Appendix C (Provided on CD only)

Laboratory Data Validation Reports

Appendix C

Laboratory Data Validation Reports

- **Laboratory Data Consultants, Inc.**
- **URS Group, Inc.**

Laboratory Data Consultants, Inc.

URS Group, Inc.

C.0 QUALITY CONTROL SUMMARY REPORT

C.1 Introduction

This section summarizes the quality assurance (QA) effort and quality control (QC) results for the samples collected and data generated during the first quarter of 2015 (1Q15) at the Modesto Groundwater Superfund Site, Modesto, California. Sampling activity protocols are provided in the *Sampling and Analysis Plan* (SAP) (URS Group, Inc. [URS], 2010). Based on the data review, all data collected and analyzed during this period are of known and acceptable quality in relation to the data quality objectives of this project. All data are considered usable as qualified for the intended purposes.

Between 8 January and 5 March 2015, field samples, field duplicates (FDs), and field QC samples were collected and analyzed. Water and vapor samples were collected from the groundwater treatment system. Table B1 (Appendix B) lists contaminants of concern at the Modesto Groundwater Superfund Site.

The following laboratories performed sample analyses during 1Q15:

ALS Laboratory Group (ALS)

- Total dissolved solids (TDS) by standard method (SM)2540C: 3 normal samples (NS), 1 FD
- Total suspended solids (TSS) by SM2540D: 3 NS, 1 FD
- Biochemical oxygen demand (BOD) by SM5210B: 3 NS, 1 FD
- Volatile organic compounds (VOCs) in water by United States Environmental Protection Agency (EPA) Method 524.2: 13 NS, 3 trip blanks (TBs), 1 FD, and 2 matrix spike/matrix spike duplicates (MS/MSDs)

Eurofins Air Toxics, Inc. (Eurofins)

- VOCs in air by EPA Method TO-15: 6 NS and 1 FD

GEL Laboratories, LLC (GEL)

- Total uranium by American Society for Testing and Material (ASTM) D5174: 10 NS, 1 FD, and 3 MSs/laboratory duplicates

Table B2 (Appendix B) summarizes sample results.

Analytical chemistry services were performed by ALS in Kelso, Washington; Eurofins in Folsom, California; and GEL, in Charleston, South Carolina. All laboratories are certified by the California Department of Health Services through the Environmental Laboratory Accreditation Program (ELAP) to perform hazardous waste analyses. GEL is currently in the process of recertification and has an interim California ELAP certification.

Data were reviewed and qualified by URS using Quality Assurance Project Plan (QAPP) in the SAP (URS, 2010) and laboratory criteria. Precision and accuracy were evaluated from field and laboratory QC samples. The calculated relative percent difference from MS/MSD and field and laboratory duplicate pairs provided information on the precision of chemical analyses and field sampling procedures. Evaluation of the percent recoveries of spiked analytes in laboratory control samples (LCSs), MS/MSDs, and surrogates were used to evaluate accuracy. External contamination was assessed through the evaluation of method blanks (MBs),TBs, and field blanks. Comparability of the data was ensured by

having project personnel follow standardized field procedures described in the SAP (URS, 2010) and having laboratories follow analytical methods and standard operating procedures. The completeness of the data is measured by the percentage of valid data for each method and matrix. Table C-1 provides the breakdown of completeness of the data sets by method. Completeness and integrity of data were evaluated by validating all project data, ensuring that all analytical requests were met, noting whether samples were received in proper condition, and verification that analyses were performed within the appropriate holding times.

QC results of the samples collected concluded that:

- The completeness objective was met for 1Q15 sampling event: 100 percent of the data produced are usable. There are no rejected results.
- Of 1,008 results, 69 normal field results are qualified as estimated or not-detected values, because one or more QA objectives were not met or the analyte was detected below the laboratory reporting limit.

Data validation flags were used in the validation process, as defined below:

U Indicates the compound or analyte is considered not detected due to external contamination.

UJ Indicates the compound or analyte was analyzed for but not detected at or above the stated limit. The sample detection limit is considered an estimated value.

J Indicates the analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.

C.2 Quality Control Results

Table C-1 summarizes the number of analyses performed, number of estimated results, and completeness of the data sets by method. Tables C-2 through C-4 provide summaries of all QC sample results for blanks, spikes, and duplicates, respectively. Table C-5 presents a summary of the qualified data.

C.2.1 Precision and Accuracy

Precision and accuracy were evaluated based on the results of QC samples collected by the field team and QC samples that originated in the laboratory. Field QC samples are collected throughout the year to meet the QC sample frequency requirements specified in the SAP (URS, 2010). The calculated relative percent difference for MS/MSDs and FD pairs provided information on the precision of sampling and analytical procedures. All data were reviewed for accuracy based on the surrogate spike, MS/MSD, and LCS percent recoveries. In addition, when applicable, initial and continuing calibration data were reviewed for analytical accuracy. The criteria used for the evaluation are provided in the QAPP portion of the SAP (URS, 2010) and by the laboratory. Table C-3 provides the summary of the QC results for spikes, and Table C-4 provides the summary of QC results for duplicates.

C.2.2 Representativeness

Representativeness was evaluated through the use of standard sampling and analytical procedures that meet required data quality objectives. Representativeness is also influenced by appropriate sample collection and handling, as well as sample locations and frequency. All sample bottles were received in

good condition and the chain-of-custody documents agreed with the sample labels. The review of field QC samples is also used to determine the representativeness of the data set.

TBs are required to accompany each cooler of aqueous samples sent to the laboratory for analysis of VOCs. One TB accompanied each cooler containing volatile organic samples for each of the sampling dates. Table C-2 provides the QC results for blanks.

MBs are processed through the same analytical procedures as the associated samples. MBs are analyzed with each batch of samples to provide information on contamination originating in the analytical process.

C.2.3 Completeness

Completeness is quantitatively defined as the percentage of measurements that are determined useable compared to the total number of measurements planned. Completeness of data was evaluated by assuring that all analytical requests were met, samples were received in proper condition, and all analyses were performed using the correct method within the appropriate holding times. Overall analytical completeness (100 percent) exceeded the project goal of 90 percent (URS, 2010). Table C-1 provides the breakdown of completeness by method.

C.2.4 Comparability

Comparability is a quantitative objective that expresses the confidence with which one data set can be compared to another for similar samples and sample conditions. It is also evaluated using precision and bias. Comparability was evaluated for this sampling event by analyzing all samples according to the specified EPA analytical methods, which use standard units of measurement. Necessary sample dilutions, due to the presence of elevated target compound concentrations, did not affect data usability and comparability. Results for some analytes are reported below the reporting limit (RL) but above the method detection limit (MDL). The “J” flag has been applied to results reported between the MDL and the RL to indicate variability at concentrations below the lower calibration level.

C.3 Summary of Data Usability

Based on the validation performed, all data for this effort are acceptable and can be used for data interpretation. Any limitations on data use are indicated by qualifier flags. Table C-5 presents the qualified data. The following items summarize data quality by all methods:

- **Method ASTM D5174:** No results for uranium are qualified for data quality issues.
- **Method SM2540C:** No results for TDS are qualified for data quality issues.
- **Method SM2540D:** No results for TSS are qualified for data quality issues.
- **Method SM5210B:** No results for BOD are qualified for data quality issues.
- **Method E524.2:** A total of 41 results are qualified. Twenty results are qualified as estimated concentrations because the result is reported between the MDL and RL. Fifteen results are considered not detected due to external contamination. Six results are qualified as estimated reporting limits due to low MS recoveries.

- **Method TO-15:** A total of 28 results are qualified. Seventeen results are qualified as estimated concentrations because the result is reported between the MDL and RL. Seven results are considered not detected due to external contamination. Two results are considered estimated concentration because of poor field duplicate precision. Two results are qualified as estimated reporting limits due to low laboratory sample control recoveries.

Table C-1. Summary of Completeness by Method, 1Q15

Method	Number of Samples[a]	Number of Analytes	Total Number of Results	Number of Estimated Results	Number of Rejected Results	Percent Completeness
ASTM D5174 (water)	10	1	10	0	0	100
SM2540C (water)	3	1	3	0	0	100
SM2540D (water)	3	1	3	0	0	100
SM5210B (water)	3	1	3	0	0	100
E524.2 (water)	13	59	767	41	0	100
TO-15 (vapor)	6	37	222	28	0	100

[a] This number includes normal field samples only.

ASTM = American Society for Testing and Materials
SM = standard method
TO = toxic organics
1Q15 = first quarter 2015

Table C-2. Summary of Quality Control Results for Blanks, 1Q15

Method	Number of Blanks	Analyte (Number of Occurrences)	Results
Reagent Blanks			
ASTM D5174	3	No analytes detected	NA
SM2540C	3	No analytes detected	NA
SM2540D	3	No analytes detected	NA
E524.2	3	n-Butylbenzene (1)	0.020 J µg/L
		sec-Butylbenzene (1)	0.020 J µg/L
		Chloromethane (1)	0.050 J µg/L
		Hexachlorobutadiene (2)	0.030 J – 0.040 J µg/L
TO-15	3	Carbon tetrachloride (1)	0.11 J ppbv
		Chloroform (1)	0.17 J ppbv
		1,2-Dichlorobenzene (1)	0.075 J ppbv
		1,3-Dichlorobenzene (1)	0.085 J ppbv
		1,1-Dichloroethane (1)	0.15 J ppbv
		1,2-Dichloroethane (1)	0.17 J ppbv
		Freon 11 (1)	0.12 J ppbv
		Freon 113 (1)	0.12 J ppbv
		m,p-Xylenes (1)	0.041 J ppbv
		1,1,1-Trichloroethane (1)	0.12 J ppbv
		1,2,4-Trimethylbenzene (3)	0.14 J – 0.16 J ppbv
		1,3,5-Trimethylbenzene (3)	0.16 J – 0.29 J ppbv
Trip Blanks			
E524.2	3	Chloroform (1)	0.12 J µg/L

ASTM = American Society for Testing and Materials
J = estimated concentration
NA = not applicable
ppbv = parts per billion by volume
SM = standard method
TO = toxic organics
µg/L = micrograms per liter
1Q15 = first quarter 2015

Table C-3. Summary of Quality Control Results for Spikes, 1Q15

Method	Number of Spikes	Analyte	Recovery Results (%)	Acceptance Criteria[a] (%)	Results Not Meeting Criteria[b]
Laboratory Control Spikes					
ASTM D5174	6	Uranium	88 – 106	75 – 125	0
SM2540C	4	Total dissolved solids	98 – 102	90 – 108	0
SM2540D	3	Total suspended solids	90 – 100	80 – 115	0
SM5210B	3	Biochemical oxygen demand	96 – 110	85 – 115	0
E524.2	3	59 Analytes	Varies	70 – 130	0
TO-15	6	37 Analytes	Varies	70 – 130	2
Matrix Spikes					
ASTM D5174	3	Uranium	86 – 105	75 – 125	0
E524.2	4	59 Analytes	Varies	70 – 130	8
Surrogate Spikes					
E524.2	13	4-Bromofluorobenzene	85 – 107	70 – 130	0
		Dibromofluoromethane	89 – 102	82 – 124	0
		Toluene-d8	92 – 101	82 – 124	0
TO-15	6	1,2-Dichloroethane-d4	95– 103	70 – 130	0
		4-Bromofluorobenzene	99 – 110	70 – 130	0
		Toluene-d8	92 – 98	70 – 130	0

Note: Not detected sample results associated with a high-quality control sample result are considered not affected and are not qualified.

[a] The acceptance criteria represent the acceptable spike recovery ranges.

[b] Refers to individual analytical results, not overall sample results.

ASTM = American Society for Testing and Materials
SM = standard method
TO = toxic organics
1Q15 = first quarter 2015
% = percent

Table C4. Summary of Quality Control Results for Duplicates, 1Q15

Method	Number of Duplicates	Analyte (Number of Detected Pairs)	Range of Results RPD (%)	Acceptance Criteria RPD[a] (%)	Results Not Meeting Criteria[b]
Field Duplicates[c]					
ASTM D5174	1	Uranium (0)	NA	30	NA
SM2540C	1	Total dissolved solids (1)	1.5	30	0
SM2540D	1	Total suspended solids (0)	NA	30	NA
SM5210B	1	Biochemical oxygen demand (0)	NA	30	NA
E524.2	1	Chloroform (1)	0	30	0
		Tetrachloroethene (1)	4.1	30	0
TO-15	1	Chloroform (1)	5.1	30	0
		Tetrachloroethene (1)	61	30	1
Matrix Spike Duplicates					
E524.2	2	59 Analytes	Varies	30	0
Laboratory Control Spike Duplicates					
TO-15	3	37 Analytes	Varies	30	0

[a] The acceptance criterion represents the upper acceptable bound of the RPD for duplicates.
[b] Refers to individual analytical results, not overall sample results.
[c] RPDs were calculated only for pairs where both results were greater than the reporting limit.

NA = not applicable
RPD = relative percent difference
SM = standard method
TO = toxic organics
1Q15 = first quarter 2015
% = percent

Table C-5. Qualified Data for the GWTS, 1Q15

Sample Identification	Sample Date	Analyte	Result	Reporting Limit	Units	EPA Flag	Reason Code
Method E524.2							
CRB EFF-0102	1/8/2015	Chloroform	0.06	0.50	µg/L	J	6G
CRB INF-0102	1/8/2015	1,1,1-Trichloroethane	0.10	0.50	µg/L	UJ	2B-
		Carbon tetrachloride	0.15	0.50	µg/L	UJ	2B-
		Chloroform	0.16	0.50	µg/L	J	6G
		Dichlorodifluoromethane	0.15	0.50	µg/L	UJ	2B-
		Trichlorofluoromethane	0.10	0.50	µg/L	UJ	2B-
		Vinyl Chloride	0.10	0.50	µg/L	UJ	2B-
CRB Mid-0102	1/8/2015	Chloroform	0.29	0.50	µg/L	J	6G
EFF-0102	1/8/2015	Chloroform	0.06	0.50	µg/L	J	6G
		Toluene	0.06	0.50	µg/L	J	6G
GWTS-INF-0102	1/8/2015	Bromodichloromethane	0.14	0.50	µg/L	J	6G
		Trichloroethene	0.14	0.50	µg/L	J	6G
		cis-1,2-Dichloroethene	0.07	0.50	µg/L	J	6G
CRB INF-0201	2/3/2015	Chloroform	0.20	0.50	µg/L	J	6G
		Chloromethane	0.13	0.50	µg/L	U	1A
		Hexachlorobutadiene	0.03	0.50	µg/L	U	1A
		Toluene	0.05	0.50	µg/L	J	6G
		n-Butyl Benzene	0.02	0.50	µg/L	U	1A
CRB Mid-0201	2/3/2015	1,2-Dibromo-3-chloropropane	0.50	0.50	µg/L	UJ	2B-
		Chloroform	0.29	0.50	µg/L	J	6G
		Chloromethane	0.08	0.50	µg/L	U	1A
		n-Butyl Benzene	0.02	0.50	µg/L	U	1A
EFF-0201	2/3/2015	Chloroform	0.18	0.50	µg/L	J	6G
		Chloromethane	0.09	0.50	µg/L	U	1A
GWTS-INF-0201	2/3/2015	Bromodichloromethane	0.14	0.50	µg/L	J	6G
		Chloromethane	0.08	0.50	µg/L	U	1A
		Dichlorodifluoromethane	0.05	0.50	µg/L	J	6G
		Trichloroethene	0.15	0.50	µg/L	J	6G
		cis-1,2-Dichloroethene	0.08	0.50	µg/L	J	6G
CRB INF-0301	3/5/2015	Chloroform	0.17	0.50	µg/L	U	1B
		Chloromethane	0.15	0.50	µg/L	U	1A
		Toluene	0.09	0.50	µg/L	J	6G
		n-Butyl Benzene	0.02	0.50	µg/L	U	1A
CRB Mid-0301	3/5/2015	Chloroform	0.24	0.50	µg/L	U	1B
		Chloromethane	0.08	0.50	µg/L	U	1A
EFF-0301	3/5/2015	Chloroform	0.25	0.50	µg/L	U	1B
		Chloromethane	0.10	0.50	µg/L	U	1A
		Toluene	0.06	0.50	µg/L	J	6G
GWTS-INF-0301	3/5/2015	Bromodichloromethane	0.14	0.50	µg/L	J	6G
		Chloromethane	0.07	0.50	µg/L	U	1A
		Trichloroethene	0.07	0.50	µg/L	J	6G
Method TO15							
GWTS Pr GAC-0102	1/8/2015	Benzene	0.42	1.1	ppbv	J	6G
		Chloromethane	ND	11	ppbv	UJ	2A-
		Dichlorodifluoromethane	0.61	1.1	ppbv	J	6G
		Toluene	0.52	1.1	ppbv	J	6G

Table C-5. (Continued)

Sample Identification	Sample Date	Analyte	Result	Reporting Limit	Units	EPA Flag	Reason Code
Method TO15 (cont'd)							
GWTS Pr GAC-0102 (cont'd)	1/8/2015 (cont'd)	Trichloroethene	0.56	1.1	ppbv	J	6G
		Trichlorofluoromethane	0.28	1.1	ppbv	J	6G
		m,p-Xylenes	0.30	1.1	ppbv	J	6G
GWTS Stack-0102	1/8/2015	Chloromethane	ND	11	ppbv	UJ	2A-
		Dichlorodifluoromethane	0.72	1.1	ppbv	J	6G
		Freon 114	0.10	1.1	ppbv	J	6G
		Trichlorofluoromethane	0.19	1.1	ppbv	J	6G
GWTS Pr GAC-0201	2/3/2015	Benzene	0.70	1.1	ppbv	U	1A
		Dichlorodifluoromethane	0.55	1.1	ppbv	J	6G
		Toluene	0.80	1.1	ppbv	U	1A
		Trichloroethene	0.49	1.1	ppbv	U	1A
		Trichlorofluoromethane	0.21	1.1	ppbv	U	1A
		m,p-Xylenes	0.25	1.1	ppbv	U	1A
GWTS Stack-0201	2/3/2015	Benzene	1.2	1.1	ppbv	J	3D
		Dichlorodifluoromethane	0.60	1.1	ppbv	J	6G
		Tetrachloroethene	8.60	1.1	ppbv	J	3D
		Trichlorofluoromethane	0.32	1.1	ppbv	U	1A
GWTS Pr GAC-0301	3/5/2015	Benzene	0.27	1.1	ppbv	J	6G
		Dichlorodifluoromethane	0.56	1.1	ppbv	J	6G
		Toluene	0.38	1.1	ppbv	J	6G
		Trichloroethene	0.34	1.1	ppbv	J	6G
		m,p-Xylenes	0.1	1.1	ppbv	U	1A
GWTS Stack-0301	3/5/2015	Benzene	1.0	1.1	ppbv	J	6G
		Dichlorodifluoromethane	0.59	1.1	ppbv	J	6G

CRB = carbon
EFF = effluent
EPA = United States Environmental Protection Agency
GAC = granular-activated carbon
GWTS = groundwater treatment system
INF = influent
J = Analyte concentration considered an estimated value because one or more quality control specifications were not met.
Mid = middle
ppbv = parts per billion by volume
U = Analyte considered not detected due to external contamination.
UJ = estimated reporting limit
µg/L = micrograms per liter
1Q15 = first quarter 2015

Reason Code
1A = laboratory blank contamination
1B = trip blank contamination
2A- = low laboratory control sample recovery
2B- = low matrix spike recovery
3D = field duplicate imprecision
6G = result reported between the detection limit and reporting limit

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LABORATORY DATA CONSULTANTS, INC.
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RORE, Inc.
5151 Shoreham Place, Suite 260
San Diego, CA 92122
ATTN: Mr. John McGuire

March 16, 2015

SUBJECT: Modesto Jan. 2015 Qtrly Monitoring, Data Validation

Dear Mr. McGuire,

Enclosed are the final validation reports for the fraction listed below. These SDGs were received on February 20, 2015. Attachment 1 is a summary of the sample that was reviewed for each analysis.

LDC Project #33775:

SDG #	Fraction
15030A, 15033A, 15033B	Volatiles

The data validation was performed under EPA Level III & IV guidelines. The analyses were validated using the following documents, as applicable to each method:

- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008

Please feel free to contact us if you have any questions.

Sincerely,

Andrea Leasure
Project Manager/Chemist

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1523 pages-SF

Attachment 1

ADR/IV

LDC #33775 (Rore, Inc. / Modesto Jan. 2015 Qtrly Monitoring)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (524.2)																													
Matrix:	Water/Soil/Air			W	S	W	A	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	15030A	02/20/15	03/13/15	12	0																												
A	15030A	02/20/15	03/13/15	2	0																												
B	15033A	02/20/15	03/13/15	18	0																												
B	15033A	02/20/15	03/13/15	2	0																												
C	15033B	02/20/15	03/13/15	17	0																												
C	15033B	02/20/15	03/13/15	1	0																												
Total	A/AL			52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52

Shaded cells indicate Level IV validation (all other cells are ADR validation). These sample counts do not include MS/MSD, and DUPs

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Data Validation Report
Modesto

SDGs: 15030A, 15033A, 15033B

Prepared for

Rore, Inc.
5685 Redwood Drive, Suite 100
Rohnert Park, CA 94928

Prepared by

Laboratory Data Consultants, Inc.
2701 Loker Ave West, Suite 220
Carlsbad, CA 92010

March 16, 2015

INTRODUCTION

This Data Validation Report (DVR) presents EPA Level III and EPA Level IV data validation results for samples collected during the January 2015 sampling period. Data validation was performed in accordance with the US EPA *Contract Laboratory Program National Functional Guidelines* (CLPNFGs) *for Superfund Organic Methods Data Review* (June 2008). Where specific guidance is not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Method 524.2

The sample identification and methods of analyses performed on each sample is presented in Attachment 1. Overall data qualification summary is presented in Attachment 2. EPA Level III Automated Data Review outliers are presented in Enclosure I. DVRs for samples on which EPA Level IV validation was performed are presented in Enclosure II.

All sample results were subjected to EPA Level III data validation, which comprises an evaluation of quality control (QC) summary results for sample holding times, initial and continuing calibrations, surrogates, internal standards, matrix spike/matrix spike duplicates (MS/MSD), laboratory control sample/laboratory control sample duplicates (LCS/LCSD), method blanks and field duplicate samples. Approximately 9 percent of samples were subjected to EPA Level IV evaluation as indicated in Attachment 1, which comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

Automated data review was performed on all QC summary results using the Automated Data Review (ADR) software program (LDC, 2013) with exception of the calibrations and internal standards, which were validated manually. Quality assurance (QA)/QC criteria specified in the CLPNFGs were incorporated with the program's reference library to assess compliance with project requirements.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detect): The compound or analyte was analyzed for and positively identified by the laboratory; however the analyte should be considered non-detect at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not applicable): Data did not warrant qualification since detected results only are affected and the compound was not detected in the associated samples.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt & Technical Holding Times

All samples were received in good condition.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A tune was performed at 12 hour intervals as required by the method.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

All criteria for the initial calibration and initial calibration verifications of each method were met with the following exceptions:

SDG/ Method	Date	Compound	%RSD (Limits)	Associated Samples	Flag	A or P
15033A/ 524.2	1/13/15	Acetone 1,2-Dibromo-3-chloropropane	33.54 (≤20%) 23.67 (≤20%)	MW-15A MW-16A MW-16B MW-16C MW-19A MW-19B1 MW-20A MW-20B MW-20C	J (all detects) UJ (all non-detects)	P
15033A/ 524.2	1/14/15	Acetone	30.41 (≤20%)	MW-02A MW-07A MW-08A MW-09A MW-11A MW-12A MW-14A	J (all detects) UJ (all non-detects)	P
15033B/ 524.2	1/13/15	Acetone 1,2-Dibromo-3-chloropropane	33.54 (≤20%) 23.67 (≤20%)	MW-21A MW-22A MW-24B MW-25A	J (all detects) UJ (all non-detects)	P
15033B/ 524.2	1/14/15	Acetone	30.41 (≤20%)	MW-31A DUP-5	J (all detects) UJ (all non-detects)	P

IV. Continuing Calibration

All criteria for the continuing calibration verifications of each method were met with the following exceptions:

SDG/ Method	Date	Compound	%D (Limits)	Associated Samples	Flag	A or P
15030A/ 524.2	2/2/15	Acetone	37.5 (≤30%)	MW-13A MW-17A MW-17B MW-17C MW-18A MW-29A MW-23A	J+ (all detects)	P
15033A/ 524.2	2/2/15	Acetone	37.5 (≤30%)	MW-01A MW-03A MW-06A	J+ (all detects)	P
15033A/ 524.2	2/2/15	Acetone	34.6 (≤30%)	MW-15A MW-16A MW-16B MW-16C MW-19A MW-19B1 MW-20A MW-20B MW-20C	J- (all detects) UJ (all non-detects)	P
15033A/ 524.2	2/2/15	2-Butanone	41.1 (≤30%)	MW-02A MW-07A MW-08A MW-11A MW-12A MW-14A	J- (all detects) UJ (all non-detects)	P
15033A/ 524.2	2/3/15	2-Butanone	42.2 (≤30%)	MW-09A	UJ (all non-detects)	P
15033B/ 524.2	2/2/15	Acetone	34.6 (≤30%)	MW-21A MW-22A MW-24B MW-25A	J- (all detects) UJ (all non-detects)	P
15033B/ 524.2	2/3/15	2-Butanone	42.2 (≤30%)	MW-31A DUP-5	J- (all detects) UJ (all non-detects)	P

V. Laboratory Blanks

Laboratory blanks were performed as required by the method. No contaminant concentrations were detected in the laboratory blanks.

VI. Field Blank Samples

No field blank samples were identified in these SDGs.

VII. Surrogate Spikes

All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on associated project samples. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the exception of several MS/MSD pairs for several VOCs. The associated sample results were qualified as detected estimated (J+/J-) or non-detected estimated (UJ) as applicable. The details regarding the qualification of data are provided in Enclosure I.

IX. Laboratory Duplicates Sample

The laboratory has indicated that there were no laboratory duplicate (DUP) analyses specified for the samples in this SDG, and therefore laboratory duplicate analyses were not performed for this SDG.

X. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control sample duplicates (LCSD) were analyzed as required by the methods. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the exception of several LCS/LCSD pairs for VOCs. The associated sample results were qualified as detected estimated (J+/J-) or non-detected estimated (UJ) as applicable. The details regarding the qualification of data are provided in Enclosures I and II.

XI. Field Duplicate Samples

Four field duplicate pairs were collected and analyzed for VOCs. No data was qualified on the basis of field duplicate RPDs outside the QC limits. The field duplicate result comparisons are provided in Enclosure I.

XII. Internal Standards

All internal standard areas and retention times were within QC limits.

XIII. Compound Quantitation

The laboratory reporting limits were evaluated. All laboratory reporting limits met the specified requirements.

All compounds reported below the LOQ as detected were qualified as follows:

Sample	Finding	Flag
All samples in SDGs 15030A, 15033A and 15033B	All compounds reported as detected below the LOQ.	J (all detects)

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in these SDGs.

Due to initial calibration %RSD, data were qualified as estimated in twenty two samples.

Due to calibration %D and LCS %R data were qualified as estimated in thirty two samples

Due to matrix spike/matrix spike duplicate %R data were qualified as estimated in three samples.

Due to compound quantitation, data were qualified as estimated in eighteen samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the data validation all other results are considered valid and usable for all purposes.

Data flags are summarized and are presented as Attachment 2

Attachment 1

Sample Cross Reference

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
29-Jan-2015	MW-4A	1501036-01	N	5030B	524.2	III
29-Jan-2015	MW-4AMS	B15A131-MS1	MS	5030B	524.2	III
29-Jan-2015	MW-4AMSD	B15A131-MSD1	MSD	5030B	524.2	III
29-Jan-2015	MW-4B	1501036-02	N	5030B	524.2	III
29-Jan-2015	MW-4C	1501036-03	N	5030B	524.2	III
29-Jan-2015	MW-10B	1501036-05	N	5030B	524.2	III
29-Jan-2015	EW-02	1501036-14	N	5030B	524.2	III
29-Jan-2015	MW-17A	1501036-08	N	5030B	524.2	III
29-Jan-2015	MW-10C	1501036-06	N	5030B	524.2	III
29-Jan-2015	MW-29A	1501036-12	N	5030B	524.2	III
29-Jan-2015	MW-17B	1501036-09	N	5030B	524.2	III
29-Jan-2015	MW-10A	1501036-04	N	5030B	524.2	III
29-Jan-2015	MW-13A	1501036-07	N	5030B	524.2	IV
29-Jan-2015	MW-17C	1501036-10	N	5030B	524.2	III
29-Jan-2015	MW-18A	1501036-11	N	5030B	524.2	III
29-Jan-2015	MW-23A	1501036-13	N	5030B	524.2	IV
29-Jan-2015	MW-18AMS	B15B002-MS1	MS	5030B	524.2	III
29-Jan-2015	MW-18AMSD	B15B002-MSD1	MSD	5030B	524.2	III
30-Jan-2015	DUP-1	1502002-15	FD	5030B	524.2	III
30-Jan-2015	DUP-2	1502002-16	FD	5030B	524.2	III
30-Jan-2015	DUP-3	1502002-17	FD	5030B	524.2	III
30-Jan-2015	DUP-5	1502002-19	FD	5030B	524.2	III
30-Jan-2015	MW-05A	1502001-04	N	5030B	524.2	III
30-Jan-2015	MW-09A	1502001-08	N	5030B	524.2	III
30-Jan-2015	MW-08A	1502001-07	N	5030B	524.2	III
30-Jan-2015	MW-32B	1502002-11	N	5030B	524.2	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
30-Jan-2015	MW-03A	1502001-03	N	5030B	524.2	IV
30-Jan-2015	MW-32C	1502002-12	N	5030B	524.2	III
30-Jan-2015	MW-01A	1502001-01	N	5030B	524.2	III
30-Jan-2015	MW-02A	1502001-02	N	5030B	524.2	III
30-Jan-2015	MW-26B	1502002-05	N	5030B	524.2	III
30-Jan-2015	MW-02AMS	B15B003-MS1	MS	5030B	524.2	III
30-Jan-2015	MW-02AMSD	B15B003-MSD1	MSD	5030B	524.2	III
30-Jan-2015	MW-11A	1502001-09	N	5030B	524.2	III
30-Jan-2015	MW-27B	1502002-06	N	5030B	524.2	III
30-Jan-2015	MW-14A	1502001-11	N	5030B	524.2	III
30-Jan-2015	MW-30B	1502002-09	N	5030B	524.2	III
30-Jan-2015	MW-35B	1502002-14	N	5030B	524.2	III
30-Jan-2015	MW-30A	1502002-08	N	5030B	524.2	IV
30-Jan-2015	MW-31A	1502002-10	N	5030B	524.2	III
30-Jan-2015	MW-22A	1502002-02	N	5030B	524.2	III
30-Jan-2015	MW-34B	1502002-13	N	5030B	524.2	III
30-Jan-2015	MW-34BMS	B15B010-MS1	MS	5030B	524.2	III
30-Jan-2015	MW-34BMSD	B15B010-MSD1	MSD	5030B	524.2	III
30-Jan-2015	MW-21A	1502002-01	N	5030B	524.2	III
30-Jan-2015	MW-28B	1502002-07	N	5030B	524.2	III
30-Jan-2015	MW-25A	1502002-04	N	5030B	524.2	III
30-Jan-2015	MW-06A	1502001-05	N	5030B	524.2	III
30-Jan-2015	MW-16A	1502001-13	N	5030B	524.2	III
30-Jan-2015	MW-20B	1502001-19	N	5030B	524.2	III
30-Jan-2015	MW-16B	1502001-14	N	5030B	524.2	III
30-Jan-2015	MW-20A	1502001-18	N	5030B	524.2	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
30-Jan-2015	MW-20C	1502001-20	N	5030B	524.2	III
30-Jan-2015	MW-16C	1502001-15	N	5030B	524.2	III
30-Jan-2015	MW-19A	1502001-16	N	5030B	524.2	III
30-Jan-2015	MW-19B1	1502001-17	N	5030B	524.2	III
30-Jan-2015	MW-12A	1502001-10	N	5030B	524.2	III
30-Jan-2015	MW-15A	1502001-12	N	5030B	524.2	IV
30-Jan-2015	MW-07A	1502001-06	N	5030B	524.2	III
30-Jan-2015	MW-24B	1502002-03	N	5030B	524.2	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Attachment 2
Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 15030A, 15033A, 15033B **Laboratory: FALSE**

EDD Filename: 1501036, 1502001, 1502002 **eQAPP Name: Rore_Modesto_GW_022315**

SDG: **15030A**

Method Category: **VOA**

Method: **524.2** ***Matrix:*** **Water**

Sample ID: **MW-10A** ***Collected:*** **1/29/2015 2:30:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	2.7	J,C1,Q3	2.0	MDL	4.0	MRL	ug/L	J	RI

Sample ID: **MW-10B** ***Collected:*** **1/29/2015 2:00:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLOROFORM	0.3	J,C1	0.2	MDL	0.5	MRL	ug/L	J	RI

Sample ID: **MW-13A** ***Collected:*** **1/29/2015 2:30:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	4.6	J,C4,Q2,Q3	2.0	MDL	4.0	MRL	ug/L	J+	Lcs, Ccv

Sample ID: **MW-17A** ***Collected:*** **1/29/2015 2:09:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	10	J,C4,Q2,Q3	2.0	MDL	4.0	MRL	ug/L	J+	Lcs, Ccv
BROMODICHLOROMETHANE	0.3	J,C1	0.2	MDL	0.5	MRL	ug/L	J	RI

Sample ID: **MW-17B** ***Collected:*** **1/29/2015 2:26:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	9.3	J,C4,Q2,Q3	2.0	MDL	4.0	MRL	ug/L	J+	Lcs, Ccv
CHLOROFORM	0.4	J,C1	0.2	MDL	0.5	MRL	ug/L	J	RI

Sample ID: **MW-17C** ***Collected:*** **1/29/2015 2:41:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	12	J,C4,Q2,Q3	2.0	MDL	4.0	MRL	ug/L	J+	Lcs, Ccv

* denotes a non-reportable result

Project Name and Number: R15S40 - Modesto Groundwater Jan 2015 Qtrly Monitoring

Data Qualifier Summary

Lab Reporting Batch ID: 15030A, 15033A, 15033B **Laboratory: FALSE**

EDD Filename: 1501036, 1502001, 1502002 **eQAPP Name: Rore_Modesto_GW_022315**

SDG: **15030A**

Method Category: **VOA**

Method: **524.2** ***Matrix:*** **Water**

Sample ID: **MW-18A** ***Collected:*** **1/29/2015 2:45:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	9.1	J,C4,Q2,Q3	2.0	MDL	4.0	MRL	ug/L	J+	Lcs, Ccv

Sample ID: **MW-23A** ***Collected:*** **1/29/2015 2:45:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	5.8	J,C4,Q2,Q3	2.0	MDL	4.0	MRL	ug/L	J+	Lcs, Ccv

Sample ID: **MW-29A** ***Collected:*** **1/29/2015 2:20:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	2.3	J,C1,C4,Q2,Q3	2.0	MDL	4.0	MRL	ug/L	J	RI, Lcs, Ccv

Sample ID: **MW-4A** ***Collected:*** **1/29/2015 1:10:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	6.1	J,Q3,Q4	2.0	MDL	4.0	MRL	ug/L	J-	Ms

Sample ID: **MW-4A** ***Collected:*** **1/29/2015 1:10:00** ***Analysis Type:*** **Reanalysis-** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TETRACHLOROETHENE	72		2.5	MDL	5.0	MRL	ug/L	J+	Ms

SDG: **15033A**

Method Category: **VOA**

Method: **524.2** ***Matrix:*** **Water**

Sample ID: **MW-01A** ***Collected:*** **1/30/2015 9:30:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	9.8	J,C4,Q2,Q3	2.0	MDL	4.0	MRL	ug/L	J+	Lcs, Ccv
CHLOROFORM	0.3	J,C1	0.2	MDL	0.5	MRL	ug/L	J	RI
TETRACHLOROETHENE	0.3	J,C1	0.2	MDL	0.5	MRL	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: R15S40 - Modesto Groundwater Jan 2015 Qtrly Monitoring

Data Qualifier Summary

Lab Reporting Batch ID: 15030A, 15033A, 15033B **Laboratory: FALSE**

EDD Filename: 1501036, 1502001, 1502002 **eQAPP Name: Rore_Modesto_GW_022315**

SDG: **15033A**

Method Category: **VOA**

Method: **524.2** ***Matrix:*** **Water**

Sample ID: **MW-02A** ***Collected:*** **1/30/2015 9:45:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-BUTANONE	4.0	J,U,C4,Q2, Q4	2.0	MDL	4.0	MRL	ug/L	UJ	Ms, Lcs, Ccv
ACETONE	3.2	J,C1,C3	2.0	MDL	4.0	MRL	ug/L	J	RI, IcRsd
BROMOCHLOROMETHANE	0.5	J,U,Q2	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs

Sample ID: **MW-03A** ***Collected:*** **1/30/2015 9:10:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	8.4	J,C4,Q2,Q 3	2.0	MDL	4.0	MRL	ug/L	J+	Lcs, Ccv

Sample ID: **MW-05A** ***Collected:*** **1/30/2015 8:30:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLOROFORM	0.3	J,C1	0.2	MDL	0.5	MRL	ug/L	J	RI

Sample ID: **MW-06A** ***Collected:*** **1/30/2015 11:35:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	6.9	J,C4,Q2,Q 3	2.0	MDL	4.0	MRL	ug/L	J+	Lcs, Ccv

Sample ID: **MW-07A** ***Collected:*** **1/30/2015 1:10:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-BUTANONE	4.0	J,U,C4,Q2	2.0	MDL	4.0	MRL	ug/L	UJ	Lcs, Ccv
ACETONE	4.0	J,U,C3	2.0	MDL	4.0	MRL	ug/L	UJ	IcRsd
BROMOCHLOROMETHANE	0.5	J,U,Q2	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs

Sample ID: **MW-08A** ***Collected:*** **1/30/2015 8:55:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-BUTANONE	4.0	J,U,C4,Q2	2.0	MDL	4.0	MRL	ug/L	UJ	Lcs, Ccv
ACETONE	4.0	J,U,C3	2.0	MDL	4.0	MRL	ug/L	UJ	IcRsd
BROMOCHLOROMETHANE	0.5	J,U,Q2	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs

* denotes a non-reportable result

Project Name and Number: R15S40 - Modesto Groundwater Jan 2015 Qtrly Monitoring

Data Qualifier Summary

Lab Reporting Batch ID: 15030A, 15033A, 15033B **Laboratory: FALSE**

EDD Filename: 1501036, 1502001, 1502002 **eQAPP Name: Rore_Modesto_GW_022315**

SDG: **15033A**

Method Category: **VOA**

Method: **524.2** ***Matrix:*** **Water**

Sample ID: **MW-09A** ***Collected:*** **1/30/2015 8:50:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-BUTANONE	4.0	J,U,C4,Q2	2.0	MDL	4.0	MRL	ug/L	UJ	Lcs, Ccv
ACETONE	8.2	J,C3	2.0	MDL	4.0	MRL	ug/L	J	IcRsd
BROMOCHLOROMETHANE	0.5	J,U,Q2	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs

Sample ID: **MW-11A** ***Collected:*** **1/30/2015 10:10:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-BUTANONE	4.0	J,U,C4,Q2	2.0	MDL	4.0	MRL	ug/L	UJ	Lcs, Ccv
ACETONE	9.4	J,C3	2.0	MDL	4.0	MRL	ug/L	J	IcRsd
BROMOCHLOROMETHANE	0.5	J,U,Q2	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
TETRACHLOROETHENE	0.4	J,C1	0.2	MDL	0.5	MRL	ug/L	J	RI

Sample ID: **MW-12A** ***Collected:*** **1/30/2015 12:50:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-BUTANONE	4.0	J,U,C4,Q2	2.0	MDL	4.0	MRL	ug/L	UJ	Lcs, Ccv
ACETONE	4.0	J,U,C3	2.0	MDL	4.0	MRL	ug/L	UJ	IcRsd
BROMOCHLOROMETHANE	0.5	J,U,Q2	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
TRICHLOROFLUOROMETHANE	0.4	J,C1	0.2	MDL	0.5	MRL	ug/L	J	RI

Sample ID: **MW-14A** ***Collected:*** **1/30/2015 10:20:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-BUTANONE	4.0	J,U,C4,Q2	2.0	MDL	4.0	MRL	ug/L	UJ	Lcs, Ccv
ACETONE	9.5	J,C3	2.0	MDL	4.0	MRL	ug/L	J	IcRsd
BROMOCHLOROMETHANE	0.5	J,U,Q2	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs

Sample ID: **MW-15A** ***Collected:*** **1/30/2015 1:00:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,1-DICHLOROPROPENE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,2-DIBROMO-3-CHLOROPROPANE	2.0	J,U,C3,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs, IcRsd

* denotes a non-reportable result

Project Name and Number: R15S40 - Modesto Groundwater Jan 2015 Qtrly Monitoring

Data Qualifier Summary

Lab Reporting Batch ID: 15030A, 15033A, 15033B **Laboratory: FALSE**

EDD Filename: 1501036, 1502001, 1502002 **eQAPP Name: Rore_Modesto_GW_022315**

SDG: **15033A**

Method Category: **VOA**

Method: **524.2** ***Matrix:*** **Water**

Sample ID: **MW-15A** ***Collected:*** **1/30/2015 1:00:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2-DICHLOROETHANE	0.3	J,C1	0.2	MDL	0.5	MRL	ug/L	J	RI
ACETONE	4.0	J,U,C3,C4	2.0	MDL	4.0	MRL	ug/L	UJ	IcRsd, Ccv
CIS-1,3-DICHLOROPROPENE	0.5	J,U,Q2	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
METHYL TERT-BUTYL ETHER	2.0	J,U,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs

Sample ID: **MW-16A** ***Collected:*** **1/30/2015 11:45:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,1-DICHLOROPROPENE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,2-DIBROMO-3-CHLOROPROPANE	2.0	J,U,C3,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs, IcRsd
ACETONE	7.4	J,C3,C4	2.0	MDL	4.0	MRL	ug/L	J	IcRsd, Ccv
CIS-1,3-DICHLOROPROPENE	0.5	J,U,Q2	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
METHYL TERT-BUTYL ETHER	2.0	J,U,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs

Sample ID: **MW-16B** ***Collected:*** **1/30/2015 12:00:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,1-DICHLOROPROPENE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,2-DIBROMO-3-CHLOROPROPANE	2.0	J,U,C3,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs, IcRsd
ACETONE	9.0	J,C3,C4	2.0	MDL	4.0	MRL	ug/L	J	IcRsd, Ccv
CIS-1,3-DICHLOROPROPENE	0.5	J,U,Q2	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
METHYL TERT-BUTYL ETHER	2.0	J,U,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs

Sample ID: **MW-16C** ***Collected:*** **1/30/2015 12:25:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,1-DICHLOROPROPENE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,2-DIBROMO-3-CHLOROPROPANE	2.0	J,U,C3,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs, IcRsd
2-BUTANONE	2.4	J,C1	2.0	MDL	4.0	MRL	ug/L	J	RI
ACETONE	7.1	J,C3,C4	2.0	MDL	4.0	MRL	ug/L	J	IcRsd, Ccv

* denotes a non-reportable result

Project Name and Number: R15S40 - Modesto Groundwater Jan 2015 Qtrly Monitoring

Data Qualifier Summary

Lab Reporting Batch ID: 15030A, 15033A, 15033B **Laboratory: FALSE**

EDD Filename: 1501036, 1502001, 1502002 **eQAPP Name: Rore_Modesto_GW_022315**

SDG: **15033A**

Method Category: **VOA**

Method: **524.2** ***Matrix:*** **Water**

Sample ID: **MW-16C** ***Collected:*** **1/30/2015 12:25:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLOROFORM	0.3	J,C1	0.2	MDL	0.5	MRL	ug/L	J	RI
CIS-1,3-DICHLOROPROPENE	0.5	J,U,Q2	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
METHYL TERT-BUTYL ETHER	2.0	J,U,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs

Sample ID: **MW-19A** ***Collected:*** **1/30/2015 12:35:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,1-DICHLOROPROPENE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,2-DIBROMO-3-CHLOROPROPANE	2.0	J,U,C3,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs, IcRsd
ACETONE	4.0	J,U,C3,C4	2.0	MDL	4.0	MRL	ug/L	UJ	IcRsd, Ccv
CIS-1,3-DICHLOROPROPENE	0.5	J,U,Q2	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
METHYL TERT-BUTYL ETHER	2.0	J,U,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs

Sample ID: **MW-19B1** ***Collected:*** **1/30/2015 12:38:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,1-DICHLOROPROPENE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,2-DIBROMO-3-CHLOROPROPANE	2.0	J,U,C3,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs, IcRsd
ACETONE	2.0	J,C1,C3,C4	2.0	MDL	4.0	MRL	ug/L	J	RI, IcRsd, Ccv
CIS-1,3-DICHLOROPROPENE	0.5	J,U,Q2	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
METHYL TERT-BUTYL ETHER	2.0	J,U,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs
TETRACHLOROETHENE	0.4	J,C1	0.2	MDL	0.5	MRL	ug/L	J	RI

Sample ID: **MW-20A** ***Collected:*** **1/30/2015 12:05:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,1-DICHLOROPROPENE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,2-DIBROMO-3-CHLOROPROPANE	2.0	J,U,C3,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs, IcRsd
ACETONE	4.0	J,U,C3,C4	2.0	MDL	4.0	MRL	ug/L	UJ	IcRsd, Ccv
BROMODICHLOROMETHANE	0.2	J,C1	0.2	MDL	0.5	MRL	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: R15S40 - Modesto Groundwater Jan 2015 Qtrly Monitoring

Data Qualifier Summary

Lab Reporting Batch ID: 15030A, 15033A, 15033B **Laboratory: FALSE**

EDD Filename: 1501036, 1502001, 1502002 **eQAPP Name: Rore_Modesto_GW_022315**

SDG: **15033A**

Method Category: **VOA**

Method: **524.2** ***Matrix:*** **Water**

Sample ID: **MW-20A** ***Collected:*** **1/30/2015 12:05:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CIS-1,3-DICHLOROPROPENE	0.5	J,U,Q2	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
METHYL TERT-BUTYL ETHER	2.0	J,U,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs
METHYLENE CHLORIDE	0.2	J,C1	0.2	MDL	0.5	MRL	ug/L	J	RI

Sample ID: **MW-20B** ***Collected:*** **1/30/2015 11:55:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,1-DICHLOROPROPENE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,2-DIBROMO-3-CHLOROPROPANE	2.0	J,U,C3,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs, IcRsd
ACETONE	4.0	J,U,C3,C4	2.0	MDL	4.0	MRL	ug/L	UJ	IcRsd, Ccv
CIS-1,3-DICHLOROPROPENE	0.5	J,U,Q2	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
METHYL TERT-BUTYL ETHER	2.0	J,U,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs

Sample ID: **MW-20C** ***Collected:*** **1/30/2015 12:15:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,1-DICHLOROPROPENE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,2-DIBROMO-3-CHLOROPROPANE	2.0	J,U,C3,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs, IcRsd
ACETONE	4.0	J,U,C3,C4	2.0	MDL	4.0	MRL	ug/L	UJ	IcRsd, Ccv
CIS-1,3-DICHLOROPROPENE	0.5	J,U,Q2	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
METHYL TERT-BUTYL ETHER	2.0	J,U,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs

SDG: **15033B**

Method Category: **VOA**

Method: **524.2** ***Matrix:*** **Water**

Sample ID: **DUP-3** ***Collected:*** **1/30/2015 12:00:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TETRACHLOROETHENE	0.4	J,C1	0.2	MDL	0.5	MRL	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: R15S40 - Modesto Groundwater Jan 2015 Qtrly Monitoring

Data Qualifier Summary

Lab Reporting Batch ID: 15030A, 15033A, 15033B **Laboratory: FALSE**

EDD Filename: 1501036, 1502001, 1502002 **eQAPP Name: Rore_Modesto_GW_022315**

SDG: **15033B**

Method Category: **VOA**

Method: **524.2** ***Matrix:*** **Water**

Sample ID: **DUP-5** ***Collected:*** **1/30/2015 12:00:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-BUTANONE	4.0	J,U,C4,Q2	2.0	MDL	4.0	MRL	ug/L	UJ	Lcs, Ccv
ACETONE	9.6	J,C3	2.0	MDL	4.0	MRL	ug/L	J	IcRsd
BROMOCHLOROMETHANE	0.5	J,U,Q2	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs

Sample ID: **MW-21A** ***Collected:*** **1/30/2015 11:10:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,1-DICHLOROPROPENE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,2-DIBROMO-3-CHLOROPROPANE	2.0	J,U,C3,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs, IcRsd
ACETONE	7.6	J,C3,C4	2.0	MDL	4.0	MRL	ug/L	J	IcRsd, Ccv
CIS-1,3-DICHLOROPROPENE	0.5	J,U,Q2	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
METHYL TERT-BUTYL ETHER	2.0	J,U,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs

Sample ID: **MW-22A** ***Collected:*** **1/30/2015 11:00:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,1-DICHLOROPROPENE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,2-DIBROMO-3-CHLOROPROPANE	2.0	J,U,C3,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs, IcRsd
ACETONE	7.1	J,C3,C4	2.0	MDL	4.0	MRL	ug/L	J	IcRsd, Ccv
BROMODICHLOROMETHANE	0.2	J,C1	0.2	MDL	0.5	MRL	ug/L	J	RI
CIS-1,3-DICHLOROPROPENE	0.5	J,U,Q2	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
METHYL TERT-BUTYL ETHER	2.0	J,U,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs
METHYLENE CHLORIDE	0.3	J,C1	0.2	MDL	0.5	MRL	ug/L	J	RI
TETRACHLOROETHENE	0.3	J,C1	0.2	MDL	0.5	MRL	ug/L	J	RI

Sample ID: **MW-24B** ***Collected:*** **1/30/2015 1:30:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,1-DICHLOROPROPENE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,2-DIBROMO-3-CHLOROPROPANE	2.0	J,U,C3,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs, IcRsd

* denotes a non-reportable result

Project Name and Number: R15S40 - Modesto Groundwater Jan 2015 Qtrly Monitoring

Data Qualifier Summary

Lab Reporting Batch ID: 15030A, 15033A, 15033B **Laboratory: FALSE**

EDD Filename: 1501036, 1502001, 1502002 **eQAPP Name: Rore_Modesto_GW_022315**

SDG: **15033B**

Method Category: **VOA**

Method: **524.2** ***Matrix:*** **Water**

Sample ID: **MW-24B** ***Collected:*** **1/30/2015 1:30:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACETONE	4.0	J,U,C3,C4	2.0	MDL	4.0	MRL	ug/L	UJ	IcRsd, Ccv
CIS-1,3-DICHLOROPROPENE	0.5	J,U,Q2	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
METHYL TERT-BUTYL ETHER	2.0	J,U,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs

Sample ID: **MW-25A** ***Collected:*** **1/30/2015 11:25:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,1,1,2-TETRACHLOROETHANE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,1-DICHLOROPROPENE	0.5	U	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
1,2-DIBROMO-3-CHLOROPROPANE	2.0	J,U,C3,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs, IcRsd
ACETONE	9.2	J,C3,C4	2.0	MDL	4.0	MRL	ug/L	J	IcRsd, Ccv
CIS-1,3-DICHLOROPROPENE	0.5	J,U,Q2	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs
METHYL TERT-BUTYL ETHER	2.0	J,U,Q2	1.0	MDL	2.0	MRL	ug/L	UJ	Lcs

Sample ID: **MW-31A** ***Collected:*** **1/30/2015 10:55:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-BUTANONE	4.0	J,U,C4,Q2	2.0	MDL	4.0	MRL	ug/L	UJ	Lcs, Ccv
ACETONE	8.2	J,C3	2.0	MDL	4.0	MRL	ug/L	J	IcRsd
BROMOCHLOROMETHANE	0.5	J,U,Q2	0.2	MDL	0.5	MRL	ug/L	UJ	Lcs

Sample ID: **MW-32B** ***Collected:*** **1/30/2015 8:55:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLOROFORM	0.4	J,C1	0.2	MDL	0.5	MRL	ug/L	J	RI

Sample ID: **MW-34B** ***Collected:*** **1/30/2015 11:05:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TETRACHLOROETHENE	12	J,Q4	0.2	MDL	0.5	MRL	ug/L	J+	Ms

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 15030A, 15033A, 15033B **Laboratory: FALSE**

EDD Filename: 1501036, 1502001, 1502002 **eQAPP Name: Rore_Modesto_GW_022315**

SDG: **15033B**

Method Category: **VOA**

Method: **524.2** ***Matrix:*** **Water**

Sample ID: **MW-35B** ***Collected:*** **1/30/2015 10:35:00** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
TRICHLOROETHENE	0.3	J,C1	0.2	MDL	0.5	MRL	ug/L	J	RI

* denotes a non-reportable result

Project Name and Number: R15S40 - Modesto Groundwater Jan 2015 Qtrly Monitoring

Data Qualifier Summary

Lab Reporting Batch ID: 15030A, 15033A, 15033B **Laboratory: FALSE**

EDD Filename: 1501036, 1502001, 1502002 **eQAPP Name: Rore_Modesto_GW_022315**

Reason Code Legend

Reason Code	*Description*
Ccv	Continuing Calibration Verification Percent Recovery Lower Estimation
Ccv	Continuing Calibration Verification Percent Recovery Upper Estimation
IcRsd	Initial Calibration Percent Relative Standard Deviation
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Upper Estimation
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Upper Estimation
RI	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

EPA Level III ADR Outliers

(Including Manual Review Outliers)

Quality Control Outlier Reports

15030A

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 15030A **Laboratory: FALSE**

EDD Filename: 1501036 FINAL **eQAPP Name: Rore_Modesto_GW_022315**

***Method:* 524.2**

***Matrix:* Water**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
MW-4AMS **MW-4AMSD** (MW-4A)	ACETONE	57	59	60.00-125.00	-	ACETONE	J- (all detects) UJ (all non-detects)
MW-4AMS **MW-4AMSD** (MW-4A)	1,1,2-TRICHLORO-1,2,2-TRIFLU	145	144	73.00-139.00	-	1,1,2-TRICHLORO-1,2,2-TRIFL	J+(all detects)
	1,1-DICHLOROETHENE	-	127	80.00-126.00	-	1,1-DICHLOROETHENE	
	1,1-DICHLOROPROPENE	-	121	88.00-120.00	-	1,1-DICHLOROPROPENE	
	ISOPROPYLBENZENE	119	-	90.00-118.00	-	ISOPROPYLBENZENE	
	N-BUTYLBENZENE	124	-	86.00-123.00	-	N-BUTYLBENZENE	
	SEC-BUTYLBENZENE	125	-	87.00-122.00	-	SEC-BUTYLBENZENE	
	TERT-BUTYLBENZENE	120	-	89.00-118.00	-	TERT-BUTYLBENZENE	
	TETRACHLOROETHENE	161	-	87.00-118.00	-	TETRACHLOROETHENE	

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 15030A **Laboratory: FALSE**

EDD Filename: 1501036 FINAL **eQAPP Name: Rore_Modesto_GW_022315**

Method: **524.2**
Matrix: **Water**

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
B15B002 -BS1 (EW-02 MW -13A MW -17A MW -17B MW -17C MW -18A MW -23A MW -29A)	ACETONE	137	-	60.00-125.00	-	ACETONE	J+ (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 15030A **Laboratory: FALSE**

EDD Filename: 1501036 FINAL **eQAPP Name: Rore_Modesto_GW_022315**

Method: **524.2**

Matrix: **Water**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
MW-10A	ACETONE	J,C1,Q3	2.7	4.0	MRL	ug/L	J (all detects)
MW-10B	CHLOROFORM	J,C1	0.3	0.5	MRL	ug/L	J (all detects)
MW-17A	BROMODICHLOROMETHANE	J,C1	0.3	0.5	MRL	ug/L	J (all detects)
MW-17B	CHLOROFORM	J,C1	0.4	0.5	MRL	ug/L	J (all detects)
MW-29A	ACETONE	J,C1,C4,Q2,Q3	2.3	4.0	MRL	ug/L	J (all detects)

LDC #: 33775A1

SDG #: 15030A

Laboratory: USEPA Region 9 Laboratory

VALIDATION COMPLETENESS WORKSHEET

ADR/IV

Date: 2/26/15

Page: 1 of 2

Reviewer: KR

2nd Reviewer: AVL

METHOD: GC/MS Volatiles (EPA Method 524.2)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	RSD ≤ 20% ICV ≤ 35%
IV.	Continuing calibration	SW	CCV ≤ 30%
V.	Laboratory Blanks	N	Not reviewed for ADR validation.
VI.	Field blanks		
VII.	Surrogate spikes		Not reviewed for ADR validation.
VIII.	Matrix spike/Matrix spike duplicates		Not reviewed for ADR validation.
IX.	Laboratory control samples		Not reviewed for ADR validation.
X.	Field duplicates		
XI.	Internal standards	A	Not reviewed for ADR validation.
XII.	Compound quantitation RL/LOQ/LODs	N	Not reviewed for ADR validation.
XIII.	Target compound identification		Not reviewed for ADR validation.
XIV.	System performance		Not reviewed for ADR validation.
XV.	Overall assessment of data		Not reviewed for ADR validation.

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

** Indicates sample underwent Level IV validation

	Client ID	Lab ID	Matrix	Date
3 1	2=AA MW-4A	1501036-01	Water	01/29/15
3 2	MW-4B	1501036-02	Water	01/29/15
3 3	MW-4C	1501036-03	Water	01/29/15
3 4	2=AA MW-10A	1501036-04	Water	01/29/15
3 5	MW-10B	1501036-05	Water	01/29/15
3 6	MW-10C	1501036-06	Water	01/29/15
7 1	MW-13A**	1501036-07**	Water	01/29/15
8 1	MW-17A	1501036-08	Water	01/29/15
9 1	2=AA MW-17B	1501036-09	Water	01/29/15
10 1	MW-17C	1501036-10	Water	01/29/15
11 1	MW-18A	1501036-11	Water	01/29/15
12 1	MW-29A	1501036-12	Water	01/29/15
13 1	2=AA MW-23A**	1501036-13**	Water	01/29/15

LDC #: 33775A1

VALIDATION COMPLETENESS WORKSHEET

ADR/IV

SDG #: 15030A

Laboratory: USEPA Region 9 Laboratory

Date: 2/26/15

Reviewer: BR

2nd Reviewer: APL

METHOD: GC/MS Volatiles (EPA Method 524.2)

	Client ID	Lab ID	Matrix	Date
1 14	2 = AK EW-02	1501036-14	Water	01/29/15
3 15	MW-4AMS	1501036-01MS	Water	01/29/15
3 16	MW-4AMSD	1501036-01MSD	Water	01/29/15
1 17	MW-18AMS	1501036-11MS	Water	01/29/15
1 18	MW-18AMSD	1501036-11MSD	Water	01/29/15
19				
20				
21				
22				
23				
24				
25				

Notes:

1	B15B002-MB						
2	B15B003-MB						
3	B15A331-MB						

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 33775A1

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: KR
2nd Reviewer: APL

METHOD: GC/MS VOA (EPA Method 524.2)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
Y N N/A Were all percent differences (%D) ≤ 30% ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤30.0%)	Associated Samples	Qualifications
	2/2/15	CCV-020215h02	F	37.5	7-8, 9-14,	J+det/P
		(HP5973 H)			17-18 +	(7-13 = Det)
					B15B002-MB	

CONCAL.1S5

Quality Control Outlier Reports

15033A

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 15033A **Laboratory: FALSE**

EDD Filename: 1502001 FINAL **eQAPP Name: Rore_Modesto_GW_022315**

***Method:* 524.2**

***Matrix:* Water**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
MW-02AMS **MW-02AMSD** (MW-02A)	2-BUTANONE	65	66	67.00-123.00	-	2-BUTANONE	J- (all detects) UJ (all non-detects)
MW-02AMS **MW-02AMSD** (MW-02A)	1,1,2-TRICHLORO-1,2,2-TRIFLU	-	143	73.00-139.00	-	1,1,2-TRICHLORO-1,2,2-TRIFL	J+(all detects)
	1,1-DICHLOROPROPENE	-	121	88.00-120.00	-	1,1-DICHLOROPROPENE	
	1,2,4-TRIMETHYLBENZENE	-	117	90.00-112.00	-	1,2,4-TRIMETHYLBENZENE	
	1,3,5-TRIMETHYLBENZENE	-	118	90.00-115.00	-	1,3,5-TRIMETHYLBENZENE	
	1,3-DICHLOROBENZENE	-	112	88.00-111.00	-	1,3-DICHLOROBENZENE	
	1,4-DICHLOROBENZENE	-	112	87.00-111.00	-	1,4-DICHLOROBENZENE	
	2-CHLOROTOLUENE	-	116	88.00-114.00	-	2-CHLOROTOLUENE	
	4-CHLOROTOLUENE	-	114	90.00-112.00	-	4-CHLOROTOLUENE	
	ETHYLBENZENE	-	118	89.00-117.00	-	ETHYLBENZENE	
	ISOPROPYLBENZENE	-	122	90.00-118.00	-	ISOPROPYLBENZENE	
	M&P-XYLENE	-	119	90.00-113.00	-	M&P-XYLENE	
	N-BUTYLBENZENE	-	130	86.00-123.00	-	N-BUTYLBENZENE	
	N-PROPYLBENZENE	-	127	89.00-120.00	-	N-PROPYLBENZENE	
	O-XYLENE	-	113	90.00-111.00	-	O-XYLENE	
	P-ISOPROPYLTOLUENE	-	125	89.00-119.00	-	P-ISOPROPYLTOLUENE	
	SEC-BUTYLBENZENE	123	130	87.00-122.00	-	SEC-BUTYLBENZENE	
	TERT-BUTYLBENZENE	-	122	89.00-118.00	-	TERT-BUTYLBENZENE	
	TRICHLOROFLUOROMETHANE	147	150	74.00-141.00	-	TRICHLOROFLUOROMETHAN	

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 15033A **Laboratory: FALSE**

EDD Filename: 1502001 FINAL **eQAPP Name: Rore_Modesto_GW_022315**

Method: **524.2**
Matrix: **Water**

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
B15B002 -BS1 (MW-01A MW -03A MW -05A MW -06A)	ACETONE	137	-	60.00-125.00	-	ACETONE	J+ (all detects)
B15B003 -BS1 (MW-02A MW -07A MW -08A MW -11A MW -12A MW -14A)	2-BUTANONE BROMOCHLOROMETHANE	59 81	- -	67.00-123.00 84.00-114.00	- -	2-BUTANONE BROMOCHLOROMETHANE	J-(all detects) UJ(all non-detects)
B15B008 -BS1 **B15B008 -BS2** (MW-15A MW -16A MW -16B MW -16C MW -19A MW -19B1 MW -20A MW -20B MW -20C)	1,1,1,2-TETRACHLOROETHANE 1,1-DICHLOROPROPENE 1,2-DIBROMO-3-CHLOROPROP CIS-1,3-DICHLOROPROPENE METHYL TERT-BUTYL ETHER	85 85 67 73 70	- - - - -	86.00-122.00 88.00-120.00 68.00-134.00 79.00-127.00 74.00-127.00	- - - - -	1,1,1,2-TETRACHLOROETHAN 1,1-DICHLOROPROPENE 1,2-DIBROMO-3-CHLOROPRO CIS-1,3-DICHLOROPROPENE METHYL TERT-BUTYL ETHER	J-(all detects) UJ(all non-detects)
B15B012 -BS1 (MW-09A)	2-BUTANONE BROMOCHLOROMETHANE	58 80	- -	67.00-123.00 84.00-114.00	- -	2-BUTANONE BROMOCHLOROMETHANE	J-(all detects) UJ(all non-detects)

Project Name and Number: R15S40 - Modesto Groundwater Jan 2015 Qtrly Monitoring

Reporting Limit Outliers

Lab Reporting Batch ID: 15033A **Laboratory: FALSE**

EDD Filename: 1502001 FINAL **eQAPP Name: Rore_Modesto_GW_022315**

Method: **524.2**

Matrix: **Water**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
MW-01A	CHLOROFORM TETRACHLOROETHENE	J,C1 J,C1	0.3 0.3	0.5 0.5	MRL MRL	ug/L ug/L	J (all detects)
MW-02A	ACETONE	J,C1,C3	3.2	4.0	MRL	ug/L	J (all detects)
MW-05A	CHLOROFORM	J,C1	0.3	0.5	MRL	ug/L	J (all detects)
MW-11A	TETRACHLOROETHENE	J,C1	0.4	0.5	MRL	ug/L	J (all detects)
MW-12A	TRICHLOROFLUOROMETHANE	J,C1	0.4	0.5	MRL	ug/L	J (all detects)
MW-15A	1,2-DICHLOROETHANE	J,C1	0.3	0.5	MRL	ug/L	J (all detects)
MW-16C	2-BUTANONE CHLOROFORM	J,C1 J,C1	2.4 0.3	4.0 0.5	MRL MRL	ug/L ug/L	J (all detects)
MW-19B1	ACETONE TETRACHLOROETHENE	J,C1,C3,C4 J,C1	2.0 0.4	4.0 0.5	MRL MRL	ug/L ug/L	J (all detects)
MW-20A	BROMODICHLOROMETHANE METHYLENE CHLORIDE	J,C1 J,C1	0.2 0.2	0.5 0.5	MRL MRL	ug/L ug/L	J (all detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: 15033A **Laboratory: FALSE**

EDD Filename: 1502001 FINAL **eQAPP Name: Rore_Modesto_GW_022315**

Method: 524.2
Matrix: Water

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	MW-16B	DUP-2			
ACETONE	9.0	12	29	1.00	No Qualifiers Applied
CHLOROFORM	1.0	0.9	11	1.00	
TETRACHLOROETHENE	7.0	7.1	1	1.00	

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	MW-11A	DUP-3			
ACETONE	9.4	13	32	1.00	No Qualifiers Applied
CHLOROFORM	3.8	4.1	8	1.00	
TETRACHLOROETHENE	0.4	0.4	0	1.00	

LDC #: 33775B1

SDG #: 15033A

Laboratory: USEPA Region 9 Laboratory

VALIDATION COMPLETENESS WORKSHEET

ADR/IV

Date: 2/26/15

Page: 1 of 2

Reviewer: BR

2nd Reviewer: APL

METHOD: GC/MS Volatiles (EPA Method 524.2)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	SW, A	RSD ≤ 20% ICV ≤ 30%
IV.	Continuing calibration	SW	CCV ≤ 30%
V.	Laboratory Blanks	N	Not reviewed for ADR validation.
VI.	Field blanks		
VII.	Surrogate spikes		Not reviewed for ADR validation.
VIII.	Matrix spike/Matrix spike duplicates		Not reviewed for ADR validation.
IX.	Laboratory control samples		Not reviewed for ADR validation.
X.	Field duplicates		
XI.	Internal standards	A	Not reviewed for ADR validation.
XII.	Compound quantitation RL/LOQ/LODs	N	Not reviewed for ADR validation.
XIII.	Target compound identification		Not reviewed for ADR validation.
XIV.	System performance		Not reviewed for ADR validation.
XV.	Overall assessment of data		Not reviewed for ADR validation.

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

** Indicates sample underwent Level IV validation

	Client ID	Lab ID	Matrix	Date
1	MW-01A	1502001-01	Water	01/30/15
2	MW-02A	1502001-02	Water	01/30/15
3	3=AA MW-03A**	1502001-03**	Water	01/30/15
4	4=AA MW-05A	1502001-04	Water	01/30/15
5	MW-06A	1502001-05	Water	01/30/15
6	MW-07A	1502001-06	Water	01/30/15
7	MW-08A	1502001-07	Water	01/30/15
8	MW-09A	1502001-08	Water	01/30/15
9	MW-11A	1502001-09	Water	01/30/15
10	MW-12A	1502001-10	Water	01/30/15
11	MW-14A	1502001-11	Water	01/30/15
12	MW-15A**	1502001-12**	Water	01/30/15
13	MW-16A	1502001-13	Water	01/30/15

LDC #: 33775B1

SDG #: 15033A

Laboratory: USEPA Region 9 Laboratory

VALIDATION COMPLETENESS WORKSHEET

ADR/IV

Date: 2/26/15

Reviewer: RZ

2nd Reviewer: APL

METHOD: GC/MS Volatiles (EPA Method 524.2)

	Client ID	Lab ID	Matrix	Date
14	MW-16B	1502001-14	Water	01/30/15
15	MW-16C	1502001-15	Water	01/30/15
16	MW-19A	1502001-16	Water	01/30/15
17	MW-19B1	1502001-17	Water	01/30/15
18	MW-20A	1502001-18	Water	01/30/15
19	MW-20B	1502001-19	Water	01/30/15
20	MW-20C	1502001-20	Water	01/30/15
21	MW-02AMS	1502001-02MS	Water	01/30/15
22	MW-02AMSD	1502001-02MSD	Water	01/30/15
23				
24				
25				
26				
27				
28				
29				
30				

Notes:

1	B15B002-MB	5	B15B008-MB				
2	B15B003-MB						
3	B15B021-MB						
4	B15B012-MB						

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 33775B1

VALIDATION FINDINGS WORKSHEET
Initial Calibration

Page: 1 of 1
Reviewer: BR
2nd Reviewer: AR

METHOD: GC/MS VOA (EPA Method 524.2)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Did the laboratory perform a 5 point calibration prior to sample analysis?

Y N N/A Were all percent relative standard deviations (%RSD) ≤ 20% ?

#	Date	Standard ID	Compound	Finding %RSD (Limit: ≤20.0%)	Associated Samples	Qualifications
	1/13/15	ICAL - PECLARUS	F	33.54	12-20 +	J/UJ/P
			mm	~~23.5~~ 23.67	B15B008-MB	L
	1/14/15	ICAL - AG5975D	F	30.41	2, 6-7, 8, 9-11, 21-22 + B15B003-MB B15B012-MB	J/UJ/P

INICAL.1S5

LDC #: 33775B1

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Reviewer: Bn
2nd Reviewer: AML

METHOD: GC/MS VOA (EPA Method 524.2)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
Y N N/A Were all percent differences (%D) ≤ 30% ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤30.0%)	Associated Samples	Qualifications
	2/2/15	CCV-020215h02 (HP5973H)	F	37.5	1,3-5 + B15B002-MB	J+ det/P (1,3,5= Det)
	2/2/15	CCV-020215pe04 (PECLARUS)	F	34.6	12-20 + B15B008-MB	J-/UJ/P (ND + Det)
	2/2/15	CCV-020215D02 (AG5975D)	M	41.1	2,6-7,9-11, 21-22 + ~~B15B003-m~~ B15B003-MB	J-/UJ/P (ND + Det)

LDC #: 33775B1

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Reviewer: AR
2nd Reviewer: AAL

METHOD: GC/MS VOA (EPA Method 524.2)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
Y N N/A Were all percent differences (%D) ≤ 30% ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤30.0%)	Associated Samples	Qualifications
	2/3/15	CCV-020315D02	m	42.2	8+ B15B012-MB	J-/UJ/P (DCE)

Quality Control Outlier Reports

15033B

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 15033B **Laboratory: FALSE**

EDD Filename: 1502002 FINAL **eQAPP Name: Rore_Modesto_GW_022315**

***Method:* 524.2**

***Matrix:* Water**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
MW-34BMS	1,1,2-TRICHLORO-1,2,2-TRIFLU	-	143	73.00-139.00	-	1,1,2-TRICHLORO-1,2,2-TRIFL	
MW-34BMSD	TETRACHLOROETHENE	139	132	87.00-118.00	-	TETRACHLOROETHENE	J+ (all detects)
(MW-34B)	TRANS-1,2-DICHLOROETHENE	-	123	86.00-119.00	-	TRANS-1,2-DICHLOROETHEN	

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 15033B **Laboratory: FALSE**

EDD Filename: 1502002 FINAL **eQAPP Name: Rore_Modesto_GW_022315**

Method: **524.2**
Matrix: **Water**

QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
B15B008 -BS1 **B15B008 -BS2** (MW-21A MW -22A MW -24B MW -25A)	1,1,1,2-TETRACHLOROETHANE 1,1-DICHLOROPROPENE 1,2-DIBROMO-3-CHLOROPROP CIS-1,3-DICHLOROPROPENE METHYL TERT-BUTYL ETHER	85 85 67 73 70	- - - - -	86.00-122.00 88.00-120.00 68.00-134.00 79.00-127.00 74.00-127.00	- - - - -	1,1,1,2-TETRACHLOROETHAN 1,1-DICHLOROPROPENE 1,2-DIBROMO-3-CHLOROPRO CIS-1,3-DICHLOROPROPENE METHYL TERT-BUTYL ETHER	J- (all detects) UJ (all non-detects)
B15B012 -BS1 (DUP-5 MW-31A)	2-BUTANONE BROMOCHLOROMETHANE	58 80	- -	67.00-123.00 84.00-114.00	- -	2-BUTANONE BROMOCHLOROMETHANE	J-(all detects) UJ(all non-detects)

Project Name and Number: R15S40 - Modesto Groundwater Jan 2015 Qtrly Monitoring

Reporting Limit Outliers

Lab Reporting Batch ID: 15033B **Laboratory: FALSE**

EDD Filename: 1502002 FINAL **eQAPP Name: Rore_Modesto_GW_022315**

Method: **524.2**

Matrix: **Water**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
DUP-3	TETRACHLOROETHENE	J,C1	0.4	0.5	MRL	ug/L	J (all detects)
MW-22A	BROMODICHLOROMETHANE METHYLENE CHLORIDE TETRACHLOROETHENE	J,C1 J,C1 J,C1	0.2 0.3 0.3	0.5 0.5 0.5	MRL MRL MRL	ug/L ug/L ug/L	J (all detects)
MW-32B	CHLOROFORM	J,C1	0.4	0.5	MRL	ug/L	J (all detects)
MW-35B	TRICHLOROETHENE	J,C1	0.3	0.5	MRL	ug/L	J (all detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: 15033B **Laboratory: FALSE**

EDD Filename: 1502002 **eQAPP Name: Rore_Modesto_GW_022315**

Method: 524.2
Matrix: Water

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	MW-27B	DUP-1			
ACETONE	10	8.9	12	1.00	No Qualifiers Applied

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	MW-34B	DUP-5			
ACETONE	9.5	9.6	1	1.00	No Qualifiers Applied
TETRACHLOROETHENE	12	12	0	1.00	

Project Name and Number: R15S40 - Modesto Groundwater Jan 2015 Qtrly Monitoring

LDC #: 33775C1

VALIDATION COMPLETENESS WORKSHEET

ADR/IV

Date: 2/28/15

SDG #: 15033B

Page: 1 of 2

Laboratory: USEPA Region 9 Laboratory

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA Method 524.2)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	SW ~~A~~ / A	RSD ≤ 20% ICV ≤ 30%
IV.	Continuing calibration	SW	CCV ≤ 30%
V.	Laboratory Blanks	N	Not reviewed for ADR validation.
VI.	Field blanks		
VII.	Surrogate spikes		Not reviewed for ADR validation.
VIII.	Matrix spike/Matrix spike duplicates		Not reviewed for ADR validation.
IX.	Laboratory control samples		Not reviewed for ADR validation.
X.	Field duplicates		
XI.	Internal standards	A	Not reviewed for ADR validation.
XII.	Compound quantitation RL/LOQ/LODs	N	Not reviewed for ADR validation.
XIII.	Target compound identification		Not reviewed for ADR validation.
XIV.	System performance		Not reviewed for ADR validation.
XV.	Overall assessment of data		Not reviewed for ADR validation.

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

** Indicates sample underwent Level IV validation

	Client ID	Lab ID	Matrix	Date
1	MW-21A	1502002-01	Water	01/30/15
21	MW-22A	1502002-02	Water	01/30/15
31	2= AA MW-24B	1502002-03	Water	01/30/15
41	2= AA MW-25A	1502002-04	Water	01/30/15
53	MW-26B	1502002-05	Water	01/30/15
63	MW-27B N,	1502002-06	Water	01/30/15
73	4= AA MW-28B	1502002-07	Water	01/30/15
83	MW-30A**	1502002-08**	Water	01/30/15
93	MW-30B	1502002-09	Water	01/30/15
102	MW-31A	1502002-10	Water	01/30/15
113	MW-32B	1502002-11	Water	01/30/15
123	MW-32C	1502002-12	Water	01/30/15
133	MW-34B	1502002-13	Water	01/30/15

LDC #: 33775C1

VALIDATION COMPLETENESS WORKSHEET

ADR/IV

Date: 2/26/15

SDG #: 15033B

Page: 2 of 2

Laboratory: USEPA Region 9 Laboratory

Reviewer: KR

2nd Reviewer: APL

METHOD: GC/MS Volatiles (EPA Method 524.2)

	Client ID	Lab ID	Matrix	Date
14	MW-35B	1502002-14	Water	01/30/15
15	DUP-1	1502002-15	Water	01/30/15
16	DUP-2	1502002-16	Water	01/30/15
17	DUP-3	1502002-17	Water	01/30/15
18	~~DUP-4~~ cancelled 3/16/15 APL	1502002-18	Water	01/30/15
19	DUP-5	1502002-19	Water	01/30/15
20	MW-34BMS	1502002-13MS	Water	01/30/15
21	MW-34BMSD	1502002-13MSD	Water	01/30/15
22				
23				
24				
25				
26				
27				
28				
29				
30				

Notes:

1	B15B008 - MB						
2	B15B012 - MB						
3	B15B010 - MB						
4	B15B021 - MB						

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 33775C1

VALIDATION FINDINGS WORKSHEET
Initial Calibration

Page: 1 of 1
Reviewer: KR
2nd Reviewer: AR

METHOD: GC/MS VOA (EPA Method 524.2)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
(Y) N N/A Did the laboratory perform a 5 point calibration prior to sample analysis?
Y (N) N/A Were all percent relative standard deviations (%RSD) ≤ 20% ?

#	Date	Standard ID	Compound	Finding %RSD (Limit: ≤20.0%)	Associated Samples	Qualifications
	1/13/15	ICAL-PECLARUS	F	33.54	~~1-20 +~~ 1-4	J/UJ/P
			MM	23.67	B15B008-MB	
	1/14/15	ICAL-AG5975D	F	30.41	10, 19 + B15B012-MB	J/UJ/P

INICAL.1S5

LDC #: 33775C1

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Reviewer: SR
2nd Reviewer: AK

METHOD: GC/MS VOA (EPA Method 524.2)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
Y N N/A Were all percent differences (%D) ≤ 30% ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤30.0%)	Associated Samples	Qualifications
	2/2/15	CCV-020215pe04 (PECLARUS)	F	34.6	1-4 + B15B008-MB	J-/UJ/P
	2/3/15	CCV-020315D02 (AG 5975D)	M	42.2	10, 19 + B15B012-MB	J-/UJ/P

Enclosure II

EPA Level IV Data Validation Reports

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Modesto Jan. 2015 Qtrly Monitoring

LDC Report Date: March 6, 2015

Parameters: Volatiles

Validation Level: EPA Level IV

Laboratory: USEPA Region 9 Laboratory

Sample Delivery Group (SDG): 15030A

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-13A	1501036-07	Water	01/29/15
MW-23A	1501036-13	Water	01/29/15

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines (CLPNFG) for Superfund Organic Methods Data Review (June 2008). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Method 524.2

All sample results were subjected to Level IV evaluation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers:

J+ (Estimated, High Bias): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated, displaying high bias, due to non-conformances discovered during data validation.

J- (Estimated, Low Bias): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated, displaying low bias, due to non-conformances discovered during data validation.

J (Estimated, Bias Indeterminate): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation. Bias is indeterminate.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the analyte should be considered non-detect at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A bromofluorobenzene (BFB) tune was performed at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

For compounds where average relative response factors (RRFs) were utilized, percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

Average relative response factors (RRF) for all compounds were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) were less than or equal to 30.0% for all compounds with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
2/2/15	Acetone	37.5	All samples in SDG 15030A	J+ (all detects)	P

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	%R (Limits)	Flag	A or P
B15B002-BS1 (All samples in SDG 15030A)	Acetone	137 (60-125)	J+ (all detects)	P

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

All compound quantitations met validation criteria.

XIII. Target Compound Identifications

All target compound identifications met validation criteria.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to calibration %D and LCS %R data were qualified as estimated in two samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the data validation all other results are considered valid and usable for all purposes.

Modesto Jan. 2015 Qtrly Monitoring
Volatiles - Data Qualification Summary - SDG 15030A

Sample	Compound	Flag	A or P	Reason
MW-13A MW-23A	Acetone	J+ (all detects)	P	Continuing calibration (%R)
MW-13A MW-23A	Acetone	J+ (all detects)	P	Laboratory control samples (%R)

Modesto Jan. 2015 Qtrly Monitoring
Volatiles - Laboratory Blank Data Qualification Summary - SDG 15030A

No Sample Data Qualified in this SDG

Modesto Jan. 2015 Qtrly Monitoring
Volatiles - Field Blank Data Qualification Summary - SDG 15030A

No Sample Data Qualified in this SDG

LDC #: 33775A1 **VALIDATION COMPLETENESS WORKSHEET** Date: 2/26/15
SDG #: 15030A ADR/IV Page: 1 of 2
Laboratory: USEPA Region 9 Laboratory Reviewer: gk
2nd Reviewer: APL

METHOD: GC/MS Volatiles (EPA Method 524.2)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	RSD ≤ 20% ICV ≤ 30%
IV.	Continuing calibration	SW	CCV ≤ 30%
V.	Laboratory Blanks	A	~~Not reviewed for ADR validation.~~
VI.	Field blanks	N	
VII.	Surrogate spikes	A	~~Not reviewed for ADR validation.~~ #15/16, #17/18 = A
VIII.	Matrix spike/Matrix spike duplicates	SW	~~Not reviewed for ADR validation.~~ (non L4 sample - % Rec. out
IX.	Laboratory control samples	SW	~~Not reviewed for ADR validation.~~ LCS
X.	Field duplicates	N	
XI.	Internal standards	A	~~Not reviewed for ADR validation.~~
XII.	Compound quantitation RL/LOQ/LODs	A	~~Not reviewed for ADR validation.~~
XIII.	Target compound identification	A	~~Not reviewed for ADR validation.~~
XIV.	System performance	A	~~Not reviewed for ADR validation.~~
XV.	Overall assessment of data	A	~~Not reviewed for ADR validation.~~

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

** Indicates sample underwent Level IV validation

	Client ID	Lab ID	Matrix	Date
1	~~MW-4A~~	1501036-01	Water	01/29/15
2	MW-4B	1501036-02	Water	01/29/15
3	MW-4C	1501036-03	Water	01/29/15
4	MW-10A	1501036-04	Water	01/29/15
5	MW-10B	1501036-05	Water	01/29/15
6	~~MW-10C~~	1501036-06	Water	01/29/15
7	MW-13A**	1501036-07**	Water	01/29/15
8	~~MW-17A~~	1501036-08	Water	01/29/15
9	MW-17B	1501036-09	Water	01/29/15
10	MW-17C	1501036-10	Water	01/29/15
11	MW-18A	1501036-11	Water	01/29/15
12	~~MW-29A~~	1501036-12	Water	01/29/15
13	MW-23A**	1501036-13**	Water	01/29/15

2= A

LDC #: 33775A1 **VALIDATION COMPLETENESS WORKSHEET** Date: 2/26/15

SDG #: 15030A ADR/IV Page: 2 of 2

Laboratory: USEPA Region 9 Laboratory Reviewer: BR

2nd Reviewer: AL

METHOD: GC/MS Volatiles (EPA Method 524.2)

	Client ID	Lab ID	Matrix	Date
14	EW-02	1501036-14	Water	01/29/15
15	MW-4AMS	1501036-01MS	Water	01/29/15
16	MW-4AMSD	1501036-01MSD	Water	01/29/15
17	MW-18AMS	1501036-11MS	Water	01/29/15
18	MW-18AMSD	1501036-11MSD	Water	01/29/15
19				
20				
21				
22				
23				
24				
25				

Notes:

1	B15B002-MB						
2	B15B003-MB						
3	B15A131-MB						

LDC #: 33775A1

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: APL

Method: Volatiles (EPA Method 524.2)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) ≤ 30%?		✓		
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Was a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for this SDG?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		

LDC #: 33775A1

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: MR

Validation Area	Yes	No	NA	Findings/Comments
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within +/-40% from the associated calibration standard?	✓			
Were retention times within - 30% of the last continuing calibration or +/- 50% of the initial calibration?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/RLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 25 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?		✓		
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 33775A1

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: BR
2nd Reviewer: APL

METHOD: GC/MS VOA (EPA Method 524.2)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
Y N N/A Were all percent differences (%D) ≤ 30% ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤30.0%)	Associated Samples	Qualifications
	2/2/15	CCV-020215h02	F	37.5	~~7 13 + 2~~ All + B15B002-MB	J + det/p (Det)

CONCAL.1S5

LDC #: 33775A1

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: VR
2nd Reviewer: APL

METHOD: GC/MS VOA (EPA Method 524.2)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?
Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		B15B002-BS1	F	137 (60-125	( )	( )	~~7 + B15B002-~~ ~~BS+MB~~ All	J+ det / P (Det)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LDC #: 33775A1

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: BR
2nd Reviewer: AYL

METHOD: GC/MS VOA (EPA Method 524.2)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$ — A_x = Area of Compound — A_{is} = Area of associated internal standard

average RRF = sum of the RRFs/number of standards — C_x = Concentration of compound, — C_{is} = Concentration of internal standard

%RSD = 100 * (S/X) — S= Standard deviation of the RRFs, — X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (IS)	Reported RRF (RRF 5 std)	Recalculated RRF (RRF 5 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	1/14/2015	Chloroform (IS1)	3.383	3.383	3.428	3.428	3.21	3.21
	HP5973H		Trichloroethene (IS2)	0.228	0.228	0.234	0.234	5.95	6.03
			Tetrachloethane (IS3)	0.379	0.379	0.390	0.391	6.32	6.37

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 33775A1

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: BR
2nd Reviewer: APL

METHOD: GC/MS VOA (EPA Method 524.2)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$ — A_x = Area of Compound — A_{is} = Area of associated internal standard

average RRF = sum of the RRFs/number of standards — C_x = Concentration of compound, — C_{is} = Concentration of internal standard

%RSD = 100 * (S/X) — S= Standard deviation of the RRFs, — X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (IS)	Reported RRF (RRF 5 std)	Recalculated RRF (RRF 5 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	1/14/2015	Tetrachloroethene (IS3	0.545	0.545	0.570	0.570	5.37	5.36
	HP5975D								

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC#: 33775A1

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Reviewer: BR
2nd Reviewer: APL

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = (Ax)(Cis)/(Ais)(Cx)

Where:
ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
Ax = Area of compound,
Cx = Concentration of compound,
Ais = Area of associated internal standard
Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (IS)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported % D	Recalculated %D
1	020215H02	2/2/2015	Chloroform (IS1)	3.428	3.522	3.522	2.7	2.7
			Trichloroethene (IS2)	0.234	0.237	0.237	1.3	1.2
			Tetrachloethane (IS3)	0.390	0.402	0.402	3.1	3.1
2	020215D02	2/2/2015	Tetrachloethane (IS3)	0.570	0.560	0.560	1.8	1.8

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 33775A1

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: BR
2nd reviewer: APL

METHOD: GC/MS VOA (EPA Method 524.2)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 7

	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
			Reported	Recalculated	
Toluene-d8	5.000	5.070	100	100	0
Bromofluorobenzene		4.556	91	91	0
1,2-Dichlorobenzene-d4		4.584	92	92	0
~~Dibromofluoromethane~~ 1,2-DCA		5.171	103	103	0

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
			Reported	Recalculated	
Toluene-d8					
Bromofluorobenzene					
1,2-Dichlorobenzene-d4					
Dibromofluoromethane					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
			Reported	Recalculated	
Toluene-d8					
Bromofluorobenzene					
1,2-Dichlorobenzene-d4					
Dibromofluoromethane					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
			Reported	Recalculated	
Toluene-d8					
Bromofluorobenzene					
1,2-Dichlorobenzene-d4					
Dibromofluoromethane					

LDC#: 33775A1

VALIDATION FINDINGS WORKSHEET

Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: BR

2nd Reviewer AR

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

Where: SSC = Spiked sample concentration
SA = Spike added
SC = Sample concentration

RPD = [MSC- MSDC] * 2) / (MSC + MSDC)*100

MSC = Matrix spike percent recovery

MSDC = Matrix spike duplicate percent recovery

MS/MSD samples: 17/18

Compound	Spike Added (µg/L)		Sample Conc. (µg/L)	Spiked Sample Concentration (µg/L)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	-------	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
1,1-Dichloroethene	5.00	5.00	0	6.11	6.05	122%	122%	121%	121%	1.0%	1.0%
Trichloroethene	5.00	5.00	0	5.42	5.32	108%	108%	106%	106%	2%	2%
Benzene	5.00	5.00	0	5.41	5.36	108%	108%	107%	107%	0.9%	0.9%
Toluene	5.00	5.00	0	5.14	5.23	103%	103%	105%	105%	2%	2%
Chlorobenzene	5.00	5.00	0	5.12	5.09	102%	102%	102%	102%	0.6%	0.6%

Comments: Refer to Matrix Spike/Matrix Spike Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 33775A1

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Reviewer: BR
2nd Reviewer: AR

METHOD: GC/MS VOA (EPA Method 524.2)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS ID: B15B002-BS1

Compound	Spike Added (µg/L)		Spiked Sample Concentration (µg/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
1,1-Dichloroethene	5.00	—	5.52	—	110	110				
Trichloroethene			5.05		101	101				
Benzene			5.09		102	102				
Toluene			5.1		102	102				
Chlorobenzene			4.97		99	99				

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 33775A1

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: BR
2nd reviewer: AR

METHOD: GC/MS VOA (EPA Method 524.2)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
RRF	=	Relative response factor of the calibration standard.
V_o	=	Volume or weight of sample pruged in milliliters (ml) or grams (g).
Df	=	Dilution factor.
%S	=	Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. 7, AA:

AA = 11

Conc. = $\frac{(429801)(5)}{(523650)(0.390)}$

= 10.52280957 ug/L

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Modesto Jan. 2015 Qtrly Monitoring

LDC Report Date: March 6, 2015

Parameters: Volatiles

Validation Level: EPA Level IV

Laboratory: USEPA Region 9 Laboratory

Sample Delivery Group (SDG): 15033A

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-03A	1502001-03	Water	01/30/15
MW-15A	1502001-12	Water	01/30/15

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines (CLPNFG) for Superfund Organic Methods Data Review (June 2008). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Method 524.2

All sample results were subjected to Level IV evaluation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers:

J+ (Estimated, High Bias): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated, displaying high bias, due to non-conformances discovered during data validation.

J- (Estimated, Low Bias): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated, displaying low bias, due to non-conformances discovered during data validation.

J (Estimated, Bias Indeterminate): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation. Bias is indeterminate.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the analyte should be considered non-detect at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A bromofluorobenzene (BFB) tune was performed at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

For compounds where average relative response factors (RRFs) were utilized, percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds with the following exceptions:

Date	Compound	%RSD	Associated Samples	Flag	A or P
1/13/15	Acetone 1,2-Dibromo-3-chloropropane	33.54 23.67	MW-15A	UJ (all non-detects) UJ (all non-detects)	P

Average relative response factors (RRF) for all compounds were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) were less than or equal to 30.0% for all compounds with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
2/2/15	Acetone	37.5	MW-03A	J+ (all detects)	P
2/2/15	Acetone	34.6	MW-15A	UJ (all non-detects)	P

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	Flag	A or P
B15B002-BS1 (MW-03A)	Acetone	137 (60-125)	NA	J+ (all detects)	P
B15B008-BS1/BS2 (MW-15A)	1,1-Dichloropropene	85 (88-120)	-	UJ (all non-detects)	P
	cis-1,3-Dichloropropene	75 (79-127)	73 (79-127)	UJ (all non-detects)	
	Methyl-tert-butyl ether	-	70 (74-127)	UJ (all non-detects)	
	1,1,1,2-Tetrachloroethane	-	85 (86-122)	UJ (all non-detects)	
	1,2-Dibromo-3-chloropropane	-	67 (68-134)	UJ (all non-detects)	

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

All compound quantitations met validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
MW-15A	All compounds reported below the RL.	J (all detects)	A

XIII. Target Compound Identifications

All target compound identifications met validation criteria.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to initial calibration %RSD, continuing calibration %D, LCS %R and compound quantitation, data were qualified as estimated in two samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the data validation all other results are considered valid and usable for all purposes.

Modesto Jan. 2015 Qtrly Monitoring
Volatiles - Data Qualification Summary - SDG 15033A

Sample	Compound	Flag	A or P	Reason
MW-15A	Acetone 1,2-Dibromo-3-chloropropane	UJ (all non-detects) UJ (all non-detects)	P	Initial calibration (%RSD)
MW-03A	Acetone	J+ (all detects)	P	Continuing calibration (%D)
MW-15A	Acetone	UJ (all non-detects)	P	Continuing calibration (%D)
MW-03A	Acetone	J+ (all detects)	P	Laboratory control samples (%R)
MW-15A	1,1-Dichloropropene cis-1,3-Dichloropropene Methyl-tert-butyl ether 1,1,1,2-Tetrachloroethane 1,2-Dibromo-3-chloropropane	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P	Laboratory control samples (%R)
MW-15A	All compounds reported below the RL.	J (all detects)	A	Compound quantitation

Modesto Jan. 2015 Qtrly Monitoring
Volatiles - Laboratory Blank Data Qualification Summary - SDG 15033A

No Sample Data Qualified in this SDG

Modesto Jan. 2015 Qtrly Monitoring
Volatiles - Field Blank Data Qualification Summary - SDG 15033A

No Sample Data Qualified in this SDG

LDC #: 33775B1 **VALIDATION COMPLETENESS WORKSHEET** Date: 2/26/15
SDG #: 15033A ADR/IV Page: 1 of 2
Laboratory: USEPA Region 9 Laboratory Reviewer: RZ
2nd Reviewer: APL

METHOD: GC/MS Volatiles (EPA Method 524.2)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	SW A	RSD ≤ 20% ICV ≤ 30%
IV.	Continuing calibration	SW	CCV ≤ 30%
V.	Laboratory Blanks	A	~~Not reviewed for ADR validation.~~
VI.	Field blanks	A	
VII.	Surrogate spikes	A	~~Not reviewed for ADR validation.~~
VIII.	Matrix spike/Matrix spike duplicates	SW	Not reviewed for ADR validation. non 24 sample - 2 Rec out
IX.	Laboratory control samples	SW	Not reviewed for ADR validation. LCS 1/0
X.	Field duplicates	N	
XI.	Internal standards	A	~~Not reviewed for ADR validation.~~
XII.	Compound quantitation RL/LOQ/LODs	A	Not reviewed for ADR validation.
XIII.	Target compound identification	A	Not reviewed for ADR validation.
XIV.	System performance	A	Not reviewed for ADR validation.
XV.	Overall assessment of data	A	~~Not reviewed for ADR validation.~~

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

** Indicates sample underwent Level IV validation

	Client ID	Lab ID	Matrix	Date
1	~~MW-01A~~	1502001-01	Water	01/30/15
2	~~MW-02A~~	1502001-02	Water	01/30/15
3	3=AK MW-03A**	1502001-03**	Water	01/30/15
4	~~MW-05A~~	1502001-04	Water	01/30/15
5	MW-06A	1502001-05	Water	01/30/15
6	MW-07A	1502001-06	Water	01/30/15
7	MW-08A	1502001-07	Water	01/30/15
8	MW-09A	1502001-08	Water	01/30/15
9	MW-11A	1502001-09	Water	01/30/15
10	MW-12A	1502001-10	Water	01/30/15
11	~~MW-14A~~	1502001-11	Water	01/30/15
12	MW-15A**	1502001-12**	Water	01/30/15
13	~~MW-16A~~	1502001-13	Water	01/30/15

LDC #: 33775B1 **VALIDATION COMPLETENESS WORKSHEET** Date: 2/26/15

SDG #: 15033A ADR/IV Page: 2 of 2

Laboratory: USEPA Region 9 Laboratory Reviewer: BR

2nd Reviewer: APL

METHOD: GC/MS Volatiles (EPA Method 524.2)

	Client ID	Lab ID	Matrix	Date
14	MW-16B	1502001-14	Water	01/30/15
15	MW-16C	1502001-15	Water	01/30/15
16	MW-19A	1502001-16	Water	01/30/15
17	MW-19B1	1502001-17	Water	01/30/15
18	MW-20A	1502001-18	Water	01/30/15
19	MW-20B	1502001-19	Water	01/30/15
20	MW-20C	1502001-20	Water	01/30/15
21	MW-02AMS	1502001-02MS	Water	01/30/15
22	~~MW-02AMSD~~	1502001-02MSD	Water	01/30/15
23				
24				
25				
26				
27				
28				
29				
30				

Notes:

1	B15B002-MB	5	B15B008-MB				
2	B15B003-MB						
3	B15B021-MB						
4	B15B012-MB						

LDC #: 33775B1

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: APL

Method: Volatiles (EPA Method 524.2)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?		✓		
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) ≤ 30%?		✓		
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Was a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for this SDG?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			

LDC #: 33775B1

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: AML

Validation Area	Yes	No	NA	Findings/Comments
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within +/-40% from the associated calibration standard?	✓			
Were retention times within - 30% of the last continuing calibration or +/- 50% of the initial calibration?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/RLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 25 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?		✓		
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 33775 B1

VALIDATION FINDINGS WORKSHEET
Initial Calibration

Page: 1 of 1
Reviewer: RR
2nd Reviewer: AR

METHOD: GC/MS VOA (EPA Method 524.2)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Did the laboratory perform a 5 point calibration prior to sample analysis?

Y N N/A Were all percent relative standard deviations (%RSD) ≤ 20% ?

#	Date	Standard ID	Compound	Finding %RSD (Limit: ≤20.0%)	Associated Samples	Qualifications
	1/13/15	ICAL - PECLARUS	F	33.54	12 +	J/UJ/P (ND)
			MM	23.67	B15B008-MB	

INICAL.1S5

LDC #: 33775 61

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: BR
2nd Reviewer: AR

METHOD: GC/MS VOA (EPA Method 524.2)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
Y N N/A Were all percent differences (%D) ≤ 30% ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤30.0%)	Associated Samples	Qualifications
	2/2/15	CCV-020215h02 (HP5973H)	F	37.5	3 + B15B002-MB	J+ UJ/P (Det)
	2/2/15	CCV-020215pe04 (PELLARUS)	F	34.6	12 + B15B008-MB	J-/UJ/P (ND)

CONCAL.1S5

LDC #: 33775S1

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: BR
2nd Reviewer: AM

METHOD: GC/MS VOA (EPA Method 524.2)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?
Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		B15B002-BS1	F	137 (60-125)	( )	( )	3 + B15B002-MB	J + det/P (det)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
		B15B008-BS1/BS2	QQ	85 (88-120)	( )	( )	12 + B15B008-MB	J-/UJ/P (ND)
			R	75 (79-127)	73 (79-127)	( )		
			LL	( )	70 (74-127)	( )		
			UU	( )	85 (86-122)	( )		
			MM	( )	67 (68-134)	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LDC #: 33775B1

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: BR
2nd Reviewer: MPL

METHOD: GC/MS VOA (EPA Method 524.2)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$ — A_x = Area of Compound — A_{is} = Area of associated internal standard

average RRF = sum of the RRFs/number of standards — C_x = Concentration of compound, — C_{is} = Concentration of internal standard

%RSD = 100 * (S/X) — S= Standard deviation of the RRFs, — X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (IS)	Reported RRF (RRF 5 std)	Recalculated RRF (RRF 5 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	1/14/2015	Chloroform (IS1)	3.383	3.383	3.428	3.428	3.21	3.21
	HP5973H		Trichloroethene (IS2)	0.228	0.228	0.234	0.234	5.95	6.03
			Tetrachloethane (IS3)	0.379	0.379	0.390	0.391	6.32	6.37

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 33775B1

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: BR
2nd Reviewer: APL

METHOD: GC/MS VOA (EPA Method 524.2)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$ — A_x = Area of Compound — A_{is} = Area of associated internal standard

average RRF = sum of the RRFs/number of standards — C_x = Concentration of compound, — C_{is} = Concentration of internal standard

%RSD = 100 * (S/X) — S= Standard deviation of the RRFs, — X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (IS)	Reported RRF (RRF 5 std)	Recalculated RRF (RRF 5 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	1/13/2015	Chloroform (IS1)	2.853	2.853	2.739	2.739	7.18	7.17
	PECLARUS		Trichloroethene (IS2)	0.126	0.126	0.126	0.126	3.28	3.03
			Tetrachloethane (IS3)	0.170	0.170	0.168	0.168	4.33	4.35

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC#: 33775B1

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Reviewer: BR
2nd Reviewer: AAL

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = (Ax)(Cis)/(Ais)(Cx)

Where:
ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
Ax = Area of compound,
Cx = Concentration of compound,
Ais = Area of associated internal standard
Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (IS)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported % D	Recalculated %D
1	020215H02	2/5/2015	Chloroform (IS1)	3.428	3.522	3.522	2.7	2.7
	HP5973H		Trichloroethene (IS2)	0.234	0.237	0.237	1.3	1.2
			Tetrachloethane (IS3)	0.390	0.402	0.402	3.1	3.1
2	020415H02	2/4/2015	Tetrachloethane (IS3)	0.390	0.399	0.399	2.3	2.3
	HP5973H							

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC#: 33775B1

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Reviewer: BR
2nd Reviewer: AML

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = (Ax)(Cis)/(Ais)(Cx)

Where:
ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
Ax = Area of compound,
Cx = Concentration of compound,
Ais = Area of associated internal standard
Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (IS)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported % D	Recalculated %D
1	020215PE04	2/2/2015	Chloroform (IS1)	2.739	2.442	2.442	10.8	10.8
	PECLARUS		Trichloroethene (IS2)	0.126	0.118	0.118	6.3	6.3
			Tetrachloethane (IS3)	0.168	0.165	0.165	1.8	1.9
2								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 33775B1

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: SR
2nd reviewer: AML

METHOD: GC/MS VOA (EPA Method 524.2)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 3

	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
			Reported	Recalculated	
Toluene-d8	5.000	4.896	98	98	0
Bromofluorobenzene	↓	4.507	90	90	0
1,2-Dichlorobenzene-d4		4.662	93	93	0
~~Dibromofluoromethane~~ 1,2-DCA		5.357	107	107	0

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
			Reported	Recalculated	
Toluene-d8					
Bromofluorobenzene					
1,2-Dichlorobenzene-d4					
Dibromofluoromethane					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
			Reported	Recalculated	
Toluene-d8					
Bromofluorobenzene					
1,2-Dichlorobenzene-d4					
Dibromofluoromethane					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
			Reported	Recalculated	
Toluene-d8					
Bromofluorobenzene					
1,2-Dichlorobenzene-d4					
Dibromofluoromethane					

LDC#: 33775B1

VALIDATION FINDINGS WORKSHEET

Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: BR

2nd Reviewer

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

Where: SSC = Spiked sample concentration
SA = Spike added
SC = Sample concentration

RPD = [MSC- MSDC] * 2) / (MSC + MSDC)*100

MSC = Matrix spike percent recovery

MSDC = Matrix spike duplicate percent recovery

MS/MSD samples: 21/22

Compound	Spike Added (µg/L)		Sample Conc. (µg/L)	Spiked Sample Concentration (µg/L)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	-------	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
1,1-Dichloroethene	5.00	5.00	0	6.10	6.28	122%	122%	126%	126%	3%	3%
Trichloroethene	5.00	5.00	0	5.55	5.50	111%	111%	110%	110%	0.9%	0.9%
Benzene	5.00	5.00	0	5.41	5.48	108%	108%	110%	110%	1%	1%
Toluene	5.00	5.00	0	5.38	5.45	108%	108%	109%	109%	1%	1%
Chlorobenzene	5.00	5.00	0	5.18	5.27	104%	104%	105%	105%	2%	2%

Comments: Refer to Matrix Spike/Matrix Spike Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 33775B1

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Reviewer: BR
2nd Reviewer: MR

METHOD: GC/MS VOA (EPA Method 524.2)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS ID: B15B008-BS1

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
1,1-Dichloroethene	5.00	—	4.5	—	90	90				
Trichloroethene			4.69		94	94				
Benzene			4.25		85	85				
Toluene			5.6		112	112				
Chlorobenzene			4.85		97	97				

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 33775B1

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: BR
2nd reviewer: AL

METHOD: GC/MS VOA (EPA Method 524.2)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
RRF	=	Relative response factor of the calibration standard.
V_o	=	Volume or weight of sample pruged in milliliters (ml) or grams (g).
Df	=	Dilution factor.
%S	=	Percent solids, applicable to soils and solid matrices only.

Example:

K = 0.7

Sample I.D. #12, K:

Conc. = $\frac{(185969)(5)}{(506095)(2.739)}$ = 0.67078947 ug/L

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Modesto Jan. 2015 Qtrly Monitoring

LDC Report Date: March 6, 2015

Parameters: Volatiles

Validation Level: EPA Level IV

Laboratory: USEPA Region 9 Laboratory

Sample Delivery Group (SDG): 15033B

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-30A	1502002-08	Water	01/30/15

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines (CLPNFG) for Superfund Organic Methods Data Review (June 2008). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Method 524.2

All sample results were subjected to Level IV evaluation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers:

J+ (Estimated, High Bias): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated, displaying high bias, due to non-conformances discovered during data validation.

J- (Estimated, Low Bias): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated, displaying low bias, due to non-conformances discovered during data validation.

J (Estimated, Bias Indeterminate): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation. Bias is indeterminate.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the analyte should be considered non-detect at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A bromofluorobenzene (BFB) tune was performed at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

For compounds where average relative response factors (RRFs) were utilized, percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

Average relative response factors (RRF) for all compounds were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) were less than or equal to 30.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) and relative percent differences (RPD) were not within QC limits. Since there were no associated samples in this SDG, no data were qualified.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

All compound quantitations met validation criteria.

XIII. Target Compound Identifications

All target compound identifications met validation criteria.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

The quality control criteria reviewed were met and are considered acceptable. Based upon the data validation all results are considered valid and usable for all purposes.

Modesto Jan. 2015 Qtrly Monitoring
Volatiles - Data Qualification Summary - SDG 15033B

No Sample Data Qualified in this SDG

Modesto Jan. 2015 Qtrly Monitoring
Volatiles - Laboratory Blank Data Qualification Summary - SDG 15033B

No Sample Data Qualified in this SDG

Modesto Jan. 2015 Qtrly Monitoring
Volatiles - Field Blank Data Qualification Summary - SDG 15033B

No Sample Data Qualified in this SDG

LDC #: 33775C1 **VALIDATION COMPLETENESS WORKSHEET** Date: 2/26/15
SDG #: 15033B ADR/IV Page: 1 of 2
Laboratory: USEPA Region 9 Laboratory Reviewer: RR
2nd Reviewer: AVL

METHOD: GC/MS Volatiles (EPA Method 524.2)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	RSD ≤ 20% ICV ≤ 30%
IV.	Continuing calibration	A	CCV ≤ 30%
V.	Laboratory Blanks	A	~~Not reviewed for ADR validation.~~
VI.	Field blanks	N	
VII.	Surrogate spikes	A	~~Not reviewed for ADR validation.~~
VIII.	Matrix spike/Matrix spike duplicates	SW	Not reviewed for ADR validation. non L4 sample - % Rec used
IX.	Laboratory control samples	A	~~Not reviewed for ADR validation.~~ LCS
X.	Field duplicates	N	
XI.	Internal standards	A	Not reviewed for ADR validation.
XII.	Compound quantitation RL/LOQ/LODs	A	Not reviewed for ADR validation.
XIII.	Target compound identification	A	Not reviewed for ADR validation.
XIV.	System performance	A	Not reviewed for ADR validation.
XV.	Overall assessment of data	A	~~Not reviewed for ADR validation.~~

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

** Indicates sample underwent Level IV validation

	Client ID	Lab ID	Matrix	Date
1	MW-21A	1502002-01	Water	01/30/15
2	MW-22A	1502002-02	Water	01/30/15
3	MW-24B	1502002-03	Water	01/30/15
4	MW-25A	1502002-04	Water	01/30/15
5	MW-26B	1502002-05	Water	01/30/15
6	MW-27B	1502002-06	Water	01/30/15
7	MW-28B	1502002-07	Water	01/30/15
8	MW-30A**	1502002-08**	Water	01/30/15
9	MW-30B	1502002-09	Water	01/30/15
10	MW-31A	1502002-10	Water	01/30/15
11	MW-32B	1502002-11	Water	01/30/15
12	MW-32C	1502002-12	Water	01/30/15
13	MW-34B	1502002-13	Water	01/30/15

LDC #: 33775C1 **VALIDATION COMPLETENESS WORKSHEET** Date: 2/26/15
SDG #: 15033B ADR/IV Page: 2 of 2
Laboratory: USEPA Region 9 Laboratory Reviewer: RR
2nd Reviewer: APL

METHOD: GC/MS Volatiles (EPA Method 524.2)

	Client ID	Lab ID	Matrix	Date
14	MW-35B	1502002-14	Water	01/30/15
15	DUP-1	1502002-15	Water	01/30/15
16	DUP-2	1502002-16	Water	01/30/15
17	DUP-3	1502002-17	Water	01/30/15
18	~~DUP-4~~ canceled 3/16/15 APL	1502002-18	Water	01/30/15
19	DUP-5	1502002-19	Water	01/30/15
3 20	MW-34BMS	1502002-13MS	Water	01/30/15
3 21	MW-34BMSD	1502002-13MSD	Water	01/30/15
22				
23				
24				
25				
26				
27				
28				
29				
30				

Notes:

T	B15B008 - MB						
2	B15B012 -						
3	B15B010 -						
4	B15B021 -						

LDC #: 33775C1

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: APL

Method: Volatiles (EPA Method 524.2)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) ≤ 30%?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Was a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for this SDG?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			

LDC #: 33775C1

VALIDATION FINDINGS CHECKLIST

Reviewer: BR
2nd Reviewer: AR

Validation Area	Yes	No	NA	Findings/Comments
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within +/-40% from the associated calibration standard?	✓			
Were retention times within - 30% of the last continuing calibration or +/- 50% of the initial calibration?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/RLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 25 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?		✓		
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 33775C1

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: BR
2nd Reviewer: APL

METHOD: GC/MS VOA (EPA Method 524.2)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$ — A_x = Area of Compound — A_{is} = Area of associated internal standard

average RRF = sum of the RRFs/number of standards — C_x = Concentration of compound, — C_{is} = Concentration of internal standard

%RSD = 100 * (S/X) — S= Standard deviation of the RRFs, — X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (IS)	Reported RRF (RRF 5 std)	Recalculated RRF (RRF 5 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	1/14/2015	Chloroform (IS1)	3.383	3.383	3.428	3.428	3.21	3.21
	HP5973H		Trichloroethene (IS2)	0.228	0.228	0.234	0.234	5.95	6.03
			Tetrachloethane (IS3)	0.379	0.379	0.390	0.391	6.32	6.37

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC#: 33775C1

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: BR
2nd Reviewer: APL

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = (Ax)(Cis)/(Ais)(Cx)

Where:
ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
Ax = Area of compound,
Cx = Concentration of compound,
Ais = Area of associated internal standard
Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (IS)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported % D	Recalculated %D
1	020315H02	2/3/2015	Chloroform (IS1)	3.428	3.243	3.243	5.4	5.4
	HP5973H		Trichloroethene (IS2)	0.234	0.222	0.222	5.1	5.2
			Tetrachloethane (IS3)	0.390	0.380	0.380	2.6	2.7
2								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 33775C1

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: BR
2nd reviewer: AML

METHOD: GC/MS VOA (EPA Method 524.2)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 8

	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
			Reported	Recalculated	
Toluene-d8	5.000	4.949	99	99	0
Bromofluorobenzene		4.541	91	91	0
1,2-Dichlorobenzene-d4		4.65 ~~5.255~~	93	93	0
~~Dibromofluoromethane~~ 1,2 DCA		5.255	105	105	0

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
			Reported	Recalculated	
Toluene-d8					
Bromofluorobenzene					
1,2-Dichlorobenzene-d4					
Dibromofluoromethane					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
			Reported	Recalculated	
Toluene-d8					
Bromofluorobenzene					
1,2-Dichlorobenzene-d4					
Dibromofluoromethane					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
			Reported	Recalculated	
Toluene-d8					
Bromofluorobenzene					
1,2-Dichlorobenzene-d4					
Dibromofluoromethane					

LDC#: 33775C1

VALIDATION FINDINGS WORKSHEET

Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: BR

2nd Reviewer AML

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

Where: SSC = Spiked sample concentration
SA = Spike added
SC = Sample concentration

RPD = [MSC- MSDC] * 2) / (MSC + MSDC)*100

MSC = Matrix spike percent recovery

MSDC = Matrix spike duplicate percent recovery

MS/MSD samples: 20/21

Compound	Spike Added (µg/L)		Sample Conc. (µg/L)	Spiked Sample Concentration (µg/L)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
[redacted]	MS	MSD	-------	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
1,1-Dichloroethene	5.00	5.00	0	6.19	6.19	124%	124%	124%	124%	0.02%	0.00%
Trichloroethene	5.00	5.00	0	5.40	5.37	108%	108%	107%	107%	0.5%	0.6%
Benzene	5.00	5.00	0	5.34	5.36	107%	107%	107%	107%	0.3%	0.4%
Toluene	5.00	5.00	0	5.29	5.29	106%	106%	106%	106%	0.04%	0.00%
Chlorobenzene	5.00	5.00	0	5.21	5.10	104%	104%	102%	102%	2%	2%

Comments: Refer to Matrix Spike/Matrix Spike Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 33775G

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Reviewer: BR
2nd Reviewer: MM

METHOD: GC/MS VOA (EPA Method 524.2)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS ID: BI5B010-BS1

Compound	Spike Added (µg/L)		Spiked Sample Concentration (µg/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
1,1-Dichloroethene	5.00	—	5.16	—	103	103	—		—	
Trichloroethene			4.73		95	95				
Benzene			4.89		98	98				
Toluene			4.9		98	98				
Chlorobenzene			4.8		96	~~94~~ 96				

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 337754

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: BR
2nd reviewer: APL

METHOD: GC/MS VOA (EPA Method 524.2)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
RRF	=	Relative response factor of the calibration standard.
V_o	=	Volume or weight of sample pruged in milliliters (ml) or grams (g).
Df	=	Dilution factor.
%S	=	Percent solids, applicable to soils and solid matrices only.

Example: K = 2.1

Sample I.D. 8 , k :

Conc. = $\frac{(120268)(5)(\quad)(\quad)}{(84593)(3.428)(\quad)(\quad)}$

= 2.073894869 ug/L

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

ICF International
Environmental Services Assistance Team, Region 9
1337 South 46th Street, Building 201, Richmond, CA 94804-4698
Phone: (510) 412-2300 Fax: (510) 412-2304

DATE: February ~~10~~ 13, 2015

TO: Richard Bauer, Chemistry TM, EPA Region 9, Laboratory Section, MTS-2

FROM: Ziyad Rajabi, Organic Group Leader

SUBJECT: Analytical Results for TDF 10101185

As assigned under EPA Contract No. EP-W-13-029, TDF 10101185, ESAT completed analysis of 53 water samples for the Modesto/Municipal Well#11 project, Case R15S40, SDGs 15030A, 15033A, and 15033B, Work Orders 1501036, 1502001, and 1502002 for VOCs following EPA Region 9 Laboratory SOP 354 based on method E524.2. The draft analytical report and raw data package are attached.

If you have any questions regarding this information please contact me at extension 22390.

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street Building 201
Richmond, CA 94804

Date: **2/20/2015**

Subject: **Analytical Testing Results - Project R15S40**
SDG: 15030A

From: **Duane James, Acting Director**
EPA Region 9 Laboratory
MTS-2

To: **Marie Lacey**
California Site Cleanup Section 2
SFD-7-2

Attached are the results from the analysis of samples from the **Modesto Groundwater Jan 2015 Qtrly Monitoring** project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

A full documentation package for these data, including raw data and sample custody documentation, is on file at the EPA Region 9 Laboratory. If you would like to request additional review and/or validation of the data, please contact Eugenia McNaughton at the Region 9 Quality Assurance Office.

If you have any questions, please ask for Richard Bauer, the Lab Project Manager at (510)412-2300.

Electronic CC: John McGuire, RORE, Inc.
Andrew Kong, Lab Data Consultants, Inc.
Andrea Leasure, Lab Data Consultants, Inc.

Analyses included in this report:

Volatile Organic Compounds by GC/MS

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
MW-4A	1501036-01	Water	01/29/15 13:10	01/30/15 14:37
MW-4B	1501036-02	Water	01/29/15 13:30	01/30/15 14:37
MW-4C	1501036-03	Water	01/29/15 13:40	01/30/15 14:37
MW-10A	1501036-04	Water	01/29/15 14:30	01/30/15 14:37
MW-10B	1501036-05	Water	01/29/15 14:00	01/30/15 14:37
MW-10C	1501036-06	Water	01/29/15 14:20	01/30/15 14:37
MW-13A	1501036-07	Water	01/29/15 14:30	01/30/15 14:37
MW-17A	1501036-08	Water	01/29/15 14:09	01/30/15 14:37
MW-17B	1501036-09	Water	01/29/15 14:26	01/30/15 14:37
MW-17C	1501036-10	Water	01/29/15 14:41	01/30/15 14:37
MW-18A	1501036-11	Water	01/29/15 14:45	01/30/15 14:37
MW-29A	1501036-12	Water	01/29/15 14:20	01/30/15 14:37
MW-23A	1501036-13	Water	01/29/15 14:45	01/30/15 14:37
EW-02	1501036-14	Water	01/29/15 14:05	01/30/15 14:37

SDG ID 15030A

Work Order(s)

1501036

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1501036-01									**Water - Sampled: 01/29/15 13:10**
Sample ID: MW-4A									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15A131	01/30/15	01/30/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
Acetone		6.1	J, Q3, Q4	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		4.4		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene	RE1	72		5	"	B15B003	02/02/15	02/02/15	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	B15A131	01/30/15	01/30/15	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1501036-01									**Water - Sampled: 01/29/15 13:10**
Sample ID: MW-4A									**Volatile Organic Compounds by EPA Method 524.2**
Ethylbenzene		ND	U	0.5	ug/L	B15A131	01/30/15	01/30/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			89 %	*65-149%*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*RE1*		97 %	*65-149%*		*B15B003*	*02/02/15*	*02/02/15*	
Surrogate: Toluene-d8			105 %	*85-114%*		*B15A131*	*01/30/15*	*01/30/15*	
Surrogate: Toluene-d8	*RE1*		98 %	*85-114%*		*B15B003*	*02/02/15*	*02/02/15*	
Surrogate: 4-Bromofluorobenzene			90 %	*82-111%*		*B15A131*	*01/30/15*	*01/30/15*	
Surrogate: 4-Bromofluorobenzene	*RE1*		104 %	*82-111%*		*B15B003*	*02/02/15*	*02/02/15*	
Surrogate: 1,2-Dichlorobenzene-d4			84 %	*76-118%*		*B15A131*	*01/30/15*	*01/30/15*	
Surrogate: 1,2-Dichlorobenzene-d4	*RE1*		107 %	*76-118%*		*B15B003*	*02/02/15*	*02/02/15*	

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1501036-02									**Water - Sampled: 01/29/15 13:30**
Sample ID: MW-4B									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15A131	01/30/15	01/30/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		ND	U	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		16		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Lab ID: 1501036-02 — **Water - Sampled: 01/29/15 13:30**

Sample ID: MW-4B

Volatile Organic Compounds by EPA Method 524.2

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
1,1,1,2-Tetrachloroethane		ND	U	0.5	ug/L	B15A131	01/30/15	01/30/15	524.2/SOP354
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4		96 %		*65-149%*		"	"	"	
Surrogate: Toluene-d8		102 %		*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene		89 %		*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4		88 %		*76-118%*		"	"	"	

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1501036-03									**Water - Sampled: 01/29/15 13:40**
Sample ID: MW-4C									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15A131	01/30/15	01/30/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		8.3	J, Q3	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		1.7		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Lab ID: 1501036-03 — **Water - Sampled: 01/29/15 13:40**

Sample ID: MW-4C

Volatile Organic Compounds by EPA Method 524.2

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Ethylbenzene		ND	U	0.5	ug/L	B15A131	01/30/15	01/30/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			97 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			103 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			92 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			89 %	*76-118%*		"	"	"	

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1501036-04									**Water - Sampled: 01/29/15 14:30**
Sample ID: MW-10A									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15A131	01/30/15	01/30/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		2.7	C1, J, Q3	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		7.0		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene	RE1	21		1	"	B15B003	02/02/15	02/02/15	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	B15A131	01/30/15	01/30/15	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Lab ID: 1501036-04 — **Water - Sampled: 01/29/15 14:30**

Sample ID: MW-10A

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Volatile Organic Compounds by EPA Method 524.2									
Ethylbenzene		ND	U	0.5	ug/L	B15A131	01/30/15	01/30/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			96 %	*65-149%*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*RE1*		97 %	*65-149%*		*B15B003*	*02/02/15*	*02/02/15*	
Surrogate: Toluene-d8			102 %	*85-114%*		*B15A131*	*01/30/15*	*01/30/15*	
Surrogate: Toluene-d8	*RE1*		99 %	*85-114%*		*B15B003*	*02/02/15*	*02/02/15*	
Surrogate: 4-Bromofluorobenzene			90 %	*82-111%*		*B15A131*	*01/30/15*	*01/30/15*	
Surrogate: 4-Bromofluorobenzene	*RE1*		105 %	*82-111%*		*B15B003*	*02/02/15*	*02/02/15*	
Surrogate: 1,2-Dichlorobenzene-d4			88 %	*76-118%*		*B15A131*	*01/30/15*	*01/30/15*	
Surrogate: 1,2-Dichlorobenzene-d4	*RE1*		110 %	*76-118%*		*B15B003*	*02/02/15*	*02/02/15*	

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1501036-05									**Water - Sampled: 01/29/15 14:00**
Sample ID: MW-10B									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15A131	01/30/15	01/30/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		ND	U	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		0.3	C1, J	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		6.7		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1501036-05									**Water - Sampled: 01/29/15 14:00**
Sample ID: MW-10B						**Volatile Organic Compounds by EPA Method 524.2**			
Ethylbenzene		ND	U	0.5	ug/L	B15A131	01/30/15	01/30/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			98 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			104 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			91 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			88 %	*76-118%*		"	"	"	

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1501036-06									**Water - Sampled: 01/29/15 14:20**
Sample ID: MW-10C									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15A131	01/30/15	01/30/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		ND	U	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Lab ID: 1501036-06 — **Water - Sampled: 01/29/15 14:20**

Sample ID: MW-10C

Volatile Organic Compounds by EPA Method 524.2

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
1,1,1,2-Tetrachloroethane		ND	U	0.5	ug/L	B15A131	01/30/15	01/30/15	524.2/SOP354
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			101 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			104 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			91 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			90 %	*76-118%*		"	"	"	

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1501036-07									**Water - Sampled: 01/29/15 14:30**
Sample ID: MW-13A									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		4.6	C4, J, Q2, Q3	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		2.8		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		11		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Lab ID: 1501036-07 — **Water - Sampled: 01/29/15 14:30**

Sample ID: MW-13A

Volatile Organic Compounds by EPA Method 524.2

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Ethylbenzene		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			103 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			100 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			91 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			92 %	*76-118%*		"	"	"	

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1501036-08									**Water - Sampled: 01/29/15 14:09**
Sample ID: MW-17A									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		10	C4, J, Q2, Q3	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		6.0		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		0.3	C1, J	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		2.9		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

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Region 9 Laboratory

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1501036-08									**Water - Sampled: 01/29/15 14:09**
Sample ID: MW-17A									**Volatile Organic Compounds by EPA Method 524.2**
Ethylbenzene		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			105 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			100 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			89 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			94 %	*76-118%*		"	"	"	

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1501036-09									**Water - Sampled: 01/29/15 14:26**
Sample ID: MW-17B									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		9.3	C4, J, Q2, Q3	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		0.4	C1, J	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene	RE1	89		5	"	B15B003	"	02/02/15	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	B15B002	"	02/02/15	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Lab ID: 1501036-09 — **Water - Sampled: 01/29/15 14:26**

Sample ID: MW-17B — **Volatile Organic Compounds by EPA Method 524.2**

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Ethylbenzene		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			105 %	*65-149%*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*RE1*		98 %	*65-149%*		*B15B003*	"	*02/02/15*	
Surrogate: Toluene-d8			99 %	*85-114%*		*B15B002*	"	*02/02/15*	
Surrogate: Toluene-d8	*RE1*		98 %	*85-114%*		*B15B003*	"	*02/02/15*	
Surrogate: 4-Bromofluorobenzene			91 %	*82-111%*		*B15B002*	"	*02/02/15*	
Surrogate: 4-Bromofluorobenzene	*RE1*		110 %	*82-111%*		*B15B003*	"	*02/02/15*	
Surrogate: 1,2-Dichlorobenzene-d4			92 %	*76-118%*		*B15B002*	"	*02/02/15*	
Surrogate: 1,2-Dichlorobenzene-d4	*RE1*		116 %	*76-118%*		*B15B003*	"	*02/02/15*	

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Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1501036-10									**Water - Sampled: 01/29/15 14:41**
Sample ID: MW-17C									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		12	C4, J, Q2, Q3	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Lab ID: 1501036-10 — **Water - Sampled: 01/29/15 14:41**

Sample ID: MW-17C

Volatile Organic Compounds by EPA Method 524.2

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
1,1,1,2-Tetrachloroethane		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			104 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			101 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			90 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			92 %	*76-118%*		"	"	"	

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Region 9 Laboratory

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1501036-11									**Water - Sampled: 01/29/15 14:45**
Sample ID: MW-18A									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		9.1	C4, J, Q2, Q3	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		5.2		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		1.9		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1501036-11									**Water - Sampled: 01/29/15 14:45**
Sample ID: MW-18A									**Volatile Organic Compounds by EPA Method 524.2**
Ethylbenzene		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			102 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			101 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			92 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			92 %	*76-118%*		"	"	"	

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1501036-12									**Water - Sampled: 01/29/15 14:20**
Sample ID: MW-29A									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		2.3	C1, C4, J, Q2, Q3	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		24		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1501036-12									**Water - Sampled: 01/29/15 14:20**
Sample ID: MW-29A									
						Volatile Organic Compounds by EPA Method 524.2			
1,1,1,2-Tetrachloroethane		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			105 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			99 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			90 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			94 %	*76-118%*		"	"	"	

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1501036-13									**Water - Sampled: 01/29/15 14:45**
Sample ID: MW-23A									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		5.8	C4, J, Q2, Q3	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		1.7		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene	RE1	28		1	"	B15B003	"	02/02/15	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	B15B002	"	02/02/15	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1501036-13									**Water - Sampled: 01/29/15 14:45**
Sample ID: MW-23A									**Volatile Organic Compounds by EPA Method 524.2**
Ethylbenzene		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			105 %	*65-149%*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*RE1*		96 %	*65-149%*		*B15B003*	"	*02/02/15*	
Surrogate: Toluene-d8			100 %	*85-114%*		*B15B002*	"	*02/02/15*	
Surrogate: Toluene-d8	*RE1*		96 %	*85-114%*		*B15B003*	"	*02/02/15*	
Surrogate: 4-Bromofluorobenzene			91 %	*82-111%*		*B15B002*	"	*02/02/15*	
Surrogate: 4-Bromofluorobenzene	*RE1*		105 %	*82-111%*		*B15B003*	"	*02/02/15*	
Surrogate: 1,2-Dichlorobenzene-d4			91 %	*76-118%*		*B15B002*	"	*02/02/15*	
Surrogate: 1,2-Dichlorobenzene-d4	*RE1*		112 %	*76-118%*		*B15B003*	"	*02/02/15*	

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1501036-14									**Water - Sampled: 01/29/15 14:05**
Sample ID: EW-02									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		ND	U	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		2.6		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene	RE1	98		10	"	B15B003	"	02/02/15	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	B15B002	"	02/02/15	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Lab ID: 1501036-14 — **Water - Sampled: 01/29/15 14:05**

Sample ID: EW-02

Volatile Organic Compounds by EPA Method 524.2

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Ethylbenzene		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			101 %	*65-149%*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*RE1*		98 %	*65-149%*		*B15B003*	"	*02/02/15*	
Surrogate: Toluene-d8			99 %	*85-114%*		*B15B002*	"	*02/02/15*	
Surrogate: Toluene-d8	*RE1*		99 %	*85-114%*		*B15B003*	"	*02/02/15*	
Surrogate: 4-Bromofluorobenzene			91 %	*82-111%*		*B15B002*	"	*02/02/15*	
Surrogate: 4-Bromofluorobenzene	*RE1*		102 %	*82-111%*		*B15B003*	"	*02/02/15*	
Surrogate: 1,2-Dichlorobenzene-d4			91 %	*76-118%*		*B15B002*	"	*02/02/15*	
Surrogate: 1,2-Dichlorobenzene-d4	*RE1*		107 %	*76-118%*		*B15B003*	"	*02/02/15*	

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15A131 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 01/30/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15A131-BLK1)										
Dichlorodifluoromethane	ND	U	0.5	ug/L						
Chloromethane	ND	U	0.5	"						
Vinyl chloride	ND	U	0.5	"						
Bromomethane	ND	U	0.5	"						
Chloroethane	ND	U	0.5	"						
Trichlorofluoromethane	ND	U	0.5	"						
1,1-Dichloroethene	ND	U	0.5	"						
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	0.5	"						
Acetone	ND	U	4	"						
Dichloromethane	ND	U	0.5	"						
trans-1,2-Dichloroethene	ND	U	0.5	"						
tert-Butyl methyl ether (MTBE)	ND	U	2	"						
1,1-Dichloroethane	ND	U	0.5	"						
2,2-Dichloropropane	ND	U	0.5	"						
cis-1,2-Dichloroethene	ND	U	0.5	"						
2-Butanone (MEK)	ND	U	4	"						
Bromochloromethane	ND	U	0.5	"						
Chloroform	ND	U	0.5	"						
1,1,1-Trichloroethane	ND	U	0.5	"						
Carbon tetrachloride	ND	U	0.5	"						
1,1-Dichloropropene	ND	U	0.5	"						
Benzene	ND	U	0.5	"						
1,2-Dichloroethane	ND	U	0.5	"						
Trichloroethene	ND	U	0.5	"						
1,2-Dichloropropane	ND	U	0.5	"						
Dibromomethane	ND	U	0.5	"						
Bromodichloromethane	ND	U	0.5	"						
cis-1,3-Dichloropropene	ND	U	0.5	"						
Toluene	ND	U	0.5	"						
trans-1,3-Dichloropropene	ND	U	0.5	"						
1,1,2-Trichloroethane	ND	U	0.5	"						
Tetrachloroethene	ND	U	0.5	"						
1,3-Dichloropropane	ND	U	0.5	"						
Chlorodibromomethane	ND	U	0.5	"						
1,2-Dibromoethane (EDB)	ND	U	0.5	"						
Chlorobenzene	ND	U	0.5	"						
1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15A131 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 01/30/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15A131-BLK1)										
Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						
Surrogate: 1,2-Dichloroethane-d4	*4.83*			"	*5.00*		97	*65-149*		
Surrogate: Toluene-d8	*5.20*			"	*5.00*		104	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.53*			"	*5.00*		91	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*4.41*			"	*5.00*		88	*76-118*		
LCS (B15A131-BS1)										
Dichlorodifluoromethane	5.04		0.5	ug/L	5.00		101	53-153		200
Chloromethane	5.01		0.5	"	5.00		100	70-124		200
Vinyl chloride	4.8		0.5	"	5.00		96	70-130		200
Bromomethane	4.17		0.5	"	5.00		83	58-172		200
Chloroethane	4.98		0.5	"	5.00		100	75-135		200
Trichlorofluoromethane	5.02		0.5	"	5.00		100	74-141		200
1,1-Dichloroethene	5.14		0.5	"	5.00		103	70-130		200
1,1,2-Trichloro-1,2,2-trifluoroethane	5.45		0.5	"	5.00		109	73-139		200
Acetone	49.2		4	"	40.0		123	60-125		200
Dichloromethane	4.37		0.5	"	5.00		87	70-130		200
trans-1,2-Dichloroethene	5.28		0.5	"	5.00		106	70-130		200
tert-Butyl methyl ether (MTBE)	17.8		2	"	20.0		89	74-127		200
1,1-Dichloroethane	5.4		0.5	"	5.00		108	85-117		200
2,2-Dichloropropane	6.29		0.5	"	5.00		126	61-163		200

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15A131 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 01/30/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
LCS (B15A131-BS1)										
cis-1,2-Dichloroethene	5.36		0.5	"	5.00		107	87-113		200
2-Butanone (MEK)	35.1		4	"	40.0		88	67-123		200
Bromochloromethane	5.14		0.5	"	5.00		103	84-114		200
Chloroform	5.33		0.5	"	5.00		107	70-130		200
1,1,1-Trichloroethane	4.94		0.5	"	5.00		99	70-130		200
Carbon tetrachloride	5.11		0.5	"	5.00		102	70-130		200
1,1-Dichloropropene	4.93		0.5	"	5.00		99	88-120		200
Benzene	4.82		0.5	"	5.00		96	70-130		200
1,2-Dichloroethane	4.23		0.5	"	5.00		85	70-130		200
Trichloroethene	4.91		0.5	"	5.00		98	70-130		200
1,2-Dichloropropane	4.48		0.5	"	5.00		90	70-130		200
Dibromomethane	4.17		0.5	"	5.00		83	79-118		200
Bromodichloromethane	4.43		0.5	"	5.00		89	70-130		200
cis-1,3-Dichloropropene	4.51		0.5	"	5.00		90	79-127		200
Toluene	4.98		0.5	"	5.00		100	70-130		200
trans-1,3-Dichloropropene	4.67		0.5	"	5.00		93	75-135		200
1,1,2-Trichloroethane	4.4		0.5	"	5.00		88	70-130		200
Tetrachloroethene	5.15		0.5	"	5.00		103	70-130		200
1,3-Dichloropropane	4.43		0.5	"	5.00		89	82-116		200
Chlorodibromomethane	4.63		0.5	"	5.00		93	70-130		200
1,2-Dibromoethane (EDB)	4.47		0.5	"	5.00		89	85-114		200
Chlorobenzene	4.78		0.5	"	5.00		96	70-130		200
1,1,1,2-Tetrachloroethane	4.69		0.5	"	5.00		94	86-122		200
Ethylbenzene	5.16		0.5	"	5.00		103	70-130		200
m&p-Xylene	9.99		1	"	10.0		100	70-130		200
o-Xylene	5		0.5	"	5.00		100	70-130		200
Styrene	4.76		0.5	"	5.00		95	70-130		200
Bromoform	4.64		0.5	"	5.00		93	70-130		200
Isopropylbenzene	5.27		0.5	"	5.00		105	90-118		200
Bromobenzene	4.66		0.5	"	5.00		93	90-110		200
1,1,2,2-Tetrachloroethane	4.27		0.5	"	5.00		85	76-122		200
1,2,3-Trichloropropane	4.18		0.5	"	5.00		84	77-119		200
Propylbenzene	5.3		0.5	"	5.00		106	89-120		200
2-Chlorotoluene	4.94		0.5	"	5.00		99	88-114		200
4-Chlorotoluene	4.87		0.5	"	5.00		97	90-112		200
1,3,5-Trimethylbenzene	5.14		0.5	"	5.00		103	90-115		200
tert-Butylbenzene	5.23		0.5	"	5.00		105	89-118		200
1,2,4-Trimethylbenzene	5.01		0.5	"	5.00		100	90-112		200
sec-Butylbenzene	5.34		0.5	"	5.00		107	87-122		200
1,3-Dichlorobenzene	4.75		0.5	"	5.00		95	88-111		200
p-Isopropyltoluene	5.26		0.5	"	5.00		105	89-119		200
1,4-Dichlorobenzene	4.61		0.5	"	5.00		92	70-130		200

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15A131 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 01/30/15**
								Volatile Organic Compounds by EPA Method 524.2 - Quality Control		
LCS (B15A131-BS1)										
1,2-Dichlorobenzene	4.57		0.5	"	5.00		91	70-130		200
Butylbenzene	5.29		0.5	"	5.00		106	86-123		200
1,2-Dibromo-3-chloropropane	17.4		2	"	20.0		87	68-134		200
1,2,4-Trichlorobenzene	4.6		0.5	"	5.00		92	70-130		200
Hexachlorobutadiene	5.3		0.5	"	5.00		106	81-123		200
Naphthalene	4.29		0.5	"	5.00		86	54-144		200
1,2,3-Trichlorobenzene	4.53		0.5	"	5.00		91	73-122		200
Surrogate: 1,2-Dichloroethane-d4	*4.24*			"	*5.00*		85	*65-149*		
Surrogate: Toluene-d8	*5.31*			"	*5.00*		106	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.77*			"	*5.00*		95	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*4.73*			"	*5.00*		95	*76-118*		
Matrix Spike (B15A131-MS1)		**Source: 1501036-01**								
Dichlorodifluoromethane	6.37		0.5	ug/L	5.00	ND	127	53-153		20
Chloromethane	5.1		0.5	"	5.00	ND	102	70-124		20
Vinyl chloride	5.71		0.5	"	5.00	ND	114	77-127		20
Bromomethane	4.37		0.5	"	5.00	ND	87	58-172		20
Chloroethane	5.36		0.5	"	5.00	ND	107	75-135		20
Trichlorofluoromethane	6.47		0.5	"	5.00	ND	129	74-141		20
1,1-Dichloroethene	6.14		0.5	"	5.00	ND	123	80-126		20
1,1,2-Trichloro-1,2,2-trifluoroethane	7.24		0.5	"	5.00	ND	**145**	73-139		20
Acetone	28.8		4	"	40.0	6.1	**57**	60-125		20
Dichloromethane	4.38		0.5	"	5.00	ND	88	73-114		20
trans-1,2-Dichloroethene	5.46		0.5	"	5.00	ND	109	86-119		20
tert-Butyl methyl ether (MTBE)	17.3		2	"	20.0	ND	87	74-127		20
1,1-Dichloroethane	5.5		0.5	"	5.00	ND	110	85-117		20
2,2-Dichloropropane	6.42		0.5	"	5.00	ND	128	61-163		20
cis-1,2-Dichloroethene	5.27		0.5	"	5.00	ND	105	87-113		20
2-Butanone (MEK)	31.3		4	"	40.0	ND	78	67-123		20
Bromochloromethane	4.92		0.5	"	5.00	ND	98	84-114		20
Chloroform	9.8		0.5	"	5.00	4.41	108	85-117		20
1,1,1-Trichloroethane	5.68		0.5	"	5.00	ND	114	85-126		20
Carbon tetrachloride	6.09		0.5	"	5.00	ND	122	77-140		20
1,1-Dichloropropene	6		0.5	"	5.00	ND	120	88-120		20
Benzene	5.22		0.5	"	5.00	ND	104	86-112		20
1,2-Dichloroethane	4.52		0.5	"	5.00	ND	90	78-121		20
Trichloroethene	5.48		0.5	"	5.00	ND	110	90-112		20
1,2-Dichloropropane	4.86		0.5	"	5.00	ND	97	83-114		20
Dibromomethane	4.53		0.5	"	5.00	ND	91	79-118		20
Bromodichloromethane	4.86		0.5	"	5.00	ND	97	82-120		20
cis-1,3-Dichloropropene	4.69		0.5	"	5.00	ND	94	79-127		20

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15A131 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 01/30/15**
								Volatile Organic Compounds by EPA Method 524.2 - Quality Control		
Matrix Spike (B15A131-MS1)		**Source: 1501036-01**								
Toluene	5.43		0.5	"	5.00	ND	109	87-113		20
trans-1,3-Dichloropropene	4.69		0.5	"	5.00	ND	94	75-135		20
1,1,2-Trichloroethane	4.74		0.5	"	5.00	ND	95	79-116		20
Tetrachloroethene	146		0.5	"	5.00	138	**161**	87-118		20
1,3-Dichloropropane	4.61		0.5	"	5.00	ND	92	82-116		20
Chlorodibromomethane	4.77		0.5	"	5.00	ND	95	80-125		20
1,2-Dibromoethane (EDB)	4.57		0.5	"	5.00	ND	91	85-114		20
Chlorobenzene	5.07		0.5	"	5.00	ND	101	88-110		20
1,1,1,2-Tetrachloroethane	4.97		0.5	"	5.00	ND	99	86-122		20
Ethylbenzene	5.74		0.5	"	5.00	ND	115	89-117		20
m&p-Xylene	10.8		1	"	10.0	ND	108	90-113		20
o-Xylene	5.27		0.5	"	5.00	ND	105	90-111		20
Styrene	5.13		0.5	"	5.00	ND	103	86-113		20
Bromoform	4.64		0.5	"	5.00	ND	93	70-138		20
Isopropylbenzene	5.96		0.5	"	5.00	ND	**119**	90-118		20
Bromobenzene	4.84		0.5	"	5.00	ND	97	90-110		20
1,1,2,2-Tetrachloroethane	4.57		0.5	"	5.00	ND	91	76-122		20
1,2,3-Trichloropropane	4.46		0.5	"	5.00	ND	89	77-119		20
Propylbenzene	5.99		0.5	"	5.00	ND	120	89-120		20
2-Chlorotoluene	5.35		0.5	"	5.00	ND	107	88-114		20
4-Chlorotoluene	5.3		0.5	"	5.00	ND	106	90-112		20
1,3,5-Trimethylbenzene	5.69		0.5	"	5.00	ND	114	90-115		20
tert-Butylbenzene	5.98		0.5	"	5.00	ND	**120**	89-118		20
1,2,4-Trimethylbenzene	5.45		0.5	"	5.00	ND	109	90-112		20
sec-Butylbenzene	6.26		0.5	"	5.00	ND	**125**	87-122		20
1,3-Dichlorobenzene	5.14		0.5	"	5.00	ND	103	88-111		20
p-Isopropyltoluene	5.94		0.5	"	5.00	ND	119	89-119		20
1,4-Dichlorobenzene	4.9		0.5	"	5.00	ND	98	87-111		20
1,2-Dichlorobenzene	4.81		0.5	"	5.00	ND	96	86-111		20
Butylbenzene	6.18		0.5	"	5.00	ND	**124**	86-123		20
1,2-Dibromo-3-chloropropane	17.3		2	"	20.0	ND	86	68-134		20
1,2,4-Trichlorobenzene	4.71		0.5	"	5.00	ND	94	77-119		20
Hexachlorobutadiene	6.08		0.5	"	5.00	ND	122	81-123		20
Naphthalene	4.45		0.5	"	5.00	ND	89	54-144		20
1,2,3-Trichlorobenzene	4.63		0.5	"	5.00	ND	93	73-122		20
Surrogate: 1,2-Dichloroethane-d4	*4.56*			"	*5.00*		91	*65-149*		
Surrogate: Toluene-d8	*5.24*			"	*5.00*		105	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.74*			"	*5.00*		95	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*4.87*			"	*5.00*		97	*76-118*		
Matrix Spike Dup (B15A131-MSD1)		**Source: 1501036-01**								

United States Environmental Protection Agency
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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Batch B15A131 - 5030 P&T VOA - VOCs — **Prepared & Analyzed: 01/30/15**

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Matrix Spike Dup (B15A131-MSD1)		**Source: 1501036-01**								
Dichlorodifluoromethane	6.62		0.5	ug/L	5.00	ND	132	53-153	4	20
Chloromethane	5.14		0.5	"	5.00	ND	103	70-124	0.7	20
Vinyl chloride	5.47		0.5	"	5.00	ND	109	77-127	4	20
Bromomethane	4.81		0.5	"	5.00	ND	96	58-172	10	20
Chloroethane	5.45		0.5	"	5.00	ND	109	75-135	2	20
Trichlorofluoromethane	6.61		0.5	"	5.00	ND	132	74-141	2	20
1,1-Dichloroethene	6.35		0.5	"	5.00	ND	**127**	80-126	3	20
1,1,2-Trichloro-1,2,2-trifluoroethane	7.21		0.5	"	5.00	ND	**144**	73-139	0.4	20
Acetone	29.5		4	"	40.0	6.1	**59**	60-125	3	20
Dichloromethane	4.52		0.5	"	5.00	ND	90	73-114	3	20
trans-1,2-Dichloroethene	5.84		0.5	"	5.00	ND	117	86-119	7	20
tert-Butyl methyl ether (MTBE)	18.5		2	"	20.0	ND	93	74-127	7	20
1,1-Dichloroethane	5.65		0.5	"	5.00	ND	113	85-117	3	20
2,2-Dichloropropane	6.48		0.5	"	5.00	ND	130	61-163	0.9	20
cis-1,2-Dichloroethene	5.41		0.5	"	5.00	ND	108	87-113	3	20
2-Butanone (MEK)	32.6		4	"	40.0	ND	82	67-123	4	20
Bromochloromethane	5.04		0.5	"	5.00	ND	101	84-114	3	20
Chloroform	10.1		0.5	"	5.00	4.41	114	85-117	3	20
1,1,1-Trichloroethane	5.7		0.5	"	5.00	ND	114	85-126	0.5	20
Carbon tetrachloride	6.12		0.5	"	5.00	ND	122	77-140	0.5	20
1,1-Dichloropropene	6.04		0.5	"	5.00	ND	**121**	88-120	0.7	20
Benzene	5.28		0.5	"	5.00	ND	106	86-112	1	20
1,2-Dichloroethane	4.6		0.5	"	5.00	ND	92	78-121	2	20
Trichloroethene	5.52		0.5	"	5.00	ND	110	90-112	0.8	20
1,2-Dichloropropane	4.83		0.5	"	5.00	ND	97	83-114	0.5	20
Dibromomethane	4.51		0.5	"	5.00	ND	90	79-118	0.3	20
Bromodichloromethane	4.88		0.5	"	5.00	ND	98	82-120	0.4	20
cis-1,3-Dichloropropene	4.79		0.5	"	5.00	ND	96	79-127	2	20
Toluene	5.31		0.5	"	5.00	ND	106	87-113	2	20
trans-1,3-Dichloropropene	4.67		0.5	"	5.00	ND	93	75-135	0.5	20
1,1,2-Trichloroethane	4.57		0.5	"	5.00	ND	91	79-116	4	20
Tetrachloroethene	143		0.5	"	5.00	138	97	87-118	2	20
1,3-Dichloropropane	4.62		0.5	"	5.00	ND	92	82-116	0.3	20
Chlorodibromomethane	4.69		0.5	"	5.00	ND	94	80-125	2	20
1,2-Dibromoethane (EDB)	4.56		0.5	"	5.00	ND	91	85-114	0.2	20
Chlorobenzene	5.06		0.5	"	5.00	ND	101	88-110	0.3	20
1,1,1,2-Tetrachloroethane	4.78		0.5	"	5.00	ND	96	86-122	4	20
Ethylbenzene	5.58		0.5	"	5.00	ND	112	89-117	3	20
m&p-Xylene	10.7		1	"	10.0	ND	107	90-113	1	20
o-Xylene	5.19		0.5	"	5.00	ND	104	90-111	2	20
Styrene	5.01		0.5	"	5.00	ND	100	86-113	2	20
Bromoform	4.66		0.5	"	5.00	ND	93	70-138	0.3	20

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15A131 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 01/30/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Matrix Spike Dup (B15A131-MSD1)		**Source: 1501036-01**								
Isopropylbenzene	5.84		0.5	"	5.00	ND	117	90-118	2	20
Bromobenzene	4.83		0.5	"	5.00	ND	97	90-110	0.2	20
1,1,2,2-Tetrachloroethane	4.57		0.5	"	5.00	ND	91	76-122	0.02	20
1,2,3-Trichloropropane	4.35		0.5	"	5.00	ND	87	77-119	2	20
Propylbenzene	5.86		0.5	"	5.00	ND	117	89-120	2	20
2-Chlorotoluene	5.24		0.5	"	5.00	ND	105	88-114	2	20
4-Chlorotoluene	5.14		0.5	"	5.00	ND	103	90-112	3	20
1,3,5-Trimethylbenzene	5.49		0.5	"	5.00	ND	110	90-115	4	20
tert-Butylbenzene	5.8		0.5	"	5.00	ND	116	89-118	3	20
1,2,4-Trimethylbenzene	5.33		0.5	"	5.00	ND	107	90-112	2	20
sec-Butylbenzene	6.05		0.5	"	5.00	ND	121	87-122	3	20
1,3-Dichlorobenzene	4.98		0.5	"	5.00	ND	100	88-111	3	20
p-Isopropyltoluene	5.84		0.5	"	5.00	ND	117	89-119	2	20
1,4-Dichlorobenzene	4.82		0.5	"	5.00	ND	96	87-111	2	20
1,2-Dichlorobenzene	4.74		0.5	"	5.00	ND	95	86-111	1	20
Butylbenzene	6.02		0.5	"	5.00	ND	120	86-123	3	20
1,2-Dibromo-3-chloropropane	17.1		2	"	20.0	ND	86	68-134	0.9	20
1,2,4-Trichlorobenzene	4.78		0.5	"	5.00	ND	96	77-119	1	20
Hexachlorobutadiene	5.9		0.5	"	5.00	ND	118	81-123	3	20
Naphthalene	4.48		0.5	"	5.00	ND	90	54-144	0.7	20
1,2,3-Trichlorobenzene	4.58		0.5	"	5.00	ND	92	73-122	1	20
Surrogate: 1,2-Dichloroethane-d4	*4.65*			"	*5.00*		93	*65-149*		
Surrogate: Toluene-d8	*5.22*			"	*5.00*		104	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.83*			"	*5.00*		97	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*4.86*			"	*5.00*		97	*76-118*		
Batch B15B002 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B002-BLK1)										
Dichlorodifluoromethane	ND	U	0.5	ug/L						
Chloromethane	ND	U	0.5	"						
Vinyl chloride	ND	U	0.5	"						
Bromomethane	ND	U	0.5	"						
Chloroethane	ND	U	0.5	"						
Trichlorofluoromethane	ND	U	0.5	"						
1,1-Dichloroethene	ND	U	0.5	"						
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	0.5	"						
Acetone	ND	U	4	"						
Dichloromethane	ND	U	0.5	"						
trans-1,2-Dichloroethene	ND	U	0.5	"						
tert-Butyl methyl ether (MTBE)	ND	U	2	"						

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B002 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B002-BLK1)										
1,1-Dichloroethane	ND	U	0.5	"						
2,2-Dichloropropane	ND	U	0.5	"						
cis-1,2-Dichloroethene	ND	U	0.5	"						
2-Butanone (MEK)	ND	U	4	"						
Bromochloromethane	ND	U	0.5	"						
Chloroform	ND	U	0.5	"						
1,1,1-Trichloroethane	ND	U	0.5	"						
Carbon tetrachloride	ND	U	0.5	"						
1,1-Dichloropropene	ND	U	0.5	"						
Benzene	ND	U	0.5	"						
1,2-Dichloroethane	ND	U	0.5	"						
Trichloroethene	ND	U	0.5	"						
1,2-Dichloropropane	ND	U	0.5	"						
Dibromomethane	ND	U	0.5	"						
Bromodichloromethane	ND	U	0.5	"						
cis-1,3-Dichloropropene	ND	U	0.5	"						
Toluene	ND	U	0.5	"						
trans-1,3-Dichloropropene	ND	U	0.5	"						
1,1,2-Trichloroethane	ND	U	0.5	"						
Tetrachloroethene	ND	U	0.5	"						
1,3-Dichloropropane	ND	U	0.5	"						
Chlorodibromomethane	ND	U	0.5	"						
1,2-Dibromoethane (EDB)	ND	U	0.5	"						
Chlorobenzene	ND	U	0.5	"						
1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						
Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B002 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B002-BLK1)										
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						
Surrogate: 1,2-Dichloroethane-d4	*5.03*			"	*5.00*		101	*65-149*		
Surrogate: Toluene-d8	*5.13*			"	*5.00*		103	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.62*			"	*5.00*		92	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*4.61*			"	*5.00*		92	*76-118*		
LCS (B15B002-BS1)										
Dichlorodifluoromethane	5.06		0.5	ug/L	5.00		101	53-153		200
Chloromethane	4.73		0.5	"	5.00		95	70-124		200
Vinyl chloride	4.84		0.5	"	5.00		97	70-130		200
Bromomethane	4.83		0.5	"	5.00		97	58-172		200
Chloroethane	4.91		0.5	"	5.00		98	75-135		200
Trichlorofluoromethane	5.31		0.5	"	5.00		106	74-141		200
1,1-Dichloroethene	5.52		0.5	"	5.00		110	70-130		200
1,1,2-Trichloro-1,2,2-trifluoroethane	5.93		0.5	"	5.00		119	73-139		200
Acetone	55		4	"	40.0		**137**	60-125		200
Dichloromethane	4.85		0.5	"	5.00		97	70-130		200
trans-1,2-Dichloroethene	5.65		0.5	"	5.00		113	70-130		200
tert-Butyl methyl ether (MTBE)	20.6		2	"	20.0		103	74-127		200
1,1-Dichloroethane	5.58		0.5	"	5.00		112	85-117		200
2,2-Dichloropropane	5.46		0.5	"	5.00		109	61-163		200
cis-1,2-Dichloroethene	5.05		0.5	"	5.00		101	87-113		200
2-Butanone (MEK)	37.1		4	"	40.0		93	67-123		200
Bromochloromethane	5.02		0.5	"	5.00		100	84-114		200
Chloroform	5.14		0.5	"	5.00		103	70-130		200
1,1,1-Trichloroethane	5.08		0.5	"	5.00		102	70-130		200
Carbon tetrachloride	5.01		0.5	"	5.00		100	70-130		200
1,1-Dichloropropene	5.15		0.5	"	5.00		103	88-120		200
Benzene	5.09		0.5	"	5.00		102	70-130		200
1,2-Dichloroethane	4.79		0.5	"	5.00		96	70-130		200
Trichloroethene	5.05		0.5	"	5.00		101	70-130		200
1,2-Dichloropropane	4.9		0.5	"	5.00		98	70-130		200
Dibromomethane	4.8		0.5	"	5.00		96	79-118		200

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B002 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
LCS (B15B002-BS1)										
Bromodichloromethane	4.9		0.5	"	5.00		98	70-130		200
cis-1,3-Dichloropropene	4.85		0.5	"	5.00		97	79-127		200
Toluene	5.1		0.5	"	5.00		102	70-130		200
trans-1,3-Dichloropropene	4.84		0.5	"	5.00		97	75-135		200
1,1,2-Trichloroethane	4.82		0.5	"	5.00		96	70-130		200
Tetrachloroethene	5.15		0.5	"	5.00		103	70-130		200
1,3-Dichloropropane	4.81		0.5	"	5.00		96	82-116		200
Chlorodibromomethane	4.78		0.5	"	5.00		96	70-130		200
1,2-Dibromoethane (EDB)	4.84		0.5	"	5.00		97	85-114		200
Chlorobenzene	4.97		0.5	"	5.00		99	70-130		200
1,1,1,2-Tetrachloroethane	4.85		0.5	"	5.00		97	86-122		200
Ethylbenzene	5.26		0.5	"	5.00		105	70-130		200
m&p-Xylene	10.1		1	"	10.0		101	70-130		200
o-Xylene	5.06		0.5	"	5.00		101	70-130		200
Styrene	5.04		0.5	"	5.00		101	70-130		200
Bromoform	4.76		0.5	"	5.00		95	70-130		200
Isopropylbenzene	5.32		0.5	"	5.00		106	90-118		200
Bromobenzene	4.81		0.5	"	5.00		96	90-110		200
1,1,2,2-Tetrachloroethane	4.85		0.5	"	5.00		97	76-122		200
1,2,3-Trichloropropane	4.8		0.5	"	5.00		96	77-119		200
Propylbenzene	5.33		0.5	"	5.00		107	89-120		200
2-Chlorotoluene	5.08		0.5	"	5.00		102	88-114		200
4-Chlorotoluene	5.14		0.5	"	5.00		103	90-112		200
1,3,5-Trimethylbenzene	5.2		0.5	"	5.00		104	90-115		200
tert-Butylbenzene	5.31		0.5	"	5.00		106	89-118		200
1,2,4-Trimethylbenzene	5.16		0.5	"	5.00		103	90-112		200
sec-Butylbenzene	5.45		0.5	"	5.00		109	87-122		200
1,3-Dichlorobenzene	5.08		0.5	"	5.00		102	88-111		200
p-Isopropyltoluene	5.32		0.5	"	5.00		106	89-119		200
1,4-Dichlorobenzene	4.87		0.5	"	5.00		97	70-130		200
1,2-Dichlorobenzene	4.96		0.5	"	5.00		99	70-130		200
Butylbenzene	5.45		0.5	"	5.00		109	86-123		200
1,2-Dibromo-3-chloropropane	18.8		2	"	20.0		94	68-134		200
1,2,4-Trichlorobenzene	4.92		0.5	"	5.00		98	70-130		200
Hexachlorobutadiene	5.33		0.5	"	5.00		107	81-123		200
Naphthalene	4.94		0.5	"	5.00		99	54-144		200
1,2,3-Trichlorobenzene	4.94		0.5	"	5.00		99	73-122		200
Surrogate: 1,2-Dichloroethane-d4	*4.45*			"	*5.00*		89	*65-149*		
Surrogate: Toluene-d8	*5.17*			"	*5.00*		103	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.88*			"	*5.00*		98	*82-111*		

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B002 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
LCS (B15B002-BS1)										
Surrogate: 1,2-Dichlorobenzene-d4	*4.97*			"	*5.00*		99	*76-118*		
Matrix Spike (B15B002-MS1)		**Source: 1501036-11**								
Dichlorodifluoromethane	6.12		0.5	ug/L	5.00	ND	122	53-153		20
Chloromethane	5.03		0.5	"	5.00	ND	101	70-124		20
Vinyl chloride	5.47		0.5	"	5.00	ND	109	77-127		20
Bromomethane	4.78		0.5	"	5.00	ND	96	58-172		20
Chloroethane	4.86		0.5	"	5.00	ND	97	75-135		20
Trichlorofluoromethane	6.12		0.5	"	5.00	ND	122	74-141		20
1,1-Dichloroethene	6.11		0.5	"	5.00	ND	122	80-126		20
1,1,2-Trichloro-1,2,2-trifluoroethane	6.75		0.5	"	5.00	ND	135	73-139		20
Acetone	42.9		4	"	40.0	9.1	85	60-125		20
Dichloromethane	4.84		0.5	"	5.00	ND	97	73-114		20
trans-1,2-Dichloroethene	5.78		0.5	"	5.00	ND	116	86-119		20
tert-Butyl methyl ether (MTBE)	20.4		2	"	20.0	ND	102	74-127		20
1,1-Dichloroethane	5.57		0.5	"	5.00	ND	111	85-117		20
2,2-Dichloropropane	5.18		0.5	"	5.00	ND	104	61-163		20
cis-1,2-Dichloroethene	5.06		0.5	"	5.00	ND	101	87-113		20
2-Butanone (MEK)	38		4	"	40.0	ND	95	67-123		20
Bromochloromethane	4.92		0.5	"	5.00	ND	98	84-114		20
Chloroform	10.5		0.5	"	5.00	5.19	107	85-117		20
1,1,1-Trichloroethane	5.42		0.5	"	5.00	ND	108	85-126		20
Carbon tetrachloride	5.66		0.5	"	5.00	ND	113	77-140		20
1,1-Dichloropropene	5.92		0.5	"	5.00	ND	118	88-120		20
Benzene	5.41		0.5	"	5.00	ND	108	86-112		20
1,2-Dichloroethane	5.08		0.5	"	5.00	ND	102	78-121		20
Trichloroethene	5.42		0.5	"	5.00	ND	108	90-112		20
1,2-Dichloropropane	5.08		0.5	"	5.00	ND	102	83-114		20
Dibromomethane	5.08		0.5	"	5.00	ND	102	79-118		20
Bromodichloromethane	5.17		0.5	"	5.00	ND	103	82-120		20
cis-1,3-Dichloropropene	4.89		0.5	"	5.00	ND	98	79-127		20
Toluene	5.14		0.5	"	5.00	ND	103	87-113		20
trans-1,3-Dichloropropene	4.69		0.5	"	5.00	ND	94	75-135		20
1,1,2-Trichloroethane	4.98		0.5	"	5.00	ND	100	79-116		20
Tetrachloroethene	7.84		0.5	"	5.00	1.92	118	87-118		20
1,3-Dichloropropane	5		0.5	"	5.00	ND	100	82-116		20
Chlorodibromomethane	4.73		0.5	"	5.00	ND	95	80-125		20
1,2-Dibromoethane (EDB)	5.05		0.5	"	5.00	ND	101	85-114		20
Chlorobenzene	5.12		0.5	"	5.00	ND	102	88-110		20
1,1,1,2-Tetrachloroethane	4.74		0.5	"	5.00	ND	95	86-122		20
Ethylbenzene	5.45		0.5	"	5.00	ND	109	89-117		20
m&p-Xylene	10.5		1	"	10.0	ND	105	90-113		20

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B002 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
								Volatile Organic Compounds by EPA Method 524.2 - Quality Control		
Matrix Spike (B15B002-MS1)		**Source: 1501036-11**								
o-Xylene	5.2		0.5	"	5.00	ND	104	90-111		20
Styrene	5.16		0.5	"	5.00	ND	103	86-113		20
Bromoform	4.86		0.5	"	5.00	ND	97	70-138		20
Isopropylbenzene	5.63		0.5	"	5.00	ND	113	90-118		20
Bromobenzene	5.06		0.5	"	5.00	ND	101	90-110		20
1,1,2,2-Tetrachloroethane	5.15		0.5	"	5.00	ND	103	76-122		20
1,2,3-Trichloropropane	5		0.5	"	5.00	ND	100	77-119		20
Propylbenzene	5.69		0.5	"	5.00	ND	114	89-120		20
2-Chlorotoluene	5.21		0.5	"	5.00	ND	104	88-114		20
4-Chlorotoluene	5.29		0.5	"	5.00	ND	106	90-112		20
1,3,5-Trimethylbenzene	5.44		0.5	"	5.00	ND	109	90-115		20
tert-Butylbenzene	5.64		0.5	"	5.00	ND	113	89-118		20
1,2,4-Trimethylbenzene	5.33		0.5	"	5.00	ND	107	90-112		20
sec-Butylbenzene	5.89		0.5	"	5.00	ND	118	87-122		20
1,3-Dichlorobenzene	5.23		0.5	"	5.00	ND	105	88-111		20
p-Isopropyltoluene	5.66		0.5	"	5.00	ND	113	89-119		20
1,4-Dichlorobenzene	5.12		0.5	"	5.00	ND	102	87-111		20
1,2-Dichlorobenzene	5.11		0.5	"	5.00	ND	102	86-111		20
Butylbenzene	5.88		0.5	"	5.00	ND	118	86-123		20
1,2-Dibromo-3-chloropropane	19.3		2	"	20.0	ND	97	68-134		20
1,2,4-Trichlorobenzene	5.04		0.5	"	5.00	ND	101	77-119		20
Hexachlorobutadiene	5.57		0.5	"	5.00	ND	111	81-123		20
Naphthalene	5.12		0.5	"	5.00	ND	102	54-144		20
1,2,3-Trichlorobenzene	5.11		0.5	"	5.00	ND	102	73-122		20
Surrogate: 1,2-Dichloroethane-d4	*4.96*			"	*5.00*		99	*65-149*		
Surrogate: Toluene-d8	*5.01*			"	*5.00*		100	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.88*			"	*5.00*		98	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*5.13*			"	*5.00*		103	*76-118*		
Matrix Spike Dup (B15B002-MSD1)		**Source: 1501036-11**								
Dichlorodifluoromethane	6.16		0.5	ug/L	5.00	ND	123	53-153	0.7	20
Chloromethane	5.1		0.5	"	5.00	ND	102	70-124	1	20
Vinyl chloride	5.52		0.5	"	5.00	ND	110	77-127	1	20
Bromomethane	5.32		0.5	"	5.00	ND	106	58-172	11	20
Chloroethane	5.01		0.5	"	5.00	ND	100	75-135	3	20
Trichlorofluoromethane	6.39		0.5	"	5.00	ND	128	74-141	4	20
1,1-Dichloroethene	6.05		0.5	"	5.00	ND	121	80-126	1	20
1,1,2-Trichloro-1,2,2-trifluoroethane	6.87		0.5	"	5.00	ND	137	73-139	2	20
Acetone	42		4	"	40.0	9.1	82	60-125	2	20
Dichloromethane	4.7		0.5	"	5.00	ND	94	73-114	3	20
trans-1,2-Dichloroethene	5.54		0.5	"	5.00	ND	111	86-119	4	20

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B002 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
								Volatile Organic Compounds by EPA Method 524.2 - Quality Control		
Matrix Spike Dup (B15B002-MSD1)		**Source: 1501036-11**								
tert-Butyl methyl ether (MTBE)	20.6		2	"	20.0	ND	103	74-127	1	20
1,1-Dichloroethane	5.43		0.5	"	5.00	ND	109	85-117	2	20
2,2-Dichloropropane	4.96		0.5	"	5.00	ND	99	61-163	4	20
cis-1,2-Dichloroethene	5.09		0.5	"	5.00	ND	102	87-113	0.6	20
2-Butanone (MEK)	39.1		4	"	40.0	ND	98	67-123	3	20
Bromochloromethane	5.01		0.5	"	5.00	ND	100	84-114	2	20
Chloroform	10.5		0.5	"	5.00	5.19	106	85-117	0.2	20
1,1,1-Trichloroethane	5.48		0.5	"	5.00	ND	110	85-126	1	20
Carbon tetrachloride	5.69		0.5	"	5.00	ND	114	77-140	0.5	20
1,1-Dichloropropene	5.93		0.5	"	5.00	ND	119	88-120	0.2	20
Benzene	5.36		0.5	"	5.00	ND	107	86-112	0.9	20
1,2-Dichloroethane	4.93		0.5	"	5.00	ND	99	78-121	3	20
Trichloroethene	5.32		0.5	"	5.00	ND	106	90-112	2	20
1,2-Dichloropropane	5.22		0.5	"	5.00	ND	104	83-114	3	20
Dibromomethane	4.86		0.5	"	5.00	ND	97	79-118	5	20
Bromodichloromethane	5.14		0.5	"	5.00	ND	103	82-120	0.6	20
cis-1,3-Dichloropropene	4.81		0.5	"	5.00	ND	96	79-127	2	20
Toluene	5.23		0.5	"	5.00	ND	105	87-113	2	20
trans-1,3-Dichloropropene	4.71		0.5	"	5.00	ND	94	75-135	0.4	20
1,1,2-Trichloroethane	5.1		0.5	"	5.00	ND	102	79-116	3	20
Tetrachloroethene	7.66		0.5	"	5.00	1.92	115	87-118	2	20
1,3-Dichloropropane	4.87		0.5	"	5.00	ND	97	82-116	3	20
Chlorodibromomethane	4.82		0.5	"	5.00	ND	96	80-125	2	20
1,2-Dibromoethane (EDB)	4.98		0.5	"	5.00	ND	100	85-114	1	20
Chlorobenzene	5.09		0.5	"	5.00	ND	102	88-110	0.6	20
1,1,1,2-Tetrachloroethane	4.8		0.5	"	5.00	ND	96	86-122	1	20
Ethylbenzene	5.47		0.5	"	5.00	ND	109	89-117	0.3	20
m&p-Xylene	10.5		1	"	10.0	ND	105	90-113	0.3	20
o-Xylene	5.14		0.5	"	5.00	ND	103	90-111	1	20
Styrene	5.22		0.5	"	5.00	ND	104	86-113	1	20
Bromoform	4.84		0.5	"	5.00	ND	97	70-138	0.4	20
Isopropylbenzene	5.58		0.5	"	5.00	ND	112	90-118	0.9	20
Bromobenzene	4.96		0.5	"	5.00	ND	99	90-110	2	20
1,1,2,2-Tetrachloroethane	5.03		0.5	"	5.00	ND	101	76-122	2	20
1,2,3-Trichloropropane	5.01		0.5	"	5.00	ND	100	77-119	0.1	20
Propylbenzene	5.64		0.5	"	5.00	ND	113	89-120	1	20
2-Chlorotoluene	5.16		0.5	"	5.00	ND	103	88-114	0.9	20
4-Chlorotoluene	5.21		0.5	"	5.00	ND	104	90-112	2	20
1,3,5-Trimethylbenzene	5.39		0.5	"	5.00	ND	108	90-115	1	20
tert-Butylbenzene	5.59		0.5	"	5.00	ND	112	89-118	0.8	20
1,2,4-Trimethylbenzene	5.32		0.5	"	5.00	ND	106	90-112	0.2	20
sec-Butylbenzene	5.88		0.5	"	5.00	ND	118	87-122	0.3	20

United States Environmental Protection Agency
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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B002 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
								Volatile Organic Compounds by EPA Method 524.2 - Quality Control		
Matrix Spike Dup (B15B002-MSD1)		**Source: 1501036-11**								
1,3-Dichlorobenzene	5.14		0.5	"	5.00	ND	103	88-111	2	20
p-Isopropyltoluene	5.56		0.5	"	5.00	ND	111	89-119	2	20
1,4-Dichlorobenzene	5.05		0.5	"	5.00	ND	101	87-111	1	20
1,2-Dichlorobenzene	5.08		0.5	"	5.00	ND	102	86-111	0.6	20
Butylbenzene	5.81		0.5	"	5.00	ND	116	86-123	1	20
1,2-Dibromo-3-chloropropane	19.6		2	"	20.0	ND	98	68-134	1	20
1,2,4-Trichlorobenzene	5.03		0.5	"	5.00	ND	101	77-119	0.04	20
Hexachlorobutadiene	5.54		0.5	"	5.00	ND	111	81-123	0.5	20
Naphthalene	5.18		0.5	"	5.00	ND	104	54-144	1	20
1,2,3-Trichlorobenzene	5.12		0.5	"	5.00	ND	102	73-122	0.2	20
Surrogate: 1,2-Dichloroethane-d4	*4.90*			"	*5.00*		98	*65-149*		
Surrogate: Toluene-d8	*5.08*			"	*5.00*		102	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.98*			"	*5.00*		100	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*5.25*			"	*5.00*		105	*76-118*		
Batch B15B003 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
								Volatile Organic Compounds by EPA Method 524.2 - Quality Control		
Blank (B15B003-BLK1)										
Dichlorodifluoromethane	ND	U	0.5	ug/L						
Chloromethane	ND	U	0.5	"						
Vinyl chloride	ND	U	0.5	"						
Bromomethane	ND	U	0.5	"						
Chloroethane	ND	U	0.5	"						
Trichlorofluoromethane	ND	U	0.5	"						
1,1-Dichloroethene	ND	U	0.5	"						
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	0.5	"						
Acetone	ND	C3, J, U	4	"						
Dichloromethane	ND	U	0.5	"						
trans-1,2-Dichloroethene	ND	U	0.5	"						
tert-Butyl methyl ether (MTBE)	ND	U	2	"						
1,1-Dichloroethane	ND	U	0.5	"						
2,2-Dichloropropane	ND	U	0.5	"						
cis-1,2-Dichloroethene	ND	J, Q2, U	0.5	"						
2-Butanone (MEK)	ND	C4, J, Q2, U	4	"						
Bromochloromethane	ND	J, Q2, U	0.5	"						
Chloroform	ND	U	0.5	"						
1,1,1-Trichloroethane	ND	U	0.5	"						
Carbon tetrachloride	ND	U	0.5	"						
1,1-Dichloropropene	ND	U	0.5	"						
Benzene	ND	U	0.5	"						
1,2-Dichloroethane	ND	U	0.5	"						

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B003 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B003-BLK1)										
Trichloroethene	ND	U	0.5	"						
1,2-Dichloropropane	ND	U	0.5	"						
Dibromomethane	ND	U	0.5	"						
Bromodichloromethane	ND	U	0.5	"						
cis-1,3-Dichloropropene	ND	U	0.5	"						
Toluene	ND	U	0.5	"						
trans-1,3-Dichloropropene	ND	U	0.5	"						
1,1,2-Trichloroethane	ND	U	0.5	"						
Tetrachloroethene	ND	U	0.5	"						
1,3-Dichloropropane	ND	U	0.5	"						
Chlorodibromomethane	ND	U	0.5	"						
1,2-Dibromoethane (EDB)	ND	U	0.5	"						
Chlorobenzene	ND	U	0.5	"						
1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						
Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B003 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B003-BLK1)										
Surrogate: 1,2-Dichloroethane-d4	*4.72*			"	*5.00*		94	*65-149*		
Surrogate: Toluene-d8	*5.00*			"	*5.00*		100	*85-114*		
Surrogate: 4-Bromofluorobenzene	*5.42*			"	*5.00*		108	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*5.78*			"	*5.00*		116	*76-118*		
LCS (B15B003-BS1)										
Dichlorodifluoromethane	3.74		0.5	ug/L	5.00		75	53-153		200
Chloromethane	4.72		0.5	"	5.00		94	70-124		200
Vinyl chloride	4.64		0.5	"	5.00		93	70-130		200
Bromomethane	4.9		0.5	"	5.00		98	58-172		200
Chloroethane	5.06		0.5	"	5.00		101	75-135		200
Trichlorofluoromethane	5.13		0.5	"	5.00		103	74-141		200
1,1-Dichloroethene	4.73		0.5	"	5.00		95	70-130		200
1,1,2-Trichloro-1,2,2-trifluoroethane	4.68		0.5	"	5.00		94	73-139		200
Acetone	29.8		4	"	40.0		74	60-125		200
Dichloromethane	4.62		0.5	"	5.00		92	70-130		200
trans-1,2-Dichloroethene	4.88		0.5	"	5.00		98	70-130		200
tert-Butyl methyl ether (MTBE)	17.3		2	"	20.0		86	74-127		200
1,1-Dichloroethane	4.72		0.5	"	5.00		94	85-117		200
2,2-Dichloropropane	4.64		0.5	"	5.00		93	61-163		200
cis-1,2-Dichloroethene	4.2		0.5	"	5.00		84	70-130		200
2-Butanone (MEK)	23.6		4	"	40.0		**59**	67-123		200
Bromochloromethane	4.03		0.5	"	5.00		**81**	84-114		200
Chloroform	4.06		0.5	"	5.00		81	70-130		200
1,1,1-Trichloroethane	5.2		0.5	"	5.00		104	70-130		200
Carbon tetrachloride	5.06		0.5	"	5.00		101	70-130		200
1,1-Dichloropropene	4.65		0.5	"	5.00		93	88-120		200
Benzene	4.84		0.5	"	5.00		97	70-130		200
1,2-Dichloroethane	4.39		0.5	"	5.00		88	70-130		200
Trichloroethene	4.58		0.5	"	5.00		92	70-130		200
1,2-Dichloropropane	4.75		0.5	"	5.00		95	70-130		200
Dibromomethane	4.48		0.5	"	5.00		90	79-118		200
Bromodichloromethane	4.58		0.5	"	5.00		92	70-130		200
cis-1,3-Dichloropropene	4.3		0.5	"	5.00		86	79-127		200
Toluene	5.04		0.5	"	5.00		101	70-130		200
trans-1,3-Dichloropropene	4.37		0.5	"	5.00		87	75-135		200
1,1,2-Trichloroethane	4.75		0.5	"	5.00		95	70-130		200
Tetrachloroethene	4.91		0.5	"	5.00		98	70-130		200
1,3-Dichloropropane	4.47		0.5	"	5.00		89	82-116		200
Chlorodibromomethane	4.41		0.5	"	5.00		88	70-130		200
1,2-Dibromoethane (EDB)	4.39		0.5	"	5.00		88	85-114		200

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B003 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
LCS (B15B003-BS1)										
Chlorobenzene	4.79		0.5	"	5.00		96	70-130		200
1,1,1,2-Tetrachloroethane	5.18		0.5	"	5.00		104	86-122		200
Ethylbenzene	5.12		0.5	"	5.00		102	70-130		200
m&p-Xylene	10.4		1	"	10.0		104	70-130		200
o-Xylene	5.25		0.5	"	5.00		105	70-130		200
Styrene	5.02		0.5	"	5.00		100	70-130		200
Bromoform	4.71		0.5	"	5.00		94	70-130		200
Isopropylbenzene	5.44		0.5	"	5.00		109	90-118		200
Bromobenzene	4.86		0.5	"	5.00		97	90-110		200
1,1,2,2-Tetrachloroethane	5.01		0.5	"	5.00		100	76-122		200
1,2,3-Trichloropropane	4.55		0.5	"	5.00		91	77-119		200
Propylbenzene	5.26		0.5	"	5.00		105	89-120		200
2-Chlorotoluene	5.26		0.5	"	5.00		105	88-114		200
4-Chlorotoluene	5.11		0.5	"	5.00		102	90-112		200
1,3,5-Trimethylbenzene	5.46		0.5	"	5.00		109	90-115		200
tert-Butylbenzene	5.65		0.5	"	5.00		113	89-118		200
1,2,4-Trimethylbenzene	5.33		0.5	"	5.00		107	90-112		200
sec-Butylbenzene	5.54		0.5	"	5.00		111	87-122		200
1,3-Dichlorobenzene	5.09		0.5	"	5.00		102	88-111		200
p-Isopropyltoluene	5.53		0.5	"	5.00		111	89-119		200
1,4-Dichlorobenzene	5.11		0.5	"	5.00		102	70-130		200
1,2-Dichlorobenzene	5.12		0.5	"	5.00		102	70-130		200
Butylbenzene	5.47		0.5	"	5.00		109	86-123		200
1,2-Dibromo-3-chloropropane	18.8		2	"	20.0		94	68-134		200
1,2,4-Trichlorobenzene	5.13		0.5	"	5.00		103	70-130		200
Hexachlorobutadiene	5.59		0.5	"	5.00		112	81-123		200
Naphthalene	4.99		0.5	"	5.00		100	54-144		200
1,2,3-Trichlorobenzene	5.05		0.5	"	5.00		101	73-122		200
Surrogate: 1,2-Dichloroethane-d4	*4.60*			"	*5.00*		92	*65-149*		
Surrogate: Toluene-d8	*5.40*			"	*5.00*		108	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.99*			"	*5.00*		100	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*5.47*			"	*5.00*		109	*76-118*		
Batch B15B012 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/03/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B012-BLK1)										
Dichlorodifluoromethane	ND	U	0.5	ug/L						
Chloromethane	ND	U	0.5	"						
Vinyl chloride	ND	U	0.5	"						
Bromomethane	ND	U	0.5	"						
Chloroethane	ND	U	0.5	"						

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B012 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/03/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B012-BLK1)										
Trichlorofluoromethane	ND	U	0.5	"						
1,1-Dichloroethene	ND	U	0.5	"						
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	0.5	"						
Acetone	ND	C3, J, U	4	"						
Dichloromethane	ND	U	0.5	"						
trans-1,2-Dichloroethene	ND	U	0.5	"						
tert-Butyl methyl ether (MTBE)	ND	U	2	"						
1,1-Dichloroethane	ND	U	0.5	"						
2,2-Dichloropropane	ND	U	0.5	"						
cis-1,2-Dichloroethene	ND	U	0.5	"						
2-Butanone (MEK)	ND	C4, J, Q2, U	4	"						
Bromochloromethane	ND	J, Q2, U	0.5	"						
Chloroform	ND	U	0.5	"						
1,1,1-Trichloroethane	ND	U	0.5	"						
Carbon tetrachloride	ND	U	0.5	"						
1,1-Dichloropropene	ND	U	0.5	"						
Benzene	ND	U	0.5	"						
1,2-Dichloroethane	ND	U	0.5	"						
Trichloroethene	ND	U	0.5	"						
1,2-Dichloropropane	ND	U	0.5	"						
Dibromomethane	ND	U	0.5	"						
Bromodichloromethane	ND	U	0.5	"						
cis-1,3-Dichloropropene	ND	U	0.5	"						
Toluene	ND	U	0.5	"						
trans-1,3-Dichloropropene	ND	U	0.5	"						
1,1,2-Trichloroethane	ND	U	0.5	"						
Tetrachloroethene	ND	U	0.5	"						
1,3-Dichloropropane	ND	U	0.5	"						
Chlorodibromomethane	ND	U	0.5	"						
1,2-Dibromoethane (EDB)	ND	U	0.5	"						
Chlorobenzene	ND	U	0.5	"						
1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						
Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B012 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/03/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B012-BLK1)										
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						
Surrogate: 1,2-Dichloroethane-d4	*4.90*			"	*5.00*		98	*65-149*		
Surrogate: Toluene-d8	*5.00*			"	*5.00*		100	*85-114*		
Surrogate: 4-Bromofluorobenzene	*5.28*			"	*5.00*		106	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*5.51*			"	*5.00*		110	*76-118*		
LCS (B15B012-BS1)										
Dichlorodifluoromethane	4.24		0.5	ug/L	5.00		85	53-153		200
Chloromethane	4.57		0.5	"	5.00		91	70-124		200
Vinyl chloride	4.89		0.5	"	5.00		98	70-130		200
Bromomethane	5.17		0.5	"	5.00		103	58-172		200
Chloroethane	5.29		0.5	"	5.00		106	75-135		200
Trichlorofluoromethane	5.4		0.5	"	5.00		108	74-141		200
1,1-Dichloroethene	5.17		0.5	"	5.00		103	70-130		200
1,1,2-Trichloro-1,2,2-trifluoroethane	5.55		0.5	"	5.00		111	73-139		200
Acetone	28.9		4	"	40.0		72	60-125		200
Dichloromethane	4.73		0.5	"	5.00		95	70-130		200
trans-1,2-Dichloroethene	5.23		0.5	"	5.00		105	70-130		200
tert-Butyl methyl ether (MTBE)	17.4		2	"	20.0		87	74-127		200
1,1-Dichloroethane	4.85		0.5	"	5.00		97	85-117		200
2,2-Dichloropropane	4.5		0.5	"	5.00		90	61-163		200
cis-1,2-Dichloroethene	4.24		0.5	"	5.00		85	70-130		200
2-Butanone (MEK)	23.1		4	"	40.0		**58**	67-123		200
Bromochloromethane	4		0.5	"	5.00		**80**	84-114		200
Chloroform	4.02		0.5	"	5.00		80	70-130		200
1,1,1-Trichloroethane	5.07		0.5	"	5.00		101	70-130		200

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Batch B15B012 - 5030 P&T VOA - VOCs — **Prepared & Analyzed: 02/03/15**

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS (B15B012-BS1)										
Carbon tetrachloride	5.03		0.5	"	5.00		101	70-130		200
1,1-Dichloropropene	4.62		0.5	"	5.00		92	88-120		200
Benzene	4.71		0.5	"	5.00		94	70-130		200
1,2-Dichloroethane	4.25		0.5	"	5.00		85	70-130		200
Trichloroethene	4.63		0.5	"	5.00		93	70-130		200
1,2-Dichloropropane	4.61		0.5	"	5.00		92	70-130		200
Dibromomethane	4.26		0.5	"	5.00		85	79-118		200
Bromodichloromethane	4.38		0.5	"	5.00		88	70-130		200
cis-1,3-Dichloropropene	3.99		0.5	"	5.00		80	79-127		200
Toluene	5.09		0.5	"	5.00		102	70-130		200
trans-1,3-Dichloropropene	3.9		0.5	"	5.00		78	75-135		200
1,1,2-Trichloroethane	4.7		0.5	"	5.00		94	70-130		200
Tetrachloroethene	5.05		0.5	"	5.00		101	70-130		200
1,3-Dichloropropane	4.44		0.5	"	5.00		89	82-116		200
Chlorodibromomethane	4.33		0.5	"	5.00		87	70-130		200
1,2-Dibromoethane (EDB)	4.39		0.5	"	5.00		88	85-114		200
Chlorobenzene	4.9		0.5	"	5.00		98	70-130		200
1,1,1,2-Tetrachloroethane	4.93		0.5	"	5.00		99	86-122		200
Ethylbenzene	5.24		0.5	"	5.00		105	70-130		200
m&p-Xylene	10.6		1	"	10.0		106	70-130		200
o-Xylene	5.28		0.5	"	5.00		106	70-130		200
Styrene	5.05		0.5	"	5.00		101	70-130		200
Bromoform	4.53		0.5	"	5.00		91	70-130		200
Isopropylbenzene	5.54		0.5	"	5.00		111	90-118		200
Bromobenzene	4.88		0.5	"	5.00		98	90-110		200
1,1,2,2-Tetrachloroethane	4.96		0.5	"	5.00		99	76-122		200
1,2,3-Trichloropropane	4.81		0.5	"	5.00		96	77-119		200
Propylbenzene	5.44		0.5	"	5.00		109	89-120		200
2-Chlorotoluene	5.37		0.5	"	5.00		107	88-114		200
4-Chlorotoluene	5.2		0.5	"	5.00		104	90-112		200
1,3,5-Trimethylbenzene	5.56		0.5	"	5.00		111	90-115		200
tert-Butylbenzene	5.6		0.5	"	5.00		112	89-118		200
1,2,4-Trimethylbenzene	5.4		0.5	"	5.00		108	90-112		200
sec-Butylbenzene	5.72		0.5	"	5.00		114	87-122		200
1,3-Dichlorobenzene	5.17		0.5	"	5.00		103	88-111		200
p-Isopropyltoluene	5.62		0.5	"	5.00		112	89-119		200
1,4-Dichlorobenzene	5.1		0.5	"	5.00		102	70-130		200
1,2-Dichlorobenzene	5.18		0.5	"	5.00		104	70-130		200
Butylbenzene	5.65		0.5	"	5.00		113	86-123		200
1,2-Dibromo-3-chloropropane	17.3		2	"	20.0		87	68-134		200
1,2,4-Trichlorobenzene	5.09		0.5	"	5.00		102	70-130		200
Hexachlorobutadiene	5.38		0.5	"	5.00		108	81-123		200

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B012 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/03/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
LCS (B15B012-BS1)										
Naphthalene	4.91		0.5	"	5.00		98	54-144		200
1,2,3-Trichlorobenzene	4.9		0.5	"	5.00		98	73-122		200
Surrogate: 1,2-Dichloroethane-d4	*4.25*			"	*5.00*		85	*65-149*		
Surrogate: Toluene-d8	*5.38*			"	*5.00*		108	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.92*			"	*5.00*		98	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*5.27*			"	*5.00*		105	*76-118*		
Batch B15B021 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/04/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B021-BLK1)										
Dichlorodifluoromethane	ND	U	0.5	ug/L						
Chloromethane	ND	U	0.5	"						
Vinyl chloride	ND	U	0.5	"						
Bromomethane	ND	U	0.5	"						
Chloroethane	ND	U	0.5	"						
Trichlorofluoromethane	ND	U	0.5	"						
1,1-Dichloroethene	ND	U	0.5	"						
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	0.5	"						
Acetone	ND	U	4	"						
Dichloromethane	ND	U	0.5	"						
trans-1,2-Dichloroethene	ND	U	0.5	"						
tert-Butyl methyl ether (MTBE)	ND	U	2	"						
1,1-Dichloroethane	ND	U	0.5	"						
2,2-Dichloropropane	ND	U	0.5	"						
cis-1,2-Dichloroethene	ND	U	0.5	"						
2-Butanone (MEK)	ND	U	4	"						
Bromochloromethane	ND	U	0.5	"						
Chloroform	ND	U	0.5	"						
1,1,1-Trichloroethane	ND	U	0.5	"						
Carbon tetrachloride	ND	U	0.5	"						
1,1-Dichloropropene	ND	U	0.5	"						
Benzene	ND	U	0.5	"						
1,2-Dichloroethane	ND	U	0.5	"						
Trichloroethene	ND	U	0.5	"						
1,2-Dichloropropane	ND	U	0.5	"						
Dibromomethane	ND	U	0.5	"						
Bromodichloromethane	ND	U	0.5	"						
cis-1,3-Dichloropropene	ND	U	0.5	"						
Toluene	ND	U	0.5	"						
trans-1,3-Dichloropropene	ND	U	0.5	"						
1,1,2-Trichloroethane	ND	U	0.5	"						

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Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B021 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/04/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B021-BLK1)										
Tetrachloroethene	ND	U	0.5	"						
1,3-Dichloropropane	ND	U	0.5	"						
Chlorodibromomethane	ND	U	0.5	"						
1,2-Dibromoethane (EDB)	ND	U	0.5	"						
Chlorobenzene	ND	U	0.5	"						
1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						
Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						
Surrogate: 1,2-Dichloroethane-d4	*5.23*			*"*	*5.00*		*105*	*65-149*		
Surrogate: Toluene-d8	*5.02*			*"*	*5.00*		*100*	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.54*			*"*	*5.00*		*91*	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*4.58*			*"*	*5.00*		*92*	*76-118*		
LCS (B15B021-BS1)										
Dichlorodifluoromethane	4.9		0.5	ug/L	5.00		98	53-153		200
Chloromethane	4.5		0.5	"	5.00		90	70-124		200
Vinyl chloride	4.53		0.5	"	5.00		91	70-130		200

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Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Batch B15B021 - 5030 P&T VOA - VOCs — **Prepared & Analyzed: 02/04/15**

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS (B15B021-BS1)										
Bromomethane	3.56		0.5	"	5.00		71	58-172		200
Chloroethane	4.75		0.5	"	5.00		95	75-135		200
Trichlorofluoromethane	4.99		0.5	"	5.00		100	74-141		200
1,1-Dichloroethene	5.08		0.5	"	5.00		102	70-130		200
1,1,2-Trichloro-1,2,2-trifluoroethane	5.14		0.5	"	5.00		103	73-139		200
Acetone	40.9		4	"	40.0		102	60-125		200
Dichloromethane	4.58		0.5	"	5.00		92	70-130		200
trans-1,2-Dichloroethene	5.11		0.5	"	5.00		102	70-130		200
tert-Butyl methyl ether (MTBE)	18.3		2	"	20.0		91	74-127		200
1,1-Dichloroethane	5.09		0.5	"	5.00		102	85-117		200
2,2-Dichloropropane	5.07		0.5	"	5.00		101	61-163		200
cis-1,2-Dichloroethene	4.91		0.5	"	5.00		98	87-113		200
2-Butanone (MEK)	35.3		4	"	40.0		88	67-123		200
Bromochloromethane	4.93		0.5	"	5.00		99	84-114		200
Chloroform	5		0.5	"	5.00		100	70-130		200
1,1,1-Trichloroethane	4.68		0.5	"	5.00		94	70-130		200
Carbon tetrachloride	4.82		0.5	"	5.00		96	70-130		200
1,1-Dichloropropene	4.92		0.5	"	5.00		98	88-120		200
Benzene	5.02		0.5	"	5.00		100	70-130		200
1,2-Dichloroethane	4.75		0.5	"	5.00		95	70-130		200
Trichloroethene	4.97		0.5	"	5.00		99	70-130		200
1,2-Dichloropropane	4.74		0.5	"	5.00		95	70-130		200
Dibromomethane	4.57		0.5	"	5.00		91	79-118		200
Bromodichloromethane	4.69		0.5	"	5.00		94	70-130		200
cis-1,3-Dichloropropene	4.65		0.5	"	5.00		93	79-127		200
Toluene	5.01		0.5	"	5.00		100	70-130		200
trans-1,3-Dichloropropene	4.61		0.5	"	5.00		92	75-135		200
1,1,2-Trichloroethane	4.69		0.5	"	5.00		94	70-130		200
Tetrachloroethene	5.11		0.5	"	5.00		102	70-130		200
1,3-Dichloropropane	4.74		0.5	"	5.00		95	82-116		200
Chlorodibromomethane	4.78		0.5	"	5.00		96	70-130		200
1,2-Dibromoethane (EDB)	4.68		0.5	"	5.00		94	85-114		200
Chlorobenzene	4.96		0.5	"	5.00		99	70-130		200
1,1,1,2-Tetrachloroethane	4.75		0.5	"	5.00		95	86-122		200
Ethylbenzene	5.28		0.5	"	5.00		106	70-130		200
m&p-Xylene	10.3		1	"	10.0		103	70-130		200
o-Xylene	5.05		0.5	"	5.00		101	70-130		200
Styrene	5.03		0.5	"	5.00		101	70-130		200
Bromoform	4.74		0.5	"	5.00		95	70-130		200
Isopropylbenzene	5.28		0.5	"	5.00		106	90-118		200
Bromobenzene	4.93		0.5	"	5.00		99	90-110		200
1,1,2,2-Tetrachloroethane	5.01		0.5	"	5.00		100	76-122		200

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B021 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/04/15**
								Volatile Organic Compounds by EPA Method 524.2 - Quality Control		
LCS (B15B021-BS1)										
1,2,3-Trichloropropane	4.73		0.5	"	5.00		95	77-119		200
Propylbenzene	5.41		0.5	"	5.00		108	89-120		200
2-Chlorotoluene	5.04		0.5	"	5.00		101	88-114		200
4-Chlorotoluene	5.06		0.5	"	5.00		101	90-112		200
1,3,5-Trimethylbenzene	5.26		0.5	"	5.00		105	90-115		200
tert-Butylbenzene	5.31		0.5	"	5.00		106	89-118		200
1,2,4-Trimethylbenzene	5.17		0.5	"	5.00		103	90-112		200
sec-Butylbenzene	5.42		0.5	"	5.00		108	87-122		200
1,3-Dichlorobenzene	5.05		0.5	"	5.00		101	88-111		200
p-Isopropyltoluene	5.32		0.5	"	5.00		106	89-119		200
1,4-Dichlorobenzene	4.94		0.5	"	5.00		99	70-130		200
1,2-Dichlorobenzene	4.97		0.5	"	5.00		99	70-130		200
Butylbenzene	5.42		0.5	"	5.00		108	86-123		200
1,2-Dibromo-3-chloropropane	18.8		2	"	20.0		94	68-134		200
1,2,4-Trichlorobenzene	4.87		0.5	"	5.00		97	70-130		200
Hexachlorobutadiene	5.21		0.5	"	5.00		104	81-123		200
Naphthalene	4.78		0.5	"	5.00		96	54-144		200
1,2,3-Trichlorobenzene	4.83		0.5	"	5.00		97	73-122		200
Surrogate: 1,2-Dichloroethane-d4	*4.68*			"	*5.00*		94	*65-149*		
Surrogate: Toluene-d8	*5.22*			"	*5.00*		104	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.85*			"	*5.00*		97	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*5.04*			"	*5.00*		101	*76-118*		

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15030A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:09
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Qualifiers and Comments

Q4 The matrix spike and/or matrix spike duplicate associated with this sample did not meet recovery criteria for this analyte (see MS/MSD results for this batch in QC summary)

Q3 The quantitation limit standard did not meet recovery criteria for this analyte.

Q2 The laboratory control standard associated with this sample did not meet recovery criteria for this analyte (see LCS results for this batch in QC summary).

J The reported result for this analyte should be considered an estimated value.

C4 The calibration verification check did not meet % difference criteria for this analyte.

C3 The initial calibration for this analyte did not meet calibration criteria.

C1 The reported concentration for this analyte is below the quantitation limit.

U Not Detected

NR Not Reported

RE1, RE2, etc: Result is from a sample re-analysis.

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street Building 201
Richmond, CA 94804

Date: **2/20/2015**

Subject: **Analytical Testing Results - Project R15S40**
SDG: 15033A

From: **Duane James, Acting Director**
EPA Region 9 Laboratory
MTS-2

To: **Marie Lacey**
California Site Cleanup Section 2
SFD-7-2

Attached are the results from the analysis of samples from the **Modesto Groundwater Jan 2015 Qtrly Monitoring** project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

A full documentation package for these data, including raw data and sample custody documentation, is on file at the EPA Region 9 Laboratory. If you would like to request additional review and/or validation of the data, please contact Eugenia McNaughton at the Region 9 Quality Assurance Office.

If you have any questions, please ask for Richard Bauer, the Lab Project Manager at (510)412-2300.

Electronic CC: John McGuire, RORE, Inc.
Andrew Kong, Lab Data Consultants, Inc.
Andrea Leasure, Lab Data Consultants, Inc.

Analyses included in this report:

Volatile Organic Compounds by GC/MS

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
MW-01A	1502001-01	Water	01/30/15 09:30	01/31/15 11:25
MW-02A	1502001-02	Water	01/30/15 09:45	01/31/15 11:25
MW-03A	1502001-03	Water	01/30/15 09:10	01/31/15 11:25
MW-05A	1502001-04	Water	01/30/15 08:30	01/31/15 11:25
MW-06A	1502001-05	Water	01/30/15 11:35	01/31/15 11:25
MW-07A	1502001-06	Water	01/30/15 13:10	01/31/15 11:25
MW-08A	1502001-07	Water	01/30/15 08:55	01/31/15 11:25
MW-09A	1502001-08	Water	01/30/15 08:50	01/31/15 11:25
MW-11A	1502001-09	Water	01/30/15 10:10	01/31/15 11:25
MW-12A	1502001-10	Water	01/30/15 12:50	01/31/15 11:25
MW-14A	1502001-11	Water	01/30/15 10:20	01/31/15 11:25
MW-15A	1502001-12	Water	01/30/15 13:00	01/31/15 11:25
MW-16A	1502001-13	Water	01/30/15 11:45	01/31/15 11:25
MW-16B	1502001-14	Water	01/30/15 12:00	01/31/15 11:25
MW-16C	1502001-15	Water	01/30/15 12:25	01/31/15 11:25
MW-19A	1502001-16	Water	01/30/15 12:35	01/31/15 11:25
MW-19B1	1502001-17	Water	01/30/15 12:38	01/31/15 11:25
MW-20A	1502001-18	Water	01/30/15 12:05	01/31/15 11:25
MW-20B	1502001-19	Water	01/30/15 11:55	01/31/15 11:25
MW-20C	1502001-20	Water	01/30/15 12:15	01/31/15 11:25

SDG ID 15033A

Work Order(s)

1502001

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Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-01									**Water - Sampled: 01/30/15 09:30**
Sample ID: MW-01A									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		9.8	C4, J, Q2, Q3	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		0.3	C1, J	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		0.3	C1, J	0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-01									**Water - Sampled: 01/30/15 09:30**
Sample ID: MW-01A									**Volatile Organic Compounds by EPA Method 524.2**
Ethylbenzene		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			103 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			101 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			92 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			93 %	*76-118%*		"	"	"	

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Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-02									**Water - Sampled: 01/30/15 09:45**
Sample ID: MW-02A									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B003	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
Acetone		3.2	C1, C3, J	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	C4, J, Q2, Q4, U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
Chloroform		2.0		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		4.7		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354

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Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-02									**Water - Sampled: 01/30/15 09:45**
Sample ID: MW-02A									**Volatile Organic Compounds by EPA Method 524.2**
1,1,1,2-Tetrachloroethane		ND	U	0.5	ug/L	B15B003	02/02/15	02/02/15	524.2/SOP354
Ethylbenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
m&p-Xylene		ND	J, Q4, U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			100 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			98 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			104 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			109 %	*76-118%*		"	"	"	

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-03									**Water - Sampled: 01/30/15 09:10**
Sample ID: MW-03A									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		8.4	C4, J, Q2, Q3	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		0.5		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene	RE2	270		10	"	B15B021	02/04/15	02/04/15	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	B15B002	02/02/15	02/02/15	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project; Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-03									**Water - Sampled: 01/30/15 09:10**
Sample ID: MW-03A									
						Volatile Organic Compounds by EPA Method 524.2			
Ethylbenzene		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			107 %	*65-149%*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*RE2*		99 %	*65-149%*		*B15B021*	*02/04/15*	*02/04/15*	
Surrogate: Toluene-d8			98 %	*85-114%*		*B15B002*	*02/02/15*	*02/02/15*	
Surrogate: Toluene-d8	*RE2*		102 %	*85-114%*		*B15B021*	*02/04/15*	*02/04/15*	
Surrogate: 4-Bromofluorobenzene			90 %	*82-111%*		*B15B002*	*02/02/15*	*02/02/15*	
Surrogate: 4-Bromofluorobenzene	*RE2*		87 %	*82-111%*		*B15B021*	*02/04/15*	*02/04/15*	
Surrogate: 1,2-Dichlorobenzene-d4			93 %	*76-118%*		*B15B002*	*02/02/15*	*02/02/15*	
Surrogate: 1,2-Dichlorobenzene-d4	*RE2*		85 %	*76-118%*		*B15B021*	*02/04/15*	*02/04/15*	

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-04									**Water - Sampled: 01/30/15 08:30**
Sample ID: MW-05A									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		ND	U	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		0.3	C1, J	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene	RE1	60		2.5	"	B15B012	02/03/15	02/03/15	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	B15B002	02/02/15	02/02/15	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory
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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Lab ID: 1502001-04 — **Water - Sampled: 01/30/15 08:30**

Sample ID: MW-05A

Volatile Organic Compounds by EPA Method 524.2

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Ethylbenzene		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			105 %	*65-149%*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*RE1*		102 %	*65-149%*		*B15B012*	*02/03/15*	*02/03/15*	
Surrogate: Toluene-d8			98 %	*85-114%*		*B15B002*	*02/02/15*	*02/02/15*	
Surrogate: Toluene-d8	*RE1*		95 %	*85-114%*		*B15B012*	*02/03/15*	*02/03/15*	
Surrogate: 4-Bromofluorobenzene			90 %	*82-111%*		*B15B002*	*02/02/15*	*02/02/15*	
Surrogate: 4-Bromofluorobenzene	*RE1*		102 %	*82-111%*		*B15B012*	*02/03/15*	*02/03/15*	
Surrogate: 1,2-Dichlorobenzene-d4			94 %	*76-118%*		*B15B002*	*02/02/15*	*02/02/15*	
Surrogate: 1,2-Dichlorobenzene-d4	*RE1*		110 %	*76-118%*		*B15B012*	*02/03/15*	*02/03/15*	

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A	
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29	
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**		

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-05									**Water - Sampled: 01/30/15 11:35**
Sample ID: MW-06A									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		6.9	C4, J, Q2, Q3	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		6.9		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		2.1		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-05									**Water - Sampled: 01/30/15 11:35**
Sample ID: MW-06A									
						Volatile Organic Compounds by EPA Method 524.2			
Ethylbenzene		ND	U	0.5	ug/L	B15B002	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			105 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			101 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			92 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			94 %	*76-118%*		"	"	"	

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-06									**Water - Sampled: 01/30/15 13:10**
Sample ID: MW-07A									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B003	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		ND	J, C3, U	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	C4, J, Q2, U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
Chloroform		1.7		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory
1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Lab ID: 1502001-06 — **Water - Sampled: 01/30/15 13:10**

Sample ID: MW-07A

Volatile Organic Compounds by EPA Method 524.2

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
1,1,1,2-Tetrachloroethane		ND	U	0.5	ug/L	B15B003	02/02/15	02/02/15	524.2/SOP354
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4		104 %		*65-149%*		"	"	"	
Surrogate: Toluene-d8		96 %		*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %		*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4		109 %		*76-118%*		"	"	"	

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Region 9 Laboratory

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-07									**Water - Sampled: 01/30/15 08:55**
Sample ID: MW-08A									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B003	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		ND	C3, J, U	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	C4, J, Q2, U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
Chloroform		3.1		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		22		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-07									**Water - Sampled: 01/30/15 08:55**
Sample ID: MW-08A						**Volatile Organic Compounds by EPA Method 524.2**			
Ethylbenzene		ND	U	0.5	ug/L	B15B003	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			102 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			97 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			107 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			115 %	*76-118%*		"	"	"	

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Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-08									**Water - Sampled: 01/30/15 08:50**
Sample ID: MW-09A									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane	RE1	ND	U	0.5	ug/L	B15B012	02/03/15	02/03/15	524.2/SOP354
Chloromethane	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone	RE1	8.2	C3, J	4	"	"	"	"	524.2/SOP354
Dichloromethane	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)	RE1	ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)	RE1	ND	C4, J, Q2, U	4	"	"	"	"	524.2/SOP354
Bromochloromethane	RE1	ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
Chloroform	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene	RE1	5.6		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Lab ID: 1502001-08 — **Water - Sampled: 01/30/15 08:50**

Sample ID: MW-09A — **Volatile Organic Compounds by EPA Method 524.2**

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Ethylbenzene	RE1	ND	U	0.5	ug/L	B15B012	02/03/15	02/03/15	524.2/SOP354
m&p-Xylene	RE1	ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane	RE1	ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene	RE1	ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4	*RE1*		96 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8	*RE1*		99 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene	*RE1*		100 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4	*RE1*		108 %	*76-118%*		"	"	"	

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-09									**Water - Sampled: 01/30/15 10:10**
Sample ID: MW-11A									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B003	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		9.4	C3, J	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	Q2, J, U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	C4, J, Q2, U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
Chloroform		3.8		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		0.4	C1, J	0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-09									**Water - Sampled: 01/30/15 10:10**
Sample ID: MW-11A									**Volatile Organic Compounds by EPA Method 524.2**
Ethylbenzene		ND	U	0.5	ug/L	B15B003	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			97 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			98 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			104 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			112 %	*76-118%*		"	"	"	

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-10									**Water - Sampled: 01/30/15 12:50**
Sample ID: MW-12A									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B003	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		0.4	C1, J	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		ND	C3, J, U	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	C4, J, Q2, U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
Chloroform		14		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		0.7		0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		6.4		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-10									**Water - Sampled: 01/30/15 12:50**
Sample ID: MW-12A						**Volatile Organic Compounds by EPA Method 524.2**			
Ethylbenzene		ND	U	0.5	ug/L	B15B003	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4		99 %		*65-149%*		"	"	"	
Surrogate: Toluene-d8		96 %		*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %		*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4		110 %		*76-118%*		"	"	"	

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-11									**Water - Sampled: 01/30/15 10:20**
Sample ID: MW-14A									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B003	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		9.5	C3, J	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	C4, J, Q2, U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
Chloroform		0.8		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		12		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-11									**Water - Sampled: 01/30/15 10:20**
Sample ID: MW-14A									**Volatile Organic Compounds by EPA Method 524.2**
Ethylbenzene		ND	U	0.5	ug/L	B15B003	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4		98 %		*65-149%*		"	"	"	
Surrogate: Toluene-d8		95 %		*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %		*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4		108 %		*76-118%*		"	"	"	

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-12									**Water - Sampled: 01/30/15 13:00**
Sample ID: MW-15A									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		ND	C3, C4, J, U	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	J, Q2, U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		0.7		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		0.3	C1, J	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-12									**Water - Sampled: 01/30/15 13:00**
Sample ID: MW-15A									**Volatile Organic Compounds by EPA Method 524.2**
Ethylbenzene		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	C3, J, Q2, U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			100 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			102 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			95 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			97 %	*76-118%*		"	"	"	

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-13									**Water - Sampled: 01/30/15 11:45**
Sample ID: MW-16A									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		7.4	C3, C4, J	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	J, Q2, U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		1.6		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

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Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-13									**Water - Sampled: 01/30/15 11:45**
Sample ID: MW-16A									**Volatile Organic Compounds by EPA Method 524.2**
Ethylbenzene		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	C3, J, Q2, U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			99 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			103 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			94 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			95 %	*76-118%*		"	"	"	

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-14									**Water - Sampled: 01/30/15 12:00**
Sample ID: MW-16B									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		9.0	C3, C4, J	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	Q2, J, U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		1.0		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		7.0		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

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Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Lab ID: 1502001-14 — **Water - Sampled: 01/30/15 12:00**

Sample ID: MW-16B

Volatile Organic Compounds by EPA Method 524.2

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Ethylbenzene		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	C3, J, Q2, U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			101 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			102 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			94 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			97 %	*76-118%*		"	"	"	

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-15									**Water - Sampled: 01/30/15 12:25**
Sample ID: MW-16C									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		7.1	C3, C4, J	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	J, Q2, U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		2.4	C1, J	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		0.3	C1, J	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		1.7		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-15									**Water - Sampled: 01/30/15 12:25**
Sample ID: MW-16C									**Volatile Organic Compounds by EPA Method 524.2**
Ethylbenzene		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	C3, J, Q2, U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			100 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			102 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			94 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			96 %	*76-118%*		"	"	"	

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-16									**Water - Sampled: 01/30/15 12:35**
Sample ID: MW-19A									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		ND	C3, C4, J, U	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	J, Q2, U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		2.0		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	Q2, J, U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Lab ID: 1502001-16 — **Water - Sampled: 01/30/15 12:35**

Sample ID: MW-19A — **Volatile Organic Compounds by EPA Method 524.2**

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
1,1,1,2-Tetrachloroethane		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	C3, J, Q2, U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			103 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			101 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			94 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			96 %	*76-118%*		"	"	"	

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-17									**Water - Sampled: 01/30/15 12:38**
Sample ID: MW-19B1									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		2.0	C1, C3, C4, J	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	J, Q2, U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		0.4	C1, J	0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-17									**Water - Sampled: 01/30/15 12:38**
Sample ID: MW-19B1						**Volatile Organic Compounds by EPA Method 524.2**			
Ethylbenzene		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	C3, J, Q2, U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			102 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			101 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			92 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			93 %	*76-118%*		"	"	"	

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-18									**Water - Sampled: 01/30/15 12:05**
Sample ID: MW-20A									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		2.9		0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		ND	C3, C4, J, U	4	"	"	"	"	524.2/SOP354
Dichloromethane		0.2	C1, J	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	J, Q2, U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		8.2		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		0.2	C1, J	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene	RE1	110		5	"	B15B012	02/03/15	02/03/15	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	B15B008	02/02/15	02/02/15	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Lab ID: 1502001-18 — **Water - Sampled: 01/30/15 12:05**

Sample ID: MW-20A

Volatile Organic Compounds by EPA Method 524.2

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Ethylbenzene		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	C3, J, Q2, U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			109 %	*65-149%*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*RE1*		100 %	*65-149%*		*B15B012*	*02/03/15*	*02/03/15*	
Surrogate: Toluene-d8			96 %	*85-114%*		*B15B008*	*02/02/15*	*02/02/15*	
Surrogate: Toluene-d8	*RE1*		97 %	*85-114%*		*B15B012*	*02/03/15*	*02/03/15*	
Surrogate: 4-Bromofluorobenzene			94 %	*82-111%*		*B15B008*	*02/02/15*	*02/02/15*	
Surrogate: 4-Bromofluorobenzene	*RE1*		102 %	*82-111%*		*B15B012*	*02/03/15*	*02/03/15*	
Surrogate: 1,2-Dichlorobenzene-d4			95 %	*76-118%*		*B15B008*	*02/02/15*	*02/02/15*	
Surrogate: 1,2-Dichlorobenzene-d4	*RE1*		109 %	*76-118%*		*B15B012*	*02/03/15*	*02/03/15*	

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-19									**Water - Sampled: 01/30/15 11:55**
Sample ID: MW-20B									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		ND	C3, C4, J, U	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	J, Q2, U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	Q2, J, U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene	RE1	47		2.5	"	B15B012	02/03/15	02/03/15	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	B15B008	02/02/15	02/02/15	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-19									**Water - Sampled: 01/30/15 11:55**
Sample ID: MW-20B									**Volatile Organic Compounds by EPA Method 524.2**
1,1,1,2-Tetrachloroethane		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	C3, J, Q2, U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			106 %	*65-149%*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*RE1*		101 %	*65-149%*		*B15B012*	*02/03/15*	*02/03/15*	
Surrogate: Toluene-d8			99 %	*85-114%*		*B15B008*	*02/02/15*	*02/02/15*	
Surrogate: Toluene-d8	*RE1*		97 %	*85-114%*		*B15B012*	*02/03/15*	*02/03/15*	
Surrogate: 4-Bromofluorobenzene			94 %	*82-111%*		*B15B008*	*02/02/15*	*02/02/15*	
Surrogate: 4-Bromofluorobenzene	*RE1*		103 %	*82-111%*		*B15B012*	*02/03/15*	*02/03/15*	
Surrogate: 1,2-Dichlorobenzene-d4			96 %	*76-118%*		*B15B008*	*02/02/15*	*02/02/15*	
Surrogate: 1,2-Dichlorobenzene-d4	*RE1*		110 %	*76-118%*		*B15B012*	*02/03/15*	*02/03/15*	

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-20									**Water - Sampled: 01/30/15 12:15**
Sample ID: MW-20C									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		ND	C3, C4, J, U	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	J, Q2, U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502001-20									**Water - Sampled: 01/30/15 12:15**
Sample ID: MW-20C						**Volatile Organic Compounds by EPA Method 524.2**			
1,1,1,2-Tetrachloroethane		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	C3, J, Q2, U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			99 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			102 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			93 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			96 %	*76-118%*		"	"	"	

United States Environmental Protection Agency
Region 9 Laboratory
1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B002 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B002-BLK1)										
Dichlorodifluoromethane	ND	U	0.5	ug/L						
Chloromethane	ND	U	0.5	"						
Vinyl chloride	ND	U	0.5	"						
Bromomethane	ND	U	0.5	"						
Chloroethane	ND	U	0.5	"						
Trichlorofluoromethane	ND	U	0.5	"						
1,1-Dichloroethene	ND	U	0.5	"						
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	0.5	"						
Acetone	ND	U	4	"						
Dichloromethane	ND	U	0.5	"						
trans-1,2-Dichloroethene	ND	U	0.5	"						
tert-Butyl methyl ether (MTBE)	ND	U	2	"						
1,1-Dichloroethane	ND	U	0.5	"						
2,2-Dichloropropane	ND	U	0.5	"						
cis-1,2-Dichloroethene	ND	U	0.5	"						
2-Butanone (MEK)	ND	U	4	"						
Bromochloromethane	ND	U	0.5	"						
Chloroform	ND	U	0.5	"						
1,1,1-Trichloroethane	ND	U	0.5	"						
Carbon tetrachloride	ND	U	0.5	"						
1,1-Dichloropropene	ND	U	0.5	"						
Benzene	ND	U	0.5	"						
1,2-Dichloroethane	ND	U	0.5	"						
Trichloroethene	ND	U	0.5	"						
1,2-Dichloropropane	ND	U	0.5	"						
Dibromomethane	ND	U	0.5	"						
Bromodichloromethane	ND	U	0.5	"						
cis-1,3-Dichloropropene	ND	U	0.5	"						
Toluene	ND	U	0.5	"						
trans-1,3-Dichloropropene	ND	U	0.5	"						
1,1,2-Trichloroethane	ND	U	0.5	"						
Tetrachloroethene	ND	U	0.5	"						
1,3-Dichloropropane	ND	U	0.5	"						
Chlorodibromomethane	ND	U	0.5	"						
1,2-Dibromoethane (EDB)	ND	U	0.5	"						
Chlorobenzene	ND	U	0.5	"						
1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						

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Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B002 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B002-BLK1)										
Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						
Surrogate: 1,2-Dichloroethane-d4	*5.03*			"	*5.00*		101	*65-149*		
Surrogate: Toluene-d8	*5.13*			"	*5.00*		103	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.62*			"	*5.00*		92	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*4.61*			"	*5.00*		92	*76-118*		
LCS (B15B002-BS1)										
Dichlorodifluoromethane	5.06		0.5	ug/L	5.00		101	53-153		200
Chloromethane	4.73		0.5	"	5.00		95	70-124		200
Vinyl chloride	4.84		0.5	"	5.00		97	70-130		200
Bromomethane	4.83		0.5	"	5.00		97	58-172		200
Chloroethane	4.91		0.5	"	5.00		98	75-135		200
Trichlorofluoromethane	5.31		0.5	"	5.00		106	74-141		200
1,1-Dichloroethene	5.52		0.5	"	5.00		110	70-130		200
1,1,2-Trichloro-1,2,2-trifluoroethane	5.93		0.5	"	5.00		119	73-139		200
Acetone	55		4	"	40.0		**137**	60-125		200
Dichloromethane	4.85		0.5	"	5.00		97	70-130		200
trans-1,2-Dichloroethene	5.65		0.5	"	5.00		113	70-130		200
tert-Butyl methyl ether (MTBE)	20.6		2	"	20.0		103	74-127		200
1,1-Dichloroethane	5.58		0.5	"	5.00		112	85-117		200
2,2-Dichloropropane	5.46		0.5	"	5.00		109	61-163		200

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Batch B15B002 - 5030 P&T VOA - VOCs — **Prepared & Analyzed: 02/02/15**

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS (B15B002-BS1)										
cis-1,2-Dichloroethene	5.05		0.5	"	5.00		101	87-113		200
2-Butanone (MEK)	37.1		4	"	40.0		93	67-123		200
Bromochloromethane	5.02		0.5	"	5.00		100	84-114		200
Chloroform	5.14		0.5	"	5.00		103	70-130		200
1,1,1-Trichloroethane	5.08		0.5	"	5.00		102	70-130		200
Carbon tetrachloride	5.01		0.5	"	5.00		100	70-130		200
1,1-Dichloropropene	5.15		0.5	"	5.00		103	88-120		200
Benzene	5.09		0.5	"	5.00		102	70-130		200
1,2-Dichloroethane	4.79		0.5	"	5.00		96	70-130		200
Trichloroethene	5.05		0.5	"	5.00		101	70-130		200
1,2-Dichloropropane	4.9		0.5	"	5.00		98	70-130		200
Dibromomethane	4.8		0.5	"	5.00		96	79-118		200
Bromodichloromethane	4.9		0.5	"	5.00		98	70-130		200
cis-1,3-Dichloropropene	4.85		0.5	"	5.00		97	79-127		200
Toluene	5.1		0.5	"	5.00		102	70-130		200
trans-1,3-Dichloropropene	4.84		0.5	"	5.00		97	75-135		200
1,1,2-Trichloroethane	4.82		0.5	"	5.00		96	70-130		200
Tetrachloroethene	5.15		0.5	"	5.00		103	70-130		200
1,3-Dichloropropane	4.81		0.5	"	5.00		96	82-116		200
Chlorodibromomethane	4.78		0.5	"	5.00		96	70-130		200
1,2-Dibromoethane (EDB)	4.84		0.5	"	5.00		97	85-114		200
Chlorobenzene	4.97		0.5	"	5.00		99	70-130		200
1,1,1,2-Tetrachloroethane	4.85		0.5	"	5.00		97	86-122		200
Ethylbenzene	5.26		0.5	"	5.00		105	70-130		200
m&p-Xylene	10.1		1	"	10.0		101	70-130		200
o-Xylene	5.06		0.5	"	5.00		101	70-130		200
Styrene	5.04		0.5	"	5.00		101	70-130		200
Bromoform	4.76		0.5	"	5.00		95	70-130		200
Isopropylbenzene	5.32		0.5	"	5.00		106	90-118		200
Bromobenzene	4.81		0.5	"	5.00		96	90-110		200
1,1,2,2-Tetrachloroethane	4.85		0.5	"	5.00		97	76-122		200
1,2,3-Trichloropropane	4.8		0.5	"	5.00		96	77-119		200
Propylbenzene	5.33		0.5	"	5.00		107	89-120		200
2-Chlorotoluene	5.08		0.5	"	5.00		102	88-114		200
4-Chlorotoluene	5.14		0.5	"	5.00		103	90-112		200
1,3,5-Trimethylbenzene	5.2		0.5	"	5.00		104	90-115		200
tert-Butylbenzene	5.31		0.5	"	5.00		106	89-118		200
1,2,4-Trimethylbenzene	5.16		0.5	"	5.00		103	90-112		200
sec-Butylbenzene	5.45		0.5	"	5.00		109	87-122		200
1,3-Dichlorobenzene	5.08		0.5	"	5.00		102	88-111		200
p-Isopropyltoluene	5.32		0.5	"	5.00		106	89-119		200
1,4-Dichlorobenzene	4.87		0.5	"	5.00		97	70-130		200

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B002 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
LCS (B15B002-BS1)										
1,2-Dichlorobenzene	4.96		0.5	"	5.00		99	70-130		200
Butylbenzene	5.45		0.5	"	5.00		109	86-123		200
1,2-Dibromo-3-chloropropane	18.8		2	"	20.0		94	68-134		200
1,2,4-Trichlorobenzene	4.92		0.5	"	5.00		98	70-130		200
Hexachlorobutadiene	5.33		0.5	"	5.00		107	81-123		200
Naphthalene	4.94		0.5	"	5.00		99	54-144		200
1,2,3-Trichlorobenzene	4.94		0.5	"	5.00		99	73-122		200
Surrogate: 1,2-Dichloroethane-d4	*4.45*			"	*5.00*		89	*65-149*		
Surrogate: Toluene-d8	*5.17*			"	*5.00*		103	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.88*			"	*5.00*		98	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*4.97*			"	*5.00*		99	*76-118*		
Batch B15B003 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B003-BLK1)										
Dichlorodifluoromethane	ND	U	0.5	ug/L						
Chloromethane	ND	U	0.5	"						
Vinyl chloride	ND	U	0.5	"						
Bromomethane	ND	U	0.5	"						
Chloroethane	ND	U	0.5	"						
Trichlorofluoromethane	ND	U	0.5	"						
1,1-Dichloroethene	ND	U	0.5	"						
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	0.5	"						
Acetone	ND	C3, J, U	4	"						
Dichloromethane	ND	U	0.5	"						
trans-1,2-Dichloroethene	ND	U	0.5	"						
tert-Butyl methyl ether (MTBE)	ND	U	2	"						
1,1-Dichloroethane	ND	U	0.5	"						
2,2-Dichloropropane	ND	U	0.5	"						
cis-1,2-Dichloroethene	ND	J, Q2, U	0.5	"						
2-Butanone (MEK)	ND	C4, J, Q2, U	4	"						
Bromochloromethane	ND	J, Q2, U	0.5	"						
Chloroform	ND	U	0.5	"						
1,1,1-Trichloroethane	ND	U	0.5	"						
Carbon tetrachloride	ND	U	0.5	"						
1,1-Dichloropropene	ND	U	0.5	"						
Benzene	ND	U	0.5	"						
1,2-Dichloroethane	ND	U	0.5	"						
Trichloroethene	ND	U	0.5	"						
1,2-Dichloropropane	ND	U	0.5	"						
Dibromomethane	ND	U	0.5	"						

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Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B003 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B003-BLK1)										
Bromodichloromethane	ND	U	0.5	"						
cis-1,3-Dichloropropene	ND	U	0.5	"						
Toluene	ND	U	0.5	"						
trans-1,3-Dichloropropene	ND	U	0.5	"						
1,1,2-Trichloroethane	ND	U	0.5	"						
Tetrachloroethene	ND	U	0.5	"						
1,3-Dichloropropane	ND	U	0.5	"						
Chlorodibromomethane	ND	U	0.5	"						
1,2-Dibromoethane (EDB)	ND	U	0.5	"						
Chlorobenzene	ND	U	0.5	"						
1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						
Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						
Surrogate: 1,2-Dichloroethane-d4	*4.72*			*"*	*5.00*		94	*65-149*		
Surrogate: Toluene-d8	*5.00*			*"*	*5.00*		100	*85-114*		
Surrogate: 4-Bromofluorobenzene	*5.42*			*"*	*5.00*		108	*82-111*		

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Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Batch B15B003 - 5030 P&T VOA - VOCs — **Prepared & Analyzed: 02/02/15**

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Blank (B15B003-BLK1)

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 1,2-Dichlorobenzene-d4	*5.78*			"	*5.00*		116	*76-118*		
LCS (B15B003-BS1)										
Dichlorodifluoromethane	3.74		0.5	ug/L	5.00		75	53-153		200
Chloromethane	4.72		0.5	"	5.00		94	70-124		200
Vinyl chloride	4.64		0.5	"	5.00		93	70-130		200
Bromomethane	4.9		0.5	"	5.00		98	58-172		200
Chloroethane	5.06		0.5	"	5.00		101	75-135		200
Trichlorofluoromethane	5.13		0.5	"	5.00		103	74-141		200
1,1-Dichloroethene	4.73		0.5	"	5.00		95	70-130		200
1,1,2-Trichloro-1,2,2-trifluoroethane	4.68		0.5	"	5.00		94	73-139		200
Acetone	29.8		4	"	40.0		74	60-125		200
Dichloromethane	4.62		0.5	"	5.00		92	70-130		200
trans-1,2-Dichloroethene	4.88		0.5	"	5.00		98	70-130		200
tert-Butyl methyl ether (MTBE)	17.3		2	"	20.0		86	74-127		200
1,1-Dichloroethane	4.72		0.5	"	5.00		94	85-117		200
2,2-Dichloropropane	4.64		0.5	"	5.00		93	61-163		200
cis-1,2-Dichloroethene	4.2		0.5	"	5.00		84	70-130		200
2-Butanone (MEK)	23.6		4	"	40.0		**59**	67-123		200
Bromochloromethane	4.03		0.5	"	5.00		**81**	84-114		200
Chloroform	4.06		0.5	"	5.00		81	70-130		200
1,1,1-Trichloroethane	5.2		0.5	"	5.00		104	70-130		200
Carbon tetrachloride	5.06		0.5	"	5.00		101	70-130		200
1,1-Dichloropropene	4.65		0.5	"	5.00		93	88-120		200
Benzene	4.84		0.5	"	5.00		97	70-130		200
1,2-Dichloroethane	4.39		0.5	"	5.00		88	70-130		200
Trichloroethene	4.58		0.5	"	5.00		92	70-130		200
1,2-Dichloropropane	4.75		0.5	"	5.00		95	70-130		200
Dibromomethane	4.48		0.5	"	5.00		90	79-118		200
Bromodichloromethane	4.58		0.5	"	5.00		92	70-130		200
cis-1,3-Dichloropropene	4.3		0.5	"	5.00		86	79-127		200
Toluene	5.04		0.5	"	5.00		101	70-130		200
trans-1,3-Dichloropropene	4.37		0.5	"	5.00		87	75-135		200
1,1,2-Trichloroethane	4.75		0.5	"	5.00		95	70-130		200
Tetrachloroethene	4.91		0.5	"	5.00		98	70-130		200
1,3-Dichloropropane	4.47		0.5	"	5.00		89	82-116		200
Chlorodibromomethane	4.41		0.5	"	5.00		88	70-130		200
1,2-Dibromoethane (EDB)	4.39		0.5	"	5.00		88	85-114		200
Chlorobenzene	4.79		0.5	"	5.00		96	70-130		200
1,1,1,2-Tetrachloroethane	5.18		0.5	"	5.00		104	86-122		200
Ethylbenzene	5.12		0.5	"	5.00		102	70-130		200
m&p-Xylene	10.4		1	"	10.0		104	70-130		200

United States Environmental Protection Agency
Region 9 Laboratory
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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B003 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
LCS (B15B003-BS1)										
o-Xylene	5.25		0.5	"	5.00		105	70-130		200
Styrene	5.02		0.5	"	5.00		100	70-130		200
Bromoform	4.71		0.5	"	5.00		94	70-130		200
Isopropylbenzene	5.44		0.5	"	5.00		109	90-118		200
Bromobenzene	4.86		0.5	"	5.00		97	90-110		200
1,1,2,2-Tetrachloroethane	5.01		0.5	"	5.00		100	76-122		200
1,2,3-Trichloropropane	4.55		0.5	"	5.00		91	77-119		200
Propylbenzene	5.26		0.5	"	5.00		105	89-120		200
2-Chlorotoluene	5.26		0.5	"	5.00		105	88-114		200
4-Chlorotoluene	5.11		0.5	"	5.00		102	90-112		200
1,3,5-Trimethylbenzene	5.46		0.5	"	5.00		109	90-115		200
tert-Butylbenzene	5.65		0.5	"	5.00		113	89-118		200
1,2,4-Trimethylbenzene	5.33		0.5	"	5.00		107	90-112		200
sec-Butylbenzene	5.54		0.5	"	5.00		111	87-122		200
1,3-Dichlorobenzene	5.09		0.5	"	5.00		102	88-111		200
p-Isopropyltoluene	5.53		0.5	"	5.00		111	89-119		200
1,4-Dichlorobenzene	5.11		0.5	"	5.00		102	70-130		200
1,2-Dichlorobenzene	5.12		0.5	"	5.00		102	70-130		200
Butylbenzene	5.47		0.5	"	5.00		109	86-123		200
1,2-Dibromo-3-chloropropane	18.8		2	"	20.0		94	68-134		200
1,2,4-Trichlorobenzene	5.13		0.5	"	5.00		103	70-130		200
Hexachlorobutadiene	5.59		0.5	"	5.00		112	81-123		200
Naphthalene	4.99		0.5	"	5.00		100	54-144		200
1,2,3-Trichlorobenzene	5.05		0.5	"	5.00		101	73-122		200
Surrogate: 1,2-Dichloroethane-d4		*4.60*		"	*5.00*		92	*65-149*		
Surrogate: Toluene-d8		*5.40*		"	*5.00*		108	*85-114*		
Surrogate: 4-Bromofluorobenzene		*4.99*		"	*5.00*		100	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4		*5.47*		"	*5.00*		109	*76-118*		
Matrix Spike (B15B003-MS1)		**Source: 1502001-02**								
Dichlorodifluoromethane	5.6		0.5	ug/L	5.00	ND	112	53-153		20
Chloromethane	5.06		0.5	"	5.00	ND	101	70-124		20
Vinyl chloride	5.77		0.5	"	5.00	ND	115	77-127		20
Bromomethane	5.31		0.5	"	5.00	ND	106	58-172		20
Chloroethane	5.59		0.5	"	5.00	ND	112	75-135		20
Trichlorofluoromethane	7.36		0.5	"	5.00	ND	**147**	74-141		20
1,1-Dichloroethene	6.1		0.5	"	5.00	ND	122	80-126		20
1,1,2-Trichloro-1,2,2-trifluoroethane	6.89		0.5	"	5.00	ND	138	73-139		20
Acetone	33		4	"	40.0	3.2	75	60-125		20
Dichloromethane	4.98		0.5	"	5.00	ND	100	73-114		20
trans-1,2-Dichloroethene	5.66		0.5	"	5.00	ND	113	86-119		20

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B003 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
								Volatile Organic Compounds by EPA Method 524.2 - Quality Control		
Matrix Spike (B15B003-MS1)		**Source: 1502001-02**								
tert-Butyl methyl ether (MTBE)	18.9		2	"	20.0	ND	95	74-127		20
1,1-Dichloroethane	5.32		0.5	"	5.00	ND	106	85-117		20
2,2-Dichloropropane	4.45		0.5	"	5.00	ND	89	61-163		20
cis-1,2-Dichloroethene	4.55		0.5	"	5.00	ND	91	87-113		20
2-Butanone (MEK)	26.1		4	"	40.0	ND	**65**	67-123		20
Bromochloromethane	4.31		0.5	"	5.00	ND	86	84-114		20
Chloroform	6.54		0.5	"	5.00	2	91	85-117		20
1,1,1-Trichloroethane	5.87		0.5	"	5.00	ND	117	85-126		20
Carbon tetrachloride	6.04		0.5	"	5.00	ND	121	77-140		20
1,1-Dichloropropene	5.88		0.5	"	5.00	ND	118	88-120		20
Benzene	5.41		0.5	"	5.00	ND	108	86-112		20
1,2-Dichloroethane	4.84		0.5	"	5.00	ND	97	78-121		20
Trichloroethene	5.55		0.5	"	5.00	ND	111	90-112		20
1,2-Dichloropropane	5.12		0.5	"	5.00	ND	102	83-114		20
Dibromomethane	4.94		0.5	"	5.00	ND	99	79-118		20
Bromodichloromethane	5.05		0.5	"	5.00	ND	101	82-120		20
cis-1,3-Dichloropropene	4.51		0.5	"	5.00	ND	90	79-127		20
Toluene	5.38		0.5	"	5.00	ND	108	87-113		20
trans-1,3-Dichloropropene	4.17		0.5	"	5.00	ND	83	75-135		20
1,1,2-Trichloroethane	4.89		0.5	"	5.00	ND	98	79-116		20
Tetrachloroethene	10.4		0.5	"	5.00	4.74	113	87-118		20
1,3-Dichloropropane	4.78		0.5	"	5.00	ND	96	82-116		20
Chlorodibromomethane	4.49		0.5	"	5.00	ND	90	80-125		20
1,2-Dibromoethane (EDB)	4.68		0.5	"	5.00	ND	94	85-114		20
Chlorobenzene	5.18		0.5	"	5.00	ND	104	88-110		20
1,1,1,2-Tetrachloroethane	4.79		0.5	"	5.00	ND	96	86-122		20
Ethylbenzene	5.6		0.5	"	5.00	ND	112	89-117		20
m&p-Xylene	11.2		1	"	10.0	ND	112	90-113		20
o-Xylene	5.45		0.5	"	5.00	ND	109	90-111		20
Styrene	5.39		0.5	"	5.00	ND	108	86-113		20
Bromoform	4.14		0.5	"	5.00	ND	83	70-138		20
Isopropylbenzene	5.8		0.5	"	5.00	ND	116	90-118		20
Bromobenzene	5.24		0.5	"	5.00	ND	105	90-110		20
1,1,2,2-Tetrachloroethane	4.98		0.5	"	5.00	ND	100	76-122		20
1,2,3-Trichloropropane	4.93		0.5	"	5.00	ND	99	77-119		20
Propylbenzene	5.99		0.5	"	5.00	ND	120	89-120		20
2-Chlorotoluene	5.53		0.5	"	5.00	ND	111	88-114		20
4-Chlorotoluene	5.52		0.5	"	5.00	ND	110	90-112		20
1,3,5-Trimethylbenzene	5.6		0.5	"	5.00	ND	112	90-115		20
tert-Butylbenzene	5.87		0.5	"	5.00	ND	117	89-118		20
1,2,4-Trimethylbenzene	5.52		0.5	"	5.00	ND	110	90-112		20
sec-Butylbenzene	6.15		0.5	"	5.00	ND	**123**	87-122		20

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Batch B15B003 - 5030 P&T VOA - VOCs — **Prepared & Analyzed: 02/02/15**

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Matrix Spike (B15B003-MS1)		**Source: 1502001-02**								
1,3-Dichlorobenzene	5.34		0.5	"	5.00	ND	107	88-111		20
p-Isopropyltoluene	5.97		0.5	"	5.00	ND	119	89-119		20
1,4-Dichlorobenzene	5.36		0.5	"	5.00	ND	107	87-111		20
1,2-Dichlorobenzene	5.28		0.5	"	5.00	ND	106	86-111		20
Butylbenzene	6.11		0.5	"	5.00	ND	122	86-123		20
1,2-Dibromo-3-chloropropane	17.6		2	"	20.0	ND	88	68-134		20
1,2,4-Trichlorobenzene	5.05		0.5	"	5.00	ND	101	77-119		20
Hexachlorobutadiene	5.71		0.5	"	5.00	ND	114	81-123		20
Naphthalene	5.01		0.5	"	5.00	ND	100	54-144		20
1,2,3-Trichlorobenzene	4.94		0.5	"	5.00	ND	99	73-122		20
Surrogate: 1,2-Dichloroethane-d4	*4.88*			"	*5.00*		98	*65-149*		
Surrogate: Toluene-d8	*4.99*			"	*5.00*		100	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.98*			"	*5.00*		100	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*5.18*			"	*5.00*		104	*76-118*		
Matrix Spike Dup (B15B003-MSD1)		**Source: 1502001-02**								
Dichlorodifluoromethane	5.74		0.5	ug/L	5.00	ND	115	53-153	2	20
Chloromethane	5.2		0.5	"	5.00	ND	104	70-124	3	20
Vinyl chloride	6.07		0.5	"	5.00	ND	121	77-127	5	20
Bromomethane	5.54		0.5	"	5.00	ND	111	58-172	4	20
Chloroethane	5.8		0.5	"	5.00	ND	116	75-135	4	20
Trichlorofluoromethane	7.49		0.5	"	5.00	ND	**150**	74-141	2	20
1,1-Dichloroethene	6.28		0.5	"	5.00	ND	126	80-126	3	20
1,1,2-Trichloro-1,2,2-trifluoroethane	7.17		0.5	"	5.00	ND	**143**	73-139	4	20
Acetone	32.6		4	"	40.0	3.2	73	60-125	1	20
Dichloromethane	5.04		0.5	"	5.00	ND	101	73-114	1	20
trans-1,2-Dichloroethene	5.84		0.5	"	5.00	ND	117	86-119	3	20
tert-Butyl methyl ether (MTBE)	19.5		2	"	20.0	ND	97	74-127	3	20
1,1-Dichloroethane	5.46		0.5	"	5.00	ND	109	85-117	3	20
2,2-Dichloropropane	4.5		0.5	"	5.00	ND	90	61-163	1	20
cis-1,2-Dichloroethene	4.65		0.5	"	5.00	ND	93	87-113	2	20
2-Butanone (MEK)	26.5		4	"	40.0	ND	**66**	67-123	2	20
Bromochloromethane	4.32		0.5	"	5.00	ND	86	84-114	0.2	20
Chloroform	6.68		0.5	"	5.00	2	94	85-117	2	20
1,1,1-Trichloroethane	6.03		0.5	"	5.00	ND	121	85-126	3	20
Carbon tetrachloride	6.19		0.5	"	5.00	ND	124	77-140	2	20
1,1-Dichloropropene	6.04		0.5	"	5.00	ND	**121**	88-120	3	20
Benzene	5.48		0.5	"	5.00	ND	110	86-112	1	20
1,2-Dichloroethane	4.82		0.5	"	5.00	ND	96	78-121	0.4	20
Trichloroethene	5.5		0.5	"	5.00	ND	110	90-112	0.9	20
1,2-Dichloropropane	5.21		0.5	"	5.00	ND	104	83-114	2	20

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Batch B15B003 - 5030 P&T VOA - VOCs — **Prepared & Analyzed: 02/02/15**

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Matrix Spike Dup (B15B003-MSD1) — **Source: 1502001-02**

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Dibromomethane	4.82		0.5	"	5.00	ND	96	79-118	2	20
Bromodichloromethane	4.96		0.5	"	5.00	ND	99	82-120	2	20
cis-1,3-Dichloropropene	4.5		0.5	"	5.00	ND	90	79-127	0.2	20
Toluene	5.45		0.5	"	5.00	ND	109	87-113	1	20
trans-1,3-Dichloropropene	4.2		0.5	"	5.00	ND	84	75-135	0.7	20
1,1,2-Trichloroethane	4.8		0.5	"	5.00	ND	96	79-116	2	20
Tetrachloroethene	10.6		0.5	"	5.00	4.74	118	87-118	2	20
1,3-Dichloropropane	4.75		0.5	"	5.00	ND	95	82-116	0.6	20
Chlorodibromomethane	4.51		0.5	"	5.00	ND	90	80-125	0.4	20
1,2-Dibromoethane (EDB)	4.63		0.5	"	5.00	ND	93	85-114	1	20
Chlorobenzene	5.27		0.5	"	5.00	ND	105	88-110	2	20
1,1,1,2-Tetrachloroethane	5.01		0.5	"	5.00	ND	100	86-122	4	20
Ethylbenzene	5.89		0.5	"	5.00	ND	**118**	89-117	5	20
m&p-Xylene	11.9		1	"	10.0	ND	**119**	90-113	6	20
o-Xylene	5.65		0.5	"	5.00	ND	**113**	90-111	4	20
Styrene	5.53		0.5	"	5.00	ND	111	86-113	3	20
Bromoform	4.32		0.5	"	5.00	ND	86	70-138	4	20
Isopropylbenzene	6.12		0.5	"	5.00	ND	**122**	90-118	5	20
Bromobenzene	5.42		0.5	"	5.00	ND	108	90-110	3	20
1,1,2,2-Tetrachloroethane	5.19		0.5	"	5.00	ND	104	76-122	4	20
1,2,3-Trichloropropane	5.16		0.5	"	5.00	ND	103	77-119	5	20
Propylbenzene	6.33		0.5	"	5.00	ND	**127**	89-120	6	20
2-Chlorotoluene	5.8		0.5	"	5.00	ND	**116**	88-114	5	20
4-Chlorotoluene	5.7		0.5	"	5.00	ND	**114**	90-112	3	20
1,3,5-Trimethylbenzene	5.89		0.5	"	5.00	ND	**118**	90-115	5	20
tert-Butylbenzene	6.1		0.5	"	5.00	ND	**122**	89-118	4	20
1,2,4-Trimethylbenzene	5.84		0.5	"	5.00	ND	**117**	90-112	6	20
sec-Butylbenzene	6.48		0.5	"	5.00	ND	**130**	87-122	5	20
1,3-Dichlorobenzene	5.58		0.5	"	5.00	ND	**112**	88-111	4	20
p-Isopropyltoluene	6.27		0.5	"	5.00	ND	**125**	89-119	5	20
1,4-Dichlorobenzene	5.58		0.5	"	5.00	ND	**112**	87-111	4	20
1,2-Dichlorobenzene	5.47		0.5	"	5.00	ND	109	86-111	4	20
Butylbenzene	6.5		0.5	"	5.00	ND	**130**	86-123	6	20
1,2-Dibromo-3-chloropropane	18.3		2	"	20.0	ND	91	68-134	4	20
1,2,4-Trichlorobenzene	5.3		0.5	"	5.00	ND	106	77-119	5	20
Hexachlorobutadiene	6.02		0.5	"	5.00	ND	120	81-123	5	20
Naphthalene	5.35		0.5	"	5.00	ND	107	54-144	7	20
1,2,3-Trichlorobenzene	5.25		0.5	"	5.00	ND	105	73-122	6	20

Surrogate: 1,2-Dichloroethane-d4	*4.65*	"	*5.00*	93	*65-149*
Surrogate: Toluene-d8	*5.05*	"	*5.00*	101	*85-114*

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B003 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Matrix Spike Dup (B15B003-MSD1)		**Source: 1502001-02**								
Surrogate: 4-Bromofluorobenzene	*5.05*			"	*5.00*		101	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*5.28*			"	*5.00*		106	*76-118*		
Batch B15B008 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B008-BLK1)										
Dichlorodifluoromethane	ND	U	0.5	ug/L						
Chloromethane	ND	U	0.5	"						
Vinyl chloride	ND	U	0.5	"						
Bromomethane	ND	U	0.5	"						
Chloroethane	ND	U	0.5	"						
Trichlorofluoromethane	ND	U	0.5	"						
1,1-Dichloroethene	ND	U	0.5	"						
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	0.5	"						
Acetone	ND	C3, C4, J, U	4	"						
Dichloromethane	ND	U	0.5	"						
trans-1,2-Dichloroethene	ND	U	0.5	"						
tert-Butyl methyl ether (MTBE)	ND	J, Q2, U	2	"						
1,1-Dichloroethane	ND	U	0.5	"						
2,2-Dichloropropane	ND	U	0.5	"						
cis-1,2-Dichloroethene	ND	U	0.5	"						
2-Butanone (MEK)	ND	U	4	"						
Bromochloromethane	ND	U	0.5	"						
Chloroform	ND	U	0.5	"						
1,1,1-Trichloroethane	ND	U	0.5	"						
Carbon tetrachloride	ND	U	0.5	"						
1,1-Dichloropropene	ND	U	0.5	"						
Benzene	ND	U	0.5	"						
1,2-Dichloroethane	ND	U	0.5	"						
Trichloroethene	ND	U	0.5	"						
1,2-Dichloropropane	ND	U	0.5	"						
Dibromomethane	ND	U	0.5	"						
Bromodichloromethane	ND	U	0.5	"						
cis-1,3-Dichloropropene	ND	J, Q2, U	0.5	"						
Toluene	ND	U	0.5	"						
trans-1,3-Dichloropropene	ND	U	0.5	"						
1,1,2-Trichloroethane	ND	U	0.5	"						
Tetrachloroethene	ND	U	0.5	"						
1,3-Dichloropropane	ND	U	0.5	"						
Chlorodibromomethane	ND	U	0.5	"						
1,2-Dibromoethane (EDB)	ND	U	0.5	"						

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Marié Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B008 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B008-BLK1)										
Chlorobenzene	ND	U	0.5	"						
1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						
Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	C3, J, Q2, U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						
Surrogate: 1,2-Dichloroethane-d4	*4.86*			"	*5.00*		97	*65-149*		
Surrogate: Toluene-d8	*5.33*			"	*5.00*		107	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.80*			"	*5.00*		96	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*4.73*			"	*5.00*		95	*76-118*		
LCS (B15B008-BS1)										
Dichlorodifluoromethane	3.51		0.5	ug/L	5.00		70	53-153		200
Chloromethane	3.84		0.5	"	5.00		77	70-124		200
Vinyl chloride	4.13		0.5	"	5.00		83	70-130		200
Bromomethane	6.01		0.5	"	5.00		120	58-172		200
Chloroethane	6.03		0.5	"	5.00		121	75-135		200
Trichlorofluoromethane	4.75		0.5	"	5.00		95	74-141		200
1,1-Dichloroethene	4.5		0.5	"	5.00		90	70-130		200

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B008 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
LCS (B15B008-BS1)										
1,1,2-Trichloro-1,2,2-trifluoroethane	4.72		0.5	"	5.00		94	73-139		200
Acetone	26.2		4	"	40.0		66	60-125		200
Dichloromethane	3.94		0.5	"	5.00		79	70-130		200
trans-1,2-Dichloroethene	4.68		0.5	"	5.00		94	70-130		200
tert-Butyl methyl ether (MTBE)	16.3		2	"	20.0		82	74-127		200
1,1-Dichloroethane	4.73		0.5	"	5.00		95	85-117		200
2,2-Dichloropropane	6.21		0.5	"	5.00		124	61-163		200
cis-1,2-Dichloroethene	6.05		0.5	"	5.00		121	70-130		200
2-Butanone (MEK)	38.4		4	"	40.0		96	67-123		200
Bromochloromethane	4.29		0.5	"	5.00		86	84-114		200
Chloroform	4.46		0.5	"	5.00		89	70-130		200
1,1,1-Trichloroethane	4.53		0.5	"	5.00		91	70-130		200
Carbon tetrachloride	3.82		0.5	"	5.00		76	70-130		200
1,1-Dichloropropene	4.25		0.5	"	5.00		**85**	88-120		200
Benzene	4.25		0.5	"	5.00		85	70-130		200
1,2-Dichloroethane	4.8		0.5	"	5.00		96	70-130		200
Trichloroethene	4.69		0.5	"	5.00		94	70-130		200
1,2-Dichloropropane	4.37		0.5	"	5.00		87	70-130		200
Dibromomethane	4.35		0.5	"	5.00		87	79-118		200
Bromodichloromethane	3.66		0.5	"	5.00		73	70-130		200
cis-1,3-Dichloropropene	3.74		0.5	"	5.00		**75**	79-127		200
Toluene	5.6		0.5	"	5.00		112	70-130		200
trans-1,3-Dichloropropene	4.35		0.5	"	5.00		87	75-135		200
1,1,2-Trichloroethane	4.82		0.5	"	5.00		96	70-130		200
Tetrachloroethene	4.9		0.5	"	5.00		98	70-130		200
1,3-Dichloropropane	4.75		0.5	"	5.00		95	82-116		200
Chlorodibromomethane	4.13		0.5	"	5.00		83	70-130		200
1,2-Dibromoethane (EDB)	4.75		0.5	"	5.00		95	85-114		200
Chlorobenzene	4.85		0.5	"	5.00		97	70-130		200
1,1,1,2-Tetrachloroethane	4.55		0.5	"	5.00		91	86-122		200
Ethylbenzene	5.67		0.5	"	5.00		113	70-130		200
m&p-Xylene	10.6		1	"	10.0		106	70-130		200
o-Xylene	5.11		0.5	"	5.00		102	70-130		200
Styrene	5.15		0.5	"	5.00		103	70-130		200
Bromoform	4.25		0.5	"	5.00		85	70-130		200
Isopropylbenzene	5.31		0.5	"	5.00		106	90-118		200
Bromobenzene	4.93		0.5	"	5.00		99	90-110		200
1,1,2,2-Tetrachloroethane	4.43		0.5	"	5.00		89	76-122		200
1,2,3-Trichloropropane	4.67		0.5	"	5.00		93	77-119		200
Propylbenzene	5.78		0.5	"	5.00		116	89-120		200
2-Chlorotoluene	5.62		0.5	"	5.00		112	88-114		200
4-Chlorotoluene	5.56		0.5	"	5.00		111	90-112		200

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B008 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
								Volatile Organic Compounds by EPA Method 524.2 - Quality Control		
LCS (B15B008-BS1)										
1,3,5-Trimethylbenzene	5.29		0.5	"	5.00		106	90-115		200
tert-Butylbenzene	5.01		0.5	"	5.00		100	89-118		200
1,2,4-Trimethylbenzene	5.34		0.5	"	5.00		107	90-112		200
sec-Butylbenzene	5.27		0.5	"	5.00		105	87-122		200
1,3-Dichlorobenzene	5.23		0.5	"	5.00		105	88-111		200
p-Isopropyltoluene	5.02		0.5	"	5.00		100	89-119		200
1,4-Dichlorobenzene	5.31		0.5	"	5.00		106	70-130		200
1,2-Dichlorobenzene	5.13		0.5	"	5.00		103	70-130		200
Butylbenzene	5.54		0.5	"	5.00		111	86-123		200
1,2-Dibromo-3-chloropropane	15		2	"	20.0		75	68-134		200
1,2,4-Trichlorobenzene	4.77		0.5	"	5.00		95	70-130		200
Hexachlorobutadiene	5.11		0.5	"	5.00		102	81-123		200
Naphthalene	4.49		0.5	"	5.00		90	54-144		200
1,2,3-Trichlorobenzene	4.86		0.5	"	5.00		97	73-122		200
Surrogate: 1,2-Dichloroethane-d4		*5.02*		"	*5.00*		100	*65-149*		
Surrogate: Toluene-d8		*5.72*		"	*5.00*		114	*85-114*		
Surrogate: 4-Bromofluorobenzene		*5.61*		"	*5.00*		**112**	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4		*5.37*		"	*5.00*		107	*76-118*		
LCS (B15B008-BS2)										
Dichlorodifluoromethane	4.1		0.5	ug/L	5.00		82	53-153		200
Chloromethane	4.38		0.5	"	5.00		88	70-124		200
Vinyl chloride	4.43		0.5	"	5.00		89	70-130		200
Bromomethane	4.89		0.5	"	5.00		98	58-172		200
Chloroethane	4.65		0.5	"	5.00		93	75-135		200
Trichlorofluoromethane	4.98		0.5	"	5.00		100	74-141		200
1,1-Dichloroethene	4.86		0.5	"	5.00		97	70-130		200
1,1,2-Trichloro-1,2,2-trifluoroethane	5.06		0.5	"	5.00		101	73-139		200
Acetone	27.2		4	"	40.0		68	60-125		200
Dichloromethane	4.31		0.5	"	5.00		86	70-130		200
trans-1,2-Dichloroethene	4.6		0.5	"	5.00		92	70-130		200
tert-Butyl methyl ether (MTBE)	14		2	"	20.0		**70**	74-127		200
1,1-Dichloroethane	4.69		0.5	"	5.00		94	85-117		200
2,2-Dichloropropane	4.44		0.5	"	5.00		89	61-163		200
cis-1,2-Dichloroethene	4.3		0.5	"	5.00		86	70-130		200
2-Butanone (MEK)	35.3		4	"	40.0		88	67-123		200
Bromochloromethane	4.44		0.5	"	5.00		89	84-114		200
Chloroform	4.65		0.5	"	5.00		93	70-130		200
1,1,1-Trichloroethane	4.07		0.5	"	5.00		81	70-130		200
Carbon tetrachloride	3.86		0.5	"	5.00		77	70-130		200
1,1-Dichloropropene	4.62		0.5	"	5.00		92	88-120		200

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B008 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
LCS (B15B008-BS2)										
Benzene	4.74		0.5	"	5.00		95	70-130		200
1,2-Dichloroethane	5.04		0.5	"	5.00		101	70-130		200
Trichloroethene	4.82		0.5	"	5.00		96	70-130		200
1,2-Dichloropropane	4.43		0.5	"	5.00		89	70-130		200
Dibromomethane	4.53		0.5	"	5.00		91	79-118		200
Bromodichloromethane	3.65		0.5	"	5.00		73	70-130		200
cis-1,3-Dichloropropene	3.67		0.5	"	5.00		**73**	79-127		200
Toluene	5.38		0.5	"	5.00		108	70-130		200
trans-1,3-Dichloropropene	3.82		0.5	"	5.00		76	75-135		200
1,1,2-Trichloroethane	4.73		0.5	"	5.00		95	70-130		200
Tetrachloroethene	5.27		0.5	"	5.00		105	70-130		200
1,3-Dichloropropane	4.86		0.5	"	5.00		97	82-116		200
Chlorodibromomethane	3.79		0.5	"	5.00		76	70-130		200
1,2-Dibromoethane (EDB)	4.45		0.5	"	5.00		89	85-114		200
Chlorobenzene	5.13		0.5	"	5.00		103	70-130		200
1,1,1,2-Tetrachloroethane	4.23		0.5	"	5.00		**85**	86-122		200
Ethylbenzene	5.47		0.5	"	5.00		109	70-130		200
m&p-Xylene	10.7		1	"	10.0		107	70-130		200
o-Xylene	5.22		0.5	"	5.00		104	70-130		200
Styrene	5.16		0.5	"	5.00		103	70-130		200
Bromoform	3.52		0.5	"	5.00		70	70-130		200
Isopropylbenzene	5.46		0.5	"	5.00		109	90-118		200
Bromobenzene	5.1		0.5	"	5.00		102	90-110		200
1,1,2,2-Tetrachloroethane	4.46		0.5	"	5.00		89	76-122		200
1,2,3-Trichloropropane	4.73		0.5	"	5.00		95	77-119		200
Propylbenzene	5.66		0.5	"	5.00		113	89-120		200
2-Chlorotoluene	5.51		0.5	"	5.00		110	88-114		200
4-Chlorotoluene	5.49		0.5	"	5.00		110	90-112		200
1,3,5-Trimethylbenzene	5.39		0.5	"	5.00		108	90-115		200
tert-Butylbenzene	5.26		0.5	"	5.00		105	89-118		200
1,2,4-Trimethylbenzene	5.43		0.5	"	5.00		109	90-112		200
sec-Butylbenzene	5.44		0.5	"	5.00		109	87-122		200
1,3-Dichlorobenzene	5.23		0.5	"	5.00		105	88-111		200
p-Isopropyltoluene	5.29		0.5	"	5.00		106	89-119		200
1,4-Dichlorobenzene	5.35		0.5	"	5.00		107	70-130		200
1,2-Dichlorobenzene	5.26		0.5	"	5.00		105	70-130		200
Butylbenzene	5.53		0.5	"	5.00		111	86-123		200
1,2-Dibromo-3-chloropropane	13.5		2	"	20.0		**67**	68-134		200
1,2,4-Trichlorobenzene	4.97		0.5	"	5.00		99	70-130		200
Hexachlorobutadiene	5.2		0.5	"	5.00		104	81-123		200
Naphthalene	4.49		0.5	"	5.00		90	54-144		200
1,2,3-Trichlorobenzene	4.88		0.5	"	5.00		98	73-122		200

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B008 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
LCS (B15B008-BS2)										
Surrogate: 1,2-Dichloroethane-d4	*4.99*			"	*5.00*		100	*65-149*		
Surrogate: Toluene-d8	*5.35*			"	*5.00*		107	*85-114*		
Surrogate: 4-Bromofluorobenzene	*5.06*			"	*5.00*		101	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*5.06*			"	*5.00*		101	*76-118*		
Batch B15B012 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/03/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B012-BLK1)										
Dichlorodifluoromethane	ND	U	0.5	ug/L						
Chloromethane	ND	U	0.5	"						
Vinyl chloride	ND	U	0.5	"						
Bromomethane	ND	U	0.5	"						
Chloroethane	ND	U	0.5	"						
Trichlorofluoromethane	ND	U	0.5	"						
1,1-Dichloroethene	ND	U	0.5	"						
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	0.5	"						
Acetone	ND	C3, J, U	4	"						
Dichloromethane	ND	U	0.5	"						
trans-1,2-Dichloroethene	ND	U	0.5	"						
tert-Butyl methyl ether (MTBE)	ND	U	2	"						
1,1-Dichloroethane	ND	U	0.5	"						
2,2-Dichloropropane	ND	U	0.5	"						
cis-1,2-Dichloroethene	ND	U	0.5	"						
2-Butanone (MEK)	ND	J, Q2, C4, U	4	"						
Bromochloromethane	ND	J, Q2, U	0.5	"						
Chloroform	ND	U	0.5	"						
1,1,1-Trichloroethane	ND	U	0.5	"						
Carbon tetrachloride	ND	U	0.5	"						
1,1-Dichloropropene	ND	U	0.5	"						
Benzene	ND	U	0.5	"						
1,2-Dichloroethane	ND	U	0.5	"						
Trichloroethene	ND	U	0.5	"						
1,2-Dichloropropane	ND	U	0.5	"						
Dibromomethane	ND	U	0.5	"						
Bromodichloromethane	ND	U	0.5	"						
cis-1,3-Dichloropropene	ND	U	0.5	"						
Toluene	ND	U	0.5	"						
trans-1,3-Dichloropropene	ND	U	0.5	"						
1,1,2-Trichloroethane	ND	U	0.5	"						
Tetrachloroethene	ND	U	0.5	"						
1,3-Dichloropropane	ND	U	0.5	"						

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A	
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29	
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**		

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B012 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/03/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B012-BLK1)										
Chlorodibromomethane	ND	U	0.5	"						
1,2-Dibromoethane (EDB)	ND	U	0.5	"						
Chlorobenzene	ND	U	0.5	"						
1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						
Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						
Surrogate: 1,2-Dichloroethane-d4	*4.90*			*"*	*5.00*		98	*65-149*		
Surrogate: Toluene-d8	*5.00*			*"*	*5.00*		100	*85-114*		
Surrogate: 4-Bromofluorobenzene	*5.28*			*"*	*5.00*		106	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*5.51*			*"*	*5.00*		110	*76-118*		
LCS (B15B012-BS1)										
Dichlorodifluoromethane	4.24		0.5	ug/L	5.00		85	53-153		200
Chloromethane	4.57		0.5	"	5.00		91	70-124		200
Vinyl chloride	4.89		0.5	"	5.00		98	70-130		200
Bromomethane	5.17		0.5	"	5.00		103	58-172		200
Chloroethane	5.29		0.5	"	5.00		106	75-135		200

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B012 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/03/15**
								Volatile Organic Compounds by EPA Method 524.2 - Quality Control		
LCS (B15B012-BS1)										
Trichlorofluoromethane	5.4		0.5	"	5.00		108	74-141		200
1,1-Dichloroethene	5.17		0.5	"	5.00		103	70-130		200
1,1,2-Trichloro-1,2,2-trifluoroethane	5.55		0.5	"	5.00		111	73-139		200
Acetone	28.9		4	"	40.0		72	60-125		200
Dichloromethane	4.73		0.5	"	5.00		95	70-130		200
trans-1,2-Dichloroethene	5.23		0.5	"	5.00		105	70-130		200
tert-Butyl methyl ether (MTBE)	17.4		2	"	20.0		87	74-127		200
1,1-Dichloroethane	4.85		0.5	"	5.00		97	85-117		200
2,2-Dichloropropane	4.5		0.5	"	5.00		90	61-163		200
cis-1,2-Dichloroethene	4.24		0.5	"	5.00		85	70-130		200
2-Butanone (MEK)	23.1		4	"	40.0		**58**	67-123		200
Bromochloromethane	4		0.5	"	5.00		**80**	84-114		200
Chloroform	4.02		0.5	"	5.00		80	70-130		200
1,1,1-Trichloroethane	5.07		0.5	"	5.00		101	70-130		200
Carbon tetrachloride	5.03		0.5	"	5.00		101	70-130		200
1,1-Dichloropropene	4.62		0.5	"	5.00		92	88-120		200
Benzene	4.71		0.5	"	5.00		94	70-130		200
1,2-Dichloroethane	4.25		0.5	"	5.00		85	70-130		200
Trichloroethene	4.63		0.5	"	5.00		93	70-130		200
1,2-Dichloropropane	4.61		0.5	"	5.00		92	70-130		200
Dibromomethane	4.26		0.5	"	5.00		85	79-118		200
Bromodichloromethane	4.38		0.5	"	5.00		88	70-130		200
cis-1,3-Dichloropropene	3.99		0.5	"	5.00		80	79-127		200
Toluene	5.09		0.5	"	5.00		102	70-130		200
trans-1,3-Dichloropropene	3.9		0.5	"	5.00		78	75-135		200
1,1,2-Trichloroethane	4.7		0.5	"	5.00		94	70-130		200
Tetrachloroethene	5.05		0.5	"	5.00		101	70-130		200
1,3-Dichloropropane	4.44		0.5	"	5.00		89	82-116		200
Chlorodibromomethane	4.33		0.5	"	5.00		87	70-130		200
1,2-Dibromoethane (EDB)	4.39		0.5	"	5.00		88	85-114		200
Chlorobenzene	4.9		0.5	"	5.00		98	70-130		200
1,1,1,2-Tetrachloroethane	4.93		0.5	"	5.00		99	86-122		200
Ethylbenzene	5.24		0.5	"	5.00		105	70-130		200
m&p-Xylene	10.6		1	"	10.0		106	70-130		200
o-Xylene	5.28		0.5	"	5.00		106	70-130		200
Styrene	5.05		0.5	"	5.00		101	70-130		200
Bromoform	4.53		0.5	"	5.00		91	70-130		200
Isopropylbenzene	5.54		0.5	"	5.00		111	90-118		200
Bromobenzene	4.88		0.5	"	5.00		98	90-110		200
1,1,2,2-Tetrachloroethane	4.96		0.5	"	5.00		99	76-122		200
1,2,3-Trichloropropane	4.81		0.5	"	5.00		96	77-119		200
Propylbenzene	5.44		0.5	"	5.00		109	89-120		200

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B012 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/03/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
LCS (B15B012-BS1)										
2-Chlorotoluene	5.37		0.5	"	5.00		107	88-114		200
4-Chlorotoluene	5.2		0.5	"	5.00		104	90-112		200
1,3,5-Trimethylbenzene	5.56		0.5	"	5.00		111	90-115		200
tert-Butylbenzene	5.6		0.5	"	5.00		112	89-118		200
1,2,4-Trimethylbenzene	5.4		0.5	"	5.00		108	90-112		200
sec-Butylbenzene	5.72		0.5	"	5.00		114	87-122		200
1,3-Dichlorobenzene	5.17		0.5	"	5.00		103	88-111		200
p-Isopropyltoluene	5.62		0.5	"	5.00		112	89-119		200
1,4-Dichlorobenzene	5.1		0.5	"	5.00		102	70-130		200
1,2-Dichlorobenzene	5.18		0.5	"	5.00		104	70-130		200
Butylbenzene	5.65		0.5	"	5.00		113	86-123		200
1,2-Dibromo-3-chloropropane	17.3		2	"	20.0		87	68-134		200
1,2,4-Trichlorobenzene	5.09		0.5	"	5.00		102	70-130		200
Hexachlorobutadiene	5.38		0.5	"	5.00		108	81-123		200
Naphthalene	4.91		0.5	"	5.00		98	54-144		200
1,2,3-Trichlorobenzene	4.9		0.5	"	5.00		98	73-122		200
Surrogate: 1,2-Dichloroethane-d4	*4.25*			"	*5.00*		85	*65-149*		
Surrogate: Toluene-d8	*5.38*			"	*5.00*		108	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.92*			"	*5.00*		98	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*5.27*			"	*5.00*		105	*76-118*		
Batch B15B021 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/04/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B021-BLK1)										
Dichlorodifluoromethane	ND	U	0.5	ug/L						
Chloromethane	ND	U	0.5	"						
Vinyl chloride	ND	U	0.5	"						
Bromomethane	ND	U	0.5	"						
Chloroethane	ND	U	0.5	"						
Trichlorofluoromethane	ND	U	0.5	"						
1,1-Dichloroethene	ND	U	0.5	"						
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	0.5	"						
Acetone	ND	U	4	"						
Dichloromethane	ND	U	0.5	"						
trans-1,2-Dichloroethene	ND	U	0.5	"						
tert-Butyl methyl ether (MTBE)	ND	U	2	"						
1,1-Dichloroethane	ND	U	0.5	"						
2,2-Dichloropropane	ND	U	0.5	"						
cis-1,2-Dichloroethene	ND	U	0.5	"						
2-Butanone (MEK)	ND	U	4	"						
Bromochloromethane	ND	U	0.5	"						

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B021 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/04/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B021-BLK1)										
Chloroform	ND	U	0.5	"						
1,1,1-Trichloroethane	ND	U	0.5	"						
Carbon tetrachloride	ND	U	0.5	"						
1,1-Dichloropropene	ND	U	0.5	"						
Benzene	ND	U	0.5	"						
1,2-Dichloroethane	ND	U	0.5	"						
Trichloroethene	ND	U	0.5	"						
1,2-Dichloropropane	ND	U	0.5	"						
Dibromomethane	ND	U	0.5	"						
Bromodichloromethane	ND	U	0.5	"						
cis-1,3-Dichloropropene	ND	U	0.5	"						
Toluene	ND	U	0.5	"						
trans-1,3-Dichloropropene	ND	U	0.5	"						
1,1,2-Trichloroethane	ND	U	0.5	"						
Tetrachloroethene	ND	U	0.5	"						
1,3-Dichloropropane	ND	U	0.5	"						
Chlorodibromomethane	ND	U	0.5	"						
1,2-Dibromoethane (EDB)	ND	U	0.5	"						
Chlorobenzene	ND	U	0.5	"						
1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						
Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						

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Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B021 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/04/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B021-BLK1)										
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						
Surrogate: 1,2-Dichloroethane-d4	*5.23*			"	*5.00*		105	*65-149*		
Surrogate: Toluene-d8	*5.02*			"	*5.00*		100	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.54*			"	*5.00*		91	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*4.58*			"	*5.00*		92	*76-118*		
LCS (B15B021-BS1)										
Dichlorodifluoromethane	4.9		0.5	ug/L	5.00		98	53-153		200
Chloromethane	4.5		0.5	"	5.00		90	70-124		200
Vinyl chloride	4.53		0.5	"	5.00		91	70-130		200
Bromomethane	3.56		0.5	"	5.00		71	58-172		200
Chloroethane	4.75		0.5	"	5.00		95	75-135		200
Trichlorofluoromethane	4.99		0.5	"	5.00		100	74-141		200
1,1-Dichloroethene	5.08		0.5	"	5.00		102	70-130		200
1,1,2-Trichloro-1,2,2-trifluoroethane	5.14		0.5	"	5.00		103	73-139		200
Acetone	40.9		4	"	40.0		102	60-125		200
Dichloromethane	4.58		0.5	"	5.00		92	70-130		200
trans-1,2-Dichloroethene	5.11		0.5	"	5.00		102	70-130		200
tert-Butyl methyl ether (MTBE)	18.3		2	"	20.0		91	74-127		200
1,1-Dichloroethane	5.09		0.5	"	5.00		102	85-117		200
2,2-Dichloropropane	5.07		0.5	"	5.00		101	61-163		200
cis-1,2-Dichloroethene	4.91		0.5	"	5.00		98	87-113		200
2-Butanone (MEK)	35.3		4	"	40.0		88	67-123		200
Bromochloromethane	4.93		0.5	"	5.00		99	84-114		200
Chloroform	5		0.5	"	5.00		100	70-130		200
1,1,1-Trichloroethane	4.68		0.5	"	5.00		94	70-130		200
Carbon tetrachloride	4.82		0.5	"	5.00		96	70-130		200
1,1-Dichloropropene	4.92		0.5	"	5.00		98	88-120		200
Benzene	5.02		0.5	"	5.00		100	70-130		200
1,2-Dichloroethane	4.75		0.5	"	5.00		95	70-130		200
Trichloroethene	4.97		0.5	"	5.00		99	70-130		200
1,2-Dichloropropane	4.74		0.5	"	5.00		95	70-130		200
Dibromomethane	4.57		0.5	"	5.00		91	79-118		200
Bromodichloromethane	4.69		0.5	"	5.00		94	70-130		200
cis-1,3-Dichloropropene	4.65		0.5	"	5.00		93	79-127		200
Toluene	5.01		0.5	"	5.00		100	70-130		200
trans-1,3-Dichloropropene	4.61		0.5	"	5.00		92	75-135		200
1,1,2-Trichloroethane	4.69		0.5	"	5.00		94	70-130		200

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B021 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/04/15**
								Volatile Organic Compounds by EPA Method 524.2 - Quality Control		
LCS (B15B021-BS1)										
Tetrachloroethene	5.11		0.5	"	5.00		102	70-130		200
1,3-Dichloropropane	4.74		0.5	"	5.00		95	82-116		200
Chlorodibromomethane	4.78		0.5	"	5.00		96	70-130		200
1,2-Dibromoethane (EDB)	4.68		0.5	"	5.00		94	85-114		200
Chlorobenzene	4.96		0.5	"	5.00		99	70-130		200
1,1,1,2-Tetrachloroethane	4.75		0.5	"	5.00		95	86-122		200
Ethylbenzene	5.28		0.5	"	5.00		106	70-130		200
m&p-Xylene	10.3		1	"	10.0		103	70-130		200
o-Xylene	5.05		0.5	"	5.00		101	70-130		200
Styrene	5.03		0.5	"	5.00		101	70-130		200
Bromoform	4.74		0.5	"	5.00		95	70-130		200
Isopropylbenzene	5.28		0.5	"	5.00		106	90-118		200
Bromobenzene	4.93		0.5	"	5.00		99	90-110		200
1,1,2,2-Tetrachloroethane	5.01		0.5	"	5.00		100	76-122		200
1,2,3-Trichloropropane	4.73		0.5	"	5.00		95	77-119		200
Propylbenzene	5.41		0.5	"	5.00		108	89-120		200
2-Chlorotoluene	5.04		0.5	"	5.00		101	88-114		200
4-Chlorotoluene	5.06		0.5	"	5.00		101	90-112		200
1,3,5-Trimethylbenzene	5.26		0.5	"	5.00		105	90-115		200
tert-Butylbenzene	5.31		0.5	"	5.00		106	89-118		200
1,2,4-Trimethylbenzene	5.17		0.5	"	5.00		103	90-112		200
sec-Butylbenzene	5.42		0.5	"	5.00		108	87-122		200
1,3-Dichlorobenzene	5.05		0.5	"	5.00		101	88-111		200
p-Isopropyltoluene	5.32		0.5	"	5.00		106	89-119		200
1,4-Dichlorobenzene	4.94		0.5	"	5.00		99	70-130		200
1,2-Dichlorobenzene	4.97		0.5	"	5.00		99	70-130		200
Butylbenzene	5.42		0.5	"	5.00		108	86-123		200
1,2-Dibromo-3-chloropropane	18.8		2	"	20.0		94	68-134		200
1,2,4-Trichlorobenzene	4.87		0.5	"	5.00		97	70-130		200
Hexachlorobutadiene	5.21		0.5	"	5.00		104	81-123		200
Naphthalene	4.78		0.5	"	5.00		96	54-144		200
1,2,3-Trichlorobenzene	4.83		0.5	"	5.00		97	73-122		200
Surrogate: 1,2-Dichloroethane-d4	*4.68*			"	*5.00*		94	*65-149*		
Surrogate: Toluene-d8	*5.22*			"	*5.00*		104	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.85*			"	*5.00*		97	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*5.04*			"	*5.00*		101	*76-118*		

United States Environmental Protection Agency
Region 9 Laboratory
1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033A
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:29
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Qualifiers and Comments

Q4 The matrix spike and/or matrix spike duplicate associated with this sample did not meet recovery criteria for this analyte (see MS/MSD results for this batch in QC summary)

Q3 The quantitation limit standard did not meet recovery criteria for this analyte.

Q2 The laboratory control standard associated with this sample did not meet recovery criteria for this analyte (see LCS results for this batch in QC summary).

J The reported result for this analyte should be considered an estimated value.

C4 The calibration verification check did not meet % difference criteria for this analyte.

C3 The initial calibration for this analyte did not meet calibration criteria.

C1 The reported concentration for this analyte is below the quantitation limit.

U Not Detected

NR Not Reported

RE1, RE2, etc: Result is from a sample re-analysis.

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street Building 201
Richmond, CA 94804

Date: 2/20/2015

Subject: **Analytical Testing Results - Project R15S40**
SDG: 15033B

From: **Duane James, Acting Director**
EPA Region 9 Laboratory
MTS-2

To: **Marie Lacey**
California Site Cleanup Section 2
SFD-7-2

Attached are the results from the analysis of samples from the **Modesto Groundwater Jan 2015 Qtrly Monitoring** project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

A full documentation package for these data, including raw data and sample custody documentation, is on file at the EPA Region 9 Laboratory. If you would like to request additional review and/or validation of the data, please contact Eugenia McNaughton at the Region 9 Quality Assurance Office.

If you have any questions, please ask for Richard Bauer, the Lab Project Manager at (510)412-2300.

Electronic CC: John McGuire, RORE, Inc.
Andrew Kong, Lab Data Consultants, Inc.
Andrea Leasure, Lab Data Consultants, Inc.

