Integrated Analytical Laboratories LLC

ANALYTICAL DATA REPORT

JMC Environmental Consultants
2109 Bridge Avenue
Building B
Point Pleasant, NJ 08742

Project Name: **ARSYNCO**
IAL Case Number: **E15-06447**

These data have been reviewed and accepted by:

Michael H. Leffin, Ph.D.
Laboratory Director

This report shall not be reproduced, except in its entirety, without the written consent of Integrated Analytical Laboratories, LLC. The test results included in this report relate only to the samples analyzed. The results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

IAL is a NELAP accredited lab (TNI01284) and maintains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402), and Pennsylvania (68-00773).

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Sample Summary

IAL Case No.

E15-06447

Client JMC Environmental Consultants

Project ARSYNCO

Received On 7/23/2015@17:07

Lab ID	Client Sample ID	Depth Top/Bottom	Sampling Time	Matrix	# of Container
06447-001	MW-34D	n/a	7/23/2015@10:12	Aqueous	2
06447-002	MW-4S	n/a	7/23/2015@10:20	Aqueous	2
06447-003	MW-40D	n/a	7/23/2015@10:45	Aqueous	4
06447-004	MW-36D	n/a	7/23/2015@10:54	Aqueous	4
06447-005	MW-13SR	n/a	7/23/2015@11:08	Aqueous	5
06447-006	MW-33S	n/a	7/23/2015@11:21	Aqueous	5
06447-007	MW-29S	n/a	7/23/2015@14:25	Aqueous	4
06447-008	MW-29D	n/a	7/23/2015@14:10	Aqueous	2
06447-009	MW-31S	n/a	7/23/2015@15:10	Aqueous	2
06447-010	MW-24S	n/a	7/23/2015@14:50	Aqueous	4
06447-011	MW-38D	n/a	7/23/2015@15:08	Aqueous	4
06447-012	MW-38DD	n/a	7/23/2015@15:14	Aqueous	4
06447-013	FB-2	n/a	7/23/2015@15:21	Aqueous	5
06447-014	TB	n/a	7/23/2015	Aqueous	2

Integrated Analytical Labs ~ 273 Franklin Road, Randolph, NJ 07869 ~ (973) 361-4252 ~ Fax (973) 989-5288

DEFINITIONS / QUALIFIERS

DATA QUALIFIERS

B Indicates the analyte was found in the associated method blank as well as in the sample. It indicates probable laboratory contamination.

C Indicates analyte is a common laboratory contaminant.

D Indicates analyte was reported from diluted analysis.

E Identifies a compound concentration that exceeds the upper level of the calibration range of the instrument.

J Indicates an estimated value. This flag is used when the concentration in the sample is below the RL but above the MDL or for qualification of tentatively identified compounds.

N Presumptive evidence of a compound from the use of GC/MS library search.

X Indicates samples analyzed for total and dissolved metals differ at ≤20% RPD.

Z Indicates internal standard failure. Sample results are either biased high or biased low.

REPORTING DEFINITIONS

RL Reporting Limit. The RL is determined by the lowest concentration in the calibration curve. For most Wet Chemistry methods, the RL is defined by using the PQL.

MDL Method Detection Limit as determined according to 40CFR Part 136 Appendix B.

PQL Practical Quantitation Limit. Usually defined as a value 3-5 times the MDL.

ND Indicates analyte was analyzed for but not detected above the MDL.

DF Dilution Factor

LCS Laboratory Control Sample

LCSD Laboratory Control Sample Duplicate

MS Matrix Spike

MSD Matrix Spike Duplicate

DUP Duplicate

SAMPLE DELIVERY GROUP CASE NARRATIVE
(Conformance / Non-Conformance Summary)

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E15-06447

Integrated Analytical Laboratories, LLC. received fourteen (14) samples** from JMC Environmental Consultants (IAL SDG# **E15-06447**, Project: ARSYNCO) on July 23, 2015 for the analysis of :

(14) TCL VO + 15
(9) NJ-EPH (C40) Cat 2
(3) Antimony - Sb
(3) Lead - Pb
(3) Nickel - Ni
(2) Zinc - Zn

**Number of samples listed above may be greater than what is listed on the chain of custody. Any samples that require in-house filtration or splitting will be counted as separate samples.

Samples were received in good condition with documentation in order.
Cooler temperature was acceptable at 4 ± 2°C

Volatiles By 8260C	**Batch: 150729**	**Matrix: Aqueous**

QC
- Calibration curve met QC criteria.
- Internal standards recovery met QC criteria.
- Surrogate percent recovery met QC criteria.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria.
- MS/MSD RPD met QC criteria.
- MS/MSD percent recovery met QC criteria.

E15-06447
- All samples were analyzed within holding time.

Dilution Summary:

Sample ID	DF(s)	Dilution For
E15-06447-001	1	NA
E15-06447-002	2	Target compound(s).
E15-06447-003	1	NA
E15-06447-004	1	NA
E15-06447-005	2	Target compound(s).
E15-06447-006	500	Target compound(s).
E15-06447-007	1	NA
E15-06447-008	1	NA
E15-06447-009	1	NA
E15-06447-010	200	Target compound(s).
E15-06447-011	1000	Target compound(s).
E15-06447-012	1	NA
E15-06447-013	1	NA
E15-06447-014	1	NA

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E15-06447

NJ-EPH-C40 By Method 10.08 Rev 3	Batch: 150728-17	Matrix: Aqueous

QC
- Calibration curve met QC criteria.
- Surrogate percent recovery met QC criteria.
- Method blank met QC criteria.
- RPD between LCS/LCSD met QC criteria.
- LCS/LCSD Percent Recovery met QC criteria.
- MS Percent Recovery met QC criteria.
- RPD between the Sample/Duplicate met QC criteria.

E15-06447
- All samples were extracted within holding time.
- All samples were analyzed within holding time.
- Retention Time Shift met QC criteria.

Dilution Summary:

Sample ID	DF(s)	Dilution For
E15-06447-003	1	NA
E15-06447-004	1	NA
E15-06447-005	1	NA
E15-06447-006	5	Target compound(s).
E15-06447-007	2	Target compound(s).
E15-06447-010	10	Target compound(s).
E15-06447-011	1	NA
E15-06447-012	1	NA
E15-06447-013	1	NA

Metals By 6020A	Batch: A150727-01	Matrix: Aqueous

QC
- Calibration Curve Linearity met criteria.
- Internal Standard Recovery met criteria.
- LCS Percent Recovery met criteria.
- MS Percent Recoveries met criteria.
- Serial Dilution / Post Spike results met criteria.

E15-06447
- Digestion Holding Time met requirement for each sample.
- Analysis Holding Time met requirement for each sample.
- Sample(s) used for aqueous metals analyses contained varying levels of sediment. Precautions were taken to take an aliquot representative of the sample. Additionally, as the remainder of the sample is stored under acidic conditions, some of the metals may continue to leach out into the water, making any reproduction of the original number impossible. The rough amount of sediment present in the samples is as follows: 06447-005: Trace; 06447-006: 1%;.

Dilution Summary:

Sample ID	DF(s)	Dilution For
E15-06447-005	1	NA
E15-06447-006	1	NA
E15-06447-013	1	NA

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E15-06447

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

Reviewed by

8/7/2015
Date

DATA OF KNOWN QUALITY CONFORMANCE/NON-CONFORMANCE SUMMARY QUESTIONNAIRE

Laboratory Name: Integrated Analytical Laboratories
Client: JMC Environmental Consultants
Project Location: ARSYNCO
IAL Project #: E15-06447
IAL Sample ID(s): E15-06447-001 ~ -014
Sampling Date(s): 7/23/2015

List of DKQP Method Used:

TCL VO by 8260C
NJ-EPH (C40) Cat 2 by Method 10.08 Rev 3
Antimony - Sb by 6020A
Lead - Pb by 6020A
Nickel - Ni by 6020A
Zinc - Zn by 6020A

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information is provided in the case narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "

		YES	NO	N/A
1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the NJDEP	X		
1A	Were the method specified handling, preservation, and holding time requirements met?	X		
1B	EPH Method: Was the EPH method conducted without significant modifications? (see Section 11.3 of respective DKQ methods)	X		
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	X		
3	Were samples received at an appropriate temperature (4±2° C)?	X		
4	Were all QA/QC performance criteria specified in the NJDEP DKQP standards achieved?	X		
5A	Were reporting limits specified or referenced on the chain-of-custody or communicated to the laboratory prior to sample receipt?	X		
5B	Were these reporting limits met?		X	
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the DKQP documents and/or site-specific QAPP?	X		
7	Are project-specific matrix spikes and/or laboratory duplicates included in this data set?		X	

RESULTS SUMMARY REPORT

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: JMC Environmental Consultants
Project: ARSYNCO
Lab Case No.: E15-06447

Lab ID:	06447-001			06447-002			06447-003			06447-004		
Client ID:	MW-34D			MW-4S			MW-40D			MW-36D		
Matrix:	Aqueous			Aqueous			Aqueous			Aqueous		
Sampled Date	7/23/15			7/23/15			7/23/15			7/23/15		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Volatiles (Units)	*(ug/L)*			*(ug/L)*			*(ug/L)*			*(ug/L)*		
Benzene	ND		0.388	0.403	J	0.388	ND		0.388	15.1		0.388
Toluene	ND		0.370	ND		0.370	0.469	J	0.370	2.12		0.370
Chlorobenzene	ND		0.395	396	D	0.790	2.80		0.395	ND		0.395
1,4-Dichlorobenzene	ND		0.409	8.64		0.409	ND		0.409	ND		0.409
1,2-Dichlorobenzene	ND		0.401	2.34		0.401	ND		0.401	ND		0.401
TOTAL VO's:	ND			407	JD		3.27	J		17.2		
TOTAL TIC's:	ND			34.5	J		7.30	JN		31.9	JN	
TOTAL VO's & TIC's:	ND			442	JDJ		10.6	JN		49.1	JN	
NJ-EPH-C40 (Units)	*(ug/L)*			*(ug/L)*			*(ug/L)*			*(ug/L)*		
C9-C40	~		~	~		~	266	J	200	301	J	200

Lab ID:	06447-005			06447-006			06447-007			06447-008		
Client ID:	MW-13SR			MW-33S			MW-29S			MW-29D		
Matrix:	Aqueous			Aqueous			Aqueous			Aqueous		
Sampled Date	7/23/15			7/23/15			7/23/15			7/23/15		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Volatiles (Units)	*(ug/L)*			*(ug/L)*			*(ug/L)*			*(ug/L)*		
Methylene chloride	ND		3.98	6350	D	995	ND		1.99	ND		1.99
2-Butanone (MEK)	2.42	D	1.74	ND		436	ND		0.872	ND		0.872
Chloroform	ND		1.02	1060	D	256	ND		0.511	ND		0.511
Benzene	322	D	0.776	6250	D	194	2.80		0.388	0.669	J	0.388
Toluene	11.2	D	0.740	58500	D	185	11.9		0.370	ND		0.370
2-Hexanone	ND		1.39	1620	D	347	ND		0.693	ND		0.693
Chlorobenzene	ND		0.790	ND		198	2.66		0.395	13.6		0.395
Ethylbenzene	7.88	D	0.840	296	DJ	210	0.879	J	0.420	ND		0.420
Total Xylenes	60.6	D	2.09	3880	D	522	1.97	J	1.04	ND		1.04
Isopropylbenzene	31.6	D	1.16	ND		291	ND		0.581	ND		0.581
1,3-Dichlorobenzene	ND		0.832	ND		208	0.506	J	0.416	0.765	J	0.416
1,4-Dichlorobenzene	ND		0.818	ND		205	0.574	J	0.409	3.31		0.409
1,2-Dichlorobenzene	ND		0.802	ND		201	1.07		0.401	1.45		0.401
Cyclohexane	2.38	DJ	1.64	ND		409	ND		0.818	ND		0.818
Methylcyclohexane	2.21	D	1.55	ND		387	1.03		0.773	ND		0.773
TOTAL VO's:	440	DJ		78000	DJ		23.4	J		19.8	J	
TOTAL TIC's:	2810	DJN		ND			97.1	JN		ND		
TOTAL VO's & TIC's:	3250	DJN		78000	DJ		120	JN		19.8	J	
NJ-EPH-C40 (Units)	*(ug/L)*			*(ug/L)*			*(ug/L)*			*(ug/L)*		
C9-C40	3040		200	13400	D	1000	2660	D	400	~		~

~ = Sample not analyzed for
ND = Analyzed for but Not Detected at the MDL
J = Concentration detected at a value below the RL and above the MDL for target compounds. For non-target compounds (i.e. TICs), qualifier indicates estimated concentrations.
D = The compound was reported from the Diluted analysis
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.
N = Presumptive evidence of a compound from the use of GC/MS library search.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: JMC Environmental Consultants
Project: ARSYNCO
Lab Case No.: E15-06447

Lab ID:	06447-005			06447-006			06447-007			06447-008		
Client ID:	MW-13SR			MW-33S			MW-29S			MW-29D		
Matrix:	Aqueous			Aqueous			Aqueous			Aqueous		
Sampled Date	7/23/15			7/23/15			7/23/15			7/23/15		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Metals (Units)	*(ug/L)*			*(ug/L)*			*(ug/L)*			*(ug/L)*		
Antimony	31.8		1.00	119		1.00	~		~	~		~
Lead	16.0		0.500	274		0.500	~		~	~		~
Nickel	23.3		1.00	476		1.00	~		~	~		~
Zinc	~		~	1560		2.00	~		~	~		~

Lab ID:	06447-009			06447-010			06447-011			06447-012		
Client ID:	MW-31S			MW-24S			MW-38D			MW-38DD		
Matrix:	Aqueous			Aqueous			Aqueous			Aqueous		
Sampled Date	7/23/15			7/23/15			7/23/15			7/23/15		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Volatiles (Units)	*(ug/L)*			*(ug/L)*			*(ug/L)*			*(ug/L)*		
Vinyl chloride	ND		0.463	ND		92.6	48000	D	463	ND		0.463
1,1-Dichloroethane	ND		0.358	ND		71.6	1860	D	358	ND		0.358
cis-1,2-Dichloroethene	0.683	J	0.479	ND		95.8	198000	D	479	1.83		0.479
Benzene	5.99		0.388	ND		77.6	ND		388	ND		0.388
Trichloroethene	ND		0.357	ND		71.4	ND		357	0.619	J	0.357
Toluene	3.36		0.370	1890	D	74.0	6810	D	370	ND		0.370
Chlorobenzene	3.94		0.395	ND		79.0	ND		395	ND		0.395
Ethylbenzene	19.5		0.420	12100	D	84.0	ND		420	ND		0.420
Total Xylenes	63.0		1.04	78200	D	209	ND		1040	ND		1.04
1,4-Dichlorobenzene	0.419	J	0.409	ND		81.8	ND		409	ND		0.409
1,2-Dichlorobenzene	1.10		0.401	ND		80.2	ND		401	ND		0.401
TOTAL VO's:	98.0	J		92200	D		255000	D		2.45	J	
TOTAL TIC's:	70.2	J		1280	DJN		ND			ND		
TOTAL VO's & TIC's:	168	J		93500	DJN		255000	D		2.45	J	
NJ-EPH-C40 (Units)	*(ug/L)*			*(ug/L)*			*(ug/L)*			*(ug/L)*		
C9-C40	~		~	41200	D	2000	10200		200	227	J	200

~ = Sample not analyzed for
ND = Analyzed for but Not Detected at the MDL
J = Concentration detected at a value below the RL and above the MDL for target compounds. For non-target compounds (i.e. TICs), qualifier indicates estimated concentrations.
D = The compound was reported from the Diluted analysis
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.
N = Presumptive evidence of a compound from the use of GC/MS library search.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: JMC Environmental Consultants
Project: ARSYNCO
Lab Case No.: E15-06447

Lab ID:	**06447-013**			**06447-014**		
Client ID:	**FB-2**			**TB**		
Matrix:	**Aqueous**			**Aqueous**		
Sampled Date	**7/23/15**			**7/23/15**		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL
Volatiles (Units)	*(ug/L)*			*(ug/L)*		
TOTAL VO's:	ND			ND		
TOTAL TIC's:	ND			ND		
TOTAL VO's & TIC's:	ND			ND		
NJ-EPH-C40 (Units)	*(ug/L)*			*(ug/L)*		
C9-C40	ND		200	~		~
Metals (Units)	*(ug/L)*			*(ug/L)*		
Antimony	ND		1.00	~		~
Lead	ND		0.500	~		~
Nickel	ND		1.00	~		~
Zinc	ND		2.00	~		~

~ = Sample not analyzed for
ND = Analyzed for but Not Detected at the MDL

ANALYTICAL RESULTS

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-001
Client ID: MW-34D
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2731.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		2.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-001
Client ID: MW-34D
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2731.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		5.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: 06447-001
Client ID: MW-34D
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2731.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-002
Client ID: MW-4S
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2732.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		2.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	0.403	J	1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-002
Client ID: MW-4S
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2732.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	285	E	1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	8.64		1.00	0.409
1,2-Dichlorobenzene	2.34		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		5.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441
Total Target Compounds (52):	296	EJ		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: 06447-002
Client ID: MW-4S
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Date File: K2732.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	Unknown VOA	34.5	J	1.80

Total TICs = 34.5 J

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-2DL
Client ID: MW-4S
Date Received: 07/23/2015
Date Analyzed: 08/03/2015
Data file: G5712.D

GC/MS Column: DB-624
Sample wt/vol: 2.5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 2
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		2.00	1.37
Chloromethane	ND		2.00	0.986
Vinyl chloride	ND		2.00	0.926
Bromomethane	ND		2.00	1.37
Chloroethane	ND		2.00	1.66
Trichlorofluoromethane	ND		2.00	1.63
1,1-Dichloroethene	ND		2.00	0.982
Acetone	ND		10.0	2.86
Carbon disulfide	ND		2.00	1.01
Methylene chloride	ND		4.00	3.98
trans-1,2-Dichloroethene	ND		2.00	1.09
Methyl tert-butyl ether (MTBE)	ND		2.00	0.982
1,1-Dichloroethane	ND		2.00	0.716
cis-1,2-Dichloroethene	ND		2.00	0.958
2-Butanone (MEK)	ND		2.00	1.74
Bromochloromethane	ND		2.00	1.27
Chloroform	ND		2.00	1.02
1,1,1-Trichloroethane	ND		2.00	0.970
Carbon tetrachloride	ND		2.00	1.34
1,2-Dichloroethane (EDC)	ND		2.00	1.15
Benzene	ND		2.00	0.776
Trichloroethene	ND		2.00	0.714
1,2-Dichloropropane	ND		2.00	1.11
1,4-Dioxane	ND		400	165
Bromodichloromethane	ND		2.00	1.05
cis-1,3-Dichloropropene	ND		2.00	0.882
4-Methyl-2-pentanone (MIBK)	ND		2.00	1.73

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-2DL
Client ID: MW-4S
Date Received: 07/23/2015
Date Analyzed: 08/03/2015
Data file: G5712.D

GC/MS Column: DB-624
Sample wt/vol: 2.5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 2
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		2.00	0.740
trans-1,3-Dichloropropene	ND		2.00	0.832
1,1,2-Trichloroethane	ND		2.00	1.27
Tetrachloroethene	ND		2.00	0.990
2-Hexanone	ND		2.00	1.39
Dibromochloromethane	ND		2.00	1.03
1,2-Dibromoethane (EDB)	ND		2.00	1.35
Chlorobenzene	396	D	2.00	0.790
Ethylbenzene	ND		2.00	0.840
Total Xylenes	ND		4.00	2.09
Styrene	ND		2.00	0.740
Bromoform	ND		2.00	1.33
Isopropylbenzene	ND		2.00	1.16
1,1,2,2-Tetrachloroethane	ND		2.00	1.38
1,3-Dichlorobenzene	ND		2.00	0.832
1,4-Dichlorobenzene	11.8	D	2.00	0.818
1,2-Dichlorobenzene	3.27	D	2.00	0.802
1,2-Dibromo-3-chloropropane	ND		2.00	1.86
1,2,4-Trichlorobenzene	ND		2.00	0.966
1,2,3-Trichlorobenzene	ND		2.00	0.898
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.00	1.94
Methyl acetate	ND		2.00	1.79
Cyclohexane	ND		4.00	1.64
Methylcyclohexane	ND		2.00	1.55
1,3-Dichloropropene (cis- and trans-)	ND		2.00	0.882
Total Target Compounds (52):	411	D		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-003
Client ID: MW-40D
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2733.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		2.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-003
Client ID: MW-40D
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2733.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	0.469	J	1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	2.80		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		5.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441
Total Target Compounds (52):	3.27	J		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: 06447-003
Client ID: MW-40D
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Date File: K2733.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
000873-94-9	Cyclohexanone, 3,3,5-trimethyl-	7.30	JN	14.05

Total TICs = 7.30 JN

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-004
Client ID: MW-36D
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2734.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		2.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	15.1		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-004
Client ID: MW-36D
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2734.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	2.12		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		5.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 17.2

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: 06447-004
Client ID: MW-36D
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Date File: K2734.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
000115-07-1	Propene	22.7	JN	1.78
000106-99-0	1,3-Butadiene	9.20	JN	2.18

Total TICs = 31.9 JN

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-005
Client ID: MW-13SR
Date Received: 07/23/2015
Date Analyzed: 08/03/2015
Data file: G5713.D

GC/MS Column: DB-624
Sample wt/vol: 2.5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 2
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		2.00	1.37
Chloromethane	ND		2.00	0.986
Vinyl chloride	ND		2.00	0.926
Bromomethane	ND		2.00	1.37
Chloroethane	ND		2.00	1.66
Trichlorofluoromethane	ND		2.00	1.63
1,1-Dichloroethene	ND		2.00	0.982
Acetone	ND		10.0	2.86
Carbon disulfide	ND		2.00	1.01
Methylene chloride	ND		4.00	3.98
trans-1,2-Dichloroethene	ND		2.00	1.09
Methyl tert-butyl ether (MTBE)	ND		2.00	0.982
1,1-Dichloroethane	ND		2.00	0.716
cis-1,2-Dichloroethene	ND		2.00	0.958
2-Butanone (MEK)	2.42	D	2.00	1.74
Bromochloromethane	ND		2.00	1.27
Chloroform	ND		2.00	1.02
1,1,1-Trichloroethane	ND		2.00	0.970
Carbon tetrachloride	ND		2.00	1.34
1,2-Dichloroethane (EDC)	ND		2.00	1.15
Benzene	322	D	2.00	0.776
Trichloroethene	ND		2.00	0.714
1,2-Dichloropropane	ND		2.00	1.11
1,4-Dioxane	ND		400	165
Bromodichloromethane	ND		2.00	1.05
cis-1,3-Dichloropropene	ND		2.00	0.882
4-Methyl-2-pentanone (MIBK)	ND		2.00	1.73

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-005
Client ID: MW-13SR
Date Received: 07/23/2015
Date Analyzed: 08/03/2015
Data file: G5713.D

GC/MS Column: DB-624
Sample wt/vol: 2.5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 2
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	11.2	D	2.00	0.740
trans-1,3-Dichloropropene	ND		2.00	0.832
1,1,2-Trichloroethane	ND		2.00	1.27
Tetrachloroethene	ND		2.00	0.990
2-Hexanone	ND		2.00	1.39
Dibromochloromethane	ND		2.00	1.03
1,2-Dibromoethane (EDB)	ND		2.00	1.35
Chlorobenzene	ND		2.00	0.790
Ethylbenzene	7.88	D	2.00	0.840
Total Xylenes	60.6	D	4.00	2.09
Styrene	ND		2.00	0.740
Bromoform	ND		2.00	1.33
Isopropylbenzene	31.6	D	2.00	1.16
1,1,2,2-Tetrachloroethane	ND		2.00	1.38
1,3-Dichlorobenzene	ND		2.00	0.832
1,4-Dichlorobenzene	ND		2.00	0.818
1,2-Dichlorobenzene	ND		2.00	0.802
1,2-Dibromo-3-chloropropane	ND		2.00	1.86
1,2,4-Trichlorobenzene	ND		2.00	0.966
1,2,3-Trichlorobenzene	ND		2.00	0.898
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.00	1.94
Methyl acetate	ND		2.00	1.79
Cyclohexane	2.38	DJ	4.00	1.64
Methylcyclohexane	2.21	D	2.00	1.55
1,3-Dichloropropene (cis- and trans-)	ND		2.00	0.882
Total Target Compounds (52):	440	DJ		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: 06447-005
Client ID: MW-13SR
Date Received: 07/23/2015
Date Analyzed: 08/03/2015
Date File: G5713.D

GC/MS Column: DB-624
Sample wt/vol: 2.5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 2
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
000526-73-8	Benzene, 1,2,3-trimethyl-	67.6	DJN	12.31
000611-14-3	Benzene, 1-ethyl-2-methyl-	66.8	DJN	12.56
	Unknown Aromatic	809	DJ	12.77
	Unknown Aromatic	294	DJ	13.29
000496-11-7	Indane	239	DJN	13.53
001758-88-9	Benzene, 2-ethyl-1,4-dimethyl-	78.2	DJN	13.64
	Unknown Aromatic	113	DJ	13.98
000527-84-4	Benzene, 1-methyl-2-(1-methylethyl	108	DJN	14.02
002870-04-4	Benzene, 2-ethyl-1,3-dimethyl-	171	DJN	14.11
	Unknown Aromatic	138	DJ	14.25
	Unknown Aromatic	71.6	DJ	14.47
000488-23-3	Benzene, 1,2,3,4-tetramethyl-	145	DJN	14.59
	Unknown Aromatic	195	DJ	14.65
000824-22-6	1H-Indene, 2,3-dihydro-4-methyl-	69.8	DJN	14.95
000824-90-8	1-Phenyl-1-butene	246	DJN	15.12

Total TICs = 2810 DJN

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-006
Client ID: MW-33S
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2750.D

GC/MS Column: DB-624
Sample wt/vol: 0.01mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 500
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		500	343
Chloromethane	ND		500	247
Vinyl chloride	ND		500	232
Bromomethane	ND		500	342
Chloroethane	ND		500	415
Trichlorofluoromethane	ND		500	407
1,1-Dichloroethene	ND		500	246
Acetone	ND		2500	715
Carbon disulfide	ND		500	253
Methylene chloride	6350	D	1000	995
trans-1,2-Dichloroethene	ND		500	272
Methyl tert-butyl ether (MTBE)	ND		500	246
1,1-Dichloroethane	ND		500	179
cis-1,2-Dichloroethene	ND		500	240
2-Butanone (MEK)	ND		1000	436
Bromochloromethane	ND		500	318
Chloroform	1060	D	500	256
1,1,1-Trichloroethane	ND		500	243
Carbon tetrachloride	ND		500	334
1,2-Dichloroethane (EDC)	ND		500	287
Benzene	6250	D	500	194
Trichloroethene	ND		500	179
1,2-Dichloropropane	ND		500	278
1,4-Dioxane	ND		100000	41400
Bromodichloromethane	ND		500	263
cis-1,3-Dichloropropene	ND		500	221
4-Methyl-2-pentanone (MIBK)	ND		500	434

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-006
Client ID: MW-33S
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2750.D

GC/MS Column: DB-624
Sample wt/vol: 0.01mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 500
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	58500	D	500	185
trans-1,3-Dichloropropene	ND		500	208
1,1,2-Trichloroethane	ND		500	317
Tetrachloroethene	ND		500	248
2-Hexanone	1620	D	500	347
Dibromochloromethane	ND		500	258
1,2-Dibromoethane (EDB)	ND		500	339
Chlorobenzene	ND		500	198
Ethylbenzene	296	DJ	500	210
Total Xylenes	3880	D	1000	522
Styrene	ND		500	185
Bromoform	ND		500	332
Isopropylbenzene	ND		500	291
1,1,2,2-Tetrachloroethane	ND		500	346
1,3-Dichlorobenzene	ND		500	208
1,4-Dichlorobenzene	ND		500	205
1,2-Dichlorobenzene	ND		500	201
1,2-Dibromo-3-chloropropane	ND		500	465
1,2,4-Trichlorobenzene	ND		500	242
1,2,3-Trichlorobenzene	ND		500	225
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		500	486
Methyl acetate	ND		500	449
Cyclohexane	ND		2500	409
Methylcyclohexane	ND		500	387
1,3-Dichloropropene (cis- and trans-)	ND		500	221
Total Target Compounds (52):	78000	DJ		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: 06447-006
Client ID: MW-33S
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Date File: K2750.D

GC/MS Column: DB-624
Sample wt/vol: 0.01mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 500
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-007
Client ID: MW-29S
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2760.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		2.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	2.80		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-007
Client ID: MW-29S
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2760.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	11.9		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	2.66		1.00	0.395
Ethylbenzene	0.879	J	1.00	0.420
Total Xylenes	1.97	J	2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	0.506	J	1.00	0.416
1,4-Dichlorobenzene	0.574	J	1.00	0.409
1,2-Dichlorobenzene	1.07		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		5.00	0.818
Methylcyclohexane	1.03		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441
Total Target Compounds (52):	23.4	J		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: 06447-007
Client ID: MW-29S
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Date File: K2760.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	Unknown VOA	55.4	J	1.80
000503-45-7	Cyclohexene, 3,3,5-trimethyl-	16.5	JN	9.69
1000113-50-1	3,4,4-Trimethylcyclohexene	12.7	JN	9.84
000873-94-9	Cyclohexanone, 3,3,5-trimethyl-	12.5	JN	14.05

Total TICs = 97.1 JN

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-008
Client ID: MW-29D
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2761.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		2.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	0.669	J	1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-008
Client ID: MW-29D
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2761.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	13.6		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	0.765	J	1.00	0.416
1,4-Dichlorobenzene	3.31		1.00	0.409
1,2-Dichlorobenzene	1.45		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		5.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441
Total Target Compounds (52):	19.8	J		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: 06447-008
Client ID: MW-29D
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Date File: K2761.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-009
Client ID: MW-31S
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2762.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	0.683	J	1.00	0.479
2-Butanone (MEK)	ND		2.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	5.99		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-009
Client ID: MW-31S
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2762.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	3.36		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	3.94		1.00	0.395
Ethylbenzene	19.5		1.00	0.420
Total Xylenes	63.0		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	0.419	J	1.00	0.409
1,2-Dichlorobenzene	1.10		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		5.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441
Total Target Compounds (52):	98.0	J		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: 06447-009
Client ID: MW-31S
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Date File: K2762.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	Unknown VOA	70.2	J	1.79

Total TICs = 70.2 J

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-010
Client ID: MW-24S
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2751.D

GC/MS Column: DB-624
Sample wt/vol: 0.025mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 200
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		200	137
Chloromethane	ND		200	98.6
Vinyl chloride	ND		200	92.6
Bromomethane	ND		200	137
Chloroethane	ND		200	166
Trichlorofluoromethane	ND		200	163
1,1-Dichloroethene	ND		200	98.2
Acetone	ND		1000	286
Carbon disulfide	ND		200	101
Methylene chloride	ND		400	398
trans-1,2-Dichloroethene	ND		200	109
Methyl tert-butyl ether (MTBE)	ND		200	98.2
1,1-Dichloroethane	ND		200	71.6
cis-1,2-Dichloroethene	ND		200	95.8
2-Butanone (MEK)	ND		400	174
Bromochloromethane	ND		200	127
Chloroform	ND		200	102
1,1,1-Trichloroethane	ND		200	97.0
Carbon tetrachloride	ND		200	134
1,2-Dichloroethane (EDC)	ND		200	115
Benzene	ND		200	77.6
Trichloroethene	ND		200	71.4
1,2-Dichloropropane	ND		200	111
1,4-Dioxane	ND		40000	16500
Bromodichloromethane	ND		200	105
cis-1,3-Dichloropropene	ND		200	88.2
4-Methyl-2-pentanone (MIBK)	ND		200	173

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-010
Client ID: MW-24S
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2751.D

GC/MS Column: DB-624
Sample wt/vol: 0.025mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 200
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	1890	D	200	74.0
trans-1,3-Dichloropropene	ND		200	83.2
1,1,2-Trichloroethane	ND		200	127
Tetrachloroethene	ND		200	99.0
2-Hexanone	ND		200	139
Dibromochloromethane	ND		200	103
1,2-Dibromoethane (EDB)	ND		200	135
Chlorobenzene	ND		200	79.0
Ethylbenzene	12100	D	200	84.0
Total Xylenes	78200	D	400	209
Styrene	ND		200	74.0
Bromoform	ND		200	133
Isopropylbenzene	ND		200	116
1,1,2,2-Tetrachloroethane	ND		200	138
1,3-Dichlorobenzene	ND		200	83.2
1,4-Dichlorobenzene	ND		200	81.8
1,2-Dichlorobenzene	ND		200	80.2
1,2-Dibromo-3-chloropropane	ND		200	186
1,2,4-Trichlorobenzene	ND		200	96.6
1,2,3-Trichlorobenzene	ND		200	89.8
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		200	194
Methyl acetate	ND		200	179
Cyclohexane	ND		1000	164
Methylcyclohexane	ND		200	155
1,3-Dichloropropene (cis- and trans-)	ND		200	88.2
Total Target Compounds (52):	92200	D		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: 06447-010
Client ID: MW-24S
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Date File: K2751.D

GC/MS Column: DB-624
Sample wt/vol: 0.025mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 200
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
000873-94-9	Cyclohexanone, 3,3,5-trimethyl-	1280	DJN	14.05

Total TICs = 1280 DJN

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-011
Client ID: MW-38D
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2752.D

GC/MS Column: DB-624
Sample wt/vol: 0.005mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1000
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1000	685
Chloromethane	ND		1000	493
Vinyl chloride	48000	D	1000	463
Bromomethane	ND		1000	684
Chloroethane	ND		1000	829
Trichlorofluoromethane	ND		1000	813
1,1-Dichloroethene	ND		1000	491
Acetone	ND		5000	1430
Carbon disulfide	ND		1000	505
Methylene chloride	ND		2000	1990
trans-1,2-Dichloroethene	ND		1000	544
Methyl tert-butyl ether (MTBE)	ND		1000	491
1,1-Dichloroethane	1860	D	1000	358
cis-1,2-Dichloroethene	198000	D	1000	479
2-Butanone (MEK)	ND		2000	872
Bromochloromethane	ND		1000	636
Chloroform	ND		1000	511
1,1,1-Trichloroethane	ND		1000	485
Carbon tetrachloride	ND		1000	668
1,2-Dichloroethane (EDC)	ND		1000	573
Benzene	ND		1000	388
Trichloroethene	ND		1000	357
1,2-Dichloropropane	ND		1000	556
1,4-Dioxane	ND		200000	82700
Bromodichloromethane	ND		1000	526
cis-1,3-Dichloropropene	ND		1000	441
4-Methyl-2-pentanone (MIBK)	ND		1000	867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-011
Client ID: MW-38D
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2752.D

GC/MS Column: DB-624
Sample wt/vol: 0.005mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1000
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	6810	D	1000	370
trans-1,3-Dichloropropene	ND		1000	416
1,1,2-Trichloroethane	ND		1000	633
Tetrachloroethene	ND		1000	495
2-Hexanone	ND		1000	693
Dibromochloromethane	ND		1000	516
1,2-Dibromoethane (EDB)	ND		1000	677
Chlorobenzene	ND		1000	395
Ethylbenzene	ND		1000	420
Total Xylenes	ND		2000	1040
Styrene	ND		1000	370
Bromoform	ND		1000	663
Isopropylbenzene	ND		1000	581
1,1,2,2-Tetrachloroethane	ND		1000	691
1,3-Dichlorobenzene	ND		1000	416
1,4-Dichlorobenzene	ND		1000	409
1,2-Dichlorobenzene	ND		1000	401
1,2-Dibromo-3-chloropropane	ND		1000	930
1,2,4-Trichlorobenzene	ND		1000	483
1,2,3-Trichlorobenzene	ND		1000	449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1000	972
Methyl acetate	ND		1000	897
Cyclohexane	ND		5000	818
Methylcyclohexane	ND		1000	773
1,3-Dichloropropene (cis- and trans-)	ND		1000	441
Total Target Compounds (52):	255000	D		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: 06447-011
Client ID: MW-38D
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Date File: K2752.D

GC/MS Column: DB-624
Sample wt/vol: 0.005mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1000
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-012
Client ID: MW-38DD
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2763.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	1.83		1.00	0.479
2-Butanone (MEK)	ND		2.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	0.619	J	1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-012
Client ID: MW-38DD
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2763.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		5.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441
Total Target Compounds (52):	2.45	J		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: 06447-012
Client ID: MW-38DD
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2763.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-013
Client ID: FB-2
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2764.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		2.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-013
Client ID: FB-2
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2764.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		5.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: 06447-013
Client ID: FB-2
Date Received: 07/23/2015
Date Analyzed: 07/30/2015
Data file: K2764.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-014
Client ID: TB
Date Received: 07/23/2015
Date Analyzed: 07/31/2015
Data file: K2765.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		2.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 06447-014
Client ID: TB
Date Received: 07/23/2015
Date Analyzed: 07/31/2015
Data file: K2765.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		5.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: 06447-014
Client ID: TB
Date Received: 07/23/2015
Date Analyzed: 07/31/2015
Data file: K2765.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

INTEGRATED ANALYTICAL LABORATORIES

NJ-EPH-C40

Lab ID: E15-06447-003
Client ID: MW-40D
Date Received: 07/23/2015
Date Extracted: 07/28/2015
Date Analyzed: 07/31/2015
Data file: I0930.D

GC Column: RTX-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
C9-C40	266	J	500	200

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

NJ-EPH-C40

Lab ID: E15-06447-004
Client ID: MW-36D
Date Received: 07/23/2015
Date Extracted: 07/28/2015
Date Analyzed: 07/31/2015
Data file: I0931.D

GC Column: RTX-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
C9-C40	301	J	500	200

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

NJ-EPH-C40

Lab ID: E15-06447-005
Client ID: MW-13SR
Date Received: 07/23/2015
Date Extracted: 07/28/2015
Date Analyzed: 07/31/2015
Data file: I0932.D

GC Column: RTX-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
C9-C40	3040		500	200

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

NJ-EPH-C40

Lab ID: E15-06447-006
Client ID: MW-33S
Date Received: 07/23/2015
Date Extracted: 07/28/2015
Date Analyzed: 07/31/2015
Data file: I0933.D

GC Column: RTX-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 5
% Moisture: 100

Compound	Concentration	Q	RL	MDL
C9-C40	13400	D	2500	1000

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

NJ-EPH-C40

Lab ID: E15-06447-007
Client ID: MW-29S
Date Received: 07/23/2015
Date Extracted: 07/28/2015
Date Analyzed: 07/31/2015
Data file: I0934.D

GC Column: RTX-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 2
% Moisture: 100

Compound	Concentration	Q	RL	MDL
C9-C40	2660	D	1000	400

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

NJ-EPH-C40

Lab ID: E15-06447-010
Client ID: MW-24S
Date Received: 07/23/2015
Date Extracted: 07/28/2015
Date Analyzed: 08/01/2015
Data file: I0935.D

GC Column: RTX-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 10
% Moisture: 100

Compound	Concentration	Q	RL	MDL
C9-C40	41200	D	5000	2000

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

NJ-EPH-C40

Lab ID: E15-06447-011
Client ID: MW-38D
Date Received: 07/23/2015
Date Extracted: 07/28/2015
Date Analyzed: 08/01/2015
Data file: I0936.D

GC Column: RTX-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
C9-C40	10200		500	200

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

NJ-EPH-C40

Lab ID: E15-06447-012
Client ID: MW-38DD
Date Received: 07/23/2015
Date Extracted: 07/28/2015
Date Analyzed: 08/01/2015
Data file: I0937.D

GC Column: RTX-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
C9-C40	227	J	500	200

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

NJ-EPH-C40

Lab ID: E15-06447-013
Client ID: FB-2
Date Received: 07/23/2015
Date Extracted: 07/28/2015
Date Analyzed: 08/01/2015
Data file: I0938.D

GC Column: RTX-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
C9-C40	ND		500	200

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: JMC/ARSYNCO

Lab ID: E15-06447-005
Client ID: MW-13SR
Date Collected: 07/23/15 11:08
Date Received: 07/23/15 17:07
Matrix-Units: Aqueous-ug/L (ppb)
% Moisture: 100
Batch #: 364

Compound	Result	Q	DF	RL	MDL	Date Analyzed	Method
Antimony	31.8		1	2.00	1.00	07/28/15 00:39	6020A
Lead	16.0		1	2.00	0.500	07/28/15 00:39	6020A
Nickel	23.3		1	2.00	1.00	07/28/15 00:39	6020A

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: JMC/ARSYNCO

Lab ID: E15-06447-006
Client ID: MW-33S
Date Collected: 07/23/15 11:21
Date Received: 07/23/15 17:07
Matrix-Units: Aqueous-ug/L (ppb)
% Moisture: 100
Batch #: 364

Compound	Result	Q	DF	RL	MDL	Date Analyzed	Method
Antimony	119		1	2.00	1.00	07/28/15 00:43	6020A
Lead	274		1	2.00	0.500	07/28/15 00:43	6020A
Nickel	476		1	2.00	1.00	07/28/15 00:43	6020A
Zinc	1560		1	2.00	2.00	07/28/15 00:43	6020A

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: JMC/ARSYNCO

Lab ID: E15-06447-013
Client ID: FB-2
Date Collected: 07/23/15 15:21
Date Received: 07/23/15 17:07
Matrix-Units: Aqueous-ug/L (ppb)
% Moisture: 100
Batch #: 364

Compound	Result	Q	DF	RL	MDL	Date Analyzed	Method
Antimony	ND		1	2.00	1.00	07/27/15 23:16	6020A
Lead	ND		1	2.00	0.500	07/27/15 23:16	6020A
Nickel	ND		1	2.00	1.00	07/27/15 23:16	6020A
Zinc	ND		1	2.00	2.00	07/27/15 23:16	6020A

ND = Analyzed for but Not Detected at the MDL

VOLATILE ORGANICS

VOLATILE ORGANICS QC SUMMARY

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 07/30/2015

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
BLKA150729b	AQUEOUS	K2718.D	87	96	97
06439-011DL	AQUEOUS	K2719.D	88	97	98
LCSA150729b	AQUEOUS	K2720.D	87	98	98
06420-001MS	AQUEOUS	K2721.D	86	99	99
06420-001MSD	AQUEOUS	K2722.D	86	97	99
06446-001	AQUEOUS	K2724.D	84	98	97
06446-002	AQUEOUS	K2725.D	86	100	95
06420-001	AQUEOUS	K2726.D	87	97	96
06420-002	AQUEOUS	K2727.D	87	96	97
06420-003	AQUEOUS	K2728.D	87	97	96
06420-004	AQUEOUS	K2729.D	88	98	95
06420-005	AQUEOUS	K2730.D	88	97	97
06447-001	AQUEOUS	K2731.D	87	98	96
06447-002	AQUEOUS	K2732.D	88	98	98
06447-003	AQUEOUS	K2733.D	90	97	97
06447-004	AQUEOUS	K2734.D	92	96	98
06446-001DL	AQUEOUS	K2735.D	90	96	97
06439-010	AQUEOUS	K2736.D	89	99	96

	Concentration	DKQPs	Leachate Aqueous/Meoh	Soil
SMC1 = 1,2-Dichloroethane-d4	50 ppb	70-130	59-138	43-133
SMC2 = Toluene-d8	50 ppb	70-130	40-133	39-137
SMC3 = Bromofluorobenzene	50 ppb	70-130	42-152	45-145

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
D Surrogate diluted out
M Matrix interference

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 07/30/2015

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
BLKA150730a	AQUEOUS	K2748.D	92	100	95
06668-001	AQUEOUS	K2749.D	93	97	104
06447-006	AQUEOUS	K2750.D	89	99	98
06447-010	AQUEOUS	K2751.D	93	98	102
06447-011	AQUEOUS	K2752.D	92	97	97
LCSTA150730a	AQUEOUS	K2753.D	94	98	111
06666-001TPH-MS	AQUEOUS	K2754.D	92	99	99
06666-001TPH-MSD	AQUEOUS	K2755.D	93	97	99
LCSA150730a	AQUEOUS	K2756.D	95	100	102
06447-012MS	AQUEOUS	K2757.D	91	100	101
06447-012MSD	AQUEOUS	K2758.D	91	98	100
06666-001	AQUEOUS	K2759.D	91	98	96
06447-007	AQUEOUS	K2760.D	92	98	97
06447-008	AQUEOUS	K2761.D	93	97	98
06447-009	AQUEOUS	K2762.D	92	97	97
06447-012	AQUEOUS	K2763.D	94	97	97
06447-013	AQUEOUS	K2764.D	94	99	97
06447-014	AQUEOUS	K2765.D	96	99	98
06668-001DL	AQUEOUS	K2766.D	97	97	103

	Concentration	DKQPs	Leachate Aqueous/Meoh	Soil
SMC1 = 1,2-Dichloroethane-d4	50 ppb	70-130	59-138	43-133
SMC2 = Toluene-d8	50 ppb	70-130	40-133	39-137
SMC3 = Bromofluorobenzene	50 ppb	70-130	42-152	45-145

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
D Surrogate diluted out
M Matrix interference

FORM 2

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 08/03/2015

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
BLKA150803a	AQUEOUS	G5696.D	98	98	97
06527-009	AQUEOUS	G5697.D	100	100	96
06527-010	AQUEOUS	G5698.D	101	99	97
06527-001	AQUEOUS	G5699.D	99	100	97
06527-002	AQUEOUS	G5700.D	99	98	94
06527-003	AQUEOUS	G5701.D	102	98	97
06527-004	AQUEOUS	G5702.D	101	98	97
06527-005	AQUEOUS	G5703.D	106	99	96
06527-006	AQUEOUS	G5704.D	99	100	98
06527-007	AQUEOUS	G5705.D	103	100	97
06527-008	AQUEOUS	G5706.D	101	99	96
06541-016	AQUEOUS	G5707.D	101	98	96
06541-017	AQUEOUS	G5708.D	101	99	97
06541-001	AQUEOUS	G5709.D	102	99	97
06541-002	AQUEOUS	G5710.D	101	99	98
06541-003	AQUEOUS	G5711.D	101	99	97
06447-2DL	AQUEOUS	G5712.D	107	98	97
06447-005	AQUEOUS	G5713.D	103	97	98
LCSA150803a	AQUEOUS	G5714.D	97	100	100
6527-001MS	AQUEOUS	G5715.D	100	101	101
6527-001MSD	AQUEOUS	G5716.D	98	101	99

	Concentration	DKQPs	Leachate Aqueous/Meoh	Soil
SMC1 = 1,2-Dichloroethane-d4	50 ppb	70-130	59-138	43-133
SMC2 = Toluene-d8	50 ppb	70-130	40-133	39-137
SMC3 = Bromofluorobenzene	50 ppb	70-130	42-152	45-145

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
D Surrogate diluted out
M Matrix interference

FORM 2

INTEGRATED ANALYTICAL LABORATORIES

8260

LCS ACCURACY REPORT

Lab ID: LCSA150729b
Date Received: NA
Date Analyzed: 07/30/2015
LCS Data file: K2720.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Blank	LCS Conc.	%Rec.	#
Dichlorodifluoromethane	50.0	0.0	39.0	78	
Chloromethane	50.0	0.0	36.4	73	
Vinyl chloride	50.0	0.0	42.4	85	
Bromomethane	50.0	0.0	45.7	91	
Chloroethane	50.0	0.0	54.5	109	
Trichlorofluoromethane	50.0	0.0	43.4	87	
1,1-Dichloroethene	50.0	0.0	46.8	94	
Acetone	50.0	0.0	43.1	86	
Carbon disulfide	50.0	0.0	46.3	93	
Vinyl acetate	50.0	0.0	41.7	83	
Methylene chloride	50.0	0.0	46.0	92	
Acrylonitrile	150.0	0.0	144.3	96	
tert-Butyl alcohol (TBA)	100.0	0.0	94.4	94	
trans-1,2-Dichloroethene	50.0	0.0	47.0	94	
Methyl tert-butyl ether (MTBE)	50.0	0.0	50.8	102	
1,1-Dichloroethane	50.0	0.0	47.5	95	
Diisopropyl ether (DIPE)	50.0	0.0	49.7	99	
cis-1,2-Dichloroethene	50.0	0.0	50.1	100	
2,2-Dichloropropane	50.0	0.0	36.2	72	
2-Butanone (MEK)	50.0	0.0	46.0	92	
Bromochloromethane	50.0	0.0	48.2	96	
Chloroform	50.0	0.0	47.6	95	
1,1,1-Trichloroethane	50.0	0.0	45.1	90	
Carbon tetrachloride	50.0	0.0	43.1	86	
1,1-Dichloropropene	50.0	0.0	45.9	92	
1,2-Dichloroethane (EDC)	50.0	0.0	44.6	89	
Benzene	50.0	0.0	50.9	102	
Trichloroethene	50.0	0.0	51.3	103	
1,2-Dichloropropane	50.0	0.0	51.3	103	
Dibromomethane	50.0	0.0	50.6	101	
1,4-Dioxane	1500	0.0	1412	94	
Bromodichloromethane	50.0	0.0	50.2	100	
cis-1,3-Dichloropropene	50.0	0.0	51.9	104	
4-Methyl-2-pentanone (MIBK)	50.0	0.0	52.4	105	
Toluene	50.0	0.0	49.8	100	
trans-1,3-Dichloropropene	50.0	0.0	48.6	97	
1,1,2-Trichloroethane	50.0	0.0	51.8	104	
Tetrachloroethene	50.0	0.0	48.8	98	
1,3-Dichloropropane	50.0	0.0	51.1	102	

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA150729b
Date Received: NA
Date Analyzed: 07/30/2015
LCS Data file: K2720.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Blank	MS Conc.	%Rec.	#
2-Hexanone	50.0	0.0	50.3	101	
Dibromochloromethane	50.0	0.0	49.5	99	
1,2-Dibromoethane (EDB)	50.0	0.0	51.6	103	
Chlorobenzene	50.0	0.0	51.2	102	
1,1,1,2-Tetrachloroethane	50.0	0.0	51.3	103	
Ethylbenzene	50.0	0.0	51.7	103	
m,p-Xylene	100.0	0.0	103.6	104	
o-Xylene	50.0	0.0	53.7	107	
Styrene	50.0	0.0	54.1	108	
Bromoform	50.0	0.0	49.3	99	
Isopropylbenzene	50.0	0.0	53.9	108	
1,1,2,2-Tetrachloroethane	50.0	0.0	50.0	100	
Bromobenzene	50.0	0.0	51.7	103	
1,2,3-Trichloropropane	50.0	0.0	50.1	100	
n-Propylbenzene	50.0	0.0	50.5	101	
2-Chlorotoluene	50.0	0.0	51.1	102	
1,3,5-Trimethylbenzene	50.0	0.0	52.1	104	
4-Chlorotoluene	50.0	0.0	49.5	99	
tert-Butylbenzene	50.0	0.0	53.2	106	
1,2,4-Trimethylbenzene	50.0	0.0	52.4	105	
sec-Butylbenzene	50.0	0.0	51.4	103	
1,3-Dichlorobenzene	50.0	0.0	49.2	98	
4-Isopropyltoluene	50.0	0.0	51.1	102	
1,4-Dichlorobenzene	50.0	0.0	49.2	98	
n-Butylbenzene	50.0	0.0	49.6	99	
1,2-Dichlorobenzene	50.0	0.0	50.7	101	
1,2-Dibromo-3-chloropropane	50.0	0.0	48.9	98	
1,2,4-Trichlorobenzene	50.0	0.0	54.5	109	
Hexachlorobutadiene	50.0	0.0	46.5	93	
Naphthalene	50.0	0.0	59.2	118	
1,2,3-Trichlorobenzene	50.0	0.0	53.5	107	
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	0.0	51.5	103	
Methyl acetate	50.0	0.0	49.5	99	
Cyclohexane	50.0	0.0	50.7	101	
Methylcyclohexane	50.0	0.0	52.9	106	

	Leachate Aqueous/Meoh	Soil/Sediment
LCS Recovery Limits	70-130	70-130

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA150729b
Date Received: NA
Date Analyzed: 07/30/2015
LCS Data file: K2720.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Blank	MS Conc.	%Rec.	#

As per SW-846 8260C, up to 10% of the compounds may be out , but must be within 40-160%
As per NJDEP DKQPs, only the following compounds may be in the 40-160% range:
Acetone; Bromomethane; 2-Butanone (MEK); Carbon disulfide; Chloroethane; Chloromethane
1,2-Dibromo-3-chloropropane; Dichlorodifluoromethane; 1,4-Dioxane; 2-Hexanone
Naphthalene; 4-Methyl-2-pentanone (MIBK); Trichlorofluoromethane

	Leachate Aqueous/Meoh	Soil/Sediment
LCS ACCURACY (%REC)	70-130	70-130

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

INTEGRATED ANALYTICAL LABORATORIES

8260

LCS ACCURACY REPORT

Lab ID: LCSA150730a
Date Received: NA
Date Analyzed: 07/30/2015
LCS Data file: K2756.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Blank	LCS Conc.	%Rec.	#
Dichlorodifluoromethane	50.0	0.0	46.4	93	
Chloromethane	50.0	0.0	43.3	87	
Vinyl chloride	50.0	0.0	48.6	97	
Bromomethane	50.0	0.0	54.9	110	
Chloroethane	50.0	0.0	59.9	120	
Trichlorofluoromethane	50.0	0.0	60.8	122	
1,1-Dichloroethene	50.0	0.0	62.5	125	
Acetone	50.0	0.0	54.8	110	
Carbon disulfide	50.0	0.0	62.4	125	
Vinyl acetate	50.0	0.0	40.5	81	
Methylene chloride	50.0	0.0	40.5	81	
Acrylonitrile	150.0	0.0	127.5	85	
tert-Butyl alcohol (TBA)	100.0	0.0	82.0	82	
trans-1,2-Dichloroethene	50.0	0.0	42.4	85	
Methyl tert-butyl ether (MTBE)	50.0	0.0	48.0	96	
1,1-Dichloroethane	50.0	0.0	43.5	87	
Diisopropyl ether (DIPE)	50.0	0.0	44.8	90	
cis-1,2-Dichloroethene	50.0	0.0	45.9	92	
2,2-Dichloropropane	50.0	0.0	48.7	97	
2-Butanone (MEK)	50.0	0.0	39.8	80	
Bromochloromethane	50.0	0.0	45.6	91	
Chloroform	50.0	0.0	47.4	95	
1,1,1-Trichloroethane	50.0	0.0	48.0	96	
Carbon tetrachloride	50.0	0.0	48.9	98	
1,1-Dichloropropene	50.0	0.0	44.6	89	
1,2-Dichloroethane (EDC)	50.0	0.0	48.6	97	
Benzene	50.0	0.0	48.6	97	
Trichloroethene	50.0	0.0	50.0	100	
1,2-Dichloropropane	50.0	0.0	48.8	98	
Dibromomethane	50.0	0.0	51.4	103	
1,4-Dioxane	1500	0.0	1235	82	
Bromodichloromethane	50.0	0.0	52.8	106	
cis-1,3-Dichloropropene	50.0	0.0	52.7	105	
4-Methyl-2-pentanone (MIBK)	50.0	0.0	49.9	100	
Toluene	50.0	0.0	49.2	98	
trans-1,3-Dichloropropene	50.0	0.0	53.9	108	
1,1,2-Trichloroethane	50.0	0.0	50.6	101	
Tetrachloroethene	50.0	0.0	51.1	102	
1,3-Dichloropropane	50.0	0.0	51.7	103	

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA150730a
Date Received: NA
Date Analyzed: 07/30/2015
LCS Data file: K2756.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Blank	MS Conc.	%Rec.	#
2-Hexanone	50.0	0.0	48.2	96	
Dibromochloromethane	50.0	0.0	54.0	108	
1,2-Dibromoethane (EDB)	50.0	0.0	53.2	106	
Chlorobenzene	50.0	0.0	50.2	100	
1,1,1,2-Tetrachloroethane	50.0	0.0	51.2	102	
Ethylbenzene	50.0	0.0	51.2	102	
m,p-Xylene	100.0	0.0	102.3	102	
o-Xylene	50.0	0.0	52.9	106	
Styrene	50.0	0.0	53.9	108	
Bromoform	50.0	0.0	50.0	100	
Isopropylbenzene	50.0	0.0	53.9	108	
1,1,2,2-Tetrachloroethane	50.0	0.0	49.8	100	
Bromobenzene	50.0	0.0	52.3	105	
1,2,3-Trichloropropane	50.0	0.0	50.1	100	
n-Propylbenzene	50.0	0.0	51.0	102	
2-Chlorotoluene	50.0	0.0	51.9	104	
1,3,5-Trimethylbenzene	50.0	0.0	53.6	107	
4-Chlorotoluene	50.0	0.0	51.0	102	
tert-Butylbenzene	50.0	0.0	54.8	110	
1,2,4-Trimethylbenzene	50.0	0.0	53.5	107	
sec-Butylbenzene	50.0	0.0	53.3	107	
1,3-Dichlorobenzene	50.0	0.0	51.3	103	
4-Isopropyltoluene	50.0	0.0	53.8	108	
1,4-Dichlorobenzene	50.0	0.0	51.7	103	
n-Butylbenzene	50.0	0.0	52.3	105	
1,2-Dichlorobenzene	50.0	0.0	52.6	105	
1,2-Dibromo-3-chloropropane	50.0	0.0	52.6	105	
1,2,4-Trichlorobenzene	50.0	0.0	55.6	111	
Hexachlorobutadiene	50.0	0.0	50.8	102	
Naphthalene	50.0	0.0	51.7	103	
1,2,3-Trichlorobenzene	50.0	0.0	54.2	108	
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	0.0	61.7	123	
Methyl acetate	50.0	0.0	46.2	92	
Cyclohexane	50.0	0.0	41.3	83	
Methylcyclohexane	50.0	0.0	45.3	91	

	Leachate Aqueous/Meoh	Soil/Sediment
LCS Recovery Limits	70-130	70-130

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA150730a
Date Received: NA
Date Analyzed: 07/30/2015
LCS Data file: K2756.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Blank	MS Conc.	%Rec.	#

As per SW-846 8260C, up to 10% of the compounds may be out , but must be within 40-160%
As per NJDEP DKQPs, only the following compounds may be in the 40-160% range:
Acetone; Bromomethane; 2-Butanone (MEK); Carbon disulfide; Chloroethane; Chloromethane
1,2-Dibromo-3-chloropropane; Dichlorodifluoromethane; 1,4-Dioxane; 2-Hexanone
Naphthalene; 4-Methyl-2-pentanone (MIBK); Trichlorofluoromethane

	Leachate Aqueous/Meoh	Soil/Sediment
LCS ACCURACY (%REC)	70-130	70-130

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

INTEGRATED ANALYTICAL LABORATORIES

8260

LCS ACCURACY REPORT

Lab ID: LCSA150803a
Date Received: NA
Date Analyzed: 08/03/2015
LCS Data file: G5714.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Blank	LCS Conc.	%Rec.	#
Dichlorodifluoromethane	50.0	0.0	39.9	80	
Chloromethane	50.0	0.0	36.7	73	
Vinyl chloride	50.0	0.0	39.5	79	
Bromomethane	50.0	0.0	45.4	91	
Chloroethane	50.0	0.0	47.4	95	
Trichlorofluoromethane	50.0	0.0	41.2	82	
Acrolein	150	0.0	159.2	106	
1,1-Dichloroethene	50.0	0.0	49.8	100	
Acetone	50.0	0.0	50.4	101	
Carbon disulfide	50.0	0.0	45.6	91	
Vinyl acetate	50.0	0.0	40.2	80	
Methylene chloride	50.0	0.0	46.6	93	
Acrylonitrile	150.0	0.0	157.7	105	
tert-Butyl alcohol (TBA)	100.0	0.0	109.0	109	
trans-1,2-Dichloroethene	50.0	0.0	47.7	95	
Methyl tert-butyl ether (MTBE)	50.0	0.0	53.8	108	
1,1-Dichloroethane	50.0	0.0	48.4	97	
Diisopropyl ether (DIPE)	50.0	0.0	53.4	107	
cis-1,2-Dichloroethene	50.0	0.0	51.2	102	
2,2-Dichloropropane	50.0	0.0	42.4	85	
2-Butanone (MEK)	50.0	0.0	54.9	110	
Bromochloromethane	50.0	0.0	51.1	102	
Chloroform	50.0	0.0	49.4	99	
1,1,1-Trichloroethane	50.0	0.0	47.6	95	
Carbon tetrachloride	50.0	0.0	45.0	90	
1,1-Dichloropropene	50.0	0.0	47.1	94	
1,2-Dichloroethane (EDC)	50.0	0.0	50.7	101	
Benzene	50.0	0.0	50.4	101	
Trichloroethene	50.0	0.0	49.6	99	
1,2-Dichloropropane	50.0	0.0	51.1	102	
Dibromomethane	50.0	0.0	52.1	104	
1,4-Dioxane	1500	0.0	1628	109	
Bromodichloromethane	50.0	0.0	52.2	104	
2-Chloroethyl vinyl ether	50.0	0.0	48.9	98	
cis-1,3-Dichloropropene	50.0	0.0	52.3	105	
4-Methyl-2-pentanone (MIBK)	50.0	0.0	60.2	120	
Toluene	50.0	0.0	49.4	99	
trans-1,3-Dichloropropene	50.0	0.0	52.6	105	
1,1,2-Trichloroethane	50.0	0.0	53.2	106	
Tetrachloroethene	50.0	0.0	47.8	96	
1,3-Dichloropropane	50.0	0.0	53.7	107	

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA150803a
Date Received: NA
Date Analyzed: 08/03/2015
LCS Data file: G5714.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Blank	MS Conc.	%Rec.	#
2-Hexanone	50.0	0.0	59.8	120	
Dibromochloromethane	50.0	0.0	54.9	110	
1,2-Dibromoethane (EDB)	50.0	0.0	54.9	110	
Chlorobenzene	50.0	0.0	49.5	99	
1,1,1,2-Tetrachloroethane	50.0	0.0	51.0	102	
Ethylbenzene	50.0	0.0	51.0	102	
m,p-Xylene	100.0	0.0	102.1	102	
o-Xylene	50.0	0.0	51.2	102	
Styrene	50.0	0.0	54.3	109	
Bromoform	50.0	0.0	54.9	110	
Isopropylbenzene	50.0	0.0	52.8	106	
1,1,2,2-Tetrachloroethane	50.0	0.0	51.4	103	
Bromobenzene	50.0	0.0	50.4	101	
1,2,3-Trichloropropane	50.0	0.0	52.4	105	
n-Propylbenzene	50.0	0.0	50.3	101	
2-Chlorotoluene	50.0	0.0	50.5	101	
1,3,5-Trimethylbenzene	50.0	0.0	52.1	104	
4-Chlorotoluene	50.0	0.0	50.5	101	
tert-Butylbenzene	50.0	0.0	52.1	104	
1,2,4-Trimethylbenzene	50.0	0.0	54.3	109	
sec-Butylbenzene	50.0	0.0	51.1	102	
1,3-Dichlorobenzene	50.0	0.0	49.7	99	
4-Isopropyltoluene	50.0	0.0	52.0	104	
1,4-Dichlorobenzene	50.0	0.0	49.6	99	
n-Butylbenzene	50.0	0.0	52.6	105	
1,2-Dichlorobenzene	50.0	0.0	51.3	103	
1,2-Dibromo-3-chloropropane	50.0	0.0	56.7	113	
1,2,4-Trichlorobenzene	50.0	0.0	56.3	113	
Hexachlorobutadiene	50.0	0.0	46.7	93	
Naphthalene	50.0	0.0	60.8	122	
1,2,3-Trichlorobenzene	50.0	0.0	54.6	109	
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	0.0	43.5	87	
Methyl acetate	50.0	0.0	55.2	110	
Cyclohexane	50.0	0.0	43.7	87	
Methylcyclohexane	50.0	0.0	47.0	94	

	Leachate Aqueous/Meoh	Soil/Sediment
LCS Recovery Limits	70-130	70-130

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA150803a
Date Received: NA
Date Analyzed: 08/03/2015
LCS Data file: G5714.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Blank	MS Conc.	%Rec.	#

As per SW-846 8260C, up to 10% of the compounds may be out , but must be within 40-160%
As per NJDEP DKQPs, only the following compounds may be in the 40-160% range:
Acetone; Bromomethane; 2-Butanone (MEK); Carbon disulfide; Chloroethane; Chloromethane
1,2-Dibromo-3-chloropropane; Dichlorodifluoromethane; 1,4-Dioxane; 2-Hexanone
Naphthalene; 4-Methyl-2-pentanone (MIBK); Trichlorofluoromethane

	Leachate Aqueous/Meoh	Soil/Sediment
LCS ACCURACY (%REC)	70-130	70-130

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

INTEGRATED ANALYTICAL LABORATORIES

8260

MS/MSD SPIKE REPORT

Lab ID: 06420-001
Client ID: MW-17
Date Received: NA
Date Analyzed: 07/30/2015
MS Data file: K2721.D
MSD Data file: K2722.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#
Dichlorodifluoromethane	50.0	0.0	43.4	87		41.8	84		4	
Chloromethane	50.0	0.0	39.5	79		38.0	76		4	
Vinyl chloride	50.0	0.6	46.0	91		44.5	88		3	
Bromomethane	50.0	0.0	49.8	100		45.9	92		8	
Chloroethane	50.0	2.2	58.4	112		55.3	106		5	
Trichlorofluoromethane	50.0	0.0	47.3	95		44.9	90		5	
1,1-Dichloroethene	50.0	0.6	50.1	99		49.0	97		2	
Acetone	50.0	0.0	41.8	84		41.4	83		1	
Carbon disulfide	50.0	0.0	49.2	98		47.4	95		4	
Vinyl acetate	50.0	0.0	41.4	83		41.7	83		1	
Methylene chloride	50.0	0.0	46.5	93		45.8	92		2	
Acrylonitrile	150	0.0	142	95		142	95		0	
tert-Butyl alcohol (TBA)	100	0.0	92.6	93		92.0	92		1	
trans-1,2-Dichloroethene	50.0	0.0	49.3	99		48.1	96		2	
Methyl tert-butyl ether (MTBE)	50.0	0.0	49.2	98		49.9	100		1	
1,1-Dichloroethane	50.0	1.2	48.5	95		47.7	93		2	
Diisopropyl ether (DIPE)	50.0	0.0	49.3	99		48.7	97		1	
cis-1,2-Dichloroethene	50.0	1.2	51.2	100		50.0	98		2	
2,2-Dichloropropane	50.0	0.0	36.2	72		34.9	70		4	
2-Butanone (MEK)	50.0	0.0	44.3	89		44.1	88		0	
Bromochloromethane	50.0	0.0	48.3	97		47.4	95		2	
Chloroform	50.0	0.0	47.7	95		47.0	94		1	
1,1,1-Trichloroethane	50.0	0.8	47.0	92		45.6	90		3	
Carbon tetrachloride	50.0	0.0	46.4	93		45.2	90		3	
1,1-Dichloropropene	50.0	0.0	47.9	96		47.3	95		1	
1,2-Dichloroethane (EDC)	50.0	0.0	43.5	87		43.5	87		0	
Benzene	50.0	0.0	52.0	104		51.2	102		2	
Trichloroethene	50.0	0.0	52.5	105		52.0	104		1	
1,2-Dichloropropane	50.0	0.0	51.4	103		50.6	101		2	
Dibromomethane	50.0	0.0	49.5	99		49.2	98		1	
1,4-Dioxane	1,500	0.0	1426	95		1455	97		2	
Bromodichloromethane	50.0	0.0	49.6	99		49.2	98		1	
cis-1,3-Dichloropropene	50.0	0.0	51.0	102		49.8	100		2	
4-Methyl-2-pentanone (MIBK)	50.0	0.0	50.7	101		49.9	100		2	
Toluene	50.0	0.0	51.0	102		49.2	98		4	
trans-1,3-Dichloropropene	50.0	0.0	49.0	98		47.5	95		3	
1,1,2-Trichloroethane	50.0	0.0	51.4	103		50.3	101		2	
Tetrachloroethene	50.0	0.0	50.7	101		49.1	98		3	
1,3-Dichloropropane	50.0	0.0	51.1	102		49.8	100		3	

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: 06420-001
Client ID: MW-17
Date Received: NA
Date Analyzed: 07/30/2015
MS Data file: K2721.D
MSD Data file: K2722.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#
2-Hexanone	50.0	0.0	49.9	100		48.5	97		3	
Dibromochloromethane	50.0	0.0	49.9	100		48.3	97		3	
1,2-Dibromoethane (EDB)	50.0	0.0	51.6	103		50.7	101		2	
Chlorobenzene	50.0	0.0	51.1	102		50.1	100		2	
1,1,1,2-Tetrachloroethane	50.0	0.0	50.2	100		50.1	100		0	
Ethylbenzene	50.0	0.0	52.2	104		51.5	103		1	
m,p-Xylene	100	0.0	104.8	105		103.0	103		2	
o-Xylene	50.0	0.0	53.5	107		53.0	106		1	
Styrene	50.0	0.0	54.1	108		53.5	107		1	
Bromoform	50.0	0.0	48.1	96		48.7	97		1	
Isopropylbenzene	50.0	0.0	54.2	108		53.5	107		1	
1,1,2,2-Tetrachloroethane	50.0	0.0	47.8	96		47.3	95		1	
Bromobenzene	50.0	0.0	51.1	102		50.7	101		1	
1,2,3-Trichloropropane	50.0	0.0	48.5	97		48.7	97		0	
n-Propylbenzene	50.0	0.0	51.2	102		50.8	102		1	
2-Chlorotoluene	50.0	0.0	51.6	103		50.6	101		2	
1,3,5-Trimethylbenzene	50.0	0.0	51.9	104		51.4	103		1	
4-Chlorotoluene	50.0	0.0	49.7	99		49.6	99		0	
tert-Butylbenzene	50.0	0.0	53.3	107		53.2	106		0	
1,2,4-Trimethylbenzene	50.0	0.0	51.6	103		51.7	103		0	
sec-Butylbenzene	50.0	0.0	52.1	104		52.0	104		0	
1,3-Dichlorobenzene	50.0	0.0	48.8	98		48.7	97		0	
4-Isopropyltoluene	50.0	0.0	51.7	103		51.6	103		0	
1,4-Dichlorobenzene	50.0	0.0	48.7	97		48.6	97		0	
n-Butylbenzene	50.0	0.0	50.1	100		50.0	100		0	
1,2-Dichlorobenzene	50.0	0.0	49.7	99		49.6	99		0	
1,2-Dibromo-3-chloropropane	50.0	0.0	47.7	95		47.9	96		0	
1,2,4-Trichlorobenzene	50.0	0.0	53.9	108		52.8	106		2	
Hexachlorobutadiene	50.0	0.0	47.8	96		47.9	96		0	
Naphthalene	50.0	0.0	51.8	104		51.5	103		1	
1,2,3-Trichlorobenzene	50.0	0.0	52.8	106		52.8	106		0	
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	0.0	54.5	109		52.5	105		4	
Methyl acetate	50.0	0.0	46.6	93		47.2	94		1	
Cyclohexane	50.0	0.0	51.8	104		50.5	101		3	
Methylcyclohexane	50.0	0.0	55.8	112		54.7	109		2	

	Leachate Aqueous/Meoh	Soil/Sediment
MS/MSD Recovery Limits	70-130	70-130
MS/MSD RPD Limits (IAL/DKQP)	30/20	30/30

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: 06420-001
Client ID: MW-17
Date Received: NA
Date Analyzed: 07/30/2015
MS Data file: K2721.D
MSD Data file: K2722.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#

2-Chloroethyl vinyl ether has zero spike recovery in the MS/MSD. This is due to the HCL acid preservation used on the samples. It is a known phenomenon, that this compound decomposes in the presence of acid.

As per SW-846 8260C, up to 10% of the compounds may be out , but must be within 40-160%
As per NJDEP DKQPs, only the following compounds may be in the 40-160% range:
Acetone; Bromomethane; 2-Butanone (MEK); Carbon disulfide; Chloroethane; Chloromethane
1,2-Dibromo-3-chloropropane; Dichlorodifluoromethane; 1,4-Dioxane; 2-Hexanone
Naphthalene; 4-Methyl-2-pentanone (MIBK); Trichlorofluoromethane

	Leachate Aqueous/Meoh	Soil/Sediment
MS/MSD Recovery Limits	70-130	70-130
MS/MSD RPD Limits (IAL/DKQP)	30/20	30/30

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

INTEGRATED ANALYTICAL LABORATORIES

8260

MS/MSD SPIKE REPORT

Lab ID: 06447-012
Client ID: MW-38DD
Date Received: NA
Date Analyzed: 07/30/2015
MS Data file: K2757.D
MSD Data file: K2758.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#
Dichlorodifluoromethane	50.0	0.0	44.6	89		43.8	88		2	
Chloromethane	50.0	0.0	42.8	86		41.4	83		3	
Vinyl chloride	50.0	0.0	47.5	95		46.5	93		2	
Bromomethane	50.0	0.0	58.5	117		55.8	112		5	
Chloroethane	50.0	0.0	58.4	117		56.3	113		4	
Trichlorofluoromethane	50.0	0.0	58.0	116		56.6	113		2	
1,1-Dichloroethene	50.0	0.0	54.6	109		54.2	108		1	
Acetone	50.0	0.0	45.1	90		42.7	85		5	
Carbon disulfide	50.0	0.0	52.8	106		48.1	96		9	
Vinyl acetate	50.0	0.0	39.6	79		42.3	85		7	
Methylene chloride	50.0	0.0	44.7	89		44.0	88		2	
Acrylonitrile	150	0.0	146	97		135	90		8	
tert-Butyl alcohol (TBA)	100	0.0	89.2	89		88.8	89		0	
trans-1,2-Dichloroethene	50.0	0.0	47.2	94		46.4	93		2	
Methyl tert-butyl ether (MTBE)	50.0	0.0	50.1	100		49.5	99		1	
1,1-Dichloroethane	50.0	0.0	47.7	95		46.2	92		3	
Diisopropyl ether (DIPE)	50.0	0.0	49.7	99		48.4	97		3	
cis-1,2-Dichloroethene	50.0	1.8	49.5	95		48.2	93		3	
2,2-Dichloropropane	50.0	0.0	48.7	97		48.2	96		1	
2-Butanone (MEK)	50.0	0.0	41.9	84		41.6	83		1	
Bromochloromethane	50.0	0.0	47.7	95		46.8	94		2	
Chloroform	50.0	0.0	48.7	97		47.5	95		2	
1,1,1-Trichloroethane	50.0	0.0	49.3	99		47.7	95		3	
Carbon tetrachloride	50.0	0.0	49.1	98		47.5	95		3	
1,1-Dichloropropene	50.0	0.0	47.3	95		46.2	92		2	
1,2-Dichloroethane (EDC)	50.0	0.0	47.5	95		46.6	93		2	
Benzene	50.0	0.0	51.2	102		49.0	98		4	
Trichloroethene	50.0	0.6	51.7	102		49.6	98		4	
1,2-Dichloropropane	50.0	0.0	51.5	103		49.5	99		4	
Dibromomethane	50.0	0.0	52.4	105		49.7	99		5	
1,4-Dioxane	1,500	0.0	1181	79		1208	81		2	
Bromodichloromethane	50.0	0.0	52.7	105		50.9	102		3	
cis-1,3-Dichloropropene	50.0	0.0	54.6	109		51.9	104		5	
4-Methyl-2-pentanone (MIBK)	50.0	0.0	52.6	105		49.2	98		7	
Toluene	50.0	0.0	51.3	103		49.1	98		4	
trans-1,3-Dichloropropene	50.0	0.0	52.7	105		50.7	101		4	
1,1,2-Trichloroethane	50.0	0.0	52.2	104		49.4	99		6	
Tetrachloroethene	50.0	0.0	53.2	106		50.1	100		6	
1,3-Dichloropropane	50.0	0.0	53.2	106		49.7	99		7	

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: 06447-012
Client ID: MW-38DD
Date Received: NA
Date Analyzed: 07/30/2015
MS Data file: K2757.D
MSD Data file: K2758.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#
2-Hexanone	50.0	0.0	49.9	100		45.8	92		9	
Dibromochloromethane	50.0	0.0	51.8	104		49.8	100		4	
1,2-Dibromoethane (EDB)	50.0	0.0	53.1	106		50.0	100		6	
Chlorobenzene	50.0	0.0	51.6	103		49.9	100		3	
1,1,1,2-Tetrachloroethane	50.0	0.0	53.0	106		51.8	104		2	
Ethylbenzene	50.0	0.0	53.5	107		51.6	103		4	
m,p-Xylene	100	0.0	106.3	106		103.6	104		3	
o-Xylene	50.0	0.0	55.1	110		53.3	107		3	
Styrene	50.0	0.0	55.6	111		53.8	108		3	
Bromoform	50.0	0.0	50.6	101		49.9	100		1	
Isopropylbenzene	50.0	0.0	56.0	112		54.9	110		2	
1,1,2,2-Tetrachloroethane	50.0	0.0	51.6	103		49.5	99		4	
Bromobenzene	50.0	0.0	53.5	107		51.3	103		4	
1,2,3-Trichloropropane	50.0	0.0	51.2	102		49.0	98		4	
n-Propylbenzene	50.0	0.0	53.4	107		51.5	103		4	
2-Chlorotoluene	50.0	0.0	53.1	106		52.1	104		2	
1,3,5-Trimethylbenzene	50.0	0.0	54.3	109		53.7	107		1	
4-Chlorotoluene	50.0	0.0	52.8	106		51.3	103		3	
tert-Butylbenzene	50.0	0.0	55.7	111		55.4	111		1	
1,2,4-Trimethylbenzene	50.0	0.0	54.2	108		53.3	107		2	
sec-Butylbenzene	50.0	0.0	55.1	110		53.8	108		2	
1,3-Dichlorobenzene	50.0	0.0	52.0	104		50.8	102		2	
4-Isopropyltoluene	50.0	0.0	54.9	110		54.4	109		1	
1,4-Dichlorobenzene	50.0	0.0	52.0	104		50.8	102		2	
n-Butylbenzene	50.0	0.0	54.1	108		52.3	105		3	
1,2-Dichlorobenzene	50.0	0.0	52.6	105		52.1	104		1	
1,2-Dibromo-3-chloropropane	50.0	0.0	52.3	105		51.4	103		2	
1,2,4-Trichlorobenzene	50.0	0.0	56.8	114		56.1	112		1	
Hexachlorobutadiene	50.0	0.0	52.5	105		50.1	100		5	
Naphthalene	50.0	0.0	53.7	107		52.7	105		2	
1,2,3-Trichlorobenzene	50.0	0.0	57.1	114		55.2	110		3	
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	0.0	62.4	125		59.0	118		6	
Methyl acetate	50.0	0.0	46.8	94		46.0	92		2	
Cyclohexane	50.0	0.0	50.6	101		49.7	99		2	
Methylcyclohexane	50.0	0.0	55.3	111		53.5	107		3	

	Leachate Aqueous/Meoh	Soil/Sediment
MS/MSD Recovery Limits	70-130	70-130
MS/MSD RPD Limits (IAL/DKQP)	30/20	30/30

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: 06447-012
Client ID: MW-38DD
Date Received: NA
Date Analyzed: 07/30/2015
MS Data file: K2757.D
MSD Data file: K2758.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#

2-Chloroethyl vinyl ether has zero spike recovery in the MS/MSD. This is due to the HCL acid preservation used on the samples. It is a known phenomenon, that this compound decomposes in the presence of acid.

As per SW-846 8260C, up to 10% of the compounds may be out , but must be within 40-160%
As per NJDEP DKQPs, only the following compounds may be in the 40-160% range:
Acetone; Bromomethane; 2-Butanone (MEK); Carbon disulfide; Chloroethane; Chloromethane
1,2-Dibromo-3-chloropropane; Dichlorodifluoromethane; 1,4-Dioxane; 2-Hexanone
Naphthalene; 4-Methyl-2-pentanone (MIBK); Trichlorofluoromethane

	Leachate Aqueous/Meoh	Soil/Sediment
MS/MSD Recovery Limits	70-130	70-130
MS/MSD RPD Limits (IAL/DKQP)	30/20	30/30

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

INTEGRATED ANALYTICAL LABORATORIES

8260

MS/MSD SPIKE REPORT

Lab ID: 06527-001
Client ID: STREAM-1
Date Received: NA
Date Analyzed: 08/03/2015
MS Data file: G5715.D
MSD Data file: G5716.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#
Dichlorodifluoromethane	50.0	0.0	36.5	73		43.0	86		16	
Chloromethane	50.0	0.0	38.3	77		37.9	76		1	
Vinyl chloride	50.0	0.0	45.6	91		44.2	88		3	
Bromomethane	50.0	0.0	47.2	94		45.7	91		3	
Chloroethane	50.0	0.0	51.9	104		49.7	99		4	
Trichlorofluoromethane	50.0	0.0	42.7	85		42.8	86		0	
Acrolein	150	0.0	159	106		148	99		7	
1,1-Dichloroethene	50.0	0.0	56.4	113		55.2	110		2	
Acetone	50.0	0.0	53.2	106		50.5	101		5	
Carbon disulfide	50.0	0.0	50.7	101		49.8	100		2	
Vinyl acetate	50.0	0.0	42.5	85		34.9	70		20	
Methylene chloride	50.0	0.0	48.6	97		47.2	94		3	
Acrylonitrile	150	0.0	161	107		153	102		5	
tert-Butyl alcohol (TBA)	100	0.0	115.9	116		107.3	107		8	
trans-1,2-Dichloroethene	50.0	0.0	51.8	104		50.3	101		3	
Methyl tert-butyl ether (MTBE)	50.0	0.0	55.5	111		53.7	107		3	
1,1-Dichloroethane	50.0	0.0	52.0	104		50.2	100		4	
Diisopropyl ether (DIPE)	50.0	0.0	55.3	111		53.9	108		3	
cis-1,2-Dichloroethene	50.0	0.0	53.7	107		52.7	105		2	
2,2-Dichloropropane	50.0	0.0	46.0	92		44.5	89		3	
2-Butanone (MEK)	50.0	0.0	56.6	113		53.4	107		6	
Bromochloromethane	50.0	0.0	53.0	106		50.9	102		4	
Chloroform	50.0	0.0	52.6	105		50.9	102		3	
1,1,1-Trichloroethane	50.0	0.0	52.4	105		51.2	102		2	
Carbon tetrachloride	50.0	0.0	51.4	103		50.1	100		3	
1,1-Dichloropropene	50.0	0.0	52.7	105		51.1	102		3	
1,2-Dichloroethane (EDC)	50.0	0.0	53.0	106		51.0	102		4	
Benzene	50.0	0.0	53.8	108		52.3	105		3	
Trichloroethene	50.0	0.0	54.6	109		53.0	106		3	
1,2-Dichloropropane	50.0	0.0	53.2	106		52.1	104		2	
Dibromomethane	50.0	0.0	54.4	109		52.7	105		3	
1,4-Dioxane	1,500	0.0	1538	103		1401	93		9	
Bromodichloromethane	50.0	0.0	54.6	109		53.3	107		2	
2-Chloroethyl vinyl ether	50.0	0.0	0.0	0	*$	0.0	0	*$	NC	*$
cis-1,3-Dichloropropene	50.0	0.0	55.4	111		54.2	108		2	
4-Methyl-2-pentanone (MIBK)	50.0	0.0	54.3	109		59.0	118		8	
Toluene	50.0	0.0	52.7	105		51.9	104		2	
trans-1,3-Dichloropropene	50.0	0.0	55.6	111		54.1	108		3	
1,1,2-Trichloroethane	50.0	0.0	54.7	109		52.6	105		4	
Tetrachloroethene	50.0	0.0	52.8	106		52.0	104		2	
1,3-Dichloropropane	50.0	0.0	55.0	110		53.9	108		2	

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: 06527-001
Client ID: STREAM-1
Date Received: NA
Date Analyzed: 08/03/2015
MS Data file: G5715.D
MSD Data file: G5716.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#
2-Hexanone	50.0	0.0	58.5	117		59.4	119		2	
Dibromochloromethane	50.0	0.0	56.8	114		54.9	110		3	
1,2-Dibromoethane (EDB)	50.0	0.0	56.4	113		54.5	109		3	
Chlorobenzene	50.0	0.0	51.9	104		50.7	101		2	
1,1,1,2-Tetrachloroethane	50.0	0.0	53.8	108		52.8	106		2	
Ethylbenzene	50.0	0.0	54.7	109		53.6	107		2	
m,p-Xylene	100	0.0	110.0	110		107.2	107		3	
o-Xylene	50.0	0.0	54.0	108		52.7	105		2	
Styrene	50.0	0.0	56.6	113		55.2	110		3	
Bromoform	50.0	0.0	57.3	115		55.0	110		4	
Isopropylbenzene	50.0	0.0	57.9	116		56.6	113		2	
1,1,2,2-Tetrachloroethane	50.0	0.0	53.4	107		51.0	102		5	
Bromobenzene	50.0	0.0	52.7	105		51.5	103		2	
1,2,3-Trichloropropane	50.0	0.0	53.5	107		51.6	103		4	
n-Propylbenzene	50.0	0.0	55.2	110		53.5	107		3	
2-Chlorotoluene	50.0	0.0	54.2	108		52.3	105		4	
1,3,5-Trimethylbenzene	50.0	0.0	56.2	112		55.1	110		2	
4-Chlorotoluene	50.0	0.0	54.2	108		52.3	105		4	
tert-Butylbenzene	50.0	0.0	57.5	115		55.8	112		3	
1,2,4-Trimethylbenzene	50.0	0.0	57.1	114		55.0	110		4	
sec-Butylbenzene	50.0	0.0	57.1	114		55.8	112		2	
1,3-Dichlorobenzene	50.0	0.0	52.0	104		50.7	101		3	
4-Isopropyltoluene	50.0	0.0	57.4	115		56.0	112		2	
1,4-Dichlorobenzene	50.0	0.0	51.7	103		50.7	101		2	
n-Butylbenzene	50.0	0.0	58.7	117		56.6	113		4	
1,2-Dichlorobenzene	50.0	0.0	52.7	105		51.5	103		2	
1,2-Dibromo-3-chloropropane	50.0	0.0	59.3	119		56.4	113		5	
1,2,4-Trichlorobenzene	50.0	0.0	59.7	119		57.3	115		4	
Hexachlorobutadiene	50.0	0.0	54.4	109		52.7	105		3	
Naphthalene	50.0	0.0	65.0	130		62.4	125		4	
1,2,3-Trichlorobenzene	50.0	0.0	58.7	117		57.1	114		3	
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	0.0	52.6	105		51.5	103		2	
Methyl acetate	50.0	0.0	56.4	113		52.9	106		6	
Cyclohexane	50.0	0.0	53.0	106		51.4	103		3	
Methylcyclohexane	50.0	0.0	56.1	112		54.3	109		3	

	Leachate Aqueous/Meoh	Soil/Sediment
MS/MSD Recovery Limits	70-130	70-130
MS/MSD RPD Limits (IAL/DKQP)	30/20	30/30

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: 06527-001
Client ID: STREAM-1
Date Received: NA
Date Analyzed: 08/03/2015
MS Data file: G5715.D
MSD Data file: G5716.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#

2-Chloroethyl vinyl ether has zero spike recovery in the MS/MSD. This is due to the HCL acid preservation used on the samples. It is a known phenomenon, that this compound decomposes in the presence of acid.

