received 07/31/2016
Complaint 200439757

GC/MS Volatiles

Case Narrative

COGCC

Complaint 200439757

Work Order Number: 1607366

1. This report consists of 1 water sample. The sample was received cool and intact by ALS on 06/20/16.

   The sample was free of headspace prior to analysis and 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 with the exception of bromoform which was low. This compound was not detected in the associated sample.

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 with the following exception:

Spiked Compound	QC Sample	Direction
Chloroethane	LCS & LCSD	RPD

Since the recoveries for this compound in the laboratory control sample and laboratory control sample duplicate were within control limits, with only the RPD exceeding acceptance criteria, quantitations of target compounds were not compromised. No further action was taken.

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 — 7/29/16
Organics Primary Data Reviewer — Date

Organics Final Data Reviewer — 7/30/16
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
Data Qualifier Flags
Fuels

G: **This flag indicates that a pattern resembling gasoline was detected in this sample.**

D: **This flag indicates that a pattern resembling diesel was detected in this sample.**

M: **This flag indicates that a pattern resembling motor oil was detected in this sample.**

C: **This flag indicates that a pattern resembling crude oil was detected in this sample.**

4: **This flag indicates that a pattern resembling JP-4 was detected in this sample.**

5: **This flag indicates that a pattern resembling JP-5 was detected in this sample.**

H: **This flag indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.**

L: **This flag indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.**

Z: **This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:**
gasoline
JP-8
diesel
mineral spirits
motor oil
Stoddard solvent
bunker C

Multiple flags may be used to indicate the presence of more than one product or component.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 1607366
Client Name: COGCC
Client Project Name: Complaint 200439757
Client Project Number:
Client PO Number: CT 2016-141

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
754977 Platteville Lat.	1607366-1		WATER	20-Jul-16	8:08
754980 Platteville Lat.	1607366-2		WATER	20-Jul-16	8:30
753452 WW	1607366-3		WATER	20-Jul-16	9:45
754914 Sump	1607366-4		WATER	20-Jul-16	9:21

ALS Environmental

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

Chain-of-Custody

Turnaround time for samples received after 2 p.m. will be calculated beginning from the next business day.

Turnaround time for samples received Saturday will be calculated beginning from the next business day.

ALS WORKORDER # 1607366

PAGE 1 of 1

DISPOSAL BY LAB or RETURN

PROJECT NAME	Complaint 20043757	TURNAROUND TIME	14 days
PROJECT No.		SITE ID	
		EDD FORMAT	COGCC
COMPANY NAME	Colo. Oil & Gas Cons. Comm.	PURCHASE ORDER	
SEND REPORT TO	Peter Gintautas	BILL TO COMPANY	
ADDRESS	1120 Lincoln St # 801	INVOICE ATTN TO	
CITY / STATE / ZIP	Denver CO 80203	ADDRESS	
PHONE	719 679-1326	CITY / STATE / ZIP	
FAX		PHONE	
E-MAIL	peter.gintautas@state.co.us	FAX	
		E-MAIL	
		SAMPLER	PAG

PARAMETER/METHOD REQUEST FOR ANALYSIS

A	Anions = Br, Cl, F, NO_2, NO_3, SO_4, POx
B	200.7 dissolved, SAR calc
C	200.8 dissolved
D	pH, specific cond., TDS, Alkalinity
E	E300 + STM pH
F	E260 + GRO
G	DRO + Meter Oil
H	TOC
I	
J	

LAB ID	FIELD ID	MATRIX	SAMPLE DATE	SAMPLE TIME	# OF BOTTLES	PRESERVATIVE	QC	A	B	C	D	E	F	G	H	I	J	SEE NOTES SECTION
1	754977 Platteville Lat.	W	07/20/2016	08:04	3	none/H_2SO_4		X	X	X	X				X			
2	754980 Platteville Lat 754	W	07/20/2016	08:30	3	none/H_2SO_4		X	X	X	X				X			
3	753452 WW	W	07/20/16	09:45	3	HCl							X					
	753452 WW	W	07/20/16	09:45	2	—						X		X				
	753452 WW	W	07/20/16	09:45	3	—		X	X	X	X							
↓	753452 WW	W	07/20/16	09:45	1	H_2SO_4									X			
4	754914 Sump	W	07/20	09:21	2	—		X	X	X	X							
	754914 Sump	W	07/20	09:21	1	H_2SO_4									X			
↓	754914 Sump	W	07/20	09:21	1	—						X						

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

NOTES

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dissolved metals = filter + preserve at lab 200.8-COGCC-16, 200.8 Na 754914 max contain Hydrical only 200.7 COGCC-11 Be 200.7 COGCC

REPORT LEVEL / QC REQUIRED	
X	Summary (Standard QC)
	LEVEL II (Standard QC)
	LEVEL III (Std QC + forms)
	LEVEL IV (Std QC + forms + raw)

PRESERVATION KEY 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaOH/ZnAcetate 6-NaHSO4 7-4°C 8-Other

Form 202r9

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Peter Gintautas	7/20/2016	14:35
RECEIVED BY		Rebecca Merola	7/20/16	1435
RELINQUISHED BY				1425
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: COGCC Workorder No: 1607366

Project Manager: ARW Initials: SDM Date: 7-20-16

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	2						
Temperature (°C):	5.0	7.2						
No. of custody seals on cooler:	0	0						
DOT Survey/ Acceptance Information — External µR/hr reading:	N/A	N/A						
Background µR/hr reading:	11							

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.

* Cooler 2 out of temp. Samples received same day as receipt.

* Sample 4 bottles 1 through 4 have a light layer of oil off top of sample water.

6.) Sample 3 is missing the 250mL amber for TOC analysis. On Sample 3 the bottle for wet chem → the COC says 3 ~~Sample~~ bottles only 1 received for the sample.

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

Project Manager Signature / Date: _____

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

Form 201r24.xls (06/04/2012)

GC/MS Volatiles

Method SW8260_25C

Method Blank

Lab Name: ALS -- Fort Collins
Work Order Number: 1607366
Client Name: COGCC
ClientProject ID: Complaint 200439757

Lab ID: VL160721-3MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 21-Jul-16
Date Analyzed: 21-Jul-16

Prep Batch: VL160721-3
QCBatchID: VL160721-3-2
Run ID: VL160721-3A
Cleanup: NONE
Basis: N/A
File Name: C70099

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
110-54-3	HEXANE	1	1	1	0.31	U	
108-87-2	METHYL CYCLOHEXANE	1	1	1	0.3	U	
71-36-3	N-BUTANOL	1	50	50	32	U	
75-65-0	TERT-BUTANOL	1	50	50	32	U	
75-71-8	DICHLORODIFLUOROMETHANE	1	1	1	0.3	U	
8006-61-9	GASOLINE RANGE ORGANICS	1	100	100	100	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	1.3	1	0.44		
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	
110-82-7	CYCLOHEXANE	1	1	1	0.3	U	

Data Package ID: *VL1607366-1*

GC/MS Volatiles

Method SW8260_25C

Method Blank

Lab Name: ALS -- Fort Collins
Work Order Number: 1607366
Client Name: COGCC
ClientProject ID: Complaint 200439757

Lab ID: VL160721-3MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 21-Jul-16
Date Analyzed: 21-Jul-16

Prep Batch: VL160721-3
QCBatchID: VL160721-3-2
Run ID: VL160721-3A
Cleanup: NONE
Basis: N/A
File Name: C70099

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
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	
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	

Data Package ID: *VL1607366-1*

GC/MS Volatiles

Method SW8260_25C

Method Blank

Lab Name: ALS -- Fort Collins
Work Order Number: 1607366
Client Name: COGCC
ClientProject ID: Complaint 200439757

Lab ID: VL160721-3MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 21-Jul-16
Date Analyzed: 21-Jul-16

Prep Batch: VL160721-3
QCBatchID: VL160721-3-2
Run ID: VL160721-3A
Cleanup: NONE
Basis: N/A
File Name: C70099

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
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	
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	
123-91-1	1,4-DIOXANE	1	100	100	60	U	
64-17-5	ETHANOL	1	40	40	29	U	
78-83-1	ISOBUTYL ALCOHOL	1	40	40	15	U	

Data Package ID: *VL1607366-1*

GC/MS Volatiles

Method SW8260_25C

Method Blank

Lab Name: ALS -- Fort Collins
Work Order Number: 1607366
Client Name: COGCC
ClientProject ID: Complaint 200439757

Lab ID: VL160721-3MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 21-Jul-16
Date Analyzed: 21-Jul-16

Prep Batch: VL160721-3
QCBatchID: VL160721-3-2
Run ID: VL160721-3A
Cleanup: NONE
Basis: N/A
File Name: C70099

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

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	25.7		25	103	85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	24.8		25	99	84 - 118
2037-26-5	TOLUENE-D8	23.8		25	95	85 - 115

Data Package ID: *VL1607366-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS -- Fort Collins
Work Order Number: 1607366
Client Name: COGCC
ClientProject ID: Complaint 200439757

Field ID:
Lab ID: VL160721-3MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 21-Jul-16
Date Analyzed: 21-Jul-16

Prep Batch: VL160721-3
QCBatchID: VL160721-3-2
Run ID: VL160721-3A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: C70099

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

Data Package ID: *VL1607366-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS -- Fort Collins
Work Order Number: 1607366
Client Name: COGCC
ClientProject ID: Complaint 200439757

Field ID: 753452 WW
Lab ID: 1607366-3

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 20-Jul-16
Date Extracted: 21-Jul-16
Date Analyzed: 21-Jul-16
Prep Method: SW5030 Rev C

Prep Batch: VL160721-3
QCBatchID: VL160721-3-2
Run ID: VL160721-3A
Cleanup: NONE
Basis: As Received
File Name: C70106

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
110-54-3	HEXANE	1	1	1	0.31	U	
108-87-2	METHYL CYCLOHEXANE	1	1	1	0.3	U	
71-36-3	N-BUTANOL	1	50	50	32	U	
75-65-0	TERT-BUTANOL	1	50	50	32	U	
75-71-8	DICHLORODIFLUOROMETHANE	1	1	1	0.3	U	
8006-61-9	GASOLINE RANGE ORGANICS	1	100	100	100	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-TRIFLUOROETH	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	

Data Package ID: *VL1607366-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS -- Fort Collins
Work Order Number: 1607366
Client Name: COGCC
ClientProject ID: Complaint 200439757

Field ID: 753452 WW
Lab ID: 1607366-3

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 20-Jul-16
Date Extracted: 21-Jul-16
Date Analyzed: 21-Jul-16
Prep Method: SW5030 Rev C

Prep Batch: VL160721-3
QCBatchID: VL160721-3-2
Run ID: VL160721-3A
Cleanup: NONE
Basis: As Received
File Name: C70106

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
594-20-7	2,2-DICHLOROPROPANE	1	1	1	0.3	U	
110-82-7	CYCLOHEXANE	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	
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	

Data Package ID: *VL1607366-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS -- Fort Collins
Work Order Number: 1607366
Client Name: COGCC
ClientProject ID: Complaint 200439757

Field ID: 753452 WW
Lab ID: 1607366-3

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 20-Jul-16
Date Extracted: 21-Jul-16
Date Analyzed: 21-Jul-16
Prep Method: SW5030 Rev C

Prep Batch: VL160721-3
QCBatchID: VL160721-3-2
Run ID: VL160721-3A
Cleanup: NONE
Basis: As Received
File Name: C70106

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
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	
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	
123-91-1	1,4-DIOXANE	1	100	100	60	U	
64-17-5	ETHANOL	1	40	40	29	U	
78-83-1	ISOBUTYL ALCOHOL	1	40	40	15	U	

Data Package ID: *VL1607366-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS -- Fort Collins
Work Order Number: 1607366
Client Name: COGCC
ClientProject ID: Complaint 200439757

Field ID: 753452 WW
Lab ID: 1607366-3

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 20-Jul-16
Date Extracted: 21-Jul-16
Date Analyzed: 21-Jul-16
Prep Method: SW5030 Rev C

Prep Batch: VL160721-3
QCBatchID: VL160721-3-2
Run ID: VL160721-3A
Cleanup: NONE
Basis: As Received
File Name: C70106

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	25.2		25	101	85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	24.6		25	98	84 - 118
2037-26-5	TOLUENE-D8	23.7		25	95	85 - 115

Data Package ID: *VL1607366-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS -- Fort Collins
Work Order Number: 1607366
Client Name: COGCC
ClientProject ID: Complaint 200439757

Field ID: 753452 WW
Lab ID: 1607366-3

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 20-Jul-16
Date Extracted: 21-Jul-16
Date Analyzed: 21-Jul-16

Prep Batch: VL160721-3
QCBatchID: VL160721-3-2
Run ID: VL160721-3A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: C70106

