GC/MS Volatiles

Case Narrative

COGCC

Charles C Bell TB

Work Order Number: 1607160

1. This report consists of 1 water sample. The sample was received intact at ambient temperature by ALS on 07/11/16.
   The water for this sample was first separated from the oil phase; the separated water sample was then analyzed. The sample had a pH > 2 at the time of analysis.

2. The sample was prepared according to SW-846, 3rd Edition procedures. Specifically, the water sample was prepared using purge and trap procedures based on Method 5030C.

3. The sample was analyzed using GC/MS with an RTX-624, RTX-VMS, or equivalent capillary column according to the current revision of SOP 525 based on SW-846 Method 8260. All positive results were quantitated against the initial calibration standards using the internal standard technique. The identification of positive results was achieved by a comparison of the retention time and mass spectrum of the sample versus the daily calibration standard.

4. All initial calibration criteria were met.

5. All initial calibrations are verified by comparing a second source standard calibration verification (ICV) against the calibration curve. All criteria for initial calibration verification were met with the exception of vinyl acetate which was low. This compound was not detected in the associated sample.

6. All compounds in the daily (continuing) calibration verifications were within 20%D.

7. Methylene chloride, acetone and 2-butanone are common laboratory contaminants. In order to minimize the levels of these compounds detected in the gc/ms analysis, ALS has designated its volatile laboratory as a restricted access area. In addition, the laboratory has been equipped with a dedicated, air intake and exhaust system that operates under positive pressure in order to minimize cross contamination of these compounds. Due to fluctuations in ambient laboratory conditions, reported sample values for common laboratory contaminants may be due to lab contamination even if the compound in question is not detected in the associated method blank.

The method blank had methylene chloride detected above the reporting limit. This compound was not detected in the associated sample.

8. All laboratory control sample and laboratory control sample duplicate recoveries and RPDs were within the acceptance criteria.

9. A matrix spike and matrix spike duplicate were not performed because of insufficient sample. A laboratory control sample and laboratory control sample duplicate were performed instead.

10. The sample was analyzed within the established holding time.

11. All surrogate recoveries were within acceptance criteria.

12. All internal standard recoveries were within acceptance criteria.

13. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in the current revision of SOP 939.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Emily Lyons — 7/31/16
Organics Primary Data Reviewer — Date

7/31/16
Organics Final Data Reviewer — Date

ALS
Data Qualifier Flags
Organics

U or ND:	**This flag indicates that the compound was analyzed for but not detected.**
J:	**This flag indicates an estimated value. This flag is used as follows : (1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the reporting limit (RL) but greater than the method detection limit (MDL); (3) when the retention time data indicate the presence of a compound that meets the GC identification criteria, and the result is less than the RL but greater than the MDL; and (4) the reported value is estimated.**
B:	**This flag is used when the analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user. This flag shall be used for a tentatively identified compound (TIC) as well as for a positively identified target compound.**
E:	**This flag identifies compounds whose concentration exceeds the upper level of the calibration range.**
A:	**This flag indicates that a tentatively identified compound is a suspected aldol-condensation product.**
X:	**This flag indicates that the analyte was diluted below an accurate quantitation level.**
***:**	**This flag indicates that a spike recovery is equal to or outside the control criteria used.**
+:	**This flag indicates that the relative percent difference (RPD) equals or exceeds the control criteria.**

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 1607160
Client Name: COGCC
Client Project Name: Charles C Bell TB
Client Project Number:
Client PO Number: CT 2016-141

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
754964 Bell TB	1607160-1		OIL	24-Jun-16	8:18
754964 Bell TB	1607160-2		WATER	24-Jun-16	8:18

ALS Laboratory Group

225 Commerce Drive, Fort Collins, Colorado 80524
TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

Chain-of-Custody

Form 202r8

PROJECT NAME	Charles CBell TB	SAMPLER	PAC	DATE	11 July 2016
PROJECT No.		SITE ID		TURNAROUND	14 days
		EDD FORMAT	COGCC		
COMPANY NAME	Colorado Oil + Gas Conservation Comm	PURCHASE ORDER			
SEND REPORT TO	Peter Gintautas	BILL TO COMPANY			
ADDRESS	1120 Lincoln St Suite 801	INVOICE ATTN TO			
CITY / STATE / ZIP	Denver CO 80203	ADDRESS			
PHONE	719-679-1306	CITY / STATE / ZIP			
FAX		PHONE			
E-MAIL	peter.gintautas@state.co.us	FAX			
		E-MAIL			

WORKORDER #	1607160
PAGE	1 of 1
DISPOSAL	By Lab or Return to Client

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	8015 DRO	8270 PAH	8260	
1	T54964 Bell TB	oil phase	24 June 16	08:18	1	✓		X	X		
2	" "	H2O	24 June 16	08:16						X	Imited H2O volume
											Separate oil + water phases

*Time Zone (Circle): EST CST (MST) PST Matrix: (O = oil) S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analytes below.

Comments:	QC PACKAGE (check below)	
analyze oil phase analyze diluted H2O phase after Separating	✓	LEVEL II (Standard QC)
		LEVEL III (Std QC + forms)
		LEVEL IV (Std QC + forms + raw data)

Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	P.C.	Peter Gintautas	11 July 16	1335
RECEIVED BY	C Trimble	C Trimble	7-11-16	1335
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

5 of 38

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: COGCC Workorder No: 1607160

Project Manager: AW Initials: CDT Date: 7-11-16

1. Does this project require any special handling in addition to standard ALS procedures?		YES	(NO)
2. Are custody seals on shipping containers intact?	(NONE)	YES	NO
3. Are Custody seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		(YES)	NO
5. Are the COC and bottle labels complete and legible?		(YES)	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7. Were airbills / shipping documents present and/or removable?	(DROP OFF)	YES	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	(N/A)	YES	NO
9. Are all aqueous non-preserved samples pH 4-9?	(N/A)	YES	NO
10. Is there sufficient sample for the requested analyses?		YES	(NO)
11. Were all samples placed in the proper containers for the requested analyses?		(YES)	NO
12. Are all samples within holding times for the requested analyses?		(YES)	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		(YES)	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: ____ < green pea ____ > green pea	(N/A)	YES	NO
15. Do any water samples contain sediment? Amount Amount of sediment: ____ dusting ____ moderate ____ heavy	N/A	YES	(NO)
16. Were the samples shipped on ice?		YES	(NO)
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: #2 #4	RAD ONLY	YES	(NO)

Cooler #:	1							
Temperature (°C):	Amb							
No. of custody seals on cooler:	0							
DOT Survey/ Acceptance Information: External µR/hr reading:	NA							
Background µR/hr reading:	NA							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? **YES / NO** (NA) (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

If applicable, was the client contacted? **YES / NO** (NA) Contact: _____ Date/Time: _____

Project Manager Signature / Date: Cindy 7/24/16

*IR Gun #2: Oakton, SN 29922500201-0066
*IR Gun #4: Oakton, SN 2372220101-0002

GC/MS Volatiles

Method SW8260_25C

Method Blank

Lab Name: ALS -- Fort Collins
Work Order Number: 1607160
Client Name: COGCC
ClientProject ID: Charles C Bell TB

Lab ID: VL160730-3MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 30-Jul-16
Date Analyzed: 30-Jul-16

Prep Batch: VL160730-3
QCBatchID: VL160730-3-3
Run ID: VL160730-3A
Cleanup: NONE
Basis: N/A
File Name: C70388

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
75-71-8	DICHLORODIFLUOROMETHANE	1	1	1	0.3	U	
74-87-3	CHLOROMETHANE	1	1	1	0.3	U	
75-01-4	VINYL CHLORIDE	1	1	1	0.3	U	
74-83-9	BROMOMETHANE	1	1	1	0.3	U	
75-00-3	CHLOROETHANE	1	1	1	0.3	U	
75-69-4	TRICHLOROFLUOROMETHANE	1	1	1	0.3	U	
75-35-4	1,1-DICHLOROETHENE	1	1	1	0.3	U	
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROET	1	1	1	0.3	U	
67-64-1	ACETONE	1	10	10	3	U	
74-88-4	IODOMETHANE	1	1	1	0.38	U	
75-15-0	CARBON DISULFIDE	1	1	1	0.3	U	
75-09-2	METHYLENE CHLORIDE	1	1	1	0.44	U	
156-60-5	TRANS-1,2-DICHLOROETHENE	1	1	1	0.3	U	
1634-04-4	METHYL TERTIARY BUTYL ETHER	1	1	1	0.3	U	
75-34-3	1,1-DICHLOROETHANE	1	1	1	0.3	U	
108-05-4	VINYL ACETATE	1	2	2	0.3	U	
156-59-2	CIS-1,2-DICHLOROETHENE	1	1	1	0.3	U	
78-93-3	2-BUTANONE	1	10	10	3	U	
74-97-5	BROMOCHLOROMETHANE	1	1	1	0.3	U	
67-66-3	CHLOROFORM	1	1	1	0.3	U	
71-55-6	1,1,1-TRICHLOROETHANE	1	1	1	0.3	U	
594-20-7	2,2-DICHLOROPROPANE	1	1	1	0.3	U	
56-23-5	CARBON TETRACHLORIDE	1	1	1	0.3	U	
563-58-6	1,1-DICHLOROPROPENE	1	1	1	0.3	U	
107-06-2	1,2-DICHLOROETHANE	1	1	1	0.3	U	
71-43-2	BENZENE	1	1	1	0.3	U	
79-01-6	TRICHLOROETHENE	1	1	1	0.3	U	
78-87-5	1,2-DICHLOROPROPANE	1	1	1	0.3	U	

Data Package ID: *VL1607160-1*

GC/MS Volatiles

Method SW8260_25C

Method Blank

Lab Name: ALS -- Fort Collins
Work Order Number: 1607160
Client Name: COGCC
ClientProject ID: Charles C Bell TB

Lab ID: VL160730-3MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 30-Jul-16
Date Analyzed: 30-Jul-16

Prep Batch: VL160730-3
QCBatchID: VL160730-3-3
Run ID: VL160730-3A
Cleanup: NONE
Basis: N/A
File Name: C70388

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
74-95-3	DIBROMOMETHANE	1	1	1	0.3	U	
75-27-4	BROMODICHLOROMETHANE	1	1	1	0.3	U	
10061-01-5	CIS-1,3-DICHLOROPROPENE	1	1	1	0.3	U	
108-10-1	4-METHYL-2-PENTANONE	1	10	10	3	U	
108-88-3	TOLUENE	1	1	1	0.3	U	
10061-02-6	TRANS-1,3-DICHLOROPROPENE	1	1	1	0.3	U	
79-00-5	1,1,2-TRICHLOROETHANE	1	1	1	0.3	U	
591-78-6	2-HEXANONE	1	10	10	3	U	
127-18-4	TETRACHLOROETHENE	1	1	1	0.2	U	
142-28-9	1,3-DICHLOROPROPANE	1	1	1	0.3	U	
124-48-1	DIBROMOCHLOROMETHANE	1	1	1	0.3	U	
106-93-4	1,2-DIBROMOETHANE	1	1	1	0.3	U	
544-10-5	1-CHLOROHEXANE	1	1	1	0.3	U	
108-90-7	CHLOROBENZENE	1	1	1	0.3	U	
630-20-6	1,1,1,2-TETRACHLOROETHANE	1	1	1	0.3	U	
100-41-4	ETHYLBENZENE	1	1	1	0.3	U	
136777-61-2	M+P-XYLENE	1	1	1	0.3	U	
95-47-6	O-XYLENE	1	1	1	0.3	U	
100-42-5	STYRENE	1	1	1	0.3	U	
75-25-2	BROMOFORM	1	1	1	0.3	U	
98-82-8	ISOPROPYLBENZENE	1	1	1	0.3	U	
96-18-4	1,2,3-TRICHLOROPROPANE	1	1	1	0.3	U	
79-34-5	1,1,2,2-TETRACHLOROETHANE	1	1	1	0.3	U	
108-86-1	BROMOBENZENE	1	1	1	0.3	U	
103-65-1	N-PROPYLBENZENE	1	1	1	0.3	U	
95-49-8	2-CHLOROTOLUENE	1	1	1	0.3	U	
108-67-8	1,3,5-TRIMETHYLBENZENE	1	1	1	0.3	U	
106-43-4	4-CHLOROTOLUENE	1	1	1	0.3	U	

Data Package ID: *VL1607160-1*

GC/MS Volatiles

Method SW8260_25C

Method Blank

Lab Name: ALS -- Fort Collins
Work Order Number: 1607160
Client Name: COGCC
ClientProject ID: Charles C Bell TB

Lab ID: VL160730-3MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 30-Jul-16
Date Analyzed: 30-Jul-16

Prep Batch: VL160730-3
QCBatchID: VL160730-3-3
Run ID: VL160730-3A
Cleanup: NONE
Basis: N/A
File Name: C70388