As per SW-846 8260C, up to 10% of the compounds may be out , but must be within 40-160%
As per NJDEP DKQPs, only the following compounds may be in the 40-160% range:
Acetone; Bromomethane; 2-Butanone (MEK); Carbon disulfide; Chloroethane; Chloromethane
1,2-Dibromo-3-chloropropane; Dichlorodifluoromethane; 1,4-Dioxane; 2-Hexanone
Naphthalene; 4-Methyl-2-pentanone (MIBK); Trichlorofluoromethane

	Leachate Aqueous/Meoh	Soil/Sediment
MS/MSD Recovery Limits	70-130	70-130
MS/MSD RPD Limits (IAL/DKQP)	30/20	30/30

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

VOLATILE METHOD BLANK SUMMARY

Lab File ID: K2718.D Instrument ID: MSD_K

Date Analyzed: 07/30/2015 Time Analyzed: 03:32

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
MW-11D	06439-011DL	07/30/2015	3:58
LCSA150729b	LCSA150729b	07/30/2015	4:24
06420-001MS	06420-001MS	07/30/2015	4:50
06420-001MSD	06420-001MSD	07/30/2015	5:17
MW-1	06446-001	07/30/2015	6:09
MW-2	06446-002	07/30/2015	6:35
MW-17	06420-001	07/30/2015	7:01
MW-2	06420-002	07/30/2015	7:27
MW-5	06420-003	07/30/2015	7:53
FB-1	06420-004	07/30/2015	8:19
TB	06420-005	07/30/2015	8:45
MW-34D	06447-001	07/30/2015	9:12
MW-4S	06447-002	07/30/2015	9:37
MW-40D	06447-003	07/30/2015	10:03
MW-36D	06447-004	07/30/2015	10:30
MW-1	06446-001DL	07/30/2015	10:56
MW-10D	06439-010	07/30/2015	11:21

FORM **4**

VOLATILE METHOD BLANK SUMMARY

Lab File ID: K2748.D Instrument ID: MSD_K

Date Analyzed: 07/30/2015 Time Analyzed: 04:37

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
GPEC-MW-16	06668-001	07/30/2015	5:04
MW-33S	06447-006	07/30/2015	5:30
MW-24S	06447-010	07/30/2015	5:55
MW-38D	06447-011	07/30/2015	6:22
LCSTA150730a	LCSTA150730a	07/30/2015	6:48
06666-001TPH-MS	06666-001TPH-MS	07/30/2015	7:14
06666-001TPH-MSD	06666-001TPH-MSD	07/30/2015	7:40
LCSA150730a	LCSA150730a	07/30/2015	8:06
06447-012MS	06447-012MS	07/30/2015	8:32
06447-012MSD	06447-012MSD	07/30/2015	8:58
MW1	06666-001	07/30/2015	9:24
MW-29S	06447-007	07/30/2015	9:50
MW-29D	06447-008	07/30/2015	10:16
MW-31S	06447-009	07/30/2015	10:42
MW-38DD	06447-012	07/30/2015	11:08
FB-2	06447-013	07/30/2015	11:34
TB	06447-014	07/31/2015	12:00
GPEC-MW-16	06668-001DL	07/31/2015	12:26

FORM **4**

VOLATILE METHOD BLANK SUMMARY

Lab File ID: G5696.D Instrument ID: MSD_G

Date Analyzed: 08/03/2015 Time Analyzed: 09:59

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
FB-2	06527-009	08/03/2015	10:27
TB-2	06527-010	08/03/2015	10:55
STREAM-1	06527-001	08/03/2015	11:23
STREAM-2	06527-002	08/03/2015	11:51
MW-21	06527-003	08/03/2015	12:20
MW-7	06527-004	08/03/2015	12:48
STREAM-1	06527-005	08/03/2015	13:17
MW-13	06527-006	08/03/2015	13:45
MW-20	06527-007	08/03/2015	14:13
DUP-1	06527-008	08/03/2015	14:41
FB-3	06541-016	08/03/2015	15:10
TB	06541-017	08/03/2015	15:38
MW-5S	06541-001	08/03/2015	16:07
MW-8S	06541-002	08/03/2015	16:35
MW-8D	06541-003	08/03/2015	17:04
MW-4S	06447-2DL	08/03/2015	17:32
MW-13SR	06447-005	08/03/2015	18:00
LCSA150803a	LCSA150803a	08/03/2015	18:28
6527-001MS	6527-001MS	08/03/2015	18:56
6527-001MSD	6527-001MSD	08/03/2015	19:24

FORM **4**

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: K2506.D BFB Injection Date: 07/23/2015

Inst ID: MSD_K BFB Injection Time: 3:00

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	24.3			
75	30.0 - 60.0% of mass 95	55.1			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	5.8			
173	Less than 2.0% of mass 174	1.1	(	1.3	)1
174	Great than 50.0% of mass 95	83.9			
175	5.0 - 9.0% of mass 174	6.3	(	7.5	)1
176	95.0 - 101.0% of mass 174	81.8	(	97.5	)1
177	5.0 - 9.0% of mass 176	4.3	(	5.3	)2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ICC100	ICC100	K2513.D	07/23/2015	6:10
ICC001	ICC001	K2509.D	07/23/2015	4:25
ICC002	ICC002	K2510.D	07/23/2015	4:51
ICC005	ICC005	K2511.D	07/23/2015	5:17
ICC020	ICC020	K2512.D	07/23/2015	5:44
ICC150	ICC150	K2514.D	07/23/2015	6:36
ICC200	ICC200	K2515.D	07/23/2015	7:02
ICV100	ICV100	K2517.D	07/23/2015	7:54

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: K2714.D BFB Injection Date: 07/30/2015

Inst ID: MSD_K BFB Injection Time: 1:47

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	22.1			
75	30.0 - 60.0% of mass 95	54.0			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	7.5			
173	Less than 2.0% of mass 174	0.7	(	0.9	)1
174	Great than 50.0% of mass 95	80.6			
175	5.0 - 9.0% of mass 174	6.2	(	7.7	)1
176	95.0 - 101.0% of mass 174	80.4	(	99.7	)1
177	5.0 - 9.0% of mass 176	5.1	(	6.4	)2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
CCV100	CCV100	K2715.D	07/30/2015	2:13
BLKA150729b	BLKA150729b	K2718.D	07/30/2015	3:32
MW-11D	06439-011DL	K2719.D	07/30/2015	3:58
LCSA150729b	LCSA150729b	K2720.D	07/30/2015	4:24
06420-001MS	06420-001MS	K2721.D	07/30/2015	4:50
06420-001MSD	06420-001MSD	K2722.D	07/30/2015	5:17
MW-1	06446-001	K2724.D	07/30/2015	6:09
MW-2	06446-002	K2725.D	07/30/2015	6:35
MW-17	06420-001	K2726.D	07/30/2015	7:01
MW-2	06420-002	K2727.D	07/30/2015	7:27
MW-5	06420-003	K2728.D	07/30/2015	7:53
FB-1	06420-004	K2729.D	07/30/2015	8:19
TB	06420-005	K2730.D	07/30/2015	8:45
MW-34D	06447-001	K2731.D	07/30/2015	9:12
MW-4S	06447-002	K2732.D	07/30/2015	9:37
MW-40D	06447-003	K2733.D	07/30/2015	10:03
MW-36D	06447-004	K2734.D	07/30/2015	10:30
MW-1	06446-001DL	K2735.D	07/30/2015	10:56
MW-10D	06439-010	K2736.D	07/30/2015	11:21

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: K2740.D BFB Injection Date: 07/30/2015

Inst ID: MSD_K BFB Injection Time: 1:07

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	24.7			
75	30.0 - 60.0% of mass 95	53.2			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	6.1			
173	Less than 2.0% of mass 174	0.0	(	0.0	)1
174	Great than 50.0% of mass 95	72.2			
175	5.0 - 9.0% of mass 174	6.1	(	8.4	)1
176	95.0 - 101.0% of mass 174	72.1	(	99.9	)1
177	5.0 - 9.0% of mass 176	5.6	(	7.7	)2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
CCV100	CCV100	K2743.D	07/30/2015	2:25
CCV1000	CCV1000	K2745.D	07/30/2015	3:17
BLKA150730a	BLKA150730a	K2748.D	07/30/2015	4:37
GPEC-MW-16	06668-001	K2749.D	07/30/2015	5:04
MW-33S	06447-006	K2750.D	07/30/2015	5:30
MW-24S	06447-010	K2751.D	07/30/2015	5:55
MW-38D	06447-011	K2752.D	07/30/2015	6:22
LCSTA150730a	LCSTA150730a	K2753.D	07/30/2015	6:48
06666-001TPH-MS	06666-001TPH-M:	K2754.D	07/30/2015	7:14
06666-001TPH-MS	06666-001TPH-M:	K2755.D	07/30/2015	7:40
LCSA150730a	LCSA150730a	K2756.D	07/30/2015	8:06
06447-012MS	06447-012MS	K2757.D	07/30/2015	8:32
06447-012MSD	06447-012MSD	K2758.D	07/30/2015	8:58
MW1	06666-001	K2759.D	07/30/2015	9:24
MW-29S	06447-007	K2760.D	07/30/2015	9:50
MW-29D	06447-008	K2761.D	07/30/2015	10:16
MW-31S	06447-009	K2762.D	07/30/2015	10:42
MW-38DD	06447-012	K2763.D	07/30/2015	11:08
FB-2	06447-013	K2764.D	07/30/2015	11:34
TB	06447-014	K2765.D	07/31/2015	12:00

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: K2740.D BFB Injection Date : 07/30/201

Inst ID: MSD_K BFB Injection Time: 1:07

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	24.7			
75	30.0 - 60.0% of mass 95	53.2			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	6.1			
173	Less than 2.0% of mass 174	0.0	(	0.0	)1
174	Great than 50.0% of mass 95	72.2			
175	5.0 - 9.0% of mass 174	6.1	(	8.4	)1
176	95.0 - 101.0% of mass 174	72.1	(	99.9	)1
177	5.0 - 9.0% of mass 176	5.6	(	7.7	)2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
GPEC-MW-16	06668-001DL	K2766.D	07/31/2015	12:26

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: G5560.D BFB Injection Date: 07/29/2015

Inst ID: MSD_G BFB Injection Time: 7:09

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	22.6			
75	30.0 - 60.0% of mass 95	48.1			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	6.6			
173	Less than 2.0% of mass 174	0.0	(	0.0	)1
174	Great than 50.0% of mass 95	70.6			
175	5.0 - 9.0% of mass 174	5.4	(	7.6	)1
176	95.0 - 101.0% of mass 174	67.6	(	95.8	)1
177	5.0 - 9.0% of mass 176	4.3	(	6.4	)2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ICC100	ICC100	G5565.D	07/29/2015	10:04
ICC001	ICC001	G5561.D	07/29/2015	7:37
ICC002	ICC002	G5562.D	07/29/2015	8:05
ICC005	ICC005	G5563.D	07/29/2015	8:33
ICC020	ICC020	G5564.D	07/29/2015	9:36
ICC150	ICC150	G5566.D	07/29/2015	10:32
ICC200	ICC200	G5567.D	07/29/2015	11:01
ICV100	ICV100	G5569.D	07/29/2015	11:56
BLKA150729a	BLKA150729a	G5571.D	07/29/2015	12:53
BETWEEN	06264-1DL	G5572.D	07/29/2015	13:21
EFFLUENT	06264-2DL	G5573.D	07/29/2015	13:49
MW-12D	06454-7DL	G5574.D	07/29/2015	14:17
REP072315	06454-8DL	G5575.D	07/29/2015	14:45
MW-1	06487-001	G5576.D	07/29/2015	15:13
MW-2	06487-002	G5577.D	07/29/2015	15:41
MW-3	06487-003	G5578.D	07/29/2015	16:09
MW-4	06487-004	G5579.D	07/29/2015	16:38
MW-5	06487-005	G5580.D	07/29/2015	17:06
LCSA150729a	LCSA150729a	G5581.D	07/29/2015	17:34
6487-003MS	6487-003MS	G5582.D	07/29/2015	18:02

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: G5560.D BFB Injection Date : 07/29/201

Inst ID: MSD_G BFB Injection Time: 7:09

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	22.6			
75	30.0 - 60.0% of mass 95	48.1			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	6.6			
173	Less than 2.0% of mass 174	0.0	(	0.0	)1
174	Great than 50.0% of mass 95	70.6			
175	5.0 - 9.0% of mass 174	5.4	(	7.6	)1
176	95.0 - 101.0% of mass 174	67.6	(	95.8	)1
177	5.0 - 9.0% of mass 176	4.3	(	6.4	)2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
6487-003MSD	6487-003MSD	G5583.D	07/29/2015	18:31

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: G5693.D BFB Injection Date: 08/03/2015

Inst ID: MSD_G BFB Injection Time: 8:25

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	21.8			
75	30.0 - 60.0% of mass 95	47.9			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	6.4			
173	Less than 2.0% of mass 174	0.2	(	0.3	)1
174	Great than 50.0% of mass 95	69.5			
175	5.0 - 9.0% of mass 174	5.1	(	7.4	)1
176	95.0 - 101.0% of mass 174	66.7	(	95.9	)1
177	5.0 - 9.0% of mass 176	4.3	(	6.5	)2
	1-Value is % mass 174	2-Value is % mass 176			

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
CCV100	CCV100	G5694.D	08/03/2015	8:53
BLKA150803a	BLKA150803a	G5696.D	08/03/2015	9:59
FB-2	06527-009	G5697.D	08/03/2015	10:27
TB-2	06527-010	G5698.D	08/03/2015	10:55
STREAM-1	06527-001	G5699.D	08/03/2015	11:23
STREAM-2	06527-002	G5700.D	08/03/2015	11:51
MW-21	06527-003	G5701.D	08/03/2015	12:20
MW-7	06527-004	G5702.D	08/03/2015	12:48
STREAM-1	06527-005	G5703.D	08/03/2015	13:17
MW-13	06527-006	G5704.D	08/03/2015	13:45
MW-20	06527-007	G5705.D	08/03/2015	14:13
DUP-1	06527-008	G5706.D	08/03/2015	14:41
FB-3	06541-016	G5707.D	08/03/2015	15:10
TB	06541-017	G5708.D	08/03/2015	15:38
MW-5S	06541-001	G5709.D	08/03/2015	16:07
MW-8S	06541-002	G5710.D	08/03/2015	16:35
MW-8D	06541-003	G5711.D	08/03/2015	17:04
MW-4S	06447-2DL	G5712.D	08/03/2015	17:32
MW-13SR	06447-005	G5713.D	08/03/2015	18:00
LCSA150803a	LCSA150803a	G5714.D	08/03/2015	18:28

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: G5693.D BFB Injection Date : 08/03/201

Inst ID: MSD_G BFB Injection Time: 8:25

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	21.8			
75	30.0 - 60.0% of mass 95	47.9			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	6.4			
173	Less than 2.0% of mass 174	0.2	(	0.3	)1
174	Great than 50.0% of mass 95	69.5			
175	5.0 - 9.0% of mass 174	5.1	(	7.4	)1
176	95.0 - 101.0% of mass 174	66.7	(	95.9	)1
177	5.0 - 9.0% of mass 176	4.3	(	6.5	)2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
6527-001MS	6527-001MS	G5715.D	08/03/2015	18:56
6527-001MSD	6527-001MSD	G5716.D	08/03/2015	19:24

Response Factor Report MSD_K

Method Path : C:\MSDCHEM\1\METHODS\
Method File : K8072315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C
Last Update : Fri Jul 24 09:51:48 2015
Response Via : Initial Calibration

07/24/15

Calibration Files
1.00=K2509.D 2.00=K2510.D 5.00=K2511.D
20 =K2512.D 100 =K2513.D 150 =K2514.D 200 =K2515.D

		Compound	1.00	2.00	5.00	20	100	150	200	Avg	%RSD
1)	I	Pentafluorobenzene	----------ISTD----------								
2)	T	Dichlorodifluorom	0.515	0.418	0.479	0.546	0.546	0.530	0.527	0.509	9.05
3)	P	Chloromethane	0.706	0.736	0.696	0.806	0.862	0.900	0.899	0.801	11.11
4)	C	Vinyl chloride	0.572	0.557	0.578	0.652	0.680	0.689	0.687	0.631	9.42
5)	T	Bromomethane	0.316	0.301	0.276	0.260	0.228	0.242	0.186	0.259	17.20
6)	T	Chloroethane	0.199	0.270	0.256	0.255	0.303	0.296	0.265	0.263	12.95
7)	T	Trichlorofluorome	0.604	0.544	0.570	0.701	0.722	0.711	0.672	0.647	11.25
9)	MC	1,1-Dichloroethen	0.386	0.369	0.413	0.425	0.403	0.452	0.393	0.406	6.66
10)	T	Acetone			0.412	0.388	0.360	0.373	0.296	0.366	11.94
11)	T	Carbon disulfide	1.289	1.133	1.248	1.312	1.318	1.339	1.139	1.254	6.82
12)	T	Vinyl acetate	1.245	1.747	0.971	1.169	1.332	1.276	1.079	1.260	19.65
13)	T	Methylene chlorid	0.642	0.487	0.514	0.510	0.514	0.515	0.441	0.518	11.80
14)	T	Acrylonitrile	0.221	0.186	0.221	0.238	0.252	0.254		0.229	11.03
15)	T	tert-Butyl alcoho	0.062	0.058	0.058	0.063	0.064	0.069	0.063	0.062	6.29
16)	T	trans-1,2-Dichlor	0.453	0.467	0.470	0.503	0.523	0.535	0.456	0.487	6.84
17)	T	Methyl tert-butyl	1.298	1.310	1.405	1.512	1.631	1.686	1.475	1.474	10.13
18)	P	1,1-Dichloroethan	0.936	1.004	0.976	1.052	1.100	1.130	0.976	1.025	6.97
19)	T	Diisopropyl ether	1.870	2.100	2.113	2.390	2.615	2.690	2.246	2.289	12.87
20)	T	cis-1,2-Dichloroe	0.467	0.498	0.486	0.545	0.581	0.598	0.514	0.527	9.34
21)	T	2,2-Dichloropropa	0.535	0.610	0.533	0.586	0.558	0.566	0.460	0.550	8.69
22)	T	2-Butanone (MEK)		0.376	0.371	0.393	0.410	0.422	0.352	0.387	6.75
23)	T	Bromochloromethan	0.241	0.238	0.236	0.250	0.265	0.269	0.243	0.249	5.38
25)	C	Chloroform	0.843	0.906	0.885	0.936	0.988	0.999	0.885	0.920	6.22
26)	T	1,1,1-Trichloroet	0.785	0.819	0.762	0.835	0.848	0.868	0.797	0.816	4.57
27)	T	Carbon tetrachlor	0.729	0.689	0.695	0.762	0.795	0.799	0.760	0.747	5.95
28)	T	1,1-Dichloroprope	0.681	0.691	0.653	0.741	0.790	0.818	0.800	0.739	8.85
29)	T	1,2-Dichloroethan	0.782	0.801	0.801	0.840	0.899	0.895	0.867	0.841	5.68
30)	S	1,2-Dichloroethan	0.732	0.724	0.734	0.742	0.739	0.729	0.711	0.730	1.43
31)	I	1,4-Difluorobenzene	----------ISTD----------								
32)	M	Benzene	1.145	1.252	1.166	1.229	1.295	1.307	1.273	1.238	5.04
33)	M	Trichloroethene	0.298	0.329	0.303	0.320	0.337	0.341	0.335	0.323	5.29
34)	C	1,2-Dichloropropa	0.324	0.345	0.317	0.348	0.369	0.372	0.364	0.348	6.15
35)	T	Dibromomethane	0.165	0.191	0.178	0.182	0.193	0.190	0.185	0.183	5.30
36)	T	1,4-Dioxane	0.002	0.003	0.003	0.003	0.003			0.003	8.88
37)	T	Bromodichlorometh	0.407	0.405	0.409	0.433	0.458	0.457	0.447	0.431	5.52
38)	T	2-Chloroethyl vin	0.044	0.057	0.047	0.057	0.065	0.067	0.067	0.058	16.23
39)	T	cis-1,3-Dichlorop	0.396	0.419	0.420	0.477	0.525	0.530	0.520	0.470	12.26
40)	T	4-Methyl-2-pentan	0.340	0.345	0.347	0.394	0.413	0.416	0.401	0.380	8.97
41)	S	Toluene-d8	1.185	1.191	1.176	1.208	1.197	1.185	1.189	1.190	0.85
42)	MC	Toluene	0.763	0.807	0.710	0.760	0.803	0.801	0.778	0.775	4.43
43)	T	trans-1,3-Dichlor	0.401	0.419	0.403	0.454	0.492	0.489	0.478	0.448	8.96
44)	T	1,1,2-Trichloroet	0.202	0.216	0.199	0.219	0.226	0.225	0.218	0.215	4.90
45)	T	Tetrachloroethene	0.301	0.324	0.280	0.314	0.314	0.312	0.298	0.306	4.72
46)	T	1,3-Dichloropropa	0.420	0.443	0.415	0.459	0.484	0.485	0.466	0.453	6.21
47)	T	2-Hexanone	0.273	0.293	0.303	0.339	0.350	0.352	0.328	0.320	9.54
48)	T	Dibromochlorometh	0.292	0.276	0.276	0.296	0.322	0.318	0.305	0.298	6.14
49)	T	1,2-Dibromoethane	0.237	0.255	0.242	0.260	0.278	0.278	0.264	0.259	6.20
50)	I	Chlorobenzene-d5	----------ISTD----------								
51)	MP	Chlorobenzene	0.848	0.905	0.805	0.867	0.916	0.918	0.888	0.878	4.70
52)	T	1,1,1,2-Tetrachlo	0.299	0.339	0.302	0.323	0.351	0.344	0.336	0.328	6.22
53)	C	Ethylbenzene	1.387	1.549	1.426	1.607	1.712	1.721	1.667	1.581	8.47

54)	T	m,p-Xylene	0.511	0.556	0.545	0.597	0.634	0.629	0.600	0.582	7.83
55)	T	o-Xylene	0.434	0.505	0.523	0.577	0.620	0.606	0.580	0.549	11.92
56)	T	Styrene	0.728	0.837	0.885	0.997	1.074	1.050	0.998	0.939	13.41
57)	P	Bromoform	0.195	0.199	0.196	0.214	0.239	0.235	0.225	0.215	8.72
58)	T	Isopropylbenzene	1.162	1.278	1.302	1.537	1.676	1.653	1.596	1.458	14.14
59)	S	Bromofluorobenzen	0.517	0.532	0.548	0.558	0.560	0.549	0.539	0.543	2.78
60)	P	1,1,2,2-Tetrachlo	0.348	0.357	0.349	0.366	0.376	0.379	0.364	0.363	3.33
61)	T	Bromobenzene	0.349	0.362	0.336	0.379	0.397	0.384	0.368	0.368	5.67
62)	T	1,2,3-Trichloropr	0.324	0.358	0.336	0.341	0.360	0.355	0.335	0.344	3.98
63)	T	n-Propylbenzene	1.649	1.738	1.659	1.899	2.054	2.013	1.920	1.847	8.97
64)	T	2-Chlorotoluene	0.967	1.075	1.017	1.126	1.215	1.181	1.134	1.102	8.01
65)	T	1,3,5-Trimethylbe	1.029	1.185	1.194	1.326	1.450	1.404	1.342	1.276	11.50
66)	T	4-Chlorotoluene	1.176	1.272	1.235	1.339	1.449	1.411	1.343	1.318	7.33
67)	T	tert-Butylbenzene	0.801	0.908	0.877	1.046	1.188	1.142	1.096	1.008	14.57
68)	T	1,2,4-Trimethylbe	1.034	1.195	1.212	1.358	1.467	1.403	1.350	1.289	11.53
69)	T	sec-Butylbenzene	1.266	1.359	1.352	1.590	1.741	1.674	1.601	1.512	12.15
70)	T	1,3-Dichlorobenze	0.637	0.692	0.676	0.705	0.752	0.712	0.684	0.694	5.10
71)	T	4-Isopropyltoluen	1.036	1.160	1.168	1.352	1.470	1.410	1.349	1.278	12.35
72)	T	1,4-Dichlorobenze	0.647	0.694	0.660	0.697	0.759	0.719	0.686	0.695	5.36
73)	T	n-Butylbenzene	1.011	1.049	1.023	1.219	1.379	1.312	1.240	1.176	12.62
74)	T	1,2-Dichlorobenze	0.569	0.605	0.605	0.658	0.694	0.650	0.623	0.629	6.58
75)	T	1,2-Dibromo-3-chl	0.199	0.223	0.217	0.234	0.253	0.239	0.232	0.228	7.51
76)	T	1,2,4-Trichlorobe	0.309	0.319	0.310	0.366	0.444	0.411	0.409	0.367	15.09
77)	T	Hexachlorobutadie	0.204	0.187	0.165	0.177	0.199	0.179	0.178	0.184	7.41
78)	T	Naphthalene			0.648	0.833	0.986	0.930	0.936	0.867	15.48
79)	T	1,2,3-Trichlorobe	0.264	0.266	0.262	0.302	0.356	0.327	0.332	0.301	12.76
80)	T	1,1,2-Trichloro-1	0.256	0.196	0.252	0.277	0.258	0.265	0.233	0.248	10.68
81)	T	Methyl acetate	0.457	0.365	0.463	0.457	0.453	0.462	0.376	0.433	9.96
82)	T	Cyclohexane			0.636	0.703	0.719	0.735	0.731	0.705	5.74
83)	T	Methylcyclohexane	0.531	0.427	0.472	0.569	0.579	0.587	0.578	0.535	11.61

(#) = Out of Range ### Number of calibration levels exceeded format ###

K8072315.M Mon Jul 27 12:22:30 2015

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\07-23-15\
Data File : K2517.D
Acq On : 23 Jul 2015 19:54
Operator : BARBARA
Sample : ICV100,ICV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 24 09:52:27 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Fri Jul 24 09:51:48 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 35% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	118	0.00
2	T	Dichlorodifluoromethane	0.509	0.542	-6.5	118	-0.01
3	P	Chloromethane	0.801	0.901	-12.5	124	0.00
4	C	Vinyl chloride	0.631	0.697	-10.5	122	0.01
5	T	Bromomethane	0.259	0.229	11.6	119	0.00
6	T	Chloroethane	0.263	0.292	-11.0	114	0.00
7	T	Trichlorofluoromethane	0.647	0.698	-7.9	114	0.02
9	MC	1,1-Dichloroethene	0.406	0.455	-12.1	134	0.01
10	T	Acetone	0.366	0.353	3.6	116	0.01
11	T	Carbon disulfide	1.254	1.372	-9.4	123	0.02
12	T	Vinyl acetate	1.260	1.251	0.7	111	0.00
13	T	Methylene chloride	0.518	0.528	-1.9	122	0.05
14	T	Acrylonitrile	0.229	0.266	-16.2	125	0.00
15	T	tert-Butyl alcohol (TBA)	0.062	0.070	-12.9	129	0.02
16	T	trans-1,2-Dichloroethene	0.487	0.536	-10.1	122	0.00
17	T	Methyl tert-butyl ether (MT	1.474	1.666	-13.0	121	0.00
18	P	1,1-Dichloroethane	1.025	1.116	-8.9	120	0.00
19	T	Diisopropyl ether (DIPE)	2.289	2.639	-15.3	120	0.01
20	T	cis-1,2-Dichloroethene	0.527	0.599	-13.7	122	0.00
21	T	2,2-Dichloropropane	0.550	0.512	6.9	109	0.00
22	T	2-Butanone (MEK)	0.387	0.408	-5.4	118	0.00
23	T	Bromochloromethane	0.249	0.275	-10.4	123	0.00
25	C	Chloroform	0.920	0.986	-7.2	118	0.00
26	T	1,1,1-Trichloroethane	0.816	0.836	-2.5	117	0.00
27	T	Carbon tetrachloride	0.747	0.769	-2.9	115	0.00
28	T	1,1-Dichloropropene	0.739	0.808	-9.3	121	0.00
29	T	1,2-Dichloroethane (EDC)	0.841	0.862	-2.5	114	0.00
30	S	1,2-Dichloroethane-d4	0.730	0.717	1.8	115	0.00
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	121	0.00
32	M	Benzene	1.238	1.297	-4.8	122	0.00
33	M	Trichloroethene	0.323	0.337	-4.3	122	0.00
34	C	1,2-Dichloropropane	0.348	0.366	-5.2	121	0.00
35	T	Dibromomethane	0.183	0.188	-2.7	119	0.00
36	T	1,4-Dioxane	0.003	0.003	0.0	126	0.00
37	T	Bromodichloromethane	0.431	0.443	-2.8	117	0.00
38	T	2-Chloroethyl vinyl ether	0.058	0.066	-13.8	123	0.00
39	T	cis-1,3-Dichloropropene	0.470	0.518	-10.2	120	0.00
40	T	4-Methyl-2-pentanone (MIBK)	0.380	0.409	-7.6	120	0.00
41	S	Toluene-d8	1.190	1.190	0.0	121	0.00
42	MC	Toluene	0.775	0.782	-0.9	118	0.00
43	T	trans-1,3-Dichloropropene	0.448	0.470	-4.9	116	0.00
44	T	1,1,2-Trichloroethane	0.215	0.221	-2.8	119	0.00
45	T	Tetrachloroethene	0.306	0.307	-0.3	119	0.00
46	T	1,3-Dichloropropane	0.453	0.474	-4.6	119	0.00
47	T	2-Hexanone	0.320	0.334	-4.4	116	0.00

48	T	Dibromochloromethane	0.298	0.306	-2.7	115	0.00
49	T	1,2-Dibromoethane (EDB)	0.259	0.270	-4.2	118	0.00
50	I	Chlorobenzene-d5	1.000	1.000	0.0	120	0.00
51	MP	Chlorobenzene	0.878	0.892	-1.6	116	0.00
52	T	1,1,1,2-Tetrachloroethane	0.328	0.336	-2.4	115	0.00
53	C	Ethylbenzene	1.581	1.663	-5.2	116	0.00
54	T	m,p-Xylene	0.582	0.608	-4.5	115	0.00
55	T	o-Xylene	0.549	0.592	-7.8	114	0.00
56	T	Styrene	0.939	1.025	-9.2	114	0.00
57	P	Bromoform	0.215	0.227	-5.6	114	0.00
58	T	Isopropylbenzene	1.458	1.591	-9.1	114	0.00
59	S	Bromofluorobenzene	0.543	0.539	0.7	115	0.00
60	P	1,1,2,2-Tetrachloroethane	0.363	0.373	-2.8	118	0.00
61	T	Bromobenzene	0.368	0.377	-2.4	114	0.00
62	T	1,2,3-Trichloropropane	0.344	0.344	0.0	114	0.00
63	T	n-Propylbenzene	1.847	1.938	-4.9	113	0.00
64	T	2-Chlorotoluene	1.102	1.135	-3.0	112	0.00
65	T	1,3,5-Trimethylbenzene	1.276	1.349	-5.7	111	0.00
66	T	4-Chlorotoluene	1.318	1.350	-2.4	111	0.00
67	T	tert-Butylbenzene	1.008	1.105	-9.6	111	0.00
68	T	1,2,4-Trimethylbenzene	1.289	1.354	-5.0	110	0.00
69	T	sec-Butylbenzene	1.512	1.612	-6.6	111	0.00
70	T	1,3-Dichlorobenzene	0.694	0.698	-0.6	111	0.00
71	T	4-Isopropyltoluene	1.278	1.355	-6.0	110	0.00
72	T	1,4-Dichlorobenzene	0.695	0.699	-0.6	110	0.00
73	T	n-Butylbenzene	1.176	1.259	-7.1	109	0.00
74	T	1,2-Dichlorobenzene	0.629	0.642	-2.1	111	0.00
75	T	1,2-Dibromo-3-chloropropane	0.228	0.228	0.0	108	0.00
76	T	1,2,4-Trichlorobenzene	0.367	0.412	-12.3	111	0.00
77	T	Hexachlorobutadiene	0.184	0.178	3.3	107	0.00
78	T	Naphthalene	0.867	0.944	-8.9	114	0.00
79	T	1,2,3-Trichlorobenzene	0.301	0.336	-11.6	113	0.00
80	T	1,1,2-Trichloro-1,2,2-trifl	0.248	0.264	-6.5	122	0.00
81	T	Methyl acetate	0.433	0.468	-8.1	123	0.00
82	T	Cyclohexane	0.705	0.747	-6.0	124	0.00
83	T	Methylcyclohexane	0.535	0.597	-11.6	123	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

K8072315.M Thu Jul 30 14:18:33 2015 MSD-K

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2715.D
Acq On : 30 Jul 2015 2:13 am
Operator : BARBARA
Sample : CCV100,CCV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Jul 30 02:32:33 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 35% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	141	0.00
2	T	Dichlorodifluoromethane	0.509	0.423	14.8	99	0.00
3	P	Chloromethane	0.801	0.652	18.6	107	0.01
4	C	Vinyl chloride	0.631	0.560	11.3	116	0.02
5	T	Bromomethane	0.259	0.247	4.6	153	0.01
6	T	Chloroethane	0.263	0.305	-16.0	141	0.00
7	T	Trichlorofluoromethane	0.647	0.557	13.9	109	0.01
9	MC	1,1-Dichloroethene	0.406	0.390	3.9	136	0.00
10	T	Acetone	0.366	0.306	16.4	120	0.01
11	T	Carbon disulfide	1.254	1.195	4.7	128	0.01
12	T	Vinyl acetate	1.260	1.051	16.6	111	0.00
13	T	Methylene chloride	0.518	0.478	7.7	131	0.00
14	T	Acrylonitrile	0.229	0.217	5.2	121	0.00
15	T	tert-Butyl alcohol (TBA)	0.062	0.057	8.1	126	0.01
16	T	trans-1,2-Dichloroethene	0.487	0.472	3.1	127	0.00
17	T	Methyl tert-butyl ether (MT	1.474	1.472	0.1	127	0.00
18	P	1,1-Dichloroethane	1.025	0.997	2.7	128	0.00
19	T	Diisopropyl ether (DIPE)	2.289	2.272	0.7	122	0.01
20	T	cis-1,2-Dichloroethene	0.527	0.533	-1.1	129	0.00
22	T	2-Butanone (MEK)	0.387	0.353	8.8	121	0.00
23	T	Bromochloromethane	0.249	0.240	3.6	128	0.00
24	T	Tetrahydrofuran	0.000	0.000	0.0	105	0.00
25	C	Chloroform	0.920	0.887	3.6	127	0.00
26	T	1,1,1-Trichloroethane	0.816	0.748	8.3	124	0.00
27	T	Carbon tetrachloride	0.747	0.658	11.9	117	0.00
28	T	1,1-Dichloropropene	0.739	0.688	6.9	123	0.00
29	T	1,2-Dichloroethane (EDC)	0.841	0.754	10.3	118	0.00
30	S	1,2-Dichloroethane-d4	0.730	0.631	13.6	120	0.00
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	130	0.00
32	M	Benzene	1.238	1.275	-3.0	128	0.00
33	M	Trichloroethene	0.323	0.334	-3.4	129	0.00
34	C	1,2-Dichloropropane	0.348	0.353	-1.4	125	0.00
35	T	Dibromomethane	0.183	0.182	0.5	123	0.00
36	T	1,4-Dioxane	0.003	0.003	0.0	119	0.00
37	T	Bromodichloromethane	0.431	0.433	-0.5	123	0.00
39	T	cis-1,3-Dichloropropene	0.470	0.489	-4.0	121	0.00
40	T	4-Methyl-2-pentanone (MIBK)	0.380	0.382	-0.5	121	0.00
41	S	Toluene-d8	1.190	1.165	2.1	127	0.00
42	MC	Toluene	0.775	0.776	-0.1	126	0.00
43	T	trans-1,3-Dichloropropene	0.448	0.446	0.4	118	0.00
44	T	1,1,2-Trichloroethane	0.215	0.215	0.0	124	0.01
45	T	Tetrachloroethene	0.306	0.293	4.2	121	0.00
46	T	1,3-Dichloropropane	0.453	0.460	-1.5	124	0.00
47	T	2-Hexanone	0.320	0.317	0.9	118	0.00
48	T	Dibromochloromethane	0.298	0.298	0.0	121	0.00

49	T	1,2-Dibromoethane (EDB)	0.259	0.263	-1.5	123	0.00
50	I	Chlorobenzene-d5	1.000	1.000	0.0	126	0.00
51	MP	Chlorobenzene	0.878	0.899	-2.4	123	0.00
52	T	1,1,1,2-Tetrachloroethane	0.328	0.336	-2.4	120	0.00
53	C	Ethylbenzene	1.581	1.667	-5.4	122	0.00
54	T	m,p-Xylene	0.582	0.604	-3.8	120	0.00
55	T	o-Xylene	0.549	0.587	-6.9	119	0.00
56	T	Styrene	0.939	1.011	-7.7	118	0.00
57	P	Bromoform	0.215	0.215	0.0	113	0.00
58	T	Isopropylbenzene	1.458	1.574	-8.0	118	0.00
59	S	Bromofluorobenzene	0.543	0.540	0.6	121	0.00
60	P	1,1,2,2-Tetrachloroethane	0.363	0.346	4.7	116	0.00
61	T	Bromobenzene	0.368	0.375	-1.9	119	0.00
62	T	1,2,3-Trichloropropane	0.344	0.337	2.0	118	0.00
63	T	n-Propylbenzene	1.847	1.886	-2.1	115	0.00
64	T	2-Chlorotoluene	1.102	1.134	-2.9	117	0.00
65	T	1,3,5-Trimethylbenzene	1.276	1.331	-4.3	115	0.00
66	T	4-Chlorotoluene	1.318	1.328	-0.8	115	0.00
67	T	tert-Butylbenzene	1.008	1.075	-6.6	114	0.00
68	T	1,2,4-Trimethylbenzene	1.289	1.341	-4.0	115	0.00
69	T	sec-Butylbenzene	1.512	1.542	-2.0	111	0.00
70	T	1,3-Dichlorobenzene	0.694	0.681	1.9	114	0.00
71	T	4-Isopropyltoluene	1.278	1.309	-2.4	112	0.00
72	T	1,4-Dichlorobenzene	0.695	0.682	1.9	113	0.00
73	T	n-Butylbenzene	1.176	1.176	0.0	107	0.00
74	T	1,2-Dichlorobenzene	0.629	0.623	1.0	113	0.00
75	T	1,2-Dibromo-3-chloropropane	0.228	0.222	2.6	111	0.00
76	T	1,2,4-Trichlorobenzene	0.367	0.408	-11.2	115	0.00
77	T	Hexachlorobutadiene	0.184	0.171	7.1	108	0.00
78	T	Naphthalene	0.867	0.916	-5.7	117	0.00
79	T	1,2,3-Trichlorobenzene	0.301	0.328	-9.0	116	0.00
80	T	1,1,2-Trichloro-1,2,2-trifl	0.248	0.233	6.0	114	0.00
81	T	Methyl acetate	0.433	0.414	4.4	115	0.00
82	T	Cyclohexane	0.705	0.651	7.7	114	0.00
83	T	Methylcyclohexane	0.535	0.506	5.4	110	0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

K8072315.M Thu Jul 30 13:42:48 2015

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2743.D
Acq On : 30 Jul 2015 2:25 pm
Operator : BARBARA
Sample : CCV100,CCV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 31 12:50:24 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 35% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	115	0.00
2	T	Dichlorodifluoromethane	0.509	0.458	10.0	96	-0.01
3	P	Chloromethane	0.801	0.667	16.7	89	0.01
4	C	Vinyl chloride	0.631	0.597	5.4	101	0.01
5	T	Bromomethane	0.259	0.299	-15.4	151	0.00
6	T	Chloroethane	0.263	0.312	-18.6	118	0.00
7	T	Trichlorofluoromethane	0.647	0.760	-17.5	121	0.01
9	MC	1,1-Dichloroethene	0.406	0.458	-12.8	130	-0.03
10	T	Acetone	0.366	0.391	-6.8	125	0.00
11	T	Carbon disulfide	1.254	1.357	-8.2	118	-0.01
12	T	Vinyl acetate	1.260	1.288	-2.2	111	0.00
13	T	Methylene chloride	0.518	0.461	11.0	103	0.00
14	T	Acrylonitrile	0.229	0.212	7.4	97	0.00
15	T	tert-Butyl alcohol (TBA)	0.062	0.054	12.9	96	0.00
16	T	trans-1,2-Dichloroethene	0.487	0.462	5.1	101	0.00
17	T	Methyl tert-butyl ether (MT	1.474	1.455	1.3	102	0.00
18	P	1,1-Dichloroethane	1.025	0.987	3.7	103	0.00
19	T	Diisopropyl ether (DIPE)	2.289	2.254	1.5	99	0.01
20	T	cis-1,2-Dichloroethene	0.527	0.520	1.3	103	0.00
21	T	2,2-Dichloropropane	0.550	0.590	-7.3	121	0.00
22	T	2-Butanone (MEK)	0.387	0.348	10.1	97	0.00
23	T	Bromochloromethane	0.249	0.236	5.2	102	0.00
24	T	Tetrahydrofuran	0.000	0.000	0.0	97	0.00
25	C	Chloroform	0.920	0.894	2.8	104	0.00
26	T	1,1,1-Trichloroethane	0.816	0.800	2.0	108	0.00
27	T	Carbon tetrachloride	0.747	0.726	2.8	105	0.00
28	T	1,1-Dichloropropene	0.739	0.703	4.9	102	0.00
29	T	1,2-Dichloroethane (EDC)	0.841	0.791	5.9	101	0.00
30	S	1,2-Dichloroethane-d4	0.730	0.677	7.3	105	0.00
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	106	0.00
32	M	Benzene	1.238	1.242	-0.3	102	0.00
33	M	Trichloroethene	0.323	0.328	-1.5	103	0.00
34	C	1,2-Dichloropropane	0.348	0.347	0.3	100	0.00
35	T	Dibromomethane	0.183	0.182	0.5	100	0.00
36	T	1,4-Dioxane	0.003	0.003	0.0	88	0.00
37	T	Bromodichloromethane	0.431	0.443	-2.8	102	0.00
39	T	cis-1,3-Dichloropropene	0.470	0.502	-6.8	101	0.00
40	T	4-Methyl-2-pentanone (MIBK)	0.380	0.374	1.6	96	0.00
41	S	Toluene-d8	1.190	1.168	1.8	103	0.00
42	MC	Toluene	0.775	0.779	-0.5	103	0.00
43	T	trans-1,3-Dichloropropene	0.448	0.466	-4.0	100	0.00
44	T	1,1,2-Trichloroethane	0.215	0.211	1.9	99	0.00
45	T	Tetrachloroethene	0.306	0.311	-1.6	105	0.00
46	T	1,3-Dichloropropane	0.453	0.450	0.7	99	0.00
47	T	2-Hexanone	0.320	0.313	2.2	95	0.00

48	T	Dibromochloromethane	0.298	0.298	0.0	98	0.00
49	T	1,2-Dibromoethane (EDB)	0.259	0.256	1.2	98	0.00
50	I	Chlorobenzene-d5	1.000	1.000	0.0	103	0.00
51	MP	Chlorobenzene	0.878	0.893	-1.7	101	0.00
52	T	1,1,1,2-Tetrachloroethane	0.328	0.343	-4.6	101	0.00
53	C	Ethylbenzene	1.581	1.680	-6.3	101	0.00
54	T	m,p-Xylene	0.582	0.613	-5.3	100	0.01
55	T	o-Xylene	0.549	0.598	-8.9	100	0.00
56	T	Styrene	0.939	1.015	-8.1	98	0.00
57	P	Bromoform	0.215	0.206	4.2	89	0.00
58	T	Isopropylbenzene	1.458	1.647	-13.0	101	0.00
59	S	Bromofluorobenzene	0.543	0.546	-0.6	101	0.00
60	P	1,1,2,2-Tetrachloroethane	0.363	0.354	2.5	97	0.00
61	T	Bromobenzene	0.368	0.384	-4.3	100	0.00
62	T	1,2,3-Trichloropropane	0.344	0.331	3.8	95	0.00
63	T	n-Propylbenzene	1.847	1.987	-7.6	100	0.00
64	T	2-Chlorotoluene	1.102	1.173	-6.4	100	0.00
65	T	1,3,5-Trimethylbenzene	1.276	1.417	-11.1	101	0.00
66	T	4-Chlorotoluene	1.318	1.391	-5.5	99	0.00
67	T	tert-Butylbenzene	1.008	1.164	-15.5	101	0.00
68	T	1,2,4-Trimethylbenzene	1.289	1.424	-10.5	100	0.00
69	T	sec-Butylbenzene	1.512	1.694	-12.0	100	0.00
70	T	1,3-Dichlorobenzene	0.694	0.716	-3.2	98	0.00
71	T	4-Isopropyltoluene	1.278	1.451	-13.5	102	0.00
72	T	1,4-Dichlorobenzene	0.695	0.723	-4.0	98	0.00
73	T	n-Butylbenzene	1.176	1.330	-13.1	100	0.00
74	T	1,2-Dichlorobenzene	0.629	0.658	-4.6	98	0.00
75	T	1,2-Dibromo-3-chloropropane	0.228	0.243	-6.6	99	0.00
76	T	1,2,4-Trichlorobenzene	0.367	0.434	-18.3	101	0.00
77	T	Hexachlorobutadiene	0.184	0.202	-9.8	105	0.00
78	T	Naphthalene	0.867	0.917	-5.8	96	0.00
79	T	1,2,3-Trichlorobenzene	0.301	0.343	-14.0	99	0.00
80	T	1,1,2-Trichloro-1,2,2-trifl	0.248	0.287	-15.7	115	0.00
81	T	Methyl acetate	0.433	0.390	9.9	89	0.00
82	T	Cyclohexane	0.705	0.718	-1.8	103	0.00
83	T	Methylcyclohexane	0.535	0.579	-8.2	103	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

K8072315.M Fri Jul 31 12:50:35 2015

Response Factor Report MSD_G

Method Path : C:\MSDCHEM\1\METHODS\
Method File : G8072915.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C
Last Update : Wed Jul 29 14:56:12 2015
Response Via : Initial Calibration

07/29/15

Calibration Files
1 =G5561.D 2 =G5562.D 5 =G5563.D
20 =G5564.D 100 =G5565.D 150 =G5566.D 200 =G5567.D

		Compound	1	2	5	20	100	150	200	Avg	%RSD
1)	I	Pentafluorobenzene	----------ISTD----------								
2)	T	Dichlorodifluorom	0.529	0.665	0.611	0.627	0.613	0.642	0.517	0.601	9.37
3)	P	Chloromethane	0.837	0.998	0.953	0.945	0.913	0.950	0.863	0.923	6.06
4)	C	Vinyl chloride	0.628	0.794	0.773	0.766	0.737	0.781	0.696	0.739	7.99
5)	T	Bromomethane	0.298	0.359	0.334	0.335	0.309	0.331	0.291	0.322	7.50
6)	T	Chloroethane	0.321	0.405	0.379	0.386	0.370	0.402	0.371	0.376	7.48
7)	T	Trichlorofluorome	0.385	0.560	0.536	0.582	0.495	0.540	0.445	0.506	13.78
8)	T	Acrolein	0.018	0.021	0.020	0.023	0.020	0.022	0.020	0.021	6.80
9)	MC	1,1-Dichloroethen	0.386	0.494	0.459	0.470	0.455	0.269	0.450	0.426	17.98
10)	T	Acetone			0.391	0.341	0.324	0.332	0.307	0.339	9.32
11)	T	Carbon disulfide	1.077	1.307	1.216	1.252	1.243	1.340	1.253	1.241	6.74
12)	T	Vinyl acetate	1.903	2.431	2.289	1.518	1.738	1.810	1.648	1.905	17.63
13)	T	Methylene chlorid		0.810	0.692	0.735	0.674	0.693	0.655	0.710	7.83
14)	T	Acrylonitrile	0.256	0.292	0.284	0.319	0.294	0.321	0.289	0.293	7.53
15)	T	tert-Butyl alcoho		0.098	0.064	0.064	0.071	0.077	0.072	0.074	16.98
16)	T	trans-1,2-Dichlor	0.488	0.614	0.594	0.598	0.588	0.615	0.573	0.581	7.50
17)	T	Methyl tert-butyl	1.372	1.772	1.732	1.819	1.828	1.950	1.844	1.760	10.44
18)	P	1,1-Dichloroethan	1.062	1.297	1.224	1.249	1.231	1.311	1.230	1.229	6.62
19)	T	Diisopropyl ether	1.777	2.414	2.375	2.745	2.670	2.804	2.688	2.496	14.28
20)	T	cis-1,2-Dichloroe	0.486	0.646	0.607	0.652	0.652	0.687	0.649	0.626	10.53
21)	T	2,2-Dichloropropa	0.445	0.561	0.516	0.502	0.469	0.478	0.449	0.489	8.44
22)	T	2-Butanone (MEK)	0.291	0.437	0.396	0.382	0.391	0.410	0.382	0.384	11.75
23)	T	Bromochloromethan	0.245	0.293	0.293	0.296	0.292	0.309	0.290	0.288	6.91
24)	T	Tetrahydrofuran								0.000	-1.00
25)	C	Chloroform	0.880	1.095	1.055	1.091	1.066	1.120	1.068	1.054	7.56
26)	T	1,1,1-Trichloroet	0.686	0.829	0.795	0.817	0.818	0.874	0.807	0.804	7.18
27)	T	Carbon tetrachlor	0.662	0.723	0.674	0.703	0.717	0.773	0.697	0.707	5.17
28)	T	1,1-Dichloroprope	0.684	0.807	0.771	0.793	0.795	0.853	0.788	0.784	6.51
29)	T	1,2-Dichloroethan	0.762	0.951	0.884	0.913	0.891	0.942	0.896	0.891	6.99
30)	S	1,2-Dichloroethan	0.667	0.679	0.679	0.663	0.669	0.661	0.659	0.668	1.21
31)	I	1,4-Difluorobenzene	----------ISTD----------								
32)	M	Benzene	1.184	1.502	1.422	1.508	1.465	1.566	1.484	1.447	8.57
33)	M	Trichloroethene	0.286	0.362	0.335	0.349	0.350	0.376	0.360	0.346	8.45
34)	C	1,2-Dichloropropa	0.344	0.429	0.411	0.435	0.427	0.454	0.438	0.420	8.56
35)	T	Dibromomethane	0.173	0.229	0.207	0.217	0.213	0.228	0.220	0.212	8.97
36)	T	1,4-Dioxane	0.003	0.003	0.003	0.002	0.003	0.003	0.003	0.003	11.68
37)	T	Bromodichlorometh	0.345	0.467	0.429	0.469	0.483	0.517	0.495	0.458	12.42
38)	T	2-Chloroethyl vin	0.073	0.062	0.063	0.096	0.138	0.128	0.108	0.095	32.14
39)	T	cis-1,3-Dichlorop	0.388	0.451	0.443	0.558	0.585	0.631	0.614	0.524	18.21
40)	T	4-Methyl-2-pentan	0.269	0.399	0.366	0.413	0.438	0.461	0.430	0.397	16.15
41)	S	Toluene-d8	1.224	1.245	1.252	1.250	1.244	1.229	1.240	1.241	0.86
42)	MC	Toluene	0.779	0.964	0.876	0.904	0.879	0.934	0.893	0.890	6.51
43)	T	trans-1,3-Dichlor	0.350	0.411	0.390	0.481	0.525	0.566	0.554	0.468	18.22
44)	T	1,1,2-Trichloroet	0.226	0.286	0.254	0.271	0.265	0.281	0.270	0.265	7.53
45)	T	Tetrachloroethene	0.266	0.330	0.316	0.313	0.303	0.321	0.299	0.307	6.80
46)	T	1,3-Dichloropropa	0.434	0.579	0.510	0.554	0.553	0.583	0.563	0.539	9.68
47)	T	2-Hexanone	0.204	0.303	0.272	0.316	0.351	0.376	0.347	0.310	18.72
48)	T	Dibromochlorometh	0.209	0.303	0.270	0.320	0.331	0.357	0.345	0.305	16.70
49)	T	1,2-Dibromoethane	0.231	0.301	0.276	0.303	0.307	0.325	0.313	0.294	10.63
50)	I	Chlorobenzene-d5	----------ISTD----------								
51)	MP	Chlorobenzene	0.835	1.090	0.990	1.003	0.969	1.034	0.992	0.988	7.91
52)	T	1,1,1,2-Tetrachlo	0.257	0.340	0.310	0.334	0.339	0.364	0.350	0.328	10.74
53)	C	Ethylbenzene	1.224	1.660	1.548	1.695	1.698	1.838	1.744	1.629	12.64

Response Factor Report MSD_G

Method Path : C:\MSDCHEM\1\METHODS\
Method File : G8072915.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C
Last Update : Wed Jul 29 14:56:12 2015
Response Via : Initial Calibration

Calibration Files
1 =G5561.D 2 =G5562.D 5 =G5563.D
20 =G5564.D 100 =G5565.D 150 =G5566.D 200 =G5567.D

		Compound	1	2	5	20	100	150	200	Avg	%RSD
54)	T	m,p-Xylene	0.461	0.640	0.616	0.676	0.649	0.686	0.647	0.625	12.13
55)	T	o-Xylene		0.592	0.579	0.668	0.651	0.685	0.646	0.637	6.63
56)	T	Styrene	0.851	0.936	0.938	1.120	1.124	1.191	1.131	1.042	12.50
57)	P	Bromoform	0.138	0.159	0.136	0.160	0.183	0.202	0.198	0.168	16.16
58)	T	Isopropylbenzene	0.948	1.402	1.367	1.611	1.629	1.748	1.623	1.475	18.20
59)	S	Bromofluorobenzen	0.556	0.563	0.575	0.569	0.571	0.573	0.568	0.568	1.14
60)	P	1,1,2,2-Tetrachlo	0.337	0.518	0.423	0.428	0.431	0.457	0.430	0.432	12.37
61)	T	Bromobenzene	0.310	0.447	0.387	0.410	0.401	0.423	0.402	0.397	10.84
62)	T	1,2,3-Trichloropr	0.332	0.495	0.388	0.390	0.397	0.420	0.396	0.402	12.15
63)	T	n-Propylbenzene	1.451	1.990	1.830	2.015	2.022	2.140	1.990	1.920	11.76
64)	T	2-Chlorotoluene	0.937	1.333	1.154	1.268	1.254	1.340	1.265	1.221	11.44
65)	T	1,3,5-Trimethylbe	0.909	1.339	1.291	1.442	1.416	1.489	1.381	1.324	14.68
66)	T	4-Chlorotoluene	0.937	1.333	1.154	1.268	1.254	1.340	1.265	1.221	11.44
67)	T	tert-Butylbenzene	0.686	1.020	0.951	1.113	1.132	1.195	1.090	1.027	16.54
68)	T	1,2,4-Trimethylbe	0.845	1.354	1.302	1.446	1.429	1.498	1.392	1.324	16.65
69)	T	sec-Butylbenzene	1.070	1.533	1.450	1.653	1.653	1.735	1.574	1.524	14.48
70)	T	1,3-Dichlorobenze	0.606	0.894	0.749	0.772	0.760	0.802	0.747	0.761	11.23
71)	T	4-Isopropyltoluen	0.761	1.214	1.145	1.323	1.310	1.356	1.250	1.194	17.09
72)	T	1,4-Dichlorobenze	0.598	0.876	0.745	0.789	0.758	0.801	0.745	0.759	11.10
73)	T	n-Butylbenzene	0.767	1.074	1.064	1.247	1.248	1.300	1.167	1.124	16.09
74)	T	1,2-Dichlorobenze	0.577	0.841	0.725	0.766	0.722	0.749	0.694	0.725	11.07
75)	T	1,2-Dibromo-3-chl	0.051	0.080	0.063	0.064	0.071	0.077	0.071	0.068	14.60
76)	T	1,2,4-Trichlorobe	0.309	0.411	0.352	0.423	0.422	0.443	0.399	0.394	11.94
77)	T	Hexachlorobutadie	0.134	0.168	0.154	0.155	0.136	0.145	0.125	0.145	10.05
78)	T	Naphthalene	0.874	0.804	0.744	0.987	1.079	1.166	1.059	0.959	16.23
79)	T	1,2,3-Trichlorobe	0.269	0.385	0.335	0.365	0.359	0.385	0.344	0.349	11.48
80)	T	1,1,2-Trichloro-1	0.207	0.267	0.248	0.248	0.233	0.250	0.217	0.238	8.78
81)	T	Methyl acetate	0.336	0.426	0.400	0.386	0.394	0.419	0.394	0.394	7.42
82)	T	Cyclohexane		0.720	0.675	0.715	0.727	0.787	0.679	0.717	5.65
83)	T	Methylcyclohexane	0.412	0.478	0.459	0.517	0.529	0.569	0.487	0.493	10.40
84)		Pentane								0.000	-1.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : G5569.D
Acq On : 29 Jul 2015 11:56
Operator : Sylvia
Sample : ICV100,ICV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 29 14:56:27 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed Jul 29 14:56:12 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	100	0.00
2	T	Dichlorodifluoromethane	0.601	0.498	17.1	81	0.00
3	P	Chloromethane	0.923	0.799	13.4	88	0.00
4	C	Vinyl chloride	0.739	0.640	13.4	87	0.00
5	T	Bromomethane	0.322	0.294	8.7	96	0.05
6	T	Chloroethane	0.376	0.339	9.8	92	0.00
7	T	Trichlorofluoromethane	0.506	0.406	19.8	82	0.00
8	T	Acrolein	0.021	0.020	4.8	97	0.00
9	MC	1,1-Dichloroethene	0.426	0.406	4.7	89	0.00
10	T	Acetone	0.339	0.305	10.0	94	0.00
11	T	Carbon disulfide	1.241	1.113	10.3	90	0.00
12	T	Vinyl acetate	1.905	2.242	-17.7	129	0.00
13	T	Methylene chloride	0.710	0.652	8.2	97	0.00
14	T	Acrylonitrile	0.293	0.289	1.4	99	0.00
15	T	tert-Butyl alcohol (TBA)	0.074	0.070	5.4	99	0.00
16	T	trans-1,2-Dichloroethene	0.581	0.534	8.1	91	0.00
17	T	Methyl tert-butyl ether (MT	1.760	1.806	-2.6	99	0.00
18	P	1,1-Dichloroethane	1.229	1.147	6.7	93	0.00
19	T	Diisopropyl ether (DIPE)	2.496	2.575	-3.2	97	0.00
20	T	cis-1,2-Dichloroethene	0.626	0.615	1.8	95	0.00
21	T	2,2-Dichloropropane	0.489	0.405	17.2	87	0.00
22	T	2-Butanone (MEK)	0.384	0.376	2.1	96	0.00
23	T	Bromochloromethane	0.288	0.284	1.4	97	0.00
24	T	Tetrahydrofuran	0.000	0.000	0.0	81	0.00
25	C	Chloroform	1.054	1.008	4.4	95	0.00
26	T	1,1,1-Trichloroethane	0.804	0.728	9.5	89	0.00
27	T	Carbon tetrachloride	0.707	0.621	12.2	87	0.00
28	T	1,1-Dichloropropene	0.784	0.699	10.8	88	0.00
29	T	1,2-Dichloroethane (EDC)	0.891	0.872	2.1	98	0.00
30	S	1,2-Dichloroethane-d4	0.668	0.659	1.3	99	0.00
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	99	0.00
32	M	Benzene	1.447	1.389	4.0	94	0.00
33	M	Trichloroethene	0.346	0.324	6.4	92	0.00
34	C	1,2-Dichloropropane	0.420	0.412	1.9	96	0.00
35	T	Dibromomethane	0.212	0.212	0.0	99	0.00
36	T	1,4-Dioxane	0.003	0.003	0.0	98	0.00
37	T	Bromodichloromethane	0.458	0.475	-3.7	97	0.00
38	T	2-Chloroethyl vinyl ether	0.095	0.131	-37.9#	94	0.00
39	T	cis-1,3-Dichloropropene	0.524	0.574	-9.5	97	0.00
40	T	4-Methyl-2-pentanone (MIBK)	0.397	0.428	-7.8	97	0.00
41	S	Toluene-d8	1.241	1.235	0.5	98	0.00
42	MC	Toluene	0.890	0.829	6.9	94	0.00
43	T	trans-1,3-Dichloropropene	0.468	0.519	-10.9	98	0.00
44	T	1,1,2-Trichloroethane	0.265	0.261	1.5	97	0.00
45	T	Tetrachloroethene	0.307	0.273	11.1	89	0.00
46	T	1,3-Dichloropropane	0.539	0.544	-0.9	98	0.00
47	T	2-Hexanone	0.310	0.339	-9.4	96	0.00

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : G5569.D
Acq On : 29 Jul 2015 11:56
Operator : Sylvia
Sample : ICV100,ICV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 29 14:56:27 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed Jul 29 14:56:12 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
48	T	Dibromochloromethane	0.305	0.329	-7.9	98	0.00
49	T	1,2-Dibromoethane (EDB)	0.294	0.305	-3.7	99	0.00
50	I	Chlorobenzene-d5	1.000	1.000	0.0	98	0.00
51	MP	Chlorobenzene	0.988	0.942	4.7	95	0.00
52	T	1,1,1,2-Tetrachloroethane	0.328	0.333	-1.5	96	0.00
53	C	Ethylbenzene	1.629	1.590	2.4	92	0.00
54	T	m,p-Xylene	0.625	0.613	1.9	92	0.00
55	T	o-Xylene	0.637	0.628	1.4	95	0.00
56	T	Styrene	1.042	1.093	-4.9	95	0.00
57	P	Bromoform	0.168	0.185	-10.1	99	0.00
58	T	Isopropylbenzene	1.475	1.511	-2.4	91	0.00
59	S	Bromofluorobenzene	0.568	0.569	-0.2	98	0.00
60	P	1,1,2,2-Tetrachloroethane	0.432	0.424	1.9	96	0.00
61	T	Bromobenzene	0.397	0.390	1.8	95	0.00
62	T	1,2,3-Trichloropropane	0.402	0.391	2.7	96	0.00
63	T	n-Propylbenzene	1.920	1.861	3.1	90	0.00
64	T	2-Chlorotoluene	1.221	1.195	2.1	93	0.00
65	T	1,3,5-Trimethylbenzene	1.324	1.335	-0.8	92	0.00
66	T	4-Chlorotoluene	1.221	1.195	2.1	93	0.00
67	T	tert-Butylbenzene	1.027	1.026	0.1	89	0.00
68	T	1,2,4-Trimethylbenzene	1.324	1.336	-0.9	92	0.00
69	T	sec-Butylbenzene	1.524	1.496	1.8	89	0.00
70	T	1,3-Dichlorobenzene	0.761	0.730	4.1	94	0.00
71	T	4-Isopropyltoluene	1.194	1.199	-0.4	90	0.00
72	T	1,4-Dichlorobenzene	0.759	0.728	4.1	94	0.00
73	T	n-Butylbenzene	1.124	1.127	-0.3	89	0.00
74	T	1,2-Dichlorobenzene	0.725	0.701	3.3	95	0.00
75	T	1,2-Dibromo-3-chloropropane	0.068	0.069	-1.5	96	0.00
76	T	1,2,4-Trichlorobenzene	0.394	0.407	-3.3	94	0.00
77	T	Hexachlorobutadiene	0.145	0.123	15.2	88	0.00
78	T	Naphthalene	0.959	1.048	-9.3	95	0.00
79	T	1,2,3-Trichlorobenzene	0.349	0.352	-0.9	96	0.00
80	T	1,1,2-Trichloro-1,2,2-trifl	0.238	0.205	13.9	86	0.00
81	T	Methyl acetate	0.394	0.396	-0.5	98	0.00
82	T	Cyclohexane	0.717	0.622	13.2	84	0.00
83	T	Methylcyclohexane	0.493	0.451	8.5	84	0.00
84		Pentane	0.000	0.000	0.0	148	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\08-03-15\
Data File : G5594.D
Acq On : 3 Aug 2015 8:53
Operator : Sylvia
Sample : CCV100,CCV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 03 14:55:12 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed Jul 29 14:56:12 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	116	0.00
2	T	Dichlorodifluoromethane	0.601	0.596	0.8	113	0.00
3	P	Chloromethane	0.923	0.804	12.9	102	0.00
4	C	Vinyl chloride	0.739	0.666	9.9	105	0.00
5	T	Bromomethane	0.322	0.296	8.1	111	0.05
6	T	Chloroethane	0.376	0.381	-1.3	119	0.01
7	T	Trichlorofluoromethane	0.506	0.453	10.5	106	0.00
8	T	Acrolein	0.021	0.021	0.0	119	0.00
9	MC	1,1-Dichloroethene	0.426	0.468	-9.9	119	0.00
10	T	Acetone	0.339	0.351	-3.5	126	0.00
11	T	Carbon disulfide	1.241	1.263	-1.8	118	0.00
12	T	Vinyl acetate	1.905	1.936	-1.6	129	0.00
13	T	Methylene chloride	0.710	0.661	6.9	114	0.00
14	T	Acrylonitrile	0.293	0.387	-32.1#	153	0.00
15	T	tert-Butyl alcohol (TBA)	0.074	0.079	-6.8	130	0.00
16	T	trans-1,2-Dichloroethene	0.581	0.575	1.0	113	0.00
17	T	Methyl tert-butyl ether (MT	1.760	1.897	-7.8	120	0.00
18	P	1,1-Dichloroethane	1.229	1.221	0.7	115	0.00
19	T	Diisopropyl ether (DIPE)	2.496	2.628	-5.3	114	0.00
20	T	cis-1,2-Dichloroethene	0.626	0.652	-4.2	116	0.00
21	T	2,2-Dichloropropane	0.489	0.486	0.6	120	0.00
22	T	2-Butanone (MEK)	0.384	0.428	-11.5	127	0.00
23	T	Bromochloromethane	0.288	0.292	-1.4	116	0.00
24	T	Tetrahydrofuran	0.000	0.000	0.0	110	0.00
25	C	Chloroform	1.054	1.056	-0.2	115	0.00
26	T	1,1,1-Trichloroethane	0.804	0.816	-1.5	116	0.00
27	T	Carbon tetrachloride	0.707	0.710	-0.4	115	0.00
28	T	1,1-Dichloropropene	0.784	0.793	-1.1	116	0.00
29	T	1,2-Dichloroethane (EDC)	0.891	0.887	0.4	115	0.00
30	S	1,2-Dichloroethane-d4	0.668	0.645	3.4	112	0.00
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	113	0.00
32	M	Benzene	1.447	1.513	-4.6	116	0.00
33	M	Trichloroethene	0.346	0.361	-4.3	116	0.00
34	C	1,2-Dichloropropane	0.420	0.437	-4.0	115	0.00
35	T	Dibromomethane	0.212	0.228	-7.5	120	0.00
36	T	1,4-Dioxane	0.003	0.003	0.0	109	0.00
37	T	Bromodichloromethane	0.458	0.490	-7.0	114	0.00
38	T	2-Chloroethyl vinyl ether	0.095	0.213	-124.2#	174	0.00
39	T	cis-1,3-Dichloropropene	0.524	0.616	-17.6	119	0.00
40	T	4-Methyl-2-pentanone (MIBK)	0.397	0.458	-15.4	118	0.00
41	S	Toluene-d8	1.241	1.243	-0.2	112	0.00
42	MC	Toluene	0.890	0.924	-3.8	118	0.00
43	T	trans-1,3-Dichloropropene	0.468	0.525	-12.2	113	0.00
44	T	1,1,2-Trichloroethane	0.265	0.286	-7.9	121	0.00
45	T	Tetrachloroethene	0.307	0.318	-3.6	118	0.00
46	T	1,3-Dichloropropane	0.539	0.593	-10.0	121	0.00
47	T	2-Hexanone	0.310	0.305	1.6	98	0.00
48	T	Dibromochloromethane	0.305	0.356	-16.7	121	0.00
49	T	1,2-Dibromoethane (EDB)	0.294	0.336	-14.3	123	0.00

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\08-03-15\
Data File : G5594.D
Acq On : 3 Aug 2015 8:53
Operator : Sylvia
Sample : CCV100,CCV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 03 14:55:12 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed Jul 29 14:56:12 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
50	I	Chlorobenzene-d5	1.000	1.000	0.0	114	0.00
51	MP	Chlorobenzene	0.988	0.993	-0.5	116	0.00
52	T	1,1,1,2-Tetrachloroethane	0.328	0.344	-4.9	115	0.00
53	C	Ethylbenzene	1.629	1.772	-8.8	119	0.00
54	T	m,p-Xylene	0.625	0.665	-6.4	116	0.00
55	T	o-Xylene	0.637	0.663	-4.1	116	0.00
56	T	Styrene	1.042	1.157	-11.0	117	0.00
57	P	Bromoform	0.168	0.162	3.6	101	0.00
58	T	Isopropylbenzene	1.475	1.664	-12.8	116	0.00
59	S	Bromofluorobenzene	0.568	0.568	0.0	113	0.00
60	P	1,1,2,2-Tetrachloroethane	0.432	0.463	-7.2	122	0.00
61	T	Bromobenzene	0.397	0.406	-2.3	115	0.00
62	T	1,2,3-Trichloropropane	0.402	0.420	-4.5	120	0.00
63	T	n-Propylbenzene	1.920	2.049	-6.7	115	0.00
64	T	2-Chlorotoluene	1.221	1.267	-3.8	115	0.00
65	T	1,3,5-Trimethylbenzene	1.324	1.431	-8.1	115	0.00
66	T	4-Chlorotoluene	1.221	1.267	-3.8	115	0.00
67	T	tert-Butylbenzene	1.027	1.139	-10.9	114	0.00
68	T	1,2,4-Trimethylbenzene	1.324	1.421	-7.3	113	0.00
69	T	sec-Butylbenzene	1.524	1.661	-9.0	114	0.00
70	T	1,3-Dichlorobenzene	0.761	0.758	0.4	113	0.00
71	T	4-Isopropyltoluene	1.194	1.314	-10.1	114	0.00
72	T	1,4-Dichlorobenzene	0.759	0.761	-0.3	114	0.00
73	T	n-Butylbenzene	1.124	1.250	-11.2	114	0.00
74	T	1,2-Dichlorobenzene	0.725	0.721	0.6	114	0.00
75	T	1,2-Dibromo-3-chloropropane	0.068	0.079	-16.2	126	0.00
76	T	1,2,4-Trichlorobenzene	0.394	0.435	-10.4	117	0.00
77	T	Hexachlorobutadiene	0.145	0.142	2.1	118	0.00
78	T	Naphthalene	0.959	1.174	-22.4#	124	0.00
79	T	1,2,3-Trichlorobenzene	0.349	0.378	-8.3	120	0.00
80	T	1,1,2-Trichloro-1,2,2-trifl	0.238	0.243	-2.1	119	0.00
81	T	Methyl acetate	0.394	0.418	-6.1	121	0.00
82	T	Cyclohexane	0.717	0.730	-1.8	114	0.00
83	T	Methylcyclohexane	0.493	0.548	-11.2	118	0.00
84		Pentane	0.000	0.000	0.0	139	0.03

(#) = Out of Range SPCC's out = 0 CCC's out = 0

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): K2513.D Date Analyzed: 07/23/2015

Instrument ID: MSD_K Time Analyzed: 6:10

	50UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	342728	6.24	581380	7.07	557706	10.42
	UPPER LIMIT	685456	6.74	1162760	7.57	1115412	10.92
	LOWER LIMIT	171364	5.74	290690	6.57	278853	9.92
	LAB SAMPLE ID						
01	ICC001	324199	6.25	523987	7.07	502969	10.42
02	ICC002	324906	6.25	521711	7.07	499474	10.42
03	ICC005	326560	6.25	529022	7.07	496421	10.42
04	ICC020	323892	6.24	536616	7.07	519209	10.42
05	ICC150	395605	6.24	683379	7.07	648660	10.42
06	ICC200	408049	6.24	710274	7.07	668130	10.43
07	ICV100	406089	6.24	705917	7.07	666870	10.42
08							
09							
10							
11							
12							
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15							
16							
17							
18							
19							
20							
21							
22							

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM 8

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): K2715.D Date Analyzed: 07/30/2015

Instrument ID: MSD_K Time Analyzed: 2:13

	50UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	483128	6.25	756808	7.07	701162	10.43
	UPPER LIMIT	966256	6.75	1513616	7.57	1402324	10.93
	LOWER LIMIT	241564	5.75	378404	6.57	350581	9.93
	LAB SAMPLE ID						
01	BLKA150729b	475094	6.25	733451	7.07	669138	10.43
02	06439-011DL	458561	6.25	707200	7.07	652443	10.43
03	LCSA150729b	499423	6.25	775211	7.07	716797	10.42
04	06420-001MS	503974	6.25	776843	7.07	739227	10.43
05	06420-001MSD	508562	6.25	790319	7.07	737974	10.42
06	06446-001	503873	6.25	768606	7.07	733462	10.42
07	06446-002	494295	6.25	748581	7.07	726124	10.43
08	06420-001	483379	6.25	747628	7.07	693556	10.43
09	06420-002	468934	6.25	722436	7.07	664125	10.42
10	06420-003	462928	6.25	709953	7.07	667624	10.42
11	06420-004	454721	6.25	697710	7.07	668634	10.43
12	06420-005	444278	6.25	680698	7.07	645789	10.42
13	06447-001	440068	6.25	669404	7.07	628395	10.42
14	06447-002	428305	6.25	650937	7.07	614572	10.43
15	06447-003	424493	6.25	649943	7.07	614921	10.43
16	06447-004	410162	6.25	635678	7.07	584809	10.43
17	06446-001DL	409948	6.25	619339	7.07	573592	10.42
18	06439-010	393818	6.25	589464	7.07	572179	10.42
19							
20							
21							
22							

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM 8

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): K2743.D

Date Analyzed: 07/30/2015

Instrument ID: MSD_K

Time Analyzed: 2:25

	50UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	393031	6.25	616177	7.07	575804	10.43
	UPPER LIMIT	786062	6.75	1232354	7.57	1151608	10.93
	LOWER LIMIT	196515.5	5.75	308088.5	6.57	287902	9.93
	LAB SAMPLE ID						
01	CCV1000	394698	6.25	600749	7.07	583384	10.43
02	BLKA150730a	370121	6.25	565065	7.07	553252	10.43
03	06668-001	366639	6.25	563635	7.07	534116	10.43
04	06447-006	412710	6.25	623307	7.07	598203	10.43
05	06447-010	381960	6.25	585857	7.07	555260	10.42
06	06447-011	383043	6.25	572127	7.07	538381	10.42
07	LCSTA150730a	330654	6.25	491813	7.07	485247	10.43
08	06666-001TPH-MS	373075	6.25	567224	7.07	542627	10.43
09	06666-001TPH-MSD	378971	6.25	582526	7.07	548867	10.42
10	LCSA150730a	340418	6.25	511437	7.07	551196	10.43
11	06447-012MS	388147	6.25	585249	7.07	564552	10.43
12	06447-012MSD	393665	6.25	613733	7.07	570207	10.43
13	06666-001	397530	6.25	602435	7.07	577860	10.42
14	06447-007	385915	6.25	590387	7.07	567589	10.42
15	06447-008	377291	6.25	574980	7.07	537344	10.42
16	06447-009	380138	6.25	573536	7.07	546954	10.42
17	06447-012	367354	6.25	560445	7.07	530859	10.42
18	06447-013	363518	6.25	554473	7.07	536439	10.43
19	06447-014	341492	6.25	523509	7.07	507317	10.43
20	06668-001DL	335758	6.25	518836	7.07	489424	10.43
21							
22							

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM 8

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): G5565.D Date Analyzed: 07/29/2015

Instrument ID: MSD_G Time Analyzed: 10:04

	50UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	368728	6.21	623921	7.02	608460	10.37
	UPPER LIMIT	737456	6.71	1247842	7.52	1216920	10.87
	LOWER LIMIT	184364	5.71	311960.5	6.52	304230	9.87
	LAB SAMPLE ID						
01	ICC001	368999	6.21	623990	7.03	601377	10.37
02	ICC002	363236	6.21	617735	7.03	607097	10.37
03	ICC005	364625	6.21	615390	7.03	599857	10.37
04	ICC020	374804	6.20	630166	7.02	614461	10.37
05	ICC150	370241	6.20	623603	7.03	600404	10.37
06	ICC200	391111	6.20	654034	7.02	628040	10.37
07	ICV100	369471	6.21	618591	7.02	596224	10.37
08	BLKA150729a	348852	6.21	605474	7.03	598109	10.37
09	06264-1DL	360876	6.21	627658	7.03	604671	10.37
10	06264-2DL	365453	6.21	628236	7.03	616111	10.37
11	06454-7DL	347936	6.21	597943	7.03	587690	10.37
12	06454-8DL	363280	6.21	627076	7.03	619115	10.37
13	06487-001	343533	6.21	604805	7.03	585680	10.37
14	06487-002	348628	6.21	599031	7.03	605095	10.37
15	06487-003	341375	6.21	608237	7.03	591026	10.37
16	06487-004	350334	6.21	616814	7.03	596508	10.37
17	06487-005	340220	6.21	600250	7.03	580555	10.37
18	LCSA150729a	367091	6.21	613692	7.03	597997	10.37
19	6487-003MS	368860	6.21	620219	7.02	600179	10.37
20	6487-003MSD	359702	6.21	593183	7.03	591086	10.37
21							
22							

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): G5694.D

Date Analyzed: 08/03/2015

Instrument ID: MSD_G

Time Analyzed: 8:53

	50UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	427171	6.20	702013	7.02	691353	10.37
	UPPER LIMIT	854342	6.70	1404026	7.52	1382706	10.87
	LOWER LIMIT	213585.5	5.70	351006.5	6.52	345676.5	9.87
	LAB SAMPLE ID						
01	BLKA150803a	419587	6.21	723750	7.03	702541	10.37
02	06527-009	337674	6.21	578980	7.03	577974	10.37
03	06527-010	399257	6.21	691675	7.03	679294	10.37
04	06527-001	404864	6.21	691530	7.03	685798	10.37
05	06527-002	404101	6.21	687904	7.03	682781	10.37
06	06527-003	381559	6.21	663768	7.03	647169	10.37
07	06527-004	398141	6.21	688063	7.03	674882	10.37
08	06527-005	294641	6.21	521892	7.03	511202	10.37
09	06527-006	384979	6.21	646083	7.03	638058	10.37
10	06527-007	390271	6.21	663544	7.03	665604	10.37
11	06527-008	357586	6.21	608127	7.03	590899	10.37
12	06541-016	375775	6.21	642577	7.03	622512	10.37
13	06541-017	385227	6.21	660101	7.03	648569	10.37
14	06541-001	377246	6.21	656244	7.03	646679	10.37
15	06541-002	389853	6.21	665132	7.03	660567	10.37
16	06541-003	390335	6.21	672736	7.03	655893	10.37
17	06447-2DL	268576	6.21	479896	7.03	473196	10.37
18	06447-005	368103	6.21	644619	7.03	623123	10.37
19	LCSA150803a	401954	6.21	675880	7.03	661915	10.37
20	6527-001MS	397100	6.21	665774	7.03	654175	10.37
21	6527-001MSD	397146	6.21	665891	7.03	651038	10.37
22							

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM 8

VOLATILE ORGANICS SAMPLE DATA

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2731.D
Acq On : 30 Jul 2015 9:12 am
Operator : BARBARA
Sample : MW-34D,06447-001,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Aug 01 17:57:17 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.25	168	440068	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.07	114	669404	50.00	UG	0.00
50) Chlorobenzene-d5	10.42	117	628395	50.00	UG	0.00

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	6.57	65	281119	43.74	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 87.48%			
41) Toluene-d8	8.75	98	777602	48.81	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.62%			
59) Bromofluorobenzene	11.83	95	328502	48.12	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.24%			

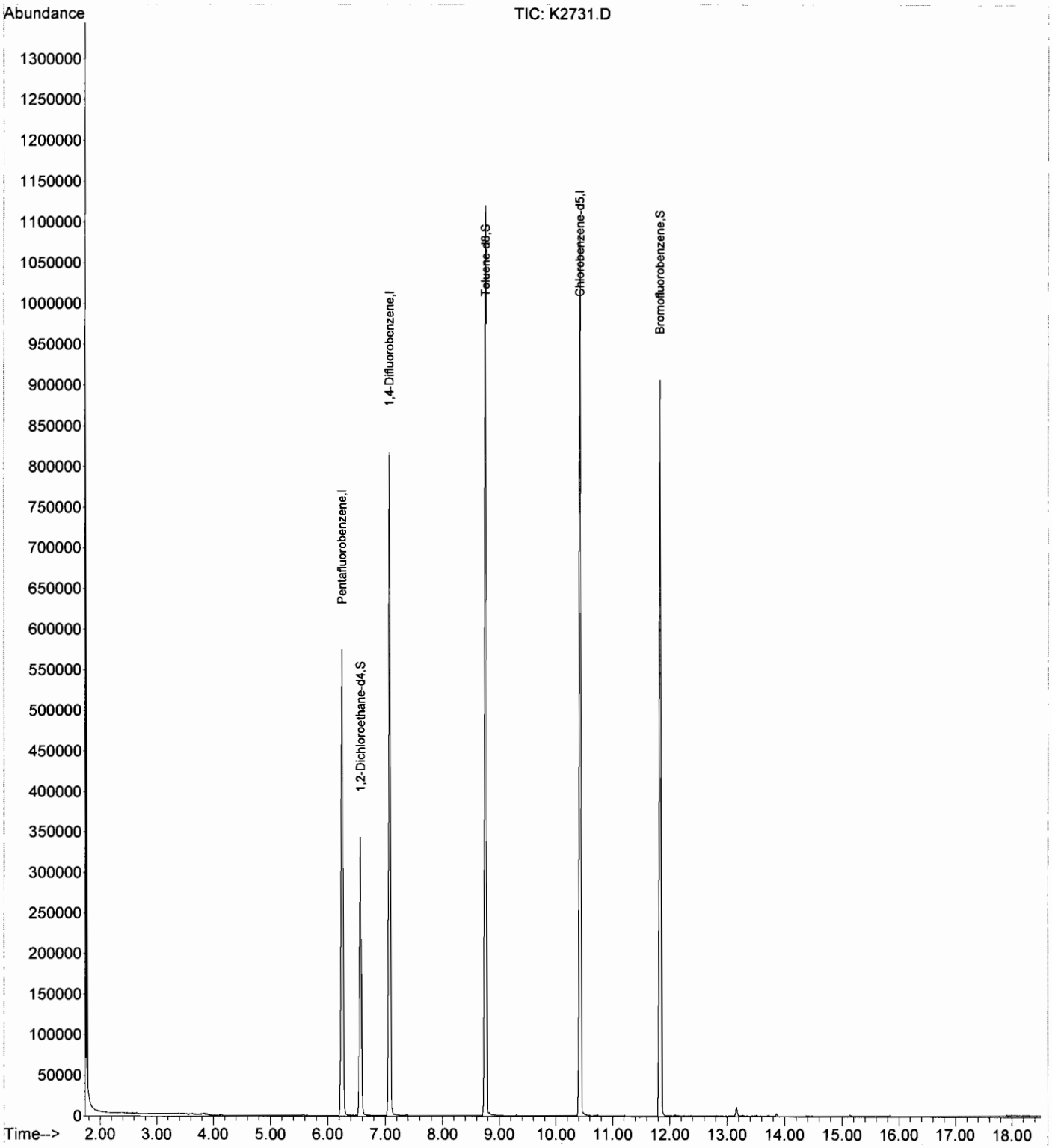
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2731.D
Acq On : 30 Jul 2015 9:12 am
Operator : BARBARA
Sample : MW-34D,06447-001,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Aug 01 17:57:17 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2731.D
Acq On : 30 Jul 2015 9:12 am
Operator : BARBARA
Sample : MW-34D,06447-001,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 48 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.07 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8072315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.117	72	74	169	rVB3	2165	32714	1.50%	0.342%
2	6.249	847	862	889	rBV	574466	1272314	58.38%	13.298%
3	6.569	911	923	947	rVB	342639	766713	35.18%	8.014%
4	7.072	1007	1019	1054	rBV	817326	1645611	75.51%	17.200%
5	8.755	1326	1340	1371	rBV	1120195	2179368	100.00%	22.779%
6	10.422	1644	1658	1687	rBV	1085716	2037081	93.47%	21.292%
7	11.827	1913	1926	1949	rBV	906247	1633616	74.96%	17.075%

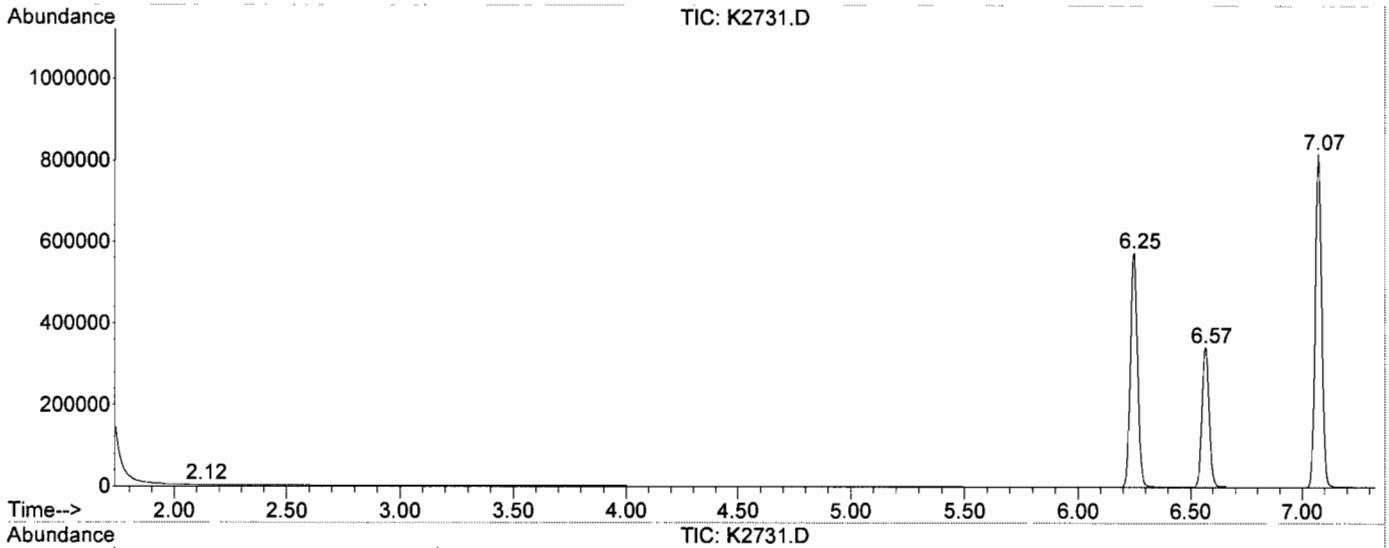
Sum of corrected areas: 9567417

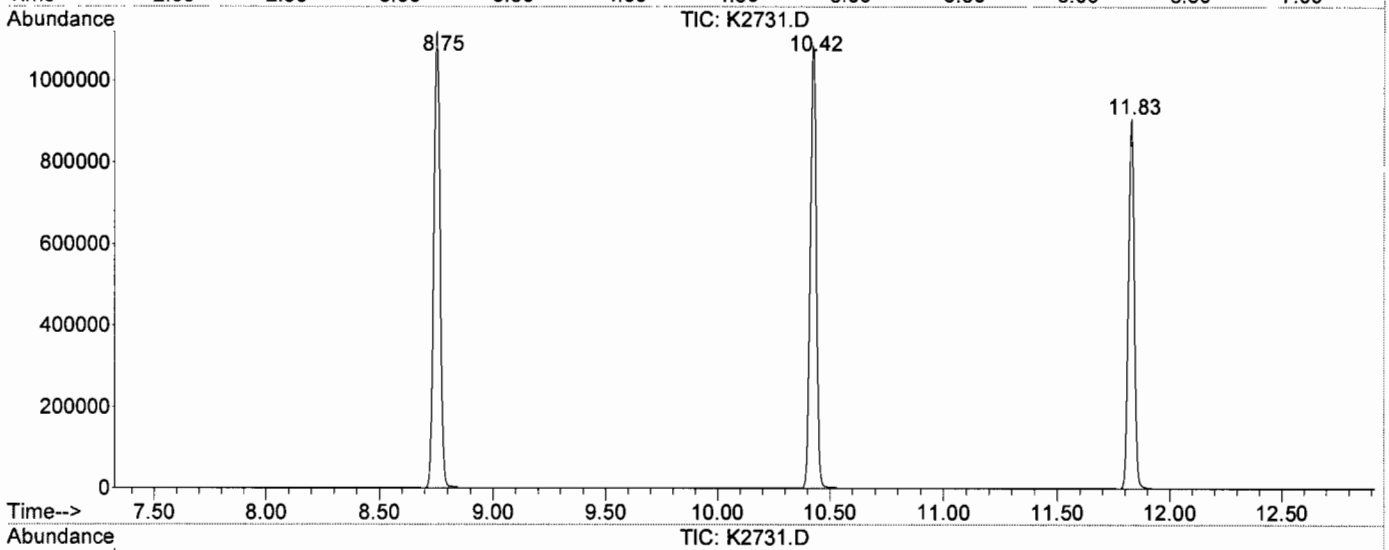
LSC Report - Integrated Chromatogram

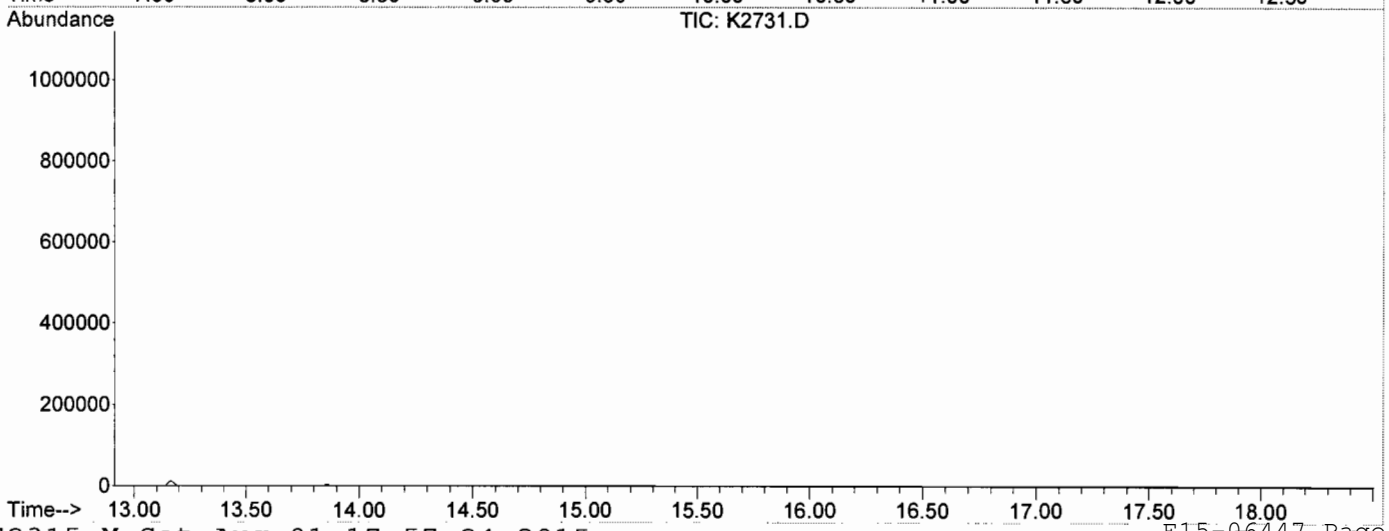
Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2731.D
Acq On : 30 Jul 2015 9:12 am
Operator : BARBARA
Sample : MW-34D,06447-001,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 48 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2732.D
Acq On : 30 Jul 2015 9:37 am
Operator : BARBARA
Sample : MW-4S,06447-002,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Aug 01 18:15:09 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration

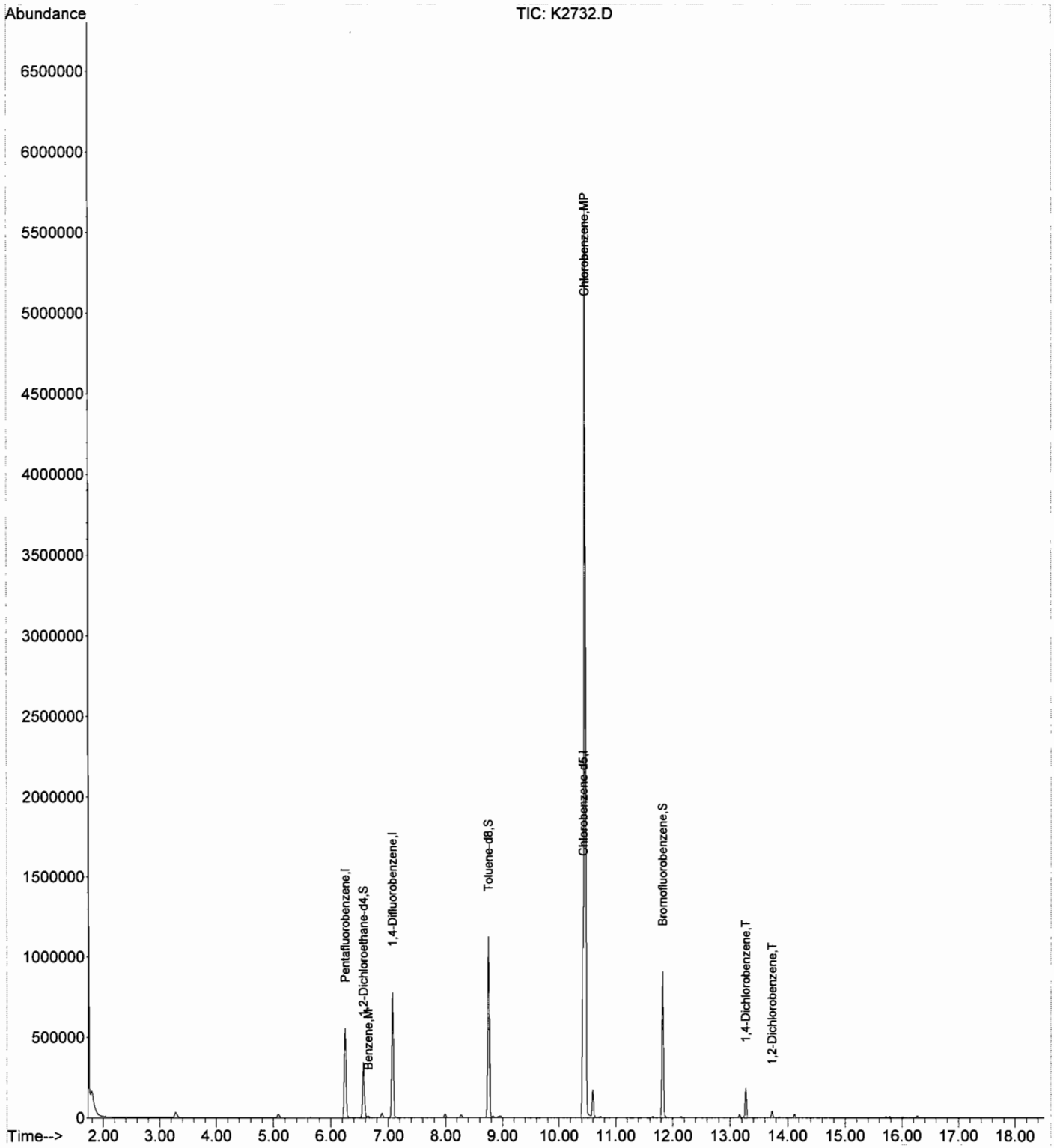
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene	6.25	168	428305	50.00 UG	0.00
31) 1,4-Difluorobenzene	7.07	114	650937	50.00 UG	0.00
50) Chlorobenzene-d5	10.43	117	614572	50.00 UG	0.00
System Monitoring Compounds					
30) 1,2-Dichloroethane-d4	6.56	65	275651	44.07 UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 88.14%		
41) Toluene-d8	8.75	98	756841	48.85 UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.70%		
59) Bromofluorobenzene	11.83	95	327269	49.02 UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.04%		
Target Compounds					Qvalue
32) Benzene	6.65	78	6499	0.40 UG	100
51) Chlorobenzene	10.46	112	3074742	284.88 UG	100
72) 1,4-Dichlorobenzene	13.27	146	73737	8.63 UG	99
74) 1,2-Dichlorobenzene	13.73	146	18087	2.34 UG	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2732.D
Acq On : 30 Jul 2015 9:37 am
Operator : BARBARA
Sample : MW-4S,06447-002,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Aug 01 18:15:09 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\08-03-15\
Data File : G5712.D
Acq On : 3 Aug 2015 17:32
Operator : Sylvia
Sample : MW-4S,06447-2DL,A,2.5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,2
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 04 10:29:52 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed Jul 29 14:56:12 2015
Response via : Initial Calibration

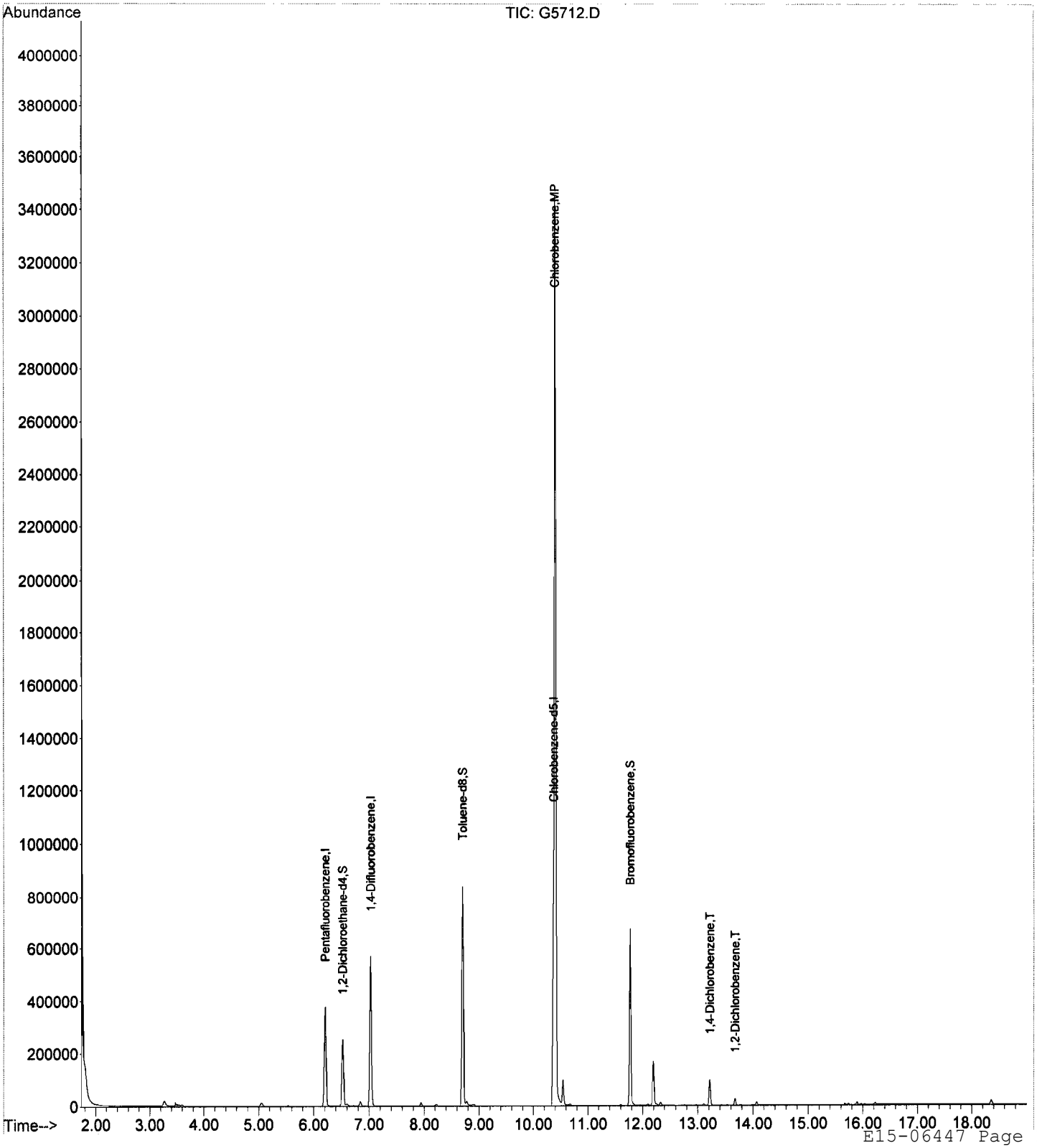
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.21	168	268576	50.00	UG		0.00
31) 1,4-Difluorobenzene	7.03	114	479896	50.00	UG		0.00
50) Chlorobenzene-d5	10.37	117	473196	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.52	65	191898	53.46	UG		0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 106.92%				
41) Toluene-d8	8.70	98	585748	49.19	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.38%				
59) Bromofluorobenzene	11.77	95	260317	48.44	UG		0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 96.88%				
Target Compounds							Qvalue
51) Chlorobenzene	10.41	112	1851048m	198.06	UG		
72) 1,4-Dichlorobenzene	13.22	146	42430	5.91	UG		100
74) 1,2-Dichlorobenzene	13.67	146	11215	1.63	UG	#	81

