ALS Environmental

received 09/27/2013
Project 2130

GC/MS Volatiles

Case Narrative

Colorado Oil & Gas Conservation Commission

TBAL

Work Order Number: 1308545

1. This report consists of 5 water samples. The samples were received cool and intact by ALS on 08/30/13. The water samples were free of headspace and had a pH < 2 at the time of analysis.

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

3. The samples were 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.

6. All compounds in the continuing calibration verification had a %D of less than 20% with the exception of iodomethane which was low. This compound was not detected in the associated samples.

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 VL130907-4MB acetone and chloroform detected below the reporting limit. These compounds were not detected in the associated samples.

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 samples were 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. Whenever manual integrations are performed, before and after chromatograms of the peak that was manually integrated are included in the report along with the reason why the re-integration was necessary.

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 — 9/11/13
Emily Lyons — Date
Organics Primary Data Reviewer

Organics Final Data Reviewer — 9/11/13
Organics Final Data Reviewer — Date

ALS
Data Qualifier Flags
Chromatography and Mass Spectrometry

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.**

Chain of Custody

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1308545
Client Name: Colorado Oil & Gas Conservation Commission
Client Project Name: TBAL
Client Project Number:
Client PO Number: PHA 14-22

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
704681 Dolores WW	1308545-1		WATER	29-Aug-13	9:01
Trip Blank	1308545-2		WATER	29-Aug-13	6:00
705737 Dolores MW	1308545-3		WATER	29-Aug-13	10:20
704681 Dolores WW 20	1308545-4		WATER	29-Aug-13	8:44
704681 Dolores WW 5	1308545-5		WATER	29-Aug-13	8:26

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

WORKORDER #	1308545
DATE	29 A 2013
PAGE	1 of 1
TURNAROUND	7E-day
DISPOSAL	(By Lab) or Return to Client

PROJECT NAME	TBAL	SAMPLER	PAE
PROJECT No.		SITE ID	
		EDD FORMAT	
		PURCHASE ORDER	
COMPANY NAME	Colo. Oil + Gas Cons Com	BILL TO COMPANY	
SEND REPORT TO	Peter Gintautas	INVOICE ATTN TO	
ADDRESS	PO Box 108	ADDRESS	
CITY / STATE / ZIP	Trinidad CO 81082	CITY / STATE / ZIP	
PHONE	719-846-3091	PHONE	
FAX		FAX	
E-MAIL	peter.gintautas@state.co.us	E-MAIL	

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	8260 + TICs	TVPH	8270 + 1,4-Dioxane + TICs	8270 SIM PAH	200.7 metals dissolved	200.8 metals dissolved	SAR Calc	Anion Cation Balance	Alk (Tot, HCO3, CO3)	pH	Conductance	Anions	TDS	TOC
1	704681 Dolores MW	W	29Aug13	09:01	6	1		X	X												
	"	↓	↓	↓	6	8				X		X	X	X	X	X	X	X	X	X	
	"	↓	↓	↓	1	3															X
2	Trip Blk	W	29Aug13	06:00	2	1		X													
3	705737 Dolores MW	W	29Aug13	10:20	6	1		X	X												
	" "	"	"		3	8	X			X	X										
		↓			6	8					X	X	X	X	X	X	X	X	X	X	
		↓			1	3															X
4	704681 Dolores MW 20	W	29Aug13	08:44	3	1		X													
5	704681 Dolores MW 5	W	29Aug13	08:26	3	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

For metals or anions, please detail analytes below.

Comments: Anions = Br, Cl, F, NO2, NO3, SO4
Filter and preserve metals on reagent = dissolved metals list as in other TBAL

QC PACKAGE (check below)	
	LEVEL II (Standard QC)
	LEVEL III (Std QC + forms)
X	LEVEL IV (Std QC + forms + raw data) QC only

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	[signature]	Peter Gintautas	29Aug13	16:40
RECEIVED BY	[signature]	Jacob Reddy	8/30/13	0930
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: COGCC Workorder No: 1308545

Project Manager: ARW Initials: JLR Date: 8/30/13

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):	2°C	4°C							
No. of custody seals on cooler:	2	1							
DOT Survey/ Acceptance Information — External µR/hr reading:	11	11							
Background µR/hr reading:	10								

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: 8/30/13

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

1308545

PETER GINTAUTAS
719-846-3091
COLORADO OIL & GAS CONSERVATIO
213 CORUNDUM RD
TRINIDAD CO 81082

41 LBS

2 OF 2

DWT: 26,16,15

SHIP TO:
AMY WOLF
970-490-1511
ALS LABORATORY GROUP
225 COMMERCE DRIVE
FORT COLLINS CO 80524-2762

CO 805 0-01

UPS NEXT DAY AIR

TRACKING #: 1Z 014 8WR 01 9830 5716

1

BILLING: P/P

Reference#1: Special Project TBAL

UIS 15.6.12. WNTE90 36.0A 01/2013

TM

Analytical Results

GC/MS Volatiles

Method SW8260_25C

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Lab ID: VL130907-4MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: N/A
File Name: D44054

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

CASNO	Target Analyte	DF	Result	RptLimit LOD/LOQ	MDL	Result Qualifier	EPA Qualifier
110-54-3	HEXANE	1	1	1	0.3	U	
108-87-2	METHYL CYCLOHEXANE	1	1	1	0.3	U	
71-36-3	N-BUTANOL	1	50	50	16	U	
75-65-0	TERT-BUTANOL	1	50	50	15	U	
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	4.6	10	3	J	
74-88-4	IODOMETHANE	1	1	1	0.3	U	
75-15-0	CARBON DISULFIDE	1	1	1	0.3	U	
75-09-2	METHYLENE CHLORIDE	1	1	1	0.3	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	0.96	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	0.51	1	0.3	J	
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	
56-23-5	CARBON TETRACHLORIDE	1	1	1	0.3	U	

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Lab ID: VL130907-4MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: N/A
File Name: D44054

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

CASNO	Target Analyte	DF	Result	RptLimit LOD/LOQ	MDL	Result Qualifier	EPA Qualifier
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	3.4	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	3.4	U	
127-18-4	TETRACHLOROETHENE	1	1	1	0.18	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	0.34	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	

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Lab ID: VL130907-4MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: N/A
File Name: D44054

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

CASNO	Target Analyte	DF	Result	RptLimit LOD/LOQ	MDL	Result Qualifier	EPA Qualifier
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	0.44	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	30	U	
64-17-5	ETHANOL	1	40	40	12	U	
78-83-1	ISOBUTYL ALCOHOL	1	40	40	17	U	

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Lab ID: VL130907-4MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: N/A
File Name: D44054

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

CASNO	Target Analyte	DF	Result	RptLimit LOD/LOQ	MDL	Result Qualifier	EPA Qualifier

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	26.3		25	105	85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	24.3		25	97	84 - 118
2037-26-5	TOLUENE-D8	24.6		25	98	85 - 115

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID:

Lab ID: VL130907-4MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: D44054

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

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID: 704681 Dolores WW
Lab ID: 1308545-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13
Prep Method: SW5030 Rev C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received
File Name: D44060

Analyst: Steven D. White
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	MDL/DL	Result Qualifier	EPA Qualifier
110-54-3	HEXANE	1	1	1	0.3	U	
108-87-2	METHYL CYCLOHEXANE	1	1	1	0.3	U	
71-36-3	N-BUTANOL	1	50	50	16	U	
75-65-0	TERT-BUTANOL	1	52	50	15		
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-TRIFLUOROETH	1	1	1	0.3	U	
67-64-1	ACETONE	1	10	10	3	U	
74-88-4	IODOMETHANE	1	1	1	0.3	U	
75-15-0	CARBON DISULFIDE	1	1	1	0.3	U	
75-09-2	METHYLENE CHLORIDE	1	1	1	0.3	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	0.96	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	

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID: 704681 Dolores WW
Lab ID: 1308545-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13
Prep Method: SW5030 Rev C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received
File Name: D44060

Analyst: Steven D. White
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	MDL/DL	Result Qualifier	EPA Qualifier
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	3.4	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	3.4	U	
127-18-4	TETRACHLOROETHENE	1	1	1	0.18	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	

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID: 704681 Dolores WW
Lab ID: 1308545-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13
Prep Method: SW5030 Rev C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received
File Name: D44060

Analyst: Steven D. White
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	MDL/DL	Result Qualifier	EPA Qualifier
75-25-2	BROMOFORM	1	1	1	0.34	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	0.44	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	30	U	
64-17-5	ETHANOL	1	40	40	12	U	
78-83-1	ISOBUTYL ALCOHOL	1	40	40	17	U	

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1308545
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: TBAL

Field ID: 704681 Dolores WW
Lab ID: 1308545-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13
Prep Method: SW5030 Rev C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received
File Name: D44060

Analyst: Steven D. White
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

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

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	26.1		25	104	85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	24.4		25	97	84 - 118
2037-26-5	TOLUENE-D8	24.8		25	99	85 - 115

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID: 704681 Dolores WW
Lab ID: 1308545-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: D44060

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

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID: Trip Blank
Lab ID: 1308545-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13
Prep Method: SW5030 Rev C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received
File Name: D44061

Analyst: Steven D. White
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	MDL/DL	Result Qualifier	EPA Qualifier
110-54-3	HEXANE	1	1	1	0.3	U	
108-87-2	METHYL CYCLOHEXANE	1	1	1	0.3	U	
71-36-3	N-BUTANOL	1	50	50	16	U	
75-65-0	TERT-BUTANOL	1	50	50	15	U	
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-TRIFLUOROETH	1	1	1	0.3	U	
67-64-1	ACETONE	1	10	10	3	U	
74-88-4	IODOMETHANE	1	1	1	0.3	U	
75-15-0	CARBON DISULFIDE	1	1	1	0.3	U	
75-09-2	METHYLENE CHLORIDE	1	1	1	0.3	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	0.96	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	

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID: Trip Blank
Lab ID: 1308545-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13
Prep Method: SW5030 Rev C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received
File Name: D44061

Analyst: Steven D. White
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	MDL/DL	Result Qualifier	EPA Qualifier
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	3.4	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	3.4	U	
127-18-4	TETRACHLOROETHENE	1	1	1	0.18	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	

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID: Trip Blank
Lab ID: 1308545-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13
Prep Method: SW5030 Rev C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received
File Name: D44061

Analyst: Steven D. White
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	MDL/DL	Result Qualifier	EPA Qualifier
75-25-2	BROMOFORM	1	1	1	0.34	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	0.44	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	30	U	
64-17-5	ETHANOL	1	40	40	12	U	
78-83-1	ISOBUTYL ALCOHOL	1	40	40	17	U	

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1308545
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: TBAL

Field ID: Trip Blank
Lab ID: 1308545-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13
Prep Method: SW5030 Rev C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received
File Name: D44061

Analyst: Steven D. White
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

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

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	26.1		25	105	85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	23.9		25	96	84 - 118
2037-26-5	TOLUENE-D8	24.4		25	97	85 - 115

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID: Trip Blank
Lab ID: 1308545-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: D44061

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

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID: 705737 Dolores MW
Lab ID: 1308545-3

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13
Prep Method: SW5030 Rev C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received
File Name: D44062

Analyst: Steven D. White
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	MDL/DL	Result Qualifier	EPA Qualifier
110-54-3	HEXANE	1	1	1	0.3	U	
108-87-2	METHYL CYCLOHEXANE	1	1	1	0.3	U	
71-36-3	N-BUTANOL	1	50	50	16	U	
75-65-0	TERT-BUTANOL	1	54	50	15		
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-TRIFLUOROETH	1	1	1	0.3	U	
67-64-1	ACETONE	1	10	10	3	U	
74-88-4	IODOMETHANE	1	1	1	0.3	U	
75-15-0	CARBON DISULFIDE	1	1	1	0.3	U	
75-09-2	METHYLENE CHLORIDE	1	1	1	0.3	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	0.96	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	

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID: 705737 Dolores MW
Lab ID: 1308545-3

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13
Prep Method: SW5030 Rev C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received
File Name: D44062

Analyst: Steven D. White
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	MDL/DL	Result Qualifier	EPA Qualifier
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	3.4	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	3.4	U	
127-18-4	TETRACHLOROETHENE	1	1	1	0.18	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	

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID: 705737 Dolores MW
Lab ID: 1308545-3

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13
Prep Method: SW5030 Rev C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received
File Name: D44062

Analyst: Steven D. White
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	MDL/DL	Result Qualifier	EPA Qualifier
75-25-2	BROMOFORM	1	1	1	0.34	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	0.44	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	30	U	
64-17-5	ETHANOL	1	40	40	12	U	
78-83-1	ISOBUTYL ALCOHOL	1	40	40	17	U	

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID: 705737 Dolores MW

Lab ID: 1308545-3

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13
Prep Method: SW5030 Rev C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received
File Name: D44062

Analyst: Steven D. White
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

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

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	26.1		25	105	85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	24.3		25	97	84 - 118
2037-26-5	TOLUENE-D8	24.8		25	99	85 - 115

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID: 705737 Dolores MW
Lab ID: 1308545-3

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: D44062

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

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID: 704681 Dolores WW 20
Lab ID: 1308545-4

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13
Prep Method: SW5030 Rev C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received
File Name: D44063

Analyst: Steven D. White
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	MDL/DL	Result Qualifier	EPA Qualifier
110-54-3	HEXANE	1	1	1	0.3	U	
108-87-2	METHYL CYCLOHEXANE	1	1	1	0.3	U	
71-36-3	N-BUTANOL	1	50	50	16	U	
75-65-0	TERT-BUTANOL	1	47	50	15	J	
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-TRIFLUOROETH	1	1	1	0.3	U	
67-64-1	ACETONE	1	10	10	3	U	
74-88-4	IODOMETHANE	1	1	1	0.3	U	
75-15-0	CARBON DISULFIDE	1	1	1	0.3	U	
75-09-2	METHYLENE CHLORIDE	1	1	1	0.3	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	0.96	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	

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID: 704681 Dolores WW 20
Lab ID: 1308545-4

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13
Prep Method: SW5030 Rev C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received
File Name: D44063

Analyst: Steven D. White
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	MDL/DL	Result Qualifier	EPA Qualifier
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	3.4	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	3.4	U	
127-18-4	TETRACHLOROETHENE	1	1	1	0.18	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	

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID: 704681 Dolores WW 20
Lab ID: 1308545-4

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13
Prep Method: SW5030 Rev C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received
File Name: D44063

Analyst: Steven D. White
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	MDL/DL	Result Qualifier	EPA Qualifier
75-25-2	BROMOFORM	1	1	1	0.34	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	0.44	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	30	U	
64-17-5	ETHANOL	1	40	40	12	U	
78-83-1	ISOBUTYL ALCOHOL	1	40	40	17	U	

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1308545
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: TBAL

Field ID: 704681 Dolores WW 20
Lab ID: 1308545-4

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13
Prep Method: SW5030 Rev C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received
File Name: D44063

Analyst: Steven D. White
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

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

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	24.7		25	99	85 - 115

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID: 704681 Dolores WW 20
Lab ID: 1308545-4

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: D44063

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

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID: 704681 Dolores WW 5
Lab ID: 1308545-5

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13
Prep Method: SW5030 Rev C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received
File Name: D44064

Analyst: Steven D. White
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	MDL/DL	Result Qualifier	EPA Qualifier
110-54-3	HEXANE	1	1	1	0.3	U	
108-87-2	METHYL CYCLOHEXANE	1	1	1	0.3	U	
71-36-3	N-BUTANOL	1	50	50	16	U	
75-65-0	TERT-BUTANOL	1	30	50	15	J	
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-TRIFLUOROETH	1	1	1	0.3	U	
67-64-1	ACETONE	1	10	10	3	U	
74-88-4	IODOMETHANE	1	1	1	0.3	U	
75-15-0	CARBON DISULFIDE	1	1	1	0.3	U	
75-09-2	METHYLENE CHLORIDE	1	1	1	0.3	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	0.96	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	

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID: 704681 Dolores WW 5
Lab ID: 1308545-5

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13
Prep Method: SW5030 Rev C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received
File Name: D44064

Analyst: Steven D. White
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	MDL/DL	Result Qualifier	EPA Qualifier
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	3.4	U	
108-88-3	TOLUENE	1	1.2	1	0.3		
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	3.4	U	
127-18-4	TETRACHLOROETHENE	1	1	1	0.18	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	

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID: 704681 Dolores WW 5
Lab ID: 1308545-5

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13
Prep Method: SW5030 Rev C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received
File Name: D44064

Analyst: Steven D. White
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	MDL/DL	Result Qualifier	EPA Qualifier
75-25-2	BROMOFORM	1	1	1	0.34	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	0.44	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	30	U	
64-17-5	ETHANOL	1	40	40	12	U	
78-83-1	ISOBUTYL ALCOHOL	1	40	40	17	U	

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1308545
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: TBAL

Field ID: 704681 Dolores WW 5
Lab ID: 1308545-5

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13
Prep Method: SW5030 Rev C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received
File Name: D44064

Analyst: Steven D. White
Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	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	24.6		25	98	84 - 118
2037-26-5	TOLUENE-D8	24.4		25	98	85 - 115

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Field ID: 704681 Dolores WW 5
Lab ID: 1308545-5

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 29-Aug-13
Date Extracted: 07-Sep-13
Date Analyzed: 07-Sep-13

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: D44064

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

Data Package ID: *VL1308545-1*

Supporting QA/QC Data

Surrogate Summary for GC/MS Volatiles

Method SW8260_25C

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

PrepBatchID: VL130907-4

QC Batch ID: VL130907-4-4

Date Extracted: 9/7/2013

Surrogate Compound	Control Limits Lower	Upper
Dibromofluoromethane	84	118
Toluene-d8	85	115
4-Bromofluorobenzene	85	115
1,2-dichloroethane-d4		

Lab ID	Client Sample ID	Date Collected	Date Received	DBFM % Recovery	BZMED8 % Recovery	BR4FBZ % Recovery	12DCED4 % Recovery
VL130907-4LCS	XXXXXXX	NA	XXXXXXX	97	98	101	
VL130907-4LCSD	XXXXXXX	NA	XXXXXXX	100	97	100	
VL130907-4MB	XXXXXXX	NA	XXXXXXX	97	98	105	
1308545-5	704681 Dolores WW 5	8/29/2013	8/30/2013	98	98	103	
1308545-4	704681 Dolores WW 20	8/29/2013	8/30/2013	96	99	104	
1308545-3	705737 Dolores MW	8/29/2013	8/30/2013	97	99	105	
1308545-2	Trip Blank	8/29/2013	8/30/2013	96	97	105	
1308545-1	704681 Dolores WW	8/29/2013	8/30/2013	97	99	104	

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

Lab ID: VL130907-4LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 09/07/2013
Date Analyzed: 09/07/2013
Prep Method: SW5030C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: N/A
File Name: D44052

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	9.77	1		98	60 - 140%
108-87-2	METHYL CYCLOHEXANE	10	9.1	1		91	60 - 140%
71-36-3	N-BUTANOL	500	538	50		108	50 - 150%
75-65-0	TERT-BUTANOL	500	537	50		107	50 - 150%
75-71-8	DICHLORODIFLUOROMETHANE	10	8.17	1		82	63 - 125%
74-87-3	CHLOROMETHANE	10	8.78	1		88	73 - 122%
75-01-4	VINYL CHLORIDE	10	8.72	1		87	72 - 123%
74-83-9	BROMOMETHANE	10	8.97	1		90	68 - 123%
75-00-3	CHLOROETHANE	10	10	1		100	74 - 124%
75-69-4	TRICHLOROFLUOROMETHANE	10	9.85	1		99	74 - 124%
75-35-4	1,1-DICHLOROETHENE	10	10.8	1		108	77 - 119%
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETH	10	10.3	1		103	79 - 122%
67-64-1	ACETONE	40	41.8	10		104	62 - 142%
74-88-4	IODOMETHANE	10	8.98	1		90	72 - 126%
75-15-0	CARBON DISULFIDE	10	10.5	1		105	76 - 121%
75-09-2	METHYLENE CHLORIDE	10	10.6	1		106	71 - 130%
156-60-5	TRANS-1,2-DICHLOROETHENE	10	10.6	1		106	82 - 117%
1634-04-4	METHYL TERTIARY BUTYL ETHER	20	21.2	1		106	77 - 119%
75-34-3	1,1-DICHLOROETHANE	10	10.8	1		108	83 - 119%
108-05-4	VINYL ACETATE	10	10.4	2		104	76 - 121%
156-59-2	CIS-1,2-DICHLOROETHENE	10	10.9	1		109	83 - 117%
78-93-3	2-BUTANONE	40	42.6	10		106	70 - 135%
74-97-5	BROMOCHLOROMETHANE	10	10.8	1		108	83 - 121%
67-66-3	CHLOROFORM	10	11	1		110	82 - 119%
71-55-6	1,1,1-TRICHLOROETHANE	10	10.5	1		105	80 - 120%
594-20-7	2,2-DICHLOROPROPANE	10	11.2	1		112	83 - 125%

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1308545
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: TBAL

Lab ID: VL130907-4LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 09/07/2013
Date Analyzed: 09/07/2013
Prep Method: SW5030C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: N/A
File Name: D44052

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	20.1	1		100	60 - 140%
56-23-5	CARBON TETRACHLORIDE	10	11	1		110	77 - 122%
563-58-6	1,1-DICHLOROPROPENE	10	11	1		110	84 - 118%
107-06-2	1,2-DICHLOROETHANE	10	10.5	1		105	74 - 128%
71-43-2	BENZENE	10	10.7	1		107	83 - 117%
79-01-6	TRICHLOROETHENE	10	10.8	1		108	83 - 117%
78-87-5	1,2-DICHLOROPROPANE	10	11	1		110	84 - 120%
74-95-3	DIBROMOMETHANE	10	10.7	1		107	79 - 122%
75-27-4	BROMODICHLOROMETHANE	10	10.9	1		109	76 - 122%
10061-01-5	CIS-1,3-DICHLOROPROPENE	10	11	1		110	81 - 120%
108-10-1	4-METHYL-2-PENTANONE	40	46.8	10		117	73 - 125%
108-88-3	TOLUENE	10	10.9	1		109	82 - 113%
10061-02-6	TRANS-1,3-DICHLOROPROPENE	10	10.7	1		107	81 - 114%
79-00-5	1,1,2-TRICHLOROETHANE	10	10.9	1		109	78 - 116%
591-78-6	2-HEXANONE	40	43.3	10		108	71 - 124%
127-18-4	TETRACHLOROETHENE	10	10.5	1		105	84 - 117%
142-28-9	1,3-DICHLOROPROPANE	10	10.8	1		108	80 - 115%
124-48-1	DIBROMOCHLOROMETHANE	10	11.3	1		113	82 - 118%
106-93-4	1,2-DIBROMOETHANE	10	10.7	1		107	79 - 114%
544-10-5	1-CHLOROHEXANE	10	9.52	1		95	80 - 117%
108-90-7	CHLOROBENZENE	10	10.9	1		109	81 - 113%
630-20-6	1,1,1,2-TETRACHLOROETHANE	10	11.2	1		112	78 - 113%
100-41-4	ETHYLBENZENE	10	10.6	1		106	81 - 113%
136777-61-	M+P-XYLENE	20	21.7	1		109	82 - 115%
95-47-6	O-XYLENE	10	11.2	1		112	81 - 115%
100-42-5	STYRENE	10	11.1	1		111	78 - 118%
75-25-2	BROMOFORM	10	11.2	1		112	70 - 120%

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1308545
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: TBAL

Lab ID: VL130907-4LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 09/07/2013
Date Analyzed: 09/07/2013
Prep Method: SW5030C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: N/A
File Name: D44052

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	10.4	1		104	80 - 113%
96-18-4	1,2,3-TRICHLOROPROPANE	10	11.1	1		111	78 - 117%
79-34-5	1,1,2,2-TETRACHLOROETHANE	10	10.6	1		106	75 - 121%
108-86-1	BROMOBENZENE	10	10.9	1		109	81 - 114%
103-65-1	N-PROPYLBENZENE	10	9.95	1		100	79 - 116%
95-49-8	2-CHLOROTOLUENE	10	10.5	1		105	79 - 116%
108-67-8	1,3,5-TRIMETHYLBENZENE	10	10.2	1		102	78 - 116%
106-43-4	4-CHLOROTOLUENE	10	10.9	1		109	78 - 115%
98-06-6	TERT-BUTYLBENZENE	10	10.2	1		102	76 - 120%
95-63-6	1,2,4-TRIMETHYLBENZENE	10	10.3	1		103	80 - 117%
135-98-8	SEC-BUTYLBENZENE	10	9.59	1		96	78 - 115%
541-73-1	1,3-DICHLOROBENZENE	10	10.7	1		107	79 - 115%
99-87-6	P-ISOPROPYLTOLUENE	10	9.68	1		97	77 - 116%
106-46-7	1,4-DICHLOROBENZENE	10	10.8	1		108	82 - 114%
104-51-8	N-BUTYLBENZENE	10	9.62	1		96	79 - 117%
95-50-1	1,2-DICHLOROBENZENE	10	10.8	1		108	82 - 114%
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	10	10.3	2		103	73 - 125%
120-82-1	1,2,4-TRICHLOROBENZENE	10	10.3	1		103	75 - 120%
87-68-3	HEXACHLOROBUTADIENE	10	11.1	1		111	71 - 124%
91-20-3	NAPHTHALENE	10	10.5	1		105	71 - 131%
87-61-6	1,2,3-TRICHLOROBENZENE	10	10.4	1		104	70 - 131%
123-91-1	1,4-DIOXANE	200	207	100		104	50 - 150%
64-17-5	ETHANOL	200	215	40		108	50 - 150%
78-83-1	ISOBUTYL ALCOHOL	200	215	40		107	50 - 150%

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1308545
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: TBAL

Lab ID: VL130907-4LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 09/07/2013
Date Analyzed: 09/07/2013
Prep Method: SW5030C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: N/A
File Name: D44053

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	8.65	1		87	30	12
108-87-2	METHYL CYCLOHEXANE	10	8.27	1		83	30	10
71-36-3	N-BUTANOL	500	542	50		108	30	1
75-65-0	TERT-BUTANOL	500	534	50		107	30	1
75-71-8	DICHLORODIFLUOROMETHANE	10	7.75	1		78	20	5
74-87-3	CHLOROMETHANE	10	8.22	1		82	20	7
75-01-4	VINYL CHLORIDE	10	8.36	1		84	20	4
74-83-9	BROMOMETHANE	10	8.64	1		86	20	4
75-00-3	CHLOROETHANE	10	9.18	1		92	20	9
75-69-4	TRICHLOROFLUOROMETHANE	10	9.38	1		94	20	5
75-35-4	1,1-DICHLOROETHENE	10	9.63	1		96	20	11
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETH	10	9.47	1		95	20	8
67-64-1	ACETONE	40	43.5	10		109	30	4
74-88-4	IODOMETHANE	10	8.19	1		82	20	9
75-15-0	CARBON DISULFIDE	10	9.68	1		97	20	8
75-09-2	METHYLENE CHLORIDE	10	10.3	1		103	20	3
156-60-5	TRANS-1,2-DICHLOROETHENE	10	10	1		100	20	6
1634-04-4	METHYL TERTIARY BUTYL ETHER	20	20.2	1		101	20	5
75-34-3	1,1-DICHLOROETHANE	10	10.1	1		101	20	6
108-05-4	VINYL ACETATE	10	10.4	2		104	20	0
156-59-2	CIS-1,2-DICHLOROETHENE	10	10	1		100	20	8
78-93-3	2-BUTANONE	40	42.2	10		106	30	1
74-97-5	BROMOCHLOROMETHANE	10	9.84	1		98	20	10
67-66-3	CHLOROFORM	10	10.6	1		106	20	4
71-55-6	1,1,1-TRICHLOROETHANE	10	10	1		100	20	5
594-20-7	2,2-DICHLOROPROPANE	10	10.6	1		106	20	6
110-82-7	CYCLOHEXANE	20	18.2	1		91	30	10

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1308545
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: TBAL

Lab ID: VL130907-4LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 09/07/2013
Date Analyzed: 09/07/2013
Prep Method: SW5030C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: N/A
File Name: D44053

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	10.4	1		104	20	6
563-58-6	1,1-DICHLOROPROPENE	10	10.3	1		103	20	7
107-06-2	1,2-DICHLOROETHANE	10	10.1	1		101	20	4
71-43-2	BENZENE	10	10.1	1		101	20	6
79-01-6	TRICHLOROETHENE	10	10.1	1		101	20	6
78-87-5	1,2-DICHLOROPROPANE	10	10.4	1		104	20	6
74-95-3	DIBROMOMETHANE	10	10.2	1		102	20	5
75-27-4	BROMODICHLOROMETHANE	10	10.4	1		104	20	4
10061-01-5	CIS-1,3-DICHLOROPROPENE	10	10.2	1		102	20	7
108-10-1	4-METHYL-2-PENTANONE	40	45.6	10		114	30	2
108-88-3	TOLUENE	10	10	1		100	20	9
10061-02-6	TRANS-1,3-DICHLOROPROPENE	10	10.3	1		103	20	4
79-00-5	1,1,2-TRICHLOROETHANE	10	9.95	1		100	20	10
591-78-6	2-HEXANONE	40	41.1	10		103	30	5
127-18-4	TETRACHLOROETHENE	10	10.1	1		101	20	4
142-28-9	1,3-DICHLOROPROPANE	10	10.1	1		101	20	7
124-48-1	DIBROMOCHLOROMETHANE	10	10.7	1		107	20	6
106-93-4	1,2-DIBROMOETHANE	10	10.5	1		105	20	2
544-10-5	1-CHLOROHEXANE	10	8.63	1		86	20	10
108-90-7	CHLOROBENZENE	10	10.1	1		101	20	7
630-20-6	1,1,1,2-TETRACHLOROETHANE	10	10.3	1		103	20	8
100-41-4	ETHYLBENZENE	10	9.87	1		99	20	7
136777-61-	M+P-XYLENE	20	20.1	1		101	20	8
95-47-6	O-XYLENE	10	10.1	1		101	20	11
100-42-5	STYRENE	10	10.2	1		102	20	9
75-25-2	BROMOFORM	10	11.1	1		111	20	1
98-82-8	ISOPROPYLBENZENE	10	9.56	1		96	20	8

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1308545
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: TBAL

Lab ID: VL130907-4LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 09/07/2013
Date Analyzed: 09/07/2013
Prep Method: SW5030C

Prep Batch: VL130907-4
QCBatchID: VL130907-4-4
Run ID: VL130907-4A
Cleanup: NONE
Basis: N/A
File Name: D44053