Analyses included in this report:

Volatile Organic Compounds by GC/MS

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
MW-21A	1502002-01	Water	01/30/15 11:10	01/31/15 11:25
MW-22A	1502002-02	Water	01/30/15 11:00	01/31/15 11:25
MW-24B	1502002-03	Water	01/30/15 13:30	01/31/15 11:25
MW-25A	1502002-04	Water	01/30/15 11:25	01/31/15 11:25
MW-26B	1502002-05	Water	01/30/15 09:45	01/31/15 11:25
MW-27B	1502002-06	Water	01/30/15 10:10	01/31/15 11:25
MW-28B	1502002-07	Water	01/30/15 11:20	01/31/15 11:25
MW-30A	1502002-08	Water	01/30/15 10:45	01/31/15 11:25
MW-30B	1502002-09	Water	01/30/15 10:35	01/31/15 11:25
MW-31A	1502002-10	Water	01/30/15 10:55	01/31/15 11:25
MW-32B	1502002-11	Water	01/30/15 08:55	01/31/15 11:25
MW-32C	1502002-12	Water	01/30/15 09:10	01/31/15 11:25
MW-34B	1502002-13	Water	01/30/15 11:05	01/31/15 11:25
MW-35B	1502002-14	Water	01/30/15 10:35	01/31/15 11:25
DUP-1	1502002-15	Water	01/30/15 00:00	01/31/15 11:25
DUP-2	1502002-16	Water	01/30/15 00:00	01/31/15 11:25
DUP-3	1502002-17	Water	01/30/15 00:00	01/31/15 11:25
DUP-4	1502002-18	Water	01/30/15 00:00	01/31/15 11:25
DUP-5	1502002-19	Water	01/30/15 00:00	01/31/15 11:25

SDG ID 15033B

Work Order(s)

1502002

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-01									**Water - Sampled: 01/30/15 11:10**
Sample ID: MW-21A									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		7.6	C3, C4, J	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	J, Q2, U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		4.1		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		0.6		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-01									**Water - Sampled: 01/30/15 11:10**
Sample ID: MW-21A									**Volatile Organic Compounds by EPA Method 524.2**
Ethylbenzene		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	C3, J, Q2, U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			99 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			101 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			92 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			94 %	*76-118%*		"	"	"	

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Lab ID: 1502002-02 — **Water - Sampled: 01/30/15 11:00**

Sample ID: MW-22A — **Volatile Organic Compounds by EPA Method 524.2**

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		7.1	C3, C4, J	4	"	"	"	"	524.2/SOP354
Dichloromethane		0.3	C1, J	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	J, Q2, U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		7.2		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		0.2	C1, J	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		0.3	C1, J	0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-02									**Water - Sampled: 01/30/15 11:00**
Sample ID: MW-22A									**Volatile Organic Compounds by EPA Method 524.2**
Ethylbenzene		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	C3, J, Q2, U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			97 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			102 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			93 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			94 %	*76-118%*		"	"	"	

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-03									**Water - Sampled: 01/30/15 13:30**
Sample ID: MW-24B									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		ND	C3, C4, J, U	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	J, Q2, U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene	RE1	60		2.5	"	B15B012	02/03/15	02/03/15	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	B15B008	02/02/15	02/02/15	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-03									**Water - Sampled: 01/30/15 13:30**
Sample ID: MW-24B									**Volatile Organic Compounds by EPA Method 524.2**
1,1,1,2-Tetrachloroethane		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	C3, J, Q2, U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			105 %	*65-149%*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*RE1*		100 %	*65-149%*		*B15B012*	*02/03/15*	*02/03/15*	
Surrogate: Toluene-d8			99 %	*85-114%*		*B15B008*	*02/02/15*	*02/02/15*	
Surrogate: Toluene-d8	*RE1*		97 %	*85-114%*		*B15B012*	*02/03/15*	*02/03/15*	
Surrogate: 4-Bromofluorobenzene			94 %	*82-111%*		*B15B008*	*02/02/15*	*02/02/15*	
Surrogate: 4-Bromofluorobenzene	*RE1*		99 %	*82-111%*		*B15B012*	*02/03/15*	*02/03/15*	
Surrogate: 1,2-Dichlorobenzene-d4			98 %	*76-118%*		*B15B008*	*02/02/15*	*02/02/15*	
Surrogate: 1,2-Dichlorobenzene-d4	*RE1*		105 %	*76-118%*		*B15B012*	*02/03/15*	*02/03/15*	

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-04									**Water - Sampled: 01/30/15 11:25**
Sample ID: MW-25A									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		9.2	C3, C4, J	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	J, Q2, U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene	RE1	95		2.5	"	B15B012	02/03/15	02/03/15	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	B15B008	02/02/15	02/02/15	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-04									**Water - Sampled: 01/30/15 11:25**
Sample ID: MW-25A						**Volatile Organic Compounds by EPA Method 524.2**			
Ethylbenzene		ND	U	0.5	ug/L	B15B008	02/02/15	02/02/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	C3, J, Q2, U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			105 %	*65-149%*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*RE1*		99 %	*65-149%*		*B15B012*	*02/03/15*	*02/03/15*	
Surrogate: Toluene-d8			98 %	*85-114%*		*B15B008*	*02/02/15*	*02/02/15*	
Surrogate: Toluene-d8	*RE1*		98 %	*85-114%*		*B15B012*	*02/03/15*	*02/03/15*	
Surrogate: 4-Bromofluorobenzene			93 %	*82-111%*		*B15B008*	*02/02/15*	*02/02/15*	
Surrogate: 4-Bromofluorobenzene	*RE1*		102 %	*82-111%*		*B15B012*	*02/03/15*	*02/03/15*	
Surrogate: 1,2-Dichlorobenzene-d4			95 %	*76-118%*		*B15B008*	*02/02/15*	*02/02/15*	
Surrogate: 1,2-Dichlorobenzene-d4	*RE1*		109 %	*76-118%*		*B15B012*	*02/03/15*	*02/03/15*	

United States Environmental Protection Agency
Region 9 Laboratory
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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-05									**Water - Sampled: 01/30/15 09:45**
Sample ID: MW-26B									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		10	J, Q3	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		1.3		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	**1502002-05**								**Water - Sampled: 01/30/15 09:45**
Sample ID:	**MW-26B**								**Volatile Organic Compounds by EPA Method 524.2**
Ethylbenzene		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			102 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			100 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			92 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			91 %	*76-118%*		"	"	"	

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-06									**Water - Sampled: 01/30/15 10:10**
Sample ID: MW-27B									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		10	J, Q3	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-06									**Water - Sampled: 01/30/15 10:10**
Sample ID: MW-27B						**Volatile Organic Compounds by EPA Method 524.2**			
1,1,1,2-Tetrachloroethane		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			105 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			100 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			92 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			93 %	*76-118%*		"	"	"	

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-07									**Water - Sampled: 01/30/15 11:20**
Sample ID: MW-28B									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		ND	U	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene	RE1	62		5	"	B15B021	02/04/15	02/04/15	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	B15B010	02/03/15	02/03/15	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354

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Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-07									**Water - Sampled: 01/30/15 11:20**
Sample ID: MW-28B						**Volatile Organic Compounds by EPA Method 524.2**			
1,1,1,2-Tetrachloroethane		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			103 %	*65-149%*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*RE1*		102 %	*65-149%*		*B15B021*	*02/04/15*	*02/04/15*	
Surrogate: Toluene-d8			100 %	*85-114%*		*B15B010*	*02/03/15*	*02/03/15*	
Surrogate: Toluene-d8	*RE1*		101 %	*85-114%*		*B15B021*	*02/04/15*	*02/04/15*	
Surrogate: 4-Bromofluorobenzene			91 %	*82-111%*		*B15B010*	*02/03/15*	*02/03/15*	
Surrogate: 4-Bromofluorobenzene	*RE1*		91 %	*82-111%*		*B15B021*	*02/04/15*	*02/04/15*	
Surrogate: 1,2-Dichlorobenzene-d4			92 %	*76-118%*		*B15B010*	*02/03/15*	*02/03/15*	
Surrogate: 1,2-Dichlorobenzene-d4	*RE1*		90 %	*76-118%*		*B15B021*	*02/04/15*	*02/04/15*	

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-08									**Water - Sampled: 01/30/15 10:45**
Sample ID: MW-30A									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		9.8	J, Q3	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		2.1		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

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Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-08									**Water - Sampled: 01/30/15 10:45**
Sample ID: MW-30A									**Volatile Organic Compounds by EPA Method 524.2**
Ethylbenzene		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			105 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			99 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			91 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			93 %	*76-118%*		"	"	"	

United States Environmental Protection Agency
Region 9 Laboratory
1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-09									**Water - Sampled: 01/30/15 10:35**
Sample ID: MW-30B									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		12	J, Q3	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		1.5		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-09									**Water - Sampled: 01/30/15 10:35**
Sample ID: MW-30B									**Volatile Organic Compounds by EPA Method 524.2**
Ethylbenzene		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			104 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			100 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			91 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			93 %	*76-118%*		"	"	"	

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Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-10									**Water - Sampled: 01/30/15 10:55**
Sample ID: MW-31A									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B012	02/03/15	02/03/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		8.2	C3, J	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	C4, J, Q2, U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
Chloroform		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		3.3		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-10									**Water - Sampled: 01/30/15 10:55**
Sample ID: MW-31A									**Volatile Organic Compounds by EPA Method 524.2**
Ethylbenzene		ND	U	0.5	ug/L	B15B012	02/03/15	02/03/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			102 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			96 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			103 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			113 %	*76-118%*		"	"	"	

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-11									**Water - Sampled: 01/30/15 08:55**
Sample ID: MW-32B									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		14	J, Q3	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		0.4	C1, J	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-11									**Water - Sampled: 01/30/15 08:55**
Sample ID: MW-32B									
						Volatile Organic Compounds by EPA Method 524.2			
Ethylbenzene		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4		105 %		*65-149%*		"	"	"	
Surrogate: Toluene-d8		101 %		*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene		92 %		*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4		93 %		*76-118%*		"	"	"	

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-12									**Water - Sampled: 01/30/15 09:10**
Sample ID: MW-32C									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		10	J, Q3	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Lab ID: 1502002-12 — **Water - Sampled: 01/30/15 09:10**

Sample ID: MW-32C — **Volatile Organic Compounds by EPA Method 524.2**

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
1,1,1,2-Tetrachloroethane		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			102 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			100 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			91 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			95 %	*76-118%*		"	"	"	

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-13									**Water - Sampled: 01/30/15 11:05**
Sample ID: MW-34B									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
Acetone		9.5	J, Q3	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	J, Q4, U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		12	J, Q4	0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-13									**Water - Sampled: 01/30/15 11:05**
Sample ID: MW-34B									**Volatile Organic Compounds by EPA Method 524.2**
Ethylbenzene		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			104 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			99 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			90 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			90 %	*76-118%*		"	"	"	

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-14									**Water - Sampled: 01/30/15 10:35**
Sample ID: MW-35B									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		11	J, Q3	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		0.3	C1, J	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		8.3		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-14									**Water - Sampled: 01/30/15 10:35**
Sample ID: MW-35B						**Volatile Organic Compounds by EPA Method 524.2**			
Ethylbenzene		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			104 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			100 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			91 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			95 %	*76-118%*		"	"	"	

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-15									**Water - Sampled: 01/30/15 00:00**
Sample ID: DUP-1									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		8.9	J, Q3	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-15									**Water - Sampled: 01/30/15 00:00**
Sample ID: DUP-1						**Volatile Organic Compounds by EPA Method 524.2**			
1,1,1,2-Tetrachloroethane		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
Ethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			104 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			100 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			92 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			90 %	*76-118%*		"	"	"	

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-16									**Water - Sampled: 01/30/15 00:00**
Sample ID: DUP-2									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		12	J, Q3	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		0.9		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		7.1		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

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Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-16									**Water - Sampled: 01/30/15 00:00**
Sample ID: DUP-2						**Volatile Organic Compounds by EPA Method 524.2**			
Ethylbenzene		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			104 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			100 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			90 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			92 %	*76-118%*		"	"	"	

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-17									**Water - Sampled: 01/30/15 00:00**
Sample ID: DUP-3									
						Volatile Organic Compounds by EPA Method 524.2			
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		13	Q3, J	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		4.1		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		0.4	C1, J	0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-17									**Water - Sampled: 01/30/15 00:00**
Sample ID: DUP-3									**Volatile Organic Compounds by EPA Method 524.2**
Ethylbenzene		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			104 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			100 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			89 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			92 %	*76-118%*		"	"	"	

United States Environmental Protection Agency
Region 9 Laboratory

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Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-18									**Water - Sampled: 01/30/15 00:00**
Sample ID: DUP-4									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		ND	U	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroform		3.6		0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		24		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-18									**Water - Sampled: 01/30/15 00:00**
Sample ID: DUP-4									**Volatile Organic Compounds by EPA Method 524.2**
Ethylbenzene		ND	U	0.5	ug/L	B15B010	02/03/15	02/03/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			106 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			99 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			90 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			90 %	*76-118%*		"	"	"	

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Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-19									**Water - Sampled: 01/30/15 00:00**
Sample ID: DUP-5									**Volatile Organic Compounds by EPA Method 524.2**
Dichlorodifluoromethane		ND	U	0.5	ug/L	B15B012	02/03/15	02/03/15	524.2/SOP354
Chloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Vinyl chloride		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichlorofluoromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Acetone		9.6	C3, J	4	"	"	"	"	524.2/SOP354
Dichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butyl methyl ether (MTBE)		ND	U	2	"	"	"	"	524.2/SOP354
1,1-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
2,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,2-Dichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Butanone (MEK)		ND	C4, J, Q2, U	4	"	"	"	"	524.2/SOP354
Bromochloromethane		ND	J, Q2, U	0.5	"	"	"	"	524.2/SOP354
Chloroform		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Carbon tetrachloride		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Benzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Trichloroethene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Dibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromodichloromethane		ND	U	0.5	"	"	"	"	524.2/SOP354
cis-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
Toluene		ND	U	0.5	"	"	"	"	524.2/SOP354
trans-1,3-Dichloropropene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2-Trichloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
Tetrachloroethene		12		0.5	"	"	"	"	524.2/SOP354
1,3-Dichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorodibromomethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromoethane (EDB)		ND	U	0.5	"	"	"	"	524.2/SOP354
Chlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,1,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1502002-19									**Water - Sampled: 01/30/15 00:00**
Sample ID: DUP-5						**Volatile Organic Compounds by EPA Method 524.2**			
Ethylbenzene		ND	U	0.5	ug/L	B15B012	02/03/15	02/03/15	524.2/SOP354
m&p-Xylene		ND	U	1	"	"	"	"	524.2/SOP354
o-Xylene		ND	U	0.5	"	"	"	"	524.2/SOP354
Styrene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromoform		ND	U	0.5	"	"	"	"	524.2/SOP354
Isopropylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Bromobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,1,2,2-Tetrachloroethane		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichloropropane		ND	U	0.5	"	"	"	"	524.2/SOP354
Propylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
2-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
4-Chlorotoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3,5-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
tert-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,4-Trimethylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
sec-Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,3-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
p-Isopropyltoluene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,4-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Butylbenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2-Dibromo-3-chloropropane		ND	U	2	"	"	"	"	524.2/SOP354
1,2,4-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Hexachlorobutadiene		ND	U	0.5	"	"	"	"	524.2/SOP354
Naphthalene		ND	U	0.5	"	"	"	"	524.2/SOP354
1,2,3-Trichlorobenzene		ND	U	0.5	"	"	"	"	524.2/SOP354
Surrogate: 1,2-Dichloroethane-d4			104 %	*65-149%*		"	"	"	
Surrogate: Toluene-d8			96 %	*85-114%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			98 %	*82-111%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			107 %	*76-118%*		"	"	"	

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Project Number:	R15S40	**75 Hawthorne Street**		**Reported:**	02/20/15 10:47
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**			

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B008 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B008-BLK1)										
Dichlorodifluoromethane	ND	U	0.5	ug/L						
Chloromethane	ND	U	0.5	"						
Vinyl chloride	ND	U	0.5	"						
Bromomethane	ND	U	0.5	"						
Chloroethane	ND	U	0.5	"						
Trichlorofluoromethane	ND	U	0.5	"						
1,1-Dichloroethene	ND	U	0.5	"						
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	0.5	"						
Acetone	ND	C3, C4, J, U	4	"						
Dichloromethane	ND	U	0.5	"						
trans-1,2-Dichloroethene	ND	U	0.5	"						
tert-Butyl methyl ether (MTBE)	ND	J, Q2, U	2	"						
1,1-Dichloroethane	ND	U	0.5	"						
2,2-Dichloropropane	ND	U	0.5	"						
cis-1,2-Dichloroethene	ND	U	0.5	"						
2-Butanone (MEK)	ND	U	4	"						
Bromochloromethane	ND	U	0.5	"						
Chloroform	ND	U	0.5	"						
1,1,1-Trichloroethane	ND	U	0.5	"						
Carbon tetrachloride	ND	U	0.5	"						
1,1-Dichloropropene	ND	U	0.5	"						
Benzene	ND	U	0.5	"						
1,2-Dichloroethane	ND	U	0.5	"						
Trichloroethene	ND	U	0.5	"						
1,2-Dichloropropane	ND	U	0.5	"						
Dibromomethane	ND	U	0.5	"						
Bromodichloromethane	ND	U	0.5	"						
cis-1,3-Dichloropropene	ND	J, Q2, U	0.5	"						
Toluene	ND	U	0.5	"						
trans-1,3-Dichloropropene	ND	U	0.5	"						
1,1,2-Trichloroethane	ND	U	0.5	"						
Tetrachloroethene	ND	U	0.5	"						
1,3-Dichloropropane	ND	U	0.5	"						
Chlorodibromomethane	ND	U	0.5	"						
1,2-Dibromoethane (EDB)	ND	U	0.5	"						
Chlorobenzene	ND	U	0.5	"						
1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						

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Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B008 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B008-BLK1)										
Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	C3, J, Q2, U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						
Surrogate: 1,2-Dichloroethane-d4	*4.86*			"	*5.00*		97	*65-149*		
Surrogate: Toluene-d8	*5.33*			"	*5.00*		107	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.80*			"	*5.00*		96	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*4.73*			"	*5.00*		95	*76-118*		
LCS (B15B008-BS1)										
Dichlorodifluoromethane	3.51		0.5	ug/L	5.00		70	53-153		200
Chloromethane	3.84		0.5	"	5.00		77	70-124		200
Vinyl chloride	4.13		0.5	"	5.00		83	70-130		200
Bromomethane	6.01		0.5	"	5.00		120	58-172		200
Chloroethane	6.03		0.5	"	5.00		121	75-135		200
Trichlorofluoromethane	4.75		0.5	"	5.00		95	74-141		200
1,1-Dichloroethene	4.5		0.5	"	5.00		90	70-130		200
1,1,2-Trichloro-1,2,2-trifluoroethane	4.72		0.5	"	5.00		94	73-139		200
Acetone	26.2		4	"	40.0		66	60-125		200
Dichloromethane	3.94		0.5	"	5.00		79	70-130		200
trans-1,2-Dichloroethene	4.68		0.5	"	5.00		94	70-130		200
tert-Butyl methyl ether (MTBE)	16.3		2	"	20.0		82	74-127		200
1,1-Dichloroethane	4.73		0.5	"	5.00		95	85-117		200
2,2-Dichloropropane	6.21		0.5	"	5.00		124	61-163		200

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B008 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
LCS (B15B008-BS1)										
cis-1,2-Dichloroethene	6.05		0.5	"	5.00		121	70-130		200
2-Butanone (MEK)	38.4		4	"	40.0		96	67-123		200
Bromochloromethane	4.29		0.5	"	5.00		86	84-114		200
Chloroform	4.46		0.5	"	5.00		89	70-130		200
1,1,1-Trichloroethane	4.53		0.5	"	5.00		91	70-130		200
Carbon tetrachloride	3.82		0.5	"	5.00		76	70-130		200
1,1-Dichloropropene	4.25		0.5	"	5.00		**85**	88-120		200
Benzene	4.25		0.5	"	5.00		85	70-130		200
1,2-Dichloroethane	4.8		0.5	"	5.00		96	70-130		200
Trichloroethene	4.69		0.5	"	5.00		94	70-130		200
1,2-Dichloropropane	4.37		0.5	"	5.00		87	70-130		200
Dibromomethane	4.35		0.5	"	5.00		87	79-118		200
Bromodichloromethane	3.66		0.5	"	5.00		73	70-130		200
cis-1,3-Dichloropropene	3.74		0.5	"	5.00		**75**	79-127		200
Toluene	5.6		0.5	"	5.00		112	70-130		200
trans-1,3-Dichloropropene	4.35		0.5	"	5.00		87	75-135		200
1,1,2-Trichloroethane	4.82		0.5	"	5.00		96	70-130		200
Tetrachloroethene	4.9		0.5	"	5.00		98	70-130		200
1,3-Dichloropropane	4.75		0.5	"	5.00		95	82-116		200
Chlorodibromomethane	4.13		0.5	"	5.00		83	70-130		200
1,2-Dibromoethane (EDB)	4.75		0.5	"	5.00		95	85-114		200
Chlorobenzene	4.85		0.5	"	5.00		97	70-130		200
1,1,1,2-Tetrachloroethane	4.55		0.5	"	5.00		91	86-122		200
Ethylbenzene	5.67		0.5	"	5.00		113	70-130		200
m&p-Xylene	10.6		1	"	10.0		106	70-130		200
o-Xylene	5.11		0.5	"	5.00		102	70-130		200
Styrene	5.15		0.5	"	5.00		103	70-130		200
Bromoform	4.25		0.5	"	5.00		85	70-130		200
Isopropylbenzene	5.31		0.5	"	5.00		106	90-118		200
Bromobenzene	4.93		0.5	"	5.00		99	90-110		200
1,1,2,2-Tetrachloroethane	4.43		0.5	"	5.00		89	76-122		200
1,2,3-Trichloropropane	4.67		0.5	"	5.00		93	77-119		200
Propylbenzene	5.78		0.5	"	5.00		116	89-120		200
2-Chlorotoluene	5.62		0.5	"	5.00		112	88-114		200
4-Chlorotoluene	5.56		0.5	"	5.00		111	90-112		200
1,3,5-Trimethylbenzene	5.29		0.5	"	5.00		106	90-115		200
tert-Butylbenzene	5.01		0.5	"	5.00		100	89-118		200
1,2,4-Trimethylbenzene	5.34		0.5	"	5.00		107	90-112		200
sec-Butylbenzene	5.27		0.5	"	5.00		105	87-122		200
1,3-Dichlorobenzene	5.23		0.5	"	5.00		105	88-111		200
p-Isopropyltoluene	5.02		0.5	"	5.00		100	89-119		200
1,4-Dichlorobenzene	5.31		0.5	"	5.00		106	70-130		200

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B008 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
								Volatile Organic Compounds by EPA Method 524.2 - Quality Control		
LCS (B15B008-BS1)										
1,2-Dichlorobenzene	5.13		0.5	"	5.00		103	70-130		200
Butylbenzene	5.54		0.5	"	5.00		111	86-123		200
1,2-Dibromo-3-chloropropane	15		2	"	20.0		75	68-134		200
1,2,4-Trichlorobenzene	4.77		0.5	"	5.00		95	70-130		200
Hexachlorobutadiene	5.11		0.5	"	5.00		102	81-123		200
Naphthalene	4.49		0.5	"	5.00		90	54-144		200
1,2,3-Trichlorobenzene	4.86		0.5	"	5.00		97	73-122		200
Surrogate: 1,2-Dichloroethane-d4	*5.02*			"	*5.00*		100	*65-149*		
Surrogate: Toluene-d8	*5.72*			"	*5.00*		114	*85-114*		
Surrogate: 4-Bromofluorobenzene	*5.61*			"	*5.00*		**112**	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*5.37*			"	*5.00*		107	*76-118*		
LCS (B15B008-BS2)										
Dichlorodifluoromethane	4.1		0.5	ug/L	5.00		82	53-153		200
Chloromethane	4.38		0.5	"	5.00		88	70-124		200
Vinyl chloride	4.43		0.5	"	5.00		89	70-130		200
Bromomethane	4.89		0.5	"	5.00		98	58-172		200
Chloroethane	4.65		0.5	"	5.00		93	75-135		200
Trichlorofluoromethane	4.98		0.5	"	5.00		100	74-141		200
1,1-Dichloroethene	4.86		0.5	"	5.00		97	70-130		200
1,1,2-Trichloro-1,2,2-trifluoroethane	5.06		0.5	"	5.00		101	73-139		200
Acetone	27.2		4	"	40.0		68	60-125		200
Dichloromethane	4.31		0.5	"	5.00		86	70-130		200
trans-1,2-Dichloroethene	4.6		0.5	"	5.00		92	70-130		200
tert-Butyl methyl ether (MTBE)	14		2	"	20.0		**70**	74-127		200
1,1-Dichloroethane	4.69		0.5	"	5.00		94	85-117		200
2,2-Dichloropropane	4.44		0.5	"	5.00		89	61-163		200
cis-1,2-Dichloroethene	4.3		0.5	"	5.00		86	70-130		200
2-Butanone (MEK)	35.3		4	"	40.0		88	67-123		200
Bromochloromethane	4.44		0.5	"	5.00		89	84-114		200
Chloroform	4.65		0.5	"	5.00		93	70-130		200
1,1,1-Trichloroethane	4.07		0.5	"	5.00		81	70-130		200
Carbon tetrachloride	3.86		0.5	"	5.00		77	70-130		200
1,1-Dichloropropene	4.62		0.5	"	5.00		92	88-120		200
Benzene	4.74		0.5	"	5.00		95	70-130		200
1,2-Dichloroethane	5.04		0.5	"	5.00		101	70-130		200
Trichloroethene	4.82		0.5	"	5.00		96	70-130		200
1,2-Dichloropropane	4.43		0.5	"	5.00		89	70-130		200
Dibromomethane	4.53		0.5	"	5.00		91	79-118		200
Bromodichloromethane	3.65		0.5	"	5.00		73	70-130		200
cis-1,3-Dichloropropene	3.67		0.5	"	5.00		**73**	79-127		200

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B008 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/02/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
LCS (B15B008-BS2)										
Toluene	5.38		0.5	"	5.00		108	70-130		200
trans-1,3-Dichloropropene	3.82		0.5	"	5.00		76	75-135		200
1,1,2-Trichloroethane	4.73		0.5	"	5.00		95	70-130		200
Tetrachloroethene	5.27		0.5	"	5.00		105	70-130		200
1,3-Dichloropropane	4.86		0.5	"	5.00		97	82-116		200
Chlorodibromomethane	3.79		0.5	"	5.00		76	70-130		200
1,2-Dibromoethane (EDB)	4.45		0.5	"	5.00		89	85-114		200
Chlorobenzene	5.13		0.5	"	5.00		103	70-130		200
1,1,1,2-Tetrachloroethane	4.23		0.5	"	5.00		**85**	86-122		200
Ethylbenzene	5.47		0.5	"	5.00		109	70-130		200
m&p-Xylene	10.7		1	"	10.0		107	70-130		200
o-Xylene	5.22		0.5	"	5.00		104	70-130		200
Styrene	5.16		0.5	"	5.00		103	70-130		200
Bromoform	3.52		0.5	"	5.00		70	70-130		200
Isopropylbenzene	5.46		0.5	"	5.00		109	90-118		200
Bromobenzene	5.1		0.5	"	5.00		102	90-110		200
1,1,2,2-Tetrachloroethane	4.46		0.5	"	5.00		89	76-122		200
1,2,3-Trichloropropane	4.73		0.5	"	5.00		95	77-119		200
Propylbenzene	5.66		0.5	"	5.00		113	89-120		200
2-Chlorotoluene	5.51		0.5	"	5.00		110	88-114		200
4-Chlorotoluene	5.49		0.5	"	5.00		110	90-112		200
1,3,5-Trimethylbenzene	5.39		0.5	"	5.00		108	90-115		200
tert-Butylbenzene	5.26		0.5	"	5.00		105	89-118		200
1,2,4-Trimethylbenzene	5.43		0.5	"	5.00		109	90-112		200
sec-Butylbenzene	5.44		0.5	"	5.00		109	87-122		200
1,3-Dichlorobenzene	5.23		0.5	"	5.00		105	88-111		200
p-Isopropyltoluene	5.29		0.5	"	5.00		106	89-119		200
1,4-Dichlorobenzene	5.35		0.5	"	5.00		107	70-130		200
1,2-Dichlorobenzene	5.26		0.5	"	5.00		105	70-130		200
Butylbenzene	5.53		0.5	"	5.00		111	86-123		200
1,2-Dibromo-3-chloropropane	13.5		2	"	20.0		**67**	68-134		200
1,2,4-Trichlorobenzene	4.97		0.5	"	5.00		99	70-130		200
Hexachlorobutadiene	5.2		0.5	"	5.00		104	81-123		200
Naphthalene	4.49		0.5	"	5.00		90	54-144		200
1,2,3-Trichlorobenzene	4.88		0.5	"	5.00		98	73-122		200
Surrogate: 1,2-Dichloroethane-d4	*4.99*			"	*5.00*		100	*65-149*		
Surrogate: Toluene-d8	*5.35*			"	*5.00*		107	*85-114*		
Surrogate: 4-Bromofluorobenzene	*5.06*			"	*5.00*		101	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*5.06*			"	*5.00*		101	*76-118*		
Batch B15B010 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/03/15**

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (B15B010-BLK1)										
Dichlorodifluoromethane	ND	U	0.5	ug/L						
Chloromethane	ND	U	0.5	"						
Vinyl chloride	ND	U	0.5	"						
Bromomethane	ND	U	0.5	"						
Chloroethane	ND	U	0.5	"						
Trichlorofluoromethane	ND	U	0.5	"						
1,1-Dichloroethene	ND	U	0.5	"						
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	0.5	"						
Acetone	ND	U	4	"						
Dichloromethane	ND	U	0.5	"						
trans-1,2-Dichloroethene	ND	U	0.5	"						
tert-Butyl methyl ether (MTBE)	ND	U	2	"						
1,1-Dichloroethane	ND	U	0.5	"						
2,2-Dichloropropane	ND	U	0.5	"						
cis-1,2-Dichloroethene	ND	U	0.5	"						
2-Butanone (MEK)	ND	U	4	"						
Bromochloromethane	ND	U	0.5	"						
Chloroform	ND	U	0.5	"						
1,1,1-Trichloroethane	ND	U	0.5	"						
Carbon tetrachloride	ND	U	0.5	"						
1,1-Dichloropropene	ND	U	0.5	"						
Benzene	ND	U	0.5	"						
1,2-Dichloroethane	ND	U	0.5	"						
Trichloroethene	ND	U	0.5	"						
1,2-Dichloropropane	ND	U	0.5	"						
Dibromomethane	ND	U	0.5	"						
Bromodichloromethane	ND	U	0.5	"						
cis-1,3-Dichloropropene	ND	U	0.5	"						
Toluene	ND	U	0.5	"						
trans-1,3-Dichloropropene	ND	U	0.5	"						
1,1,2-Trichloroethane	ND	U	0.5	"						
Tetrachloroethene	ND	U	0.5	"						
1,3-Dichloropropane	ND	U	0.5	"						
Chlorodibromomethane	ND	U	0.5	"						
1,2-Dibromoethane (EDB)	ND	U	0.5	"						
Chlorobenzene	ND	U	0.5	"						
1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						
Isopropylbenzene	ND	U	0.5	"						

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B010 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/03/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B010-BLK1)										
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						
Surrogate: 1,2-Dichloroethane-d4	*5.05*			"	*5.00*		101	*65-149*		
Surrogate: Toluene-d8	*4.96*			"	*5.00*		99	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.48*			"	*5.00*		90	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*4.46*			"	*5.00*		89	*76-118*		
LCS (B15B010-BS1)										
Dichlorodifluoromethane	4.43		0.5	ug/L	5.00		89	53-153		200
Chloromethane	4.34		0.5	"	5.00		87	70-124		200
Vinyl chloride	4.43		0.5	"	5.00		89	70-130		200
Bromomethane	4.57		0.5	"	5.00		91	58-172		200
Chloroethane	4.63		0.5	"	5.00		93	75-135		200
Trichlorofluoromethane	5.03		0.5	"	5.00		101	74-141		200
1,1-Dichloroethene	5.16		0.5	"	5.00		103	70-130		200
1,1,2-Trichloro-1,2,2-trifluoroethane	5.42		0.5	"	5.00		108	73-139		200
Acetone	41.1		4	"	40.0		103	60-125		200
Dichloromethane	4.58		0.5	"	5.00		92	70-130		200
trans-1,2-Dichloroethene	5.29		0.5	"	5.00		106	70-130		200
tert-Butyl methyl ether (MTBE)	19.7		2	"	20.0		99	74-127		200
1,1-Dichloroethane	5.24		0.5	"	5.00		105	85-117		200
2,2-Dichloropropane	5		0.5	"	5.00		100	61-163		200
cis-1,2-Dichloroethene	4.68		0.5	"	5.00		94	87-113		200

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B010 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/03/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
LCS (B15B010-BS1)										
2-Butanone (MEK)	36.1		4	"	40.0		90	67-123		200
Bromochloromethane	4.8		0.5	"	5.00		96	84-114		200
Chloroform	4.73		0.5	"	5.00		95	70-130		200
1,1,1-Trichloroethane	4.65		0.5	"	5.00		93	70-130		200
Carbon tetrachloride	4.86		0.5	"	5.00		97	70-130		200
1,1-Dichloropropene	4.79		0.5	"	5.00		96	88-120		200
Benzene	4.89		0.5	"	5.00		98	70-130		200
1,2-Dichloroethane	4.68		0.5	"	5.00		94	70-130		200
Trichloroethene	4.73		0.5	"	5.00		95	70-130		200
1,2-Dichloropropane	4.69		0.5	"	5.00		94	70-130		200
Dibromomethane	4.64		0.5	"	5.00		93	79-118		200
Bromodichloromethane	4.75		0.5	"	5.00		95	70-130		200
cis-1,3-Dichloropropene	4.7		0.5	"	5.00		94	79-127		200
Toluene	4.9		0.5	"	5.00		98	70-130		200
trans-1,3-Dichloropropene	4.74		0.5	"	5.00		95	75-135		200
1,1,2-Trichloroethane	4.62		0.5	"	5.00		92	70-130		200
Tetrachloroethene	4.86		0.5	"	5.00		97	70-130		200
1,3-Dichloropropane	4.61		0.5	"	5.00		92	82-116		200
Chlorodibromomethane	4.91		0.5	"	5.00		98	70-130		200
1,2-Dibromoethane (EDB)	4.72		0.5	"	5.00		94	85-114		200
Chlorobenzene	4.8		0.5	"	5.00		96	70-130		200
1,1,1,2-Tetrachloroethane	4.65		0.5	"	5.00		93	86-122		200
Ethylbenzene	5.03		0.5	"	5.00		101	70-130		200
m&p-Xylene	9.76		1	"	10.0		98	70-130		200
o-Xylene	4.87		0.5	"	5.00		97	70-130		200
Styrene	4.9		0.5	"	5.00		98	70-130		200
Bromoform	5.06		0.5	"	5.00		101	70-130		200
Isopropylbenzene	5.06		0.5	"	5.00		101	90-118		200
Bromobenzene	4.87		0.5	"	5.00		97	90-110		200
1,1,2,2-Tetrachloroethane	5.03		0.5	"	5.00		101	76-122		200
1,2,3-Trichloropropane	4.63		0.5	"	5.00		93	77-119		200
Propylbenzene	5.09		0.5	"	5.00		102	89-120		200
2-Chlorotoluene	4.85		0.5	"	5.00		97	88-114		200
4-Chlorotoluene	4.94		0.5	"	5.00		99	90-112		200
1,3,5-Trimethylbenzene	5.03		0.5	"	5.00		101	90-115		200
tert-Butylbenzene	4.98		0.5	"	5.00		100	89-118		200
1,2,4-Trimethylbenzene	4.97		0.5	"	5.00		99	90-112		200
sec-Butylbenzene	5.13		0.5	"	5.00		103	87-122		200
1,3-Dichlorobenzene	4.9		0.5	"	5.00		98	88-111		200
p-Isopropyltoluene	5.1		0.5	"	5.00		102	89-119		200
1,4-Dichlorobenzene	4.76		0.5	"	5.00		95	70-130		200
1,2-Dichlorobenzene	4.78		0.5	"	5.00		96	70-130		200

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B010 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/03/15**
								Volatile Organic Compounds by EPA Method 524.2 - Quality Control		
LCS (B15B010-BS1)										
Butylbenzene	5.18		0.5	"	5.00		104	86-123		200
1,2-Dibromo-3-chloropropane	19.6		2	"	20.0		98	68-134		200
1,2,4-Trichlorobenzene	4.84		0.5	"	5.00		97	70-130		200
Hexachlorobutadiene	4.92		0.5	"	5.00		98	81-123		200
Naphthalene	4.92		0.5	"	5.00		98	54-144		200
1,2,3-Trichlorobenzene	4.82		0.5	"	5.00		96	73-122		200
Surrogate: 1,2-Dichloroethane-d4	*4.66*			"	*5.00*		93	*65-149*		
Surrogate: Toluene-d8	*5.05*			"	*5.00*		101	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.89*			"	*5.00*		98	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*5.06*			"	*5.00*		101	*76-118*		
Matrix Spike (B15B010-MS1)		**Source: 1502002-13**								
Dichlorodifluoromethane	6.38		0.5	ug/L	5.00	ND	128	53-153		20
Chloromethane	4.9		0.5	"	5.00	ND	98	70-124		20
Vinyl chloride	5.42		0.5	"	5.00	ND	108	77-127		20
Bromomethane	4.37		0.5	"	5.00	ND	87	58-172		20
Chloroethane	5.05		0.5	"	5.00	ND	101	75-135		20
Trichlorofluoromethane	6.4		0.5	"	5.00	ND	128	74-141		20
1,1-Dichloroethene	6.19		0.5	"	5.00	ND	124	80-126		20
1,1,2-Trichloro-1,2,2-trifluoroethane	6.89		0.5	"	5.00	ND	138	73-139		20
Acetone	42.9		4	"	40.0	9.54	83	60-125		20
Dichloromethane	4.33		0.5	"	5.00	ND	87	73-114		20
trans-1,2-Dichloroethene	5.38		0.5	"	5.00	ND	108	86-119		20
tert-Butyl methyl ether (MTBE)	19.3		2	"	20.0	ND	96	74-127		20
1,1-Dichloroethane	5.69		0.5	"	5.00	ND	114	85-117		20
2,2-Dichloropropane	5.56		0.5	"	5.00	ND	111	61-163		20
cis-1,2-Dichloroethene	5.31		0.5	"	5.00	ND	106	87-113		20
2-Butanone (MEK)	38.1		4	"	40.0	ND	95	67-123		20
Bromochloromethane	5.04		0.5	"	5.00	ND	101	84-114		20
Chloroform	5.39		0.5	"	5.00	ND	108	85-117		20
1,1,1-Trichloroethane	5.45		0.5	"	5.00	ND	109	85-126		20
Carbon tetrachloride	5.76		0.5	"	5.00	ND	115	77-140		20
1,1-Dichloropropene	5.9		0.5	"	5.00	ND	118	88-120		20
Benzene	5.34		0.5	"	5.00	ND	107	86-112		20
1,2-Dichloroethane	4.95		0.5	"	5.00	ND	99	78-121		20
Trichloroethene	5.4		0.5	"	5.00	ND	108	90-112		20
1,2-Dichloropropane	5		0.5	"	5.00	ND	100	83-114		20
Dibromomethane	4.91		0.5	"	5.00	ND	98	79-118		20
Bromodichloromethane	4.96		0.5	"	5.00	ND	99	82-120		20
cis-1,3-Dichloropropene	4.8		0.5	"	5.00	ND	96	79-127		20
Toluene	5.29		0.5	"	5.00	ND	106	87-113		20

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Project Manager:	Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number:	R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project:	Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B010 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/03/15**
								Volatile Organic Compounds by EPA Method 524.2 - Quality Control		
Matrix Spike (B15B010-MS1)		**Source: 1502002-13**								
trans-1,3-Dichloropropene	4.75		0.5	"	5.00	ND	95	75-135		20
1,1,2-Trichloroethane	5.05		0.5	"	5.00	ND	101	79-116		20
Tetrachloroethene	19		0.5	"	5.00	12.1	**139**	87-118		20
1,3-Dichloropropane	4.95		0.5	"	5.00	ND	99	82-116		20
Chlorodibromomethane	4.89		0.5	"	5.00	ND	98	80-125		20
1,2-Dibromoethane (EDB)	4.96		0.5	"	5.00	ND	99	85-114		20
Chlorobenzene	5.21		0.5	"	5.00	ND	104	88-110		20
1,1,1,2-Tetrachloroethane	4.94		0.5	"	5.00	ND	99	86-122		20
Ethylbenzene	5.63		0.5	"	5.00	ND	113	89-117		20
m&p-Xylene	10.8		1	"	10.0	ND	108	90-113		20
o-Xylene	5.31		0.5	"	5.00	ND	106	90-111		20
Styrene	5.3		0.5	"	5.00	ND	106	86-113		20
Bromoform	4.75		0.5	"	5.00	ND	95	70-138		20
Isopropylbenzene	5.77		0.5	"	5.00	ND	115	90-118		20
Bromobenzene	5.2		0.5	"	5.00	ND	104	90-110		20
1,1,2,2-Tetrachloroethane	5.2		0.5	"	5.00	ND	104	76-122		20
1,2,3-Trichloropropane	5.06		0.5	"	5.00	ND	101	77-119		20
Propylbenzene	5.89		0.5	"	5.00	ND	118	89-120		20
2-Chlorotoluene	5.32		0.5	"	5.00	ND	106	88-114		20
4-Chlorotoluene	5.41		0.5	"	5.00	ND	108	90-112		20
1,3,5-Trimethylbenzene	5.58		0.5	"	5.00	ND	112	90-115		20
tert-Butylbenzene	5.78		0.5	"	5.00	ND	116	89-118		20
1,2,4-Trimethylbenzene	5.42		0.5	"	5.00	ND	108	90-112		20
sec-Butylbenzene	6.1		0.5	"	5.00	ND	122	87-122		20
1,3-Dichlorobenzene	5.31		0.5	"	5.00	ND	106	88-111		20
p-Isopropyltoluene	5.87		0.5	"	5.00	ND	117	89-119		20
1,4-Dichlorobenzene	5.15		0.5	"	5.00	ND	103	87-111		20
1,2-Dichlorobenzene	5.19		0.5	"	5.00	ND	104	86-111		20
Butylbenzene	6.05		0.5	"	5.00	ND	121	86-123		20
1,2-Dibromo-3-chloropropane	19.1		2	"	20.0	ND	96	68-134		20
1,2,4-Trichlorobenzene	5.07		0.5	"	5.00	ND	101	77-119		20
Hexachlorobutadiene	5.81		0.5	"	5.00	ND	116	81-123		20
Naphthalene	5.13		0.5	"	5.00	ND	103	54-144		20
1,2,3-Trichlorobenzene	5.01		0.5	"	5.00	ND	100	73-122		20
Surrogate: 1,2-Dichloroethane-d4	*4.86*			"	*5.00*		97	*65-149*		
Surrogate: Toluene-d8	*5.13*			"	*5.00*		103	*85-114*		
Surrogate: 4-Bromofluorobenzene	*5.07*			"	*5.00*		101	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*5.09*			"	*5.00*		102	*76-118*		
Matrix Spike Dup (B15B010-MSD1)		**Source: 1502002-13**								
Dichlorodifluoromethane	6.34		0.5	ug/L	5.00	ND	127	53-153	0.5	20

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B010 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/03/15**
								Volatile Organic Compounds by EPA Method 524.2 - Quality Control		
Matrix Spike Dup (B15B010-MSD1)		**Source: 1502002-13**								
Chloromethane	4.86		0.5	"	5.00	ND	97	70-124	0.9	20
Vinyl chloride	5.54		0.5	"	5.00	ND	111	77-127	2	20
Bromomethane	4.91		0.5	"	5.00	ND	98	58-172	12	20
Chloroethane	5.34		0.5	"	5.00	ND	107	75-135	6	20
Trichlorofluoromethane	6.86		0.5	"	5.00	ND	137	74-141	7	20
1,1-Dichloroethene	6.19		0.5	"	5.00	ND	124	80-126	0.02	20
1,1,2-Trichloro-1,2,2-trifluoroethane	7.16		0.5	"	5.00	ND	**143**	73-139	4	20
Acetone	43.5		4	"	40.0	9.54	85	60-125	2	20
Dichloromethane	4.48		0.5	"	5.00	ND	90	73-114	3	20
trans-1,2-Dichloroethene	6.17		0.5	"	5.00	ND	**123**	86-119	14	20
tert-Butyl methyl ether (MTBE)	21.4		2	"	20.0	ND	107	74-127	10	20
1,1-Dichloroethane	5.77		0.5	"	5.00	ND	115	85-117	1	20
2,2-Dichloropropane	5.48		0.5	"	5.00	ND	110	61-163	1	20
cis-1,2-Dichloroethene	5.27		0.5	"	5.00	ND	105	87-113	0.8	20
2-Butanone (MEK)	39		4	"	40.0	ND	98	67-123	2	20
Bromochloromethane	5.09		0.5	"	5.00	ND	102	84-114	1	20
Chloroform	5.43		0.5	"	5.00	ND	109	85-117	0.8	20
1,1,1-Trichloroethane	5.51		0.5	"	5.00	ND	110	85-126	1	20
Carbon tetrachloride	5.77		0.5	"	5.00	ND	115	77-140	0.2	20
1,1-Dichloropropene	5.92		0.5	"	5.00	ND	118	88-120	0.3	20
Benzene	5.36		0.5	"	5.00	ND	107	86-112	0.3	20
1,2-Dichloroethane	4.92		0.5	"	5.00	ND	98	78-121	0.7	20
Trichloroethene	5.37		0.5	"	5.00	ND	107	90-112	0.5	20
1,2-Dichloropropane	5.09		0.5	"	5.00	ND	102	83-114	2	20
Dibromomethane	4.94		0.5	"	5.00	ND	99	79-118	0.7	20
Bromodichloromethane	4.95		0.5	"	5.00	ND	99	82-120	0.2	20
cis-1,3-Dichloropropene	4.9		0.5	"	5.00	ND	98	79-127	2	20
Toluene	5.29		0.5	"	5.00	ND	106	87-113	0.04	20
trans-1,3-Dichloropropene	4.7		0.5	"	5.00	ND	94	75-135	1	20
1,1,2-Trichloroethane	4.94		0.5	"	5.00	ND	99	79-116	2	20
Tetrachloroethene	18.7		0.5	"	5.00	12.1	**132**	87-118	2	20
1,3-Dichloropropane	4.95		0.5	"	5.00	ND	99	82-116	0.08	20
Chlorodibromomethane	4.85		0.5	"	5.00	ND	97	80-125	0.9	20
1,2-Dibromoethane (EDB)	4.88		0.5	"	5.00	ND	98	85-114	2	20
Chlorobenzene	5.1		0.5	"	5.00	ND	102	88-110	2	20
1,1,1,2-Tetrachloroethane	4.89		0.5	"	5.00	ND	98	86-122	1	20
Ethylbenzene	5.54		0.5	"	5.00	ND	111	89-117	2	20
m&p-Xylene	10.6		1	"	10.0	ND	106	90-113	2	20
o-Xylene	5.28		0.5	"	5.00	ND	106	90-111	0.7	20
Styrene	5.18		0.5	"	5.00	ND	104	86-113	2	20
Bromoform	4.92		0.5	"	5.00	ND	98	70-138	3	20
Isopropylbenzene	5.69		0.5	"	5.00	ND	114	90-118	1	20

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B010 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/03/15**
								Volatile Organic Compounds by EPA Method 524.2 - Quality Control		
Matrix Spike Dup (B15B010-MSD1)		**Source: 1502002-13**								
Bromobenzene	5.11		0.5	"	5.00	ND	102	90-110	2	20
1,1,2,2-Tetrachloroethane	5.08		0.5	"	5.00	ND	102	76-122	2	20
1,2,3-Trichloropropane	4.96		0.5	"	5.00	ND	99	77-119	2	20
Propylbenzene	5.77		0.5	"	5.00	ND	115	89-120	2	20
2-Chlorotoluene	5.27		0.5	"	5.00	ND	105	88-114	1	20
4-Chlorotoluene	5.3		0.5	"	5.00	ND	106	90-112	2	20
1,3,5-Trimethylbenzene	5.46		0.5	"	5.00	ND	109	90-115	2	20
tert-Butylbenzene	5.69		0.5	"	5.00	ND	114	89-118	2	20
1,2,4-Trimethylbenzene	5.39		0.5	"	5.00	ND	108	90-112	0.5	20
sec-Butylbenzene	6		0.5	"	5.00	ND	120	87-122	2	20
1,3-Dichlorobenzene	5.24		0.5	"	5.00	ND	105	88-111	1	20
p-Isopropyltoluene	5.67		0.5	"	5.00	ND	113	89-119	4	20
1,4-Dichlorobenzene	5.1		0.5	"	5.00	ND	102	87-111	1	20
1,2-Dichlorobenzene	5.13		0.5	"	5.00	ND	103	86-111	1	20
Butylbenzene	5.92		0.5	"	5.00	ND	118	86-123	2	20
1,2-Dibromo-3-chloropropane	19.7		2	"	20.0	ND	99	68-134	3	20
1,2,4-Trichlorobenzene	5.02		0.5	"	5.00	ND	100	77-119	1	20
Hexachlorobutadiene	5.71		0.5	"	5.00	ND	114	81-123	2	20
Naphthalene	5.17		0.5	"	5.00	ND	103	54-144	0.7	20
1,2,3-Trichlorobenzene	4.99		0.5	"	5.00	ND	100	73-122	0.4	20
Surrogate: 1,2-Dichloroethane-d4	*4.83*			"	*5.00*		97	*65-149*		
Surrogate: Toluene-d8	*4.99*			"	*5.00*		100	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.94*			"	*5.00*		99	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*5.12*			"	*5.00*		102	*76-118*		
Batch B15B012 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/03/15**
								Volatile Organic Compounds by EPA Method 524.2 - Quality Control		
Blank (B15B012-BLK1)										
Dichlorodifluoromethane	ND	U	0.5	ug/L						
Chloromethane	ND	U	0.5	"						
Vinyl chloride	ND	U	0.5	"						
Bromomethane	ND	U	0.5	"						
Chloroethane	ND	U	0.5	"						
Trichlorofluoromethane	ND	U	0.5	"						
1,1-Dichloroethene	ND	U	0.5	"						
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	0.5	"						
Acetone	ND	C3, J, U	4	"						
Dichloromethane	ND	U	0.5	"						
trans-1,2-Dichloroethene	ND	U	0.5	"						
tert-Butyl methyl ether (MTBE)	ND	U	2	"						
1,1-Dichloroethane	ND	U	0.5	"						

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B012 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/03/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B012-BLK1)										
2,2-Dichloropropane	ND	U	0.5	"						
cis-1,2-Dichloroethene	ND	U	0.5	"						
2-Butanone (MEK)	ND	Q2, C4, J, U	4	"						
Bromochloromethane	ND	J, Q2, U	0.5	"						
Chloroform	ND	U	0.5	"						
1,1,1-Trichloroethane	ND	U	0.5	"						
Carbon tetrachloride	ND	U	0.5	"						
1,1-Dichloropropene	ND	U	0.5	"						
Benzene	ND	U	0.5	"						
1,2-Dichloroethane	ND	U	0.5	"						
Trichloroethene	ND	U	0.5	"						
1,2-Dichloropropane	ND	U	0.5	"						
Dibromomethane	ND	U	0.5	"						
Bromodichloromethane	ND	U	0.5	"						
cis-1,3-Dichloropropene	ND	U	0.5	"						
Toluene	ND	U	0.5	"						
trans-1,3-Dichloropropene	ND	U	0.5	"						
1,1,2-Trichloroethane	ND	U	0.5	"						
Tetrachloroethene	ND	U	0.5	"						
1,3-Dichloropropane	ND	U	0.5	"						
Chlorodibromomethane	ND	U	0.5	"						
1,2-Dibromoethane (EDB)	ND	U	0.5	"						
Chlorobenzene	ND	U	0.5	"						
1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						
Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B012 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/03/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B012-BLK1)										
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						
Surrogate: 1,2-Dichloroethane-d4	*4.90*			"	*5.00*		98	*65-149*		
Surrogate: Toluene-d8	*5.00*			"	*5.00*		100	*85-114*		
Surrogate: 4-Bromofluorobenzene	*5.28*			"	*5.00*		106	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*5.51*			"	*5.00*		110	*76-118*		
LCS (B15B012-BS1)										
Dichlorodifluoromethane	4.24		0.5	ug/L	5.00		85	53-153		200
Chloromethane	4.57		0.5	"	5.00		91	70-124		200
Vinyl chloride	4.89		0.5	"	5.00		98	70-130		200
Bromomethane	5.17		0.5	"	5.00		103	58-172		200
Chloroethane	5.29		0.5	"	5.00		106	75-135		200
Trichlorofluoromethane	5.4		0.5	"	5.00		108	74-141		200
1,1-Dichloroethene	5.17		0.5	"	5.00		103	70-130		200
1,1,2-Trichloro-1,2,2-trifluoroethane	5.55		0.5	"	5.00		111	73-139		200
Acetone	28.9		4	"	40.0		72	60-125		200
Dichloromethane	4.73		0.5	"	5.00		95	70-130		200
trans-1,2-Dichloroethene	5.23		0.5	"	5.00		105	70-130		200
tert-Butyl methyl ether (MTBE)	17.4		2	"	20.0		87	74-127		200
1,1-Dichloroethane	4.85		0.5	"	5.00		97	85-117		200
2,2-Dichloropropane	4.5		0.5	"	5.00		90	61-163		200
cis-1,2-Dichloroethene	4.24		0.5	"	5.00		85	70-130		200
2-Butanone (MEK)	23.1		4	"	40.0		**58**	67-123		200
Bromochloromethane	4		0.5	"	5.00		**80**	84-114		200
Chloroform	4.02		0.5	"	5.00		80	70-130		200
1,1,1-Trichloroethane	5.07		0.5	"	5.00		101	70-130		200
Carbon tetrachloride	5.03		0.5	"	5.00		101	70-130		200
1,1-Dichloropropene	4.62		0.5	"	5.00		92	88-120		200
Benzene	4.71		0.5	"	5.00		94	70-130		200
1,2-Dichloroethane	4.25		0.5	"	5.00		85	70-130		200
Trichloroethene	4.63		0.5	"	5.00		93	70-130		200
1,2-Dichloropropane	4.61		0.5	"	5.00		92	70-130		200
Dibromomethane	4.26		0.5	"	5.00		85	79-118		200
Bromodichloromethane	4.38		0.5	"	5.00		88	70-130		200

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Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B012 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/03/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
LCS (B15B012-BS1)										
cis-1,3-Dichloropropene	3.99		0.5	"	5.00		80	79-127		200
Toluene	5.09		0.5	"	5.00		102	70-130		200
trans-1,3-Dichloropropene	3.9		0.5	"	5.00		78	75-135		200
1,1,2-Trichloroethane	4.7		0.5	"	5.00		94	70-130		200
Tetrachloroethene	5.05		0.5	"	5.00		101	70-130		200
1,3-Dichloropropane	4.44		0.5	"	5.00		89	82-116		200
Chlorodibromomethane	4.33		0.5	"	5.00		87	70-130		200
1,2-Dibromoethane (EDB)	4.39		0.5	"	5.00		88	85-114		200
Chlorobenzene	4.9		0.5	"	5.00		98	70-130		200
1,1,1,2-Tetrachloroethane	4.93		0.5	"	5.00		99	86-122		200
Ethylbenzene	5.24		0.5	"	5.00		105	70-130		200
m&p-Xylene	10.6		1	"	10.0		106	70-130		200
o-Xylene	5.28		0.5	"	5.00		106	70-130		200
Styrene	5.05		0.5	"	5.00		101	70-130		200
Bromoform	4.53		0.5	"	5.00		91	70-130		200
Isopropylbenzene	5.54		0.5	"	5.00		111	90-118		200
Bromobenzene	4.88		0.5	"	5.00		98	90-110		200
1,1,2,2-Tetrachloroethane	4.96		0.5	"	5.00		99	76-122		200
1,2,3-Trichloropropane	4.81		0.5	"	5.00		96	77-119		200
Propylbenzene	5.44		0.5	"	5.00		109	89-120		200
2-Chlorotoluene	5.37		0.5	"	5.00		107	88-114		200
4-Chlorotoluene	5.2		0.5	"	5.00		104	90-112		200
1,3,5-Trimethylbenzene	5.56		0.5	"	5.00		111	90-115		200
tert-Butylbenzene	5.6		0.5	"	5.00		112	89-118		200
1,2,4-Trimethylbenzene	5.4		0.5	"	5.00		108	90-112		200
sec-Butylbenzene	5.72		0.5	"	5.00		114	87-122		200
1,3-Dichlorobenzene	5.17		0.5	"	5.00		103	88-111		200
p-Isopropyltoluene	5.62		0.5	"	5.00		112	89-119		200
1,4-Dichlorobenzene	5.1		0.5	"	5.00		102	70-130		200
1,2-Dichlorobenzene	5.18		0.5	"	5.00		104	70-130		200
Butylbenzene	5.65		0.5	"	5.00		113	86-123		200
1,2-Dibromo-3-chloropropane	17.3		2	"	20.0		87	68-134		200
1,2,4-Trichlorobenzene	5.09		0.5	"	5.00		102	70-130		200
Hexachlorobutadiene	5.38		0.5	"	5.00		108	81-123		200
Naphthalene	4.91		0.5	"	5.00		98	54-144		200
1,2,3-Trichlorobenzene	4.9		0.5	"	5.00		98	73-122		200
Surrogate: 1,2-Dichloroethane-d4	*4.25*			"	*5.00*		85	*65-149*		
Surrogate: Toluene-d8	*5.38*			"	*5.00*		108	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.92*			"	*5.00*		98	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*5.27*			"	*5.00*		105	*76-118*		

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Region 9 Laboratory

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B021 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/04/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B021-BLK1)										
Dichlorodifluoromethane	ND	U	0.5	ug/L						
Chloromethane	ND	U	0.5	"						
Vinyl chloride	ND	U	0.5	"						
Bromomethane	ND	U	0.5	"						
Chloroethane	ND	U	0.5	"						
Trichlorofluoromethane	ND	U	0.5	"						
1,1-Dichloroethene	ND	U	0.5	"						
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	0.5	"						
Acetone	ND	U	4	"						
Dichloromethane	ND	U	0.5	"						
trans-1,2-Dichloroethene	ND	U	0.5	"						
tert-Butyl methyl ether (MTBE)	ND	U	2	"						
1,1-Dichloroethane	ND	U	0.5	"						
2,2-Dichloropropane	ND	U	0.5	"						
cis-1,2-Dichloroethene	ND	U	0.5	"						
2-Butanone (MEK)	ND	U	4	"						
Bromochloromethane	ND	U	0.5	"						
Chloroform	ND	U	0.5	"						
1,1,1-Trichloroethane	ND	U	0.5	"						
Carbon tetrachloride	ND	U	0.5	"						
1,1-Dichloropropene	ND	U	0.5	"						
Benzene	ND	U	0.5	"						
1,2-Dichloroethane	ND	U	0.5	"						
Trichloroethene	ND	U	0.5	"						
1,2-Dichloropropane	ND	U	0.5	"						
Dibromomethane	ND	U	0.5	"						
Bromodichloromethane	ND	U	0.5	"						
cis-1,3-Dichloropropene	ND	U	0.5	"						
Toluene	ND	U	0.5	"						
trans-1,3-Dichloropropene	ND	U	0.5	"						
1,1,2-Trichloroethane	ND	U	0.5	"						
Tetrachloroethene	ND	U	0.5	"						
1,3-Dichloropropane	ND	U	0.5	"						
Chlorodibromomethane	ND	U	0.5	"						
1,2-Dibromoethane (EDB)	ND	U	0.5	"						
Chlorobenzene	ND	U	0.5	"						
1,1,1,2-Tetrachloroethane	ND	U	0.5	"						
Ethylbenzene	ND	U	0.5	"						
m&p-Xylene	ND	U	1	"						
o-Xylene	ND	U	0.5	"						
Styrene	ND	U	0.5	"						
Bromoform	ND	U	0.5	"						

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B021 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/04/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
Blank (B15B021-BLK1)										
Isopropylbenzene	ND	U	0.5	"						
Bromobenzene	ND	U	0.5	"						
1,1,2,2-Tetrachloroethane	ND	U	0.5	"						
1,2,3-Trichloropropane	ND	U	0.5	"						
Propylbenzene	ND	U	0.5	"						
2-Chlorotoluene	ND	U	0.5	"						
4-Chlorotoluene	ND	U	0.5	"						
1,3,5-Trimethylbenzene	ND	U	0.5	"						
tert-Butylbenzene	ND	U	0.5	"						
1,2,4-Trimethylbenzene	ND	U	0.5	"						
sec-Butylbenzene	ND	U	0.5	"						
1,3-Dichlorobenzene	ND	U	0.5	"						
p-Isopropyltoluene	ND	U	0.5	"						
1,4-Dichlorobenzene	ND	U	0.5	"						
1,2-Dichlorobenzene	ND	U	0.5	"						
Butylbenzene	ND	U	0.5	"						
1,2-Dibromo-3-chloropropane	ND	U	2	"						
1,2,4-Trichlorobenzene	ND	U	0.5	"						
Hexachlorobutadiene	ND	U	0.5	"						
Naphthalene	ND	U	0.5	"						
1,2,3-Trichlorobenzene	ND	U	0.5	"						
Surrogate: 1,2-Dichloroethane-d4	*5.23*			"	*5.00*		105	*65-149*		
Surrogate: Toluene-d8	*5.02*			"	*5.00*		100	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.54*			"	*5.00*		91	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*4.58*			"	*5.00*		92	*76-118*		
LCS (B15B021-BS1)										
Dichlorodifluoromethane	4.9		0.5	ug/L	5.00		98	53-153		200
Chloromethane	4.5		0.5	"	5.00		90	70-124		200
Vinyl chloride	4.53		0.5	"	5.00		91	70-130		200
Bromomethane	3.56		0.5	"	5.00		71	58-172		200
Chloroethane	4.75		0.5	"	5.00		95	75-135		200
Trichlorofluoromethane	4.99		0.5	"	5.00		100	74-141		200
1,1-Dichloroethene	5.08		0.5	"	5.00		102	70-130		200
1,1,2-Trichloro-1,2,2-trifluoroethane	5.14		0.5	"	5.00		103	73-139		200
Acetone	40.9		4	"	40.0		102	60-125		200
Dichloromethane	4.58		0.5	"	5.00		92	70-130		200
trans-1,2-Dichloroethene	5.11		0.5	"	5.00		102	70-130		200
tert-Butyl methyl ether (MTBE)	18.3		2	"	20.0		91	74-127		200
1,1-Dichloroethane	5.09		0.5	"	5.00		102	85-117		200
2,2-Dichloropropane	5.07		0.5	"	5.00		101	61-163		200

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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B021 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/04/15**
								Volatile Organic Compounds by EPA Method 524.2 - Quality Control		
LCS (B15B021-BS1)										
cis-1,2-Dichloroethene	4.91		0.5	"	5.00		98	87-113		200
2-Butanone (MEK)	35.3		4	"	40.0		88	67-123		200
Bromochloromethane	4.93		0.5	"	5.00		99	84-114		200
Chloroform	5		0.5	"	5.00		100	70-130		200
1,1,1-Trichloroethane	4.68		0.5	"	5.00		94	70-130		200
Carbon tetrachloride	4.82		0.5	"	5.00		96	70-130		200
1,1-Dichloropropene	4.92		0.5	"	5.00		98	88-120		200
Benzene	5.02		0.5	"	5.00		100	70-130		200
1,2-Dichloroethane	4.75		0.5	"	5.00		95	70-130		200
Trichloroethene	4.97		0.5	"	5.00		99	70-130		200
1,2-Dichloropropane	4.74		0.5	"	5.00		95	70-130		200
Dibromomethane	4.57		0.5	"	5.00		91	79-118		200
Bromodichloromethane	4.69		0.5	"	5.00		94	70-130		200
cis-1,3-Dichloropropene	4.65		0.5	"	5.00		93	79-127		200
Toluene	5.01		0.5	"	5.00		100	70-130		200
trans-1,3-Dichloropropene	4.61		0.5	"	5.00		92	75-135		200
1,1,2-Trichloroethane	4.69		0.5	"	5.00		94	70-130		200
Tetrachloroethene	5.11		0.5	"	5.00		102	70-130		200
1,3-Dichloropropane	4.74		0.5	"	5.00		95	82-116		200
Chlorodibromomethane	4.78		0.5	"	5.00		96	70-130		200
1,2-Dibromoethane (EDB)	4.68		0.5	"	5.00		94	85-114		200
Chlorobenzene	4.96		0.5	"	5.00		99	70-130		200
1,1,1,2-Tetrachloroethane	4.75		0.5	"	5.00		95	86-122		200
Ethylbenzene	5.28		0.5	"	5.00		106	70-130		200
m&p-Xylene	10.3		1	"	10.0		103	70-130		200
o-Xylene	5.05		0.5	"	5.00		101	70-130		200
Styrene	5.03		0.5	"	5.00		101	70-130		200
Bromoform	4.74		0.5	"	5.00		95	70-130		200
Isopropylbenzene	5.28		0.5	"	5.00		106	90-118		200
Bromobenzene	4.93		0.5	"	5.00		99	90-110		200
1,1,2,2-Tetrachloroethane	5.01		0.5	"	5.00		100	76-122		200
1,2,3-Trichloropropane	4.73		0.5	"	5.00		95	77-119		200
Propylbenzene	5.41		0.5	"	5.00		108	89-120		200
2-Chlorotoluene	5.04		0.5	"	5.00		101	88-114		200
4-Chlorotoluene	5.06		0.5	"	5.00		101	90-112		200
1,3,5-Trimethylbenzene	5.26		0.5	"	5.00		105	90-115		200
tert-Butylbenzene	5.31		0.5	"	5.00		106	89-118		200
1,2,4-Trimethylbenzene	5.17		0.5	"	5.00		103	90-112		200
sec-Butylbenzene	5.42		0.5	"	5.00		108	87-122		200
1,3-Dichlorobenzene	5.05		0.5	"	5.00		101	88-111		200
p-Isopropyltoluene	5.32		0.5	"	5.00		106	89-119		200
1,4-Dichlorobenzene	4.94		0.5	"	5.00		99	70-130		200

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B15B021 - 5030 P&T VOA - VOCs										**Prepared & Analyzed: 02/04/15**
										Volatile Organic Compounds by EPA Method 524.2 - Quality Control
LCS (B15B021-BS1)										
1,2-Dichlorobenzene	4.97		0.5	"	5.00		99	70-130		200
Butylbenzene	5.42		0.5	"	5.00		108	86-123		200
1,2-Dibromo-3-chloropropane	18.8		2	"	20.0		94	68-134		200
1,2,4-Trichlorobenzene	4.87		0.5	"	5.00		97	70-130		200
Hexachlorobutadiene	5.21		0.5	"	5.00		104	81-123		200
Naphthalene	4.78		0.5	"	5.00		96	54-144		200
1,2,3-Trichlorobenzene	4.83		0.5	"	5.00		97	73-122		200
Surrogate: 1,2-Dichloroethane-d4	*4.68*			"	*5.00*		94	*65-149*		
Surrogate: Toluene-d8	*5.22*			"	*5.00*		104	*85-114*		
Surrogate: 4-Bromofluorobenzene	*4.85*			"	*5.00*		97	*82-111*		
Surrogate: 1,2-Dichlorobenzene-d4	*5.04*			"	*5.00*		101	*76-118*		

United States Environmental Protection Agency
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Project Manager: Marie Lacey	**California Site Cleanup Section 2**	**SDG:** 15033B
Project Number: R15S40	**75 Hawthorne Street**	**Reported:** 02/20/15 10:47
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring	**San Francisco CA, 94105**	

Qualifiers and Comments

Q4 The matrix spike and/or matrix spike duplicate associated with this sample did not meet recovery criteria for this analyte (see MS/MSD results for this batch in QC summary)

Q3 The quantitation limit standard did not meet recovery criteria for this analyte.

Q2 The laboratory control standard associated with this sample did not meet recovery criteria for this analyte (see LCS results for this batch in QC summary).

J The reported result for this analyte should be considered an estimated value.

C4 The calibration verification check did not meet % difference criteria for this analyte.

C3 The initial calibration for this analyte did not meet calibration criteria.

C1 The reported concentration for this analyte is below the quantitation limit.

U Not Detected

NR Not Reported

RE1, RE2, etc: Result is from a sample re-analysis.

General Project Management and ESAT Contractor Oversight Review

Project Number: R15S40 SDG: 15030A, 15033A, and 15033B

Analysis: VOCs Number of Pages: 1177

Reviewer: Christopher Cagurangan

- ☑ Review project notes and requirements (including TDF) and verify that correct analytical procedures and any special instructions were followed. Note any significant deviations or omissions in report narrative or return to contractor for correction.
- ☑ Review project memo field for each work order and include information pertinent to data users in report narrative. (Information important only to chemist reviewing the raw data package should be included in data package, but not in the report narrative).
- ☑ Review chain of custody documentation and verify that information in report corresponds correctly. Verify that any sample shipping or handling issues are properly documented and reported.
- ☑ Review analytical report and QC report and verify that qualifier flags for holding times, sample handling, surrogates, blanks, blank spikes, matrix QC, and calibration range have been appropriately applied.
- ☑ Review LIMS Data Entry table for unaddressed outliers.
- ☑ Verify that all major sections of data package are present.

Comments: 02/20/2015

Reviewer Signature Date 02/20/2015

G:\USER\ESAT\# LAB DATA Deliverables\R15S40\15030A, 15033A, and 15033B-VOCs-17702.docx

EPA Region 9 Laboratory

DATA PACKAGE

Analysis:	**VOCs**
Project Number:	**R15S40**
SDG Number:	**15030A, 15033A, and 15033B**
Work Order:	**1501036, 1502001, and 1502002**
ESAT DCN:	**17702**

Contents

- **Review Forms**
- **Tracking Forms**
- ***Sample Preparation***
- **Data**
  -Initial Calibration Data
  -Sample Data
- ***Miscellaneous Data***
- ***Canister Certification Data***

Sections in italics are included as applicable

REVIEW FORMS

ESAT Region 9 **ICF International**
Case: R15S40 **Analysis:** VOCs **TDF:** 10101185 **Matrix:** water
DCN: 17702 **Site:** Modesto/Municipal Well#11 **SDG:** 15030A, 15033A, and 15033B

ESAT REGION 9 DATA PACKAGE TECHNICAL REVIEW GUIDE

Reviewer:	Package Prep (P): YMB	Technical (T): EM	Final (F): TR
	Date: 02.05.15	Date: 2/11/15	Date: 2-13-15

P T F N/A (indicates that the item is present and reviewed for accuracy and completeness)

Report Section

- ☑ ☑ ☑ ESAT Cover Memo (original)
- ☑ ☑ ☑ TDF included and requirements met (e.g. project analytes, project QLs, special procedures)
- ☑ ☑ ☑ Draft LIMS Report

Data Package Cover

- ☑ ☑ ☑ Case, SDG, Work Order(s), TDF#-DCN [First numbered page in the data package]

Review Forms

- ☑ ☑ ☑ EPA Review Form and Technical Review Guide included and complete.
- ☐ ☐ ☐ ☑ LIMS memo field; include as applicable.
- ☐ ☐ ☐ ☑ Discrepancy form(s) include as applicable
- ☑ ☑ ☑ ☑ Daily folder review forms are complete and reviewed; QC outliers noted
- ☑ ☑ ☑ ☐ Analysis matrix listing all analytical runs is included, as applicable

Tracking Forms

- ☑ ☑ ☑ Work Orders and Chains of Custody forms included and reviewed.
- ☑ ☑ ☑ Preparation and analyses performed within holding times. Qualify and/or explain deviations in memo field
- ☑ ☑ ☑ ☐ Cooler temperatures recorded on COC are within specification. Qualify and/or explain deviations in memo field

Sample Preparation

- ☑ ☑ ☑ ☐ Bench sheets and extraction logs, where applicable
- ☐ ☐ ☐ ☑ Sample cleanup data and records (e.g. GPC logs)
- ☐ ☐ ☐ ☑ Homogenization and Moisture data

Initial Calibration Data

Group ICAL data by instrument and analysis date:

- ☑ ☑ ☑ ☐ All ICALs associated with samples are present, reviewed, and pass SOP criteria. (If failure, discrepancy form must be included)
- ☑ ☑ ☐ ☐ Check for misidentification (e.g. isomers such as dichlorobenzene)

Sample Data

Group data for the following areas in sections by method, instrument, and analysis date.

Continuing Calibrations

- ☑ ☑ ☑ ☐ All CCALs associated with samples are present and meet SOP criteria. If not, discrepancy form included.
- ☑ ☑ ☐ Average RRFs from associated ICAL are correctly transposed to CCAL summary form
- ☑ ☑ ☐ CCAL RRFs and %Ds calculated correctly. Check at least 1 surrogate & 1 target analyte
- ☑ ☑ ☐ Check %Ds and RRFs against SOP criteria

ESAT Region 9 **ICF International**
Case: R15S40 **Analysis:** VOCs **TDF:** 10101185 **Matrix:** water
DCN: 17702 **Site:** Modesto/Municipal Well#11 **SDG:** 15030A, 15033A, and 15033B

P T F N/A (indicates that the item is present and reviewed for accuracy and completeness)

Quantitation Limit Standards
¤ ¤ ¤ ¤ Percent recoveries of 60-140% met; outliers noted and flagged

Laboratory Control Samples
¤ ¤ ¤ Percent recoveries met. If not, discrepancy form included unless not required because: _____

Method Blanks
¤ ¤ ¤ Present and no target analyte results > ½ QL; if not, flag data as appropriate

MS/MSD or Duplicate Data
¤ ¤ ¤ ¤ Percent recoveries and RPDs were met; outliers are noted and flagged. Note significant deviations in LIMS memo field

Sample Data
¤ ¤ ¤ ¤ Bench sheet(s) and injection or run logs present for all samples
¤ ¤ ¤ ¤ Internal standards meet SOP criteria
¤ ¤ ¤ ¤ System Monitoring Compound/Surrogate recoveries met; outliers are noted and flagged
¤ ¤ ¤ All non-detects are reported as ND on the quantitation report and explained for QC samples
¤ ¤ ¤ Quantitation results are correctly calculated. Check at least one surrogate or one target analyte
¤ ¤ ¤ Mass spectral data are present for all target analytes
¤ ¤ ¤ ¤ Check for manual integrations (m) identified on quantitation reports. Verify presence of manual integration data, initialed and dated by a supervisor
¤ ¤ ¤ ¤ Compound concentrations exceeding the upper range of the instrument are reported from the dilution run
¤ ¤ Check for carry-over contamination
¤ ¤ ¤ ¤ Dilutions and reruns appropriate.
¤ ¤ ¤ TICs properly identified; TIC report and data present; proper TIC name used (Organics)
¤ ¤ ¤ ¤ QC outliers are appropriately flagged in LIMS

Miscellaneous Data
¤ ¤ ¤ ¤ Storage blank data present
¤ ¤ ¤ ¤ Other data, as applicable _____

Canister Certification Data (TO 15 only)
¤ ¤ ¤ ¤ Data and supporting QC present

Standards Records
¤ ¤ ¤ ¤ LIMS Standards pdf created and filed as: 15033A, 15033B
I:\PDF\Standard\ R15S40_15030A, ~~B3A,B3B~~ _VOC.pdf
em 2/10/15

For ESAT Files: ESAT Review form (original) and Cover Memo (copy)

Organics Daily Folder Preparation/Technical Review Guide

Analysis Method	524.2 VOC	Analyst Initial	YNB	Reviewer Initial	[illegible]	Batch/ Sequence	B15A047/S15A042
Instrument ID	PECLAR	Date Analyzed	01.13.15	Date	01/16-15	Chemstation Last Update	Tue Jan 13 14:04:43 2015
	CALIBRATION/EPT-15-04			SDGs	ICAL 1411006/15007E		

Review each item listed below. As problems are discovered list them in the non-conformance section of the form and provide and explanation in the discussion part of the table.

NA	A	PR	Item Description
	✓	✓	Runlog (Present, legible, peer reviewed)
	✓	✓	Tune/ Degradation Standard
	✓	✓	Initial Calibration (SOP criteria for number of levels, concentration, and %RSD). Manual calculation. Include summary for daily review.
	✓	✓	Continuing Calibration Verification (frequency, recovery, and %D). Manual calculation.
✓			QLS (level, frequency, and recovery) (include Chemstation summary)
	✓	✓	Method / Extraction / Storage Blanks (frequency and contamination levels)
	✓	✓	Surrogate Recoveries
	✓	✓	IS Areas (SOP criteria met)
	✓	✓	LCS (level, frequency, and recovery) (include Chemstation summary)
✓			MS/MSD
	✓	✓	Samples (within calibration range, results calculated correctly)
✓			Manual Integration Verified
✓			Standard Prep Log (all pages present, legible, peer reviewed, legible)
✓			Sample Prep/Extraction (all pages present, legible, peer reviewed)
✓	✓	✓	Others: Shares QC with Initial Calibration watch reg. comp. for drinking water pro.

NA = not applicable A = Analyst check PR = Peer Review Check

Non-conformance Report

QC	File ID	Result	QC Limit	High Bias	Low Bias	Flag ND	Flag Hits	Discussion
	ICAL	33.54	±20%	✓	✓	✓	✓	Acetone
	↓	23.67	↓	✓	✓	✓	✓	DBCP
	second source		70-130%					O.K
BS1	011315PE14	81	87-113		✓	✓	✓	cis-1.2 DCE (regulat comp)
↓	↓	60	67-123		✓	✓	✓	2-Butanone
BS2	011315PE17	131	87-113	✓			✓	cis-1.2 DCE (Reg. comp)
CV1	011315PE25	39.2	±30%		✓	✓	✓	Acetone
		47.8			✓	✓	✓	TBA non-reg. comp
		31.7			✓	✓	✓	MTBE O.K for DW
		35.6			✓	✓	✓	TAME
↓	↓	33.3	↓	✓			✓	DBCP

Organics Daily Folder Preparation/Technical Review Guide

Analysis Method	524.2	Analyst Initial	JNB	Reviewer Initial	[illegible]	Batch/ Sequence	B15A055/S15A047
Instrument ID	AG5975D	Date Analyzed	01.14.15	Date	01-16-15	Chemstation Last Update	Wed Jan 14 13:06:31 2015
Cases	CALIBRATION/ EPT-15-04/ R15S31			SDGs	ICAL 1501010/15007E/15014A		

Review each item listed below. As problems are discovered list them in the non-conformance section of the form and provide and explanation in the discussion part of the table.

NA	A	PR	Item Description
	✓	✓	Runlog (Present, legible, peer reviewed)
	✓	✓	Tune/ Degradation Standard
	✓	✓	Initial Calibration (SOP criteria for number of levels, concentration, and %RSD). Manual calculation. Include summary for daily review.
	✓	✓	Continuing Calibration Verification (frequency, recovery, and %D). Manual calculation.
✓			QLS (level, frequency, and recovery) (include Chemstation summary)
	✓	✓	Method / Extraction / Storage Blanks (frequency and contamination levels)
	✓	✓	Surrogate Recoveries
	✓	✓	IS Areas (SOP criteria met)
	✓	✓	LCS (level, frequency, and recovery) (include Chemstation summary) SCV
	✓	✓	MS/MSD
	✓	✓	Samples (within calibration range, results calculated correctly)
✓			Manual Integration Verified
✓			Standard Prep Log (all pages present, legible, peer reviewed, legible)
✓			Sample Prep/Extraction (all pages present, legible, peer reviewed)
✓			Others:

NA = not applicable A = Analyst check PR = Peer Review Check

Non-conformance Report

QC	File ID	Result	QC Limit	High Bias	Low Bias	Flag ND	Flag Hits	Discussion
	ICAL	30.41	≤20%	✓	✓	✓	✓	Acetone (non-reg)
	second source	O.K.						

Organics Daily Folder Preparation/Technical Review Guide

Analysis Method	**524.2/VOC**	**Analyst Initial**	**YNB/EM**	**Reviewer Initial**	[illegible]	**Batch/ Sequence**	S15A050
Instrument ID	**HP5973H**	**Date Analyzed**	**1/14/2015**	**Date**	01/16/15	**Chemstation Last Update**	Wed Jan 14 16:54:35 2015
Cases	**INITIAL CALIBRATION**			**SDGs**	**ICAL1501011**		

Review each item listed below. As problems are discovered list them in the non-conformance section of the form and provide and explanation in the discussion part of the table.

NA	A	PR	Item Description
	X	/	Runlog (Present, legible, peer reviewed)
	X	/	Tune/ Degradation Standard
	X	/	Initial Calibration (SOP criteria for number of levels, concentration, and %RSD). Manual calculation. Include summary for daily review.
X			Continuing Calibration Verification (frequency, recovery, and %D). Manual calculation.
X			QLS (level, frequency, and recovery) (include Chemstation summary)
X			Method / Extraction / Storage Blanks (frequency and contamination levels)
	X	/	Surrogate Recoveries
	X	/	IS Areas (SOP criteria met)
	X	/	LCS (level, frequency, and recovery) (include Chemstation summary)SCV
X			MS/MSD
X			Samples (within calibration range, results calculated correctly)
X			Manual Integration Verified
X			Standard Prep Log (all pages present, legible, peer reviewed, legible)
X			Sample Prep/Extraction (all pages present, legible, peer reviewed)
X			Others:

NA = not applicable A = Analyst check PR = Peer Review Check

Non-conformance Report

QC	File ID	Result	QC Limit	High Bias	Low Bias	Flag ND	Flag Hits	Discussion
								No QC outliers

Organics Daily Folder Preparation/Technical Review Guide

Analysis Method	524.2/VOC	Analyst Initial	YNB	Reviewer Initial	[illegible]	Batch/ Sequence	B15A131 S15A119
Instrument ID	HP5973H	Date Analyzed	01.30.15	Date	2/3/15	Chemstation Last Update	Wed Jan 14 16:54:35 2015
Cases	R15S40			SDGs	15030A		

Review each item listed below. As problems are discovered list them in the non-conformance section of the form and provide and explanation in the discussion part of the table.

NA	A	PR	Item Description
	✓	/	Runlog (Present, legible, peer reviewed)
	✓	/	Tune/ Degradation Standard
	✓	/	Initial Calibration (SOP criteria for number of levels, concentration, and %RSD). Manual calculation. Include summary for daily review.
	✓	/	Continuing Calibration Verification (frequency, recovery, and %D). Manual calculation.
	✓	/	QLS (level, frequency, and recovery) (include Chemstation summary)
	✓	/	Method / Extraction / Storage Blanks (frequency and contamination levels)
	✓	/	Surrogate Recoveries
	✓	/	IS Areas (SOP criteria met)
	✓	/	LCS (level, frequency, and recovery) (include Chemstation summary)SCV
	✓	/	MS/MSD
	✓	/	Samples (within calibration range, results calculated correctly)
✓			Manual Integration Verified
✓			Standard Prep Log (all pages present, legible, peer reviewed, legible)
✓			Sample Prep/Extraction (all pages present, legible, peer reviewed)
✓			Others:

NA = not applicable A = Analyst check PR = Peer Review Check

Non-conformance Report

QC	File ID	Result	QC Limit	High Bias	Low Bias	Flag ND	Flag Hits	Discussion
CV	013015402	31.9	≤30%		✓	✓	✓	TBA
BS	↓	78	80-117		✓	✓	✓	Diisopropyl ether
QL	013015403	161.9	60-140%	✓			✓	Acetone
↓	↓	169.9	↓	✓			✓	TBA

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Organics Daily Folder Preparation/Technical Review Guide

Analysis Method	**524.2/VOC**	**Analyst Initial**	YNB	**Reviewer Initial**	[illegible]	**Batch/ Sequence**	B15B002 S15B002
Instrument ID	**HP5973H**	**Date Analyzed**	02.02.15	**Date**	2/3/15	**Chemstation Last Update**	Wed Jan 14 16:54:35 2015
Cases	**R15S40**			**SDGs**	**15030A/15033A**		

Review each item listed below. As problems are discovered list them in the non-conformance section of the form and provide and explanation in the discussion part of the table.

NA	A	PR	Item Description
	✓	/	Runlog (Present, legible, peer reviewed)
	✓	/	Tune/ Degradation Standard
	✓	/	Initial Calibration (SOP criteria for number of levels, concentration, and %RSD). Manual calculation. Include summary for daily review.
	✓	/	Continuing Calibration Verification (frequency, recovery, and %D). Manual calculation.
	✓	/	QLS (level, frequency, and recovery) (include Chemstation summary)
	✓	/	Method / Extraction / Storage Blanks (frequency and contamination levels)
	✓	/	Surrogate Recoveries
	✓	/	IS Areas (SOP criteria met)
	✓	/	LCS (level, frequency, and recovery) (include Chemstation summary)SCV
	✓	/	MS/MSD
	✓	/	Samples (within calibration range, results calculated correctly)
✓			Manual Integration Verified
✓			Standard Prep Log (all pages present, legible, peer reviewed, legible)
✓			Sample Prep/Extraction (all pages present, legible, peer reviewed)
✓			Others: check for carry over - see RES for confirmation.

NA = not applicable A = Analyst check PR = Peer Review Check

Non-conformance Report

QC	File ID	Result	QC Limit	High Bias	Low Bias	Flag ND	Flag Hits	Discussion
CV	020215H02	37.5	≤30%	✓			✓	Acetone
BS	↓	137	60-125	✓			✓	↓
QL	020215H03	190.3	60-140%	✓			✓	Acetone
↓	↓	200.2	↓	✓			✓	TBA

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Organics Daily Folder Preparation/Technical Review Guide

Analysis Method	**524.2 VOC**	**Analyst Initial**	YNB	**Reviewer Initial**	[illegible]	**Batch/ Sequence**	**B15B008/S15B009**
Instrument ID	**PECLAR**	**Date Analyzed**	02.02.15	**Date**	02/03/15	**Chemstation Last Update**	**Tue Jan 13 14:04:43 2015**
	R15S40			**SDGs**	**15033A,15033B**		

Review each item listed below. As problems are discovered list them in the non-conformance section of the form and provide and explanation in the discussion part of the table.

NA	A	PR	Item Description
	✓	✓	Runlog (Present, legible, peer reviewed)
	✓	✓	Tune/ Degradation Standard
	✓	✓	Initial Calibration (SOP criteria for number of levels, concentration, and %RSD). Manual calculation. Include summary for daily review.
	✓	✓	Continuing Calibration Verification (frequency, recovery, and %D). Manual calculation.
	✓	✓	QLS (level, frequency, and recovery) (include Chemstation summary)
	✓	✓	Method / Extraction / Storage Blanks (frequency and contamination levels)
	✓	✓	Surrogate Recoveries
	✓	✓	IS Areas (SOP criteria met)
	✓	✓	LCS (level, frequency, and recovery) (include Chemstation summary)
✓			MS/MSD
	✓	✓	Samples (within calibration range, results calculated correctly)
✓			Manual Integration Verified
✓			Standard Prep Log (all pages present, legible, peer reviewed, legible)
✓			Sample Prep/Extraction (all pages present, legible, peer reviewed)
✓			Others: Shares QC with Initial Calibration

NA = not applicable A = Analyst check PR = Peer Review Check

Non-conformance Report

QC	File ID	Result	QC Limit	High Bias	Low Bias	Flag ND	Flag Hits	Discussion
CV	020215PE04	34.6	≤30%		✓	✓	✓	Acetone
BS1	↓	121	87-113	✓			✓	cis-1,2 PCE O.K 70-130%
↓		85	88-120		✓	✓	✓	1,1-Dichloropropene
		75	79-127		✓	✓	✓	cis-1,3 dichloropropene
↓	↓	112	82-111	✓			✓	surrogate BFB
QL	020215PE05	164	40-160	✓			✓	2,2-Dichloropropane
BS2	020215PE07	70	74-127		✓	✓	✓	MTBE
		86	87-113		✓	✓	✓	cis-1,2 PCE O.K 70-130%
		73	79-127		✓	✓	✓	cis-1,3-dichloropropene
		85	86-122		✓	✓	✓	1,1,1,2-Tetrachloroethane
		67	68-134		✓	✓	✓	DBCP

Organics Daily Folder Preparation/Technical Review Guide

Analysis Method	**524.2**	**Analyst Initial**	YNB	**Reviewer Initial**	[illegible]	**Batch/ Sequence**	**B15B003/S15B003**
Instrument ID	**AG5975D**	**Date Analyzed**	02.02.15	**Date**	02/03/15	**Chemstation Last Update**	**Wed Jan 14 13:06:31 2015**
Cases	**R15S40**			**SDGs**	**15030A,15033A**		

Review each item listed below. As problems are discovered list them in the non-conformance section of the form and provide and explanation in the discussion part of the table.

NA	A	PR	Item Description
	✓	✓	Runlog (Present, legible, peer reviewed)
	✓	✓	Tune/ Degradation Standard
	✓	✓	Initial Calibration (SOP criteria for number of levels, concentration, and %RSD). Manual calculation. Include summary for daily review.
	✓	✓	Continuing Calibration Verification (frequency, recovery, and %D). Manual calculation.
	✓	✓	QLS (level, frequency, and recovery) (include Chemstation summary)
	✓	✓	Method / Extraction / Storage Blanks (frequency and contamination levels)
	✓	✓	Surrogate Recoveries
	✓	✓	IS Areas (SOP criteria met)
	✓	✓	LCS (level, frequency, and recovery) (include Chemstation summary)
	✓	✓	MS/MSD
	✓	✓	Samples (within calibration range, results calculated correctly)
✓			Manual Integration Verified
✓			Standard Prep Log (all pages present, legible, peer reviewed, legible)
✓			Sample Prep/Extraction (all pages present, legible, peer reviewed)
✓			Others:

NA = not applicable A = Analyst check PR = Peer Review Check

Non-conformance Report

QC	File ID	Result	QC Limit	High Bias	Low Bias	Flag ND	Flag Hits	Discussion
CV	020215D02	41.1	≤30%		✓	✓	✓	2-Butanone
BS	↓	YNB 2/12/15 ~~67.59~~	67-123%		✓	✓	✓	↓
↓	↓	81%	84-114%		✓	✓	✓	Bromochloromethane
~~BS~~	↓	~~84%~~	~~87-113%~~		✓	✓	✓	~~cis 12 DCE (LMS)~~ cm 2/11/15

Organics Daily Folder Preparation/Technical Review Guide

Analysis Method	**524.2**	**Analyst Initial**	YNB	**Reviewer Initial**	[illegible]	**Batch/ Sequence**	**B15B012/S15B014**
Instrument ID	**AG5975D**	**Date Analyzed**	02.03.15	**Date**	2/4/15	**Chemstation Last Update**	**Wed Jan 14 13:06:31 2015**
Cases	**R15S40**			**SDGs**	**15030A,15033A,15033B**		

Review each item listed below. As problems are discovered list them in the non-conformance section of the form and provide and explanation in the discussion part of the table.

NA	A	PR	Item Description
	✓	✓	Runlog (Present, legible, peer reviewed)
	✓	✓	Tune/ Degradation Standard
	✓	✓	Initial Calibration (SOP criteria for number of levels, concentration, and %RSD). Manual calculation. Include summary for daily review.
	✓	✓	Continuing Calibration Verification (frequency, recovery, and %D). Manual calculation.
	✓	✓	QLS (level, frequency, and recovery) (include Chemstation summary)
	✓	✓	Method / Extraction / Storage Blanks (frequency and contamination levels)
	✓	✓	Surrogate Recoveries
	✓	✓	IS Areas (SOP criteria met)
	✓	✓	LCS (level, frequency, and recovery) (include Chemstation summary)
✓			MS/MSD
	✓	✓	Samples (within calibration range, results calculated correctly)
✓			Manual Integration Verified
✓			Standard Prep Log (all pages present, legible, peer reviewed, legible)
✓			Sample Prep/Extraction (all pages present, legible, peer reviewed)
✓			Others:

NA = not applicable A = Analyst check PR = Peer Review Check

Non-conformance Report

QC	File ID	Result	QC Limit	High Bias	Low Bias	Flag ND	Flag Hits	Discussion
CV	020315D02	42.2	≤30%		✓	✓	✓	2-Butanone
BS	↓	58	67-123		✓	✓	✓	↓
↓	↓	80	84-114		✓	✓	✓	Bromochloromethane

Organics Daily Folder Preparation/Technical Review Guide

Analysis Method	**524.2/VOC**	**Analyst Initial**	YNB	**Reviewer Initial**		**Batch/ Sequence**	B15B010 S15B012
Instrument ID	**HP5973H**	**Date Analyzed**	02.03.15	**Date**	2/4/15	**Chemstation Last Update**	Wed Jan 14 16:54:35 2015
Cases	**R15S40**			**SDGs**	**15033B**		

Review each item listed below. As problems are discovered list them in the non-conformance section of the form and provide and explanation in the discussion part of the table.

NA	A	PR	Item Description
	✓	✓	Runlog (Present, legible, peer reviewed)
	✓	✓	Tune/ Degradation Standard
	✓	✓	Initial Calibration (SOP criteria for number of levels, concentration, and %RSD). Manual calculation. Include summary for daily review.
	✓	✓	Continuing Calibration Verification (frequency, recovery, and %D). Manual calculation.
	✓	✓	QLS (level, frequency, and recovery) (include Chemstation summary)
	✓	✓	Method / Extraction / Storage Blanks (frequency and contamination levels)
	✓	✓	Surrogate Recoveries
	✓	✓	IS Areas (SOP criteria met)
	✓	✓	LCS (level, frequency, and recovery) (include Chemstation summary)SCV
	✓	✓	MS/MSD
	✓	✓	Samples (within calibration range, results calculated correctly)
✓			Manual Integration Verified
✓			Standard Prep Log (all pages present, legible, peer reviewed, legible)
✓			Sample Prep/Extraction (all pages present, legible, peer reviewed)
✓			Others:

NA = not applicable A = Analyst check PR = Peer Review Check

Non-conformance Report

QC	File ID	Result	QC Limit	High Bias	Low Bias	Flag ND	Flag Hits	Discussion
QL	020315H03	148.6	60-140%	✓			✓	Acetone
↓	↓	169.2	↓	✓			✓	TBA

C:\Documents and Settings\INS_HP5973H\Desktop\daily reviewH.doc

Organics Daily Folder Preparation/Technical Review Guide

Analysis Method	**524.2/VOC**	**Analyst Initial**	YNB	**Reviewer Initial**	[illegible]	**Batch/ Sequence**	B15B021 S15B020
Instrument ID	**HP5973H**	**Date Analyzed**	02.04.15	**Date**	2/4/15	**Chemstation Last Update**	Wed Jan 14 16:54:35 2015
Cases	**R15S40**			**SDGs**	**15030A,15033B**		

Review each item listed below. As problems are discovered list them in the non-conformance section of the form and provide and explanation in the discussion part of the table.

NA	A	PR	Item Description
	✓	✓	Runlog (Present, legible, peer reviewed)
	✓	✓	Tune/ Degradation Standard
	✓	✓	Initial Calibration (SOP criteria for number of levels, concentration, and %RSD). Manual calculation. Include summary for daily review.
	✓	✓	Continuing Calibration Verification (frequency, recovery, and %D). Manual calculation.
	✓	✓	QLS (level, frequency, and recovery) (include Chemstation summary)
	✓	✓	Method / Extraction / Storage Blanks (frequency and contamination levels)
	✓	✓	Surrogate Recoveries
	✓	✓	IS Areas (SOP criteria met)
	✓	✓	LCS (level, frequency, and recovery) (include Chemstation summary)SCV
✓			MS/MSD
	✓	✓	Samples (within calibration range, results calculated correctly)
✓			Manual Integration Verified
✓			Standard Prep Log (all pages present, legible, peer reviewed, legible)
✓			Sample Prep/Extraction (all pages present, legible, peer reviewed)
✓			Others:

NA = not applicable A = Analyst check PR = Peer Review Check

Non-conformance Report

QC	File ID	Result	QC Limit	High Bias	Low Bias	Flag ND	Flag Hits	Discussion
QC	020415H02	36.1	≤30%		✓	✓	✓	TBA
QC	020415H03	143.3	60-140%	✓			✓	Acetone
↓	↓	180.8	↓	✓			✓	TBA

C:\Documents and Settings\INS_HP5973H\Desktop\daily reviewH.doc

USEPA Region 9 Laboratory
Organic Analysis Summary

Case: R15S40
SDG: 15030A
Analysis: VOC 524.2

Sample ID	Sample Runs					
Instrument:	HP5973H	AG5975D	HP5973H	AG5975D	HP5973H	INSTRUMENT
Analysis Date:	1/30/2015	2/2/2015	2/2/2015	2/3/2015	2/4/2015	
Sequence:	S15A119	S15B003	S15B002	S15B014	S15B020	
1501036-01	RPT OC PCE	RPT RE1 10X PCE				
B15A131-MS1	RPT					
B15A131-MSD1	RPT					
1501036-02	RPT					
1501036-03	RPT					
1501036-04	RPT OC PCE	RPT RE1 2X PCE				
1501036-05	RPT			NU RE1 (conf.run)		
1501036-06	RPT					
1501036-07			RPT			
1501036-08			RPT			
1501036-09		RPT RE1 10X PCE	RPT OC PCE		NU RE2 10X (conf.run)	
1501036-10			RPT			
1501036-11			RPT			
B15B002-MS1			RPT			
B15B002-MSD1			RPT			
1501036-12		NU RE1 1X OC PCE (conf.run)	RPT	NU RE2 2X PCE (conf.run)		
1501036-13		RPT RE1 2X PCE	RPT OC PCE			
1501036-14		RPT RE1 20X PCE	RPT OC PCE		NU RE2 10X (conf.run)	
	RPT B15A131-BLK1	RPT B15B003-BLK1	RPT B15B002-BLK1	RPT B15B012-BLK1	NU B15B021-BLK1	
	RPT B15A131-BS1	RPT B15B003-BS1	RPT B15B002-BS1	RPT B15B012-BS1	NU B15B021-BS1	

Definitions	Report
RPT	Not Used
NU	Over calibration
OC	Out of tune time
OTT	Dilution, where n is dilution factor
nX	

USEPA Region 9 Laboratory
Organic Analysis Summary

Case: R15S40
SDG: 15033A
Analysis: VOC 524.2

Sample ID	Sample Runs					
Instrument:	AG5975D	HP5973H	PECLARUS	HP5972D	HP5973H	INSTRUMENT
Analysis Date:	2/2/2015	2/2/2015	2/2/2015	2/3/2015	2/4/2015	
Sequence:	S15B003	S15B002	S15B009	S15B014	S15B020	
1502001-01		RPT				
1502001-02	RPT					
B15B003-MS1	RPT					
B15B003-MSD1	RPT					
1502001-03		RPT OC PCE		NU RE1 50X PCE	RPT RE2 20X PCE	
1502001-04		RPT OC PCE		RPT RE1 5X PCE		
1502001-05		RPT		NU RE1 (for CO)		
1502001-06	RPT					
1502001-07	RPT					
1502001-08	NU OTT			RPT RE1		
1502001-09	RPT					
1502001-10	RPT					
1502001-11	RPT					
1502001-12			RPT			
1502001-13			RPT			
1502001-14			RPT			
1502001-15			RPT			
1502001-16			RPT			
1502001-17			RPT	NU RE1, conf.run CO		
1502001-18			RPT OC PCE	RPT RE1 10X PCE		
1502001-19			RPT OC PCE	RPT RE1 5X PCE		
1502001-20			RPT			
	RPT B15B003-BLK1	RPT B15B002-BLK1	RPT B15B008-BLK1	RPT B15B012-BLK1	RPT B15B021-BLK1	
	RPT B15B003-BS1	RPT B15B002-BS1	NU B15B008-BS1	RPT B15B012-BS1	RPT B15B021-BS1	
			RPT B15B008-BS2			

Definitions	Report
RPT	Not Used
NU	Over calibration
OC	Out of tune time
OTT	Dilution, where n is dilution factor
nX	

USEPA Region 9 Laboratory
Organic Analysis Summary

Case: R15S40
SDG: 15033B
Analysis: VOC 524.2

Sample ID	Sample Runs					
Instrument:	PEKLARUS	HP5972D	HP5973H	AG5975D	HP5973H	INSTRUMENT
Analysis Date:	2/2/2015	2/3/2015	2/3/2015	2/4/2015	2/4/2015	
Sequence:	S15B009	S15B014	S15B012	S15B021	S15B020	
1502002-01	RPT					
1502002-02	RPT					
1502002-03	RPT OC PCE	RPT RE1 5X PCE				
1502002-04	RPT OC PCE	RPT RE1 5X PCE				
1502002-05			RPT			
1502002-06			RPT			
1502002-07			RPT OC PCE		RPT RE1 10X PCE	
1502002-08			RPT			
1502002-09			RPT			
1502002-10		RPT				
1502002-11			RPT			
1502002-12			RPT			
1502002-13			RPT			
B15B010-MS1			RPT			
B15B010-MSD1			RPT			
1502002-14			RPT	NU RE1 conf.run		
1502002-15			RPT			
1502002-16			RPT			
1502002-17			RPT			
1502002-18			RPT			
1502002-19		RPT				
	RPT B15B008-BLK1	RPT B15B012-BLK1	RPT B15B010-BLK1	NU B15B022-BLK1	RPT B15B021-BLK1	
	RPT B15B008-BS1	RPT B15B012-BS1	RPT B15B010-BS1	NU B15B022-BS1	RPT B15B021-BS1	

Definitions	Report
RPT	Not Used
NU	Over calibration
OC	Out of tune time
OTT	Dilution, where n is dilution factor
nX	

SAMPLE TRACKING FORMS

WORK ORDER

Printed: 1/30/2015 4:06:24PM

1501036

EPA Region 9 Laboratory

Client: **California Site Cleanup Section 2** **Project Number:** **R15S40**
Project: **Modesto Groundwater Jan 2015 Qtrly Monitoring**

Report To:
California Site Cleanup Section 2
Marie Lacey
75 Hawthorne Street
San Francisco, CA 94105
Phone: (415) 972-3163
Fax: (415) 947-3526

Project Contact
RORE, Inc.
John McGuire
5151 Shoreham Place, Suite 260
San Diego, CA 92122
Phone :(707) 246-5399
Fax:

Shipping Containers	Description	Temp C	Custody Seals?	Containers Intact?	Labels COC Agree?	Preservation Confirmed?	Received on Ice?	Comments
Default Cooler	Default Cooler	1	Yes	Yes	Yes	Yes	Yes	

Date Due:	02/21/15 15:00 (21 day TAT)	SDG:	15030A
Received By:	Jack Berges	Date Received:	01/30/15 14:37
Logged In By:	Susan Sturges	Date Logged In:	01/30/15 14:37

Analysis	Hold Time Expires	Comments	
1501036-01 MW-4A [Water] Sampled 01/29/15 13:10 Pacific			**MS/MSD**
VOCs	02/12/15	no TICs	
1501036-02 MW-4B [Water] Sampled 01/29/15 13:30 Pacific			
VOCs	02/12/15	no TICs	
1501036-03 MW-4C [Water] Sampled 01/29/15 13:40 Pacific			
VOCs	02/12/15	no TICs	
1501036-04 MW-10A [Water] Sampled 01/29/15 14:30 Pacific			
VOCs	02/12/15	no TICs	
1501036-05 MW-10B [Water] Sampled 01/29/15 14:00 Pacific			
VOCs	02/12/15	no TICs	
1501036-06 MW-10C [Water] Sampled 01/29/15 14:20 Pacific			
VOCs	02/12/15	no TICs	
1501036-07 MW-13A [Water] Sampled 01/29/15 14:30 Pacific			
VOCs	02/12/15	no TICs	
1501036-08 MW-17A [Water] Sampled 01/29/15 14:09 Pacific			
VOCs	02/12/15	no TICs	

: 00019

WORK ORDER

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1501036

EPA Region 9 Laboratory

Client: California Site Cleanup Section 2 **Project Number:** R15S40
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring

Analysis	Hold Time Expires	Comments

Analysis	Expires	Comments
1501036-09 MW-17B [Water] Sampled 01/29/15 14:26 Pacific		
VOCs	02/12/15	no TICs
1501036-10 MW-17C [Water] Sampled 01/29/15 14:41 Pacific		
VOCs	02/12/15	no TICs
1501036-11 MW-18A [Water] Sampled 01/29/15 14:45 Pacific		**MS/MSD**
VOCs	02/12/15	no TICs
1501036-12 MW-29A [Water] Sampled 01/29/15 14:20 Pacific		
VOCs	02/12/15	no TICs
1501036-13 MW-23A [Water] Sampled 01/29/15 14:45 Pacific		
VOCs	02/12/15	no TICs
1501036-14 EW-02 [Water] Sampled 01/29/15 14:05 Pacific		
VOCs	02/12/15	no TICs

Reviewed By Date

BLAINE
TECH SERVICES, INC

1680 ROGERS AVENUE
SAN JOSE, CA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY BTS # 150129-KD1

CLIENT: RORE, Inc.

SITE: Modesto Superfund Site
941 McHenry Ave.
Modesto, CA

CONDUCT ANALYSIS TO DETECT

LAB: EPA Lab Region 9 | DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
☐ EPA ☐ LIA ☐ OTHER ☐ RWQCB REGION _____

Report and Invoice to:
RORE - 5685 Redwood Dr, Ste 100, Rohnert Park, CA 94928
Attn: John McGuire
phone - (707) 246-5399 / email - jmcguire@roreinc.com

Lab Case Number: R15S40

SAMPLE I.D.	DATE	TIME	MATRIX (S= SOIL W=H_2O)	CONTAINERS TOTAL	CONTAINERS TYPE	C = COMPOSITE ALL CONTAINERS	VOCs (524.2)	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-4A	1/29/15	1310	W	9	HCl VOA		X	MS/MSD			
MW-4B		1330					X				
MW-4C		1340					X				
MW-10A		1430					X				
MW-10B		1400					X				
MW-10C		1420					X				
MW-13A		1430					X				
MW-17A		1409					X				
MW-17B		1426					X				
MW-17C		1441					X				

SAMPLING COMPLETED: DATE 1/29/15 TIME 1445
SAMPLING PERFORMED BY: K. Allen S. Sarmiento, R. Huerta

RESULTS NEEDED NO LATER THAN: 21 Days

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	1/29/15	1700	[signature]	1/30/15	10:00

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #	
Fedex	1/29/15	1700		1°C, SEALS INTACT, ON ICE

00521

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY BTS # 150129-K01

CLIENT: RORE, Inc.

SITE: Modesto Superfund Site
941 McHenry Ave.
Modesto, CA

LAB: EPA Lab Region 9 | DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
☐ EPA ☐ LIA ☐ OTHER ☐ RWQCB REGION _____

Report and Invoice to:
RORE - 5685 Redwood Dr, Ste 100, Rohnert Park, CA 94928
Attn: John McGuire
phone - (707) 246-5399 / email - jmcguire@roreinc.com

Lab Case Number: R15S40

CONDUCT ANALYSIS TO DETECT

SAMPLE I.D.	DATE	TIME	MATRIX (S= SOIL W=H_2O)	CONTAINERS TOTAL	CONTAINERS TYPE	C = COMPOSITE ALL CONTAINERS	VOC's (5242)	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-18A	1/29/15	1445	W	~~6~~ 9	HCl VOA		X	MS/MSD			
MW-29A		1420		3			X				
MW-23A		1445					X				
EW-02		1405					X				

SAMPLING COMPLETED	DATE	TIME	SAMPLING PERFORMED BY	RESULTS NEEDED NO LATER THAN
	1/29/15	1445	K. Allen, S. Sarmiento, R. Huerta	21 Days

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	1/29/15	~~1445~~ 1700	[signature]	1/30/15	10:00

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #	
Fedex	1/29/15	1700		1°C, ON ICE, SEALS INTACT

22999

Cooler/Box/Env 1 of 1

U.S. Environmental Protection Agency
Region 9 Richmond Laboratory

1337 South 46th Street
Richmond, CA 94804

Sample Receipt Checklist

Project No: R15S40 **Work Order No(s):** 1501036 **Rec'd:** 1/30/15 **by** SMS

MATRIX ☒ Water ☐ Soil/Sediment ☐ Air filter ☐ Air/Soil Gas (canisters) ☐ Wipes ☐ Tissue ☐ Other _____

CUSTODY SEALS Intact ☒ Yes ☐ No ☐ N/A- None
Check if applies: ☒ External Seals ☐ Internal Seals ☐ Hand Delivered

TEMPERATURE 1 **°C Within Acceptable Range** ☒ Yes ☐ No ☐ Ambient OK
Check if applies: ☒ Provided Temp Blank ☐ Between 6 to 10°C ☐ Previously Frozen
☐ Delivery Delay ☐ Insufficient/Melted Ice ☐ Sampled Today & On Ice

SAMPLE CONTAINERS Intact ☒ Yes ☐ No
If not intact, was volume recoverable for analysis? ☐ Yes ☐ No ☒ N/A
Check if applies: ☐ Bottle/Jar/Vial broken ☐ Cap broken or loose ☐ Other _____

CHAIN OF CUSTODY Received ☒ Yes ☐ No
COC complete and consistent with labels ☒ Yes ☐ No ☐ N/A
Check if applies: ☐ Not relinquished ☐ Logged in by sample label ☐ Sampler follow-up needed

TAT and analyses match scheduling ☒ Yes ☐ No ☐ N/A
Check if applies: ☐ Preliminary Results ☐ Rush Request ☐ 7-day TAT

Within hold times ☐ Expires today ☒ Yes ☐ No ☐ N/A

All shipping and sample containers accounted for ☒ Yes ☐ No ☐ N/A

PRESERVATION / FILTRATION ☐ N/A No chem. pres./filtra.
Check if applies: ☐ Requires sample custodian preservation
☐ Requires analyst filtration and/or preservation

Preserved and/or filtered samples correctly identified ☒ Yes ☐ No ☐ N/A

Preserved samples (non-VOA vials) measured at correct pH ☐ Yes ☐ No ☒ N/A
Preservation/measured pH _____

Sample custodian preservation and/or pH adjustments

Sample ID	Initial pH	Pres.	Date/time Pres. added	Adjusted pH	pH after 16-hrs (metals)	Date/time of pH recheck	Rechecked by

FOLLOW-UP / COMMENTS _____

WORK ORDER

Printed: 2/2/2015 10:53:23AM

1502001

EPA Region 9 Laboratory

Client: California Site Cleanup Section 2
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring
Project Number: R15S40

Report To:
California Site Cleanup Section 2
Marie Lacey
75 Hawthorne Street
San Francisco, CA 94105
Phone: (415) 972-3163
Fax: (415) 947-3526

Project Contact
RORE, Inc.
John McGuire
5151 Shoreham Place, Suite 260
San Diego, CA 92122
Phone :(707) 246-5399
Fax:

Shipping Containers	Description	Temp C	Custody Seals?	Containers Intact?	Labels COC Agree?	Preservation Confirmed?	Received on Ice?	Comments
Default Cooler	Default Cooler	2 /	Yes	No	Yes	Yes	Yes	

Date Due:	02/22/15 15:00 (21 day TAT)	SDG:	15033A
Received By:	Jack Berges	Date Received:	01/31/15 11:25
Logged In By:	Susan Sturges	Date Logged In:	02/02/15 10:16

Analysis	Hold Time Expires	Comments	
1502001-01 MW-01A [Water] Sampled 01/30/15 09:30 Pacific			
VOCs	02/13/15	no TICs	
1502001-02 MW-02A [Water] Sampled 01/30/15 09:45 Pacific			**MS/MSD**
VOCs	02/13/15	no TICs	
1502001-03 MW-03A [Water] Sampled 01/30/15 09:10 Pacific			
VOCs	02/13/15	no TICs	
1502001-04 MW-05A [Water] Sampled 01/30/15 08:30 Pacific			
VOCs	02/13/15	no TICs	
1502001-05 MW-06A [Water] Sampled 01/30/15 11:35 Pacific			
VOCs	02/13/15	no TICs	
1502001-06 MW-07A [Water] Sampled 01/30/15 13:10 Pacific			
VOCs	02/13/15	no TICs	
1502001-07 MW-08A [Water] Sampled 01/30/15 08:55 Pacific			
VOCs	02/13/15	no TICs	
1502001-08 MW-09A [Water] Sampled 01/30/15 08:50 Pacific			
VOCs	02/13/15	no TICs	

00024

WORK ORDER

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1502001

EPA Region 9 Laboratory

Client: California Site Cleanup Section 2 **Project Number:** R15S40
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring

Analysis	Hold Time Expires	Comments

Analysis	Expires	Comments
1502001-09 MW-11A [Water] Sampled 01/30/15 10:10 Pacific		
VOCs	02/13/15	no TICs
1502001-10 MW-12A [Water] Sampled 01/30/15 12:50 Pacific		
VOCs	02/13/15	no TICs
1502001-11 MW-14A [Water] Sampled 01/30/15 10:20 Pacific		
VOCs	02/13/15	no TICs
1502001-12 MW-15A [Water] Sampled 01/30/15 13:00 Pacific		
VOCs	02/13/15	no TICs
1502001-13 MW-16A [Water] Sampled 01/30/15 11:45 Pacific		
VOCs	02/13/15	no TICs
1502001-14 MW-16B [Water] Sampled 01/30/15 12:00 Pacific		
VOCs	02/13/15	no TICs
1502001-15 MW-16C [Water] Sampled 01/30/15 12:25 Pacific		
VOCs	02/13/15	no TICs
1502001-16 MW-19A [Water] Sampled 01/30/15 12:35 Pacific		
VOCs	02/13/15	no TICs
1502001-17 MW-19B1 [Water] Sampled 01/30/15 12:38 Pacific		
VOCs	02/13/15	no TICs
1502001-18 MW-20A [Water] Sampled 01/30/15 12:05 Pacific		
VOCs	02/13/15	no TICs
1502001-19 MW-20B [Water] Sampled 01/30/15 11:55 Pacific		
VOCs	02/13/15	no TICs

WORK ORDER

Printed: 2/2/2015 10:53:23AM

1502001

EPA Region 9 Laboratory

Client: California Site Cleanup Section 2 **Project Number:** R15S40
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring

Analysis	Hold Time Expires	Comments

Analysis	Expires	Comments
1502001-20 MW-20C [Water] Sampled 01/30/15 12:15 Pacific		
VOCs	02/13/15	no TICs

Reviewed By

Date

00026

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY BTS# 150129-K01

CLIENT: RORE, Inc.

SITE: Modesto Superfund Site
941 McHenry Ave.
Modesto, CA

LAB: EPA Lab Region 9 | DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
☐ EPA ☐ RWQCB REGION _____
☐ LIA
☐ OTHER

Report and Invoice to:
RORE - 5685 Redwood Dr, Ste 100, Rohnert Park, CA 94928
Attn: John McGuire
phone - (707) 246-5399 / email - jmcguire@roreinc.com

Lab Case Number: R15S40

CONDUCT ANALYSIS TO DETECT

SAMPLE I.D.	DATE	TIME	MATRIX (S= SOIL W=H_2O)	CONTAINERS TOTAL	CONTAINERS TYPE	C = COMPOSITE ALL CONTAINERS	VOCs (524.2)	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-01A	1/30/15	0930	W	3	HCl VOA		X				
MW-02A		0945		9			X	MS/MSD			
MW-03A		0910		3			X				
MW-05A		0830					X				
MW-06A		1135					X				
MW-07A		1310					X				
MW-08A		0855					X				
MW-09A		0850					X				
MW-11A		1010					X				
MW-12A		1250					X				

SAMPLING COMPLETED: DATE 1/29/15 TIME 1400
SAMPLING PERFORMED BY: K. Allen V. Landi

RESULTS NEEDED NO LATER THAN: 21 Days

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	1/30/15	1645	[signature]	1/31/15	11:25

SHIPPED VIA: Fedex | DATE SENT: 1/30/15 | TIME SENT: 1645 | COOLER #: | REC'D ON ICE AT 2°C, SEALS INTACT

1/4

BLAINE
TECH SERVICES, INC

1680 ROGERS AVENUE
SAN JOSE, CA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY BTS # 150129-K01

CLIENT: RORE, Inc.

SITE: Modesto Superfund Site
941 McHenry Ave.
Modesto, CA

SDG 150133A -SLS 02 pg 6

CONDUCT ANALYSIS TO DETECT: VOCs (524.2)

LAB: EPA Lab Region 9 | DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
☐ EPA ☐ RWQCB REGION _____
☐ LIA
☐ OTHER

Report and Invoice to:
RORE - 5685 Redwood Dr, Ste 100, Rohnert Park, CA 94928
Attn: John McGuire
phone - (707) 246-5399 / email - jmcguire@roreinc.com

Lab Case Number: R15S40

SAMPLE I.D.	DATE	TIME	MATRIX S=SOIL W=H_2O	CONTAINERS TOTAL	CONTAINERS TYPE	C = COMPOSITE ALL CONTAINERS	VOCs (524.2)	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-14A	1/30/15	1020	W	3	HCl VOA		X				
MW-15A		1300					X				
MW-16A		1145					X				
MW-16B		1200					X				
MW-16C		1225					X				
MW-19A		1235					X				
MW-19B1		1238					X				
MW-20A		1205					X				
MW-20B		1155					X				
MW-20C		1215					X				

SAMPLING COMPLETED: DATE 1/30/15 TIME 1400
SAMPLING PERFORMED BY: K. Alles V. Lombi

RESULTS NEEDED NO LATER THAN: 21 Days

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	1/30/15	1645	[signature]	1/31/15	11:25

SHIPPED VIA: Fedex | DATE SENT: 1/30/15 | TIME SENT: 1645 | COOLER #: | REC'D ON ICE AT 2°C, SEALS INTACT SLB

2/4

95928

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY BTS# 150129-K01

CLIENT: RORE, Inc.

SITE: Modesto Superfund Site
941 McHenry Ave.
Modesto, CA

LAB: EPA Lab Region 9 | DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
☐ EPA ☐ LIA ☐ OTHER ☐ RWQCB REGION _____

Report and Invoice to:
RORE - 5685 Redwood Dr, Ste 100, Rohnert Park, CA 94928
Attn: John McGuire
phone - (707) 246-5399 / email - jmcguire@roreinc.com

Lab Case Number: R15S40

CONDUCT ANALYSIS TO DETECT: VOCs (524.2)

C = COMPOSITE ALL CONTAINERS

SAMPLE I.D. (DG 150331B, SLS 2/2/15)	DATE	TIME	MATRIX (S= SOIL W=H_2O)	CONTAINERS TOTAL	CONTAINERS TYPE	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-21A	1/30/15	1110	W	3	HCl VOA				
MW-22A		1100							
MW-24B		1330							
MW-25A		1125							
MW-26B		0945							
MW-27B		1010							
MW-28B		1120							
MW-30A		1045							
MW-30B		1035							
MW-31A		1055							

SAMPLING COMPLETED: DATE 1/30/15 TIME 1400
SAMPLING PERFORMED BY: F. Alkn V. Landi

RESULTS NEEDED NO LATER THAN: 21 Days

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	1/30/15	1645	[signature]	1/31/15	11:25

SHIPPED VIA: Fedex | DATE SENT: 1/30/15 | TIME SENT: 1645 | COOLER #: | REC'D ON ICE AT 2°C, SEALS INTACT

3/4

00525

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY BTS # 150129.K01

CLIENT: RORE, Inc.

SITE: Modesto Superfund Site
941 McHenry Ave.
Modesto, CA

LAB: EPA Lab Region 9 | DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
☐ EPA ☐ LIA ☐ OTHER ☐ RWQCB REGION _____

Report and Invoice to:
RORE - 5685 Redwood Dr, Ste 100, Rohnert Park, CA 94928
Attn: John McGuire
phone - (707) 246-5399 / email - jmcguire@roreinc.com

Lab Case Number: R15S40

CONDUCT ANALYSIS TO DETECT: VOCs (524.2)

SAMPLE I.D. (SDG 33B 150133 SHS 2/2/15)	DATE	TIME	MATRIX (S=SOIL W=H_2O)	CONTAINERS TOTAL	CONTAINERS TYPE	C = COMPOSITE ALL CONTAINERS	VOCs (524.2)	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-32B	1/30/15	0855	W	3	HCl VOA		X				
MW-32C		0910					X				
MW-34B		1105					X				
MW-35B		1035					X				
DUP-1		—					X	On hold			
DUP-2		—					X	On hold			
DUP-3		—					X	On hold			
DUP-4		—					X	On hold			
DUP-5		—					X	On hold			

SAMPLING COMPLETED: DATE 1/30/15 TIME 1400
SAMPLING PERFORMED BY: K. Allen V. Landi
RESULTS NEEDED NO LATER THAN: 21 Days

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	1/30/15	1645	[signature]	1/31/15	11:25

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #	
Fedex	1/30/15	1645		REC'D ON ICE AT 2°C, SEALS INTACT [illegible]

4/4

Cooler/Box/Env 1 of 1

U.S. Environmental Protection Agency
Region 9 Richmond Laboratory

1337 South 46th Street
Richmond, CA 94804

Sample Receipt Checklist

Project No: R1534C **Work Order No(s):** 1502001, 1502002 **Rec'd:** 2/2/15 **by** SMS

MATRIX ☒ Water ☐ Soil/Sediment ☐ Air filter ☐ Air/Soil Gas (canisters) ☐ Wipes ☐ Tissue ☐ Other_____

CUSTODY SEALS Intact checked on 1/31/15 by J. Burgos ☒ **Yes** ☐ **No** ☐ **N/A- None**
Check if applies: ☒ External Seals ☐ Internal Seals ☐ Hand Delivered

TEMPERATURE 2 **°C Within Acceptable Range** checked on 1/31/15 by J. Burgos ☒ **Yes** ☐ **No** ☐ **Ambient OK**
Check if applies: ☒ Provided Temp Blank ☐ Between 6 to 10°C ☐ Previously Frozen
☐ Delivery Delay ☐ Insufficient/Melted Ice ☐ Sampled Today & On Ice

SAMPLE CONTAINERS Intact ☐ **Yes** ☒ **No**
If not intact, was volume recoverable for analysis? ☒ **Yes** ☐ **No** ☐ **N/A**
Check if applies: ☒ Bottle/Jar/Vial broken ☐ Cap broken or loose ☐ Other _____
one vial of MW-07A broken during receipt. Other two vials intact.

CHAIN OF CUSTODY Received ☒ **Yes** ☐ **No**
COC complete and consistent with labels ☒ **Yes** ☐ **No** ☐ **N/A**
Check if applies: ☐ Not relinquished ☐ Logged in by sample label ☐ Sampler follow-up needed

TAT and analyses match scheduling ☒ **Yes** ☐ **No** ☐ **N/A**
Check if applies: ☐ Preliminary Results ☐ Rush Request ☐ 7-day TAT

Within hold times ☐ Expires today ☒ **Yes** ☐ **No** ☐ **N/A**

All shipping and sample containers accounted for ☒ **Yes** ☐ **No** ☐ **N/A**

PRESERVATION / FILTRATION ☐ **N/A No chem. pres./filtra.**
Check if applies: ☐ Requires sample custodian preservation
☐ Requires analyst filtration and/or preservation

Preserved and/or filtered samples correctly identified ☒ **Yes** ☐ **No** ☐ **N/A**

Preserved samples (non-VOA vials) measured at correct pH ☐ **Yes** ☐ **No** ☒ **N/A**
Preservation/measured pH_____

Sample custodian preservation and/or pH adjustments

Sample ID	Initial pH	Pres.	Date/time Pres. added	Adjusted pH	pH after 16-hrs (metals)	Date/time of pH recheck	Rechecked by

FOLLOW-UP / COMMENTS_____

WORK ORDER

Printed: 2/2/2015 12:22:15PM

1502002

EPA Region 9 Laboratory

Client: California Site Cleanup Section 2
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring
Project Number: R15S40

Report To:
California Site Cleanup Section 2
Marie Lacey
75 Hawthorne Street
San Francisco, CA 94105
Phone: (415) 972-3163
Fax: (415) 947-3526

Project Contact
RORE, Inc.
John McGuire
5151 Shoreham Place, Suite 260
San Diego, CA 92122
Phone :(707) 246-5399
Fax:

Shipping Containers	Description	Temp C	Custody Seals?	Containers Intact?	Labels COC Agree?	Preservation Confirmed?	Received on Ice?	Comments
Default Cooler	Default Cooler	2	Yes	Yes	Yes	Yes	Yes	

Date Due:	02/22/15 15:00 (21 day TAT)	SDG:	15033B
Received By:	Jack Berges	Date Received:	01/31/15 11:25
Logged In By:	Susan Sturges	Date Logged In:	02/02/15 10:37

Analysis	Hold Time Expires	Comments
1502002-01 MW-21A [Water] Sampled 01/30/15 11:10 Pacific		
VOCs	02/13/15	no TICs
1502002-02 MW-22A [Water] Sampled 01/30/15 11:00 Pacific		
VOCs	02/13/15	no TICs
1502002-03 MW-24B [Water] Sampled 01/30/15 13:30 Pacific		
VOCs	02/13/15	no TICs
1502002-04 MW-25A [Water] Sampled 01/30/15 11:25 Pacific		
VOCs	02/13/15	no TICs
1502002-05 MW-26B [Water] Sampled 01/30/15 09:45 Pacific		
VOCs	02/13/15	no TICs
1502002-06 MW-27B [Water] Sampled 01/30/15 10:10 Pacific		
VOCs	02/13/15	no TICs
1502002-07 MW-28B [Water] Sampled 01/30/15 11:20 Pacific		
VOCs	02/13/15	no TICs
1502002-08 MW-30A [Water] Sampled 01/30/15 10:45 Pacific		
VOCs	02/13/15	no TICs

: 00032

WORK ORDER

Printed: 2/2/2015 12:22:15PM

1502002

EPA Region 9 Laboratory

Client: California Site Cleanup Section 2 **Project Number:** R15S40
Project: Modesto Groundwater Jan 2015 Qtrly Monitoring

Analysis	Hold Time Expires	Comments

Analysis	Expires	Comments
1502002-09 MW-30B [Water] Sampled 01/30/15 10:35 Pacific		
VOCs	02/13/15	no TICs
1502002-10 MW-31A [Water] Sampled 01/30/15 10:55 Pacific		
VOCs	02/13/15	no TICs
1502002-11 MW-32B [Water] Sampled 01/30/15 08:55 Pacific		
VOCs	02/13/15	no TICs
1502002-12 MW-32C [Water] Sampled 01/30/15 09:10 Pacific		
VOCs	02/13/15	no TICs
1502002-13 MW-34B [Water] Sampled 01/30/15 11:05 Pacific		
VOCs	02/13/15	no TICs
1502002-14 MW-35B [Water] Sampled 01/30/15 10:35 Pacific		
VOCs	02/13/15	no TICs
1502002-15 DUP-1 [Water] Sampled 01/30/15 00:00 Pacific		
VOCs	02/13/15	no TICs
1502002-16 DUP-2 [Water] Sampled 01/30/15 00:00 Pacific		
VOCs	02/13/15	no TICs
1502002-17 DUP-3 [Water] Sampled 01/30/15 00:00 Pacific		
VOCs	02/13/15	no TICs
1502002-18 DUP-4 [Water] Sampled 01/30/15 00:00 Pacific		
VOCs	02/13/15	no TICs
1502002-19 DUP-5 [Water] Sampled 01/30/15 00:00 Pacific		
VOCs	02/13/15	no TICs

Reviewed By Date

00033

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY BTS# 150129-K01

CLIENT: RORE, Inc.

SITE: Modesto Superfund Site
941 McHenry Ave.
Modesto, CA

SDG 15033A -SKS 2/2/15

CONDUCT ANALYSIS TO DETECT

LAB: **EPA Lab Region 9** DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
- ☐ EPA
- ☐ LIA
- ☐ OTHER
- ☐ RWQCB REGION _____

Report and Invoice to:
RORE - 5685 Redwood Dr, Ste 100, Rohnert Park, CA 94928
Attn: John McGuire
phone - (707) 246-5399 / email - jmcguire@roreinc.com

Lab Case Number: R15S40

SAMPLE I.D.	DATE	TIME	MATRIX (S= SOIL W=H_2O)	CONTAINERS TOTAL	CONTAINERS TYPE	C = COMPOSITE ALL CONTAINERS	VOCs (524.2)	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-01A	1/30/15	0930	W	3	HCl VOA		X				
MW-02A		0945		9			X	MS/MSD			
MW-03A		0910		3			X				
MW-05A		0830					X				
MW-06A		1135					X				
MW-07A		1310					X				
MW-08A		0855					X				
MW-09A		0850					X				
MW-11A		1010					X				
MW-12A		1250					X				

SAMPLING COMPLETED	DATE	TIME	SAMPLING PERFORMED BY
	1/29/15	1400	K. Allen V. Landi

RESULTS NEEDED NO LATER THAN **21 Days**

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	1/30/15	1645	[signature]	1/31/15	11:25

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #	
Fedex	1/30/15	1645		REC'D ON ICE AT 2°C, SEALS INTACT

1/4

BLAINE
TECH SERVICES, INC

1680 ROGERS AVENUE
SAN JOSE, CA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY BTS # 150129-K01

CLIENT: RORE, Inc.

SITE: Modesto Superfund Site
941 McHenry Ave.
Modesto, CA

SDG 15033A, SES 02/06

CONDUCT ANALYSIS TO DETECT: VOCs (524.2)

LAB: EPA Lab Region 9 | DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
☐ EPA ☐ LIA ☐ OTHER ☐ RWQCB REGION _____

Report and Invoice to:
RORE - 5685 Redwood Dr, Ste 100, Rohnert Park, CA 94928
Attn: John McGuire
phone - (707) 246-5399 / email - jmcguire@roreinc.com

Lab Case Number: R15S40

SAMPLE I.D.	DATE	TIME	MATRIX (S=SOIL W=H_2O)	CONTAINERS TOTAL	CONTAINERS TYPE	C = COMPOSITE ALL CONTAINERS	VOCs (524.2)	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-14A	1/30/15	1020	W	3	HCl VOA		X				
MW-15A		1300					X				
MW-16A		1145					X				
MW-16B		1200					X				
MW-16C		1225					X				
MW-19A		1235					X				
MW-19B1		1238					X				
MW-20A		1205					X				
MW-20B		1155					X				
MW-20C		1215					X				

SAMPLING COMPLETED: DATE 1/30/15 TIME 1400
SAMPLING PERFORMED BY: K. Allen V. Lombi

RESULTS NEEDED NO LATER THAN **21 Days**

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	1/30/15	1645	[signature]	1/31/15	11:25

SHIPPED VIA: Fedex | DATE SENT: 1/30/15 | TIME SENT: 1645 | COOLER #: | REC'D ON ICE AT 2°C, SEALS INTACT LAB

2/4

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY BTS# 150129-K01

CLIENT: RORE, Inc.

SITE: Modesto Superfund Site
941 McHenry Ave.
Modesto, CA

LAB: EPA Lab Region 9 | DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
☐ EPA ☐ RWQCB REGION ____
☐ LIA
☐ OTHER

Report and Invoice to:
RORE - 5685 Redwood Dr, Ste 100, Rohnert Park, CA 94928
Attn: John McGuire
phone - (707) 246-5399 / email - jmcguire@roreinc.com

Lab Case Number: R15S40

CONDUCT ANALYSIS TO DETECT: VOCs (524.2)

C = COMPOSITE ALL CONTAINERS

SAMPLE I.D. (DG 150330, SLS 2/2/15)	DATE	TIME	MATRIX S=SOIL W=H_2O	CONTAINERS TOTAL	CONTAINERS TYPE	C	VOCs (524.2)	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-21A	1/30/15	1110	W	3	HCl VOA						
MW-22A		1100									
MW-24B		1330									
MW-25A		1125									
MW-26B		0945									
MW-27B		1010									
MW-28B		1120									
MW-30A		1045									
MW-30B		1035									
MW-31A		1055									

SAMPLING COMPLETED: DATE 1/30/15 TIME 1400

SAMPLING PERFORMED BY: K. Allen, V. Landi

RESULTS NEEDED NO LATER THAN: 21 Days

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	1/30/15	1645	[signature]	1/31/15	11:25

SHIPPED VIA: Fedex | DATE SENT: 1/30/15 | TIME SENT: 1645 | COOLER #: | REC'D ON ICE AT 2°C, SEALS INTACT [signature]

3/4

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY BTS # 150129.KR1

CLIENT: RORE, Inc.

SITE: Modesto Superfund Site
941 McHenry Ave.
Modesto, CA

LAB: EPA Lab Region 9 | DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
☐ EPA ☐ LIA ☐ OTHER ☐ RWQCB REGION _____

Report and Invoice to:
RORE - 5685 Redwood Dr, Ste 100, Rohnert Park, CA 94928
Attn: John McGuire
phone - (707) 246-5399 / email - jmcguire@roreinc.com

Lab Case Number: R15S40

SDG 33B 150133B SMS 2/2/15

SAMPLE I.D.	DATE	TIME	MATRIX S=SOIL W=H_2O	CONTAINERS TOTAL	CONTAINERS TYPE	C = COMPOSITE ALL CONTAINERS	CONDUCT ANALYSIS TO DETECT: VOCs (524.2)	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-32B	1/30/15	0855	W	3	HCl VOA		X				
MW-32C		0910					X				
MW-34B		1105					X				
MW-35B		1035					X				
DUP-1		—					X	On hold			
DUP-2		—					X	On hold			
DUP-3		—					X	On hold			
DUP-4		—					X	On hold			
DUP-5		—					X	On hold			

SAMPLING COMPLETED: DATE 1/30/15 TIME 1400
SAMPLING PERFORMED BY: K. Allen V. Landi
RESULTS NEEDED NO LATER THAN: 21 Days

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	1/30/15	1645	[signature]	1/31/15	11:25

SHIPPED VIA: Fedex | DATE SENT: 1/30/15 | TIME SENT: 1645 | COOLER #: | REC'D ON ICE AT 2°C, SEALS INTACT LAB

4/4

Cooler/Box/Env 1 of 1

U.S. Environmental Protection Agency
Region 9 Richmond Laboratory

1337 South 46th Street
Richmond, CA 94804

Sample Receipt Checklist

Project No: R1S340 **Work Order No(s):** 1502001, 1502002 **Rec'd:** 2/2/15 **by** SMS

MATRIX ☒ Water ☐ Soil/Sediment ☐ Air filter ☐ Air/Soil Gas (canisters) ☐ Wipes ☐ Tissue ☐ Other_____

CUSTODY SEALS Intact checked on 1/31/15 by J. Burgos ☒ **Yes** ☐ **No** ☐ **N/A- None**
Check if applies: ☒ External Seals ☐ Internal Seals ☐ Hand Delivered

TEMPERATURE 2 **°C Within Acceptable Range** checked on 1/31/15 by J. Burgos ☒ **Yes** ☐ **No** ☐ **Ambient OK**
Check if applies: ☒ Provided Temp Blank ☐ Between 6 to 10°C ☐ Previously Frozen
☐ Delivery Delay ☐ Insufficient/Melted Ice ☐ Sampled Today & On Ice

SAMPLE CONTAINERS Intact ☐ **Yes** ☒ **No**
If not intact, was volume recoverable for analysis? ☒ **Yes** ☐ **No** ☐ **N/A**
Check if applies: ☒ Bottle/Jar/Vial broken ☐ Cap broken or loose ☐ Other _____
one vial of MW-07A broken during receipt. Other two vials intact.

CHAIN OF CUSTODY Received ☒ **Yes** ☐ **No**
COC complete and consistent with labels ☒ **Yes** ☐ **No** ☐ **N/A**
Check if applies: ☐ Not relinquished ☐ Logged in by sample label ☐ Sampler follow-up needed

TAT and analyses match scheduling ☒ **Yes** ☐ **No** ☐ **N/A**
Check if applies: ☐ Preliminary Results ☐ Rush Request ☐ 7-day TAT

Within hold times ☐ Expires today ☒ **Yes** ☐ **No** ☐ **N/A**

All shipping and sample containers accounted for ☒ **Yes** ☐ **No** ☐ **N/A**

PRESERVATION / FILTRATION ☐ **N/A No chem. pres./filtra.**
Check if applies: ☐ Requires sample custodian preservation
☐ Requires analyst filtration and/or preservation

Preserved and/or filtered samples correctly identified ☒ **Yes** ☐ **No** ☐ **N/A**

Preserved samples (non-VOA vials) measured at correct pH ☐ **Yes** ☐ **No** ☒ **N/A**
Preservation/measured pH_____

Sample custodian preservation and/or pH adjustments

Sample ID	Initial pH	Pres.	Date/time Pres. added	Adjusted pH	pH after 16-hrs (metals)	Date/time of pH recheck	Rechecked by

FOLLOW-UP / COMMENTS_____

00038

SAMPLE PREPARATION

PREPARATION BENCH SHEET

B15A131

EPA Region 9 Laboratory

'rinted: 1/30/2015 3:37:03PM

Project: R15S40 - Modesto Groundwater Jan 2015 Qtrly Monitoring

Matrix: Water **Analysis: VOCs** **Prepared using: Volatiles - 5030 P&T VOA** **Surrogate used: 1504074**

Lab Number	SampleName	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Prepared By	pH	Extraction Comments
1501036-01 A	MW-4A	01/30/15 15:36	25	25				1	YNB	<2	
1501036-02 A	MW-4B	01/30/15 15:36	25	25				1	YNB	<2	
1501036-03 A	MW-4C	01/30/15 15:36	25	25				1	YNB	<2	
1501036-04 A	MW-10A	01/30/15 15:36	25	25				1	YNB	<2	
1501036-05 A	MW-10B	01/30/15 15:36	25	25				1	YNB	<2	
1501036-06 A	MW-10C	01/30/15 15:36	25	25				1	YNB	<2	
B15A131-BLK1	Blank	01/30/15 07:36	25	25				1	YNB	—	
B15A131-BS1	LCS	01/30/15 07:36	25	25	1505012		5	1	YNB	—	
B15A131-MS1 B	Matrix Spike	01/30/15 15:36	25	25	1505012	1501036-01	5 /	1	YNB	<2	
B15A131-MSD1 C	Matrix Spike Dup	01/30/15 15:36	25	25	1505012	1501036-01	5 /	1	YNB	<2	

HP5975H

Spike witness: WT 1/30/15

YNB 02.02.15

Reagents

Reagent #	Description

Preparation Reviewed By

2/3/15
Date

PREPARATION BENCH SHEET

B15B002

EPA Region 9 Laboratory

Printed: 2/2/2015 11:40:45AM

Project: R15S40 - Modesto Groundwater Jan 2015 Qtrly Monitoring

Matrix: Water **Analysis: VOCs** **Prepared using: Volatiles - 5030 P&T VOA** **Surrogate used: 1504074**

Lab Number	SampleName	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Prepared By	pH	Extraction Comments
1501036-07 A	MW-13A	02/02/15 09:26	25	25				1	YNB	<2	
1501036-08 A	MW-17A	02/02/15 09:26	25	25				1	YNB	<2	
1501036-09 A	MW-17B	02/02/15 09:26	25	25				1	YNB	<2	
1501036-10 A	MW-17C	02/02/15 09:26	25	25				1	YNB	<2	
1501036-11 A	MW-18A	02/02/15 09:26	25	25				1	YNB	<2	
1501036-12 A	MW-29A	02/02/15 09:26	25	25				1	YNB	<2	
1501036-13 A	MW-23A	02/02/15 09:26	25	25				1	YNB	<2	
1501036-14 A	EW-02	02/02/15 09:26	25	25				1	YNB	<2	
1502001-01 A	MW-01A	02/02/15 09:26	25	25				1	YNB	<2	
1502001-03 A	MW-03A	02/02/15 09:26	25	25				1	YNB	<2	
1502001-04 A	MW-05A	02/02/15 09:26	25	25				1	YNB	<2	
1502001-05 A	MW-06A	02/02/15 09:26	25	25				1	YNB	<2	
B15B002-BLK1	Blank	02/02/15 07:26	25	25				1	YNB	–	
B15B002-BS1	LCS	02/02/15 07:26	25	25	1505012		5	1	YNB	–	
B15B002-MS1 B	Matrix Spike	02/02/15 09:26	25	25	1505012	1501036-11	5	1	YNB	<2	
B15B002-MSD1 C	Matrix Spike Dup	02/02/15 09:26	25	25	1505012	1501036-11	5	1	YNB	<2	

HP5975H

spike check o.k. W.D. 2/2/15

YNB 02.03.15

Reagents

Reagent #	Description

Preparation Reviewed By

2/3/15
Date

PREPARATION BENCH SHEET

B15B008

EPA Region 9 Laboratory

Printed: 2/2/2015 2:34:41PM

Project: R15S40 - Modesto Groundwater Jan 2015 Qtrly Monitoring

Matrix: Water **Analysis: VOCs** **Prepared using: Volatiles - 5030 P&T VOA** **Surrogate used: 1506020**

Lab Number	SampleName	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Prepared By	pH	Extraction Comments
1502001-12 A	MW-15A	02/02/15 14:33	25	25				1	YNB	<2	
1502001-13 A	MW-16A	02/02/15 14:33	25	25				1	YNB	<2	
1502001-14 A	MW-16B	02/02/15 14:33	25	25				1	YNB	<2	
1502001-15 A	MW-16C	02/02/15 14:33	25	25				1	YNB	<2	
1502001-16 A	MW-19A	02/02/15 14:33	25	25				1	YNB	<2	
1502001-17 A	MW-19B1	02/02/15 14:33	25	25				1	YNB	<2	
1502001-18 A	MW-20A	02/02/15 14:33	25	25				1	YNB	<2	
1502001-19 A	MW-20B	02/02/15 14:33	25	25				1	YNB	<2	
1502001-20 A	MW-20C	02/02/15 14:33	25	25				1	YNB	<2	
1502002-01 A	MW-21A	02/02/15 14:33	25	25				1	YNB	<2	
1502002-02 A	MW-22A	02/02/15 14:33	25	25				1	YNB	<2	
1502002-03 A	MW-24B	02/02/15 14:33	25	25				1	YNB	<2	
1502002-04 A	MW-25A	02/02/15 14:33	25	25				1	YNB	<2	
B15B008-BLK1	Blank	02/02/15 08:06	25	25				1	YNB	—	
B15B008-BS1	LCS	02/02/15 08:06	25	25	1505012		5	1	YNB	—	surr. failed
B15B008-BS2	LCS	02/02/15 08:06	25	25	1505012		5	1	YNB	—	

PECLARUS-1

Reagents

Reagent #	Description

Preparation Reviewed By: [illegible] Date: 02/03/15

PREPARATION BENCH SHEET

B15B003

EPA Region 9 Laboratory

Printed: 2/2/2015 12:03:34PM

Project: R15S40 - Modesto Groundwater Jan 2015 Qtrly Monitoring

Matrix: Water **Analysis: VOCs** **Prepared using: Volatiles - 5030 P&T VOA** **Surrogate used: 1504074**

Lab Number	SampleName	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Prepared By	pH	Extraction Comments
1501036-01RE1 D	MW-4A	02/02/15 10:03	[redacted]	25				1	YNB	<2	10X
1501036-04RE1 B	MW-10A	02/02/15 10:03	[redacted]	25				1	YNB	<2	
1501036-09RE1 B	MW-17B	02/02/15 09:26	[redacted]	25				1	YNB	<2	10X
1501036-13RE1 B	MW-23A	02/02/15 09:26	[redacted]	25				1	YNB	<2	~~10X~~ 9X YNB 2/2/15
1501036-14RE1 B	EW-02	02/02/15 09:26	[redacted]	25				1	YNB	<2	20X for PCE
1502001-02 A	MW-02A	02/02/15 09:26	25	25				1	YNB	<2	
1502001-06 A	MW-07A	02/02/15 09:26	25	25				1	YNB	<2	
1502001-07 A	MW-08A	02/02/15 09:26	25	25				1	YNB	<2	
1502001-08 A	MW-09A	02/02/15 09:26	25	25				1	YNB	<2	
1502001-09 A	MW-11A	02/02/15 09:26	25	25				1	YNB	<2	
1502001-10 A	MW-12A	02/02/15 09:26	25	25				1	YNB	<2	
1502001-11 A	MW-14A	02/02/15 09:26	25	25				1	YNB	<2	
B15B003-BLK1	Blank	02/02/15 07:03	25	25				1	YNB	—	
B15B003-BS1	LCS	02/02/15 07:03	25	25	1505012		5	1	YNB	—	
B15B003-MS1 B	Matrix Spike	02/02/15 07:03	25	25	1505012	1502001-02	5	1	YNB	<2	
B15B003-MSD1 C	Matrix Spike Dup	02/02/15 07:03	25	25	1505012	1502001-02	5	1	YNB	<2	

AG5979-D

Spike witness: UH 2/2/15

add [redacted] "B" <2
YNB
02.03.15

Reagents

Reagent #	Description

Preparation Reviewed By 02/03/15 Date

PREPARATION BENCH SHEET

B15B003

EPA Region 9 Laboratory

Printed: 2/3/2015 9:28:33AM

Matrix: Water **Analysis: VOCs** **Prepared using: Volatiles - 5030 P&T VOA** **Surrogate used: 1504074**

Lab Number	SampleName	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Prepared By	Extraction Comments
1501036-01RE1 D	MW-4A	02/02/15 10:03	2.5	25				1	YNB	10X
1501036-04RE1 B	MW-10A	02/02/15 10:03	12.5	25				1	YNB	
1501036-09RE1 B	MW-17B	02/02/15 09:26	2.5	25				1	YNB	10X
1501036-12RE1 B	MW-29A	02/02/15 09:26	25	25				1	YNB	
1501036-13RE1 B	MW-23A	02/02/15 09:26	12.5	25				1	YNB	2X for PCE
1501036-14RE1 B	EW-02	02/02/15 09:26	1.25	25				1	YNB	20X for PCE
1502001-02 A	MW-02A	02/02/15 09:26	25	25				1	YNB	
1502001-06 A	MW-07A	02/02/15 09:26	25	25				1	YNB	
1502001-07 A	MW-08A	02/02/15 09:26	25	25				1	YNB	
1502001-08 A	MW-09A	02/02/15 09:26	25	25				1	YNB	
1502001-09 A	MW-11A	02/02/15 09:26	25	25				1	YNB	
1502001-10 A	MW-12A	02/02/15 09:26	25	25				1	YNB	
1502001-11 A	MW-14A	02/02/15 09:26	25	25				1	YNB	
B15B003-BLK1	Blank	02/02/15 07:03	25	25				1	YNB	
B15B003-BS1	LCS	02/02/15 07:03	25	25	1505012		5	1	YNB	
B15B003-MS1	Matrix Spike	02/02/15 07:03	25	25	1505012	1502001-02	5	1	YNB	
B15B003-MSD1	Matrix Spike Dup	02/02/15 07:03	25	25	1505012	1502001-02	5	1	YNB	

AG5979-D

after edit. ✓em 2/10/15

Reagents

Reagent #	Description

2/10/15

Spike Check Witness By Date

Preparation Reviewed By Date

PREPARATION BENCH SHEET

B15B012

EPA Region 9 Laboratory

Printed: 2/3/2015 12:13:59PM

Project: R15S40 - Modesto Groundwater Jan 2015 Qtrly Monitoring

Matrix: Water **Analysis: VOCs** **Prepared using: Volatiles - 5030 P&T VOA** **Surrogate used: 1506020**

Lab Number	SampleName	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Prepared By	pH	Extraction Comments
1501036-05RE1 B	MW-10B	02/03/15 09:58	25	25				1	YNB	<2	1X
1501036-12RE2 C	MW-29A	02/03/15 09:58	12.5	25				1	YNB	<2	2X
1502001-03RE1 B	MW-03A	02/03/15 09:58	0.5	25				1	YNB	<2	50X
1502001-04RE1 B	MW-05A	02/03/15 09:58	5	25				1	YNB	<2	5X
1502001-05RE1 B	MW-06A	02/03/15 09:58	25	25				1	YNB	<2	1X
1502001-08RE1 B	MW-09A	02/03/15 09:58	25	25				1	YNB	<2	1X
1502001-17RE1 B	MW-19B1	02/03/15 09:58	25	25				1	YNB	<2	1X
1502001-18RE1 B	MW-20A	02/03/15 09:58	2.5	25				1	YNB	<2	10X
1502001-19RE1 B	MW-20B	02/03/15 09:58	5	25				1	YNB	<2	5X
1502002-03RE1 B	MW-24B	02/03/15 09:58	5	25				1	YNB	<2	5X
1502002-04RE1 B	MW-25A	02/03/15 09:58	5	25				1	YNB	<2	5X
1502002-10 A	MW-31A	02/03/15 09:58	25	25				1	YNB	<2	✓
1502002-19 A	DUP-5	02/03/15 09:58	25	25				1	YNB	<2	✓
B15B012-BLK1	Blank	02/03/15 07:58	25	25				1	YNB	—	
B15B012-BS1	LCS	02/03/15 07:58	25	25	1505012		5	1	YNB	—	

AG5979-D

YNB 02.05.15

Reagents

Reagent #	Description

Preparation Reviewed By — Date: 2/4/15

PREPARATION BENCH SHEET

B15B010

EPA Region 9 Laboratory

Printed: 2/3/2015 10:32:48AM

Project: R15S40 - Modesto Groundwater Jan 2015 Qtrly Monitoring

Matrix: Water **Analysis: VOCs** **Prepared using: Volatiles - 5030 P&T VOA** **Surrogate used: 1506020**

Lab Number	SampleName	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Prepared By	pH	Extraction Comments
1502002-05 A	MW-26B	02/03/15 09:46	25	25				1	YNB	<2	
1502002-06 A	MW-27B	02/03/15 09:46	25	25				1	YNB	<2	
1502002-07 A	MW-28B	02/03/15 09:46	25	25				1	YNB	<2	
1502002-08 A	MW-30A	02/03/15 09:46	25	25				1	YNB	<2	
1502002-09 A	MW-30B	02/03/15 09:46	25	25				1	YNB	<2	
1502002-11 A	MW-32B	02/03/15 09:46	25	25				1	YNB	<2	
1502002-12 A	MW-32C	02/03/15 09:46	25	25				1	YNB	<2	
1502002-13 A	MW-34B	02/03/15 09:46	25	25				1	YNB	<2	
1502002-14 A	MW-35B	02/03/15 09:46	25	25				1	YNB	<2	
1502002-15 A	DUP-1	02/03/15 09:46	25	25				1	YNB	<2	
1502002-16 A	DUP-2	02/03/15 09:46	25	25				1	YNB	<2	
1502002-17 A	DUP-3	02/03/15 09:46	25	25				1	YNB	<2	
1502002-18 A	DUP-4	02/03/15 09:46	25	25				1	YNB	<2	
B15B010-BLK1	Blank	02/03/15 07:46	25	25				1	YNB	—	
B15B010-BS1	LCS	02/03/15 07:46	25	25	1505012		5	1	YNB	—	
B15B010-MS1 B	Matrix Spike	02/03/15 09:46	25	25	1505012	1502002-13	5	1	YNB	<2	
B15B010-MSD1 C	Matrix Spike Dup	02/03/15 09:46	25	25	1505012	1502002-13	5	1	YNB	<2	

HP5975H

WA 2/3/15 GMB 02.04.15

Reagents

Reagent #	Description

Preparation Reviewed By 2/4/15 Date

PREPARATION BENCH SHEET

B15B021

EPA Region 9 Laboratory

Printed: 2/4/2015 10:17:43AM

Project: R15S40 - Modesto Groundwater Jan 2015 Qtrly Monitoring

Matrix: Water **Analysis: VOCs** **Prepared using: Volatiles - 5030 P&T VOA** **Surrogate used: 1506020**

Lab Number	SampleName	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Prepared By	pH	Extraction Comments
1501036-09RE2 C	MW-17B	02/04/15 10:09	2.5	25				1	YNB	<2	10X for PCE
1501036-14RE2 C	EW-02	02/04/15 10:09	2.5	25				1	YNB	<2	10X for PCE
1502001-03RE2 C	MW-03A	02/04/15 10:09	1.25	25				1	YNB	<2	20X
1502002-07RE1 B	MW-28B	02/04/15 10:09	2.5	25				1	YNB	<2	10X for PCE
B15B021-BLK1	Blank	02/04/15 07:09	25	25				1	YNB	—	
B15B021-BS1	LCS	02/04/15 07:09	25	25	1506076		5	1	YNB	—	

HP5975H

YNB
02.04.15

Reagents

Reagent #	Description

Preparation Reviewed By

2/4/15
Date

PREPARATION BENCH SHEET

B15B022

EPA Region 9 Laboratory

Printed: 2/4/2015 3:24:42PM

Project: R15S40 - Modesto Groundwater Jan 2015 Qtrly Monitoring

Matrix: Water **Analysis: VOCs** **Prepared using: Volatiles - 5030 P&T VOA** **Surrogate used: 1506020**

Lab Number	SampleName	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Prepared By	pH	Extraction Comments
1502002-14RE1 B	MW-35B	02/04/15 10:41	25	25				1	YNB	<2	
B15B022-BLK1	Blank	02/04/15 07:41	25	25				1	YNB	—	
B15B022-BS1	LCS	02/04/15 07:41	25	25	1506076		5	1	YNB	—	
B15B022-BS2	LCS	02/04/15 07:41	25	25	1506076		5	1	YNB	—	

AG5979-D

YNB
02.04.15

Reagents

Reagent #	Description

Preparation Reviewed By

2/4/15
Date

Instrument: AG 5975D

Analysis Date: 01.14.15

INITIAL CALIBRATION DATA

Injection Log

Operator: YNB
Directory: C:\msdchem\2\data\011415W\

Vial	File Name	Mult	Sample Info	Misc Info	Date Acquired
100	011415D01.D	1	S15A047-TUN1	0.5ng, EM 1329 V	14 Jan 2015 8:08
27	011415D02.D	1	BLANK	blank WATER	14 Jan 2015 8:30
28	011415D03.D	1	S15A047-IBL1	blank WATER	14 Jan 2015 9:06
29	011415D04.D	1	S15A047-CAL6	25ug/L WATER	14 Jan 2015 9:41
30	011415D05.D	1	S15A047-CAL5	10ug/L WATER	14 Jan 2015 10:17
31	011415D06.D	1	S15A047-CAL4	5ug/L WATER	14 Jan 2015 10:52
32	011415D07.D	1	S15A047-CAL3	2.0ug/L WATER	14 Jan 2015 11:28
33	011415D08.D	1	S15A047-CAL2	1.0ug/L WATER	14 Jan 2015 12:04
34	011415D09.D	1	S15A047-CAL1	0.5ug/L WATER	14 Jan 2015 12:39
35	011415D10.D	1	S15A047-SCV1	5ug/L WATER	14 Jan 2015 13:14
36	011415D11.D	1	B15A055-BS1	2ug/L WATER	14 Jan 2015 13:49
37	011415D12.D	1	BLANK	BLANK, WATER	14 Jan 2015 14:25
38	011415D13.D	1	B15A055-BLK1	BLANK, WATER	14 Jan 2015 15:00
39	011415D14.D	1	1501006-10RE2	HAL, WATER	14 Jan 2015 15:35
40	011415D15.D	1	1501006-11RE2	REG, WATER	14 Jan 2015 16:10
41	011415D16.D	1	1501006-12RE2	UNREG WATER	14 Jan 2015 16:45
42	011415D17.D	1	1501006-10RE3	5X,HAL, WATER	14 Jan 2015 17:20
43	011415D18.D	1	1501011-03	V3EFF-D827, WATER	14 Jan 2015 17:56
44	011415D19.D	1	B15A055-MS1	V3EFF-D827, WATER SPIKE	14 Jan 2015 18:31
45	011415D20.D	1	B15A055-MSD1	V3EFF-D827, WATER SPIKE	14 Jan 2015 19:06 OK
46	011415D21.D	1	BLANK	BLANK, WATER	14 Jan 2015 19:42
47	011415D22.D	1	S15A047-CCV1 OK	5ug/L WATER	14 Jan 2015 20:17
48	011415D23.D	1	S15A047-CCV2	5ug/L WATER	14 Jan 2015 20:52

YNB
01.15.15

USEPA REGION 9 VOLATILE ORGANICS RUN LOG

SOP: ☒354 (Water) ☐305 (Solid, Low) ☐305 (Solid, Medium)

INST. ID: AG5975D

EM Voltage: 1329

LIMS Batch: B15A055 BFB STD ID: 1453027 Cal STD ID: 1503027

LIMS Seq.: 815A047 IS/Surr ID: 1502039 MS SPK ID: ↓

Purge Vol, mL: 25 IS/Surr Volume: 1 µL BS SPK ID: 1503027, 1502067 as second source

	Date Analyzed	Time Analyzed	Analyst	File Name	Laboratory ID	Vial ID	Initial Volume, mL /Weight, g	MeOH Used, uL	Final Volume, mL	Archon DF	STD Amounts (uL) CAL	BS	MS	pH	Comments	M[1]
1	01.14.15	8:08	YAB	011415D 01	815A047-tune1	—	—	—	—	—	—	—	—	—		
2		8:30		02	blank	—	—	—	—	—	—	—	—	—		
3		9:06		03	815A047-IAL1	—	—	—	—	—	—	—	—	—		
4		9:41		04	-CAL6	—	50	—	—	—	50	—	—	—		
5		10:17		05	-CAL5	—	50	—	—	—	20	—	—	—		
6		10:52		06	-CAL4	—	50	—	—	—	10	—	—	—		
7		11:28		07	-CAL3	—	50	—	—	—	4	—	—	—		
8		12:04		08	-CAL2	—	50	—	—	—	2	—	—	—		
9		12:39		09	-CAL1	—	50	—	—	—	1	—	—	—		
10		13:14		10	-SCV1	—	50	—	—	—	—	10	—	—		
11		13:49		11	B15A055-AS1	—	50	—	—	—	—	10	—	—		
12		14:25		12	blank	—	—	—	—	—	—	—	—	—		
13		15:00		13	B15A055-ALCS1	—	—	—	—	—	—	—	—	—		
14		15:35		14	1501006-10RE2	A	—	—	—	—	—	—	—	—		
15		16:10		15	-11RE2	A	—	—	—	—	—	—	—	—		
16		16:45		16	-12RE2	A	—	—	—	—	—	—	—	—		
17		17:20		17	-10RE3	A	—	—	—	5X	—	—	—	—		
18		17:56		18	1501011-03	D	—	—	—	—	—	—	—	<2		
19		18:31		19	B15A055-MS1	E	40	—	—	—	—	—	8	<2		
20		19:06		20	-MSD1	F	40	—	—	—	—	—	8	<2		
21		19:42		21	blank	—	—	—	—	—	—	—	—	—		
22		20:17		22	815A047-CCV1	—	—	—	—	—	—	—	—	—		
23		20:52		23	-CCV2	—	—	—	—	—	—	—	—	—		
24																

YAB 01.15.15

[1] Manual integration performed

Reviewed: TD Date: 01-15-15

GC/MS QA-QC Check Report

Tune File : C:\msdchem\2\data\011415W\011415D01.D
Tune Time : 14 Jan 2015 8:08

Daily Calibration File : C:\msdchem\2\data\011415W\011415D06.D

File	Sample	Surrogate Recovery %				Internal Standard Responses		
						81039	861283	460549
011415D02.D	BLANK	97	101	105	97	81321	817125	414102
011415D03.D	S15A047-IBL1	105	101	101	100	79902	781421	375057
011415D04.D	S15A047-CAL6	95	98	97	82	83684	966901	555033
011415D05.D	S15A047-CAL5	101	98	96	86	81645	890028	494658
011415D06.D	S15A047-CAL4	103	99	100	90	81039	861283	460549
011415D07.D	S15A047-CAL3	102	101	99	94	83409	869264	432670
011415D08.D	S15A047-CAL2	107	102	101	96	83810	859272	419287
011415D09.D	S15A047-CAL1	109	103	99	100	82021	841179	395991
011415D10.D	S15A047-SCV1	101	98	99	98	78607	840281	464078
011415D11.D	B15A055-BS1	100	102	101	102	80341	845143	443313
011415D12.D	BLANK	101	97	105	110	75906	770324	391012
011415D13.D	B15A055-BLK1	102	98	108	112	76238	770847	389642
011415D14.D	1501006-10RE2	101	99	105	111	79153	768877	382999
011415D15.D	1501006-11RE2	96	98	102	100	76512	810149	433297
011415D16.D	1501006-12RE2	103	98	107	112	75180	740959	408835
011415D17.D	1501006-10RE3	100	99	113*	116	73982	702961	364179
011415D18.D	1501011-03	101	104	100	109	77265	788977	354602
011415D19.D	B15A055-MS1	98	101	102	101	78787	838793	446400
011415D20.D	B15A055-MSD1	96	98	102	102	70188	833934	455254

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-----------------------------------------------------------------------------
011415D21.D
         BLANK        104   99  105  110        79473     791076     388852
-----------------------------------------------------------------------------
011415D22.D
(fails)  S15A047-CCV1   96   99  100  101        75541     816253     436529
-----------------------------------------------------------------------------
011415D23.D
(fails)  S15A047-CCV2  102  100  100  100        77330     865331     457573
-----------------------------------------------------------------------------
(fails) - fails 12hr time check   * - fails criteria