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\08-03-15\
Data File : G5712.D
Acq On : 3 Aug 2015 17:32
Operator : Sylvia
Sample : MW-4S,06447-2DL,A,2.5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,2
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 04 10:29:52 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed Jul 29 14:56:12 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2732.D
Acq On : 30 Jul 2015 9:37 am
Operator : BARBARA
Sample : MW-4S,06447-002,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 49 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.07 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8072315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.797	9	13	205	rVB	164053	856338	6.94%	4.046%
2	6.249	845	862	891	rBV	555228	1242980	10.08%	5.872%
3	6.563	912	922	933	rBV	340734	744568	6.04%	3.518%
4	7.072	1007	1019	1050	rBV	776611	1606536	13.02%	7.590%
5	8.755	1328	1340	1351	rBV	1121765	2112361	17.13%	9.980%
6	10.459	1647	1665	1684	rBV2	5666452	12334422	100.00%	58.274%
7	10.595	1684	1691	1702	rVB	171011	310860	2.52%	1.469%
8	11.827	1913	1926	1953	rBV	904625	1638365	13.28%	7.740%
9	13.269	2192	2201	2213	rBV	180565	319928	2.59%	1.511%

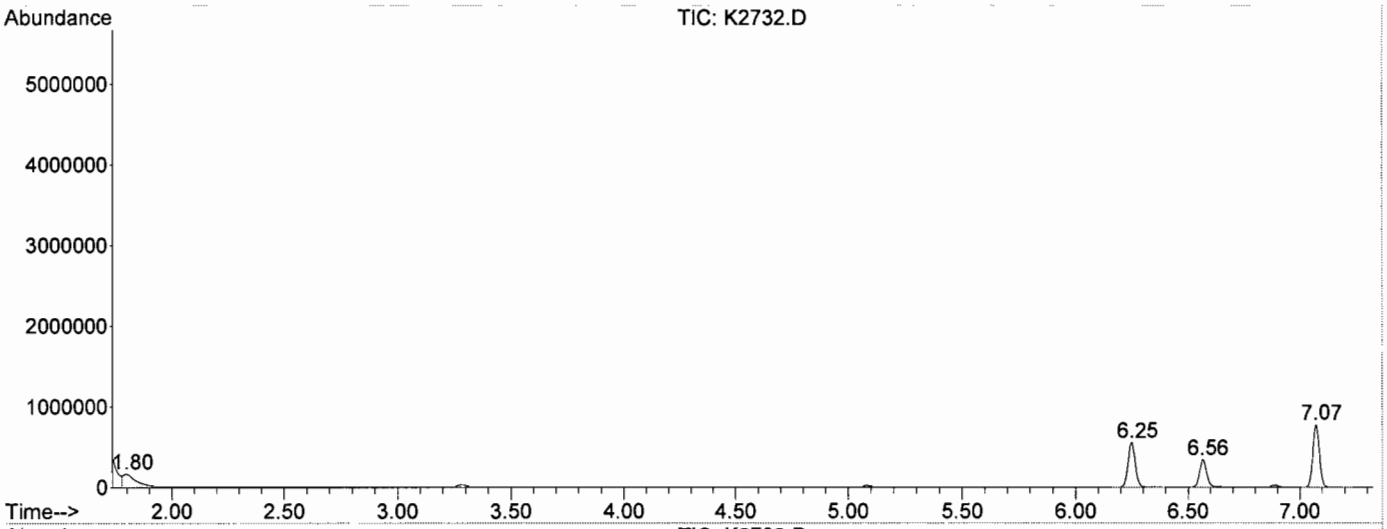
Sum of corrected areas: 21166358

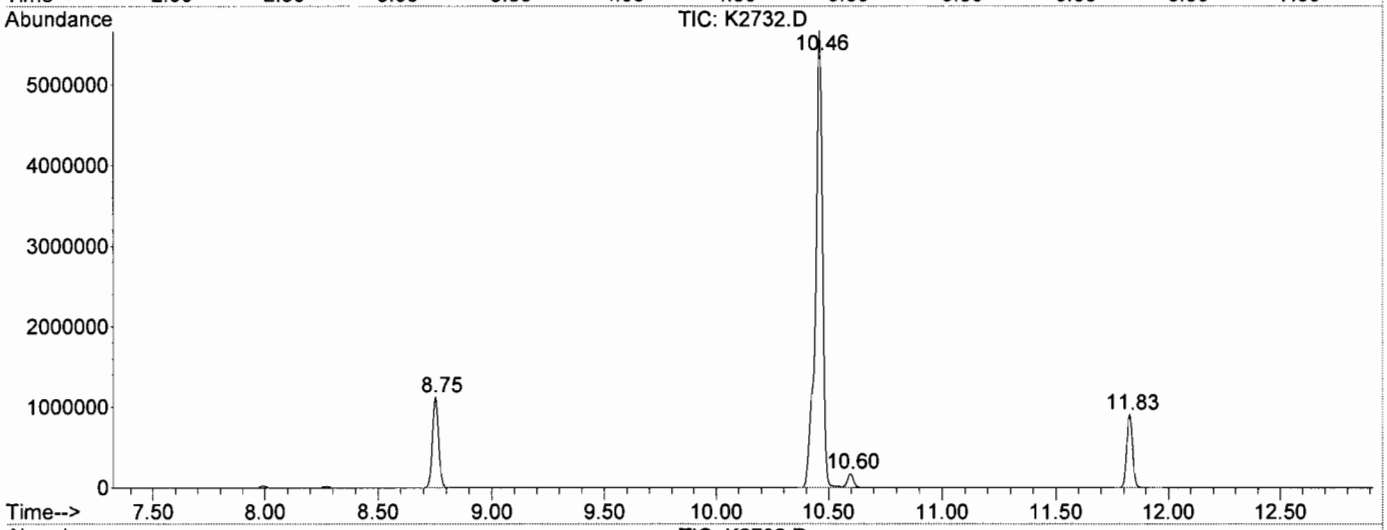
LSC Report - Integrated Chromatogram

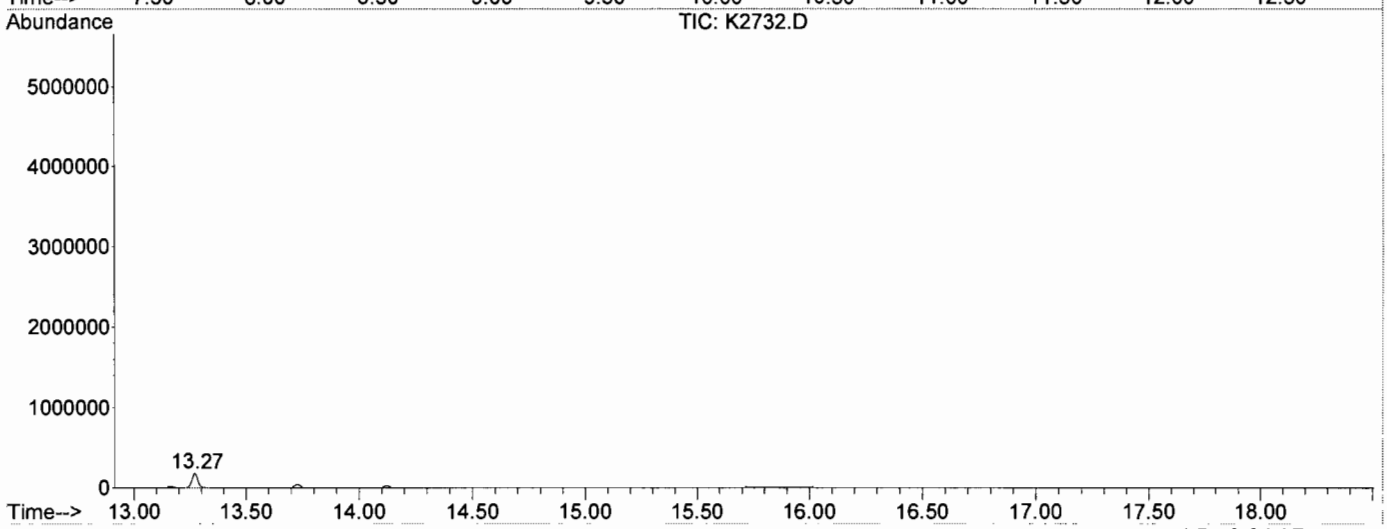
Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2732.D
Acq On : 30 Jul 2015 9:37 am
Operator : BARBARA
Sample : MW-4S,06447-002,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 49 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2732.D
Acq On : 30 Jul 2015 9:37 am
Operator : BARBARA
Sample : MW-4S,06447-002,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 49 Sample Multiplier: 1

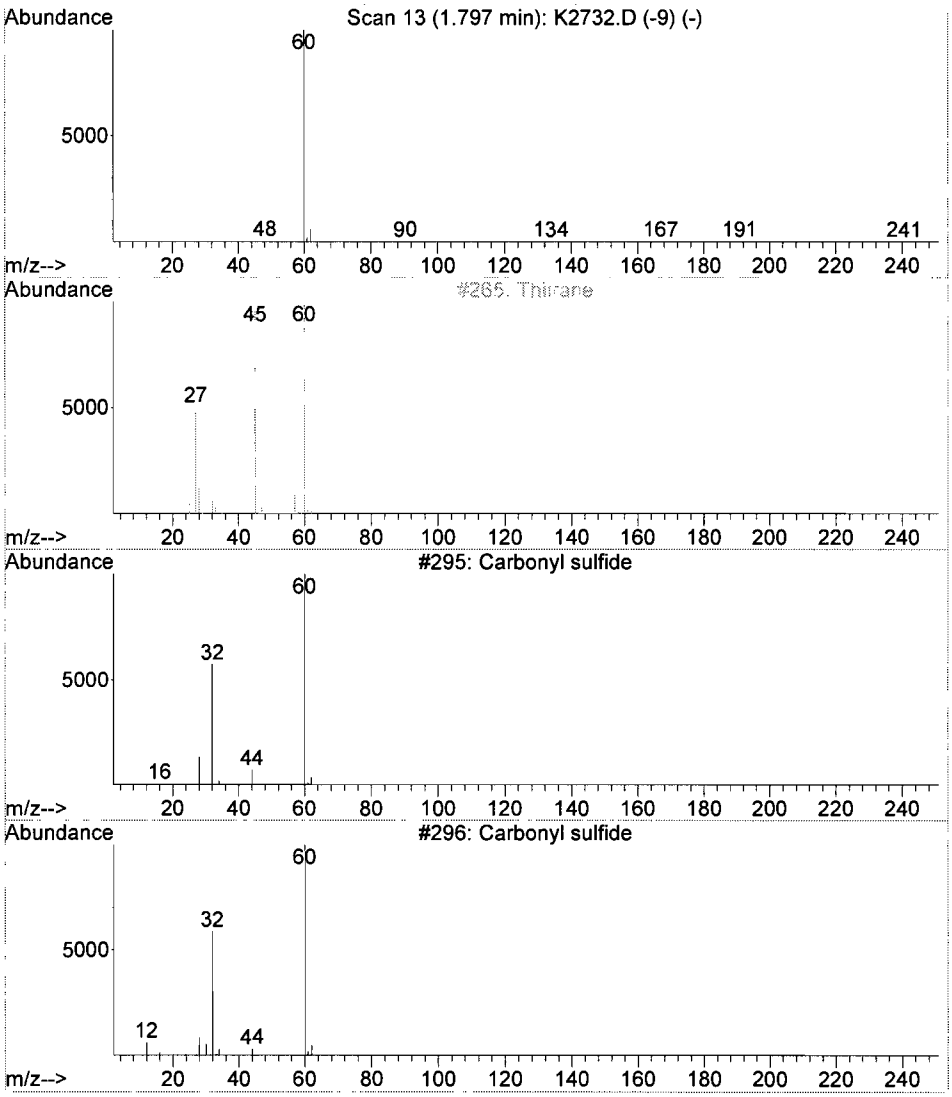
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

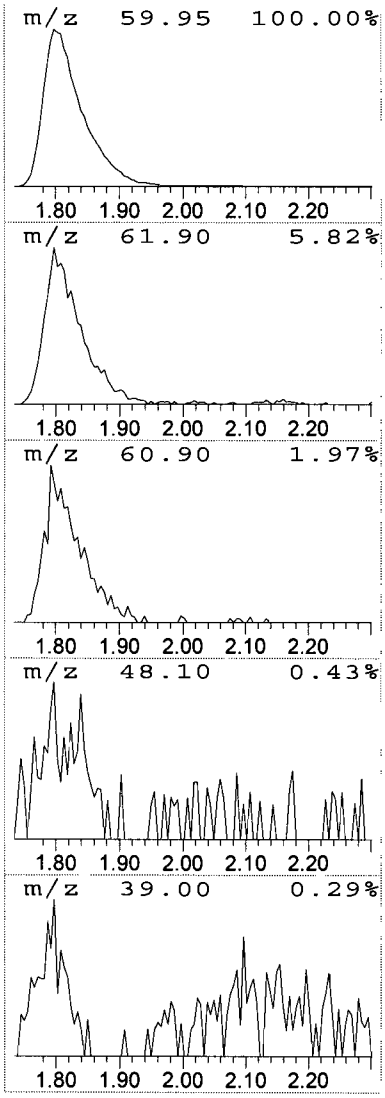
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 1 Unknown VOA Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.80	34.45 UG	856338	Pentafluorobenzene	6.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Thiirane	60	C2H4S	000420-12-2	7
2	Carbonyl sulfide	60	COS	000463-58-1	5
3	Carbonyl sulfide	60	COS	000463-58-1	5
4	Ethyne, chloro-	60	C2HCl	000593-63-5	4
5	Urea	60	CH4N2O	000057-13-6	4





Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2733.D
Acq On : 30 Jul 2015 10:03 am
Operator : BARBARA
Sample : MW-40D,06447-003,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 50 Sample Multiplier: 1

Quant Time: Aug 01 18:08:19 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration

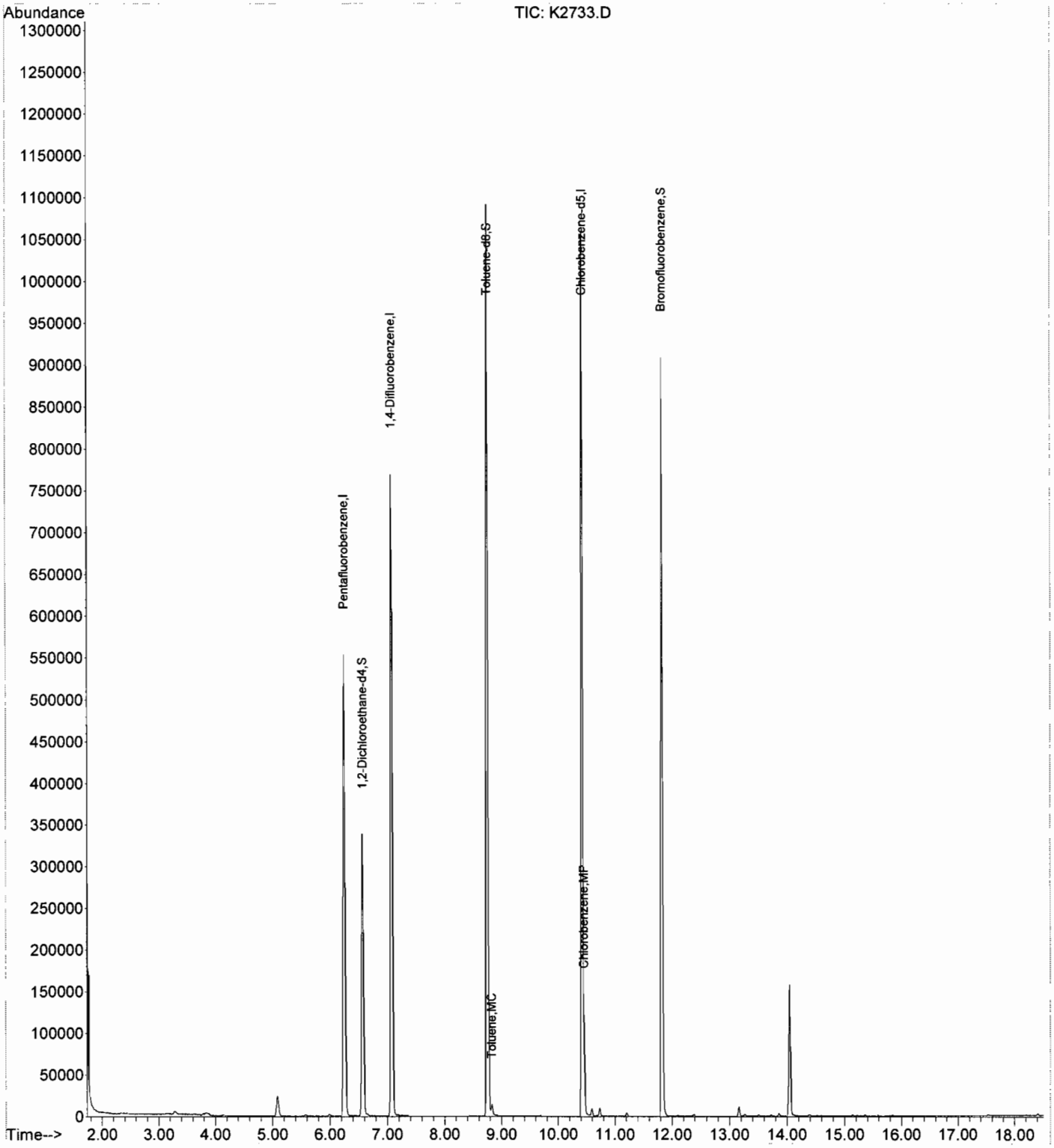
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.25	168	424493	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.07	114	649943	50.00	UG	0.00
50) Chlorobenzene-d5	10.43	117	614921	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.57	65	277975	44.84	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 89.68%			
41) Toluene-d8	8.76	98	751735	48.60	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.20%			
59) Bromofluorobenzene	11.83	95	323550	48.43	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.86%			
Target Compounds						Qvalue
42) Toluene	8.82	92	4720	0.47	UG	93
51) Chlorobenzene	10.46	112	30232	2.80	UG	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2733.D
Acq On : 30 Jul 2015 10:03 am
Operator : BARBARA
Sample : MW-40D,06447-003,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 50 Sample Multiplier: 1

Quant Time: Aug 01 18:08:19 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2733.D
Acq On : 30 Jul 2015 10:03 am
Operator : BARBARA
Sample : MW-40D,06447-003,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 50 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.07 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8072315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	5.085	626	640	660	rBV3	23818	64930	3.08%	0.663%
2	6.249	850	862	887	rBV	552835	1231967	58.51%	12.580%
3	6.569	912	923	953	rBV	337415	751167	35.68%	7.671%
4	7.072	1007	1019	1042	rBV	768936	1593575	75.68%	16.273%
5	8.755	1329	1340	1350	rBV	1091711	2105557	100.00%	21.501%
6	8.828	1350	1354	1385	rVB3	13821	34005	1.62%	0.347%
7	10.428	1645	1659	1684	rBV	1059189	2095146	99.51%	21.395%
8	11.827	1915	1926	1947	rBV	908369	1612442	76.58%	16.466%
9	14.045	2337	2349	2373	rBV2	157599	303889	14.43%	3.103%

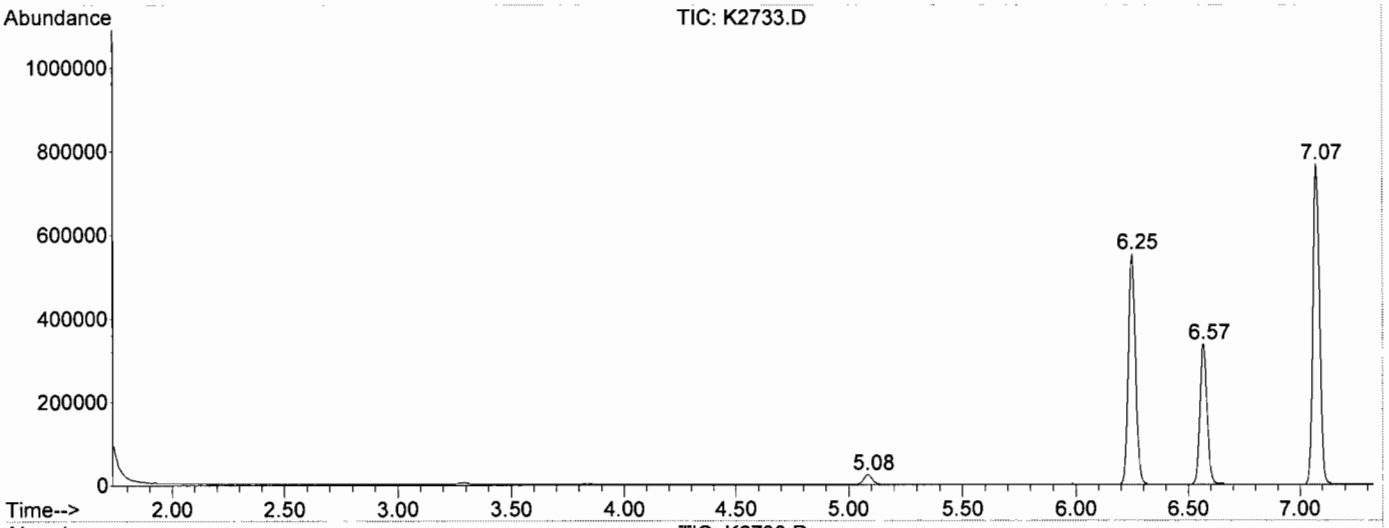
Sum of corrected areas: 9792678

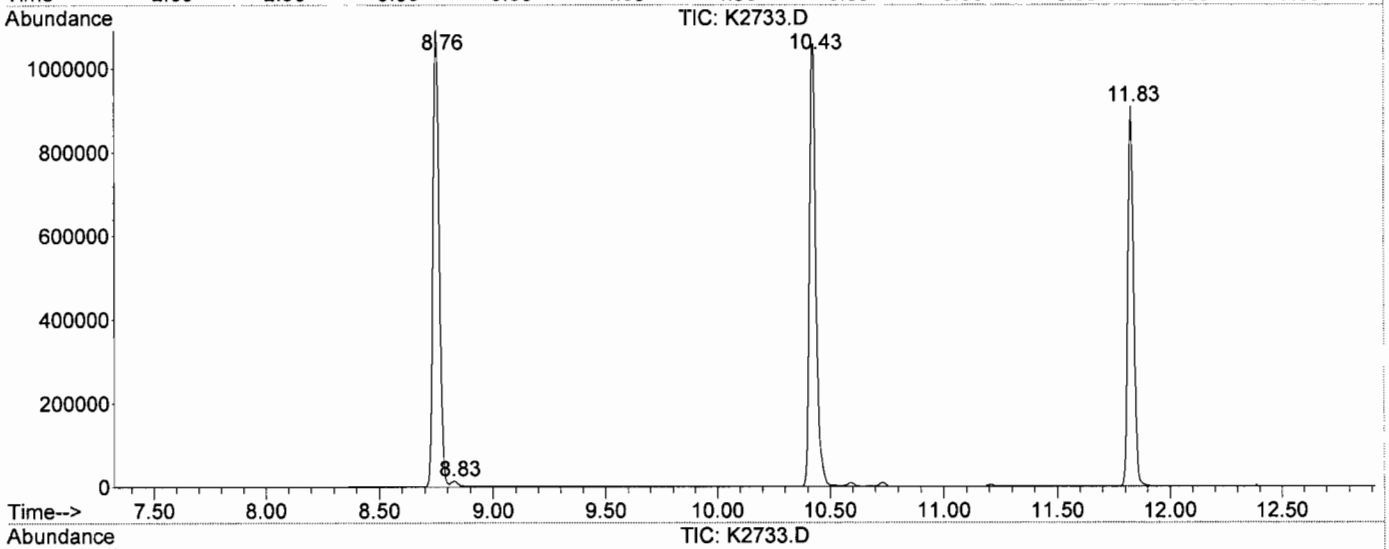
LSC Report - Integrated Chromatogram

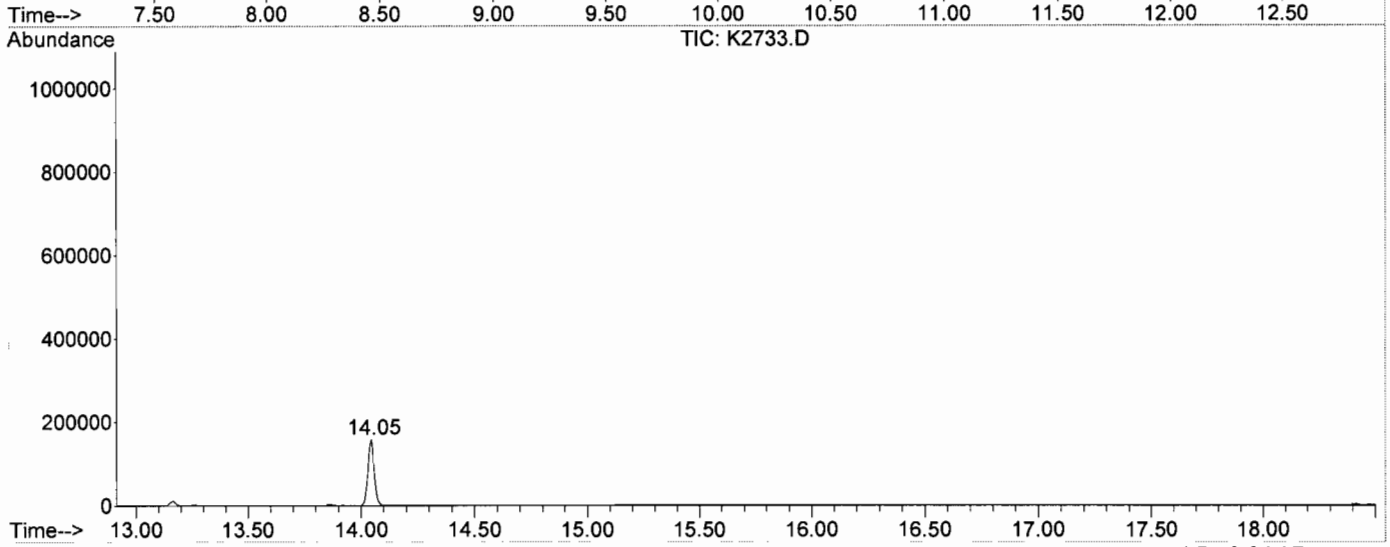
Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2733.D
Acq On : 30 Jul 2015 10:03 am
Operator : BARBARA
Sample : MW-40D,06447-003,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 50 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2733.D
Acq On : 30 Jul 2015 10:03 am
Operator : BARBARA
Sample : MW-40D,06447-003,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 50 Sample Multiplier: 1

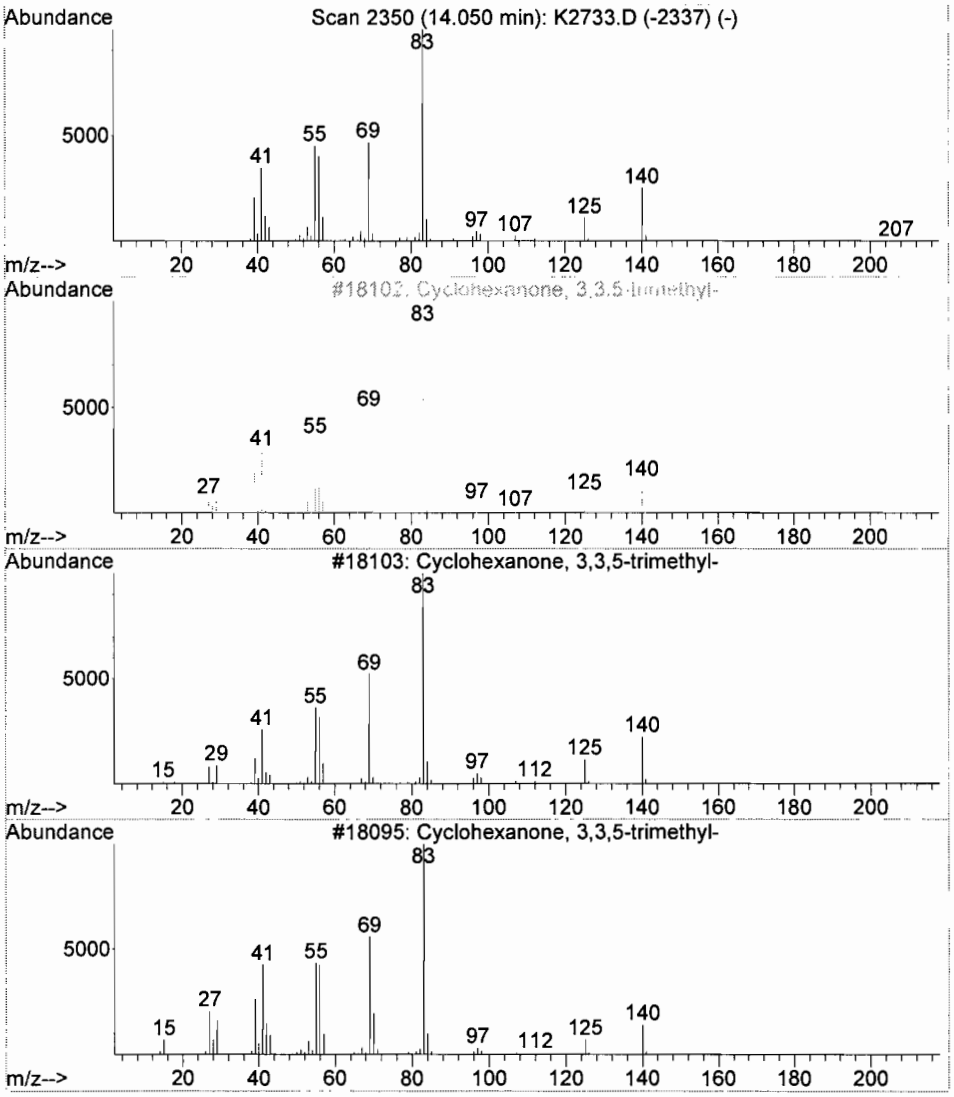
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

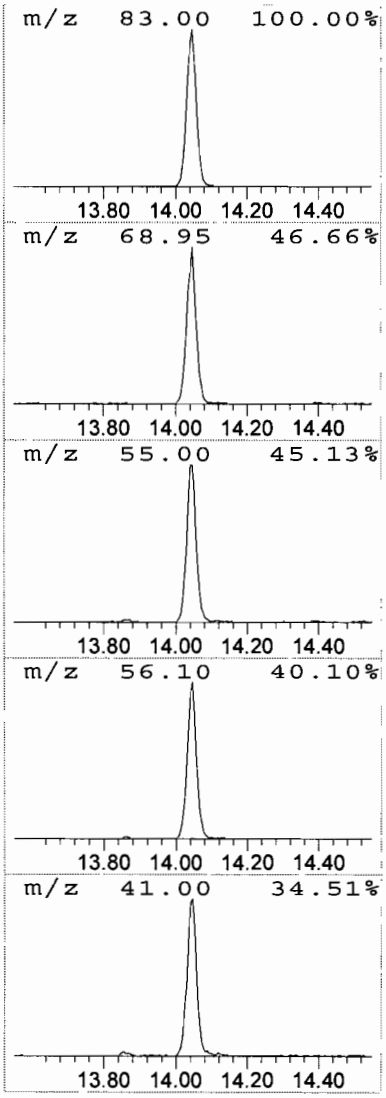
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 1 Cyclohexanone, 3,3,5-trimet... Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.05	7.25 UG	303889	Chlorobenzene-d5	10.43

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexanone, 3,3,5-trimethyl-	140	C9H16O	000873-94-9	94
2	Cyclohexanone, 3,3,5-trimethyl-	140	C9H16O	000873-94-9	91
3	Cyclohexanone, 3,3,5-trimethyl-	140	C9H16O	000873-94-9	91
4	Cyclohexanone, 3,3,5-trimethyl-	140	C9H16O	000873-94-9	60
5	Imidazole, 2-acetamido-	125	C5H7N3O	052737-49-2	58





Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2734.D
Acq On : 30 Jul 2015 10:30 am
Operator : BARBARA
Sample : MW-36D,06447-004,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 51 Sample Multiplier: 1

Quant Time: Aug 01 18:22:53 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration

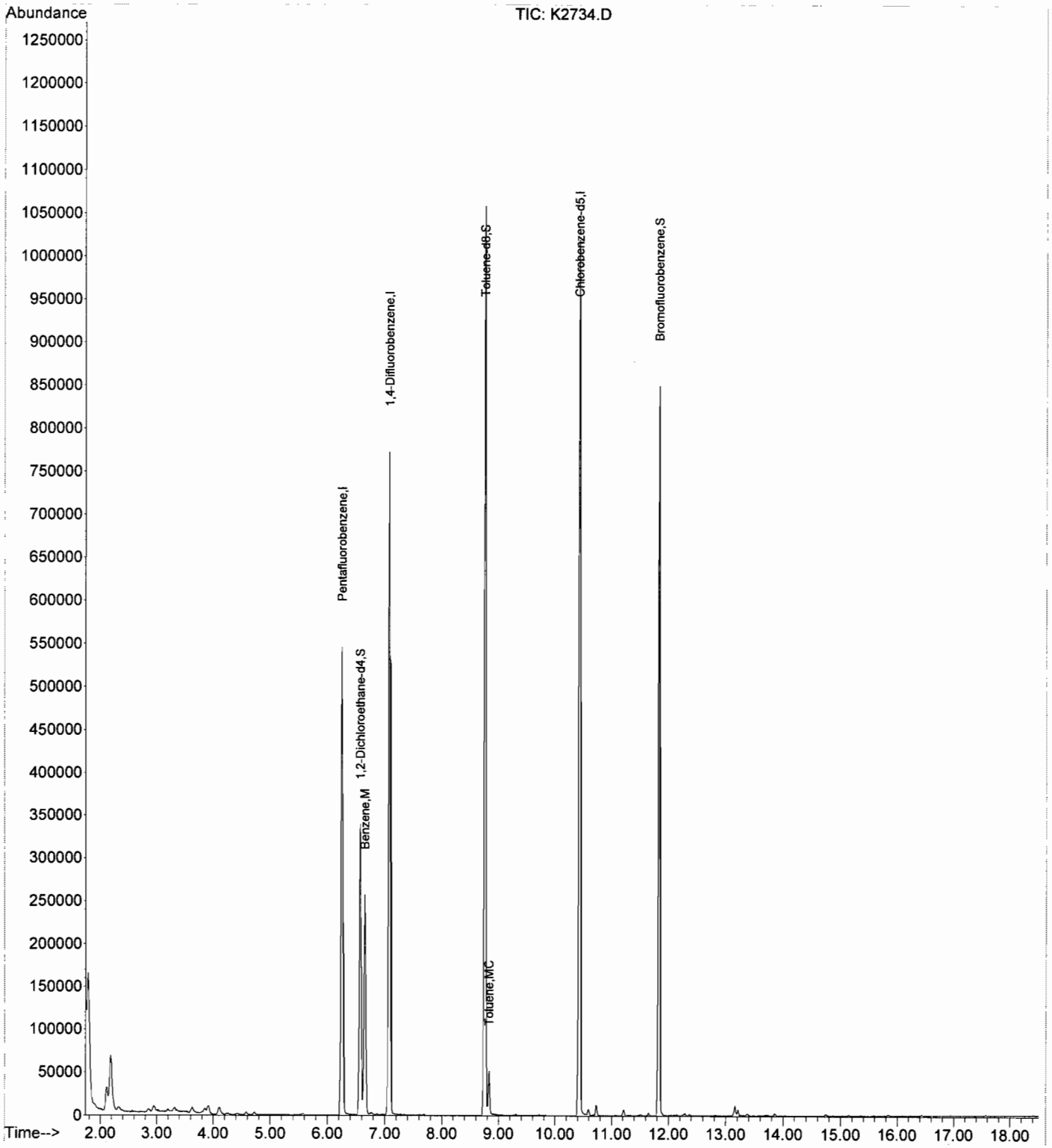
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene	6.25	168	410162	50.00 UG	0.00
31) 1,4-Difluorobenzene	7.07	114	635678	50.00 UG	0.00
50) Chlorobenzene-d5	10.43	117	584809	50.00 UG	0.00
System Monitoring Compounds					
30) 1,2-Dichloroethane-d4	6.57	65	276702	46.19 UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.38%		
41) Toluene-d8	8.75	98	723305	47.81 UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.62%		
59) Bromofluorobenzene	11.83	95	311135	48.97 UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.94%		
Target Compounds					Qvalue
32) Benzene	6.65	78	238436	15.15 UG	100
42) Toluene	8.83	92	20846	2.12 UG	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2734.D
Acq On : 30 Jul 2015 10:30 am
Operator : BARBARA
Sample : MW-36D,06447-004,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 51 Sample Multiplier: 1

Quant Time: Aug 01 18:22:53 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2734.D
Acq On : 30 Jul 2015 10:30 am
Operator : BARBARA
Sample : MW-36D,06447-004,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 51 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.07 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8072315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.782	5	10	64	rVB2	159539	547481	26.98%	5.113%
2	2.117	64	74	79	rVV2	27171	78727	3.88%	0.735%
3	2.180	79	86	108	rVV2	64660	221341	10.91%	2.067%
4	2.327	108	114	153	rVB8	5999	27258	1.34%	0.255%
5	2.951	226	233	274	rVB4	6696	21382	1.05%	0.200%
6	3.318	295	303	352	rVB10	6157	36849	1.82%	0.344%
7	3.627	352	362	397	rVV10	7322	34836	1.72%	0.325%
8	3.916	410	417	436	rVB4	10064	31029	1.53%	0.290%
9	4.110	443	454	469	rVB2	8585	28041	1.38%	0.262%
10	6.249	847	862	878	rBV	545653	1205386	59.40%	11.257%
11	6.569	910	923	931	rBV	338250	736608	36.30%	6.879%
12	6.647	931	938	955	rVB	255255	562625	27.72%	5.255%
13	7.072	1005	1019	1049	rBV	771156	1567874	77.26%	14.643%
14	8.755	1327	1340	1349	rBV	1058410	2029394	100.00%	18.953%
15	8.828	1349	1354	1371	rVB	50192	97456	4.80%	0.910%
16	10.422	1648	1658	1683	rBV	1019321	1898676	93.56%	17.732%
17	10.726	1710	1716	1728	rVB3	12004	23410	1.15%	0.219%
18	11.827	1916	1926	1950	rVB	848817	1533982	75.59%	14.326%
19	13.159	2167	2180	2186	rBV9	11326	25074	1.24%	0.234%

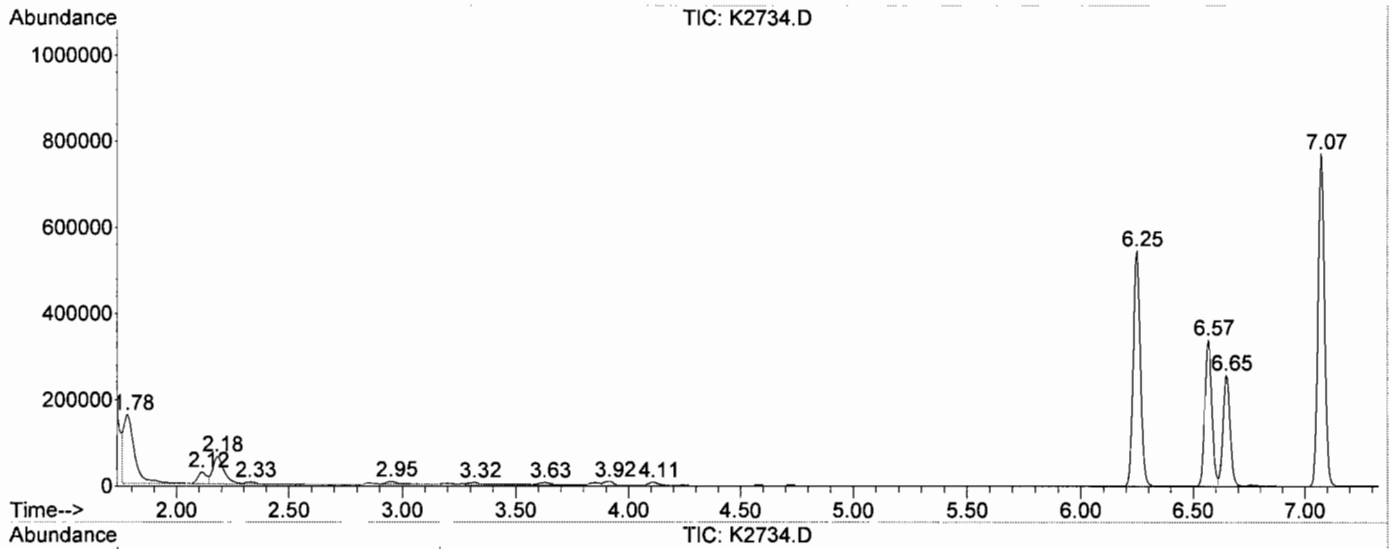
Sum of corrected areas: 10707429

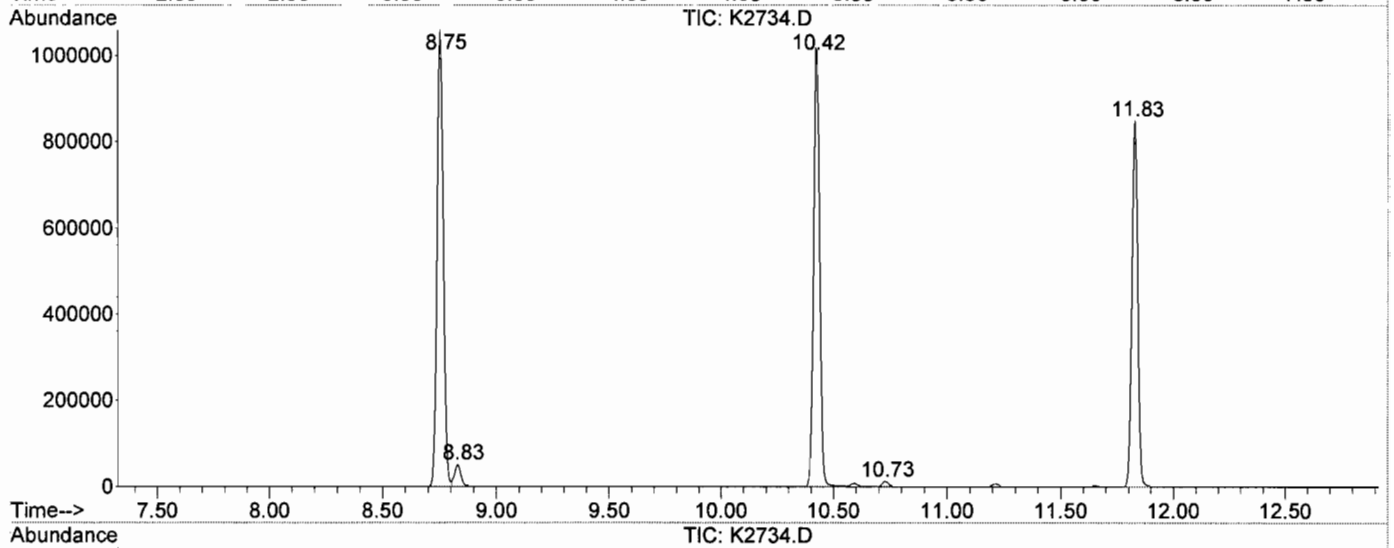
LSC Report - Integrated Chromatogram

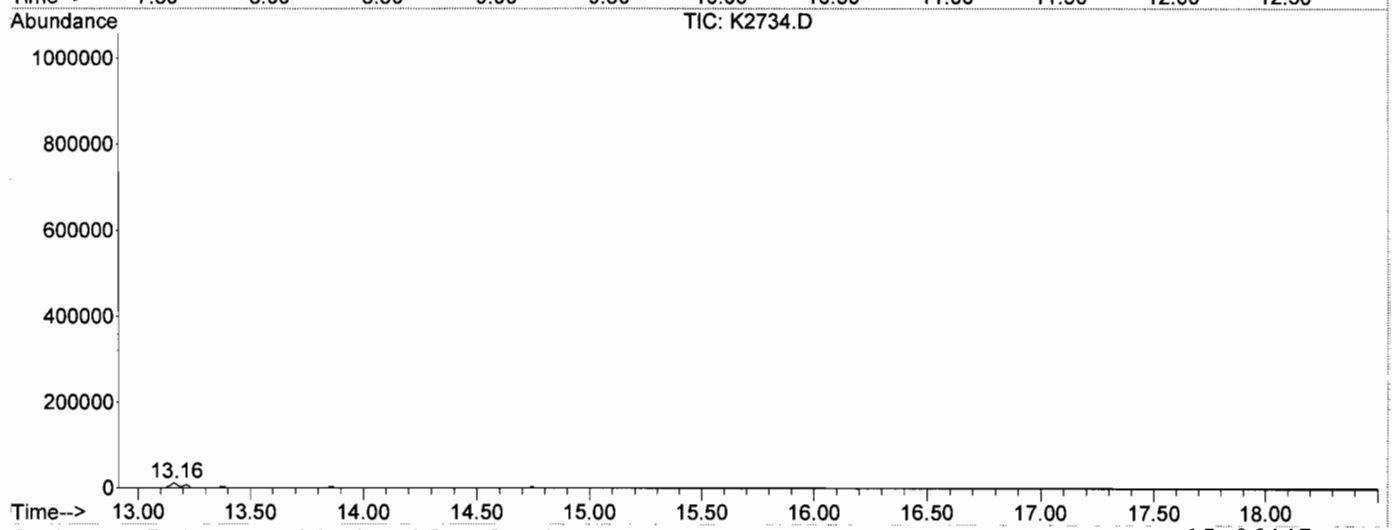
Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2734.D
Acq On : 30 Jul 2015 10:30 am
Operator : BARBARA
Sample : MW-36D,06447-004,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 51 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2734.D
Acq On : 30 Jul 2015 10:30 am
Operator : BARBARA
Sample : MW-36D,06447-004,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 51 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

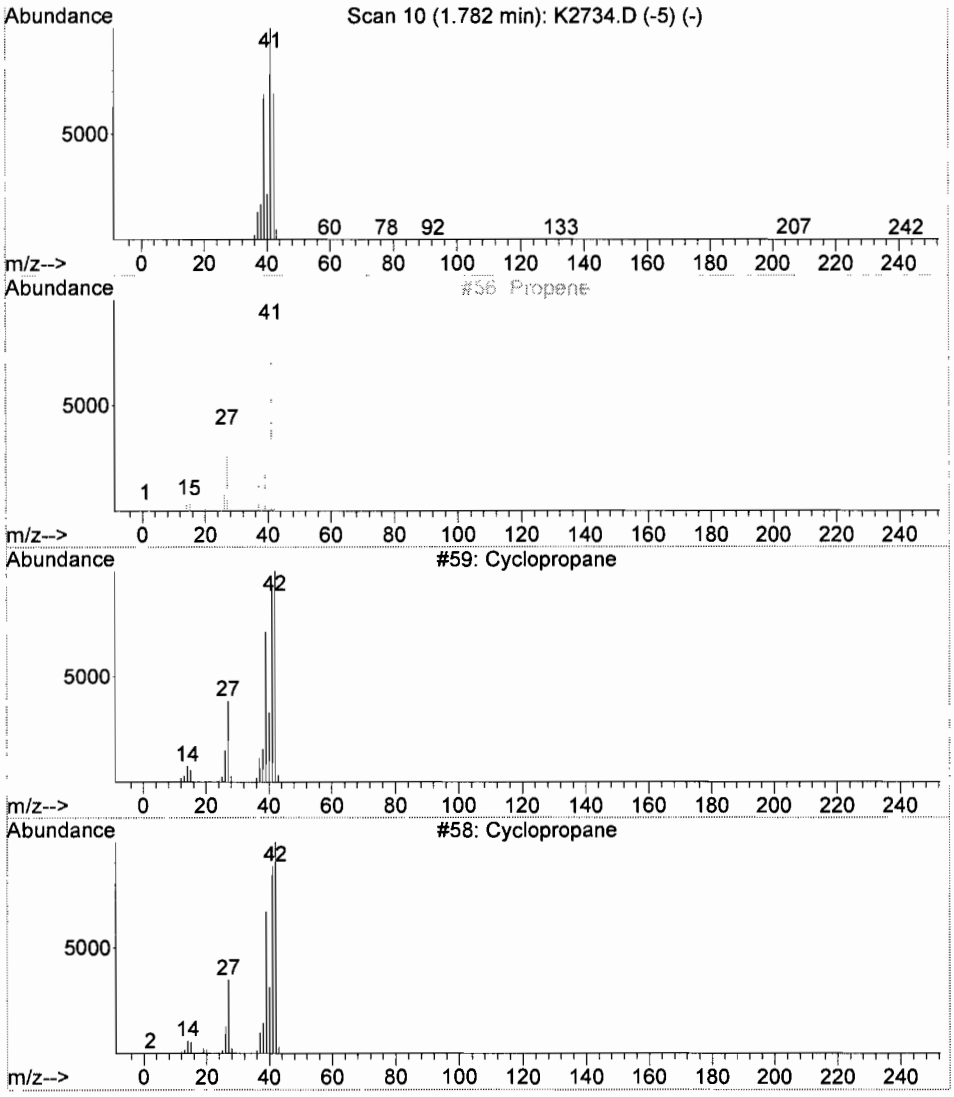
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

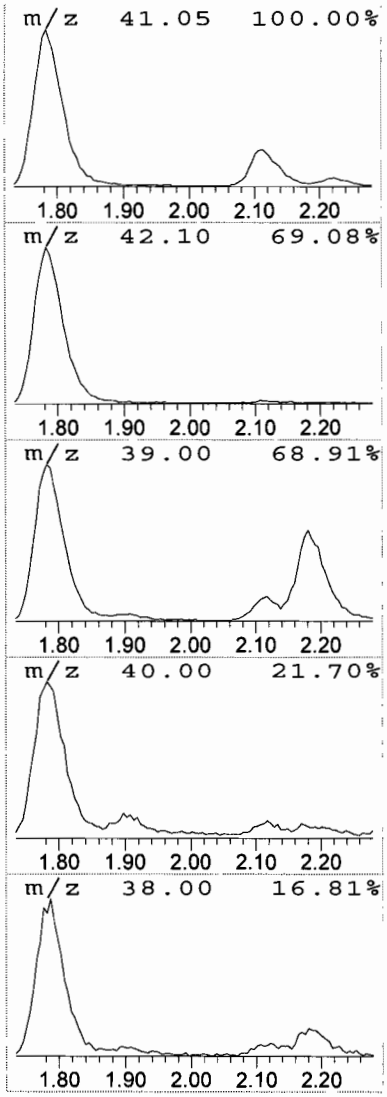
****

Peak Number 1 Propene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.78	22.71 UG	547481	Pentafluorobenzene	6.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Propene	42	C3H6	000115-07-1	86
2	Cyclopropane	42	C3H6	000075-19-4	72
3	Cyclopropane	42	C3H6	000075-19-4	72
4	N-Methyl-7-azabicyclo(2,2,1)hept...	109	C7H11N	055590-26-6	64
5	Aluminum, tripropyl-	156	C9H21Al	000102-67-0	64





Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2734.D
Acq On : 30 Jul 2015 10:30 am
Operator : BARBARA
Sample : MW-36D,06447-004,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 51 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

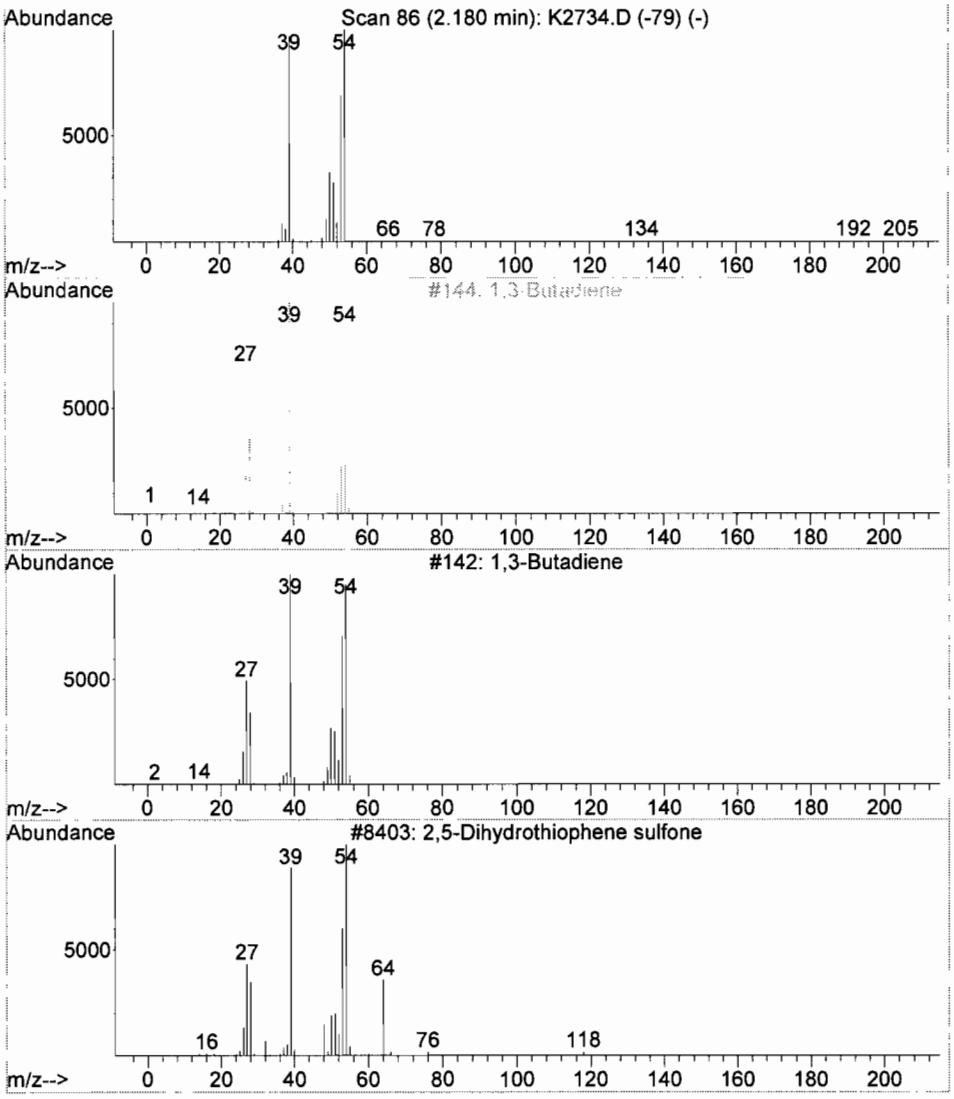
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

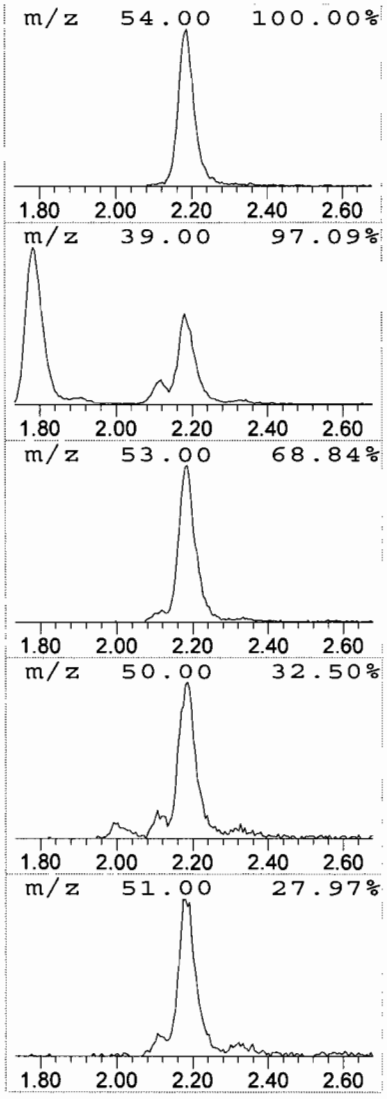
****

Peak Number 2 1,3-Butadiene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.18	9.18 UG	221341	Pentafluorobenzene	6.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,3-Butadiene	54	C4H6	000106-99-0	86
2	1,3-Butadiene	54	C4H6	000106-99-0	86
3	2,5-Dihydrothiophene sulfone	118	C4H6O2S	000077-79-2	83
4	2,5-Dihydrothiophene sulfone	118	C4H6O2S	000077-79-2	83
5	Bicyclo[1.1.0]butane	54	C4H6	000157-33-5	78





Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\08-03-15\
Data File : G5713.D
Acq On : 3 Aug 2015 18:00
Operator : Sylvia
Sample : MW-13SR,06447-005,A,2.5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,2
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 04 09:59:05 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed Jul 29 14:56:12 2015
Response via : Initial Calibration

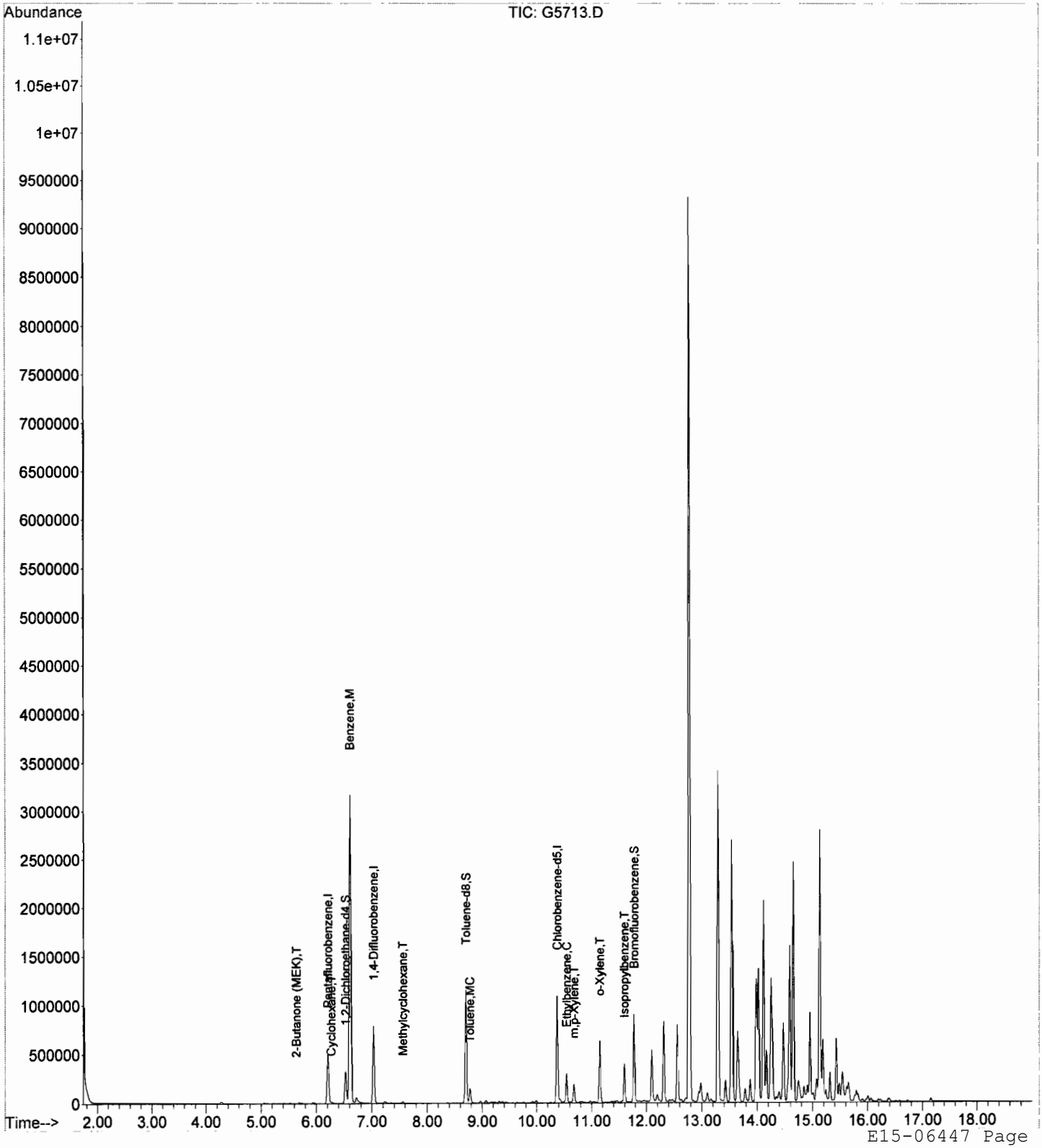
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.21	168	368103	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.03	114	644619	50.00	UG	0.00
50) Chlorobenzene-d5	10.37	117	623123	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.53	65	253835	51.59	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 103.18%			
41) Toluene-d8	8.70	98	776532	48.55	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.10%			
59) Bromofluorobenzene	11.77	95	346327	48.94	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 97.88%			
Target Compounds						Qvalue
22) 2-Butanone (MEK)	5.64	43	3420	1.21	UG	# 93
32) Benzene	6.60	78	3001274	160.83	UG	100
42) Toluene	8.78	92	64117	5.59	UG	99
53) Ethylbenzene	10.54	91	80045	3.94	UG	98
54) m,p-Xylene	10.67	106	59756	7.67	UG	95
55) o-Xylene	11.15	106	179633	22.64	UG	93
58) Isopropylbenzene	11.59	105	290390	15.79	UG	99
82) Cyclohexane	6.27	56	10648	1.19	UG	# 67
83) Methylcyclohexane	7.56	83	6778	1.10	UG	# 46

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\08-03-15\
Data File : G5713.D
Acq On : 3 Aug 2015 18:00
Operator : Sylvia
Sample : MW-13SR,06447-005,A,2.5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,2
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 04 09:59:05 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed Jul 29 14:56:12 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDCHEM\1\DATA\08-03-15\
Data File : G5713.D
Acq On : 3 Aug 2015 18:00
Operator : Sylvia
Sample : MW-13SR,06447-005,A,2.5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,2
ALS Vial : 19 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8072915.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.207	845	856	884	rBV	506685	1186473	6.84%	1.321%
2	6.526	903	917	923	rBV	323846	729284	4.21%	0.812%
3	6.604	923	932	947	rVV	3164596	7003992	40.39%	7.796%
4	6.725	947	955	988	rVB2	57438	205792	1.19%	0.229%
5	7.028	1001	1013	1045	rBV	784179	1582193	9.12%	1.761%
6	8.702	1314	1333	1341	rBV	1150541	2194799	12.66%	2.443%
7	8.775	1341	1347	1362	rVB	145182	302565	1.74%	0.337%
8	10.370	1639	1652	1670	rBV	1087014	2143401	12.36%	2.386%
9	10.543	1677	1685	1694	rVB2	292061	516257	2.98%	0.575%
10	10.679	1702	1711	1725	rVB	185435	370761	2.14%	0.413%
11	11.149	1792	1801	1817	rVB	620977	1126005	6.49%	1.253%
12	11.594	1869	1886	1906	rBV	393614	771294	4.45%	0.859%
13	11.772	1908	1920	1933	rBV	888879	1641760	9.47%	1.827%
14	12.096	1971	1982	1993	rBV	523433	1019176	5.88%	1.134%
15	12.195	1993	2001	2014	rVV4	74150	187136	1.08%	0.208%
16	12.311	2014	2023	2037	rVB	812309	1447511	8.35%	1.611%
17	12.556	2062	2070	2080	rBV	780541	1429733	8.24%	1.591%
18	12.771	2102	2111	2133	rVB	9322540	17342582	100.00%	19.304%
19	12.943	2133	2144	2146	rBV	106561	182767	1.05%	0.203%
20	12.980	2146	2151	2164	rVV	188138	388959	2.24%	0.433%
21	13.100	2164	2174	2181	rVB	86027	173785	1.00%	0.193%
22	13.289	2199	2210	2228	rBV	3403136	6298725	36.32%	7.011%
23	13.425	2228	2236	2246	rVB	218386	402669	2.32%	0.448%
24	13.534	2246	2257	2269	rBV	2678753	5131612	29.59%	5.712%
25	13.644	2269	2278	2296	rVB3	718972	1676646	9.67%	1.866%
26	13.780	2296	2304	2314	rBV2	134552	277298	1.60%	0.309%
27	13.869	2314	2321	2333	rVB	223888	402699	2.32%	0.448%
28	13.979	2333	2342	2346	rBV	1248858	2428631	14.00%	2.703%
29	14.021	2346	2350	2358	rVV	1340127	2308194	13.31%	2.569%
30	14.110	2358	2367	2373	rVV	2042361	3673849	21.18%	4.089%
31	14.162	2373	2377	2385	rVV	507850	854377	4.93%	0.951%
32	14.251	2385	2394	2407	rVB3	1241934	2960292	17.07%	3.295%
33	14.471	2426	2436	2444	rVB3	786742	1535933	8.86%	1.710%
34	14.586	2444	2458	2463	rBV	1580248	3108191	17.92%	3.460%
35	14.648	2463	2470	2480	rVB	2445324	4183606	24.12%	4.657%
36	14.737	2480	2487	2497	rBV3	206392	547698	3.16%	0.610%
37	14.842	2502	2507	2514	rBV	117617	224397	1.29%	0.250%

LSC Area Percent Report

Data Path : C:\MSDCHEM\1\DATA\08-03-15\
Data File : G5713.D
Acq On : 3 Aug 2015 18:00
Operator : Sylvia
Sample : MW-13SR,06447-005,A,2.5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,2
ALS Vial : 19 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8072915.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

38	14.905	2514	2519	2522	rVV2	128223	220734	1.27%	0.246%
39	14.947	2522	2527	2536	rVV	873708	1496346	8.63%	1.666%
40	15.067	2544	2550	2554	rBV4	213456	417369	2.41%	0.465%
41	15.124	2554	2561	2568	rVV3	2765152	5272350	30.40%	5.869%
42	15.182	2568	2572	2579	rVV2	615303	1081488	6.24%	1.204%
43	15.313	2590	2597	2606	rVB	288454	489790	2.82%	0.545%
44	15.428	2608	2619	2625	rBV2	628354	1143242	6.59%	1.273%
45	15.480	2625	2629	2634	rVV	145104	252426	1.46%	0.281%
46	15.538	2634	2640	2648	rVB3	242750	527861	3.04%	0.588%
47	15.616	2649	2655	2658	rVV2	146595	309714	1.79%	0.345%
48	15.647	2658	2661	2677	rVV2	189971	387163	2.23%	0.431%
49	15.794	2677	2689	2693	rVV2	105820	281021	1.62%	0.313%

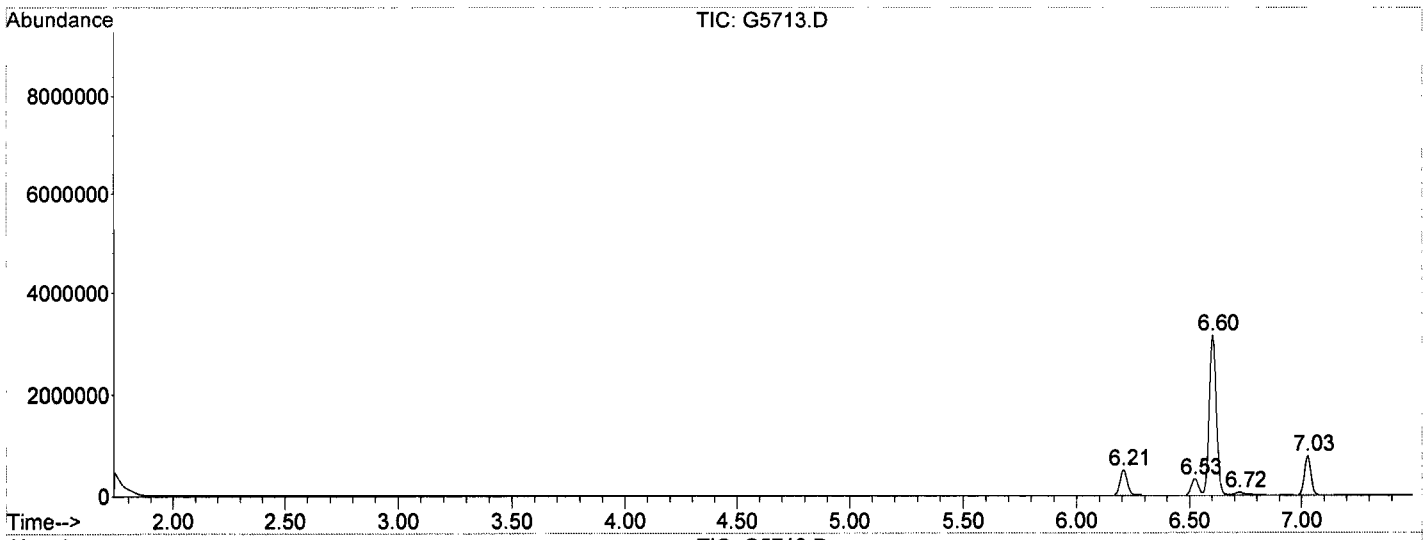
Sum of corrected areas: 89840546

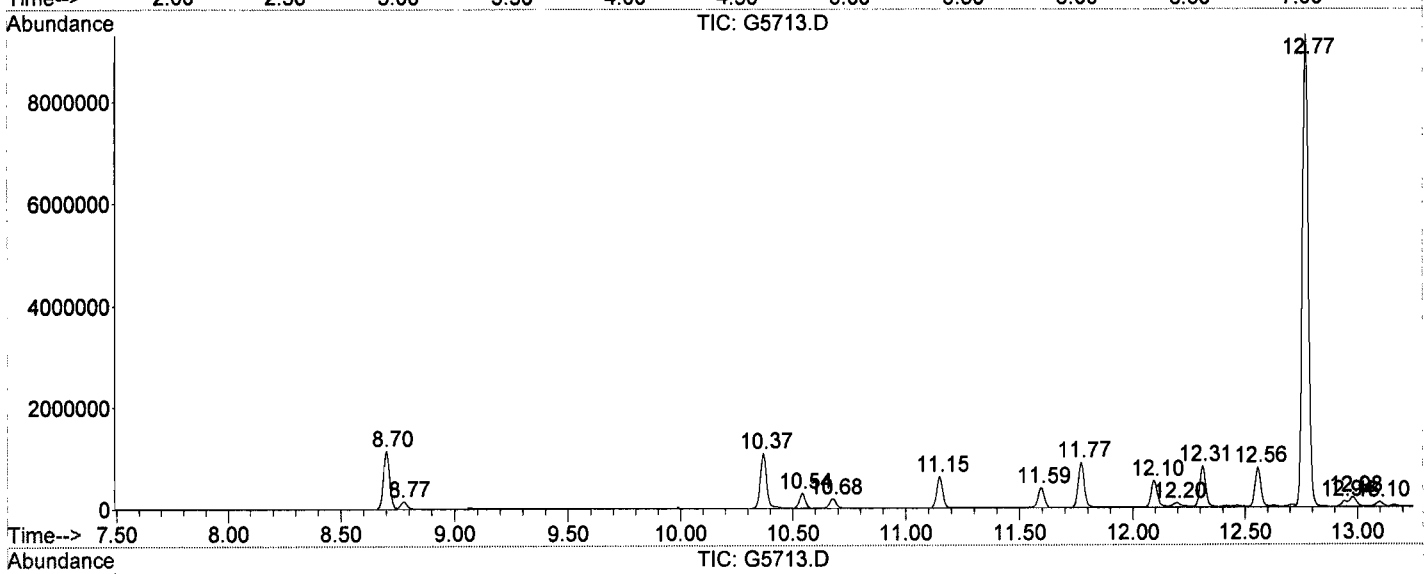
LSC Report - Integrated Chromatogram

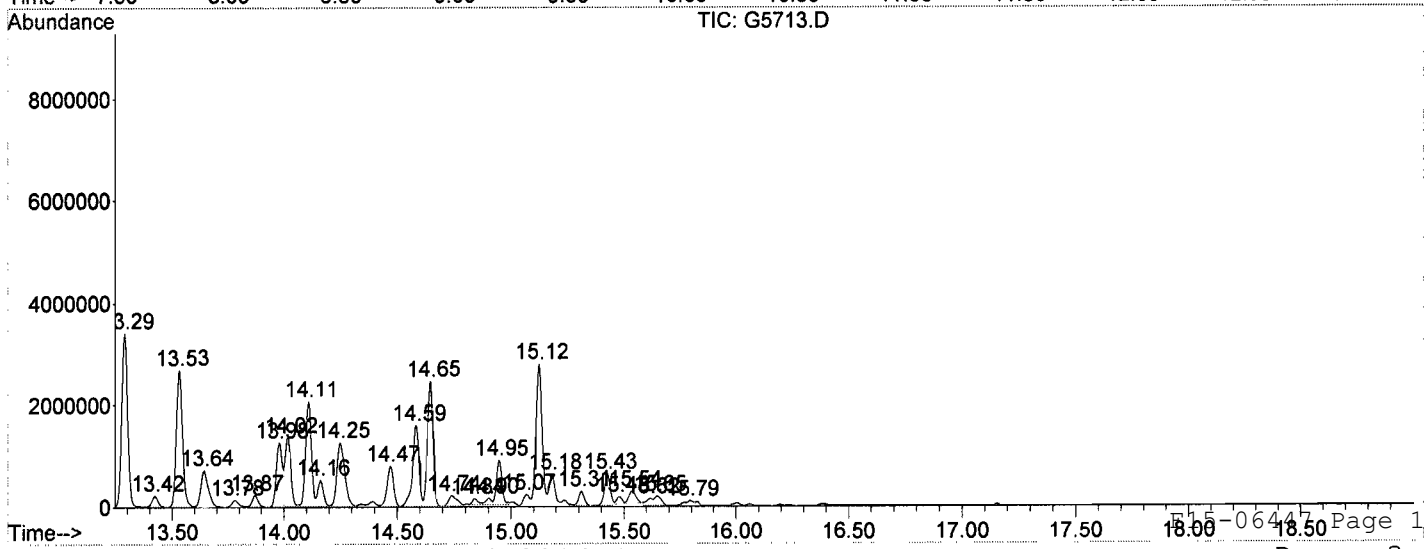
Data Path : C:\MSDCHEM\1\DATA\08-03-15\
Data File : G5713.D
Acq On : 3 Aug 2015 18:00
Operator : Sylvia
Sample : MW-13SR,06447-005,A,2.5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,2
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







Library Search Compound Report

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Data Path : C:\MSDCHEM\1\DATA\08-03-15\
Data File : G5713.D
Acq On    :  3 Aug 2015  18:00
Operator  : Sylvia
Sample    : MW-13SR,06447-005,A,2.5mL,100
Misc      : JMC/ARSYNCO,07/23/15,07/23/15,2
ALS Vial  : 19   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title  : VOLATILE ORGANICS BY EPA METHOD 8260C