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	10.6	1		106	20	5
79-34-5	1,1,2,2-TETRACHLOROETHANE	10	10	1		100	20	5
108-86-1	BROMOBENZENE	10	10.1	1		101	20	8
103-65-1	N-PROPYLBENZENE	10	9.26	1		93	20	7
95-49-8	2-CHLOROTOLUENE	10	9.54	1		95	20	10
108-67-8	1,3,5-TRIMETHYLBENZENE	10	9.43	1		94	20	8
106-43-4	4-CHLOROTOLUENE	10	9.91	1		99	20	10
98-06-6	TERT-BUTYLBENZENE	10	9.16	1		92	20	11
95-63-6	1,2,4-TRIMETHYLBENZENE	10	9.36	1		94	20	10
135-98-8	SEC-BUTYLBENZENE	10	8.71	1		87	20	10
541-73-1	1,3-DICHLOROBENZENE	10	9.8	1		98	20	9
99-87-6	P-ISOPROPYLTOLUENE	10	9.02	1		90	20	7
106-46-7	1,4-DICHLOROBENZENE	10	9.87	1		99	20	9
104-51-8	N-BUTYLBENZENE	10	8.67	1		87	20	10
95-50-1	1,2-DICHLOROBENZENE	10	10.1	1		101	20	6
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	10	9.21	2		92	20	11
120-82-1	1,2,4-TRICHLOROBENZENE	10	9.85	1		98	20	5
87-68-3	HEXACHLOROBUTADIENE	10	9.93	1		99	20	12
91-20-3	NAPHTHALENE	10	9.88	1		99	20	6
87-61-6	1,2,3-TRICHLOROBENZENE	10	9.79	1		98	20	6
123-91-1	1,4-DIOXANE	200	201	100		100	30	3
64-17-5	ETHANOL	200	228	40		114	30	6
78-83-1	ISOBUTYL ALCOHOL	200	213	40		106	30	1

Data Package ID: *VL1308545-1*

GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1308545

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: TBAL

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	101		100		85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	25	97		100		84 - 118
2037-26-5	TOLUENE-D8	25	98		97		85 - 115

Data Package ID: *VL1308545-1*

Prep Batch ID: VL130907-4

Start Date: 09/07/13
Start Time: 17:08
Prep Analyst: Steven D. White

End Date: 09/08/13
End Time: 5:01

Concentration Method: NONE
Extract Method: SW5030C
Initial Volume Units: ml
Final Volume Units: ml

Batch Created By: sdw
Date Created: 09/07/13
Time Created: 16:30
Validated By: sdw
Date Validated: 09/09/13
Time Validated: 9:16

Comments:

UN-heated purge waters and methanol extracted soils/solids; insufficient sample provided for MS/MSD

QC Batch ID: VL130907-4-4

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
VL130907-4	MB	XXXXXX	WATER	XXXXXX	10	10	NONE	1	1308545
VL130907-4	LCS	XXXXXX	WATER	XXXXXX	10	10	NONE	1	1308545
VL130907-4	LCSD	XXXXXX	WATER	XXXXXX	10	10	NONE	1	1308545
1308545-1	SMP	704681 Dolores WW	WATER	8/29/2013	10	10	NONE	1	1308545
1308545-2	SMP	Trip Blank	WATER	8/29/2013	10	10	NONE	1	1308545
1308545-3	SMP	705737 Dolores MW	WATER	8/29/2013	10	10	NONE	1	1308545
1308545-4	SMP	704681 Dolores WW 20	WATER	8/29/2013	10	10	NONE	1	1308545
1308545-5	SMP	704681 Dolores WW 5	WATER	8/29/2013	10	10	NONE	1	1308545

QC Types

CAR	Carrier reference sample	DUP	Laboratory Duplicate
LCS	Laboratory Control Sample	LCSD	Laboratory Control Sample Duplicat
MB	Method Blank	MS	Laboratory Matrix Spike
MSD	Laboratory Matrix Spike Duplicate	REP	Sample replicate
RVS	Reporting Level Verification Standar	SMP	Field Sample
SYS	Sample Yield Spike		

5A

Volatile Organic GC/MS Tuning And Mass Calibration--Bromofluorobenzene (BFB)

Lab Name: ALS Environmental -- FC
Work Order Number: 1308545
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: TBAL

BFB Injection Date: 8/23/2013
BFB Injection Time: 12:46
Instrument ID: HPV4

Reported on: Wednesday, September 11, 2013

Level: Low **Column:** CAP **FileID:** D43478

m/e	Ion Abundance Criteria SW8260_25C	% Relative Abundance
50	15.0 - 40.0 percent of mass 95	24.5
75	30.0 - 60.0 percent of mass 95	51.3
95	Base peak, 100 percent of relative abundance	100
96	5.0 - 9.0 percent of mass 95	6.8
173	Less than 2.0 percent of mass 174	0
174	Greater than 50.0 percent of mass 95	76.3
175	5.0 - 9.0 percent of mass 174	8.8
176	Greater than 95.0 percent < 101.0 percent of mass 174	97.3
177	5.0 - 9.0 percent of mass 176	6.7

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS/MSD, BLANKS, AND STANDARDS:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	QC BatchID
XXXXXXX	VOC_0.25ppb_ICALCSTD	D43480	8/23/2013	13:20	VL130823-4A
XXXXXXX	VOC_0.5ppb_ICALCSTD	D43481	8/23/2013	13:44	VL130823-4A
XXXXXXX	VOC_1ppb_ICALCSTD	D43482	8/23/2013	14:07	VL130823-4A
XXXXXXX	VOC_2ppb_ICALCSTD	D43483	8/23/2013	14:31	VL130823-4A
XXXXXXX	VOC_4ppb_ICALCSTD	D43484	8/23/2013	14:54	VL130823-4A
XXXXXXX	VOC_10ppb_ICALCSTD	D43485	8/23/2013	15:17	VL130823-4A
XXXXXXX	VOC_20ppb_ICALCSTD	D43487	8/23/2013	16:05	VL130823-4A
XXXXXXX	VOC_40ppb_ICALCSTD	D43489	8/23/2013	16:52	VL130823-4A
XXXXXXX	VOC_60ppb_ICALCSTD	D43491	8/23/2013	17:39	VL130823-4A
XXXXXXX	VL130823-4ICV	D43494	8/23/2013	18:50	VL130823-4A
XXXXXXX	VL130823-4LCS	D43495	8/23/2013	19:18	VL130823-4-1
XXXXXXX	VL130823-4LCSD	D43496	8/23/2013	19:41	VL130823-4-1
XXXXXXX	VL130823-4MB	D43497	8/23/2013	20:04	VL130823-4-1
XXXXXXX	1308315-1	D43498	8/23/2013	20:28	VL130823-4-1
XXXXXXX	1308315-2	D43499	8/23/2013	20:51	VL130823-4-1
XXXXXXX	1308315-3	D43500	8/23/2013	21:14	VL130823-4-1
XXXXXXX	1308315-4	D43501	8/23/2013	21:37	VL130823-4-1

Data Package ID: *VL1308545-1*

5A

Volatile Organic GC/MS Tuning And Mass Calibration--Bromofluorobenzene (BFB)

Lab Name: ALS Environmental -- FC
Work Order Number: 1308545
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: TBAL

BFB Injection Date: 9/7/2013
BFB Injection Time: 17:08
Instrument ID: HPV4

Reported on: Wednesday, September 11, 2013

Level: Low **Column:** CAP **FileID:** D44050

m/e	Ion Abundance Criteria SW8260_25C	% Relative Abundance
50	15.0 - 40.0 percent of mass 95	22.7
75	30.0 - 60.0 percent of mass 95	50.4
95	Base peak, 100 percent of relative abundance	100
96	5.0 - 9.0 percent of mass 95	6.9
173	Less than 2.0 percent of mass 174	0
174	Greater than 50.0 percent of mass 95	81.8
175	5.0 - 9.0 percent of mass 174	8.3
176	Greater than 95.0 percent < 101.0 percent of mass 174	97.6
177	5.0 - 9.0 percent of mass 176	6.6

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS/MSD, BLANKS, AND STANDARDS:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	QC BatchID
XXXXXXX	VL130907-4RVS	D44051	9/7/2013	17:22	VL130907-4-5
XXXXXXX	CCV1CCV	D44052	9/7/2013	17:45	VL130907-4A
XXXXXXX	VL130907-4LCS	D44052	9/7/2013	17:45	VL130907-4-1
XXXXXXX	VL130907-4LCS	D44052	9/7/2013	17:45	VL130907-4-2
XXXXXXX	VL130907-4LCS	D44052	9/7/2013	17:45	VL130907-4-3
XXXXXXX	VL130907-4LCS	D44052	9/7/2013	17:45	VL130907-4-4
XXXXXXX	VL130907-4LCSD	D44053	9/7/2013	18:08	VL130907-4-2
XXXXXXX	VL130907-4LCSD	D44053	9/7/2013	18:08	VL130907-4-3
XXXXXXX	VL130907-4LCSD	D44053	9/7/2013	18:08	VL130907-4-1
XXXXXXX	VL130907-4LCSD	D44053	9/7/2013	18:08	VL130907-4-4
XXXXXXX	VL130907-4MB	D44054	9/7/2013	18:31	VL130907-4-1
XXXXXXX	VL130907-4MB	D44054	9/7/2013	18:31	VL130907-4-2
XXXXXXX	VL130907-4MB	D44054	9/7/2013	18:31	VL130907-4-3
XXXXXXX	VL130907-4MB	D44054	9/7/2013	18:31	VL130907-4-4
XXXXXXX	VL130907-4MMB	D44055	9/7/2013	18:54	VL130907-4-2
XXXXXXX	VL130907-4MMB	D44055	9/7/2013	18:54	VL130907-4-1
XXXXXXX	1308526-4	D44056	9/7/2013	19:17	VL130907-4-1

Data Package ID: *VL1308545-1*

5A

Volatile Organic GC/MS Tuning And Mass Calibration--Bromofluorobenzene (BFB)

Lab Name: ALS Environmental -- FC
Work Order Number: 1308545
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: TBAL

BFB Injection Date: 9/7/2013
BFB Injection Time: 17:08
Instrument ID: HPV4
Reported on: Wednesday, September 11, 2013

Level: Low **Column:** CAP **FileID:** D44050

m/e	Ion Abundance Criteria SW8260_25C	% Relative Abundance
50	15.0 - 40.0 percent of mass 95	22.7
75	30.0 - 60.0 percent of mass 95	50.4
95	Base peak, 100 percent of relative abundance	100
96	5.0 - 9.0 percent of mass 95	6.9
173	Less than 2.0 percent of mass 174	0
174	Greater than 50.0 percent of mass 95	81.8
175	5.0 - 9.0 percent of mass 174	8.3
176	Greater than 95.0 percent < 101.0 percent of mass 174	97.6
177	5.0 - 9.0 percent of mass 176	6.6

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS/MSD, BLANKS, AND STANDARDS:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	QC BatchID
XXXXXXX	1308526-4RR1	D44057	9/7/2013	19:41	VL130907-4-1
704681 Dolores WW	1308545-1	D44060	9/7/2013	21:00	VL130907-4-4
Trip Blank	1308545-2	D44061	9/7/2013	21:24	VL130907-4-4
705737 Dolores MW	1308545-3	D44062	9/7/2013	21:47	VL130907-4-4
704681 Dolores WW 20	1308545-4	D44063	9/7/2013	22:10	VL130907-4-4
704681 Dolores WW 5	1308545-5	D44064	9/7/2013	22:33	VL130907-4-4
XXXXXXX	1309076-1	D44065	9/7/2013	22:56	VL130907-4-3
XXXXXXX	1309077-1	D44066	9/7/2013	23:19	VL130907-4-3
XXXXXXX	1309078-1	D44067	9/7/2013	23:42	VL130907-4-3
XXXXXXX	1309079-1	D44068	9/8/2013	0:05	VL130907-4-3
XXXXXXX	1309080-1	D44069	9/8/2013	0:28	VL130907-4-3
XXXXXXX	1309081-1	D44070	9/8/2013	0:51	VL130907-4-3
XXXXXXX	1309054-3	D44075	9/8/2013	2:45	VL130907-4-2
XXXXXXX	1309054-4	D44076	9/8/2013	3:08	VL130907-4-2
XXXXXXX	1309054-5	D44077	9/8/2013	3:31	VL130907-4-2

Data Package ID: *VL1308545-1*

Calibration ID:	082313WM
Instrument ID:	HPV4
Calibration Date:	8/23/2013

ALS Environmental -- FC

Initial Calibration Report

Analyte	FileName: / Cal LVL ID:	D43480.D 0.25	D43481.D 0.5	D43482.D 1	D43483.D 2	D43484.D 4	D43485.D 10	D43487.D 20	D43489.D 40	D43491.D 60	AvgR	%RSD	Curve Type	Higher Order Equation Corr	Quad Term	Linear Term	Const Term
fluorobenzene												ISTD	AvgRF				
dichlorodifluoromethane			0.5323	0.5178	0.4889	0.5188	0.4783	0.4634	0.4660	0.4697	0.4920	5.53	AvgRF				
chloromethane			0.7332	0.7109	0.5727	0.6189	0.5756	0.5570	0.5386	0.5219	0.6033	13.08	AvgRF				
vinyl chloride			0.6574	0.6215	0.5939	0.6020	0.5851	0.5534	0.5446	0.5373	0.5844	7.16	AvgRF				
bromomethane			0.3303	0.2974	0.2737	0.2679	0.2337	0.2229	0.2135	0.2197	0.2574	16.35	AvgRF				
chloroethane			0.2741	0.2339	0.2315	0.2364	0.2262	0.2235	0.2215	0.2234	0.2338	7.33	AvgRF				
trichlorofluoromethane			0.5413	0.5596	0.4989	0.5391	0.4922	0.4850	0.5003	0.4941	0.5138	5.49	AvgRF				
diethyl ether			0.1600	0.1672	0.1610	0.1481	0.1370	0.1511	0.1520	0.1536	0.1538	5.99	AvgRF				
ethanol				0.0027	0.0028	0.0029	0.0027	0.0027	0.0025	0.0026	0.0027	5.05	AvgRF				
acrolein			0.0400	0.0431	0.0420	0.0455	0.0448	0.0434	0.0437	0.0444	0.0434	4.03	AvgRF				
1,1,2-trichloro-1,2,2-trifluoroethane			0.2904	0.3004	0.2595	0.2855	0.2425	0.2656	0.2725	0.2753	0.2740	6.72	AvgRF				
1,1-dichloroethene			0.2611	0.2423	0.2396	0.2602	0.2213	0.2432	0.2449	0.2509	0.2454	5.16	AvgRF				
acetone			0.0298	0.0299	0.0216	0.0223	0.0198	0.0217	0.0203	0.0199	0.0232	18.30	linear	0.9992		0.019883	0.001567
iodomethane			0.1602	0.1391	0.2053	0.2391	0.2735	0.3228	0.3565	0.3729	0.2587	34.01	quadratic	0.9996	0.026192	0.315507	-0.00981
carbon disulfide			0.8697	0.8379	0.8218	0.8829	0.7734	0.8475	0.8710	0.8776	0.8502	4.59	AvgRF				
allyl chloride			0.1900	0.1594	0.1698	0.1585	0.1418	0.1513	0.1535	0.1568	0.1601	9.02	AvgRF				
acetonitrile			0.0301	0.0270	0.0288	0.0308	0.0289	0.0304	0.0297	0.0303	0.0295	4.16	AvgRF				
methylene chloride			1.4504	0.9309	0.5864	0.5449	0.3414	0.3209	0.3102	0.3060	0.5989	67.71	linear	0.9994		0.294449	0.025587
methyl acetate				0.0369	0.0269	0.0385	0.0360	0.0360	0.0382	0.0386	0.0359	11.41	AvgRF				
tert-butanol			0.0241	0.0238	0.0231	0.0265	0.0254	0.0256	0.0245	0.0246	0.0247	4.40	AvgRF				
methyl tertiary butyl ether		0.8274	0.7934	0.7518	0.7336	0.7565	0.7226	0.7718	0.7816	0.7904	0.7699	4.23	AvgRF				
hexane			0.3237	0.3001	0.2556	0.2737	0.2877	0.2717	0.2754	0.2720	0.2800	7.70	AvgRF				
trans-1,2-dichloroethene			0.3051	0.2865	0.2694	0.2973	0.2595	0.2864	0.2913	0.2971	0.2866	5.31	AvgRF				
acrylonitrile			0.0873	0.0932	0.0889	0.0953	0.0895	0.0905	0.0909	0.0922	0.0910	2.80	AvgRF				
isopropyl ether			1.2228	1.1453	1.1328	1.1566	1.0788	1.1546	1.1606	1.1826	1.1543	3.55	AvgRF				
vinyl acetate			0.5160	0.6285	0.5416	0.6066	0.6517	0.6148	0.6327	0.6571	0.6061	8.42	AvgRF				
1,1-dichloroethane			0.6019	0.5929	0.5593	0.5862	0.5238	0.5734	0.5788	0.5842	0.5748	4.23	AvgRF				
chloroprene			0.5532	0.5400	0.5127	0.5267	0.4701	0.5382	0.5483	0.5543	0.5302	5.27	AvgRF				
ethyl tert-butyl ether			0.9728	1.0066	0.9016	0.9619	0.8741	0.9284	0.9395	0.9581	0.9429	4.43	AvgRF				
2,2-dichloropropane			0.5195	0.4642	0.4347	0.4527	0.4001	0.4256	0.4244	0.4198	0.4426	8.32	AvgRF				
cyclohexane		0.4366	0.4051	0.3975	0.3813	0.4135	0.3617	0.3938	0.4096	0.4144	0.4015	5.35	AvgRF				
2-butanone			0.0233	0.0253	0.0241	0.0270	0.0248	0.0265	0.0264	0.0261	0.0254	5.03	AvgRF				
cis-1,2-dichloroethene			0.3282	0.3249	0.3183	0.3249	0.2927	0.3222	0.3327	0.3355	0.3224	4.10	AvgRF				
propionitrile			0.0314	0.0308	0.0315	0.0331	0.0309	0.0319	0.0310	0.0320	0.0316	2.44	AvgRF				
methyl acrylate																	
methacrylonitrile			0.2197	0.1662	0.1628	0.1629	0.1524	0.1660	0.1619	0.1670	0.1699	12.16	AvgRF				
bromochloromethane			0.1528	0.1515	0.1460	0.1416	0.1328	0.1392	0.1423	0.1474	0.1442	4.58	AvgRF				
chloroform			0.6058	0.5963	0.5882	0.5916	0.5420	0.5719	0.5756	0.5785	0.5812	3.35	AvgRF				
1-chlorobutane																	
dibromofluoromethane		0.2691	0.2689	0.2697	0.2686	0.2734	0.2688	0.2762	0.2749	0.2810	0.2723	1.61 SUR	AvgRF				
1,1,1-trichloroethane			0.5144	0.4569	0.4456	0.4994	0.4276	0.4842	0.4928	0.5006	0.4777	6.42	AvgRF				
pentafluorobenzene																	
carbon tetrachloride			0.3079	0.3326	0.3363	0.3521	0.3192	0.3768	0.4009	0.4112	0.3546	10.71	AvgRF				
1,1-dichloropropene			0.4162	0.4363	0.4075	0.4412	0.3744	0.4250	0.4331	0.4413	0.4219	5.37	AvgRF				
1,2-dichloroethane-d4		0.1630	0.1708	0.1674	0.1699	0.1749	0.1652	0.1686	0.1696	0.1705	0.1689	2.03 SUR	AvgRF				
isobutyl alcohol			0.0123	0.0111	0.0108	0.0128	0.0124	0.0120	0.0114	0.0115	0.0118	5.72	AvgRF				
tert-amyl methyl ether			0.1986	0.1593	0.1698	0.1773	0.1526	0.1737	0.1761	0.1777	0.1731	7.92	AvgRF				
benzene			1.2763	1.3224	1.1834	1.2384	1.0982	1.2033	1.2206	1.2235	1.2205	5.40	AvgRF				
1,2-dichloroethane			0.5177	0.4260	0.4307	0.4338	0.4032	0.4339	0.4319	0.4378	0.4394	7.61	AvgRF				
methyl cyclohexane			0.4857	0.4538	0.3977	0.4307	0.3808	0.4350	0.4473	0.4521	0.4354	7.63	AvgRF				
trichloroethene			0.3304	0.3113	0.3015	0.3283	0.2806	0.3170	0.3244	0.3258	0.3149	5.36	AvgRF				
n-butanol			0.0061	0.0057	0.0056	0.0066	0.0063	0.0063	0.0060	0.0062	0.0061	5.40	AvgRF				
1,2-dichloropropane			0.3347	0.3470	0.3417	0.3560	0.3115	0.3401	0.3429	0.3458	0.3399	3.84	AvgRF				
methyl methacrylate			0.1722	0.1647	0.1411	0.1610	0.1437	0.1655	0.1672	0.1687	0.1605	7.27	AvgRF				
1,4-dioxane			0.0020	0.0022	0.0024	0.0025	0.0022	0.0023	0.0022	0.0022	0.0022	6.36	AvgRF				
dibromomethane			0.1788	0.1882	0.1771	0.1832	0.1676	0.1826	0.1823	0.1889	0.1811	3.75	AvgRF				
bromodichloromethane			0.3527	0.4001	0.3704	0.3934	0.3702	0.4152	0.4172	0.4355	0.3943	7.16	AvgRF				
chloroacetonitrile																	
2-chloroethyl vinyl ether			0.1420	0.1369	0.1400	0.1621	0.1463	0.1550	0.1618	0.1674	0.1514	7.69	AvgRF				
cis-1,3-dichloropropene			0.5142	0.4786	0.4564	0.4705	0.4456	0.4934	0.4989	0.5101	0.4835	5.16	AvgRF				
chlorobenzene-d5												ISTD	AvgRF				
toluene-d8		1.4818	1.4659	1.4905	1.4433	1.4568	1.4583	1.4295	1.4302	1.4019	1.4507	1.91 SUR	AvgRF				
toluene			1.0491	1.0916	1.0073	1.0317	0.9470	1.0365	1.0165	1.0112	1.0239	4.02	AvgRF				
4-methyl-2-pentanone			0.0344	0.0347	0.0372	0.0377	0.0379	0.0397	0.0397	0.0408	0.0378	6.16	AvgRF				
ethyl methacrylate			0.4299	0.4584	0.4389	0.4509	0.4466	0.4632	0.4615	0.4695	0.4524	2.96	AvgRF				
trans-1,3-dichloropropene			0.5671	0.6018	0.5423	0.5807	0.5720	0.6091	0.6136	0.6150	0.5877	4.48	AvgRF				

Operator: twk-sop525r16 Notes: 10mL un-heated purge

TWK 8/29/13

Calibration ID:	082313WM
Instrument ID:	HPV4
Calibration Date:	8/23/2013

ALS Environmental -- FC

Initial Calibration Report

Analyte	FileName: D43480.D	D43481.D	D43482.D	D43483.D	D43484.D	D43485.D	D43487.D	D43489.D	D43491.D	AvgR	%RSD		Curve Type	Higher Order Equation			
	Cal LVL ID: 0.25	0.5	1	2	4	10	20	40	60					Corr	Quad Term	Linear Term	Const Term
1,1,2-trichloroethane		0.3195	0.3244	0.3058	0.3217	0.2954	0.3040	0.3045	0.3023	0.3097	3.43		AvgRF				
tetrachloroethene	0.3609	0.3312	0.3244	0.3045	0.3273	0.2909	0.3202	0.3341	0.3316	0.3250	6.03		AvgRF				
2-hexanone		0.1279	0.1310	0.1153	0.1245	0.1243	0.1296	0.1247	0.1223	0.1249	3.92		AvgRF				
1,3-dichloropropane		0.6297	0.6227	0.5582	0.6003	0.5867	0.6121	0.5946	0.5875	0.5990	3.81		AvgRF				
dibromochloromethane		0.3218	0.2939	0.3169	0.3327	0.3441	0.3904	0.3949	0.4085	0.3504	12.03		AvgRF				
1,2-dibromoethane		0.3097	0.3698	0.3191	0.3282	0.3153	0.3362	0.3332	0.3321	0.3304	5.58		AvgRF				
1-chlorohexane		0.6259	0.5576	0.5304	0.5359	0.4779	0.5031	0.5161	0.5113	0.5323	8.38		AvgRF				
chlorobenzene		1.1556	1.1084	1.0662	1.1123	1.0376	1.0936	1.1092	1.1066	1.0988	3.17		AvgRF				
ethylbenzene		1.8010	1.8832	1.7901	1.8897	1.7546	1.9129	1.9204	1.9028	1.8568	3.47		AvgRF				
1,1,1,2-tetrachloroethane		0.3656	0.3847	0.3591	0.3905	0.3700	0.4080	0.4165	0.4163	0.3888	5.90		AvgRF				
m+p-xylene	0.6018	0.7066	0.6510	0.6221	0.6721	0.6356	0.7054	0.7162	0.7216	0.6702	6.65		AvgRF				
o-xylene		0.6417	0.6407	0.6064	0.6837	0.6492	0.7104	0.7282	0.7256	0.6732	6.73		AvgRF				
styrene		1.0386	1.0266	1.0684	1.1365	1.0943	1.1962	1.2145	1.2233	1.1248	7.06		AvgRF				
bromoform		0.1368	0.1857	0.1584	0.1799	0.1919	0.2159	0.2356	0.2435	0.1935	19.02		AvgRF				
isopropylbenzene		1.4351	1.4773	1.4282	1.5876	1.4786	1.6469	1.6533	1.6592	1.5458	6.55		AvgRF				
4-bromofluorobenzene	0.8475	0.8458	0.8543	0.8115	0.8122	0.7788	0.7870	0.8019	0.8062	0.8161	3.33	SUR	AvgRF				
1,4-dichlorobenzene-d4												ISTD	AvgRF				
1,1,2,2-tetrachloroethane		0.9217	0.8654	0.8474	0.8493	0.8181	0.8311	0.7646	0.7659	0.8329	6.22		AvgRF				
trans-1,4-dichloro-2-butene		0.2626	0.2560	0.2215	0.2379	0.2146	0.2105	0.2070	0.2112	0.2279	9.73		AvgRF				
n-propylbenzene		4.7032	4.3888	4.0240	4.3731	3.8484	4.1714	4.1455	4.2061	4.2325	6.11		AvgRF				
1,2,3-trichloropropane		0.2845	0.2525	0.2464	0.2647	0.2178	0.2320	0.2093	0.2218	0.2386	9.00		AvgRF				
bromobenzene		0.9926	1.0607	0.9687	0.9983	0.8943	0.9553	0.9256	0.9532	0.9686	5.20		AvgRF				
1,3,5-trimethylbenzene		2.8159	2.7746	2.7219	2.8089	2.5653	2.7997	2.7632	2.8376	2.7609	3.14		AvgRF				
2-chlorotoluene		0.9688	0.9421	0.8304	0.8708	0.7823	0.8825	0.8436	0.8625	0.8729	6.86		AvgRF				
4-chlorotoluene		0.8539	0.8730	0.8167	0.8685	0.7961	0.8829	0.8522	0.8837	0.8559	3.95		AvgRF				
tert-butylbenzene		0.4847	0.5190	0.4998	0.5253	0.4980	0.5545	0.5547	0.5683	0.5255	5.87		AvgRF				
1,2,4-trimethylbenzene		2.9372	2.9127	2.6151	2.8034	2.5465	2.7537	2.7200	2.7848	2.7592	4.85		AvgRF				
sec-butylbenzene		3.5701	3.5186	3.1664	3.4781	3.1384	3.4065	3.4089	3.5051	3.3985	4.77		AvgRF				
p-isopropyltoluene		2.4914	2.5617	2.4299	2.6138	2.3837	2.6948	2.7239	2.8043	2.5879	5.73		AvgRF				
1,3-dichlorobenzene		1.7481	1.6854	1.5100	1.6795	1.5270	1.6743	1.6891	1.7281	1.6552	5.33		AvgRF				
1,4-dichlorobenzene		1.8022	1.7641	1.6155	1.6855	1.5248	1.6526	1.6046	1.6376	1.6609	5.37		AvgRF				
n-butylbenzene		2.5749	2.5936	2.3379	2.5381	2.1929	2.4371	2.4355	2.4681	2.4498	5.44		AvgRF				
1,2-dichlorobenzene		1.5612	1.4968	1.4868	1.5543	1.4367	1.5793	1.5307	1.5498	1.5245	3.12		AvgRF				
hexachloroethane		0.3061	0.3627	0.3125	0.3252	0.3217	0.3675	0.3863	0.4176	0.3500	11.38		AvgRF				
1,2-dibromo-3-chloropropane			0.1036	0.1251	0.1330	0.1154	0.1228	0.1151	0.1139	0.1184	8.00		AvgRF				
1,2,4-trichlorobenzene		0.7260	0.8276	0.7496	0.8710	0.7628	0.7906	0.7652	0.7932	0.7858	5.88		AvgRF				
hexachlorobutadiene		0.3074	0.3564	0.3168	0.3432	0.3029	0.3283	0.3215	0.3339	0.3263	5.52		AvgRF				
naphthalene		1.5690	1.6405	1.5179	1.6987	1.6046	1.6439	1.5861	1.6355	1.6120	3.42		AvgRF				
1,2,3-trichlorobenzene		0.6964	0.6934	0.6821	0.7181	0.6562	0.7001	0.6798	0.7139	0.6925	2.87		AvgRF				

Average RSD = 7.06

Concentration Multipliers

a: cyclohexane - 2X
b: m,p-xylene - 2X
c: methyl-t-butyl-ether - 2X
d: 2-butanone - 4X
e: 2-hexanone - 4X
f: 4-methyl-2-pentanone - 4X
g: acetone - 4X
h: acetonitrile - 10X
i: acrolein - 10X
j: acrylonitrile - 10X
k: chloroacetonitrile - 10X
l: propionitrile - 10X
m: isobutyl alcohol - 20X
n: 1,4-dioxane - 20X
o: ethanol - 20X
p: n-butanol - 50X
q: tert-butanol - 50X

Ethanol originally integrated incorrectly (wrong peak) re-integrated/updated 8/29/13 TW

Operator: twk-sop525r16 Notes: 10mL un-heated purge

TW 8/29/13

ALS Environmental -- FC

Initial Calibration Verification

Lab Sample ID:	VL130823-4ICV	**Calibration ID:**	082313WM
Analysis Date:	8/23/2013	**Instrument ID:**	HPV4
File Name:	D43494	**Calibration Date:**	8/23/2013