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
98-06-6	TERT-BUTYLBENZENE	1	1	1	0.3	U	
95-63-6	1,2,4-TRIMETHYLBENZENE	1	1	1	0.3	U	
135-98-8	SEC-BUTYLBENZENE	1	1	1	0.3	U	
541-73-1	1,3-DICHLOROBENZENE	1	1	1	0.3	U	
99-87-6	P-ISOPROPYLTOLUENE	1	1	1	0.3	U	
106-46-7	1,4-DICHLOROBENZENE	1	1	1	0.3	U	
104-51-8	N-BUTYLBENZENE	1	1	1	0.3	U	
95-50-1	1,2-DICHLOROBENZENE	1	1	1	0.3	U	
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	1	2	2	0.4	U	
120-82-1	1,2,4-TRICHLOROBENZENE	1	1	1	0.3	U	
87-68-3	HEXACHLOROBUTADIENE	1	1	1	0.3	U	
91-20-3	NAPHTHALENE	1	1	1	0.3	U	
87-61-6	1,2,3-TRICHLOROBENZENE	1	1	1	0.3	U	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	26		25	104	85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	24.1		25	96	84 - 118
2037-26-5	TOLUENE-D8	23.4		25	94	85 - 115

Data Package ID: *VL1607160-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS -- Fort Collins
Work Order Number: 1607160
Client Name: COGCC
ClientProject ID: Charles C Bell TB

Field ID:
Lab ID: VL160730-3MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 30-Jul-16
Date Analyzed: 30-Jul-16

Prep Batch: VL160730-3
QCBatchID: VL160730-3-3
Run ID: VL160730-3A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: C70388

CASNO	Retention Time	Target Analyte	Dilution Factor	Result	Units	Qualifier
		NONE DETECTED	1			U

Data Package ID: *VL1607160-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS -- Fort Collins
Work Order Number: 1607160
Client Name: COGCC
ClientProject ID: Charles C Bell TB

Field ID: 754964 Bell TB
Lab ID: 1607160-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Jun-16
Date Extracted: 30-Jul-16
Date Analyzed: 30-Jul-16
Prep Method: SW5030 Rev C

Prep Batch: VL160730-3
QCBatchID: VL160730-3-3
Run ID: VL160730-3A
Cleanup: NONE
Basis: As Received
File Name: C70407

Analyst: Joe Kostelnik
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
75-71-8	DICHLORODIFLUOROMETHANE	5	5	5	1.5	U	
74-87-3	CHLOROMETHANE	5	5	5	1.5	U	
75-01-4	VINYL CHLORIDE	5	5	5	1.5	U	
74-83-9	BROMOMETHANE	5	5	5	1.5	U	
75-00-3	CHLOROETHANE	5	5	5	1.5	U	
75-69-4	TRICHLOROFLUOROMETHANE	5	5	5	1.5	U	
75-35-4	1,1-DICHLOROETHENE	5	5	5	1.5	U	
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETH	5	5	5	1.5	U	
67-64-1	ACETONE	5	120	50	15		
74-88-4	IODOMETHANE	5	5	5	1.9	U	
75-15-0	CARBON DISULFIDE	5	5	5	1.5	U	
75-09-2	METHYLENE CHLORIDE	5	5.7	5	2.2		
156-60-5	TRANS-1,2-DICHLOROETHENE	5	5	5	1.5	U	
1634-04-4	METHYL TERTIARY BUTYL ETHER	5	5	5	1.5	U	
75-34-3	1,1-DICHLOROETHANE	5	5	5	1.5	U	
108-05-4	VINYL ACETATE	5	10	10	1.5	U	
156-59-2	CIS-1,2-DICHLOROETHENE	5	5	5	1.5	U	
78-93-3	2-BUTANONE	5	50	50	15	U	
74-97-5	BROMOCHLOROMETHANE	5	5	5	1.5	U	
67-66-3	CHLOROFORM	5	5	5	1.5	U	
71-55-6	1,1,1-TRICHLOROETHANE	5	5	5	1.5	U	
594-20-7	2,2-DICHLOROPROPANE	5	5	5	1.5	U	
56-23-5	CARBON TETRACHLORIDE	5	5	5	1.5	U	
563-58-6	1,1-DICHLOROPROPENE	5	5	5	1.5	U	
107-06-2	1,2-DICHLOROETHANE	5	5	5	1.5	U	
71-43-2	BENZENE	5	5	5	1.5	U	

Data Package ID: *VL1607160-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS -- Fort Collins
Work Order Number: 1607160
Client Name: COGCC
ClientProject ID: Charles C Bell TB

Field ID: 754964 Bell TB
Lab ID: 1607160-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Jun-16
Date Extracted: 30-Jul-16
Date Analyzed: 30-Jul-16
Prep Method: SW5030 Rev C

Prep Batch: VL160730-3
QCBatchID: VL160730-3-3
Run ID: VL160730-3A
Cleanup: NONE
Basis: As Received
File Name: C70407

Analyst: Joe Kostelnik
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
79-01-6	TRICHLOROETHENE	5	7.4	5	1.5		
78-87-5	1,2-DICHLOROPROPANE	5	5	5	1.5	U	
74-95-3	DIBROMOMETHANE	5	5	5	1.5	U	
75-27-4	BROMODICHLOROMETHANE	5	5	5	1.5	U	
10061-01-5	CIS-1,3-DICHLOROPROPENE	5	5	5	1.5	U	
108-10-1	4-METHYL-2-PENTANONE	5	50	50	15	U	
108-88-3	TOLUENE	5	5	5	1.5	U	
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5	5	5	1.5	U	
79-00-5	1,1,2-TRICHLOROETHANE	5	5	5	1.5	U	
591-78-6	2-HEXANONE	5	50	50	15	U	
127-18-4	TETRACHLOROETHENE	5	5	5	1	U	
142-28-9	1,3-DICHLOROPROPANE	5	5	5	1.5	U	
124-48-1	DIBROMOCHLOROMETHANE	5	5	5	1.5	U	
106-93-4	1,2-DIBROMOETHANE	5	5	5	1.5	U	
544-10-5	1-CHLOROHEXANE	5	5	5	1.5	U	
108-90-7	CHLOROBENZENE	5	5	5	1.5	U	
630-20-6	1,1,1,2-TETRACHLOROETHANE	5	5	5	1.5	U	
100-41-4	ETHYLBENZENE	5	5	5	1.5	U	
136777-61-2	M+P-XYLENE	5	3.6	5	1.5	J	
95-47-6	O-XYLENE	5	4.8	5	1.5	J	
100-42-5	STYRENE	5	5	5	1.5	U	
75-25-2	BROMOFORM	5	5	5	1.5	U	
98-82-8	ISOPROPYLBENZENE	5	5	5	1.5	U	
96-18-4	1,2,3-TRICHLOROPROPANE	5	5	5	1.5	U	
79-34-5	1,1,2,2-TETRACHLOROETHANE	5	5	5	1.5	U	
108-86-1	BROMOBENZENE	5	5	5	1.5	U	

Data Package ID: *VL1607160-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS -- Fort Collins
Work Order Number: 1607160
Client Name: COGCC
ClientProject ID: Charles C Bell TB

Field ID: 754964 Bell TB
Lab ID: 1607160-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Jun-16
Date Extracted: 30-Jul-16
Date Analyzed: 30-Jul-16
Prep Method: SW5030 Rev C

Prep Batch: VL160730-3
QCBatchID: VL160730-3-3
Run ID: VL160730-3A
Cleanup: NONE
Basis: As Received
File Name: C70407

Analyst: Joe Kostelnik
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
103-65-1	N-PROPYLBENZENE	5	5	5	1.5	U	
95-49-8	2-CHLOROTOLUENE	5	5	5	1.5	U	
108-67-8	1,3,5-TRIMETHYLBENZENE	5	7.8	5	1.5		
106-43-4	4-CHLOROTOLUENE	5	5	5	1.5	U	
98-06-6	TERT-BUTYLBENZENE	5	5	5	1.5	U	
95-63-6	1,2,4-TRIMETHYLBENZENE	5	20	5	1.5		
135-98-8	SEC-BUTYLBENZENE	5	5	5	1.5	U	
541-73-1	1,3-DICHLOROBENZENE	5	5	5	1.5	U	
99-87-6	P-ISOPROPYLTOLUENE	5	1.7	5	1.5	J	
106-46-7	1,4-DICHLOROBENZENE	5	5	5	1.5	U	
104-51-8	N-BUTYLBENZENE	5	5	5	1.5	U	
95-50-1	1,2-DICHLOROBENZENE	5	5	5	1.5	U	
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	5	10	10	2	U	
120-82-1	1,2,4-TRICHLOROBENZENE	5	5	5	1.5	U	
87-68-3	HEXACHLOROBUTADIENE	5	5	5	1.5	U	
91-20-3	NAPHTHALENE	5	53	5	1.5		
87-61-6	1,2,3-TRICHLOROBENZENE	5	5	5	1.5	U	

Data Package ID: *VL1607160-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS -- Fort Collins
Work Order Number: 1607160
Client Name: COGCC
ClientProject ID: Charles C Bell TB

Field ID: 754964 Bell TB
Lab ID: 1607160-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Jun-16
Date Extracted: 30-Jul-16
Date Analyzed: 30-Jul-16
Prep Method: SW5030 Rev C

Prep Batch: VL160730-3
QCBatchID: VL160730-3-3
Run ID: VL160730-3A
Cleanup: NONE
Basis: As Received
File Name: C70407

Analyst: Joe Kostelnik
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	126		125	101	85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	121		125	97	84 - 118
2037-26-5	TOLUENE-D8	121		125	97	85 - 115

Data Package ID: *VL1607160-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS -- Fort Collins
Work Order Number: 1607160
Client Name: COGCC
ClientProject ID: Charles C Bell TB

Field ID: 754964 Bell TB
Lab ID: 1607160-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Jun-16
Date Extracted: 30-Jul-16
Date Analyzed: 30-Jul-16

Prep Batch: VL160730-3
QCBatchID: VL160730-3-3
Run ID: VL160730-3A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: C70407

CASNO	Retention Time	Target Analyte	Dilution Factor	Result	Units	Qualifier
95-93-2	12.33	1,2,4,5-TETRAMETHYLBENZENE	5	23	UG/L	J

Data Package ID: *VL1607160-1*

GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins
Work Order Number: 1607160
Client Name: COGCC
ClientProject ID: Charles C Bell TB

Lab ID: VL160730-3LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07/30/2016
Date Analyzed: 07/30/2016
Prep Method: SW5030C

Prep Batch: VL160730-3
QCBatchID: VL160730-3-3
Run ID: VL160730-3A
Cleanup: NONE
Basis: N/A
File Name: C70385

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
75-71-8	DICHLORODIFLUOROMETHANE	10	9.88	1		99	63 - 125%
74-87-3	CHLOROMETHANE	10	11.4	1		114	73 - 122%
75-01-4	VINYL CHLORIDE	10	9.85	1		98	72 - 123%
74-83-9	BROMOMETHANE	10	9.98	1		100	68 - 123%
75-00-3	CHLOROETHANE	10	9.3	1		93	74 - 124%
75-69-4	TRICHLOROFLUOROMETHANE	10	10.4	1		104	74 - 124%
75-35-4	1,1-DICHLOROETHENE	10	9.18	1		92	77 - 119%
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETH	10	9.56	1		96	79 - 122%
67-64-1	ACETONE	40	40.9	10		102	62 - 142%
74-88-4	IODOMETHANE	10	8.25	1		83	72 - 126%
75-15-0	CARBON DISULFIDE	10	8.61	1		86	76 - 121%
75-09-2	METHYLENE CHLORIDE	10	8.81	1		88	71 - 130%
156-60-5	TRANS-1,2-DICHLOROETHENE	10	9.33	1		93	82 - 117%
1634-04-4	METHYL TERTIARY BUTYL ETHER	20	19.4	1		97	77 - 119%
75-34-3	1,1-DICHLOROETHANE	10	9.52	1		95	83 - 119%
108-05-4	VINYL ACETATE	10	8.33	2		83	76 - 121%
156-59-2	CIS-1,2-DICHLOROETHENE	10	9.65	1		96	83 - 117%
78-93-3	2-BUTANONE	40	40.6	10		101	70 - 135%
74-97-5	BROMOCHLOROMETHANE	10	10.1	1		101	84 - 129%
67-66-3	CHLOROFORM	10	8.97	1		90	82 - 119%
71-55-6	1,1,1-TRICHLOROETHANE	10	9.31	1		93	80 - 120%
594-20-7	2,2-DICHLOROPROPANE	10	9.1	1		91	82 - 140%
56-23-5	CARBON TETRACHLORIDE	10	9.75	1		98	77 - 122%
563-58-6	1,1-DICHLOROPROPENE	10	9.32	1		93	84 - 118%
107-06-2	1,2-DICHLOROETHANE	10	9.67	1		97	74 - 128%
71-43-2	BENZENE	10	9.42	1		94	83 - 117%

Data Package ID: *VL1607160-1*

GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins
Work Order Number: 1607160
Client Name: COGCC
ClientProject ID: Charles C Bell TB

Lab ID: VL160730-3LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07/30/2016
Date Analyzed: 07/30/2016
Prep Method: SW5030C