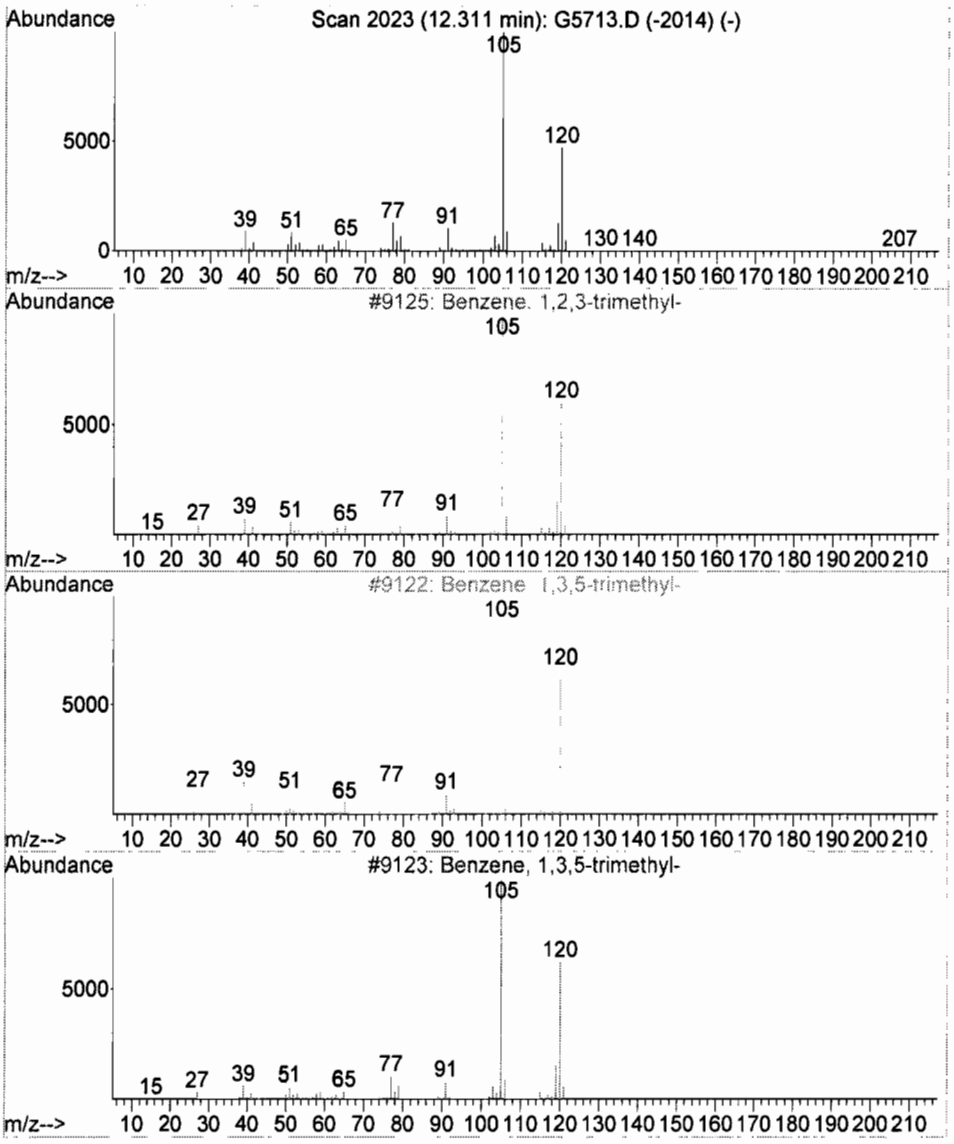
TIC Library    : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P
```

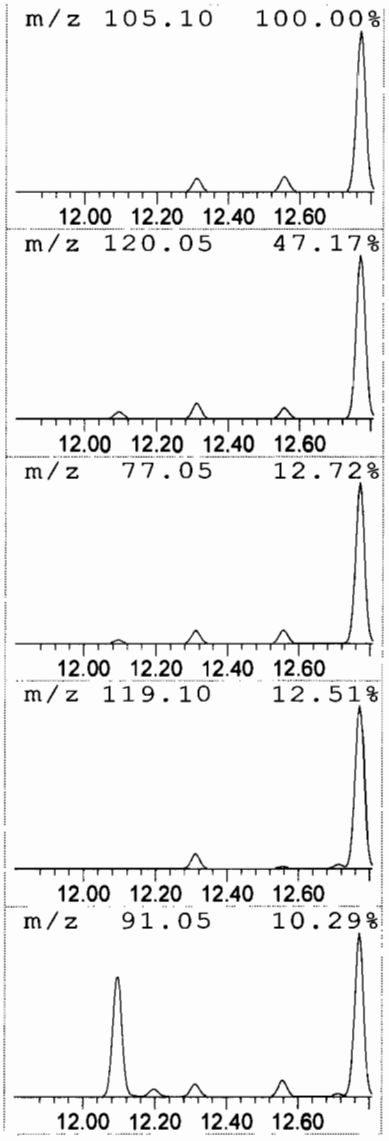
****

Peak Number 1 Benzene, 1,2,3-trimethyl- Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.31	33.77 UG	1447510	Chlorobenzene-d5	10.37

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
5	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\08-03-15\
Data File : G5713.D
Acq On : 3 Aug 2015 18:00
Operator : Sylvia
Sample : MW-13SR,06447-005,A,2.5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,2
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

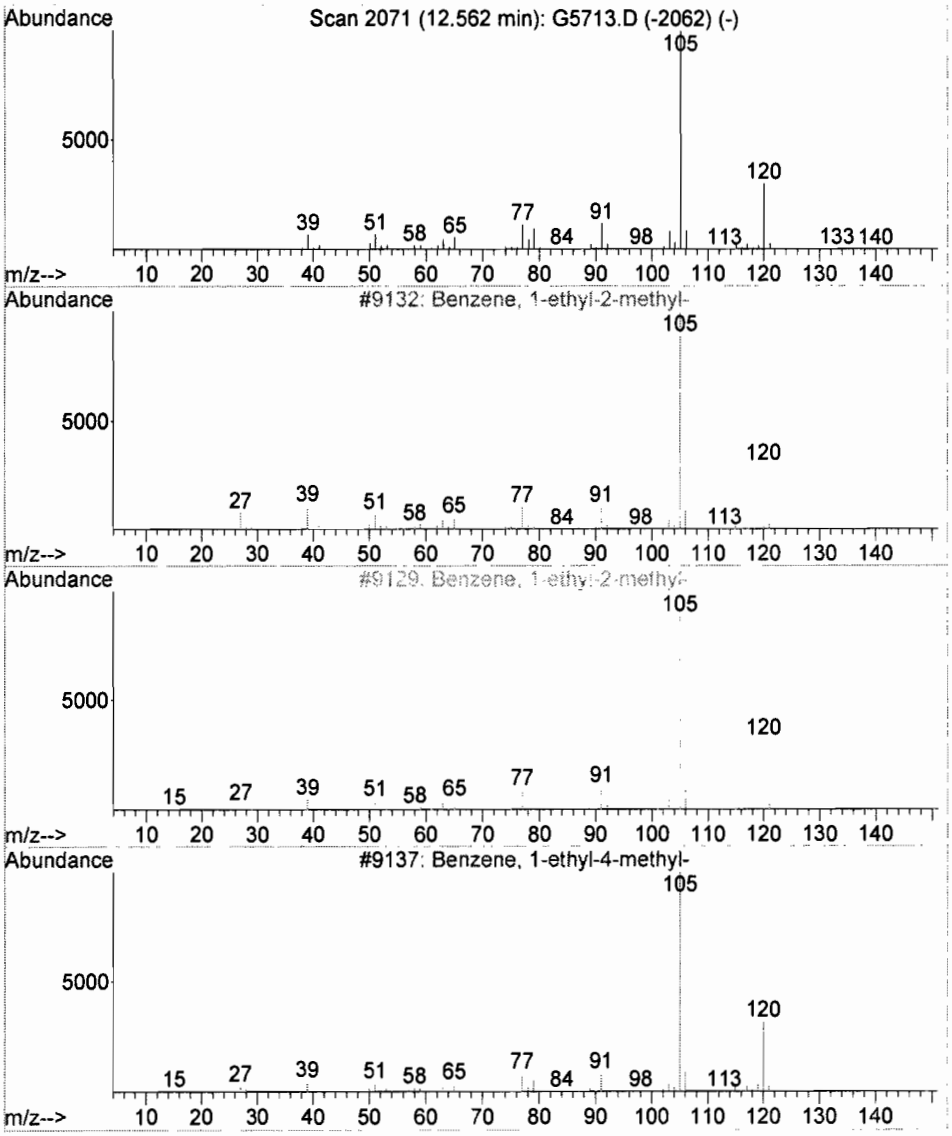
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

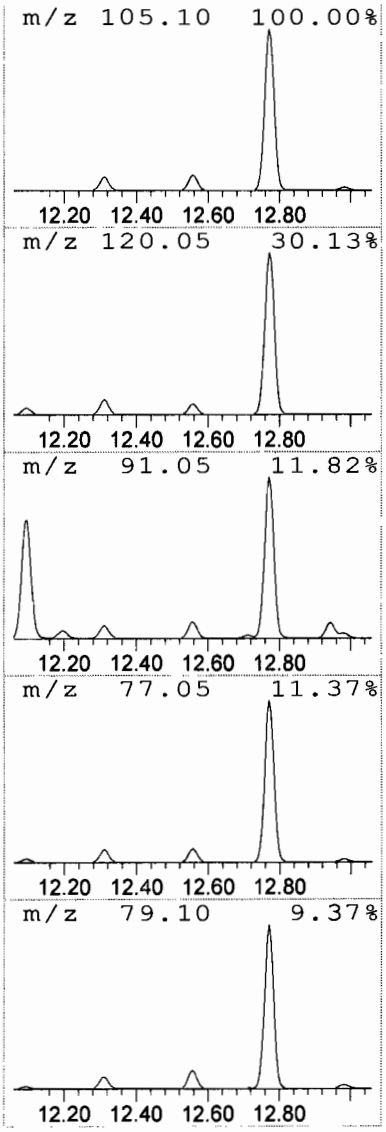
****

Peak Number 2 Benzene, 1-ethyl-2-methyl- Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.56	33.35 UG	1429730	Chlorobenzene-d5	10.37

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	91
5	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	91





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\08-03-15\
Data File : G5713.D
Acq On : 3 Aug 2015 18:00
Operator : Sylvia
Sample : MW-13SR,06447-005,A,2.5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,2
ALS Vial : 19 Sample Multiplier: 1

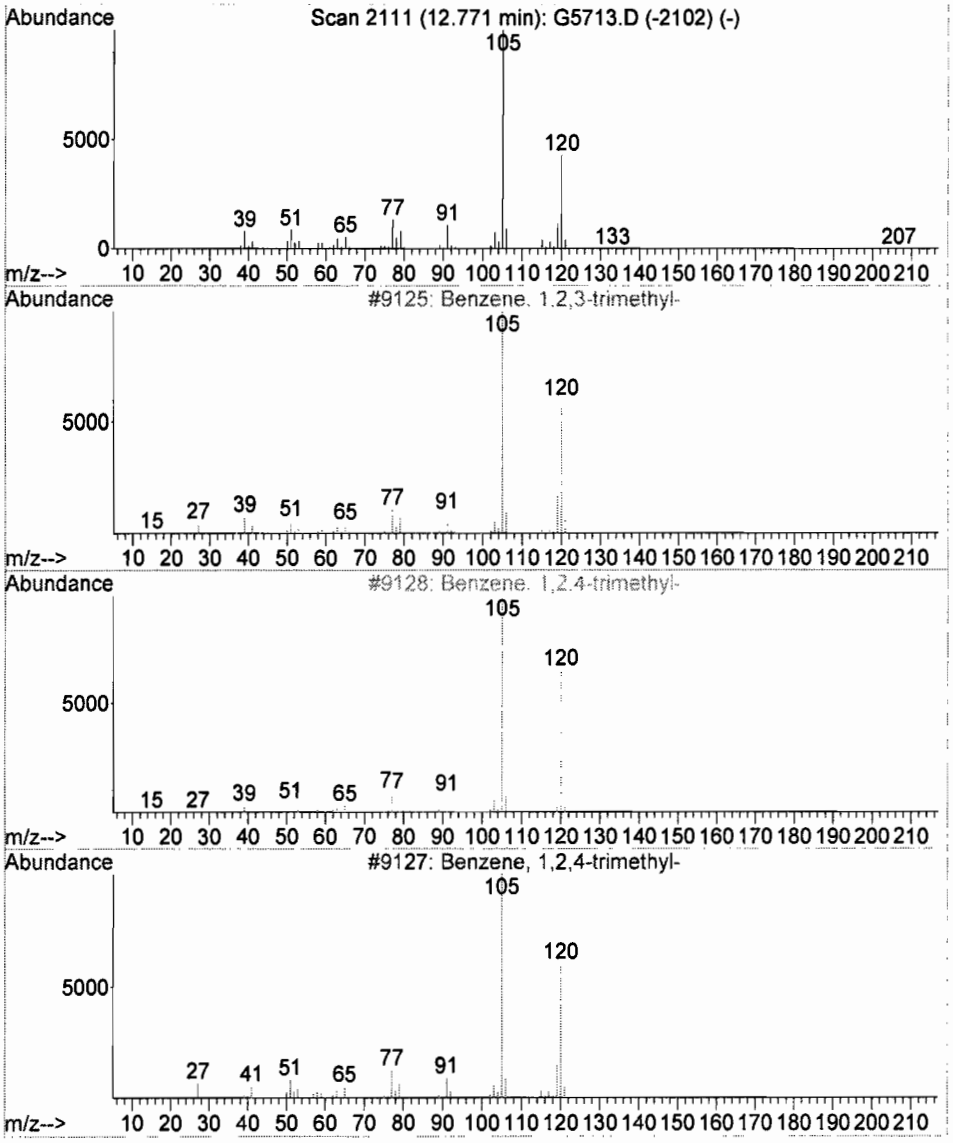
Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

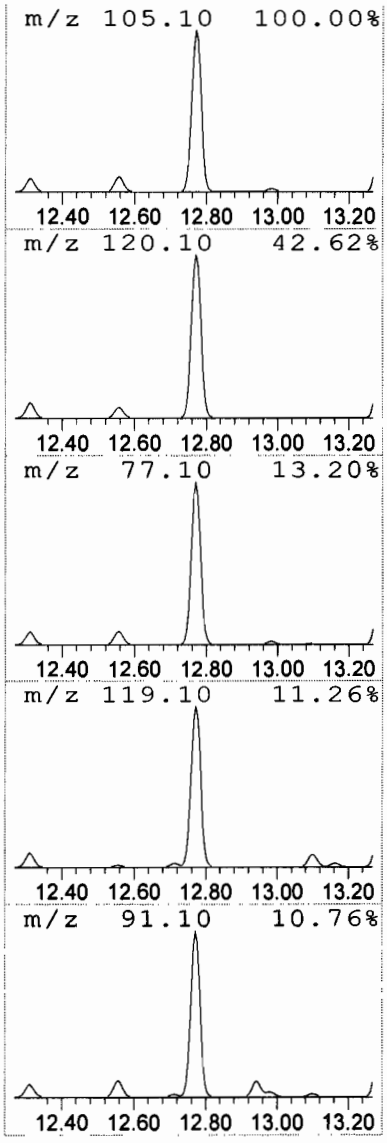
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 3 Unknown Aromatic Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.77	404.56 UG	17342600	Chlorobenzene-d5	10.37

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	95
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	93





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\08-03-15\
Data File : G5713.D
Acq On : 3 Aug 2015 18:00
Operator : Sylvia
Sample : MW-13SR,06447-005,A,2.5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,2
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

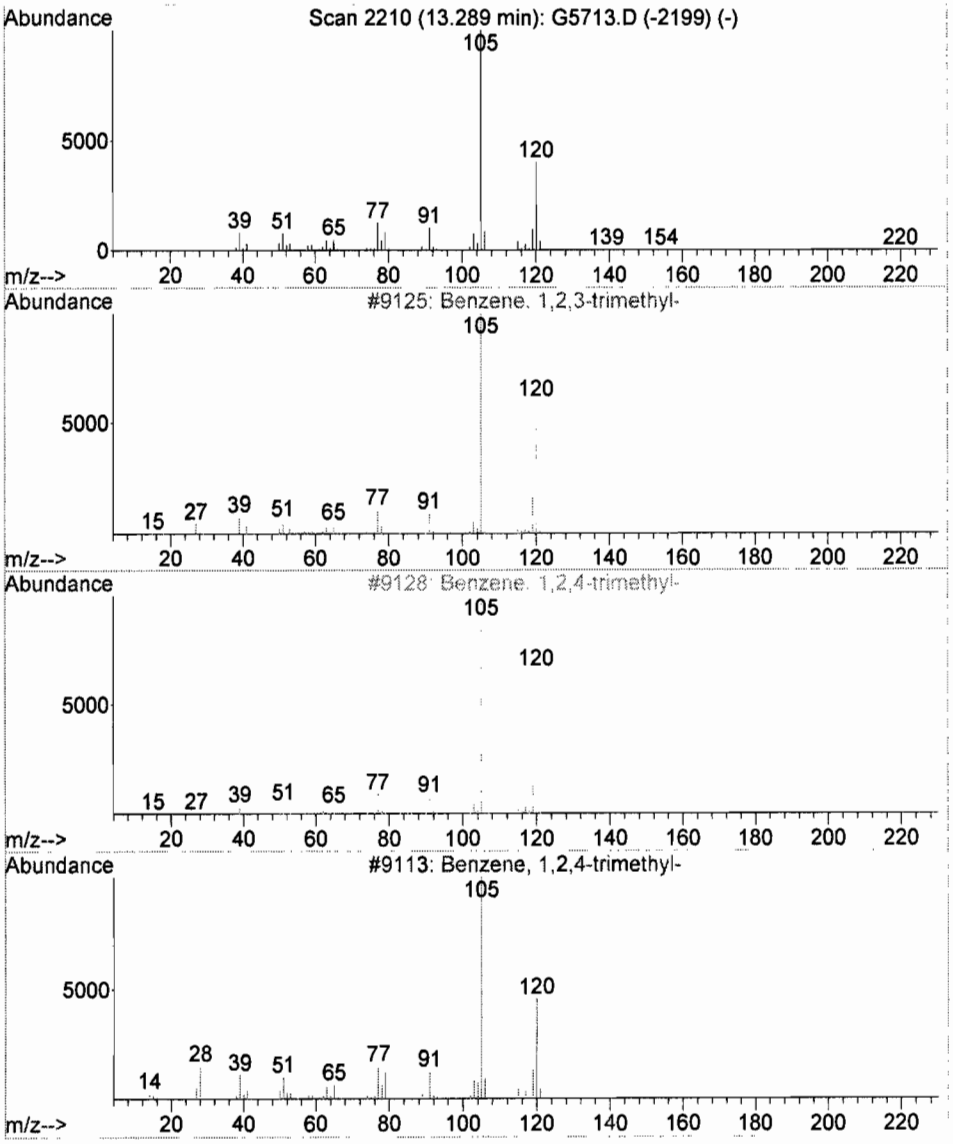
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

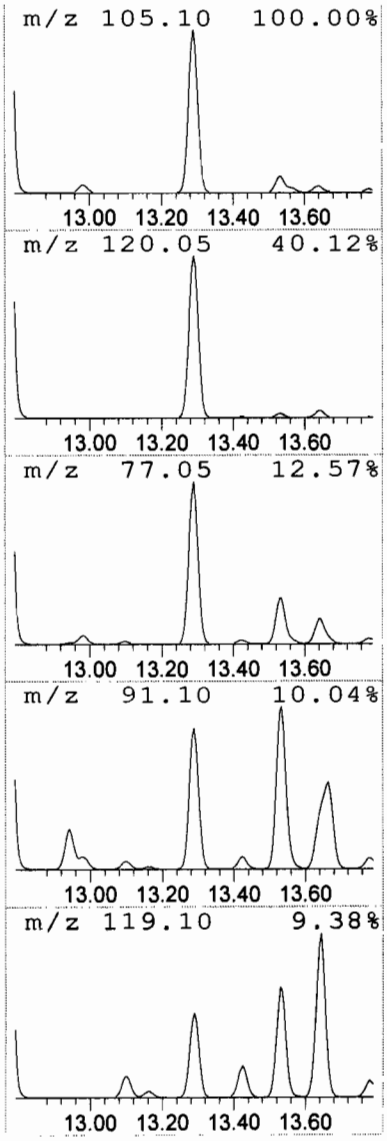
****

Peak Number 4 Unknown Aromatic Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.29	146.93 UG	6298730	Chlorobenzene-d5	10.37

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94
5	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	94





Library Search Compound Report

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Data File : G5713.D
Acq On : 3 Aug 2015 18:00
Operator : Sylvia
Sample : MW-13SR,06447-005,A,2.5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,2
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

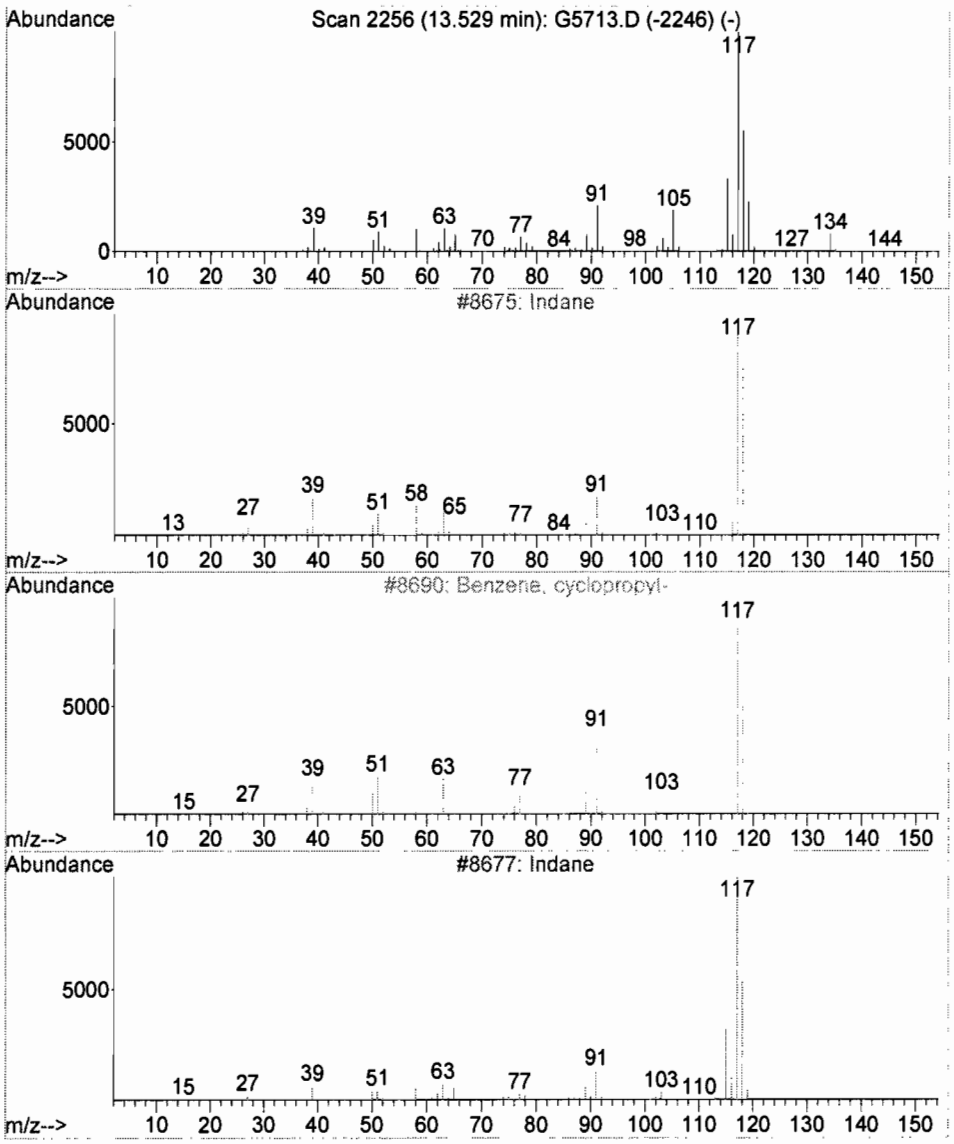
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

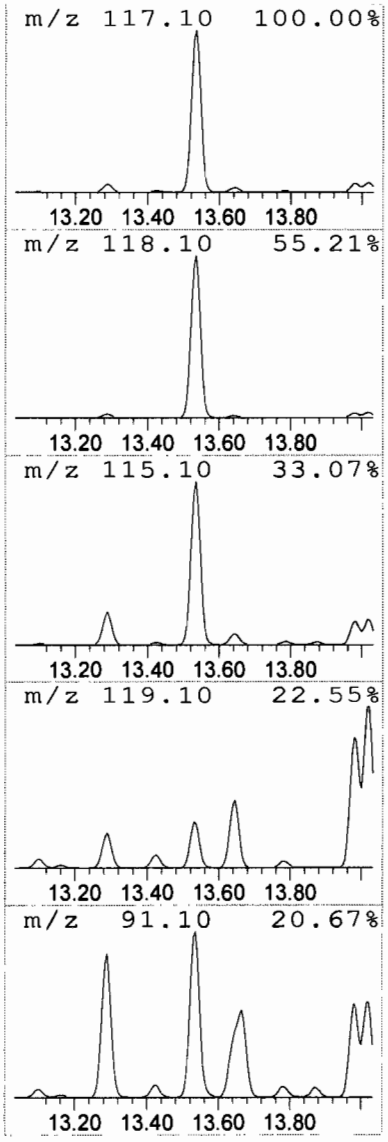
****

Peak Number 5 Indane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.53	119.71 UG	5131610	Chlorobenzene-d5	10.37

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indane	118	C9H10	000496-11-7	89
2	Benzene, cyclopropyl-	118	C9H10	000873-49-4	70
3	Indane	118	C9H10	000496-11-7	70
4	Benzene, cyclopropyl-	118	C9H10	000873-49-4	70
5	Benzene, cyclopropyl-	118	C9H10	000873-49-4	58





Library Search Compound Report

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Data File : G5713.D
Acq On    :  3 Aug 2015  18:00
Operator  : Sylvia
Sample    : MW-13SR,06447-005,A,2.5mL,100
Misc      : JMC/ARSYNCO,07/23/15,07/23/15,2
ALS Vial  : 19   Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title  : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library    : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P
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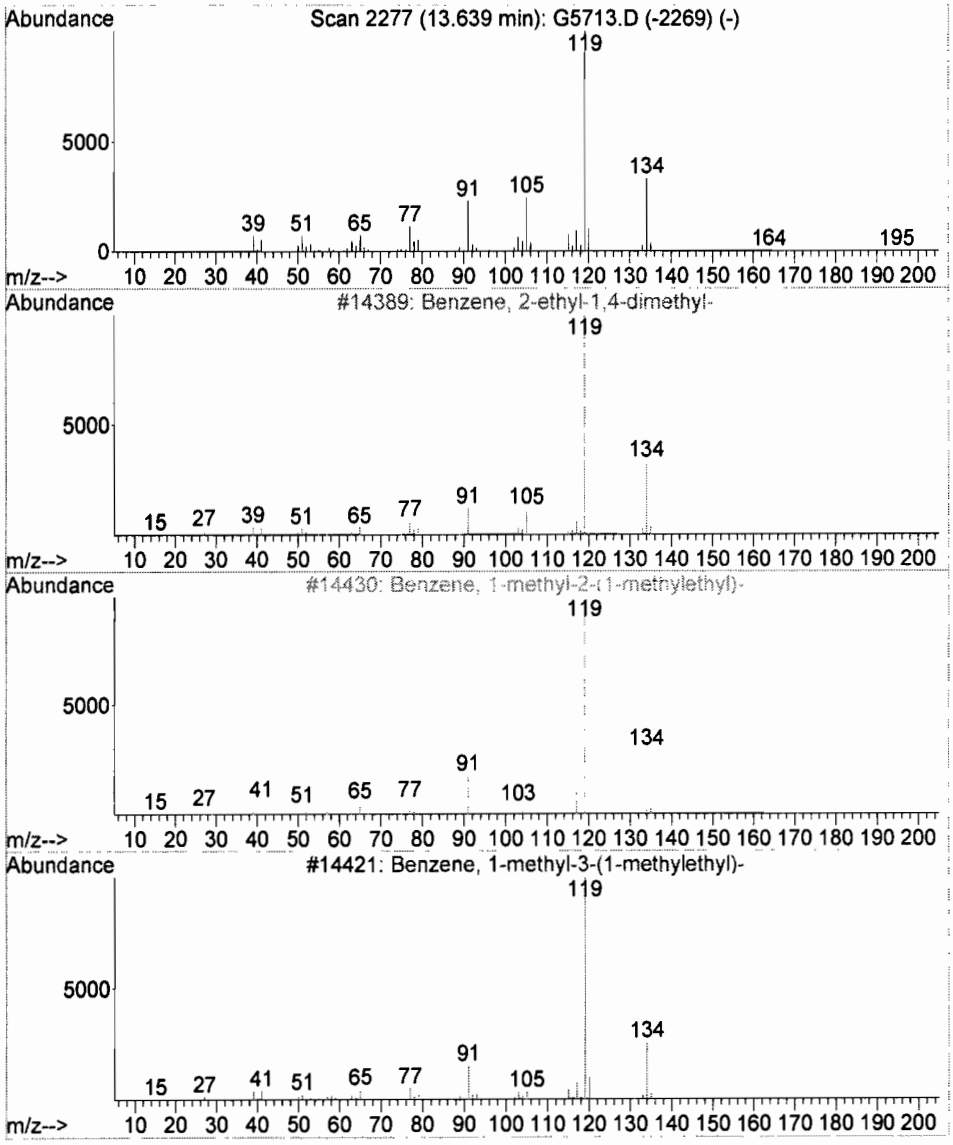
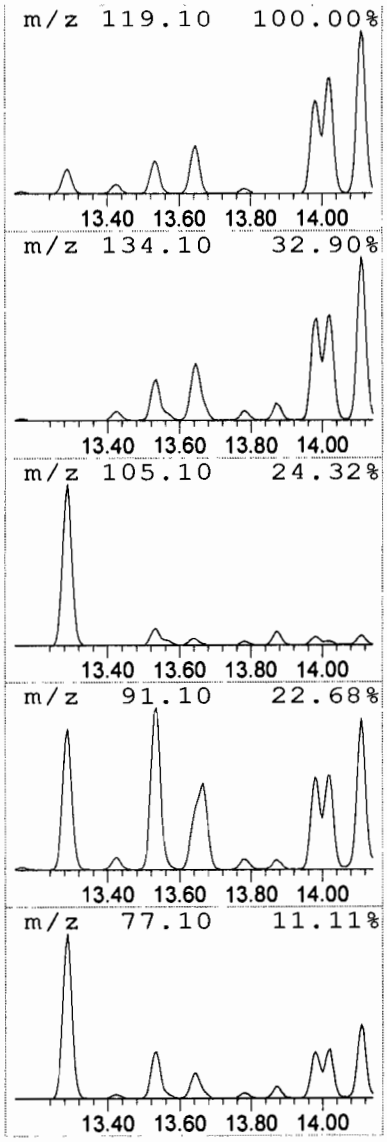
****

Peak Number 6 Benzene, 2-ethyl-1,4-dimethyl- Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.64	39.11 UG	1676650	Chlorobenzene-d5	10.37

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	97
2	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	94
3	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	94
4	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	94
5	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	93





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\08-03-15\
Data File : G5713.D
Acq On : 3 Aug 2015 18:00
Operator : Sylvia
Sample : MW-13SR,06447-005,A,2.5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,2
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

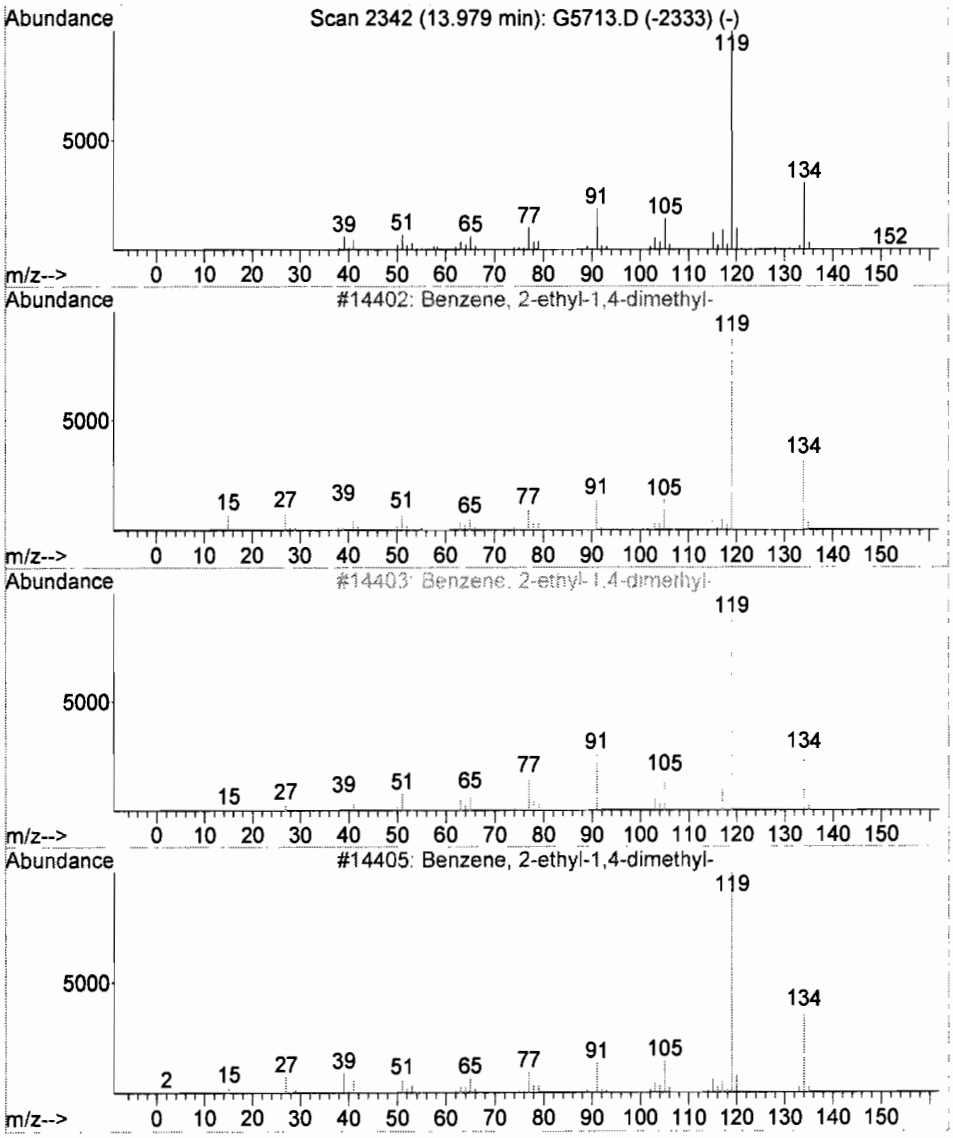
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

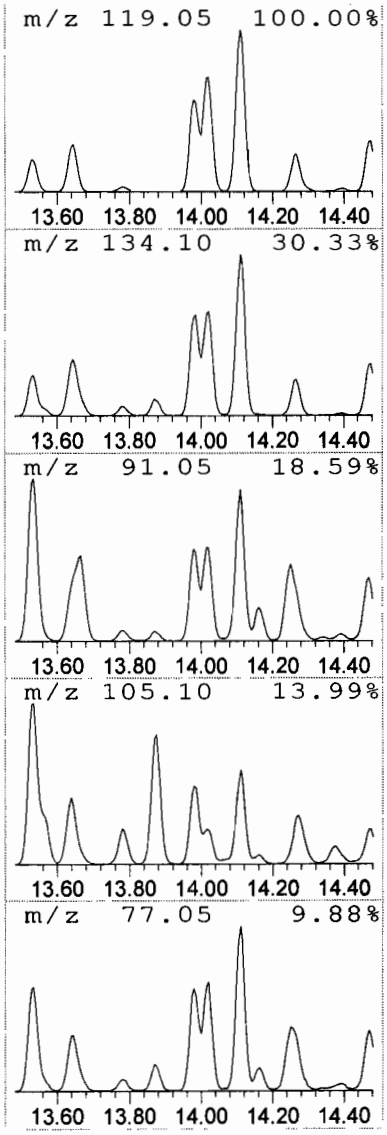
****

Peak Number 7 Unknown Aromatic Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.98	56.65 UG	2428630	Chlorobenzene-d5	10.37

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	97
2	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	96
3	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	95
4	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	95
5	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	95





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\08-03-15\
Data File : G5713.D
Acq On : 3 Aug 2015 18:00
Operator : Sylvia
Sample : MW-13SR,06447-005,A,2.5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,2
ALS Vial : 19 Sample Multiplier: 1

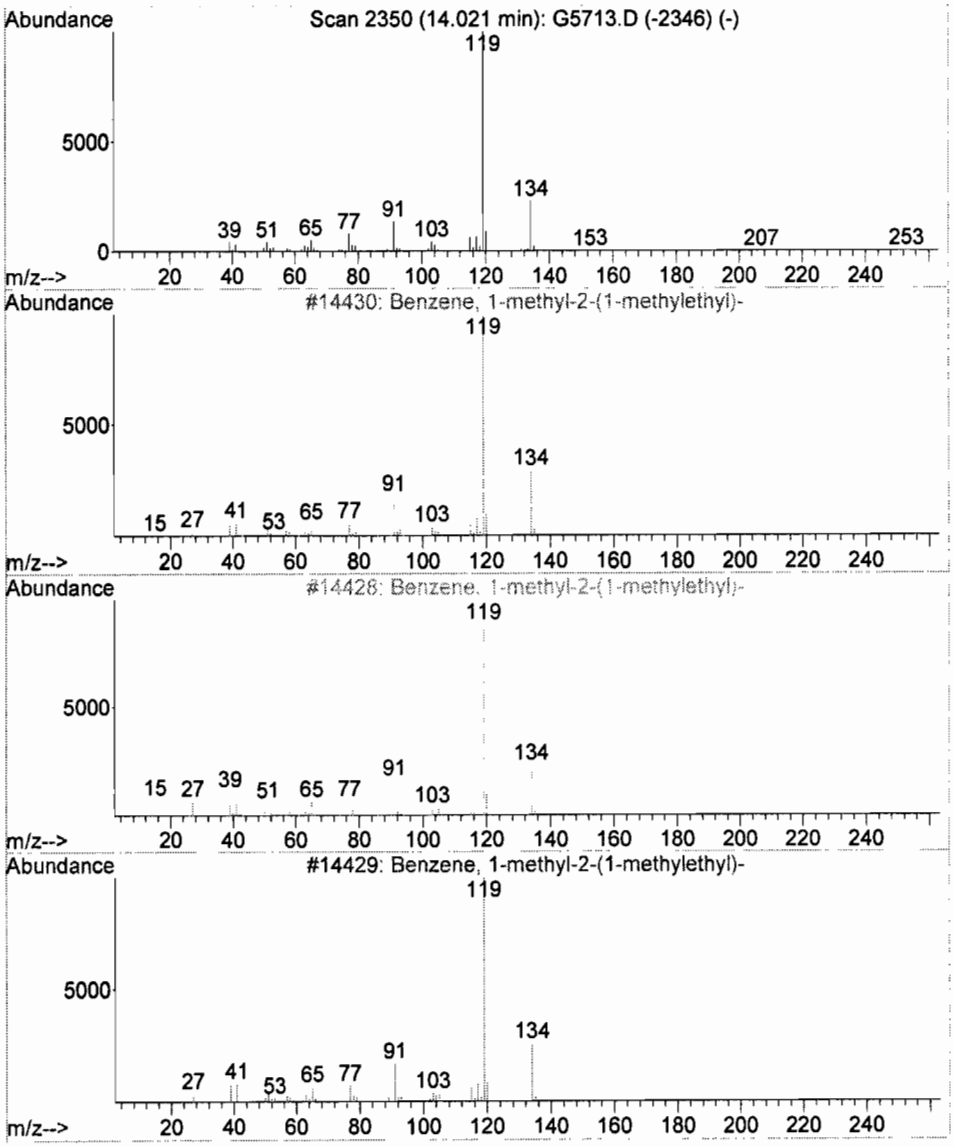
Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

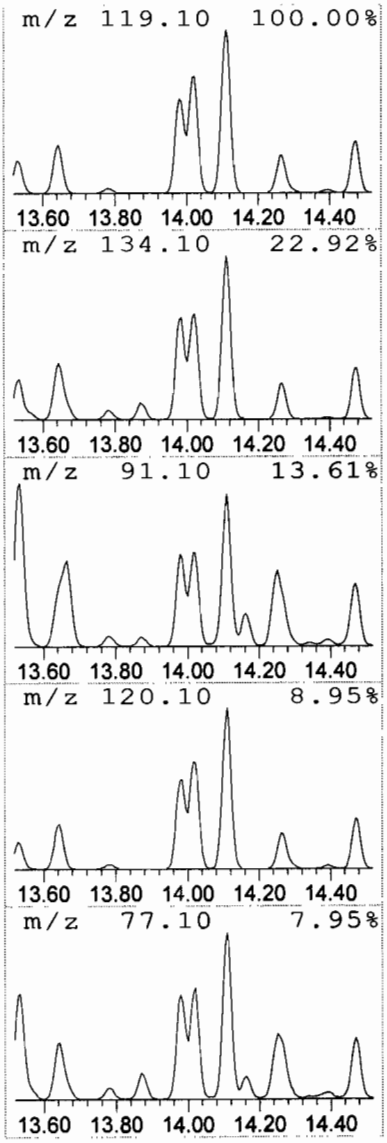
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 8 Benzene, 1-methyl-2-(1-meth... Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.02	53.84 UG	2308190	Chlorobenzene-d5	10.37

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-2-(1-methylethl...	134	C10H14	000527-84-4	97
2	Benzene, 1-methyl-2-(1-methylethl...	134	C10H14	000527-84-4	95
3	Benzene, 1-methyl-2-(1-methylethl...	134	C10H14	000527-84-4	94
4	Benzene, 1-methyl-4-(1-methylethl...	134	C10H14	000099-87-6	94
5	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	91





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\08-03-15\
Data File : G5713.D
Acq On : 3 Aug 2015 18:00
Operator : Sylvia
Sample : MW-13SR,06447-005,A,2.5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,2
ALS Vial : 19 Sample Multiplier: 1

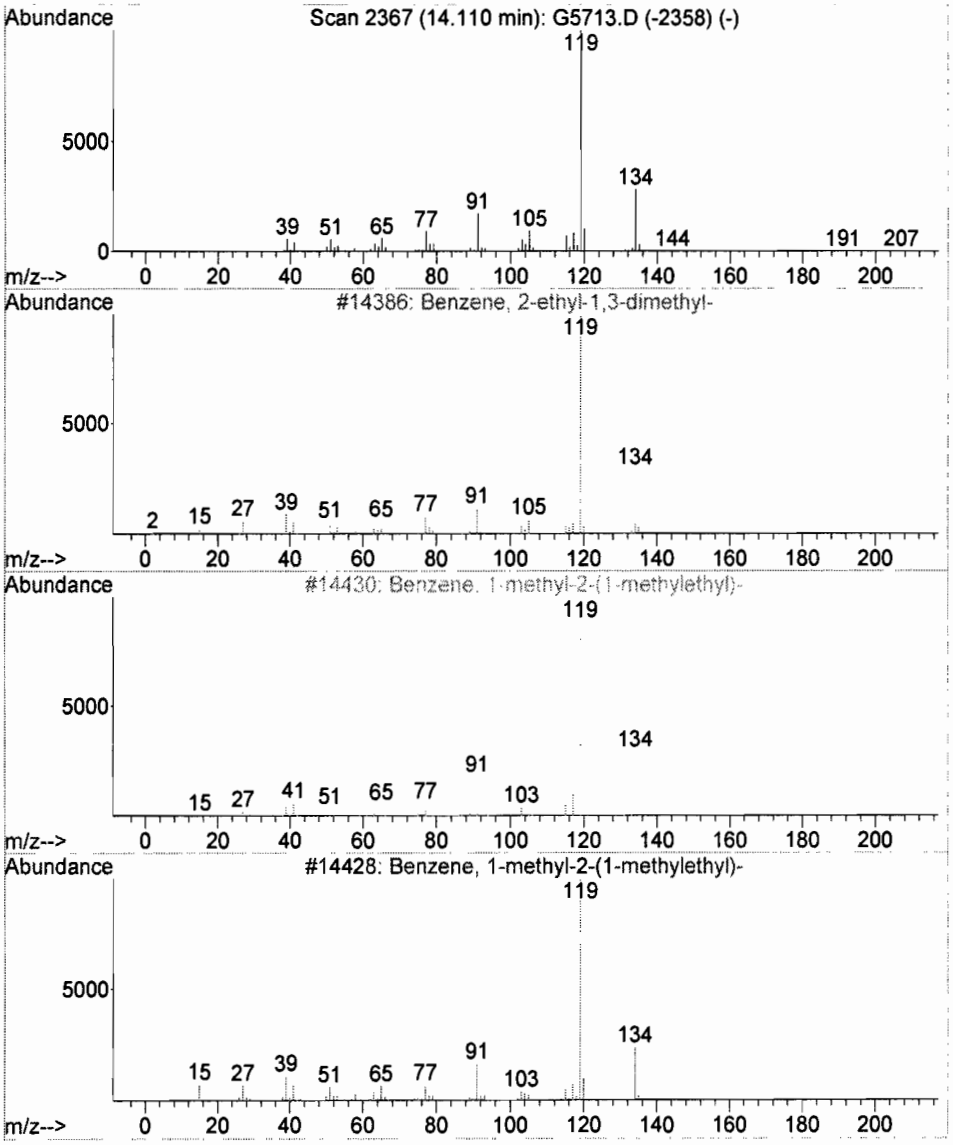
Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

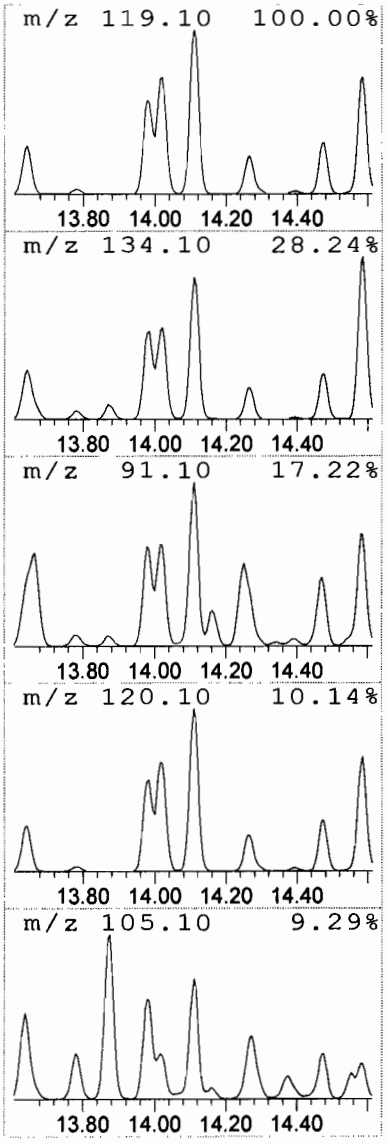
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 9 Benzene, 2-ethyl-1,3-dimethyl- Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.11	85.70 UG	3673850	Chlorobenzene-d5	10.37

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	95
2	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	95
3	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	95
4	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	95
5	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	95





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\08-03-15\
Data File : G5713.D
Acq On : 3 Aug 2015 18:00
Operator : Sylvia
Sample : MW-13SR,06447-005,A,2.5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,2
ALS Vial : 19 Sample Multiplier: 1

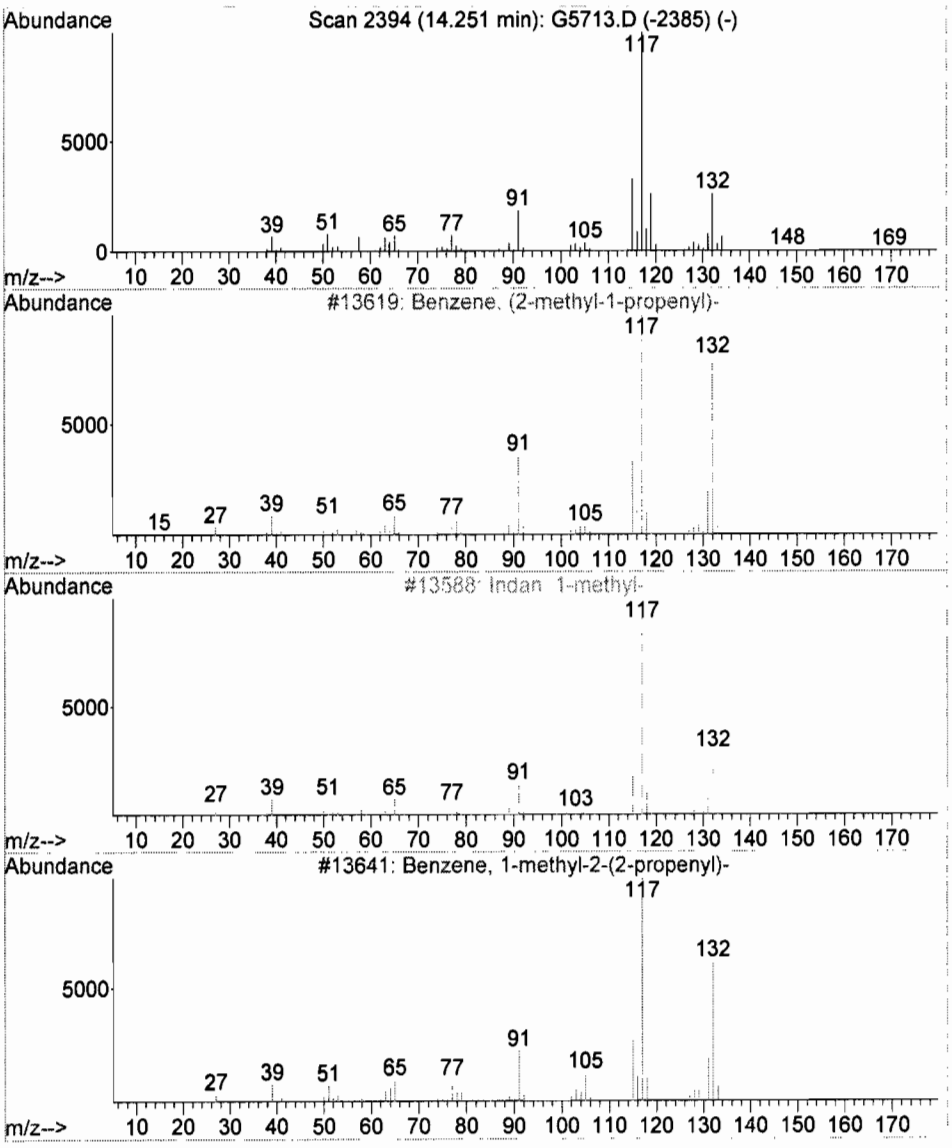
Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

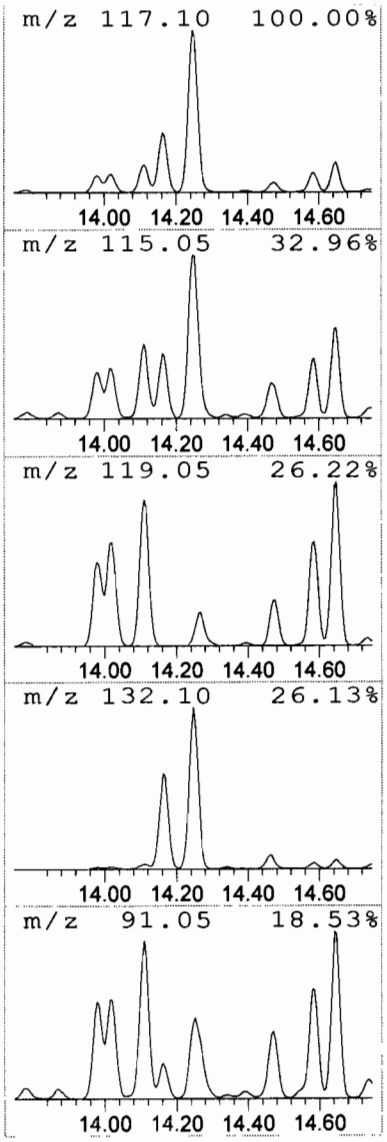
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 10 Unknown Aromatic Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.25	69.06 UG	2960290	Chlorobenzene-d5	10.37

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, (2-methyl-1-propenyl)-	132	C10H12	000768-49-0	81
2	Indan, 1-methyl-	132	C10H12	000767-58-8	76
3	Benzene, 1-methyl-2-(2-propenyl)-	132	C10H12	001587-04-8	76
4	Benzene, (2-methyl-2-propenyl)-	132	C10H12	003290-53-7	74
5	Benzene, 1-ethenyl-3-ethyl-	132	C10H12	007525-62-4	74





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\08-03-15\
Data File : G5713.D
Acq On : 3 Aug 2015 18:00
Operator : Sylvia
Sample : MW-13SR,06447-005,A,2.5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,2
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

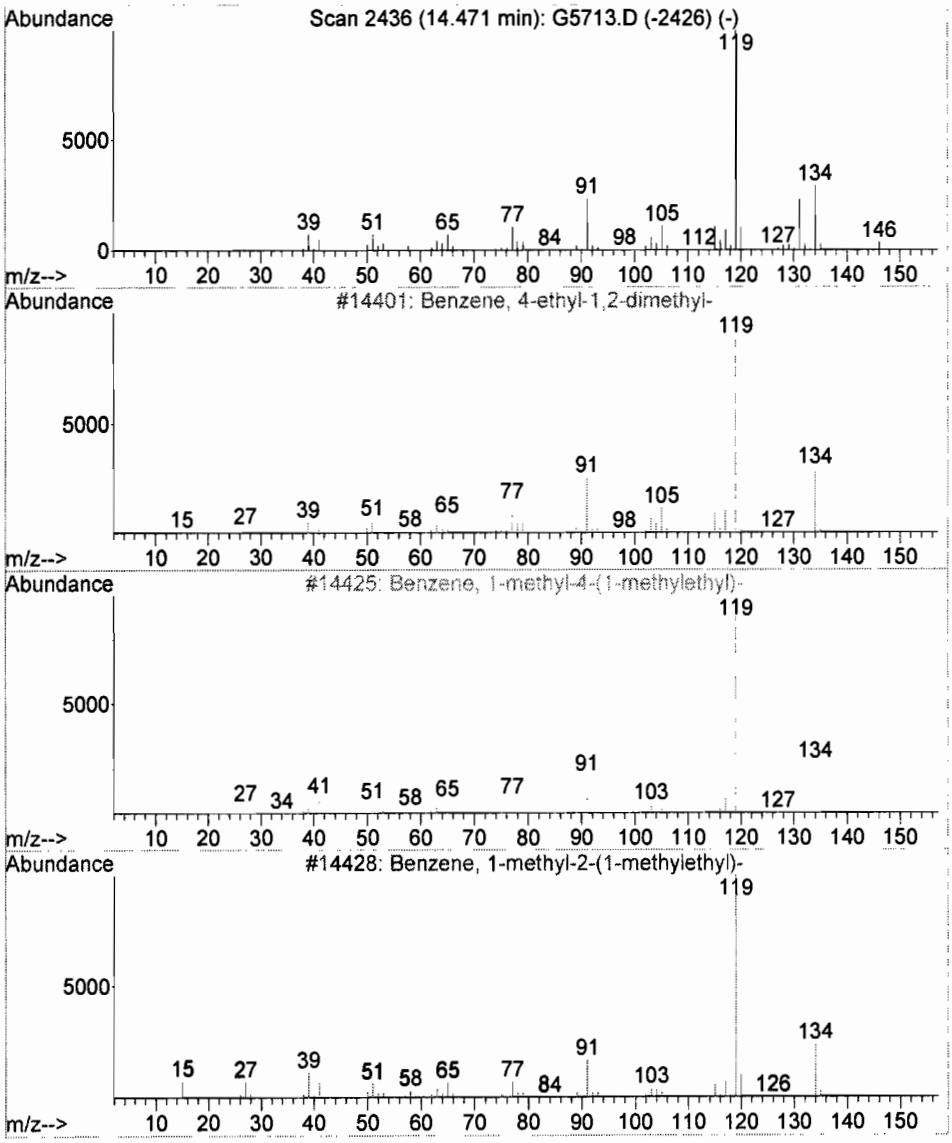
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

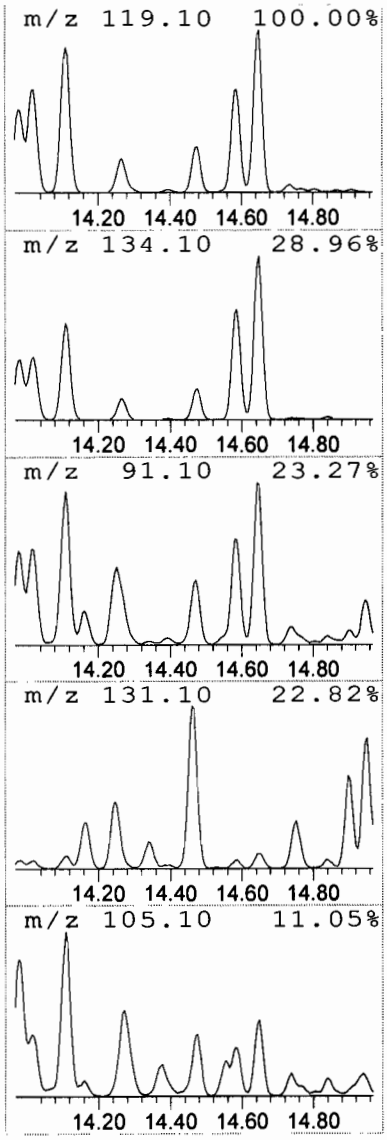
****

Peak Number 11 Unknown Aromatic Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.47	35.83 UG	1535930	Chlorobenzene-d5	10.37

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	95
2	Benzene, 1-methyl-4-(1-methyleth...	134	C10H14	000099-87-6	94
3	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	94
4	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	94
5	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	93





Library Search Compound Report

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Acq On : 3 Aug 2015 18:00
Operator : Sylvia
Sample : MW-13SR,06447-005,A,2.5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,2
ALS Vial : 19 Sample Multiplier: 1

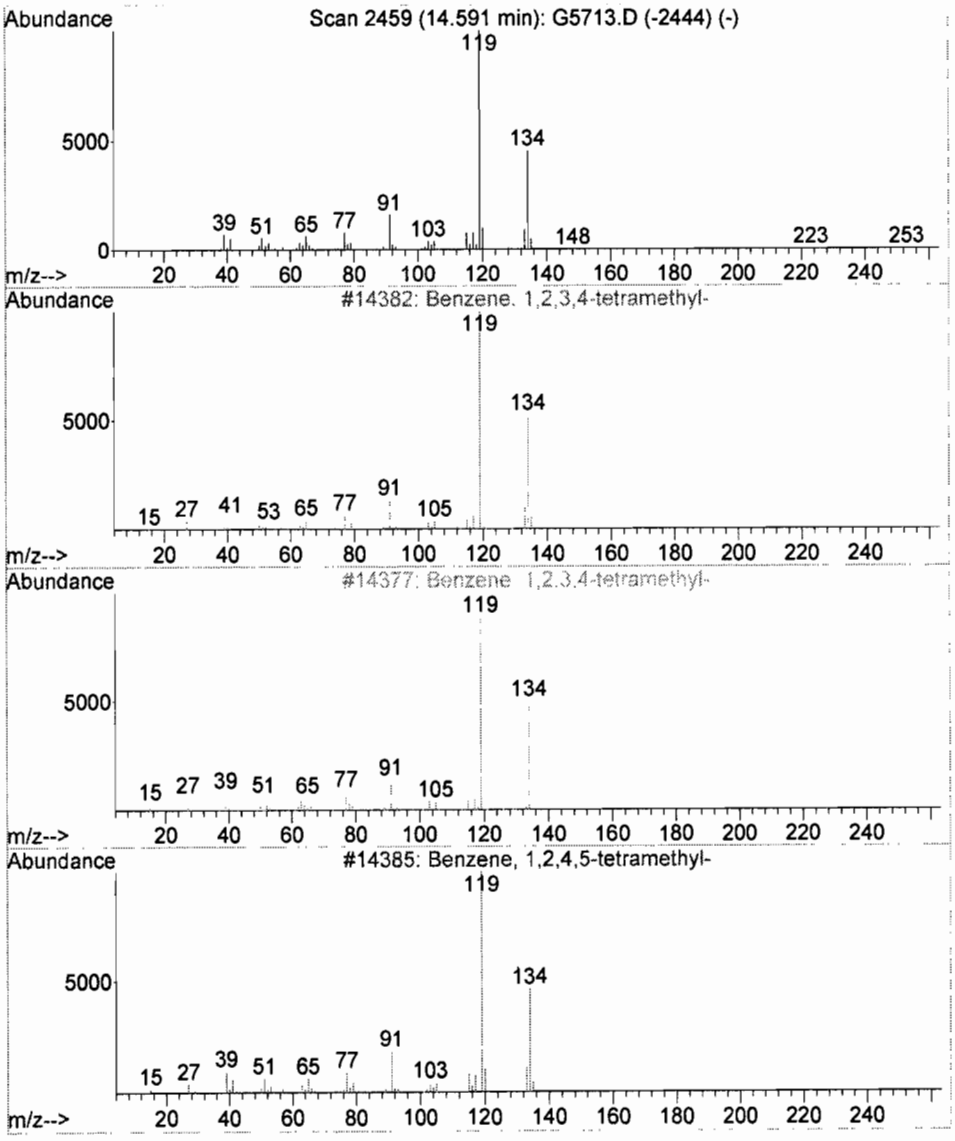
Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

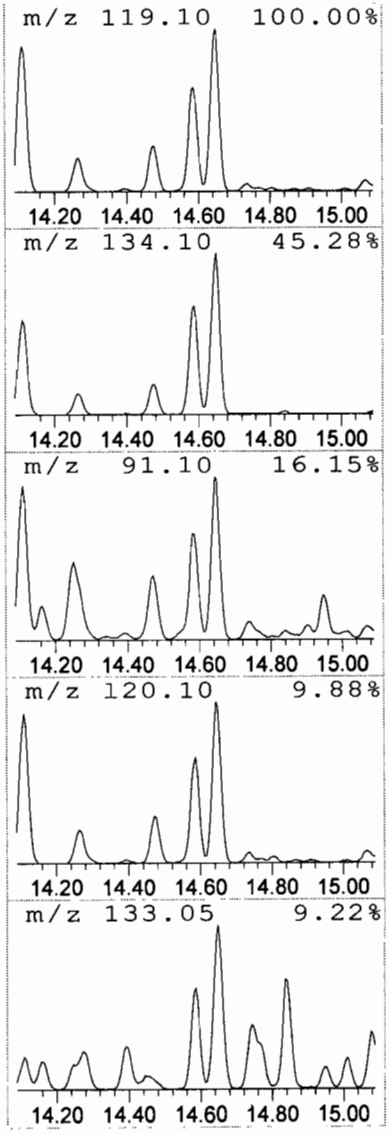
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 12 Benzene, 1,2,3,4-tetramethyl- Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.59	72.51 UG	3108190	Chlorobenzene-d5	10.37

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
2	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
3	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	96
4	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95
5	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95





Library Search Compound Report

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Data File : G5713.D
Acq On : 3 Aug 2015 18:00
Operator : Sylvia
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Misc : JMC/ARSYNCO,07/23/15,07/23/15,2
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

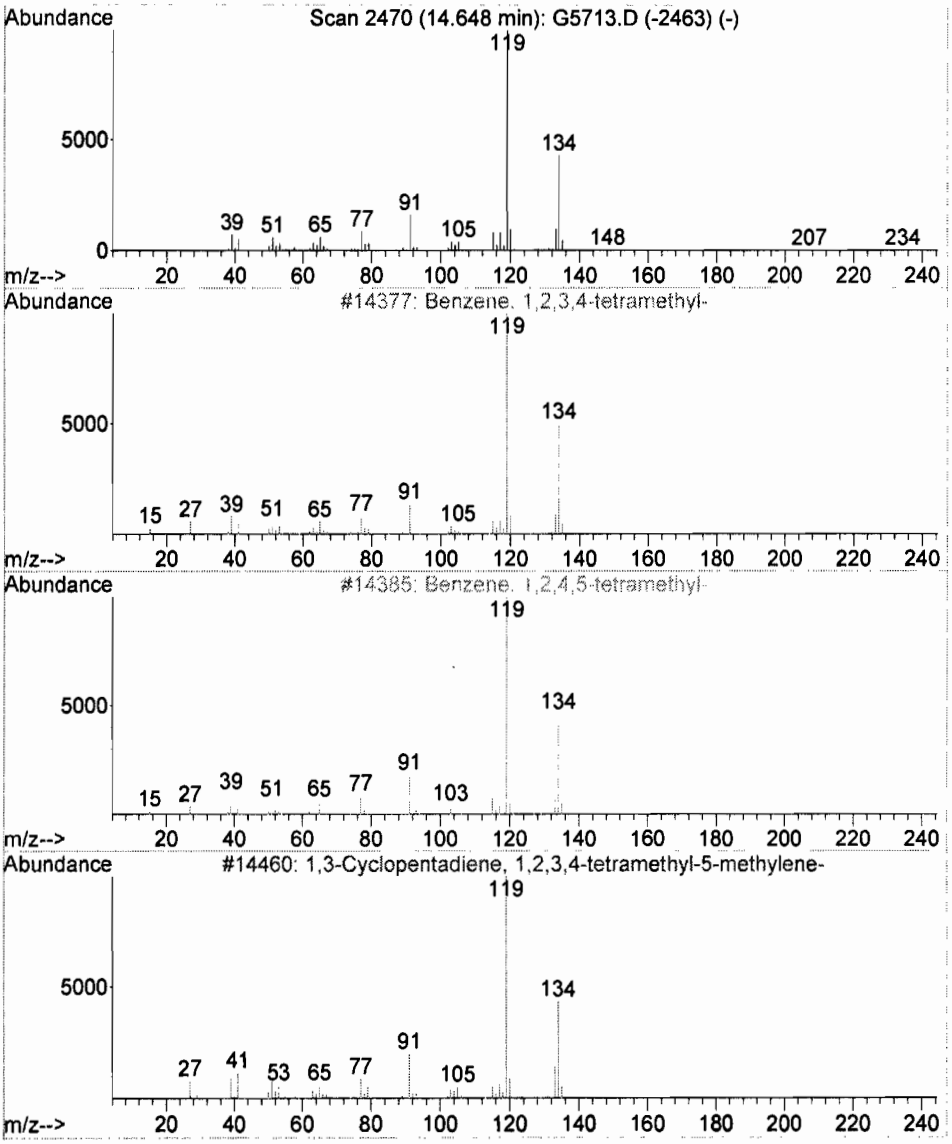
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

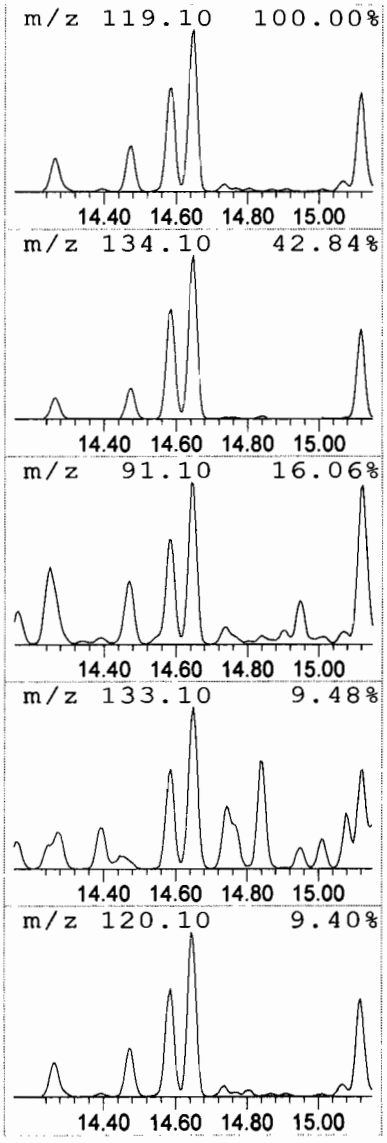
****

Peak Number 13 Unknown Aromatic Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.65	97.59 UG	4183610	Chlorobenzene-d5	10.37

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
2	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	97
3	1,3-Cyclopentadiene, 1,2,3,4-tet...	134	C10H14	076089-59-3	97
4	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	95
5	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	95





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\08-03-15\
Data File : G5713.D
Acq On : 3 Aug 2015 18:00
Operator : Sylvia
Sample : MW-13SR,06447-005,A,2.5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,2
ALS Vial : 19 Sample Multiplier: 1

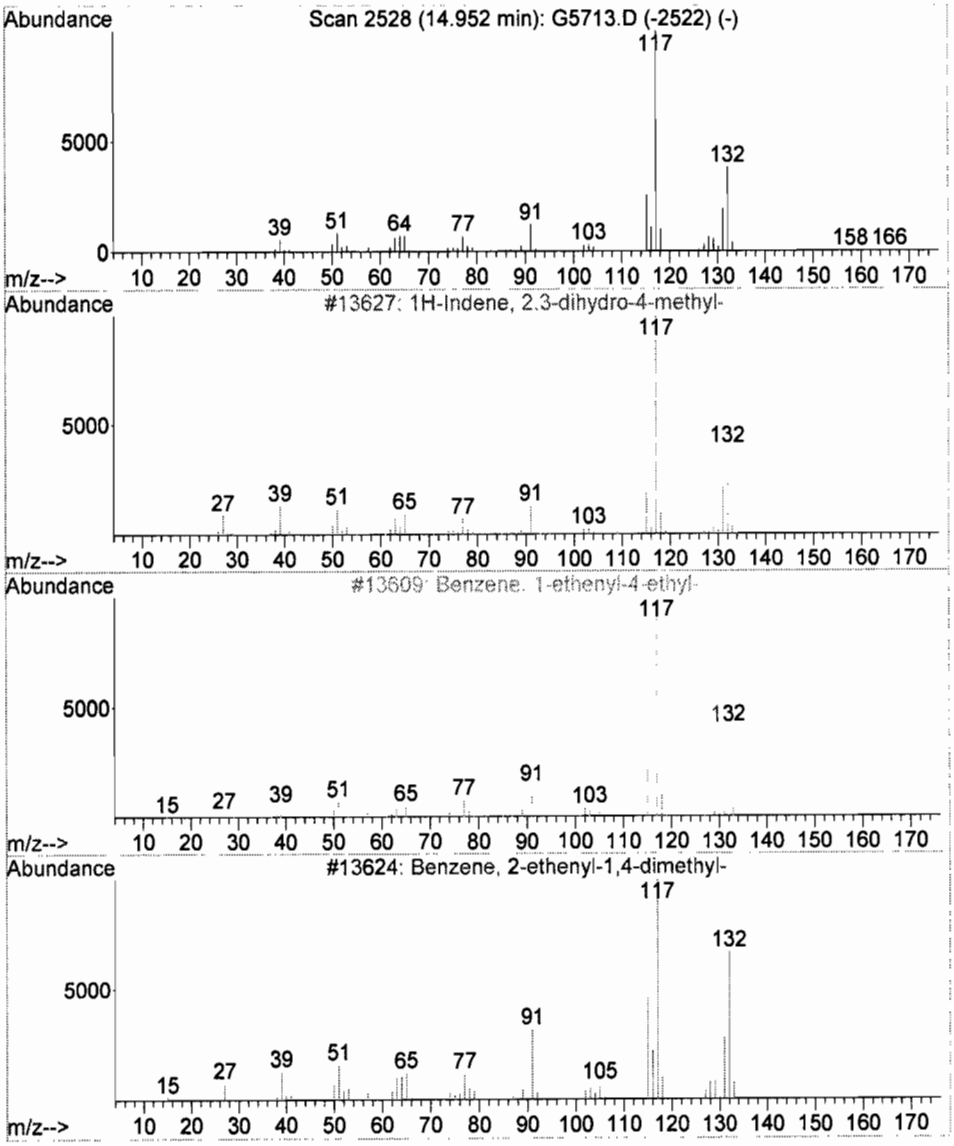
Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

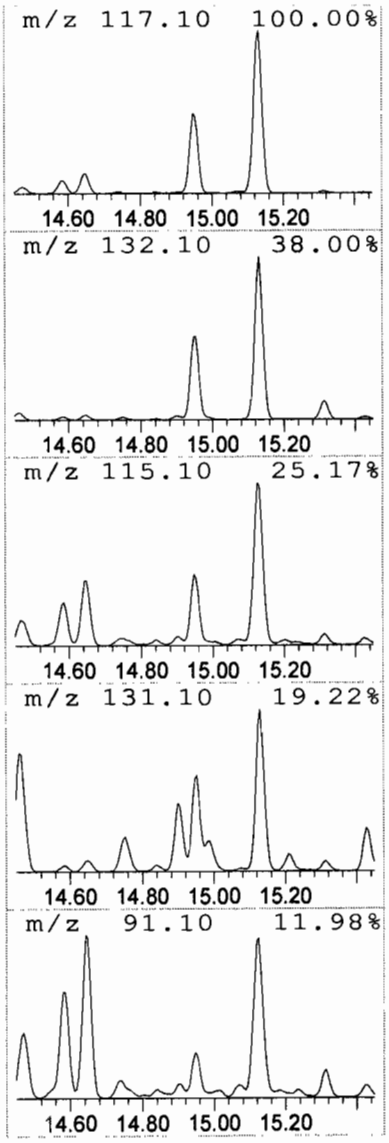
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 14 1H-Indene, 2,3-dihydro-4-me... Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.95	34.91 UG	1496350	Chlorobenzene-d5	10.37

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	95
2	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	94
3	Benzene, 2-ethenyl-1,4-dimethyl-	132	C10H12	002039-89-6	91
4	1H-Indene, 2,3-dihydro-5-methyl-	132	C10H12	000874-35-1	91
5	Indan, 1-methyl-	132	C10H12	000767-58-8	90





Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\08-03-15\
Data File : G5713.D
Acq On : 3 Aug 2015 18:00
Operator : Sylvia
Sample : MW-13SR,06447-005,A,2.5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,2
ALS Vial : 19 Sample Multiplier: 1

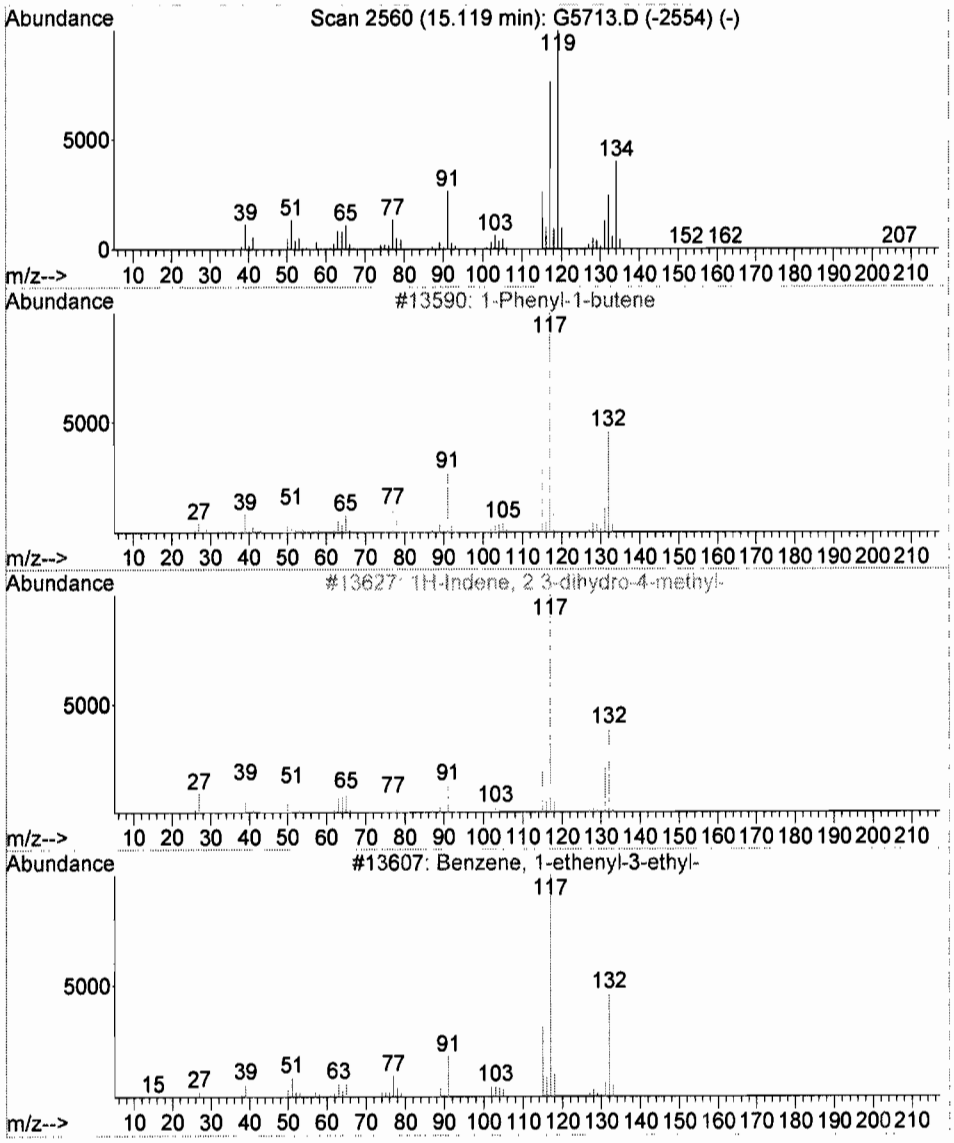
Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

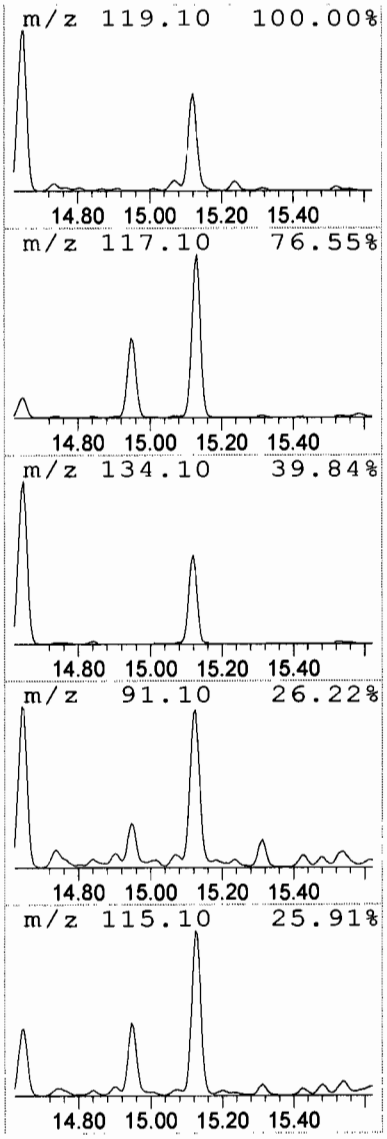
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 15 1-Phenyl-1-butene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.12	122.99 UG	5272350	Chlorobenzene-d5	10.37

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Phenyl-1-butene	132	C10H12	000824-90-8	91
2	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	87
3	Benzene, 1-ethenyl-3-ethyl-	132	C10H12	007525-62-4	87
4	2,4-Dimethylstyrene	132	C10H12	002234-20-0	83
5	Benzene, (1-methyl-1-propenyl)-,...	132	C10H12	000768-00-3	78





Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2750.D
Acq On : 30 Jul 2015 5:30 pm
Operator : BARBARA
Sample : MW-33S,06447-006,A,0.01mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1000
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 01 17:33:14 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration

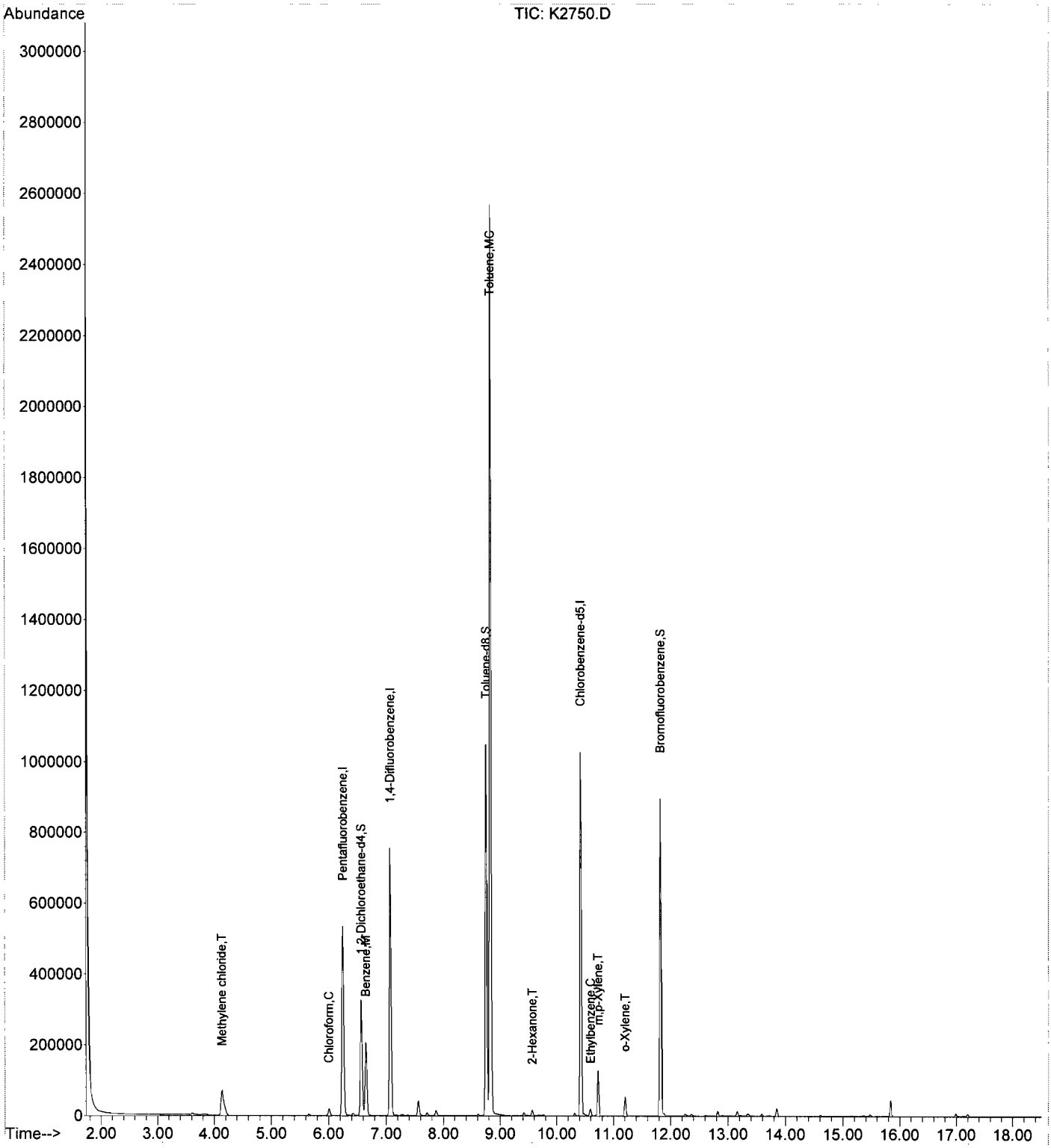
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.25	168	412710	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.07	114	623307	50.00	UG	0.00
50) Chlorobenzene-d5	10.43	117	598203	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.57	65	267100	44.31	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 88.62%			
41) Toluene-d8	8.75	98	731594	49.31	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.62%			
59) Bromofluorobenzene	11.83	95	317117	48.80	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.60%			
Target Compounds						Qvalue
13) Methylene chloride	4.13	84	54246	12.69	UG	97
25) Chloroform	6.01	83	16169	2.13	UG	99
32) Benzene	6.65	78	193014	12.51	UG	100
42) Toluene	8.83	92	1128758	116.91	UG	99
47) 2-Hexanone	9.56	43	12915	3.24	UG	98
53) Ethylbenzene	10.60	91	11204	0.59	UG	100
54) m,p-Xylene	10.73	106	39137	5.62	UG	99
55) o-Xylene	11.20	106	14049	2.14	UG	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2750.D
Acq On : 30 Jul 2015 5:30 pm
Operator : BARBARA
Sample : MW-33S,06447-006,A,0.01mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1000
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 01 17:33:14 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDCHEM\1\DATA\07-30-15\
Data File : K2750.D
Acq On : 30 Jul 2015 5:30 pm
Operator : BARBARA
Sample : MW-33S,06447-006,A,0.01mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1000
ALS Vial : 10 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.07 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8072315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.141	448	460	487	rBV2	70327	266286	5.44%	1.755%
2	6.249	850	862	884	rBV	533996	1200750	24.53%	7.914%
3	6.569	910	923	931	rBV	325917	718235	14.67%	4.734%
4	6.647	931	938	960	rVB	205747	460216	9.40%	3.033%
5	7.072	1007	1019	1035	rBV	753969	1535152	31.36%	10.118%
6	7.565	1101	1113	1132	rBV	40642	89855	1.84%	0.592%
7	8.755	1329	1340	1347	rBV	1047610	2056026	42.00%	13.551%
8	8.828	1347	1354	1390	rVB	2565428	4894758	100.00%	32.261%
9	10.422	1648	1658	1682	rBV	1025967	1952129	39.88%	12.866%
10	10.732	1704	1717	1732	rVB	126299	240910	4.92%	1.588%
11	11.203	1798	1807	1821	rVB3	52389	101351	2.07%	0.668%
12	11.827	1916	1926	1952	rVB	895037	1584730	32.38%	10.445%
13	15.838	2684	2691	2699	rBV	44247	72085	1.47%	0.475%

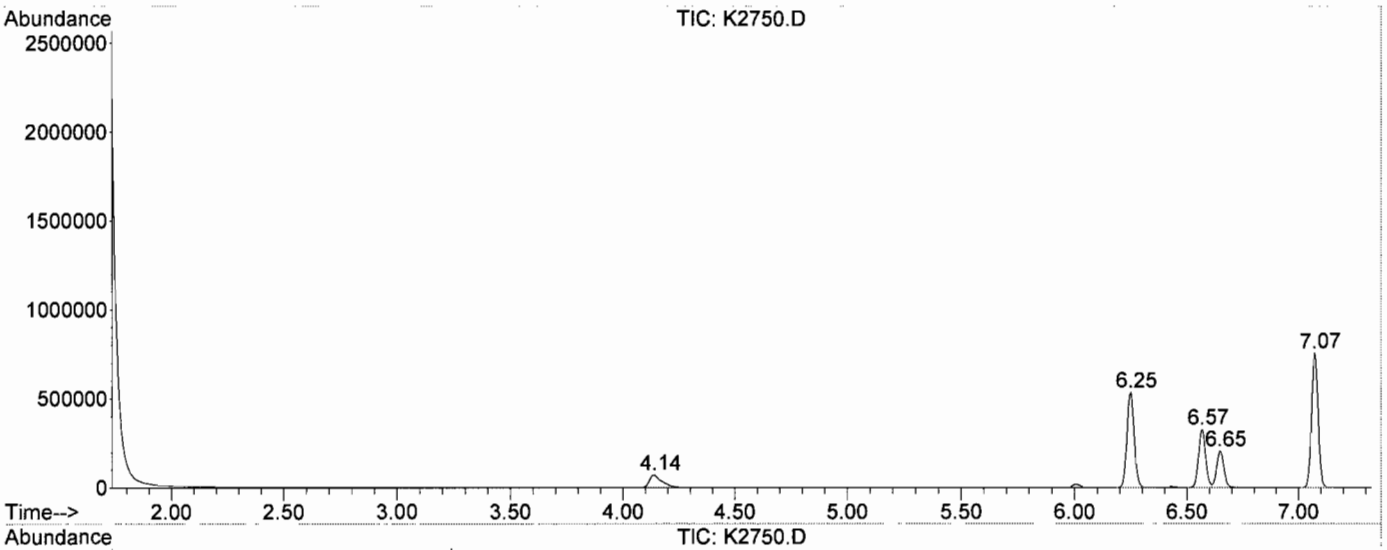
Sum of corrected areas: 15172483

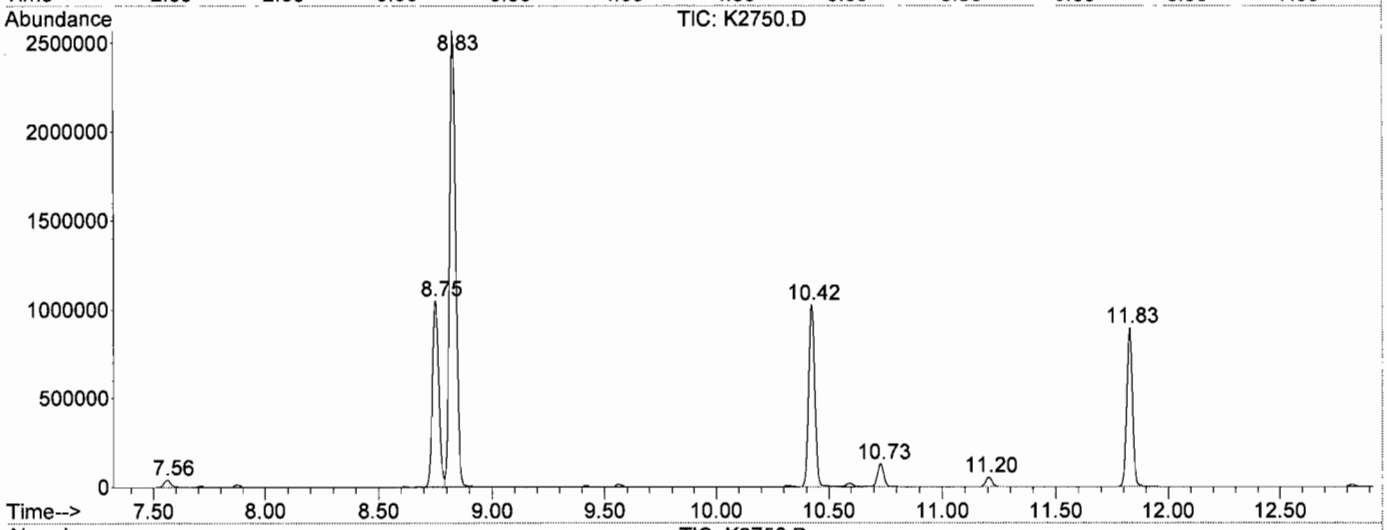
LSC Report - Integrated Chromatogram

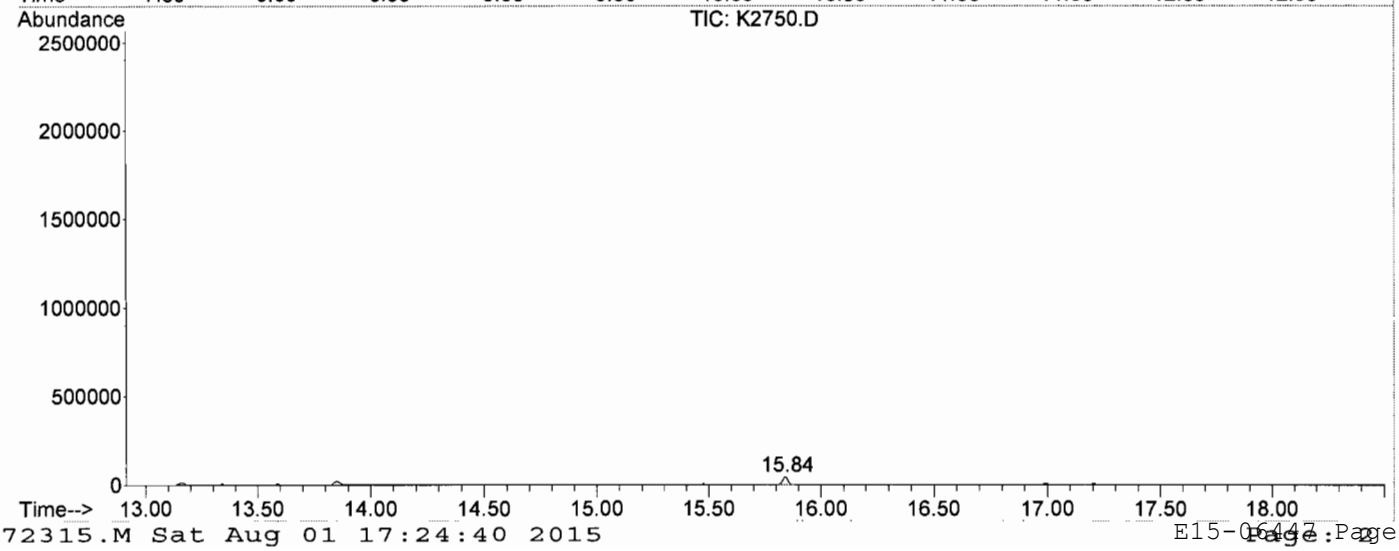
Data Path : C:\MSDCHEM\1\DATA\07-30-15\
Data File : K2750.D
Acq On : 30 Jul 2015 5:30 pm
Operator : BARBARA
Sample : MW-33S,06447-006,A,0.01mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1000
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2760.D
Acq On : 30 Jul 2015 9:50 pm
Operator : BARBARA
Sample : MW-29S,06447-007,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 01 17:29:59 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration

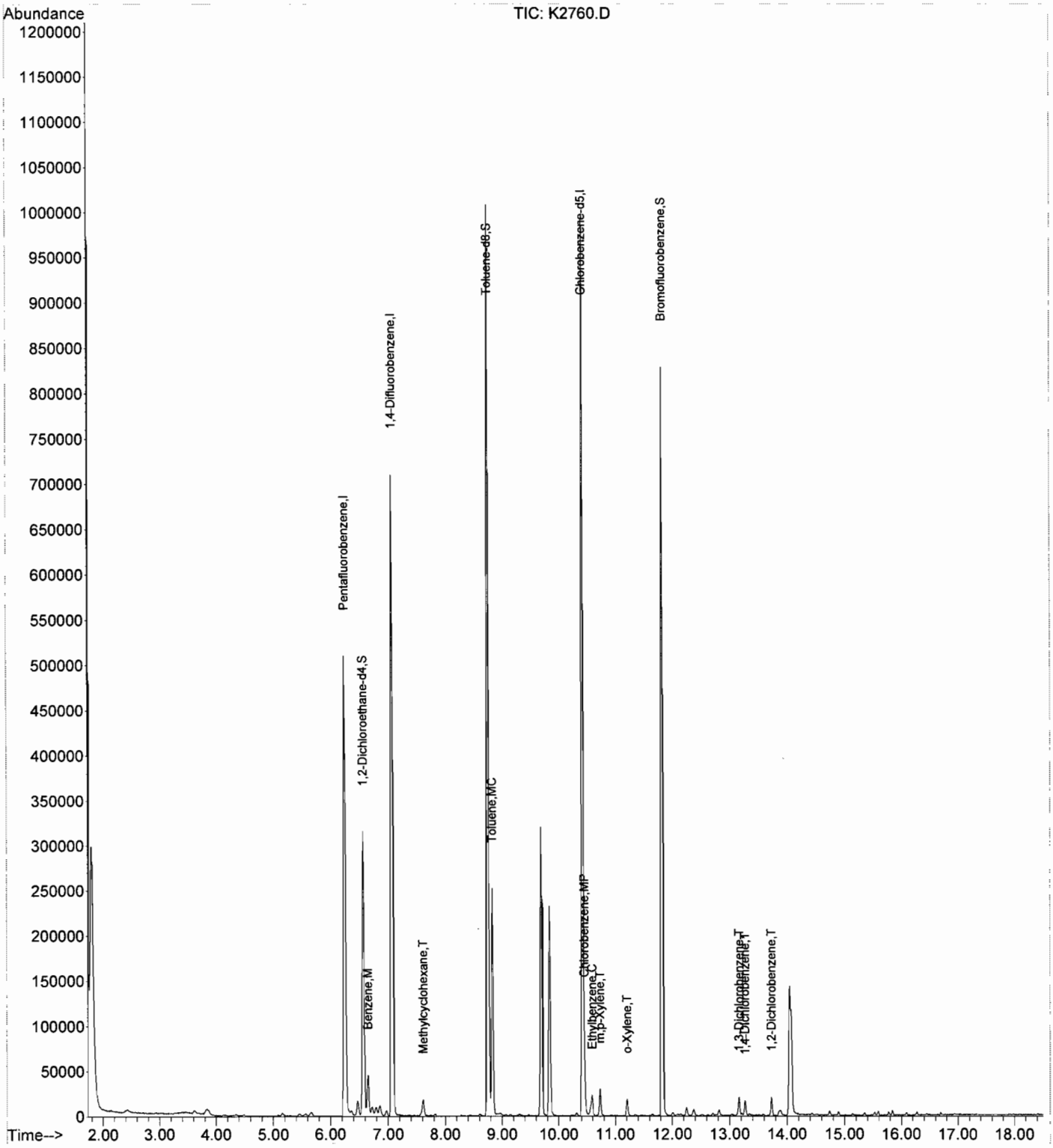
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.25	168	385915	50.00	UG		0.00
31) 1,4-Difluorobenzene	7.07	114	590387	50.00	UG		0.00
50) Chlorobenzene-d5	10.42	117	567589	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.57	65	258531	45.87	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 91.74%				
41) Toluene-d8	8.76	98	686430	48.85	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.70%				
59) Bromofluorobenzene	11.83	95	297727	48.28	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.56%				
Target Compounds							Qvalue
32) Benzene	6.65	78	40931	2.80	UG		100
42) Toluene	8.83	92	108963	11.91	UG		98
51) Chlorobenzene	10.46	112	26535	2.66	UG		99
53) Ethylbenzene	10.59	91	15772	0.88	UG		100
54) m,p-Xylene	10.73	106	8396	1.27	UG		98
55) o-Xylene	11.20	106	4331	0.69	UG		98
70) 1,3-Dichlorobenzene	13.16	146	3990	0.51	UG		97
72) 1,4-Dichlorobenzene	13.27	146	4524	0.57	UG		98
74) 1,2-Dichlorobenzene	13.73	146	7641	1.07	UG		99
83) Methylcyclohexane	7.61	83	6237	1.03	UG	#	80

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2760.D
Acq On : 30 Jul 2015 9:50 pm
Operator : BARBARA
Sample : MW-29S,06447-007,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 01 17:29:59 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2760.D
Acq On : 30 Jul 2015 9:50 pm
Operator : BARBARA
Sample : MW-29S,06447-007,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.07 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8072315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.798	5	13	125	rVB3	293329	1280926	66.03%	10.032%
2	2.437	125	135	257	rVB3	4917	60928	3.14%	0.477%
3	3.449	288	328	352	rBV5	2865	38754	2.00%	0.304%
4	3.606	352	358	382	rVV2	5122	25403	1.31%	0.199%
5	3.837	391	402	430	rVB2	7568	40716	2.10%	0.319%
6	6.249	847	862	879	rBV	509529	1156023	59.59%	9.054%
7	6.464	893	903	913	rVV3	16700	41798	2.15%	0.327%
8	6.569	913	923	932	rVV	314731	690909	35.61%	5.411%
9	6.647	932	938	946	rVV2	44724	101815	5.25%	0.797%
10	6.721	946	952	959	rVV7	9465	25391	1.31%	0.199%
11	6.789	959	965	972	rVV7	9217	24615	1.27%	0.193%
12	6.857	972	978	989	rVB3	11076	28859	1.49%	0.226%
13	7.072	1009	1019	1045	rBV	709463	1465676	75.55%	11.479%
14	7.612	1106	1122	1134	rBV5	17861	47982	2.47%	0.376%
15	8.755	1325	1340	1348	rBV	1008279	1937292	99.86%	15.173%
16	8.828	1348	1354	1368	rVB	250007	475899	24.53%	3.727%
17	9.688	1506	1518	1536	rBV	319277	640244	33.00%	5.014%
18	9.840	1536	1547	1564	rVB2	231828	491977	25.36%	3.853%
19	10.422	1647	1658	1677	rBV	995861	1940033	100.00%	15.194%
20	10.590	1677	1690	1700	rVV2	22868	61648	3.18%	0.483%
21	10.732	1707	1717	1737	rVB	29672	59105	3.05%	0.463%
22	11.209	1798	1808	1821	rVB3	18067	37434	1.93%	0.293%
23	11.827	1915	1926	1946	rBV	828302	1498390	77.24%	11.735%
24	13.164	2169	2181	2187	rBV3	20418	40302	2.08%	0.316%
25	13.264	2194	2200	2210	rVB5	16208	32110	1.66%	0.251%
26	13.725	2276	2288	2297	rBV2	20431	40468	2.09%	0.317%
27	14.045	2339	2349	2385	rBV2	143080	483665	24.93%	3.788%

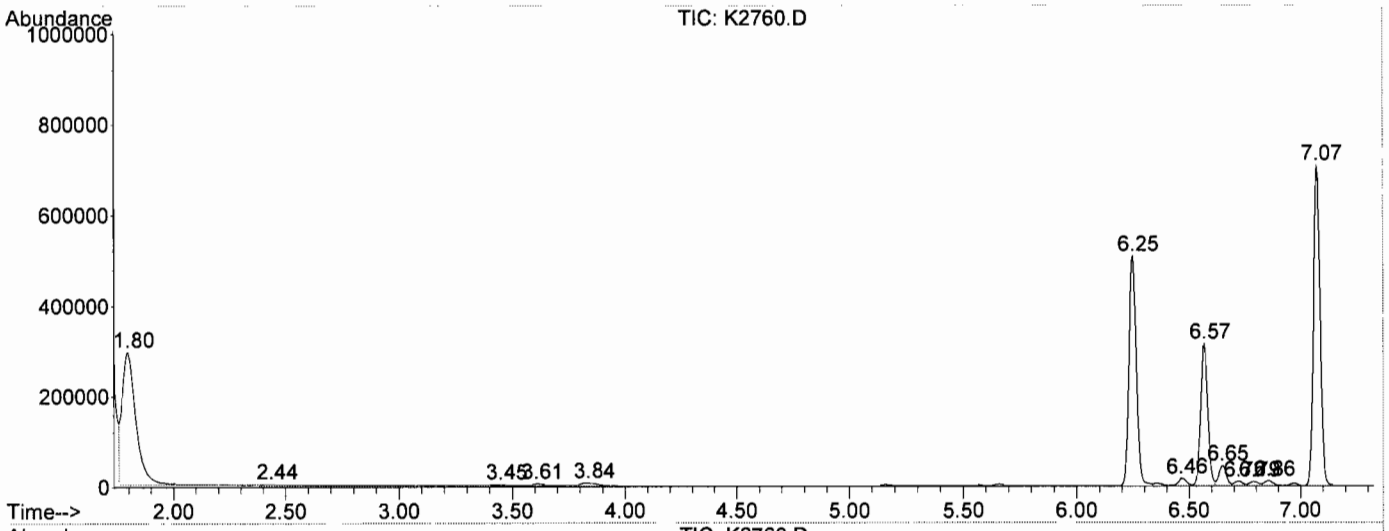
Sum of corrected areas: 12768362

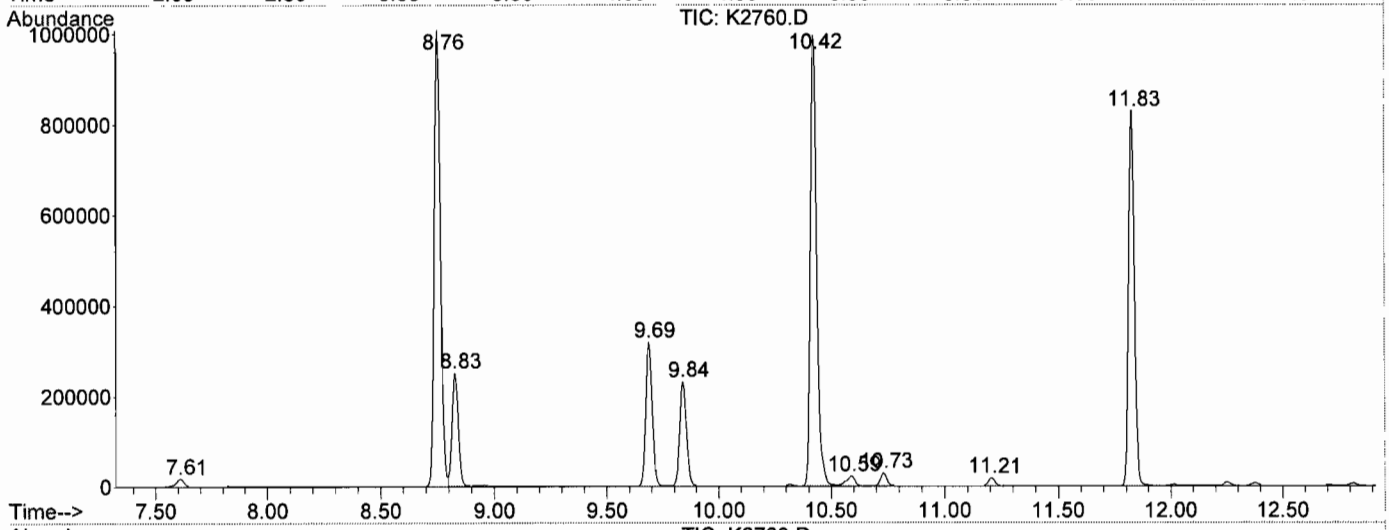
LSC Report - Integrated Chromatogram

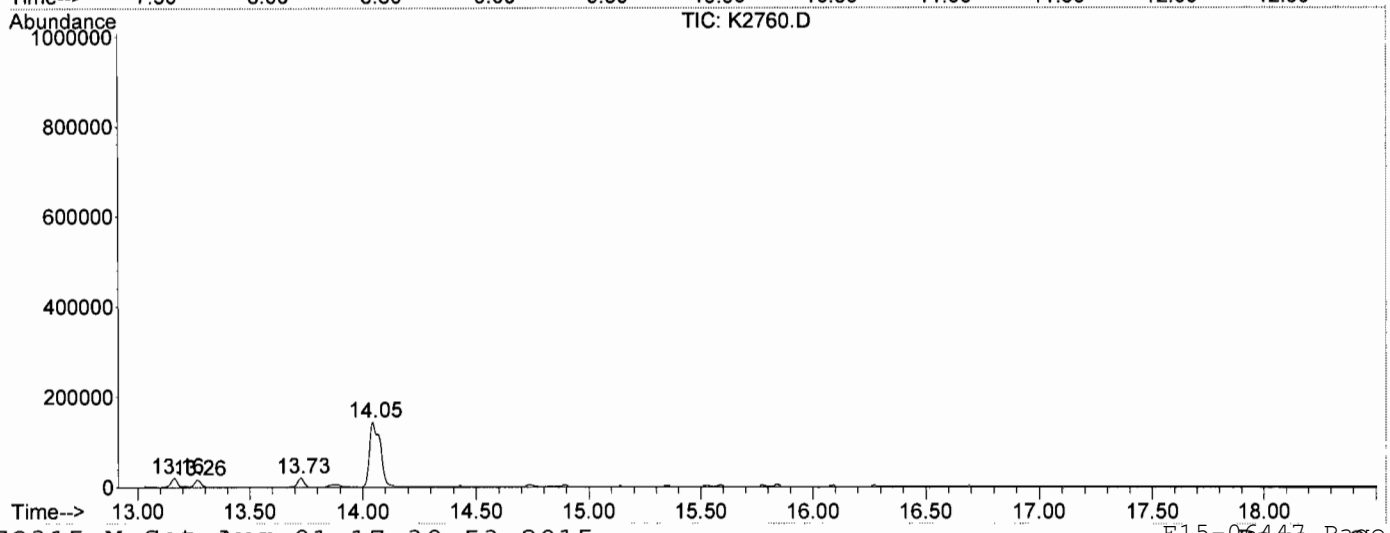
Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2760.D
Acq On : 30 Jul 2015 9:50 pm
Operator : BARBARA
Sample : MW-29S,06447-007,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2760.D
Acq On : 30 Jul 2015 9:50 pm
Operator : BARBARA
Sample : MW-29S,06447-007,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 11 Sample Multiplier: 1

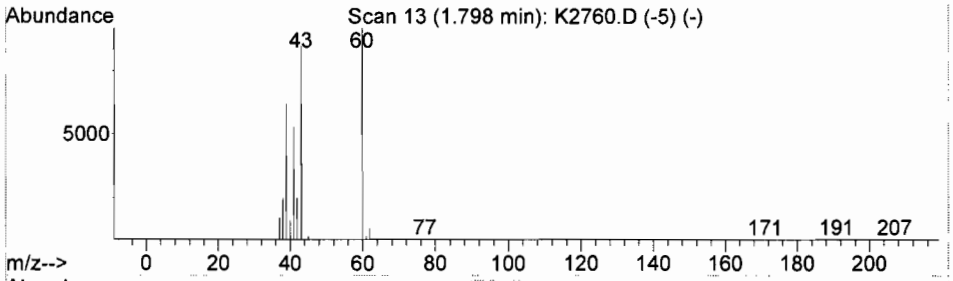
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

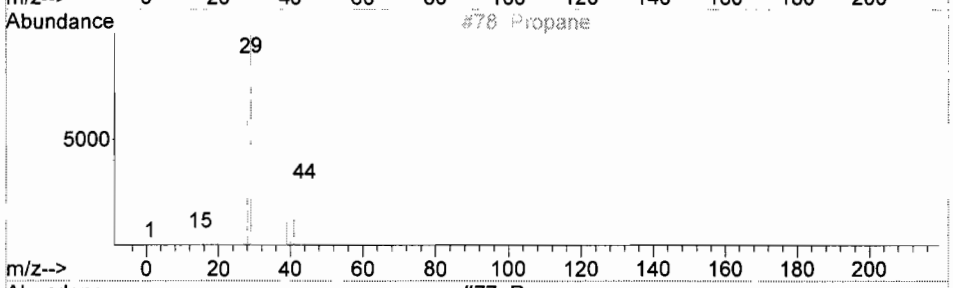
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

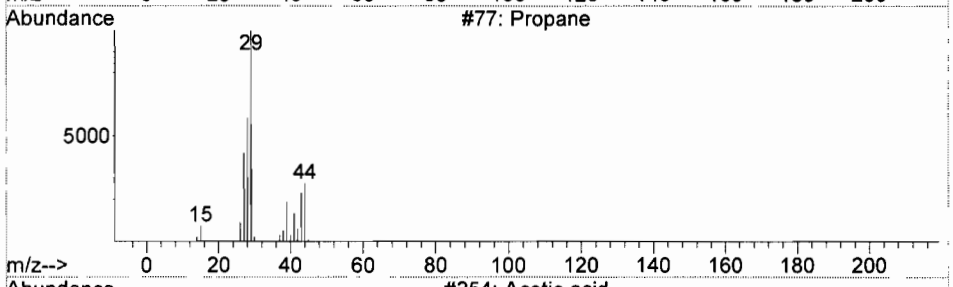
****
Peak Number 1 Unknown VOA Concentration Rank 1

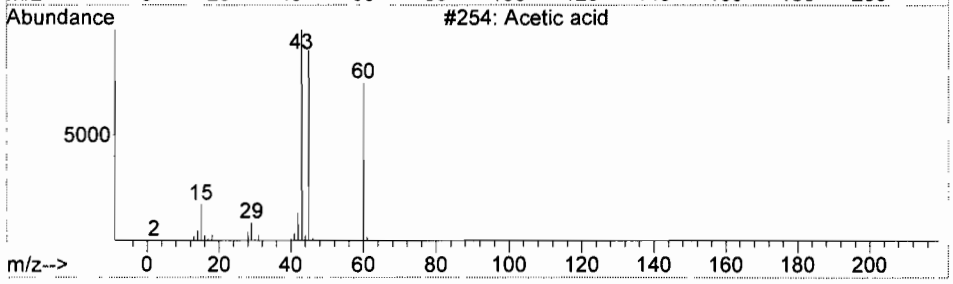
R.T.	EstConc	Area	Relative to ISTD	R.T.
1.80	55.40 UG	1280930	Pentafluorobenzene	6.25

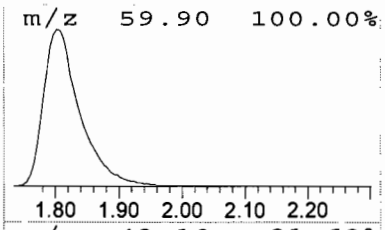
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Propane	44	C3H8	000074-98-6	9
2	Propane	44	C3H8	000074-98-6	9
3	Acetic acid	60	C2H4O2	000064-19-7	7
4	Thiirane	60	C2H4S	000420-12-2	7
5	Carbonyl sulfide	60	COS	000463-58-1	5

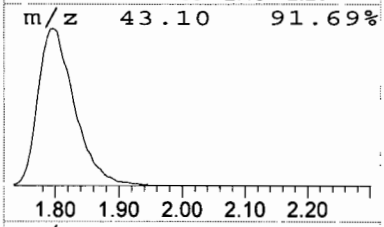


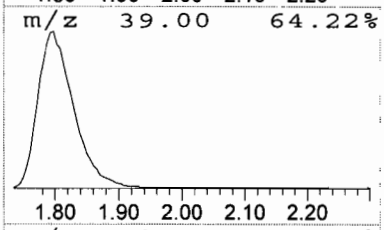


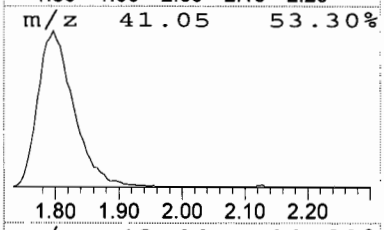


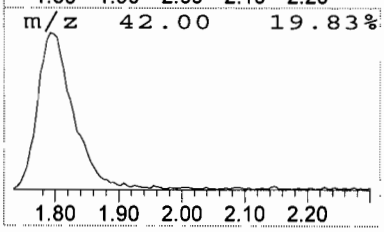












Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2760.D
Acq On : 30 Jul 2015 9:50 pm
Operator : BARBARA
Sample : MW-29S,06447-007,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 11 Sample Multiplier: 1

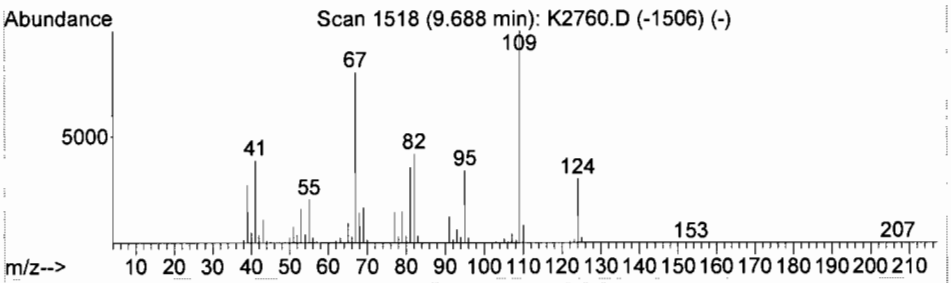
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

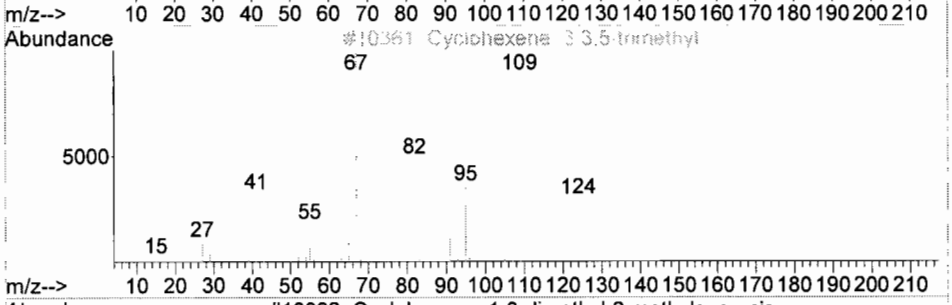
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

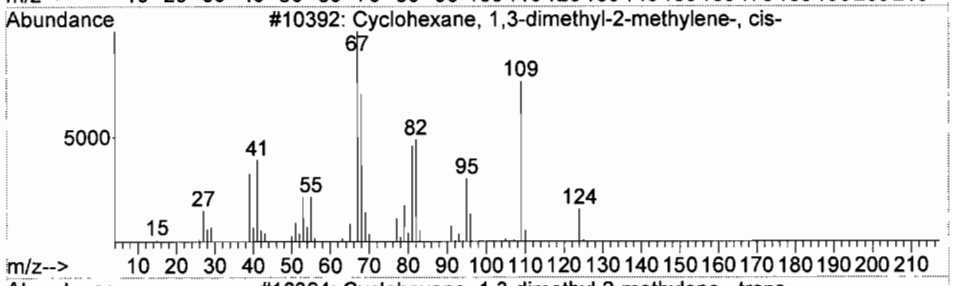
****
Peak Number 2 Cyclohexene, 3,3,5-trimethyl- Concentration Rank 2

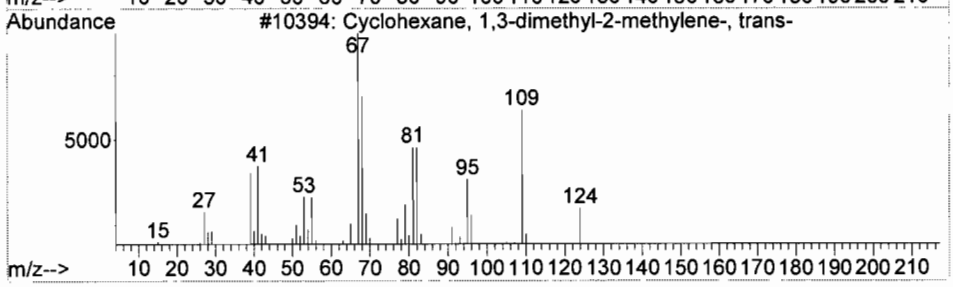
R.T.	EstConc	Area	Relative to ISTD	R.T.
9.69	16.50 UG	640244	Chlorobenzene-d5	10.42

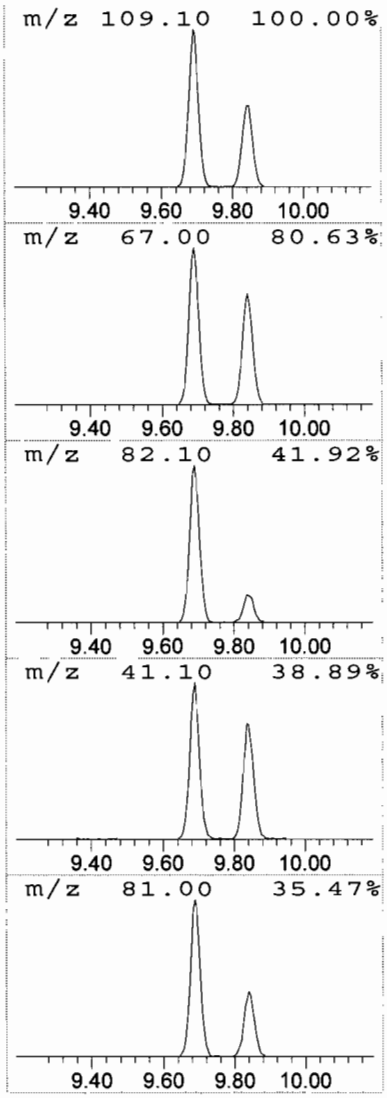
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexene, 3,3,5-trimethyl-	124	C9H16	000503-45-7	98
2	Cyclohexane, 1,3-dimethyl-2-meth...	124	C9H16	019781-47-6	94
3	Cyclohexane, 1,3-dimethyl-2-meth...	124	C9H16	020348-74-7	94
4	Cyclohexene, 3,5,5-trimethyl-	124	C9H16	000933-12-0	91
5	2,4-Heptadiene, 2,6-dimethyl-	124	C9H16	004634-87-1	81











Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2760.D
Acq On : 30 Jul 2015 9:50 pm
Operator : BARBARA
Sample : MW-29S,06447-007,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 11 Sample Multiplier: 1

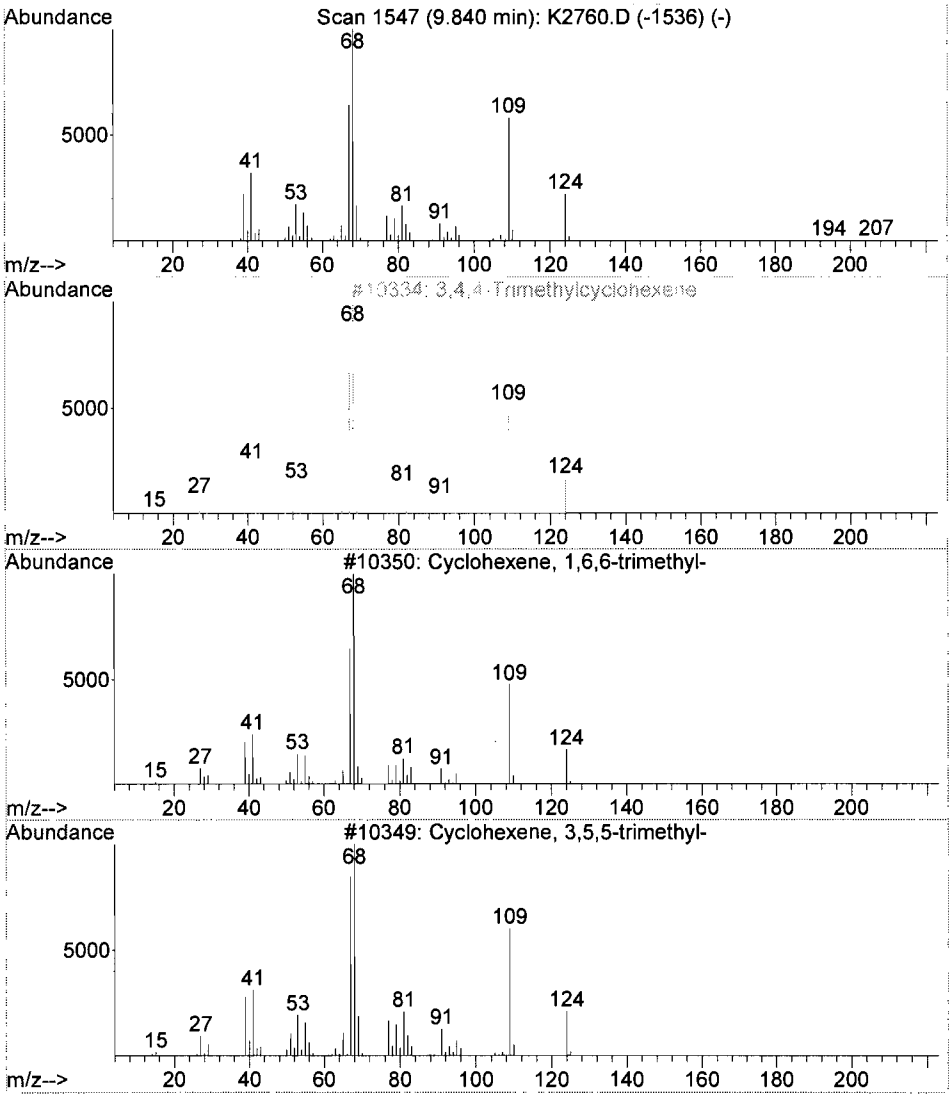
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

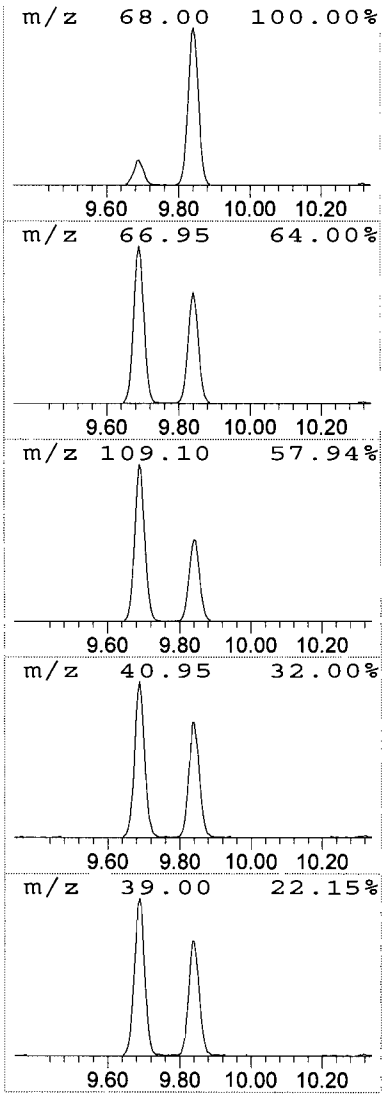
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 3 3,4,4-Trimethylcyclohexene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.84	12.68 UG	491977	Chlorobenzene-d5	10.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3,4,4-Trimethylcyclohexene	124	C9H16	1000113-50-1	97
2	Cyclohexene, 1,6,6-trimethyl-	124	C9H16	069745-49-9	96
3	Cyclohexene, 3,5,5-trimethyl-	124	C9H16	000933-12-0	95
4	1,2,4,4-Tetramethylcyclopentene	124	C9H16	065378-76-9	91
5	Cyclohexene, 3,5,5-trimethyl-	124	C9H16	000933-12-0	81





Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2760.D
Acq On : 30 Jul 2015 9:50 pm
Operator : BARBARA
Sample : MW-29S,06447-007,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 11 Sample Multiplier: 1

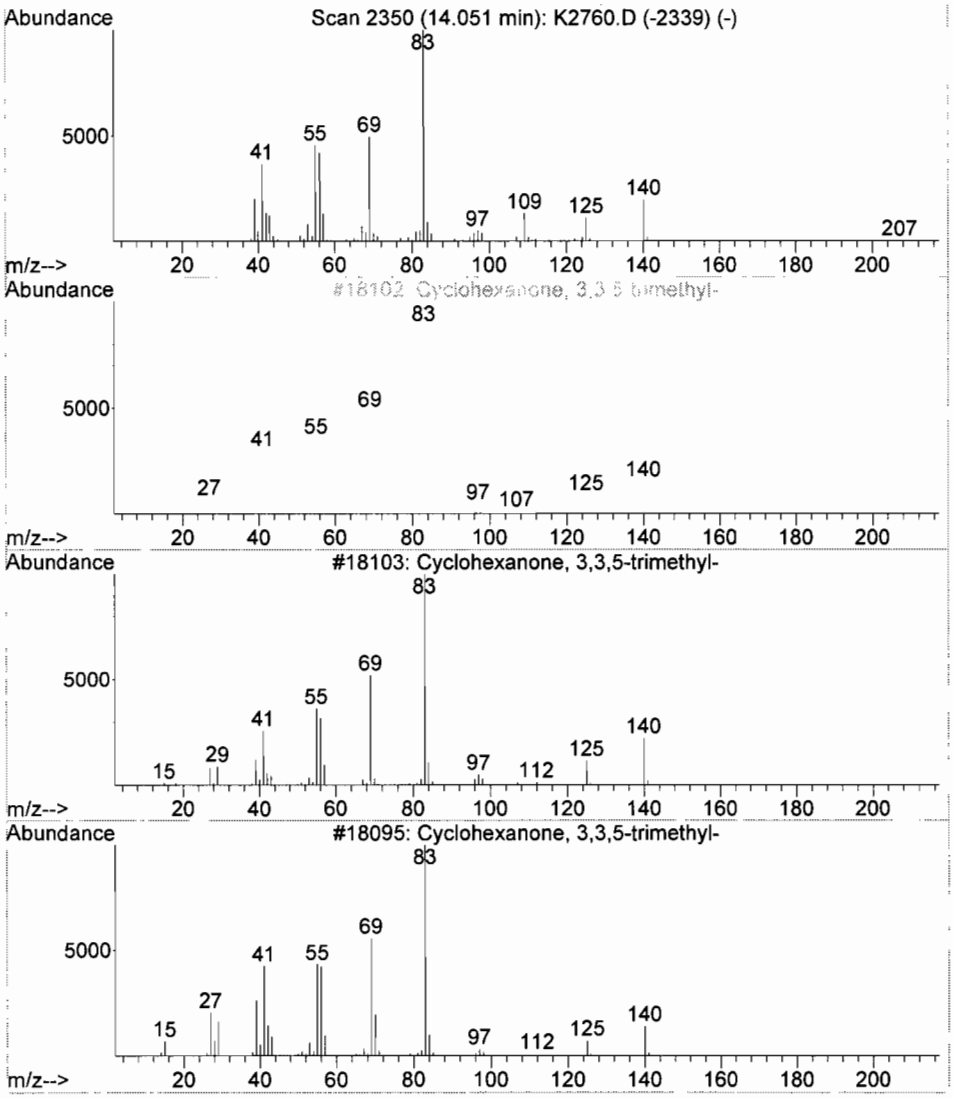
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

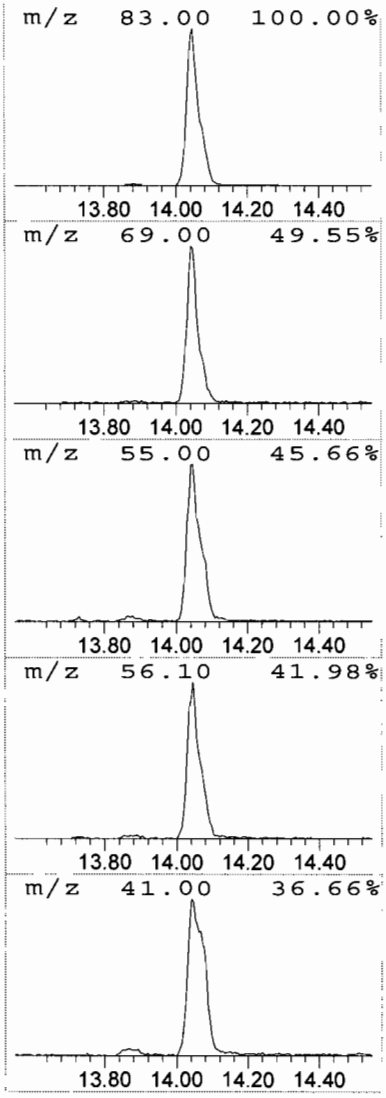
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 4 Cyclohexanone, 3,3,5-trimet... Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.05	12.47 UG	483665	Chlorobenzene-d5	10.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexanone, 3,3,5-trimethyl-	140	C9H16O	000873-94-9	95
2	Cyclohexanone, 3,3,5-trimethyl-	140	C9H16O	000873-94-9	94
3	Cyclohexanone, 3,3,5-trimethyl-	140	C9H16O	000873-94-9	87
4	Cyclohexanone, 3,3,5-trimethyl-	140	C9H16O	000873-94-9	50
5	2-Decene, 2,4-dimethyl-	168	C12H24	074421-03-7	47





Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2761.D
Acq On : 30 Jul 2015 10:16 pm
Operator : BARBARA
Sample : MW-29D,06447-008,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 01 17:43:54 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration

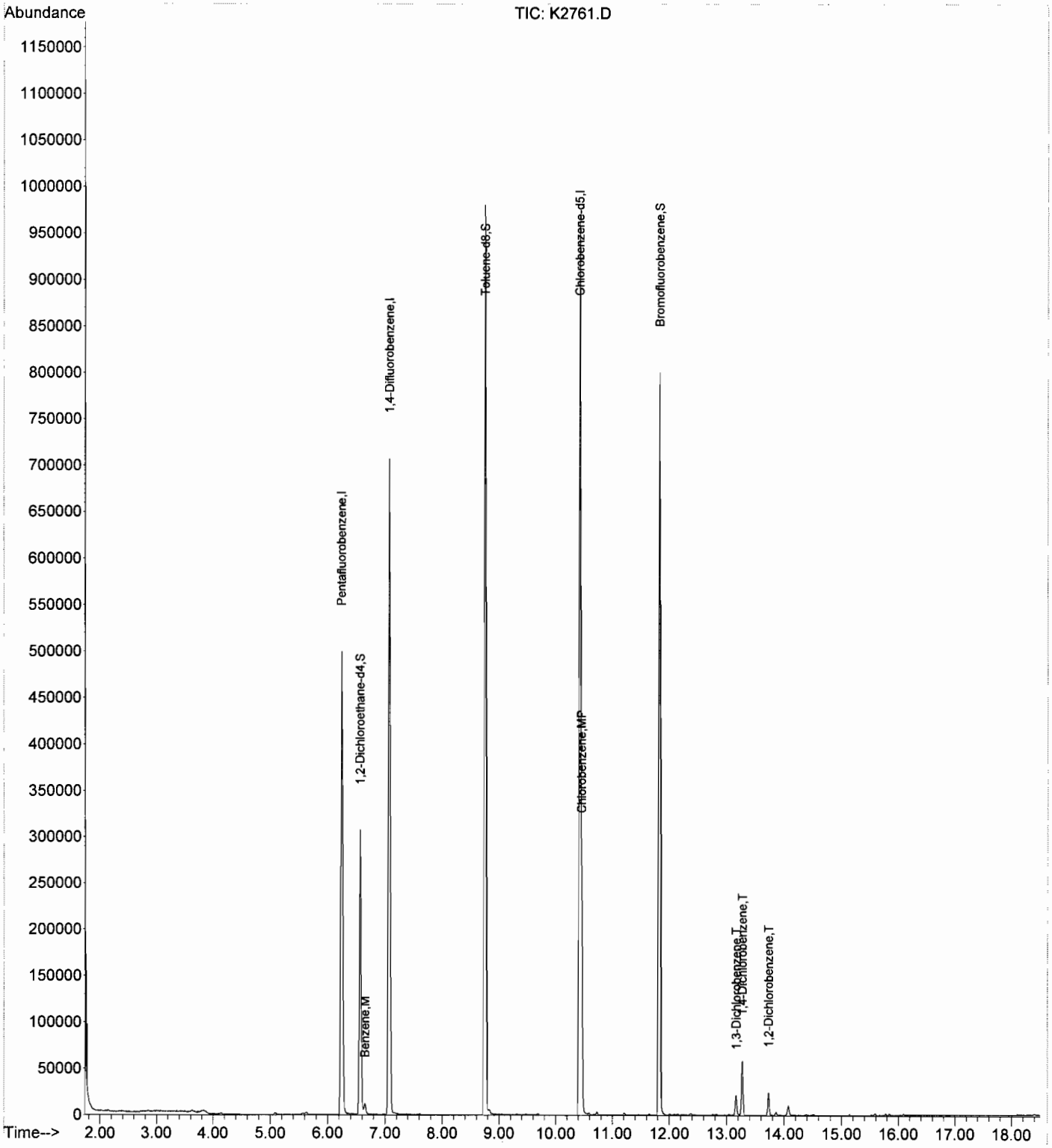
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.25	168	377291	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.07	114	574980	50.00	UG	0.00
50) Chlorobenzene-d5	10.42	117	537344	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.56	65	255857	46.43	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.86%			
41) Toluene-d8	8.75	98	662946	48.44	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.88%			
59) Bromofluorobenzene	11.83	95	285844	48.97	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.94%			
Target Compounds						Qvalue
32) Benzene	6.64	78	9518	0.67	UG	100
51) Chlorobenzene	10.46	112	127957	13.56	UG	100
70) 1,3-Dichlorobenzene	13.16	146	5704	0.76	UG	98
72) 1,4-Dichlorobenzene	13.27	146	24698	3.31	UG	99
74) 1,2-Dichlorobenzene	13.73	146	9809	1.45	UG	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2761.D
Acq On : 30 Jul 2015 10:16 pm
Operator : BARBARA
Sample : MW-29D,06447-008,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 01 17:43:54 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2761.D
Acq On : 30 Jul 2015 10:16 pm
Operator : BARBARA
Sample : MW-29D,06447-008,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.07 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8072315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.988	239	240	351	rVB	1879	24932	1.14%	0.276%
2	3.837	387	402	421	rVB7	3830	23884	1.09%	0.264%
3	6.244	849	861	879	rBV	499208	1110140	50.65%	12.284%
4	6.564	911	922	933	rBV	306653	675736	30.83%	7.477%
5	6.647	933	938	952	rVB2	11408	27213	1.24%	0.301%
6	7.072	1008	1019	1053	rBV	706440	1433904	65.43%	15.867%
7	8.750	1328	1339	1374	rBV	980162	1887666	86.13%	20.888%
8	10.422	1647	1658	1687	rBV2	962003	2191651	100.00%	24.251%
9	11.828	1916	1926	1951	rBV	800030	1441141	65.76%	15.947%
10	13.165	2172	2181	2193	rBV4	21111	43688	1.99%	0.483%
11	13.269	2193	2201	2213	rVB2	57870	106510	4.86%	1.179%
12	13.726	2278	2288	2300	rBV2	23670	46865	2.14%	0.519%
13	14.072	2339	2354	2365	rBV5	10480	23946	1.09%	0.265%

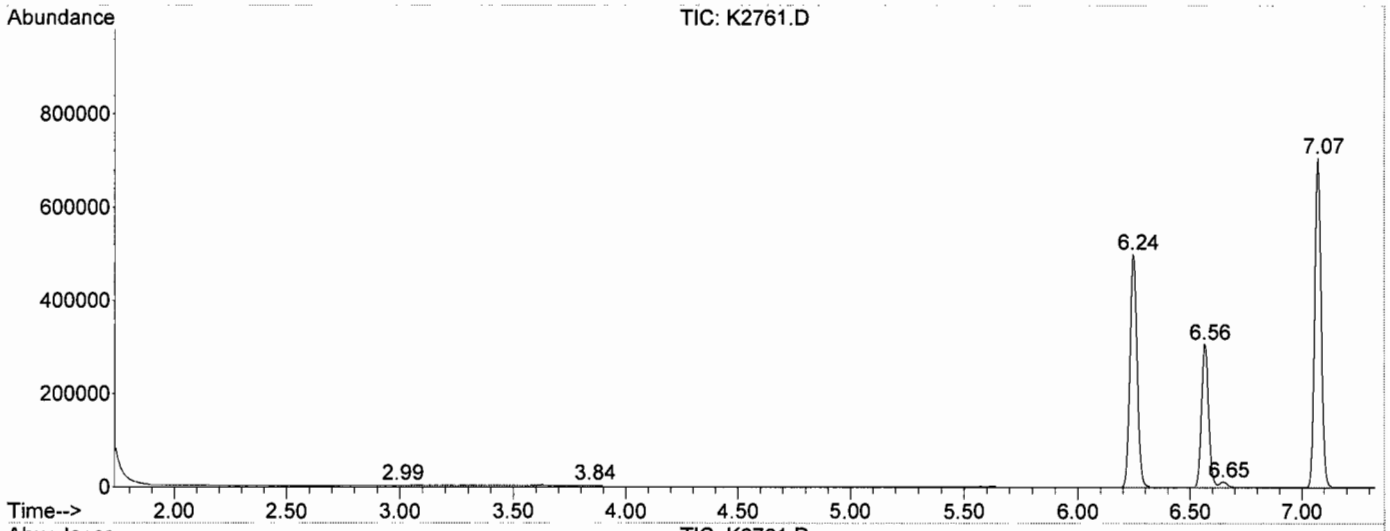
Sum of corrected areas: 9037276

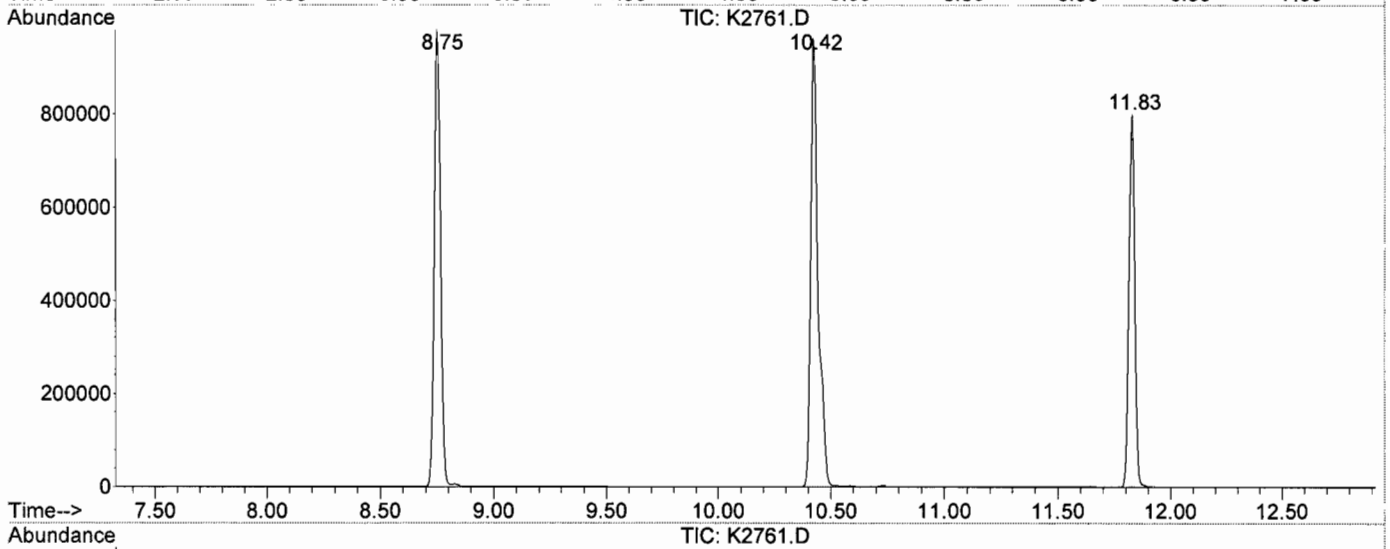
LSC Report - Integrated Chromatogram

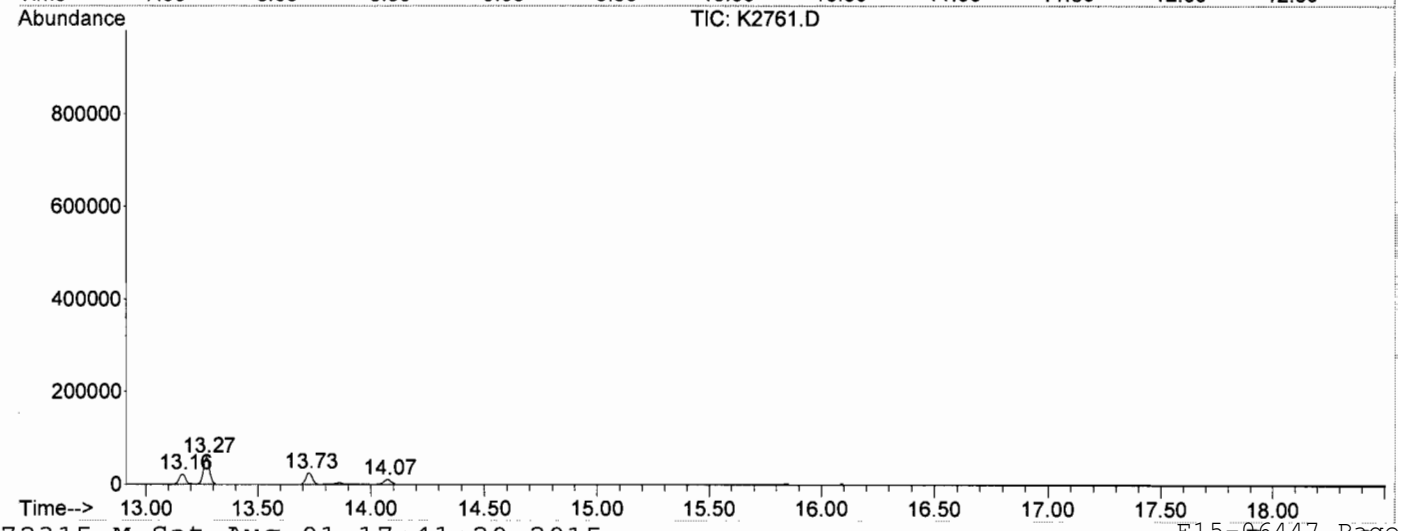
Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2761.D
Acq On : 30 Jul 2015 10:16 pm
Operator : BARBARA
Sample : MW-29D,06447-008,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2762.D
Acq On : 30 Jul 2015 10:42 pm
Operator : BARBARA
Sample : MW-31S,06447-009,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 01 17:49:32 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration

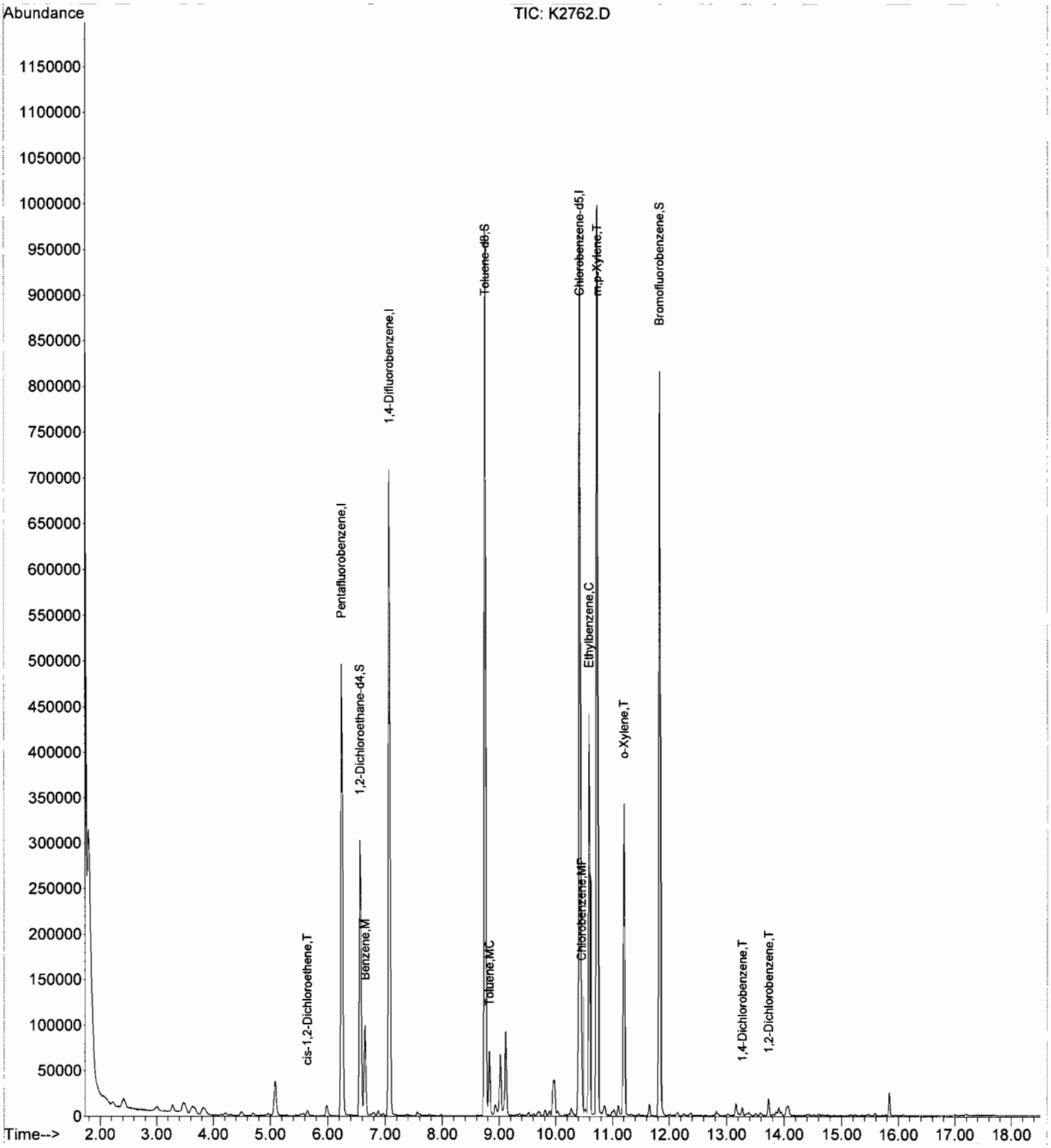
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene	6.25	168	380138	50.00 UG	0.00
31) 1,4-Difluorobenzene	7.07	114	573536	50.00 UG	0.00
50) Chlorobenzene-d5	10.42	117	546954	50.00 UG	0.00
System Monitoring Compounds					
30) 1,2-Dichloroethane-d4	6.56	65	256422	46.19 UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.38%		
41) Toluene-d8	8.75	98	659067	48.28 UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.56%		
59) Bromofluorobenzene	11.83	95	289508	48.72 UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.44%		
Target Compounds					Qvalue
20) cis-1,2-Dichloroethene	5.64	96	2735	0.68 UG #	97
32) Benzene	6.65	78	85010	5.99 UG	100
42) Toluene	8.82	92	29834	3.36 UG	99
51) Chlorobenzene	10.46	112	37870	3.94 UG	99
53) Ethylbenzene	10.59	91	337515	19.51 UG	100
54) m,p-Xylene	10.73	106	300804	47.28 UG	96
55) o-Xylene	11.20	106	94275	15.69 UG	99
72) 1,4-Dichlorobenzene	13.27	146	3187	0.42 UG	98
74) 1,2-Dichlorobenzene	13.73	146	7552	1.10 UG	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2762.D
Acq On : 30 Jul 2015 10:42 pm
Operator : BARBARA
Sample : MW-31S,06447-009,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 01 17:49:32 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2762.D
Acq On : 30 Jul 2015 10:42 pm
Operator : BARBARA
Sample : MW-31S,06447-009,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.07 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8072315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.792	8	12	122	rVB	302845	1562605	79.54%	10.510%
2	2.411	122	130	237	rVV3	13105	75394	3.84%	0.507%
3	2.998	237	242	270	rVB6	5471	22538	1.15%	0.152%
4	3.281	289	296	323	rVV4	6854	19726	1.00%	0.133%
5	3.470	323	332	351	rVB5	11467	53428	2.72%	0.359%
6	3.633	351	363	384	rVB6	9079	51615	2.63%	0.347%
7	3.827	389	400	431	rVB2	8893	49012	2.49%	0.330%
8	5.085	627	640	662	rVB3	37366	105266	5.36%	0.708%
9	5.987	802	812	835	rVB3	11152	30709	1.56%	0.207%
10	6.244	848	861	892	rBV	496133	1113721	56.69%	7.491%
11	6.563	910	922	931	rBV	302501	676707	34.44%	4.552%
12	6.647	931	938	955	rVB	97861	209746	10.68%	1.411%
13	7.072	1008	1019	1048	rBV	708015	1428356	72.70%	9.607%
14	8.750	1322	1339	1348	rBV	972147	1866085	94.98%	12.552%
15	8.828	1348	1354	1366	rVV2	70285	140855	7.17%	0.947%
16	8.928	1366	1373	1381	rVV2	11822	31650	1.61%	0.213%
17	9.022	1381	1391	1398	rVV2	66584	146121	7.44%	0.983%
18	9.117	1398	1409	1423	rVB	91782	195147	9.93%	1.313%
19	9.977	1561	1573	1581	rBV3	38417	127070	6.47%	0.855%
20	10.422	1646	1658	1674	rBV	971661	1964659	100.00%	13.215%