Ethanol RT updated 8/29/13

		Analyte	AvgRF	CCRF	Expected Conc.	Found Conc.	%Dev. or % Drift	%Diff (Area)	RT Dev.	Curve Type
1)	ISTD	fluorobenzene						1.8	0.001	AvgRF
2)		dichlorodifluoromethane	0.4920	0.4184			-15.0		-0.001	AvgRF
3)		chloromethane	0.6033	0.5226			-13.4		0.001	AvgRF
4)		vinyl chloride	0.5844	0.5224			-10.6		0.003	AvgRF
5)		bromomethane	0.2574	0.2357			-8.4		-0.002	AvgRF
6)		chloroethane	0.2338	0.2119			-9.4		-0.001	AvgRF
7)		trichlorofluoromethane	0.5138	0.4787			-6.8		0.003	AvgRF
8)		diethyl ether	0.1538	0.1561			1.5		-0.002	AvgRF
9)		ethanol	0.0027	0.0029			7.5		-0.004	AvgRF
10		acrolein	0.0434	0.0442			1.9		0.000	AvgRF
11		1,1,2-trichloro-1,2,2-trifluoroethane	0.2740	0.2532			-7.6		0.002	AvgRF
12		1,1-dichloroethene	0.2454	0.2387			-2.8		0.002	AvgRF
13		acetone			40.000	38.27	-4.3		0.003	linear
14		iodomethane			10.000	8.68	-13.2		0.005	quadratic
15		carbon disulfide	0.8502	0.8187			-3.7		-0.004	AvgRF
16		allyl chloride	0.1601	0.1588			-0.8		-0.001	AvgRF
17		acetonitrile	0.0295	0.0302			2.3		-0.002	AvgRF
18		methylene chloride			10.000	10.61	6.1		0.002	linear
19		methyl acetate	0.0359	0.0391			9.0		-0.001	AvgRF
20		tert-butanol	0.0247	0.0258			4.3		0.004	AvgRF
21		methyl tertiary butyl ether	0.7699	0.7776			1.0		-0.002	AvgRF
22		hexane	0.2800	0.2541			-9.3		0.005	AvgRF
23		trans-1,2-dichloroethene	0.2866	0.2741			-4.4		-0.002	AvgRF
24		acrylonitrile	0.0910	0.0906			-0.4		-0.003	AvgRF
25		isopropyl ether	1.1543	1.1547			0.0		-0.001	AvgRF
26		vinyl acetate	0.6061	0.5768			-4.8		-0.002	AvgRF
27		1,1-dichloroethane	0.5748	0.5784			0.6		-0.002	AvgRF
28		chloroprene	0.5302	0.5279			-0.4		0.000	AvgRF
29		ethyl tert-butyl ether	0.9429	0.9418			-0.1		-0.003	AvgRF
30		2,2-dichloropropane	0.4426	0.3811			-13.9		0.000	AvgRF
31		cyclohexane	0.4015	0.3967			-1.2		0.001	AvgRF
32		2-butanone	0.0254	0.0265			4.0		0.000	AvgRF
33		cis-1,2-dichloroethene	0.3224	0.3187			-1.2		0.000	AvgRF
34		propionitrile	0.0316	0.0330			4.7		0.001	AvgRF
35		methyl acrylate							0.000	
36		methacrylonitrile	0.1699	0.1635			-3.8		0.004	AvgRF
37		bromochloromethane	0.1442	0.1406			-2.5		0.005	AvgRF
38		chloroform	0.5812	0.5693			-2.1		-0.003	AvgRF
39		1-chlorobutane							0.001	
41		1,1,1-trichloroethane	0.4777	0.4737			-0.8		0.000	AvgRF
42		pentafluorobenzene							0.000	
43		carbon tetrachloride	0.3546	0.3598			1.5		0.003	AvgRF
44		1,1-dichloropropene	0.4219	0.4110			-2.6		0.003	AvgRF
46		isobutyl alcohol	0.0118	0.0124			5.2		0.005	AvgRF
47		tert-amyl methyl ether	0.1731	0.1771			2.3		-0.002	AvgRF
48		benzene	1.2205	1.1952			-2.1		-0.004	AvgRF
49		1,2-dichloroethane	0.4394	0.4361			-0.7		-0.003	AvgRF
50		methyl cyclohexane	0.4354	0.4237			-2.7		-0.001	AvgRF
51		trichloroethene	0.3149	0.3108			-1.3		-0.004	AvgRF
52		n-butanol	0.0061	0.0065			7.3		0.005	AvgRF
53		1,2-dichloropropane	0.3399	0.3383			-0.5		-0.001	AvgRF
54		methyl methacrylate	0.1605	0.1723			7.3		0.000	AvgRF
55		1,4-dioxane	0.0022	0.0022			-0.2		0.000	AvgRF
56		dibromomethane	0.1811	0.1803			-0.5		0.001	AvgRF
57		bromodichloromethane	0.3943	0.4163			5.6		0.003	AvgRF
58		chloroacetonitrile							-0.002	
59		2-chloroethyl vinyl ether	0.1514	0.1571			3.7		-0.003	AvgRF
60		cis-1,3-dichloropropene	0.4835	0.4674			-3.3		-0.001	AvgRF
61	ISTD	chlorobenzene-d5						4.2	-0.002	AvgRF
63		toluene	1.0239	1.0226			-0.1		0.002	AvgRF
64		4-methyl-2-pentanone	0.0378	0.0436			15.3		0.000	AvgRF
65		ethyl methacrylate	0.4524	0.4892			8.1		-0.004	AvgRF
66		trans-1,3-dichloropropene	0.5877	0.6078			3.4		-0.005	AvgRF

Operator: twk-sop525r16

TW 8/29/13

ALS Environmental -- FC

Initial Calibration Verification

Lab Sample ID:	VL130823-4ICV	**Calibration ID:**	082313WM
Analysis Date:	8/23/2013	**Instrument ID:**	HPV4
File Name:	D43494	**Calibration Date:**	8/23/2013

		Analyte	AvgRF	CCRF	Expected Conc.	Found Conc.	%Dev. or % Drift	%Diff (Area)	RT Dev.	Curve Type
67		1,1,2-trichloroethane	0.3097	0.3174			2.5		-0.002	AvgRF
68		tetrachloroethene	0.3250	0.3395			4.5		-0.001	AvgRF
69		2-hexanone	0.1249	0.1329			6.4		0.000	AvgRF
70		1,3-dichloropropane	0.5990	0.6329			5.7		-0.001	AvgRF
71		dibromochloromethane	0.3504	0.3890			11.0		0.002	AvgRF
72		1,2-dibromoethane	0.3304	0.3400			2.9		0.003	AvgRF
73		1-chlorohexane	0.5323	0.5164			-3.0		-0.002	AvgRF
74		chlorobenzene	1.0988	1.1538			5.0		-0.001	AvgRF
75		ethylbenzene	1.8568	1.8489			-0.4		0.000	AvgRF
76		1,1,1,2-tetrachloroethane	0.3888	0.4025			3.5		0.000	AvgRF
77		m+p-xylene	0.6702	0.6968			4.0		0.001	AvgRF
78		o-xylene	0.6732	0.6979			3.7		-0.005	AvgRF
79		styrene	1.1248	1.2314			9.5		-0.005	AvgRF
80		bromoform	0.1935	0.2050			6.0		-0.003	AvgRF
81		isopropylbenzene	1.5458	1.6574			7.2		-0.001	AvgRF
83	ISTD	1,4-dichlorobenzene-d4						1.5	0.003	AvgRF
84		1,1,2,2-tetrachloroethane	0.8329	0.8898			6.8		0.002	AvgRF
85		trans-1,4-dichloro-2-butene	0.2279	0.2335			2.5		0.003	AvgRF
86		n-propylbenzene	4.2325	4.3333			2.4		0.003	AvgRF
87		1,2,3-trichloropropane	0.2386	0.2510			5.2		0.003	AvgRF
88		bromobenzene	0.9686	0.9907			2.3		0.003	AvgRF
89		1,3,5-trimethylbenzene	2.7609	2.8818			4.4		-0.005	AvgRF
90		2-chlorotoluene	0.8729	0.9043			3.6		0.004	AvgRF
91		4-chlorotoluene	0.8559	0.9010			5.3		-0.004	AvgRF
92		tert-butylbenzene	0.5255	0.5831			11.0		-0.002	AvgRF
93		1,2,4-trimethylbenzene	2.7592	2.8226			2.3		-0.001	AvgRF
94		sec-butylbenzene	3.3985	3.5396			4.2		0.001	AvgRF
95		p-isopropyltoluene	2.5879	2.6774			3.5		0.002	AvgRF
96		1,3-dichlorobenzene	1.6552	1.7119			3.4		0.002	AvgRF
97		1,4-dichlorobenzene	1.6609	1.6896			1.7		0.003	AvgRF
98		n-butylbenzene	2.4498	2.4704			0.8		-0.004	AvgRF
99		1,2-dichlorobenzene	1.5245	1.5834			3.9		-0.003	AvgRF
10		hexachloroethane	0.3500	0.3533			1.0		0.000	AvgRF
10		1,2-dibromo-3-chloropropane	0.1184	0.1233			4.1		0.004	AvgRF
10		1,2,4-trichlorobenzene	0.7858	0.8607			9.5		0.003	AvgRF
10		hexachlorobutadiene	0.3263	0.3353			2.8		0.004	AvgRF
10		naphthalene	1.6120	1.7660			9.5		-0.005	AvgRF
10		1,2,3-trichlorobenzene	0.6925	0.7305			5.5		-0.002	AvgRF

Operator: twk-sop525r16

8/26/13

ALS Environmental -- FC

Continuing Calibration Verification

Lab Sample ID: VL130907-4CCV	**Calibration ID:** 082313WM
Analysis Date: 9/7/2013	**Instrument ID:** HPV4
File Name: D44052	**Calibration Date:** 8/23/2013

	Analyte	AvgRF	CCRF	Expected Conc.	Found Conc.	%Dev. or % Drift	%Diff (Area)	RT Dev.	Curve Type
1) ISTD	fluorobenzene						3.9	0.001	AvgRF
2)	dichlorodifluoromethane	0.4920	0.4019			-18.3		-0.001	AvgRF
3)	chloromethane	0.6033	0.5297			-12.2		0.001	AvgRF
4)	vinyl chloride	0.5844	0.5094			-12.8		0.003	AvgRF
5)	bromomethane	0.2574	0.2309			-10.3		-0.002	AvgRF
6)	chloroethane	0.2338	0.2350			0.5		-0.001	AvgRF
7)	trichlorofluoromethane	0.5138	0.5063			-1.5		0.003	AvgRF
9)	ethanol	0.0027	0.0029			7.7		-0.004	AvgRF
11)	1,1,2-trichloro-1,2,2-trifluoroethane	0.2740	0.2811			2.6		0.002	AvgRF
12)	1,1-dichloroethene	0.2454	0.2645			7.8		0.002	AvgRF
13)	acetone			40.000	41.78	4.4		0.003	linear
14)	iodomethane			10.000	8.98	-10.2		0.005	quadratic
15)	carbon disulfide	0.8502	0.8896			4.6		-0.004	AvgRF
18)	methylene chloride			10.000	10.64	6.4		0.002	linear
20)	tert-butanol	0.0247	0.0265			7.4		0.004	AvgRF
21)	methyl tertiary butyl ether	0.7699	0.8165			6.0		-0.002	AvgRF
22)	hexane	0.2800	0.2736			-2.3		0.005	AvgRF
23)	trans-1,2-dichloroethene	0.2866	0.3048			6.4		-0.002	AvgRF
26)	vinyl acetate	0.6061	0.6290			3.8		-0.002	AvgRF
27)	1,1-dichloroethane	0.5748	0.6190			7.7		-0.002	AvgRF
30)	2,2-dichloropropane	0.4426	0.4936			11.5		0.000	AvgRF
31)	cyclohexane	0.4015	0.4033			0.4		0.001	AvgRF
32)	2-butanone	0.0254	0.0271			6.4		0.000	AvgRF
33)	cis-1,2-dichloroethene	0.3224	0.3511			8.9		0.000	AvgRF
37)	bromochloromethane	0.1442	0.1564			8.5		-0.005	AvgRF
38)	chloroform	0.5812	0.6385			9.8		-0.003	AvgRF
41)	1,1,1-trichloroethane	0.4777	0.5017			5.0		0.000	AvgRF
43)	carbon tetrachloride	0.3546	0.3886			9.6		0.002	AvgRF
44)	1,1-dichloropropene	0.4219	0.4642			10.0		0.003	AvgRF
46)	isobutyl alcohol	0.0118	0.0126			7.3		0.005	AvgRF
48)	benzene	1.2205	1.3098			7.3		-0.004	AvgRF
49)	1,2-dichloroethane	0.4394	0.4626			5.3		-0.003	AvgRF
50)	methyl cyclohexane	0.4354	0.3962			-9.0		-0.001	AvgRF
51)	trichloroethene	0.3149	0.3398			7.9		-0.004	AvgRF
52)	n-butanol	0.0061	0.0065			7.6		0.005	AvgRF
53)	1,2-dichloropropane	0.3399	0.3748			10.3		-0.001	AvgRF
55)	1,4-dioxane	0.0022	0.0023			3.7		0.000	AvgRF
56)	dibromomethane	0.1811	0.1943			7.3		0.001	AvgRF
57)	bromodichloromethane	0.3943	0.4295			8.9		0.003	AvgRF
60)	cis-1,3-dichloropropene	0.4835	0.5301			9.7		-0.002	AvgRF
61) ISTD	chlorobenzene-d5						1.9	-0.002	AvgRF
63)	toluene	1.0239	1.1195			9.3		0.002	AvgRF
64)	4-methyl-2-pentanone	0.0378	0.0442			16.9		0.000	AvgRF
66)	trans-1,3-dichloropropene	0.5877	0.6280			6.9		-0.005	AvgRF
67)	1,1,2-trichloroethane	0.3097	0.3390			9.5		-0.002	AvgRF
68)	tetrachloroethene	0.3250	0.3409			4.9		-0.002	AvgRF
69)	2-hexanone	0.1249	0.1353			8.3		0.000	AvgRF
70)	1,3-dichloropropane	0.5990	0.6484			8.2		-0.001	AvgRF
71)	dibromochloromethane	0.3504	0.3961			13.0		0.002	AvgRF
72)	1,2-dibromoethane	0.3304	0.3533			6.9		0.003	AvgRF
73)	1-chlorohexane	0.5323	0.5066			-4.8		-0.002	AvgRF
74)	chlorobenzene	1.0988	1.1968			8.9		-0.001	AvgRF
75)	ethylbenzene	1.8568	1.9719			6.2		0.000	AvgRF
76)	1,1,1,2-tetrachloroethane	0.3888	0.4340			11.6		0.000	AvgRF
77)	m+p-xylene	0.6702	0.7273			8.5		0.001	AvgRF
78)	o-xylene	0.6732	0.7560			12.3		-0.005	AvgRF
79)	styrene	1.1248	1.2502			11.1		-0.005	AvgRF
80)	bromoform	0.1935	0.2169			12.1		-0.003	AvgRF
81)	isopropylbenzene	1.5458	1.6035			3.7		-0.001	AvgRF
83) ISTD	1,4-dichlorobenzene-d4						2.3	0.003	AvgRF
84)	1,1,2,2-tetrachloroethane	0.8329	0.8820			5.9		0.002	AvgRF
86)	n-propylbenzene	4.2325	4.2116			-0.5		0.003	AvgRF
87)	1,2,3-trichloropropane	0.2386	0.2651			11.1		0.003	AvgRF
88)	bromobenzene	0.9686	1.0561			9.0		0.002	AvgRF

Operator: sdw-sop525r16

ALS Environmental -- FC

Continuing Calibration Verification

Lab Sample ID:	VL130907-4CCV	**Calibration ID:**	082313WM
Analysis Date:	9/7/2013	**Instrument ID:**	HPV4
File Name:	D44052	**Calibration Date:**	8/23/2013

	Analyte	AvgRF	CCRF	Expected Conc.	Found Conc.	%Dev. or % Drift	%Diff (Area)	RT Dev.	Curve Type
89)	1,3,5-trimethylbenzene	2.7609	2.8171			2.0		-0.005	AvgRF
90)	2-chlorotoluene	0.8729	0.9186			5.2		0.004	AvgRF
91)	4-chlorotoluene	0.8559	0.9342			9.2		-0.004	AvgRF
92)	tert-butylbenzene	0.5255	0.5376			2.3		-0.002	AvgRF
93)	1,2,4-trimethylbenzene	2.7592	2.8512			3.3		-0.001	AvgRF
94)	sec-butylbenzene	3.3985	3.2602			-4.1		0.001	AvgRF
95)	p-isopropyltoluene	2.5879	2.5046			-3.2		0.002	AvgRF
96)	1,3-dichlorobenzene	1.6552	1.7713			7.0		0.002	AvgRF
97)	1,4-dichlorobenzene	1.6609	1.7861			7.5		0.003	AvgRF
98)	n-butylbenzene	2.4498	2.3557			-3.8		-0.004	AvgRF
99)	1,2-dichlorobenzene	1.5245	1.6474			8.1		-0.003	AvgRF
10	1,2-dibromo-3-chloropropane	0.1184	0.1216			2.7		0.004	AvgRF
10	1,2,4-trichlorobenzene	0.7858	0.8128			3.4		0.003	AvgRF
10	hexachlorobutadiene	0.3263	0.3636			11.4		0.004	AvgRF
10	naphthalene	1.6120	1.6954			5.2		-0.005	AvgRF
10	1,2,3-trichlorobenzene	0.6925	0.7203			4.0		-0.002	AvgRF

Nickname Filters

8260_25
8260_25_Toluene
8260_25Full
8260_25Full_COGCCExtended

Operator: sdw-sop525r16

GW 9/10/13

8A

Volatile Internal Standard Area Summary

Lab Name: ALS Environmental -- FC
Work Order Number: 1308545
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: TBAL

Date Analyzed: 9/7/2013
Time Analyzed: 17:45
Reported on: Wednesday, September 11, 2013

Instrument ID: HPV4
Lab File ID: D44052

	IS1		IS2		IS3		IS4		IS5		IS6	
	Area	RT	Area	RT	Area	RT	Area	RT	Area	RT	Area	RT
12 Hour STD	649956	8.34	459351	11.37	217771	13.33						
Upper Limit	1299912	8.84	918702	11.9	435542	13.8						
Lower Limit	324978	7.84	229676	10.9	108886	12.8						
Lab Sample ID												
VL130907-4LCS	649956	8.34	459351	11.37	217771	13.33						
VL130907-4LCSD	675365	8.34	479850	11.37	230738	13.33						
VL130907-4MB	658150	8.34	455575	11.37	201358	13.33						
1308545-1	717699	8.34	485748	11.37	213330	13.33						
1308545-2	718530	8.34	500729	11.37	220553	13.33						
1308545-3	679001	8.34	463835	11.37	209158	13.33						
1308545-4	695367	8.34	477523	11.37	212877	13.33						
1308545-5	661214	8.34	467761	11.37	208651	13.33						

Shaded values exceed established area count limits.

LIMS Version: 6.658

Upper Limit = + 100 percent of internal standard area.

Lower Limit = - 50 percent of internal standard area.

Supporting Raw Data

GCMS Volatile Instrument Run Log - HPV4
ALS Laboratory Group - Fort Collins, CO

Sequence Name: C:\msdchem\1\sequence\082313.S
Comment: HPV4 - 8260 - 10mL un-heated purge : Serial Number US10451271
Data Path: C:\msdchem\1\DATA\2013\082313\
Operator:twk-sop525r16 Analysis Date: 08/23/13 TR
Istd\Surr ID's (5.0uL): ST130823-1 CAL Standard ID's: see comments
Logbook Number: 3096 purge time: 8 min. desorb time & temp.:0.5 min. @ 250 C

Vial	DataFile	Method	Sample Name	Dil.	Samp. Amt.	RA?	pH<2?	HS?	Comment
1	D43473	070113W	Blank	—	10mL	NO	NA	NA	
2	D43474	070113W	Blank						
3	D43475	070113W	10ppb						
4	D43476	082313W	MeOH Blank 50X						
5	D43477	082313W	0.5ppb Check						
100	D43478	BFB	BFB-TUNE1		1µL				ST130814-5 injection @ 12:46
6	D43479	082313W	Blank		10mL				
7	D43480	082313W	VOC_0.25ppb_ICAL						5µL ST130823-3 to 100mL
8	D43481	082313W	VOC_0.5ppb_ICAL						5µL 50mL
9	D43482	082313W	VOC_1ppb_ICAL						10µL
10	D43483	082313W	VOC_2ppb_ICAL						20µL
11	D43484	082313W	VOC_4ppb_ICAL						40µL ST130814-1,-11 & ST130823-2 to 100mL
12	D43485	082313W	VOC_10ppb_ICAL						5µL - to 50mL
13	D43486	082313W	Blank						NA
14	D43487	082313W	VOC_20ppb_ICAL						10µL -
15	D43488	082313W	Blank						NA
16	D43489	082313W	VOC_40ppb_ICAL						20µL -
17	D43490	082313W	Blank						NA
18	D43491	082313W	VOC_60ppb_ICAL						30µL -
19	D43492	082313W	Blank						
20	D43493	082313W	Blank						
21	D43494	082313W	VL130823-4ICV						5µL ST130626-4, ST130814-4 & ST130814-12 to 50mL
22	D43495	082313W	VL130823-4LCS						10µL ST130814-1,-11 & ST130823-2 to 100mL
23	D43496	082313W	VL130823-4LCSD						
24	D43497	082313W	VL130823-4MB						DCME 0.37ppb - all other samples
25	D43498	082313W	1308315-1 40X	40	1.25mL to 50mL		pH~7	HS>pca	
26	D43499	082313W	1308315-2 40X				YES	HS>pca	
27	D43500	082313W	1308315-3 40X			YES	↓ pH~8	HS<pca	Benzene & Toluene (E)
28	D43501	082313W	1308315-4 40X			NO	NO YES	HS<pca	
29	D43502	082313W	1308315-5 40X				pH~3	HS>pca	
30	D43503	082313W	1308315-6 40X				YES	HS>pca	
31	D43504	082313W	1308401-1 4X	4	12.5mL			NO	
32	D43505	082313W	1308401-3 4X						
33	D43506	082313W	1308401-5 4X						
34	D43507	082313W	1308401-6	—					
35	D43508	082313W	1308401-2 100X	100	0.5mL to 50mL	YES			RR for low RL's
36	D43509	082313W	1308401-4 100X	100	0.5mL to 50mL	YES			desorb @ 00:43

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GCMS Volatile Instrument Run Log - HPV4
ALS Laboratory Group - Fort Collins, CO

BFB - ST130814-5

A - ST130814-1 ⊥ -11 ST130829-2

B - ST130829-3

Sequence Name: C:\msdchem\1\sequence\090713.S
Comment: HPV4 - 8260 - 10mL UN-htd purge : Serial Number US10451271
Data Path: C:\msdchem\1\DATA\2013\090713\
Operator: sdw-sop525r16 Analysis Date: 9-7-13 sdw
Istd\Surr ID's (5.0uL): ST130823-1 CAL Standard ID's:
Logbook Number: 3096 purge time: 8.0 min. desorb time & temp.: 0.5 min. @ 250 C

Vial	DataFile	Method	Sample Name	Dil.	Samp. Amt.	RA?	pH<2?	HS?	Comment
1	D44048	082313W	Prime	1X	10mls	NO	NA	NA	
2	D44049	082313W	Blank		1µL				BFB injected @ 1708
100	D44050	BFB	BFB-TUNE-1		10mls				10µL to 50mls B (1ng) 100mls A (10ng)
4	D44051	082313W	VL130907-4RVS						All<RL
5	D44052	082313W	VL130907-4CCS						sdw 9-10-13 Meoh Ext. Meoh Extracts
6	D44053	082313W	VL130907-4LCSD						* Targets > ICAL
7	D44054	082313W	VL130907-4MB						Cleanup
8	D44055	082313W	VL130907-4MMB	50X	1ml to 50mls fv				All<RL
9	D44056	082313W	1308526-4 500X	500X	0.1ml				
10	D44057	082313W	1308526-4 50X	50X	1ml				
11	D44058	082313W	Blank	1X	10mls				
12	D44059	082313W	Blank						
13	D44060	082313W	1308545-1				YES	NONE	
14	D44061	082313W	1308545-2						
15	D44062	082313W	1308545-3						
16	D44063	082313W	1308545-4						
17	D44064	082313W	1308545-5						
18	D44065	082313W	1309076-1						
19	D44066	082313W	1309077-1						
20	D44067	082313W	1309078-1						
21	D44068	082313W	1309079-1						
22	D44069	082313W	1309080-1						
23	D44070	082313W	1309081-1						
24	D44071	082313W	Blank				NA	NA	All<RL
25	D44072	082313W	Blank						
26	D44073	082313W	1309054-1 50X	50X	1ml to 50mls fv	YES			Toluene > ICAL Meoh Extracts
27	D44074	082313W	1309054-2 50X						
28	D44075	082313W	1309054-3 50X						
29	D44076	082313W	1309054-4 50X						
30	D44077	082313W	1309054-5 50X			NO			
31	D44078	082313W	Blank	1X	10mls				Cleanup
32	D44079	082313W	Blank						
33	D44080	082313W	Blank						
34	D44081	082313W	Blank						Reanl @ 050
35	D44082	082313W	Blank						
36	D44083	082313W	Blank						
37	D44084	082313W	Blank						

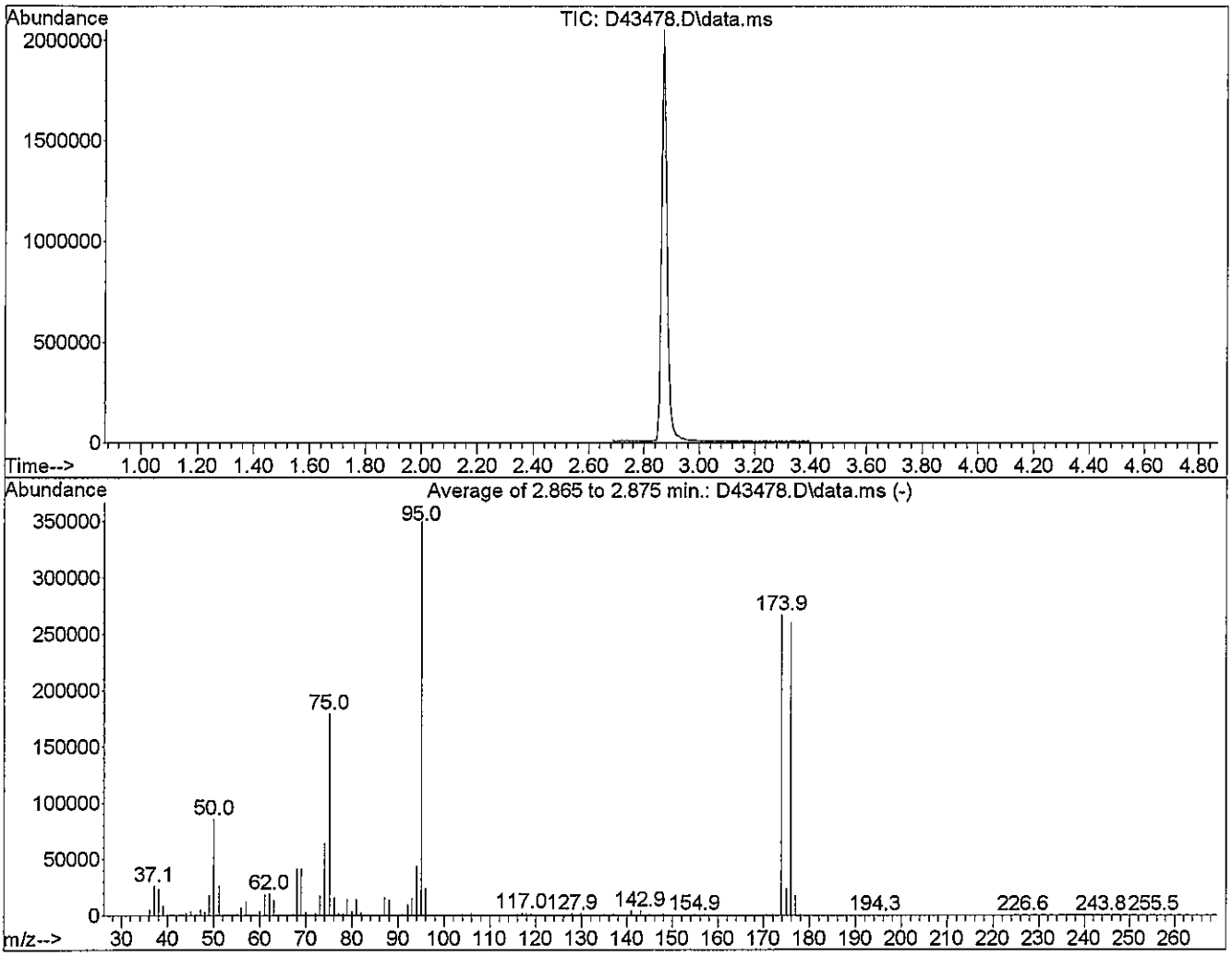
* = Toluene dB high - ok in more dilute sample. MATRIX

Calibration Raw Data

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43478.D
Acq On : 23 Aug 2013 12:46
Operator : twk-sop525r16
Sample : BFB-TUNE1
Misc : 50ng 4-BFB (1uL direct injection)
ALS Vial : 100 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\082313W.M
Title :
Last Update : Thu Aug 29 13:20:38 2013



AutoFind: Scans 35, 36, 37; Background Corrected with Scan 26

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.5	85784	PASS
75	95	30	60	51.3	179562	PASS
95	95	100	100	100.0	350099	PASS
96	95	5	9	6.8	23768	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	76.3	267242	PASS
175	174	5	9	8.8	23507	PASS
176	174	95	101	97.3	259946	PASS
177	176	5	9	6.7	17527	PASS

Tue 8/29/13

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43480.D
Acq On : 23 Aug 2013 13:20
Operator : twk-sop525r16
Sample : VOC_0.25ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 23 17:16:17 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 17:09:01 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	8.341	96	637335	25.00	ppb	0.00
61) Chlorobenzene-d5	11.368	117	435013	25.00	ppb	0.00
82) 1,4-Dichlorobenzene-d4	13.333	152	189802	25.00	ppb	0.00
System Monitoring Compounds						
38) Dibromofluoromethane	7.490	113	171507	24.80	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 99.20%			
42) 1,2-Dichloroethane-d4	7.936	67	103901	24.09	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 96.36%			
65) Toluene-d8	10.032	98	644583	25.45	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 101.80%			
83) 4-Bromofluorobenzene	12.381	176	160855	26.20	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 104.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	d	
3) Chloromethane	0.000		0	N.D.	d	
4) Vinyl chloride	0.000		0	N.D.	d	
5) Bromomethane	0.000		0	N.D.	d	
6) Chloroethane	0.000		0	N.D.	d	
7) Ethanol	0.000		0	N.D.	d	
8) Acrolein	0.000		0	N.D.	d	
9) Acetonitrile	0.000		0	N.D.	d	
10) Trichlorofluoromethane	0.000		0	N.D.	d	
11) Acetone	0.000		0	N.D.	d	
12) Diethyl Ether	0.000		0	N.D.	d	
13) tert-Butanol	0.000		0	N.D.	d	
14) 1,1-Dichloroethene	0.000		0	N.D.	d	
15) Acrylonitrile	0.000		0	N.D.	d	
16) Iodomethane	0.000		0	N.D.	d	
17) Methylene Chloride	0.000		0	N.D.	d	
18) Methyl acetate	0.000		0	N.D.		
19) Allyl chloride	0.000		0	N.D.	d	
20) 1,1,2-Trichloro-1,2,2-...	0.000		0	N.D.	d	
21) Carbon disulfide	0.000		0	N.D.	d	
22) trans-1,2-Dichloroethene	0.000		0	N.D.	d	
23) Methyl-t-butyl ether	4.918	73	10547	0.55	ppb	87
24) Hexane	0.000		0	N.D.	d	
25) 1,1-Dichloroethane	0.000		0	N.D.	d	
26) Propionitrile	0.000		0	N.D.	d	
27) Vinyl acetate	0.000		0	N.D.	d	
28) Chloroprene	0.000		0	N.D.	d	
29) 2-Butanone	0.000		0	N.D.	d	
30) Isopropyl ether	0.000		0	N.D.	d	
31) Methacrylonitrile	0.000		0	N.D.	d	
32) cis-1,2-Dichloroethene	0.000		0	N.D.	d	
33) Methyl Acrylate	0.000		0	N.D.		
34) Bromochloromethane	0.000		0	N.D.	d	
35) Chloroform	0.000		0	N.D.	d	
36) 2,2-Dichloropropane	0.000		0	N.D.	d	
37) Ethyl tert-butyl ether	0.000		0	N.D.	d	