Prep Batch: VL160730-3
QCBatchID: VL160730-3-3
Run ID: VL160730-3A
Cleanup: NONE
Basis: N/A
File Name: C70385

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
79-01-6	TRICHLOROETHENE	10	9.99	1		100	83 - 117%
78-87-5	1,2-DICHLOROPROPANE	10	9.78	1		98	84 - 120%
74-95-3	DIBROMOMETHANE	10	10.3	1		103	79 - 122%
75-27-4	BROMODICHLOROMETHANE	10	9.15	1		91	76 - 122%
10061-01-5	CIS-1,3-DICHLOROPROPENE	10	9.57	1		96	87 - 126%
108-10-1	4-METHYL-2-PENTANONE	40	40.9	10		102	73 - 125%
108-88-3	TOLUENE	10	9.66	1		97	82 - 113%
10061-02-6	TRANS-1,3-DICHLOROPROPENE	10	9.25	1		92	81 - 114%
79-00-5	1,1,2-TRICHLOROETHANE	10	9.18	1		92	78 - 116%
591-78-6	2-HEXANONE	40	41.3	10		103	71 - 124%
127-18-4	TETRACHLOROETHENE	10	9.63	1		96	84 - 117%
142-28-9	1,3-DICHLOROPROPANE	10	9.77	1		98	80 - 115%
124-48-1	DIBROMOCHLOROMETHANE	10	9.02	1		90	82 - 118%
106-93-4	1,2-DIBROMOETHANE	10	10.3	1		103	79 - 114%
544-10-5	1-CHLOROHEXANE	10	9.19	1		92	80 - 117%
108-90-7	CHLOROBENZENE	10	9.86	1		99	81 - 113%
630-20-6	1,1,1,2-TETRACHLOROETHANE	10	9.8	1		98	78 - 113%
100-41-4	ETHYLBENZENE	10	9.8	1		98	81 - 113%
136777-61-	M+P-XYLENE	20	19.3	1		96	82 - 115%
95-47-6	O-XYLENE	10	9.86	1		99	81 - 115%
100-42-5	STYRENE	10	9.7	1		97	78 - 118%
75-25-2	BROMOFORM	10	8.9	1		89	70 - 120%
98-82-8	ISOPROPYLBENZENE	10	9.72	1		97	80 - 113%
96-18-4	1,2,3-TRICHLOROPROPANE	10	10.4	1		104	78 - 117%
79-34-5	1,1,2,2-TETRACHLOROETHANE	10	9.61	1		96	75 - 121%
108-86-1	BROMOBENZENE	10	10.2	1		102	81 - 114%
103-65-1	N-PROPYLBENZENE	10	9.89	1		99	79 - 116%

Data Package ID: *VL1607160-1*

GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins
Work Order Number: 1607160
Client Name: COGCC
ClientProject ID: Charles C Bell TB

Lab ID: VL160730-3LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07/30/2016
Date Analyzed: 07/30/2016
Prep Method: SW5030C

Prep Batch: VL160730-3
QCBatchID: VL160730-3-3
Run ID: VL160730-3A
Cleanup: NONE
Basis: N/A
File Name: C70385

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
95-49-8	2-CHLOROTOLUENE	10	10.3	1		103	79 - 116%
108-67-8	1,3,5-TRIMETHYLBENZENE	10	9.98	1		100	78 - 116%
106-43-4	4-CHLOROTOLUENE	10	10.4	1		104	78 - 115%
98-06-6	TERT-BUTYLBENZENE	10	9.85	1		98	76 - 120%
95-63-6	1,2,4-TRIMETHYLBENZENE	10	10	1		100	80 - 117%
135-98-8	SEC-BUTYLBENZENE	10	9.92	1		99	78 - 115%
541-73-1	1,3-DICHLOROBENZENE	10	10.1	1		101	79 - 115%
99-87-6	P-ISOPROPYLTOLUENE	10	9.81	1		98	77 - 116%
106-46-7	1,4-DICHLOROBENZENE	10	10	1		100	82 - 114%
104-51-8	N-BUTYLBENZENE	10	10	1		100	79 - 117%
95-50-1	1,2-DICHLOROBENZENE	10	10.2	1		102	82 - 114%
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	10	9.63	2		96	73 - 125%
120-82-1	1,2,4-TRICHLOROBENZENE	10	9.6	1		96	75 - 120%
87-68-3	HEXACHLOROBUTADIENE	10	10.9	1		109	71 - 124%
91-20-3	NAPHTHALENE	10	8.86	1		89	71 - 131%
87-61-6	1,2,3-TRICHLOROBENZENE	10	9.25	1		93	70 - 131%

Data Package ID: *VL1607160-1*

GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins
Work Order Number: 1607160
Client Name: COGCC
ClientProject ID: Charles C Bell TB

Lab ID: VL160730-3LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07/30/2016
Date Analyzed: 07/30/2016
Prep Method: SW5030C

Prep Batch: VL160730-3
QCBatchID: VL160730-3-3
Run ID: VL160730-3A
Cleanup: NONE
Basis: N/A
File Name: C70386

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
75-71-8	DICHLORODIFLUOROMETHANE	10	9.53	1		95	20	4
74-87-3	CHLOROMETHANE	10	11.1	1		111	20	3
75-01-4	VINYL CHLORIDE	10	9.38	1		94	20	5
74-83-9	BROMOMETHANE	10	9.88	1		99	20	1
75-00-3	CHLOROETHANE	10	8.95	1		90	20	4
75-69-4	TRICHLOROFLUOROMETHANE	10	9.76	1		98	20	6
75-35-4	1,1-DICHLOROETHENE	10	8.81	1		88	20	4
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETH	10	9.26	1		93	20	3
67-64-1	ACETONE	40	42.5	10		106	30	4
74-88-4	IODOMETHANE	10	8.41	1		84	20	2
75-15-0	CARBON DISULFIDE	10	8.36	1		84	20	3
75-09-2	METHYLENE CHLORIDE	10	8.85	1		88	20	0
156-60-5	TRANS-1,2-DICHLOROETHENE	10	9.15	1		92	20	2
1634-04-4	METHYL TERTIARY BUTYL ETHER	20	19.7	1		98	20	2
75-34-3	1,1-DICHLOROETHANE	10	9.52	1		95	20	0
108-05-4	VINYL ACETATE	10	8.63	2		86	20	4
156-59-2	CIS-1,2-DICHLOROETHENE	10	9.47	1		95	20	2
78-93-3	2-BUTANONE	40	42.4	10		106	30	4
74-97-5	BROMOCHLOROMETHANE	10	10.2	1		102	20	1
67-66-3	CHLOROFORM	10	8.93	1		89	20	0
71-55-6	1,1,1-TRICHLOROETHANE	10	9.11	1		91	20	2
594-20-7	2,2-DICHLOROPROPANE	10	8.79	1		88	20	4
56-23-5	CARBON TETRACHLORIDE	10	9.5	1		95	20	3
563-58-6	1,1-DICHLOROPROPENE	10	9.04	1		90	20	3
107-06-2	1,2-DICHLOROETHANE	10	9.67	1		97	20	0
71-43-2	BENZENE	10	9.32	1		93	20	1
79-01-6	TRICHLOROETHENE	10	9.79	1		98	20	2

Data Package ID: *VL1607160-1*

GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins
Work Order Number: 1607160
Client Name: COGCC
ClientProject ID: Charles C Bell TB

Lab ID: VL160730-3LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07/30/2016
Date Analyzed: 07/30/2016
Prep Method: SW5030C

Prep Batch: VL160730-3
QCBatchID: VL160730-3-3
Run ID: VL160730-3A
Cleanup: NONE
Basis: N/A
File Name: C70386

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
78-87-5	1,2-DICHLOROPROPANE	10	9.74	1		97	20	0
74-95-3	DIBROMOMETHANE	10	10.5	1		105	20	2
75-27-4	BROMODICHLOROMETHANE	10	9.01	1		90	20	2
10061-01-5	CIS-1,3-DICHLOROPROPENE	10	9.67	1		97	20	1
108-10-1	4-METHYL-2-PENTANONE	40	42.3	10		106	30	3
108-88-3	TOLUENE	10	9.41	1		94	20	3
10061-02-6	TRANS-1,3-DICHLOROPROPENE	10	9.13	1		91	20	1
79-00-5	1,1,2-TRICHLOROETHANE	10	9.08	1		91	20	1
591-78-6	2-HEXANONE	40	42.7	10		107	30	3
127-18-4	TETRACHLOROETHENE	10	9.14	1		91	20	5
142-28-9	1,3-DICHLOROPROPANE	10	9.7	1		97	20	1
124-48-1	DIBROMOCHLOROMETHANE	10	9.14	1		91	20	1
106-93-4	1,2-DIBROMOETHANE	10	10.5	1		105	20	3
544-10-5	1-CHLOROHEXANE	10	8.66	1		87	20	6
108-90-7	CHLOROBENZENE	10	9.55	1		96	20	3
630-20-6	1,1,1,2-TETRACHLOROETHANE	10	9.55	1		95	20	3
100-41-4	ETHYLBENZENE	10	9.44	1		94	20	4
136777-61-	M+P-XYLENE	20	18.8	1		94	20	2
95-47-6	O-XYLENE	10	9.61	1		96	20	3
100-42-5	STYRENE	10	9.57	1		96	20	1
75-25-2	BROMOFORM	10	9	1		90	20	1
98-82-8	ISOPROPYLBENZENE	10	9.4	1		94	20	3
96-18-4	1,2,3-TRICHLOROPROPANE	10	10.6	1		106	20	3
79-34-5	1,1,2,2-TETRACHLOROETHANE	10	10.1	1		101	20	5
108-86-1	BROMOBENZENE	10	10.2	1		102	20	0
103-65-1	N-PROPYLBENZENE	10	9.8	1		98	20	1
95-49-8	2-CHLOROTOLUENE	10	10.2	1		102	20	1

Data Package ID: *VL1607160-1*

GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins
Work Order Number: 1607160
Client Name: COGCC
ClientProject ID: Charles C Bell TB

Lab ID: VL160730-3LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07/30/2016
Date Analyzed: 07/30/2016
Prep Method: SW5030C

Prep Batch: VL160730-3
QCBatchID: VL160730-3-3
Run ID: VL160730-3A
Cleanup: NONE
Basis: N/A
File Name: C70386

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
108-67-8	1,3,5-TRIMETHYLBENZENE	10	9.77	1		98	20	2
106-43-4	4-CHLOROTOLUENE	10	10.1	1		101	20	2
98-06-6	TERT-BUTYLBENZENE	10	9.68	1		97	20	2
95-63-6	1,2,4-TRIMETHYLBENZENE	10	9.96	1		100	20	1
135-98-8	SEC-BUTYLBENZENE	10	9.76	1		98	20	2
541-73-1	1,3-DICHLOROBENZENE	10	10	1		100	20	1
99-87-6	P-ISOPROPYLTOLUENE	10	9.57	1		96	20	2
106-46-7	1,4-DICHLOROBENZENE	10	9.97	1		100	20	1
104-51-8	N-BUTYLBENZENE	10	9.84	1		98	20	2
95-50-1	1,2-DICHLOROBENZENE	10	10.3	1		103	20	0
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	10	10.3	2		103	20	7
120-82-1	1,2,4-TRICHLOROBENZENE	10	9.58	1		96	20	0
87-68-3	HEXACHLOROBUTADIENE	10	10.1	1		101	20	8
91-20-3	NAPHTHALENE	10	9.13	1		91	20	3
87-61-6	1,2,3-TRICHLOROBENZENE	10	9.52	1		95	20	3

Surrogate Recovery LCS/LCSD

CASNO	Target Analyte	Spike Added	LCS % Rec.	LCS Flag	LCSD % Rec.	LCSD Flag	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	25	104		105		85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	25	100		101		84 - 118
2037-26-5	TOLUENE-D8	25	98		97		85 - 115

Data Package ID: *VL1607160-1*

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2016\073016\C70385.D Vial: 4
Acq On : 30 Jul 2016 11:39 Operator: jk-sop525r16
Sample : VL160730-3CCS Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 30 12:18 2016 Quant Results File: 060316W.RES

Quant Method : C:\HPCHEM\1\METHODS\060316W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Tue Jun 21 11:12:05 2016
Response via : Initial Calibration
DataAcq Meth : 060316W