21	10.590	1682	1690	1703	rVV	441369	803374	40.89%	5.404%
22	10.732	1703	1717	1732	rVV	997950	1882535	95.82%	12.662%
23	10.868	1732	1743	1752	rVV8	10457	31715	1.61%	0.213%
24	11.104	1782	1788	1798	rVV6	10455	23777	1.21%	0.160%
25	11.204	1798	1807	1827	rVB	342178	613162	31.21%	4.124%
26	11.649	1883	1892	1901	rVB2	12362	23648	1.20%	0.159%
27	11.827	1915	1926	1946	rBV	816100	1465581	74.60%	9.858%
28	13.159	2169	2180	2194	rBV9	12965	32636	1.66%	0.220%
29	13.725	2277	2288	2298	rBV2	18582	35891	1.83%	0.241%
30	14.066	2339	2353	2371	rBV8	10693	39384	2.00%	0.265%
31	15.844	2684	2692	2704	rVB	25824	45182	2.30%	0.304%

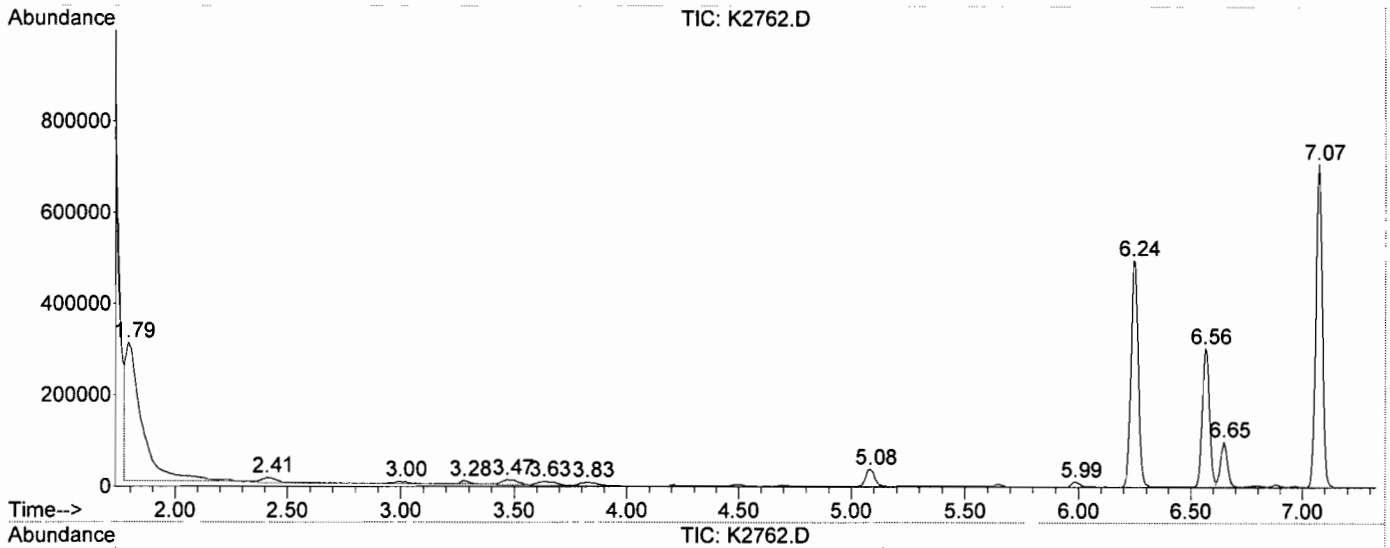
Sum of corrected areas: 14867295

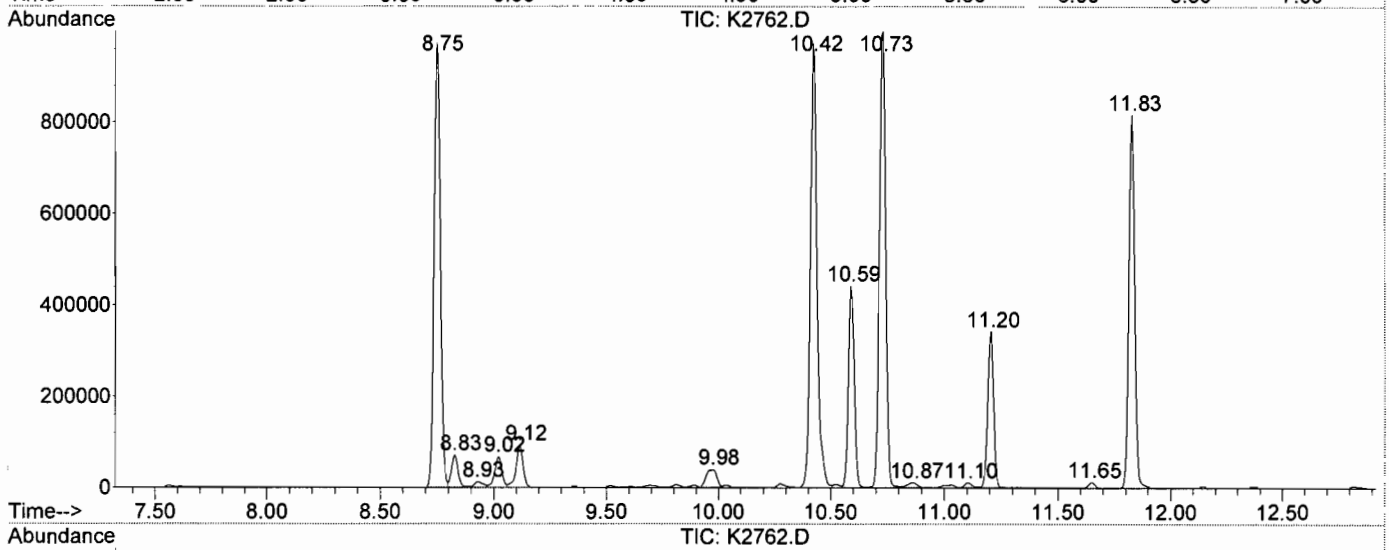
LSC Report - Integrated Chromatogram

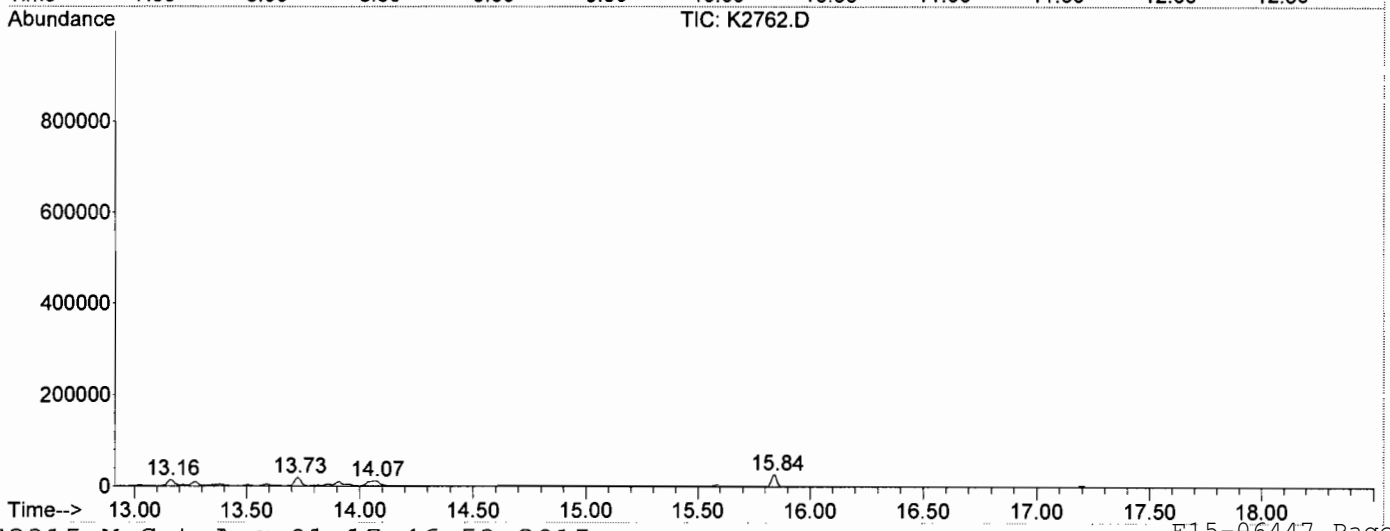
Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2762.D
Acq On : 30 Jul 2015 10:42 pm
Operator : BARBARA
Sample : MW-31S,06447-009,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2762.D
Acq On : 30 Jul 2015 10:42 pm
Operator : BARBARA
Sample : MW-31S,06447-009,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 13 Sample Multiplier: 1

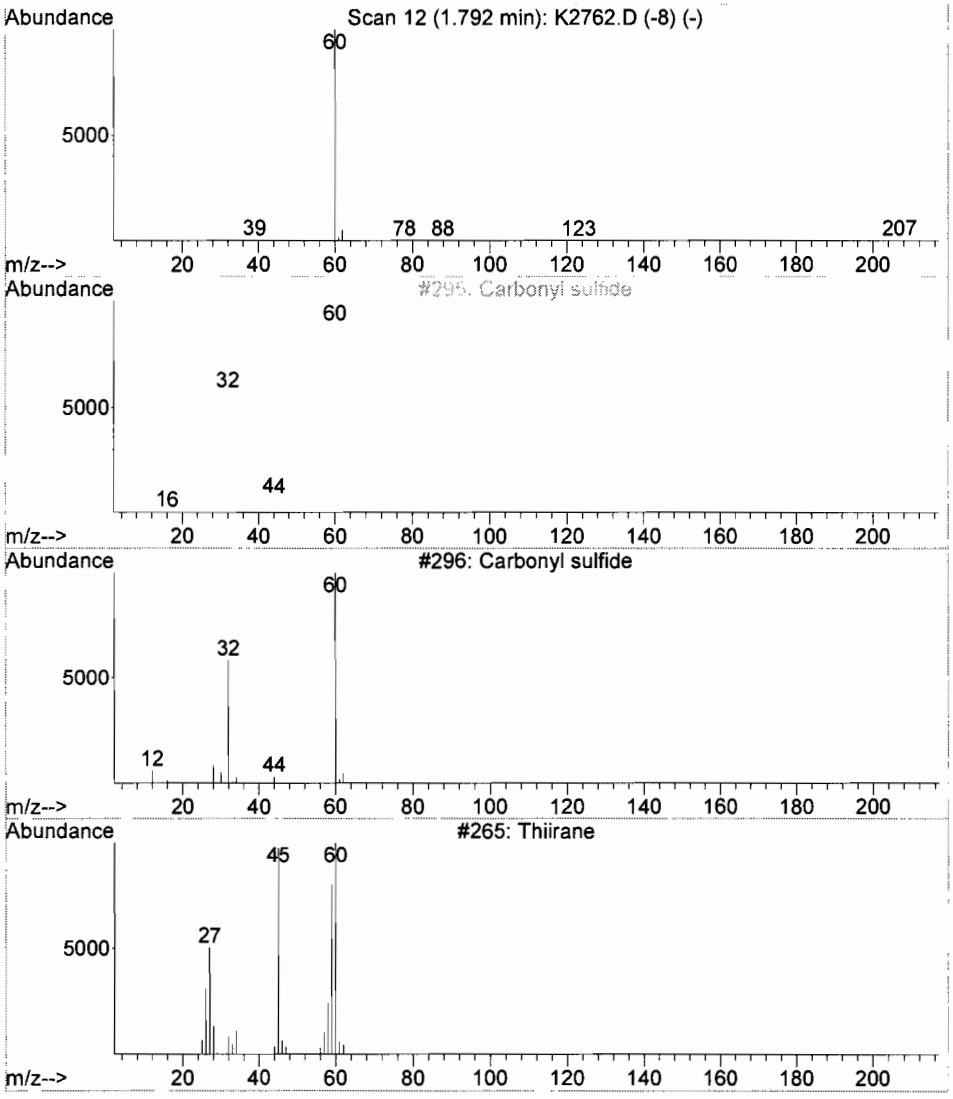
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

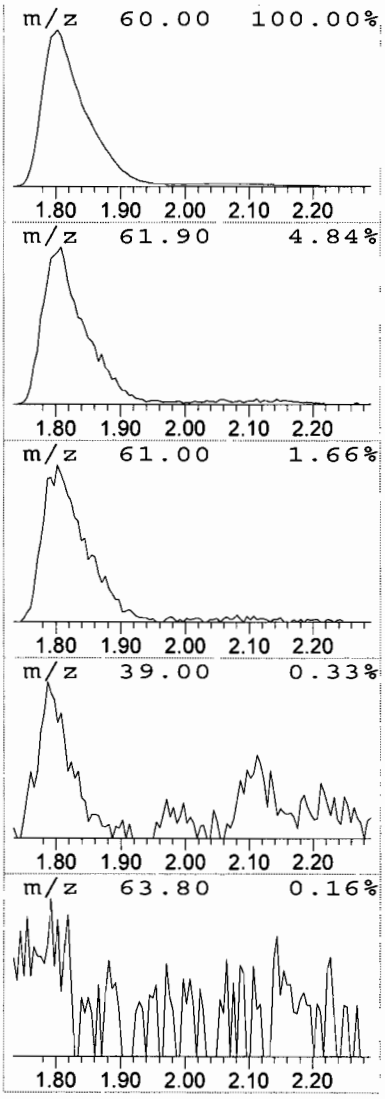
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 1 Unknown VOA Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.79	70.15 UG	1562610	Pentafluorobenzene	6.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbonyl sulfide	60	COS	000463-58-1	5
2	Carbonyl sulfide	60	COS	000463-58-1	5
3	Thiirane	60	C2H4S	000420-12-2	4
4	Urea	60	CH4N2O	000057-13-6	4
5	Urea	60	CH4N2O	000057-13-6	4





Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2751.D
Acq On : 30 Jul 2015 5:55 pm
Operator : BARBARA
Sample : MW-24S,06447-010,A,0.025mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1000
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 30 20:04:16 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration

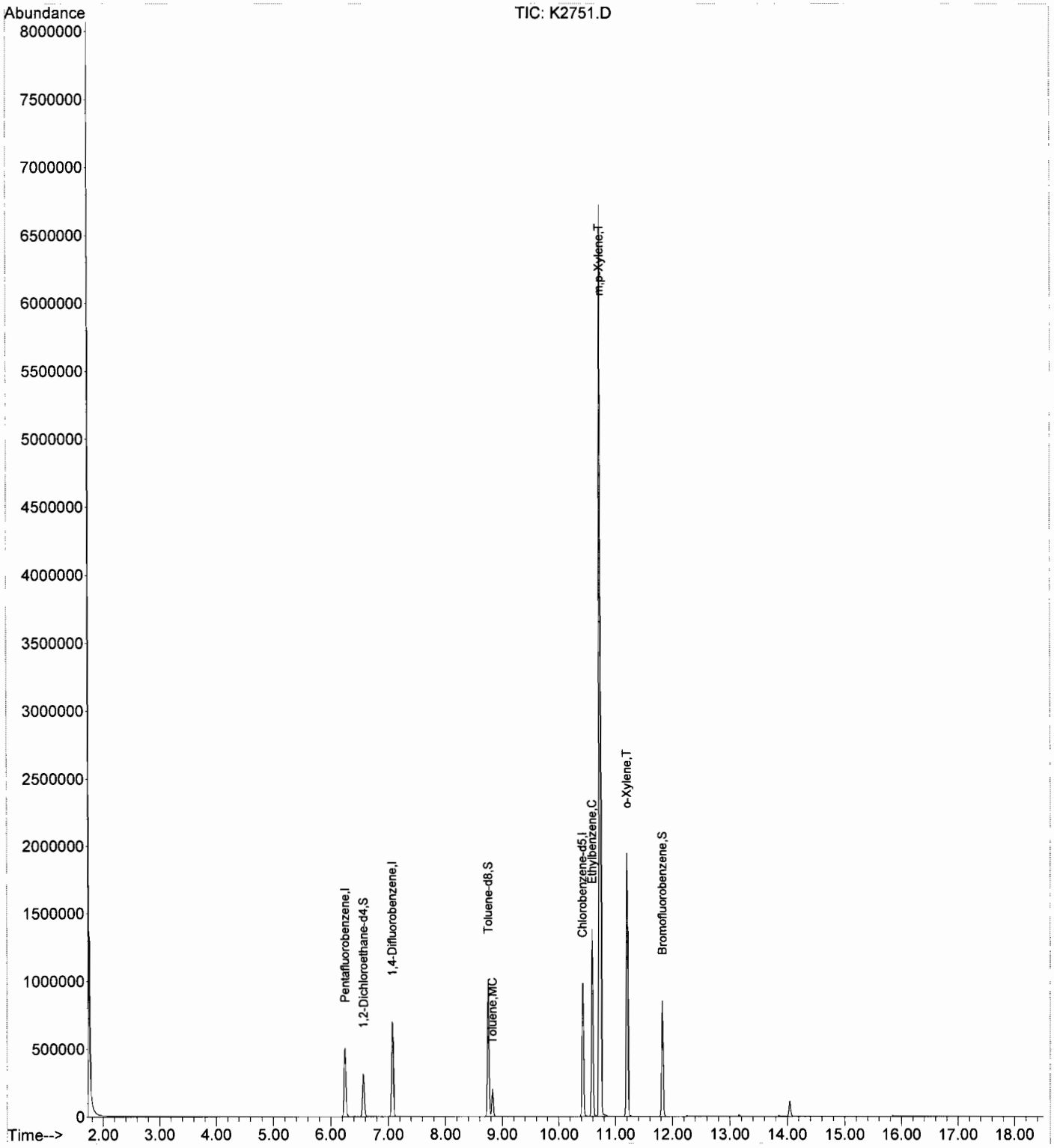
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.25	168	381960	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.07	114	585857	50.00	UG	0.00
50) Chlorobenzene-d5	10.42	117	555260	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.57	65	258144	46.27	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.54%			
41) Toluene-d8	8.75	98	686194	49.21	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.42%			
59) Bromofluorobenzene	11.83	95	306749	50.85	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.70%			
Target Compounds						Qvalue
42) Toluene	8.83	92	85650	9.44	UG	99
53) Ethylbenzene	10.59	91	1059192	60.32	UG	100
54) m,p-Xylene	10.73	106	1942122	300.66	UG	95
55) o-Xylene	11.20	106	550683	90.26	UG	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2751.D
Acq On : 30 Jul 2015 5:55 pm
Operator : BARBARA
Sample : MW-24S,06447-010,A,0.025mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1000
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 30 20:04:16 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2751.D
Acq On : 30 Jul 2015 5:55 pm
Operator : BARBARA
Sample : MW-24S,06447-010,A,0.025mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1000
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.07 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8072315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.249	850	862	881	rBV	504887	1122811	9.13%	4.082%
2	6.569	909	923	935	rBV	313654	689828	5.61%	2.508%
3	7.072	1007	1019	1045	rBV	697895	1449571	11.78%	5.270%
4	8.755	1325	1340	1348	rBV	1009529	1929801	15.68%	7.016%
5	8.828	1348	1354	1390	rVB	199783	383258	3.11%	1.393%
6	10.422	1646	1658	1681	rBV	979038	1824693	14.83%	6.634%
7	10.590	1681	1690	1706	rVV	1376321	2495763	20.28%	9.074%
8	10.732	1706	1717	1755	rVB	6723432	12304696	100.00%	44.735%
9	11.203	1795	1807	1836	rBV	1942582	3544377	28.81%	12.886%
10	11.827	1912	1926	1957	rBV	851785	1528783	12.42%	5.558%
11	14.045	2339	2349	2388	rBV	112869	231878	1.88%	0.843%

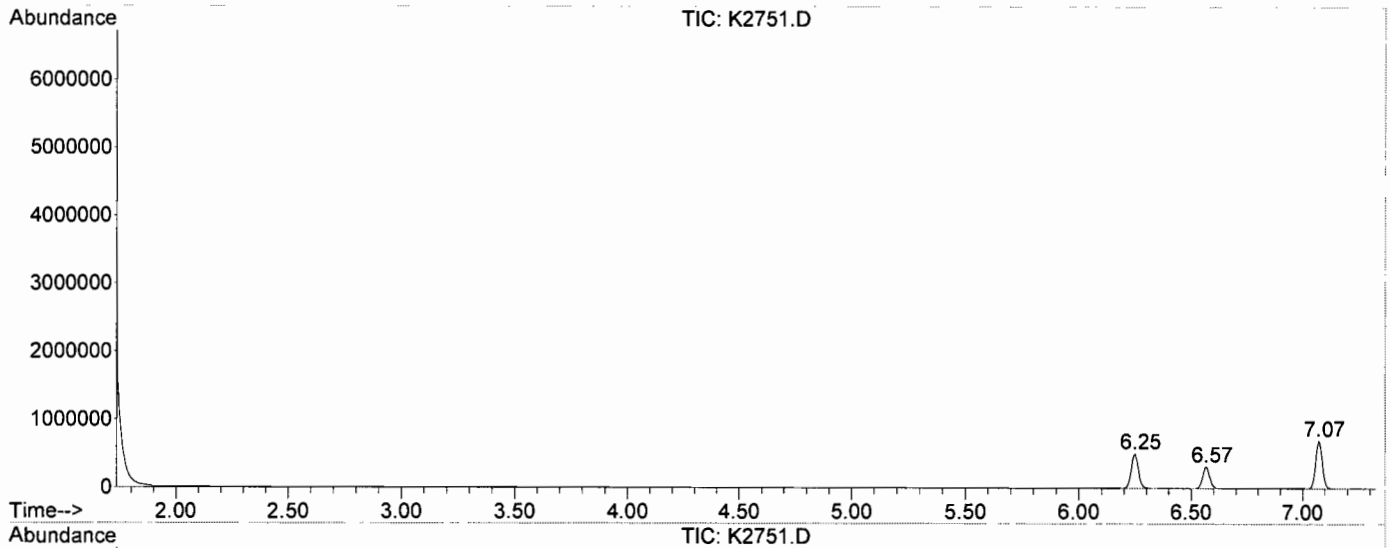
Sum of corrected areas: 27505459

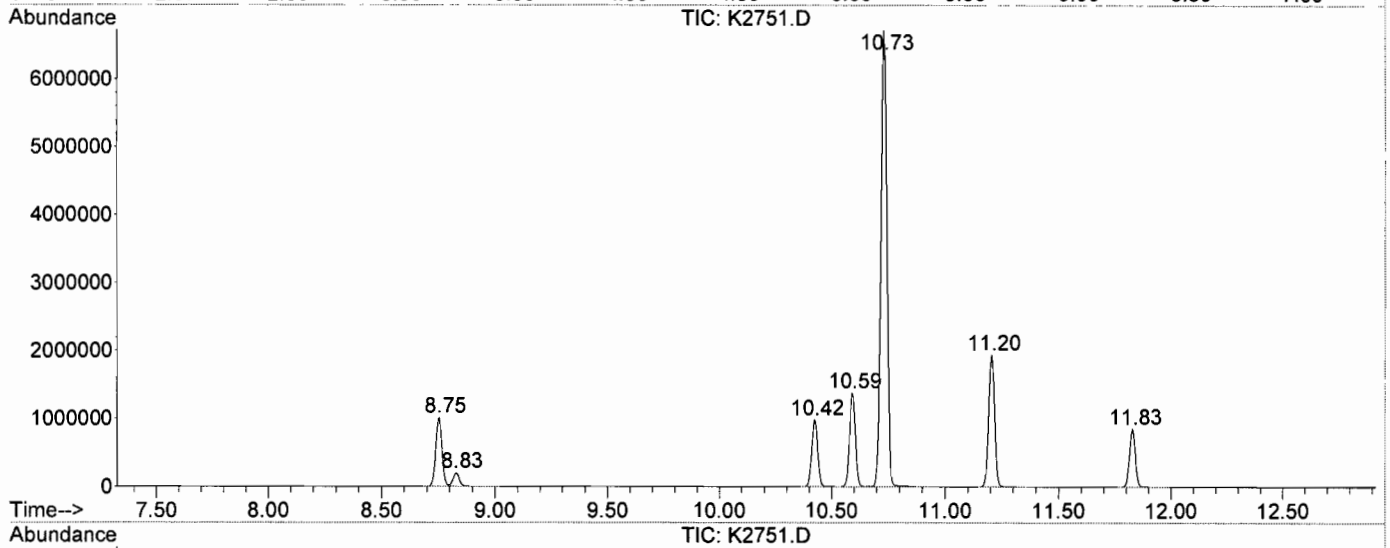
LSC Report - Integrated Chromatogram

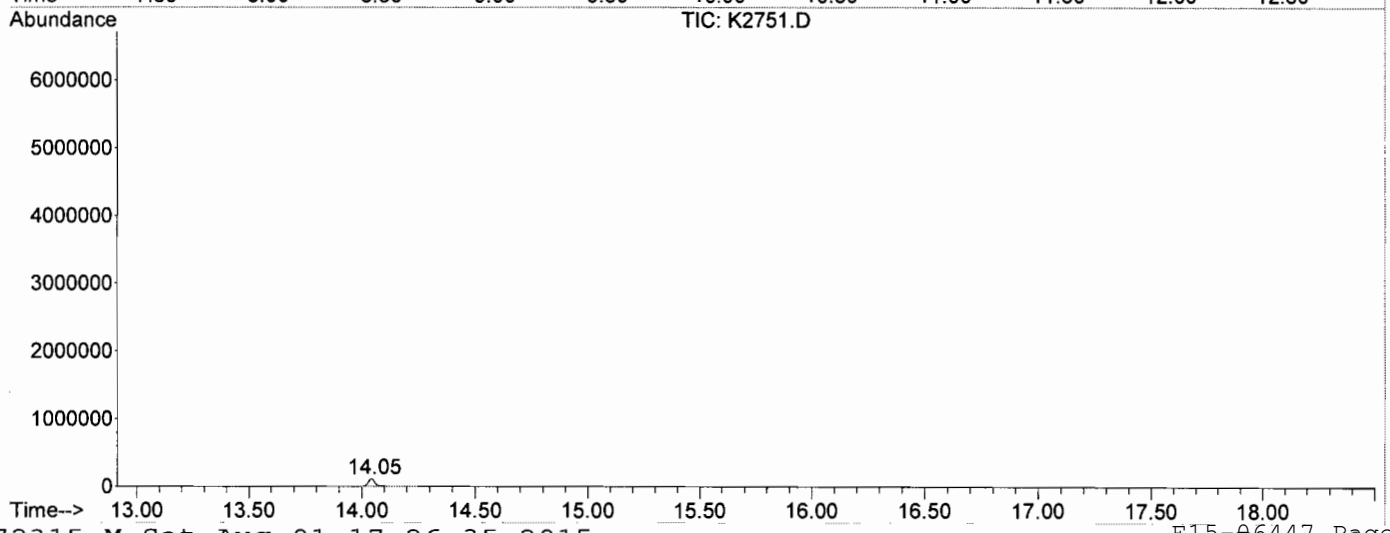
Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2751.D
Acq On : 30 Jul 2015 5:55 pm
Operator : BARBARA
Sample : MW-24S,06447-010,A,0.025mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1000
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2751.D
Acq On : 30 Jul 2015 5:55 pm
Operator : BARBARA
Sample : MW-24S,06447-010,A,0.025mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1000
ALS Vial : 11 Sample Multiplier: 1

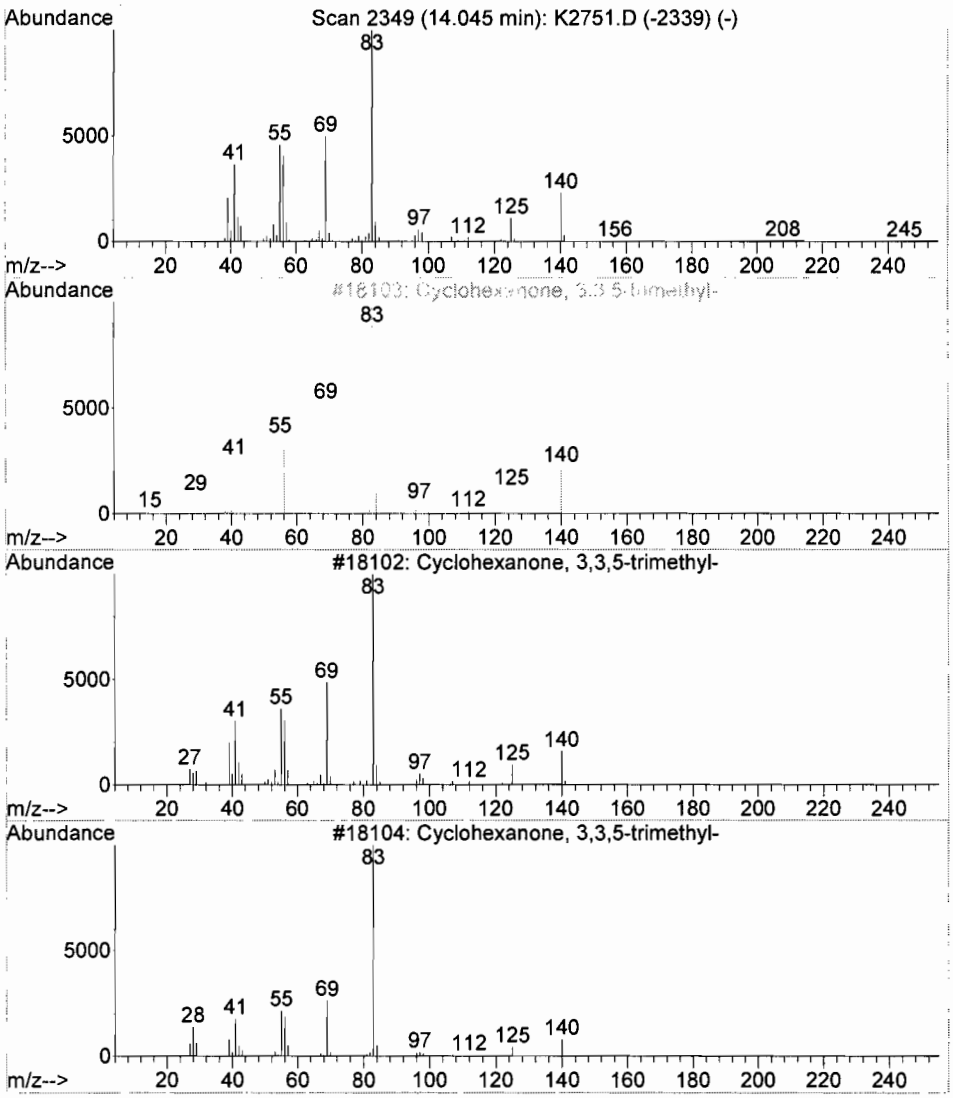
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

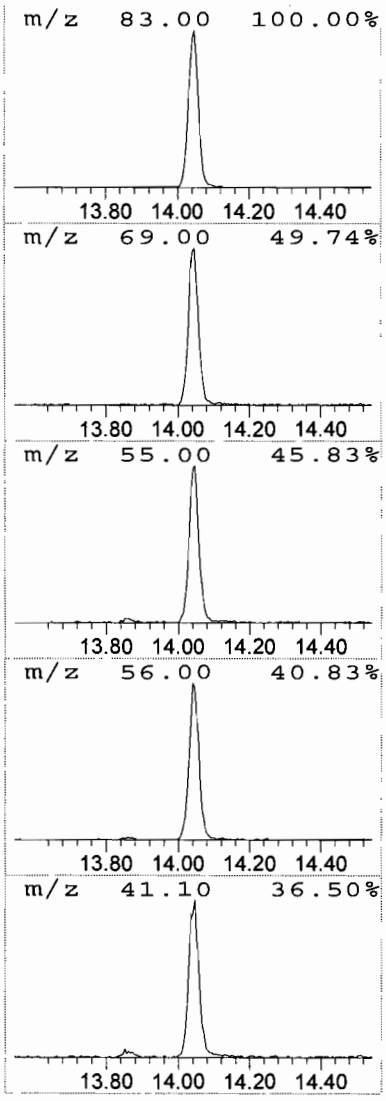
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 1 Cyclohexanone, 3,3,5-trimet... Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.05	6.35 UG	231878	Chlorobenzene-d5	10.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexanone, 3,3,5-trimethyl-	140	C9H16O	000873-94-9	96
2	Cyclohexanone, 3,3,5-trimethyl-	140	C9H16O	000873-94-9	96
3	Cyclohexanone, 3,3,5-trimethyl-	140	C9H16O	000873-94-9	91
4	Cyclohexanone, 3,3,5-trimethyl-	140	C9H16O	000873-94-9	91
5	Cyclopentanone, 3-butyl-	140	C9H16O	057283-81-5	58





Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2752.D
Acq On : 30 Jul 2015 6:22 pm
Operator : BARBARA
Sample : MW-38D,06447-011,A,0.005mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1000
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 01 17:36:55 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration

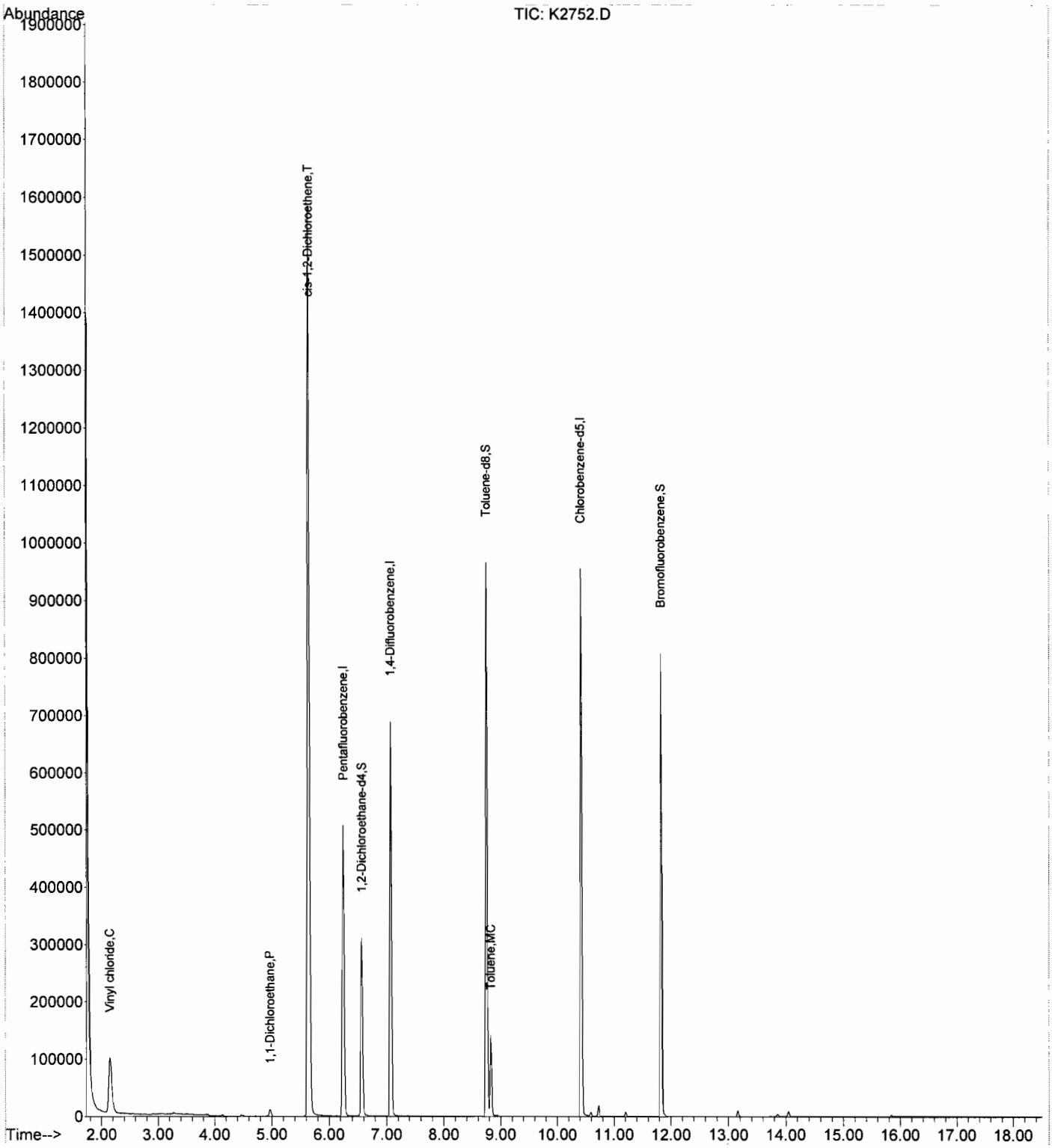
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.25	168	383043	50.00	UG		0.00
31) 1,4-Difluorobenzene	7.07	114	572127	50.00	UG		0.00
50) Chlorobenzene-d5	10.42	117	538381	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.57	65	256217	45.80	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 91.60%				
41) Toluene-d8	8.75	98	662739	48.67	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.34%				
59) Bromofluorobenzene	11.83	95	283343	48.44	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.88%				
Target Compounds							Qvalue
4) Vinyl chloride	2.15	62	231739	47.95	UG		99
18) 1,1-Dichloroethane	4.97	63	14600	1.86	UG	#	100
20) cis-1,2-Dichloroethene	5.65	96	799897	198.15	UG	#	99
42) Toluene	8.83	92	60330	6.81	UG		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2752.D
Acq On : 30 Jul 2015 6:22 pm
Operator : BARBARA
Sample : MW-38D,06447-011,A,0.005mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1000
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 01 17:36:55 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2752.D
Acq On : 30 Jul 2015 6:22 pm
Operator : BARBARA
Sample : MW-38D,06447-011,A,0.005mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1000
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.07 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8072315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.149	68	80	152	rVB2	98555	431943	11.34%	3.375%
2	5.646	727	747	805	rBV	1585056	3810028	100.00%	29.769%
3	6.249	849	862	902	rVB	506879	1120409	29.41%	8.754%
4	6.569	911	923	936	rBV	310269	676776	17.76%	5.288%
5	7.072	1006	1019	1039	rBV	688233	1418190	37.22%	11.081%
6	8.755	1329	1340	1348	rBV	965885	1872562	49.15%	14.631%
7	8.828	1348	1354	1375	rVB	140201	270928	7.11%	2.117%
8	10.422	1645	1658	1684	rBV	954239	1766623	46.37%	13.803%
9	11.827	1910	1926	1949	rBV	807436	1431134	37.56%	11.182%

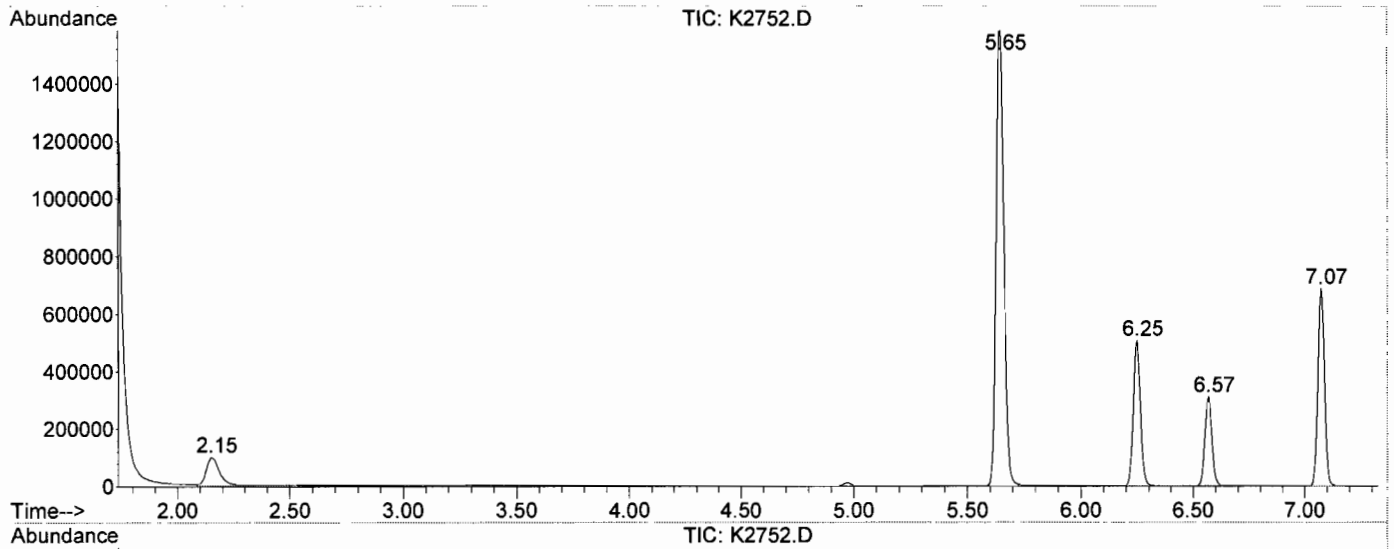
Sum of corrected areas: 12798593

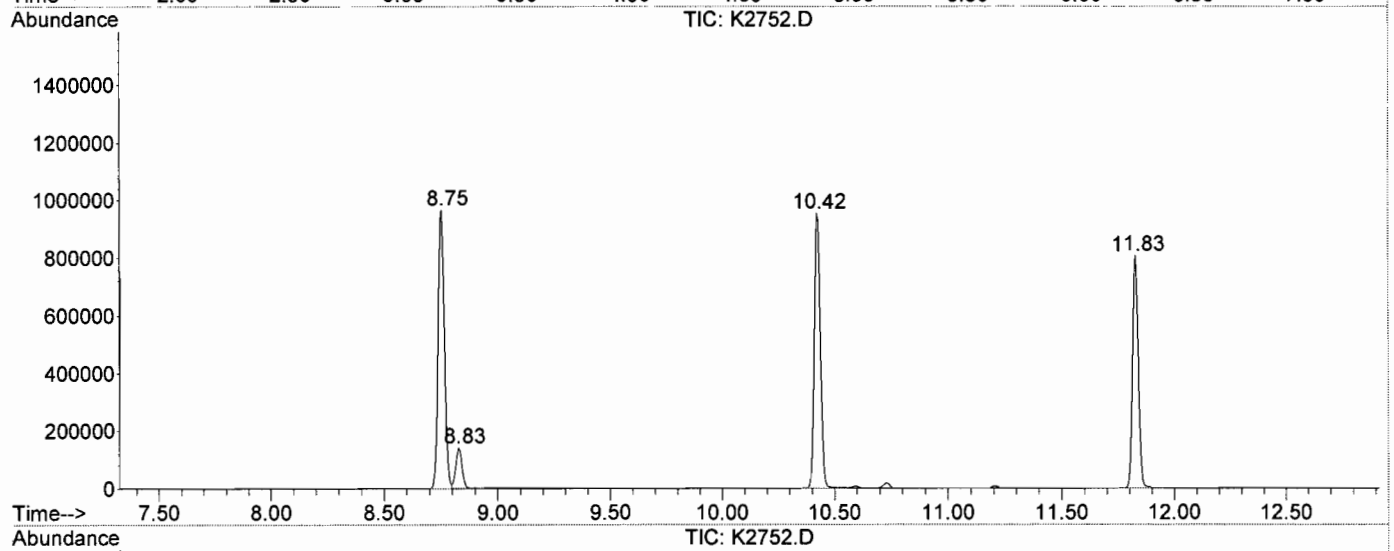
LSC Report - Integrated Chromatogram

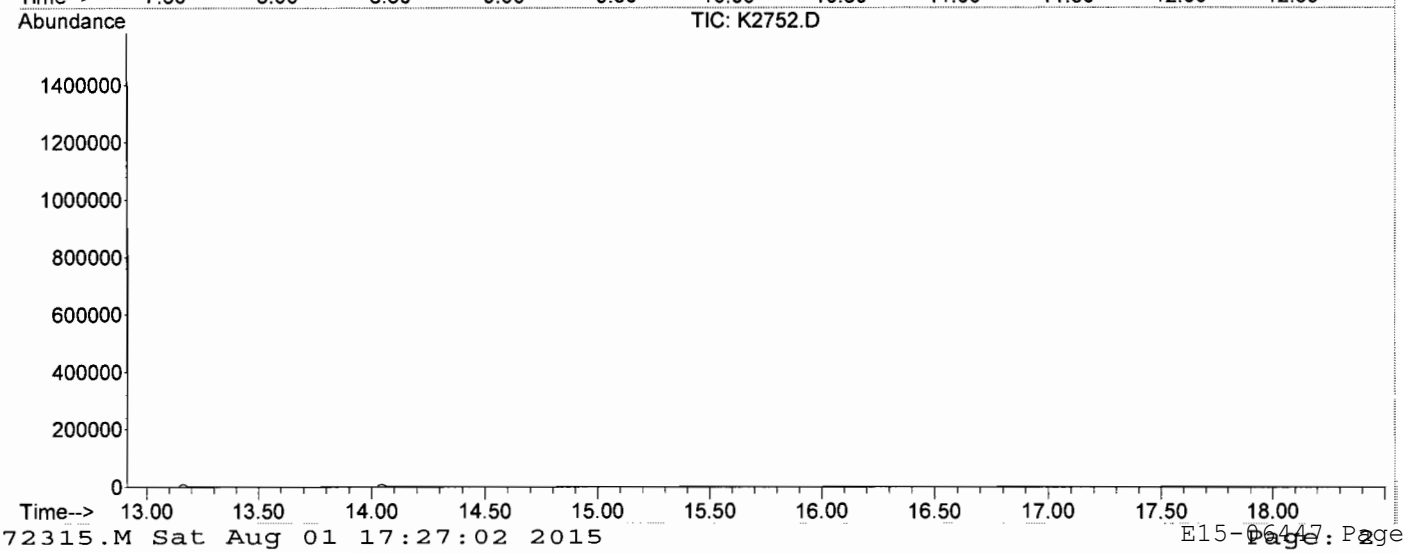
Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2752.D
Acq On : 30 Jul 2015 6:22 pm
Operator : BARBARA
Sample : MW-38D,06447-011,A,0.005mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1000
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2763.D
Acq On : 30 Jul 2015 11:08 pm
Operator : BARBARA
Sample : MW-38DD,06447-012,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 01 17:47:59 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration

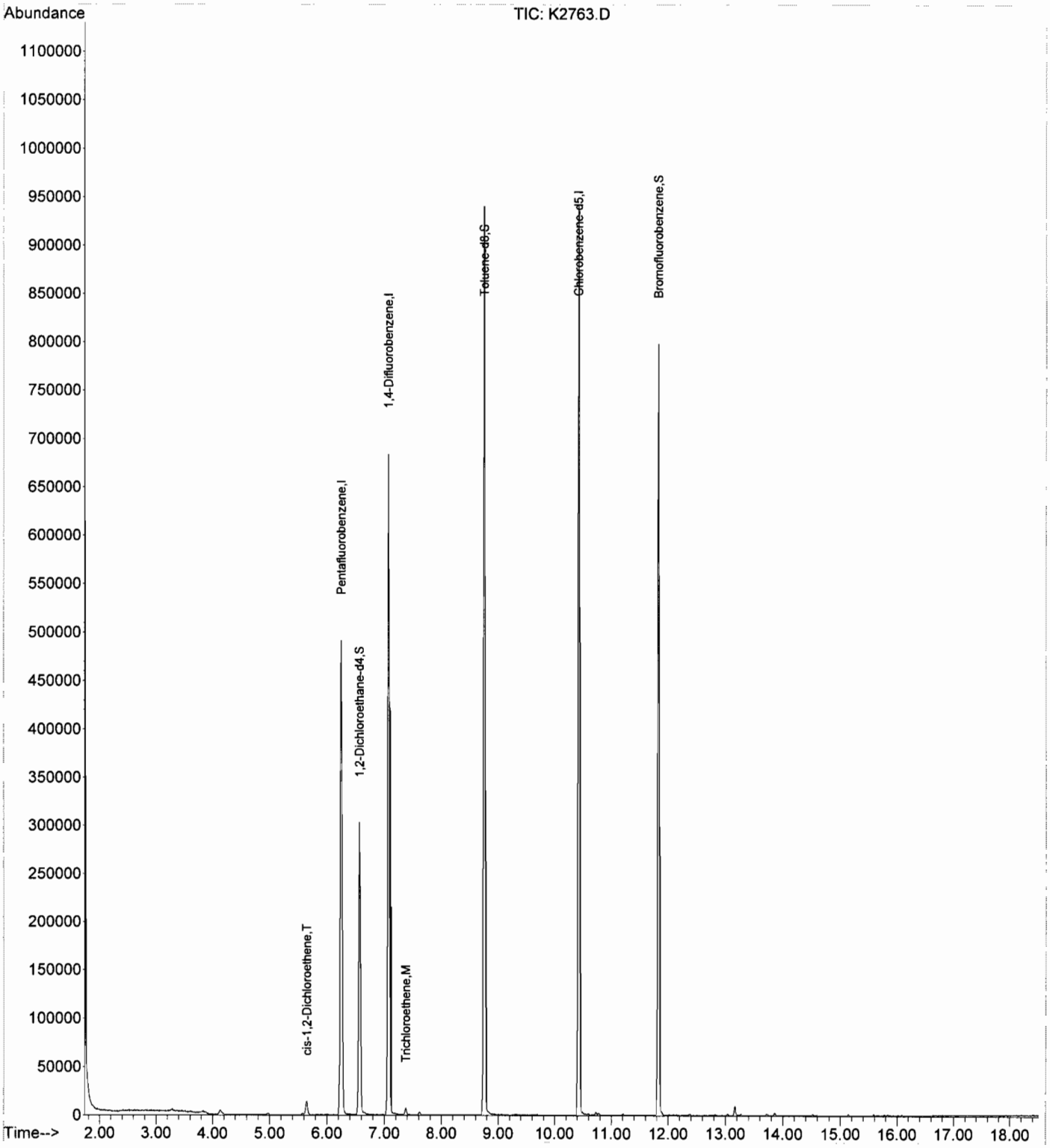
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Pentafluorobenzene	6.25	168	367354	50.00 UG	0.00
31) 1,4-Difluorobenzene	7.07	114	560445	50.00 UG	0.00
50) Chlorobenzene-d5	10.42	117	530859	50.00 UG	0.00
System Monitoring Compounds					
30) 1,2-Dichloroethane-d4	6.57	65	252282	47.02 UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.04%		
41) Toluene-d8	8.76	98	645033	48.36 UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.72%		
59) Bromofluorobenzene	11.83	95	279869	48.53 UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.06%		
Target Compounds					Qvalue
20) cis-1,2-Dichloroethene	5.64	96	7084	1.83 UG	# 67
33) Trichloroethene	7.38	95	2240	0.62 UG	# 100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2763.D
Acq On : 30 Jul 2015 11:08 pm
Operator : BARBARA
Sample : MW-38DD,06447-012,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 01 17:47:59 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2763.D
Acq On : 30 Jul 2015 11:08 pm
Operator : BARBARA
Sample : MW-38DD,06447-012,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 14 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.07 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8072315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.960	42	44	115	rVB	3392	27299	1.48%	0.326%
2	3.287	128	297	349	rVB6	3847	127737	6.94%	1.526%
3	3.832	361	401	415	rVB6	3230	27781	1.51%	0.332%
4	5.646	738	747	760	rVB3	13743	34058	1.85%	0.407%
5	6.249	848	862	885	rBV	491254	1086630	59.08%	12.979%
6	6.569	910	923	950	rBV	302340	672347	36.55%	8.031%
7	7.072	1006	1019	1038	rBV	683752	1398641	76.04%	16.705%
8	8.755	1325	1340	1366	rBV	940183	1839346	100.00%	21.969%
9	10.422	1645	1658	1680	rBV	941150	1742980	94.76%	20.818%
10	11.827	1915	1926	1946	rBV	797778	1415592	76.96%	16.908%

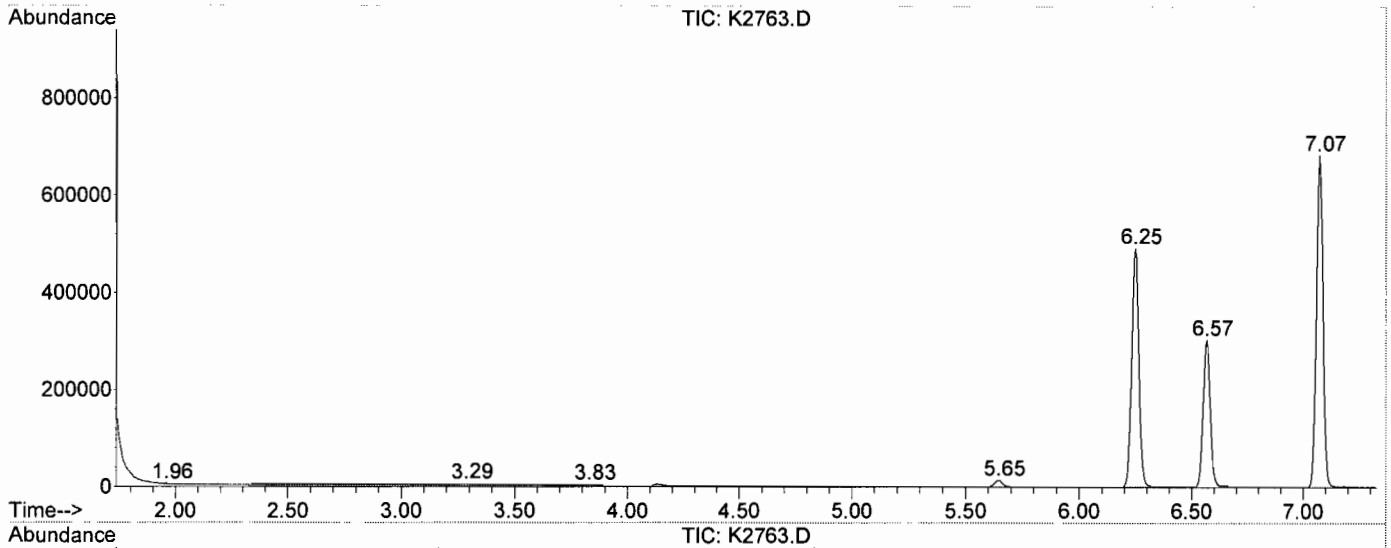
Sum of corrected areas: 8372411

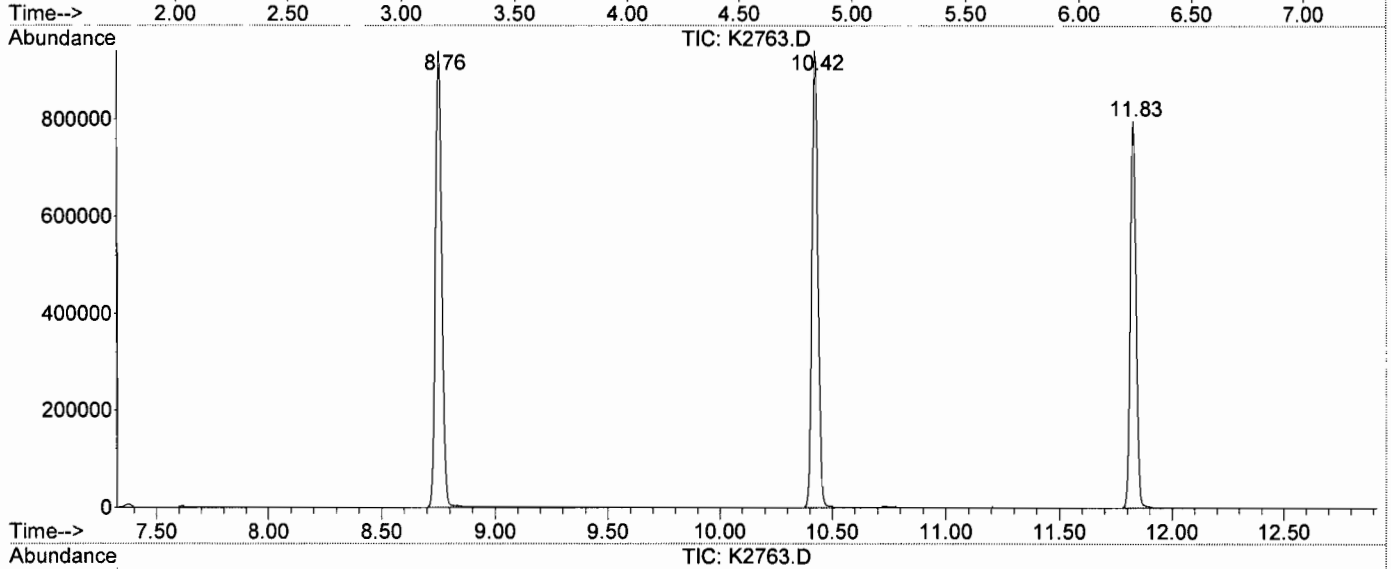
LSC Report - Integrated Chromatogram

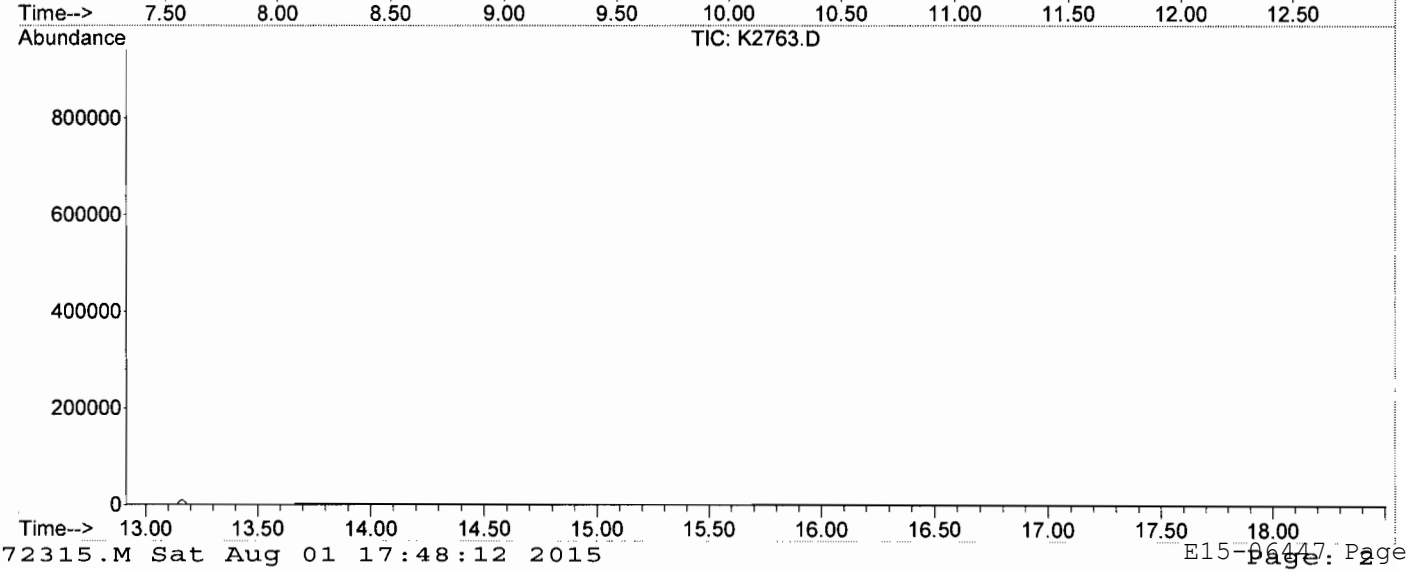
Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2763.D
Acq On : 30 Jul 2015 11:08 pm
Operator : BARBARA
Sample : MW-38DD,06447-012,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2764.D
Acq On : 30 Jul 2015 11:34 pm
Operator : BARBARA
Sample : FB-2,06447-013,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 01 17:52:00 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.25	168	363518	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.07	114	554473	50.00	UG	0.00
50) Chlorobenzene-d5	10.43	117	536439	50.00	UG	0.00

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	6.57	65	249303	46.96	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 93.92%			
41) Toluene-d8	8.75	98	654860	49.62	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.24%			
59) Bromofluorobenzene	11.83	95	281721	48.34	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.68%			

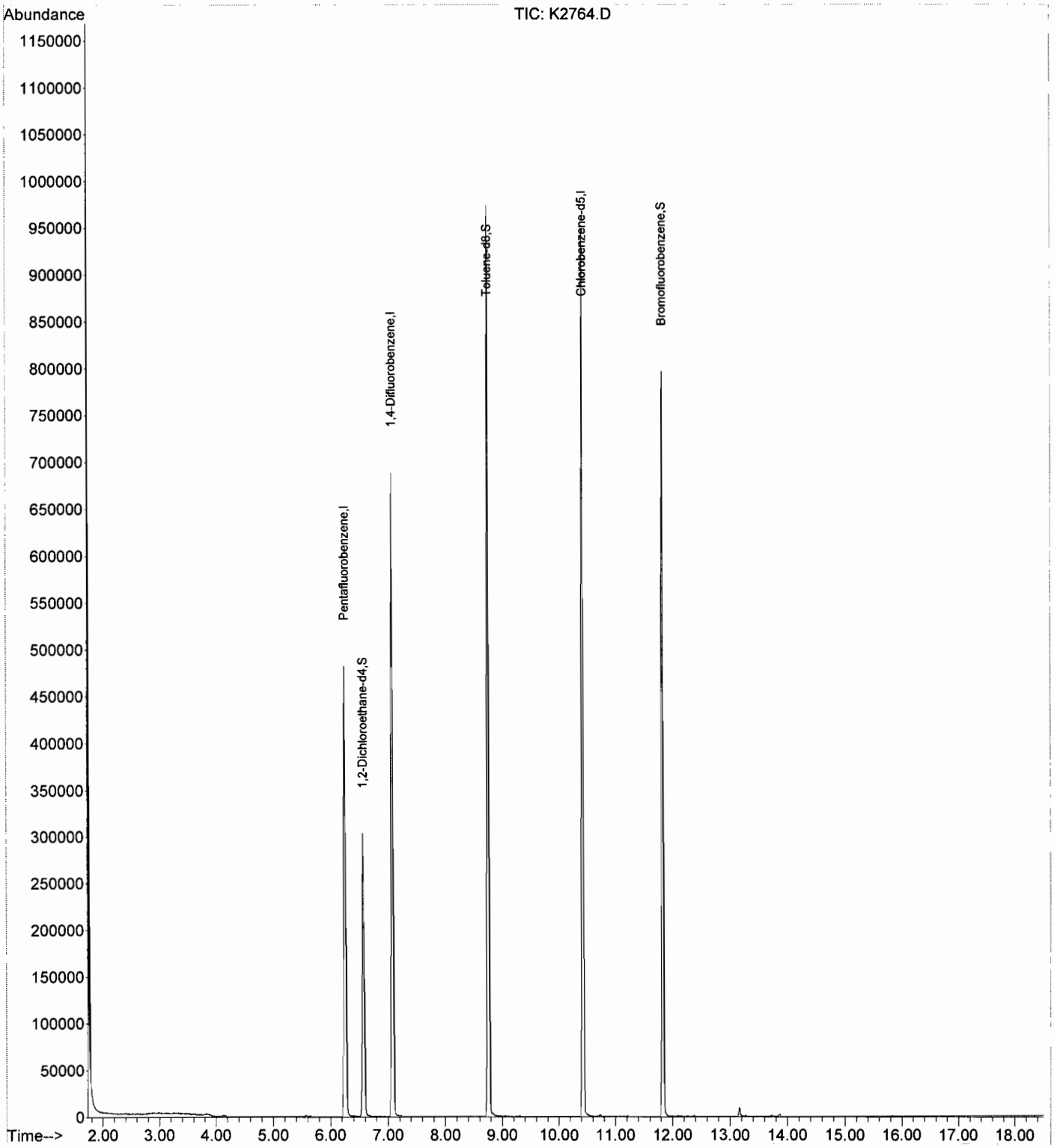
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2764.D
Acq On : 30 Jul 2015 11:34 pm
Operator : BARBARA
Sample : FB-2,06447-013,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 01 17:52:00 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2764.D
Acq On : 30 Jul 2015 11:34 pm
Operator : BARBARA
Sample : FB-2,06447-013,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 15 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.07 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8072315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.986	48	49	201	rVB2	2666	38018	2.04%	0.462%
2	6.249	849	862	881	rBV	482026	1069737	57.33%	13.001%
3	6.569	911	923	952	rBV	302607	663615	35.57%	8.065%
4	7.072	1008	1019	1043	rBV	688057	1385265	74.24%	16.836%
5	8.755	1329	1340	1372	rBV	973455	1865827	100.00%	22.676%
6	10.427	1646	1659	1688	rBV	947440	1773803	95.07%	21.558%
7	11.827	1914	1926	1945	rBV	796025	1431902	76.74%	17.402%

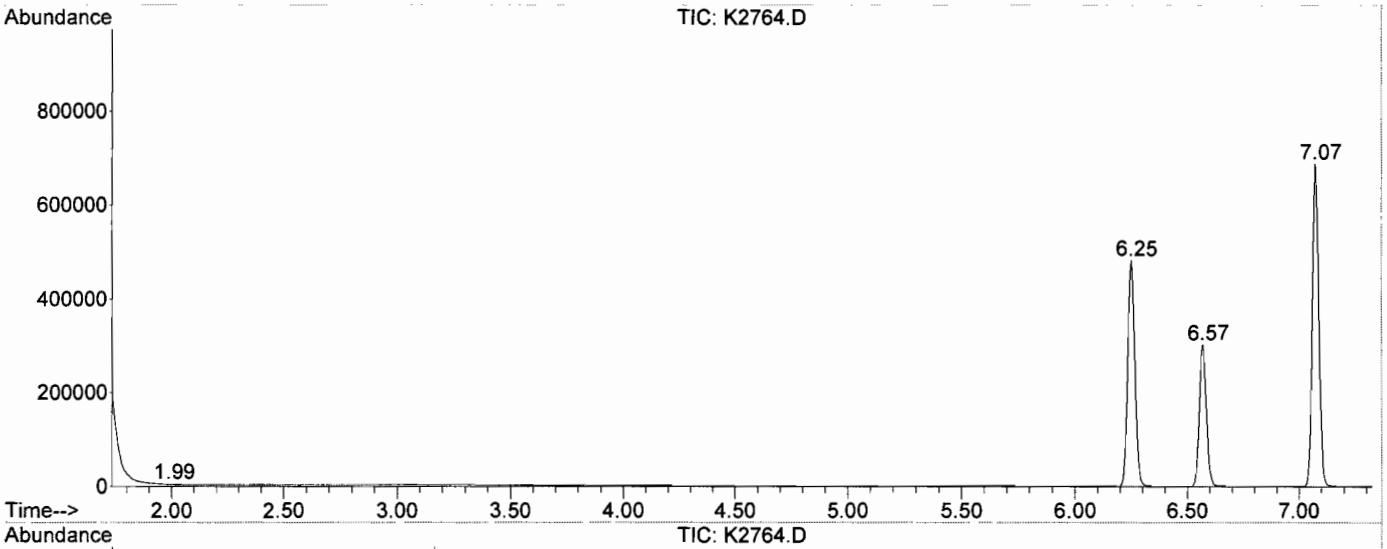
Sum of corrected areas: 8228167

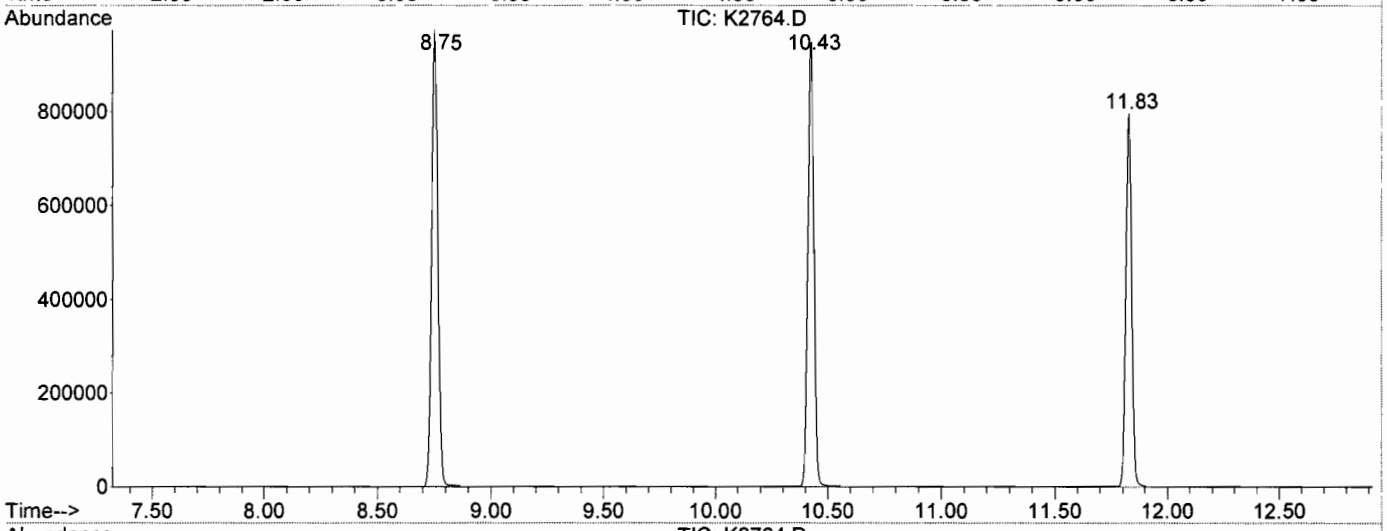
LSC Report - Integrated Chromatogram

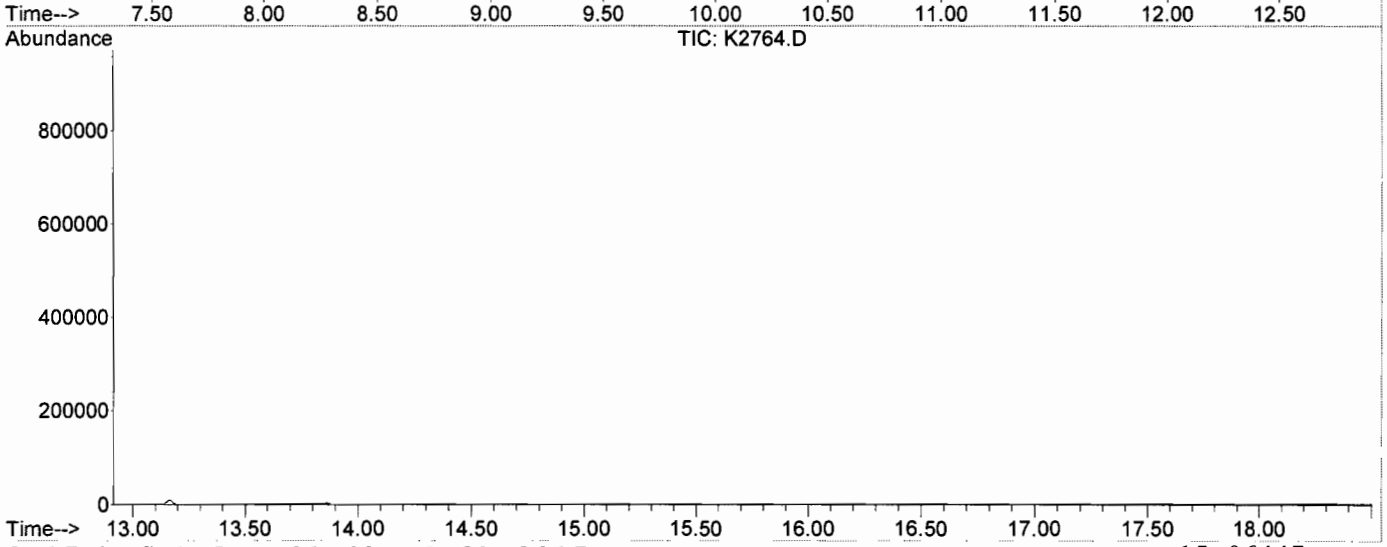
Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2764.D
Acq On : 30 Jul 2015 11:34 pm
Operator : BARBARA
Sample : FB-2,06447-013,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2765.D
Acq On : 31 Jul 2015 12:00 am
Operator : BARBARA
Sample : TB,06447-014,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 01 17:52:29 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.25	168	341492	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.07	114	523509	50.00	UG	0.00
50) Chlorobenzene-d5	10.43	117	507317	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.57	65	238422	47.80	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.60%			
41) Toluene-d8	8.76	98	617219	49.54	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.08%			
59) Bromofluorobenzene	11.83	95	268950	48.80	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.60%			

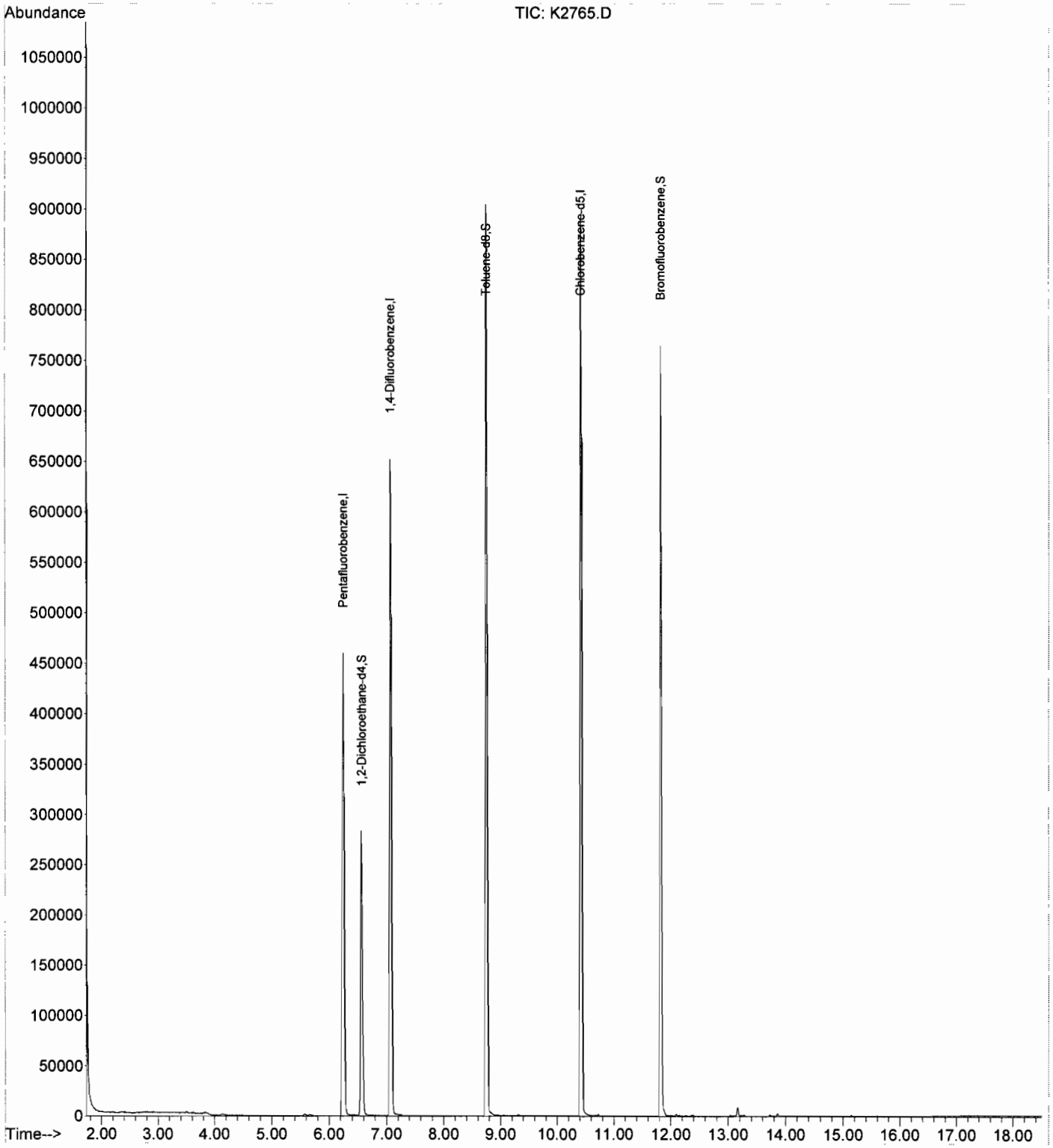
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2765.D
Acq On : 31 Jul 2015 12:00 am
Operator : BARBARA
Sample : TB,06447-014,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 01 17:52:29 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2765.D
Acq On : 31 Jul 2015 12:00 am
Operator : BARBARA
Sample : TB,06447-014,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 16 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.07 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8072315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.832	388	401	425	rVB9	3085	18367	1.05%	0.236%
2	6.249	845	862	888	rBV	459474	1024545	58.31%	13.170%
3	6.569	910	923	952	rBV	282471	629789	35.84%	8.096%
4	7.072	1007	1019	1039	rBV	651784	1308424	74.47%	16.819%
5	8.750	1328	1339	1366	rBV	903711	1756994	100.00%	22.586%
6	10.422	1646	1658	1695	rBV	891280	1679572	95.59%	21.591%
7	11.827	1915	1926	1949	rBV	764132	1361522	77.49%	17.502%

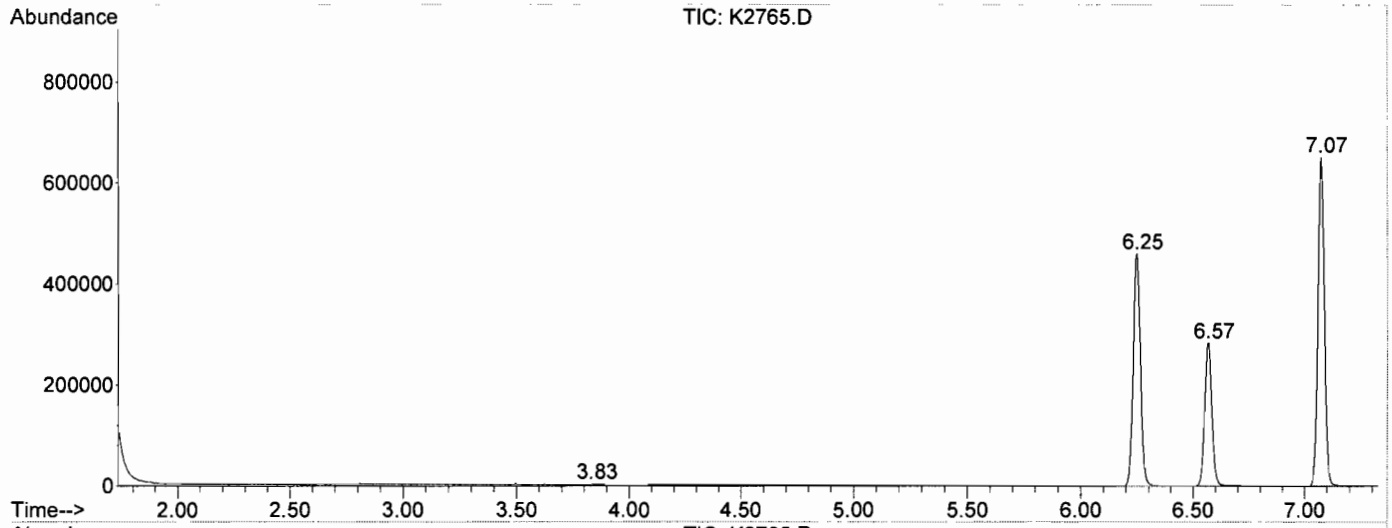
Sum of corrected areas: 7779213

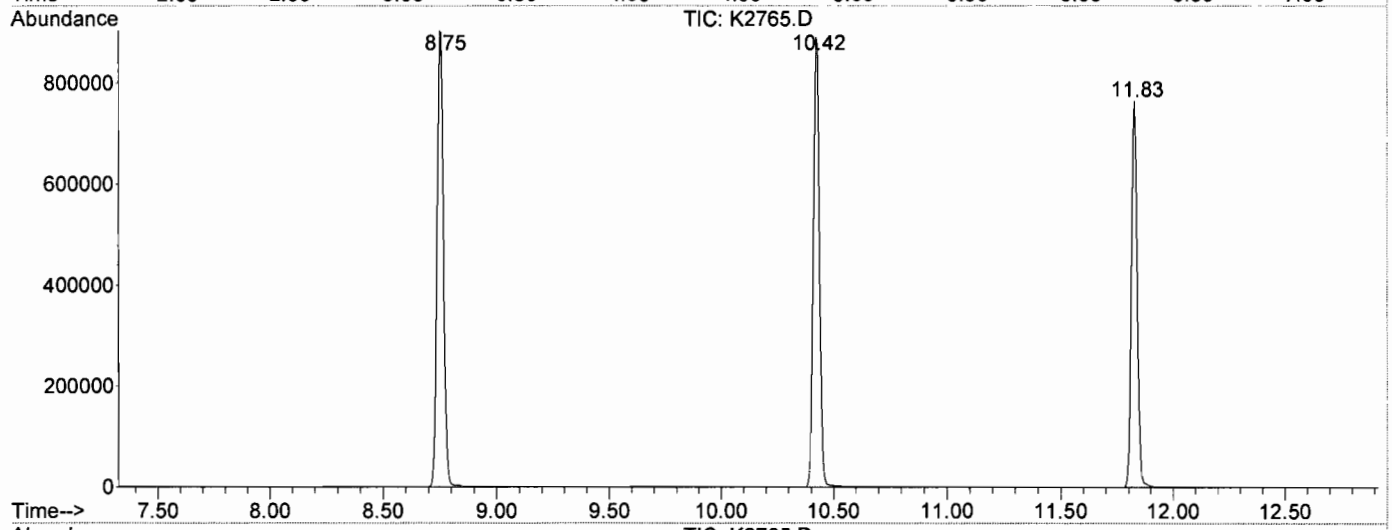
LSC Report - Integrated Chromatogram

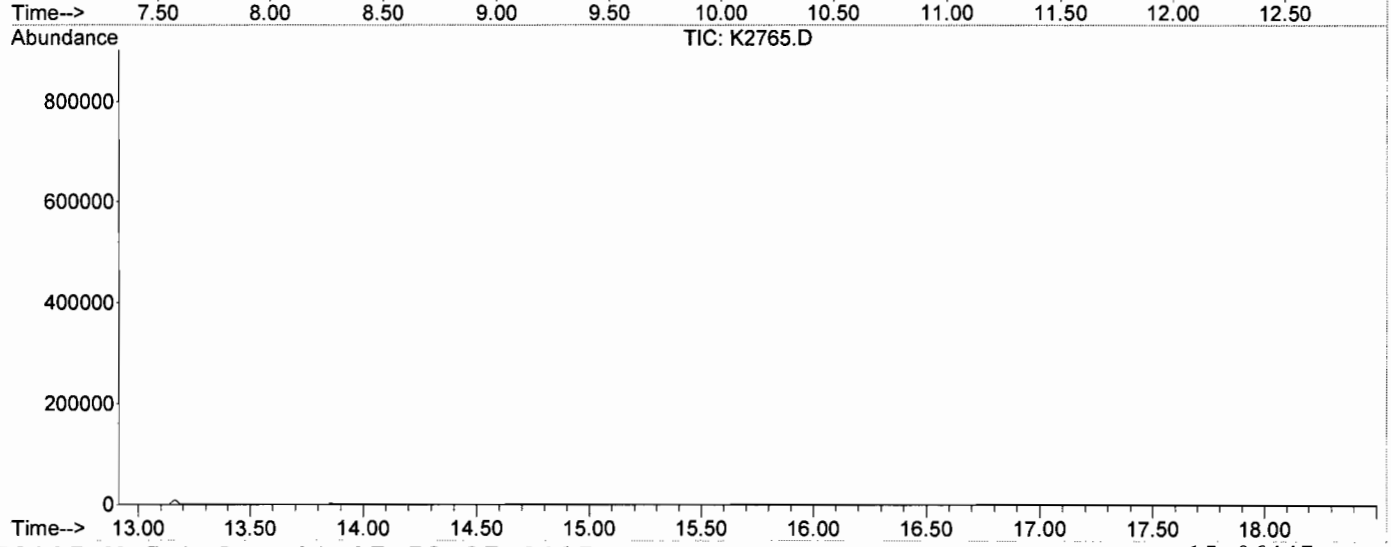
Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2765.D
Acq On : 31 Jul 2015 12:00 am
Operator : BARBARA
Sample : TB,06447-014,A,5mL,100
Misc : JMC/ARSYNCO,07/23/15,07/23/15,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: BLKA150729b
Client ID: BLKA150729b
Date Received: NA
Date Analyzed: 07/30/2015
Data file: K2718.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		2.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: BLKA150729b
Client ID: BLKA150729b
Date Received: NA
Date Analyzed: 07/30/2015
Data file: K2718.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		5.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: BLKA150729b
Client ID: BLKA150729b
Date Received: NA
Date Analyzed: 07/30/2015
Data file: K2718.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2718.D
Acq On : 30 Jul 2015 3:32 am
Operator : BARBARA
Sample : BLKA150729b,BLKA150729b,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Jul 30 10:18:09 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.25	168	475094	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.07	114	733451	50.00	UG	0.00
50) Chlorobenzene-d5	10.43	117	669138	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.56	65	301864	43.50	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 87.00%			
41) Toluene-d8	8.76	98	839112	48.07	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.14%			
59) Bromofluorobenzene	11.83	95	352117	48.44	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.88%			

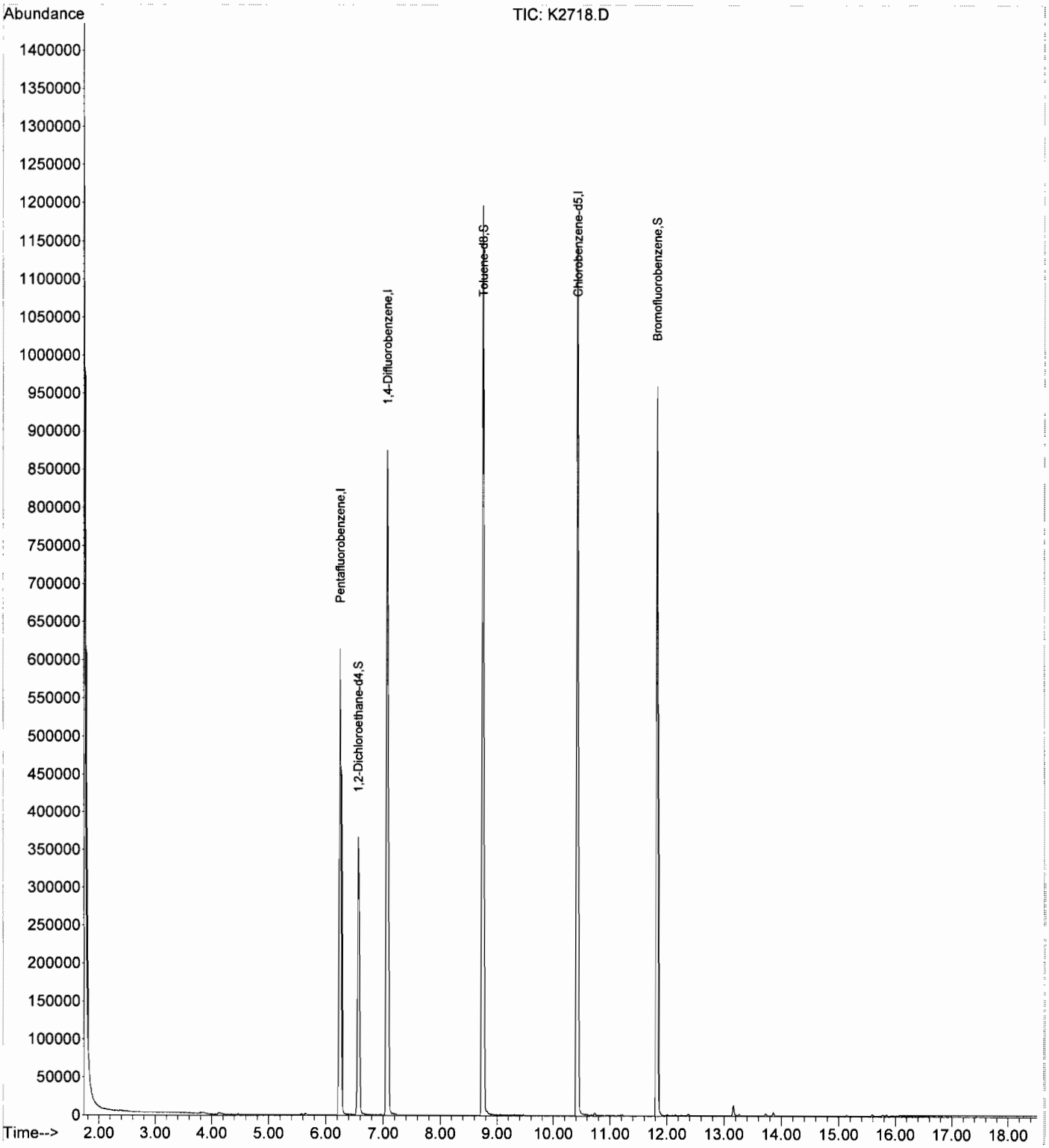
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2718.D
Acq On : 30 Jul 2015 3:32 am
Operator : BARBARA
Sample : BLKA150729b,BLKA150729b,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Jul 30 10:18:09 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2718.D
Acq On : 30 Jul 2015 3:32 am
Operator : BARBARA
Sample : BLKA150729b,BLKA150729b,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 35 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.07 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8072315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.374	112	123	178	rVB10	2754	28391	1.21%	0.277%
2	6.249	850	862	889	rBV	614205	1364715	58.37%	13.320%
3	6.564	911	922	954	rBV	365359	823613	35.23%	8.039%
4	7.072	1008	1019	1062	rBV	874769	1785914	76.38%	17.431%
5	8.755	1327	1340	1367	rBV	1195957	2338074	100.00%	22.820%
6	10.428	1646	1659	1686	rBV	1141166	2150355	91.97%	20.988%
7	11.828	1914	1926	1952	rBV	958401	1726803	73.86%	16.854%
8	13.165	2167	2181	2196	rBV5	13247	27867	1.19%	0.272%

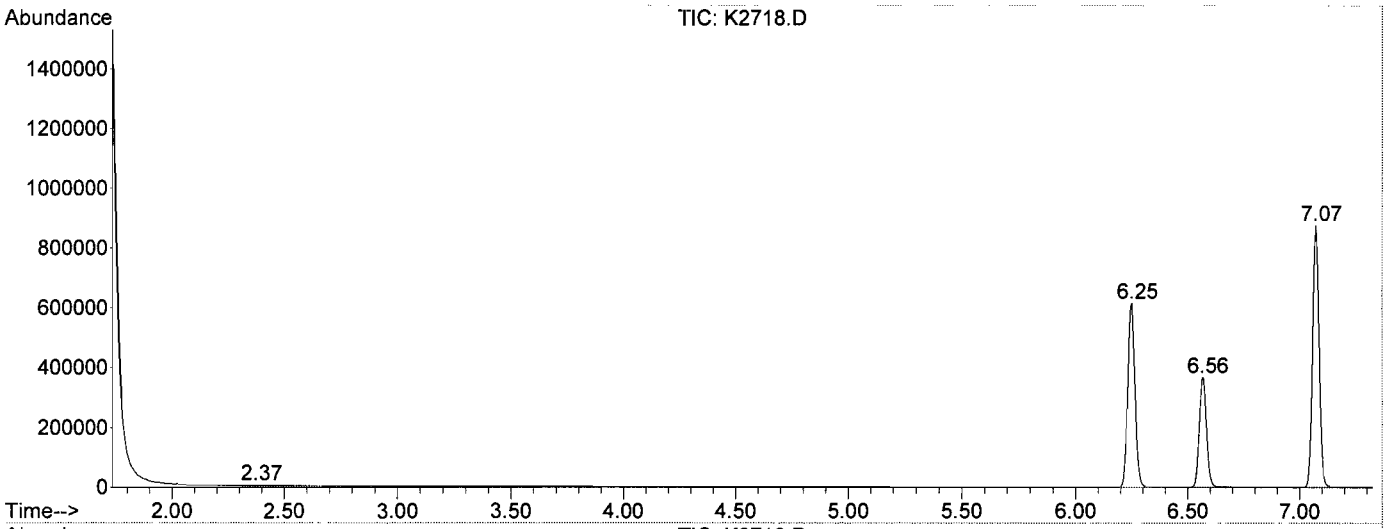
Sum of corrected areas: 10245732

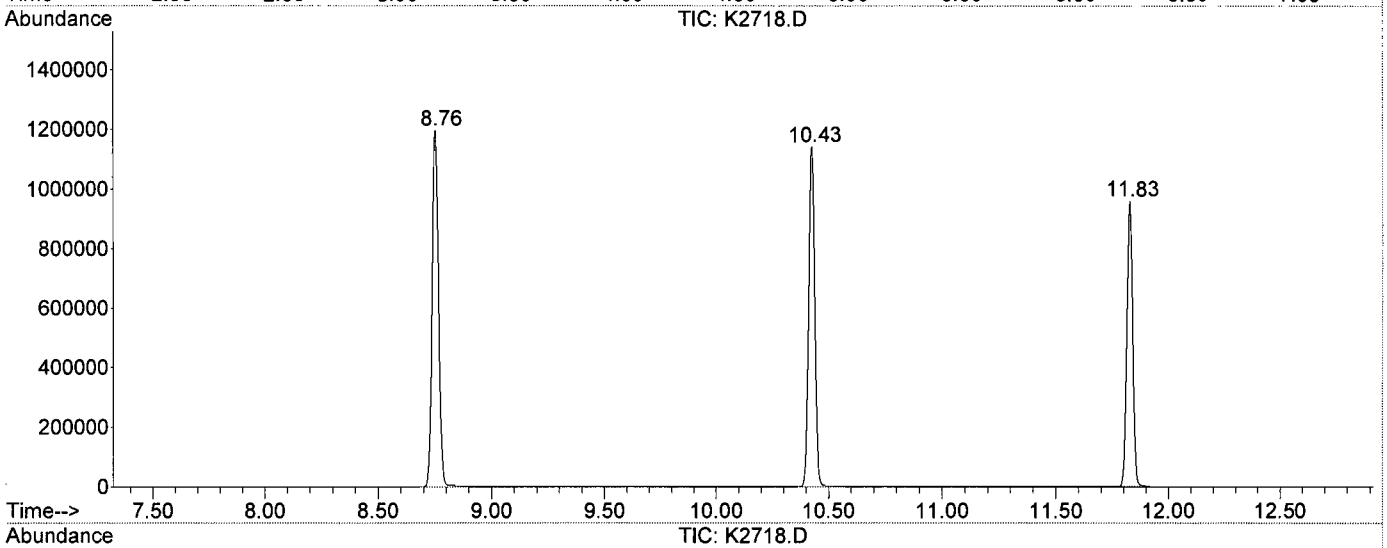
LSC Report - Integrated Chromatogram

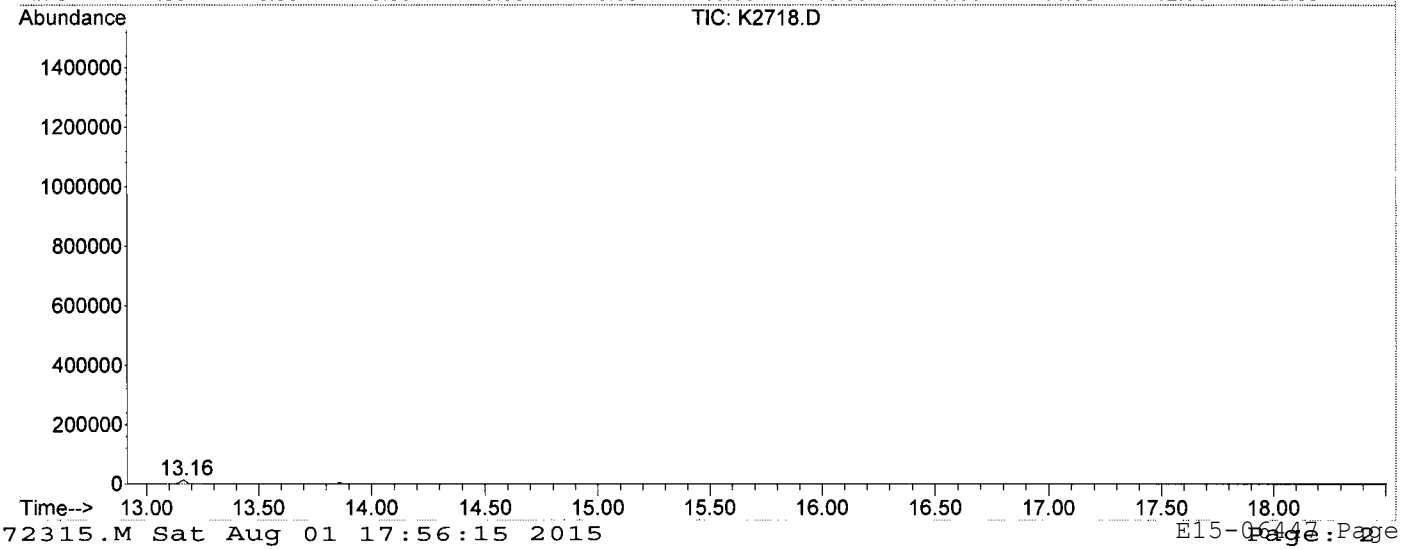
Data Path : C:\MSDChem\1\DATA\07-29-15\
Data File : K2718.D
Acq On : 30 Jul 2015 3:32 am
Operator : BARBARA
Sample : BLKA150729b,BLKA150729b,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 35 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: BLKA150730a
Client ID: BLKA150730a
Date Received: NA
Date Analyzed: 07/30/2015
Data file: K2748.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		2.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: BLKA150730a
Client ID: BLKA150730a
Date Received: NA
Date Analyzed: 07/30/2015
Data file: K2748.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		5.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: BLKA150730a
Client ID: BLKA150730a
Date Received: NA
Date Analyzed: 07/30/2015
Data file: K2748.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2748.D
Acq On : 30 Jul 2015 4:37 pm
Operator : BARBARA
Sample : BLKA150730a,BLKA150730a,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 31 12:51:37 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.25	168	370121	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.07	114	565065	50.00	UG	0.00
50) Chlorobenzene-d5	10.43	117	553252	50.00	UG	0.00

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	6.56	65	249406	46.14	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.28%			
41) Toluene-d8	8.75	98	674690	50.17	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.34%			
59) Bromofluorobenzene	11.83	95	285910	47.57	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.14%			

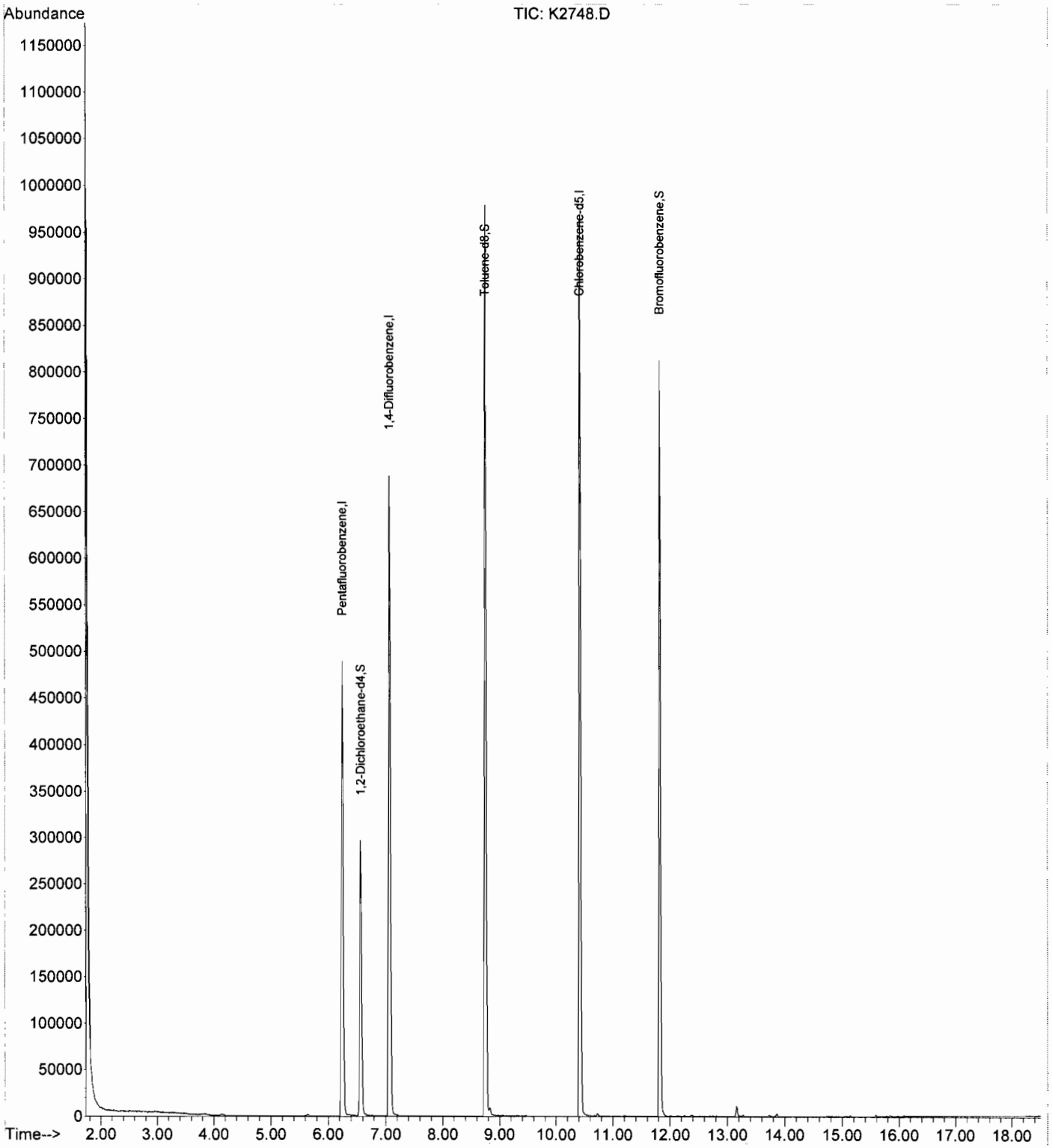
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2748.D
Acq On : 30 Jul 2015 4:37 pm
Operator : BARBARA
Sample : BLKA150730a,BLKA150730a,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 31 12:51:37 2015
Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Jul 28 17:12:19 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2748.D
Acq On : 30 Jul 2015 4:37 pm
Operator : BARBARA
Sample : BLKA150730a,BLKA150730a,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 8 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.07 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 10

Method : C:\MSDCHEM\1\METHODS\K8072315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.227	82	95	146	rVB	2701	24253	1.27%	0.288%
2	2.956	211	234	297	rVB10	2664	34000	1.79%	0.404%
3	6.249	850	862	884	rBV	488718	1087345	57.12%	12.909%
4	6.569	909	923	957	rBV	295813	666246	35.00%	7.910%
5	7.072	1008	1019	1055	rBV	687809	1409127	74.02%	16.729%
6	8.750	1329	1339	1350	rBV	978108	1903620	100.00%	22.600%
7	8.823	1350	1353	1375	rVB3	8741	21118	1.11%	0.251%
8	10.422	1645	1658	1686	rBV	963575	1814084	95.30%	21.537%
9	11.827	1912	1926	1953	rVB	811930	1441947	75.75%	17.119%
10	13.159	2166	2180	2190	rBV5	10833	21485	1.13%	0.255%

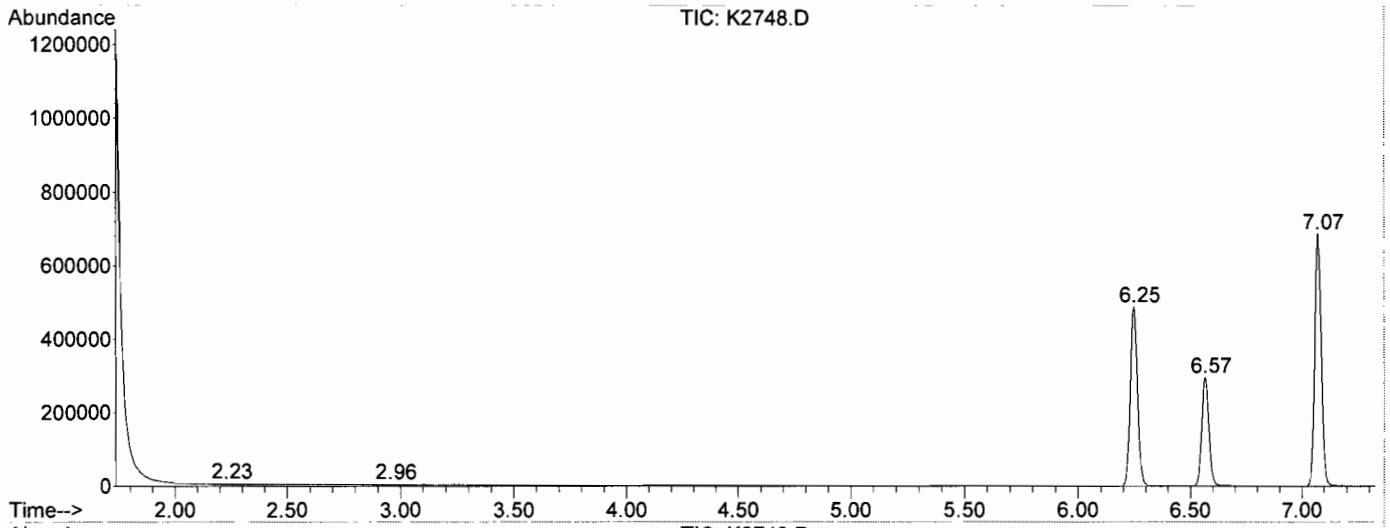
Sum of corrected areas: 8423225

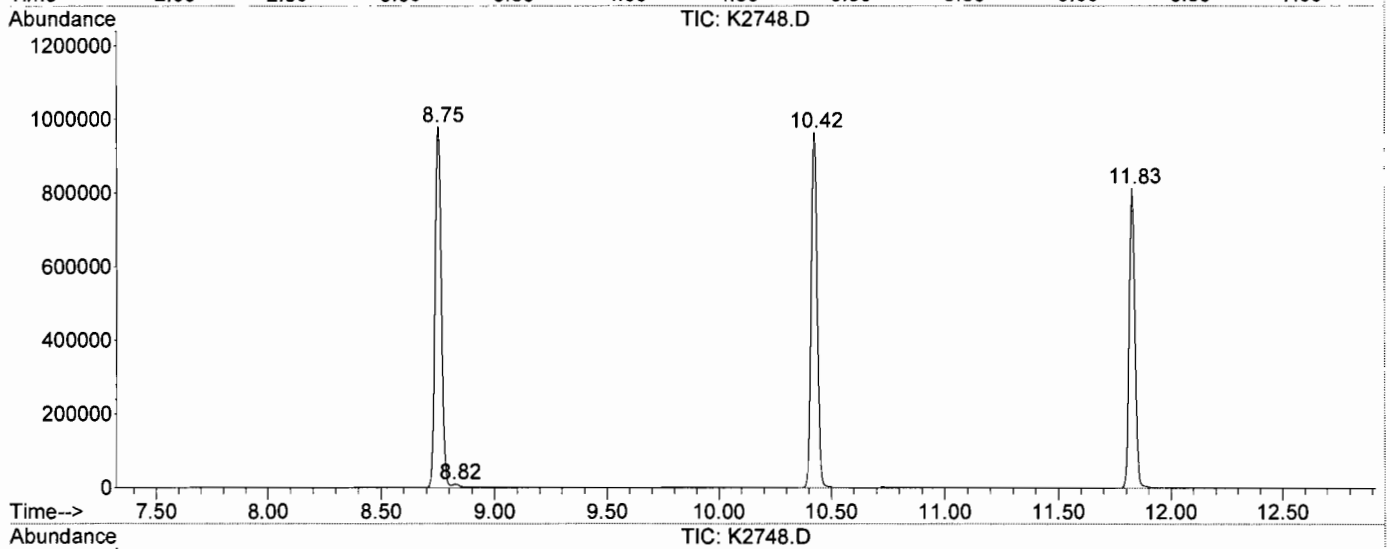
LSC Report - Integrated Chromatogram

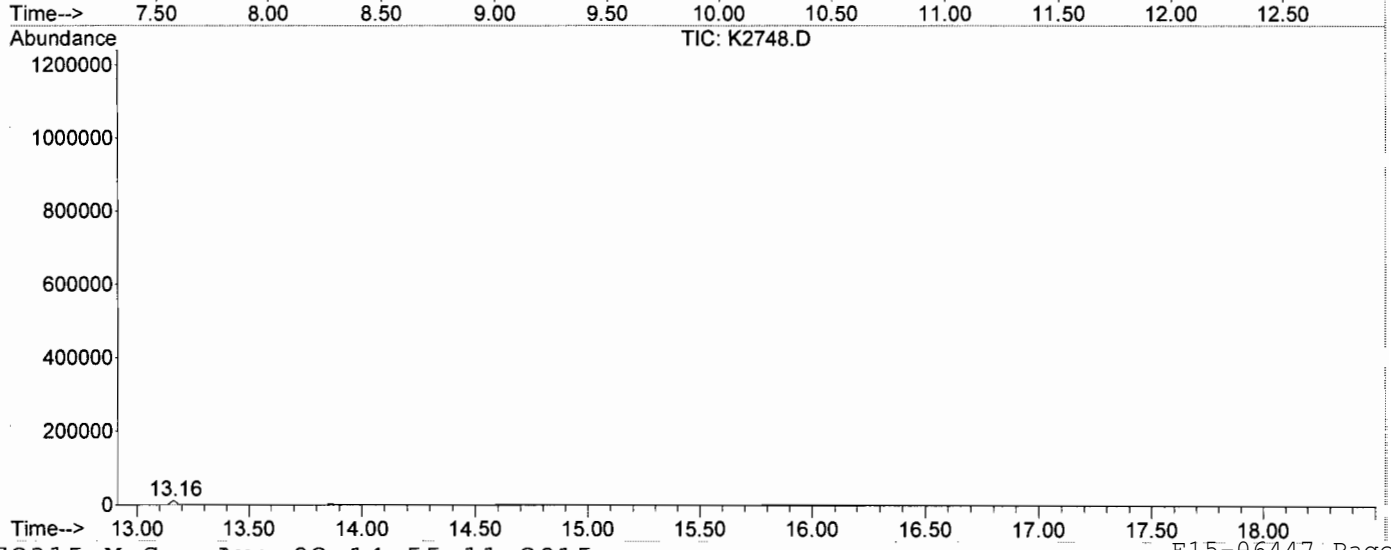
Data Path : C:\MSDChem\1\DATA\07-30-15\
Data File : K2748.D
Acq On : 30 Jul 2015 4:37 pm
Operator : BARBARA
Sample : BLKA150730a,BLKA150730a,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\K8072315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: BLKA150803a
Client ID: BLKA150803a
Date Received: NA
Date Analyzed: 08/03/2015
Data file: G5696.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: BLKA150803a
Client ID: BLKA150803a
Date Received: NA
Date Analyzed: 08/03/2015
Data file: G5696.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: BLKA150803a
Client ID: BLKA150803a
Date Received: NA
Date Analyzed: 08/03/2015
Data file: G5696.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\08-03-15\
Data File : G5696.D
Acq On : 3 Aug 2015 9:59
Operator : Sylvia
Sample : BLKA150803a,BLKA150803a,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 03 14:56:50 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed Jul 29 14:56:12 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.21	168	419587	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.03	114	723750	50.00	UG	0.00
50) Chlorobenzene-d5	10.37	117	702541	50.00	UG	0.00

System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	275294	49.09	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 98.18%			
41) Toluene-d8	8.70	98	876823	48.83	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.66%			
59) Bromofluorobenzene	11.77	95	388342	48.68	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 97.36%			

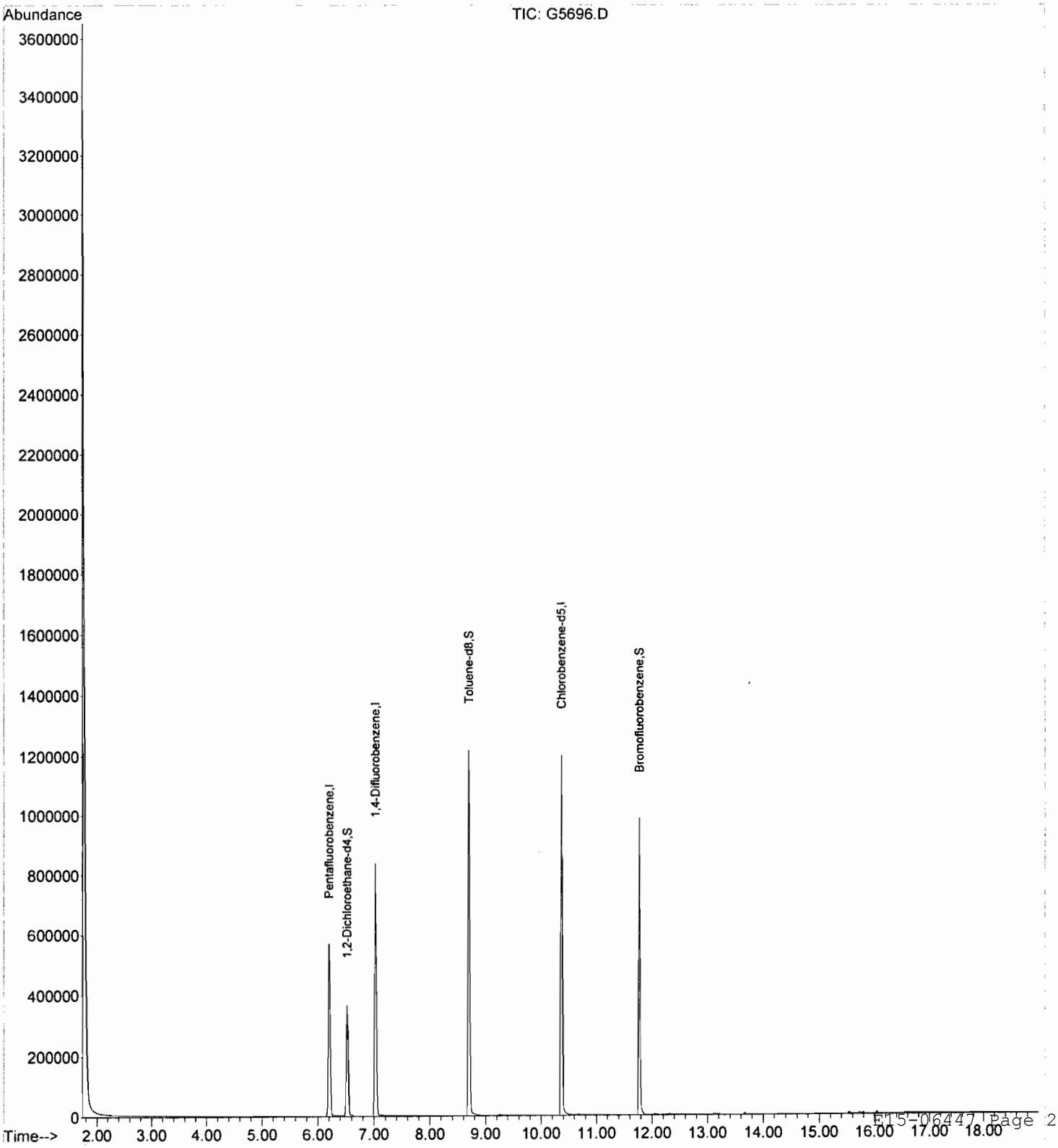
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\08-03-15\
Data File : G5696.D
Acq On : 3 Aug 2015 9:59
Operator : Sylvia
Sample : BLKA150803a,BLKA150803a,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 03 14:56:50 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed Jul 29 14:56:12 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\08-03-15\
Data File : G5696.D
Acq On : 3 Aug 2015 9:59
Operator : Sylvia
Sample : BLKA150803a,BLKA150803a,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8072915.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.202	842	855	878	rBV	567859	1284453	52.97%	12.430%
2	6.521	904	916	944	rBV	365546	808736	33.35%	7.827%
3	7.023	1001	1012	1028	rBV	837291	1742908	71.88%	16.867%
4	8.702	1322	1333	1371	rBV	1216632	2424743	100.00%	23.466%
5	10.370	1639	1652	1681	rBV	1197761	2283046	94.16%	22.094%
6	11.772	1910	1920	1944	rBV	985885	1789268	73.79%	17.316%

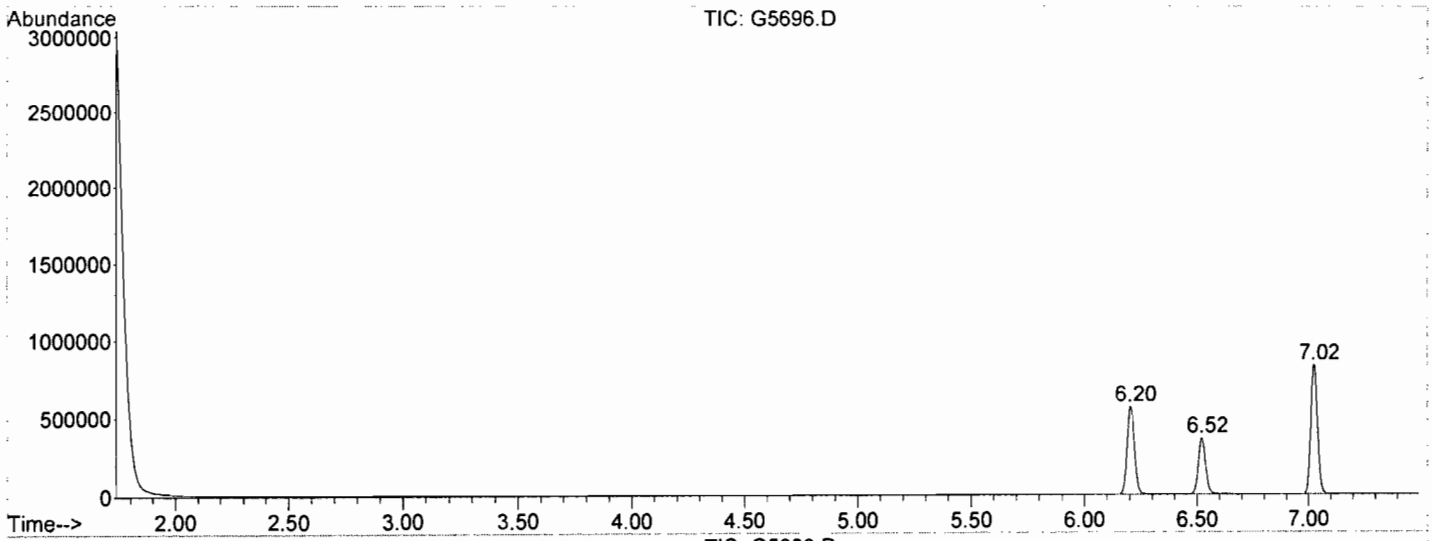
Sum of corrected areas: 10333154

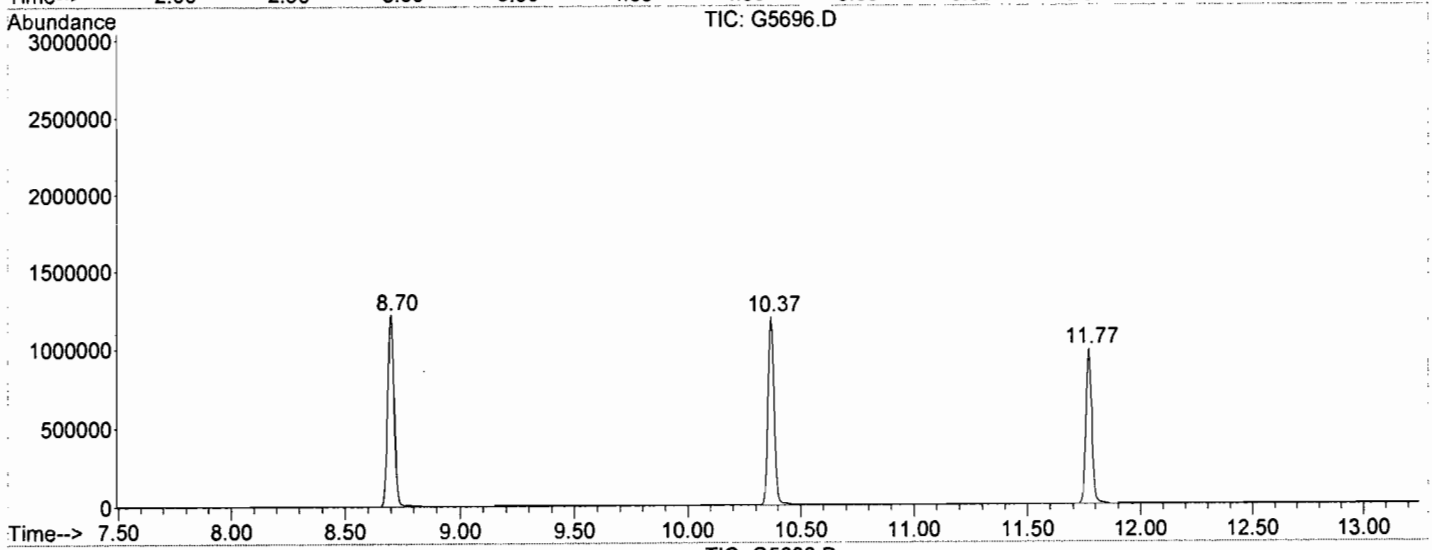
LSC Report - Integrated Chromatogram

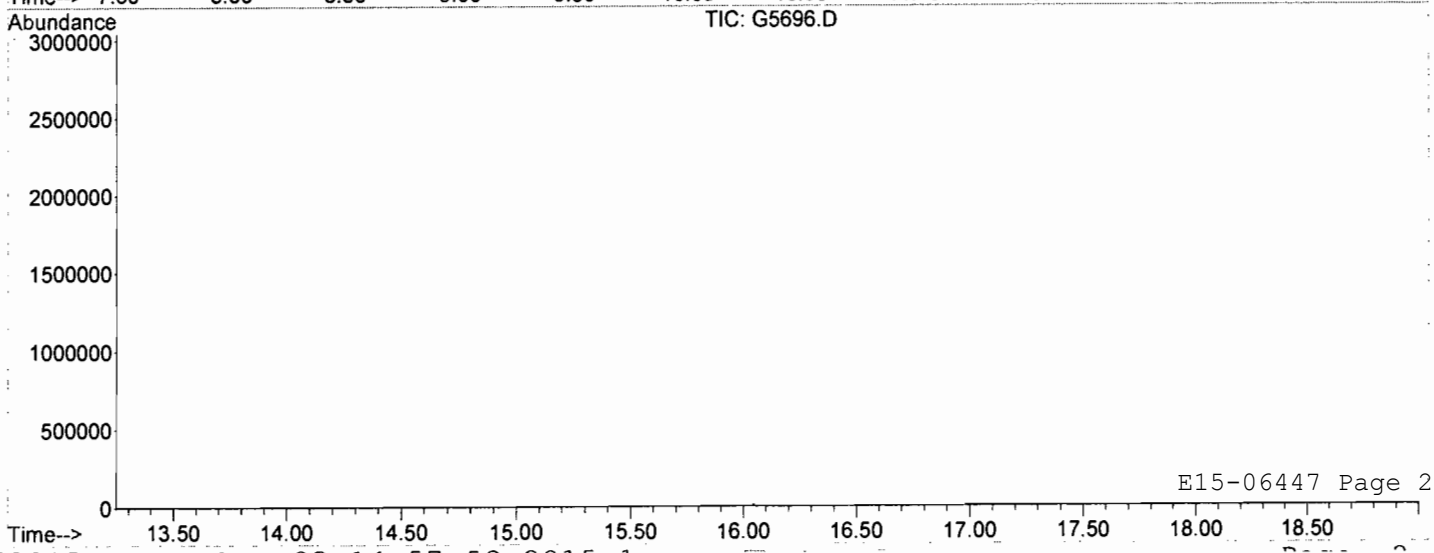
Data Path : C:\MSDChem\1\DATA\08-03-15\
Data File : G5696.D
Acq On : 3 Aug 2015 9:59
Operator : Sylvia
Sample : BLKA150803a,BLKA150803a,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8072915.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







EXTRACTABLE PETROLEUM HYDROCARBON

EXTRACTABLE PETROLEUM HYDROCARBON
QC SUMMARY

NJ-EPH-C40 SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 07/31/2015

Client ID	Lab Sample ID	Matrix	COD % rec	#	OTP % rec	#
NJ-EPH-C	LCSA150728-17	AQUEOUS	60		63	
NJ-EPH-C	LCSDA150728-17	AQUEOUS	59		62	
MW-11D	E15-06443-005	AQUEOUS	72		75	
MW-11SR	E15-06443-006	AQUEOUS	75		80	
MW-11DD	E15-06443-007	AQUEOUS	68		74	
MW-34S	E15-06443-008	AQUEOUS	66		73	
MW-40D	E15-06447-003	AQUEOUS	66		70	
MW-36D	E15-06447-004	AQUEOUS	64		69	
MW-13SR	E15-06447-005	AQUEOUS	68		70	
MW-33S	E15-06447-006	AQUEOUS	74		104	
MW-29S	E15-06447-007	AQUEOUS	72		77	
MW-24S	E15-06447-010	AQUEOUS	64		72	
MW-38D	E15-06447-011	AQUEOUS	76		64	
MW-38DD	E15-06447-012	AQUEOUS	70		75	
FB-2	E15-06447-013	AQUEOUS	59		63	
NJ-EPH-C	BLKA150728-17	AQUEOUS	53		59	
FB-1	E15-6443-009	AQUEOUS	76		82	

Surrogate QC Limits	Soil	Aqueous/Leachate
COD = 1-Chlorooctadecane	40-140	40-140
OTP = o-Terphenyl	40-140	40-140

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
D Surrogate diluted out
M Matrix interference

INTEGRATED ANALYTICAL LABORATORIES

NJ-EPH ALIPHATIC LCS/LCSD ACCURACY REPORT

Lab ID: LCSDA150728-17
Date Received: NA
Date Extracted: 07/28/2015
Date Analyzed: 07/31/2015
LCS Data file: I0923.D
LCSD Data file: I0924.D

GC Column: RTX-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-mg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. LCS	%Rec. LCS	#	Conc. LCSD	%Rec. LCSD	#	%RPD	#
n-Nonane (C9)	100	0.0	56.9	57		56.2	56		1	
n-Decane (C10)	100	0.0	55.9	56		55.1	55		1	
n-Dodecane (C12)	100	0.0	58.0	58		57.0	57		2	
n-Tetradecane (C14)	100	0.0	58.2	58		57.3	57		2	
n-Hexadecane (C16)	100	0.0	59.2	59		58.3	58		2	
n-Octadecane (C18)	100	0.0	62.5	63		62.1	62		1	
n-Eicosane (C20)	100	0.0	59.2	59		58.4	58		1	
n-Heneicosane (C21)	200	0.0	137.1	69		135.6	68		1	
n-Docosane (C22)	100	0.0	58.3	58		57.7	58		1	
n-Tetracosane (C24)	100	0.0	60.1	60		59.5	60		1	
n-Hexacosane (C26)	100	0.0	60.3	60		59.9	60		1	
n-Octacosane (C28)	300	0.0	197.9	66		195.1	65		1	
n-Triacontane (C30)	100	0.0	59.6	60		59.1	59		1	
n-Dotriacontane (C32)	100	0.0	60.3	60		59.4	59		2	
n-Tetratriacontane (C34)	100	0.0	59.6	60		58.4	58		2	
n-Hexatriacontane (C36)	100	0.0	61.4	61		60.0	60		2	
n-Octatriacontane (C38)	100	0.0	62.9	63		61.0	61		3	
n-Tetracontane (C40)	100	0.0	63.8	64		62.2	62		3	
C9-C40	3600	0.0	2472.3	69		2393.4	66		3	

	Aqueous	Soil/Sediment
n-Nonane (C9) ACCURACY (%REC)	25-140	25-140
LCS/LCSSD ACCURACY (%REC)	40-140	40-140
LCS/LCSD PRECISION (RPD)	25	25

C9-C40 includes Aliphatic and Aromatic compounds

Column used to flag recovery and RPD values that did not meet criteria

* Values outside of QC limits

INTEGRATED ANALYTICAL LABORATORIES

NJ-EPH MS ACCURACY REPORT

Lab ID: E15-06421-001MS
Client ID: NJ-EPH-C
Date Received: NA
Date Extracted: 07/23/2015
Date Analyzed: 07/27/2015
MS Data file: T7067.D

GC Column: RTX-5
Sample wt/vol: 200ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Sample	MS Conc.	%Rec.	#
n-Nonane (C9)	100	0	40	40	
n-Decane (C10)	100	0	48	48	
n-Dodecane (C12)	100	0	57	57	
n-Tetradecane (C14)	100	0	61	61	
n-Hexadecane (C16)	100	0	62	62	
n-Octadecane (C18)	100	0	61	61	
n-Eicosane (C20)	100	0	63	63	
n-Heneicosane (C21)	200	0	134	67	
n-Docosane (C22)	100	0	62	62	
n-Tetracosane (C24)	100	0	62	62	
n-Hexacosane (C26)	100	0	63	63	
n-Octacosane (C28)	300	0	198	66	
n-Triacontane (C30)	100	0	64	64	
n-Dotriacontane (C32)	100	0	66	66	
n-Tetratriacontane (C34)	100	0	68	68	
n-Hexatriacontane (C36)	100	0	72	72	
n-Octatriacontane (C38)	100	0	72	72	
n-Tetracontane (C40)	100	0	71	71	
C9-C40	3600	0	2506	70	

	Aqueous	Soil/Sediment
n-Nonane (C9) Recovery Limits	25-140	25-140
MS Recovery Limits	40-140	40-140

C9-C40 includes Aliphatic and Aromatic compounds

Column used to flag recovery values that did not meet criteria

* Values outside of QC limits

NC Not calculable

INTEGRATED ANALYTICAL LABORATORIES

NJ-EPH DUPLICATE SAMPLE RESULTS SUMMARY

Client ID: K01
Date Received: 07/23/2015
Date Extracted: 07/23/2015
Lab ID: E15-06421-001
Sample wt/vol: 1000ml
Date Analyzed: 07/27/2015
Aliphatics Sample Data file: T7064.D
Dilution Factor: 1

GC Column: RTX-5
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Lab ID: E15-06421-001DUP
Sample wt/vol: 400ml
Date Analyzed: 07/27/2015
Aliphatics Sample Dup Data file: T7066.D
Dilution Factor: 1

Compound	Sample Conc.	Sample Dup Conc.	% RPD	#
C9-C40	ND	ND	NC	

	Aqueous	Soil/Sediment
Sample/Sample Dup PRECISION (% RPD)	50	50

NC Not calculable

NJ-EPH-C40 METHOD BLANK SUMMARY

Lab File ID:	T7061.D	Instrument ID:	GC-T
Date Extracted:	07/23/2015	Matrix:	AQUEOUS
Date Analyzed:	07/27/2015	Time Analyzed:	13:59

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS or LCSD, MS or MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
NJ-EPH-C	LCSA150723-22	07/27/2015	14:21
NJ-EPH-C	LCSDA150723-22	07/27/2015	14:43
K01	E15-06421-001	07/27/2015	15:06
K02	E15-06421-002	07/27/2015	15:28
K01	E15-06421-001DUP	07/27/2015	15:50
NJ-EPH-C	E15-06421-001MS	07/27/2015	16:12

NJ-EPH-C40 METHOD BLANK SUMMARY

Lab File ID:	I0945.D	Instrument ID:	GC-I
Date Extracted:	07/28/2015	Matrix:	AQUEOUS
Date Analyzed:	08/03/2015	Time Analyzed:	13:15