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

Data Package ID: *VL1607366-1*

GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins
Work Order Number: 1607366
Client Name: COGCC
ClientProject ID: Complaint 200439757

Lab ID: VL160721-3LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07/21/2016
Date Analyzed: 07/21/2016
Prep Method: SW5030C

Prep Batch: VL160721-3
QCBatchID: VL160721-3-2
Run ID: VL160721-3A
Cleanup: NONE
Basis: N/A
File Name: C70091

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
110-54-3	HEXANE	10	9.55	1		96	60 - 140%
108-87-2	METHYL CYCLOHEXANE	10	9.69	1		97	60 - 140%
71-36-3	N-BUTANOL	500	484	50		97	50 - 150%
75-65-0	TERT-BUTANOL	500	492	50		98	50 - 150%
75-71-8	DICHLORODIFLUOROMETHANE	10	8.54	1		85	63 - 125%
74-87-3	CHLOROMETHANE	10	9.37	1		94	73 - 122%
75-01-4	VINYL CHLORIDE	10	9.13	1		91	72 - 123%
74-83-9	BROMOMETHANE	10	10.2	1		102	68 - 123%
75-00-3	CHLOROETHANE	10	10.6	1		106	74 - 124%
75-69-4	TRICHLOROFLUOROMETHANE	10	9.44	1		94	74 - 124%
75-35-4	1,1-DICHLOROETHENE	10	9.08	1		91	77 - 119%
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETH	10	9.5	1		95	79 - 122%
67-64-1	ACETONE	40	37.9	10		95	62 - 142%
74-88-4	IODOMETHANE	10	9.43	1		94	72 - 126%
75-15-0	CARBON DISULFIDE	10	8.64	1		86	76 - 121%
75-09-2	METHYLENE CHLORIDE	10	11.4	1		114	71 - 130%
156-60-5	TRANS-1,2-DICHLOROETHENE	10	9.36	1		94	82 - 117%
1634-04-4	METHYL TERTIARY BUTYL ETHER	20	18.8	1		94	77 - 119%
75-34-3	1,1-DICHLOROETHANE	10	9.48	1		95	83 - 119%
108-05-4	VINYL ACETATE	10	8.32	2		83	76 - 121%
156-59-2	CIS-1,2-DICHLOROETHENE	10	9.51	1		95	83 - 117%
78-93-3	2-BUTANONE	40	37.9	10		95	70 - 135%
74-97-5	BROMOCHLOROMETHANE	10	9.84	1		98	83 - 121%
67-66-3	CHLOROFORM	10	9.03	1		90	82 - 119%
71-55-6	1,1,1-TRICHLOROETHANE	10	9.32	1		93	80 - 120%
594-20-7	2,2-DICHLOROPROPANE	10	9.14	1		91	83 - 125%

Data Package ID: *VL1607366-1*

GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins
Work Order Number: 1607366
Client Name: COGCC
ClientProject ID: Complaint 200439757

Lab ID: VL160721-3LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07/21/2016
Date Analyzed: 07/21/2016
Prep Method: SW5030C

Prep Batch: VL160721-3
QCBatchID: VL160721-3-2
Run ID: VL160721-3A
Cleanup: NONE
Basis: N/A
File Name: C70091

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
110-82-7	CYCLOHEXANE	20	18.2	1		91	60 - 140%
56-23-5	CARBON TETRACHLORIDE	10	9.86	1		99	77 - 122%
563-58-6	1,1-DICHLOROPROPENE	10	9.34	1		93	84 - 118%
107-06-2	1,2-DICHLOROETHANE	10	9.65	1		96	74 - 128%
71-43-2	BENZENE	10	9.36	1		94	83 - 117%
79-01-6	TRICHLOROETHENE	10	10.2	1		102	83 - 117%
78-87-5	1,2-DICHLOROPROPANE	10	9.79	1		98	84 - 120%
74-95-3	DIBROMOMETHANE	10	10.1	1		101	79 - 122%
75-27-4	BROMODICHLOROMETHANE	10	8.92	1		89	76 - 122%
10061-01-5	CIS-1,3-DICHLOROPROPENE	10	9.41	1		94	81 - 120%
108-10-1	4-METHYL-2-PENTANONE	40	37.5	10		94	73 - 125%
108-88-3	TOLUENE	10	9.64	1		96	82 - 113%
10061-02-6	TRANS-1,3-DICHLOROPROPENE	10	8.98	1		90	81 - 114%
79-00-5	1,1,2-TRICHLOROETHANE	10	9.02	1		90	78 - 116%
591-78-6	2-HEXANONE	40	37	10		92	71 - 124%
127-18-4	TETRACHLOROETHENE	10	9.58	1		96	84 - 117%
142-28-9	1,3-DICHLOROPROPANE	10	9.47	1		95	80 - 115%
124-48-1	DIBROMOCHLOROMETHANE	10	8.71	1		87	82 - 118%
106-93-4	1,2-DIBROMOETHANE	10	9.96	1		100	79 - 114%
544-10-5	1-CHLOROHEXANE	10	9.13	1		91	80 - 117%
108-90-7	CHLOROBENZENE	10	9.62	1		96	81 - 113%
630-20-6	1,1,1,2-TETRACHLOROETHANE	10	9.47	1		95	78 - 113%
100-41-4	ETHYLBENZENE	10	9.72	1		97	81 - 113%
136777-61-	M+P-XYLENE	20	19.3	1		97	82 - 115%
95-47-6	O-XYLENE	10	9.66	1		97	81 - 115%
100-42-5	STYRENE	10	9.52	1		95	78 - 118%
75-25-2	BROMOFORM	10	7.96	1		80	70 - 120%

Data Package ID: *VL1607366-1*

GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins
Work Order Number: 1607366
Client Name: COGCC
ClientProject ID: Complaint 200439757

Lab ID: VL160721-3LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07/21/2016
Date Analyzed: 07/21/2016
Prep Method: SW5030C

Prep Batch: VL160721-3
QCBatchID: VL160721-3-2
Run ID: VL160721-3A
Cleanup: NONE
Basis: N/A
File Name: C70091

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
98-82-8	ISOPROPYLBENZENE	10	9.8	1		98	80 - 113%
96-18-4	1,2,3-TRICHLOROPROPANE	10	9.48	1		95	78 - 117%
79-34-5	1,1,2,2-TETRACHLOROETHANE	10	8.94	1		89	75 - 121%
108-86-1	BROMOBENZENE	10	9.9	1		99	81 - 114%
103-65-1	N-PROPYLBENZENE	10	10.1	1		101	79 - 116%
95-49-8	2-CHLOROTOLUENE	10	10.2	1		102	79 - 116%
108-67-8	1,3,5-TRIMETHYLBENZENE	10	10.1	1		101	78 - 116%
106-43-4	4-CHLOROTOLUENE	10	10.4	1		104	78 - 115%
98-06-6	TERT-BUTYLBENZENE	10	9.99	1		100	76 - 120%
95-63-6	1,2,4-TRIMETHYLBENZENE	10	10.2	1		102	80 - 117%
135-98-8	SEC-BUTYLBENZENE	10	10.3	1		103	78 - 115%
541-73-1	1,3-DICHLOROBENZENE	10	10.2	1		102	79 - 115%
99-87-6	P-ISOPROPYLTOLUENE	10	10	1		100	77 - 116%
106-46-7	1,4-DICHLOROBENZENE	10	10	1		100	82 - 114%
104-51-8	N-BUTYLBENZENE	10	10.1	1		101	79 - 117%
95-50-1	1,2-DICHLOROBENZENE	10	10.2	1		102	82 - 114%
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	10	8.44	2		84	73 - 125%
120-82-1	1,2,4-TRICHLOROBENZENE	10	9.6	1		96	75 - 120%
87-68-3	HEXACHLOROBUTADIENE	10	11.1	1		111	71 - 124%
91-20-3	NAPHTHALENE	10	8.45	1		85	71 - 131%
87-61-6	1,2,3-TRICHLOROBENZENE	10	9.45	1		95	70 - 131%
123-91-1	1,4-DIOXANE	200	196	100		98	50 - 150%
64-17-5	ETHANOL	200	193	40		96	50 - 150%
78-83-1	ISOBUTYL ALCOHOL	200	191	40		95	50 - 150%

Data Package ID: *VL1607366-1*

GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins
Work Order Number: 1607366
Client Name: COGCC
ClientProject ID: Complaint 200439757

Lab ID: VL160721-3LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07/21/2016
Date Analyzed: 07/21/2016
Prep Method: SW5030C

Prep Batch: VL160721-3
QCBatchID: VL160721-3-2
Run ID: VL160721-3A
Cleanup: NONE
Basis: N/A
File Name: C70092

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
110-54-3	HEXANE	10	9.19	1		92	30	4
108-87-2	METHYL CYCLOHEXANE	10	9.35	1		94	30	4
71-36-3	N-BUTANOL	500	507	50		101	30	5
75-65-0	TERT-BUTANOL	500	526	50		105	30	7
75-71-8	DICHLORODIFLUOROMETHANE	10	8.42	1		84	20	1
74-87-3	CHLOROMETHANE	10	9.05	1		91	20	3
75-01-4	VINYL CHLORIDE	10	8.86	1		89	20	3
74-83-9	BROMOMETHANE	10	9.88	1		99	20	3
75-00-3	CHLOROETHANE	10	8.22	1	+	82	20	26
75-69-4	TRICHLOROFLUOROMETHANE	10	9.3	1		93	20	1
75-35-4	1,1-DICHLOROETHENE	10	8.92	1		89	20	2
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETH	10	9.22	1		92	20	3
67-64-1	ACETONE	40	39.3	10		98	30	4
74-88-4	IODOMETHANE	10	9.73	1		97	20	3
75-15-0	CARBON DISULFIDE	10	8.52	1		85	20	1
75-09-2	METHYLENE CHLORIDE	10	11.5	1		115	20	1
156-60-5	TRANS-1,2-DICHLOROETHENE	10	9.22	1		92	20	1
1634-04-4	METHYL TERTIARY BUTYL ETHER	20	19.3	1		97	20	3
75-34-3	1,1-DICHLOROETHANE	10	9.55	1		95	20	1
108-05-4	VINYL ACETATE	10	7.82	2		78	20	6
156-59-2	CIS-1,2-DICHLOROETHENE	10	9.42	1		94	20	1
78-93-3	2-BUTANONE	40	39.4	10		98	30	4
74-97-5	BROMOCHLOROMETHANE	10	10.1	1		101	20	3
67-66-3	CHLOROFORM	10	9.04	1		90	20	0
71-55-6	1,1,1-TRICHLOROETHANE	10	9.43	1		94	20	1
594-20-7	2,2-DICHLOROPROPANE	10	8.94	1		89	20	2
110-82-7	CYCLOHEXANE	20	17.8	1		89	30	2

Data Package ID: *VL1607366-1*

GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins
Work Order Number: 1607366
Client Name: COGCC
ClientProject ID: Complaint 200439757

Lab ID: VL160721-3LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07/21/2016
Date Analyzed: 07/21/2016
Prep Method: SW5030C

Prep Batch: VL160721-3
QCBatchID: VL160721-3-2
Run ID: VL160721-3A
Cleanup: NONE
Basis: N/A
File Name: C70092

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
56-23-5	CARBON TETRACHLORIDE	10	9.67	1		97	20	2
563-58-6	1,1-DICHLOROPROPENE	10	9.13	1		91	20	2
107-06-2	1,2-DICHLOROETHANE	10	9.7	1		97	20	1
71-43-2	BENZENE	10	9.39	1		94	20	0
79-01-6	TRICHLOROETHENE	10	10	1		100	20	2
78-87-5	1,2-DICHLOROPROPANE	10	9.8	1		98	20	0
74-95-3	DIBROMOMETHANE	10	10.1	1		101	20	0
75-27-4	BROMODICHLOROMETHANE	10	8.95	1		89	20	0
10061-01-5	CIS-1,3-DICHLOROPROPENE	10	9.45	1		95	20	0
108-10-1	4-METHYL-2-PENTANONE	40	38.5	10		96	30	3
108-88-3	TOLUENE	10	9.5	1		95	20	1
10061-02-6	TRANS-1,3-DICHLOROPROPENE	10	9	1		90	20	0
79-00-5	1,1,2-TRICHLOROETHANE	10	8.99	1		90	20	0
591-78-6	2-HEXANONE	40	38.5	10		96	30	4
127-18-4	TETRACHLOROETHENE	10	9.5	1		95	20	1
142-28-9	1,3-DICHLOROPROPANE	10	9.74	1		97	20	3
124-48-1	DIBROMOCHLOROMETHANE	10	8.93	1		89	20	3
106-93-4	1,2-DIBROMOETHANE	10	10.1	1		101	20	1
544-10-5	1-CHLOROHEXANE	10	8.7	1		87	20	5
108-90-7	CHLOROBENZENE	10	9.55	1		95	20	1
630-20-6	1,1,1,2-TETRACHLOROETHANE	10	9.51	1		95	20	0
100-41-4	ETHYLBENZENE	10	9.51	1		95	20	2
136777-61-	M+P-XYLENE	20	19	1		95	20	2
95-47-6	O-XYLENE	10	9.65	1		96	20	0
100-42-5	STYRENE	10	9.45	1		95	20	1
75-25-2	BROMOFORM	10	8.26	1		83	20	4
98-82-8	ISOPROPYLBENZENE	10	9.65	1		97	20	2