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	5.45	96	1797583	25.00	ppb		0.00
58) Chlorobenzene-d5	8.93	82	653560	25.00	ppb		0.00
78) 1,4-Dichlorobenzene-d4	11.08	152	473932	25.00	ppb		0.00
System Monitoring Compounds							
37) Dibromofluoromethane	4.71	113	481507	24.89	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 99.56%				
42) 1,2-dichloroethane-d4	5.09	65	341982	24.70	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 98.80%				
59) Toluene-d8	7.29	98	1647533	24.43	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 97.72%				
79) 4-Bromofluorobenzene	10.07	95	535748	25.95	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 103.80%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.51	85	208508	9.88	ppb		98
3) Chloromethane	1.64	50	510168	11.42	ppb		99
4) Vinyl chloride	1.72	62	311428	9.85	ppb		99
5) Bromomethane	1.94	96	126594	9.98	ppb		100
6) Chloroethane	2.01	64	168019	9.30	ppb		97
7) Trichlorofluoromethane	2.18	101	203248	10.36	ppb		99
8) Ethanol	2.25	45	51000	207.40	ppb		94
9) Diethyl Ether	2.36	59	177233	9.67	ppb		99
10) Acrolein	2.48	56	374769	94.51	ppb		98
11) 1,1,2-Trichloro-1,2,2-trif	2.56	101	160492	9.56	ppb		97
12) 1,1-Dichloroethene	2.57	96	169512	9.18	ppb		99
13) Acetone	2.57	43	190262	40.92	ppb		95
14) Iodomethane	2.70	142	142228	8.25	ppb		97
15) Carbon Disulfide	2.78	76	630136	8.61	ppb		98
16) Methyl Acetate	2.82	43	158129	9.69	ppb		99
17) Allyl chloride	2.86	76	135255	9.39	ppb		96
18) Acetonitrile	2.80	41	272998	103.00	ppb		98
19) Methylene chloride	2.97	84	216435	8.81	ppb		100
20) tert-Butanol	3.00	59	783665	564.63	ppb		98
21) Methyl-t-butyl-ether	3.20	73	762344	19.38	ppb		99
22) trans-1,2-Dichloroethene	3.22	96	187398	9.33	ppb		96
23) Acrylonitrile	3.16	53	796573	104.63	ppb		99
24) Hexane	3.47	57	217700	9.38	ppb		99
25) Isopropyl ether	3.64	45	962238	9.78	ppb		99
26) Vinyl Acetate	3.61	86	28231	8.33	ppb		96
27) 1,1-Dichloroethane	3.64	63	413074	9.52	ppb		99
28) Chloroprene	3.71	53	270982	9.46	ppb		97
29) Ethyl tert-butyl ether	4.00	59	636245	10.01	ppb		98
30) 2,2-Dichloropropane	4.21	77	197311	9.10	ppb		99
31) 2-Butanone	4.17	43	386474	40.56	ppb		98
32) cis-1,2-Dichloroethene	4.20	96	208875	9.65	ppb		96
33) Propionitrile	4.24	54	248218	104.56	ppb	#	96
34) Methacrylonitrile	4.40	67	67918	8.77	ppb		92
35) Bromochloromethane	4.45	128	92670	10.11	ppb		97
36) Chloroform	4.54	83	276640	8.97	ppb		98
38) 1,1,1-Trichloroethane	4.74	97	163267	9.31	ppb		94
39) Cyclohexane	4.82	84	480147	18.10	ppb		95
40) Carbon tetrachloride	4.91	117	136659	9.75	ppb		97
41) 1,1-Dichloropropene	4.90	75	242632	9.32	ppb		98
43) Isobutyl alcohol	4.96	43	176220	211.03	ppb		99

(#) = qualifier out of range (m) = manual integration
C70385.D 060316W.M Sat Jul 30 12:18:44 2016 8/31-14

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2016\073016\C70385.D Vial: 4
Acq On : 30 Jul 2016 11:39 Operator: jk-sop525r16
Sample : VL160730-3CCS Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 30 12:18 2016 Quant Results File: 060316W.RES

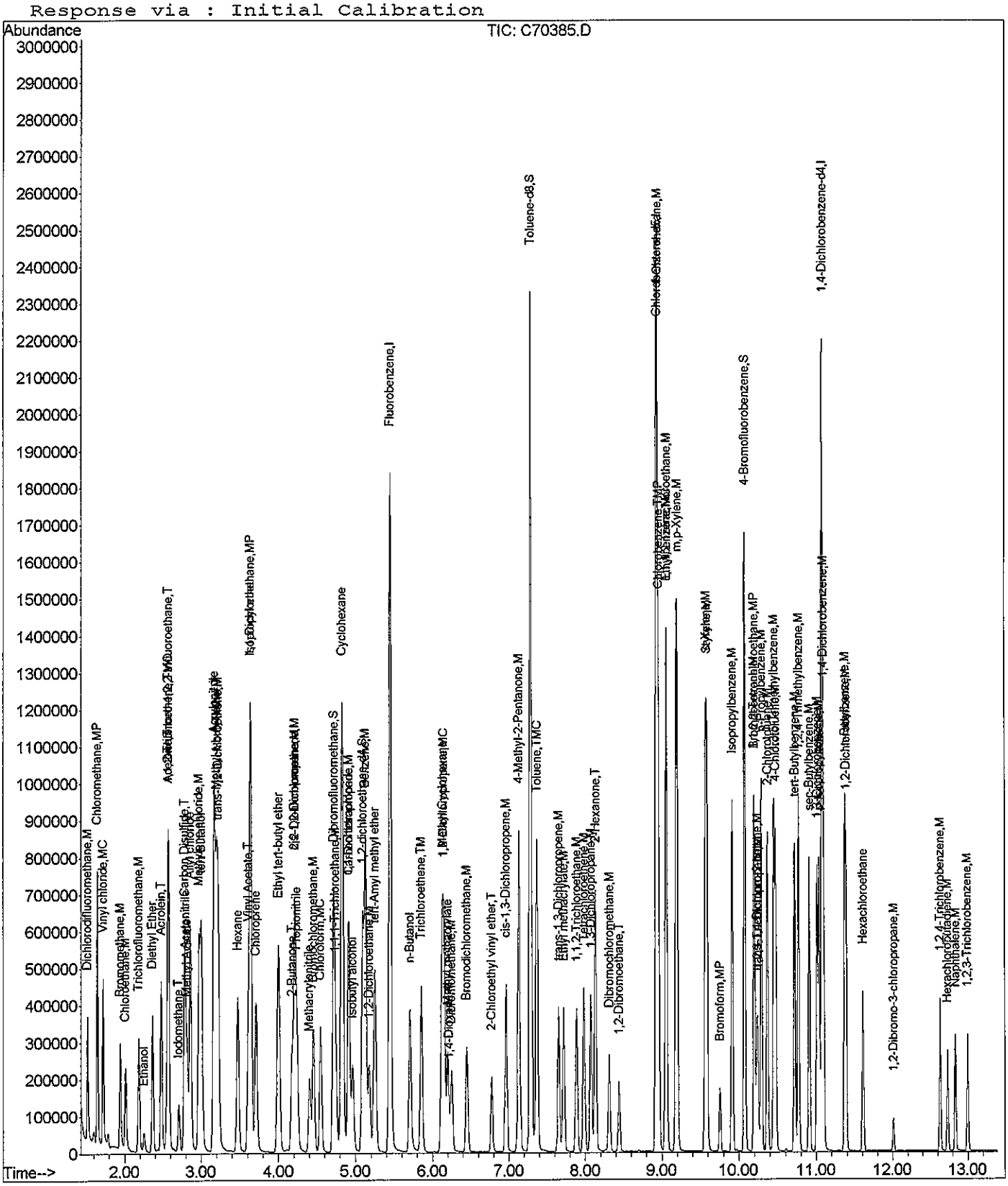
Quant Method : C:\HPCHEM\1\METHODS\060316W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Tue Jun 21 11:12:05 2016
Response via : Initial Calibration
DataAcq Meth : 060316W

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
44)	tert-Amyl methyl ether	5.25	87	84343	9.42	ppb		93
45)	Benzene	5.12	78	775972	9.42	ppb		99
46)	1,2-Dichloroethane	5.18	62	156818	9.67	ppb		99
47)	n-Butanol	5.70	56	267876	566.11	ppb		98
48)	Trichloroethene	5.85	130	174575	9.99	ppb		99
49)	Methyl Cyclohexane	6.13	55	235499	9.54	ppb		97
50)	1,2-Dichloropropane	6.15	63	246764	9.78	ppb		97
51)	Methyl methacrylate	6.20	69	110301	9.18	ppb		93
52)	1,4-Dioxane	6.22	88	25819	201.90	ppb	#	89
53)	Dibromomethane	6.25	93	99164	10.29	ppb		96
54)	Bromodichloromethane	6.44	83	205522	9.15	ppb		100
55)	2-Chloroethyl vinyl ether	6.77	63	101186	9.09	ppb		96
56)	cis-1,3-Dichloropropene	6.96	75	305066	9.57	ppb		100
57)	4-Methyl-2-Pentanone	7.13	43	821901	40.94	ppb		98
60)	Toluene	7.37	91	671241	9.66	ppb		100
61)	Ethyl methacrylate	7.72	69	217671	8.98	ppb		98
62)	trans-1,3-Dichloropropene	7.65	75	224317	9.25	ppb		98
63)	1,1,2-Trichloroethane	7.89	83	128252	9.18	ppb		97
64)	Tetrachloroethene	7.98	164	114342	9.63	ppb		97
65)	2-Hexanone	8.13	58	293578	41.29	ppb		100
66)	1,3-Dichloropropane	8.07	76	255283	9.77	ppb		98
67)	Dibromochloromethane	8.31	129	141299	9.02	ppb		96
68)	1,2-Dibromoethane	8.44	107	135514	10.26	ppb		100
69)	1-Chlorohexane	8.94	91	241052	9.19	ppb		98
70)	Chlorobenzene	8.96	112	433998	9.86	ppb		94
71)	Ethylbenzene	9.06	91	688248	9.80	ppb		100
72)	1,1,1,2-Tetrachloroethane	9.05	131	140744	9.80	ppb		98
73)	m,p-Xylene	9.20	106	524417	19.25	ppb		98
74)	o-Xylene	9.57	106	265892	9.86	ppb		91
75)	Styrene	9.59	104	461813	9.70	ppb		98
76)	Bromoform	9.76	173	70553	8.90	ppb		96
77)	Isopropylbenzene	9.91	105	576168	9.72	ppb		99
80)	1,1,2,2-Tetrachloroethane	10.20	83	173844	9.61	ppb		100
81)	trans-1,4-Dichloro-2-buten	10.23	53	35442	9.54	ppb		98
82)	n-Propylbenzene	10.29	91	702426	9.89	ppb		100
83)	1,2,3-Trichloropropane	10.24	110	36488	10.38	ppb		97
84)	Bromobenzene	10.20	156	150569	10.15	ppb		91
85)	1,3,5-Trimethylbenzene	10.45	105	438983	9.98	ppb		98
86)	2-Chlorotoluene	10.37	126	156225	10.26	ppb		99
87)	4-Chlorotoluene	10.48	126	156911	10.37	ppb		95
88)	tert-Butylbenzene	10.72	134	95354	9.85	ppb		96
89)	1,2,4-Trimethylbenzene	10.77	105	427059	10.01	ppb		97
90)	sec-Butylbenzene	10.91	105	519884	9.92	ppb		99
91)	p-Isopropyltoluene	11.04	119	401405	9.81	ppb		98
92)	1,3-Dichlorobenzene	11.01	146	267803	10.12	ppb		98
93)	1,4-Dichlorobenzene	11.10	146	266184	10.02	ppb		98
94)	n-Butylbenzene	11.37	91	380700	10.04	ppb		99
95)	1,2-Dichlorobenzene	11.39	146	248369	10.24	ppb		99
96)	Hexachloroethane	11.61	119	94651	9.50	ppb		96
97)	1,2-Dibromo-3-chloropropan	12.01	157	20441	9.63	ppb		93
98)	1,2,4-Trichlorobenzene	12.63	180	100755	9.60	ppb		97
99)	Hexachlorobutadiene	12.73	225	44583	10.92	ppb		95
100)	Naphthalene	12.83	128	200796	8.86	ppb		99
101)	1,2,3-Trichlorobenzene	13.00	180	77540	9.25	ppb		99

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\2016\073016\C70385.D Vial: 4
Acq On : 30 Jul 2016 11:39 Operator: jk-sop525r16
Sample : VL160730-3CCS Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 30 12:18 2016 Quant Results File: 060316W.RES

Method : C:\HPCHEM\1\METHODS\060316W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Tue Jun 21 11:12:05 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2016\073016\C70386.D Vial: 5
Acq On : 30 Jul 2016 12:01 Operator: jk-sop525r16
Sample : VL160730-3LCSD Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 30 12:18 2016 Quant Results File: 060316W.RES

Quant Method : C:\HPCHEM\1\METHODS\060316W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Tue Jun 21 11:12:05 2016
Response via : Initial Calibration
DataAcq Meth : 060316W