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS or LCSD, MS or MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
NJ-EPH-C	LCSA150728-17	07/31/2015	19:31
NJ-EPH-C	LCSDA150728-17	07/31/2015	19:54
MW-11D	E15-06443-005	07/31/2015	20:16
MW-11SR	E15-06443-006	07/31/2015	20:39
MW-11DD	E15-06443-007	07/31/2015	21:01
MW-34S	E15-06443-008	07/31/2015	21:24
MW-40D	E15-06447-003	07/31/2015	22:08
MW-36D	E15-06447-004	07/31/2015	22:31
MW-13SR	E15-06447-005	07/31/2015	22:53
MW-33S	E15-06447-006	07/31/2015	23:16
MW-29S	E15-06447-007	07/31/2015	23:38
MW-24S	E15-06447-010	08/01/2015	00:01
MW-38D	E15-06447-011	08/01/2015	00:23
MW-38DD	E15-06447-012	08/01/2015	00:46
FB-2	E15-06447-013	08/01/2015	01:08
FB-1	E15-6443-009	08/03/2015	14:45

NJ-EPH-C40 RETENTION TIME SHIFT SUMMARY

Instrument ID: GC-I **Column:** RTX-5

Surrogate RT from initial calibration :

COD **8.35** **OTP** **6.69**

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed	COD RT	#	OTP RT	#
NJ-EPH-C	LCSA150728-17	07/31/2015	19:31	8.35		6.69	
NJ-EPH-C	LCSDA150728-17	07/31/2015	19:54	8.35		6.69	
MW-11D	E15-06443-005	07/31/2015	20:16	8.35		6.70	
MW-11SR	E15-06443-006	07/31/2015	20:39	8.35		6.69	
MW-11DD	E15-06443-007	07/31/2015	21:01	8.35		6.69	
MW-34S	E15-06443-008	07/31/2015	21:24	8.36		6.70	
MW-40D	E15-06447-003	07/31/2015	22:08	8.35		6.69	
MW-36D	E15-06447-004	07/31/2015	22:31	8.35		6.69	
MW-13SR	E15-06447-005	07/31/2015	22:53	8.35		6.69	
MW-33S	E15-06447-006	07/31/2015	23:16	8.34		6.68	
MW-29S	E15-06447-007	07/31/2015	23:38	8.35		6.69	
MW-24S	E15-06447-010	08/01/2015	00:01	8.34		6.69	
MW-38D	E15-06447-011	08/01/2015	00:23	8.35		6.71	
MW-38DD	E15-06447-012	08/01/2015	00:46	8.35		6.69	
FB-2	E15-06447-013	08/01/2015	01:08	8.35		6.69	
NJ-EPH-C	BLKA150728-17	08/03/2015	13:15	8.35		6.69	
FB-1	E15-6443-009	08/03/2015	14:45	8.35		6.69	

Surrogate QC Limits

COD = 1-Chlorooctadecane (± 0.10 Minutes)

OTP = o-Terphenyl (± 0.10 Minutes)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out
M Matrix interference

EXTRACTABLE PETROLEUM HYDROCARBON SAMPLE DATA

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-31-15\
Data File : I0930.D
Signal(s) : FID1A.CH
Acq On : 31 Jul 2015 22:08
Operator : JOLANTA
Sample : MW-40D,E15-06447-003,A,1000ml,100,1
Misc : 150728-17,07/28/15,07/23/15,1
ALS Vial : 19 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 11:21:28 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
1) S 1-Chlorooctadecane	8.35	23389381	65.508	ng	m
Spiked Amount 100.000		Recovery =	65.51%		
23) S o-Terphenyl	6.69	31132160	69.890	ng	m
Spiked Amount 100.000		Recovery =	69.89%		
Target Compounds					
22) H C9-C40	7.00	122100492	266.493	ng	

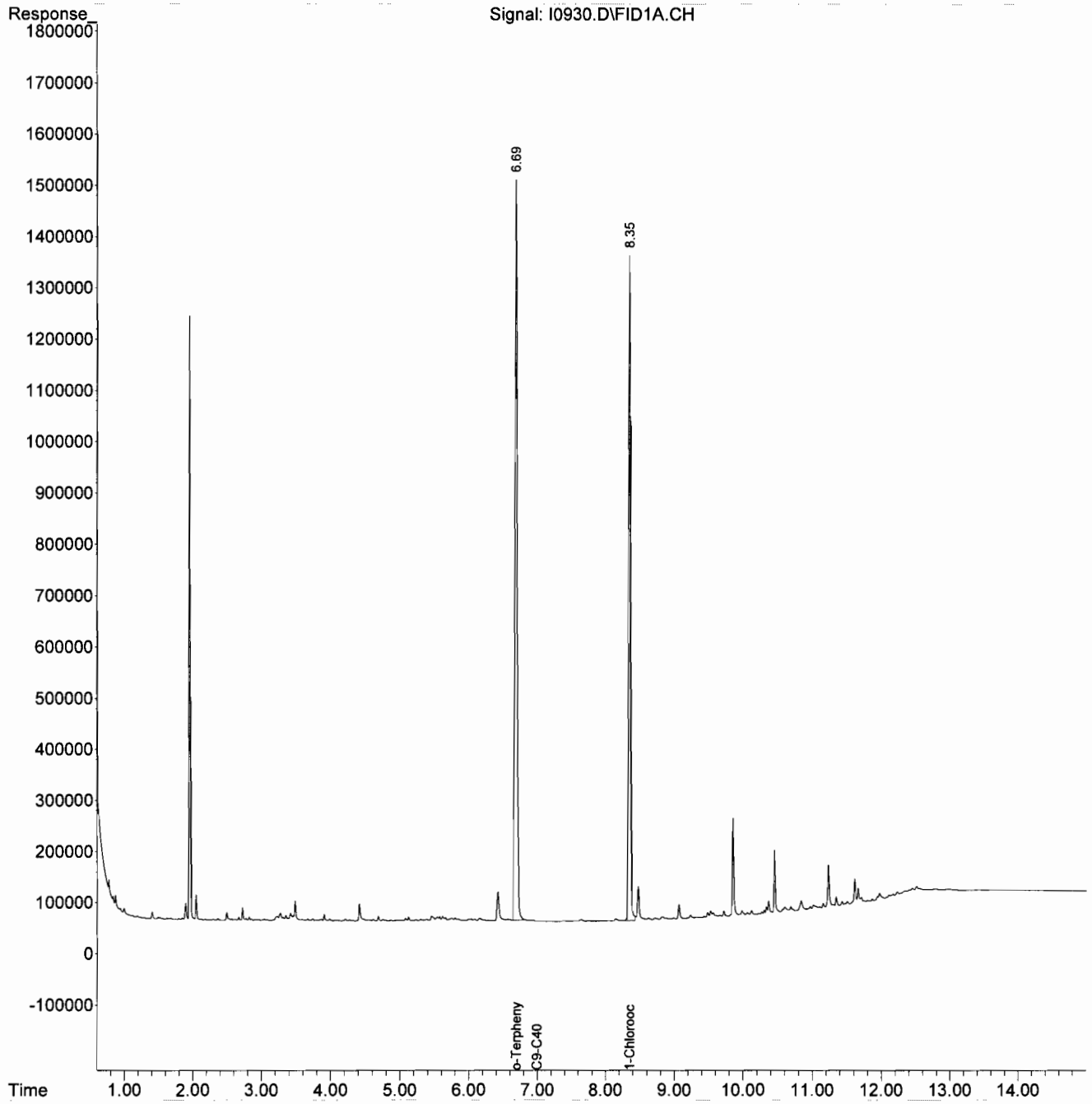
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-31-15\
Data File : I0930.D
Signal(s) : FID1A.CH
Acq On : 31 Jul 2015 22:08
Operator : JOLANTA
Sample : MW-40D,E15-06447-003,A,1000ml,100,1
Misc : 150728-17,07/28/15,07/23/15,1
ALS Vial : 19 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 11:21:28 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-31-15\
Data File : I0931.D
Signal(s) : FID1A.CH
Acq On : 31 Jul 2015 22:31
Operator : JOLANTA
Sample : MW-36D,E15-06447-004,A,1000ml,100,1
Misc : 150728-17,07/28/15,07/23/15,1
ALS Vial : 20 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 11:21:56 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
1) S 1-Chlorooctadecane	8.35	23008789	64.442	ng	m
Spiked Amount 100.000		Recovery =	64.44%		
23) S o-Terphenyl	6.69	30688878	68.895	ng	m
Spiked Amount 100.000		Recovery =	68.89%		
Target Compounds					
22) H C9-C40	7.00	137789345	300.735	ng	

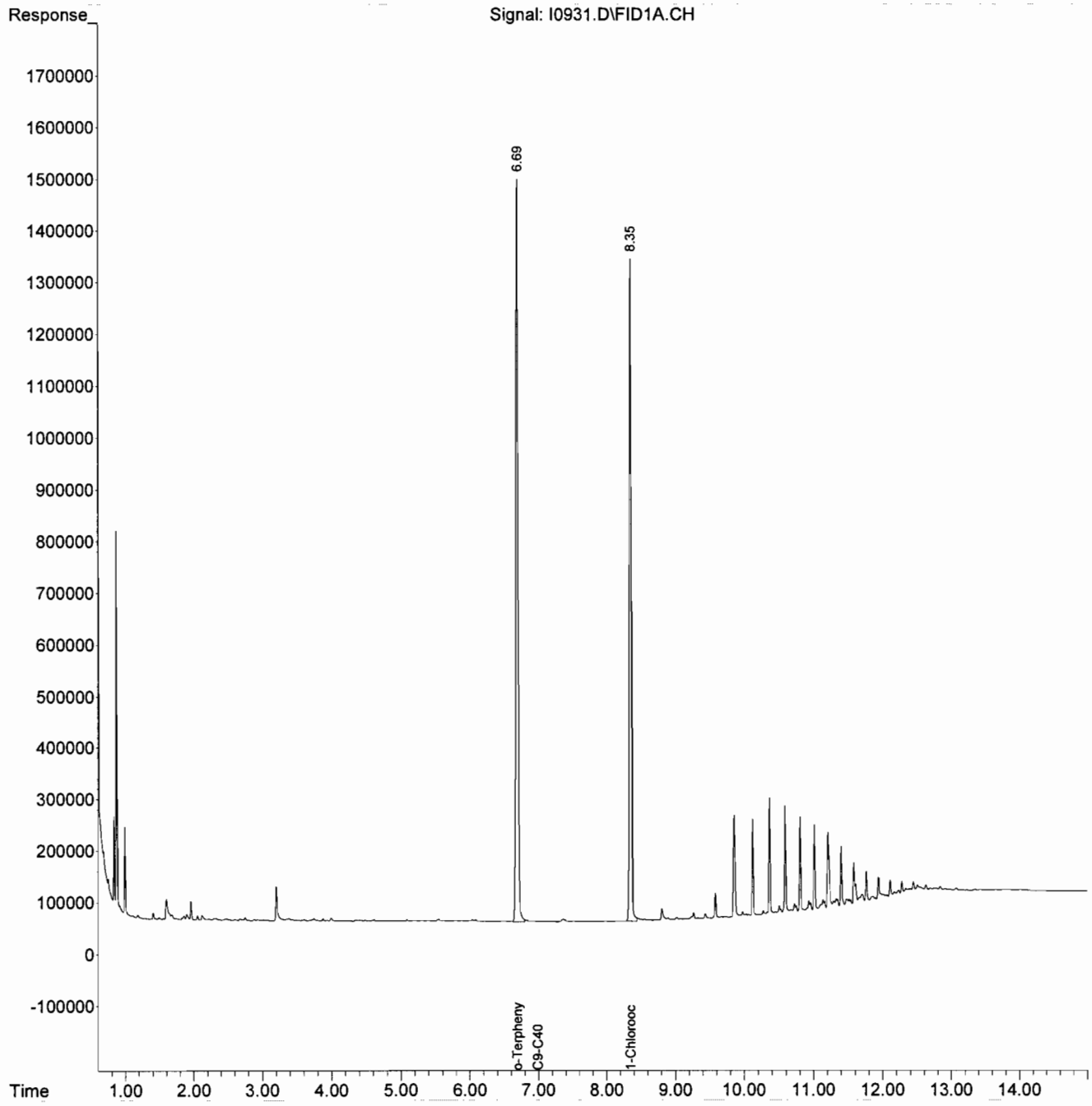
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-31-15\
Data File : I0931.D
Signal(s) : FID1A.CH
Acq On : 31 Jul 2015 22:31
Operator : JOLANTA
Sample : MW-36D,E15-06447-004,A,1000ml,100,1
Misc : 150728-17,07/28/15,07/23/15,1
ALS Vial : 20 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 11:21:56 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-31-15\
Data File : I0932.D
Signal(s) : FID1A.CH
Acq On : 31 Jul 2015 22:53
Operator : JOLANTA
Sample : MW-13SR,E15-06447-005,A,1000ml,100,1
Misc : 150728-17,07/28/15,07/23/15,1
ALS Vial : 21 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 11:22:30 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
1) S 1-Chlorooctadecane	8.35	24204312	67.791	ng	m
Spiked Amount 100.000		Recovery =	67.79%		
23) S o-Terphenyl	6.69	31216190	70.079	ng	m
Spiked Amount 100.000		Recovery =	70.08%		
Target Compounds					
22) H C9-C40	7.00	1391934815	3038.000	ng	

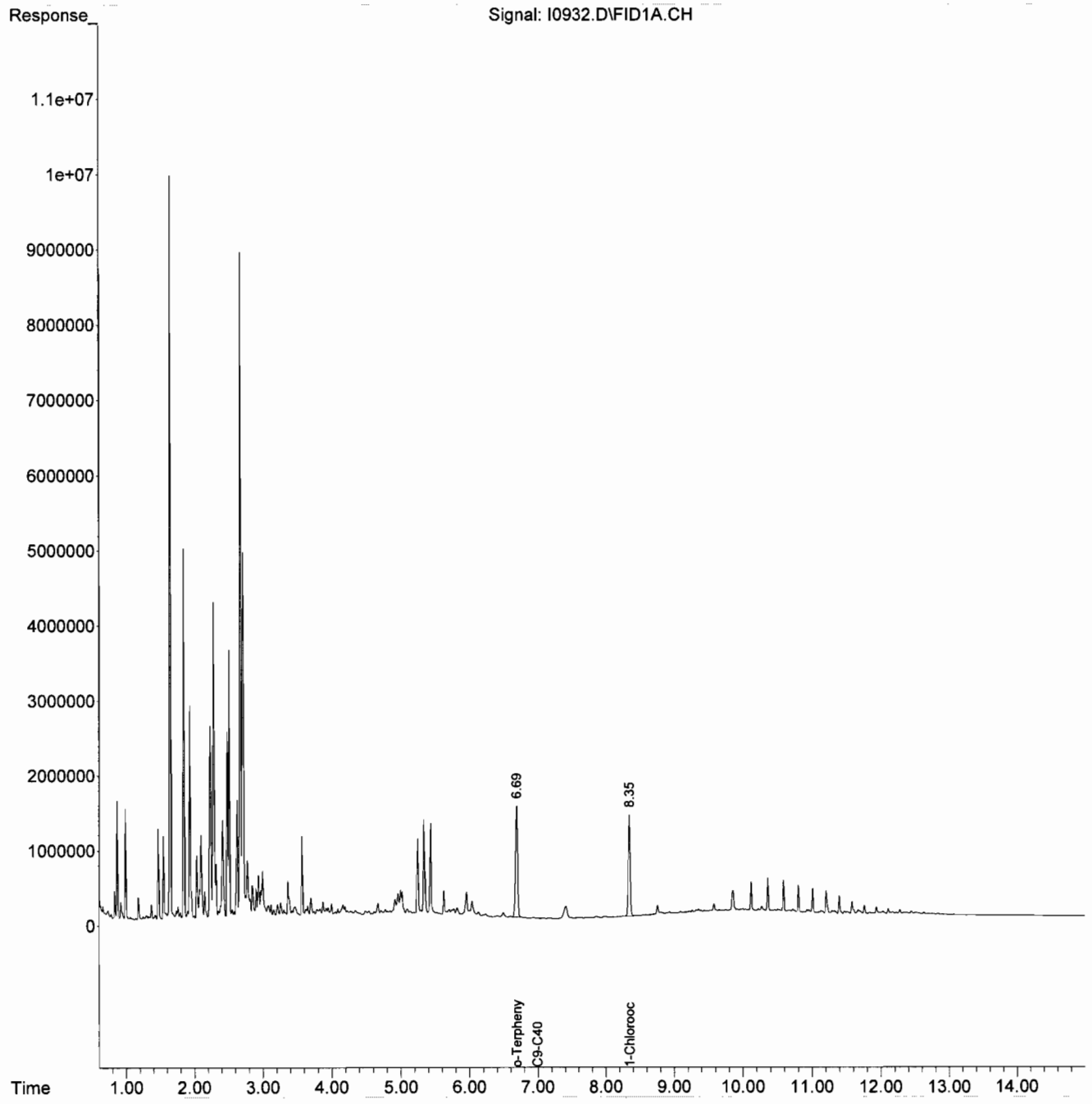
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-31-15\
Data File : I0932.D
Signal(s) : FID1A.CH
Acq On : 31 Jul 2015 22:53
Operator : JOLANTA
Sample : MW-13SR,E15-06447-005,A,1000ml,100,1
Misc : 150728-17,07/28/15,07/23/15,1
ALS Vial : 21 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 11:22:30 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-31-15\
Data File : I0933.D
Signal(s) : FID1A.CH
Acq On : 31 Jul 2015 23:16
Operator : JOLANTA
Sample : MW-33S,E15-06447-006,A,1000ml,100,1
Misc : 150728-17,07/28/15,07/23/15,5
ALS Vial : 22 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 11:23:10 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
1) S 1-Chlorooctadecane	8.34	5290878	14.819	ng	m
Spiked Amount 100.000		Recovery = 14.82%			
23) S o-Terphenyl	6.68	9238188	20.739	ng	m
Spiked Amount 100.000		Recovery = 20.74%			
Target Compounds					
22) H C9-C40	7.00	1227065267	2678.160	ng	

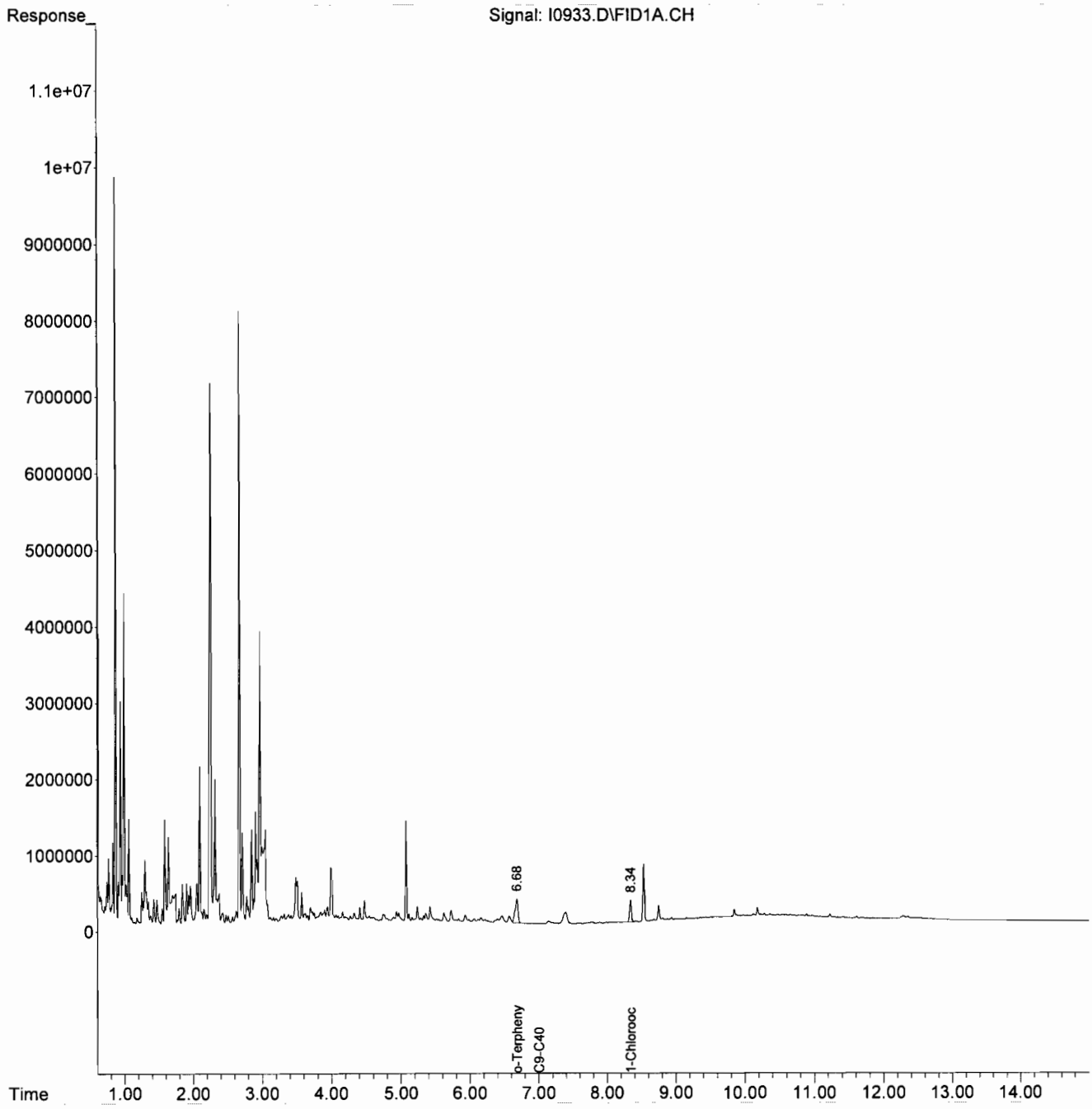
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-31-15\
Data File : I0933.D
Signal(s) : FID1A.CH
Acq On : 31 Jul 2015 23:16
Operator : JOLANTA
Sample : MW-33S,E15-06447-006,A,1000ml,100,1
Misc : 150728-17,07/28/15,07/23/15,5
ALS Vial : 22 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 11:23:10 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-31-15\
Data File : I0934.D
Signal(s) : FID1A.CH
Acq On : 31 Jul 2015 23:38
Operator : JOLANTA
Sample : MW-29S,E15-06447-007,A,1000ml,100,1
Misc : 150728-17,07/28/15,07/23/15,2
ALS Vial : 23 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 11:23:38 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
1) S 1-Chlorooctadecane	8.35	12942783	36.250	ng	m
Spiked Amount 100.000		Recovery =	36.25%		
23) S o-Terphenyl	6.69	17056102	38.290	ng	m
Spiked Amount 100.000		Recovery =	38.29%		
Target Compounds					
22) H C9-C40	7.00	608853498	1328.868	ng	

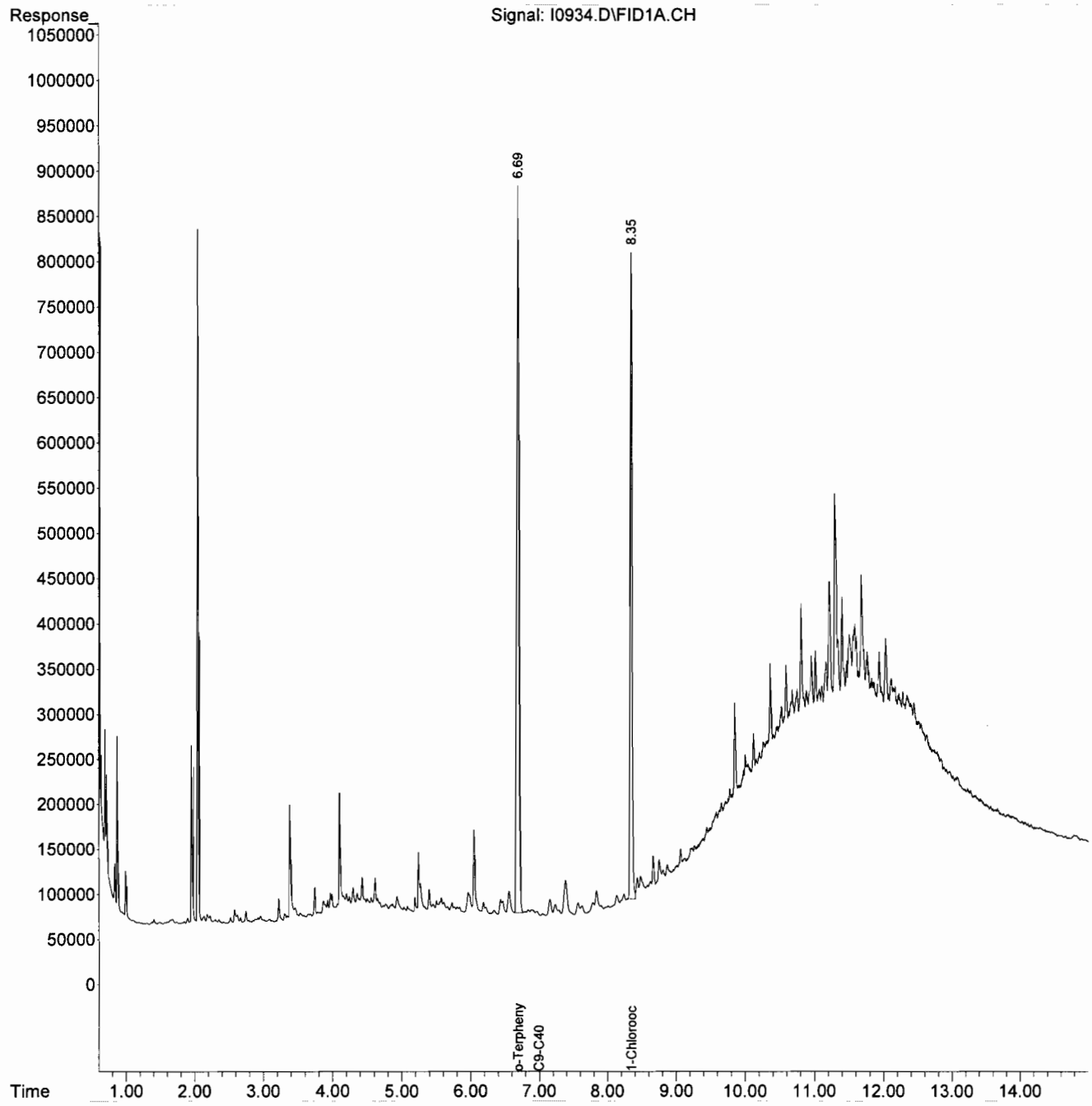
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-31-15\
Data File : I0934.D
Signal(s) : FID1A.CH
Acq On : 31 Jul 2015 23:38
Operator : JOLANTA
Sample : MW-29S,E15-06447-007,A,1000ml,100,1
Misc : 150728-17,07/28/15,07/23/15,2
ALS Vial : 23 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 11:23:38 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\I_Jul-15\07-31-15\
Data File : I0935.D
Signal(s) : FID1A.CH
Acq On : 01 Aug 2015 00:01
Operator : JOLANTA
Sample : MW-24S,E15-06447-010,A,1000ml,100,1
Misc : 150728-17,07/28/15,07/23/15,10
ALS Vial : 24 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 07 10:40:42 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
1) S 1-Chlorooctadecane	8.34	2293418	6.423	ng	m
Spiked Amount 100.000		Recovery =	6.42%		
23) S o-Terphenyl	6.69	3191579	7.165	ng	m
Spiked Amount 100.000		Recovery =	7.17%		
Target Compounds					
22) H C9-C40	7.00	1889851563	4124.740	ng	

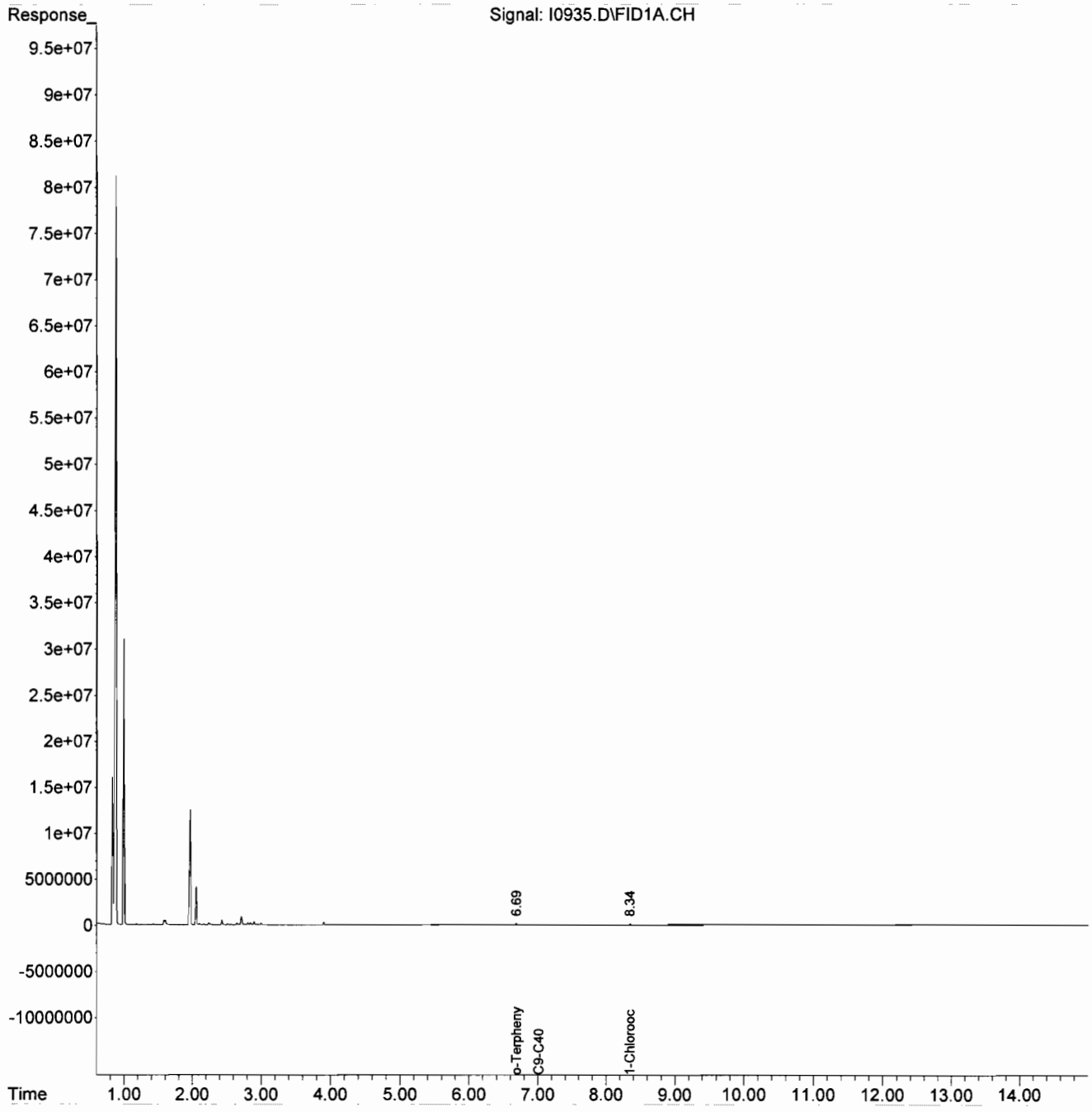
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\I_Jul-15\07-31-15\
Data File : I0935.D
Signal(s) : FID1A.CH
Acq On : 01 Aug 2015 00:01
Operator : JOLANTA
Sample : MW-24S,E15-06447-010,A,1000ml,100,1
Misc : 150728-17,07/28/15,07/23/15,10
ALS Vial : 24 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 07 10:40:42 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-31-15\
Data File : I0936.D
Signal(s) : FID1A.CH
Acq On : 01 Aug 2015 00:23
Operator : JOLANTA
Sample : MW-38D,E15-06447-011,A,1000ml,100,1
Misc : 150728-17,07/28/15,07/23/15,1
ALS Vial : 25 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 11:25:35 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 1-Chlorooctadecane	8.35	27279958	76.405 ng m
Spiked Amount 100.000		Recovery =	76.41%
23) S o-Terphenyl	6.71	28586928	64.176 ng
Spiked Amount 100.000		Recovery =	64.18%
Target Compounds			
22) H C9-C40	7.00	4665532204	10182.867 ng

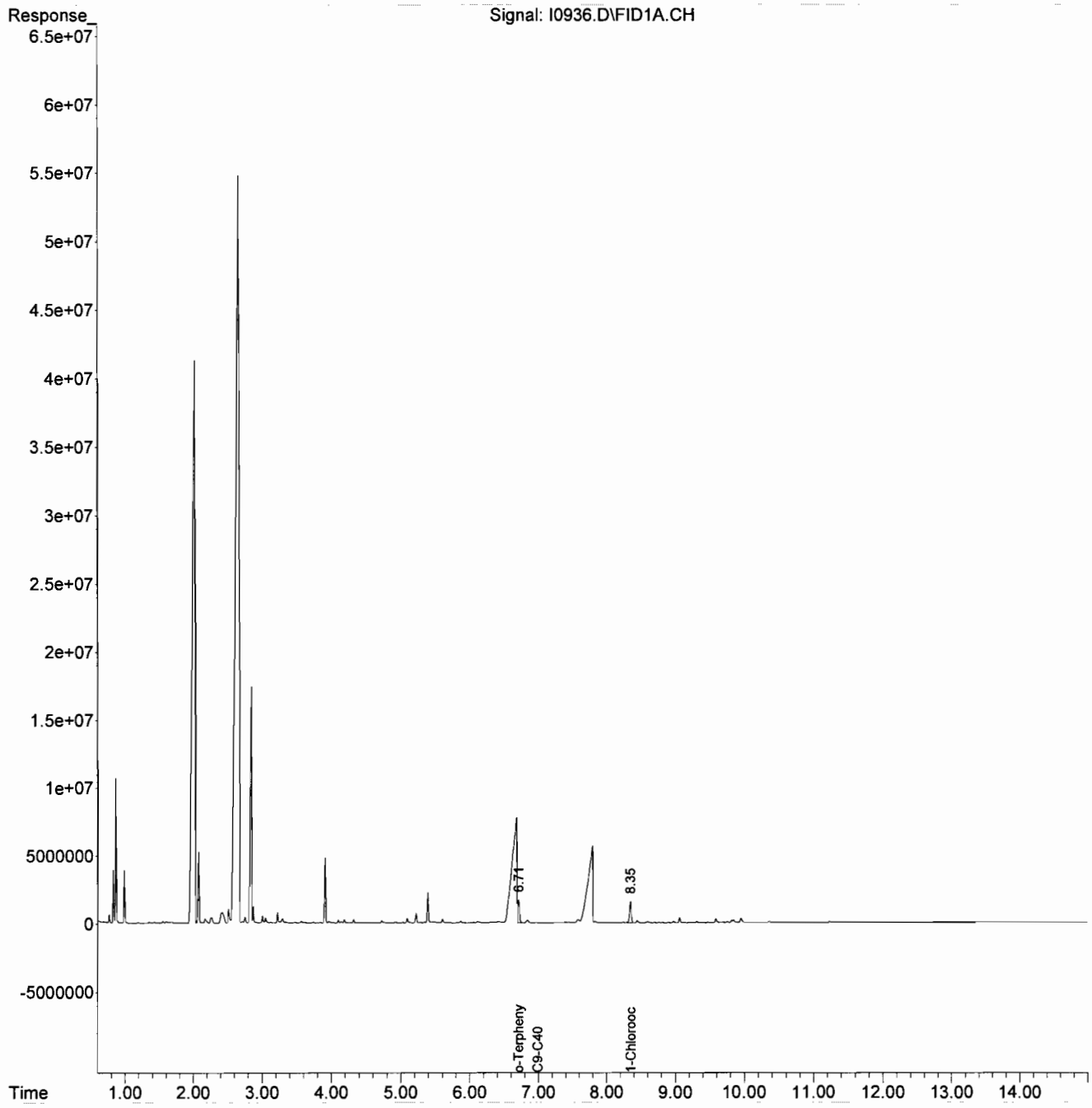
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-31-15\
Data File : I0936.D
Signal(s) : FID1A.CH
Acq On : 01 Aug 2015 00:23
Operator : JOLANTA
Sample : MW-38D,E15-06447-011,A,1000ml,100,1
Misc : 150728-17,07/28/15,07/23/15,1
ALS Vial : 25 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 11:25:35 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-31-15\
Data File : I0937.D
Signal(s) : FID1A.CH
Acq On : 01 Aug 2015 00:46
Operator : JOLANTA
Sample : MW-38DD,E15-06447-012,A,1000ml,100,1
Misc : 150728-17,07/28/15,07/23/15,1
ALS Vial : 26 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 11:26:07 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
1) S 1-Chlorooctadecane	8.35	24961651	69.912	ng	m
Spiked Amount 100.000		Recovery =	69.91%		
23) S o-Terphenyl	6.69	33607523	75.447	ng	m
Spiked Amount 100.000		Recovery =	75.45%		
Target Compounds					
22) H C9-C40	7.00	104141725	227.297	ng	

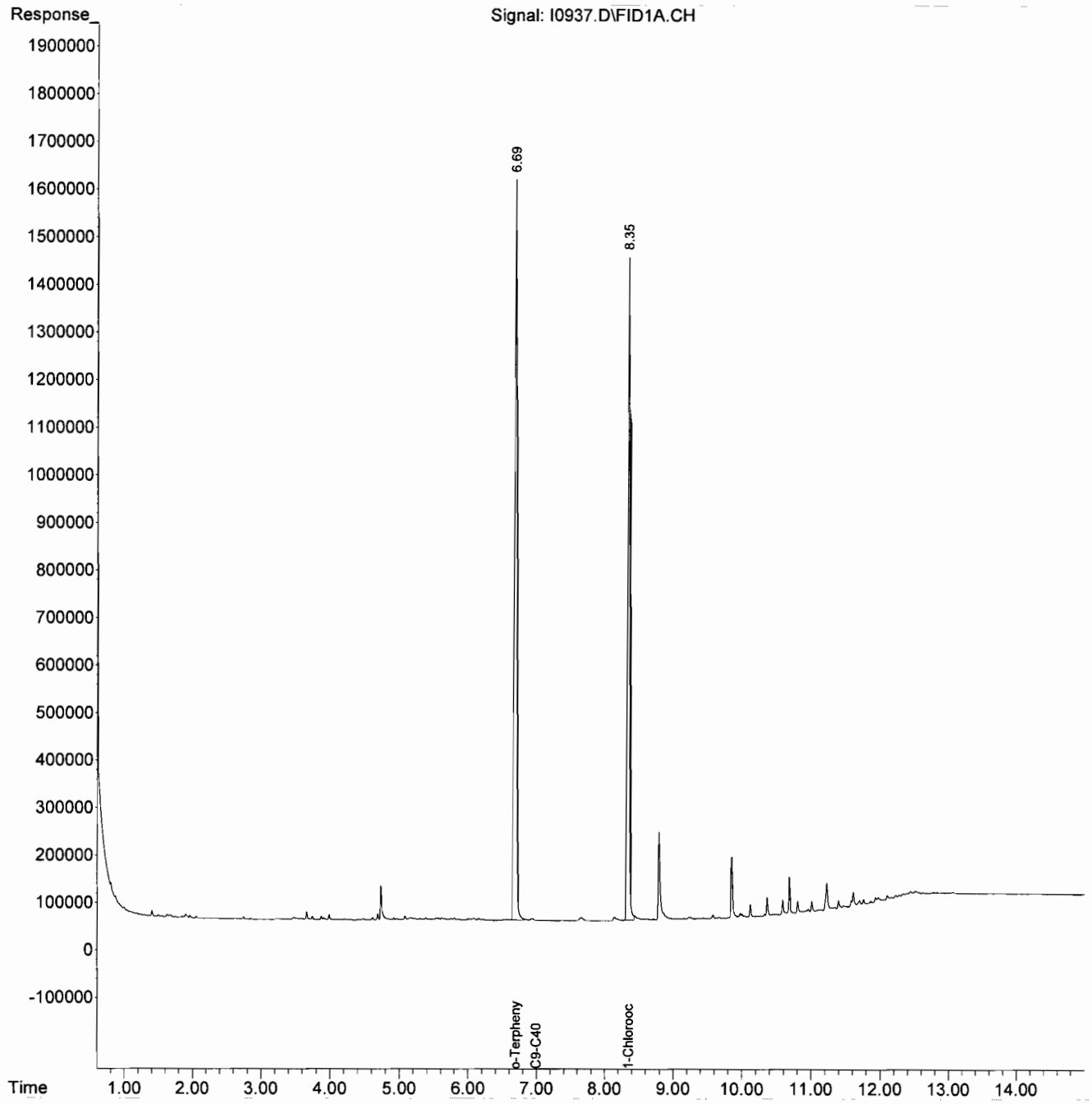
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-31-15\
Data File : I0937.D
Signal(s) : FID1A.CH
Acq On : 01 Aug 2015 00:46
Operator : JOLANTA
Sample : MW-38DD,E15-06447-012,A,1000ml,100,1
Misc : 150728-17,07/28/15,07/23/15,1
ALS Vial : 26 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 11:26:07 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-31-15\
Data File : I0938.D
Signal(s) : FID1A.CH
Acq On : 01 Aug 2015 1:08
Operator : JOLANTA
Sample : FB-2,E15-06447-013,A,1000ml,100,1
Misc : 150728-17,07/28/15,07/23/15,1
ALS Vial : 27 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 04 12:34:01 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
1) S 1-Chlorooctadecane	8.35	21075315	59.027	ng	m
Spiked Amount 100.000		Recovery =	59.03%		
23) S o-Terphenyl	6.69	28072214	63.021	ng	m
Spiked Amount 100.000		Recovery =	63.02%		
Target Compounds					

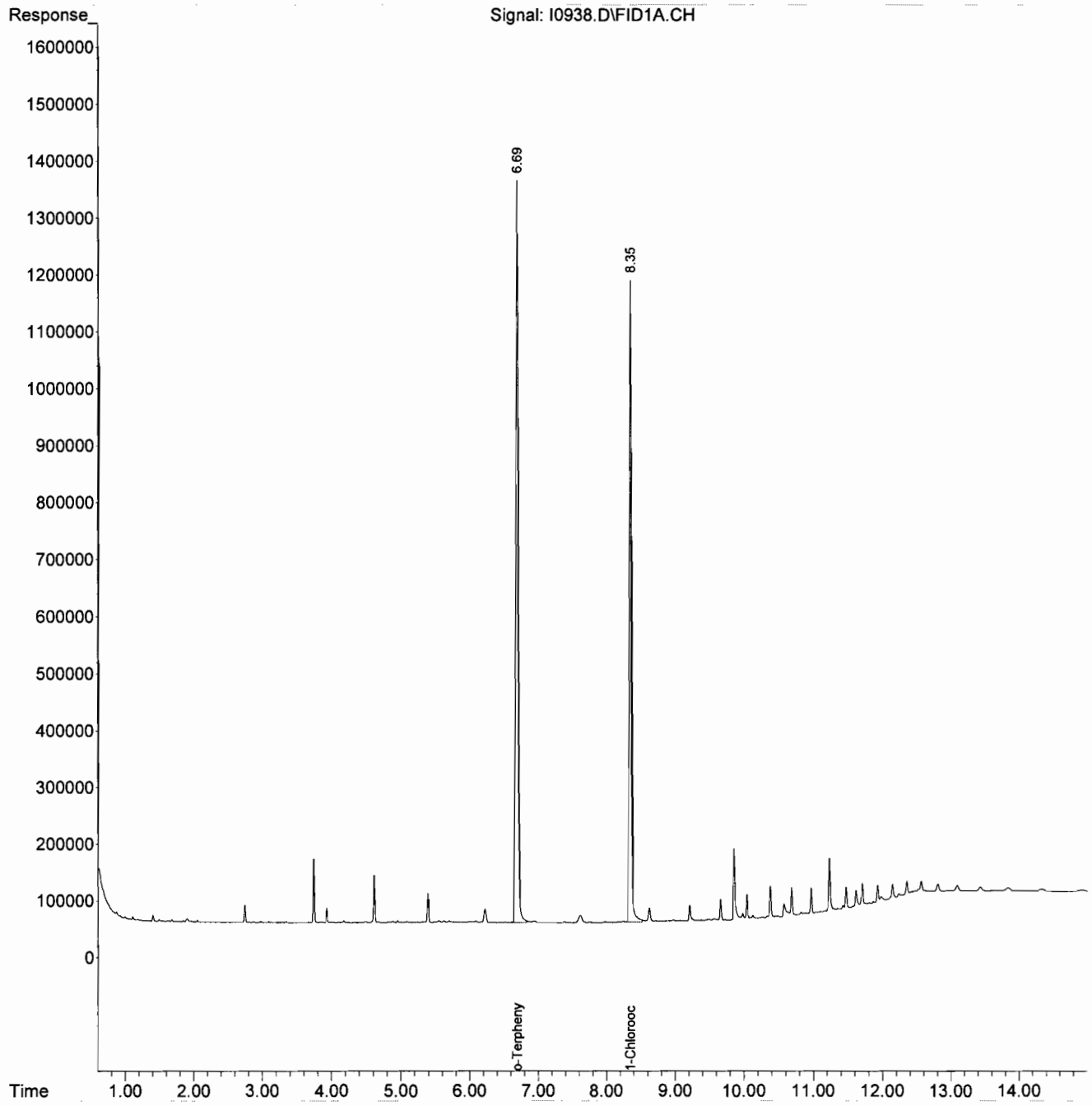
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-31-15\
Data File : I0938.D
Signal(s) : FID1A.CH
Acq On : 01 Aug 2015 1:08
Operator : JOLANTA
Sample : FB-2,E15-06447-013,A,1000ml,100,1
Misc : 150728-17,07/28/15,07/23/15,1
ALS Vial : 27 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 04 12:34:01 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



EXTRACTABLE PETROLEUM HYDROCARBON STANDARDS

NJ-EPH-DRO INITIAL CALIBRATION SUMMARY

Date Analyzed: 07/07/2015 **Instrument ID:** GC-I

GC Column : RTX-5

Data File: I0306.D I0305.D I0304.D I0303.D I0302.D

Compound	RT OF STANDARDS 20	100	250	500	1000	MEAN RT	RT WI NDOW FROM	TO
n-Nonane (C9)	1.00	1.00	1.00	1.00	1.01	1.00	0.91	1.09
n-Decane (C10)	1.67	1.67	1.68	1.68	1.70	1.68	1.59	1.77
n-Dodecane (C12)	3.00	3.01	3.01	3.02	3.03	3.01	2.92	3.10
n-Tetradecane (C14)	4.12	4.12	4.13	4.13	4.14	4.13	4.03	4.23
n-Hexadecane (C16)	5.09	5.09	5.10	5.10	5.11	5.10	5.00	5.20
n-Octadecane (C18)	6.04	6.05	6.06	6.07	6.09	6.06	5.96	6.16
n-Eicosane (C20)	7.76	7.77	7.79	7.81	7.84	7.80	7.69	7.91
n-Heneicosane (C21)	8.45	8.45	8.47	8.48	8.50	8.47	8.36	8.58
n-Docosane (C22)	8.91	8.91	8.92	8.93	8.95	8.93	8.82	9.04
n-Tetracosane (C24)	9.60	9.60	9.61	9.62	9.63	9.61	9.49	9.73
n-Hexacosane (C26)	10.13	10.14	10.15	10.15	10.17	10.15	10.03	10.27
n_Octacosane (C28)	10.61	10.61	10.62	10.62	10.64	10.62	10.50	10.74
n-Triacontane (C30)	11.03	11.03	11.04	11.04	11.06	11.04	10.91	11.17
n-Dotriacontane (C32)	11.42	11.42	11.43	11.44	11.45	11.43	11.30	11.56
n-Tetratriacontane (C34)	11.79	11.79	11.80	11.81	11.82	11.80	11.67	11.93
n-Hexatriacontane (C36)	12.14	12.15	12.16	12.17	12.19	12.16	12.01	12.31
n-Octatriacontane (C38)	12.49	12.49	12.51	12.53	12.55	12.51	12.36	12.66
n-Tetracontane (40)	12.89	12.89	12.91	12.93	12.96	12.91	12.76	13.06
C9-C28	5.80	5.80	5.80	5.80	5.80	5.80	5.65	5.95
C28-C40	12.00	12.00	12.00	12.00	12.00	12.00	11.85	12.15
C9-C40	7.00	7.00	7.00	7.00	7.00	7.00	6.85	7.15

NJ-EPH-DRO INITIAL CALIBRATION SUMMARY

Date Analyzed: 07/07/2015 **Instrument ID:** GC-I

GC Column : RTX-5

Data File: I0306.D I0305.D I0304.D I0303.D I0302.D

Compound	CALIBRATION FACTORS 20	100	250	500	1000	MEAN	%RSD
n-Nonane (C9)	406103	403935	437618	393721	390251	406326	4.61
n-Decane (C10)	407751	409379	443490	401714	398501	412167	4.38
n-Dodecane (C12)	404207	414986	449354	412196	408388	417826	4.33
n-Tetradecane (C14)	405157	421170	459430	419356	414144	423851	4.92
n-Hexadecane (C16)	407123	426702	469063	423315	417270	428695	5.54
n-Octadecane (C18)	415391	437992	483662	432105	424525	438735	6.04
n-Eicosane (C20)	420568	438754	486270	427920	418523	438407	6.36
n-Heneicosane (C21)	426603	439534	483723	417912	409050	435364	6.73
n-Docosane (C22)	424866	446585	495860	430540	421704	443911	6.89
n-Tetracosane (C24)	417194	440340	489945	420652	414024	436431	7.25
n-Hexacosane (C26)	415132	438984	484592	413564	406734	431801	7.39
n_Octacosane (C28)	426240	442910	481893	410869	405253	433433	7.10
n-Triacontane (C30)	408112	433650	473123	403765	394530	422636	7.51
n-Dotriacontane (C32)	397073	421371	459561	391237	374228	408694	8.09
n-Tetratriacontane (C34)	384087	406867	442574	372297	355631	392291	8.60
n-Hexatriacontane (C36)	373692	394720	423919	357567	350976	380175	7.81
n-Octatriacontane (C38)	350287	371614	393195	342338	343849	360257	6.06
n-Tetracontane (40)	338538	357990	374877	339405	343956	350953	4.41
C9-C28	503994	452382	483222	424057	415930	455917	8.27
C28-C40	479340	420812	438029	373677	364584	415288	11.39
C9-C40	553205	454142	473365	409870	400293	458175	13.35

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\07-07-15\
Data File : I0302.D
Signal(s) : FID1A.CH
Acq On : 07 Jul 2015 13:25
Operator : JOLANTA
Sample : ALI_L5_IAS_5294,1000_PPM
Misc : ,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Jul 07 15:16:06 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Tue Jul 07 15:14:51 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 1-Chlorooctadecane	8.41	348320552	975.568 ng
Spiked Amount 100.000		Recovery	= 975.57%
23) S o-Terphenyl	6.77	430117390	965.591 ng
Spiked Amount 100.000		Recovery	= 965.59%
Target Compounds			
2) T n-Nonane (C9)	1.01	390250581	960.438 ng
3) T n-Decane (C10)	1.70	398501369	966.844 ng
4) T n-Dodecane (C12)	3.03	408387682	977.411 ng
5) T n-Tetradecane (C14)	4.14	414143830	977.097 ng
6) T n-Hexadecane (C16)	5.11	417270249	973.351 ng
7) T n-Octadecane (C18)	6.09	424524925	967.611 ng
8) T n-Eicosane (C20)	7.84	418523413	954.645 ng
9) T n-Heneicosane (C21)	8.50	409050100	939.558 ng
10) T n-Docosane (C22)	8.95	421703511	949.974 ng
11) T n-Tetracosane (C24)	9.63	414024090	948.659 ng
12) T n-Hexacosane (C26)	10.17	406734289	941.948 ng
13) T n-Octacosane (C28)	10.64	405253323	934.985 ng
14) T n-Triacontane (C30)	11.06	394529515	933.497 ng
15) T n-Dotriacontane (C32)	11.45	374227687	915.667 ng
16) T n-Tetratriacontane (C34)	11.82	355631108	906.549 ng
17) T n-Hexatriacontane (C36)	12.19	350976066	923.197 ng
18) T n-Octatriacontane (C38)	12.55	343849208	954.456 ng
19) T n-Tetracontane (C40)	12.96	343955630	980.062 ng
20) H C9-C28	5.80	4991163730	10947.527 ng
21) H C28-C40	12.00	2187503090	5267.434 ng
22) H C9-C40	7.00	7205267463	15726.026 ng

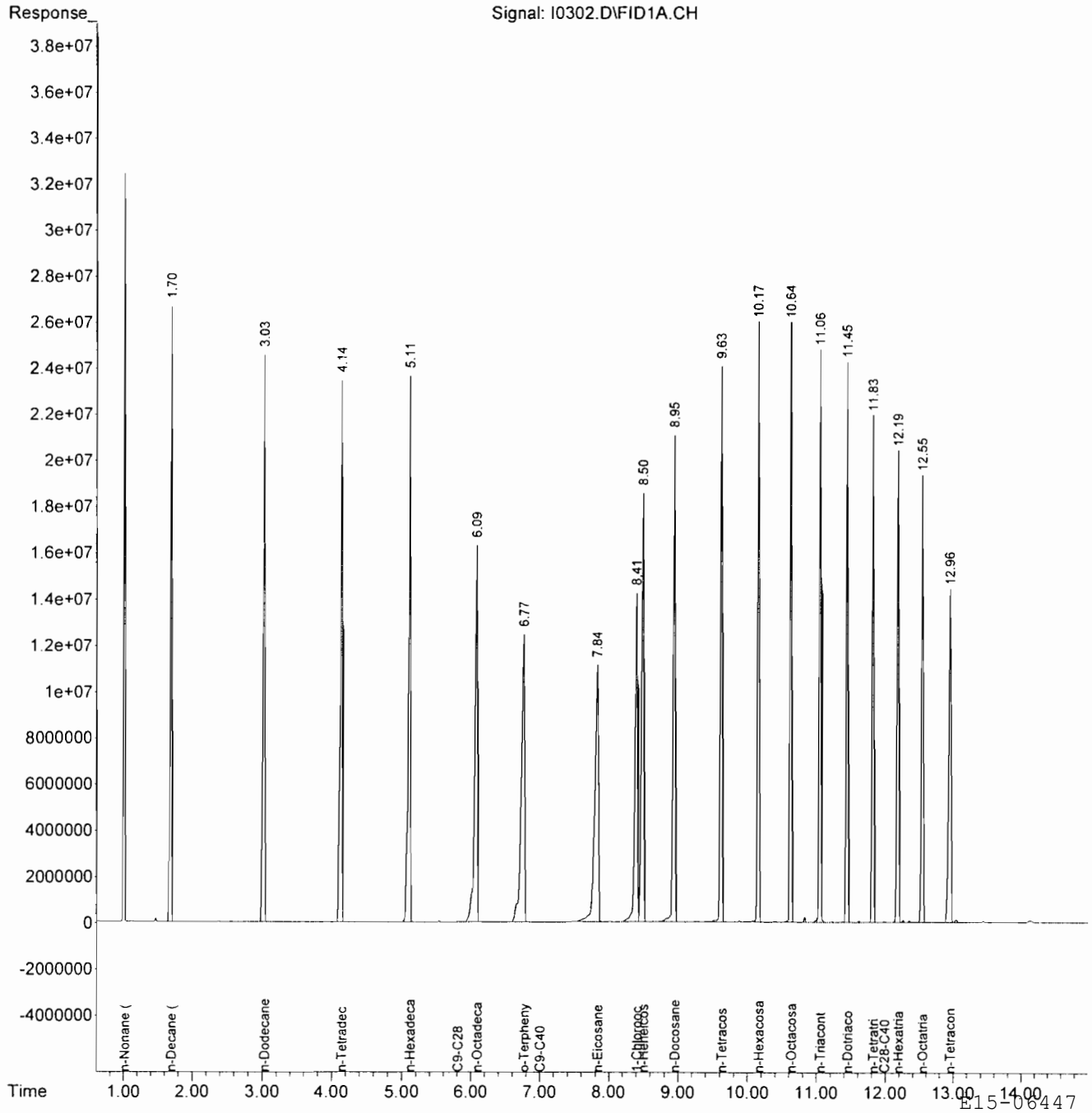
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\07-07-15\
Data File : I0302.D
Signal(s) : FID1A.CH
Acq On : 07 Jul 2015 13:25
Operator : JOLANTA
Sample : ALI_L5_IAS_5294,1000_PPM
Misc : ,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Jul 07 15:16:06 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Tue Jul 07 15:14:51 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\07-07-15\
Data File : I0303.D
Signal(s) : FID1A.CH
Acq On : 07 Jul 2015 13:47
Operator : JOLANTA
Sample : ALI_L4_IAS_5295,500_PPM
Misc : ,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Jul 07 15:16:22 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Tue Jul 07 15:14:51 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	1-Chlorooctadecane	8.39	177082332	495.968 ng
Spiked Amount	100.000		Recovery	= 495.97%
23) S	o-Terphenyl	6.74	218703940	490.979 ng
Spiked Amount	100.000		Recovery	= 490.98%
Target Compounds				
2) T	n-Nonane (C9)	1.00	196860710	484.490 ng
3) T	n-Decane (C10)	1.68	200857222	487.320 ng
4) T	n-Dodecane (C12)	3.02	206097974	493.263 ng
5) T	n-Tetradecane (C14)	4.13	209677754	494.697 ng
6) T	n-Hexadecane (C16)	5.10	211657400	493.725 ng
7) T	n-Octadecane (C18)	6.07	216052579	492.444 ng
8) T	n-Eicosane (C20)	7.81	213960189	488.040 ng
9) T	n-Heneicosane (C21)	8.48	208956182	479.957 ng
10) T	n-Docosane (C22)	8.93	215269795	484.939 ng
11) T	n-Tetracosane (C24)	9.62	210325992	481.923 ng
12) T	n-Hexacosane (C26)	10.15	206782197	478.883 ng
13) T	n-Octacosane (C28)	10.62	205434635	473.971 ng
14) T	n-Triacontane (C30)	11.04	201882335	477.674 ng
15) T	n-Dotriacontane (C32)	11.44	195618590	478.643 ng
16) T	n-Tetratriacontane (C34)	11.81	186148608	474.516 ng
17) T	n-Hexatriacontane (C36)	12.17	178783296	470.266 ng
18) T	n-Octatriacontane (C38)	12.53	171169001	475.131 ng
19) T	n-Tetracontane (C40)	12.93	169702515	483.548 ng
20) H	C9-C28	5.80	2544343178	5580.716 ng
21) H	C28-C40	12.00	1121030541	2699.404 ng
22) H	C9-C40	7.00	3688827494	8051.137 ng

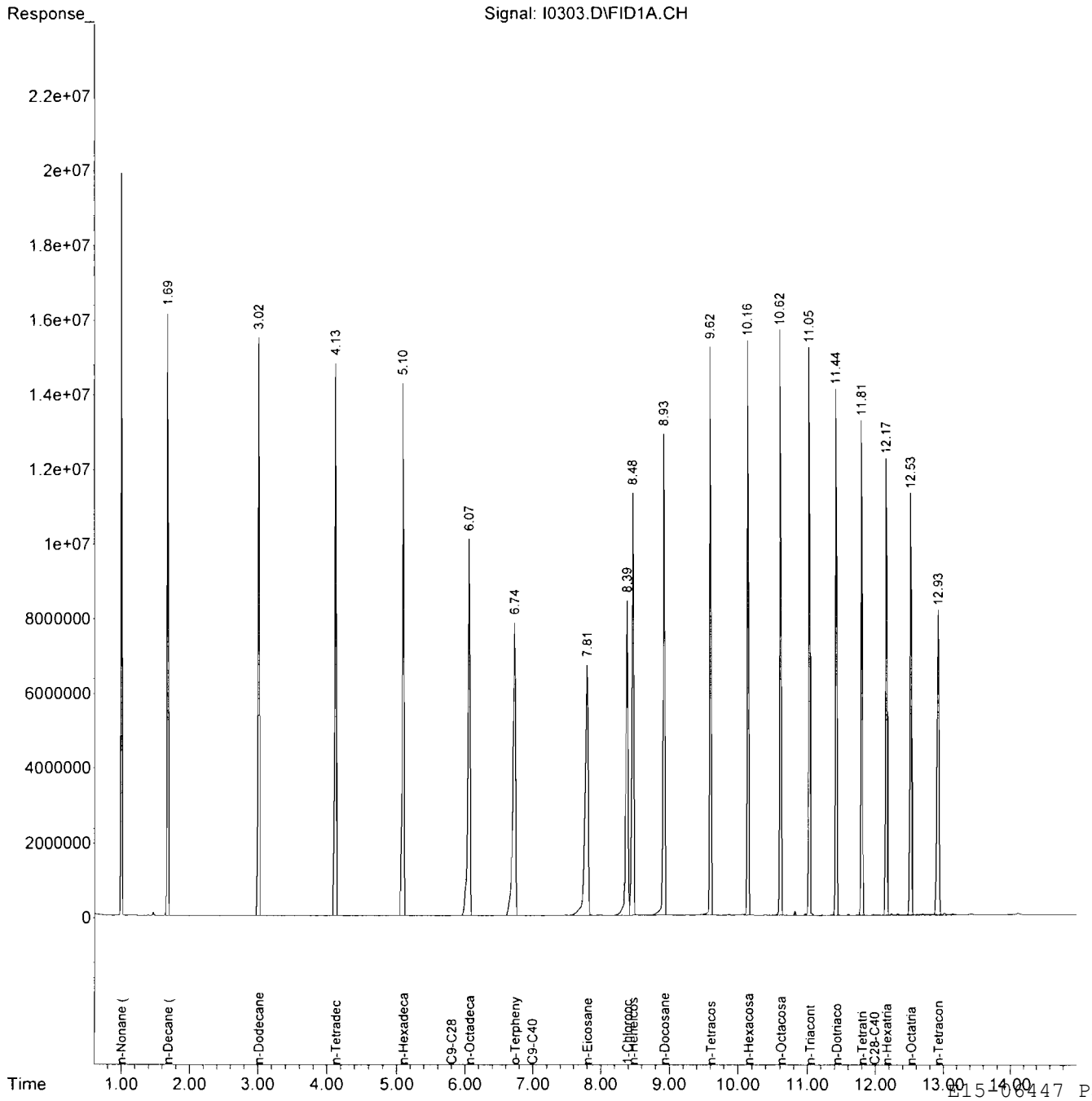
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\07-07-15\
Data File : I0303.D
Signal(s) : FID1A.CH
Acq On : 07 Jul 2015 13:47
Operator : JOLANTA
Sample : ALI_L4_IAS_5295,500_PPM
Misc : ,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Jul 07 15:16:22 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Tue Jul 07 15:14:51 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\07-07-15\
Data File : I0304.D
Signal(s) : FID1A.CH
Acq On : 07 Jul 2015 14:10
Operator : JOLANTA
Sample : ALI_L3_IAS_5296,250_PPM
Misc : ,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Jul 07 15:16:38 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Tue Jul 07 15:14:51 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	1-Chlorooctadecane	8.38	99378949	278.338	ng
Spiked Amount		100.000		Recovery	= 278.34%	
23)	S	o-Terphenyl	6.72	122627688	275.293	ng
Spiked Amount		100.000		Recovery	= 275.29%	
Target Compounds						
2)	T	n-Nonane (C9)	1.00	109404574	269.253	ng
3)	T	n-Decane (C10)	1.68	110872463	268.999	ng
4)	T	n-Dodecane (C12)	3.01	112338386	268.864	ng
5)	T	n-Tetradecane (C14)	4.13	114857561	270.986	ng
6)	T	n-Hexadecane (C16)	5.10	117265757	273.541	ng
7)	T	n-Octadecane (C18)	6.06	120915573	275.600	ng
8)	T	n-Eicosane (C20)	7.79	121567619	277.294	ng
9)	T	n-Heneicosane (C21)	8.47	120930712	277.769	ng
10)	T	n-Docosane (C22)	8.92	123965084	279.257	ng
11)	T	n-Tetracosane (C24)	9.61	122486259	280.654	ng
12)	T	n-Hexacosane (C26)	10.15	121148052	280.564	ng
13)	T	n-Octacosane (C28)	10.62	120473180	277.951	ng
14)	T	n-Triacontane (C30)	11.04	118280754	279.864	ng
15)	T	n-Dotriacontane (C32)	11.43	114890166	281.115	ng
16)	T	n-Tetratriacontane (C34)	11.80	110643543	282.044	ng
17)	T	n-Hexatriacontane (C36)	12.16	105979759	278.766	ng
18)	T	n-Octatriacontane (C38)	12.51	98298862	272.858	ng
19)	T	n-Tetracontane (C40)	12.91	93719163	267.042	ng
20)	H	C9-C28	5.80	1449664809	3179.668	ng
21)	H	C28-C40	12.00	657043210	1582.138	ng
22)	H	C9-C40	7.00	2130142102	4649.192	ng

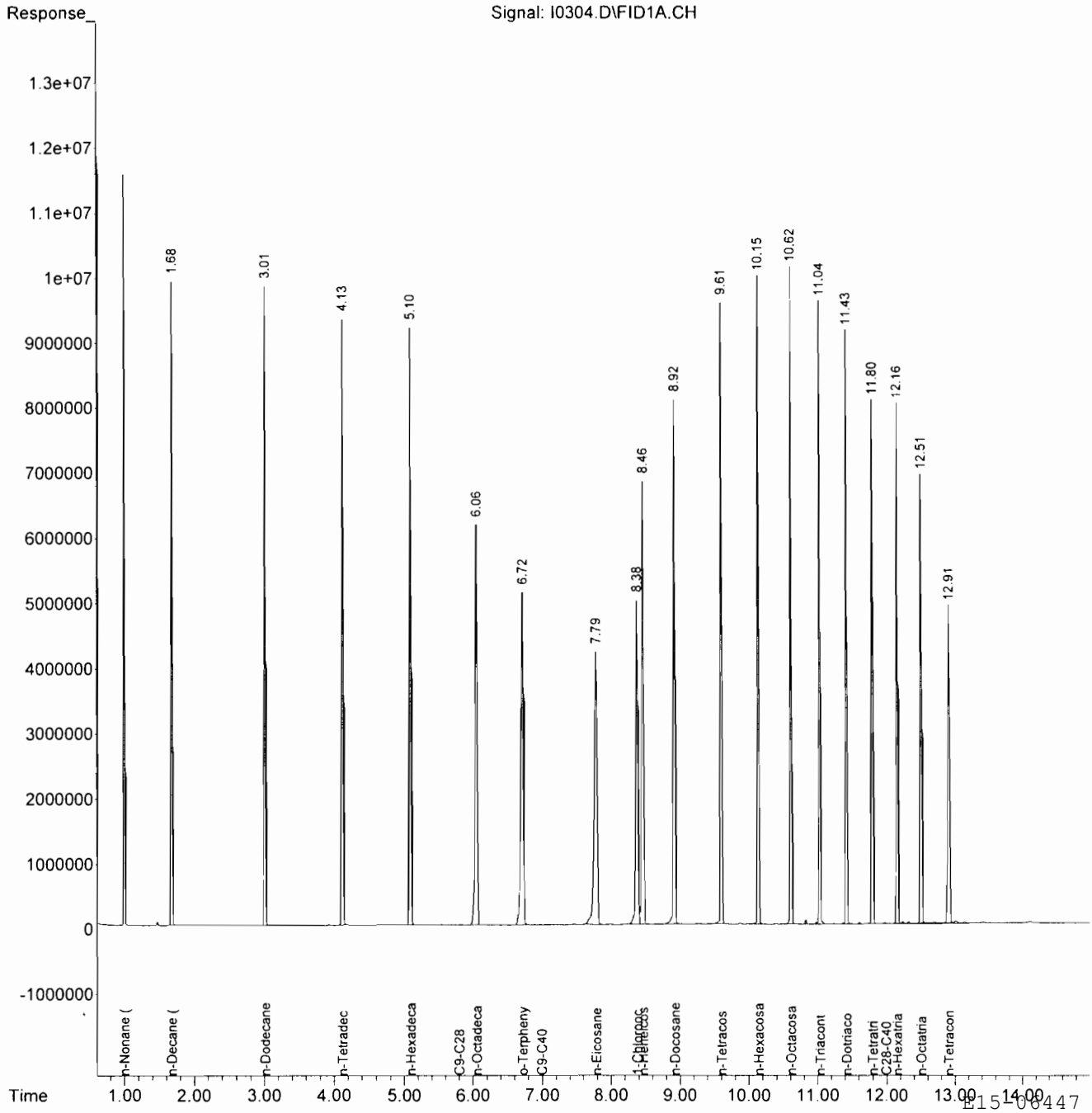
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\07-07-15\
Data File : I0304.D
Signal(s) : FID1A.CH
Acq On : 07 Jul 2015 14:10
Operator : JOLANTA
Sample : ALI_L3_IAS_5296,250_PPM
Misc : ,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Jul 07 15:16:38 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Tue Jul 07 15:14:51 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\07-07-15\
Data File : I0305.D
Signal(s) : FID1A.CH
Acq On : 07 Jul 2015 14:32
Operator : JOLANTA
Sample : ALI_L2_IAS_5297,100_PPM
Misc : ,NA,NA,1
ALS Vial : 5 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Jul 07 15:16:56 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Tue Jul 07 15:14:51 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	1-Chlorooctadecane	8.37	35442486	99.266 ng
Spiked Amount	100.000		Recovery =	99.27%
23) S	o-Terphenyl	6.71	44363364	99.593 ng
Spiked Amount	100.000		Recovery =	99.59%
Target Compounds				
2) T	n-Nonane (C9)	1.00	40393500	99.412 ng
3) T	n-Decane (C10)	1.67	40937886	99.324 ng
4) T	n-Dodecane (C12)	3.01	41498624	99.320 ng
5) T	n-Tetradecane (C14)	4.12	42116957	99.367 ng
6) T	n-Hexadecane (C16)	5.09	42670231	99.535 ng
7) T	n-Octadecane (C18)	6.05	43799166	99.831 ng
8) T	n-Eicosane (C20)	7.77	43875410	100.079 ng
9) T	n-Heneicosane (C21)	8.45	43953383	100.958 ng
10) T	n-Docosane (C22)	8.91	44658470	100.602 ng
11) T	n-Tetracosane (C24)	9.60	44033990	100.896 ng
12) T	n-Hexacosane (C26)	10.14	43898401	101.663 ng
13) T	n-Octacosane (C28)	10.61	44290953	102.186 ng
14) T	n-Triacontane (C30)	11.03	43365039	102.606 ng
15) T	n-Dotriacontane (C32)	11.42	42137128	103.102 ng
16) T	n-Tetratriacontane (C34)	11.79	40686650	103.715 ng
17) T	n-Hexatriacontane (C36)	12.15	39471988	103.826 ng
18) T	n-Octatriacontane (C38)	12.49	37161395	103.153 ng
19) T	n-Tetracontane (C40)	12.89	35798981	102.005 ng
20) H	C9-C28	5.80	542857845	1190.694 ng
21) H	C28-C40	12.00	252486907	607.980 ng
22) H	C9-C40	7.00	817454913	1784.155 ng

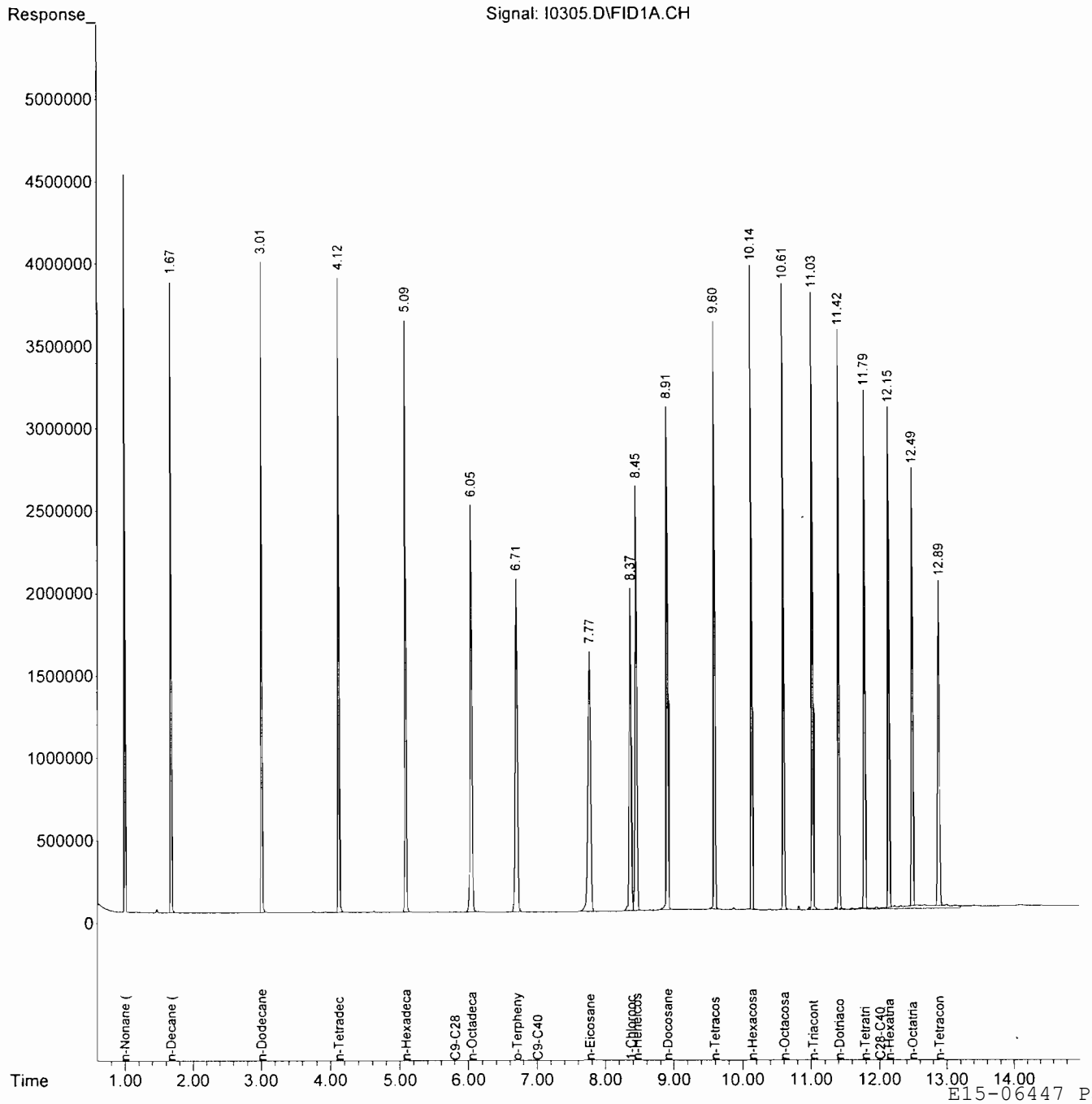
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\07-07-15\
Data File : I0305.D
Signal(s) : FID1A.CH
Acq On : 07 Jul 2015 14:32
Operator : JOLANTA
Sample : ALI_L2_IAS_5297,100_PPM
Misc : ,NA,NA,1
ALS Vial : 5 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Jul 07 15:16:56 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Tue Jul 07 15:14:51 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\07-07-15\
Data File : I0306.D
Signal(s) : FID1A.CH
Acq On : 07 Jul 2015 14:55
Operator : JOLANTA
Sample : ALI_L1_IAS_5298,20_PPM
Misc : ,NA,NA,1
ALS Vial : 6 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Jul 07 15:17:13 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Tue Jul 07 15:14:51 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	1-Chlorooctadecane	8.36	6615879	18.530 ng
Spiked Amount	100.000		Recovery =	18.53%
23) S	o-Terphenyl	6.70	8511079	19.107 ng
Spiked Amount	100.000		Recovery =	19.11%
Target Compounds				
2) T	n-Nonane (C9)	1.00	8122061	19.989 ng
3) T	n-Decane (C10)	1.67	8155014	19.786 ng
4) T	n-Dodecane (C12)	3.00	8084140	19.348 ng
5) T	n-Tetradecane (C14)	4.12	8103144	19.118 ng
6) T	n-Hexadecane (C16)	5.09	8142454	18.994 ng
7) T	n-Octadecane (C18)	6.04	8307827	18.936 ng
8) T	n-Eicosane (C20)	7.76	8411369	19.186 ng
9) T	n-Heneicosane (C21)	8.45	8532059	19.598 ng
10) T	n-Docosane (C22)	8.91	8497315	19.142 ng
11) T	n-Tetracosane (C24)	9.60	8343887	19.118 ng
12) T	n-Hexacosane (C26)	10.13	8302642	19.228 ng
13) T	n-Octacosane (C28)	10.61	8524807	19.668 ng
14) T	n-Triacontane (C30)	11.03	8162243	19.313 ng
15) T	n-Dotriacontane (C32)	11.42	7941455	19.431 ng
16) T	n-Tetratriacontane (C34)	11.79	7681745	19.582 ng
17) T	n-Hexatriacontane (C36)	12.14	7473847	19.659 ng
18) T	n-Octatriacontane (C38)	12.49	7005731	19.447 ng
19) T	n-Tetracontane (C40)	12.89	6770763	19.293 ng
20) H	C9-C28	5.80	120958642	265.308 ng
21) H	C28-C40	12.00	57520795	138.508 ng
22) H	C9-C40	7.00	199153670	434.668 ng

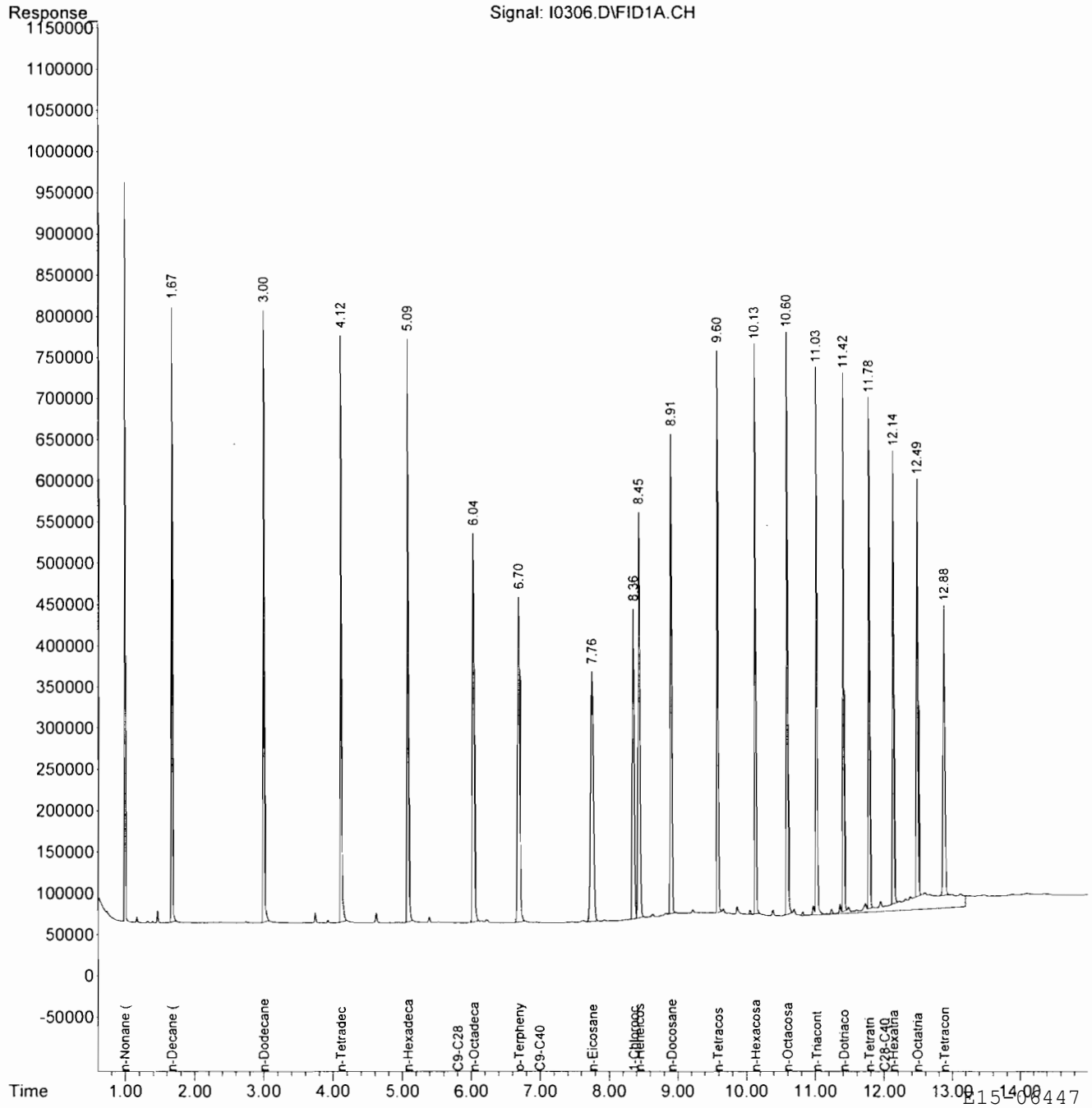
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\07-07-15\
Data File : I0306.D
Signal(s) : FID1A.CH
Acq On : 07 Jul 2015 14:55
Operator : JOLANTA
Sample : ALI_L1_IAS_5298,20_PPM
Misc : ,NA,NA,1
ALS Vial : 6 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Jul 07 15:17:13 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Tue Jul 07 15:14:51 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



NJ-EPH-DRO CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 07/31/2015 **Instrument ID:** GC-I

Data File: I0921.D **GC Column :** RTX-5

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
n-Nonane (C9)	1.02	0.91	1.09	406326	427004	5.09
n-Decane (C10)	1.69	1.59	1.77	412167	447448	8.56
n-Dodecane (C12)	3.02	2.92	3.10	417826	452467	8.29
n-Tetradecane (C14)	4.13	4.03	4.23	423851	453506	7.00
n-Hexadecane (C16)	5.09	5.00	5.20	428695	454884	6.11
n-Octadecane (C18)	6.05	5.96	6.16	438735	463149	5.56
n-Eicosane (C20)	7.78	7.69	7.91	438407	461539	5.28
n-Heneicosane (C21)	8.45	8.36	8.58	435364	451230	3.64
n-Docosane (C22)	8.91	8.82	9.04	443911	465158	4.79
n-Tetracosane (C24)	9.59	9.49	9.73	436431	458329	5.02
n-Hexacosane (C26)	10.13	10.03	10.27	431801	452720	4.84
n_Octacosane (C28)	10.60	10.50	10.74	433433	448886	3.57
n-Triacontane (C30)	11.02	10.91	11.17	422636	441424	4.45
n-Dotriacontane (C32)	11.41	11.30	11.56	408694	427809	4.68
n-Tetratriacontane (C34)	11.77	11.67	11.93	392291	416307	6.12
n-Hexatriacontane (C36)	12.12	12.01	12.31	380175	411774	8.31
n-Octatriacontane (C38)	12.46	12.36	12.66	360257	400014	11.04
n-Tetracontane (C40)	12.86	12.76	13.06	350953	391437	11.54
C9-C28	5.80	5.65	5.95	455917	470199	3.13
C28-C40	12.00	11.85	12.15	415288	456933	10.03
C9-C40	7.00	6.85	7.15	458175	483599	5.55

NJ-EPH-DRO CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 08/01/2015 **Instrument ID:** GC-I

Data File: I0939.D **GC Column :** RTX-5

Compound	RT	RT WI NDOW FROM	TO	Avg CF	CC CF	%D
n-Nonane (C9)	1.02	0.91	1.09	406326	452677	11.41
n-Decane (C10)	1.69	1.59	1.77	412167	474479	15.12
n-Dodecane (C12)	3.02	2.92	3.10	417826	479025	14.65
n-Tetradecane (C14)	4.13	4.03	4.23	423851	479054	13.02
n-Hexadecane (C16)	5.09	5.00	5.20	428695	479456	11.84
n-Octadecane (C18)	6.05	5.96	6.16	438735	487489	11.11
n-Eicosane (C20)	7.77	7.69	7.91	438407	483035	10.18
n-Heneicosane (C21)	8.45	8.36	8.58	435364	469143	7.76
n-Docosane (C22)	8.91	8.82	9.04	443911	488758	10.10
n-Tetracosane (C24)	9.59	9.49	9.73	436431	481622	10.35
n-Hexacosane (C26)	10.13	10.03	10.27	431801	480961	11.38
n_Octacosane (C28)	10.60	10.50	10.74	433433	473618	9.27
n-Triacontane (C30)	11.02	10.91	11.17	422636	468344	10.82
n-Dotriacontane (C32)	11.41	11.30	11.56	408694	453908	11.06
n-Tetratriacontane (C34)	11.77	11.67	11.93	392291	439790	12.11
n-Hexatriacontane (C36)	12.12	12.01	12.31	380175	431905	13.61
n-Octatriacontane (C38)	12.46	12.36	12.66	360257	417018	15.76
n-Tetracontane (C40)	12.85	12.76	13.06	350953	410358	16.93
C9-C28	5.80	5.65	5.95	455917	486950	6.81
C28-C40	12.00	11.85	12.15	415288	455097	9.59
C9-C40	7.00	6.85	7.15	458175	482560	5.32

NJ-EPH-DRO CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 08/03/2015 **Instrument ID:** GC-I

Data File: I0944.D **GC Column :** RTX-5

Compound	RT	RT WI NDOW FROM	TO	Avg CF	CC CF	%D
n-Nonane (C9)	1.02	0.91	1.09	406326	457584	12.62
n-Decane (C10)	1.69	1.59	1.77	412167	481363	16.79
n-Dodecane (C12)	3.02	2.92	3.10	417826	486397	16.41
n-Tetradecane (C14)	4.13	4.03	4.23	423851	487705	15.07
n-Hexadecane (C16)	5.09	5.00	5.20	428695	489840	14.26
n-Octadecane (C18)	6.05	5.96	6.16	438735	499955	13.95
n-Eicosane (C20)	7.78	7.69	7.91	438407	495337	12.99
n-Heneicosane (C21)	8.45	8.36	8.58	435364	497113	14.18
n-Docosane (C22)	8.91	8.82	9.04	443911	504277	13.60
n-Tetracosane (C24)	9.59	9.49	9.73	436431	496638	13.80
n-Hexacosane (C26)	10.13	10.03	10.27	431801	498016	15.33
n_Octacosane (C28)	10.60	10.50	10.74	433433	496946	14.65
n-Triacontane (C30)	11.02	10.91	11.17	422636	494560	17.02
n-Dotriacontane (C32)	11.41	11.30	11.56	408694	484347	18.51
n-Tetratriacontane (C34)	11.79	11.67	11.93	392291	470633	19.97
n-Hexatriacontane (C36)	12.15	12.01	12.31	380175	462520	21.66
n-Octatriacontane (C38)	12.51	12.36	12.66	360257	444302	23.33
n-Tetracontane (C40)	12.91	12.76	13.06	350953	434770	23.88
C9-C28	5.80	5.65	5.95	455917	502512	10.22
C28-C40	12.00	11.85	12.15	415288	480460	15.69
C9-C40	7.00	6.85	7.15	458175	498656	8.84

NJ-EPH-DRO CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 08/03/2015 **Instrument ID:** GC-I

Data File: I0951.D **GC Column :** RTX-5