Data Package ID: *VL1607366-1*

GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins
Work Order Number: 1607366
Client Name: COGCC
ClientProject ID: Complaint 200439757

Lab ID: VL160721-3LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07/21/2016
Date Analyzed: 07/21/2016
Prep Method: SW5030C

Prep Batch: VL160721-3
QCBatchID: VL160721-3-2
Run ID: VL160721-3A
Cleanup: NONE
Basis: N/A
File Name: C70092

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
96-18-4	1,2,3-TRICHLOROPROPANE	10	9.68	1		97	20	2
79-34-5	1,1,2,2-TETRACHLOROETHANE	10	8.97	1		90	20	0
108-86-1	BROMOBENZENE	10	9.85	1		99	20	1
103-65-1	N-PROPYLBENZENE	10	9.79	1		98	20	3
95-49-8	2-CHLOROTOLUENE	10	9.97	1		100	20	2
108-67-8	1,3,5-TRIMETHYLBENZENE	10	9.76	1		98	20	4
106-43-4	4-CHLOROTOLUENE	10	9.99	1		100	20	4
98-06-6	TERT-BUTYLBENZENE	10	9.67	1		97	20	3
95-63-6	1,2,4-TRIMETHYLBENZENE	10	9.9	1		99	20	3
135-98-8	SEC-BUTYLBENZENE	10	9.9	1		99	20	4
541-73-1	1,3-DICHLOROBENZENE	10	9.89	1		99	20	3
99-87-6	P-ISOPROPYLTOLUENE	10	9.75	1		97	20	3
106-46-7	1,4-DICHLOROBENZENE	10	9.76	1		98	20	3
104-51-8	N-BUTYLBENZENE	10	9.96	1		100	20	2
95-50-1	1,2-DICHLOROBENZENE	10	10.1	1		101	20	1
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	10	8.82	2		88	20	4
120-82-1	1,2,4-TRICHLOROBENZENE	10	9.61	1		96	20	0
87-68-3	HEXACHLOROBUTADIENE	10	10.6	1		106	20	5
91-20-3	NAPHTHALENE	10	8.91	1		89	20	5
87-61-6	1,2,3-TRICHLOROBENZENE	10	9.72	1		97	20	3
123-91-1	1,4-DIOXANE	200	200	100		100	30	2
64-17-5	ETHANOL	200	201	40		101	30	5
78-83-1	ISOBUTYL ALCOHOL	200	200	40		100	30	5

Data Package ID: *VL1607366-1*

GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: **ALS -- Fort Collins**
Work Order Number: 1607366
Client Name: COGCC
ClientProject ID: Complaint 200439757

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	103		102		85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	25	100		101		84 - 118
2037-26-5	TOLUENE-D8	25	97		97		85 - 115

Data Package ID: *VL1607366-1*

GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins
Work Order Number: 1607366
Client Name: COGCC
ClientProject ID: Complaint 200439757

Lab ID: VL160721-6LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07/21/2016
Date Analyzed: 07/21/2016
Prep Method: SW5030C

Prep Batch: VL160721-3
QCBatchID: VL160721-3-6
Run ID: VL160721-3A
Cleanup: NONE
Basis: N/A
File Name: C70095

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
8006-61-9	GASOLINE RANGE ORGANICS	1000	969	100		97	80 - 120%

Lab ID: VL160721-6LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07/21/2016
Date Analyzed: 07/21/2016
Prep Method: SW5030C

Prep Batch: VL160721-3
QCBatchID: VL160721-3-6
Run ID: VL160721-3A
Cleanup: NONE
Basis: N/A
File Name: C70096

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
8006-61-9	GASOLINE RANGE ORGANICS	1000	933	100		93	20	4

Data Package ID: *VL1607366-1*

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2016\072116\C70091.D Vial: 4
Acq On : 21 Jul 2016 10:56 Operator: jk-sop525r16
Sample : VL160721-3CCS Inst : CSS Instr
Misc : 8260 - 10mL water - 10ppb Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 21 11:26 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	5.43	96	1800948	25.00	ppb		0.00
58) Chlorobenzene-d5	8.92	82	649919	25.00	ppb		0.00
78) 1,4-Dichlorobenzene-d4	11.07	152	472660	25.00	ppb		0.00
System Monitoring Compounds							
37) Dibromofluoromethane	4.70	113	482608	24.90	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery =	99.60%			
42) 1,2-dichloroethane-d4	5.08	65	337036	24.29	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery =	97.16%			
59) Toluene-d8	7.28	98	1627155	24.27	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery =	97.08%			
79) 4-Bromofluorobenzene	10.07	95	529523	25.72	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery =	102.88%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.51	85	180468	8.54	ppb		96
3) Chloromethane	1.64	50	419391	9.37	ppb		100
4) Vinyl chloride	1.71	62	289369	9.13	ppb		100
5) Bromomethane	1.93	96	129880	10.22	ppb		99
6) Chloroethane	2.00	64	192437	10.63	ppb		99
7) Trichlorofluoromethane	2.18	101	185498	9.44	ppb		96
8) Ethanol	2.24	45	47433	192.54	ppb		97
9) Diethyl Ether	2.35	59	171863	9.36	ppb		98
10) Acrolein	2.47	56	355382	89.46	ppb		97
11) 1,1,2-Trichloro-1,2,2-trif	2.55	101	159829	9.50	ppb		98
12) 1,1-Dichloroethene	2.56	96	168008	9.08	ppb		100
13) Acetone	2.56	43	177240	37.92	ppb		98
14) Iodomethane	2.70	142	166426	9.43	ppb		96
15) Carbon Disulfide	2.77	76	633592	8.64	ppb		98
16) Methyl Acetate	2.81	43	150341	9.19	ppb		98
17) Allyl chloride	2.85	76	135388	9.38	ppb		99
18) Acetonitrile	2.79	41	246352	92.77	ppb		99
19) Methylene chloride	2.96	84	280025	11.38	ppb		97
20) tert-Butanol	2.99	59	683830	491.78	ppb		99
21) Methyl-t-butyl-ether	3.18	73	740206	18.78	ppb		98
22) trans-1,2-Dichloroethene	3.21	96	188330	9.36	ppb		99
23) Acrylonitrile	3.15	53	709673	93.04	ppb		99
24) Hexane	3.46	57	222075	9.55	ppb		98
25) Isopropyl ether	3.63	45	942036	9.56	ppb		99
26) Vinyl Acetate	3.60	86	28250	8.32	ppb		97
27) 1,1-Dichloroethane	3.63	63	412197	9.48	ppb		99
28) Chloroprene	3.70	53	274746	9.57	ppb		99
29) Ethyl tert-butyl ether	3.99	59	613908	9.64	ppb		99
30) 2,2-Dichloropropane	4.20	77	198508	9.14	ppb		98
31) 2-Butanone	4.16	43	361384	37.85	ppb		100
32) cis-1,2-Dichloroethene	4.19	96	206152	9.51	ppb		95
33) Propionitrile	4.23	54	230976	97.12	ppb	#	96
34) Methacrylonitrile	4.39	67	63580	8.20	ppb		88
35) Bromochloromethane	4.44	128	90404	9.84	ppb		96
36) Chloroform	4.54	83	279102	9.03	ppb		100
38) 1,1,1-Trichloroethane	4.73	97	163860	9.32	ppb		99
39) Cyclohexane	4.81	84	483100	18.17	ppb		92
40) Carbon tetrachloride	4.90	117	138362	9.86	ppb		97
41) 1,1-Dichloropropene	4.90	75	243420	9.34	ppb		98
43) Isobutyl alcohol	4.95	43	159587	190.75	ppb		96

(#) = qualifier out of range (m) = manual integration 8/7-22-16
C70091.D 060316W.M Thu Jul 21 11:26:59 2016 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2016\072116\C70091.D Vial: 4
Acq On : 21 Jul 2016 10:56 Operator: jk-sop525r16
Sample : VL160721-3CCS Inst : CSS Instr
Misc : 8260 - 10mL water - 10ppb Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 21 11:26 2016 Quant Results File: 060316W.RES

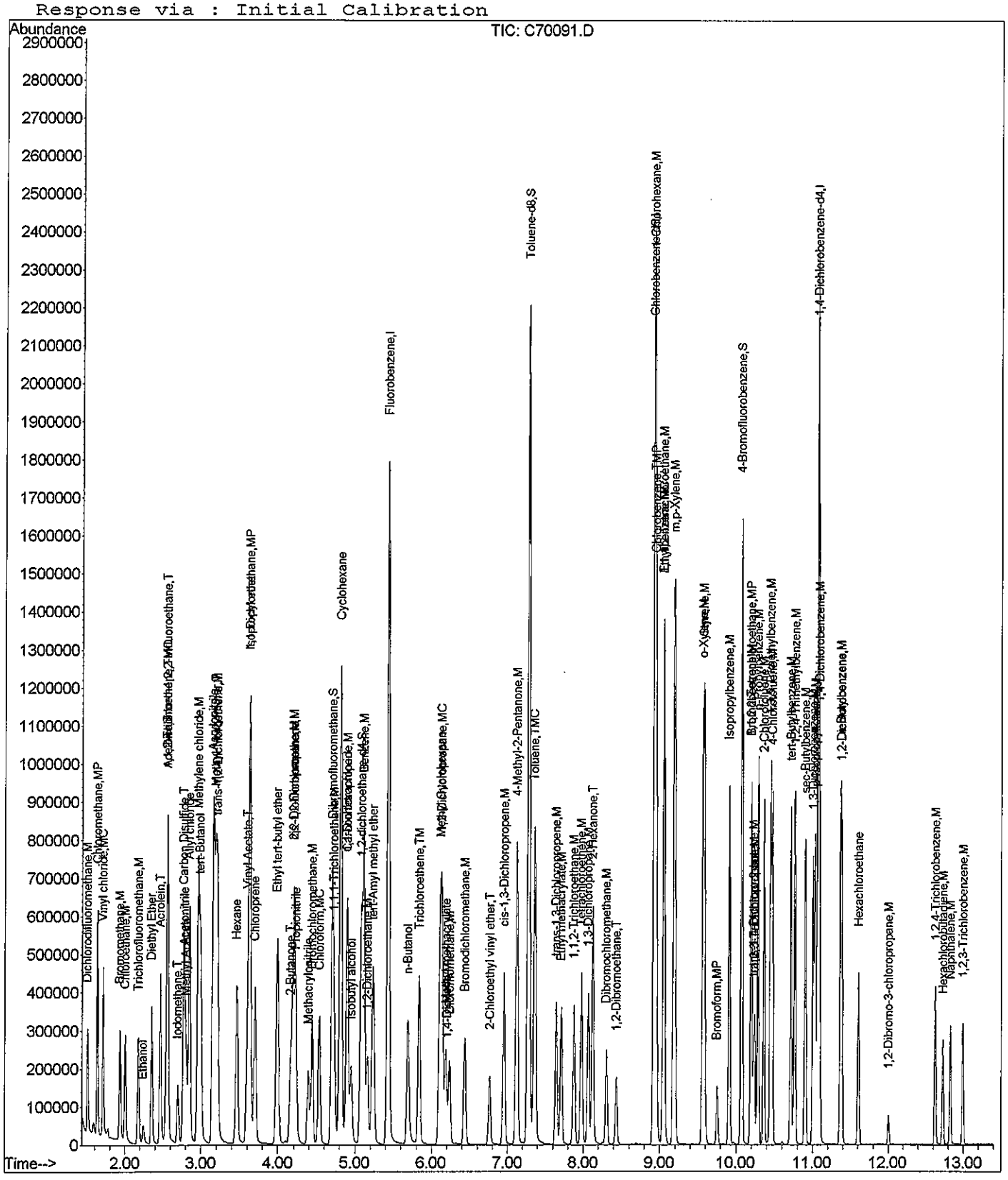
Quant Method : C:\HPCHEM\1\METHODS\060316W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Tue Jun 21 11:12:05 2016
Response via : Initial Calibration
DataAcq Meth : 060316W