8/29/13

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43480.D
Acq On : 23 Aug 2013 13:20
Operator : twk-sop525r16
Sample : VOC_0.25ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 23 17:16:17 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 17:09:01 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) Pentafluorobenzene	0.000		0	N.D.	
40) 1-Chlorobutane	0.000		0	N.D. d	
41) Isobutyl Alcohol	0.000		0	N.D. d	
43) 1,2-Dichloroethane	0.000		0	N.D. d	
44) 1,1,1-Trichloroethane	0.000		0	N.D. d	
45) 1,1-Dichloropropene	0.000		0	N.D. d	
46) n-Butanol	0.000		0	N.D. d	
47) Cyclohexane	7.571	84	5565	0.56 ppb	97
48) Carbon tetrachloride	0.000		0	N.D. d	
49) Benzene	0.000		0	N.D. d	
50) Tert-amyl methyl ether	0.000		0	N.D. d	
51) Dibromomethane	0.000		0	N.D. d	
52) 1,2-Dichloropropane	0.000		0	N.D. d	
53) Trichloroethene	0.000		0	N.D. d	
54) Bromodichloromethane	0.000		0	N.D. d	
55) 1,4-Dioxane	0.000		0	N.D. d	
56) Methyl methacrylate	0.000		0	N.D. d	
57) Methyl cyclohexane	0.000		0	N.D. d	
58) Chloroacetonitrile	0.000		0	N.D. d	
59) 2-Chloroethyl vinyl ether	0.000		0	N.D. d	
60) cis-1,3-Dichloropropene	0.000		0	N.D. d	
62) 4-Methyl-2-pentanone	0.000		0	N.D. d	
63) trans-1,3-Dichloropropene	0.000		0	N.D. d	
64) 1,1,2-Trichloroethane	0.000		0	N.D. d	
66) Toluene	0.000		0	N.D. d	
67) 1,3-Dichloropropane	0.000		0	N.D. d	
68) Ethyl methacrylate	0.000		0	N.D. d	
69) 2-Hexanone	0.000		0	N.D. d	
70) Dibromochloromethane	0.000		0	N.D. d	
71) 1,2-Dibromoethane	0.000		0	N.D. d	
72) Tetrachloroethene	10.578	164	1570	0.29 ppb	80
73) 1,1,1,2-Tetrachloroethane	0.000		0	N.D. d	
74) Chlorobenzene	0.000		0	N.D. d	
75) 1-Chlorohexane	0.000		0	N.D. d	
76) Ethylbenzene	0.000		0	N.D. d	
77) m+p-Xylene	11.581	106	5234	0.46 ppb	82
78) Bromoform	0.000		0	N.D. d	
79) Styrene	0.000		0	N.D. d	
80) o-Xylene	0.000		0	N.D. d	
81) Isopropylbenzene	0.000		0	N.D. d	
84) 1,1,2,2-Tetrachloroethane	0.000		0	N.D. d	
85) trans-1,4-Dichloro-2-b...	0.000		0	N.D. d	
86) Bromobenzene	0.000		0	N.D. d	
87) 1,2,3-Trichloropropane	0.000		0	N.D. d	
88) n-Propylbenzene	0.000		0	N.D. d	
89) 2-Chlorotoluene	0.000		0	N.D. d	
90) 4-Chlorotoluene	0.000		0	N.D. d	
91) 1,3,5-Trimethylbenzene	0.000		0	N.D. d	
92) tert-Butylbenzene	0.000		0	N.D. d	
93) 1,2,4-Trimethylbenzene	0.000		0	N.D. d	
94) sec-Butylbenzene	0.000		0	N.D. d	
95) 1,3-Dichlorobenzene	0.000		0	N.D. d	

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43480.D
Acq On : 23 Aug 2013 13:20
Operator : twk-sop525r16
Sample : VOC_0.25ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 7 Sample Multiplier: 1

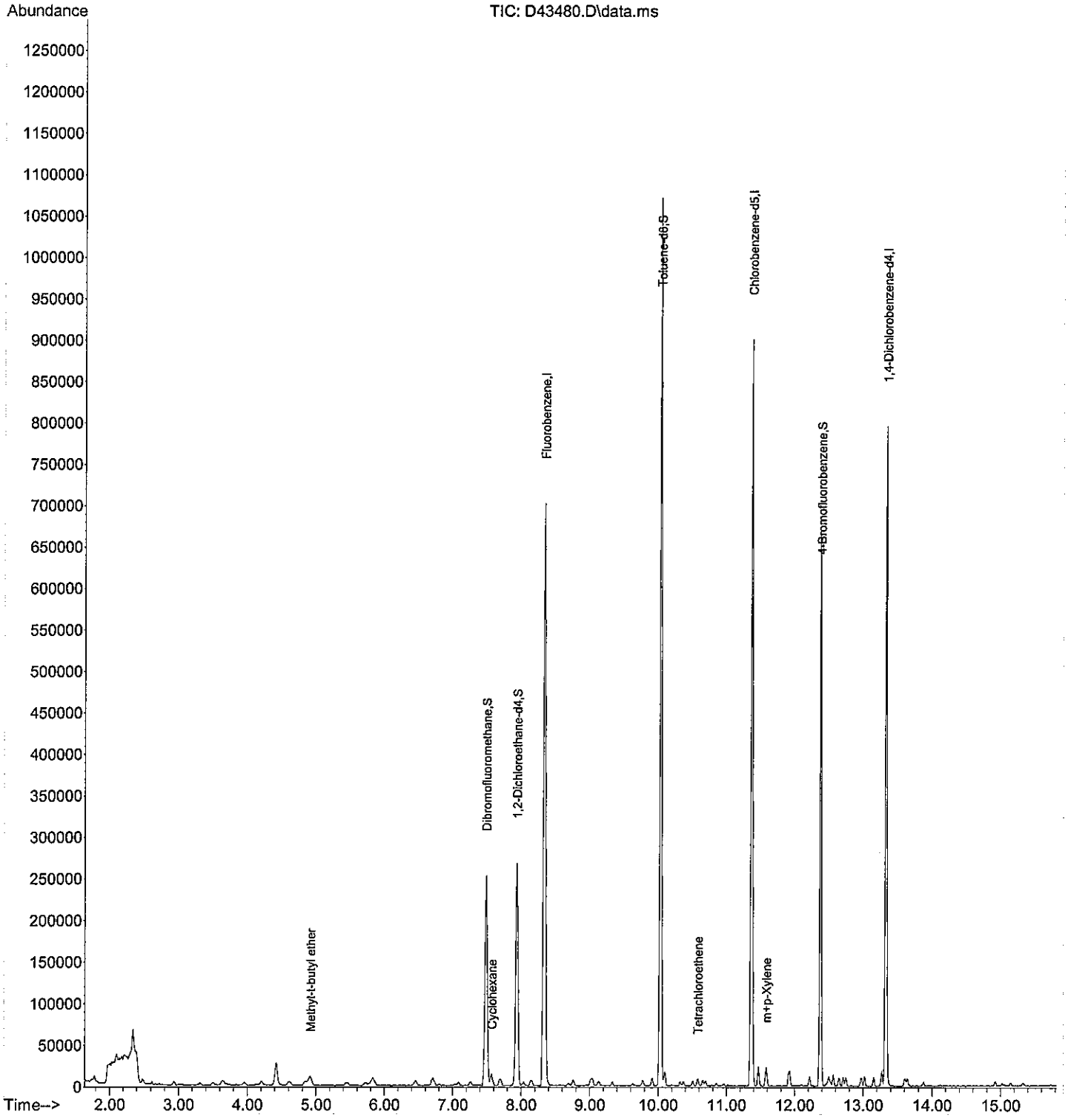
Quant Time: Aug 23 17:16:17 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 17:09:01 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
96) 1,4-Dichlorobenzene	0.000		0	N.D.	d	
97) p-Isopropyltoluene	0.000		0	N.D.	d	
98) 1,2-Dichlorobenzene	0.000		0	N.D.	d	
99) n-Butylbenzene	0.000		0	N.D.	d	
100) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	d	
101) Hexachloroethane	0.000		0	N.D.	d	
102) 1,2,4-Trichlorobenzene	0.000		0	N.D.	d	
103) Naphthalene	0.000		0	N.D.	d	
104) Hexachlorobutadiene	0.000		0	N.D.	d	
105) 1,2,3-Trichlorobenzene	0.000		0	N.D.	d	

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

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43480.D
Acq On : 23 Aug 2013 13:20
Operator : twk-sop525r16
Sample : VOC_0.25ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 23 17:16:17 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 17:09:01 2013
Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43481.D
Acq On : 23 Aug 2013 13:44
Operator : twk-sop525r16
Sample : VOC_0.5ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 23 16:56:41 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:56:31 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	8.341	96	634452	25.00	ppb		0.00
61) Chlorobenzene-d5	11.368	117	437900	25.00	ppb		0.00
82) 1,4-Dichlorobenzene-d4	13.333	152	187544	25.00	ppb		0.00
System Monitoring Compounds							
38) Dibromofluoromethane	7.490	113	170596	24.78	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 99.12%				
42) 1,2-Dichloroethane-d4	7.936	67	108369	25.24	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 100.96%				
65) Toluene-d8	10.032	98	641927	25.18	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 100.72%				
83) 4-Bromofluorobenzene	12.381	176	158624	26.15	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 104.60%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.779	85	6754	0.54	ppb		95
3) Chloromethane	1.971	50	9303	0.60	ppb	#	98
4) Vinyl chloride	2.103	62	8342	0.56	ppb		85
5) Bromomethane	2.488	96	4191	0.64	ppb		88
6) Chloroethane	2.619	64	3478	0.60	ppb	#	90
7) Ethanol	3.308	45	2623	10.60	ppb	#	87
8) Acrolein	3.500	56	5075	4.57	ppb		93
9) Acetonitrile	4.138	41	3815	5.15	ppb	#	79
10) Trichlorofluoromethane	2.933	101	6868	0.53	ppb		78
11) Acetone	3.703	58	1514	2.59	ppb		94
12) Diethyl Ether	3.318	74	2030	0.52	ppb		81
13) tert-Butanol	4.604	59	15286	24.19	ppb	#	89
14) 1,1-Dichloroethene	3.642	96	3313	0.54	ppb	#	83
15) Acrylonitrile	4.827	53	11074	4.77	ppb		97
16) Iodomethane	3.855	142	2033	0.34	ppb	#	85
17) Methylene Chloride	4.422	84	18404	1.33	ppb		88
18) Methyl acetate	4.209	74	129	0.15	ppb	#	1
19) Allyl chloride	4.209	76	2411	0.61	ppb	#	27
20) 1,1,2-Trichloro-1,2,2-...	3.662	101	3685	0.54	ppb		92
21) Carbon disulfide	3.956	76	11289	0.53	ppb	#	84
22) trans-1,2-Dichloroethene	4.918	96	3871	0.55	ppb		94
23) Methyl-t-butyl ether	4.908	73	20135	1.06	ppb		96
24) Hexane	5.465	57	4107	0.59	ppb	#	76
25) 1,1-Dichloroethane	5.728	63	7637	0.53	ppb	#	85
26) Propionitrile	6.801	54	3986	4.96	ppb	#	95
27) Vinyl acetate	5.769	43	6547	0.42	ppb	#	90
28) Chloroprene	5.860	53	7019	0.53	ppb		92
29) 2-Butanone	6.700	72	1185	1.83	ppb	#	31
30) Isopropyl ether	5.829	45	15516	0.54	ppb		89
31) Methacrylonitrile	7.044	41	2788	0.68	ppb	#	82
32) cis-1,2-Dichloroethene	6.710	96	4165	0.52	ppb		87
33) Methyl Acrylate	0.000		0	N.D.			
34) Bromochloromethane	7.095	128	1939	0.54	ppb	#	62
35) Chloroform	7.257	83	7687	0.52	ppb		95
36) 2,2-Dichloropropane	6.710	77	6592	0.60	ppb		92
37) Ethyl tert-butyl ether	6.457	59	12344	0.52	ppb		97

8/24/13

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43481.D
Acq On : 23 Aug 2013 13:44
Operator : twk-sop525r16
Sample : VOC_0.5ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 23 16:56:41 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:56:31 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
39)	Pentafluorobenzene	0.000		0	N.D.			
40)	1-Chlorobutane	7.561	56	13269	0.51	ppb		94
41)	Isobutyl Alcohol	7.885	43	3132	10.48	ppb	#	82
43)	1,2-Dichloroethane	8.037	62	6569	0.61	ppb		86
44)	1,1,1-Trichloroethane	7.470	97	6527	0.56	ppb		81
45)	1,1-Dichloropropene	7.703	75	5281	0.50	ppb	#	88
46)	n-Butanol	8.685	56	3895	25.25	ppb		80
47)	Cyclohexane	7.571	84	10281	1.04	ppb		90
48)	Carbon tetrachloride	7.693	117	3907	0.45	ppb	#	68
49)	Benzene	7.956	78	16195	0.53	ppb	#	89
50)	Tert-amyl methyl ether	8.148	87	2520	0.60	ppb		95
51)	Dibromomethane	9.141	93	2269	0.50	ppb		93
52)	1,2-Dichloropropane	9.039	63	4247	0.49	ppb	#	85
53)	Trichloroethene	8.756	95	4192	0.54	ppb		94
54)	Bromodichloromethane	9.333	83	4475	0.45	ppb	#	97
55)	1,4-Dioxane	9.130	88	515	8.78	ppb	#	50
56)	Methyl methacrylate	9.120	69	2185	0.55	ppb		80
57)	Methyl cyclohexane	9.019	83	6163	0.58	ppb		92
58)	Chloroacetonitrile	9.768	48	197	12.08	ppb	#	1
59)	2-Chloroethyl vinyl ether	9.627	63	1802	0.48	ppb		96
60)	cis-1,3-Dichloropropene	9.779	75	6525	0.55	ppb	#	92
62)	4-Methyl-2-pentanone	9.910	100	1205	1.84	ppb	#	74
63)	trans-1,3-Dichloropropene	10.325	75	4967	0.49	ppb	#	92
64)	1,1,2-Trichloroethane	10.508	83	2798	0.51	ppb		91
66)	Toluene	10.103	92	9188	0.51	ppb		99
67)	1,3-Dichloropropane	10.649	76	5515	0.53	ppb		88
68)	Ethyl methacrylate	10.376	69	3765	0.48	ppb	#	94
69)	2-Hexanone	10.690	58	4480	2.05	ppb		95
70)	Dibromochloromethane	10.852	129	2818	0.48	ppb	#	67
71)	1,2-Dibromoethane	10.963	107	2712	0.46	ppb	#	96
72)	Tetrachloroethene	10.579	164	2901	0.53	ppb	#	82
73)	1,1,1,2-Tetrachloroethane	11.470	131	3202	0.48	ppb		97
74)	Chlorobenzene	11.389	112	10121	0.53	ppb	#	87
75)	1-Chlorohexane	11.368	91	5482	0.60	ppb	#	21
76)	Ethylbenzene	11.470	91	15773	0.49	ppb		95
77)	m+p-Xylene	11.581	106	12376	1.08	ppb		71
78)	Bromoform	12.097	173	1198	0.37	ppb	#	87
79)	Styrene	11.925	104	9096	0.47	ppb		92
80)	o-Xylene	11.915	106	5620	0.49	ppb		97
81)	Isopropylbenzene	12.219	105	12569	0.47	ppb		100
84)	1,1,2,2-Tetrachloroethane	12.472	83	3457	0.55	ppb		87
85)	trans-1,4-Dichloro-2-b...	12.503	53	985	0.57	ppb	#	56
86)	Bromobenzene	12.503	156	3723	0.51	ppb		86
87)	1,2,3-Trichloropropane	12.523	110	992	0.54	ppb		87
88)	n-Propylbenzene	12.563	91	17641	0.57	ppb		96
89)	2-Chlorotoluene	12.654	126	3634	0.56	ppb		95
90)	4-Chlorotoluene	12.756	126	3203	0.50	ppb		71
91)	1,3,5-Trimethylbenzene	12.715	105	10562	0.51	ppb		96
92)	tert-Butylbenzene	12.978	134	1818	0.47	ppb	#	12
93)	1,2,4-Trimethylbenzene	13.019	105	11017	0.54	ppb		99
94)	sec-Butylbenzene	13.151	105	13391	0.53	ppb		100
95)	1,3-Dichlorobenzene	13.272	146	6557	0.54	ppb		93

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43481.D
Acq On : 23 Aug 2013 13:44
Operator : twk-sop525r16
Sample : VOC_0.5ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 8 Sample Multiplier: 1

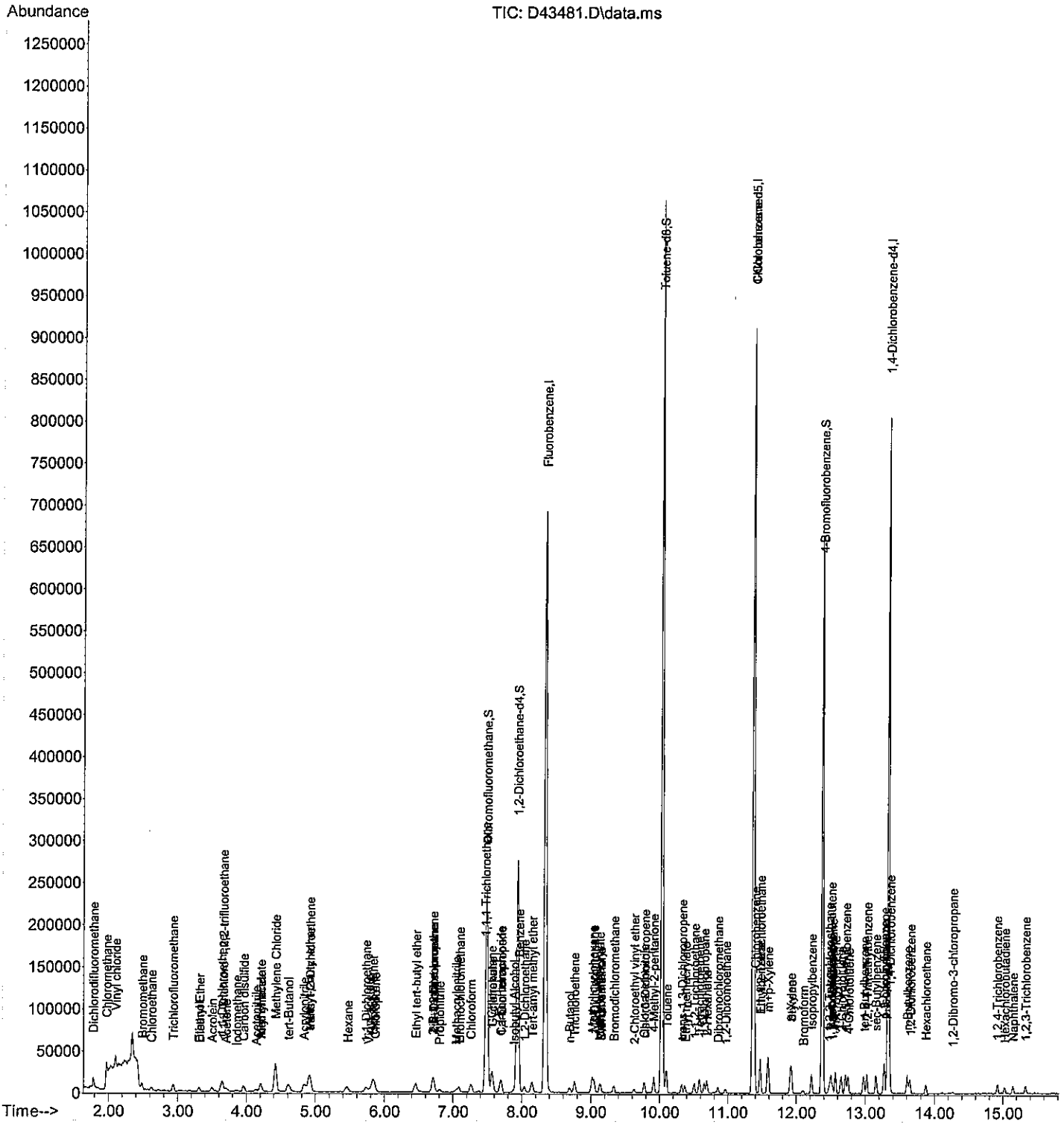
Quant Time: Aug 23 16:56:41 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:56:31 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
96)	1,4-Dichlorobenzene	13.353	146	6760	0.55	ppb	#	77
97)	p-Isopropyltoluene	13.272	119	9345	0.49	ppb		92
98)	1,2-Dichlorobenzene	13.647	146	5856	0.52	ppb		95
99)	n-Butylbenzene	13.606	91	9658	0.53	ppb		95
100)	1,2-Dibromo-3-chloropr...	14.264	75	610	0.68	ppb	#	62
101)	Hexachloroethane	13.870	201	1148	0.45	ppb	#	70
102)	1,2,4-Trichlorobenzene	14.913	180	2723	0.45	ppb	#	85
103)	Naphthalene	15.145	128	5885	0.48	ppb	#	89
104)	Hexachlorobutadiene	15.024	225	1153	0.47	ppb	#	72
105)	1,2,3-Trichlorobenzene	15.328	180	2612	0.50	ppb	#	89

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

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43481.D
Acq On : 23 Aug 2013 13:44
Operator : twk-sop525r16
Sample : VOC_0.5ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 23 16:56:41 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:56:31 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43482.D
Acq On : 23 Aug 2013 14:07
Operator : twk-sop525r16
Sample : VOC_1ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 29 13:06:53 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:56:17 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	8.341	96	626742	25.00	ppb		0.00
61) Chlorobenzene-d5	11.368	117	422375	25.00	ppb		0.00
82) 1,4-Dichlorobenzene-d4	13.333	152	184425	25.00	ppb		0.00
System Monitoring Compounds							
38) Dibromofluoromethane	7.490	113	169057	24.82	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 99.28%				
42) 1,2-Dichloroethane-d4	7.935	67	104921	24.67	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 98.68%				
65) Toluene-d8	10.032	98	629557	25.76	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 103.04%				
83) 4-Bromofluorobenzene	12.381	176	157557	26.79	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 107.16%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.779	85	12981	1.06	ppb		95
3) Chloromethane	1.971	50	17822	1.22	ppb	#	92
4) Vinyl chloride	2.103	62	15582	1.07	ppb		97
5) Bromomethane	2.488	96	7456	1.19	ppb		83
6) Chloroethane	2.619	64	5863	1.02	ppb	#	88
7) Ethanol	3.156	45	1348m	5.57	ppb		
8) Acrolein	3.500	56	10802	9.80	ppb		93
9) Acetonitrile	4.128	41	6769	9.08	ppb	#	84
10) Trichlorofluoromethane	2.943	101	14029	1.11	ppb		99
11) Acetone	3.703	58	2998	5.61	ppb		100
12) Diethyl Ether	3.308	74	4192	1.12	ppb		89
13) tert-Butanol	4.604	59	29871	47.35	ppb	#	89
14) 1,1-Dichloroethene	3.642	96	6074	1.01	ppb		86
15) Acrylonitrile	4.837	53	23361	10.23	ppb		94
16) Iodomethane	3.844	142	3486	0.53	ppb		92
17) Methylene Chloride	4.422	84	23337	2.08	ppb		92
18) Methyl acetate	4.209	74	926	1.08	ppb		57
19) Allyl chloride	4.209	76	3996	1.03	ppb	#	78
20) 1,1,2-Trichloro-1,2,2-...	3.662	101	7532	1.14	ppb		85
21) Carbon disulfide	3.956	76	21005	1.01	ppb		98
22) trans-1,2-Dichloroethene	4.918	96	7183	1.03	ppb		94
23) Methyl-t-butyl ether	4.908	73	37696	2.02	ppb		99
24) Hexane	5.455	57	7524	1.12	ppb		90
25) 1,1-Dichloroethane	5.728	63	14864	1.06	ppb	#	94
26) Propionitrile	6.801	54	7713	9.66	ppb	#	93
27) Vinyl acetate	5.768	43	15757	1.04	ppb		96
28) Chloroprene	5.849	53	13538	1.05	ppb		95
29) 2-Butanone	6.710	72	2539	3.96	ppb	#	89
30) Isopropyl ether	5.819	45	28712	1.01	ppb		98
31) Methacrylonitrile	7.044	41	4167	1.03	ppb		91
32) cis-1,2-Dichloroethene	6.710	96	8144	1.03	ppb		88
33) Methyl Acrylate	0.000		0	N.D.			
34) Bromochloromethane	7.095	128	3797	1.08	ppb		80
35) Chloroform	7.267	83	14950	1.04	ppb		96
36) 2,2-Dichloropropane	6.700	77	11638	1.08	ppb		89
37) Ethyl tert-butyl ether	6.457	59	25234	1.10	ppb		92
39) Pentafluorobenzene	0.000		0	N.D.			
40) 1-Chlorobutane	7.571	56	26124	1.01	ppb		94
41) Isobutyl Alcohol	7.885	43	5545	18.49	ppb	#	82

Tr 8/29/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43482.D
Acq On : 23 Aug 2013 14:07
Operator : twk-sop525r16
Sample : VOC_1ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 29 13:06:53 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:56:17 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	1,2-Dichloroethane	8.037	62	10679	1.00	ppb		98
44)	1,1,1-Trichloroethane	7.480	97	11454	0.98	ppb		91
45)	1,1-Dichloropropene	7.703	75	10937	1.06	ppb		97
46)	n-Butanol	8.685	56	7158	46.27	ppb		81
47)	Cyclohexane	7.571	84	19932	2.05	ppb		96
48)	Carbon tetrachloride	7.692	117	8337	0.96	ppb		93
49)	Benzene	7.956	78	33152	1.12	ppb		95
50)	Tert-amyl methyl ether	8.148	87	3994	0.95	ppb	#	89
51)	Dibromomethane	9.140	93	4719	1.06	ppb		97
52)	1,2-Dichloropropane	9.049	63	8698	1.03	ppb	#	92
53)	Trichloroethene	8.756	95	7805	1.01	ppb		96
54)	Bromodichloromethane	9.333	83	10031	1.03	ppb		89
55)	1,4-Dioxane	9.130	88	1087	18.46	ppb	#	78
56)	Methyl methacrylate	9.120	69	4128	1.08	ppb		90
57)	Methyl cyclohexane	9.019	83	11376	1.10	ppb		96
58)	Chloroacetonitrile	9.768	48	404	40.27	ppb	#	1
59)	2-Chloroethyl vinyl ether	9.627	63	3431	0.91	ppb		92
60)	cis-1,3-Dichloropropene	9.778	75	11999	1.03	ppb		91
62)	4-Methyl-2-pentanone	9.920	100	2346	3.64	ppb		54
63)	trans-1,3-Dichloropropene	10.325	75	10168	1.04	ppb		88
64)	1,1,2-Trichloroethane	10.508	83	5480	1.06	ppb		95
66)	Toluene	10.092	92	18443	1.09	ppb		100
67)	1,3-Dichloropropane	10.649	76	10520	1.06	ppb		91
68)	Ethyl methacrylate	10.366	69	7744	1.02	ppb	#	95
69)	2-Hexanone	10.690	58	8854	4.25	ppb		85
70)	Dibromochloromethane	10.852	129	4966	0.85	ppb	#	54
71)	1,2-Dibromoethane	10.963	107	6247	1.14	ppb	#	98
72)	Tetrachloroethene	10.578	164	5480	1.04	ppb		91
73)	1,1,1,2-Tetrachloroethane	11.470	131	6500	1.01	ppb		89
74)	Chlorobenzene	11.389	112	18726	1.03	ppb		97
75)	1-Chlorohexane	11.368	91	9421	1.09	ppb	#	52
76)	Ethylbenzene	11.470	91	31816	1.03	ppb		96
77)	m+p-Xylene	11.581	106	21996	1.98	ppb		94
78)	Bromoform	12.097	173	3137	1.00	ppb	#	91
79)	Styrene	11.925	104	17344	0.91	ppb		96
80)	o-Xylene	11.915	106	10824	0.97	ppb		91
81)	Isopropylbenzene	12.219	105	24959	0.96	ppb		98
84)	1,1,2,2-Tetrachloroethane	12.472	83	6384	1.03	ppb	#	88
85)	trans-1,4-Dichloro-2-b...	12.502	53	1903	1.17	ppb	#	74
86)	Bromobenzene	12.502	156	7825	1.11	ppb		90
87)	1,2,3-Trichloropropane	12.523	110	1863	1.05	ppb	#	90
88)	n-Propylbenzene	12.563	91	32376	1.07	ppb		93
89)	2-Chlorotoluene	12.654	126	6950	1.12	ppb		94
90)	4-Chlorotoluene	12.745	126	6440	1.03	ppb		88
91)	1,3,5-Trimethylbenzene	12.715	105	20468	1.02	ppb		95
92)	tert-Butylbenzene	12.978	134	3829	1.00	ppb		73
93)	1,2,4-Trimethylbenzene	13.019	105	21487	1.09	ppb		96
94)	sec-Butylbenzene	13.150	105	25957	1.07	ppb		93
95)	1,3-Dichlorobenzene	13.272	146	12433	1.05	ppb		96
96)	1,4-Dichlorobenzene	13.353	146	13014	1.09	ppb		92
97)	p-Isopropyltoluene	13.272	119	18898	1.01	ppb		96
98)	1,2-Dichlorobenzene	13.647	146	11042	0.99	ppb	#	88
99)	n-Butylbenzene	13.606	91	19133	1.09	ppb		90
100)	1,2-Dibromo-3-chloropr...	14.264	75	764	0.83	ppb	#	79
101)	Hexachloroethane	13.880	201	2676	1.09	ppb		93

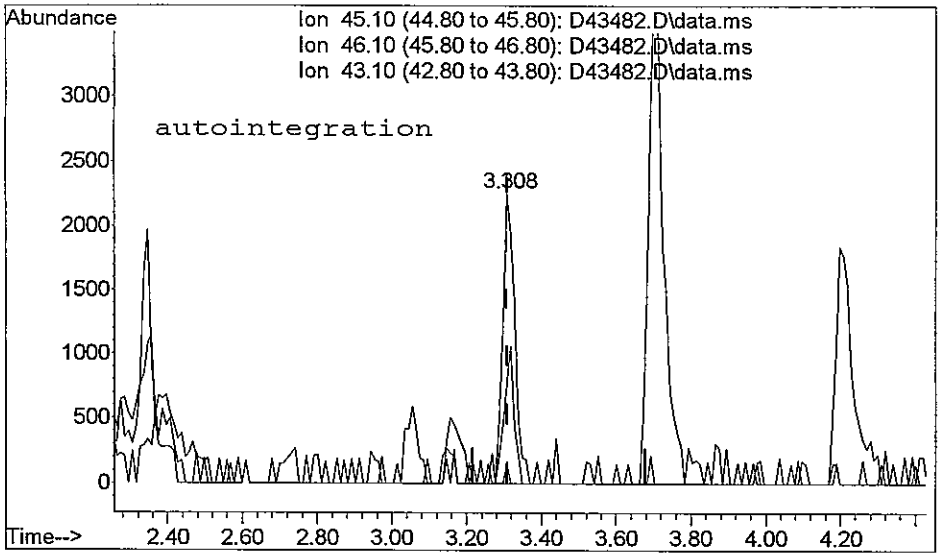
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43482.D
Acq On : 23 Aug 2013 14:07
Operator : twk-sop525r16
Sample : VOC_1ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 29 13:06:53 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:56:17 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
102) 1,2,4-Trichlorobenzene	14.923	180	6105	1.04 ppb	91
103) Naphthalene	15.145	128	12102	1.01 ppb	98
104) Hexachlorobutadiene	15.034	225	2629	1.10 ppb	83
105) 1,2,3-Trichlorobenzene	15.328	180	5115	1.01 ppb	91

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



TIC: D43482.D\data.ms

(7) Ethanol
3.308min (-0.000) 21.00 ppb
response 5084

Ion	Exp%	Act%
45.10	100	100
46.10	2.90	7.38#
43.10	31.00	33.57
0.00	0.00	0.00

Reason for manual re-integration?