    Created: Thu Jan 15 08:16:12 2015  AG5975D
```

ANALYSIS SEQUENCE

Instrument: AG5975DV

S15A047

Printed: 1/15/2015 9:28:57AM

Calibration ID: 1501010

Lab Number	Sample Name	Analysis	Container	Order	Position	STD ID	ISTD ID	Comments
S15A047-TUN1	MS Tune	QC		1		1453027		
S15A047-IBL1	Instrument Blank	QC		2				
S15A047-CAL1	Cal Standard	QC		3		1503034		
S15A047-CAL2	Cal Standard	QC		4		1503035		
S15A047-CAL3	Cal Standard	QC		5		1503036		
S15A047-CAL4	Cal Standard	QC		6		1503037		
S15A047-CAL5	Cal Standard	QC		7		1503038		
S15A047-CAL6	Cal Standard	QC		8		1503039		
S15A047-SCV1	Secondary Cal Check	QC		9		1502068		
B15A055-BS1	LCS	QC		10				
B15A055-BLK1	Blank	QC		11				
1501006-10RE2	Halomethanes #842	VOCs	A	12				THMs
1501006-11RE2	Regulated Volatiles #840	VOCs	A	13				From B15A047 by YNB on 01/14/15
1501006-12RE2	Unregulated Volatiles #841	VOCs	A	14				From B15A047 by YNB on 01/14/15
1501006-10RE3	Halomethanes #842	VOCs	A	15				5mL/100mL
1501011-03	V3EFF-D827	VOCs	D	16				Limited target list - No TICs; RUSH 2-
B15A055-MS1	Matrix Spike	QC		17				
B15A055-MSD1	Matrix Spike Dup	QC		18				
S15A047-IBL2	Instrument Blank	QC		19				
S15A047-CCV1	50ppb	QC		20		1503037		
S15A047-CCV2	CCV 2F18002	QC		21		1503037		

YNB 01.15.15

Samples Loaded By Date

YNB 01.15.15

Data Processed By Date

Response Factor Report AG5975D

Method Path : C:\msdchem\2\methods\
Method File : 011415W.M
Title : Volatile Organic Analysis - 524.2 Method
Last Update : Wed Jan 14 13:06:31 2015
Response Via : Initial Calibration

Calibration Files
0.5 =011415D09.D 1.0 =011415D08.D 2.0 =011415D07.D 5.0 =011415D06.D 10.0=011415D05.D
25.0=011415D04.D

		Compound	0.5	1.0	2.0	5.0	10.0	25.0	Avg	%RSD
1)	I	Dichloromethane-d2	----------ISTD----------							
2)	TMC	Dichlorodifluo...	2.762	2.758	2.850	2.870	2.787	2.651	2.780	2.81
3)	TMC	Chloromethane	2.601	2.752	2.768	2.777	2.721	2.709	2.721	2.38
4)	TCM	Vinyl chloride	3.187	3.217	3.271	3.234	3.174	3.131	3.202	1.54
5)	TCM	Bromomethane	2.709	2.723	2.758	2.773	2.782	2.774	2.753	1.09
6)	TMC	Chloroethane	2.056	1.697	1.935	1.899	1.846	1.865	1.883	6.25
7)	TMC	Trichlorofluor...	2.625	3.291	3.751	3.910	4.364	4.494	3.739	18.65
8)	TMC	1,1-Dichloroet...	2.947	3.067	3.072	2.986	3.036	2.926	3.006	2.07
9)	TCM	1,1,2-Trichlor...	3.125	3.114	3.218	3.062	3.146	2.966	3.105	2.74
10)	TCM	Acetone	0.439	0.331	0.272	0.237	0.224	0.210	0.285	30.41#
11)	TCM	Carbon disulfide	9.812	9.363	9.729	9.747	9.747	9.508	9.652	1.82
12)	TMC	Dichloromethane	3.318	3.236	3.069	2.926	2.867	2.751	3.028	7.27
13)	TCM	tert-Butyl alc...	0.108	0.093	0.109	0.106	0.103	0.097	0.103	6.26
14)	TMC	trans-1,2-Dich...	3.331	3.501	3.549	3.560	3.606	3.496	3.507	2.72
15)	TCM	tert-Butyl met...	4.669	4.472	4.683	4.483	4.507	4.395	4.535	2.55
16)	TCM	1,1-Dichloroet...	5.462	5.287	5.368	5.319	5.308	5.131	5.312	2.05
17)	TMC	Diisopropyl ether	6.167	6.011	6.281	6.116	6.146	6.082	6.134	1.48
18)	TCM	Ethyl-tert-but...	5.297	5.253	5.422	5.392	5.574	5.538	5.413	2.35
19)	TCM	2,2-Dichloropr...	3.666	3.625	3.784	3.955	4.265	4.305	3.933	7.52
20)	TMC	cis-1,2-Dichlo...	3.118	3.177	3.270	3.264	3.358	3.311	3.250	2.71
21)	TCM	2-Butanone (MEK)	0.368	0.257	0.256	0.247	0.248	0.242	0.270	18.02
22)	TMC	Bromochloromet...	1.285	1.224	1.257	1.269	1.296	1.257	1.265	1.99
23)	TCM	Chloroform	5.109	4.969	5.235	5.242	5.331	5.299	5.197	2.61
24)	I	Fluorobenzene	----------ISTD----------							
25)	TCM	1,1,1-Trichlor...	0.445	0.453	0.466	0.460	0.466	0.440	0.455	2.42
26)	TCM	Carbon tetrach...	0.403	0.408	0.414	0.415	0.422	0.395	0.410	2.37
27)	TCM	1,1-Dichloropr...	0.333	0.320	0.332	0.324	0.324	0.308	0.323	2.81
28)	S	1,2-Dichloroet...	0.185	0.181	0.172	0.175	0.171	0.161	0.174	4.74
29)	TMC	Benzene	0.931	0.913	0.933	0.920	0.922	0.885	0.918	1.89
30)	TCM	1,2-Dichloroet...	0.198	0.199	0.200	0.197	0.196	0.184	0.196	2.89
31)	TCM	tert-Amyl meth...	0.435	0.428	0.441	0.435	0.437	0.419	0.433	1.85
32)	TMC	Trichloroethene	0.297	0.293	0.293	0.291	0.295	0.286	0.293	1.24
33)	TMC	1,2-Dichloropr...	0.160	0.157	0.167	0.164	0.167	0.166	0.164	2.45
34)	TMC	Dibromomethane	0.082	0.084	0.088	0.086	0.086	0.082	0.085	3.06
35)	TCM	Bromodichlorom...	0.226	0.230	0.238	0.240	0.249	0.246	0.238	3.77
36)	TCM	cis-1,3-Dichlo...	0.164	0.174	0.183	0.187	0.198	0.203	0.185	7.98
37)	I	Chlorobenzene-d5	----------ISTD----------							
38)	TMC	4-Methyl-2-pen...	0.108	0.102	0.101	0.098	0.095	0.091	0.099	5.96
39)	S	Toluene-d8	1.578	1.562	1.550	1.524	1.502	1.508	1.537	2.00
40)	TMC	Toluene	0.960	0.941	0.968	0.928	0.931	0.921	0.941	1.99
41)	TCM	trans-1,3-Dich...	0.222	0.211	0.232	0.221	0.228	0.227	0.223	3.26
42)	TCM	1,1,2-Trichlor...	0.125	0.129	0.128	0.127	0.125	0.121	0.126	2.38
43)	TCM	Tetrachloroethene	0.618	0.570	0.592	0.545	0.555	0.538	0.570	5.37
44)	TMC	1,3-Dichloropr...	0.209	0.227	0.228	0.214	0.212	0.208	0.216	4.08
45)	TCM	2-Hexanone	0.048	0.045	0.044	0.044	0.042	0.040	0.044	5.69
46)	TCM	Chlorodibromom...	0.237	0.230	0.240	0.236	0.236	0.237	0.236	1.38
47)	TMC	1,2-Dibromoeth...	0.142	0.141	0.143	0.143	0.141	0.135	0.141	2.27
48)	TMC	Chlorobenzene	0.945	0.956	0.967	0.940	0.942	0.931	0.947	1.34
49)	TCM	1,1,1,2-Tetrac...	0.466	0.474	0.483	0.466	0.463	0.453	0.468	2.18
50)	TCM	Ethylbenzene	1.795	1.783	1.831	1.848	1.833	1.807	1.816	1.39
51)	TCM	m&p-Xylene	0.694	0.712	0.727	0.744	0.740	0.735	0.725	2.62
52)	TCM	o-Xylene	0.787	0.787	0.829	0.836	0.816	0.800	0.809	2.63
53)	TCM	Styrene	0.870	0.918	0.946	0.967	0.953	0.955	0.935	3.83
54)	TCM	Bromoform	0.133	0.128	0.138	0.136	0.139	0.137	0.135	3.08
55)	TCM	Isopropylbenzene	2.242	2.234	2.386	2.420	2.392	2.369	2.341	3.47
56)	S	4-Bromofluorob...	0.440	0.447	0.439	0.444	0.424	0.432	0.438	1.96

≤ 20% YMR 01.14.15

Method Path : C:\msdchem\2\methods\
Method File : 011415W.M
Title : Volatile Organic Analysis - 524.2 Method

57)	TCM	Bromobenzene	0.442	0.429	0.443	0.433	0.422	0.409	0.430	3.03
58)	TCM	1,1,2,2-Tetrac...	0.203	0.200	0.202	0.197	0.193	0.182	0.196	4.00
59)	TMC	1,2,3-Trichlor...	0.146	0.130	0.131	0.130	0.122	0.113	0.129	8.72
60)	TCM	Propylbenzene	2.285	2.351	2.421	2.446	2.392	2.354	2.375	2.42
61)	TCM	2-Chlorotoluene	1.451	1.467	1.490	1.489	1.463	1.426	1.464	1.65
62)	TCM	4-Chlorotoluene	1.459	1.475	1.484	1.476	1.434	1.426	1.459	1.65
63)	TCM	1,3,5-Trimethy...	1.994	1.989	2.115	2.121	2.122	2.145	2.081	3.38
64)	TCM	tert-Butylbenzene	1.469	1.556	1.718	1.746	1.835	1.936	1.710	10.12
65)	TCM	1,2,4-Trimethy...	2.002	2.037	2.096	2.106	2.082	2.066	2.065	1.91
66)	TCM	sec-Butylbenzene	2.393	2.444	2.631	2.623	2.665	2.729	2.581	5.13
67)	TCM	1,3-Dichlorobe...	1.132	1.086	1.088	1.059	1.007	0.970	1.057	5.62
68)	TCM	p-Isopropyltol...	2.142	2.194	2.370	2.365	2.392	2.439	2.317	5.16
69)	TCM	1,4-Dichlorobe...	1.110	1.026	1.034	0.993	0.954	0.922	1.006	6.58
70)	S	1,2-Dichlorobe...	0.736	0.709	0.695	0.668	0.634	0.609	0.675	7.05
71)	TCM	1,2-Dichlorobe...	1.105	1.061	1.079	1.013	0.969	0.912	1.023	7.15
72)	TCM	Butylbenzene	2.140	2.115	2.147	2.119	2.051	2.024	2.100	2.40
73)	TMC	1,2-Dibromo-3-...	0.046	0.045	0.045	0.042	0.041	0.038	0.043	6.61
74)	TCM	1,2,4-Trichlor...	1.366	1.268	1.290	1.167	1.121	1.060	1.212	9.50
75)	TCM	Hexachlorobuta...	0.760	0.716	0.742	0.696	0.685	0.663	0.710	5.12
76)	TCM	Naphthalene	1.408	1.308	1.350	1.262	1.197	1.078	1.267	9.29
77)	TCM	1,2,3-Trichlor...	1.137	1.031	1.072	0.958	0.906	0.814	0.986	11.91

(#) = Out of Range

Compound List Report AG5975D

Method Path : C:\msdchem\2\methods\
Method File : 011415W.M
Title : Volatile Organic Analysis - 524.2 Method
Last Update : Wed Jan 14 13:06:31 2015
Response Via : Initial Calibration

Total Cpnds : 77

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Dichloromethane-d2	53	3.634	1.000	A	3	A	B
2	T	Dichlorodifluoromethane	85	1.413	0.389	A	1	A	B
3	T	Chloromethane	50	1.551	0.427	A	3	A	B
4	T	Vinyl chloride	62	1.683	0.463	A	2	A	B
5	T	Bromomethane	94	1.993	0.548	A	1	A	B
6	T	Chloroethane	64	2.102	0.579	A	1	A	B
7	T	Trichlorofluoromethane	101	2.390	0.658	A	1	A	B
8	T	1,1-Dichloroethene	96	2.995	0.824	A	2	A	B
9	T	1,1,2-Trichloro-1,2,2-trifl...	101	3.043	0.837	A	2	A	B
10	T	Acetone	43	3.084	0.849	A	1	A	B
11	T	Carbon disulfide	76	3.246	0.893	A	1	A	B
12	T	Dichloromethane	84	3.665	1.008	A	2	A	B
13	T	tert-Butyl alcohol	59	3.975	1.094	A	2	A	B
14	T	trans-1,2-Dichloroethene	96	4.106	1.130	A	2	A	B
15	T	tert-Butyl methyl ether (MTBE)	73	4.159	1.145	A	2	A	B
16	T	1,1-Dichloroethane	63	4.838	1.331	A	2	A	B
17	T	Diisopropyl ether	45	5.089	1.400	A	2	A	B
18	T	Ethyl-tert-butyl ether	59	5.725	1.575	A	1	A	B
19	T	2,2-Dichloropropane	77	5.850	1.610	A	2	A	B
20	T	cis-1,2-Dichloroethene	96	5.861	1.613	A	2	A	B
21	T	2-Butanone (MEK)	43	5.955	1.639	A	2	A	B
22	T	Bromochloromethane	128	6.247	1.719	A	2	A	B
23	T	Chloroform	83	6.434	1.771	A	2	A	B
24	I	Fluorobenzene	96	7.775	1.000	A	2	A	B
25	T	1,1,1-Trichloroethane	97	6.691	0.861	A	2	A	B
26	T	Carbon tetrachloride	117	6.962	0.895	A	1	A	B
27	T	1,1-Dichloropropene	75	6.976	0.897	A	2	A	B
28	S	1,2-Dichloroethane-d4	65	7.214	0.928	A	2	A	B
29	T	Benzene	78	7.297	0.938	A	1	A	B
30	T	1,2-Dichloroethane	62	7.338	0.944	A	2	A	B
31	T	tert-Amyl methyl ether	73	7.584	0.975	A	2	A	B
32	T	Trichloroethene	95	8.365	1.076	A	2	A	B
33	T	1,2-Dichloropropane	63	8.700	1.119	A	2	A	B
34	T	Dibromomethane	93	8.870	1.141	A	2	A	B
35	T	Bromodichloromethane	83	9.163	1.179	A	2	A	B
36	T	cis-1,3-Dichloropropene	75	9.879	1.271	A	2	A	B
37	I	Chlorobenzene-d5	117	12.517	1.000	A	1	A	B
38	T	4-Methyl-2-pentanone (MIBK)	43	10.167	0.812	A	2	A	B
39	S	Toluene-d8	98	10.283	0.822	A	1	A	B
40	T	Toluene	92	10.385	0.830	A	1	A	B
41	T	trans-1,3-Dichloropropene	75	10.764	0.860	A	2	A	B
42	T	1,1,2-Trichloroethane	83	11.030	0.881	A	2	A	B
43	T	Tetrachloroethene	166	11.232	0.897	A	2	A	B
44	T	1,3-Dichloropropane	76	11.277	0.901	A	1	A	B
45	T	2-Hexanone	43	11.482	0.917	A	1	A	B
46	T	Chlorodibromomethane	129	11.616	0.928	A	2	A	B
47	T	1,2-Dibromoethane (EDB)	107	11.758	0.939	A	2	A	B
48	T	Chlorobenzene	112	12.560	1.003	A	2	A	B
49	T	1,1,1,2-Tetrachloroethane	131	12.712	1.016	A	2	A	B
50	T	Ethylbenzene	91	12.774	1.021	A	1	A	B
51	T	m&p-Xylene	106	12.972	1.036	A	1	A	B
52	T	o-Xylene	106	13.581	1.085	A	1	A	B
53	T	Styrene	104	13.605	1.087	A	2	A	B
54	T	Bromoform	173	13.846	1.106	A	2	A	B

55	T	Isopropylbenzene	105	14.191	1.134	A	1	A	B
56	S	4-Bromofluorobenzene	95	14.399	1.150	A	2	A	B
57	T	Bromobenzene	156	14.603	1.167	A	2	A	B
58	T	1,1,2,2-Tetrachloroethane	83	14.668	1.172	A	2	A	B
59	T	1,2,3-Trichloropropane	75	14.704	1.175	A	1	A	B
60	T	Propylbenzene	91	14.848	1.186	A	1	A	B
61	T	2-Chlorotoluene	91	14.940	1.194	A	1	A	B
62	T	4-Chlorotoluene	91	15.122	1.208	A	1	A	B
63	T	1,3,5-Trimethylbenzene	105	15.148	1.210	A	1	A	B
64	T	tert-Butylbenzene	119	15.657	1.251	A	2	A	B
65	T	1,2,4-Trimethylbenzene	105	15.731	1.257	A	1	A	B
66	T	sec-Butylbenzene	105	15.988	1.277	A	1	A	B
67	T	1,3-Dichlorobenzene	146	16.095	1.286	A	2	A	B
68	T	p-Isopropyltoluene	119	16.207	1.295	A	2	A	B
69	T	1,4-Dichlorobenzene	146	16.220	1.296	A	2	A	B
70	S	1,2-Dichlorobenzene-d4	152	16.662	1.331	A	2	A	B
71	T	1,2-Dichlorobenzene	146	16.682	1.333	A	2	A	B
72	T	Butylbenzene	91	16.722	1.336	A	1	A	B
73	T	1,2-Dibromo-3-chloropropane	75	17.536	1.401	A	2	A	B
74	T	1,2,4-Trichlorobenzene	180	18.320	1.464	A	2	A	B
75	T	Hexachlorobutadiene	225	18.486	1.477	A	2	A	B
76	T	Naphthalene	128	18.523	1.480	A	2	A	B
77	T	1,2,3-Trichlorobenzene	180	18.728	1.496	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

011415W.M Wed Jan 14 13:07:03 2015

GC/MS QA-QC Check Report

Tune File : C:\msdchem\2\data\011415W\011415D01.D
Tune Time : 14 Jan 2015 8:08

Daily Calibration File : C:\msdchem\2\data\011415W\011415D06.D

File	Sample	Surrogate Recovery %				Internal Standard Responses		
						81039	861283	460549
011415D02.D	BLANK	97	101	105	97	81321	817125	414102
011415D03.D	S15A047-IB	105	101	101	100	79902	781421	375057
011415D04.D	S15A047-CAL6	95	98	97	82	83684	966901	555033
011415D05.D	S15A047-CAL5	101	98	96	86	81645	890028	494658
011415D06.D	S15A047-CAL4	103	99	100	90	81039	861283	460549
011415D07.D	S15A047-CAL3	102	101	99	94	83409	869264	432670
011415D08.D	S15A047-CAL2	107	102	101	96	83810	859272	419287
011415D09.D	S15A047-CAL1	109	103	99	100	82021	841179	395991
011415D10.D	S15A047-SCV1	101	98	99	98	78607	840281	464078

(fails) - fails 12hr time check * - fails criteria

Created: Wed Jan 14 13:41:51 2015 AG5975D

Edit Compounds -- Compound #8 -- 1,1-Dichloroethene

Search by: Ret Time | Name | Index

Find Compou

- Compound Database
  - Dichloromethane-d2
    - Dichlorodifluoromethane
    - Chloromethane
    - Vinyl chloride
    - Bromomethane
    - Chloroethane
    - Trichlorofluoromethane
    - 1,1-Dichloroethene
    - 1,1,2-Trichloro-1,2,2-trifl
    - Acetone
    - Carbon disulfide
    - Dichloromethane
    - tert-Butyl alcohol
    - trans-1,2-Dichloroethene
    - tert-Butyl methyl ether (M
    - 1,1-Dichloroethane
    - Diisopropyl ether
    - Ethyl-tert-butyl ether
    - 2,2-Dichloropropane
    - cis-1,2-Dichloroethene
    - 2-Butanone (MEK)
    - Bromochloromethane
    - Chloroform
  - Fluorobenzene
  - Chlorobenzene-d5

Identification | Calibration | User-Defined | Advanced | Reporting

Name: 1,1-Dichloroethene

Concentration Units: ug/L

Compound Ty

Signals to Be Used for Quantitation

Ret Time: 2.995 RRT: 0.824

Extract signals from

- 0.200 + 0.290 Min %

This is 2.795 to 3.285 minutes

Quant signal: Target Ion % Uncertainty

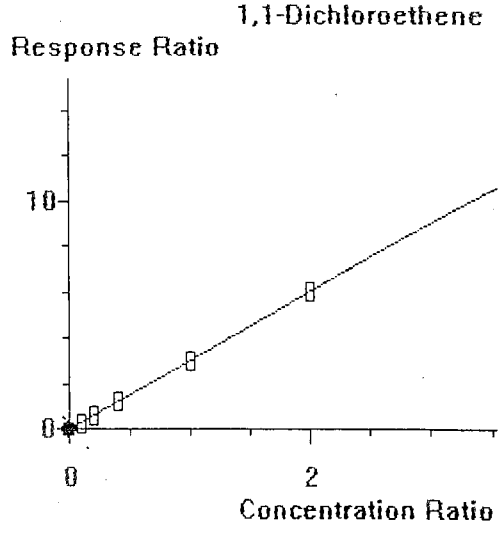
	m/z	Relative Response	
Target	95.90	100.00	
Q1	61.00	140.90	20.00
Q2	63.00	46.70	20.00
Q3	0.00	0.00	20.00

Abs

Quantitation Options

Quantitation type	Target com
Sample ISTD Concentration	-1.000000
Measure response by	Area
Identify by	Meets qual
Maximum number of hits	9
Subtraction Method	Extend Are
Curve Fit	Avg of Res
Weight	Equal weig

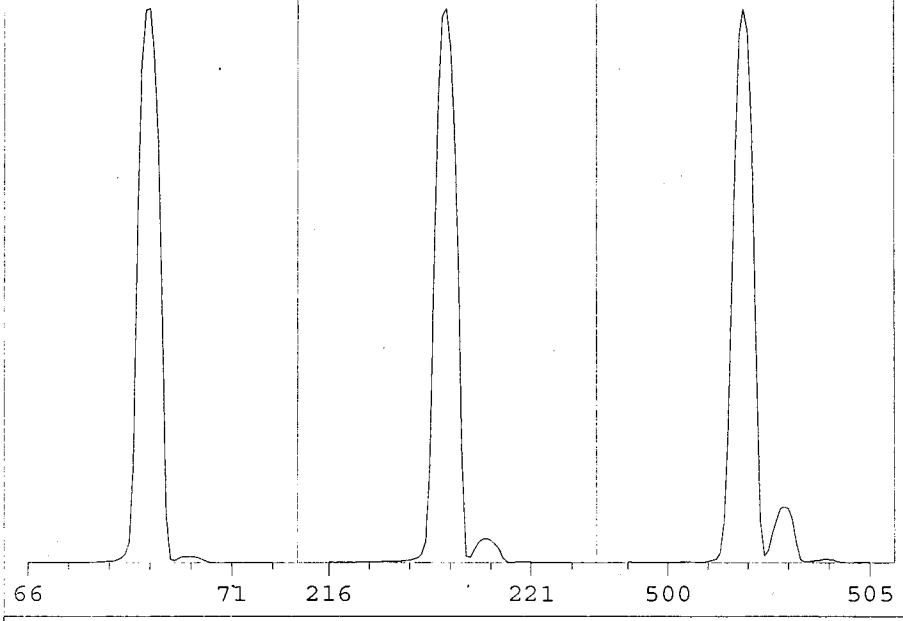
Level	Concentration	Response
0.5	0.500000	24172.000000
1.0	1.000000	51409.000000
2.0	2.000000	102489.000000
5.0	5.000000	241964.000000
10.0	10.000000	495813.000000
25.0	25.000000	1224176.000000
CC	5.000000	241964.000000



OK | Cancel | Help | Print Calibration Curve | Copy Calibration

Wed Jan 14 07:56:36 2015 Instrument: AG5975D
C:\msdchem\2\5975\BFD011415.u US10443603

Mass	69.00	Mass	218.90	Mass	501.90
Ab	2670609	Ab	2257713	Ab	131859
Pw50	0.62	Pw50	0.62	Pw50	0.57

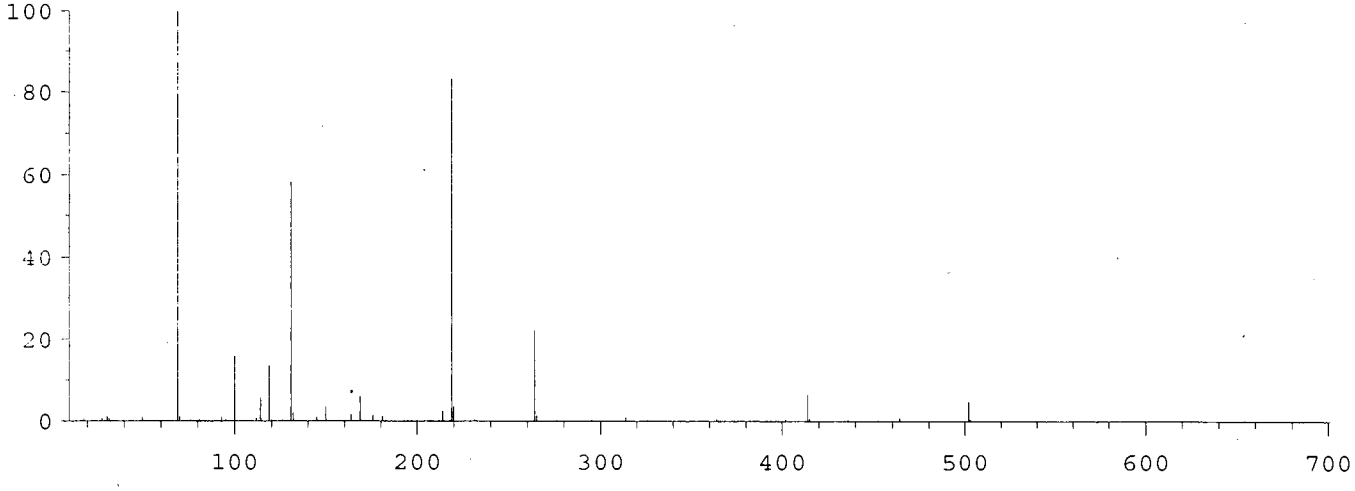


Ion Pol	Pos	MassGain	-809
		MassOffs	-39
Emission	34.6	AmuGain	1635
EIEnrgy	69.9	AmuOffs	121.19
Filament	1	Wid219	-0.004
		DC Pol	Pos
Repeller	34.81		
IonFcus	81.6	HEDEnab	On
EntLens	16.0	EMVolts	1329
EntOffs	19.33		
		Samples	8
PFTBA	Open	Averages	3
		Stepsize	0.10

Temperatures and Pressures:

MS Source	280	Turbo Speed	100
MS Quad	176	HiVac	8.20e06

Scan: 10.00 - 701.00 Samples: 8 Thresh: 100 Step: 0.10
233 peaks Base: 69.00 Abundance: 2606592



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	2606592	100.00	70.00	28240	1.08
218.90	2167808	83.17	219.90	92728	4.28
502.00	122568	4.70	503.00	12298	10.03

Air/Water Check: H20~0.53% N2~0.78% O2~0.64% CO2~0.07% N2/H2O~146.42%

Column(1) Flow: 0.97 Column(2): 0 ml/min. Interface Temp: 230

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 502; EM Gain 194539
Repeller Maximum 35 volts using ion 219; Gain Factor 1.95

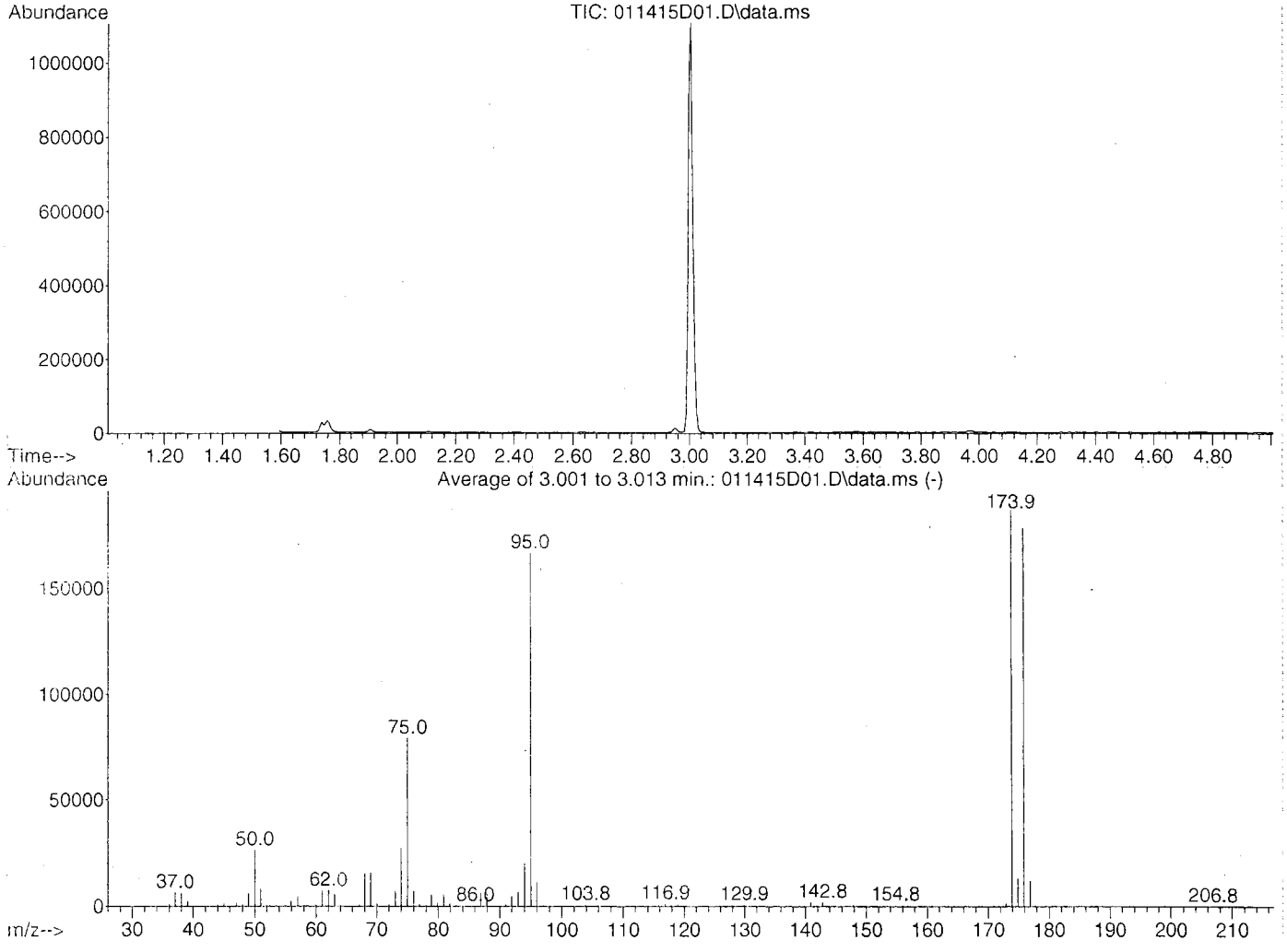
MassGain Values(Samples): -796(3) -787(2) -770(1) -749(0) -706(FS)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset:	121.2	121.2	121.2	121.2	121.2	121.2	121.2
Entrance Lens Offset:	19.3	19.3	19.3	19.3	19.3	19.3	19.3

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D01.D
Acq On : 14 Jan 2015 8:08
Operator : YNB
Sample : S15A047-TUN1
Misc : 0.5ng, EM 1329 V
ALS Vial : 100 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\2\methods\011415W.M
Title : Volatile Organic Analysis - 524.2 Method
Last Update : Tue Nov 18 07:35:43 2014



AutoFind: Scans 232, 233, 234; Background Corrected with Scan 226

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.9	26543	PASS
75	95	30	60	47.6	79312	PASS
95	95	100	100	100.0	166664	PASS
96	95	5	9	6.8	11265	PASS
173	174	0.00	2	0.7	1397	PASS
174	95	50	120	112.1	186773	PASS
175	174	5	9	7.0	12995	PASS
176	174	95	101	95.5	178411	PASS
177	176	5	9	6.6	11834	PASS

Average of 3.001 to 3.013 min.: 011415D01.D\data.ms
S15A047-TUN1
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	1038	47.05	1329	59.90	816	71.10	38
37.00	6279	48.00	787	60.10	542	72.00	848
38.00	5704	49.00	5523	61.00	7197	73.00	6963
39.05	2162	50.00	26543	62.00	7270	74.00	27197
39.90	43	51.00	7901	63.00	5485	75.00	79312
40.95	80	52.00	395	64.05	547	76.00	6996
43.05	70	54.95	425	65.10	40	76.90	750
44.00	775	55.95	2380	67.05	439	77.95	641
45.00	1287	57.00	4362	68.00	15164	78.90	5244
45.90	40	57.90	89	69.00	15551	79.90	1287
46.20	39	58.10	83	70.00	1216	80.90	5423

Average of 3.001 to 3.013 min.: 011415D01.D\data.ms
S15A047-TUN1
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
81.90	1172	97.00	390	112.85	228	134.85	221
82.90	117	102.95	168	114.80	206	135.70	46
86.05	169	103.85	817	115.85	669	136.85	400
86.95	6103	104.80	96	116.90	1237	139.80	138
87.95	5567	104.95	180	117.85	667	140.90	1805
91.00	738	105.90	696	118.90	884	141.80	92
91.95	4485	106.75	120	123.70	92	141.95	185
93.00	6501	107.00	63	127.85	667	142.85	1846
94.00	20122	109.90	37	128.85	286	143.95	154
95.00	166664	110.90	200	129.90	833	144.75	172
96.00	11265	112.00	40	130.80	254	145.80	258

Average of 3.001 to 3.013 min.: 011415D01.D\data.ms
S15A047-TUN1
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
146.80	185	158.85	186				
147.85	528	160.80	250				
148.70	158	171.75	252				
149.85	161	172.95	1397				
151.80	42	173.90	186773				
152.90	211	174.90	12995				
153.90	83	175.90	178411				
154.85	568	176.90	11834				
156.00	42	177.80	340				
156.80	338	206.85	82				
158.60	86						

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D02.D
Acq On : 14 Jan 2015 8:30
Operator : YNB
Sample : BLANK
Misc : blank WATER
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Jan 14 13:04:18 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Nov 18 07:35:43 2014
Response via : Initial Calibration

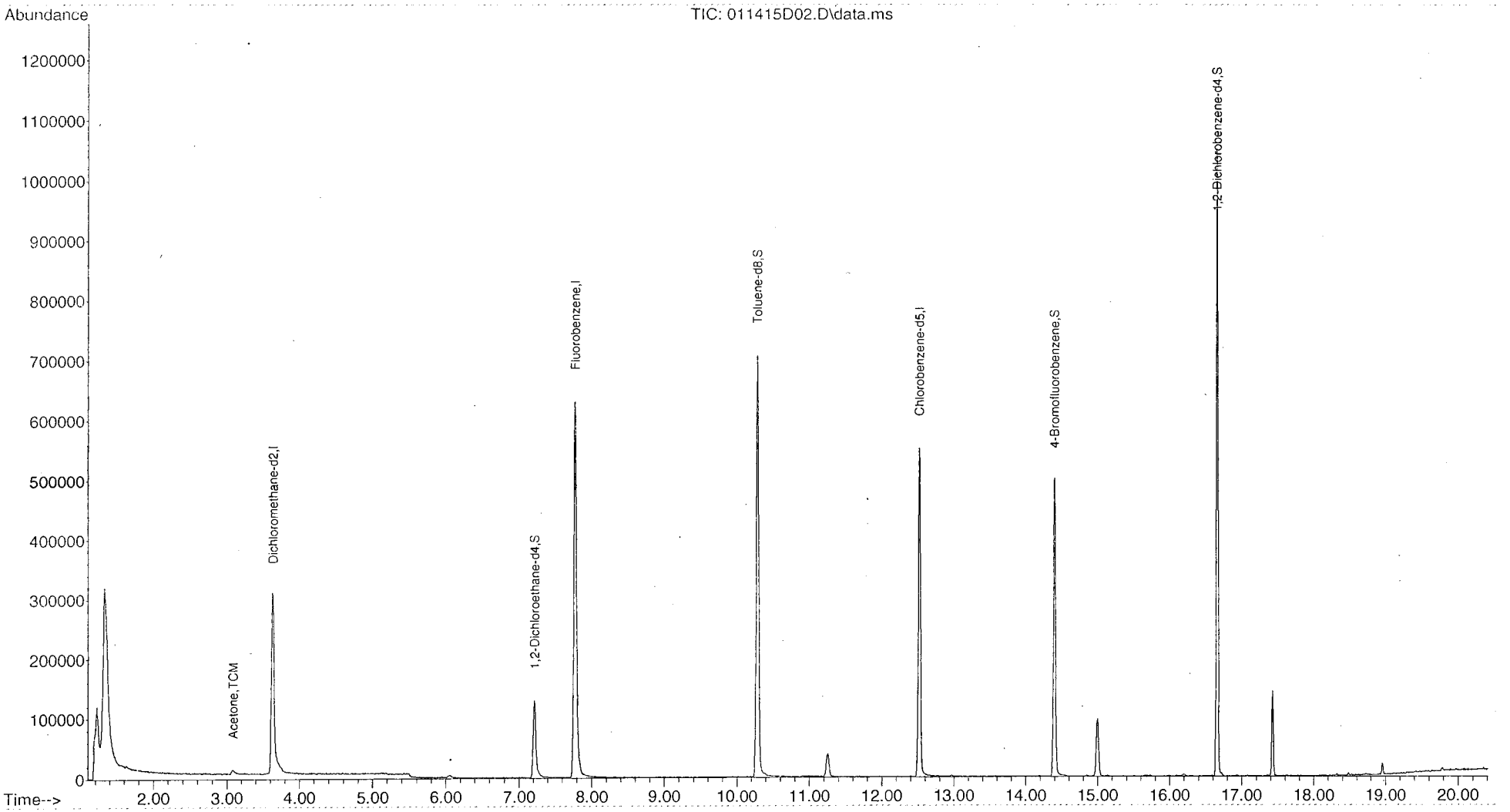
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Dichloromethane-d2	3.633	53	81321	5.00	ug/L	# 0.00
24) Fluorobenzene	7.773	96	817125	5.00	ug/L	0.00
37) Chlorobenzene-d5	12.517	117	414102	5.00	ug/L	0.00
System Monitoring Compounds						
28) 1,2-Dichloroethane-d4	7.211	65	134354	4.85	ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery = 97.00%			
39) Toluene-d8	10.281	98	638951	5.03	ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery = 100.60%			
56) 4-Bromofluorobenzene	14.394	95	192664	5.24	ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery = 104.80%			
70) 1,2-Dichlorobenzene-d4	16.657	152	296409	4.85	ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery = 97.00%			
Target Compounds						Qvalue
10) Acetone	3.082	43	16197	4.19	ug/L	87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D02.D
Acq On : 14 Jan 2015 8:30
Operator : YNB
Sample : BLANK
Misc : blank WATER
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Jan 14 13:04:18 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Nov 18 07:35:43 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D03.D
Acq On : 14 Jan 2015 9:06
Operator : YNB
Sample : S15A047-IBL1
Misc : blank WATER
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Jan 14 13:04:22 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Nov 18 07:35:43 2014
Response via : Initial Calibration

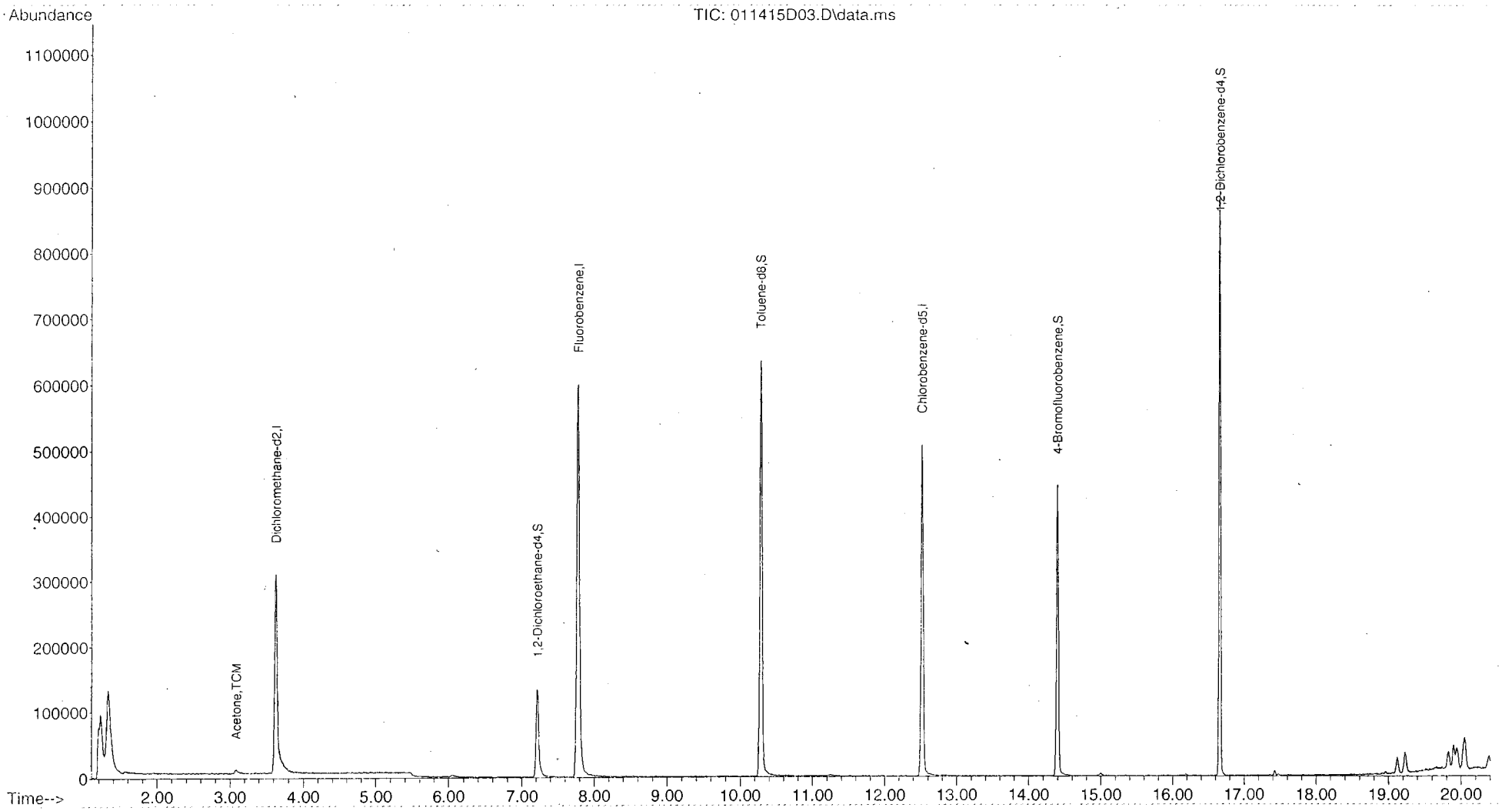
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Dichloromethane-d2	3.633	53	79902	5.00	ug/L	# 0.00
24) Fluorobenzene	7.778	96	781421	5.00	ug/L	0.00
37) Chlorobenzene-d5	12.517	117	375057	5.00	ug/L	0.00
System Monitoring Compounds						
28) 1,2-Dichloroethane-d4	7.211	65	138721	5.23	ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	=	104.60%	
39) Toluene-d8	10.281	98	581190	5.05	ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	=	101.00%	
56) 4-Bromofluorobenzene	14.400	95	168554	5.06	ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	=	101.20%	
70) 1,2-Dichlorobenzene-d4	16.662	152	275713	4.98	ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	=	99.60%	
Target Compounds						Qvalue
10) Acetone	3.082	43	13783	3.63	ug/L	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D03.D
Acq On : 14 Jan 2015 9:06
Operator : YNB
Sample : S15A047-IBL1
Misc : blank WATER
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Jan 14 13:04:22 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Nov 18 07:35:43 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D04.D
Acq On : 14 Jan 2015 9:41
Operator : YNB
Sample : S15A047-CAL6
Misc : 25ug/L WATER
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Jan 14 13:04:26 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Nov 18 07:35:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Dichloromethane-d2	3.628	53	83684	5.00 ug/L	# 0.00
24) Fluorobenzene	7.773	96	966901	5.00 ug/L	0.00
37) Chlorobenzene-d5	12.517	117	555033	5.00 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.211	65	155996	4.75 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 95.00%	
39) Toluene-d8	10.287	98	836927	4.92 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 98.40%	
56) 4-Bromofluorobenzene	14.400	95	239622	4.86 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 97.20%	
70) 1,2-Dichlorobenzene-d4	16.662	152	337998	4.12 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 82.40%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.413	85	1109404	24.52 ug/L	98
3) Chloromethane	1.558	50	1133510	25.08 ug/L	99
4) Vinyl chloride	1.691	62	1310026	25.82 ug/L	99
5) Bromomethane	1.996	94	1160667	25.81 ug/L	100
6) Chloroethane	2.103	64	780477	26.38 ug/L	99
7) Trichlorofluoromethane	2.387	101	1880259	30.37 ug/L	99
8) 1,1-Dichloroethene	2.991	96	1224176	26.30 ug/L	96
9) 1,1,2-Trichloro-1,2,2-...	3.045	101	1240937	27.69 ug/L	99
10) Acetone	3.082	43	703164	176.60 ug/L	97
11) Carbon disulfide	3.242	76	3978479	25.02 ug/L	100
12) Dichloromethane	3.665	84	1151141	23.36 ug/L #	87
13) tert-Butyl alcohol	3.975	59	810999	489.21 ug/L	90
14) trans-1,2-Dichloroethene	4.104	96	1462925	26.06 ug/L	99
15) tert-Butyl methyl ethe...	4.157	73	7356111	100.49 ug/L	99
16) 1,1-Dichloroethane	4.836	63	2146871	25.47 ug/L	98
17) Diisopropyl ether	5.088	45	10178867	103.44 ug/L	99
18) Ethyl-tert-butyl ether	5.724	59	9269325	111.89 ug/L	98
19) 2,2-Dichloropropane	5.847	77	1801371	31.23 ug/L	100
20) cis-1,2-Dichloroethene	5.858	96	1385580	27.91 ug/L	98
21) 2-Butanone (MEK)	5.949	43	809786	223.17 ug/L	99
22) Bromochloromethane	6.248	128	525860	27.11 ug/L	98
23) Chloroform	6.436	83	2217041	28.98 ug/L	98
25) 1,1,1-Trichloroethane	6.692	97	2128465	21.23 ug/L	99
26) Carbon tetrachloride	6.960	117	1909527	20.45 ug/L	99
27) 1,1-Dichloropropene	6.976	75	1489438	22.60 ug/L	100
29) Benzene	7.297	78	4280414	23.07 ug/L	100
30) 1,2-Dichloroethane	7.334	62	891930	24.24 ug/L	99
31) tert-Amyl methyl ether	7.586	73	8093250	85.62 ug/L	98
32) Trichloroethene	8.361	95	1384831	24.37 ug/L	98
33) 1,2-Dichloropropane	8.698	63	804659	24.51 ug/L	99
34) Dibromomethane	8.869	93	394942	23.30 ug/L	96
35) Bromodichloromethane	9.163	83	1190434	24.76 ug/L	99
36) cis-1,3-Dichloropropene	9.880	75	982841	27.80 ug/L	99
38) 4-Methyl-2-pentanone (...	10.169	43	2015889	165.36 ug/L	99
40) Toluene	10.383	92	2556461	23.49 ug/L	100
41) trans-1,3-Dichloropropene	10.763	75	630888	24.97 ug/L	98
42) 1,1,2-Trichloroethane	11.030	83	334556	22.77 ug/L	97
43) Tetrachloroethene	11.233	166	1493667	23.15 ug/L	100
44) 1,3-Dichloropropane	11.276	76	578591	24.07 ug/L	99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D04.D
Acq On : 14 Jan 2015 9:41
Operator : YNB
Sample : S15A047-CAL6
Misc : 25ug/L WATER
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Jan 14 13:04:26 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Nov 18 07:35:43 2014
Response via : Initial Calibration

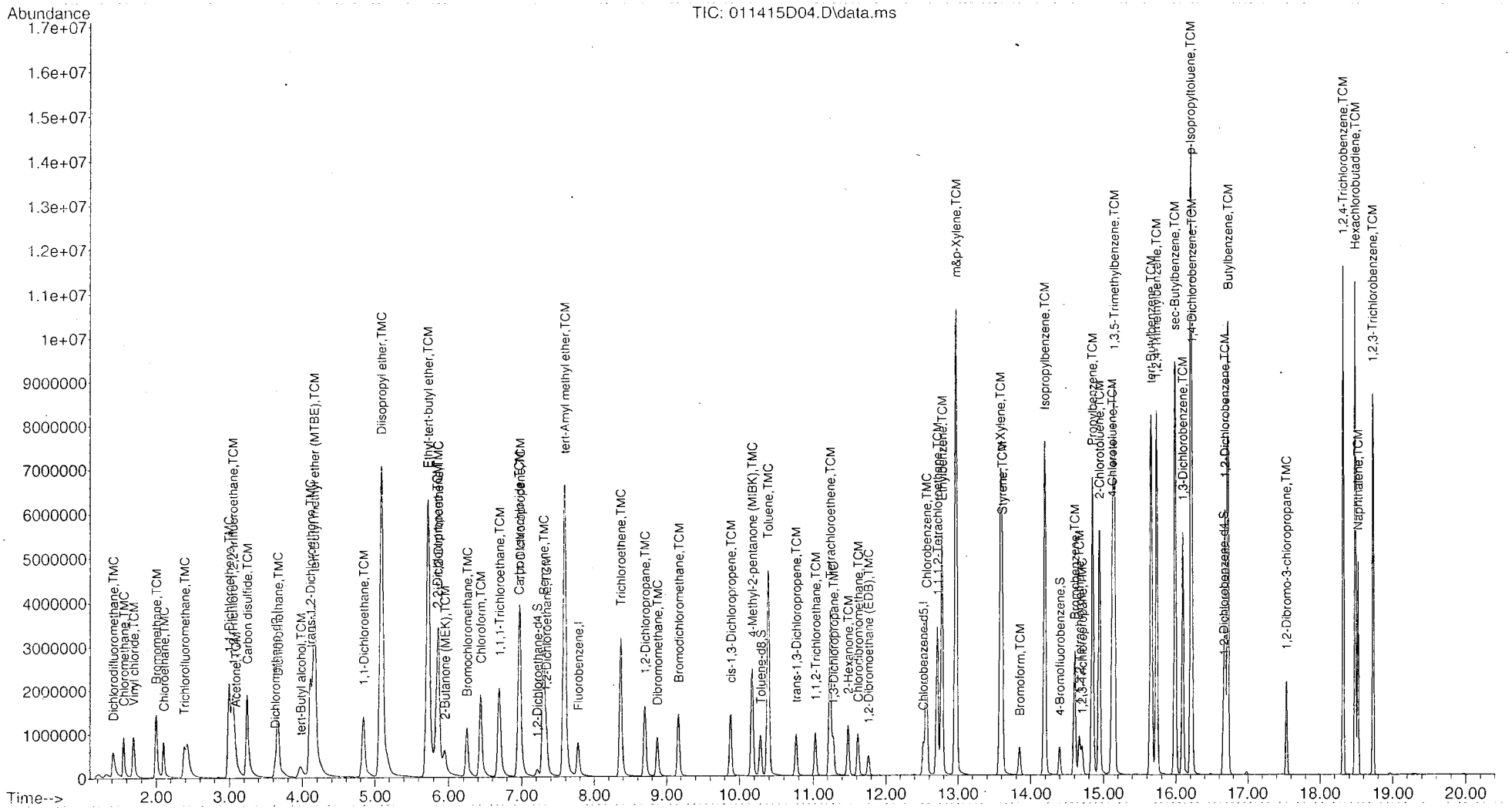
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
45) 2-Hexanone	11.479	43	892491	163.56 ug/L	98
46) Chlorodibromomethane	11.618	129	658217	22.19 ug/L	98
47) 1,2-Dibromoethane (EDB)	11.757	107	373368	22.56 ug/L	99
48) Chlorobenzene	12.565	112	2583537	23.83 ug/L	99
49) 1,1,1,2-Tetrachloroethane	12.715	131	1257521	20.58 ug/L	98
50) Ethylbenzene	12.779	91	5014676	23.13 ug/L	99
51) m&p-Xylene	12.972	106	4080517	46.04 ug/L	99
52) o-Xylene	13.581	106	2219882	21.59 ug/L	99
53) Styrene	13.608	104	2650892	23.17 ug/L	99
54) Bromoform	13.849	173	379456	20.38 ug/L	99
55) Isopropylbenzene	14.191	105	6575243	22.97 ug/L	99
57) Bromobenzene	14.603	156	1133897	21.31 ug/L	96
58) 1,1,2,2-Tetrachloroethane	14.667	83	504028	19.92 ug/L	99
59) 1,2,3-Trichloropropane	14.705	75	312579	19.94 ug/L	96
60) Propylbenzene	14.849	91	6533517	22.35 ug/L	100
61) 2-Chlorotoluene	14.945	91	3957466	22.26 ug/L	98
62) 4-Chlorotoluene	15.122	91	3956575	22.50 ug/L	98
63) 1,3,5-Trimethylbenzene	15.149	105	5953959	23.23 ug/L	99
64) tert-Butylbenzene	15.657	119	5372829	26.77 ug/L	98
65) 1,2,4-Trimethylbenzene	15.732	105	5732675	22.38 ug/L	99
66) sec-Butylbenzene	15.988	105	7573907	24.13 ug/L	100
67) 1,3-Dichlorobenzene	16.095	146	2691072	20.46 ug/L	99
68) p-Isopropyltoluene	16.208	119	6767294	23.48 ug/L	100
69) 1,4-Dichlorobenzene	16.224	146	2559725	20.43 ug/L	99
71) 1,2-Dichlorobenzene	16.684	146	2529664	19.34 ug/L	99
72) Butylbenzene	16.726	91	5617192	21.64 ug/L	100
73) 1,2-Dibromo-3-chloropr...	17.534	75	424045	72.88 ug/L	93
74) 1,2,4-Trichlorobenzene	18.320	180	2940799	17.96 ug/L	99
75) Hexachlorobutadiene	18.486	225	1839676	20.10 ug/L	99
76) Naphthalene	18.523	128	2991441	17.06 ug/L	99
77) 1,2,3-Trichlorobenzene	18.727	180	2257857	16.85 ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D04.D
Acq On : 14 Jan 2015 9:41
Operator : YNB
Sample : S15A047-CAL6
Misc : 25ug/L WATER
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Jan 14 13:04:26 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Nov 18 07:35:43 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D05.D
Acq On : 14 Jan 2015 10:17
Operator : YNB
Sample : S15A047-CAL5
Misc : 10ug/L WATER
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Jan 14 13:04:30 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Nov 18 07:35:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Dichloromethane-d2	3.633	53	81645	5.00 ug/L #	0.00
24) Fluorobenzene	7.773	96	890028	5.00 ug/L	0.00
37) Chlorobenzene-d5	12.517	117	494658	5.00 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.211	65	151773	5.03 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery = 100.60%		
39) Toluene-d8	10.281	98	742731	4.90 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery = 98.00%		
56) 4-Bromofluorobenzene	14.394	95	209647	4.78 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery = 95.60%		
70) 1,2-Dichlorobenzene-d4	16.662	152	313858	4.30 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery = 86.00%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.413	85	455031	10.31 ug/L	99
3) Chloromethane	1.552	50	444248	10.08 ug/L	99
4) Vinyl chloride	1.686	62	518225	10.47 ug/L	99
5) Bromomethane	1.996	94	454213	10.35 ug/L	99
6) Chloroethane	2.103	64	301489	10.44 ug/L	100
7) Trichlorofluoromethane	2.392	101	712643	11.80 ug/L	100
8) 1,1-Dichloroethene	2.996	96	495813	10.92 ug/L	96
9) 1,1,2-Trichloro-1,2,2-...	3.044	101	513697	11.75 ug/L	98
10) Acetone	3.082	43	292483	75.29 ug/L	99
11) Carbon disulfide	3.242	76	1591632	10.26 ug/L	99
12) Dichloromethane	3.665	84	468137	9.74 ug/L #	91
13) tert-Butyl alcohol	3.970	59	336836	208.26 ug/L	93
14) trans-1,2-Dichloroethene	4.103	96	588837	10.75 ug/L	99
15) tert-Butyl methyl ethe...	4.162	73	2943583	41.22 ug/L	99
16) 1,1-Dichloroethane	4.836	63	866759	10.54 ug/L	98
17) Diisopropyl ether	5.088	45	4014354	41.81 ug/L	99
18) Ethyl-tert-butyl ether	5.724	59	3640625	45.05 ug/L	99
19) 2,2-Dichloropropane	5.847	77	696427	12.38 ug/L	98
20) cis-1,2-Dichloroethene	5.863	96	548271	11.32 ug/L	98
21) 2-Butanone (MEK)	5.949	43	323507	91.38 ug/L	98
22) Bromochloromethane	6.248	128	211586	11.18 ug/L	97
23) Chloroform	6.435	83	870514	11.66 ug/L	99
25) 1,1,1-Trichloroethane	6.692	97	830277	9.00 ug/L	99
26) Carbon tetrachloride	6.965	117	751642	8.74 ug/L	100
27) 1,1-Dichloropropene	6.976	75	575893	9.49 ug/L	99
29) Benzene	7.297	78	1640917	9.61 ug/L	100
30) 1,2-Dichloroethane	7.334	62	348627	10.29 ug/L	99
31) tert-Amyl methyl ether	7.580	73	3110367	35.75 ug/L	98
32) Trichloroethene	8.361	95	525074	10.04 ug/L	98
33) 1,2-Dichloropropane	8.698	63	296717	9.82 ug/L	98
34) Dibromomethane	8.869	93	152982	9.80 ug/L	97
35) Bromodichloromethane	9.163	83	443217	10.02 ug/L	100
36) cis-1,3-Dichloropropene	9.875	75	353293	10.86 ug/L	99
38) 4-Methyl-2-pentanone (...	10.169	43	749287	68.96 ug/L	99
40) Toluene	10.383	92	920646	9.49 ug/L	100
41) trans-1,3-Dichloropropene	10.763	75	225443	10.01 ug/L	97
42) 1,1,2-Trichloroethane	11.030	83	123824	9.46 ug/L	98
43) Tetrachloroethene	11.233	166	549182	9.55 ug/L	99
44) 1,3-Dichloropropane	11.276	76	209472	9.78 ug/L	98

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D05.D
Acq On : 14 Jan 2015 10:17
Operator : YNB
Sample : S15A047-CAL5
Misc : 10ug/L WATER
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Jan 14 13:04:30 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Nov 18 07:35:43 2014
Response via : Initial Calibration

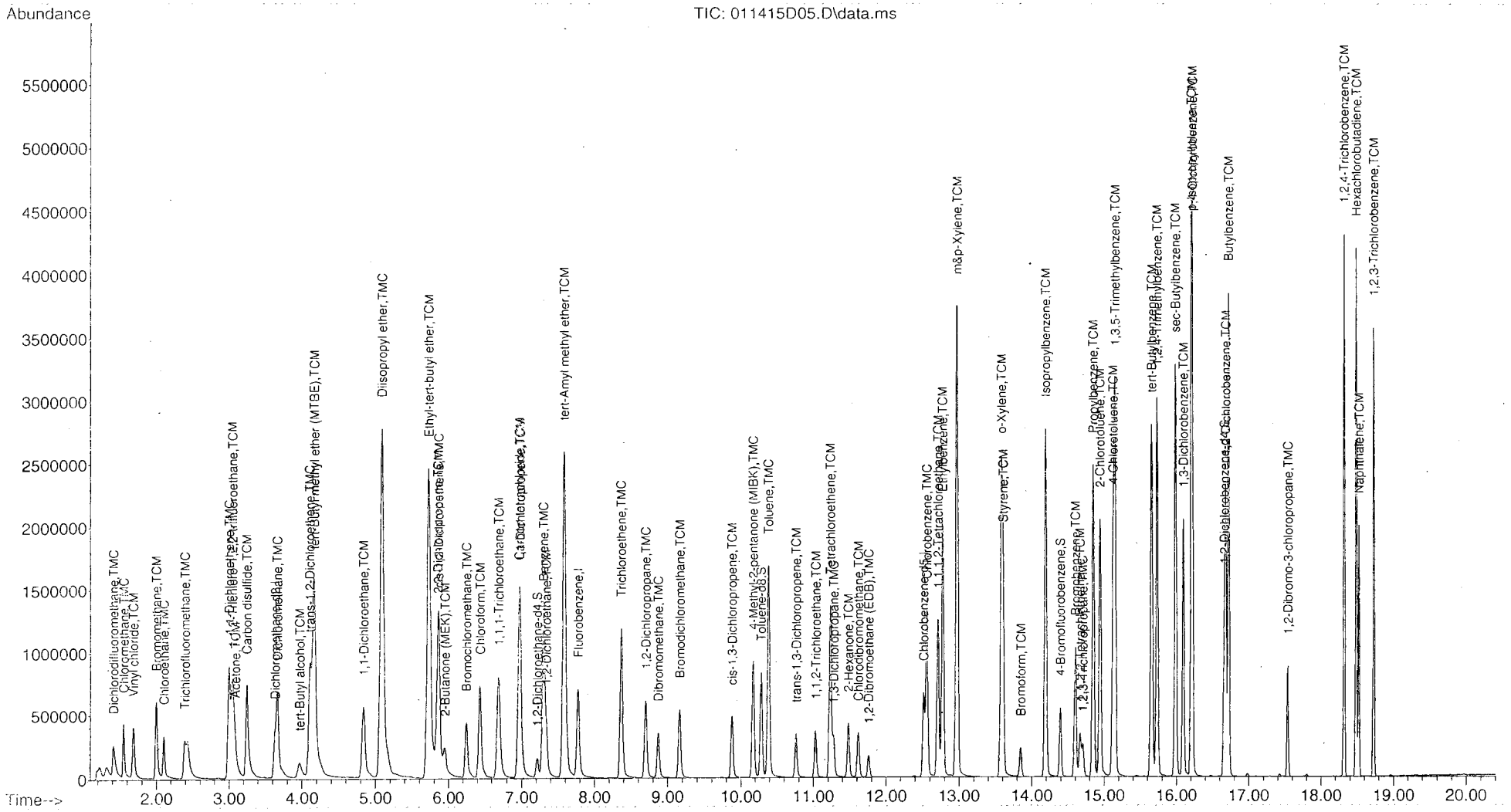
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
45) 2-Hexanone	11.479	43	335668	69.02 ug/L	100
46) Chlorodibromomethane	11.618	129	233434	8.83 ug/L	99
47) 1,2-Dibromoethane (EDB)	11.757	107	139284	9.45 ug/L	100
48) Chlorobenzene	12.560	112	931445	9.64 ug/L	99
49) 1,1,1,2-Tetrachloroethane	12.709	131	458275	8.42 ug/L	99
50) Ethylbenzene	12.774	91	1813308	9.38 ug/L	99
51) m&p-Xylene	12.972	106	1463229	18.52 ug/L	100
52) o-Xylene	13.581	106	807239	8.81 ug/L	98
53) Styrene	13.608	104	942412	9.24 ug/L	99
54) Bromoform	13.849	173	137772	8.30 ug/L	99
55) Isopropylbenzene	14.191	105	2366806	9.28 ug/L	99
57) Bromobenzene	14.603	156	417322	8.80 ug/L	95
58) 1,1,2,2-Tetrachloroethane	14.667	83	191106	8.47 ug/L	100
59) 1,2,3-Trichloropropane	14.704	75	120478	8.63 ug/L	98
60) Propylbenzene	14.849	91	2366513	9.08 ug/L	100
61) 2-Chlorotoluene	14.940	91	1447769	9.14 ug/L	97
62) 4-Chlorotoluene	15.122	91	1419039	9.05 ug/L	98
63) 1,3,5-Trimethylbenzene	15.148	105	2099636	9.19 ug/L	99
64) tert-Butylbenzene	15.657	119	1815706	10.15 ug/L	98
65) 1,2,4-Trimethylbenzene	15.731	105	2060012	9.03 ug/L	99
66) sec-Butylbenzene	15.988	105	2636600	9.43 ug/L	100
67) 1,3-Dichlorobenzene	16.095	146	995836	8.49 ug/L	99
68) p-Isopropyltoluene	16.207	119	2366143	9.21 ug/L	99
69) 1,4-Dichlorobenzene	16.218	146	943453	8.45 ug/L	99
71) 1,2-Dichlorobenzene	16.683	146	958747	8.22 ug/L	99
72) Butylbenzene	16.721	91	2028879	8.77 ug/L	100
73) 1,2-Dibromo-3-chloropr...	17.539	75	162393	31.32 ug/L	94
74) 1,2,4-Trichlorobenzene	18.320	180	1109222	7.60 ug/L	100
75) Hexachlorobutadiene	18.486	225	677812	8.31 ug/L	100
76) Naphthalene	18.523	128	1184029	7.58 ug/L	99
77) 1,2,3-Trichlorobenzene	18.727	180	896354	7.51 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D05.D
Acq On : 14 Jan 2015 10:17
Operator : YNB
Sample : S15A047-CAL5
Misc : 10ug/L WATER
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Jan 14 13:04:30 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Nov 18 07:35:43 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D06.D
Acq On : 14 Jan 2015 10:52
Operator : YNB
Sample : S15A047-CAL4
Misc : 5ug/L WATER
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Jan 14 13:04:34 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Nov 18 07:35:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Dichloromethane-d2	3.633	53	81039	5.00 ug/L	# 0.00
24) Fluorobenzene	7.773	96	861283	5.00 ug/L	0.00
37) Chlorobenzene-d5	12.517	117	460549	5.00 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.216	65	151081	5.17 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 103.40%	
39) Toluene-d8	10.281	98	701701	4.97 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 99.40%	
56) 4-Bromofluorobenzene	14.400	95	204696	5.01 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 100.20%	
70) 1,2-Dichlorobenzene-d4	16.662	152	307456	4.52 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 90.40%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.413	85	232601	5.31 ug/L	99
3) Chloromethane	1.552	50	225014	5.14 ug/L	98
4) Vinyl chloride	1.686	62	262094	5.33 ug/L	99
5) Bromomethane	1.996	94	224681	5.16 ug/L	99
6) Chloroethane	2.103	64	153900	5.37 ug/L	98
7) Trichlorofluoromethane	2.392	101	316822	5.28 ug/L	100
8) 1,1-Dichloroethene	2.991	96	241964	5.37 ug/L	96
9) 1,1,2-Trichloro-1,2,2-...	3.044	101	248175	5.72 ug/L	99
10) Acetone	3.082	43	153341	39.77 ug/L	98
11) Carbon disulfide	3.248	76	790184	5.13 ug/L	99
12) Dichloromethane	3.665	84	237122	4.97 ug/L #	95
13) tert-Butyl alcohol	3.970	59	171112	106.59 ug/L	90
14) trans-1,2-Dichloroethene	4.103	96	288466	5.31 ug/L	99
15) tert-Butyl methyl ethe...	4.157	73	1453297	20.50 ug/L	100
16) 1,1-Dichloroethane	4.836	63	431028	5.28 ug/L	98
17) Diisopropyl ether	5.088	45	1982548	20.81 ug/L	99
18) Ethyl-tert-butyl ether	5.724	59	1747813	21.79 ug/L	99
19) 2,2-Dichloropropane	5.847	77	320549	5.74 ug/L	100
20) cis-1,2-Dichloroethene	5.863	96	264537	5.50 ug/L	96
21) 2-Butanone (MEK)	5.954	43	160161	45.58 ug/L	98
22) Bromochloromethane	6.248	128	102828	5.47 ug/L	97
23) Chloroform	6.435	83	424827	5.74 ug/L	99
25) 1,1,1-Trichloroethane	6.692	97	396194	4.44 ug/L	99
26) Carbon tetrachloride	6.965	117	357512	4.30 ug/L	99
27) 1,1-Dichloropropene	6.976	75	278634	4.75 ug/L	100
29) Benzene	7.297	78	792679	4.80 ug/L	99
30) 1,2-Dichloroethane	7.339	62	169827	5.18 ug/L	98
31) tert-Amyl methyl ether	7.580	73	1499311	17.81 ug/L	98
32) Trichloroethene	8.366	95	250864	4.96 ug/L	98
33) 1,2-Dichloropropane	8.703	63	141167	4.83 ug/L	99
34) Dibromomethane	8.874	93	73951	4.90 ug/L	97
35) Bromodichloromethane	9.163	83	207121	4.84 ug/L	99
36) cis-1,3-Dichloropropene	9.880	75	160843	5.11 ug/L	100
38) 4-Methyl-2-pentanone (...	10.169	43	360925	35.68 ug/L	99
40) Toluene	10.388	92	427566	4.73 ug/L	100
41) trans-1,3-Dichloropropene	10.763	75	101818	4.86 ug/L	97
42) 1,1,2-Trichloroethane	11.030	83	58537	4.80 ug/L	98
43) Tetrachloroethene	11.233	166	250832	4.69 ug/L	100
44) 1,3-Dichloropropane	11.276	76	98724	4.95 ug/L	97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D06.D
Acq On : 14 Jan 2015 10:52
Operator : YNB
Sample : S15A047-CAL4
Misc : 5ug/L WATER
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Jan 14 13:04:34 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Nov 18 07:35:43 2014
Response via : Initial Calibration

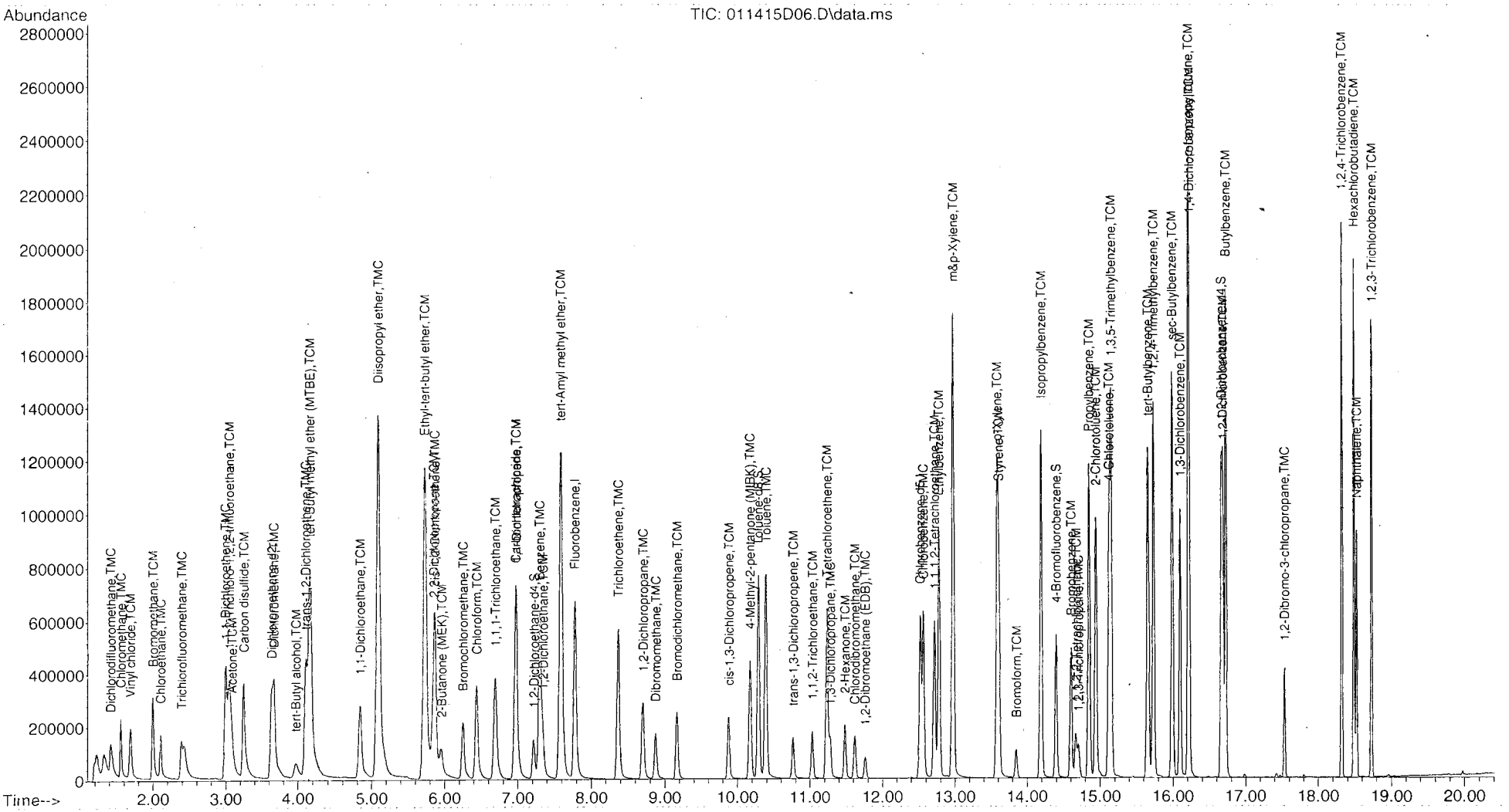
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
45) 2-Hexanone	11.479	43	162287	35.84 ug/L	97
46) Chlorodibromomethane	11.618	129	108508	4.41 ug/L	99
47) 1,2-Dibromoethane (EDB)	11.757	107	65934	4.80 ug/L	98
48) Chlorobenzene	12.560	112	433052	4.81 ug/L	99
49) 1,1,1,2-Tetrachloroethane	12.715	131	214662	4.23 ug/L	99
50) Ethylbenzene	12.774	91	851207	4.73 ug/L	99
51) m&p-Xylene	12.972	106	685082	9.32 ug/L	100
52) o-Xylene	13.581	106	385089	4.51 ug/L	99
53) Styrene	13.603	104	445423	4.69 ug/L	99
54) Bromoform	13.849	173	62677	4.06 ug/L	99
55) Isopropylbenzene	14.191	105	1114405	4.69 ug/L	98
57) Bromobenzene	14.603	156	199447	4.52 ug/L	95
58) 1,1,2,2-Tetrachloroethane	14.672	83	90574	4.31 ug/L	99
59) 1,2,3-Trichloropropane	14.704	75	59944	4.61 ug/L	99
60) Propylbenzene	14.849	91	1126342	4.64 ug/L	100
61) 2-Chlorotoluene	14.940	91	685873	4.65 ug/L	97
62) 4-Chlorotoluene	15.122	91	679614	4.66 ug/L	98
63) 1,3,5-Trimethylbenzene	15.148	105	976616	4.59 ug/L	99
64) tert-Butylbenzene	15.657	119	804273	4.83 ug/L	99
65) 1,2,4-Trimethylbenzene	15.731	105	970090	4.56 ug/L	99
66) sec-Butylbenzene	15.988	105	1208165	4.64 ug/L	100
67) 1,3-Dichlorobenzene	16.095	146	487630	4.47 ug/L	99
68) p-Isopropyltoluene	16.207	119	1089230	4.56 ug/L	99
69) 1,4-Dichlorobenzene	16.218	146	457119	4.40 ug/L	99
71) 1,2-Dichlorobenzene	16.683	146	466363	4.30 ug/L	99
72) Butylbenzene	16.721	91	976065	4.53 ug/L	100
73) 1,2-Dibromo-3-chloropr...	17.534	75	77724	16.10 ug/L	92
74) 1,2,4-Trichlorobenzene	18.320	180	537669	3.96 ug/L	99
75) Hexachlorobutadiene	18.486	225	320507	4.22 ug/L	99
76) Naphthalene	18.523	128	581222	4.00 ug/L	99
77) 1,2,3-Trichlorobenzene	18.732	180	440999	3.97 ug/L	98

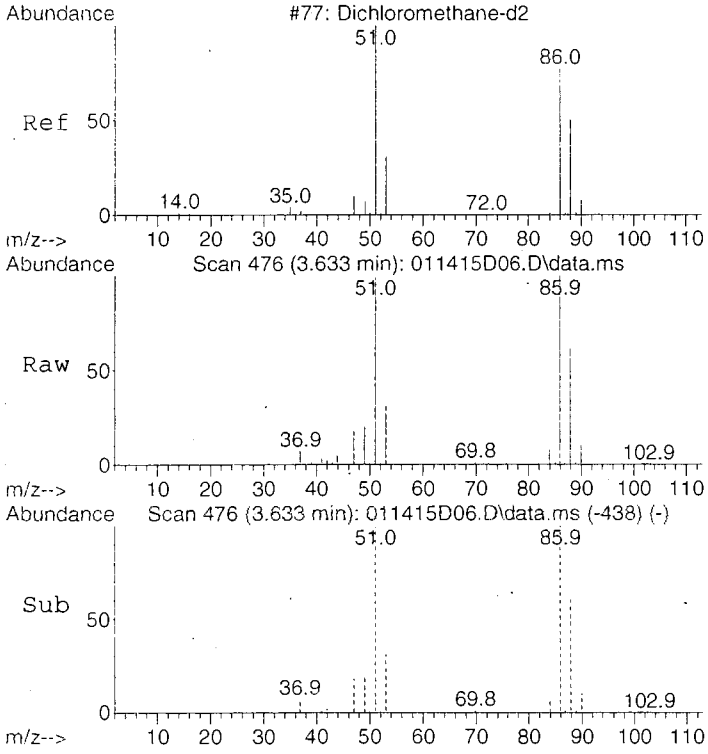
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D06.D
Acq On : 14 Jan 2015 10:52
Operator : YNB
Sample : S15A047-CAL4
Misc : 5ug/L WATER
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Jan 14 13:04:34 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Nov 18 07:35:43 2014
Response via : Initial Calibration

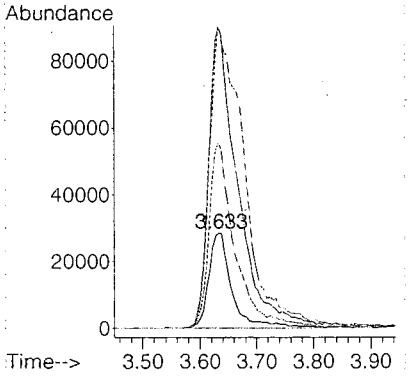


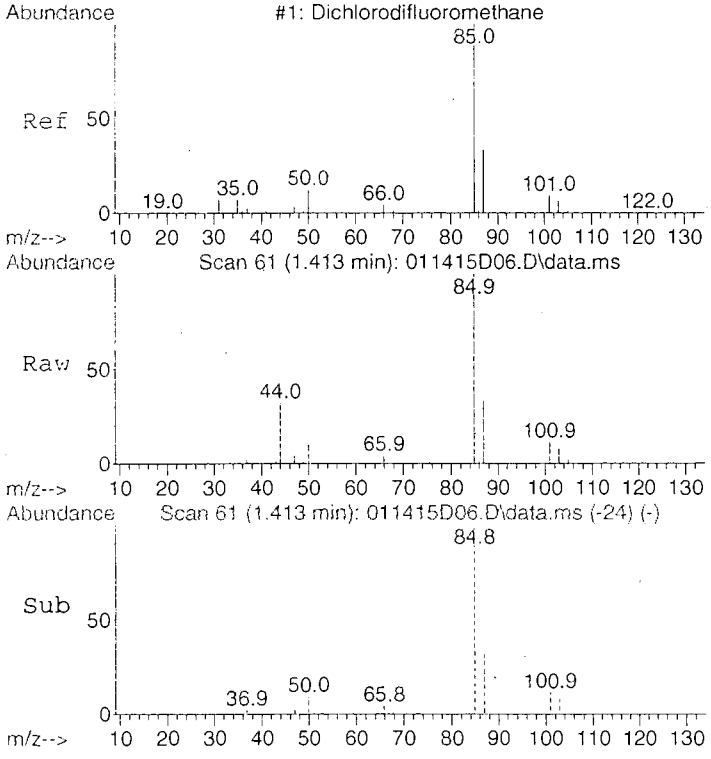


#1
Dichloromethane-d2
Concen: 5.00 ug/L
RT: 3.633 min Scan# 476
Delta R.T. 0.004 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 53 Resp: 81039

Ion	Ratio	Lower	Upper
53	100		
51	403.4	362.8	402.8#
86	481.6	420.9	460.9#
88	219.4	183.0	223.0

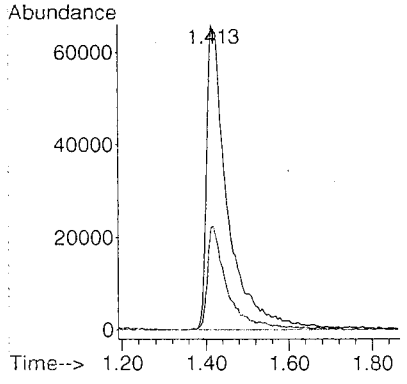




#2
Dichlorodifluoromethane
Concen: 5.31 ug/L
RT: 1.413 min Scan# 61
Delta R.T. -0.002 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 85 Resp: 232601

Ion	Ratio	Lower	Upper
85	100		
87	32.3	11.9	51.9



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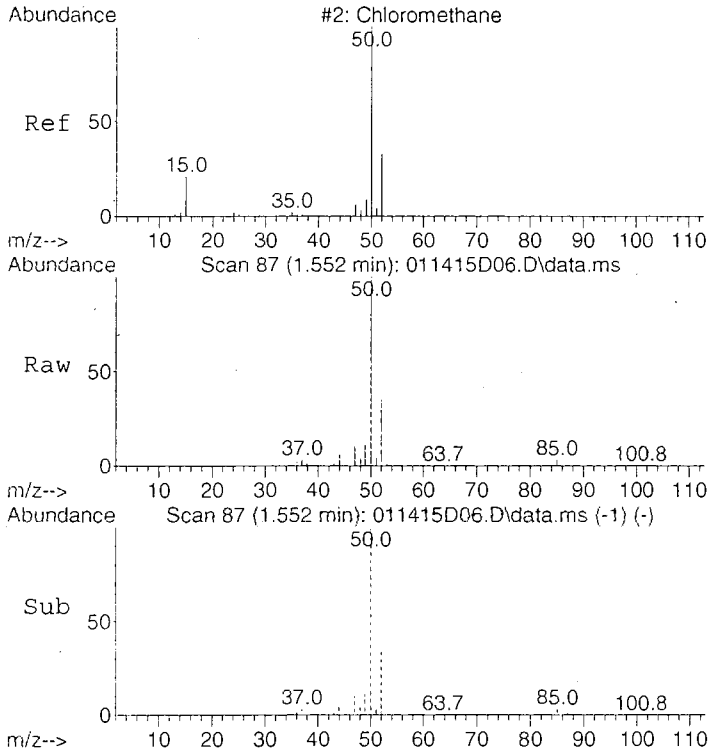
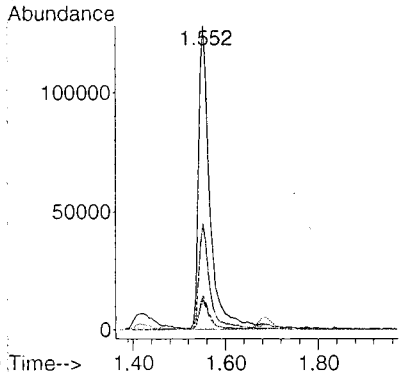
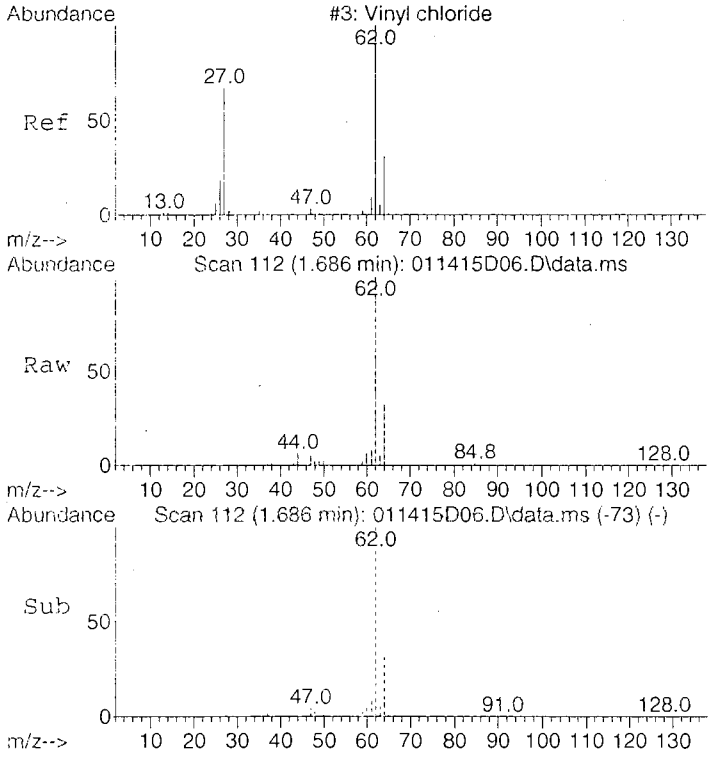


#3
Chloromethane
Concen: 5.14 ug/L
RT: 1.552 min Scan# 87
Delta R.T. 0.005 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 50 Resp: 225014

Ion	Ratio	Lower	Upper
50	100		
52	33.1	12.3	52.3
49	10.4	0.0	30.2
47	8.9	0.0	27.7

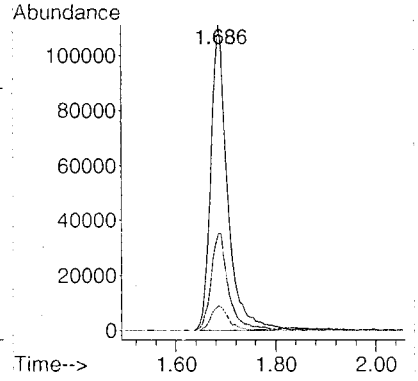


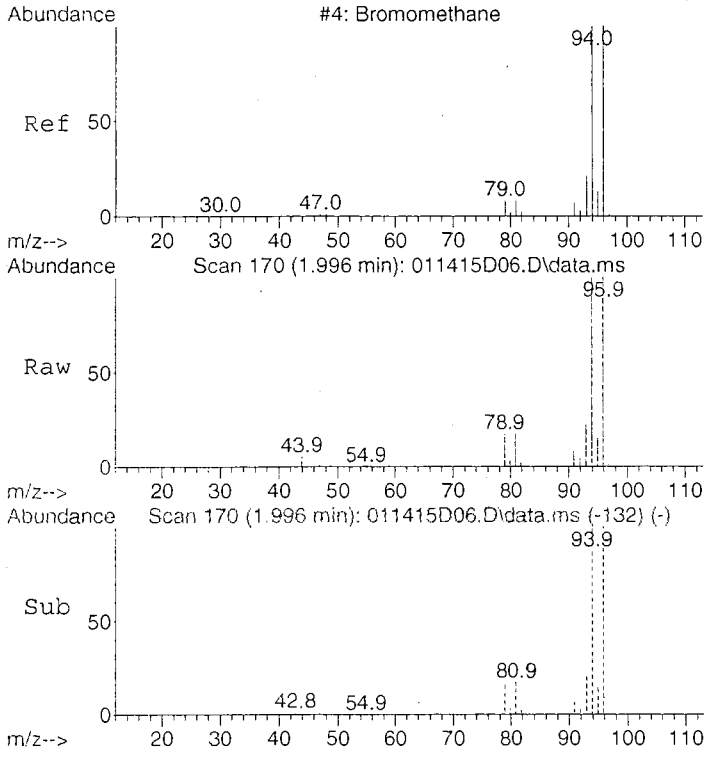


#4
Vinyl chloride
Concen: 5.33 ug/L
RT: 1.686 min Scan# 112
Delta R.T. 0.008 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 62 Resp: 262094

Ion	Ratio	Lower	Upper
62	100		
64	33.0	13.4	53.4
61	8.2	0.0	28.4

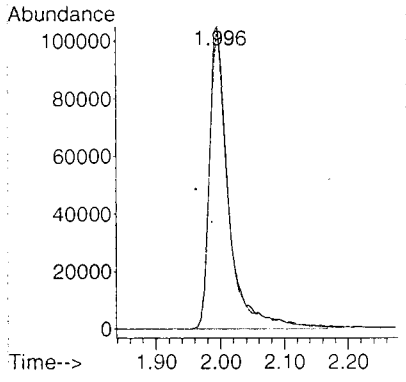


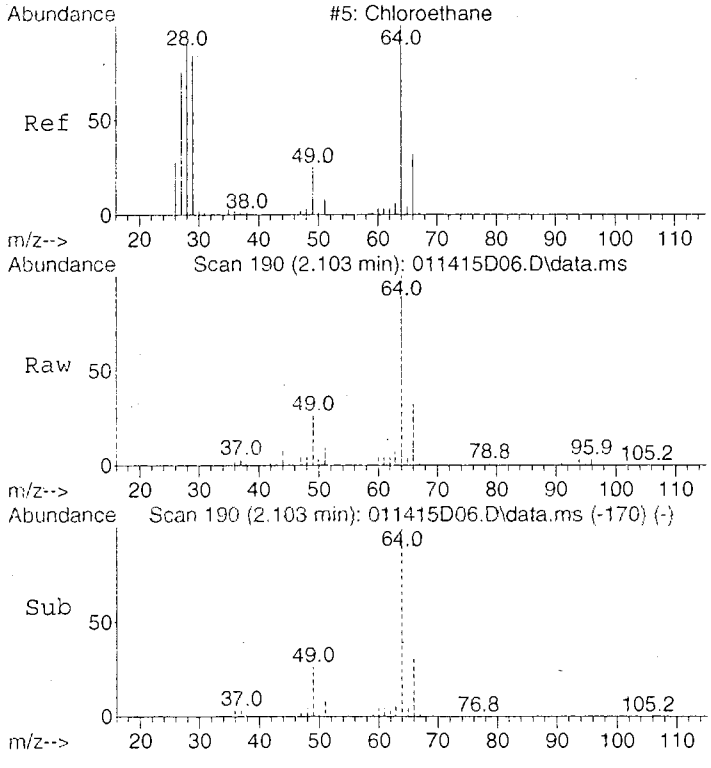


#5
Bromomethane
Concen: 5.16 ug/L
RT: 1.996 min Scan# 170
Delta R.T. 0.005 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 94 Resp: 224681

Ion	Ratio	Lower	Upper
94	100		
96	94.8	73.9	113.9

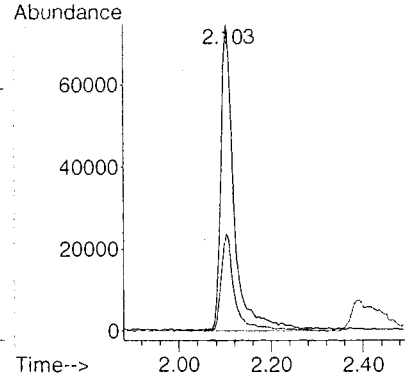


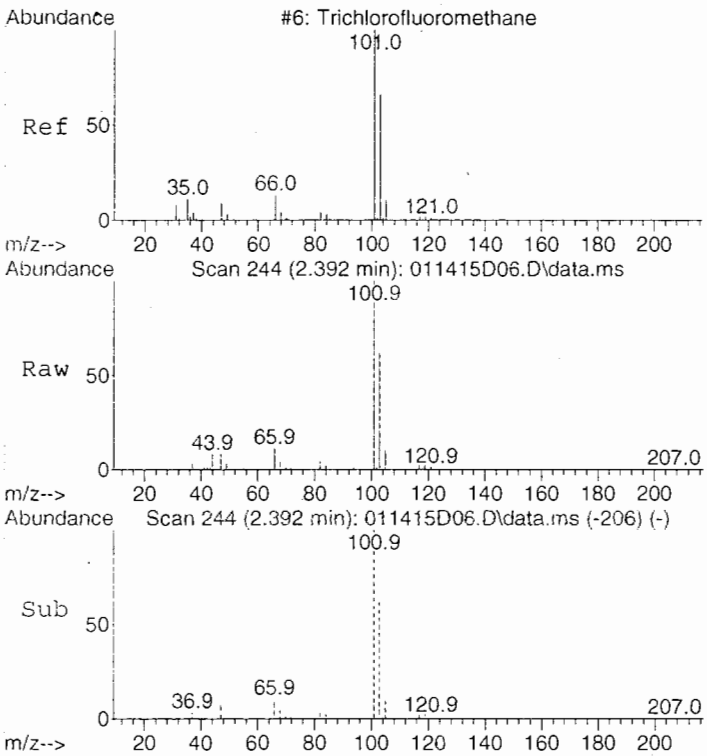


#6
Chloroethane
Concen: 5.37 ug/L
RT: 2.103 min Scan# 190
Delta R.T. 0.004 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 64 Resp: 153900

Ion	Ratio	Lower	Upper
64	100		
66	31.4	12.3	52.3

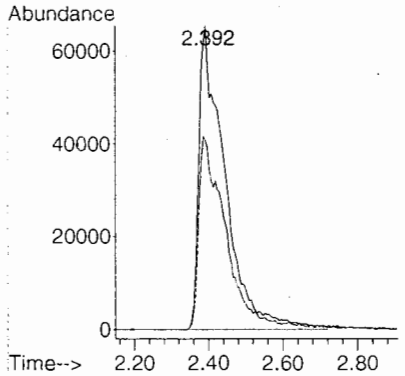


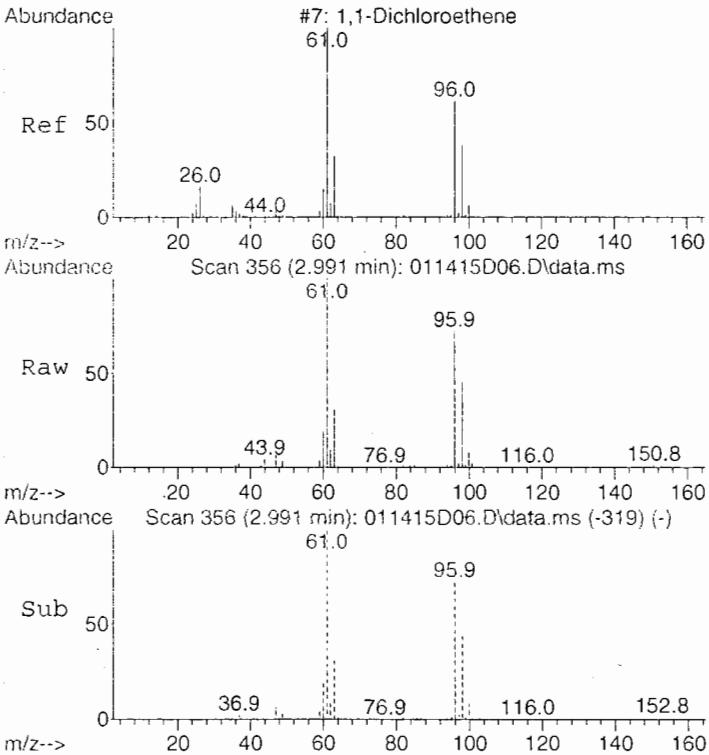


#7
Trichlorofluoromethane
Concen: 5.28 ug/L
RT: 2.392 min Scan# 244
Delta R.T. 0.003 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:101 Resp: 316822

Ion	Ratio	Lower	Upper
101	100		
103	65.9	45.6	85.6

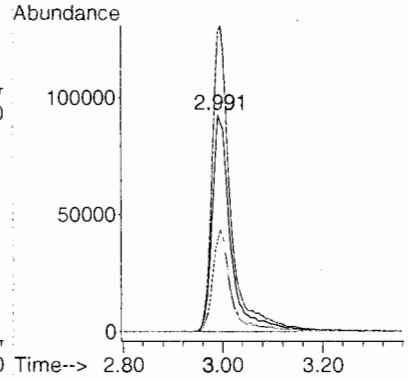


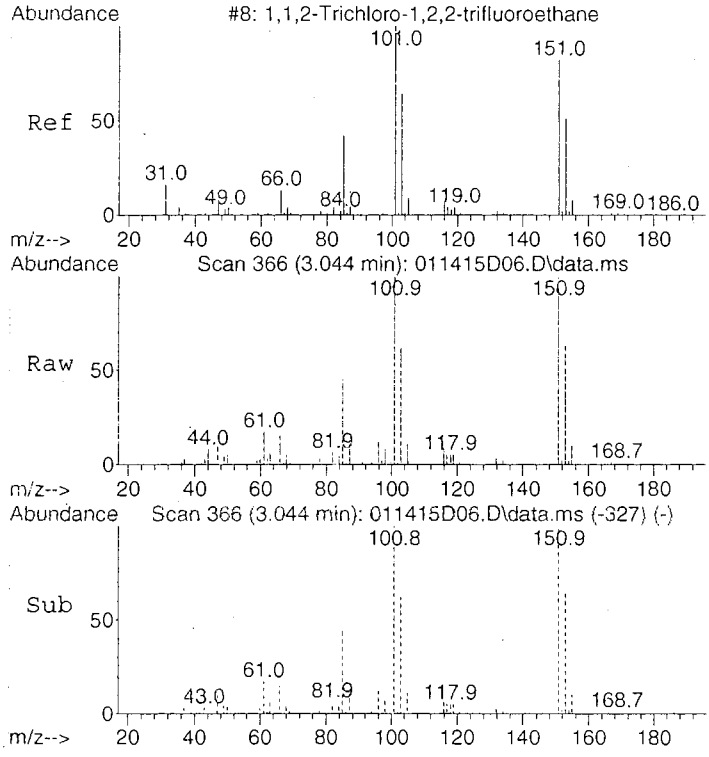


#8
1,1-Dichloroethene
Concen: 5.37 ug/L
RT: 2.991 min Scan# 356
Delta R.T. 0.000 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 96 Resp: 241964

Ion	Ratio	Lower	Upper
96	100		
61	140.9	126.1	166.1
63	46.7	28.9	68.9

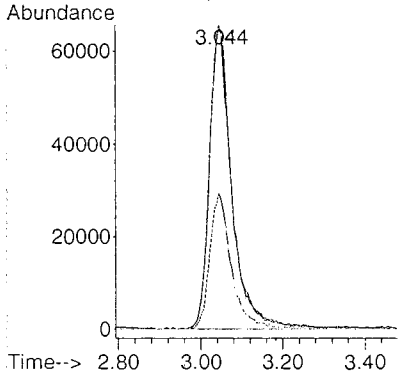


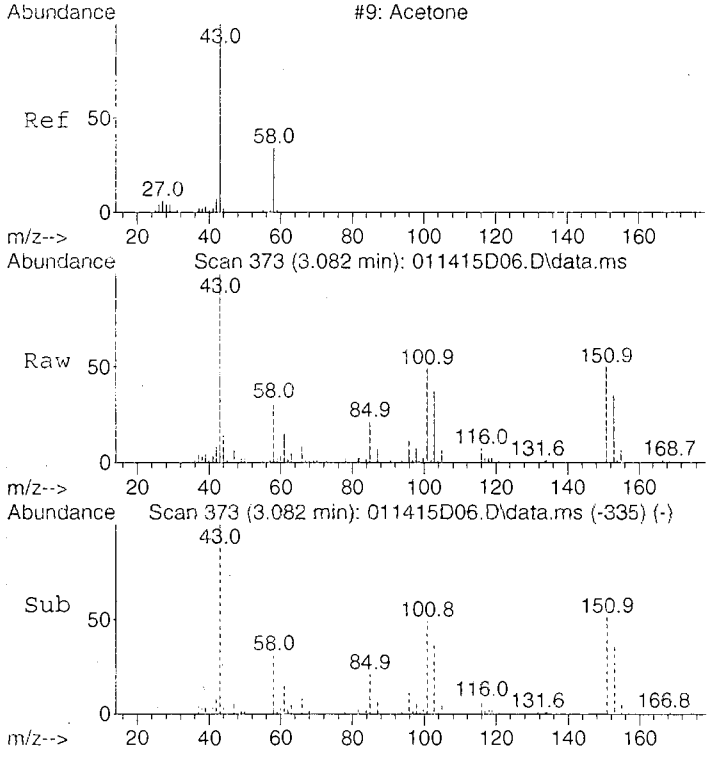


#9
1,1,2-Trichloro-1,2,2-trifluoroethane
Concen: 5.72 ug/L
RT: 3.044 min Scan# 366
Delta R.T. 0.008 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:101 Resp: 248175

Ion	Ratio	Lower	Upper
101	100		
151	99.5	80.0	120.0
85	42.8	24.7	64.7

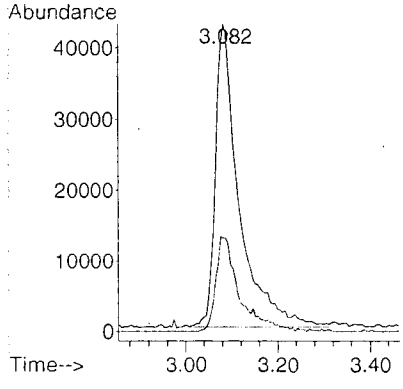


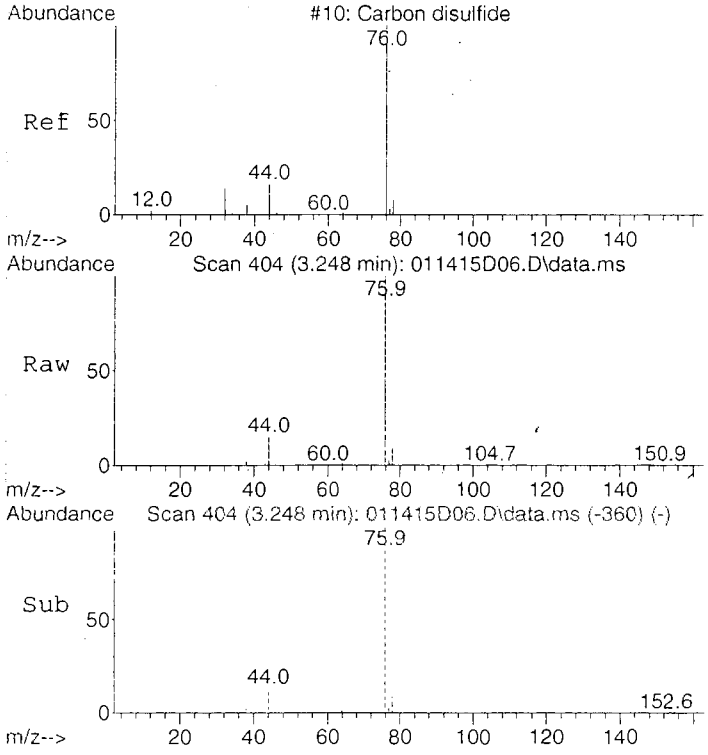


#10
Acetone
Concen: 39.77 ug/L
RT: 3.082 min Scan# 373
Delta R.T. 0.001 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 43 Resp: 153341

Ion	Ratio	Lower	Upper
43	100		
58	31.1	12.0	52.0

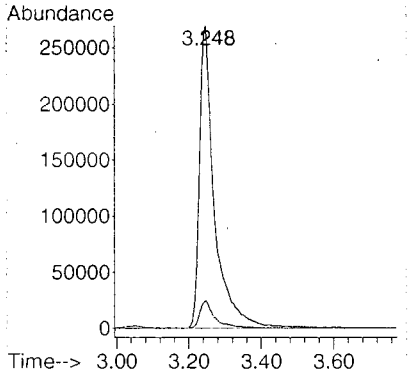


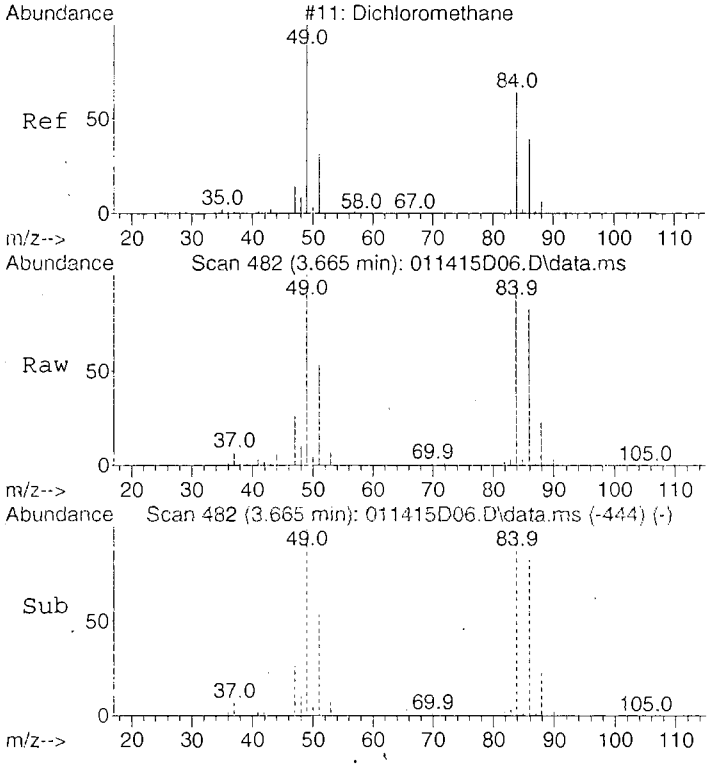


#11
Carbon disulfide
Concen: 5.13 ug/L
RT: 3.248 min Scan# 404
Delta R.T. 0.005 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 76 Resp: 790184

Ion	Ratio	Lower	Upper
76	100		
78	9.1	0.0	29.3

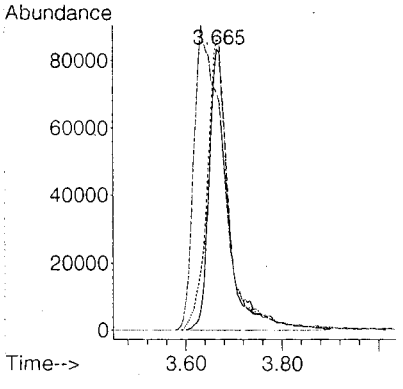


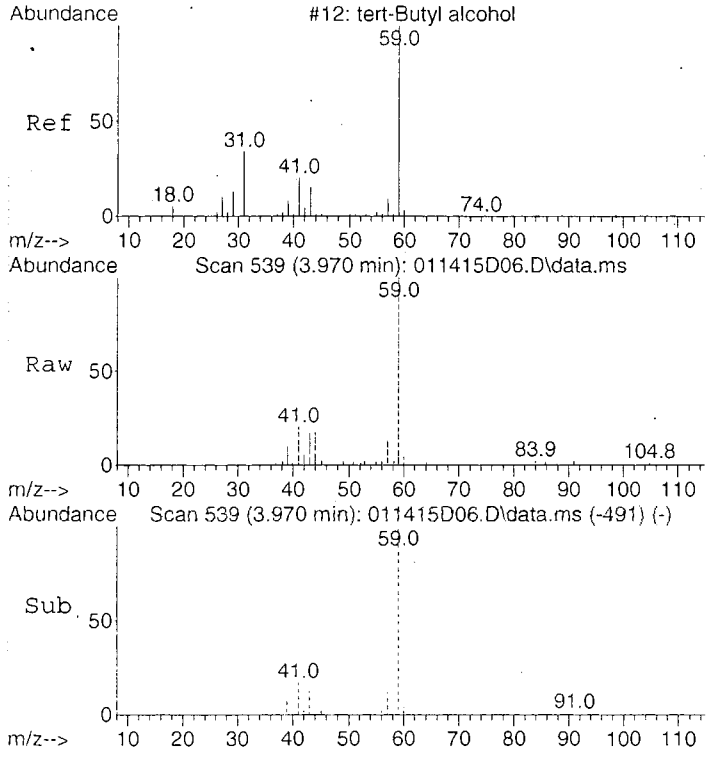


#12
Dichloromethane
Concen: 4.97 ug/L
RT: 3.665 min Scan# 482
Delta R.T. 0.003 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 84 Resp: 237122

Ion	Ratio	Lower	Upper
84	100		
86	0.0	0.0	20.0
49	114.9	100.9	140.9

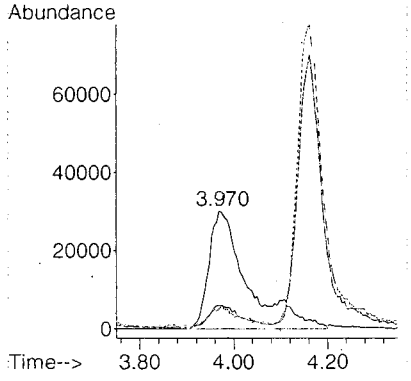


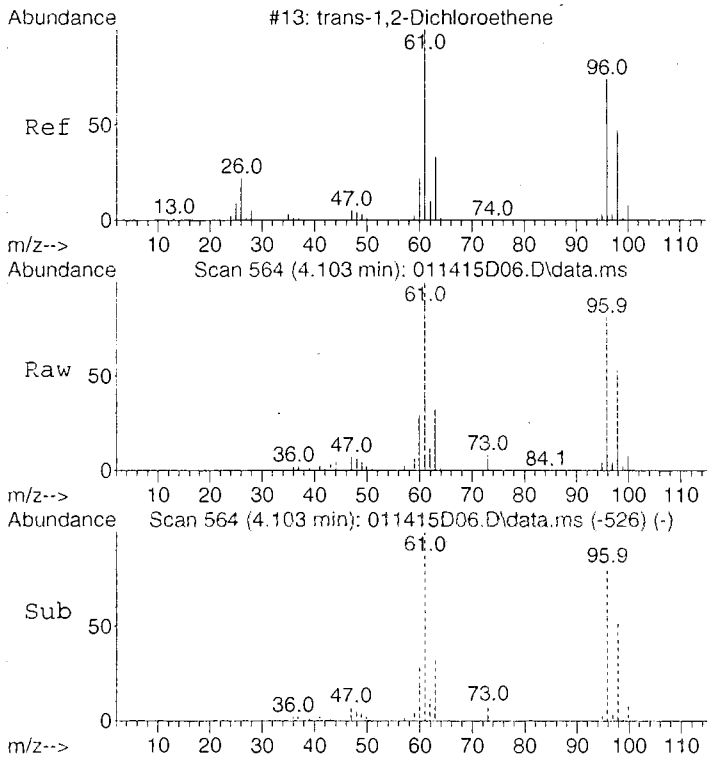


#13
tert-Butyl alcohol
Concen: 106.59 ug/L
RT: 3.970 min Scan# 539
Delta R.T. 0.005 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 59 Resp: 171112

Ion	Ratio	Lower	Upper
59	100		
41	15.4	0.0	39.5
43	12.1	0.0	37.4

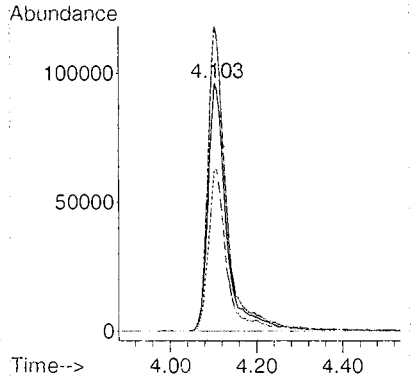


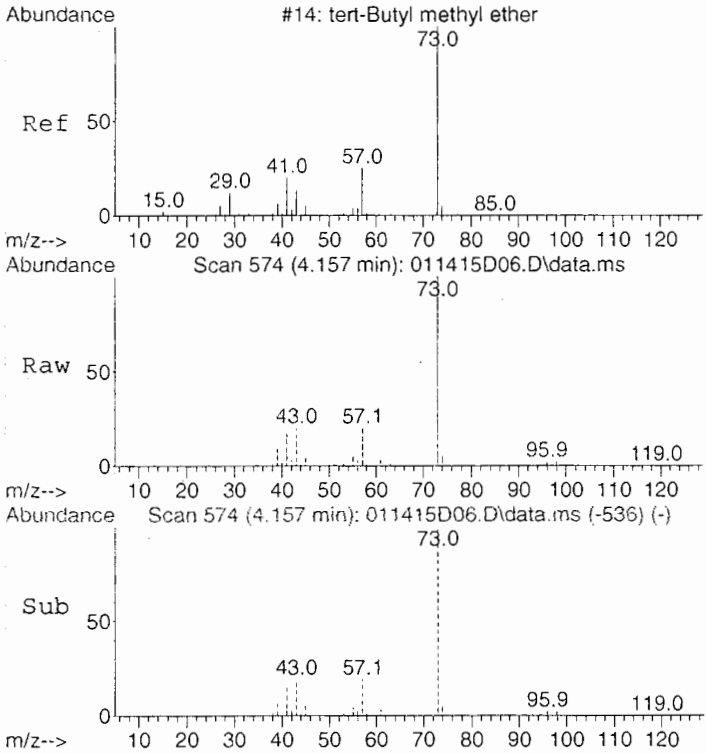


#14
trans-1,2-Dichloroethene
Concen: 5.31 ug/L
RT: 4.103 min Scan# 564
Delta R.T. 0.003 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 96 Resp: 288466

Ion	Ratio	Lower	Upper
96	100		
61	123.6	102.9	142.9
98	64.5	43.2	83.2

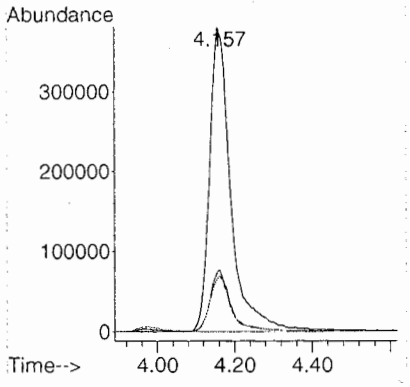


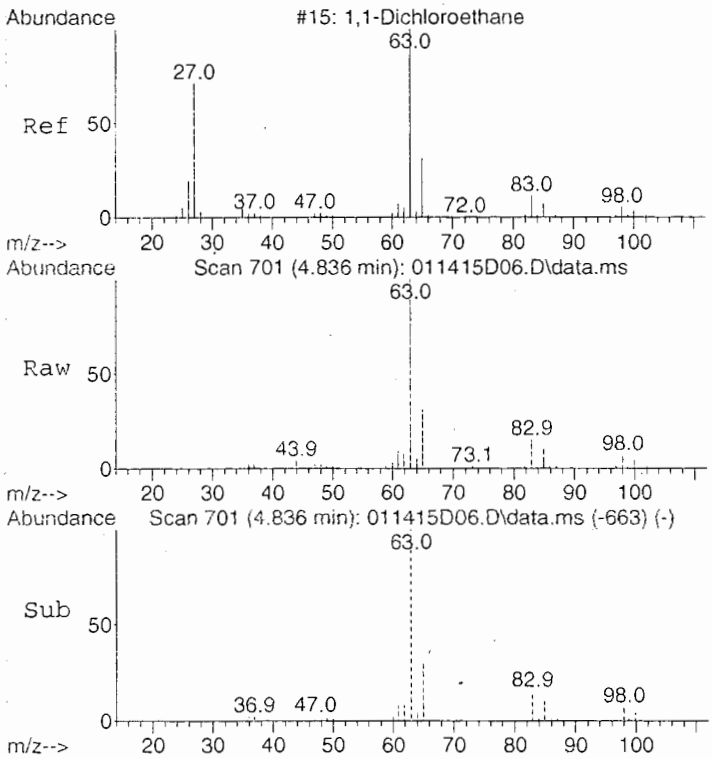


#15
tert-Butyl methyl ether (MTBE)
Concen: 20.50 ug/L
RT: 4.157 min Scan# 574
Delta R.T. 0.001 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 73 Resp: 1453297

Ion	Ratio	Lower	Upper
73	100		
57	19.2	0.0	39.3
41	17.2	0.0	37.6

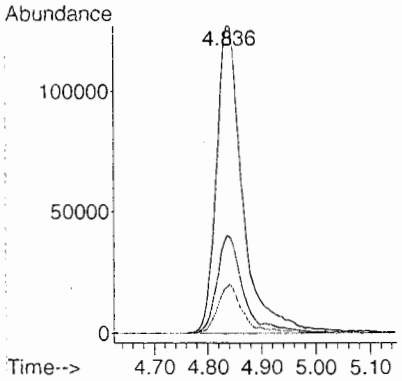


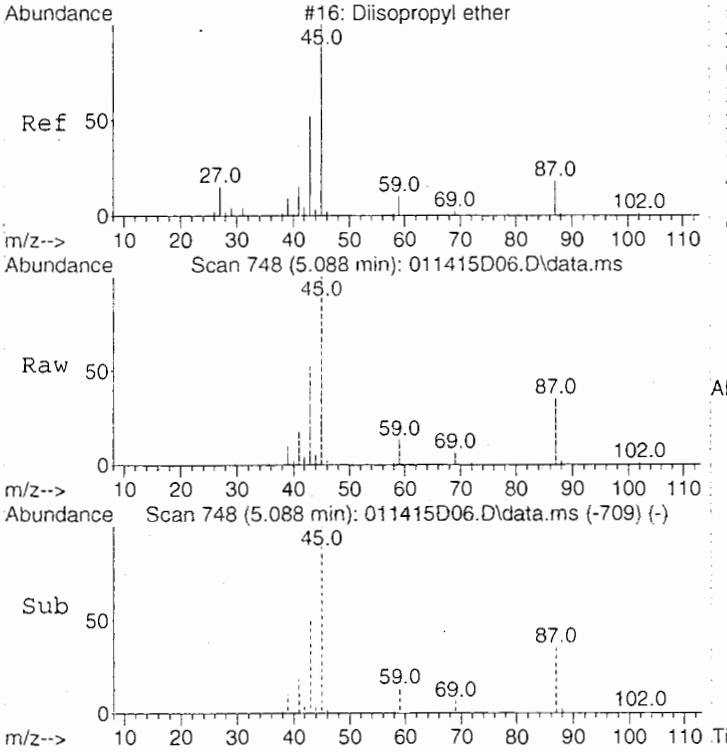


#16
1,1-Dichloroethane
Concen: 5.28 ug/L
RT: 4.836 min Scan# 701
Delta R.T. 0.002 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 63 Resp: 431028

Ion	Ratio	Lower	Upper
63	100		
65	32.1	12.8	52.8
83	15.4	0.0	36.9

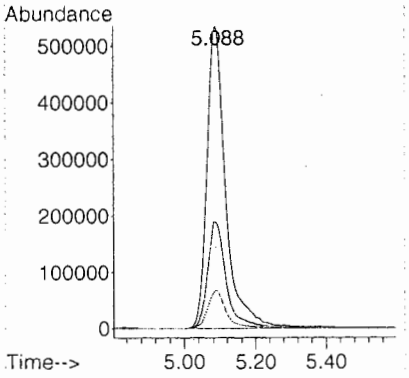


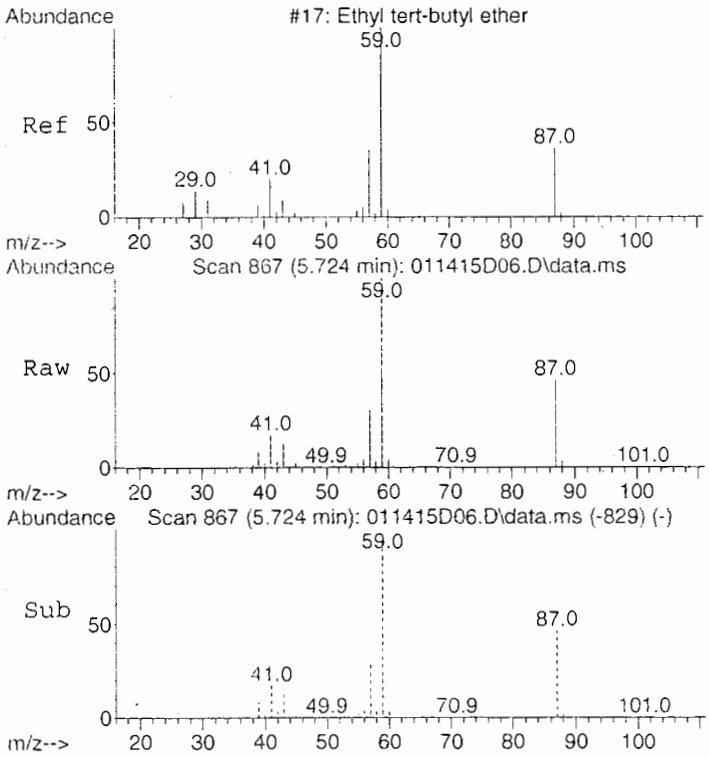


#17
Diisopropyl ether
Concen: 20.81 ug/L
RT: 5.088 min Scan# 748
Delta R.T. 0.006 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 45 Resp: 1982548

Ion	Ratio	Lower	Upper
45	100		
87	35.4	14.5	54.5
59	12.4	0.0	32.4

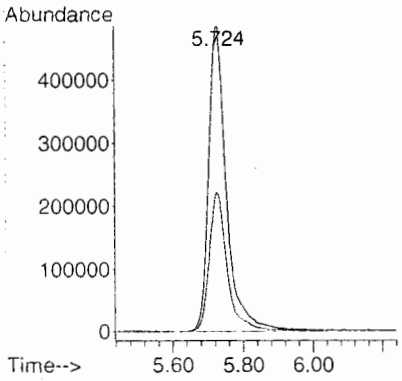


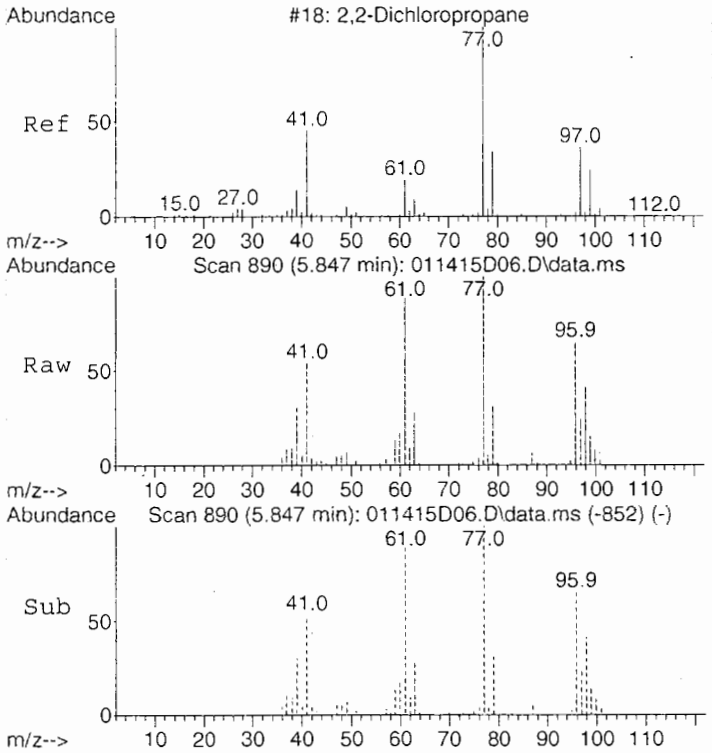


#18
Ethyl-tert-butyl ether
Concen: 21.79 ug/L
RT: 5.724 min Scan# 867
Delta R.T. 0.004 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 59 Resp: 1747813

Ion	Ratio	Lower	Upper
59	100		
87	46.0	27.0	67.0

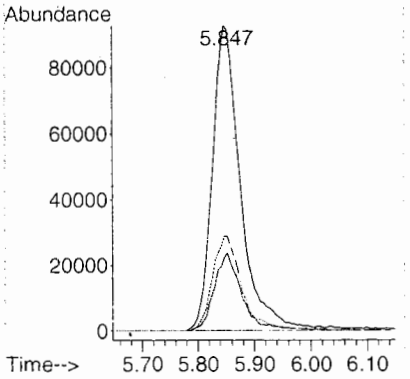


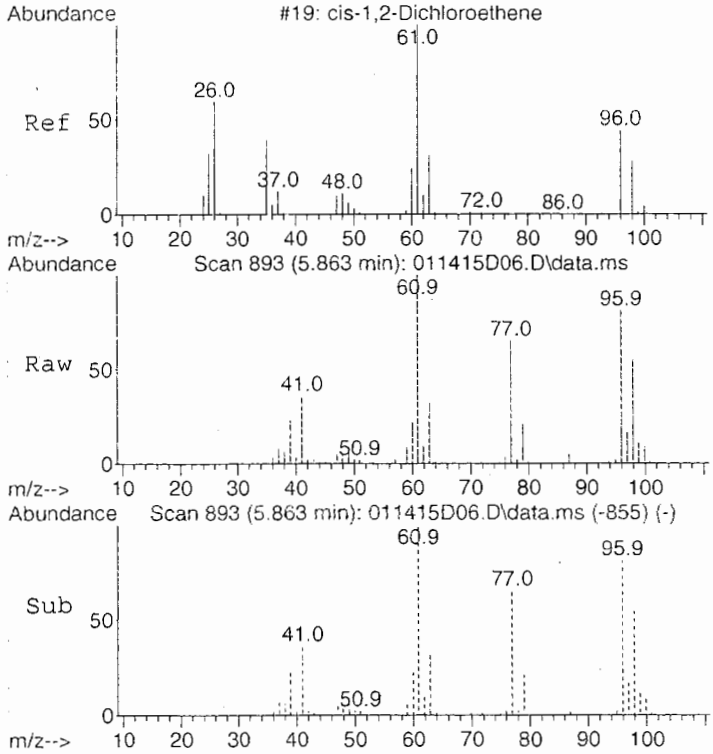


#19
2,2-Dichloropropane
Concen: 5.74 ug/L
RT: 5.847 min Scan# 890
Delta R.T. 0.005 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 77 Resp: 320549

Ion	Ratio	Lower	Upper
77	100		
97	25.0	5.2	45.2
79	32.1	12.0	52.0

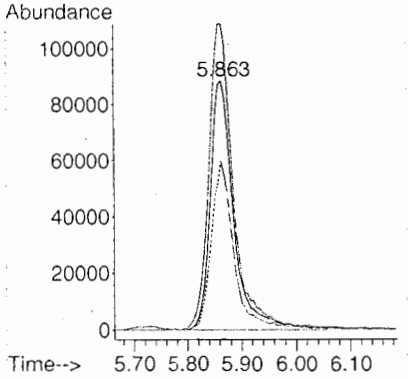


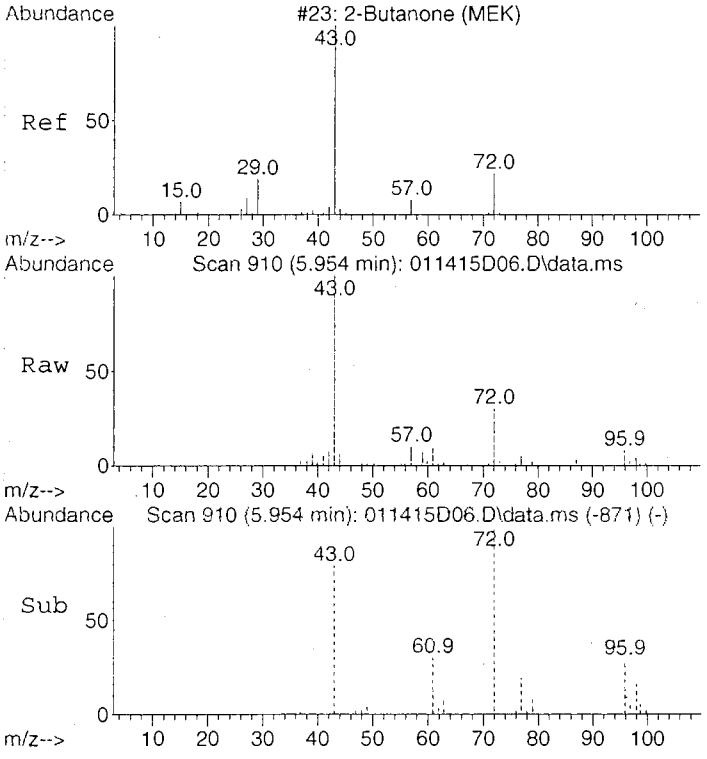


#20
cis-1,2-Dichloroethene
Concen: 5.50 ug/L
RT: 5.863 min Scan# 893
Delta R.T. 0.005 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 96 Resp: 264537

Ion	Ratio	Lower	Upper
96	100		
61	130.8	105.2	145.2
98	65.4	46.6	86.6

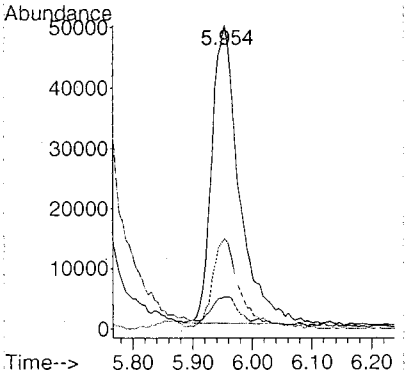


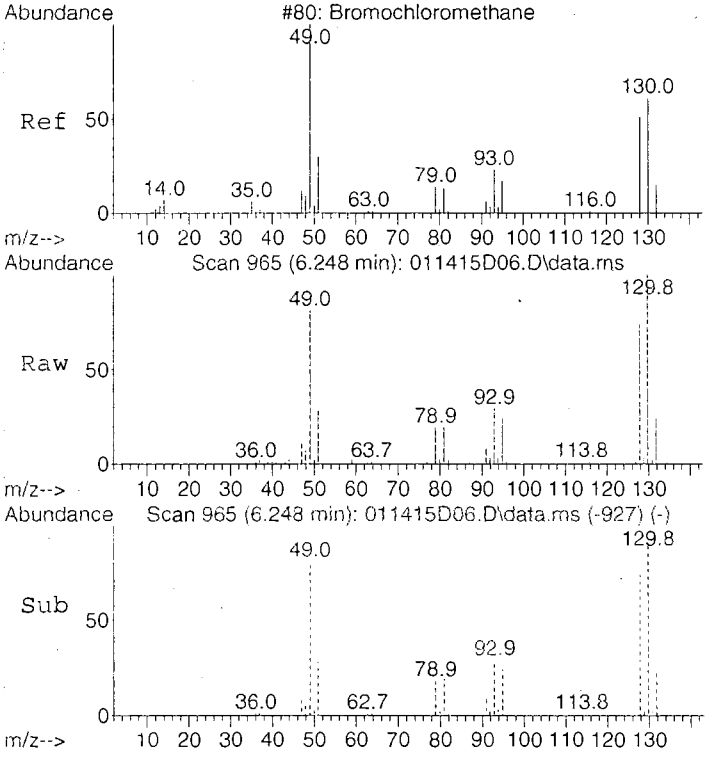


#21
2-Butanone (MEK)
Concen: 45.58 ug/L
RT: 5.954 min Scan# 910
Delta R.T. 0.008 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 43 Resp: 160161

Ion	Ratio	Lower	Upper
43	100		
57	9.8	0.0	30.7
72	30.2	9.4	49.4

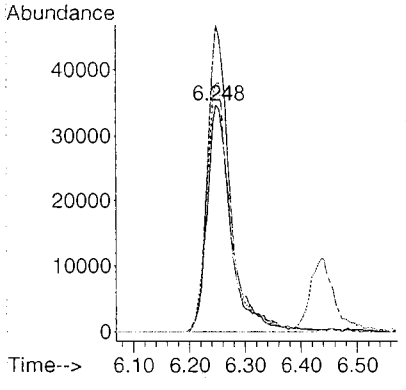


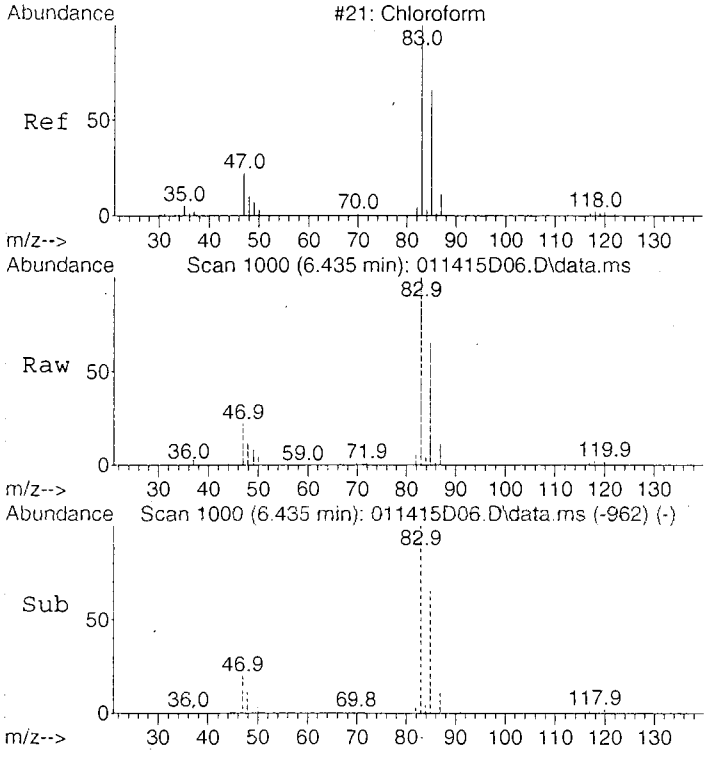


#22
Bromochloromethane
Concen: 5.47 ug/L
RT: 6.248 min Scan# 965
Delta R.T. 0.003 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:128 Resp: 102828

Ion	Ratio	Lower	Upper
128	100		
130	130.3	107.6	147.6
49	108.2	85.0	125.0

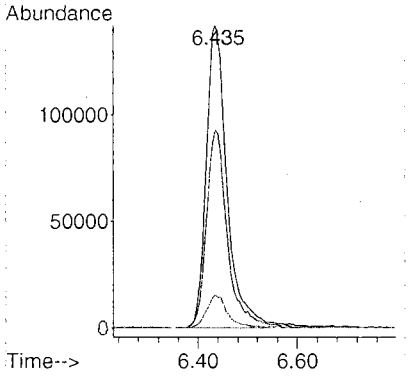


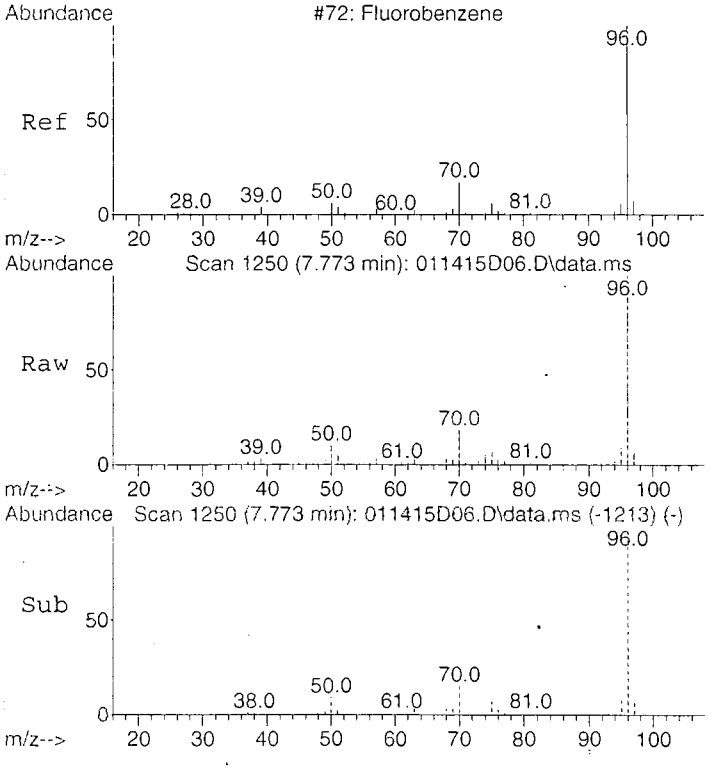


#23
Chloroform
Concen: 5.74 ug/L
RT: 6.435 min Scan# 1000
Delta R.T. 0.005 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 83 Resp: 424827

Ion	Ratio	Lower	Upper
83	100		
85	65.7	46.6	86.6
87	10.8	0.0	30.7

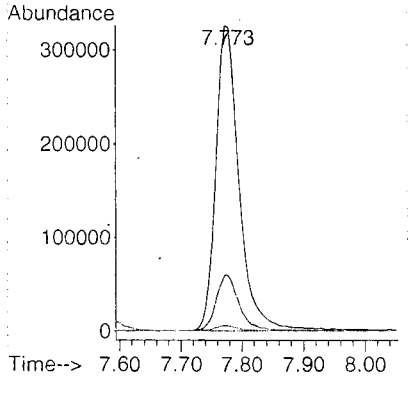


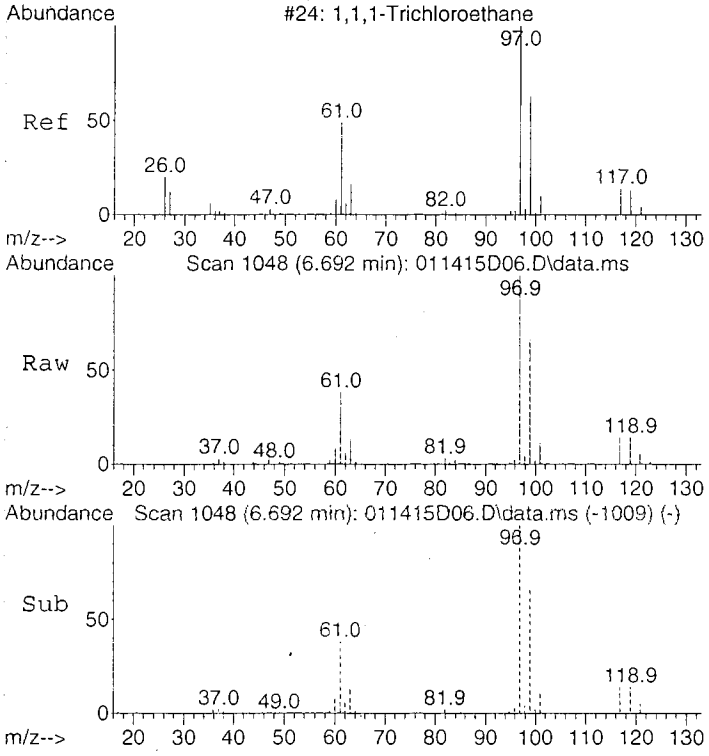


#24
Fluorobenzene
Concen: 5.00 ug/L
RT: 7.773 min Scan# 1250
Delta R.T. 0.000 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 96 Resp: 861283

Ion	Ratio	Lower	Upper
96	100		
70	18.0	0.0	38.2
77	1.7	0.0	21.8

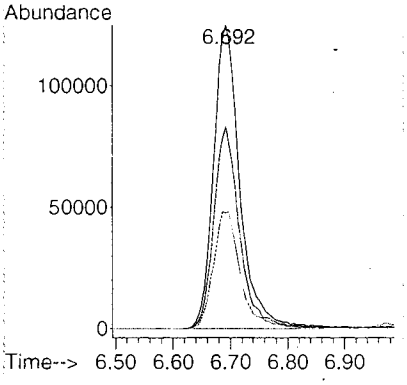


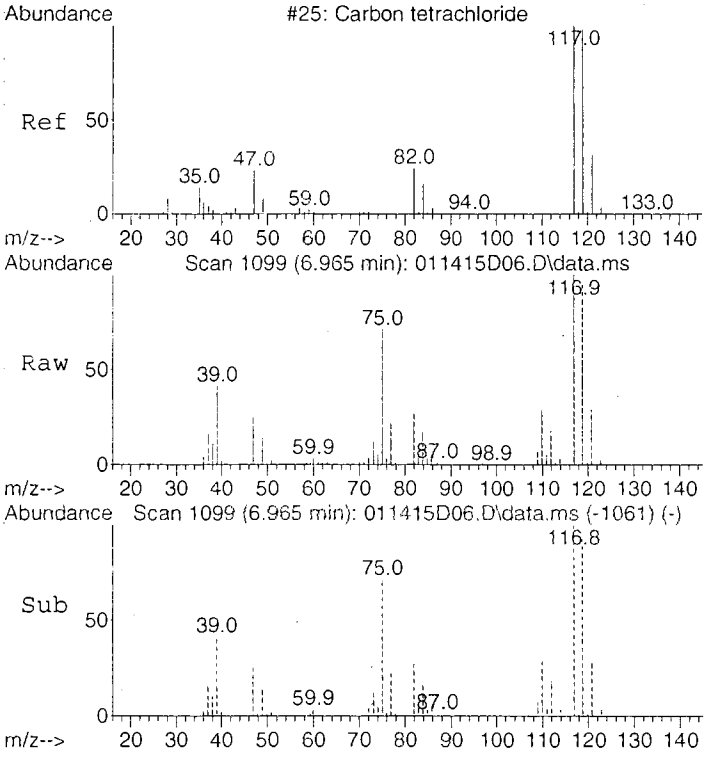


#25
1,1,1-Trichloroethane
Concen: 4.44 ug/L
RT: 6.692 min Scan# 1048
Delta R.T. 0.007 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 97 Resp: 396194

Ion	Ratio	Lower	Upper
97	100		
99	65.1	45.7	85.7
61	39.8	19.6	59.6

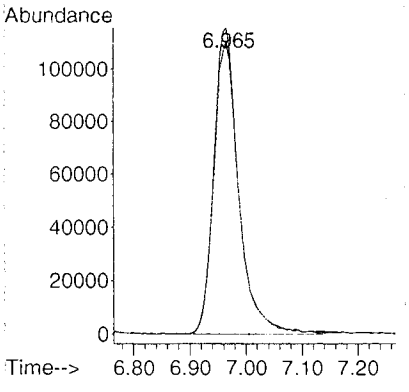


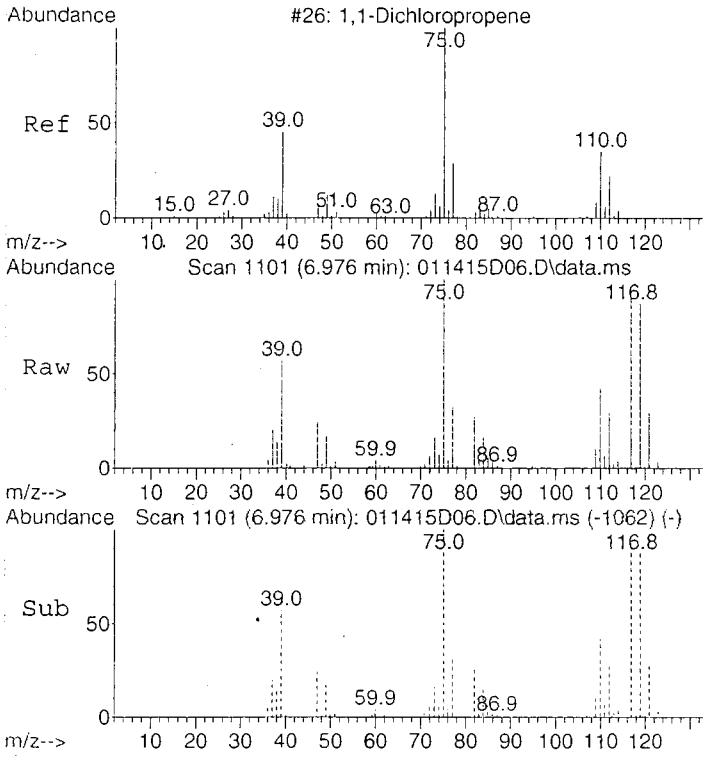


#26
Carbon tetrachloride
Concen: 4.30 ug/L
RT: 6.965 min Scan# 1099
Delta R.T. 0.004 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:117 Resp: 357512

Ion	Ratio	Lower	Upper
117	100		
119	94.7	76.0	116.0

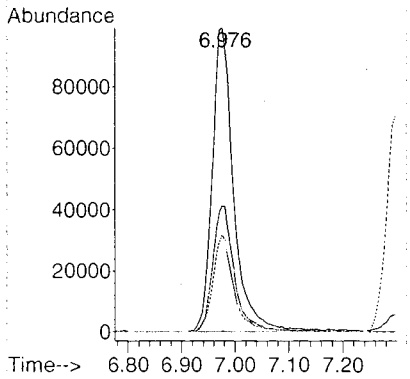


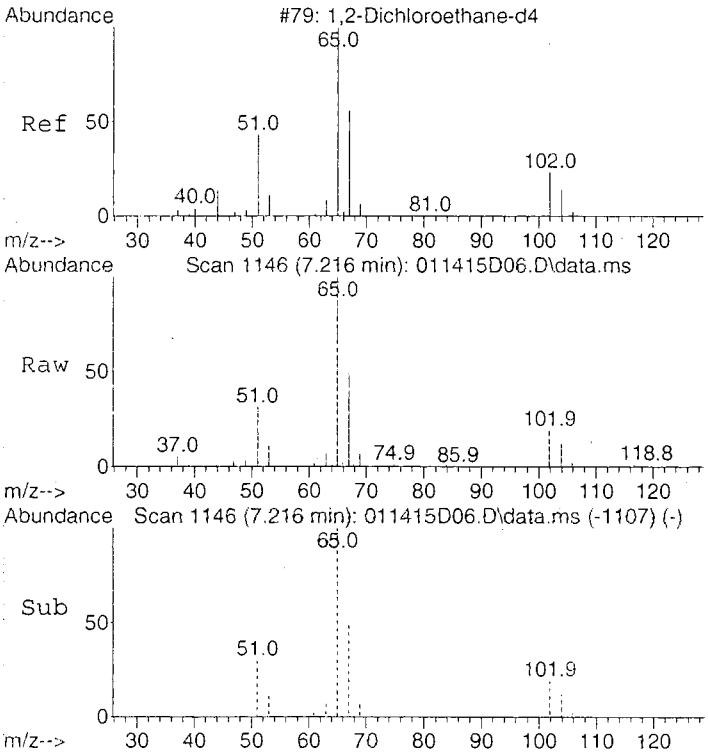


#27
1,1-Dichloropropene
Concen: 4.75 ug/L
RT: 6.976 min Scan# 1101
Delta R.T. 0.006 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 75 Resp: 278634

Ion	Ratio	Lower	Upper
75	100		
110	41.8	21.8	61.8
77	31.4	11.1	51.1

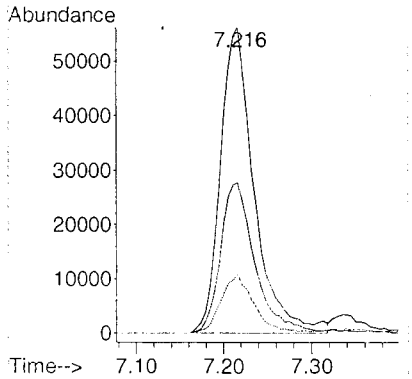


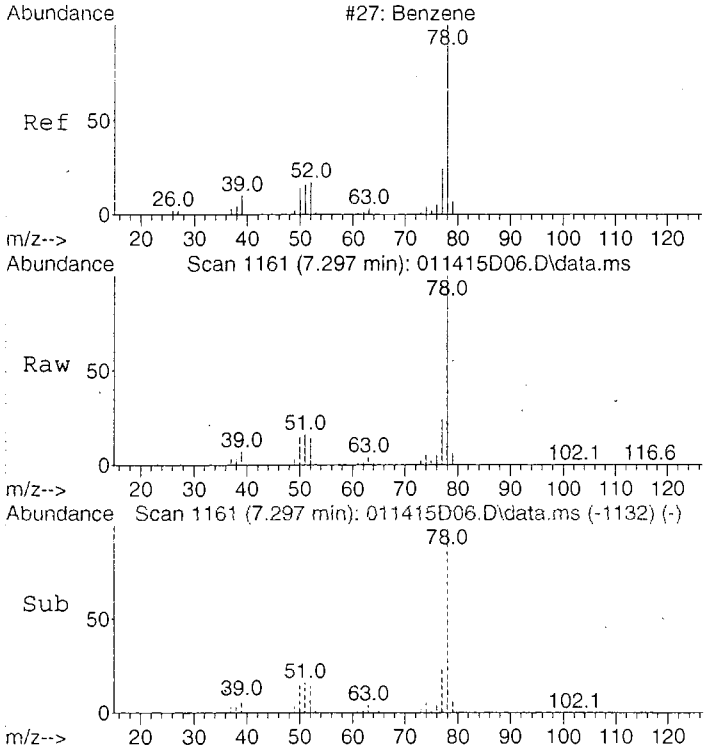


#28
1,2-Dichloroethane-d4
Concen: 5.17 ug/L
RT: 7.216 min Scan# 1146
Delta R.T. 0.007 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 65 Resp: 151081

Ion	Ratio	Lower	Upper
65	100		
67	51.2	33.8	73.8
102	18.7	0.0	39.9

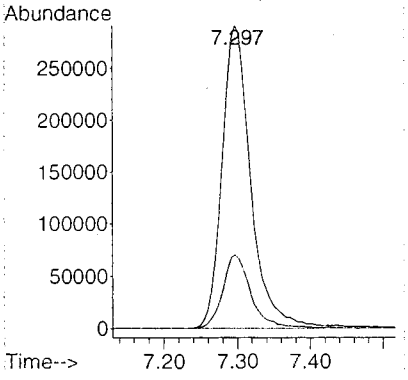


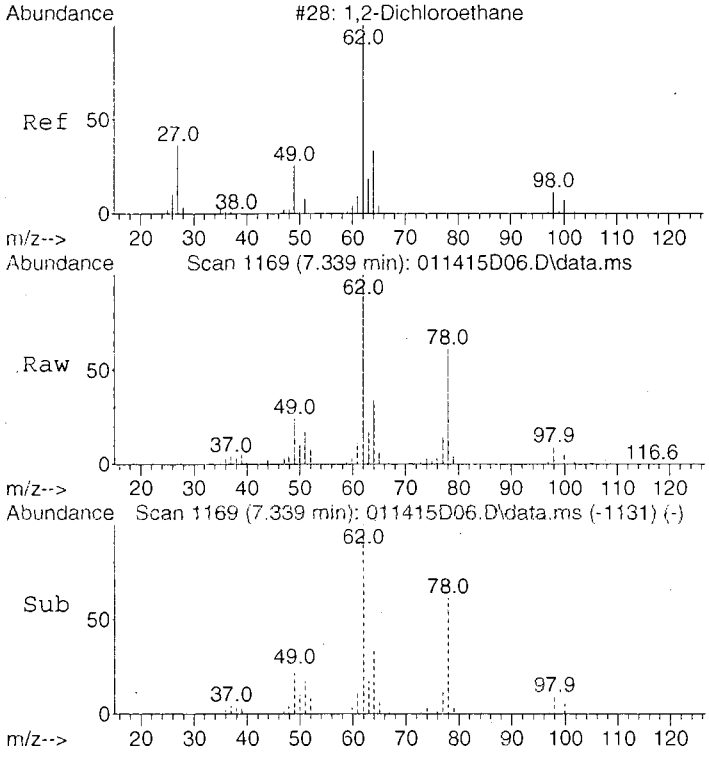


#29
Benzene
Concen: 4.80 ug/L
RT: 7.297 min Scan# 1161
Delta R.T. 0.004 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 78 Resp: 792679

Ion	Ratio	Lower	Upper
78	100		
77	23.8	3.5	43.5

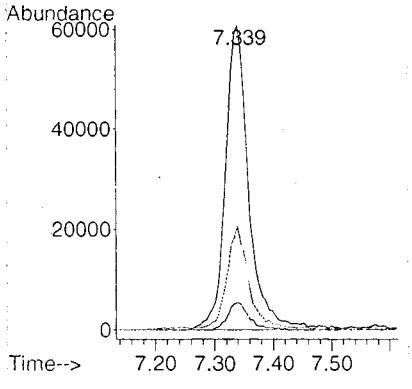


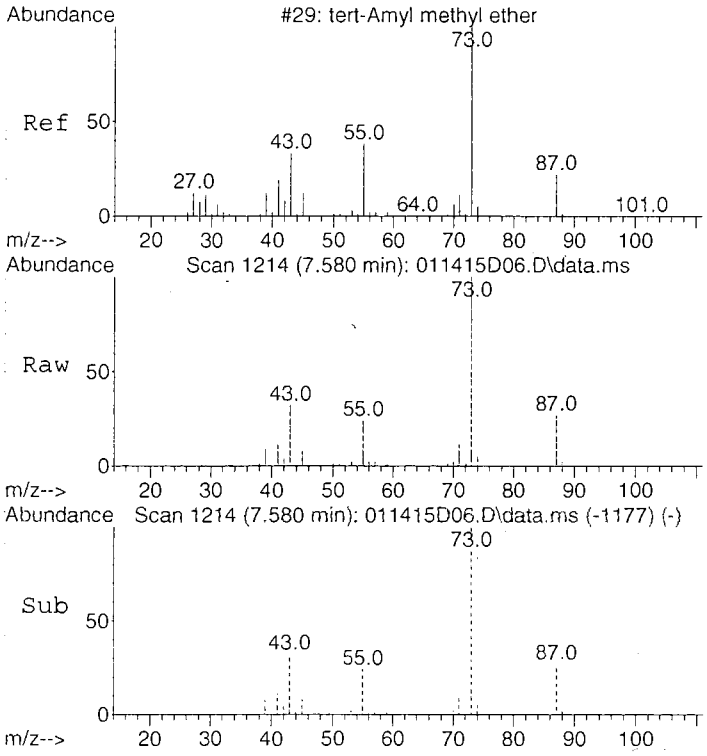


#30
1,2-Dichloroethane
Concen: 5.18 ug/L
RT: 7.339 min Scan# 1169
Delta R.T. 0.006 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 62 Resp: 169827

Ion	Ratio	Lower	Upper
62	100		
98	8.2	0.0	28.7
64	31.8	13.0	53.0

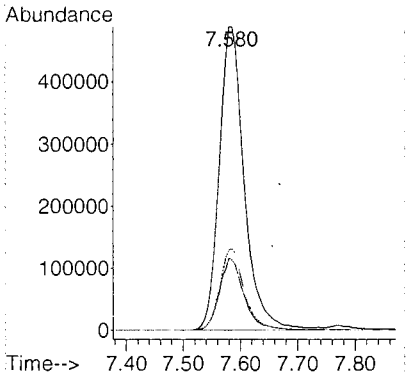


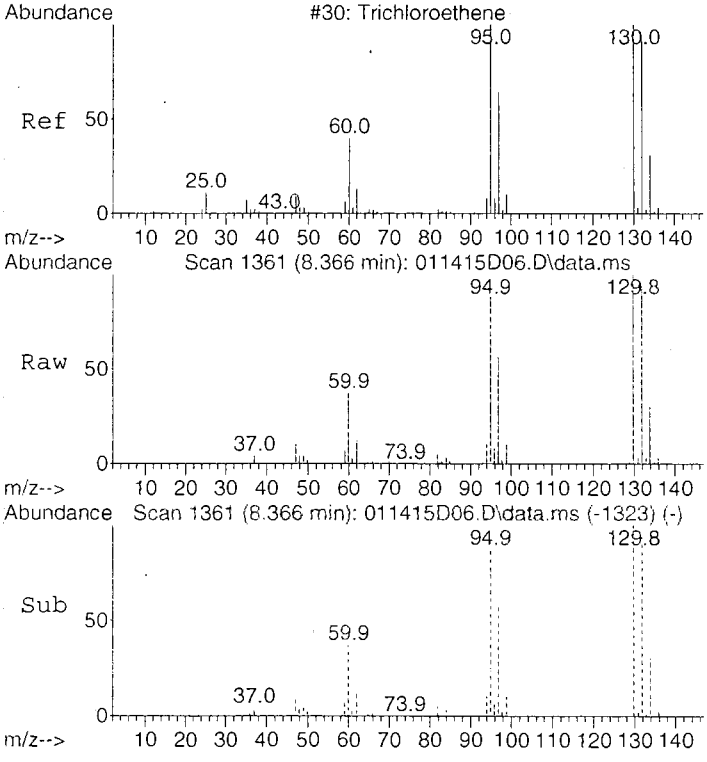


#31
tert-Amyl methyl ether
Concen: 17.81 ug/L
RT: 7.580 min Scan# 1214
Delta R.T. 0.000 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 73 Resp: 1499311

Ion	Ratio	Lower	Upper
73	100		
55	23.1	1.2	41.2
87	26.5	6.4	46.4

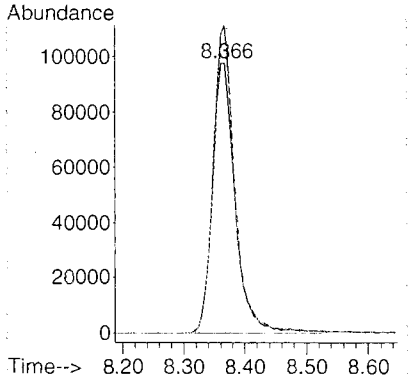


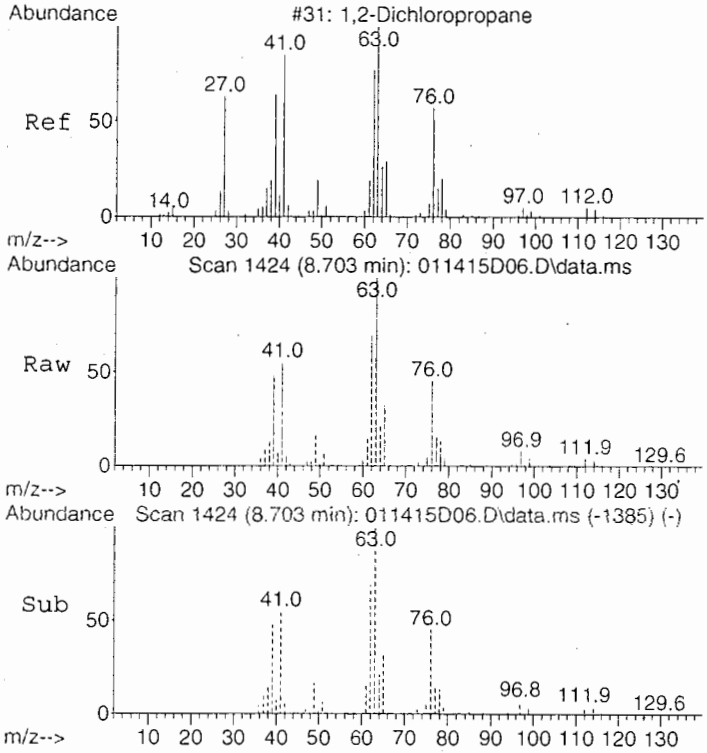


#32
Trichloroethene
Concen: 4.96 ug/L
RT: 8.366 min Scan# 1361
Delta R.T. 0.005 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 95 Resp: 250864

Ion	Ratio	Lower	Upper
95	100		
130	110.7	92.6	132.6
132	107.3	89.2	129.2

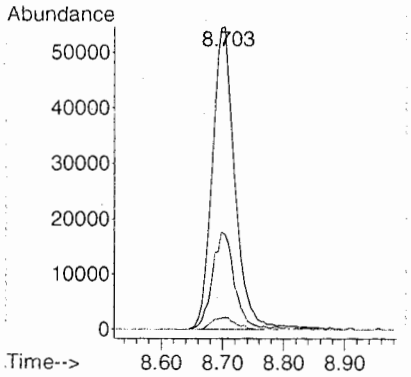


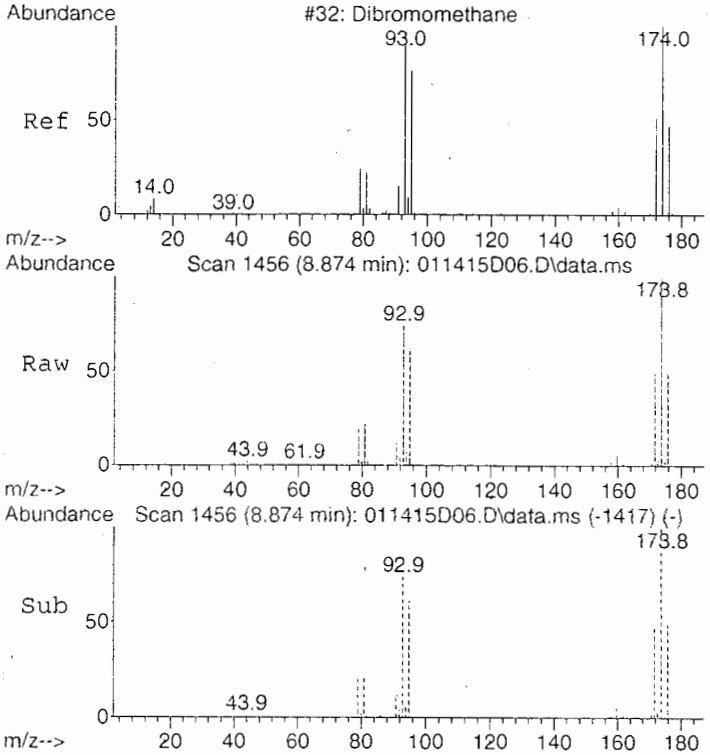


#33
1,2-Dichloropropane
Concen: 4.83 ug/L
RT: 8.703 min Scan# 1424
Delta R.T. 0.007 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 63 Resp: 141167

Ion	Ratio	Lower	Upper
63	100		
65	31.3	10.5	50.5
112	4.0	0.0	24.2

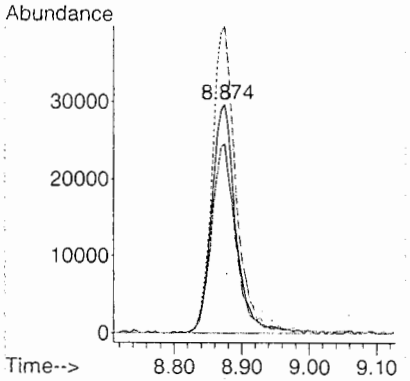


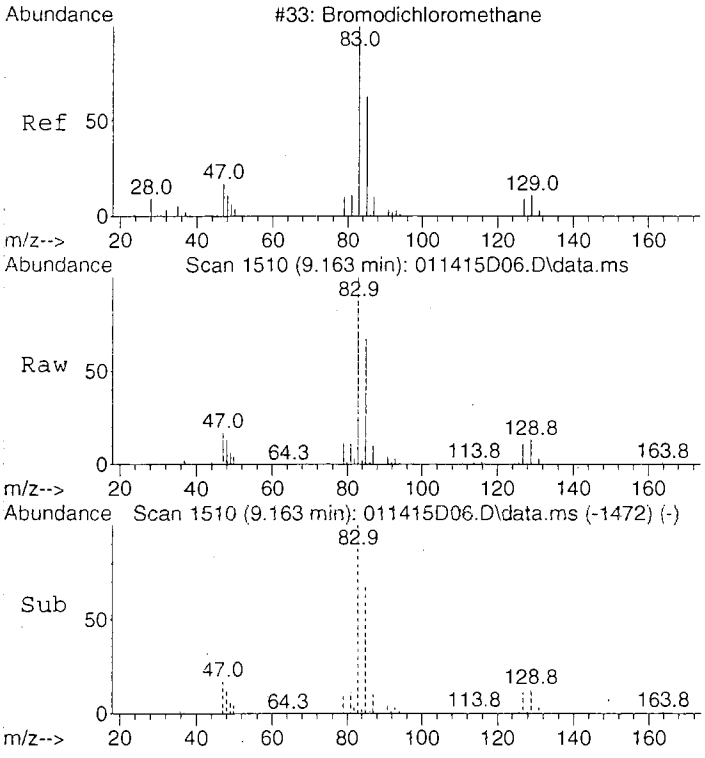


#34
Dibromomethane
Concen: 4.90 ug/L
RT: 8.874 min Scan# 1456
Delta R.T. 0.007 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 93 Resp: 73951

Ion	Ratio	Lower	Upper
93	100		
95	83.6	63.7	103.7
174	133.8	118.7	158.7

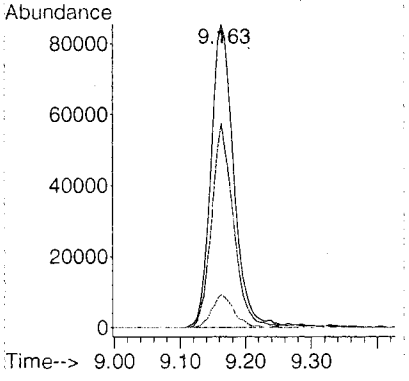


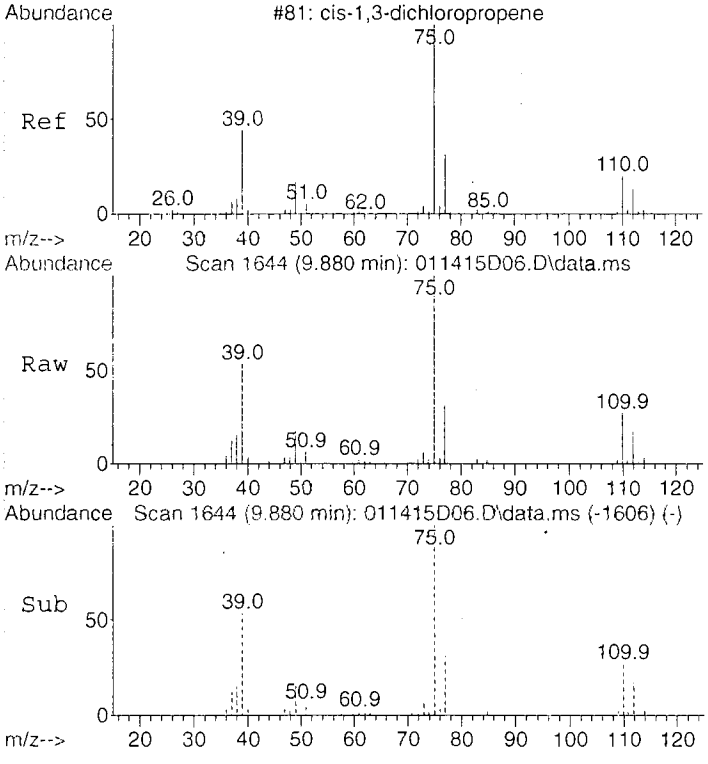


#35
Bromodichloromethane
Concen: 4.84 ug/L
RT: 9.163 min Scan# 1510
Delta R.T. 0.004 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 83 Resp: 207121

Ion	Ratio	Lower	Upper
83	100		
85	63.6	43.0	83.0
127	10.3	0.0	30.4

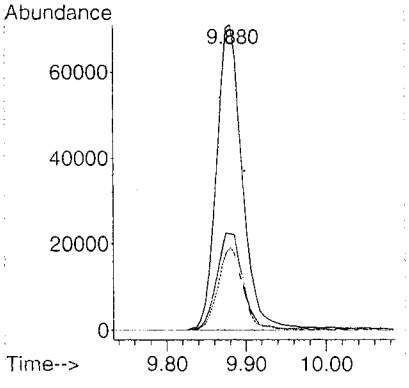


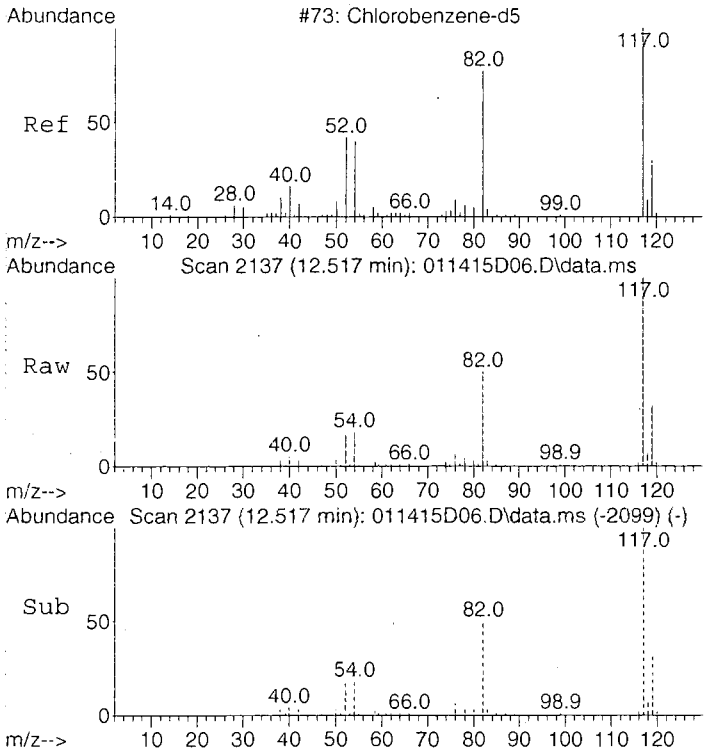


#36
cis-1,3-Dichloropropene
Concen: 5.11 ug/L
RT: 9.880 min Scan# 1644
Delta R.T. 0.005 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 75 Resp: 160843

Ion	Ratio	Lower	Upper
75	100		
77	32.7	12.7	52.7
110	26.0	6.4	46.4

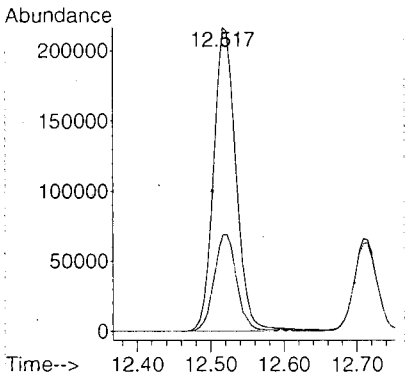


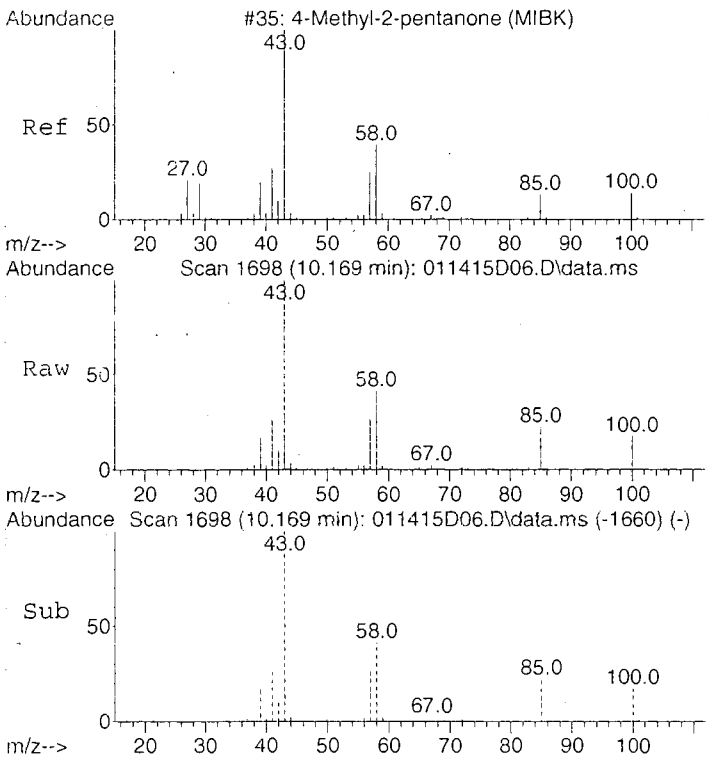


#37
Chlorobenzene-d5
Concen: 5.00 ug/L
RT: 12.517 min Scan# 2137
Delta R.T. 0.001 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:117 Resp: 460549

Ion	Ratio	Lower	Upper
117	100		
119	32.2	12.2	52.2

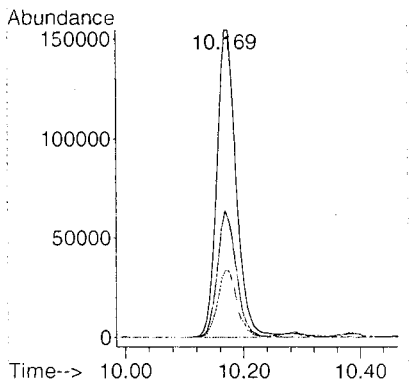


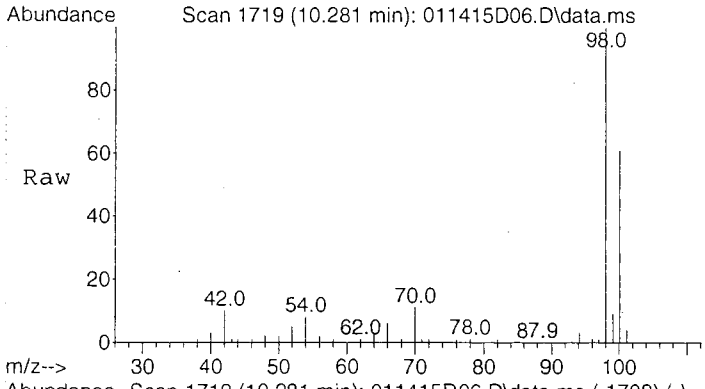


#38
4-Methyl-2-pentanone (MIBK)
Concen: 35.68 ug/L
RT: 10.169 min Scan# 1698
Delta R.T. 0.002 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 43 Resp: 360925

Ion	Ratio	Lower	Upper
43	100		
58	39.6	19.3	59.3
85	21.7	2.3	42.3

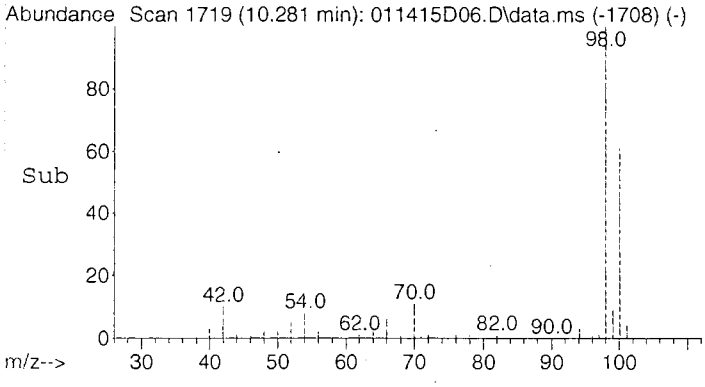


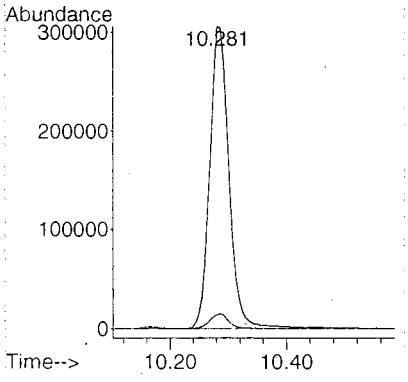


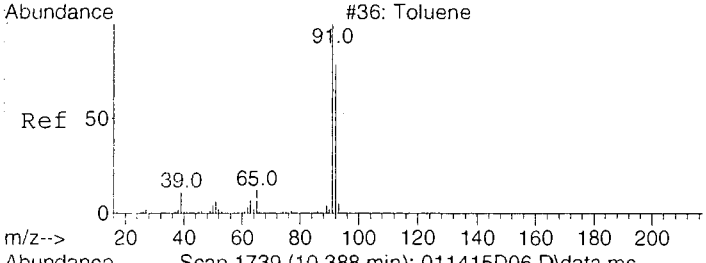
#39
Toluene-d8
Concen: 4.97 ug/L
RT: 10.281 min Scan# 1719
Delta R.T. 0.000 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 98 Resp: 701701

Ion	Ratio	Lower	Upper
98	100		
101	4.7	0.0	24.6



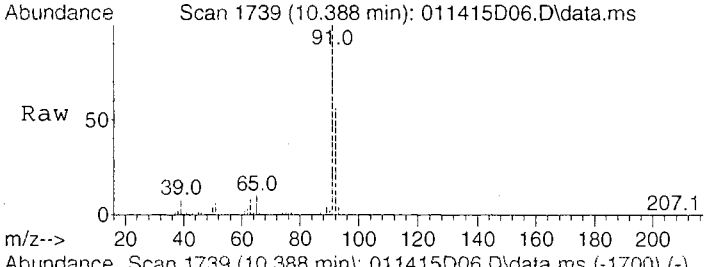


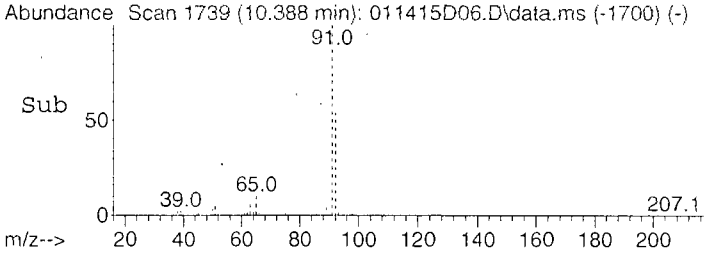


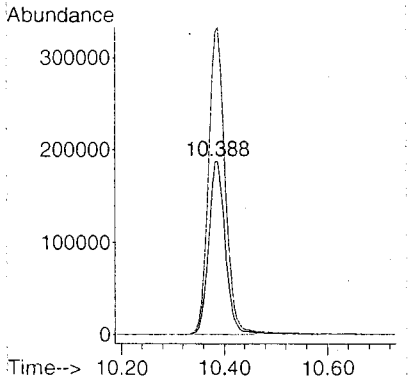
#40
Toluene
Concen: 4.73 ug/L
RT: 10.388 min Scan# 1739
Delta R.T. 0.006 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

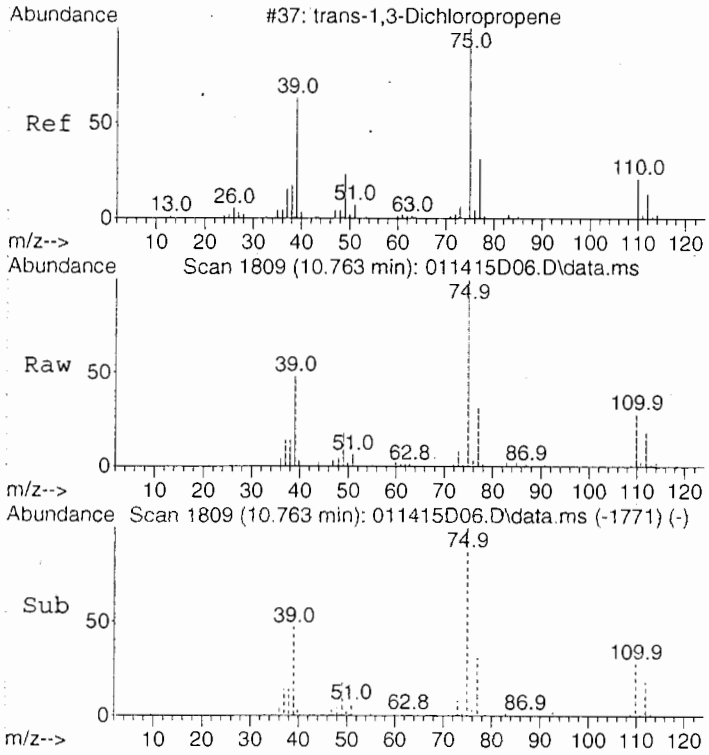
Tgt Ion: 92 Resp: 427566

Ion	Ratio	Lower	Upper
92	100		
91	177.5	157.9	197.9





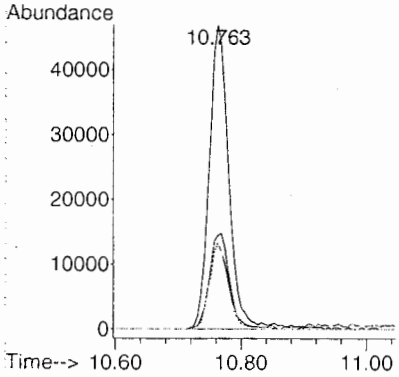


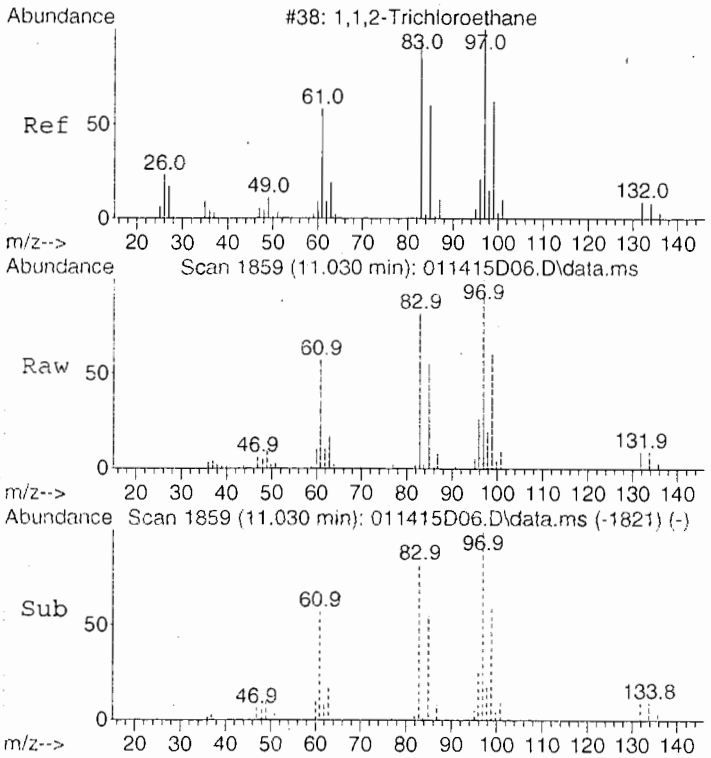


#41
trans-1,3-Dichloropropene
Concen: 4.86 ug/L
RT: 10.763 min Scan# 1809
Delta R.T. 0.002 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 75 Resp: 101818

Ion	Ratio	Lower	Upper
75	100		
77	31.7	13.9	53.9
110	27.5	8.2	48.2

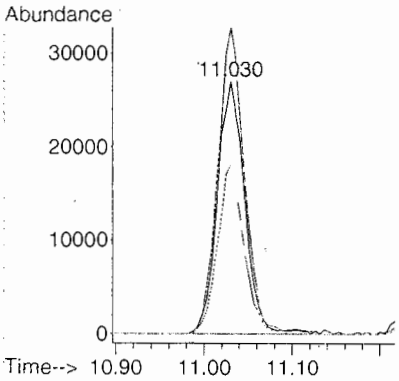


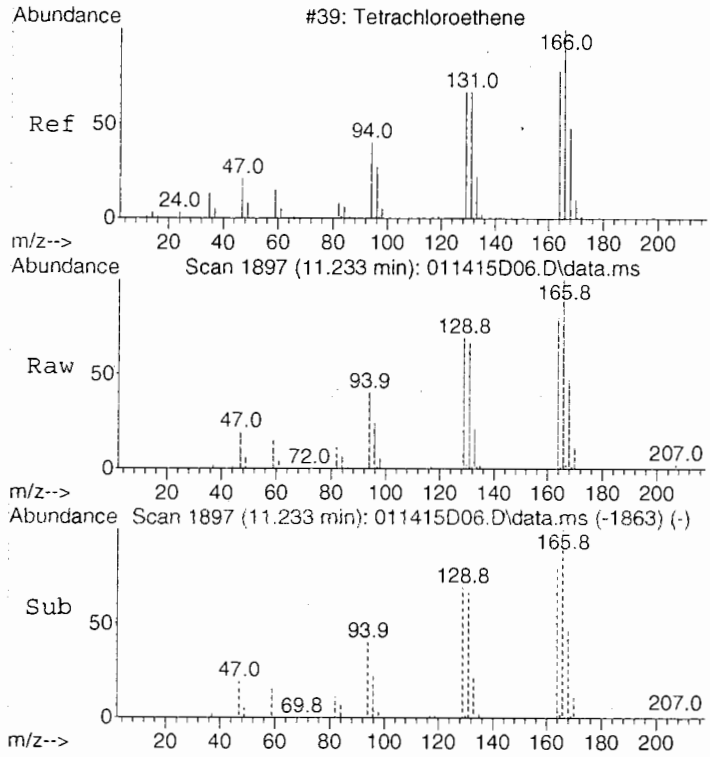


#42
1,1,2-Trichloroethane
Concen: 4.80 ug/L
RT: 11.030 min Scan# 1859
Delta R.T. 0.005 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 83 Resp: 58537

Ion	Ratio	Lower	Upper
83	100		
97	119.0	96.8	136.8
85	64.5	43.6	83.6

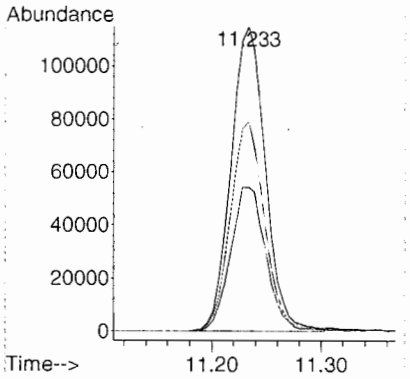


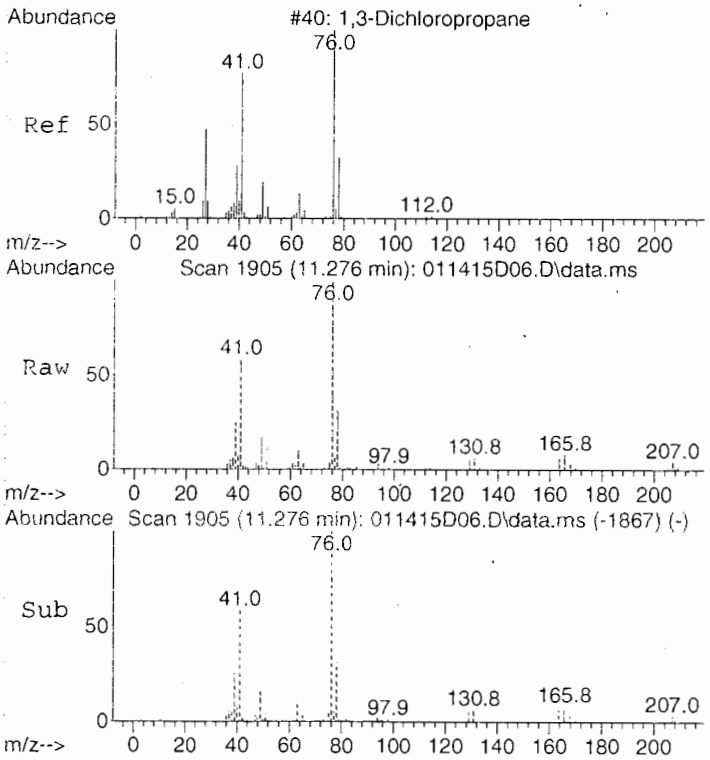


#43
Tetrachloroethene
Concen: 4.69 ug/L
RT: 11.233 min Scan# 1897
Delta R.T. 0.004 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:166 Resp: 250832

Ion	Ratio	Lower	Upper
166	100		
168	48.7	28.1	68.1
129	68.2	48.1	88.1

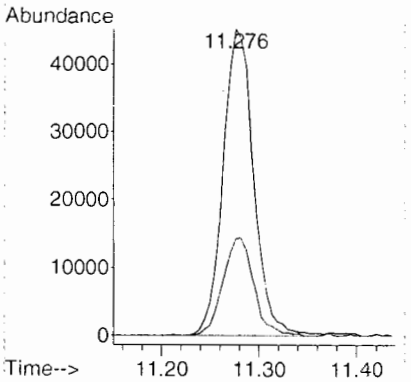


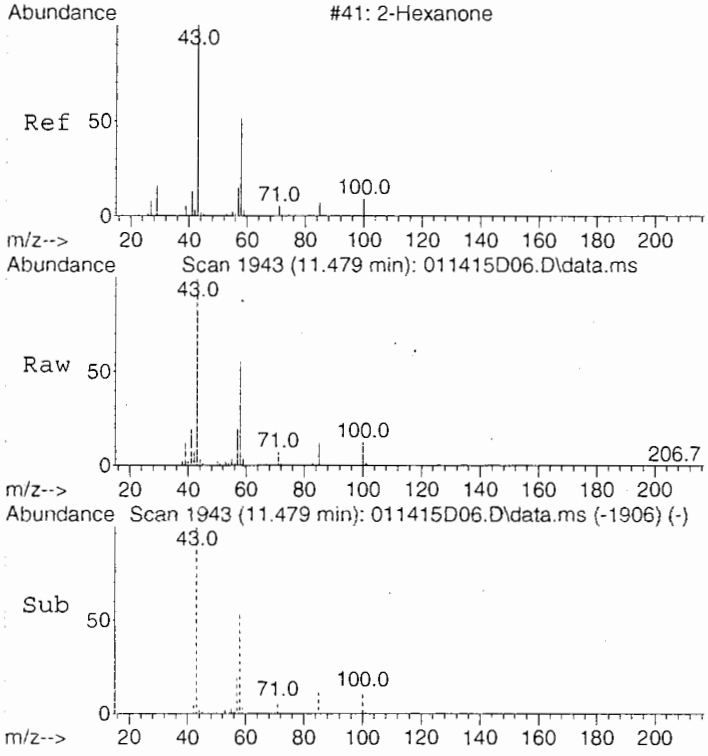


#44
1,3-Dichloropropane
Concen: 4.95 ug/L
RT: 11.276 min Scan# 1905
Delta R.T. 0.001 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 76 Resp: 98724

Ion	Ratio	Lower	Upper
76	100		
78	32.0	13.5	53.5

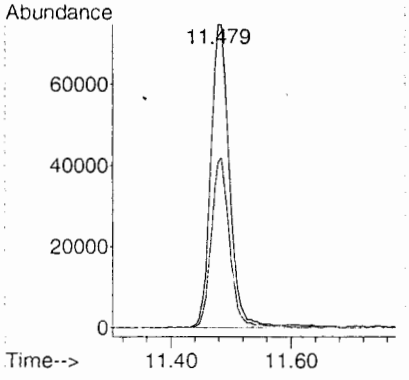


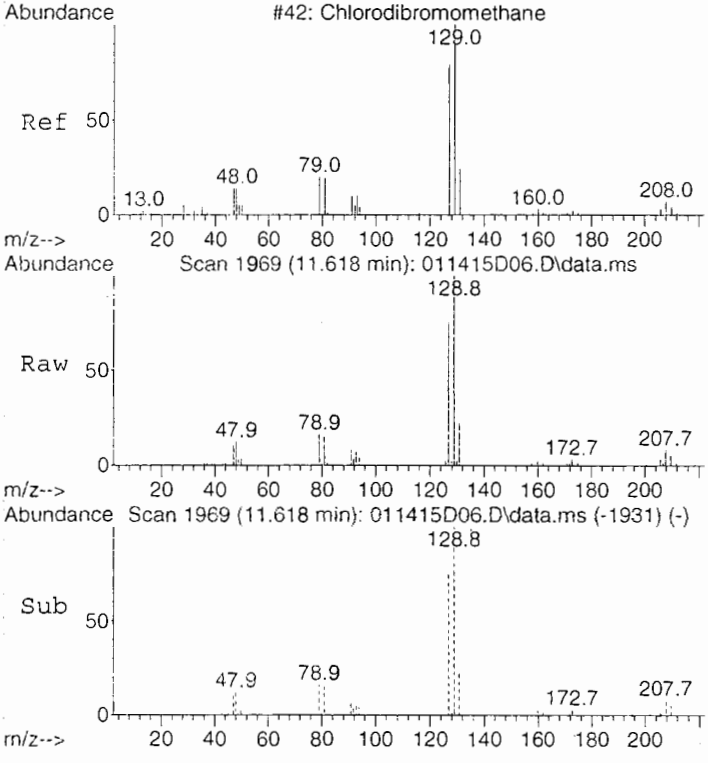


#45
2-Hexanone
Concen: 35.84 ug/L
RT: 11.479 min Scan# 1943
Delta R.T. 0.000 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 43 Resp: 162287

Ion	Ratio	Lower	Upper
43	100		
58	54.1	32.2	72.2

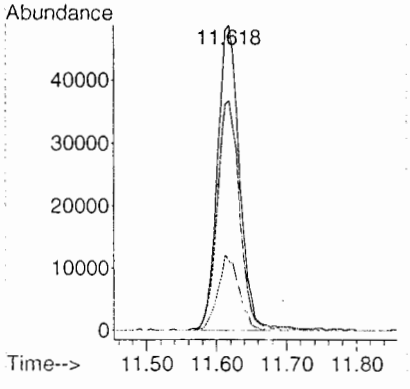


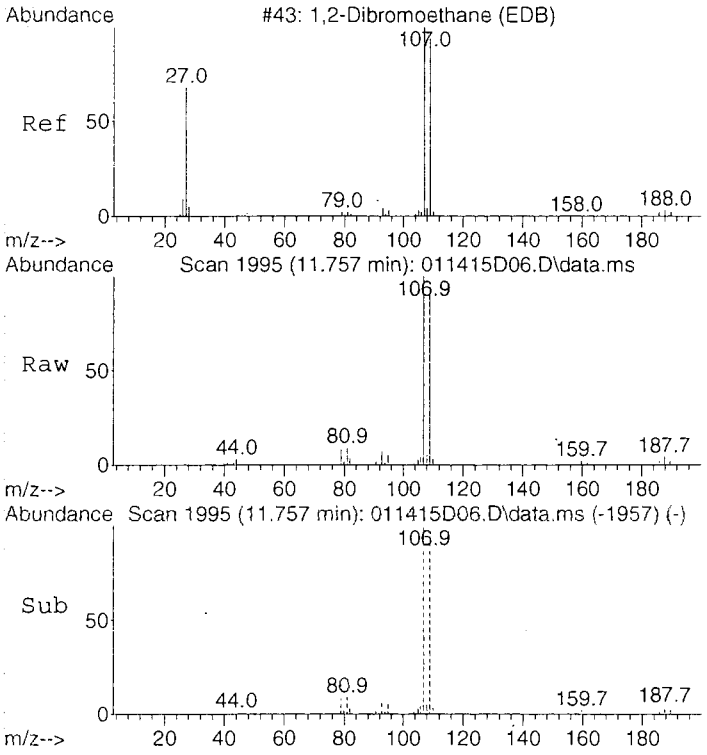


#46
Chlorodibromomethane
Concen: 4.41 ug/L
RT: 11.618 min Scan# 1969
Delta R.T. 0.005 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:129 Resp: 108508

Ion	Ratio	Lower	Upper
129	100		
127	75.2	55.7	95.7
131	23.5	4.8	44.8

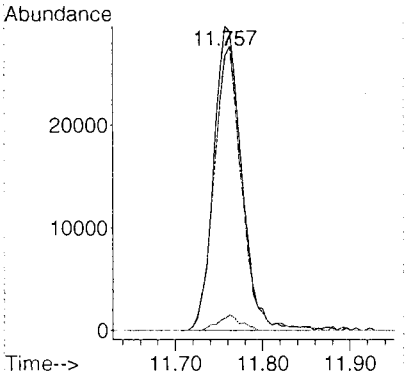


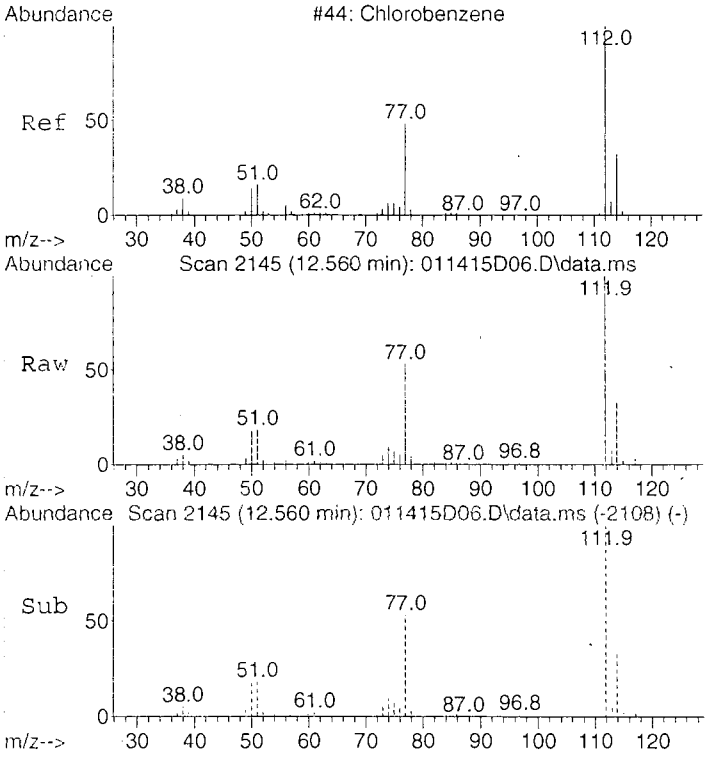


#47
1,2-Dibromoethane (EDB)
Concen: 4.80 ug/L
RT: 11.757 min Scan# 1995
Delta R.T. 0.001 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:107 Resp: 65934

Ion	Ratio	Lower	Upper
107	100		
109	92.0	74.3	114.3
188	4.1	0.0	24.5

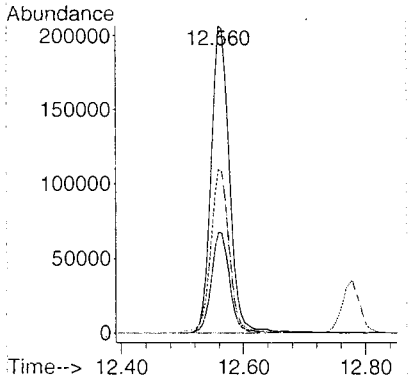


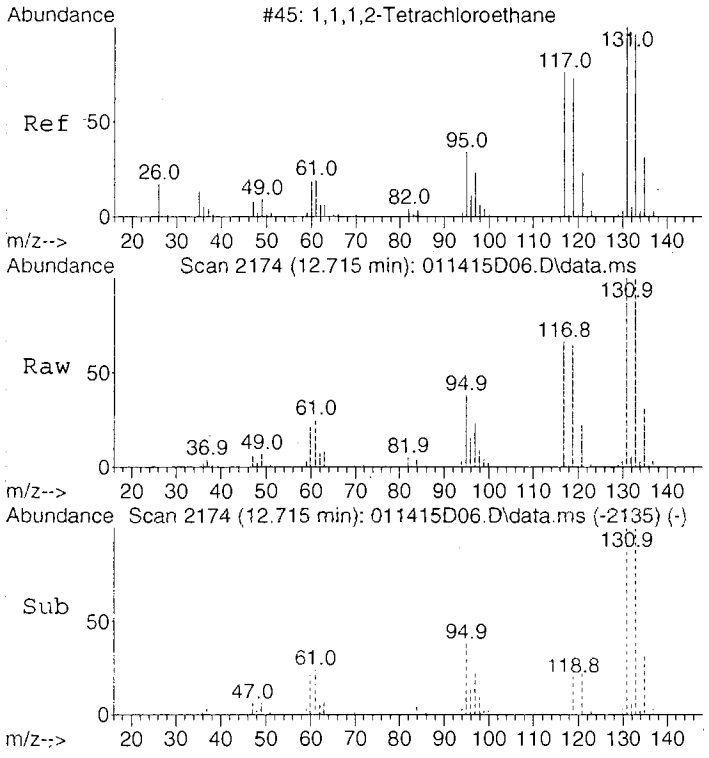


#48
Chlorobenzene
Concen: 4.81 ug/L
RT: 12.560 min Scan# 2145
Delta R.T. 0.000 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:112 Resp: 433052

Ion	Ratio	Lower	Upper
112	100		
114	32.4	12.2	52.2
77	53.2	32.0	72.0

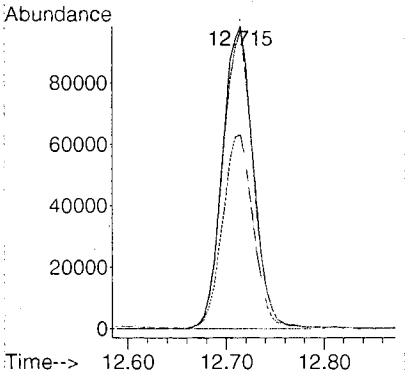


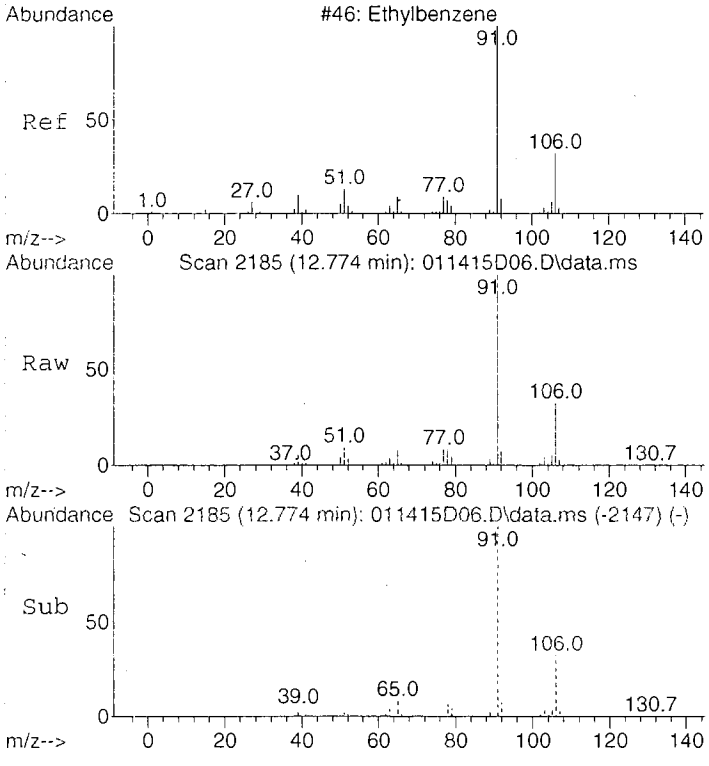


#49
1,1,1,2-Tetrachloroethane
Concen: 4.23 ug/L
RT: 12.715 min Scan# 2174
Delta R.T. 0.006 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:131 Resp: 214662

Ion	Ratio	Lower	Upper
131	100		
133	96.4	76.6	116.6
119	63.9	46.2	86.2

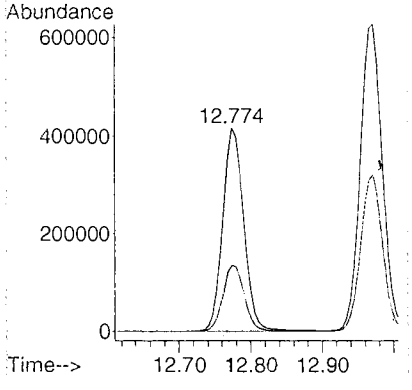


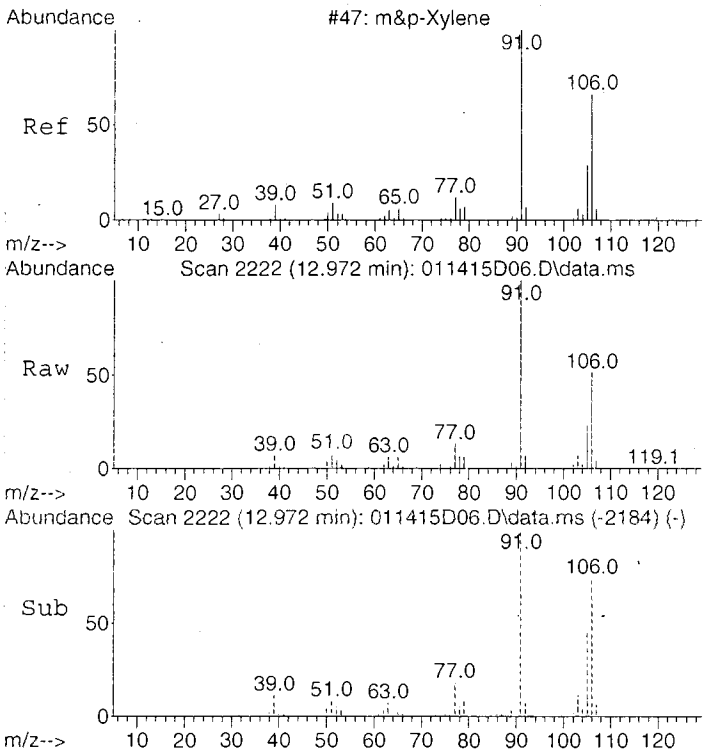


#50
Ethylbenzene
Concen: 4.73 ug/L
RT: 12.774 min Scan# 2185
Delta R.T. 0.001 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 91 Resp: 851207

Ion	Ratio	Lower	Upper
91	100		
106	33.0	13.7	53.7

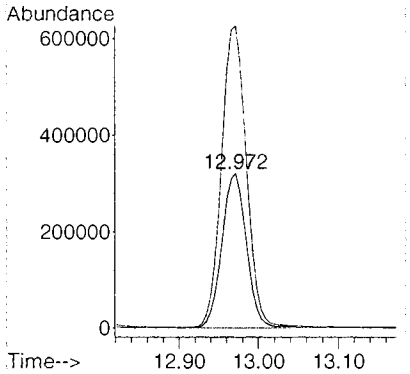


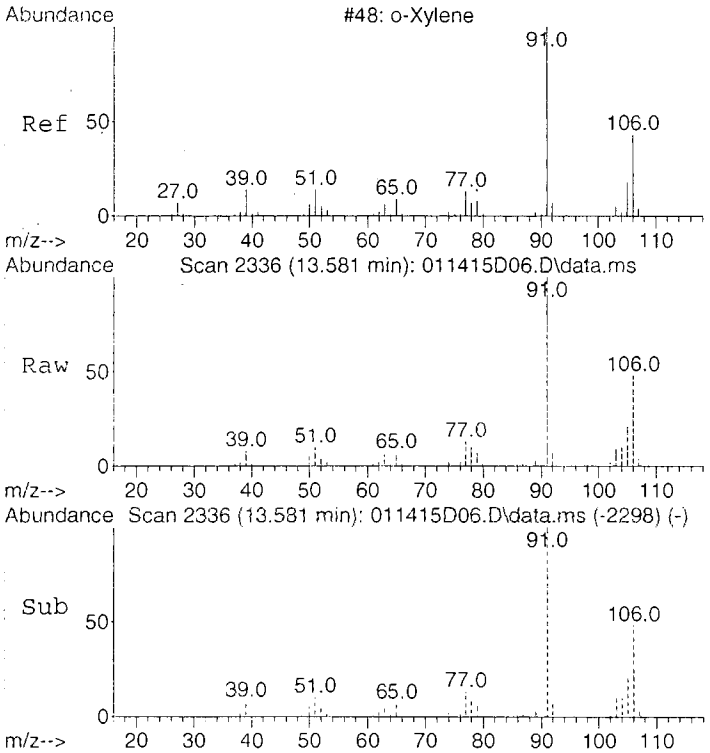


#51
m&p-Xylene
Concen: 9.32 ug/L
RT: 12.972 min Scan# 2222
Delta R.T. 0.005 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:106 Resp: 685082

Ion	Ratio	Lower	Upper
106	100		
91	197.7	177.2	217.2

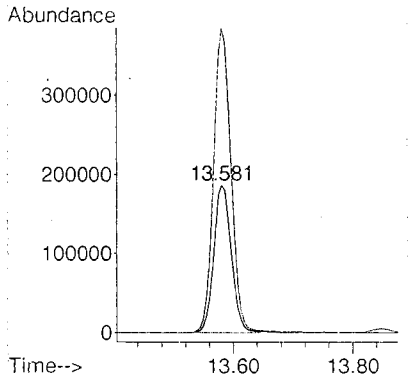


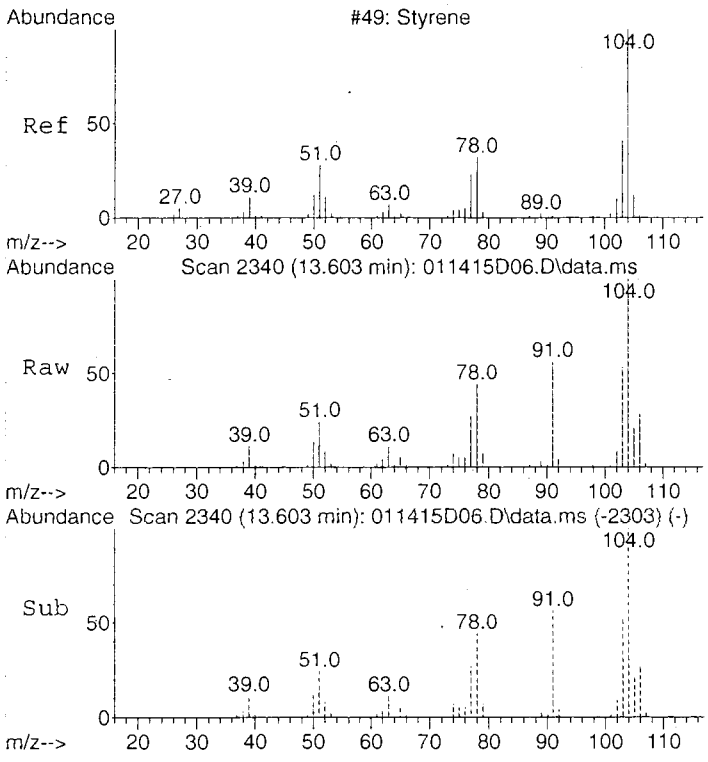


#52
o-Xylene
Concen: 4.51 ug/L
RT: 13.581 min Scan# 2336
Delta R.T. 0.002 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:106 Resp: 385089

Ion	Ratio	Lower	Upper
106	100		
91	205.5	187.4	227.4

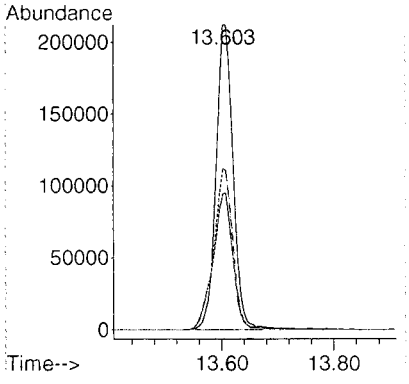


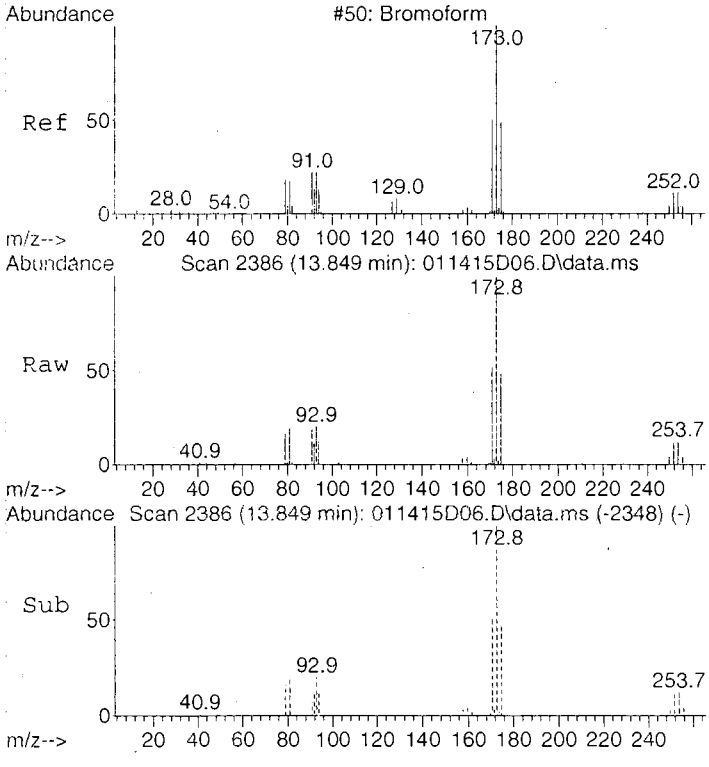


#53
Styrene
Concen: 4.69 ug/L
RT: 13.603 min Scan# 2340
Delta R.T. 0.000 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:104 Resp: 445423

Ion	Ratio	Lower	Upper
104	100		
78	52.1	31.1	71.1
103	59.1	39.7	79.7

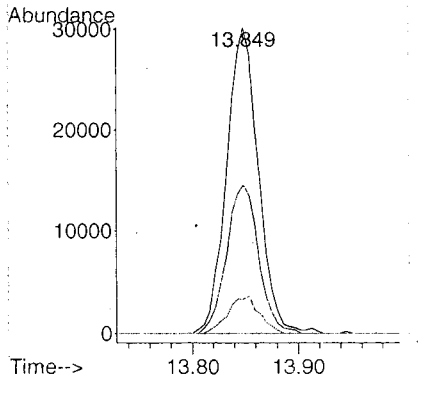


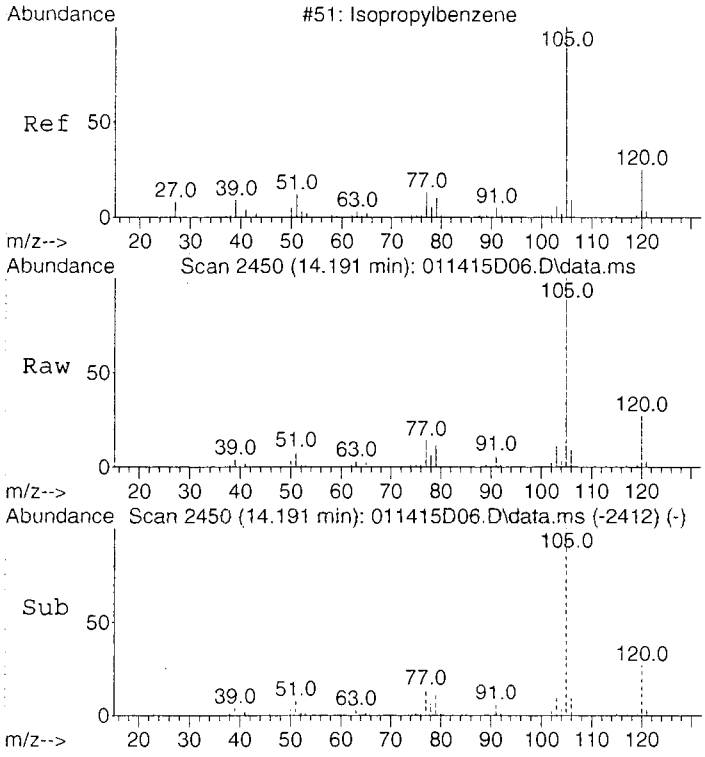


#54
Bromoform
Concen: 4.06 ug/L
RT: 13.849 min Scan# 2386
Delta R.T. 0.003 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:173 Resp: 62677

Ion	Ratio	Lower	Upper
173	100		
175	48.6	28.8	68.8
252	11.9	0.0	32.4

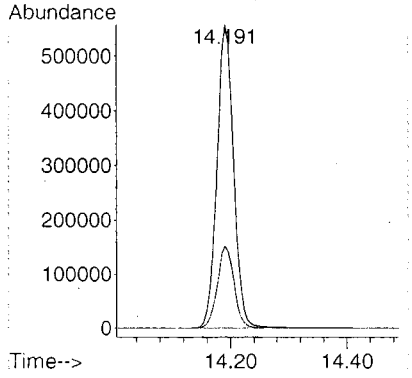


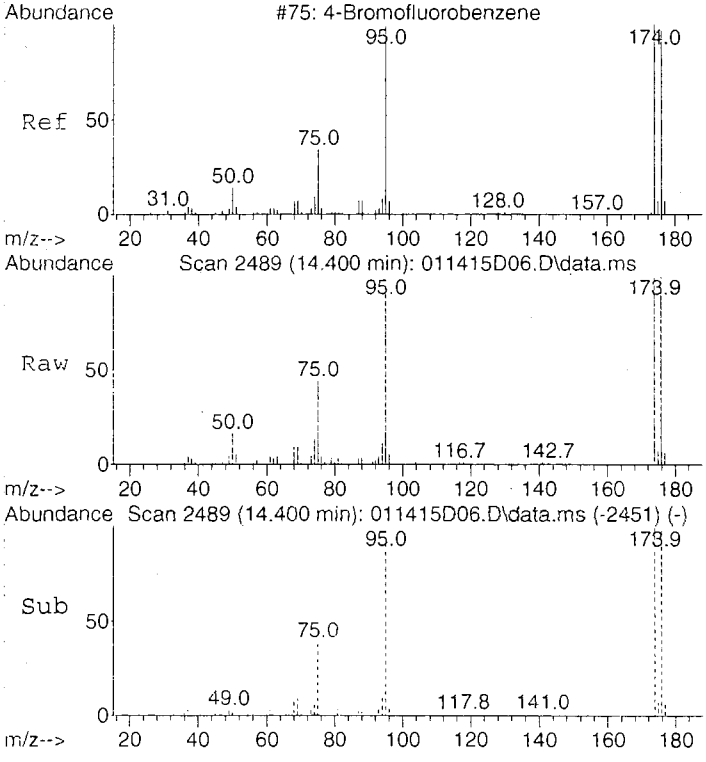


#55
Isopropylbenzene
Concen: 4.69 ug/L
RT: 14.191 min Scan# 2450
Delta R.T. 0.001 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:105 Resp: 1114405

Ion	Ratio	Lower	Upper
105	100		
120	27.1	8.0	48.0

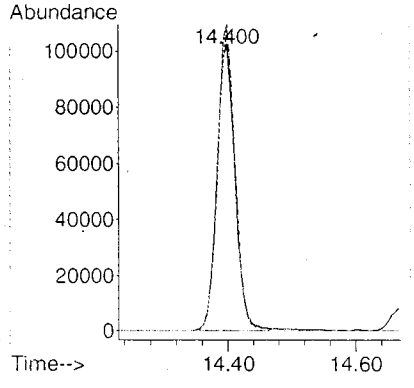


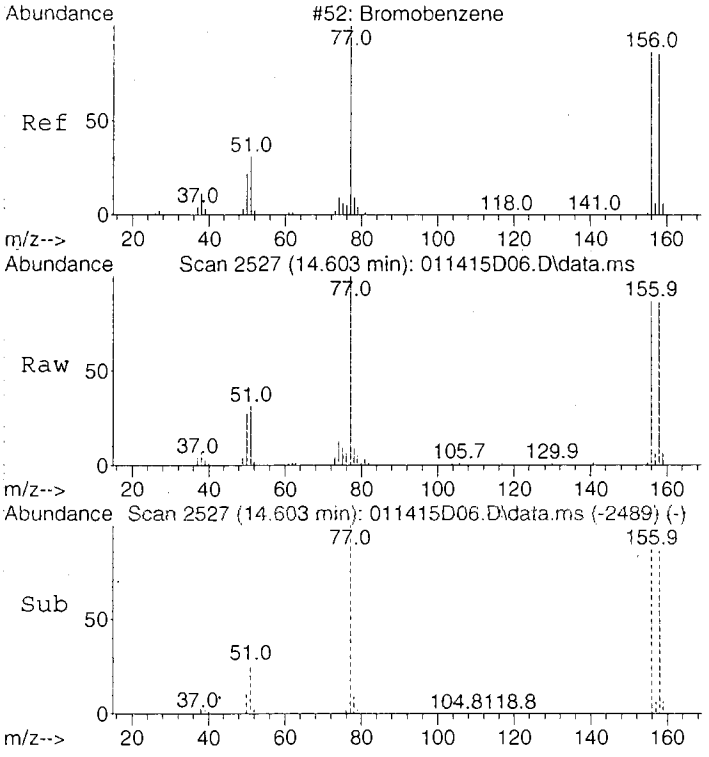


#56
4-Bromofluorobenzene
Concen: 5.01 ug/L
RT: 14.400 min Scan# 2489
Delta R.T. 0.005 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 95 Resp: 204696

Ion	Ratio	Lower	Upper
95	100		
174	105.3	91.4	131.4
176	103.0	87.4	127.4

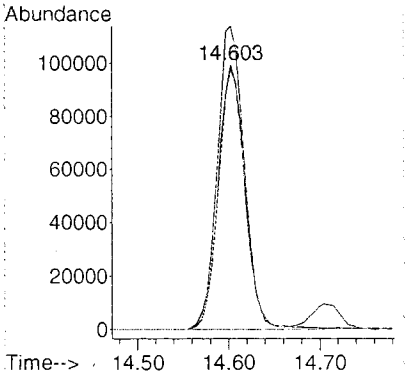


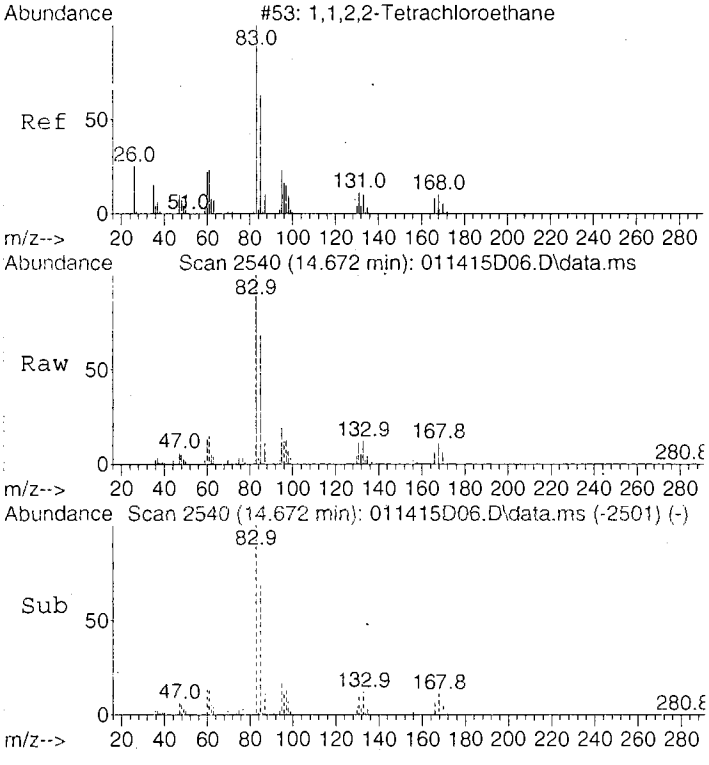


#57
Bromobenzene
Concen: 4.52 ug/L
RT: 14.603 min Scan# 2527
Delta R.T. 0.004 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:156 Resp: 199447

Ion	Ratio	Lower	Upper
156	100		
77	116.7	89.7	129.7
158	98.8	75.7	115.7

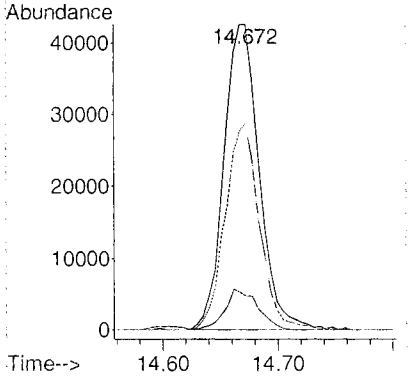


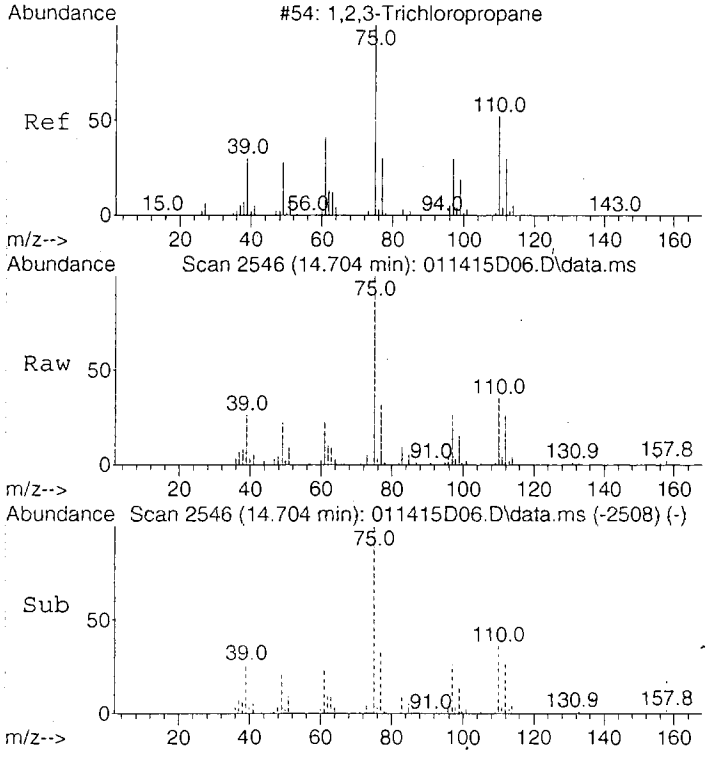


#58
1,1,2,2-Tetrachloroethane
Concen: 4.31 ug/L
RT: 14.672 min Scan# 2540
Delta R.T. 0.006 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 83 Resp: 90574

Ion	Ratio	Lower	Upper
83	100		
131	12.4	0.0	32.3
85	65.6	44.9	84.9

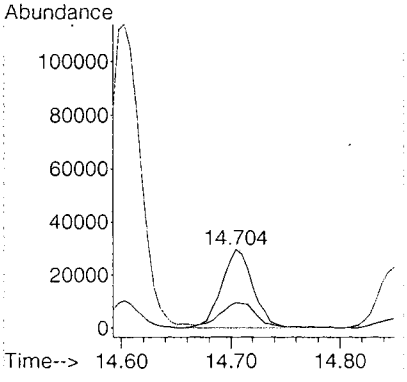


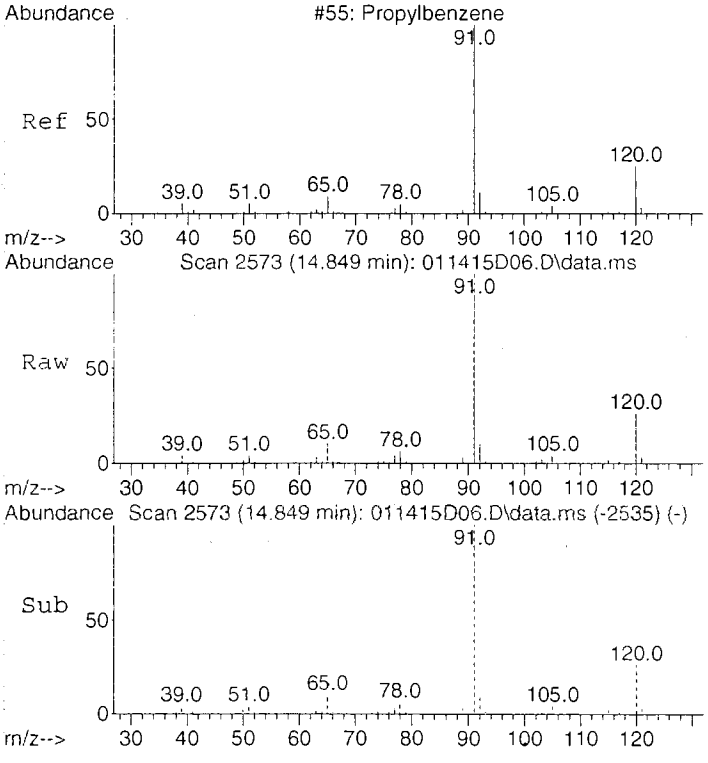


#59
1,2,3-Trichloropropane
Concen: 4.61 ug/L
RT: 14.704 min Scan# 2546
Delta R.T. 0.001 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 75 Resp: 59944

Ion	Ratio	Lower	Upper
75	100		
77	38.0	18.8	58.8

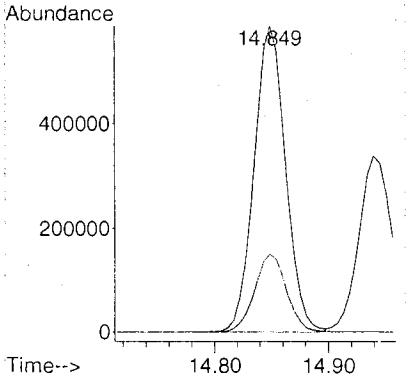


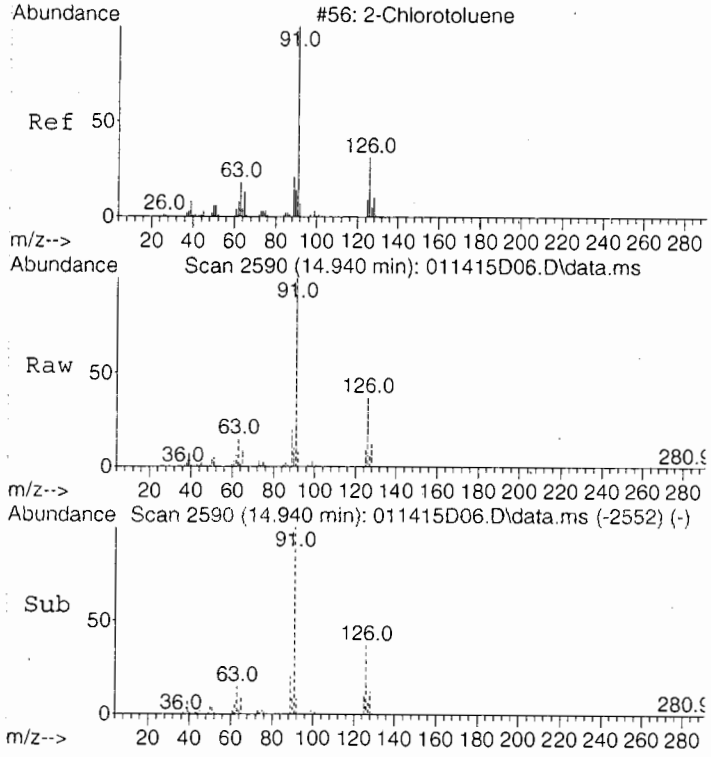


#60
Propylbenzene
Concen: 4.64 ug/L
RT: 14.849 min Scan# 2573
Delta R.T. 0.004 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 91 Resp: 1126342

Ion	Ratio	Lower	Upper
91	100		
120	25.9	5.7	45.7

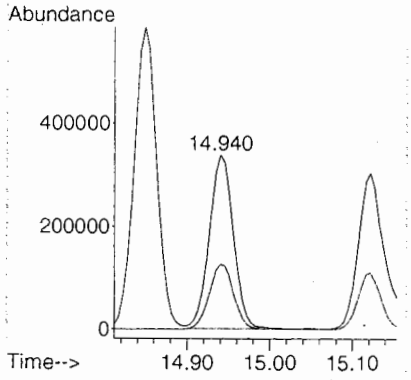


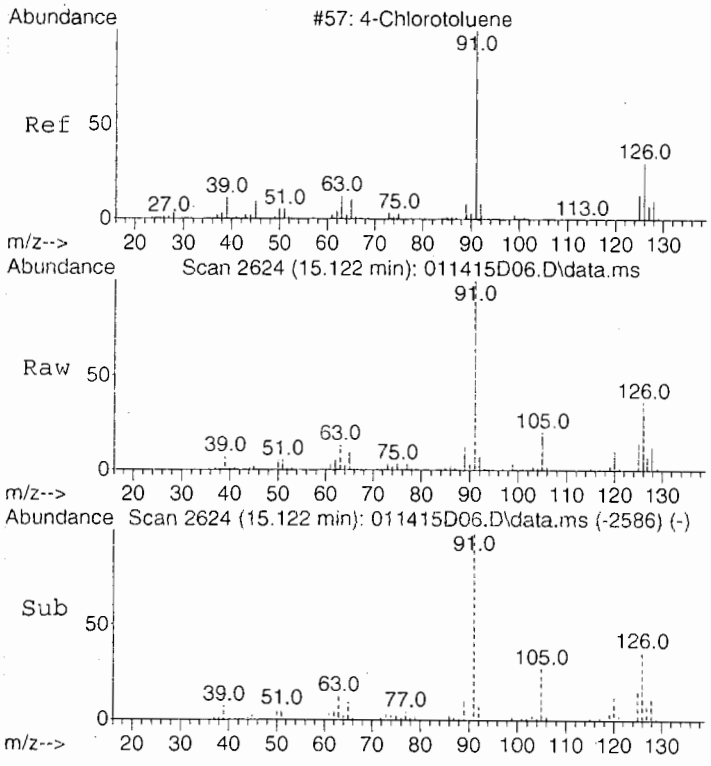


#61
2-Chlorotoluene
Concen: 4.65 ug/L
RT: 14.940 min Scan# 2590
Delta R.T. 0.002 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 91 Resp: 685873

Ion	Ratio	Lower	Upper
91	100		
126	38.0	19.8	59.8

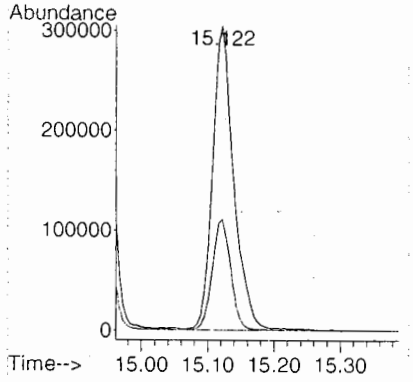


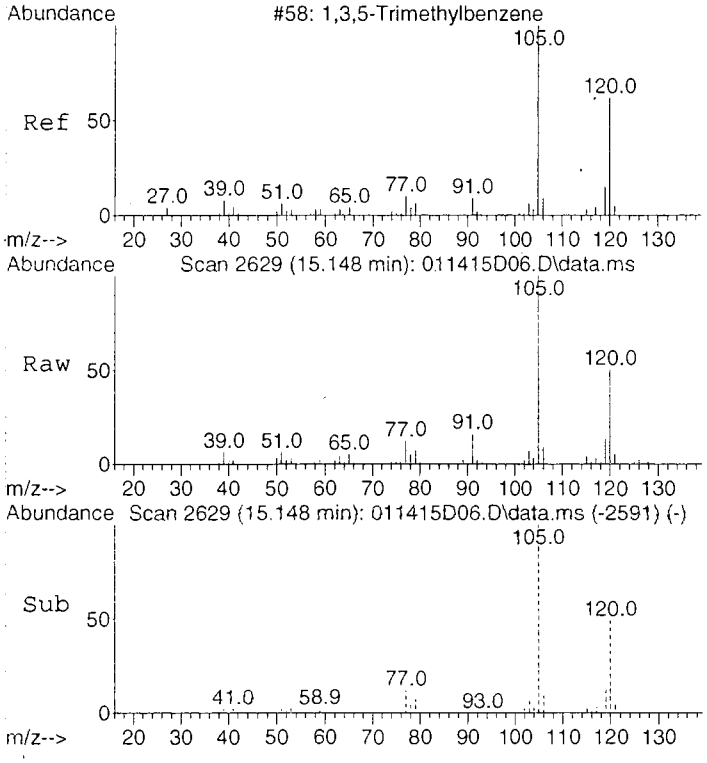


#62
4-Chlorotoluene
Concen: 4.66 ug/L
RT: 15.122 min Scan# 2624
Delta R.T. 0.004 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 91 Resp: 679614

Ion	Ratio	Lower	Upper
91	100		
126	32.0	13.0	53.0

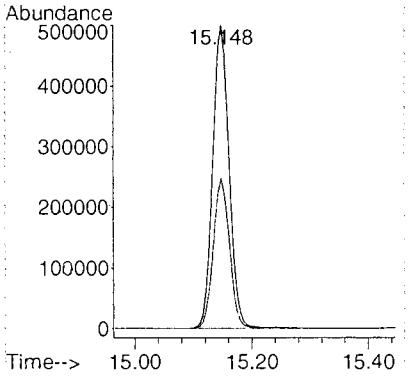


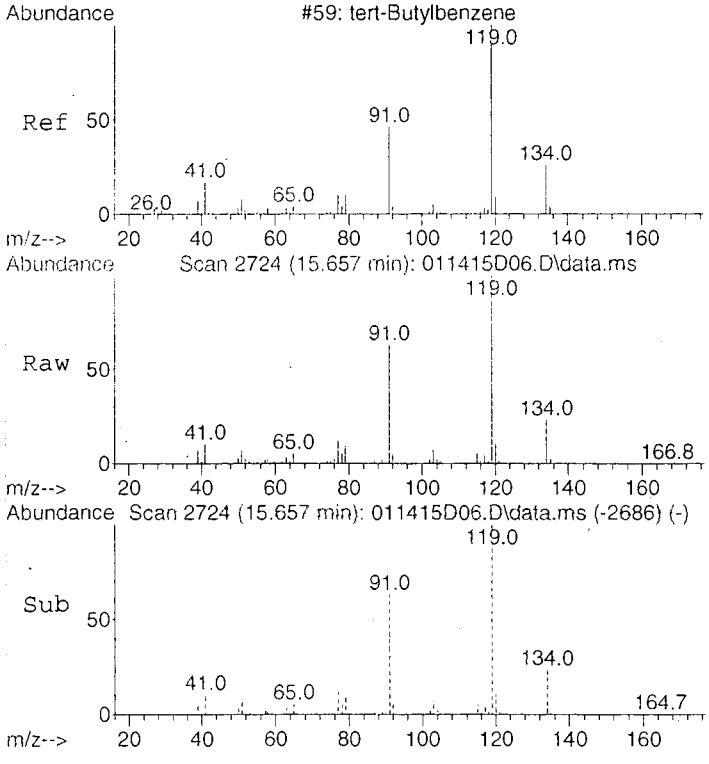


#63
1,3,5-Trimethylbenzene
Concen: 4.59 ug/L
RT: 15.148 min Scan# 2629
Delta R.T. 0.002 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:105 Resp: 976616

Ion	Ratio	Lower	Upper
105	100		
120	49.1	29.8	69.8

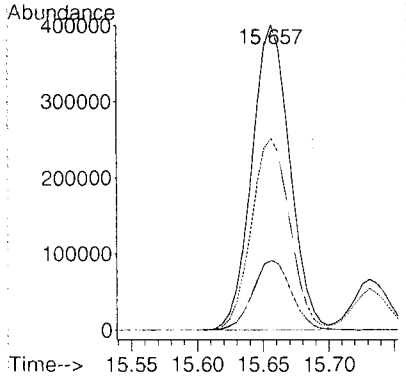


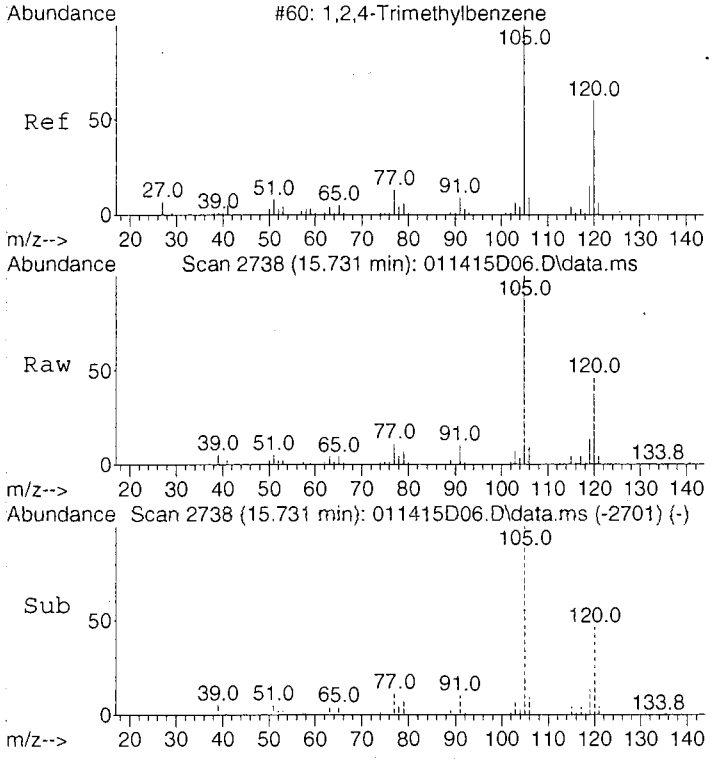


#64
tert-Butylbenzene
Concen: 4.83 ug/L
RT: 15.657 min Scan# 2724
Delta R.T. 0.002 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:119 Resp: 804273

Ion	Ratio	Lower	Upper
119	100		
134	23.0	3.2	43.2
91	63.8	42.8	82.8

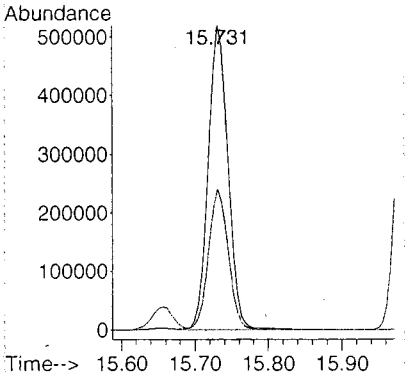


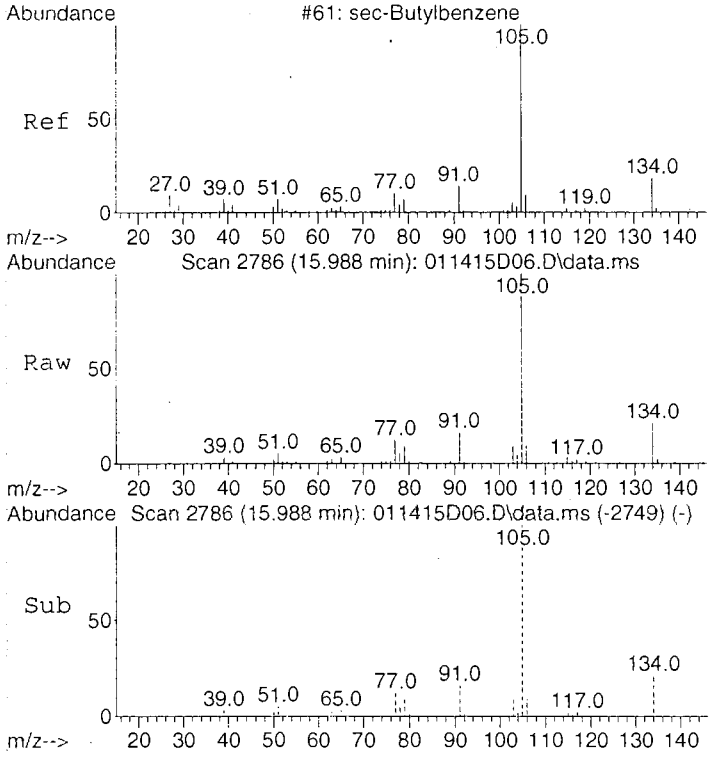


#65
1,2,4-Trimethylbenzene
Concen: 4.56 ug/L
RT: 15.731 min Scan# 2738
Delta R.T. 0.000 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:105 Resp: 970090

Ion	Ratio	Lower	Upper
105	100		
120	46.3	26.7	66.7

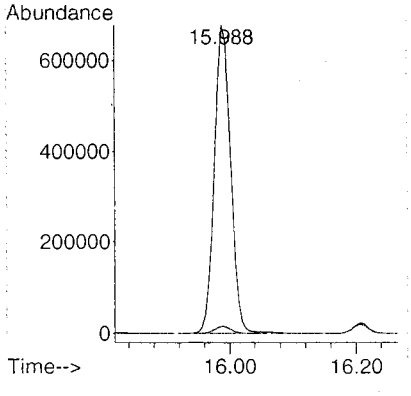


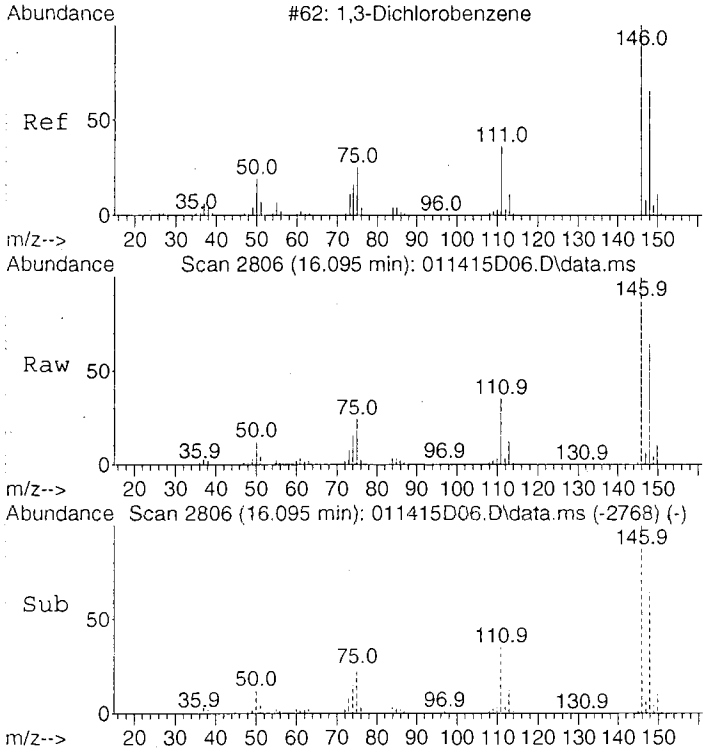


#66
sec-Butylbenzene
Concen: 4.64 ug/L
RT: 15.988 min Scan# 2786
Delta R.T. 0.000 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:105 Resp: 1208165

Ion	Ratio	Lower	Upper
105	100		
135	2.2	0.0	22.2

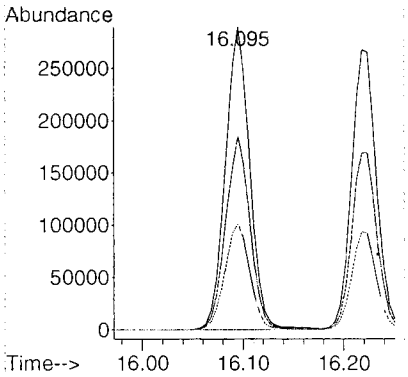


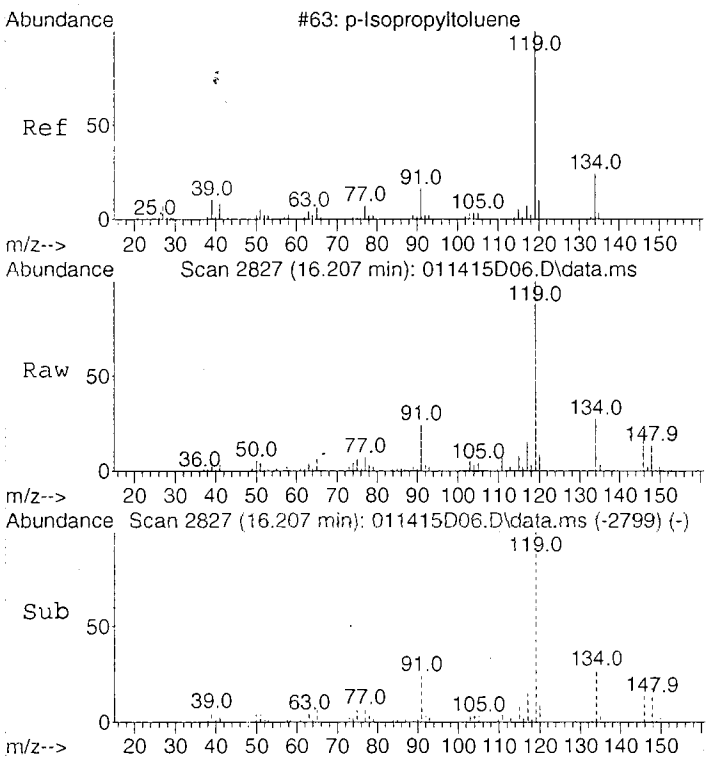


#67
1,3-Dichlorobenzene
Concen: 4.47 ug/L
RT: 16.095 min Scan# 2806
Delta R.T. 0.002 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:146 Resp: 487630

Ion	Ratio	Lower	Upper
146	100		
148	64.1	44.4	84.4
111	36.0	15.1	55.1

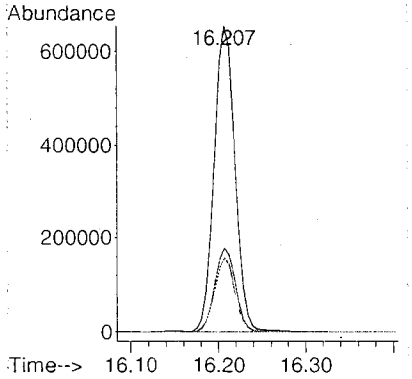


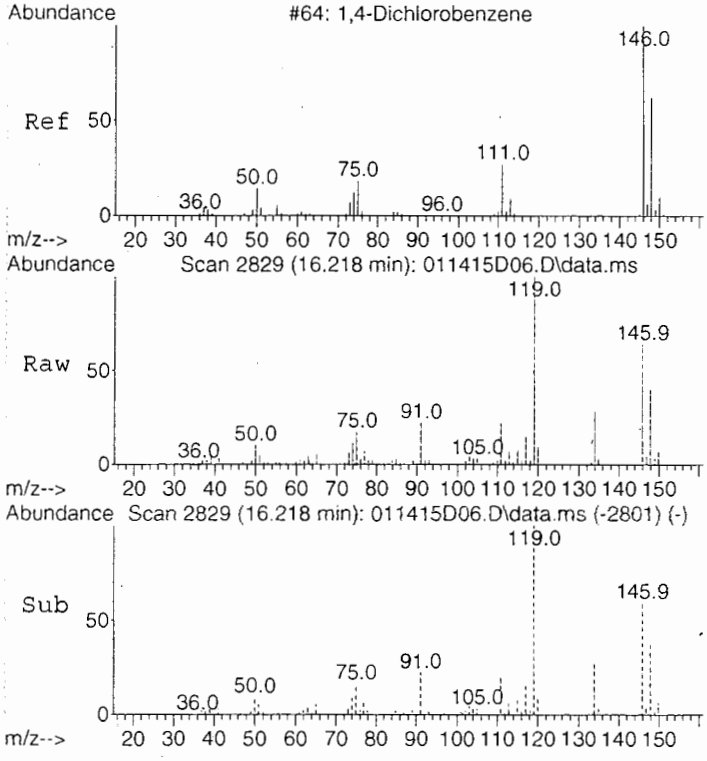


#68
p-Isopropyltoluene
Concen: 4.56 ug/L
RT: 16.207 min Scan# 2827
Delta R.T. 0.001 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:119 Resp: 1089230

Ion	Ratio	Lower	Upper
119	100		
134	27.3	7.6	47.6
91	23.5	3.0	43.0

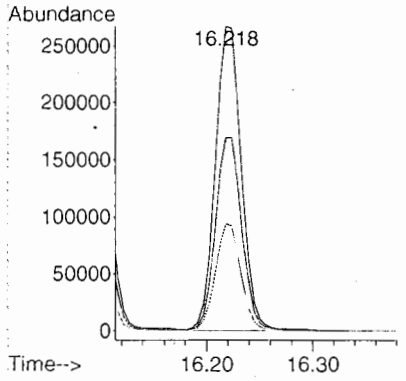


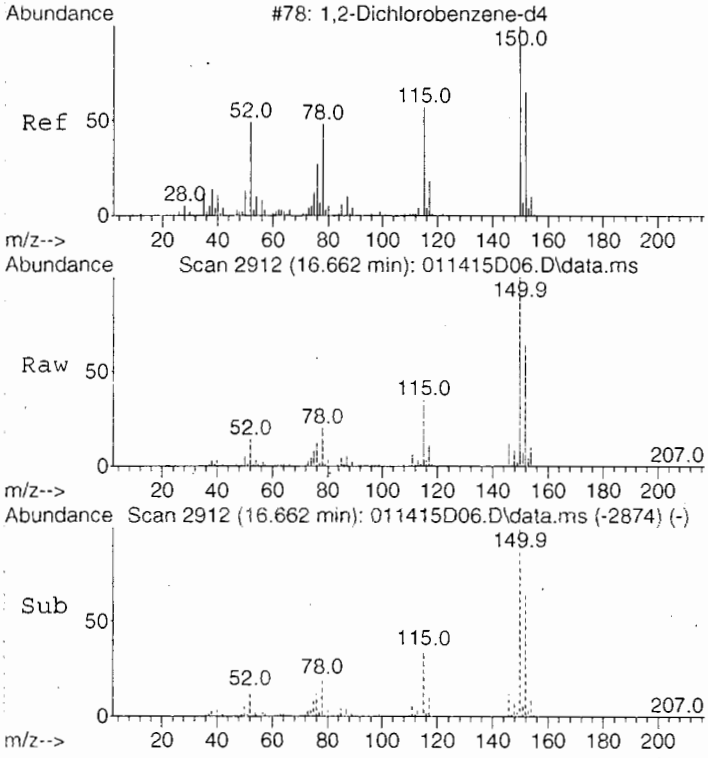


#69
1,4-Dichlorobenzene
Concen: 4.40 ug/L
RT: 16.218 min Scan# 2829
Delta R.T. 0.000 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:146 Resp: 457119

Ion	Ratio	Lower	Upper
146	100		
148	64.2	43.6	83.6
111	34.7	14.3	54.3

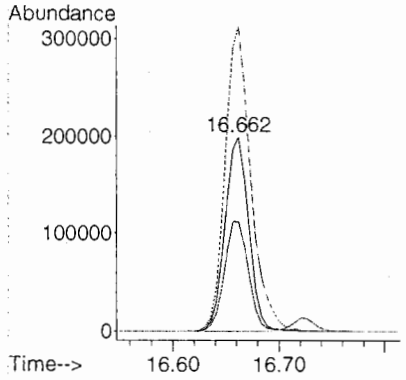


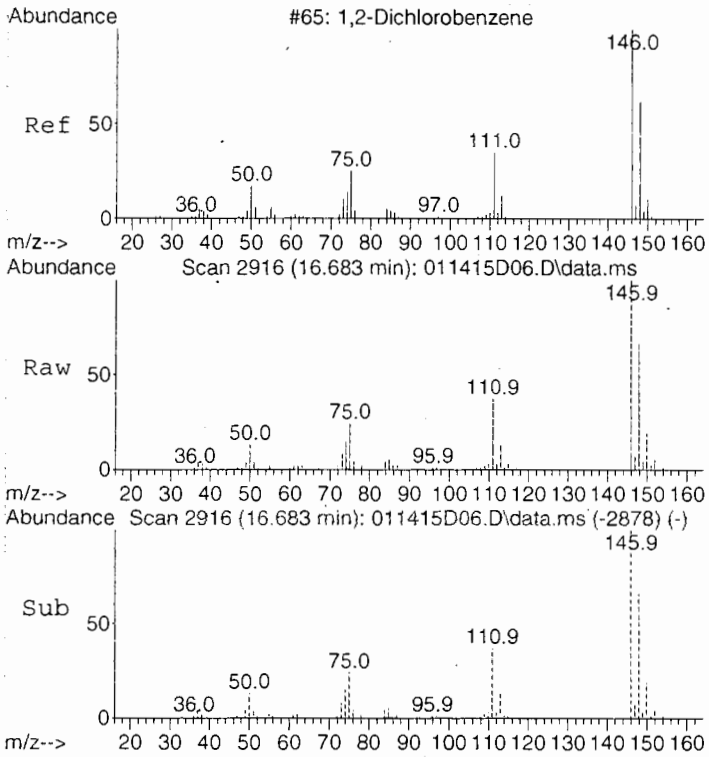


#70
1,2-Dichlorobenzene-d4
Concen: 4.52 ug/L
RT: 16.662 min Scan# 2912
Delta R.T. 0.005 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:152 Resp: 307456

Ion	Ratio	Lower	Upper
152	100		
115	57.1	35.0	75.0
150	170.8	150.1	190.1

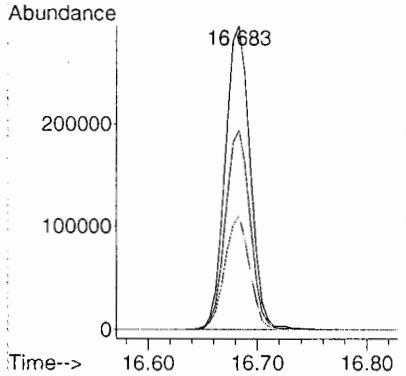


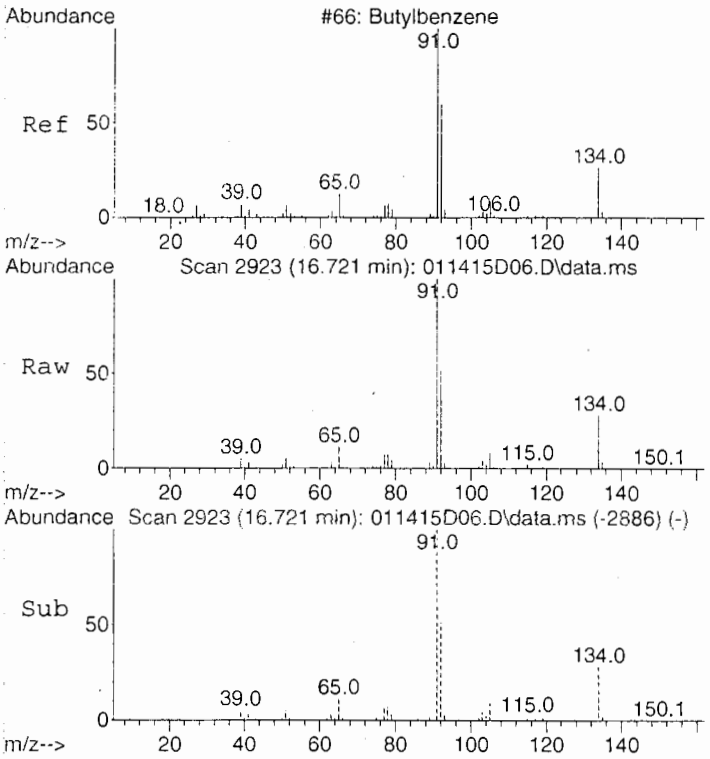


#71
1,2-Dichlorobenzene
Concen: 4.30 ug/L
RT: 16.683 min Scan# 2916
Delta R.T. 0.002 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:146 Resp: 466363

Ion	Ratio	Lower	Upper
146	100		
148	64.9	44.7	84.7
111	37.5	16.7	56.7

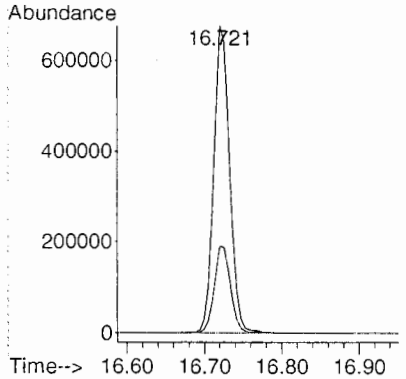


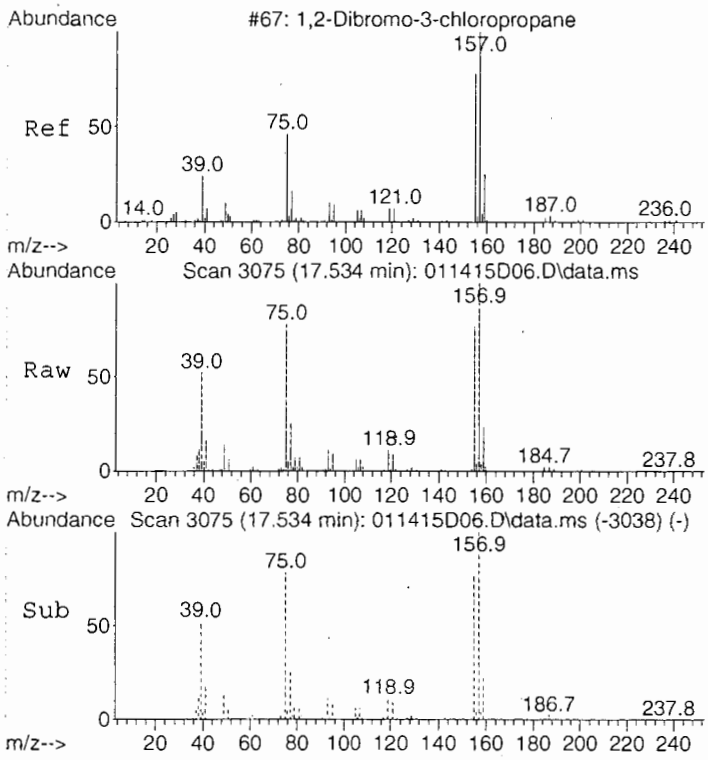


#72
Butylbenzene
Concen: 4.53 ug/L
RT: 16.721 min Scan# 2923
Delta R.T. 0.000 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 91 Resp: 976065

Ion	Ratio	Lower	Upper
91	100		
134	28.8	9.0	49.0

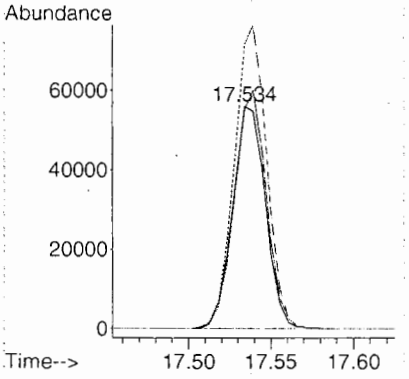


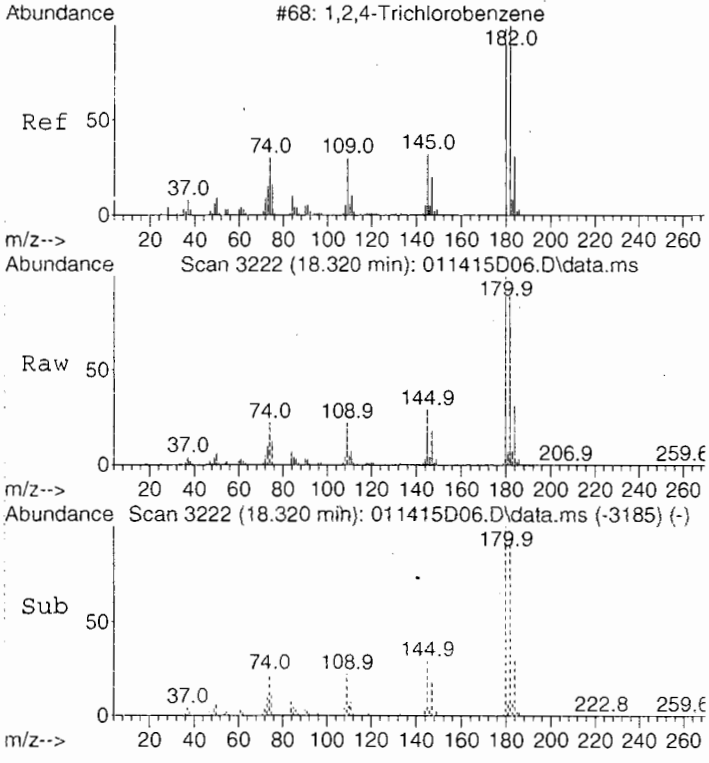


#73
1,2-Dibromo-3-chloropropane
Concen: 16.10 ug/L
RT: 17.534 min Scan# 3075
Delta R.T. 0.000 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion: 75 Resp: 77724

Ion	Ratio	Lower	Upper
75	100		
155	103.8	93.5	133.5
157	134.7	123.2	163.2

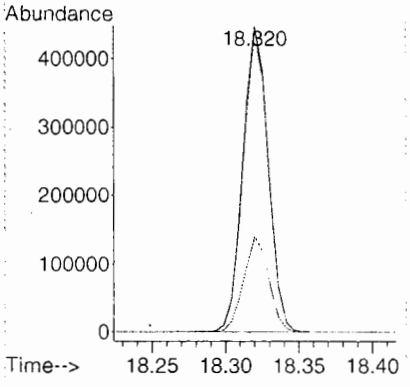


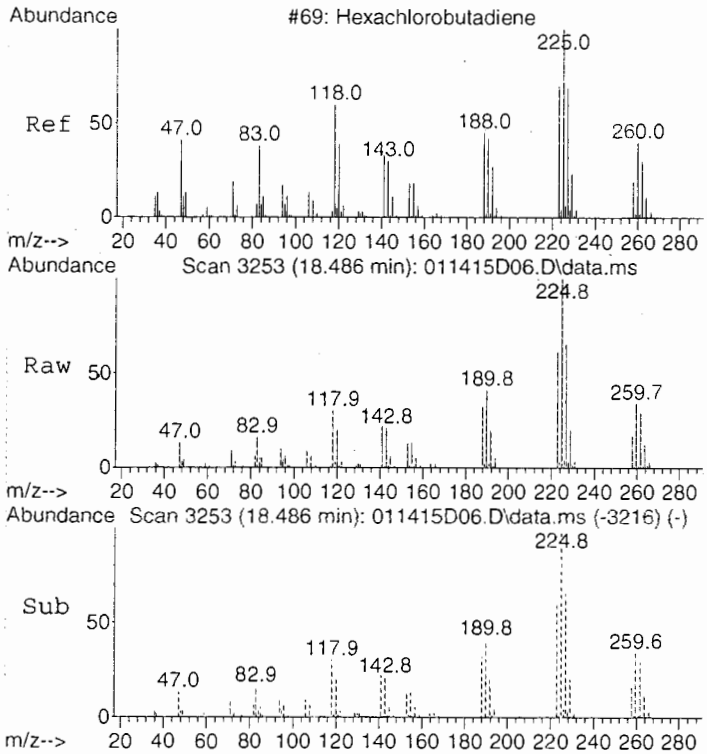


#74
1,2,4-Trichlorobenzene
Concen: 3.96 ug/L
RT: 18.320 min Scan# 3222
Delta R.T. 0.000 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:180 Resp: 537669

Ion	Ratio	Lower	Upper
180	100		
182	96.7	75.7	115.7
184	30.9	10.7	50.7

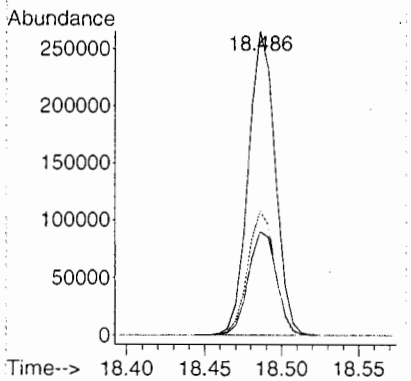


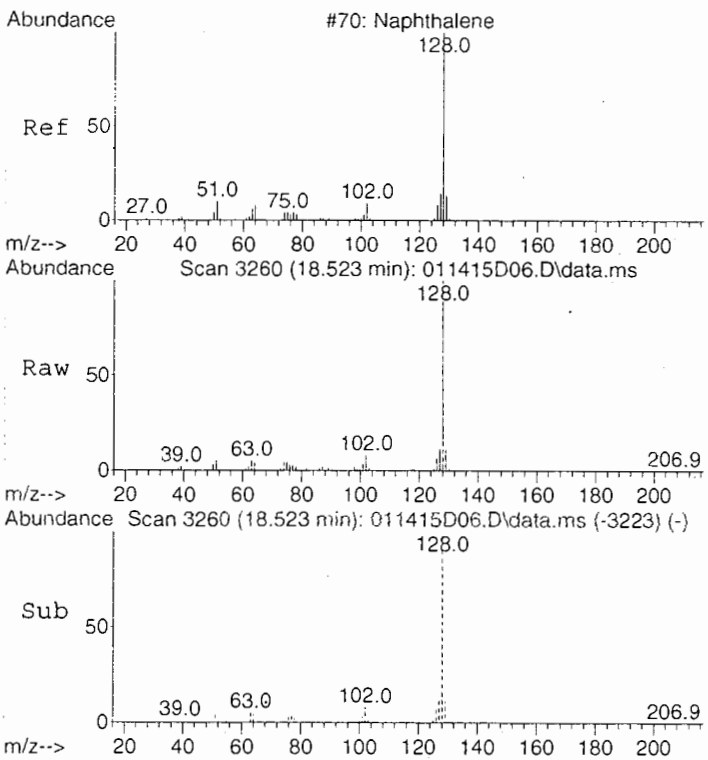


#75
Hexachlorobutadiene
Concen: 4.22 ug/L
RT: 18.486 min Scan# 3253
Delta R.T. 0.000 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:225 Resp: 320507

Ion	Ratio	Lower	Upper
225	100		
260	35.5	14.1	54.1
190	40.9	21.1	61.1

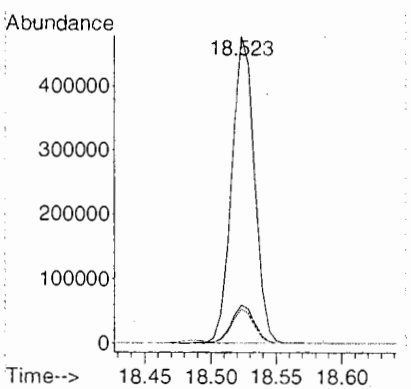


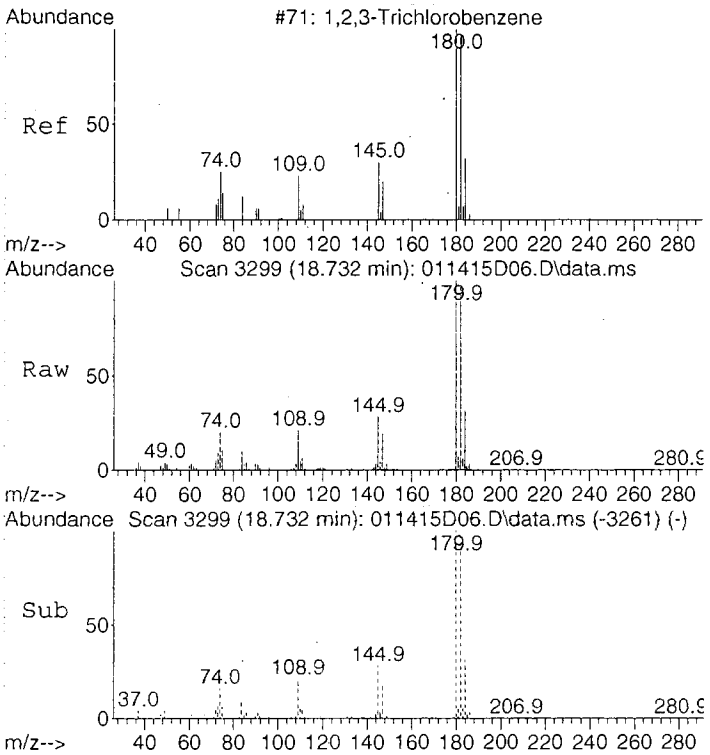


#76
Naphthalene
Concen: 4.00 ug/L
RT: 18.523 min Scan# 3260
Delta R.T. 0.000 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:128 Resp: 581222

Ion	Ratio	Lower	Upper
128	100		
127	12.5	0.0	33.2
129	10.8	0.0	31.0

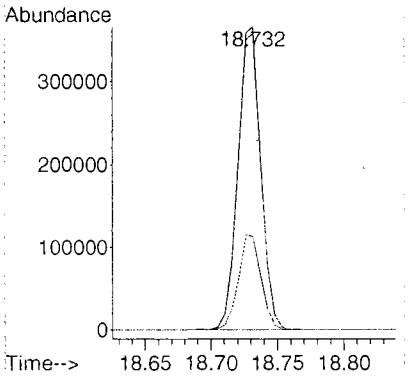




#77
1,2,3-Trichlorobenzene
Concen: 3.97 ug/L
RT: 18.732 min Scan# 3299
Delta R.T. 0.005 min
Lab File: 011415D06.D
Acq: 14 Jan 2015 10:52

Tgt Ion:180 Resp: 440999

Ion	Ratio	Lower	Upper
180	100		
182	97.6	75.6	115.6
184	31.0	11.0	51.0



LSC Area Percent Report

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D06.D
Acq On : 14 Jan 2015 10:52
Operator : YNB
Sample : S15A047-CAL4
Misc : 5ug/L WATER
ALS Vial : 31 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 50 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\2\methods\011415W.M
Title : Volatile Organic Analysis - 524.2 Method

Signal : TIC: 011415D06.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.552	82	87	98	rBV	215727	326777	6.67%	0.333%
2	1.686	104	112	133	rVB	186065	430898	8.79%	0.439%
3	1.996	163	170	184	rBV	306905	605415	12.35%	0.616%
4	2.103	184	190	206	rVB	159318	302697	6.18%	0.308%
5	2.392	235	244	247	rBV	143342	309767	6.32%	0.315%
6	2.996	348	357	361	rBV	426547	971576	19.83%	0.989%
7	3.248	395	404	428	rVB	347888	936808	19.12%	0.953%
8	3.638	467	477	478	rBV	338282	631867	12.89%	0.643%
9	3.970	530	539	555	rBV2	49177	197758	4.04%	0.201%
10	4.109	555	565	567	rVV	442405	931041	19.00%	0.947%
11	4.157	569	574	608	rVB	777701	2734819	55.80%	2.783%
12	4.836	690	701	726	rBV	268096	885977	18.08%	0.902%
13	5.088	734	748	780	rBV2	1357920	4900714	100.00%	4.987%
14	5.724	851	867	882	rBV	1169281	4005039	81.72%	4.076%
15	5.858	882	892	903	rVV4	622044	2093662	42.72%	2.131%
16	5.943	905	908	932	rVB	103509	331255	6.76%	0.337%
17	6.248	954	965	988	rVB2	209345	586487	11.97%	0.597%
18	6.435	988	1000	1021	rBV	349234	1003161	20.47%	1.021%
19	6.692	1036	1048	1075	rBV	379190	1191933	24.32%	1.213%
20	6.970	1085	1100	1125	rBV3	730458	2241075	45.73%	2.281%
21	7.216	1136	1146	1152	rBV	144005	352980	7.20%	0.359%
22	7.297	1152	1161	1193	rVB2	625363	2055078	41.93%	2.091%
23	7.580	1202	1214	1238	rBV	1222176	3700565	75.51%	3.766%
24	7.773	1241	1250	1275	rVB	664491	1735620	35.42%	1.766%
25	8.366	1350	1361	1379	rBV	565439	1415708	28.89%	1.441%
26	8.698	1413	1423	1444	rBV	283953	728723	14.87%	0.742%
27	8.874	1444	1456	1474	rVV	168022	403171	8.23%	0.410%
28	9.163	1499	1510	1523	rBV	249422	591615	12.07%	0.602%
29	9.880	1634	1644	1657	rBV	230121	516497	10.54%	0.526%
30	10.169	1688	1698	1710	rBV	443096	1002367	20.45%	1.020%
31	10.287	1710	1720	1730	rVV	759000	1707277	34.84%	1.737%
32	10.388	1730	1739	1753	rVB	759261	1693861	34.56%	1.724%
33	10.763	1801	1809	1824	rBV2	151327	316845	6.47%	0.322%
34	11.030	1850	1859	1874	rBV2	173348	371301	7.58%	0.378%
35	11.233	1887	1897	1903	rBV	636298	1416354	28.90%	1.441%
36	11.485	1935	1944	1958	rBV	198957	416620	8.50%	0.424%
37	11.618	1960	1969	1978	rBV	155408	337860	6.89%	0.344%
38	11.763	1986	1996	2005	rBV	76891	165854	3.38%	0.169%

00115

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D06.D
Acq On : 14 Jan 2015 10:52
Operator : YNB
Sample : S15A047-CAL4
Misc : 5ug/L WATER
ALS Vial : 31 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 50 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\2\methods\011415W.M
Title : Volatile Organic Analysis - 524.2 Method

39	12.517	2126	2137	2141	rBV	609485	1250557	25.52%	1.273%
40	12.560	2141	2145	2162	rVV	624745	1277745	26.07%	1.300%
41	12.715	2164	2174	2179	rVV	585618	1260446	25.72%	1.283%
42	12.774	2179	2185	2200	rVB	933058	1898398	38.74%	1.932%
43	12.972	2212	2222	2243	rBV	1744669	3763570	76.80%	3.830%
44	13.587	2326	2337	2361	rBV3	1198783	3501126	71.44%	3.563%
45	13.849	2376	2386	2397	rVB	104602	217404	4.44%	0.221%
46	14.191	2439	2450	2467	rBV	1305019	2607517	53.21%	2.654%
47	14.400	2478	2489	2502	rBV	534915	1048037	21.39%	1.067%
48	14.603	2518	2527	2534	rBV2	486292	979616	19.99%	0.997%
49	14.672	2534	2540	2543	rBV2	129771	245052	5.00%	0.249%
50	14.849	2563	2573	2582	rBV	1177318	2261538	46.15%	2.301%
51	14.940	2582	2590	2600	rVV	962811	1917858	39.13%	1.952%
52	15.148	2614	2629	2640	rBV2	1458537	4228102	86.28%	4.303%
53	15.657	2713	2724	2731	rBV	1237651	2491637	50.84%	2.536%
54	15.731	2731	2738	2750	rVB	1405023	2615707	53.37%	2.662%
55	15.988	2774	2786	2797	rBV	1524303	2705579	55.21%	2.753%
56	16.095	2797	2806	2814	rVV	998825	1688897	34.46%	1.719%
57	16.213	2819	2828	2844	rVB2	2358893	4441955	90.64%	4.520%
58	16.662	2903	2912	2914	rBV	1221369	1982770	40.46%	2.018%
59	16.721	2919	2923	2941	rVB	1838848	2670534	54.49%	2.718%
60	16.983	2968	2972	2977	rVB3	10723	14369	0.29%	0.015%
61	17.427	3048	3055	3061	rBV3	12633	21009	0.43%	0.021%
62	17.539	3069	3076	3084	rBV	407077	559157	11.41%	0.569%
63	17.801	3120	3125	3130	rBV2	9806	12567	0.26%	0.013%
64	18.320	3216	3222	3228	rBV	2086546	2486244	50.73%	2.530%
65	18.486	3245	3253	3257	rBV	1949701	2403375	49.04%	2.446%
66	18.523	3257	3260	3269	rVB	923982	1077942	22.00%	1.097%
67	18.727	3292	3298	3304	rVB	1720125	2064423	42.12%	2.101%
68	19.973	3527	3531	3539	rBV9	15438	25481	0.52%	0.026%

Sum of corrected areas: 98265634

Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D06.D
Acq On : 14 Jan 2015 10:52
Operator : YNB
Sample : S15A047-CAL4
Misc : 5ug/L WATER
ALS Vial : 31 Sample Multiplier: 1

Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method

TIC Library : C:\DATABASE\NIST98.L
TIC Integration Parameters: LSCINT.P

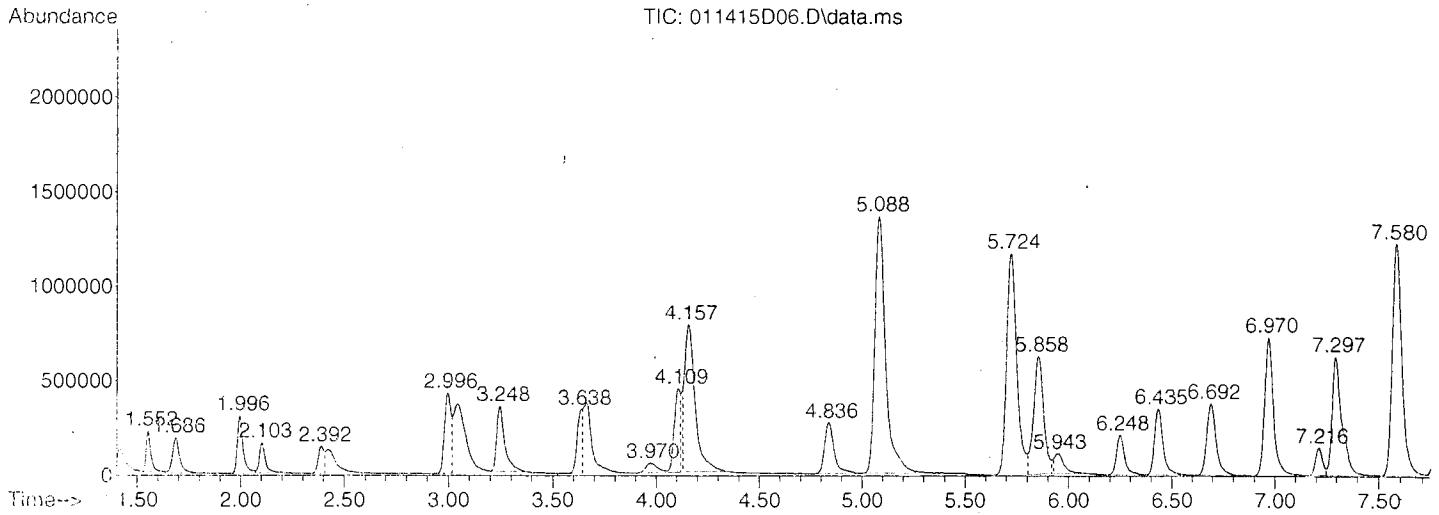
TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc

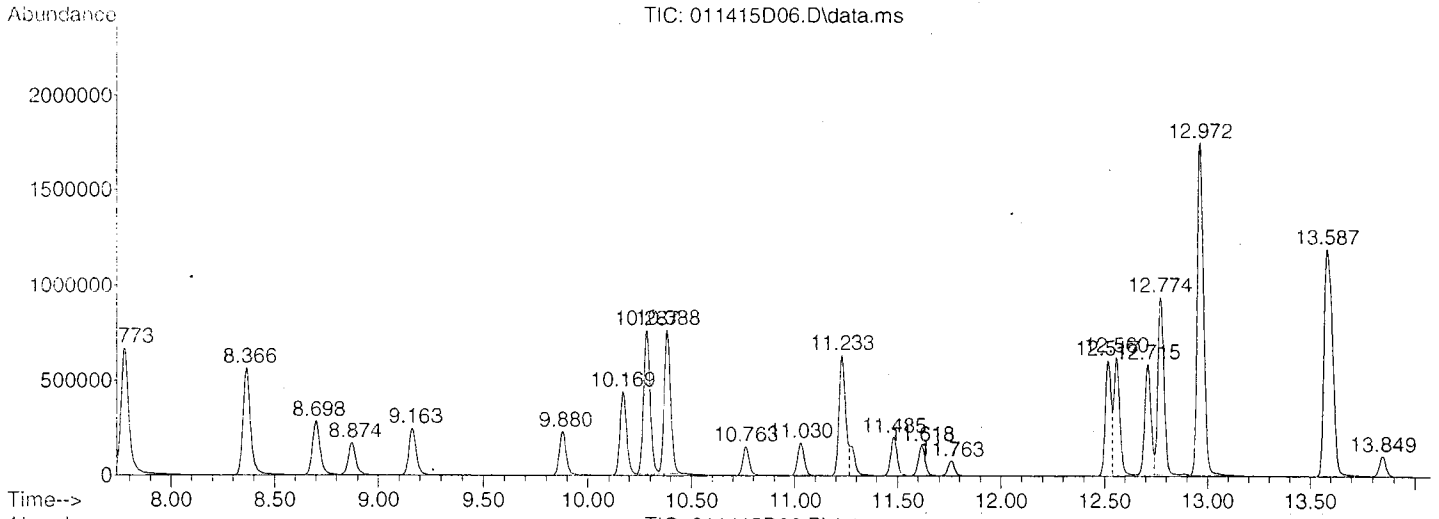
LSC Report - Integrated Chromatogram

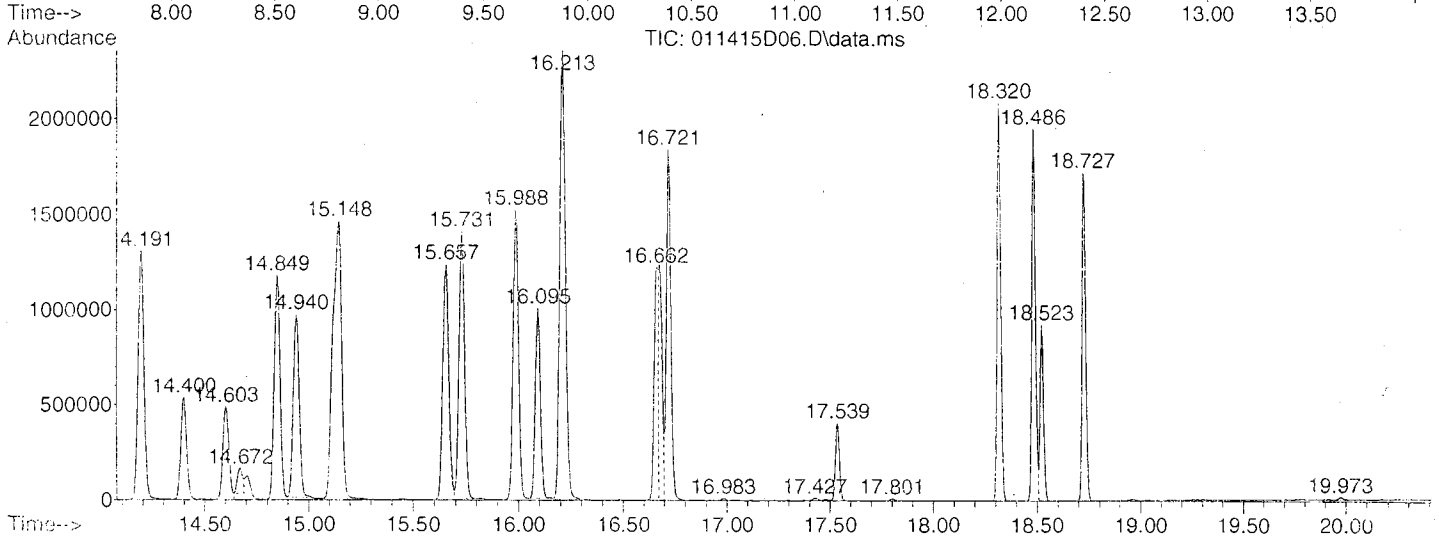
Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D06.D
Acq On : 14 Jan 2015 10:52
Operator : YNB
Sample : S15A047-CAL4
Misc : 5ug/L WATER
ALS Vial : 31 Sample Multiplier: 1

Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method

TIC Library : C:\DATABASE\NIST98.L
TIC Integration Parameters: LSCINT.P







Library Search Compound Report

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D06.D
Acq On : 14 Jan 2015 10:52
Operator : YNB
Sample : S15A047-CAL4
Misc : 5ug/L WATER
ALS Vial : 31 Sample Multiplier: 1

Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method

TIC Library : C:\DATABASE\NIST98.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D07.D
Acq On : 14 Jan 2015 11:28
Operator : YNB
Sample : S15A047-CAL3
Misc : 2.0ug/L WATER
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jan 14 13:04:38 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Nov 18 07:35:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Dichloromethane-d2	3.633	53	83409	5.00	ug/L	# 0.00
24) Fluorobenzene	7.773	96	869264	5.00	ug/L	0.00
37) Chlorobenzene-d5	12.517	117	432670	5.00	ug/L	0.00
System Monitoring Compounds						
28) 1,2-Dichloroethane-d4	7.211	65	149761	5.08	ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery = 101.60%			
39) Toluene-d8	10.286	98	670555	5.05	ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery = 101.00%			
56) 4-Bromofluorobenzene	14.400	95	189900	4.95	ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery = 99.00%			
70) 1,2-Dichlorobenzene-d4	16.662	152	300736	4.71	ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery = 94.20%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.413	85	95088	2.11	ug/L	99
3) Chloromethane	1.547	50	92364	2.05	ug/L	99
4) Vinyl chloride	1.681	62	109139	2.16	ug/L	99
5) Bromomethane	1.991	94	92005	2.05	ug/L	99
6) Chloroethane	2.098	64	64549	2.19	ug/L	99
7) Trichlorofluoromethane	2.387	101	125150	2.03	ug/L	100
8) 1,1-Dichloroethene	2.991	96	102489	2.21	ug/L	97
9) 1,1,2-Trichloro-1,2,2-...	3.039	101	107375	2.40	ug/L	97
10) Acetone	3.082	43	72605	18.29	ug/L	98
11) Carbon disulfide	3.242	76	324584	2.05	ug/L	100
12) Dichloromethane	3.665	84	102388	2.08	ug/L #	91
13) tert-Butyl alcohol	3.970	59	72963	44.16	ug/L	93
14) trans-1,2-Dichloroethene	4.103	96	118417	2.12	ug/L	97
15) tert-Butyl methyl ethe...	4.157	73	624976	8.57	ug/L	99
16) 1,1-Dichloroethane	4.842	63	179094	2.13	ug/L	98
17) Diisopropyl ether	5.088	45	838206	8.55	ug/L	100
18) Ethyl-tert-butyl ether	5.724	59	723555	8.76	ug/L	98
19) 2,2-Dichloropropane	5.842	77	126249	2.20	ug/L	99
20) cis-1,2-Dichloroethene	5.863	96	109102	2.20	ug/L	99
21) 2-Butanone (MEK)	5.949	43	68447	18.93	ug/L	98
22) Bromochloromethane	6.248	128	41929	2.17	ug/L	94
23) Chloroform	6.435	83	174667	2.29	ug/L	97
25) 1,1,1-Trichloroethane	6.687	97	162135	1.80	ug/L	98
26) Carbon tetrachloride	6.960	117	144042	1.72	ug/L	100
27) 1,1-Dichloropropene	6.976	75	115526	1.95	ug/L	99
29) Benzene	7.297	78	324396	1.94	ug/L	100
30) 1,2-Dichloroethane	7.339	62	69373	2.10	ug/L	98
31) tert-Amyl methyl ether	7.585	73	613547	7.22	ug/L	98
32) Trichloroethene	8.361	95	101936	2.00	ug/L	99
33) 1,2-Dichloropropane	8.698	63	58060	1.97	ug/L	98
34) Dibromomethane	8.869	93	30765	2.02	ug/L	95
35) Bromodichloromethane	9.163	83	82691	1.91	ug/L	98
36) cis-1,3-Dichloropropene	9.880	75	63662	2.00	ug/L	99
38) 4-Methyl-2-pentanone (...	10.169	43	139908	14.72	ug/L	99
40) Toluene	10.388	92	167561	1.97	ug/L	99
41) trans-1,3-Dichloropropene	10.762	75	40106	2.04	ug/L	97
42) 1,1,2-Trichloroethane	11.030	83	22115	1.93	ug/L	94
43) Tetrachloroethene	11.233	166	102463	2.04	ug/L	98
44) 1,3-Dichloropropane	11.276	76	39409	2.10	ug/L	98

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D07.D
Acq On : 14 Jan 2015 11:28
Operator : YNB
Sample : S15A047-CAL3
Misc : 2.0ug/L WATER
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jan 14 13:04:38 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Nov 18 07:35:43 2014
Response via : Initial Calibration

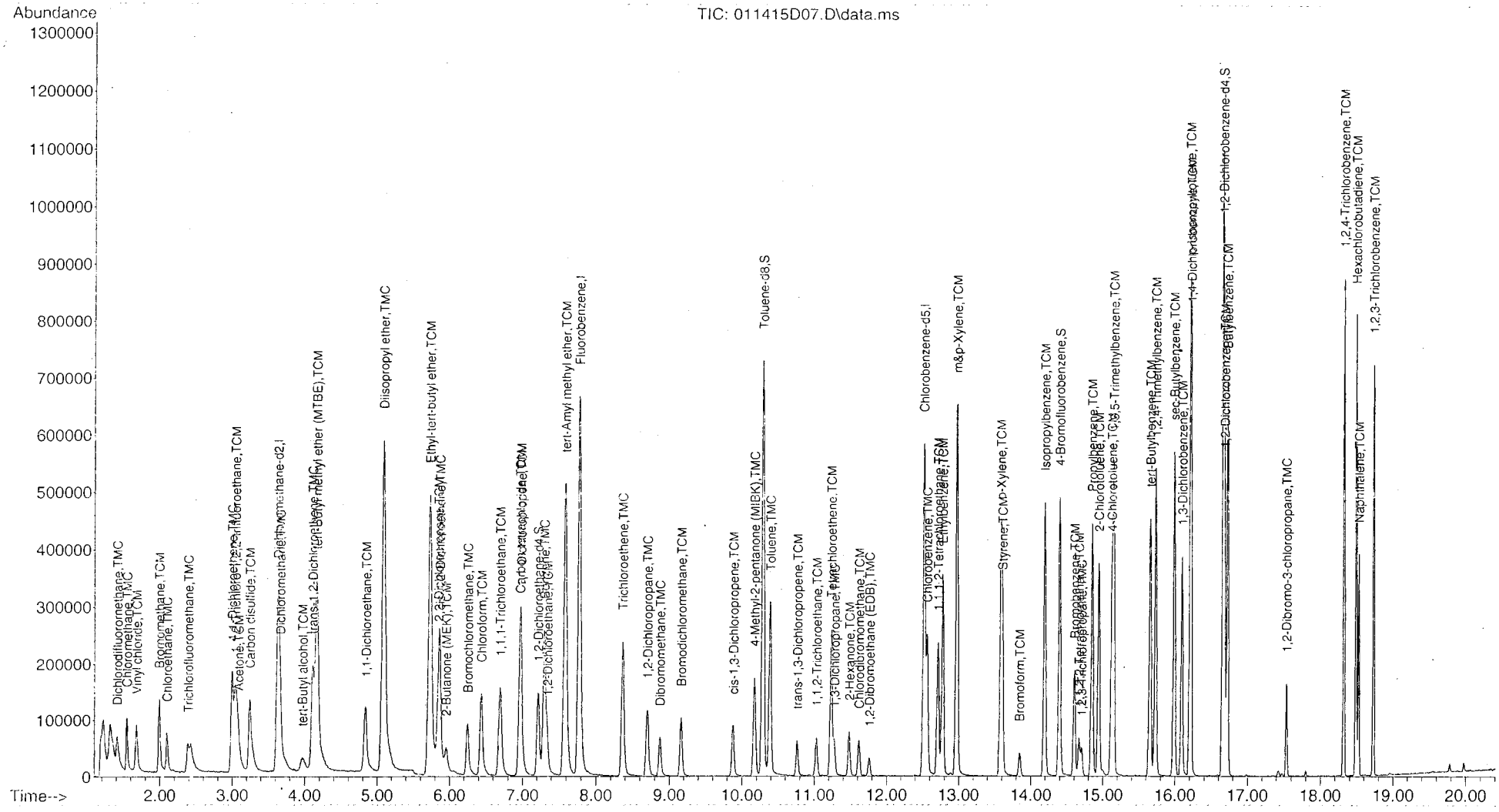
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
45)	2-Hexanone	11.485	43	61515	14.46 ug/L	97
46)	Chlorodibromomethane	11.618	129	41605	1.80 ug/L	98
47)	1,2-Dibromoethane (EDB)	11.763	107	24766	1.92 ug/L	97
48)	Chlorobenzene	12.560	112	167305	1.98 ug/L	98
49)	1,1,1,2-Tetrachloroethane	12.709	131	83623	1.76 ug/L	98
50)	Ethylbenzene	12.774	91	316891	1.87 ug/L	98
51)	m&p-Xylene	12.971	106	251590	3.64 ug/L	98
52)	o-Xylene	13.581	106	143491	1.79 ug/L	99
53)	Styrene	13.608	104	163751	1.84 ug/L	98
54)	Bromoform	13.843	173	23877	1.65 ug/L	99
55)	Isopropylbenzene	14.191	105	412974	1.85 ug/L	99
57)	Bromobenzene	14.603	156	76680	1.85 ug/L	94
58)	1,1,2,2-Tetrachloroethane	14.667	83	34956	1.77 ug/L	100
59)	1,2,3-Trichloropropane	14.704	75	22596	1.85 ug/L	97
60)	Propylbenzene	14.849	91	418928	1.84 ug/L	99
61)	2-Chlorotoluene	14.940	91	257846	1.86 ug/L	97
62)	4-Chlorotoluene	15.122	91	256913	1.87 ug/L	98
63)	1,3,5-Trimethylbenzene	15.148	105	366125	1.83 ug/L	99
64)	tert-Butylbenzene	15.656	119	297299	1.90 ug/L	99
65)	1,2,4-Trimethylbenzene	15.731	105	362756	1.82 ug/L	99
66)	sec-Butylbenzene	15.988	105	455418	1.86 ug/L	100
67)	1,3-Dichlorobenzene	16.095	146	188360	1.84 ug/L	98
68)	p-Isopropyltoluene	16.207	119	410146	1.83 ug/L	99
69)	1,4-Dichlorobenzene	16.218	146	178900	1.83 ug/L	99
71)	1,2-Dichlorobenzene	16.683	146	186733	1.83 ug/L	98
72)	Butylbenzene	16.721	91	371621	1.84 ug/L	99
73)	1,2-Dibromo-3-chloropr...	17.534	75	31031	6.84 ug/L	90
74)	1,2,4-Trichlorobenzene	18.320	180	223300	1.75 ug/L	100
75)	Hexachlorobutadiene	18.486	225	128475	1.80 ug/L	99
76)	Naphthalene	18.523	128	233681	1.71 ug/L	99
77)	1,2,3-Trichlorobenzene	18.727	180	185478	1.78 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D07.D
Acq On : 14 Jan 2015 11:28
Operator : YNB
Sample : S15A047-CAL3
Misc : 2.0ug/L WATER
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jan 14 13:04:38 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Nov 18 07:35:43 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D08.D
Acq On : 14 Jan 2015 12:04
Operator : YNB
Sample : S15A047-CAL2
Misc : 1.0ug/L WATER
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jan 14 13:04:42 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Nov 18 07:35:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Dichloromethane-d2	3.633	53	83810	5.00 ug/L	# 0.00
24) Fluorobenzene	7.778	96	859272	5.00 ug/L	0.00
37) Chlorobenzene-d5	12.517	117	419287	5.00 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.211	65	155431	5.33 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 106.60%	
39) Toluene-d8	10.286	98	654852	5.09 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 101.80%	
56) 4-Bromofluorobenzene	14.400	95	187478	5.04 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 100.80%	
70) 1,2-Dichlorobenzene-d4	16.662	152	297405	4.80 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 96.00%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.413	85	46224	1.02 ug/L	99
3) Chloromethane	1.552	50	46128	1.02 ug/L	98
4) Vinyl chloride	1.681	62	53921	1.06 ug/L	100
5) Bromomethane	1.991	94	45642	1.01 ug/L	96
6) Chloroethane	2.103	64	28445	0.96 ug/L	98
7) Trichlorofluoromethane	2.387	101	55167	0.89 ug/L	98
8) 1,1-Dichloroethene	3.002	96	51409	1.10 ug/L	93
9) 1,1,2-Trichloro-1,2,2-...	3.039	101	52205	1.16 ug/L	97
10) Acetone	3.087	43	44410	11.14 ug/L	98
11) Carbon disulfide	3.248	76	156946	0.99 ug/L	99
12) Dichloromethane	3.665	84	54247	1.10 ug/L #	67
13) tert-Butyl alcohol	3.980	59	31177	18.78 ug/L	94
14) trans-1,2-Dichloroethene	4.109	96	58689	1.04 ug/L	98
15) tert-Butyl methyl ethe...	4.168	73	299820	4.09 ug/L	98
16) 1,1-Dichloroethane	4.842	63	88623	1.05 ug/L	98
17) Diisopropyl ether	5.093	45	403026	4.09 ug/L	99
18) Ethyl-tert-butyl ether	5.729	59	352220	4.25 ug/L	98
19) 2,2-Dichloropropane	5.858	77	60760	1.05 ug/L	99
20) cis-1,2-Dichloroethene	5.863	96	53260	1.07 ug/L	99
21) 2-Butanone (MEK)	5.959	43	34451	9.48 ug/L	95
22) Bromochloromethane	6.248	128	20524	1.06 ug/L	96
23) Chloroform	6.430	83	83285	1.09 ug/L	99
25) 1,1,1-Trichloroethane	6.692	97	77821	0.87 ug/L	98
26) Carbon tetrachloride	6.965	117	70105	0.84 ug/L	97
27) 1,1-Dichloropropene	6.976	75	54922	0.94 ug/L	98
29) Benzene	7.297	78	156967	0.95 ug/L	100
30) 1,2-Dichloroethane	7.339	62	34172	1.05 ug/L	98
31) tert-Amyl methyl ether	7.585	73	294495	3.51 ug/L	98
32) Trichloroethene	8.366	95	50296	1.00 ug/L	98
33) 1,2-Dichloropropane	8.703	63	27017	0.93 ug/L	97
34) Dibromomethane	8.869	93	14380	0.95 ug/L	98
35) Bromodichloromethane	9.163	83	39546	0.93 ug/L	98
36) cis-1,3-Dichloropropene	9.875	75	29943	0.95 ug/L	97
38) 4-Methyl-2-pentanone (...	10.169	43	68262	7.41 ug/L	98
40) Toluene	10.383	92	78887	0.96 ug/L	98
41) trans-1,3-Dichloropropene	10.768	75	17698	0.93 ug/L	99
42) 1,1,2-Trichloroethane	11.030	83	10831	0.98 ug/L	96
43) Tetrachloroethene	11.233	166	47832	0.98 ug/L	98
44) 1,3-Dichloropropane	11.276	76	19065	1.05 ug/L	94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D08.D
Acq On : 14 Jan 2015 12:04
Operator : YNB
Sample : S15A047-CAL2
Misc : 1.0ug/L WATER
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jan 14 13:04:42 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Nov 18 07:35:43 2014
Response via : Initial Calibration

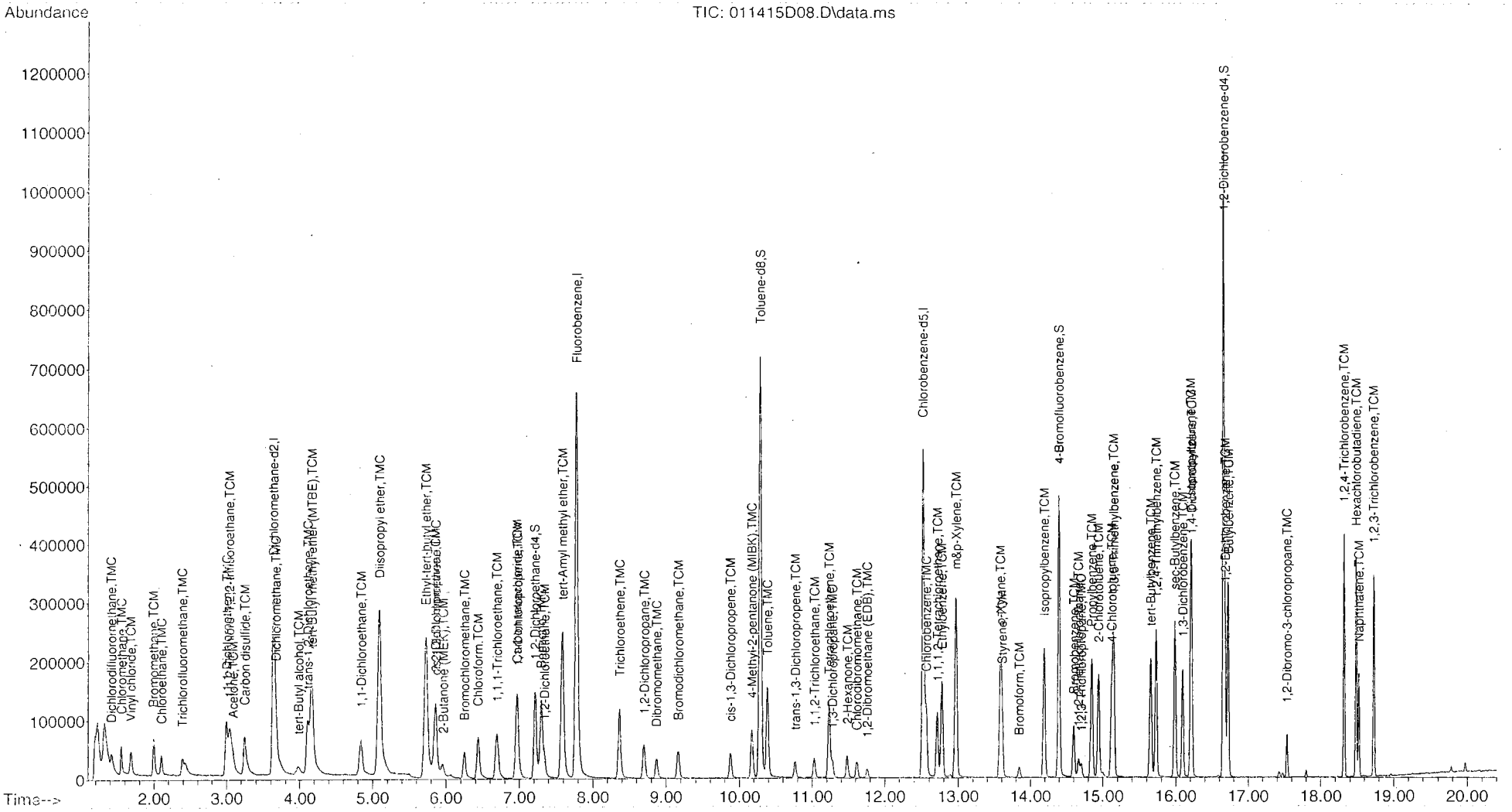
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45)	2-Hexanone	11.485	43	30218	7.33	ug/L	97
46)	Chlorodibromomethane	11.613	129	19318	0.86	ug/L	99
47)	1,2-Dibromoethane (EDB)	11.757	107	11838	0.95	ug/L	97
48)	Chlorobenzene	12.560	112	80174	0.98	ug/L	97
49)	1,1,1,2-Tetrachloroethane	12.715	131	39781	0.86	ug/L	96
50)	Ethylbenzene	12.774	91	149500	0.91	ug/L	99
51)	m&p-Xylene	12.971	106	119335	1.78	ug/L	99
52)	o-Xylene	13.581	106	65996	0.85	ug/L	96
53)	Styrene	13.608	104	77021	0.89	ug/L	99
54)	Bromoform	13.843	173	10712	0.76	ug/L	97
55)	Isopropylbenzene	14.191	105	187299	0.87	ug/L	99
57)	Bromobenzene	14.603	156	35990	0.90	ug/L	94
58)	1,1,2,2-Tetrachloroethane	14.667	83	16742	0.88	ug/L	99
59)	1,2,3-Trichloropropane	14.704	75	10864	0.92	ug/L	100
60)	Propylbenzene	14.849	91	197170	0.89	ug/L	100
61)	2-Chlorotoluene	14.940	91	123021	0.92	ug/L	97
62)	4-Chlorotoluene	15.122	91	123689	0.93	ug/L	98
63)	1,3,5-Trimethylbenzene	15.148	105	166802	0.86	ug/L	99
64)	tert-Butylbenzene	15.656	119	130508	0.86	ug/L	98
65)	1,2,4-Trimethylbenzene	15.731	105	170776	0.88	ug/L	98
66)	sec-Butylbenzene	15.988	105	204956	0.86	ug/L	99
67)	1,3-Dichlorobenzene	16.095	146	91100	0.92	ug/L	99
68)	p-Isopropyltoluene	16.207	119	183953	0.84	ug/L	99
69)	1,4-Dichlorobenzene	16.218	146	86077	0.91	ug/L	98
71)	1,2-Dichlorobenzene	16.683	146	88969	0.90	ug/L	96
72)	Butylbenzene	16.726	91	177382	0.90	ug/L	97
73)	1,2-Dibromo-3-chloropr...	17.534	75	15001	3.41	ug/L	85
74)	1,2,4-Trichlorobenzene	18.320	180	106310	0.86	ug/L	99
75)	Hexachlorobutadiene	18.486	225	60020	0.87	ug/L	99
76)	Naphthalene	18.523	128	109667	0.83	ug/L	98
77)	1,2,3-Trichlorobenzene	18.727	180	86477	0.85	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D08.D
Acq On : 14 Jan 2015 12:04
Operator : YNB
Sample : S15A047-CAL2
Misc : 1.0ug/L WATER
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Jan 14 13:04:42 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Nov 18 07:35:43 2014
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D09.D
Acq On : 14 Jan 2015 12:39
Operator : YNB
Sample : S15A047-CAL1
Misc : 0.5ug/L WATER
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Jan 14 13:04:46 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Nov 18 07:35:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Dichloromethane-d2	3.638	53	82021	5.00 ug/L	# 0.00
24) Fluorobenzene	7.778	96	841179	5.00 ug/L	0.00
37) Chlorobenzene-d5	12.517	117	395991	5.00 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.216	65	155441	5.45 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 109.00%	
39) Toluene-d8	10.281	98	624730	5.15 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 103.00%	
56) 4-Bromofluorobenzene	14.400	95	174215	4.96 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 99.20%	
70) 1,2-Dichlorobenzene-d4	16.662	152	291308	4.98 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 99.60%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.413	85	22658	0.51 ug/L	96
3) Chloromethane	1.547	50	21330	0.48 ug/L	96
4) Vinyl chloride	1.681	62	26137	0.53 ug/L	93
5) Bromomethane	1.991	94	22221	0.50 ug/L	99
6) Chloroethane	2.103	64	16865	0.58 ug/L	98
7) Trichlorofluoromethane	2.392	101	21532	0.35 ug/L	98
8) 1,1-Dichloroethene	2.996	96	24172	0.53 ug/L	96
9) 1,1,2-Trichloro-1,2,2-...	3.045	101	25629	0.58 ug/L	96
10) Acetone	3.087	43	28797	7.38 ug/L	96
11) Carbon disulfide	3.248	76	80483	0.52 ug/L	98
12) Dichloromethane	3.665	84	27217	0.56 ug/L #	1
13) tert-Butyl alcohol	3.981	59	17690	10.89 ug/L	84
14) trans-1,2-Dichloroethene	4.109	96	27324	0.50 ug/L	98
15) tert-Butyl methyl ethe...	4.157	73	153174	2.13 ug/L	98
16) 1,1-Dichloroethane	4.836	63	44799	0.54 ug/L	98
17) Diisopropyl ether	5.088	45	202327	2.10 ug/L	99
18) Ethyl-tert-butyl ether	5.724	59	173784	2.14 ug/L	99
19) 2,2-Dichloropropane	5.853	77	30067	0.53 ug/L	96
20) cis-1,2-Dichloroethene	5.858	96	25571	0.53 ug/L	98
21) 2-Butanone (MEK)	5.960	43	24161	6.79 ug/L	94
22) Bromochloromethane	6.243	128	10543	0.55 ug/L	93
23) Chloroform	6.436	83	41902	0.56 ug/L	96
25) 1,1,1-Trichloroethane	6.692	97	37428	0.43 ug/L	99
26) Carbon tetrachloride	6.960	117	33899	0.42 ug/L	97
27) 1,1-Dichloropropene	6.976	75	27984	0.49 ug/L	97
29) Benzene	7.297	78	78339	0.49 ug/L	97
30) 1,2-Dichloroethane	7.340	62	16688	0.52 ug/L	96
31) tert-Amyl methyl ether	7.586	73	146346	1.78 ug/L	95
32) Trichloroethene	8.366	95	24988	0.51 ug/L	95
33) 1,2-Dichloropropane	8.698	63	13489	0.47 ug/L	99
34) Dibromomethane	8.869	93	6915	0.47 ug/L	92
35) Bromodichloromethane	9.163	83	19004	0.45 ug/L	100
36) cis-1,3-Dichloropropene	9.880	75	13775	0.45 ug/L	97
38) 4-Methyl-2-pentanone (...	10.164	43	34106	3.92 ug/L	99
40) Toluene	10.383	92	38007	0.49 ug/L	98
41) trans-1,3-Dichloropropene	10.763	75	8782	0.49 ug/L	97
42) 1,1,2-Trichloroethane	11.030	83	4968	0.47 ug/L	98
43) Tetrachloroethene	11.228	166	24477	0.53 ug/L	96
44) 1,3-Dichloropropane	11.281	76	8281	0.48 ug/L	91

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D09.D
Acq On : 14 Jan 2015 12:39
Operator : YNB
Sample : S15A047-CAL1
Misc : 0.5ug/L WATER
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Jan 14 13:04:46 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Nov 18 07:35:43 2014
Response via : Initial Calibration

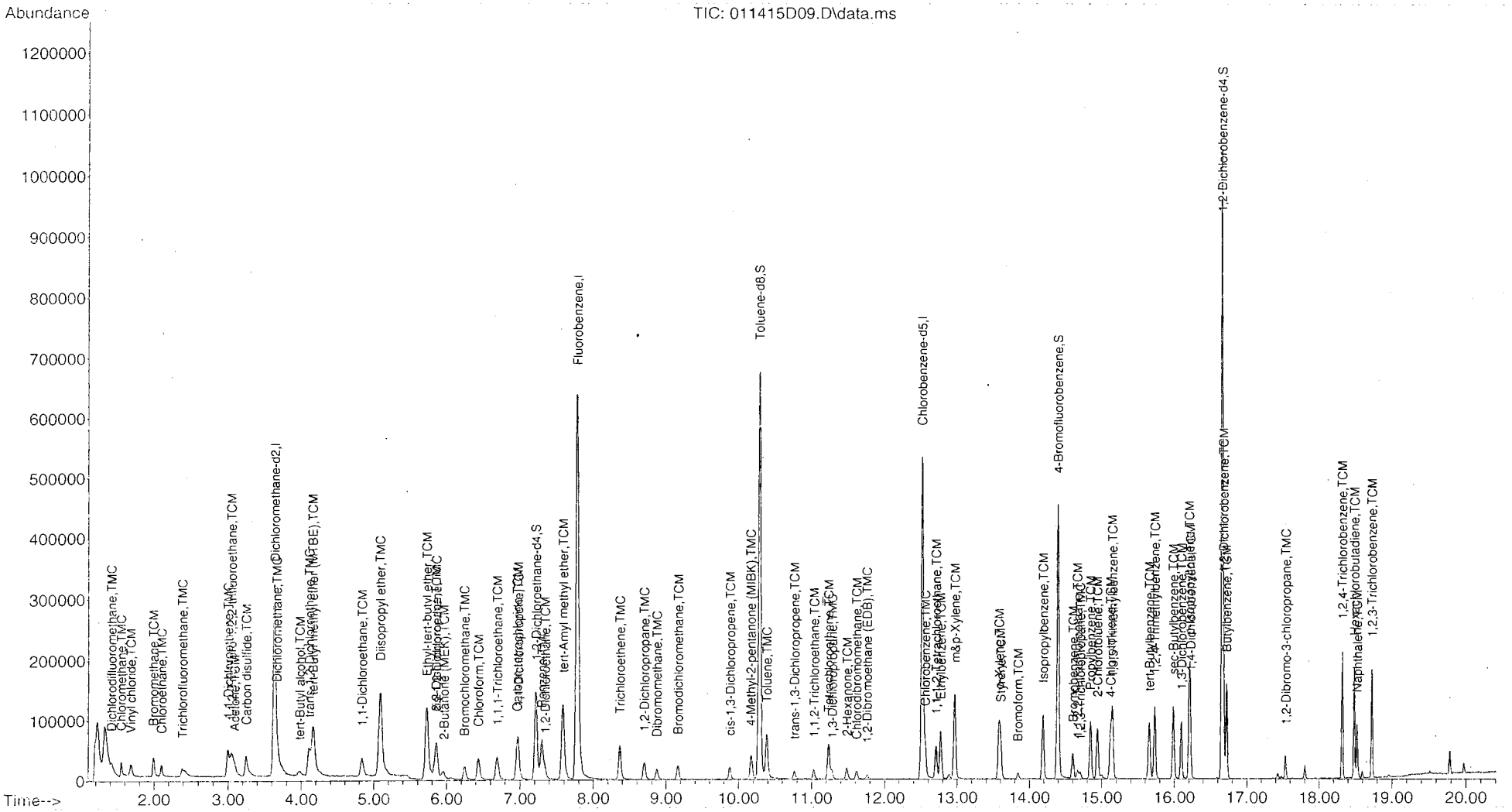
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45)	2-Hexanone	11.485	43	15082	3.87	ug/L	94
46)	Chlorodibromomethane	11.613	129	9377	0.44	ug/L	96
47)	1,2-Dibromoethane (EDB)	11.757	107	5610	0.48	ug/L	98
48)	Chlorobenzene	12.560	112	37419	0.48	ug/L	89
49)	1,1,1,2-Tetrachloroethane	12.710	131	18470	0.42	ug/L	98
50)	Ethylbenzene	12.774	91	71062	0.46	ug/L	99
51)	m&p-Xylene	12.972	106	54969	0.87	ug/L	99
52)	o-Xylene	13.581	106	31148	0.42	ug/L	98
53)	Styrene	13.603	104	34439	0.42	ug/L	97
54)	Bromoform	13.843	173	5276	0.40	ug/L	93
55)	Isopropylbenzene	14.191	105	88789	0.43	ug/L	98
57)	Bromobenzene	14.603	156	17499	0.46	ug/L	95
58)	1,1,2,2-Tetrachloroethane	14.667	83	8021	0.44	ug/L	99
59)	1,2,3-Trichloropropane	14.705	75	5801	0.52	ug/L	98
60)	Propylbenzene	14.844	91	90476	0.43	ug/L	99
61)	2-Chlorotoluene	14.940	91	57454	0.45	ug/L	98
62)	4-Chlorotoluene	15.122	91	57758	0.46	ug/L	99
63)	1,3,5-Trimethylbenzene	15.149	105	78948	0.43	ug/L	99
64)	tert-Butylbenzene	15.657	119	58188	0.41	ug/L	97
65)	1,2,4-Trimethylbenzene	15.732	105	79260	0.43	ug/L	100
66)	sec-Butylbenzene	15.988	105	94745	0.42	ug/L	98