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
44)	tert-Amyl methyl ether	5.23	87	78486	8.75	ppb		96
45)	Benzene	5.11	78	772711	9.36	ppb		99
46)	1,2-Dichloroethane	5.17	62	156705	9.65	ppb		100
47)	n-Butanol	5.70	56	229575	484.26	ppb		98
48)	Trichloroethene	5.84	130	177825	10.16	ppb		99
49)	Methyl Cyclohexane	6.11	55	239807	9.69	ppb		93
50)	1,2-Dichloropropane	6.13	63	247648	9.79	ppb		97
51)	Methyl methacrylate	6.19	69	103608	8.61	ppb		98
52)	1,4-Dioxane	6.21	88	25141	196.23	ppb	#	75
53)	Dibromomethane	6.24	93	97628	10.11	ppb		96
54)	Bromodichloromethane	6.44	83	200794	8.92	ppb		96
55)	2-Chloroethyl vinyl ether	6.77	63	88379	7.93	ppb		97
56)	cis-1,3-Dichloropropene	6.95	75	300443	9.41	ppb		99
57)	4-Methyl-2-Pentanone	7.12	43	754469	37.51	ppb		98
60)	Toluene	7.35	91	665831	9.64	ppb		98
61)	Ethyl methacrylate	7.71	69	201809	8.37	ppb		98
62)	trans-1,3-Dichloropropene	7.64	75	216494	8.98	ppb		97
63)	1,1,2-Trichloroethane	7.88	83	125287	9.02	ppb		97
64)	Tetrachloroethene	7.97	164	113016	9.58	ppb		94
65)	2-Hexanone	8.12	58	261469	36.98	ppb		99
66)	1,3-Dichloropropane	8.06	76	246173	9.47	ppb		98
67)	Dibromochloromethane	8.30	129	135761	8.71	ppb		98
68)	1,2-Dibromoethane	8.44	107	130832	9.96	ppb		96
69)	1-Chlorohexane	8.94	91	238230	9.13	ppb		97
70)	Chlorobenzene	8.95	112	421327	9.62	ppb		96
71)	Ethylbenzene	9.06	91	678796	9.72	ppb		100
72)	1,1,1,2-Tetrachloroethane	9.04	131	135151	9.47	ppb		99
73)	m,p-Xylene	9.19	106	522925	19.31	ppb		97
74)	o-Xylene	9.56	106	258960	9.66	ppb		97
75)	Styrene	9.58	104	450800	9.52	ppb		100
76)	Bromoform	9.75	173	62808	7.96	ppb		97
77)	Isopropylbenzene	9.90	105	577540	9.80	ppb		99
80)	1,1,2,2-Tetrachloroethane	10.19	83	161331	8.94	ppb		97
81)	trans-1,4-Dichloro-2-buten	10.22	53	33004	8.91	ppb		86
82)	n-Propylbenzene	10.28	91	713924	10.08	ppb		98
83)	1,2,3-Trichloropropane	10.24	110	33231	9.48	ppb		93
84)	Bromobenzene	10.19	156	146468	9.90	ppb		95
85)	1,3,5-Trimethylbenzene	10.44	105	443762	10.12	ppb		96
86)	2-Chlorotoluene	10.36	126	155217	10.22	ppb		96
87)	4-Chlorotoluene	10.47	126	157134	10.41	ppb		100
88)	tert-Butylbenzene	10.72	134	96501	9.99	ppb		94
89)	1,2,4-Trimethylbenzene	10.77	105	432287	10.16	ppb		97
90)	sec-Butylbenzene	10.91	105	536685	10.27	ppb		99
91)	p-Isopropyltoluene	11.03	119	407954	10.00	ppb		100
92)	1,3-Dichlorobenzene	11.00	146	268697	10.18	ppb		98
93)	1,4-Dichlorobenzene	11.09	146	265815	10.03	ppb		99
94)	n-Butylbenzene	11.36	91	383190	10.13	ppb		98
95)	1,2-Dichlorobenzene	11.38	146	246049	10.18	ppb		95
96)	Hexachloroethane	11.61	119	94835	9.54	ppb		97
97)	1,2-Dibromo-3-chloropropan	12.01	157	17870	8.44	ppb		96
98)	1,2,4-Trichlorobenzene	12.63	180	100522	9.60	ppb		97
99)	Hexachlorobutadiene	12.73	225	45036	11.06	ppb		96
100)	Naphthalene	12.83	128	189872	8.45	ppb		99
101)	1,2,3-Trichlorobenzene	12.99	180	79156	9.45	ppb		98

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

Data File : C:\HPCHEM\1\DATA\2016\072116\C70091.D Vial: 4
Acq On : 21 Jul 2016 10:56 Operator: jk-sop525r16
Sample : VL160721-3CCS Inst : CSS Instr
Misc : 8260 - 10mL water - 10ppb Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 21 11:26 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\072116\C70092.D Vial: 5
Acq On : 21 Jul 2016 11:18 Operator: jk-sop525r16
Sample : VL160721-3LCSD Inst : CSS Instr
Misc : 8260 - 10mL water - 10ppb Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 21 11:49 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	5.43	96	1769968	25.00	ppb		0.00
58) Chlorobenzene-d5	8.92	82	640110	25.00	ppb		0.00
78) 1,4-Dichlorobenzene-d4	11.07	152	471542	25.00	ppb		0.00
System Monitoring Compounds							
37) Dibromofluoromethane	4.70	113	483103	25.36	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 101.44%				
42) 1,2-dichloroethane-d4	5.08	65	342193	25.10	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 100.40%				
59) Toluene-d8	7.27	98	1605838	24.32	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 97.28%				
79) 4-Bromofluorobenzene	10.07	95	522424	25.44	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 101.76%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.51	85	174903	8.42	ppb		96
3) Chloromethane	1.63	50	398409	9.05	ppb		100
4) Vinyl chloride	1.71	62	275947	8.86	ppb		99
5) Bromomethane	1.94	96	123499	9.88	ppb		100
6) Chloroethane	2.00	64	146198	8.22	ppb		98
7) Trichlorofluoromethane	2.18	101	179633	9.30	ppb		97
8) Ethanol	2.24	45	48767	201.42	ppb		96
9) Diethyl Ether	2.36	59	171428	9.50	ppb		98
10) Acrolein	2.47	56	355323	91.01	ppb		98
11) 1,1,2-Trichloro-1,2,2-trif	2.55	101	152359	9.22	ppb		98
12) 1,1-Dichloroethene	2.56	96	162203	8.92	ppb		98
13) Acetone	2.56	43	180317	39.31	ppb		100
14) Iodomethane	2.70	142	169548	9.73	ppb		98
15) Carbon Disulfide	2.77	76	613552	8.52	ppb		98
16) Methyl Acetate	2.81	43	150235	9.35	ppb		99
17) Allyl chloride	2.85	76	129551	9.14	ppb		96
18) Acetonitrile	2.80	41	255789	98.01	ppb		100
19) Methylene chloride	2.96	84	278514	11.51	ppb		98
20) tert-Butanol	2.99	59	718428	525.70	ppb		99
21) Methyl-t-butyl-ether	3.19	73	748555	19.32	ppb		99
22) trans-1,2-Dichloroethene	3.21	96	182347	9.22	ppb		99
23) Acrylonitrile	3.16	53	717509	95.72	ppb		100
24) Hexane	3.46	57	210018	9.19	ppb		99
25) Isopropyl ether	3.62	45	943060	9.74	ppb		99
26) Vinyl Acetate	3.59	86	26110	7.82	ppb		94
27) 1,1-Dichloroethane	3.62	63	408071	9.55	ppb		99
28) Chloroprene	3.70	53	262900	9.32	ppb		99
29) Ethyl tert-butyl ether	3.99	59	613901	9.81	ppb		98
30) 2,2-Dichloropropane	4.21	77	190701	8.94	ppb		99
31) 2-Butanone	4.16	43	369518	39.38	ppb		99
32) cis-1,2-Dichloroethene	4.20	96	200836	9.42	ppb		98
33) Propionitrile	4.23	54	237223	101.49	ppb	#	96
34) Methacrylonitrile	4.39	67	66208	8.68	ppb		96
35) Bromochloromethane	4.44	128	91370	10.12	ppb		99
36) Chloroform	4.54	83	274595	9.04	ppb		98
38) 1,1,1-Trichloroethane	4.73	97	162914	9.43	ppb		96
39) Cyclohexane	4.81	84	464352	17.77	ppb		93
40) Carbon tetrachloride	4.90	117	133412	9.67	ppb		99
41) 1,1-Dichloropropene	4.90	75	233844	9.13	ppb		95
43) Isobutyl alcohol	4.95	43	164430	199.98	ppb		96

(#) = qualifier out of range (m) = manual integration
C70092.D 060316W.M Thu Jul 21 11:49:25 2016 7-22-16

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2016\072116\C70092.D Vial: 5
Acq On : 21 Jul 2016 11:18 Operator: jk-sop525r16
Sample : VL160721-3LCSD Inst : CSS Instr
Misc : 8260 - 10mL water - 10ppb Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 21 11:49 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