[] missed peak assignment

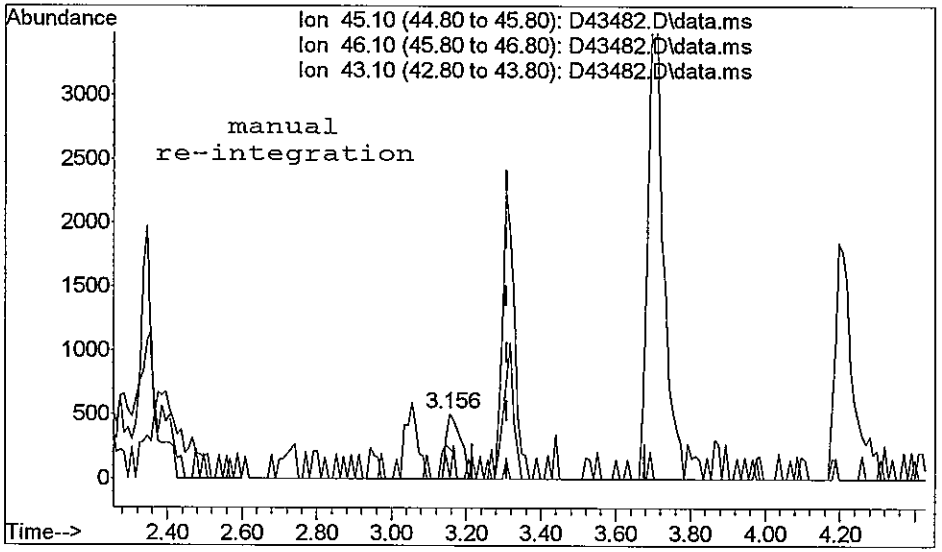
[] peak saturation (detector shutdown)

[] over-integrated peak's area

[] under-integrated peak's area

[X] other (incorrect RT in method)

initials: JL date: 8 / 29 / 13



TIC: D43482.D\data.ms

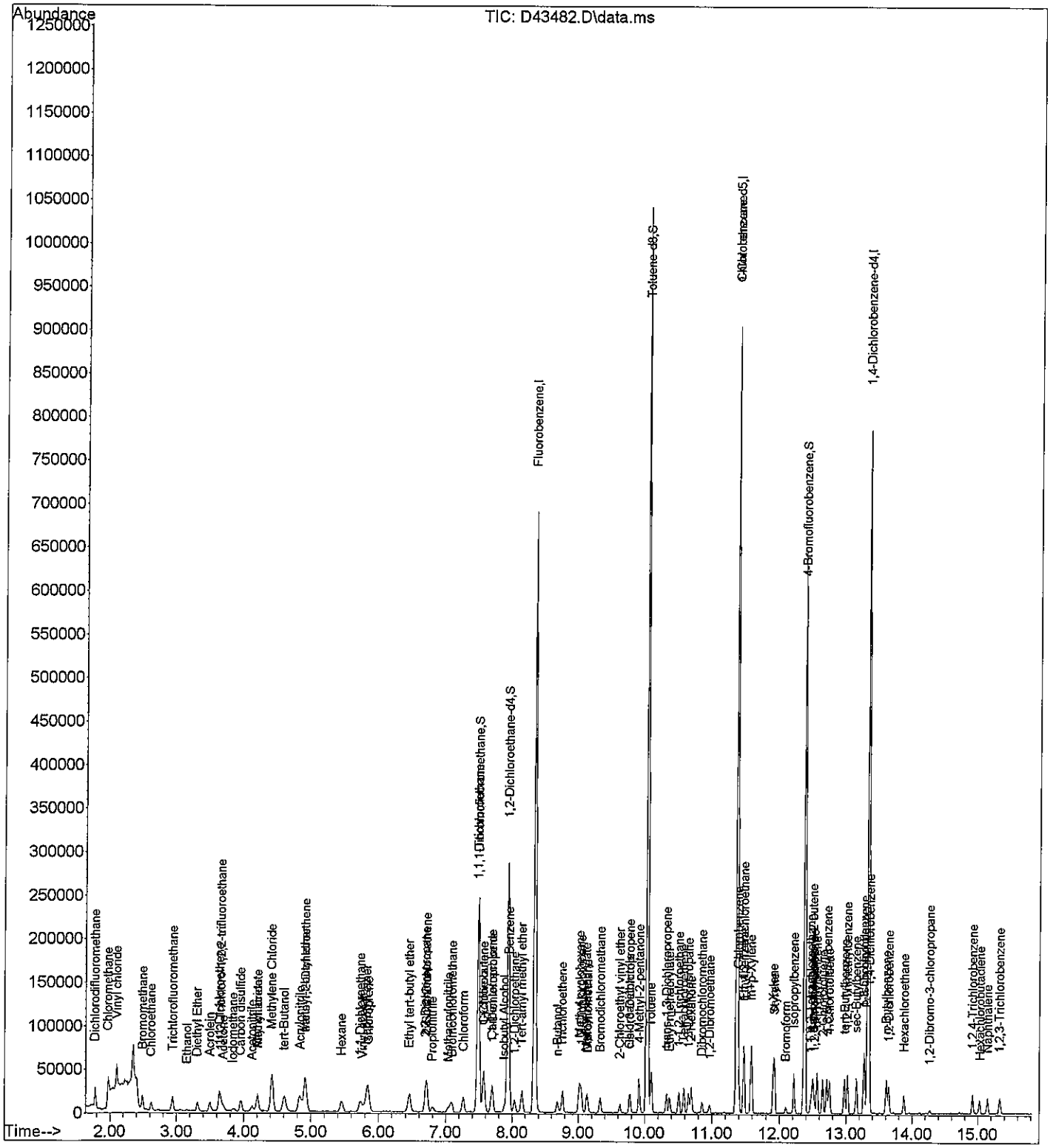
(7) Ethanol
3.156min (-0.152) 5.57 ppb m
response 1348

Ion	Exp%	Act%
45.10	100	100
46.10	2.90	0.00#
43.10	31.00	45.47#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43482.D
Acq On : 23 Aug 2013 14:07
Operator : twk-sop525r16
Sample : VOC_1ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 29 13:06:53 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:56:17 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43483.D
Acq On : 23 Aug 2013 14:31
Operator : twk-sop525r16
Sample : VOC_2ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 29 13:08:05 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:56:00 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	8.341	96	671247	25.00	ppb		0.00
61) Chlorobenzene-d5	11.369	117	466756	25.00	ppb		0.00
82) 1,4-Dichlorobenzene-d4	13.333	152	212275	25.00	ppb		0.00
System Monitoring Compounds							
38) Dibromofluoromethane	7.490	113	180304	24.62	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 98.48%				
42) 1,2-Dichloroethane-d4	7.936	67	114068	25.06	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 100.24%				
65) Toluene-d8	10.032	98	673663	24.93	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 99.72%				
83) 4-Bromofluorobenzene	12.381	176	172255	25.59	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 102.36%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.779	85	26305	2.01	ppb		95
3) Chloromethane	1.972	50	30753	1.96	ppb		97
4) Vinyl chloride	2.103	62	31892	2.07	ppb		97
5) Bromomethane	2.478	96	14698	2.27	ppb		93
6) Chloroethane	2.620	64	12434	2.02	ppb		97
7) Ethanol	3.156	45	3012m	11.60	ppb		
8) Acrolein	3.501	56	22559	18.84	ppb		98
9) Acetonitrile	4.118	41	15473	19.19	ppb		99
10) Trichlorofluoromethane	2.934	101	26792	1.97	ppb		100
11) Acetone	3.693	58	4635	8.12	ppb		82
12) Diethyl Ether	3.308	74	8648	2.21	ppb		90
13) tert-Butanol	4.604	59	62116	89.53	ppb		97
14) 1,1-Dichloroethene	3.642	96	12865	1.98	ppb		94
15) Acrylonitrile	4.827	53	47733	19.37	ppb		93
16) Iodomethane	3.845	142	11026	1.47	ppb		96
17) Methylene Chloride	4.432	84	31491	2.91	ppb		93
18) Methyl acetate	4.199	74	1447	1.46	ppb	#	91
19) Allyl chloride	4.209	76	9118	2.26	ppb		73
20) 1,1,2-Trichloro-1,2,2-...	3.663	101	13935	1.96	ppb		91
21) Carbon disulfide	3.956	76	44133	1.97	ppb	#	88
22) trans-1,2-Dichloroethene	4.918	96	14469	1.92	ppb		91
23) Methyl-t-butyl ether	4.908	73	78783	3.91	ppb		99
24) Hexane	5.455	57	13724	1.89	ppb	#	78
25) 1,1-Dichloroethane	5.718	63	30034	1.99	ppb		92
26) Propionitrile	6.802	54	16907	19.69	ppb	#	90
27) Vinyl acetate	5.769	43	29084	1.73	ppb		100
28) Chloroprene	5.850	53	27530	2.00	ppb		96
29) 2-Butanone	6.711	72	5175	7.39	ppb		74
30) Isopropyl ether	5.820	45	60833	2.01	ppb		98
31) Methacrylonitrile	7.045	41	8741	2.03	ppb	#	87
32) cis-1,2-Dichloroethene	6.711	96	17090	2.03	ppb		94
33) Methyl Acrylate	0.000		0	N.D.			
34) Bromochloromethane	7.095	128	7842	2.12	ppb	#	62
35) Chloroform	7.257	83	31585	2.07	ppb		92
36) 2,2-Dichloropropane	6.711	77	23342	2.04	ppb		91
37) Ethyl tert-butyl ether	6.457	59	48415	1.96	ppb		94
39) Pentafluorobenzene	7.713	168	92	No Calib		#	
40) 1-Chlorobutane	7.571	56	56137	2.04	ppb		96
41) Isobutyl Alcohol	7.885	43	11595	34.97	ppb	#	89

TM 8/29/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43483.D
Acq On : 23 Aug 2013 14:31
Operator : twk-sop525r16
Sample : VOC_2ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 29 13:08:05 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:56:00 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	1,2-Dichloroethane	8.037	62	23129	2.03	ppb		100
44)	1,1,1-Trichloroethane	7.480	97	23926	1.89	ppb		91
45)	1,1-Dichloropropene	7.703	75	21885	1.97	ppb		95
46)	n-Butanol	8.685	56	14936	87.28	ppb		96
47)	Cyclohexane	7.571	84	40950	3.91	ppb		92
48)	Carbon tetrachloride	7.683	117	18060	1.93	ppb		96
49)	Benzene	7.956	78	63549	2.01	ppb		97
50)	Tert-amyl methyl ether	8.149	87	9120	2.02	ppb		83
51)	Dibromomethane	9.131	93	9511	1.99	ppb		79
52)	1,2-Dichloropropane	9.050	63	18347	2.03	ppb		94
53)	Trichloroethene	8.756	95	16193	1.95	ppb		95
54)	Bromodichloromethane	9.333	83	19893	1.89	ppb		98
55)	1,4-Dioxane	9.131	88	2581	41.26	ppb		90
56)	Methyl methacrylate	9.121	69	7575	1.80	ppb		82
57)	Methyl cyclohexane	9.019	83	21356	1.91	ppb		96
58)	Chloroacetonitrile	0.000		0	N.D.	d		
59)	2-Chloroethyl vinyl ether	9.627	63	7520	1.81	ppb		91
60)	cis-1,3-Dichloropropene	9.769	75	24509	1.94	ppb		96
62)	4-Methyl-2-pentanone	9.911	100	5553	7.73	ppb		83
63)	trans-1,3-Dichloropropene	10.326	75	20248	1.85	ppb		93
64)	1,1,2-Trichloroethane	10.508	83	11417	1.99	ppb		98
66)	Toluene	10.093	92	37614	2.00	ppb		95
67)	1,3-Dichloropropane	10.650	76	20845	1.86	ppb		98
68)	Ethyl methacrylate	10.366	69	16389	1.94	ppb	#	93
69)	2-Hexanone	10.690	58	17226	7.32	ppb		99
70)	Dibromochloromethane	10.852	129	11834	1.78	ppb		89
71)	1,2-Dibromoethane	10.964	107	11914	1.95	ppb		92
72)	Tetrachloroethene	10.579	164	11369	1.95	ppb		79
73)	1,1,1,2-Tetrachloroethane	11.470	131	13408	1.84	ppb		86
74)	Chlorobenzene	11.389	112	39814	1.97	ppb		98
75)	1-Chlorohexane	11.369	91	19806	2.10	ppb		77
76)	Ethylbenzene	11.470	91	66842	1.93	ppb		98
77)	m+p-Xylene	11.581	106	46459	3.71	ppb		96
78)	Bromoform	12.098	173	5915	1.62	ppb		87
79)	Styrene	11.926	104	39895	1.87	ppb		98
80)	o-Xylene	11.916	106	22644	1.78	ppb		90
81)	Isopropylbenzene	12.219	105	53328	1.82	ppb		96
84)	1,1,2,2-Tetrachloroethane	12.472	83	14390	2.03	ppb		96
85)	trans-1,4-Dichloro-2-b...	12.503	53	3761	2.00	ppb	#	81
86)	Bromobenzene	12.503	156	16451	2.04	ppb		94
87)	1,2,3-Trichloropropane	12.523	110	4184	2.07	ppb	#	82
88)	n-Propylbenzene	12.564	91	68336	1.95	ppb		96
89)	2-Chlorotoluene	12.645	126	14102	1.96	ppb		96
90)	4-Chlorotoluene	12.756	126	13870	1.91	ppb		76
91)	1,3,5-Trimethylbenzene	12.716	105	46224	2.00	ppb		89
92)	tert-Butylbenzene	12.979	134	8485	1.90	ppb		85
93)	1,2,4-Trimethylbenzene	13.019	105	44409	1.94	ppb		100
94)	sec-Butylbenzene	13.151	105	53772	1.90	ppb		93
95)	1,3-Dichlorobenzene	13.272	146	25643	1.86	ppb		98
96)	1,4-Dichlorobenzene	13.353	146	27434	1.99	ppb		94
97)	p-Isopropyltoluene	13.272	119	41265	1.90	ppb		95
98)	1,2-Dichlorobenzene	13.647	146	25249	1.95	ppb		90
99)	n-Butylbenzene	13.607	91	39702	1.96	ppb		97
100)	1,2-Dibromo-3-chloropr...	14.265	75	2125	2.02	ppb		84
101)	Hexachloroethane	13.880	201	5307	1.85	ppb		85

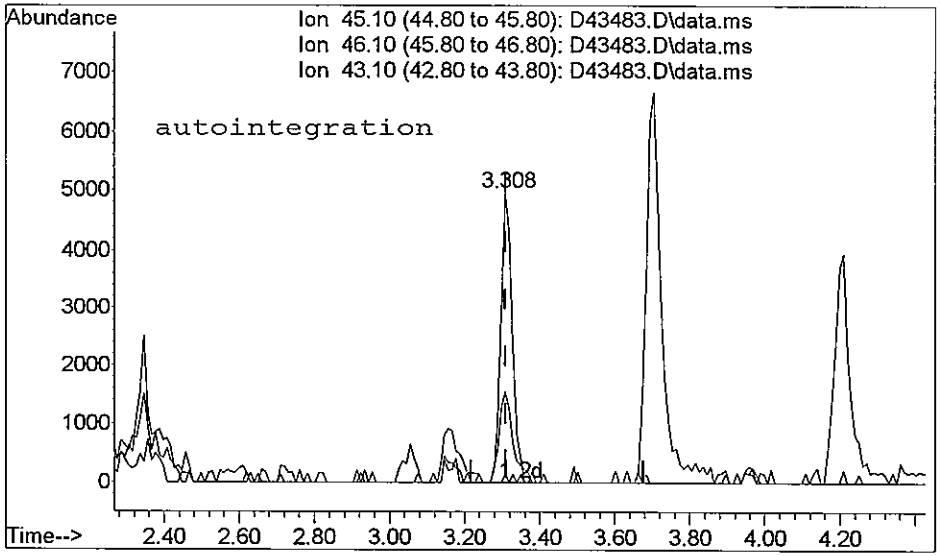
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43483.D
Acq On : 23 Aug 2013 14:31
Operator : twk-sop525r16
Sample : VOC_2ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 29 13:08:05 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:56:00 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
102) 1,2,4-Trichlorobenzene	14.923	180	12730	1.86	ppb	99
103) Naphthalene	15.146	128	25777	1.84	ppb	98
104) Hexachlorobutadiene	15.024	225	5380	1.95	ppb	92
105) 1,2,3-Trichlorobenzene	15.328	180	11583	1.97	ppb	98

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



TIC: D43483.D\data.ms

(7) Ethanol
3.308min (+0.000) 39.81 ppb
response 10336

Ion	Exp%	Act%
45.10	100	100
46.10	2.90	3.19
43.10	31.00	31.23
0.00	0.00	0.00

Reason for manual re-integration?

[] missed peak assignment

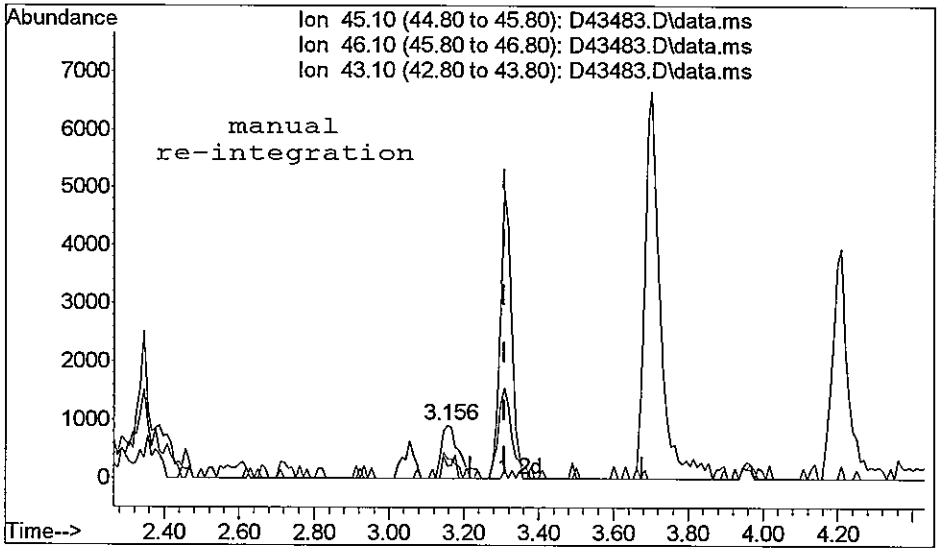
[] peak saturation (detector shutdown)

[] over-integrated peak's area

[] under-integrated peak's area

[X] other (incorrect RT in method)

initials: TM date: 8/29/13



TIC: D43483.D\data.ms

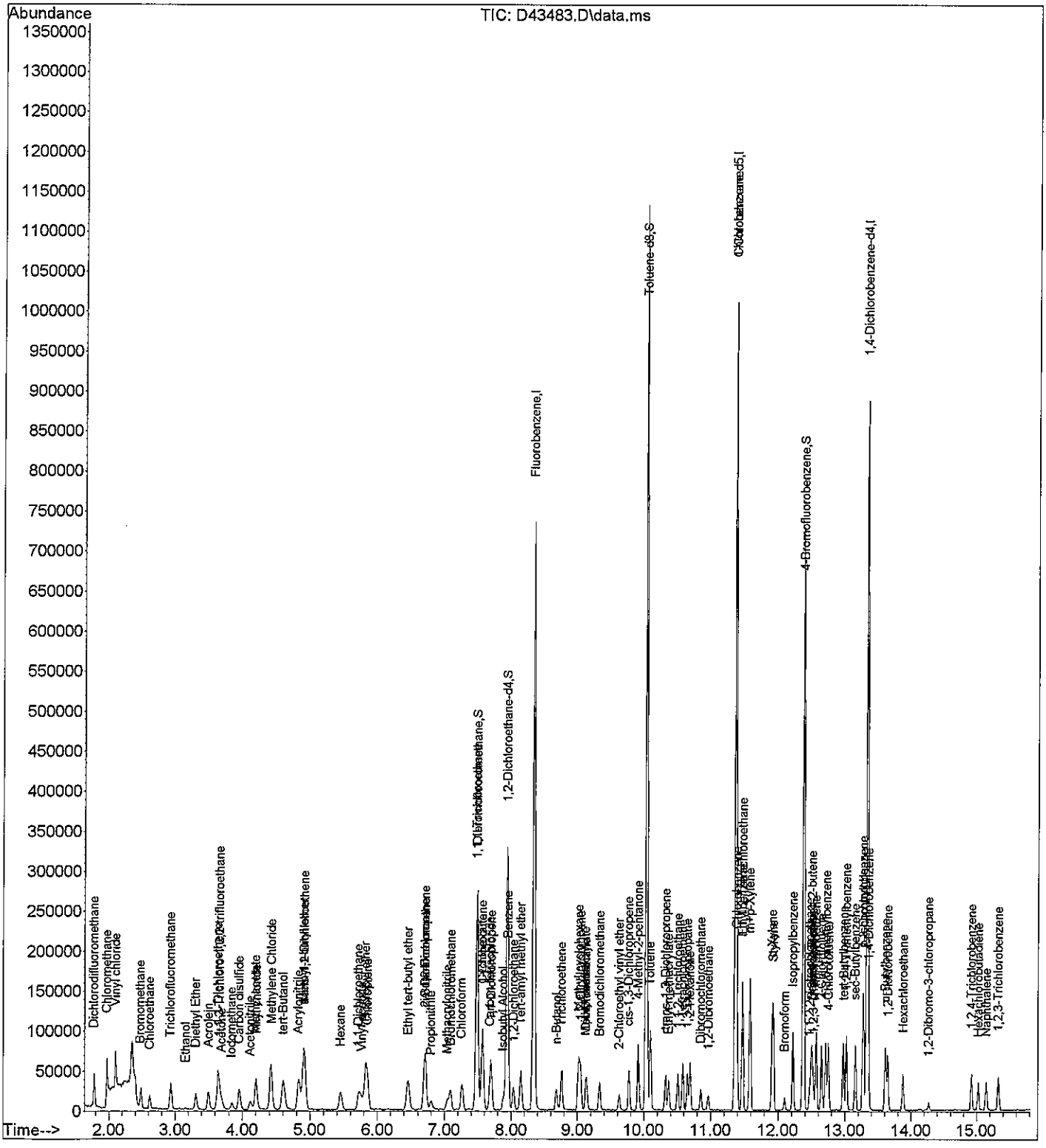
(7) Ethanol
3.156min (-0.151) 11.60 ppb m
response 3012

Ion	Exp%	Act%
45.10	100	100
46.10	2.90	36.62#
43.10	31.00	23.03
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43483.D
Acq On : 23 Aug 2013 14:31
Operator : twk-sop525r16
Sample : VOC_2ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 29 13:08:05 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:56:00 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43484.D
Acq On : 23 Aug 2013 14:54
Operator : twk-sop525r16
Sample : VOC_4ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 29 13:08:44 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:55:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	8.341	96	647202	25.00	ppb		0.00
61) Chlorobenzene-d5	11.368	117	445198	25.00	ppb		0.00
82) 1,4-Dichlorobenzene-d4	13.333	152	204136	25.00	ppb		0.00
System Monitoring Compounds							
38) Dibromofluoromethane	7.490	113	176914	25.08	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery =	100.32%			
42) 1,2-Dichloroethane-d4	7.936	67	113202	26.20	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery =	104.80%			
65) Toluene-d8	10.032	98	648559	25.24	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery =	100.96%			
83) 4-Bromofluorobenzene	12.381	176	165794	25.94	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery =	103.76%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.779	85	53720	4.41	ppb		96
3) Chloromethane	1.971	50	64088	4.37	ppb		97
4) Vinyl chloride	2.103	62	62342	4.31	ppb		100
5) Bromomethane	2.488	96	27737	4.69	ppb		94
6) Chloroethane	2.619	64	24484	4.21	ppb		95
7) Ethanol	3.156	45	5944m	24.11	ppb		
8) Acrolein	3.490	56	47166	41.29	ppb		95
9) Acetonitrile	4.118	41	31872	41.52	ppb		98
10) Trichlorofluoromethane	2.933	101	55822	4.41	ppb		97
11) Acetone	3.693	58	9228	17.18	ppb		90
12) Diethyl Ether	3.308	74	15336	4.11	ppb		93
13) tert-Butanol	4.604	59	137366	208.13	ppb		95
14) 1,1-Dichloroethene	3.632	96	26943	4.48	ppb		96
15) Acrylonitrile	4.827	53	98677	42.35	ppb		97
16) Iodomethane	3.845	142	24762	3.21	ppb		96
17) Methylene Chloride	4.422	84	56422	6.58	ppb		98
18) Methyl acetate	4.209	74	3983	4.27	ppb	#	47
19) Allyl chloride	4.209	76	16411	4.33	ppb	#	93
20) 1,1,2-Trichloro-1,2,2-...	3.662	101	29567	4.50	ppb		96
21) Carbon disulfide	3.956	76	91428	4.36	ppb		97
22) trans-1,2-Dichloroethene	4.918	96	30790	4.36	ppb		89
23) Methyl-t-butyl ether	4.908	73	156668	8.10	ppb		95
24) Hexane	5.465	57	28342	4.06	ppb		96
25) 1,1-Dichloroethane	5.728	63	60699	4.27	ppb		97
26) Propionitrile	6.801	54	34315	42.21	ppb	#	92
27) Vinyl acetate	5.758	43	62817	3.83	ppb		96
28) Chloroprene	5.850	53	54537	4.18	ppb		97
29) 2-Butanone	6.700	72	11172	16.84	ppb		94
30) Isopropyl ether	5.819	45	119766	4.14	ppb		95
31) Methacrylonitrile	7.044	41	16869	4.09	ppb		95
32) cis-1,2-Dichloroethene	6.710	96	33641	4.23	ppb		97
33) Methyl Acrylate	0.000		0	N.D.			
34) Bromochloromethane	7.095	128	14668	4.17	ppb		87
35) Chloroform	7.267	83	61262	4.25	ppb		97
36) 2,2-Dichloropropane	6.710	77	46883	4.39	ppb		95
37) Ethyl tert-butyl ether	6.457	59	99602	4.27	ppb		97
39) Pentafluorobenzene	0.000		0	N.D.			
40) 1-Chlorobutane	7.571	56	112890	4.38	ppb	#	94
41) Isobutyl Alcohol	7.885	43	26136	82.66	ppb		90

TM 8/29/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43484.D
Acq On : 23 Aug 2013 14:54
Operator : twk-sop525r16
Sample : VOC_4ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 29 13:08:44 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:55:45 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	1,2-Dichloroethane	8.037	62	44917	4.15	ppb		98
44)	1,1,1-Trichloroethane	7.480	97	51711	4.38	ppb		99
45)	1,1-Dichloropropene	7.703	75	45687	4.42	ppb		96
46)	n-Butanol	8.675	56	34035	209.55	ppb		94
47)	Cyclohexane	7.571	84	85646	8.76	ppb		96
48)	Carbon tetrachloride	7.682	117	36464	4.05	ppb		96
49)	Benzene	7.956	78	128032	4.30	ppb		98
50)	Tert-amyl methyl ether	8.148	87	18359	4.35	ppb		93
51)	Dibromomethane	9.141	93	18968	4.18	ppb		98
52)	1,2-Dichloropropane	9.049	63	36862	4.37	ppb		95
53)	Trichloroethene	8.766	95	33992	4.39	ppb		97
54)	Bromodichloromethane	9.333	83	40740	4.01	ppb		98
55)	1,4-Dioxane	9.120	88	5154	88.46	ppb	#	89
56)	Methyl methacrylate	9.120	69	16672	4.17	ppb		92
57)	Methyl cyclohexane	9.019	83	44601	4.22	ppb		96
58)	Chloroacetonitrile	0.000		0	N.D.	d		
59)	2-Chloroethyl vinyl ether	9.627	63	16790	4.31	ppb		89
60)	cis-1,3-Dichloropropene	9.779	75	48722	4.01	ppb		95
62)	4-Methyl-2-pentanone	9.910	100	10754	15.55	ppb		79
63)	trans-1,3-Dichloropropene	10.325	75	41362	3.93	ppb		96
64)	1,1,2-Trichloroethane	10.508	83	22914	4.29	ppb		90
66)	Toluene	10.092	92	73487	4.16	ppb		92
67)	1,3-Dichloropropane	10.649	76	42759	4.01	ppb		98
68)	Ethyl methacrylate	10.366	69	32121	3.96	ppb		95
69)	2-Hexanone	10.690	58	35467	15.69	ppb		99
70)	Dibromochloromethane	10.852	129	23700	3.62	ppb		87
71)	1,2-Dibromoethane	10.963	107	23381	4.03	ppb		95
72)	Tetrachloroethene	10.589	164	23313	4.28	ppb		96
73)	1,1,1,2-Tetrachloroethane	11.470	131	27815	4.02	ppb		92
74)	Chlorobenzene	11.389	112	79232	4.17	ppb		97
75)	1-Chlorohexane	11.368	91	38170	4.37	ppb		96
76)	Ethylbenzene	11.470	91	134609	4.12	ppb		97
77)	m+p-Xylene	11.581	106	95755	8.02	ppb		98
78)	Bromoform	12.097	173	12812	3.53	ppb		94
79)	Styrene	11.925	104	80955	3.97	ppb		99
80)	o-Xylene	11.915	106	48701	4.02	ppb		95
81)	Isopropylbenzene	12.219	105	113089	4.06	ppb		99
84)	1,1,2,2-Tetrachloroethane	12.472	83	27740	4.12	ppb		95
85)	trans-1,4-Dichloro-2-b...	12.502	53	7770	4.48	ppb		90
86)	Bromobenzene	12.502	156	32606	4.32	ppb		91
87)	1,2,3-Trichloropropane	12.523	110	8644	4.71	ppb		91
88)	n-Propylbenzene	12.563	91	142833	4.36	ppb		98
89)	2-Chlorotoluene	12.654	126	28443	4.18	ppb		93
90)	4-Chlorotoluene	12.746	126	29020	4.23	ppb		96
91)	1,3,5-Trimethylbenzene	12.715	105	91743	4.19	ppb		100
92)	tert-Butylbenzene	12.978	134	17156	3.99	ppb		77
93)	1,2,4-Trimethylbenzene	13.019	105	91563	4.23	ppb		99
94)	sec-Butylbenzene	13.151	105	113602	4.25	ppb		94
95)	1,3-Dichlorobenzene	13.262	146	54855	4.20	ppb		93
96)	1,4-Dichlorobenzene	13.353	146	55053	4.24	ppb		97
97)	p-Isopropyltoluene	13.272	119	85371	4.12	ppb		97
98)	1,2-Dichlorobenzene	13.647	146	50766	4.12	ppb		97
99)	n-Butylbenzene	13.606	91	82900	4.39	ppb		98
100)	1,2-Dibromo-3-chloropr...	14.264	75	4343	4.46	ppb		89
101)	Hexachloroethane	13.880	201	10622	3.77	ppb		85

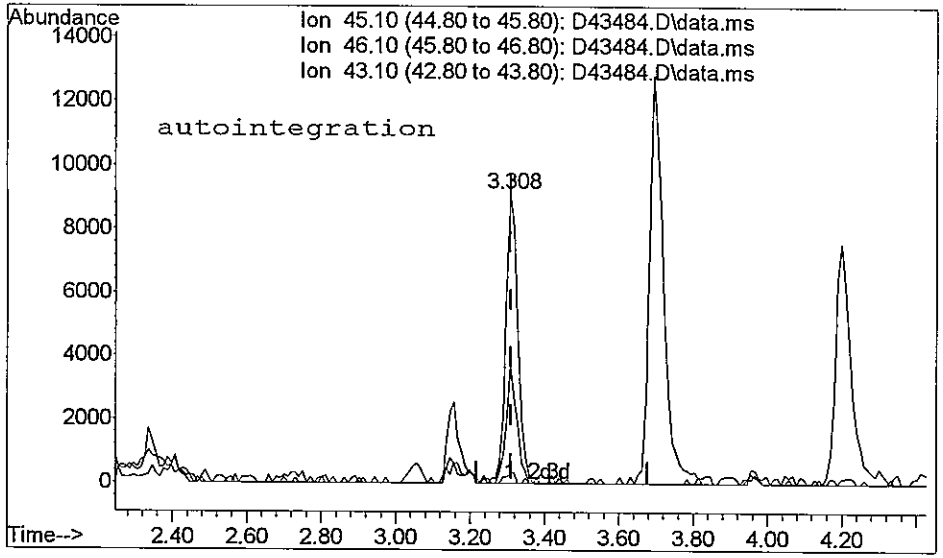
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43484.D
Acq On : 23 Aug 2013 14:54
Operator : twk-sop525r16
Sample : VOC_4ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 29 13:08:44 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:55:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
102) 1,2,4-Trichlorobenzene	14.923	180	28450	4.49	ppb	95
103) Naphthalene	15.145	128	55483	4.18	ppb	98
104) Hexachlorobutadiene	15.024	225	11209	4.35	ppb	93
105) 1,2,3-Trichlorobenzene	15.328	180	23453	4.24	ppb	94

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



TIC: D43484.D\data.ms

(7) Ethanol
3.308min (-0.000) 83.67 ppb
response 20628

Ion	Exp%	Act%
45.10	100	100
46.10	2.90	3.05
43.10	31.00	40.46#
0.00	0.00	0.00

Reason for manual re-integration?