67)	1,3-Dichlorobenzene	16.095	146	44830	0.48	ug/L	99
68)	p-Isopropyltoluene	16.208	119	84815	0.41	ug/L	99
69)	1,4-Dichlorobenzene	16.224	146	43955	0.49	ug/L	97
71)	1,2-Dichlorobenzene	16.678	146	43766	0.47	ug/L	94
72)	Butylbenzene	16.721	91	84752	0.46	ug/L	98
73)	1,2-Dibromo-3-chloropr...	17.539	75	7212	1.74	ug/L	94
74)	1,2,4-Trichlorobenzene	18.320	180	54074	0.46	ug/L	99
75)	Hexachlorobutadiene	18.486	225	30098	0.46	ug/L	97
76)	Naphthalene	18.523	128	55766	0.45	ug/L	99
77)	1,2,3-Trichlorobenzene	18.727	180	45008	0.47	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D09.D
Acq On : 14 Jan 2015 12:39
Operator : YNB
Sample : S15A047-CAL1
Misc : 0.5ug/L WATER
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Jan 14 13:04:46 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Nov 18 07:35:43 2014
Response via : Initial Calibration



Data File Na 011415D10.D
Operator YNB
Data File Pachem\2\data\011415W\
Date Acquir 1/14/2015 13:14
Sample Nar S15A047-SCV1
Instrument Na AG5975D

#	Name	Ret Time	Amount	Calculatec	QC	LIMIT	ECOVER	STATUS
2)	Dichlorodifluoromethan	1.42	5.00	5.97	70	130	119%	PASS
3)	Chloromethane	1.55	5.00	5.64	70	130	113%	PASS
4)	Vinyl chloride	1.69	5.00	5.44	70	130	109%	PASS
5)	Bromomethane	1.99	5.00	5.21	70	130	104%	PASS
6)	Chloroethane	2.10	5.00	5.32	70	130	106%	PASS
7)	Trichlorofluoromethane	2.39	5.00	6.07	70	130	121%	PASS
8)	1,1-Dichloroethene	2.99	5.00	4.82	70	130	96%	PASS
9)	1,1,2-Trichloro-1,2,2-tri	3.04	5.00	4.54	70	130	91%	PASS
10)	Acetone	3.08	40.00	35.98	70	130	90%	PASS
11)	Carbon disulfide	3.24	5.00	4.99	70	130	100%	PASS
12)	Dichloromethane	3.66	5.00	4.91	70	130	98%	PASS
13)	tert-Butyl alcohol	3.97	100.00	0.13	70	130	0%	nc
14)	trans-1,2-Dichloroether	4.10	5.00	5.00	70	130	100%	PASS
15)	tert-Butyl methyl ether (	4.16	20.00	23.62	70	130	118%	PASS
16)	1,1-Dichloroethane	4.84	5.00	4.99	70	130	100%	PASS
17)	Diisopropyl ether	5.08	20.00	0.02	70	130	0%	nc
18)	Ethyl-tert-butyl ether	5.72	20.00	0.01	70	130	0%	nc
19)	2,2-Dichloropropane	5.84	5.00	4.78	70	130	96%	PASS
20)	cis-1,2-Dichloroethene	5.86	5.00	5.19	70	130	104%	PASS
21)	2-Butanone (MEK)	5.95	40.00	40.27	70	130	101%	PASS
22)	Bromochloromethane	6.25	5.00	5.21	70	130	104%	PASS
23)	Chloroform	6.44	5.00	5.30	70	130	106%	PASS
25)	1,1,1-Trichloroethane	6.69	5.00	5.21	70	130	104%	PASS
26)	Carbon tetrachloride	6.96	5.00	5.17	70	130	103%	PASS
27)	1,1-Dichloropropene	6.97	5.00	5.17	70	130	103%	PASS
29)	Benzene	7.30	5.00	5.22	70	130	104%	PASS
30)	1,2-Dichloroethane	7.33	5.00	5.23	70	130	105%	PASS
31)	tert-Amyl methyl ether	7.59	20.00	0.02	70	130	0%	nc
32)	Trichloroethene	8.36	5.00	5.14	70	130	103%	PASS
33)	1,2-Dichloropropane	8.70	5.00	5.35	70	130	107%	PASS
34)	Dibromomethane	8.87	5.00	5.47	70	130	109%	PASS
35)	Bromodichloromethane	9.16	5.00	5.28	70	130	106%	PASS
36)	cis-1,3-Dichloropropen	9.88	5.00	5.35	70	130	107%	PASS
38)	4-Methyl-2-pentanone (	10.17	40.00	41.83	70	130	105%	PASS
40)	Toluene	10.38	5.00	5.15	70	130	103%	PASS
41)	trans-1,3-Dichloroprope	10.76	5.00	5.04	70	130	101%	PASS
42)	1,1,2-Trichloroethane	11.03	5.00	5.26	70	130	105%	PASS
43)	Tetrachloroethene	11.23	5.00	5.05	70	130	101%	PASS
44)	1,3-Dichloropropane	11.28	5.00	5.10	70	130	102%	PASS
45)	2-Hexanone	11.48	40.00	42.54	70	130	106%	PASS
46)	Chlorodibromomethane	11.61	5.00	5.22	70	130	104%	PASS

47) 1,2-Dibromoethane (ED	11.76	5.00	5.45	70	130	109%	PASS
48) Chlorobenzene	12.56	5.00	5.27	70	130	105%	PASS
49) 1,1,1,2-Tetrachloroetha	12.71	5.00	5.13	70	130	103%	PASS
50) Ethylbenzene	12.77	5.00	5.24	70	130	105%	PASS
51) m&p-Xylene	12.97	10.00	10.51	70	130	105%	PASS
52) o-Xylene	13.58	5.00	5.25	70	130	105%	PASS
53) Styrene	13.61	5.00	5.36	70	130	107%	PASS
54) Bromoform	13.84	5.00	5.20	70	130	104%	PASS
55) Isopropylbenzene	14.19	5.00	5.24	70	130	105%	PASS
57) Bromobenzene	14.60	5.00	5.36	70	130	107%	PASS
58) 1,1,2,2-Tetrachloroetha	14.67	5.00	5.27	70	130	105%	PASS
59) 1,2,3-Trichloropropane	14.70	5.00	5.18	70	130	104%	PASS
60) Propylbenzene	14.85	5.00	5.28	70	130	106%	PASS
61) 2-Chlorotoluene	14.94	5.00	5.25	70	130	105%	PASS
62) 4-Chlorotoluene	15.12	5.00	5.20	70	130	104%	PASS
63) 1,3,5-Trimethylbenzene	15.15	5.00	5.27	70	130	105%	PASS
64) tert-Butylbenzene	15.66	5.00	5.32	70	130	106%	PASS
65) 1,2,4-Trimethylbenzene	15.73	5.00	5.23	70	130	105%	PASS
66) sec-Butylbenzene	15.99	5.00	5.29	70	130	106%	PASS
67) 1,3-Dichlorobenzene	16.10	5.00	5.12	70	130	102%	PASS
68) p-Isopropyltoluene	16.21	5.00	5.20	70	130	104%	PASS
69) 1,4-Dichlorobenzene	16.22	5.00	5.17	70	130	103%	PASS
71) 1,2-Dichlorobenzene	16.68	5.00	5.15	70	130	103%	PASS
72) Butylbenzene	16.72	5.00	5.16	70	130	103%	PASS
73) 1,2-Dibromo-3-chloropr	17.54	5.00	4.90	70	130	98%	PASS
74) 1,2,4-Trichlorobenzene	18.32	5.00	5.04	70	130	101%	PASS
75) Hexachlorobutadiene	18.49	5.00	4.96	70	130	99%	PASS
76) Naphthalene	18.52	5.00	5.26	70	130	105%	PASS
77) 1,2,3-Trichlorobenzene	18.73	5.00	5.23	70	130	105%	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D10.D
Acq On : 14 Jan 2015 13:14
Operator : YNB
Sample : S15A047-SCV1
Misc : 5ug/L WATER
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Jan 14 13:40:53 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 13:06:31 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Dichloromethane-d2	3.633	53	78607	5.00 ug/L	0.00
24) Fluorobenzene	7.773	96	840281	5.00 ug/L	0.00
37) Chlorobenzene-d5	12.517	117	464078	5.00 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.211	65	147786	5.05 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 101.00%	
39) Toluene-d8	10.281	98	696475	4.88 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 97.60%	
56) 4-Bromofluorobenzene	14.394	95	200261	4.93 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 98.60%	
70) 1,2-Dichlorobenzene-d4	16.662	152	306212	4.89 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 97.80%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.418	85	260692	5.97 ug/L	98
3) Chloromethane	1.547	50	241494	5.64 ug/L	97
4) Vinyl chloride	1.686	62	273726	5.44 ug/L	99
5) Bromomethane	1.991	94	225471	5.21 ug/L	98
6) Chloroethane	2.103	64	157421	5.32 ug/L	97
7) Trichlorofluoromethane	2.387	101	357065	6.07 ug/L	98
8) 1,1-Dichloroethene	2.991	96	227849	4.82 ug/L	99
9) 1,1,2-Trichloro-1,2,2-...	3.039	101	221627	4.54 ug/L	98
10) Acetone	3.082	43	161474	35.98 ug/L	99
11) Carbon disulfide	3.242	76	757705	4.99 ug/L	99
12) Dichloromethane	3.665	84	233950	4.91 ug/L #	98
14) trans-1,2-Dichloroethene	4.103	96	275704	5.00 ug/L	99
15) tert-Butyl methyl ethe...	4.157	73	1683948	23.62 ug/L	99
16) 1,1-Dichloroethane	4.836	63	416501	4.99 ug/L	99
19) 2,2-Dichloropropane	5.842	77	295648	4.78 ug/L	99
20) cis-1,2-Dichloroethene	5.858	96	265156	5.19 ug/L	98
21) 2-Butanone (MEK)	5.954	43	170739	40.27 ug/L	96
22) Bromochloromethane	6.254	128	103672	5.21 ug/L	99
23) Chloroform	6.435	83	433170	5.30 ug/L	99
25) 1,1,1-Trichloroethane	6.692	97	398445	5.21 ug/L	99
26) Carbon tetrachloride	6.960	117	355698	5.17 ug/L	98
27) 1,1-Dichloropropene	6.970	75	281011	5.17 ug/L	99
29) Benzene	7.297	78	804852	5.22 ug/L	98
30) 1,2-Dichloroethane	7.334	62	171965	5.23 ug/L	98
32) Trichloroethene	8.361	95	252876	5.14 ug/L	98
33) 1,2-Dichloropropane	8.698	63	147150	5.35 ug/L	99
34) Dibromomethane	8.869	93	77811	5.47 ug/L	98
35) Bromodichloromethane	9.163	83	211604	5.28 ug/L	99
36) cis-1,3-Dichloropropene	9.880	75	166230	5.35 ug/L	98
38) 4-Methyl-2-pentanone (...	10.169	43	384334	41.83 ug/L	100
40) Toluene	10.383	92	449786	5.15 ug/L	99
41) trans-1,3-Dichloropropene	10.763	75	104440	5.04 ug/L	99
42) 1,1,2-Trichloroethane	11.030	83	61422	5.26 ug/L	99
43) Tetrachloroethene	11.233	166	266995	5.05 ug/L	98
44) 1,3-Dichloropropane	11.276	76	102390	5.10 ug/L	98
45) 2-Hexanone	11.485	43	173558	42.54 ug/L	100
46) Chlorodibromomethane	11.613	129	114451	5.22 ug/L	99
47) 1,2-Dibromoethane (EDB)	11.757	107	71137	5.45 ug/L	98
48) Chlorobenzene	12.560	112	462806	5.27 ug/L	100

$\frac{696475 \times 5}{464078 \times 1.537} =$
$= 4.882$
YNB
01.14.15

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D10.D
Acq On : 14 Jan 2015 13:14
Operator : YNB
Sample : S15A047-SCV1
Misc : 5ug/L WATER
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Jan 14 13:40:53 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 13:06:31 2015
Response via : Initial Calibration

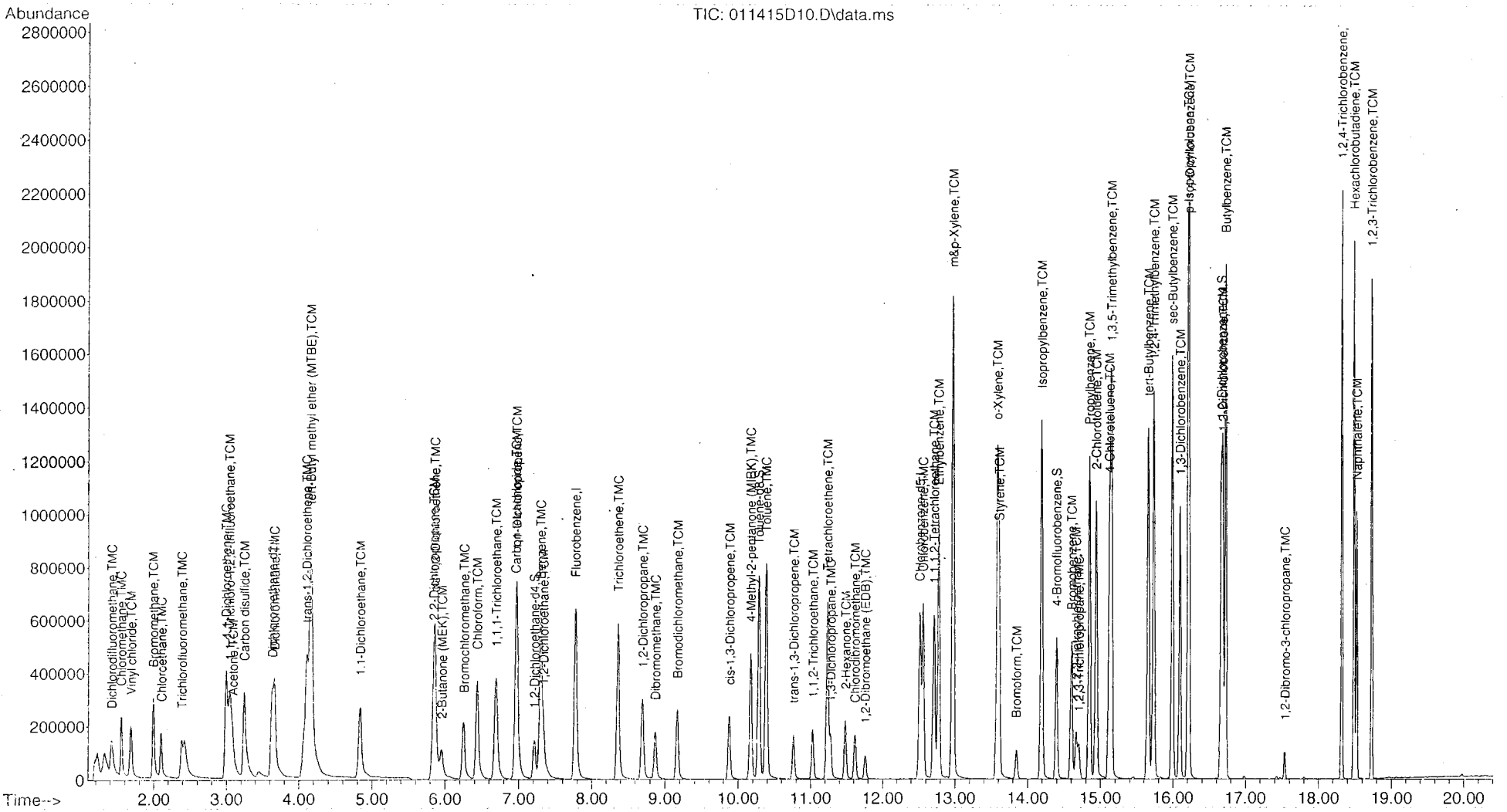
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49)	1,1,1,2-Tetrachloroethane	12.709	131	222532	5.13	ug/L	100
50)	Ethylbenzene	12.774	91	883057	5.24	ug/L	100
51)	m&p-Xylene	12.972	106	707288	10.51	ug/L	100
52)	o-Xylene	13.581	106	393905	5.25	ug/L	98
53)	Styrene	13.608	104	464674	5.36	ug/L	100
54)	Bromoform	13.843	173	65223	5.20	ug/L	99
55)	Isopropylbenzene	14.191	105	1139217	5.24	ug/L	99
57)	Bromobenzene	14.603	156	213730	5.36	ug/L	97
58)	1,1,2,2-Tetrachloroethane	14.667	83	95979	5.28	ug/L	99
59)	1,2,3-Trichloropropane	14.704	75	61798	5.18	ug/L	98
60)	Propylbenzene	14.849	91	1163584	5.28	ug/L	100
61)	2-Chlorotoluene	14.940	91	714026	5.25	ug/L	99
62)	4-Chlorotoluene	15.122	91	704814	5.20	ug/L	100
63)	1,3,5-Trimethylbenzene	15.148	105	1018648	5.27	ug/L	100
64)	tert-Butylbenzene	15.657	119	844608	5.32	ug/L	99
65)	1,2,4-Trimethylbenzene	15.731	105	1002420	5.23	ug/L	100
66)	sec-Butylbenzene	15.988	105	1268402	5.29	ug/L	100
67)	1,3-Dichlorobenzene	16.095	146	502434	5.12	ug/L	99
68)	p-Isopropyltoluene	16.207	119	1117131	5.20	ug/L	100
69)	1,4-Dichlorobenzene	16.218	146	483130	5.17	ug/L	100
71)	1,2-Dichlorobenzene	16.683	146	489453	5.15	ug/L	99
72)	Butylbenzene	16.721	91	1005332	5.16	ug/L	99
73)	1,2-Dibromo-3-chloropr...	17.539	75	19447	4.90	ug/L	99
74)	1,2,4-Trichlorobenzene	18.320	180	567103	5.04	ug/L	99
75)	Hexachlorobutadiene	18.486	225	326879	4.96	ug/L	99
76)	Naphthalene	18.523	128	618470	5.26	ug/L	99
77)	1,2,3-Trichlorobenzene	18.727	180	479098	5.23	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\2\data\011415W\
Data File : 011415D10.D
Acq On : 14 Jan 2015 13:14
Operator : YNB
Sample : S15A047-SCV1
Misc : 5ug/L WATER
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Jan 14 13:40:53 2015
Quant Method : C:\msdchem\2\methods\011415W.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 13:06:31 2015
Response via : Initial Calibration



Instrument: HP5973H

Analysis Date: 01.14.2015

INITIAL CALIBRATION DATA

ANALYSIS SEQUENCE

Instrument: HP5973H

Calibration ID: 1501011

S15A050

Printed: 1/14/2015 11:56:17AM

Lab Number	Sample Name	Analysis	Container	Order	Position	STD ID	ISTD ID	Comments
S15A050-TUN1	MS Tune	QC		1		1453027		
S15A050-CCV1	50ppb	QC		2		1503037		
S15A050-CRL1	5ppb	QC		3		1503034		
S15A050-TUN2	MS Tune	QC		4				
S15A050-IBL1	Instrument Blank	QC		5				
S15A050-CAL1	Cal Standard	QC		6		1503034		
S15A050-CAL2	Cal Standard	QC		7		1503035		
S15A050-CAL3	Cal Standard	QC		8		1503036		
S15A050-CAL4	Cal Standard	QC		9		1503037		
S15A050-CAL5	Cal Standard	QC		10		1503038		
S15A050-CAL6	Cal Standard	QC		11		1503039		
S15A050-SCV1	Secondary Cal Check	QC		12		1502068		

Samples Loaded By Date

Data Processed By Date

Injection Log

Directory: C:\MSDCHEM\1\DATA\2015\011415HVW

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	10	011415h00.d	0.	PREP	CV level,WATER	14 Jan 2015 09:20
2	100	011415h01.d	0.	S15A050-TUN1	0.5ul , EM 2318V	14 Jan 2015 09:54
3	27	011415h02.d	0.	S15A050-CCV	CCV,WATER	14 Jan 2015 10:18
4	100	011415h03.d	0.	S15A050-TUN2	0.5ul , EM 2318V	14 Jan 2015 11:03
5	27	011415h04.d	0.	S15A050-CCV1@B15A0XX-BS1	CCV,WATER	14 Jan 2015 11:28
6	28	011415h05.d	0.	BLANK	BLANK,WATER	14 Jan 2015 12:11
7	28	011415h06.d	0.	BLANK	BLANK,WATER	14 Jan 2015 12:47
8	29	011415h07.d	0.	S15A050-CAL6	25ug/L;,WATER	14 Jan 2015 13:23
9	30	011415h08.d	0.	S15A050-CAL5	10ug/L;,WATER	14 Jan 2015 13:59
10	31	011415h09.d	0.	S15A050-CAL4	5.0ug/L;,WATER	14 Jan 2015 14:35
11	32	011415h10.d	0.	S15A050-CAL3	2.0ug/L;,WATER	14 Jan 2015 15:11
12	33	011415h11.d	0.	S15A050-CAL2	1.0ug/L;,WATER	14 Jan 2015 15:47
13	34	011415h12.d	0.	S15A050-CAL1	0.5ug/L;,WATER	14 Jan 2015 16:22
14	35	011415h13.d	0.	S15A050-SCV1	5ug/L;WATER	14 Jan 2015 16:58
15		011415h14.d	0.	No MS or GC data present		

USEPA REGION 9 VOLATILE ORGANICS RUN LOG

SOP: ☒354 (Water) ☐305 (Solid, Low) ☐305 (Solid, Medium)

INST. ID: HP5973H

EM Voltage: 2318

LIMS Batch: 815A0XX

LIMS Seq.: 815A050

Purge Vol, mL: 25

BFB STD ID: 1453027

IS/Surr ID: 1502039

IS/Surr.Volume: 1µL

Cal STD ID: 1503027

MS SPK ID: —

BS SPK ID: 1502067 second

	Date Analyzed	Time Analyzed	Analyst	File Name	Laboratory ID	Vial ID	Initial Volume, mL /Weight, g	MeOH Used, uL	Final Volume, mL	Archon DF	STD Amounts (uL) CAL	BS	MS	pH	Comments	M
1	1-14-15	9:20	YAB	01 1415400	PREP	—	—	—	—	—	—	—	—	—		
2		9:54		01	815A050-Tun1	—	—	—	—	—	—	—	—	—		
3		10:18		02	-ccv1	—	50	—	—	—	10	—	—	—	failed	
4		11:03		03	-Tun2	—	—	—	—	—	—	—	—	—		
5		11:28		04	815A050-ccv1	—	50	—	—	—	10	—	—	—	failed	
6		12:11		05	blank	—	—	—	—	—	—	—	—	—		
7		12:47		06	blank2	—	—	—	—	—	—	—	—	—		
8		13:23		07	815A050-CAL6	—	50	—	—	—	50	—	—	—		
9		13:59		08	-CAL5	—	50	—	—	—	20	—	—	—		
10		14:35		09	-CAL4	—	50	—	—	—	10	—	—	—		
11		15:11		10	-CAL3	—	50	—	—	—	4	—	—	—		
12		15:47		11	-CAL2	—	50	—	—	—	2	—	—	—		
13		1622		12	-CAL1	—	50	—	—	—	1	—	—	—		
14		1658		13	-Sev1	—	50	—	—	—	—	10	—	—		
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Cm 1/14/15

[1] Manual integration performed

GC/MS QA-QC Check Report

Tune File : C:\msdchem\1\DATA\2015\011415HVW\011415H03.D
Tune Time : 14 Jan 2015 11:03

Daily Calibration File : C:\MSDCHEM\1\DATA\2015\011415HVW\011415H09.D

File	Sample	Surrogate Recovery %				Internal Standard Responses			
						124016	1151900	745649	
011415H04.D	S15A050-CCV1	95	100	97	98	131241	1273653	816830	NU
011415H05.D	BLANK	100	101	93	91	122189	1155888	747458	
011415H06.D	BLANK	102	100	94	92	117292	1084301	698901	
011415H07.D	S15A050-CAL6	98	99	102	104	121177	1157183	775664	
011415H08.D	S15A050-CAL5	100	100	99	98	125048	1188925	780704	
011415H09.D	S15A050-CAL4	100	100	100	100	124016	1151896	745649	
011415H10.D	S15A050-CAL3	103	102	97	97	121514	1103810	713777	
011415H11.D	S15A050-CAL2	101	102	99	98	115423	1068878	682568	
011415H12.D	S15A050-CAL1	101	101	97	95	110861	1032100	662007	
011415H13.D	S15A050-SCV1	102	101	100	99	110711	1016564	676688	

(fails) - fails 12hr time check * - fails criteria

Created: Wed Jan 14 17:38:40 2015 HP5973H

Response Factor Report HP5973H

Method Path : C:\MSDCHEM\1\METHODS\2015\
Method File : 011415HVW.M
Title : Volatile Organic Analysis - 524.2 Method
Last Update : Wed Jan 14 16:54:35 2015
Response Via : Initial Calibration

Calibration Files
0.5 =011415H12.D 1.0 =011415H11.D 2.0 =011415H10.D 5.0 =011415H09.D 10.0=011415H08.D
25.0=011415H07.D

		Compound	0.5	1.0	2.0	5.0	10.0	25.0	Avg		%RSD
1)	I	Dichloromethane-d2	----------ISTD----------								
2)	TMC	Dichlorodifluo...	2.600	2.513	2.450	2.413	2.449	2.497	2.487		2.66
3)	TMC	Chloromethane	3.296	3.370	3.192	3.082	3.027	3.003	3.162		4.73
4)	TCM	Vinyl chloride	3.339	3.475	3.282	3.225	3.211	3.276	3.301		2.93
5)	TCM	Bromomethane	1.885	2.327	2.367	2.474	2.795	2.657	2.418		13.05
6)	TMC	Chloroethane	2.381	2.444	2.330	2.327	2.375	2.379	2.372		1.80
7)	TMC	Trichlorofluor...	4.707	4.523	4.552	4.368	4.584	4.634	4.561		2.52
8)	TMC	1,1-Dichloroet...	2.975	3.072	3.160	3.085	3.256	3.292	3.140		3.81
9)	TCM	1,1,2-Trichlor...	3.032	2.854	2.989	2.845	2.931	3.057	2.951		3.04
10)	TCM	Acetone	0.248	0.205	0.191	0.178	0.170	0.161	0.192		16.38
11)	TCM	Carbon disulfide	1.051	1.053	1.053	1.031	1.035	1.019	1.040	E1	1.35
12)	TMC	Dichloromethane	4.286	3.702	3.416	3.189	3.079	2.994	3.444		14.08
13)	TCM	tert-Butyl alc...	0.071	0.074	0.077	0.076	0.081	0.055	0.072		12.56
14)	TMC	trans-1,2-Dich...	3.700	3.915	3.949	3.907	4.044	4.145	3.943		3.79
15)	TCM	tert-Butyl met...	3.971	4.174	4.345	4.355	4.393	4.250	4.248		3.71
16)	TCM	1,1-Dichloroet...	5.696	6.042	5.795	5.669	5.785	5.832	5.803		2.28
17)	TMC	Diisopropyl ether	7.120	7.345	7.164	7.054	7.033	6.528	7.041		3.90
18)	TCM	Ethyl-tert-but...	3.503	3.747	3.757	3.925	4.092	4.236	3.877		6.81
19)	TCM	2,2-Dichloropr...	2.067	2.356	2.476	2.657	2.854	3.320	2.622		16.55
20)	TMC	cis-1,2-Dichlo...	2.084	2.191	2.188	2.220	2.319	2.593	2.266		7.81
21)	TCM	2-Butanone (MEK)	0.241	0.226	0.219	0.218	0.213	0.213	0.222		4.74
22)	TMC	Bromochloromet...	0.611	0.666	0.663	0.678	0.695	0.720	0.672		5.43
23)	TCM	Chloroform	3.312	3.415	3.370	3.383	3.456	3.630	3.428		3.21
24)	I	Fluorobenzene	----------ISTD----------								
25)	TCM	1,1,1-Trichlor...	0.298	0.317	0.317	0.325	0.326	0.352	0.323		5.53
26)	TCM	Carbon tetrach...	0.235	0.257	0.264	0.269	0.281	0.318	0.271		10.20
27)	TCM	1,1-Dichloropr...	0.258	0.271	0.273	0.275	0.281	0.313	0.279		6.69
28)	S	1,2-Dichloroet...	0.138	0.138	0.140	0.139	0.136	0.134	0.137		1.73
29)	TMC	Benzene	0.886	0.953	0.946	0.945	0.956	1.014	0.950		4.30
30)	TCM	1,2-Dichloroet...	0.152	0.174	0.167	0.163	0.160	0.165	0.163		4.42
31)	TCM	tert-Amyl meth...	0.277	0.304	0.318	0.330	0.341	0.362	0.322		9.13
32)	TMC	Trichloroethene	0.220	0.228	0.234	0.228	0.235	0.261	0.234		5.95
33)	TMC	1,2-Dichloropr...	0.171	0.184	0.189	0.187	0.187	0.199	0.186		4.89
34)	TMC	Dibromomethane	0.065	0.062	0.064	0.067	0.065	0.067	0.065		2.86
35)	TCM	Bromodichlorom...	0.202	0.208	0.223	0.224	0.225	0.238	0.220		5.94
36)	TCM	cis-1,3-Dichlo...	0.197	0.210	0.226	0.235	0.244	0.268	0.230		10.99
37)	I	Chlorobenzene-d5	----------ISTD----------								
38)	TMC	4-Methyl-2-pen...	0.070	0.077	0.081	0.084	0.083	0.085	0.080		7.10
39)	S	Toluene-d8	1.493	1.510	1.491	1.486	1.465	1.451	1.482		1.44
40)	TMC	Toluene	0.928	0.983	0.964	0.960	0.963	1.054	0.975		4.36
41)	TCM	trans-1,3-Dich...	0.217	0.224	0.244	0.259	0.268	0.287	0.250		10.72
42)	TCM	1,1,2-Trichlor...	0.127	0.123	0.125	0.122	0.122	0.127	0.124		1.89
43)	TCM	Tetrachloroethene	0.374	0.386	0.376	0.379	0.388	0.440	0.390		6.32
44)	TMC	1,3-Dichloropr...	0.257	0.276	0.281	0.281	0.273	0.278	0.274		3.36
45)	TCM	2-Hexanone	0.045	0.048	0.051	0.054	0.053	0.055	0.051		7.74
46)	TCM	Chlorodibromom...	0.160	0.175	0.185	0.195	0.196	0.207	0.186		9.00
47)	TMC	1,2-Dibromoeth...	0.118	0.125	0.133	0.135	0.136	0.137	0.131		5.79
48)	TMC	Chlorobenzene	0.945	0.984	0.952	0.953	0.964	1.042	0.973		3.70
49)	TCM	1,1,1,2-Tetrac...	0.249	0.267	0.268	0.278	0.281	0.309	0.275		7.19
50)	TCM	Ethylbenzene	1.613	1.783	1.802	1.823	1.850	1.973	1.808		6.45
51)	TCM	m&p-Xylene	0.660	0.734	0.728	0.764	0.800	0.950	0.773		12.72
52)	TCM	o-Xylene	0.578	0.651	0.658	0.689	0.719	0.842	0.690		12.78
53)	TCM	Styrene	0.873	0.999	1.028	1.094	1.135	1.330	1.077		14.23

Method Path : C:\MSDCHEM\1\METHODS\2015\
Method File : 011415HVW.M
Title : Volatile Organic Analysis - 524.2 Method

54)	TCM	Bromoform	0.071	0.077	0.083	0.090	0.094	0.105	0.087	14.07
55)	TCM	Isopropylbenzene	1.507	1.712	1.752	1.813	1.878	2.067	1.788	10.40
56)	S	4-Bromofluorob...	0.422	0.429	0.425	0.436	0.431	0.445	0.431	1.92
57)	TCM	Bromobenzene	0.304	0.339	0.337	0.348	0.355	0.391	0.346	8.26
58)	TCM	1,1,2,2-Tetrac...	0.130	0.146	0.147	0.149	0.147	0.152	0.145	5.47
59)	TMC	1,2,3-Trichlor...	0.096	0.108	0.108	0.105	0.104	0.105	0.104	4.32
60)	TCM	Propylbenzene	1.903	2.096	2.114	2.151	2.198	2.338	2.133	6.67
61)	TCM	2-Chlorotoluene	1.159	1.234	1.202	1.221	1.252	1.347	1.236	5.09
62)	TCM	4-Chlorotoluene	1.265	1.400	1.391	1.425	1.462	1.626	1.428	8.21
63)	TCM	1,3,5-Trimethy...	1.353	1.498	1.507	1.567	1.621	1.840	1.564	10.37
64)	TCM	tert-Butylbenzene	1.102	1.227	1.242	1.315	1.356	1.547	1.298	11.54
65)	TCM	1,2,4-Trimethy...	1.342	1.463	1.492	1.571	1.609	1.819	1.549	10.42
66)	TCM	sec-Butylbenzene	1.661	1.824	1.864	1.919	1.991	2.235	1.916	10.01
67)	TCM	1,3-Dichlorobe...	0.707	0.756	0.789	0.810	0.832	0.932	0.805	9.50
68)	TCM	p-Isopropyltol...	1.415	1.582	1.615	1.748	1.864	2.272	1.749	17.04
69)	TCM	1,4-Dichlorobe...	0.672	0.760	0.760	0.821	0.879	1.117	0.835	18.49
70)	S	1,2-Dichlorobe...	0.396	0.406	0.409	0.414	0.413	0.440	0.413	3.57
71)	TCM	1,2-Dichlorobe...	0.601	0.617	0.613	0.633	0.639	0.700	0.634	5.56
72)	TCM	Butylbenzene	1.384	1.508	1.503	1.538	1.577	1.737	1.541	7.51
73)	TMC	1,2-Dibromo-3-...	0.017	0.017	0.020	0.020	0.020	0.021	0.019	10.54
74)	TCM	1,2,4-Trichlor...	0.377	0.415	0.427	0.445	0.453	0.515	0.439	10.47
75)	TCM	Hexachlorobuta...	0.244	0.251	0.259	0.258	0.269	0.313	0.266	9.29
76)	TCM	Naphthalene	0.412	0.456	0.512	0.539	0.538	0.569	0.504	11.72
77)	TCM	1,2,3-Trichlor...	0.296	0.332	0.330	0.345	0.345	0.376	0.337	7.74

(#) = Out of Range

CALIBRATION REPORT

Instrument Name: HP5973H
Sample Name: S15A050-SCV1
Misc Info: 5ug/L;WATER
Date Acquired: 1/14/2015
QLast Update: Wed Jan 14 16:54:35 20
Operator: YNB

#	Name	L1	L2	L3	L4	L5	L6
1)	Dichloromethane-d2	110861	115423	121514	124016	125048	121177
2)	Dichlorodifluoromethane	28827	58008	119093	299276	612515	1513023
3)	Chloromethane	36536	77785	155168	382256	756923	1819475
4)	Vinyl chloride	37013	80225	159518	399914	803068	1985035
5)	Bromomethane	20900	53714	115048	306875	699026	1609993
6)	Chloroethane	26395	56412	113227	288560	594052	1441147
7)	Trichlorofluoromethane	52186	104415	221232	541696	1146499	2807692
8)	1,1-Dichloroethene	32984	70913	153588	382614	814248	1994627
9)	1,1,2-Trichloro-1,2,2-trifluoroethane	33614	65891	145281	352764	733008	1852288
10)	Acetone	22001	37870	74261	176687	339632	780995
11)	Carbon disulfide	116490	243059	511761	1279032	2587324	6174380
12)	Dichloromethane	47511	85451	166027	395509	770135	1814303
13)	tert-Butyl alcohol	15776	34257	74915	189056	402899	665550
14)	trans-1,2-Dichloroethene	41023	90375	191944	484570	1011325	2511496
15)	tert-Butyl methyl ether (MTBE)	176078	385395	844853	2160336	4395049	10300832
16)	1,1-Dichloroethane	63150	139473	281650	703020	1446787	3533346
17)	Diisopropyl ether	315744	678252	1392908	3499187	7035799	15820799
18)	Ethyl-tert-butyl ether	155331	346019	730529	1947238	4093858	10265582
19)	2,2-Dichloropropane	22915	54388	120345	329495	713794	2011251
20)	cis-1,2-Dichloroethene	23105	50571	106354	275345	580026	1571058
21)	2-Butanone (MEK)	21362	41736	85305	216441	426063	1033640
22)	Bromochloromethane	6774	15383	32218	84034	173899	435968
23)	Chloroform	36721	78841	163791	419537	864232	2199366
24)	Fluorobenzene	1032100	1068878	1103810	1151896	1188925	1157183
25)	1,1,1-Trichloroethane	30741	67741	139860	374896	775185	2039535
26)	Carbon tetrachloride	24276	55015	116512	310131	667273	1839309
27)	1,1-Dichloropropene	26634	57899	120650	316781	667324	1813026
28)	1,2-Dichloroethane-d4	142769	147505	154303	160621	161253	154645
29)	Benzene	91414	203813	417564	1088622	2273213	5867261
30)	1,2-Dichloroethane	15702	37149	73616	187353	380214	953435
31)	tert-Amyl methyl ether	114507	260057	562496	1518683	3242890	8371363
32)	Trichloroethene	22751	48731	103249	263147	558193	1509113
33)	1,2-Dichloropropane	17649	39292	83563	215901	444286	1151938
34)	Dibromomethane	6664	13252	28291	76834	154556	388039
35)	Bromodichloromethane	20813	44360	98378	258340	534084	1375310
36)	cis-1,3-Dichloropropene	20347	44848	99963	270379	580811	1552709
37)	Chlorobenzene-d5	662007	682568	713777	745649	780704	775664
38)	4-Methyl-2-pentanone (MIBK)	36839	84322	184009	498163	1034285	2632269
39)	Toluene-d8	988445	1030535	1064109	1107806	1143649	1125106
40)	Toluene	61458	134161	275101	715618	1503392	4089008
41)	trans-1,3-Dichloropropene	14362	30635	69558	193459	418817	1113848
42)	1,1,2-Trichloroethane	8376	16783	35773	90755	190139	492078

43)	Tetrachloroethene	24755	52630	107420	282713	606231	1704867
44)	1,3-Dichloropropane	16994	37689	80352	209360	425694	1078951
45)	2-Hexanone	23747	52398	117580	323187	665462	1705669
46)	Chlorodibromomethane	10609	23891	52831	145054	306387	803345
47)	1,2-Dibromoethane (EDB)	7794	17070	38084	100539	211943	530056
48)	Chlorobenzene	62578	134379	271805	710846	1505630	4039474
49)	1,1,1,2-Tetrachloroethane	16499	36409	76653	206984	438938	1197654
50)	Ethylbenzene	106802	243424	514598	1359261	2889328	7653348
51)	m&p-Xylene	87408	200280	415785	1139530	2499695	7365966
52)	o-Xylene	38296	88884	187955	513468	1122611	3264666
53)	Styrene	57817	136393	293609	815746	1772616	5156992
54)	Bromoform	4698	10565	23751	67323	147215	406608
55)	Isopropylbenzene	99734	233667	500083	1351561	2932319	8014947
56)	4-Bromofluorobenzene	279092	292871	303114	325079	336781	344885
57)	Bromobenzene	20099	46313	96128	259353	554207	1518203
58)	1,1,2,2-Tetrachloroethane	8573	19873	42023	111257	230206	588625
59)	1,2,3-Trichloropropane	6341	14709	30905	78543	161952	406777
60)	Propylbenzene	125959	286183	603493	1604250	3432589	9066084
61)	2-Chlorotoluene	76724	168519	343280	910673	1955148	5222720
62)	4-Chlorotoluene	83772	191177	397111	1062221	2283003	6304670
63)	1,3,5-Trimethylbenzene	89570	204509	430244	1168732	2531428	7136899
64)	tert-Butylbenzene	72976	167482	354745	980430	2117011	6000790
65)	1,2,4-Trimethylbenzene	88857	199768	426006	1171192	2512997	7054654
66)	sec-Butylbenzene	109958	248964	532278	1430910	3109187	8668499
67)	1,3-Dichlorobenzene	46836	103181	225369	603806	1299668	3616510
68)	p-Isopropyltoluene	93680	215903	461141	1303214	2911141	8810563
69)	1,4-Dichlorobenzene	44470	103793	217068	612286	1371913	4330245
70)	1,2-Dichlorobenzene-d4	261865	277157	291705	308475	322489	341081
71)	1,2-Dichlorobenzene	39760	84190	175090	471781	997557	2714525
72)	Butylbenzene	91610	205921	429045	1147158	2462980	6737169
73)	1,2-Dibromo-3-chloropropane	4425	9043	22711	59646	126862	332122
74)	1,2,4-Trichlorobenzene	24987	56633	121950	331476	707354	1998200
75)	Hexachlorobutadiene	16159	34326	73993	192741	420039	1215400
76)	Naphthalene	27282	62219	146044	401906	839340	2208129
77)	1,2,3-Trichlorobenzene	19600	45363	94272	257076	538646	1459347

Duplicate RT REPORT

Instrument Name: HP5973H
Sample Name: S15A050-CAL4
Misc Inao: 5.0ug/L;,WATER
Date Acquired: 1/14/2015
QLast Update: Wed Jan 14 15:26:35 20
Operator: YNB

#	Name	RT	CONC	Qion	
1)	Dichloromethane-d2	3.892	5.000	53	3.472
2)	Dichlorodifluoromethane	1.539	5.000	85	
3)	Chloromethane	1.739	5.000	50	
4)	Vinyl chloride	1.837	5.000	62	
5)	Bromomethane	2.177	5.000	94	
6)	Chloroethane	2.293	5.000	64	
7)	Trichlorofluoromethane	2.585	5.000	101	
8)	1,1-Dichloroethene	3.211	5.000	96	
9)	1,1,2-Trichloro-1,2,2-trifluoroethane	3.247	5.000	101	
10)	Acetone	3.320	40.000	43	
11)	Carbon disulfide	3.472	5.000	76	
12)	Dichloromethane	3.929	5.000	84	
13)	tert-Butyl alcohol	4.251	100.000	59	
14)	trans-1,2-Dichloroethene	4.360	5.000	96	
15)	tert-Butyl methyl ether (MTBE)	4.415	20.000	73	
16)	1,1-Dichloroethane	5.035	5.000	63	
17)	Diisopropyl ether	5.248	20.000	45	
18)	Ethyl-tert-butyl ether	5.832	20.000	59	
19)	2,2-Dichloropropane	5.960	5.000	77	
20)	cis-1,2-Dichloroethene	5.972	5.000	96	
21)	2-Butanone (MEK)	6.063	40.000	43	
22)	Bromochloromethane	6.343	5.000	128	
23)	Chloroform	6.519	5.000	83	
24)	Fluorobenzene	7.821	5.000	96	7.620
25)	1,1,1-Trichloroethane	6.762	5.000	97	
26)	Carbon tetrachloride	7.012	5.000	117	
27)	1,1-Dichloropropene	7.030	5.000	75	
28)	1,2-Dichloroethane-d4	7.273	5.000	65	
29)	Benzene	7.352	5.000	78	
30)	1,2-Dichloroethane	7.395	5.000	62	
31)	tert-Amyl methyl ether	7.620	20.000	73	
32)	Trichloroethene	8.404	5.000	95	
33)	1,2-Dichloropropane	8.757	5.000	63	
34)	Dibromomethane	8.934	5.000	93	
35)	Bromodichloromethane	9.231	5.000	83	
36)	cis-1,3-Dichloropropene	9.973	5.000	75	
37)	Chlorobenzene-d5	12.783	5.000	117	11.974
38)	4-Methyl-2-pentanone (MIBK)	10.277	40.000	43	
39)	Toluene-d8	10.393	5.000	98	
40)	Toluene	10.502	5.000	92	
41)	trans-1,3-Dichloropropene	10.904	5.000	75	

42)	1,1,2-Trichloroethane	11.190	5.000	83	
43)	Tetrachloroethene	11.390	5.000	166	
44)	1,3-Dichloropropane	11.457	5.000	76	
45)	2-Hexanone	11.676	40.000	43	
46)	Chlorodibromomethane	11.822	5.000	129	
47)	1,2-Dibromoethane (EDB)	11.974	5.000	107	
48)	Chlorobenzene	12.832	5.000	112	
49)	1,1,1,2-Tetrachloroethane	12.996	5.000	131	
50)	Ethylbenzene	13.063	5.000	91	
51)	m&p-Xylene	13.276	10.000	106	
52)	o-Xylene	13.945	5.000	106	
53)	Styrene	13.975	5.000	104	
54)	Bromoform	14.243	5.000	173	
55)	Isopropylbenzene	14.613	5.000	105	
56)	4-Bromofluorobenzene	14.845	5.000	95	
57)	Bromobenzene	15.070	5.000	156	
58)	1,1,2,2-Tetrachloroethane	15.155	5.000	83	
59)	1,2,3-Trichloropropane	15.191	5.000	75	
60)	Propylbenzene	15.337	5.000	91	
61)	2-Chlorotoluene	15.441	5.000	91	
62)	4-Chlorotoluene	15.641	5.000	91	
63)	1,3,5-Trimethylbenzene	15.672	5.000	105	
64)	tert-Butylbenzene	16.231	5.000	119	0.000
65)	1,2,4-Trimethylbenzene	16.322	5.000	105	0.000
66)	sec-Butylbenzene	16.626	5.000	105	
67)	1,3-Dichlorobenzene	16.760	5.000	146	
68)	p-Isopropyltoluene	16.912	5.000	119	
69)	1,4-Dichlorobenzene	16.924	5.000	146	
70)	1,2-Dichlorobenzene-d4	17.539	5.000	152	0.000
71)	1,2-Dichlorobenzene	17.569	5.000	146	0.000
72)	Butylbenzene	17.642	5.000	91	0.000
73)	1,2-Dibromo-3-chloropropane	18.986	20.000	75	0.000
74)	1,2,4-Trichlorobenzene	20.494	5.000	180	0.000
75)	Hexachlorobutadiene	0.000	5.000	225	0.000
76)	Naphthalene	20.914	5.000	128	0.000
77)	1,2,3-Trichlorobenzene	21.358	5.000	180	0.000

CALIBRATION REPORT

Instrument Name: HP5973H
Sample Name: S15A050-SCV1
Misc Info: 5ug/L;WATER
Date Acquired: 1/14/2015
QLast Update: Wed Jan 14 16:54:35 20
Operator: YNB

#	Name	L1	L2	L3	L4	L5	L6
1)	Dichloromethane-d2	5.00	5.00	5.00	5.00	5.00	5.00
2)	Dichlorodifluoromethane	0.50	1.00	2.00	5.00	10.00	25.00
3)	Chloromethane	0.50	1.00	2.00	5.00	10.00	25.00
4)	Vinyl chloride	0.50	1.00	2.00	5.00	10.00	25.00
5)	Bromomethane	0.50	1.00	2.00	5.00	10.00	25.00
6)	Chloroethane	0.50	1.00	2.00	5.00	10.00	25.00
7)	Trichlorofluoromethane	0.50	1.00	2.00	5.00	10.00	25.00
8)	1,1-Dichloroethene	0.50	1.00	2.00	5.00	10.00	25.00
9)	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	1.00	2.00	5.00	10.00	25.00
10)	Acetone	4.00	8.00	16.00	40.00	80.00	200.00
11)	Carbon disulfide	0.50	1.00	2.00	5.00	10.00	25.00
12)	Dichloromethane	0.50	1.00	2.00	5.00	10.00	25.00
13)	tert-Butyl alcohol	10.00	20.00	40.00	100.00	200.00	500.00
14)	trans-1,2-Dichloroethene	0.50	1.00	2.00	5.00	10.00	25.00
15)	tert-Butyl methyl ether (MTBE)	2.00	4.00	8.00	20.00	40.00	100.00
16)	1,1-Dichloroethane	0.50	1.00	2.00	5.00	10.00	25.00
17)	Diisopropyl ether	2.00	4.00	8.00	20.00	40.00	100.00
18)	Ethyl-tert-butyl ether	2.00	4.00	8.00	20.00	40.00	100.00
19)	2,2-Dichloropropane	0.50	1.00	2.00	5.00	10.00	25.00
20)	cis-1,2-Dichloroethene	0.50	1.00	2.00	5.00	10.00	25.00
21)	2-Butanone (MEK)	4.00	8.00	16.00	40.00	80.00	200.00
22)	Bromochloromethane	0.50	1.00	2.00	5.00	10.00	25.00
23)	Chloroform	0.50	1.00	2.00	5.00	10.00	25.00
24)	Fluorobenzene	5.00	5.00	5.00	5.00	5.00	5.00
25)	1,1,1-Trichloroethane	0.50	1.00	2.00	5.00	10.00	25.00
26)	Carbon tetrachloride	0.50	1.00	2.00	5.00	10.00	25.00
27)	1,1-Dichloropropene	0.50	1.00	2.00	5.00	10.00	25.00
28)	1,2-Dichloroethane-d4	5.00	5.00	5.00	5.00	5.00	5.00
29)	Benzene	0.50	1.00	2.00	5.00	10.00	25.00
30)	1,2-Dichloroethane	0.50	1.00	2.00	5.00	10.00	25.00
31)	tert-Amyl methyl ether	2.00	4.00	8.00	20.00	40.00	100.00
32)	Trichloroethene	0.50	1.00	2.00	5.00	10.00	25.00
33)	1,2-Dichloropropane	0.50	1.00	2.00	5.00	10.00	25.00
34)	Dibromomethane	0.50	1.00	2.00	5.00	10.00	25.00
35)	Bromodichloromethane	0.50	1.00	2.00	5.00	10.00	25.00
36)	cis-1,3-Dichloropropene	0.50	1.00	2.00	5.00	10.00	25.00
37)	Chlorobenzene-d5	5.00	5.00	5.00	5.00	5.00	5.00
38)	4-Methyl-2-pentanone (MIBK)	4.00	8.00	16.00	40.00	80.00	200.00
39)	Toluene-d8	5.00	5.00	5.00	5.00	5.00	5.00
40)	Toluene	0.50	1.00	2.00	5.00	10.00	25.00
41)	trans-1,3-Dichloropropene	0.50	1.00	2.00	5.00	10.00	25.00
42)	1,1,2-Trichloroethane	0.50	1.00	2.00	5.00	10.00	25.00

43)	Tetrachloroethene	0.50	1.00	2.00	5.00	10.00	25.00
44)	1,3-Dichloropropane	0.50	1.00	2.00	5.00	10.00	25.00
45)	2-Hexanone	4.00	8.00	16.00	40.00	80.00	200.00
46)	Chlorodibromomethane	0.50	1.00	2.00	5.00	10.00	25.00
47)	1,2-Dibromoethane (EDB)	0.50	1.00	2.00	5.00	10.00	25.00
48)	Chlorobenzene	0.50	1.00	2.00	5.00	10.00	25.00
49)	1,1,1,2-Tetrachloroethane	0.50	1.00	2.00	5.00	10.00	25.00
50)	Ethylbenzene	0.50	1.00	2.00	5.00	10.00	25.00
51)	m&p-Xylene	1.00	2.00	4.00	10.00	20.00	50.00
52)	o-Xylene	0.50	1.00	2.00	5.00	10.00	25.00
53)	Styrene	0.50	1.00	2.00	5.00	10.00	25.00
54)	Bromoform	0.50	1.00	2.00	5.00	10.00	25.00
55)	Isopropylbenzene	0.50	1.00	2.00	5.00	10.00	25.00
56)	4-Bromofluorobenzene	5.00	5.00	5.00	5.00	5.00	5.00
57)	Bromobenzene	0.50	1.00	2.00	5.00	10.00	25.00
58)	1,1,2,2-Tetrachloroethane	0.50	1.00	2.00	5.00	10.00	25.00
59)	1,2,3-Trichloropropane	0.50	1.00	2.00	5.00	10.00	25.00
60)	Propylbenzene	0.50	1.00	2.00	5.00	10.00	25.00
61)	2-Chlorotoluene	0.50	1.00	2.00	5.00	10.00	25.00
62)	4-Chlorotoluene	0.50	1.00	2.00	5.00	10.00	25.00
63)	1,3,5-Trimethylbenzene	0.50	1.00	2.00	5.00	10.00	25.00
64)	tert-Butylbenzene	0.50	1.00	2.00	5.00	10.00	25.00
65)	1,2,4-Trimethylbenzene	0.50	1.00	2.00	5.00	10.00	25.00
66)	sec-Butylbenzene	0.50	1.00	2.00	5.00	10.00	25.00
67)	1,3-Dichlorobenzene	0.50	1.00	2.00	5.00	10.00	25.00
68)	p-Isopropyltoluene	0.50	1.00	2.00	5.00	10.00	25.00
69)	1,4-Dichlorobenzene	0.50	1.00	2.00	5.00	10.00	25.00
70)	1,2-Dichlorobenzene-d4	5.00	5.00	5.00	5.00	5.00	5.00
71)	1,2-Dichlorobenzene	0.50	1.00	2.00	5.00	10.00	25.00
72)	Butylbenzene	0.50	1.00	2.00	5.00	10.00	25.00
73)	1,2-Dibromo-3-chloropropane	2.00	4.00	8.00	20.00	40.00	100.00
74)	1,2,4-Trichlorobenzene	0.50	1.00	2.00	5.00	10.00	25.00
75)	Hexachlorobutadiene	0.50	1.00	2.00	5.00	10.00	25.00
76)	Naphthalene	0.50	1.00	2.00	5.00	10.00	25.00
77)	1,2,3-Trichlorobenzene	0.50	1.00	2.00	5.00	10.00	25.00

CALIBRATION REPORT

Instrument Name: HP5973H
Sample Name: S15A050-SCV1
Misc Info: 5ug/L;WATER
Date Acquired: 1/14/2015
QLast Update: Wed Jan 14 16:54:35 20
Operator: YNB

#	Name	L1	L2	L3	L4	L5	L6
1)	Dichloromethane-d2	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2)	Dichlorodifluoromethane	0.50	1.00	2.00	5.00	10.00	25
3)	Chloromethane	0.50	1.00	2.00	5.00	10.00	25
4)	Vinyl chloride	0.50	1.00	2.00	5.00	10.00	25
5)	Bromomethane	0.50	1.00	2.00	5.00	10.00	25
6)	Chloroethane	0.50	1.00	2.00	5.00	10.00	25
7)	Trichlorofluoromethane	0.50	1.00	2.00	5.00	10.00	25
8)	1,1-Dichloroethene	0.50	1.00	2.00	5.00	10.00	25
9)	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	1.00	2.00	5.00	10.00	25
10)	Acetone	4.00	8.00	16.00	40.00	80.00	200
11)	Carbon disulfide	0.50	1.00	2.00	5.00	10.00	25
12)	Dichloromethane	0.50	1.00	2.00	5.00	10.00	25
13)	tert-Butyl alcohol	10.00	20.00	40.00	100.00	200.00	500
14)	trans-1,2-Dichloroethene	0.50	1.00	2.00	5.00	10.00	25
15)	tert-Butyl methyl ether (MTBE)	2.00	4.00	8.00	20.00	40.00	100
16)	1,1-Dichloroethane	0.50	1.00	2.00	5.00	10.00	25
17)	Diisopropyl ether	2.00	4.00	8.00	20.00	40.00	100
18)	Ethyl-tert-butyl ether	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
19)	2,2-Dichloropropane	0.50	1.00	2.00	5.00	10.00	25
20)	cis-1,2-Dichloroethene	0.50	1.00	2.00	5.00	10.00	25
21)	2-Butanone (MEK)	4.00	8.00	16.00	40.00	80.00	200
22)	Bromochloromethane	0.50	1.00	2.00	5.00	10.00	25
23)	Chloroform	0.50	1.00	2.00	5.00	10.00	25
24)	Fluorobenzene	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
25)	1,1,1-Trichloroethane	0.50	1.00	2.00	5.00	10.00	25
26)	Carbon tetrachloride	0.50	1.00	2.00	5.00	10.00	25
27)	1,1-Dichloropropene	0.50	1.00	2.00	5.00	10.00	25
28)	1,2-Dichloroethane-d4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
29)	Benzene	0.50	1.00	2.00	5.00	10.00	25
30)	1,2-Dichloroethane	0.50	1.00	2.00	5.00	10.00	25
31)	tert-Amyl methyl ether	2.00	4.00	8.00	20.00	40.00	100
32)	Trichloroethene	0.50	1.00	2.00	5.00	10.00	25
33)	1,2-Dichloropropane	0.50	1.00	2.00	5.00	10.00	25
34)	Dibromomethane	0.50	1.00	2.00	5.00	10.00	25
35)	Bromodichloromethane	0.50	1.00	2.00	5.00	10.00	25
36)	cis-1,3-Dichloropropene	0.50	1.00	2.00	5.00	10.00	25
37)	Chlorobenzene-d5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
38)	4-Methyl-2-pentanone (MIBK)	4.00	8.00	16.00	40.00	80.00	200
39)	Toluene-d8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
40)	Toluene	0.50	1.00	2.00	5.00	10.00	25
41)	trans-1,3-Dichloropropene	0.50	1.00	2.00	5.00	10.00	25
42)	1,1,2-Trichloroethane	0.50	1.00	2.00	5.00	10.00	25
43)	Tetrachloroethene	0.50	1.00	2.00	5.00	10.00	25
44)	1,3-Dichloropropane	0.50	1.00	2.00	5.00	10.00	25
45)	2-Hexanone	4.00	8.00	16.00	40.00	80.00	200
46)	Chlorodibromomethane	0.50	1.00	2.00	5.00	10.00	25
47)	1,2-Dibromoethane (EDB)	0.50	1.00	2.00	5.00	10.00	25

48)	Chlorobenzene	0.50	1.00	2.00	5.00	10.00	25
49)	1,1,1,2-Tetrachloroethane	0.50	1.00	2.00	5.00	10.00	25
50)	Ethylbenzene	0.50	1.00	2.00	5.00	10.00	25
51)	m&p-Xylene	1.00	2.00	4.00	10.00	20.00	50
52)	o-Xylene	0.50	1.00	2.00	5.00	10.00	25
53)	Styrene	0.50	1.00	2.00	5.00	10.00	25
54)	Bromoform	0.50	1.00	2.00	5.00	10.00	25
55)	Isopropylbenzene	0.50	1.00	2.00	5.00	10.00	25
56)	4-Bromofluorobenzene	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
57)	Bromobenzene	0.50	1.00	2.00	5.00	10.00	25
58)	1,1,2,2-Tetrachloroethane	0.50	1.00	2.00	5.00	10.00	25
59)	1,2,3-Trichloropropane	0.50	1.00	2.00	5.00	10.00	25
60)	Propylbenzene	0.50	1.00	2.00	5.00	10.00	25
61)	2-Chlorotoluene	0.50	1.00	2.00	5.00	10.00	25
62)	4-Chlorotoluene	0.50	1.00	2.00	5.00	10.00	25
63)	1,3,5-Trimethylbenzene	0.50	1.00	2.00	5.00	10.00	25
64)	tert-Butylbenzene	0.50	1.00	2.00	5.00	10.00	25
65)	1,2,4-Trimethylbenzene	0.50	1.00	2.00	5.00	10.00	25
66)	sec-Butylbenzene	0.50	1.00	2.00	5.00	10.00	25
67)	1,3-Dichlorobenzene	0.50	1.00	2.00	5.00	10.00	25
68)	p-Isopropyltoluene	0.50	1.00	2.00	5.00	10.00	25
69)	1,4-Dichlorobenzene	0.50	1.00	2.00	5.00	10.00	25
70)	1,2-Dichlorobenzene-d4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
71)	1,2-Dichlorobenzene	0.50	1.00	2.00	5.00	10.00	25
72)	Butylbenzene	0.50	1.00	2.00	5.00	10.00	25
73)	1,2-Dibromo-3-chloropropane	2.00	4.00	8.00	20.00	40.00	100
74)	1,2,4-Trichlorobenzene	0.50	1.00	2.00	5.00	10.00	25
75)	Hexachlorobutadiene	0.50	1.00	2.00	5.00	10.00	25
76)	Naphthalene	0.50	1.00	2.00	5.00	10.00	25
77)	1,2,3-Trichlorobenzene	0.50	1.00	2.00	5.00	10.00	25

LIMS VS CHEMSTATION CONCENTRATIONS "0"= MATCH

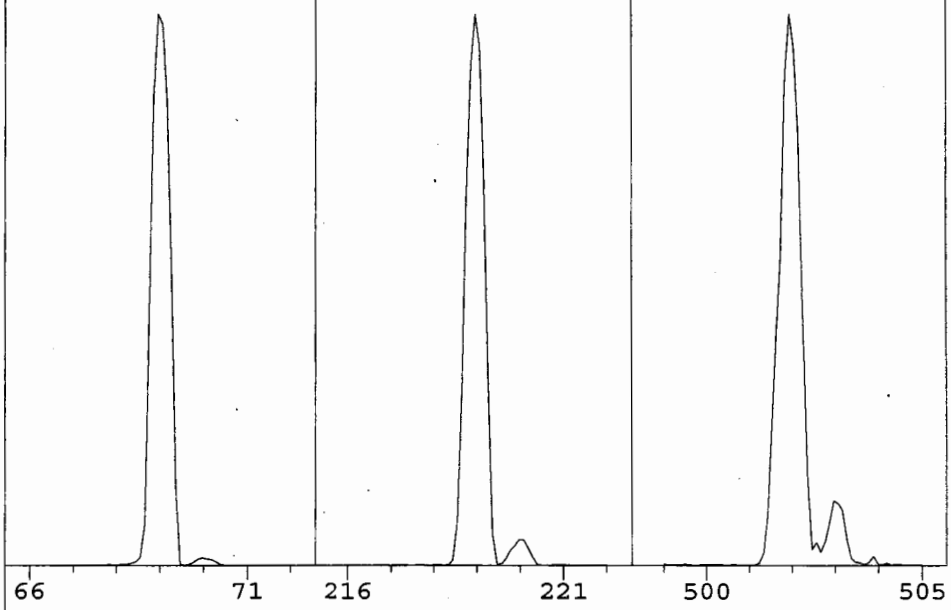
Instrument Name: HP5973H
Sample Name: S15A050-SCV1
Misc Info: 5ug/L;WATER
Date Acquired: 1/14/2015
QLast Update: Wed Jan 14 16:54:35 20
Operator: YNB

#	Name	L1	L2	L3	L4	L5	L6
1)	Dichloromethane-d2	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2)	Dichlorodifluoromethane	0.00	0.00	0.00	0.00	0.00	0.00
3)	Chloromethane	0.00	0.00	0.00	0.00	0.00	0.00
4)	Vinyl chloride	0.00	0.00	0.00	0.00	0.00	0.00
5)	Bromomethane	0.00	0.00	0.00	0.00	0.00	0.00
6)	Chloroethane	0.00	0.00	0.00	0.00	0.00	0.00
7)	Trichlorofluoromethane	0.00	0.00	0.00	0.00	0.00	0.00
8)	1,1-Dichloroethene	0.00	0.00	0.00	0.00	0.00	0.00
9)	1,1,2-Trichloro-1,2,2-trifluoroethane	0.00	0.00	0.00	0.00	0.00	0.00
10)	Acetone	0.00	0.00	0.00	0.00	0.00	0.00
11)	Carbon disulfide	0.00	0.00	0.00	0.00	0.00	0.00
12)	Dichloromethane	0.00	0.00	0.00	0.00	0.00	0.00
13)	tert-Butyl alcohol	0.00	0.00	0.00	0.00	0.00	0.00
14)	trans-1,2-Dichloroethene	0.00	0.00	0.00	0.00	0.00	0.00
15)	tert-Butyl methyl ether (MTBE)	0.00	0.00	0.00	0.00	0.00	0.00
16)	1,1-Dichloroethane	0.00	0.00	0.00	0.00	0.00	0.00
17)	Diisopropyl ether	0.00	0.00	0.00	0.00	0.00	0.00
18)	Ethyl-tert-butyl ether	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
19)	2,2-Dichloropropane	0.00	0.00	0.00	0.00	0.00	0.00
20)	cis-1,2-Dichloroethene	0.00	0.00	0.00	0.00	0.00	0.00
21)	2-Butanone (MEK)	0.00	0.00	0.00	0.00	0.00	0.00
22)	Bromochloromethane	0.00	0.00	0.00	0.00	0.00	0.00
23)	Chloroform	0.00	0.00	0.00	0.00	0.00	0.00
24)	Fluorobenzene	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
25)	1,1,1-Trichloroethane	0.00	0.00	0.00	0.00	0.00	0.00
26)	Carbon tetrachloride	0.00	0.00	0.00	0.00	0.00	0.00
27)	1,1-Dichloropropene	0.00	0.00	0.00	0.00	0.00	0.00
28)	1,2-Dichloroethane-d4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
29)	Benzene	0.00	0.00	0.00	0.00	0.00	0.00
30)	1,2-Dichloroethane	0.00	0.00	0.00	0.00	0.00	0.00
31)	tert-Amyl methyl ether	0.00	0.00	0.00	0.00	0.00	0.00
32)	Trichloroethene	0.00	0.00	0.00	0.00	0.00	0.00
33)	1,2-Dichloropropane	0.00	0.00	0.00	0.00	0.00	0.00
34)	Dibromomethane	0.00	0.00	0.00	0.00	0.00	0.00
35)	Bromodichloromethane	0.00	0.00	0.00	0.00	0.00	0.00
36)	cis-1,3-Dichloropropene	0.00	0.00	0.00	0.00	0.00	0.00
37)	Chlorobenzene-d5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
38)	4-Methyl-2-pentanone (MIBK)	0.00	0.00	0.00	0.00	0.00	0.00
39)	Toluene-d8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
40)	Toluene	0.00	0.00	0.00	0.00	0.00	0.00
41)	trans-1,3-Dichloropropene	0.00	0.00	0.00	0.00	0.00	0.00
42)	1,1,2-Trichloroethane	0.00	0.00	0.00	0.00	0.00	0.00
43)	Tetrachloroethene	0.00	0.00	0.00	0.00	0.00	0.00
44)	1,3-Dichloropropane	0.00	0.00	0.00	0.00	0.00	0.00
45)	2-Hexanone	0.00	0.00	0.00	0.00	0.00	0.00
46)	Chlorodibromomethane	0.00	0.00	0.00	0.00	0.00	0.00
47)	1,2-Dibromoethane (EDB)	0.00	0.00	0.00	0.00	0.00	0.00

48)	Chlorobenzene	0.00	0.00	0.00	0.00	0.00	0.00
49)	1,1,1,2-Tetrachloroethane	0.00	0.00	0.00	0.00	0.00	0.00
50)	Ethylbenzene	0.00	0.00	0.00	0.00	0.00	0.00
51)	m&p-Xylene	0.00	0.00	0.00	0.00	0.00	0.00
52)	o-Xylene	0.00	0.00	0.00	0.00	0.00	0.00
53)	Styrene	0.00	0.00	0.00	0.00	0.00	0.00
54)	Bromoform	0.00	0.00	0.00	0.00	0.00	0.00
55)	Isopropylbenzene	0.00	0.00	0.00	0.00	0.00	0.00
56)	4-Bromofluorobenzene	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
57)	Bromobenzene	0.00	0.00	0.00	0.00	0.00	0.00
58)	1,1,2,2-Tetrachloroethane	0.00	0.00	0.00	0.00	0.00	0.00
59)	1,2,3-Trichloropropane	0.00	0.00	0.00	0.00	0.00	0.00
60)	Propylbenzene	0.00	0.00	0.00	0.00	0.00	0.00
61)	2-Chlorotoluene	0.00	0.00	0.00	0.00	0.00	0.00
62)	4-Chlorotoluene	0.00	0.00	0.00	0.00	0.00	0.00
63)	1,3,5-Trimethylbenzene	0.00	0.00	0.00	0.00	0.00	0.00
64)	tert-Butylbenzene	0.00	0.00	0.00	0.00	0.00	0.00
65)	1,2,4-Trimethylbenzene	0.00	0.00	0.00	0.00	0.00	0.00
66)	sec-Butylbenzene	0.00	0.00	0.00	0.00	0.00	0.00
67)	1,3-Dichlorobenzene	0.00	0.00	0.00	0.00	0.00	0.00
68)	p-Isopropyltoluene	0.00	0.00	0.00	0.00	0.00	0.00
69)	1,4-Dichlorobenzene	0.00	0.00	0.00	0.00	0.00	0.00
70)	1,2-Dichlorobenzene-d4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
71)	1,2-Dichlorobenzene	0.00	0.00	0.00	0.00	0.00	0.00
72)	Butylbenzene	0.00	0.00	0.00	0.00	0.00	0.00
73)	1,2-Dibromo-3-chloropropane	0.00	0.00	0.00	0.00	0.00	0.00
74)	1,2,4-Trichlorobenzene	0.00	0.00	0.00	0.00	0.00	0.00
75)	Hexachlorobutadiene	0.00	0.00	0.00	0.00	0.00	0.00
76)	Naphthalene	0.00	0.00	0.00	0.00	0.00	0.00
77)	1,2,3-Trichlorobenzene	0.00	0.00	0.00	0.00	0.00	0.00

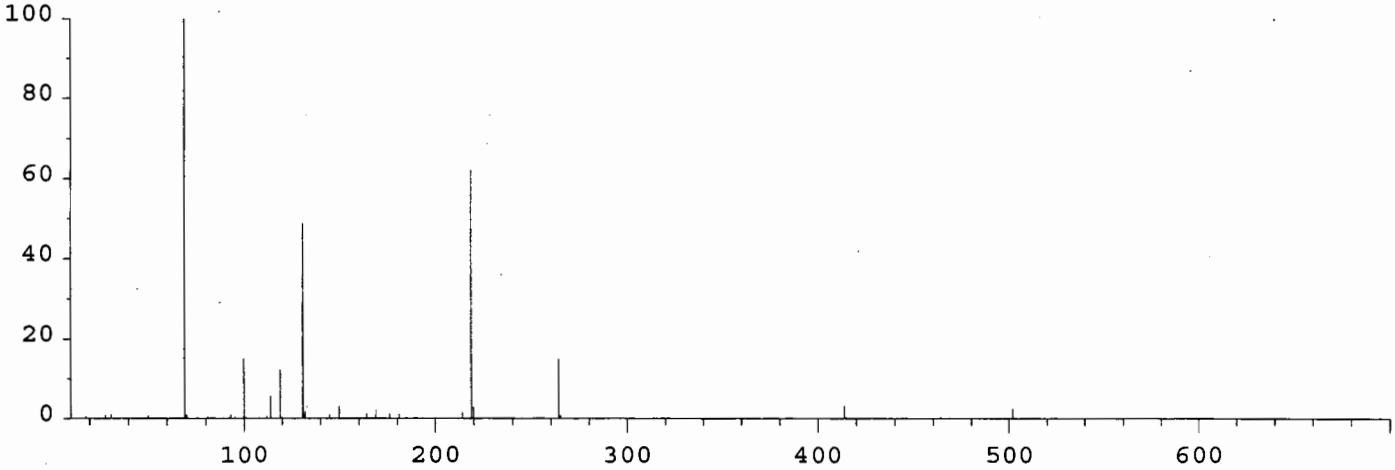
Wed Jan 14 11:01:05 2015 Instrument: HP5973H
C:\msdchem\1\5973\BFH011415.u

Mass	68.95	Mass	218.95	Mass	501.95
Ab	732995	Ab	449169	Ab	16983
Pw50	0.49	Pw50	0.50	Pw50	0.53



Ion Pol	POS	MassGain	-228
		MassOffs	-11
Emission	34.6	AmuGain	1859
EIEnrgy	69.9	AmuOffs	133
Filament	2	Wid219	-0.019
		DC Pol	NEG
Repeller	12.70		
IonFcus	66.4	HEDEnab	ON
EntLens	12.0	EMVolts	2294
EntOffs	15.31		
		Samples	8
PFTBA	OPEN	Averages	3
		Stepsize	0.10
Zones:			
MS Source	230	TurboSpd	100
MS Quad	150		

Scan: 10.00 - 700.00 Samples: 8 Thresh: 100 Step: 0.10
150 peaks Base: 69.05 Abundance: 626304



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.05	626304	100.00	69.95	6256	1.00
218.95	388736	62.07	219.95	17968	4.62
501.95	15761	2.52	502.95	1598	10.14

Air/Water Check: H20~0.60% N2~0.84% O2~0.29% CO2~0.12% N2/H2O~138.82%

Column Flow: Front: 1 Back: 0 ml/min. Interface Temp: 230

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 69; EM Gain 474818
Repeller Maximum 20 volts using ion 219;

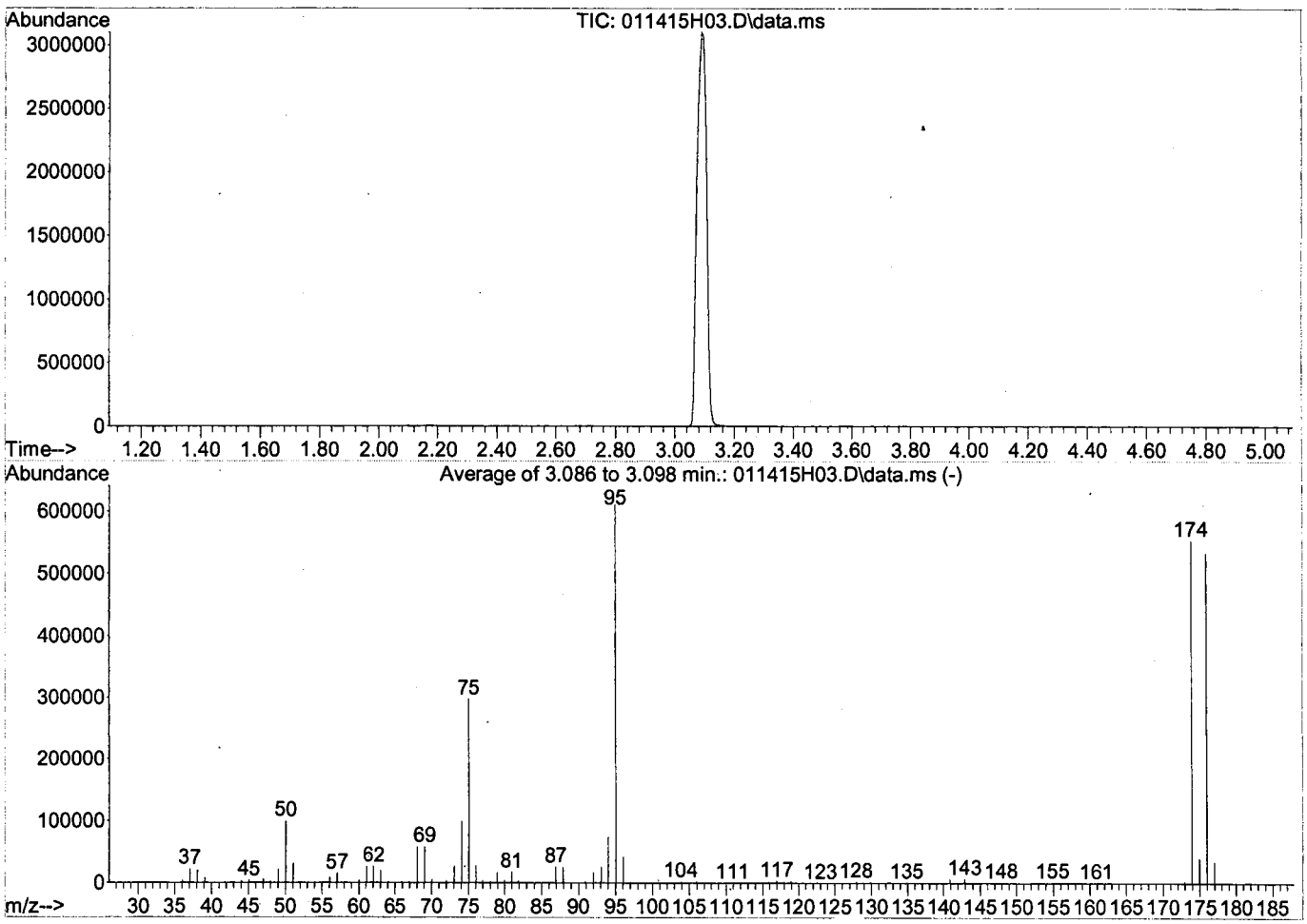
MassGain Values @Samples: -228@3 -228@2 -228@1 -228@0 -228@FS

TARGET MASS:	50	69	131	219	414	502	800
Amu Offset:	133.0	133.0	133.0	133.0	133.0	133.0	133.0
Entrance Lens Offset:	15.3	15.3	15.3	15.3	15.3	15.3	15.3

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H03.D
Acq On : 14 Jan 2015 11:03
Operator : YNB
Sample : S15A050-TUN2
Misc : 0.5ul , EM 2318V
ALS Vial : 100 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M
Title : Volatile Organic Analysis - 524.2 Method
Last Update : Tue Oct 21 13:52:26 2014



AutoFind: Scans 164, 165, 166; Background Corrected with Scan 155

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.3	99581	PASS
75	95	30	80	48.7	297301	PASS
95	95	100	100	100.0	610688	PASS
96	95	5	9	7.0	42722	PASS
173	174	0.00	2	0.5	3022	PASS
174	95	50	120	90.6	553429	PASS
175	174	5	9	7.3	40314	PASS
176	174	95	101	96.3	533141	PASS
177	176	5	9	6.5	34648	PASS

Average of 3.086 to 3.098 min.: 011415H03.D\data.ms
S15A050-TUN2
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	3993	48.00	3046	62.05	26432	75.05	297301
37.05	22626	49.05	21965	63.05	20037	76.05	27213
38.05	20288	50.05	99581	64.05	1856	76.95	3387
39.10	8178	51.05	31408	66.95	1412	78.00	2084
40.10	427	52.05	1446	68.05	58082	78.95	15952
41.05	112	55.10	1476	69.05	58301	79.95	4504
43.05	122	56.05	8717	70.05	4916	80.95	17738
44.05	3276	57.05	15256	71.25	116	81.90	3750
45.05	4422	58.00	598	72.00	3461	83.00	561
46.05	179	60.00	4500	73.05	27034	85.85	222
47.05	6277	61.05	26010	74.05	99541	86.05	561

Average of 3.086 to 3.098 min.: 011415H03.D\data.ms
S15A050-TUN2
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
86.95	26000	104.90	800	118.90	3301	130.90	982
87.95	25658	105.95	2489	120.05	115	134.90	1292
90.90	2190	106.95	641	123.05	139	136.90	1133
92.00	16922	109.90	317	123.85	277	139.80	549
93.05	26181	110.90	512	124.85	119	140.85	6918
94.05	73912	111.90	409	125.05	122	141.90	596
95.05	610688	112.90	659	126.05	104	142.90	7211
96.05	42722	114.90	657	126.75	136	143.75	211
97.00	1424	115.85	2141	127.90	2400	144.00	294
103.05	226	116.95	3839	128.85	1167	145.00	591
103.90	2727	117.95	2390	129.85	2243	145.90	881

Average of 3.086 to 3.098 min.: 011415H03.D\data.ms
S15A050-TUN2
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
146.85	292	160.90	798				
147.90	1793	171.95	102				
148.75	264	172.95	3022				
148.95	134	173.95	553429				
149.95	727	174.95	40314				
152.85	591	175.95	533141				
153.90	595	176.95	34648				
154.90	1687	177.90	1041				
155.85	127						
156.90	865						
158.80	810						

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H04.D
Acq On : 14 Jan 2015 11:28
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CCV1@B15A0XX-BS1
Misc : CCV,WATER
ALS Vial : 27
Multiplier: 1

Quant Time: Jan 14 17:01:18 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.893	53	131241	5.000 ug/L	0.00
24) Fluorobenzene	7.822	96	1273653	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.784	117	816830	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.275	65	165657	4.731 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 94.60%	
39) Toluene-d8	10.394	98	1214704	5.016 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 100.40%	
56) 4-Bromofluorobenzene	14.846	95	342477	4.862 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 97.20%	
70) 1,2-Dichlorobenzene-d4	17.540	152	329852	4.891 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 97.80%	

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.540	85	330933	5.069 ug/L	99
3) Chloromethane	1.759	50	420560	5.068 ug/L #	85
4) Vinyl chloride	1.838	62	443261	5.115 ug/L	99
5) Bromomethane	2.178	94	312944	4.931 ug/L	99
6) Chloroethane	2.294	64	307805	4.943 ug/L	99
7) Trichlorofluoromethane	2.586	101	576911	4.819 ug/L	99
8) 1,1-Dichloroethene	3.218	96	420022	5.096 ug/L	97
9) 1,1,2-Trichloro-1,2,2-...	3.249	101	396416	5.117 ug/L	99
10) Acetone	3.322	43	169888	33.679 ug/L	98
11) Carbon disulfide	3.480	76	1348312	4.938 ug/L	100
12) Dichloromethane	3.930	84	393630	4.354 ug/L #	97
13) tert-Butyl alcohol	4.246	59	159045	83.747 ug/L	99
14) trans-1,2-Dichloroethene	4.368	96	519407	5.018 ug/L	99
15) tert-Butyl methyl ethe...	4.416	73	2113189	18.952 ug/L	100
16) 1,1-Dichloroethane	5.037	63	746588	4.901 ug/L	99
17) Diisopropyl ether	5.249	45	3481411	18.838 ug/L	99
18) Ethyl-tert-butyl ether	5.833	59	1938091	19.046 ug/L	100
19) 2,2-Dichloropropane	5.961	77	402176	5.845 ug/L	100
20) cis-1,2-Dichloroethene	5.973	96	294788	4.956 ug/L	100
21) 2-Butanone (MEK)	6.064	43	203766	35.006 ug/L	98
22) Bromochloromethane	6.350	128	85416	4.842 ug/L	99
23) Chloroform	6.520	83	445212	4.948 ug/L	99
25) 1,1,1-Trichloroethane	6.758	97	407150	4.955 ug/L	98
26) Carbon tetrachloride	7.019	117	345866	5.016 ug/L	99
27) 1,1-Dichloropropene	7.031	75	342820	4.832 ug/L	99
29) Benzene	7.354	78	1172571	4.845 ug/L	100
30) 1,2-Dichloroethane	7.396	62	193833	4.659 ug/L	98
31) tert-Amyl methyl ether	7.621	73	1517812	18.502 ug/L	100
32) Trichloroethene	8.406	95	288907	4.839 ug/L	98
33) 1,2-Dichloropropane	8.758	63	221554	4.670 ug/L	99
34) Dibromomethane	8.935	93	77299	4.676 ug/L	98
35) Bromodichloromethane	9.233	83	264765	4.730 ug/L	100
36) cis-1,3-Dichloropropene	9.969	75	293820	5.013 ug/L	98

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H04.D
Acq On : 14 Jan 2015 11:28
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CCV1@B15A0XX-BS1
Misc : CCV,WATER
ALS Vial : 27
Multiplier: 1

Quant Time: Jan 14 17:01:18 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
38) 4-Methyl-2-pentanone (...	10.279	43	478497	36.728 ug/L	99
40) Toluene	10.504	92	764201	4.797 ug/L	99
41) trans-1,3-Dichloropropene	10.905	75	203533	4.984 ug/L	100
42) 1,1,2-Trichloroethane	11.191	83	94107	4.639 ug/L	96
43) Tetrachloroethene	11.392	166	318759	4.997 ug/L	98
44) 1,3-Dichloropropane	11.459	76	209255	4.670 ug/L	99
45) 2-Hexanone	11.671	43	300961	36.037 ug/L	100
46) Chlorodibromomethane	11.817	129	147243	4.836 ug/L	98
47) 1,2-Dibromoethane (EDB)	11.975	107	102765	4.818 ug/L	100
48) Chlorobenzene	12.833	112	757293	4.762 ug/L	99
49) 1,1,1,2-Tetrachloroethane	12.997	131	217806	4.842 ug/L	99
50) Ethylbenzene	13.064	91	1482251	5.019 ug/L	100
51) m&p-Xylene	13.277	106	1229242	9.738 ug/L	100
52) o-Xylene	13.946	106	548216	4.867 ug/L	98
53) Styrene	13.976	104	846000	4.810 ug/L	100
54) Bromoform	14.244	173	71044	5.009 ug/L	99
55) Isopropylbenzene	14.615	105	1470131	5.033 ug/L	99
57) Bromobenzene	15.065	156	269178	4.767 ug/L	99
58) 1,1,2,2-Tetrachloroethane	15.156	83	110719	4.670 ug/L	99
59) 1,2,3-Trichloropropane	15.192	75	77873	4.571 ug/L	99
60) Propylbenzene	15.338	91	1753437	5.031 ug/L	100
61) 2-Chlorotoluene	15.442	91	965478	4.782 ug/L	98
62) 4-Chlorotoluene	15.642	91	1134127	4.861 ug/L	100
63) 1,3,5-Trimethylbenzene	15.673	105	1266824	4.957 ug/L	100
64) tert-Butylbenzene	16.232	119	1057574	4.986 ug/L	100
65) 1,2,4-Trimethylbenzene	16.324	105	1245782	4.921 ug/L	99
66) sec-Butylbenzene	16.628	105	1573611	5.028 ug/L	100
67) 1,3-Dichlorobenzene	16.755	146	637525	4.850 ug/L	99
68) p-Isopropyltoluene	16.913	119	1436170	5.026 ug/L	99
69) 1,4-Dichlorobenzene	16.926	146	646615	4.741 ug/L	99
71) 1,2-Dichlorobenzene	17.570	146	486070	4.695 ug/L	99
72) Butylbenzene	17.643	91	1253039	4.976 ug/L	99
73) 1,2-Dibromo-3-chloropr...	18.981	75	59825	19.127 ug/L	98
74) 1,2,4-Trichlorobenzene	20.489	180	340944	4.757 ug/L	99
75) Hexachlorobutadiene	20.860	225	216794	4.990 ug/L	99
76) Naphthalene	20.915	128	387846	4.708 ug/L	99
77) 1,2,3-Trichlorobenzene	21.359	180	256866	4.660 ug/L	98

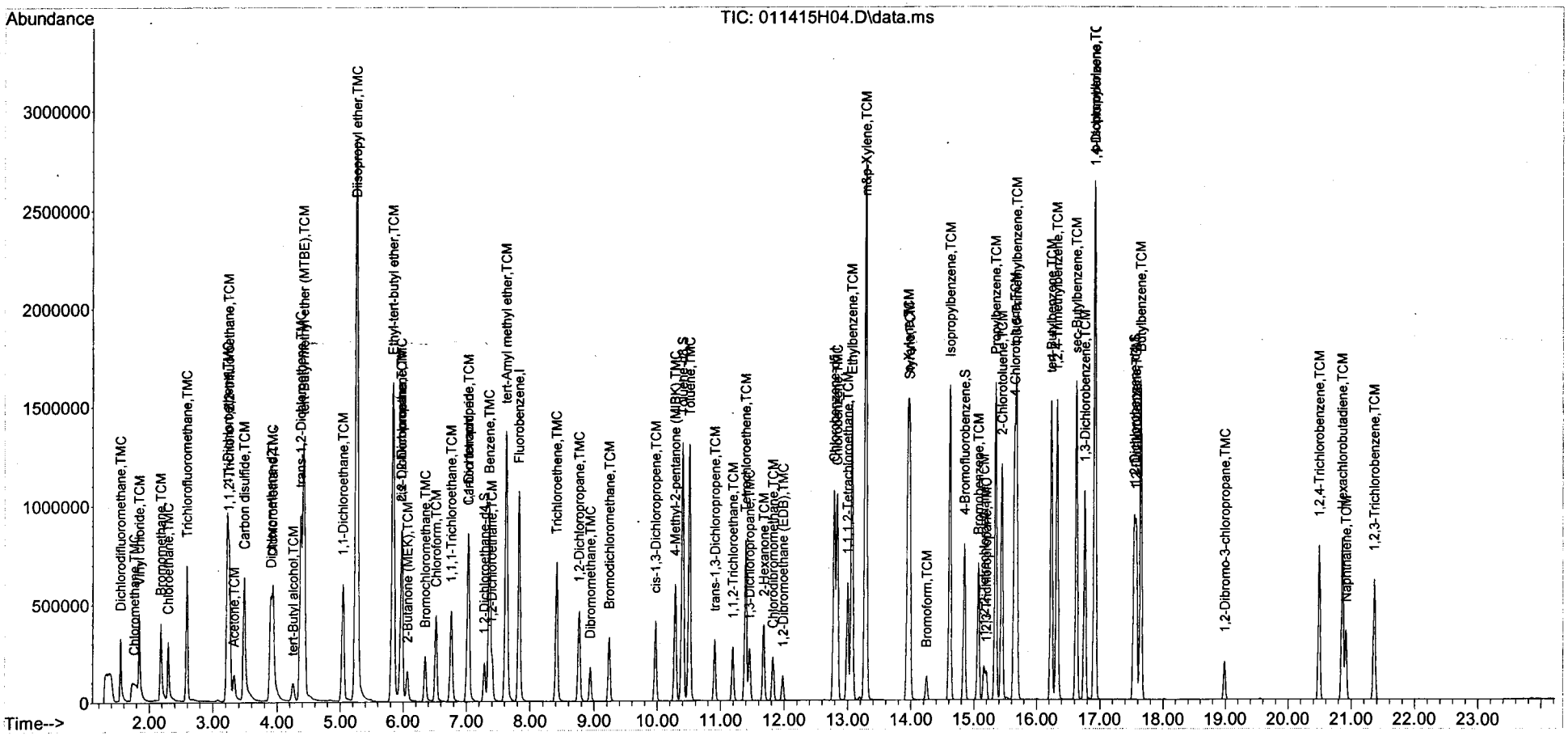
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H04.D
Acq On : 14 Jan 2015 11:28
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CCV1@B15A0XX-BS1
Misc : CCV,WATER
ALS Vial : 27
Multiplier: 1

Quant Time: Jan 14 17:01:18 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H05.D
Acq On : 14 Jan 2015 12:11
Instrument: HP5973H
Operator : YNB
Sample : BLANK
Misc : BLANK,WATER
ALS Vial : 28
Multiplier: 1

Quant Time: Jan 14 17:01:33 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M

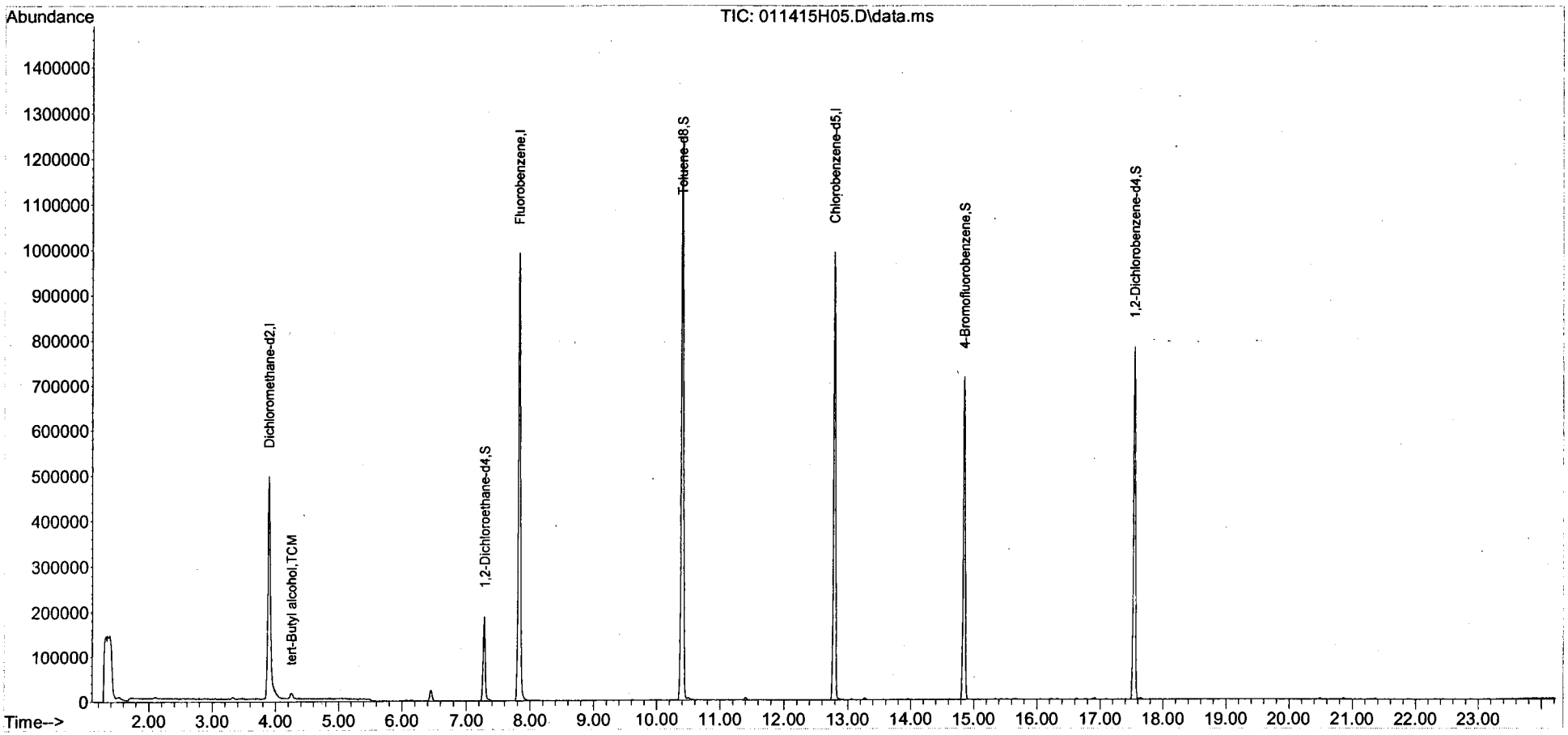
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.893	53	122189	5.000 ug/L	0.00
24) Fluorobenzene	7.822	96	1155888	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.784	117	747458	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.274	65	159512	5.019 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 100.40%	
39) Toluene-d8	10.394	98	1119615	5.052 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 101.00%	
56) 4-Bromofluorobenzene	14.846	95	298941	4.637 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 92.80%	
70) 1,2-Dichlorobenzene-d4	17.540	152	282095	4.571 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 91.40%	
Target Compounds					Qvalue
13) tert-Butyl alcohol	4.246	59	21805	12.332 ug/L	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H05.D
Acq On : 14 Jan 2015 12:11
Instrument: HP5973H
Operator : YNB
Sample : BLANK
Misc : BLANK,WATER
ALS Vial : 28
Multiplier: 1

Quant Time: Jan 14 17:01:33 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H06.D
Acq On : 14 Jan 2015 12:47
Instrument: HP5973H
Operator : YNB
Sample : BLANK
Misc : BLANK,WATER
ALS Vial : 28
Multiplier: 1

Quant Time: Jan 14 17:01:44 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.893	53	117292	5.000 ug/L	0.00
24) Fluorobenzene	7.822	96	1084301	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.784	117	698901	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.281	65	152508	5.116 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 102.40%	
39) Toluene-d8	10.394	98	1036110	5.000 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 100.00%	
56) 4-Bromofluorobenzene	14.846	95	283466	4.703 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 94.00%	
70) 1,2-Dichlorobenzene-d4	17.540	152	265265	4.597 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 92.00%	
Target Compounds					Qvalue
10) Acetone	3.322	43	14106	3.129 ug/L	87

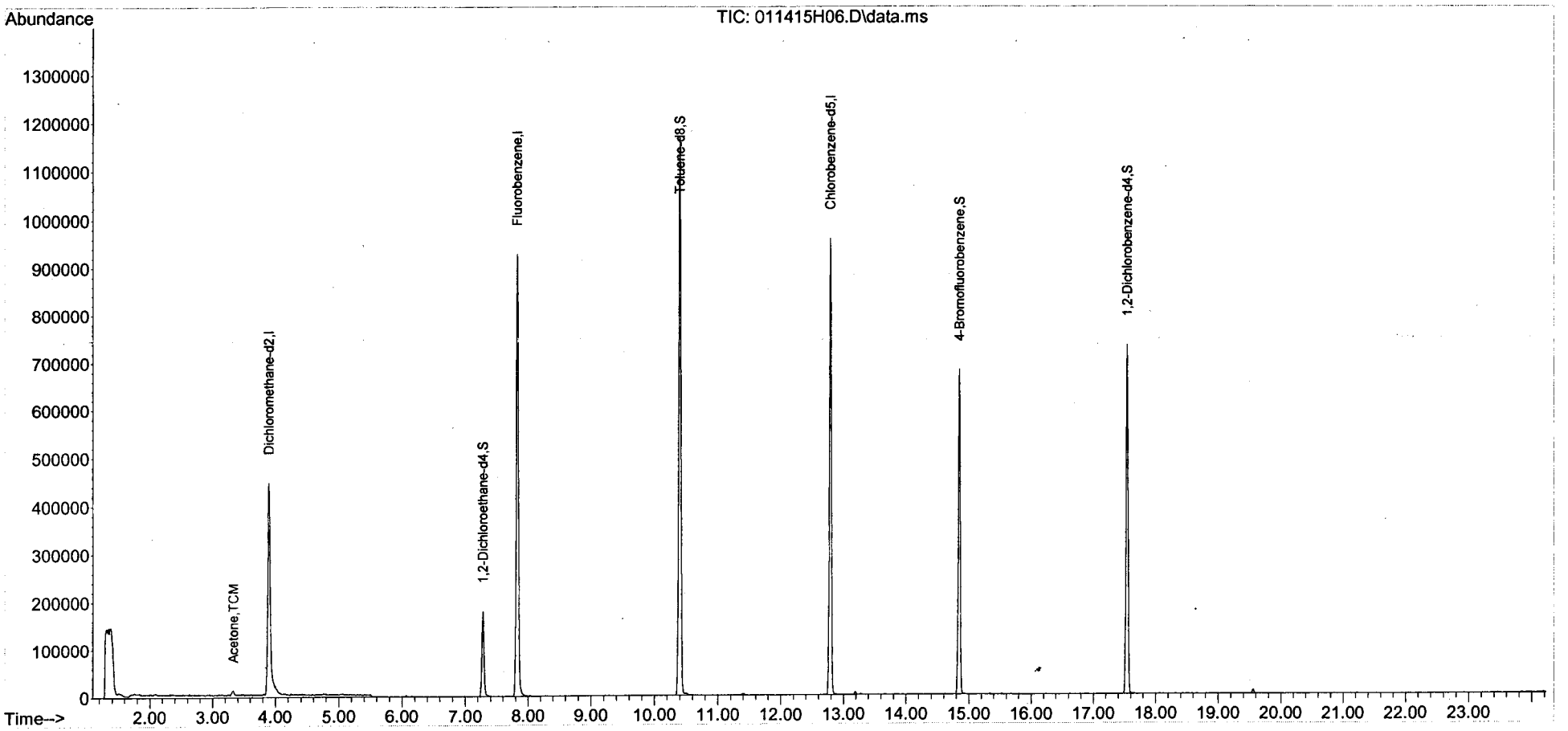
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H06.D
Acq On : 14 Jan 2015 12:47
Instrument: HP5973H
Operator : YNB
Sample : BLANK
Misc : BLANK,WATER
ALS Vial : 28
Multiplier: 1

Quant Time: Jan 14 17:01:44 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H07.D
Acq On : 14 Jan 2015 13:23
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL6
Misc : 25ug/L;,WATER
ALS Vial : 29
Multiplier: 1

Quant Time: Jan 14 15:34:44 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 15:34:23 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.888	53	121177	5.000 ug/L	0.00
24) Fluorobenzene	7.822	96	1157183	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.785	117	775664	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.281	65	154645	4.905 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery = 98.00%		
39) Toluene-d8	10.395	98	1125106	4.944 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery = 98.80%		
56) 4-Bromofluorobenzene	14.846	95	344885	5.084 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery = 101.60%		
70) 1,2-Dichlorobenzene-d4	17.540	152	341081	5.208 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery = 104.20%		

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.540	85	1513023	25.449 ug/L	98
3) Chloromethane	1.735	50	1819475	35.850 ug/L #	98
4) Vinyl chloride	1.832	62	1985035	25.301 ug/L	100
5) Bromomethane	2.173	94	1609993	25.142 ug/L	100
6) Chloroethane	2.288	64	1441147	25.194 ug/L	99
7) Trichlorofluoromethane	2.580	101	2807692	25.581 ug/L	98
8) 1,1-Dichloroethene	3.213	96	1994627	25.631 ug/L	97
9) 1,1,2-Trichloro-1,2,2-...	3.243	101	1852288	25.959 ug/L	99
10) Acetone	3.316	43	780995	189.946 ug/L	98
11) Carbon disulfide	3.474	76	6174380	24.775 ug/L	100
12) Dichloromethane	3.924	84	1814303	24.245 ug/L #	96
13) tert-Butyl alcohol	4.246	59	665550	389.171 ug/L	98
14) trans-1,2-Dichloroethene	4.362	96	2511496	25.701 ug/L	98
15) tert-Butyl methyl ethe...	4.411	73	10300832	98.095 ug/L	99
16) 1,1-Dichloroethane	5.037	63	3533346	25.303 ug/L	99
17) Diisopropyl ether	5.250	45	15820799	94.998 ug/L	90
18) Ethyl-tert-butyl ether	5.834	59	10265582	103.704 ug/L	95
19) 2,2-Dichloropropane	5.961	77	2011251	28.194 ug/L	99
20) cis-1,2-Dichloroethene	5.973	96	1571058	27.266 ug/L	97
21) 2-Butanone (MEK)	6.065	43	1033640	198.570 ug/L	97
22) Bromochloromethane	6.344	128	435968	25.791 ug/L	96
23) Chloroform	6.515	83	2199366	26.007 ug/L	100
25) 1,1,1-Trichloroethane	6.758	97	2039535	26.333 ug/L	99
26) Carbon tetrachloride	7.019	117	1839309	27.476 ug/L	99
27) 1,1-Dichloropropene	7.032	75	1813026	27.044 ug/L	99
29) Benzene	7.354	78	5867261	26.090 ug/L	99
30) 1,2-Dichloroethane	7.397	62	953435	25.360 ug/L	99
31) tert-Amyl methyl ether	7.622	73	8371363	105.122 ug/L	98
32) Trichloroethene	8.412	95	1509113	27.018 ug/L	100
33) 1,2-Dichloropropane	8.759	63	1151938	26.043 ug/L	100
34) Dibromomethane	8.935	93	388039	25.306 ug/L	99
35) Bromodichloromethane	9.233	83	1375310	25.966 ug/L	99
36) cis-1,3-Dichloropropene	9.969	75	1552709	26.931 ug/L	100

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H07.D
Acq On : 14 Jan 2015 13:23
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL6
Misc : 25ug/L;,WATER
ALS Vial : 29
Multiplier: 1

Quant Time: Jan 14 15:34:44 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 15:34:23 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
38) 4-Methyl-2-pentanone (...	10.285	43	2632269	202.681 ug/L	99
40) Toluene	10.504	92	4089008	26.563 ug/L	97
41) trans-1,3-Dichloropropene	10.905	75	1113848	26.433 ug/L	99
42) 1,1,2-Trichloroethane	11.191	83	492078	25.693 ug/L	97
43) Tetrachloroethene	11.392	166	1704867	27.315 ug/L	98
44) 1,3-Dichloropropane	11.459	76	1078951	25.090 ug/L	100
45) 2-Hexanone	11.678	43	1705669	203.073 ug/L	99
46) Chlorodibromomethane	11.824	129	803345	25.983 ug/L	99
47) 1,2-Dibromoethane (EDB)	11.976	107	530056	25.170 ug/L	100
48) Chlorobenzene	12.833	112	4039474	26.398 ug/L	98
49) 1,1,1,2-Tetrachloroethane	12.997	131	1197654	26.698 ug/L	99
50) Ethylbenzene	13.064	91	7653348	26.210 ug/L	97
51) m&p-Xylene	13.283	106	7365966	56.656 ug/L	87
52) o-Xylene	13.952	106	3264666	28.067 ug/L	93
53) Styrene	13.977	104	5156992	28.021 ug/L	98
54) Bromoform	14.244	173	406608	27.169 ug/L	96
55) Isopropylbenzene	14.615	105	8014947	26.922 ug/L	95
57) Bromobenzene	15.071	156	1518203	26.831 ug/L	96
58) 1,1,2,2-Tetrachloroethane	15.156	83	588625	25.385 ug/L	99
59) 1,2,3-Trichloropropane	15.199	75	406777	25.057 ug/L	100
60) Propylbenzene	15.345	91	9066084	26.216 ug/L	95
61) 2-Chlorotoluene	15.442	91	5222720	26.438 ug/L	97
62) 4-Chlorotoluene	15.643	91	6304670	27.020 ug/L	97
63) 1,3,5-Trimethylbenzene	15.673	105	7136899	27.445 ug/L	97
64) tert-Butylbenzene	16.239	119	6000790	27.512 ug/L	99
65) 1,2,4-Trimethylbenzene	16.324	105	7054654	27.290 ug/L	96
66) sec-Butylbenzene	16.628	105	8668499	27.278 ug/L	95
67) 1,3-Dichlorobenzene	16.762	146	3616510	27.164 ug/L	100
68) p-Isopropyltoluene	16.914	119	8810563	28.957 ug/L	97
69) 1,4-Dichlorobenzene	16.926	146	4330245	29.734 ug/L	98
71) 1,2-Dichlorobenzene	17.577	146	2714525	26.626 ug/L	99
72) Butylbenzene	17.644	91	6737169	26.846 ug/L	95
73) 1,2-Dibromo-3-chloropr...	18.988	75	332122	104.063 ug/L	93
74) 1,2,4-Trichlorobenzene	20.496	180	1998200	27.351 ug/L	100
75) Hexachlorobutadiene	20.861	225	1215400	27.951 ug/L	99
76) Naphthalene	20.915	128	2208129	25.944 ug/L	100
77) 1,2,3-Trichlorobenzene	21.359	180	1459347	26.473 ug/L	100

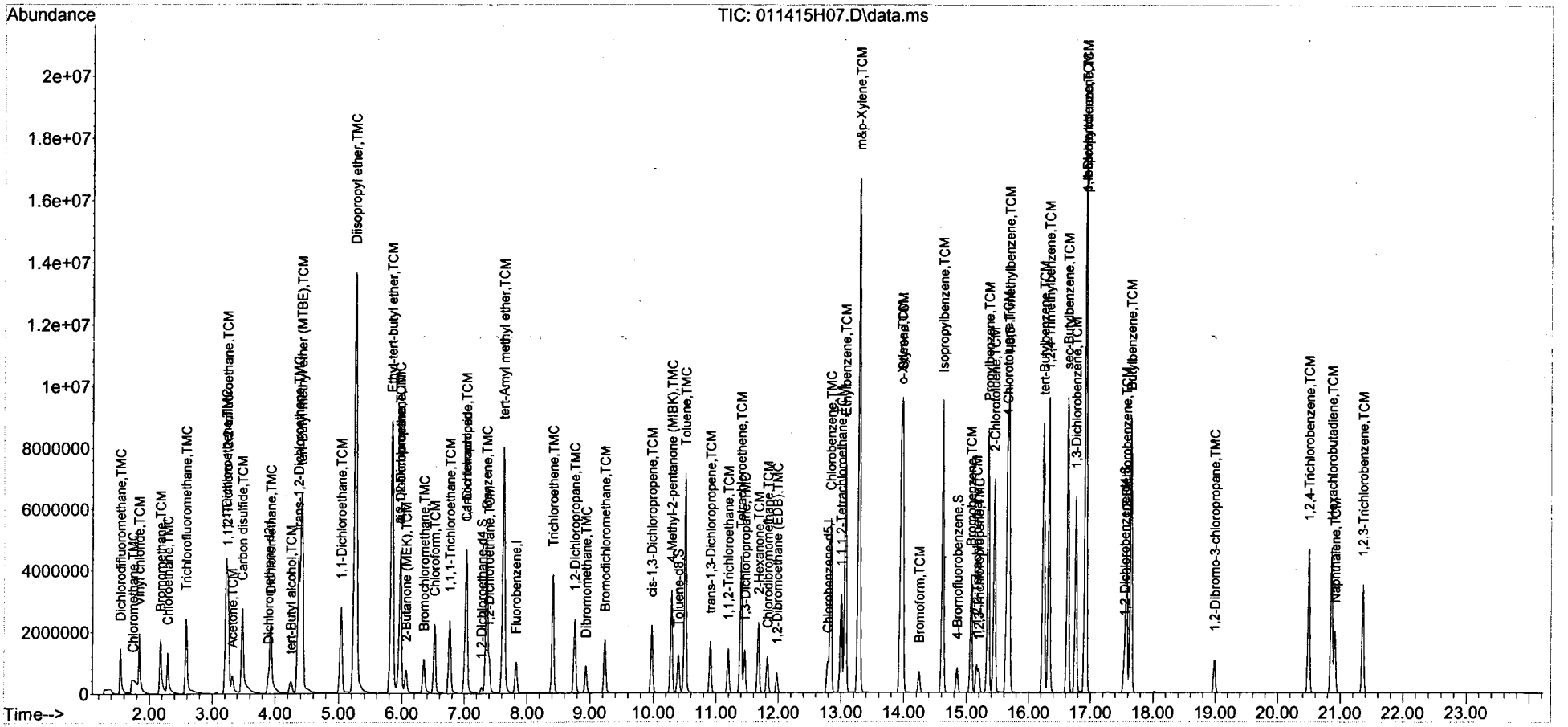
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H07.D
Acq On : 14 Jan 2015 13:23
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL6
Misc : 25ug/L;,WATER
ALS Vial : 29
Multiplier: 1

Quant Time: Jan 14 15:34:44 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 15:34:23 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H08.D
Acq On : 14 Jan 2015 13:59
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL5
Misc : 10ug/L;,WATER
ALS Vial : 30
Multiplier: 1

Quant Time: Jan 14 15:35:19 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 15:35:14 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.890	53	125048	5.000 ug/L	0.00
24) Fluorobenzene	7.825	96	1188925	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.787	117	780704	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.278	65	161253	4.978 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery = 99.60%		
39) Toluene-d8	10.391	98	1143649	4.993 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery = 99.80%		
56) 4-Bromofluorobenzene	14.843	95	336781	4.932 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery = 98.60%		
70) 1,2-Dichlorobenzene-d4	17.543	152	322489	4.892 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery = 97.80%		

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.537	85	612515	9.983 ug/L	100
3) Chloromethane	1.762	50	756923	9.965 ug/L #	99
4) Vinyl chloride	1.835	62	803068	9.919 ug/L	99
5) Bromomethane	2.169	94	699026	10.578 ug/L	99
6) Chloroethane	2.291	64	594052	10.064 ug/L	99
7) Trichlorofluoromethane	2.583	101	1146499	10.123 ug/L	97
8) 1,1-Dichloroethene	3.215	96	814248	10.139 ug/L	96
9) 1,1,2-Trichloro-1,2,2-...	3.246	101	733008	9.955 ug/L	97
10) Acetone	3.319	43	339632	80.045 ug/L	100
11) Carbon disulfide	3.477	76	2587324	10.060 ug/L	100
12) Dichloromethane	3.927	84	770135	9.973 ug/L #	96
13) tert-Butyl alcohol	4.249	59	402899	228.297 ug/L	97
14) trans-1,2-Dichloroethene	4.359	96	1011325	10.029 ug/L	97
15) tert-Butyl methyl ethe...	4.413	73	4395049	40.558 ug/L	100
16) 1,1-Dichloroethane	5.034	63	1446787	10.040 ug/L	100
17) Diisopropyl ether	5.247	45	7035799	40.940 ug/L	97
18) Ethyl-tert-butyl ether	5.830	59	4093858	40.076 ug/L	99
19) 2,2-Dichloropropane	5.958	77	713794	9.696 ug/L	100
20) cis-1,2-Dichloroethene	5.976	96	580026	9.755 ug/L	99
21) 2-Butanone (MEK)	6.068	43	426063	79.316 ug/L	98
22) Bromochloromethane	6.347	128	173899	9.969 ug/L	98
23) Chloroform	6.518	83	864232	9.903 ug/L	99
25) 1,1,1-Trichloroethane	6.761	97	775185	9.741 ug/L	99
26) Carbon tetrachloride	7.016	117	667273	9.702 ug/L	99
27) 1,1-Dichloropropene	7.035	75	667324	9.688 ug/L	100
29) Benzene	7.351	78	2273213	9.838 ug/L	99
30) 1,2-Dichloroethane	7.399	62	380214	9.843 ug/L	99
31) tert-Amyl methyl ether	7.618	73	3242890	39.635 ug/L	99
32) Trichloroethene	8.409	95	558193	9.727 ug/L	99
33) 1,2-Dichloropropane	8.762	63	444286	9.776 ug/L	100
34) Dibromomethane	8.932	93	154556	9.810 ug/L	99
35) Bromodichloromethane	9.230	83	534084	9.814 ug/L	100
36) cis-1,3-Dichloropropene	9.972	75	580811	9.805 ug/L	99

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H08.D
Acq On : 14 Jan 2015 13:59
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL5
Misc : 10ug/L;,WATER
ALS Vial : 30
Multiplier: 1

Quant Time: Jan 14 15:35:19 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 15:35:14 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
38) 4-Methyl-2-pentanone (...	10.282	43	1034285	79.124 ug/L	100
40) Toluene	10.501	92	1503392	9.703 ug/L	100
41) trans-1,3-Dichloropropene	10.908	75	418817	9.875 ug/L	99
42) 1,1,2-Trichloroethane	11.194	83	190139	9.864 ug/L	98
43) Tetrachloroethene	11.395	166	606231	9.650 ug/L	98
44) 1,3-Dichloropropane	11.456	76	425694	9.835 ug/L	99
45) 2-Hexanone	11.675	43	665462	78.717 ug/L	99
46) Chlorodibromomethane	11.820	129	306387	9.846 ug/L	99
47) 1,2-Dibromoethane (EDB)	11.973	107	211943	9.999 ug/L	98
48) Chlorobenzene	12.836	112	1505630	9.776 ug/L	98
49) 1,1,1,2-Tetrachloroethane	13.000	131	438938	9.721 ug/L	99
50) Ethylbenzene	13.067	91	2889328	9.831 ug/L	100
51) m&p-Xylene	13.280	106	2499695	19.102 ug/L	98
52) o-Xylene	13.949	106	1122611	9.589 ug/L	98
53) Styrene	13.973	104	1772616	9.570 ug/L	99
54) Bromoform	14.247	173	147215	9.773 ug/L	98
55) Isopropylbenzene	14.612	105	2932319	9.786 ug/L	99
57) Bromobenzene	15.068	156	554207	9.731 ug/L	99
58) 1,1,2,2-Tetrachloroethane	15.159	83	230206	9.864 ug/L	99
59) 1,2,3-Trichloropropane	15.196	75	161952	9.912 ug/L	99
60) Propylbenzene	15.342	91	3432589	9.862 ug/L	98
61) 2-Chlorotoluene	15.439	91	1955148	9.833 ug/L	100
62) 4-Chlorotoluene	15.640	91	2283003	9.721 ug/L	99
63) 1,3,5-Trimethylbenzene	15.676	105	2531428	9.672 ug/L	100
64) tert-Butylbenzene	16.236	119	2117011	9.643 ug/L	100
65) 1,2,4-Trimethylbenzene	16.321	105	2512997	9.658 ug/L	99
66) sec-Butylbenzene	16.631	105	3109187	9.721 ug/L	99
67) 1,3-Dichlorobenzene	16.759	146	1299668	9.699 ug/L	99
68) p-Isopropyltoluene	16.917	119	2911141	9.506 ug/L	99
69) 1,4-Dichlorobenzene	16.923	146	1371913	9.359 ug/L	100
71) 1,2-Dichlorobenzene	17.573	146	997557	9.722 ug/L	99
72) Butylbenzene	17.646	91	2462980	9.751 ug/L	99
73) 1,2-Dibromo-3-chloropr...	18.984	75	126862	39.493 ug/L	96
74) 1,2,4-Trichlorobenzene	20.492	180	707354	9.620 ug/L	100
75) Hexachlorobutadiene	20.857	225	420039	9.598 ug/L	99
76) Naphthalene	20.912	128	839340	9.798 ug/L	99
77) 1,2,3-Trichlorobenzene	21.362	180	538646	9.708 ug/L	98

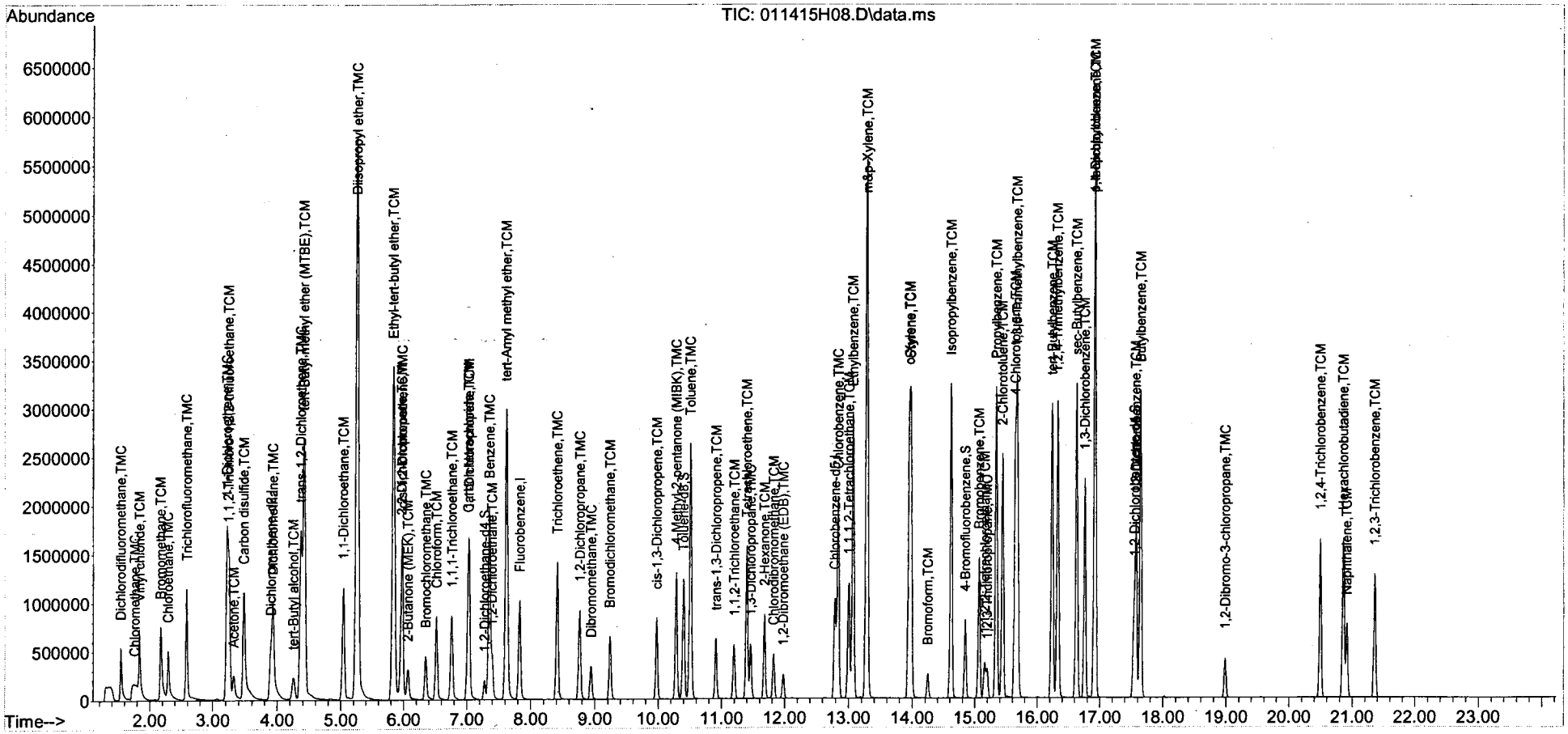
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H08.D
Acq On : 14 Jan 2015 13:59
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL5
Misc : 10ug/L;,WATER
ALS Vial : 30
Multiplier: 1

Quant Time: Jan 14 15:35:19 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 15:35:14 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M



Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H09.D
Acq On : 14 Jan 2015 14:35
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL4
Misc : 5.0ug/L;,WATER
ALS Vial : 31
Multiplier: 1

Quant Time: Jan 14 15:26:41 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 15:26:35 2015
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\2015\011415HVW\011415H09.D

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.03min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Dichloromethane-d2	1.000	1.000	0.0	100	0.00
2	TMC	Dichlorodifluoromethane	2.487	2.413	-3.0	100	0.00
3	TMC	Chloromethane	3.162	3.082	-2.5	100	0.00
4	TCM	Vinyl chloride	3.301	3.225	-2.3	100	0.00
5	TCM	Bromomethane	2.418	2.474	2.3	100	0.00
6	TMC	Chloroethane	2.372	2.327	-1.9	100	0.00
7	TMC	Trichlorofluoromethane	4.561	4.368	-4.2	100	0.00
8	TMC	1,1-Dichloroethene	3.140	3.085	-1.8	100	0.00
9	TCM	1,1,2-Trichloro-1,2,2-trifl	2.951	2.845	-3.6	100	0.00
10	TCM	Acetone	0.192	0.178	-7.3	100	0.00
11	TCM	Carbon disulfide	10.403	10.313	-0.9	100	0.00
12	TMC	Dichloromethane	3.444	3.189	-7.4	100	0.00
13	TCM	tert-Butyl alcohol	0.072	0.076	5.6	100	0.00
14	TMC	trans-1,2-Dichloroethene	3.943	3.907	-0.9	100	0.00
15	TCM	tert-Butyl methyl ether (MT	4.248	4.355	2.5	100	0.00
16	TCM	1,1-Dichloroethane	5.803	5.669	-2.3	100	0.00
17	TMC	Diisopropyl ether	7.041	7.054	0.2	100	0.00
18	TCM	Ethyl-tert-butyl ether	3.877	3.925	1.2	100	0.00
19	TCM	2,2-Dichloropropane	2.622	2.657	1.3	100	0.00
20	TMC	cis-1,2-Dichloroethene	2.266	2.220	-2.0	100	0.00
21	TCM	2-Butanone (MEK)	0.222	0.218	-1.8	100	0.00
22	TMC	Bromochloromethane	0.672	0.678	0.9	100	0.00
23	TCM	Chloroform	3.428	3.383	-1.3	100	0.00
24	I	Fluorobenzene	1.000	1.000	0.0	100	0.00
25	TCM	1,1,1-Trichloroethane	0.323	0.325	0.6	100	0.00
26	TCM	Carbon tetrachloride	0.271	0.269	-0.7	100	0.00
27	TCM	1,1-Dichloropropene	0.279	0.275	-1.4	100	0.00
28	S	1,2-Dichloroethane-d4	0.137	0.139	1.5	100	0.00
29	TMC	Benzene	0.950	0.945	-0.5	100	0.00
30	TCM	1,2-Dichloroethane	0.163	0.163	0.0	100	0.00
31	TCM	tert-Amyl methyl ether	0.322	0.330	2.5	100	0.00
32	TMC	Trichloroethene	0.234	0.228	-2.6	100	0.00
33	TMC	1,2-Dichloropropane	0.186	0.187	0.5	100	0.00
34	TMC	Dibromomethane	0.065	0.067	3.1	100	0.00
35	TCM	Bromodichloromethane	0.220	0.224	1.8	100	0.00
36	TCM	cis-1,3-Dichloropropene	0.230	0.235	2.2	100	0.00
37	I	Chlorobenzene-d5	1.000	1.000	0.0	100	0.00
38	TMC	4-Methyl-2-pentanone (MIBK)	0.080	0.084	5.0	100	0.00
39	S	Toluene-d8	1.482	1.486	0.3	100	0.00
40	TMC	Toluene	0.975	0.960	-1.5	100	0.00
41	TCM	trans-1,3-Dichloropropene	0.250	0.259	3.6	100	0.00
42	TCM	1,1,2-Trichloroethane	0.124	0.122	-1.6	100	0.00

Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H09.D
Acq On : 14 Jan 2015 14:35
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL4
Misc : 5.0ug/L;,WATER
ALS Vial : 31
Multiplier: 1

Quant Time: Jan 14 15:26:41 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 15:26:35 2015
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\2015\011415HVW\011415H09.D

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.03min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
43	TCM	Tetrachloroethene	0.390	0.379	-2.8	100	0.00
44	TMC	1,3-Dichloropropane	0.274	0.281	2.6	100	0.00
45	TCM	2-Hexanone	0.051	0.054	5.9	100	0.00
46	TCM	Chlorodibromomethane	0.186	0.195	4.8	100	0.00
47	TMC	1,2-Dibromoethane (EDB)	0.131	0.135	3.1	100	0.00
48	TMC	Chlorobenzene	0.973	0.953	-2.1	100	0.00
49	TCM	1,1,1,2-Tetrachloroethane	0.275	0.278	1.1	100	0.00
50	TCM	Ethylbenzene	1.808	1.823	0.8	100	0.00
51	TCM	m&p-Xylene	0.773	0.764	-1.2	100	0.00
52	TCM	o-Xylene	0.690	0.689	-0.1	100	0.00
53	TCM	Styrene	1.077	1.094	1.6	100	0.00
54	TCM	Bromoform	0.087	0.090	3.4	100	0.00
55	TCM	Isopropylbenzene	1.788	1.813	1.4	100	0.00
56	S	4-Bromofluorobenzene	0.431	0.436	1.2	100	0.00
57	TCM	Bromobenzene	0.346	0.348	0.6	100	0.00
58	TCM	1,1,2,2-Tetrachloroethane	0.145	0.149	2.8	100	0.00
59	TMC	1,2,3-Trichloropropane	0.104	0.105	1.0	100	0.00
60	TCM	Propylbenzene	2.133	2.151	0.8	100	0.00
61	TCM	2-Chlorotoluene	1.236	1.221	-1.2	100	0.00
62	TCM	4-Chlorotoluene	1.428	1.425	-0.2	100	0.00
63	TCM	1,3,5-Trimethylbenzene	1.564	1.567	0.2	100	0.00
64	TCM	tert-Butylbenzene	1.298	1.315	1.3	100	0.00
65	TCM	1,2,4-Trimethylbenzene	1.549	1.571	1.4	100	0.00
66	TCM	sec-Butylbenzene	1.916	1.919	0.2	100	0.00
67	TCM	1,3-Dichlorobenzene	0.805	0.810	0.6	100	0.00
68	TCM	p-Isopropyltoluene	1.749	1.748	-0.1	100	0.00
69	TCM	1,4-Dichlorobenzene	0.835	0.821	-1.7	100	0.00
70	S	1,2-Dichlorobenzene-d4	0.413	0.414	0.2	100	0.00
71	TCM	1,2-Dichlorobenzene	0.634	0.633	-0.2	100	0.00
72	TCM	Butylbenzene	1.541	1.538	-0.2	100	0.00
73	TMC	1,2-Dibromo-3-chloropropane	0.019	0.020	5.3	100	0.00
74	TCM	1,2,4-Trichlorobenzene	0.439	0.445	1.4	100	0.00
75	TCM	Hexachlorobutadiene	0.266	0.258	-3.0	100	0.00
76	TCM	Naphthalene	0.504	0.539	6.9	100	0.00
77	TCM	1,2,3-Trichlorobenzene	0.337	0.345	2.4	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

% Dev 123TCB = $\frac{0.337 - 0.345}{0.337} \times 100 = 2.37\%$

em 1/14/15

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H09.D
Acq On : 14 Jan 2015 14:35
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL4
Misc : 5.0ug/L;,WATER
ALS Vial : 31
Multiplier: 1

Quant Time: Jan 14 15:26:19 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 15:26:08 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.892	53	124016	5.000 ug/L	0.00
24) Fluorobenzene	7.821	96	1151896	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.783	117	745649	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.273	65	160621	4.652 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 93.00%	
39) Toluene-d8	10.393	98	1107806	4.891 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 97.80%	
56) 4-Bromofluorobenzene	14.845	95	325079	4.828 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 96.60%	
70) 1,2-Dichlorobenzene-d4	17.539	152	308475	5.250 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 105.00%	

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.539	85	299276	4.435 ug/L	100
3) Chloromethane	1.739	50	382256	4.769 ug/L #	100
4) Vinyl chloride	1.837	62	399914	4.691 ug/L	100
5) Bromomethane	2.177	94	306875	5.378 ug/L	100
6) Chloroethane	2.293	64	288560	5.002 ug/L	100
7) Trichlorofluoromethane	2.585	101	541696	4.461 ug/L	100
8) 1,1-Dichloroethene	3.211	96	382614	5.100 ug/L	100
9) 1,1,2-Trichloro-1,2,2-...	3.247	101	352764	4.879 ug/L	100
10) Acetone	3.320	43	176687	36.139 ug/L	100
11) Carbon disulfide	3.472	76	1279032	5.405 ug/L	100
12) Dichloromethane	3.929	84	395509	5.555 ug/L #	100
13) tert-Butyl alcohol	4.251	59	189056	108.733 ug/L	100
14) trans-1,2-Dichloroethene	4.360	96	484570	5.469 ug/L	100
15) tert-Butyl methyl ethe...	4.415	73	2160336	22.007 ug/L	100
16) 1,1-Dichloroethane	5.035	63	703020	5.213 ug/L	100
17) Diisopropyl ether	5.248	45	3499187	22.796 ug/L	100
18) Ethyl-tert-butyl ether	5.832	59	1947238	20.588 ug/L	100
19) 2,2-Dichloropropane	5.960	77	329495	4.403 ug/L	100
20) cis-1,2-Dichloroethene	5.972	96	275345	5.201 ug/L	100
21) 2-Butanone (MEK)	6.063	43	216441	41.837 ug/L	100
22) Bromochloromethane	6.343	128	84034	5.604 ug/L	100
23) Chloroform	6.519	83	419537	5.048 ug/L	100
25) 1,1,1-Trichloroethane	6.762	97	374896	4.695 ug/L	100
26) Carbon tetrachloride	7.012	117	310131	5.098 ug/L	100
27) 1,1-Dichloropropene	7.030	75	316781	4.429 ug/L	100
29) Benzene	7.352	78	1088622	5.089 ug/L	100
30) 1,2-Dichloroethane	7.395	62	187353	4.865 ug/L	100
31) tert-Amyl methyl ether	7.620	73	1518683	21.489 ug/L	100
32) Trichloroethene	8.404	95	263147	4.796 ug/L	100
33) 1,2-Dichloropropane	8.757	63	215901	5.206 ug/L	100
34) Dibromomethane	8.934	93	76834	5.659 ug/L	100
35) Bromodichloromethane	9.231	83	258340	5.884 ug/L	100
36) cis-1,3-Dichloropropene	9.973	75	270379	5.416 ug/L	100

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H09.D
Acq On : 14 Jan 2015 14:35
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL4
Misc : 5.0ug/L;,WATER
ALS Vial : 31
Multiplier: 1

Quant Time: Jan 14 15:26:19 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 15:26:08 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
38) 4-Methyl-2-pentanone (...	10.277	43	498163	42.984 ug/L	100
40) Toluene	10.502	92	715618	4.966 ug/L	100
41) trans-1,3-Dichloropropene	10.904	75	193459	5.675 ug/L	100
42) 1,1,2-Trichloroethane	11.190	83	90755	5.509 ug/L	100
43) Tetrachloroethene	11.390	166	282713	4.718 ug/L	100
44) 1,3-Dichloropropane	11.457	76	209360	5.604 ug/L	100
45) 2-Hexanone	11.676	43	323187	40.399 ug/L	100
46) Chlorodibromomethane	11.822	129	145054	6.764 ug/L	100
47) 1,2-Dibromoethane (EDB)	11.974	107	100539	5.613 ug/L	100
48) Chlorobenzene	12.832	112	710846	5.236 ug/L	100
49) 1,1,1,2-Tetrachloroethane	12.996	131	206984	6.240 ug/L	100
50) Ethylbenzene	13.063	91	1359261	4.866 ug/L	100
51) m&p-Xylene	13.276	106	1139530	9.960 ug/L	100
52) o-Xylene	13.945	106	513468	5.137 ug/L	100
53) Styrene	13.975	104	815746	5.502 ug/L	100
54) Bromoform	14.243	173	67323	7.741 ug/L	100
55) Isopropylbenzene	14.613	105	1351561	4.819 ug/L	100
57) Bromobenzene	15.070	156	259353	5.517 ug/L	100
58) 1,1,2,2-Tetrachloroethane	15.155	83	111257	5.920 ug/L	100
59) 1,2,3-Trichloropropane	15.191	75	78543	5.518 ug/L	100
60) Propylbenzene	15.337	91	1604250	4.784 ug/L	100
61) 2-Chlorotoluene	15.441	91	910673	4.921 ug/L	100
62) 4-Chlorotoluene	15.641	91	1062221	4.971 ug/L	100
63) 1,3,5-Trimethylbenzene	15.672	105	1168732	4.879 ug/L	100
64) tert-Butylbenzene	16.231	119	980430	4.813 ug/L	100
65) 1,2,4-Trimethylbenzene	16.322	105	1171192	5.108 ug/L	100
66) sec-Butylbenzene	16.626	105	1430910	4.705 ug/L	100
67) 1,3-Dichlorobenzene	16.760	146	603806	5.469 ug/L	100
68) p-Isopropyltoluene	16.912	119	1303214	4.830 ug/L	100
69) 1,4-Dichlorobenzene	16.924	146	612286	5.545 ug/L	100
71) 1,2-Dichlorobenzene	17.569	146	471781	5.697 ug/L	100
72) Butylbenzene	17.642	91	1147158	4.702 ug/L	100
73) 1,2-Dibromo-3-chloropr...	18.986	75	59646	25.327 ug/L	100
74) 1,2,4-Trichlorobenzene	20.494	180	331476	5.754 ug/L	100
75) Hexachlorobutadiene	20.859	225	192741	4.692 ug/L	100
76) Naphthalene	20.914	128	401906	6.296 ug/L	100
77) 1,2,3-Trichlorobenzene	21.358	180	257076	5.932 ug/L	100

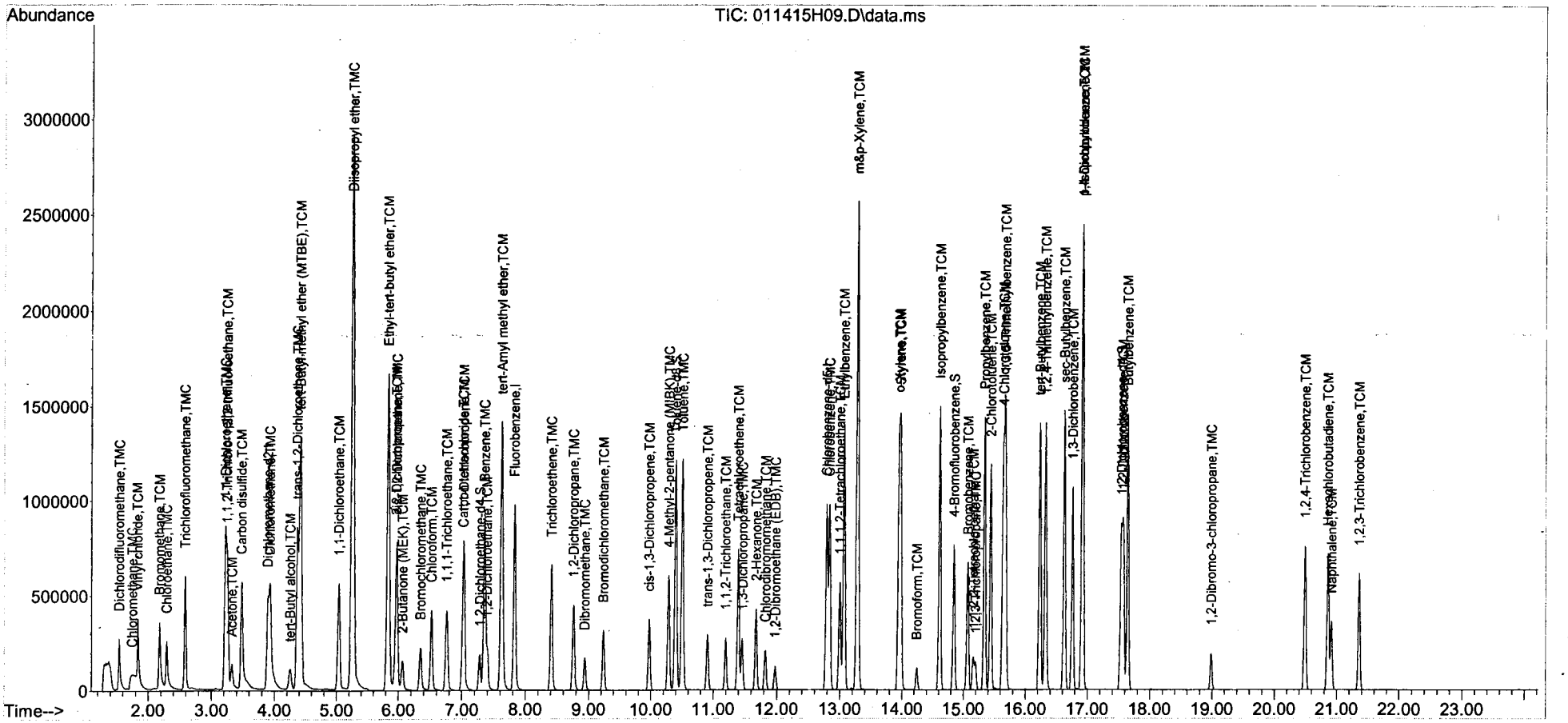
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H09.D
Acq On : 14 Jan 2015 14:35
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL4
Misc : 5.0ug/L;,WATER
ALS Vial : 31
Multiplier: 1

Quant Time: Jan 14 15:26:19 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 15:26:08 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H09.D
Acq On : 14 Jan 2015 14:35
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL4
Misc : 5.0ug/L;,WATER
ALS Vial : 31
Multiplier: 1

Quant Time: Jan 14 15:26:41 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 15:26:35 2015
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\2015\011415HVW\011415H09.D

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.892	53	124016	5.000 ug/L	0.00
24) Fluorobenzene	7.821	96	1151896	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.783	117	745649	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.273	65	160621	5.000 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 100.00%	
39) Toluene-d8	10.393	98	1107806	5.000 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 100.00%	
56) 4-Bromofluorobenzene	14.845	95	325079	5.000 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 100.00%	
70) 1,2-Dichlorobenzene-d4	17.539	152	308475	5.000 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 100.00%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.539	85	299276	5.000 ug/L	100
3) Chloromethane	1.739	50	382256	5.000 ug/L #	100
4) Vinyl chloride	1.837	62	399914	5.000 ug/L	100
5) Bromomethane	2.177	94	306875	5.000 ug/L	100
6) Chloroethane	2.293	64	288560	5.000 ug/L	100
7) Trichlorofluoromethane	2.585	101	541696	5.000 ug/L	100
8) 1,1-Dichloroethene	3.211	96	382614	5.000 ug/L	100
9) 1,1,2-Trichloro-1,2,2-...	3.247	101	352764	5.000 ug/L	100
10) Acetone	3.320	43	176687	40.000 ug/L	100
11) Carbon disulfide	3.472	76	1279032	5.000 ug/L	100
12) Dichloromethane	3.929	84	395509	5.000 ug/L #	100
13) tert-Butyl alcohol	4.251	59	189056	100.000 ug/L	100
14) trans-1,2-Dichloroethene	4.360	96	484570	5.000 ug/L	100
15) tert-Butyl methyl ethe...	4.415	73	2160336	20.000 ug/L	100
16) 1,1-Dichloroethane	5.035	63	703020	5.000 ug/L	100
17) Diisopropyl ether	5.248	45	3499187	20.000 ug/L	100
18) Ethyl-tert-butyl ether	5.832	59	1947238	20.000 ug/L	100
19) 2,2-Dichloropropane	5.960	77	329495	5.000 ug/L	100
20) cis-1,2-Dichloroethene	5.972	96	275345	5.000 ug/L	100
21) 2-Butanone (MEK)	6.063	43	216441	40.000 ug/L	100
22) Bromochloromethane	6.343	128	84034	5.000 ug/L	100
23) Chloroform	6.519	83	419537	5.000 ug/L	100
25) 1,1,1-Trichloroethane	6.762	97	374896	5.000 ug/L	100
26) Carbon tetrachloride	7.012	117	310131	5.000 ug/L	100
27) 1,1-Dichloropropene	7.030	75	316781	5.000 ug/L	100
29) Benzene	7.352	78	1088622	5.000 ug/L	100
30) 1,2-Dichloroethane	7.395	62	187353	5.000 ug/L	100
31) tert-Amyl methyl ether	7.620	73	1518683	20.000 ug/L	100
32) Trichloroethene	8.404	95	263147	5.000 ug/L	100
33) 1,2-Dichloropropane	8.757	63	215901	5.000 ug/L	100
34) Dibromomethane	8.934	93	76834	5.000 ug/L	100
35) Bromodichloromethane	9.231	83	258340	5.000 ug/L	100
36) cis-1,3-Dichloropropene	9.973	75	270379	5.000 ug/L	100

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H09.D
Acq On : 14 Jan 2015 14:35
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL4
Misc : 5.0ug/L;,WATER
ALS Vial : 31
Multiplier: 1

Quant Time: Jan 14 15:26:41 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 15:26:35 2015
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\2015\011415HVW\011415H09.D

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) 4-Methyl-2-pentanone (...	10.277	43	498163	40.000	ug/L	100
40) Toluene	10.502	92	715618	5.000	ug/L	100
41) trans-1,3-Dichloropropene	10.904	75	193459	5.000	ug/L	100
42) 1,1,2-Trichloroethane	11.190	83	90755	5.000	ug/L	100
43) Tetrachloroethene	11.390	166	282713	5.000	ug/L	100
44) 1,3-Dichloropropane	11.457	76	209360	5.000	ug/L	100
45) 2-Hexanone	11.676	43	323187	40.000	ug/L	100
46) Chlorodibromomethane	11.822	129	145054	5.000	ug/L	100
47) 1,2-Dibromoethane (EDB)	11.974	107	100539	5.000	ug/L	100
48) Chlorobenzene	12.832	112	710846	5.000	ug/L	100
49) 1,1,1,2-Tetrachloroethane	12.996	131	206984	5.000	ug/L	100
50) Ethylbenzene	13.063	91	1359261	5.000	ug/L	100
51) m&p-Xylene	13.276	106	1139530	10.000	ug/L	100
52) o-Xylene	13.945	106	513468	5.000	ug/L	100
53) Styrene	13.975	104	815746	5.000	ug/L	100
54) Bromoform	14.243	173	67323	5.000	ug/L	100
55) Isopropylbenzene	14.613	105	1351561	5.000	ug/L	100
57) Bromobenzene	15.070	156	259353	5.000	ug/L	100
58) 1,1,2,2-Tetrachloroethane	15.155	83	111257	5.000	ug/L	100
59) 1,2,3-Trichloropropane	15.191	75	78543	5.000	ug/L	100
60) Propylbenzene	15.337	91	1604250	5.000	ug/L	100
61) 2-Chlorotoluene	15.441	91	910673	5.000	ug/L	100
62) 4-Chlorotoluene	15.641	91	1062221	5.000	ug/L	100
63) 1,3,5-Trimethylbenzene	15.672	105	1168732	5.000	ug/L	100
64) tert-Butylbenzene	16.231	119	980430	5.000	ug/L	100
65) 1,2,4-Trimethylbenzene	16.322	105	1171192	5.000	ug/L	100
66) sec-Butylbenzene	16.626	105	1430910	5.000	ug/L	100
67) 1,3-Dichlorobenzene	16.760	146	603806	5.000	ug/L	100
68) p-Isopropyltoluene	16.912	119	1303214	5.000	ug/L	100
69) 1,4-Dichlorobenzene	16.924	146	612286	5.000	ug/L	100
71) 1,2-Dichlorobenzene	17.569	146	471781	5.000	ug/L	100
72) Butylbenzene	17.642	91	1147158	5.000	ug/L	100
73) 1,2-Dibromo-3-chloropr...	18.986	75	59646	20.000	ug/L	100
74) 1,2,4-Trichlorobenzene	20.494	180	331476	5.000	ug/L	100
75) Hexachlorobutadiene	20.859	225	192741	5.000	ug/L	100
76) Naphthalene	20.914	128	401906	5.000	ug/L	100
77) 1,2,3-Trichlorobenzene	21.358	180	257076	5.000	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H09.D
Acq On : 14 Jan 2015 14:35
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL4
Misc : 5.0ug/L;,WATER
ALS Vial : 31
Multiplier: 1

Quant Time: Jan 14 15:26:41 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 15:26:35 2015
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\2015\011415HVW\011415H09.D

DataAcq Meth:011415HVW.M
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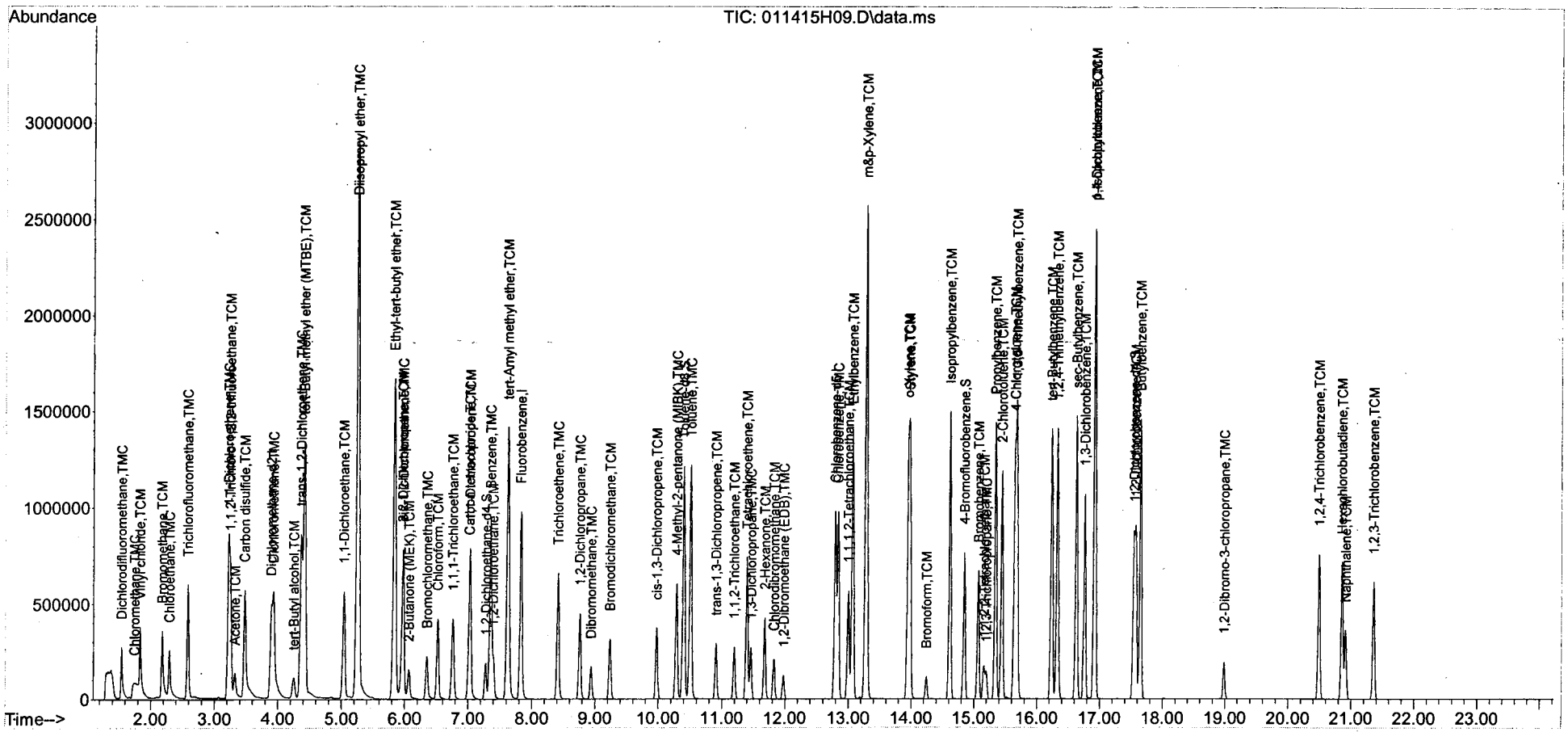
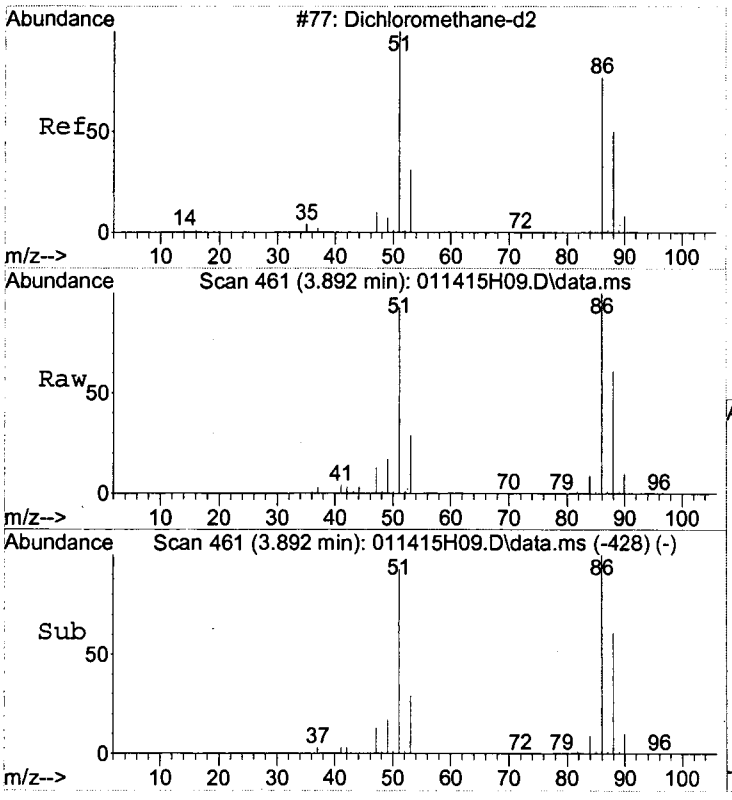
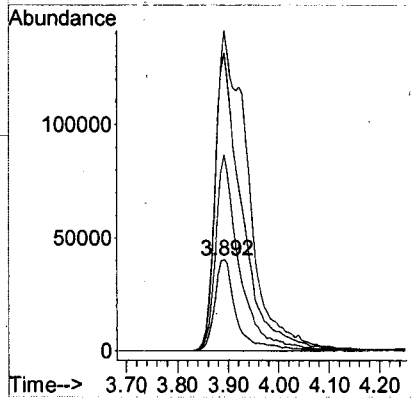


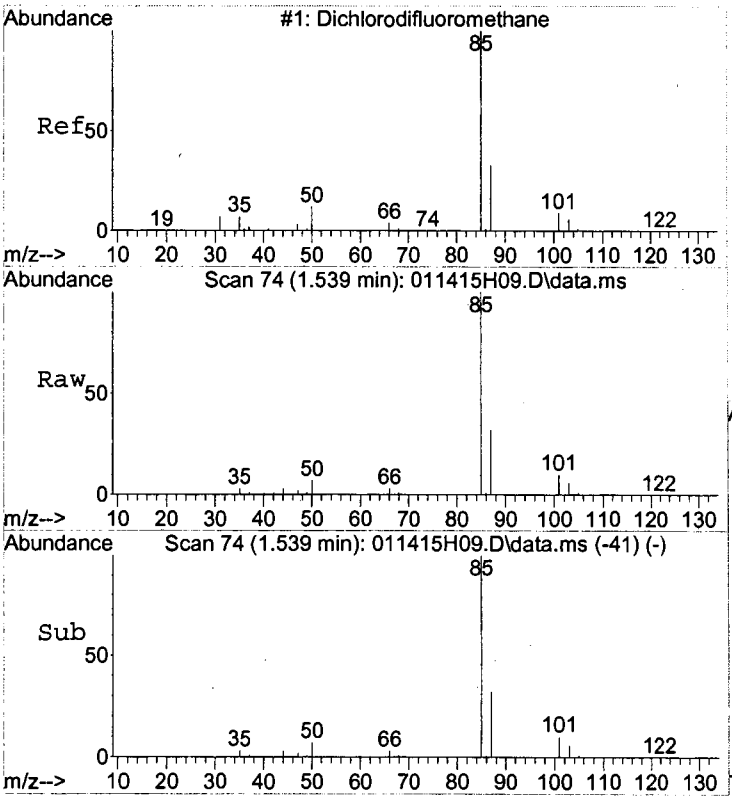


#1
Dichloromethane-d2
Concen: 5.00 ug/L
RT: 3.892 min Scan# 461
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 53 Resp: 124016

Ion	Ratio	Lower	Upper
53	100		
51	401.1	381.1	421.1
86	510.1	490.1	530.1
88	231.2	211.2	251.2

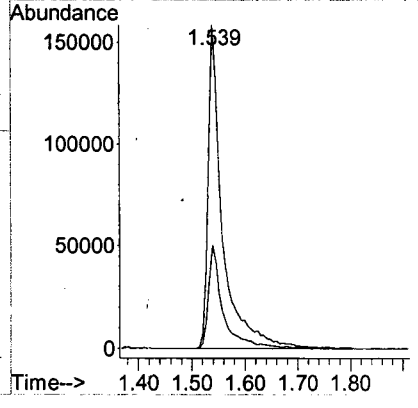


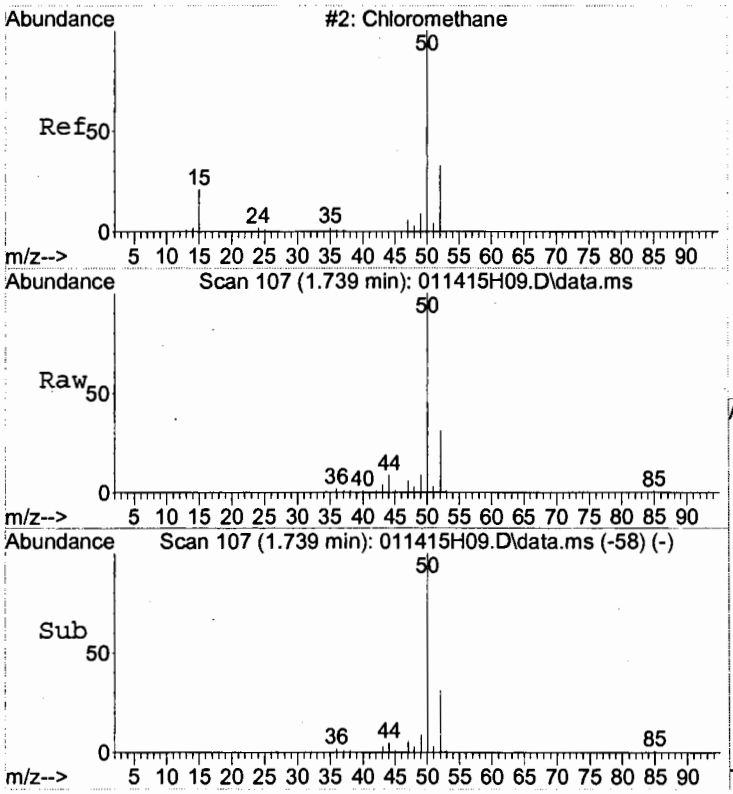


#2
Dichlorodifluoromethane
Concen: 5.00 ug/L
RT: 1.539 min Scan# 74