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	5.44	96	1759520	25.00	ppb		0.00
58) Chlorobenzene-d5	8.93	82	649591	25.00	ppb		0.00
78) 1,4-Dichlorobenzene-d4	11.08	152	463254	25.00	ppb		0.00
System Monitoring Compounds							
37) Dibromofluoromethane	4.71	113	476759	25.18	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery =	100.72%			
42) 1,2-dichloroethane-d4	5.09	65	337103	24.87	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery =	99.48%			
59) Toluene-d8	7.28	98	1626623	24.27	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery =	97.08%			
79) 4-Bromofluorobenzene	10.07	95	530924	26.31	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery =	105.24%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.51	85	196812	9.53	ppb		95
3) Chloromethane	1.64	50	484456	11.08	ppb		99
4) Vinyl chloride	1.72	62	290432	9.38	ppb		99
5) Bromomethane	1.94	96	122702	9.88	ppb		99
6) Chloroethane	2.01	64	158400	8.95	ppb		99
7) Trichlorofluoromethane	2.18	101	187459	9.76	ppb		96
8) Ethanol	2.25	45	51950	215.84	ppb		95
9) Diethyl Ether	2.36	59	173007	9.64	ppb		99
10) Acrolein	2.47	56	375970	96.87	ppb		99
11) 1,1,2-Trichloro-1,2,2-trif	2.56	101	152173	9.26	ppb		98
12) 1,1-Dichloroethene	2.57	96	159209	8.81	ppb		99
13) Acetone	2.57	43	193090	42.50	ppb		98
14) Iodomethane	2.70	142	142265	8.41	ppb		96
15) Carbon Disulfide	2.78	76	598605	8.36	ppb		99
16) Methyl Acetate	2.82	43	158535	9.92	ppb		96
17) Allyl chloride	2.86	76	129885	9.21	ppb		97
18) Acetonitrile	2.80	41	272548	105.06	ppb		100
19) Methylene chloride	2.97	84	212739	8.85	ppb		98
20) tert-Butanol	3.00	59	811350	597.22	ppb		99
21) Methyl-t-butyl-ether	3.20	73	758359	19.69	ppb		99
22) trans-1,2-Dichloroethene	3.22	96	179894	9.15	ppb		98
23) Acrylonitrile	3.16	53	793478	106.48	ppb		99
24) Hexane	3.47	57	202035	8.89	ppb		98
25) Isopropyl ether	3.64	45	934212	9.71	ppb		99
26) Vinyl Acetate	3.61	86	28635	8.63	ppb		84
27) 1,1-Dichloroethane	3.64	63	404221	9.52	ppb		99
28) Chloroprene	3.71	53	259085	9.24	ppb		99
29) Ethyl tert-butyl ether	4.00	59	626355	10.07	ppb		99
30) 2,2-Dichloropropane	4.22	77	186415	8.79	ppb		99
31) 2-Butanone	4.17	43	395629	42.41	ppb		100
32) cis-1,2-Dichloroethene	4.20	96	200677	9.47	ppb		95
33) Propionitrile	4.24	54	250213	107.68	ppb	#	96
34) Methacrylonitrile	4.40	67	69081	9.11	ppb		99
35) Bromochloromethane	4.45	128	91299	10.18	ppb		98
36) Chloroform	4.55	83	269504	8.93	ppb		99
38) 1,1,1-Trichloroethane	4.74	97	156512	9.11	ppb		96
39) Cyclohexane	4.83	84	451107	17.37	ppb		94
40) Carbon tetrachloride	4.91	117	130300	9.50	ppb		100
41) 1,1-Dichloropropene	4.91	75	230369	9.04	ppb		97
43) Isobutyl alcohol	4.96	43	188405	230.50	ppb		95

(#) = qualifier out of range (m) = manual integration
C70386.D 060316W.M Sat Jul 30 12:19:02 2016 7-31-16

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2016\073016\C70386.D Vial: 5
Acq On : 30 Jul 2016 12:01 Operator: jk-sop525r16
Sample : VL160730-3LCSD Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 30 12:18 2016 Quant Results File: 060316W.RES

Quant Method : C:\HPCHEM\1\METHODS\060316W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Tue Jun 21 11:12:05 2016
Response via : Initial Calibration
DataAcq Meth : 060316W

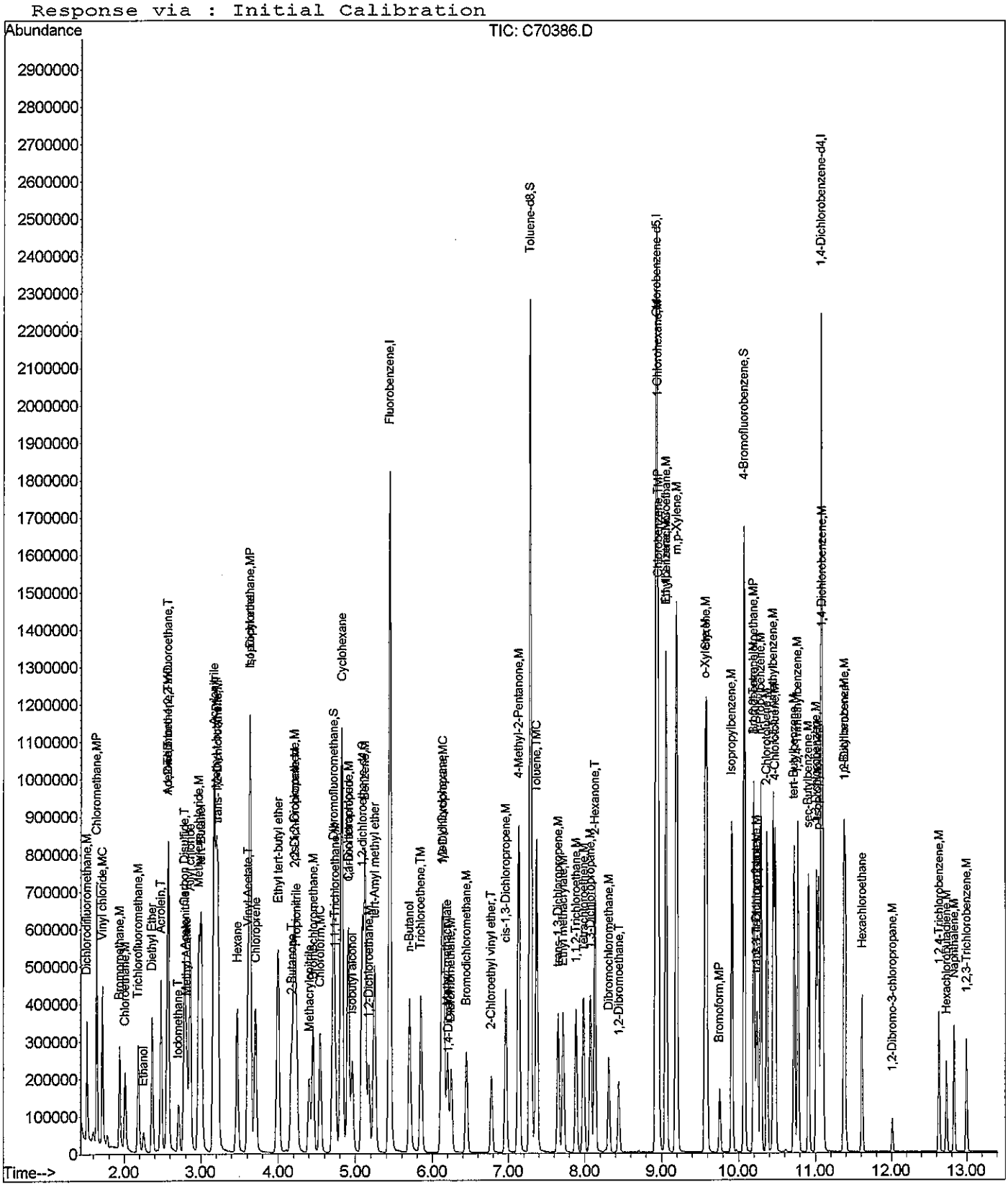
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
44)	tert-Amyl methyl ether	5.25	87	83209	9.50	ppb		99
45)	Benzene	5.13	78	751567	9.32	ppb		100
46)	1,2-Dichloroethane	5.17	62	153506	9.67	ppb		98
47)	n-Butanol	5.70	56	278482	601.25	ppb		97
48)	Trichloroethene	5.85	130	167488	9.79	ppb		98
49)	Methyl Cyclohexane	6.12	55	218973	9.06	ppb		96
50)	1,2-Dichloropropane	6.15	63	240727	9.74	ppb		94
51)	Methyl methacrylate	6.20	69	110439	9.40	ppb		95
52)	1,4-Dioxane	6.22	88	27378	218.72	ppb	#	74
53)	Dibromomethane	6.24	93	99371	10.53	ppb		94
54)	Bromodichloromethane	6.45	83	198086	9.01	ppb		97
55)	2-Chloroethyl vinyl ether	6.77	63	102683	9.43	ppb		95
56)	cis-1,3-Dichloropropene	6.96	75	301713	9.67	ppb		99
57)	4-Methyl-2-Pentanone	7.13	43	832014	42.34	ppb		99
60)	Toluene	7.37	91	650059	9.41	ppb		99
61)	Ethyl methacrylate	7.72	69	221167	9.18	ppb		99
62)	trans-1,3-Dichloropropene	7.65	75	220016	9.13	ppb		98
63)	1,1,2-Trichloroethane	7.89	83	126081	9.08	ppb		95
64)	Tetrachloroethene	7.99	164	107780	9.14	ppb		98
65)	2-Hexanone	8.13	58	302067	42.74	ppb		97
66)	1,3-Dichloropropane	8.07	76	251971	9.70	ppb		98
67)	Dibromochloromethane	8.31	129	142330	9.14	ppb		99
68)	1,2-Dibromoethane	8.44	107	138328	10.53	ppb		99
69)	1-Chlorohexane	8.95	91	225910	8.66	ppb		100
70)	Chlorobenzene	8.96	112	417897	9.55	ppb		97
71)	Ethylbenzene	9.06	91	658655	9.44	ppb		99
72)	1,1,1,2-Tetrachloroethane	9.05	131	136241	9.55	ppb		99
73)	m,p-Xylene	9.20	106	509133	18.81	ppb		97
74)	o-Xylene	9.57	106	257535	9.61	ppb		95
75)	Styrene	9.59	104	453080	9.57	ppb		99
76)	Bromoform	9.76	173	70922	9.00	ppb		99
77)	Isopropylbenzene	9.91	105	553941	9.40	ppb		100
80)	1,1,2,2-Tetrachloroethane	10.20	83	179492	10.15	ppb		96
81)	trans-1,4-Dichloro-2-buten	10.23	53	36648	10.09	ppb		89
82)	n-Propylbenzene	10.29	91	680172	9.80	ppb		98
83)	1,2,3-Trichloropropane	10.25	110	36569	10.64	ppb		77
84)	Bromobenzene	10.20	156	147475	10.17	ppb		95
85)	1,3,5-Trimethylbenzene	10.45	105	419923	9.77	ppb		98
86)	2-Chlorotoluene	10.37	126	151689	10.19	ppb		99
87)	4-Chlorotoluene	10.48	126	149640	10.12	ppb		97
88)	tert-Butylbenzene	10.72	134	91594	9.68	ppb		96
89)	1,2,4-Trimethylbenzene	10.77	105	415329	9.96	ppb		95
90)	sec-Butylbenzene	10.91	105	499674	9.76	ppb		99
91)	p-Isopropyltoluene	11.04	119	382793	9.57	ppb		98
92)	1,3-Dichlorobenzene	11.01	146	259925	10.04	ppb		98
93)	1,4-Dichlorobenzene	11.10	146	258878	9.97	ppb		98
94)	n-Butylbenzene	11.37	91	364488	9.84	ppb		99
95)	1,2-Dichlorobenzene	11.39	146	243709	10.28	ppb		99
96)	Hexachloroethane	11.61	119	91825	9.43	ppb	#	91
97)	1,2-Dibromo-3-chloropropan	12.01	157	21325	10.28	ppb		98
98)	1,2,4-Trichlorobenzene	12.63	180	98249	9.58	ppb		98
99)	Hexachlorobutadiene	12.74	225	40177	10.07	ppb		96
100)	Naphthalene	12.83	128	203121	9.13	ppb		100
101)	1,2,3-Trichlorobenzene	13.00	180	78171	9.52	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2016\073016\C70386.D Vial: 5
Acq On : 30 Jul 2016 12:01 Operator: jk-sop525r16
Sample : VL160730-3LCSD Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 30 12:18 2016 Quant Results File: 060316W.RES

Method : C:\HPCHEM\1\METHODS\060316W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Tue Jun 21 11:12:05 2016
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2016\073016\C70388.D Vial: 7
Acq On : 30 Jul 2016 12:46 Operator: jk-sop525r16
Sample : VL160730-3MB Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 30 13:01 2016 Quant Results File: 060316W.RES

Quant Method : C:\HPCHEM\1\METHODS\060316W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Tue Jun 21 11:12:05 2016
Response via : Initial Calibration
DataAcq Meth : 060316W