[] missed peak assignment

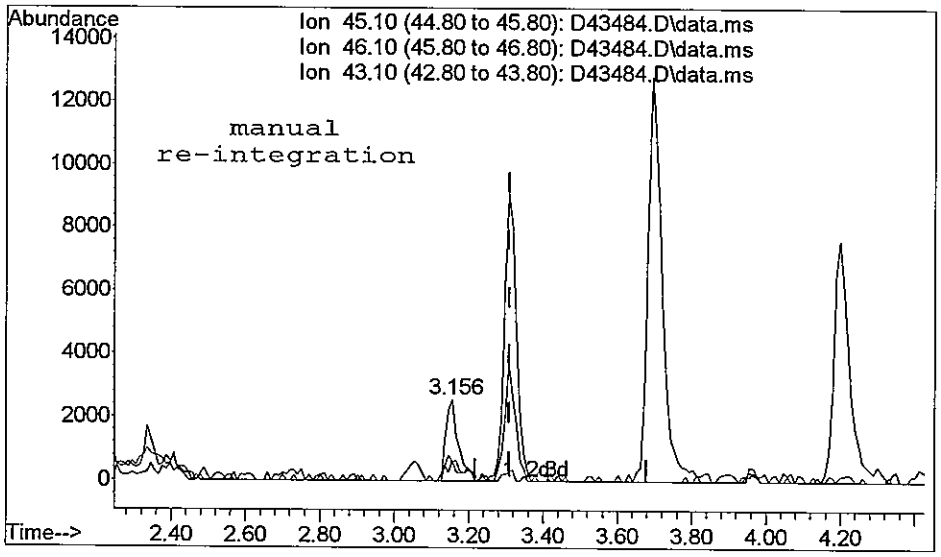
[] peak saturation (detector shutdown)

[] over-integrated peak's area

[] under-integrated peak's area

[X] other (incorrect RT in method)

initials: TM date: 8/29/13



TIC: D43484.D\data.ms

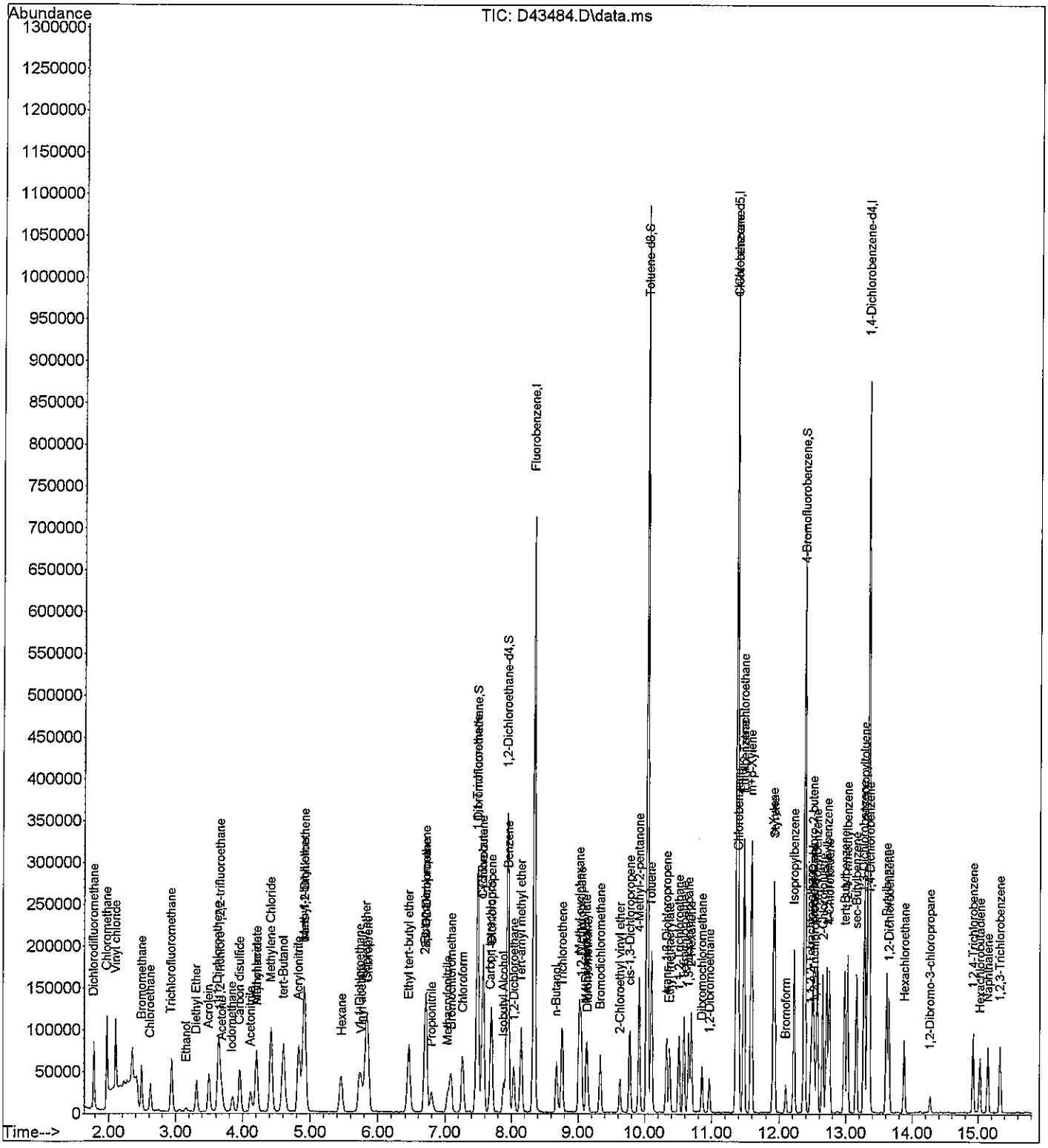
(7) Ethanol
3.156min (-0.152) 24.11 ppb m
response 5944

Ion	Exp%	Act%
45.10	100	100
46.10	2.90	24.06#
43.10	31.00	24.53
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43484.D
Acq On : 23 Aug 2013 14:54
Operator : twk-sop525r16
Sample : VOC_4ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 29 13:08:44 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:55:45 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43485.D
Acq On : 23 Aug 2013 15:17
Operator : twk-sop525r16
Sample : VOC_10ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 29 13:09:30 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:55:19 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	8.341	96	675960	25.00	ppb		0.00
61) Chlorobenzene-d5	11.368	117	450598	25.00	ppb		0.00
82) 1,4-Dichlorobenzene-d4	13.333	152	222743	25.00	ppb		0.00
System Monitoring Compounds							
38) Dibromofluoromethane	7.490	113	181591	24.31	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 97.24%				
42) 1,2-Dichloroethane-d4	7.936	67	111665	24.50	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 98.00%				
65) Toluene-d8	10.032	98	656220	25.47	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 101.88%				
83) 4-Bromofluorobenzene	12.381	176	173465	24.74	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 98.96%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.779	85	129322	10.32	ppb		97
3) Chloromethane	1.971	50	155637	10.33	ppb		99
4) Vinyl chloride	2.103	62	152800	10.21	ppb		100
5) Bromomethane	2.488	96	63181	10.48	ppb		97
6) Chloroethane	2.619	64	61158	10.12	ppb		98
7) Ethanol	3.146	45	14513m	57.08	ppb		
8) Acrolein	3.490	56	121193	103.21	ppb		99
9) Acetonitrile	4.108	41	78178	95.15	ppb		98
10) Trichlorofluoromethane	2.933	101	133091	10.15	ppb		100
11) Acetone	3.693	58	21411	36.51	ppb		96
12) Diethyl Ether	3.308	74	37052	9.07	ppb		97
13) tert-Butanol	4.604	59	343162	495.65	ppb		99
14) 1,1-Dichloroethene	3.642	96	59838	9.10	ppb		99
15) Acrylonitrile	4.827	53	241968	98.87	ppb		98
16) Iodomethane	3.855	142	73938	8.47	ppb		98
17) Methylene Chloride	4.422	84	92302	10.64	ppb		97
18) Methyl acetate	4.199	74	9732	9.99	ppb		95
19) Allyl chloride	4.209	76	38330	9.37	ppb		97
20) 1,1,2-Trichloro-1,2,2-...	3.662	101	65577	9.13	ppb		94
21) Carbon disulfide	3.956	76	209111	9.13	ppb		98
22) trans-1,2-Dichloroethene	4.918	96	70157	9.06	ppb		93
23) Methyl-t-butyl ether	4.908	73	390784	18.73	ppb		96
24) Hexane	5.455	57	72377	9.85	ppb		98
25) 1,1-Dichloroethane	5.728	63	141616	9.13	ppb		99
26) Propionitrile	6.791	54	83679	97.13	ppb		95
27) Vinyl acetate	5.758	43	176211	10.60	ppb		99
28) Chloroprene	5.850	53	127110	8.74	ppb		97
29) 2-Butanone	6.700	72	26823	37.50	ppb		89
30) Isopropyl ether	5.819	45	291698	9.34	ppb		99
31) Methacrylonitrile	7.044	41	41214	9.18	ppb		93
32) cis-1,2-Dichloroethene	6.710	96	79129	9.08	ppb		95
33) Methyl Acrylate	0.000		0	N.D.	d		
34) Bromochloromethane	7.095	128	35911	9.54	ppb		84
35) Chloroform	7.267	83	146554	9.48	ppb		97
36) 2,2-Dichloropropane	6.710	77	108173	9.40	ppb		98
37) Ethyl tert-butyl ether	6.457	59	236356	9.42	ppb		98
39) Pentafluorobenzene	0.000		0	N.D.			
40) 1-Chlorobutane	7.571	56	253231	8.89	ppb	#	96
41) Isobutyl Alcohol	7.885	43	66957	205.57	ppb		94

8/29/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43485.D
Acq On : 23 Aug 2013 15:17
Operator : twk-sop525r16
Sample : VOC_10ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 29 13:09:30 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:55:19 2013
Response via : Initial Calibration

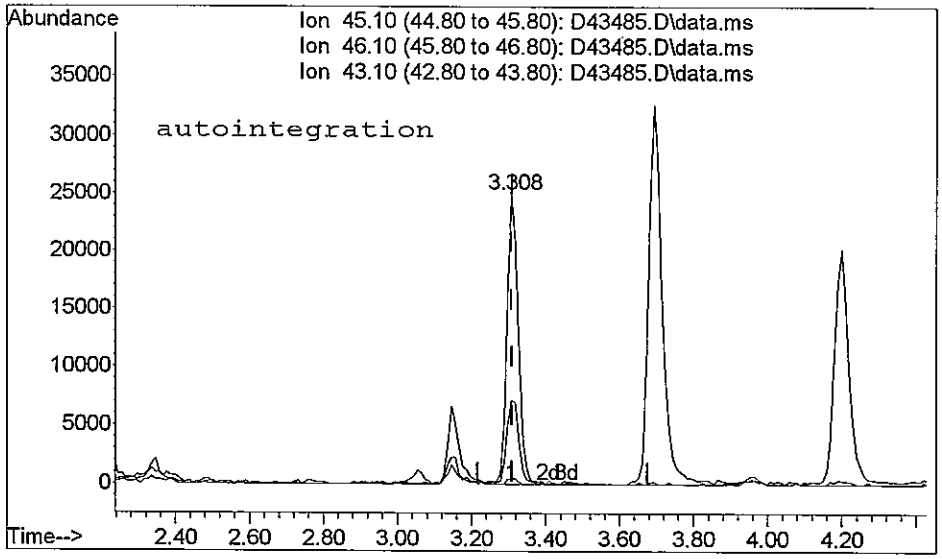
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	1,2-Dichloroethane	8.037	62	109014	9.29	ppb		97
44)	1,1,1-Trichloroethane	7.480	97	115624	8.83	ppb		98
45)	1,1-Dichloropropene	7.703	75	101221	8.81	ppb		99
46)	n-Butanol	8.675	56	84589	497.30	ppb		97
47)	Cyclohexane	7.571	84	195599	18.37	ppb		97
48)	Carbon tetrachloride	7.693	117	86310	8.47	ppb		95
49)	Benzene	7.956	78	296949	9.13	ppb		99
50)	Tert-amyl methyl ether	8.148	87	41271	8.79	ppb		89
51)	Dibromomethane	9.141	93	45327	9.18	ppb		98
52)	1,2-Dichloropropane	9.049	63	84215	9.16	ppb		97
53)	Trichloroethene	8.766	95	75881	8.85	ppb		89
54)	Bromodichloromethane	9.333	83	100086	8.92	ppb		98
55)	1,4-Dioxane	9.130	88	11995	194.30	ppb	#	88
56)	Methyl methacrylate	9.120	69	38857	8.68	ppb		96
57)	Methyl cyclohexane	9.019	83	102957	8.75	ppb		96
58)	Chloroacetonitrile	9.627	48	817	82.96	ppb	#	23
59)	2-Chloroethyl vinyl ether	9.627	63	39551	9.44	ppb		94
60)	cis-1,3-Dichloropropene	9.779	75	120490	9.03	ppb		98
62)	4-Methyl-2-pentanone	9.910	100	27353	38.21	ppb		96
63)	trans-1,3-Dichloropropene	10.325	75	103089	9.39	ppb		98
64)	1,1,2-Trichloroethane	10.508	83	53248	9.72	ppb		91
66)	Toluene	10.092	92	170678	9.14	ppb		96
67)	1,3-Dichloropropane	10.649	76	105739	9.58	ppb		96
68)	Ethyl methacrylate	10.366	69	80500	9.64	ppb		98
69)	2-Hexanone	10.690	58	89587	38.35	ppb		94
70)	Dibromochloromethane	10.852	129	62026	8.82	ppb		100
71)	1,2-Dibromoethane	10.963	107	56836	9.38	ppb		100
72)	Tetrachloroethene	10.589	164	52430	9.09	ppb		96
73)	1,1,1,2-Tetrachloroethane	11.470	131	66691	9.07	ppb		99
74)	Chlorobenzene	11.389	112	187060	9.49	ppb		97
75)	1-Chlorohexane	11.368	91	86136	9.50	ppb		94
76)	Ethylbenzene	11.470	91	316249	9.17	ppb		98
77)	m+p-Xylene	11.581	106	229108	18.02	ppb		98
78)	Bromoform	12.097	173	34580	8.89	ppb		95
79)	Styrene	11.925	104	197239	9.15	ppb		98
80)	o-Xylene	11.915	106	117018	9.14	ppb		95
81)	Isopropylbenzene	12.219	105	266496	8.98	ppb		100
84)	1,1,2,2-Tetrachloroethane	12.472	83	72888	9.84	ppb		96
85)	trans-1,4-Dichloro-2-b...	12.502	53	19123	10.20	ppb		88
86)	Bromobenzene	12.502	156	79681	9.36	ppb		92
87)	1,2,3-Trichloropropane	12.523	110	19403	9.39	ppb		95
88)	n-Propylbenzene	12.563	91	342880	9.23	ppb		100
89)	2-Chlorotoluene	12.654	126	69701	8.86	ppb		95
90)	4-Chlorotoluene	12.756	126	70930	9.02	ppb		83
91)	1,3,5-Trimethylbenzene	12.715	105	228560	9.16	ppb		96
92)	tert-Butylbenzene	12.978	134	44374	8.98	ppb		98
93)	1,2,4-Trimethylbenzene	13.019	105	226883	9.25	ppb		91
94)	sec-Butylbenzene	13.161	105	279447	9.21	ppb		98
95)	1,3-Dichlorobenzene	13.272	146	136055	9.12	ppb		98
96)	1,4-Dichlorobenzene	13.353	146	135855	9.23	ppb		98
97)	p-Isopropyltoluene	13.272	119	212379	8.85	ppb		97
98)	1,2-Dichlorobenzene	13.647	146	128009	9.10	ppb		97
99)	n-Butylbenzene	13.606	91	195384	9.00	ppb		100
100)	1,2-Dibromo-3-chloropr...	14.264	75	10280	9.38	ppb		92
101)	Hexachloroethane	13.880	201	28661	8.75	ppb		96

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43485.D
Acq On : 23 Aug 2013 15:17
Operator : twk-sop525r16
Sample : VOC_10ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 29 13:09:30 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:55:19 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
102) 1,2,4-Trichlorobenzene	14.923	180	67967	9.65	ppb	98
103) Naphthalene	15.145	128	142966	9.76	ppb	99
104) Hexachlorobutadiene	15.024	225	26990	9.23	ppb	97
105) 1,2,3-Trichlorobenzene	15.328	180	58462	9.37	ppb	97

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



TIC: D43485.D\data.ms

(7) Ethanol
3.308min (+0.000) 205.08 ppb
response 52143

Ion	Exp%	Act%
45.10	100	100
46.10	2.90	1.89#
43.10	31.00	28.65
0.00	0.00	0.00

Reason for manual re-integration?

[] missed peak assignment

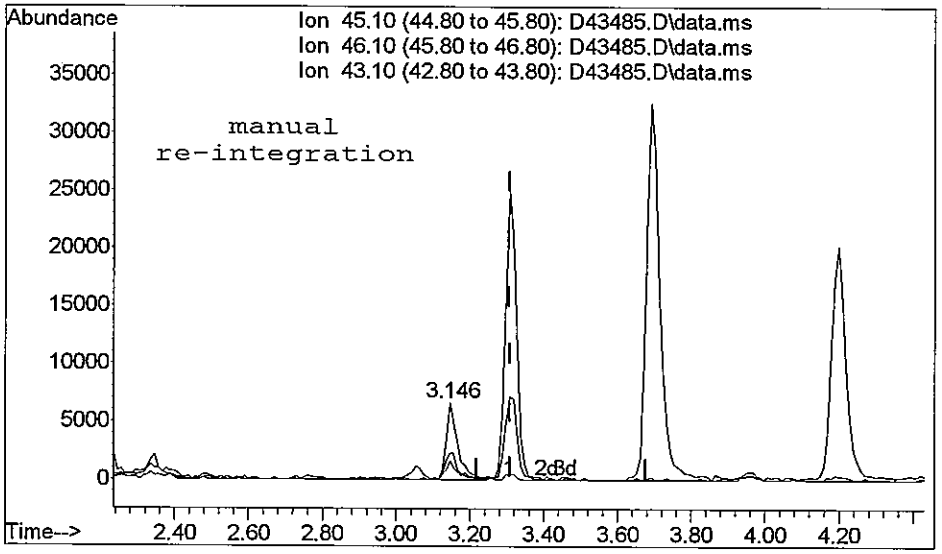
[] peak saturation (detector shutdown)

[] over-integrated peak's area

[] under-integrated peak's area

[X] other (incorrect RT in method)

initials: ZM date: 8/29/13



TIC: D43485.D\data.ms

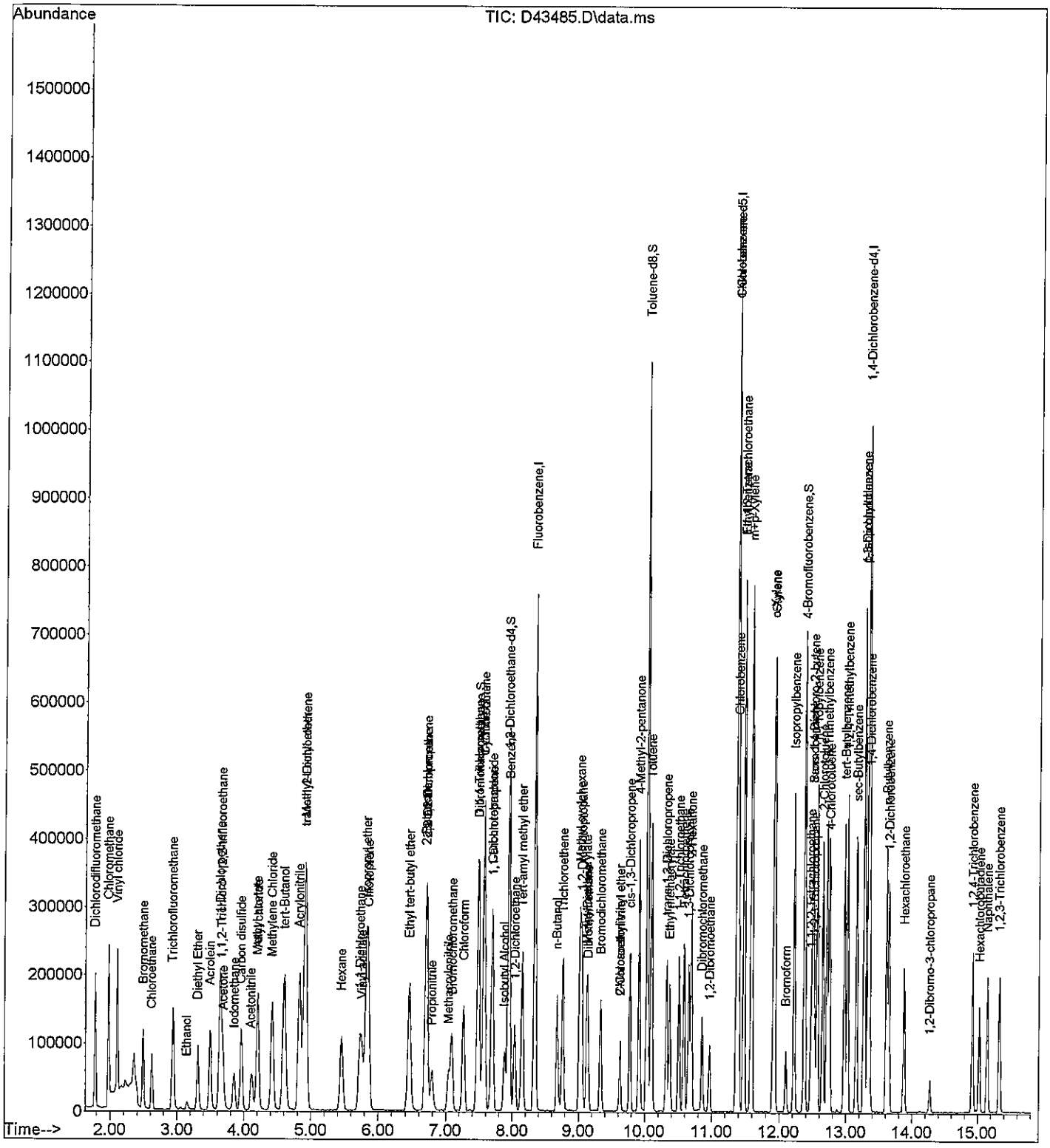
(7) Ethanol
3.146min (-0.162) 57.08 ppb m
response 14513

Ion	Exp%	Act%
45.10	100	100
46.10	2.90	34.33#
43.10	31.00	24.81
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43485.D
Acq On : 23 Aug 2013 15:17
Operator : twk-sop525r16
Sample : VOC_10ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 29 13:09:30 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:55:19 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43487.D
Acq On : 23 Aug 2013 16:05
Operator : twk-sop525r16
Sample : VOC_20ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 29 13:10:13 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:55:19 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	8.341	96	679194	25.00	ppb	0.00
61) Chlorobenzene-d5	11.368	117	470002	25.00	ppb	0.00
82) 1,4-Dichlorobenzene-d4	13.333	152	236652	25.00	ppb	0.00
System Monitoring Compounds						
38) Dibromofluoromethane	7.490	113	187625	25.00	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 100.00%			
42) 1,2-Dichloroethane-d4	7.936	67	114486	25.00	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 100.00%			
65) Toluene-d8	10.032	98	671872	25.00	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 100.00%			
83) 4-Bromofluorobenzene	12.381	176	186239	25.00	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 100.00%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.779	85	251782	20.00	ppb	100
3) Chloromethane	1.971	50	302637	20.00	ppb	100
4) Vinyl chloride	2.103	62	300719	20.00	ppb	100
5) Bromomethane	2.478	96	121102	20.00	ppb	100
6) Chloroethane	2.619	64	121451	20.00	ppb	100
7) Ethanol	3.146	45	29253m	114.51	ppb	
8) Acrolein	3.490	56	235965	200.00	ppb	100
9) Acetonitrile	4.108	41	165111	200.00	ppb	100
10) Trichlorofluoromethane	2.933	101	263521	20.00	ppb	100
11) Acetone	3.693	58	47137	80.00	ppb	100
12) Diethyl Ether	3.308	74	82110	20.00	ppb	100
13) tert-Butanol	4.604	59	695666	1000.00	ppb	100
14) 1,1-Dichloroethene	3.642	96	132145	20.00	ppb	100
15) Acrylonitrile	4.827	53	491796	200.00	ppb	100
16) Iodomethane	3.855	142	175414	20.00	ppb	100
17) Methylene Chloride	4.422	84	174350	20.00	ppb	100
18) Methyl acetate	4.199	74	19579	20.00	ppb	100
19) Allyl chloride	4.209	76	82189	20.00	ppb	100
20) 1,1,2-Trichloro-1,2,2-...	3.662	101	144318	20.00	ppb	100
21) Carbon disulfide	3.956	76	460505	20.00	ppb	100
22) trans-1,2-Dichloroethene	4.918	96	155599	20.00	ppb	100
23) Methyl-t-butyl ether	4.908	73	838691	40.00	ppb	100
24) Hexane	5.455	57	147646	20.00	ppb	100
25) 1,1-Dichloroethane	5.728	63	311551	20.00	ppb	100
26) Propionitrile	6.791	54	173130	200.00	ppb	100
27) Vinyl acetate	5.758	43	334066	20.00	ppb	100
28) Chloroprene	5.850	53	292414	20.00	ppb	100
29) 2-Butanone	6.700	72	57498	80.00	ppb	100
30) Isopropyl ether	5.819	45	627370	20.00	ppb	100
31) Methacrylonitrile	7.044	41	90182	20.00	ppb	100
32) cis-1,2-Dichloroethene	6.710	96	175050	20.00	ppb	100
33) Methyl Acrylate	0.000		0	N.D.		
34) Bromochloromethane	7.085	128	75616	20.00	ppb	100
35) Chloroform	7.267	83	310738	20.00	ppb	100
36) 2,2-Dichloropropane	6.710	77	231271	20.00	ppb	100
37) Ethyl tert-butyl ether	6.457	59	504454	20.00	ppb	100
39) Pentafluorobenzene	0.000		0	N.D.		
40) 1-Chlorobutane	7.571	56	572376	20.00	ppb	100
41) Isobutyl Alcohol	7.875	43	130911	400.00	ppb	100

TAL 8/20/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43487.D
Acq On : 23 Aug 2013 16:05
Operator : twk-sop525r16
Sample : VOC_20ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 29 13:10:13 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:55:19 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43)	1,2-Dichloroethane	8.037	62	235755	20.00	ppb	100
44)	1,1,1-Trichloroethane	7.480	97	263100	20.00	ppb	100
45)	1,1-Dichloropropene	7.703	75	230913	20.00	ppb	100
46)	n-Butanol	8.675	56	170909	1000.00	ppb	100
47)	Cyclohexane	7.571	84	427897	40.00	ppb	100
48)	Carbon tetrachloride	7.693	117	204751	20.00	ppb	100
49)	Benzene	7.956	78	653841	20.00	ppb	100
50)	Tert-amyl methyl ether	8.148	87	94365	20.00	ppb	100
51)	Dibromomethane	9.141	93	99198	20.00	ppb	100
52)	1,2-Dichloropropane	9.049	63	184795	20.00	ppb	100
53)	Trichloroethene	8.756	95	172257	20.00	ppb	100
54)	Bromodichloromethane	9.333	83	225600	20.00	ppb	100
55)	1,4-Dioxane	9.130	88	24812	400.00	ppb	100
56)	Methyl methacrylate	9.120	69	89914	20.00	ppb	100
57)	Methyl cyclohexane	9.019	83	236378	20.00	ppb	100
58)	Chloroacetonitrile	9.627	48	1979	200.00	ppb	100
59)	2-Chloroethyl vinyl ether	9.627	63	84233	20.00	ppb	100
60)	cis-1,3-Dichloropropene	9.779	75	268079	20.00	ppb	100
62)	4-Methyl-2-pentanone	9.910	100	59732	80.00	ppb	100
63)	trans-1,3-Dichloropropene	10.325	75	229014	20.00	ppb	100
64)	1,1,2-Trichloroethane	10.508	83	114286	20.00	ppb	100
66)	Toluene	10.092	92	389736	20.00	ppb	100
67)	1,3-Dichloropropane	10.649	76	230149	20.00	ppb	100
68)	Ethyl methacrylate	10.366	69	174178	20.00	ppb	100
69)	2-Hexanone	10.690	58	194906	80.00	ppb	100
70)	Dibromochloromethane	10.852	129	146787	20.00	ppb	100
71)	1,2-Dibromoethane	10.963	107	126414	20.00	ppb	100
72)	Tetrachloroethene	10.589	164	120386	20.00	ppb	100
73)	1,1,1,2-Tetrachloroethane	11.470	131	153416	20.00	ppb	100
74)	Chlorobenzene	11.389	112	411287	20.00	ppb	100
75)	1-Chlorohexane	11.368	91	189150	20.00	ppb	100
76)	Ethylbenzene	11.470	91	719259	20.00	ppb	100
77)	m+p-Xylene	11.581	106	530475	40.00	ppb	100
78)	Bromoform	12.097	173	81166	20.00	ppb	100
79)	Styrene	11.925	104	449770	20.00	ppb	100
80)	o-Xylene	11.915	106	267111	20.00	ppb	100
81)	Isopropylbenzene	12.219	105	619253	20.00	ppb	100
84)	1,1,2,2-Tetrachloroethane	12.472	83	157345	20.00	ppb	100
85)	trans-1,4-Dichloro-2-b...	12.502	53	39843	20.00	ppb	100
86)	Bromobenzene	12.502	156	180861	20.00	ppb	100
87)	1,2,3-Trichloropropane	12.523	110	43920	20.00	ppb	100
88)	n-Propylbenzene	12.563	91	789730	20.00	ppb	100
89)	2-Chlorotoluene	12.654	126	167084	20.00	ppb	100
90)	4-Chlorotoluene	12.746	126	167149	20.00	ppb	100
91)	1,3,5-Trimethylbenzene	12.715	105	530045	20.00	ppb	100
92)	tert-Butylbenzene	12.978	134	104988	20.00	ppb	100
93)	1,2,4-Trimethylbenzene	13.019	105	521338	20.00	ppb	100
94)	sec-Butylbenzene	13.161	105	644919	20.00	ppb	100
95)	1,3-Dichlorobenzene	13.272	146	316990	20.00	ppb	100
96)	1,4-Dichlorobenzene	13.353	146	312875	20.00	ppb	100
97)	p-Isopropyltoluene	13.272	119	510186	20.00	ppb	100
98)	1,2-Dichlorobenzene	13.647	146	298998	20.00	ppb	100
99)	n-Butylbenzene	13.606	91	461393	20.00	ppb	100
100)	1,2-Dibromo-3-chloropr...	14.264	75	23276	20.00	ppb	100
101)	Hexachloroethane	13.880	201	69582	20.00	ppb	100

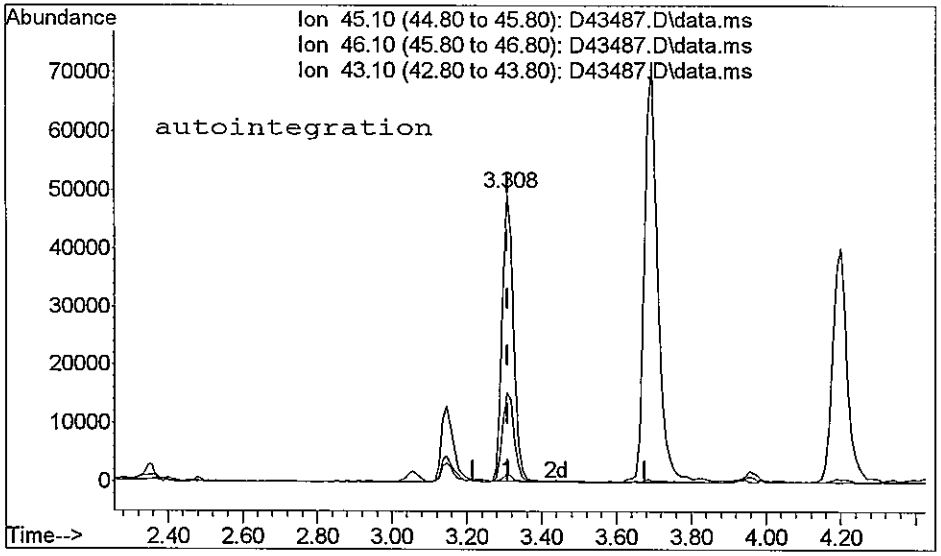
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43487.D
Acq On : 23 Aug 2013 16:05
Operator : twk-sop525r16
Sample : VOC_20ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 29 13:10:13 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:55:19 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
102) 1,2,4-Trichlorobenzene	14.923	180	149683	20.00	ppb	100
103) Naphthalene	15.145	128	311235	20.00	ppb	100
104) Hexachlorobutadiene	15.024	225	62149	20.00	ppb	100
105) 1,2,3-Trichlorobenzene	15.328	180	132537	20.00	ppb	100

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



TIC: D43487.D\data.ms

(7) Ethanol
3.308min (0.000) 400.00 ppb
response 102189

Ion	Exp%	Act%
45.10	100	100
46.10	2.90	2.90
43.10	31.00	30.99
0.00	0.00	0.00

Reason for manual re-integration?