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 85 Resp: 299276

Ion	Ratio	Lower	Upper
85	100		
87	32.4	12.4	52.4

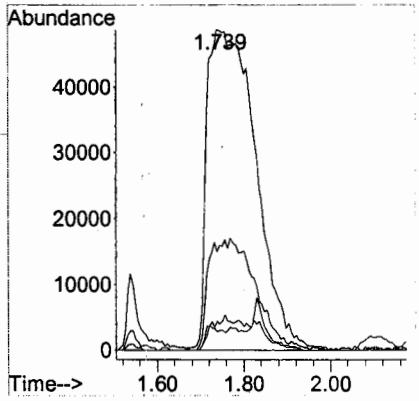


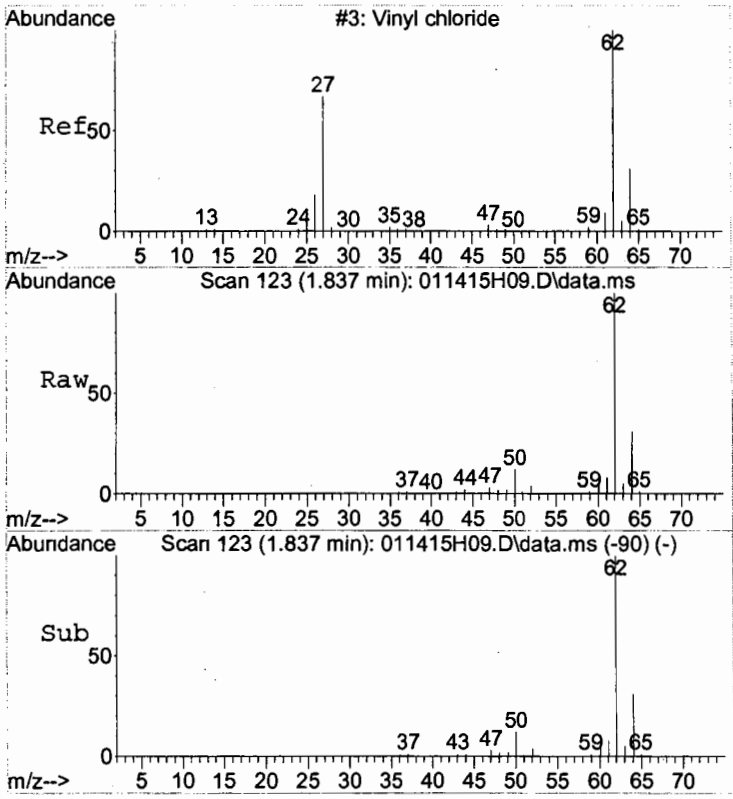


#3
Chloromethane
Concen: 5.00 ug/L
RT: 1.739 min Scan# 107
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 50 Resp: 382256

Ion	Ratio	Lower	Upper
50	100		
52	0.0	0.0	20.0
49	0.0	0.0	20.0
47	4.8	0.0	24.8

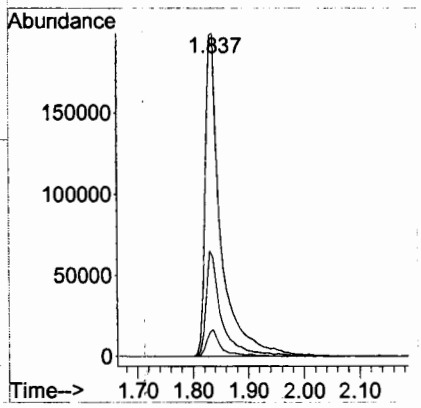


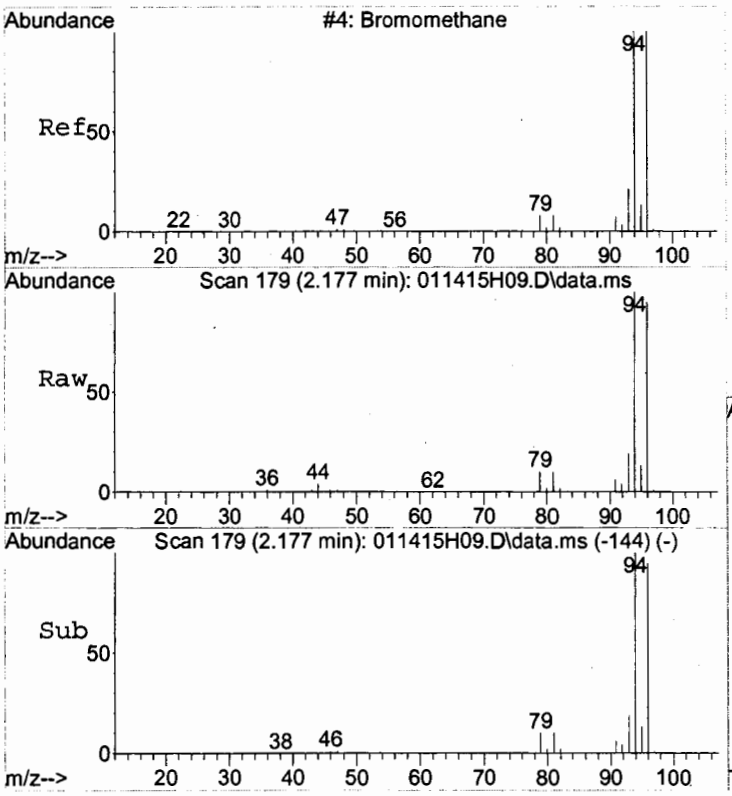


#4
Vinyl chloride
Concen: 5.00 ug/L
RT: 1.837 min Scan# 123
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 62 Resp: 399914

Ion	Ratio	Lower	Upper
62	100		
64	32.5	12.5	52.5
61	7.7	0.0	27.7

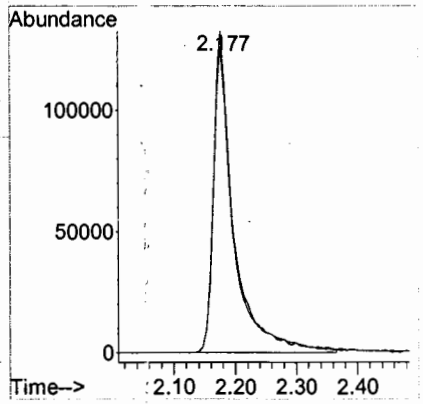


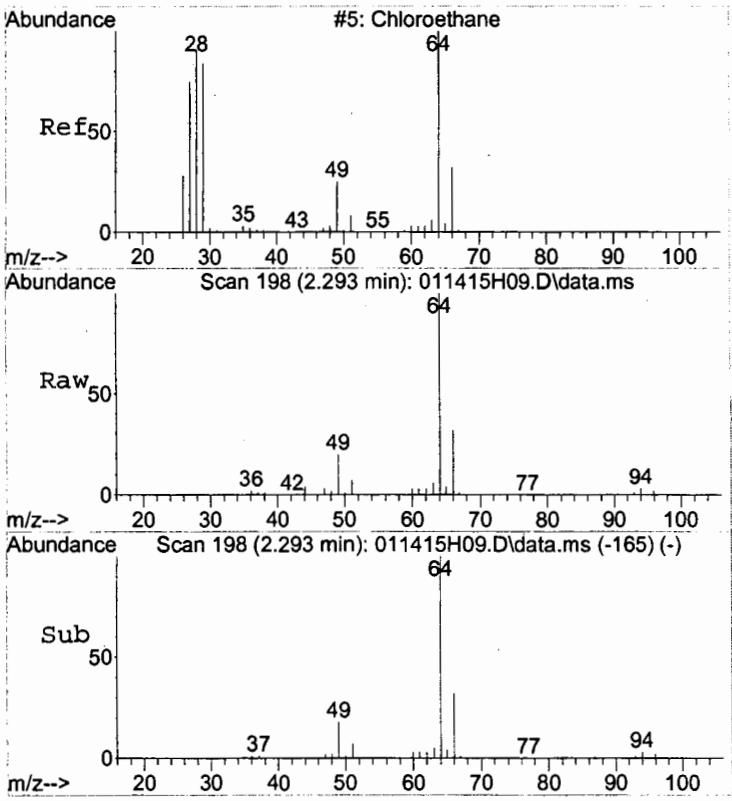


#5
Bromomethane
Concen: 5.00 ug/L
RT: 2.177 min Scan# 179
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 94 Resp: 306875

Ion	Ratio	Lower	Upper
94	100		
96	94.7	74.7	114.7

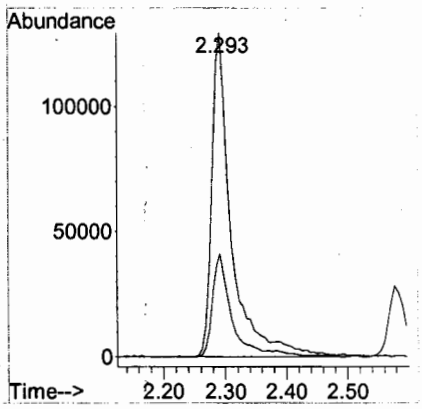


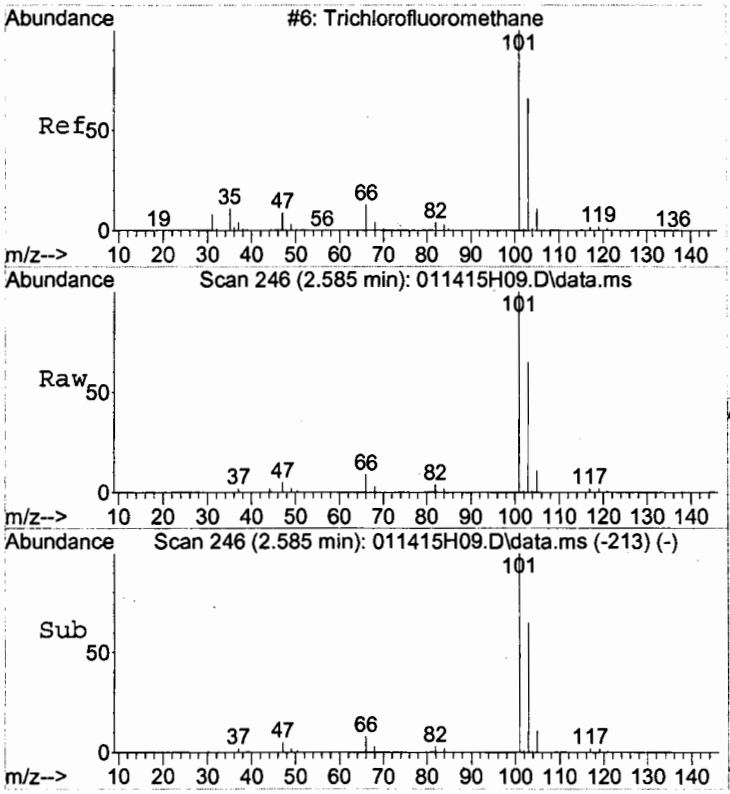


#6
Chloroethane
Concen: 5.00 ug/L
RT: 2.293 min Scan# 198
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 64 Resp: 288560

Ion	Ratio	Lower	Upper
64	100		
66	31.8	11.8	51.8

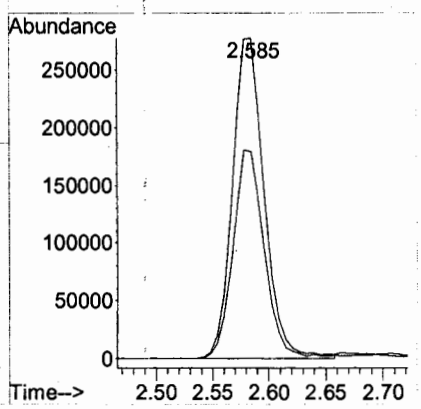


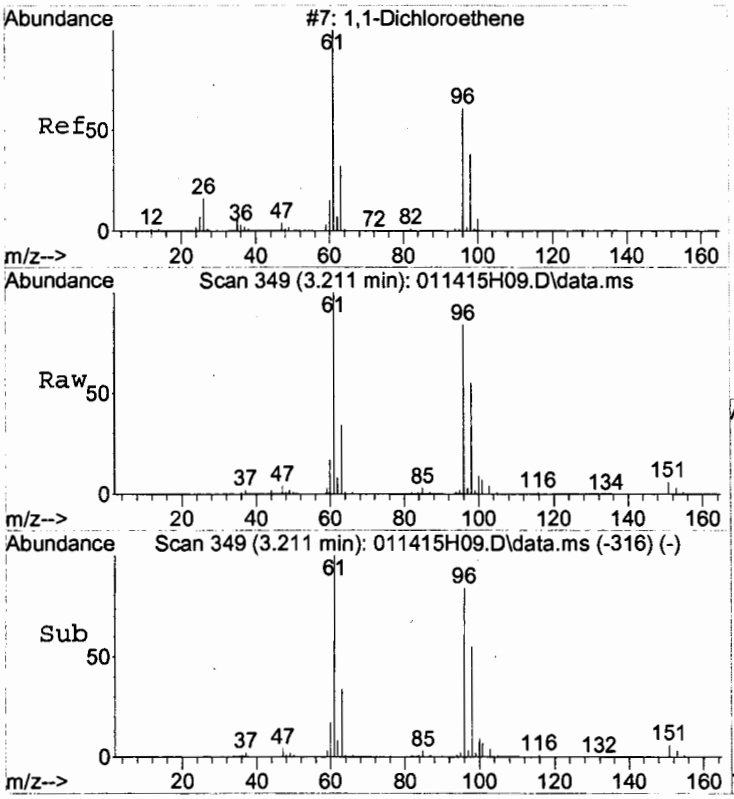


#7
Trichlorofluoromethane
Concen: 5.00 ug/L
RT: 2.585 min Scan# 246
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:101 Resp: 541696

Ion	Ratio	Lower	Upper
101	100		
103	67.4	47.4	87.4

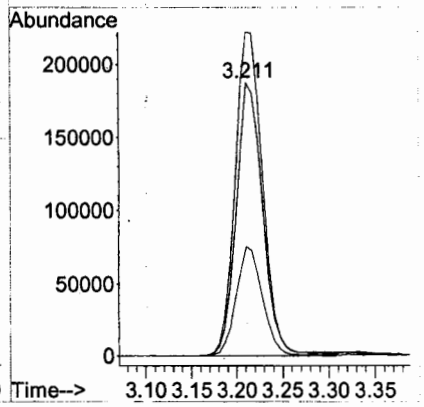


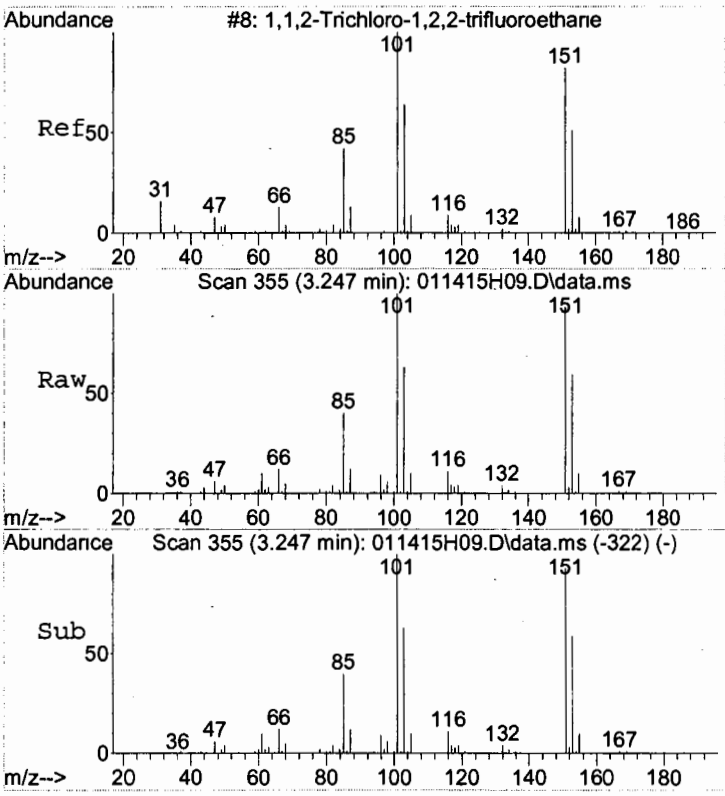


#8
1,1-Dichloroethene
Concen: 5.00 ug/L
RT: 3.211 min Scan# 349
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 96 Resp: 382614

Ion	Ratio	Lower	Upper
96	100		
61	126.3	106.3	146.3
63	40.0	20.0	60.0

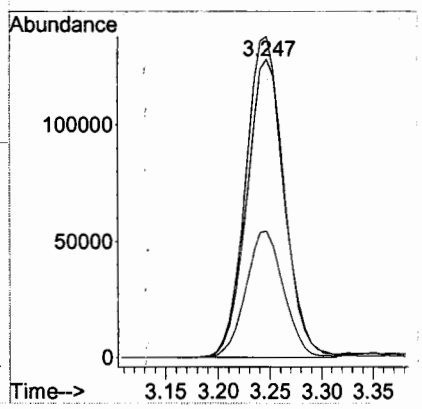


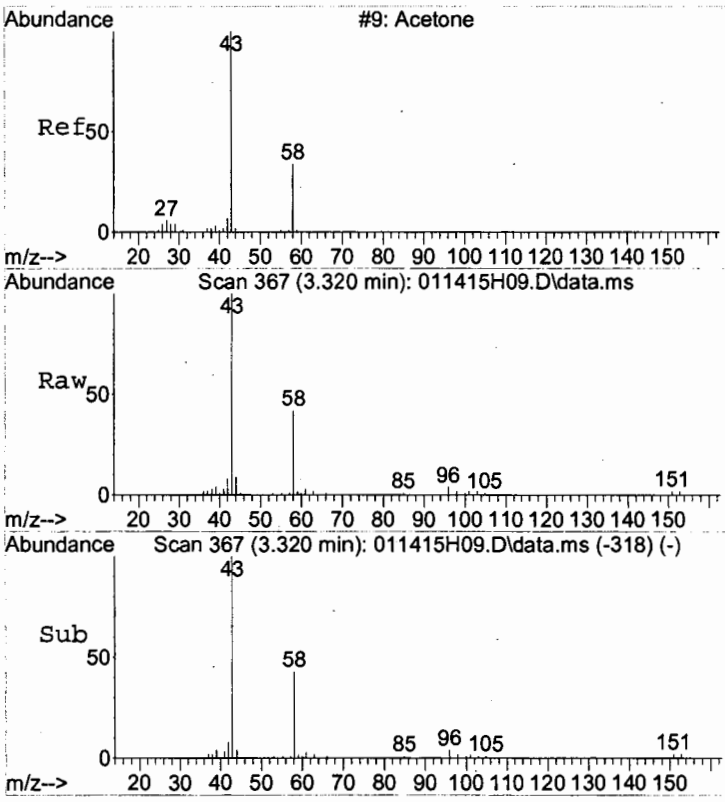


#9
1,1,2-Trichloro-1,2,2-trifluoroethane
Concen: 5.00 ug/L
RT: 3.247 min Scan# 355
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:101 Resp: 352764

Ion	Ratio	Lower	Upper
101	100		
151	92.5	72.5	112.5
85	39.1	19.1	59.1

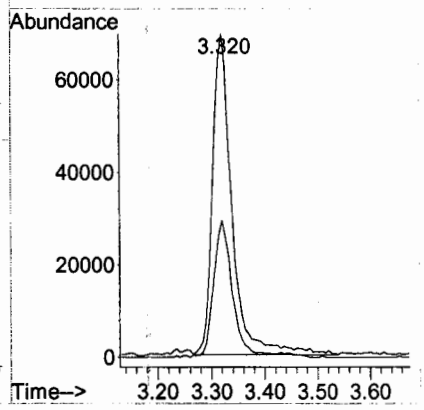


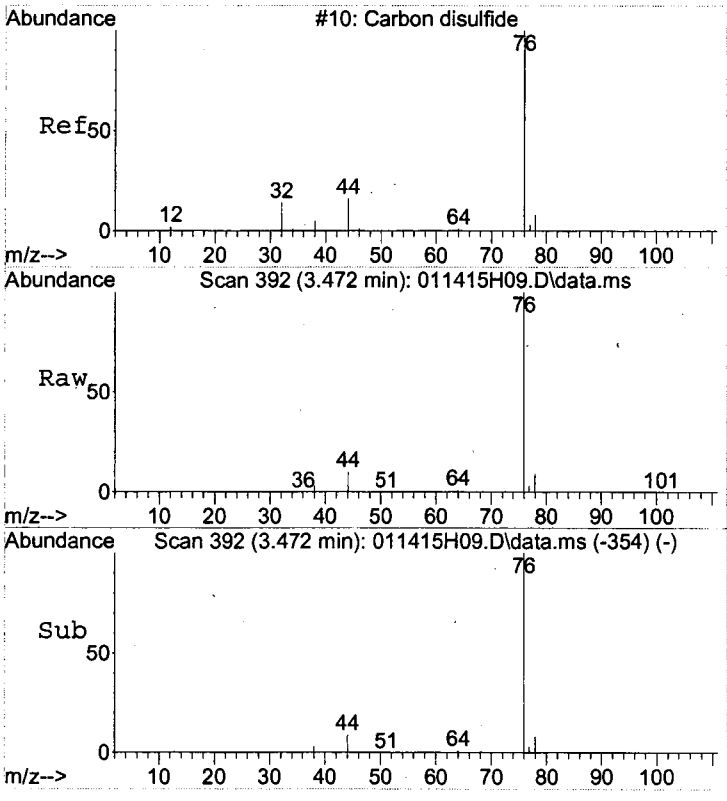


#10
Acetone
Concen: 40.00 ug/L
RT: 3.320 min Scan# 367
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 43 Resp: 176687

Ion	Ratio	Lower	Upper
43	100		
58	42.4	22.4	62.4

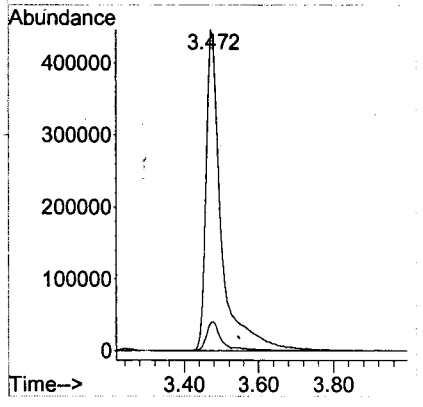


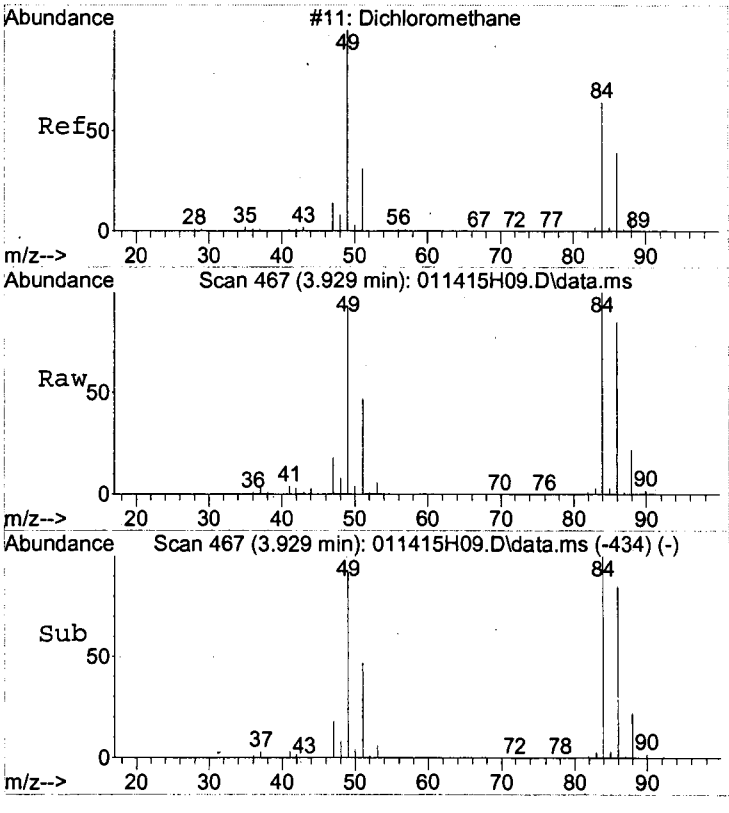


#11
Carbon disulfide
Concen: 5.00 ug/L
RT: 3.472 min Scan# 392
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 76 Resp: 1279032

Ion	Ratio	Lower	Upper
76	100		
78	9.3	0.0	29.3

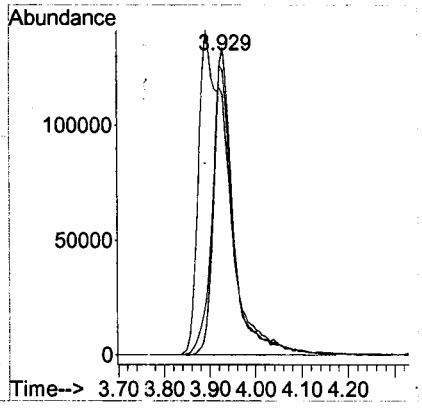


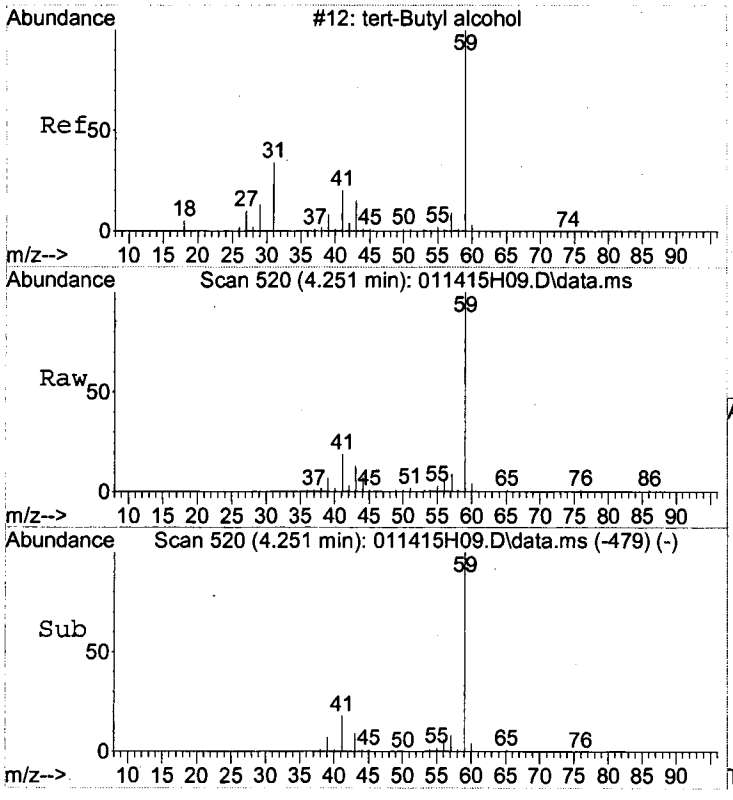


#12
Dichloromethane
Concen: 5.00 ug/L
RT: 3.929 min Scan# 467
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 84 Resp: 395509

Ion	Ratio	Lower	Upper
84	100		
86	0.0	0.0	20.0
49	103.0	83.0	123.0

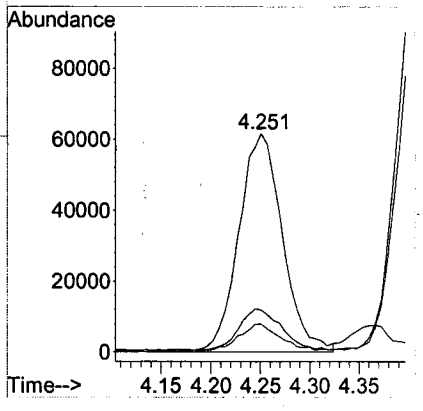


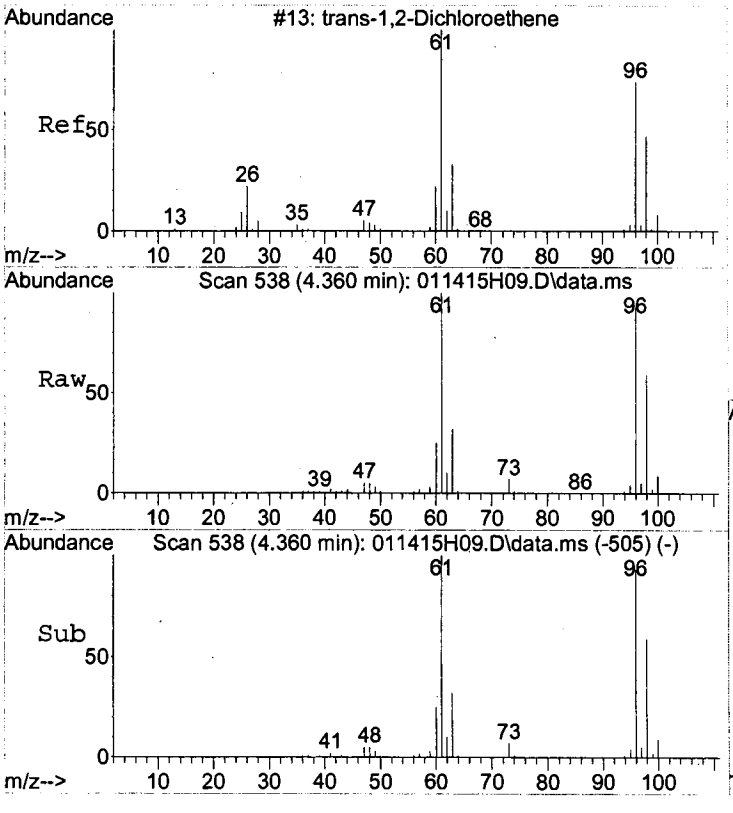


#13
tert-Butyl alcohol
Concen: 100.00 ug/L
RT: 4.251 min Scan# 520
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 59 Resp: 189056

Ion	Ratio	Lower	Upper
59	100		
41	21.2	1.2	41.2
43	11.2	0.0	31.2

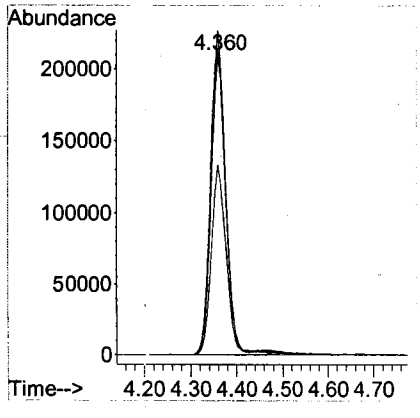


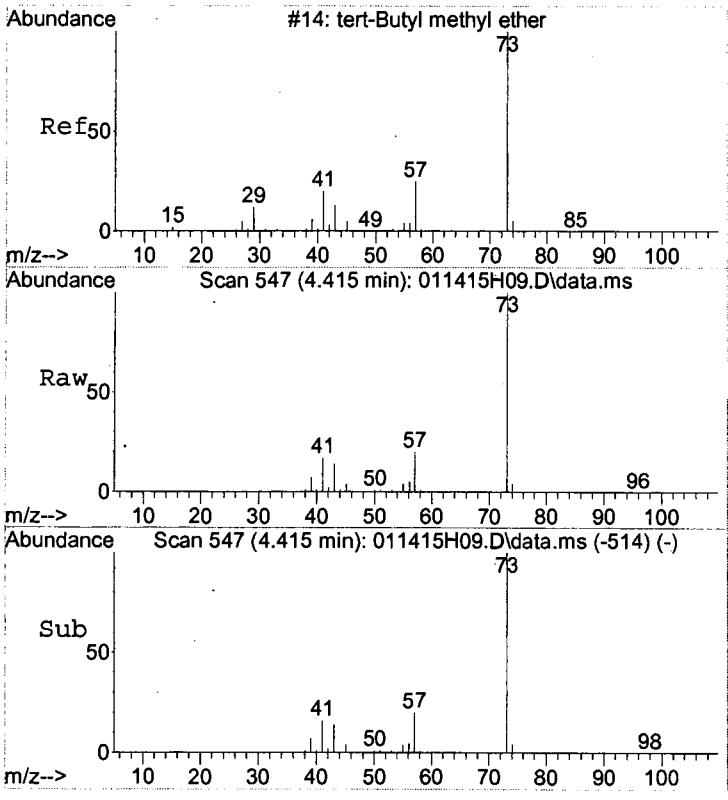


#14
trans-1,2-Dichloroethene
Concen: 5.00 ug/L
RT: 4.360 min Scan# 538
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 96 Resp: 484570

Ion	Ratio	Lower	Upper
96	100		
61	109.7	89.7	129.7
98	63.7	43.7	83.7

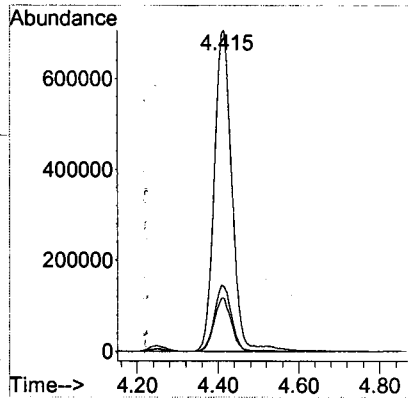


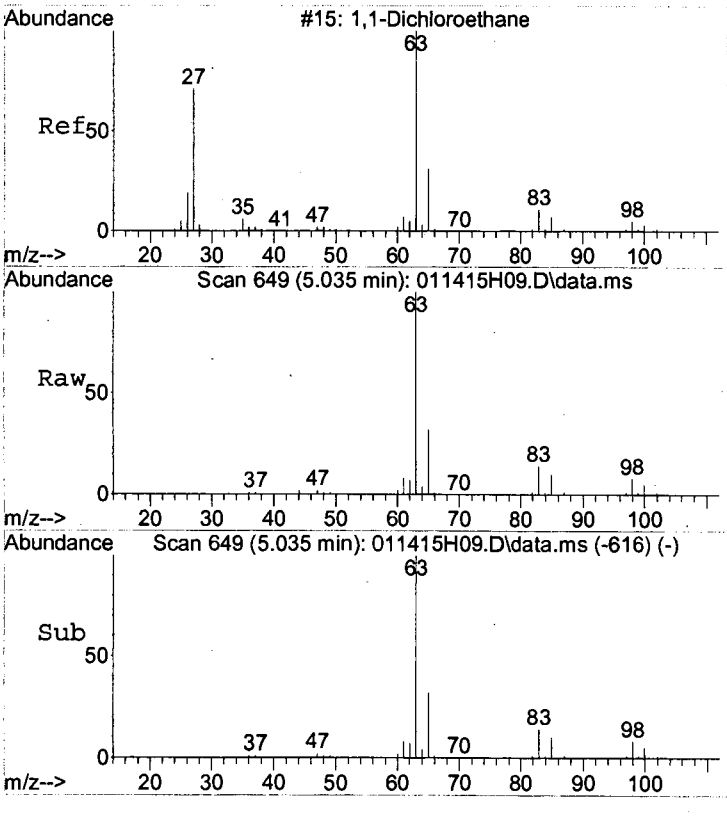


#15
tert-Butyl methyl ether (MTBE)
Concen: 20.00 ug/L
RT: 4.415 min Scan# 547
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 73 Resp: 2160336

Ion	Ratio	Lower	Upper
73	100		
57	20.5	0.5	40.5
41	15.9	0.0	35.9

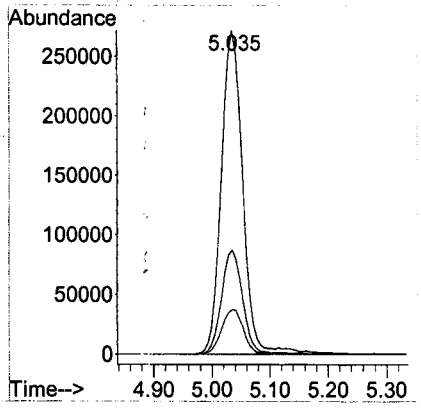


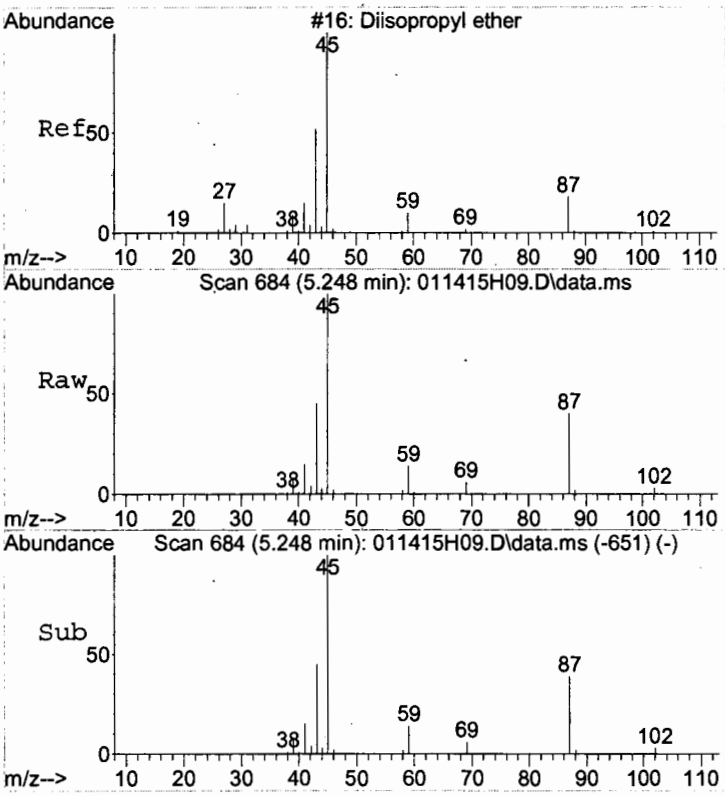


#16
1,1-Dichloroethane
Concen: 5.00 ug/L
RT: 5.035 min Scan# 649
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 63 Resp: 703020

Ion	Ratio	Lower	Upper
63	100		
65	32.0	12.0	52.0
83	14.3	0.0	34.3

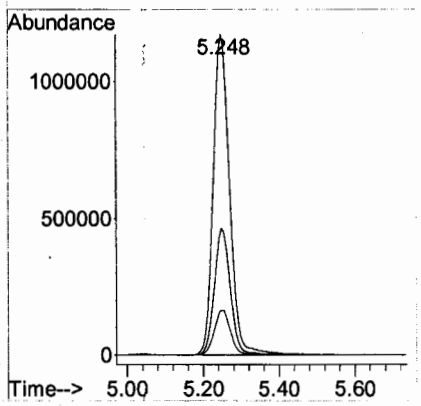


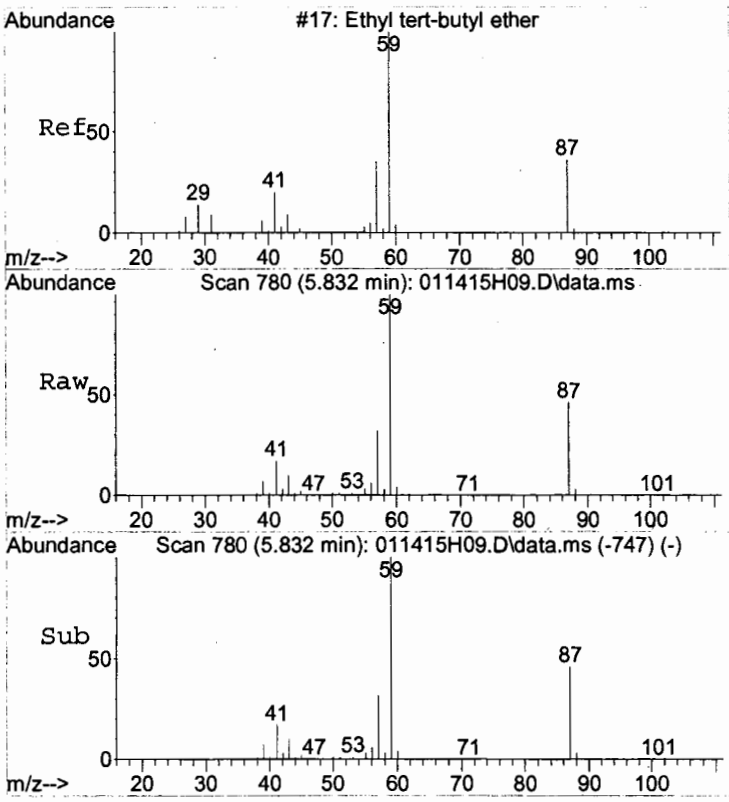


#17
Diisopropyl ether
Concen: 20.00 ug/L
RT: 5.248 min Scan# 684
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 45 Resp: 3499187

Ion	Ratio	Lower	Upper
45	100		
87	38.7	18.7	58.7
59	13.9	0.0	33.9

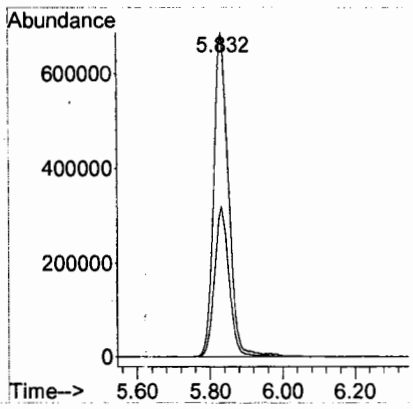


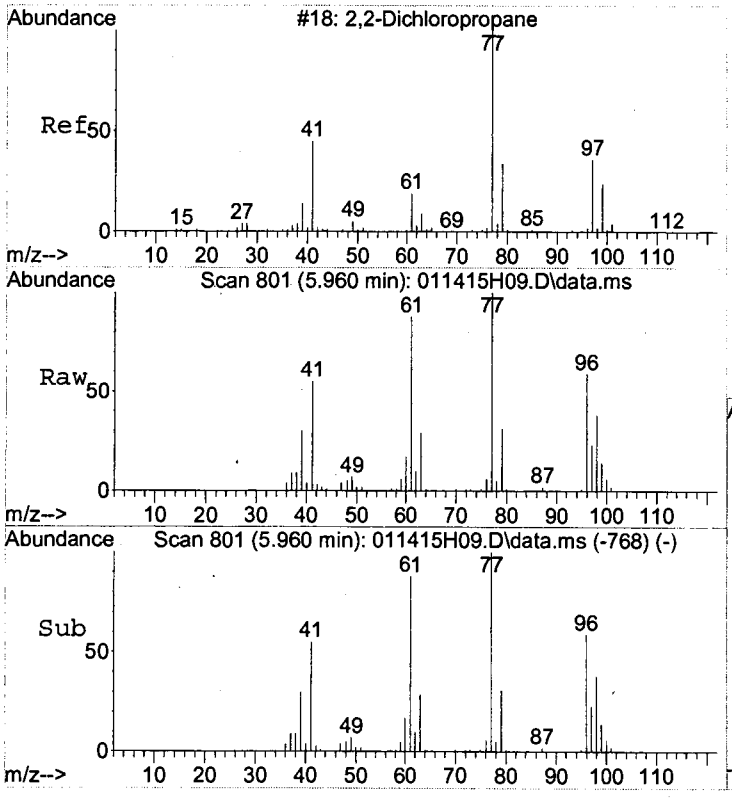


#18
Ethyl-tert-butyl ether
Concen: 20.00 ug/L
RT: 5.832 min Scan# 780
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 59 Resp: 1947238

Ion	Ratio	Lower	Upper
59	100		
87	45.6	25.6	65.6

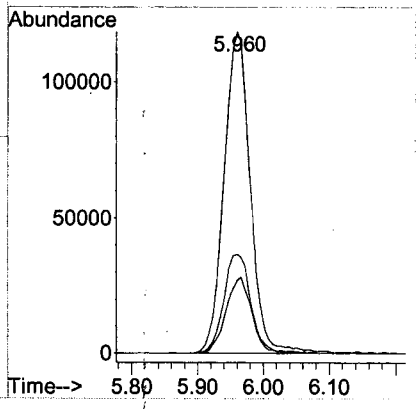


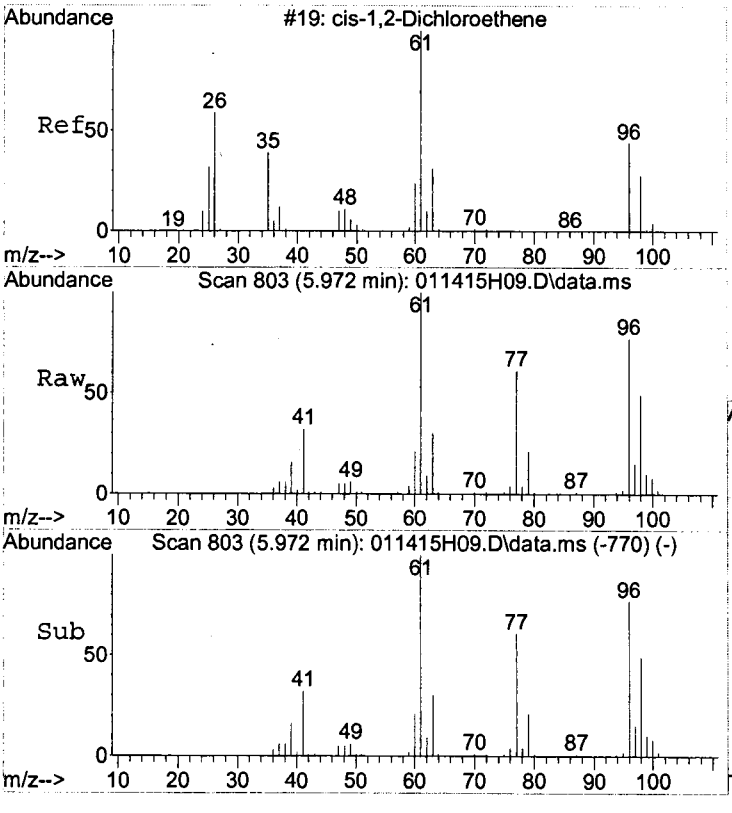


#19
2,2-Dichloropropane
Concen: 5.00 ug/L
RT: 5.960 min Scan# 801
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 77 Resp: 329495

Ion	Ratio	Lower	Upper
77	100		
97	23.4	3.4	43.4
79	32.0	12.0	52.0

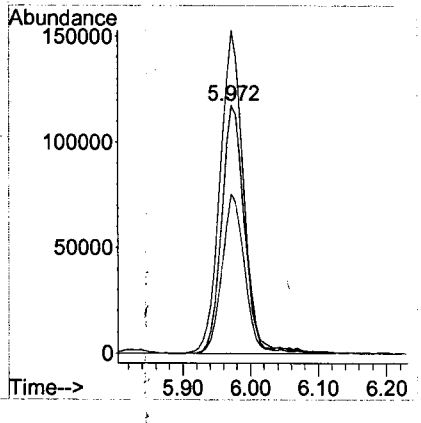


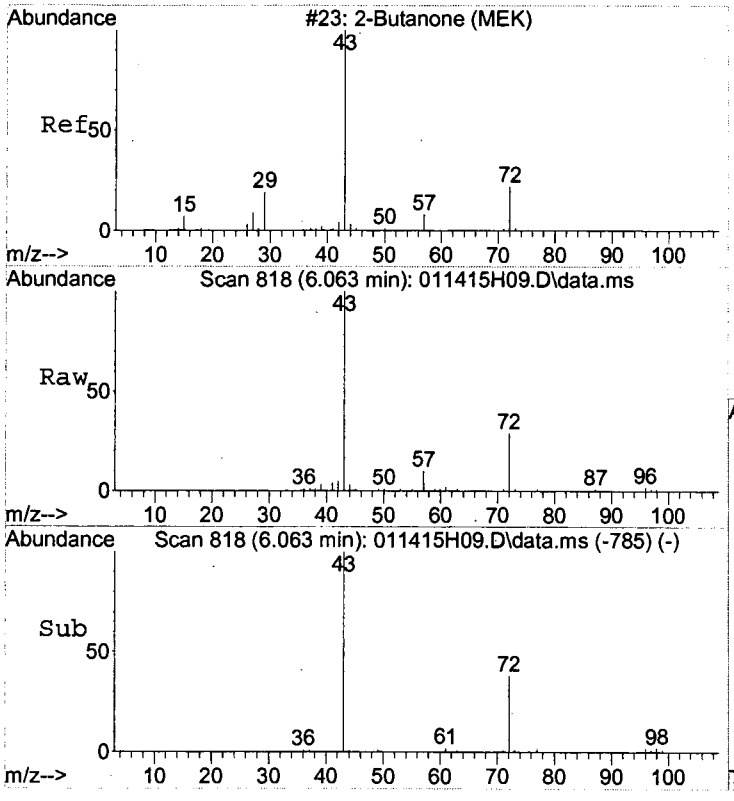


#20
cis-1,2-Dichloroethene
Concen: 5.00 ug/L
RT: 5.972 min Scan# 803
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 96 Resp: 275345

Ion	Ratio	Lower	Upper
96	100		
61	134.9	114.9	154.9
98	64.2	44.2	84.2

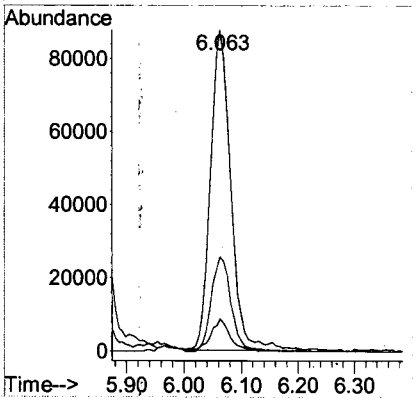


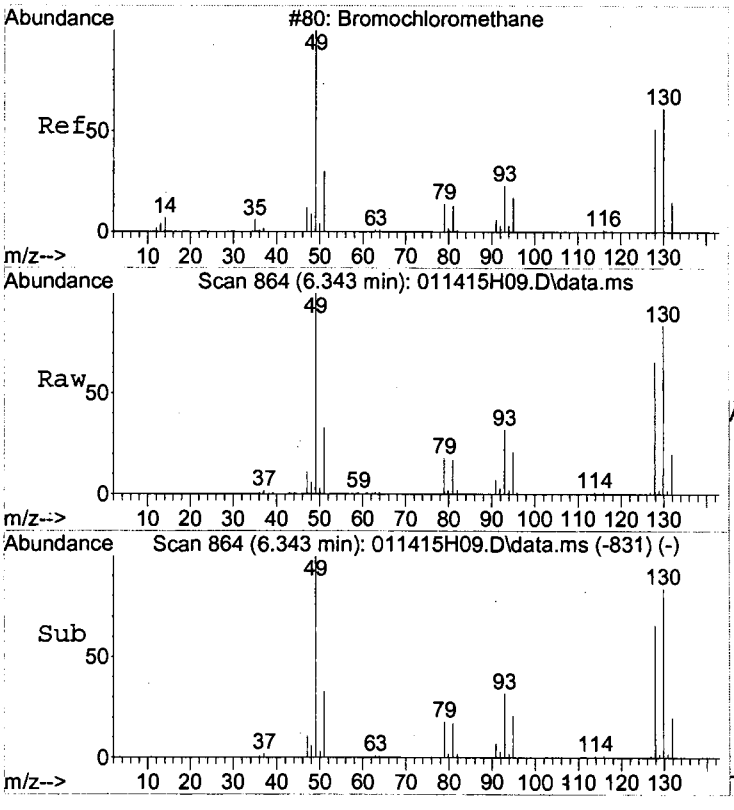


#21
2-Butanone (MEK)
Concen: 40.00 ug/L
RT: 6.063 min Scan# 818
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 43 Resp: 216441

Ion	Ratio	Lower	Upper
43	100		
57	9.8	0.0	29.8
72	28.6	8.6	48.6

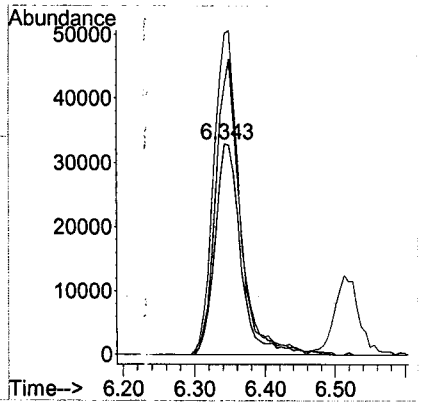


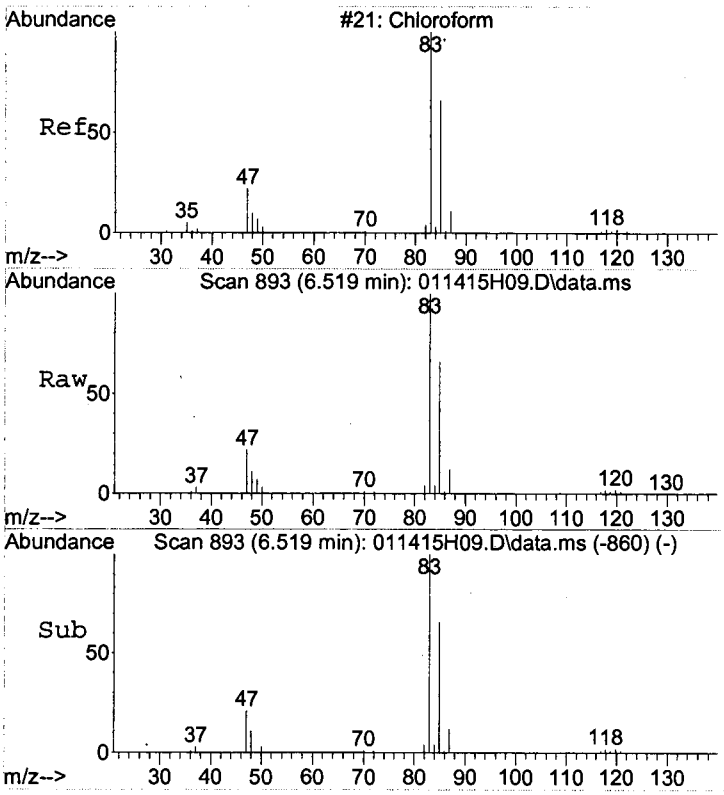


#22
Bromochloromethane
Concen: 5.00 ug/L
RT: 6.343 min Scan# 864
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:128 Resp: 84034

Ion	Ratio	Lower	Upper
128	100		
130	131.6	111.6	151.6
49	154.3	134.3	174.3

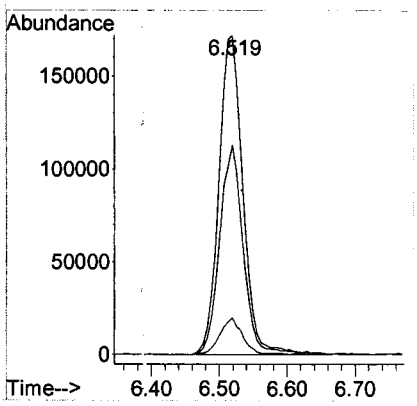


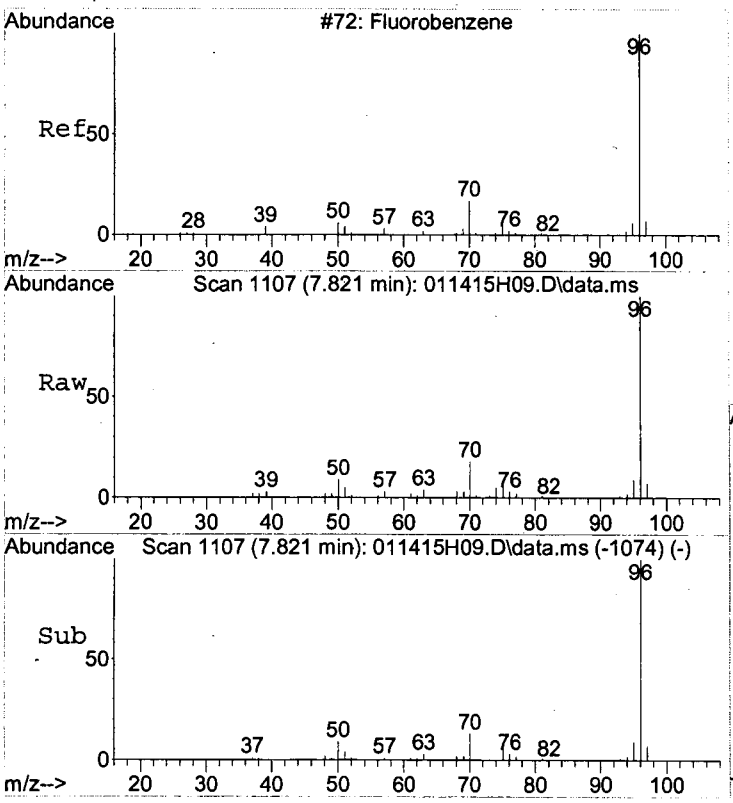


#23
Chloroform
Concen: 5.00 ug/L
RT: 6.519 min Scan# 893
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 83 Resp: 419537

Ion	Ratio	Lower	Upper
83	100		
85	64.4	44.4	84.4
87	10.8	0.0	30.8

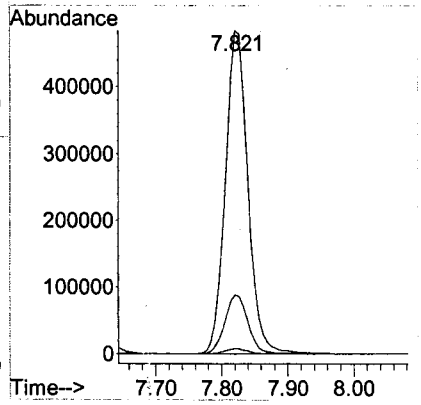


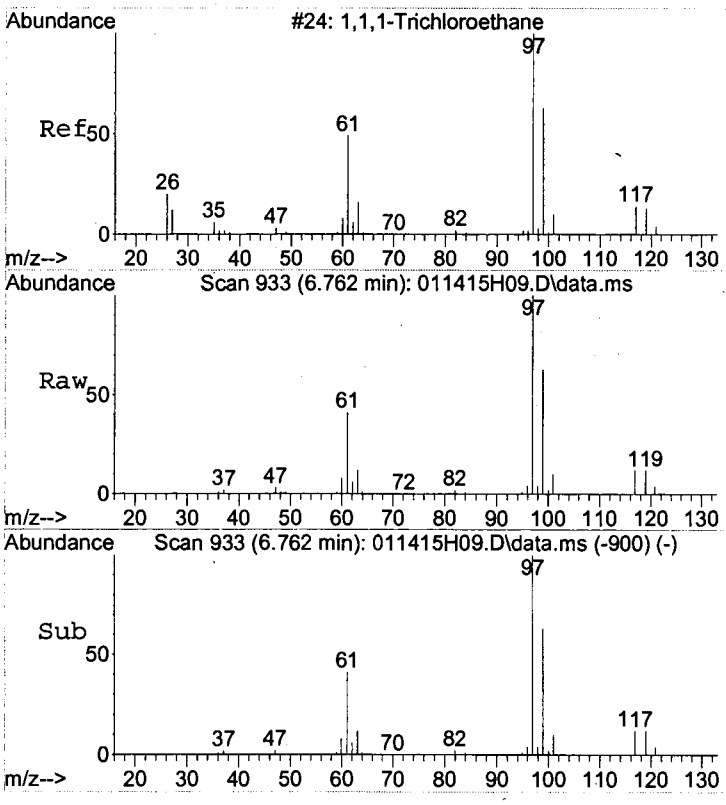


#24
Fluorobenzene
Concen: 5.00 ug/L
RT: 7.821 min Scan# 1107
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 96 Resp: 1151896

Ion	Ratio	Lower	Upper
96	100		
70	18.7	0.0	38.7
77	1.6	0.0	21.6

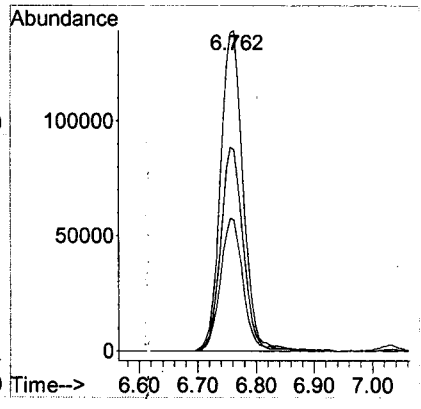


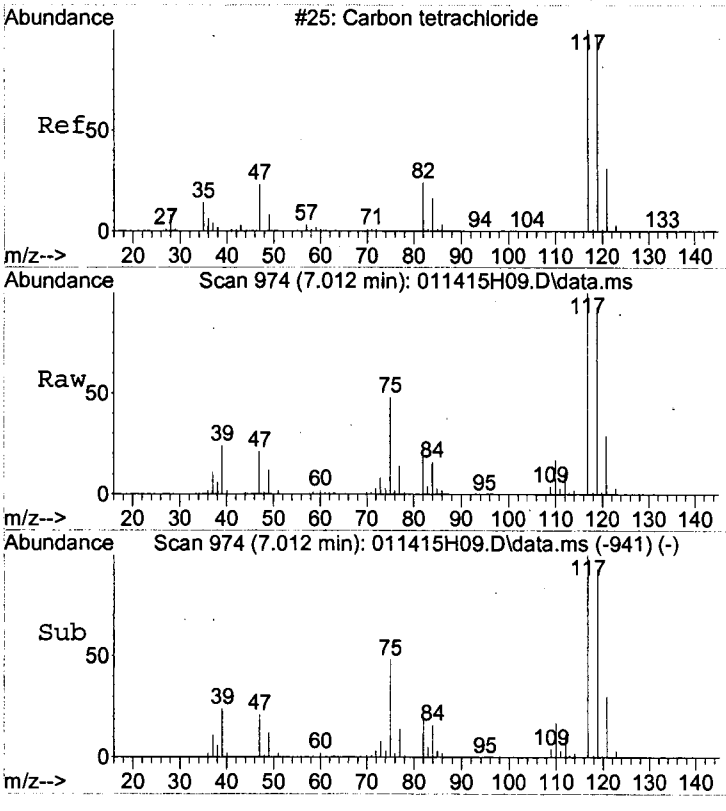


#25
1,1,1-Trichloroethane
Concen: 5.00 ug/L
RT: 6.762 min Scan# 933
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 97 Resp: 374896

Ion	Ratio	Lower	Upper
97	100		
99	63.3	43.3	83.3
61	41.2	21.2	61.2

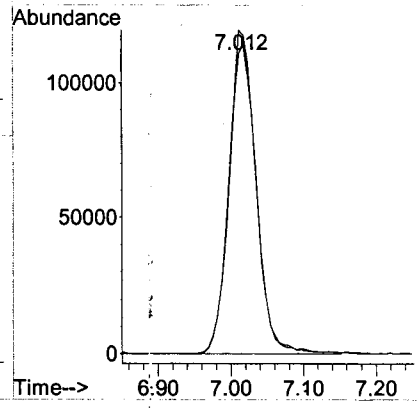


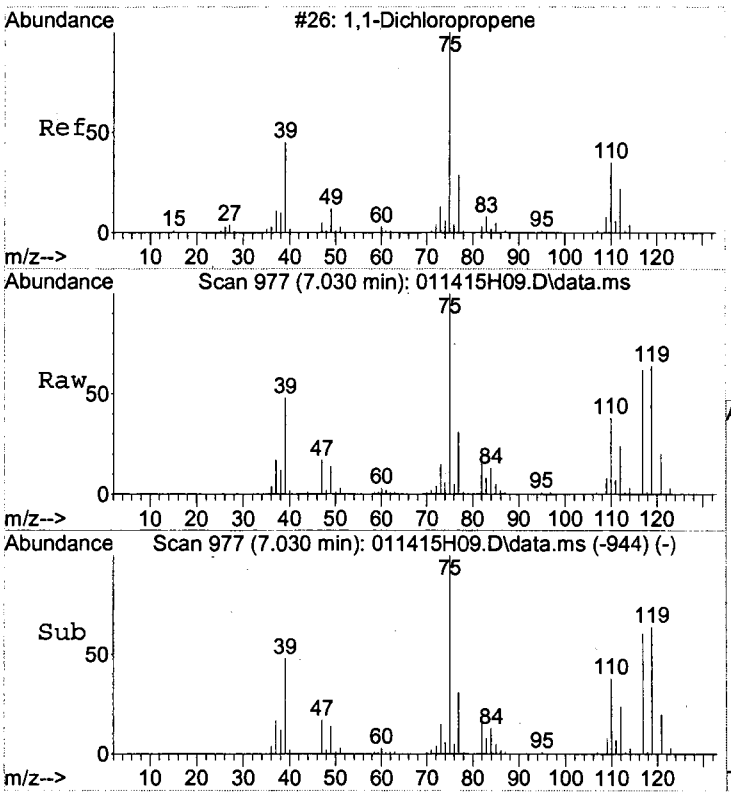


#26
Carbon tetrachloride
Concen: 5.00 ug/L
RT: 7.012 min Scan# 974
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:117 Resp: 310131

Ion	Ratio	Lower	Upper
117	100		
119	97.0	77.0	117.0

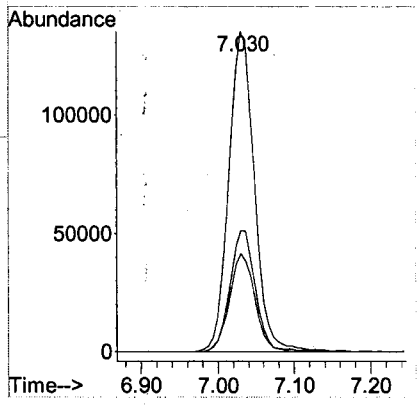


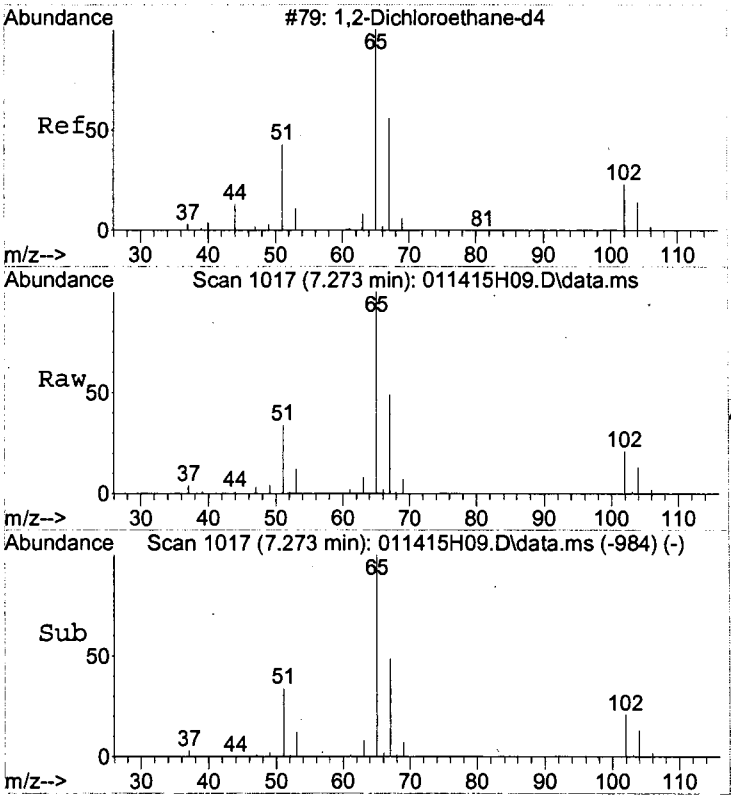


#27
1,1-Dichloropropene
Concen: 5.00 ug/L
RT: 7.030 min Scan# 977
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 75 Resp: 316781

Ion	Ratio	Lower	Upper
75	100		
110	37.8	17.8	57.8
77	30.8	10.8	50.8

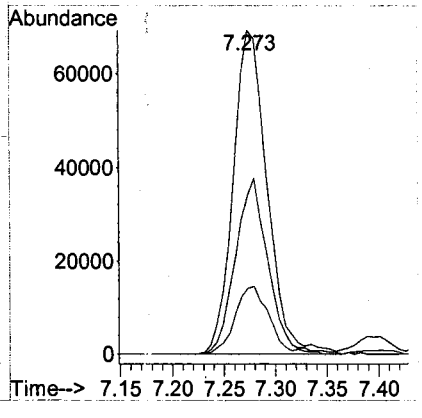


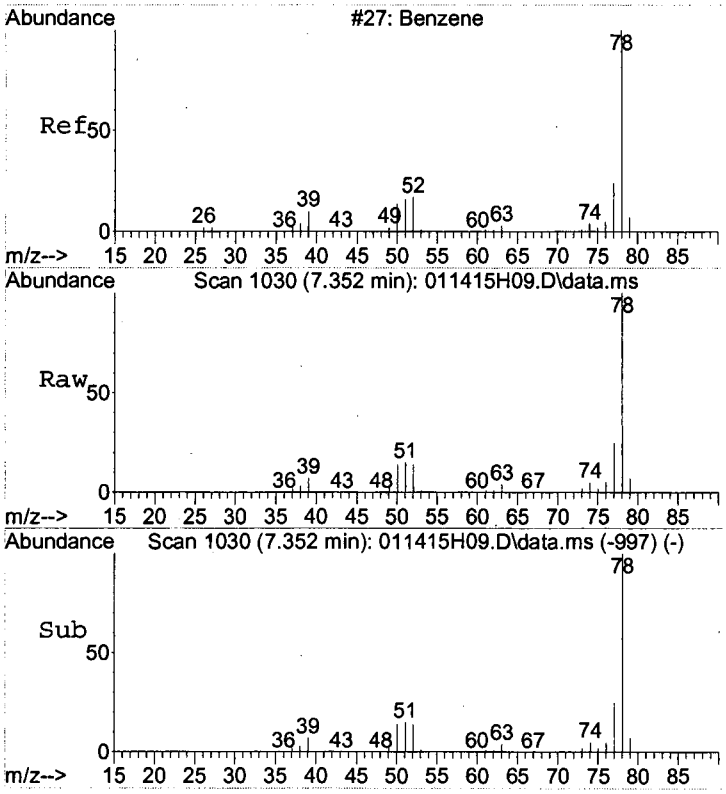


#28
1,2-Dichloroethane-d4
Concen: 5.00 ug/L
RT: 7.273 min Scan# 1017
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 65 Resp: 160621

Ion	Ratio	Lower	Upper
65	100		
67	52.3	32.3	72.3
102	21.3	1.3	41.3

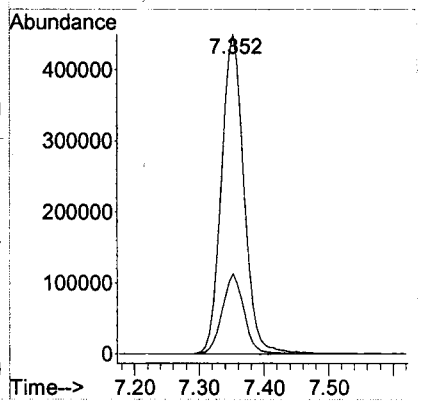


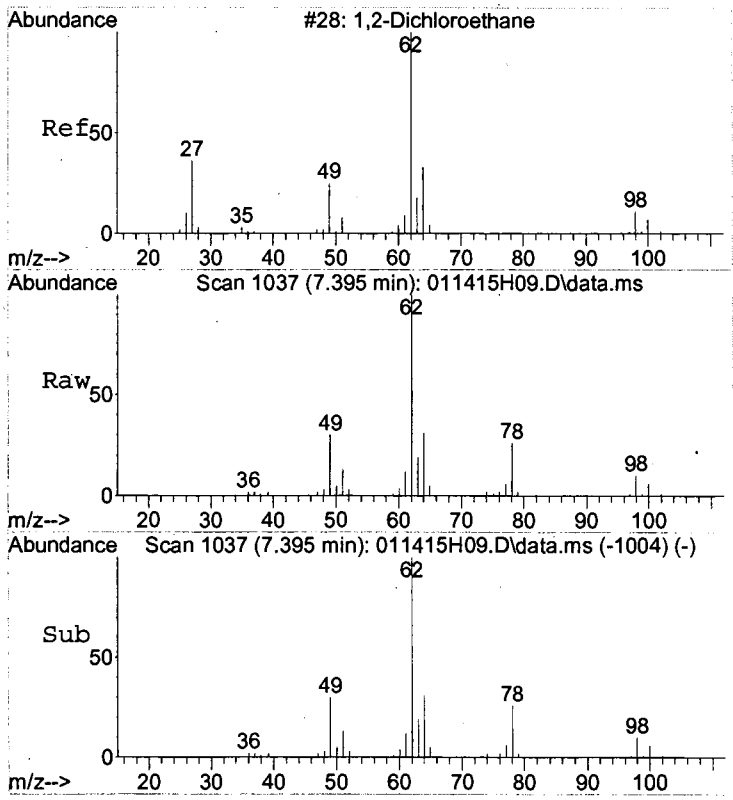


#29
Benzene
Concen: 5.00 ug/L
RT: 7.352 min Scan# 1030
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 78 Resp: 1088622

Ion	Ratio	Lower	Upper
78	100		
77	24.3	4.3	44.3

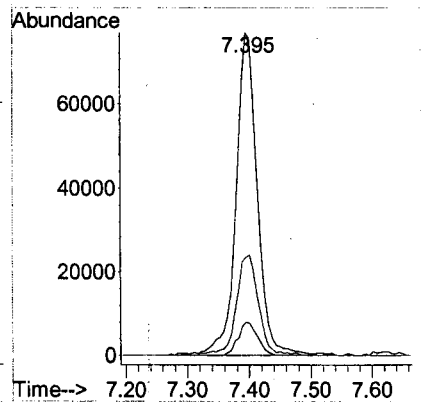


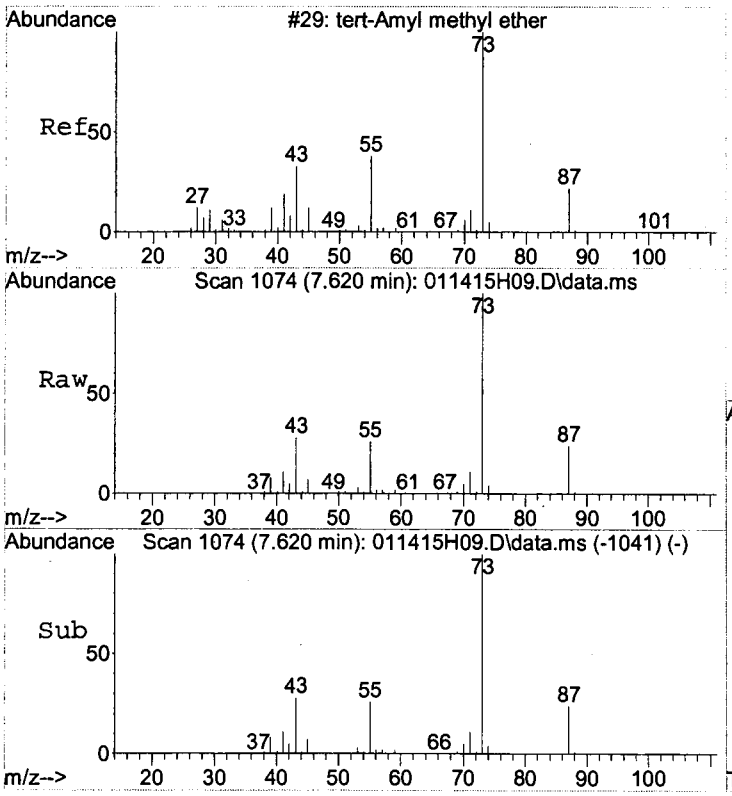


#30
1,2-Dichloroethane
Concen: 5.00 ug/L
RT: 7.395 min Scan# 1037
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 62 Resp: 187353

Ion	Ratio	Lower	Upper
62	100		
98	9.4	0.0	29.4
64	32.8	12.8	52.8

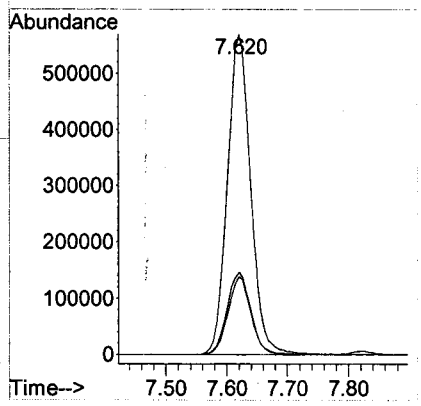


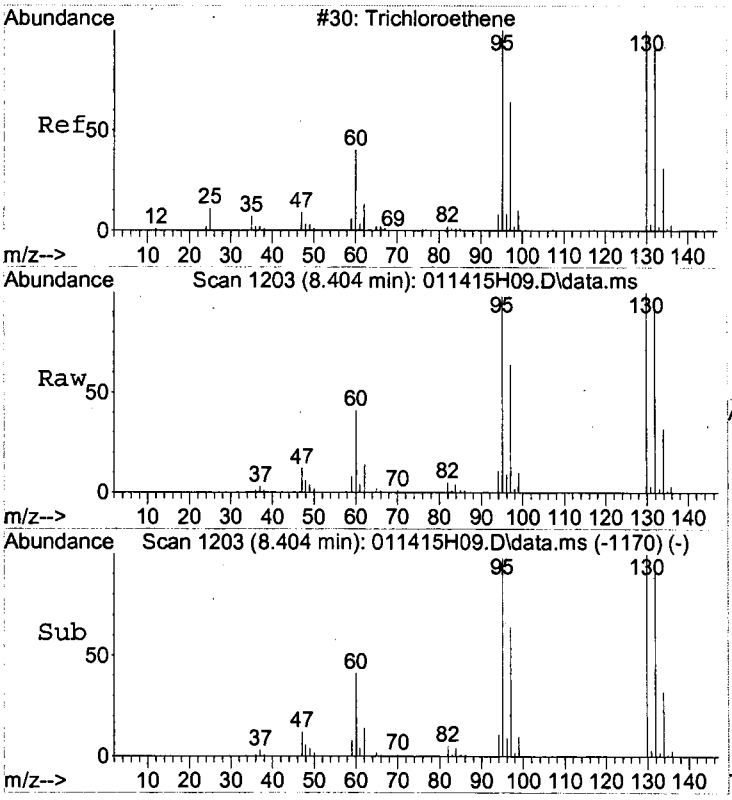


#31
tert-Amyl methyl ether
Concen: 20.00 ug/L
RT: 7.620 min Scan# 1074
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 73 Resp: 1518683

Ion	Ratio	Lower	Upper
73	100		
55	26.3	6.3	46.3
87	23.9	3.9	43.9

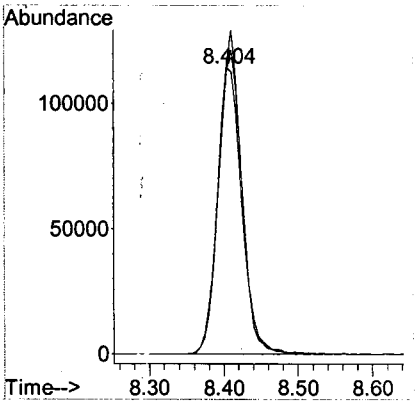


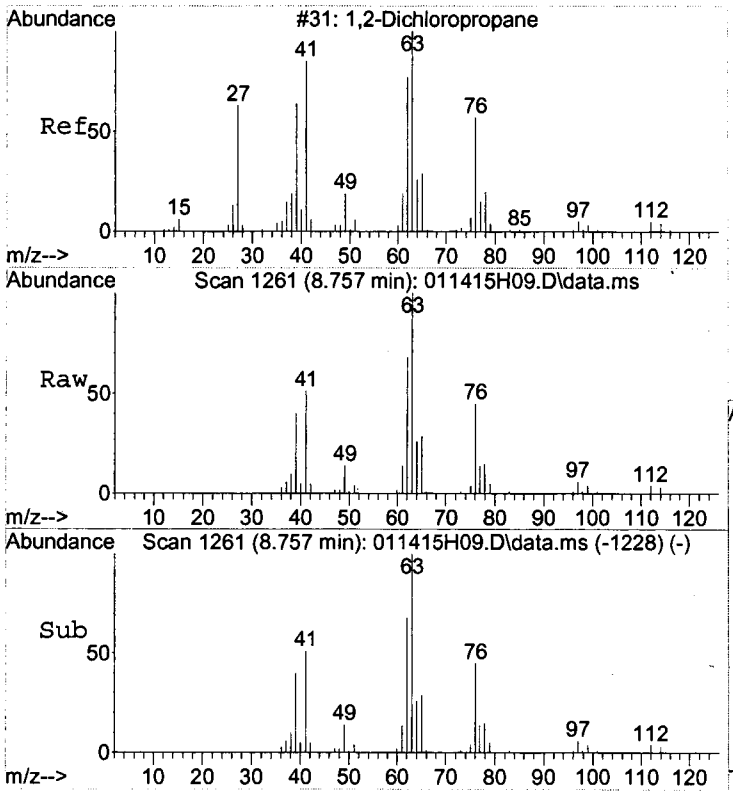


#32
Trichloroethene
Concen: 5.00 ug/L
RT: 8.404 min Scan# 1203
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 95 Resp: 263147

Ion	Ratio	Lower	Upper
95	100		
130	107.4	87.4	127.4
132	103.5	83.5	123.5

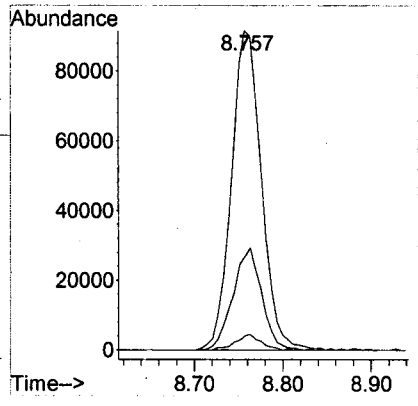


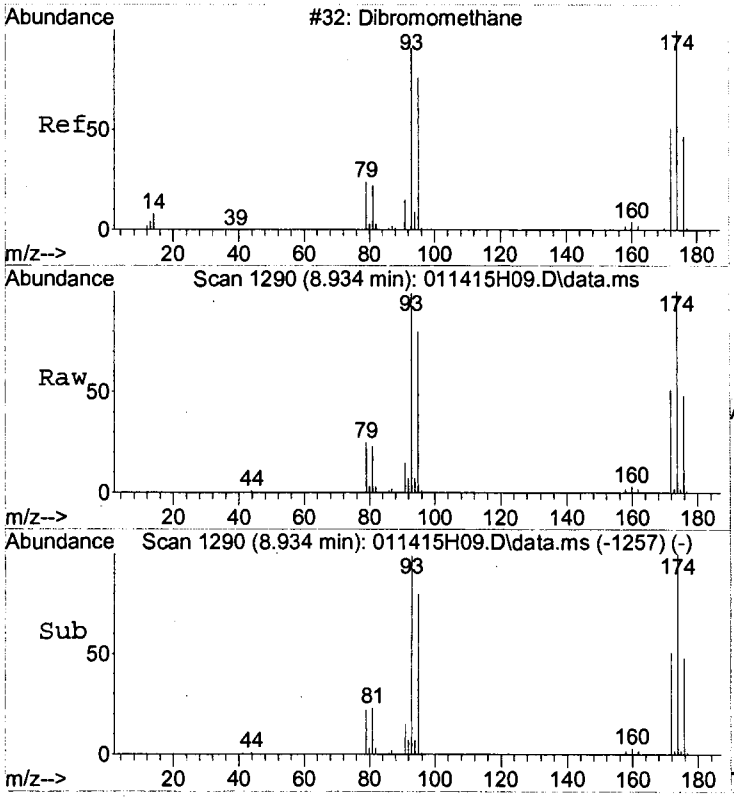


#33
1,2-Dichloropropane
Concen: 5.00 ug/L
RT: 8.757 min Scan# 1261
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 63 Resp: 215901

Ion	Ratio	Lower	Upper
63	100		
65	30.7	10.7	50.7
112	4.2	0.0	24.2

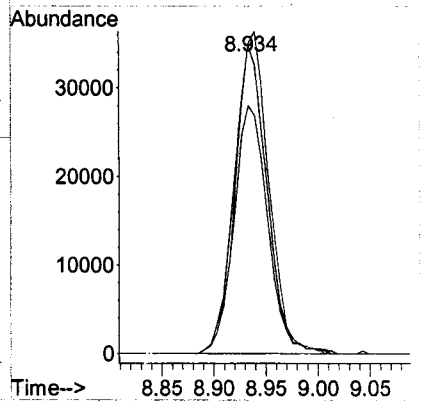


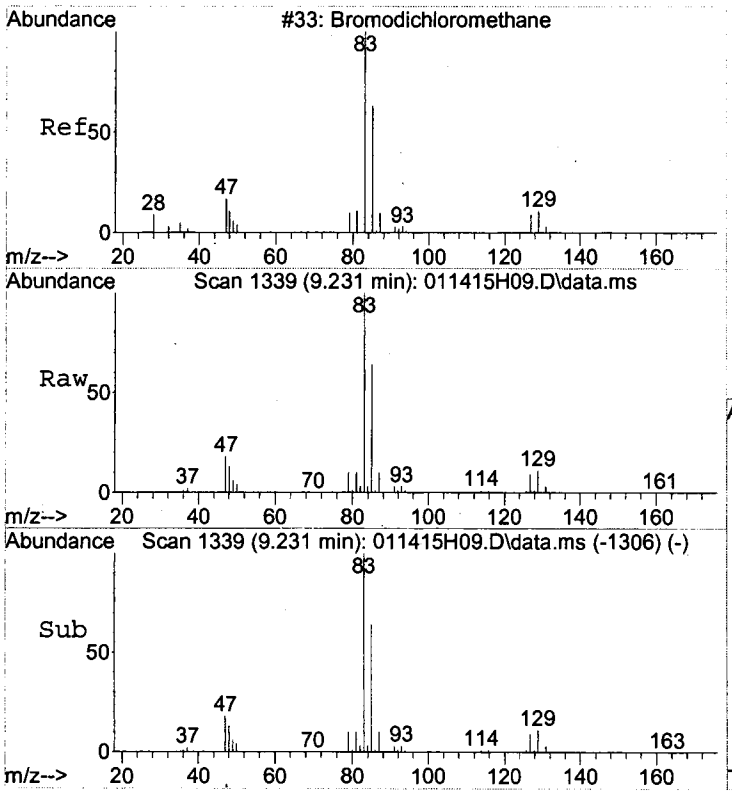


#34
Dibromomethane
Concen: 5.00 ug/L
RT: 8.934 min Scan# 1290
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 93 Resp: 76834

Ion	Ratio	Lower	Upper
93	100		
95	82.8	62.8	102.8
174	104.7	84.7	124.7

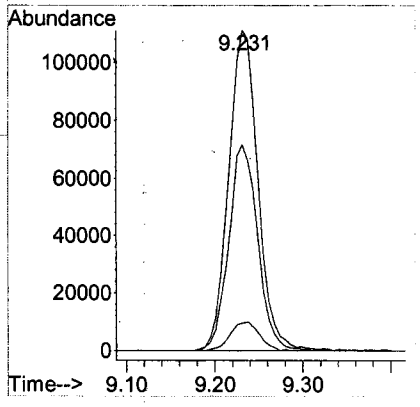


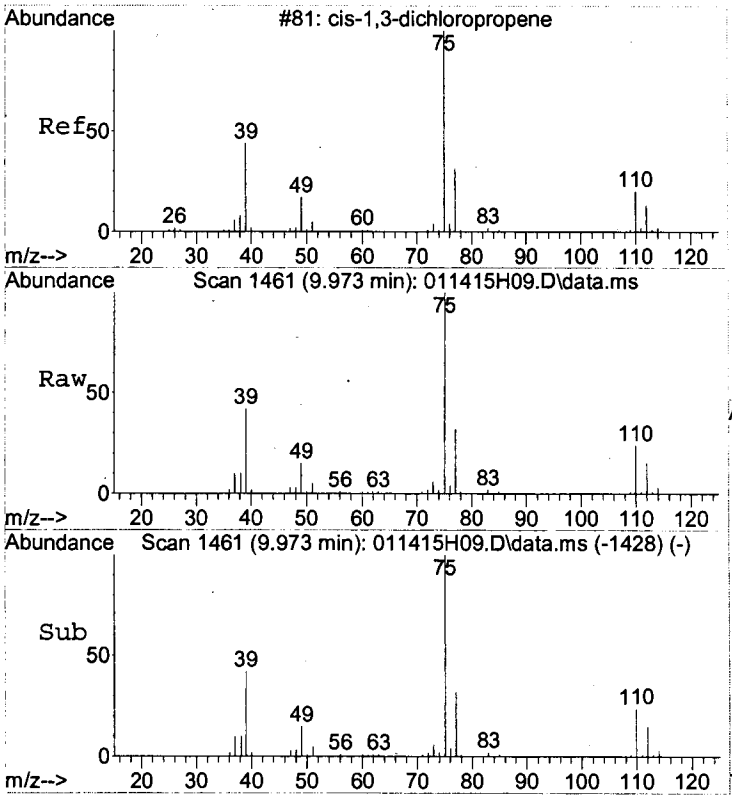


#35
Bromodichloromethane
Concen: 5.00 ug/L
RT: 9.231 min Scan# 1339
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 83 Resp: 258340

Ion	Ratio	Lower	Upper
83	100		
85	63.5	43.5	83.5
127	8.9	0.0	28.9

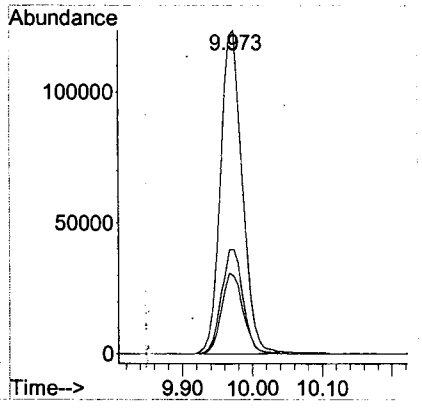


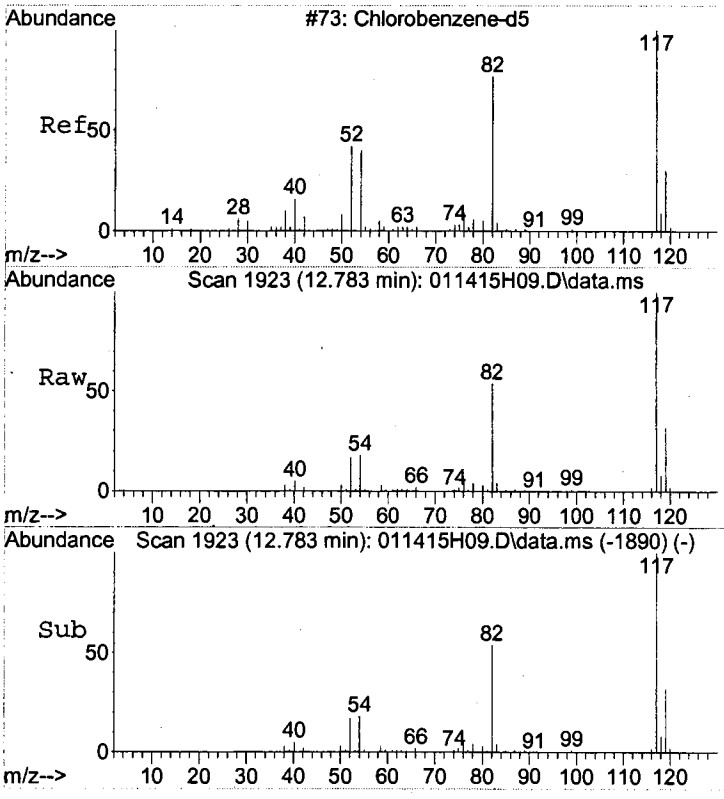


#36
cis-1,3-Dichloropropene
Concen: 5.00 ug/L
RT: 9.973 min Scan# 1461
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 75 Resp: 270379

Ion	Ratio	Lower	Upper
75	100		
77	32.1	12.1	52.1
110	24.6	4.6	44.6

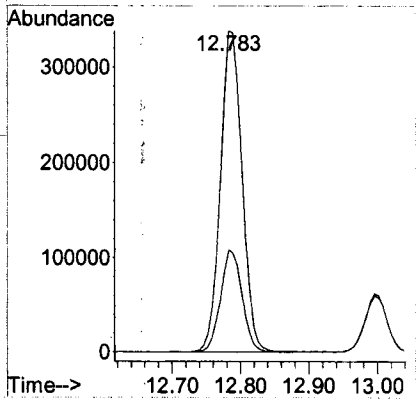


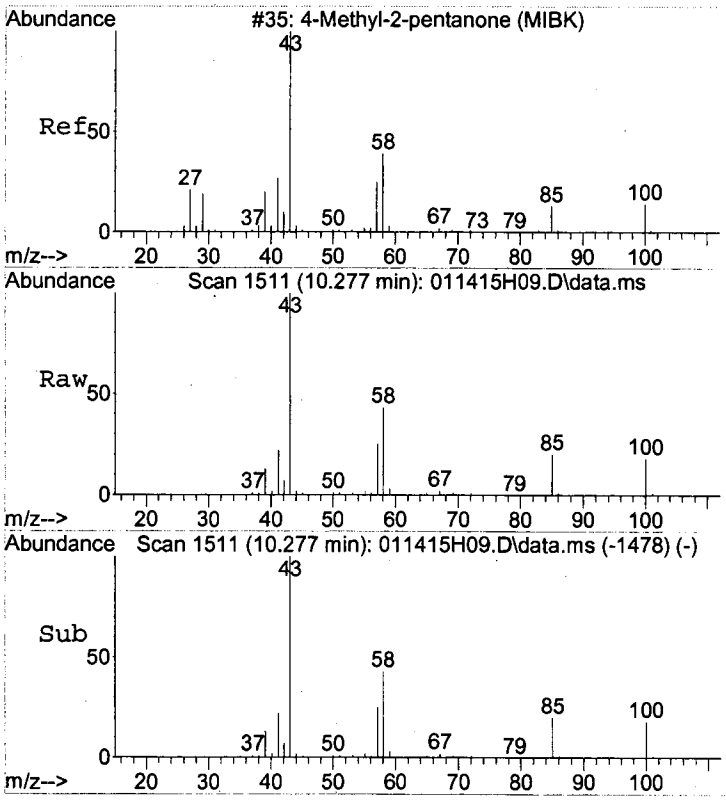


#37
Chlorobenzene-d5
Concen: 5.00 ug/L
RT: 12.783 min Scan# 1923
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:117 Resp: 745649

Ion	Ratio	Lower	Upper
117	100		
119	31.7	11.7	51.7

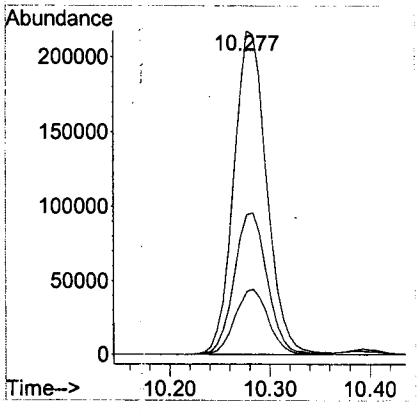


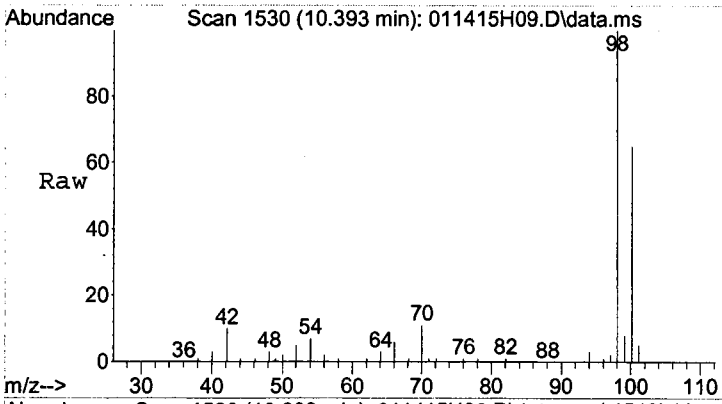


#38
4-Methyl-2-pentanone (MIBK)
Concen: 40.00 ug/L
RT: 10.277 min Scan# 1511
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 43 Resp: 498163

Ion	Ratio	Lower	Upper
43	100		
58	44.0	24.0	64.0
85	20.5	0.5	40.5

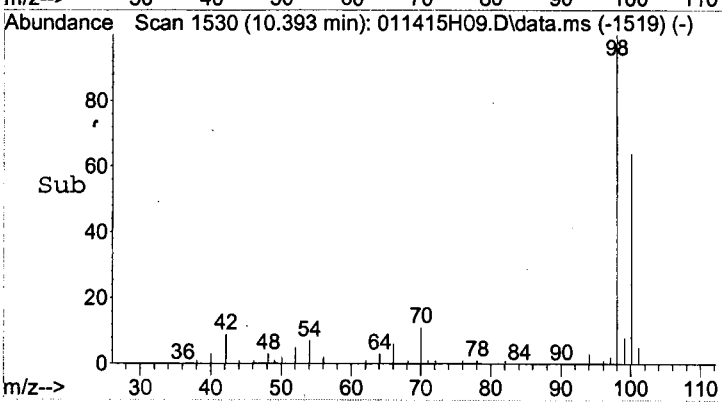


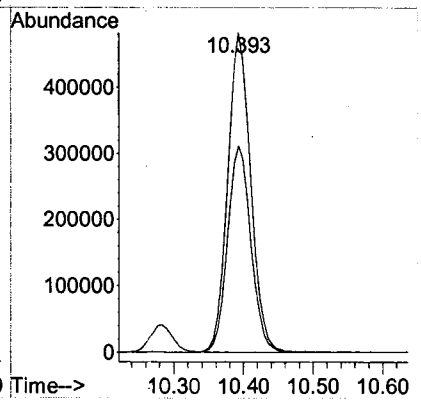


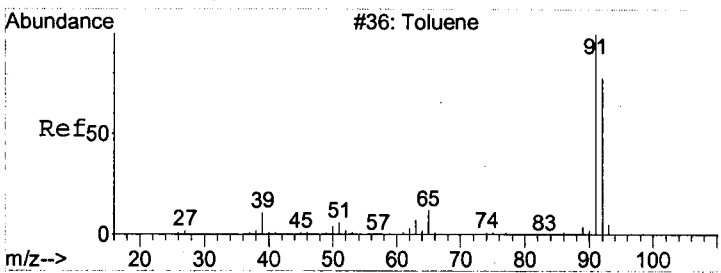
#39
Toluene-d8
Concen: 5.00 ug/L
RT: 10.393 min Scan# 1530
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 98 Resp: 1107806

Ion	Ratio	Lower	Upper
98	100		
100	65.3	45.3	85.3



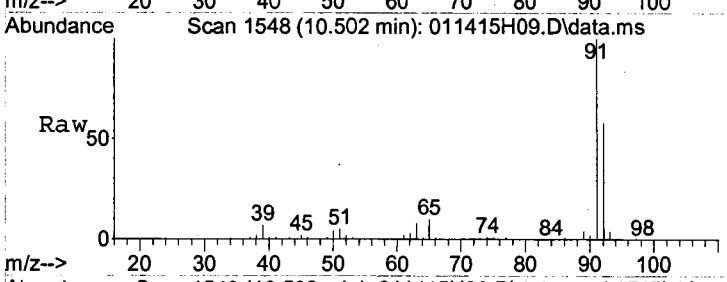


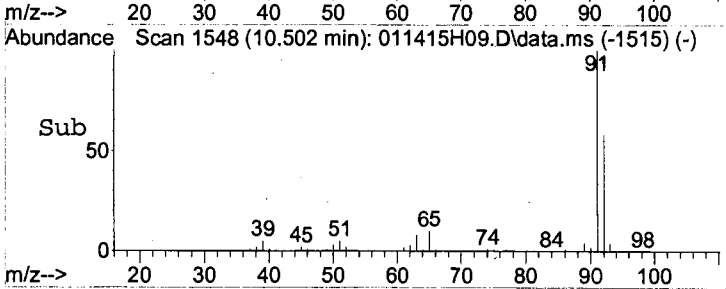


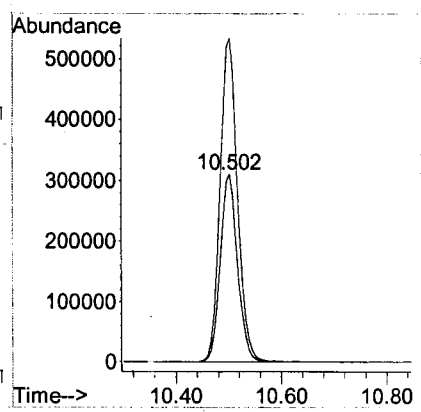
#40
Toluene
Concen: 5.00 ug/L
RT: 10.502 min Scan# 1548
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

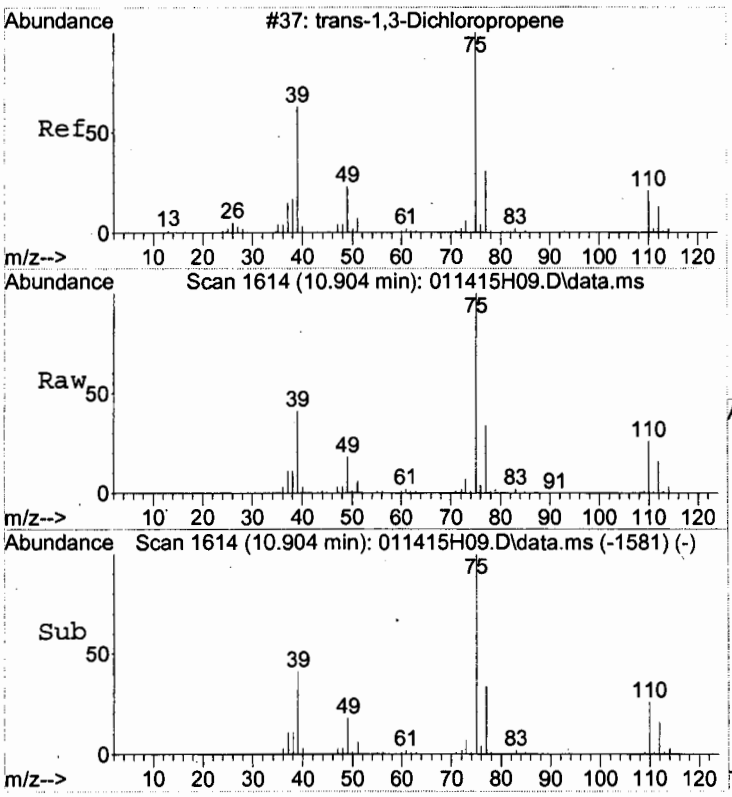
Tgt Ion: 92 Resp: 715618

Ion	Ratio	Lower	Upper
92	100		
91	173.2	153.2	193.2





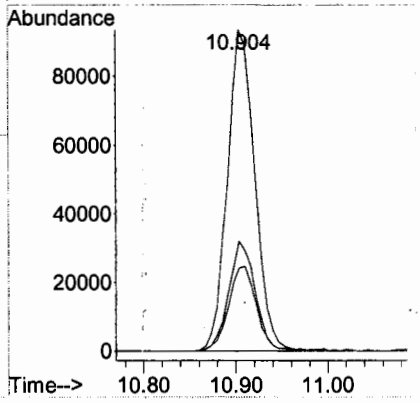


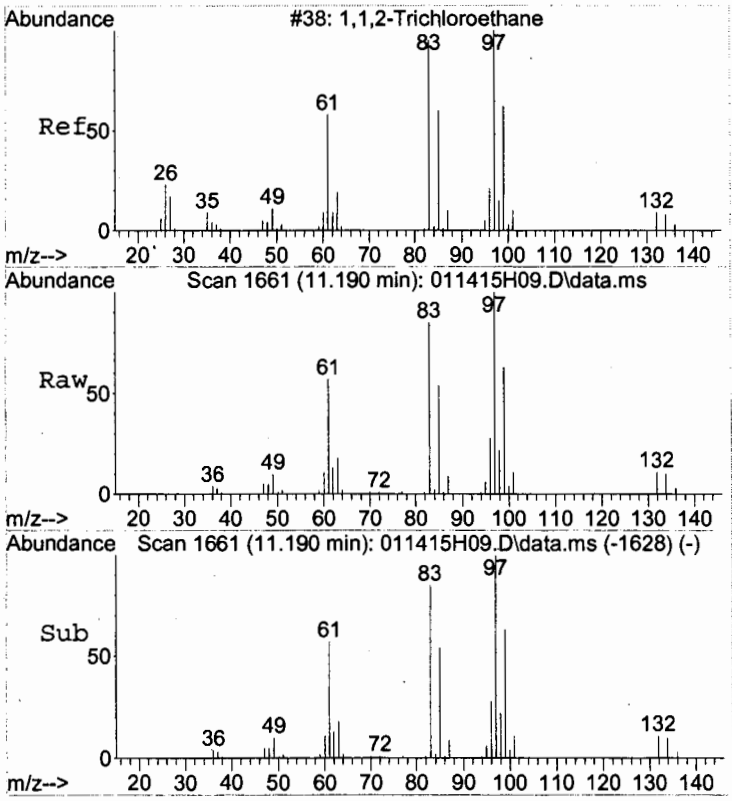


#41
trans-1,3-Dichloropropene
Concen: 5.00 ug/L
RT: 10.904 min Scan# 1614
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 75 Resp: 193459

Ion	Ratio	Lower	Upper
75	100		
77	32.6	12.6	52.6
110	26.4	6.4	46.4

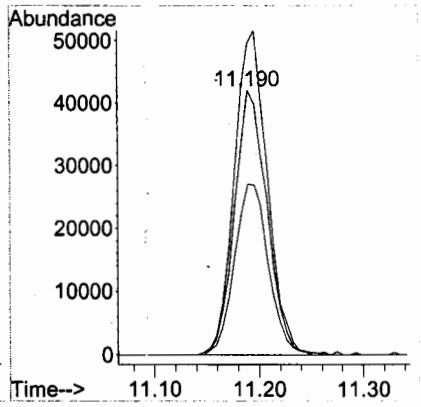


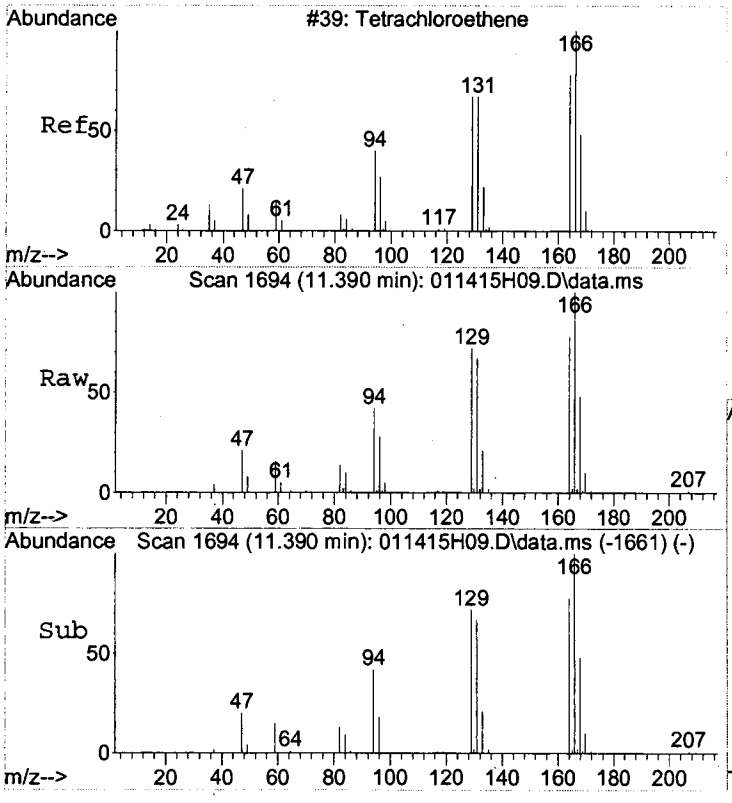


#42
1,1,2-Trichloroethane
Concen: 5.00 ug/L
RT: 11.190 min Scan# 1661
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 83 Resp: 90755

Ion	Ratio	Lower	Upper
83	100		
97	123.7	103.7	143.7
85	66.8	46.8	86.8

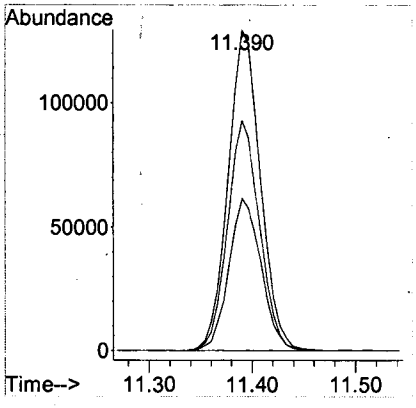


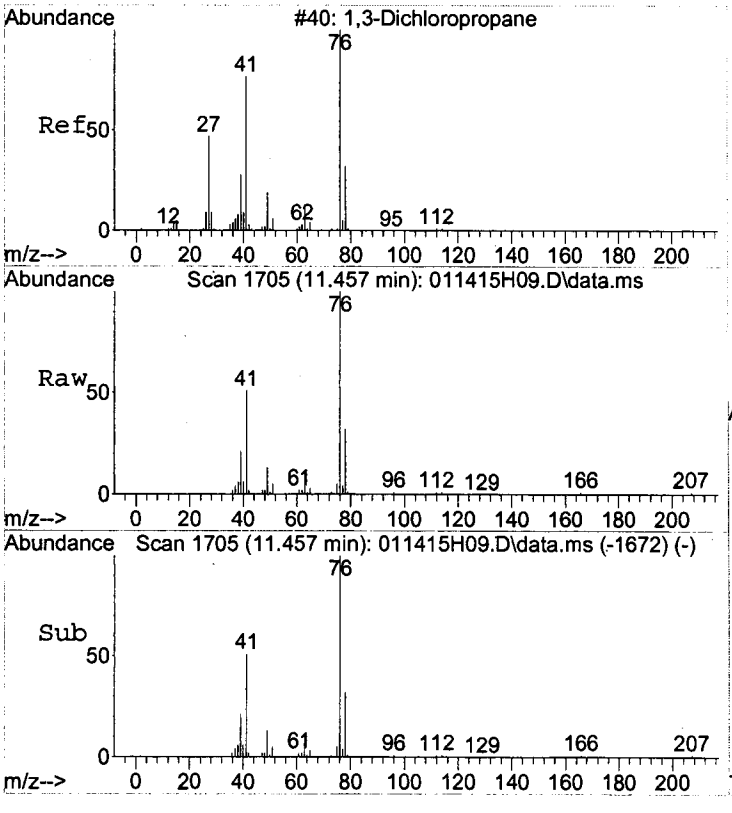


#43
Tetrachloroethene
Concen: 5.00 ug/L
RT: 11.390 min Scan# 1694
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:166 Resp: 282713

Ion	Ratio	Lower	Upper
166	100		
168	47.5	27.5	67.5
129	71.3	51.3	91.3

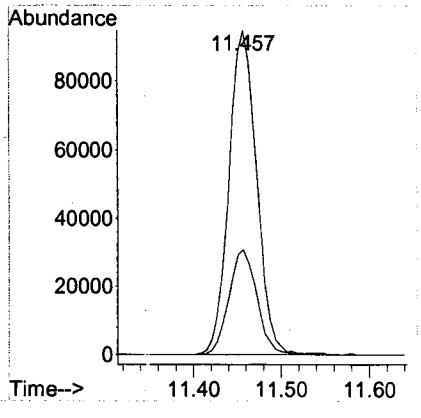


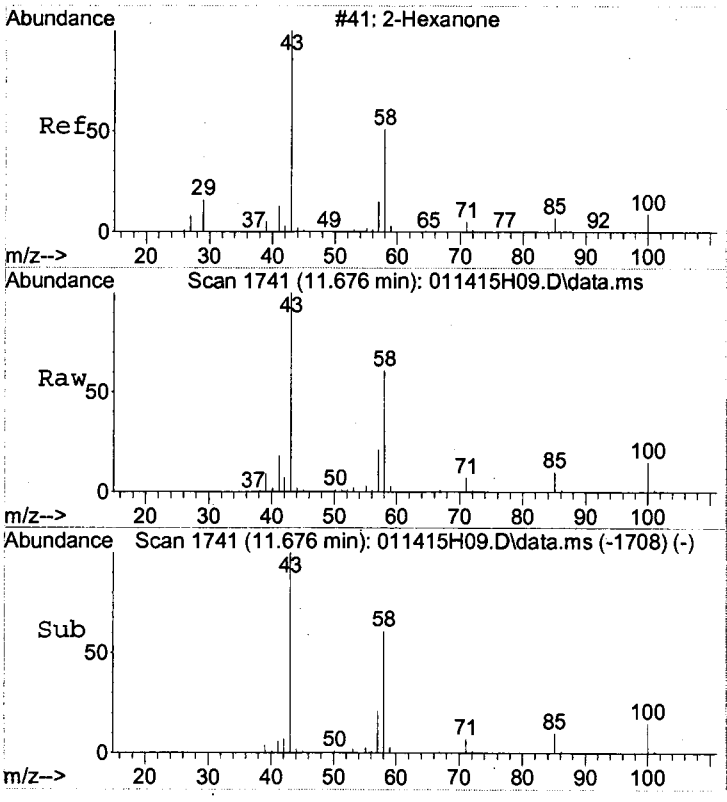


#44
1,3-Dichloropropane
Concen: 5.00 ug/L
RT: 11.457 min Scan# 1705
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 76 Resp: 209360

Ion	Ratio	Lower	Upper
76	100		
78	32.5	12.5	52.5

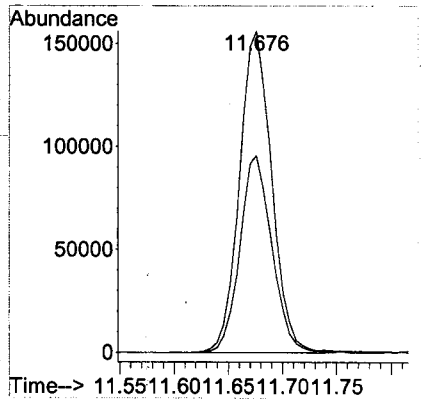


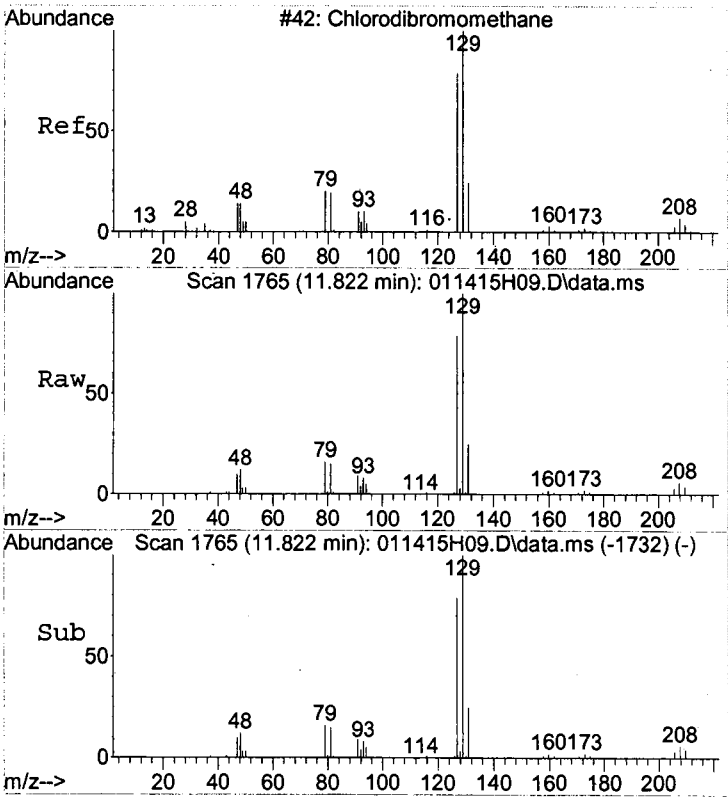


#45
2-Hexanone
Concen: 40.00 ug/L
RT: 11.676 min Scan# 1741
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 43 Resp: 323187

Ion	Ratio	Lower	Upper
43	100		
58	60.8	40.8	80.8

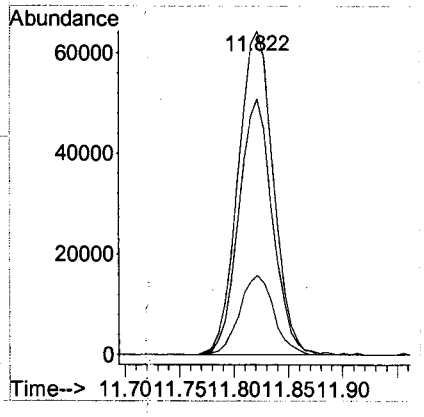


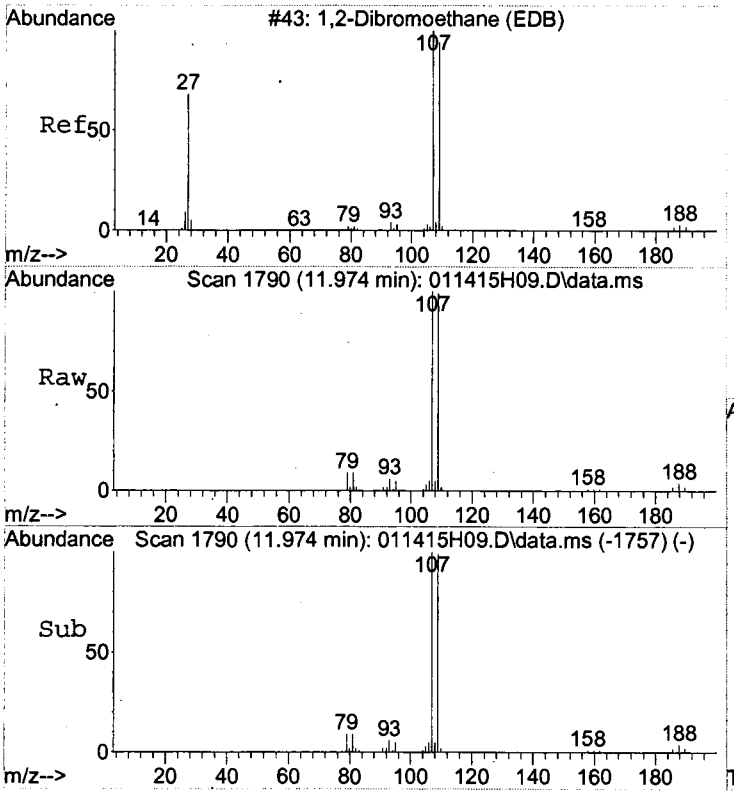


#46
Chlorodibromomethane
Concen: 5.00 ug/L
RT: 11.822 min Scan# 1765
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 129 Resp: 145054

Ion	Ratio	Lower	Upper
129	100		
127	75.9	55.9	95.9
131	24.1	4.1	44.1

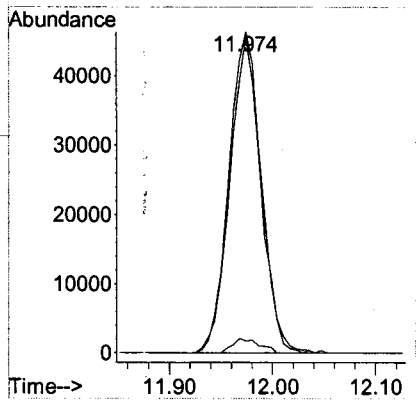


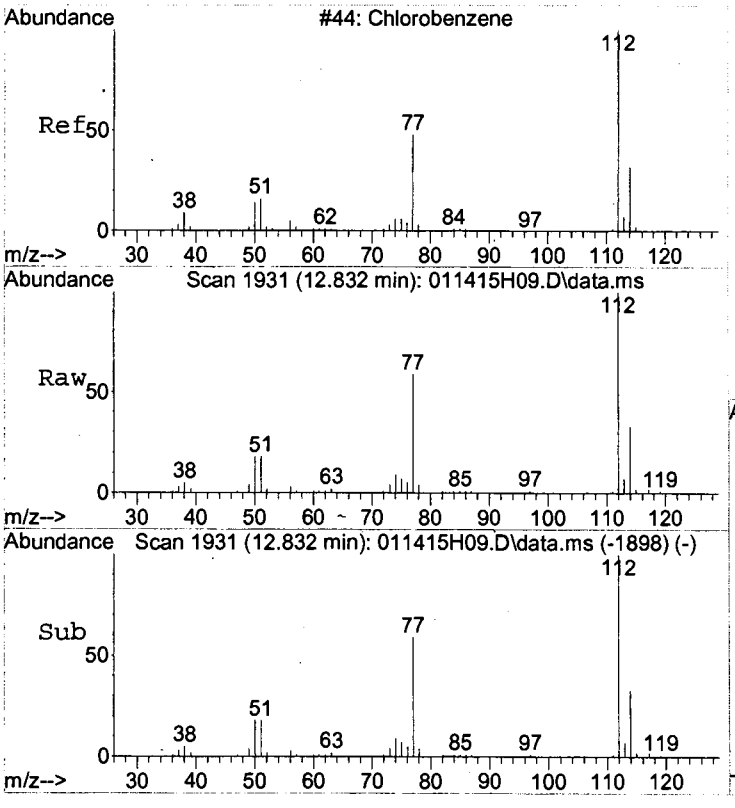


#47
1,2-Dibromoethane (EDB)
Concen: 5.00 ug/L
RT: 11.974 min Scan# 1790
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:107 Resp: 100539

Ion	Ratio	Lower	Upper
107	100		
109	95.0	75.0	115.0
188	3.7	0.0	23.7

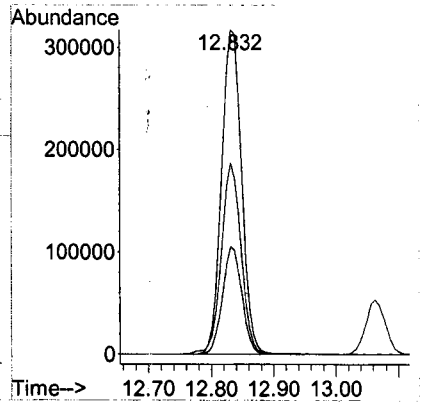


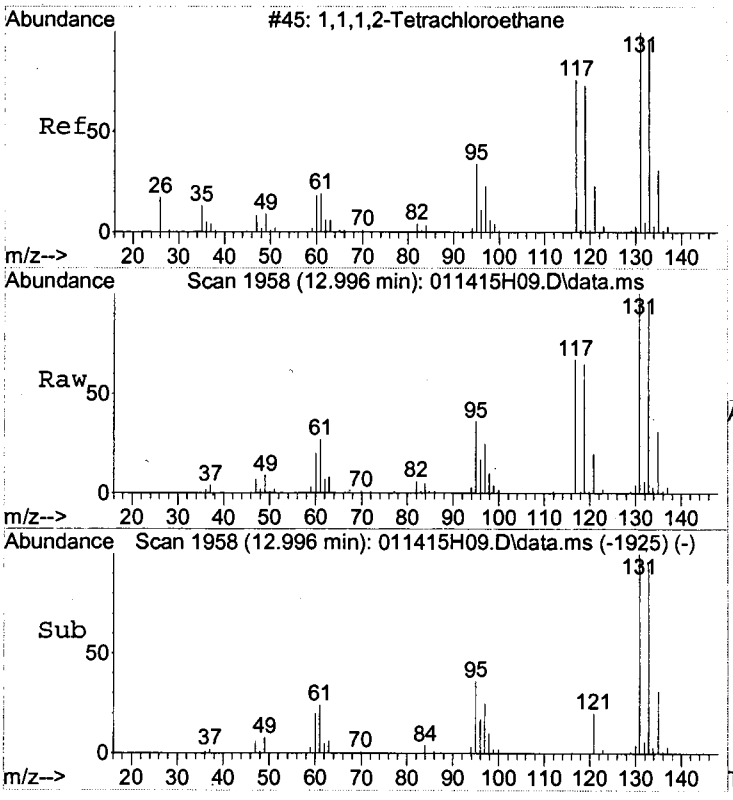


#48
Chlorobenzene
Concen: 5.00 ug/L
RT: 12.832 min Scan# 1931
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:112 Resp: 710846

Ion	Ratio	Lower	Upper
112	100		
114	32.1	12.1	52.1
77	57.8	37.8	77.8

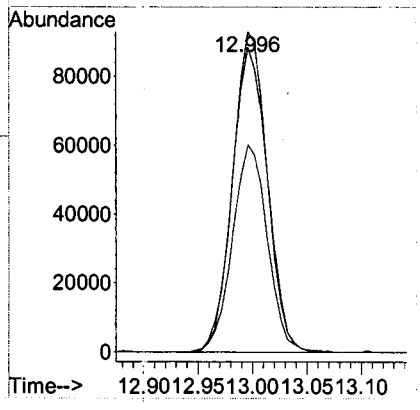


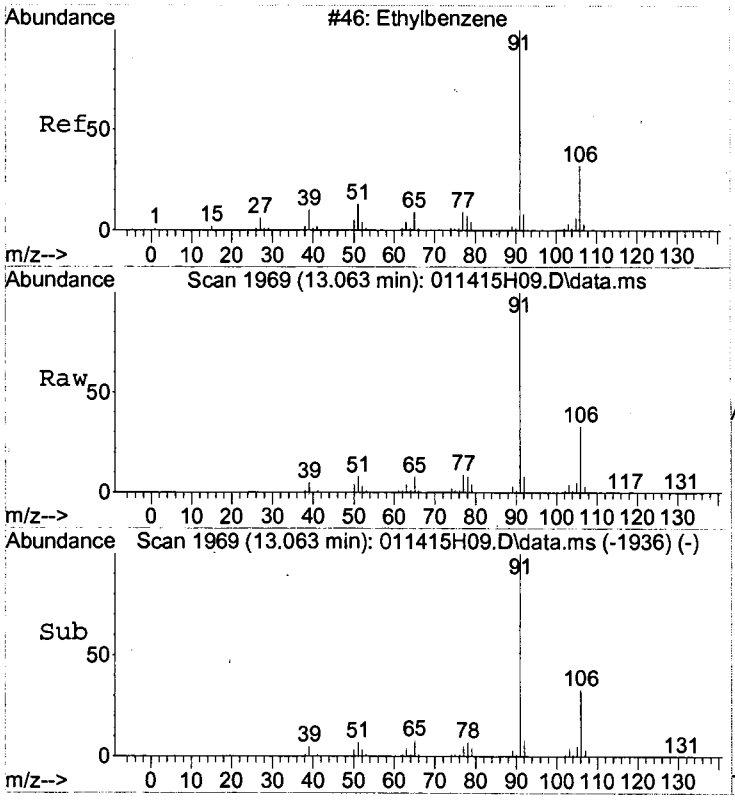


#49
1,1,1,2-Tetrachloroethane
Concen: 5.00 ug/L
RT: 12.996 min Scan# 1958
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:131 Resp: 206984

Ion	Ratio	Lower	Upper
131	100		
133	95.4	75.4	115.4
119	65.0	45.0	85.0

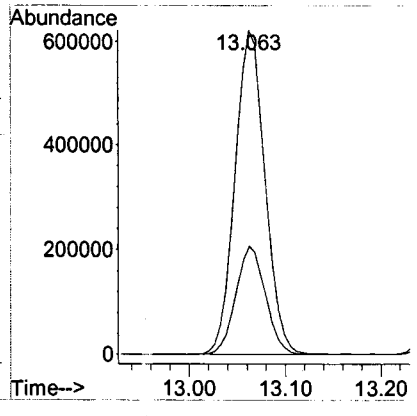


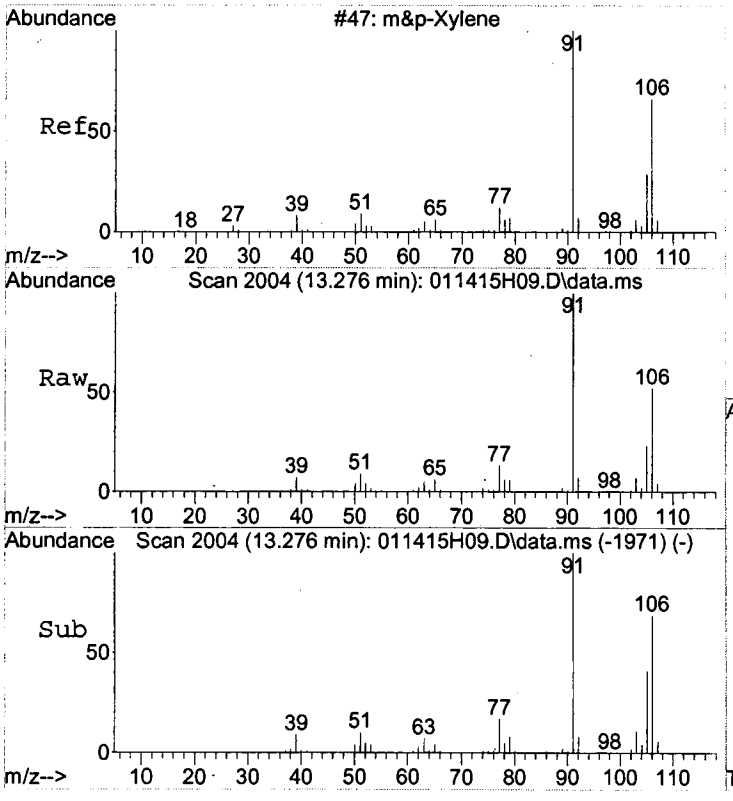


#50
Ethylbenzene
Concen: 5.00 ug/L
RT: 13.063 min Scan# 1969
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 91 Resp: 1359261

Ion	Ratio	Lower	Upper
91	100		
106	32.9	12.9	52.9

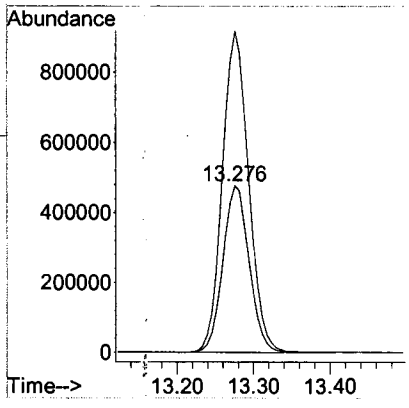


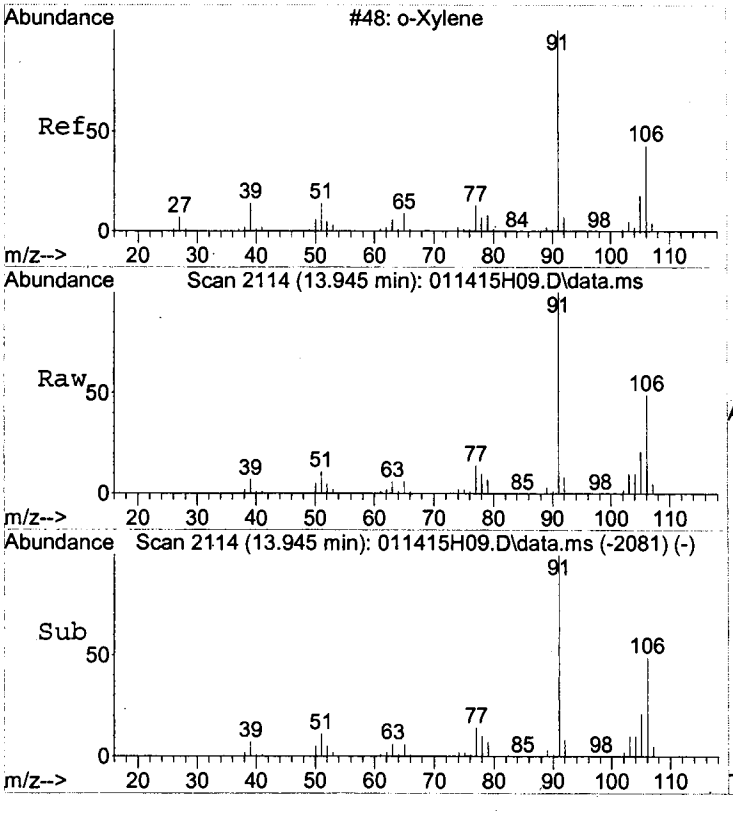


#51
m&p-Xylene
Concen: 10.00 ug/L
RT: 13.276 min Scan# 2004
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:106 Resp: 1139530

Ion	Ratio	Lower	Upper
106	100		
91	191.8	171.8	211.8

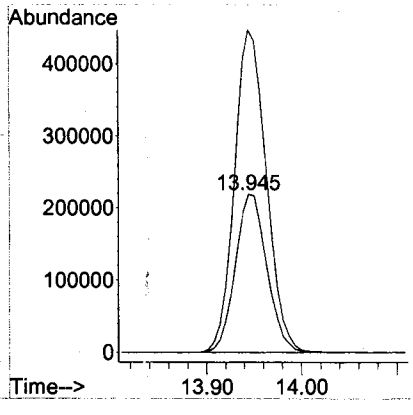


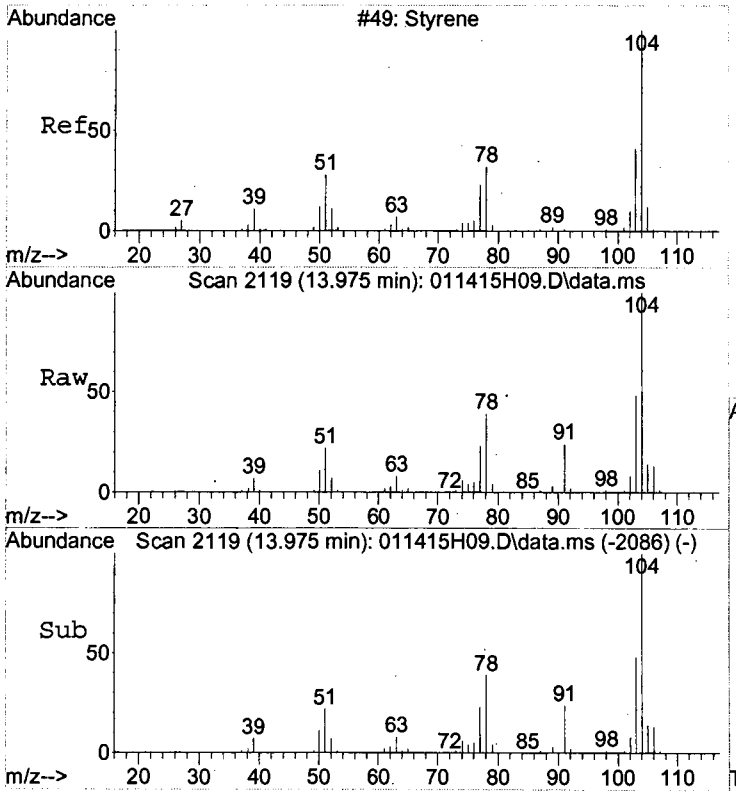


#52
o-Xylene
Concen: 5.00 ug/L
RT: 13.945 min Scan# 2114
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:106 Resp: 513468

Ion	Ratio	Lower	Upper
106	100		
91	206.0	186.0	226.0

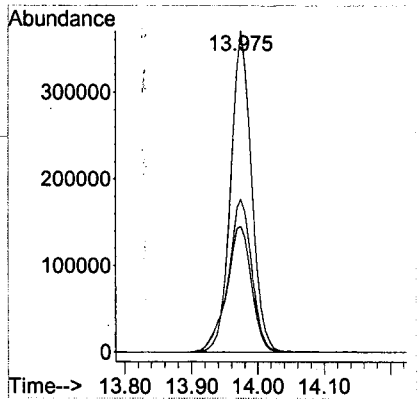


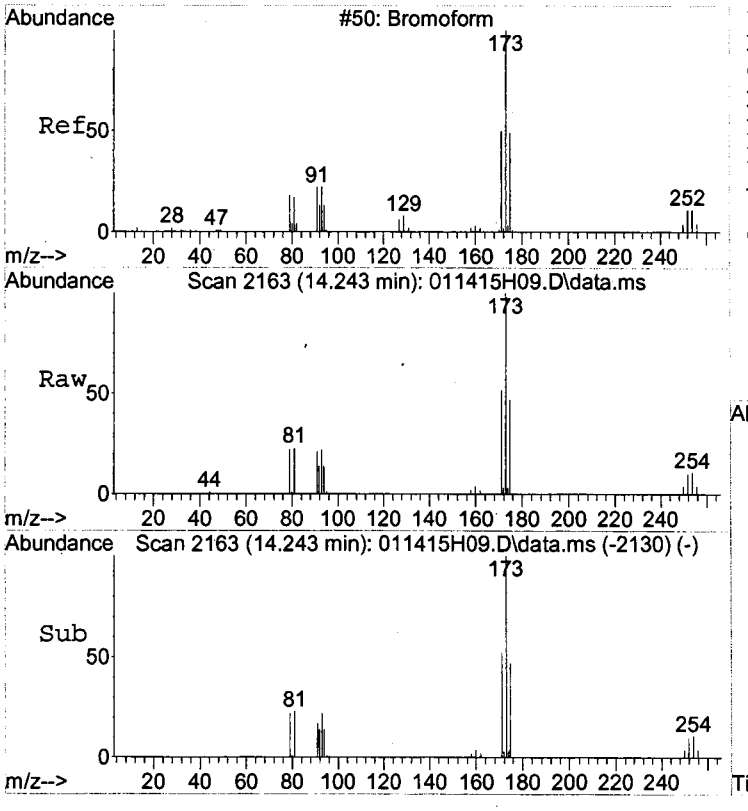


#53
Styrene
Concen: 5.00 ug/L
RT: 13.975 min Scan# 2119
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:104 Resp: 815746

Ion	Ratio	Lower	Upper
104	100		
78	46.9	26.9	66.9
103	54.4	34.4	74.4

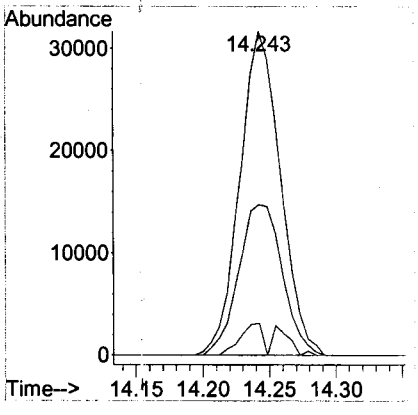


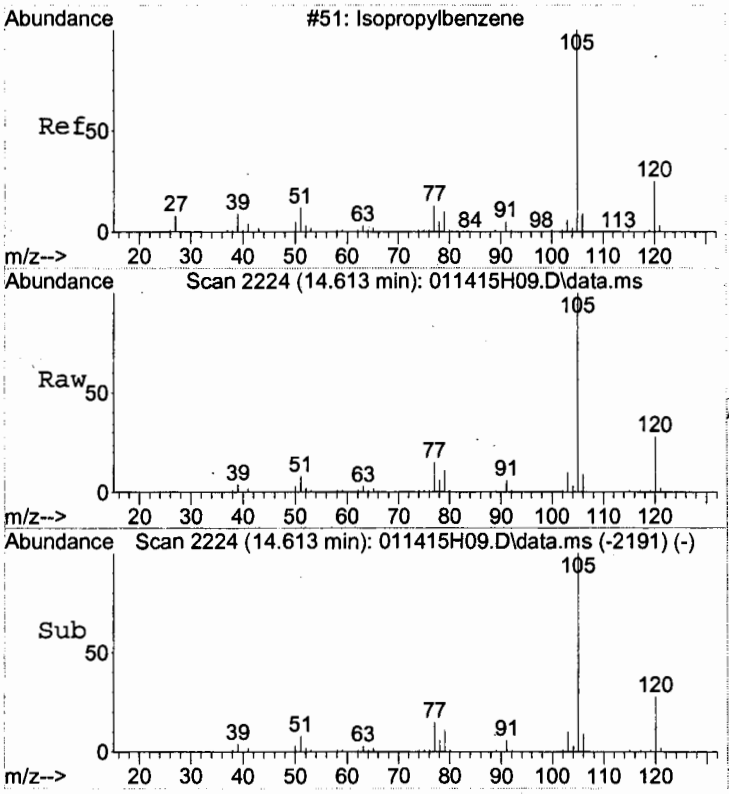


#54
Bromoform
Concen: 5.00 ug/L
RT: 14.243 min Scan# 2163
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:173 Resp: 67323

Ion	Ratio	Lower	Upper
173	100		
175	50.2	30.2	70.2
252	5.4	0.0	25.4

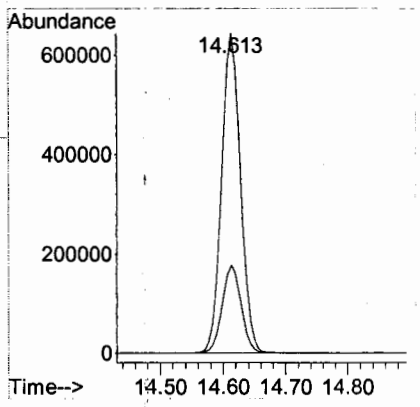


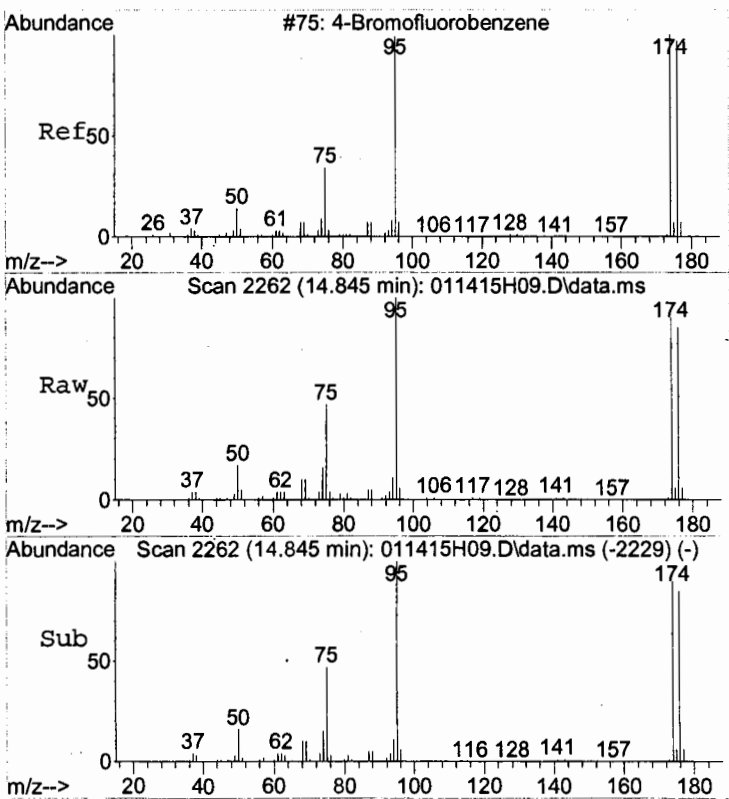


#55
Isopropylbenzene
Concen: 5.00 ug/L
RT: 14.613 min Scan# 2224
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:105 Resp: 1351561

Ion	Ratio	Lower	Upper
105	100		
120	27.6	7.6	47.6

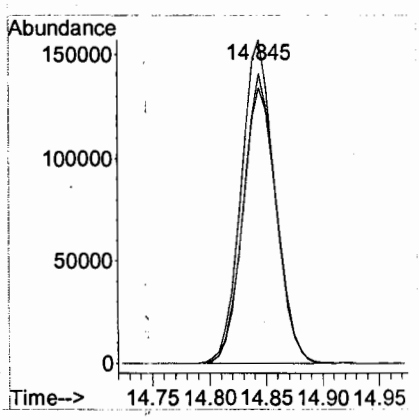


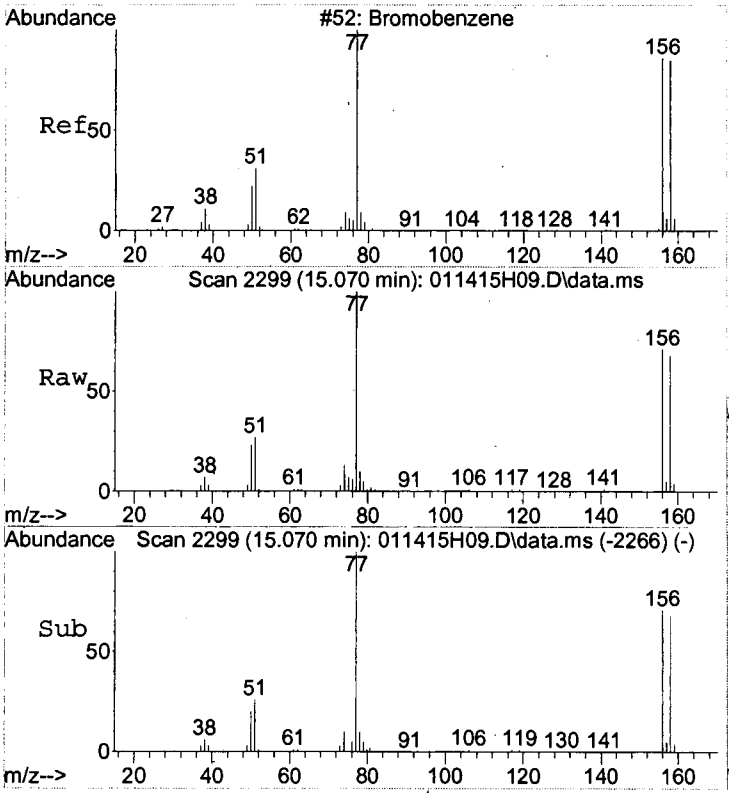


#56
4-Bromofluorobenzene
Concen: 5.00 ug/L
RT: 14.845 min Scan# 2262
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 95 Resp: 325079

Ion	Ratio	Lower	Upper
95	100		
174	88.9	68.9	108.9
176	86.0	66.0	106.0

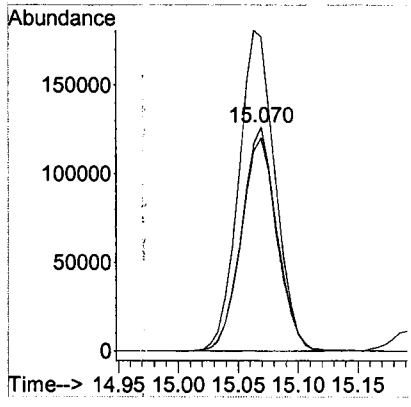


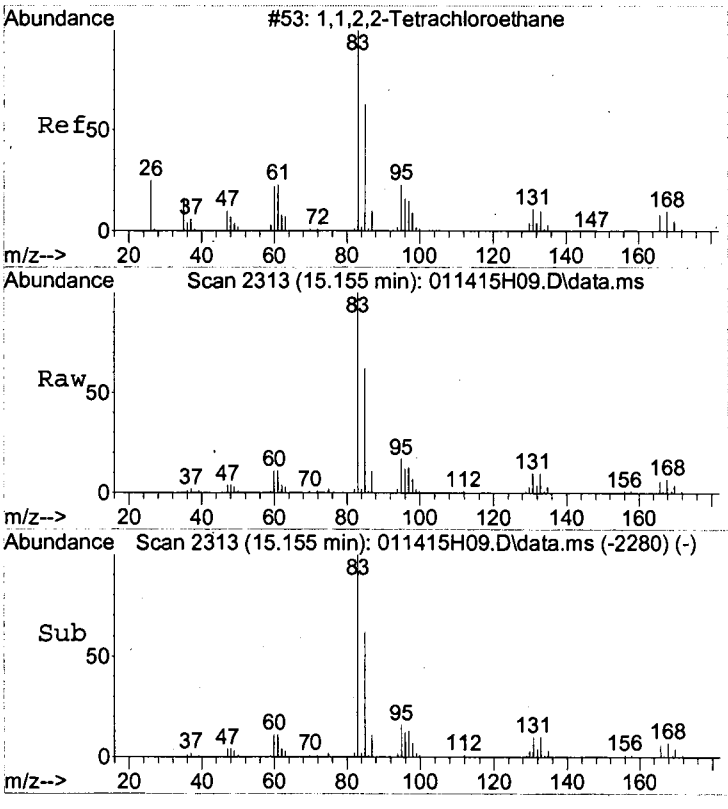


#57
Bromobenzene
Concen: 5.00 ug/L
RT: 15.070 min Scan# 2299
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:156 Resp: 259353

Ion	Ratio	Lower	Upper
156	100		
77	147.9	127.9	167.9
158	96.6	76.6	116.6

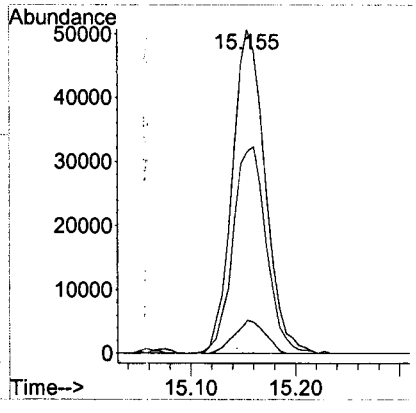


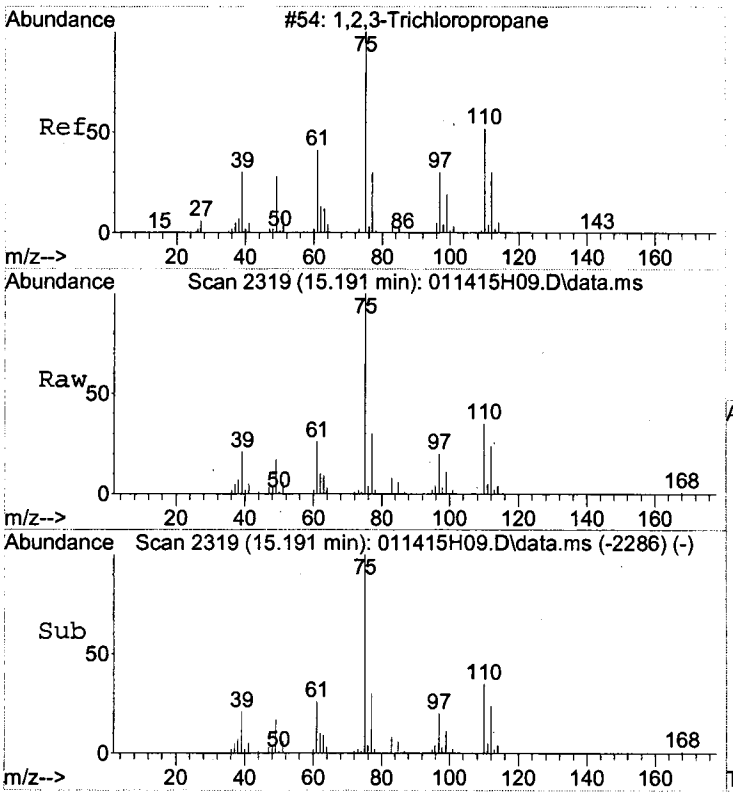


#58
1,1,2,2-Tetrachloroethane
Concen: 5.00 ug/L
RT: 15.155 min Scan# 2313
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 83 Resp: 111257

Ion	Ratio	Lower	Upper
83	100		
131	9.6	0.0	29.6
85	64.7	44.7	84.7

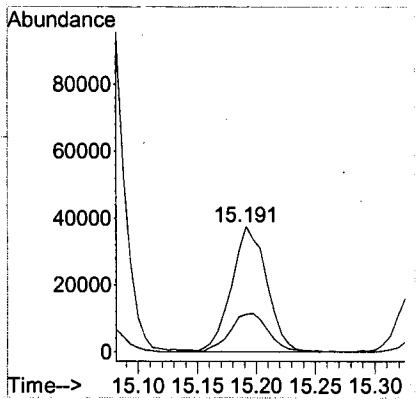


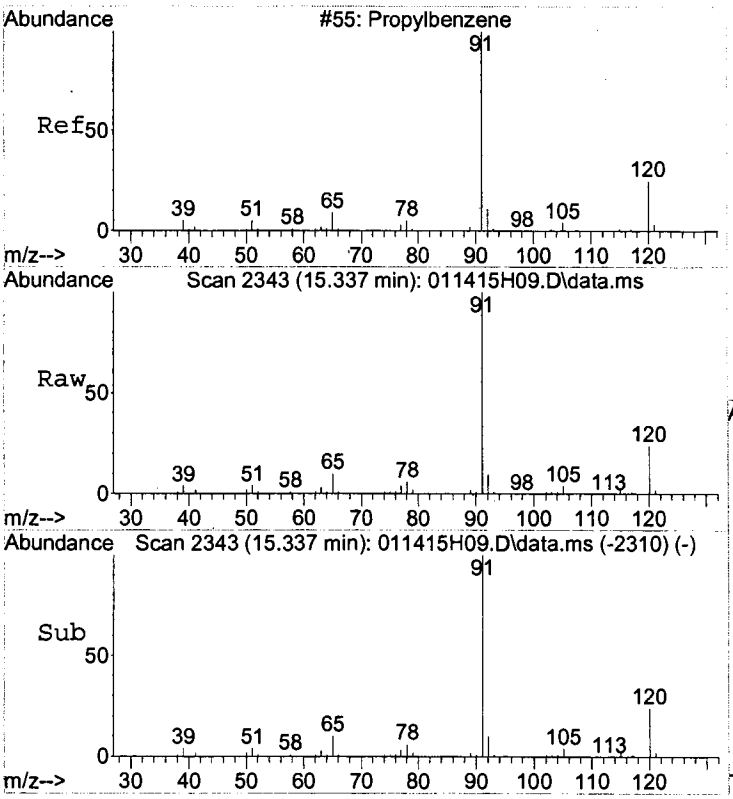


#59
1,2,3-Trichloropropane
Concen: 5.00 ug/L
RT: 15.191 min Scan# 2319
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 75 Resp: 78543

Ion	Ratio	Lower	Upper
75	100		
77	33.1	13.1	53.1

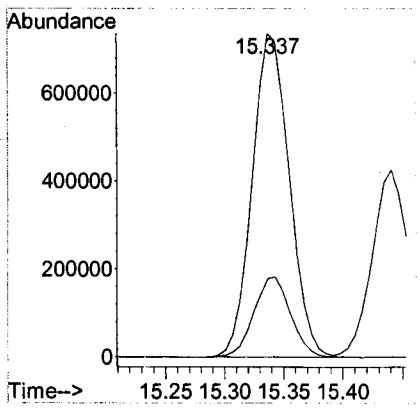


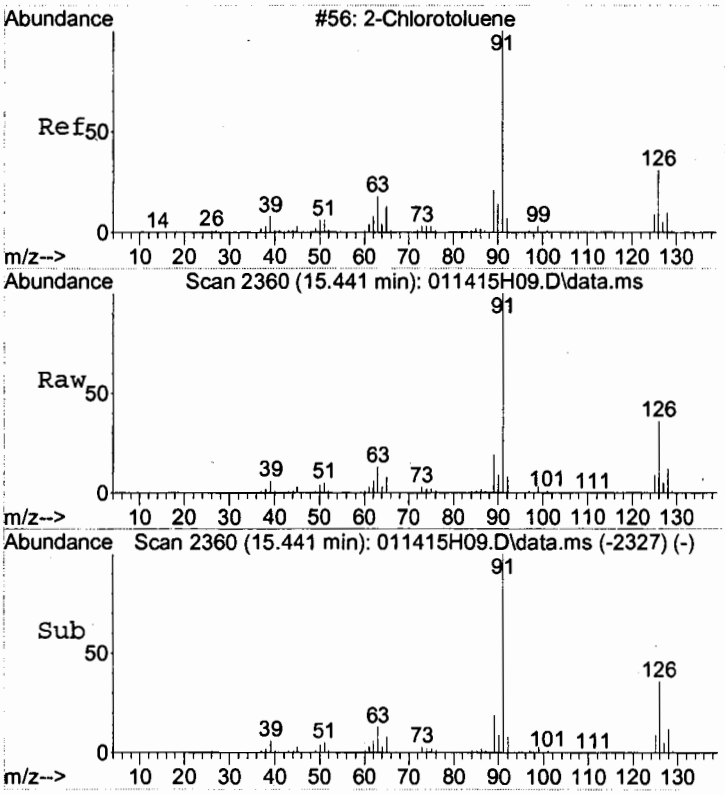


#60
Propylbenzene
Concen: 5.00 ug/L
RT: 15.337 min Scan# 2343
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 91 Resp: 1604250

Ion	Ratio	Lower	Upper
91	100		
120	24.3	4.3	44.3

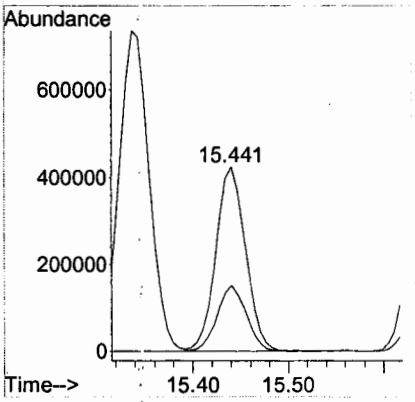


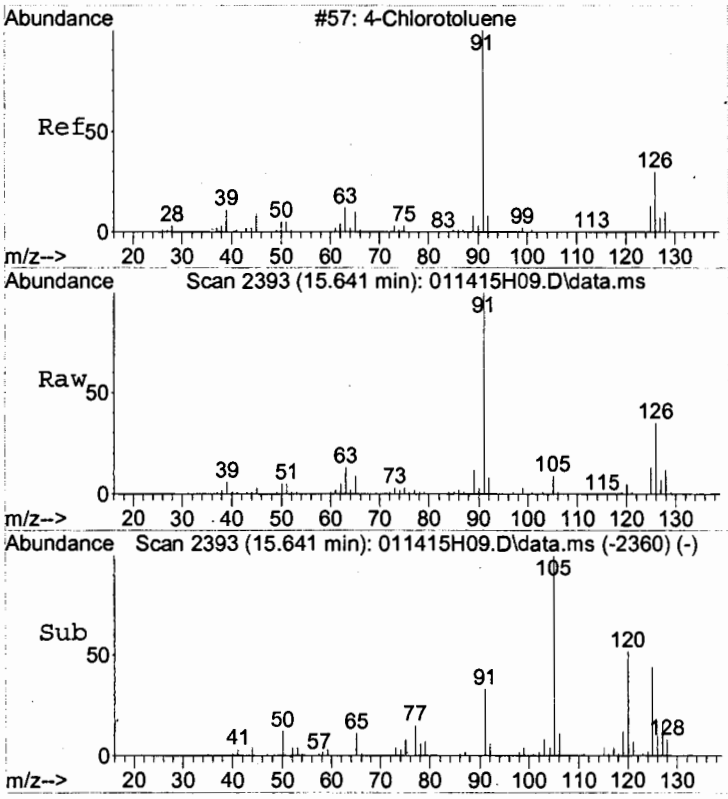


#61
2-Chlorotoluene
Concen: 5.00 ug/L
RT: 15.441 min Scan# 2360
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 91 Resp: 910673

Ion	Ratio	Lower	Upper
91	100		
126	35.2	15.2	55.2

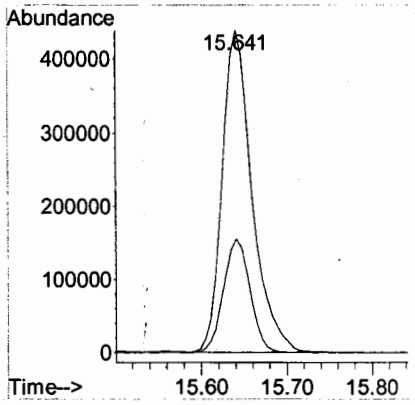


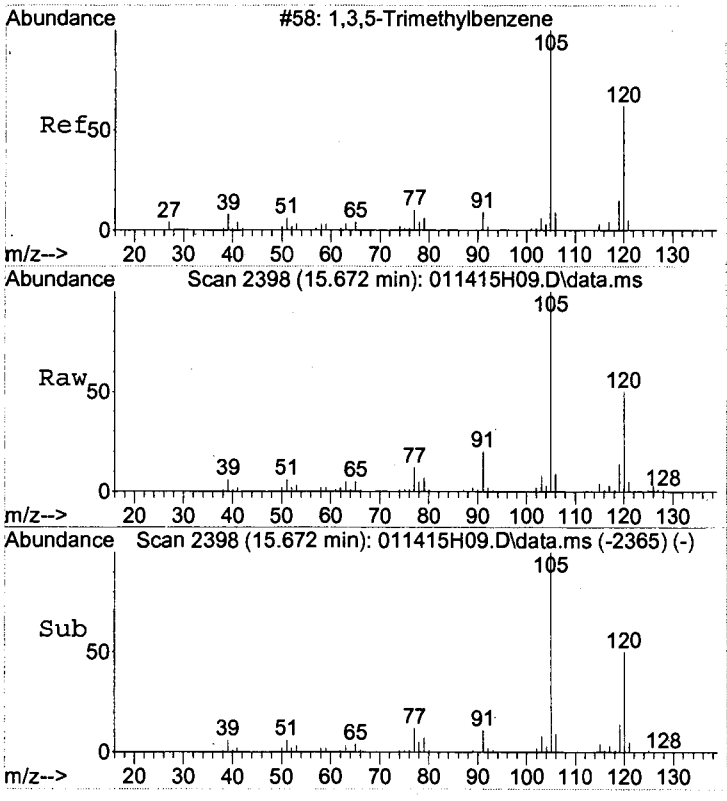


#62
4-Chlorotoluene
Concen: 5.00 ug/L
RT: 15.641 min Scan# 2393
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 91 Resp: 1062221

Ion	Ratio	Lower	Upper
91	100		
126	31.6	11.6	51.6

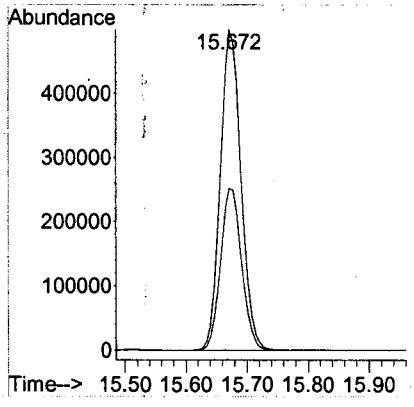


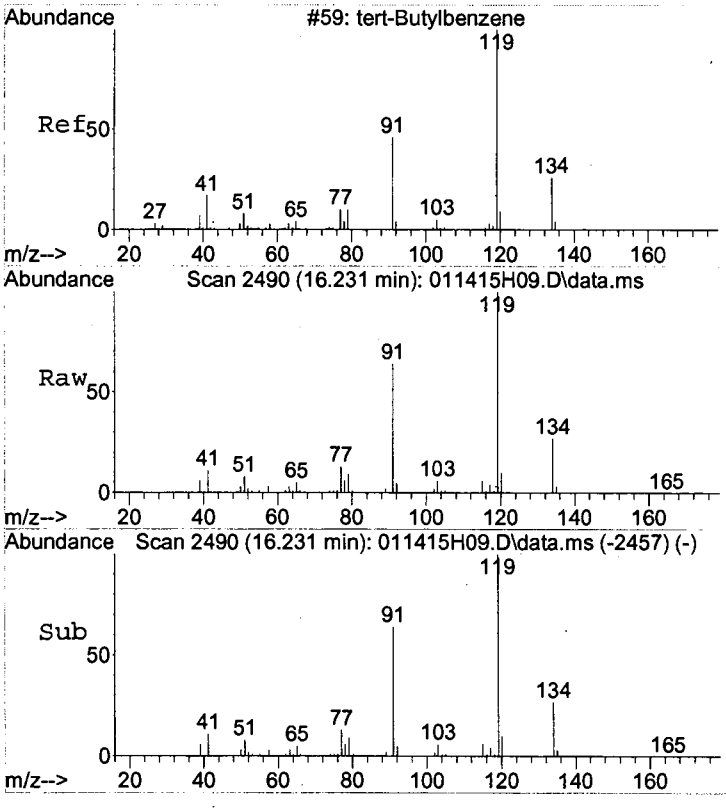


#63
1,3,5-Trimethylbenzene
Concen: 5.00 ug/L
RT: 15.672 min Scan# 2398
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:105 Resp: 1168732

Ion	Ratio	Lower	Upper
105	100		
120	51.4	31.4	71.4

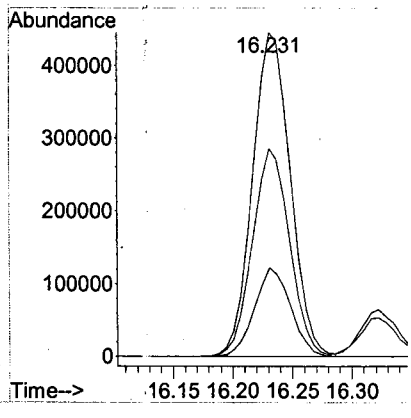


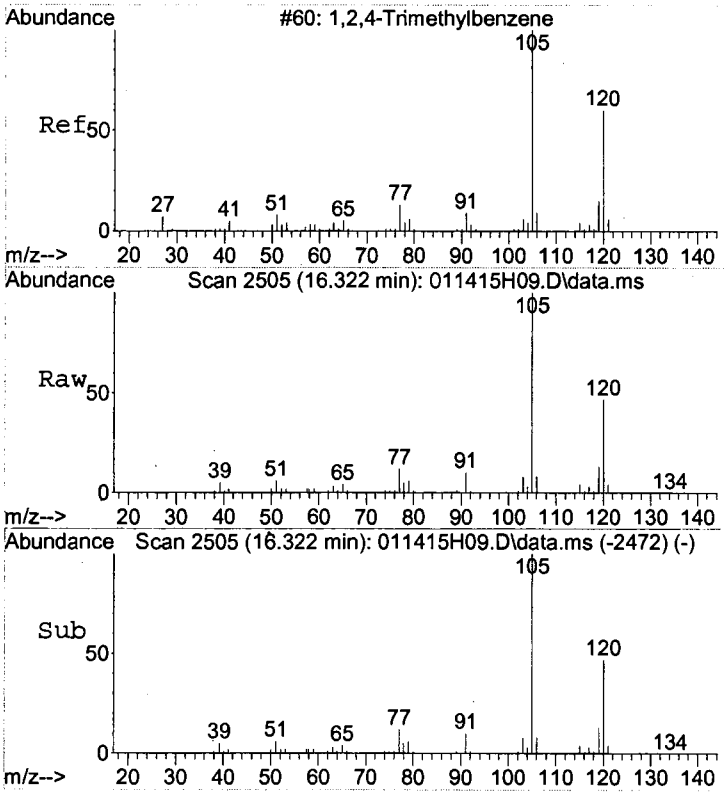


#64
tert-Butylbenzene
Concen: 5.00 ug/L
RT: 16.231 min Scan# 2490
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:119 Resp: 980430

Ion	Ratio	Lower	Upper
119	100		
134	26.2	6.2	46.2
91	63.0	43.0	83.0

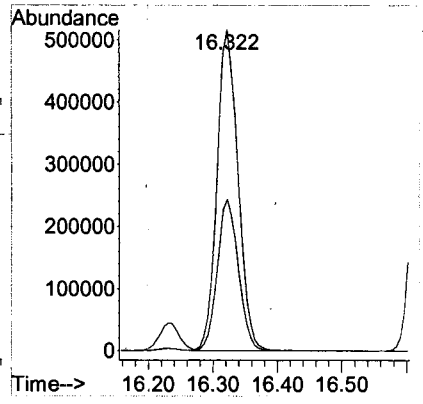


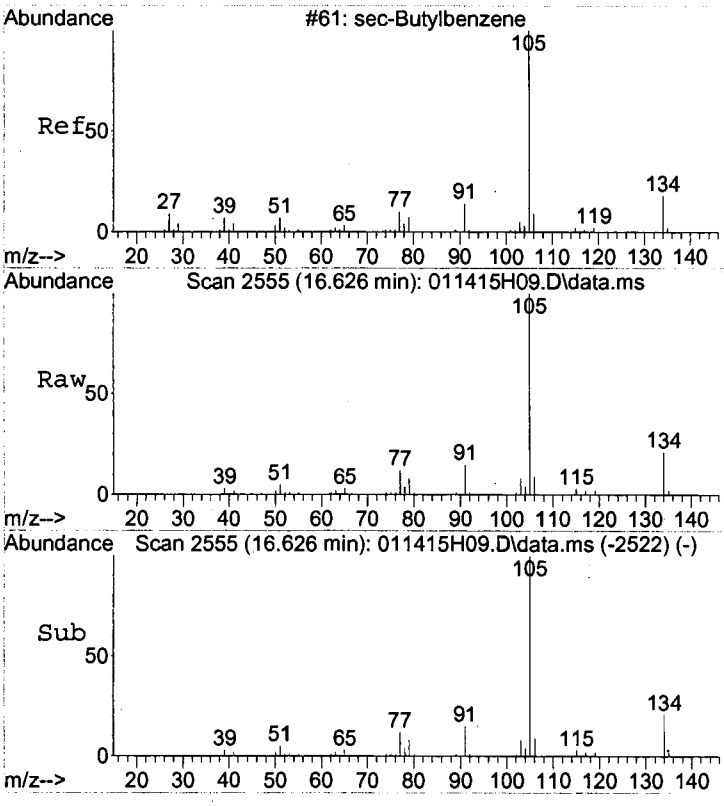


#65
1,2,4-Trimethylbenzene
Concen: 5.00 ug/L
RT: 16.322 min Scan# 2505
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:105 Resp: 1171192

Ion	Ratio	Lower	Upper
105	100		
120	47.1	27.1	67.1

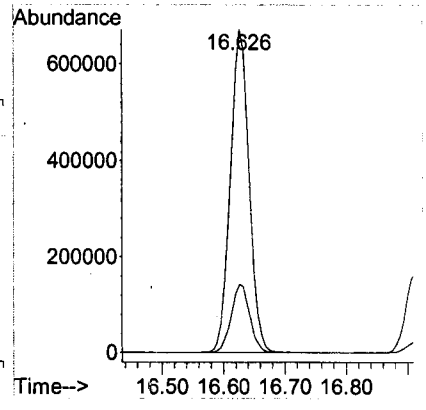


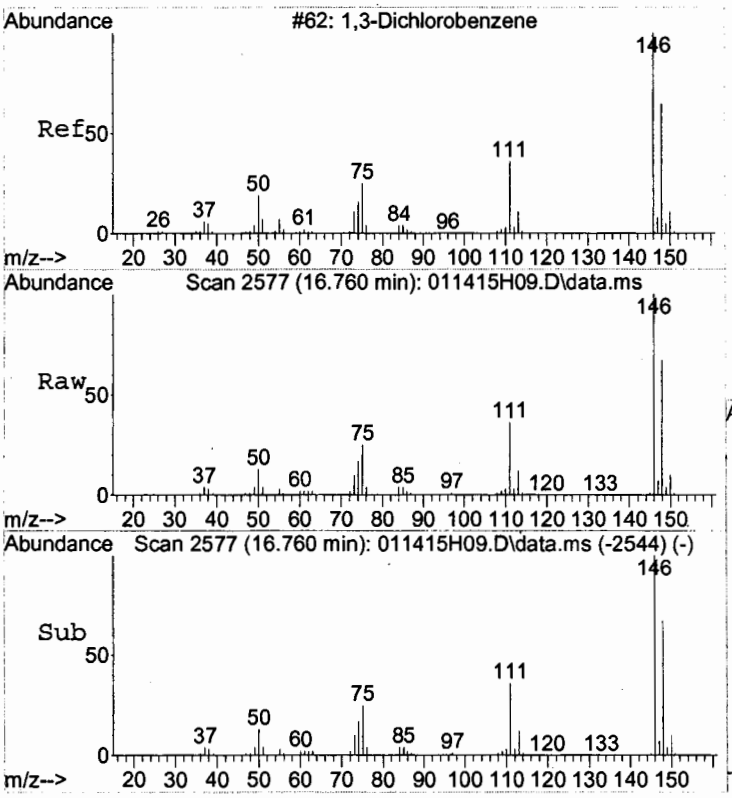


#66
sec-Butylbenzene
Concen: 5.00 ug/L
RT: 16.626 min Scan# 2555
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:105 Resp: 1430910

Ion	Ratio	Lower	Upper
105	100		
134	21.2	1.2	41.2

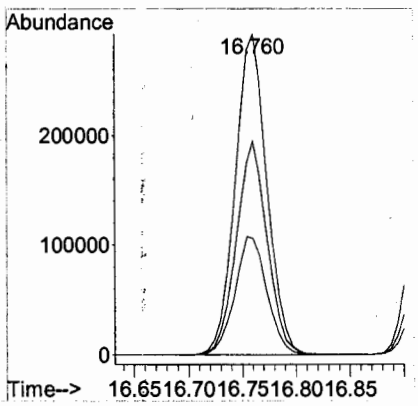


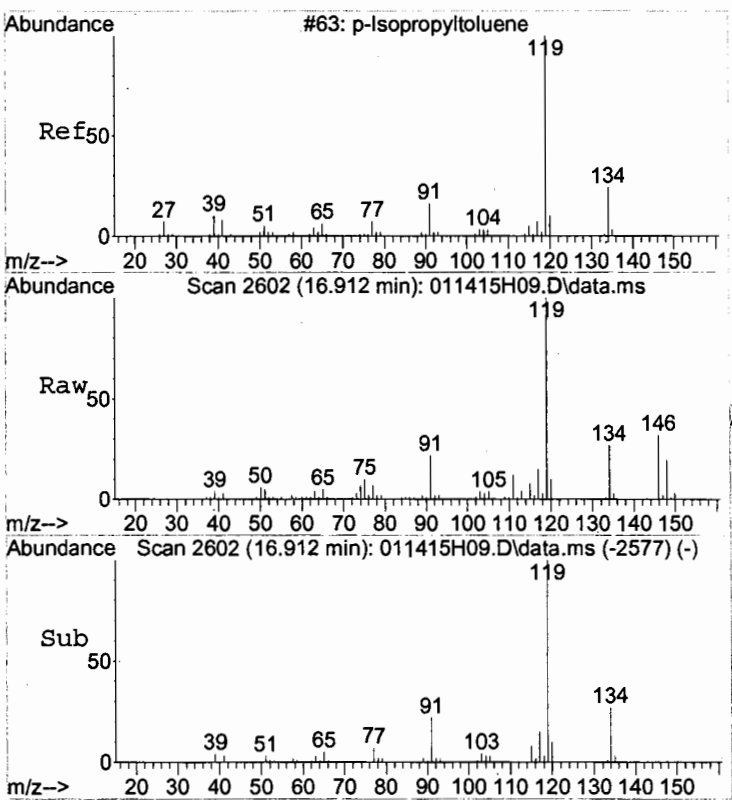


#67
1,3-Dichlorobenzene
Concen: 5.00 ug/L
RT: 16.760 min Scan# 2577
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:146 Resp: 603806

Ion	Ratio	Lower	Upper
146	100		
148	64.8	44.8	84.8
111	37.3	17.3	57.3

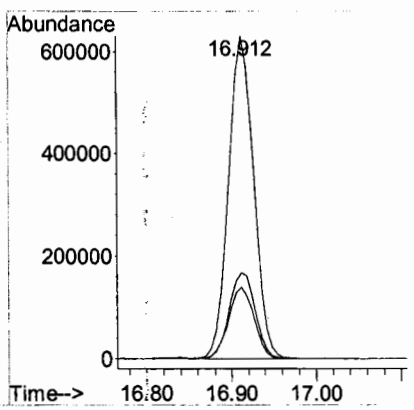


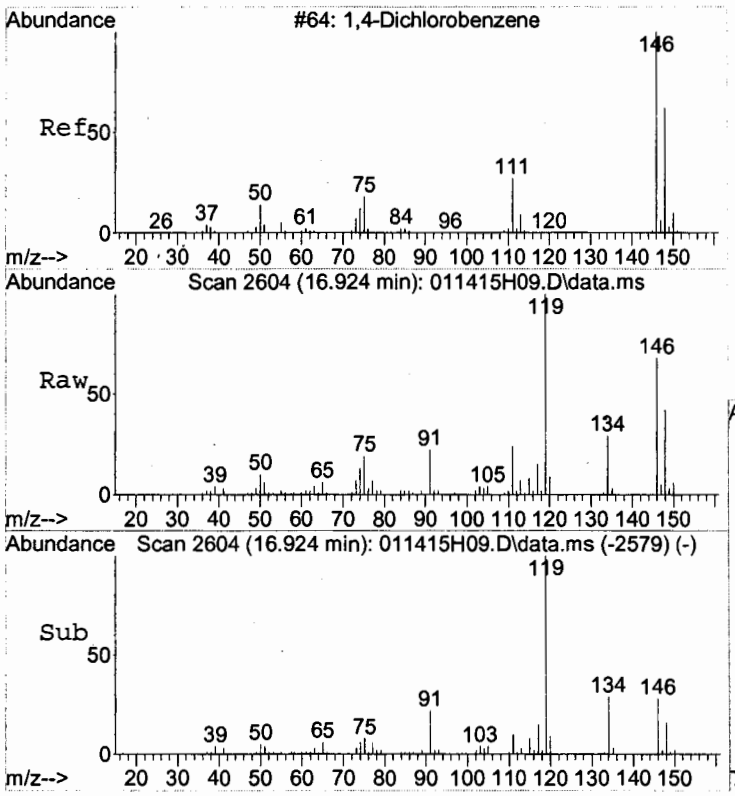


#68
p-Isopropyltoluene
Concen: 5.00 ug/L
RT: 16.912 min Scan# 2602
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:119 Resp: 1303214

Ion	Ratio	Lower	Upper
119	100		
134	27.8	7.8	47.8
91	22.6	2.6	42.6

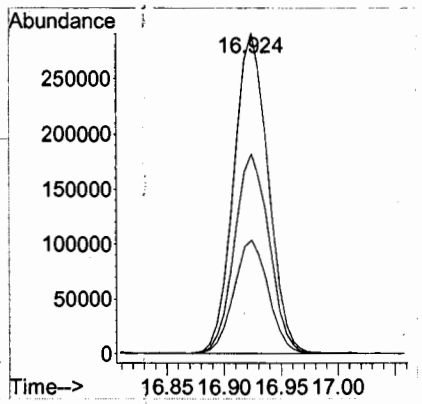


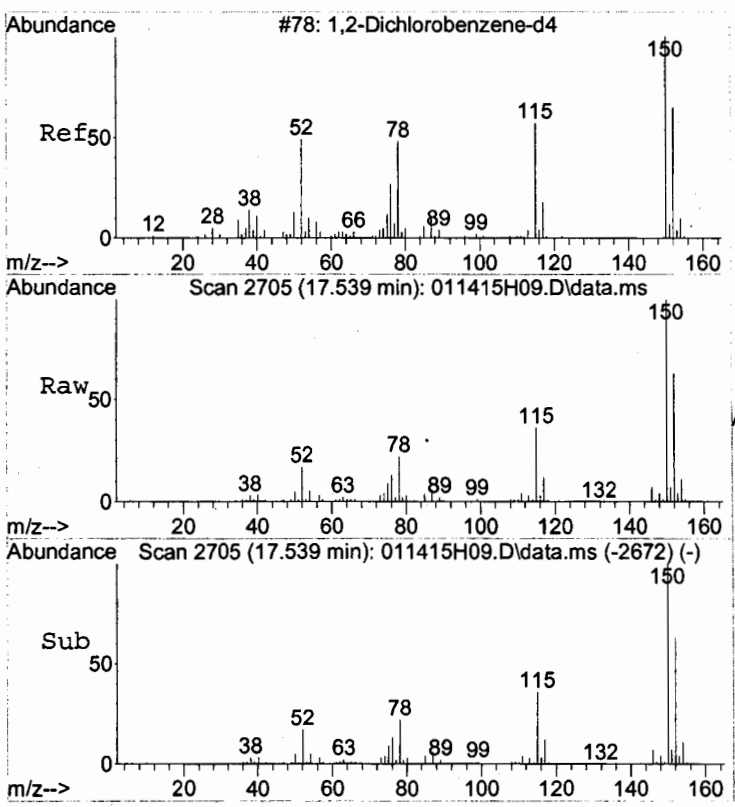


#69
1,4-Dichlorobenzene
Concen: 5.00 ug/L
RT: 16.924 min Scan# 2604
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:146 Resp: 612286

Ion	Ratio	Lower	Upper
146	100		
148	63.2	43.2	83.2
111	35.8	15.8	55.8

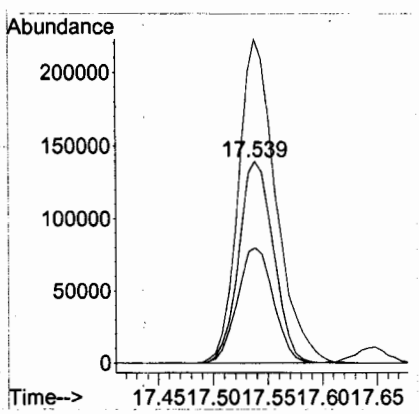


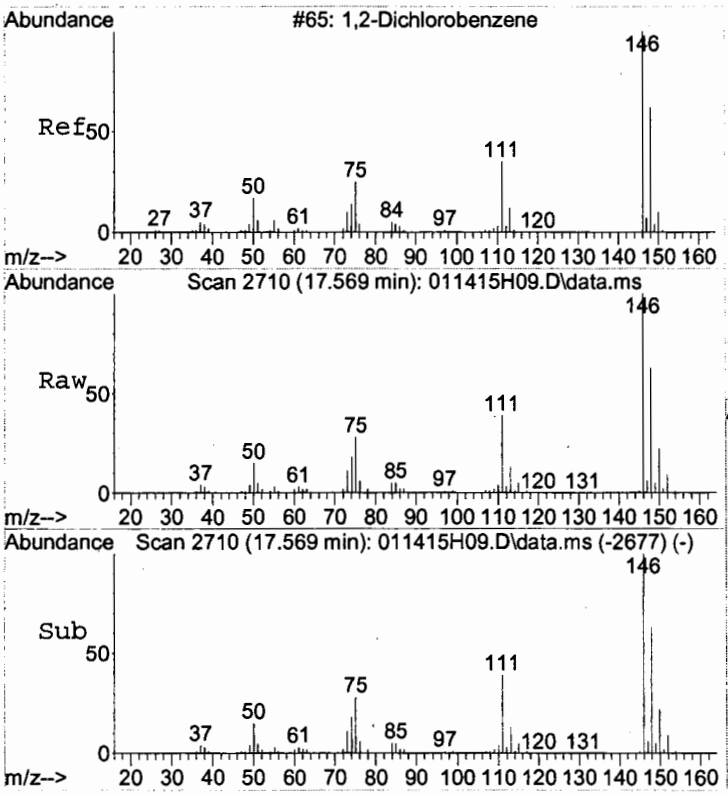


#70
1,2-Dichlorobenzene-d4
Concen: 5.00 ug/L
RT: 17.539 min Scan# 2705
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:152 Resp: 308475

Ion	Ratio	Lower	Upper
152	100		
115	59.3	39.3	79.3
150	172.8	152.8	192.8

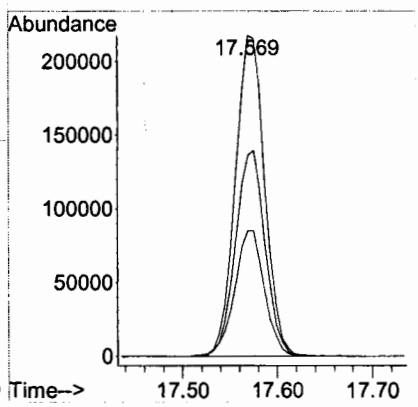


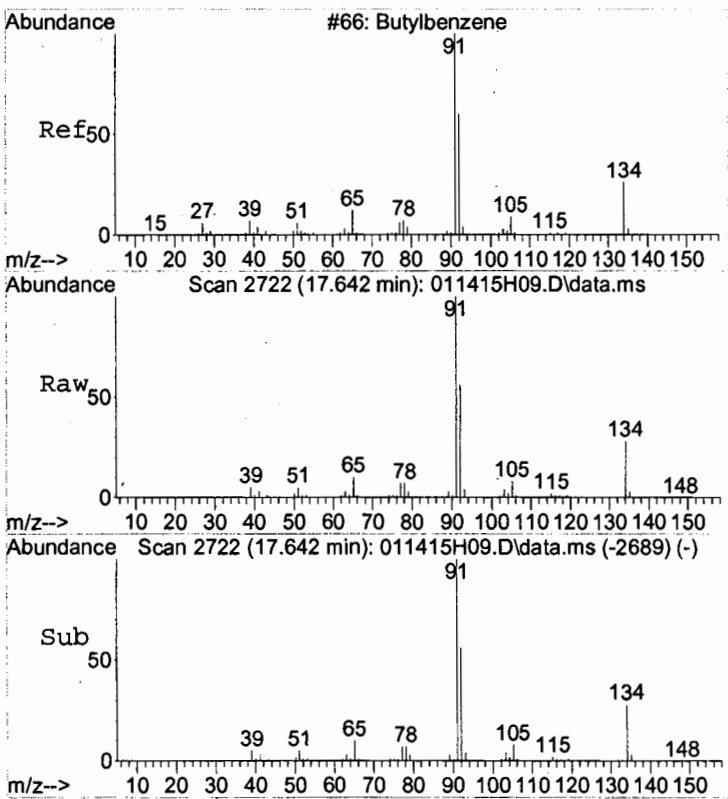


#71
1,2-Dichlorobenzene
Concen: 5.00 ug/L
RT: 17.569 min Scan# 2710
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:146 Resp: 471781

Ion	Ratio	Lower	Upper
146	100		
148	64.5	44.5	84.5
111	39.7	19.7	59.7

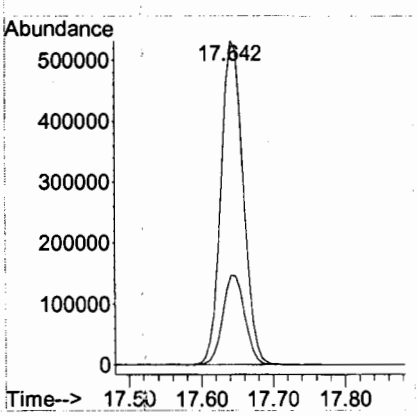


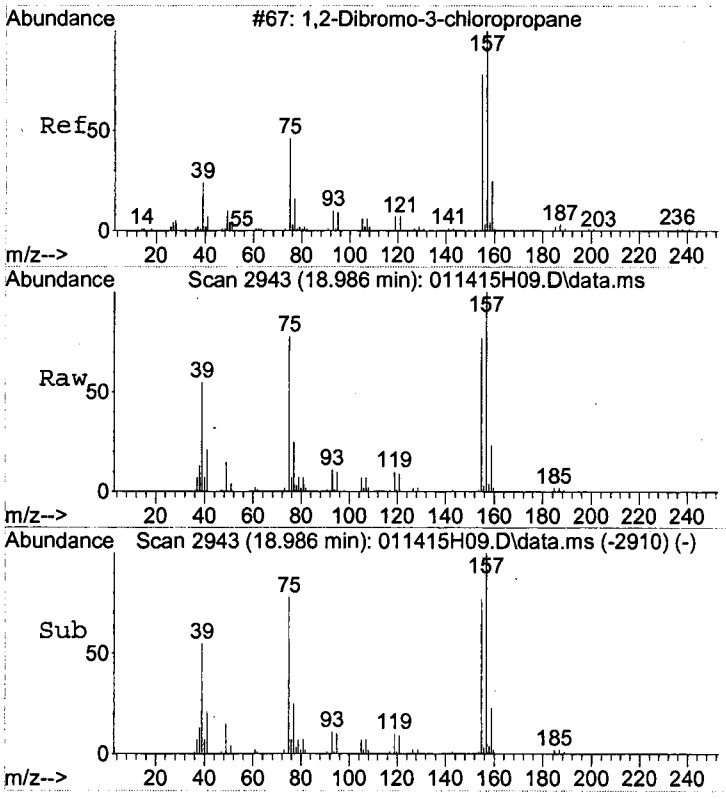


#72
Butylbenzene
Concen: 5.00 ug/L
RT: 17.642 min Scan# 2722
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 91 Resp: 1147158

Ion	Ratio	Lower	Upper
91	100		
134	27.5	7.5	47.5

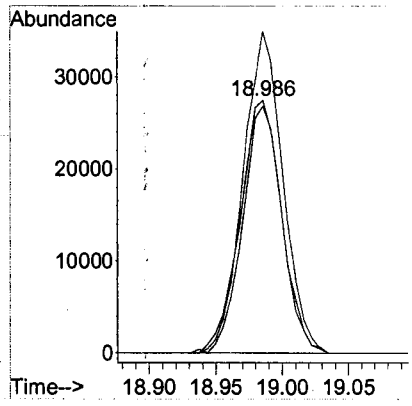


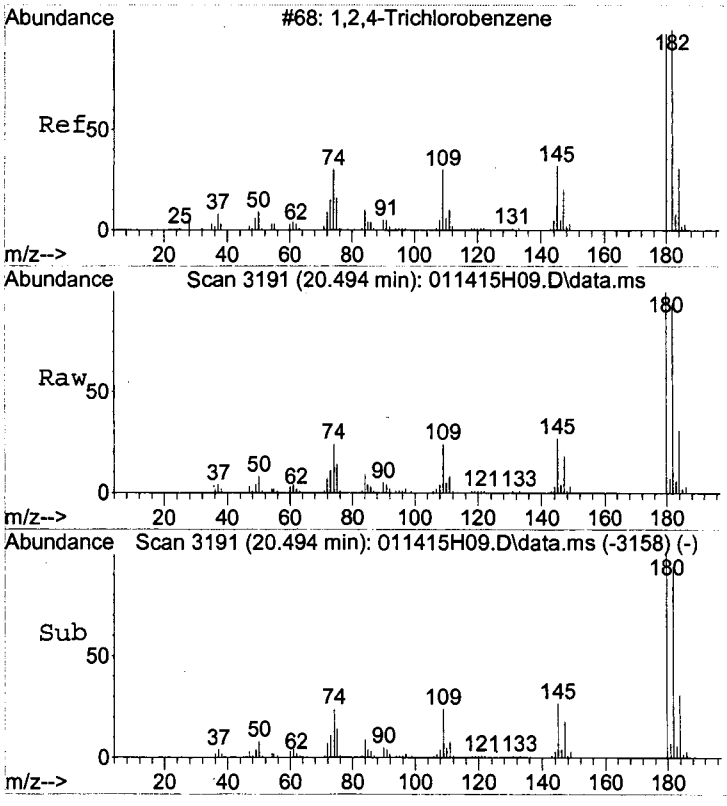


#73
1,2-Dibromo-3-chloropropane
Concen: 20.00 ug/L
RT: 18.986 min Scan# 2943
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion: 75 Resp: 59646

Ion	Ratio	Lower	Upper
75	100		
155	93.5	73.5	113.5
157	122.3	102.3	142.3

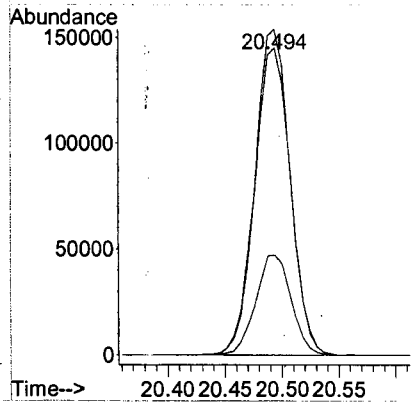


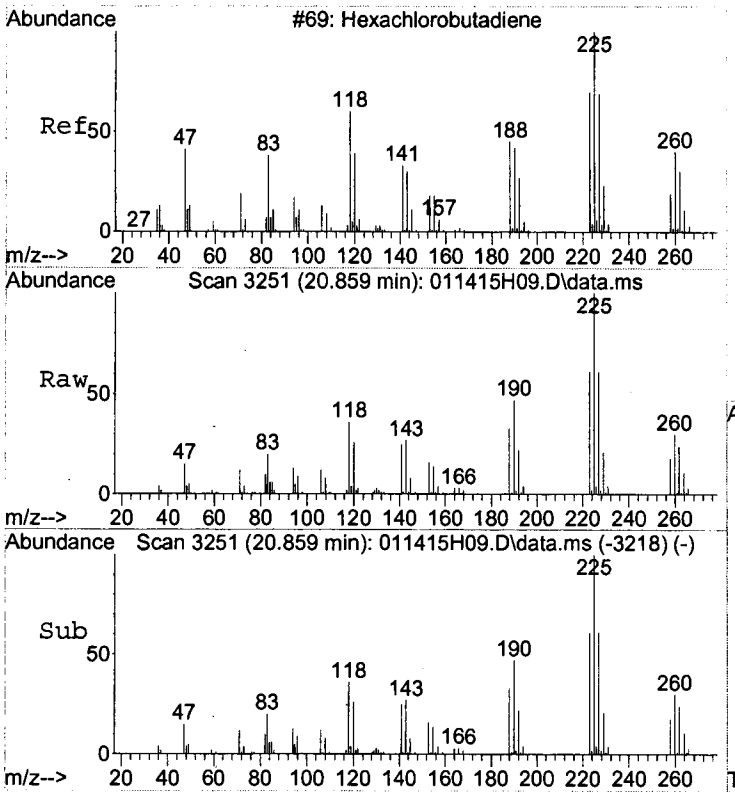


#74
1,2,4-Trichlorobenzene
Concen: 5.00 ug/L
RT: 20.494 min Scan# 3191
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:180 Resp: 331476

Ion	Ratio	Lower	Upper
180	100		
182	95.1	75.1	115.1
184	30.7	10.7	50.7

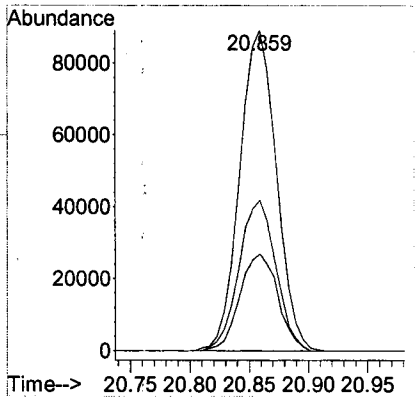


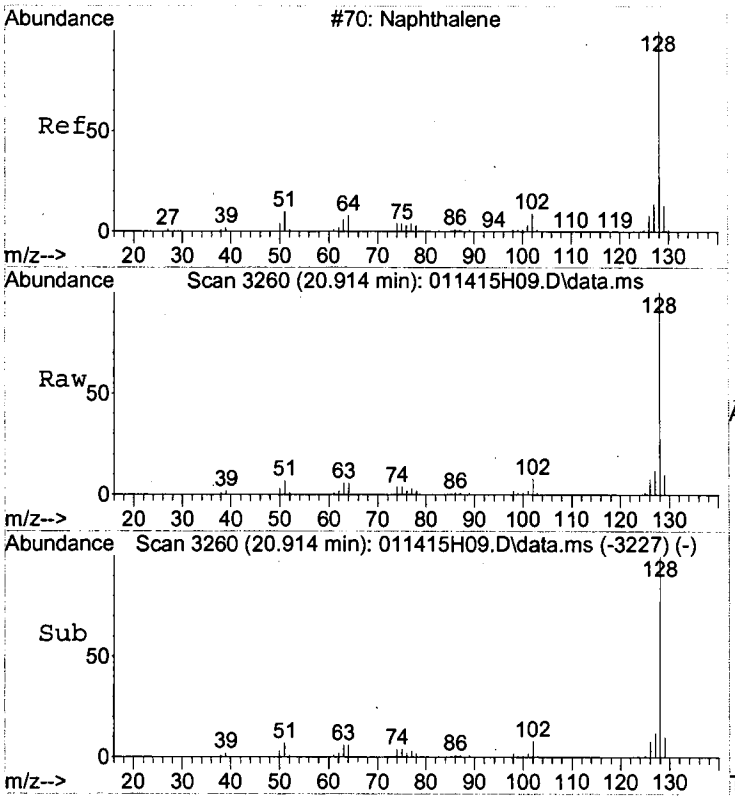


#75
Hexachlorobutadiene
Concen: 5.00 ug/L
RT: 20.859 min Scan# 3251
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:225 Resp: 192741

Ion	Ratio	Lower	Upper
225	100		
260	31.2	11.2	51.2
190	47.0	27.0	67.0

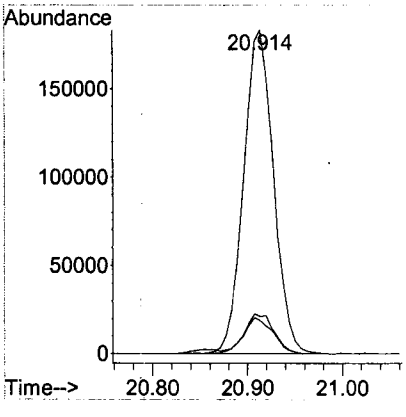


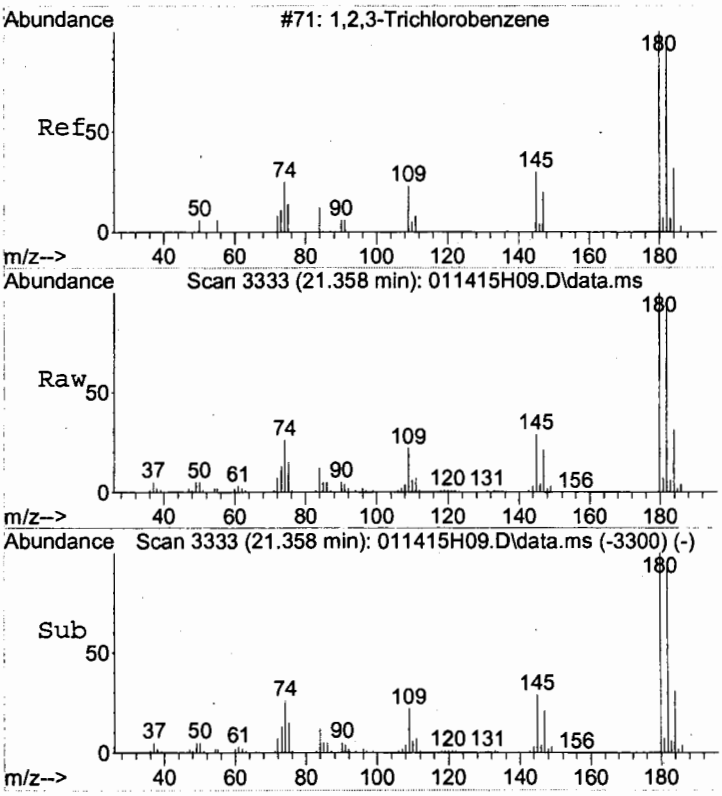


#76
Naphthalene
Concen: 5.00 ug/L
RT: 20.914 min Scan# 3260
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:128 Resp: 401906

Ion	Ratio	Lower	Upper
128	100		
127	12.3	0.0	32.3
129	10.9	0.0	30.9

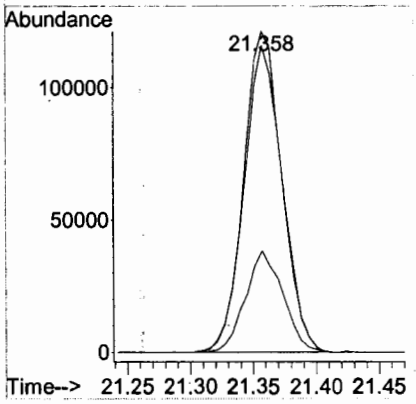




#77
1,2,3-Trichlorobenzene
Concen: 5.00 ug/L
RT: 21.358 min Scan# 3333
Delta R.T. 0.000 min
Lab File: 011415H09.D
Acq: 14 Jan 2015 14:35

Tgt Ion:180 Resp: 257076

Ion	Ratio	Lower	Upper
180	100		
182	94.6	74.6	114.6
184	30.7	10.7	50.7



LSC Area Percent Report

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H09.D
Acq On : 14 Jan 2015 14:35
Operator : YNB
Sample : S15A050-CAL4
Misc : 5.0ug/L;,WATER
ALS Vial : 31 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 50 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M
Title : Volatile Organic Analysis - 524.2 Method

Signal : TIC: 011415H09.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.539	70	74	91	rBV	266447	449496	5.28%	0.356%
2	1.758	99	110	111	rBV2	77448	252789	2.97%	0.200%
3	1.831	118	122	149	rVB	371405	791020	9.30%	0.627%
4	2.177	173	179	191	rBV	345406	719074	8.45%	0.570%
5	2.293	192	198	216	rVB	245733	525237	6.17%	0.416%
6	2.579	238	245	254	rBV	596413	1149449	13.51%	0.911%
7	3.071	322	326	333	rVB4	6725	10628	0.12%	0.008%
8	3.217	342	350	362	rBV2	861128	3148677	37.00%	2.496%
9	3.320	362	367	384	rVV	129676	345028	4.05%	0.273%
10	3.472	384	392	424	rVB	559728	1542488	18.13%	1.223%
11	3.892	452	461	463	rBV	492321	1006788	11.83%	0.798%
12	4.251	508	520	529	rBV2	105129	317098	3.73%	0.251%
13	4.360	529	538	541	rBV	850425	1870326	21.98%	1.483%
14	4.409	542	546	559	rVB	1302689	3477777	40.87%	2.757%
15	5.035	638	649	661	rBV	556322	1407284	16.54%	1.115%
16	5.248	671	684	713	rBV	2901340	8509188	100.00%	6.745%
17	5.832	766	780	792	rBV	1668699	4633218	54.45%	3.673%
18	5.972	792	803	811	rVV3	775317	2179343	25.61%	1.727%
19	6.063	811	818	831	rVB	148684	378163	4.44%	0.300%
20	6.349	854	865	883	rBV	224020	558639	6.57%	0.443%
21	6.519	883	893	917	rVB	419462	1013731	11.91%	0.804%
22	6.756	922	932	945	rBV	419891	1121247	13.18%	0.889%
23	7.024	964	976	997	rBV3	787239	2176564	25.58%	1.725%
24	7.279	1009	1018	1023	rBV	187157	439611	5.17%	0.348%
25	7.352	1023	1030	1051	rVB2	949252	2676859	31.46%	2.122%
26	7.620	1062	1074	1093	rBV	1414849	3780402	44.43%	2.997%
27	7.821	1097	1107	1125	rVB	975001	2313798	27.19%	1.834%
28	8.411	1194	1204	1220	rBV	658964	1493639	17.55%	1.184%
29	8.757	1252	1261	1280	rBV	445867	1056718	12.42%	0.838%
30	8.934	1282	1290	1304	rVB	168145	379254	4.46%	0.301%
31	9.231	1329	1339	1352	rBV	313440	713581	8.39%	0.566%
32	9.967	1452	1460	1474	rBV	371786	815305	9.58%	0.646%
33	10.284	1499	1512	1521	rBV	601349	1380328	16.22%	1.094%
34	10.393	1521	1530	1539	rVV	1208445	2795068	32.85%	2.216%
35	10.502	1539	1548	1565	rVB	1214741	2829298	33.25%	2.243%

LSC Area Percent Report

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H09.D
Acq On : 14 Jan 2015 14:35
Operator : YNB
Sample : S15A050-CAL4
Misc : 5.0ug/L;,WATER
ALS Vial : 31 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 50 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M
Title : Volatile Organic Analysis - 524.2 Method

36	10.904	1605	1614	1623	rBV	288982	593963	6.98%	0.471%
37	11.190	1653	1661	1674	rVB	271016	603354	7.09%	0.478%
38	11.390	1685	1694	1700	rBV	739716	1617942	19.01%	1.282%
39	11.457	1700	1705	1715	rVB	267950	575291	6.76%	0.456%
40	11.676	1731	1741	1755	rBV	423519	862338	10.13%	0.684%
41	11.822	1755	1765	1773	rBV	206382	460047	5.41%	0.365%
42	11.974	1782	1790	1799	rBV	123012	257788	3.03%	0.204%
43	12.783	1914	1923	1927	rBV	977538	2145594	25.22%	1.701%
44	12.832	1927	1931	1944	rVB	972826	2099681	24.68%	1.664%
45	12.996	1949	1958	1963	rVV	561417	1247464	14.66%	0.989%
46	13.063	1963	1969	1981	rVB	1386334	3005238	35.32%	2.382%
47	13.178	1984	1988	1994	rBV3	6826	13690	0.16%	0.011%
48	13.276	1994	2004	2019	rVV	2565377	6113810	71.85%	4.846%
49	13.969	2105	2118	2136	rBV2	1459968	5311967	62.43%	4.211%
50	14.243	2155	2163	2171	rBB2	114548	244580	2.87%	0.194%
51	14.613	2214	2224	2237	rBV	1494325	3156035	37.09%	2.502%
52	14.845	2253	2262	2273	rBV	762005	1588790	18.67%	1.259%
53	15.070	2289	2299	2306	rBV	667868	1425653	16.75%	1.130%
54	15.161	2306	2314	2317	rVV	171526	406646	4.78%	0.322%
55	15.191	2317	2319	2327	rVB	146613	251736	2.96%	0.200%
56	15.337	2332	2343	2352	rBV	1436953	3142394	36.93%	2.491%
57	15.441	2352	2360	2369	rVV	1182773	2519565	29.61%	1.997%
58	15.514	2369	2372	2379	rVB4	6233	11098	0.13%	0.009%
59	15.647	2384	2394	2395	rBV	1349965	2550937	29.98%	2.022%
60	16.231	2479	2490	2498	rBV	1405333	3069617	36.07%	2.433%
61	16.322	2498	2505	2519	rVB	1407543	3182000	37.39%	2.522%
62	16.626	2541	2555	2567	rBV	1470838	3164255	37.19%	2.508%
63	16.760	2567	2577	2585	rBV	1063176	2215324	26.03%	1.756%
64	16.918	2593	2603	2622	rVB2	2447357	5607463	65.90%	4.445%
65	17.545	2696	2706	2707	rBV	874987	1687387	19.83%	1.338%
66	17.642	2716	2722	2735	rVB	1453364	3080356	36.20%	2.442%
67	18.986	2928	2943	2951	rBB2	190205	402006	4.72%	0.319%
68	20.488	3180	3190	3201	rBB	752880	1630674	19.16%	1.293%
69	20.853	3240	3250	3256	rBV2	712632	1644852	19.33%	1.304%
70	20.914	3256	3260	3272	rVB	358144	728932	8.57%	0.578%
71	21.358	3324	3333	3342	rVB	608587	1282234	15.07%	1.016%

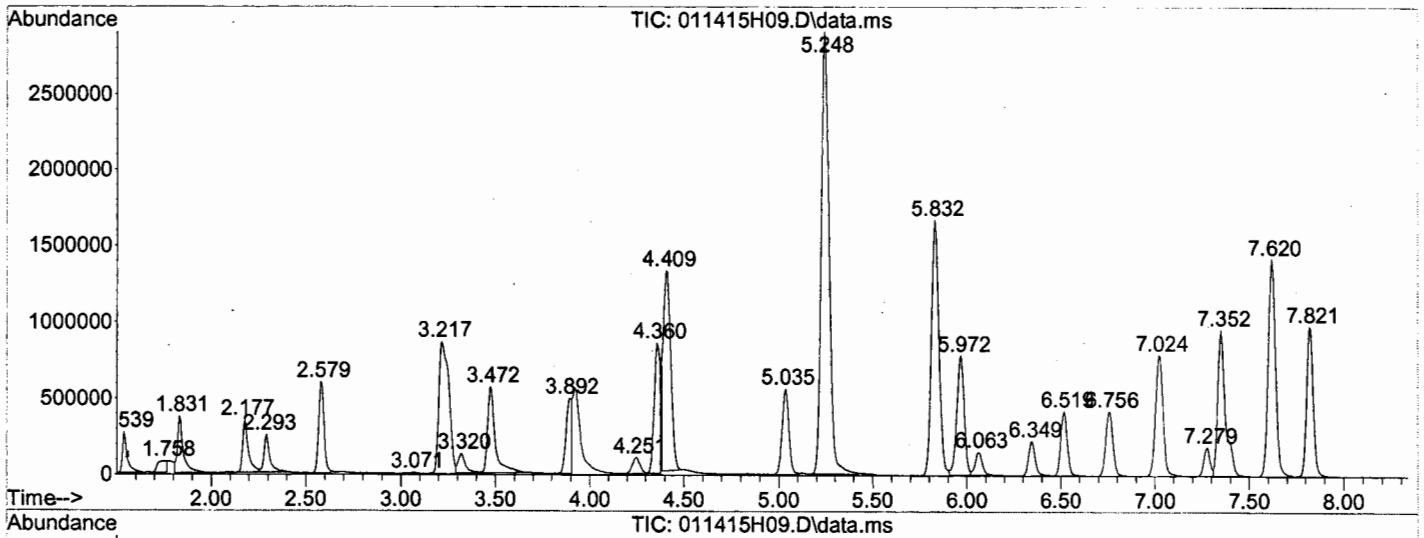
Sum of corrected areas: 126157814

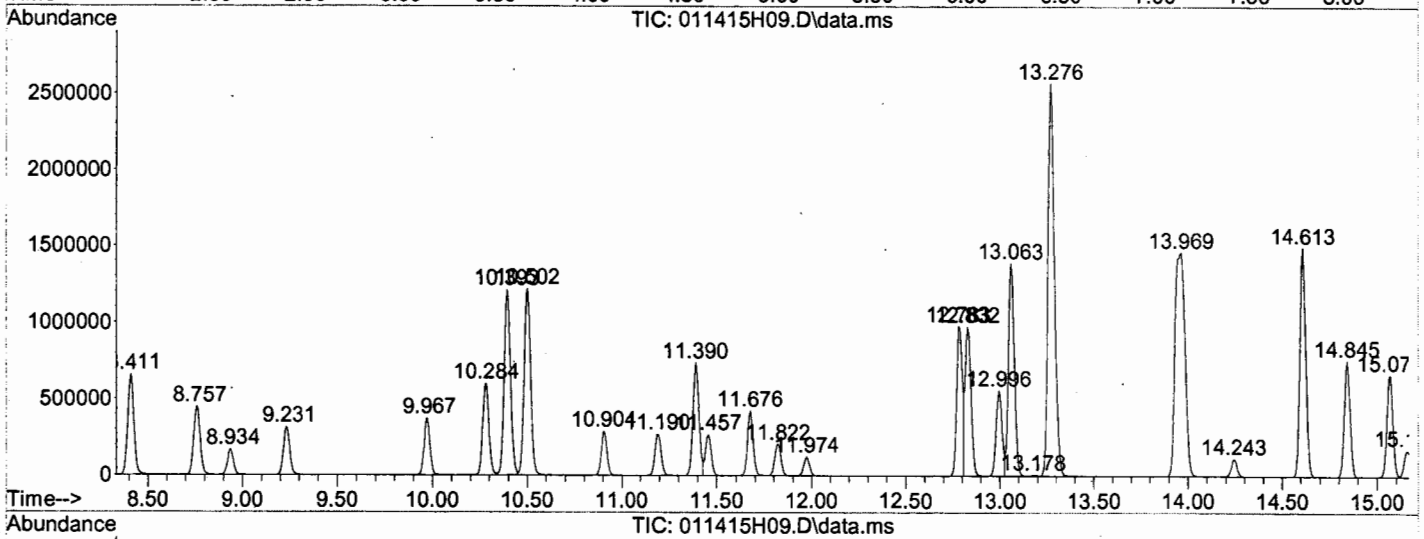
LSC Report - Integrated Chromatogram

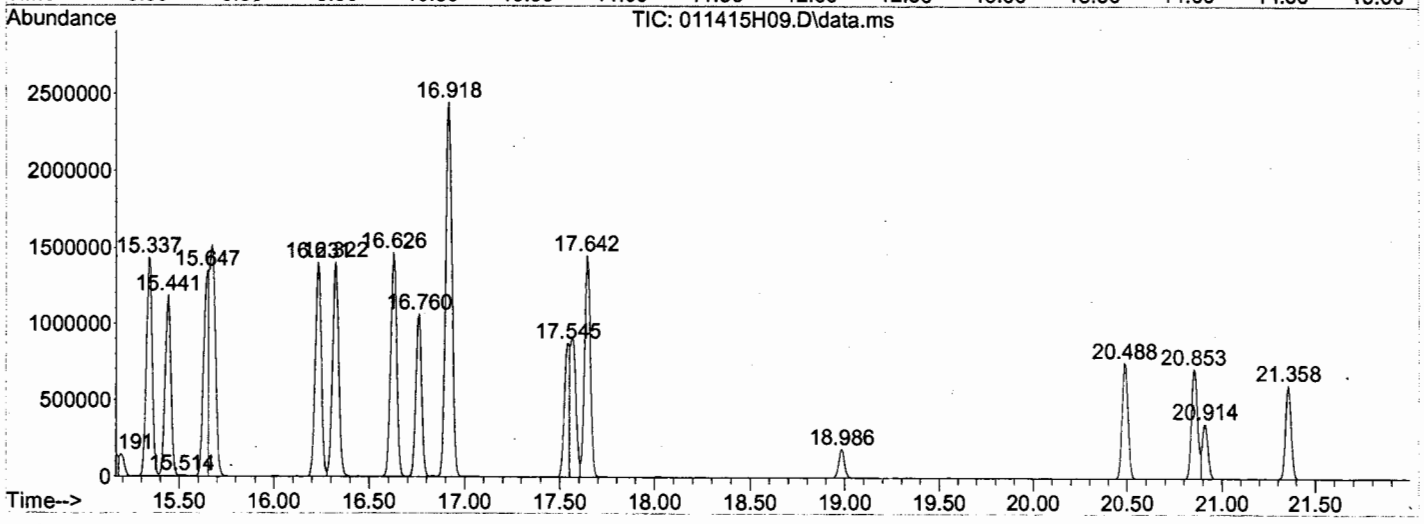
Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H09.D
Acq On : 14 Jan 2015 14:35
Operator : YNB
Sample : S15A050-CAL4
Misc : 5.0ug/L;,WATER
ALS Vial : 31 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M
Quant Title : Volatile Organic Analysis - 524.2 Method

TIC Library : C:\DATABASE\NIST98.L
TIC Integration Parameters: LSCINT.P







00216

Tentatively Identified Compound (LSC) summary

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\\
Data File : 011415H09.D
Acq On : 14 Jan 2015 14:355
Operator : YNBB
Sample : S15A050-CAL44
Misc : 5.0ug/L;,WATERR
ALS Vial : 31 Sample Multiplier: 11

Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.MM
Quant Title : Volatile Organic Analysis - 524.2 Methodd

TIC Library : C:\DATABASE\NIST98.LL
TIC Integration Parameters: LSCINT.PP

TIC Top Hit name	RT	EstConc	Units	Response	--Internal Standard--- #	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H10.D
Acq On : 14 Jan 2015 15:11
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL3
Misc : 2.0ug/L;,WATER
ALS Vial : 32
Multiplier: 1

Quant Time: Jan 14 15:35:42 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 15:35:33 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.887	53	121514	5.000 ug/L	0.00
24) Fluorobenzene	7.822	96	1103810	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.791	117	713777	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.281	65	154303	5.130 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 102.60%	
39) Toluene-d8	10.394	98	1064109	5.081 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 101.60%	
56) 4-Bromofluorobenzene	14.846	95	303114	4.855 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 97.20%	
70) 1,2-Dichlorobenzene-d4	17.540	152	291705	4.840 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 96.80%	

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.540	85	119093	1.998 ug/L	97
3) Chloromethane	1.735	50	155168	2.102 ug/L #	85
4) Vinyl chloride	1.832	62	159518	2.028 ug/L	100
5) Bromomethane	2.179	94	115048	1.792 ug/L	97
6) Chloroethane	2.288	64	113227	1.974 ug/L	100
7) Trichlorofluoromethane	2.580	101	221232	2.010 ug/L	94
8) 1,1-Dichloroethene	3.212	96	153588	1.968 ug/L	96
9) 1,1,2-Trichloro-1,2,2-...	3.243	101	145281	2.030 ug/L	99
10) Acetone	3.322	43	74261	18.011 ug/L	99
11) Carbon disulfide	3.474	76	511761	2.048 ug/L	100
12) Dichloromethane	3.924	84	166027	2.213 ug/L #	88
13) tert-Butyl alcohol	4.252	59	74915	43.684 ug/L	96
14) trans-1,2-Dichloroethene	4.362	96	191944	1.959 ug/L	97
15) tert-Butyl methyl ethe...	4.410	73	844853	8.023 ug/L	98
16) 1,1-Dichloroethane	5.037	63	281650	2.011 ug/L	100
17) Diisopropyl ether	5.250	45	1392908	8.341 ug/L	99
18) Ethyl-tert-butyl ether	5.833	59	730529	7.359 ug/L	99
19) 2,2-Dichloropropane	5.955	77	120345	1.682 ug/L	100
20) cis-1,2-Dichloroethene	5.973	96	106354	1.841 ug/L	97
21) 2-Butanone (MEK)	6.065	43	85305	16.342 ug/L	97
22) Bromochloromethane	6.350	128	32218	1.901 ug/L	99
23) Chloroform	6.521	83	163791	1.931 ug/L	100
25) 1,1,1-Trichloroethane	6.764	97	139860	1.893 ug/L	97
26) Carbon tetrachloride	7.013	117	116512	1.825 ug/L	100
27) 1,1-Dichloropropene	7.032	75	120650	1.887 ug/L	99
29) Benzene	7.354	78	417564	1.947 ug/L	100
30) 1,2-Dichloroethane	7.396	62	73616	2.053 ug/L	99
31) tert-Amyl methyl ether	7.621	73	562496	7.405 ug/L	98
32) Trichloroethene	8.412	95	103249	1.938 ug/L	97
33) 1,2-Dichloropropane	8.759	63	83563	1.981 ug/L	100
34) Dibromomethane	8.935	93	28291	1.934 ug/L	97
35) Bromodichloromethane	9.233	83	98378	1.947 ug/L	100
36) cis-1,3-Dichloropropene	9.969	75	99963	1.818 ug/L	99

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H10.D
Acq On : 14 Jan 2015 15:11
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL3
Misc : 2.0ug/L;,WATER
ALS Vial : 32
Multiplier: 1

Quant Time: Jan 14 15:35:42 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 15:35:33 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
38) 4-Methyl-2-pentanone (...	10.279	43	184009	15.397 ug/L	99
40) Toluene	10.498	92	275101	1.942 ug/L	99
41) trans-1,3-Dichloropropene	10.905	75	69558	1.794 ug/L	99
42) 1,1,2-Trichloroethane	11.191	83	35773	2.030 ug/L	96
43) Tetrachloroethene	11.392	166	107420	1.870 ug/L	98
44) 1,3-Dichloropropane	11.459	76	80352	2.031 ug/L	98
45) 2-Hexanone	11.672	43	117580	15.213 ug/L	99
46) Chlorodibromomethane	11.824	129	52831	1.857 ug/L	99
47) 1,2-Dibromoethane (EDB)	11.976	107	38084	1.965 ug/L	96
48) Chlorobenzene	12.833	112	271805	1.930 ug/L	97
49) 1,1,1,2-Tetrachloroethane	12.997	131	76653	1.857 ug/L	98
50) Ethylbenzene	13.064	91	514598	1.915 ug/L	98
51) m&p-Xylene	13.277	106	415785	3.475 ug/L	97
52) o-Xylene	13.946	106	187955	1.756 ug/L	100
53) Styrene	13.976	104	293609	1.734 ug/L	99
54) Bromoform	14.244	173	23751	1.725 ug/L	99
55) Isopropylbenzene	14.615	105	500083	1.825 ug/L	100
57) Bromobenzene	15.065	156	96128	1.846 ug/L	98
58) 1,1,2,2-Tetrachloroethane	15.150	83	42023	1.969 ug/L	97
59) 1,2,3-Trichloropropane	15.193	75	30905	2.069 ug/L	100
60) Propylbenzene	15.339	91	603493	1.896 ug/L	100
61) 2-Chlorotoluene	15.442	91	343280	1.888 ug/L	100
62) 4-Chlorotoluene	15.643	91	397111	1.849 ug/L	98
63) 1,3,5-Trimethylbenzene	15.673	105	430244	1.798 ug/L	98
64) tert-Butylbenzene	16.233	119	354745	1.767 ug/L	98
65) 1,2,4-Trimethylbenzene	16.324	105	426006	1.791 ug/L	100
66) sec-Butylbenzene	16.628	105	532278	1.820 ug/L	100
67) 1,3-Dichlorobenzene	16.762	146	225369	1.840 ug/L	99
68) p-Isopropyltoluene	16.908	119	461141	1.647 ug/L	100
69) 1,4-Dichlorobenzene	16.920	146	217068	1.620 ug/L	99
71) 1,2-Dichlorobenzene	17.570	146	175090	1.866 ug/L	99
72) Butylbenzene	17.643	91	429045	1.858 ug/L	98
73) 1,2-Dibromo-3-chloropr...	18.981	75	22711	7.733 ug/L	94
74) 1,2,4-Trichlorobenzene	20.489	180	121950	1.814 ug/L	100
75) Hexachlorobutadiene	20.860	225	73993	1.849 ug/L	98
76) Naphthalene	20.915	128	146044	1.865 ug/L	100
77) 1,2,3-Trichlorobenzene	21.359	180	94272	1.858 ug/L	98

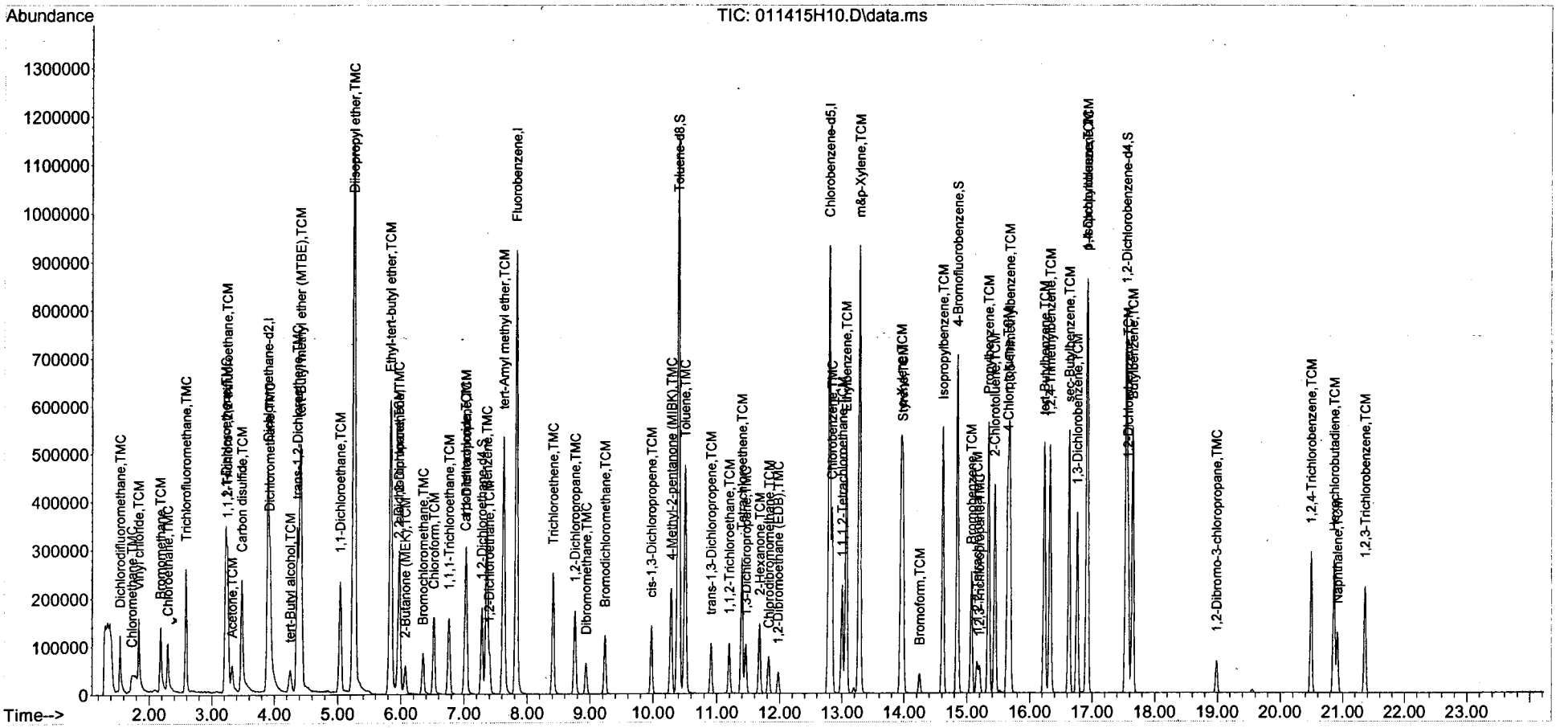
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H10.D
Acq On : 14 Jan 2015 15:11
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL3
Misc : 2.0ug/L;,WATER
ALS Vial : 32
Multiplier: 1

Quant Time: Jan 14 15:35:42 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 15:35:33 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H11.D
Acq On : 14 Jan 2015 15:47
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL2
Misc : 1.0ug/L;,WATER
ALS Vial : 33
Multiplier: 1

Quant Time: Jan 14 16:38:51 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:09:59 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.897	53	115423	5.000 ug/L	0.00
24) Fluorobenzene	7.826	96	1068878	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.788	117	682568	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.278	65	147505	5.025 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 100.60%	
39) Toluene-d8	10.392	98	1030535	5.099 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 102.00%	
56) 4-Bromofluorobenzene	14.843	95	292871	4.953 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 99.00%	
70) 1,2-Dichlorobenzene-d4	17.537	152	277157	4.878 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 97.60%	

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.544	85	58008	1.020 ug/L	100
3) Chloromethane	1.744	50	77785	1.075 ug/L #	85
4) Vinyl chloride	1.835	62	80225	1.055 ug/L	99
5) Bromomethane	2.176	94	53714	0.922 ug/L	99
6) Chloroethane	2.292	64	56412	1.031 ug/L	98
7) Trichlorofluoromethane	2.583	101	104415	0.998 ug/L	97
8) 1,1-Dichloroethene	3.216	96	70913	0.968 ug/L	99
9) 1,1,2-Trichloro-1,2,2-...	3.246	101	65891	0.972 ug/L	100
10) Acetone	3.325	43	37870	9.063 ug/L	95
11) Carbon disulfide	3.477	76	243059	1.014 ug/L	98
12) Dichloromethane	3.927	84	85451	1.130 ug/L #	67
13) tert-Butyl alcohol	4.250	59	34257	20.443 ug/L	92
14) trans-1,2-Dichloroethene	4.365	96	90375	0.981 ug/L	98
15) tert-Butyl methyl ethe...	4.414	73	385395	3.879 ug/L	98
16) 1,1-Dichloroethane	5.040	63	139473	1.037 ug/L	100
17) Diisopropyl ether	5.247	45	678252	4.182 ug/L	97
18) Ethyl-tert-butyl ether	5.837	59	346019	3.793 ug/L	98
19) 2,2-Dichloropropane	5.965	77	54388	0.862 ug/L	98
20) cis-1,2-Dichloroethene	5.977	96	50571	0.952 ug/L	100
21) 2-Butanone (MEK)	6.068	43	41736	8.295 ug/L	97
22) Bromochloromethane	6.342	128	15383	0.974 ug/L	94
23) Chloroform	6.518	83	78841	0.990 ug/L	99
25) 1,1,1-Trichloroethane	6.761	97	67741	0.968 ug/L	96
26) Carbon tetrachloride	7.023	117	55015	0.926 ug/L	99
27) 1,1-Dichloropropene	7.035	75	57899	0.958 ug/L	98
29) Benzene	7.351	78	203813	0.990 ug/L	97
30) 1,2-Dichloroethane	7.400	62	37149	1.050 ug/L	96
31) tert-Amyl methyl ether	7.625	73	260057	3.675 ug/L	97
32) Trichloroethene	8.409	95	48731	0.961 ug/L	99
33) 1,2-Dichloropropane	8.762	63	39292	0.971 ug/L	99
34) Dibromomethane	8.932	93	13252	0.954 ug/L	94
35) Bromodichloromethane	9.236	83	44360	0.929 ug/L	97
36) cis-1,3-Dichloropropene	9.966	75	44848	0.886 ug/L	97

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H11.D
Acq On : 14 Jan 2015 15:47
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL2
Misc : 1.0ug/L;,WATER
ALS Vial : 33
Multiplier: 1

Quant Time: Jan 14 16:38:51 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:09:59 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
38) 4-Methyl-2-pentanone (...	10.282	43	84322	7.553 ug/L	97
40) Toluene	10.495	92	134161	0.998 ug/L	99
41) trans-1,3-Dichloropropene	10.903	75	30635	0.875 ug/L	98
42) 1,1,2-Trichloroethane	11.189	83	16783	0.994 ug/L	99
43) Tetrachloroethene	11.395	166	52630	0.979 ug/L	100
44) 1,3-Dichloropropane	11.456	76	37689	0.994 ug/L	99
45) 2-Hexanone	11.675	43	52398	7.328 ug/L	95
46) Chlorodibromomethane	11.815	129	23891	0.913 ug/L	96
47) 1,2-Dibromoethane (EDB)	11.967	107	17070	0.939 ug/L	99
48) Chlorobenzene	12.830	112	134379	1.005 ug/L	97
49) 1,1,1,2-Tetrachloroethane	12.995	131	36409	0.951 ug/L	98
50) Ethylbenzene	13.062	91	243424	0.966 ug/L	99
51) m&p-Xylene	13.274	106	200280	1.845 ug/L	97
52) o-Xylene	13.949	106	88884	0.915 ug/L	100
53) Styrene	13.974	104	136393	0.894 ug/L	99
54) Bromoform	14.247	173	10565	0.860 ug/L	96
55) Isopropylbenzene	14.612	105	233667	0.928 ug/L	98
57) Bromobenzene	15.062	156	46313	0.958 ug/L	97
58) 1,1,2,2-Tetrachloroethane	15.154	83	19873	0.982 ug/L	98
59) 1,2,3-Trichloropropane	15.196	75	14709	1.017 ug/L	98
60) Propylbenzene	15.336	91	286183	0.962 ug/L	98
61) 2-Chlorotoluene	15.439	91	168519	0.986 ug/L	97
62) 4-Chlorotoluene	15.640	91	191177	0.959 ug/L	98
63) 1,3,5-Trimethylbenzene	15.677	105	204509	0.932 ug/L	98
64) tert-Butylbenzene	16.236	119	167482	0.917 ug/L	99
65) 1,2,4-Trimethylbenzene	16.321	105	199768	0.920 ug/L	99
66) sec-Butylbenzene	16.625	105	248964	0.927 ug/L	100
67) 1,3-Dichlorobenzene	16.759	146	103181	0.917 ug/L	99
68) p-Isopropyltoluene	16.911	119	215903	0.871 ug/L	98
69) 1,4-Dichlorobenzene	16.923	146	103793	0.877 ug/L	99
71) 1,2-Dichlorobenzene	17.574	146	84190	0.963 ug/L	97
72) Butylbenzene	17.647	91	205921	0.959 ug/L	99
73) 1,2-Dibromo-3-chloropr...	18.979	75	9043	3.374 ug/L	92
74) 1,2,4-Trichlorobenzene	20.493	180	56633	0.920 ug/L	98
75) Hexachlorobutadiene	20.858	225	34326	0.930 ug/L	99
76) Naphthalene	20.913	128	62219	0.872 ug/L	99
77) 1,2,3-Trichlorobenzene	21.363	180	45363	0.961 ug/L	99

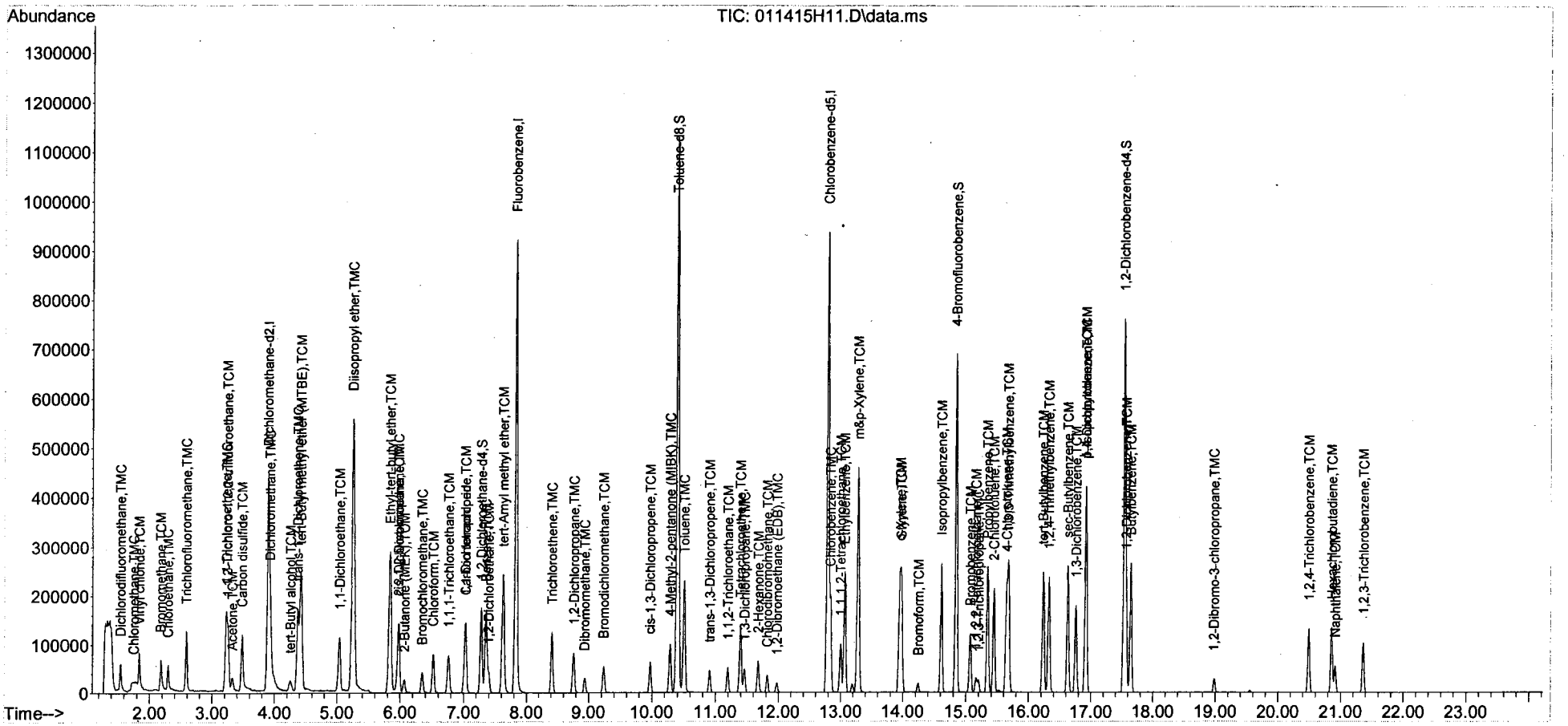
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H11.D
Acq On : 14 Jan 2015 15:47
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL2
Misc : 1.0ug/L;,WATER
ALS Vial : 33
Multiplier: 1

Quant Time: Jan 14 16:38:51 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:09:59 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H12.D
Acq On : 14 Jan 2015 16:22
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL1
Misc : 0.5ug/L;,WATER
ALS Vial : 34
Multiplier: 1

Quant Time: Jan 14 16:54:24 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:39:22 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.892	53	110861	5.000 ug/L	0.00
24) Fluorobenzene	7.820	96	1032100	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.789	117	662007	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.279	65	142769	5.037 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 100.80%	
39) Toluene-d8	10.393	98	988445	5.043 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 100.80%	
56) 4-Bromofluorobenzene	14.844	95	279092	4.867 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 97.40%	
70) 1,2-Dichlorobenzene-d4	17.538	152	261865	4.752 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 95.00%	

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.538	85	28827	0.528 ug/L	98
3) Chloromethane	1.769	50	36536	0.526 ug/L #	92
4) Vinyl chloride	1.830	62	37013	0.507 ug/L	99
5) Bromomethane	2.177	94	20900	0.373 ug/L	92
6) Chloroethane	2.292	64	26395	0.502 ug/L	97
7) Trichlorofluoromethane	2.584	101	52186	0.519 ug/L	95
8) 1,1-Dichloroethene	3.217	96	32984	0.469 ug/L	95
9) 1,1,2-Trichloro-1,2,2-...	3.247	101	33614	0.517 ug/L	97
10) Acetone	3.326	43	22001	5.482 ug/L	99
11) Carbon disulfide	3.472	76	116490	0.506 ug/L	98
12) Dichloromethane	3.934	84	47511	0.654 ug/L #	44
13) tert-Butyl alcohol	4.244	59	15776	9.802 ug/L	88
14) trans-1,2-Dichloroethene	4.360	96	41023	0.463 ug/L	98
15) tert-Butyl methyl ethe...	4.415	73	176078	1.845 ug/L	97
16) 1,1-Dichloroethane	5.035	63	63150	0.489 ug/L	99
17) Diisopropyl ether	5.248	45	315744	2.027 ug/L	96
18) Ethyl-tert-butyl ether	5.832	59	155331	1.773 ug/L	97
19) 2,2-Dichloropropane	5.959	77	22915	0.378 ug/L	98
20) cis-1,2-Dichloroethene	5.971	96	23105	0.453 ug/L	100
21) 2-Butanone (MEK)	6.057	43	21362	4.421 ug/L	92
22) Bromochloromethane	6.342	128	6774	0.446 ug/L	96
23) Chloroform	6.519	83	36721	0.480 ug/L	97
25) 1,1,1-Trichloroethane	6.762	97	30741	0.455 ug/L	97
26) Carbon tetrachloride	7.011	117	24276	0.423 ug/L	96
27) 1,1-Dichloropropene	7.036	75	26634	0.457 ug/L	98
29) Benzene	7.352	78	91414	0.460 ug/L	100
30) 1,2-Dichloroethane	7.401	62	15702	0.459 ug/L	98
31) tert-Amyl methyl ether	7.619	73	114507	1.676 ug/L	95
32) Trichloroethene	8.410	95	22751	0.465 ug/L	99
33) 1,2-Dichloropropane	8.763	63	17649	0.452 ug/L	97
34) Dibromomethane	8.933	93	6664	0.497 ug/L	96
35) Bromodichloromethane	9.237	83	20813	0.451 ug/L	98
36) cis-1,3-Dichloropropene	9.967	75	20347	0.416 ug/L	96

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H12.D
Acq On : 14 Jan 2015 16:22
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL1
Misc : 0.5ug/L;,WATER
ALS Vial : 34
Multiplier: 1

Quant Time: Jan 14 16:54:24 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:39:22 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
38) 4-Methyl-2-pentanone (...	10.289	43	36839	3.402 ug/L	95
40) Toluene	10.502	92	61458	0.471 ug/L	100
41) trans-1,3-Dichloropropene	10.903	75	14362	0.423 ug/L	97
42) 1,1,2-Trichloroethane	11.189	83	8376	0.511 ug/L	90
43) Tetrachloroethene	11.390	166	24755	0.475 ug/L	99
44) 1,3-Dichloropropane	11.457	76	16994	0.462 ug/L	95
45) 2-Hexanone	11.676	43	23747	3.424 ug/L	94
46) Chlorodibromomethane	11.816	129	10609	0.418 ug/L	98
47) 1,2-Dibromoethane (EDB)	11.968	107	7794	0.442 ug/L #	95
48) Chlorobenzene	12.837	112	62578	0.483 ug/L	93
49) 1,1,1,2-Tetrachloroethane	12.995	131	16499	0.444 ug/L	98
50) Ethylbenzene	13.062	91	106802	0.437 ug/L	99
51) m&p-Xylene	13.275	106	87408	0.830 ug/L	93
52) o-Xylene	13.944	106	38296	0.406 ug/L	97
53) Styrene	13.974	104	57817	0.391 ug/L	97
54) Bromoform	14.242	173	4698	0.394 ug/L	99
55) Isopropylbenzene	14.613	105	99734	0.408 ug/L	100
57) Bromobenzene	15.063	156	20099	0.429 ug/L	94
58) 1,1,2,2-Tetrachloroethane	15.154	83	8573	0.437 ug/L	99
59) 1,2,3-Trichloropropane	15.191	75	6341	0.452 ug/L	96
60) Propylbenzene	15.337	91	125959	0.436 ug/L	98
61) 2-Chlorotoluene	15.434	91	76724	0.463 ug/L	96
62) 4-Chlorotoluene	15.641	91	83772	0.433 ug/L	97
63) 1,3,5-Trimethylbenzene	15.677	105	89570	0.421 ug/L	97
64) tert-Butylbenzene	16.237	119	72976	0.412 ug/L	97
65) 1,2,4-Trimethylbenzene	16.322	105	88857	0.422 ug/L	97
66) sec-Butylbenzene	16.626	105	109958	0.422 ug/L	100
67) 1,3-Dichlorobenzene	16.760	146	46836	0.429 ug/L	99
68) p-Isopropyltoluene	16.912	119	93680	0.390 ug/L	100
69) 1,4-Dichlorobenzene	16.930	146	44470	0.387 ug/L	97
71) 1,2-Dichlorobenzene	17.575	146	39760	0.469 ug/L	95
72) Butylbenzene	17.642	91	91610	0.440 ug/L	99
73) 1,2-Dibromo-3-chloropr...	18.979	75	4425	1.702 ug/L	92
74) 1,2,4-Trichlorobenzene	20.494	180	24987	0.418 ug/L	97
75) Hexachlorobutadiene	20.852	225	16159	0.452 ug/L	99
76) Naphthalene	20.913	128	27282	0.394 ug/L	98
77) 1,2,3-Trichlorobenzene	21.363	180	19600	0.428 ug/L	99

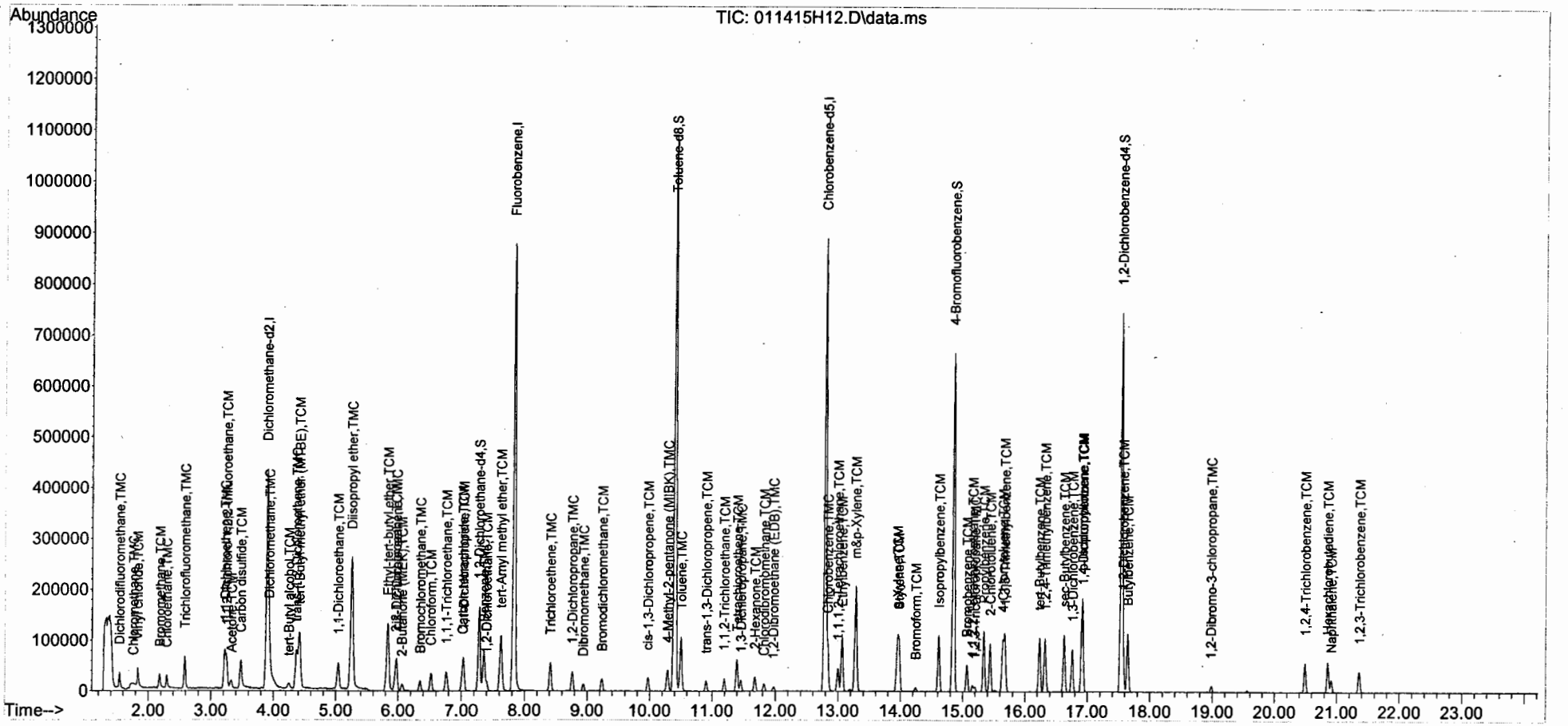
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H12.D
Acq On : 14 Jan 2015 16:22
Instrument: HP5973H
Operator : YNB
Sample : S15A050-CAL1
Misc : 0.5ug/L;,WATER
ALS Vial : 34
Multiplier: 1

Quant Time: Jan 14 16:54:24 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:39:22 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M



SCV REPORT

Instrument Name: HP5973H
Sample Name: S15A050-SCV1
Misc Info: 5ug/L;WATER
Date Acquired: 1/14/2015 16:58
QLast Update: Wed Jan 14 16:54:35 2015
Operator: YNB

#	Name	Ret Time	Concentration	Amount	%R	QC Limit		STATUS
1)	Dichloromethane-d2	3.89	5.0					
2)	Dichlorodifluoromethane	1.54	5.8	5.0	115%	70	130	pass
3)	Chloromethane	1.73	5.4	5.0	108%	70	130	pass
4)	Vinyl chloride	1.83	5.4	5.0	107%	70	130	pass
5)	Bromomethane	2.18	4.8	5.0	96%	70	130	pass
6)	Chloroethane	2.29	5.1	5.0	103%	70	130	pass
7)	Trichlorofluoromethane	2.58	5.0	5.0	100%	70	130	pass
8)	1,1-Dichloroethene	3.22	4.5	5.0	90%	70	130	pass
9)	1,1,2-Trichloro-1,2,2-trifluoroethane	3.25	4.1	5.0	82%	70	130	pass
10)	Acetone	3.32	35.0	40.0	88%	70	130	pass
11)	Carbon disulfide	3.48	4.8	5.0	96%	70	130	pass
12)	Dichloromethane	3.93	4.6	5.0	92%	70	130	pass
13)	tert-Butyl alcohol	4.25	1.4					
14)	trans-1,2-Dichloroethene	4.36	5.1	5.0	102%	70	130	pass
15)	tert-Butyl methyl ether (MTBE)	4.41	22.3	20.0	111%	70	130	pass
16)	1,1-Dichloroethane	5.03	5.0	5.0	101%	70	130	pass
17)	Diisopropyl ether	5.25	0.0					
18)	Ethyl-tert-butyl ether	5.97	0.1					
19)	2,2-Dichloropropane	5.96	4.4	5.0	89%	70	130	pass
20)	cis-1,2-Dichloroethene	5.98	4.8	5.0	96%	70	130	pass
21)	2-Butanone (MEK)	6.06	38.3	40.0	96%	70	130	pass
22)	Bromochloromethane	6.35	5.1	5.0	101%	70	130	pass
23)	Chloroform	6.52	5.0	5.0	101%	70	130	pass
24)	Fluorobenzene	7.83	5.0					
25)	1,1,1-Trichloroethane	6.76	5.1	5.0	102%	70	130	pass
26)	Carbon tetrachloride	7.02	5.1	5.0	101%	70	130	pass
27)	1,1-Dichloropropene	7.03	5.2	5.0	103%	70	130	pass
28)	1,2-Dichloroethane-d4	7.28	5.1					
29)	Benzene	7.35	5.2	5.0	104%	70	130	pass
30)	1,2-Dichloroethane	7.40	5.2	5.0	103%	70	130	pass
31)	tert-Amyl methyl ether	7.83	0.2					
32)	Trichloroethene	8.41	5.1	5.0	101%	70	130	pass
33)	1,2-Dichloropropane	8.76	5.0	5.0	100%	70	130	pass
34)	Dibromomethane	8.94	5.1	5.0	102%	70	130	pass
35)	Bromodichloromethane	9.23	5.1	5.0	101%	70	130	pass
36)	cis-1,3-Dichloropropene	9.97	5.1	5.0	102%	70	130	pass
37)	Chlorobenzene-d5	12.79	5.0					
38)	4-Methyl-2-pentanone (MIBK)	10.28	41.8	40.0	105%	70	130	pass
39)	Toluene-d8	10.39	5.0					
40)	Toluene	10.50	5.1	5.0	101%	70	130	pass
41)	trans-1,3-Dichloropropene	10.91	4.9	5.0	98%	70	130	pass
42)	1,1,2-Trichloroethane	11.19	5.1	5.0	102%	70	130	pass
43)	Tetrachloroethene	11.39	4.9	5.0	97%	70	130	pass
44)	1,3-Dichloropropane	11.46	5.0	5.0	101%	70	130	pass
45)	2-Hexanone	11.67	41.3	40.0	103%	70	130	pass
46)	Chlorodibromomethane	11.82	5.0	5.0	101%	70	130	pass
47)	1,2-Dibromoethane (EDB)	11.97	5.1	5.0	102%	70	130	pass
48)	Chlorobenzene	12.84	5.0	5.0	101%	70	130	pass

5.757
~~5.8~~ / 5.0 X 100 = 115.1
tm 1/14/

49)	1,1,1,2-Tetrachloroethane	13.00	5.1	5.0	102%	70	130	pass
50)	Ethylbenzene	13.06	5.2	5.0	103%	70	130	pass
51)	m&p-Xylene	13.28	10.1	10.0	101%	70	130	pass
52)	o-Xylene	13.95	5.2	5.0	103%	70	130	pass
53)	Styrene	13.97	5.1	5.0	103%	70	130	pass
54)	Bromoform	14.25	5.1	5.0	101%	70	130	pass
55)	Isopropylbenzene	14.61	5.3	5.0	105%	70	130	pass
56)	4-Bromofluorobenzene	14.84	5.0					
57)	Bromobenzene	15.07	5.0	5.0	101%	70	130	pass
58)	1,1,2,2-Tetrachloroethane	15.16	5.1	5.0	101%	70	130	pass
59)	1,2,3-Trichloropropane	15.20	5.0	5.0	101%	70	130	pass
60)	Propylbenzene	15.34	5.3	5.0	106%	70	130	pass
61)	2-Chlorotoluene	15.44	5.2	5.0	103%	70	130	pass
62)	4-Chlorotoluene	15.64	5.1	5.0	102%	70	130	pass
63)	1,3,5-Trimethylbenzene	15.68	5.2	5.0	104%	70	130	pass
64)	tert-Butylbenzene	16.24	5.2	5.0	104%	70	130	pass
65)	1,2,4-Trimethylbenzene	16.32	5.2	5.0	103%	70	130	pass
66)	sec-Butylbenzene	16.62	5.3	5.0	106%	70	130	pass
67)	1,3-Dichlorobenzene	16.76	5.1	5.0	101%	70	130	pass
68)	p-Isopropyltoluene	16.91	5.1	5.0	102%	70	130	pass
69)	1,4-Dichlorobenzene	16.92	5.0	5.0	100%	70	130	pass
70)	1,2-Dichlorobenzene-d4	17.54	4.9					
71)	1,2-Dichlorobenzene	17.57	5.0	5.0	100%	70	130	pass
72)	Butylbenzene	17.65	5.2	5.0	104%	70	130	pass
73)	1,2-Dibromo-3-chloropropane	18.98	4.9	5.0	97%	70	130	pass
74)	1,2,4-Trichlorobenzene	20.49	4.8	5.0	97%	70	130	pass
75)	Hexachlorobutadiene	0.00	4.7	5.0	95%	70	130	pass
76)	Naphthalene	20.91	5.2	5.0	103%	70	130	pass
77)	1,2,3-Trichlorobenzene	21.36	5.0	5.0	100%	70	130	pass

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H13.D
Acq On : 14 Jan 2015 16:58
Instrument: HP5973H
Operator : YNB
Sample : S15A050-SCV1
Misc : 5ug/L;WATER
ALS Vial : 35
Multiplier: 1

Quant Time: Jan 14 17:35:35 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.890	53	110711	5.000 ug/L	0.00
24) Fluorobenzene	7.825	96	1016564	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.787	117	676688	5.000 ug/L	0.00

System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.278	65	142920	5.113 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 102.20%	
39) Toluene-d8	10.391	98	1011083	5.039 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 100.80%	
56) 4-Bromofluorobenzene	14.843	95	290616	4.980 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 99.60%	
70) 1,2-Dichlorobenzene-d4	17.543	152	276058	4.941 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 98.80%	

$= \frac{142920(5)}{1016564(0.1)}$
$= 5.13$ ug/L
em 1/14/15

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.537	85	317032	5.757 ug/L	99
3) Chloromethane	1.732	50	378565	5.408 ug/L #	98
4) Vinyl chloride	1.835	62	392199	5.365 ug/L	99
5) Bromomethane	2.175	94	255895	4.780 ug/L	99
6) Chloroethane	2.291	64	269784	5.136 ug/L	98
7) Trichlorofluoromethane	2.583	101	505648	5.006 ug/L	94
8) 1,1-Dichloroethene	3.215	96	313475	4.509 ug/L	96
9) 1,1,2-Trichloro-1,2,2-...	3.246	101	268263	4.105 ug/L	98
10) Acetone	3.319	43	149059	35.029 ug/L	100
11) Carbon disulfide	3.477	76	1100232	4.777 ug/L	99
12) Dichloromethane	3.927	84	350585	4.597 ug/L #	96
14) trans-1,2-Dichloroethene	4.365	96	445357	5.101 ug/L	98
15) tert-Butyl methyl ethe...	4.413	73	2097365	22.298 ug/L	98
16) 1,1-Dichloroethane	5.034	63	645697	5.025 ug/L	100
19) 2,2-Dichloropropane	5.964	77	257276	4.432 ug/L	99
20) cis-1,2-Dichloroethene	5.976	96	242030	4.824 ug/L	99
21) 2-Butanone (MEK)	6.061	43	187835	38.253 ug/L	99
22) Bromochloromethane	6.347	128	75459	5.070 ug/L	97
23) Chloroform	6.518	83	382760	5.043 ug/L	100
25) 1,1,1-Trichloroethane	6.761	97	334922	5.107 ug/L	98
26) Carbon tetrachloride	7.016	117	278362	5.058 ug/L	100
27) 1,1-Dichloropropene	7.028	75	291919	5.155 ug/L	99
29) Benzene	7.351	78	1001562	5.186 ug/L	100
30) 1,2-Dichloroethane	7.399	62	171663	5.169 ug/L	98
32) Trichloroethene	8.409	95	241493	5.068 ug/L	98
33) 1,2-Dichloropropane	8.762	63	190159	5.022 ug/L	99
34) Dibromomethane	8.938	93	67332	5.103 ug/L	99
35) Bromodichloromethane	9.230	83	226370	5.066 ug/L	99
36) cis-1,3-Dichloropropene	9.972	75	238354	5.095 ug/L	99
38) 4-Methyl-2-pentanone (...	10.282	43	451178	41.804 ug/L	98
40) Toluene	10.501	92	667749	5.059 ug/L	100
41) trans-1,3-Dichloropropene	10.908	75	165324	4.887 ug/L	98
42) 1,1,2-Trichloroethane	11.194	83	86027	5.118 ug/L	95

$= \frac{317032(5)}{110711(2.48)}$
$= 5.757$ ug/L
em 1/14/15

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H13.D
Acq On : 14 Jan 2015 16:58
Instrument: HP5973H
Operator : YNB
Sample : S15A050-SCV1
Misc : 5ug/L;WATER
ALS Vial : 35
Multiplier: 1

Quant Time: Jan 14 17:35:35 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
43) Tetrachloroethene	11.395	166	257527	4.873 ug/L	99
44) 1,3-Dichloropropane	11.456	76	186616	5.027 ug/L	99
45) 2-Hexanone	11.674	43	285733	41.300 ug/L	99
46) Chlorodibromomethane	11.820	129	127137	5.041 ug/L	100
47) 1,2-Dibromoethane (EDB)	11.972	107	89754	5.079 ug/L	99
48) Chlorobenzene	12.836	112	662589	5.029 ug/L	100
49) 1,1,1,2-Tetrachloroethane	13.000	131	189965	5.098 ug/L	97
50) Ethylbenzene	13.061	91	1262263	5.160 ug/L	99
51) m&p-Xylene	13.280	106	1051830	10.058 ug/L	99
52) o-Xylene	13.949	106	482698	5.172 ug/L	99
53) Styrene	13.973	104	746905	5.126 ug/L	100
54) Bromoform	14.247	173	59541	5.067 ug/L	95
55) Isopropylbenzene	14.612	105	1275942	5.273 ug/L	99
57) Bromobenzene	15.068	156	235332	5.031 ug/L	100
58) 1,1,2,2-Tetrachloroethane	15.159	83	99499	5.066 ug/L	100
59) 1,2,3-Trichloropropane	15.196	75	71066	5.035 ug/L	98
60) Propylbenzene	15.342	91	1523139	5.275 ug/L	100
61) 2-Chlorotoluene	15.439	91	864722	5.169 ug/L	99
62) 4-Chlorotoluene	15.640	91	986363	5.103 ug/L	99
63) 1,3,5-Trimethylbenzene	15.676	105	1103049	5.210 ug/L	99
64) tert-Butylbenzene	16.235	119	916825	5.218 ug/L	100
65) 1,2,4-Trimethylbenzene	16.321	105	1085022	5.174 ug/L	99
66) sec-Butylbenzene	16.625	105	1370885	5.287 ug/L	100
67) 1,3-Dichlorobenzene	16.758	146	551812	5.068 ug/L	99
68) p-Isopropyltoluene	16.910	119	1210628	5.114 ug/L	100
69) 1,4-Dichlorobenzene	16.923	146	565301	5.004 ug/L	100
71) 1,2-Dichlorobenzene	17.573	146	429869	5.012 ug/L	99
72) Butylbenzene	17.646	91	1083285	5.193 ug/L	99
73) 1,2-Dibromo-3-chloropr...	18.984	75	12581	4.855 ug/L	94
74) 1,2,4-Trichlorobenzene	20.492	180	286697	4.829 ug/L	99
75) Hexachlorobutadiene	20.857	225	170792	4.745 ug/L	99
76) Naphthalene	20.912	128	353025	5.173 ug/L	100
77) 1,2,3-Trichlorobenzene	21.362	180	227617	4.984 ug/L	99

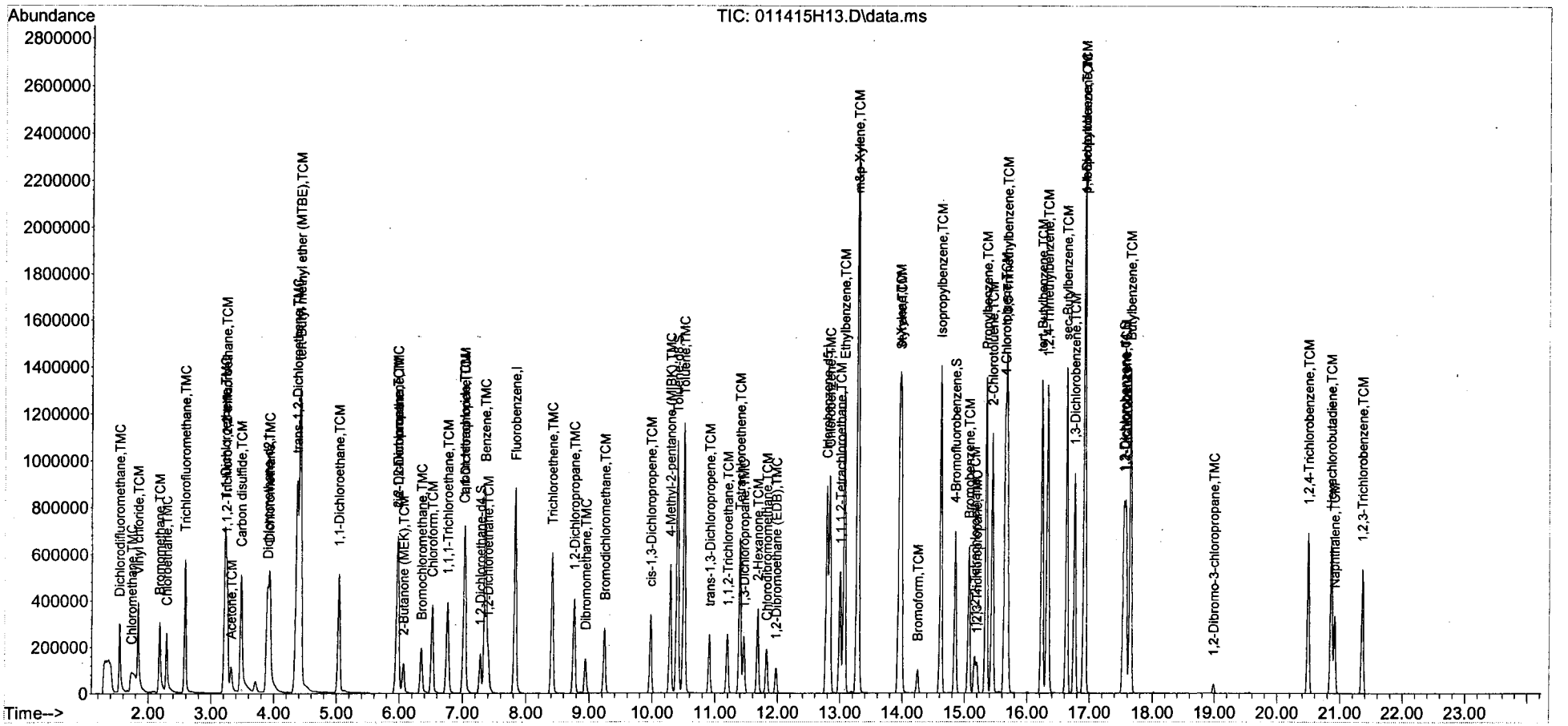
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\011415HVW\
Data File : 011415H13.D
Acq On : 14 Jan 2015 16:58
Instrument: HP5973H
Operator : YNB
Sample : S15A050-SCV1
Misc : 5ug/L;WATER
ALS Vial : 35
Multiplier: 1

Quant Time: Jan 14 17:35:35 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:011415HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\011415HVW.M



Instrument: PECLA RUS-1

Analysis Date: 01.13.15

INITIAL CALIBRATION DATA

Response Factor Report PECLARUS

Method Path : C:\msdchem\1\METHODS\2015\
Method File : 011315PERKEN.M
Title : Volatile Organic Analysis - 524.2 Method
Last Update : Tue Jan 13 14:04:43 2015
Response Via : Initial Calibration

Calibration Files
0.5 =011315pe12.D 1.0 =011315pe11.D 2.0 =011315pe10.D 5.0 =011315pe09.D
10.0=011315pe08.D 25.0=011315pe07.D

		Compound	0.5	1.0	2.0	5.0	10.0	25.0	Avg	%RSD
1)	I	Dichloromethane-d2	----------ISTD----------							
2)	TMC	Dichlorodifluo...	1.313	1.321	1.307	1.272	1.199	1.166	1.263	5.17
3)	TMC	Chloromethane	2.381	2.368	2.318	2.319	2.262	2.121	2.295	4.14
4)	TCM	Vinyl chloride	1.246	1.248	1.249	1.256	1.201	1.150	1.225	3.41
5)	TCM	Bromomethane	0.697	0.577	0.532	0.531	0.510	0.424	0.545	16.46
6)	TMC	Chloroethane	0.878	0.839	0.773	0.827	0.721	0.684	0.787	9.44
7)	TMC	Trichlorofluor...	1.261	1.242	1.224	1.190	1.170	1.159	1.207	3.39
8)	TMC	1,1-Dichloroet...	1.097	1.007	0.981	0.992	0.992	0.971	1.007	4.56
9)	TCM	1,1,2-Trichlor...	0.987	1.030	1.002	0.930	0.890	0.904	0.957	5.94
10)	TCM	Acetone	0.372	0.301	0.222	0.192	0.187	0.165	0.240	33.54#
11)	TCM	Carbon disulfide	1.310	1.298	1.388	1.410	1.577	1.736	1.453	11.76
12)	TMC	Dichloromethane	1.825	1.597	1.384	1.333	1.271	1.213	1.437	16.09
13)	TCM	tert-Butyl alc...	0.041	0.048	0.043	0.046	0.050	0.048	0.046	7.47
14)	TMC	trans-1,2-Dich...	1.238	1.163	1.074	1.095	1.107	1.094	1.128	5.44
15)	TCM	tert-Butyl met...	1.557	1.677	1.641	1.624	1.590	1.534	1.604	3.35
16)	TCM	1,1-Dichloroet...	1.748	1.839	1.802	1.872	1.873	1.898	1.839	3.02
17)	TMC	Diisopropyl ether	3.774	4.171	4.056	4.024	3.749	2.785	3.760	13.45
18)	TCM	Ethyl-tert-but...	1.751	1.957	1.996	2.036	2.006	1.937	1.947	5.26
19)	TCM	2,2-Dichloropr...	0.615	0.516	0.513	0.614	0.543	0.603	0.568	8.60
20)	TMC	cis-1,2-Dichlo...	1.685	1.318	1.218	1.743	1.195	1.286	1.407	17.22
21)	TCM	2-Butanone (MEK)	0.531	0.314	0.429	0.415	0.418	0.386	0.416	16.93
22)	TMC	Bromochloromet...	0.646	0.719	0.706	0.711	0.721	0.732	0.706	4.30
23)	TCM	Chloroform	2.415	2.669	2.670	2.853	2.863	2.962	2.739	7.18
24)	I	Fluorobenzene	----------ISTD----------							
25)	TCM	1,1,1-Trichlor...	0.069	0.070	0.074	0.080	0.087	0.105	0.081	16.93
26)	TCM	Carbon tetrach...	0.072	0.066	0.075	0.077	0.083	0.099	0.079	14.69
27)	TCM	1,1-Dichloropr...	0.139	0.150	0.153	0.146	0.138	0.140	0.144	4.35
28)	S	1,2-Dichloroet...	0.173	0.171	0.176	0.180	0.186	0.190	0.179	4.17
29)	TMC	Benzene	0.566	0.589	0.599	0.588	0.560	0.538	0.573	3.97
30)	TCM	1,2-Dichloroet...	0.103	0.108	0.107	0.110	0.110	0.111	0.108	2.79
31)	TCM	tert-Amyl meth...	0.114	0.123	0.127	0.137	0.143	0.146	0.132	9.37
32)	TMC	Trichloroethene	0.130	0.126	0.130	0.126	0.121	0.122	0.126	3.28
33)	TMC	1,2-Dichloropr...	0.111	0.119	0.118	0.119	0.117	0.120	0.117	2.95
34)	TMC	Dibromomethane	0.043	0.044	0.044	0.047	0.049	0.053	0.047	8.03
35)	TCM	Bromodichlorom...	0.085	0.087	0.090	0.097	0.107	0.127	0.099	16.41
36)	TCM	cis-1,3-Dichlo...	0.076	0.077	0.081	0.091	0.101	0.122	0.091	19.21
37)	I	Chlorobenzene-d5	----------ISTD----------							
38)	TMC	4-Methyl-2-pen...	0.077	0.082	0.081	0.087	0.089	0.088	0.084	5.41
39)	S	Toluene-d8	1.323	1.334	1.333	1.358	1.376	1.387	1.352	1.92
40)	TMC	Toluene	0.400	0.412	0.420	0.437	0.432	0.434	0.423	3.50
41)	TCM	trans-1,3-Dich...	0.063	0.069	0.071	0.078	0.084	0.100	0.077	17.12
42)	TCM	1,1,2-Trichlor...	0.110	0.115	0.119	0.119	0.113	0.110	0.114	3.67
43)	TCM	Tetrachloroethene	0.156	0.177	0.173	0.170	0.166	0.165	0.168	4.33
44)	TMC	1,3-Dichloropr...	0.205	0.216	0.213	0.207	0.196	0.186	0.204	5.49
45)	TCM	2-Hexanone	0.044	0.049	0.050	0.055	0.057	0.058	0.052	10.48
46)	TCM	Chlorodibromom...	0.059	0.075	0.073	0.078	0.084	0.099	0.078	16.84
47)	TMC	1,2-Dibromoeth...	0.073	0.082	0.082	0.086	0.085	0.088	0.083	6.17
48)	TMC	Chlorobenzene	0.453	0.481	0.475	0.482	0.468	0.462	0.470	2.43
49)	TCM	1,1,1,2-Tetrac...	0.083	0.094	0.100	0.110	0.118	0.132	0.106	16.32
50)	TCM	Ethylbenzene	0.693	0.744	0.777	0.808	0.811	0.752	0.764	5.80
51)	TCM	m&p-Xylene	0.245	0.273	0.278	0.296	0.292	0.299	0.281	7.26
52)	TCM	o-Xylene	0.231	0.258	0.264	0.285	0.282	0.293	0.269	8.42
53)	TCM	Styrene	0.369	0.411	0.414	0.452	0.451	0.471	0.428	8.66

2 out
yrB
01.13.15
D.W
non-reg. O.K

00233

Method Path : C:\msdchem\1\METHODS\2015\
Method File : 011315PERKEN.M
Title : Volatile Organic Analysis - 524.2 Method

54)	TCM	Bromoform	0.029	0.032	0.031	0.036	0.037	0.045	0.035	16.01
55)	TCM	Isopropylbenzene	0.561	0.613	0.655	0.688	0.682	0.679	0.646	7.77
56)	S	4-Bromofluorob...	0.430	0.441	0.442	0.456	0.468	0.471	0.451	3.64
57)	TCM	Bromobenzene	0.158	0.169	0.165	0.172	0.175	0.177	0.169	4.09
58)	TCM	1,1,2,2-Tetrac...	0.115	0.113	0.114	0.119	0.123	0.128	0.119	4.98
59)	TMC	1,2,3-Trichlor...	0.087	0.089	0.088	0.093	0.093	0.092	0.090	2.96
60)	TCM	Propylbenzene	0.746	0.809	0.869	0.928	0.938	0.802	0.849	8.99
61)	TCM	2-Chlorotoluene	0.465	0.520	0.534	0.568	0.579	0.594	0.543	8.65
62)	TCM	4-Chlorotoluene	0.531	0.608	0.624	0.665	0.677	0.693	0.633	9.37
63)	TCM	1,3,5-Trimethy...	0.544	0.603	0.630	0.671	0.663	0.650	0.627	7.59
64)	TCM	tert-Butylbenzene	0.460	0.502	0.529	0.556	0.559	0.561	0.528	7.66
65)	TCM	1,2,4-Trimethy...	0.560	0.644	0.658	0.708	0.703	0.674	0.658	8.19
66)	TCM	sec-Butylbenzene	0.631	0.677	0.722	0.754	0.746	0.718	0.708	6.51
67)	TCM	1,3-Dichlorobe...	0.313	0.329	0.328	0.350	0.353	0.362	0.339	5.50
68)	TCM	p-Isopropyltol...	0.550	0.620	0.652	0.684	0.684	0.674	0.644	8.11
69)	TCM	1,4-Dichlorobe...	0.302	0.323	0.326	0.344	0.347	0.356	0.333	5.92
70)	S	1,2-Dichlorobe...	0.413	0.417	0.427	0.430	0.431	0.439	0.426	2.25
71)	TCM	1,2-Dichlorobe...	0.307	0.336	0.329	0.335	0.331	0.335	0.329	3.41
72)	TCM	Butylbenzene	0.554	0.604	0.649	0.694	0.702	0.683	0.648	9.03
73)	TMC	1,2-Dibromo-3-...	0.007	0.007	0.008	0.008	0.010	0.013	0.009#	23.67
74)	TCM	1,2,4-Trichlor...	0.193	0.224	0.228	0.249	0.258	0.268	0.237	11.50
75)	TCM	Hexachlorobuta...	0.092	0.098	0.099	0.106	0.106	0.116	0.103	7.93
76)	TCM	Naphthalene	0.321	0.346	0.360	0.405	0.437	0.455	0.387	13.76
77)	TCM	1,2,3-Trichlor...	0.181	0.197	0.204	0.221	0.226	0.233	0.210	9.45

non-Reg. OK

(#) = Out of Range

USEPA REGION 9 VOLATILE ORGANICS RUN LOG

SOP: ☒354 (Water) ☐305 (Solid, Low) ☐305 (Solid, Medium) ☐353 LLVOC

INST. ID: PEClarus-1

EM Voltage: 260

LIMS Batch: B15A047

LIMS Seq.: S15A042

Purge Vol, mL: 25

BFB STD ID: 1453027

IS/Surr ID: 1502039

IS/Surr Volume: 1µL

MS SPK ID: —

BS SPK ID: 1502064

	Date Analyzed	Time Analyzed	Analyst	File Name	Laboratory ID	Vial ID	Initial Volume, mL /Weight, g	MeOH Used, uL	Final Volume, mL	Archon DF	STD Amounts (uL) CAL	BS	MS	pH	Comments
1	01.13.15	8:26	YNB	0113 15PE01	PREP	—	—	—	—	—	—	—	—	—	
2		8:39		02		—	—	—	—	—	—	—	—	—	
3		8:53		03		—	—	—	—	—	—	—	—	—	
4		9:03		04	S15A042-Rem1	—	—	—	—	—	—	—	—	—	
5		9:27		05	blank	—	—	—	—	—	—	—	—	—	
6		10:00		06	blank	—	—	—	—	—	—	—	—	—	
7		10:35		07	S15A042-CAL6	—	50	—	—	—	50	—	—	—	
8		11:09		08	-CAL5	—	50	—	—	—	20	—	—	—	
9		11:43		09	-CAL4	—	50	—	—	—	10	—	—	—	
10		12:17		10	-CAL3	—	50	—	—	—	4	—	—	—	
11		12:51		11	-CAL2	—	50	—	—	—	2	—	—	—	
12		13:25		12	-CAL1	—	50	—	—	—	1	—	—	—	
13		18:59		13	-SQ1	—	50	—	—	—	—	10	—	—	
14		14:33		14	B15A047-BS1	—	50	—	—	—	—	10	—	—	
15		15:08		15	blank	—	—	—	—	—	—	—	—	—	
16		15:47		16	B15A047-Rem1	—	—	—	—	—	—	—	—	—	
17		16:20		17	-BS2	—	50	—	—	—	—	10	—	—	
18		16:53		18	1501006-10	A	—	—	—	—	—	—	—	—	
19		17:25		19	-12	A	—	—	—	—	—	—	—	—	
20		17:57		20	-11	A	—	—	—	—	—	—	—	—	
21		18:30		21	-10RE1	A	—	—	—	5x	—	—	—	—	
22		18:02		22	-12RE1	A	—	—	—	5x	—	—	—	—	N4
23		19:34		23	-11RE1	A	—	—	—	5x	—	—	—	—	N4
24		19:02		24	blank	—	—	—	—	—	—	—	—	—	
		19:34		25	S15A042-ccv1	—	50	—	—	—	10	—	—	—	
		20:07		26	-ccv2	—	50	—	—	—	10	—	—	—	

[1] Manual integration performed

VOCrunlog Ins. PEClarus-1 .xlsx

USEPA REGION 9 LABORATORY

Reviewed: [signature] Date: 1/14/1

Injection Log

Directory: i:\DATA\ROOM201\PECLARUS-1\2015\DATA\011315PE

Line	Vial	FileName	Multiplier	SampleName		Misc Info	Injected
1	100	011315pe01.d	1.	S15A042-TUN1		TUNE 0.5ng	13 Jan 2015 20:26
2	100	011315pe02.d	1.	S15A042-TUN1	PREPS NU	TUNE 0.5ng	13 Jan 2015 20:39
3	100	011315pe03.d	1.	S15A042-TUN1		TUNE 0.5ng	13 Jan 2015 20:53
4	101	011315pe04.d	1.	S15A042-TUN1		TUNE 0.5ng	13 Jan 2015 21:03
5	1	011315pe05.d	1.	BLANK		BLANK,WATER	13 Jan 2015 21:27
6	2	011315pe06.d	1.	BLANK		BLANK,WATER	13 Jan 2015 22:00
7	3	011315pe07.d	1.	S15A042-CAL6		25ug/L,WATER	13 Jan 2015 22:35
8	4	011315pe08.d	1.	S15A042-CAL5		10ug/L,WATER	13 Jan 2015 23:09
9	5	011315pe09.d	1.	S15A042-CAL4		5ug/L,WATER	13 Jan 2015 23:43
10	6	011315pe10.d	1.	S15A042-CAL3		2ug/L,WATER	13 Jan 2015 12:17
11	7	011315pe11.d	1.	S15A042-CAL2		1ug/L,WATER	13 Jan 2015 12:51
12	8	011315pe12.d	1.	S15A042-CAL1		0.5ug/L,WATER	13 Jan 2015 25:25
13	9	011315pe13.d	1.	S15A042-SCV1		5ug/L,SECOND,WATER	13 Jan 2015 25:59
14	10	011315pe14.d	1.	B15A047-BS1	B15A047-BS	5ug/L,WATER 5...	13 Jan 2015 26:33
15	11	011315pe15.d	1.	BLANK		BLANK,WATER	13 Jan 2015 27:08
16	12	011315pe16.d	1.	B15A047-BLK1		BLANK,WATER	13 Jan 2015 27:42
17	13	011315pe17.d	1.	B15A047-BS2		SPIKE,WATER	13 Jan 2015 28:15
18	14	011315pe18.d	1.	1501006-10	OC	#842,WATER	13 Jan 2015 28:47
19	15	011315pe19.d	1.	1501006-12		UNREG,WATER	13 Jan 2015 29:20
20	16	011315pe20.d	1.	1501006-11		REG,WATER	13 Jan 2015 29:53
21	17	011315pe21.d	1.	1501006-10RE1		5X,HAL,WATER	13 Jan 2015 30:25
22	18	011315pe22.d	1.	1501006-12RE1	NU	5X,UNREG,WATER	13 Jan 2015 30:57
23	19	011315pe23.d	1.	1501006-11RE1		5X,REG,WATER	13 Jan 2015 31:30
24	20	011315pe24.d	1.	BLANK		BLANK,WATER	13 Jan 2015 32:02
25	21	011315pe25.d	1.	S15A042-CCV1	CK	5ug/L,WATER	13 Jan 2015 32:34 OK
26	22	011315pe26.d	1.	S15A042-CCV2		5ug/L,WATER	13 Jan 2015 33:07

YMB
01.14.15

14 Jan 2015 10:04

00236

ANALYSIS SEQUENCE

Instrument: PEClarus-1

Calibration ID: 1501006

S15A042

Printed: 1/14/2015 9:58:49AM

Lab Number	Sample Name	Analysis	Container	Order	Position	STD ID	ISTD ID	Comments
S15A042-TUN1	MS Tune	QC		1		1453027		
S15A042-ICB1	Initial Cal Blank	QC		2				
S15A042-CAL1	Cal Standard	QC		3		1503034		
S15A042-CAL2	Cal Standard	QC		4		1503035		
S15A042-CAL3	Cal Standard	QC		5		1503036		
S15A042-CAL4	Cal Standard	QC		6		1503037		
S15A042-CAL5	Cal Standard	QC		7		1503038		
S15A042-CAL6	Cal Standard	QC		8		1503039		
S15A042-SCV1	Secondary Cal Check	QC		9		1502068		
B15A047-BLK1	Blank	QC		10				
B15A047-BS1	LCS	QC		11				
B15A047-BS2	LCS	QC		12				
1501006-10	Halomethanes #842	VOCs	A	13				THMs
1501006-10RE1	Halomethanes #842	VOCs	A	14				THMs
1501006-11	Regulated Volatiles #840	VOCs	A	15				
1501006-11RE1	Regulated Volatiles #840	VOCs	A	16				Added 1/14/2015 by YNB
1501006-12	Unregulated Volatiles #841	VOCs	A	17				
1501006-12RE1	Unregulated Volatiles #841	VOCs	A	18				Added 1/14/2015 by YNB
S15A042-CCV1	50ppb	QC		19		1503037		
S15A042-CCV2	CCV 2F18002	QC		20		1503037		

J2295

YNB 01.14.15

Samples Loaded By — Date

YNB 01.14.15

Data Processed By — Date

GC/MS QA-QC Check Report

Tune File : C:\D Data\2015\011315PE\011315pe04.D
Tune Time : 13 Jan 2015 09:03

Daily Calibration File : C:\D Data\2015\011315PE\011315pe09.D

File	Sample	Surrogate Recovery %				Internal Standard Responses			
						611867	9649400	6684650	
011315pe05.D	BLANK	84	119*	97	92	611265	11789566	6370535	
011315pe06.D	BLANK	93	101	99	96	587501	10443188	6692142	
011315pe07.D	S15A042-CAL6	106	103	104	103	611247	8853136	6561855	
011315pe08.D	S15A042-CAL5	104	102	104	101	595867	9105745	6522668	
011315pe09.D	S15A042-CAL4	101	100	101	101	611867	9649396	6684653	
011315pe10.D	S15A042-CAL3	98	99	98	100	631261	10184022	6912680	
011315pe11.D	S15A042-CAL2	95	99	98	98	614838	10132732	6752641	
011315pe12.D	S15A042-CAL1	97	98	95	97	621115	10269402	6939066	
011315pe13.D	S15A042-SCV1	97	100	99	102	612134	9806986	6583849	
011315pe14.D	B15A047-BS1	101	100	99	102	614946	9241679	6562087	
011315pe15.D	BLANK	0*	0*	0*	0*	0*	0*	0*	
011315pe16.D	B15A047-BLK1	96	97	91	95	590522	10180931	6847668	
011315pe17.D	B15A047-BS2	98	101	97	99	572043	9396900	6468030	
011315pe18.D	1501006-10	96	99	92	93	595909	10271634	6914447	
011315pe19.D	1501006-12	94	102	95	97	595851	10435623	6614617	
011315pe20.D	1501006-11	94	97	95	96	616367	10511507	6772426	
011315pe21.D	1501006-10RE1	95	101	92	93	595673	10408605	6850288	5X
011315pe22.D	1501006-12RE1	93	102	91	93	583108	10629706	6703954	5X NU
011315pe23.D	1501006-11RE1	95	99	92	92	600534	10688518	6868486	5X NU

011315pe24.D								
	BLANK	94	101	90	92	586514	10633679	6845002
011315pe25.D								
	S15A042-CCV1	97	103	94	97	586587	9930077	6575371
011315pe26.D								
(fails)	S15A042-CCV2	95	102	93	95	569729	9838078	6550484

(fails) - fails 12hr time check * - fails criteria

Created: Wed Jan 14 07:48:42 2015 PECLARUS

Compound List Report PECLARUS

Method Path : C:\msdchem\1\METHODS\2015\
Method File : 011315PERKEN.M
Title : Volatile Organic Analysis - 524.2 Method
Last Update : Tue Jan 13 14:04:43 2015
Response Via : Initial Calibration

Total Cpnds : 77

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Dichloromethane-d2	53	4.915	1.000	A	3	A	B
2	T	Dichlorodifluoromethane	85	1.787	0.364	A	1	A	B
3	T	Chloromethane	50	2.035	0.414	A	3	A	B
4	T	Vinyl chloride	62	2.170	0.441	A	2	A	B
5	T	Bromomethane	94	2.642	0.538	A	1	A	B
6	T	Chloroethane	64	2.792	0.568	A	1	A	B
7	T	Trichlorofluoromethane	101	3.115	0.634	A	1	A	B
8	T	1,1-Dichloroethene	96	3.979	0.810	A	2	A	B
9	T	1,1,2-Trichloro-1,2,2-trifl...	101	3.940	0.802	A	2	A	B
10	T	Acetone	43	4.272	0.869	A	1	A	B
11	T	Carbon disulfide	76	4.293	0.873	A	1	A	B
12	T	Dichloromethane	84	4.953	1.008	A	2	A	B
13	T	tert-Butyl alcohol	59	5.298	1.078	A	2	A	B
14	T	trans-1,2-Dichloroethene	96	5.328	1.084	A	2	A	B
15	T	tert-Butyl methyl ether (MTBE)	73	5.341	1.087	A	2	A	B
16	T	1,1-Dichloroethane	63	6.136	1.248	A	2	A	B
17	T	Diisopropyl ether	45	6.176	1.256	A	2	A	B
18	T	Ethyl-tert-butyl ether	59	6.776	1.379	A	1	A	B
19	T	2,2-Dichloropropane	77	7.044	1.433	A	2	A	B
20	T	cis-1,2-Dichloroethene	96	7.113	1.447	A	2	A	B
21	T	2-Butanone (MEK)	43	7.247	1.474	A	2	A	B
22	T	Bromochloromethane	128	7.515	1.529	A	2	A	B
23	T	Chloroform	83	7.652	1.557	A	2	A	B
24	I	Fluorobenzene	96	8.948	1.000	A	2	A	B
25	T	1,1,1-Trichloroethane	97	7.837	0.876	A	2	A	B
26	T	Carbon tetrachloride	117	8.027	0.897	A	1	A	B
27	T	1,1-Dichloropropene	75	8.109	0.906	A	2	A	B
28	S	1,2-Dichloroethane-d4	65	8.505	0.951	A	2	A	B
29	T	Benzene	78	8.438	0.943	A	1	A	B
30	T	1,2-Dichloroethane	62	8.633	0.965	A	2	A	B
31	T	tert-Amyl methyl ether	73	8.640	0.966	A	2	A	B
32	T	Trichloroethene	95	9.510	1.063	A	2	A	B
33	T	1,2-Dichloropropane	63	9.968	1.114	A	2	A	B
34	T	Dibromomethane	93	10.157	1.135	A	2	A	B
35	T	Bromodichloromethane	83	10.420	1.165	A	2	A	B
36	T	cis-1,3-Dichloropropene	75	11.176	1.249	A	2	A	B
37	I	Chlorobenzene-d5	117	13.983	1.000	A	1	A	B
38	T	4-Methyl-2-pentanone (MIBK)	43	11.463	0.820	A	2	A	B
39	S	Toluene-d8	98	11.502	0.823	A	1	A	B
40	T	Toluene	92	11.613	0.830	A	1	A	B
41	T	trans-1,3-Dichloropropene	75	12.153	0.869	A	2	A	B
42	T	1,1,2-Trichloroethane	83	12.453	0.891	A	2	A	B
43	T	Tetrachloroethene	166	12.460	0.891	A	2	A	B
44	T	1,3-Dichloropropane	76	12.731	0.910	A	1	A	B
45	T	2-Hexanone	43	12.866	0.920	A	1	A	B
46	T	Chlorodibromomethane	129	13.038	0.932	A	2	A	B
47	T	1,2-Dibromoethane (EDB)	107	13.233	0.946	A	2	A	B
48	T	Chlorobenzene	112	14.034	1.004	A	2	A	B
49	T	1,1,1,2-Tetrachloroethane	131	14.205	1.016	A	2	A	B
50	T	Ethylbenzene	91	14.186	1.014	A	1	A	B
51	T	m&p-Xylene	106	14.403	1.030	A	1	A	B
52	T	o-Xylene	106	15.096	1.080	A	1	A	B
53	T	Styrene	104	15.154	1.084	A	2	A	B
54	T	Bromoform	173	15.488	1.108	A	2	A	B

55	T	Isopropylbenzene	105	15.731	1.125	A	1	A	B
56	S	4-Bromofluorobenzene	95	16.078	1.150	A	2	A	B
57	T	Bromobenzene	156	16.303	1.166	A	2	A	B
58	T	1,1,2,2-Tetrachloroethane	83	16.437	1.175	A	2	A	B
59	T	1,2,3-Trichloropropane	75	16.506	1.180	A	1	A	B
60	T	Propylbenzene	91	16.467	1.178	A	1	A	B
61	T	2-Chlorotoluene	91	16.647	1.190	A	1	A	B
62	T	4-Chlorotoluene	91	16.858	1.206	A	1	A	B
63	T	1,3,5-Trimethylbenzene	105	16.806	1.202	A	1	A	B
64	T	tert-Butylbenzene	119	17.354	1.241	A	2	A	B
65	T	1,2,4-Trimethylbenzene	105	17.479	1.250	A	1	A	B
66	T	sec-Butylbenzene	105	17.757	1.270	A	1	A	B
67	T	1,3-Dichlorobenzene	146	17.997	1.287	A	2	A	B
68	T	p-Isopropyltoluene	119	18.034	1.290	A	2	A	B
69	T	1,4-Dichlorobenzene	146	18.179	1.300	A	2	A	B
70	S	1,2-Dichlorobenzene-d4	152	18.817	1.346	A	2	A	B
71	T	1,2-Dichlorobenzene	146	18.852	1.348	A	2	A	B
72	T	Butylbenzene	91	18.779	1.343	A	1	A	B
73	T	1,2-Dibromo-3-chloropropane	75	20.332	1.454	A	2	A	B
74	T	1,2,4-Trichlorobenzene	180	21.772	1.557	A	2	A	B
75	T	Hexachlorobutadiene	225	22.005	1.574	A	2	A	B
76	T	Naphthalene	128	22.228	1.590	A	2	A	B
77	T	1,2,3-Trichlorobenzene	180	22.635	1.619	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

011315PERKEN.M Tue Jan 13 14:05:05 2015

Edit Compounds -- Compound 429 -- Benzene

Search by: Ret Time | Name | Index | Find Compound

- Compound Database
- Dichloromethane-d2
- Fluorobenzene
  - 1,1,1-Trichloroethane
  - Carbon tetrachloride
  - 1,1-Dichloropropene
  - 1,2-Dichloroethane-d4
  - Benzene
  - 1,2-Dichloroethane
  - tert-Amyl methyl ether
  - Trichloroethene
  - 1,2-Dichloropropane
  - Dibromomethane
  - Bromodichloromethane
  - cis-1,3-Dichloropropene
- Chlorobenzene-d5

Identification | Calibration | User-Defined | Advanced | Reporting

Name: Benzene Concentration Units: ug/L Compound Type: TMC

Signals to Be Used for Quantitation

Ret Time: 8.438 RRT: 0.943

Extract signals from: 0.200 + 0.300 (Min / %)

This is 8.238 to 8.738 minutes

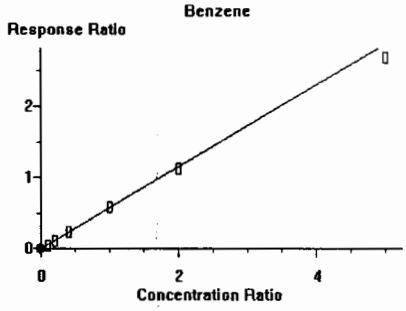
Quant signal: Target Ion % Uncertainty

m/z	Relative Response	Abs
Target	78.00	100.00
Q1	77.00	22.80	20.00
Q2	0.00	0.00	20.00
Q3	0.00	0.00	20.00

Quantitation Options

Quantitation type	Target compound
Sample ISTD Concentration	-1.000000
Measure response by	Area
Identify by	Meets qualifiers, Best RT
Maximum number of hits	9
Subtraction Method	Extend Area Quant
Curve Fit	Avg of Response Factors
Weight	Equal weighting

Level	Concentration	Response
0.5	0.500000	580819.000000
1.0	1.000000	1193707.000000
2.0	2.000000	2441612.000000
5.0	5.000000	5669069.000000
10.0	10.000000	10202738.000000
25.0	25.000000	23822382.000000
CC	5.000000	5669069.000000

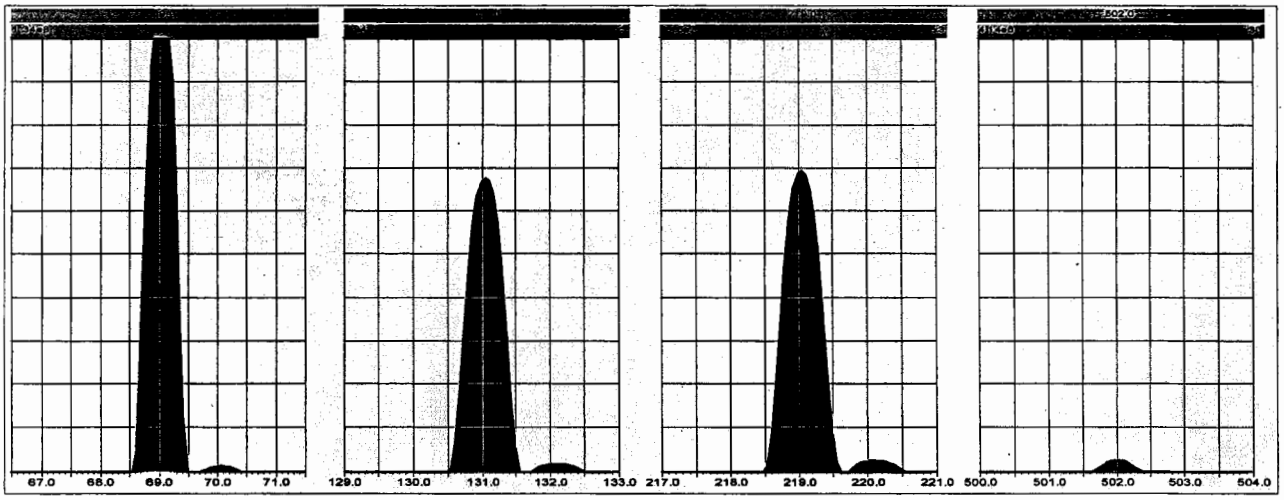


OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

TURBOMASS Tune Parameters

Parameter File: C:\TurboMass\EPA 524.PRO\ACQUDB\011315T.IPR

Printed : Tue Jan 13 09:00:40 2015



Source (EI+)	Settings	Readbacks
Source Temp (C)	260	260
GCLine Temp (C)	240	238
Electron Energy	70	-70
Trap Emission	100	101
Filament Current		1.92
Source Current		-242
Repeller	2.2	2.2
Lens 1	2.0	-2.0
Lens 2	90.0	-90.8

Analyser	Settings
LM Resolution	12.6
HM Resolution	14.6
Ion Energy (V)	1.1
Ion Energy Ramp	3.6
Multiplier (V)	1565

Pressure Gauges	ReadBacks
Wide Range	8.51e-6

Report: BFB 524.2 TEST Test Passed

Printed: Tue Jan 13 09:08:51 2015

File: C:\TurboMass\EPA 524.PRO\Data\011315PE04.RAW

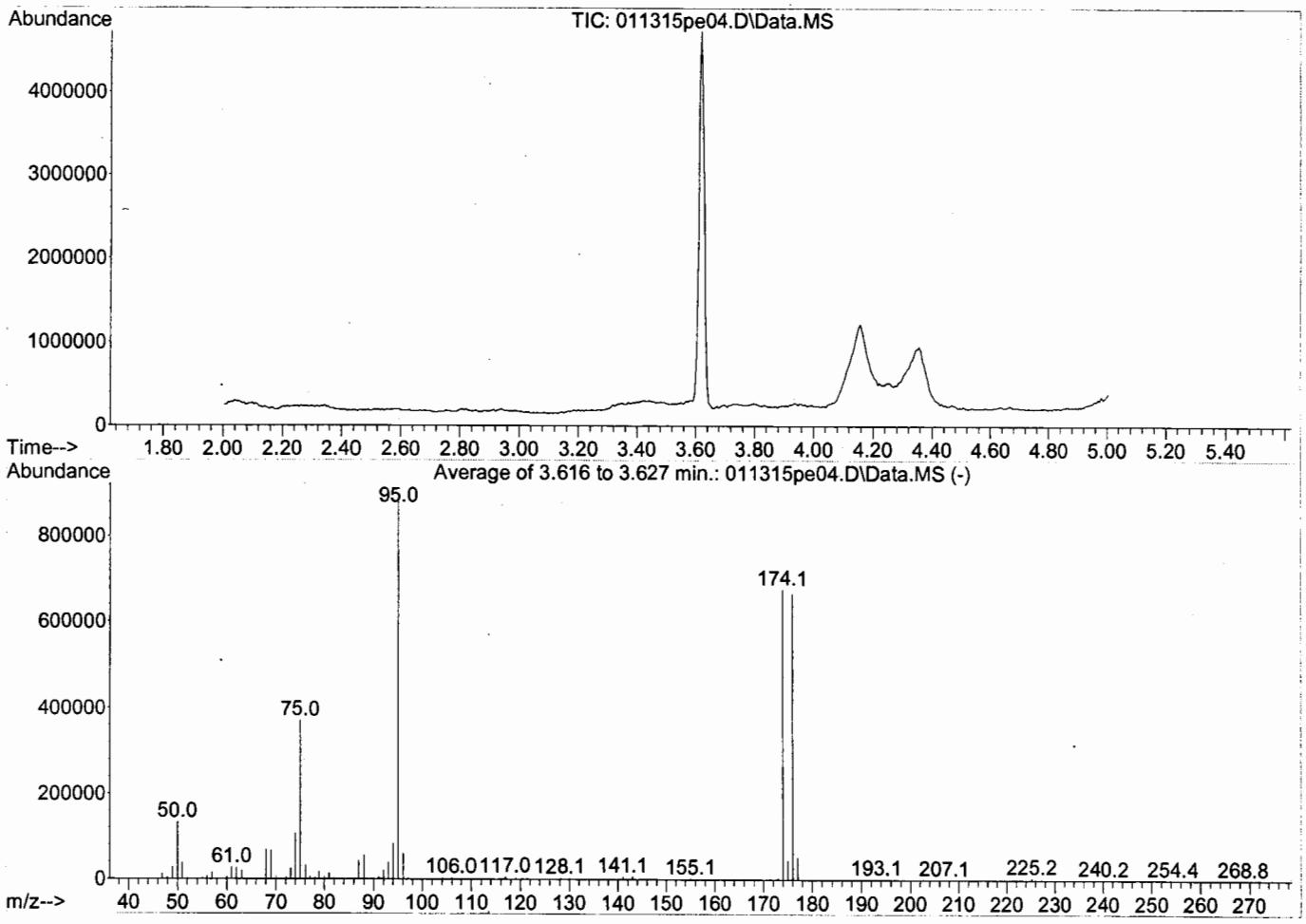
Mass	Ref Mass		Condition	Result
			COMBINE(276:280)-(258:272)	Pass
50	95	15.2%	>= 15% and <= 40%	Pass
75	95	42.0%	>= 30% and <= 80%	Pass
95	BPI	100%	= 100%	Pass
96	95	6.9%	>= 5% and <= 9%	Pass
173	174	0.5%	< 2%	Pass
174	95	78.6%	> 50% and < 100%	Pass
175	174	6.3%	>= 5% and <= 9%	Pass
176	174	98.1%	> 95% and < 101%	Pass
177	176	7.5%	>= 5% and <= 9%	Pass

BFB

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe04.D
Acq On : 13 Jan 2015 09:03
Operator : YNB
Sample : S15A042-TUN1
Misc : TUNE 0.5ng
ALS Vial : 101 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Title : Volatile Organic Analysis - 524.2 Method
Last Update : Wed Jan 07 13:15:12 2015



AutoFind: Scans 277, 278, 279; Background Corrected with Scan 269

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.2	133667	PASS
75	95	30	80	42.1	370595	PASS
95	95	100	100	100.0	879608	PASS
96	95	5	9	6.7	59366	PASS
173	174	0.00	2	0.5	3505	PASS
174	95	50	120	76.8	675858	PASS
175	174	5	9	6.5	43617	PASS
176	174	95	101	98.4	665181	PASS
177	176	5	9	7.7	50946	PASS

Average of 3.616 to 3.627 min.: 011315pe04.D\Data.MS
S15A042-TUN1
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
46.15	812	57.90	181	70.05	5865	80.95	13825
46.90	11990	58.15	989	71.00	47	81.95	3124
47.95	4170	60.00	5018	72.05	4535	83.05	535
48.95	27686	60.95	27377	73.00	25776	83.90	712
50.00	133667	61.95	25688	74.00	107158	86.00	2216
50.95	38036	63.00	19374	75.00	370595	86.95	42424
51.95	1486	64.00	1624	76.05	32131	88.00	55101
52.95	1048	65.25	643	77.00	5424	88.95	283
55.05	2741	67.00	766	78.10	2911	89.65	241
56.00	7071	68.00	69398	78.90	16341	90.30	342
57.00	14803	69.00	66535	79.95	5689	91.05	3981

Average of 3.616 to 3.627 min.: 011315pe04.D\Data.MS
S15A042-TUN1
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
92.05	20423	102.40	52	112.60	140	124.10	413
93.05	39062	104.05	2457	113.05	557	125.20	542
94.05	82937	104.95	530	113.90	4	128.10	3193
95.05	879608	105.95	3682	114.15	229	129.10	1268
96.10	59366	107.05	527	116.05	2508	130.00	2849
97.05	2883	108.10	27	116.95	5462	131.10	928
98.05	565	109.00	340	118.10	1064	132.10	311
99.10	454	109.85	78	119.05	2971	133.75	74
100.10	193	110.10	148	120.05	121	134.05	403
101.05	277	111.20	500	122.00	77	135.10	1240
101.70	45	111.70	216	123.10	659	137.00	1154

Average of 3.616 to 3.627 min.: 011315pe04.D\Data.MS
S15A042-TUN1
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
137.85	145	145.80	447	154.55	500	163.95	258
138.05	128	147.10	576	155.05	2731	164.95	417
138.50	154	148.00	2116	155.95	131	166.30	22
139.35	787	149.05	1020	157.10	1463	167.00	465
140.20	434	150.10	801	157.85	30	168.15	105
141.05	6474	151.00	412	158.20	193	168.95	159
142.05	322	151.25	256	159.05	1004	170.60	375
143.00	6238	152.00	644	160.05	189	170.95	20
143.95	305	152.95	996	161.00	85	172.00	624
144.40	167	153.15	194	162.25	248	173.00	3505
145.15	1504	153.70	308	163.25	628	174.05	675858

Average of 3.616 to 3.627 min.: 011315pe04.D\Data.MS
S15A042-TUN1
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
175.05	43617	184.50	176	195.90	89	210.20	101
176.05	665181	185.05	584	197.15	198	212.00	11
177.05	50946	187.00	251	197.75	31	212.25	27
178.10	1082	189.10	139	198.15	86	212.50	7
179.15	895	189.80	8	198.60	3	213.35	8
180.25	100	190.10	101	198.95	125	216.30	16
180.60	138	190.50	157	199.60	4	216.50	359
181.45	471	193.05	1697	204.20	94	217.05	125
182.65	4	194.10	221	204.90	131	218.10	185
182.90	117	195.05	361	207.10	477	221.10	277
183.40	50	195.45	91	209.30	282	225.20	4422

Average of 3.616 to 3.627 min.: 011315pe04.D\Data.MS
S15A042-TUN1
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
226.25	589	237.50	20	245.90	121	260.75	22
226.55	245	237.90	32	246.85	39	261.40	23
227.25	1581	238.80	4	249.20	286	262.00	18
228.35	340	240.20	477	250.80	114	263.10	124
229.15	13	241.05	364	251.10	48	263.60	154
230.75	32	241.40	10	254.40	356	264.45	29

231.15	19	241.70	65	255.15	101	264.65	117
231.50	3	242.35	153	256.20	54	266.10	105
234.15	451	244.15	61	257.30	33	268.75	168
236.95	22	244.80	47	258.60	46		
237.25	4	245.10	146	259.10	36		

Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe05.D
Acq On : 13 Jan 2015 09:27
Operator : YNB
Sample : BLANK
Misc : BLANK,WATER
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 13 13:55:23 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration

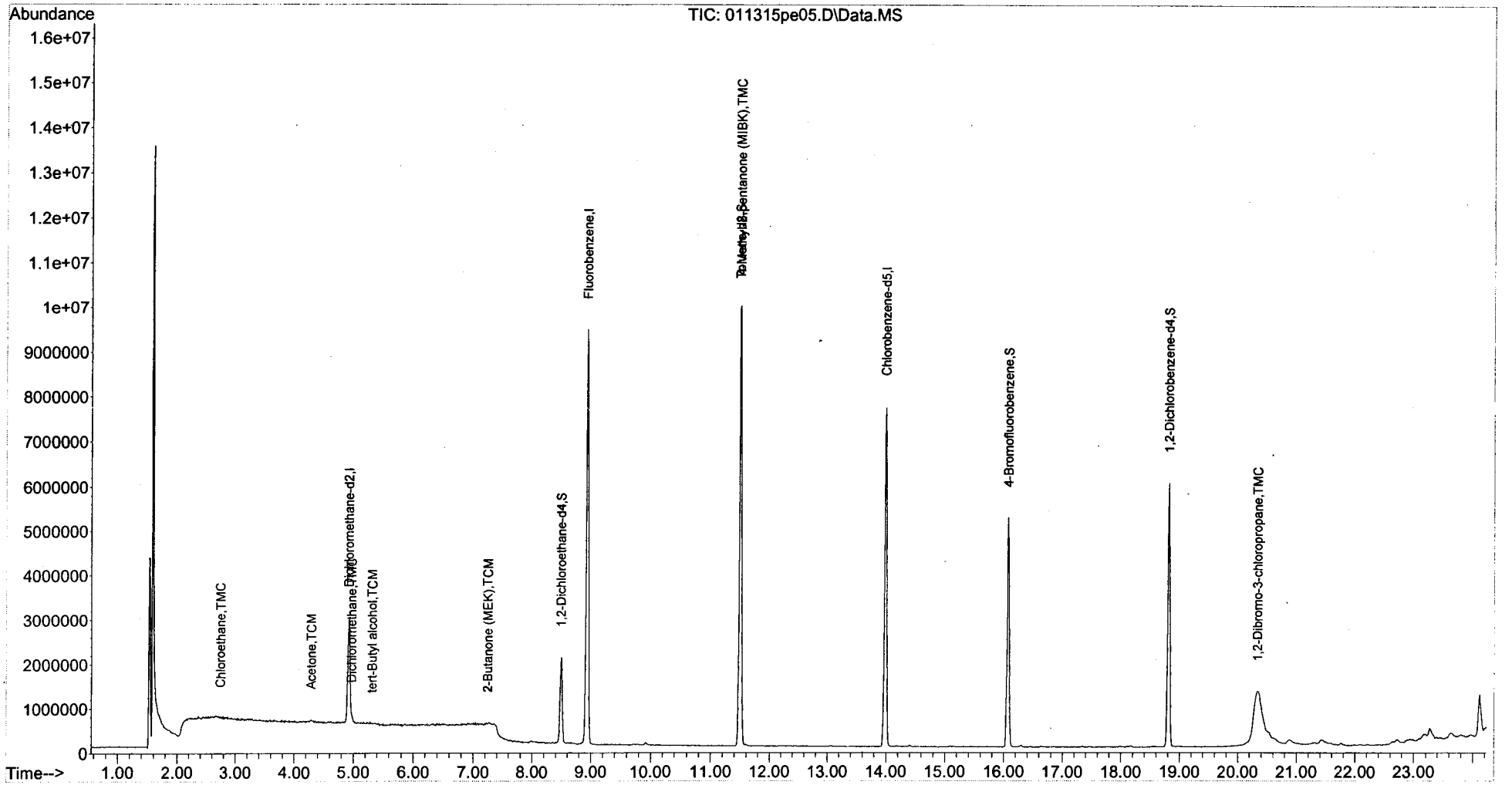
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Dichloromethane-d2	4.915	53	611265	5.00	ug/L	# 0.00
24) Fluorobenzene	8.929	96	11789566	5.00	ug/L	-0.01
37) Chlorobenzene-d5	13.985	117	6370535	5.00	ug/L	0.00
System Monitoring Compounds						
28) 1,2-Dichloroethane-d4	8.486	65	1776028	4.20	ug/L	-0.01
Spiked Amount 5.000	Range 65 - 149		Recovery	=	84.00%	
39) Toluene-d8	11.487	98	10282506	5.97	ug/L	-0.01
Spiked Amount 5.000	Range 85 - 114		Recovery	=	119.40%#	
56) 4-Bromofluorobenzene	16.071	95	2775960	4.83	ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	=	96.60%	
70) 1,2-Dichlorobenzene-d4	18.809	152	2499604	4.60	ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	=	92.00%	
Target Compounds						Qvalue
6) Chloroethane	2.740	64	25917	0.27	ug/L	72
10) Acetone	4.285	43	93888	3.20	ug/L	98
12) Dichloromethane	4.960	84	118954	0.68	ug/L #	1
13) tert-Butyl alcohol	5.313	59	2059	0.37	ug/L #	100
21) 2-Butanone (MEK)	7.241	43	37612	0.74	ug/L	82
38) 4-Methyl-2-pentanone (...	11.495	43	48666	0.45	ug/L #	1
73) 1,2-Dibromo-3-chloropr...	20.332	75	147441	12.98	ug/L #	3

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe05.D
Acq On : 13 Jan 2015 09:27
Operator : YNB
Sample : BLANK
Misc : BLANK,WATER
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 13 13:55:23 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe06.D
Acq On : 13 Jan 2015 10:00
Operator : YNB
Sample : BLANK
Misc : BLANK,WATER
ALS Vial : 2 Sample Multiplier: 1

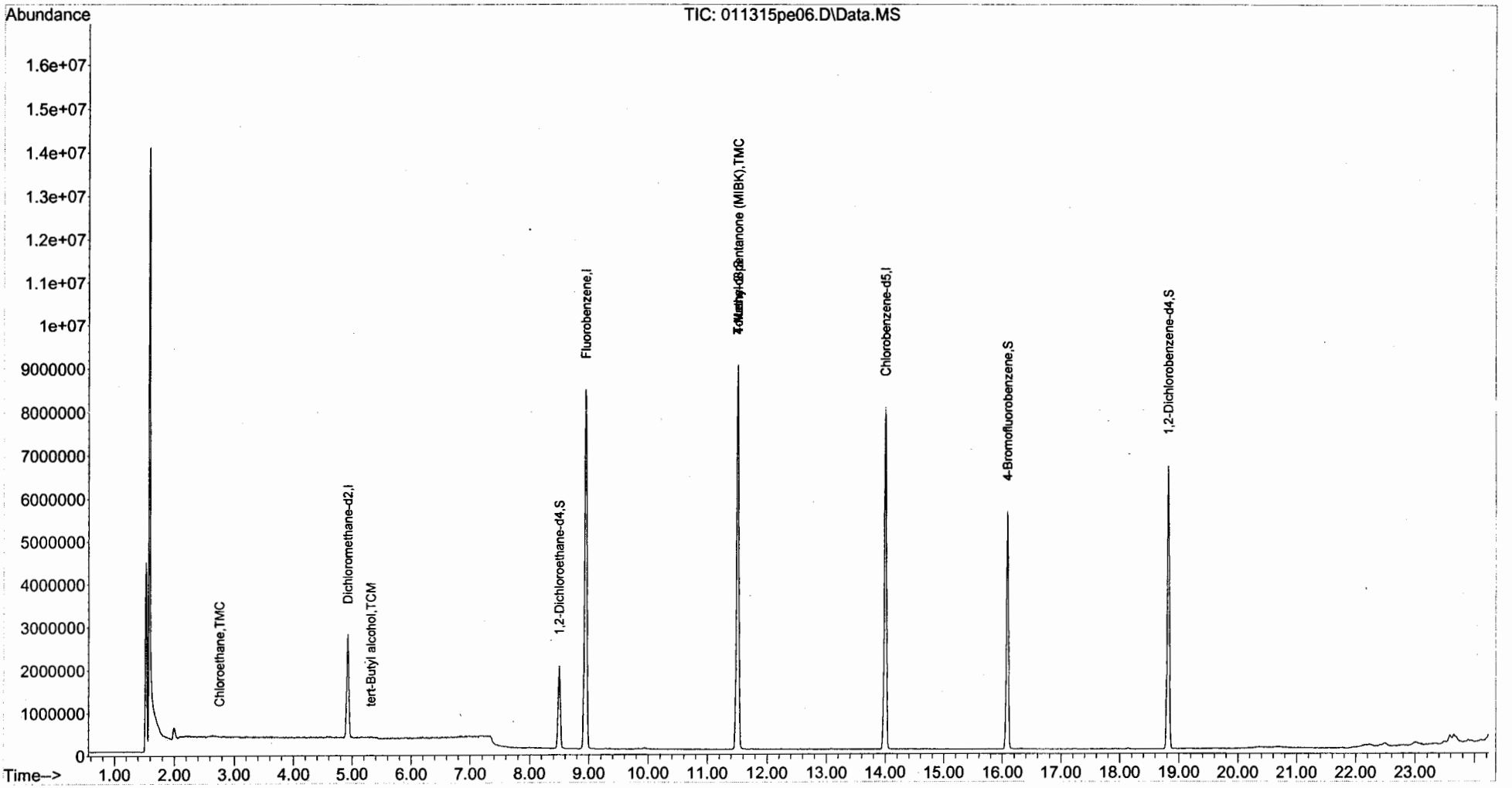
Quant Time: Jan 13 13:55:37 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Dichloromethane-d2	4.915	53	587501	5.00 ug/L	# 0.00
24) Fluorobenzene	8.936	96	10443188	5.00 ug/L	0.00
37) Chlorobenzene-d5	13.993	117	6692142	5.00 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	8.494	65	1734607	4.63 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 92.60%	
39) Toluene-d8	11.502	98	9139271	5.05 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 101.00%	
56) 4-Bromofluorobenzene	16.078	95	2987227	4.94 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 98.80%	
70) 1,2-Dichlorobenzene-d4	18.816	152	2733619	4.79 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 95.80%	
Target Compounds					Qvalue
6) Chloroethane	2.755	64	43573	~~0.47~~ ug/L # ND	53
13) tert-Butyl alcohol	5.313	59	1213	0.22 ug/L #	100
38) 4-Methyl-2-pentanone (...	11.502	43	44642	0.40 ug/L #	1

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe06.D
Acq On : 13 Jan 2015 10:00
Operator : YNB
Sample : BLANK
Misc : BLANK,WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 13 13:55:37 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe07.D
Acq On : 13 Jan 2015 10:35
Operator : YNB
Sample : S15A042-CAL6
Misc : 25ug/L,WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 13 13:55:51 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Dichloromethane-d2	4.915	53	611247	5.00 ug/L	# 0.00
24) Fluorobenzene	8.944	96	8853136	5.00 ug/L	0.00
37) Chlorobenzene-d5	13.993	117	6561855	5.00 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	8.501	65	1680803	5.30 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 106.00%	
39) Toluene-d8	11.502	98	9103393	5.13 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 102.60%	
56) 4-Bromofluorobenzene	16.078	95	3091216	5.22 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 104.40%	
70) 1,2-Dichlorobenzene-d4	18.817	152	2882985	5.15 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 103.00%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.787	85	3564927	23.09 ug/L	100
3) Chloromethane	2.035	50	6483279	23.11 ug/L	100
4) Vinyl chloride	2.170	62	3515337	23.47 ug/L	97
5) Bromomethane	2.635	94	1296544	19.52 ug/L	97
6) Chloroethane	2.792	64	2091456	21.76 ug/L	93
7) Trichlorofluoromethane	3.115	101	3540769	23.99 ug/L	97
8) 1,1-Dichloroethene	3.985	96	2967666	24.12 ug/L	100
9) 1,1,2-Trichloro-1,2,2-...	3.940	101	2762508	23.61 ug/L	99
10) Acetone	4.270	43	4032151	137.47 ug/L	99
11) Carbon disulfide	4.293	76	5305963	29.87 ug/L	98
12) Dichloromethane	4.953	84	3706700	21.10 ug/L #	88
13) tert-Butyl alcohol	5.298	59	2926119	520.23 ug/L #	100
14) trans-1,2-Dichloroethene	5.328	96	3343219	24.23 ug/L	98
15) tert-Butyl methyl ethe...	5.335	73	18752748	95.66 ug/L	91
16) 1,1-Dichloroethane	6.131	63	5801398	25.81 ug/L	100
17) Diisopropyl ether	6.161	45	34042028	74.06 ug/L	89
18) Ethyl-tert-butyl ether	6.776	59	23683682	99.50 ug/L	99
19) 2,2-Dichloropropane	7.038	77	1843570	26.57 ug/L	93
20) cis-1,2-Dichloroethene	7.113	96	3930354	22.84 ug/L	92
21) 2-Butanone (MEK)	7.241	43	9437656	185.76 ug/L	99
22) Bromochloromethane	7.511	128	2236596	25.92 ug/L	98
23) Chloroform	7.654	83	9053064	27.04 ug/L	98
25) 1,1,1-Trichloroethane	7.834	97	4648612	32.49 ug/L	92
26) Carbon tetrachloride	8.021	117	4401604	31.59 ug/L	99
27) 1,1-Dichloropropene	8.104	75	6184273	24.22 ug/L	99