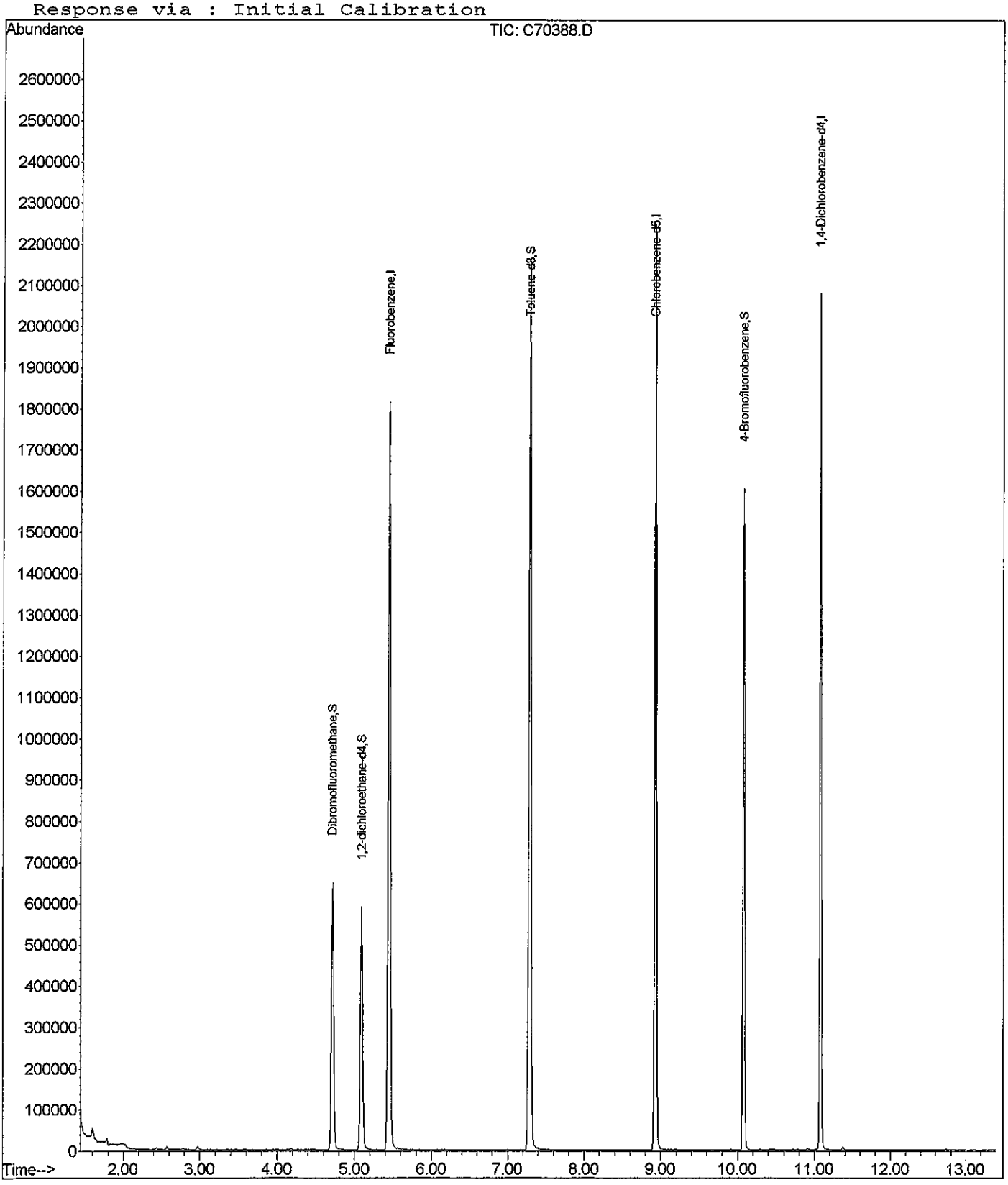
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	5.44	96	1775501	25.00	ppb	0.00
58) Chlorobenzene-d5	8.93	82	650990	25.00	ppb	0.00
78) 1,4-Dichlorobenzene-d4	11.08	152	448116	25.00	ppb	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	4.72	113	460287	24.09	ppb	0.01
Spiked Amount 25.000	Range 85 - 115		Recovery = 96.36%			
42) 1,2-dichloroethane-d4	5.09	65	333399	24.37	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 97.48%			
59) Toluene-d8	7.29	98	1572632	23.41	ppb	0.01
Spiked Amount 25.000	Range 85 - 115		Recovery = 93.64%			
79) 4-Bromofluorobenzene	10.07	95	506660	25.96	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 103.84%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
C70388.D 060316W.M Sat Jul 30 13:01:18 2016 7-31-16 Page 1

Data File : C:\HPCHEM\1\DATA\2016\073016\C70388.D Vial: 7
Acq On : 30 Jul 2016 12:46 Operator: jk-sop525r16
Sample : VL160730-3MB Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 30 13:01 2016 Quant Results File: 060316W.RES

Method : C:\HPCHEM\1\METHODS\060316W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Tue Jun 21 11:12:05 2016
Response via : Initial Calibration



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\2016\073016\C70388.D Vial: 7
Acq On : 30 Jul 2016 12:46 Operator: jk-sop525r16
Sample : VL160730-3MB Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ETTICS.P
Quant Method : C:\HPCHEM\1\METHODS\060316W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Library : C:\DATABASE\NIST129k.l

No Library Search Compounds Detected

****
C70388.D 060316W.M Sun Jul 31 10:11:18 2016

8-7-31-16

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2016\073016\C70407.D Vial: 26
Acq On : 30 Jul 2016 19:29 Operator: jk-sop525r16
Sample : 1607160-2 5X Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 31 8:49 2016 Quant Results File: 060316W.RES

Quant Method : C:\HPCHEM\1\METHODS\060316W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Tue Jun 21 11:12:05 2016
Response via : Initial Calibration
DataAcq Meth : 060316W

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	5.45	96	1732800	25.00	ppb	0.01
58) Chlorobenzene-d5	8.93	82	621534	25.00	ppb	0.00
78) 1,4-Dichlorobenzene-d4	11.08	152	450049	25.00	ppb	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	4.72	113	450678	24.16	ppb	0.01
Spiked Amount 25.000	Range 85 - 115		Recovery = 96.64%			
42) 1,2-dichloroethane-d4	5.10	65	316111	23.68	ppb	0.01
Spiked Amount 25.000	Range 85 - 115		Recovery = 94.72%			
59) Toluene-d8	7.29	98	1548507	24.15	ppb	0.01
Spiked Amount 25.000	Range 85 - 115		Recovery = 96.60%			
79) 4-Bromofluorobenzene	10.07	95	494626	25.23	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 100.92%			
Target Compounds						Qvalue
13) Acetone	2.58	43	106829	23.11	ppb	97
19) Methylene chloride	2.97	84	27212	1.15	ppb	95
48) Trichloroethene	5.85	130	24833	1.47	ppb	96
73) m,p-Xylene	9.19	106	18688	0.72	ppb	92
74) o-Xylene	9.57	106	24665	0.96	ppb	89
85) 1,3,5-Trimethylbenzene	10.45	105	65215	1.56	ppb	99
89) 1,2,4-Trimethylbenzene	10.77	105	162593	4.02	ppb	98
91) p-Isopropyltoluene	11.04	119	13166	0.34	ppb	98
100) Naphthalene	12.83	128	233024	10.58	ppb	100

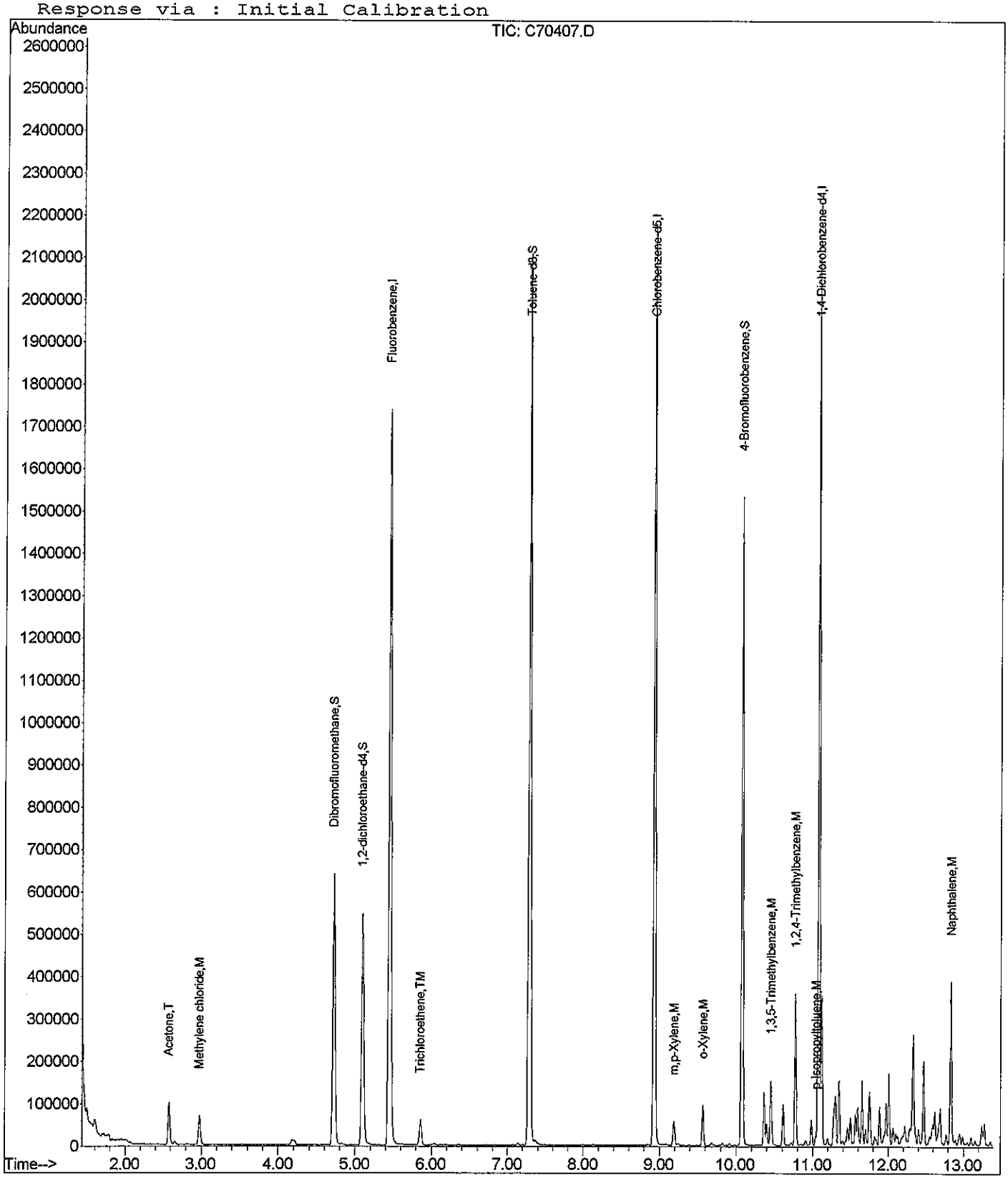
(#) = qualifier out of range (m) = manual integration
C70407.D 060316W.M Sun Jul 31 08:49:56 2016 Page 1

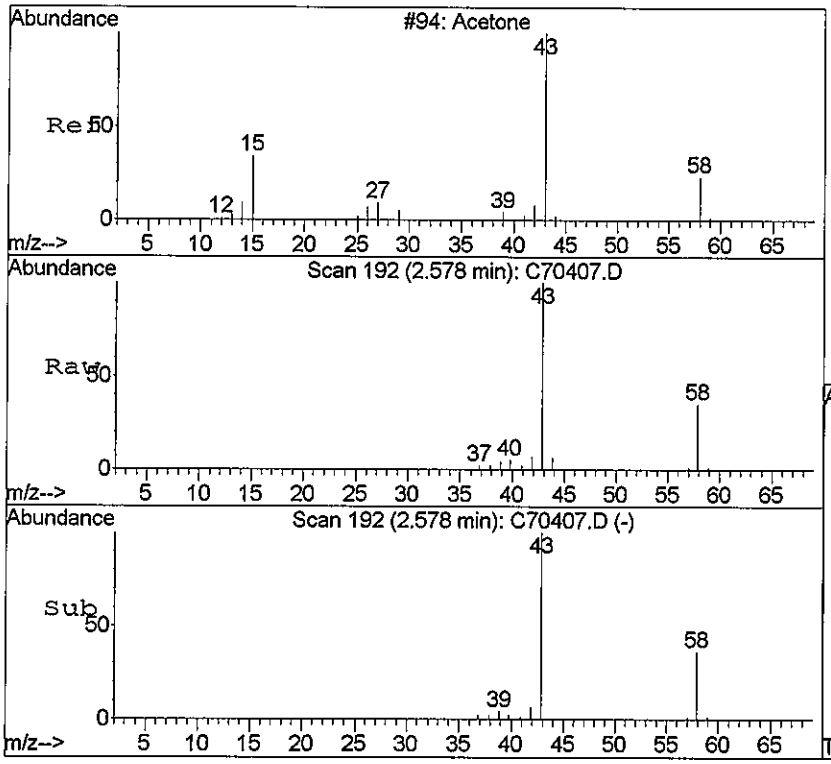
7-31-16

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2016\073016\C70407.D Vial: 26
Acq On : 30 Jul 2016 19:29 Operator: jk-sop525r16
Sample : 1607160-2 5X Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 31 8:49 2016 Quant Results File: 060316W.RES