[] missed peak assignment

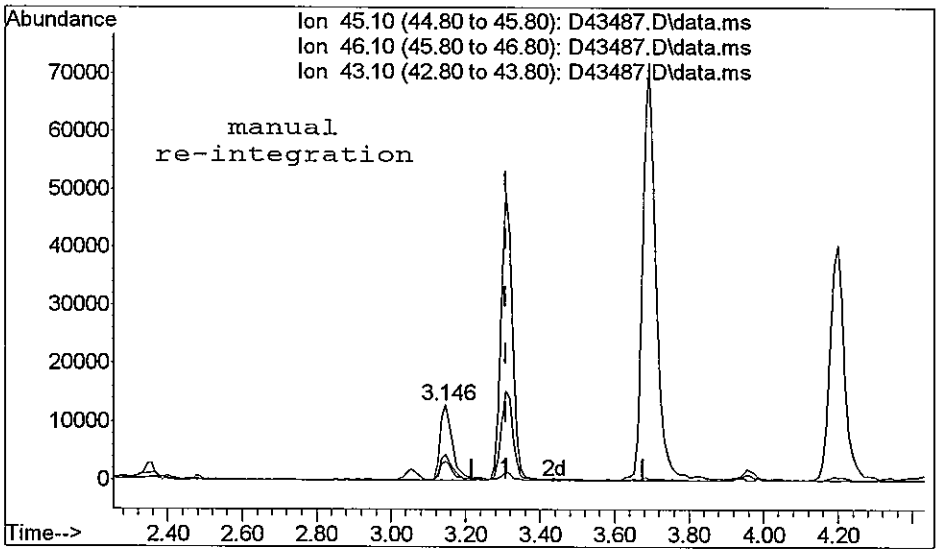
[] peak saturation (detector shutdown)

[] over-integrated peak's area

[] under-integrated peak's area

[X] other (incorrect RT in method)

initials: TA date: 6/29/13



TIC: D43487.D\data.ms

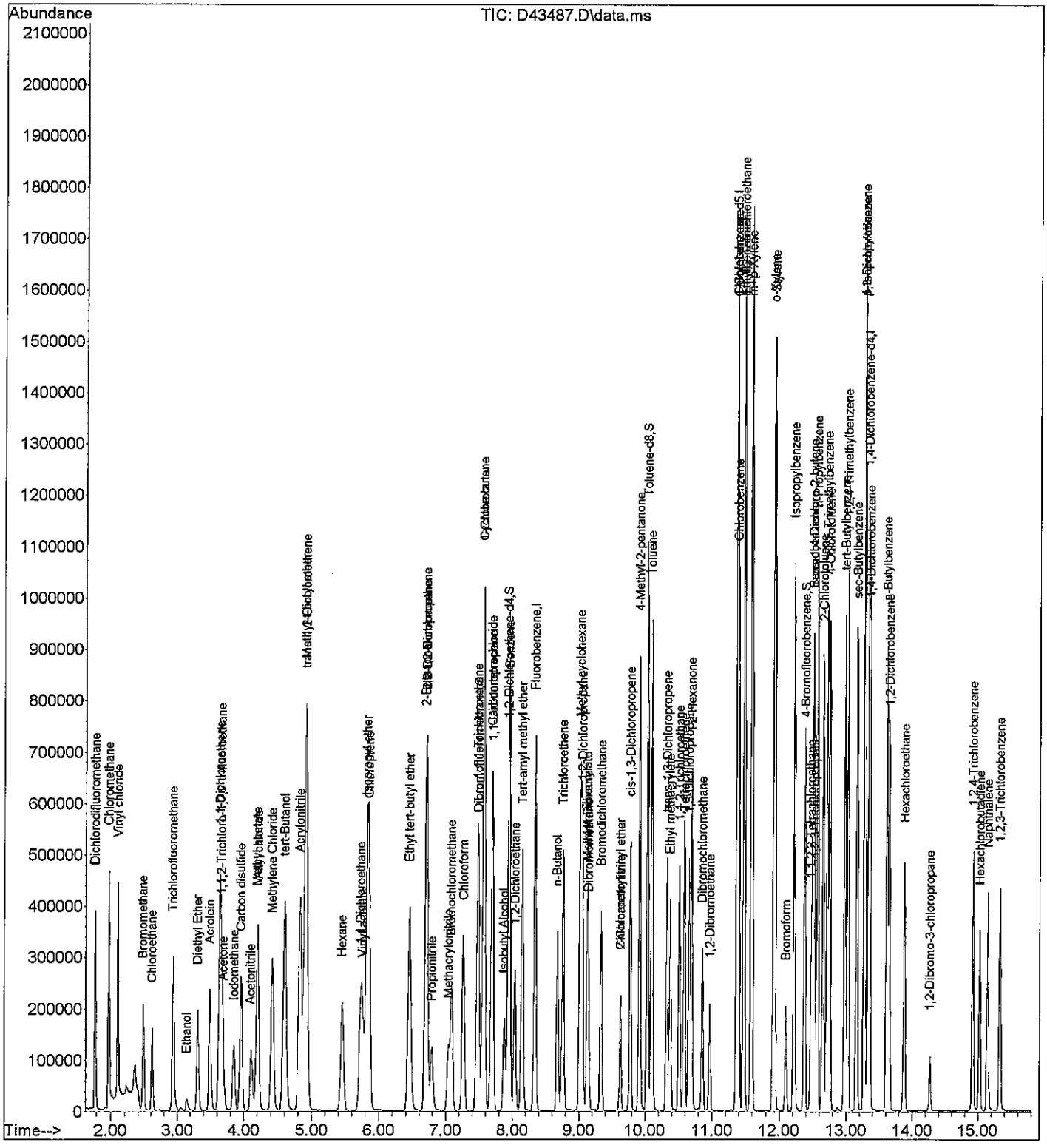
(7) Ethanol
3.146min (-0.162) 114.51 ppb m
response 29253

Ion	Exp%	Act%
45.10	100	100
46.10	2.90	34.54#
43.10	31.00	24.80
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43487.D
Acq On : 23 Aug 2013 16:05
Operator : twk-sop525r16
Sample : VOC_20ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 29 13:10:13 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 16:55:19 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43489.D
Acq On : 23 Aug 2013 16:52
Operator : twk-sop525r16
Sample : VOC_40ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 29 13:11:19 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 17:17:32 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorobenzene	8.341	96	734328	25.00	ppb		0.00
61) Chlorobenzene-d5	11.368	117	517584	25.00	ppb		0.00
82) 1,4-Dichlorobenzene-d4	13.333	152	267780	25.00	ppb		0.00
System Monitoring Compounds							
38) Dibromofluoromethane	7.490	113	201894	25.40	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery =	101.60%			
42) 1,2-Dichloroethane-d4	7.936	67	124546	25.16	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery =	100.64%			
65) Toluene-d8	10.032	98	740239	24.48	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery =	97.92%			
83) 4-Bromofluorobenzene	12.381	176	214720	24.46	ppb		0.00
Spiked Amount 25.000	Range 85 - 115		Recovery =	97.84%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.779	85	547486	37.27	ppb		100
3) Chloromethane	1.971	50	630465	34.18	ppb		99
4) Vinyl chloride	2.103	62	639823	36.37	ppb		100
5) Bromomethane	2.477	96	250824	31.51	ppb		98
6) Chloroethane	2.619	64	260256	37.29	ppb		99
7) Ethanol	3.146	45	57832m	199.87	ppb		
8) Acrolein	3.490	56	513003	404.77	ppb		96
9) Acetonitrile	4.108	41	348654	404.75	ppb		98
10) Trichlorofluoromethane	2.933	101	587868	38.54	ppb		98
11) Acetone	3.693	58	95401	134.33	ppb		93
12) Diethyl Ether	3.308	74	178555	39.45	ppb		98
13) tert-Butanol	4.604	59	1440833	1980.88	ppb		99
14) 1,1-Dichloroethene	3.642	96	287750	40.05	ppb		99
15) Acrylonitrile	4.827	53	1068271	400.66	ppb		99
16) Iodomethane	3.855	142	418869	63.85	ppb		98
17) Methylene Chloride	4.422	84	364439	17.83	ppb		99
18) Methyl acetate	4.199	74	44865	49.66	ppb		81
19) Allyl chloride	4.209	76	180371	37.96	ppb		96
20) 1,1,2-Trichloro-1,2,2-...	3.662	101	320163	39.78	ppb		98
21) Carbon disulfide	3.956	76	1023309	41.37	ppb		99
22) trans-1,2-Dichloroethene	4.918	96	342213	41.02	ppb		98
23) Methyl-t-butyl ether	4.908	73	1836591	81.70	ppb		99
24) Hexane	5.455	57	323583	39.05	ppb		98
25) 1,1-Dichloroethane	5.728	63	677716	40.27	ppb		99
26) Propionitrile	6.791	54	363932	392.06	ppb		97
27) Vinyl acetate	5.758	43	743405	42.66	ppb		99
28) Chloroprene	5.850	53	641886	41.75	ppb		99
29) 2-Butanone	6.700	72	124203	168.03	ppb		98
30) Isopropyl ether	5.819	45	1363660	40.42	ppb		97
31) Methacrylonitrile	7.034	41	190266	37.73	ppb		95
32) cis-1,2-Dichloroethene	6.710	96	390907	41.78	ppb		94
33) Methyl Acrylate	6.720	85	571	55.33	ppb	#	1
34) Bromochloromethane	7.085	128	167182	39.53	ppb		97
35) Chloroform	7.257	83	676284	39.52	ppb		98
36) 2,2-Dichloropropane	6.710	77	498580	37.76	ppb		98
37) Ethyl tert-butyl ether	6.457	59	1103881	39.94	ppb		99
39) Pentafluorobenzene	0.000		0	N.D.			
40) 1-Chlorobutane	7.571	56	1263508	41.54	ppb		100
41) Isobutyl Alcohol	7.875	43	266954	765.39	ppb		97

TM 4/29/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43489.D
Acq On : 23 Aug 2013 16:52
Operator : twk-sop525r16
Sample : VOC_40ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 29 13:11:19 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 17:17:32 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	1,2-Dichloroethane	8.037	62	507455	39.19	ppb		99
44)	1,1,1-Trichloroethane	7.470	97	578969	41.82	ppb		98
45)	1,1-Dichloropropene	7.703	75	508852	41.57	ppb		96
46)	n-Butanol	8.675	56	349842	1956.05	ppb		99
47)	Cyclohexane	7.571	84	962531	82.23	ppb		99
48)	Carbon tetrachloride	7.692	117	471015	47.51	ppb		99
49)	Benzene	7.956	78	1434089	40.02	ppb		99
50)	Tert-amyl methyl ether	8.148	87	206851	40.97	ppb		88
51)	Dibromomethane	9.141	93	214138	40.59	ppb		95
52)	1,2-Dichloropropane	9.049	63	402888	40.52	ppb		99
53)	Trichloroethene	8.756	95	381142	41.65	ppb		98
54)	Bromodichloromethane	9.333	83	490185	43.50	ppb		98
55)	1,4-Dioxane	9.120	88	51256	770.40	ppb	#	75
56)	Methyl methacrylate	9.120	69	196501	42.34	ppb		98
57)	Methyl cyclohexane	9.019	83	525577	41.55	ppb		99
58)	Chloroacetonitrile	9.768	48	24672	541.02	ppb	#	1
59)	2-Chloroethyl vinyl ether	9.627	63	190104	44.01	ppb		94
60)	cis-1,3-Dichloropropene	9.779	75	586165	41.88	ppb		99
62)	4-Methyl-2-pentanone	9.910	100	131356	171.72	ppb		85
63)	trans-1,3-Dichloropropene	10.325	75	508139	42.40	ppb		98
64)	1,1,2-Trichloroethane	10.508	83	252151	39.06	ppb		95
66)	Toluene	10.092	92	841800	39.58	ppb		100
67)	1,3-Dichloropropane	10.649	76	492399	39.53	ppb		98
68)	Ethyl methacrylate	10.366	69	382220	41.21	ppb		99
69)	2-Hexanone	10.690	58	413015	159.05	ppb		94
70)	Dibromochloromethane	10.852	129	327016	47.39	ppb		97
71)	1,2-Dibromoethane	10.963	107	275949	40.43	ppb		97
72)	Tetrachloroethene	10.578	164	276656	41.40	ppb		93
73)	1,1,1,2-Tetrachloroethane	11.470	131	344944	43.89	ppb		96
74)	Chlorobenzene	11.389	112	918561	40.49	ppb		98
75)	1-Chlorohexane	11.368	91	427389	38.34	ppb		98
76)	Ethylbenzene	11.470	91	1590336	41.78	ppb		99
77)	m+p-Xylene	11.581	106	1186142	87.29	ppb		99
78)	Bromoform	12.097	173	195127	52.93	ppb		98
79)	Styrene	11.925	104	1005803	44.43	ppb		99
80)	o-Xylene	11.915	106	603051	44.45	ppb		99
81)	Isopropylbenzene	12.219	105	1369184	43.83	ppb		98
84)	1,1,2,2-Tetrachloroethane	12.472	83	327570	35.75	ppb		98
85)	trans-1,4-Dichloro-2-b...	12.502	53	88708	35.37	ppb		98
86)	Bromobenzene	12.502	156	396573	37.84	ppb		98
87)	1,2,3-Trichloropropane	12.523	110	89654	33.98	ppb	#	72
88)	n-Propylbenzene	12.563	91	1776131	39.00	ppb		100
89)	2-Chlorotoluene	12.654	126	361421	38.37	ppb		95
90)	4-Chlorotoluene	12.746	126	365127	40.02	ppb		100
91)	1,3,5-Trimethylbenzene	12.715	105	1183867	40.22	ppb		98
92)	tert-Butylbenzene	12.978	134	237643	43.20	ppb		94
93)	1,2,4-Trimethylbenzene	13.019	105	1165399	39.40	ppb		97
94)	sec-Butylbenzene	13.151	105	1459664	40.33	ppb		94
95)	1,3-Dichlorobenzene	13.272	146	723681	41.26	ppb		97
96)	1,4-Dichlorobenzene	13.353	146	687488	38.34	ppb		99
97)	p-Isopropyltoluene	13.272	119	1167034	43.08	ppb		99
98)	1,2-Dichlorobenzene	13.647	146	655840	40.30	ppb		96
99)	n-Butylbenzene	13.606	91	1043485	39.83	ppb		99
100)	1,2-Dibromo-3-chloropr...	14.264	75	49314	36.22	ppb		94
101)	Hexachloroethane	13.880	201	165530	46.46	ppb		92

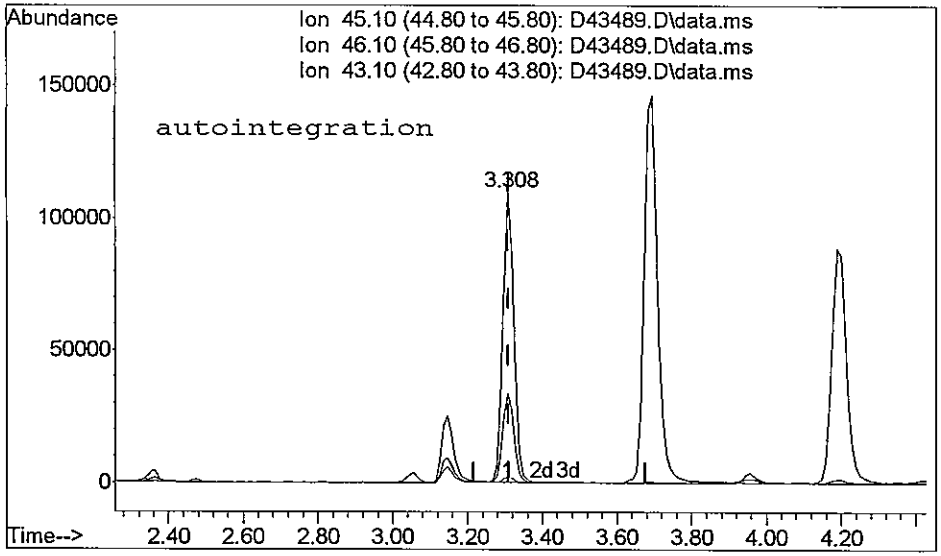
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43489.D
Acq On : 23 Aug 2013 16:52
Operator : twk-sop525r16
Sample : VOC_40ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 29 13:11:19 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 17:17:32 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
102) 1,2,4-Trichlorobenzene	14.923	180	327843	38.84	ppb	99
103) Naphthalene	15.145	128	679572	39.35	ppb	99
104) Hexachlorobutadiene	15.024	225	137727	39.46	ppb	96
105) 1,2,3-Trichlorobenzene	15.328	180	291273	39.35	ppb	98

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



TIC: D43489.D\data.ms

(7) Ethanol
3.308min (-0.000) 763.21 ppb
response 220836

Ion	Exp%	Act%
45.10	100	100
46.10	2.90	2.01#
43.10	31.00	30.49
0.00	0.00	0.00

Reason for manual re-integration?

[] missed peak assignment

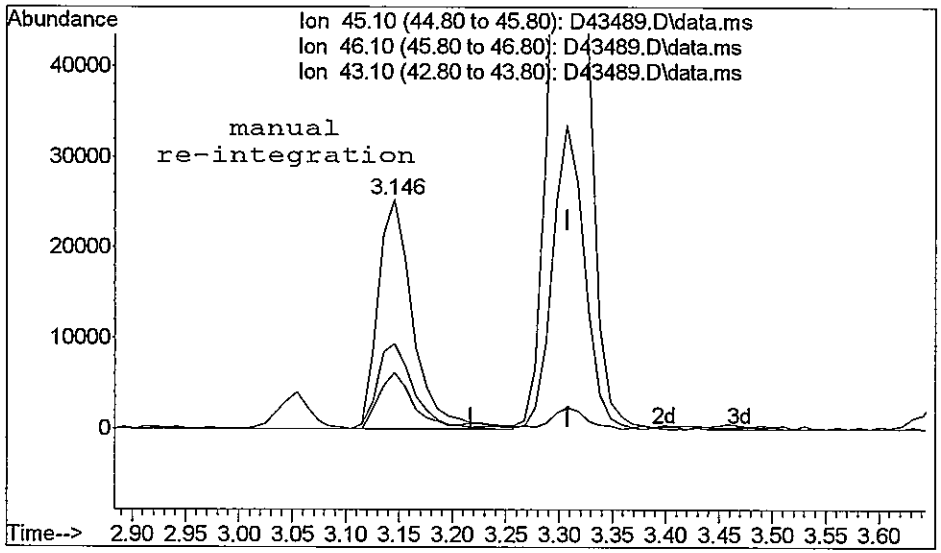
[] peak saturation (detector shutdown)

[] over-integrated peak's area

[] under-integrated peak's area

[X] other (incorrect RT in Method)

initials: ___ date: 8 / 29 / 13



TIC: D43489.D\data.ms

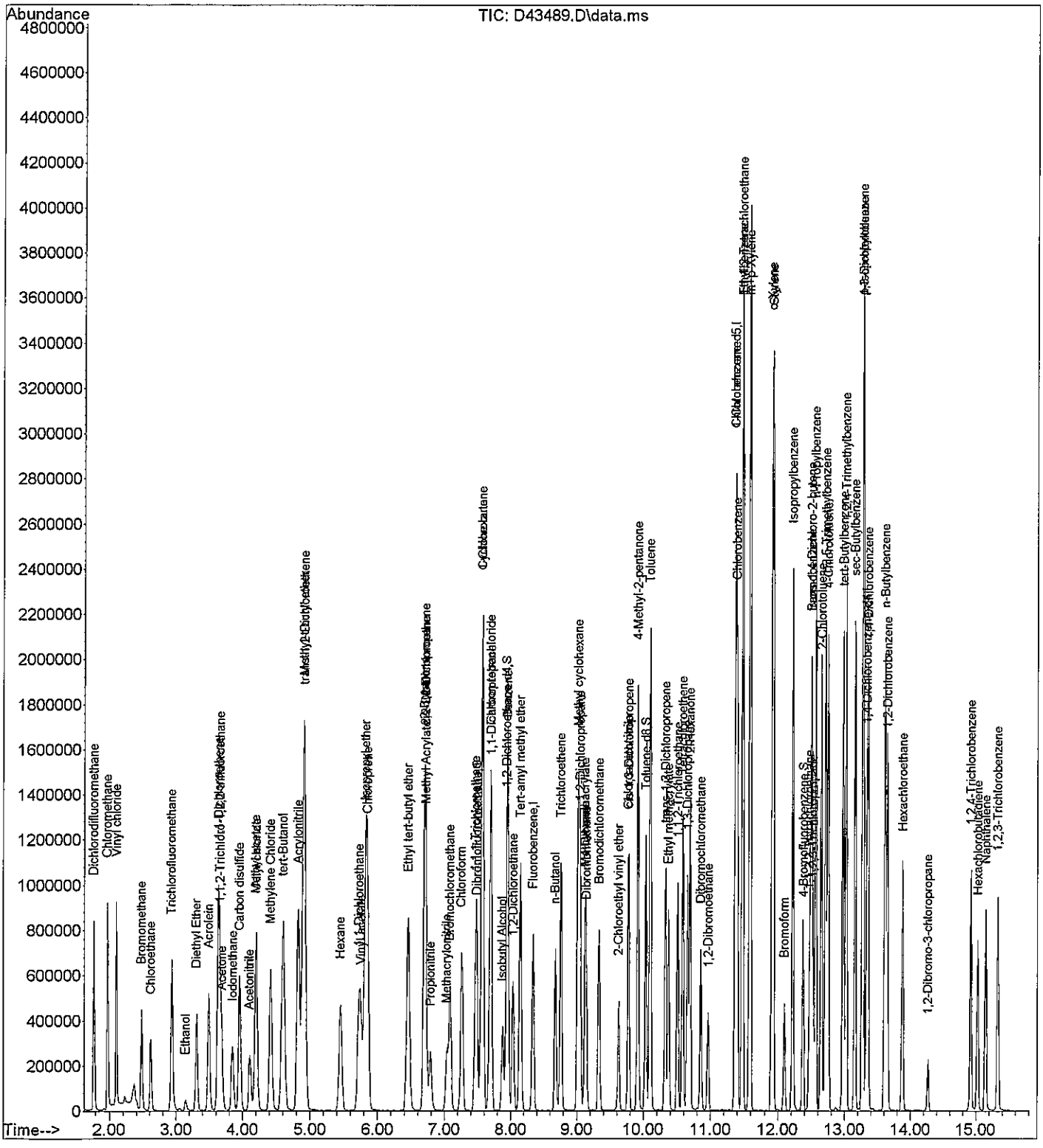
(7) Ethanol
3.146min (-0.162) 199.87 ppb m
response 57832

Ion	Exp%	Act%
45.10	100	100
46.10	2.90	37.08#
43.10	31.00	24.44
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43489.D
Acq On : 23 Aug 2013 16:52
Operator : twk-sop525r16
Sample : VOC_40ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 29 13:11:19 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 17:17:32 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43491.D
Acq On : 23 Aug 2013 17:39
Operator : twk-sop525r16
Sample : VOC_60ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 29 13:12:10 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 17:22:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	8.341	96	718275	25.00	ppb	0.00
61) Chlorobenzene-d5	11.368	117	519467	25.00	ppb	0.00
82) 1,4-Dichlorobenzene-d4	13.333	152	263086	25.00	ppb	0.00
System Monitoring Compounds						
38) Dibromofluoromethane	7.490	113	201821	25.90	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 103.60%			
42) 1,2-Dichloroethane-d4	7.936	67	122464	25.27	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 101.08%			
65) Toluene-d8	10.032	98	728248	24.06	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 96.24%			
83) 4-Bromofluorobenzene	12.381	176	212102	24.66	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 98.64%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.779	85	809736	56.91	ppb	98
3) Chloromethane	1.971	50	899633	50.92	ppb	99
4) Vinyl chloride	2.103	62	926216	54.53	ppb	100
5) Bromomethane	2.467	96	378722	50.17	ppb	97
6) Chloroethane	2.609	64	385107	56.96	ppb	97
7) Ethanol	3.146	45	88883m	316.12	ppb	
8) Acrolein	3.490	56	765758	616.65	ppb	98
9) Acetonitrile	4.108	41	523100	619.78	ppb	97
10) Trichlorofluoromethane	2.933	101	851706	57.38	ppb	99
11) Acetone	3.693	58	136928	201.74	ppb	96
12) Diethyl Ether	3.308	74	264835	59.94	ppb	95
13) tert-Butanol	4.604	59	2117680	2980.56	ppb	99
14) 1,1-Dichloroethene	3.632	96	432558	61.54	ppb	97
15) Acrylonitrile	4.827	53	1589594	609.36	ppb	99
16) Iodomethane	3.855	142	642847	92.32	ppb	99
17) Methylene Chloride	4.422	84	527424	28.65	ppb	99
18) Methyl acetate	4.199	74	66601	65.43	ppb	79
19) Allyl chloride	4.209	76	270279	58.57	ppb	91
20) 1,1,2-Trichloro-1,2,2-...	3.652	101	474649	60.34	ppb	95
21) Carbon disulfide	3.956	76	1513209	62.23	ppb	99
22) trans-1,2-Dichloroethene	4.918	96	512222	62.54	ppb	96
23) Methyl-t-butyl ether	4.908	73	2725107	123.61	ppb	99
24) Hexane	5.455	57	468951	58.06	ppb	97
25) 1,1-Dichloroethane	5.728	63	1007085	61.12	ppb	99
26) Propionitrile	6.791	54	552092	609.79	ppb	95
27) Vinyl acetate	5.758	43	1132747	65.84	ppb	100
28) Chloroprene	5.850	53	955612	63.15	ppb	99
29) 2-Butanone	6.700	72	180279	247.57	ppb	96
30) Isopropyl ether	5.819	45	2038721	61.69	ppb	99
31) Methacrylonitrile	7.034	41	287964	58.86	ppb	94
32) cis-1,2-Dichloroethene	6.710	96	578296	62.80	ppb	96
33) Methyl Acrylate	0.000		0	N.D.	d	
34) Bromochloromethane	7.085	128	254022	61.51	ppb	90
35) Chloroform	7.267	83	997228	59.68	ppb	99
36) 2,2-Dichloropropane	6.710	77	723624	56.49	ppb	99
37) Ethyl tert-butyl ether	6.457	59	1651625	61.11	ppb	98
39) Pentafluorobenzene	0.000		0	N.D.	d	
40) 1-Chlorobutane	0.000		0	N.D.	d	
41) Isobutyl Alcohol	7.875	43	398227	1174.55	ppb	97

mr 8/29/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43491.D
Acq On : 23 Aug 2013 17:39
Operator : twk-sop525r16
Sample : VOC_60ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 29 13:12:10 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 17:22:34 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	1,2-Dichloroethane	8.037	62	754765	59.76	ppb		98
44)	1,1,1-Trichloroethane	7.480	97	863038	63.32	ppb		98
45)	1,1-Dichloropropene	7.703	75	760777	63.18	ppb		97
46)	n-Butanol	8.675	56	533745	3060.60	ppb		97
47)	Cyclohexane	7.571	84	1428682	124.35	ppb		98
48)	Carbon tetrachloride	7.682	117	708928	71.20	ppb		100
49)	Benzene	7.956	78	2109141	60.17	ppb		99
50)	Tert-amyl methyl ether	8.148	87	306364	61.82	ppb		96
51)	Dibromomethane	9.141	93	325699	62.99	ppb		94
52)	1,2-Dichloropropane	9.049	63	596088	61.18	ppb		100
53)	Trichloroethene	8.756	95	561589	62.38	ppb		98
54)	Bromodichloromethane	9.333	83	750801	67.27	ppb		96
55)	1,4-Dioxane	9.120	88	76660	1184.24	ppb	#	85
56)	Methyl methacrylate	9.120	69	290860	63.54	ppb		98
57)	Methyl cyclohexane	9.019	83	779334	62.64	ppb		98
58)	Chloroacetonitrile	0.000		0	N.D.	d		
59)	2-Chloroethyl vinyl ether	9.627	63	288632	67.35	ppb		96
60)	cis-1,3-Dichloropropene	9.779	75	879423	63.81	ppb		99
62)	4-Methyl-2-pentanone	9.910	100	203702	262.58	ppb		75
63)	trans-1,3-Dichloropropene	10.325	75	766767	63.21	ppb		96
64)	1,1,2-Trichloroethane	10.508	83	376888	58.37	ppb		94
66)	Toluene	10.092	92	1260645	59.15	ppb		98
67)	1,3-Dichloropropane	10.649	76	732461	58.69	ppb		97
68)	Ethyl methacrylate	10.366	69	585292	62.61	ppb		100
69)	2-Hexanone	10.690	58	609677	234.13	ppb		95
70)	Dibromochloromethane	10.852	129	509272	71.64	ppb		97
71)	1,2-Dibromoethane	10.963	107	414046	60.34	ppb	#	98
72)	Tetrachloroethene	10.579	164	413460	61.38	ppb		92
73)	1,1,1,2-Tetrachloroethane	11.470	131	519055	64.90	ppb		97
74)	Chlorobenzene	11.389	112	1379594	60.49	ppb		98
75)	1-Chlorohexane	11.368	91	637494	57.32	ppb		98
76)	Ethylbenzene	11.470	91	2372295	61.70	ppb		99
77)	m+p-Xylene	11.581	106	1799201	130.44	ppb		99
78)	Bromoform	12.097	173	303600	78.43	ppb		98
79)	Styrene	11.925	104	1525081	66.08	ppb		99
80)	o-Xylene	11.915	106	904623	65.39	ppb		99
81)	Isopropylbenzene	12.219	105	2068497	65.08	ppb		98
84)	1,1,2,2-Tetrachloroethane	12.472	83	483566	54.54	ppb		100
85)	trans-1,4-Dichloro-2-b...	12.503	53	133349	55.02	ppb		93
86)	Bromobenzene	12.503	156	601872	58.91	ppb		97
87)	1,2,3-Trichloropropane	12.523	110	140028	55.21	ppb	#	83
88)	n-Propylbenzene	12.563	91	2655746	59.57	ppb		100
89)	2-Chlorotoluene	12.654	126	544589	59.19	ppb		93
90)	4-Chlorotoluene	12.756	126	557977	62.24	ppb		72
91)	1,3,5-Trimethylbenzene	12.715	105	1791699	61.91	ppb		99
92)	tert-Butylbenzene	12.978	134	358842	65.65	ppb		98
93)	1,2,4-Trimethylbenzene	13.019	105	1758341	60.64	ppb		98
94)	sec-Butylbenzene	13.161	105	2213172	62.16	ppb		99
95)	1,3-Dichlorobenzene	13.272	146	1091102	63.04	ppb		97
96)	1,4-Dichlorobenzene	13.353	146	1033966	59.04	ppb		99
97)	p-Isopropyltoluene	13.272	119	1770666	65.80	ppb		99
98)	1,2-Dichlorobenzene	13.647	146	978553	61.14	ppb		97
99)	n-Butylbenzene	13.606	91	1571031	61.08	ppb		99
100)	1,2-Dibromo-3-chloropr...	14.264	75	71911	54.50	ppb		94
101)	Hexachloroethane	13.880	201	263667	73.63	ppb		92