29) Benzene	8.426	78	23822382	23.47 ug/L	98
30) 1,2-Dichloroethane	8.621	62	4929027	25.70 ug/L	99
31) tert-Amyl methyl ether	8.629	73	25872341	110.94 ug/L	90
32) Trichloroethene	9.507	95	5381498	24.15 ug/L	99
33) 1,2-Dichloropropane	9.964	63	5304945	25.56 ug/L	99
34) Dibromomethane	10.152	93	2332430	28.19 ug/L	99
35) Bromodichloromethane	10.422	83	5628478	32.20 ug/L	98
36) cis-1,3-Dichloropropene	11.172	75	5385867	33.29 ug/L	99
38) 4-Methyl-2-pentanone (...	11.457	43	22991343	208.56 ug/L	99
40) Toluene	11.615	92	14230013	25.66 ug/L	92
41) trans-1,3-Dichloropropene	12.155	75	3290919	32.38 ug/L	100

Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe07.D
Acq On : 13 Jan 2015 10:35
Operator : YNB
Sample : S15A042-CAL6
Misc : 25ug/L,WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 13 13:55:51 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration

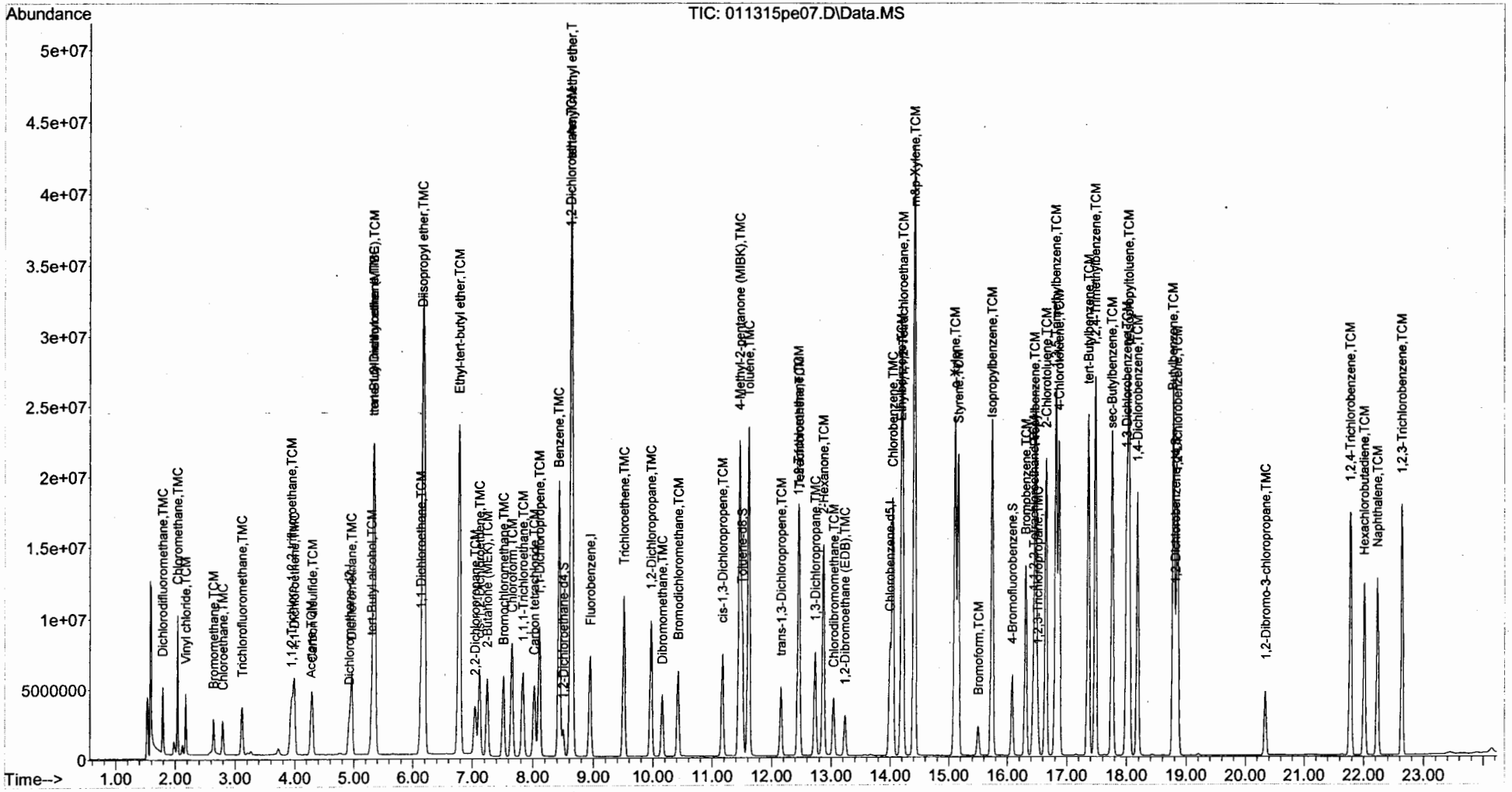
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
42) 1,1,2-Trichloroethane	12.447	83	3604734	24.03 ug/L	99
43) Tetrachloroethene	12.462	166	5416419	24.60 ug/L	99
44) 1,3-Dichloropropane	12.732	76	6094432	22.81 ug/L	100
45) 2-Hexanone	12.867	43	15286701	223.17 ug/L	99
46) Chlorodibromomethane	13.040	129	3242380	31.66 ug/L	99
47) 1,2-Dibromoethane (EDB)	13.228	107	2875749	26.45 ug/L	99
48) Chlorobenzene	14.038	112	15153055	24.56 ug/L	98
49) 1,1,1,2-Tetrachloroethane	14.210	131	4319293	31.03 ug/L	99
50) Ethylbenzene	14.180	91	24667117	24.60 ug/L	95
51) m&p-Xylene	14.405	106	19646546	53.34 ug/L #	57
52) o-Xylene	15.096	106	9614853	27.23 ug/L	99
53) Styrene	15.156	104	15456697	27.52 ug/L	99
54) Bromoform	15.501	173	1464111	31.88 ug/L	99
55) Isopropylbenzene	15.726	105	22261122	26.25 ug/L	98
57) Bromobenzene	16.303	156	5809471	26.13 ug/L	99
58) 1,1,2,2-Tetrachloroethane	16.438	83	4193895	26.92 ug/L	98
59) 1,2,3-Trichloropropane	16.506	75	3025020	25.53 ug/L #	100
60) Propylbenzene	16.453	91	26306095	23.62 ug/L	91
61) 2-Chlorotoluene	16.648	91	19476508	27.31 ug/L	99
62) 4-Chlorotoluene	16.859	91	22743533	27.37 ug/L	99
63) 1,3,5-Trimethylbenzene	16.806	105	21325955	25.92 ug/L	97
64) tert-Butylbenzene	17.361	119	18398349	26.56 ug/L	99
65) 1,2,4-Trimethylbenzene	17.474	105	22117407	25.61 ug/L	96
66) sec-Butylbenzene	17.751	105	23546432	25.34 ug/L	96
67) 1,3-Dichlorobenzene	17.999	146	11878990	26.68 ug/L	98
68) p-Isopropyltoluene	18.029	119	22108202	26.16 ug/L	97
69) 1,4-Dichlorobenzene	18.179	146	11669342	26.71 ug/L	98
71) 1,2-Dichlorobenzene	18.847	146	10987028	25.46 ug/L	98
72) Butylbenzene	18.772	91	22422053	26.38 ug/L	96
73) 1,2-Dibromo-3-chloropr...	20.339	75	1653416	141.30 ug/L	96
74) 1,2,4-Trichlorobenzene	21.772	180	8790028	28.29 ug/L	99
75) Hexachlorobutadiene	22.005	225	3790839	28.09 ug/L	99
76) Naphthalene	22.230	128	14941557	29.38 ug/L	99
77) 1,2,3-Trichlorobenzene	22.635	180	7641386	27.66 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe07.D
Acq On : 13 Jan 2015 10:35
Operator : YNB
Sample : S15A042-CAL6
Misc : 25ug/L,WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 13 13:55:51 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe08.D
Acq On : 13 Jan 2015 11:09
Operator : YNB
Sample : S15A042-CAL5
Misc : 10ug/L,WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jan 13 13:56:07 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Dichloromethane-d2	4.915	53	595867	5.00 ug/L	# 0.00
24) Fluorobenzene	8.936	96	9105745	5.00 ug/L	0.00
37) Chlorobenzene-d5	13.985	117	6522668	5.00 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	8.494	65	1689227	5.18 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 103.60%	
39) Toluene-d8	11.495	98	8973321	5.09 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 101.80%	
56) 4-Bromofluorobenzene	16.071	95	3055295	5.19 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 103.80%	
70) 1,2-Dichlorobenzene-d4	18.817	152	2810733	5.06 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 101.20%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.787	85	1428654	9.49 ug/L	99
3) Chloromethane	2.035	50	2695129	9.85 ug/L	100
4) Vinyl chloride	2.170	62	1430682	9.80 ug/L	99
5) Bromomethane	2.642	94	608002	9.39 ug/L	99
6) Chloroethane	2.800	64	859710	9.18 ug/L	92
7) Trichlorofluoromethane	3.115	101	1394580	9.69 ug/L	97
8) 1,1-Dichloroethene	3.985	96	1182147	9.85 ug/L	99
9) 1,1,2-Trichloro-1,2,2-...	3.948	101	1061216	9.30 ug/L	98
10) Acetone	4.278	43	1783213	62.37 ug/L	99
11) Carbon disulfide	4.300	76	1879269	10.85 ug/L	98
12) Dichloromethane	4.960	84	1514444	8.84 ug/L #	92
13) tert-Butyl alcohol	5.305	59	1196096	218.14 ug/L #	100
14) trans-1,2-Dichloroethene	5.328	96	1319044	9.81 ug/L	98
15) tert-Butyl methyl ethe...	5.343	73	7577046	39.65 ug/L	96
16) 1,1-Dichloroethane	6.131	63	2232257	10.19 ug/L	99
17) Diisopropyl ether	6.168	45	17871571	39.89 ug/L	100
18) Ethyl-tert-butyl ether	6.776	59	9562424	41.21 ug/L	100
19) 2,2-Dichloropropane	7.038	77	647204	9.57 ug/L	96
20) cis-1,2-Dichloroethene	7.106	96	1423988	8.49 ug/L	94
21) 2-Butanone (MEK)	7.241	43	3986209	80.49 ug/L	99
22) Bromochloromethane	7.511	128	858767	10.21 ug/L	98
23) Chloroform	7.646	83	3412254	10.45 ug/L	98
25) 1,1,1-Trichloroethane	7.826	97	1589453	10.80 ug/L	97
26) Carbon tetrachloride	8.014	117	1508960	10.53 ug/L	99
27) 1,1-Dichloropropene	8.104	75	2513929	9.57 ug/L	99
29) Benzene	8.426	78	10202738	9.77 ug/L	99
30) 1,2-Dichloroethane	8.621	62	2001400	10.15 ug/L	99
31) tert-Amyl methyl ether	8.629	73	10404476	43.38 ug/L	95
32) Trichloroethene	9.499	95	2196752	9.59 ug/L	99
33) 1,2-Dichloropropane	9.964	63	2124376	9.95 ug/L	99
34) Dibromomethane	10.152	93	900808	10.58 ug/L	98
35) Bromodichloromethane	10.414	83	1955127	10.88 ug/L	98
36) cis-1,3-Dichloropropene	11.165	75	1839103	11.05 ug/L	98
38) 4-Methyl-2-pentanone (...	11.457	43	9253754	84.45 ug/L	100
40) Toluene	11.607	92	5639494	10.23 ug/L	100
41) trans-1,3-Dichloropropene	12.155	75	1090008	10.79 ug/L	98

Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe08.D
Acq On : 13 Jan 2015 11:09
Operator : YNB
Sample : S15A042-CAL5
Misc : 10ug/L,WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jan 13 13:56:07 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration

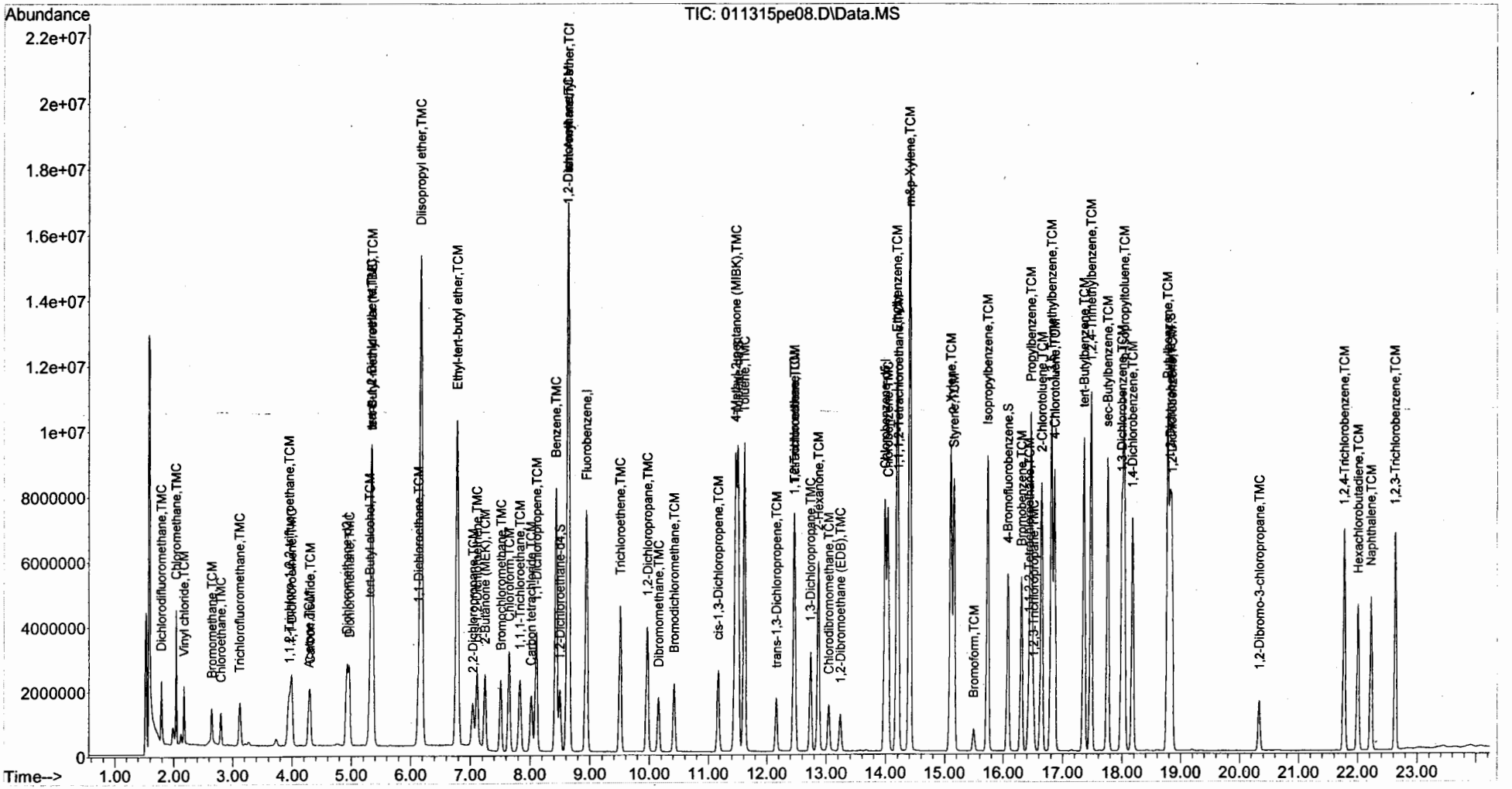
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
42) 1,1,2-Trichloroethane	12.455	83	1471839	9.87 ug/L	99
43) Tetrachloroethene	12.462	166	2165443	9.89 ug/L	98
44) 1,3-Dichloropropane	12.732	76	2553607	9.61 ug/L	98
45) 2-Hexanone	12.868	43	5966353	87.63 ug/L	100
46) Chlorodibromomethane	13.040	129	1096970	10.78 ug/L	99
47) 1,2-Dibromoethane (EDB)	13.235	107	1110764	10.28 ug/L	99
48) Chlorobenzene	14.038	112	6100751	9.95 ug/L	99
49) 1,1,1,2-Tetrachloroethane	14.210	131	1535309	11.10 ug/L	99
50) Ethylbenzene	14.188	91	10576078	10.61 ug/L	100
51) m&p-Xylene	14.398	106	7631167	20.84 ug/L	97
52) o-Xylene	15.096	106	3675050	10.47 ug/L	95
53) Styrene	15.148	104	5882462	10.53 ug/L	94
54) Bromoform	15.493	173	479144	10.50 ug/L	99
55) Isopropylbenzene	15.726	105	8898658	10.56 ug/L	100
57) Bromobenzene	16.303	156	2285609	10.34 ug/L	98
58) 1,1,2,2-Tetrachloroethane	16.431	83	1608841	10.39 ug/L	98
59) 1,2,3-Trichloropropane	16.506	75	1207277	10.25 ug/L #	100
60) Propylbenzene	16.461	91	12239420	11.05 ug/L	100
61) 2-Chlorotoluene	16.641	91	7547161	10.65 ug/L	99
62) 4-Chlorotoluene	16.859	91	8837865	10.70 ug/L	99
63) 1,3,5-Trimethylbenzene	16.806	105	8650633	10.58 ug/L	99
64) tert-Butylbenzene	17.354	119	7294578	10.59 ug/L	100
65) 1,2,4-Trimethylbenzene	17.474	105	9176266	10.69 ug/L	100
66) sec-Butylbenzene	17.751	105	9727056	10.53 ug/L	100
67) 1,3-Dichlorobenzene	17.991	146	4607783	10.41 ug/L	98
68) p-Isopropyltoluene	18.029	119	8919255	10.62 ug/L	99
69) 1,4-Dichlorobenzene	18.171	146	4527194	10.42 ug/L	99
71) 1,2-Dichlorobenzene	18.847	146	4320969	10.07 ug/L	99
72) Butylbenzene	18.772	91	9152449	10.83 ug/L	100
73) 1,2-Dibromo-3-chloropr...	20.332	75	532140	45.75 ug/L	97
74) 1,2,4-Trichlorobenzene	21.765	180	3370097	10.91 ug/L	99
75) Hexachlorobutadiene	22.005	225	1387049	10.34 ug/L	100
76) Naphthalene	22.222	128	5702163	11.28 ug/L	100
77) 1,2,3-Trichlorobenzene	22.628	180	2954254	10.76 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe08.D
Acq On : 13 Jan 2015 11:09
Operator : YNB
Sample : S15A042-CAL5
Misc : 10ug/L,WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jan 13 13:56:07 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe09.D
Acq On : 13 Jan 2015 11:43
Operator : YNB
Sample : S15A042-CAL4
Misc : 5ug/L,WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jan 13 13:56:22 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Dichloromethane-d2	4.915	53	611867	5.00 ug/L	0.00
24) Fluorobenzene	8.951	96	9649396	5.00 ug/L	0.00
37) Chlorobenzene-d5	13.985	117	6684653	5.00 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	8.509	65	1741571	5.04 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 100.80%	
39) Toluene-d8	11.502	98	9076488	5.02 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 100.40%	
56) 4-Bromofluorobenzene	16.078	95	3048078	5.05 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 101.00%	
70) 1,2-Dichlorobenzene-d4	18.817	152	2871321	5.04 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 100.80%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.787	85	778163	5.03 ug/L	100
3) Chloromethane	2.035	50	1419146	5.05 ug/L	100
4) Vinyl chloride	2.170	62	768775	5.13 ug/L	100
5) Bromomethane	2.642	94	324930	4.89 ug/L	100
6) Chloroethane	2.792	64	505784	5.26 ug/L	100
7) Trichlorofluoromethane	3.115	101	727952	4.93 ug/L	100
8) 1,1-Dichloroethene	3.978	96	606991	4.93 ug/L	100
9) 1,1,2-Trichloro-1,2,2-...	3.940	101	569330	4.86 ug/L	100
10) Acetone	4.270	43	940210	32.02 ug/L	100
11) Carbon disulfide	4.293	76	862961	4.85 ug/L	100
12) Dichloromethane	4.953	84	815830	4.64 ug/L #	100
13) tert-Butyl alcohol	5.298	59	557744	99.06 ug/L #	100
14) trans-1,2-Dichloroethene	5.328	96	670230	4.85 ug/L	100
15) tert-Butyl methyl ethe...	5.343	73	3973775	20.25 ug/L	100
16) 1,1-Dichloroethane	6.138	63	1145609	5.09 ug/L	100
17) Diisopropyl ether	6.176	45	9847993	21.40 ug/L	100
18) Ethyl-tert-butyl ether	6.776	59	4981905	20.91 ug/L	100
19) 2,2-Dichloropropane	7.046	77	375710	5.41 ug/L	100
20) cis-1,2-Dichloroethene	7.113	96	1066460	6.19 ug/L	100
21) 2-Butanone (MEK)	7.248	43	2030090	39.92 ug/L	100
22) Bromochloromethane	7.519	128	435255	5.04 ug/L	100
23) Chloroform	7.654	83	1745719	5.21 ug/L	100
25) 1,1,1-Trichloroethane	7.841	97	770728	4.94 ug/L	100
26) Carbon tetrachloride	8.029	117	744920	4.90 ug/L	100
27) 1,1-Dichloropropene	8.111	75	1405578	5.05 ug/L	100
29) Benzene	8.441	78	5669069	5.12 ug/L	100
30) 1,2-Dichloroethane	8.636	62	1061611	5.08 ug/L	100
31) tert-Amyl methyl ether	8.644	73	5296628	20.84 ug/L	100
32) Trichloroethene	9.514	95	1216161	5.01 ug/L	100
33) 1,2-Dichloropropane	9.972	63	1151682	5.09 ug/L	100
34) Dibromomethane	10.159	93	453485	5.03 ug/L	100
35) Bromodichloromethane	10.422	83	933430	4.90 ug/L	100
36) cis-1,3-Dichloropropene	11.180	75	877429	4.98 ug/L	100
38) 4-Methyl-2-pentanone (...	11.465	43	4657399	41.47 ug/L	100
40) Toluene	11.615	92	2923628	5.18 ug/L	100
41) trans-1,3-Dichloropropene	12.155	75	520678	5.03 ug/L	100

Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe09.D
Acq On : 13 Jan 2015 11:43
Operator : YNB
Sample : S15A042-CAL4
Misc : 5ug/L,WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jan 13 13:56:22 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration

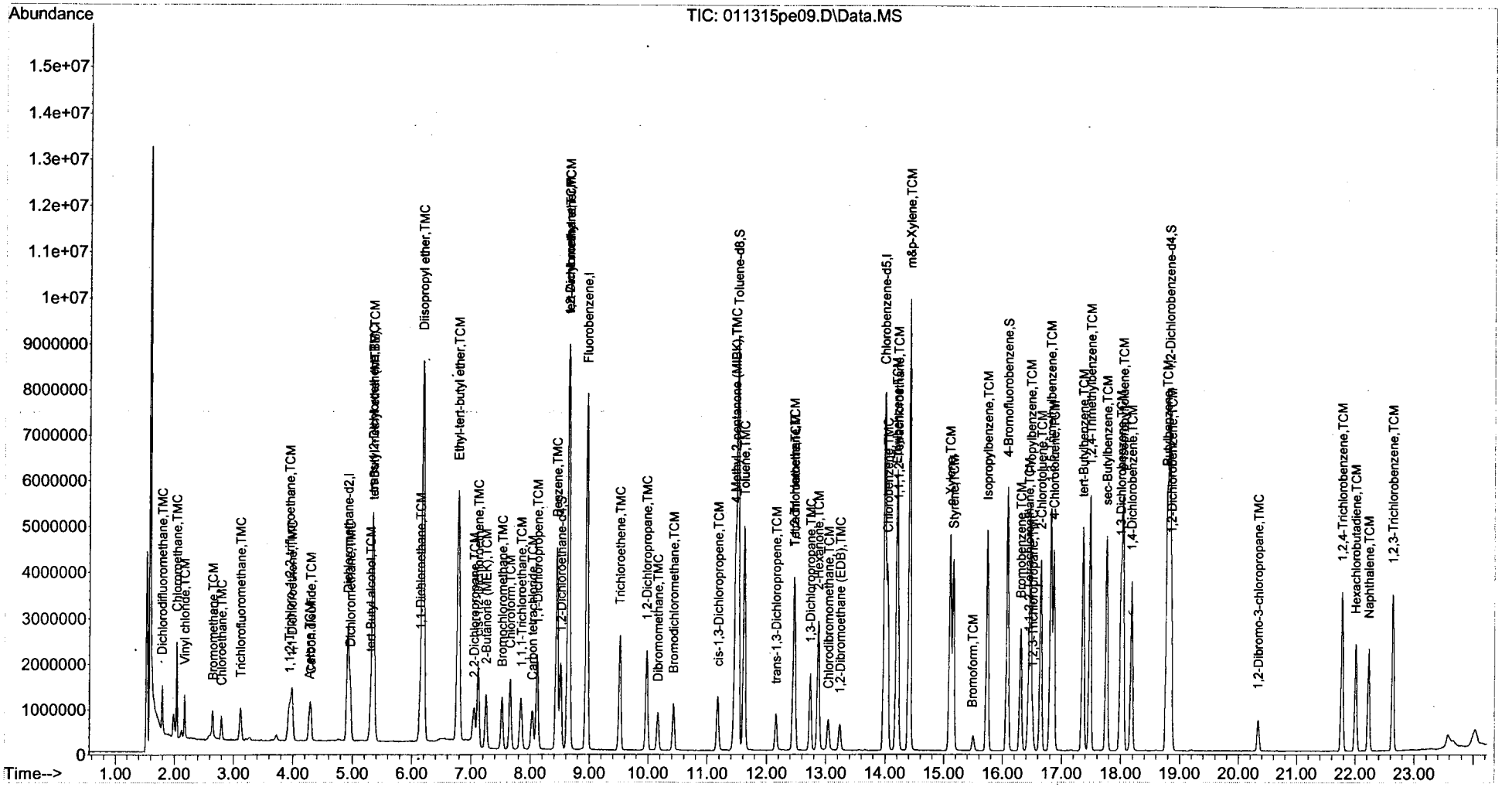
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) 1,1,2-Trichloroethane	12.455	83	795247	5.20	ug/L	100
43) Tetrachloroethene	12.462	166	1138087	5.07	ug/L	100
44) 1,3-Dichloropropane	12.732	76	1383010	5.08	ug/L	100
45) 2-Hexanone	12.867	43	2927606	41.96	ug/L	100
46) Chlorodibromomethane	13.040	129	523305	5.02	ug/L	100
47) 1,2-Dibromoethane (EDB)	13.235	107	577622	5.21	ug/L	100
48) Chlorobenzene	14.038	112	3224494	5.13	ug/L	100
49) 1,1,1,2-Tetrachloroethane	14.210	131	732152	5.16	ug/L	100
50) Ethylbenzene	14.188	91	5400858	5.29	ug/L	100
51) m&p-Xylene	14.405	106	3962079	10.56	ug/L	100
52) o-Xylene	15.096	106	1907705	5.30	ug/L	100
53) Styrene	15.156	104	3019867	5.28	ug/L	100
54) Bromoform	15.486	173	242854	5.19	ug/L	100
55) Isopropylbenzene	15.733	105	4597261	5.32	ug/L	100
57) Bromobenzene	16.303	156	1147966	5.07	ug/L	100
58) 1,1,2,2-Tetrachloroethane	16.438	83	797153	5.02	ug/L	100
59) 1,2,3-Trichloropropane	16.506	75	623074	5.16	ug/L #	100
60) Propylbenzene	16.468	91	6206192	5.47	ug/L	100
61) 2-Chlorotoluene	16.648	91	3795350	5.22	ug/L	100
62) 4-Chlorotoluene	16.858	91	4442212	5.25	ug/L	100
63) 1,3,5-Trimethylbenzene	16.806	105	4488572	5.36	ug/L	100
64) tert-Butylbenzene	17.354	119	3718524	5.27	ug/L	100
65) 1,2,4-Trimethylbenzene	17.481	105	4729738	5.38	ug/L	100
66) sec-Butylbenzene	17.759	105	5038390	5.32	ug/L	100
67) 1,3-Dichlorobenzene	17.999	146	2339098	5.16	ug/L	100
68) p-Isopropyltoluene	18.036	119	4573557	5.31	ug/L	100
69) 1,4-Dichlorobenzene	18.179	146	2300101	5.17	ug/L	100
71) 1,2-Dichlorobenzene	18.854	146	2239313	5.09	ug/L	100
72) Butylbenzene	18.779	91	4640771	5.36	ug/L	100
73) 1,2-Dibromo-3-chloropr...	20.332	75	226001	18.96	ug/L	100
74) 1,2,4-Trichlorobenzene	21.772	180	1662917	5.25	ug/L	100
75) Hexachlorobutadiene	22.005	225	706831	5.14	ug/L	100
76) Naphthalene	22.230	128	2705008	5.22	ug/L	100
77) 1,2,3-Trichlorobenzene	22.635	180	1480183	5.26	ug/L	100

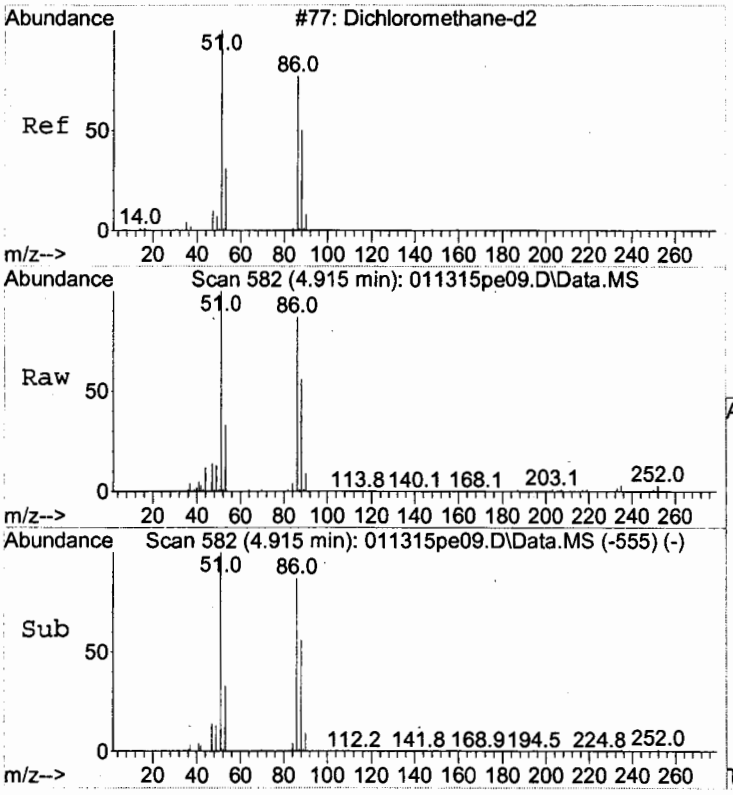
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe09.D
Acq On : 13 Jan 2015 11:43
Operator : YNB
Sample : S15A042-CAL4
Misc : 5ug/L,WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jan 13 13:56:22 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration

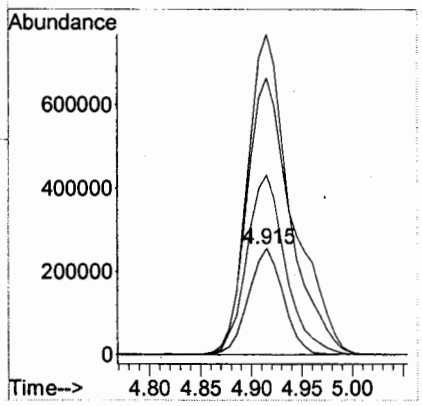


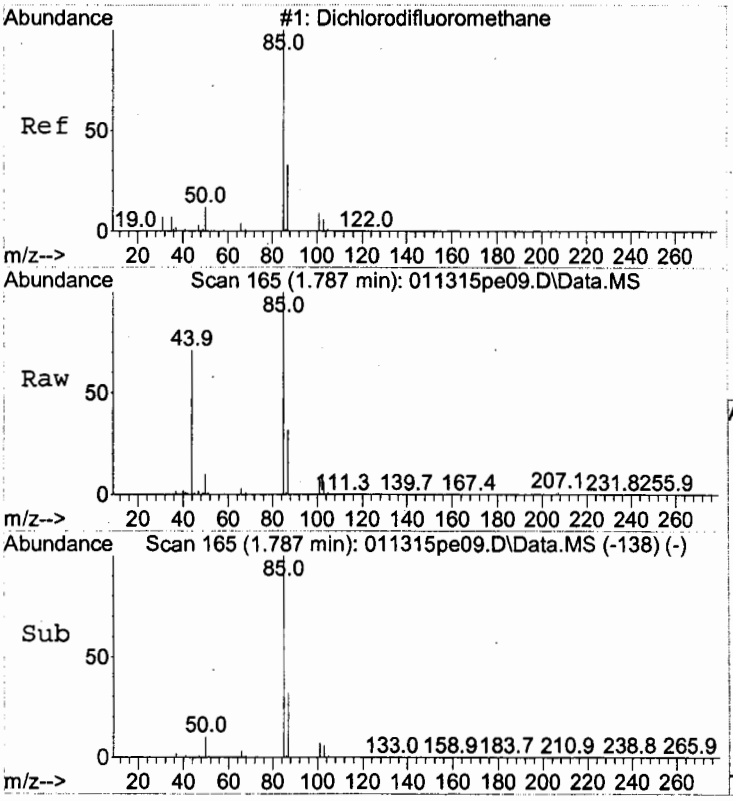


#1
Dichloromethane-d2
Concen: 5.00 ug/L
RT: 4.915 min Scan# 582
Delta R.T. 0.000 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 53 Resp: 611867

Ion	Ratio	Lower	Upper
53	100		
51	356.8	336.8	376.8
86	352.1	332.1	372.1
88	189.1	169.1	209.1

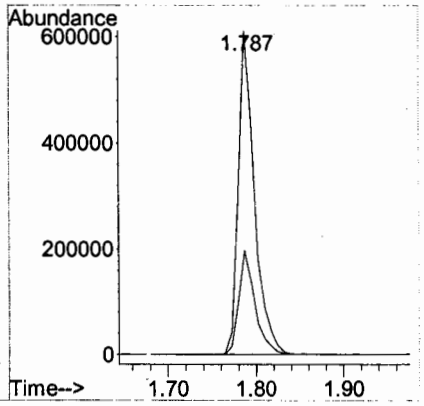


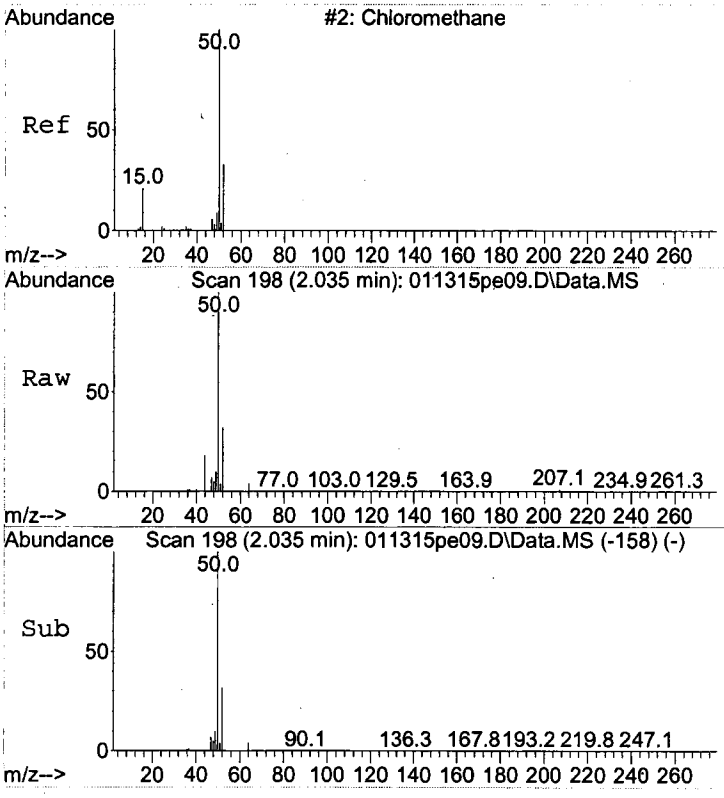


#2
Dichlorodifluoromethane
Concen: 5.03 ug/L
RT: 1.787 min Scan# 165
Delta R.T. 0.000 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 85 Resp: 778163

Ion	Ratio	Lower	Upper
85	100		
87	32.5	12.5	52.5

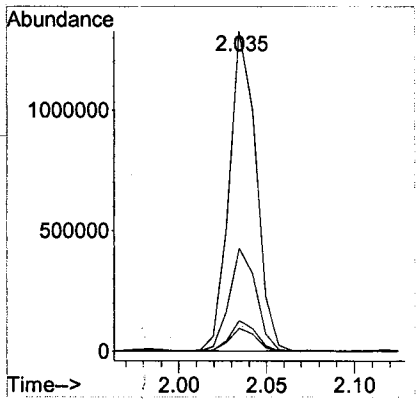


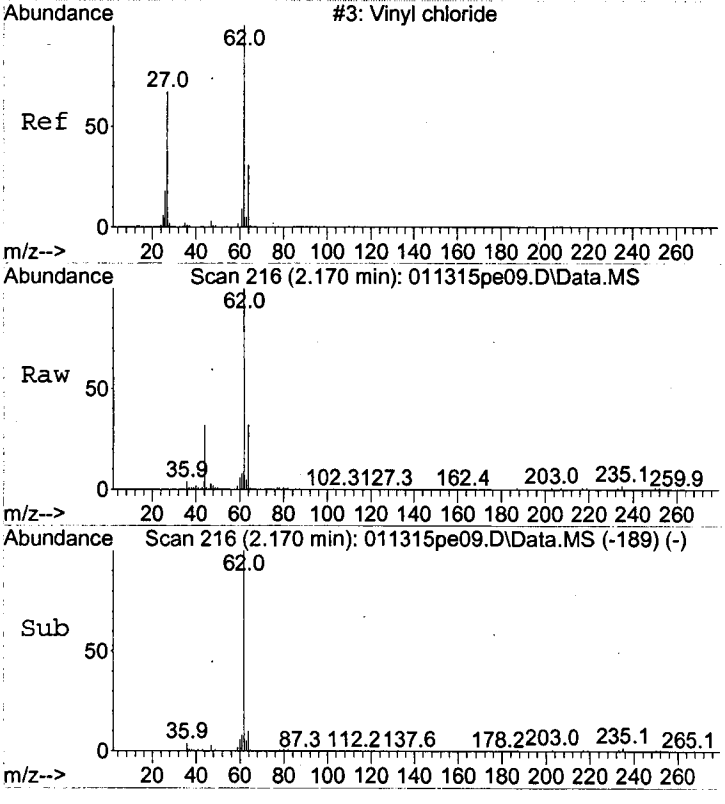


#3
Chloromethane
Concen: 5.05 ug/L
RT: 2.035 min Scan# 198
Delta R.T. 0.000 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 50 Resp: 1419146

Ion	Ratio	Lower	Upper
50	100		
52	32.5	12.5	52.5
49	9.4	0.0	29.4
47	7.3	0.0	27.3

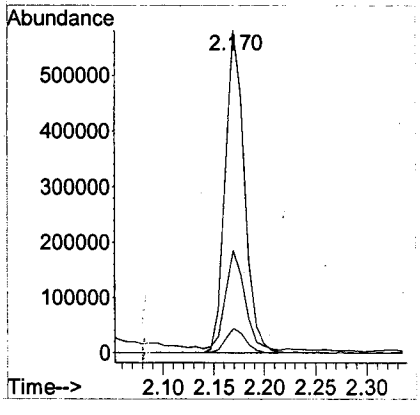


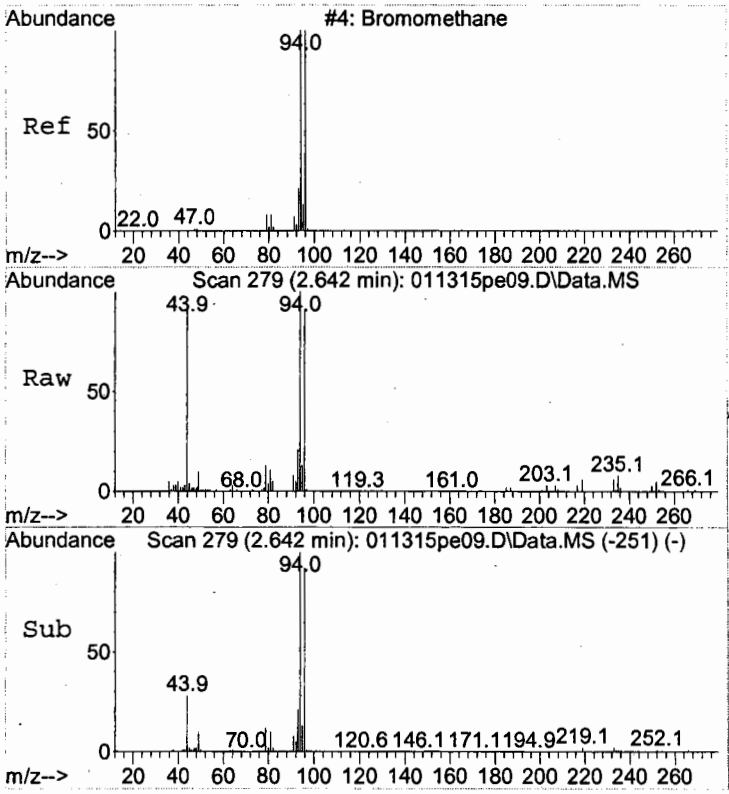


#4
Vinyl chloride
Concen: 5.13 ug/L
RT: 2.170 min Scan# 216
Delta R.T. 0.000 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 62 Resp: 768775

Ion	Ratio	Lower	Upper
62	100		
64	33.9	13.9	53.9
61	7.7	0.0	27.7

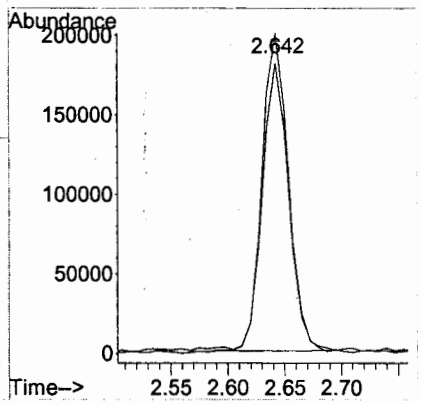


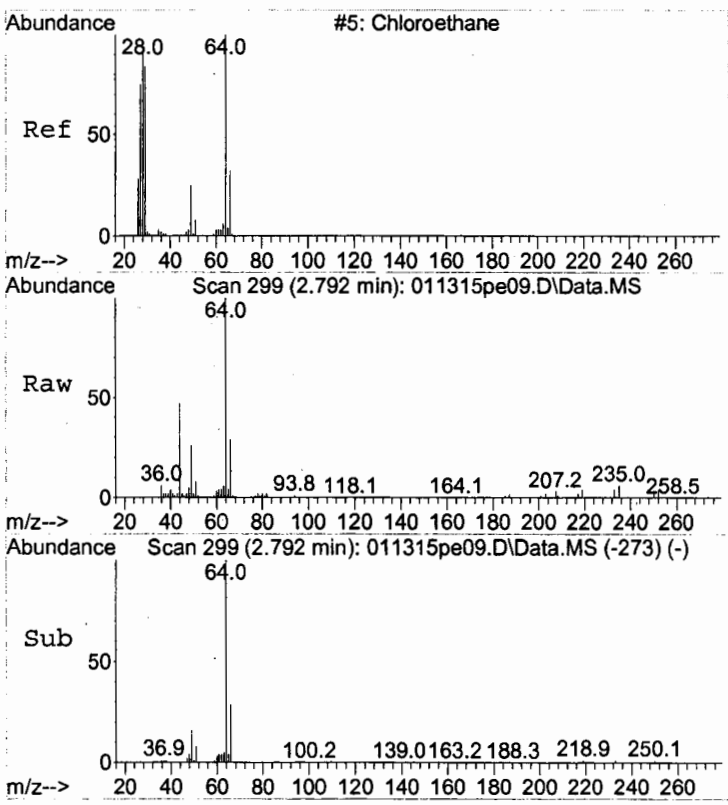


#5
Bromomethane
Concen: 4.89 ug/L
RT: 2.642 min Scan# 279
Delta R.T. -0.002 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 94 Resp: 324930

Ion	Ratio	Lower	Upper
94	100		
96	92.3	72.3	112.3

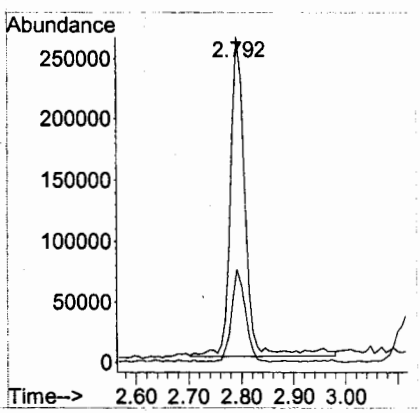


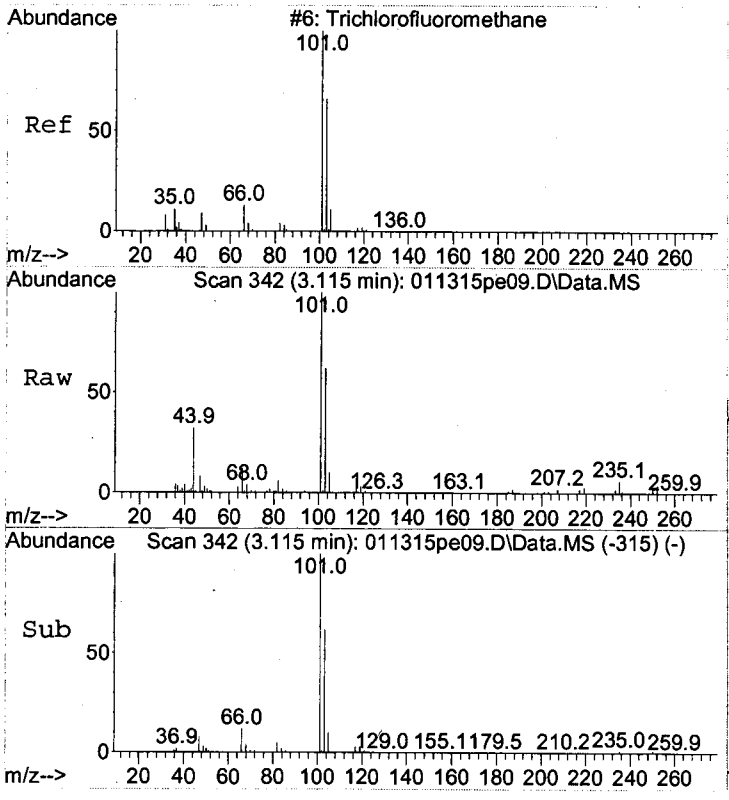


#6
Chloroethane
Concen: 5.26 ug/L
RT: 2.792 min Scan# 299
Delta R.T. -0.003 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 64 Resp: 505784

Ion	Ratio	Lower	Upper
64	100		
66	27.2	7.2	47.2

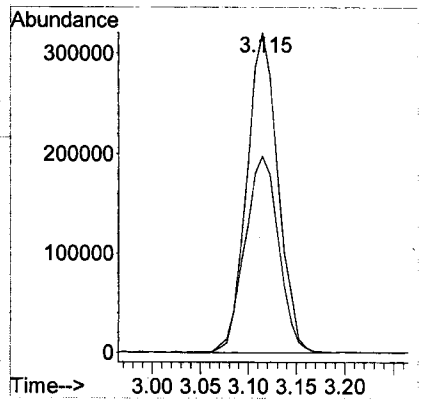


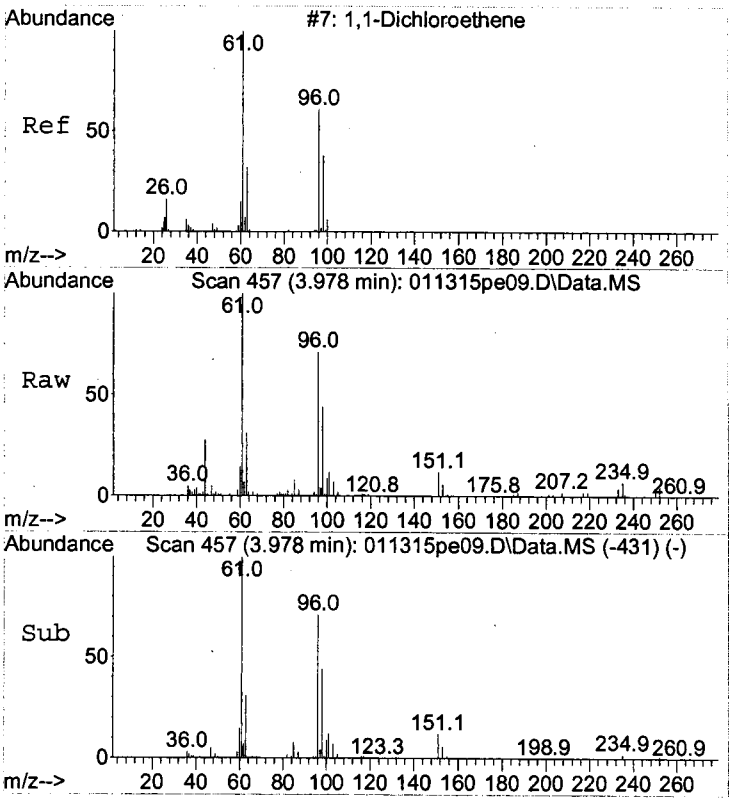


#7
Trichlorofluoromethane
Concen: 4.93 ug/L
RT: 3.115 min Scan# 342
Delta R.T. 0.000 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:101 Resp: 727952

Ion	Ratio	Lower	Upper
101	100		
103	66.0	46.0	86.0

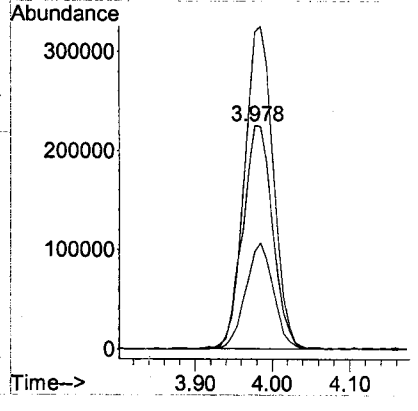


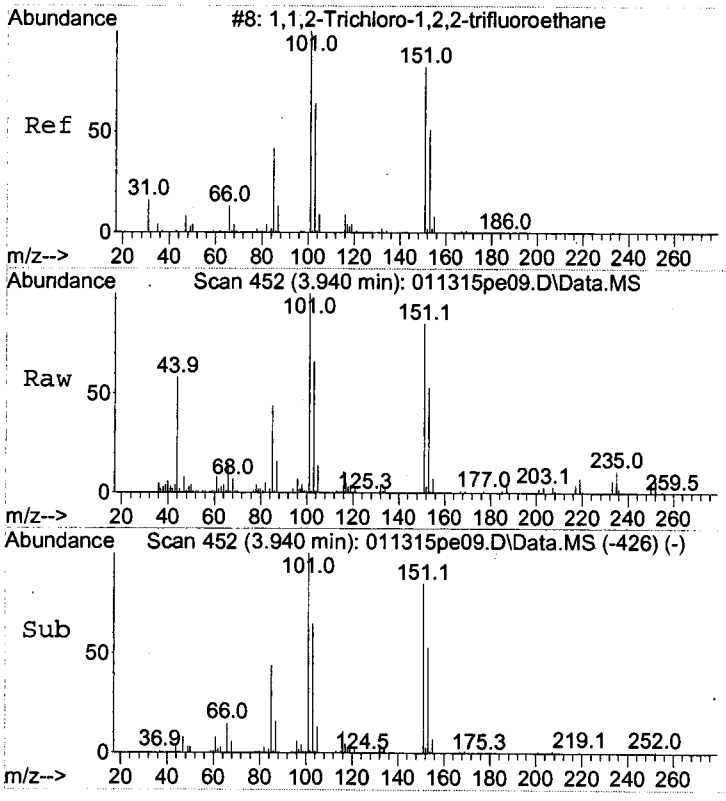


#8
1,1-Dichloroethene
Concen: 4.93 ug/L
RT: 3.978 min Scan# 457
Delta R.T. -0.002 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 96 Resp: 606991

Ion	Ratio	Lower	Upper
96	100		
61	139.0	119.0	159.0
63	44.9	24.9	64.9

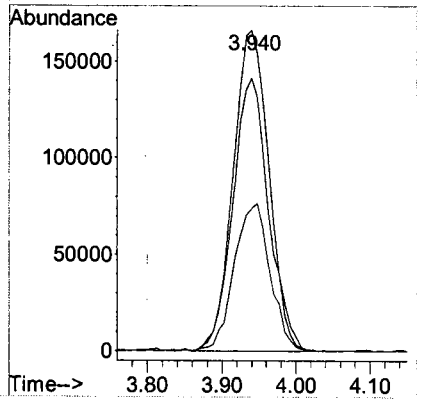


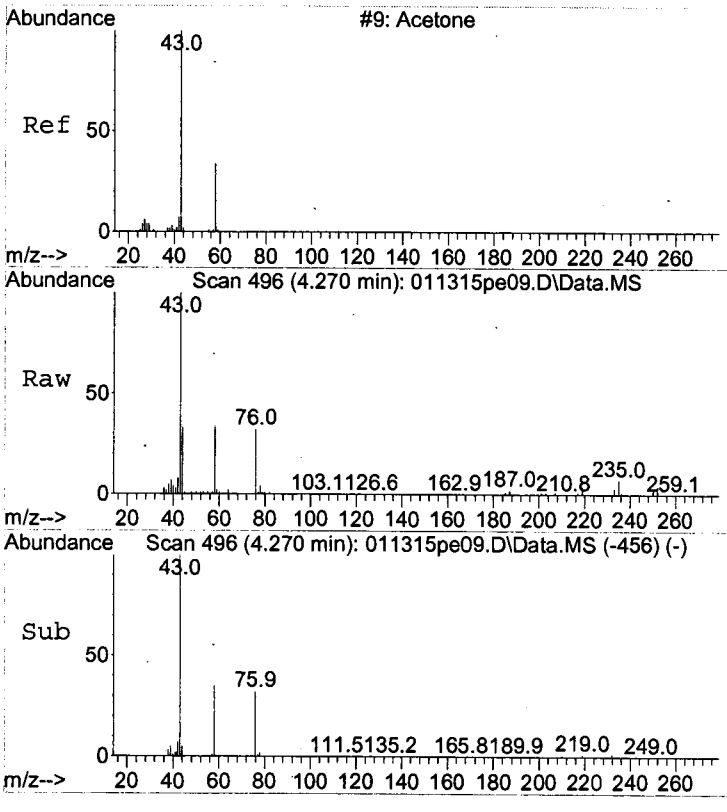


#9
1,1,2-Trichloro-1,2,2-trifluoroethane
Concen: 4.86 ug/L
RT: 3.940 min Scan# 452
Delta R.T. -0.002 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:101 Resp: 569330

Ion	Ratio	Lower	Upper
101	100		
151	83.2	63.2	103.2
85	45.8	25.8	65.8

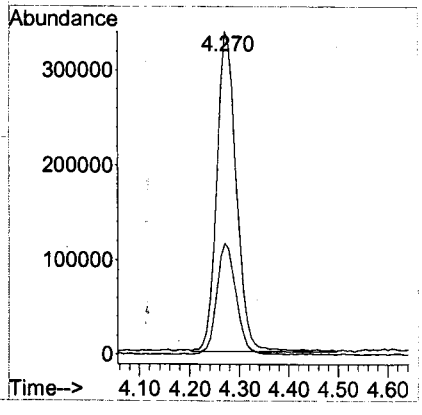


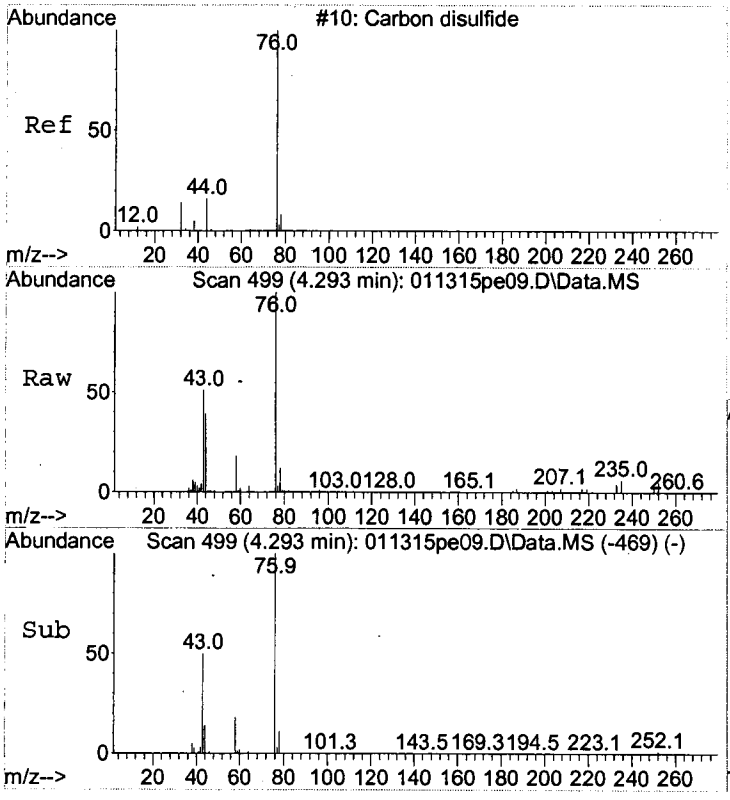


#10
Acetone
Concen: 32.02 ug/L
RT: 4.270 min Scan# 496
Delta R.T. -0.002 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 43 Resp: 940210

Ion	Ratio	Lower	Upper
43	100		
58	34.1	14.1	54.1

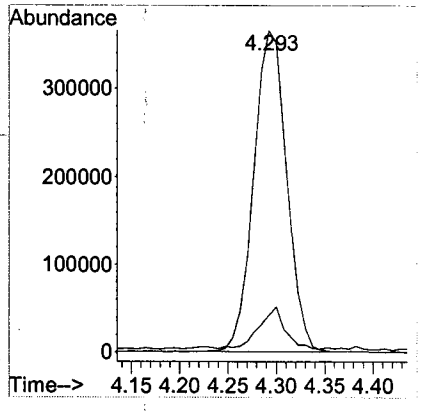


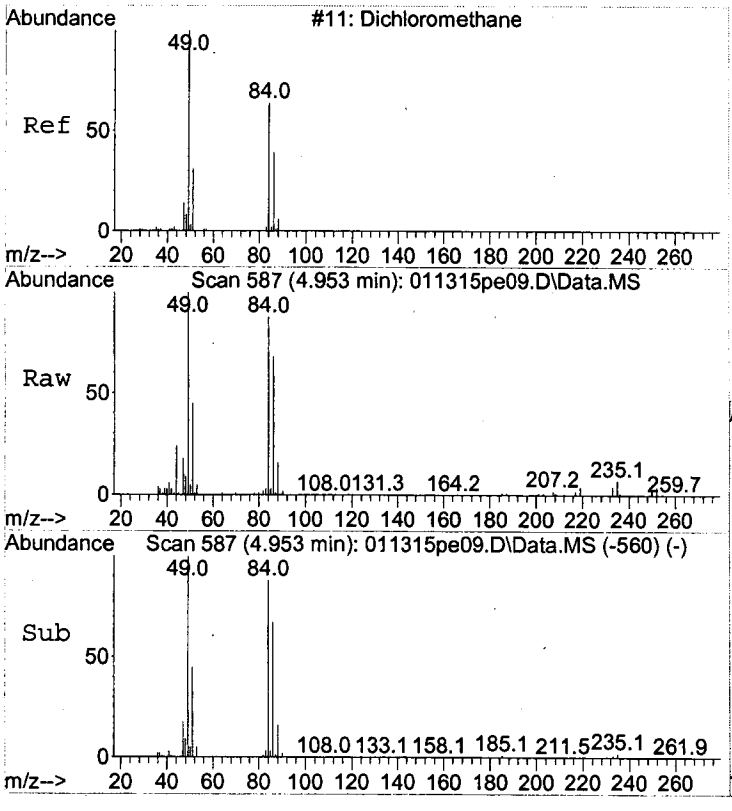


#11
Carbon disulfide
Concen: 4.85 ug/L
RT: 4.293 min Scan# 499
Delta R.T. -0.002 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 76 Resp: 862961

Ion	Ratio	Lower	Upper
76	100		
78	10.6	0.0	30.6

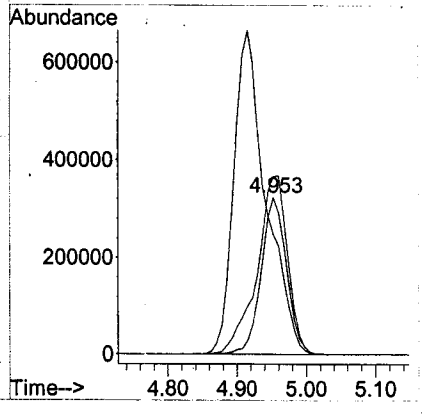


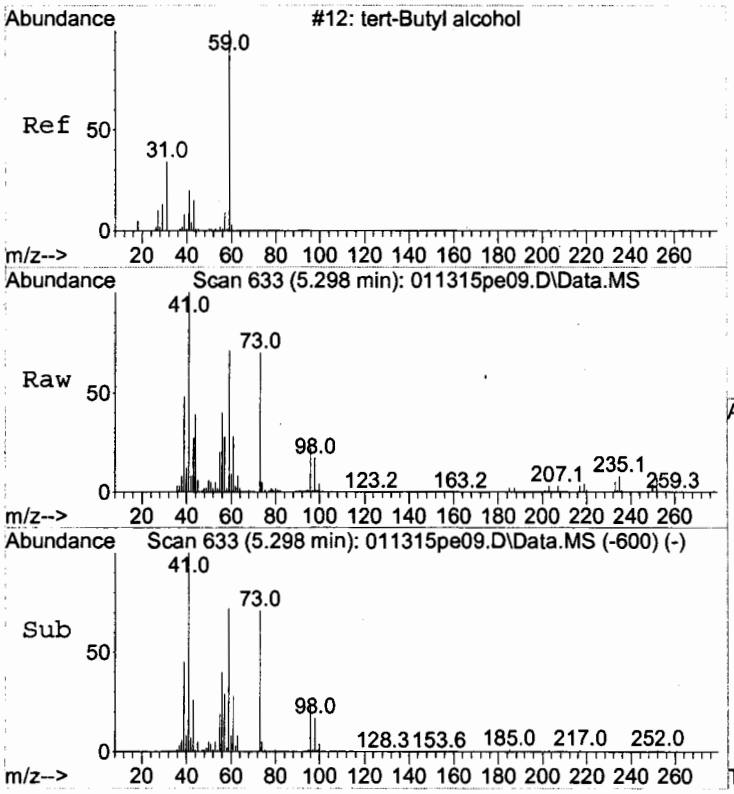


#12
Dichloromethane
Concen: 4.64 ug/L
RT: 4.953 min Scan# 587
Delta R.T. 0.000 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 84 Resp: 815830

Ion	Ratio	Lower	Upper
84	100		
86	0.0	0.0	20.0
49	137.8	117.8	157.8

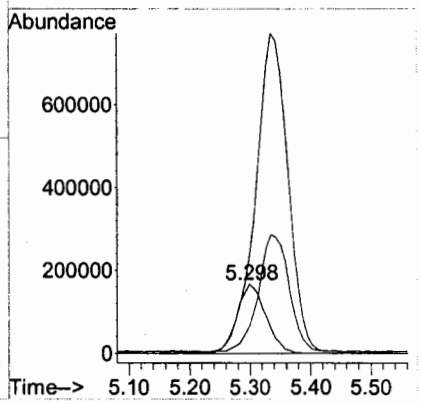


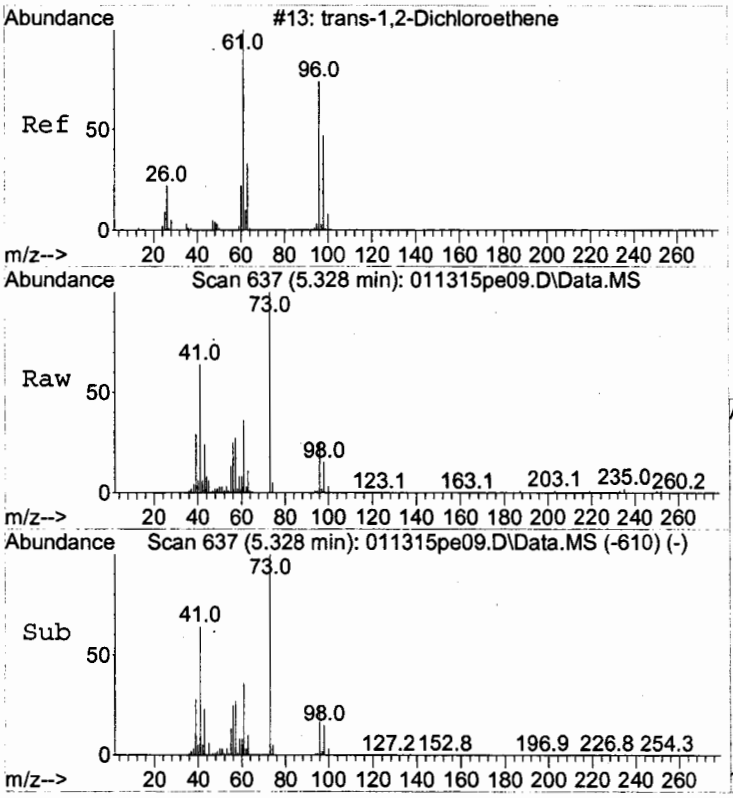


#13
tert-Butyl alcohol
Concen: 99.06 ug/L
RT: 5.298 min Scan# 633
Delta R.T. -0.003 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 59 Resp: 557744

Ion	Ratio	Lower	Upper
59	100		
41	0.0	0.0	20.0
43	0.0	0.0	20.0

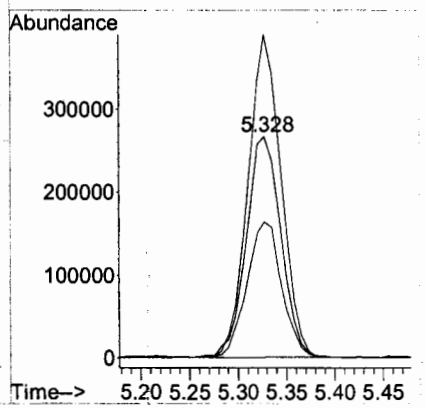


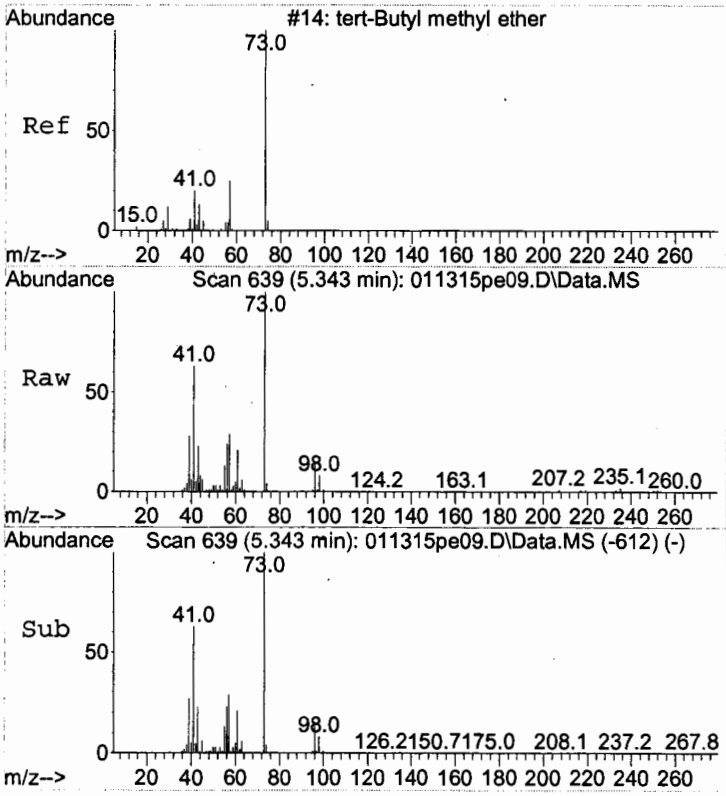


#14
trans-1,2-Dichloroethene
Concen: 4.85 ug/L
RT: 5.328 min Scan# 637
Delta R.T. 0.000 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 96 Resp: 670230

Ion	Ratio	Lower	Upper
96	100		
61	139.4	119.4	159.4
98	62.1	42.1	82.1

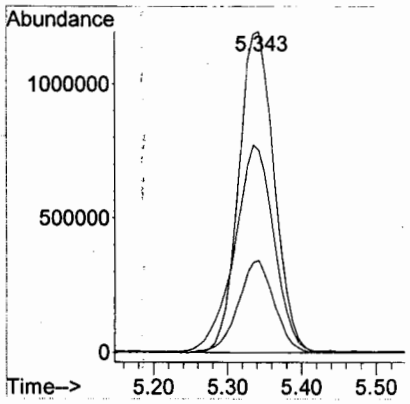


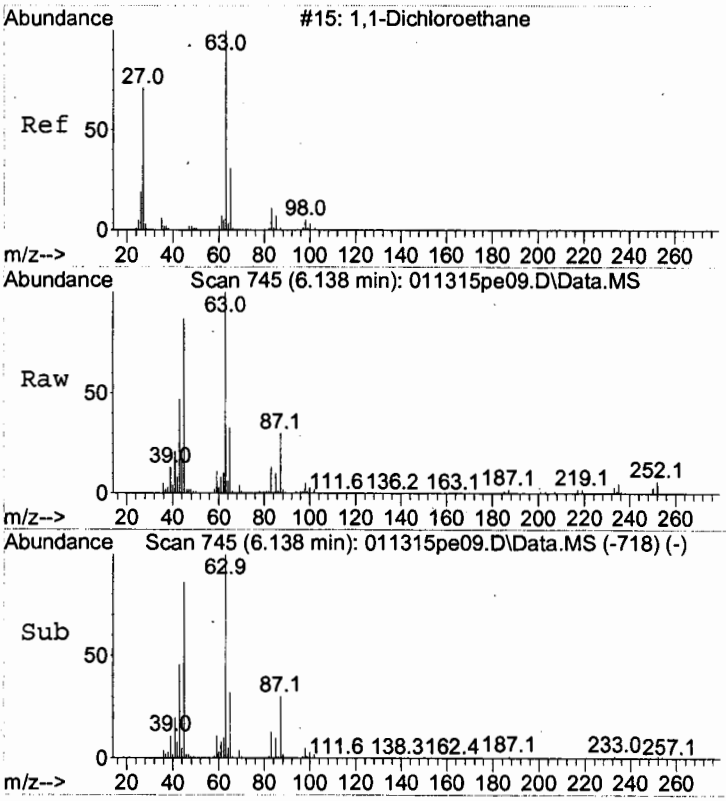


#15
tert-Butyl methyl ether (MTBE)
Concen: 20.25 ug/L
RT: 5.343 min Scan# 639
Delta R.T. 0.004 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 73 Resp: 3973775

Ion	Ratio	Lower	Upper
73	100		
57	29.0	9.0	49.0
41	71.7	51.7	91.7

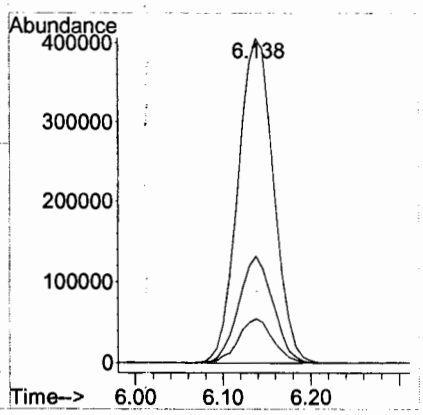


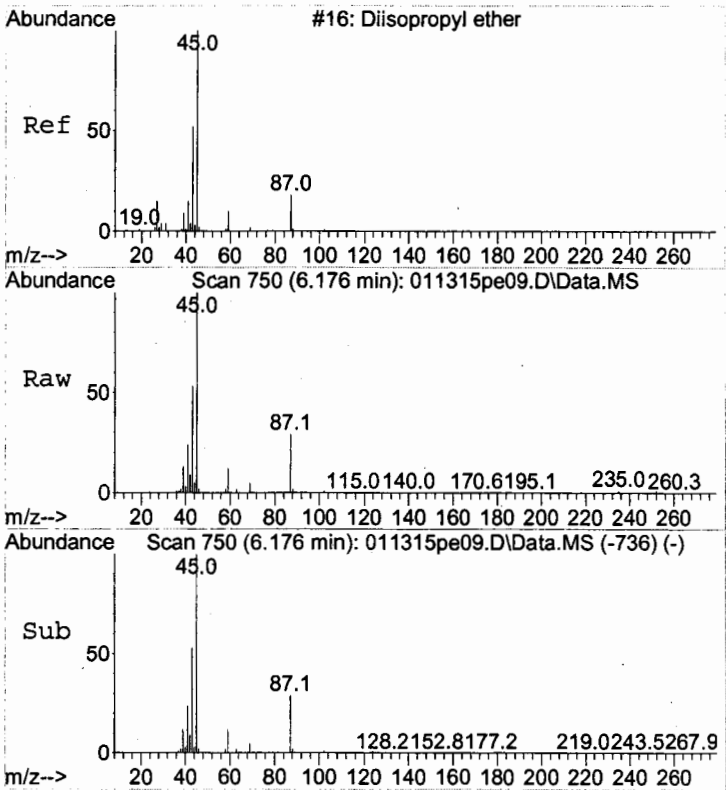


#16
1,1-Dichloroethane
Concen: 5.09 ug/L
RT: 6.138 min Scan# 745
Delta R.T. 0.004 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 63 Resp: 1145609

Ion	Ratio	Lower	Upper
63	100		
65	31.4	11.4	51.4
83	13.4	0.0	33.4

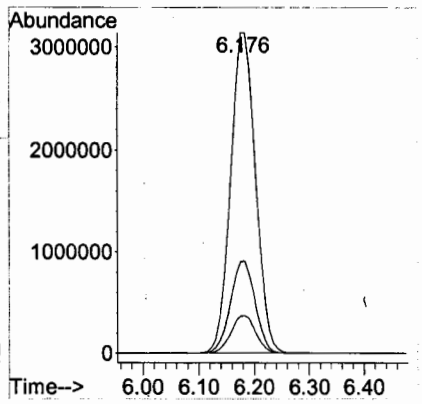


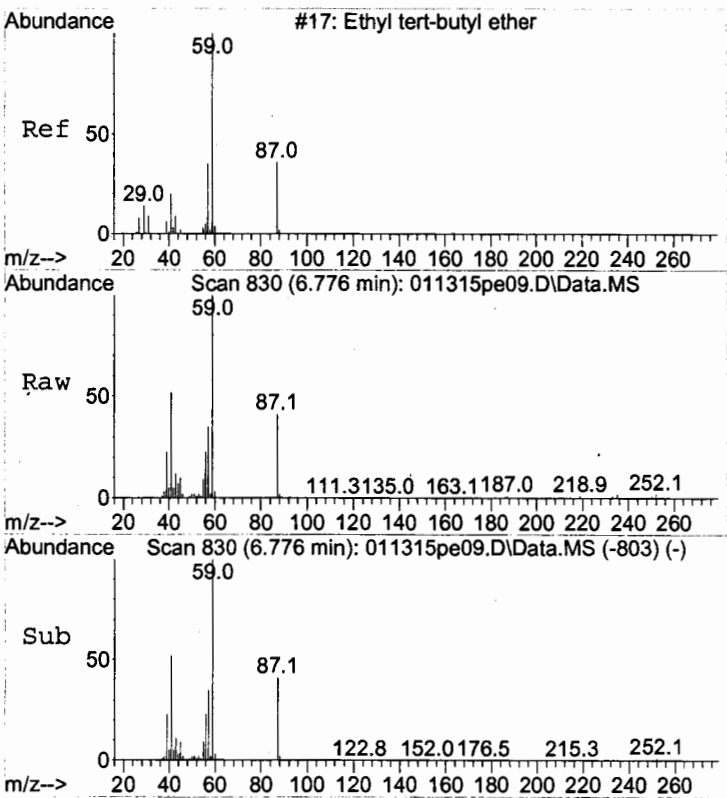


#17
Diisopropyl ether
Concen: 21.40 ug/L
RT: 6.176 min Scan# 750
Delta R.T. 0.002 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 45 Resp: 9847993

Ion	Ratio	Lower	Upper
45	100		
87	28.9	8.9	48.9
59	12.0	0.0	32.0

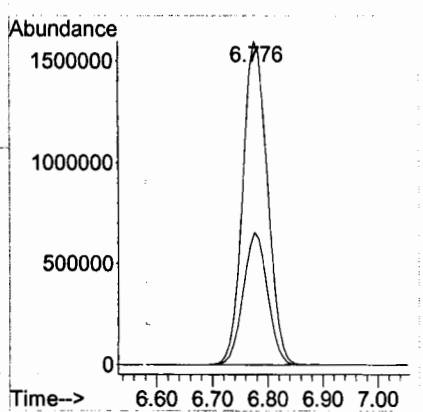


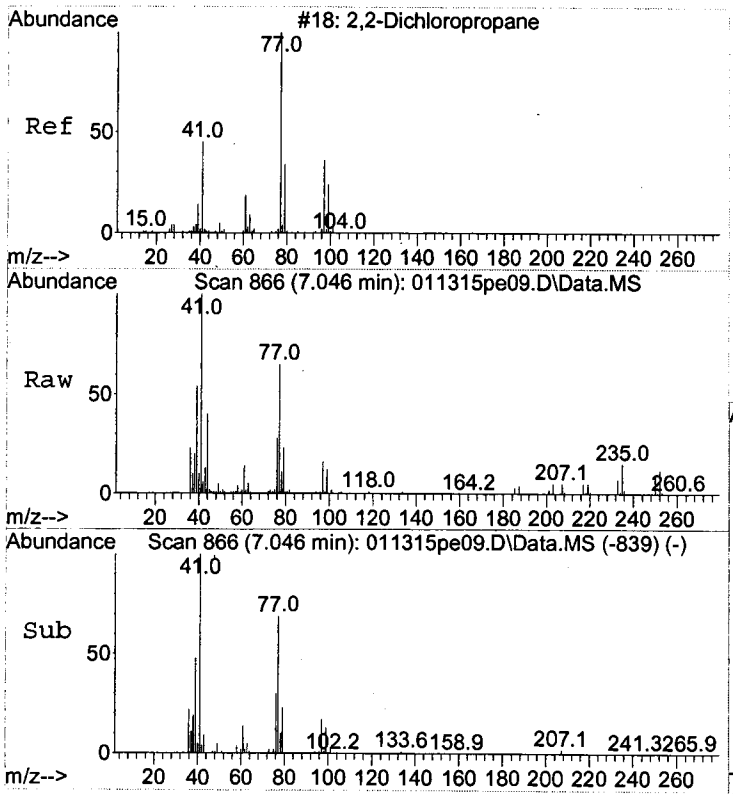


#18
Ethyl-tert-butyl ether
Concen: 20.91 ug/L
RT: 6.776 min Scan# 830
Delta R.T. 0.000 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 59 Resp: 4981905

Ion	Ratio	Lower	Upper
59	100		
87	40.4	20.4	60.4

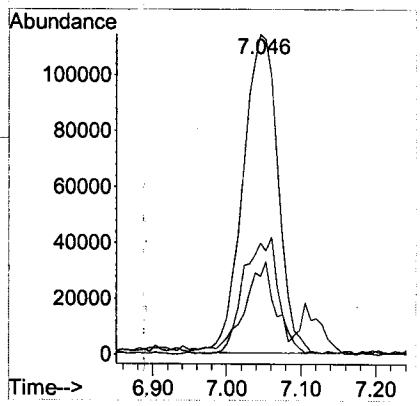


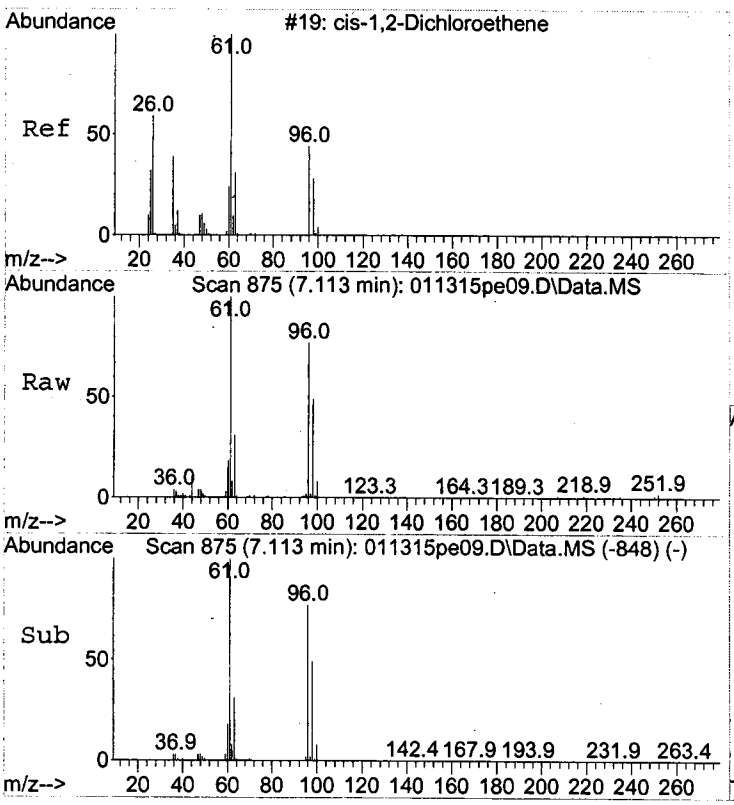


#19
2,2-Dichloropropane
Concen: 5.41 ug/L
RT: 7.046 min Scan# 866
Delta R.T. 0.003 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 77 Resp: 375710

Ion	Ratio	Lower	Upper
77	100		
97	24.4	4.4	44.4
79	37.0	17.0	57.0

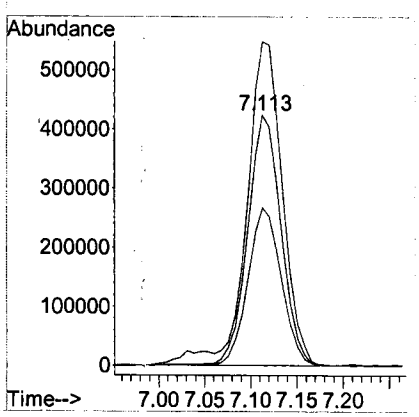


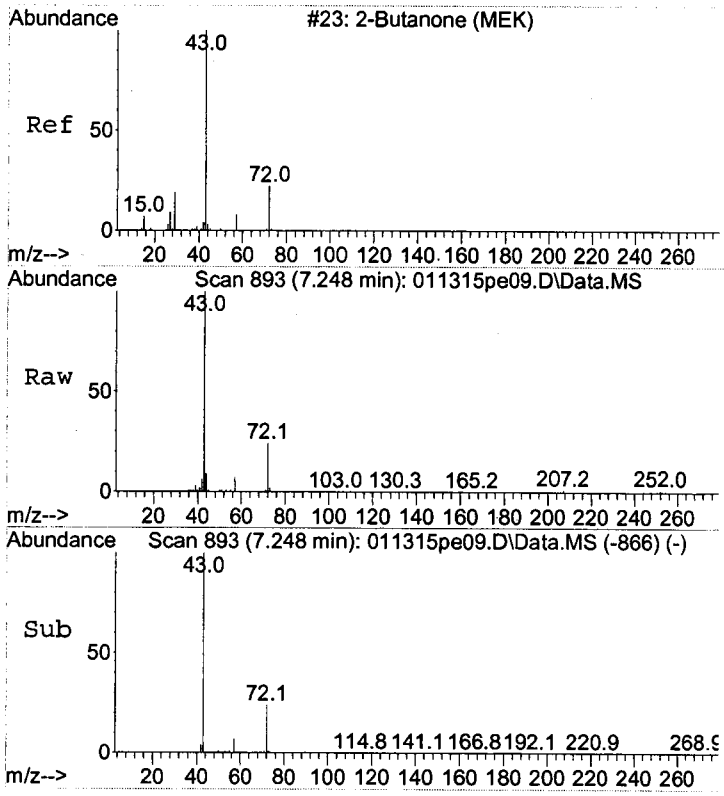


#20
cis-1,2-Dichloroethene
Concen: 6.19 ug/L
RT: 7.113 min Scan# 875
Delta R.T. 0.003 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 96 Resp: 1066460

Ion	Ratio	Lower	Upper
96	100		
61	133.2	113.2	153.2
98	63.8	43.8	83.8

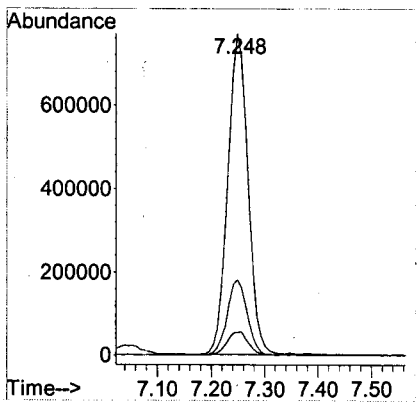


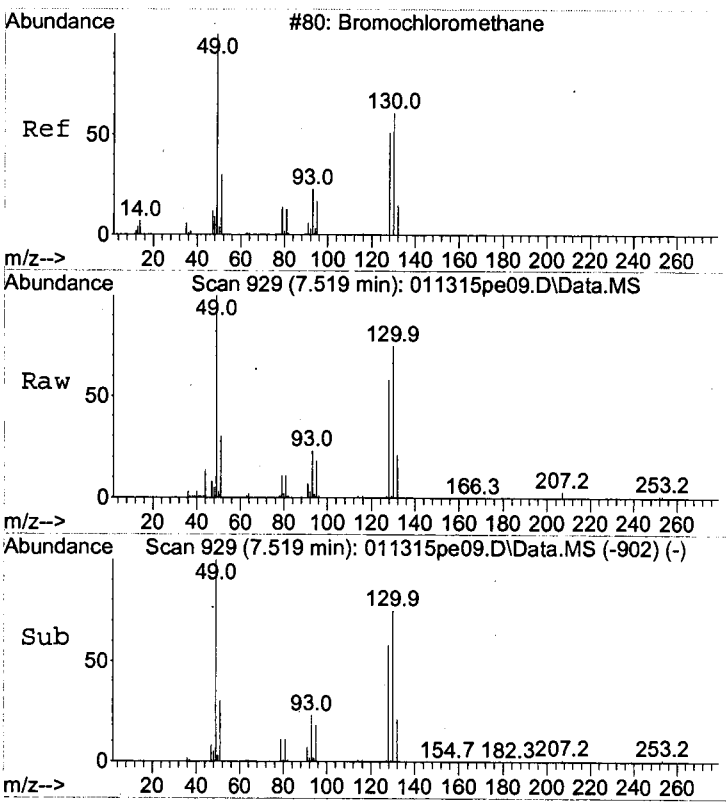


#21
2-Butanone (MEK)
Concen: 39.92 ug/L
RT: 7.248 min Scan# 893
Delta R.T. 0.004 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 43 Resp: 2030090

Ion	Ratio	Lower	Upper
43	100		
57	7.8	0.0	27.8
72	23.5	3.5	43.5

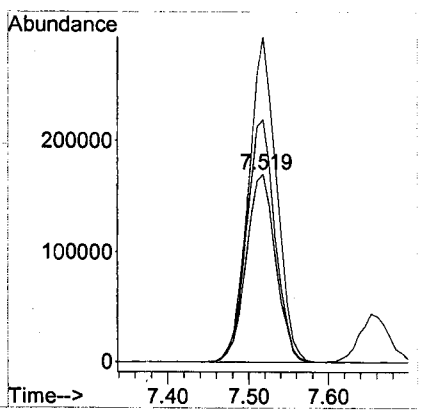


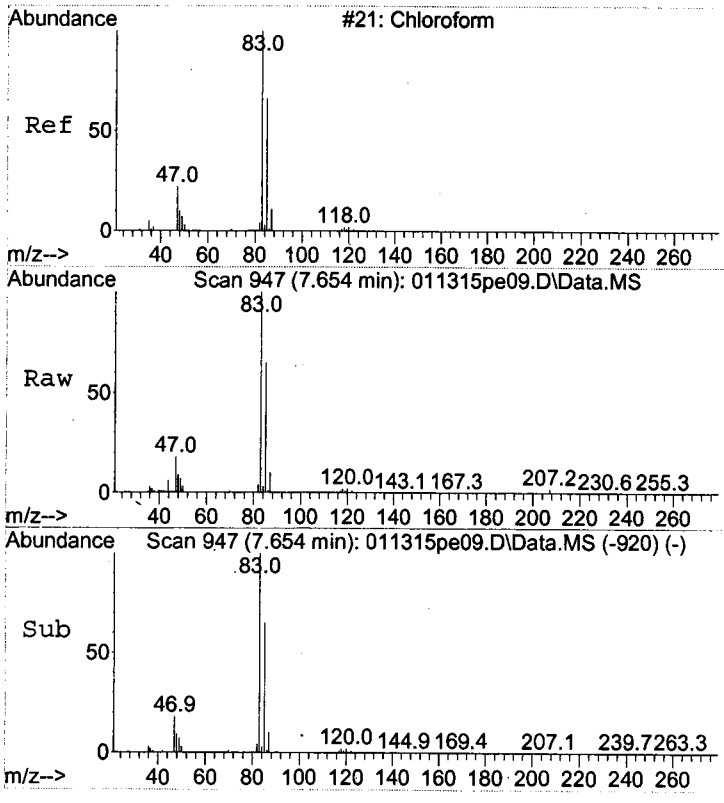


#22
Bromochloromethane
Concen: 5.04 ug/L
RT: 7.519 min Scan# 929
Delta R.T. 0.005 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 128 Resp: 435255

Ion	Ratio	Lower	Upper
128	100		
130	125.1	105.1	145.1
49	164.5	144.5	184.5

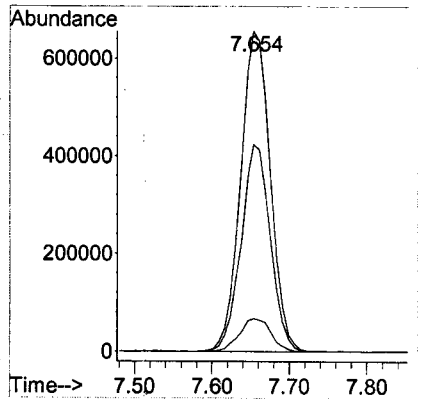


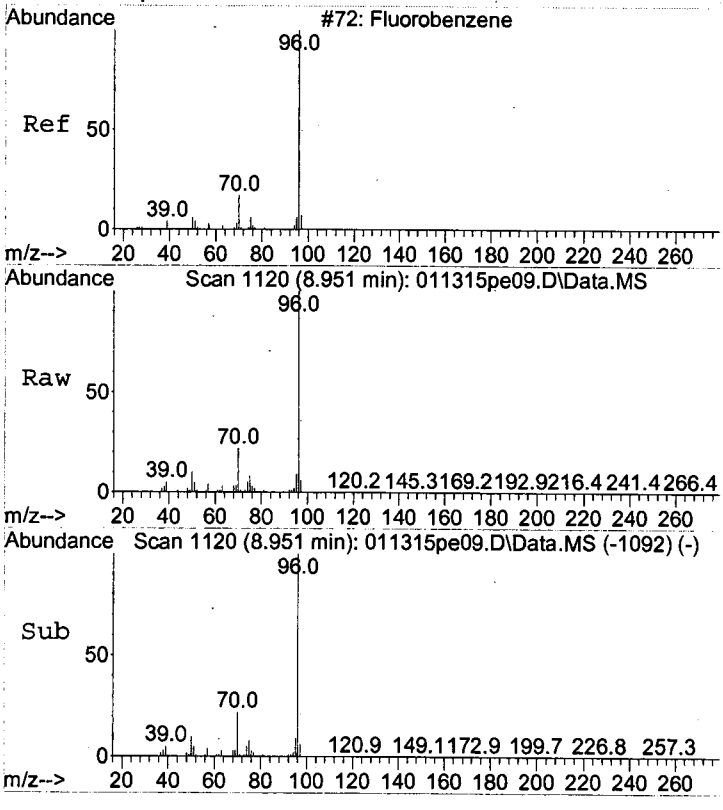


#23
Chloroform
Concen: 5.21 ug/L
RT: 7.654 min Scan# 947
Delta R.T. 0.004 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 83 Resp: 1745719

Ion	Ratio	Lower	Upper
83	100		
85	63.6	43.6	83.6
87	10.8	0.0	30.8

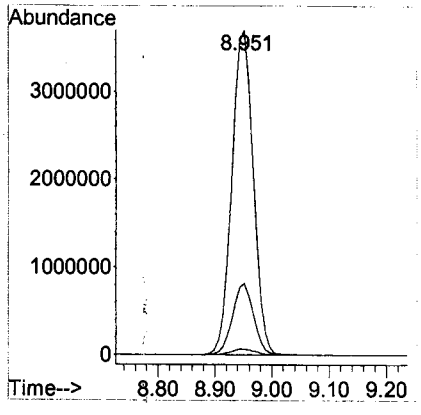


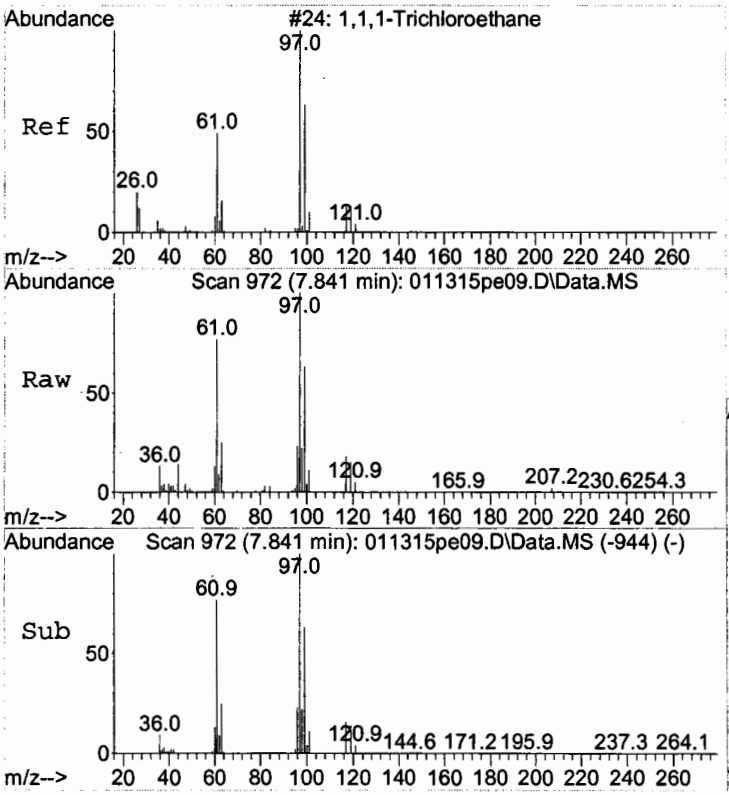


#24
Fluorobenzene
Concen: 5.00 ug/L
RT: 8.951 min Scan# 1120
Delta R.T. 0.009 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 96 Resp: 9649396

Ion	Ratio	Lower	Upper
96	100		
70	21.7	1.7	41.7
77	1.9	0.0	21.9

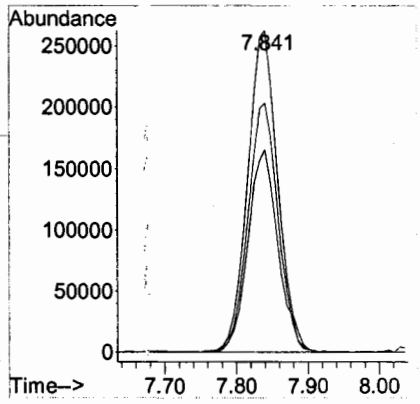


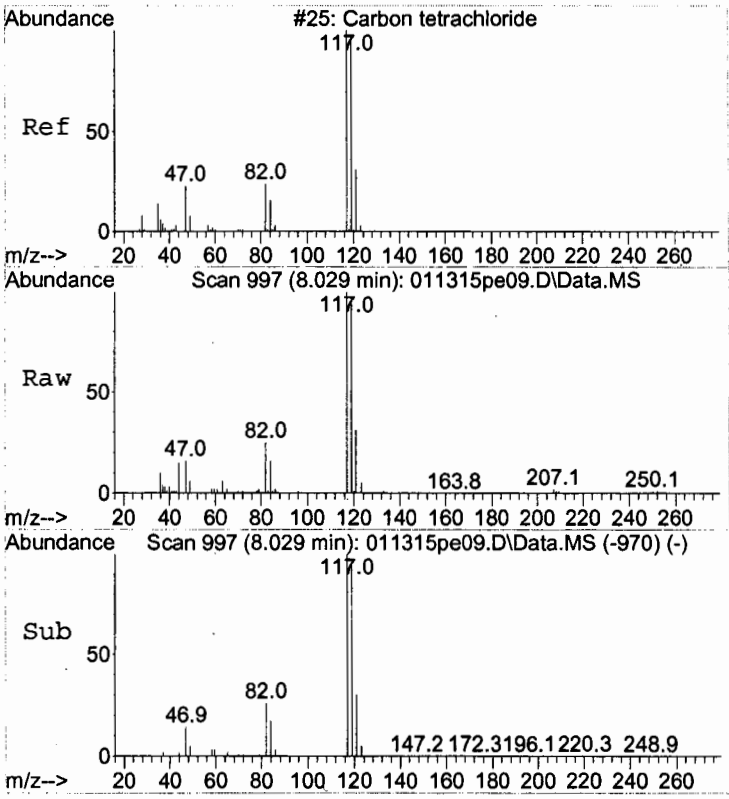


#25
1,1,1-Trichloroethane
Concen: 4.94 ug/L
RT: 7.841 min Scan# 972
Delta R.T. 0.007 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 97 Resp: 770728

Ion	Ratio	Lower	Upper
97	100		
99	62.8	42.8	82.8
61	77.5	57.5	97.5

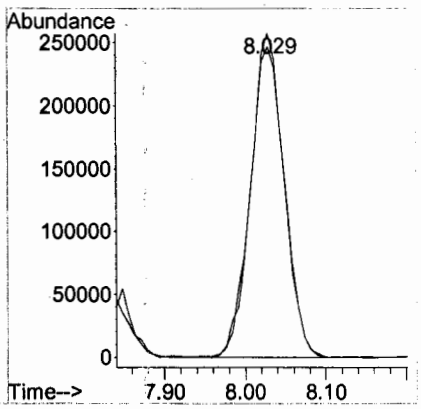


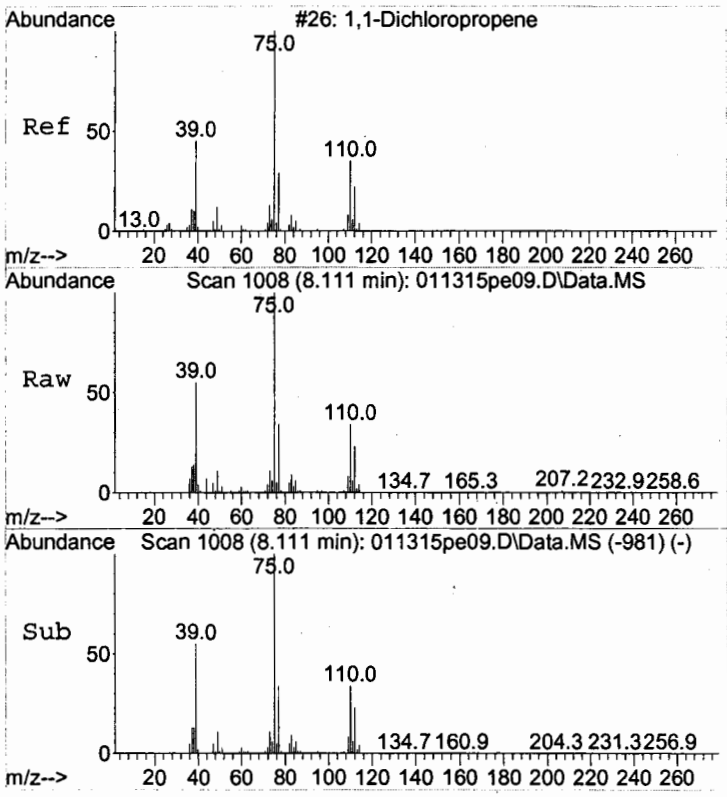


#26
Carbon tetrachloride
Concen: 4.90 ug/L
RT: 8.029 min Scan# 997
Delta R.T. 0.006 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:117 Resp: 744920

Ion	Ratio	Lower	Upper
117	100		
119	97.6	77.6	117.6

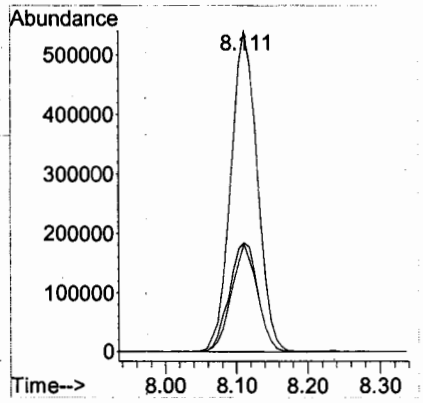


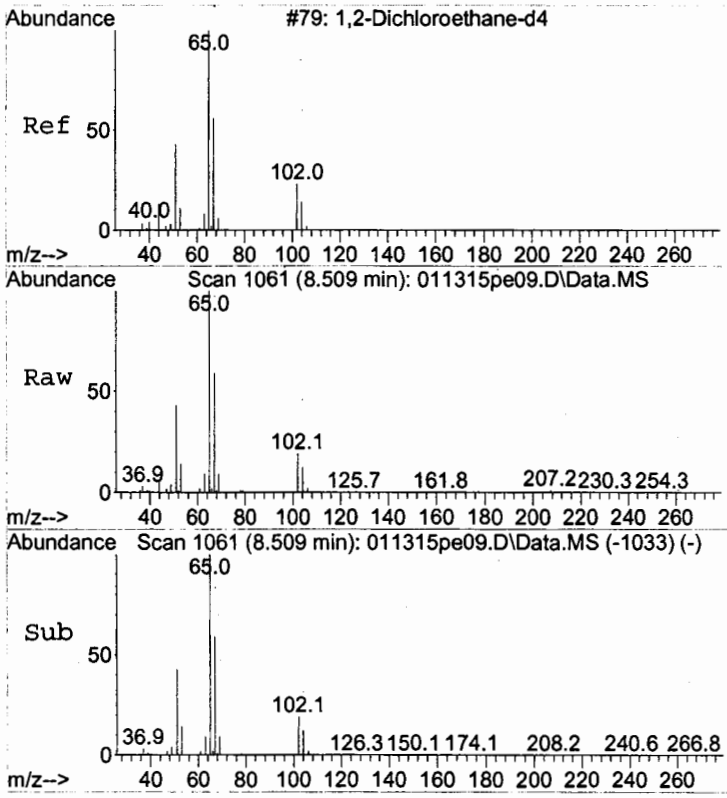


#27
1,1-Dichloropropene
Concen: 5.05 ug/L
RT: 8.111 min Scan# 1008
Delta R.T. 0.006 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 75 Resp: 1405578

Ion	Ratio	Lower	Upper
75	100		
110	36.6	16.6	56.6
77	32.7	12.7	52.7

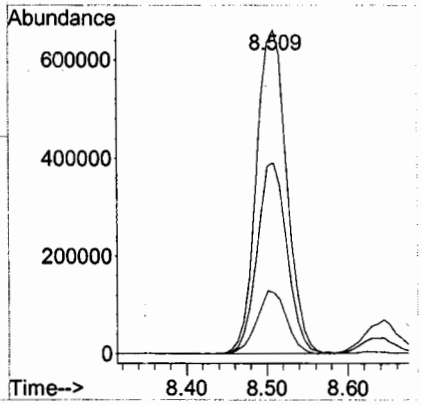


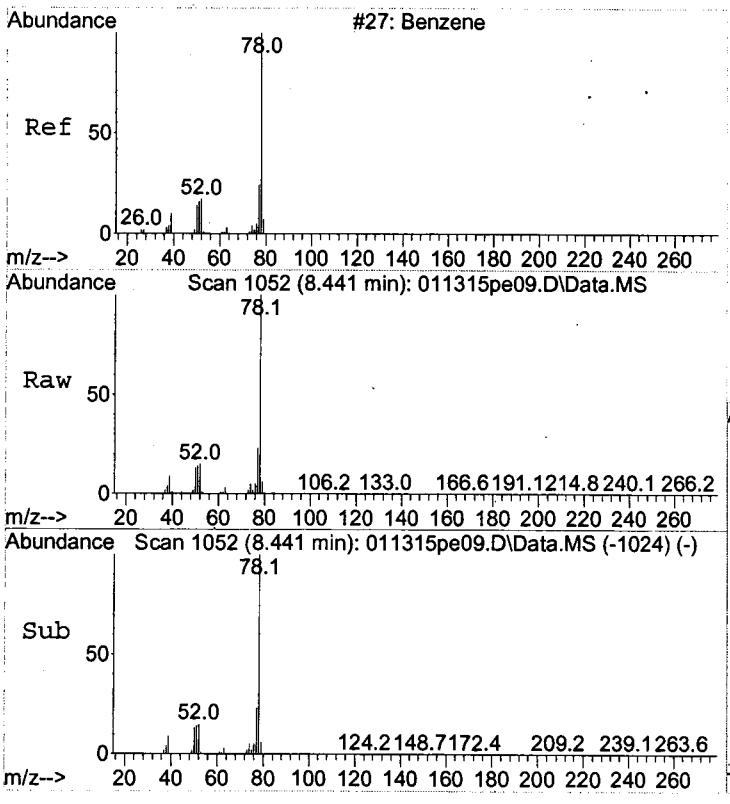


#28
1,2-Dichloroethane-d4
Concen: 5.04 ug/L
RT: 8.509 min Scan# 1061
Delta R.T. 0.009 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 65 Resp: 1741571

Ion	Ratio	Lower	Upper
65	100		
67	58.0	38.0	78.0
102	19.0	0.0	39.0

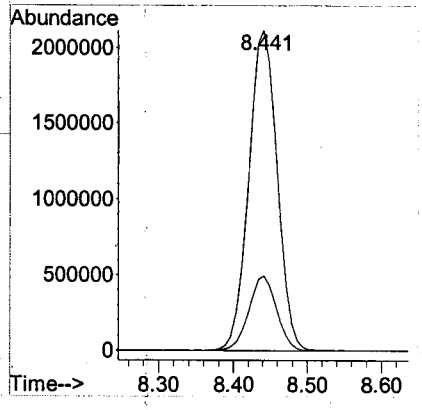


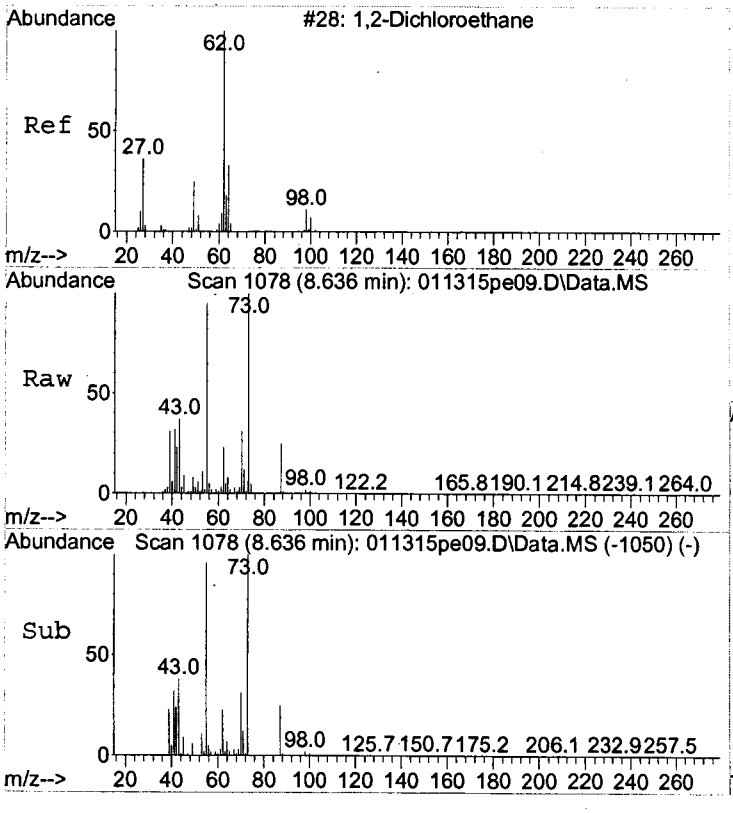


#29
Benzene
Concen: 5.12 ug/L
RT: 8.441 min Scan# 1052
Delta R.T. 0.009 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 78 Resp: 5669069

Ion	Ratio	Lower	Upper
78	100		
77	22.8	2.8	42.8

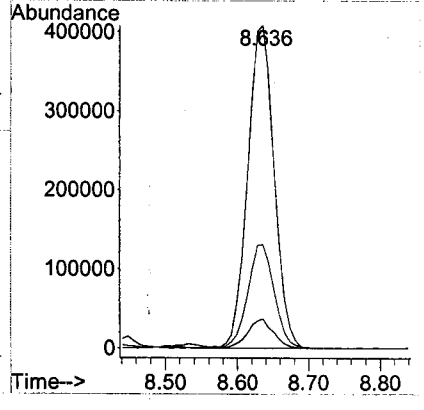


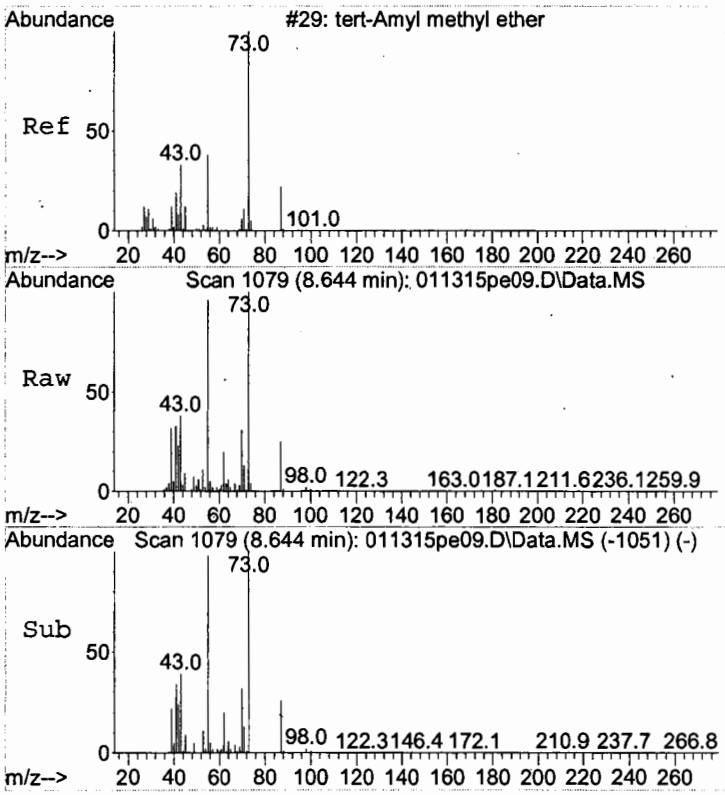


#30
1,2-Dichloroethane
Concen: 5.08 ug/L
RT: 8.636 min Scan# 1078
Delta R.T. 0.007 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 62 Resp: 1061611

Ion	Ratio	Lower	Upper
62	100		
98	8.8	0.0	28.8
64	32.0	12.0	52.0

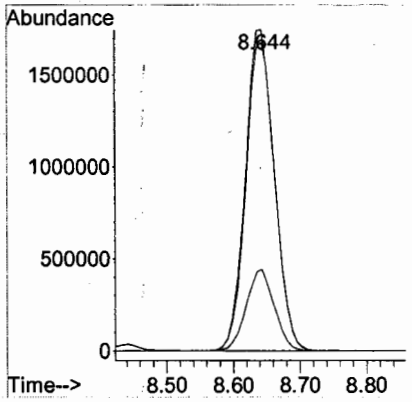


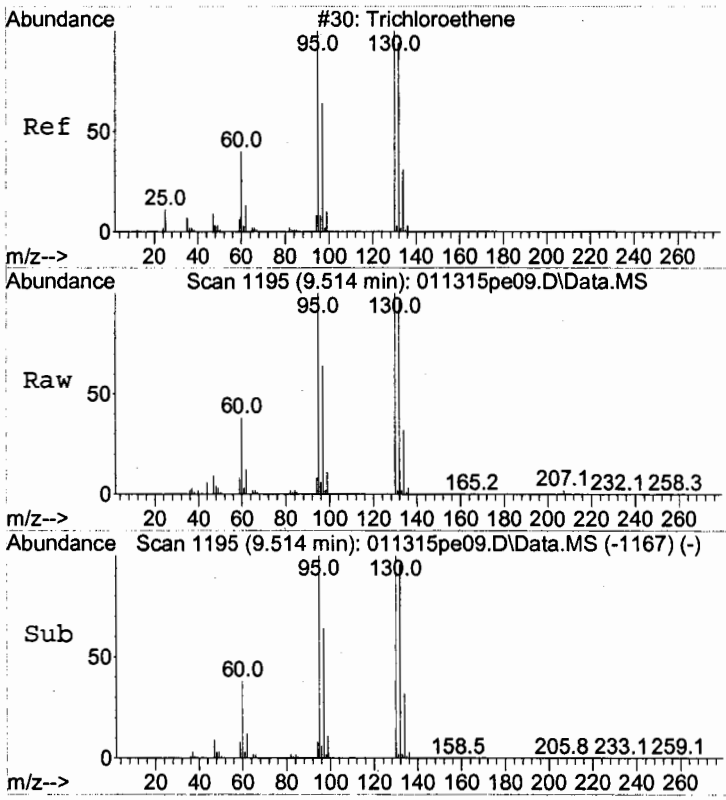


#31
tert-Amyl methyl ether
Concen: 20.84 ug/L
RT: 8.644 min Scan# 1079
Delta R.T. 0.007 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 73 Resp: 5296628

Ion	Ratio	Lower	Upper
73	100		
55	96.2	76.2	116.2
87	24.5	4.5	44.5

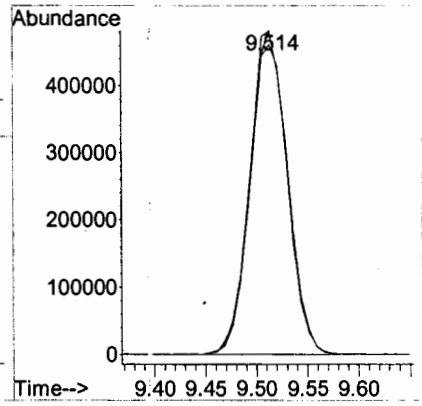


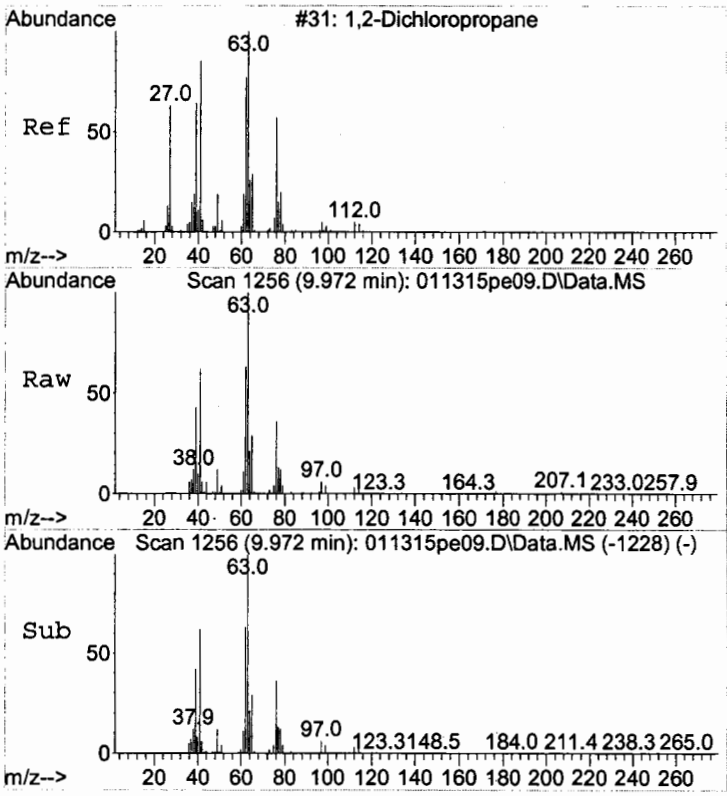


#32
Trichloroethene
Concen: 5.01 ug/L
RT: 9.514 min Scan# 1195
Delta R.T. 0.007 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 95 Resp: 1216161

Ion	Ratio	Lower	Upper
95	100		
130	101.2	81.2	121.2
132	98.6	78.6	118.6

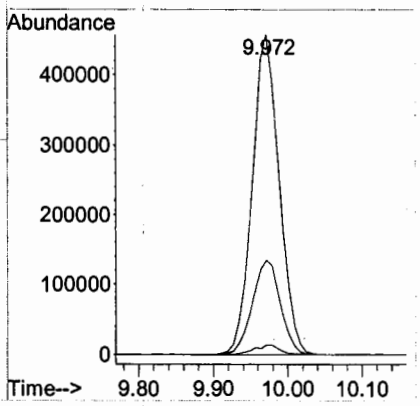


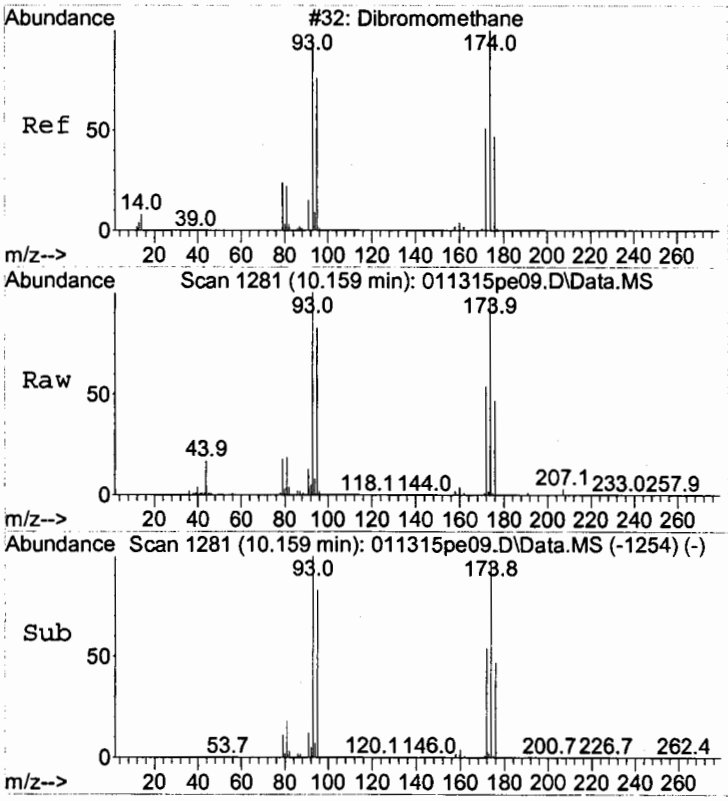


#33
1,2-Dichloropropane
Concen: 5.09 ug/L
RT: 9.972 min Scan# 1256
Delta R.T. 0.009 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 63 Resp: 1151682

Ion	Ratio	Lower	Upper
63	100		
65	30.5	10.5	50.5
112	3.0	0.0	23.0

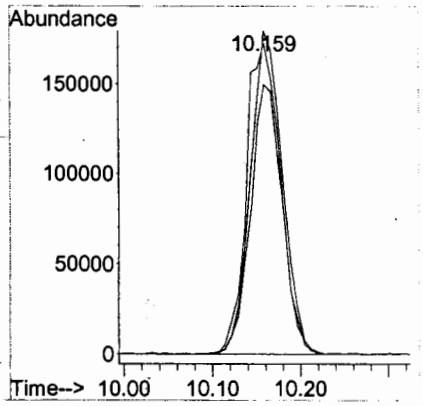


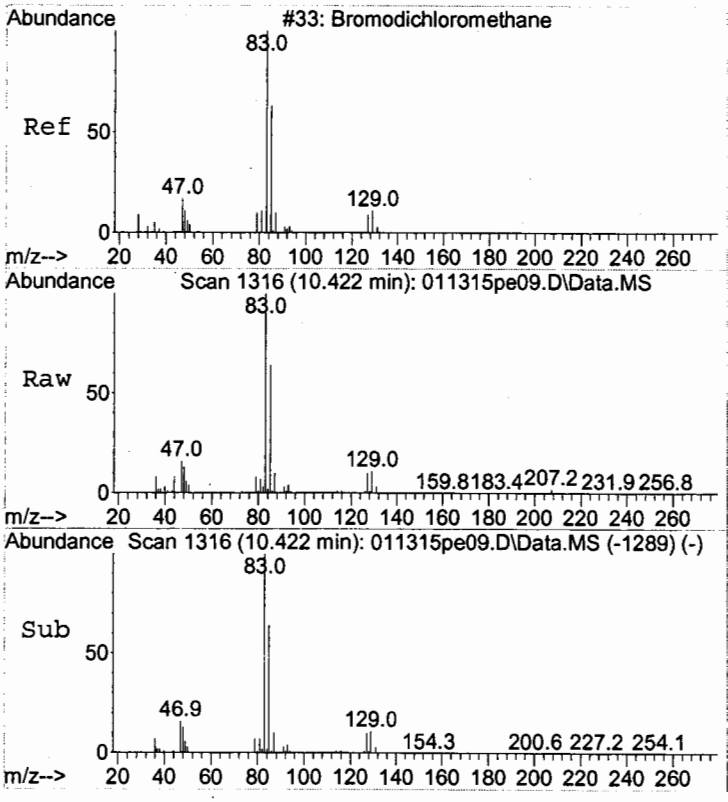


#34
Dibromomethane
Concen: 5.03 ug/L
RT: 10.159 min Scan# 1281
Delta R.T. 0.004 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 93 Resp: 453485

Ion	Ratio	Lower	Upper
93	100		
95	83.4	63.4	103.4
174	102.1	82.1	122.1

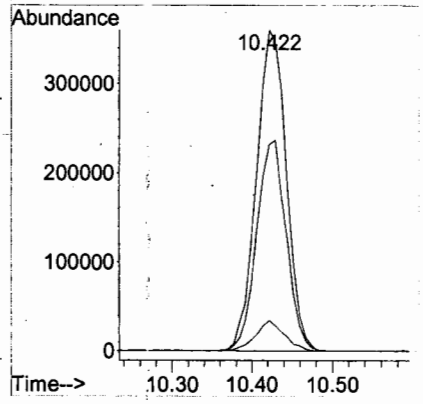


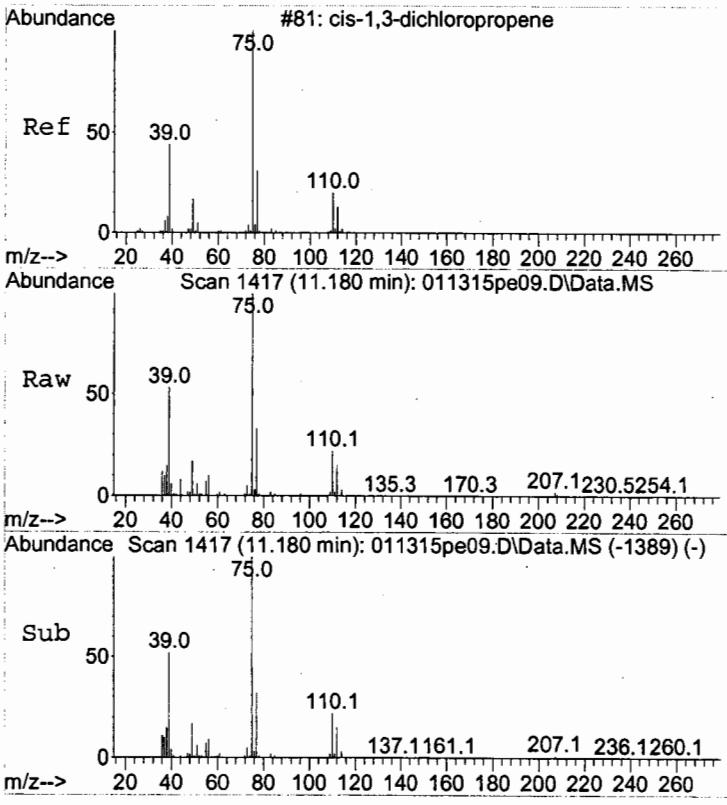


#35
Bromodichloromethane
Concen: 4.90 ug/L
RT: 10.422 min Scan# 1316
Delta R.T. 0.004 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 83 Resp: 933430

Ion	Ratio	Lower	Upper
83	100		
85	64.9	44.9	84.9
127	9.2	0.0	29.2

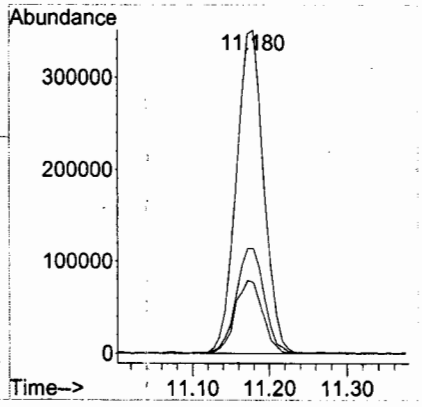


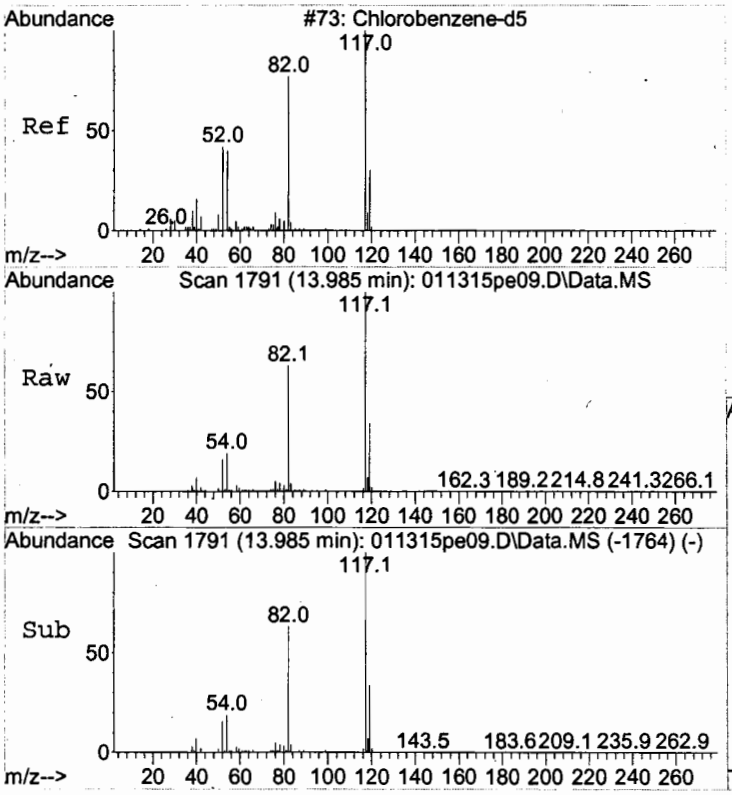


#36
cis-1,3-Dichloropropene
Concen: 4.98 ug/L
RT: 11.180 min Scan# 1417
Delta R.T. 0.009 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 75 Resp: 877429

Ion	Ratio	Lower	Upper
75	100		
77	33.0	13.0	53.0
110	22.6	2.6	42.6

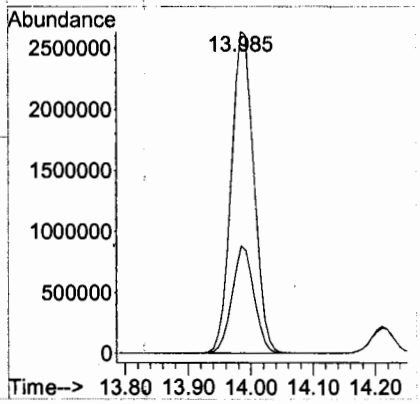


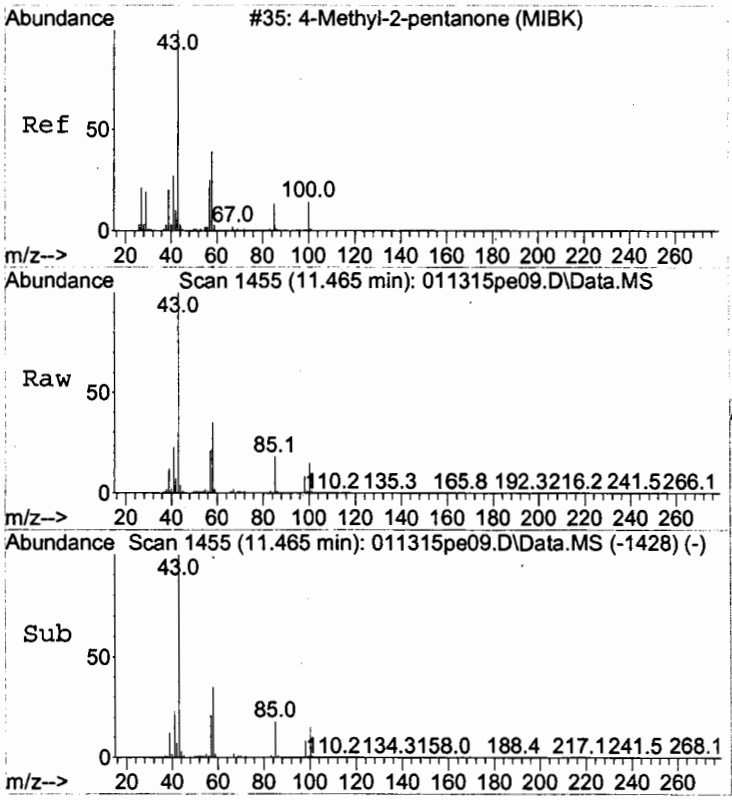


#37
Chlorobenzene-d5
Concen: 5.00 ug/L
RT: 13.985 min Scan# 1791
Delta R.T. 0.002 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:117 Resp: 6684653

Ion	Ratio	Lower	Upper
117	100		
119	32.4	12.4	52.4

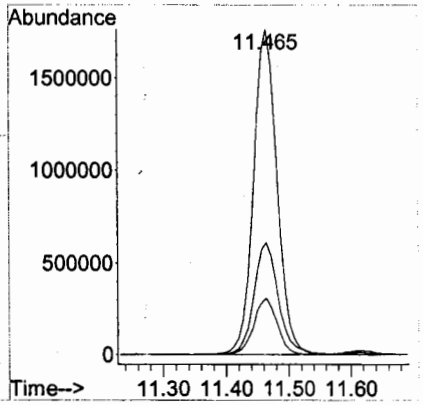


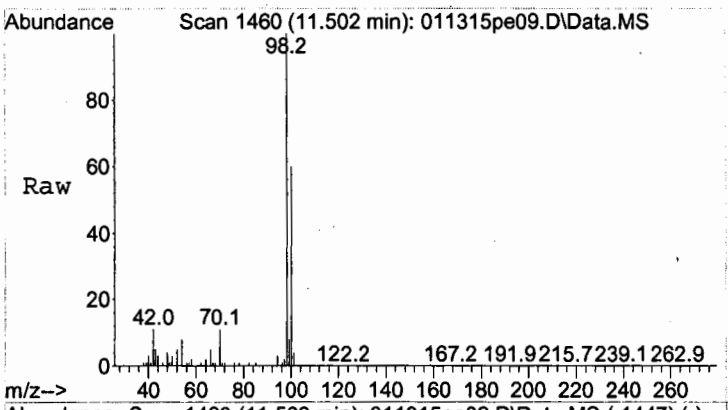


#38
4-Methyl-2-pentanone (MIBK)
Concen: 41.47 ug/L
RT: 11.465 min Scan# 1455
Delta R.T. 0.004 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 43 Resp: 4657399

Ion	Ratio	Lower	Upper
43	100		
58	36.1	16.1	56.1
85	17.4	0.0	37.4

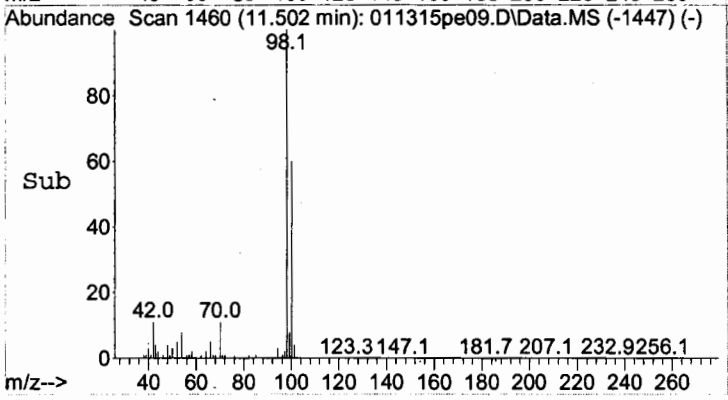


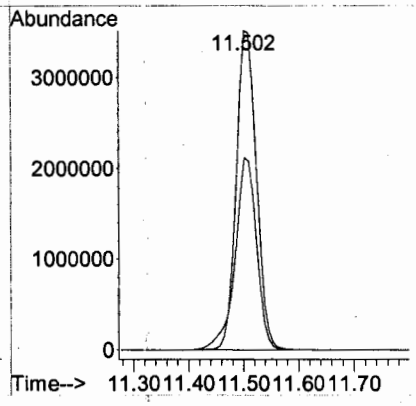


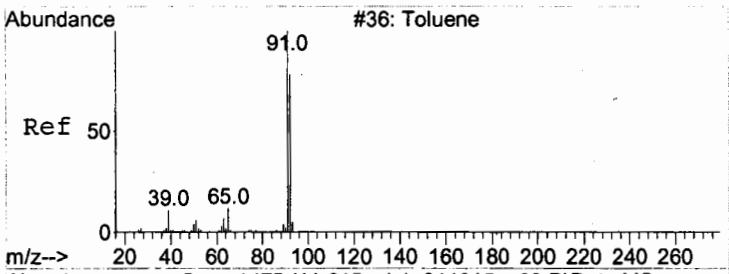
#39
Toluene-d8
Concen: 5.02 ug/L
RT: 11.502 min Scan# 1460
Delta R.T. 0.003 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 98 Resp: 9076488

Ion	Ratio	Lower	Upper
98	100		
100	64.0	44.0	84.0



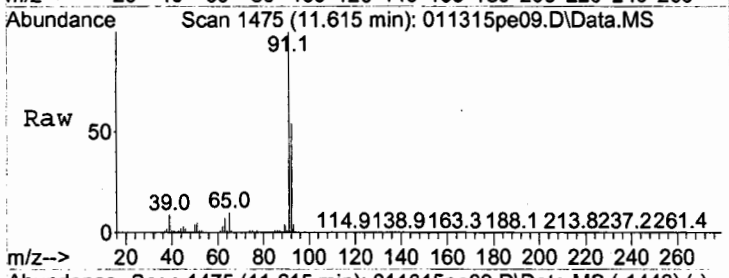


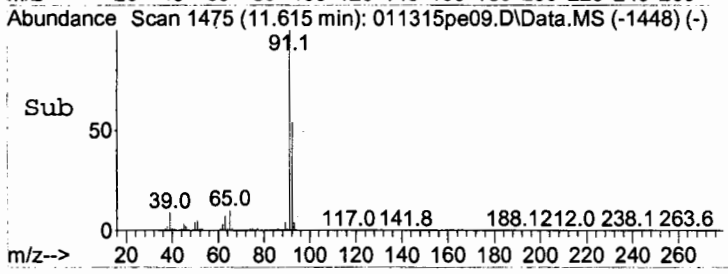


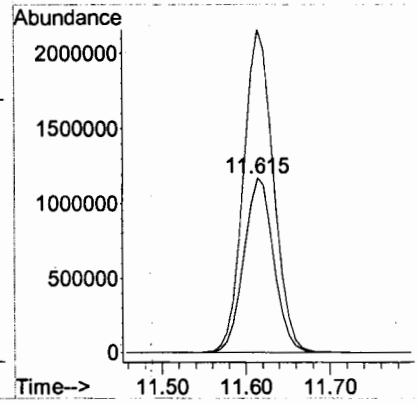
#40
Toluene
Concen: 5.18 ug/L
RT: 11.615 min Scan# 1475
Delta R.T. 0.004 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

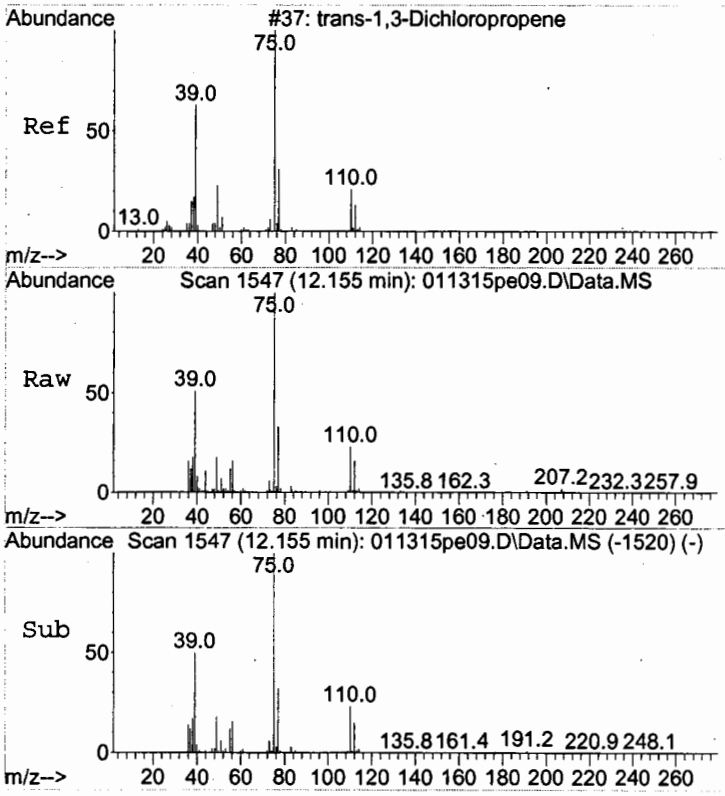
Tgt Ion: 92 Resp: 2923628

Ion	Ratio	Lower	Upper
92	100		
91	185.6	165.6	205.6





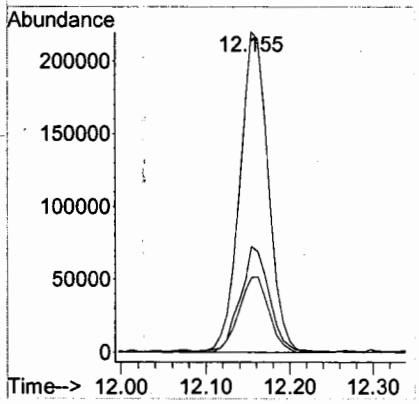


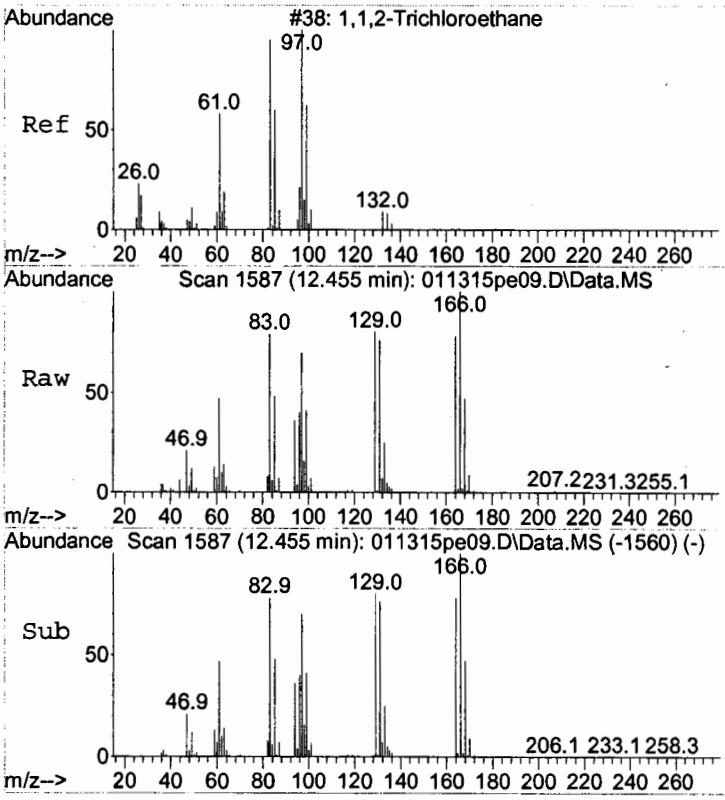


#41
trans-1,3-Dichloropropene
Concen: 5.03 ug/L
RT: 12.155 min Scan# 1547
Delta R.T. 0.003 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 75 Resp: 520678

Ion	Ratio	Lower	Upper
75	100		
77	33.1	13.1	53.1
110	24.6	4.6	44.6

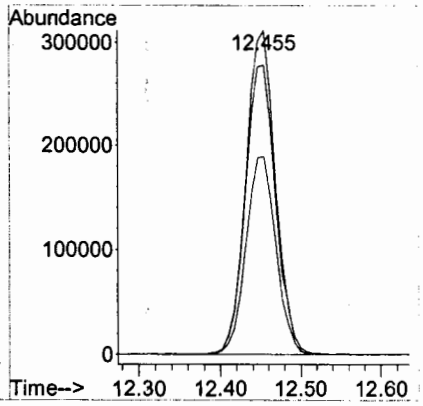


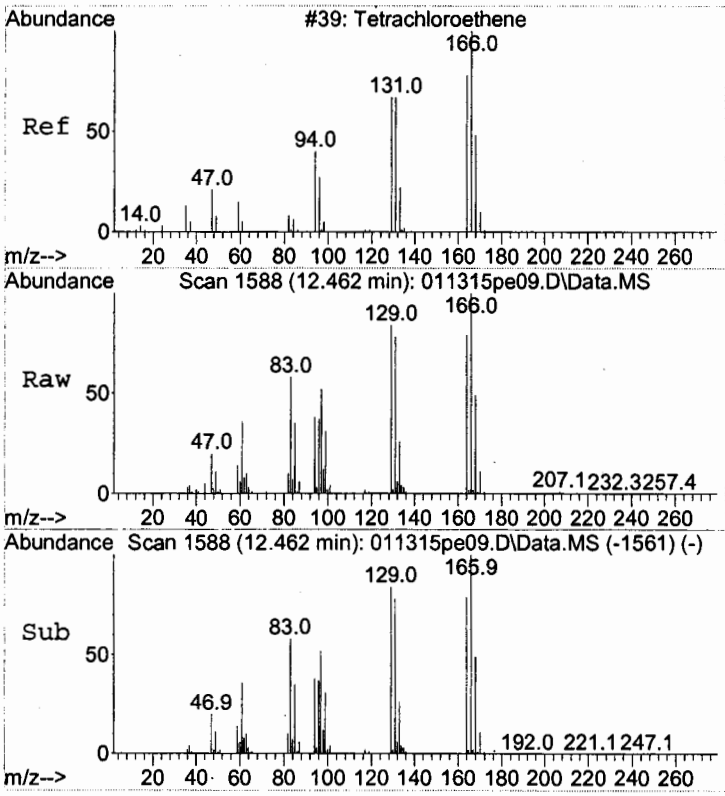


#42
1,1,2-Trichloroethane
Concen: 5.20 ug/L
RT: 12.455 min Scan# 1587
Delta R.T. 0.004 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 83 Resp: 795247

Ion	Ratio	Lower	Upper
83	100		
97	91.2	71.2	111.2
85	61.6	41.6	81.6

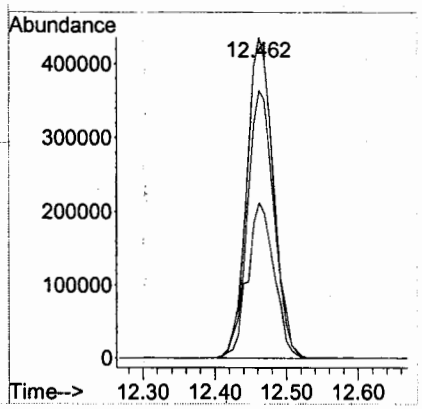


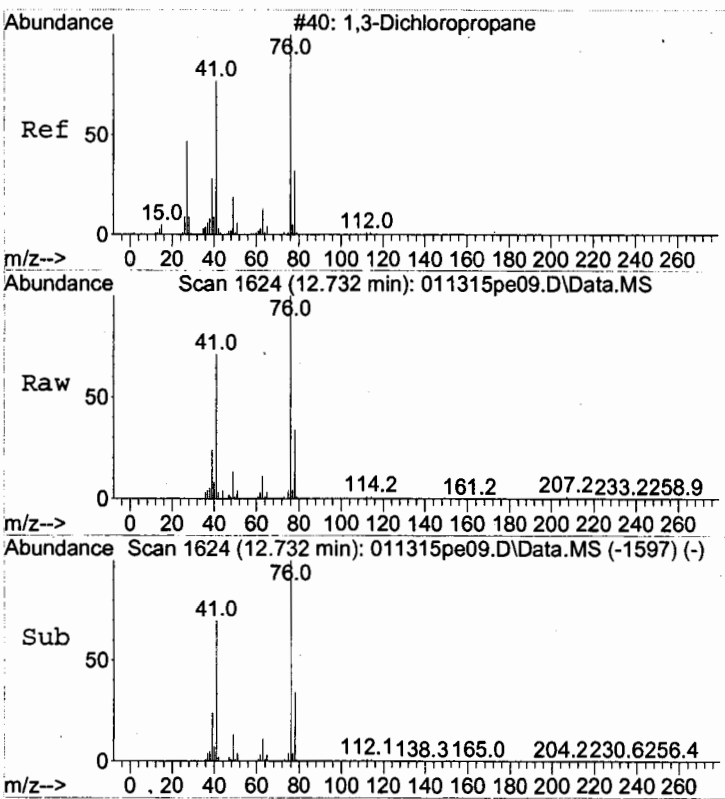


#43
Tetrachloroethene
Concen: 5.07 ug/L
RT: 12.462 min Scan# 1588
Delta R.T. 0.001 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 166 Resp: 1138087

Ion	Ratio	Lower	Upper
166	100		
168	48.7	28.7	68.7
129	83.4	63.4	103.4

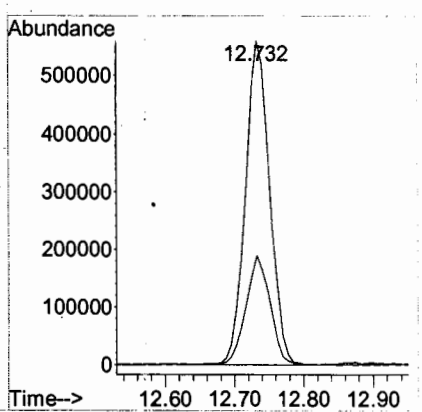


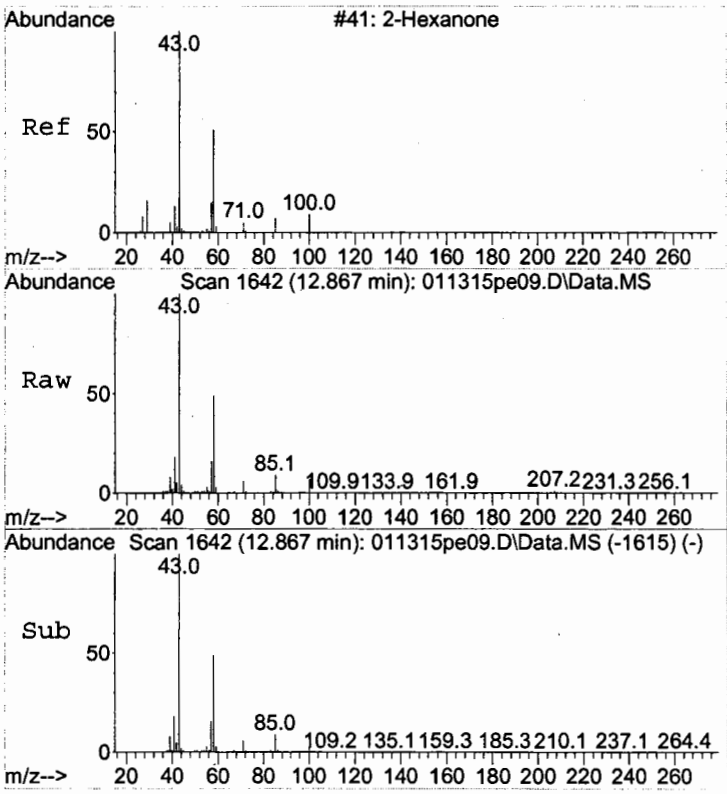


#44
1,3-Dichloropropane
Concen: 5.08 ug/L
RT: 12.732 min Scan# 1624
Delta R.T. 0.001 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 76 Resp: 1383010

Ion	Ratio	Lower	Upper
76	100		
78	33.4	13.4	53.4

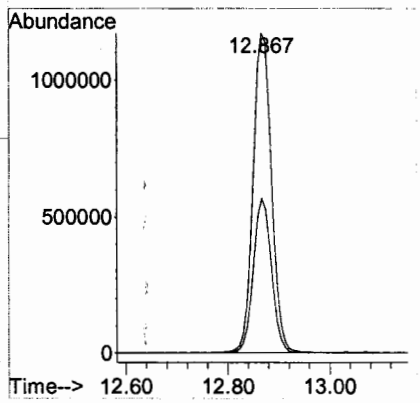


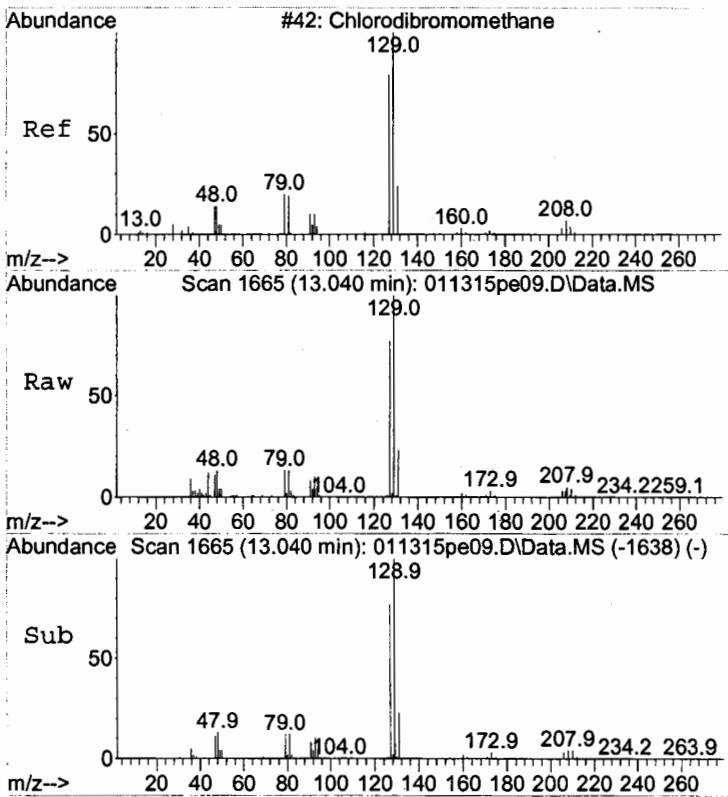


#45
2-Hexanone
Concen: 41.96 ug/L
RT: 12.867 min Scan# 1642
Delta R.T. 0.002 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 43 Resp: 2927606

Ion	Ratio	Lower	Upper
43	100		
58	48.0	28.0	68.0

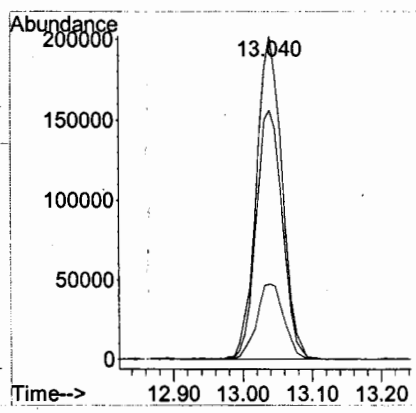


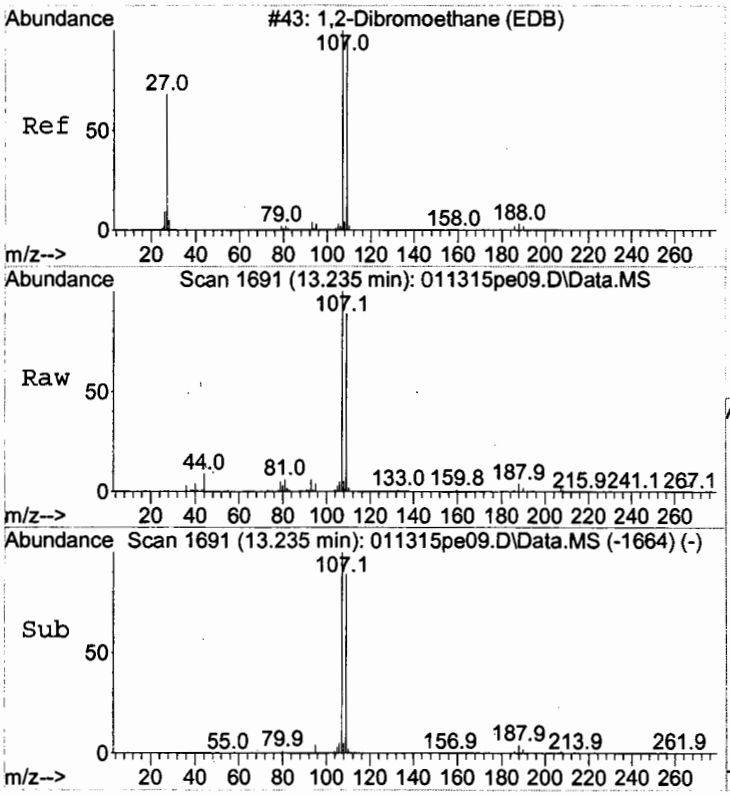


#46
Chlorodibromomethane
Concen: 5.02 ug/L
RT: 13.040 min Scan# 1665
Delta R.T. 0.001 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:129 Resp: 523305

Ion	Ratio	Lower	Upper
129	100		
127	79.1	59.1	99.1
131	24.8	4.8	44.8

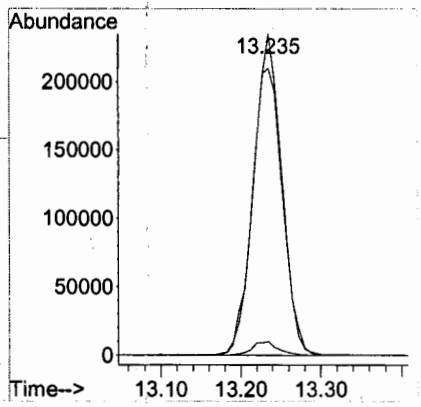


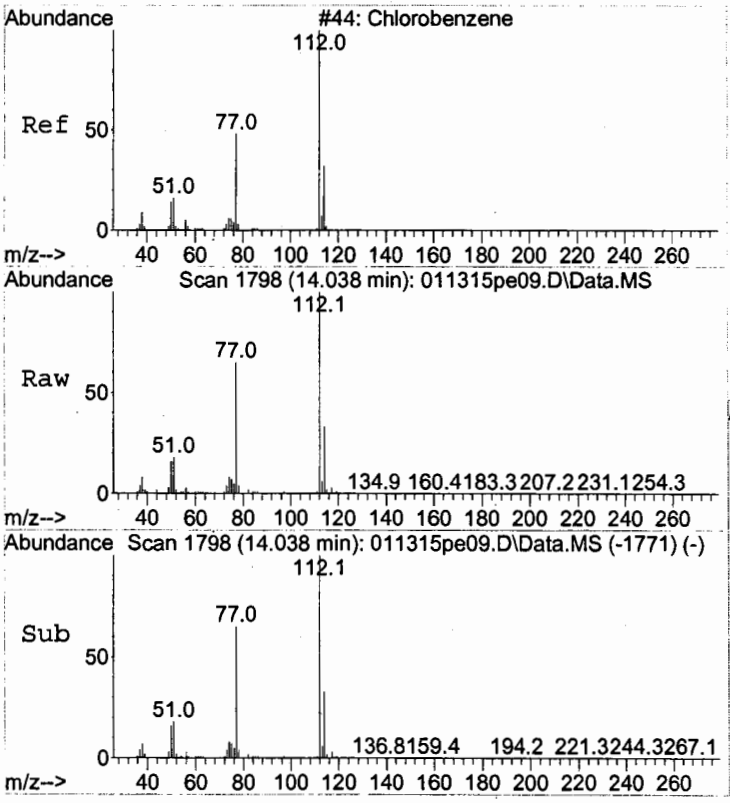


#47
1,2-Dibromoethane (EDB)
Concen: 5.21 ug/L
RT: 13.235 min Scan# 1691
Delta R.T. 0.001 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:107 Resp: 577622

Ion	Ratio	Lower	Upper
107	100		
109	95.9	75.9	115.9
188	3.8	0.0	23.8

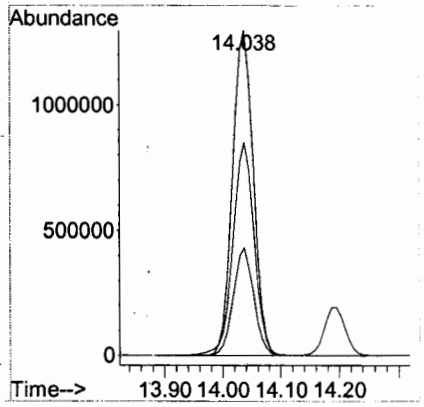


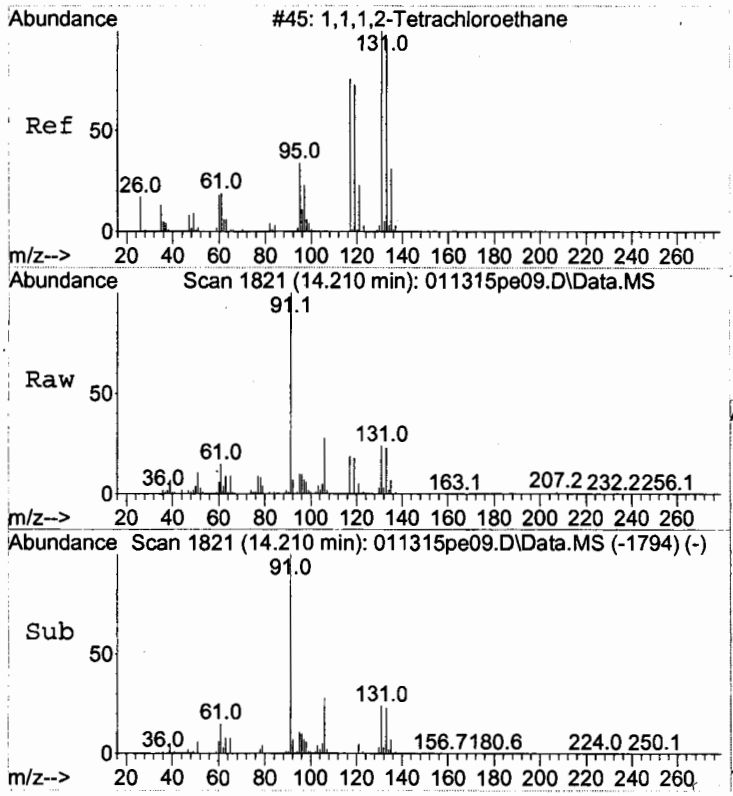


#48
Chlorobenzene
Concen: 5.13 ug/L
RT: 14.038 min Scan# 1798
Delta R.T. 0.004 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:112 Resp: 3224494

Ion	Ratio	Lower	Upper
112	100		
114	32.6	12.6	52.6
77	66.6	46.6	86.6

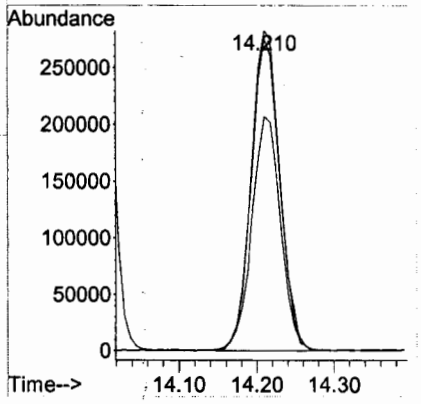


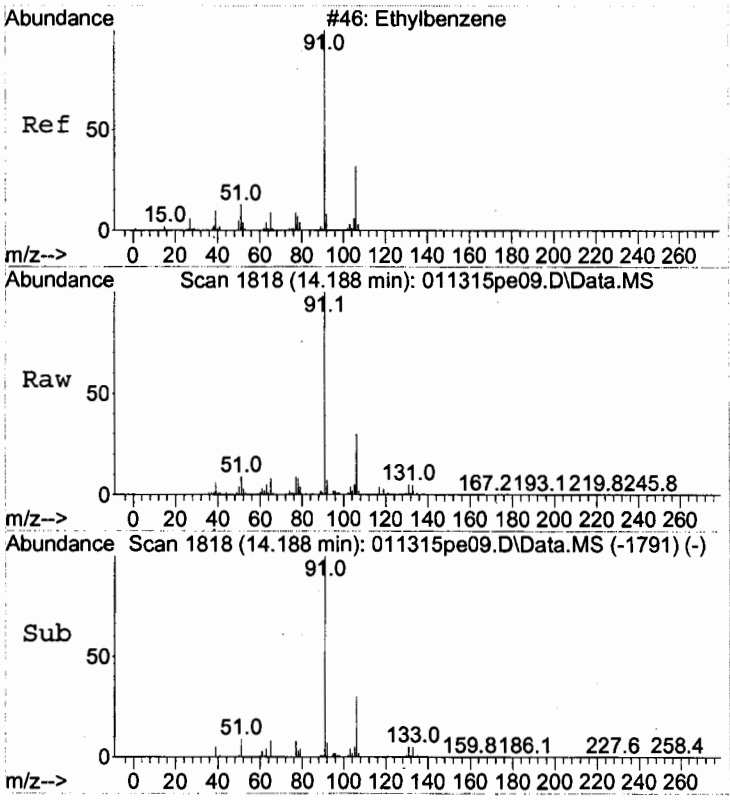


#49
1,1,1,2-Tetrachloroethane
Concen: 5.16 ug/L
RT: 14.210 min Scan# 1821
Delta R.T. 0.005 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:131 Resp: 732152

Ion	Ratio	Lower	Upper
131	100		
133	96.5	76.5	116.5
119	73.1	53.1	93.1

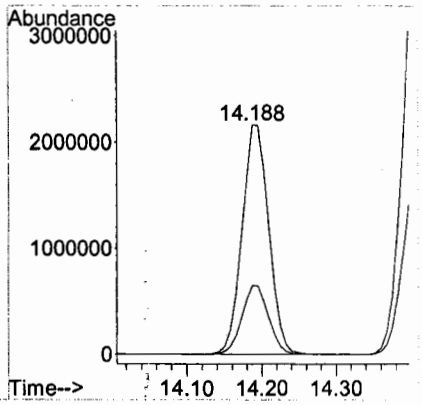


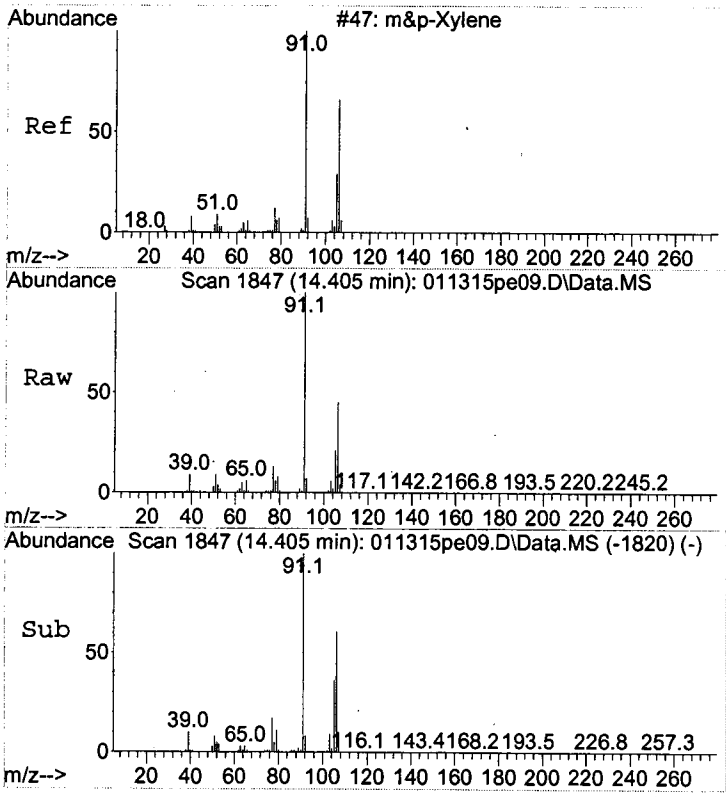


#50
Ethylbenzene
Concen: 5.29 ug/L
RT: 14.188 min Scan# 1818
Delta R.T. 0.002 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 91 Resp: 5400858

Ion	Ratio	Lower	Upper
91	100		
106	30.0	10.0	50.0

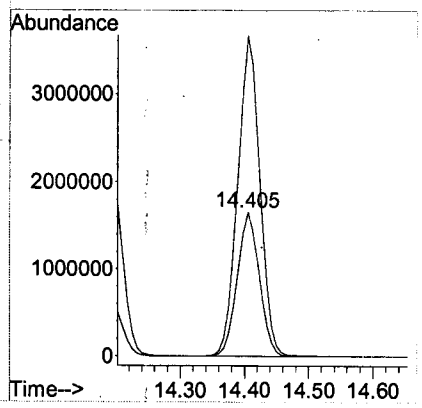


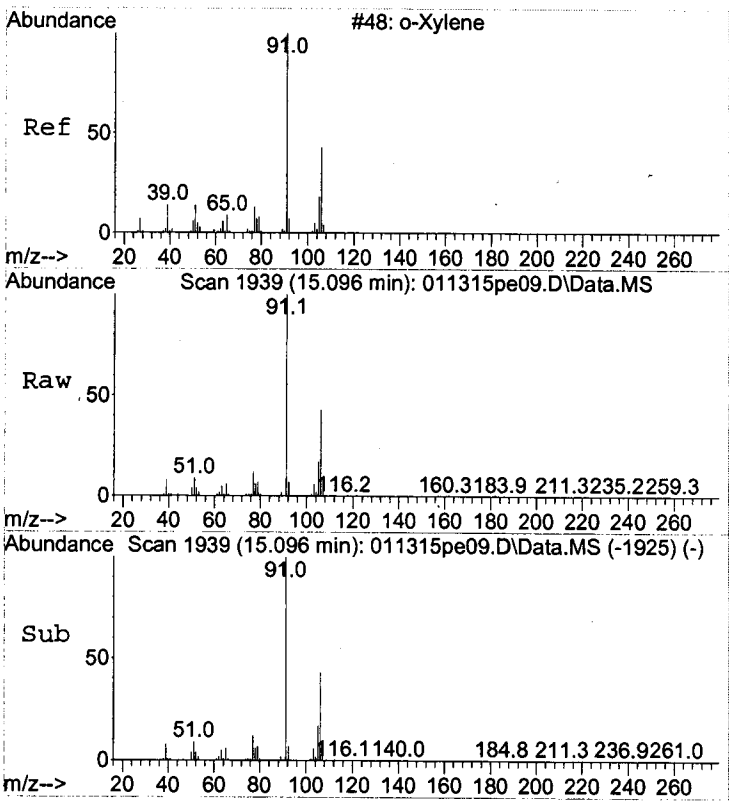


#51
m&p-Xylene
Concen: 10.56 ug/L
RT: 14.405 min Scan# 1847
Delta R.T. 0.002 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:106 Resp: 3962079

Ion	Ratio	Lower	Upper
106	100		
91	222.8	202.8	242.8

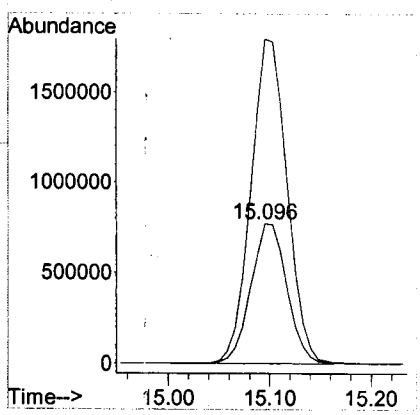


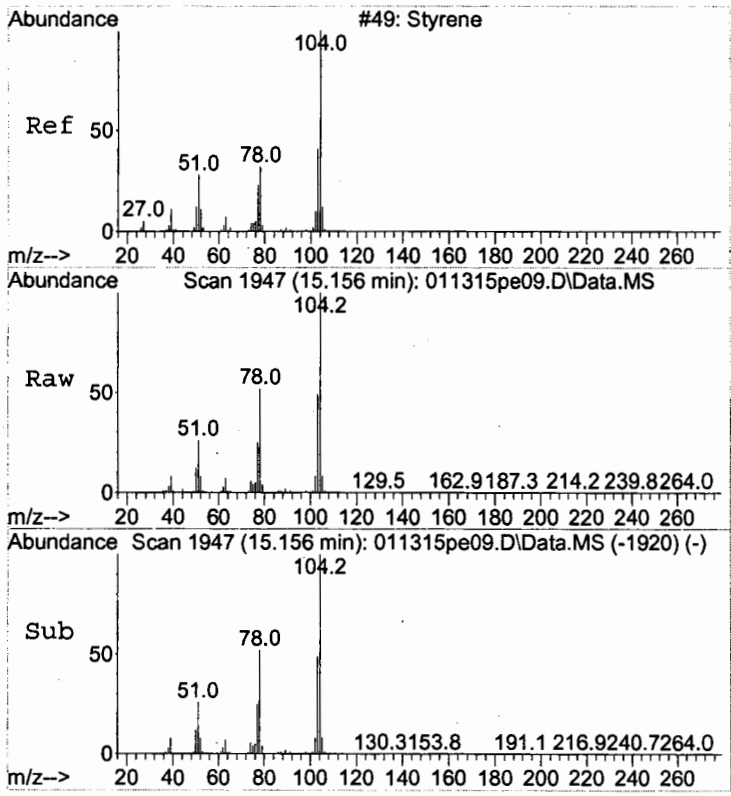


#52
o-Xylene
Concen: 5.30 ug/L
RT: 15.096 min Scan# 1939
Delta R.T. 0.002 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:106 Resp: 1907705

Ion	Ratio	Lower	Upper
106	100		
91	233.2	213.2	253.2

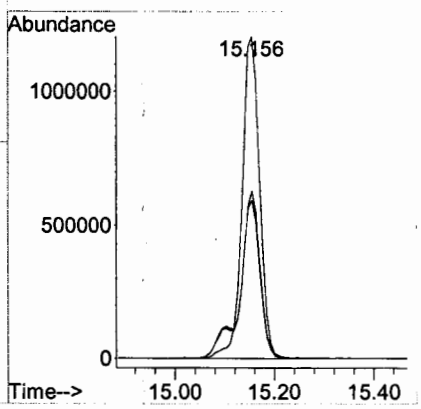


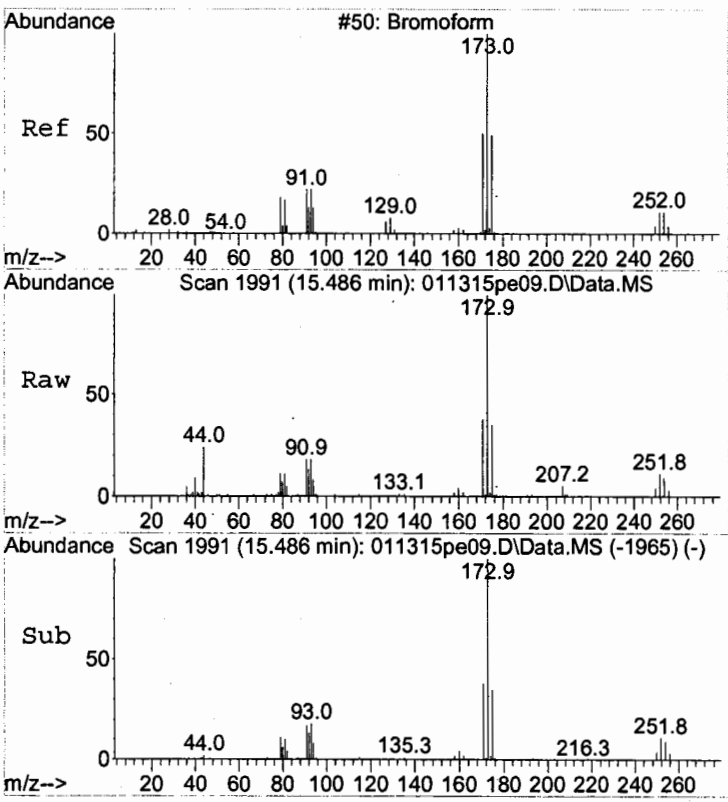


#53
Styrene
Concen: 5.28 ug/L
RT: 15.156 min Scan# 1947
Delta R.T. 0.004 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:104 Resp: 3019867

Ion	Ratio	Lower	Upper
104	100		
78	59.4	39.4	79.4
103	56.8	36.8	76.8

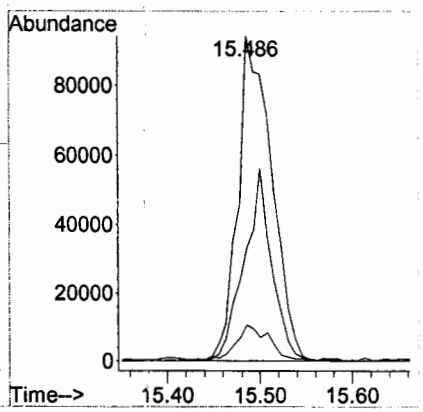


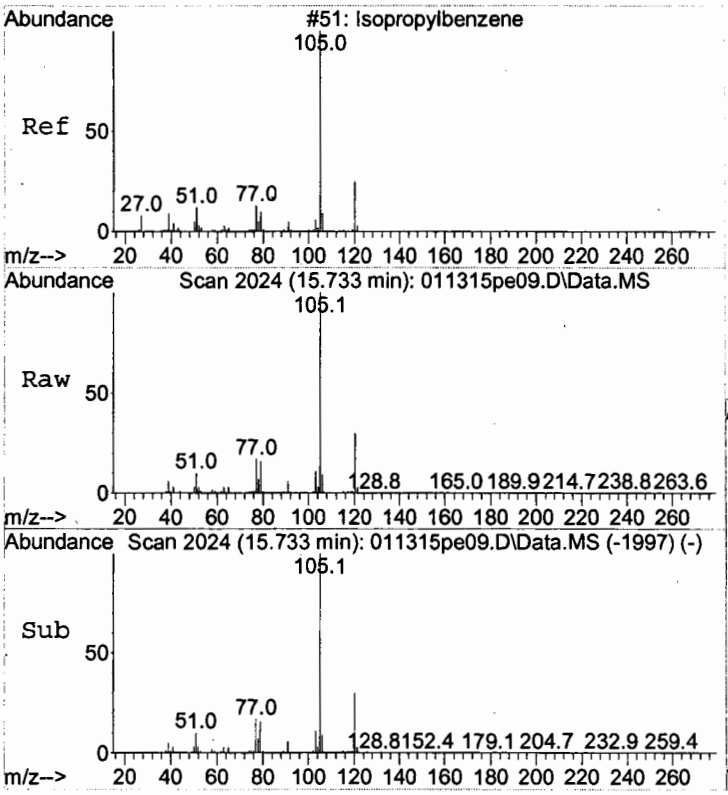


#54
Bromoform
Concen: 5.19 ug/L
RT: 15.486 min Scan# 1991
Delta R.T. -0.005 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:173 Resp: 242854

Ion	Ratio	Lower	Upper
173	100		
175	48.6	28.6	68.6
252	11.0	0.0	31.0

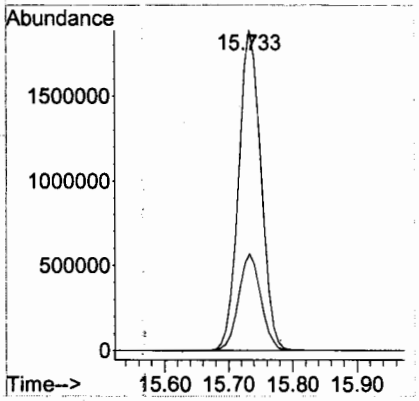


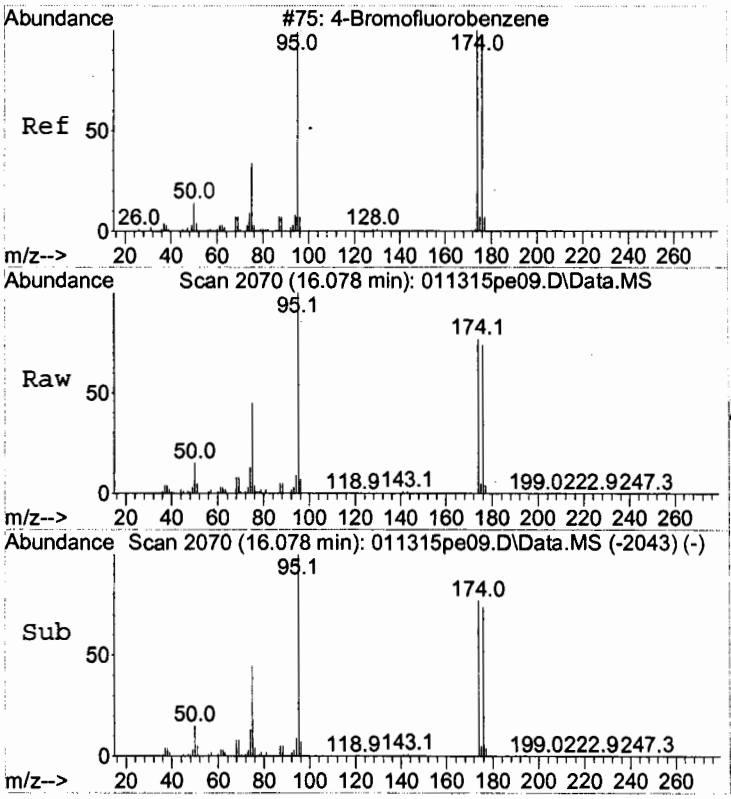


#55
Isopropylbenzene
Concen: 5.32 ug/L
RT: 15.733 min Scan# 2024
Delta R.T. 0.003 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:105 Resp: 4597261

Ion	Ratio	Lower	Upper
105	100		
120	30.1	10.1	50.1

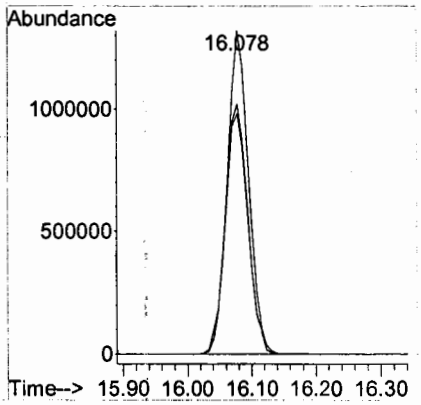


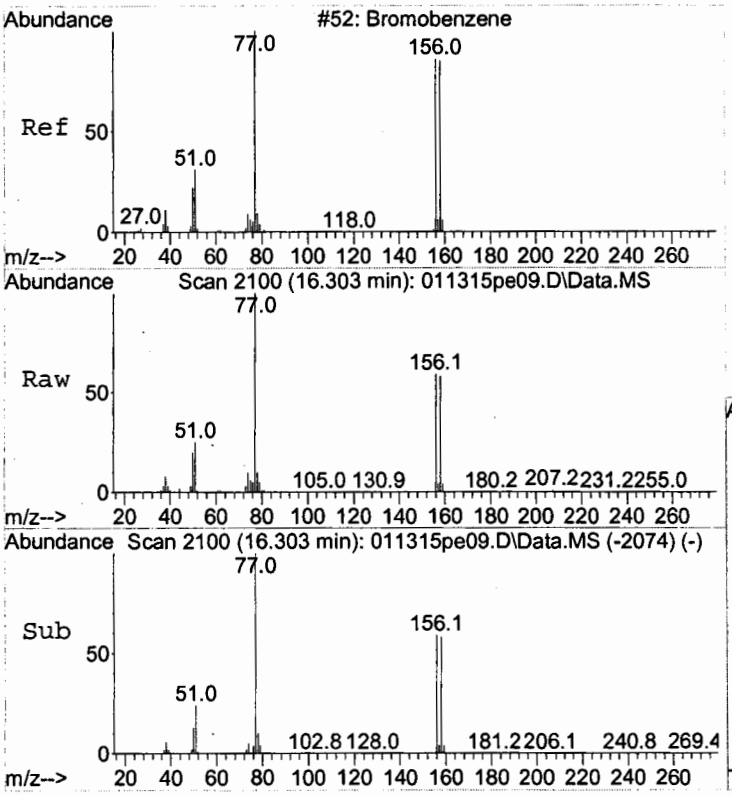


#56
4-Bromofluorobenzene
Concen: 5.05 ug/L
RT: 16.078 min Scan# 2070
Delta R.T. 0.000 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 95 Resp: 3048078

Ion	Ratio	Lower	Upper
95	100		
174	81.7	61.7	101.7
176	78.2	58.2	98.2

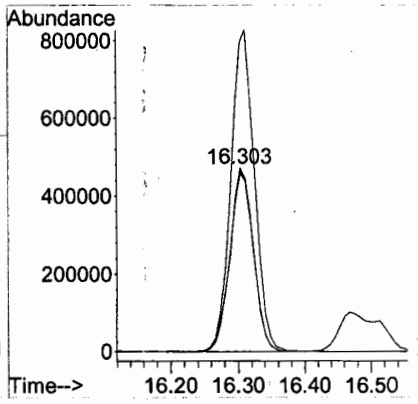


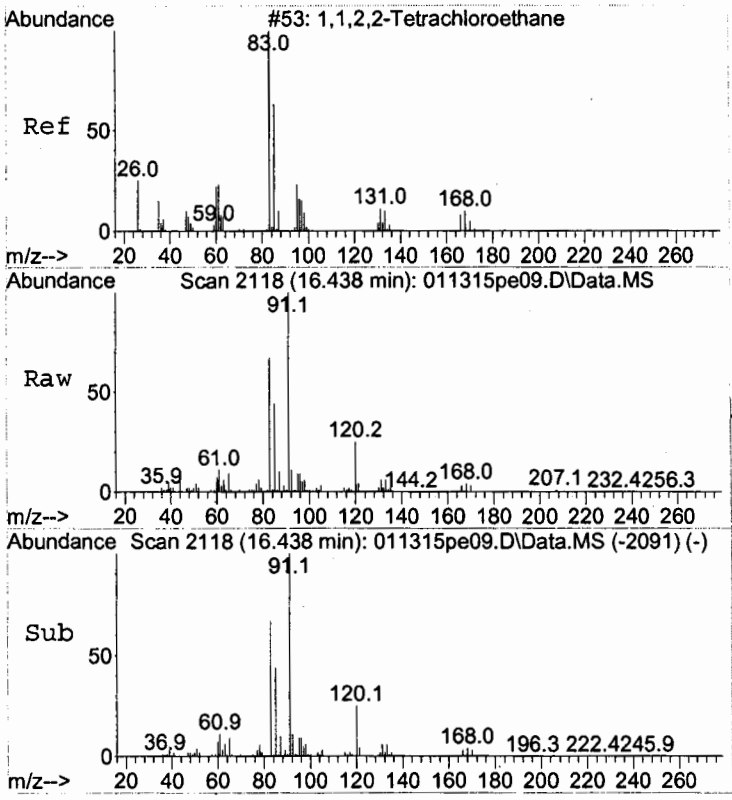


#57
Bromobenzene
Concen: 5.07 ug/L
RT: 16.303 min Scan# 2100
Delta R.T. -0.002 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:156 Resp: 1147966

Ion	Ratio	Lower	Upper
156	100		
77	176.4	156.4	196.4
158	98.4	78.4	118.4

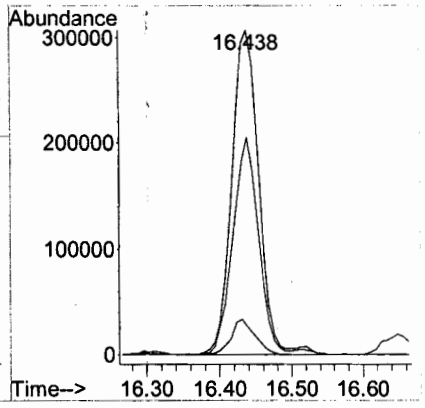


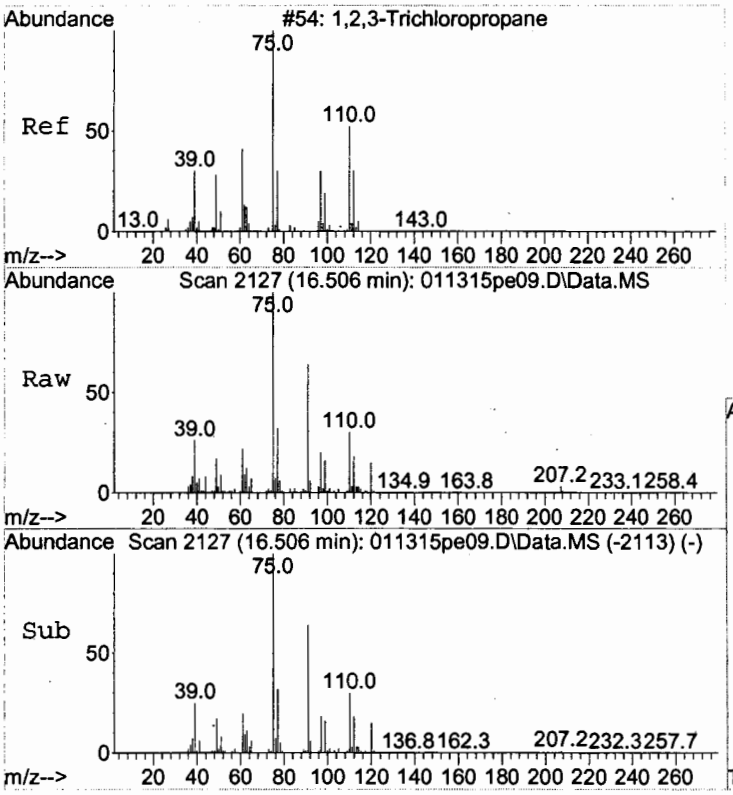


#58
1,1,2,2-Tetrachloroethane
Concen: 5.02 ug/L
RT: 16.438 min Scan# 2118
Delta R.T. 0.004 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 83 Resp: 797153

Ion	Ratio	Lower	Upper
83	100		
131	9.5	0.0	29.5
85	63.7	43.7	83.7

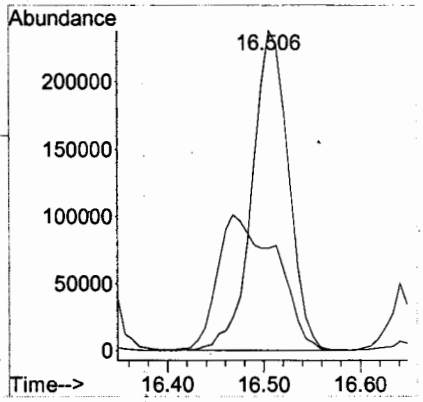


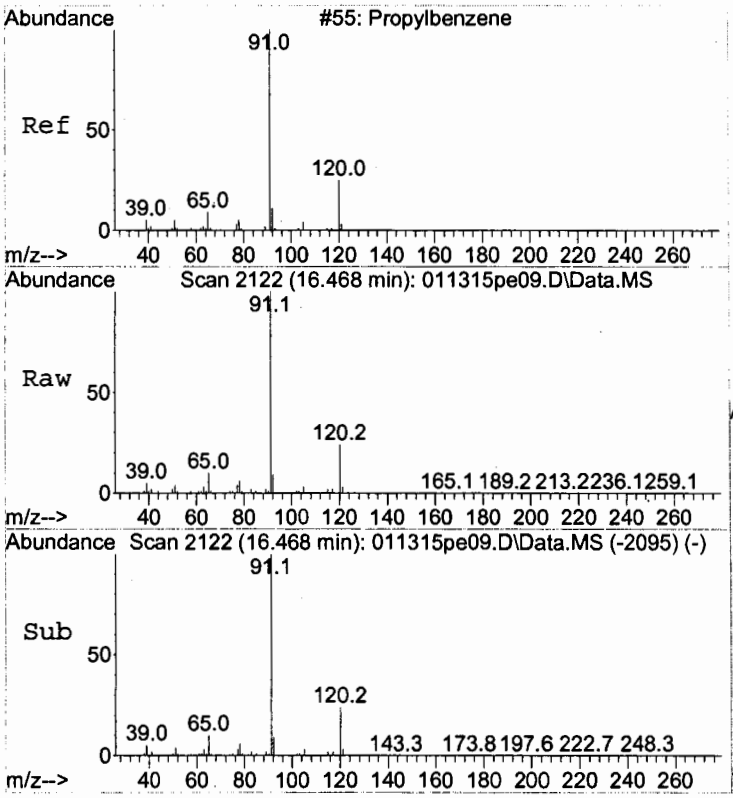


#59
1,2,3-Trichloropropane
Concen: 5.16 ug/L
RT: 16.506 min Scan# 2127
Delta R.T. 0.001 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 75 Resp: 623074

Ion	Ratio	Lower	Upper
75	100		
77	0.0	0.0	20.0

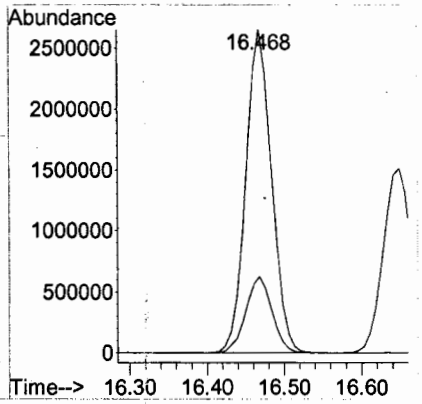


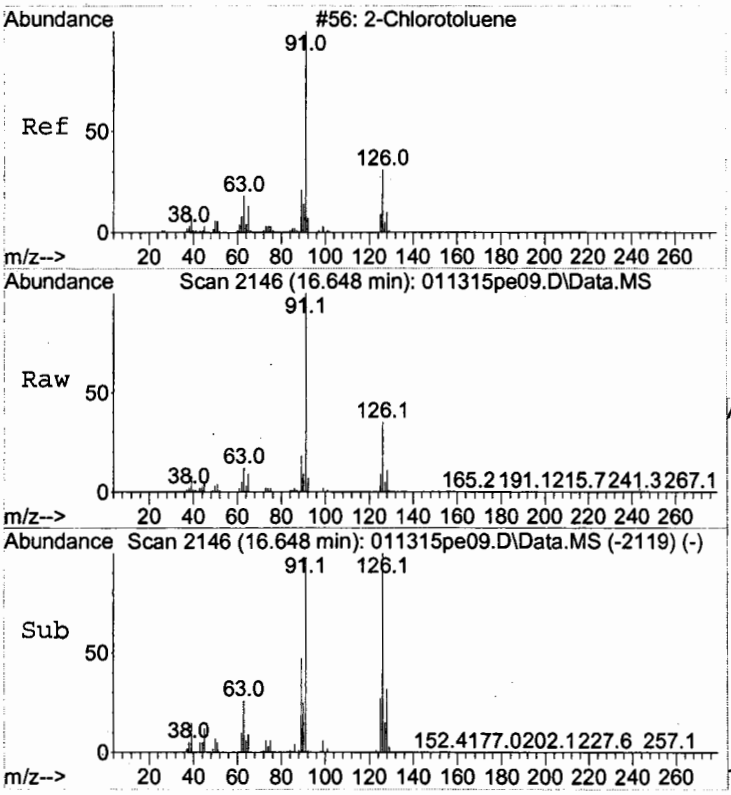


#60
Propylbenzene
Concen: 5.47 ug/L
RT: 16.468 min Scan# 2122
Delta R.T. 0.004 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 91 Resp: 6206192

Ion	Ratio	Lower	Upper
91	100		
120	23.9	3.9	43.9

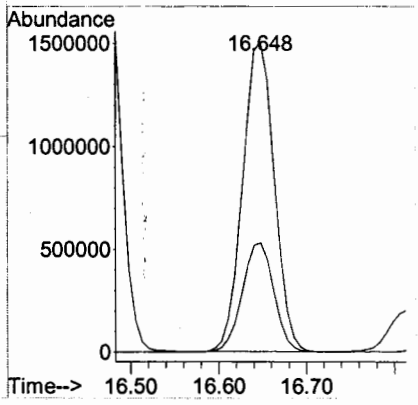


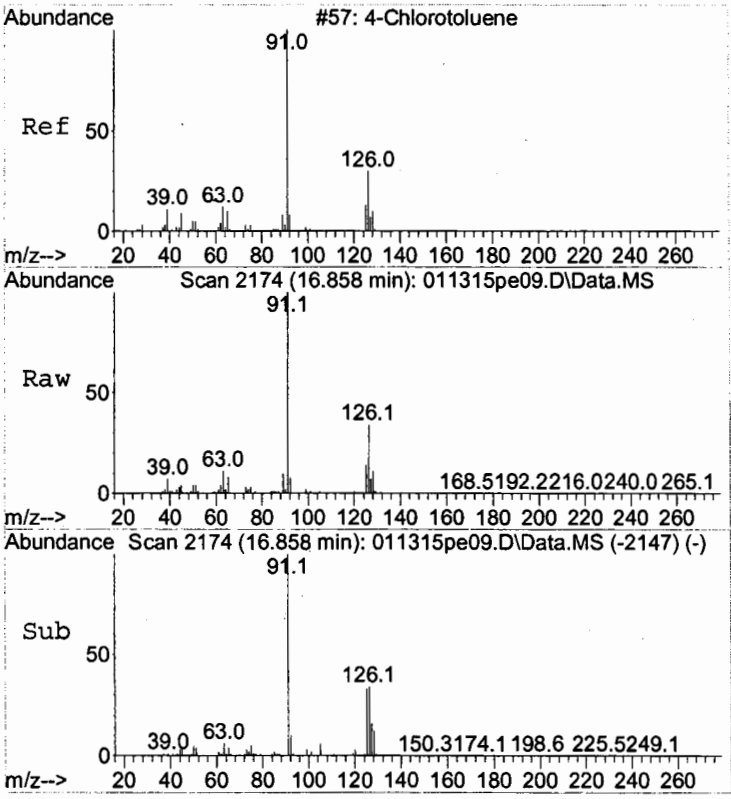


#61
2-Chlorotoluene
Concen: 5.22 ug/L
RT: 16.648 min Scan# 2146
Delta R.T. 0.004 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 91 Resp: 3795350

Ion	Ratio	Lower	Upper
91	100		
126	35.3	15.3	55.3

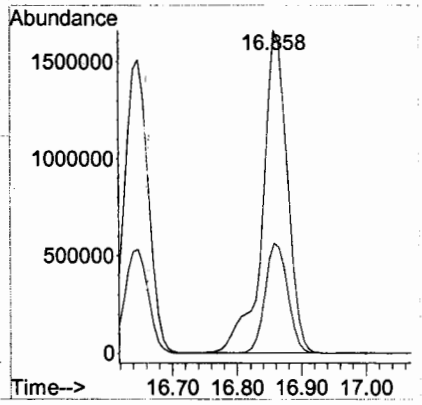


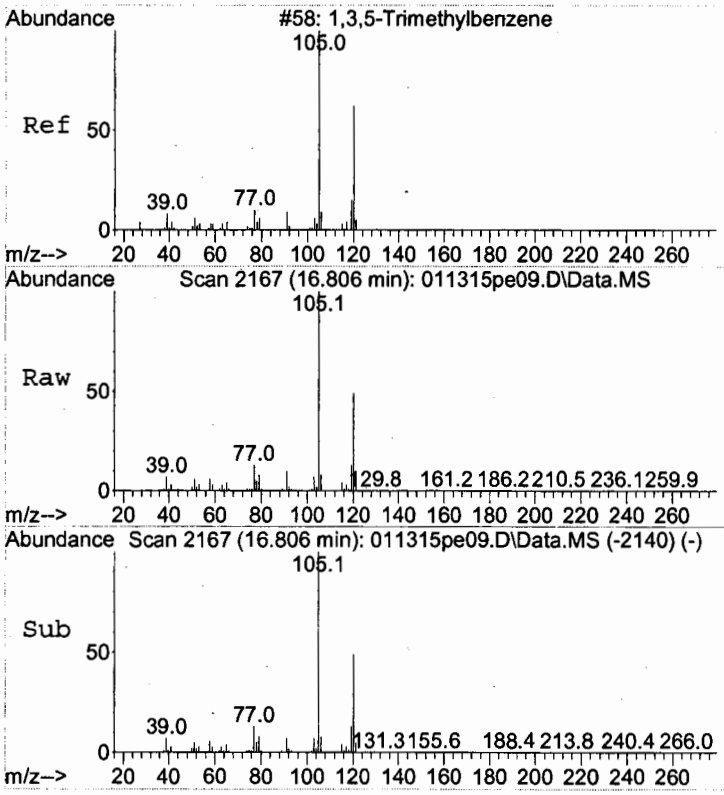


#62
4-Chlorotoluene
Concen: 5.25 ug/L
RT: 16.858 min Scan# 2174
Delta R.T. 0.000 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 91 Resp: 4442212

Ion	Ratio	Lower	Upper
91	100		
126	31.2	11.2	51.2

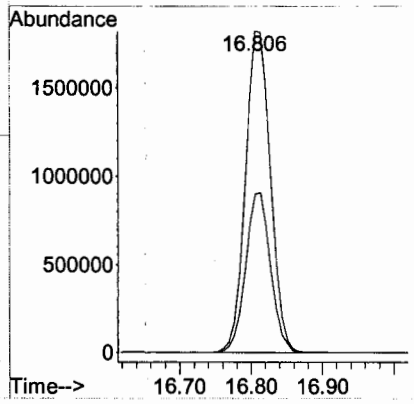


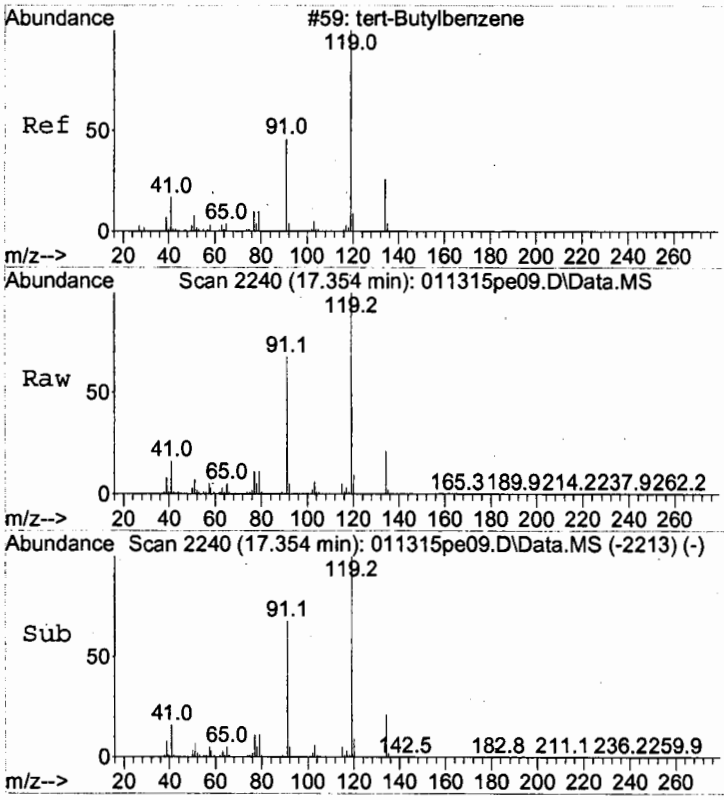


#63
1,3,5-Trimethylbenzene
Concen: 5.36 ug/L
RT: 16.806 min Scan# 2167
Delta R.T. 0.000 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:105 Resp: 4488572

Ion	Ratio	Lower	Upper
105	100		
120	49.6	29.6	69.6

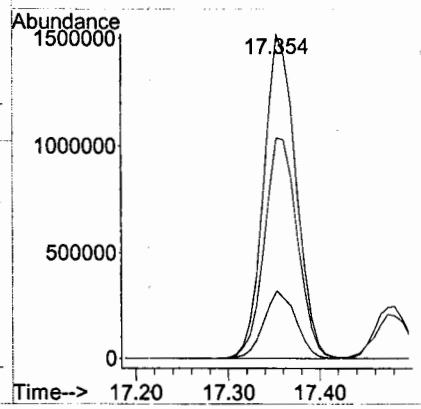


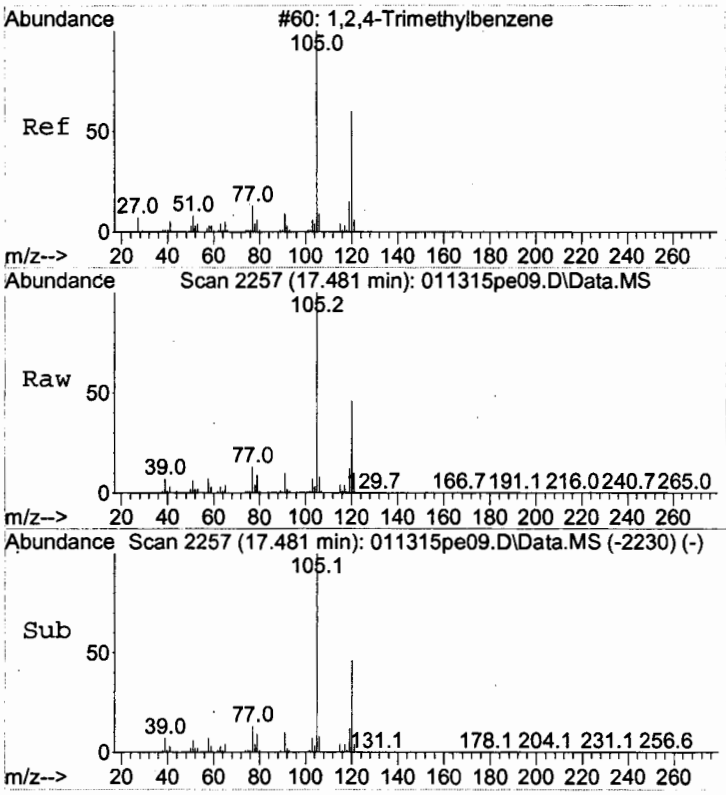


#64
tert-Butylbenzene
Concen: 5.27 ug/L
RT: 17.354 min Scan# 2240
Delta R.T. 0.000 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:119 Resp: 3718524

Ion	Ratio	Lower	Upper
119	100		
134	21.0	1.0	41.0
91	69.9	49.9	89.9

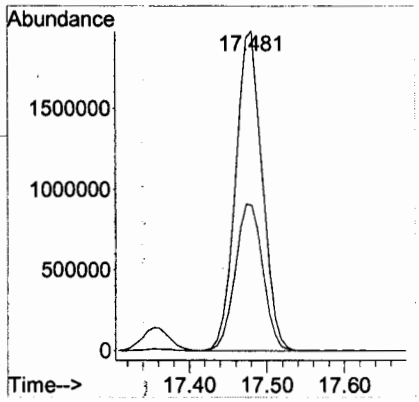


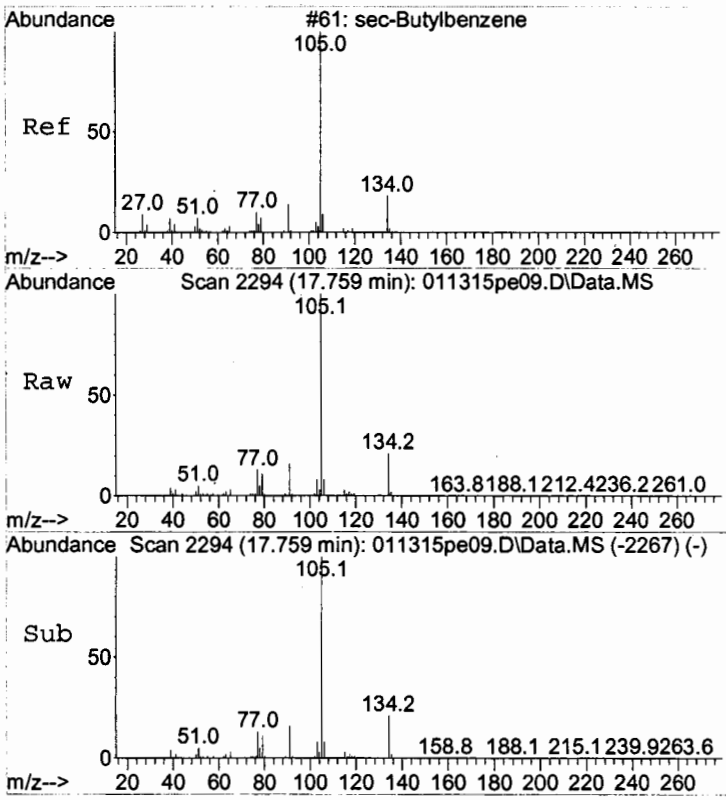


#65
1,2,4-Trimethylbenzene
Concen: 5.38 ug/L
RT: 17.481 min Scan# 2257
Delta R.T. 0.002 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:105 Resp: 4729738

Ion	Ratio	Lower	Upper
105	100		
120	47.8	27.8	67.8

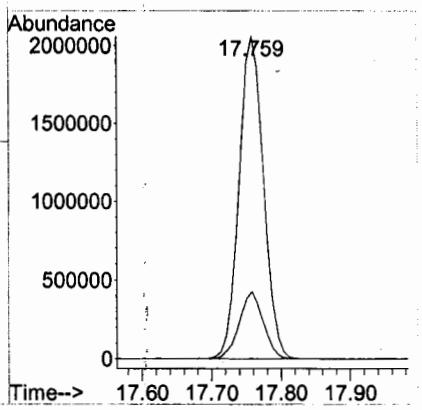


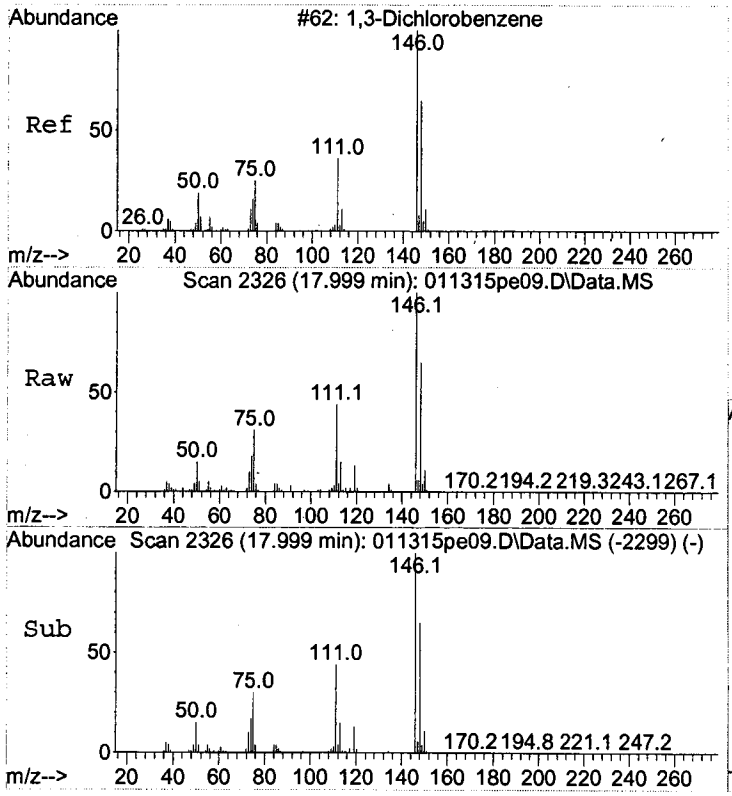


#66
sec-Butylbenzene
Concen: 5.32 ug/L
RT: 17.759 min Scan# 2294
Delta R.T. 0.003 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:105 Resp: 5038390

Ion	Ratio	Lower	Upper
105	100		
134	20.5	0.5	40.5

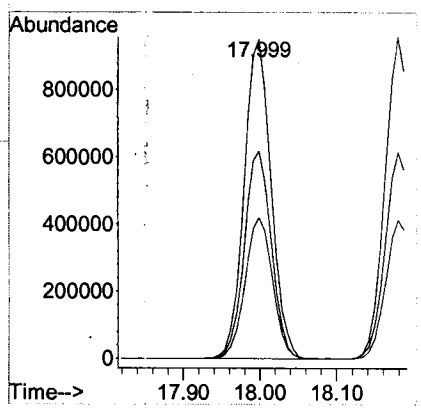


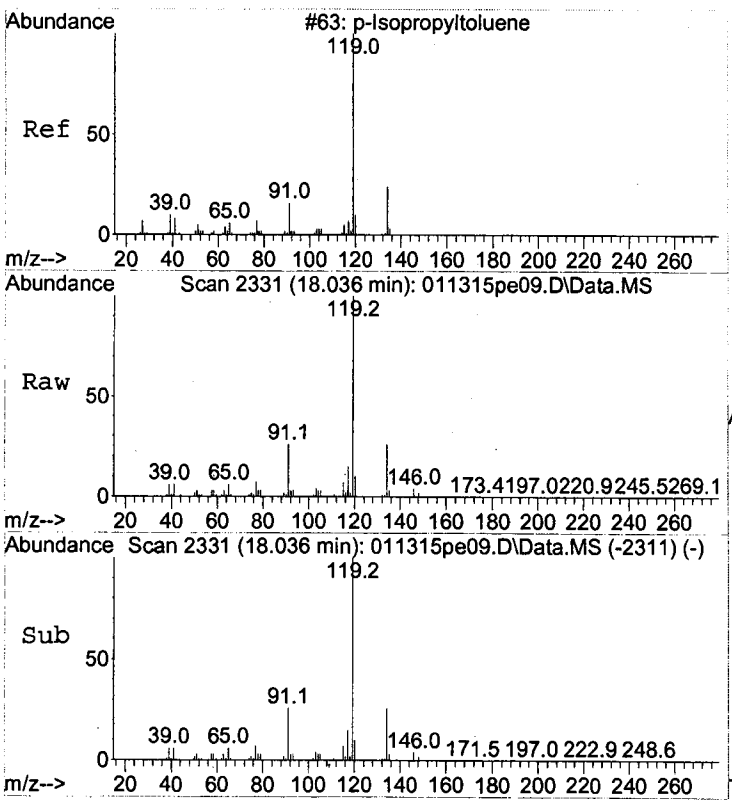


#67
1,3-Dichlorobenzene
Concen: 5.16 ug/L
RT: 17.999 min Scan# 2326
Delta R.T. 0.004 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:146 Resp: 2339098

Ion	Ratio	Lower	Upper
146	100		
148	65.0	45.0	85.0
111	44.8	24.8	64.8

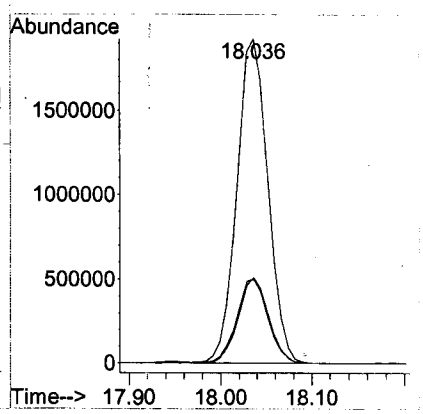


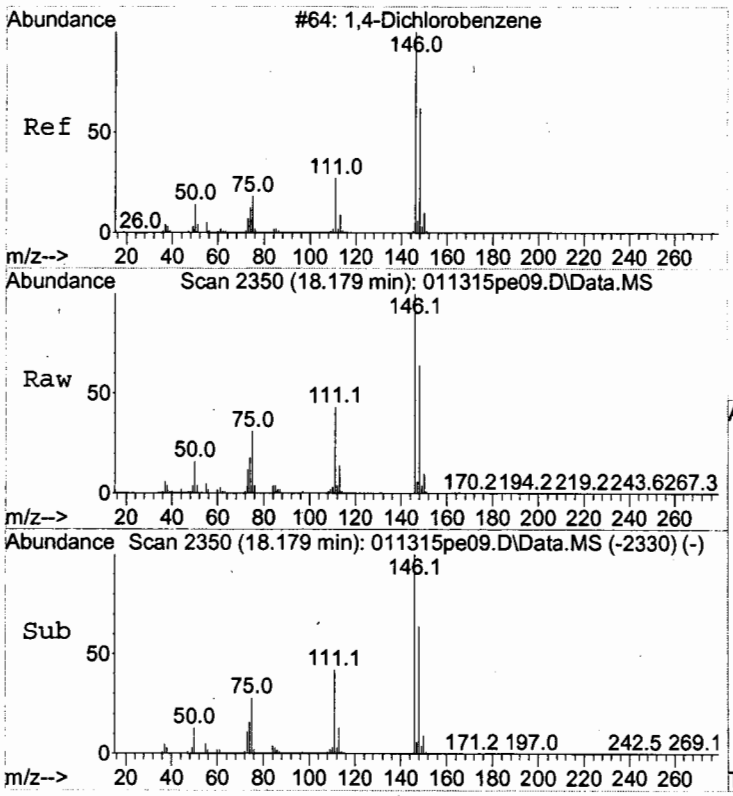


#68
p-Isopropyltoluene
Concen: 5.31 ug/L
RT: 18.036 min Scan# 2331
Delta R.T. 0.003 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:119 Resp: 4573557

Ion	Ratio	Lower	Upper
119	100		
134	26.1	6.1	46.1
91	25.9	5.9	45.9

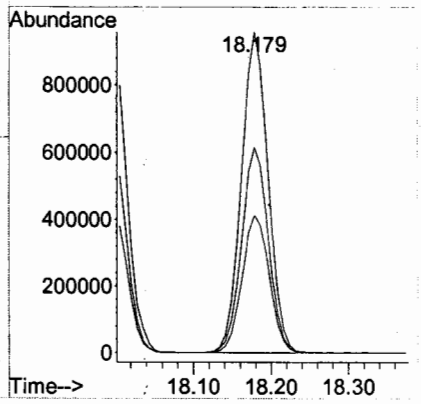


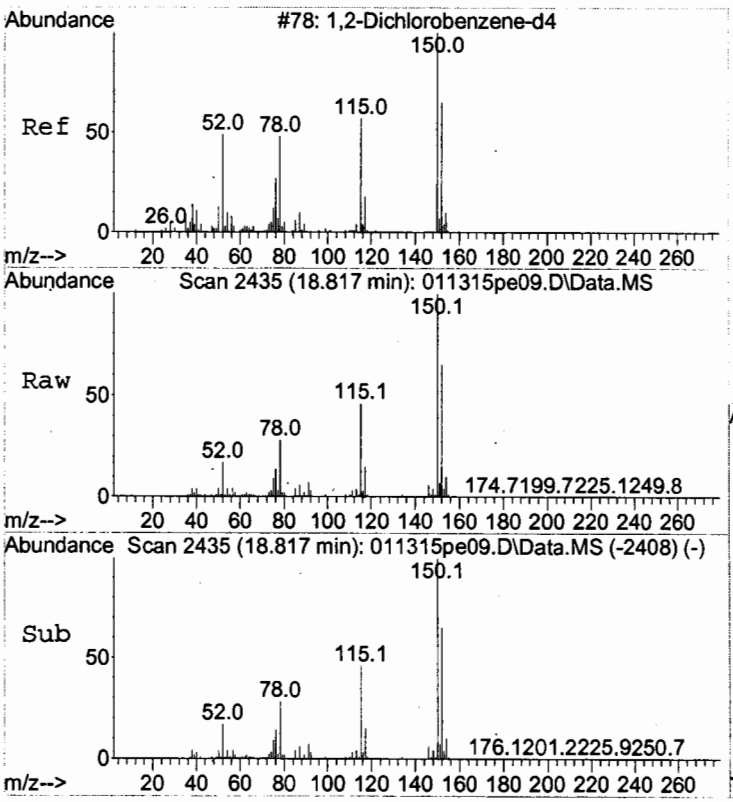


#69
1,4-Dichlorobenzene
Concen: 5.17 ug/L
RT: 18.179 min Scan# 2350
Delta R.T. 0.000 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:146 Resp: 2300101

Ion	Ratio	Lower	Upper
146	100		
148	64.3	44.3	84.3
111	43.9	23.9	63.9

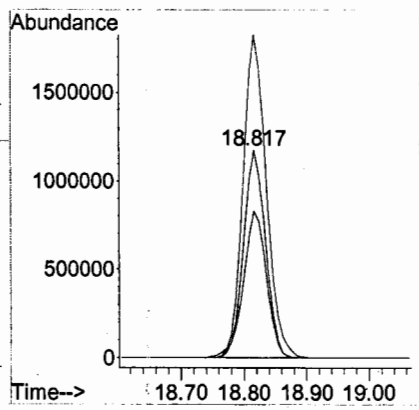


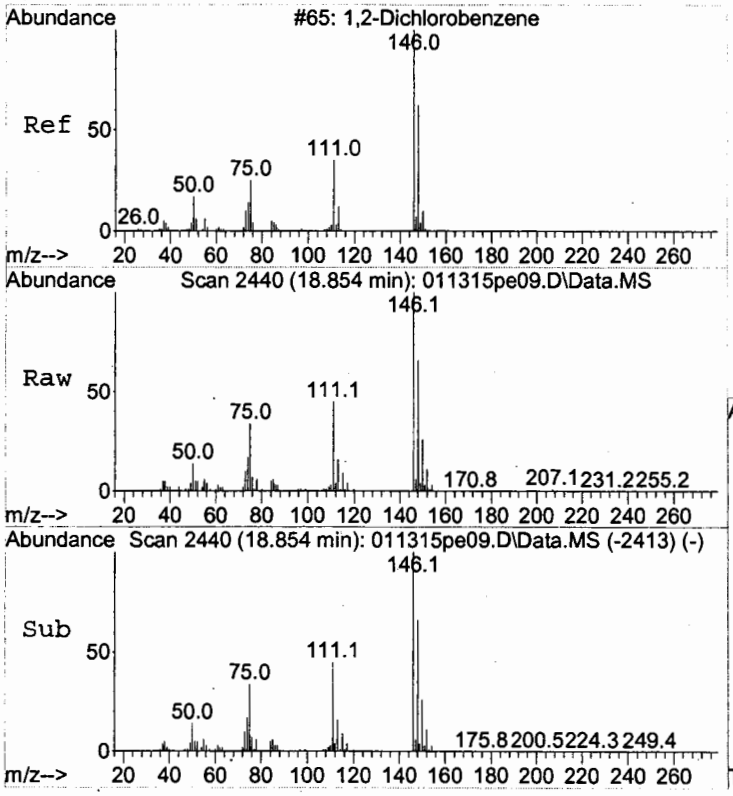


#70
1,2-Dichlorobenzene-d4
Concen: 5.04 ug/L
RT: 18.817 min Scan# 2435
Delta R.T. 0.000 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:152 Resp: 2871321

Ion	Ratio	Lower	Upper
152	100		
115	74.2	54.2	94.2
150	164.8	144.8	184.8

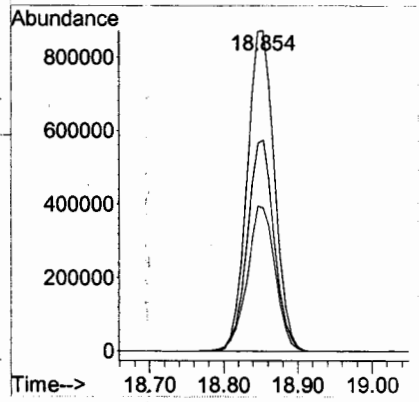


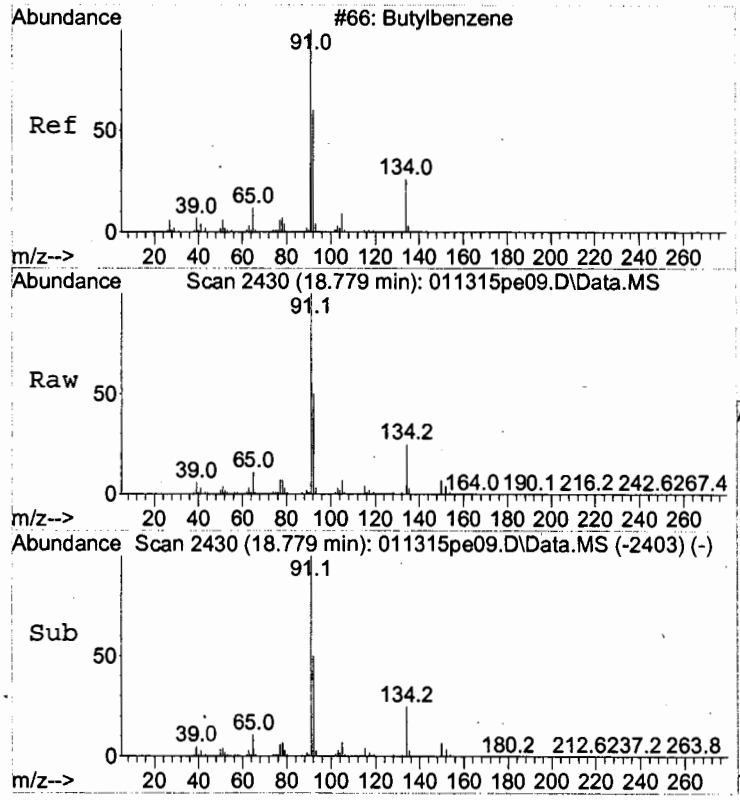


#71
1,2-Dichlorobenzene
Concen: 5.09 ug/L
RT: 18.854 min Scan# 2440
Delta R.T. 0.004 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:146 Resp: 2239313

Ion	Ratio	Lower	Upper
146	100		
148	64.5	44.5	84.5
111	46.5	26.5	66.5

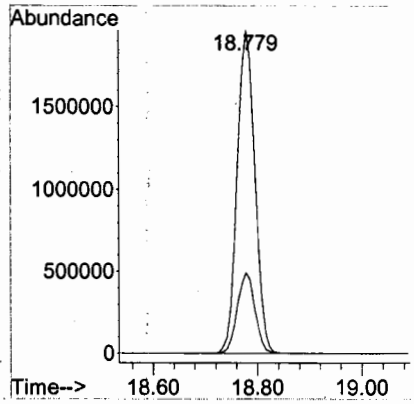


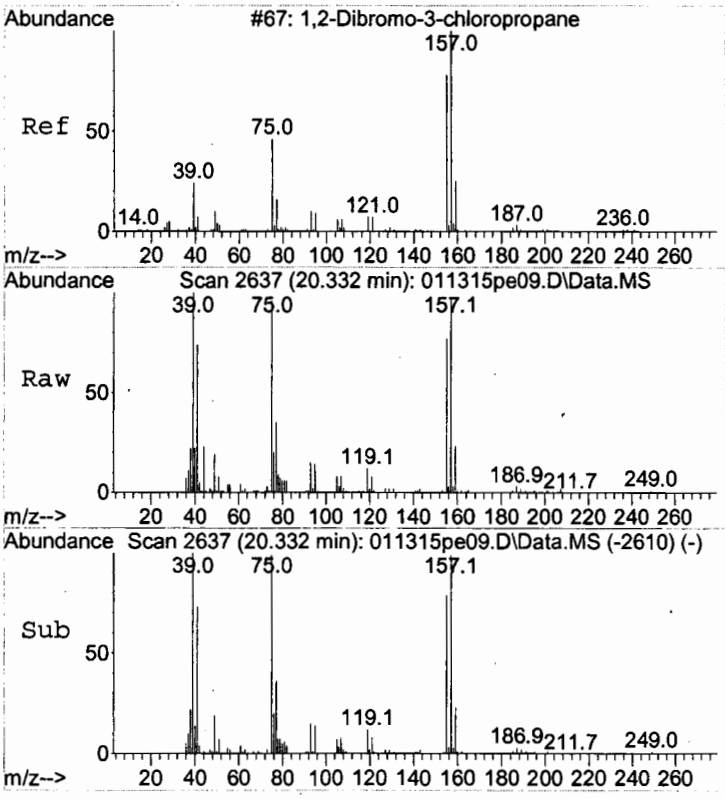


#72
Butylbenzene
Concen: 5.36 ug/L
RT: 18.779 min Scan# 2430
Delta R.T. 0.000 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 91 Resp: 4640771

Ion	Ratio	Lower	Upper
91	100		
134	24.8	4.8	44.8

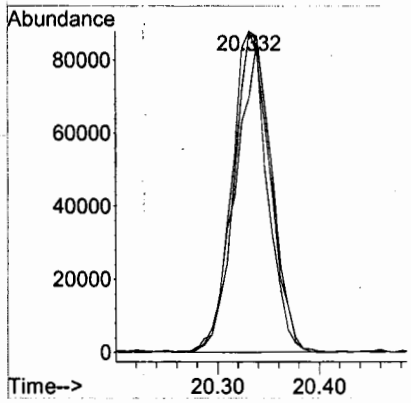


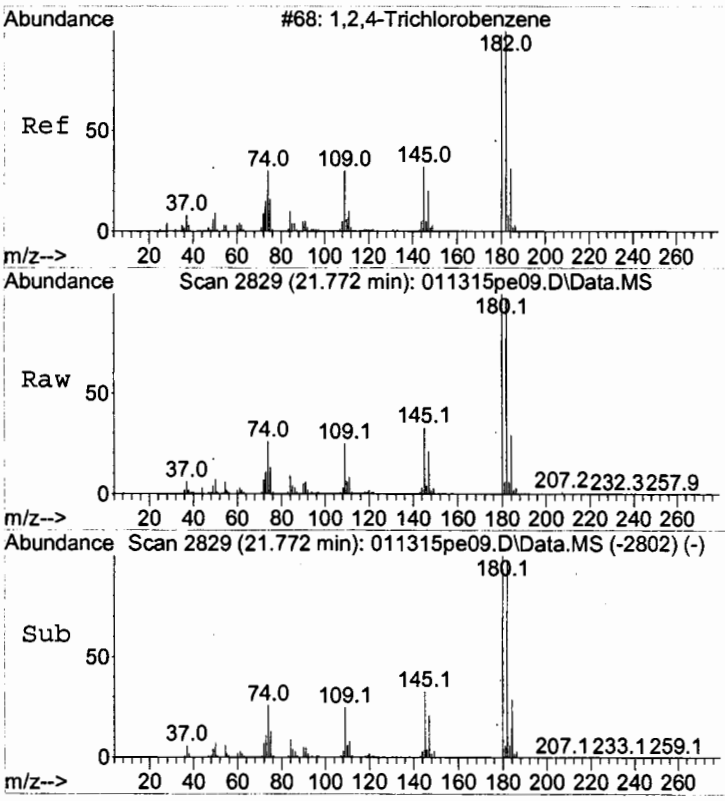


#73
1,2-Dibromo-3-chloropropane
Concen: 18.96 ug/L
RT: 20.332 min Scan# 2637
Delta R.T. -0.000 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 75 Resp: 226001

Ion	Ratio	Lower	Upper
75	100		
155	85.2	65.2	105.2
157	101.8	81.8	121.8

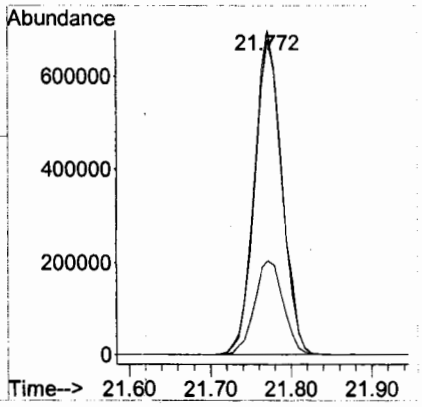


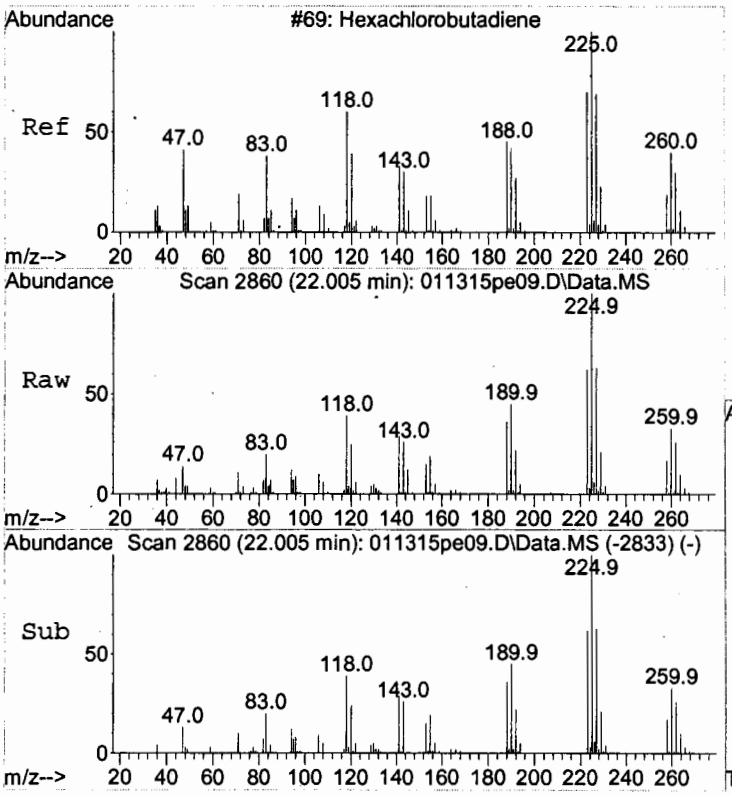


#74
1,2,4-Trichlorobenzene
Concen: 5.25 ug/L
RT: 21.772 min Scan# 2829
Delta R.T. 0.000 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion: 180 Resp: 1662917

Ion	Ratio	Lower	Upper
180	100		
182	97.2	77.2	117.2
184	30.7	10.7	50.7

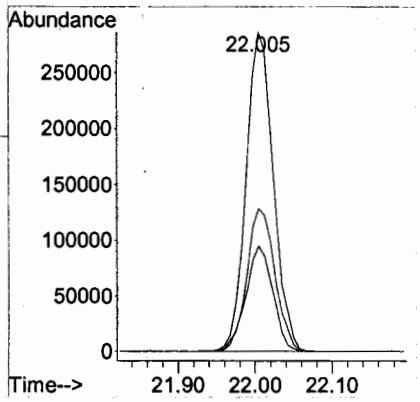


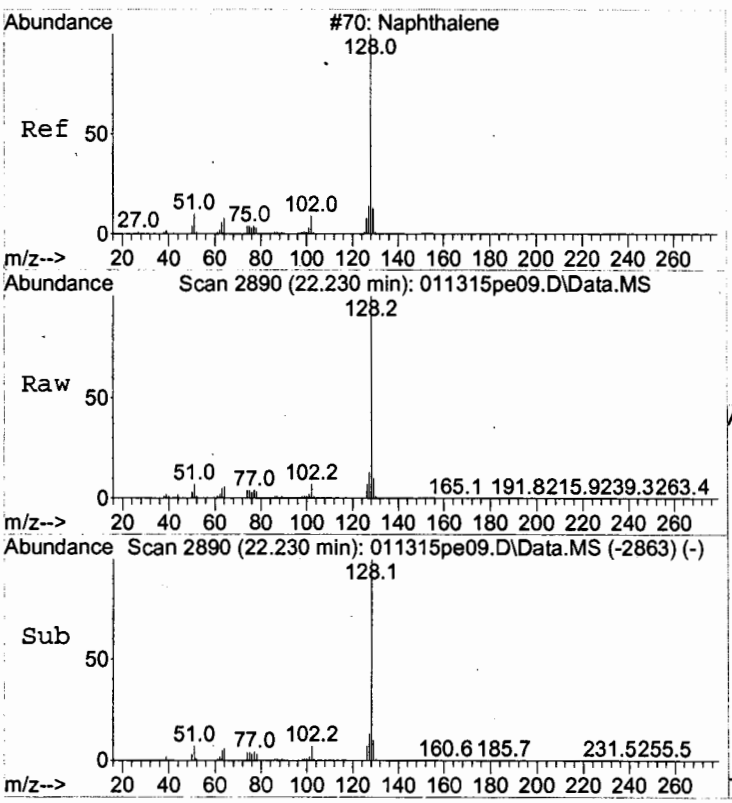


#75
Hexachlorobutadiene
Concen: 5.14 ug/L
RT: 22.005 min Scan# 2860
Delta R.T. 0.002 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:225 Resp: 706831

Ion	Ratio	Lower	Upper
225	100		
260	32.7	12.7	52.7
190	46.4	26.4	66.4

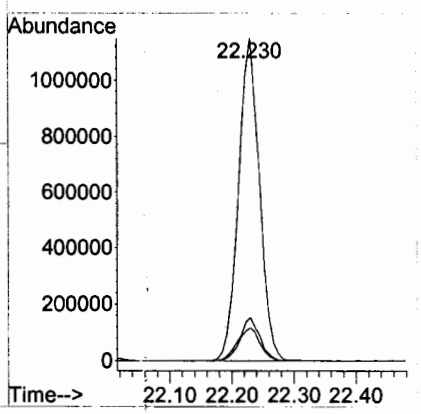


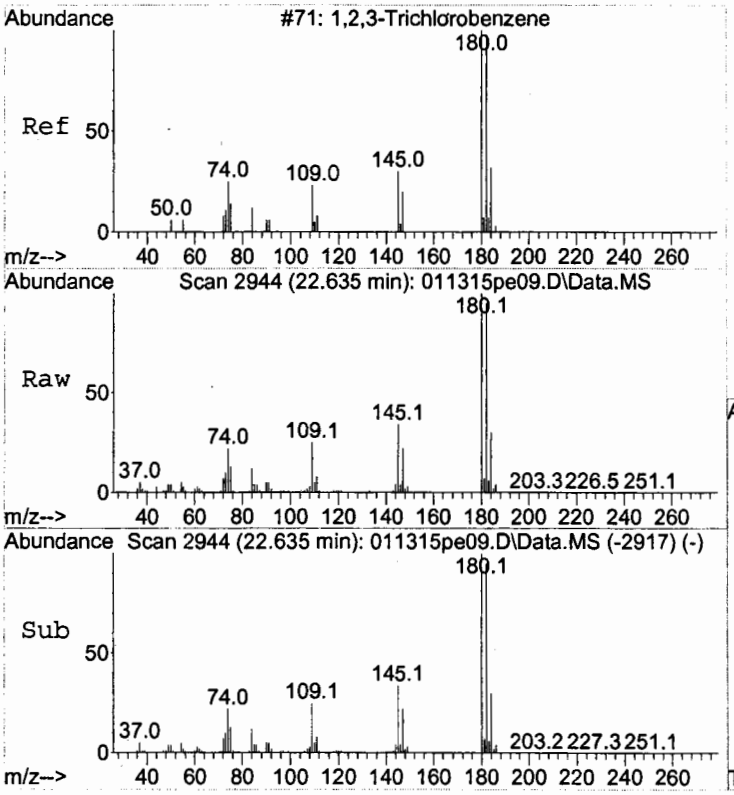


#76
Naphthalene
Concen: 5.22 ug/L
RT: 22.230 min Scan# 2890
Delta R.T. 0.002 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:128 Resp: 2705008

Ion	Ratio	Lower	Upper
128	100		
127	13.1	0.0	33.1
129	10.3	0.0	30.3

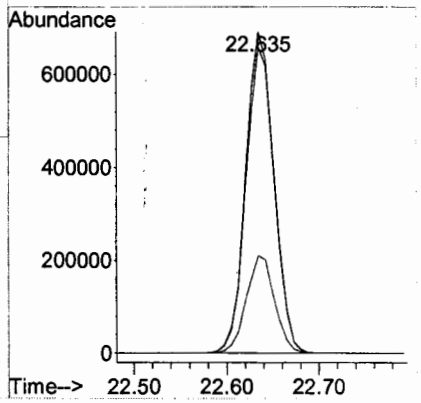




#77
1,2,3-Trichlorobenzene
Concen: 5.26 ug/L
RT: 22.635 min Scan# 2944
Delta R.T. -0.000 min
Lab File: 011315pe09.D
Acq: 13 Jan 2015 11:43

Tgt Ion:180 Resp: 1480183

Ion	Ratio	Lower	Upper
180	100		
182	94.8	74.8	114.8
184	30.3	10.3	50.3



LSC Area Percent Report

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe09.D
Acq On : 13 Jan 2015 11:43
Operator : YNB
Sample : S15A042-CAL4
Misc : 5ug/L,WATER
ALS Vial : 5 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 50 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Title : Volatile Organic Analysis - 524.2 Method

Signal : TIC: 011315pe09.D\Data.MS

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.525	127	130	135	rBV	4389257	7974355	21.11%	1.336%
2	1.585	135	138	162	rVV	13090741	27586588	73.01%	4.621%
3	1.787	162	165	171	rVB	1082972	1616084	4.28%	0.271%
4	1.982	187	191	195	rBV	475802	932076	2.47%	0.156%
5	2.035	195	198	202	rVB	2092892	2279356	6.03%	0.382%
6	2.117	206	209	212	rVV	163105	239879	0.63%	0.040%
7	2.170	213	216	224	rVB	950866	1288680	3.41%	0.216%
8	2.642	275	279	286	rVB	599401	1050098	2.78%	0.176%
9	2.792	295	299	307	rVB	516916	904205	2.39%	0.151%
10	3.115	336	342	350	rVB	716061	1710903	4.53%	0.287%
11	3.978	444	457	467	rVB5	1164268	5204022	13.77%	0.872%
12	4.285	491	498	507	rVB	851383	2565345	6.79%	0.430%
13	4.915	574	582	598	rVB2	2568306	9390111	24.85%	1.573%
14	5.336	626	638	653	rVB4	4995032	17344681	45.91%	2.905%
15	6.176	738	750	763	rBV2	8311896	27984880	74.07%	4.688%
16	6.776	821	830	843	rVB	5451340	17104228	45.27%	2.865%
17	7.053	859	867	870	rBV3	686987	2126403	5.63%	0.356%
18	7.113	870	875	885	rVB	1773641	4625251	12.24%	0.775%
19	7.248	885	893	905	rVB	1189082	3179383	8.41%	0.533%
20	7.519	920	929	938	rVB	1136609	2838796	7.51%	0.476%
21	7.654	938	947	959	rVB	1547892	4214944	11.16%	0.706%
22	7.841	962	972	981	rVB2	1121774	3286282	8.70%	0.550%
23	8.029	988	997	1002	rBV2	850490	2534988	6.71%	0.425%
24	8.111	1002	1008	1021	rVB	2075161	5481802	14.51%	0.918%
25	8.441	1043	1052	1057	rVV	4407115	12002819	31.77%	2.011%
26	8.509	1057	1061	1069	rVV	1898469	4711779	12.47%	0.789%
27	8.644	1069	1079	1095	rVB	8868305	26732008	70.75%	4.478%
28	8.869	1106	1109	1110	rBV3	24335	31554	0.08%	0.005%
29	8.951	1110	1120	1134	rVB	7800133	20299510	53.73%	3.400%
30	9.162	1145	1148	1150	rVB7	10907	18140	0.05%	0.003%
31	9.267	1158	1162	1165	rBV3	10782	23108	0.06%	0.004%
32	9.514	1186	1195	1204	rBV	2519559	6410492	16.97%	1.074%
33	9.972	1245	1256	1265	rBV	2182475	5744061	15.20%	0.962%
34	10.159	1273	1281	1290	rVB2	840148	2191169	5.80%	0.367%
35	10.287	1296	1298	1302	rVB8	8505	14577	0.04%	0.002%

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe09.D
Acq On : 13 Jan 2015 11:43
Operator : YNB
Sample : S15A042-CAL4
Misc : 5ug/L,WATER
ALS Vial : 5 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 50 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Title : Volatile Organic Analysis - 524.2 Method

36	10.422	1307	1316	1325	rBV	1031178	2710987	7.18%	0.454%
37	10.752	1358	1360	1366	rVB7	12577	22345	0.06%	0.004%
38	10.804	1366	1367	1372	rBV6	9387	19539	0.05%	0.003%
39	10.984	1388	1391	1394	rVV7	7681	13277	0.04%	0.002%
40	11.052	1397	1400	1402	rVB5	10200	14346	0.04%	0.002%
41	11.172	1408	1416	1429	rBV	1190620	3089534	8.18%	0.518%
42	11.502	1443	1460	1468	rBV2	9084643	34194616	90.50%	5.728%
43	11.615	1468	1475	1488	rVV	4892596	12491422	33.06%	2.092%
44	11.750	1491	1493	1497	rVB6	14489	24109	0.06%	0.004%
45	12.162	1539	1548	1555	rBV	811244	2007345	5.31%	0.336%
46	12.222	1555	1556	1560	rVV6	23539	31338	0.08%	0.005%
47	12.282	1562	1564	1569	rVB8	11687	13896	0.04%	0.002%
48	12.342	1571	1572	1575	rBV5	10765	13468	0.04%	0.002%
49	12.462	1578	1588	1597	rVB5	3772911	10628490	28.13%	1.780%
50	12.732	1614	1624	1633	rBV	1683818	4179373	11.06%	0.700%
51	12.867	1633	1642	1653	rVV	2835800	7147510	18.92%	1.197%
52	13.040	1657	1665	1676	rVV2	677454	1873385	4.96%	0.314%
53	13.138	1676	1678	1680	rVB2	15708	16430	0.04%	0.003%
54	13.235	1683	1691	1701	rVB	577541	1482450	3.92%	0.248%
55	13.475	1721	1723	1726	rBV8	11037	14518	0.04%	0.002%
56	13.573	1730	1736	1741	rVB4	21671	49339	0.13%	0.008%
57	13.670	1744	1749	1750	rBV9	24399	30847	0.08%	0.005%
58	13.993	1782	1792	1796	rBV	7832250	21970297	58.15%	3.680%
59	14.195	1810	1819	1833	rVV2	6117390	17643298	46.70%	2.955%
60	14.405	1837	1847	1859	rVV	9879584	23856480	63.14%	3.996%
61	14.525	1861	1863	1865	rVV4	10385	14735	0.04%	0.002%
62	14.555	1865	1867	1870	rVB5	13360	15982	0.04%	0.003%
63	15.103	1931	1940	1943	rBV	4716675	11845575	31.35%	1.984%
64	15.156	1943	1947	1961	rVV	4179386	9909208	26.23%	1.660%
65	15.276	1961	1963	1967	rVB10	7634	13381	0.04%	0.002%
66	15.501	1984	1993	2001	rBV2	343091	888448	2.35%	0.149%
67	15.733	2015	2024	2034	rBV	4814588	11769304	31.15%	1.971%
68	16.078	2062	2070	2083	rVB	5756723	13751832	36.40%	2.304%
69	16.303	2091	2100	2109	rBV	2667281	6706987	17.75%	1.123%
70	16.468	2109	2122	2136	rVV	5394091	16821709	44.52%	2.818%
71	16.648	2136	2146	2155	rVB	4157113	10437224	27.62%	1.748%
72	16.813	2158	2168	2171	rBV	5266761	13167817	34.85%	2.206%
73	16.858	2171	2174	2184	rVB	4363899	10109381	26.76%	1.693%
74	17.091	2201	2205	2207	rBV6	9092	15861	0.04%	0.003%
75	17.144	2209	2212	2219	rBV5	18851	53008	0.14%	0.009%

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe09.D
Acq On : 13 Jan 2015 11:43
Operator : YNB
Sample : S15A042-CAL4
Misc : 5ug/L,WATER
ALS Vial : 5 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 50 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Title : Volatile Organic Analysis - 524.2 Method

76	17.256	2225	2227	2230	rVB4	9832	13402	0.04%	0.002%
77	17.354	2232	2240	2249	rVV	4875066	12206732	32.31%	2.045%
78	17.481	2249	2257	2268	rVB	5573277	13548506	35.86%	2.269%
79	17.616	2273	2275	2280	rVB10	18444	33280	0.09%	0.006%
80	17.684	2283	2284	2285	rVV	17942	14294	0.04%	0.002%
81	17.759	2285	2294	2305	rVB	4688105	11574496	30.63%	1.939%
82	18.029	2313	2330	2339	rBV2	5532721	21536548	57.00%	3.607%
83	18.179	2341	2350	2363	rVB	3693301	9017101	23.87%	1.510%
84	18.426	2378	2383	2385	rVV5	11621	17994	0.05%	0.003%
85	18.591	2403	2405	2406	rBV	14515	15476	0.04%	0.003%
86	18.817	2419	2435	2448	rBV4	7654600	37783291	100.00%	6.329%
87	19.199	2478	2486	2492	rBV4	32097	112073	0.30%	0.019%
88	19.964	2585	2588	2591	rVB3	8585	13334	0.04%	0.002%
89	20.197	2617	2619	2621	rBV5	10512	13686	0.04%	0.002%
90	20.332	2628	2637	2645	rBV2	677951	1754750	4.64%	0.294%
91	20.504	2656	2660	2663	rVB5	9186	14814	0.04%	0.002%
92	20.542	2663	2665	2669	rVB5	10206	15948	0.04%	0.003%
93	20.609	2669	2674	2675	rVB5	11372	21269	0.06%	0.004%
94	20.662	2675	2681	2684	rBV5	13665	33640	0.09%	0.006%
95	21.090	2735	2738	2739	rBV3	9499	14568	0.04%	0.002%
96	21.120	2739	2742	2744	rBV6	7703	13985	0.04%	0.002%
97	21.195	2749	2752	2754	rBV6	7988	14917	0.04%	0.002%
98	21.502	2789	2793	2796	rVV3	11039	16232	0.04%	0.003%
99	21.637	2809	2811	2815	rVB5	9655	15213	0.04%	0.003%
100	21.772	2820	2829	2838	rBV	3469776	8477635	22.44%	1.420%

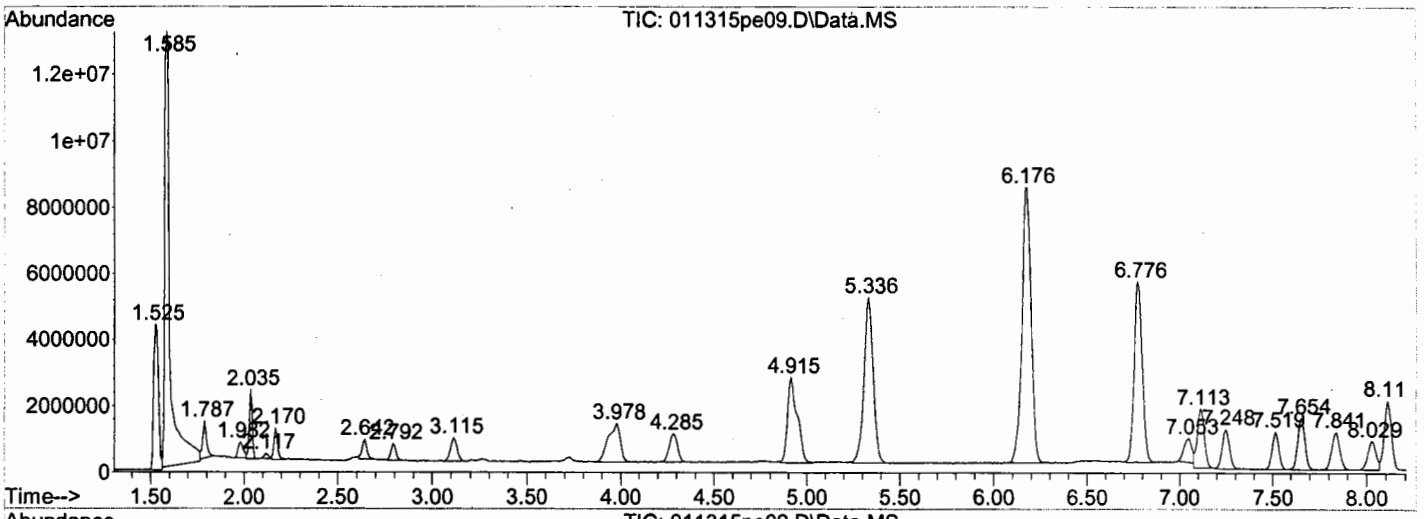
Sum of corrected areas: 596994832

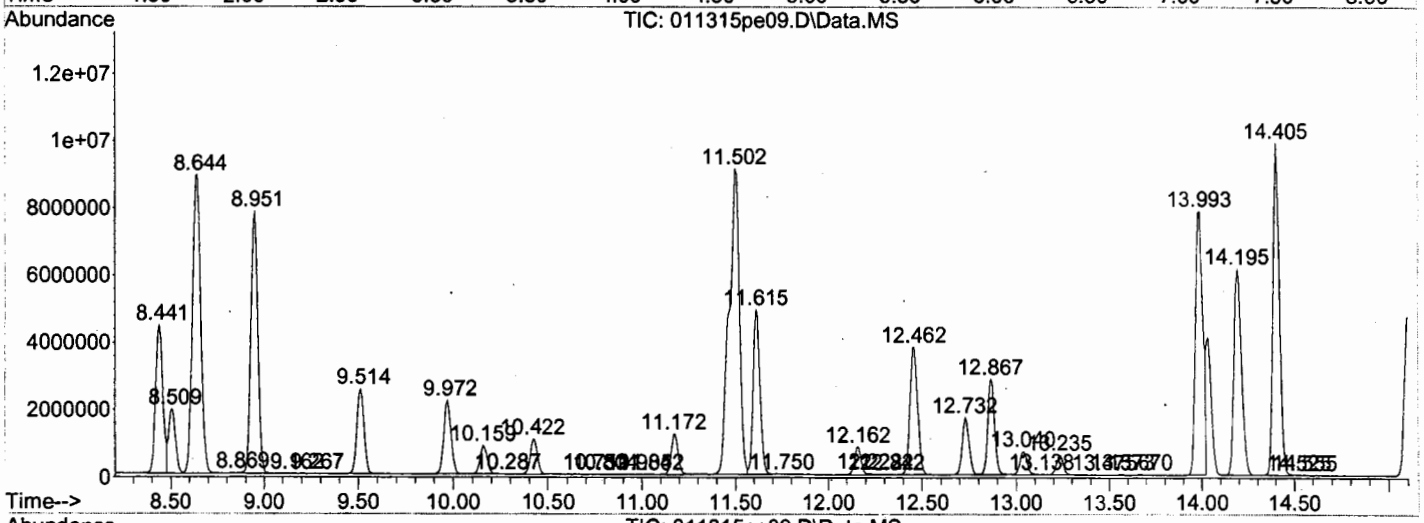
LSC Report - Integrated Chromatogram

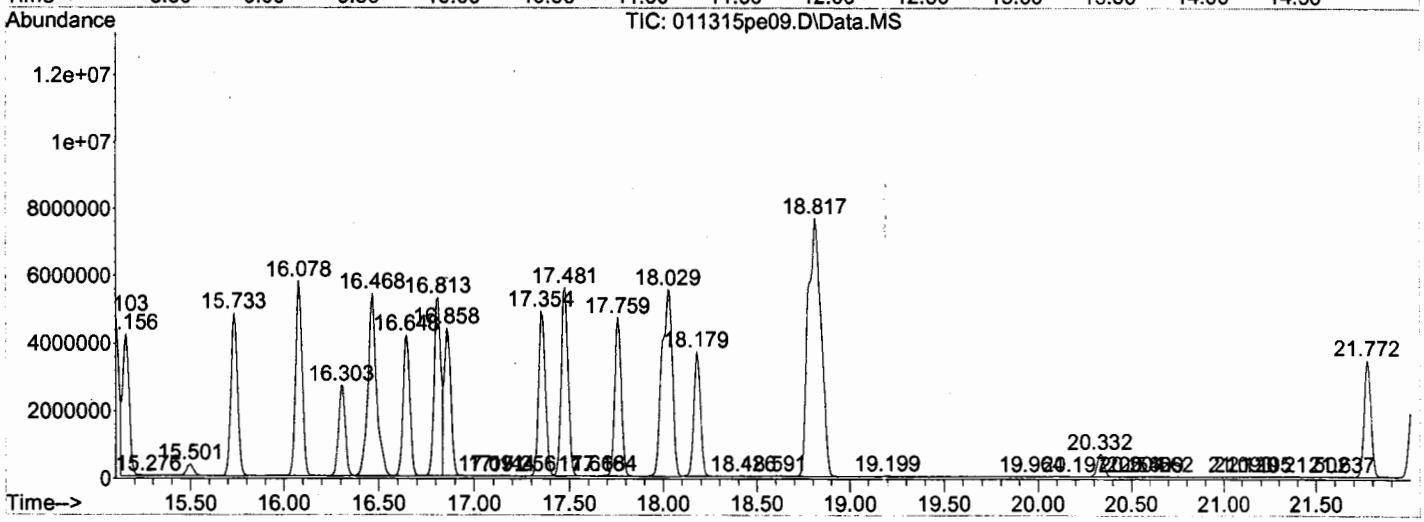
Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe09.D
Acq On : 13 Jan 2015 11:43
Operator : YNB
Sample : S15A042-CAL4
Misc : 5ug/L,WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method

TIC Library : C:\DATABASE\NIST98.L
TIC Integration Parameters: LSCINT.P







Library Search Compound Report

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe09.D
Acq On : 13 Jan 2015 11:43
Operator : YNB
Sample : S15A042-CAL4
Misc : 5ug/L,WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method

TIC Library : C:\DATABASE\NIST98.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected
****

Tentatively Identified Compound (LSC) summary

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe09.D
Acq On : 13 Jan 2015 11:43
Operator : YNB
Sample : S15A042-CAL4
Misc : 5ug/L,WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method

TIC Library : C:\DATABASE\NIST98.L
TIC Integration Parameters: LSCINT.P

TIC Top Hit name	RT	EstConc	Units	Response	--Internal Standard--- #	RT	Resp	Conc

Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe10.D
Acq On : 13 Jan 2015 12:17
Operator : YNB
Sample : S15A042-CAL3
Misc : 2ug/L,WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jan 13 13:56:38 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Dichloromethane-d2	4.915	53	631261	5.00	ug/L	# 0.00
24) Fluorobenzene	8.936	96	10184022	5.00	ug/L	0.00
37) Chlorobenzene-d5	13.978	117	6912680	5.00	ug/L	0.00
System Monitoring Compounds						
28) 1,2-Dichloroethane-d4	8.494	65	1788169	4.90	ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	=	98.00%	
39) Toluene-d8	11.502	98	9216845	4.93	ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	=	98.60%	
56) 4-Bromofluorobenzene	16.078	95	3053153	4.89	ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	=	97.80%	
70) 1,2-Dichlorobenzene-d4	18.817	152	2952267	5.01	ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	=	100.20%	
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.787	85	330028	2.07	ug/L	98
3) Chloromethane	2.035	50	585298	2.02	ug/L	99
4) Vinyl chloride	2.170	62	315446	2.04	ug/L	99
5) Bromomethane	2.642	94	134262	1.96	ug/L	98
6) Chloroethane	2.792	64	195065	1.97	ug/L	95
7) Trichlorofluoromethane	3.115	101	309118	2.03	ug/L	99
8) 1,1-Dichloroethene	3.985	96	247682	1.95	ug/L	95
9) 1,1,2-Trichloro-1,2,2-...	3.940	101	252961	2.09	ug/L	98
10) Acetone	4.278	43	448074	14.79	ug/L	99
11) Carbon disulfide	4.293	76	350360	1.91	ug/L	99
12) Dichloromethane	4.953	84	349351	1.93	ug/L #	80
13) tert-Butyl alcohol	5.298	59	218722	37.65	ug/L #	100
14) trans-1,2-Dichloroethene	5.328	96	271195	1.90	ug/L	99
15) tert-Butyl methyl ethe...	5.335	73	1657595	8.19	ug/L	96
16) 1,1-Dichloroethane	6.131	63	454956	1.96	ug/L	99
17) Diisopropyl ether	6.176	45	4096273	8.63	ug/L	99
18) Ethyl-tert-butyl ether	6.776	59	2016361	8.20	ug/L	98
19) 2,2-Dichloropropane	7.038	77	129586	1.81	ug/L	96
20) cis-1,2-Dichloroethene	7.113	96	307440	1.73	ug/L	92
21) 2-Butanone (MEK)	7.241	43	867474	16.53	ug/L	99
22) Bromochloromethane	7.504	128	178320	2.00	ug/L	97
23) Chloroform	7.646	83	674212	1.95	ug/L	99
25) 1,1,1-Trichloroethane	7.826	97	299733	1.82	ug/L	93
26) Carbon tetrachloride	8.021	117	304901	1.90	ug/L	96
27) 1,1-Dichloropropene	8.104	75	622424	2.12	ug/L	99
29) Benzene	8.426	78	2441612	2.09	ug/L	99
30) 1,2-Dichloroethane	8.621	62	436772	1.98	ug/L	99
31) tert-Amyl methyl ether	8.629	73	2063481	7.69	ug/L	96
32) Trichloroethene	9.499	95	531099	2.07	ug/L	98
33) 1,2-Dichloropropane	9.957	63	481767	2.02	ug/L	97
34) Dibromomethane	10.152	93	178719	1.88	ug/L	99
35) Bromodichloromethane	10.414	83	365467	1.82	ug/L	96
36) cis-1,3-Dichloropropene	11.165	75	330290	1.77	ug/L	97
38) 4-Methyl-2-pentanone (...	11.457	43	1802532	15.52	ug/L	98
40) Toluene	11.607	92	1162689	1.99	ug/L	99
41) trans-1,3-Dichloropropene	12.147	75	195091	1.82	ug/L	97

Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe10.D
Acq On : 13 Jan 2015 12:17
Operator : YNB
Sample : S15A042-CAL3
Misc : 2ug/L,WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jan 13 13:56:38 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration

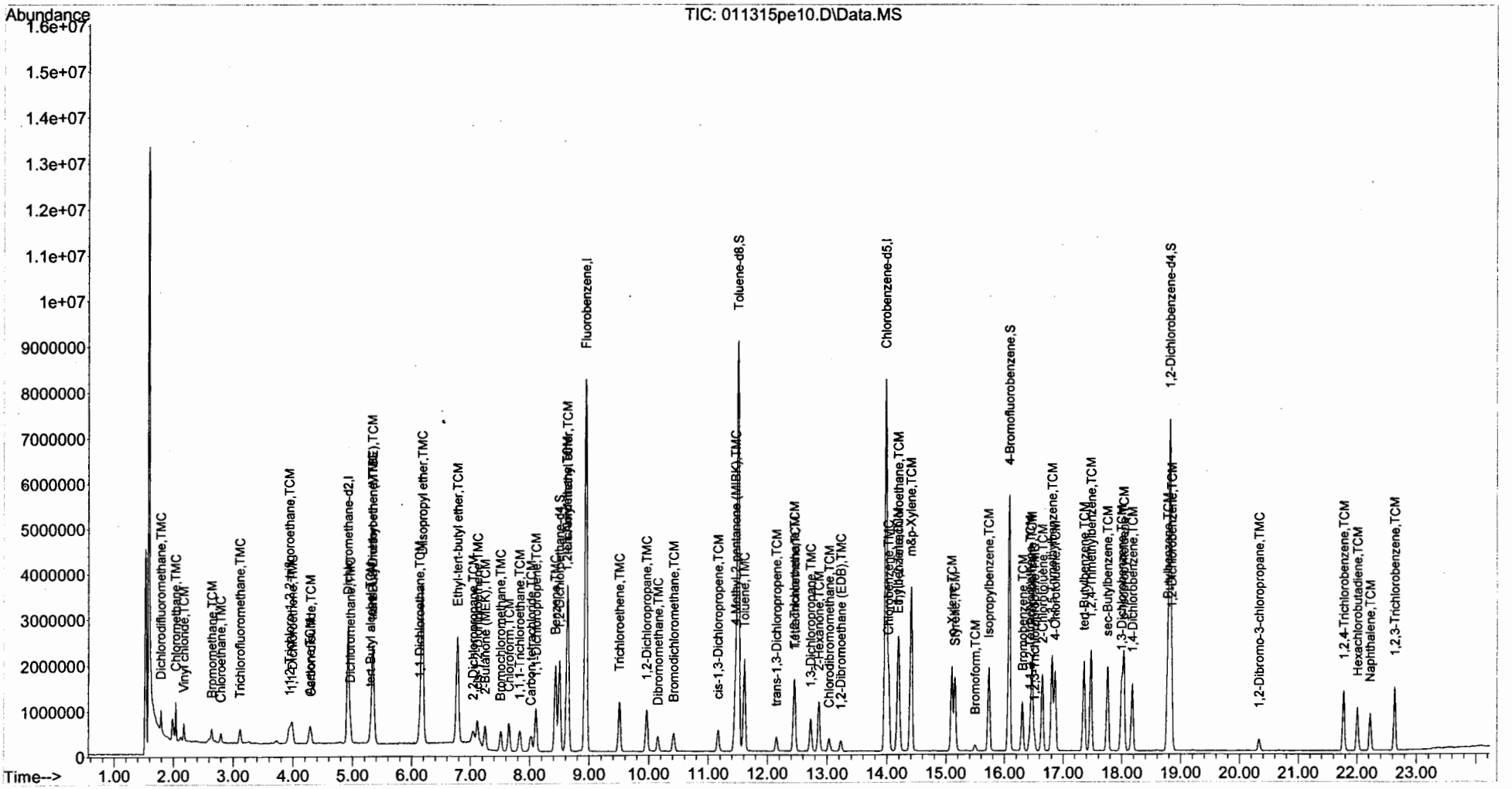
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
42) 1,1,2-Trichloroethane	12.447	83	329279	2.08 ug/L	99
43) Tetrachloroethene	12.455	166	478754	2.06 ug/L	97
44) 1,3-Dichloropropane	12.725	76	587876	2.09 ug/L	100
45) 2-Hexanone	12.860	43	1105522	15.32 ug/L	100
46) Chlorodibromomethane	13.033	129	201195	1.86 ug/L	99
47) 1,2-Dibromoethane (EDB)	13.228	107	227334	1.98 ug/L	98
48) Chlorobenzene	14.023	112	1313333	2.02 ug/L	98
49) 1,1,1,2-Tetrachloroethane	14.188	131	276390	1.89 ug/L	98
50) Ethylbenzene	14.180	91	2147574	2.03 ug/L	99
51) m&p-Xylene	14.398	106	1537287	3.96 ug/L	100
52) o-Xylene	15.096	106	731262	1.97 ug/L	99
53) Styrene	15.148	104	1145669	1.94 ug/L	100
54) Bromoform	15.493	173	86648	1.79 ug/L	100
55) Isopropylbenzene	15.726	105	1811108	2.03 ug/L	99
57) Bromobenzene	16.303	156	456864	1.95 ug/L	99
58) 1,1,2,2-Tetrachloroethane	16.431	83	315019	1.92 ug/L	97
59) 1,2,3-Trichloropropane	16.506	75	243791	1.95 ug/L #	100
60) Propylbenzene	16.461	91	2403345	2.05 ug/L	100
61) 2-Chlorotoluene	16.641	91	1477534	1.97 ug/L	100
62) 4-Chlorotoluene	16.859	91	1724892	1.97 ug/L	99
63) 1,3,5-Trimethylbenzene	16.806	105	1741262	2.01 ug/L	100
64) tert-Butylbenzene	17.354	119	1461689	2.00 ug/L	99
65) 1,2,4-Trimethylbenzene	17.474	105	1820426	2.00 ug/L	99
66) sec-Butylbenzene	17.751	105	1997376	2.04 ug/L	100
67) 1,3-Dichlorobenzene	17.991	146	907829	1.94 ug/L	98
68) p-Isopropyltoluene	18.029	119	1801633	2.02 ug/L	100
69) 1,4-Dichlorobenzene	18.179	146	900202	1.96 ug/L	99
71) 1,2-Dichlorobenzene	18.847	146	910732	2.00 ug/L	98
72) Butylbenzene	18.779	91	1794359	2.00 ug/L	100
73) 1,2-Dibromo-3-chloropr...	20.332	75	84637	6.87 ug/L	92
74) 1,2,4-Trichlorobenzene	21.772	180	631778	1.93 ug/L	97
75) Hexachlorobutadiene	22.005	225	273567	1.92 ug/L	95
76) Naphthalene	22.222	128	996739	1.86 ug/L	99
77) 1,2,3-Trichlorobenzene	22.635	180	564835	1.94 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe10.D
Acq On : 13 Jan 2015 12:17
Operator : YNB
Sample : S15A042-CAL3
Misc : 2ug/L,WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jan 13 13:56:38 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe11.D
Acq On : 13 Jan 2015 12:51
Operator : YNB
Sample : S15A042-CAL2
Misc : 1ug/L,WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jan 13 13:59:56 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration

MANUAL INTEGRATION VERIFICATION

☐ Before Manual Integration(s) (not used)

Peak integrated due to being:

☐ Missed ☐ Summed

☐ Cropped ☐ Improper Baseline

☐ Other:

☑ After Manual Integration

Manual integration(s) performed by:

Analyst: YNB Date: 01.14.15

Manual integration(s) reviewed by:

Reviewer: [illegible] Date: 01-16-15

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Dichlomethane-d2	4.915	53	614836	5.00 ug/L	# 0.00
24) Fluorobenzene	8.936	96	10132732	5.00 ug/L	0.00
37) Chlorobenzene-d5	13.978	117	6752641	5.00 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	8.494	65	1727690	4.76 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 95.20%	
39) Toluene-d8	11.495	98	9004782	4.93 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 98.60%	
56) 4-Bromofluorobenzene	16.078	95	2975177	4.88 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 97.60%	
70) 1,2-Dichlorobenzene-d4	18.816	152	2814033	4.89 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 97.80%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.787	85	162491	1.05 ug/L	97
3) Chloromethane	2.035	50	291196	1.03 ug/L	99
4) Vinyl chloride	2.170	62	153429	1.02 ug/L	76
5) Bromomethane	2.642	94	70930	1.06 ug/L	95
6) Chloroethane	2.800	64	103159	1.07 ug/L	94
7) Trichlorofluoromethane	3.115	101	152679	1.03 ug/L	98
8) 1,1-Dichloroethene	3.985	96	123768	1.00 ug/L	98
9) 1,1,2-Trichloro-1,2,2-...	3.940	101	126643	1.08 ug/L #	40
10) Acetone	4.278	43	296314	10.04 ug/L	98
11) Carbon disulfide	4.293	76	159627	0.89 ug/L	88
12) Dichloromethane	4.953	84	196424	1.11 ug/L #	52
13) tert-Butyl alcohol	5.305	59	118541	20.95 ug/L #	100
14) trans-1,2-Dichloroethene	5.328	96	142997	1.03 ug/L	93
15) tert-Butyl methyl ethe...	5.335	73	824781	4.18 ug/L	90
16) 1,1-Dichloroethane	6.131	63	226118	1.00 ug/L	95
17) Diisopropyl ether	6.176	45	2051832	4.44 ug/L	99
18) Ethyl-tert-butyl ether	6.776	59	962442	4.02 ug/L	99
19) 2,2-Dichloropropane	7.046	77	63467	0.91 ug/L	92
20) cis-1,2-Dichloroethene	7.106	96	162017m	0.94 ug/L	
21) 2-Butanone (MEK)	7.241	43	308979	6.05 ug/L	98
22) Bromochloromethane	7.511	128	88400	1.02 ug/L	92
23) Chloroform	7.646	83	328141	0.97 ug/L	99
25) 1,1,1-Trichloroethane	7.826	97	141639	0.86 ug/L	95
26) Carbon tetrachloride	8.014	117	134414	0.84 ug/L	96
27) 1,1-Dichloropropene	8.096	75	304160	1.04 ug/L	99
29) Benzene	8.426	78	1193707	1.03 ug/L	97
30) 1,2-Dichloroethane	8.621	62	219863	1.00 ug/L	96
31) tert-Amyl methyl ether	8.629	73	997150	3.74 ug/L	93
32) Trichloroethene	9.507	95	255858	1.00 ug/L	98
33) 1,2-Dichloropropane	9.957	63	240710	1.01 ug/L	97
34) Dibromomethane	10.152	93	89679	0.95 ug/L	97
35) Bromodichloromethane	10.414	83	175537	0.88 ug/L	97
36) cis-1,3-Dichloropropene	11.164	75	157037	0.85 ug/L	98
38) 4-Methyl-2-pentanone (...	11.457	43	885831	7.81 ug/L	93
40) Toluene	11.607	92	555806	0.97 ug/L	98
41) trans-1,3-Dichloropropene	12.155	75	93182	0.89 ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe11.D
Acq On : 13 Jan 2015 12:51
Operator : YNB
Sample : S15A042-CAL2
Misc : 1ug/L,WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jan 13 13:59:56 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration

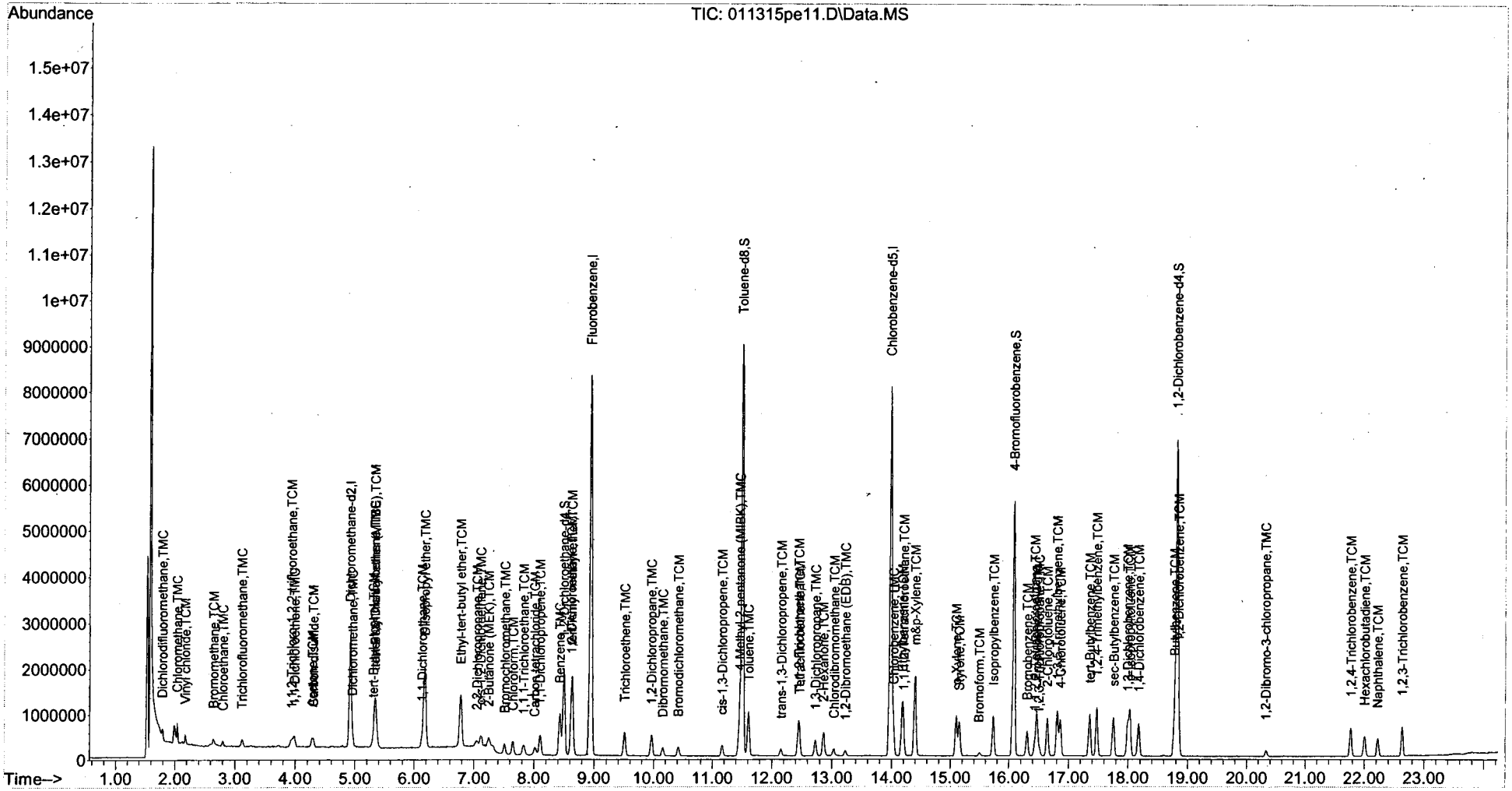
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
42) 1,1,2-Trichloroethane	12.447	83	155846	1.01 ug/L	93
43) Tetrachloroethene	12.462	166	238371	1.05 ug/L	97
44) 1,3-Dichloropropane	12.732	76	291572	1.06 ug/L	99
45) 2-Hexanone	12.860	43	529446	7.51 ug/L	99
46) Chlorodibromomethane	13.040	129	101499	0.96 ug/L	97
47) 1,2-Dibromoethane (EDB)	13.228	107	111107	0.99 ug/L	100
48) Chlorobenzene	14.030	112	649074	1.02 ug/L	94
49) 1,1,1,2-Tetrachloroethane	14.203	131	127131	0.89 ug/L	99
50) Ethylbenzene	14.180	91	1004955	0.97 ug/L	99
51) m&p-Xylene	14.398	106	736298	1.94 ug/L	98
52) o-Xylene	15.096	106	348903	0.96 ug/L	98
53) Styrene	15.148	104	554878	0.96 ug/L	90
54) Bromoform	15.486	173	43249	0.92 ug/L	87
55) Isopropylbenzene	15.733	105	827263	0.95 ug/L	99
57) Bromobenzene	16.303	156	227946	1.00 ug/L	95
58) 1,1,2,2-Tetrachloroethane	16.431	83	152637	0.95 ug/L	99
59) 1,2,3-Trichloropropane	16.498	75	119852	0.98 ug/L #	100
60) Propylbenzene	16.461	91	1092435	0.95 ug/L	99
61) 2-Chlorotoluene	16.641	91	702534	0.96 ug/L	96
62) 4-Chlorotoluene	16.858	91	821646	0.96 ug/L	100
63) 1,3,5-Trimethylbenzene	16.806	105	814558	0.96 ug/L	98
64) tert-Butylbenzene	17.354	119	677825	0.95 ug/L	98
65) 1,2,4-Trimethylbenzene	17.474	105	869408	0.98 ug/L	98
66) sec-Butylbenzene	17.759	105	914417	0.96 ug/L	98
67) 1,3-Dichlorobenzene	17.991	146	444904	0.97 ug/L	99
68) p-Isopropyltoluene	18.036	119	837751	0.96 ug/L	99
69) 1,4-Dichlorobenzene	18.179	146	436404	0.97 ug/L	99
71) 1,2-Dichlorobenzene	18.847	146	454101	1.02 ug/L	94
72) Butylbenzene	18.779	91	815298	0.93 ug/L	99
73) 1,2-Dibromo-3-chloropr...	20.324	75	39918	3.32 ug/L	96
74) 1,2,4-Trichlorobenzene	21.772	180	302670	0.95 ug/L	97
75) Hexachlorobutadiene	22.005	225	132601	0.95 ug/L	92
76) Naphthalene	22.222	128	467584	0.89 ug/L	99
77) 1,2,3-Trichlorobenzene	22.635	180	266052	0.94 ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe11.D
Acq On : 13 Jan 2015 12:51
Operator : YNB
Sample : S15A042-CAL2
Misc : 1ug/L,WATER
ALS Vial : 7 Sample Multiplier: 1

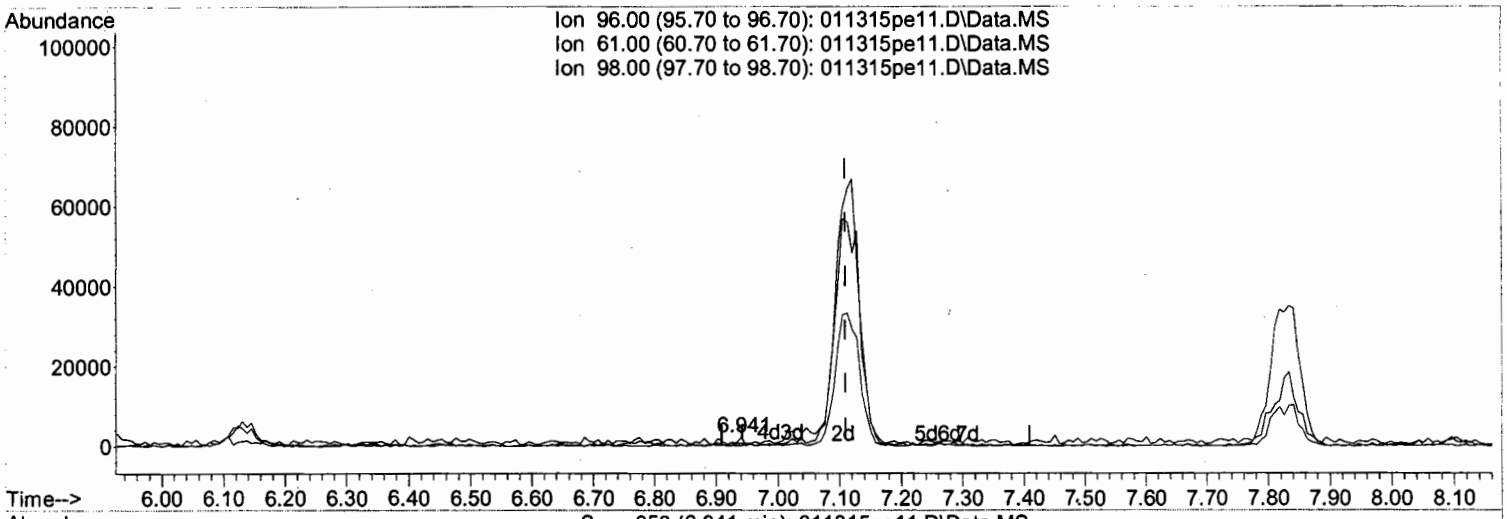
Quant Time: Jan 13 13:59:56 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration

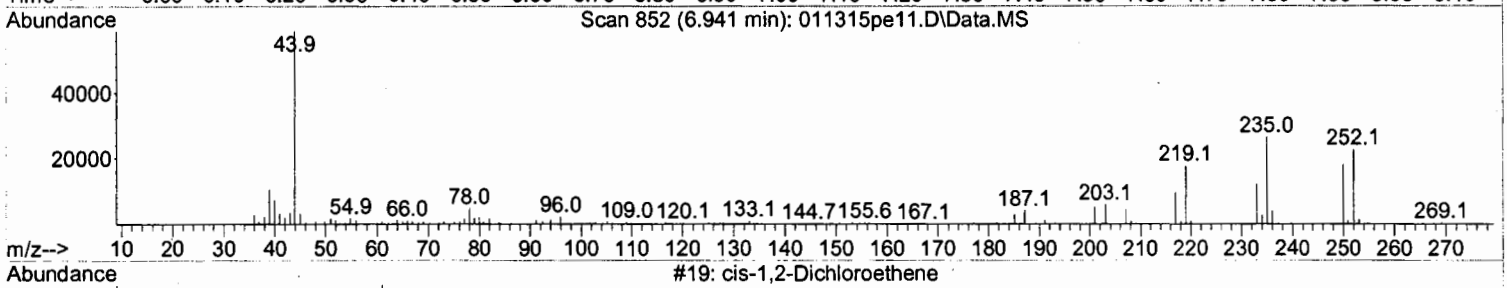


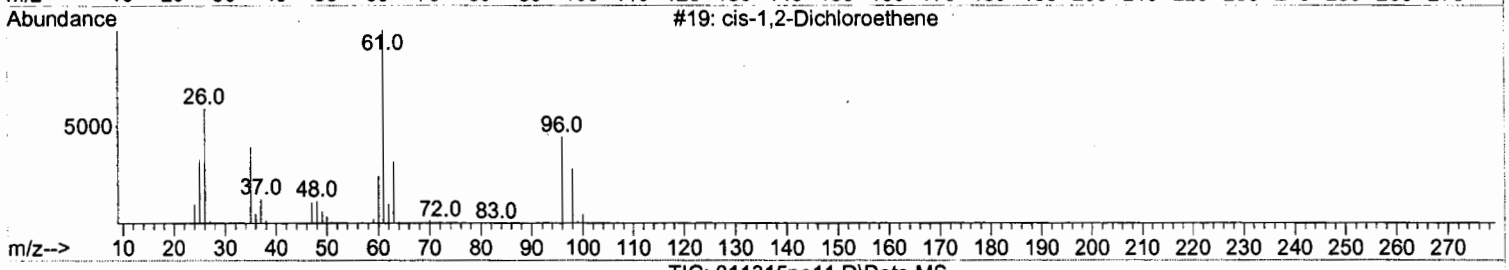
Quantitation Report (Qedit)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe11.D
Acq On : 13 Jan 2015 12:51
Operator : YNB
Sample : S15A042-CAL2
Misc : 1ug/L,WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jan 13 13:56:53 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration







TIC: 011315pe11.D\Data.MS

(20) cis-1,2-Dichloroethene (TMC)

6.941min (-0.169) 0.00 ug/L

response 620

Ion	Exp%	Act%
96.00	100.00	100.00
61.00	133.20	128.39
98.00	63.80	49.03
0.00	0.00	0.00

MANUAL INTEGRATION VERIFICATION

☐ Before Manual Integration(s) (not used)

Peak integrated due to being:

☐ Missed ☐ Summed

☐ Cropped ☐ Improper Baseline

☐ Other _____

☐ After Manual Integration(s)

Manual integration(s) performed by

Analyst _____ Date: _____

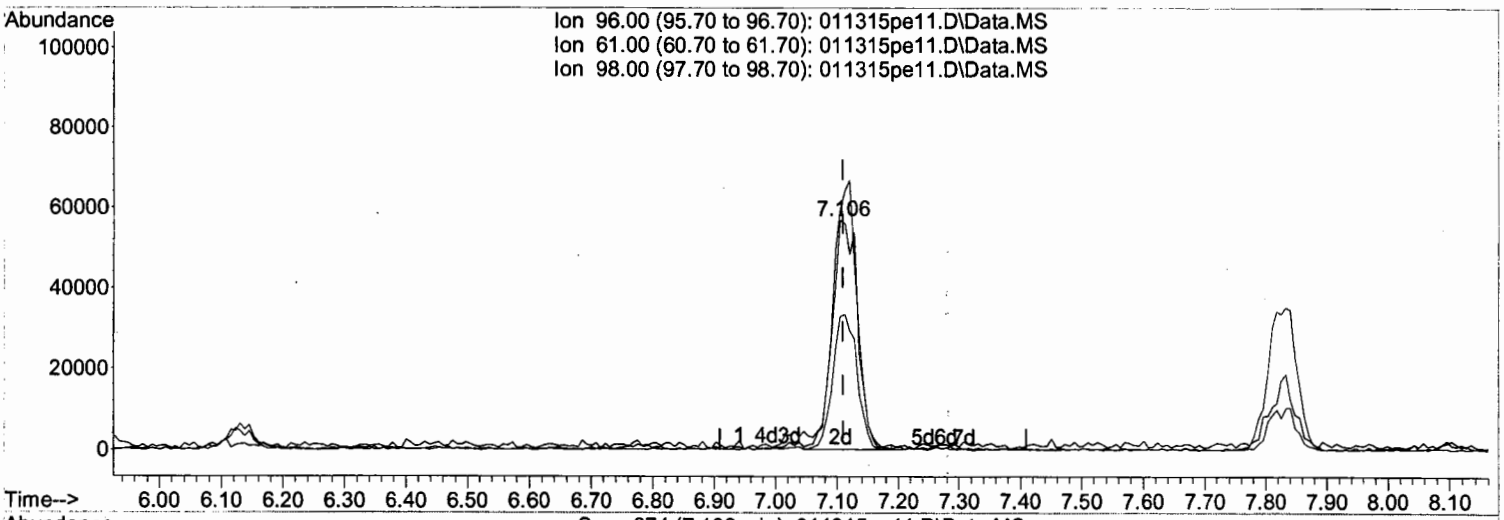
Manual integration(s) reviewed by:

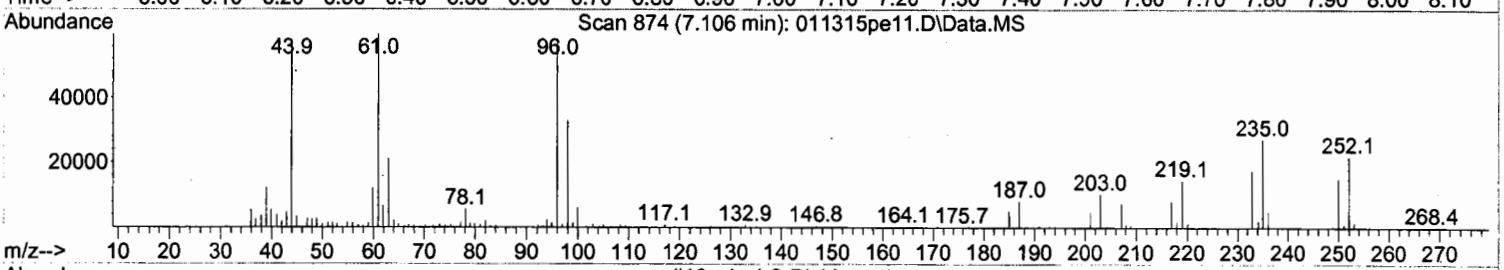
Reviewer: _____ Date: _____

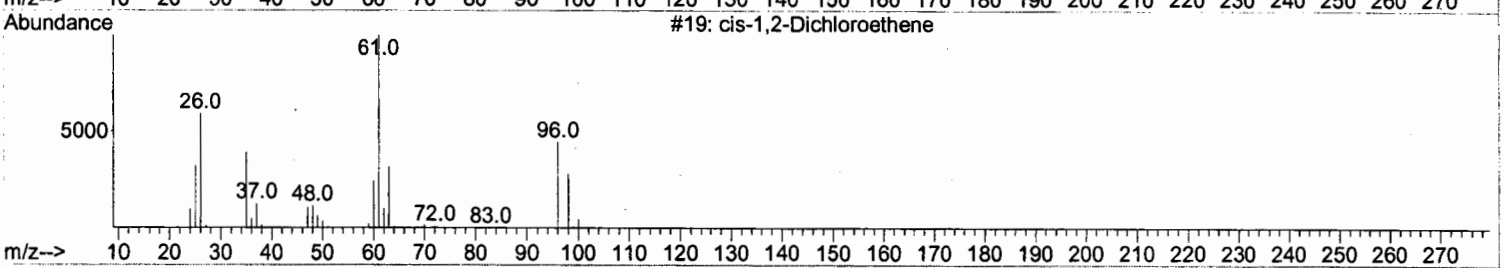
Quantitation Report (Qedit)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe11.D
Acq On : 13 Jan 2015 12:51
Operator : YNB
Sample : S15A042-CAL2
Misc : 1ug/L,WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jan 13 13:56:53 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration







TIC: 011315pe11.D\Data.MS

(20) cis-1,2-Dichloroethene (TMC)

7.106min (-0.004) 0.94 ug/L m

response 162017

Ion	Exp%	Act%
96.00	100.00	100.00
61.00	133.20	0.49#
98.00	63.80	0.19#
0.00	0.00	0.00

MANUAL INTEGRATION VERIFICATION

☐ Before Manual Integration(s) (not used)

Peak integrated due to being:

☐ Missed ☐ Summed

☐ Cropped ☐ Improper Baseline

☐ Other:

☑ After Manual Integration

Manual integration(s) performed by:

Analyst: YNB Date: 01.19.15

Manual integration(s) reviewed by:

Reviewer: [illegible] Date: 01-16-15

Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe11.D
Acq On : 13 Jan 2015 12:51
Operator : YNB
Sample : S15A042-CAL2
Misc : 1ug/L,WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jan 13 13:56:53 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration

MANUAL INTEGRATION VERIFICATION

☐ Before Manual Integration(s) (not used)

Peak integrated due to being:

☐ Missed ☐ Summed
☐ Cropped ☐ Improper Baseline
☐ Other: _____

☐ After Manual Integration

Manual integration(s) performed by:
Analyst: _____ Date: _____
Manual integration(s) reviewed by:
Reviewer: _____ Date: _____

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Dichloromethane-d2	4.915	53	614838	5.00 ug/L	# 0.00
24) Fluorobenzene	8.936	96	10132732	5.00 ug/L	0.00
37) Chlorobenzene-d5	13.978	117	6752641	5.00 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	8.494	65	1727690	4.76 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 95.20%	
39) Toluene-d8	11.495	98	9004782	4.93 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 98.60%	
56) 4-Bromofluorobenzene	16.078	95	2975177	4.88 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 97.60%	
70) 1,2-Dichlorobenzene-d4	18.816	152	2814033	4.89 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 97.80%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.787	85	162491	1.05 ug/L	97
3) Chloromethane	2.035	50	291196	1.03 ug/L	99
4) Vinyl chloride	2.170	62	153429	1.02 ug/L	76
5) Bromomethane	2.642	94	70930	1.06 ug/L	95
6) Chloroethane	2.800	64	103159	1.07 ug/L	94
7) Trichlorofluoromethane	3.115	101	152679	1.03 ug/L	98
8) 1,1-Dichloroethene	3.985	96	123768	1.00 ug/L	98
9) 1,1,2-Trichloro-1,2,2-...	3.940	101	126643	1.08 ug/L #	40
10) Acetone	4.278	43	296314	10.04 ug/L	98
11) Carbon disulfide	4.293	76	159627	0.89 ug/L	88
12) Dichloromethane	4.953	84	196424	1.11 ug/L #	52
13) tert-Butyl alcohol	5.305	59	118541	20.95 ug/L #	100
14) trans-1,2-Dichloroethene	5.328	96	142997	1.03 ug/L	93
15) tert-Butyl methyl ethe...	5.335	73	824781	4.18 ug/L	90
16) 1,1-Dichloroethane	6.131	63	226118	1.00 ug/L	95
17) Diisopropyl ether	6.176	45	2051832	4.44 ug/L	99
18) Ethyl-tert-butyl ether	6.776	59	962442	4.02 ug/L	99
19) 2,2-Dichloropropane	7.046	77	63467	0.91 ug/L	92
21) 2-Butanone (MEK)	7.241	43	308979	6.05 ug/L	98
22) Bromochloromethane	7.511	128	88400	1.02 ug/L	92
23) Chloroform	7.646	83	328141	0.97 ug/L	99
25) 1,1,1-Trichloroethane	7.826	97	141639	0.86 ug/L	95
26) Carbon tetrachloride	8.014	117	134414	0.84 ug/L	96
27) 1,1-Dichloropropene	8.096	75	304160	1.04 ug/L	99
29) Benzene	8.426	78	1193707	1.03 ug/L	97
30) 1,2-Dichloroethane	8.621	62	219863	1.00 ug/L	96
31) tert-Amyl methyl ether	8.629	73	997150	3.74 ug/L	93
32) Trichloroethene	9.507	95	255858	1.00 ug/L	98
33) 1,2-Dichloropropane	9.957	63	240710	1.01 ug/L	97
34) Dibromomethane	10.152	93	89679	0.95 ug/L	97
35) Bromodichloromethane	10.414	83	175537	0.88 ug/L	97
36) cis-1,3-Dichloropropene	11.164	75	157037	0.85 ug/L	98
38) 4-Methyl-2-pentanone (...	11.457	43	885831	7.81 ug/L	93
40) Toluene	11.607	92	555806	0.97 ug/L	98
41) trans-1,3-Dichloropropene	12.155	75	93182	0.89 ug/L	95
42) 1,1,2-Trichloroethane	12.447	83	155846	1.01 ug/L	93

Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe11.D
Acq On : 13 Jan 2015 12:51
Operator : YNB
Sample : S15A042-CAL2
Misc : 1ug/L,WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jan 13 13:56:53 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration

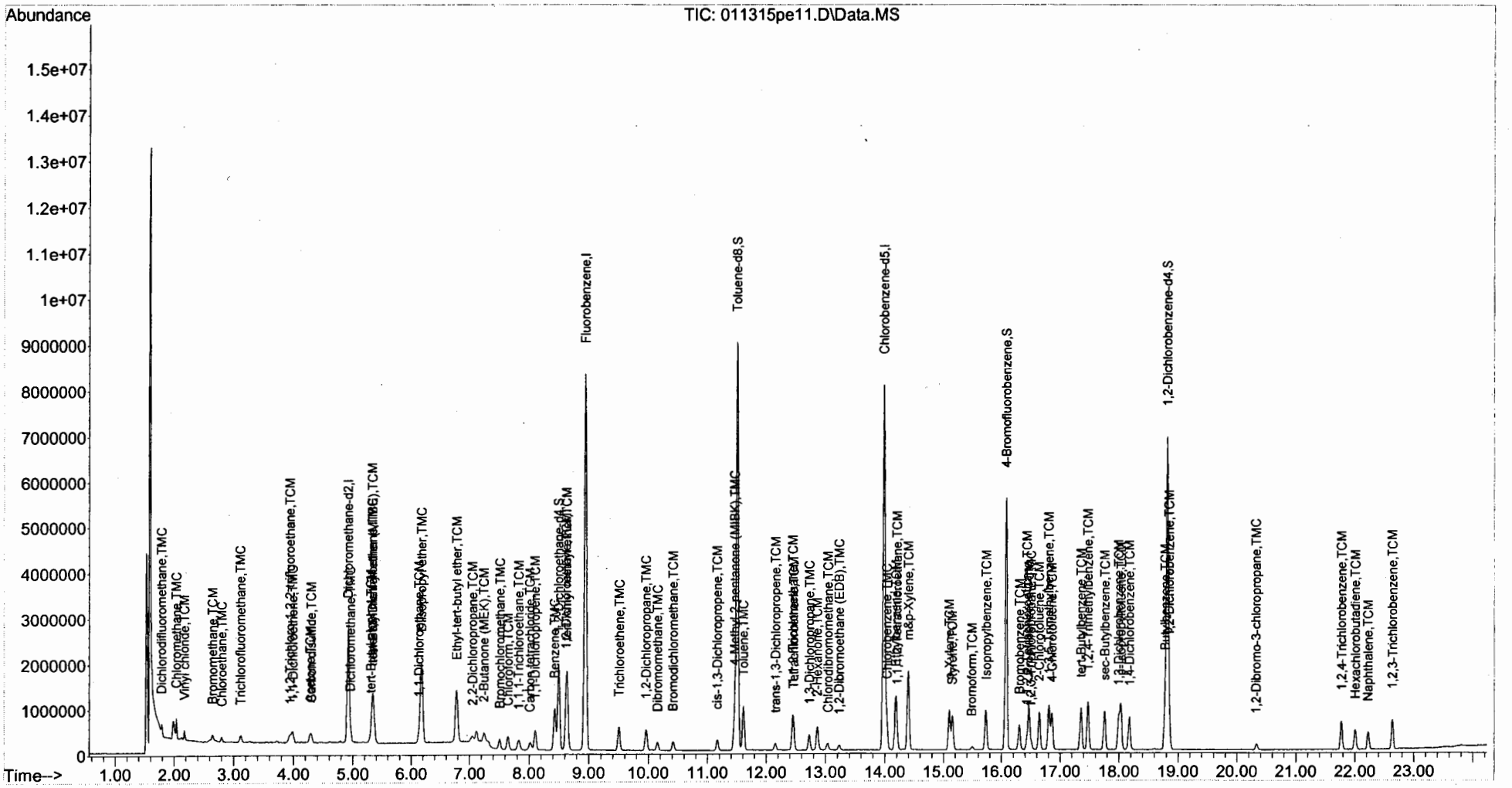
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) Tetrachloroethene	12.462	166	238371	1.05 ug/L	97
44) 1,3-Dichloropropane	12.732	76	291572	1.06 ug/L	99
45) 2-Hexanone	12.860	43	529446	7.51 ug/L	99
46) Chlorodibromomethane	13.040	129	101499	0.96 ug/L	97
47) 1,2-Dibromoethane (EDB)	13.228	107	111107	0.99 ug/L	100
48) Chlorobenzene	14.030	112	649074	1.02 ug/L	94
49) 1,1,1,2-Tetrachloroethane	14.203	131	127131	0.89 ug/L	99
50) Ethylbenzene	14.180	91	1004955	0.97 ug/L	99
51) m&p-Xylene	14.398	106	736298	1.94 ug/L	98
52) o-Xylene	15.096	106	348903	0.96 ug/L	98
53) Styrene	15.148	104	554878	0.96 ug/L	90
54) Bromoform	15.486	173	43249	0.92 ug/L	87
55) Isopropylbenzene	15.733	105	827263	0.95 ug/L	99
57) Bromobenzene	16.303	156	227946	1.00 ug/L	95
58) 1,1,2,2-Tetrachloroethane	16.431	83	152637	0.95 ug/L	99
59) 1,2,3-Trichloropropane	16.498	75	119852	0.98 ug/L #	100
60) Propylbenzene	16.461	91	1092435	0.95 ug/L	99
61) 2-Chlorotoluene	16.641	91	702534	0.96 ug/L	96
62) 4-Chlorotoluene	16.858	91	821646	0.96 ug/L	100
63) 1,3,5-Trimethylbenzene	16.806	105	814558	0.96 ug/L	98
64) tert-Butylbenzene	17.354	119	677825	0.95 ug/L	98
65) 1,2,4-Trimethylbenzene	17.474	105	869408	0.98 ug/L	98
66) sec-Butylbenzene	17.759	105	914417	0.96 ug/L	98
67) 1,3-Dichlorobenzene	17.991	146	444904	0.97 ug/L	99
68) p-Isopropyltoluene	18.036	119	837751	0.96 ug/L	99
69) 1,4-Dichlorobenzene	18.179	146	436404	0.97 ug/L	99
71) 1,2-Dichlorobenzene	18.847	146	454101	1.02 ug/L	94
72) Butylbenzene	18.779	91	815298	0.93 ug/L	99
73) 1,2-Dibromo-3-chloropr...	20.324	75	39918	3.32 ug/L	96
74) 1,2,4-Trichlorobenzene	21.772	180	302670	0.95 ug/L	97
75) Hexachlorobutadiene	22.005	225	132601	0.95 ug/L	92
76) Naphthalene	22.222	128	467584	0.89 ug/L	99
77) 1,2,3-Trichlorobenzene	22.635	180	266052	0.94 ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe11.D
Acq On : 13 Jan 2015 12:51
Operator : YNB
Sample : S15A042-CAL2
Misc : 1ug/L,WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jan 13 13:56:53 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe12.D
Acq On : 13 Jan 15 13:25
Operator : YNB
Sample : S15A042-CAL1
Misc : 0.5ug/L,WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jan 13 13:57:08 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Dichloromethane-d2	4.915	53	621115	5.00 ug/L	# 0.00
24) Fluorobenzene	8.936	96	10269402	5.00 ug/L	0.00
37) Chlorobenzene-d5	13.985	117	6939066	5.00 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	8.494	65	1778965	4.83 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 96.60%	
39) Toluene-d8	11.495	98	9179300	4.89 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 97.80%	
56) 4-Bromofluorobenzene	16.078	95	2986736	4.77 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 95.40%	
70) 1,2-Dichlorobenzene-d4	18.817	152	2868724	4.85 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 97.00%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.787	85	81530	0.52 ug/L	90
3) Chloromethane	2.035	50	147894	0.52 ug/L	90
4) Vinyl chloride	2.170	62	77413	0.51 ug/L	72
5) Bromomethane	2.650	94	43285	0.64 ug/L	88
6) Chloroethane	2.800	64	54529	0.56 ug/L	90
7) Trichlorofluoromethane	3.115	101	78292	0.52 ug/L	95
8) 1,1-Dichloroethene	3.978	96	68147	0.54 ug/L	90
9) 1,1,2-Trichloro-1,2,2-...	3.948	101	61311	0.52 ug/L	93
10) Acetone	4.270	43	185088	6.21 ug/L	99
11) Carbon disulfide	4.300	76	81375	0.45 ug/L	79
12) Dichloromethane	4.953	84	113324	0.63 ug/L #	1
13) tert-Butyl alcohol	5.305	59	50829	8.89 ug/L #	100
14) trans-1,2-Dichloroethene	5.328	96	76877	0.55 ug/L #	82
15) tert-Butyl methyl ethe...	5.335	73	386721	1.94 ug/L	88
16) 1,1-Dichloroethane	6.131	63	108577	0.48 ug/L	97
17) Diisopropyl ether	6.168	45	937702	2.01 ug/L	100
18) Ethyl-tert-butyl ether	6.776	59	434918	1.80 ug/L	96
19) 2,2-Dichloropropane	7.038	77	38221	0.54 ug/L	98
20) cis-1,2-Dichloroethene	7.106	96	104657	0.60 ug/L	94
21) 2-Butanone (MEK)	7.241	43	263939	5.11 ug/L	98
22) Bromochloromethane	7.511	128	40155	0.46 ug/L	92
23) Chloroform	7.646	83	149982	0.44 ug/L	99
25) 1,1,1-Trichloroethane	7.834	97	71050	0.43 ug/L	91
26) Carbon tetrachloride	8.021	117	73472	0.45 ug/L	98
27) 1,1-Dichloropropene	8.104	75	142676	0.48 ug/L	94
29) Benzene	8.426	78	580819	0.49 ug/L	99
30) 1,2-Dichloroethane	8.629	62	105639	0.47 ug/L	98
31) tert-Amyl methyl ether	8.636	73	469997	1.74 ug/L	94
32) Trichloroethene	9.499	95	133723	0.52 ug/L	93
33) 1,2-Dichloropropane	9.957	63	113521	0.47 ug/L	93
34) Dibromomethane	10.152	93	44274	0.46 ug/L	94
35) Bromodichloromethane	10.414	83	86970	0.43 ug/L #	27
36) cis-1,3-Dichloropropene	11.165	75	78187	0.42 ug/L	95
38) 4-Methyl-2-pentanone (...	11.457	43	427690	3.67 ug/L	86
40) Toluene	11.607	92	277283	0.47 ug/L	99
41) trans-1,3-Dichloropropene	12.147	75	43937	0.41 ug/L	94

Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe12.D
Acq On : 13 Jan 15 13:25
Operator : YNB
Sample : S15A042-CAL1
Misc : 0.5ug/L,WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jan 13 13:57:08 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration

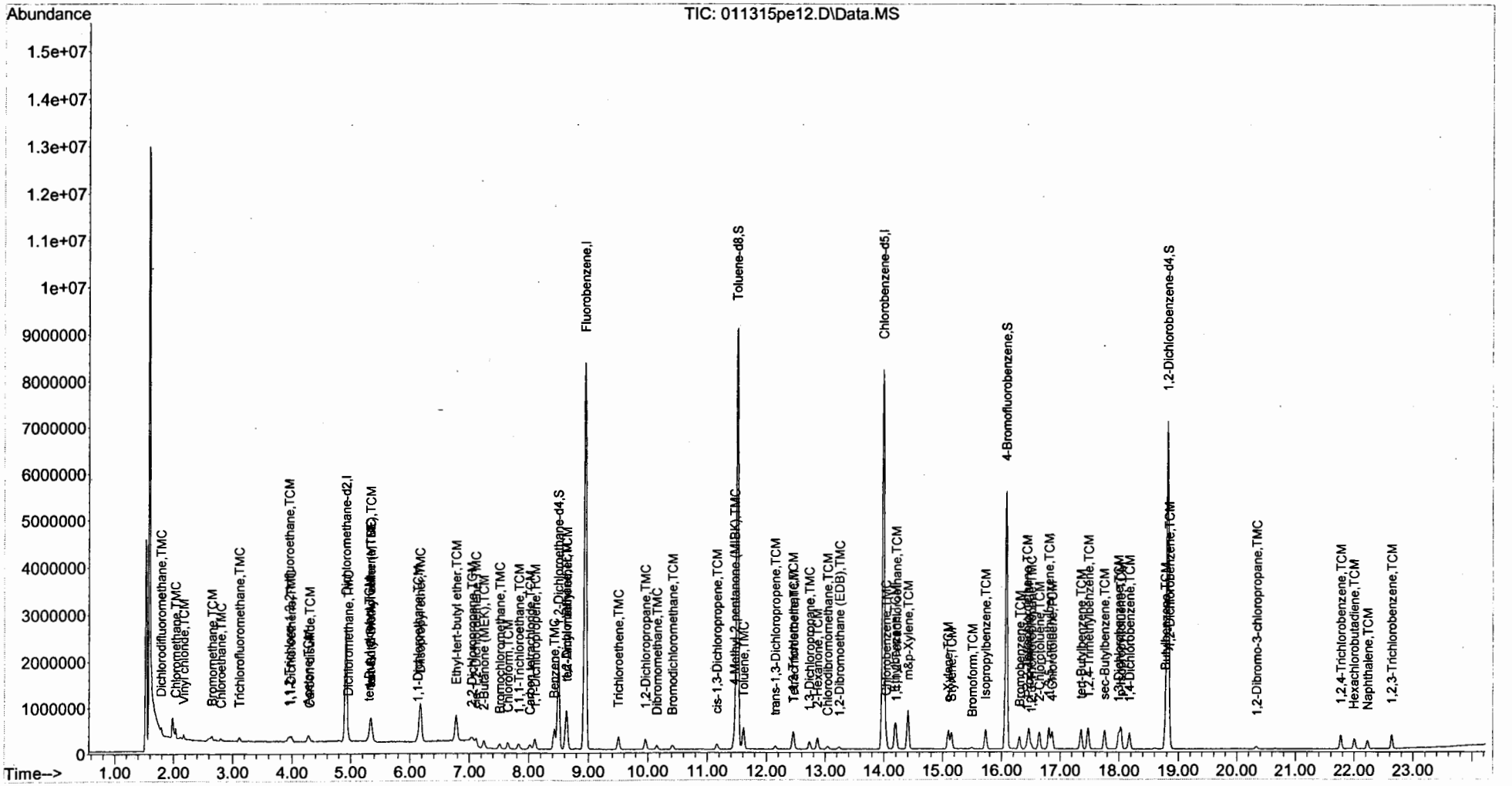
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
42) 1,1,2-Trichloroethane	12.447	83	76191	0.48 ug/L	88
43) Tetrachloroethene	12.462	166	108130	0.46 ug/L	96
44) 1,3-Dichloropropane	12.732	76	142016	0.50 ug/L	94
45) 2-Hexanone	12.867	43	244390	3.37 ug/L	99
46) Chlorodibromomethane	13.040	129	41010	0.38 ug/L	81
47) 1,2-Dibromoethane (EDB)	13.243	107	50953	0.44 ug/L	89
48) Chlorobenzene	14.038	112	314299	0.48 ug/L	88
49) 1,1,1,2-Tetrachloroethane	14.210	131	57826	0.39 ug/L	92
50) Ethylbenzene	14.188	91	480988	0.45 ug/L	98
51) m&p-Xylene	14.405	106	340121	0.87 ug/L	98
52) o-Xylene	15.088	106	160476	0.43 ug/L	96
53) Styrene	15.148	104	256245	0.43 ug/L	87
54) Bromoform	15.501	173	20052	0.41 ug/L	96
55) Isopropylbenzene	15.726	105	388962	0.43 ug/L	95
57) Bromobenzene	16.311	156	109799	0.47 ug/L	93
58) 1,1,2,2-Tetrachloroethane	16.431	83	79710	0.48 ug/L	94
59) 1,2,3-Trichloropropane	16.506	75	60304	0.48 ug/L #	100
60) Propylbenzene	16.461	91	517703	0.44 ug/L	100
61) 2-Chlorotoluene	16.641	91	322997	0.43 ug/L	100
62) 4-Chlorotoluene	16.859	91	368806	0.42 ug/L	95
63) 1,3,5-Trimethylbenzene	16.806	105	377350	0.43 ug/L	99
64) tert-Butylbenzene	17.354	119	319139	0.44 ug/L	99
65) 1,2,4-Trimethylbenzene	17.481	105	388874	0.43 ug/L	97
66) sec-Butylbenzene	17.751	105	438145	0.45 ug/L	98
67) 1,3-Dichlorobenzene	17.991	146	217118	0.46 ug/L	97
68) p-Isopropyltoluene	18.029	119	381325	0.43 ug/L	98
69) 1,4-Dichlorobenzene	18.179	146	209605	0.45 ug/L	99
71) 1,2-Dichlorobenzene	18.847	146	212743	0.47 ug/L #	82
72) Butylbenzene	18.779	91	384227	0.43 ug/L	96
73) 1,2-Dibromo-3-chloropr...	20.339	75	20000	1.62 ug/L	91
74) 1,2,4-Trichlorobenzene	21.772	180	134026	0.41 ug/L	92
75) Hexachlorobutadiene	21.997	225	63969	0.45 ug/L	91
76) Naphthalene	22.230	128	222752	0.41 ug/L	99
77) 1,2,3-Trichlorobenzene	22.635	180	125493	0.43 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe12.D
Acq On : 13 Jan 15 13:25
Operator : YNB
Sample : S15A042-CAL1
Misc : 0.5ug/L,WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jan 13 13:57:08 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 13:52:19 2015
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe13.D
Acq On : 13 Jan 15 13:59
Operator : YNB
Sample : S15A042-SCV1
Misc : 5ug/L,SECOND,WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jan 13 14:25:53 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 14:04:43 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Dichloromethane-d2	4.915	53	612134	5.00 ug/L	0.00
24) Fluorobenzene	8.936	96	9806986	5.00 ug/L	-0.01
37) Chlorobenzene-d5	13.978	117	6583849	5.00 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	8.494	65	1705826	4.85 ug/L	-0.01
Spiked Amount 5.000	Range 65 - 149		Recovery	= 97.00%	
39) Toluene-d8	11.502	98	8886922	4.99 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 99.80%	
56) 4-Bromofluorobenzene	16.078	95	2934427	4.94 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 98.80%	
70) 1,2-Dichlorobenzene-d4	18.816	152	2868968	5.11 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 102.20%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.787	85	820816	5.31 ug/L	99
3) Chloromethane	2.035	50	1386130	4.93 ug/L	100
4) Vinyl chloride	2.170	62	728637	4.86 ug/L	99
5) Bromomethane	2.642	94	311406	4.67 ug/L	100
6) Chloroethane	2.792	64	460089	4.78 ug/L	89
7) Trichlorofluoromethane	3.115	101	690743	4.67 ug/L	100
8) 1,1-Dichloroethene	3.985	96	513419	4.17 ug/L	95
9) 1,1,2-Trichloro-1,2,2-...	3.948	101	453560	3.87 ug/L	96
10) Acetone	4.278	43	941623	32.06 ug/L	99
11) Carbon disulfide	4.293	76	723289	4.07 ug/L	100
12) Dichloromethane	4.953	84	787487	4.48 ug/L #	99
13) tert-Butyl alcohol	5.335	59	37407	6.64 ug/L #	100
14) trans-1,2-Dichloroethene	5.328	96	582570	4.22 ug/L	99
15) tert-Butyl methyl ethe...	5.343	73	3764113	19.17 ug/L	95
16) 1,1-Dichloroethane	6.131	63	1047746	4.65 ug/L	100
19) 2,2-Dichloropropane	7.038	77	247216	3.56 ug/L	96
20) cis-1,2-Dichloroethene	7.113	96	684943	3.98 ug/L	96
21) 2-Butanone (MEK)	7.248	43	1533010	30.13 ug/L	99
22) Bromochloromethane	7.511	128	395969	4.58 ug/L	97
23) Chloroform	7.646	83	1607051	4.79 ug/L	99
25) 1,1,1-Trichloroethane	7.826	97	650120	4.10 ug/L	94
26) Carbon tetrachloride	8.021	117	638959	4.14 ug/L	98
27) 1,1-Dichloropropene	8.104	75	1356872	4.80 ug/L	98
29) Benzene	8.426	78	5649263	5.02 ug/L	99
30) 1,2-Dichloroethane	8.621	62	1009313	4.75 ug/L	98
32) Trichloroethene	9.507	95	1201286	4.87 ug/L	97
33) 1,2-Dichloropropane	9.964	63	1102675	4.80 ug/L	99
34) Dibromomethane	10.152	93	436339	4.76 ug/L	97
35) Bromodichloromethane	10.414	83	840797	4.34 ug/L	98
36) cis-1,3-Dichloropropene	11.172	75	805459	4.49 ug/L	98
38) 4-Methyl-2-pentanone (...	11.457	43	4532369	40.99 ug/L	99
40) Toluene	11.607	92	2763424	4.97 ug/L	99
41) trans-1,3-Dichloropropene	12.155	75	472268	4.63 ug/L	98
42) 1,1,2-Trichloroethane	12.447	83	800422	5.32 ug/L	98
43) Tetrachloroethene	12.455	166	1085608	4.91 ug/L	99
44) 1,3-Dichloropropane	12.725	76	1443236	5.38 ug/L	98

$\frac{8886922 \times 5}{6583849 \times 1.352}$

$= 4.99$ 9

YNB
01.14.15

Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe13.D
Acq On : 13 Jan 15 13:59
Operator : YNB
Sample : S15A042-SCV1
Misc : 5ug/L,SECOND,WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jan 13 14:25:53 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 14:04:43 2015
Response via : Initial Calibration

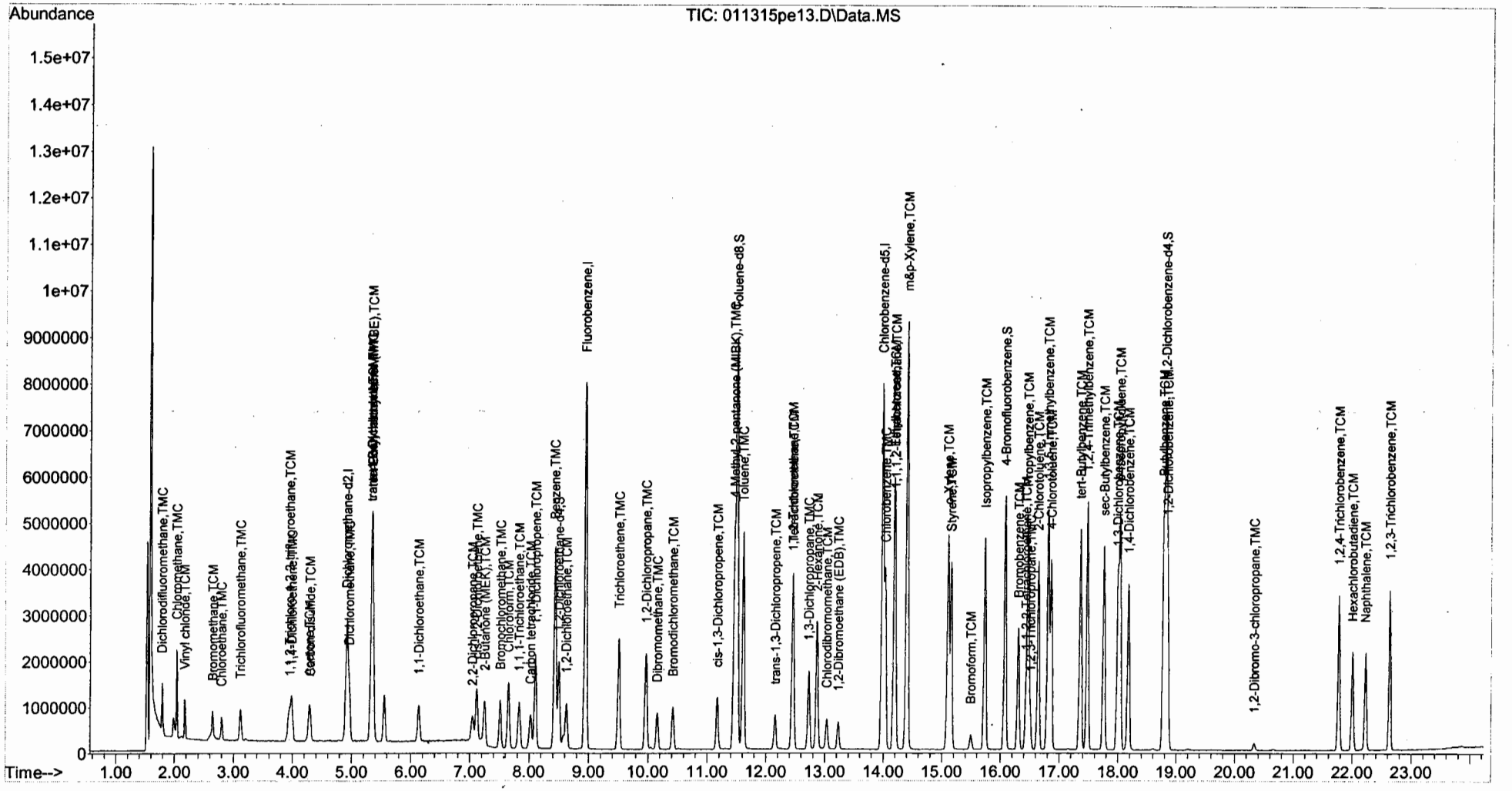
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
45)	2-Hexanone	12.867	43	2893731	42.10	ug/L		100
46)	Chlorodibromomethane	13.032	129	484417	4.71	ug/L		99
47)	1,2-Dibromoethane (EDB)	13.228	107	585742	5.37	ug/L		99
48)	Chlorobenzene	14.030	112	3148549	5.09	ug/L		99
49)	1,1,1,2-Tetrachloroethane	14.195	131	687032	4.92	ug/L		97
50)	Ethylbenzene	14.180	91	5117394	5.09	ug/L		98
51)	m&p-Xylene	14.398	106	3839780	10.39	ug/L		96
52)	o-Xylene	15.096	106	1869091	5.28	ug/L		97
53)	Styrene	15.148	104	2945169	5.23	ug/L		99
54)	Bromoform	15.493	173	217216	4.71	ug/L		99
55)	Isopropylbenzene	15.733	105	4424474	5.20	ug/L		99
57)	Bromobenzene	16.303	156	1120647	5.02	ug/L		99
58)	1,1,2,2-Tetrachloroethane	16.431	83	789785	5.05	ug/L		99
59)	1,2,3-Trichloropropane	16.506	75	611315	5.14	ug/L	#	100
60)	Propylbenzene	16.461	91	5787051	5.18	ug/L		99
61)	2-Chlorotoluene	16.641	91	3659815	5.12	ug/L		99
62)	4-Chlorotoluene	16.858	91	4200897	5.04	ug/L		100
63)	1,3,5-Trimethylbenzene	16.806	105	4373835	5.30	ug/L		99
64)	tert-Butylbenzene	17.354	119	3579770	5.15	ug/L		98
65)	1,2,4-Trimethylbenzene	17.474	105	4554478	5.26	ug/L		99
66)	sec-Butylbenzene	17.759	105	4775718	5.12	ug/L		98
67)	1,3-Dichlorobenzene	17.991	146	2265341	5.07	ug/L		100
68)	p-Isopropyltoluene	18.029	119	4290259	5.06	ug/L		99
69)	1,4-Dichlorobenzene	18.179	146	2274042	5.19	ug/L		99
71)	1,2-Dichlorobenzene	18.846	146	2174594	5.02	ug/L		100
72)	Butylbenzene	18.779	91	4215199	4.94	ug/L		99
73)	1,2-Dibromo-3-chloropr...	20.332	75	52349	4.46	ug/L		94
74)	1,2,4-Trichlorobenzene	21.772	180	1590171	5.10	ug/L		98
75)	Hexachlorobutadiene	22.005	225	631117	4.66	ug/L		97
76)	Naphthalene	22.222	128	2551597	5.00	ug/L		99
77)	1,2,3-Trichlorobenzene	22.635	180	1457700	5.26	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\D Data\2015\011315PE\
Data File : 011315pe13.D
Acq On : 13 Jan 15 13:59
Operator : YNB
Sample : S15A042-SCV1
Misc : 5ug/L,SECOND,WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jan 13 14:25:53 2015
Quant Method : C:\msdchem\1\METHODS\2015\011315PERKEN.M
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Tue Jan 13 14:04:43 2015
Response via : Initial Calibration



SDG: R15540/15030A

Instrument: HP5973K

Analysis Date: 01.30.2015

SAMPLE DATA

ANALYSIS SEQUENCE

S15A119

Instrument: HP5973H

Calibration ID: 1501011

Printed: 2/2/2015 9:39:00AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
S15A119-TUN1	QC		1		1453027			
S15A119-CCV1	QC		2		1505014			
B15A131-BS1	QC		3					
S15A119-CRL1	QC		4		1505015			
B15A131-BLK1	QC		5					
1501036-01	VOCs	A	6				California Site Cleanup Section 2	no TICs
B15A131-MS1	QC		7					
B15A131-MSD1	QC		8					
1501036-02	VOCs	A	9				California Site Cleanup Section 2	no TICs
1501036-03	VOCs	A	10				California Site Cleanup Section 2	no TICs
1501036-04	VOCs	A	11				California Site Cleanup Section 2	no TICs
1501036-05	VOCs	A	12				California Site Cleanup Section 2	no TICs
1501036-06	VOCs	A	13				California Site Cleanup Section 2	no TICs

YRB 02.02.15

Samples Loaded By Date

YRB 02.02.15

Data Processed By Date

Injection Log

Directory: C:\MSDCHEM\1\DATA\2015\013015HVW

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	100	013015h01.d	0.	S15A119-TUN1	0.5ul , EM 2294V	30 Jan 2015 08:37
2	27	013015h02.d	0.	S15A119-CCV1@B15A131-BS1	CCV,WATER	30 Jan 2015 09:02
3	28	013015h03.d	0.	S15A119-CRL1	CRL,WATER	30 Jan 2015 09:51
4	29	013015h04.d	0.	B15A131-BLK1	BLANK,WATER	30 Jan 2015 10:27
5	30	013015h05.d	0.	1501036-01	MW-4A,WATER	30 Jan 2015 15:52
6	31	013015h06.d	0.	B15A131-MS1	MW-4A,WATER SPIKE	30 Jan 2015 16:27
7	32	013015h07.d	0.	B15A131-MSD1	MW-4A,WATER SPIKE	30 Jan 2015 17:03
8	33	013015h08.d	0.	BLANK	BLANK,WATER	30 Jan 2015 17:39
9	34	013015h09.d	0.	1501036-02	MW-4B,WATER	30 Jan 2015 18:14
10	35	013015h10.d	0.	1501036-03	MW-4C,WATER	30 Jan 2015 18:50
11	36	013015h11.d	0.	1501036-04	MW-10A,WATER	30 Jan 2015 19:26
12	37	013015h12.d	0.	1501036-05	MW-10B,WATER	30 Jan 2015 20:02
13	38	013015h13.d	0.	1501036-06	MW-10C,WATER	30 Jan 2015 20:37 OK
14	39	013015h14.d	0.	BLANK	BLANK,WATER	30 Jan 2015 21:13
15	40	013015h15.d	0.	BLANK	BLANK,WATER	30 Jan 2015 21:49
16		013015h16.d	1.	No MS or GC data present		

YNB
02.02.15

02 Feb 2015 08:12

00325

USEPA REGION 9 VOLATILE ORGANICS RUN LOG

SOP: ☒354 (Water) ☐305 (Solid, Low) ☐305 (Solid, Medium)

INST. ID: HP5973H

EM Voltage: 2294

LIMS Batch: B15A131 BFB STD ID: 1453027 Cal STD ID: 1505012

LIMS Seq.: S15A119 IS/Surr ID: 1504074 MS SPK ID: ↓

Purge Vol, mL: 25 IS/Surr Volume: 1µL BS SPK ID: ↓

	Date Analyzed	Time Analyzed	Analyst	File Name	Laboratory ID	Vial ID	Initial Volume, mL /Weight, g	MeOH Used, uL	Final Volume, mL	Archon DF	STD Amounts (uL) CAL	BS	MS	pH	Comments	M
1	02.30.15	8:37	YAB	013015H01	S15A119-Run1	–	–	–	–	–	–	–	–	–		
2	↓	9:02	↓	02	↓ -ccv1	–	50	–	–	–	10	–	–	–		
3		9:51		03	↓ -CRL1	–	50	–	–	–	1	–	–	–		
4		10:27		04	B15A131-Blk1	–	–	–	–	–	–	–	–	–		
5		15:52		05	1501036-01	A	–	–	–	–	–	–	–	<2		
6		16:27		06	B15A131-MS1	B	40	–	–	–	–	–	8	<2		
7		17:03		07	↓ -MSD1	C	40	–	–	–	–	–	8	<2		
8		17:39		08	blank	–	–	–	–	–	–	–	–	–		
9		18:14		09	1501036-02	A	–	–	–	–	–	–	–	<2		
10		18:50		10	↓ -03	A	–	–	–	–	–	–	–	<2		
11		19:26		11	-04	A	–	–	–	–	–	–	–	<2		
12		20:02		12	-05	A	–	–	–	–	–	–	–	<2		
13		20:37		13	↓ -06	A	–	–	–	–	–	–	–	<2		
14		21:13		14	blank	–	–	–	–	–	–	–	–	–		
15	↓	21:49	↓	15	↓	–	–	–	–	–	–	–	–	–		
16																
17																
18					YAB 02.02.15											
19																
20																
21																
22																
23																
24																

[1] Manual integration performed

GC/MS QA-QC Check Report

Tune File : C:\msdchem\1\DATA\2015\013015HVW\013015H01.D
Tune Time : 30 Jan 2015 8:37

Daily Calibration File : C:\MSDCHEM\1\DATA\2015\013015HVW\013015H02.D

File	Sample	Surrogate Recovery %				Internal Standard Responses		
						105262	1144760	702674
013015H02.D	S15A119-CCV1@	85	106	95	95	105262	1144755	702674
013015H03.D	S15A119-CRL1	93	105	94	91	109417	1085196	680146
013015H04.D	B15A131-BLK1	97	104	91	88	104875	1034806	651047
013015H05.D	1501036-01	89	105	90	84	100936	1002911	620625
013015H06.D	B15A131-MS1	91	105	95	97	104157	1033978	646180
013015H07.D	B15A131-MSD1	93	104	97	97	104588	1055600	669281
013015H08.D	BLANK	96	104	91	89	104353	977464	618135
013015H09.D	1501036-02	96	102	89	88	100271	939604	605466
013015H10.D	1501036-03	97	103	92	89	93247	892774	573199
013015H11.D	1501036-04	96	102	90	88	97135	887123	575648
013015H12.D	1501036-05	98	104	91	88	93206	863299	551522
013015H13.D	1501036-06	101	104	91	90	93055	843392	540536

(fails) - fails 12hr time check * - fails criteria

Created: Mon Feb 02 08:16:43 2015 HP5973H

Response Factor Report HP5973H

Method Path : C:\MSDCHEM\1\METHODS\2015\
Method File : 013015HVW.M
Title : Volatile Organic Analysis - 524.2 Method
Last Update : Wed Jan 14 16:54:35 2015
Response Via : Initial Calibration

Calibration Files
0.5 =011415H12.D 1.0 =011415H11.D 2.0 =011415H10.D 5.0 =011415H09.D 10.0=011415H08.D
25.0=011415H07.D

		Compound	0.5	1.0	2.0	5.0	10.0	25.0	Avg		%RSD
1)	I	Dichloromethane-d2	----------ISTD----------								
2)	TMC	Dichlorodifluo...	2.600	2.513	2.450	2.413	2.449	2.497	2.487		2.66
3)	TMC	Chloromethane	3.296	3.370	3.192	3.082	3.027	3.003	3.162		4.73
4)	TCM	Vinyl chloride	3.339	3.475	3.282	3.225	3.211	3.276	3.301		2.93
5)	TCM	Bromomethane	1.885	2.327	2.367	2.474	2.795	2.657	2.418		13.05
6)	TMC	Chloroethane	2.381	2.444	2.330	2.327	2.375	2.379	2.372		1.80
7)	TMC	Trichlorofluor...	4.707	4.523	4.552	4.368	4.584	4.634	4.561		2.52
8)	TMC	1,1-Dichloroet...	2.975	3.072	3.160	3.085	3.256	3.292	3.140		3.81
9)	TCM	1,1,2-Trichlor...	3.032	2.854	2.989	2.845	2.931	3.057	2.951		3.04
10)	TCM	Acetone	0.248	0.205	0.191	0.178	0.170	0.161	0.192		16.38
11)	TCM	Carbon disulfide	1.051	1.053	1.053	1.031	1.035	1.019	1.040	E1	1.35
12)	TMC	Dichloromethane	4.286	3.702	3.416	3.189	3.079	2.994	3.444		14.08
13)	TCM	tert-Butyl alc...	0.071	0.074	0.077	0.076	0.081	0.055	0.072		12.56
14)	TMC	trans-1,2-Dich...	3.700	3.915	3.949	3.907	4.044	4.145	3.943		3.79
15)	TCM	tert-Butyl met...	3.971	4.174	4.345	4.355	4.393	4.250	4.248		3.71
16)	TCM	1,1-Dichloroet...	5.696	6.042	5.795	5.669	5.785	5.832	5.803		2.28
17)	TMC	Diisopropyl ether	7.120	7.345	7.164	7.054	7.033	6.528	7.041		3.90
18)	TCM	Ethyl-tert-but...	3.503	3.747	3.757	3.925	4.092	4.236	3.877		6.81
19)	TCM	2,2-Dichloropr...	2.067	2.356	2.476	2.657	2.854	3.320	2.622		16.55
20)	TMC	cis-1,2-Dichlo...	2.084	2.191	2.188	2.220	2.319	2.593	2.266		7.81
21)	TCM	2-Butanone (MEK)	0.241	0.226	0.219	0.218	0.213	0.213	0.222		4.74
22)	TMC	Bromochloromet...	0.611	0.666	0.663	0.678	0.695	0.720	0.672		5.43
23)	TCM	Chloroform	3.312	3.415	3.370	3.383	3.456	3.630	3.428		3.21
24)	I	Fluorobenzene	----------ISTD----------								
25)	TCM	1,1,1-Trichlor...	0.298	0.317	0.317	0.325	0.326	0.352	0.323		5.53
26)	TCM	Carbon tetrach...	0.235	0.257	0.264	0.269	0.281	0.318	0.271		10.20
27)	TCM	1,1-Dichloropr...	0.258	0.271	0.273	0.275	0.281	0.313	0.279		6.69
28)	S	1,2-Dichloroet...	0.138	0.138	0.140	0.139	0.136	0.134	0.137		1.73
29)	TMC	Benzene	0.886	0.953	0.946	0.945	0.956	1.014	0.950		4.30
30)	TCM	1,2-Dichloroet...	0.152	0.174	0.167	0.163	0.160	0.165	0.163		4.42
31)	TCM	tert-Amyl meth...	0.277	0.304	0.318	0.330	0.341	0.362	0.322		9.13
32)	TMC	Trichloroethene	0.220	0.228	0.234	0.228	0.235	0.261	0.234		5.95