Method : C:\HPCHEM\1\METHODS\060316W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Tue Jun 21 11:12:05 2016
Response via : Initial Calibration

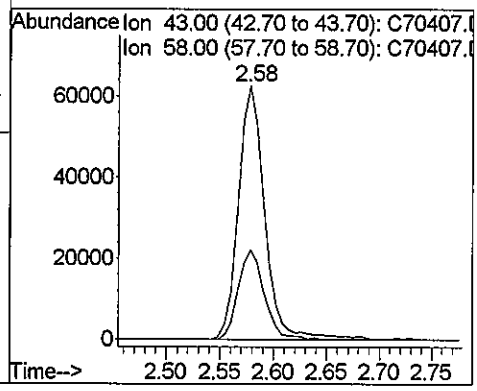


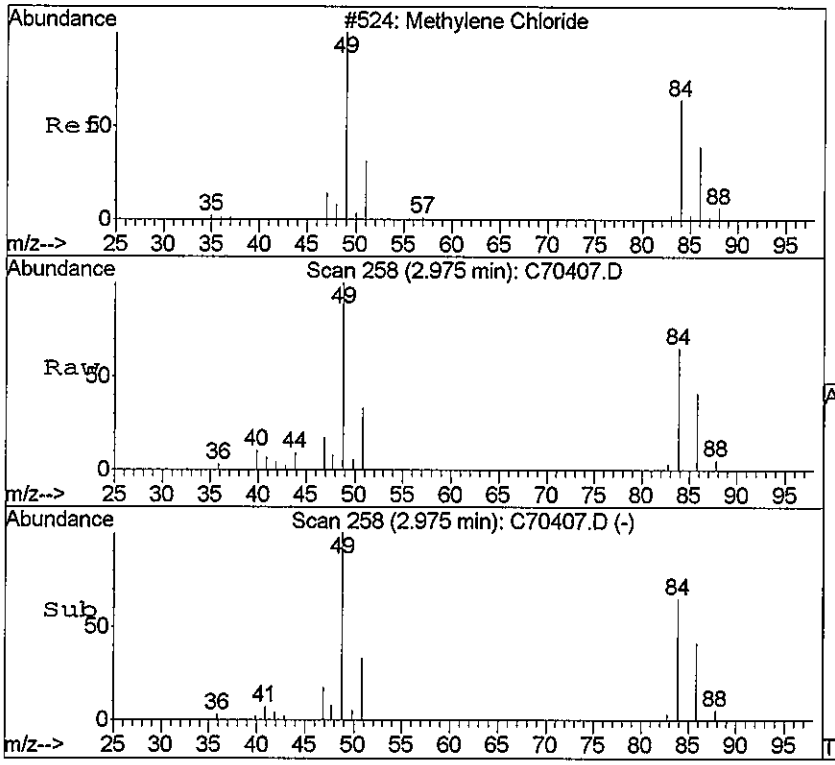


#13
Acetone
Concen: 23.11 ppb
RT: 2.58 min Scan# 192
Delta R.T. 0.01 min
Lab File: C70407.D
Acq: 30 Jul 2016 19:29

Tgt Ion: 43 Resp: 106829

Ion	Ratio	Lower	Upper
43	100		
58	35.4	0.0	208.5

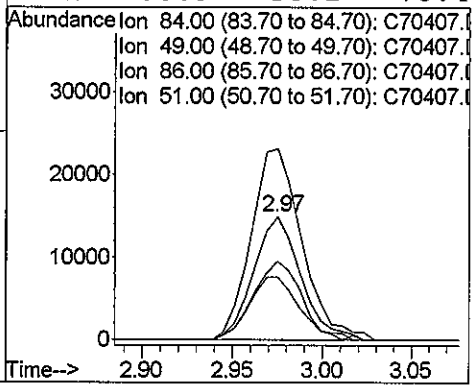


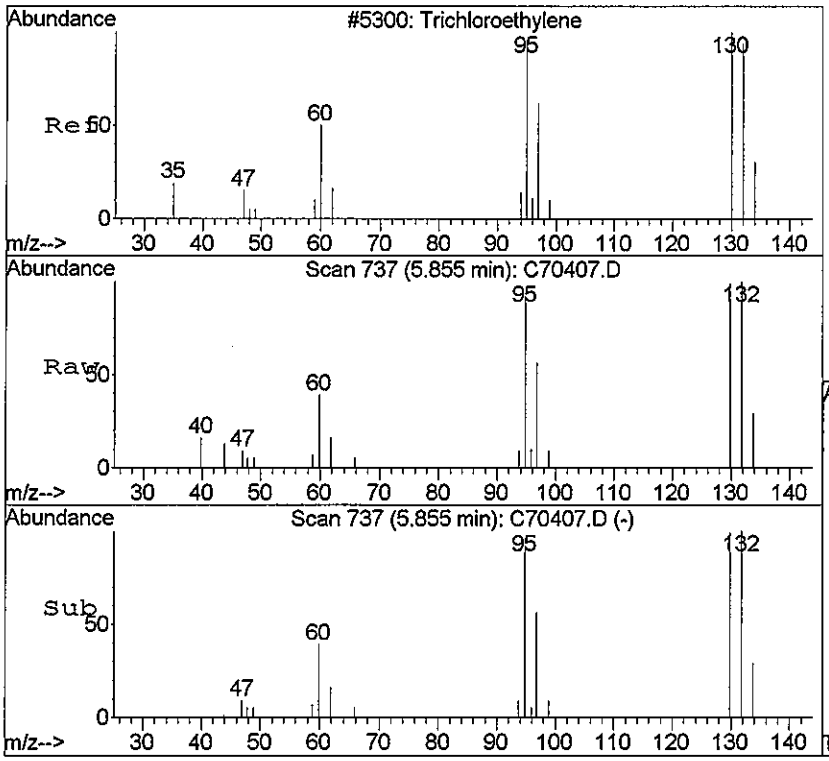


#19
Methylene chloride
Concen: 1.15 ppb
RT: 2.97 min Scan# 258
Delta R.T. 0.01 min
Lab File: C70407.D
Acq: 30 Jul 2016 19:29

Tgt Ion: 84 Resp: 27212

Ion	Ratio	Lower	Upper
84	100		
49	155.0	99.1	231.1
86	63.8	39.5	92.3
51	50.9	30.2	70.4

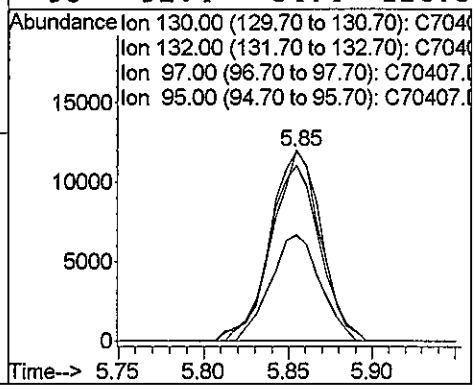


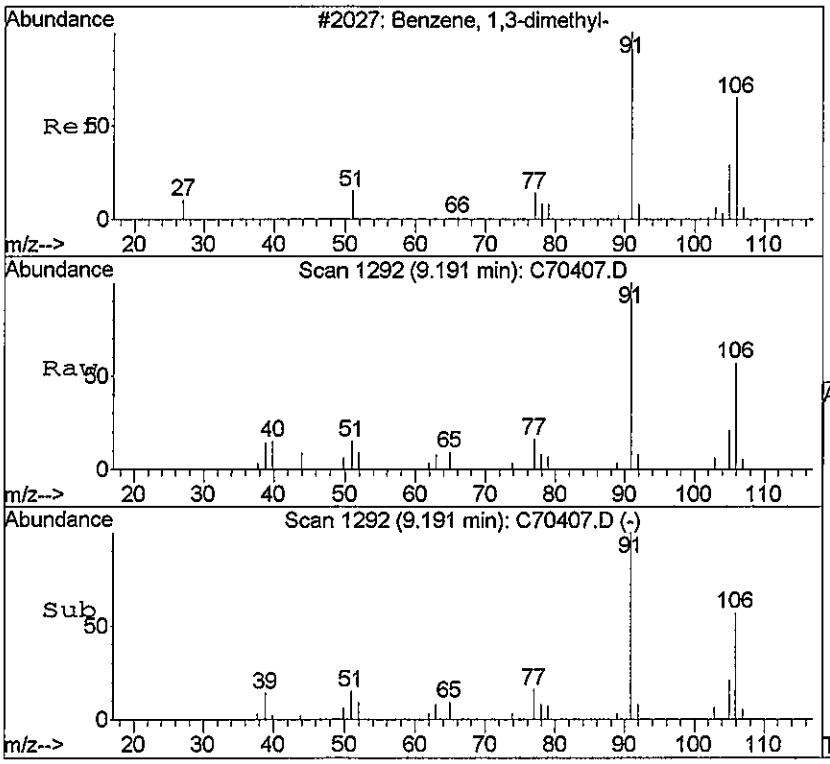


#48
Trichloroethene
Concen: 1.47 ppb
RT: 5.85 min Scan# 737
Delta R.T. 0.01 min
Lab File: C70407.D
Acq: 30 Jul 2016 19:29

Tgt Ion:130 Resp: 24833

Ion	Ratio	Lower	Upper
130	100		
132	100.7	57.0	133.0
97	56.0	34.7	80.9
95	92.4	54.4	126.8

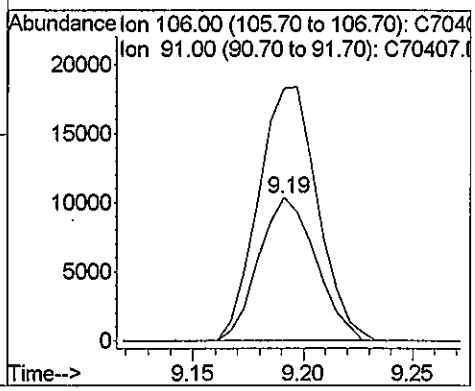


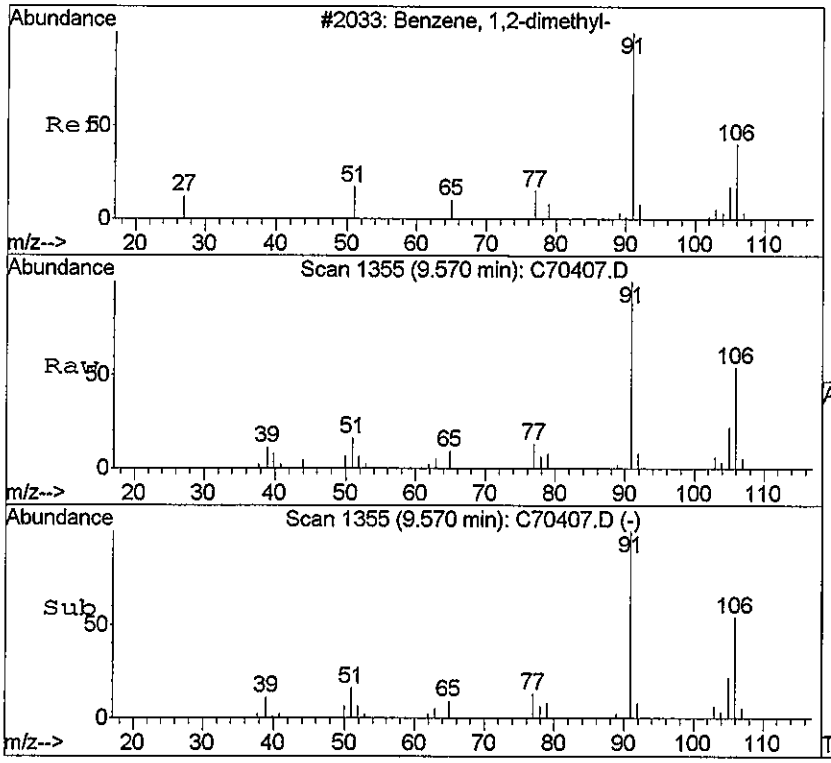


#73
m,p-Xylene
Concen: 0.72 ppb
RT: 9.19 min Scan# 1292
Delta R.T. -0.00 min
Lab File: C70407.D
Acq: 30 Jul 2016 19:29