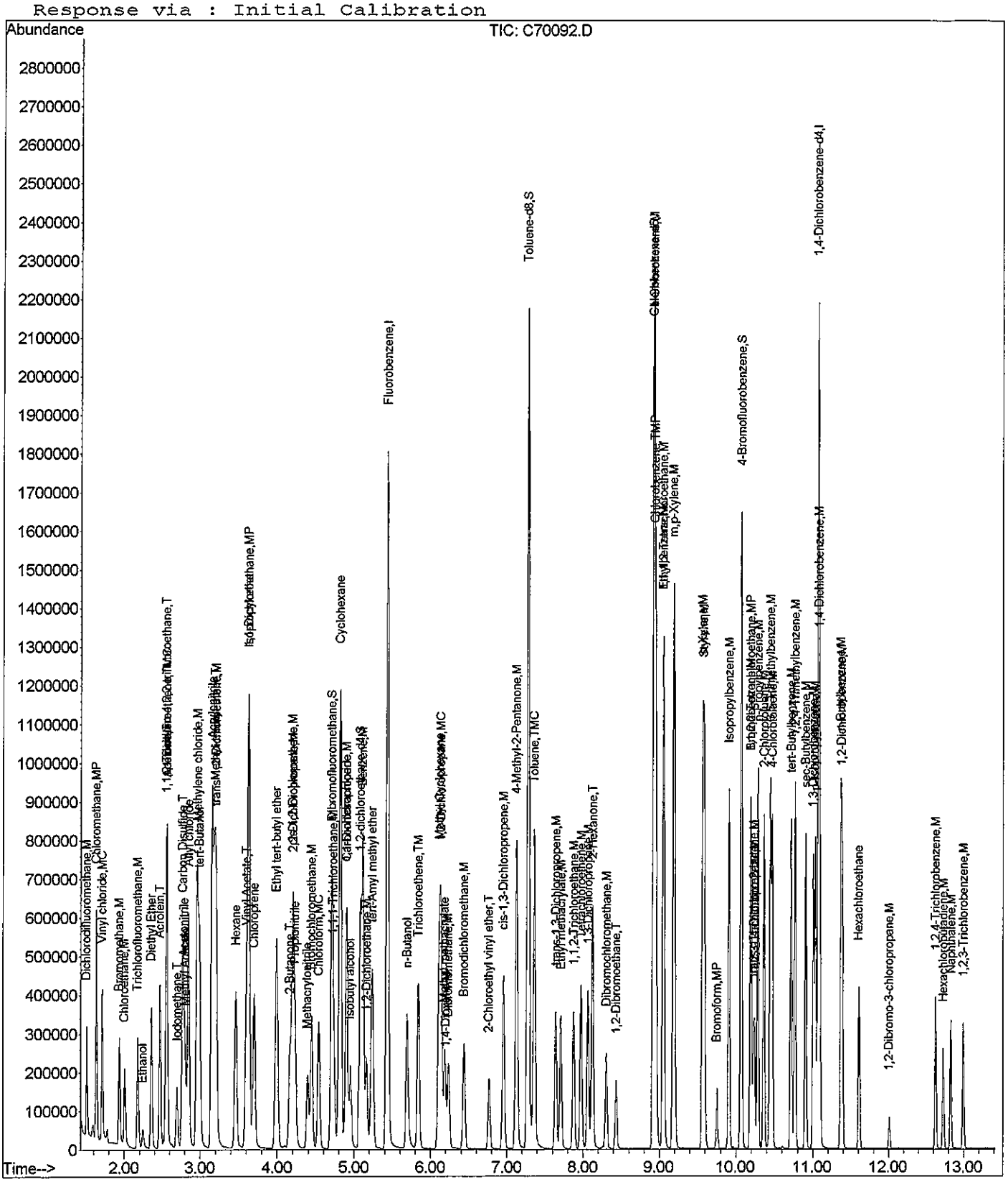
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
44)	tert-Amyl methyl ether	5.24	87	77933	8.84	ppb		98
45)	Benzene	5.12	78	761884	9.39	ppb		99
46)	1,2-Dichloroethane	5.16	62	154794	9.70	ppb		98
47)	n-Butanol	5.69	56	236416	507.42	ppb		99
48)	Trichloroethene	5.84	130	172054	10.00	ppb		98
49)	Methyl Cyclohexane	6.11	55	227402	9.35	ppb		96
50)	1,2-Dichloropropane	6.14	63	243505	9.80	ppb		96
51)	Methyl methacrylate	6.19	69	104514	8.84	ppb		99
52)	1,4-Dioxane	6.21	88	25151	199.75	ppb	#	81
53)	Dibromomethane	6.23	93	96005	10.12	ppb		93
54)	Bromodichloromethane	6.44	83	197883	8.95	ppb		97
55)	2-Chloroethyl vinyl ether	6.76	63	89527	8.17	ppb		96
56)	cis-1,3-Dichloropropene	6.96	75	296672	9.45	ppb		97
57)	4-Methyl-2-Pentanone	7.12	43	761495	38.53	ppb		98
60)	Toluene	7.36	91	646366	9.50	ppb		98
61)	Ethyl methacrylate	7.71	69	200098	8.43	ppb		98
62)	trans-1,3-Dichloropropene	7.65	75	213793	9.00	ppb		98
63)	1,1,2-Trichloroethane	7.88	83	122997	8.99	ppb		96
64)	Tetrachloroethene	7.98	164	110416	9.50	ppb		94
65)	2-Hexanone	8.13	58	268246	38.52	ppb		98
66)	1,3-Dichloropropane	8.07	76	249314	9.74	ppb		99
67)	Dibromochloromethane	8.31	129	137107	8.93	ppb		98
68)	1,2-Dibromoethane	8.43	107	130280	10.07	ppb		100
69)	1-Chlorohexane	8.94	91	223534	8.70	ppb		98
70)	Chlorobenzene	8.95	112	411654	9.55	ppb		98
71)	Ethylbenzene	9.05	91	653966	9.51	ppb		100
72)	1,1,1,2-Tetrachloroethane	9.05	131	133700	9.51	ppb		99
73)	m,p-Xylene	9.19	106	506911	19.00	ppb		100
74)	o-Xylene	9.56	106	254796	9.65	ppb		99
75)	Styrene	9.58	104	440976	9.45	ppb		99
76)	Bromoform	9.75	173	64134	8.26	ppb		98
77)	Isopropylbenzene	9.91	105	560293	9.65	ppb		99
80)	1,1,2,2-Tetrachloroethane	10.20	83	161525	8.97	ppb		96
81)	trans-1,4-Dichloro-2-buten	10.23	53	32854	8.89	ppb		87
82)	n-Propylbenzene	10.29	91	691469	9.79	ppb		100
83)	1,2,3-Trichloropropane	10.24	110	33866	9.68	ppb		78
84)	Bromobenzene	10.20	156	145328	9.85	ppb		92
85)	1,3,5-Trimethylbenzene	10.45	105	427080	9.76	ppb		99
86)	2-Chlorotoluene	10.36	126	151088	9.97	ppb		97
87)	4-Chlorotoluene	10.47	126	150433	9.99	ppb		99
88)	tert-Butylbenzene	10.72	134	93137	9.67	ppb		93
89)	1,2,4-Trimethylbenzene	10.77	105	419884	9.90	ppb		94
90)	sec-Butylbenzene	10.90	105	516229	9.90	ppb		98
91)	p-Isopropyltoluene	11.03	119	396838	9.75	ppb		99
92)	1,3-Dichlorobenzene	11.01	146	260511	9.89	ppb		99
93)	1,4-Dichlorobenzene	11.09	146	257820	9.76	ppb		99
94)	n-Butylbenzene	11.37	91	375524	9.96	ppb		99
95)	1,2-Dichlorobenzene	11.39	146	243148	10.08	ppb		99
96)	Hexachloroethane	11.60	119	90467	9.12	ppb	#	96
97)	1,2-Dibromo-3-chloropropan	12.00	157	18622	8.82	ppb		99
98)	1,2,4-Trichlorobenzene	12.63	180	100321	9.61	ppb		99
99)	Hexachlorobutadiene	12.73	225	42859	10.55	ppb		97
100)	Naphthalene	12.83	128	201076	8.91	ppb		100
101)	1,2,3-Trichlorobenzene	12.99	180	81426	9.72	ppb		98

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2016\072116\C70092.D Vial: 5
Acq On : 21 Jul 2016 11:18 Operator: jk-sop525r16
Sample : VL160721-3LCSD Inst : CSS Instr
Misc : 8260 - 10mL water - 10ppb Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 21 11:49 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



ALS -- Fort Collins

Continuing Calibration Verification

Lab Sample ID: VL160721-6CCV **Calibration ID:** 060316W
Analysis Date: 7/21/2016 **Instrument ID:** HPV3
File Name: C70095 **Calibration Date:** 6/3/2016

	Analyte	AvgRF	CCRF	Expected Conc.	Found Conc.	%Dev. or % Drift	%Diff (Area)	RT Dev.	Curve Type
85 ISTD	1,4-dichlorobenzene-d4						200.0	0.000	AvgRF
10	gasoline range organics			1000.000	969.24	-3.1		0.002	linear

Nickname Filters

8260_25GRO

Operator: jk-sop525r16

Quantitation Report (QT Reviewed)

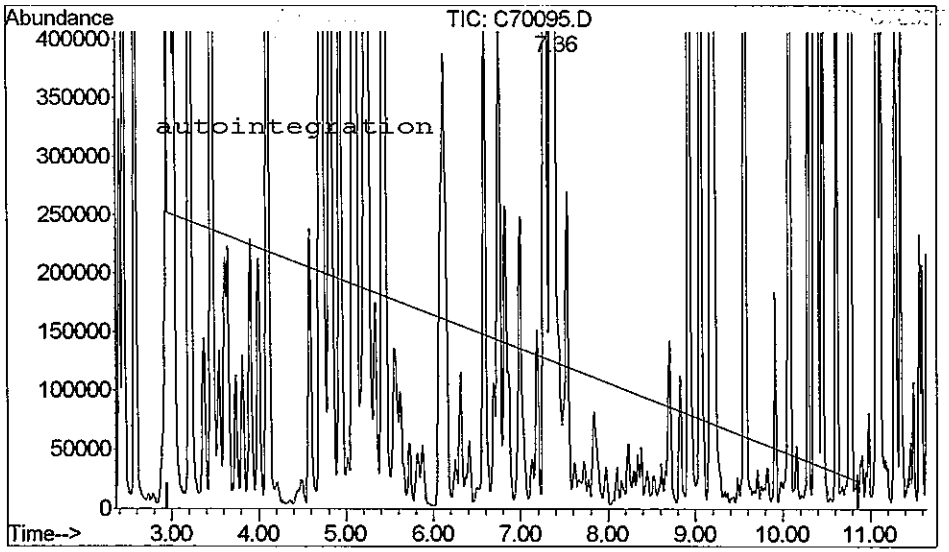
Data File : C:\HPCHEM\1\DATA\2016\072116\C70095.D Vial: 8
Acq On : 21 Jul 2016 12:24 Operator: jk-sop525r16
Sample : VL160721-6CCS Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 21 12:42 2016 Quant Results File: 060616GR.RES

Quant Method : C:\HPCHEM\1\METHODS\060616GR.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Tue Jun 07 10:17:05 2016
Response via : Initial Calibration
DataAcq Meth : 060316W

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
2) 1,4-Dichlorobenzene-d4	0.00	TIC	0m	25.00	ppb	-11.07
System Monitoring Compounds						
3) 4-Bromofluorobenzene	0.00	TIC	0d	0.00	ppb	
Spiked Amount 25.000	Range 85 - 115		Recovery =	0.00%#		
Target Compounds						Qvalue
1) GRO	7.36	TIC	111029471m	969.24	ppb	

(#) = qualifier out of range (m) = manual integration
C70095.D 060616GR.M Thu Jul 21 12:42:18 2016 Page 1

JA7-22-16



TIC: C70095.D

(1) GRO (H)
7.37min 847.81ppb m
response 99848868

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Reason for manual re-integration?

[] missed peak assignment

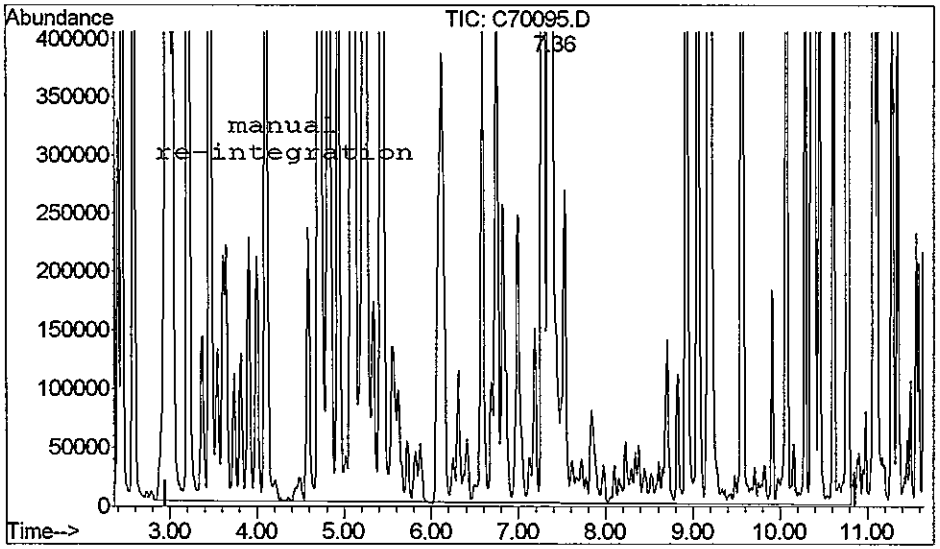
[] peak saturation (detector shutdown)

[] over-integrated peak's area

[✓] under-integrated peak's area

[] other (_____)

initials: ___ date: 7 / 22 / 11



TIC: C70095.D

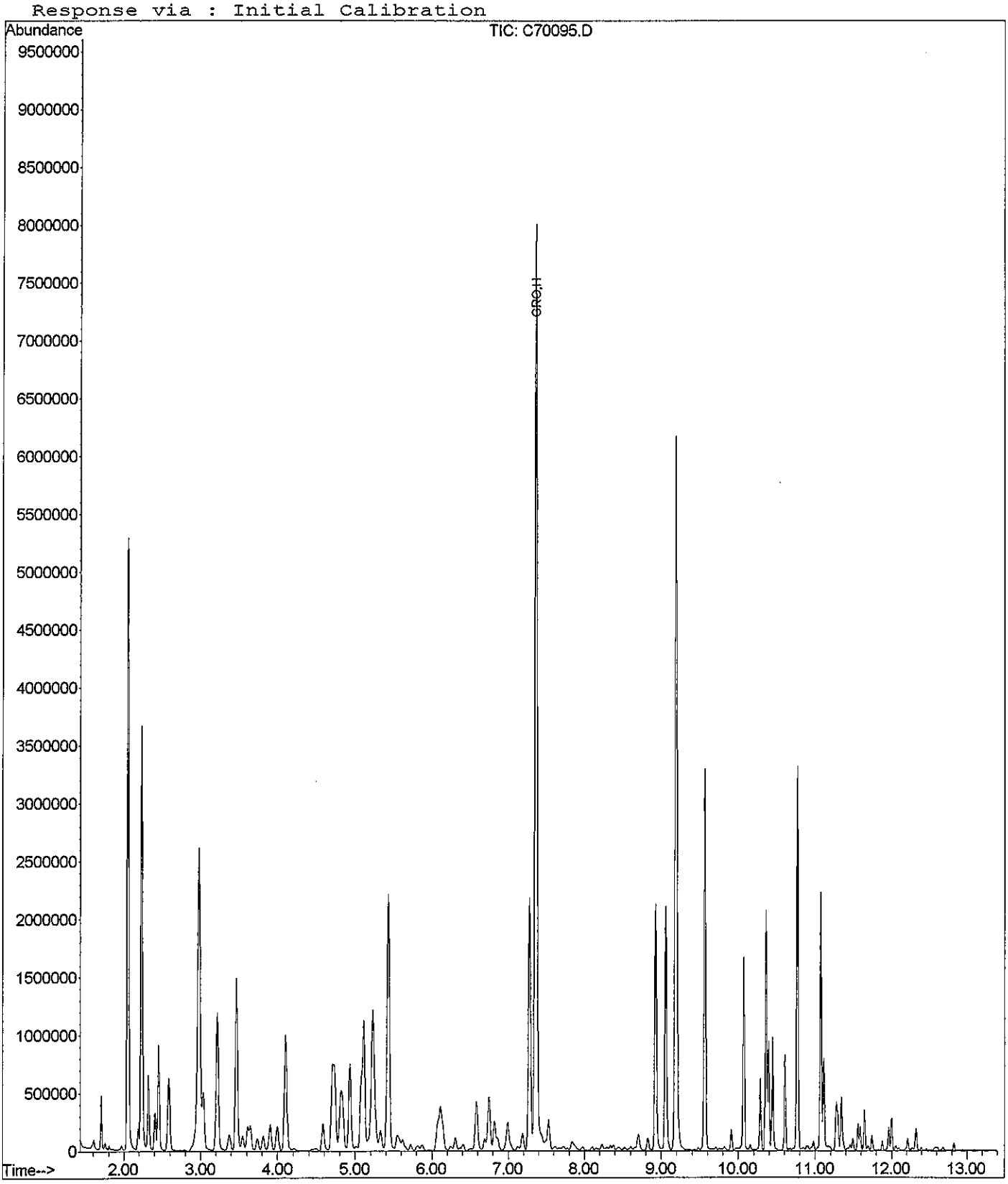
(1) GRO (H)
7.36min 969.24ppb m
response 111029471