Compound	RT	RT WI NDOW FROM	TO	Avg CF	CC CF	%D
n-Nonane (C9)	1.01	0.91	1.09	406326	383875	5.53
n-Decane (C10)	1.69	1.59	1.77	412167	402658	2.31
n-Dodecane (C12)	3.02	2.92	3.10	417826	406335	2.75
n-Tetradecane (C14)	4.13	4.03	4.23	423851	407506	3.86
n-Hexadecane (C16)	5.09	5.00	5.20	428695	408750	4.65
n-Octadecane (C18)	6.05	5.96	6.16	438735	417332	4.88
n-Eicosane (C20)	7.77	7.69	7.91	438407	415842	5.15
n-Heneicosane (C21)	8.45	8.36	8.58	435364	420210	3.48
n-Docosane (C22)	8.91	8.82	9.04	443911	419924	5.40
n-Tetracosane (C24)	9.59	9.49	9.73	436431	418565	4.09
n-Hexacosane (C26)	10.13	10.03	10.27	431801	417525	3.31
n_Octacosane (C28)	10.60	10.50	10.74	433433	417211	3.74
n-Triacontane (C30)	11.02	10.91	11.17	422636	416839	1.37
n-Dotriacontane (C32)	11.41	11.30	11.56	408694	410464	0.43
n-Tetratriacontane (C34)	11.78	11.67	11.93	392291	400200	2.02
n-Hexatriacontane (C36)	12.13	12.01	12.31	380175	394114	3.67
n-Octatriacontane (C38)	12.48	12.36	12.66	360257	379473	5.33
n-Tetracontane (C40)	12.87	12.76	13.06	350953	370660	5.62
C9-C28	5.80	5.65	5.95	455917	426443	6.46
C28-C40	12.00	11.85	12.15	415288	410188	1.23
C9-C40	7.00	6.85	7.15	458175	424777	7.29

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\07-31-15\
Data File : I0921.D
Signal(s) : FID1A.CH
Acq On : 31 Jul 2015 18:46
Operator : JOLANTA
Sample : ALI_C_IAS_5296,250_PPM
Misc : ,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 01 11:29:51 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc Units
System Monitoring Compounds					
1)	S	1-Chlorooctadecane	8.36	95276945	266.849 ng
Spiked Amount		100.000		Recovery	= 266.85%
23)	S	o-Terphenyl	6.71	117173516	263.048 ng
Spiked Amount		100.000		Recovery	= 263.05%
Target Compounds					
2)	T	n-Nonane (C9)	1.02	106750967	262.723 ng
3)	T	n-Decane (C10)	1.69	111861929	271.399 ng
4)	T	n-Dodecane (C12)	3.02	113116860	270.727 ng
5)	T	n-Tetradecane (C14)	4.13	113376560	267.491 ng
6)	T	n-Hexadecane (C16)	5.09	113720883	265.272 ng
7)	T	n-Octadecane (C18)	6.05	115787166	263.911 ng
8)	T	n-Eicosane (C20)	7.78	115384862	263.191 ng
9)	T	n-Heneicosane (C21)	8.45	112807513	259.111 ng
10)	T	n-Docosane (C22)	8.91	116289471	261.966 ng
11)	T	n-Tetracosane (C24)	9.59	114582176	262.544 ng
12)	T	n-Hexacosane (C26)	10.13	113179934	262.111 ng
13)	T	n-Octacosane (C28)	10.60	112221395	258.913 ng
14)	T	n-Triacontane (C30)	11.02	110356112	261.114 ng
15)	T	n-Dotriacontane (C32)	11.41	106952212	261.693 ng
16)	T	n-Tetratriacontane (C34)	11.77	104076868	265.305 ng
17)	T	n-Hexatriacontane (C36)	12.12	102943607	270.780 ng
18)	T	n-Octatriacontane (C38)	12.46	100003522	277.590 ng
19)	T	n-Tetracontane (C40)	12.86	97859218	278.838 ng
20)	H	C9-C28	5.80	1410597684	3093.979 ng
21)	H	C28-C40	12.00	685399974	1650.420 ng
22)	H	C9-C40	7.00	2176195193	4749.706 ng

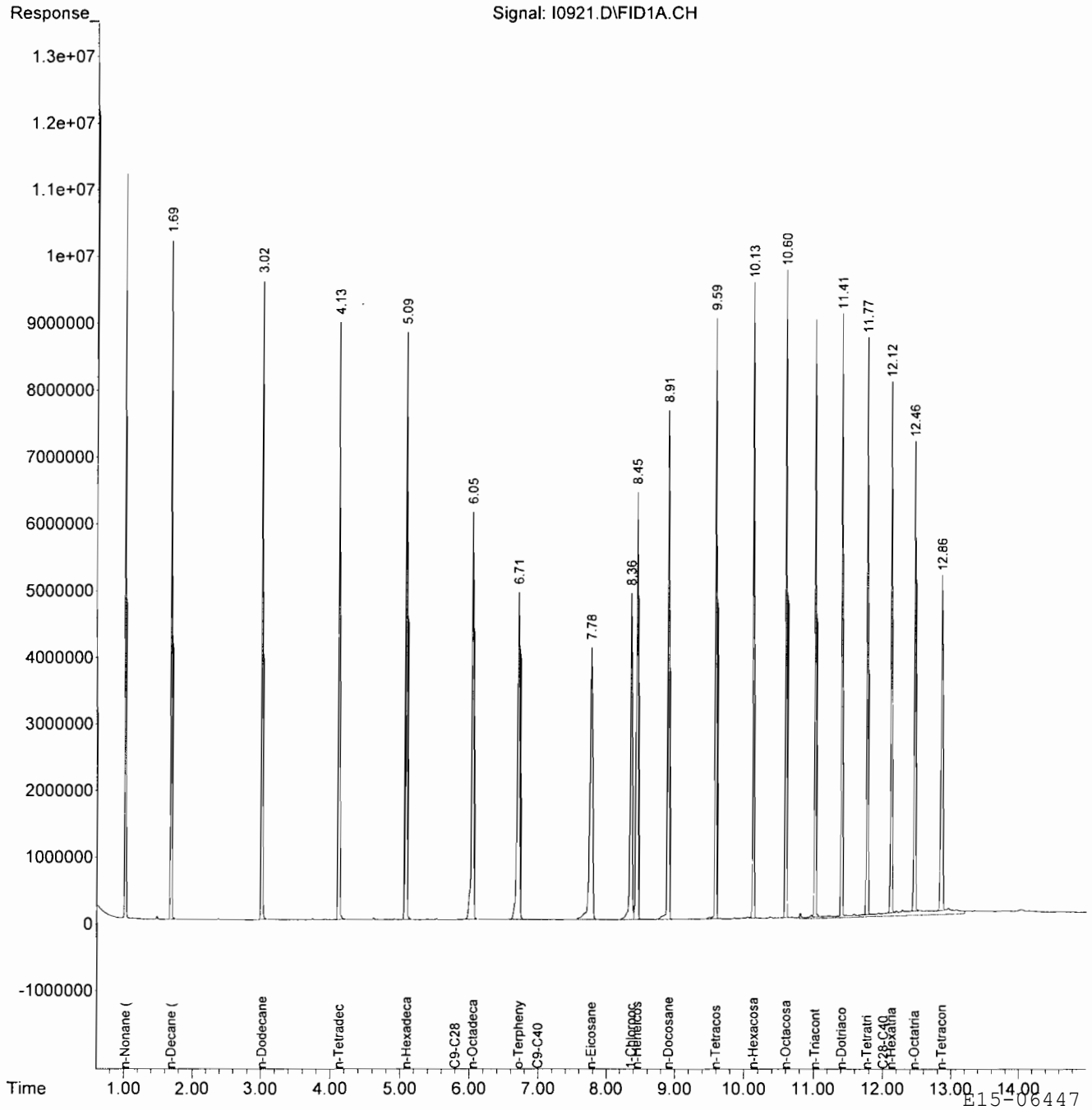
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\07-31-15\
Data File : I0921.D
Signal(s) : FID1A.CH
Acq On : 31 Jul 2015 18:46
Operator : JOLANTA
Sample : ALI_C_IAS_5296,250_PPM
Misc : ,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 01 11:29:51 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\07-31-15\
Data File : I0939.D
Signal(s) : FID1A.CH
Acq On : 01 Aug 2015 1:31
Operator : JOLANTA
Sample : ALI_C_IAS_5296,250_PPM
Misc : ,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 01 11:30:18 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	1-Chlorooctadecane	8.36	101526327	284.352 ng
Spiked Amount	100.000		Recovery	= 284.35%
23) S	o-Terphenyl	6.71	123253783	276.698 ng
Spiked Amount	100.000		Recovery	= 276.70%
Target Compounds				
2) T	n-Nonane (C9)	1.02	113169230	278.519 ng
3) T	n-Decane (C10)	1.69	118619742	287.795 ng
4) T	n-Dodecane (C12)	3.02	119756296	286.618 ng
5) T	n-Tetradecane (C14)	4.13	119763459	282.560 ng
6) T	n-Hexadecane (C16)	5.09	119864030	279.602 ng
7) T	n-Octadecane (C18)	6.05	121872215	277.781 ng
8) T	n-Eicosane (C20)	7.77	120758818	275.449 ng
9) T	n-Heneicosane (C21)	8.45	117285775	269.397 ng
10) T	n-Docosane (C22)	8.91	122189507	275.257 ng
11) T	n-Tetracosane (C24)	9.59	120405557	275.887 ng
12) T	n-Hexacosane (C26)	10.13	120240215	278.462 ng
13) T	n-Octacosane (C28)	10.60	118404502	273.178 ng
14) T	n-Triacontane (C30)	11.02	117086065	277.038 ng
15) T	n-Dotriacontane (C32)	11.41	113476970	277.658 ng
16) T	n-Tetratriacontane (C34)	11.77	109947426	280.270 ng
17) T	n-Hexatriacontane (C36)	12.12	107976325	284.018 ng
18) T	n-Octatriacontane (C38)	12.46	104254402	289.389 ng
19) T	n-Tetracontane (C40)	12.85	102589564	292.317 ng
20) H	C9-C28	5.80	1460851258	3204.204 ng
21) H	C28-C40	12.00	682645727	1643.788 ng
22) H	C9-C40	7.00	2171521045	4739.504 ng

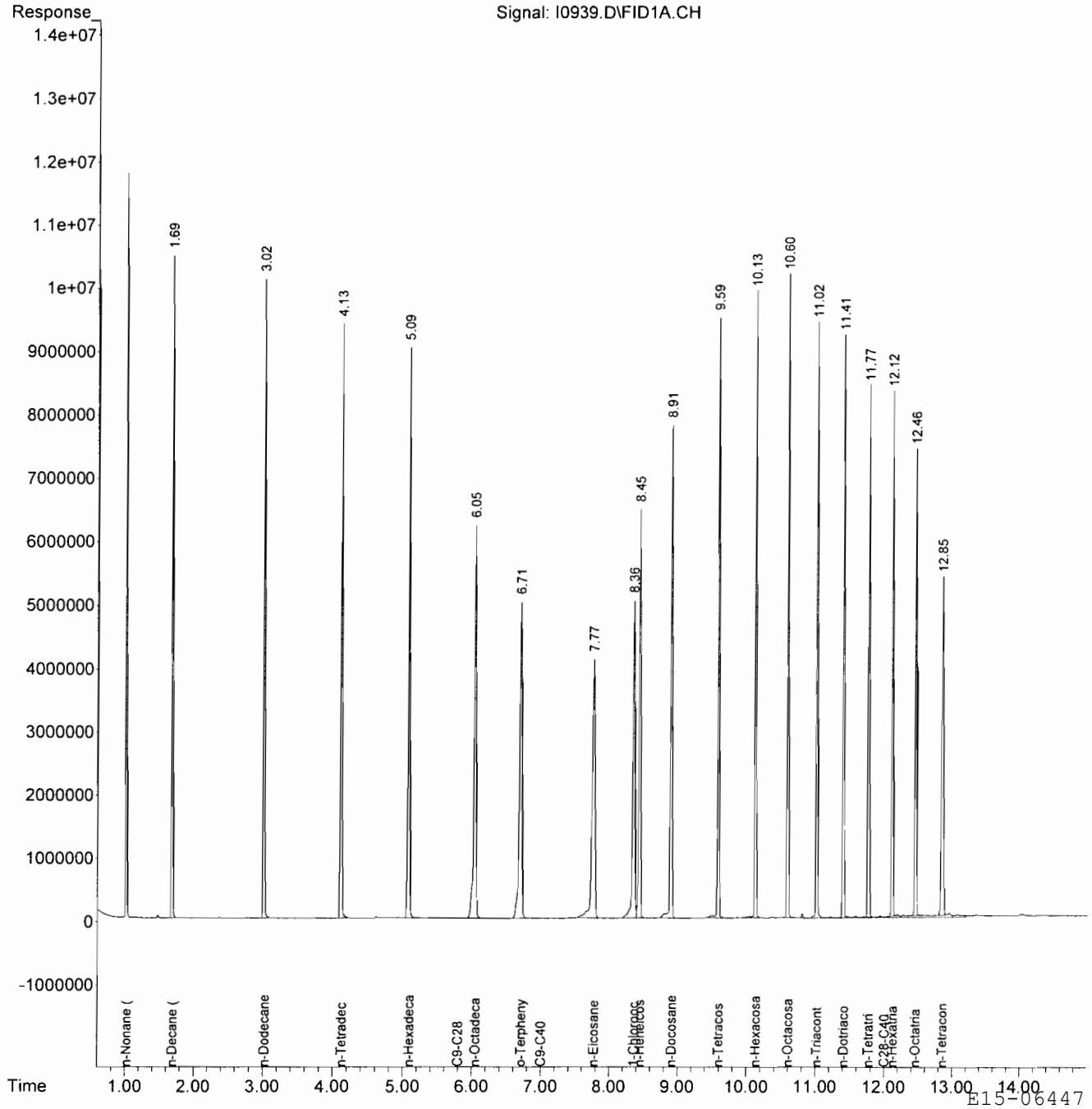
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\07-31-15\
Data File : I0939.D
Signal(s) : FID1A.CH
Acq On : 01 Aug 2015 1:31
Operator : JOLANTA
Sample : ALI_C_IAS_5296,250_PPM
Misc : ,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 01 11:30:18 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\08-03-15\
Data File : I0944.D
Signal(s) : FID1A.CH
Acq On : 03 Aug 2015 12:52
Operator : JOLANTA
Sample : ALI_C_IAS_5296,250_PPM
Misc : ,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 13:11:08 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc Units
System Monitoring Compounds					
1)	S	1-Chlorooctadecane	8.36	101060313	283.047 ng
Spiked Amount		100.000		Recovery	= 283.05%
23)	S	o-Terphenyl	6.71	126557414	284.115 ng
Spiked Amount		100.000		Recovery	= 284.12%
Target Compounds					
2)	T	n-Nonane (C9)	1.02	114396030	281.538 ng
3)	T	n-Decane (C10)	1.69	120340735	291.971 ng
4)	T	n-Dodecane (C12)	3.02	121599183	291.028 ng
5)	T	n-Tetradecane (C14)	4.13	121926290	287.663 ng
6)	T	n-Hexadecane (C16)	5.09	122459953	285.658 ng
7)	T	n-Octadecane (C18)	6.05	124988854	284.885 ng
8)	T	n-Eicosane (C20)	7.78	123834240	282.464 ng
9)	T	n-Heneicosane (C21)	8.45	124278251	285.458 ng
10)	T	n-Docosane (C22)	8.91	126069370	283.997 ng
11)	T	n-Tetracosane (C24)	9.59	124159529	284.488 ng
12)	T	n-Hexacosane (C26)	10.13	124504057	288.336 ng
13)	T	n-Octacosane (C28)	10.60	124236392	286.633 ng
14)	T	n-Triacontane (C30)	11.02	123640020	292.545 ng
15)	T	n-Dotriacontane (C32)	11.41	121086729	296.277 ng
16)	T	n-Tetratriacontane (C34)	11.79	117658128	299.925 ng
17)	T	n-Hexatriacontane (C36)	12.15	115629914	304.149 ng
18)	T	n-Octatriacontane (C38)	12.51	111075422	308.323 ng
19)	T	n-Tetracontane (C40)	12.91	108692597	309.707 ng
20)	H	C9-C28	5.80	1507536475	3306.603 ng
21)	H	C28-C40	12.00	720690602	1735.399 ng
22)	H	C9-C40	7.00	2243950765	4897.588 ng

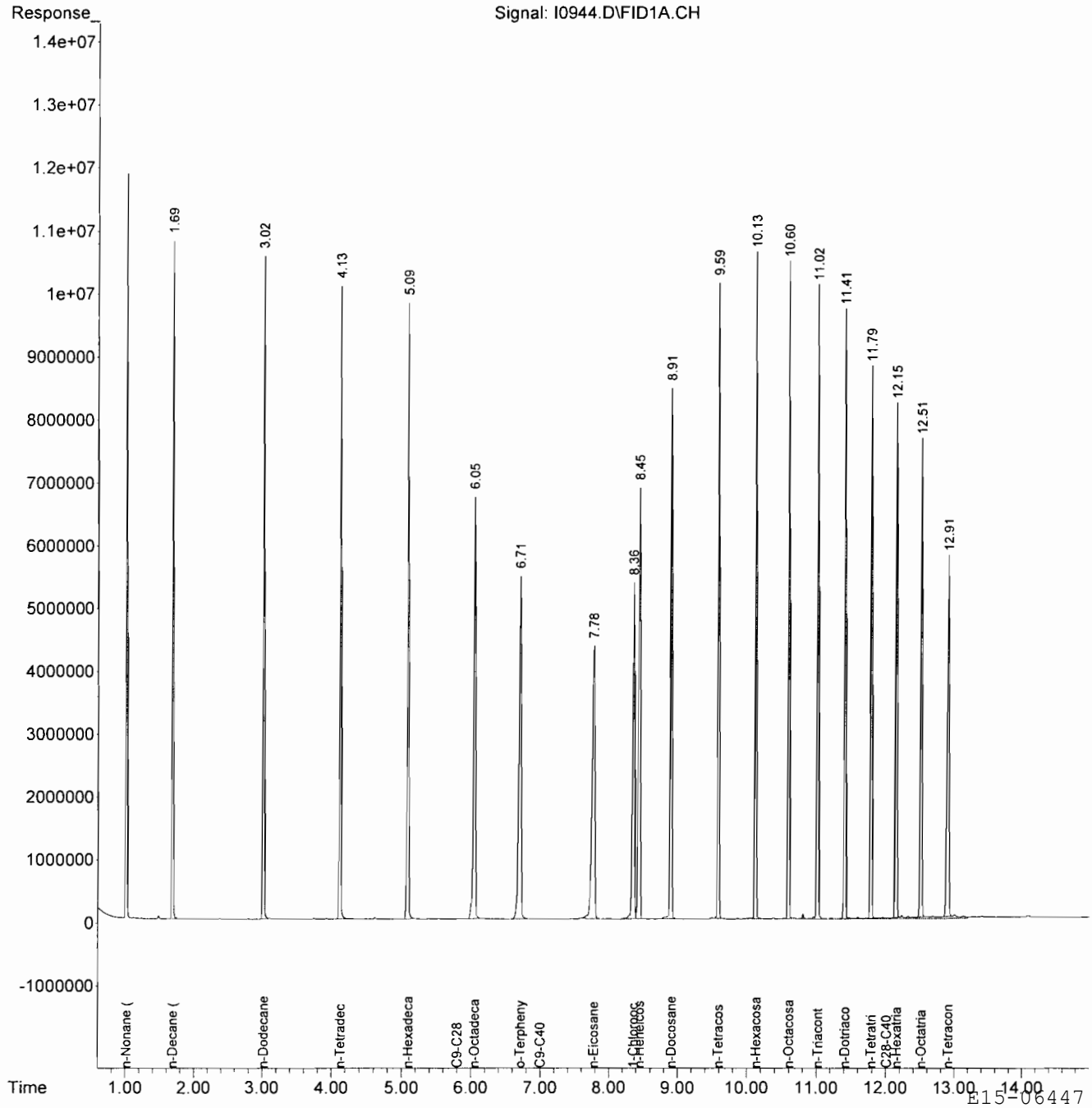
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\08-03-15\
Data File : I0944.D
Signal(s) : FID1A.CH
Acq On : 03 Aug 2015 12:52
Operator : JOLANTA
Sample : ALI_C_IAS_5296,250_PPM
Misc : ,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 13:11:08 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\08-03-15\
Data File : I0951.D
Signal(s) : FID1A.CH
Acq On : 03 Aug 2015 15:33
Operator : JOLANTA
Sample : ALI_C_IAS_5296,250_PPM
Misc : ,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 16:07:36 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	1-Chlorooctadecane	8.36	83030586	232.550 ng
Spiked Amount	100.000		Recovery	= 232.55%
23) S	o-Terphenyl	6.71	105703875	237.300 ng
Spiked Amount	100.000		Recovery	= 237.30%
Target Compounds				
2) T	n-Nonane (C9)	1.01	95968836	236.187 ng
3) T	n-Decane (C10)	1.69	100664570	244.232 ng
4) T	n-Dodecane (C12)	3.02	101583635	243.124 ng
5) T	n-Tetradecane (C14)	4.13	101876389	240.359 ng
6) T	n-Hexadecane (C16)	5.09	102187452	238.369 ng
7) T	n-Octadecane (C18)	6.05	104333080	237.804 ng
8) T	n-Eicosane (C20)	7.77	103960601	237.132 ng
9) T	n-Heneicosane (C21)	8.45	105052514	241.298 ng
10) T	n-Docosane (C22)	8.91	104981037	236.491 ng
11) T	n-Tetracosane (C24)	9.59	104641226	239.766 ng
12) T	n-Hexacosane (C26)	10.13	104381254	241.734 ng
13) T	n-Octacosane (C28)	10.60	104302696	240.643 ng
14) T	n-Triacontane (C30)	11.02	104209788	246.571 ng
15) T	n-Dotriacontane (C32)	11.41	102616111	251.083 ng
16) T	n-Tetratriacontane (C34)	11.78	100049937	255.040 ng
17) T	n-Hexatriacontane (C36)	12.13	98528457	259.166 ng
18) T	n-Octatriacontane (C38)	12.48	94868199	263.335 ng
19) T	n-Tetracontane (C40)	12.87	92665021	264.038 ng
20) H	C9-C28	5.80	1279327571	2806.054 ng
21) H	C28-C40	12.00	615281642	1481.577 ng
22) H	C9-C40	7.00	1911495426	4171.979 ng

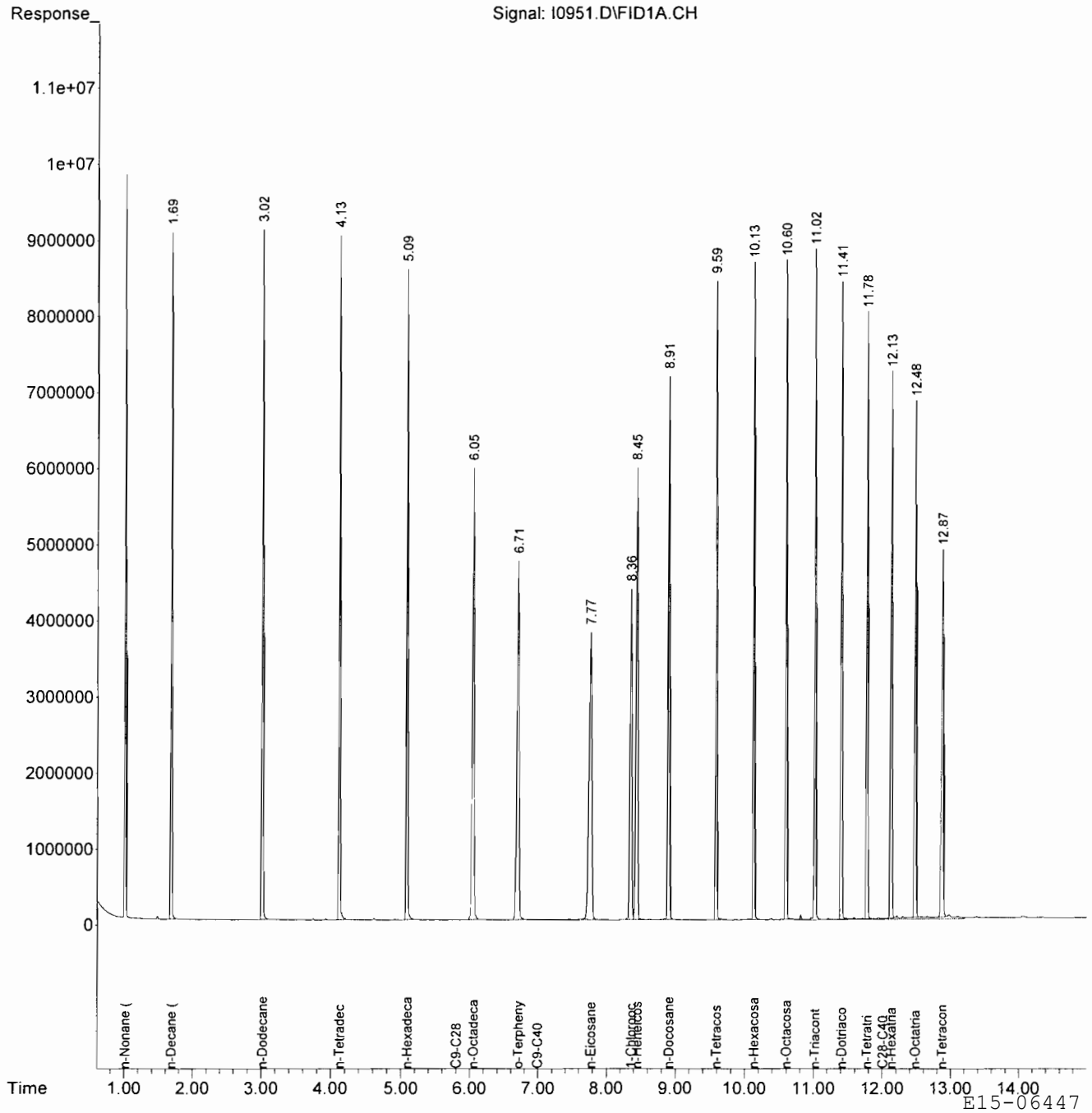
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\08-03-15\
Data File : I0951.D
Signal(s) : FID1A.CH
Acq On : 03 Aug 2015 15:33
Operator : JOLANTA
Sample : ALI_C_IAS_5296,250_PPM
Misc : ,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 16:07:36 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



EXTRACTABLE PETROLEUM HYDROCARBON
RAW QC DATA

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\07-31-15\
Data File : I0923.D
Signal(s) : FID1A.CH
Acq On : 31 Jul 2015 19:31
Operator : JOLANTA
Sample : NJ-EPH-C,LCSA150728-17,A,1000ml,100,1
Misc : 150728-17,07/28/15,NA,1
ALS Vial : 12 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 11:17:56 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	1-Chlorooctadecane	8.35	21459784	60.104	ng
Spiked Amount		100.000		Recovery	= 60.10%	
23)	S	o-Terphenyl	6.69	28061658	62.997	ng
Spiked Amount		100.000		Recovery	= 63.00%	
Target Compounds						
2)	T	n-Nonane (C9)	1.01	23128259	56.920	ng
3)	T	n-Decane (C10)	1.68	23020034	55.851	ng
4)	T	n-Dodecane (C12)	3.01	24211598	57.947	ng
5)	T	n-Tetradecane (C14)	4.12	24660620	58.182	ng
6)	T	n-Hexadecane (C16)	5.08	25388844	59.224	ng
7)	T	n-Octadecane (C18)	6.04	27420331	62.499	ng
8)	T	n-Eicosane (C20)	7.76	25952795	59.198	ng
9)	T	n-Heneicosane (C21)	8.43	59673702	137.066	ng
10)	T	n-Docosane (C22)	8.90	25888811	58.320	ng
11)	T	n-Tetracosane (C24)	9.59	26210977	60.058	ng
12)	T	n-Hexacosane (C26)	10.13	26052218	60.334	ng
13)	T	n-Octacosane (C28)	10.59	85791422	197.935	ng
14)	T	n-Triacontane (C30)	11.01	25195246	59.615	ng
15)	T	n-Dotriacontane (C32)	11.40	24642030	60.295	ng
16)	T	n-Tetratriacontane (C34)	11.76	23385702	59.613	ng
17)	T	n-Hexatriacontane (C36)	12.11	23324058	61.351	ng
18)	T	n-Octatriacontane (C38)	12.45	22655449	62.887	ng
19)	T	n-Tetracontane (C40)	12.84	22374104	63.752	ng
20)	H	C9-C28	5.80	820492764	1799.654	ng
21)	H	C28-C40	12.00	263957698	635.601	ng
22)	H	C9-C40	7.00	1132759320	2472.331	ng

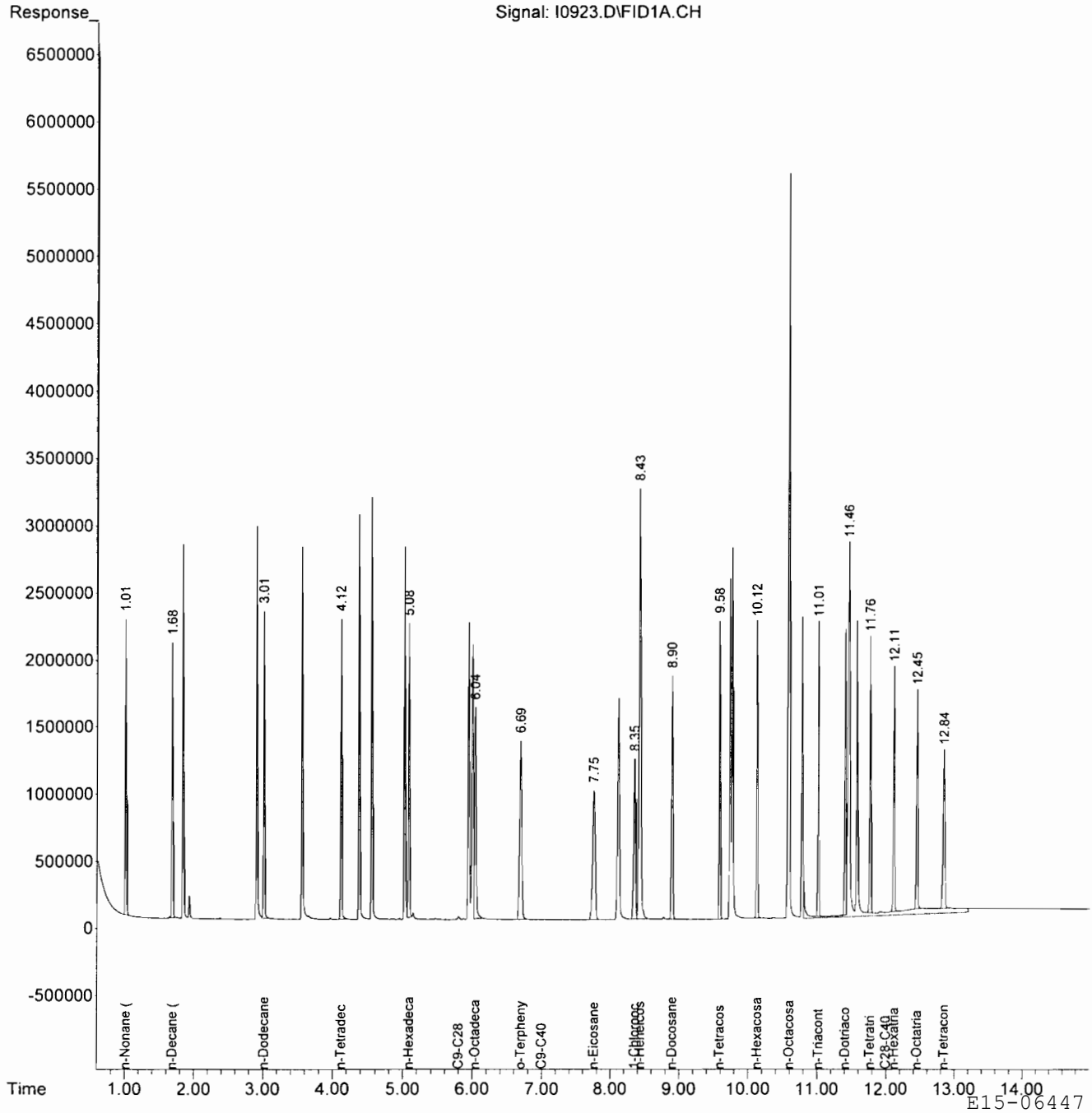
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\07-31-15\
Data File : I0923.D
Signal(s) : FID1A.CH
Acq On : 31 Jul 2015 19:31
Operator : JOLANTA
Sample : NJ-EPH-C,LCSA150728-17,A,1000ml,100,1
Misc : 150728-17,07/28/15,NA,1
ALS Vial : 12 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 11:17:56 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-31-15\
Data File : I0924.D
Signal(s) : FID1A.CH
Acq On : 31 Jul 2015 19:54
Operator : JOLANTA
Sample : NJ-EPH-C,LCSDA150728-17,A,1000ml,100,1
Misc : 150728-17,07/28/15,NA,1
ALS Vial : 13 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 11:09:40 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	1-Chlorooctadecane	8.35	21216444	59.422 ng
Spiked Amount	100.000		Recovery =	59.42%
23) S	o-Terphenyl	6.69	27691872	62.167 ng
Spiked Amount	100.000		Recovery =	62.17%
Target Compounds				
2) T	n-Nonane (C9)	1.01	22847442	56.229 ng
3) T	n-Decane (C10)	1.68	22698853	55.072 ng
4) T	n-Dodecane (C12)	3.01	23834164	57.043 ng
5) T	n-Tetradecane (C14)	4.12	24281209	57.287 ng
6) T	n-Hexadecane (C16)	5.08	25001120	58.319 ng
7) T	n-Octadecane (C18)	6.04	27222100	62.047 ng
8) T	n-Eicosane (C20)	7.76	25615460	58.428 ng
9) T	n-Heneicosane (C21)	8.43	59033586	135.596 ng
10) T	n-Docosane (C22)	8.90	25598987	57.667 ng
11) T	n-Tetracosane (C24)	9.59	25957830	59.478 ng
12) T	n-Hexacosane (C26)	10.12	25855271	59.878 ng
13) T	n-Octacosane (C28)	10.59	84538914	195.045 ng
14) T	n-Triacontane (C30)	11.01	24992210	59.134 ng
15) T	n-Dotriacontane (C32)	11.40	24293437	59.442 ng
16) T	n-Tetratriacontane (C34)	11.77	22918987	58.423 ng
17) T	n-Hexatriacontane (C36)	12.11	22796721	59.964 ng
18) T	n-Octatriacontane (C38)	12.45	21984218	61.024 ng
19) T	n-Tetracontane (C40)	12.84	21811705	62.150 ng
20) H	C9-C28	5.80	798835266	1752.151 ng
21) H	C28-C40	12.00	256485695	617.609 ng
22) H	C9-C40	7.00	1096590769	2393.390 ng

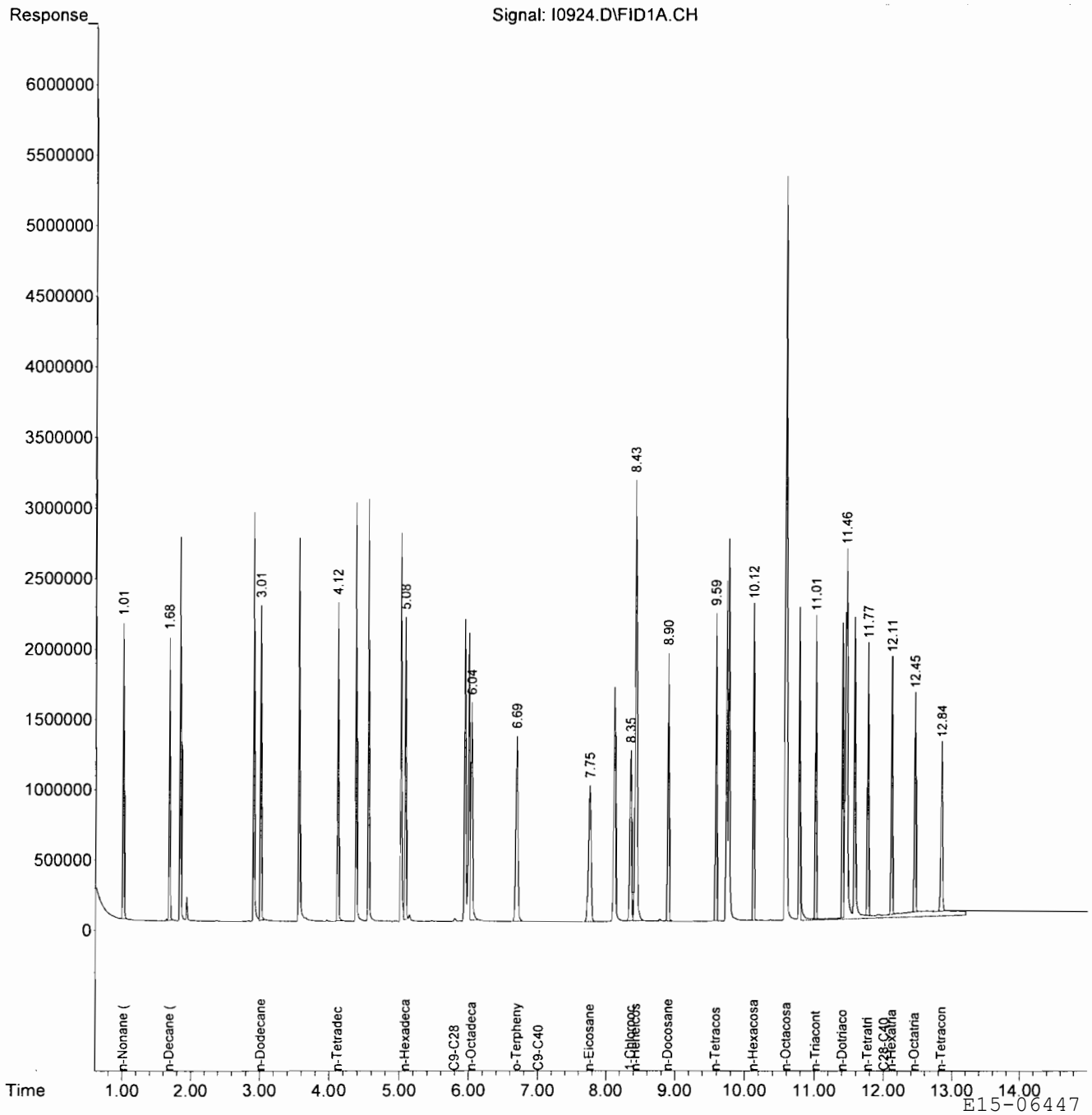
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\07-31-15\
Data File : I0924.D
Signal(s) : FID1A.CH
Acq On : 31 Jul 2015 19:54
Operator : JOLANTA
Sample : NJ-EPH-C,LCSDA150728-17,A,1000ml,100,1
Misc : 150728-17,07/28/15,NA,1
ALS Vial : 13 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 11:09:40 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\07-27-15\
Data File : T7067.D
Signal(s) : FID1A.CH
Acq On : 27 Jul 2015 16:12
Operator : MJ
Sample : NJ-EPH-C,E15-06421-001MS,A,200ml,100,1
Misc : 150723-22,07/23/15,NA,1
ALS Vial : 9 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Jul 28 07:58:53 2015
Quant Method : C:\MSDCHEM\1\METHODS\TEPH0716.M
Quant Title :
QLast Update : Thu Jul 16 15:00:14 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units	
System Monitoring Compounds				
1) S 1-Chlorooctadecane	8.44	17102459	66.201 ng	
Spiked Amount 100.000		Recovery =	66.20%	
23) S o-Terphenyl	6.83	23379372	67.791 ng	
Spiked Amount 100.000		Recovery =	67.79%	
Target Compounds				
2) T n-Nonane (C9)	1.02	11669270	39.698 ng	m
3) T n-Decane (C10)	1.70	14348031	47.778 ng	
4) T n-Dodecane (C12)	3.04	17486981	56.859 ng	
5) T n-Tetradecane (C14)	4.16	19081548	61.067 ng	
6) T n-Hexadecane (C16)	5.13	19733802	62.252 ng	
7) T n-Octadecane (C18)	6.12	19958547	61.359 ng	
8) T n-Eicosane (C20)	7.88	20442540	63.062 ng	
9) T n-Heneicosane (C21)	8.51	43925139	134.437 ng	
10) T n-Docosane (C22)	8.97	20113466	61.643 ng	
11) T n-Tetracosane (C24)	9.65	19901597	61.883 ng	
12) T n-Hexacosane (C26)	10.19	19726541	62.745 ng	
13) T n-Octacosane (C28)	10.66	60802182	197.744 ng	
14) T n-Triacontane (C30)	11.09	19159611	64.425 ng	
15) T n-Dotriacontane (C32)	11.49	18785418	66.256 ng	m
16) T n-Tetratriacontane (C34)	11.88	18562344	68.307 ng	
17) T n-Hexatriacontane (C36)	12.26	19251341	72.120 ng	
18) T n-Octatriacontane (C38)	12.63	18144596	71.751 ng	
19) T n-Tetracontane (C40)	13.07	17980306	70.911 ng	
22) H C9-C40	7.10	835319475	2505.520 ng	

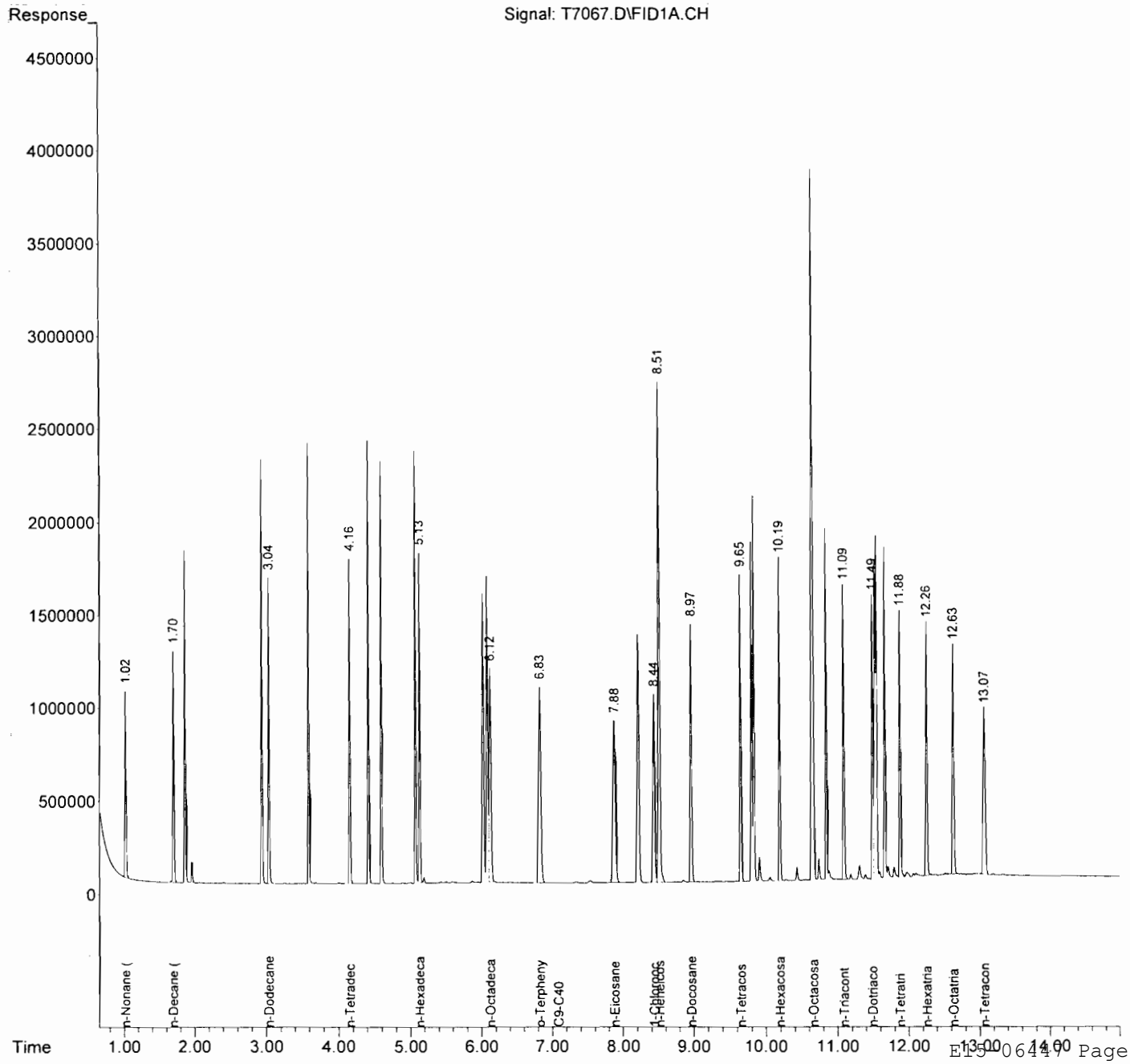
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\07-27-15\
Data File : T7067.D
Signal(s) : FID1A.CH
Acq On : 27 Jul 2015 16:12
Operator : MJ
Sample : NJ-EPH-C,E15-06421-001MS,A,200ml,100,1
Misc : 150723-22,07/23/15,NA,1
ALS Vial : 9 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Jul 28 07:58:53 2015
Quant Method : C:\MSDCHEM\1\METHODS\TEPH0716.M
Quant Title :
QLast Update : Thu Jul 16 15:00:14 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\07-27-15\
Data File : T7064.D
Signal(s) : FID1A.CH
Acq On : 27 Jul 2015 15:06
Operator : MJ
Sample : K01,E15-06421-001,A,1000ml,100,1
Misc : 150723-22,07/23/15,07/23/15,1
ALS Vial : 6 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Jul 27 15:33:48 2015
Quant Method : C:\MSDCHEM\1\METHODS\TEPH0716.M
Quant Title :
QLast Update : Thu Jul 16 15:00:14 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 1-Chlorooctadecane	8.44	14290258	55.315 ng
Spiked Amount 100.000		Recovery =	55.32%
23) S o-Terphenyl	6.83	18884226	54.757 ng
Spiked Amount 100.000		Recovery =	54.76%
Target Compounds			

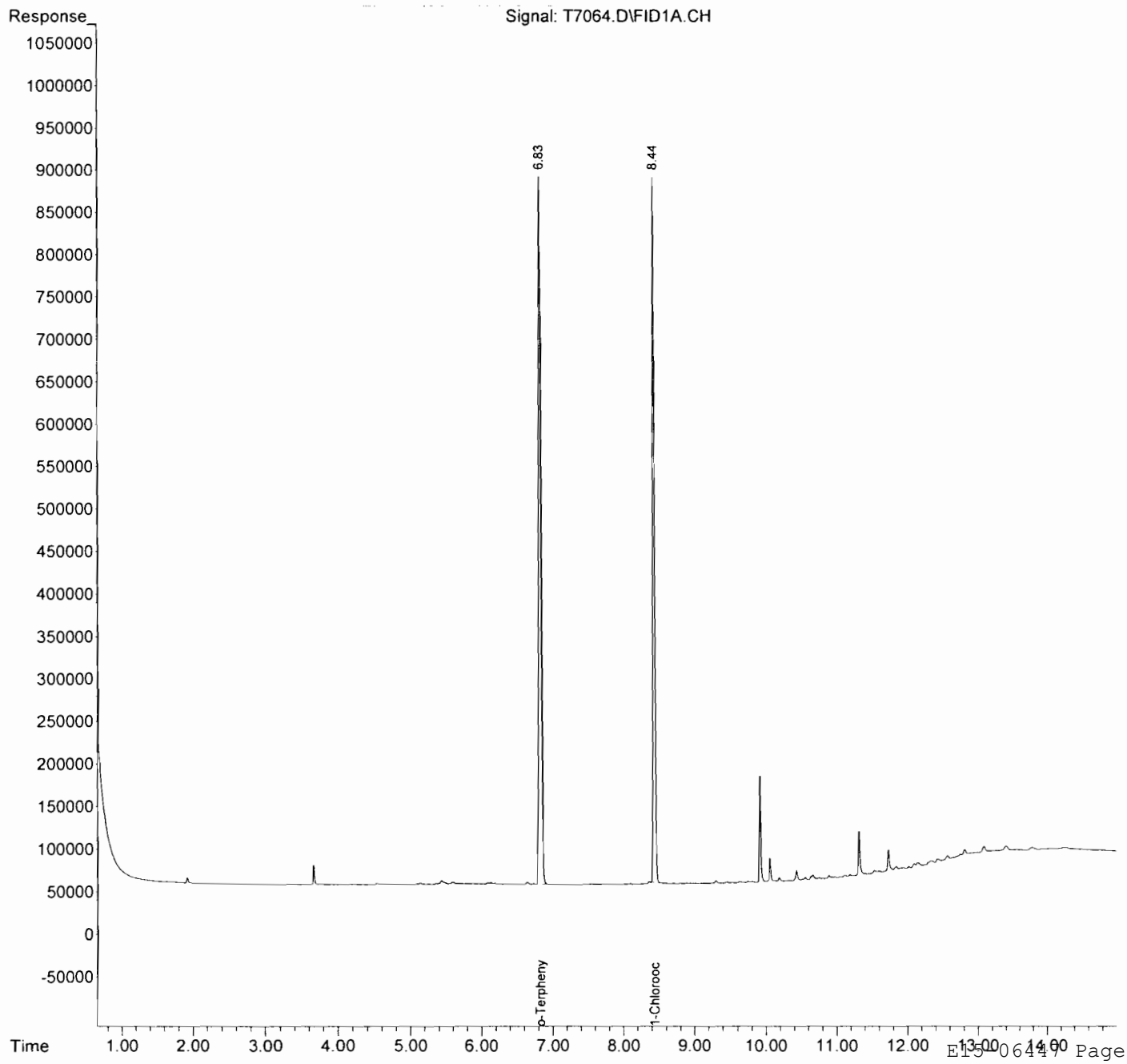
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\07-27-15\
Data File : T7064.D
Signal(s) : FID1A.CH
Acq On : 27 Jul 2015 15:06
Operator : MJ
Sample : K01,E15-06421-001,A,1000ml,100,1
Misc : 150723-22,07/23/15,07/23/15,1
ALS Vial : 6 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Jul 27 15:33:48 2015
Quant Method : C:\MSDCHEM\1\METHODS\TEPH0716.M
Quant Title :
QLast Update : Thu Jul 16 15:00:14 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



TEPH0716.M Tue Jul 28 08:15:29 2015 RPT1

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\07-27-15\
Data File : T7066.D
Signal(s) : FID1A.CH
Acq On : 27 Jul 2015 15:50
Operator : MJ
Sample : K01,E15-06421-001DUP,A,400ml,100,1
Misc : 150723-22,07/23/15,07/23/15,1
ALS Vial : 8 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Jul 27 16:08:20 2015
Quant Method : C:\MSDCHEM\1\METHODS\TEPH0716.M
Quant Title :
QLast Update : Thu Jul 16 15:00:14 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 1-Chlorooctadecane	8.44	18630894	72.117 ng
Spiked Amount 100.000		Recovery =	72.12%
23) S o-Terphenyl	6.83	25826382	74.887 ng
Spiked Amount 100.000		Recovery =	74.89%
Target Compounds			

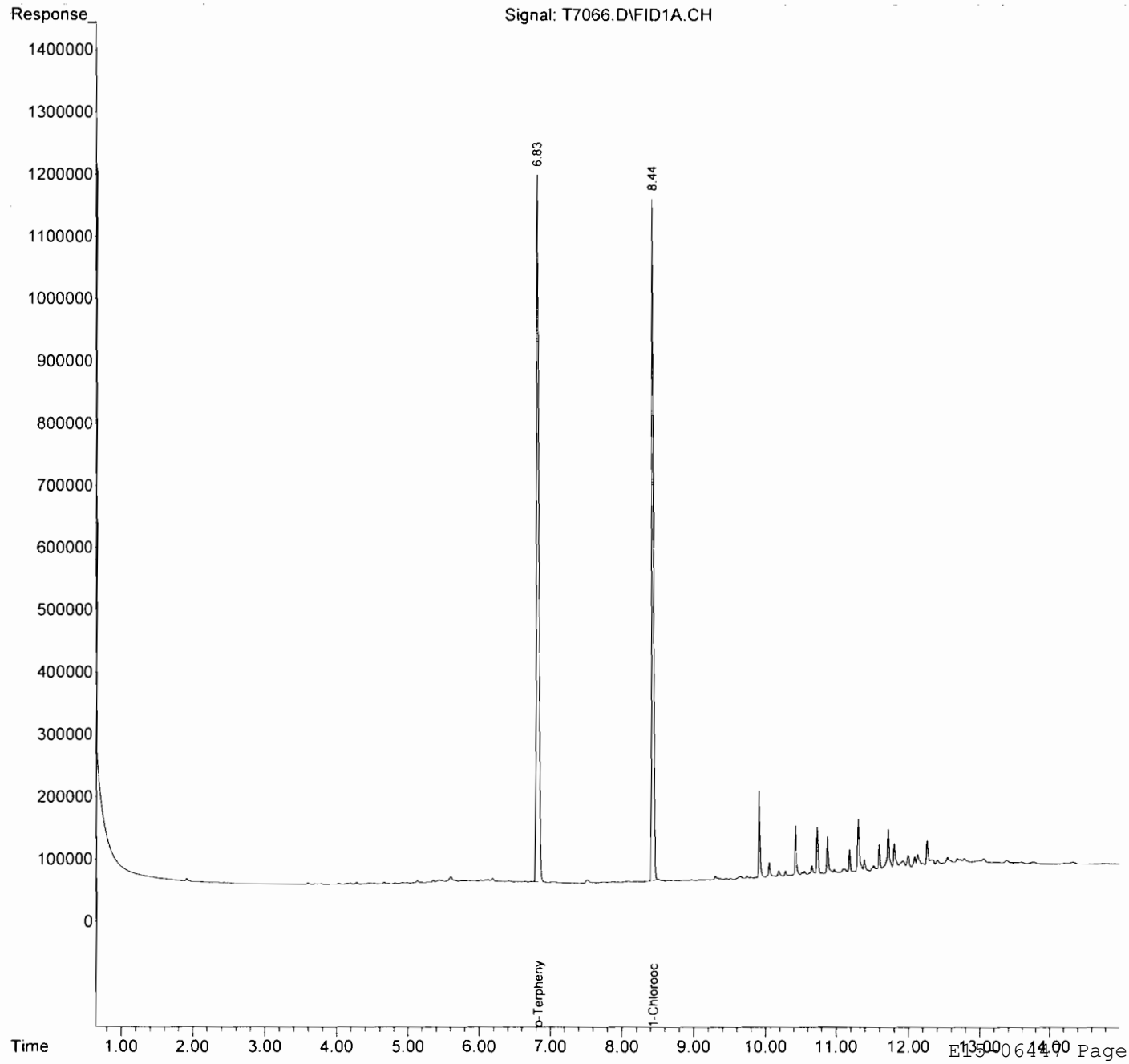
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\07-27-15\
Data File : T7066.D
Signal(s) : FID1A.CH
Acq On : 27 Jul 2015 15:50
Operator : MJ
Sample : K01,E15-06421-001DUP,A,400ml,100,1
Misc : 150723-22,07/23/15,07/23/15,1
ALS Vial : 8 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Jul 27 16:08:20 2015
Quant Method : C:\MSDCHEM\1\METHODS\TEPH0716.M
Quant Title :
QLast Update : Thu Jul 16 15:00:14 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



INTEGRATED ANALYTICAL LABORATORIES

NJ-EPH-C40

Lab ID: BLKA150723-22
Client ID: NJ-EPH-C
Date Received: NA
Date Extracted: 07/23/2015
Date Analyzed: 07/27/2015
Data file: T7061.D

GC Column: RTX-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
C9-C40	ND		500	200

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

NJ-EPH-C40

Lab ID: BLKA150728-17
Client ID: NJ-EPH-C
Date Received: NA
Date Extracted: 07/28/2015
Date Analyzed: 08/03/2015
Data file: I0945.D

GC Column: RTX-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
C9-C40	ND		500	200

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\08-03-15\
Data File : I0945.D
Signal(s) : FID1A.CH
Acq On : 03 Aug 2015 13:15
Operator : JOLANTA
Sample : NJ-EPH-C,BLKA150728-17,A,1000ml,100,1
Misc : 150728-17,07/28/15,NA,1
ALS Vial : 11 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 14:04:43 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
1) S 1-Chlorooctadecane	8.35	18851620	52.799	ng	m
Spiked Amount 100.000		Recovery = 52.80%			
23) S o-Terphenyl	6.69	26393838	59.253	ng	m
Spiked Amount 100.000		Recovery = 59.25%			
Target Compounds					

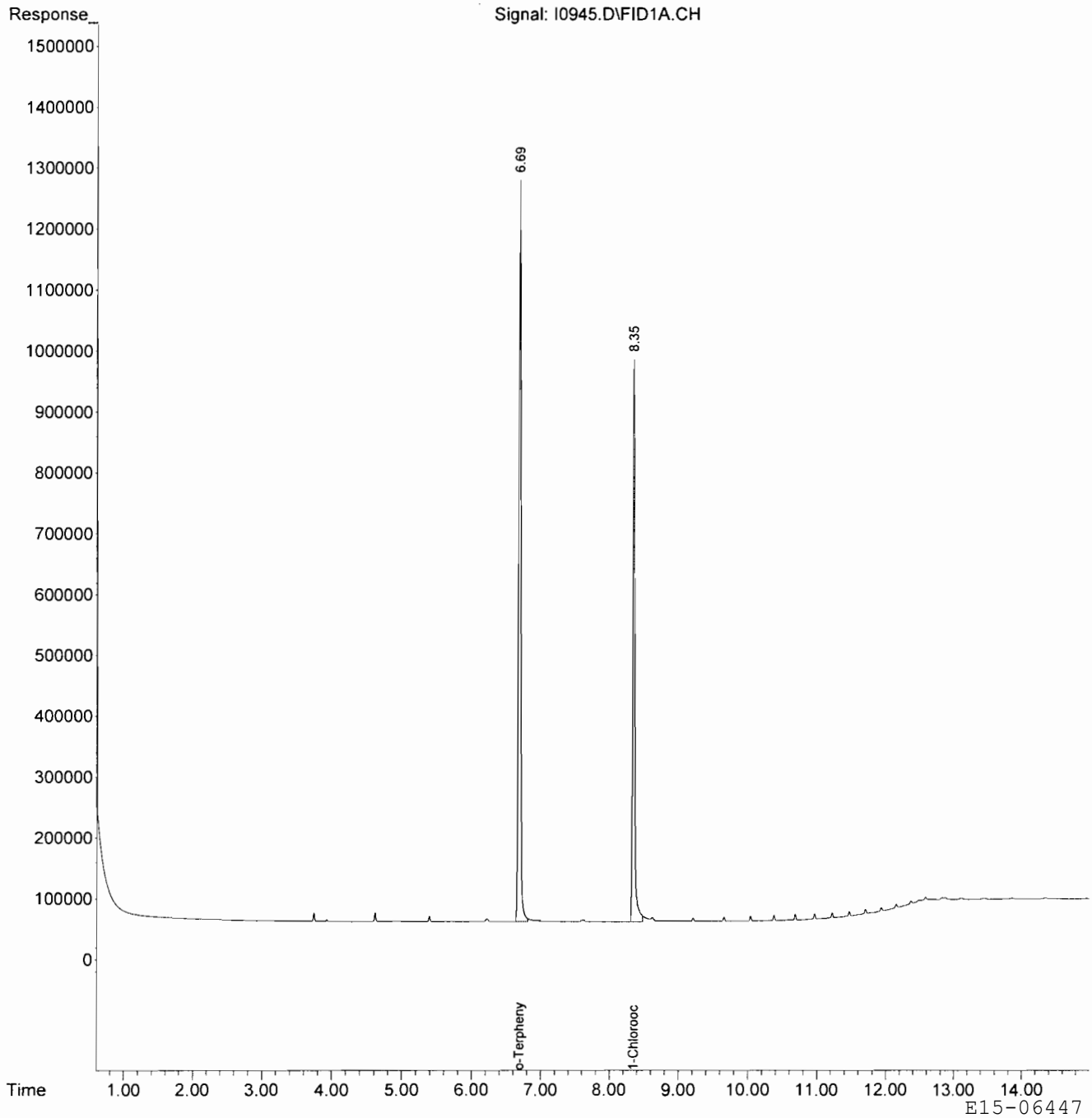
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\08-03-15\
Data File : I0945.D
Signal(s) : FID1A.CH
Acq On : 03 Aug 2015 13:15
Operator : JOLANTA
Sample : NJ-EPH-C,BLKA150728-17,A,1000ml,100,1
Misc : 150728-17,07/28/15,NA,1
ALS Vial : 11 Sample Multiplier: 1

Integration File: AUTOINT1.E
Quant Time: Aug 03 14:04:43 2015
Quant Method : C:\MSDCHEM\1\METHODS\IEPH0707.M
Quant Title :
QLast Update : Thu Jul 30 18:52:52 2015
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal Phase :
Signal Info :



METALS

METALS QC SUMMARY

METALS QUALITY CONTROL

INITIAL & CONTINUING CALIBRATION VERIFICATION

Batch (Page) #: 364

SDG #: E15-06176, E15-06447, E15-06443, E15-06230, E15-06191, E15-06403, E15-06427, E15-06446 E15-06455, E15-06463, E15-06420, E15-06360

Matrix: Aqueous Method: 6020A Units: ppb (ug/L)

			7/27/15 23:03		7/27/15 23:59		7/28/15 00:52		7/28/15 01:44	
	INST.	ICV & CCV	ICV		CCV		CCV		CCV	
ANALYTE	MDL	TRUE	FOUND	% R	FOUND	% R	FOUND	% R	FOUND	% R
Aluminum	0.500	25.0	24.1	96.4	23.9	95.6	24.8	99.2	25.4	102
Antimony	0.250	25.0	24.0	96.0	23.8	95.2	24.0	96.0	23.6	94.4
Arsenic	0.250	25.0	24.4	97.6	23.8	95.2	24.9	99.6	24.8	99.2
Barium	0.500	25.0	24.4	97.6	24.1	96.4	24.5	98.0	24.5	98.0
Beryllium	0.250	25.0	23.7	94.8	23.5	94.0	23.2	92.8	22.7	90.8
Cadmium	0.125	25.0	24.2	96.8	23.9	95.6	24.5	98.0	24.4	97.6
Calcium	5.00	250	247	98.8	248	99.2	257	103	244	97.6
Chromium	0.500	25.0	24.4	97.6	23.7	94.8	24.4	97.6	24.0	96.0
Cobalt	0.500	25.0	24.3	97.2	23.4	93.6	24.2	96.8	23.8	95.2
Copper	0.500	25.0	24.5	98.0	23.7	94.8	24.4	97.6	24.2	96.8
Iron	5.00	250	247	98.8	240	96.0	250	100	245	98.0
Lead	0.125	25.0	23.9	95.6	23.9	95.6	24.0	96.0	23.8	95.2
Magnesium	5.00	250	247	98.8	243	97.2	253	101	249	99.6
Manganese	0.500	25.0	24.0	96.0	23.4	93.6	24.7	98.8	24.1	96.4
Mercury	0.150	5.00	5.23	105	5.15	103				
Nickel	0.250	25.0	24.0	96.0	23.1	92.4	23.7	94.8	23.8	95.2
Potassium	5.00	250	246	98.4	247	98.8	253	101	259	104
Selenium	0.500	25.0	23.4	93.6	26.0	104	24.1	96.4	24.6	98.4
Silver	0.125	25.0	24.6	98.4	24.4	97.6	24.4	97.6	24.2	96.8
Sodium	5.00	250	247	98.8	243	97.2	261	104	247	98.8
Thallium	0.125	25.0	23.5	94.0	23.2	92.8	23.2	92.8	23.3	93.2
Vanadium	0.500	25.0	24.2	96.8	23.6	94.4	24.2	96.8	23.8	95.2
Zinc	0.500	25.0	24.0	96.0	23.3	93.2	24.0	96.0	23.8	95.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

METALS QUALITY CONTROL

INITIAL & CONTINUING CALIBRATION VERIFICATION

Batch (Page) #: 364

SDG #: E15-06176, E15-06447, E15-06443, E15-06230, E15-06191, E15-06403, E15-06427, E15-06446
E15-06455, E15-06463, E15-06420, E15-06360

Matrix: Aqueous Method: 6020A Units: ppb (ug/L)

			7/28/15 02:37		7/28/15 03:29		7/28/15 04:04			
	INST.	ICV & CCV	CCV		CCV		CCV			
ANALYTE	MDL	TRUE	FOUND	% R	FOUND	% R	FOUND	% R	FOUND	% R
Aluminum	0.500	25.0	25.9	104	25.3	101	23.9	95.6		
Antimony	0.250	25.0	23.8	95.2	23.4	93.6	23.6	94.4		
Arsenic	0.250	25.0	24.7	98.8	24.5	98.0	23.5	94.0		
Barium	0.500	25.0	24.3	97.2	24.3	97.2	24.5	98.0		
Beryllium	0.250	25.0	23.0	92.0	23.2	92.8	23.0	92.0		
Cadmium	0.125	25.0	24.4	97.6	24.5	98.0	23.9	95.6		
Calcium	5.00	250	242	96.8	249	99.6	228	91.2		
Chromium	0.500	25.0	24.6	98.4	23.9	95.6	23.6	94.4		
Cobalt	0.500	25.0	24.0	96.0	24.0	96.0	23.6	94.4		
Copper	0.500	25.0	24.3	97.2	24.2	96.8	24.1	96.4		
Iron	5.00	250	248	99.2	248	99.2	243	97.2		
Lead	0.125	25.0	23.6	94.4	23.8	95.2	23.6	94.4		
Magnesium	5.00	250	254	102	253	101	245	98.0		
Manganese	0.500	25.0	24.4	97.6	24.2	96.8	23.7	94.8		
Nickel	0.250	25.0	23.9	95.6	23.5	94.0	23.5	94.0		
Potassium	5.00	250	258	103	255	102	241	96.4		
Selenium	0.500	25.0	26.1	104	24.8	99.2	24.0	96.0		
Silver	0.125	25.0	24.2	96.8	24.3	97.2	24.2	96.8		
Sodium	5.00	250	272	109	245	98.0	262	105		
Thallium	0.125	25.0	23.0	92.0	23.1	92.4	23.0	92.0		
Vanadium	0.500	25.0	24.1	96.4	24.0	96.0	23.6	94.4		
Zinc	0.500	25.0	24.2	96.8	23.7	94.8	23.5	94.0		

(1) Control Limits: Mercury 80-120; Other Metals 90-110

METALS QUALITY CONTROL

INITIAL & CONTINUING CALIBRATION BLANKS VERIFICATION

Batch (Page) #: 364
SDG #: E15-06176, E15-06447, E15-06443, E15-06230, E15-06191, E15-06403, E15-06427, E15-06446
E15-06455, E15-06463, E15-06420, E15-06360

Matrix: Aqueous Method: 6020A Concentration/Units: ppb (µg/L)

		7/27/15 23:11	7/28/15 00:04	7/28/15 00:56	7/28/15 01:49	7/28/15 02:41	7/28/15 03:34
ANALYTE	INST. MDL	ICB	CCB	CCB	CCB	CCB	CCB
Aluminum	0.500	ND	ND	ND	ND	ND	ND
Antimony	0.250	ND	ND	ND	ND	ND	ND
Arsenic	0.250	ND	ND	ND	ND	ND	ND
Barium	0.500	ND	ND	ND	ND	ND	ND
Beryllium	0.250	ND	ND	ND	ND	ND	ND
Cadmium	0.125	ND	ND	ND	ND	ND	ND
Calcium	5.00	ND	ND	ND	ND	ND	ND
Chromium	0.500	ND	ND	ND	ND	ND	ND
Cobalt	0.500	ND	ND	ND	ND	ND	ND
Copper	0.500	ND	ND	ND	ND	ND	ND
Iron	5.00	ND	ND	ND	ND	ND	ND
Lead	0.125	ND	ND	ND	ND	ND	ND
Magnesium	5.00	ND	ND	ND	ND	ND	ND
Manganese	0.500	ND	ND	ND	ND	ND	ND
Mercury	0.150	ND	ND				
Nickel	0.250	ND	ND	ND	ND	ND	ND
Potassium	5.00	ND	ND	ND	ND	ND	ND
Selenium	0.500	ND	ND	ND	ND	ND	ND
Silver	0.125	ND	ND	ND	ND	ND	ND
Sodium	5.00	ND	ND	ND	ND	ND	ND
Thallium	0.125	ND	ND	ND	ND	ND	ND
Vanadium	0.500	ND	ND	ND	ND	ND	ND
Zinc	0.500	ND	ND	ND	ND	ND	ND

METALS QUALITY CONTROL

INITIAL & CONTINUING CALIBRATION BLANKS VERIFICATION

Batch (Page) #: 364

SDG #: E15-06176, E15-06447, E15-06443, E15-06230, E15-06191, E15-06403, E15-06427, E15-06446
E15-06455, E15-06463, E15-06420, E15-06360

Matrix: Aqueous Method: 6020A Concentration/Units: ppb (µg/L)

7/28/15 04:08

ANALYTE	INST. MDL	CCB					
Aluminum	0.500	ND					
Antimony	0.250	ND					
Arsenic	0.250	ND					
Barium	0.500	ND					
Beryllium	0.250	ND					
Cadmium	0.125	ND					
Calcium	5.00	ND					
Chromium	0.500	ND					
Cobalt	0.500	ND					
Copper	0.500	ND					
Iron	5.00	ND					
Lead	0.125	ND					
Magnesium	5.00	ND					
Manganese	0.500	ND					
Nickel	0.250	ND					
Potassium	5.00	ND					
Selenium	0.500	ND					
Silver	0.125	ND					
Sodium	5.00	ND					
Thallium	0.125	ND					
Vanadium	0.500	ND					
Zinc	0.500	ND					

METALS QUALITY CONTROL

BLANK 1 RESULTS SUMMARY

07/27/2015 11:38 PM

Batch (Page) #: 364
Associated Lab Case for Blank 1: E15-06176, E15-06191, E15-06230, E15-06403, E15-06427, E15-06443, E15-06446 E15-06447, E15-06455

Matrix: Aqueous Unit: ppb (µg/L) Method: 6020A

ANALYTE	SAMPLE MDL	REAGENT BLANK BLKA150727-01
Aluminum	2.00	ND
Antimony	1.00	ND
Arsenic	1.00	ND
Barium	2.00	ND
Beryllium	1.00	ND
Cadmium	0.500	ND
Calcium	20.0	ND
Chromium	2.00	ND
Cobalt	2.00	ND
Copper	2.00	ND
Iron	20.0	ND
Lead	0.500	ND
Magnesium	20.0	ND
Manganese	2.00	ND
Mercury	0.300	ND
Nickel	1.00	ND
Potassium	20.0	ND
Selenium	2.00	ND
Silver	0.500	ND
Sodium	20.0	ND
Thallium	0.500	ND
Vanadium	2.00	ND
Zinc	2.00	ND

Associated Sample for Blank 1:

06176-005,014,022; 06191-001~004; 06230-005
06403-001; 06427-001~003; 06443-008~009; 06446-001
06446-002; 06447-005~006,013; 06455-001

METALS QUALITY CONTROL

ICP-MS ICSAB RESULTS SUMMARY

Instrument: Agilent7700
Batch (Page) #: 364
SDG #: E15-06176, E15-06447, E15-06443, E15-06230, E15-06191, E15-06403, E15-06427, E15-06446
E15-06455, E15-06463, E15-06420, E15-06360

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	TRUE		INITIAL FOUND			CONTROL
	SOL A	SOL B	SOL A	SOL A+B	%R	LIMIT %R
Chlorine	1000000	-	-	-	-	NA
Carbon	200000	-	-	-	-	NA
Aluminum	100000	-	98600	94300	94.3	NA
Calcium	100000	-	102000	98400	98.4	NA
Iron	100000	-	101000	97300	97.3	NA
Potassium	100000	-	99300	96000	96.0	NA
Magnesium	100000	-	99800	95700	95.7	NA
Sodium	100000	-	100000	96400	96.4	NA
Phosphorus	100000	-	-	-	-	NA
Sulfur	100000	-	-	-	-	NA
Molybdenum	2000	-	2300	2210	111	NA
Titanium	2000	-	2120	2030	102	NA
Silver	-	20.0	-	21.4	107	80-120
Arsenic	-	20.0	-	21.4	107	80-120
Cadmium	-	20.0	-	21.0	105	80-120
Cobalt	-	20.0	-	19.8	99.0	80-120
Chromium	-	20.0	-	20.6	103	80-120
Copper	-	20.0	-	20.1	101	80-120
Manganese	-	20.0	-	20.2	101	80-120
Nickel	-	20.0	-	20.1	101	80-120
Zinc	-	20.0	-	20.6	103	80-120

%R = Percent Recovery

METALS QUALITY CONTROL

LABORATORY CONTROL SAMPLE

Batch (Page) #: 364
SDG #: E15-06176, E15-06191, E15-06230, E15-06403, E15-06427, E15-06443, E15-06446
E15-06447, E15-06455, E15-06360, E15-06420, E15-06463

Matrix: Aqueous Unit: ppb (µg/L)

ANALYTE	LCSA150727-01			LCSA150727-02		
	TRUE	FOUND	%R(1)	TRUE	FOUND	%R(1)
Aluminum	400	425	106	400	345	86.3
Antimony	400	435	109			
Arsenic	400	434	109	400	340	85.0
Barium	400	439	110			
Beryllium	400	439	110			
Cadmium	400	423	106			
Calcium	8000	8330	104			
Chromium	400	431	108			
Cobalt	400	430	108			
Copper	400	422	106			
Iron	8000	8690	109	8000	6870	85.9
Lead	400	439	110	400	343	85.8
Magnesium	8000	8620	108			
Manganese	400	429	107	400	340	85.0
Mercury	10.0	10.4	104			
Nickel	400	427	107			
Potassium	8000	8730	109			
Selenium	400	424	106			
Silver	400	439	110			
Sodium	8000	8420	105	8000	6960	87.0
Thallium	400	441	110			
Vanadium	400	434	109			
Zinc	400	425	106			

(1) Control Limits % Recovery = 80-120%

LCSA150727-01 7/27/15 23:42
06176-005,014,022; 06191-001~004; 06230-005
06403-001; 06427-001~003; 06443-008~009; 06446-001
06446-002; 06447-005~006,013; 06455-001

LCSA150727-02 7/28/15 02:02
06360-002~003; 06420-001~004,006~009; 06463-001
06463-002~008

METALS QUALITY CONTROL

LOW LEVEL INITIAL CALIBRATION VERIFICATION

Batch (Page) #: 364

SDG #: E15-06176, E15-06447, E15-06443, E15-06230, E15-06191, E15-06403, E15-06427, E15-06446
E15-06455, E15-06463, E15-06420, E15-06360

Matrix: Aqueous Method: 6020A Units: ppb (ug/L)

7/27/15 23:07

ANALYTE	INST. MDL	LLICV TRUE	LLICV FOUND	LLICV % R
Aluminum	0.500	0.500	0.539	108
Antimony	0.250	0.500	0.560	112
Arsenic	0.250	0.500	0.552	110
Barium	0.500	0.500	0.566	113
Beryllium	0.250	0.500	0.551	110
Cadmium	0.125	0.500	0.506	101
Calcium	5.00	5.00	5.17	103
Chromium	0.500	0.500	0.565	113
Cobalt	0.500	0.500	0.570	114
Copper	0.500	0.500	0.480	96.0
Iron	5.00	5.00	5.53	111
Lead	0.125	0.500	0.535	107
Magnesium	5.00	5.00	6.18	124
Manganese	0.500	0.500	0.561	112
Nickel	0.250	0.500	0.590	118
Potassium	5.00	5.00	5.09	102
Selenium	0.500	0.500	0.553	111