33)	TMC	1,2-Dichloropr...	0.171	0.184	0.189	0.187	0.187	0.199	0.186		4.89
34)	TMC	Dibromomethane	0.065	0.062	0.064	0.067	0.065	0.067	0.065		2.86
35)	TCM	Bromodichlorom...	0.202	0.208	0.223	0.224	0.225	0.238	0.220		5.94
36)	TCM	cis-1,3-Dichlo...	0.197	0.210	0.226	0.235	0.244	0.268	0.230		10.99
37)	I	Chlorobenzene-d5	----------ISTD----------								
38)	TMC	4-Methyl-2-pen...	0.070	0.077	0.081	0.084	0.083	0.085	0.080		7.10
39)	S	Toluene-d8	1.493	1.510	1.491	1.486	1.465	1.451	1.482		1.44
40)	TMC	Toluene	0.928	0.983	0.964	0.960	0.963	1.054	0.975		4.36
41)	TCM	trans-1,3-Dich...	0.217	0.224	0.244	0.259	0.268	0.287	0.250		10.72
42)	TCM	1,1,2-Trichlor...	0.127	0.123	0.125	0.122	0.122	0.127	0.124		1.89
43)	TCM	Tetrachloroethene	0.374	0.386	0.376	0.379	0.388	0.440	0.390		6.32
44)	TMC	1,3-Dichloropr...	0.257	0.276	0.281	0.281	0.273	0.278	0.274		3.36
45)	TCM	2-Hexanone	0.045	0.048	0.051	0.054	0.053	0.055	0.051		7.74
46)	TCM	Chlorodibromom...	0.160	0.175	0.185	0.195	0.196	0.207	0.186		9.00
47)	TMC	1,2-Dibromoeth...	0.118	0.125	0.133	0.135	0.136	0.137	0.131		5.79
48)	TMC	Chlorobenzene	0.945	0.984	0.952	0.953	0.964	1.042	0.973		3.70
49)	TCM	1,1,1,2-Tetrac...	0.249	0.267	0.268	0.278	0.281	0.309	0.275		7.19
50)	TCM	Ethylbenzene	1.613	1.783	1.802	1.823	1.850	1.973	1.808		6.45
51)	TCM	m&p-Xylene	0.660	0.734	0.728	0.764	0.800	0.950	0.773		12.72
52)	TCM	o-Xylene	0.578	0.651	0.658	0.689	0.719	0.842	0.690		12.78
53)	TCM	Styrene	0.873	0.999	1.028	1.094	1.135	1.330	1.077		14.23

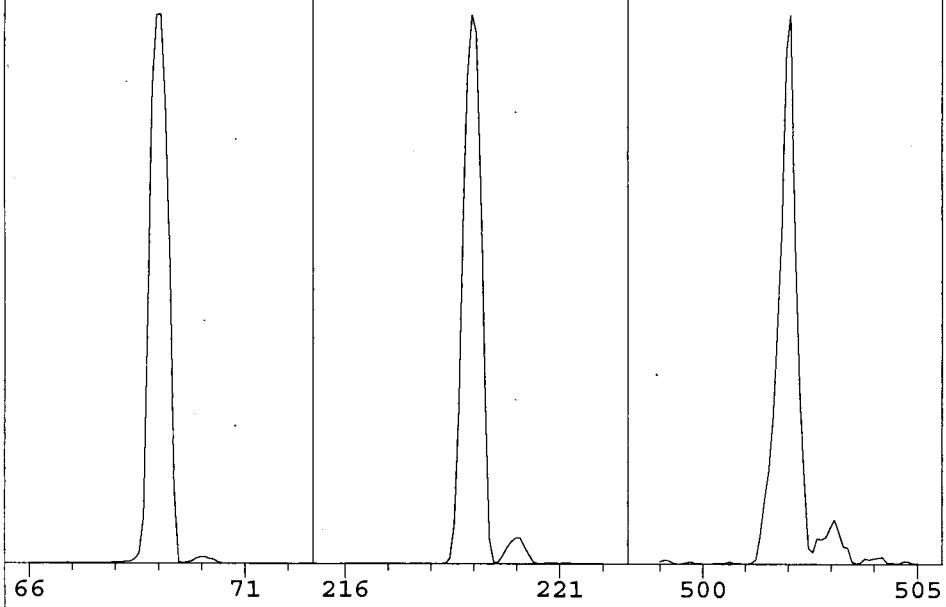
Method Path : C:\MSDCHEM\1\METHODS\2015\
Method File : 013015HVW.M
Title : Volatile Organic Analysis - 524.2 Method

54)	TCM	Bromoform	0.071	0.077	0.083	0.090	0.094	0.105	0.087	14.07
55)	TCM	Isopropylbenzene	1.507	1.712	1.752	1.813	1.878	2.067	1.788	10.40
56)	S	4-Bromofluorob...	0.422	0.429	0.425	0.436	0.431	0.445	0.431	1.92
57)	TCM	Bromobenzene	0.304	0.339	0.337	0.348	0.355	0.391	0.346	8.26
58)	TCM	1,1,2,2-Tetrac...	0.130	0.146	0.147	0.149	0.147	0.152	0.145	5.47
59)	TMC	1,2,3-Trichlor...	0.096	0.108	0.108	0.105	0.104	0.105	0.104	4.32
60)	TCM	Propylbenzene	1.903	2.096	2.114	2.151	2.198	2.338	2.133	6.67
61)	TCM	2-Chlorotoluene	1.159	1.234	1.202	1.221	1.252	1.347	1.236	5.09
62)	TCM	4-Chlorotoluene	1.265	1.400	1.391	1.425	1.462	1.626	1.428	8.21
63)	TCM	1,3,5-Trimethy...	1.353	1.498	1.507	1.567	1.621	1.840	1.564	10.37
64)	TCM	tert-Butylbenzene	1.102	1.227	1.242	1.315	1.356	1.547	1.298	11.54
65)	TCM	1,2,4-Trimethy...	1.342	1.463	1.492	1.571	1.609	1.819	1.549	10.42
66)	TCM	sec-Butylbenzene	1.661	1.824	1.864	1.919	1.991	2.235	1.916	10.01
67)	TCM	1,3-Dichlorobe...	0.707	0.756	0.789	0.810	0.832	0.932	0.805	9.50
68)	TCM	p-Isopropyltol...	1.415	1.582	1.615	1.748	1.864	2.272	1.749	17.04
69)	TCM	1,4-Dichlorobe...	0.672	0.760	0.760	0.821	0.879	1.117	0.835	18.49
70)	S	1,2-Dichlorobe...	0.396	0.406	0.409	0.414	0.413	0.440	0.413	3.57
71)	TCM	1,2-Dichlorobe...	0.601	0.617	0.613	0.633	0.639	0.700	0.634	5.56
72)	TCM	Butylbenzene	1.384	1.508	1.503	1.538	1.577	1.737	1.541	7.51
73)	TMC	1,2-Dibromo-3-...	0.017	0.017	0.020	0.020	0.020	0.021	0.019	10.54
74)	TCM	1,2,4-Trichlor...	0.377	0.415	0.427	0.445	0.453	0.515	0.439	10.47
75)	TCM	Hexachlorobuta...	0.244	0.251	0.259	0.258	0.269	0.313	0.266	9.29
76)	TCM	Naphthalene	0.412	0.456	0.512	0.539	0.538	0.569	0.504	11.72
77)	TCM	1,2,3-Trichlor...	0.296	0.332	0.330	0.345	0.345	0.376	0.337	7.74

(#) = Out of Range

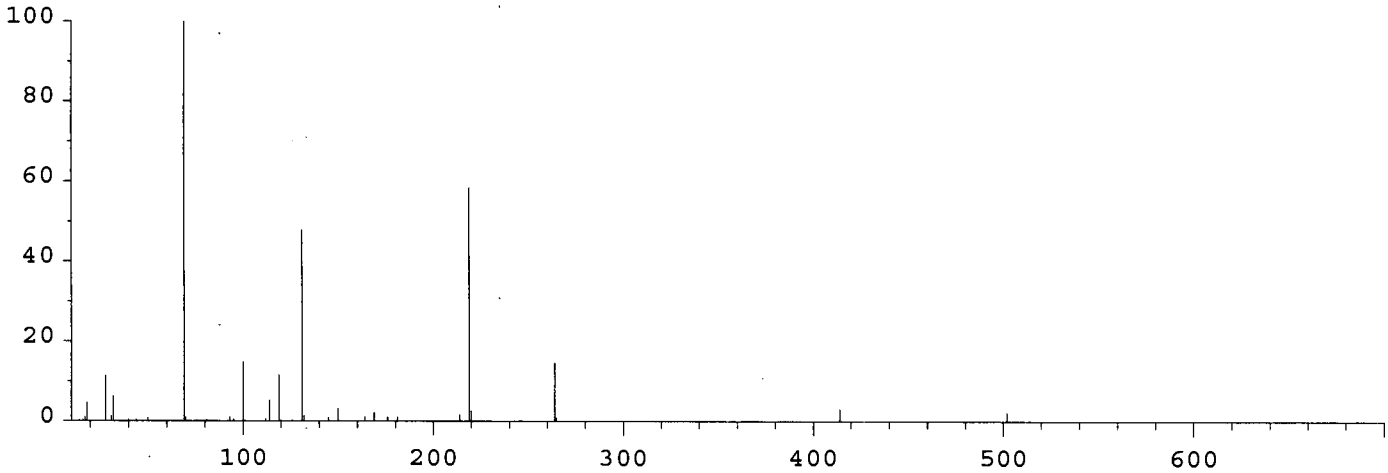
Fri Jan 30 08:31:20 2015 Instrument: HP5973H
C:\msdchem\1\5973\BFH013015.u

Mass	69.05	Mass	218.95	Mass	502.05
Ab	548467	Ab	331587	Ab	14226
Pw50	0.50	Pw50	0.48	Pw50	0.39



Ion Pol	POS	MassGain	-230
		MassOffs	-11
Emission	34.6	AmuGain	1859
EIEnrgy	69.9	AmuOffs	133
Filament	2	Wid219	-0.019
		DC Pol	NEG
Repeller	12.70		
IonFcus	66.4	HEDEnab	ON
EntLens	12.0	EMVolts	2294
EntOffs	15.31		
		Samples	8
PFTBA	OPEN	Averages	3
		Stepsize	0.10
Zones:			
MS Source	230	TurboSpd	100
MS Quad	150		

Scan: 10.00 - 700.00 Samples: 8 Thresh: 100 Step: 0.10
145 peaks Base: 69.05 Abundance: 473344



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.05	473344	100.00	70.05	5200	1.10
218.95	276672	58.45	219.95	12646	4.57
501.95	10586	2.24	503.05	817	7.72

Air/Water Check: H20~4.73% N2~11.45% O2~6.21% CO2~0.51% N2/H2O~241.88%

Column Flow: Front: 0.997 Back: 0 ml/min. Interface Temp: 230

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 69; EM Gain 480640
Repeller Maximum 20 volts using ion 219;

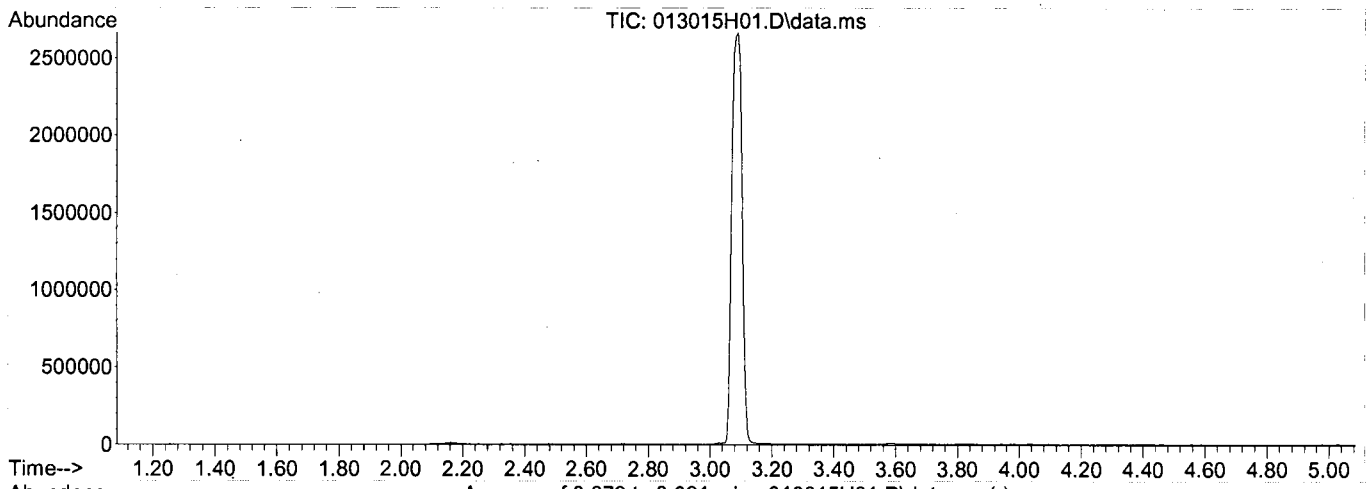
MassGain Values @Samples: -230@3 -230@2 -230@1 -230@0 -230@FS

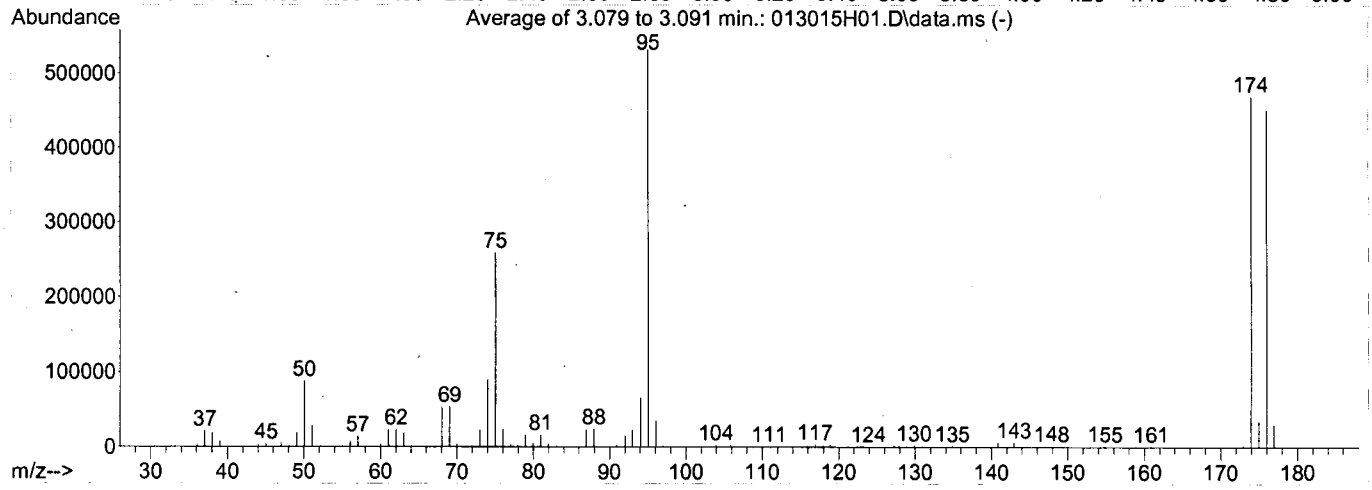
TARGET MASS:	50	69	131	219	414	502	800
Amu Offset:	133.0	133.0	133.0	133.0	133.0	133.0	133.0
Entrance Lens Offset:	15.3	15.3	15.3	15.3	15.3	15.3	15.3

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H01.D
Acq On : 30 Jan 2015 8:37
Operator : YNB
Sample : S15A119-TUN1
Misc : 0.5ul , EM 2294V
ALS Vial : 100 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M
Title : Volatile Organic Analysis - 524.2 Method
Last Update : Wed Jan 14 16:54:35 2015





AutoFind: Scans 163, 164, 165; Background Corrected with Scan 155

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.5	87866	PASS
75	95	30	60	48.7	259029	PASS
95	95	100	100	100.0	531690	PASS
96	95	5	9	6.6	35293	PASS
173	174	0.00	2	0.6	2815	PASS
174	95	50	120	88.3	469226	PASS
175	174	5	9	7.3	34314	PASS
176	174	95	101	96.2	451529	PASS
177	176	5	9	6.5	29498	PASS

Average of 3.079 to 3.091 min.: 013015H01.D\data.ms
S15A119-TUN1
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	3378	50.05	87866	64.05	1695	76.00	23552
37.05	21072	51.05	28016	65.10	208	77.00	3286
38.05	18602	52.10	1269	67.00	1249	77.95	2056
39.05	7336	55.05	1235	68.05	52597	78.95	15493
40.05	368	56.05	7181	69.05	53386	79.95	4708
44.05	2669	57.05	14159	70.00	3889	80.95	15781
45.05	4045	58.00	562	71.05	110	81.95	3718
46.05	276	60.00	3940	72.00	2256	83.05	691
47.05	6243	61.05	22536	73.05	22432	86.10	557
48.05	2390	62.05	23098	74.05	89741	86.95	23189
49.05	18493	63.05	18536	75.05	259029	87.95	23706

Average of 3.079 to 3.091 min.: 013015H01.D\data.ms
S15A119-TUN1
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
90.95	2291	109.95	482	124.95	110	140.85	6119
92.00	15052	110.90	483	125.95	173	141.90	689
93.00	22746	111.90	297	126.85	139	142.95	6281
94.05	65456	112.80	604	127.90	1983	143.90	482
95.05	531690	114.80	398	128.90	907	144.95	495
96.05	35293	115.90	2141	129.90	2163	145.90	803
97.00	1138	116.90	3381	130.90	939	146.90	447
103.95	2656	117.95	2060	134.90	1183	147.90	1473
104.90	884	118.90	3014	135.95	112	148.95	514
105.90	2490	121.95	129	136.85	1027	149.90	722
106.85	470	123.90	371	139.95	306	151.90	348

Average of 3.079 to 3.091 min.: 013015H01.D\data.ms
S15A119-TUN1
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
152.90	300	175.95	451529				
153.85	153	176.95	29498				
154.90	1190	178.00	911				
156.90	766						
158.90	711						
160.90	674						
171.85	136						
172.00	392						
172.95	2815						
173.95	469226						
174.95	34314						

Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H02.D
Acq On : 30 Jan 2015 9:02
Instrument: HP5973H
Operator : YNB
Sample : S15A119-CCV1@B15A131-BS1
Misc : CCV,WATER
ALS Vial : 27
Multiplier: 1

Quant Time: Jan 30 09:32:18 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.03min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Dichloromethane-d2	1.000	1.000	0.0	85	0.00
2	TMC	Dichlorodifluoromethane	2.487	2.507	0.8	88	0.01
3	TMC	Chloromethane	3.162	3.166	0.1	87	0.00
4	TCM	Vinyl chloride	3.301	3.172	-3.9	83	0.00
5	TCM	Bromomethane	2.418	2.018	-16.5	69	0.00
6	TMC	Chloroethane	2.372	2.362	-0.4	86	0.00
7	TMC	Trichlorofluoromethane	4.561	4.582	0.5	89	0.01
8	TMC	1,1-Dichloroethene	3.140	3.227	2.8	89	0.01
9	TCM	1,1,2-Trichloro-1,2,2-trifl	2.951	3.217	9.0	96	0.01
10	TCM	Acetone	0.192	0.236	22.9	113	0.00
11	TCM	Carbon disulfide	10.403	10.654	2.4	88	0.02
12	TMC	Dichloromethane	3.444	3.012	-12.5	80	0.00
13	TCM	tert-Butyl alcohol	0.072	0.049	-31.9#	54	-0.01
14	TMC	trans-1,2-Dichloroethene	3.943	4.163	5.6	90	0.01
15	TCM	tert-Butyl methyl ether (MT	4.248	3.772	-11.2	74	0.00
16	TCM	1,1-Dichloroethane	5.803	6.270	8.0	94	0.00
17	TMC	Diisopropyl ether	7.041	5.498	-21.9	66	0.00
18	TCM	Ethyl-tert-butyl ether	3.877	3.557	-8.3	77	0.00
19	TCM	2,2-Dichloropropane	2.622	3.300	25.9	105	0.00
20	TMC	cis-1,2-Dichloroethene	2.266	2.431	7.3	93	0.00
21	TCM	2-Butanone (MEK)	0.222	0.194	-12.6	76	0.00
22	TMC	Bromochloromethane	0.672	0.691	2.8	87	0.00
23	TCM	Chloroform	3.428	3.656	6.7	92	0.00
24	I	Fluorobenzene	1.000	1.000	0.0	99	0.00
25	TCM	1,1,1-Trichloroethane	0.323	0.318	-1.5	97	0.00
26	TCM	Carbon tetrachloride	0.271	0.276	1.8	102	0.01
27	TCM	1,1-Dichloropropene	0.279	0.275	-1.4	99	0.00
28	S	1,2-Dichloroethane-d4	0.137	0.117	-14.6	83	0.00
29	TMC	Benzene	0.950	0.917	-3.5	96	0.00
30	TCM	1,2-Dichloroethane	0.163	0.138	-15.3	84	0.00
31	TCM	tert-Amyl methyl ether	0.322	0.254	-21.1	77	0.00
32	TMC	Trichloroethene	0.234	0.230	-1.7	100	0.00
33	TMC	1,2-Dichloropropane	0.186	0.167	-10.2	88	0.00
34	TMC	Dibromomethane	0.065	0.054	-16.9	81	0.00
35	TCM	Bromodichloromethane	0.220	0.195	-11.4	86	0.00
36	TCM	cis-1,3-Dichloropropene	0.230	0.207	-10.0	88	0.00
37	I	Chlorobenzene-d5	1.000	1.000	0.0	94	0.00
38	TMC	4-Methyl-2-pentanone (MIBK)	0.080	0.065	-18.8	73	0.00
39	S	Toluene-d8	1.482	1.574	6.2	100	0.00
40	TMC	Toluene	0.975	0.971	-0.4	95	0.00
41	TCM	trans-1,3-Dichloropropene	0.250	0.233	-6.8	85	0.00
42	TCM	1,1,2-Trichloroethane	0.124	0.109	-12.1	85	0.00

±30%

Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H02.D
Acq On : 30 Jan 2015 9:02
Instrument: HP5973H
Operator : YNB
Sample : S15A119-CCV1@B15A131-BS1
Misc : CCV,WATER
ALS Vial : 27
Multiplier: 1

Quant Time: Jan 30 09:32:18 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.03min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
43	TCM	Tetrachloroethene	0.390	0.402	3.1	100	0.00
44	TMC	1,3-Dichloropropane	0.274	0.243	-11.3	82	0.00
45	TCM	2-Hexanone	0.051	0.041	-19.6	71	0.00
46	TCM	Chlorodibromomethane	0.186	0.173	-7.0	84	0.00
47	TMC	1,2-Dibromoethane (EDB)	0.131	0.117	-10.7	82	0.00
48	TMC	Chlorobenzene	0.973	0.931	-4.3	92	0.00
49	TCM	1,1,1,2-Tetrachloroethane	0.275	0.258	-6.2	88	0.00
50	TCM	Ethylbenzene	1.808	1.866	3.2	96	0.00
51	TCM	m&p-Xylene	0.773	0.772	-0.1	95	0.00
52	TCM	o-Xylene	0.690	0.689	-0.1	94	0.00
53	TCM	Styrene	1.077	1.025	-4.8	88	0.00
54	TCM	Bromoform	0.087	0.081	-6.9	84	0.00
55	TCM	Isopropylbenzene	1.788	1.885	5.4	98	0.00
56	S	4-Bromofluorobenzene	0.431	0.411	-4.6	89	0.00
57	TCM	Bromobenzene	0.346	0.322	-6.9	87	0.00
58	TCM	1,1,2,2-Tetrachloroethane	0.145	0.124	-14.5	78	0.00
59	TMC	1,2,3-Trichloropropane	0.104	0.087	-16.3	78	0.00
60	TCM	Propylbenzene	2.133	2.262	6.0	99	0.00
61	TCM	2-Chlorotoluene	1.236	1.222	-1.1	94	0.00
62	TCM	4-Chlorotoluene	1.428	1.391	-2.6	92	0.00
63	TCM	1,3,5-Trimethylbenzene	1.564	1.607	2.7	97	0.00
64	TCM	tert-Butylbenzene	1.298	1.359	4.7	97	0.00
65	TCM	1,2,4-Trimethylbenzene	1.549	1.552	0.2	93	0.00
66	TCM	sec-Butylbenzene	1.916	2.048	6.9	101	0.00
67	TCM	1,3-Dichlorobenzene	0.805	0.765	-5.0	89	0.00
68	TCM	p-Isopropyltoluene	1.749	1.839	5.1	99	0.00
69	TCM	1,4-Dichlorobenzene	0.835	0.770	-7.8	88	0.00
70	S	1,2-Dichlorobenzene-d4	0.413	0.390	-5.6	89	0.00
71	TCM	1,2-Dichlorobenzene	0.634	0.580	-8.5	86	0.00
72	TCM	Butylbenzene	1.541	1.630	5.8	100	0.00
73	TMC	1,2-Dibromo-3-chloropropane	0.019	0.017	-10.5	78	0.00
74	TCM	1,2,4-Trichlorobenzene	0.439	0.404	-8.0	86	0.00
75	TCM	Hexachlorobutadiene	0.266	0.282	6.0	103	0.00
76	TCM	Naphthalene	0.504	0.433	-14.1	76	0.00
77	TCM	1,2,3-Trichlorobenzene	0.337	0.306	-9.2	84	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 1

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H02.D
Acq On : 30 Jan 2015 9:02
Instrument: HP5973H
Operator : YNB
Sample : S15A119-CCV1@B15A131-BS1
Misc : CCV,WATER
ALS Vial : 27
Multiplier: 1

Quant Time: Jan 30 09:32:18 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.900	53	105262	5.000 ug/L	0.00
24) Fluorobenzene	7.829	96	1144755	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.785	117	702674	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.275	65	133414	4.239 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 84.80%	
39) Toluene-d8	10.395	98	1105912	5.308 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 106.20%	
56) 4-Bromofluorobenzene	14.840	95	288954	4.768 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 95.40%	
70) 1,2-Dichlorobenzene-d4	17.541	152	274343	4.729 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 94.60%	

$\frac{1105912 \times 5}{702674 \times 1.482} = 5.3099$

YNB 02.02.15

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.553	85	263918	5.040 ug/L	99
3) Chloromethane	1.741	50	333232	5.007 ug/L #	98
4) Vinyl chloride	1.845	62	333866	4.804 ug/L	100
5) Bromomethane	2.185	94	212387	4.173 ug/L	99
6) Chloroethane	2.301	64	248616	4.978 ug/L	97
7) Trichlorofluoromethane	2.599	101	482337	5.023 ug/L	98
8) 1,1-Dichloroethene	3.225	96	339628	5.138 ug/L	97
9) 1,1,2-Trichloro-1,2,2-...	3.262	101	338640	5.450 ug/L	99
10) Acetone	3.322	43	198964	49.177 ug/L	97
11) Carbon disulfide	3.493	76	1121487	5.121 ug/L	99
12) Dichloromethane	3.937	84	316999	4.372 ug/L #	96
13) tert-Butyl alcohol	4.241	59	102622	67.374 ug/L	97
14) trans-1,2-Dichloroethene	4.374	96	438159	5.278 ug/L	99
15) tert-Butyl methyl ethe...	4.417	73	1588046	17.757 ug/L	98
16) 1,1-Dichloroethane	5.043	63	659977	5.402 ug/L	99
17) Diisopropyl ether	5.250	45	2314952	15.618 ug/L	92
18) Ethyl-tert-butyl ether	5.834	59	1497485	18.348 ug/L	99
19) 2,2-Dichloropropane	5.968	77	347313	6.293 ug/L	99
20) cis-1,2-Dichloroethene	5.980	96	255934	5.365 ug/L	99
21) 2-Butanone (MEK)	6.059	43	163648	35.052 ug/L	98
22) Bromochloromethane	6.351	128	72737	5.140 ug/L	97
23) Chloroform	6.521	83	384786	5.332 ug/L	99
25) 1,1,1-Trichloroethane	6.764	97	364533	4.936 ug/L	99
26) Carbon tetrachloride	7.026	117	316485	5.107 ug/L	98
27) 1,1-Dichloropropene	7.038	75	314328	4.929 ug/L	100
29) Benzene	7.354	78	1049478	4.825 ug/L	100
30) 1,2-Dichloroethane	7.397	62	158126	4.229 ug/L	100
31) tert-Amyl methyl ether	7.622	73	1164706	15.797 ug/L	98
32) Trichloroethene	8.412	95	263472	4.910 ug/L	97
33) 1,2-Dichloropropane	8.759	63	191041	4.480 ug/L	99
34) Dibromomethane	8.935	93	61963	4.170 ug/L	98
35) Bromodichloromethane	9.233	83	223035	4.433 ug/L	99
36) cis-1,3-Dichloropropene	9.969	75	237492	4.508 ug/L	100

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H02.D
Acq On : 30 Jan 2015 9:02
Instrument: HP5973H
Operator : YNB
Sample : S15A119-CCV1@B15A131-BS1
Misc : CCV,WATER
ALS Vial : 27
Multiplier: 1

Quant Time: Jan 30 09:32:18 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
38) 4-Methyl-2-pentanone (...	10.279	43	364745	32.545 ug/L	100
40) Toluene	10.498	92	682340	4.978 ug/L	99
41) trans-1,3-Dichloropropene	10.906	75	163965	4.667 ug/L	98
42) 1,1,2-Trichloroethane	11.192	83	76725	4.396 ug/L	100
43) Tetrachloroethene	11.392	166	282353	5.146 ug/L	99
44) 1,3-Dichloropropane	11.453	76	170773	4.430 ug/L	100
45) 2-Hexanone	11.672	43	230407	32.071 ug/L	100
46) Chlorodibromomethane	11.818	129	121234	4.629 ug/L	99
47) 1,2-Dibromoethane (EDB)	11.970	107	82013	4.470 ug/L	100
48) Chlorobenzene	12.834	112	654189	4.782 ug/L	99
49) 1,1,1,2-Tetrachloroethane	12.998	131	181335	4.687 ug/L	98
50) Ethylbenzene	13.065	91	1311396	5.162 ug/L	99
51) m&p-Xylene	13.278	106	1085071	9.992 ug/L	99
52) o-Xylene	13.946	106	484371	4.998 ug/L	96
53) Styrene	13.971	104	720401	4.761 ug/L	99
54) Bromoform	14.238	173	56576	4.637 ug/L	100
55) Isopropylbenzene	14.609	105	1324342	5.271 ug/L	99
57) Bromobenzene	15.065	156	226377	4.661 ug/L	99
58) 1,1,2,2-Tetrachloroethane	15.157	83	87050	4.269 ug/L	99
59) 1,2,3-Trichloropropane	15.193	75	61284	4.182 ug/L	99
60) Propylbenzene	15.339	91	1589464	5.301 ug/L	99
61) 2-Chlorotoluene	15.436	91	858648	4.943 ug/L	100
62) 4-Chlorotoluene	15.637	91	977101	4.868 ug/L	100
63) 1,3,5-Trimethylbenzene	15.674	105	1129542	5.137 ug/L	99
64) tert-Butylbenzene	16.233	119	954923	5.234 ug/L	100
65) 1,2,4-Trimethylbenzene	16.324	105	1090289	5.007 ug/L	98
66) sec-Butylbenzene	16.628	105	1438738	5.344 ug/L	100
67) 1,3-Dichlorobenzene	16.756	146	537340	4.752 ug/L	99
68) p-Isopropyltoluene	16.908	119	1291954	5.255 ug/L	99
69) 1,4-Dichlorobenzene	16.920	146	540954	4.611 ug/L	100
71) 1,2-Dichlorobenzene	17.571	146	407276	4.573 ug/L	99
72) Butylbenzene	17.644	91	1145662	5.289 ug/L	99
73) 1,2-Dibromo-3-chloropr...	18.982	75	46726	17.366 ug/L	98
74) 1,2,4-Trichlorobenzene	20.490	180	283584	4.600 ug/L	99
75) Hexachlorobutadiene	20.855	225	198055	5.299 ug/L	100
76) Naphthalene	20.910	128	304183	4.293 ug/L	99
77) 1,2,3-Trichlorobenzene	21.354	180	214829	4.530 ug/L	99

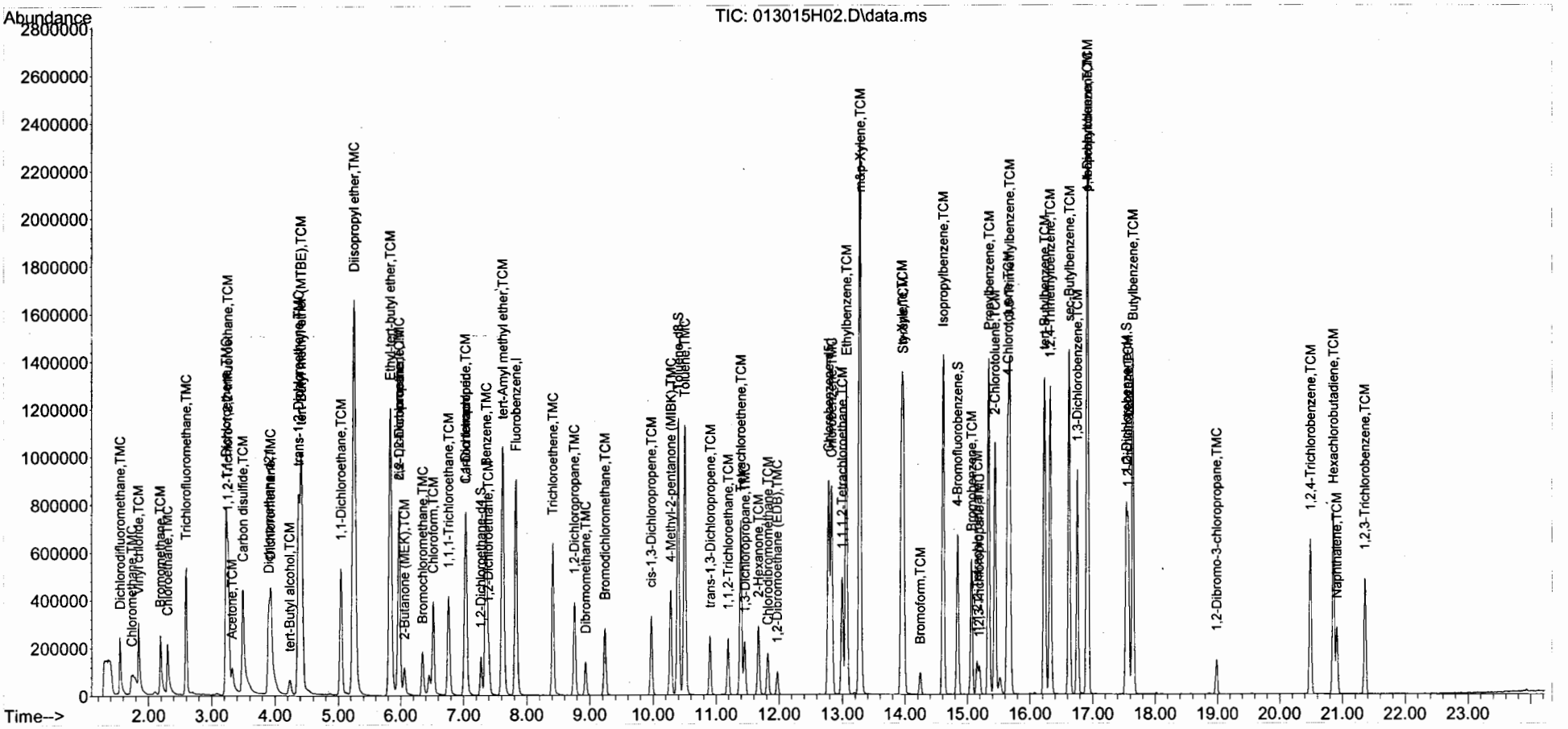
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H02.D
Acq On : 30 Jan 2015 9:02
Instrument: HP5973H
Operator : YNB
Sample : S15A119-CCV1@B15A131-BS1
Misc : CCV,WATER
ALS Vial : 27
Multiplier: 1

Quant Time: Jan 30 09:32:18 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M



LCS REPORT

Instrument Name: HP5973H
Sample Name: S15A119-CCV1@B15A131-BS1
Misc Info: CCV,WATER
Date Acquired: 1/30/2015 9:02
QLast Update: Wed Jan 14 16:54:35 2015
Operator: YNB

#	Name	Ret Time	Concentration	Amount	%R	QC Limit		STATUS
2)	Dichlorodifluoromethane	1.55	5.0	5.0	101%	53.0	153.0	pass
3)	Chloromethane	1.74	5.0	5.0	100%	70.0	124.0	pass
4)	Vinyl chloride	1.84	4.8	5.0	96%	70.0	130.0	pass
5)	Bromomethane	2.19	4.2	5.0	83%	58.0	172.0	pass
6)	Chloroethane	2.30	5.0	5.0	100%	75.0	135.0	pass
7)	Trichlorofluoromethane	2.60	5.0	5.0	100%	74.0	141.0	pass
8)	1,1-Dichloroethene	3.23	5.1	5.0	103%	70.0	130.0	pass
9)	1,1,2-Trichloro-1,2,2-trifluoroethane	3.26	5.5	5.0	109%	73.0	139.0	pass
10)	Acetone	3.32	49.2	40.0	123%	60.0	125.0	pass
11)	Carbon disulfide	3.49	5.1	5.0	102%	72.0	121.0	pass
12)	Dichloromethane	3.94	4.4	5.0	87%	70.0	130.0	pass
13)	tert-Butyl alcohol	4.24	67.4	100.0	67%	42.0	161.0	pass
14)	trans-1,2-Dichloroethene	4.37	5.3	5.0	106%	70.0	130.0	pass
15)	tert-Butyl methyl ether (MTBE)	4.42	17.8	20.0	89%	74.0	127.0	pass
16)	1,1-Dichloroethane	5.04	5.4	5.0	108%	85.0	117.0	pass
17)	Diisopropyl ether	5.25	15.6	20.0	78%	80.0	117.0	FAIL
18)	Ethyl-tert-butyl ether	5.83	18.3	20.0	92%	67.0	133.0	pass
19)	2,2-Dichloropropane	5.97	6.3	5.0	126%	61.0	163.0	pass
20)	cis-1,2-Dichloroethene	5.98	5.4	5.0	107%	70.0	130.0	pass
21)	2-Butanone (MEK)	6.06	35.1	40.0	88%	67.0	123.0	pass
22)	Bromochloromethane	6.35	5.1	5.0	103%	84.0	114.0	pass
23)	Chloroform	6.52	5.3	5.0	107%	70.0	130.0	pass
25)	1,1,1-Trichloroethane	6.76	4.9	5.0	99%	70.0	130.0	pass
26)	Carbon tetrachloride	7.03	5.1	5.0	102%	70.0	130.0	pass
27)	1,1-Dichloropropene	7.04	4.9	5.0	99%	88.0	120.0	pass
29)	Benzene	7.35	4.8	5.0	97%	70.0	130.0	pass
30)	1,2-Dichloroethane	7.40	4.2	5.0	85%	70.0	130.0	pass
31)	tert-Amyl methyl ether	7.62	15.8	20.0	79%	63.0	134.0	pass
32)	Trichloroethene	8.41	4.9	5.0	98%	70.0	130.0	pass
33)	1,2-Dichloropropane	8.76	4.5	5.0	90%	70.0	130.0	pass
34)	Dibromomethane	8.94	4.2	5.0	83%	79.0	118.0	pass
35)	Bromodichloromethane	9.23	4.4	5.0	89%	70.0	130.0	pass
36)	cis-1,3-Dichloropropene	9.97	4.5	5.0	90%	79.0	127.0	pass
38)	4-Methyl-2-pentanone (MIBK)	10.28	32.5	40.0	81%	68.0	132.0	pass
40)	Toluene	10.50	5.0	5.0	100%	70.0	130.0	pass
41)	trans-1,3-Dichloropropene	10.91	4.7	5.0	93%	75.0	135.0	pass
42)	1,1,2-Trichloroethane	11.19	4.4	5.0	88%	70.0	130.0	pass
43)	Tetrachloroethene	11.39	5.1	5.0	103%	70.0	130.0	pass
44)	1,3-Dichloropropane	11.45	4.4	5.0	89%	82.0	116.0	pass
45)	2-Hexanone	11.67	32.1	40.0	80%	64.0	134.0	pass
46)	Chlorodibromomethane	11.82	4.6	5.0	93%	70.0	130.0	pass
47)	1,2-Dibromoethane (EDB)	11.97	4.5	5.0	89%	85.0	114.0	pass
48)	Chlorobenzene	12.83	4.8	5.0	96%	70.0	130.0	pass
49)	1,1,1,2-Tetrachloroethane	13.00	4.7	5.0	94%	86.0	122.0	pass
50)	Ethylbenzene	13.06	5.2	5.0	103%	70.0	130.0	pass
51)	m&p-Xylene	13.28	10.0	10.0	100%	70.0	130.0	pass
52)	o-Xylene	13.95	5.0	5.0	100%	70.0	130.0	pass

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53)	Styrene	13.97	4.8	5.0	95%	70.0	130.0	pass
54)	Bromoform	14.24	4.6	5.0	93%	70.0	130.0	pass
55)	Isopropylbenzene	14.61	5.3	5.0	105%	90.0	118.0	pass
57)	Bromobenzene	15.07	4.7	5.0	93%	90.0	110.0	pass
58)	1,1,2,2-Tetrachloroethane	15.16	4.3	5.0	85%	76.0	122.0	pass
59)	1,2,3-Trichloropropane	15.19	4.2	5.0	84%	77.0	119.0	pass
60)	Propylbenzene	15.34	5.3	5.0	106%	89.0	120.0	pass
61)	2-Chlorotoluene	15.44	4.9	5.0	99%	88.0	114.0	pass
62)	4-Chlorotoluene	15.64	4.9	5.0	97%	90.0	112.0	pass
63)	1,3,5-Trimethylbenzene	15.67	5.1	5.0	103%	90.0	115.0	pass
64)	tert-Butylbenzene	16.23	5.2	5.0	105%	89.0	118.0	pass
65)	1,2,4-Trimethylbenzene	16.32	5.0	5.0	100%	90.0	112.0	pass
66)	sec-Butylbenzene	16.63	5.3	5.0	107%	87.0	122.0	pass
67)	1,3-Dichlorobenzene	16.76	4.8	5.0	95%	88.0	111.0	pass
69)	1,4-Dichlorobenzene	16.92	4.6	5.0	92%	70.0	130.0	pass
70)	1,2-Dichlorobenzene-d4	17.54	4.7	5.0	95%	70.0	130.0	pass
72)	Butylbenzene	17.64	5.3	5.0	106%	86.0	123.0	pass
73)	1,2-Dibromo-3-chloropropane	18.98	17.4	20.0	87%	68.0	134.0	pass
74)	1,2,4-Trichlorobenzene	20.49	4.6	5.0	92%	70.0	130.0	pass
75)	Hexachlorobutadiene	0.00	5.3	5.0	106%	81.0	123.0	pass
76)	Naphthalene	20.91	4.3	5.0	86%	54.0	144.0	pass
77)	1,2,3-Trichlorobenzene	21.35	4.5	5.0	91%	73.0	122.0	pass

QLS REPORT

Instrument Name: HP5973H
Sample Name: S15A119-CRL1
Misc Info: CRL,WATER
Date Acquired: 1/30/2015 9:51
QLast Update: Wed Jan 14 16:54:35 2015
Operator: YNB

#	Name	Ret Time	Concentration	Amount	%R	QC Limit		STATUS
1)	Dichloromethane-d2	3.91	5.00	5.0	100.0%	60.0	140.0	pass
2)	Dichlorodifluoromethane	1.55	0.48	0.5	96.4%	60.0	140.0	pass
3)	Chloromethane	1.73	0.52	0.5	104.9%	60.0	140.0	pass
4)	Vinyl chloride	1.84	0.48	0.5	95.7%	60.0	140.0	pass
5)	Bromomethane	2.18	0.37	0.5	73.7%	60.0	140.0	pass
6)	Chloroethane	2.30	0.50	0.5	99.6%	60.0	140.0	pass
7)	Trichlorofluoromethane	2.60	0.48	0.5	96.3%	60.0	140.0	pass
8)	1,1-Dichloroethene	3.23	0.51	0.5	102.4%	60.0	140.0	pass
9)	1,1,2-Trichloro-1,2,2-trifluoroethane	3.25	0.52	0.5	104.8%	60.0	140.0	pass
10)	Acetone	3.32	6.48	4.0	161.9%	60.0	140.0	FAIL 1
11)	Carbon disulfide	3.49	0.51	0.5	102.5%	60.0	140.0	pass
12)	Dichloromethane	3.94	0.51	0.5	101.4%	60.0	140.0	pass
13)	tert-Butyl alcohol	4.25	16.99	10.0	169.9%	60.0	140.0	FAIL 2
14)	trans-1,2-Dichloroethene	4.37	0.49	0.5	98.9%	60.0	140.0	pass
15)	tert-Butyl methyl ether (MTBE)	4.42	1.71	2.0	85.4%	60.0	140.0	pass
16)	1,1-Dichloroethane	5.04	0.51	0.5	102.8%	60.0	140.0	pass
17)	Diisopropyl ether	5.25	1.34	2.0	67.1%	60.0	140.0	pass
18)	Ethyl-tert-butyl ether	5.83	1.64	2.0	82.1%	60.0	140.0	pass
19)	2,2-Dichloropropane	5.97	0.50	0.5	100.6%	60.0	140.0	pass
20)	cis-1,2-Dichloroethene	5.98	0.46	0.5	91.7%	60.0	140.0	pass
21)	2-Butanone (MEK)	6.06	3.70	4.0	92.4%	60.0	140.0	pass
22)	Bromochloromethane	6.35	0.45	0.5	90.3%	60.0	140.0	pass
23)	Chloroform	6.53	0.48	0.5	96.2%	60.0	140.0	pass
24)	Fluorobenzene	7.82	5.00	5.0	100.0%	60.0	140.0	pass
25)	1,1,1-Trichloroethane	6.76	0.48	0.5	95.5%	60.0	140.0	pass
26)	Carbon tetrachloride	7.02	0.47	0.5	94.0%	60.0	140.0	pass
27)	1,1-Dichloropropene	7.04	0.45	0.5	90.3%	60.0	140.0	pass
28)	1,2-Dichloroethane-d4	7.28	4.64	5.0	92.7%	60.0	140.0	pass
29)	Benzene	7.35	0.47	0.5	93.7%	60.0	140.0	pass
30)	1,2-Dichloroethane	7.40	0.46	0.5	92.0%	60.0	140.0	pass
31)	tert-Amyl methyl ether	7.62	1.46	2.0	72.8%	60.0	140.0	pass
32)	Trichloroethene	8.41	0.47	0.5	94.5%	60.0	140.0	pass
33)	1,2-Dichloropropane	8.76	0.45	0.5	90.2%	60.0	140.0	pass
34)	Dibromomethane	8.94	0.38	0.5	76.4%	60.0	140.0	pass
35)	Bromodichloromethane	9.24	0.43	0.5	86.7%	60.0	140.0	pass
36)	cis-1,3-Dichloropropene	9.97	0.39	0.5	78.6%	60.0	140.0	pass
37)	Chlorobenzene-d5	12.78	5.00	5.0	100.0%	60.0	140.0	pass
38)	4-Methyl-2-pentanone (MIBK)	10.28	2.95	4.0	73.9%	60.0	140.0	pass
39)	Toluene-d8	10.39	5.23	5.0	104.6%	60.0	140.0	pass
40)	Toluene	10.50	0.49	0.5	98.9%	60.0	140.0	pass
41)	trans-1,3-Dichloropropene	10.90	0.40	0.5	80.9%	60.0	140.0	pass
42)	1,1,2-Trichloroethane	11.20	0.45	0.5	89.2%	60.0	140.0	pass
43)	Tetrachloroethene	11.40	0.48	0.5	96.8%	60.0	140.0	pass
44)	1,3-Dichloropropane	11.46	0.41	0.5	82.7%	60.0	140.0	pass
45)	2-Hexanone	11.67	2.77	4.0	69.2%	60.0	140.0	pass
46)	Chlorodibromomethane	11.82	0.40	0.5	80.5%	60.0	140.0	pass

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47)	1,2-Dibromoethane (EDB)	11.98	0.41	0.5	83.0%	60.0	140.0	pass
48)	Chlorobenzene	12.83	0.45	0.5	90.2%	60.0	140.0	pass
49)	1,1,1,2-Tetrachloroethane	13.00	0.44	0.5	88.1%	60.0	140.0	pass
50)	Ethylbenzene	13.06	0.46	0.5	92.5%	60.0	140.0	pass
51)	m&p-Xylene	13.28	0.85	1.0	84.8%	60.0	140.0	pass
52)	o-Xylene	13.95	0.42	0.5	84.4%	60.0	140.0	pass
53)	Styrene	13.98	0.39	0.5	77.9%	60.0	140.0	pass
54)	Bromoform	14.24	0.39	0.5	77.8%	60.0	140.0	pass
55)	Isopropylbenzene	14.61	0.43	0.5	85.4%	60.0	140.0	pass
56)	4-Bromofluorobenzene	14.84	4.72	5.0	94.3%	60.0	140.0	pass
57)	Bromobenzene	15.06	0.42	0.5	83.6%	60.0	140.0	pass
58)	1,1,2,2-Tetrachloroethane	15.15	0.42	0.5	84.2%	60.0	140.0	pass
59)	1,2,3-Trichloropropane	15.19	0.44	0.5	87.7%	60.0	140.0	pass
60)	Propylbenzene	15.34	0.45	0.5	90.7%	60.0	140.0	pass
61)	2-Chlorotoluene	15.44	0.44	0.5	88.9%	60.0	140.0	pass
62)	4-Chlorotoluene	15.64	0.44	0.5	88.6%	60.0	140.0	pass
63)	1,3,5-Trimethylbenzene	15.67	0.43	0.5	86.6%	60.0	140.0	pass
64)	tert-Butylbenzene	16.23	0.43	0.5	86.1%	60.0	140.0	pass
65)	1,2,4-Trimethylbenzene	16.32	0.43	0.5	85.1%	60.0	140.0	pass
66)	sec-Butylbenzene	16.63	0.44	0.5	87.5%	60.0	140.0	pass
67)	1,3-Dichlorobenzene	16.75	0.44	0.5	88.7%	60.0	140.0	pass
68)	p-Isopropyltoluene	16.91	0.42	0.5	83.1%	60.0	140.0	pass
69)	1,4-Dichlorobenzene	16.92	0.40	0.5	79.3%	60.0	140.0	pass
70)	1,2-Dichlorobenzene-d4	17.54	4.54	5.0	90.8%	60.0	140.0	pass
71)	1,2-Dichlorobenzene	17.57	0.46	0.5	91.0%	60.0	140.0	pass
72)	Butylbenzene	17.64	0.46	0.5	91.4%	60.0	140.0	pass
73)	1,2-Dibromo-3-chloropropane	18.99	1.71	2.0	85.5%	60.0	140.0	pass
74)	1,2,4-Trichlorobenzene	20.49	0.44	0.5	88.5%	60.0	140.0	pass
75)	Hexachlorobutadiene	0.00	0.50	0.5	99.6%	60.0	140.0	pass
76)	Naphthalene	20.91	0.42	0.5	83.2%	60.0	140.0	pass
77)	1,2,3-Trichlorobenzene	21.36	0.44	0.5	88.8%	60.0	140.0	pass

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H03.D
Acq On : 30 Jan 2015 9:51
Instrument: HP5973H
Operator : YNB
Sample : S15A119-CRL1
Misc : CRL,WATER
ALS Vial : 28
Multiplier: 1

Quant Time: Jan 30 10:23:09 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.905	53	109417	5.000 ug/L	0.01
24) Fluorobenzene	7.821	96	1085196	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.784	117	680146	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.280	65	138295	4.635 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 92.80%	
39) Toluene-d8	10.394	98	1054843	5.231 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 104.60%	
56) 4-Bromofluorobenzene	14.839	95	276598	4.715 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 94.40%	
70) 1,2-Dichlorobenzene-d4	17.539	152	255060	4.542 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 90.80%	

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.552	85	26236	0.482 ug/L	100
3) Chloromethane	1.728	50	36300	0.525 ug/L #	87
4) Vinyl chloride	1.844	62	34569	0.479 ug/L	99
5) Bromomethane	2.184	94	19497	0.369 ug/L	91
6) Chloroethane	2.300	64	25845	0.498 ug/L	96
7) Trichlorofluoromethane	2.598	101	48038	0.481 ug/L	97
8) 1,1-Dichloroethene	3.230	96	35181	0.512 ug/L	97
9) 1,1,2-Trichloro-1,2,2-...	3.254	101	33858	0.524 ug/L	96
10) Acetone	3.321	43	27233	6.476 ug/L	92
11) Carbon disulfide	3.492	76	116618	0.512 ug/L	98
12) Dichloromethane	3.942	84	38202	0.507 ug/L #	27
13) tert-Butyl alcohol	4.246	59	26907	16.994 ug/L #	70
14) trans-1,2-Dichloroethene	4.373	96	42678	0.495 ug/L	98
15) tert-Butyl methyl ethe...	4.422	73	158740	1.708 ug/L	97
16) 1,1-Dichloroethane	5.042	63	65256	0.514 ug/L	99
17) Diisopropyl ether	5.249	45	206748	1.342 ug/L	90
18) Ethyl-tert-butyl ether	5.833	59	139347	1.643 ug/L	96
19) 2,2-Dichloropropane	5.973	77	28850	0.503 ug/L	99
20) cis-1,2-Dichloroethene	5.979	96	22745	0.459 ug/L	99
21) 2-Butanone (MEK)	6.058	43	17944	3.698 ug/L #	58
22) Bromochloromethane	6.350	128	6644	0.452 ug/L	100
23) Chloroform	6.526	83	36079	0.481 ug/L	99
25) 1,1,1-Trichloroethane	6.757	97	33418	0.477 ug/L	98
26) Carbon tetrachloride	7.019	117	27604	0.470 ug/L	97
27) 1,1-Dichloropropene	7.037	75	27292	0.451 ug/L	97
29) Benzene	7.353	78	96618	0.469 ug/L	100
30) 1,2-Dichloroethane	7.396	62	16300	0.460 ug/L	99
31) tert-Amyl methyl ether	7.621	73	101779	1.456 ug/L	93
32) Trichloroethene	8.411	95	24040	0.473 ug/L	96
33) 1,2-Dichloropropane	8.758	63	18220	0.451 ug/L	96
34) Dibromomethane	8.940	93	5382	0.382 ug/L	89
35) Bromodichloromethane	9.238	83	20679	0.434 ug/L	98
36) cis-1,3-Dichloropropene	9.974	75	19626	0.393 ug/L	97

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H03.D
Acq On : 30 Jan 2015 9:51
Instrument: HP5973H
Operator : YNB
Sample : S15A119-CRL1
Misc : CRL,WATER
ALS Vial : 28
Multiplier: 1

Quant Time: Jan 30 10:23:09 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
38) 4-Methyl-2-pentanone (...	10.278	43	32046	2.954 ug/L	97
40) Toluene	10.497	92	65617	0.495 ug/L	98
41) trans-1,3-Dichloropropene	10.905	75	13763	0.405 ug/L	98
42) 1,1,2-Trichloroethane	11.197	83	7535	0.446 ug/L	94
43) Tetrachloroethene	11.397	166	25699	0.484 ug/L	98
44) 1,3-Dichloropropane	11.458	76	15434	0.414 ug/L	97
45) 2-Hexanone	11.671	43	19246	2.768 ug/L	99
46) Chlorodibromomethane	11.817	129	10207	0.403 ug/L	94
47) 1,2-Dibromoethane (EDB)	11.975	107	7368	0.415 ug/L #	99
48) Chlorobenzene	12.832	112	59750	0.451 ug/L	92
49) 1,1,1,2-Tetrachloroethane	12.997	131	16505	0.441 ug/L	96
50) Ethylbenzene	13.064	91	113764	0.463 ug/L	96
51) m&p-Xylene	13.276	106	89139	0.848 ug/L	96
52) o-Xylene	13.945	106	39597	0.422 ug/L	99
53) Styrene	13.976	104	57078	0.390 ug/L	95
54) Bromoform	14.243	173	4592	0.389 ug/L #	90
55) Isopropylbenzene	14.614	105	103894	0.427 ug/L	99
57) Bromobenzene	15.064	156	19661	0.418 ug/L	96
58) 1,1,2,2-Tetrachloroethane	15.149	83	8311	0.421 ug/L	95
59) 1,2,3-Trichloropropane	15.192	75	6218	0.438 ug/L	98
60) Propylbenzene	15.338	91	131610	0.454 ug/L	100
61) 2-Chlorotoluene	15.441	91	74733	0.444 ug/L	99
62) 4-Chlorotoluene	15.636	91	86065	0.443 ug/L	98
63) 1,3,5-Trimethylbenzene	15.672	105	92158	0.433 ug/L	98
64) tert-Butylbenzene	16.232	119	76019	0.430 ug/L	97
65) 1,2,4-Trimethylbenzene	16.323	105	89707	0.426 ug/L	100
66) sec-Butylbenzene	16.627	105	114072	0.438 ug/L	99
67) 1,3-Dichlorobenzene	16.755	146	48525	0.443 ug/L	96
68) p-Isopropyltoluene	16.907	119	98876	0.416 ug/L	99
69) 1,4-Dichlorobenzene	16.919	146	45033	0.397 ug/L	99
71) 1,2-Dichlorobenzene	17.570	146	39234	0.455 ug/L	97
72) Butylbenzene	17.643	91	95766	0.457 ug/L	99
73) 1,2-Dibromo-3-chloropr...	18.987	75	4453	1.710 ug/L	95
74) 1,2,4-Trichlorobenzene	20.489	180	26412	0.443 ug/L	97
75) Hexachlorobutadiene	20.860	225	18022	0.498 ug/L	99
76) Naphthalene	20.909	128	28532	0.416 ug/L	97
77) 1,2,3-Trichlorobenzene	21.359	180	20391	0.444 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

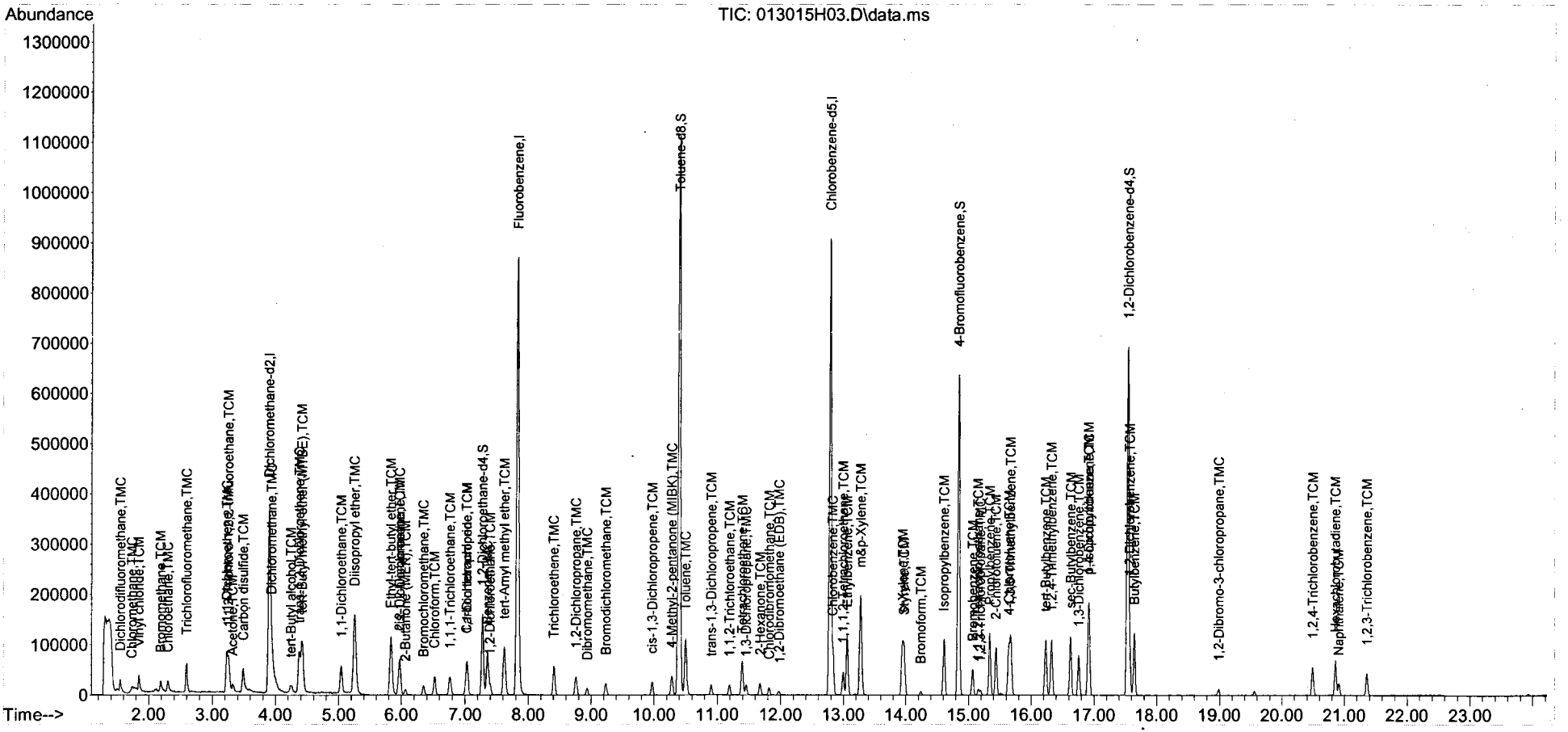
00343

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H03.D
Acq On : 30 Jan 2015 9:51
Instrument: HP5973H
Operator : YNB
Sample : S15A119-CRL1
Misc : CRL,WATER
ALS Vial : 28
Multiplier: 1

Quant Time: Jan 30 10:23:09 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H04.D
Acq On : 30 Jan 2015 10:27
Instrument: HP5973H
Operator : YNB
Sample : B15A131-BLK1
Misc : BLANK,WATER
ALS Vial : 29
Multiplier: 1

Quant Time: Jan 30 11:24:45 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Dichloromethane-d2	3.899	53	104875	5.000	ug/L	0.00
24) Fluorobenzene	7.828	96	1034806	5.000	ug/L	0.00
37) Chlorobenzene-d5	12.784	117	651047	5.000	ug/L	0.00

System Monitoring Compounds

28) 1,2-Dichloroethane-d4	7.281	65	137385	4.829	ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery = 96.60%			
39) Toluene-d8	10.394	98	1003951	5.201	ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery = 104.00%			
56) 4-Bromofluorobenzene	14.840	95	254350	4.530	ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery = 90.60%			
70) 1,2-Dichlorobenzene-d4	17.540	152	237243	4.414	ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery = 88.20%			

Target Compounds Qvalue

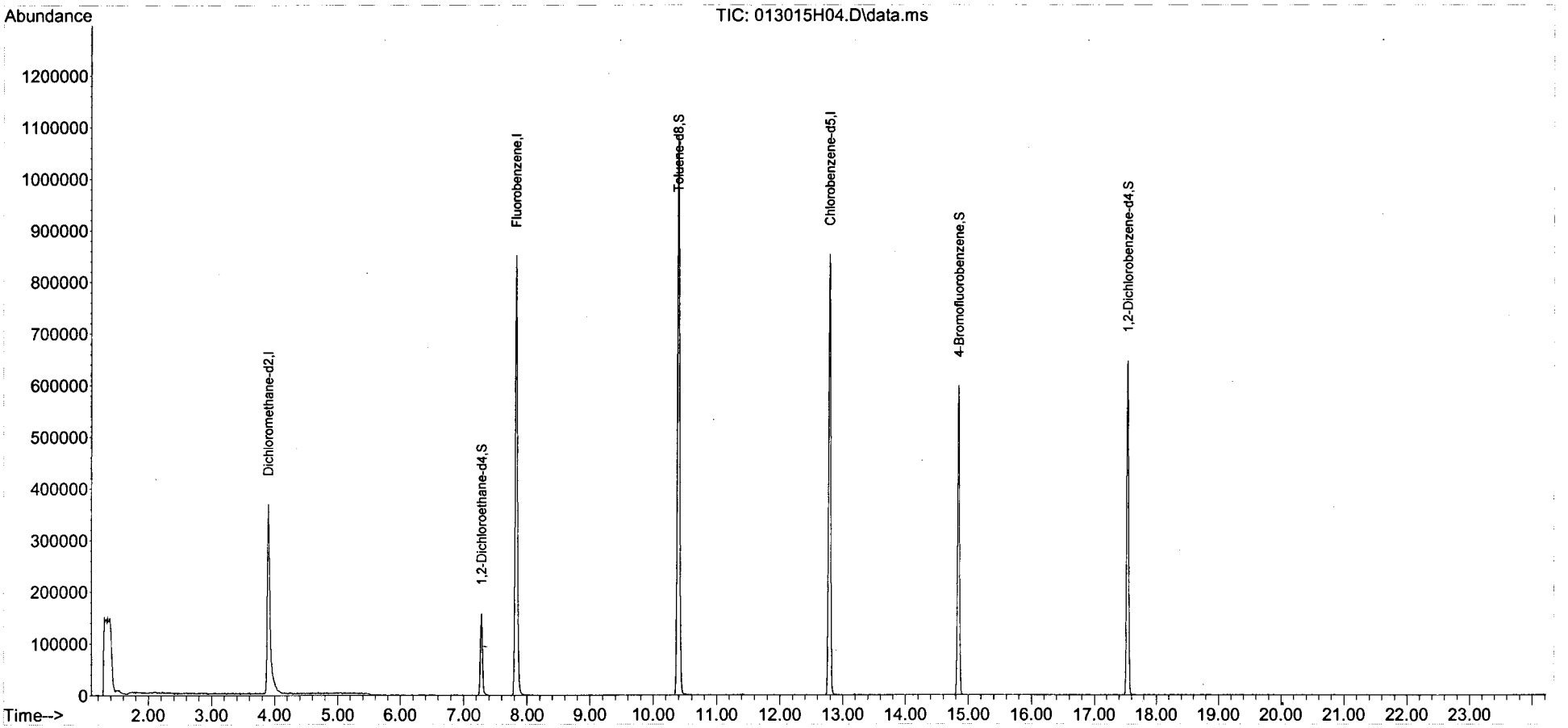
(#) = qualifier out of range (m) = manual integration (+) = signals summed

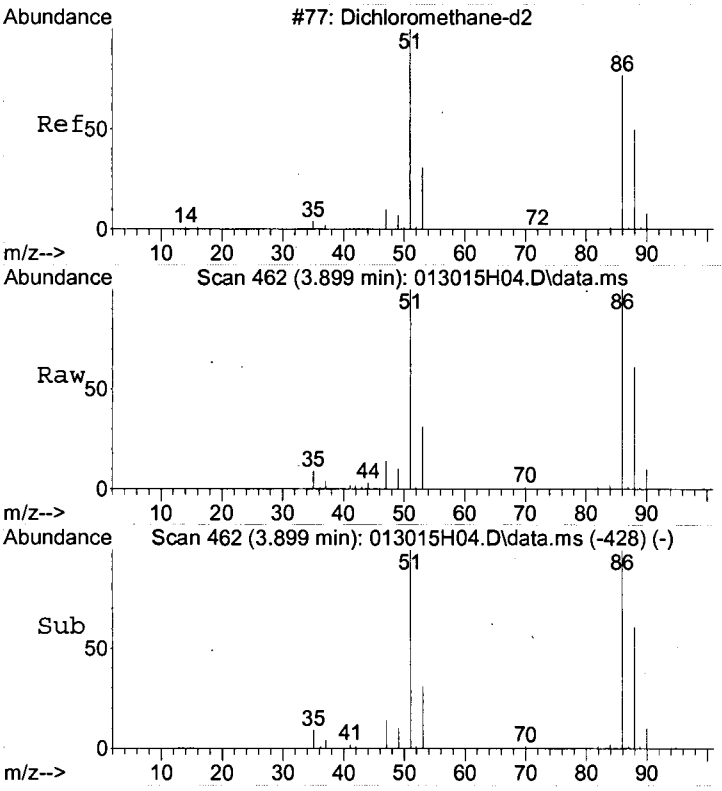
Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H04.D
Acq On : 30 Jan 2015 10:27
Instrument: HP5973H
Operator : YNB
Sample : B15A131-BLK1
Misc : BLANK,WATER
ALS Vial : 29
Multiplier: 1

Quant Time: Jan 30 11:24:45 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

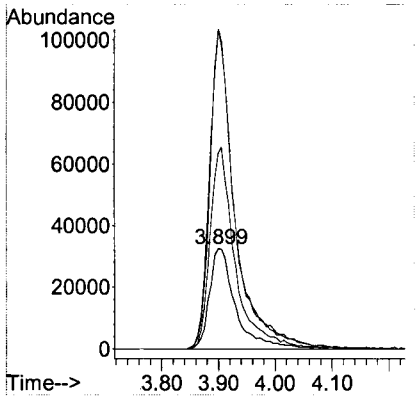


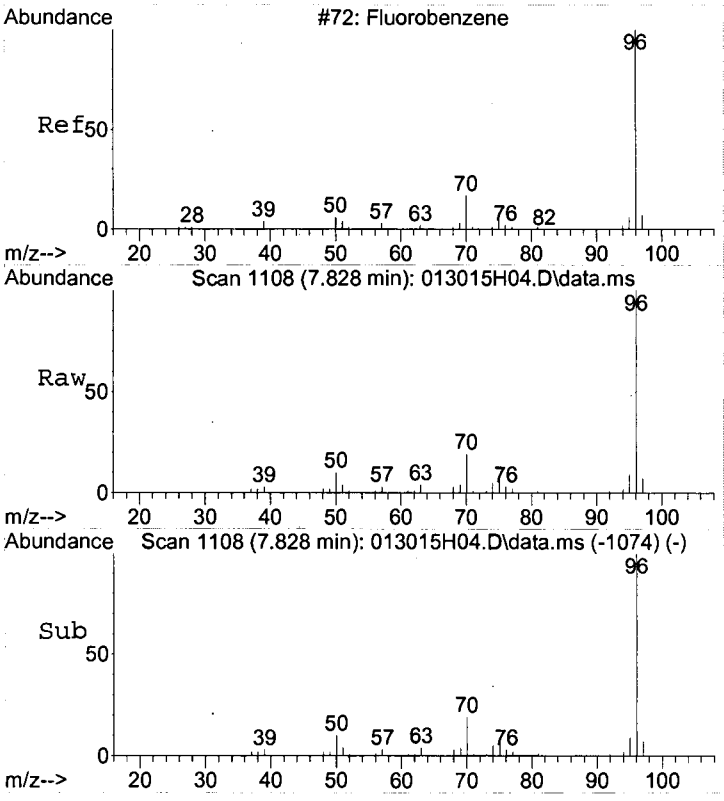


#1
Dichloromethane-d2
Concen: 5.00 ug/L
RT: 3.899 min Scan# 462
Delta R.T. 0.007 min
Lab File: 013015H04.D
Acq: 30 Jan 2015 10:27

Tgt Ion: 53 Resp: 104875

Ion	Ratio	Lower	Upper
53	100		
51	307.7	381.1	421.1#
86	302.9	490.1	530.1#
88	193.0	211.2	251.2#

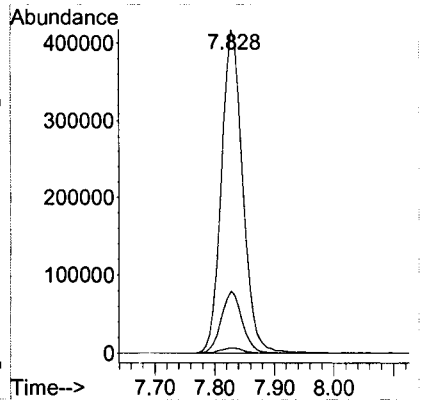


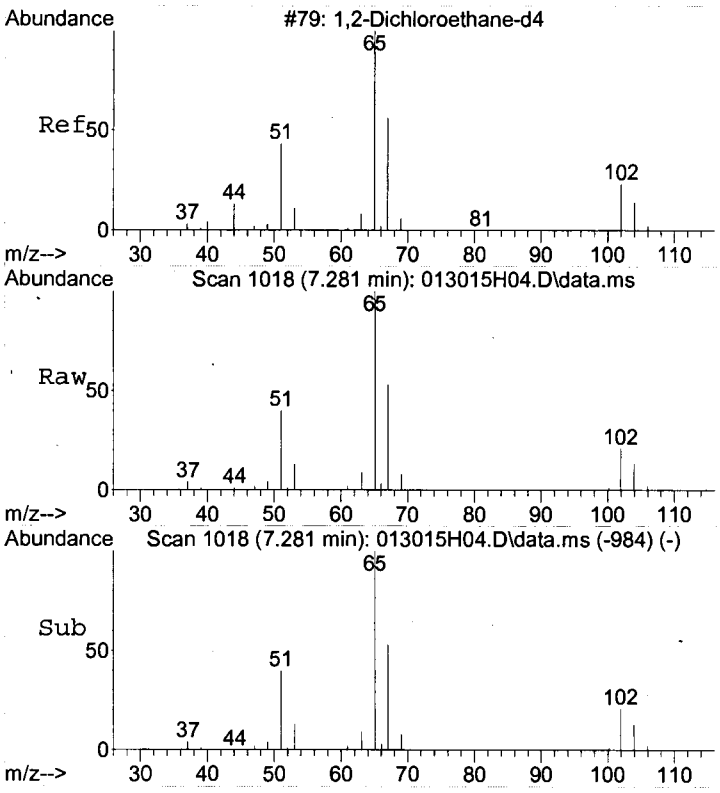


#24
Fluorobenzene
Concen: 5.00 ug/L
RT: 7.828 min Scan# 1108
Delta R.T. 0.007 min
Lab File: 013015H04.D
Acq: 30 Jan 2015 10:27

Tgt Ion: 96 Resp: 1034806

Ion	Ratio	Lower	Upper
96	100		
70	18.7	0.0	38.7
77	1.6	0.0	21.6

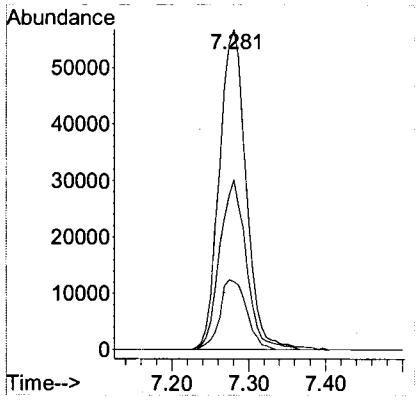


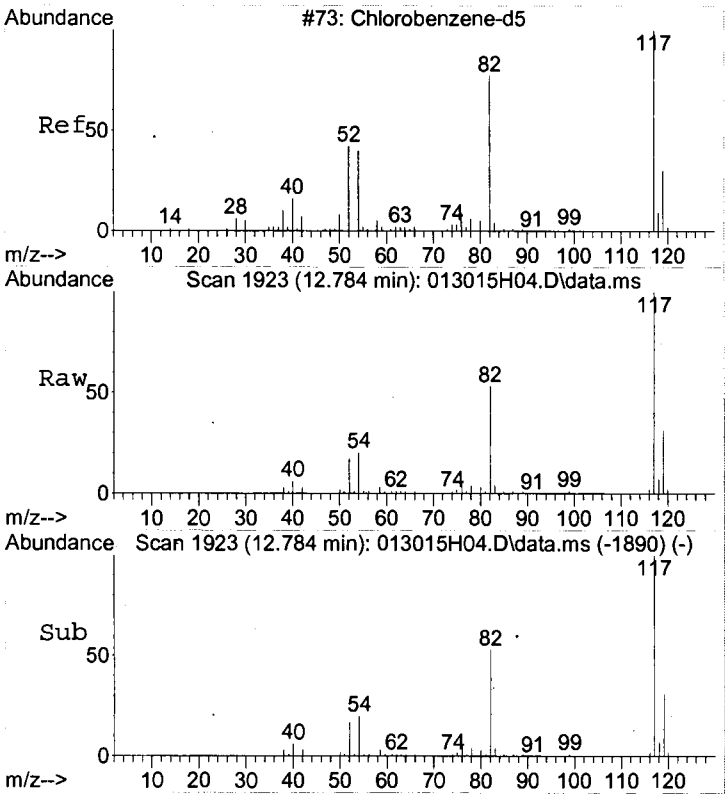


#28
1,2-Dichloroethane-d4
Concen: 4.83 ug/L
RT: 7.281 min Scan# 1018
Delta R.T. 0.007 min
Lab File: 013015H04.D
Acq: 30 Jan 2015 10:27

Tgt Ion: 65 Resp: 137385

Ion	Ratio	Lower	Upper
65	100		
67	52.7	32.3	72.3
102	21.9	1.3	41.3

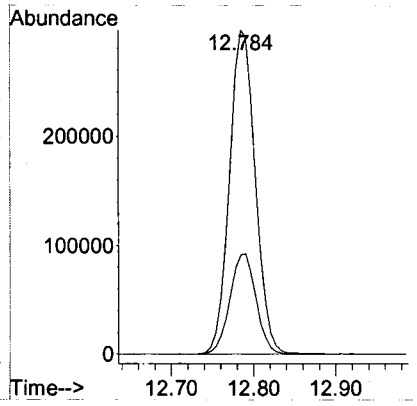


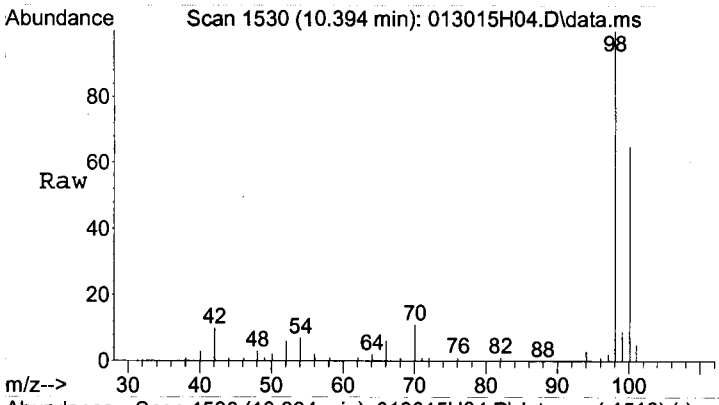


#37
Chlorobenzene-d5
Concen: 5.00 ug/L
RT: 12.784 min Scan# 1923
Delta R.T. 0.001 min
Lab File: 013015H04.D
Acq: 30 Jan 2015 10:27

Tgt Ion:117 Resp: 651047

Ion	Ratio	Lower	Upper
117	100		
119	31.5	11.7	51.7

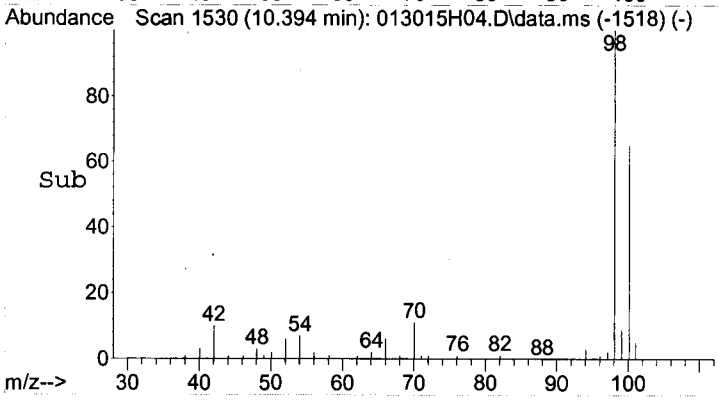


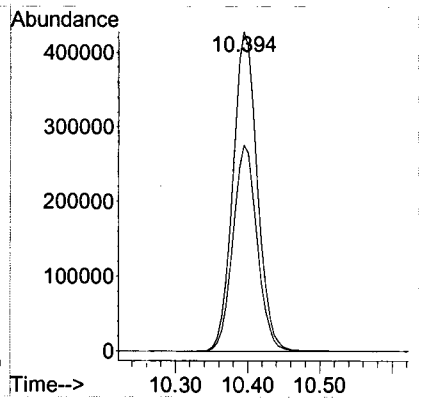


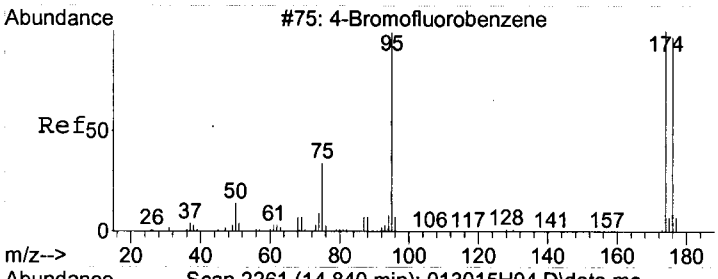
#39
Toluene-d8
Concen: 5.20 ug/L
RT: 10.394 min Scan# 1530
Delta R.T. 0.001 min
Lab File: 013015H04.D
Acq: 30 Jan 2015 10:27

Tgt Ion: 98 Resp: 1003951

Ion	Ratio	Lower	Upper
98	100		
100	64.1	45.3	85.3



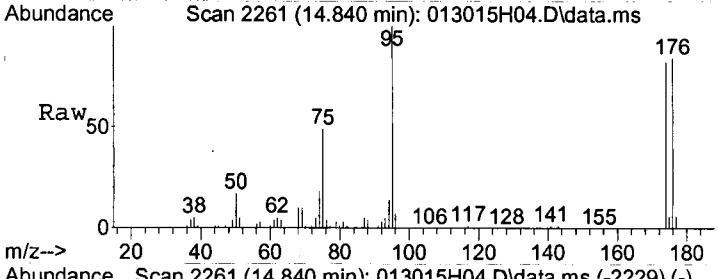


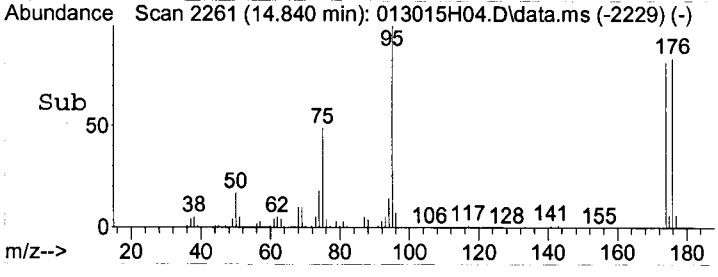


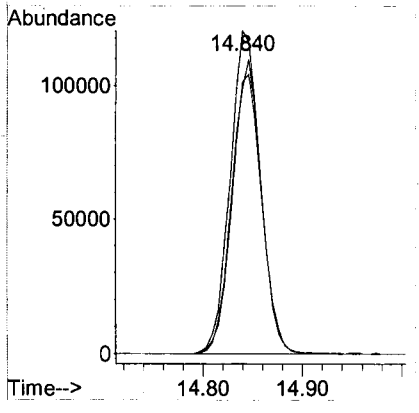
#56
4-Bromofluorobenzene
Concen: 4.53 ug/L
RT: 14.840 min Scan# 2261
Delta R.T. -0.005 min
Lab File: 013015H04.D
Acq: 30 Jan 2015 10:27

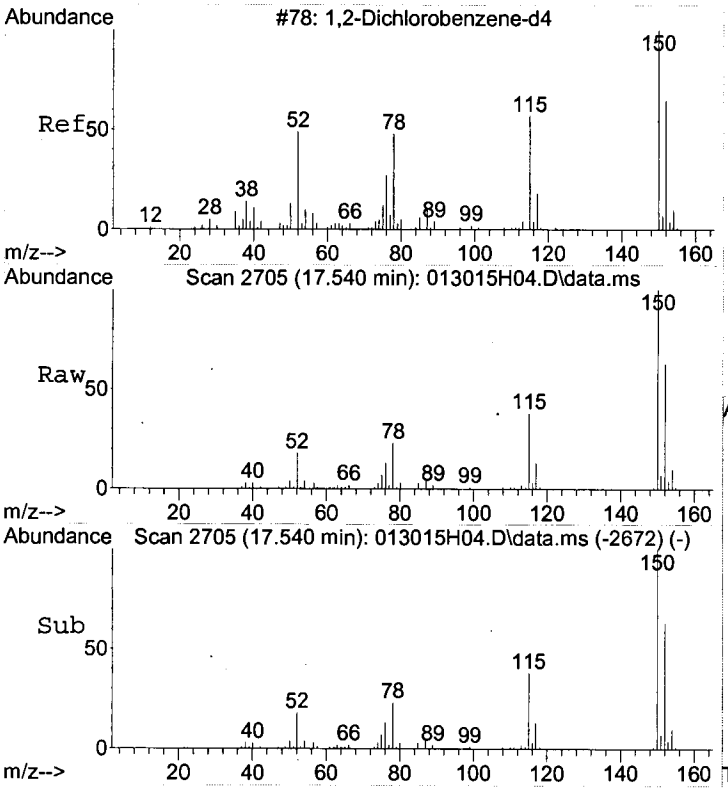
Tgt Ion: 95 Resp: 254350

Ion	Ratio	Lower	Upper
95	100		
174	88.5	68.9	108.9
176	85.7	66.0	106.0





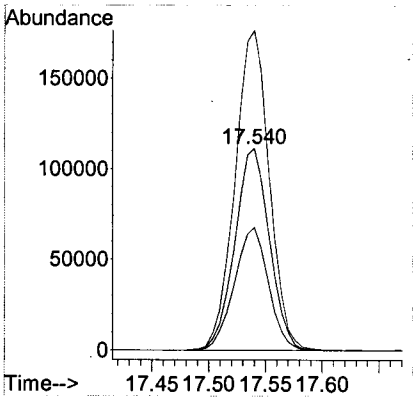




#70
1,2-Dichlorobenzene-d4
Concen: 4.41 ug/L
RT: 17.540 min Scan# 2705
Delta R.T. 0.001 min
Lab File: 013015H04.D
Acq: 30 Jan 2015 10:27

Tgt Ion:152 Resp: 237243

Ion	Ratio	Lower	Upper
152	100		
115	59.9	39.3	79.3
150	157.3	152.8	192.8



LSC Area Percent Report

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H04.D
Acq On : 30 Jan 2015 10:27
Operator : YNB
Sample : B15A131-BLK1
Misc : BLANK,WATER
ALS Vial : 29 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 50 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M
Title : Volatile Organic Analysis - 524.2 Method

Signal : TIC: 013015H04.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.899	453	462	487	rBV	366478	1107471	43.99%	10.449%
2	7.281	1008	1018	1029	rBV	157714	376306	14.95%	3.550%
3	7.828	1098	1108	1126	rBV	852168	2082370	82.71%	19.647%
4	10.394	1520	1530	1545	rBV	1081542	2517771	100.00%	23.755%
5	12.784	1913	1923	1937	rBV	854052	1873544	74.41%	17.677%
6	14.846	2251	2262	2275	rBV	598919	1262509	50.14%	11.912%
7	17.540	2695	2705	2716	rBV	646850	1378851	54.76%	13.009%

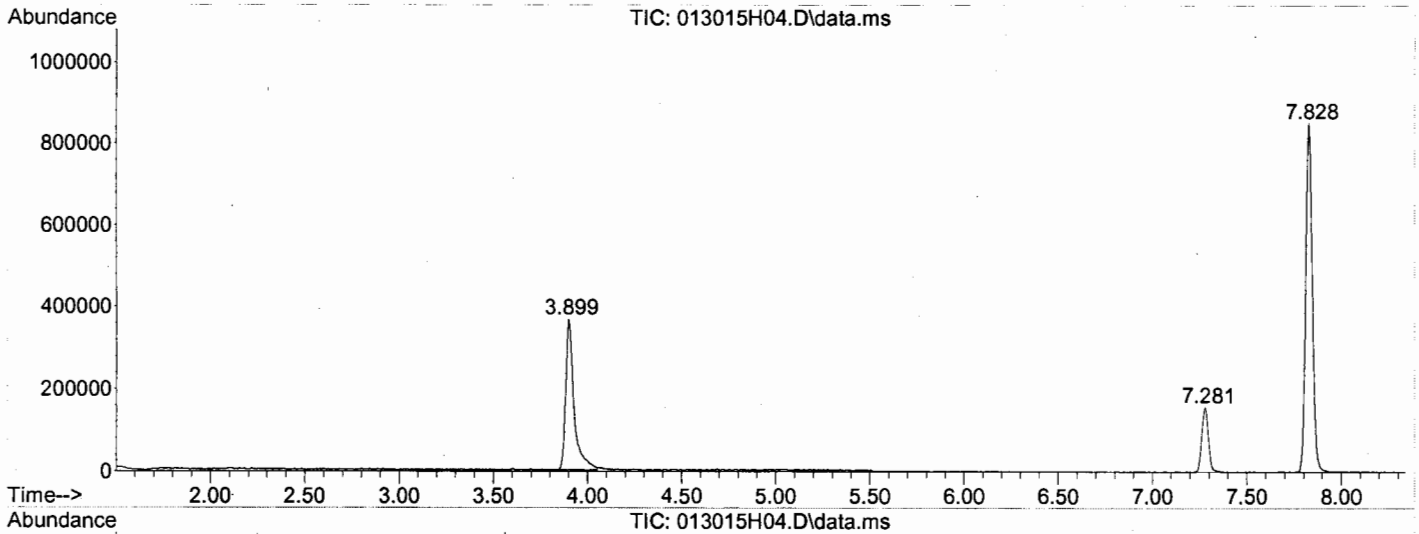
Sum of corrected areas: 10598822

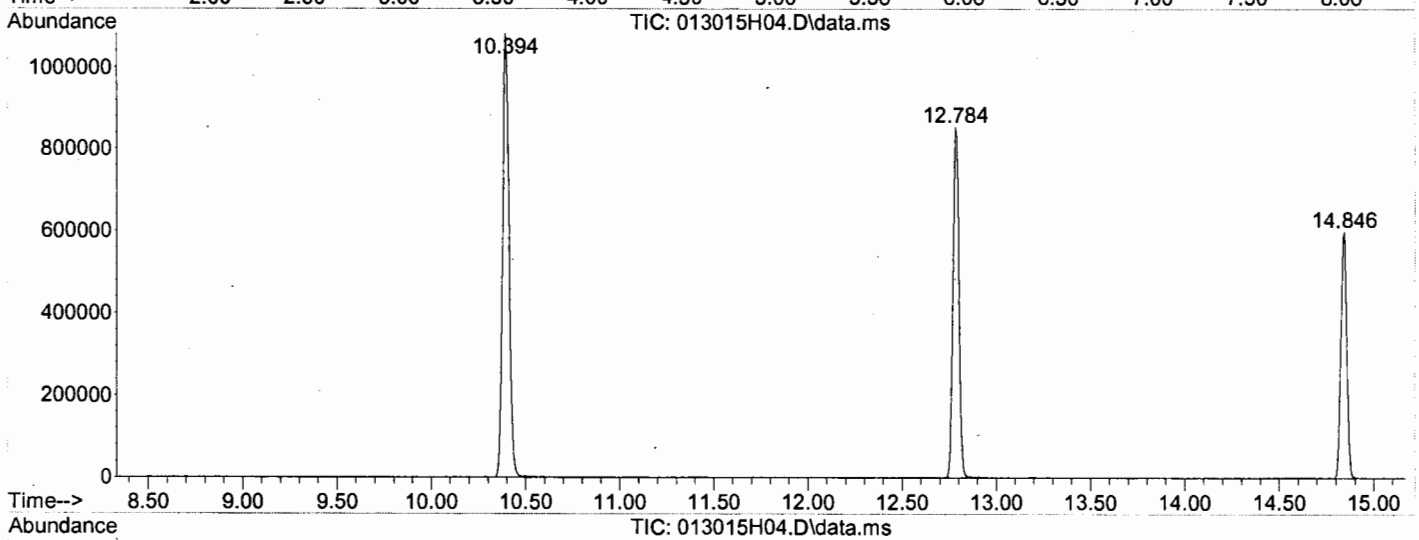
LSC Report - Integrated Chromatogram

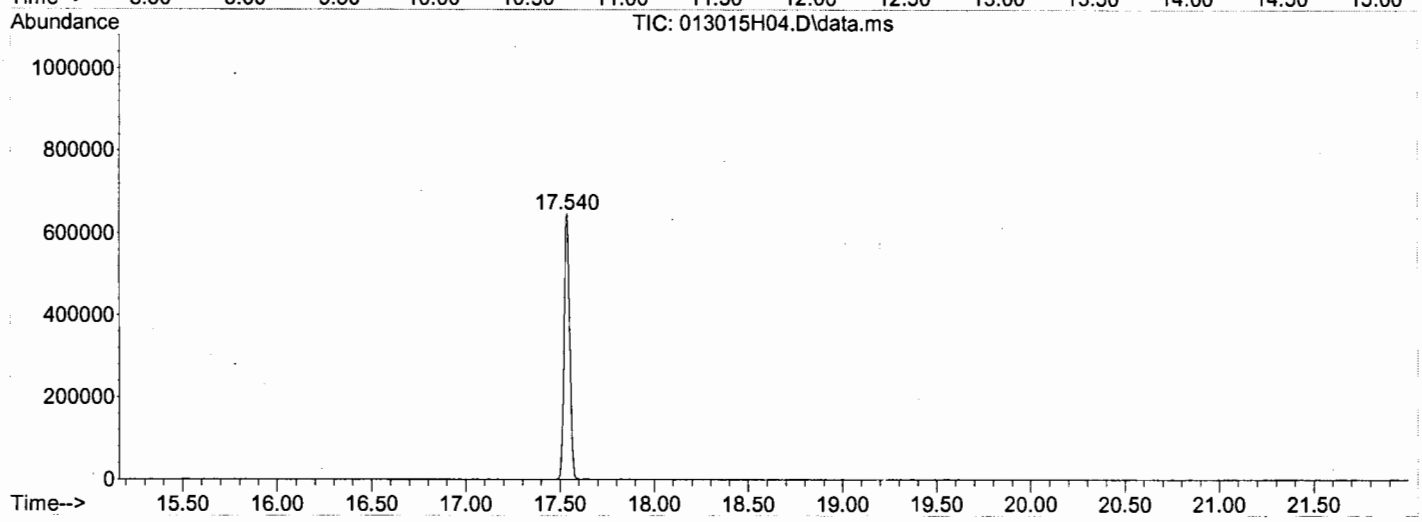
Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H04.D
Acq On : 30 Jan 2015 10:27
Operator : YNB
Sample : B15A131-BLK1
Misc : BLANK,WATER
ALS Vial : 29 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M
Quant Title : Volatile Organic Analysis - 524.2 Method

TIC Library : C:\DATABASE\NIST98.L
TIC Integration Parameters: LSCINT.P







Tentatively Identified Compound (LSC) summary

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\\
Data File : 013015H04.D
Acq On : 30 Jan 2015 10:277
Operator : YNBB
Sample : B15A131-BLK11
Misc : BLANK,WATERR
ALS Vial : 29 Sample Multiplier: 11

Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.MM
Quant Title : Volatile Organic Analysis - 524.2 Methodd

TIC Library : C:\DATABASE\NIST98.LL
TIC Integration Parameters: LSCINT.PP

TIC Top Hit name	RT	EstConc	Units	Response	--Internal Standard--- #	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H05.D
Acq On : 30 Jan 2015 15:52
Instrument: HP5973H
Operator : YNB
Sample : 1501036-01
Misc : MW-4A,WATER
ALS Vial : 30
Multiplier: 1

Quant Time: Jan 30 16:32:05 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.900	53	100936	5.000 ug/L	0.00
24) Fluorobenzene	7.829	96	1002911	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.785	117	620625	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.275	65	123083	4.464 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 89.20%	
39) Toluene-d8	10.389	98	970533	5.274 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 105.40%	
56) 4-Bromofluorobenzene	14.840	95	240539	4.494 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 89.80%	
70) 1,2-Dichlorobenzene-d4	17.534	152	215761	4.211 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 84.20%	
Target Compounds					Qvalue
10) Acetone	3.334	43	23663	6.099 ug/L	95
23) Chloroform	6.515	83	305047	4.409 ug/L	99
43) Tetrachloroethene	11.398	166	6697895	138.202 ug/L OC	96

see 10X

(#) = qualifier out of range (m) = manual integration (+) = signals summed

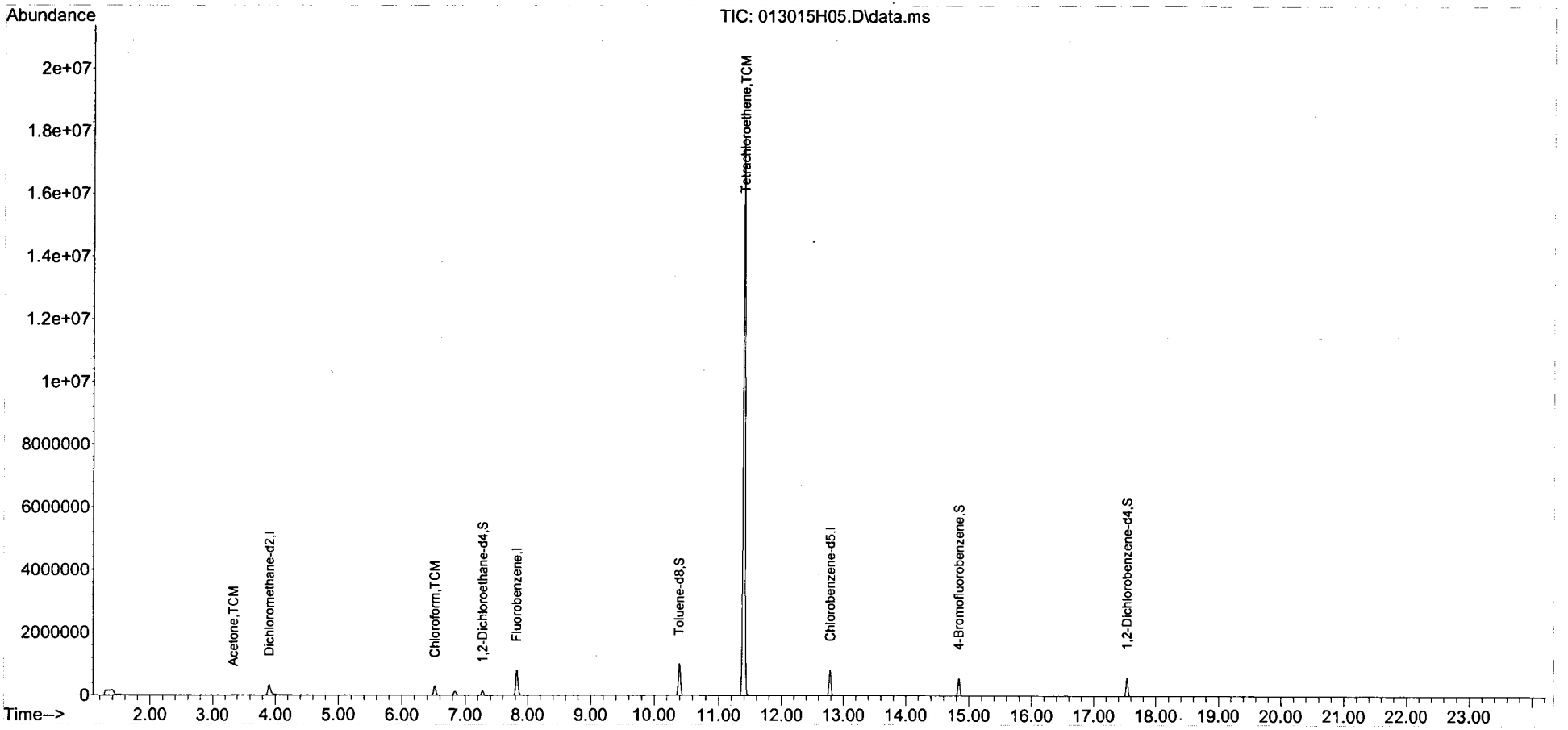
YNB
02.02.15

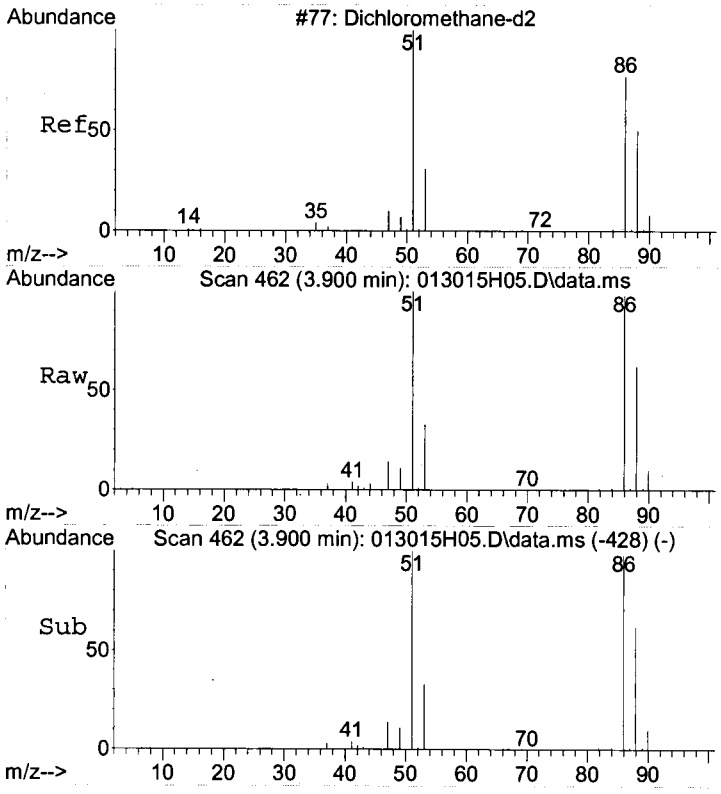
Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H05.D
Acq On : 30 Jan 2015 15:52
Instrument: HP5973H
Operator : YNB
Sample : 1501036-01
Misc : MW-4A,WATER
ALS Vial : 30
Multiplier: 1

Quant Time: Jan 30 16:32:05 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

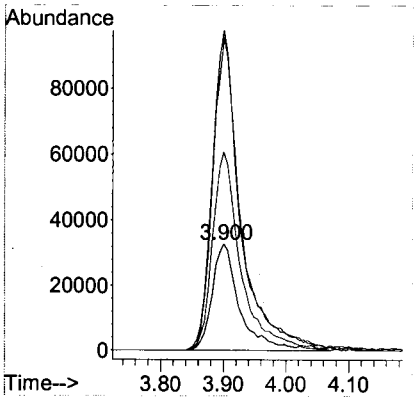


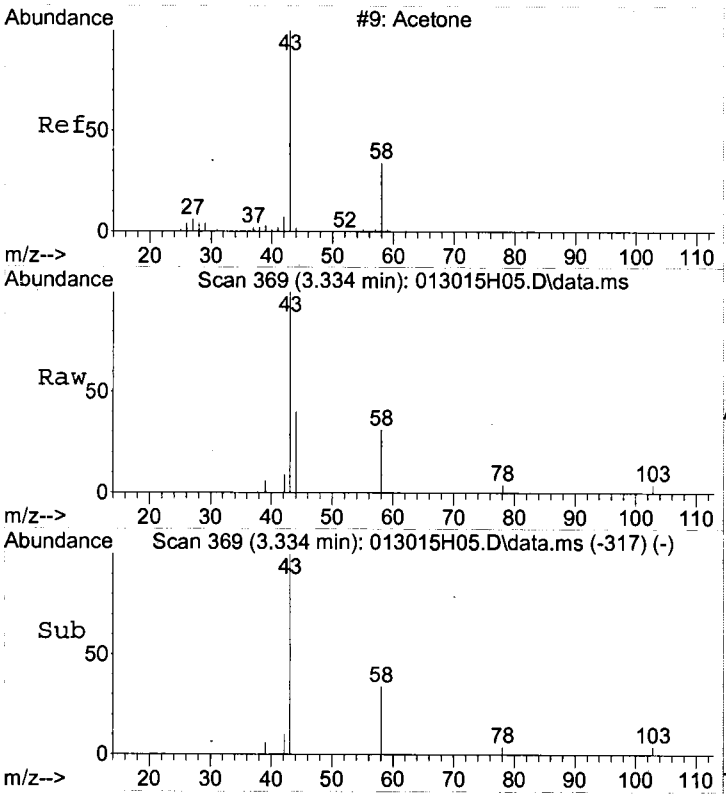


#1
Dichloromethane-d2
Concen: 5.00 ug/L
RT: 3.900 min Scan# 462
Delta R.T. 0.008 min
Lab File: 013015H05.D
Acq: 30 Jan 2015 15:52

Tgt Ion: 53 Resp: 100936

Ion	Ratio	Lower	Upper
53	100		
51	306.5	381.1	421.1#
86	303.8	490.1	530.1#
88	190.9	211.2	251.2#

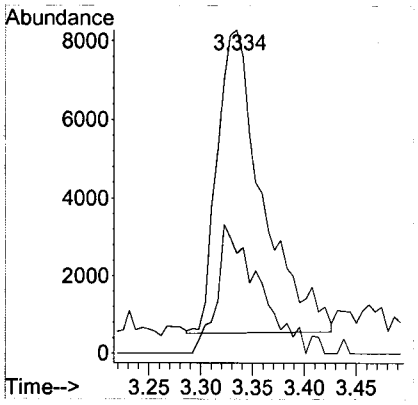


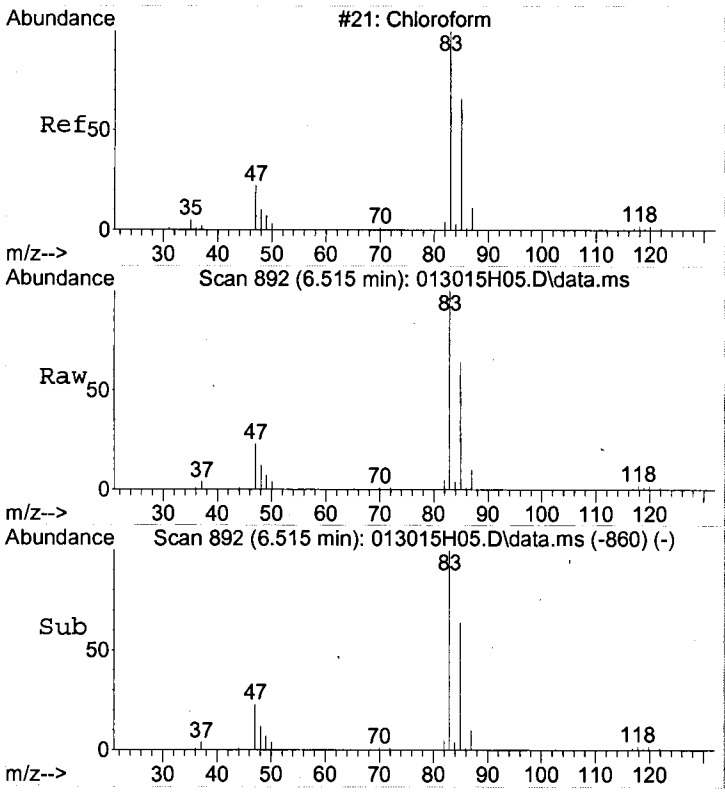


#10
Acetone
Concen: 6.10 ug/L
RT: 3.334 min Scan# 369
Delta R.T. 0.014 min
Lab File: 013015H05.D
Acq: 30 Jan 2015 15:52

Tgt Ion: 43 Resp: 23663

Ion	Ratio	Lower	Upper
43	100		
58	39.2	22.4	62.4

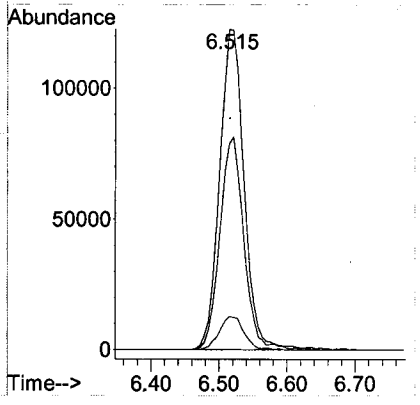


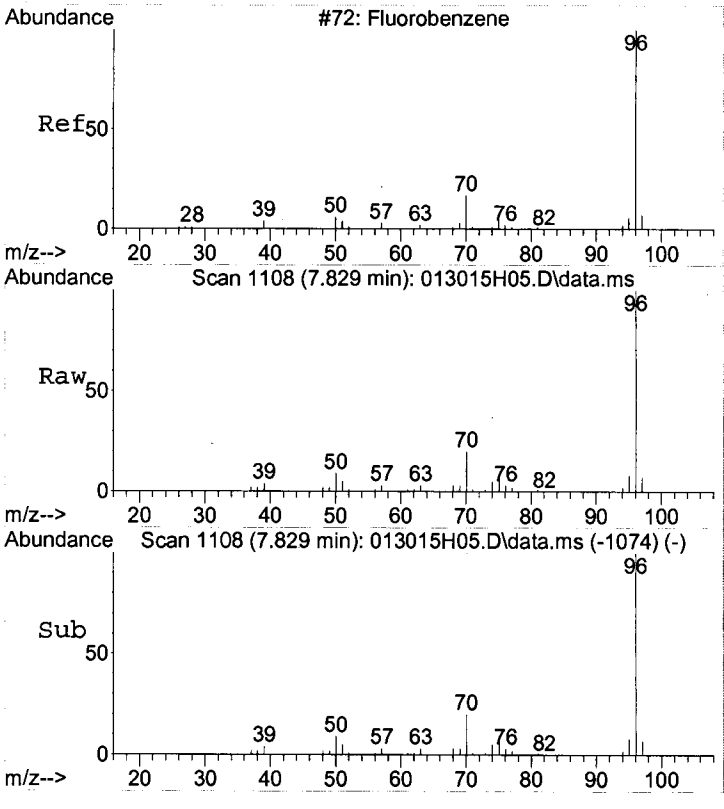


#23
Chloroform
Concen: 4.41 ug/L
RT: 6.515 min Scan# 892
Delta R.T. -0.004 min
Lab File: 013015H05.D
Acq: 30 Jan 2015 15:52

Tgt Ion: 83 Resp: 305047

Ion	Ratio	Lower	Upper
83	100		
85	64.9	44.4	84.4
87	10.4	0.0	30.8

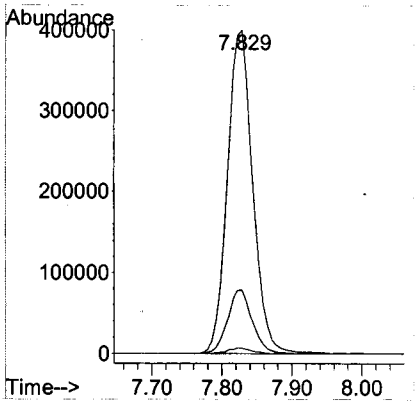


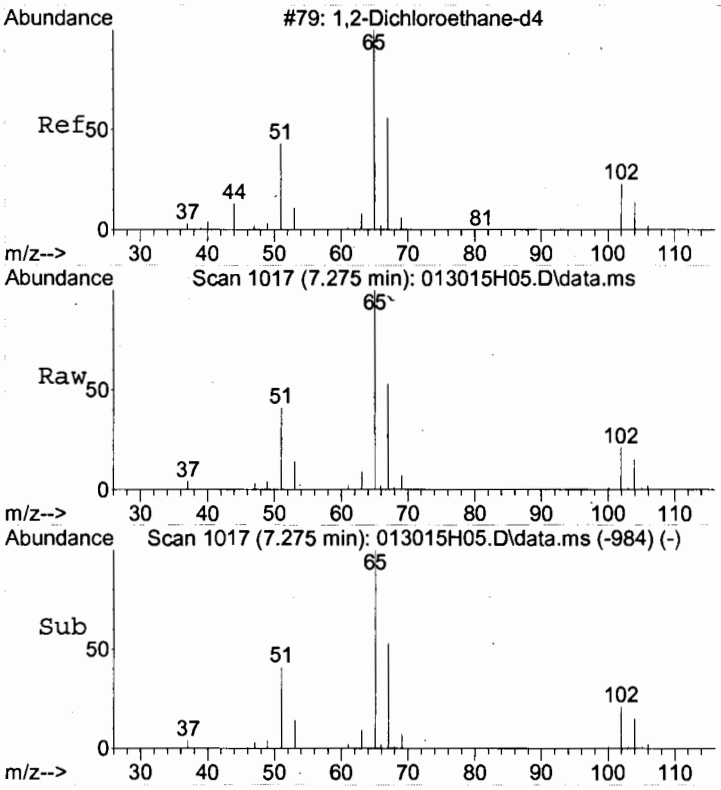


#24
Fluorobenzene
Concen: 5.00 ug/L
RT: 7.829 min Scan# 1108
Delta R.T. 0.008 min
Lab File: 013015H05.D
Acq: 30 Jan 2015 15:52

Tgt Ion: 96 Resp: 1002911

Ion	Ratio	Lower	Upper
96	100		
70	19.0	0.0	38.7
77	1.6	0.0	21.6

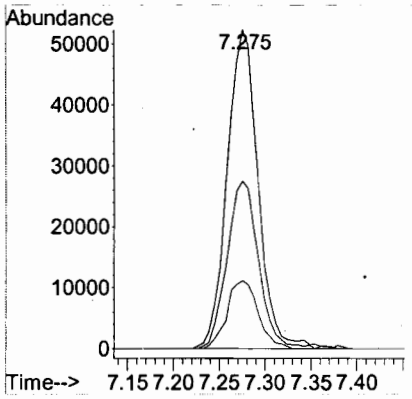


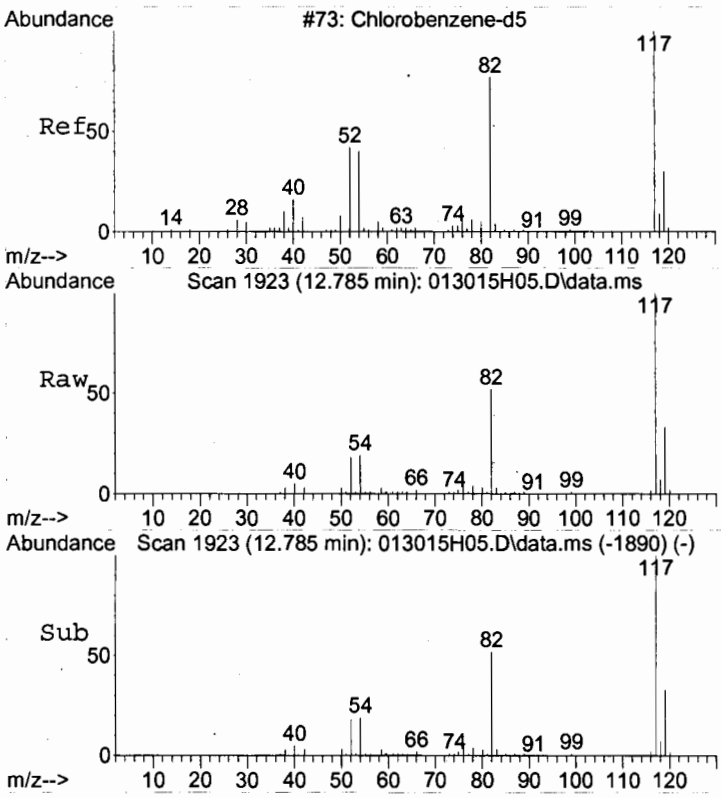


#28
1,2-Dichloroethane-d4
Concen: 4.46 ug/L
RT: 7.275 min Scan# 1017
Delta R.T. 0.002 min
Lab File: 013015H05.D
Acq: 30 Jan 2015 15:52

Tgt Ion: 65 Resp: 123083

Ion	Ratio	Lower	Upper
65	100		
67	53.3	32.3	72.3
102	21.4	1.3	41.3

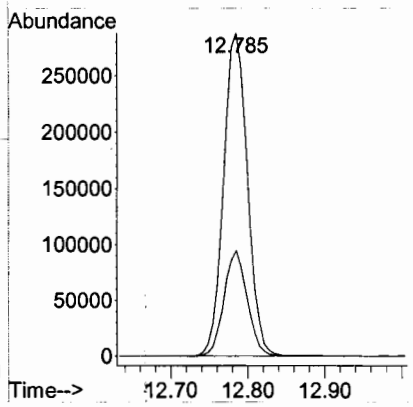


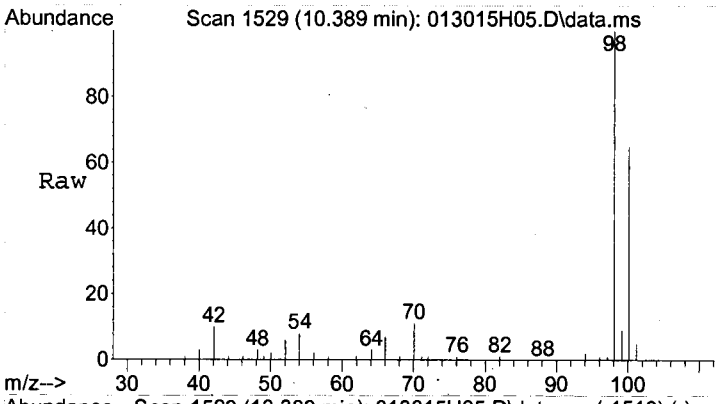


#37
Chlorobenzene-d5
Concen: 5.00 ug/L
RT: 12.785 min Scan# 1923
Delta R.T. 0.002 min
Lab File: 013015H05.D
Acq: 30 Jan 2015 15:52

Tgt Ion:117 Resp: 620625

Ion	Ratio	Lower	Upper
117	100		
119	31.8	11.7	51.7

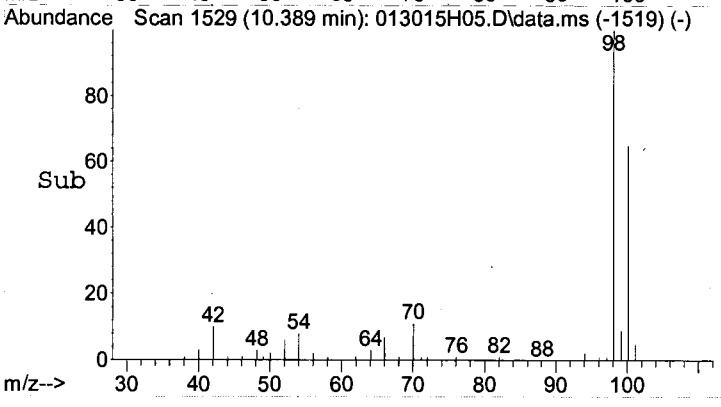


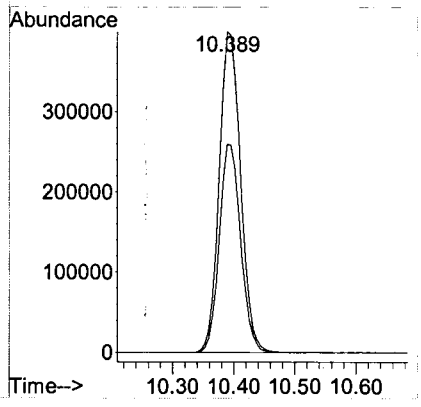


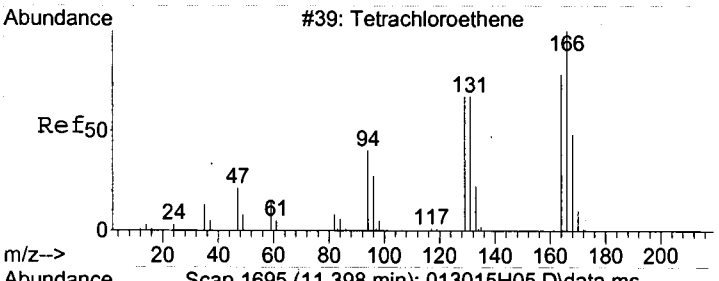
#39
Toluene-d8
Concen: 5.27 ug/L
RT: 10.389 min Scan# 1529
Delta R.T. -0.004 min
Lab File: 013015H05.D
Acq: 30 Jan 2015 15:52

Tgt Ion: 98 Resp: 970533

Ion	Ratio	Lower	Upper
98	100		
100	64.8	45.3	85.3



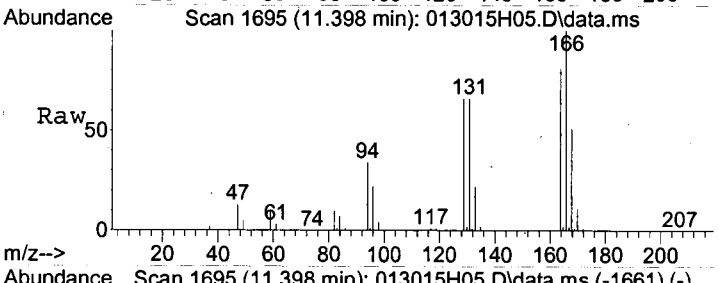


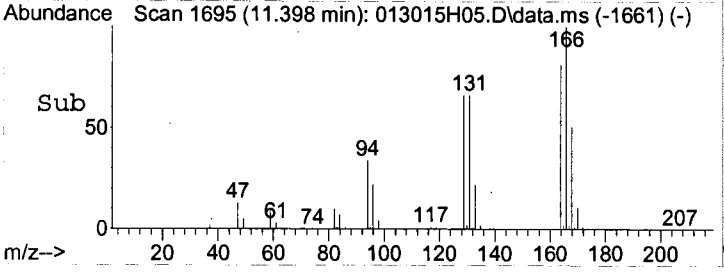


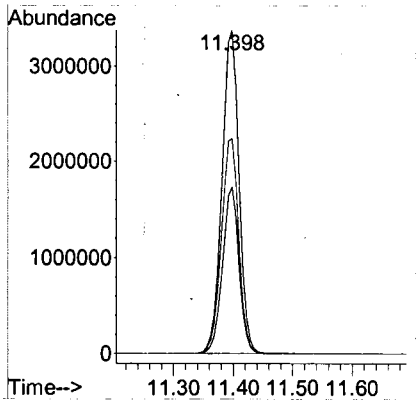
#43
Tetrachloroethene
Concen: 138.20 ug/L
RT: 11.398 min Scan# 1695
Delta R.T. 0.008 min
Lab File: 013015H05.D
Acq: 30 Jan 2015 15:52

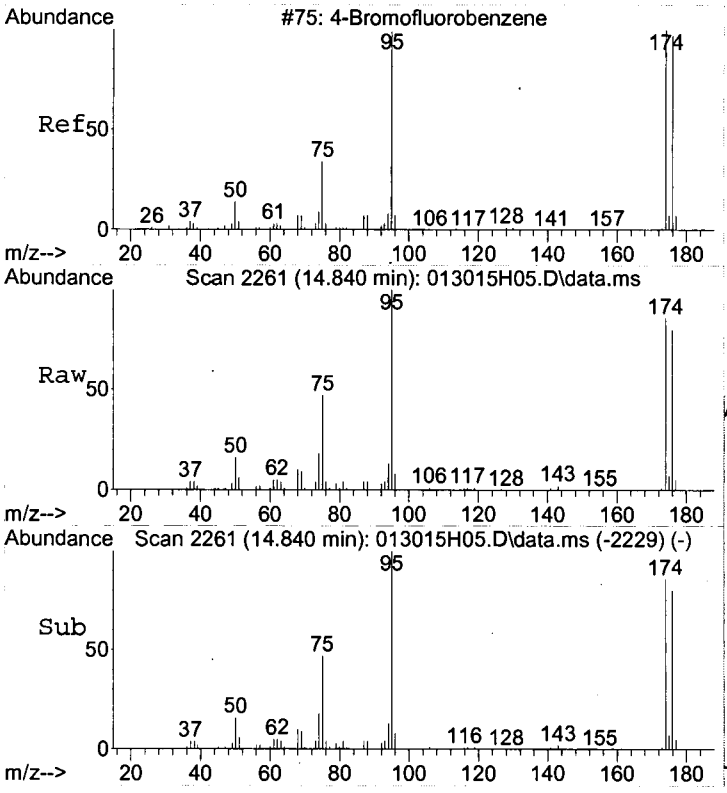
Tgt Ion:166 Resp: 6697895

Ion	Ratio	Lower	Upper
166	100		
168	49.8	27.5	67.5
129	67.6	51.3	91.3





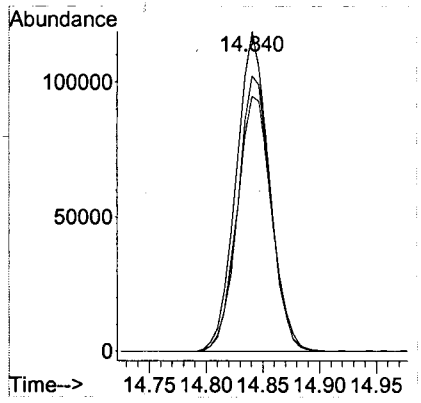


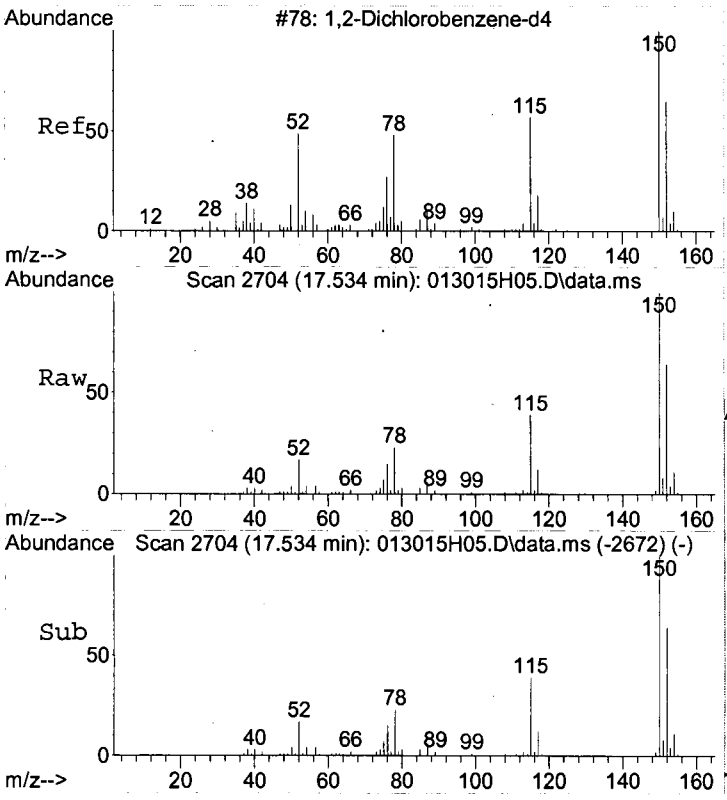


#56
4-Bromofluorobenzene
Concen: 4.49 ug/L
RT: 14.840 min Scan# 2261
Delta R.T. -0.004 min
Lab File: 013015H05.D
Acq: 30 Jan 2015 15:52

Tgt Ion: 95 Resp: 240539

Ion	Ratio	Lower	Upper
95	100		
174	88.0	68.9	108.9
176	82.9	66.0	106.0

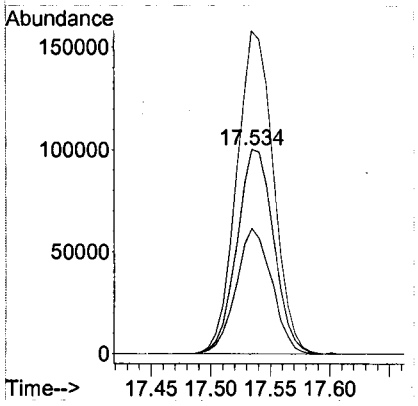




#70
1,2-Dichlorobenzene-d4
Concen: 4.21 ug/L
RT: 17.534 min Scan# 2704
Delta R.T. -0.004 min
Lab File: 013015H05.D
Acq: 30 Jan 2015 15:52

Tgt Ion:152 Resp: 215761

Ion	Ratio	Lower	Upper
152	100		
115	59.7	39.3	79.3
150	157.2	152.8	192.8



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H06.D
Acq On : 30 Jan 2015 16:27
Instrument: HP5973H
Operator : YNB
Sample : B15A131-MS1
Misc : MW-4A,WATER SPIKE
ALS Vial : 31
Multiplier: 1

Quant Time: Feb 02 08:12:41 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Dichloromethane-d2	3.903	53	104157	5.000	ug/L	0.01
24) Fluorobenzene	7.832	96	1033978	5.000	ug/L	0.01
37) Chlorobenzene-d5	12.788	117	646180	5.000	ug/L	0.00
System Monitoring Compounds						
28) 1,2-Dichloroethane-d4	7.278	65	129600	4.559	ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	=	91.20%	
39) Toluene-d8	10.398	98	1004053	5.241	ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	=	104.80%	
56) 4-Bromofluorobenzene	14.844	95	264329	4.743	ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	=	94.80%	
70) 1,2-Dichlorobenzene-d4	17.538	152	259852	4.871	ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	=	97.40%	

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.550	85	329958	6.369	ug/L	99
3) Chloromethane	1.763	50	336086	5.103	ug/L #	85
4) Vinyl chloride	1.842	62	392672	5.710	ug/L	99
5) Bromomethane	2.188	94	220075	4.370	ug/L	99
6) Chloroethane	2.304	64	265151	5.365	ug/L	99
7) Trichlorofluoromethane	2.596	101	614766	6.470	ug/L	98
8) 1,1-Dichloroethene	3.228	96	401268	6.135	ug/L	97
9) 1,1,2-Trichloro-1,2,2-...	3.259	101	445113	7.240	ug/L	97
10) Acetone	3.325	43	115228	28.783	ug/L	100
11) Carbon disulfide	3.490	76	1277378	5.895	ug/L	100
12) Dichloromethane	3.934	84	314282	4.380	ug/L #	97
13) tert-Butyl alcohol	4.250	59	79583	52.802	ug/L	89
14) trans-1,2-Dichloroethene	4.371	96	448653	5.462	ug/L	97
15) tert-Butyl methyl ethe...	4.414	73	1531871	17.311	ug/L	97
16) 1,1-Dichloroethane	5.047	63	664822	5.500	ug/L	99
17) Diisopropyl ether	5.253	45	2888406	19.693	ug/L	98
18) Ethyl-tert-butyl ether	5.837	59	1449931	17.954	ug/L	99
19) 2,2-Dichloropropane	5.965	77	350625	6.420	ug/L	99
20) cis-1,2-Dichloroethene	5.983	96	248637	5.268	ug/L	97
21) 2-Butanone (MEK)	6.062	43	144513	31.282	ug/L	97
22) Bromochloromethane	6.348	128	68844	4.917	ug/L	97
23) Chloroform	6.524	83	700008	9.804	ug/L	100
25) 1,1,1-Trichloroethane	6.761	97	378601	5.676	ug/L	97
26) Carbon tetrachloride	7.023	117	340904	6.090	ug/L	100
27) 1,1-Dichloropropene	7.035	75	345500	5.998	ug/L	99
29) Benzene	7.357	78	1025321	5.219	ug/L	100
30) 1,2-Dichloroethane	7.400	62	152733	4.522	ug/L	99
31) tert-Amyl methyl ether	7.619	73	1115992	16.757	ug/L	96
32) Trichloroethene	8.409	95	265706	5.482	ug/L	97
33) 1,2-Dichloropropane	8.762	63	186993	4.855	ug/L	99
34) Dibromomethane	8.939	93	60749	4.526	ug/L	97
35) Bromodichloromethane	9.230	83	220928	4.861	ug/L	99
36) cis-1,3-Dichloropropene	9.972	75	223305	4.693	ug/L	99

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H06.D
Acq On : 30 Jan 2015 16:27
Instrument: HP5973H
Operator : YNB
Sample : B15A131-MS1
Misc : MW-4A,WATER SPIKE
ALS Vial : 31
Multiplier: 1

Quant Time: Feb 02 08:12:41 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
38) 4-Methyl-2-pentanone (...	10.283	43	360974	35.025 ug/L	99
40) Toluene	10.501	92	684752	5.433 ug/L	100
41) trans-1,3-Dichloropropene	10.909	75	151522	4.690 ug/L	98
42) 1,1,2-Trichloroethane	11.195	83	76155	4.745 ug/L	94
43) Tetrachloroethene	11.395	166	7381191	146.277 ug/L	96
44) 1,3-Dichloropropane	11.456	76	163375	4.609 ug/L	100
45) 2-Hexanone	11.675	43	225171	34.083 ug/L	99
46) Chlorodibromomethane	11.821	129	114846	4.768 ug/L	98
47) 1,2-Dibromoethane (EDB)	11.973	107	77160	4.573 ug/L	98
48) Chlorobenzene	12.837	112	638084	5.072 ug/L	99
49) 1,1,1,2-Tetrachloroethane	13.001	131	176730	4.967 ug/L	100
50) Ethylbenzene	13.062	91	1340427	5.738 ug/L	99
51) m&p-Xylene	13.275	106	1079899	10.814 ug/L	98
52) o-Xylene	13.943	106	469947	5.274 ug/L	99
53) Styrene	13.974	104	713302	5.127 ug/L	99
54) Bromoform	14.241	173	52076	4.641 ug/L	96
55) Isopropylbenzene	14.612	105	1376579	5.958 ug/L	100
57) Bromobenzene	15.069	156	216086	4.838 ug/L	100
58) 1,1,2,2-Tetrachloroethane	15.154	83	85769	4.573 ug/L	99
59) 1,2,3-Trichloropropane	15.190	75	60099	4.459 ug/L	99
60) Propylbenzene	15.336	91	1651960	5.992 ug/L	100
61) 2-Chlorotoluene	15.440	91	854833	5.352 ug/L	99
62) 4-Chlorotoluene	15.640	91	978023	5.299 ug/L	100
63) 1,3,5-Trimethylbenzene	15.671	105	1151202	5.694 ug/L	99
64) tert-Butylbenzene	16.230	119	1003293	5.980 ug/L	100
65) 1,2,4-Trimethylbenzene	16.321	105	1090794	5.447 ug/L	99
66) sec-Butylbenzene	16.625	105	1551066	6.265 ug/L	100
67) 1,3-Dichlorobenzene	16.759	146	534980	5.145 ug/L	99
68) p-Isopropyltoluene	16.911	119	1343862	5.944 ug/L	100
69) 1,4-Dichlorobenzene	16.923	146	528353	4.897 ug/L	99
71) 1,2-Dichlorobenzene	17.568	146	393754	4.808 ug/L	99
72) Butylbenzene	17.641	91	1231722	6.183 ug/L	100
73) 1,2-Dibromo-3-chloropr...	18.979	75	42785	17.291 ug/L	98
74) 1,2,4-Trichlorobenzene	20.487	180	266822	4.706 ug/L	99
75) Hexachlorobutadiene	20.858	225	209061	6.083 ug/L	99
76) Naphthalene	20.913	128	290254	4.454 ug/L	99
77) 1,2,3-Trichlorobenzene	21.357	180	201792	4.627 ug/L	100

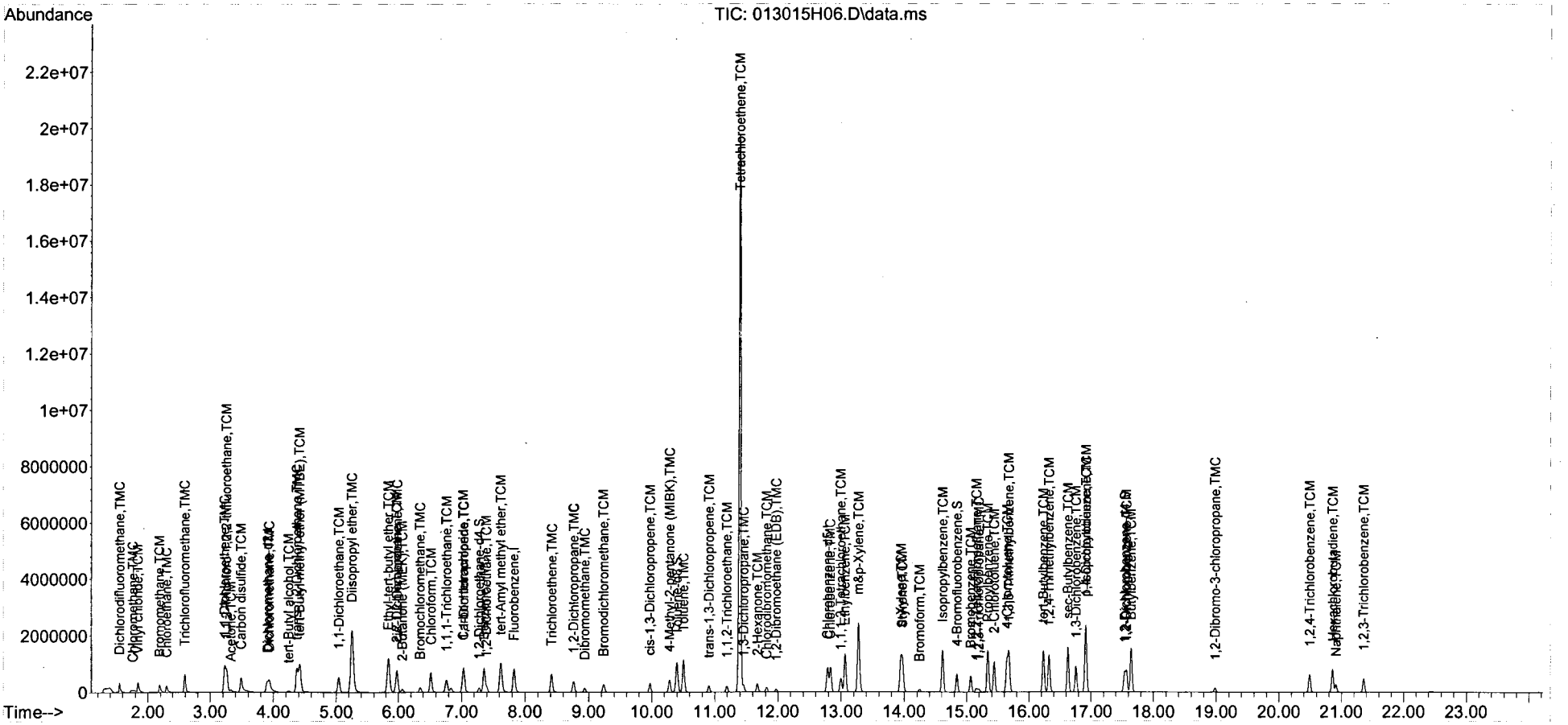
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H06.D
Acq On : 30 Jan 2015 16:27
Instrument: HP5973H
Operator : YNB
Sample : B15A131-MS1
Misc : MW-4A,WATER SPIKE
ALS Vial : 31
Multiplier: 1

Quant Time: Feb 02 08:12:41 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H07.D
Acq On : 30 Jan 2015 17:03
Instrument: HP5973H
Operator : YNB
Sample : B15A131-MSD1
Misc : MW-4A,WATER SPIKE
ALS Vial : 32
Multiplier: 1

Quant Time: Feb 02 08:12:54 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.899	53	104588	5.000 ug/L	0.00
24) Fluorobenzene	7.827	96	1055600	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.784	117	669281	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.280	65	134969	4.650 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 93.00%	
39) Toluene-d8	10.394	98	1035847	5.220 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 104.40%	
56) 4-Bromofluorobenzene	14.845	95	278664	4.828 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 96.60%	
70) 1,2-Dichlorobenzene-d4	17.539	152	268692	4.863 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 97.20%	

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.545	85	344352	6.619 ug/L	99
3) Chloromethane	1.764	50	339956	5.141 ug/L #	85
4) Vinyl chloride	1.843	62	377853	5.472 ug/L	100
5) Bromomethane	2.184	94	243470	4.814 ug/L	99
6) Chloroethane	2.300	64	270613	5.453 ug/L	99
7) Trichlorofluoromethane	2.598	101	630471	6.608 ug/L	97
8) 1,1-Dichloroethene	3.224	96	416935	6.348 ug/L	100
9) 1,1,2-Trichloro-1,2,2-...	3.260	101	444984	7.208 ug/L	97
10) Acetone	3.321	43	118754	29.541 ug/L	100
11) Carbon disulfide	3.485	76	1294651	5.950 ug/L	100
12) Dichloromethane	3.935	84	325910	4.524 ug/L #	98
13) tert-Butyl alcohol	4.246	59	111646	73.770 ug/L	97
14) trans-1,2-Dichloroethene	4.373	96	481964	5.843 ug/L	99
15) tert-Butyl methyl ethe...	4.416	73	1644048	18.502 ug/L	98
16) 1,1-Dichloroethane	5.042	63	685894	5.651 ug/L	99
17) Diisopropyl ether	5.255	45	2934843	19.927 ug/L	99
18) Ethyl-tert-butyl ether	5.833	59	1528198	18.845 ug/L	99
19) 2,2-Dichloropropane	5.967	77	355099	6.476 ug/L	99
20) cis-1,2-Dichloroethene	5.979	96	256205	5.406 ug/L	99
21) 2-Butanone (MEK)	6.064	43	151285	32.613 ug/L	98
22) Bromochloromethane	6.350	128	70914	5.044 ug/L	99
23) Chloroform	6.520	83	725417	10.118 ug/L	99
25) 1,1,1-Trichloroethane	6.763	97	388367	5.703 ug/L	98
26) Carbon tetrachloride	7.025	117	349687	6.119 ug/L	100
27) 1,1-Dichloropropene	7.037	75	355169	6.040 ug/L	99
29) Benzene	7.359	78	1059768	5.284 ug/L	99
30) 1,2-Dichloroethane	7.402	62	158516	4.597 ug/L	100
31) tert-Amyl methyl ether	7.621	73	1173007	17.253 ug/L	98
32) Trichloroethene	8.411	95	273337	5.524 ug/L	98
33) 1,2-Dichloropropane	8.758	63	189973	4.832 ug/L	98
34) Dibromomethane	8.940	93	61835	4.513 ug/L	99
35) Bromodichloromethane	9.232	83	226498	4.882 ug/L	98
36) cis-1,3-Dichloropropene	9.974	75	232601	4.788 ug/L	98

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H07.D
Acq On : 30 Jan 2015 17:03
Instrument: HP5973H
Operator : YNB
Sample : B15A131-MSD1
Misc : MW-4A,WATER SPIKE
ALS Vial : 32
Multiplier: 1

Quant Time: Feb 02 08:12:54 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
38) 4-Methyl-2-pentanone (...	10.278	43	376486	35.269 ug/L	99
40) Toluene	10.503	92	693656	5.314 ug/L	99
41) trans-1,3-Dichloropropene	10.905	75	156137	4.666 ug/L	97
42) 1,1,2-Trichloroethane	11.190	83	75939	4.568 ug/L	98
43) Tetrachloroethene	11.397	166	7475914	143.041 ug/L	96
44) 1,3-Dichloropropane	11.458	76	169746	4.623 ug/L	99
45) 2-Hexanone	11.677	43	234147	34.218 ug/L	98
46) Chlorodibromomethane	11.817	129	117034	4.691 ug/L	99
47) 1,2-Dibromoethane (EDB)	11.975	107	79779	4.565 ug/L	97
48) Chlorobenzene	12.832	112	659028	5.058 ug/L	99
49) 1,1,1,2-Tetrachloroethane	12.997	131	176107	4.779 ug/L	99
50) Ethylbenzene	13.064	91	1351156	5.584 ug/L	100
51) m&p-Xylene	13.276	106	1106485	10.698 ug/L	100
52) o-Xylene	13.945	106	479155	5.191 ug/L	98
53) Styrene	13.976	104	722543	5.014 ug/L	99
54) Bromoform	14.243	173	54126	4.657 ug/L	97
55) Isopropylbenzene	14.614	105	1397473	5.840 ug/L	100
57) Bromobenzene	15.064	156	223453	4.830 ug/L	99
58) 1,1,2,2-Tetrachloroethane	15.155	83	88814	4.572 ug/L	96
59) 1,2,3-Trichloropropane	15.198	75	60777	4.354 ug/L	99
60) Propylbenzene	15.338	91	1674725	5.865 ug/L	100
61) 2-Chlorotoluene	15.441	91	867181	5.242 ug/L	100
62) 4-Chlorotoluene	15.642	91	983110	5.143 ug/L	99
63) 1,3,5-Trimethylbenzene	15.672	105	1149339	5.488 ug/L	99
64) tert-Butylbenzene	16.232	119	1008407	5.803 ug/L	100
65) 1,2,4-Trimethylbenzene	16.323	105	1106081	5.333 ug/L	100
66) sec-Butylbenzene	16.627	105	1551501	6.050 ug/L	100
67) 1,3-Dichlorobenzene	16.761	146	536409	4.981 ug/L	99
68) p-Isopropyltoluene	16.913	119	1367044	5.838 ug/L	99
69) 1,4-Dichlorobenzene	16.925	146	538861	4.822 ug/L	100
71) 1,2-Dichlorobenzene	17.570	146	402477	4.745 ug/L	99
72) Butylbenzene	17.643	91	1241640	6.018 ug/L	100
73) 1,2-Dibromo-3-chloropr...	18.981	75	43911	17.134 ug/L	99
74) 1,2,4-Trichlorobenzene	20.489	180	280474	4.776 ug/L	100
75) Hexachlorobutadiene	20.854	225	209982	5.899 ug/L	98
76) Naphthalene	20.908	128	302647	4.484 ug/L	99
77) 1,2,3-Trichlorobenzene	21.358	180	207007	4.583 ug/L	99

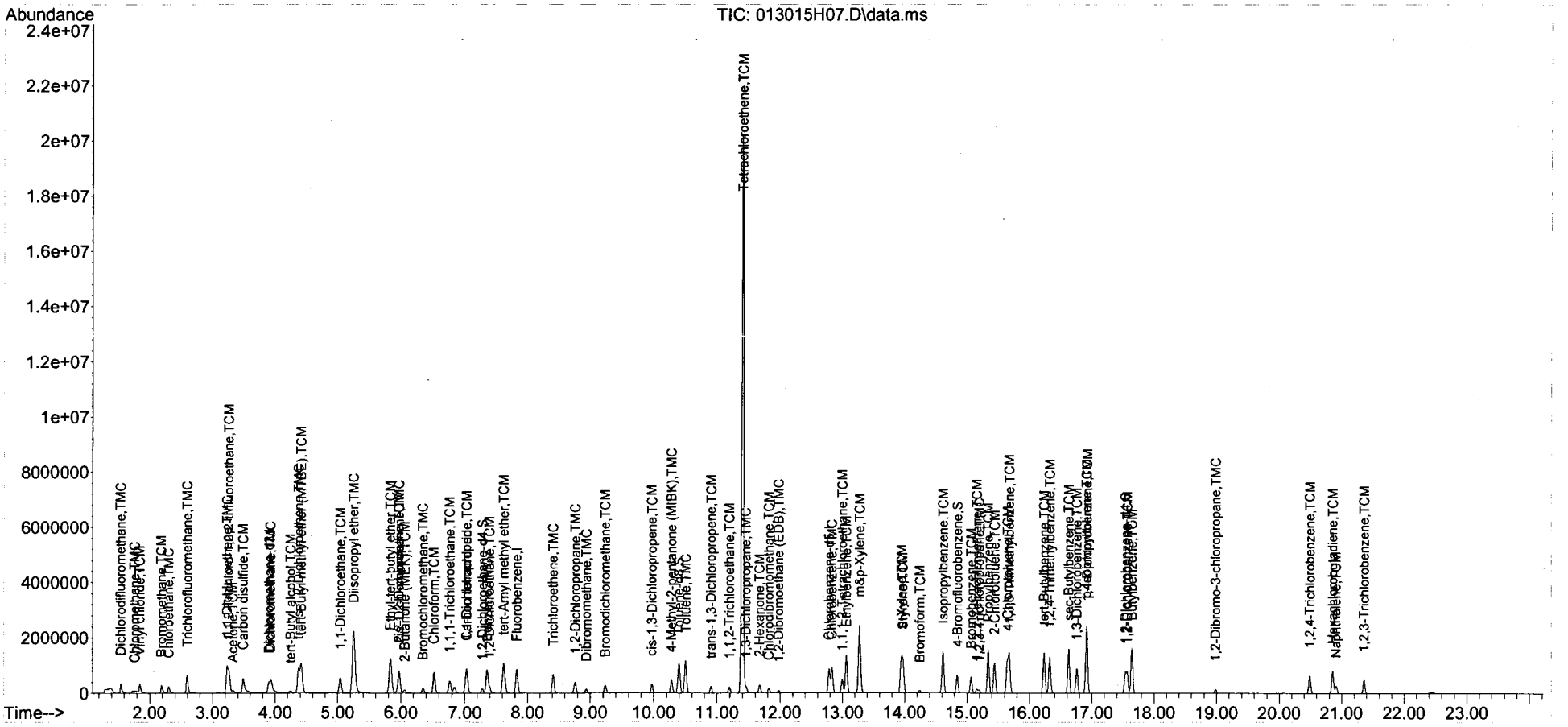
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H07.D
Acq On : 30 Jan 2015 17:03
Instrument: HP5973H
Operator : YNB
Sample : B15A131-MSD1
Misc : MW-4A,WATER SPIKE
ALS Vial : 32
Multiplier: 1

Quant Time: Feb 02 08:12:54 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H08.D
Acq On : 30 Jan 2015 17:39
Instrument: HP5973H
Operator : YNB
Sample : BLANK
Misc : BLANK,WATER
ALS Vial : 33
Multiplier: 1

Quant Time: Feb 02 08:13:13 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.899	53	104353	5.000 ug/L	0.00
24) Fluorobenzene	7.828	96	977464	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.784	117	618135	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.281	65	129085	4.803 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 96.00%	
39) Toluene-d8	10.394	98	953363	5.202 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 104.00%	
56) 4-Bromofluorobenzene	14.840	95	243316	4.564 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 91.20%	
70) 1,2-Dichlorobenzene-d4	17.540	152	227160	4.451 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 89.00%	
Target Compounds					Qvalue
13) tert-Butyl alcohol	4.252	59	18524	12.267 ug/L	79

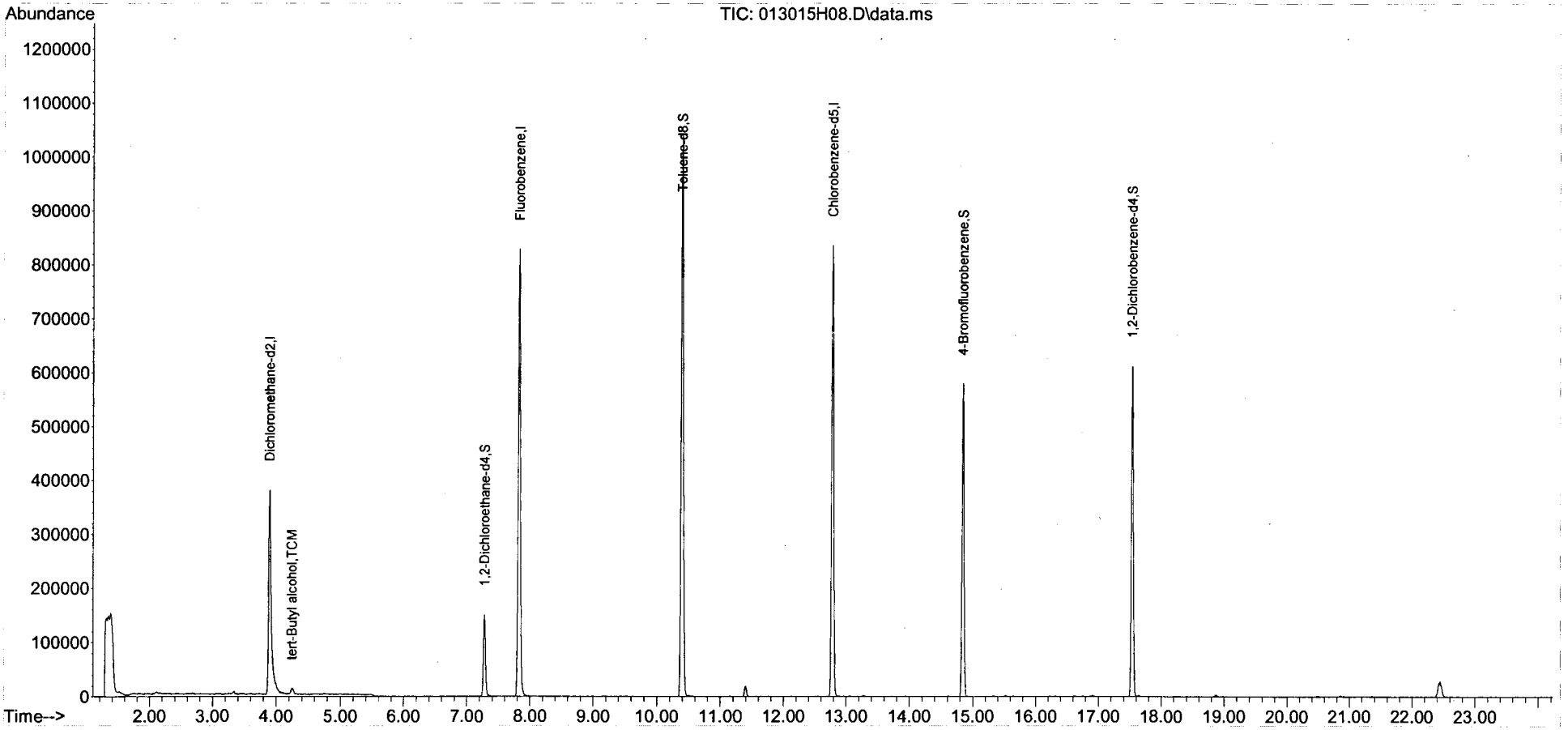
(#) = qualifier out of range (m) = manual integration (+) = signals summed

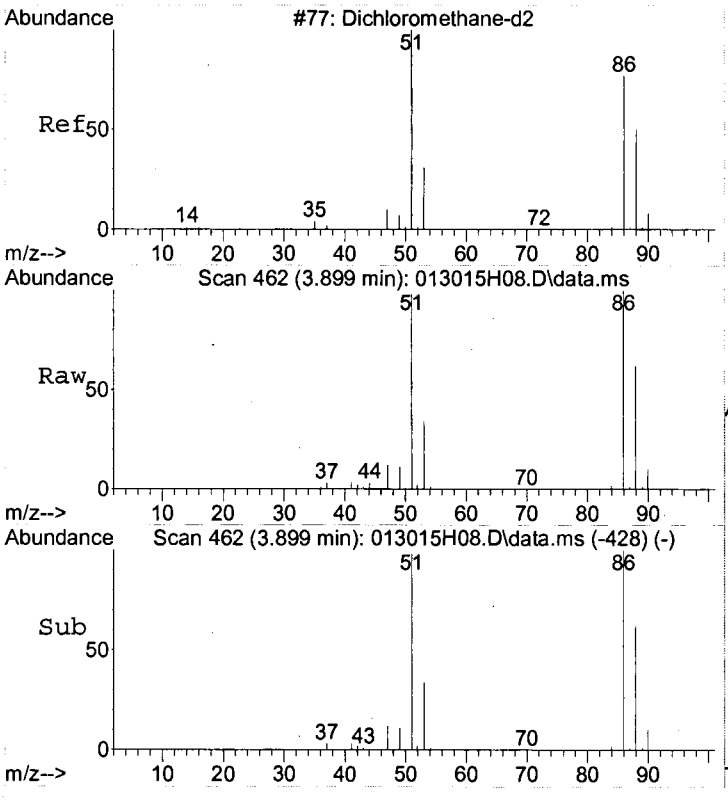
Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H08.D
Acq On : 30 Jan 2015 17:39
Instrument: HP5973H
Operator : YNB
Sample : BLANK
Misc : BLANK,WATER
ALS Vial : 33
Multiplier: 1

Quant Time: Feb 02 08:13:13 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

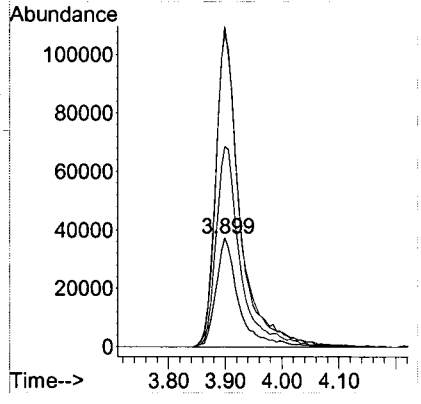


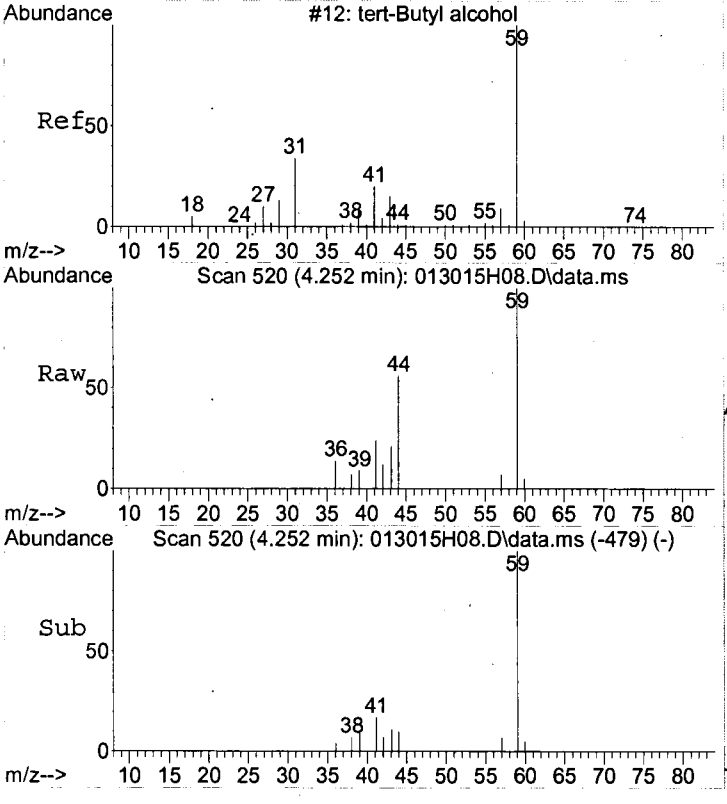


#1
Dichloromethane-d2
Concen: 5.00 ug/L
RT: 3.899 min Scan# 462
Delta R.T. 0.007 min
Lab File: 013015H08.D
Acq: 30 Jan 2015 17:39

Tgt Ion: 53 Resp: 104353

Ion	Ratio	Lower	Upper
53	100		
51	306.4	381.1	421.1#
86	305.7	490.1	530.1#
88	195.8	211.2	251.2#

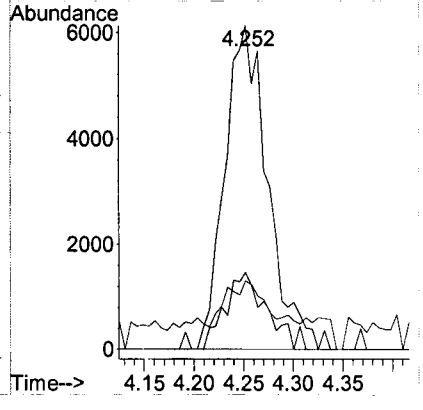


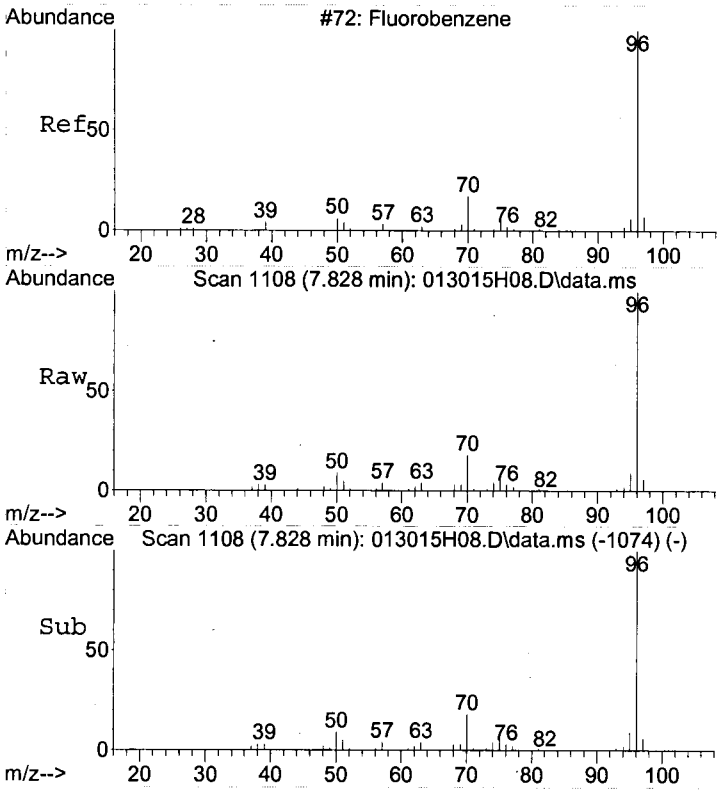


#13
tert-Butyl alcohol
Concen: 12.27 ug/L
RT: 4.252 min Scan# 520
Delta R.T. 0.001 min
Lab File: 013015H08.D
Acq: 30 Jan 2015 17:39

Tgt Ion: 59 Resp: 18524

Ion	Ratio	Lower	Upper
59	100		
41	23.3	1.2	41.2
43	31.2	0.0	31.2

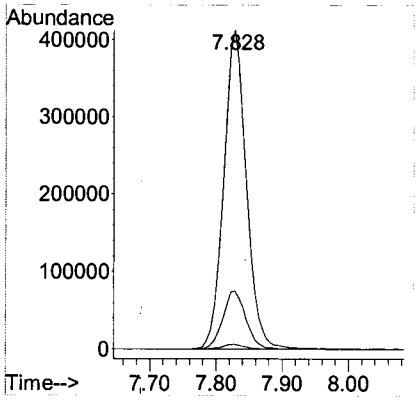


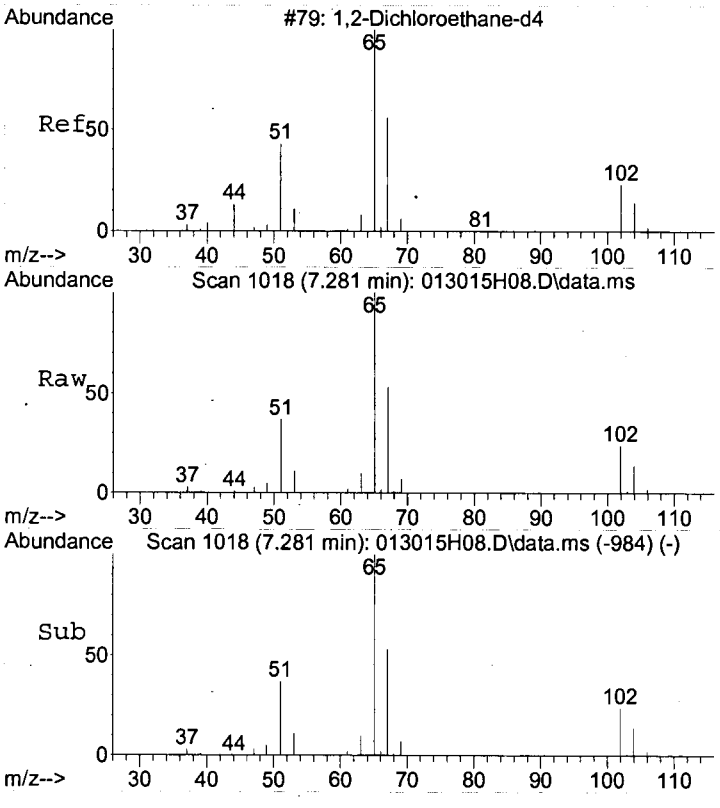


#24
Fluorobenzene
Concen: 5.00 ug/L
RT: 7.828 min Scan# 1108
Delta R.T. 0.007 min
Lab File: 013015H08.D
Acq: 30 Jan 2015 17:39

Tgt Ion: 96 Resp: 977464

Ion	Ratio	Lower	Upper
96	100		
70	18.6	0.0	38.7
77	1.5	0.0	21.6

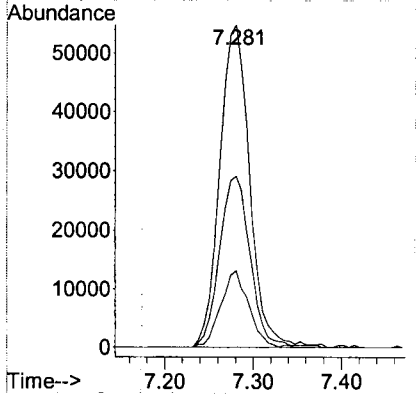


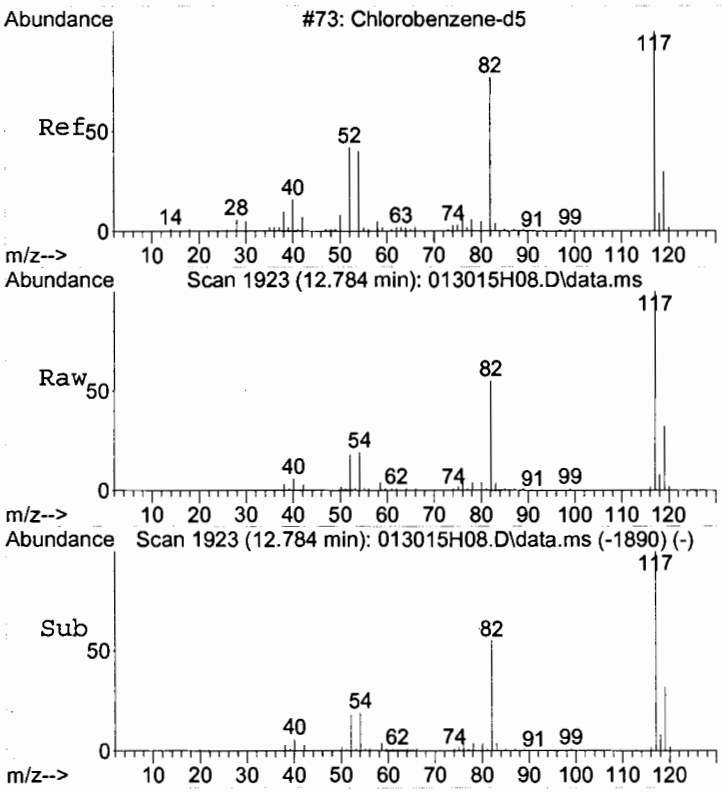


#28
1,2-Dichloroethane-d4
Concen: 4.80 ug/L
RT: 7.281 min Scan# 1018
Delta R.T. 0.007 min
Lab File: 013015H08.D
Acq: 30 Jan 2015 17:39

Tgt Ion: 65 Resp: 129085

Ion	Ratio	Lower	Upper
65	100		
67	54.6	32.3	72.3
102	22.1	1.3	41.3

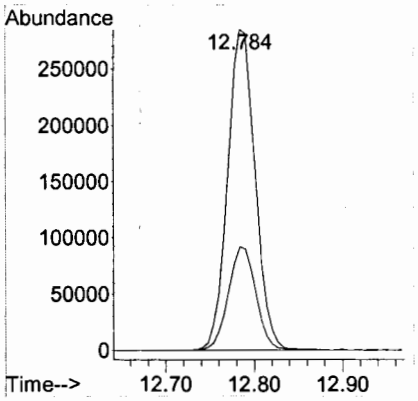


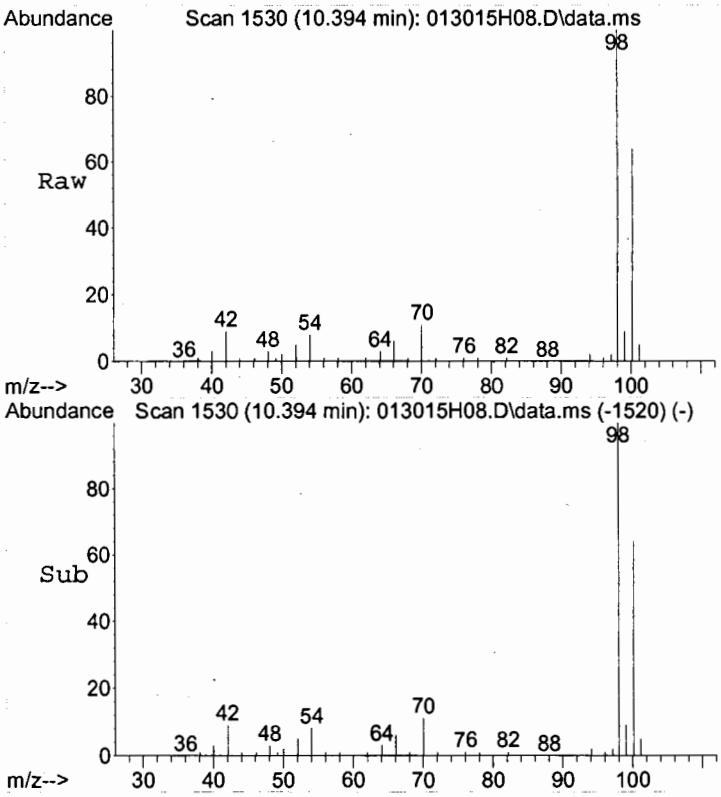


#37
Chlorobenzene-d5
Concen: 5.00 ug/L
RT: 12.784 min Scan# 1923
Delta R.T. 0.001 min
Lab File: 013015H08.D
Acq: 30 Jan 2015 17:39

Tgt Ion:117 Resp: 618135

Ion	Ratio	Lower	Upper
117	100		
119	32.1	11.7	51.7

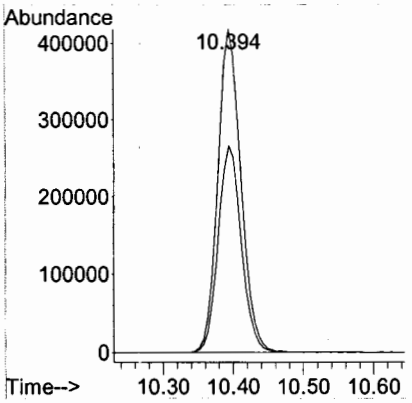


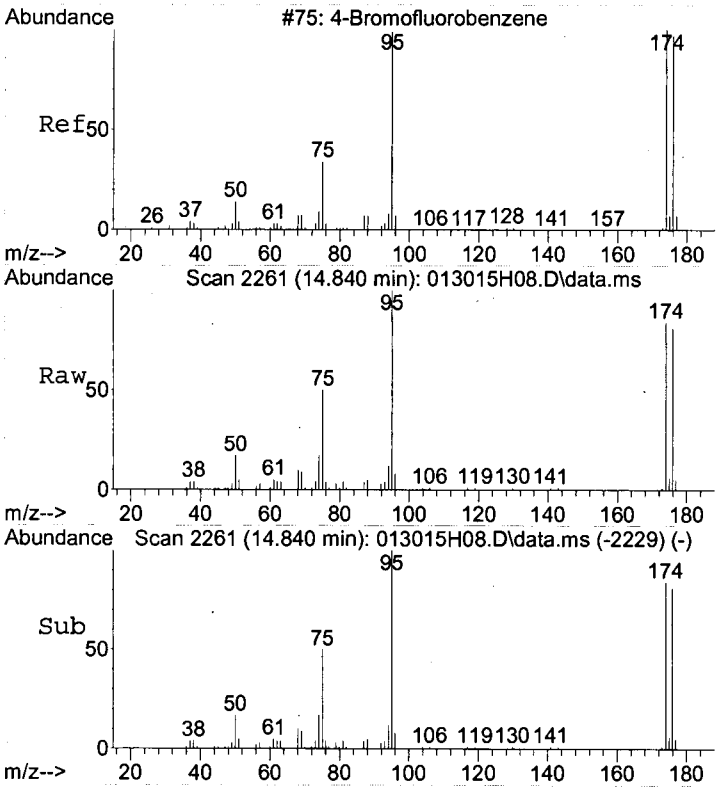


#39
Toluene-d8
Concen: 5.20 ug/L
RT: 10.394 min Scan# 1530
Delta R.T. 0.001 min
Lab File: 013015H08.D
Acq: 30 Jan 2015 17:39

Tgt Ion: 98 Resp: 953363

Ion	Ratio	Lower	Upper
98	100		
100	64.0	45.3	85.3

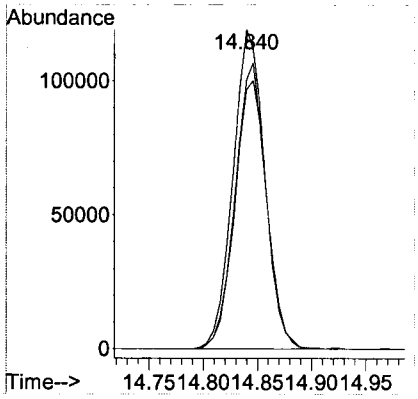


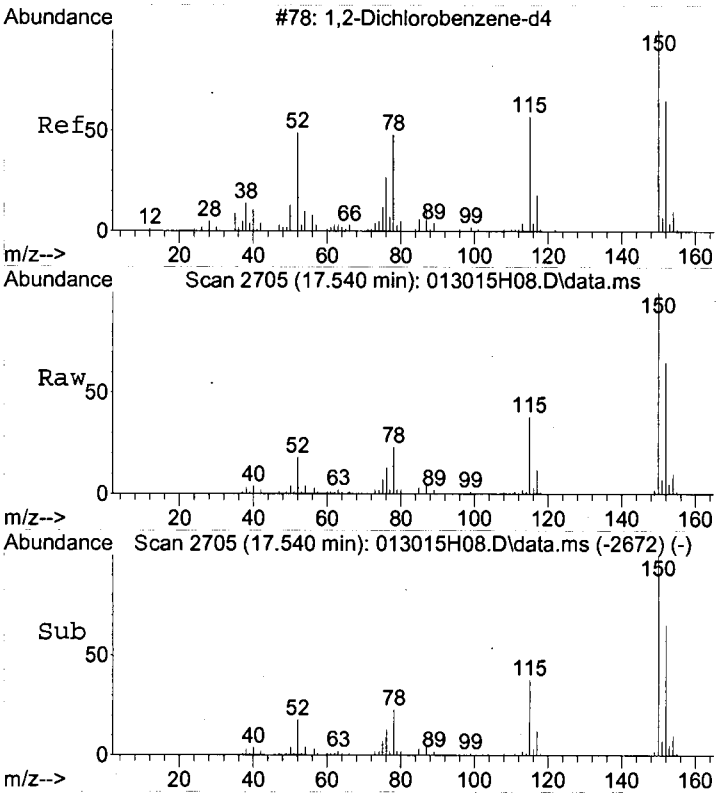


#56
4-Bromofluorobenzene
Concen: 4.56 ug/L
RT: 14.840 min Scan# 2261
Delta R.T. -0.005 min
Lab File: 013015H08.D
Acq: 30 Jan 2015 17:39

Tgt Ion: 95 Resp: 243316

Ion	Ratio	Lower	Upper
95	100		
174	87.7	68.9	108.9
176	84.9	66.0	106.0

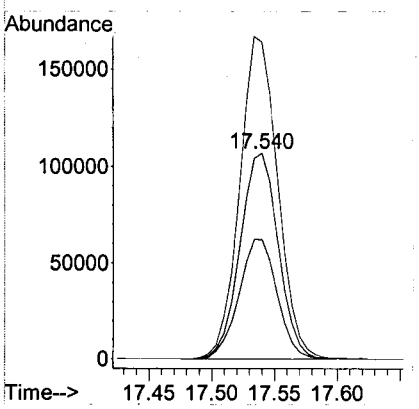




#70
1,2-Dichlorobenzene-d4
Concen: 4.45 ug/L
RT: 17.540 min Scan# 2705
Delta R.T. 0.001 min
Lab File: 013015H08.D
Acq: 30 Jan 2015 17:39

Tgt Ion:152 Resp: 227160

Ion	Ratio	Lower	Upper
152	100		
115	58.1	39.3	79.3
150	155.0	152.8	192.8



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H09.D
Acq On : 30 Jan 2015 18:14
Instrument: HP5973H
Operator : YNB
Sample : 1501036-02
Misc : MW-4B,WATER
ALS Vial : 34
Multiplier: 1

Quant Time: Feb 02 08:13:26 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.897	53	100271	5.000 ug/L	0.00
24) Fluorobenzene	7.825	96	939604	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.788	117	605466	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.278	65	123724	4.789 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 95.80%	
39) Toluene-d8	10.398	98	919594	5.123 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 102.40%	
56) 4-Bromofluorobenzene	14.843	95	231544	4.434 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 88.60%	
70) 1,2-Dichlorobenzene-d4	17.537	152	219834	4.398 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 88.00%	
Target Compounds					Qvalue
43) Tetrachloroethene	11.395	166	770242	16.291 ug/L	98

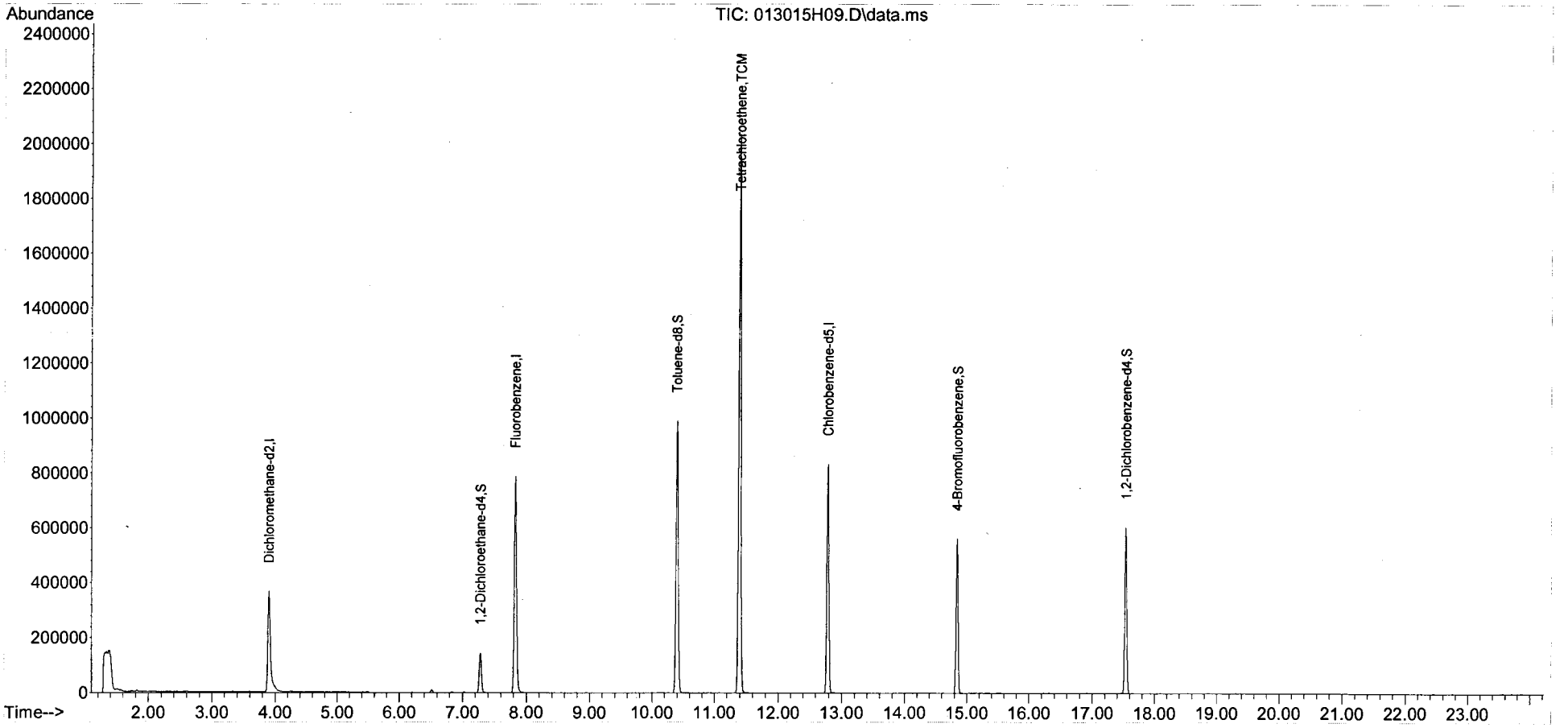
(#) = qualifier out of range (m) = manual integration (+) = signals summed

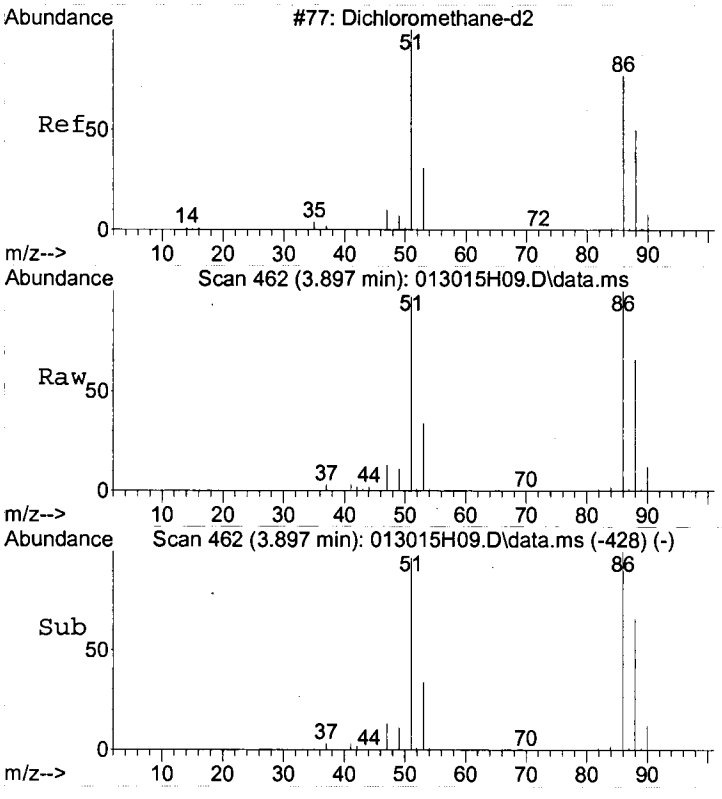
Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H09.D
Acq On : 30 Jan 2015 18:14
Instrument: HP5973H
Operator : YNB
Sample : 1501036-02
Misc : MW-4B,WATER
ALS Vial : 34
Multiplier: 1

Quant Time: Feb 02 08:13:26 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

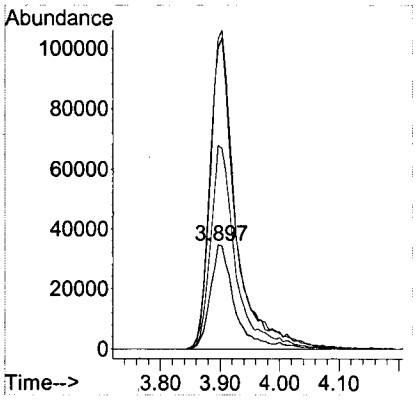


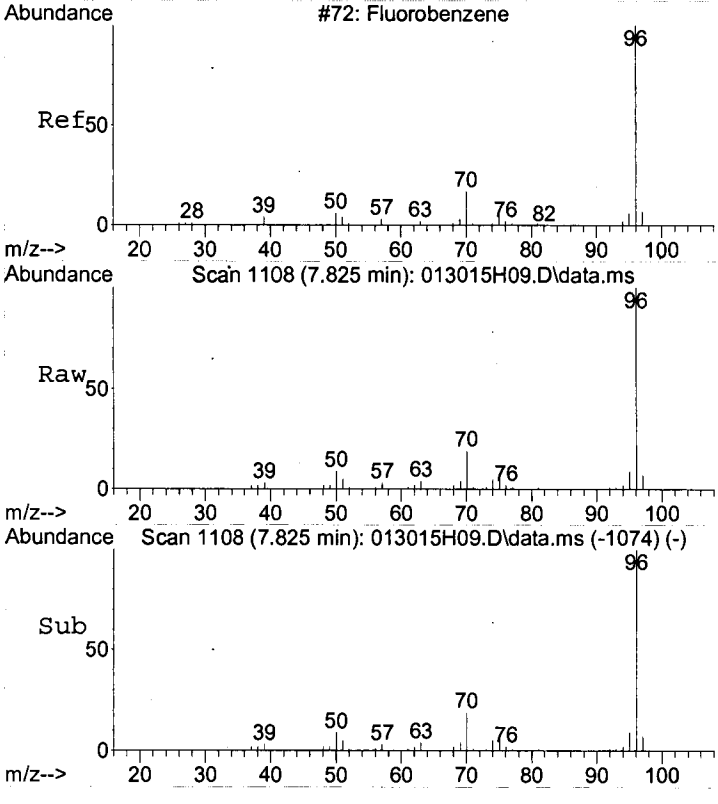


#1
Dichloromethane-d2
Concen: 5.00 ug/L
RT: 3.897 min Scan# 462
Delta R.T. 0.005 min
Lab File: 013015H09.D
Acq: 30 Jan 2015 18:14

Tgt Ion: 53 Resp: 100271

Ion	Ratio	Lower	Upper
53	100		
51	311.3	381.1	421.1#
86	313.6	490.1	530.1#
88	197.1	211.2	251.2#

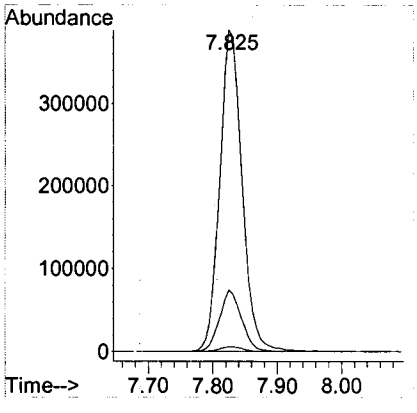


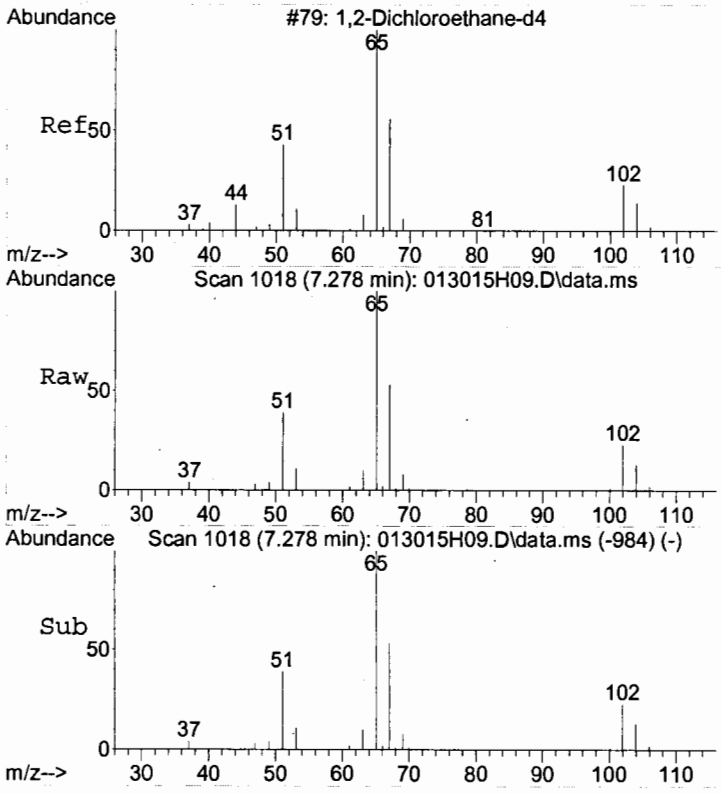


#24
Fluorobenzene
Concen: 5.00 ug/L
RT: 7.825 min Scan# 1108
Delta R.T. 0.005 min
Lab File: 013015H09.D
Acq: 30 Jan 2015 18:14

Tgt Ion: 96 Resp: 939604

Ion	Ratio	Lower	Upper
96	100		
70	18.9	0.0	38.7
77	1.5	0.0	21.6

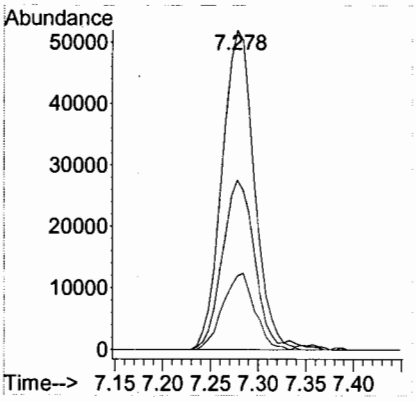


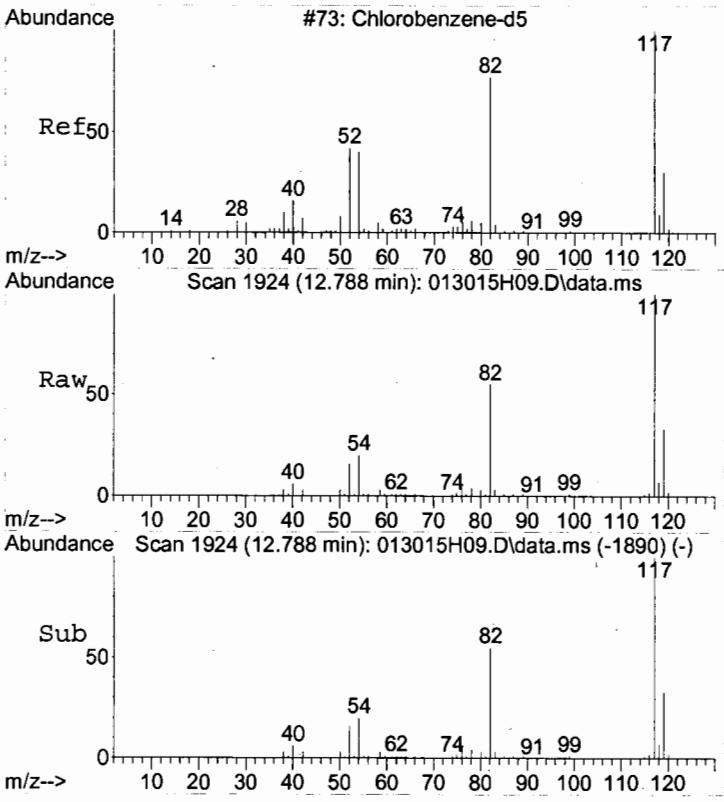


#28
1,2-Dichloroethane-d4
Concen: 4.79 ug/L
RT: 7.278 min Scan# 1018
Delta R.T. 0.005 min
Lab File: 013015H09.D
Acq: 30 Jan 2015 18:14

Tgt Ion: 65 Resp: 123724

Ion	Ratio	Lower	Upper
65	100		
67	52.9	32.3	72.3
102	23.2	1.3	41.3

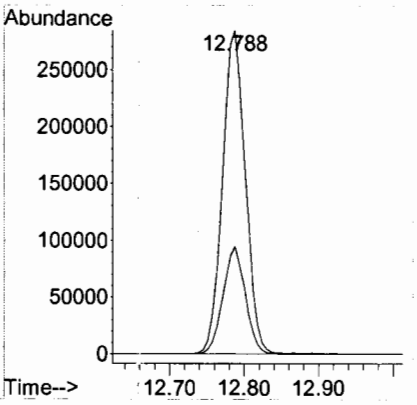


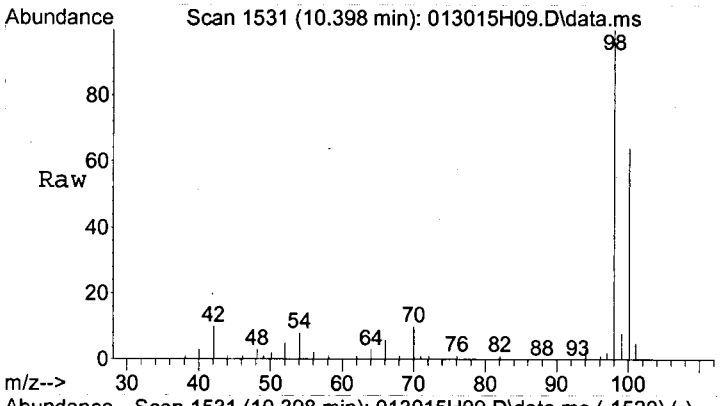


#37
Chlorobenzene-d5
Concen: 5.00 ug/L
RT: 12.788 min Scan# 1924
Delta R.T. 0.005 min
Lab File: 013015H09.D
Acq: 30 Jan 2015 18:14

Tgt Ion:117 Resp: 605466

Ion	Ratio	Lower	Upper
117	100		
119	32.4	11.7	51.7

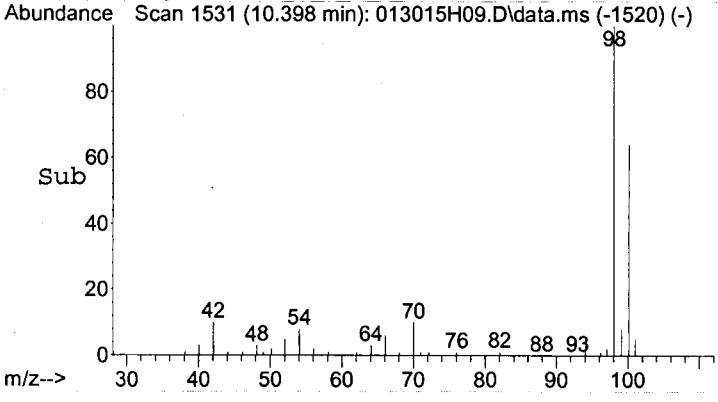


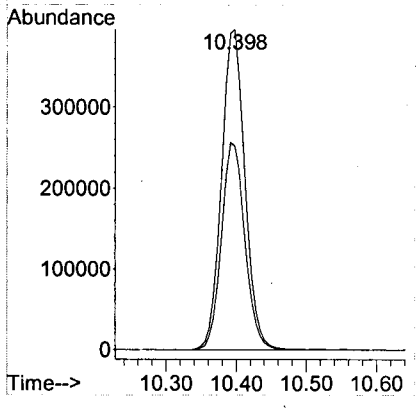


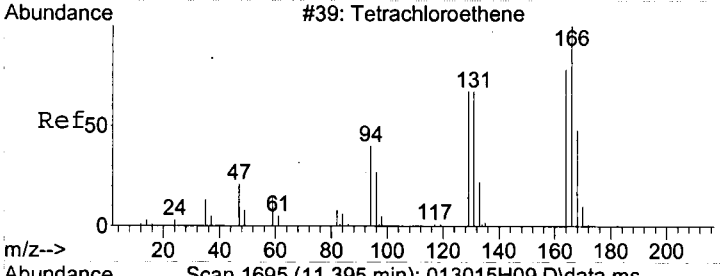
#39
Toluene-d8
Concen: 5.12 ug/L
RT: 10.398 min Scan# 1531
Delta R.T. 0.005 min
Lab File: 013015H09.D
Acq: 30 Jan 2015 18:14

Tgt Ion: 98 Resp: 919594

Ion	Ratio	Lower	Upper
98	100		
100	64.7	45.3	85.3



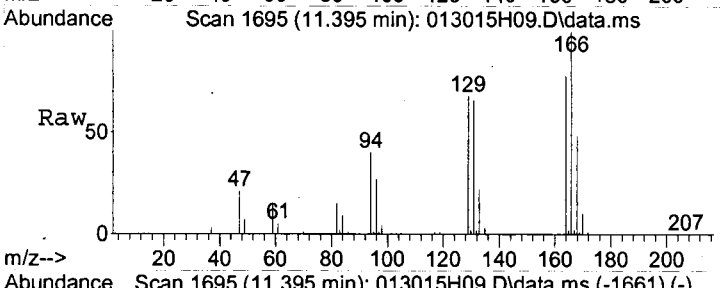


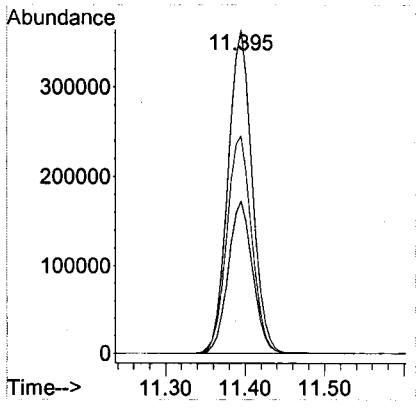


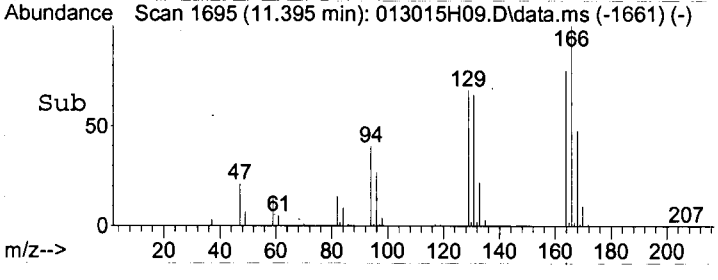
#43
Tetrachloroethene
Concen: 16.29 ug/L
RT: 11.395 min Scan# 1695
Delta R.T. 0.005 min
Lab File: 013015H09.D
Acq: 30 Jan 2015 18:14

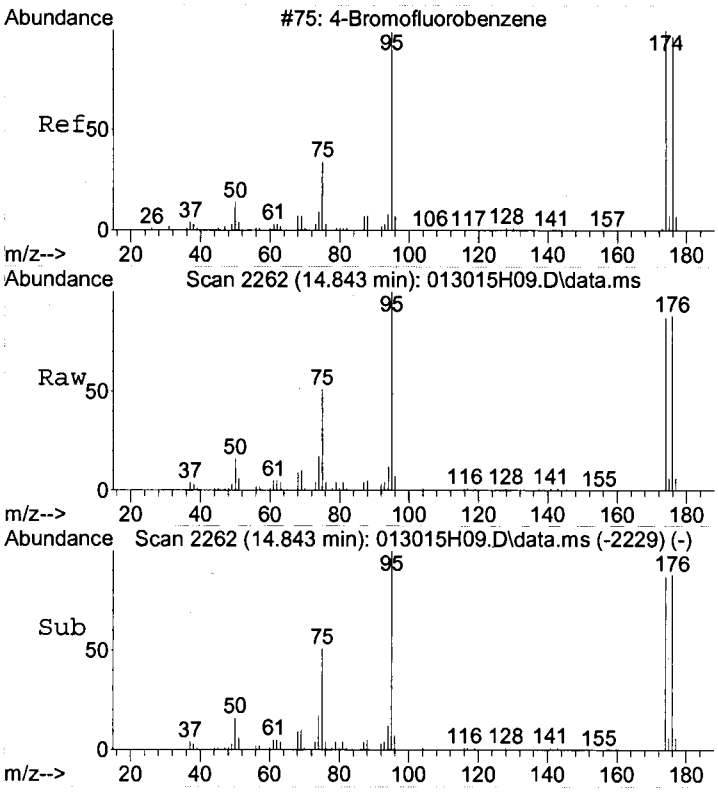
Tgt Ion:166 Resp: 770242

Ion	Ratio	Lower	Upper
166	100		
168	47.9	27.5	67.5
129	69.4	51.3	91.3





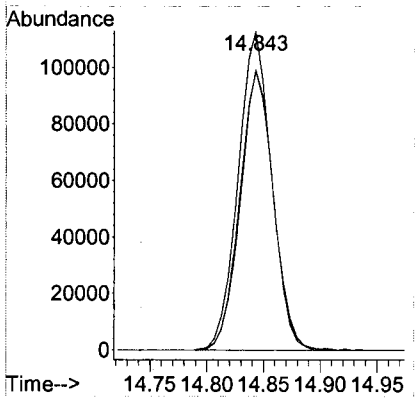


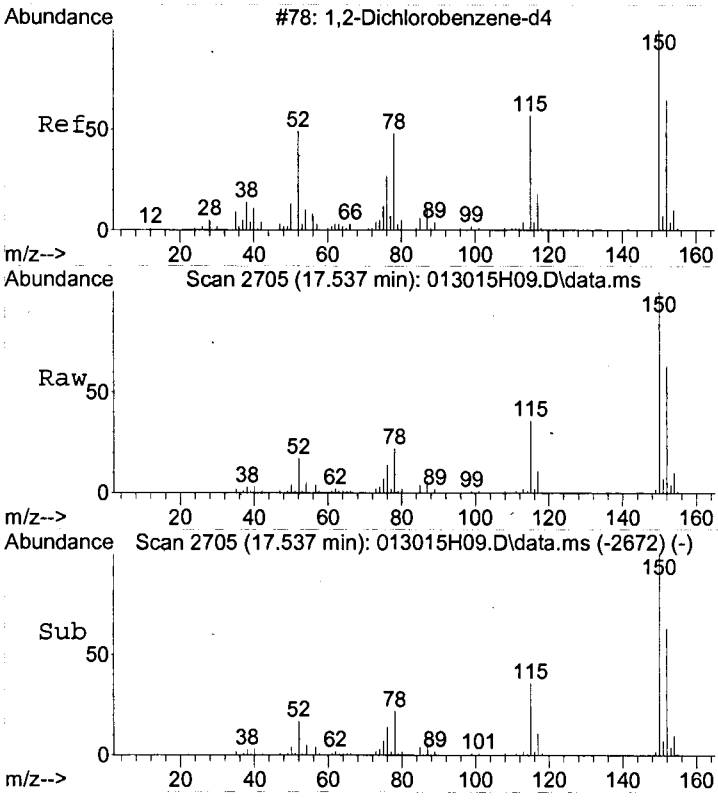


#56
4-Bromofluorobenzene
Concen: 4.43 ug/L
RT: 14.843 min Scan# 2262
Delta R.T. -0.001 min
Lab File: 013015H09.D
Acq: 30 Jan 2015 18:14

Tgt Ion: 95 Resp: 231544

Ion	Ratio	Lower	Upper
95	100		
174	88.7	68.9	108.9
176	86.7	66.0	106.0

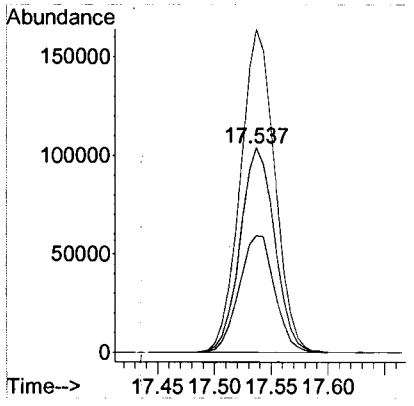




#70
1,2-Dichlorobenzene-d4
Concen: 4.40 ug/L
RT: 17.537 min Scan# 2705
Delta R.T. -0.001 min
Lab File: 013015H09.D
Acq: 30 Jan 2015 18:14

Tgt Ion:152 Resp: 219834

Ion	Ratio	Lower	Upper
152	100		
115	58.7	39.3	79.3
150	157.5	152.8	192.8



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H10.D
Acq On : 30 Jan 2015 18:50
Instrument: HP5973H
Operator : YNB
Sample : 1501036-03
Misc : MW-4C,WATER
ALS Vial : 35
Multiplier: 1

Quant Time: Feb 02 08:13:38 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.902	53	93247	5.000 ug/L	0.01
24) Fluorobenzene	7.825	96	892774	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.787	117	573199	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.278	65	119572	4.871 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 97.40%	
39) Toluene-d8	10.397	98	876822	5.159 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 103.20%	
56) 4-Bromofluorobenzene	14.843	95	227515	4.602 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 92.00%	
70) 1,2-Dichlorobenzene-d4	17.537	152	211126	4.461 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 89.20%	
Target Compounds					Qvalue
10) Acetone	3.331	43	29864	8.333 ug/L	87
43) Tetrachloroethene	11.395	166	78102	1.745 ug/L	97

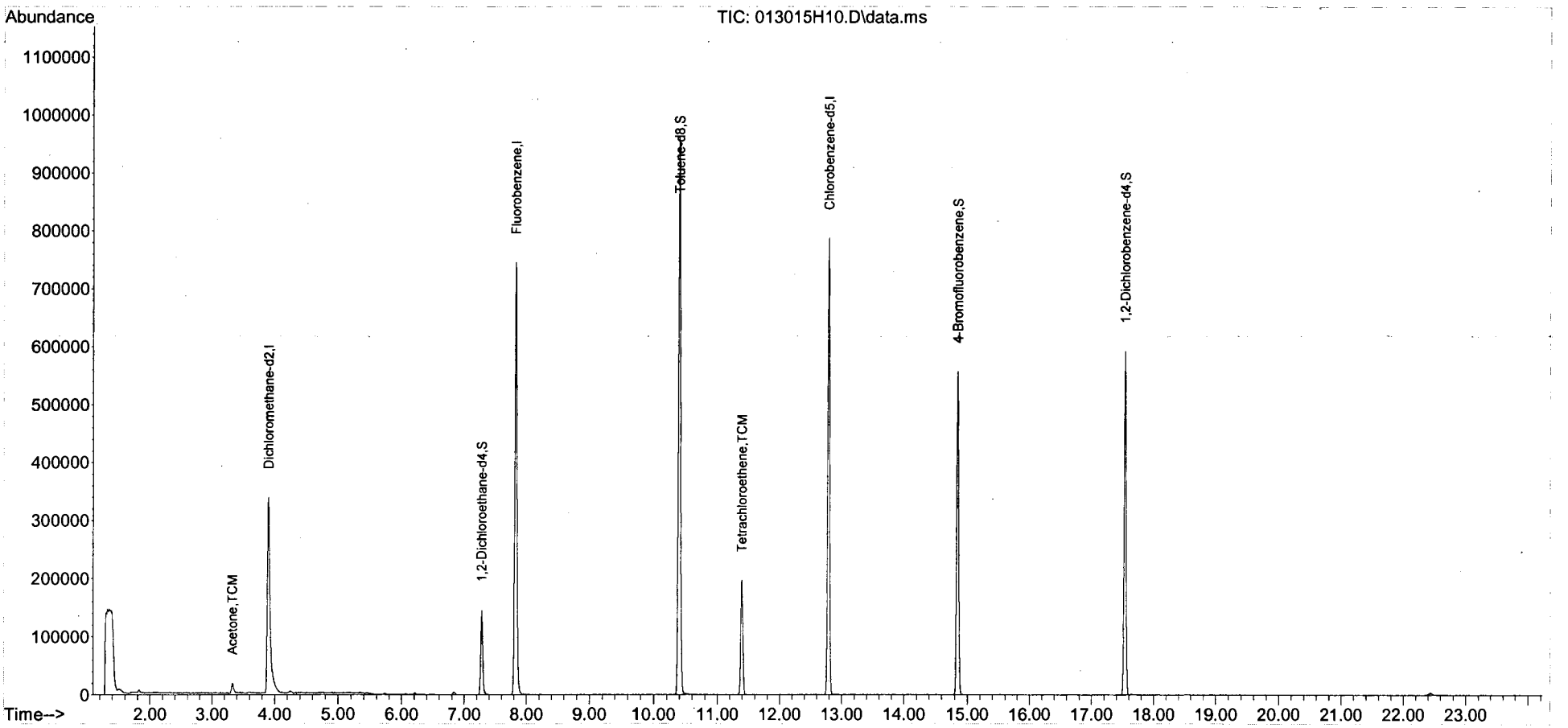
(#) = qualifier out of range (m) = manual integration (+) = signals summed

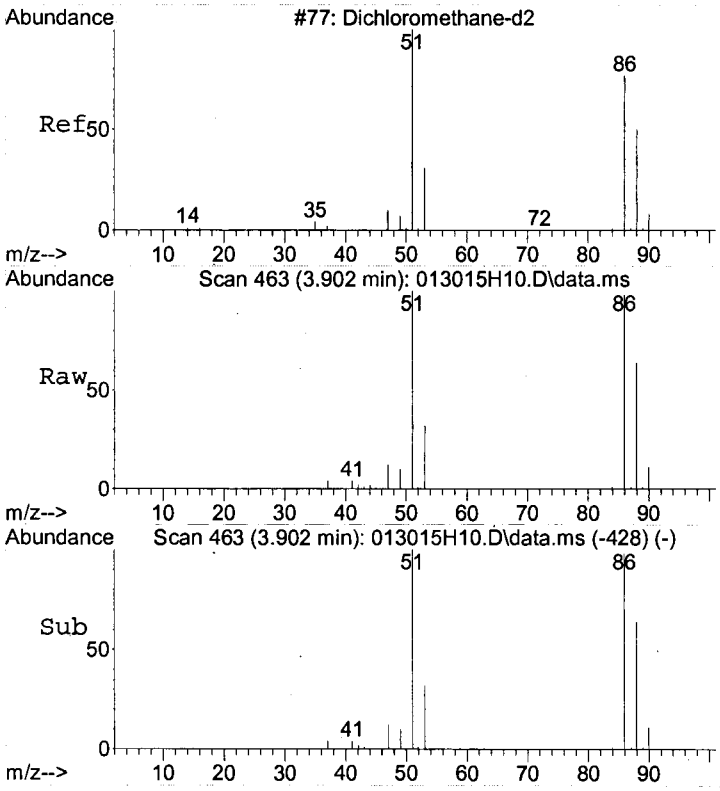
Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H10.D
Acq On : 30 Jan 2015 18:50
Instrument: HP5973H
Operator : YNB
Sample : 1501036-03
Misc : MW-4C,WATER
ALS Vial : 35
Multiplier: 1

Quant Time: Feb 02 08:13:38 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

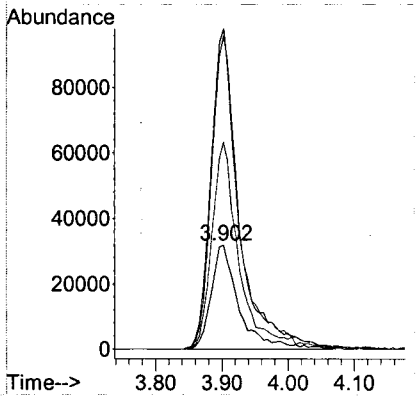


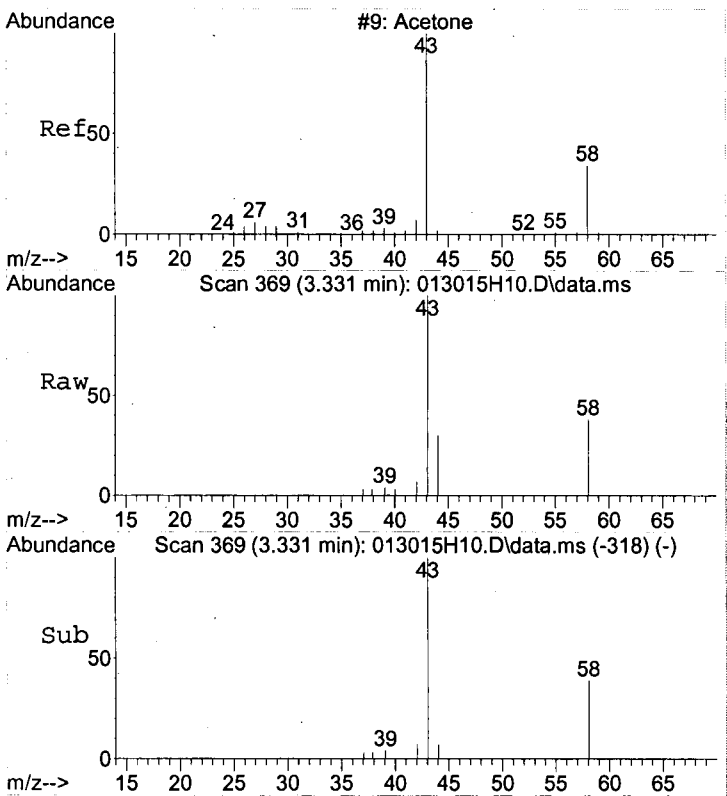


#1
Dichloromethane-d2
Concen: 5.00 ug/L
RT: 3.902 min Scan# 463
Delta R.T. 0.010 min
Lab File: 013015H10.D
Acq: 30 Jan 2015 18:50

Tgt Ion: 53 Resp: 93247

Ion	Ratio	Lower	Upper
53	100		
51	310.6	381.1	421.1#
86	304.8	490.1	530.1#
88	196.3	211.2	251.2#

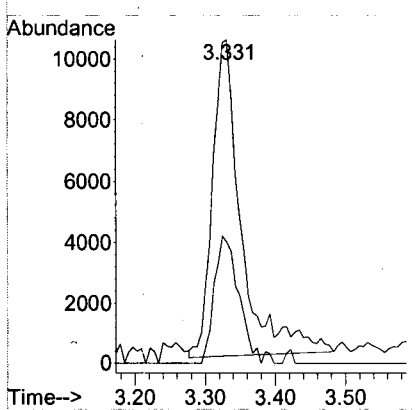


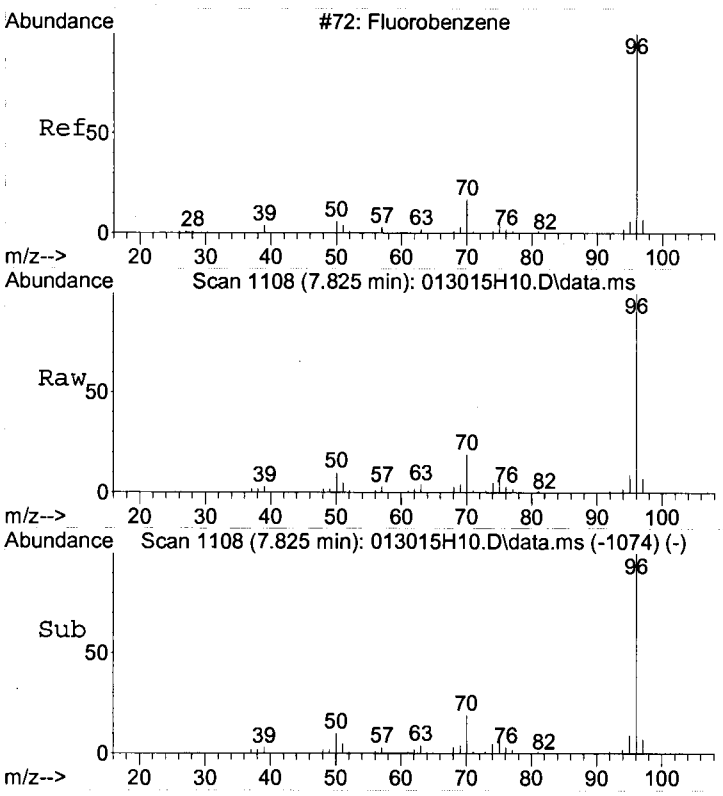


#10
Acetone
Concen: 8.33 ug/L
RT: 3.331 min Scan# 369
Delta R.T. 0.010 min
Lab File: 013015H10.D
Acq: 30 Jan 2015 18:50

Tgt Ion: 43 Resp: 29864

Ion	Ratio	Lower	Upper
43	100		
58	33.9	22.4	62.4

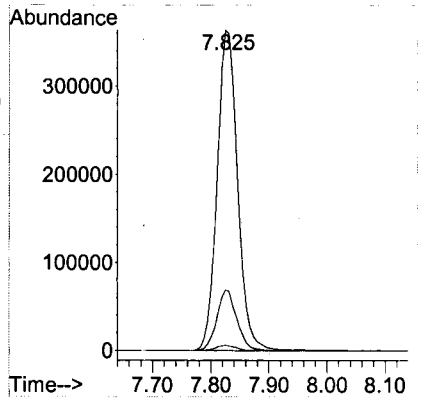


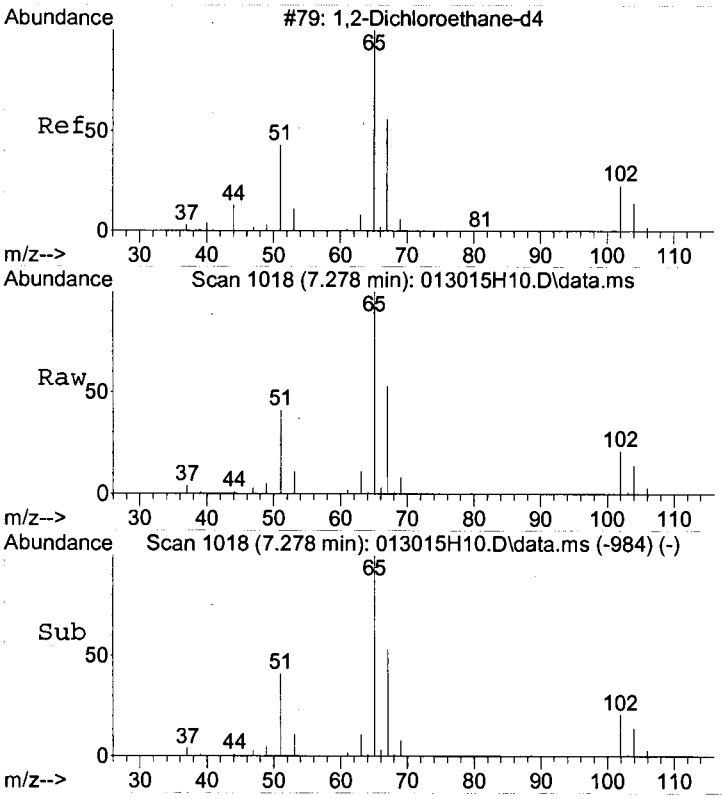


#24
Fluorobenzene
Concen: 5.00 ug/L
RT: 7.825 min Scan# 1108
Delta R.T. 0.004 min
Lab File: 013015H10.D
Acq: 30 Jan 2015 18:50

Tgt Ion: 96 Resp: 892774

Ion	Ratio	Lower	Upper
96	100		
70	18.5	0.0	38.7
77	1.6	0.0	21.6

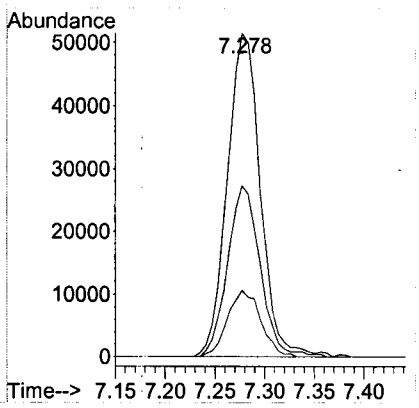


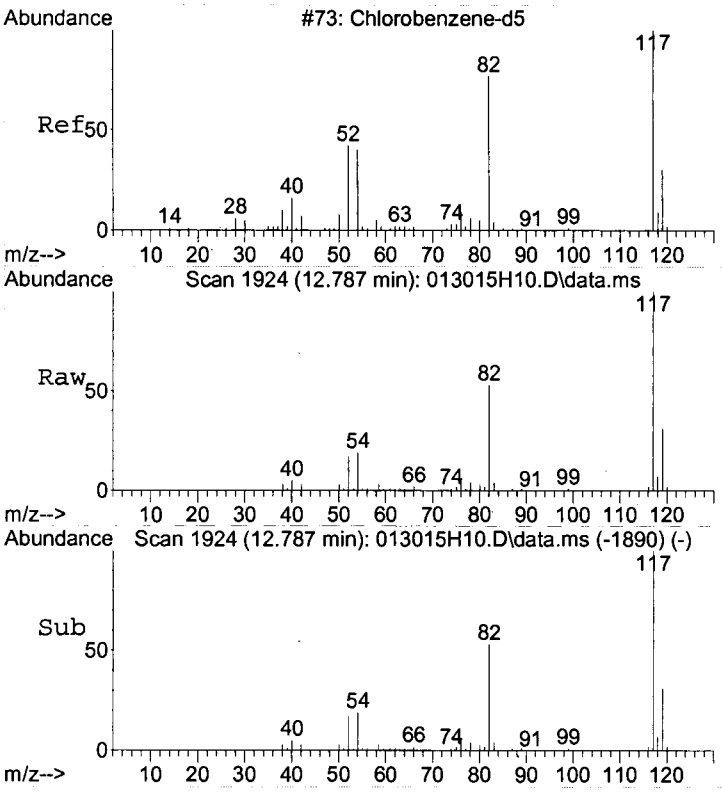


#28
1,2-Dichloroethane-d4
Concen: 4.87 ug/L
RT: 7.278 min Scan# 1018
Delta R.T. 0.004 min
Lab File: 013015H10.D
Acq: 30 Jan 2015 18:50

Tgt Ion: 65 Resp: 119572

Ion	Ratio	Lower	Upper
65	100		
67	52.4	32.3	72.3
102	20.8	1.3	41.3

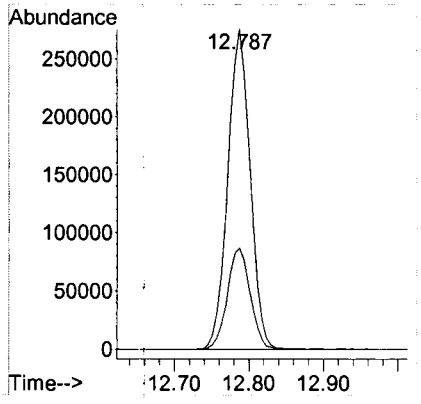


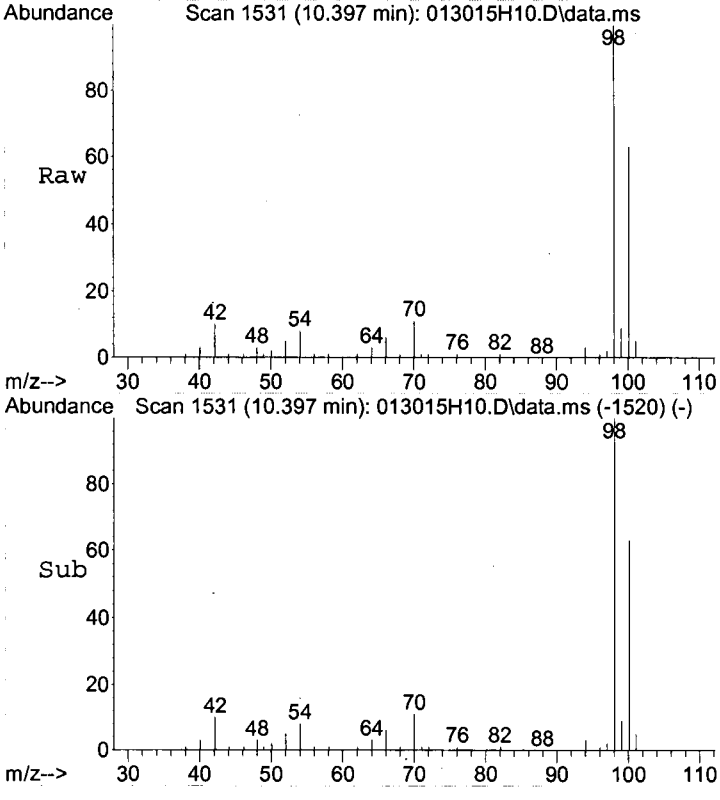


#37
Chlorobenzene-d5
Concen: 5.00 ug/L
RT: 12.787 min Scan# 1924
Delta R.T. 0.004 min
Lab File: 013015H10.D
Acq: 30 Jan 2015 18:50

Tgt Ion:117 Resp: 573199

Ion	Ratio	Lower	Upper
117	100		
119	32.3	11.7	51.7

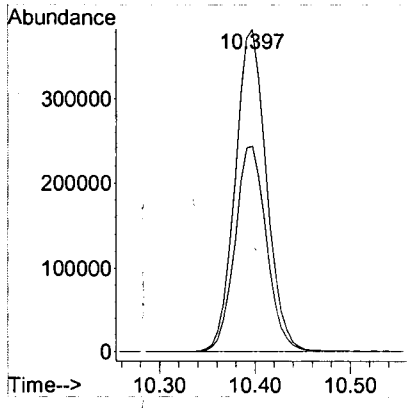


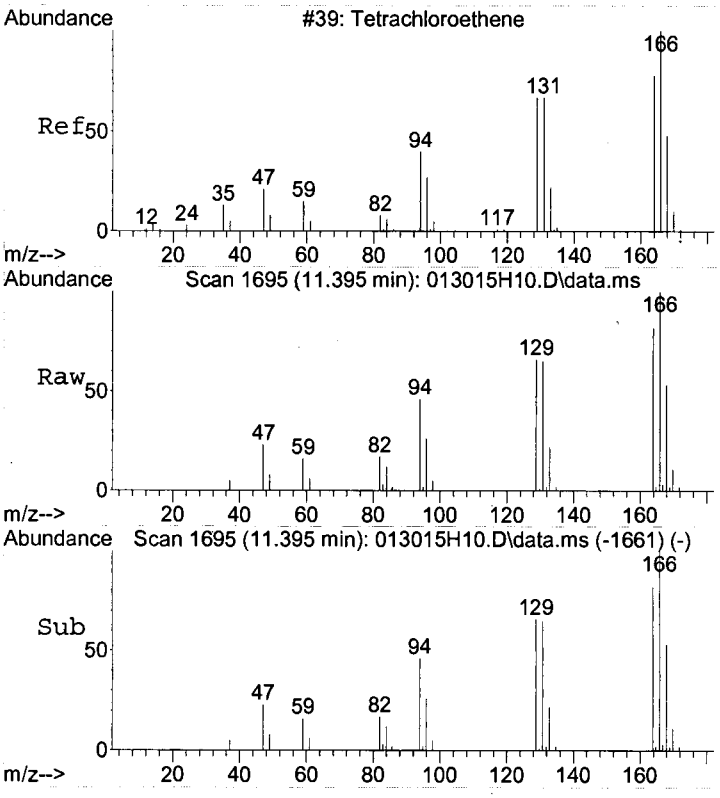


#39
Toluene-d8
Concen: 5.16 ug/L
RT: 10.397 min Scan# 1531
Delta R.T. 0.004 min
Lab File: 013015H10.D
Acq: 30 Jan 2015 18:50

Tgt Ion: 98 Resp: 876822

Ion	Ratio	Lower	Upper
98	100		
100	64.6	45.3	85.3

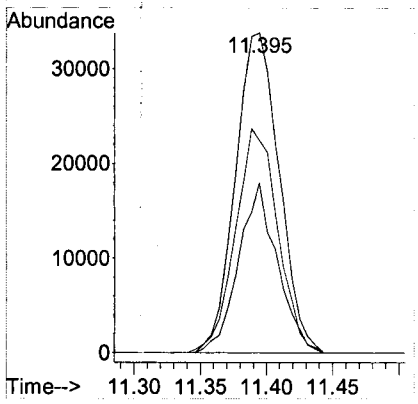


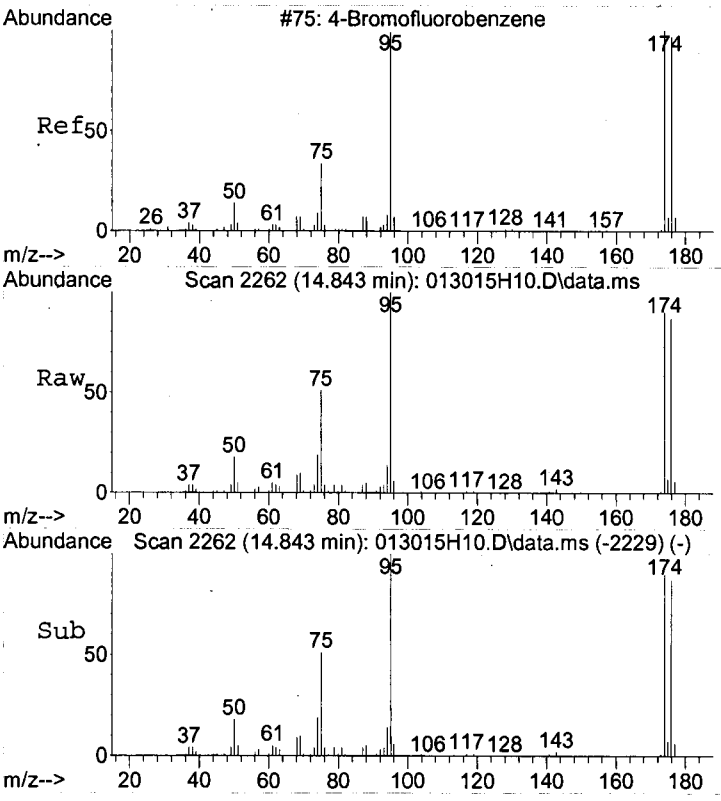


#43
Tetrachloroethene
Concen: 1.74 ug/L
RT: 11.395 min Scan# 1695
Delta R.T. 0.004 min
Lab File: 013015H10.D
Acq: 30 Jan 2015 18:50

Tgt Ion:166 Resp: 78102

Ion	Ratio	Lower	Upper
166	100		
168	46.9	27.5	67.5
129	68.0	51.3	91.3

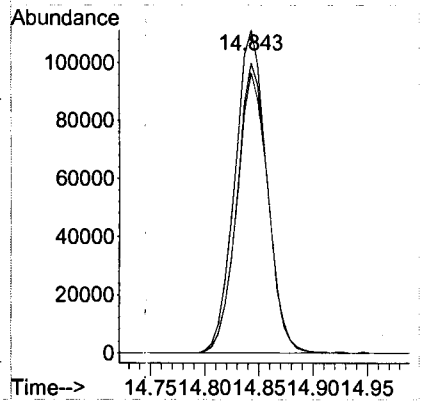


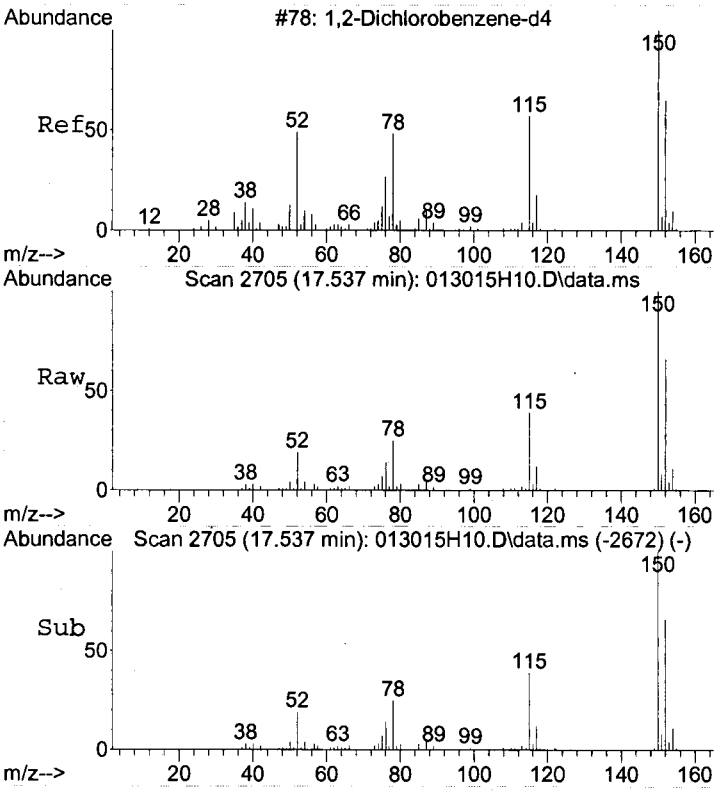


#56
4-Bromofluorobenzene
Concen: 4.60 ug/L
RT: 14.843 min Scan# 2262
Delta R.T. -0.002 min
Lab File: 013015H10.D
Acq: 30 Jan 2015 18:50

Tgt Ion: 95 Resp: 227515

Ion	Ratio	Lower	Upper
95	100		
174	87.8	68.9	108.9
176	85.1	66.0	106.0

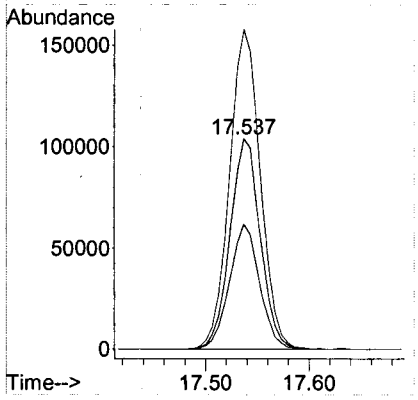




#70
1,2-Dichlorobenzene-d4
Concen: 4.46 ug/L
RT: 17.537 min Scan# 2705
Delta R.T. -0.002 min
Lab File: 013015H10.D
Acq: 30 Jan 2015 18:50

Tgt Ion:152 Resp: 211126

Ion	Ratio	Lower	Upper
152	100		
115	59.1	39.3	79.3
150	154.6	152.8	192.8



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H11.D
Acq On : 30 Jan 2015 19:26
Instrument: HP5973H
Operator : YNB
Sample : 1501036-04
Misc : MW-10A,WATER
ALS Vial : 36
Multiplier: 1

Quant Time: Feb 02 08:13:50 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.898	53	97135	5.000 ug/L	0.00
24) Fluorobenzene	7.826	96	887123	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.782	117	575648	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.279	65	117273	4.808 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 96.20%	
39) Toluene-d8	10.399	98	872611	5.113 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 102.20%	
56) 4-Bromofluorobenzene	14.844	95	223887	4.510 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 90.20%	
70) 1,2-Dichlorobenzene-d4	17.538	152	208237	4.382 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 87.60%	
Target Compounds					Qvalue
10) Acetone	3.332	43	10204	2.733 ug/L #	50
23) Chloroform	6.519	83	463786	6.965 ug/L	99
43) Tetrachloroethene	11.396	166	1138054	25.317 ug/L ?	98 Cr

(#) = qualifier out of range (m) = manual integration (+) = signals summed

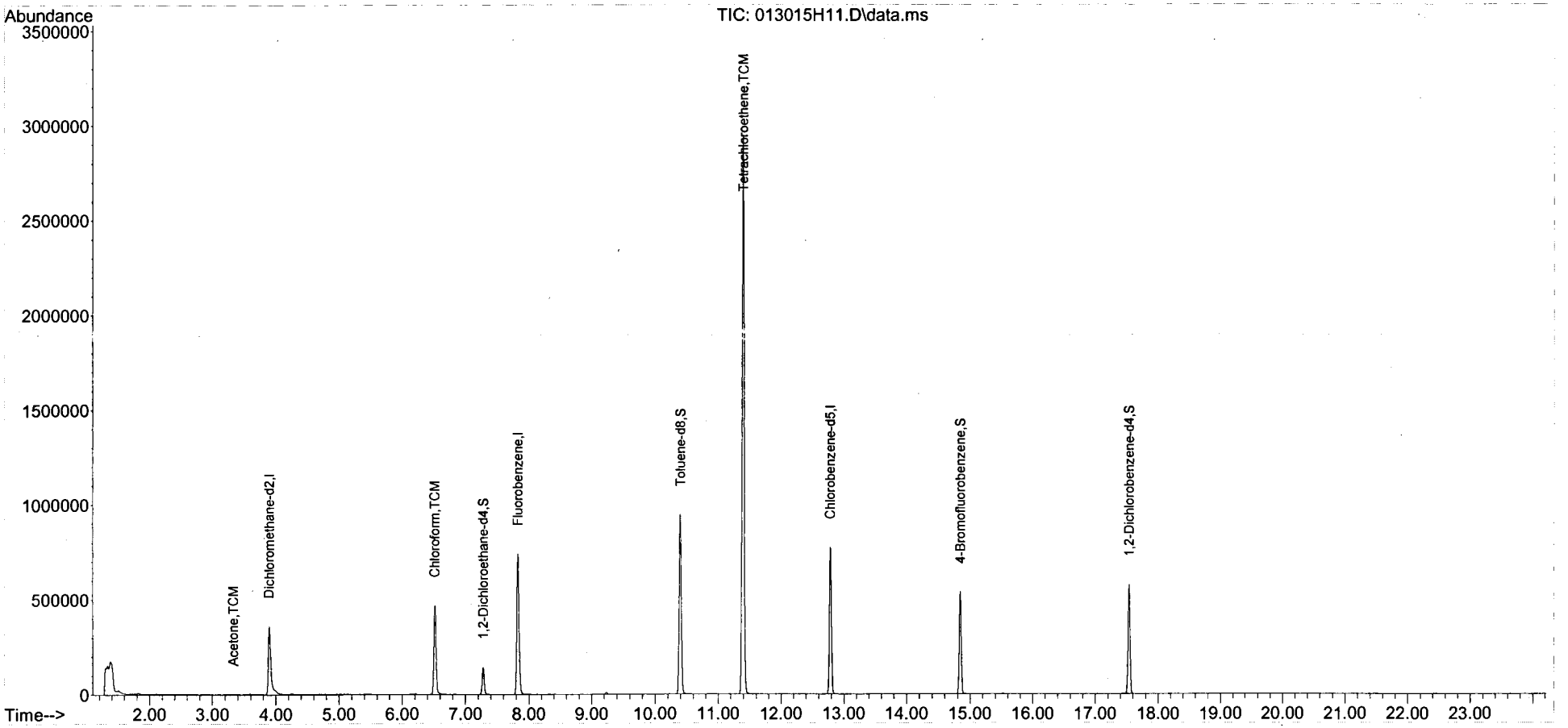
00386

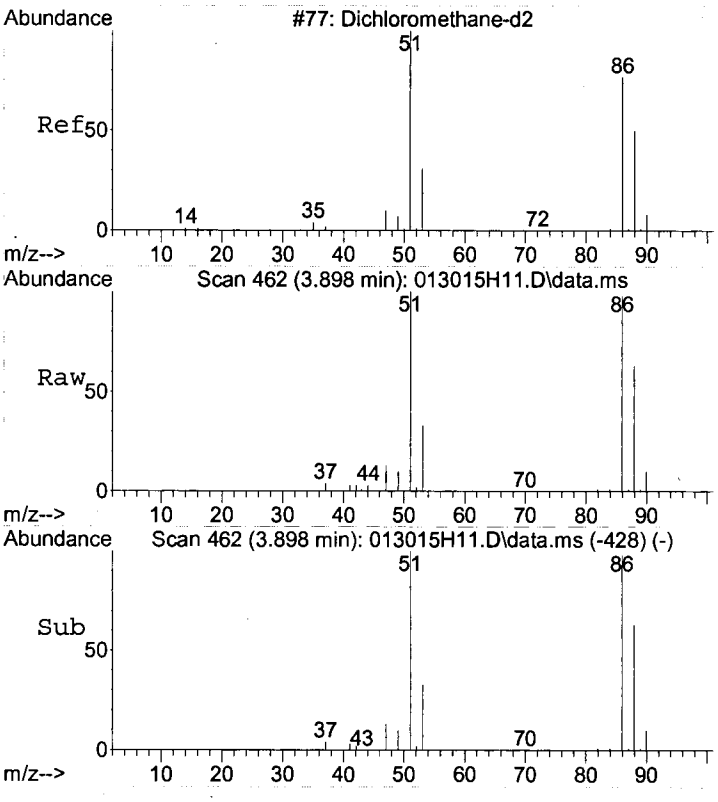
Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H11.D
Acq On : 30 Jan 2015 19:26
Instrument: HP5973H
Operator : YNB
Sample : 1501036-04
Misc : MW-10A,WATER
ALS Vial : 36
Multiplier: 1

Quant Time: Feb 02 08:13:50 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

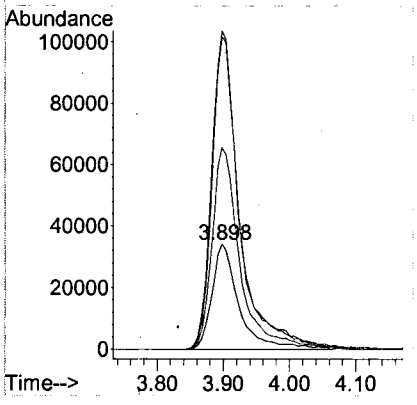


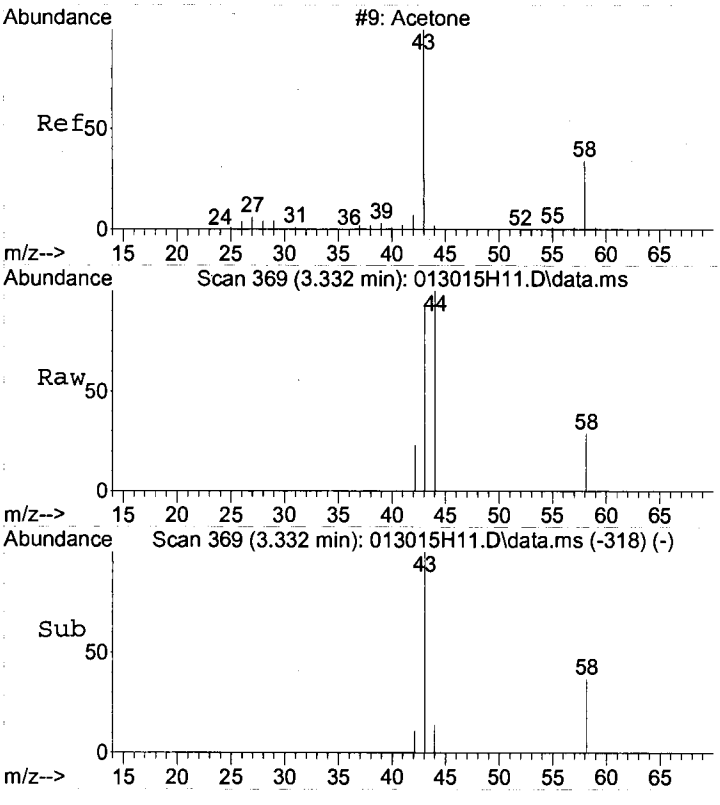


#1
Dichloromethane-d2
Concen: 5.00 ug/L
RT: 3.898 min Scan# 462
Delta R.T. 0.006 min
Lab File: 013015H11.D
Acq: 30 Jan 2015 19:26

Tgt Ion: 53 Resp: 97135

Ion	Ratio	Lower	Upper
53	100		
51	313.1	381.1	421.1#
86	305.8	490.1	530.1#
88	198.3	211.2	251.2#

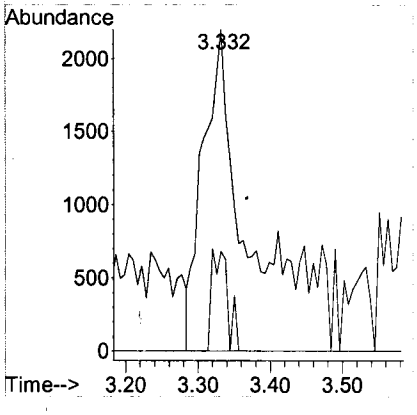


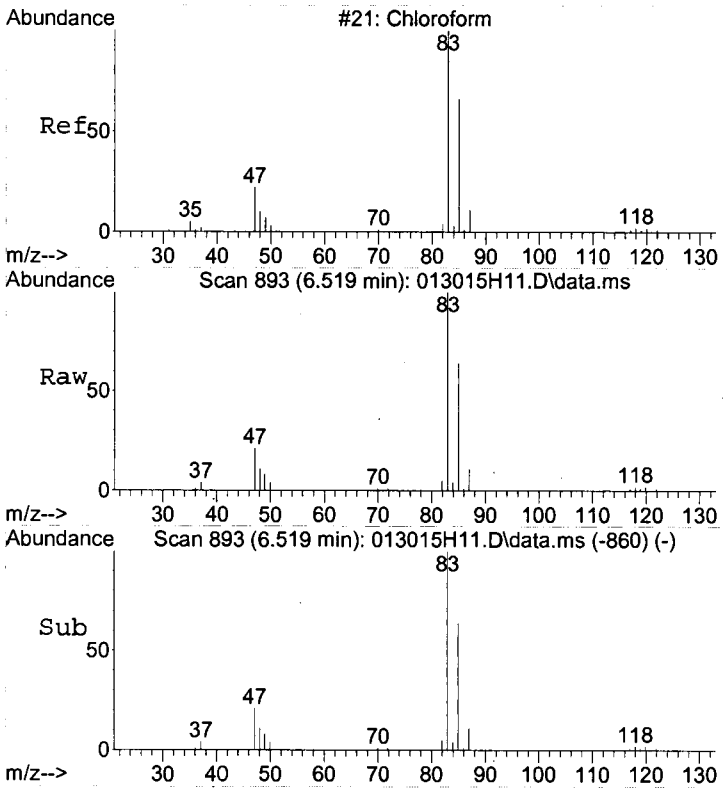


#10
Acetone
Concen: 2.73 ug/L
RT: 3.332 min Scan# 369
Delta R.T. 0.012 min
Lab File: 013015H11.D
Acq: 30 Jan 2015 19:26

Tgt Ion: 43 Resp: 10204

Ion	Ratio	Lower	Upper
43	100		
58	10.4	22.4	62.4#

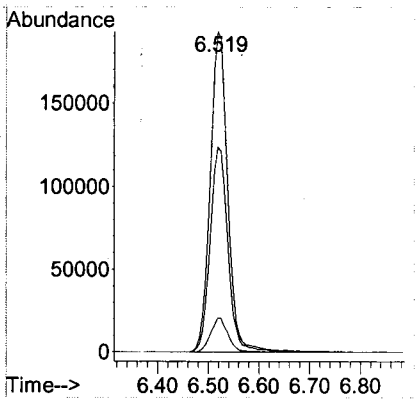


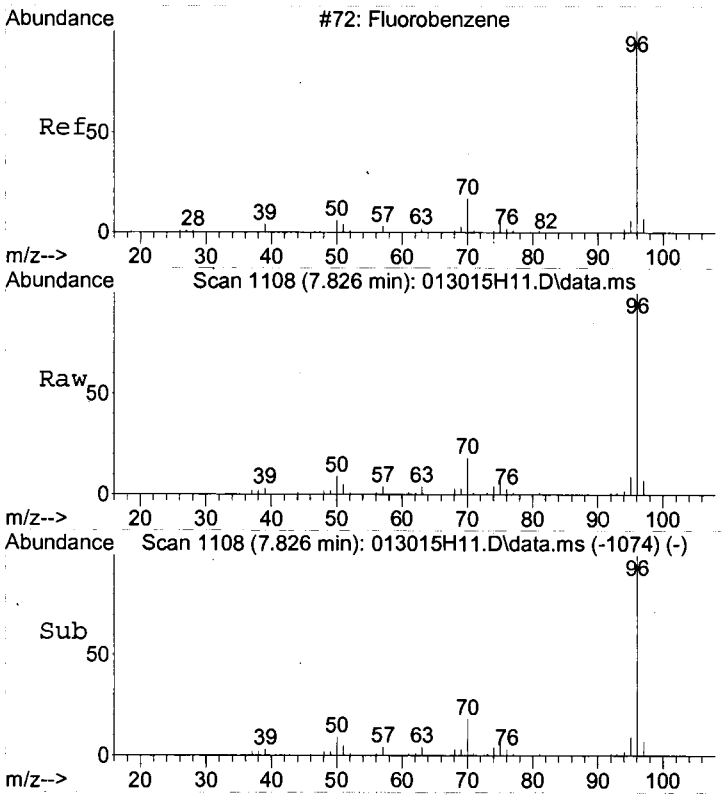


#23
Chloroform
Concen: 6.96 ug/L
RT: 6.519 min Scan# 893
Delta R.T. -0.001 min
Lab File: 013015H11.D
Acq: 30 Jan 2015 19:26

Tgt Ion: 83 Resp: 463786

Ion	Ratio	Lower	Upper
83	100		
85	65.3	44.4	84.4
87	10.4	0.0	30.8

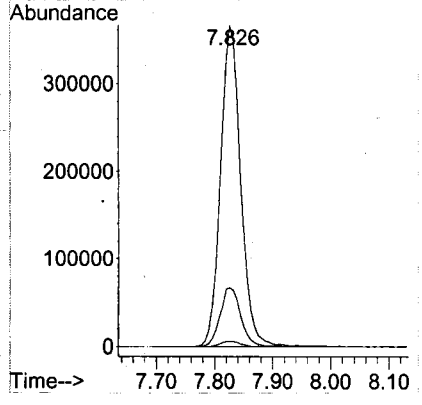


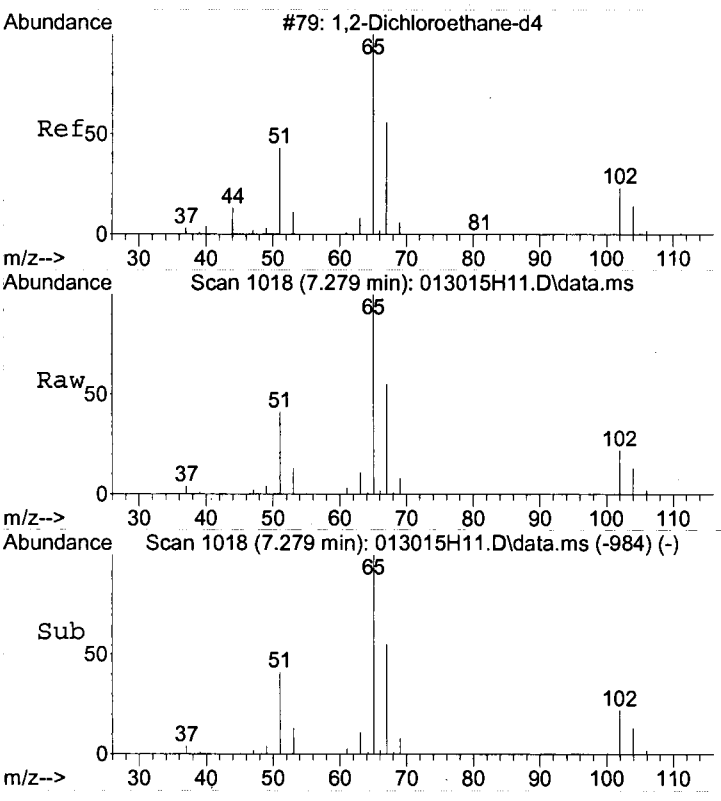


#24
Fluorobenzene
Concen: 5.00 ug/L
RT: 7.826 min Scan# 1108
Delta R.T. 0.006 min
Lab File: 013015H11.D
Acq: 30 Jan 2015 19:26

Tgt Ion: 96 Resp: 887123

Ion	Ratio	Lower	Upper
96	100		
70	18.6	0.0	38.7
77	1.6	0.0	21.6

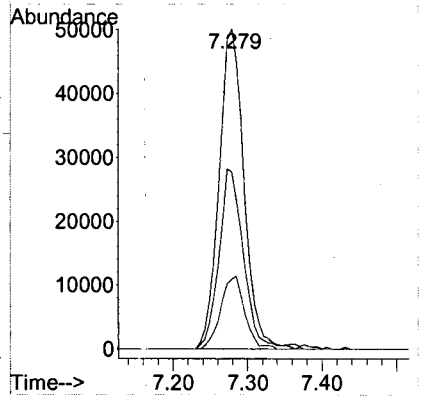


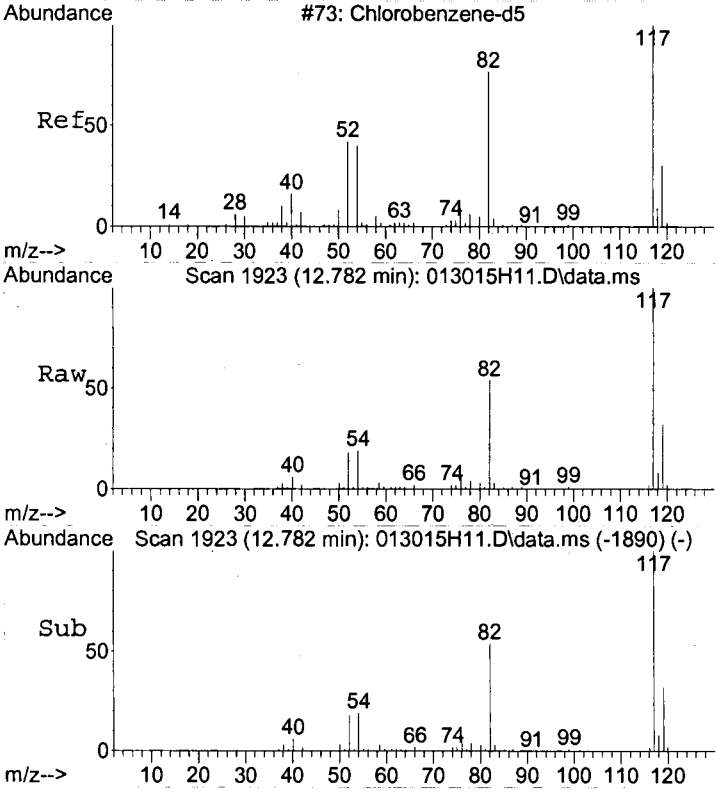


#28
1,2-Dichloroethane-d4
Concen: 4.81 ug/L
RT: 7.279 min Scan# 1018
Delta R.T. 0.006 min
Lab File: 013015H11.D
Acq: 30 Jan 2015 19:26

Tgt Ion: 65 Resp: 117273

Ion	Ratio	Lower	Upper
65	100		
67	54.6	32.3	72.3
102	21.6	1.3	41.3

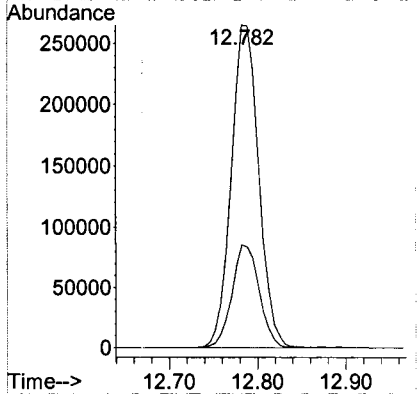


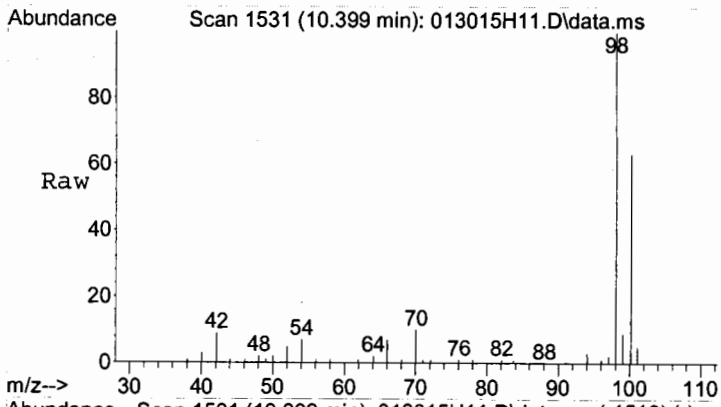


#37
Chlorobenzene-d5
Concen: 5.00 ug/L
RT: 12.782 min Scan# 1923
Delta R.T. -0.001 min
Lab File: 013015H11.D
Acq: 30 Jan 2015 19:26

Tgt Ion:117 Resp: 575648

Ion	Ratio	Lower	Upper
117	100		
119	31.8	11.7	51.7

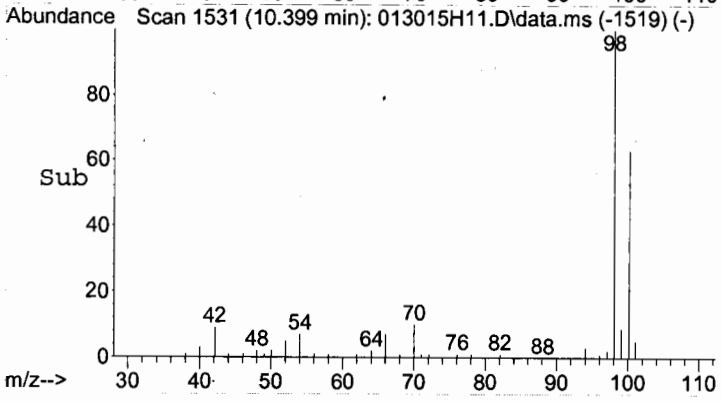


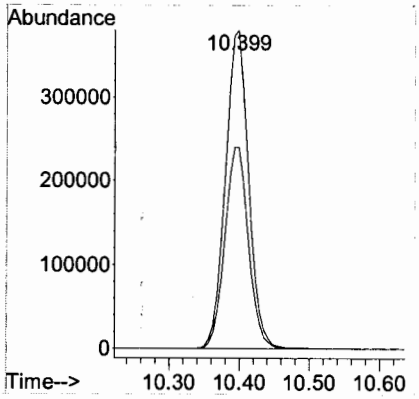


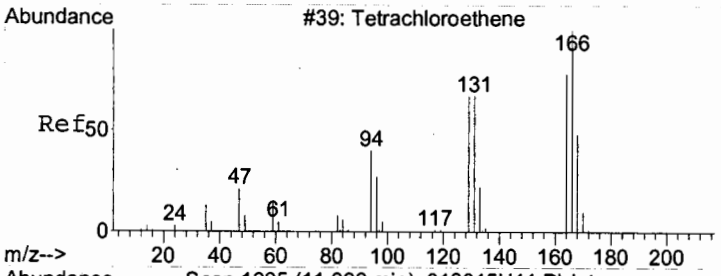
#39
Toluene-d8
Concen: 5.11 ug/L
RT: 10.399 min Scan# 1531
Delta R.T. 0.006 min
Lab File: 013015H11.D
Acq: 30 Jan 2015 19:26

Tgt Ion: 98 Resp: 872611

Ion	Ratio	Lower	Upper
98	100		
100	64.3	45.3	85.3



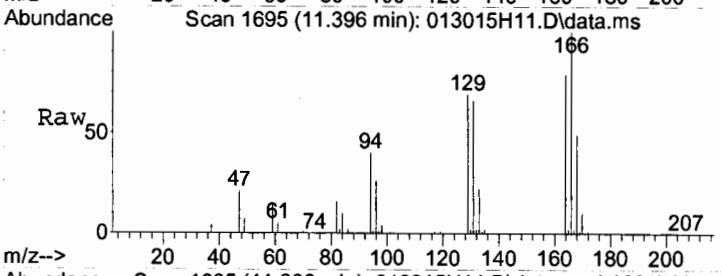


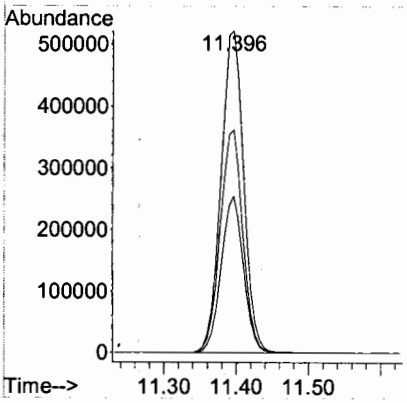


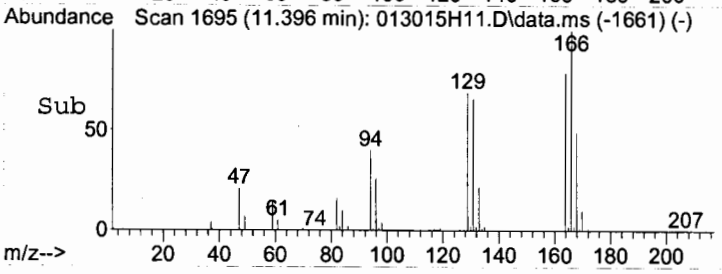
#43
Tetrachloroethene
Concen: 25.32 ug/L
RT: 11.396 min Scan# 1695
Delta R.T. 0.006 min
Lab File: 013015H11.D
Acq: 30 Jan 2015 19:26

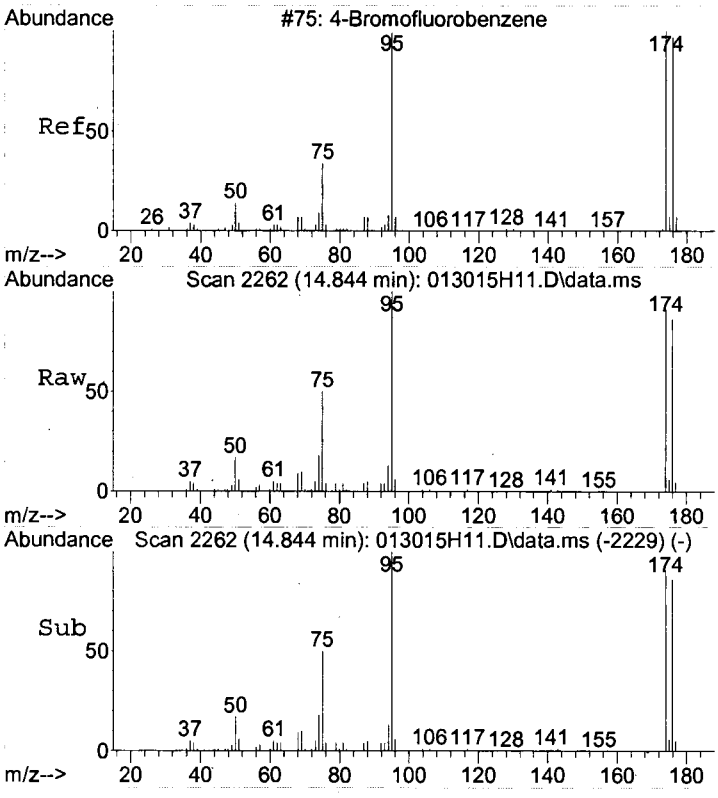
Tgt Ion:166 Resp: 1138054

Ion	Ratio	Lower	Upper
166	100		
168	47.9	27.5	67.5
129	69.2	51.3	91.3





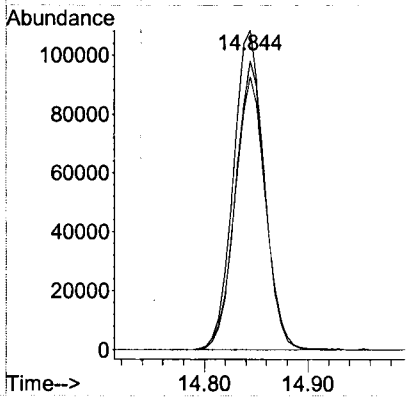


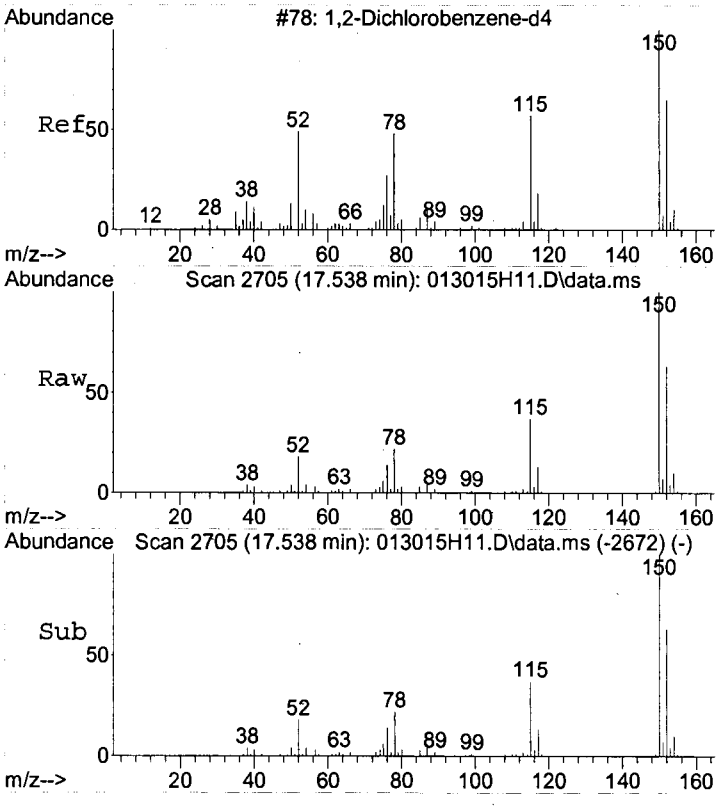


#56
4-Bromofluorobenzene
Concen: 4.51 ug/L
RT: 14.844 min Scan# 2262
Delta R.T. -0.001 min
Lab File: 013015H11.D
Acq: 30 Jan 2015 19:26

Tgt Ion: 95 Resp: 223887

Ion	Ratio	Lower	Upper
95	100		
174	87.4	68.9	108.9
176	84.8	66.0	106.0

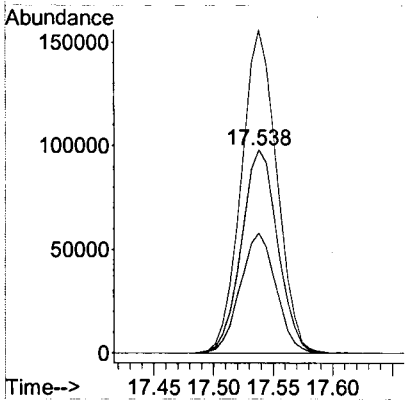




#70
1,2-Dichlorobenzene-d4
Concen: 4.38 ug/L
RT: 17.538 min Scan# 2705
Delta R.T. -0.001 min
Lab File: 013015H11.D
Acq: 30 Jan 2015 19:26

Tgt Ion:152 Resp: 208237

Ion	Ratio	Lower	Upper
152	100		
115	58.4	39.3	79.3
150	156.1	152.8	192.8



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H12.D
Acq On : 30 Jan 2015 20:02
Instrument: HP5973H
Operator : YNB
Sample : 1501036-05
Misc : MW-10B,WATER
ALS Vial : 37
Multiplier: 1

Quant Time: Feb 02 08:14:03 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.897	53	93206	5.000 ug/L	0.00
24) Fluorobenzene	7.826	96	863299	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.788	117	551522	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.278	65	115761	4.877 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 97.60%	
39) Toluene-d8	10.398	98	850812	5.203 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 104.00%	
56) 4-Bromofluorobenzene	14.844	95	215778	4.536 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 90.80%	
70) 1,2-Dichlorobenzene-d4	17.538	152	201401	4.423 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 88.40%	
Target Compounds					Qvalue
23) Chloroform	6.518	83	20432	0.320 ug/L C\.	98
43) Tetrachloroethene	11.395	166	287850	6.684 ug/L	98

use this one to report

6.55 conf min

(#) = qualifier out of range (m) = manual integration (+) = signals summed

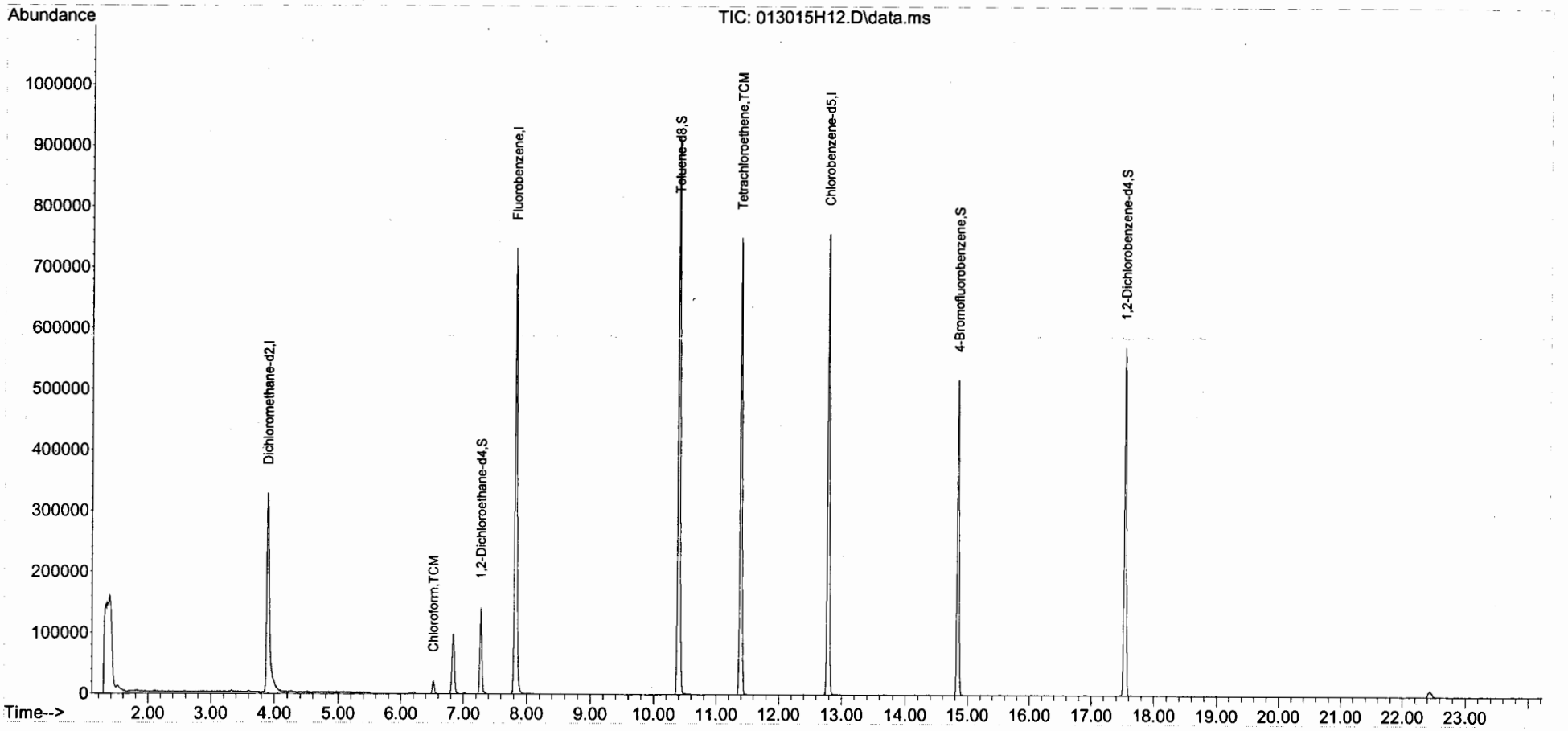
YNB
02.05.15

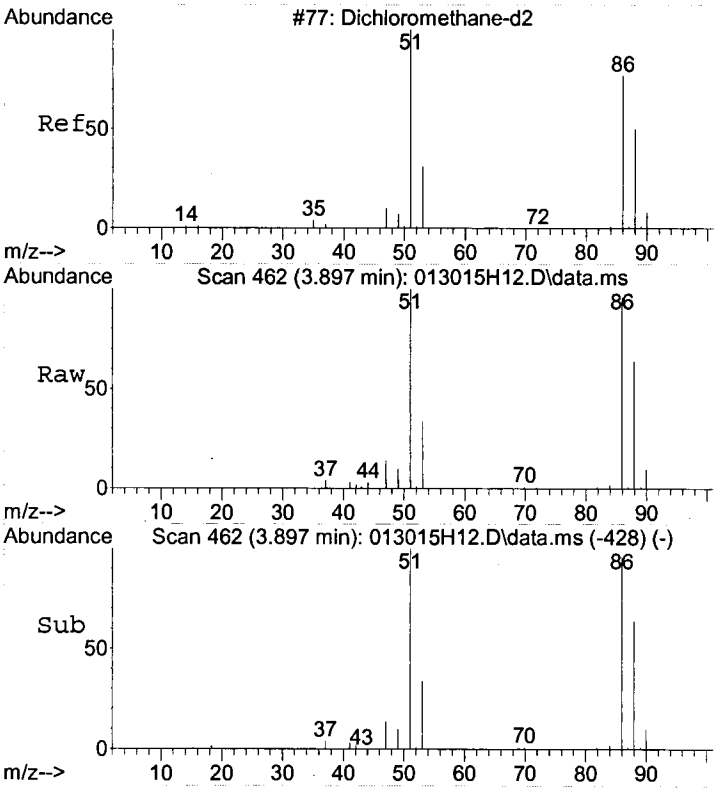
Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H12.D
Acq On : 30 Jan 2015 20:02
Instrument: HP5973H
Operator : YNB
Sample : 1501036-05
Misc : MW-10B,WATER
ALS Vial : 37
Multiplier: 1

Quant Time: Feb 02 08:14:03 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

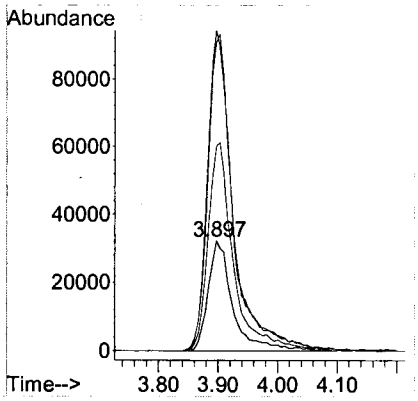


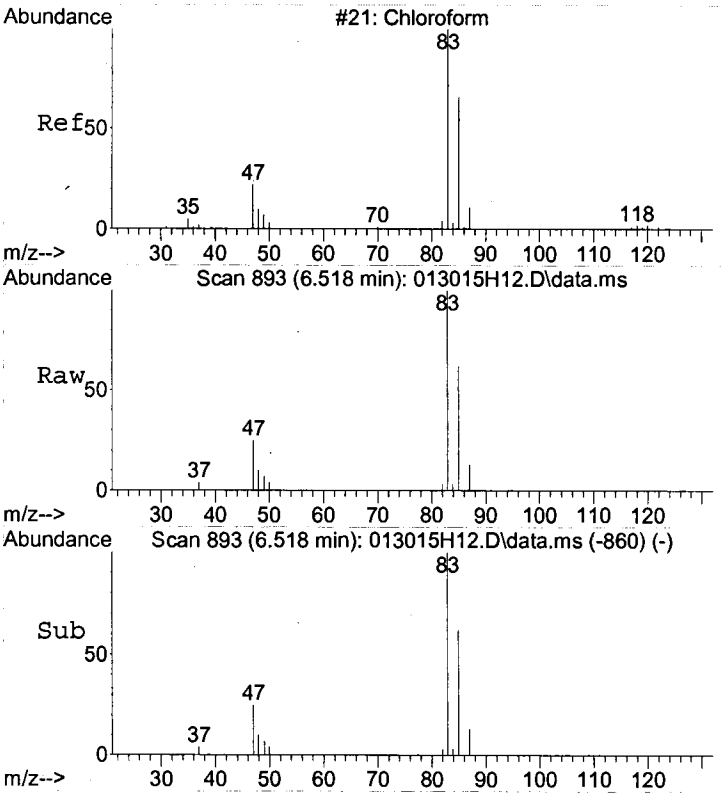


#1
Dichloromethane-d2
Concen: 5.00 ug/L
RT: 3.897 min Scan# 462
Delta R.T. 0.005 min
Lab File: 013015H12.D
Acq: 30 Jan 2015 20:02

Tgt Ion: 53 Resp: 93206

Ion	Ratio	Lower	Upper
53	100		
51	303.7	381.1	421.1#
86	299.5	490.1	530.1#
88	194.2	211.2	251.2#

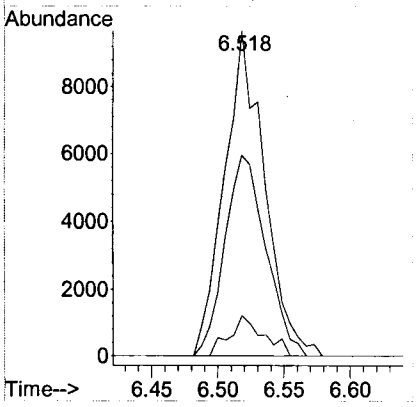




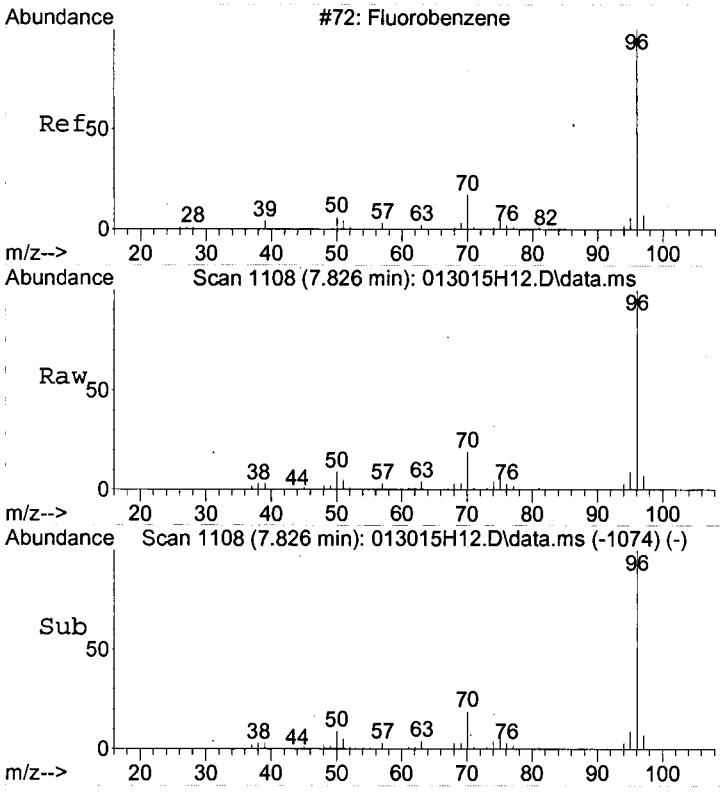
#23
Chloroform
Concen: 0.32 ug/L
RT: 6.518 min Scan# 893
Delta R.T. -0.001 min
Lab File: 013015H12.D
Acq: 30 Jan 2015 20:02

Tgt Ion: 83 Resp: 20432

Ion	Ratio	Lower	Upper
83	100		
85	63.1	44.4	84.4
87	10.6	0.0	30.8



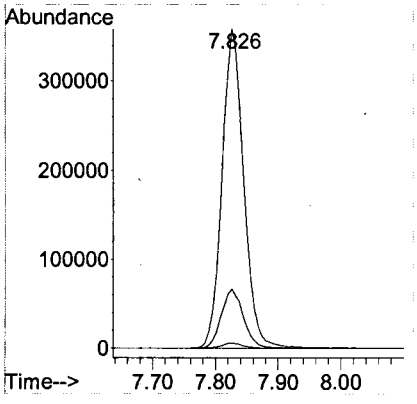
C1

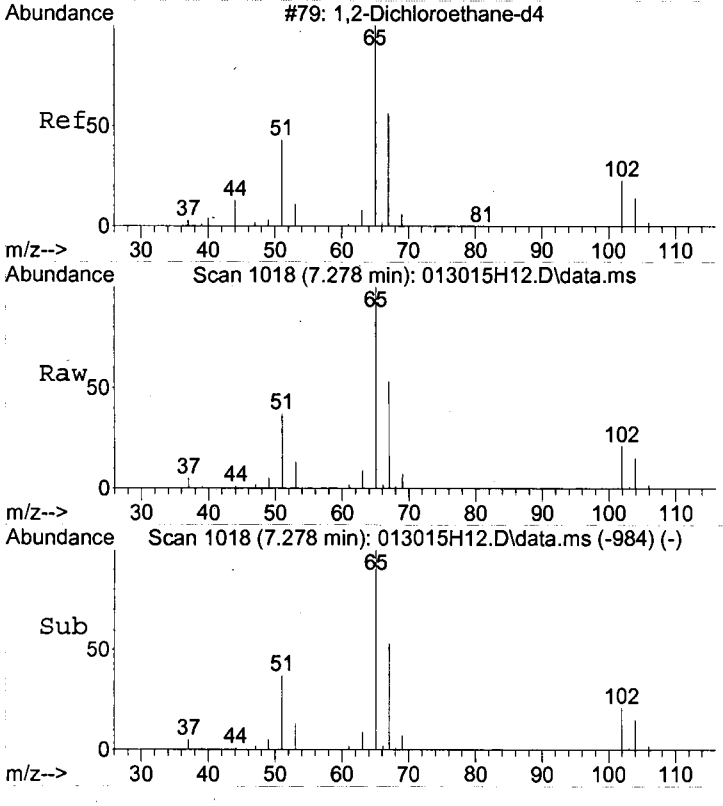


#24
Fluorobenzene
Concen: 5.00 ug/L
RT: 7.826 min Scan# 1108
Delta R.T. 0.005 min
Lab File: 013015H12.D
Acq: 30 Jan 2015 20:02

Tgt Ion: 96 Resp: 863299

Ion	Ratio	Lower	Upper
96	100		
70	18.8	0.0	38.7
77	1.5	0.0	21.6

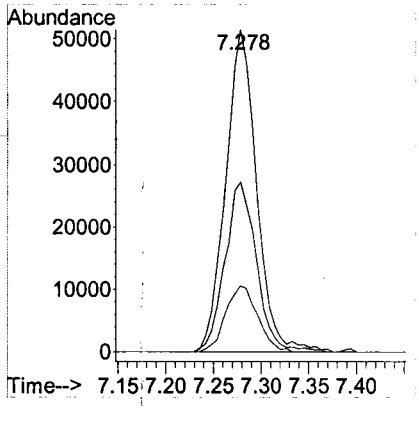


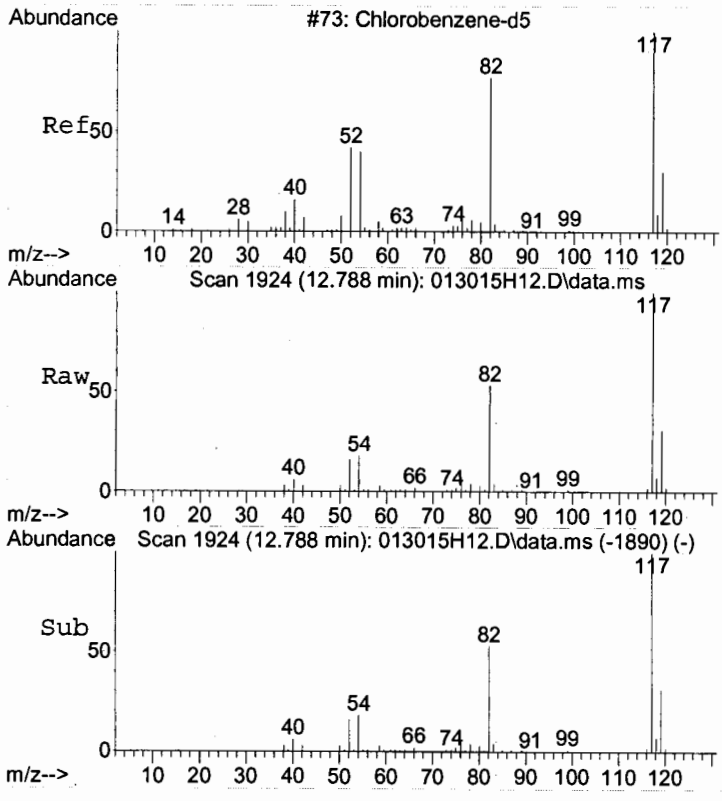


#28
1,2-Dichloroethane-d4
Concen: 4.88 ug/L
RT: 7.278 min Scan# 1018
Delta R.T. 0.005 min
Lab File: 013015H12.D
Acq: 30 Jan 2015 20:02

Tgt Ion: 65 Resp: 115761

Ion	Ratio	Lower	Upper
65	100		
67	53.9	32.3	72.3
102	21.2	1.3	41.3

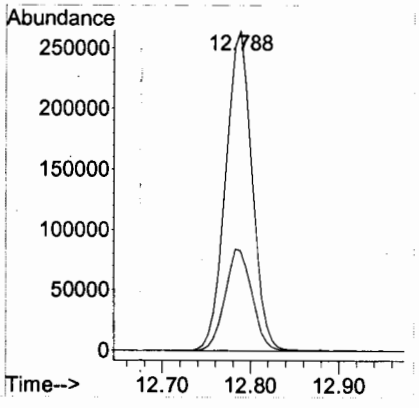


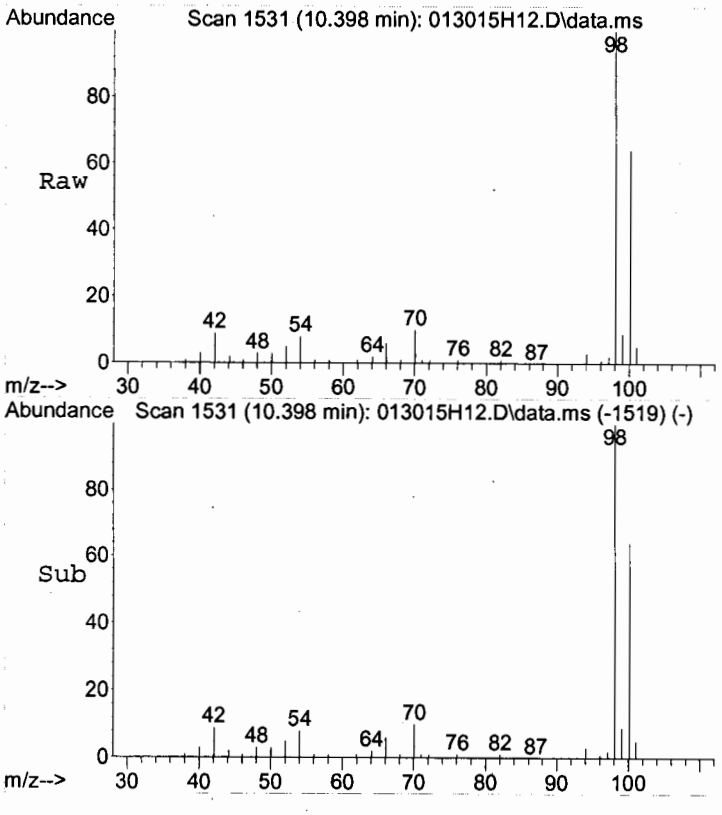


#37
Chlorobenzene-d5
Concen: 5.00 ug/L
RT: 12.788 min Scan# 1924
Delta R.T. 0.005 min
Lab File: 013015H12.D
Acq: 30 Jan 2015 20:02

Tgt Ion:117 Resp: 551522

Ion	Ratio	Lower	Upper
117	100		
119	32.3	11.7	51.7

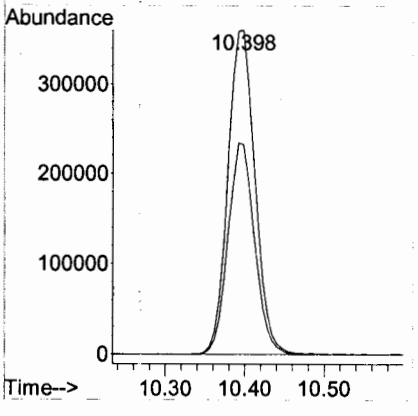


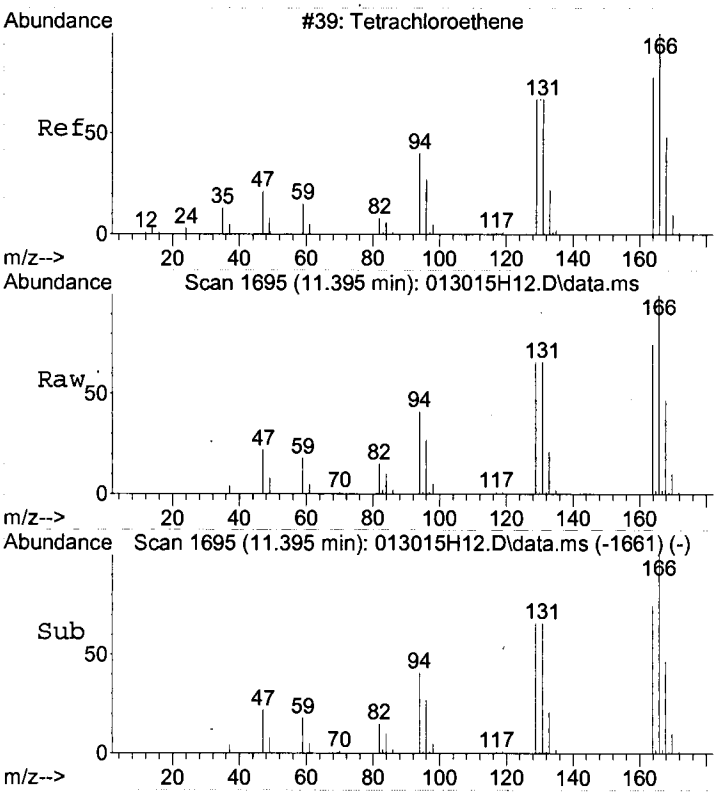


#39
Toluene-d8
Concen: 5.20 ug/L
RT: 10.398 min Scan# 1531
Delta R.T. 0.005 min
Lab File: 013015H12.D
Acq: 30 Jan 2015 20:02

Tgt Ion: 98 Resp: 850812

Ion	Ratio	Lower	Upper
98	100		
100	63.9	45.3	85.3

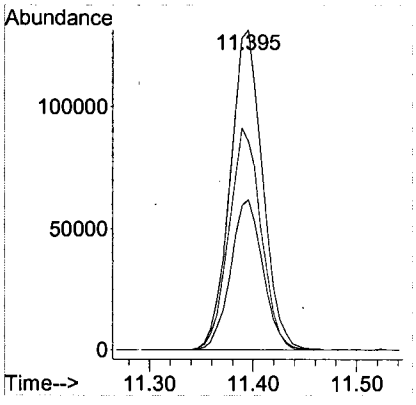


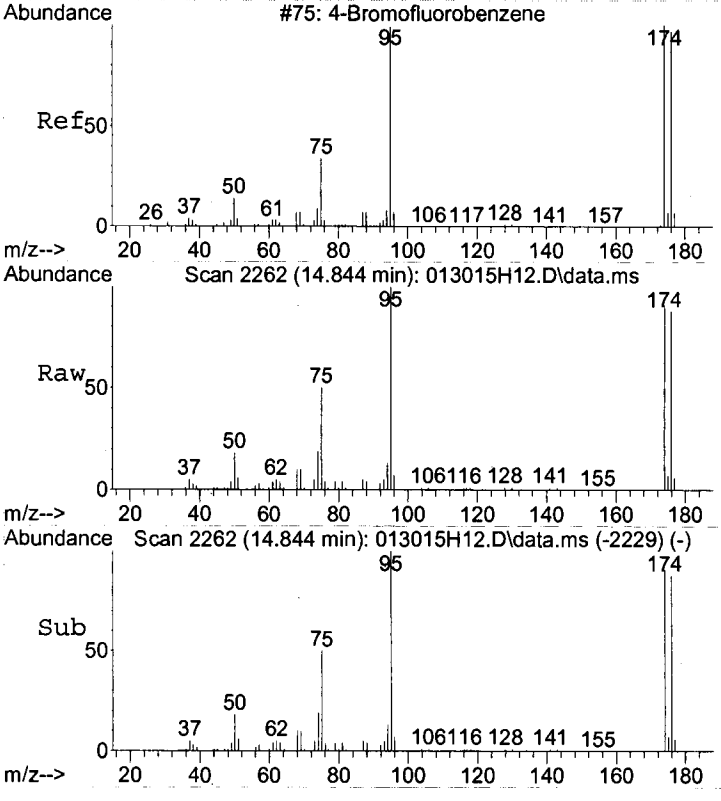


#43
Tetrachloroethene
Concen: 6.68 ug/L
RT: 11.395 min Scan# 1695
Delta R.T. 0.005 min
Lab File: 013015H12.D
Acq: 30 Jan 2015 20:02

Tgt Ion:166 Resp: 287850

Ion	Ratio	Lower	Upper
166	100		
168	47.0	27.5	67.5
129	68.9	51.3	91.3

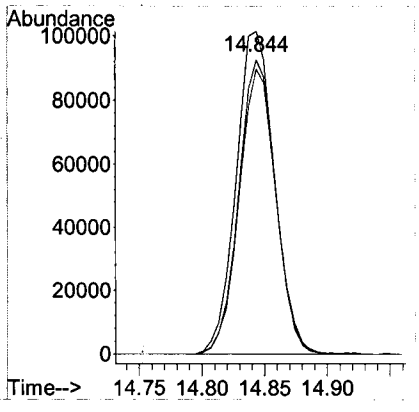


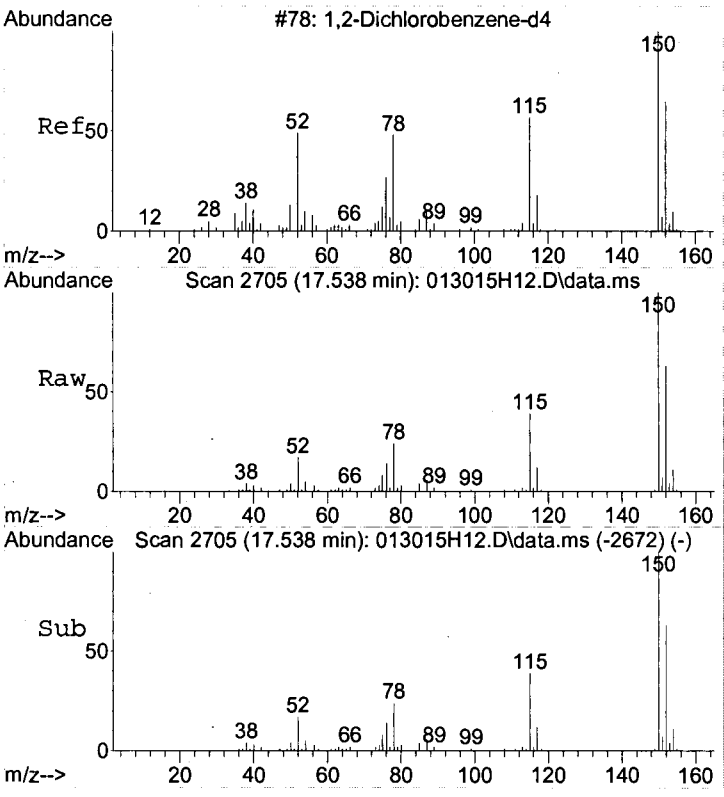


#56
4-Bromofluorobenzene
Concen: 4.54 ug/L
RT: 14.844 min Scan# 2262
Delta R.T. -0.001 min
Lab File: 013015H12.D
Acq: 30 Jan 2015 20:02

Tgt Ion: 95 Resp: 215778

Ion	Ratio	Lower	Upper
95	100		
174	88.9	68.9	108.9
176	85.1	66.0	106.0

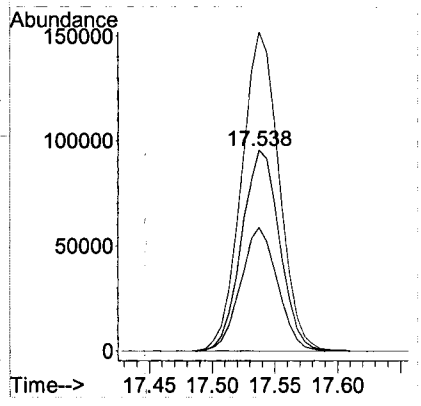




#70
1,2-Dichlorobenzene-d4
Concen: 4.42 ug/L
RT: 17.538 min Scan# 2705
Delta R.T. -0.001 min
Lab File: 013015H12.D
Acq: 30 Jan 2015 20:02

Tgt Ion:152 Resp: 201401

Ion	Ratio	Lower	Upper
152	100		
115	60.2	39.3	79.3
150	157.6	152.8	192.8



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H13.D
Acq On : 30 Jan 2015 20:37
Instrument: HP5973H
Operator : YNB
Sample : 1501036-06
Misc : MW-10C,WATER
ALS Vial : 38
Multiplier: 1

Quant Time: Feb 02 08:14:16 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.903	53	93055	5.000 ug/L	0.01
24) Fluorobenzene	7.832	96	843392	5.000 ug/L	0.01
37) Chlorobenzene-d5	12.788	117	540536	5.000 ug/L	0.00

System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.278	65	117147	5.052 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 101.00%	
39) Toluene-d8	10.398	98	837252	5.224 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 104.40%	
56) 4-Bromofluorobenzene	14.844	95	212990	4.569 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 91.40%	
70) 1,2-Dichlorobenzene-d4	17.538	152	201280	4.510 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 90.20%	

Target Compounds Qvalue

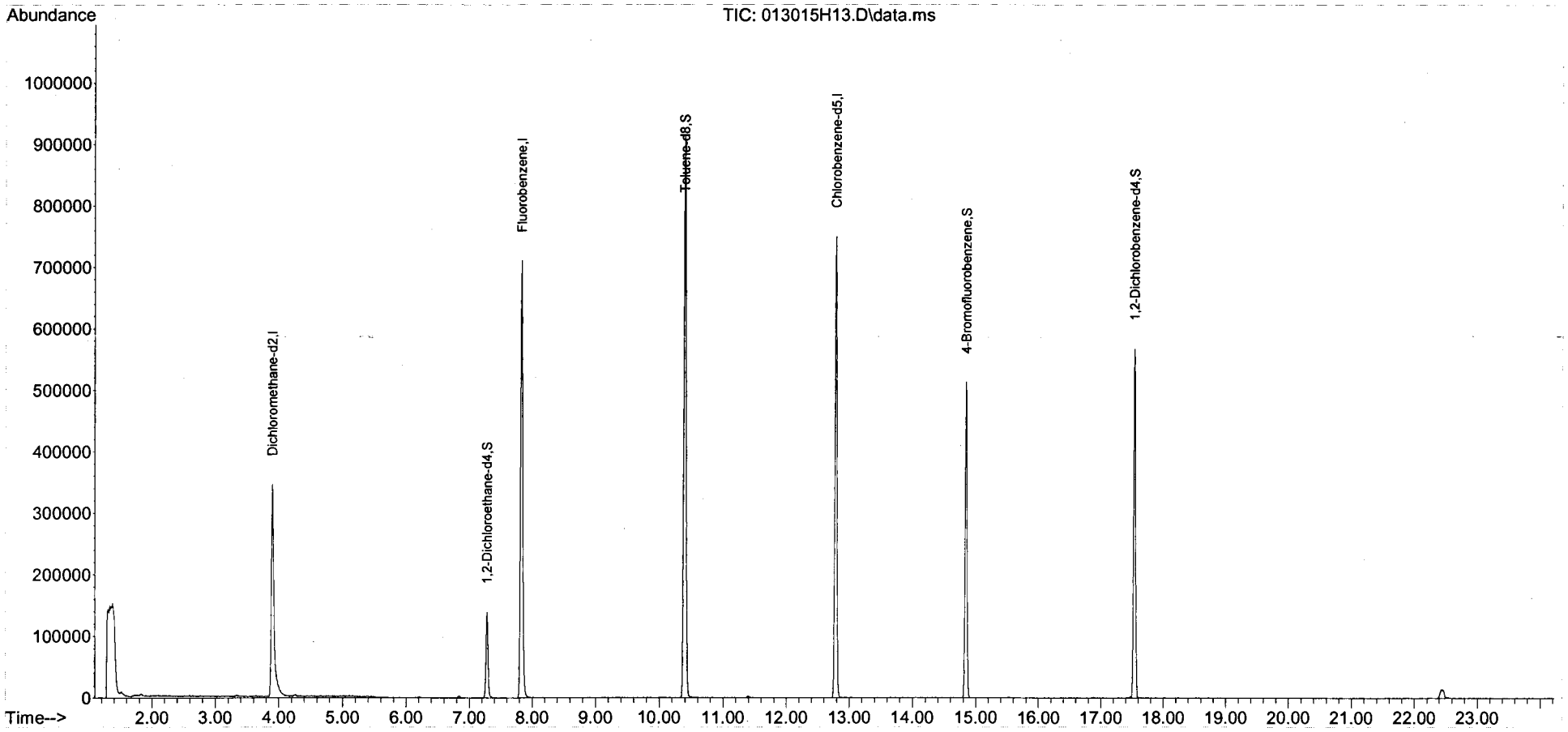
(#) = qualifier out of range (m) = manual integration (+) = signals summed

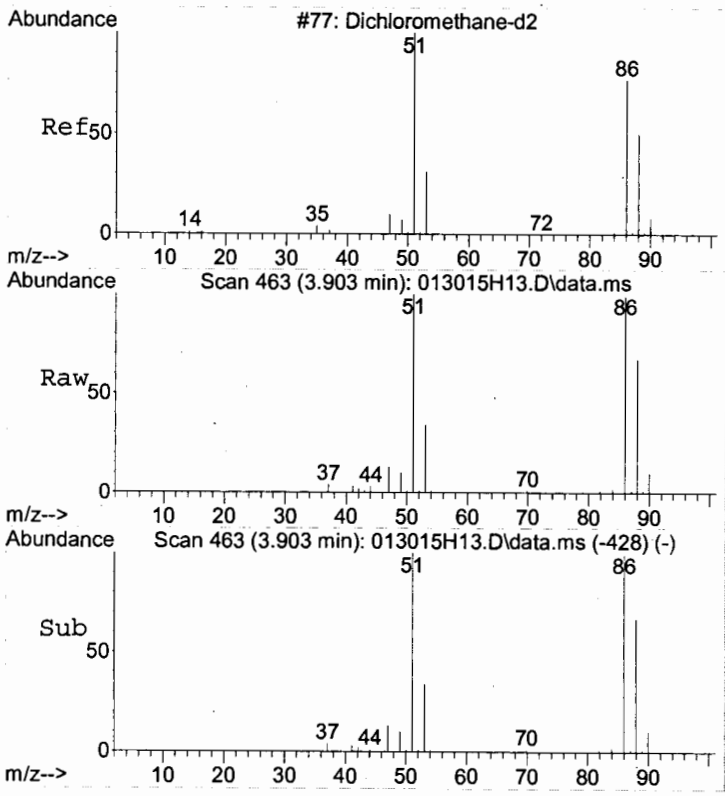
Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\013015HVW\
Data File : 013015H13.D
Acq On : 30 Jan 2015 20:37
Instrument: HP5973H
Operator : YNB
Sample : 1501036-06
Misc : MW-10C,WATER
ALS Vial : 38
Multiplier: 1

Quant Time: Feb 02 08:14:16 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:013015HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\013015HVW.M

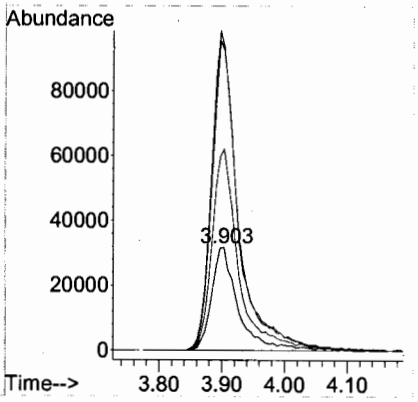


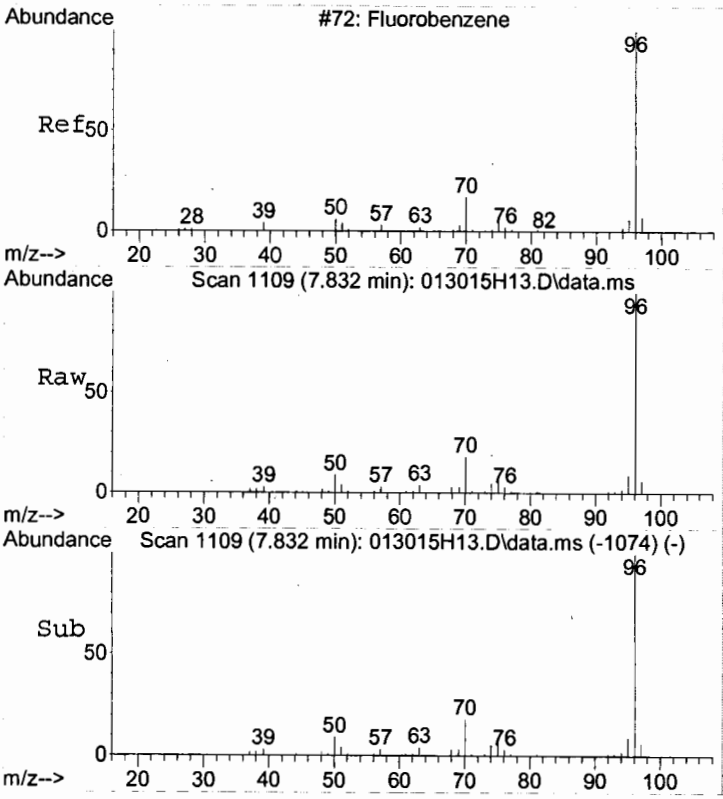


#1
Dichloromethane-d2
Concen: 5.00 ug/L
RT: 3.903 min Scan# 463
Delta R.T. 0.011 min
Lab File: 013015H13.D
Acq: 30 Jan 2015 20:37

Tgt Ion: 53 Resp: 93055

Ion	Ratio	Lower	Upper
53	100		
51	312.7	381.1	421.1#
86	301.0	490.1	530.1#
88	196.0	211.2	251.2#

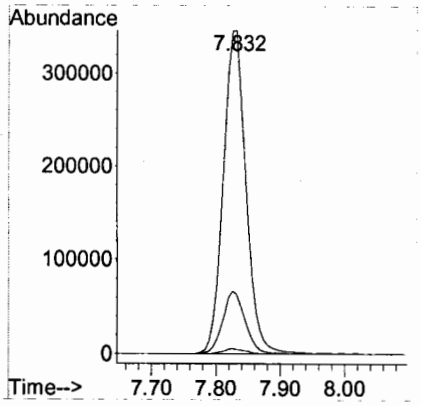


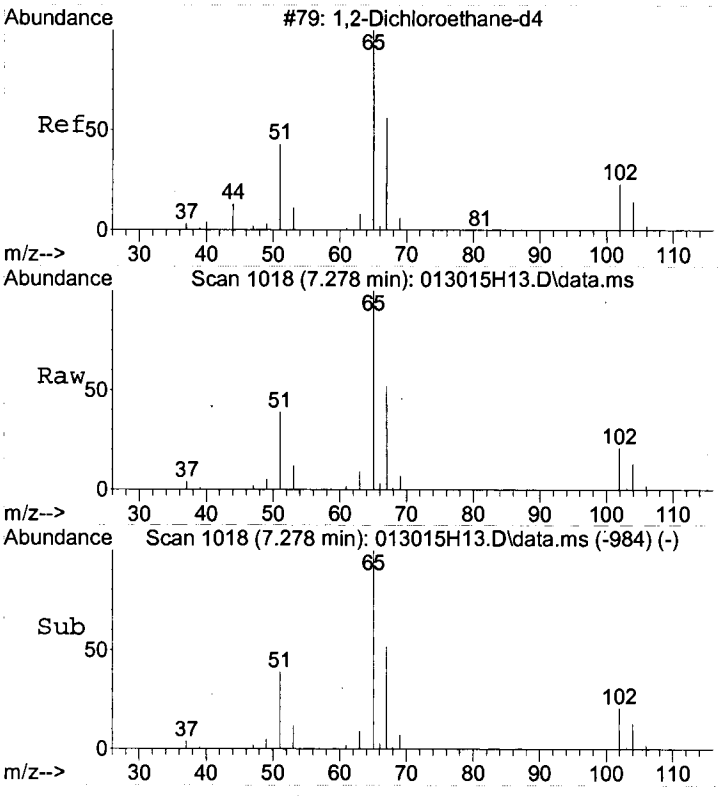


#24
Fluorobenzene
Concen: 5.00 ug/L
RT: 7.832 min Scan# 1109
Delta R.T. 0.011 min
Lab File: 013015H13.D
Acq: 30 Jan 2015 20:37

Tgt Ion: 96 Resp: 843392

Ion	Ratio	Lower	Upper
96	100		
70	18.9	0.0	38.7
77	1.5	0.0	21.6

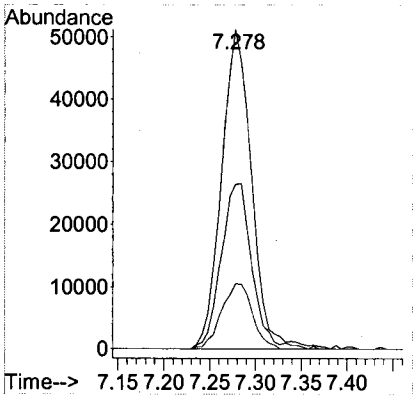


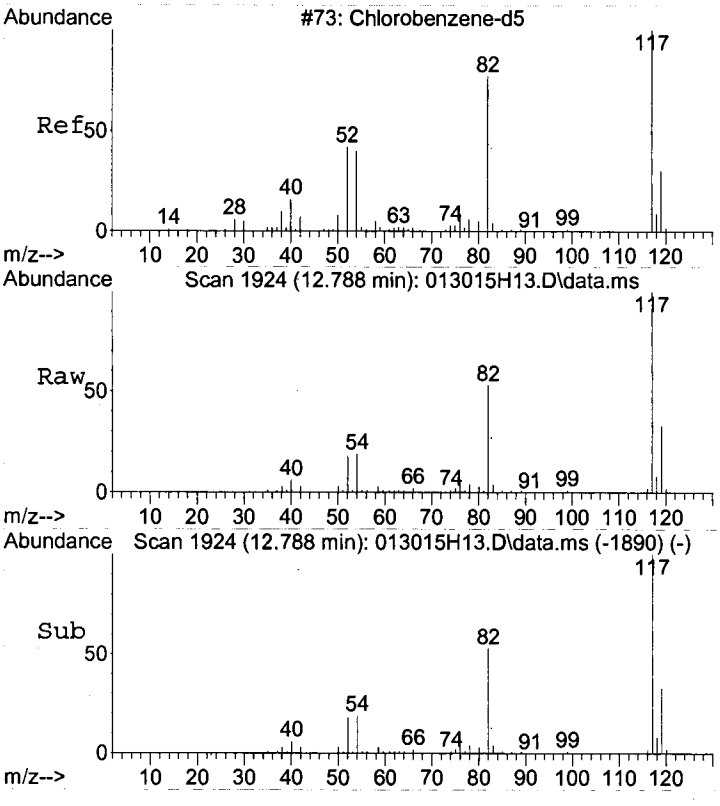


#28
1,2-Dichloroethane-d4
Concen: 5.05 ug/L
RT: 7.278 min Scan# 1018
Delta R.T. 0.005 min
Lab File: 013015H13.D
Acq: 30 Jan 2015 20:37

Tgt Ion: 65 Resp: 117147

Ion	Ratio	Lower	Upper
65	100		
67	53.1	32.3	72.3
102	21.1	1.3	41.3

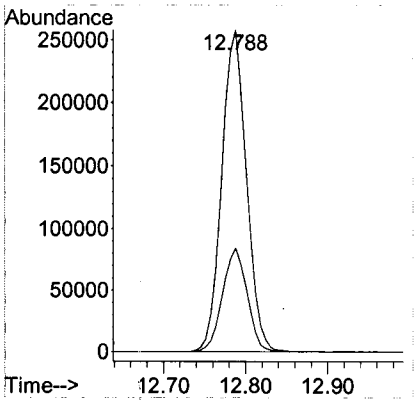


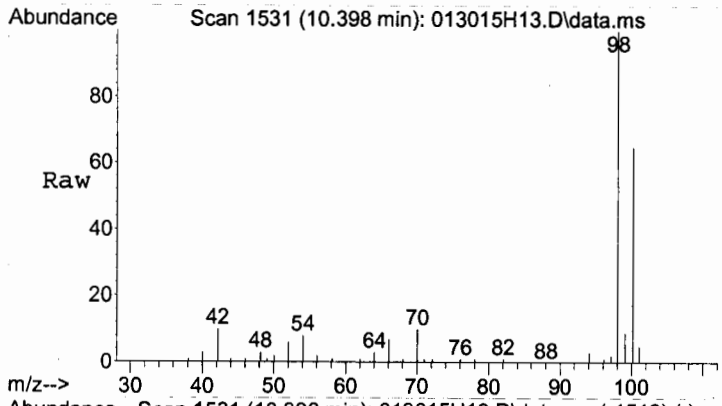


#37
Chlorobenzene-d5
Concen: 5.00 ug/L
RT: 12.788 min Scan# 1924
Delta R.T. 0.005 min
Lab File: 013015H13.D
Acq: 30 Jan 2015 20:37

Tgt Ion:117 Resp: 540536

Ion	Ratio	Lower	Upper
117	100		
119	32.2	11.7	51.7

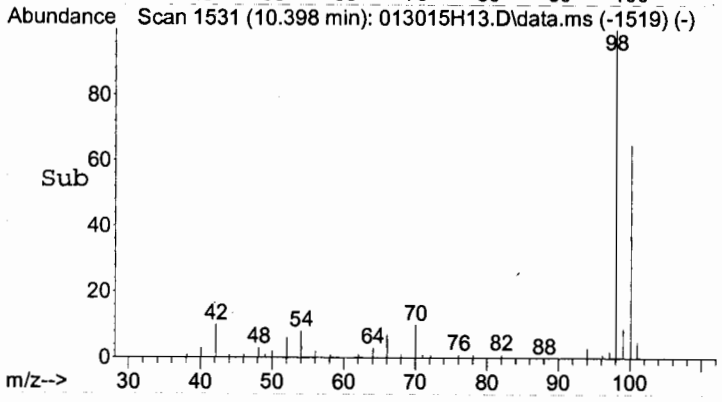


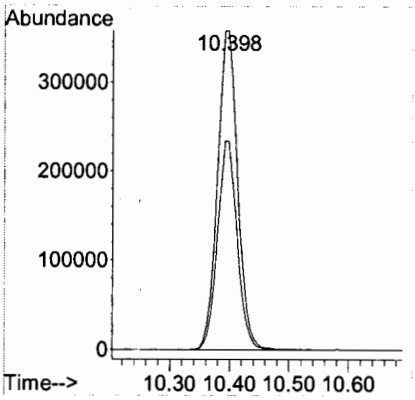


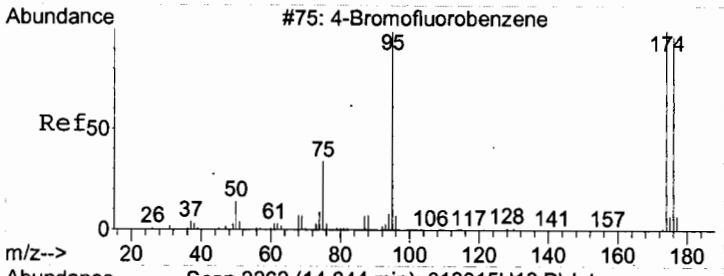
#39
Toluene-d8
Concen: 5.22 ug/L
RT: 10.398 min Scan# 1531
Delta R.T. 0.005 min
Lab File: 013015H13.D
Acq: 30 Jan 2015 20:37

Tgt Ion: 98 Resp: 837252

Ion	Ratio	Lower	Upper
98	100		
100	64.0	45.3	85.3



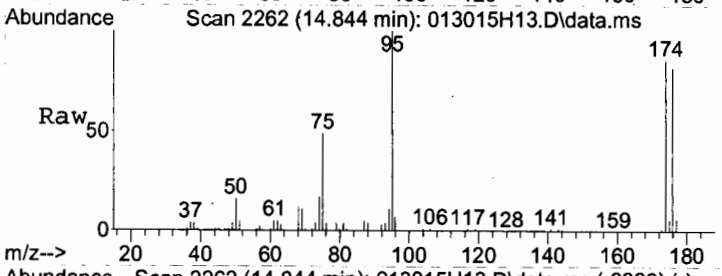


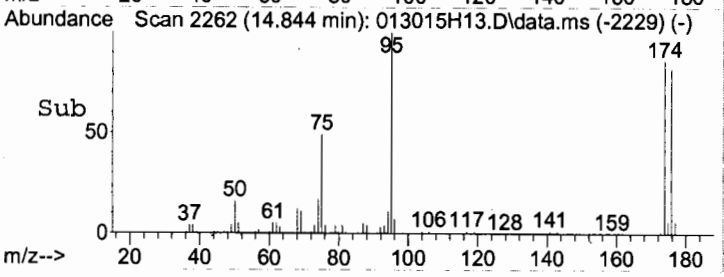


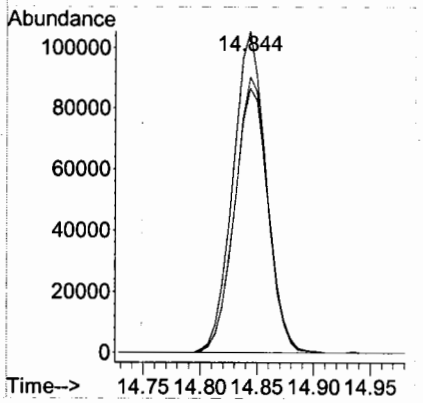
#56
4-Bromofluorobenzene
Concen: 4.57 ug/L
RT: 14.844 min Scan# 2262
Delta R.T. -0.001 min
Lab File: 013015H13.D
Acq: 30 Jan 2015 20:37

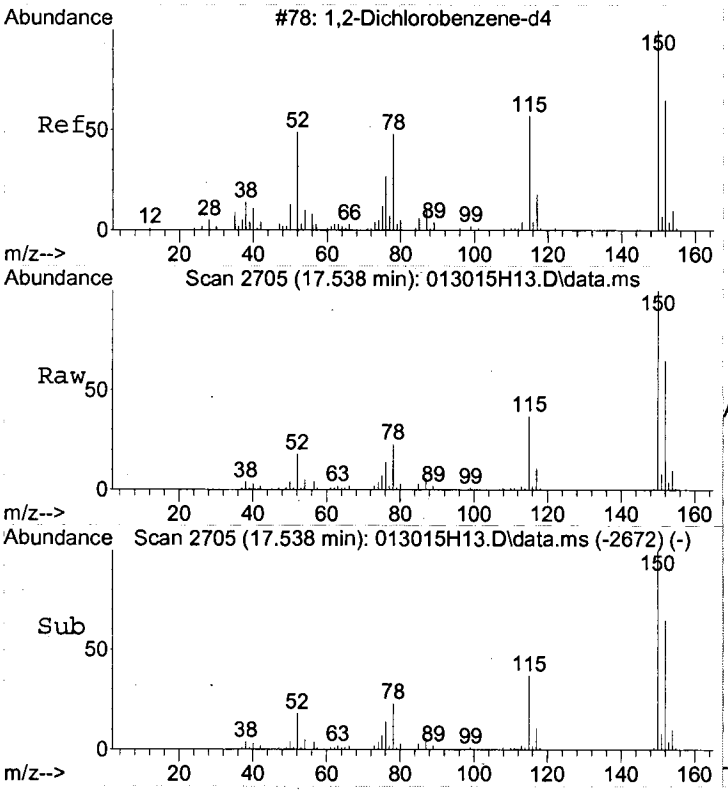
Tgt Ion: 95 Resp: 212990

Ion	Ratio	Lower	Upper
95	100		
174	85.9	68.9	108.9
176	85.0	66.0	106.0





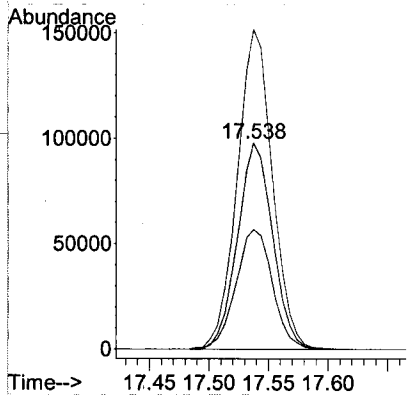




#70
1,2-Dichlorobenzene-d4
Concen: 4.51 ug/L
RT: 17.538 min Scan# 2705
Delta R.T. -0.001 min
Lab File: 013015H13.D
Acq: 30 Jan 2015 20:37

Tgt Ion:152 Resp: 201280

Ion	Ratio	Lower	Upper
152	100		
115	60.2	39.3	79.3
150	155.4	152.8	192.8



SDG: R15540 / 15030A 15033A

Instrument: HP 5973H

Analysis Date: 02.02.2015

SAMPLE DATA

ANALYSIS SEQUENCE

S15B002

Instrument: HP5973H

Calibration ID: 1501011

Printed: 2/3/2015 1:35:36PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
S15B002-TUN1	QC		1		1453027			
S15B002-CCV1	QC		2		1505014			
B15B002-BS1	QC		3					
S15B002-CRL1	QC		4		1505015			
B15B002-BLK1	QC		5					
1501036-11	VOCs	A	6				California Site Cleanup Section 2	no TICs
B15B002-MS1	QC		7					
B15B002-MSD1	QC		8					
1501036-07	VOCs	A	9				California Site Cleanup Section 2	no TICs
1501036-08	VOCs	A	10				California Site Cleanup Section 2	no TICs
1501036-09	VOCs	A	11				California Site Cleanup Section 2	no TICs
1501036-10	VOCs	A	12				California Site Cleanup Section 2	no TICs
1501036-12	VOCs	A	13				California Site Cleanup Section 2	no TICs
1501036-13	VOCs	A	14				California Site Cleanup Section 2	no TICs
1501036-14	VOCs	A	15				California Site Cleanup Section 2	no TICs
1502001-01	VOCs	A	16				California Site Cleanup Section 2	no TICs
1502001-03	VOCs	A	17				California Site Cleanup Section 2	no TICs
1502001-04	VOCs	A	18				California Site Cleanup Section 2	no TICs
1502001-05	VOCs	A	19				California Site Cleanup Section 2	no TICs

YMB 02.03.15

Samples Loaded By Date

YMB 02.03.15

Data Processed By Date

Injection Log

Directory: C:\MSDCHEM\1\DATA\2015\020215HVW

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	100	020215h01.d	0.	S15B002-TUN1	0.5ul , EM 2294V	2 Feb 2015 08:32
2	27	020215h02.d	0.	S15B002-CCV1@B15B002-BS1	CCV,WATER	2 Feb 2015 08:58
3	28	020215h03.d	0.	S15B002-CRL1	CRL,WATER	2 Feb 2015 09:33
4	29	020215h04.d	0.	B15B002-BLK1	BLANK,WATER	2 Feb 2015 10:09
5	30	020215h05.d	0.	1501036-14	EW-02,WATER	2 Feb 2015 10:45
6	31	020215h06.d	0.	1501036-12	MW-29A,WATER	2 Feb 2015 11:21
7	32	020215h07.d	0.	1501036-09	MW-17B,WATER	2 Feb 2015 11:57
8	33	020215h08.d	0.	1501036-13	MW-23A,WATER	2 Feb 2015 12:33
9	34	020215h09.d	0.	BLANK	BLANK,WATER	2 Feb 2015 13:09
10	35	020215h10.d	0.	B15B002-MS1	MW-18A,WATER SPIKE	2 Feb 2015 13:45
11	36	020215h11.d	0.	B15B002-MSD1	MW-18A,WATER SPIKE	2 Feb 2015 14:21
12	37	020215h12.d	0.	BLANK	BLANK,WATER	2 Feb 2015 14:57
13	38	020215h13.d	0.	1501036-11	MW-18A,WATER	2 Feb 2015 15:33
14	39	020215h14.d	0.	1501036-07	MW-13A,WATER	2 Feb 2015 16:09
15	40	020215h15.d	0.	1501036-08	MW-17A,WATER	2 Feb 2015 16:45
16	41	020215h16.d	0.	1501036-10	MW-17C,WATER	2 Feb 2015 17:21
17	42	020215h17.d	0.	1502001-01	MW-01A,WATER	2 Feb 2015 17:57
18	43	020215h18.d	0.	1502001-03	MW-03A,WATER	2 Feb 2015 18:33
19	44	020215h19.d	0.	1502001-04	MW-05A,WATER	2 Feb 2015 19:09
20	45	020215h20.d	0.	1502001-05	MW-06A,WATER	2 Feb 2015 19:45 ek
21	46	020215h21.d	0.	BLANK	BLANK,WATER	2 Feb 2015 20:21
22	47	020215h22.d	0.	S15B002-SB1	SB 01/26/15,WATER	2 Feb 2015 20:57

YAB
02.03.15

03 Feb 2015 08:00

: 00407

GC/MS QA-QC Check Report

Tune File : C:\msdchem\1\DATA\2015\020215HVW\020215H01.D
Tune Time : 2 Feb 2015 8:32

Daily Calibration File : C:\MSDCHEM\1\DATA\2015\020215HVW\020215H02.D

File	Sample	Surrogate Recovery %				Internal Standard Responses		
						99780	960987	626780
020215H02.D	S15B002-CCV1@	89	103	98	99	99780	960987	626780
020215H03.D	S15B002-CRL1	100	100	96	96	99783	902778	601782
020215H04.D	B15B002-BLK1	101	103	92	92	94022	869369	571208
020215H05.D	1501036-14	101	99	91	91	96989	829798	570910
020215H06.D	1501036-12	105	99	90	94	97282	817789	559499
020215H07.D	1501036-09	105	99	91	92	92075	795295	547038
020215H08.D	1501036-13	105	100	91	91	90814	781709	535000
020215H09.D	BLANK	103	101	92	92	91905	775252	517633
020215H10.D	B15B002-MS1	99	100	98	103	91958	850179	572642
020215H11.D	B15B002-MSD1	98	102	100	105	94935	880905	582761
020215H12.D	BLANK	101	101	92	91	94770	818080	544451
020215H13.D	1501036-11	102	101	92	93	89358	794195	530331
020215H14.D	1501036-07	103	100	91	92	89706	776425	523650
020215H15.D	1501036-08	105	100	89	94	90586	765812	512949
020215H16.D	1501036-10	104	101	90	92	90257	761685	509254
020215H17.D	1502001-01	103	101	92	93	88188	754362	506017
020215H18.D	1502001-03	107	98	90	93	84762	738112	506304
020215H19.D	1502001-04	105	98	90	94	84126	726377	501519
020215H20.D	1502001-05	105	101	92	94	85497	720792	490762

USEPA REGION 9 VOLATILE ORGANICS RUN LOG

SOP: ☒ 8260 (Water) ☐ 305 (Solid, Low) ☐ 305 (Solid, Medium)

INST. ID: HP5973H

EM Voltage: 2294

LIMS Batch: B15B002 BFB STD ID: 1453027 Cal STD ID: 1505012

LIMS Seq.: S15B002 IS/Surr ID: 1504074 MS SPK ID: ↓

Purge Vol, mL: 25 IS/Surr Volume: 1µL BS SPK ID: ↓