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2016\072116\C70095.D Vial: 8
Acq On : 21 Jul 2016 12:24 Operator: jk-sop525r16
Sample : VL160721-6CCS Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 21 12:42 2016 Quant Results File: 060616GR.RES

Method : C:\HPCHEM\1\METHODS\060616GR.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Tue Jun 07 10:17:05 2016
Response via : Initial Calibration



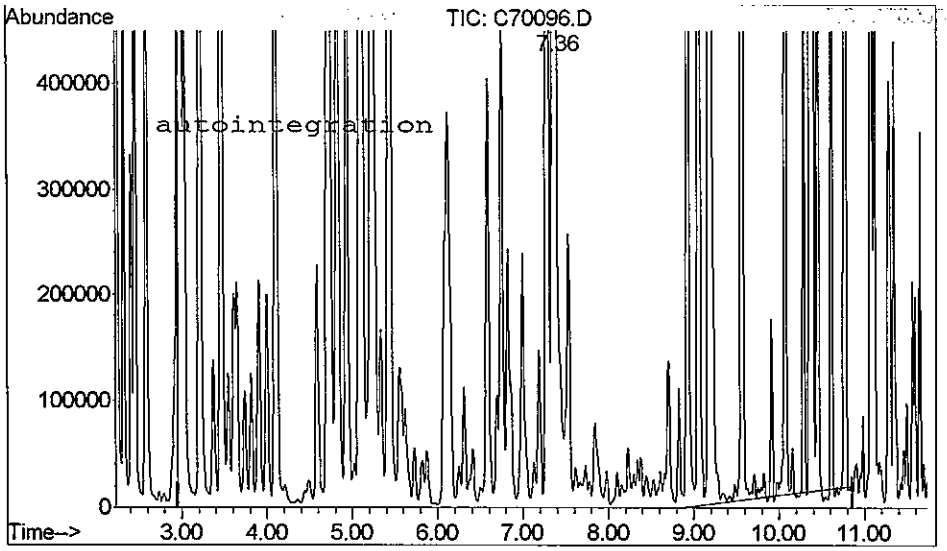
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2016\072116\C70096.D Vial: 9
Acq On : 21 Jul 2016 12:45 Operator: jk-sop525r16
Sample : VL160721-6LCSD Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 21 13:09 2016 Quant Results File: 060616GR.RES

Quant Method : C:\HPCHEM\1\METHODS\060616GR.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Tue Jun 07 10:17:05 2016
Response via : Initial Calibration
DataAcq Meth : 060316W

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
2) 1,4-Dichlorobenzene-d4	0.00	TIC	0m	25.00	ppb	-11.07
System Monitoring Compounds						
3) 4-Bromofluorobenzene	0.00	TIC	0d	0.00	ppb	
Spiked Amount 25.000	Range 85 - 115		Recovery =	0.00%#		
Target Compounds						Qvalue
1) GRO	7.36	TIC	107693215m	933.01	ppb	

(#) = qualifier out of range (m) = manual integration
C70096.D 060616GR.M Thu Jul 21 13:09:43 2016 9/7-22-16



TIC: C70096.D

(1) GRO (H)
7.37min 816.44ppb m
response 96960738

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Reason for manual re-integration?

[ ] missed peak assignment

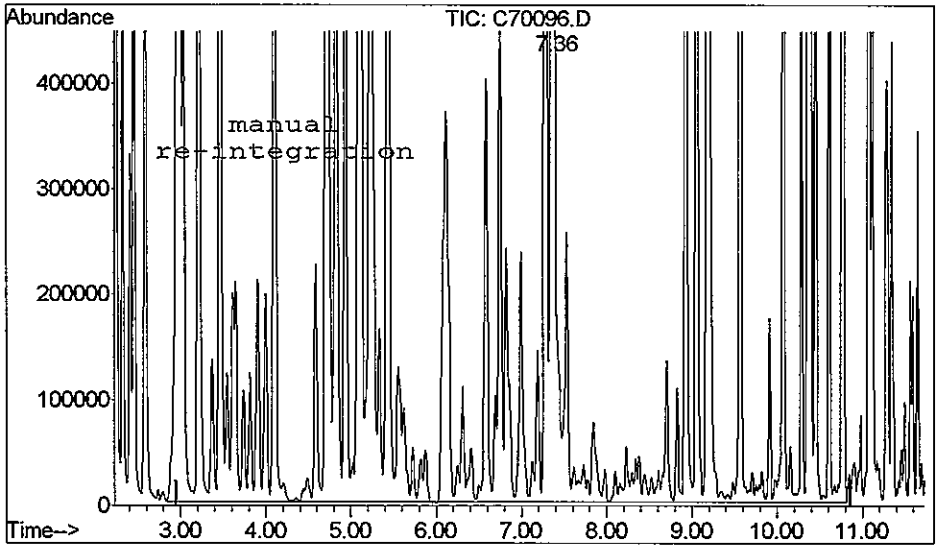
[ ] peak saturation (detector shutdown)

[ ] over-integrated peak's area

[✓] under-integrated peak's area

[ ] other (_____)

initials: JC date: 7 /22 /15



TIC: C70096.D

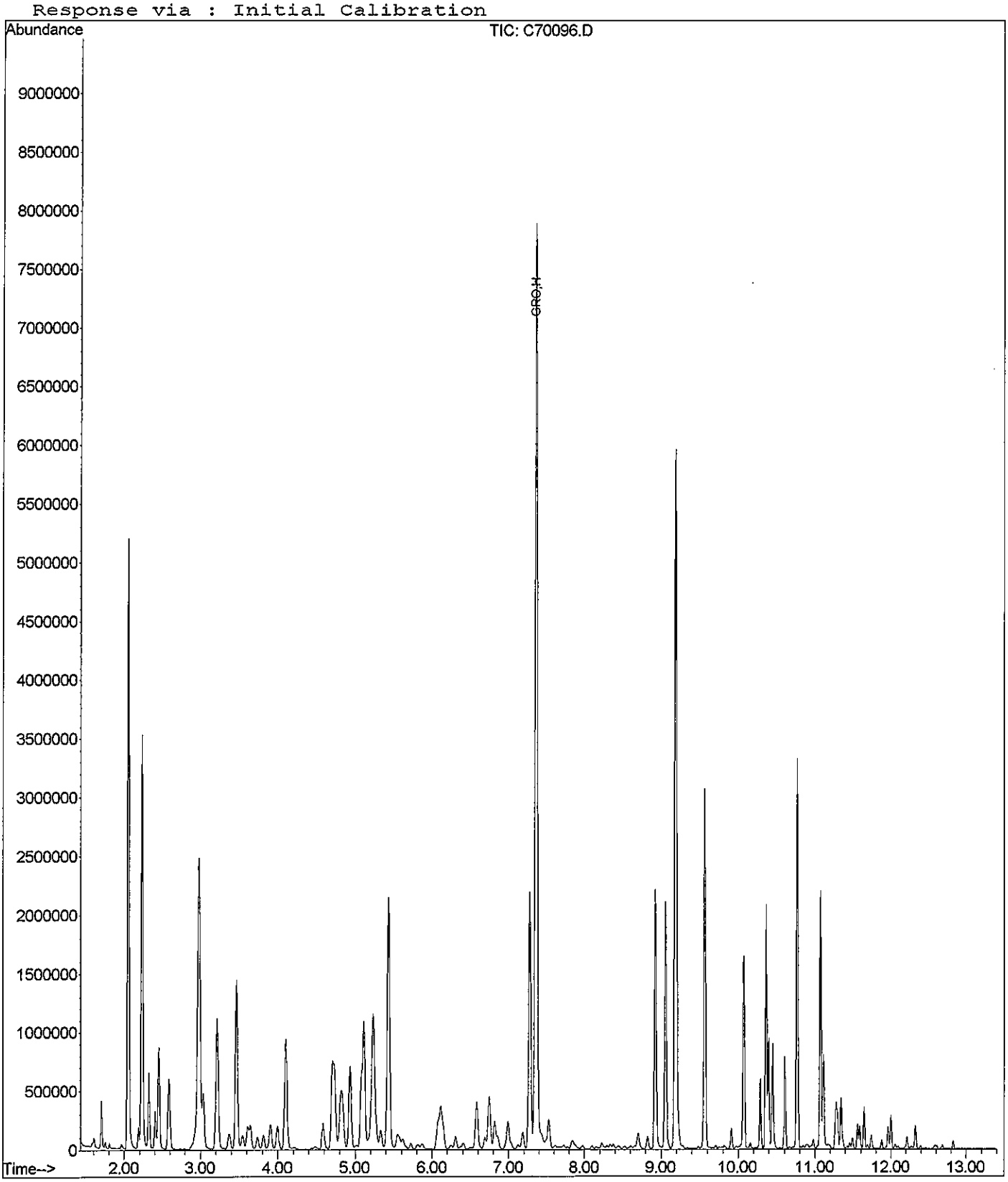
(1) GRO (H)
7.36min 933.01ppb m
response 107693215

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2016\072116\C70096.D Vial: 9
Acq On : 21 Jul 2016 12:45 Operator: jk-sop525r16
Sample : VL160721-6LCSD Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 21 13:09 2016 Quant Results File: 060616GR.RES

Method : C:\HPCHEM\1\METHODS\060616GR.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Tue Jun 07 10:17:05 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2016\072116\C70099.D Vial: 12
Acq On : 21 Jul 2016 13:49 Operator: jk-sop525r16
Sample : VL160721-3MB Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 21 14:58 2016 Quant Results File: 060316W.RES

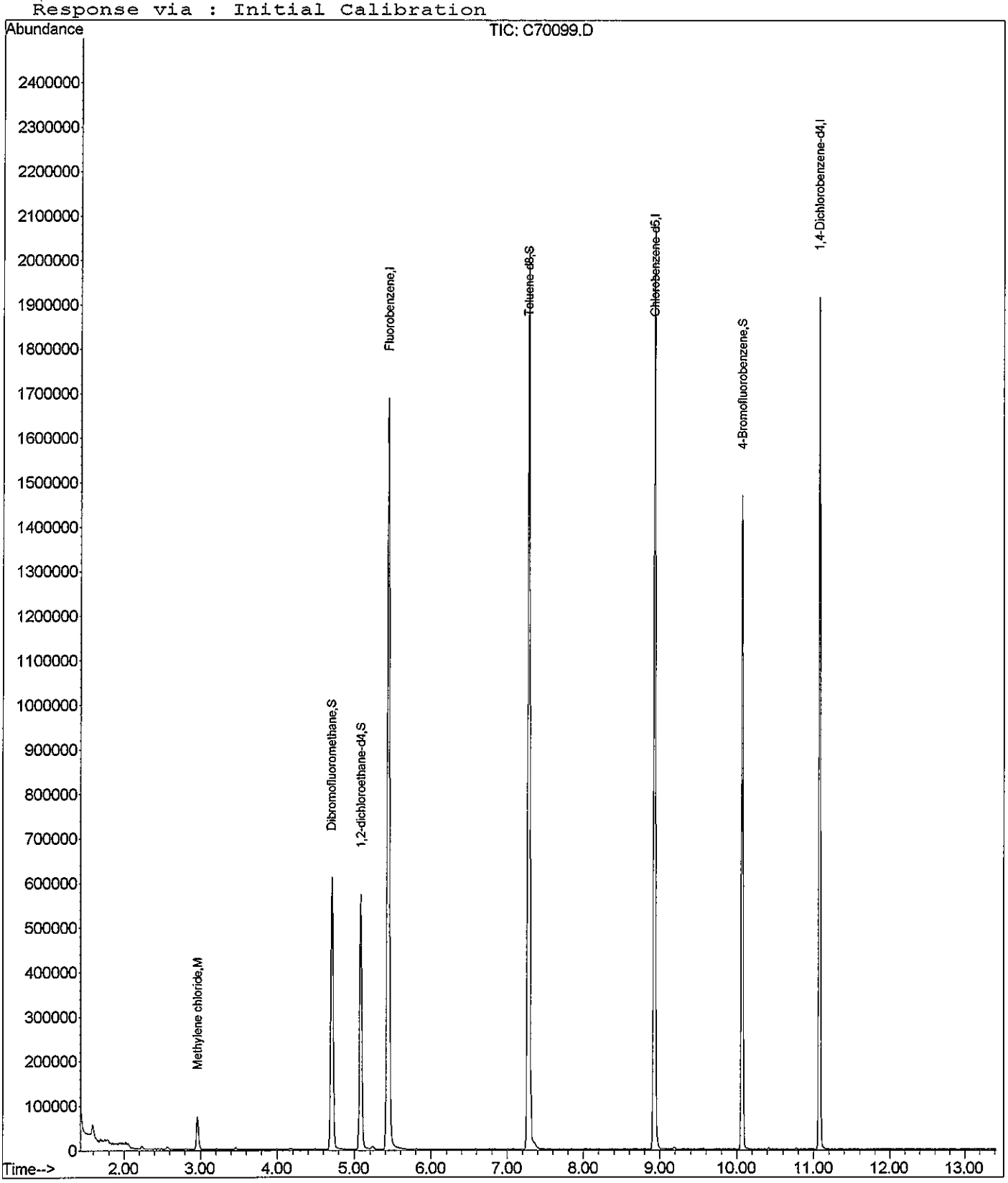
Quant Method : C:\HPCHEM\1\METHODS\060316W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Tue Jun 21 11:12:05 2016
Response via : Initial Calibration
DataAcq Meth : 060316W