Silver	0.125	0.500	0.562	112
Sodium	5.00	5.00	6.32	126
Thallium	0.125	0.500	0.538	108
Vanadium	0.500	0.500	0.608	122
Zinc	0.500	0.500	0.515	103

(1) Control Limits: 70-130

METALS QUALITY CONTROL
SPIKE SAMPLE RECOVERY

Batch (Page) #: 364

SDG #: E15-06176, E15-06191, E15-06230, E15-06403, E15-06427, E15-06443, E15-06446
E15-06447, E15-06455, E15-06360, E15-06420, E15-06463

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	7/28/15 00:08 SSR1	7/27/15 23:46 SR1	%R1	SA1	7/28/15 02:19 SSR2	7/28/15 02:06 SR2	%R2	SA2	CONTROL LIMIT %R
Aluminum	1030	638	98.0	400	368	28.0	85.0	400	75-125
Antimony	485	1.37	121	400					75-125
Arsenic	399	1.31	99.4	400	367	1.85	91.3	400	75-125
Barium	1160	773	96.8	400					75-125
Beryllium	499	1.87	124	400					75-125
Cadmium	528	40.5	122	400					75-125
Calcium	578000	441000	NC	8000					75-125
Chromium	507	8.15	125	400					75-125
Cobalt	553	54.7	125	400					75-125
Copper	526	131	98.8	400					75-125
Iron	8490	589	98.8	8000	42800	39300	NC	8000	75-125
Lead	1000	609	97.8	400	363	ND	90.8	400	75-125
Magnesium	49000	30300	NC	8000					75-125
Manganese	8470	6180	NC	400	5450	5590	NC	400	75-125
Mercury	10.4	0.323	101	10.0					75-125
Nickel	566	70.8	124	400					75-125
Potassium	23700	15000	109	8000					75-125
Selenium	503	7.57	124	400					75-125
Silver	496	ND	124	400					75-125
Sodium	63600	41900	NC	8000	412000	448000	NC	8000	75-125
Thallium	500	ND	125	400					75-125
Vanadium	401	2.86	99.5	400					75-125
Zinc	1210	820	97.5	400					75-125

SSR = Spike Sample Result
SA = Spike Added
SR = Sample Result
%R = Percent Recovery
NC = Non-calculable % R; Spike sample concentration > 4 x Spike Concentration.

QC Sample 1: E15-06176-005
% Solids: 0
QC Sample 1 for following samples:
06176-005,014,022; 06191-001~004; 06230-005
06403-001; 06427-001~003; 06443-008~009; 06446-001
06446-002; 06447-005~006,013; 06455-001

QC Sample 2: E15-06463-004
% Solids: 0
QC Sample 2 for following samples:
06360-002~003; 06420-001~004,006~009; 06463-001
06463-002~008

METALS QUALITY CONTROL
DUPLICATE SAMPLE RECOVERY

Batch (Page) #: 364
SDG #: E15-06176, E15-06191, E15-06230, E15-06403, E15-06427, E15-06443, E15-06446
E15-06447, E15-06455, E15-06360, E15-06420, E15-06463

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	CONTROL LIMIT 1	7/27/15 23:46 S1	7/27/15 23:51 D1	RPD1	CONTROL LIMIT 2	7/28/15 02:06 S2	7/28/15 02:11 D2	RPD2
Aluminum	20	638	673	5.34	20	28.0	25.1	10.9
Antimony	20	1.37	1.40	2.17				
Arsenic	20	1.31	1.31	0	20	1.85	1.92	3.71
Barium	20	773	797	3.06				
Beryllium	20	1.87	1.68	10.7				
Cadmium	20	40.5	42.1	3.87				
Calcium	20	441000	455000	3.13				
Chromium	20	8.15	8.29	1.70				
Cobalt	20	54.7	56.3	2.88				
Copper	20	131	136	3.75				
Iron	20	589	600	1.85	20	39300	37900	3.63
Lead	20	609	627	2.91	NA	ND	ND	NC
Magnesium	20	30300	31300	3.25				
Manganese	20	6180	6400	3.50	20	5590	5420	3.09
Mercury	20	0.323	0.302	6.72				
Nickel	20	70.8	72.8	2.79				
Potassium	20	15000	15500	3.28				
Selenium	20	7.57	7.47	1.33				
Silver	NA	ND	ND	NC				
Sodium	20	41900	43200	3.06	20	448000	434000	3.17
Thallium	NA	ND	ND	NC				
Vanadium	20	2.86	2.85	0.350				
Zinc	20	820	849	3.48				

S1 = Sample 1
D1 = Duplicate 1
NA = Not Applicable
NC = Non-calculable RPD due to result (s) less than the detection limit.

S2 = Sample 2
D2 = Duplicate 2

QC Sample 1: E15-06176-005
% Solids: 0
QC Sample 1 for following samples:
06176-005,014,022; 06191-001~004; 06230-005
06403-001; 06427-001~003; 06443-008~009; 06446-001
06446-002; 06447-005~006,013; 06455-001

QC Sample 2: E15-06463-004
% Solids: 0
QC Sample 2 for following samples:
06360-002~003; 06420-001~004,006~009; 06463-001
06463-002~008

METALS QUALITY CONTROL
SERIAL DILUTIONS & POST SPIKES 1

Batch (Page) #: 364
SDG #: E15-06176, E15-06191, E15-06230, E15-06403, E15-06427, E15-06443, E15-06446
E15-06447, E15-06455

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	SERIAL DILUTION 7/27/15 23:46 SR	SERIAL DILUTION 7/27/15 23:55 SDR	% Difference	POST SPIKE 7/28/15 00:13 SPR	POST SPIKE SA	% Recovery
Aluminum	638	698	8.98			
Antimony	1.37	ND	NC	461	400	115.0
Arsenic	1.31	ND	NC	478	400	119.0
Barium	773	764	1.17			
Beryllium	1.87	ND	NC	473	400	118.0
Cadmium	40.5	41.9	3.40			
Calcium	441000	467000	5.73			
Chromium	8.15	ND	NC	484	400	119.0
Cobalt	54.7	57.5	4.99			
Copper	131	140	6.64			
Iron	589	602	2.18			
Lead	609	608	0.164			
Magnesium	30300	31900	5.14			
Manganese	6180	6510	5.20			
Nickel	70.8	77.5	9.04			
Potassium	15000	16100	7.07			
Selenium	7.57	ND	NC	469	400	115.0
Silver	ND	ND	NC	468	400	117
Sodium	41900	43400	3.52			
Thallium	ND	ND	NC	476	400	119
Vanadium	2.86	ND	NC	401	400	99.5
Zinc	820	876	6.60			

SR = Sample Result
SDR = Sample Dilution Result
SPR = Sample Post Spike Result
SA = Spike Added

Control Limits: (+) or (-) 10% Difference or 80-120% Recovery

QC Sample1: E15-06176-005
QC Sample 1 for following samples:
06176-005,014,022; 06191-001~004; 06230-005
06403-001; 06427-001~003; 06443-008~009; 06446-001
06446-002; 06447-005~006,013; 06455-001

METALS INTERNAL STANDARD AREA SUMMARY
2015 PG364
July 27, 2015
Method: 6020A

	ISTD	Li-6 [2]		Ge-72 [1]		Ge-72 [2]		Rh-103 [2]		Tb-159 [2]		Bi-209 [2]		
002CALB.d	**BLANK**	**1143939**		**59514**		**513592**		**3357656**		**4770030**		**3191175**		
		Area Count	**% Rec**	**Area Count**	**% Rec**	**Area Count**	**% Rec**	**Area Count**	**% Rec**	**Area Count**	**% Rec**	**Area Count**	**% Rec**	
	Lower Limit	**800757**	**70**	**41660**	**70**	**359514**	**70**	**2350359**	**70**	**3339021**	**70**	**2233822**	**70**	
	Upper Limit	**1372727**	**120**	**71417**	**120**	**616310**	**120**	**4029187**	**120**	**5724036**	**120**	**3829410**	**120**	
003CALS.d	STD1	1148575	100	59545	100	512772	100	3363728	100	4735183	99	3195508	100	
004CALS.d	STD2	1178726	103	60056	101	516312	101	3379429	101	4811645	101	3250925	102	
005CALS.d	STD3	1150285	101	57121	96	503506	98	3335822	99	4746606	100	3209856	101	
006CALS.d	STD4	1153671	101	57454	97	506347	99	3307999	99	4727825	99	3213707	101	
007CALS.d	STD5	1166105	102	58627	99	506509	99	3350492	100	4780379	100	3241602	102	
009_CCV.d	ICV	1148904	100	57083	96	502131	98	3332430	99	4789912	100	3231874	101	
010LCCV.d	LLICV	1117512	98	56700	95	496780	97	3252604	97	4666616	98	3131525	98	
011_ICB.d	ICB	1150656	101	56738	95	505729	98	3317870	99	4728576	99	3171440	99	
012SMPL.d	E15-06447-013	1158850	101	55040	92	511328	100	3333553	99	4787250	100	3213307	101	
013SMPL.d	E15-06443-009	1167923	102	58177	98	516336	101	3337940	99	4761372	100	3210057	101	
014SMPL.d	E15-06463-008	1159315	101	58608	98	510057	99	3314959	99	4753146	100	3188425	100	
015SMPL.d	E15-06420-004	1154249	101	59947	101	506333	99	3315507	99	4703614	99	3156378	99	
016SMPL.d	E15-06360-002	1173274	103	57157	96	516190	101	3336257	99	4709495	99	3185504	100	
017SMPL.d	BLKA150727-01	1174207	103	58408	98	515223	100	3346038	100	4733690	99	3191917	100	
018SMPL.d	LCSA150727-01	1148427	100	57041	96	499760	97	3218256	96	4641605	97	3107375	97	
019SMPL.d	E15-06176-005	1171433	102	57122	96	513683	100	3201508	95	4778755	100	3089135	97	
020SMPL.d	E15-06176-005DUP	1174246	103	57464	97	511621	100	3227806	96	4800456	101	3101668	97	
021SMPL.d	E15-06176-005SD	1165526	102	56622	95	505161	98	3256575	97	4787596	100	3192474	100	
022_CCV.d	CCV	1159559	101	57739	97	486181	95	3222363	96	4647216	97	3168944	99	
023_CCB.d	CCB	1164211	102	55227	93	494839	96	3256099	97	4682375	98	3179192	100	
024SMPL.d	E15-06176-005MS	1115060	97	53149	89	477983	93	3010088	90	4633090	97	2985710	94	
025SMPL.d	E15-06176-005PS	1079205	94	52117	88	463708	90	2923509	87	4501636	94	2922631	92	
028SMPL.d	E15-06176-014	1097075	96	52628	88	478553	93	3000108	89	4556107	96	2969414	93	
029SMPL.d	E15-06176-022	1124363	98	52464	88	480026	93	2963577	88	4596247	96	2916461	91	
030SMPL.d	E15-06230-005	1124973	98	53947	91	478384	93	3081405	92	4676734	98	3112869	98	
031SMPL.d	E15-06447-005	1119684	98	53024	89	469887	91	2994667	89	4550967	95	2969889	93	
032SMPL.d	E15-06447-006	1125345	98	52680	89	482118	94	3014333	90	4585382	96	2957424	93	
033SMPL.d	E15-06191-001	1112143	97	52539	88	460008	90	2996401	89	4509018	95	3012725	94	
034_CCV.d	CCV	1115619	98	52741	89	462350	90	3094152	92	4502600	94	3105910	97	
035_CCB.d	CCB	1095186	96	52617	88	456982	89	3048540	91	4459705	93	3063876	96	

A* in last column indicates the analysis has failed QC criteria
Sample Limits = 70-120% of reference Standard (CAL BLANK L1)
QC Sample Limits = 80-120% of reference Standard (CAL BLANK L1)

[1] = [He]; [2] = [No Gas]
Ge-72 [1] = Na,Mg,Al,Si,K,Ca,Ti,V,Cr,Mn,Fe,Co,Ni,Cu,Zn,As,Se
Li-6 [2] = Be,B; Ge-72 [2] = Cd; Rh-103 [2] = Mo,Ag,Sn; Tb-159 [2] = Sb,Ba

METALS INTERNAL STANDARD AREA SUMMARY
2015 PG364
July 27, 2015
Method: 6020A

	ISTD	Li-6 [2]		Ge-72 [1]		Ge-72 [2]		Rh-103 [2]		Tb-159 [2]		Bi-209 [2]		
002CALB.d	BLANK	1143939		59514		513592		3357656		4770030		3191175		
		Area Count	% Rec	Area Count	% Rec	Area Count	% Rec	Area Count	% Rec	Area Count	% Rec	Area Count	% Rec	
	Lower Limit	800757	70	41660	70	359514	70	2350359	70	3339021	70	2233822	70	
	Upper Limit	1372727	120	71417	120	616310	120	4029187	120	5724036	120	3829410	120	
036SMPL.d	E15-06191-002	1086657	95	51290	86	458041	89	2908404	87	4473333	94	2933166	92	
037SMPL.d	E15-06191-003	1087327	95	52719	89	453378	88	2958245	88	4491460	94	3035569	95	
038SMPL.d	E15-06191-004	1081402	95	50155	84	453311	88	2946720	88	4423324	93	3005227	94	
039SMPL.d	E15-06403-001	1086356	95	51384	86	459374	89	2931970	87	4462499	94	2948055	92	
040SMPL.d	E15-06443-008	1078409	94	51237	86	458518	89	2930316	87	4480325	94	2928797	92	
041SMPL.d	E15-06427-001	1084617	95	50682	85	446987	87	2811947	84	4331156	91	2730272	86	
042SMPL.d	E15-06427-002	1051569	92	55255	93	435022	85	2680658	80	4128859	87	2523760	79	
043SMPL.d	E15-06427-003	1116319	98	55657	94	465572	91	2986020	89	4486359	94	2931500	92	
044SMPL.d	E15-06446-001	1102140	96	49934	84	458909	89	2975125	89	4474182	94	2999875	94	
045SMPL.d	E15-06446-002	1101344	96	51823	87	454897	89	2949867	88	4393011	92	2968609	93	
046_CCV.d	CCV	1131129	99	53375	90	461153	90	3090654	92	4519269	95	3101331	97	
047_CCB.d	CCB	1093927	96	54580	92	450422	88	2993417	89	4350240	91	2989714	94	
048SMPL.d	E15-06455-001	1098025	96	49390	83	458650	89	2936406	87	4502327	94	2976391	93	
049SMPL.d	BLKA150727-02	1138757	100	53541	90	467915	91	3144147	94	4556397	96	3105162	97	
050SMPL.d	LCSA150727-02	1110753	97	53428	90	460390	90	3029805	90	4443475	93	3031110	95	
051SMPL.d	E15-06463-004	1065011	93	50573	85	447183	87	2836407	84	4342780	91	2892916	91	
052SMPL.d	E15-06463-004DUP	1074991	94	51930	87	458783	89	2876674	86	4383828	92	2916031	91	
053SMPL.d	E15-06463-004SD	1100561	96	56477	95	458394	89	2950033	88	4388259	92	3006946	94	
054SMPL.d	E15-06463-004MS	1073371	94	54303	91	458850	89	2893312	86	4426163	93	2925143	92	
055SMPL.d	E15-06463-004PS	1073890	94	55180	93	458860	89	2911459	87	4442143	93	2938501	92	
056SMPL.d	E15-06420-009	1107188	97	52788	89	459040	89	3088124	92	4436543	93	3056343	96	
057SMPL.d	E15-06420-006	1094411	96	52101	88	450353	88	2956391	88	4464370	94	2931969	92	
058_CCV.d	CCV	1108566	97	51983	87	449091	87	3044502	91	4394603	92	3059791	96	
059_CCB.d	CCB	1086971	95	52007	87	448007	87	2998954	89	4353762	91	2992842	94	
060SMPL.d	E15-06420-007	1053992	92	51697	87	439387	86	2800900	83	4296017	90	2781760	87	
061SMPL.d	E15-06420-008	1080705	94	53500	90	447296	87	2893848	86	4412559	93	2884510	90	
062SMPL.d	E15-06463-001	1105453	97	50701	85	457260	89	3017553	90	4492863	94	3038326	95	
063SMPL.d	E15-06463-002	1078365	94	50904	86	450274	88	2899316	86	4390588	92	2988759	94	
064SMPL.d	E15-06463-003	1076366	94	50957	86	450791	88	2939074	88	4433941	93	2993993	94	
065SMPL.d	E15-06463-005	1086417	95	51347	86	457980	89	2973526	89	4484474	94	3017221	95	

A* in last column indicates the analysis has failed QC criteria
Sample Limits = 70-120% of reference Standard (CAL BLANK L1)
QC Sample Limits = 80-120% of reference Standard (CAL BLANK L1)

[1] = [He]; [2] = [No Gas]
Ge-72 [1] = Na,Mg,Al,Si,K,Ca,Ti,V,Cr,Mn,Fe,Co,Ni,Cu,Zn,As,Se
Li-6 [2] = Be,B; Ge-72 [2] = Cd; Rh-103 [2] = Mo,Ag,Sn; Tb-159 [2] = Sb,Ba

METALS INTERNAL STANDARD AREA SUMMARY
2015 PG364
July 27, 2015
Method: 6020A

	ISTD	Li-6 [2]		Ge-72 [1]		Ge-72 [2]		Rh-103 [2]		Tb-159 [2]		Bi-209 [2]		
002CALB.d	**BLANK**	**1143939**		**59514**		**513592**		**3357656**		**4770030**		**3191175**		
		Area Count	**% Rec**	**Area Count**	**% Rec**	**Area Count**	**% Rec**	**Area Count**	**% Rec**	**Area Count**	**% Rec**	**Area Count**	**% Rec**	
	Lower Limit	**800757**	**70**	**41660**	**70**	**359514**	**70**	**2350359**	**70**	**3339021**	**70**	**2233822**	**70**	
	Upper Limit	**1372727**	**120**	**71417**	**120**	**616310**	**120**	**4029187**	**120**	**5724036**	**120**	**3829410**	**120**	
066SMPL.d	E15-06463-006	1085293	95	53121	89	452322	88	2934981	87	4448296	93	2992279	94	
067SMPL.d	E15-06463-007	1084548	95	52944	89	460760	90	2924125	87	4446790	93	2952055	93	
068SMPL.d	E15-06420-001	1098683	96	51469	86	456516	89	2951042	88	4402757	92	2902302	91	
069SMPL.d	E15-06420-002	1078554	94	50994	86	453353	88	2831179	84	4406644	92	2850175	89	
070_CCV.d	CCV	1087986	95	52072	87	447889	87	3007427	90	4371215	92	3010063	94	
071_CCB.d	CCB	1090307	95	52908	89	450443	88	3015203	90	4404827	92	3030915	95	
072SMPL.d	E15-06420-003	1076373	94	50792	85	450533	88	2849831	85	4387391	92	2890461	91	
073SMPL.d	E15-06360-003	1093936	96	52042	87	459583	89	2890215	86	4417436	93	2903091	91	
075ICSA.d	ICSA	989866	87	49588	83	461228	90	2677936	80	4304149	90	2694108	84	
076ICSB.d	ICSAB	988376	86	50560	85	475103	93	2761583	82	4368281	92	2724141	85	
078_CCV.d	FINAL CCV	1068182	93	51730	87	460455	90	3077260	92	4508887	95	3064627	96	
079_CCB.d	FINAL CCB	1095410	96	52965	89	478319	93	3178983	95	4619472	97	3143328	99	

A* in last column indicates the analysis has failed QC criteria
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QC Sample Limits = 80-120% of reference Standard (CAL BLANK L1)

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Li-6 [2] = Be,B; Ge-72 [2] = Cd; Rh-103 [2] = Mo,Ag,Sn; Tb-159 [2] = Sb,Ba

SAMPLE TRACKING

IAL

Integrated Analytical Labs
273 Franklin Rd
Randolph, NJ 07869

Chain of Custody Record

Contact Us: 973 361-4252
fax: 973 989-5288
Web: www.ialonline.com

Customer Information	Reporting Information
Company: JMC Environmental Consultants Inc.	REPORT TO: JMC
Address: 2109 Bridge Ave. Bldg. B	Address:
Point Pleasant, N.J. 08742	
Telephone #: (732) 295-2144	Attn:
Fax #: (732) 295 2150	FAX # 732-295-2150
Project Manager: James Clabby	INVOICE TO: Aceto Corp.
EMAIL Address: jclabby@jmcenvironmental.com	Address: 4 Tri Harbor Ct.
Project Name: Arsynco	Port Washington, NY 11050
Project Location (State): NJ	Attn: Ed Kelly
Bottle Order #:	PO # 22126
☐ "Report to"/"Invoice To" same as above	Quote #
Sampled by:	

COMPLETED BY IAL: Field Sampling Equipment Rental

Sample Matrix

DW - Drinking Water; WW - Waste Water; GW - Groundwater; SW - Surface Water; LIQ - Liquid (Specify); OI - Oil; S - Soil; SOL - Solid; SL - Sludge; W - Wipe; B - Biphasic

****Rush TAT Charge**

24 hr - 100%...
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day - 10%

Deliverables

NJ, CT, PA	NY
☐ Results Only	☐ ASP Category A
☒ Reduced	
☐ Regulatory/ Full*	☐ ASP Category B*

EDDs

☒ NJ SRP
☐ NYSDEC EQuIS
☐ lab approved custom EDD
☐ NO EDD REQ'D

Concentrations Expected: Low Med High

These samples have been previously analyzed by IAL ☐ YES ☐ NO

Turn-Around Time (TAT)

Standard (10 business days) Verbal
Rush/date needed (only if pre-approved)**
Hard Copy: Std 3 week — Other - call for price

Petroleum Hydrocarbons - Selection is REQUIRED

☐ NJ EPH-DRO - Category 1
☐ NJ EPH-C40 - Category 2
☐ NJ EPH-Fractionated - Cat 2
☐ DRO-8015

TAT for PHC (if other than 2 weeks):

Regulatory Requirement

New Jersey	New York
☒ GWQS	☐ AWQS (TOGS Table 1)
☐ IGW	☐ GWEL (TOGS Table 5)
☐ SRS	☐ Part 375-6.8(a) - Unrestricted
☐ Ecological	☐ Part 375-6.8(b) - Restricted
☐ DW	☐ CP-51 Table 2 or 3 (selection required)
☐ SPLP	OTHER Reg. Req. (specify)

SAMPLE INFORMATION

ANALYTICAL PARAMETERS (please note if contingent)

Client ID	Depth (ft only)	Sampling Date	Sampling Time	Matrix	# containers	IAL #	TCL VOTS	EPH	Sb, Pb, Ni	Sb, Pb, Ni, ZN						Sample Specific Notes:
MW-34D		7/23/15	10:12	GW	2	1	X									
MW-4S		↓	10:20	↓	2	2	X									
MW-40D		↓	10:45	↓	4	3	X	X								
MW-36D		↓	10:54	↓	4	4	X	X								
MW-13SR		↓	11:08	↓	5	5	X	X	X							
MW-33S		↓	11:21	↓	5	6	X	X		X						
MW-29S		↓	2:25	↓	4	7	X	X								
MW-29D		↓	2:10	↓	2	8	X									
Preservative (use code)							2	2	3	3						
Container Type (use code)							C	A	B	B						

Known Hazard: YES / NO
Describe:

Preservative Code: 1 = None; 2 = HCl; 3 = HNO3; 4 = MeOH; 5 = NaOH; 6 = H2SO4; 7 = Other

Container Code: A = Amber Glass; B = Plastic; C = Vial; D = Glass; E = EnCore; T = Terracore

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time (TAT) will not start until any ambiguities have been resolved. TAT starts the following day if samples rec'd at lab ≥ 5PM. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY IAL'S TERMS & CONDITIONS (found on rear of pink copy).

Carrier (check one):
☐ IAL Courier
☐ Client Courier
☐ FedEx/UPS***
***Tracking #:

Special Instructions/QC Requirements & Comments:

FOR LAB USE ONLY
SDG #: 6447
Cooler Temp: 3 °C

Relinquished by (Signature and Company)	Date	Time	Received by (Signature and Company)	Date	Time
[signature]	7/23/14	1530	[signature]	7/23/15	1530
	7/23/15	1707	[signature]	7/23/15	1707

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Certification IDs: TNI (TNI01284); CT (PH-0699); NJ (14751); NY (11402); PA (68-00773).

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Integrated Analytical Labs
273 Franklin Rd
Randolph, NJ 07869

Chain of Custody Record

Contact Us: 973 361-4252
fax: 973 989-5288
Web: www.ialonline.com

Customer Information

Company: JMC Environmental Consultants Inc.
Address: 2109 Bridge Ave. Bldg. B
Point Pleasant, N.J. 08742
Telephone #: (732) 295-2144
Fax #: (732) 295 2150
Project Manager: James Clabby
EMAIL Address: jclabby@jmcenvironmental.com
Project Name: Arsynco
Project Location (State): NJ
Bottle Order #:
☐ "Report to"/"Invoice To" same as above
Sampled by:

COMPLETED BY IAL:
Field Sampling Equipment Rental

Reporting Information

REPORT TO: JMC
Address:
Attn:
FAX # 732-295-2150
INVOICE TO: Aceto Corp.
Address: 4 Tri Harbor Ct.
Port Washington, NY 11050
Attn: Ed Kelly
PO # 22126
Quote #

**Rush TAT Charge
24 hr - 100%...
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day - 10%

Deliverables

NJ, CT, PA
☐ Results Only
☒ Reduced
☐ Regulatory/ Full*

NY
☐ ASP Category A
☐ ASP Category B*

EDDs

☒ NJ SRP
☐ NYSDEC EQuIS
☐ lab approved custom EDD
☐ NO EDD REQ'D

Concentrations Expected:

Low Med High

These samples have been previously analyzed by IAL
☐ YES ☐ NO

Turn-Around Time (TAT)

Standard (10 business days) Verbal
Rush/date needed (only if pre-approved)**
Hard Copy: Std 3 week Other - call for price

Petroleum Hydrocarbons - Selection is REQUIRED

☐ NJ EPH-DRO - Category 1
☐ NJ EPH-C40 - Category 2
☐ NJ EPH-Fractionated - Cat 2
☐ DRO-8015
TAT for PHC (If other than 2 weeks):

Regulatory Requirement

New Jersey
☒ GWQS
☐ IGW
☐ SRS
☐ Ecological
☐ DW
☐ SPLP

New York
☐ AWQS (TOGS Table 1)
☐ GWEL (TOGS Table 5)
☐ Part 375-6.8(a) - Unrestricted
☐ Part 375-6.8(b) - Restricted
☐ CP-51 Table 2 or 3 (selection required)

OTHER Reg. Req. (specify)

Sample Matrix

DW - Drinking Water
WW - Waste Water
GW - Groundwater
SW - Surface Water
LIQ - Liquid (Specify)
OI - Oil
S - Soil
SOL - Solid
SL - Sludge
W - Wipe
B - Biphasic

SAMPLE INFORMATION

ANALYTICAL PARAMETERS (please note if contingent)

Client ID	Depth (ft only)	Sampling Date	Sampling Time	Matrix	# containers	IAL #	TCL VOTIS	EPH	Sb, Pb, Ni, Zn							Sample Specific Notes:
MW-31S		7/23/15	3:10	GW	2	9		X								
MW-24S			2:50	GW	4	10	X	X								
MW-38D			3:08	GW	4	11	X	X								
MW-38DD			3:14	GW	4	12	X	X								
FB-2			3:21	GW	5	13	X	X	X							
TB					2	14										
Preservative (use code)							2	2								
Container Type (use code)							C	A								

Known Hazard: YES / NO
Describe:

Preservative Code:
1 = None
2 = HCl
3 = HNO3
4 = MeOH
5 = NaOH
6 = H2SO4
7 = Other

Container Code:
A = Amber Glass
B = Plastic
C = Vial
D = Glass
E = EnCore
T = Terracore

Carrier (check one):
☐ IAL Courier
☐ Client Courier
☐ FedEx/UPS***
***Tracking #:

Special Instructions/QC Requirements & Comments:

Relinquished by (Signature and Company)	Date	Time	Received by (Signature and Company)	Date	Time
[signature]	7/23/15	1530	[signature]	7/23/15	1530
	7/23/15	1707			

FOR LAB USE ONLY
SDG #: 6447
Cooler Temp: 3 °C

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LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK

Certification IDs: TNI (TNI01284); CT (PH-0699); NJ (14751); NY (11402); PA (68-00773).

PAGE: 2 of 2

IAL
Integrated Analytical Laboratories LLC

PROJECT INFORMATION

E15-06447: ARSYNCO

To: Jim Clabby
JMC Environmental Consultants
Fax: 1(732) 295-2150
EMail: jclabby@jmcenvironmental.com; ah

Report To

JMC Environmental Consultants
2109 Bridge Avenue
Building B
Point Pleasant, NJ 08742
Attn: Jim Clabby

Bill To

JMC Environmental Consultants
Aceto Corp.
4 Tri Harbor Court
Port Washington, NY 11050
Attn: Mr. Ed Kelly

Report Format	P.O. #	Received At Lab	TPHC Due	Verbal Due	Hardcopy Due
Reduced	22126	Jul 23, 2015 @ 17:07	NA	Aug 07, 2015	Aug 14, 2015 *

* Any ***Conditional or Hold*** status will delay final hardcopy report sent date.

Diskette Req. SRP TXT

**** QC Requirement (must meet):** NJ GWQS

Lab ID	Client Sample ID	Depth	Sampling Time	Matrix	Unit	Field pH/Temp
06447-001	MW-34D	NA	07/23/15@10:12	Aqueous	ug/L (ppb)	
06447-002	MW-4S	NA	07/23/15@10:20	Aqueous	ug/L (ppb)	
06447-003	MW-40D	NA	07/23/15@10:45	Aqueous	ug/L (ppb)	
06447-004	MW-36D	NA	07/23/15@10:54	Aqueous	ug/L (ppb)	
06447-005	MW-13SR	NA	07/23/15@11:08	Aqueous	ug/L (ppb)	
06447-006	MW-33S	NA	07/23/15@11:21	Aqueous	ug/L (ppb)	
06447-007	MW-29S	NA	07/23/15@14:25	Aqueous	ug/L (ppb)	
06447-008	MW-29D	NA	07/23/15@14:10	Aqueous	ug/L (ppb)	
06447-009	MW-31S	NA	07/23/15@15:10	Aqueous	ug/L (ppb)	
06447-010	MW-24S	NA	07/23/15@14:50	Aqueous	ug/L (ppb)	
06447-011	MW-38D	NA	07/23/15@15:08	Aqueous	ug/L (ppb)	
06447-012	MW-38DD	NA	07/23/15@15:14	Aqueous	ug/L (ppb)	
06447-013	FB-2	NA	07/23/15@15:21	Aqueous	ug/L (ppb)	
06447-014	TB	NA	07/23/15	Aqueous	ug/L (ppb)	

Sample #	Test	Status	QA Method	TAT	Holding Time Expires
001	TCL VO + 15	Analyze	8260C	STD/2 WKS	8/6/2015
002	TCL VO + 15	Analyze	8260C	STD/2 WKS	8/6/2015
003	TCL VO + 15	Analyze	8260C	STD/2 WKS	8/6/2015
	NJ-EPH (C40) Cat 2	Analyze	Method 10.08 Rev 3	STD/2 WKS	8/6/2015
004	TCL VO + 15	Analyze	8260C	STD/2 WKS	8/6/2015
	NJ-EPH (C40) Cat 2	Analyze	Method 10.08 Rev 3	STD/2 WKS	8/6/2015
005	TCL VO + 15	Analyze	8260C	STD/2 WKS	8/6/2015

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

IAL is a NELAP accredited lab (TNI01284) and maintains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402), and Pennsylvania (68-00773).

IAL
Integrated Analytical Laboratories LLC

PROJECT INFORMATION

E15-06447: ARSYNCO

Sample #	Test	Status	QA Method	TAT	Holding Time Expires
005	NJ-EPH (C40) Cat 2	Analyze	Method 10.08 Rev 3	STD/2 WKS	8/6/2015
	Lead - Pb	Analyze	6020A	STD/2 WKS	1/19/2016
	Antimony - Sb	Analyze	6020A	STD/2 WKS	1/19/2016
	Nickel - Ni	Analyze	6020A	STD/2 WKS	1/19/2016
006	TCL VO + 15	Analyze	8260C	STD/2 WKS	8/6/2015
	NJ-EPH (C40) Cat 2	Analyze	Method 10.08 Rev 3	STD/2 WKS	8/6/2015
	Lead - Pb	Analyze	6020A	STD/2 WKS	1/19/2016
	Nickel - Ni	Analyze	6020A	STD/2 WKS	1/19/2016
	Antimony - Sb	Analyze	6020A	STD/2 WKS	1/19/2016
	Zinc - Zn	Analyze	6020A	STD/2 WKS	1/19/2016
007	TCL VO + 15	Analyze	8260C	STD/2 WKS	8/6/2015
	NJ-EPH (C40) Cat 2	Analyze	Method 10.08 Rev 3	STD/2 WKS	8/6/2015
008	TCL VO + 15	Analyze	8260C	STD/2 WKS	8/6/2015
009	TCL VO + 15	Analyze	8260C	STD/2 WKS	8/6/2015
	NJ-EPH (C40) Cat 2	Cancel	Method 10.08 Rev 3	STD/2 WKS	8/6/2015
010	TCL VO + 15	Analyze	8260C	STD/2 WKS	8/6/2015
	NJ-EPH (C40) Cat 2	Analyze	Method 10.08 Rev 3	STD/2 WKS	8/6/2015
011	TCL VO + 15	Analyze	8260C	STD/2 WKS	8/6/2015
	NJ-EPH (C40) Cat 2	Analyze	Method 10.08 Rev 3	STD/2 WKS	8/6/2015
012	TCL VO + 15	Analyze	8260C	STD/2 WKS	8/6/2015
	NJ-EPH (C40) Cat 2	Analyze	Method 10.08 Rev 3	STD/2 WKS	8/6/2015
013	TCL VO + 15	Analyze	8260C	STD/2 WKS	8/6/2015
	NJ-EPH (C40) Cat 2	Analyze	Method 10.08 Rev 3	STD/2 WKS	8/6/2015
	Lead - Pb	Analyze	6020A	STD/2 WKS	1/19/2016
	Zinc - Zn	Analyze	6020A	STD/2 WKS	1/19/2016
	Antimony - Sb	Analyze	6020A	STD/2 WKS	1/19/2016
	Nickel - Ni	Analyze	6020A	STD/2 WKS	1/19/2016
014	TCL VO + 15	Analyze	8260C	STD/2 WKS	8/6/2015

Project Notes:

NOTE 1 taken by Ellen on 07/23/2015 04:21
AS PER KIM'S PREVIOUS CONVERSATION W/ ALTON H., FOR EPH REPORT EPH-C40.

NOTE 3 taken by Ellen on 07/24/2015 12:53
SAMPLE #9 CHECKED OFF FOR EPH ON COC. BUT 2 VO VIALS RECEIVED. AS PER KIM'S CONVERSATION W/ STEVE K., SAMPLE SHOULD BE ANALYZED FOR VO. CANCEL EPH.

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INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE RECEIPT VERIFICATION

CASE NO: **E 15** **06447** CLIENT: JMC Arsynco

COOLER TEMPERATURE: 2° - 6°C: ✓ (See Chain of Custody)

COC: (COMPLETE) / INCOMPLETE

Comments

KEY

✓ = **YES/NA**
✗ = **NO**

VOA received: (check one) ☐ Encore ☐ IGW - Methanol ☐ Terra Core ☐ No Preservative

✓ Bottles Intact
✓ no-Missing Bottles
✓ no-Extra Bottles

✓ Sufficient Sample Volume
✓ no-headspace/bubbles in VOs
✓ Labels intact/correct
✓ pH Check (exclude VOs)[1]
✓ Correct bottles/preservative
✓ Sufficient Holding/Prep Time[1]
☐ Multiphasic Sample
☐ Sample to be Subcontracted
✓ **Chain of Custody is Clear**

[1] All samples with "Analyze Immediately" holding times will be analyzed by this laboratory past the holding time. This includes but is not limited to the following tests: pH, Temperature, Free Residual Chlorine, Total Residual Chlorine, Dissolved Oxygen, Sulfite.

ADDITIONAL COMMENTS:

SAMPLE(S) VERIFIED BY: INITIAL [illegible] DATE 7/23/15

CORRECTIVE ACTION REQUIRED: YES ☐ (SEE BELOW) **NO** ☐

If COC is **NOT** clear, ***STOP*** until you get client to authorize/clarify work.

CLIENT NOTIFIED: YES ☐ Date/ Time: _____ NO ☐
PROJECT CONTACT:
SUBCONTRACTED LAB:
DATE SHIPPED:

ADDITIONAL COMMENTS:

VERIFIED/TAKEN BY: INITIAL [illegible] DATE 7.24.15

REV 03/2013

Laboratory Custody Chronicle

IAL Case No.

E15-06447

Client JMC Environmental Consultants

Project ARSYNCO

Received On 7/23/2015@17:07

Department: Volatiles			Prep. Date	Analyst	Analysis Date	Analyst
TCL VO + 15	06447-001	Aqueous	n/a	n/a	7/30/15	Barbara
"	-002	"	n/a	n/a	8/ 3/15	Sylvia
"	-003	"	n/a	n/a	7/30/15	Barbara
"	-004	"	n/a	n/a	7/30/15	Barbara
"	-005	"	n/a	n/a	8/ 3/15	Sylvia
"	-006	"	n/a	n/a	7/30/15	Barbara
"	-007	"	n/a	n/a	7/30/15	Barbara
"	-008	"	n/a	n/a	7/30/15	Barbara
"	-009	"	n/a	n/a	7/30/15	Barbara
"	-010	"	n/a	n/a	7/30/15	Barbara
"	-011	"	n/a	n/a	7/30/15	Barbara
"	-012	"	n/a	n/a	7/30/15	Barbara
"	-013	"	n/a	n/a	7/30/15	Barbara
"	-014	"	n/a	n/a	7/31/15	Barbara

Department: GC			Prep. Date	Analyst	Analysis Date	Analyst
NJ-EPH (C40) Cat 2	-003	Aqueous	7/28/15	Archimede	7/31/15	Jolanta
"	-004	"	7/28/15	Archimede	7/31/15	Jolanta
"	-005	"	7/28/15	Archimede	7/31/15	Jolanta
"	-006	"	7/28/15	Archimede	7/31/15	Jolanta
"	-007	"	7/28/15	Archimede	7/31/15	Jolanta
"	-010	"	7/28/15	Archimede	7/31/15	Jolanta
"	-011	"	7/28/15	Archimede	7/31/15	Jolanta
"	-012	"	7/28/15	Archimede	7/31/15	Jolanta
"	-013	"	7/28/15	Archimede	7/31/15	Jolanta

Department: Metals			Prep. Date	Analyst	Analysis Date	Analyst
Antimony - Sb	-005	Aqueous	7/27/15	Frank	7/28/15	En
"	-006	"	7/27/15	Frank	7/28/15	En
"	-013	"	7/27/15	Frank	7/27/15	En
Lead - Pb	-005	Aqueous	7/27/15	Frank	7/28/15	En
"	-006	"	7/27/15	Frank	7/28/15	En
"	-013	"	7/27/15	Frank	7/27/15	En
Nickel - Ni	-005	Aqueous	7/27/15	Frank	7/28/15	En
"	-006	"	7/27/15	Frank	7/28/15	En
"	-013	"	7/27/15	Frank	7/27/15	En
Zinc - Zn	-006	Aqueous	7/27/15	Frank	7/28/15	En
"	-013	"	7/27/15	Frank	7/27/15	En

Integrated Analytical Labs ~ 273 Franklin Road, Randolph, NJ 07869 ~ (973) 361-4252 ~ Fax (973) 989-5288

LAST PAGE OF DOCUMENT