	Date Analyzed	Time Analyzed	Analyst	File Name	Laboratory ID	Vial ID	Initial Volume, mL /Weight, g	MeOH Used, uL	Final Volume, mL	Archon DF	STD Amounts (uL) CAL	BS	MS	pH	Comments
1	02.02.15	8:32	YAB	0202154 01	S15B002-ICV1	—	—	—	—	—	—	—	—	—	
2		8:58		02	-CCV1	—	50	—	—	—	10	—	—	—	B15B002-BS1
3		9:33		03	-CRL1	—	50	—	—	—	1	—	—	—	
4		10:09		04	B15B002-BK1	—	—	—	—	—	—	—	—	—	
5		10:45		05	1501036-14	A	—	—	—	—	—	—	—	<2	
6		11:21		06	-12	A	—	—	—	—	—	—	—	<2	
7		11:57		07	-09	A	—	—	—	—	—	—	—	<2	
8		12:33		08	-13	A	—	—	—	—	—	—	—	<2	
9		13:09		09	blank	—	—	—	—	—	—	—	—	—	
10		13:45		10	B15B002-MS1	B	40	—	—	—	—	—	8	<2	
11		14:21		11	-MSD1	C	40	—	—	—	—	—	8	<2	
12		14:57		12	blank	—	—	—	—	—	—	—	—	—	
13		15:33		13	1501036-11	A	—	—	—	—	—	—	—	<2	
14		16:09		14	36-07	A	—	—	—	—	—	—	—	<2	
15		16:45		15	36-08	A	—	—	—	—	—	—	—	<2	
16		17:21		16	36-10	A	—	—	—	—	—	—	—	<2	
17		17:57		17	1502001-01	A	—	—	—	—	—	—	—	<2	
18		18:33		18	1502001-03	A	—	—	—	—	—	—	—	<2	
19		19:09		19	01-04	A	—	—	—	—	—	—	—	<2	
20		19:45		20	01-05	A	—	—	—	—	—	—	—	<2	
21		20:21		21	blank	—	—	—	—	—	—	—	—	—	
22		20:57		22	SB 1/26/15	—	—	—	—	—	—	—	—	—	
23															
24				YAB 02.03.15											

[1] Manual integration performed

Response Factor Report HP5973H

Method Path : C:\MSDCHEM\1\METHODS\2015\
Method File : 020215HVW.M
Title : Volatile Organic Analysis - 524.2 Method
Last Update : Wed Jan 14 16:54:35 2015
Response Via : Initial Calibration

Calibration Files
0.5 =011415H12.D 1.0 =011415H11.D 2.0 =011415H10.D 5.0 =011415H09.D 10.0=011415H08.D
25.0=011415H07.D

		Compound	0.5	1.0	2.0	5.0	10.0	25.0	Avg		%RSD
1)	I	Dichloromethane-d2	----------ISTD----------								
2)	TMC	Dichlorodifluo...	2.600	2.513	2.450	2.413	2.449	2.497	2.487		2.66
3)	TMC	Chloromethane	3.296	3.370	3.192	3.082	3.027	3.003	3.162		4.73
4)	TCM	Vinyl chloride	3.339	3.475	3.282	3.225	3.211	3.276	3.301		2.93
5)	TCM	Bromomethane	1.885	2.327	2.367	2.474	2.795	2.657	2.418		13.05
6)	TMC	Chloroethane	2.381	2.444	2.330	2.327	2.375	2.379	2.372		1.80
7)	TMC	Trichlorofluor...	4.707	4.523	4.552	4.368	4.584	4.634	4.561		2.52
8)	TMC	1,1-Dichloroet...	2.975	3.072	3.160	3.085	3.256	3.292	3.140		3.81
9)	TCM	1,1,2-Trichlor...	3.032	2.854	2.989	2.845	2.931	3.057	2.951		3.04
10)	TCM	Acetone	0.248	0.205	0.191	0.178	0.170	0.161	0.192		16.38
11)	TCM	Carbon disulfide	1.051	1.053	1.053	1.031	1.035	1.019	1.040	E1	1.35
12)	TMC	Dichloromethane	4.286	3.702	3.416	3.189	3.079	2.994	3.444		14.08
13)	TCM	tert-Butyl alc...	0.071	0.074	0.077	0.076	0.081	0.055	0.072		12.56
14)	TMC	trans-1,2-Dich...	3.700	3.915	3.949	3.907	4.044	4.145	3.943		3.79
15)	TCM	tert-Butyl met...	3.971	4.174	4.345	4.355	4.393	4.250	4.248		3.71
16)	TCM	1,1-Dichloroet...	5.696	6.042	5.795	5.669	5.785	5.832	5.803		2.28
17)	TMC	Diisopropyl ether	7.120	7.345	7.164	7.054	7.033	6.528	7.041		3.90
18)	TCM	Ethyl-tert-but...	3.503	3.747	3.757	3.925	4.092	4.236	3.877		6.81
19)	TCM	2,2-Dichloropr...	2.067	2.356	2.476	2.657	2.854	3.320	2.622		16.55
20)	TMC	cis-1,2-Dichlo...	2.084	2.191	2.188	2.220	2.319	2.593	2.266		7.81
21)	TCM	2-Butanone (MEK)	0.241	0.226	0.219	0.218	0.213	0.213	0.222		4.74
22)	TMC	Bromochloromet...	0.611	0.666	0.663	0.678	0.695	0.720	0.672		5.43
23)	TCM	Chloroform	3.312	3.415	3.370	3.383	3.456	3.630	3.428		3.21
24)	I	Fluorobenzene	----------ISTD----------								
25)	TCM	1,1,1-Trichlor...	0.298	0.317	0.317	0.325	0.326	0.352	0.323		5.53
26)	TCM	Carbon tetrach...	0.235	0.257	0.264	0.269	0.281	0.318	0.271		10.20
27)	TCM	1,1-Dichloropr...	0.258	0.271	0.273	0.275	0.281	0.313	0.279		6.69
28)	S	1,2-Dichloroet...	0.138	0.138	0.140	0.139	0.136	0.134	0.137		1.73
29)	TMC	Benzene	0.886	0.953	0.946	0.945	0.956	1.014	0.950		4.30
30)	TCM	1,2-Dichloroet...	0.152	0.174	0.167	0.163	0.160	0.165	0.163		4.42
31)	TCM	tert-Amyl meth...	0.277	0.304	0.318	0.330	0.341	0.362	0.322		9.13
32)	TMC	Trichloroethene	0.220	0.228	0.234	0.228	0.235	0.261	0.234		5.95
33)	TMC	1,2-Dichloropr...	0.171	0.184	0.189	0.187	0.187	0.199	0.186		4.89
34)	TMC	Dibromomethane	0.065	0.062	0.064	0.067	0.065	0.067	0.065		2.86
35)	TCM	Bromodichlorom...	0.202	0.208	0.223	0.224	0.225	0.238	0.220		5.94
36)	TCM	cis-1,3-Dichlo...	0.197	0.210	0.226	0.235	0.244	0.268	0.230		10.99
37)	I	Chlorobenzene-d5	----------ISTD----------								
38)	TMC	4-Methyl-2-pen...	0.070	0.077	0.081	0.084	0.083	0.085	0.080		7.10
39)	S	Toluene-d8	1.493	1.510	1.491	1.486	1.465	1.451	1.482		1.44
40)	TMC	Toluene	0.928	0.983	0.964	0.960	0.963	1.054	0.975		4.36
41)	TCM	trans-1,3-Dich...	0.217	0.224	0.244	0.259	0.268	0.287	0.250		10.72
42)	TCM	1,1,2-Trichlor...	0.127	0.123	0.125	0.122	0.122	0.127	0.124		1.89
43)	TCM	Tetrachloroethene	0.374	0.386	0.376	0.379	0.388	0.440	0.390		6.32
44)	TMC	1,3-Dichloropr...	0.257	0.276	0.281	0.281	0.273	0.278	0.274		3.36
45)	TCM	2-Hexanone	0.045	0.048	0.051	0.054	0.053	0.055	0.051		7.74
46)	TCM	Chlorodibromom...	0.160	0.175	0.185	0.195	0.196	0.207	0.186		9.00
47)	TMC	1,2-Dibromoeth...	0.118	0.125	0.133	0.135	0.136	0.137	0.131		5.79
48)	TMC	Chlorobenzene	0.945	0.984	0.952	0.953	0.964	1.042	0.973		3.70
49)	TCM	1,1,1,2-Tetrac...	0.249	0.267	0.268	0.278	0.281	0.309	0.275		7.19
50)	TCM	Ethylbenzene	1.613	1.783	1.802	1.823	1.850	1.973	1.808		6.45
51)	TCM	m&p-Xylene	0.660	0.734	0.728	0.764	0.800	0.950	0.773		12.72
52)	TCM	o-Xylene	0.578	0.651	0.658	0.689	0.719	0.842	0.690		12.78
53)	TCM	Styrene	0.873	0.999	1.028	1.094	1.135	1.330	1.077		14.23

00410

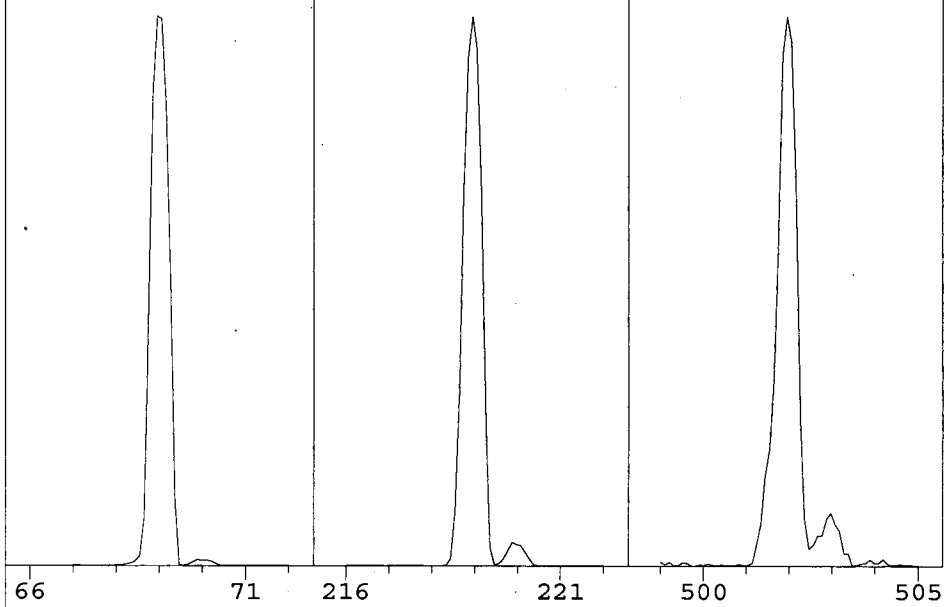
Method Path : C:\MSDCHEM\1\METHODS\2015\
Method File : 020215HVW.M
Title : Volatile Organic Analysis - 524.2 Method

54)	TCM	Bromoform	0.071	0.077	0.083	0.090	0.094	0.105	0.087	14.07
55)	TCM	Isopropylbenzene	1.507	1.712	1.752	1.813	1.878	2.067	1.788	10.40
56)	S	4-Bromofluorob...	0.422	0.429	0.425	0.436	0.431	0.445	0.431	1.92
57)	TCM	Bromobenzene	0.304	0.339	0.337	0.348	0.355	0.391	0.346	8.26
58)	TCM	1,1,2,2-Tetrac...	0.130	0.146	0.147	0.149	0.147	0.152	0.145	5.47
59)	TMC	1,2,3-Trichlor...	0.096	0.108	0.108	0.105	0.104	0.105	0.104	4.32
60)	TCM	Propylbenzene	1.903	2.096	2.114	2.151	2.198	2.338	2.133	6.67
61)	TCM	2-Chlorotoluene	1.159	1.234	1.202	1.221	1.252	1.347	1.236	5.09
62)	TCM	4-Chlorotoluene	1.265	1.400	1.391	1.425	1.462	1.626	1.428	8.21
63)	TCM	1,3,5-Trimethy...	1.353	1.498	1.507	1.567	1.621	1.840	1.564	10.37
64)	TCM	tert-Butylbenzene	1.102	1.227	1.242	1.315	1.356	1.547	1.298	11.54
65)	TCM	1,2,4-Trimethy...	1.342	1.463	1.492	1.571	1.609	1.819	1.549	10.42
66)	TCM	sec-Butylbenzene	1.661	1.824	1.864	1.919	1.991	2.235	1.916	10.01
67)	TCM	1,3-Dichlorobe...	0.707	0.756	0.789	0.810	0.832	0.932	0.805	9.50
68)	TCM	p-Isopropyltol...	1.415	1.582	1.615	1.748	1.864	2.272	1.749	17.04
69)	TCM	1,4-Dichlorobe...	0.672	0.760	0.760	0.821	0.879	1.117	0.835	18.49
70)	S	1,2-Dichlorobe...	0.396	0.406	0.409	0.414	0.413	0.440	0.413	3.57
71)	TCM	1,2-Dichlorobe...	0.601	0.617	0.613	0.633	0.639	0.700	0.634	5.56
72)	TCM	Butylbenzene	1.384	1.508	1.503	1.538	1.577	1.737	1.541	7.51
73)	TMC	1,2-Dibromo-3-...	0.017	0.017	0.020	0.020	0.020	0.021	0.019	10.54
74)	TCM	1,2,4-Trichlor...	0.377	0.415	0.427	0.445	0.453	0.515	0.439	10.47
75)	TCM	Hexachlorobuta...	0.244	0.251	0.259	0.258	0.269	0.313	0.266	9.29
76)	TCM	Naphthalene	0.412	0.456	0.512	0.539	0.538	0.569	0.504	11.72
77)	TCM	1,2,3-Trichlor...	0.296	0.332	0.330	0.345	0.345	0.376	0.337	7.74

(#) = Out of Range

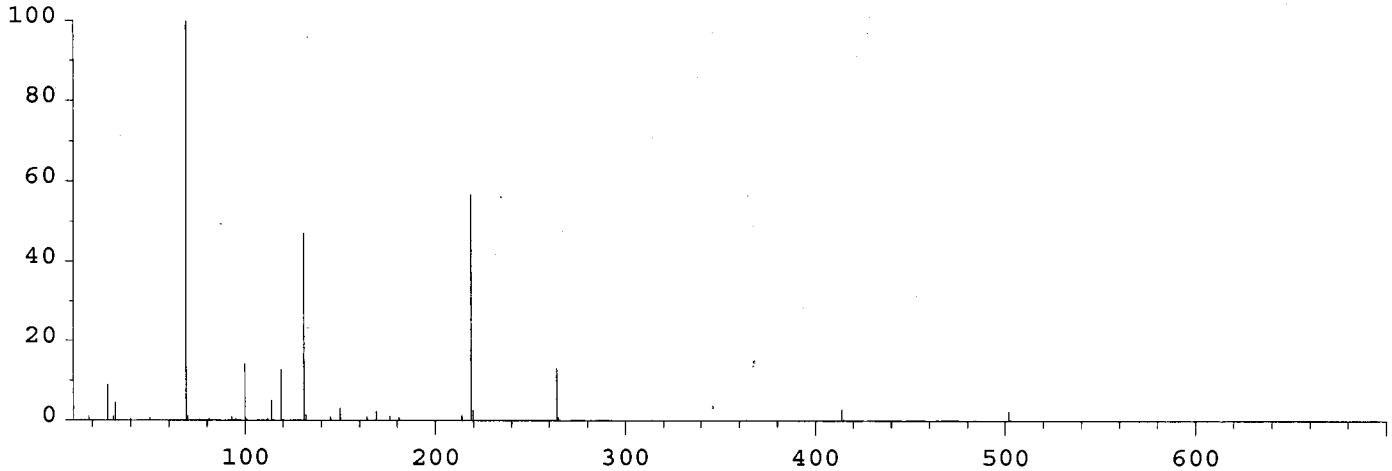
Mon Feb 02 08:28:55 2015 Instrument: HP5973H
C:\msdchem\1\5973\BFH020215.u

Mass	68.95	Mass	218.95	Mass	501.95
Ab	518844	Ab	294297	Ab	10695
Pw50	0.49	Pw50	0.49	Pw50	0.48



Ion Pol	POS	MassGain	-232
		MassOffs	-11
Emission	34.6	AmuGain	1859
EIEnrgy	69.9	AmuOffs	133
Filament	2	Wid219	-0.019
		DC Pol	NEG
Repeller	12.70		
IonFcus	66.4	HEDEnab	ON
EntLens	12.0	EMVolts	2294
EntOffs	15.31		
		Samples	8
PFTBA	OPEN	Averages	3
		Stepsize	0.10
Zones:			
MS Source	230	TurboSpd	100
MS Quad	150		

Scan: 10.00 - 700.00 Samples: 8 Thresh: 100 Step: 0.10
144 peaks Base: 69.05 Abundance: 445376



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.05	445376	100.00	69.95	5132	1.15
218.95	252416	56.67	219.95	11241	4.45
501.95	9994	2.24	502.95	1189	11.90

Air/Water Check: H20~1.05% N2~9.10% O2~4.59% CO2~0.25% N2/H2O~868.77%

Column Flow: Front: 1 Back: 0 ml/min. Interface Temp: 230

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 69; EM Gain 486562
Repeller Maximum 20 volts using ion 219;

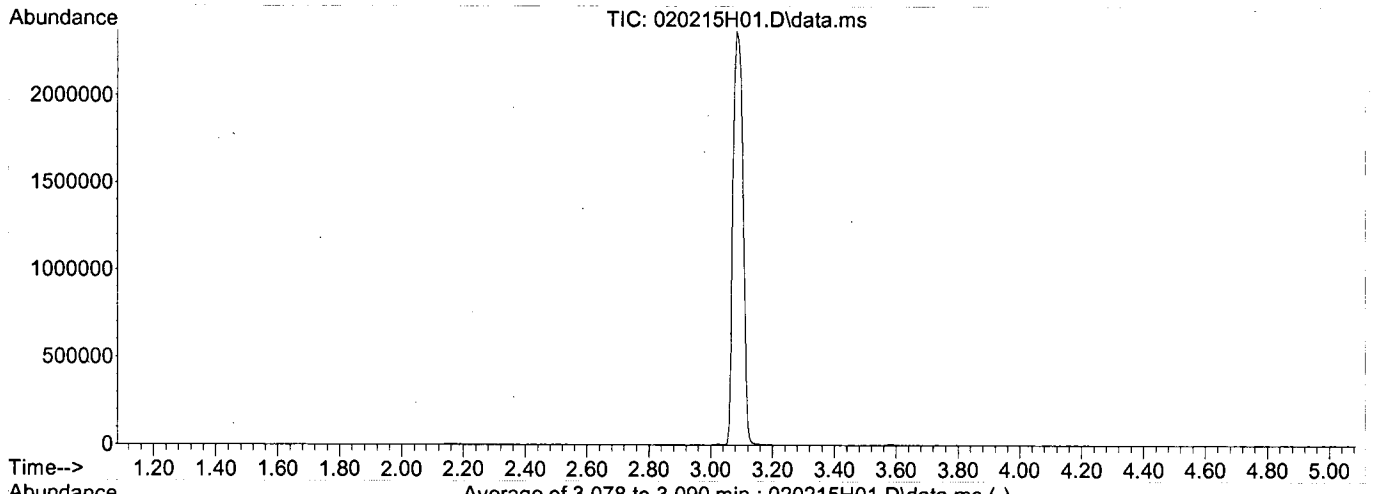
MassGain Values @Samples: -232@3 -232@2 -232@1 -232@0 -232@FS

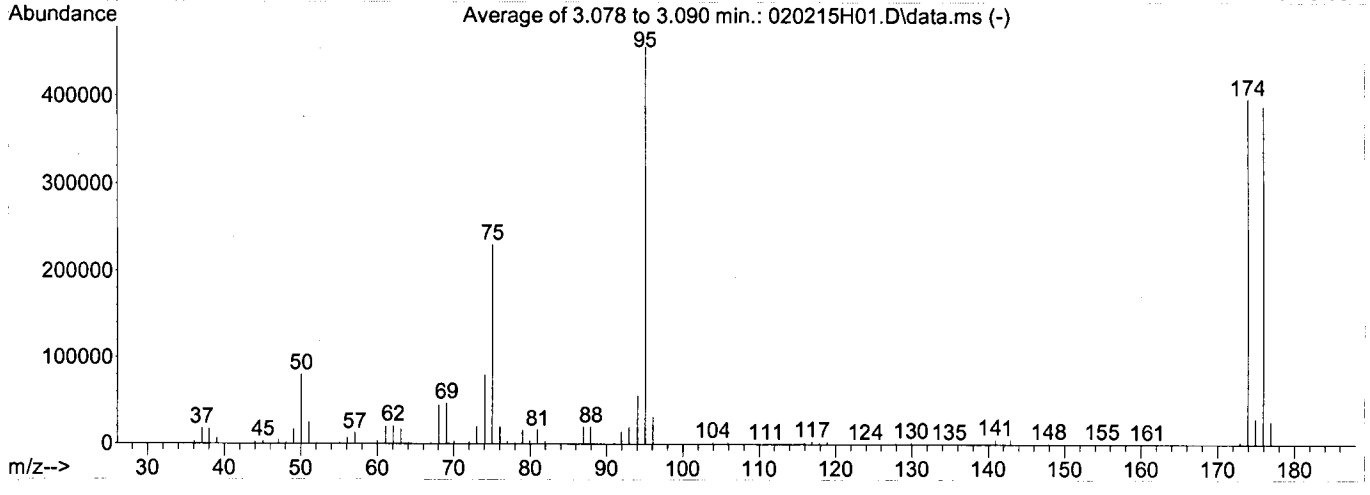
TARGET MASS:	50	69	131	219	414	502	800
Amu Offset:	133.0	133.0	133.0	133.0	133.0	133.0	133.0
Entrance Lens Offset:	15.3	15.3	15.3	15.3	15.3	15.3	15.3

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H01.D
Acq On : 2 Feb 2015 8:32
Operator : YNB
Sample : S15B002-TUN1
Misc : 0.5ul , EM 2294V
ALS Vial : 100 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M
Title : Volatile Organic Analysis - 524.2 Method
Last Update : Wed Jan 14 16:54:35 2015





AutoFind: Scans 163, 164, 165; Background Corrected with Scan 156

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.6	80613	PASS
75	95	30	60	50.4	230229	PASS
95	95	100	100	100.0	456960	PASS
96	95	5	9	6.9	31389	PASS
173	174	0.00	2	0.7	2789	PASS
174	95	50	120	87.0	397674	PASS
175	174	5	9	7.4	29445	PASS
176	174	95	101	98.0	389824	PASS
177	176	5	9	6.7	26064	PASS

00413

Average of 3.078 to 3.090 min.: 020215H01.D\data.ms
S15B002-TUN1
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	3153	48.10	2215	62.05	20890	76.05	20149
37.05	18170	49.05	16991	63.05	17056	77.00	2954
38.05	17061	50.05	80613	64.05	1477	78.00	1996
39.05	6616	51.05	24824	67.00	1106	78.95	15521
40.00	439	52.05	1013	68.05	45146	79.95	3919
43.15	124	55.05	1357	69.05	47360	80.95	16359
44.00	2674	56.05	7219	70.05	3304	81.95	3017
45.05	3454	57.05	12510	72.00	2667	83.00	450
45.95	108	58.00	474	73.00	19987	85.75	175
46.25	120	60.00	3657	74.05	79922	86.00	415
47.10	5116	61.05	20546	75.05	230229	86.95	19794

Average of 3.078 to 3.090 min.: 020215H01.D\data.ms
S15B002-TUN1
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
87.95	19877	105.90	2133	118.90	2733	140.00	339
90.85	563	106.90	564	122.05	105	140.90	5701
91.00	1262	109.90	401	123.90	404	141.90	660
91.95	13963	110.90	521	125.95	117	142.90	5529
92.95	19525	111.90	345	127.90	1776	143.85	234
94.05	56269	112.15	115	128.90	601	144.65	161
95.05	456960	112.90	578	129.90	2076	144.95	162
96.05	31389	114.90	499	130.90	544	145.85	727
97.00	765	115.90	2046	134.90	963	146.90	373
103.90	2248	116.90	3251	136.80	812	147.90	1158
104.85	831	117.85	1958	138.85	106	148.80	437

Average of 3.078 to 3.090 min.: 020215H01.D\data.ms
S15B002-TUN1
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
149.90	606	173.95	397674				
152.80	224	174.95	29445				
153.95	146	175.95	389824				
154.90	1237	176.95	26064				
155.95	120	177.95	687				
156.90	765						
158.90	378						
160.80	409						
161.05	168						
171.95	100						
172.95	2789						

00414

Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H02.D
Acq On : 2 Feb 2015 8:58
Instrument: HP5973H
Operator : YNB
Sample : S15B002-CCV1@B15B002-BS1
Misc : CCV,WATER
ALS Vial : 27
Multiplier: 1

Quant Time: Feb 02 09:22:54 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.03min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Dichloromethane-d2	1.000	1.000	0.0	80	0.00
2	TMC	Dichlorodifluoromethane	2.487	2.518	1.2	84	0.00
3	TMC	Chloromethane	3.162	2.992	-5.4	78	-0.01
4	TCM	Vinyl chloride	3.301	3.192	-3.3	80	0.00
5	TCM	Bromomethane	2.418	2.334	-3.5	76	0.00
6	TMC	Chloroethane	2.372	2.329	-1.8	81	0.00
7	TMC	Trichlorofluoromethane	4.561	4.845	6.2	89	0.00
8	TMC	1,1-Dichloroethene	3.140	3.465	10.4	90	0.00
9	TCM	1,1,2-Trichloro-1,2,2-trifl	2.951	3.499	18.6	99	0.00
10	TCM	Acetone	0.192	0.264	37.5#	119	0.00
11	TCM	Carbon disulfide	10.403	11.627	11.8	91	0.00
12	TMC	Dichloromethane	3.444	3.339	-3.0	84	0.00
13	TCM	tert-Butyl alcohol	0.072	0.059	-18.1	62	0.00
14	TMC	trans-1,2-Dichloroethene	3.943	4.456	13.0	92	0.00
15	TCM	tert-Butyl methyl ether (MT	4.248	4.384	3.2	81	0.00
16	TCM	1,1-Dichloroethane	5.803	6.472	11.5	92	0.00
17	TMC	Diisopropyl ether	7.041	7.597	7.9	87	0.00
18	TCM	Ethyl-tert-butyl ether	3.877	3.762	-3.0	77	0.00
19	TCM	2,2-Dichloropropane	2.622	2.864	9.2	87	0.00
20	TMC	cis-1,2-Dichloroethene	2.266	2.287	0.9	83	0.00
21	TCM	2-Butanone (MEK)	0.222	0.206	-7.2	76	0.00
22	TMC	Bromochloromethane	0.672	0.675	0.4	80	0.00
23	TCM	Chloroform	3.428	3.522	2.7	84	0.00
24	I	Fluorobenzene	1.000	1.000	0.0	83	0.00
25	TCM	1,1,1-Trichloroethane	0.323	0.327	1.2	84	0.00
26	TCM	Carbon tetrachloride	0.271	0.271	0.0	84	0.00
27	TCM	1,1-Dichloropropene	0.279	0.287	2.9	87	0.00
28	S	1,2-Dichloroethane-d4	0.137	0.122	-10.9	73	0.00
29	TMC	Benzene	0.950	0.968	1.9	85	0.00
30	TCM	1,2-Dichloroethane	0.163	0.157	-3.7	80	0.00
31	TCM	tert-Amyl methyl ether	0.322	0.301	-6.5	76	0.00
32	TMC	Trichloroethene	0.234	0.237	1.3	86	0.00
33	TMC	1,2-Dichloropropane	0.186	0.182	-2.2	81	0.00
34	TMC	Dibromomethane	0.065	0.062	-4.6	78	0.00
35	TCM	Bromodichloromethane	0.220	0.215	-2.3	80	0.00
36	TCM	cis-1,3-Dichloropropene	0.230	0.223	-3.0	79	0.00
37	I	Chlorobenzene-d5	1.000	1.000	0.0	84	0.00
38	TMC	4-Methyl-2-pentanone (MIBK)	0.080	0.079	-1.3	79	0.00
39	S	Toluene-d8	1.482	1.532	3.4	87	0.00
40	TMC	Toluene	0.975	0.995	2.1	87	0.00
41	TCM	trans-1,3-Dichloropropene	0.250	0.242	-3.2	78	0.00
42	TCM	1,1,2-Trichloroethane	0.124	0.120	-3.2	83	0.00

≤30%
YNB
02.02.15

Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H02.D
Acq On : 2 Feb 2015 8:58
Instrument: HP5973H
Operator : YNB
Sample : S15B002-CCV1@B15B002-BS1
Misc : CCV,WATER
ALS Vial : 27
Multiplier: 1

Quant Time: Feb 02 09:22:54 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.03min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
43	TCM	Tetrachloroethene	0.390	0.402	3.1	89	0.00
44	TMC	1,3-Dichloropropane	0.274	0.264	-3.6	79	0.00
45	TCM	2-Hexanone	0.051	0.051	0.0	78	0.00
46	TCM	Chlorodibromomethane	0.186	0.178	-4.3	77	0.00
47	TMC	1,2-Dibromoethane (EDB)	0.131	0.126	-3.8	79	0.00
48	TMC	Chlorobenzene	0.973	0.968	-0.5	85	0.00
49	TCM	1,1,1,2-Tetrachloroethane	0.275	0.267	-2.9	81	0.00
50	TCM	Ethylbenzene	1.808	1.901	5.1	88	0.00
51	TCM	m&p-Xylene	0.773	0.781	1.0	86	0.00
52	TCM	o-Xylene	0.690	0.699	1.3	85	0.00
53	TCM	Styrene	1.077	1.086	0.8	83	0.00
54	TCM	Bromoform	0.087	0.083	-4.6	77	0.00
55	TCM	Isopropylbenzene	1.788	1.902	6.4	88	0.00
56	S	4-Bromofluorobenzene	0.431	0.421	-2.3	81	0.00
57	TCM	Bromobenzene	0.346	0.332	-4.0	80	0.00
58	TCM	1,1,2,2-Tetrachloroethane	0.145	0.141	-2.8	79	0.00
59	TMC	1,2,3-Trichloropropane	0.104	0.100	-3.8	80	0.00
60	TCM	Propylbenzene	2.133	2.275	6.7	89	0.00
61	TCM	2-Chlorotoluene	1.236	1.255	1.5	86	0.00
62	TCM	4-Chlorotoluene	1.428	1.469	2.9	87	0.00
63	TCM	1,3,5-Trimethylbenzene	1.564	1.628	4.1	87	0.00
64	TCM	tert-Butylbenzene	1.298	1.379	6.2	88	0.00
65	TCM	1,2,4-Trimethylbenzene	1.549	1.600	3.3	86	0.00
66	TCM	sec-Butylbenzene	1.916	2.087	8.9	91	0.00
67	TCM	1,3-Dichlorobenzene	0.805	0.818	1.6	85	0.00
68	TCM	p-Isopropyltoluene	1.749	1.860	6.3	89	0.00
69	TCM	1,4-Dichlorobenzene	0.835	0.813	-2.6	83	0.00
70	S	1,2-Dichlorobenzene-d4	0.413	0.410	-0.7	83	0.00
71	TCM	1,2-Dichlorobenzene	0.634	0.628	-0.9	83	0.00
72	TCM	Butylbenzene	1.541	1.679	9.0	92	0.00
73	TMC	1,2-Dibromo-3-chloropropane	0.019	0.018	-5.3	76	0.00
74	TCM	1,2,4-Trichlorobenzene	0.439	0.431	-1.8	82	0.00
75	TCM	Hexachlorobutadiene	0.266	0.284	6.8	92	0.00
76	TCM	Naphthalene	0.504	0.498	-1.2	78	0.00
77	TCM	1,2,3-Trichlorobenzene	0.337	0.334	-0.9	81	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 1

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H02.D
Acq On : 2 Feb 2015 8:58
Instrument: HP5973H
Operator : YNB
Sample : S15B002-CCV1@B15B002-BS1
Misc : CCV,WATER
ALS Vial : 27
Multiplier: 1

Quant Time: Feb 02 09:22:54 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.893	53	99780	5.000 ug/L	0.00
24) Fluorobenzene	7.821	96	960987	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.784	117	626780	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.274	65	117691	4.454 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 89.00%	
39) Toluene-d8	10.394	98	960485	5.168 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 103.40%	
56) 4-Bromofluorobenzene	14.839	95	263889	4.882 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 97.60%	
70) 1,2-Dichlorobenzene-d4	17.539	152	257202	4.970 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 99.40%	

$\frac{960485 \times 5}{626780 \times 1.482} = 5.17008$

YNB 02.02.15

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.539	85	251268	5.062 ug/L	100
3) Chloromethane	1.728	50	298575	4.732 ug/L #	98
4) Vinyl chloride	1.837	62	318540	4.835 ug/L	100
5) Bromomethane	2.178	94	232887	4.827 ug/L	99
6) Chloroethane	2.293	64	232362	4.908 ug/L	100
7) Trichlorofluoromethane	2.585	101	483413	5.311 ug/L	97
8) 1,1-Dichloroethene	3.218	96	345786	5.518 ug/L	98
9) 1,1,2-Trichloro-1,2,2-...	3.248	101	349089	5.927 ug/L	97
10) Acetone	3.315	43	210752	54.953 ug/L	100
11) Carbon disulfide	3.479	76	1160099	5.588 ug/L	100
12) Dichloromethane	3.923	84	333124	4.846 ug/L #	99
13) tert-Butyl alcohol	4.246	59	117079	81.088 ug/L	94
14) trans-1,2-Dichloroethene	4.361	96	444605	5.650 ug/L	99
15) tert-Butyl methyl ethe...	4.410	73	1749787	20.640 ug/L	98
16) 1,1-Dichloroethane	5.036	63	645742	5.576 ug/L	100
17) Diisopropyl ether	5.249	45	3031935	21.579 ug/L	98
18) Ethyl-tert-butyl ether	5.833	59	1501671	19.410 ug/L	99
19) 2,2-Dichloropropane	5.960	77	285818	5.463 ug/L	99
20) cis-1,2-Dichloroethene	5.973	96	228220	5.047 ug/L	98
21) 2-Butanone (MEK)	6.064	43	164284	37.122 ug/L	99
22) Bromochloromethane	6.350	128	67369	5.023 ug/L	98
23) Chloroform	6.514	83	351402	5.137 ug/L	99
25) 1,1,1-Trichloroethane	6.757	97	314660	5.075 ug/L	99
26) Carbon tetrachloride	7.019	117	260446	5.006 ug/L	99
27) 1,1-Dichloropropene	7.031	75	275890	5.154 ug/L	99
29) Benzene	7.347	78	929840	5.093 ug/L	99
30) 1,2-Dichloroethane	7.396	62	150396	4.791 ug/L	99
31) tert-Amyl methyl ether	7.621	73	1155769	18.673 ug/L	96
32) Trichloroethene	8.405	95	227464	5.050 ug/L	100
33) 1,2-Dichloropropane	8.758	63	175218	4.895 ug/L	99
34) Dibromomethane	8.934	93	59890	4.801 ug/L	99
35) Bromodichloromethane	9.232	83	207056	4.902 ug/L	99
36) cis-1,3-Dichloropropene	9.968	75	214392	4.848 ug/L	100

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H02.D
Acq On : 2 Feb 2015 8:58
Instrument: HP5973H
Operator : YNB
Sample : S15B002-CCV1@B15B002-BS1
Misc : CCV,WATER
ALS Vial : 27
Multiplier: 1

Quant Time: Feb 02 09:22:54 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
38) 4-Methyl-2-pentanone (...	10.278	43	395937	39.606 ug/L	99
40) Toluene	10.497	92	623893	5.103 ug/L	100
41) trans-1,3-Dichloropropene	10.905	75	151578	4.837 ug/L	99
42) 1,1,2-Trichloroethane	11.190	83	75076	4.823 ug/L	99
43) Tetrachloroethene	11.391	166	251941	5.147 ug/L	99
44) 1,3-Dichloropropane	11.458	76	165335	4.808 ug/L	100
45) 2-Hexanone	11.671	43	253424	39.546 ug/L	99
46) Chlorodibromomethane	11.817	129	111618	4.778 ug/L	97
47) 1,2-Dibromoethane (EDB)	11.975	107	79132	4.835 ug/L	97
48) Chlorobenzene	12.832	112	606913	4.973 ug/L	99
49) 1,1,1,2-Tetrachloroethane	12.997	131	167498	4.853 ug/L	100
50) Ethylbenzene	13.063	91	1191213	5.257 ug/L	99
51) m&p-Xylene	13.276	106	979119	10.109 ug/L	99
52) o-Xylene	13.945	106	437813	5.065 ug/L	98
53) Styrene	13.976	104	680890	5.045 ug/L	100
54) Bromoform	14.243	173	51865	4.765 ug/L	98
55) Isopropylbenzene	14.608	105	1191994	5.319 ug/L	99
57) Bromobenzene	15.064	156	208260	4.807 ug/L	98
58) 1,1,2,2-Tetrachloroethane	15.155	83	88234	4.850 ug/L	99
59) 1,2,3-Trichloropropane	15.192	75	62704	4.796 ug/L	94
60) Propylbenzene	15.338	91	1425672	5.331 ug/L	100
61) 2-Chlorotoluene	15.441	91	786387	5.076 ug/L	100
62) 4-Chlorotoluene	15.642	91	920657	5.142 ug/L	100
63) 1,3,5-Trimethylbenzene	15.672	105	1020610	5.204 ug/L	100
64) tert-Butylbenzene	16.232	119	864214	5.310 ug/L	99
65) 1,2,4-Trimethylbenzene	16.317	105	1002836	5.163 ug/L	99
66) sec-Butylbenzene	16.627	105	1308301	5.448 ug/L	100
67) 1,3-Dichlorobenzene	16.755	146	512599	5.083 ug/L	98
68) p-Isopropyltoluene	16.913	119	1165996	5.317 ug/L	99
69) 1,4-Dichlorobenzene	16.925	146	509565	4.870 ug/L	99
71) 1,2-Dichlorobenzene	17.570	146	393830	4.958 ug/L	98
72) Butylbenzene	17.643	91	1052594	5.448 ug/L	100
73) 1,2-Dibromo-3-chloropr...	18.981	75	45156	18.814 ug/L	94
74) 1,2,4-Trichlorobenzene	20.495	180	270306	4.915 ug/L	99
75) Hexachlorobutadiene	20.854	225	177813	5.334 ug/L	98
76) Naphthalene	20.914	128	312278	4.941 ug/L	99
77) 1,2,3-Trichlorobenzene	21.358	180	209058	4.942 ug/L	98

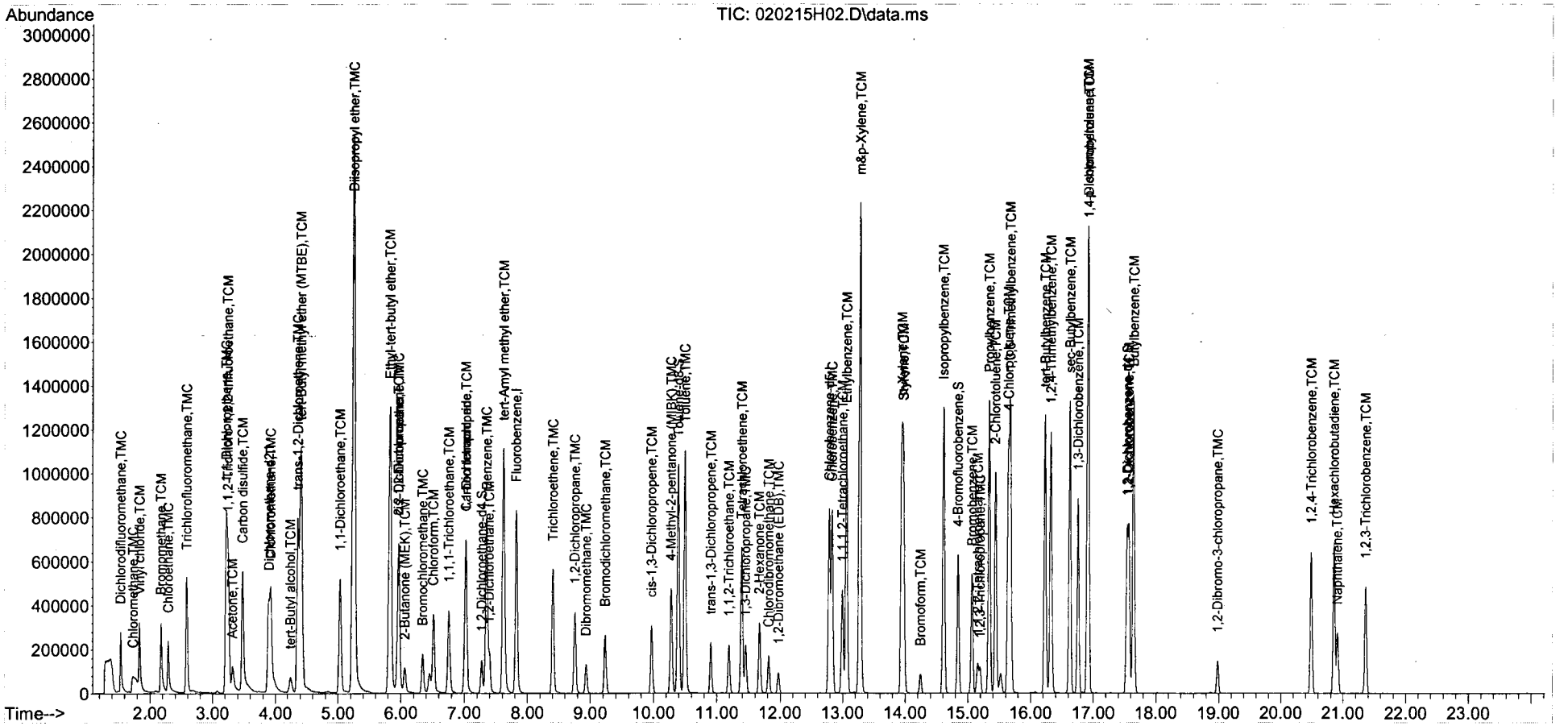
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H02.D
Acq On : 2 Feb 2015 8:58
Instrument: HP5973H
Operator : YNB
Sample : S15B002-CCV1@B15B002-BS1
Misc : CCV,WATER
ALS Vial : 27
Multiplier: 1

Quant Time: Feb 02 09:22:54 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M



LCS REPORT

Instrument Name: HP5973H
Sample Name: S15B002-CCV1@B15B002-BS1
Misc Info: CCV,WATER
Date Acquired: 2/2/2015 8:58
QLast Update: Wed Jan 14 16:54:35 2015
Operator: YNB

#	Name	Ret Time	Concentration	Amount	%R	QC Limit		STATUS
2)	Dichlorodifluoromethane	1.54	5.1	5.0	101%	53.0	153.0	pass
3)	Chloromethane	1.73	4.7	5.0	95%	70.0	124.0	pass
4)	Vinyl chloride	1.84	4.8	5.0	97%	70.0	130.0	pass
5)	Bromomethane	2.18	4.8	5.0	97%	58.0	172.0	pass
6)	Chloroethane	2.29	4.9	5.0	98%	75.0	135.0	pass
7)	Trichlorofluoromethane	2.59	5.3	5.0	106%	74.0	141.0	pass
8)	1,1-Dichloroethene	3.22	5.5	5.0	110%	70.0	130.0	pass
9)	1,1,2-Trichloro-1,2,2-trifluoroethane	3.25	5.9	5.0	119%	73.0	139.0	pass
10)	Acetone	3.32	55.0	40.0	137%	60.0	125.0	FAIL
11)	Carbon disulfide	3.48	5.6	5.0	112%	72.0	121.0	pass
12)	Dichloromethane	3.92	4.8	5.0	97%	70.0	130.0	pass
13)	tert-Butyl alcohol	4.25	81.1	100.0	81%	42.0	161.0	pass
14)	trans-1,2-Dichloroethene	4.36	5.6	5.0	113%	70.0	130.0	pass
15)	tert-Butyl methyl ether (MTBE)	4.41	20.6	20.0	103%	74.0	127.0	pass
16)	1,1-Dichloroethane	5.04	5.6	5.0	112%	85.0	117.0	pass
17)	Diisopropyl ether	5.25	21.6	20.0	108%	80.0	117.0	pass
18)	Ethyl-tert-butyl ether	5.83	19.4	20.0	97%	67.0	133.0	pass
19)	2,2-Dichloropropane	5.96	5.5	5.0	109%	61.0	163.0	pass
20)	cis-1,2-Dichloroethene	5.97	5.0	5.0	101%	70.0	130.0	pass
21)	2-Butanone (MEK)	6.06	37.1	40.0	93%	67.0	123.0	pass
22)	Bromochloromethane	6.35	5.0	5.0	100%	84.0	114.0	pass
23)	Chloroform	6.51	5.1	5.0	103%	70.0	130.0	pass
25)	1,1,1-Trichloroethane	6.76	5.1	5.0	102%	70.0	130.0	pass
26)	Carbon tetrachloride	7.02	5.0	5.0	100%	70.0	130.0	pass
27)	1,1-Dichloropropene	7.03	5.2	5.0	103%	88.0	120.0	pass
29)	Benzene	7.35	5.1	5.0	102%	70.0	130.0	pass
30)	1,2-Dichloroethane	7.40	4.8	5.0	96%	70.0	130.0	pass
31)	tert-Amyl methyl ether	7.62	18.7	20.0	93%	63.0	134.0	pass
32)	Trichloroethene	8.41	5.0	5.0	101%	70.0	130.0	pass
33)	1,2-Dichloropropane	8.76	4.9	5.0	98%	70.0	130.0	pass
34)	Dibromomethane	8.93	4.8	5.0	96%	79.0	118.0	pass
35)	Bromodichloromethane	9.23	4.9	5.0	98%	70.0	130.0	pass
36)	cis-1,3-Dichloropropene	9.97	4.8	5.0	97%	79.0	127.0	pass
38)	4-Methyl-2-pentanone (MIBK)	10.28	39.6	40.0	99%	68.0	132.0	pass
40)	Toluene	10.50	5.1	5.0	102%	70.0	130.0	pass
41)	trans-1,3-Dichloropropene	10.90	4.8	5.0	97%	75.0	135.0	pass
42)	1,1,2-Trichloroethane	11.19	4.8	5.0	96%	70.0	130.0	pass
43)	Tetrachloroethene	11.39	5.1	5.0	103%	70.0	130.0	pass
44)	1,3-Dichloropropane	11.46	4.8	5.0	96%	82.0	116.0	pass
45)	2-Hexanone	11.67	39.5	40.0	99%	64.0	134.0	pass
46)	Chlorodibromomethane	11.82	4.8	5.0	96%	70.0	130.0	pass
47)	1,2-Dibromoethane (EDB)	11.97	4.8	5.0	97%	85.0	114.0	pass
48)	Chlorobenzene	12.83	5.0	5.0	99%	70.0	130.0	pass
49)	1,1,1,2-Tetrachloroethane	13.00	4.9	5.0	97%	86.0	122.0	pass
50)	Ethylbenzene	13.06	5.3	5.0	105%	70.0	130.0	pass
51)	m&p-Xylene	13.28	10.1	10.0	101%	70.0	130.0	pass
52)	o-Xylene	13.95	5.1	5.0	101%	70.0	130.0	pass

53)	Styrene	13.98	5.0	5.0	101%	70.0	130.0	pass
54)	Bromoform	14.24	4.8	5.0	95%	70.0	130.0	pass
55)	Isopropylbenzene	14.61	5.3	5.0	106%	90.0	118.0	pass
57)	Bromobenzene	15.06	4.8	5.0	96%	90.0	110.0	pass
58)	1,1,2,2-Tetrachloroethane	15.16	4.9	5.0	97%	76.0	122.0	pass
59)	1,2,3-Trichloropropane	15.19	4.8	5.0	96%	77.0	119.0	pass
60)	Propylbenzene	15.34	5.3	5.0	107%	89.0	120.0	pass
61)	2-Chlorotoluene	15.44	5.1	5.0	102%	88.0	114.0	pass
62)	4-Chlorotoluene	15.64	5.1	5.0	103%	90.0	112.0	pass
63)	1,3,5-Trimethylbenzene	15.67	5.2	5.0	104%	90.0	115.0	pass
64)	tert-Butylbenzene	16.23	5.3	5.0	106%	89.0	118.0	pass
65)	1,2,4-Trimethylbenzene	16.32	5.2	5.0	103%	90.0	112.0	pass
66)	sec-Butylbenzene	16.63	5.4	5.0	109%	87.0	122.0	pass
67)	1,3-Dichlorobenzene	16.75	5.1	5.0	102%	88.0	111.0	pass
69)	1,4-Dichlorobenzene	16.93	4.9	5.0	97%	70.0	130.0	pass
70)	1,2-Dichlorobenzene-d4	17.54	5.0	5.0	99%	70.0	130.0	pass
72)	Butylbenzene	17.64	5.4	5.0	109%	86.0	123.0	pass
73)	1,2-Dibromo-3-chloropropane	18.98	18.8	20.0	94%	68.0	134.0	pass
74)	1,2,4-Trichlorobenzene	20.49	4.9	5.0	98%	70.0	130.0	pass
75)	Hexachlorobutadiene	0.00	5.3	5.0	107%	81.0	123.0	pass
76)	Naphthalene	20.91	4.9	5.0	99%	54.0	144.0	pass
77)	1,2,3-Trichlorobenzene	21.36	4.9	5.0	99%	73.0	122.0	pass

QLS REPORT

Instrument Name: HP5973H
Sample Name: S15B002-CRL1
Misc Info: CRL,WATER
Date Acquired: 2/2/2015 9:33
QLast Update: Wed Jan 14 16:54:35 2015
Operator: YNB

#	Name	Ret Time	Concentration	Amount	%R	QC Limit		STATUS
1)	Dichloromethane-d2	3.90	5.00	5.0	100.0%	60.0	140.0	pass
2)	Dichlorodifluoromethane	1.54	0.45	0.5	90.9%	60.0	140.0	pass
3)	Chloromethane	1.77	0.52	0.5	103.6%	60.0	140.0	pass
4)	Vinyl chloride	1.84	0.49	0.5	98.0%	60.0	140.0	pass
5)	Bromomethane	2.18	0.52	0.5	104.0%	60.0	140.0	pass
6)	Chloroethane	2.30	0.54	0.5	108.6%	60.0	140.0	pass
7)	Trichlorofluoromethane	2.58	0.53	0.5	106.6%	60.0	140.0	pass
8)	1,1-Dichloroethene	3.22	0.57	0.5	113.0%	60.0	140.0	pass
9)	1,1,2-Trichloro-1,2,2-trifluoroethane	3.25	0.56	0.5	112.6%	60.0	140.0	pass
10)	Acetone	3.32	7.61	4.0	190.3%	60.0	140.0	FAIL 1
11)	Carbon disulfide	3.48	0.58	0.5	116.3%	60.0	140.0	pass
12)	Dichloromethane	3.93	0.61	0.5	122.6%	60.0	140.0	pass
13)	tert-Butyl alcohol	4.27	20.02	10.0	200.2%	60.0	140.0	FAIL 2
14)	trans-1,2-Dichloroethene	4.37	0.56	0.5	112.4%	60.0	140.0	pass
15)	tert-Butyl methyl ether (MTBE)	4.42	2.31	2.0	115.7%	60.0	140.0	pass
16)	1,1-Dichloroethane	5.04	0.61	0.5	121.7%	60.0	140.0	pass
17)	Diisopropyl ether	5.25	2.36	2.0	118.2%	60.0	140.0	pass
18)	Ethyl-tert-butyl ether	5.84	1.99	2.0	99.3%	60.0	140.0	pass
19)	2,2-Dichloropropane	5.96	0.47	0.5	94.6%	60.0	140.0	pass
20)	cis-1,2-Dichloroethene	5.98	0.49	0.5	98.9%	60.0	140.0	pass
21)	2-Butanone (MEK)	6.07	4.25	4.0	106.2%	60.0	140.0	pass
22)	Bromochloromethane	6.35	0.49	0.5	98.9%	60.0	140.0	pass
23)	Chloroform	6.52	0.54	0.5	107.4%	60.0	140.0	pass
24)	Fluorobenzene	7.83	5.00	5.0	100.0%	60.0	140.0	pass
25)	1,1,1-Trichloroethane	6.77	0.48	0.5	96.8%	60.0	140.0	pass
26)	Carbon tetrachloride	7.02	0.44	0.5	88.1%	60.0	140.0	pass
27)	1,1-Dichloropropene	7.03	0.49	0.5	98.8%	60.0	140.0	pass
28)	1,2-Dichloroethane-d4	7.28	5.02	5.0	100.5%	60.0	140.0	pass
29)	Benzene	7.35	0.53	0.5	105.2%	60.0	140.0	pass
30)	1,2-Dichloroethane	7.39	0.57	0.5	113.5%	60.0	140.0	pass
31)	tert-Amyl methyl ether	7.62	1.90	2.0	94.9%	60.0	140.0	pass
32)	Trichloroethene	8.41	0.51	0.5	102.9%	60.0	140.0	pass
33)	1,2-Dichloropropane	8.76	0.54	0.5	108.2%	60.0	140.0	pass
34)	Dibromomethane	8.94	0.51	0.5	102.1%	60.0	140.0	pass
35)	Bromodichloromethane	9.24	0.51	0.5	103.0%	60.0	140.0	pass
36)	cis-1,3-Dichloropropene	9.97	0.47	0.5	93.5%	60.0	140.0	pass
37)	Chlorobenzene-d5	12.78	5.00	5.0	100.0%	60.0	140.0	pass
38)	4-Methyl-2-pentanone (MIBK)	10.28	3.86	4.0	96.6%	60.0	140.0	pass
39)	Toluene-d8	10.39	5.02	5.0	100.5%	60.0	140.0	pass
40)	Toluene	10.50	0.51	0.5	102.9%	60.0	140.0	pass
41)	trans-1,3-Dichloropropene	10.90	0.42	0.5	84.6%	60.0	140.0	pass
42)	1,1,2-Trichloroethane	11.19	0.53	0.5	106.6%	60.0	140.0	pass
43)	Tetrachloroethene	11.40	0.50	0.5	100.7%	60.0	140.0	pass
44)	1,3-Dichloropropane	11.46	0.52	0.5	103.8%	60.0	140.0	pass
45)	2-Hexanone	11.68	3.90	4.0	97.6%	60.0	140.0	pass
46)	Chlorodibromomethane	11.82	0.44	0.5	87.7%	60.0	140.0	pass

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02.02.15

47)	1,2-Dibromoethane (EDB)	11.97	0.53	0.5	105.3%	60.0	140.0	pass
48)	Chlorobenzene	12.83	0.53	0.5	107.0%	60.0	140.0	pass
49)	1,1,1,2-Tetrachloroethane	12.99	0.47	0.5	93.3%	60.0	140.0	pass
50)	Ethylbenzene	13.06	0.50	0.5	100.8%	60.0	140.0	pass
51)	m&p-Xylene	13.27	0.95	1.0	94.8%	60.0	140.0	pass
52)	o-Xylene	13.94	0.45	0.5	90.6%	60.0	140.0	pass
53)	Styrene	13.97	0.45	0.5	89.4%	60.0	140.0	pass
54)	Bromoform	14.24	0.46	0.5	92.6%	60.0	140.0	pass
55)	Isopropylbenzene	14.61	0.46	0.5	91.5%	60.0	140.0	pass
56)	4-Bromofluorobenzene	14.84	4.79	5.0	95.7%	60.0	140.0	pass
57)	Bromobenzene	15.06	0.48	0.5	96.8%	60.0	140.0	pass
58)	1,1,2,2-Tetrachloroethane	15.15	0.50	0.5	100.3%	60.0	140.0	pass
59)	1,2,3-Trichloropropane	15.20	0.46	0.5	91.8%	60.0	140.0	pass
60)	Propylbenzene	15.34	0.48	0.5	95.3%	60.0	140.0	pass
61)	2-Chlorotoluene	15.44	0.50	0.5	100.3%	60.0	140.0	pass
62)	4-Chlorotoluene	15.64	0.49	0.5	97.2%	60.0	140.0	pass
63)	1,3,5-Trimethylbenzene	15.68	0.46	0.5	92.0%	60.0	140.0	pass
64)	tert-Butylbenzene	16.23	0.45	0.5	90.7%	60.0	140.0	pass
65)	1,2,4-Trimethylbenzene	16.32	0.46	0.5	92.8%	60.0	140.0	pass
66)	sec-Butylbenzene	16.63	0.45	0.5	91.0%	60.0	140.0	pass
67)	1,3-Dichlorobenzene	16.75	0.51	0.5	101.4%	60.0	140.0	pass
68)	p-Isopropyltoluene	16.91	0.43	0.5	85.5%	60.0	140.0	pass
69)	1,4-Dichlorobenzene	16.92	0.46	0.5	91.7%	60.0	140.0	pass
70)	1,2-Dichlorobenzene-d4	17.54	4.78	5.0	95.7%	60.0	140.0	pass
71)	1,2-Dichlorobenzene	17.57	0.53	0.5	105.5%	60.0	140.0	pass
72)	Butylbenzene	17.64	0.49	0.5	97.2%	60.0	140.0	pass
73)	1,2-Dibromo-3-chloropropane	18.99	1.69	2.0	84.3%	60.0	140.0	pass
74)	1,2,4-Trichlorobenzene	20.49	0.47	0.5	94.6%	60.0	140.0	pass
75)	Hexachlorobutadiene	0.00	0.50	0.5	99.7%	60.0	140.0	pass
76)	Naphthalene	20.91	0.46	0.5	91.8%	60.0	140.0	pass
77)	1,2,3-Trichlorobenzene	21.36	0.53	0.5	105.7%	60.0	140.0	pass

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H03.D
Acq On : 2 Feb 2015 9:33
Instrument: HP5973H
Operator : YNB
Sample : S15B002-CRL1
Misc : CRL,WATER
ALS Vial : 28
Multiplier: 1

Quant Time: Feb 02 10:00:01 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.897	53	99783	5.000 ug/L	0.00
24) Fluorobenzene	7.826	96	902778	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.782	117	601782	5.000 ug/L	0.00

System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.278	65	124681	5.023 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery = 100.40%		
39) Toluene-d8	10.392	98	896284	5.023 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery = 100.40%		
56) 4-Bromofluorobenzene	14.838	95	248344	4.785 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery = 95.80%		
70) 1,2-Dichlorobenzene-d4	17.538	152	237653	4.783 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery = 95.60%		

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.544	85	22568	0.455 ug/L	92
3) Chloromethane	1.769	50	32671	0.518 ug/L #	87
4) Vinyl chloride	1.836	62	32293	0.490 ug/L	98
5) Bromomethane	2.176	94	25088	0.520 ug/L	99
6) Chloroethane	2.298	64	25718	0.543 ug/L	98
7) Trichlorofluoromethane	2.584	101	48530	0.533 ug/L	97
8) 1,1-Dichloroethene	3.222	96	35411	0.565 ug/L	99
9) 1,1,2-Trichloro-1,2,2-...	3.253	101	33152	0.563 ug/L	99
10) Acetone	3.319	43	29191	7.611 ug/L	83
11) Carbon disulfide	3.478	76	120703	0.581 ug/L	99
12) Dichloromethane	3.928	84	42121	0.613 ug/L #	47
13) tert-Butyl alcohol	4.268	59	28905	20.019 ug/L	82
14) trans-1,2-Dichloroethene	4.365	96	44239	0.562 ug/L	96
15) tert-Butyl methyl ethe...	4.420	73	196117	2.313 ug/L	96
16) 1,1-Dichloroethane	5.040	63	70445	0.608 ug/L	99
17) Diisopropyl ether	5.253	45	332246	2.365 ug/L	100
18) Ethyl-tert-butyl ether	5.837	59	153682	1.986 ug/L	95
19) 2,2-Dichloropropane	5.959	77	24758	0.473 ug/L	98
20) cis-1,2-Dichloroethene	5.977	96	22369	0.495 ug/L	98
21) 2-Butanone (MEK)	6.068	43	18804	4.249 ug/L	96
22) Bromochloromethane	6.348	128	6635	0.495 ug/L	92
23) Chloroform	6.518	83	36746	0.537 ug/L	97
25) 1,1,1-Trichloroethane	6.768	97	28188	0.484 ug/L	97
26) Carbon tetrachloride	7.017	117	21540	0.441 ug/L	99
27) 1,1-Dichloropropene	7.029	75	24843	0.494 ug/L	96
29) Benzene	7.351	78	90257	0.526 ug/L	99
30) 1,2-Dichloroethane	7.394	62	16731	0.567 ug/L	94
31) tert-Amyl methyl ether	7.619	73	110330	1.897 ug/L	94
32) Trichloroethene	8.410	95	21768	0.514 ug/L	98
33) 1,2-Dichloropropane	8.756	63	18194	0.541 ug/L #	49
34) Dibromomethane	8.939	93	5983	0.511 ug/L	97
35) Bromodichloromethane	9.237	83	20433	0.515 ug/L	97
36) cis-1,3-Dichloropropene	9.966	75	19431	0.468 ug/L	96

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H03.D
Acq On : 2 Feb 2015 9:33
Instrument: HP5973H
Operator : YNB
Sample : S15B002-CRL1
Misc : CRL,WATER
ALS Vial : 28
Multiplier: 1

Quant Time: Feb 02 10:00:01 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
38) 4-Methyl-2-pentanone (...	10.277	43	37092	3.865 ug/L	99
40) Toluene	10.502	92	60374	0.514 ug/L	100
41) trans-1,3-Dichloropropene	10.903	75	12730	0.423 ug/L	98
42) 1,1,2-Trichloroethane	11.195	83	7967	0.533 ug/L	98
43) Tetrachloroethene	11.395	166	23664	0.504 ug/L	99
44) 1,3-Dichloropropane	11.462	76	17128	0.519 ug/L	97
45) 2-Hexanone	11.675	43	24009	3.902 ug/L	93
46) Chlorodibromomethane	11.821	129	9831	0.438 ug/L	91
47) 1,2-Dibromoethane (EDB)	11.973	107	8271	0.526 ug/L #	94
48) Chlorobenzene	12.831	112	62674	0.535 ug/L	99
49) 1,1,1,2-Tetrachloroethane	12.995	131	15451	0.466 ug/L	98
50) Ethylbenzene	13.062	91	109674	0.504 ug/L	97
51) m&p-Xylene	13.275	106	88172	0.948 ug/L	99
52) o-Xylene	13.944	106	37605	0.453 ug/L	100
53) Styrene	13.974	104	57925	0.447 ug/L	98
54) Bromoform	14.235	173	4839	0.463 ug/L #	33
55) Isopropylbenzene	14.613	105	98420	0.457 ug/L	98
57) Bromobenzene	15.063	156	20137	0.484 ug/L	97
58) 1,1,2,2-Tetrachloroethane	15.154	83	8763	0.502 ug/L	87
59) 1,2,3-Trichloropropane	15.196	75	5760	0.459 ug/L	91
60) Propylbenzene	15.336	91	122287	0.476 ug/L	99
61) 2-Chlorotoluene	15.440	91	74616	0.502 ug/L	100
62) 4-Chlorotoluene	15.640	91	83530	0.486 ug/L	99
63) 1,3,5-Trimethylbenzene	15.677	105	86642	0.460 ug/L	100
64) tert-Butylbenzene	16.230	119	70837	0.453 ug/L	100
65) 1,2,4-Trimethylbenzene	16.321	105	86524	0.464 ug/L	99
66) sec-Butylbenzene	16.625	105	104890	0.455 ug/L	99
67) 1,3-Dichlorobenzene	16.753	146	49096	0.507 ug/L	99
68) p-Isopropyltoluene	16.911	119	90007	0.428 ug/L	98
69) 1,4-Dichlorobenzene	16.923	146	46089	0.459 ug/L	99
71) 1,2-Dichlorobenzene	17.568	146	40241	0.528 ug/L	95
72) Butylbenzene	17.641	91	90181	0.486 ug/L	98
73) 1,2-Dibromo-3-chloropr...	18.991	75	3883	1.685 ug/L	88
74) 1,2,4-Trichlorobenzene	20.493	180	24976	0.473 ug/L	97
75) Hexachlorobutadiene	20.852	225	15957	0.499 ug/L	94
76) Naphthalene	20.913	128	27863	0.459 ug/L	98
77) 1,2,3-Trichlorobenzene	21.357	180	21456	0.528 ug/L	93

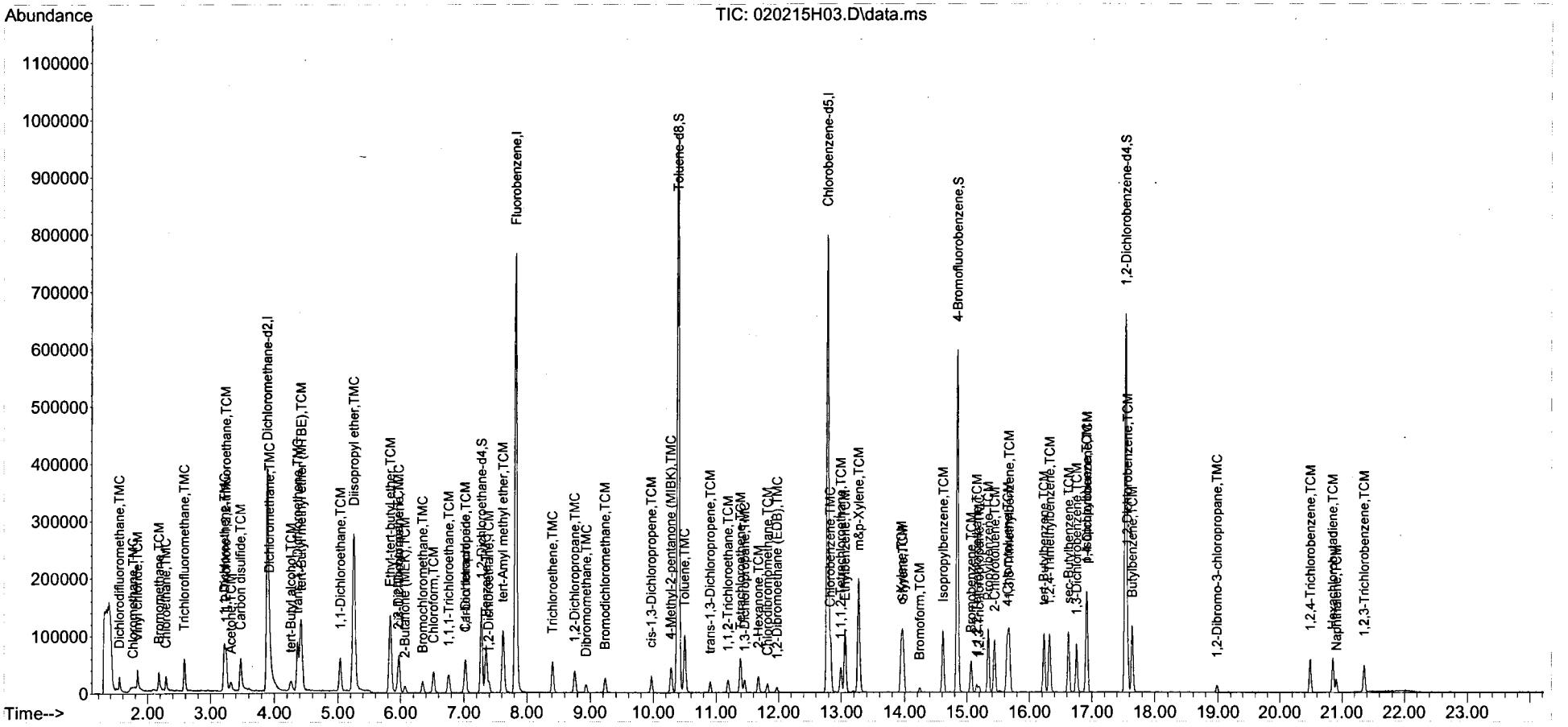
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H03.D
Acq On : 2 Feb 2015 9:33
Instrument: HP5973H
Operator : YNB
Sample : S15B002-CRL1
Misc : CRL,WATER
ALS Vial : 28
Multiplier: 1

Quant Time: Feb 02 10:00:01 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H04.D
Acq On : 2 Feb 2015 10:09
Instrument: HP5973H
Operator : YNB
Sample : B15B002-BLK1
Misc : BLANK,WATER
ALS Vial : 29
Multiplier: 1

Quant Time: Feb 02 10:50:49 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.894	53	94022	5.000 ug/L	0.00
24) Fluorobenzene	7.823	96	869369	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.785	117	571208	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.275	65	120195	5.029 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 100.60%	
39) Toluene-d8	10.395	98	868884	5.130 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 102.60%	
56) 4-Bromofluorobenzene	14.840	95	227807	4.624 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 92.40%	
70) 1,2-Dichlorobenzene-d4	17.541	152	217545	4.613 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 92.20%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

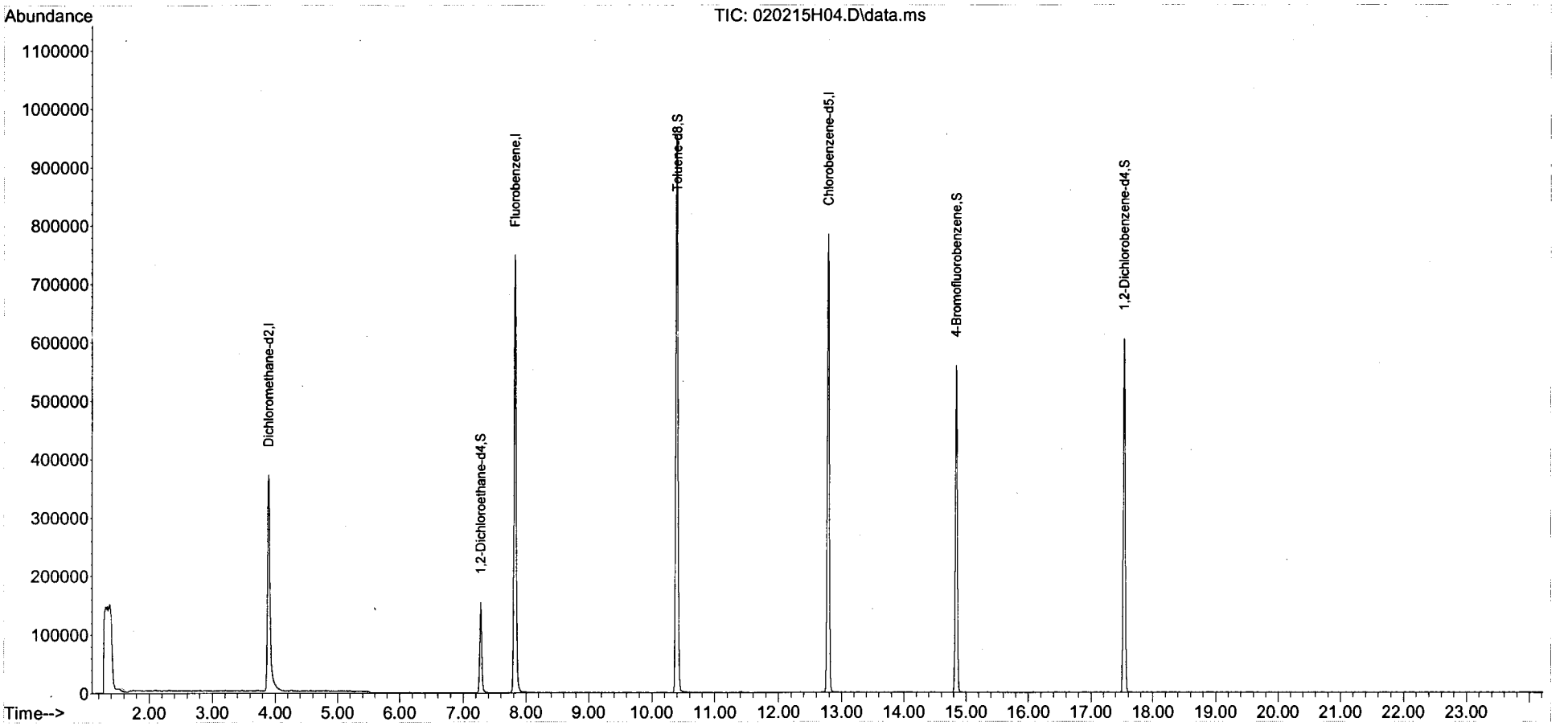
00427

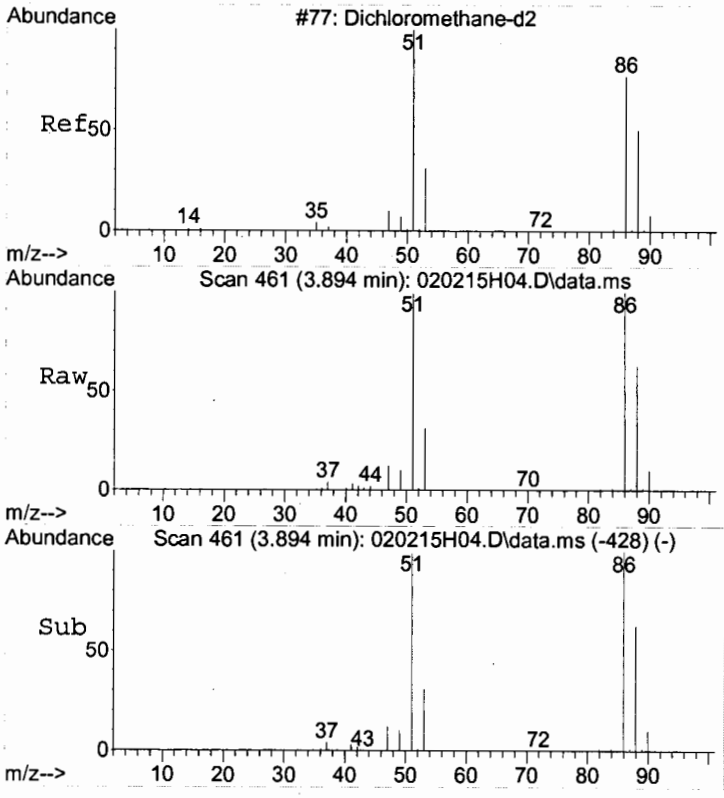
Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H04.D
Acq On : 2 Feb 2015 10:09
Instrument: HP5973H
Operator : YNB
Sample : B15B002-BLK1
Misc : BLANK,WATER
ALS Vial : 29
Multiplier: 1

Quant Time: Feb 02 10:50:49 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

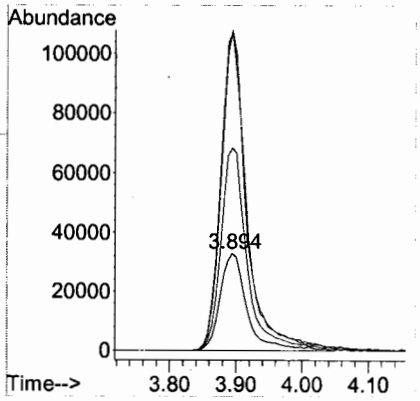


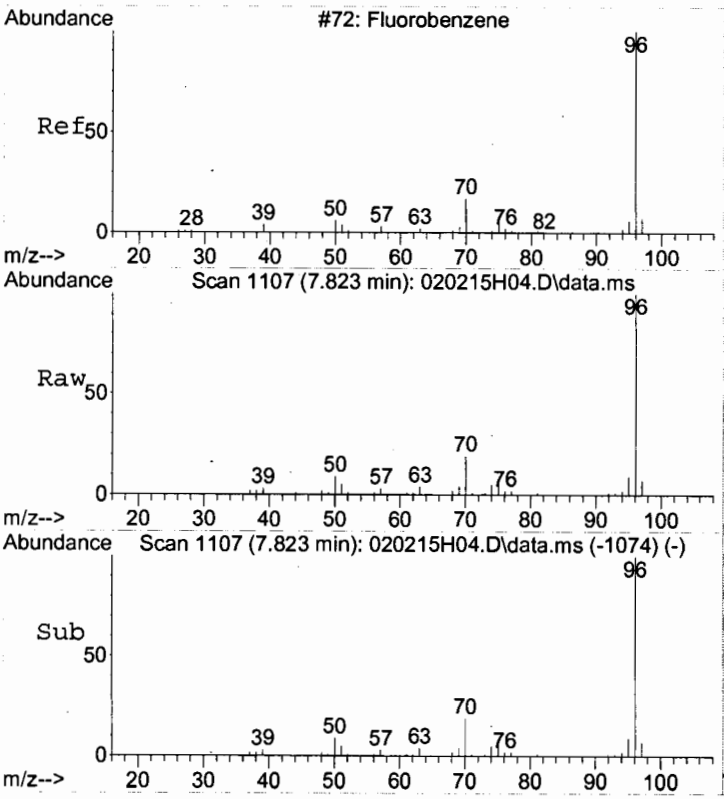


#1
Dichloromethane-d2
Concen: 5.00 ug/L
RT: 3.894 min Scan# 461
Delta R.T. 0.002 min
Lab File: 020215H04.D
Acq: 2 Feb 2015 10:09

Tgt Ion: 53 Resp: 94022

Ion	Ratio	Lower	Upper
53	100		
51	312.1	381.1	421.1#
86	314.6	490.1	530.1#
88	203.4	211.2	251.2#

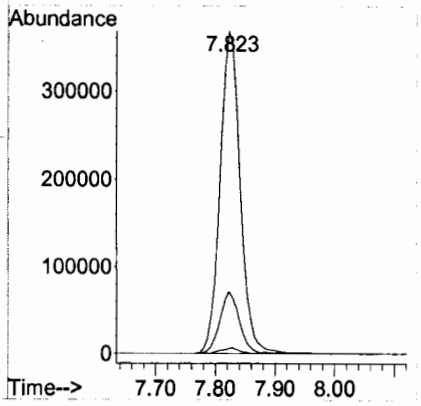


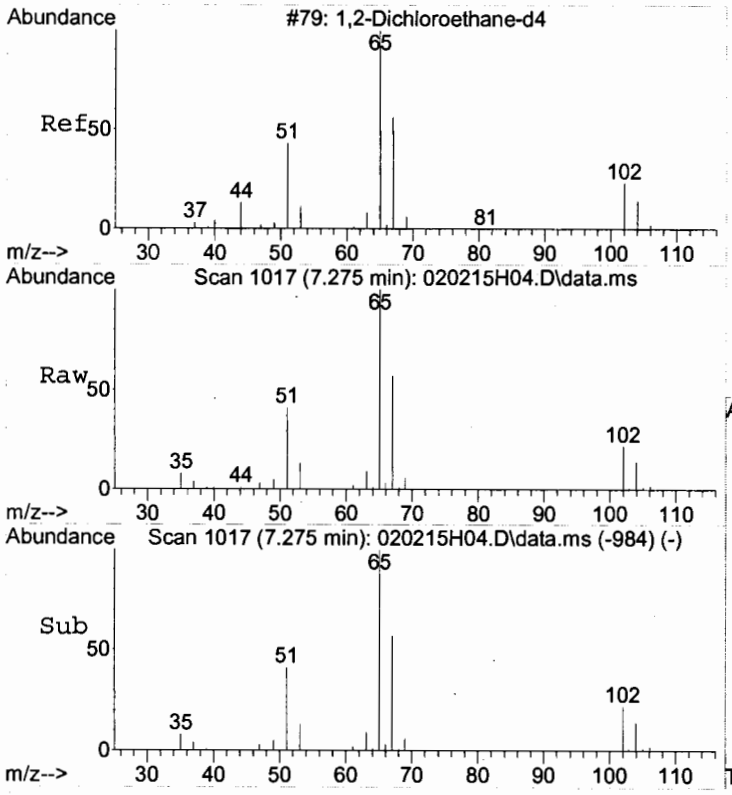


#24
Fluorobenzene
Concen: 5.00 ug/L
RT: 7.823 min Scan# 1107
Delta R.T. 0.002 min
Lab File: 020215H04.D
Acq: 2 Feb 2015 10:09

Tgt Ion: 96 Resp: 869369

Ion	Ratio	Lower	Upper
96	100		
70	18.8	0.0	38.7
77	1.6	0.0	21.6

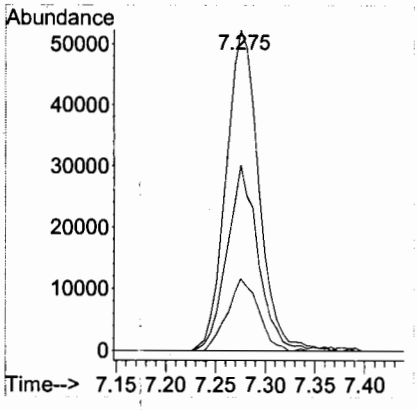


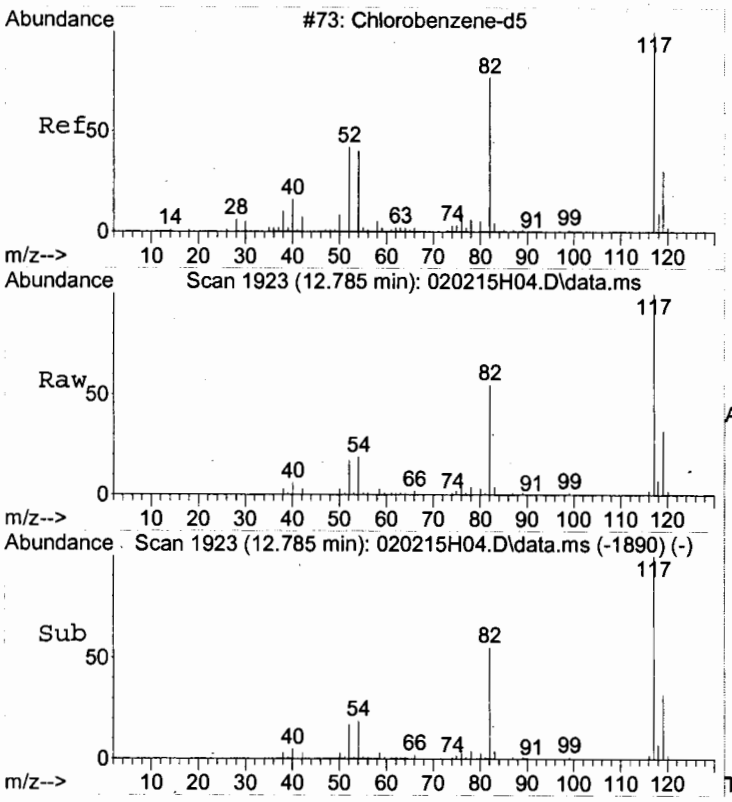


#28
1,2-Dichloroethane-d4
Concen: 5.03 ug/L
RT: 7.275 min Scan# 1017
Delta R.T. 0.002 min
Lab File: 020215H04.D
Acq: 2 Feb 2015 10:09

Tgt Ion: 65 Resp: 120195

Ion	Ratio	Lower	Upper
65	100		
67	54.8	32.3	72.3
102	20.9	1.3	41.3

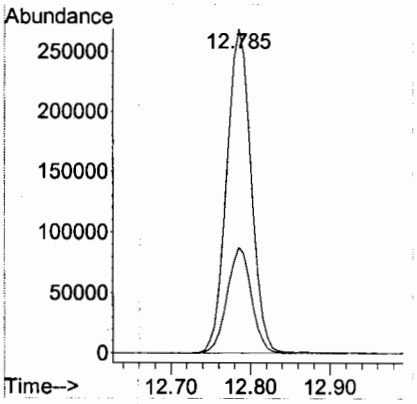


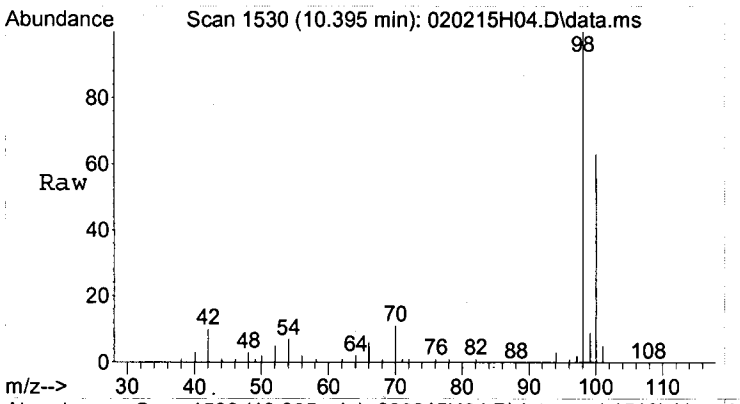


#37
Chlorobenzene-d5
Concen: 5.00 ug/L
RT: 12.785 min Scan# 1923
Delta R.T. 0.002 min
Lab File: 020215H04.D
Acq: 2 Feb 2015 10:09

Tgt Ion:117 Resp: 571208

Ion	Ratio	Lower	Upper
117	100		
119	32.2	11.7	51.7

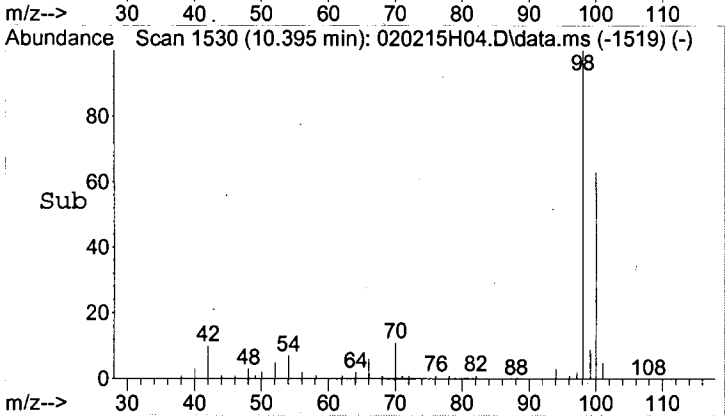


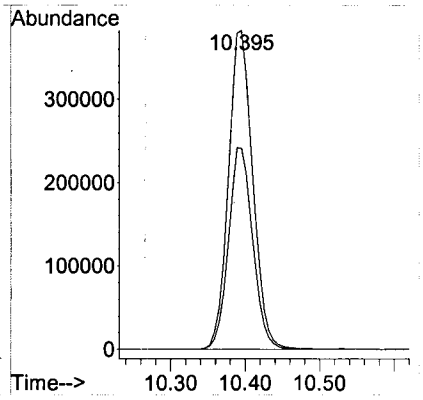


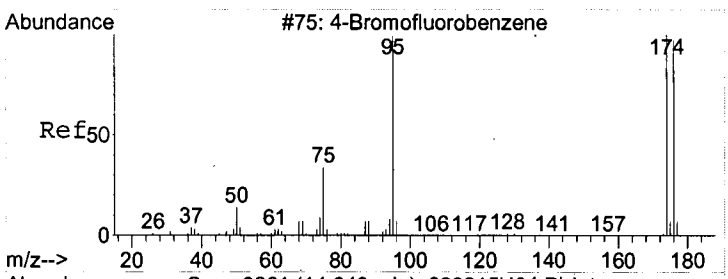
#39
Toluene-d8
Concen: 5.13 ug/L
RT: 10.395 min Scan# 1530
Delta R.T. 0.002 min
Lab File: 020215H04.D
Acq: 2 Feb 2015 10:09

Tgt Ion: 98 Resp: 868884

Ion	Ratio	Lower	Upper
98	100		
100	63.1	45.3	85.3



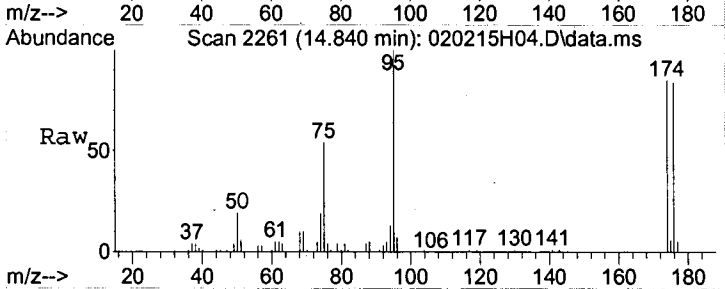


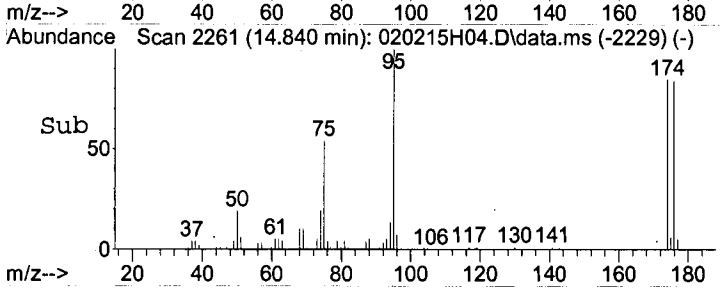


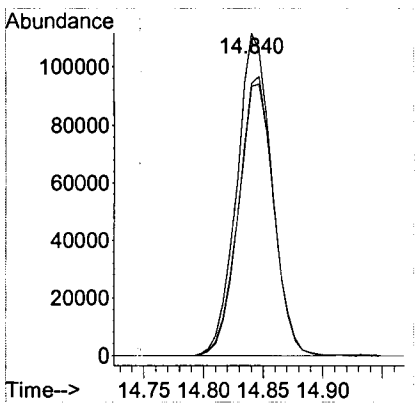
#56
4-Bromofluorobenzene
Concen: 4.62 ug/L
RT: 14.840 min Scan# 2261
Delta R.T. -0.004 min
Lab File: 020215H04.D
Acq: 2 Feb 2015 10:09

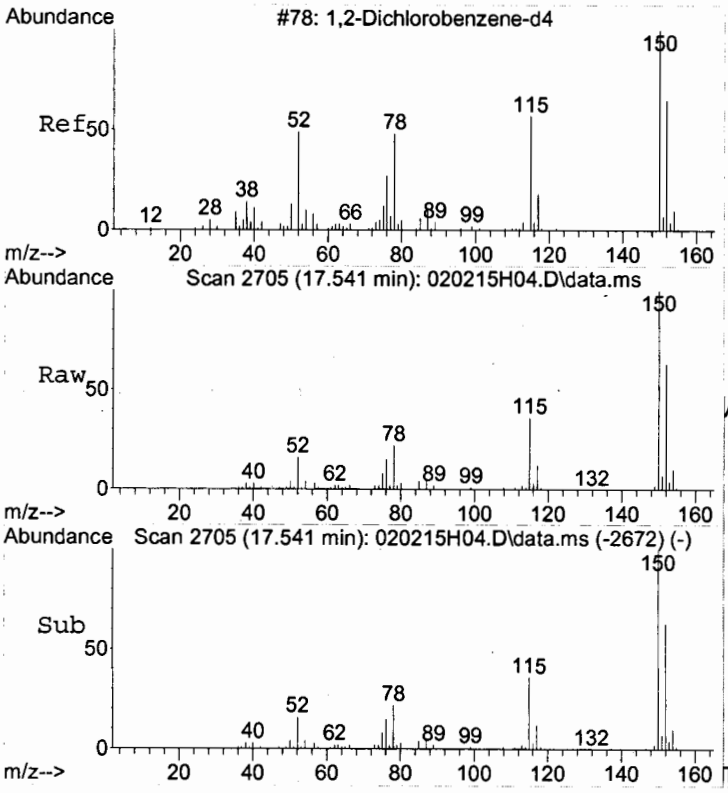
Tgt Ion: 95 Resp: 227807

Ion	Ratio	Lower	Upper
95	100		
174	87.1	68.9	108.9
176	85.3	66.0	106.0





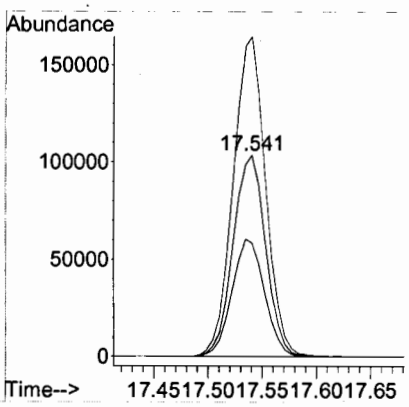




#70
1,2-Dichlorobenzene-d4
Concen: 4.61 ug/L
RT: 17.541 min Scan# 2705
Delta R.T. 0.002 min
Lab File: 020215H04.D
Acq: 2 Feb 2015 10:09

Tgt Ion:152 Resp: 217545

Ion	Ratio	Lower	Upper
152	100		
115	58.4	39.3	79.3
150	158.0	152.8	192.8



LSC Area Percent Report

Data Path : C:\msdchem\1\DATA\2015\020215HVW\
Data File : 020215H04.D
Acq On : 2 Feb 2015 10:09
Operator : YNB
Sample : B15B002-BLK1
Misc : BLANK,WATER
ALS Vial : 29 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 50 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M
Title : Volatile Organic Analysis - 524.2 Method

Signal : TIC: 020215H04.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.894	451	461	484	rBV	369483	1021675	46.89%	10.902%
2	7.275	1008	1017	1028	rBV	154848	336915	15.46%	3.595%
3	7.823	1098	1107	1123	rBV	748778	1753269	80.46%	18.709%
4	10.395	1519	1530	1540	rBV	952713	2179067	100.00%	23.253%
5	12.785	1913	1923	1933	rBV	784436	1671146	76.69%	17.833%
6	14.840	2253	2261	2272	rBV	559219	1135278	52.10%	12.115%
7	17.535	2696	2704	2717	rBV	604767	1273747	58.45%	13.592%

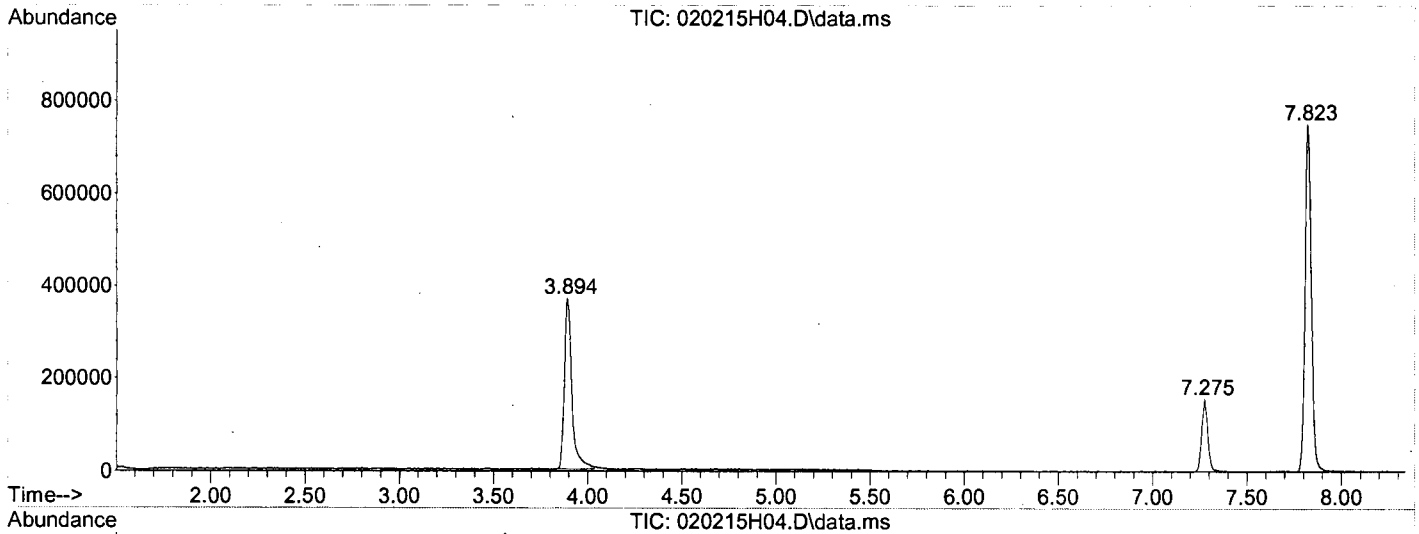
Sum of corrected areas: 9371097

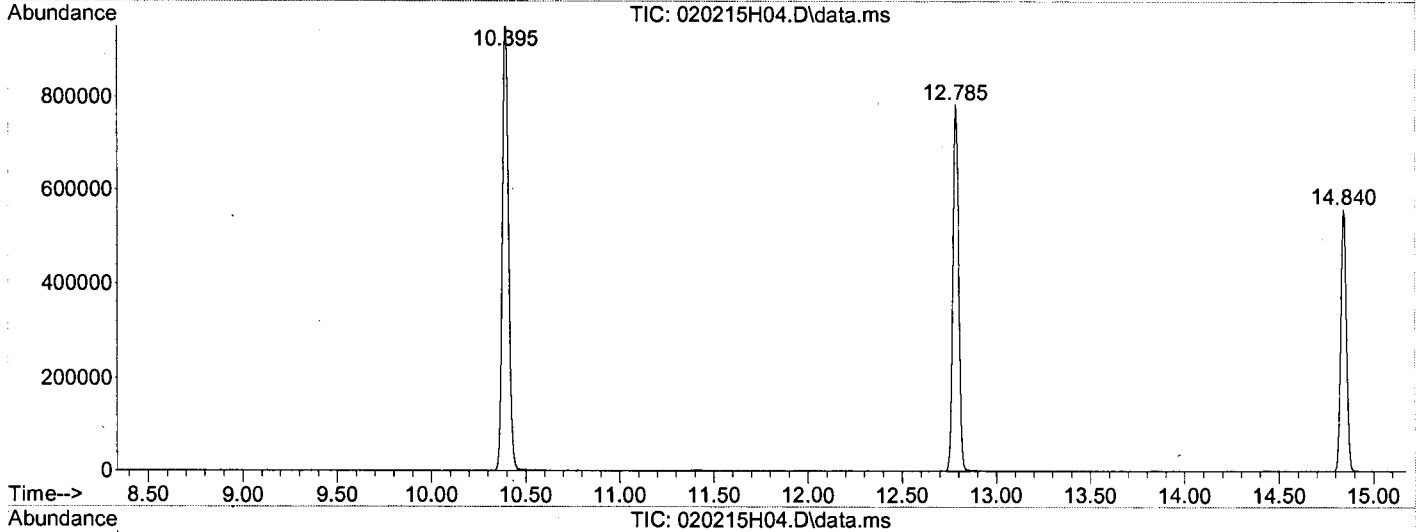
LSC Report - Integrated Chromatogram

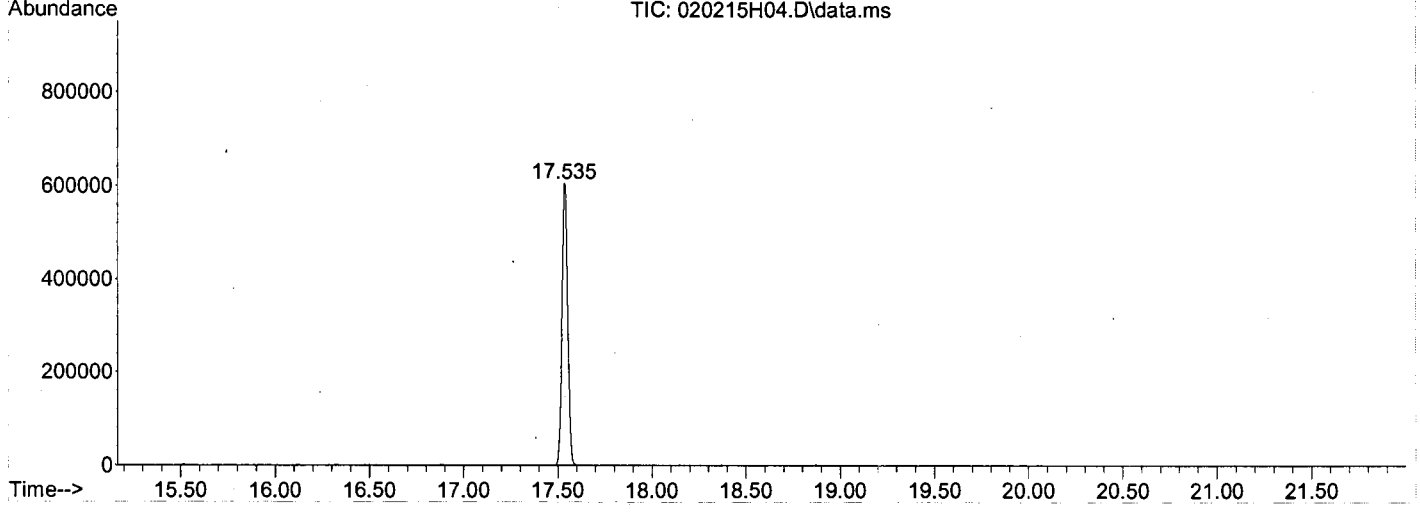
Data Path : C:\msdchem\1\DATA\2015\020215HVW\
Data File : 020215H04.D
Acq On : 2 Feb 2015 10:09
Operator : YNB
Sample : B15B002-BLK1
Misc : BLANK,WATER
ALS Vial : 29 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M
Quant Title : Volatile Organic Analysis - 524.2 Method

TIC Library : C:\DATABASE\NIST98.L
TIC Integration Parameters: LSCINT.P







Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\2015\020215HVW\\
Data File : 020215H04.D
Acq On : 2 Feb 2015 10:099
Operator : YNBB
Sample : B15B002-BLK11
Misc : BLANK,WATERR
ALS Vial : 29 Sample Multiplier: 11

Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.MM
Quant Title : Volatile Organic Analysis - 524.2 Methodd

TIC Library : C:\DATABASE\NIST98.LL
TIC Integration Parameters: LSCINT.PP

TIC Top Hit name	RT	EstConc	Units	Response	--Internal Standard--- #	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H05.D
Acq On : 2 Feb 2015 10:45
Instrument: HP5973H
Operator : YNB
Sample : 1501036-14
Misc : EW-02,WATER
ALS Vial : 30
Multiplier: 1

Quant Time: Feb 02 11:11:03 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.893	53	96989	5.000 ug/L	0.00
24) Fluorobenzene	7.822	96	829798	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.784	117	570910	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.275	65	114687	5.027 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 100.60%	
39) Toluene-d8	10.394	98	836669	4.943 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 98.80%	
56) 4-Bromofluorobenzene	14.840	95	223887	4.547 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 91.00%	
70) 1,2-Dichlorobenzene-d4	17.540	152	215496	4.572 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 91.40%	
Target Compounds					Qvalue
23) Chloroform	6.520	83	172018	2.587 ug/L	99
43) Tetrachloroethene	11.398	166	9188901	206.110 ug/L	OC 96

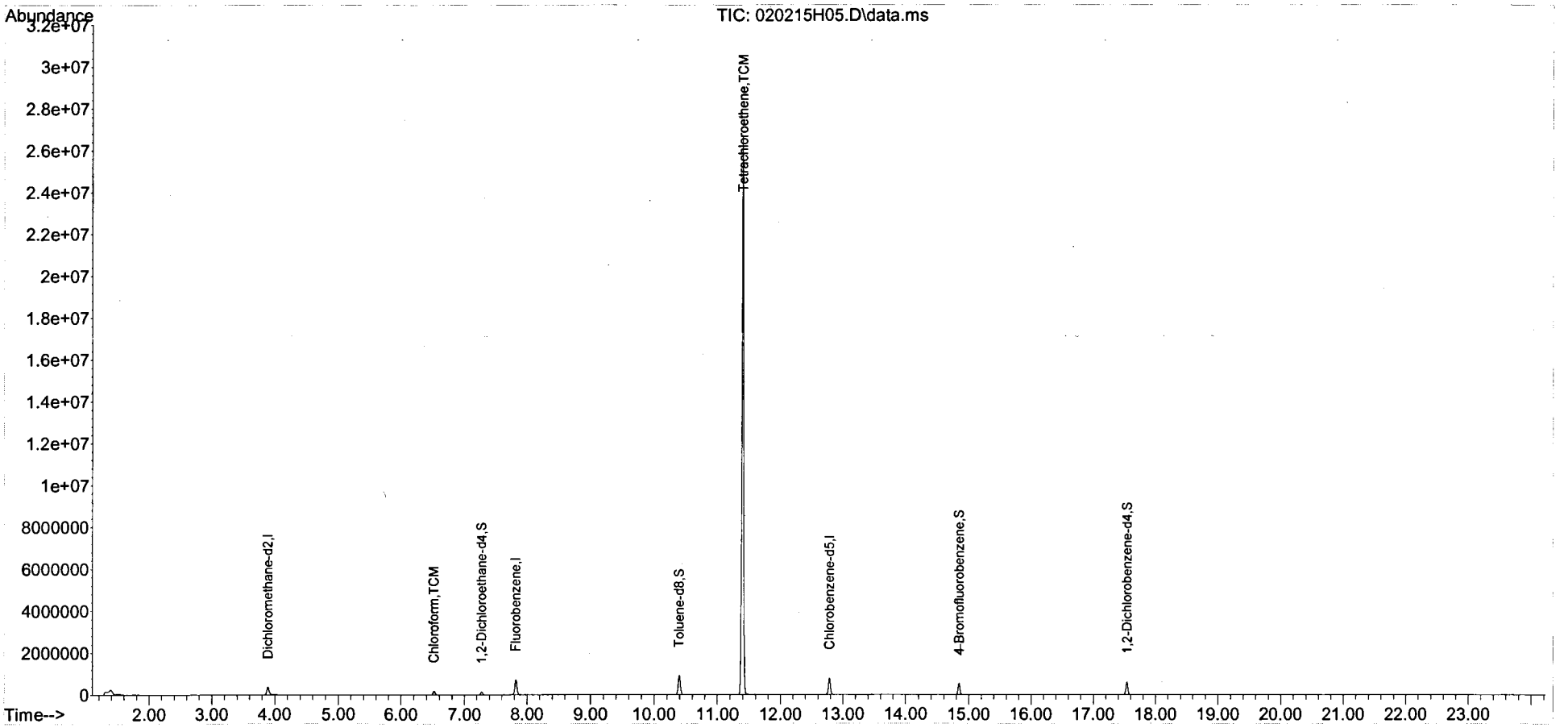
(#) = qualifier out of range (m) = manual integration (+) = signals summed

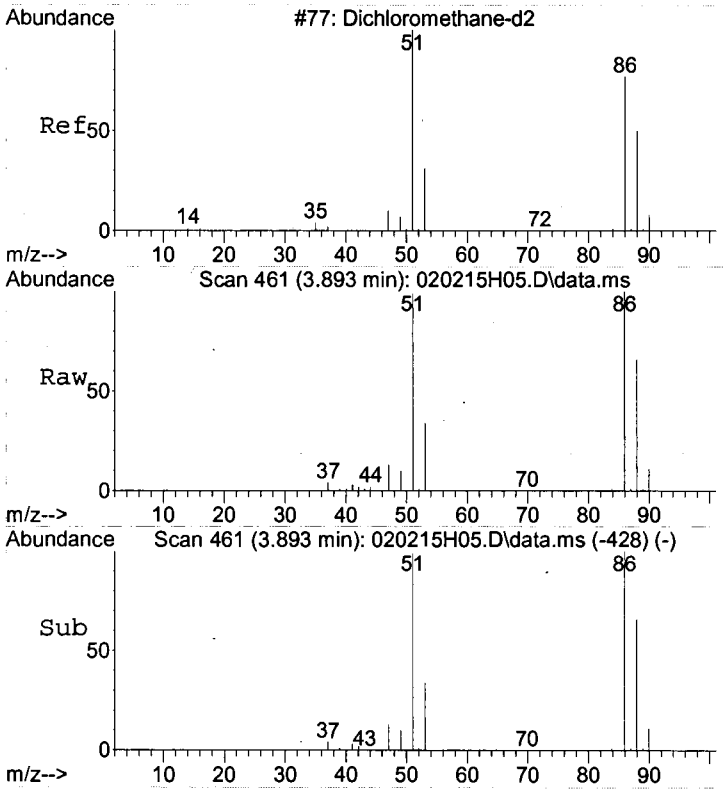
Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H05.D
Acq On : 2 Feb 2015 10:45
Instrument: HP5973H
Operator : YNB
Sample : 1501036-14
Misc : EW-02,WATER
ALS Vial : 30
Multiplier: 1

Quant Time: Feb 02 11:11:03 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

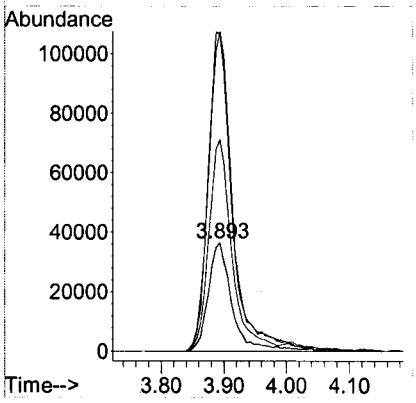


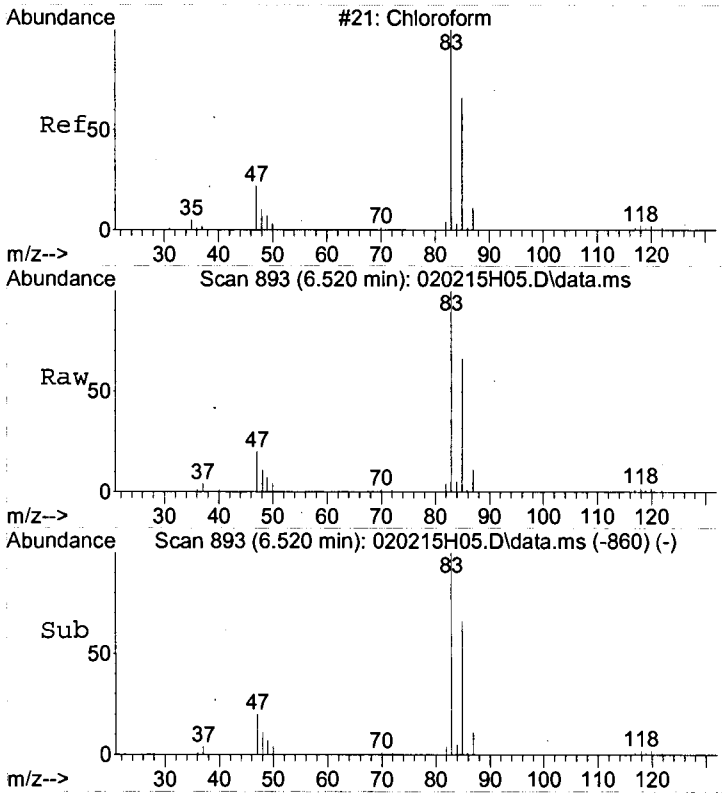


#1
Dichloromethane-d2
Concen: 5.00 ug/L
RT: 3.893 min Scan# 461
Delta R.T. 0.001 min
Lab File: 020215H05.D
Acq: 2 Feb 2015 10:45

Tgt Ion: 53 Resp: 96989

Ion	Ratio	Lower	Upper
53	100		
51	300.9	381.1	421.1#
86	301.6	490.1	530.1#
88	195.0	211.2	251.2#

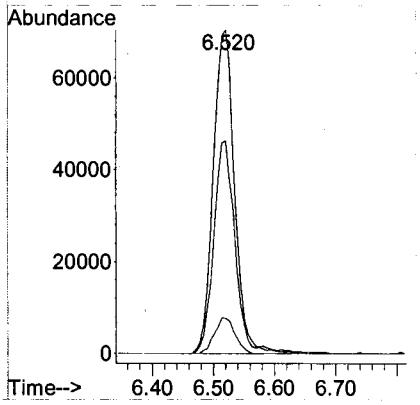


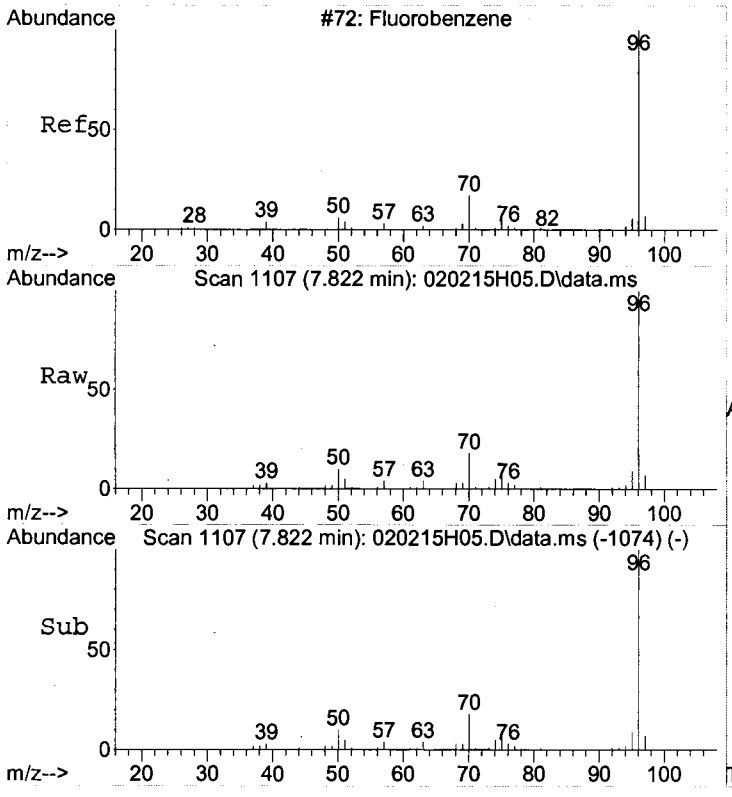


#23
Chloroform
Concen: 2.59 ug/L
RT: 6.520 min Scan# 893
Delta R.T. 0.001 min
Lab File: 020215H05.D
Acq: 2 Feb 2015 10:45

Tgt Ion: 83 Resp: 172018

Ion	Ratio	Lower	Upper
83	100		
85	64.9	44.4	84.4
87	10.5	0.0	30.8

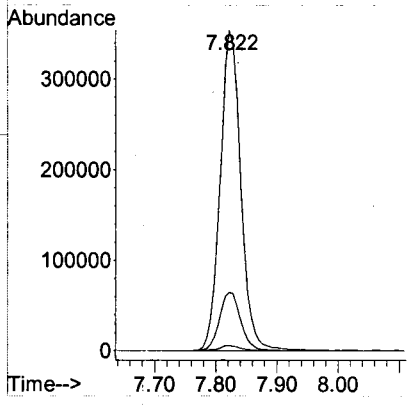


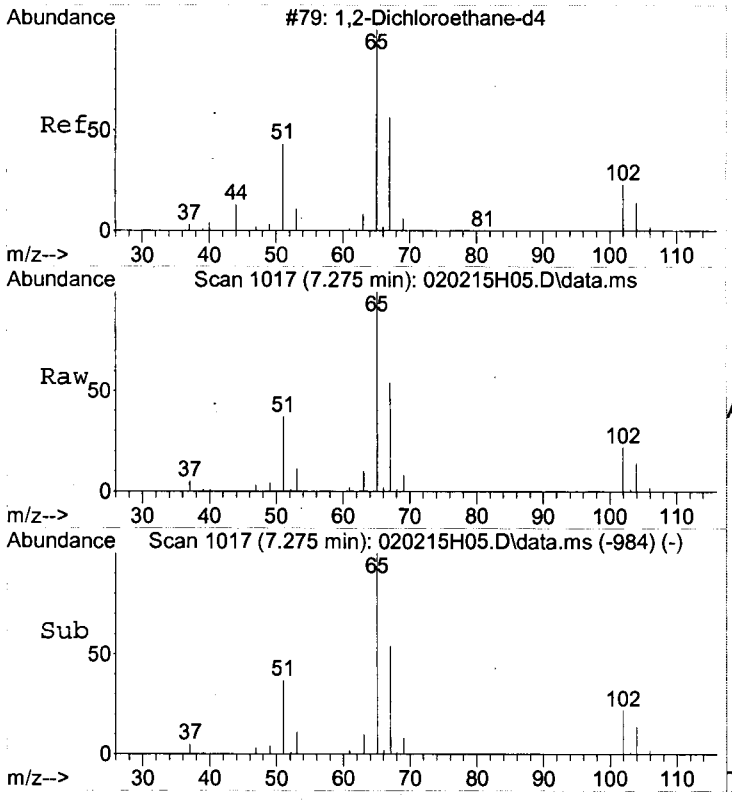


#24
Fluorobenzene
Concen: 5.00 ug/L
RT: 7.822 min Scan# 1107
Delta R.T. 0.001 min
Lab File: 020215H05.D
Acq: 2 Feb 2015 10:45

Tgt Ion: 96 Resp: 829798

Ion	Ratio	Lower	Upper
96	100		
70	18.8	0.0	38.7
77	1.6	0.0	21.6

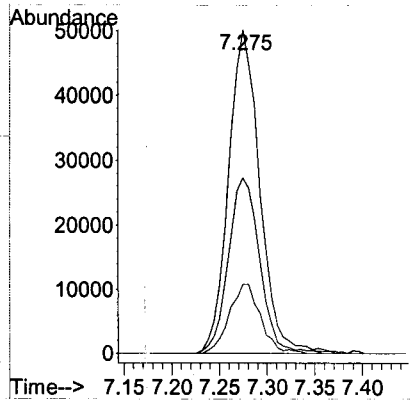


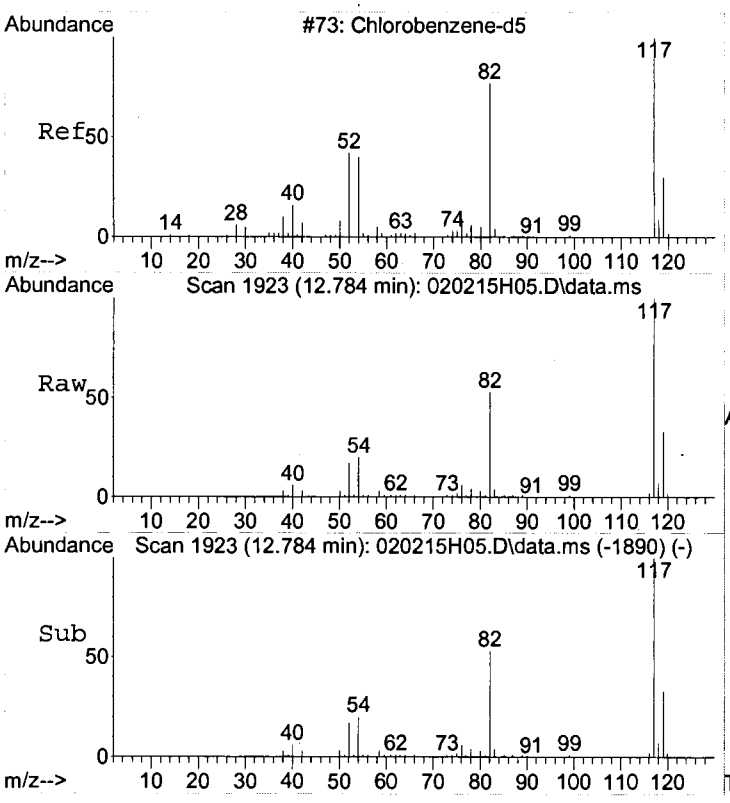


#28
1,2-Dichloroethane-d4
Concen: 5.03 ug/L
RT: 7.275 min Scan# 1017
Delta R.T. 0.001 min
Lab File: 020215H05.D
Acq: 2 Feb 2015 10:45

Tgt Ion: 65 Resp: 114687

Ion	Ratio	Lower	Upper
65	100		
67	55.0	32.3	72.3
102	21.5	1.3	41.3

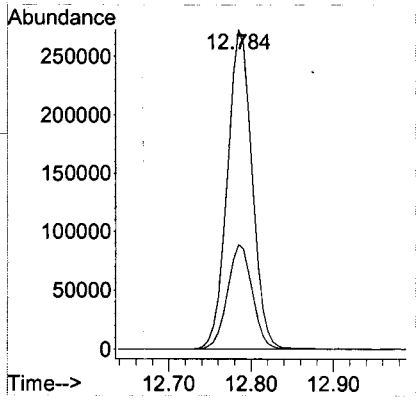


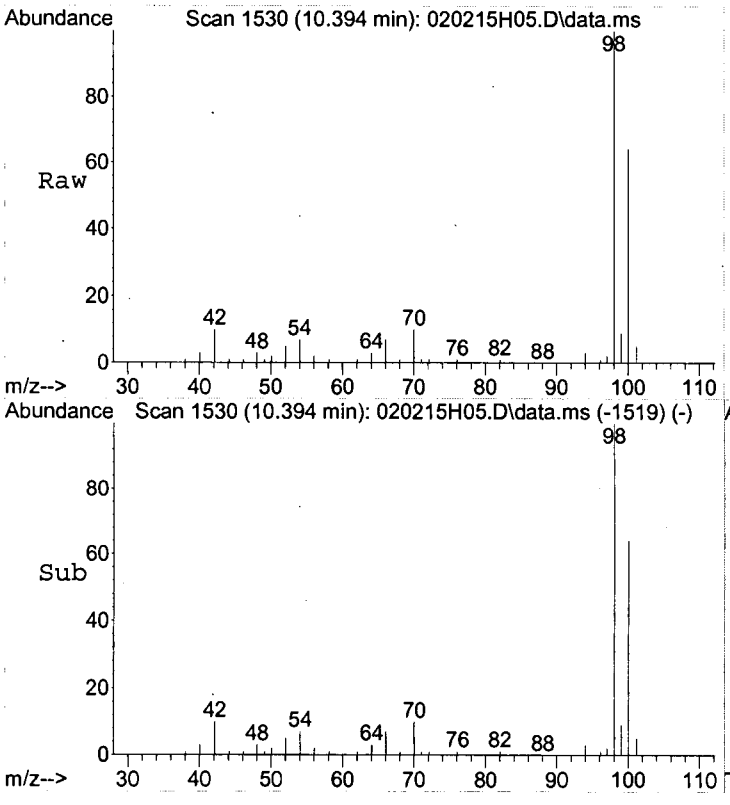


#37
Chlorobenzene-d5
Concen: 5.00 ug/L
RT: 12.784 min Scan# 1923
Delta R.T. 0.001 min
Lab File: 020215H05.D
Acq: 2 Feb 2015 10:45

Tgt Ion:117 Resp: 570910

Ion	Ratio	Lower	Upper
117	100		
119	32.5	11.7	51.7

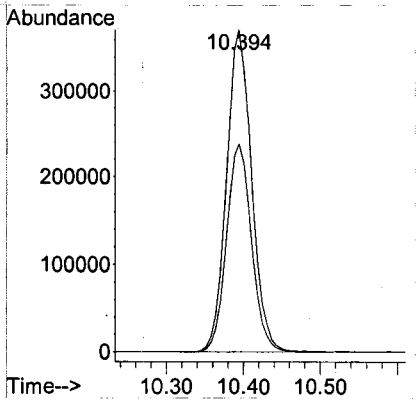


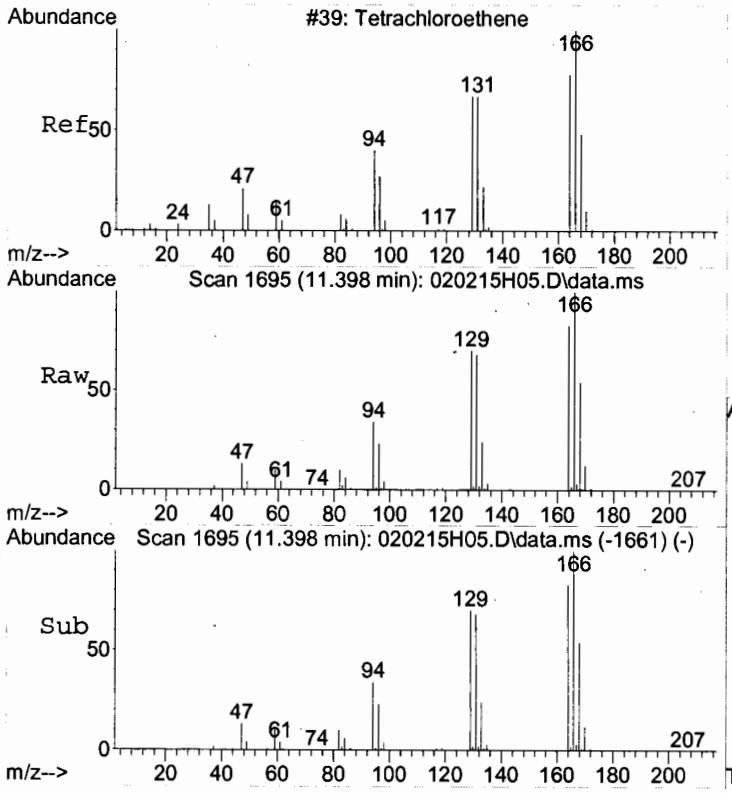


#39
Toluene-d8
Concen: 4.94 ug/L
RT: 10.394 min Scan# 1530
Delta R.T. 0.001 min
Lab File: 020215H05.D
Acq: 2 Feb 2015 10:45

Tgt Ion: 98 Resp: 836669

Ion	Ratio	Lower	Upper
98	100		
100	64.1	45.3	85.3

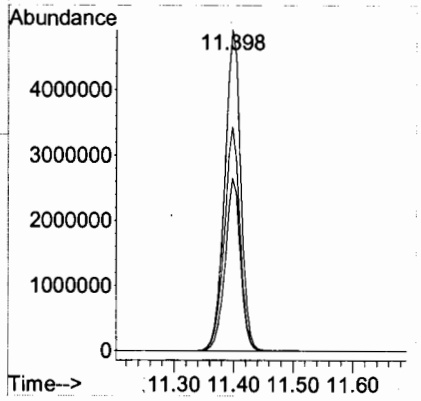




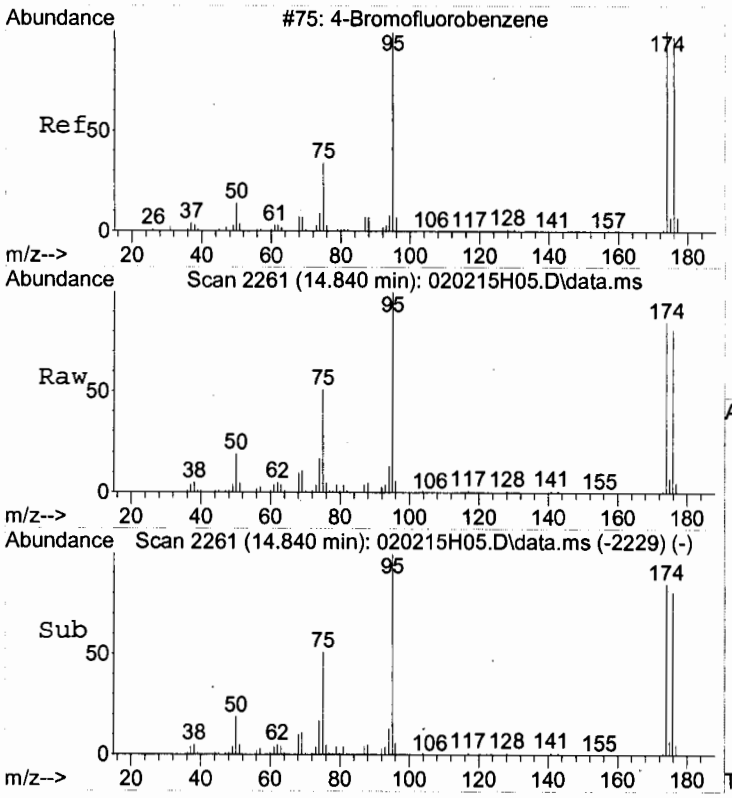
#43
Tetrachloroethene
Concen: 206.11 ug/L
RT: 11.398 min Scan# 1695
Delta R.T. 0.007 min
Lab File: 020215H05.D
Acq: 2 Feb 2015 10:45

Tgt Ion:166 Resp: 9188901

Ion	Ratio	Lower	Upper
166	100		
168	51.2	27.5	67.5
129	68.3	51.3	91.3



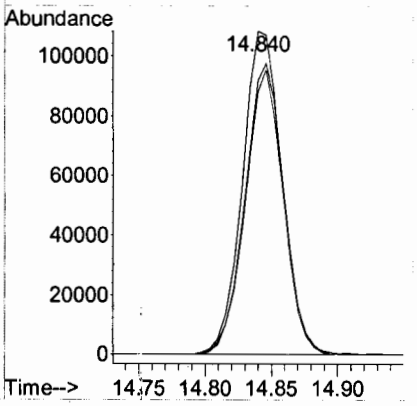
CV

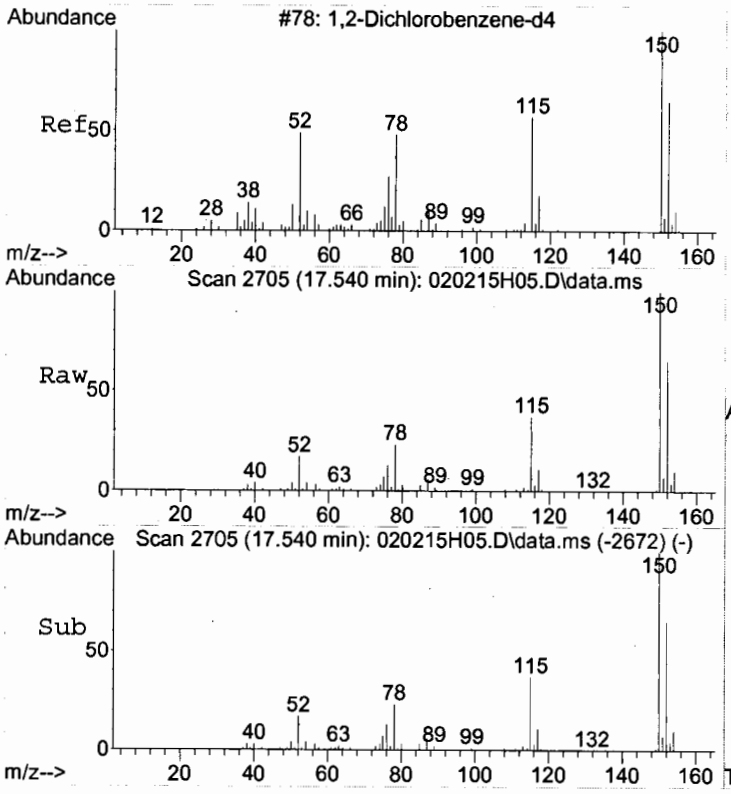


#56
4-Bromofluorobenzene
Concen: 4.55 ug/L
RT: 14.840 min Scan# 2261
Delta R.T. -0.005 min
Lab File: 020215H05.D
Acq: 2 Feb 2015 10:45

Tgt Ion: 95 Resp: 223887

Ion	Ratio	Lower	Upper
95	100		
174	89.4	68.9	108.9
176	85.6	66.0	106.0

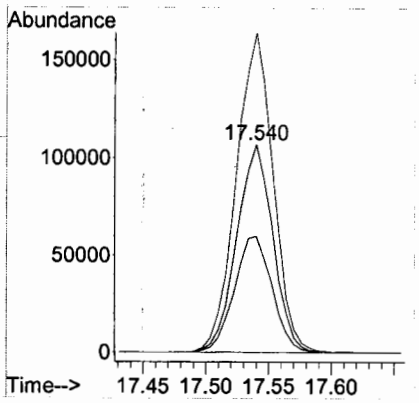




#70
1,2-Dichlorobenzene-d4
Concen: 4.57 ug/L
RT: 17.540 min Scan# 2705
Delta R.T. 0.001 min
Lab File: 020215H05.D
Acq: 2 Feb 2015 10:45

Tgt Ion:152 Resp: 215496

Ion	Ratio	Lower	Upper
152	100		
115	58.3	39.3	79.3
150	156.1	152.8	192.8



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H06.D
Acq On : 2 Feb 2015 11:21
Instrument: HP5973H
Operator : YNB
Sample : 1501036-12
Misc : MW-29A,WATER
ALS Vial : 31
Multiplier: 1

Quant Time: Feb 02 11:49:06 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.887	53	97282	5.000 ug/L	0.00
24) Fluorobenzene	7.822	96	817789	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.784	117	559499	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.274	65	118104	5.253 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 105.00%	
39) Toluene-d8	10.394	98	819656	4.941 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 98.80%	
56) 4-Bromofluorobenzene	14.839	95	215991	4.476 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 89.60%	
70) 1,2-Dichlorobenzene-d4	17.540	152	216242	4.681 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 93.60%	
Target Compounds					Qvalue
10) Acetone	3.321	43	8469	2.265 ug/L	80
43) Tetrachloroethene	11.391	166	1050807	24.051 ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

RP for eo
1x

YNB
02.02.15

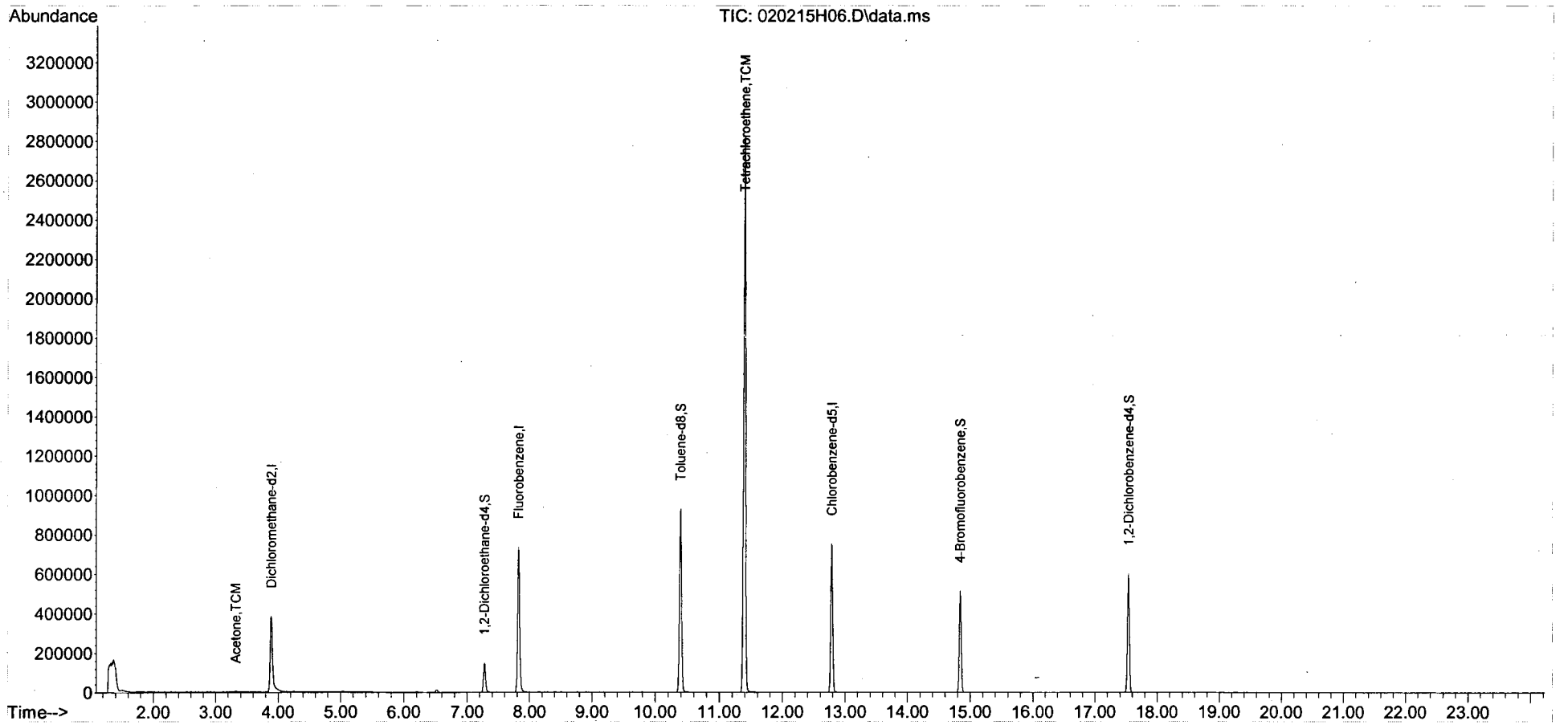
:06443

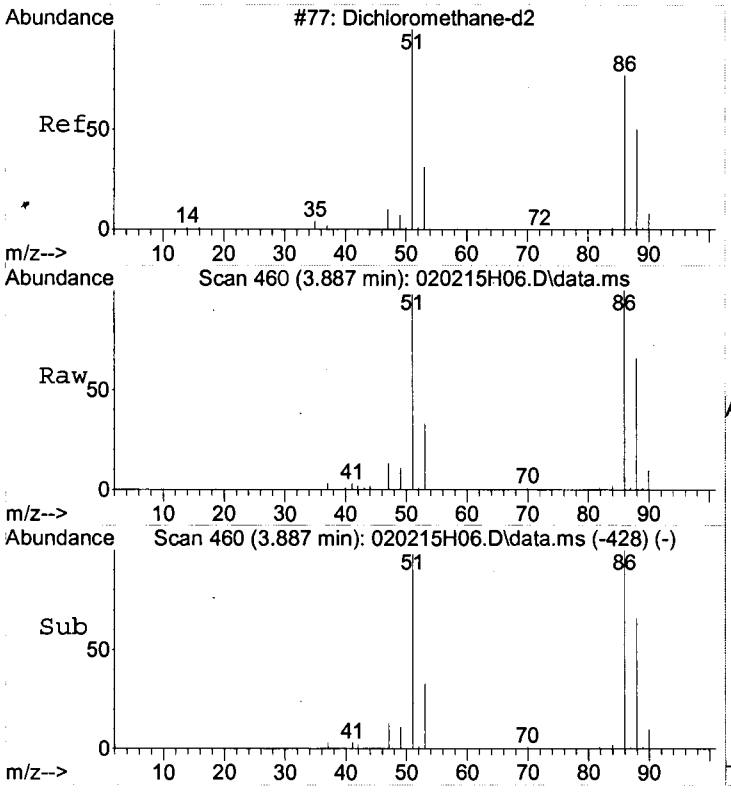
Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H06.D
Acq On : 2 Feb 2015 11:21
Instrument: HP5973H
Operator : YNB
Sample : 1501036-12
Misc : MW-29A,WATER
ALS Vial : 31
Multiplier: 1

Quant Time: Feb 02 11:49:06 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

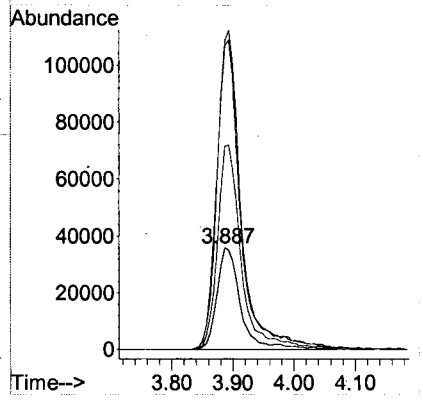


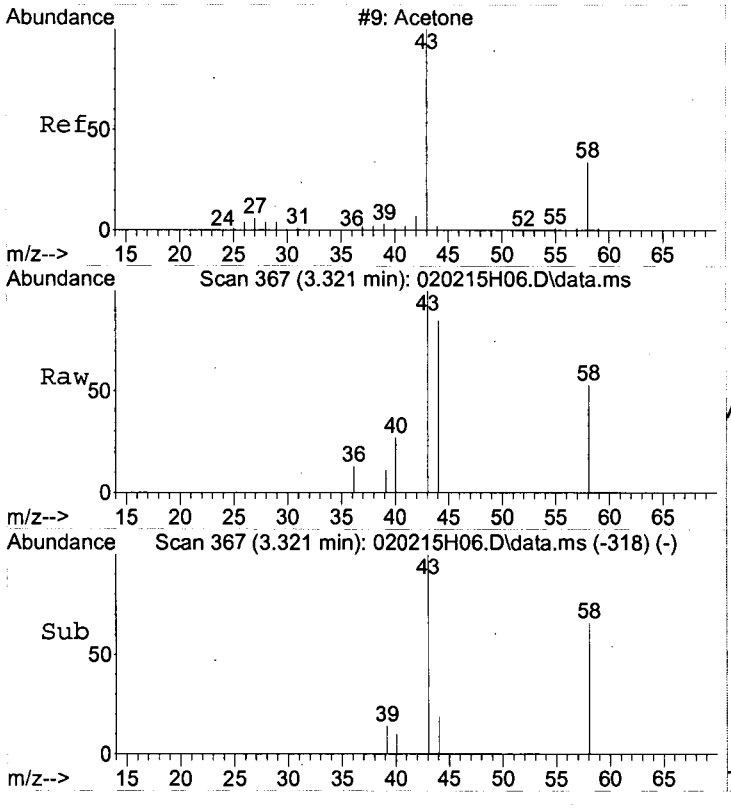


#1
Dichloromethane-d2
Concen: 5.00 ug/L
RT: 3.887 min Scan# 460
Delta R.T. -0.005 min
Lab File: 020215H06.D
Acq: 2 Feb 2015 11:21

Tgt Ion: 53 Resp: 97282

Ion	Ratio	Lower	Upper
53	100		
51	309.1	381.1	421.1#
86	318.2	490.1	530.1#
88	202.0	211.2	251.2#

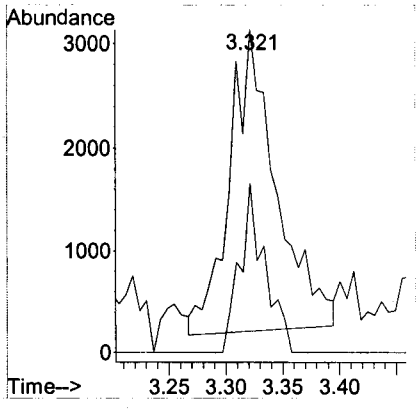


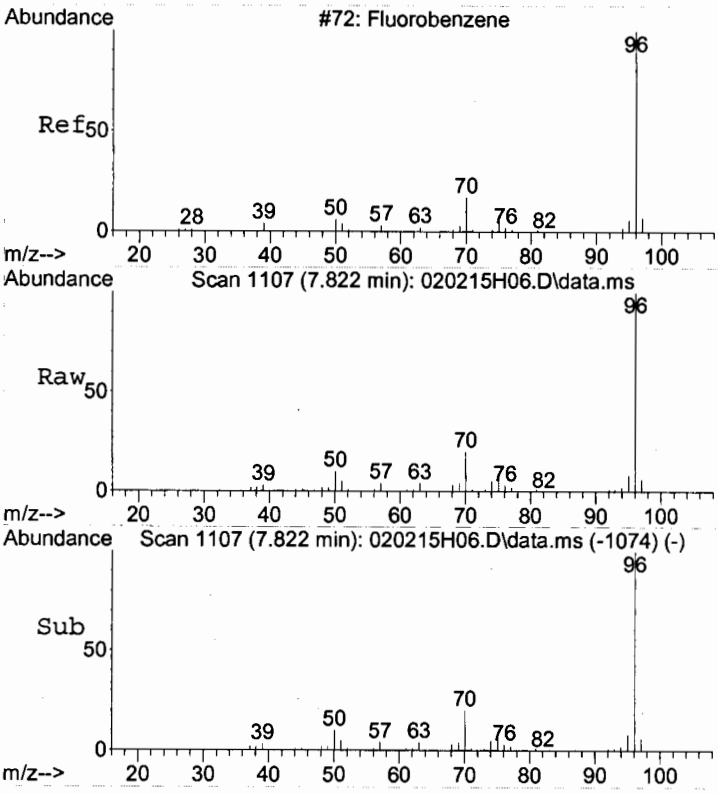


#10
Acetone
Concen: 2.26 ug/L
RT: 3.321 min Scan# 367
Delta R.T. 0.001 min
Lab File: 020215H06.D
Acq: 2 Feb 2015 11:21

Tgt Ion: 43 Resp: 8469

Ion	Ratio	Lower	Upper
43	100		
58	30.0	22.4	62.4

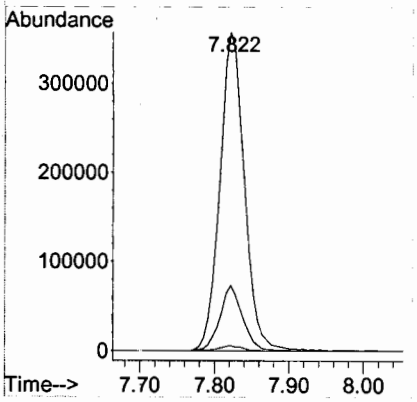


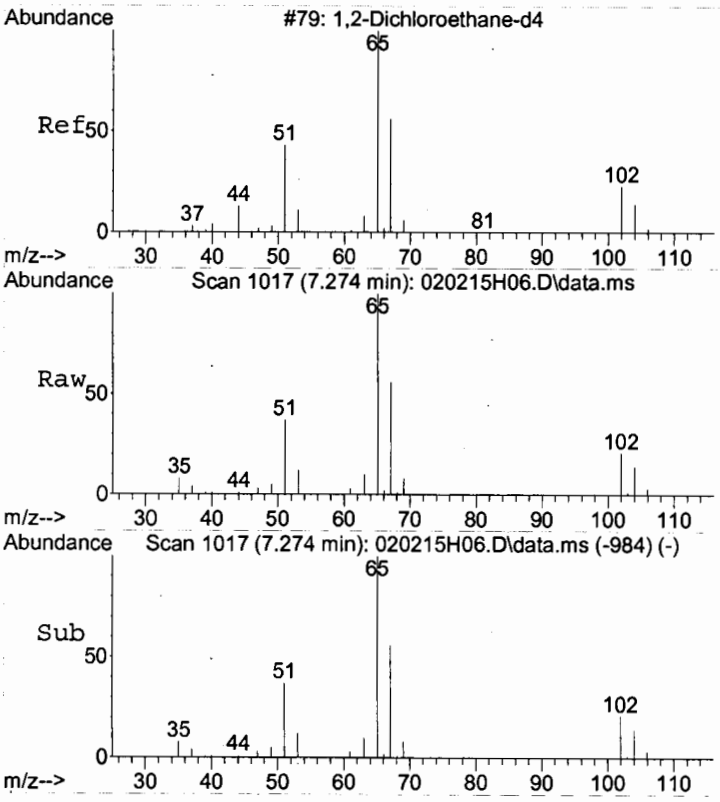


#24
Fluorobenzene
Concen: 5.00 ug/L
RT: 7.822 min Scan# 1107
Delta R.T. 0.001 min
Lab File: 020215H06.D
Acq: 2 Feb 2015 11:21

Tgt Ion: 96 Resp: 817789

Ion	Ratio	Lower	Upper
96	100		
70	18.9	0.0	38.7
77	1.5	0.0	21.6

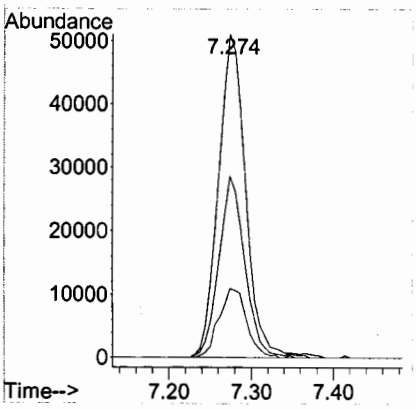


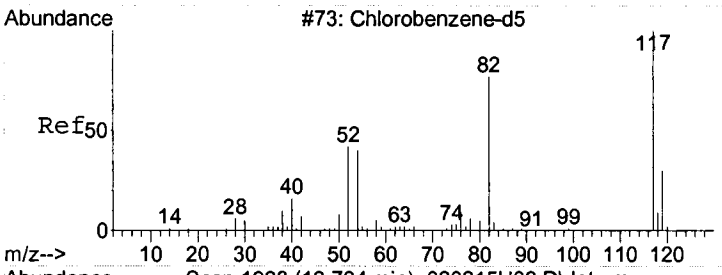


#28
1,2-Dichloroethane-d4
Concen: 5.25 ug/L
RT: 7.274 min Scan# 1017
Delta R.T. 0.001 min
Lab File: 020215H06.D
Acq: 2 Feb 2015 11:21

Tgt Ion: 65 Resp: 118104

Ion	Ratio	Lower	Upper
65	100		
67	53.1	32.3	72.3
102	21.7	1.3	41.3

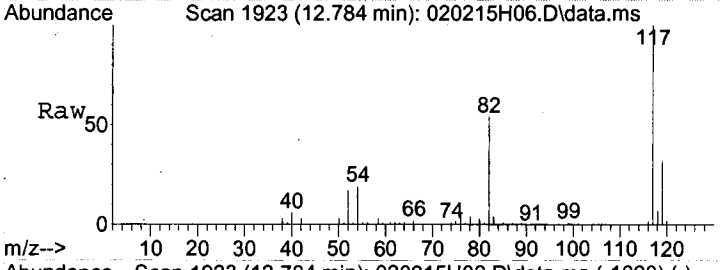


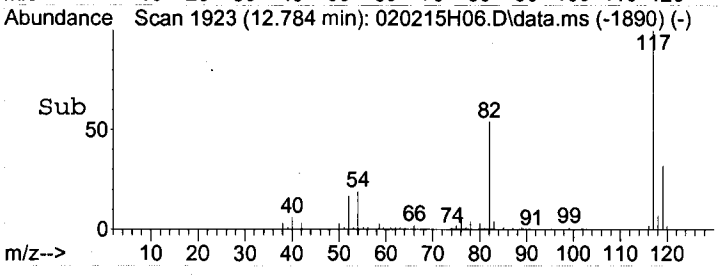


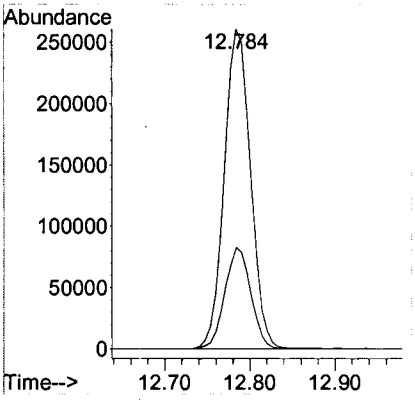
#37
Chlorobenzene-d5
Concen: 5.00 ug/L
RT: 12.784 min Scan# 1923
Delta R.T. 0.001 min
Lab File: 020215H06.D
Acq: 2 Feb 2015 11:21

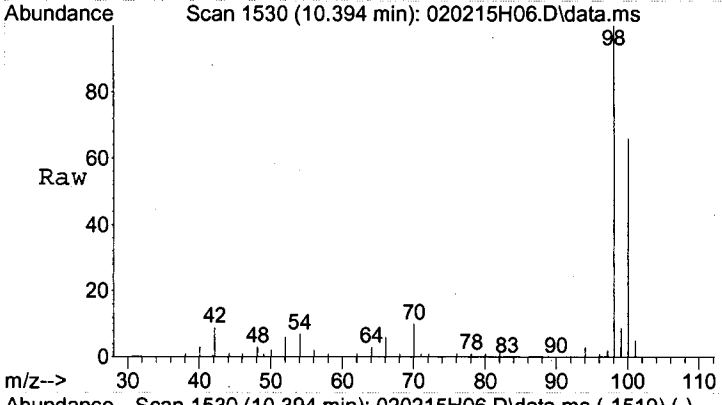
Tgt Ion:117 Resp: 559499

Ion	Ratio	Lower	Upper
117	100		
119	31.3	11.7	51.7





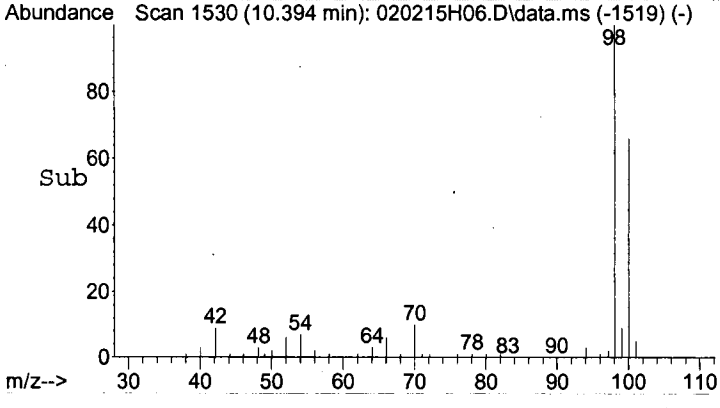


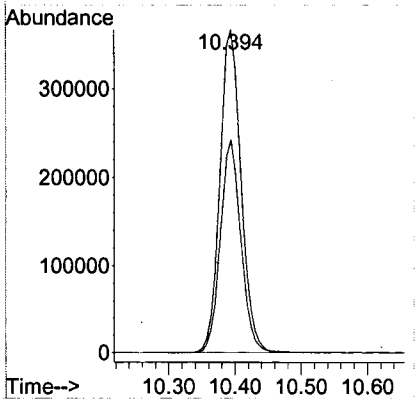


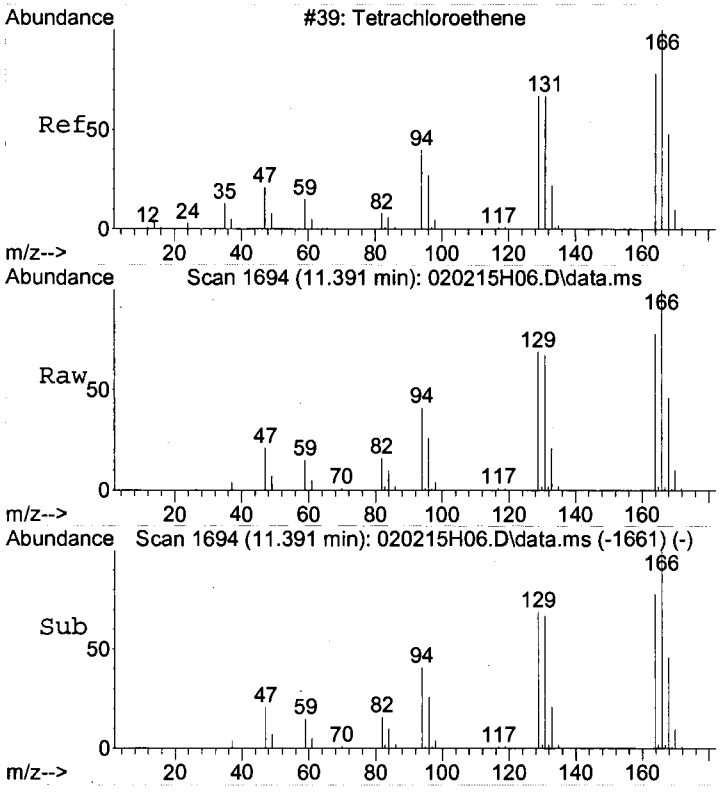
#39
Toluene-d8
Concen: 4.94 ug/L
RT: 10.394 min Scan# 1530
Delta R.T. 0.001 min
Lab File: 020215H06.D
Acq: 2 Feb 2015 11:21

Tgt Ion: 98 Resp: 819656

Ion	Ratio	Lower	Upper
98	100		
100	64.0	45.3	85.3



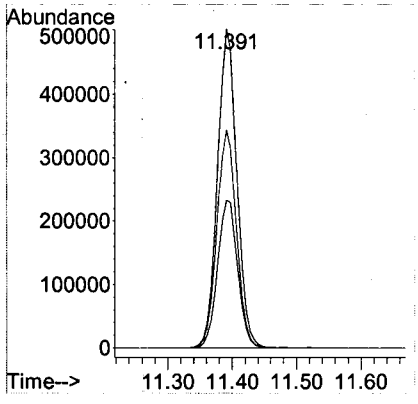


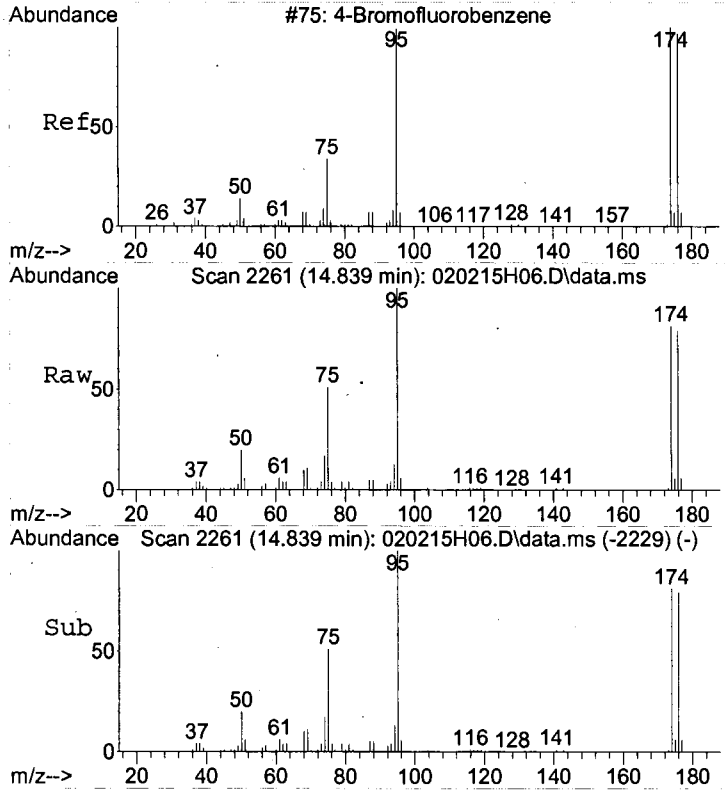


#43
Tetrachloroethene
Concen: 24.05 ug/L
RT: 11.391 min Scan# 1694
Delta R.T. 0.001 min
Lab File: 020215H06.D
Acq: 2 Feb 2015 11:21

Tgt Ion:166 Resp: 1050807

Ion	Ratio	Lower	Upper
166	100		
168	47.8	27.5	67.5
129	69.1	51.3	91.3

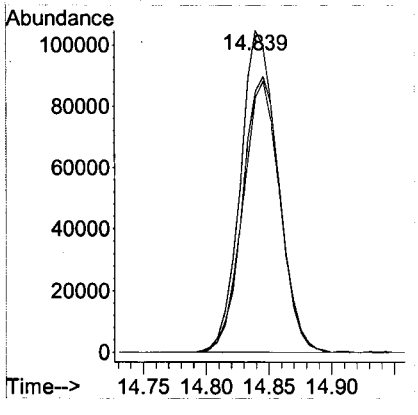


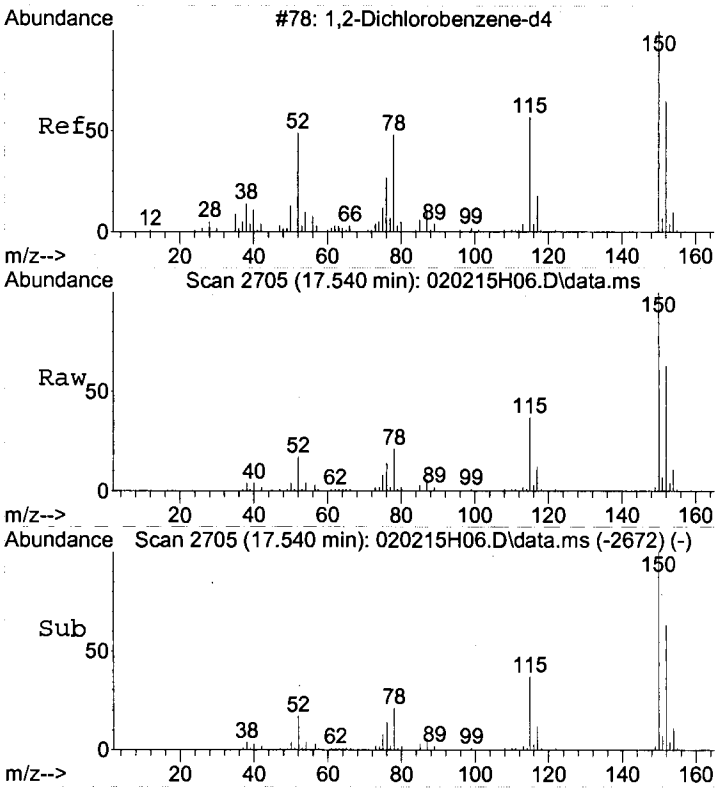


#56
4-Bromofluorobenzene
Concen: 4.48 ug/L
RT: 14.839 min Scan# 2261
Delta R.T. -0.005 min
Lab File: 020215H06.D
Acq: 2 Feb 2015 11:21

Tgt Ion: 95 Resp: 215991

Ion	Ratio	Lower	Upper
95	100		
174	87.8	68.9	108.9
176	84.3	66.0	106.0

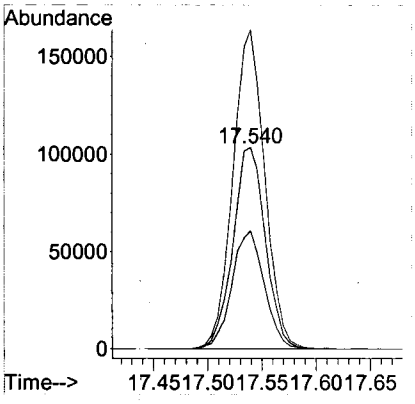




#70
1,2-Dichlorobenzene-d4
Concen: 4.68 ug/L
RT: 17.540 min Scan# 2705
Delta R.T. 0.001 min
Lab File: 020215H06.D
Acq: 2 Feb 2015 11:21

Tgt Ion:152 Resp: 216242

Ion	Ratio	Lower	Upper
152	100		
115	58.7	39.3	79.3
150	155.4	152.8	192.8



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H07.D
Acq On : 2 Feb 2015 11:57
Instrument: HP5973H
Operator : YNB
Sample : 1501036-09
Misc : MW-17B,WATER
ALS Vial : 32
Multiplier: 1

Quant Time: Feb 02 12:24:41 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.893	53	92075	5.000 ug/L	0.00
24) Fluorobenzene	7.822	96	795295	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.784	117	547038	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.274	65	114590	5.241 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 104.80%	
39) Toluene-d8	10.394	98	801475	4.941 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 98.80%	
56) 4-Bromofluorobenzene	14.840	95	214177	4.540 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 90.80%	
70) 1,2-Dichlorobenzene-d4	17.540	152	207736	4.600 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 92.00%	
Target Compounds					Qvalue
10) Acetone	3.321	43	32944	9.309 ug/L	96
23) Chloroform	6.514	83	24459	0.387 ug/L	96
43) Tetrachloroethene	11.398	166	6926381	162.141 ug/L OR	96

see 10X

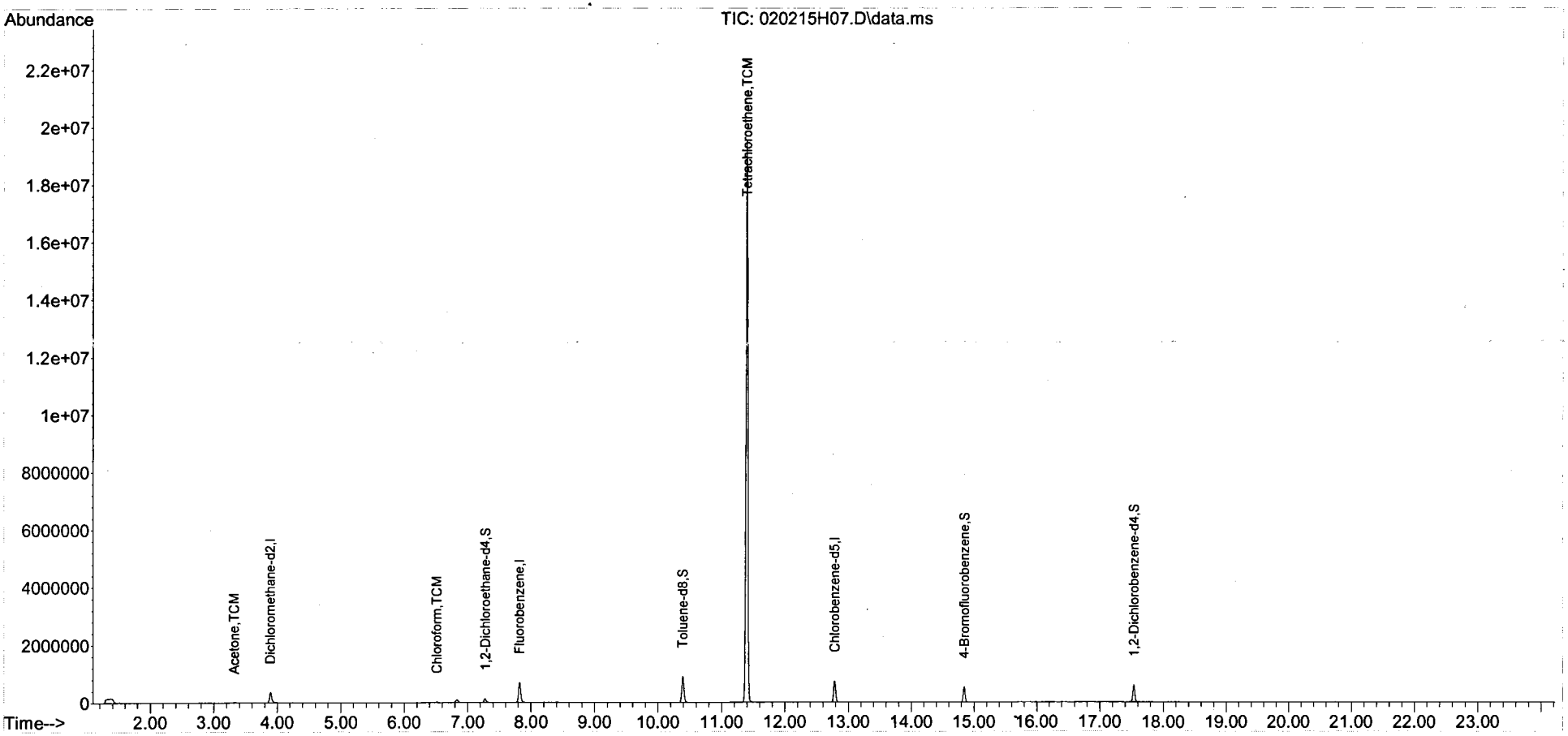
(#) = qualifier out of range (m) = manual integration (+) = signals summed

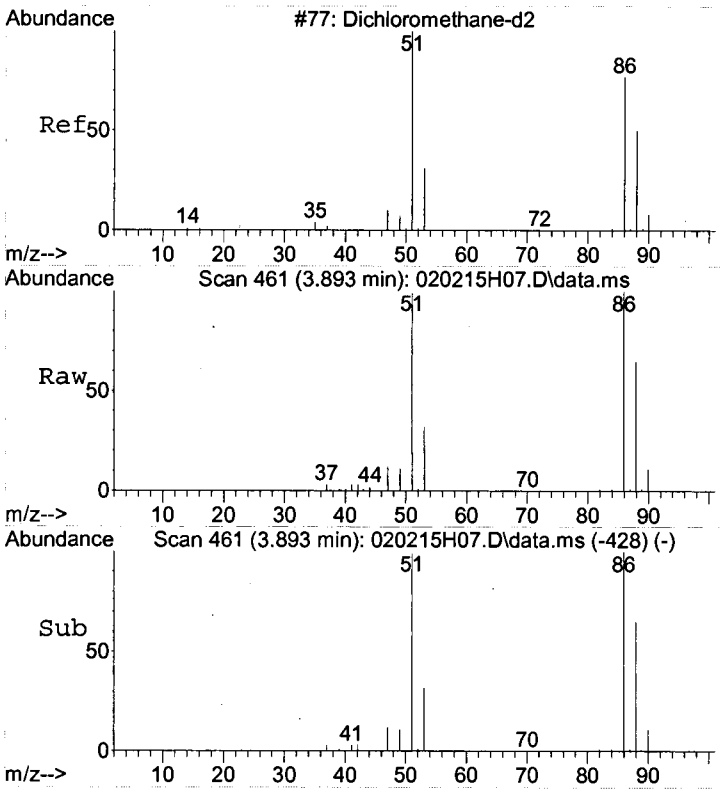
Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H07.D
Acq On : 2 Feb 2015 11:57
Instrument: HP5973H
Operator : YNB
Sample : 1501036-09
Misc : MW-17B,WATER
ALS Vial : 32
Multiplier: 1

Quant Time: Feb 02 12:24:41 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

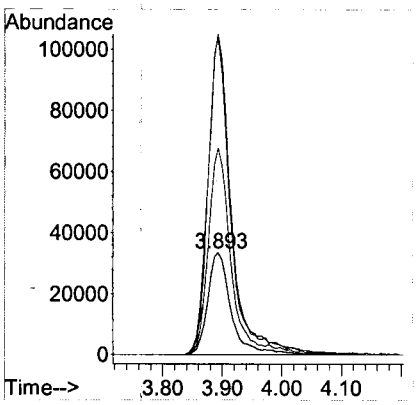


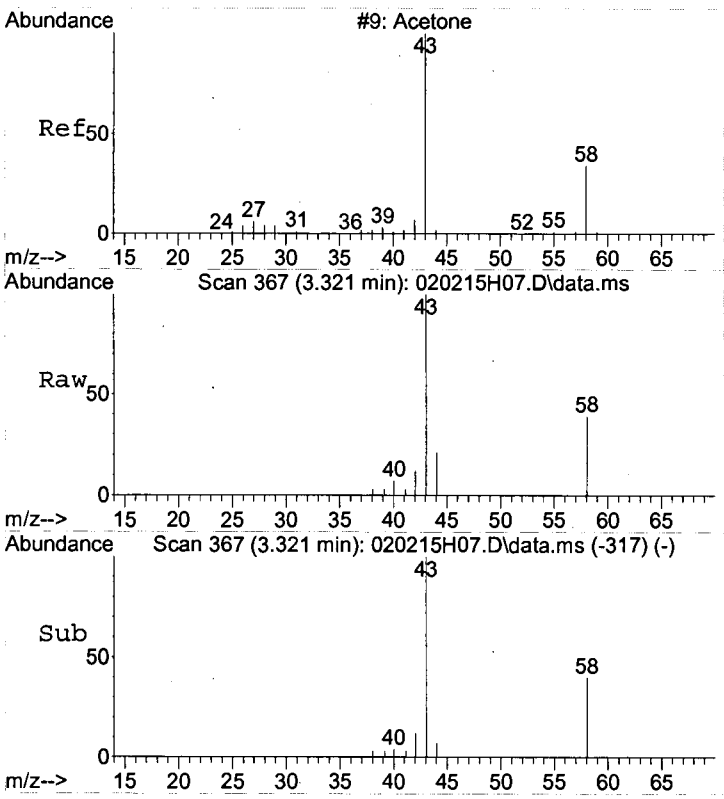


#1
Dichloromethane-d2
Concen: 5.00 ug/L
RT: 3.893 min Scan# 461
Delta R.T. 0.001 min
Lab File: 020215H07.D
Acq: 2 Feb 2015 11:57

Tgt Ion: 53 Resp: 92075

Ion	Ratio	Lower	Upper
53	100		
51	305.0	381.1	421.1#
86	308.8	490.1	530.1#
88	197.8	211.2	251.2#

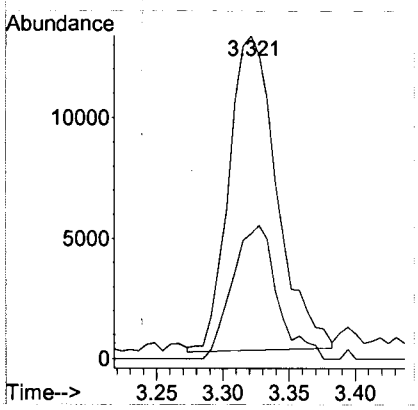


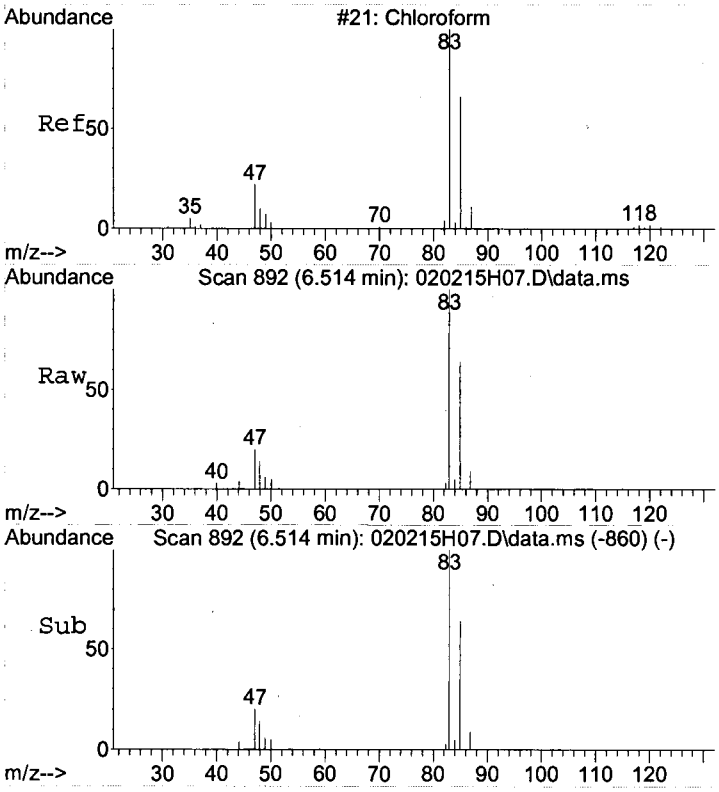


#10
Acetone
Concen: 9.31 ug/L
RT: 3.321 min Scan# 367
Delta R.T. 0.001 min
Lab File: 020215H07.D
Acq: 2 Feb 2015 11:57

Tgt Ion: 43 Resp: 32944

Ion	Ratio	Lower	Upper
43	100		
58	39.8	22.4	62.4

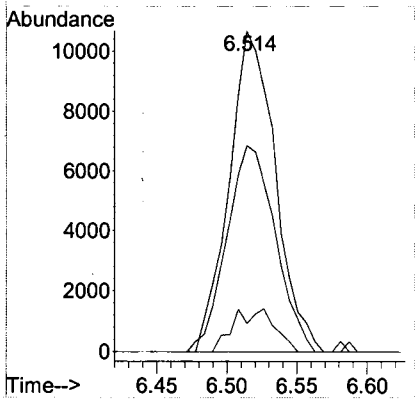


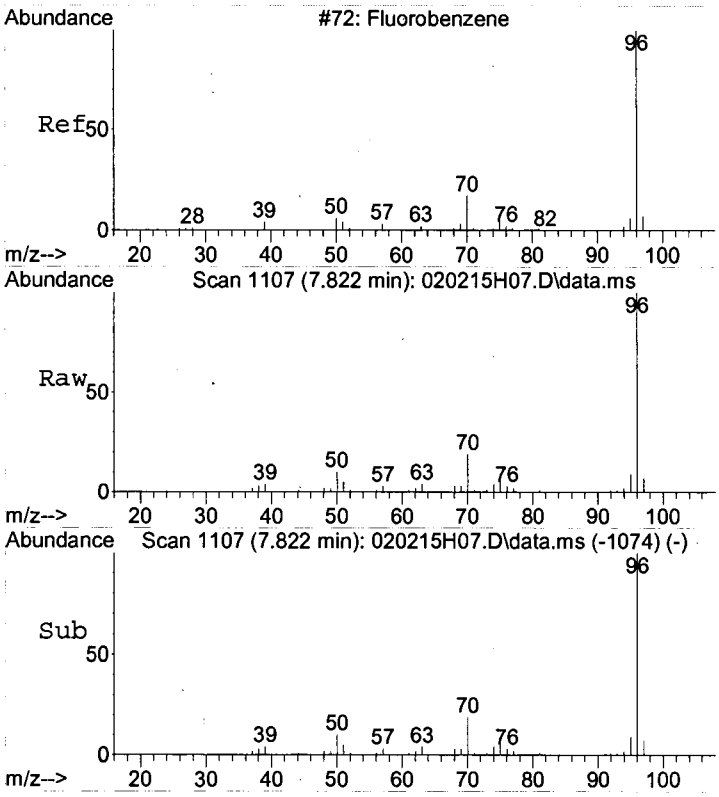


#23
Chloroform
Concen: 0.39 ug/L
RT: 6.514 min Scan# 892
Delta R.T. -0.005 min
Lab File: 020215H07.D
Acq: 2 Feb 2015 11:57

Tgt Ion: 83 Resp: 24459

Ion	Ratio	Lower	Upper
83	100		
85	67.4	44.4	84.4
87	11.8	0.0	30.8

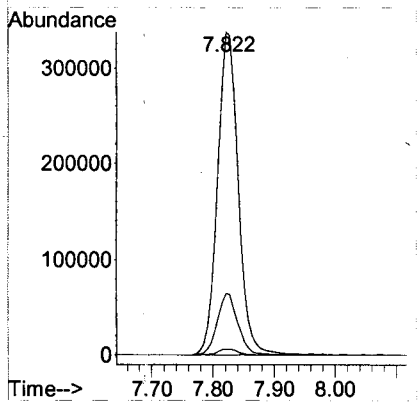


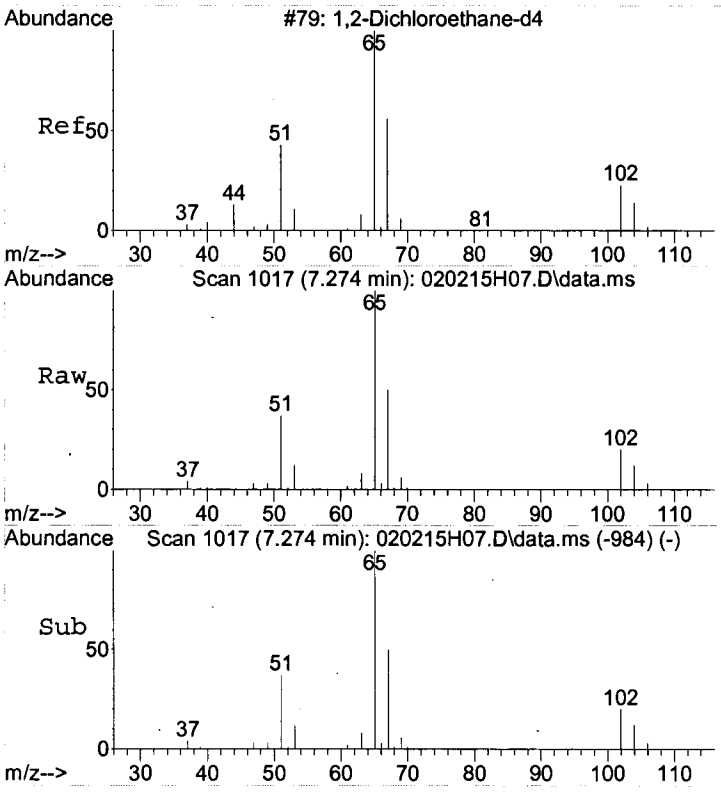


#24
Fluorobenzene
Concen: 5.00 ug/L
RT: 7.822 min Scan# 1107
Delta R.T. 0.001 min
Lab File: 020215H07.D
Acq: 2 Feb 2015 11:57

Tgt Ion: 96 Resp: 795295

Ion	Ratio	Lower	Upper
96	100		
70	19.0	0.0	38.7
77	1.7	0.0	21.6

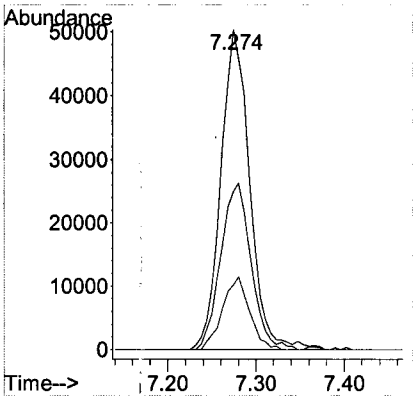


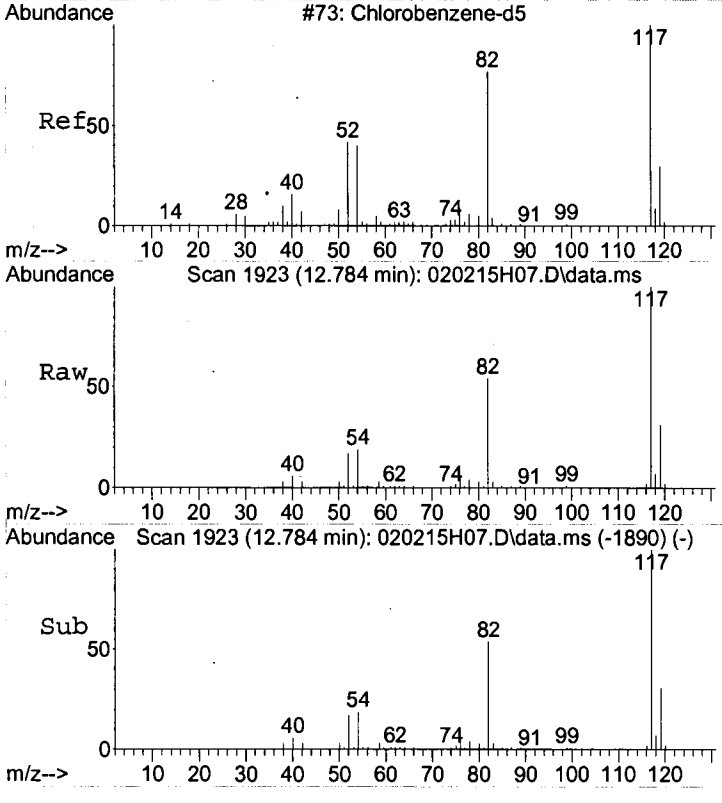


#28
1,2-Dichloroethane-d4
Concen: 5.24 ug/L
RT: 7.274 min Scan# 1017
Delta R.T. 0.001 min
Lab File: 020215H07.D
Acq: 2 Feb 2015 11:57

Tgt Ion: 65 Resp: 114590

Ion	Ratio	Lower	Upper
65	100		
67	54.6	32.3	72.3
102	21.2	1.3	41.3

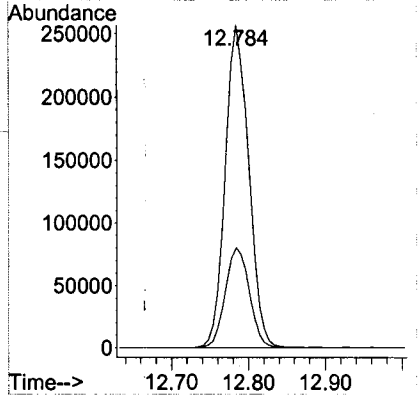


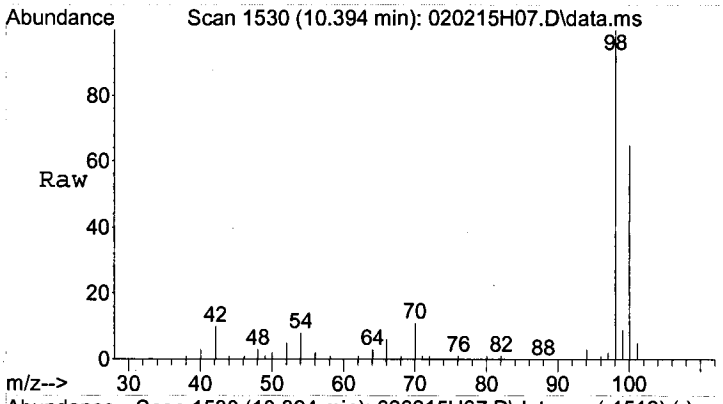


#37
Chlorobenzene-d5
Concen: 5.00 ug/L
RT: 12.784 min Scan# 1923
Delta R.T. 0.001 min
Lab File: 020215H07.D
Acq: 2 Feb 2015 11:57

Tgt Ion:117 Resp: 547038

Ion	Ratio	Lower	Upper
117	100		
119	31.8	11.7	51.7

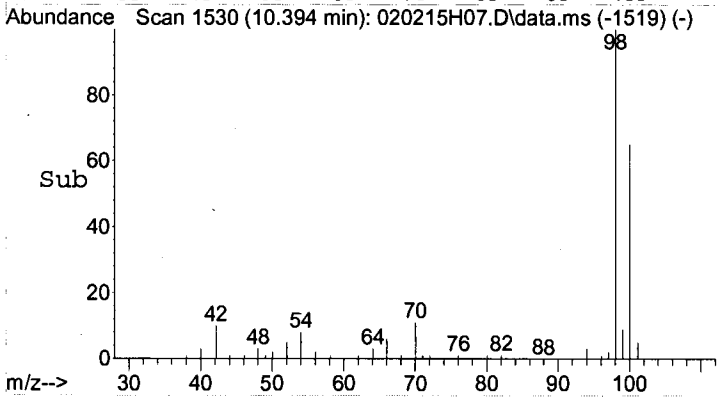


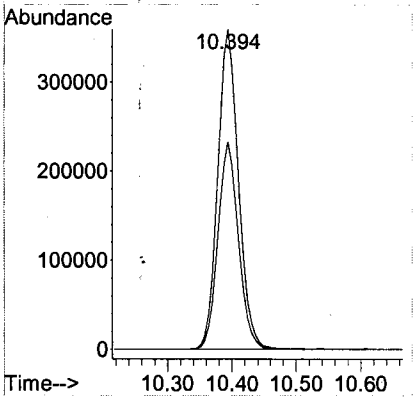


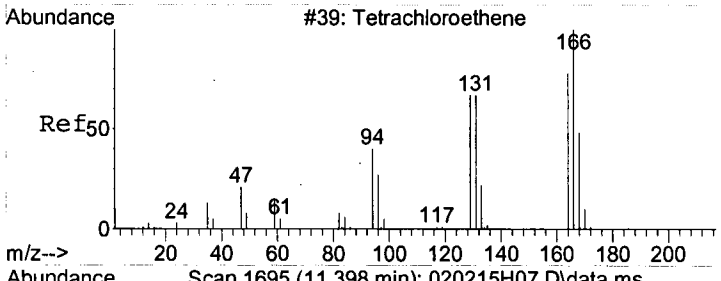
#39
Toluene-d8
Concen: 4.94 ug/L
RT: 10.394 min Scan# 1530
Delta R.T. 0.001 min
Lab File: 020215H07.D
Acq: 2 Feb 2015 11:57

Tgt Ion: 98 Resp: 801475

Ion	Ratio	Lower	Upper
98	100		
100	64.0	45.3	85.3



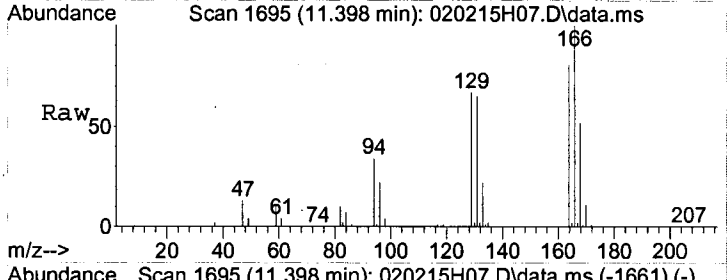


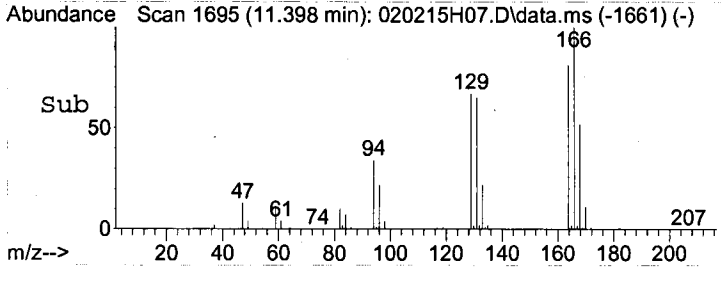


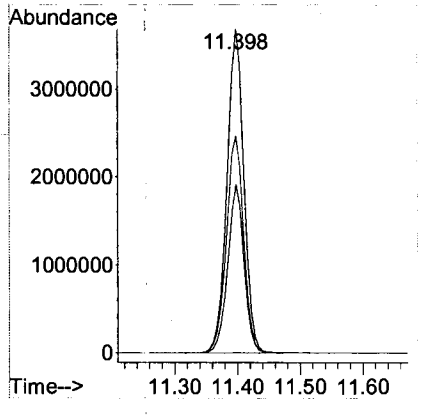
#43
Tetrachloroethene
Concen: 162.14 ug/L
RT: 11.398 min Scan# 1695
Delta R.T. 0.007 min
Lab File: 020215H07.D
Acq: 2 Feb 2015 11:57

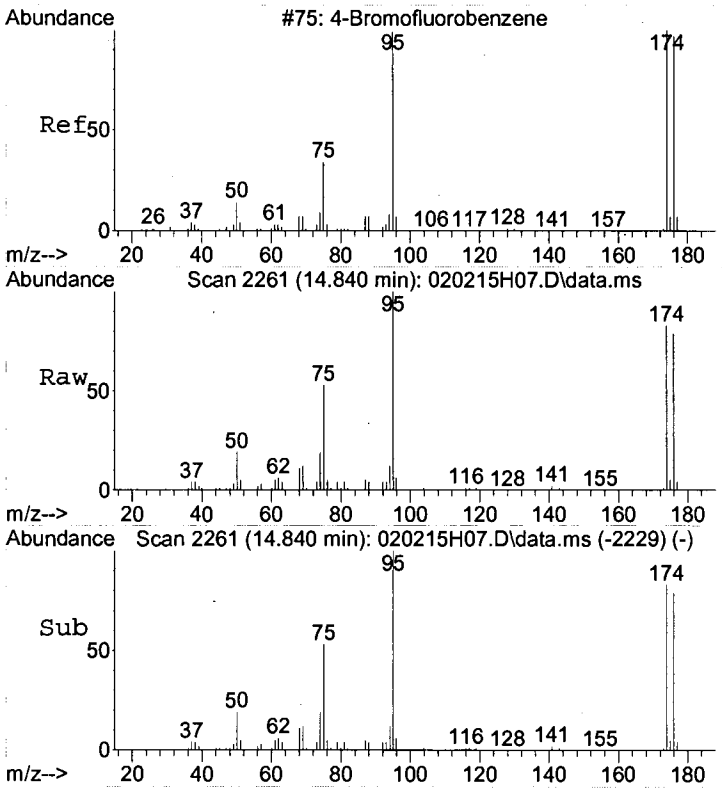
Tgt Ion:166 Resp: 6926381

Ion	Ratio	Lower	Upper
166	100		
168	50.1	27.5	67.5
129	68.1	51.3	91.3





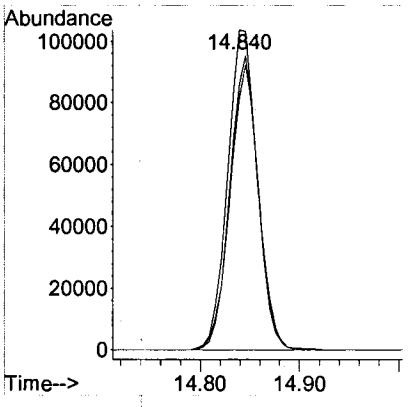


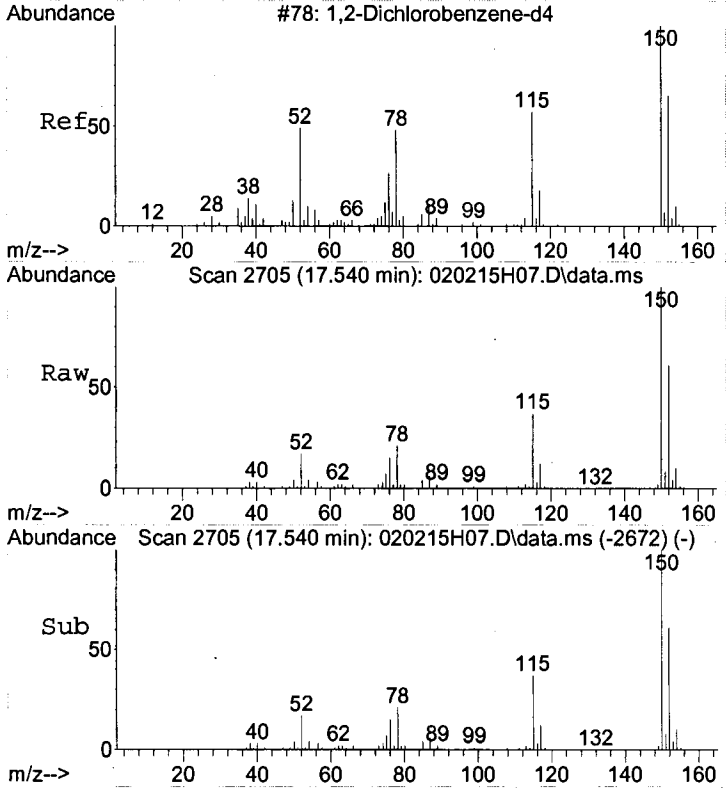


#56
4-Bromofluorobenzene
Concen: 4.54 ug/L
RT: 14.840 min Scan# 2261
Delta R.T. -0.005 min
Lab File: 020215H07.D
Acq: 2 Feb 2015 11:57

Tgt Ion: 95 Resp: 214177

Ion	Ratio	Lower	Upper
95	100		
174	89.0	68.9	108.9
176	85.9	66.0	106.0

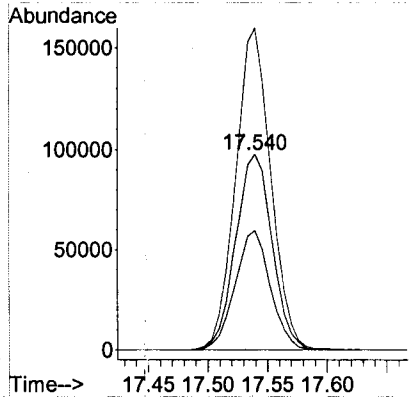




#70
1,2-Dichlorobenzene-d4
Concen: 4.60 ug/L
RT: 17.540 min Scan# 2705
Delta R.T. 0.001 min
Lab File: 020215H07.D
Acq: 2 Feb 2015 11:57

Tgt Ion:152 Resp: 207736

Ion	Ratio	Lower	Upper
152	100		
115	58.9	39.3	79.3
150	158.2	152.8	192.8



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H08.D
Acq On : 2 Feb 2015 12:33
Instrument: HP5973H
Operator : YNB
Sample : 1501036-13
Misc : MW-23A,WATER
ALS Vial : 33
Multiplier: 1

Quant Time: Feb 02 13:09:13 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.887	53	90814	5.000 ug/L	0.00
24) Fluorobenzene	7.822	96	781709	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.784	117	535000	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.274	65	113150	5.265 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 105.20%	
39) Toluene-d8	10.394	98	796163	5.019 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 100.40%	
56) 4-Bromofluorobenzene	14.840	95	210915	4.571 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 91.40%	
70) 1,2-Dichlorobenzene-d4	17.540	152	201205	4.555 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 91.20%	
Target Compounds					Qvalue
10) Acetone	3.322	43	20252	5.802 ug/L	99
23) Chloroform	6.520	83	104541	1.679 ug/L	99
43) Tetrachloroethene	11.391	166	1376455	32.947 ug/L oe	98

see 2X

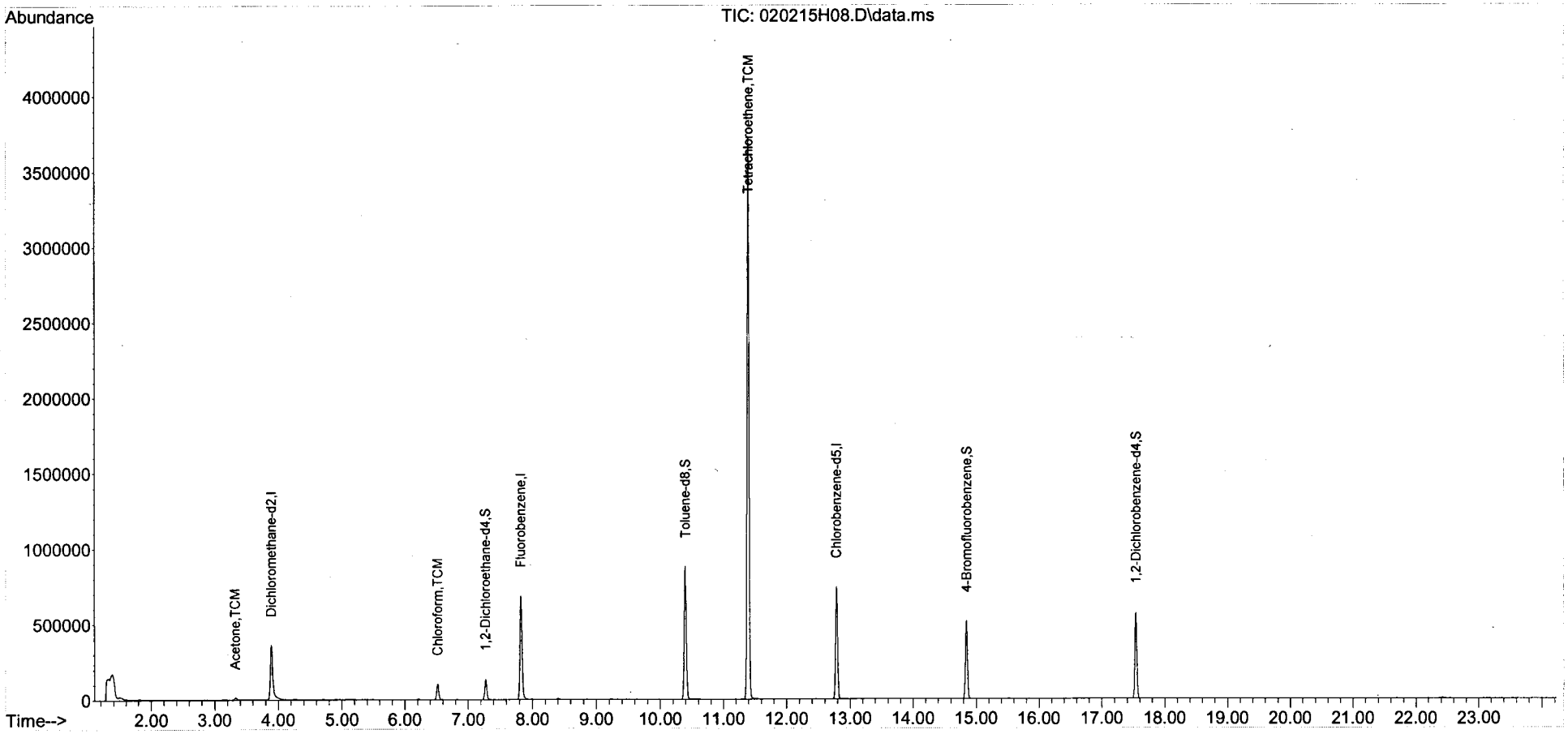
(#) = qualifier out of range (m) = manual integration (+) = signals summed

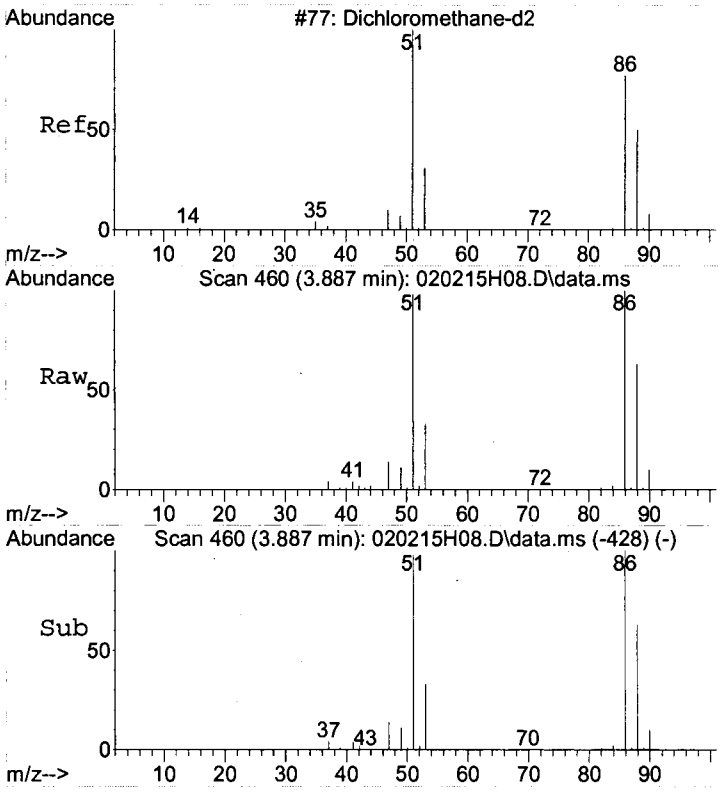
Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H08.D
Acq On : 2 Feb 2015 12:33
Instrument: HP5973H
Operator : YNB
Sample : 1501036-13
Misc : MW-23A,WATER
ALS Vial : 33
Multiplier: 1

Quant Time: Feb 02 13:09:13 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

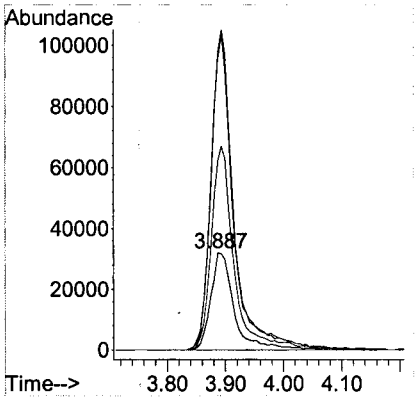


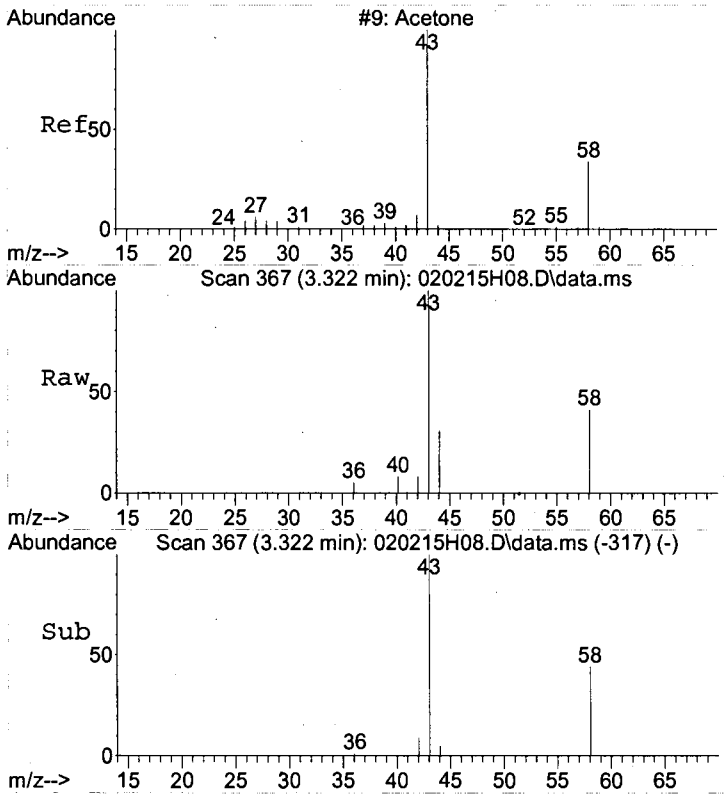


#1
Dichloromethane-d2
Concen: 5.00 ug/L
RT: 3.887 min Scan# 460
Delta R.T. -0.005 min
Lab File: 020215H08.D
Acq: 2 Feb 2015 12:33

Tgt Ion: 53 Resp: 90814

Ion	Ratio	Lower	Upper
53	100		
51	311.6	381.1	421.1#
86	315.8	490.1	530.1#
88	202.1	211.2	251.2#

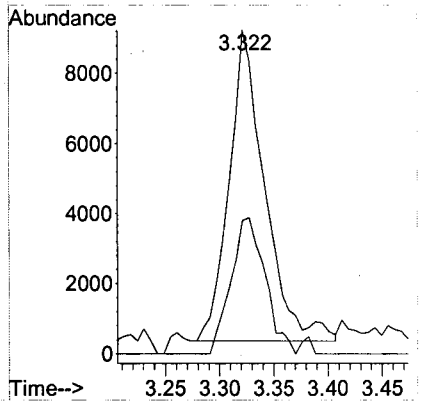


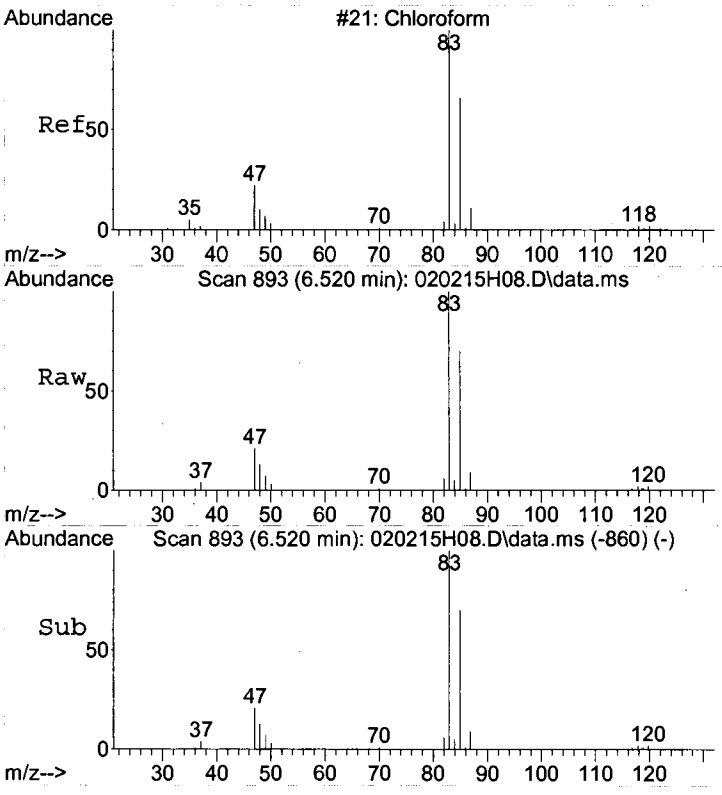


#10
Acetone
Concen: 5.80 ug/L
RT: 3.322 min Scan# 367
Delta R.T. 0.001 min
Lab File: 020215H08.D
Acq: 2 Feb 2015 12:33

Tgt Ion: 43 Resp: 20252

Ion	Ratio	Lower	Upper
43	100		
58	42.0	22.4	62.4

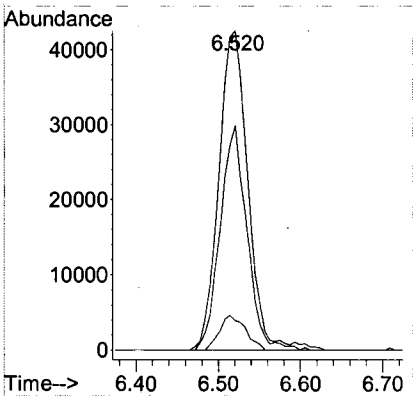


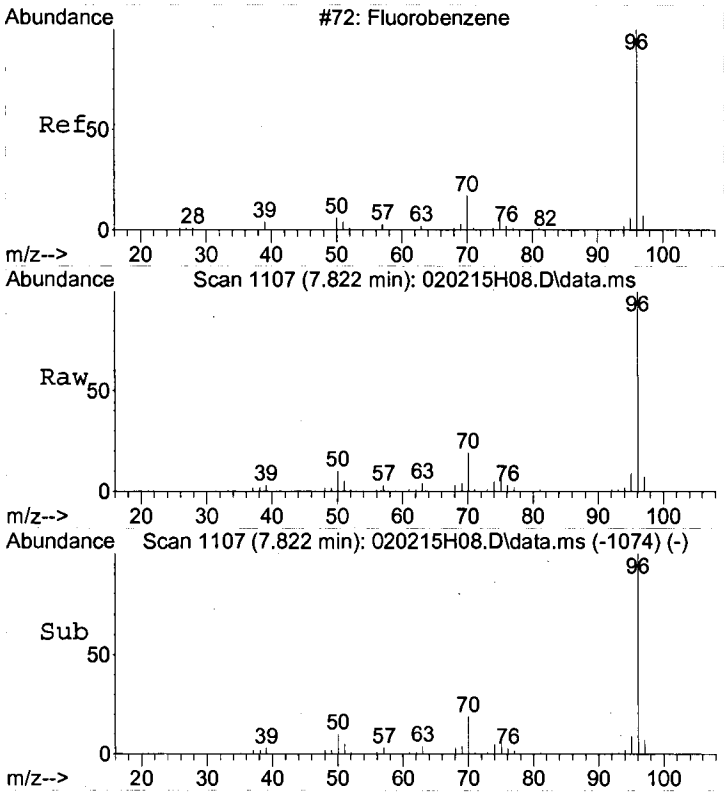


#23
Chloroform
Concen: 1.68 ug/L
RT: 6.520 min Scan# 893
Delta R.T. 0.001 min
Lab File: 020215H08.D
Acq: 2 Feb 2015 12:33

Tgt Ion: 83 Resp: 104541

Ion	Ratio	Lower	Upper
83	100		
85	64.6	44.4	84.4
87	9.7	0.0	30.8

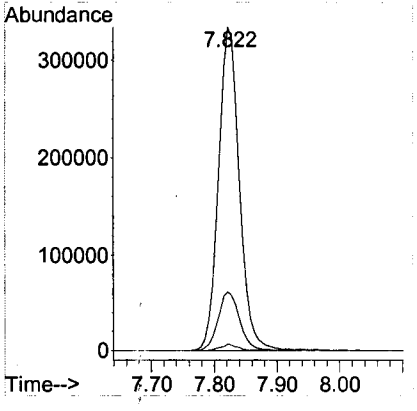


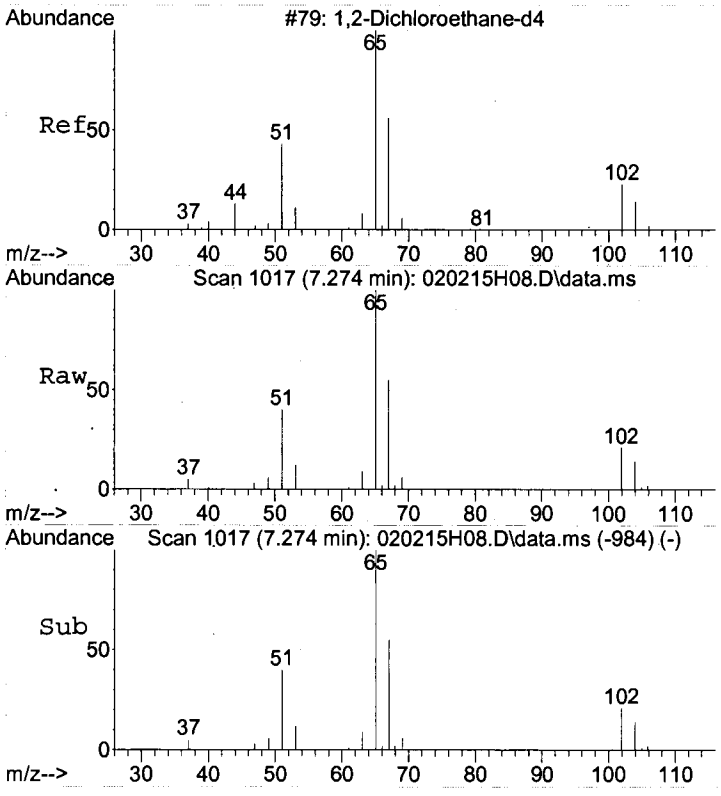


#24
Fluorobenzene
Concen: 5.00 ug/L
RT: 7.822 min Scan# 1107
Delta R.T. 0.001 min
Lab File: 020215H08.D
Acq: 2 Feb 2015 12:33

Tgt Ion: 96 Resp: 781709

Ion	Ratio	Lower	Upper
96	100		
70	18.9	0.0	38.7
77	1.6	0.0	21.6

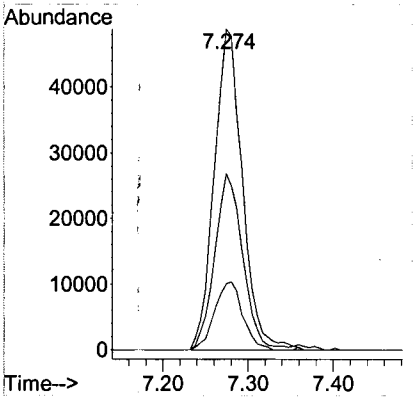


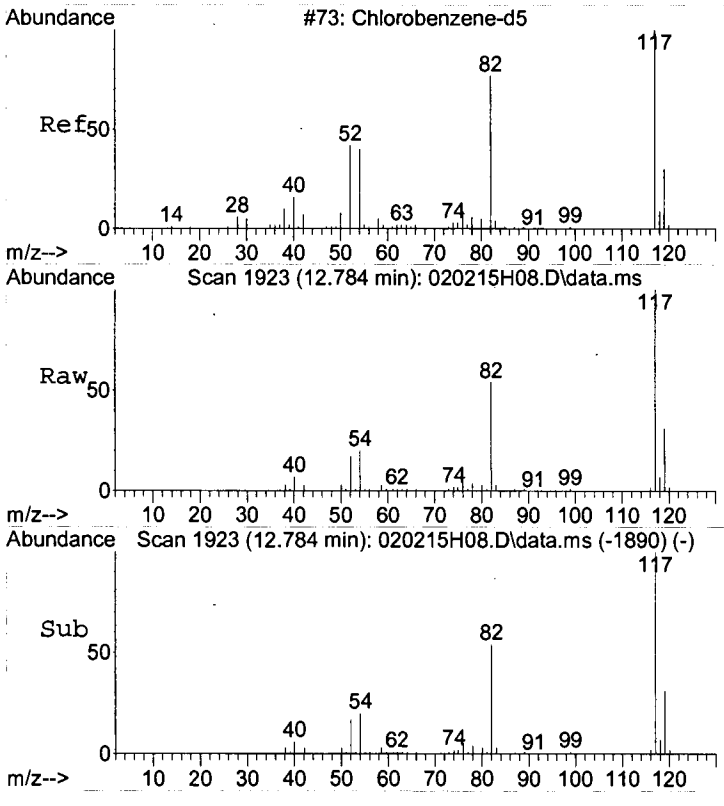


#28
1,2-Dichloroethane-d4
Concen: 5.26 ug/L
RT: 7.274 min Scan# 1017
Delta R.T. 0.001 min
Lab File: 020215H08.D
Acq: 2 Feb 2015 12:33

Tgt Ion: 65 Resp: 113150

Ion	Ratio	Lower	Upper
65	100		
67	54.4	32.3	72.3
102	20.9	1.3	41.3

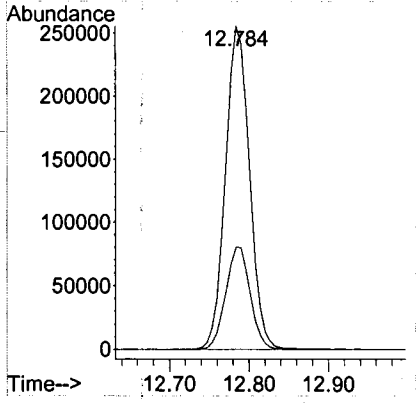


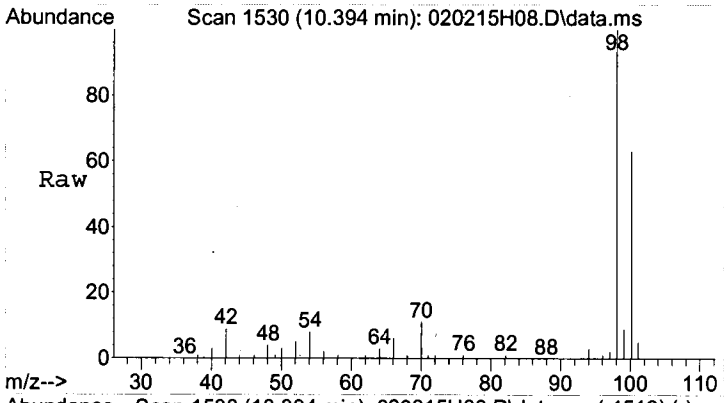


#37
Chlorobenzene-d5
Concen: 5.00 ug/L
RT: 12.784 min Scan# 1923
Delta R.T. 0.001 min
Lab File: 020215H08.D
Acq: 2 Feb 2015 12:33

Tgt Ion:117 Resp: 535000

Ion	Ratio	Lower	Upper
117	100		
119	31.9	11.7	51.7

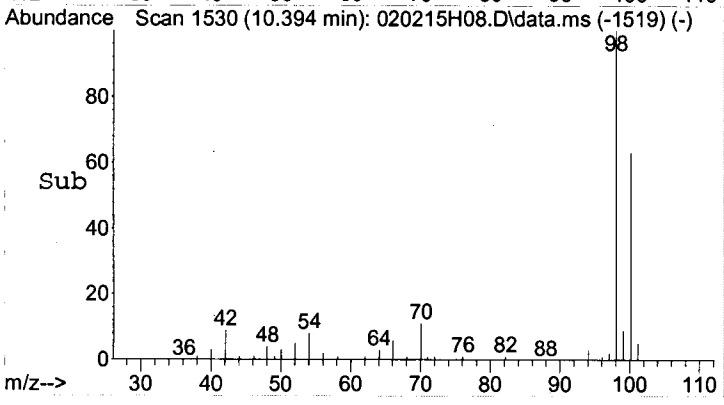


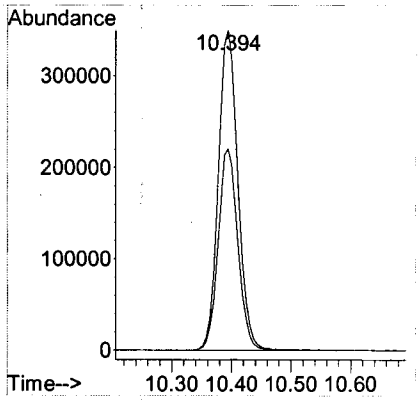


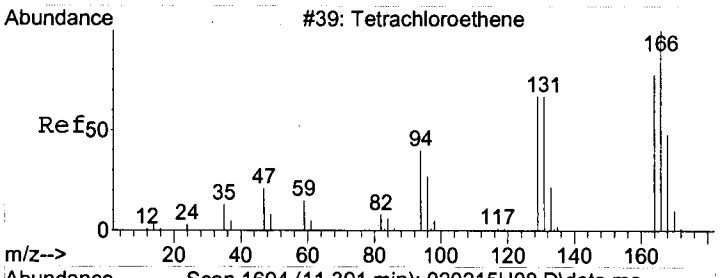
#39
Toluene-d8
Concen: 5.02 ug/L
RT: 10.394 min Scan# 1530
Delta R.T. 0.001 min
Lab File: 020215H08.D
Acq: 2 Feb 2015 12:33

Tgt Ion: 98 Resp: 796163

Ion	Ratio	Lower	Upper
98	100		
100	63.1	45.3	85.3



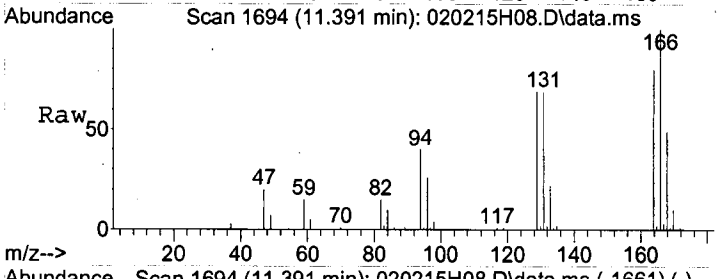


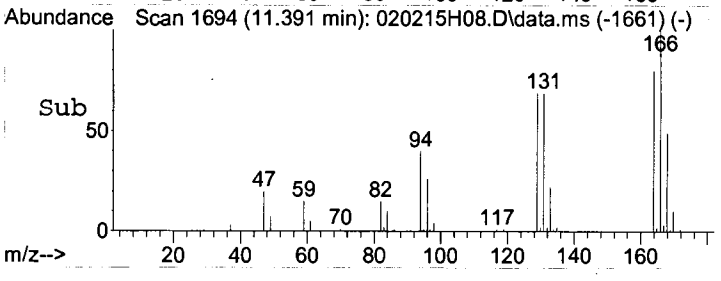


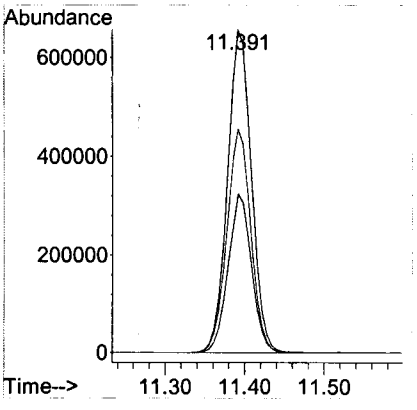
#43
Tetrachloroethene
Concen: 32.95 ug/L
RT: 11.391 min Scan# 1694
Delta R.T. 0.001 min
Lab File: 020215H08.D
Acq: 2 Feb 2015 12:33

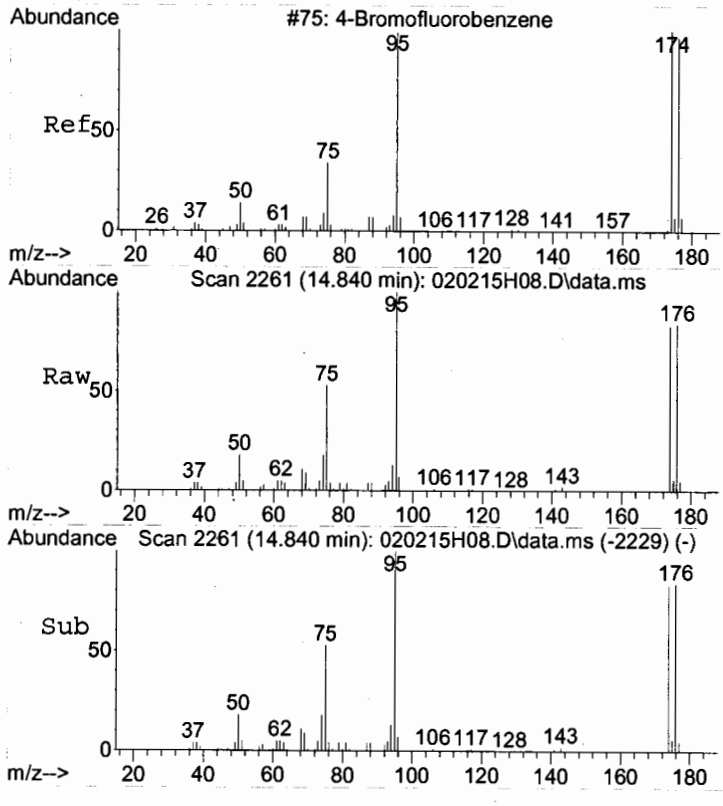
Tgt Ion:166 Resp: 1376455

Ion	Ratio	Lower	Upper
166	100		
168	48.3	27.5	67.5
129	69.4	51.3	91.3





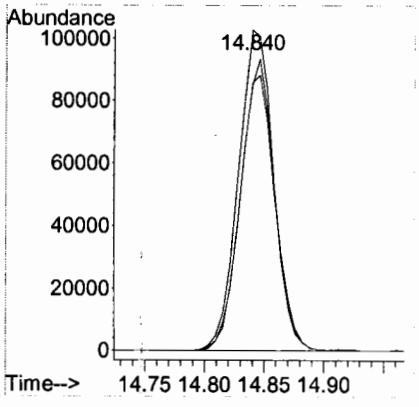


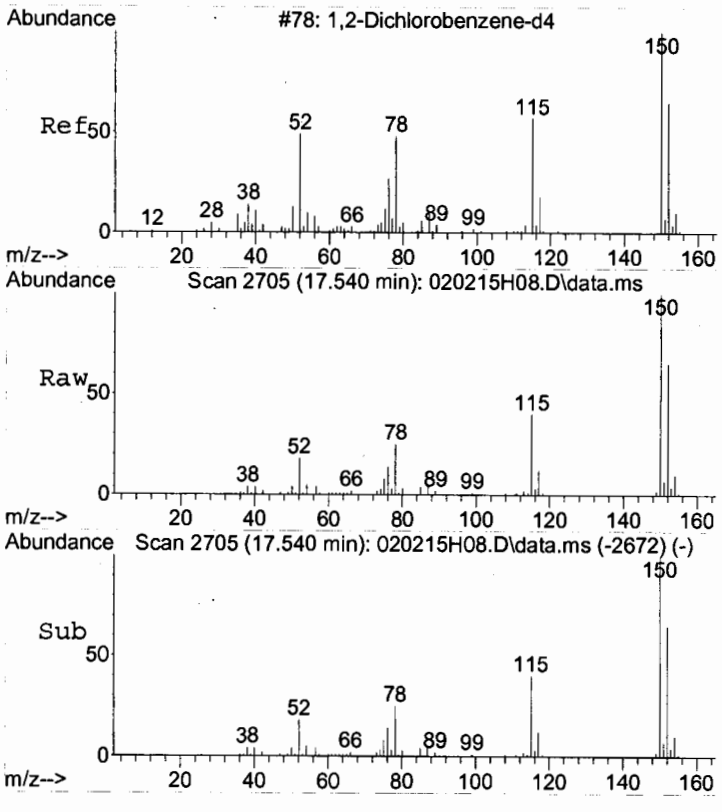


#56
4-Bromofluorobenzene
Concen: 4.57 ug/L
RT: 14.840 min Scan# 2261
Delta R.T. -0.005 min
Lab File: 020215H08.D
Acq: 2 Feb 2015 12:33

Tgt Ion: 95 Resp: 210915

Ion	Ratio	Lower	Upper
95	100		
174	87.9	68.9	108.9
176	86.1	66.0	106.0

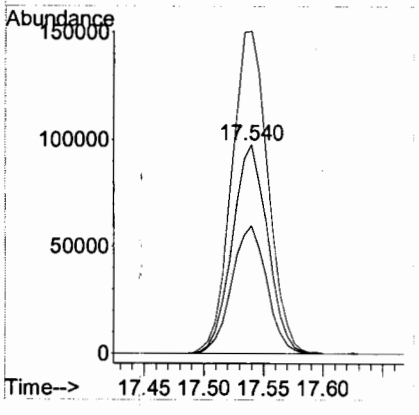




#70
1,2-Dichlorobenzene-d4
Concen: 4.56 ug/L
RT: 17.540 min Scan# 2705
Delta R.T. 0.001 min
Lab File: 020215H08.D
Acq: 2 Feb 2015 12:33

Tgt Ion:152 Resp: 201205

Ion	Ratio	Lower	Upper
152	100		
115	60.7	39.3	79.3
150	158.5	152.8	192.8



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H09.D
Acq On : 2 Feb 2015 13:09
Instrument: HP5973H
Operator : YNB
Sample : BLANK
Misc : BLANK,WATER
ALS Vial : 34
Multiplier: 1

Quant Time: Feb 02 13:46:54 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.890	53	91905	5.000 ug/L	0.00
24) Fluorobenzene	7.825	96	775252	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.787	117	517633	5.000 ug/L	0.00

System Monitoring Compounds

28) 1,2-Dichloroethane-d4	7.277	65	110034	5.162 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 103.20%	
39) Toluene-d8	10.391	98	773705	5.041 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 100.80%	
56) 4-Bromofluorobenzene	14.842	95	205900	4.612 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 92.20%	
70) 1,2-Dichlorobenzene-d4	17.537	152	197189	4.614 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 92.20%	

Target Compounds Qvalue

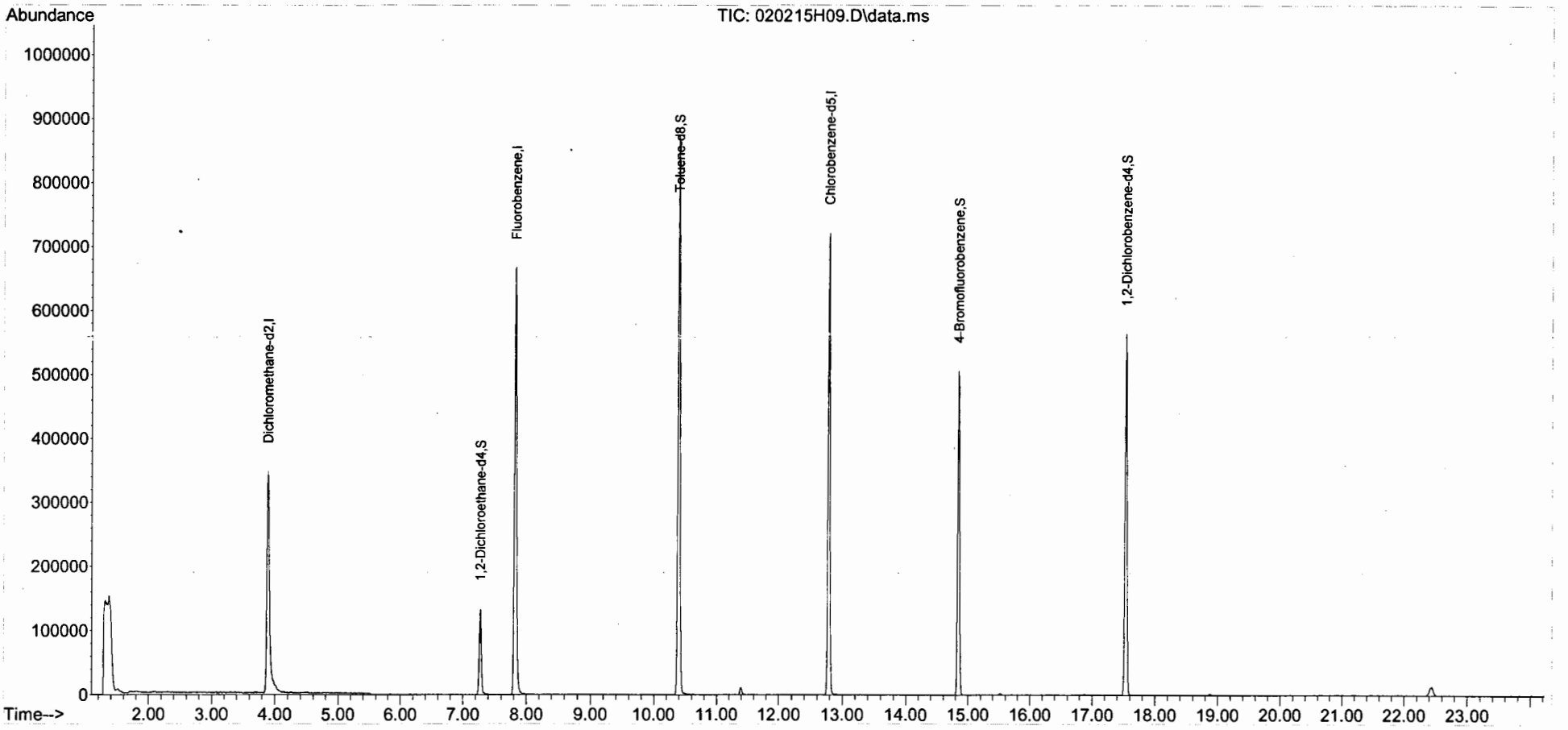
(#) = qualifier out of range (m) = manual integration (+) = signals summed

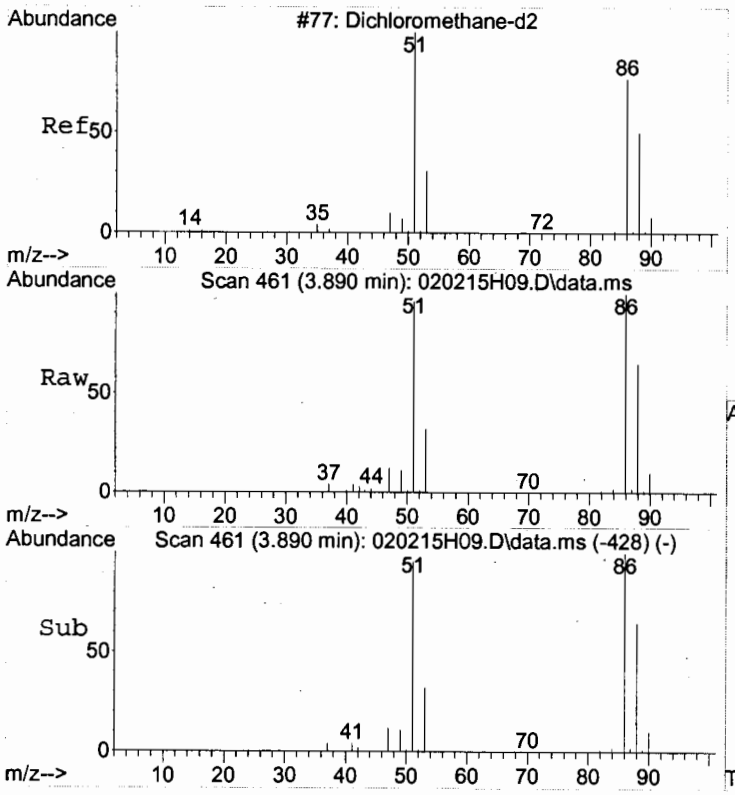
Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H09.D
Acq On : 2 Feb 2015 13:09
Instrument: HP5973H
Operator : YNB
Sample : BLANK
Misc : BLANK,WATER
ALS Vial : 34
Multiplier: 1

Quant Time: Feb 02 13:46:54 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

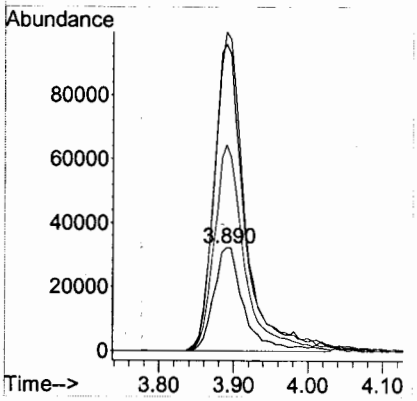


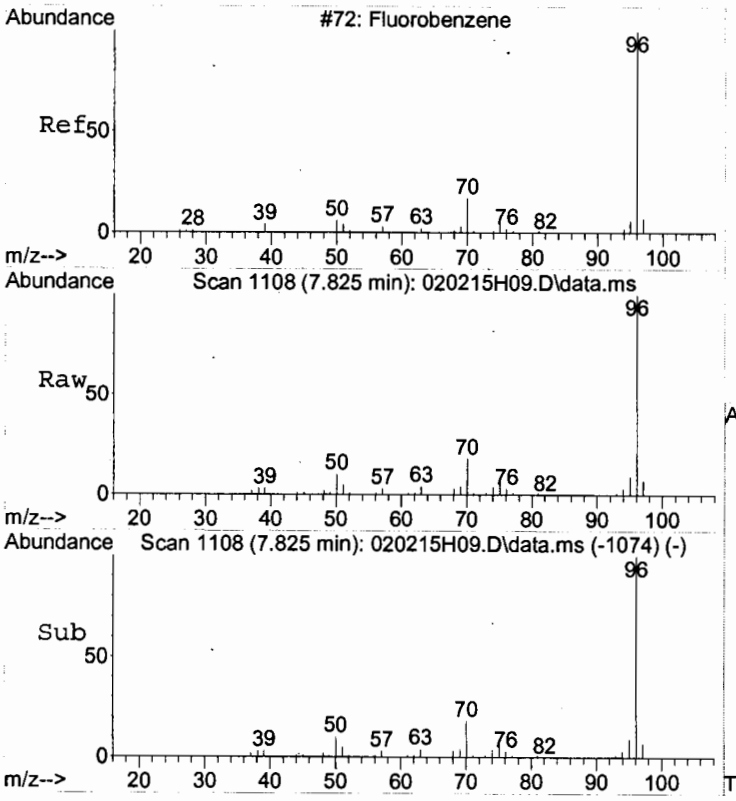


#1
Dichloromethane-d2
Concen: 5.00 ug/L
RT: 3.890 min Scan# 461
Delta R.T. -0.002 min
Lab File: 020215H09.D
Acq: 2 Feb 2015 13:09

Tgt Ion: 53 Resp: 91905

Ion	Ratio	Lower	Upper
53	100		
51	305.0	381.1	421.1#
86	312.1	490.1	530.1#
88	200.2	211.2	251.2#

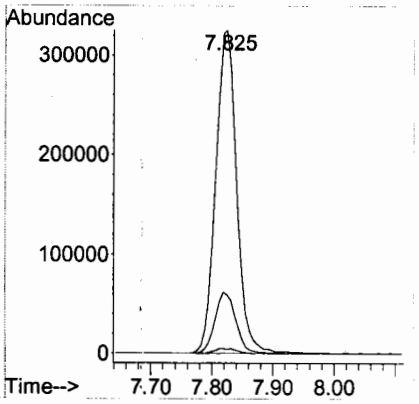


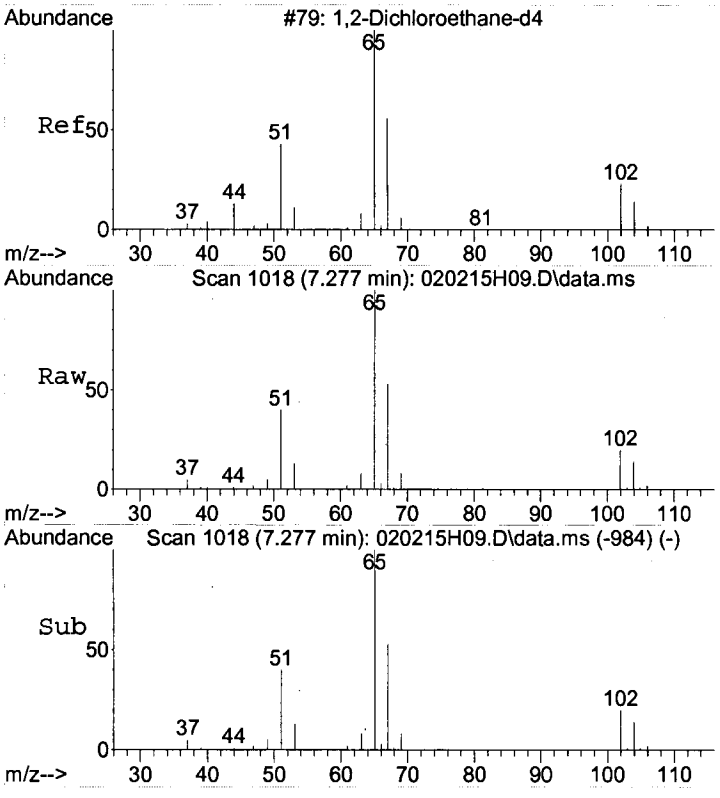


#24
Fluorobenzene
Concen: 5.00 ug/L
RT: 7.825 min Scan# 1108
Delta R.T. 0.004 min
Lab File: 020215H09.D
Acq: 2 Feb 2015 13:09

Tgt Ion: 96 Resp: 775252

Ion	Ratio	Lower	Upper
96	100		
70	18.9	0.0	38.7
77	1.6	0.0	21.6

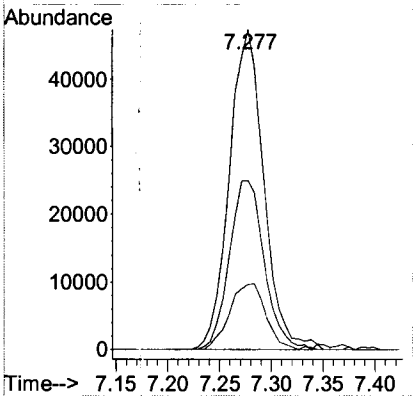


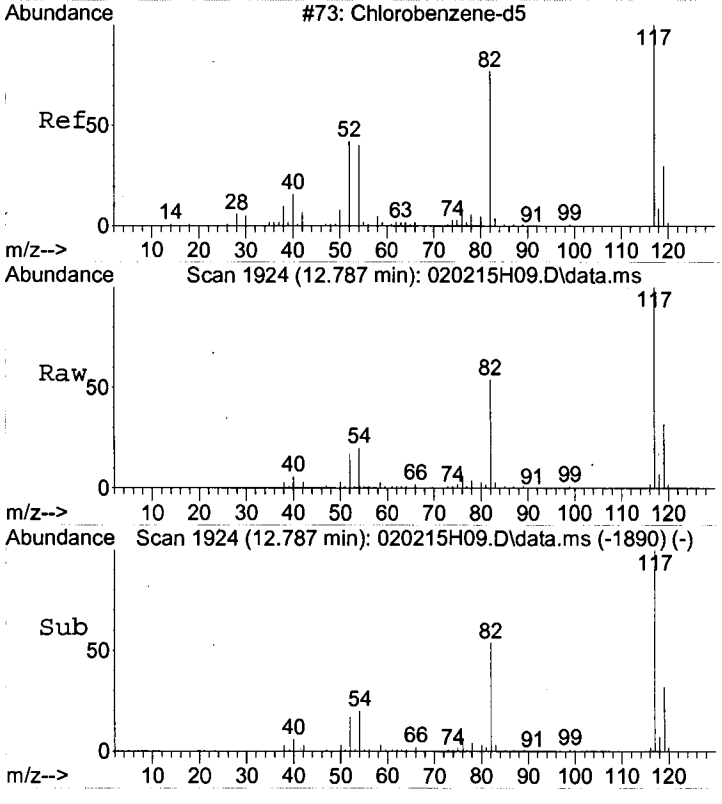


#28
1,2-Dichloroethane-d4
Concen: 5.16 ug/L
RT: 7.277 min Scan# 1018
Delta R.T. 0.004 min
Lab File: 020215H09.D
Acq: 2 Feb 2015 13:09

Tgt Ion: 65 Resp: 110034

Ion	Ratio	Lower	Upper
65	100		
67	53.4	32.3	72.3
102	21.5	1.3	41.3

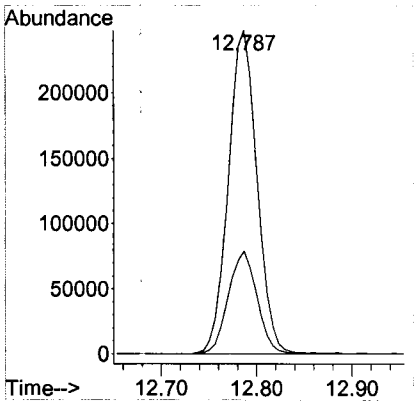


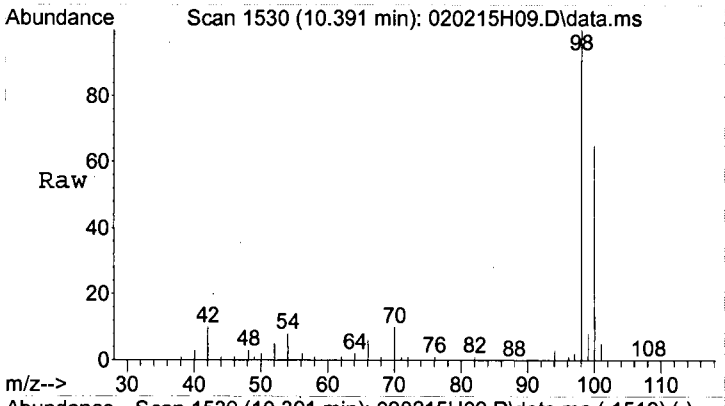


#37
Chlorobenzene-d5
Concen: 5.00 ug/L
RT: 12.787 min Scan# 1924
Delta R.T. 0.004 min
Lab File: 020215H09.D
Acq: 2 Feb 2015 13:09

Tgt Ion:117 Resp: 517633

Ion	Ratio	Lower	Upper
117	100		
119	31.7	11.7	51.7

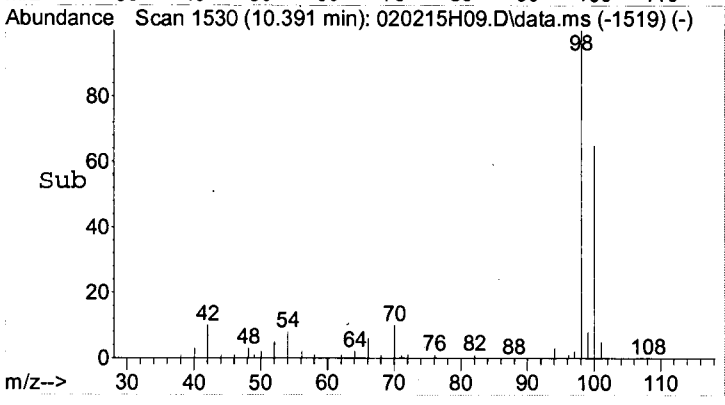


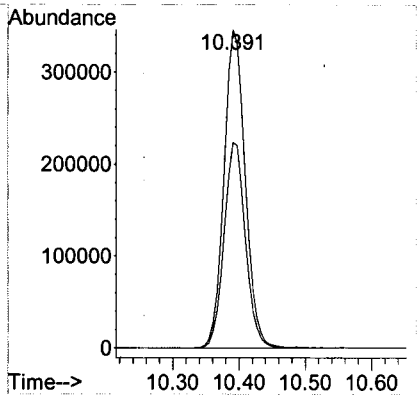


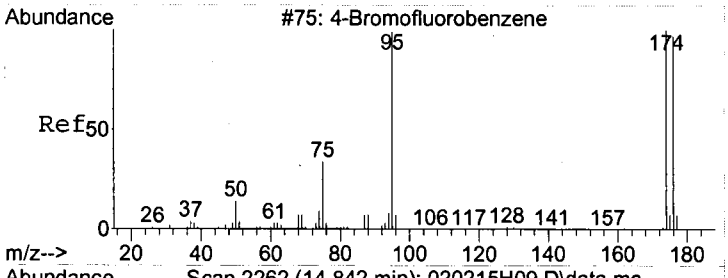
#39
Toluene-d8
Concen: 5.04 ug/L
RT: 10.391 min Scan# 1530
Delta R.T. -0.002 min
Lab File: 020215H09.D
Acq: 2 Feb 2015 13:09

Tgt Ion: 98 Resp: 773705

Ion	Ratio	Lower	Upper
98	100		
100	65.0	45.3	85.3



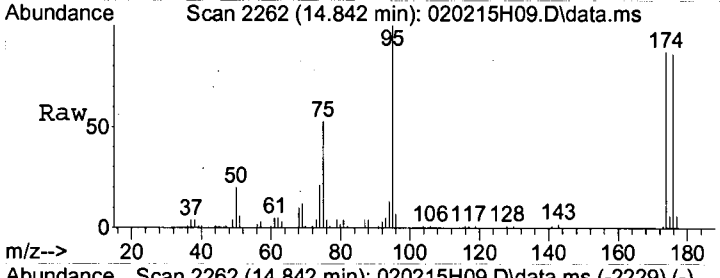


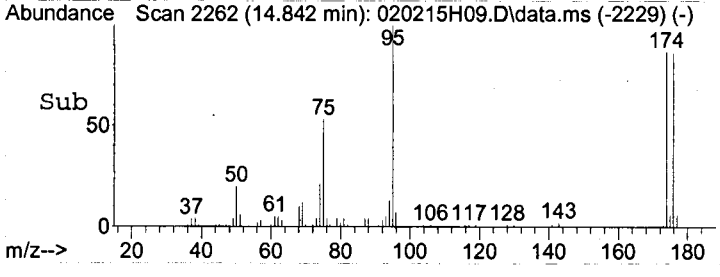


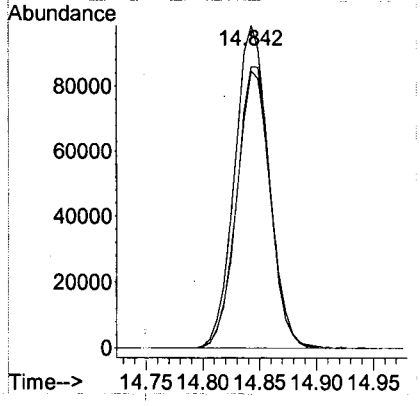
#56
4-Bromofluorobenzene
Concen: 4.61 ug/L
RT: 14.842 min Scan# 2262
Delta R.T. -0.002 min
Lab File: 020215H09.D
Acq: 2 Feb 2015 13:09

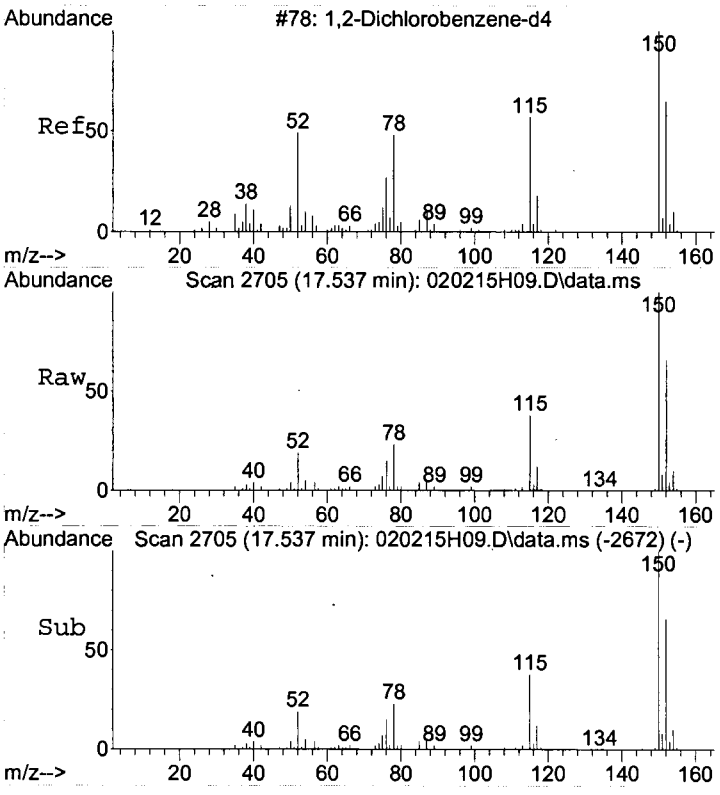
Tgt Ion: 95 Resp: 205900

Ion	Ratio	Lower	Upper
95	100		
174	87.2	68.9	108.9
176	84.8	66.0	106.0





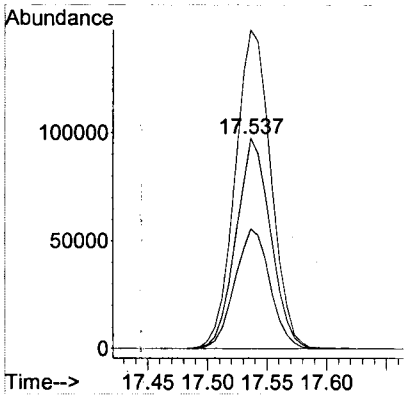




#70
1,2-Dichlorobenzene-d4
Concen: 4.61 ug/L
RT: 17.537 min Scan# 2705
Delta R.T. -0.002 min
Lab File: 020215H09.D
Acq: 2 Feb 2015 13:09

Tgt Ion:152 Resp: 197189

Ion	Ratio	Lower	Upper
152	100		
115	58.2	39.3	79.3
150	157.5	152.8	192.8



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H10.D
Acq On : 2 Feb 2015 13:45
Instrument: HP5973H
Operator : YNB
Sample : B15B002-MS1
Misc : MW-18A,WATER SPIKE
ALS Vial : 35
Multiplier: 1

Quant Time: Feb 02 14:10:58 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.890	53	91958	5.000 ug/L	0.00
24) Fluorobenzene	7.825	96	850179	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.787	117	572642	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.277	65	116029	4.964 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 99.20%	
39) Toluene-d8	10.391	98	851170	5.013 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 100.20%	
56) 4-Bromofluorobenzene	14.843	95	241066	4.881 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 97.60%	
70) 1,2-Dichlorobenzene-d4	17.537	152	242599	5.131 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 102.60%	

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.537	85	280186	6.125 ug/L	100
3) Chloromethane	1.762	50	292519	5.031 ug/L #	85
4) Vinyl chloride	1.835	62	332127	5.470 ug/L	100
5) Bromomethane	2.181	94	212362	4.776 ug/L	99
6) Chloroethane	2.291	64	211932	4.857 ug/L	100
7) Trichlorofluoromethane	2.583	101	513292	6.119 ug/L	97
8) 1,1-Dichloroethene	3.215	96	353002	6.113 ug/L	99
9) 1,1,2-Trichloro-1,2,2-...	3.246	101	366374	6.750 ug/L	99
10) Acetone	3.318	43	151666	42.910 ug/L	98
11) Carbon disulfide	3.477	76	1172227	6.127 ug/L	99
12) Dichloromethane	3.927	84	306881	4.844 ug/L #	99
13) tert-Butyl alcohol	4.249	59	101812	76.512 ug/L	93
14) trans-1,2-Dichloroethene	4.358	96	419570	5.785 ug/L	99
15) tert-Butyl methyl ethe...	4.413	73	1596377	20.433 ug/L	97
16) 1,1-Dichloroethane	5.033	63	594028	5.566 ug/L	100
17) Diisopropyl ether	5.246	45	2814867	21.738 ug/L	100
18) Ethyl-tert-butyl ether	5.830	59	1391889	19.521 ug/L	98
19) 2,2-Dichloropropane	5.958	77	249831	5.182 ug/L	98
20) cis-1,2-Dichloroethene	5.970	96	210929	5.061 ug/L	99
21) 2-Butanone (MEK)	6.061	43	154973	37.996 ug/L	98
22) Bromochloromethane	6.341	128	60825	4.921 ug/L	97
23) Chloroform	6.517	83	664016	10.533 ug/L	100
25) 1,1,1-Trichloroethane	6.761	97	297182	5.418 ug/L	98
26) Carbon tetrachloride	7.016	117	260527	5.660 ug/L	99
27) 1,1-Dichloropropene	7.028	75	280304	5.919 ug/L	99
29) Benzene	7.350	78	874038	5.411 ug/L	100
30) 1,2-Dichloroethane	7.399	62	140969	5.076 ug/L	98
31) tert-Amyl methyl ether	7.618	73	1073762	19.609 ug/L	94
32) Trichloroethene	8.409	95	215796	5.415 ug/L	99
33) 1,2-Dichloropropane	8.755	63	160739	5.076 ug/L	99
34) Dibromomethane	8.938	93	56112	5.085 ug/L	98
35) Bromodichloromethane	9.230	83	193313	5.173 ug/L	99
36) cis-1,3-Dichloropropene	9.971	75	191402	4.892 ug/L	100

00476

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H10.D
Acq On : 2 Feb 2015 13:45
Instrument: HP5973H
Operator : YNB
Sample : B15B002-MS1
Misc : MW-18A,WATER SPIKE
ALS Vial : 35
Multiplier: 1

Quant Time: Feb 02 14:10:58 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
38) 4-Methyl-2-pentanone (...	10.282	43	385211	42.177 ug/L	98
40) Toluene	10.501	92	574701	5.145 ug/L	97
41) trans-1,3-Dichloropropene	10.902	75	134285	4.690 ug/L	99
42) 1,1,2-Trichloroethane	11.194	83	70783	4.977 ug/L	96
43) Tetrachloroethene	11.395	166	350543	7.839 ug/L	99
44) 1,3-Dichloropropane	11.455	76	157007	4.998 ug/L	99
45) 2-Hexanone	11.674	43	248442	42.434 ug/L	98
46) Chlorodibromomethane	11.820	129	100919	4.728 ug/L	99
47) 1,2-Dibromoethane (EDB)	11.972	107	75549	5.052 ug/L	98
48) Chlorobenzene	12.830	112	570554	5.118 ug/L	99
49) 1,1,1,2-Tetrachloroethane	13.000	131	149497	4.741 ug/L	99
50) Ethylbenzene	13.061	91	1128473	5.451 ug/L	99
51) m&p-Xylene	13.274	106	933490	10.549 ug/L	99
52) o-Xylene	13.943	106	411047	5.205 ug/L	99
53) Styrene	13.973	104	636754	5.164 ug/L	99
54) Bromoform	14.241	173	48295	4.857 ug/L	93
55) Isopropylbenzene	14.612	105	1153451	5.633 ug/L	100
57) Bromobenzene	15.062	156	200219	5.058 ug/L	99
58) 1,1,2,2-Tetrachloroethane	15.153	83	85563	5.148 ug/L	99
59) 1,2,3-Trichloropropane	15.189	75	59759	5.003 ug/L	98
60) Propylbenzene	15.341	91	1390971	5.693 ug/L	100
61) 2-Chlorotoluene	15.439	91	737429	5.209 ug/L	100
62) 4-Chlorotoluene	15.639	91	865320	5.290 ug/L	99
63) 1,3,5-Trimethylbenzene	15.670	105	974646	5.440 ug/L	100
64) tert-Butylbenzene	16.229	119	838438	5.639 ug/L	99
65) 1,2,4-Trimethylbenzene	16.320	105	945693	5.329 ug/L	98
66) sec-Butylbenzene	16.624	105	1292828	5.892 ug/L	99
67) 1,3-Dichlorobenzene	16.758	146	481855	5.229 ug/L	99
68) p-Isopropyltoluene	16.910	119	1134177	5.661 ug/L	99
69) 1,4-Dichlorobenzene	16.922	146	489381	5.119 ug/L	100
71) 1,2-Dichlorobenzene	17.567	146	370665	5.107 ug/L	100
72) Butylbenzene	17.646	91	1038020	5.880 ug/L	100
73) 1,2-Dibromo-3-chloropr...	18.984	75	42397	19.335 ug/L	98
74) 1,2,4-Trichlorobenzene	20.492	180	252974	5.035 ug/L	100
75) Hexachlorobutadiene	20.857	225	169595	5.568 ug/L	99
76) Naphthalene	20.912	128	295688	5.120 ug/L	98
77) 1,2,3-Trichlorobenzene	21.356	180	197556	5.112 ug/L	99

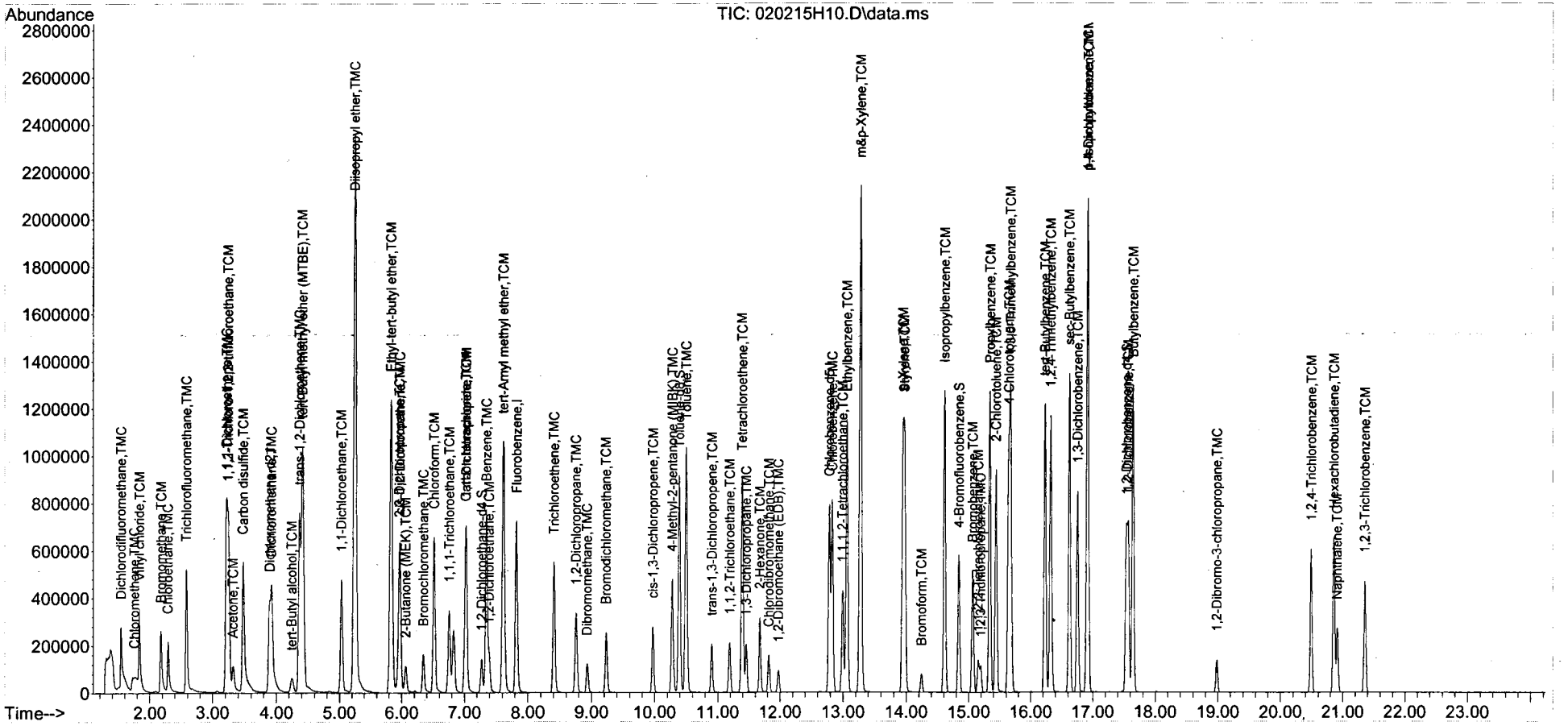
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H10.D
Acq On : 2 Feb 2015 13:45
Instrument: HP5973H
Operator : YNB
Sample : B15B002-MS1
Misc : MW-18A,WATER SPIKE
ALS Vial : 35
Multiplier: 1

Quant Time: Feb 02 14:10:58 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H11.D
Acq On : 2 Feb 2015 14:21
Instrument: HP5973H
Operator : YNB
Sample : B15B002-MSD1
Misc : MW-18A,WATER SPIKE
ALS Vial : 36
Multiplier: 1

Quant Time: Feb 02 14:46:13 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.893	53	94935	5.000 ug/L	0.00
24) Fluorobenzene	7.821	96	880905	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.783	117	582761	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.274	65	118734	4.902 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery = 98.00%		
39) Toluene-d8	10.394	98	877665	5.080 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery = 101.60%		
56) 4-Bromofluorobenzene	14.845	95	250363	4.981 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery = 99.60%		
70) 1,2-Dichlorobenzene-d4	17.539	152	252789	5.254 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery = 105.00%		

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.539	85	291118	6.165 ug/L	99
3) Chloromethane	1.770	50	305820	5.095 ug/L #	85
4) Vinyl chloride	1.831	62	346348	5.525 ug/L	99
5) Bromomethane	2.178	94	244412	5.324 ug/L	98
6) Chloroethane	2.293	64	225548	5.007 ug/L	100
7) Trichlorofluoromethane	2.579	101	553300	6.389 ug/L	97
8) 1,1-Dichloroethene	3.211	96	360801	6.052 ug/L	100
9) 1,1,2-Trichloro-1,2,2-...	3.248	101	384915	6.869 ug/L	98
10) Acetone	3.315	43	153177	41.979 ug/L	99
11) Carbon disulfide	3.479	76	1158559	5.866 ug/L	100
12) Dichloromethane	3.923	84	307232	4.698 ug/L #	99
13) tert-Butyl alcohol	4.245	59	117366	85.435 ug/L	93
14) trans-1,2-Dichloroethene	4.361	96	414726	5.539 ug/L	98
15) tert-Butyl methyl ethe...	4.409	73	1664423	20.635 ug/L	98
16) 1,1-Dichloroethane	5.036	63	598688	5.434 ug/L	99
17) Diisopropyl ether	5.249	45	2833441	21.195 ug/L	99
18) Ethyl-tert-butyl ether	5.832	59	1418027	19.264 ug/L	100
19) 2,2-Dichloropropane	5.960	77	247048	4.963 ug/L	99
20) cis-1,2-Dichloroethene	5.972	96	219023	5.091 ug/L	98
21) 2-Butanone (MEK)	6.064	43	164743	39.125 ug/L	99
22) Bromochloromethane	6.343	128	63898	5.007 ug/L	99
23) Chloroform	6.514	83	683866	10.508 ug/L	100
25) 1,1,1-Trichloroethane	6.757	97	311614	5.483 ug/L	97
26) Carbon tetrachloride	7.018	117	271216	5.687 ug/L	99
27) 1,1-Dichloropropene	7.031	75	291105	5.932 ug/L	99
29) Benzene	7.353	78	897378	5.362 ug/L	99
30) 1,2-Dichloroethane	7.395	62	141838	4.929 ug/L	99
31) tert-Amyl methyl ether	7.620	73	1110496	19.572 ug/L	95
32) Trichloroethene	8.411	95	219583	5.318 ug/L	99
33) 1,2-Dichloropropane	8.758	63	171218	5.218 ug/L	98
34) Dibromomethane	8.934	93	55557	4.859 ug/L	97
35) Bromodichloromethane	9.232	83	199142	5.143 ug/L	99
36) cis-1,3-Dichloropropene	9.968	75	195136	4.813 ug/L	99

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H11.D
Acq On : 2 Feb 2015 14:21
Instrument: HP5973H
Operator : YNB
Sample : B15B002-MSD1
Misc : MW-18A,WATER SPIKE
ALS Vial : 36
Multiplier: 1

Quant Time: Feb 02 14:46:13 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
38) 4-Methyl-2-pentanone (...	10.278	43	387043	41.641 ug/L	99
40) Toluene	10.503	92	594055	5.226 ug/L	100
41) trans-1,3-Dichloropropene	10.904	75	137180	4.708 ug/L	98
42) 1,1,2-Trichloroethane	11.190	83	73871	5.104 ug/L	92
43) Tetrachloroethene	11.391	166	348551	7.659 ug/L	99
44) 1,3-Dichloropropane	11.452	76	155750	4.872 ug/L	99
45) 2-Hexanone	11.677	43	252412	42.364 ug/L	97
46) Chlorodibromomethane	11.817	129	104811	4.825 ug/L	100
47) 1,2-Dibromoethane (EDB)	11.975	107	75807	4.981 ug/L	99
48) Chlorobenzene	12.832	112	577076	5.086 ug/L	99
49) 1,1,1,2-Tetrachloroethane	12.996	131	153898	4.796 ug/L	99
50) Ethylbenzene	13.063	91	1152161	5.469 ug/L	99
51) m&p-Xylene	13.276	106	947521	10.521 ug/L	99
52) o-Xylene	13.945	106	412820	5.137 ug/L	99
53) Styrene	13.975	104	654581	5.216 ug/L	99
54) Bromoform	14.243	173	48976	4.840 ug/L	96
55) Isopropylbenzene	14.614	105	1163534	5.584 ug/L	99
57) Bromobenzene	15.064	156	199692	4.957 ug/L	97
58) 1,1,2,2-Tetrachloroethane	15.155	83	85144	5.034 ug/L	98
59) 1,2,3-Trichloropropane	15.192	75	60900	5.010 ug/L	100
60) Propylbenzene	15.338	91	1401514	5.636 ug/L	100
61) 2-Chlorotoluene	15.441	91	743558	5.162 ug/L	99
62) 4-Chlorotoluene	15.642	91	866900	5.208 ug/L	100
63) 1,3,5-Trimethylbenzene	15.672	105	982371	5.387 ug/L	99
64) tert-Butylbenzene	16.232	119	846383	5.593 ug/L	99
65) 1,2,4-Trimethylbenzene	16.323	105	960052	5.316 ug/L	98
66) sec-Butylbenzene	16.627	105	1312286	5.877 ug/L	100
67) 1,3-Dichlorobenzene	16.755	146	482360	5.144 ug/L	100
68) p-Isopropyltoluene	16.913	119	1133121	5.558 ug/L	100
69) 1,4-Dichlorobenzene	16.925	146	491017	5.047 ug/L	100
71) 1,2-Dichlorobenzene	17.569	146	375021	5.078 ug/L	99
72) Butylbenzene	17.642	91	1043793	5.810 ug/L	100
73) 1,2-Dibromo-3-chloropr...	18.980	75	43781	19.619 ug/L	99
74) 1,2,4-Trichlorobenzene	20.495	180	257368	5.033 ug/L	99
75) Hexachlorobutadiene	20.859	225	171637	5.538 ug/L	97
76) Naphthalene	20.914	128	304381	5.179 ug/L	99
77) 1,2,3-Trichlorobenzene	21.358	180	201403	5.121 ug/L	100

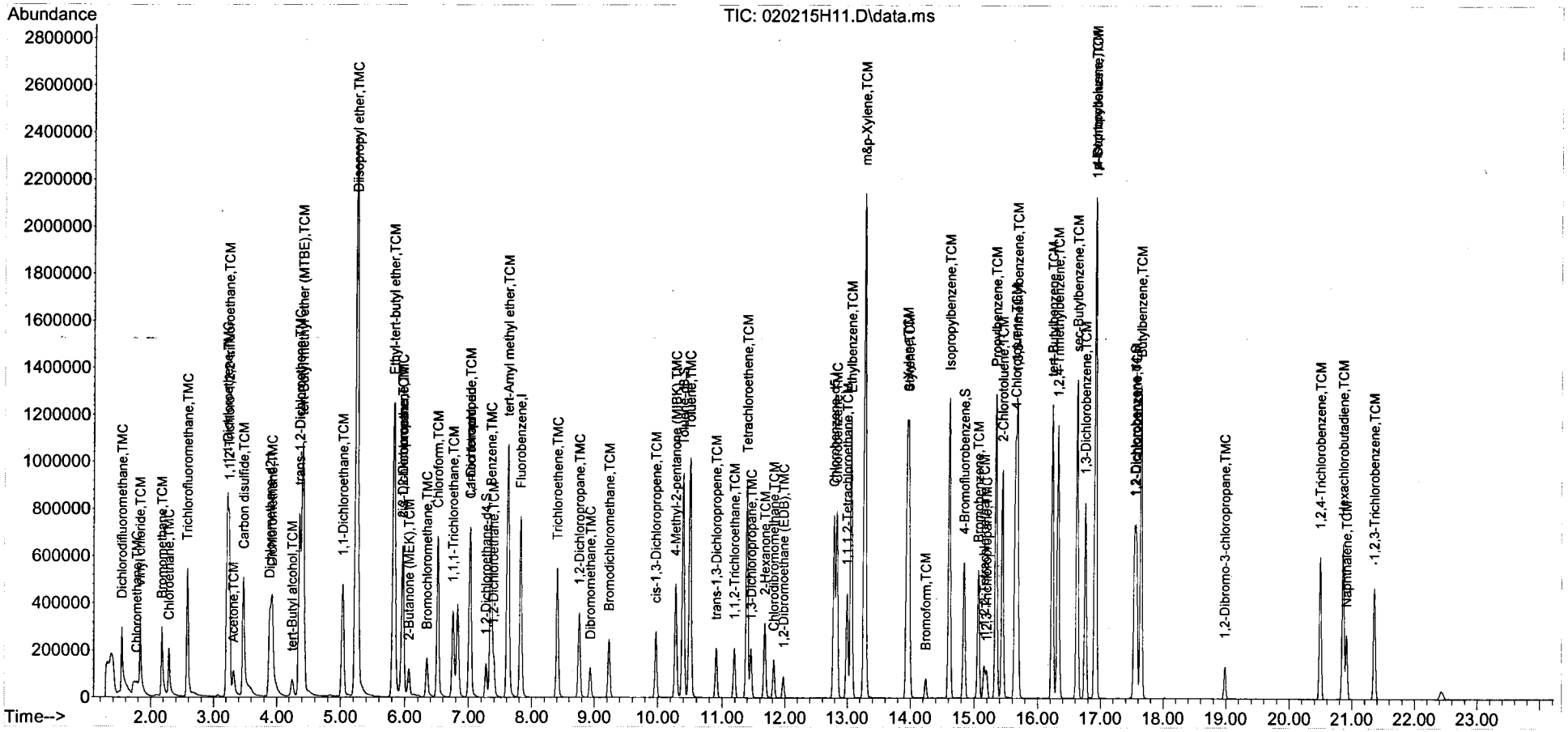
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H11.D
Acq On : 2 Feb 2015 14:21
Instrument: HP5973H
Operator : YNB
Sample : B15B002-MSD1
Misc : MW-18A,WATER SPIKE
ALS Vial : 36
Multiplier: 1

Quant Time: Feb 02 14:46:13 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H12.D
Acq On : 2 Feb 2015 14:57
Instrument: HP5973H
Operator : YNB
Sample : BLANK
Misc : BLANK,WATER
ALS Vial : 37
Multiplier: 1

Quant Time: Feb 02 15:44:10 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.894	53	94770	5.000 ug/L	0.00
24) Fluorobenzene	7.822	96	818080	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.785	117	544451	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.275	65	114135	5.074 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 101.40%	
39) Toluene-d8	10.395	98	817769	5.066 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 101.40%	
56) 4-Bromofluorobenzene	14.840	95	215930	4.599 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 92.00%	
70) 1,2-Dichlorobenzene-d4	17.540	152	205067	4.562 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 91.20%	
Target Compounds					Qvalue
13) tert-Butyl alcohol	4.253	59	12455	9.082 ug/L	83

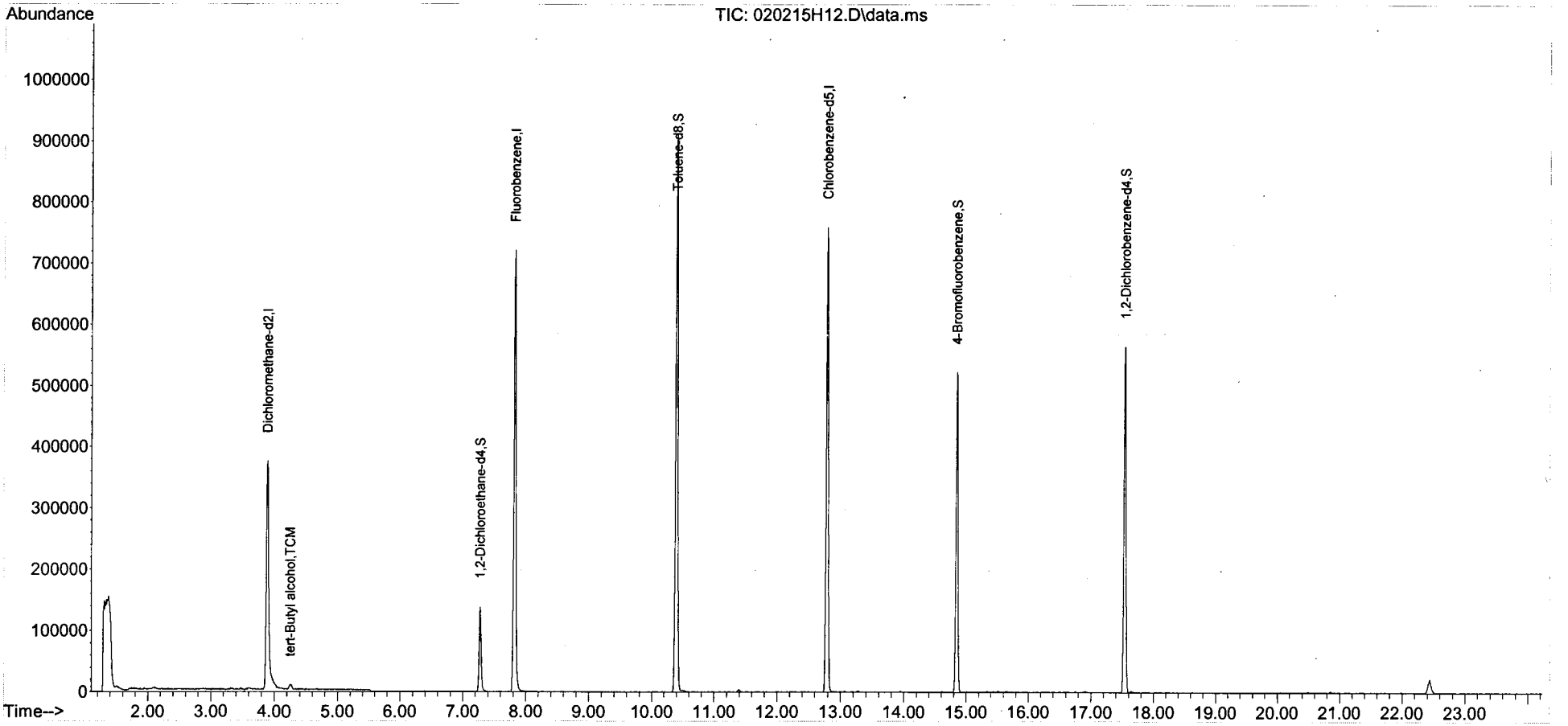
(#) = qualifier out of range (m) = manual integration (+) = signals summed

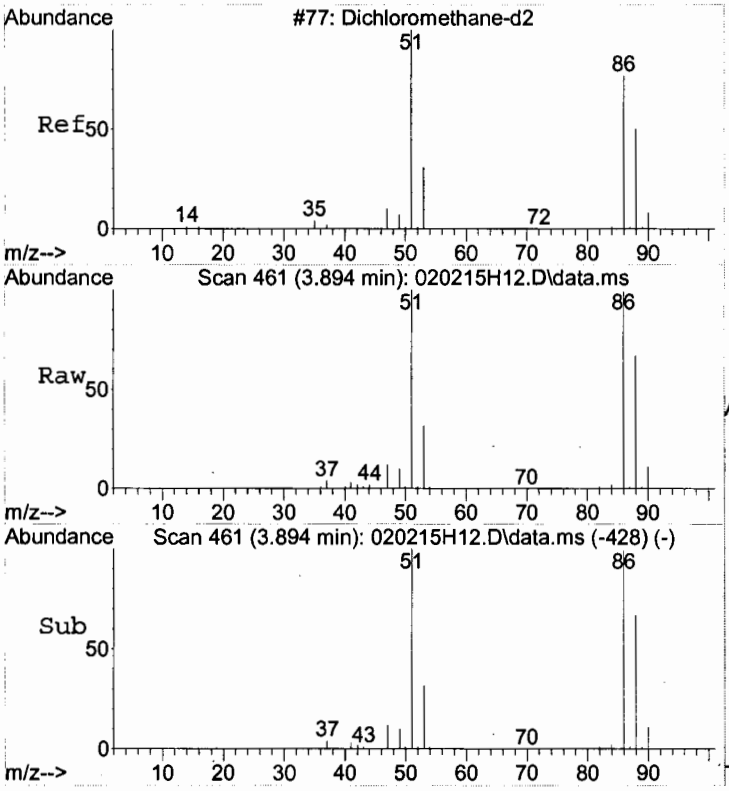
Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H12.D
Acq On : 2 Feb 2015 14:57
Instrument: HP5973H
Operator : YNB
Sample : BLANK
Misc : BLANK,WATER
ALS Vial : 37
Multiplier: 1

Quant Time: Feb 02 15:44:10 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

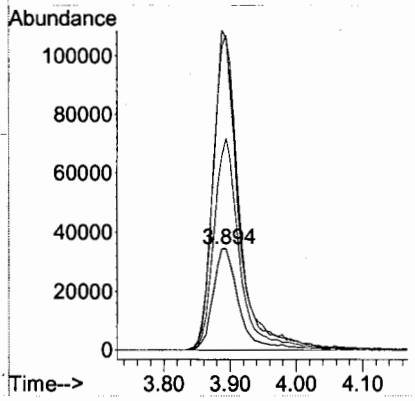


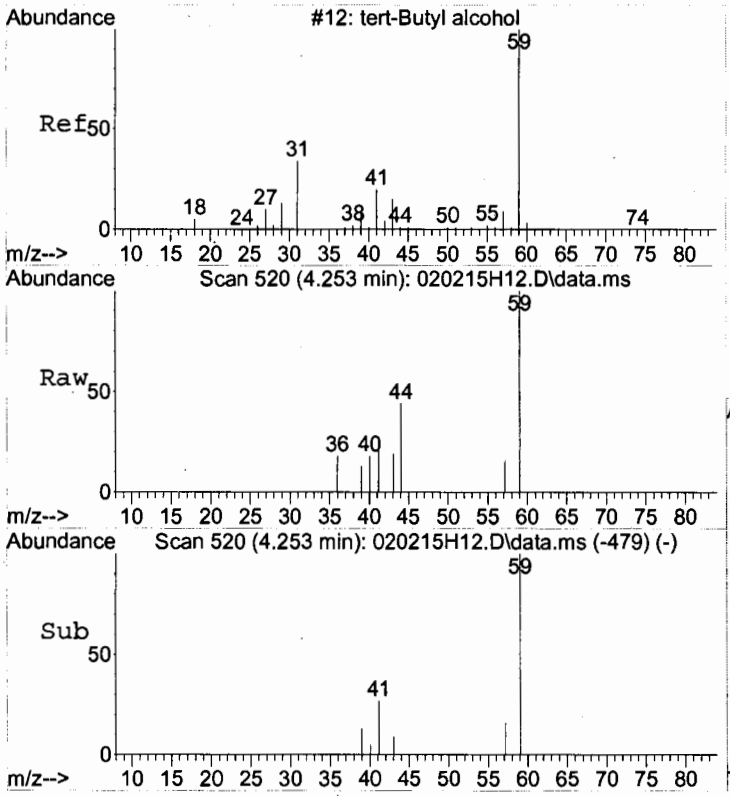


#1
Dichloromethane-d2
Concen: 5.00 ug/L
RT: 3.894 min Scan# 461
Delta R.T. 0.002 min
Lab File: 020215H12.D
Acq: 2 Feb 2015 14:57

Tgt Ion: 53 Resp: 94770

Ion	Ratio	Lower	Upper
53	100		
51	305.7	381.1	421.1#
86	316.9	490.1	530.1#
88	204.7	211.2	251.2#

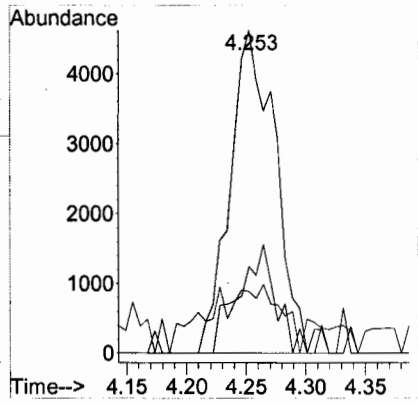


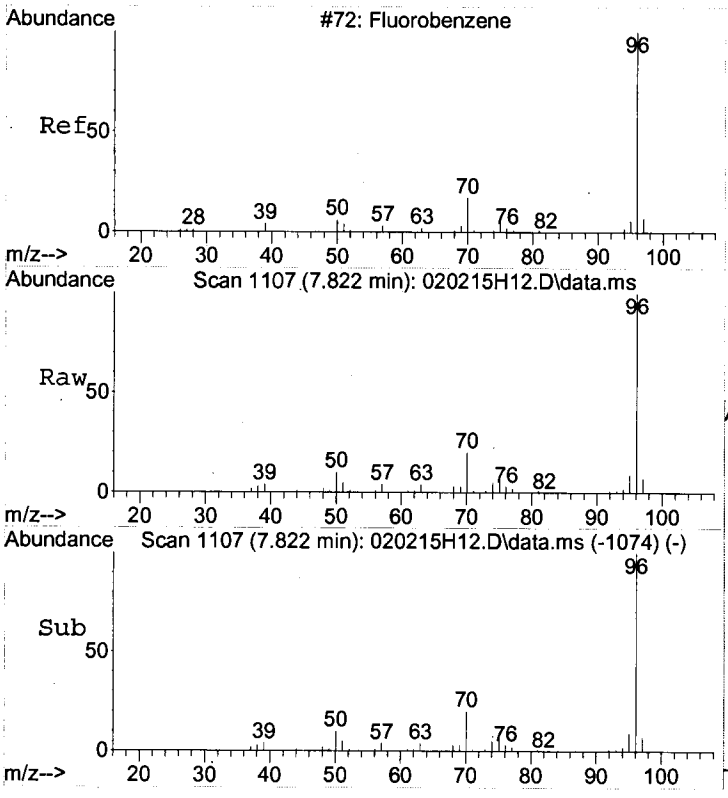


#13
tert-Butyl alcohol
Concen: 9.08 ug/L
RT: 4.253 min Scan# 520
Delta R.T. 0.002 min
Lab File: 020215H12.D
Acq: 2 Feb 2015 14:57

Tgt Ion: 59 Resp: 12455

Ion	Ratio	Lower	Upper
59	100		
41	27.6	1.2	41.2
43	20.0	0.0	31.2

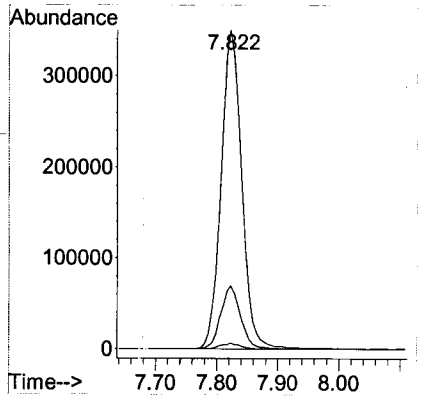


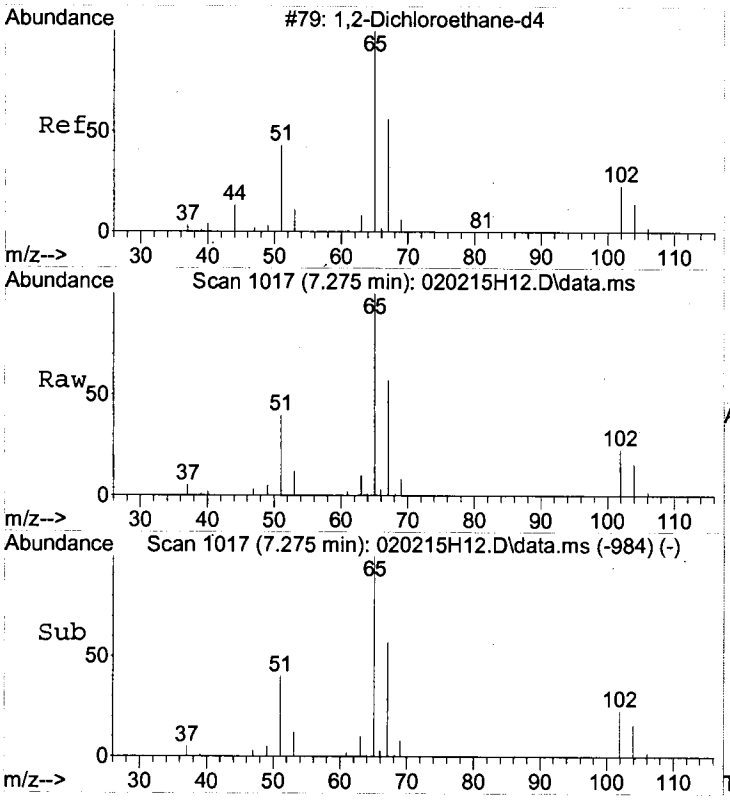


#24
Fluorobenzene
Concen: 5.00 ug/L
RT: 7.822 min Scan# 1107
Delta R.T. 0.002 min
Lab File: 020215H12.D
Acq: 2 Feb 2015 14:57

Tgt Ion: 96 Resp: 818080

Ion	Ratio	Lower	Upper
96	100		
70	19.0	0.0	38.7
77	1.7	0.0	21.6

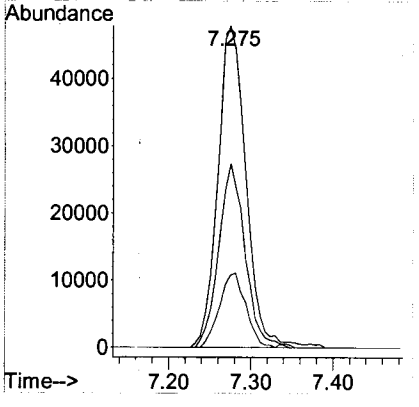


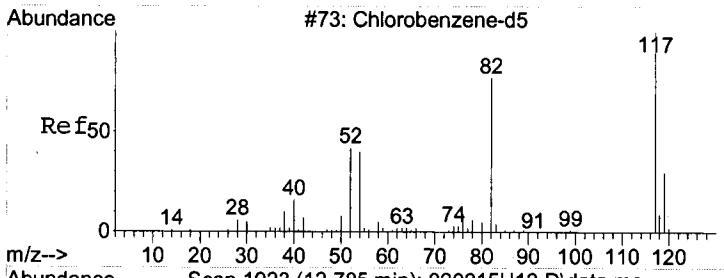


#28
1,2-Dichloroethane-d4
Concen: 5.07 ug/L
RT: 7.275 min Scan# 1017
Delta R.T. 0.002 min
Lab File: 020215H12.D
Acq: 2 Feb 2015 14:57

Tgt Ion: 65 Resp: 114135

Ion	Ratio	Lower	Upper
65	100		
67	53.5	32.3	72.3
102	21.6	1.3	41.3

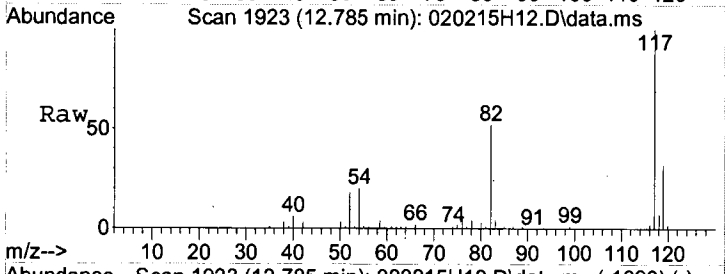


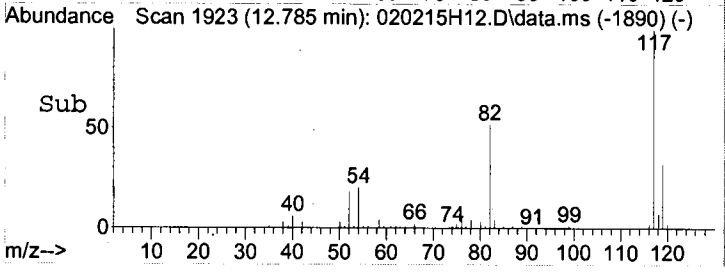


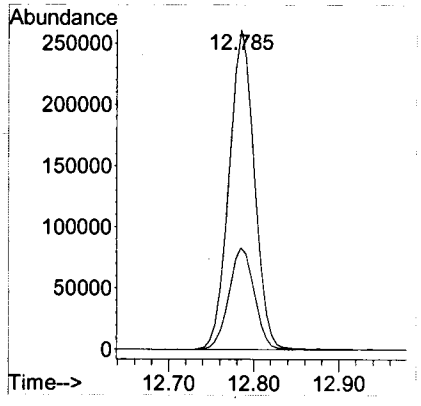
#37
Chlorobenzene-d5
Concen: 5.00 ug/L
RT: 12.785 min Scan# 1923
Delta R.T. 0.002 min
Lab File: 020215H12.D
Acq: 2 Feb 2015 14:57

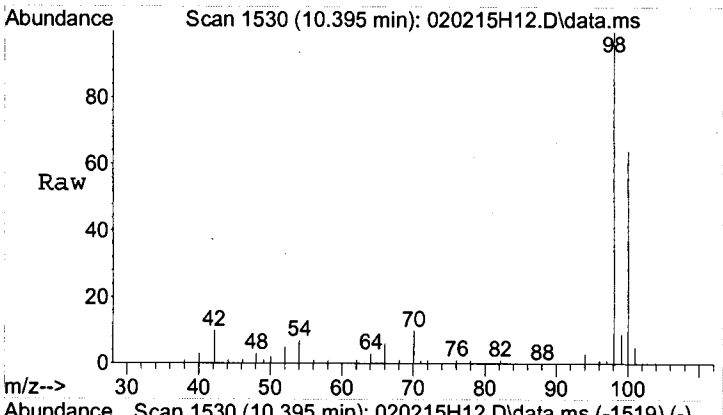
Tgt Ion:117 Resp: 544451

Ion	Ratio	Lower	Upper
117	100		
119	31.9	11.7	51.7





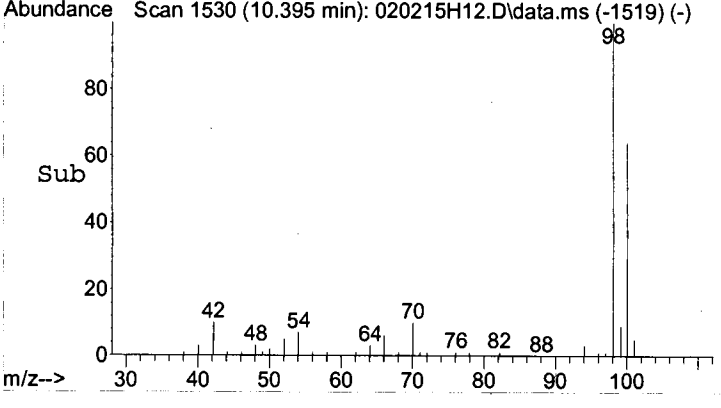


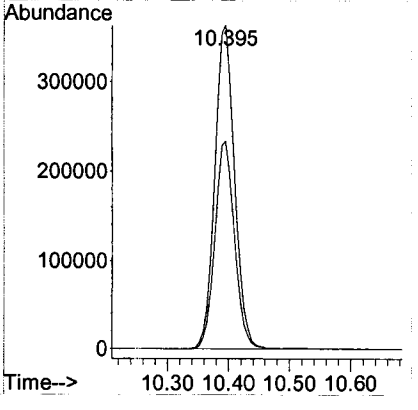


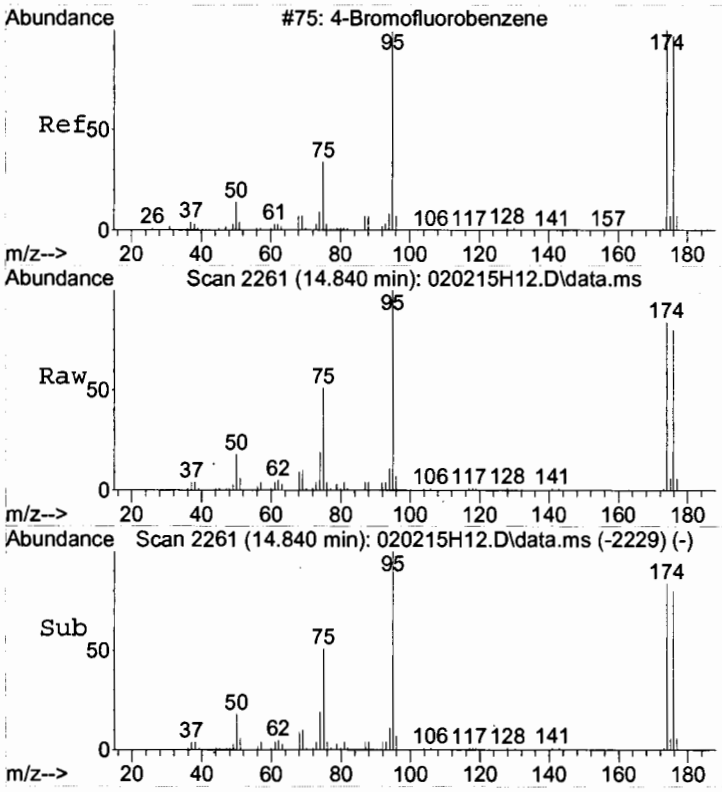
#39
Toluene-d8
Concen: 5.07 ug/L
RT: 10.395 min Scan# 1530
Delta R.T. 0.002 min
Lab File: 020215H12.D
Acq: 2 Feb 2015 14:57

Tgt Ion: 98 Resp: 817769

Ion	Ratio	Lower	Upper
98	100		
100	63.6	45.3	85.3



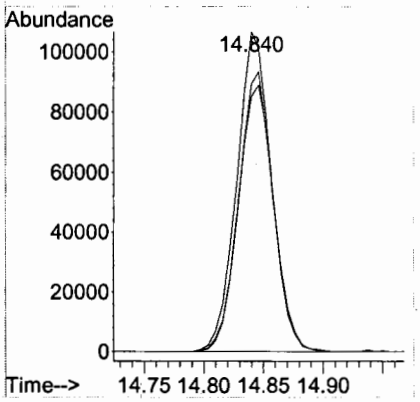


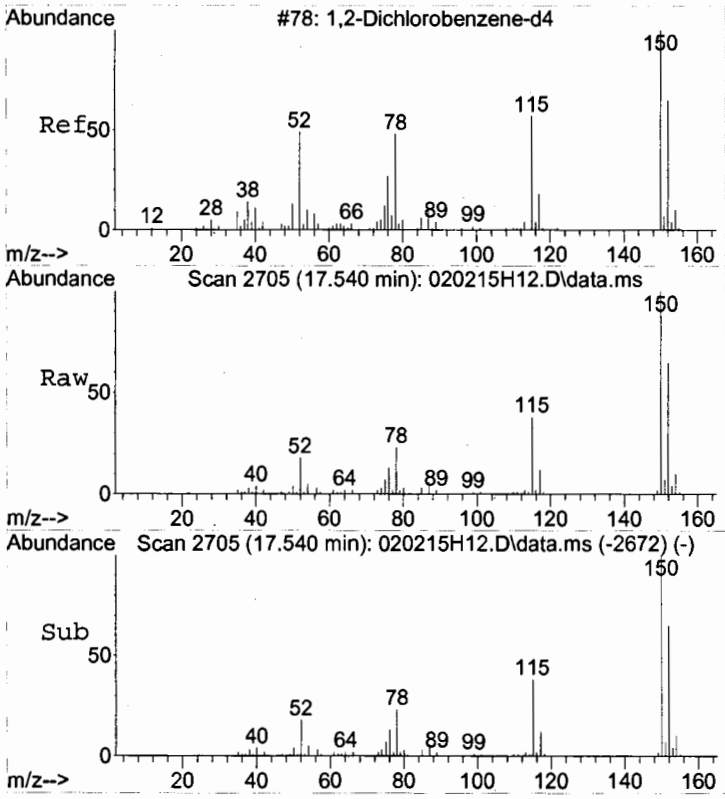


#56
4-Bromofluorobenzene
Concen: 4.60 ug/L
RT: 14.840 min Scan# 2261
Delta R.T. -0.004 min
Lab File: 020215H12.D
Acq: 2 Feb 2015 14:57

Tgt Ion: 95 Resp: 215930

Ion	Ratio	Lower	Upper
95	100		
174	88.1	68.9	108.9
176	85.3	66.0	106.0

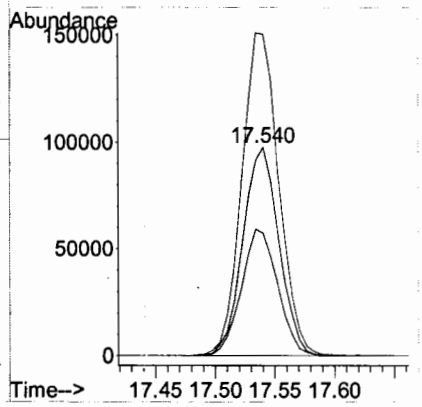




#70
1,2-Dichlorobenzene-d4
Concen: 4.56 ug/L
RT: 17.540 min Scan# 2705
Delta R.T. 0.002 min
Lab File: 020215H12.D
Acq: 2 Feb 2015 14:57

Tgt Ion:152 Resp: 205067

Ion	Ratio	Lower	Upper
152	100		
115	61.0	39.3	79.3
150	159.0	152.8	192.8



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H14.D
Acq On : 2 Feb 2015 16:09
Instrument: HP5973H
Operator : YNB
Sample : 1501036-07
Misc : MW-13A,WATER
ALS Vial : 39
Multiplier: 1

Quant Time: Feb 03 08:00:42 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Dichloromethane-d2	3.893	53	89706	5.000 ug/L	0.00
24) Fluorobenzene	7.822	96	776425	5.000 ug/L	0.00
37) Chlorobenzene-d5	12.784	117	523650	5.000 ug/L	0.00
System Monitoring Compounds					
28) 1,2-Dichloroethane-d4	7.275	65	110393	5.171 ug/L	0.00
Spiked Amount 5.000	Range 65 - 149		Recovery	= 103.40%	
39) Toluene-d8	10.394	98	777900	5.010 ug/L	0.00
Spiked Amount 5.000	Range 85 - 114		Recovery	= 100.20%	
56) 4-Bromofluorobenzene	14.846	95	205751	4.556 ug/L	0.00
Spiked Amount 5.000	Range 82 - 111		Recovery	= 91.20%	
70) 1,2-Dichlorobenzene-d4	17.540	152	198159	4.584 ug/L	0.00
Spiked Amount 5.000	Range 76 - 118		Recovery	= 91.60%	
Target Compounds					Qvalue
10) Acetone	3.322	43	15763	4.572 ug/L	70
23) Chloroform	6.520	83	171441	2.788 ug/L	99
43) Tetrachloroethene	11.392	166	429801	10.511 ug/L	98

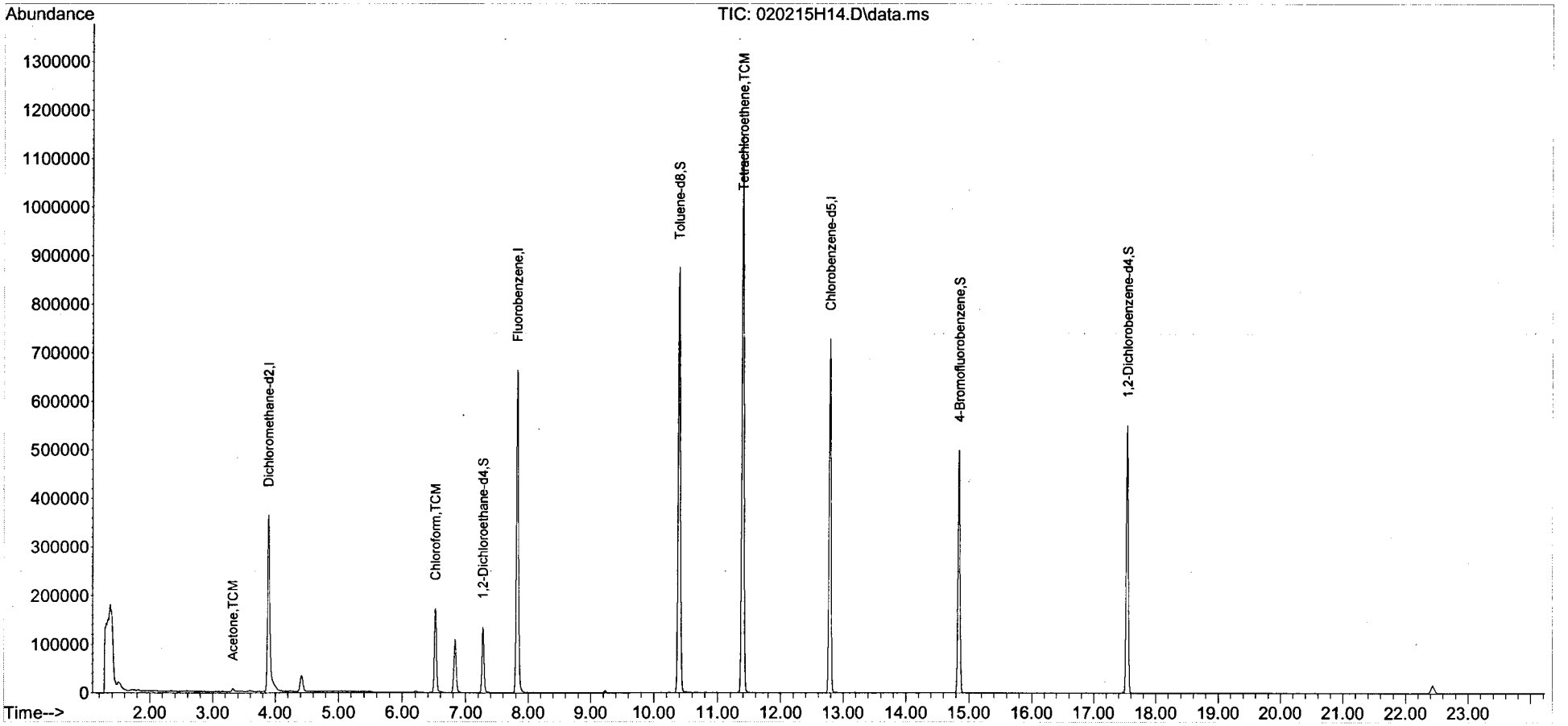
(#) = qualifier out of range (m) = manual integration (+) = signals summed

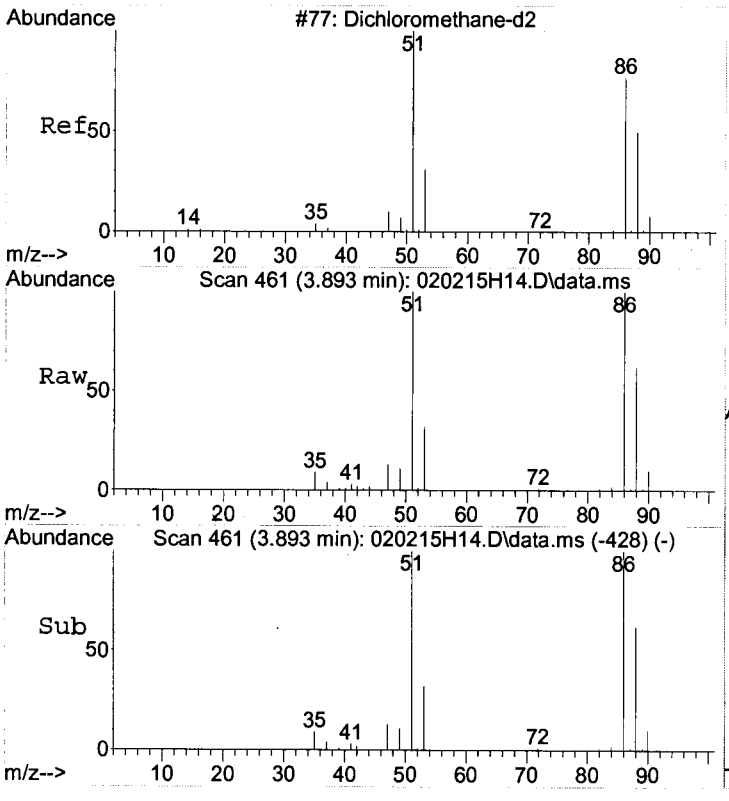
Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2015\020215HVW\
Data File : 020215H14.D
Acq On : 2 Feb 2015 16:09
Instrument: HP5973H
Operator : YNB
Sample : 1501036-07
Misc : MW-13A,WATER
ALS Vial : 39
Multiplier: 1

Quant Time: Feb 03 08:00:42 2015
Quant Title : Volatile Organic Analysis - 524.2 Method
QLast Update : Wed Jan 14 16:54:35 2015
Response via : Initial Calibration

DataAcq Meth:020215HVW.M
Quant Method : C:\MSDCHEM\1\METHODS\2015\020215HVW.M

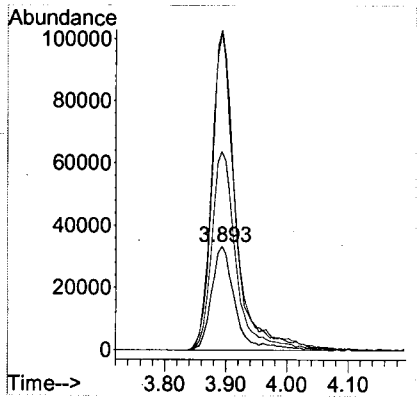


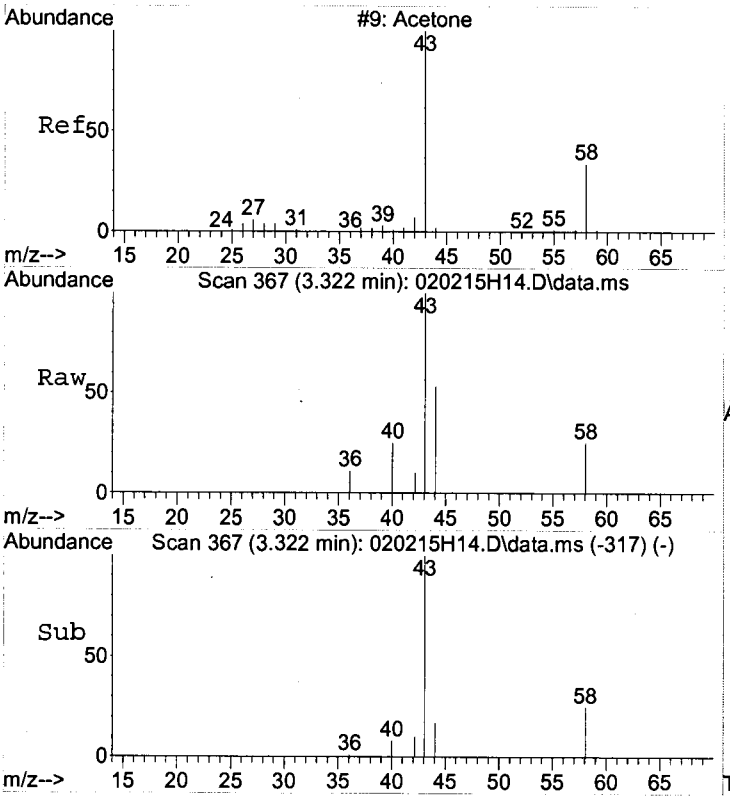


#1
Dichloromethane-d2
Concen: 5.00 ug/L
RT: 3.893 min Scan# 461
Delta R.T. 0.001 min
Lab File: 020215H14.D
Acq: 2 Feb 2015 16:09

Tgt Ion: 53 Resp: 89706

Ion	Ratio	Lower	Upper
53	100		
51	307.2	381.1	421.1#
86	311.3	490.1	530.1#
88	197.2	211.2	251.2#

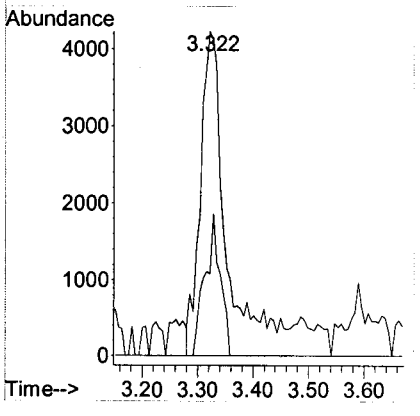


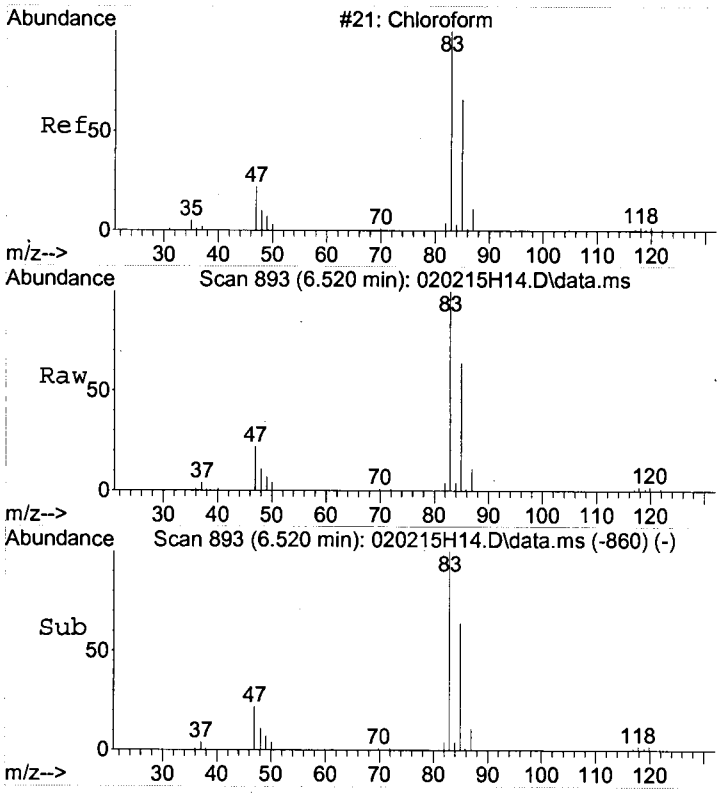


#10
Acetone
Concen: 4.57 ug/L
RT: 3.322 min Scan# 367
Delta R.T. 0.001 min
Lab File: 020215H14.D
Acq: 2 Feb 2015 16:09

Tgt Ion: 43 Resp: 15763

Ion	Ratio	Lower	Upper
43	100		
58	23.0	22.4	62.4

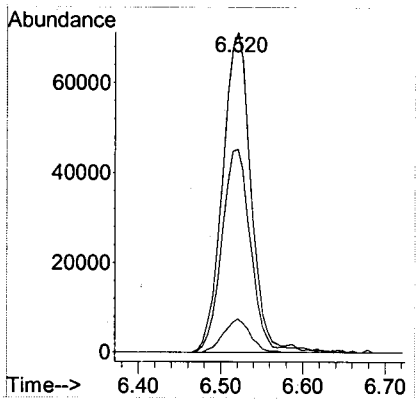


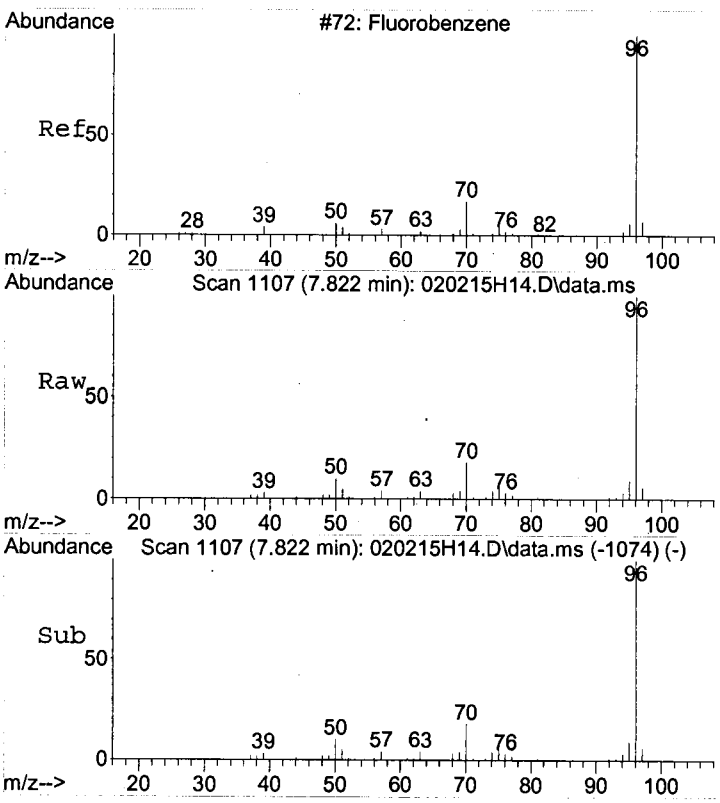


#23
Chloroform
Concen: 2.79 ug/L
RT: 6.520 min Scan# 893
Delta R.T. 0.001 min
Lab File: 020215H14.D
Acq: 2 Feb 2015 16:09

Tgt Ion: 83 Resp: 171441

Ion	Ratio	Lower	Upper
83	100		
85	64.8	44.4	84.4
87	9.9	0.0	30.8

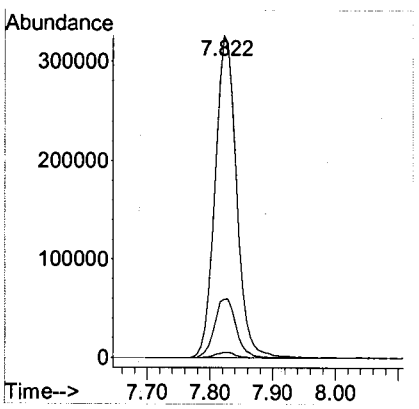


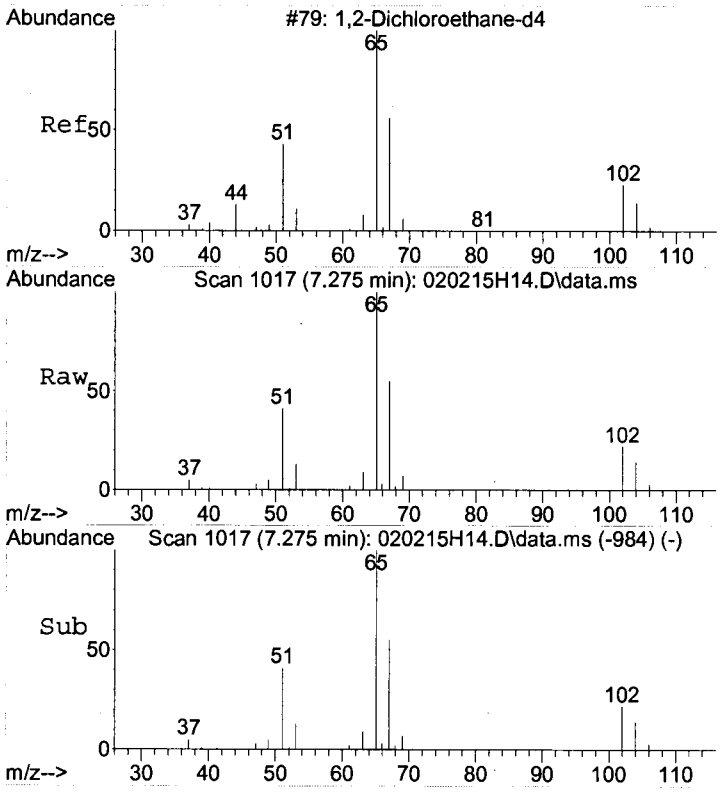


#24
Fluorobenzene
Concen: 5.00 ug/L
RT: 7.822 min Scan# 1107
Delta R.T. 0.001 min
Lab File: 020215H14.D
Acq: 2 Feb 2015 16:09

Tgt Ion: 96 Resp: 776425

Ion	Ratio	Lower	Upper
96	100		
70	18.5	0.0	38.7
77	1.6	0.0	21.6

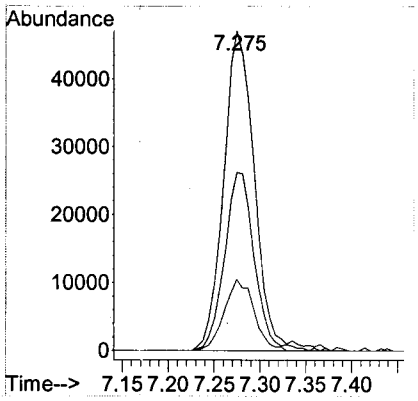


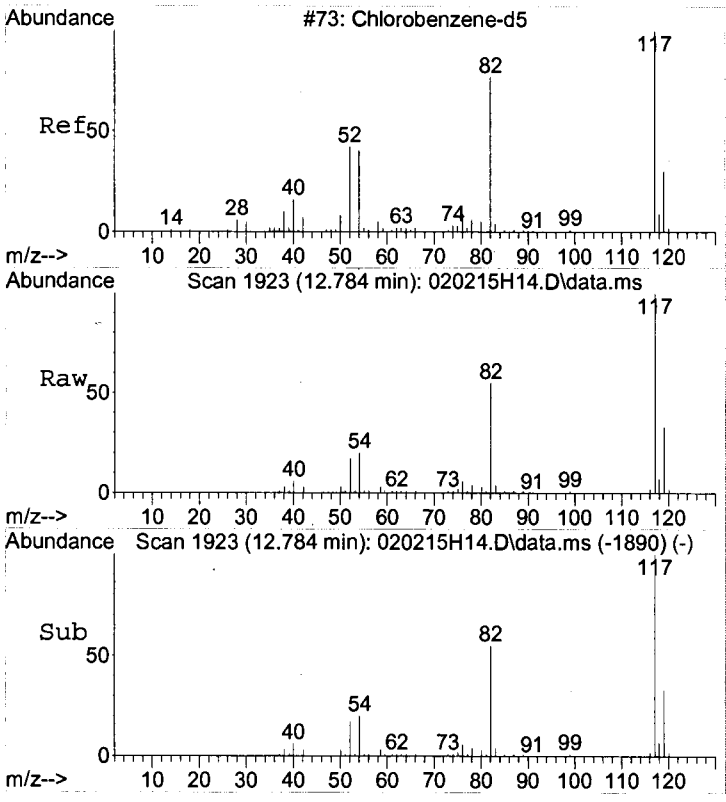


#28
1,2-Dichloroethane-d4
Concen: 5.17 ug/L
RT: 7.275 min Scan# 1017
Delta R.T. 0.001 min
Lab File: 020215H14.D
Acq: 2 Feb 2015 16:09

Tgt Ion: 65 Resp: 110393

Ion	Ratio	Lower	Upper
65	100		
67	53.6	32.3	72.3
102	21.4	1.3	41.3

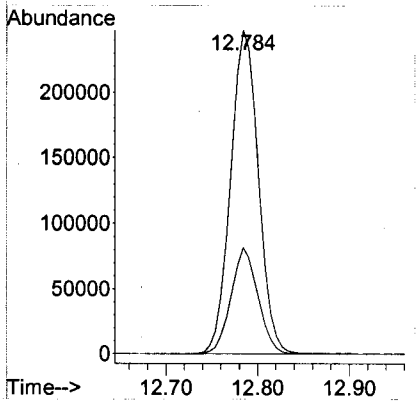


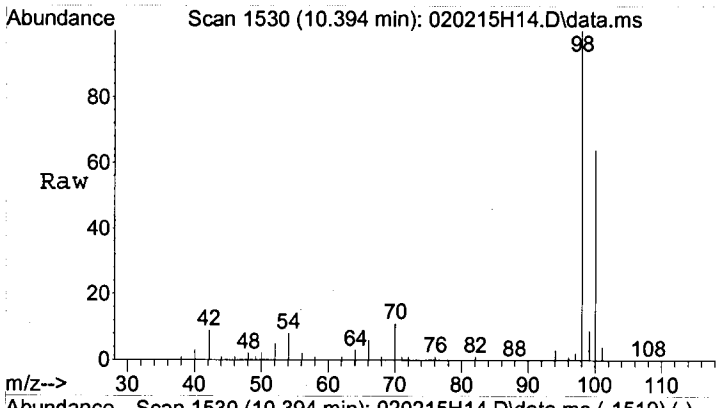


#37
Chlorobenzene-d5
Concen: 5.00 ug/L
RT: 12.784 min Scan# 1923
Delta R.T. 0.001 min
Lab File: 020215H14.D
Acq: 2 Feb 2015 16:09

Tgt Ion:117 Resp: 523650

Ion	Ratio	Lower	Upper
117	100		
119	31.8	11.7	51.7

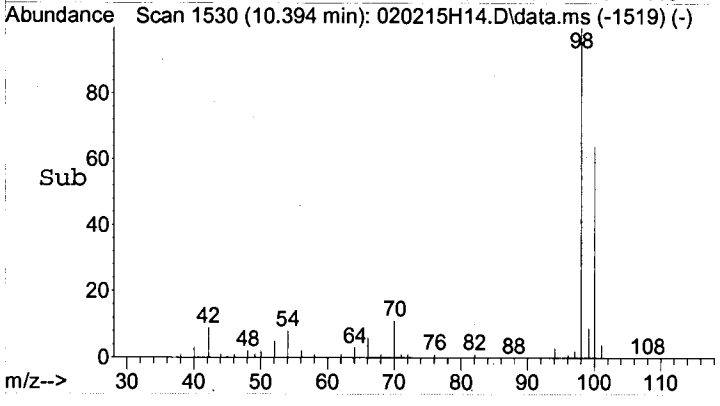


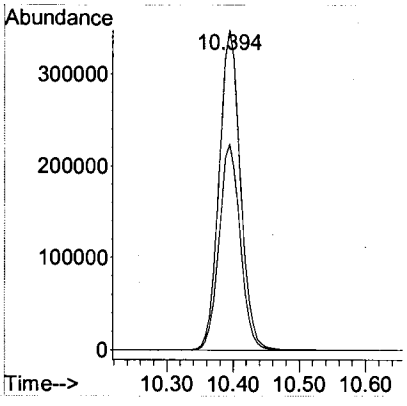


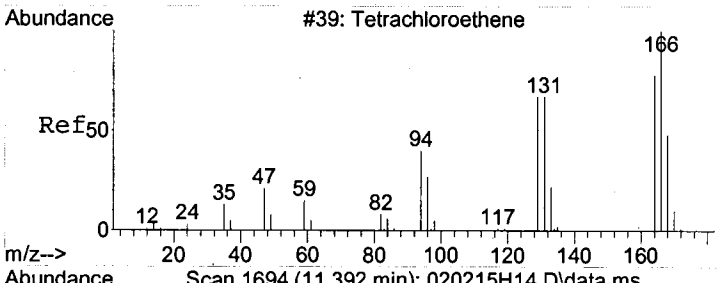
#39
Toluene-d8
Concen: 5.01 ug/L
RT: 10.394 min Scan# 1530
Delta R.T. 0.001 min
Lab File: 020215H14.D
Acq: 2 Feb 2015 16:09

Tgt Ion: 98 Resp: 777900

Ion	Ratio	Lower	Upper
98	100		
100	63.8	45.3	85.3



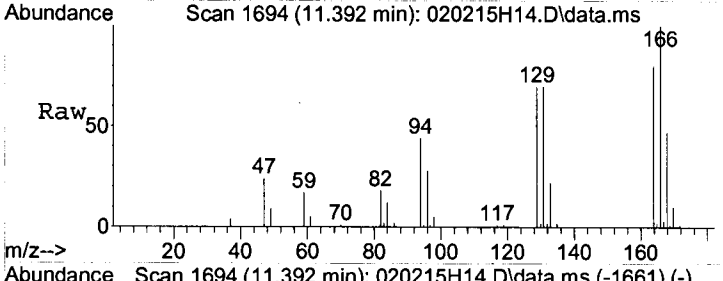


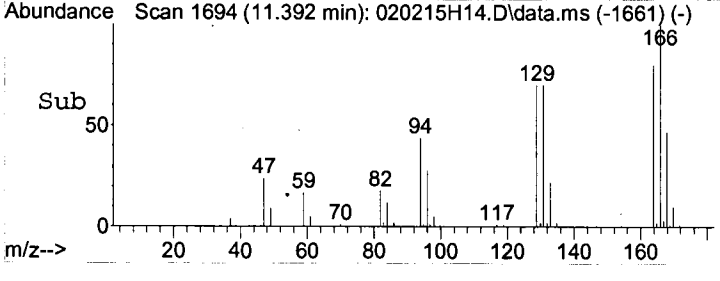


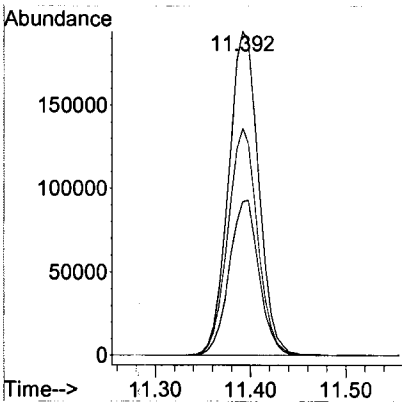
#43
Tetrachloroethene
Concen: 10.51 ug/L
RT: 11.392 min Scan# 1694
Delta R.T. 0.001 min
Lab File: 020215H14.D
Acq: 2 Feb 2015 16:09

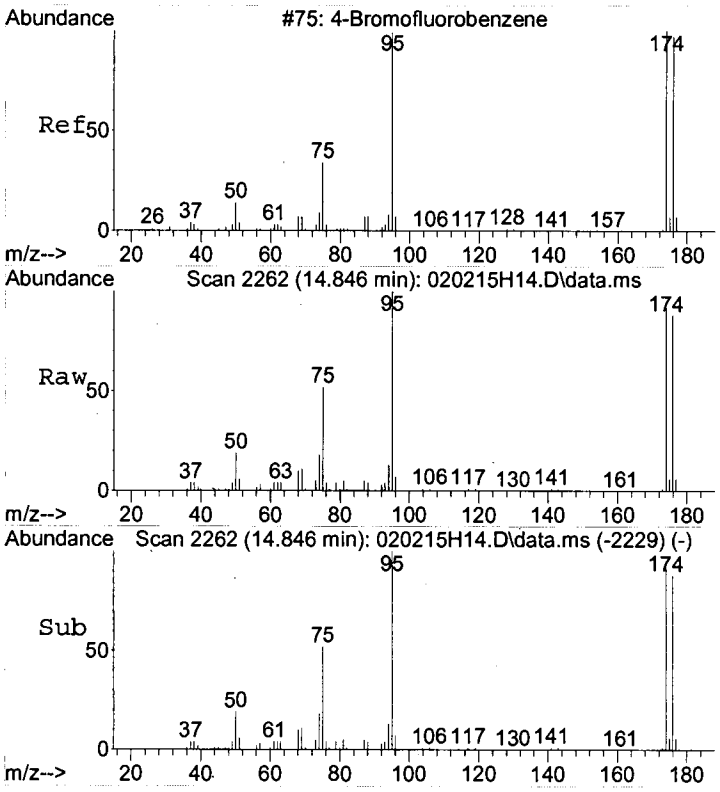
Tgt Ion:166 Resp: 429801

Ion	Ratio	Lower	Upper
166	100		
168	47.6	27.5	67.5
129	69.1	51.3	91.3





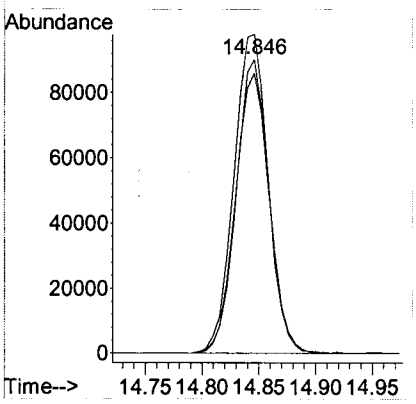


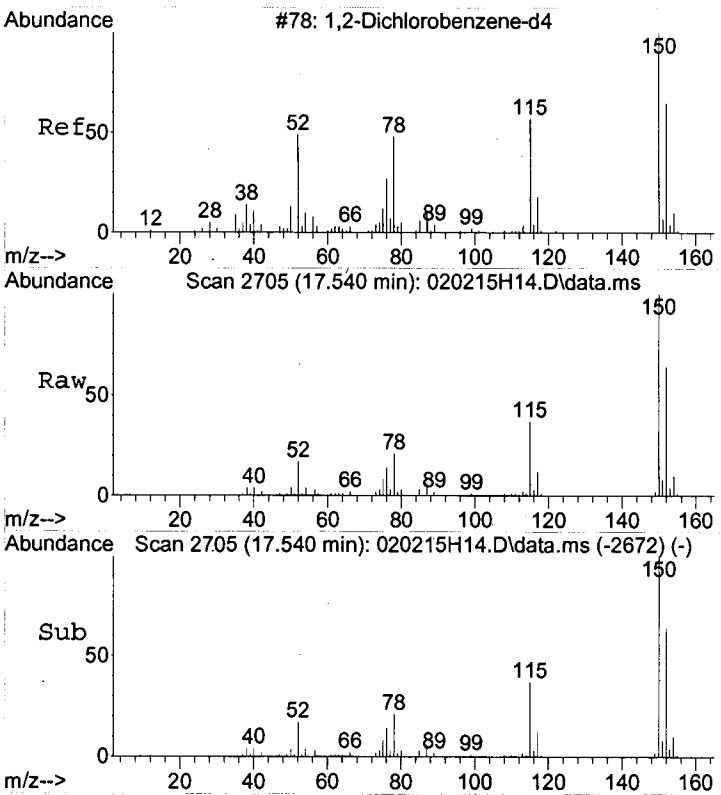


#56
4-Bromofluorobenzene
Concen: 4.56 ug/L
RT: 14.846 min Scan# 2262
Delta R.T. 0.001 min
Lab File: 020215H14.D
Acq: 2 Feb 2015 16:09

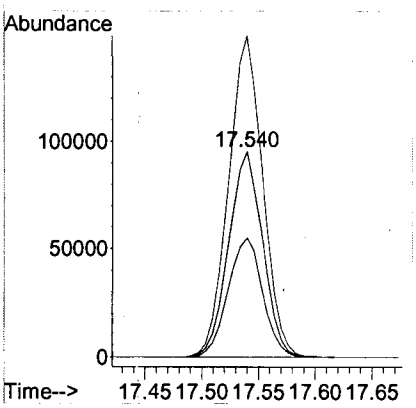
Tgt Ion: 95 Resp: 205751

Ion	Ratio	Lower	Upper
95	100		
174	89.2	68.9	108.9
176	86.4	66.0	106.0





#70
1,2-Dichlorobenzene-d4
Concen: 4.58 ug/L
RT: 17.540 min Scan# 2705
Delta R.T. 0.001 min
Lab File: 020215H14.D
Acq: 2 Feb 2015 16:09

Tgt Ion:152 Resp: 198159

Ion	Ratio	Lower	Upper
152	100		
115	58.7	39.3	79.3
150	157.4	152.8	192.8