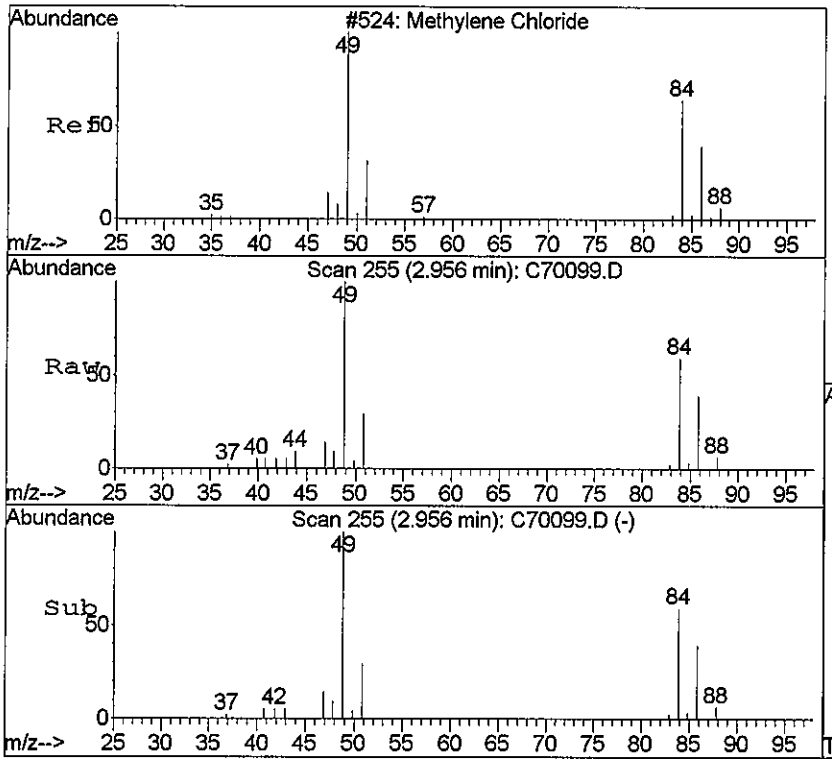
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	5.44	96	1647056	25.00	ppb	0.00
58) Chlorobenzene-d5	8.93	82	599004	25.00	ppb	0.00
78) 1,4-Dichlorobenzene-d4	11.08	152	423589	25.00	ppb	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	4.71	113	440107	24.83	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery =	99.32%		
42) 1,2-dichloroethane-d4	5.08	65	317699	25.04	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery =	100.16%		
59) Toluene-d8	7.28	98	1468712	23.76	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery =	95.04%		
79) 4-Bromofluorobenzene	10.07	95	474923	25.74	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery =	102.96%		
Target Compounds						Qvalue
19) Methylene chloride	2.96	84	28594	1.27	ppb	98

(#) = qualifier out of range (m) = manual integration
C70099.D 060316W.M Thu Jul 21 14:58:51 2016 7-22-16

Data File : C:\HPCHEM\1\DATA\2016\072116\C70099.D Vial: 12
Acq On : 21 Jul 2016 13:49 Operator: jk-sop525r16
Sample : VL160721-3MB Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 21 14:58 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

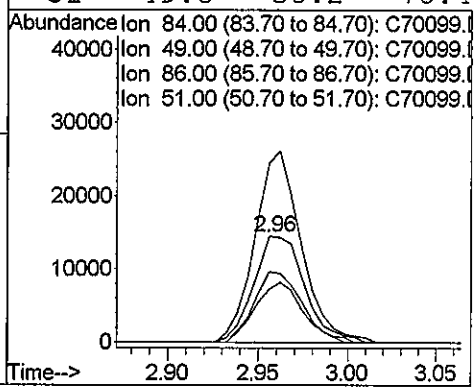




#19
Methylene chloride
Concen: 1.27 ppb
RT: 2.96 min Scan# 255
Delta R.T. -0.01 min
Lab File: C70099.D
Acq: 21 Jul 2016 13:49

Tgt Ion: 84 Resp: 28594

Ion	Ratio	Lower	Upper
84	100		
49	169.3	99.1	231.1
86	66.5	39.5	92.3
51	49.8	30.2	70.4



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\2016\072116\C70099.D Vial: 12
Acq On : 21 Jul 2016 13:49 Operator: jk-sop525r16
Sample : VL160721-3MB 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.1

No Library Search Compounds Detected

****
C70099.D 060316W.M Fri Jul 22 10:28:23 2016

JK 7-22-16

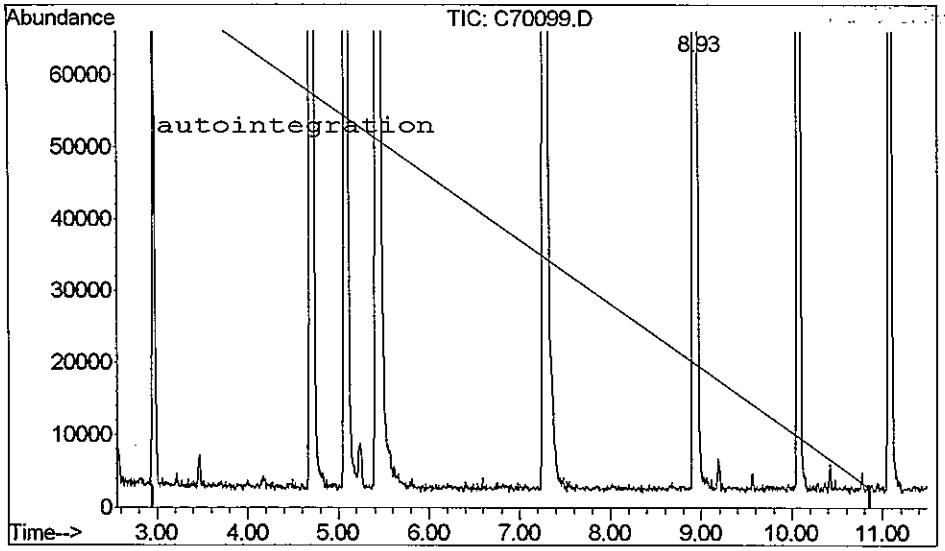
Data File : C:\HPCHEM\1\DATA\2016\072116\C70099.D Vial: 12
Acq On : 21 Jul 2016 13:49 Operator: jk-sop525r16
Sample : VL160721-3MB Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 21 14:58 2016 Quant Results File: 060616GR.RES

Quant Method : C:\HPCHEM\1\METHODS\060616GR.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Tue Jun 07 10:17:05 2016
Response via : Initial Calibration
DataAcq Meth : 060316W

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
2) 1,4-Dichlorobenzene-d4	0.00	TIC	0m	25.00	ppb	-11.07
System Monitoring Compounds						
3) 4-Bromofluorobenzene	0.00	TIC	0d	0.00	ppb	
Spiked Amount 25.000	Range 85 - 115		Recovery =	0.00%#		
Target Compounds						Qvalue
1) GRO	8.93	TIC	15798375m	Below Cal		

(#) = qualifier out of range (m) = manual integration
C70099.D 060616GR.M Thu Jul 21 14:58:15 2016 Page 1

8/2-22-16



TIC: C70099.D

(1) GRO (H)
7.37min -90.21ppb m
response 13484064

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Reason for manual re-integration?

[] missed peak assignment

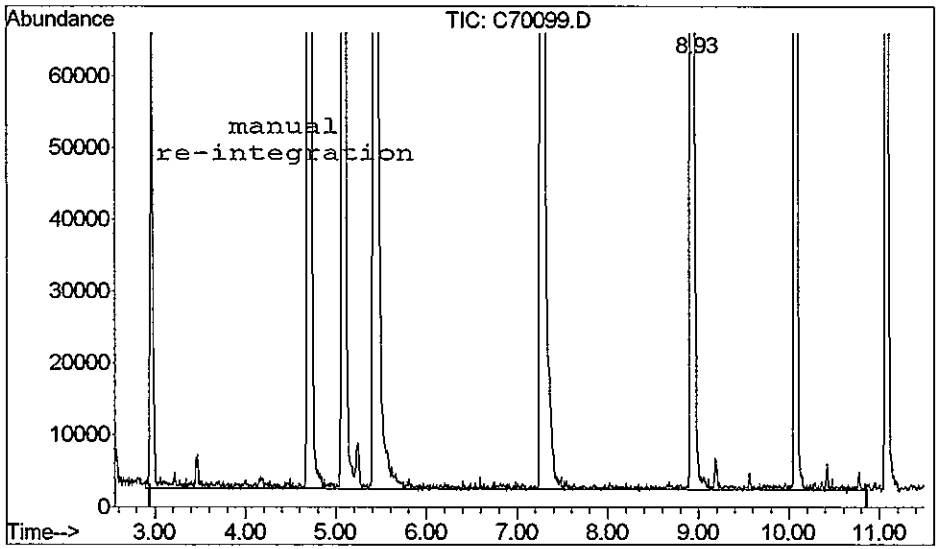
[] peak saturation (detector shutdown)