Tgt Ion:106 Resp: 18688

Ion	Ratio	Lower	Upper
106	100		
91	176.4	112.9	263.5

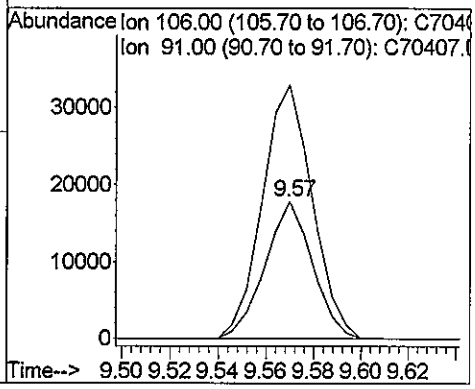


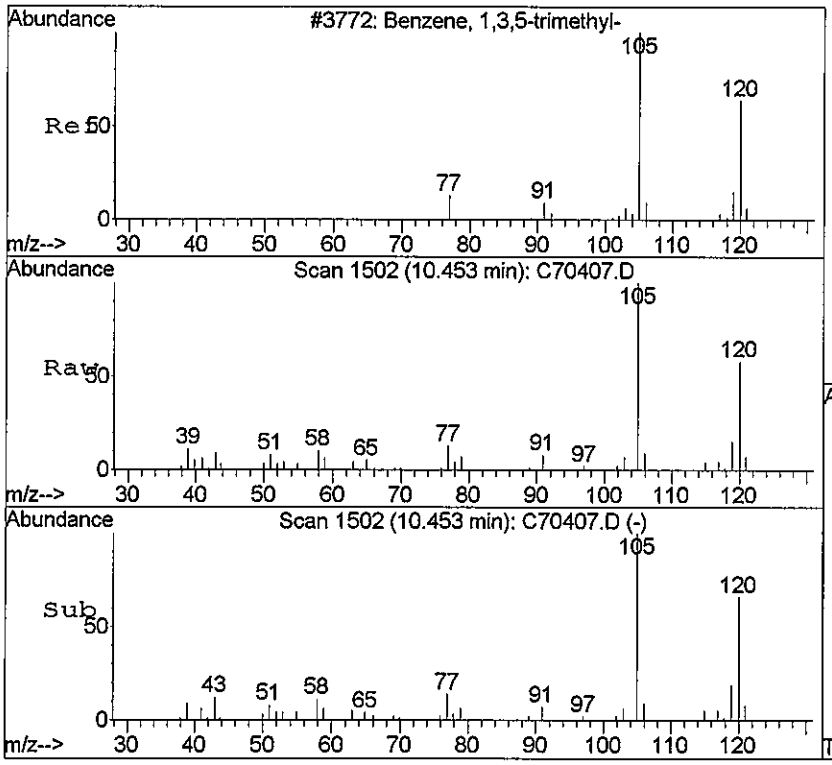


#74
o-Xylene
Concen: 0.96 ppb
RT: 9.57 min Scan# 1355
Delta R.T. 0.01 min
Lab File: C70407.D
Acq: 30 Jul 2016 19:29

Tgt Ion:106 Resp: 24665

Ion	Ratio	Lower	Upper
106	100		
91	184.2	120.7	281.7

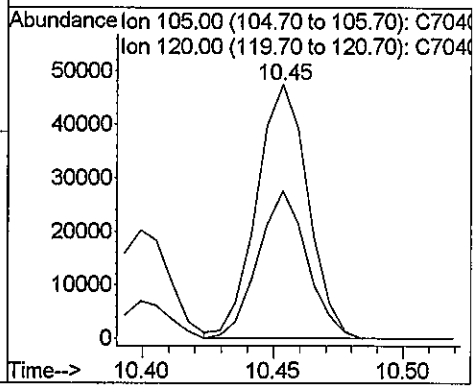


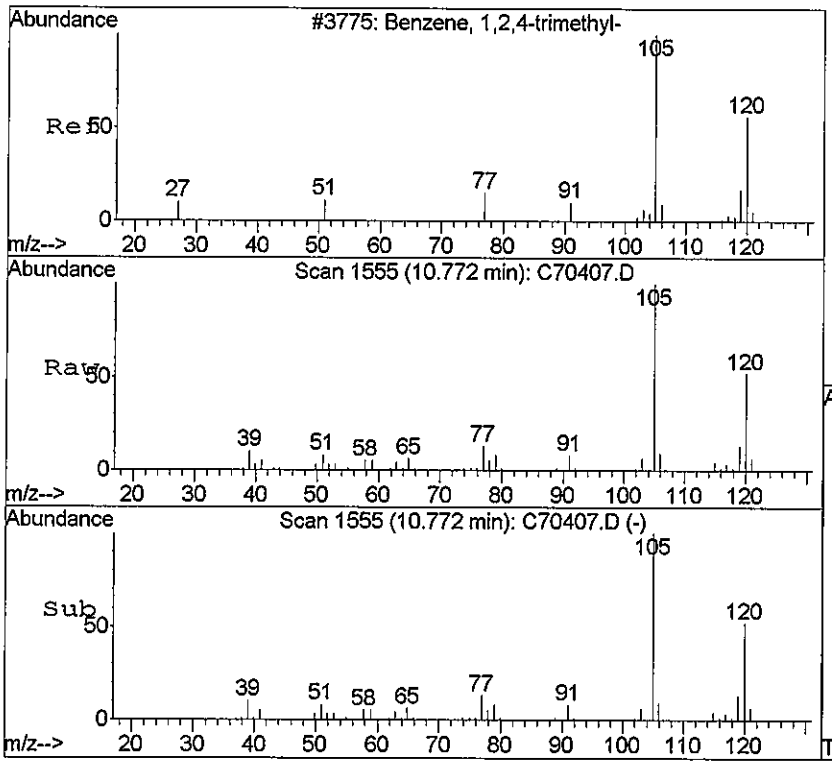


#85
1,3,5-Trimethylbenzene
Concen: 1.56 ppb
RT: 10.45 min Scan# 1502
Delta R.T. -0.00 min
Lab File: C70407.D
Acq: 30 Jul 2016 19:29

Tgt Ion:105 Resp: 65215

Ion	Ratio	Lower	Upper
105	100		
120	58.2	34.4	80.2

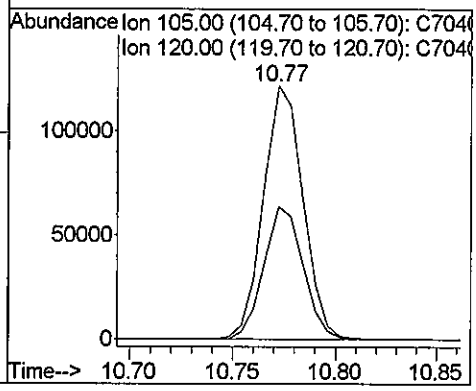


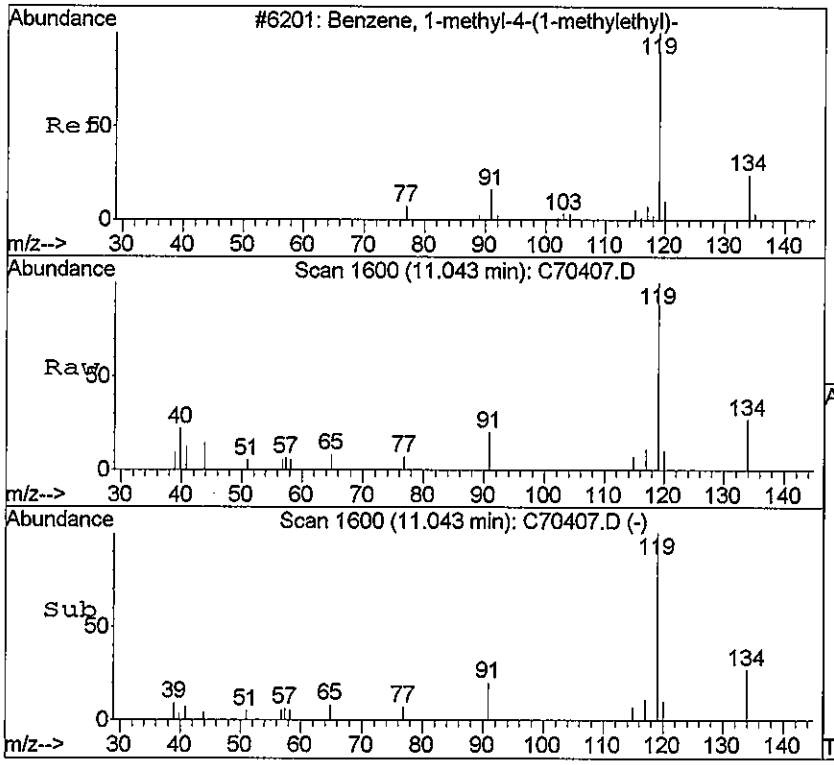


#89
1,2,4-Trimethylbenzene
Concen: 4.02 ppb
RT: 10.77 min Scan# 1555
Delta R.T. -0.00 min
Lab File: C70407.D
Acq: 30 Jul 2016 19:29

Tgt Ion:105 Resp: 162593

Ion	Ratio	Lower	Upper
105	100		
120	52.4	32.5	75.7

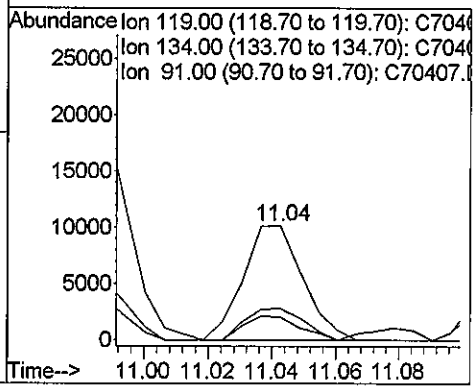


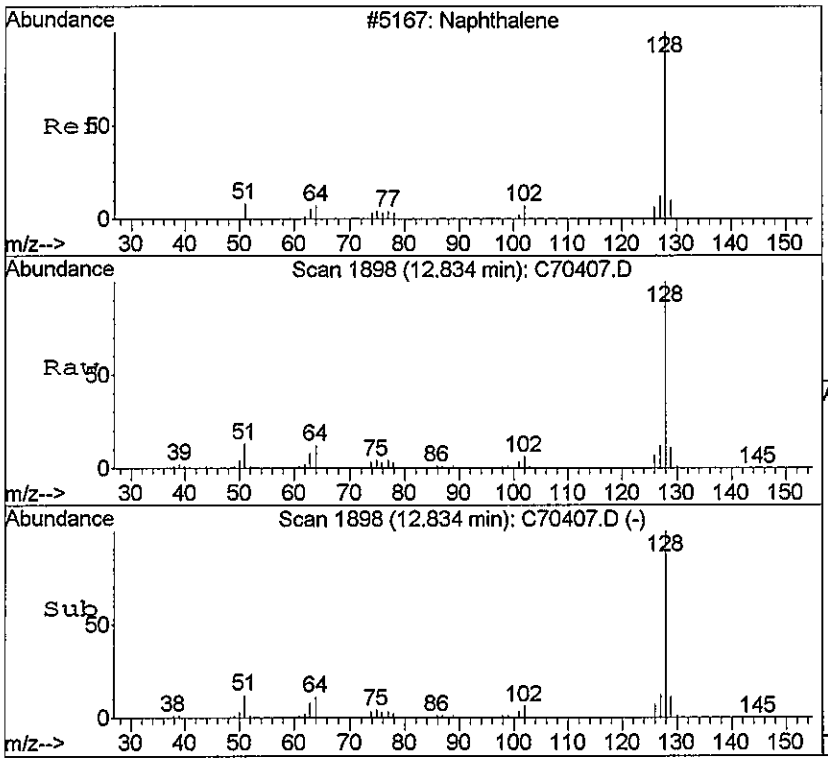


#91
p-Isopropyltoluene
Concen: 0.34 ppb
RT: 11.04 min Scan# 1600
Delta R.T. 0.01 min
Lab File: C70407.D
Acq: 30 Jul 2016 19:29

Tgt Ion:119 Resp: 13166

Ion	Ratio	Lower	Upper
119	100		
134	27.1	15.8	36.8
91	19.7	11.4	26.6

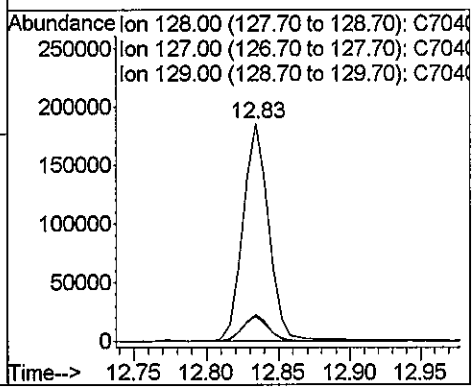




#100
Naphthalene
Concen: 10.58 ppb
RT: 12.83 min Scan# 1898
Delta R.T. -0.00 min
Lab File: C70407.D
Acq: 30 Jul 2016 19:29

Tgt Ion:128 Resp: 233024

Ion	Ratio	Lower	Upper
128	100		
127	12.2	7.4	17.2
129	11.3	6.7	15.7



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\2016\073016\C70407.D Vial: 26
Acq On : 30 Jul 2016 19:29 Operator: jk-sop525r16
Sample : 1607160-2 5X Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ETTICS.P

Quant Method : C:\HPCHEM\1\METHODS\060316W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Library : C:\DATABASE\NIST129k.l

****

Peak Number 1 Benzene, 1,2,4,5-tetramethyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.33	4.51 ppb	507504	1,4-Dichlorobenzene-d4	11.08

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	60
2	1,3-Cyclopentadiene, 1,2,3,4-tetram	134	C10H14	076089-59-3	60
3	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	55
4	Benzene, 1-methyl-2-(1-methylethyl)	134	C10H14	000527-84-4	55