[] over-integrated peak's area

[✓] under-integrated peak's area

[] other (_____)

initials: JM date: 7 / 22 / 16



TIC: C70099.D

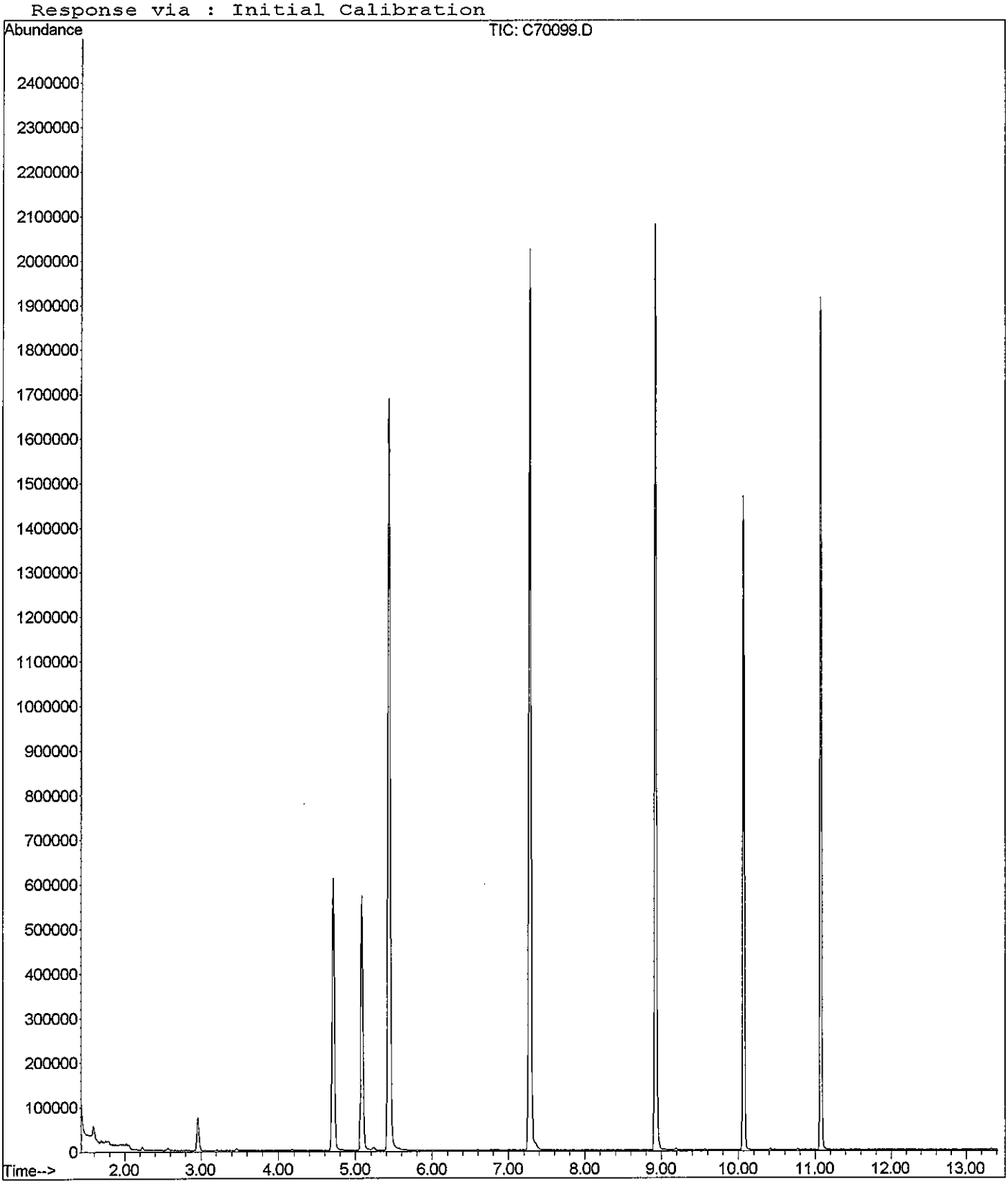
(1) GRO (H)
8.93min -65.07ppb m
response 15798375

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2016\072116\C70099.D Vial: 12
Acq On : 21 Jul 2016 13:49 Operator: jk-sop525r16
Sample : VL160721-3MB Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 21 14:58 2016 Quant Results File: 060616GR.RES

Method : C:\HPCHEM\1\METHODS\060616GR.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Tue Jun 07 10:17:05 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2016\072116\C70106.D Vial: 19
Acq On : 21 Jul 2016 16:19 Operator: jk-sop525r16
Sample : 1607366-3 Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 21 17:13 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	1774105	25.00	ppb	0.00
58) Chlorobenzene-d5	8.93	82	645783	25.00	ppb	0.00
78) 1,4-Dichlorobenzene-d4	11.07	152	463364	25.00	ppb	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	4.71	113	470162	24.62	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 98.48%			
42) 1,2-dichloroethane-d4	5.08	65	346547	25.36	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 101.44%			
59) Toluene-d8	7.28	98	1577736	23.68	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 94.72%			
79) 4-Bromofluorobenzene	10.07	95	508239	25.18	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 100.72%			

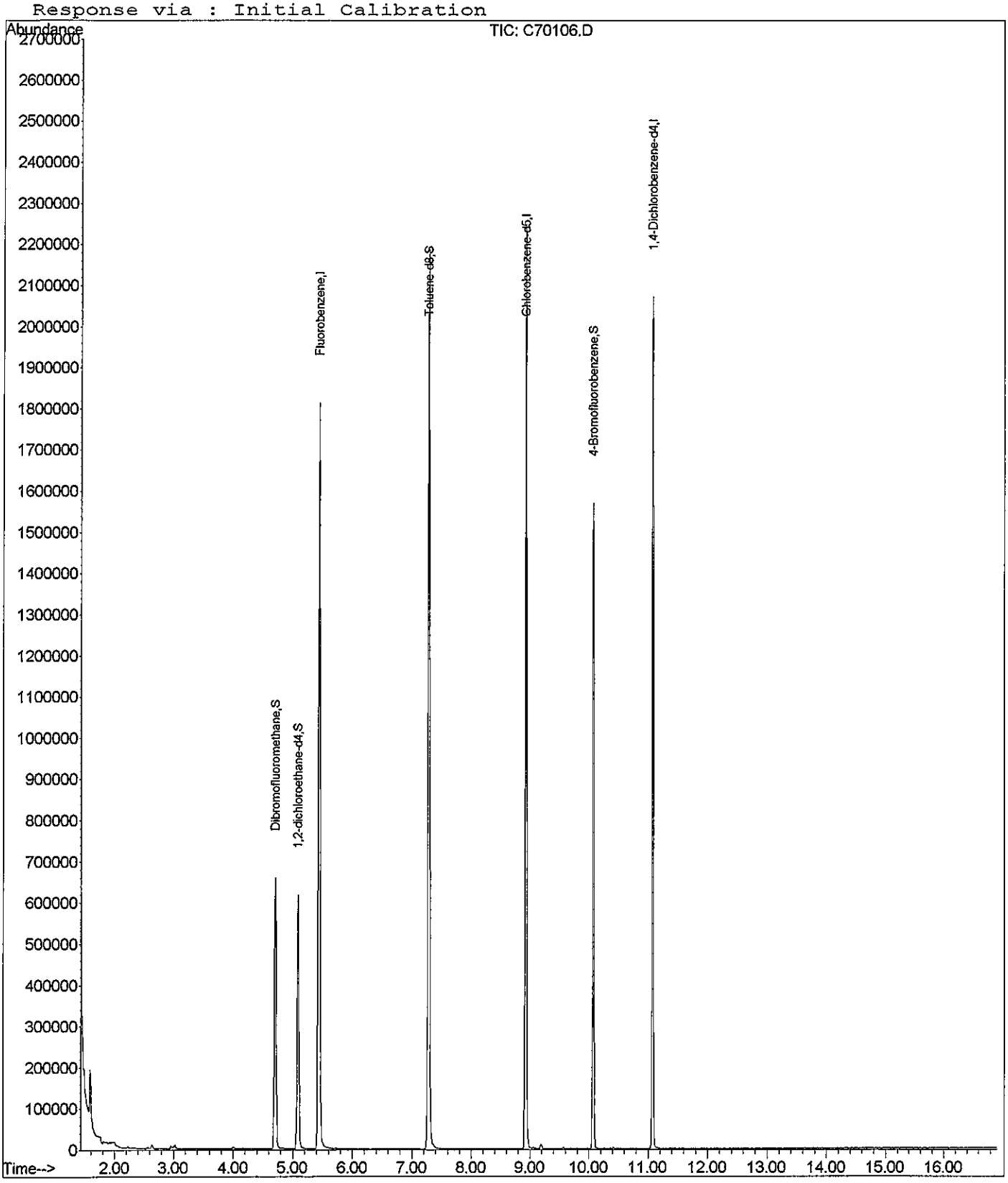
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
C70106.D 060316W.M Thu Jul 21 17:13:41 2016 Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2016\072116\C70106.D Vial: 19
Acq On : 21 Jul 2016 16:19 Operator: jk-sop525r16
Sample : 1607366-3 Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 21 17:13 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\072116\C70106.D Vial: 19
Acq On : 21 Jul 2016 16:19 Operator: jk-sop525r16
Sample : 1607366-3 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.1

No Library Search Compounds Detected

****
C70106.D 060316W.M Mon Jul 25 10:51:14 2016

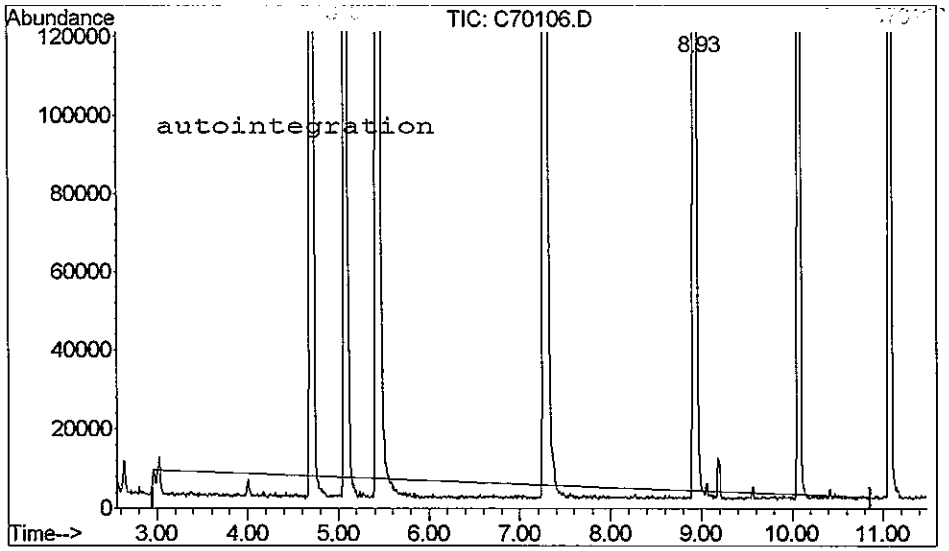
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2016\072116\C70106.D Vial: 19
Acq On : 21 Jul 2016 16:19 Operator: jk-sop525r16
Sample : 1607366-3 Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 21 17:01 2016 Quant Results File: 060616GR.RES

Quant Method : C:\HPCHEM\1\METHODS\060616GR.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Tue Jun 07 10:17:05 2016
Response via : Initial Calibration
DataAcq Meth : 060316W

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
2) 1,4-Dichlorobenzene-d4	0.00	TIC	0m	25.00	ppb	-11.07
System Monitoring Compounds						
3) 4-Bromofluorobenzene	0.00	TIC	0d	0.00	ppb	
Spiked Amount 25.000	Range 85 - 115		Recovery =	0.00%#		
Target Compounds						Qvalue
1) GRO	8.93	TIC	16761053m	Below Cal		

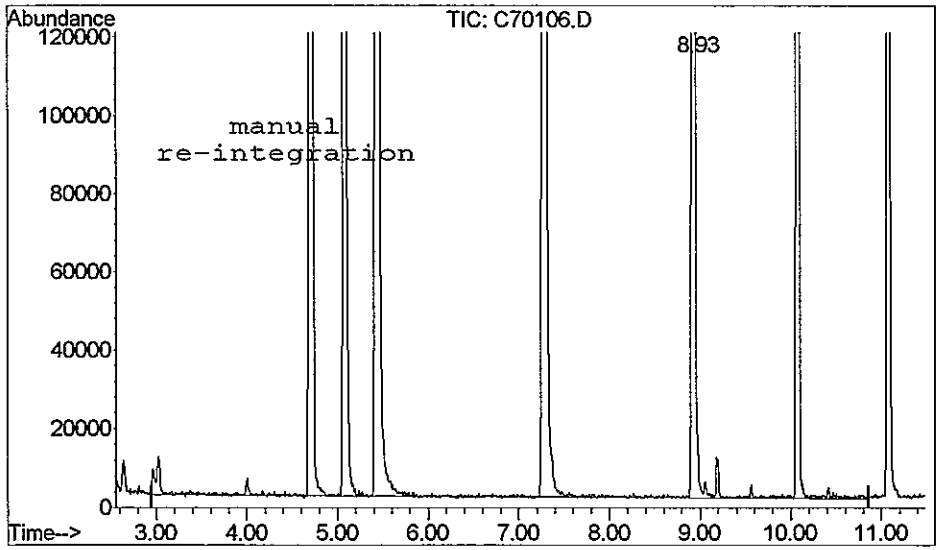
(#) = qualifier out of range (m) = manual integration
C70106.D 060616GR.M Thu Jul 21 17:01:55 2016 Page 1



TIC: C70106.D

(1) GRO (H)
7.37min -79.49ppb m
response 14471356

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00



Reason for manual re-integration?

[ ] missed peak assignment

[ ] peak saturation (detector shutdown)

[ ] over-integrated peak's area

[✓] under-integrated peak's area

[ ] other (_____)

initials: JCC date: 7/22/16

TIC: C70106.D

(1) GRO (H)
8.93min -54.62ppb m
response 16761053

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2016\072116\C70106.D Vial: 19
Acq On : 21 Jul 2016 16:19 Operator: jk-sop525r16
Sample : 1607366-3 Inst : CSS Instr
Misc : 8260 - 10mL water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Jul 21 17:01 2016 Quant Results File: 060616GR.RES

Method : C:\HPCHEM\1\METHODS\060616GR.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Tue Jun 07 10:17:05 2016
Response via : Initial Calibration