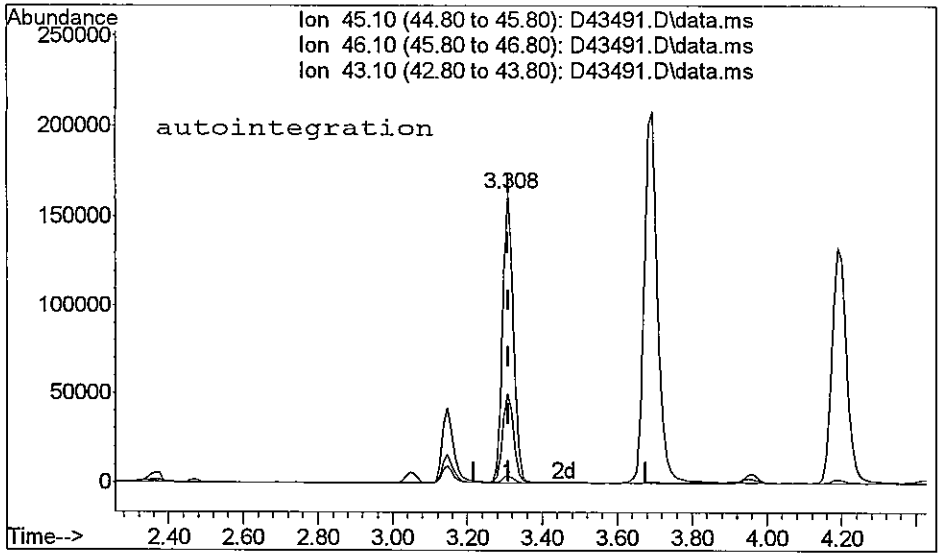
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43491.D
Acq On : 23 Aug 2013 17:39
Operator : twk-sop525r16
Sample : VOC_60ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 29 13:12:10 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 17:22:34 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
102) 1,2,4-Trichlorobenzene	14.923	180	500804	60.65	ppb	98
103) Naphthalene	15.145	128	1032687	61.00	ppb	99
104) Hexachlorobutadiene	15.024	225	210858	61.61	ppb	94
105) 1,2,3-Trichlorobenzene	15.328	180	450748	62.13	ppb	97

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



TIC: D43491.D\data.ms

(7) Ethanol
3.308min (+0.000) 1173.10 ppb
response 329837

Ion	Exp%	Act%
45.10	100	100
46.10	2.90	2.66
43.10	31.00	30.39
0.00	0.00	0.00

Reason for manual re-integration?

[] missed peak assignment

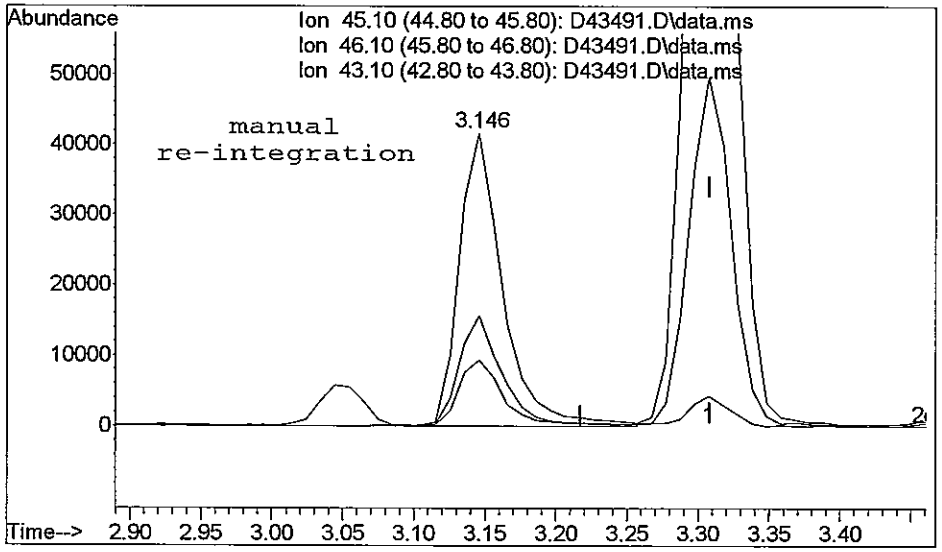
[] peak saturation (detector shutdown)

[] over-integrated peak's area

[] under-integrated peak's area

[X] other (incorrect RT in method)

initials: TM date: 8/22/13



TIC: D43491.D\data.ms

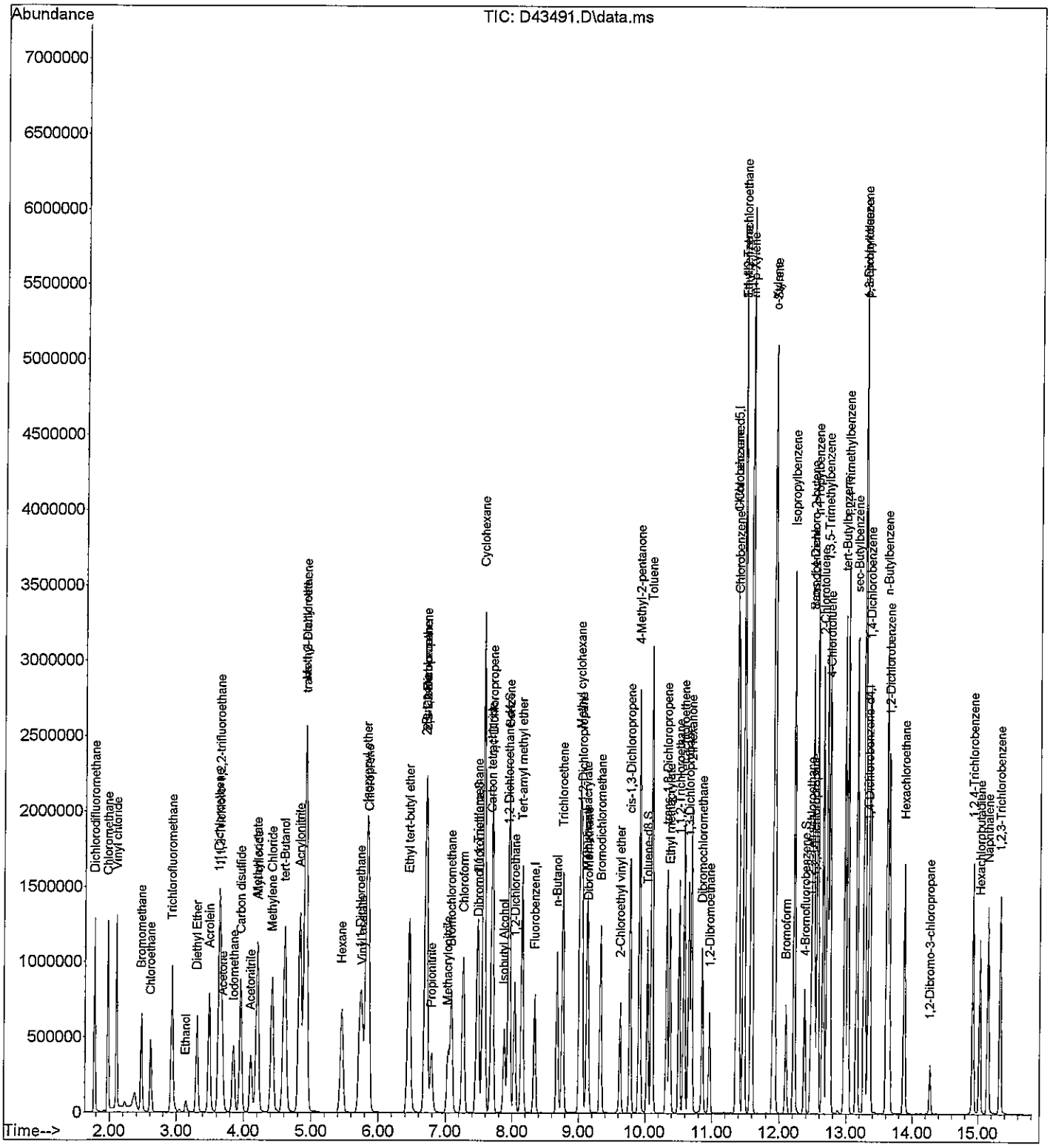
(7) Ethanol
3.146min (-0.162) 316.12 ppb m
response 88883

Ion	Exp%	Act%
45.10	100	100
46.10	2.90	37.52#
43.10	31.00	22.39
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43491.D
Acq On : 23 Aug 2013 17:39
Operator : twk-sop525r16
Sample : VOC_60ppb_ICAL
Misc : 10mL un-heated purge
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 29 13:12:10 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 23 17:22:34 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43494.D
Acq On : 23 Aug 2013 18:50
Operator : twk-sop525r16
Sample : VL130823-4ICV
Misc : 10mL un-heated purge
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 29 13:20:49 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Thu Aug 29 13:20:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	8.341	96	688008	25.00	ppb	0.00
61) Chlorobenzene-d5	11.368	117	469778	25.00	ppb	0.00
82) 1,4-Dichlorobenzene-d4	13.333	152	226182	25.00	ppb	0.00
System Monitoring Compounds						
38) Dibromofluoromethane	7.490	113	184756	24.66	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 98.64%			
42) 1,2-Dichloroethane-d4	7.936	67	114459	24.63	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 98.52%			
65) Toluene-d8	10.032	98	684169	25.10	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 100.40%			
83) 4-Bromofluorobenzene	12.381	176	180530	24.45	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 97.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.779	85	115147	8.50	ppb	95
3) Chloromethane	1.971	50	143812	8.66	ppb	98
4) Vinyl chloride	2.103	62	143771	8.94	ppb	99
5) Bromomethane	2.488	96	64863	9.16	ppb	95
6) Chloroethane	2.619	64	58305	9.06	ppb	98
7) Ethanol	3.146	45	15879	215.09	ppb	97
8) Acrolein	3.490	56	121676	101.94	ppb	95
9) Acetonitrile	4.118	41	83020	102.27	ppb	97
10) Trichlorofluoromethane	2.933	101	131745	9.32	ppb	100
11) Acetone	3.693	58	22020	38.27	ppb	78
12) Diethyl Ether	3.308	74	42968	10.15	ppb	95
13) tert-Butanol	4.604	59	354751	521.69	ppb	98
14) 1,1-Dichloroethene	3.642	96	65683	9.72	ppb	98
15) Acrylonitrile	4.827	53	249359	99.60	ppb	96
16) Iodomethane	3.855	142	70786	8.68	ppb	95
17) Methylene Chloride	4.422	84	103609	10.61	ppb	96
18) Methyl acetate	4.199	74	10767	10.90	ppb	74
19) Allyl chloride	4.209	76	43700	9.92	ppb	86
20) 1,1,2-Trichloro-1,2,2-...	3.662	101	69678	9.24	ppb	97
21) Carbon disulfide	3.956	76	225322	9.63	ppb	99
22) trans-1,2-Dichloroethene	4.918	96	75421	9.56	ppb	93
23) Methyl-t-butyl ether	4.908	73	427994	20.20	ppb	98
24) Hexane	5.455	57	69926	9.07	ppb	97
25) 1,1-Dichloroethane	5.728	63	159164	10.06	ppb	98
26) Propionitrile	6.791	54	90953	104.66	ppb	98
27) Vinyl acetate	5.758	43	158728	9.52	ppb	99
28) Chloroprene	5.850	53	145285	9.96	ppb	98
29) 2-Butanone	6.700	72	29128	41.60	ppb	98
30) Isopropyl ether	5.819	45	317769	10.00	ppb	99
31) Methacrylonitrile	7.034	41	44987	9.62	ppb	92
32) cis-1,2-Dichloroethene	6.710	96	87705	9.88	ppb	96
33) Methyl Acrylate	0.000		0	N.D.		
34) Bromochloromethane	7.085	128	38696	9.75	ppb	92
35) Chloroform	7.267	83	156664	9.79	ppb	96
36) 2,2-Dichloropropane	6.710	77	104877	8.61	ppb	97
37) Ethyl tert-butyl ether	6.457	59	259196	9.99	ppb	98
39) Pentafluorobenzene	0.000		0	N.D.		
40) 1-Chlorobutane	7.571	56	283346	No Calib	#	
41) Isobutyl Alcohol	7.875	43	68135	210.36	ppb	97

Tue 8/29/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43494.D
Acq On : 23 Aug 2013 18:50
Operator : twk-sop525r16
Sample : VL130823-4ICV
Misc : 10mL un-heated purge
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 29 13:20:49 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Thu Aug 29 13:20:38 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	1,2-Dichloroethane	8.037	62	120028	9.93	ppb		95
44)	1,1,1-Trichloroethane	7.470	97	130361	9.92	ppb		97
45)	1,1-Dichloropropene	7.703	75	113103	9.74	ppb		98
46)	n-Butanol	8.675	56	89860	536.59	ppb		97
47)	Cyclohexane	7.571	84	218320	19.76	ppb		97
48)	Carbon tetrachloride	7.693	117	99013	10.15	ppb		97
49)	Benzene	7.956	78	328933	9.79	ppb		98
50)	Tert-amyl methyl ether	8.148	87	48735	10.23	ppb		93
51)	Dibromomethane	9.141	93	49606	9.95	ppb		96
52)	1,2-Dichloropropane	9.049	63	93101	9.95	ppb		99
53)	Trichloroethene	8.766	95	85528	9.87	ppb		92
54)	Bromodichloromethane	9.333	83	114575	10.56	ppb		99
55)	1,4-Dioxane	9.120	88	12352	199.53	ppb	#	79
56)	Methyl methacrylate	9.120	69	47412	10.73	ppb		97
57)	Methyl cyclohexane	9.019	83	116593	9.73	ppb		98
58)	Chloroacetonitrile	9.768	48	5433	No Calib		#	
59)	2-Chloroethyl vinyl ether	9.627	63	43229	10.37	ppb		96
60)	cis-1,3-Dichloropropene	9.779	75	128634	9.67	ppb		98
62)	4-Methyl-2-pentanone	9.910	100	32748	46.14	ppb		92
63)	trans-1,3-Dichloropropene	10.325	75	114204	10.34	ppb		99
64)	1,1,2-Trichloroethane	10.508	83	59647	10.25	ppb		96
66)	Toluene	10.092	92	192158	9.99	ppb		97
67)	1,3-Dichloropropane	10.649	76	118928	10.57	ppb		98
68)	Ethyl methacrylate	10.366	69	91919	10.81	ppb		99
69)	2-Hexanone	10.690	58	99925	42.56	ppb		99
70)	Dibromochloromethane	10.852	129	73097	11.10	ppb		98
71)	1,2-Dibromoethane	10.963	107	63881	10.29	ppb		92
72)	Tetrachloroethene	10.579	164	63803	10.45	ppb		91
73)	1,1,1,2-Tetrachloroethane	11.470	131	75625	10.35	ppb		92
74)	Chlorobenzene	11.389	112	216814	10.50	ppb		99
75)	1-Chlorohexane	11.368	91	97036	9.70	ppb		97
76)	Ethylbenzene	11.470	91	347436	9.96	ppb		100
77)	m+p-Xylene	11.581	106	261874	20.79	ppb		98
78)	Bromoform	12.097	173	38518	10.60	ppb		99
79)	Styrene	11.925	104	231394	10.95	ppb		99
80)	o-Xylene	11.915	106	131142	10.37	ppb		97
81)	Isopropylbenzene	12.219	105	311442	10.72	ppb		100
84)	1,1,2,2-Tetrachloroethane	12.472	83	80506	10.68	ppb		98
85)	trans-1,4-Dichloro-2-b...	12.503	53	21127	10.25	ppb		90
86)	Bromobenzene	12.503	156	89635	10.23	ppb		92
87)	1,2,3-Trichloropropane	12.523	110	22710	10.52	ppb		96
88)	n-Propylbenzene	12.563	91	392045	10.24	ppb		98
89)	2-Chlorotoluene	12.654	126	81817	10.36	ppb		99
90)	4-Chlorotoluene	12.756	126	81520	10.53	ppb		71
91)	1,3,5-Trimethylbenzene	12.715	105	260724	10.44	ppb		98
92)	tert-Butylbenzene	12.978	134	52758	11.10	ppb		91
93)	1,2,4-Trimethylbenzene	13.019	105	255373	10.23	ppb		97
94)	sec-Butylbenzene	13.161	105	320236	10.42	ppb		96
95)	1,3-Dichlorobenzene	13.272	146	154883	10.34	ppb		97
96)	1,4-Dichlorobenzene	13.353	146	152859	10.17	ppb		98
97)	p-Isopropyltoluene	13.272	119	242233	10.35	ppb		99
98)	1,2-Dichlorobenzene	13.647	146	143251	10.39	ppb		96
99)	n-Butylbenzene	13.606	91	223505	10.08	ppb		99
100)	1,2-Dibromo-3-chloropr...	14.265	75	11153	10.41	ppb		91
101)	Hexachloroethane	13.880	201	31965	10.10	ppb		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43494.D
Acq On : 23 Aug 2013 18:50
Operator : twk-sop525r16
Sample : VL130823-4ICV
Misc : 10mL un-heated purge
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 29 13:20:49 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Thu Aug 29 13:20:38 2013
Response via : Initial Calibration

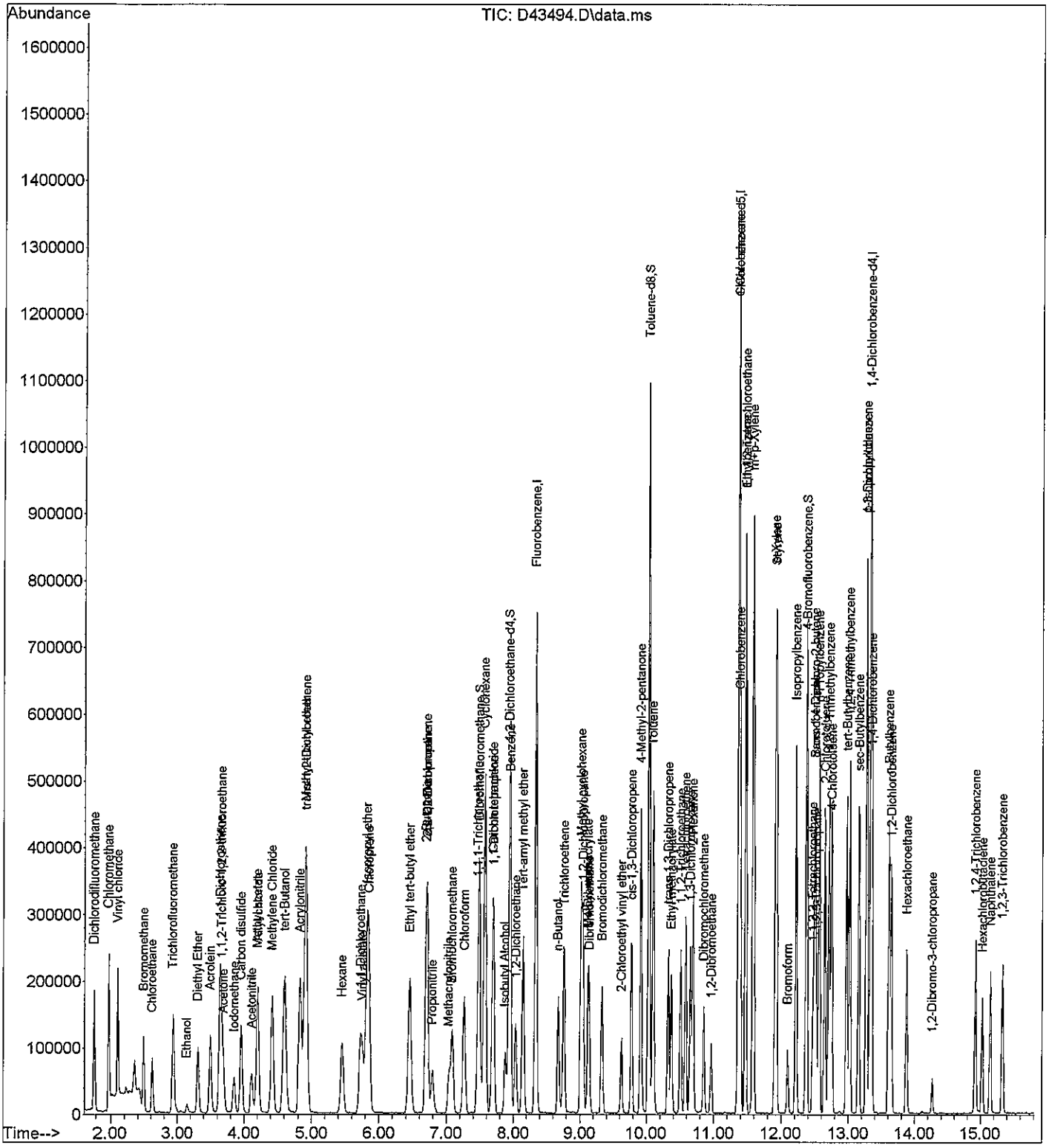
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
102) 1,2,4-Trichlorobenzene	14.923	180	77868	10.95	ppb	98
103) Naphthalene	15.145	128	159773	10.95	ppb	99
104) Hexachlorobutadiene	15.024	225	30339	10.28	ppb	96
105) 1,2,3-Trichlorobenzene	15.328	180	66088	10.55	ppb	94

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\082313\
Data File : D43494.D
Acq On : 23 Aug 2013 18:50
Operator : twk-sop525r16
Sample : VL130823-4ICV
Misc : 10mL un-heated purge
ALS Vial : 21 Sample Multiplier: 1

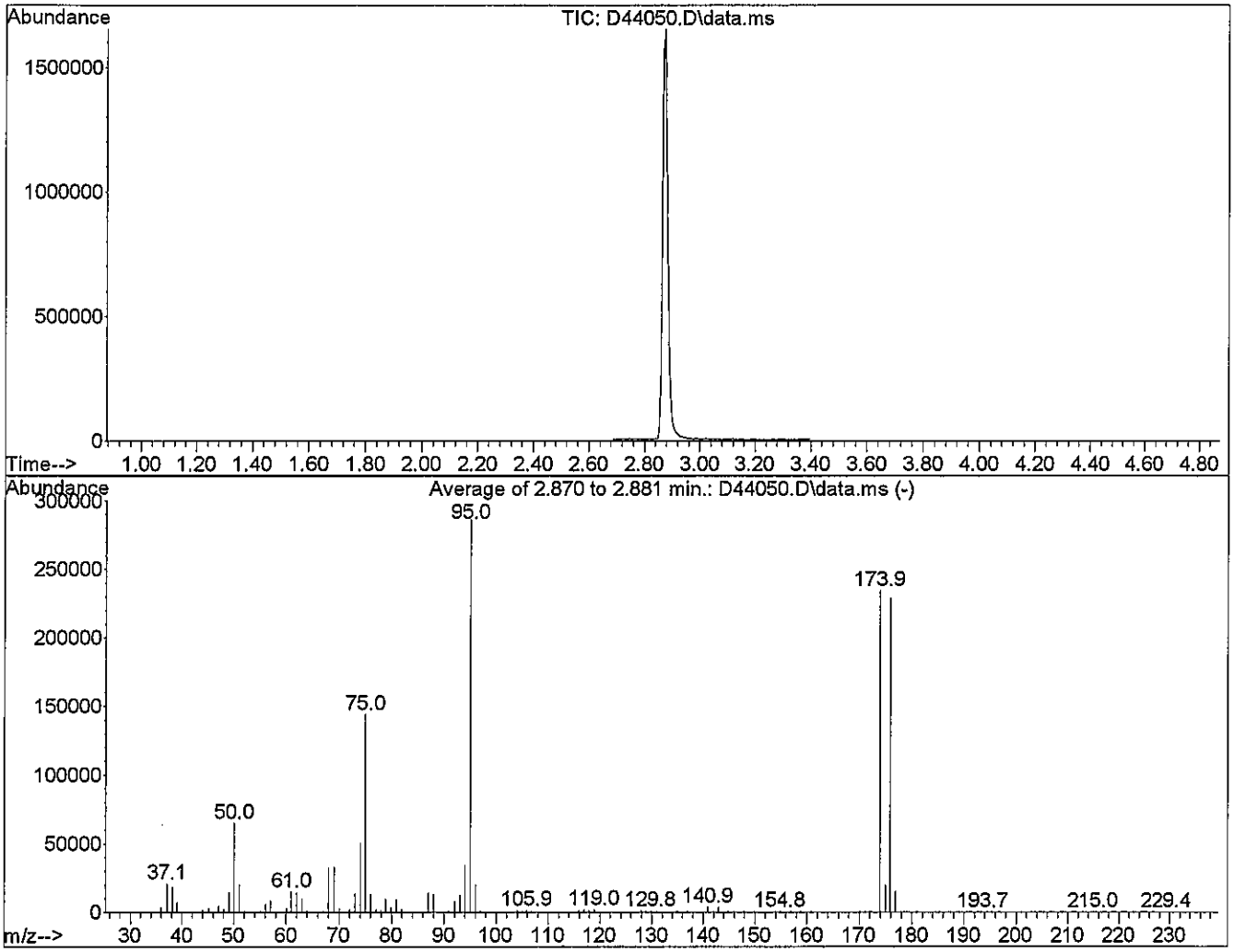
Quant Time: Aug 29 13:20:49 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Thu Aug 29 13:20:38 2013
Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44050.D
Acq On : 7 Sep 2013 17:08
Operator : sdw-sop525r16
Sample : BFB-TUNE-1
Misc : 50ng 4-BFB (1uL direct injection)
ALS Vial : 100 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\082313W.M
Title :
Last Update : Fri Aug 30 20:44:53 2013



AutoFind: Scans 36, 37, 38; Background Corrected with Scan 29

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.7	64869	PASS
75	95	30	60	50.4	144112	PASS
95	95	100	100	100.0	286101	PASS
96	95	5	9	6.9	19837	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	81.8	234154	PASS
175	174	5	9	8.3	19354	PASS
176	174	95	101	97.6	228458	PASS
177	176	5	9	6.6	15102	PASS

GW 9/10/13

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44052.D
Acq On : 7 Sep 2013 17:45
Operator : sdw-sop525r16
Sample : VL130907-4CCS
Misc : 10mL un-heated purge
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 07 18:08:58 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	8.341	96	649956	25.00 ppb	0.00
61) Chlorobenzene-d5	11.368	117	459351	25.00 ppb	0.00
82) 1,4-Dichlorobenzene-d4	13.333	152	217771	25.00 ppb	0.00
System Monitoring Compounds					
38) Dibromofluoromethane	7.490	113	171367	24.21 ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 96.84%		
42) 1,2-Dichloroethane-d4	7.936	67	107508	24.49 ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 97.96%		
65) Toluene-d8	10.032	98	651797	24.45 ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 97.80%		
83) 4-Bromofluorobenzene	12.381	176	179189	25.21 ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 100.84%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.779	85	104498	8.17 ppb	98
3) Chloromethane	1.971	50	137700	8.78 ppb	98
4) Vinyl chloride	2.103	62	132423	8.72 ppb	99
5) Bromomethane	2.488	96	60040	8.97 ppb	95
6) Chloroethane	2.619	64	61093	10.05 ppb	100
7) Ethanol	3.146	45	15018	215.34 ppb	94
8) Acrolein	3.490	56	52099	46.20 ppb	100
9) Acetonitrile	4.108	41	81945	106.86 ppb	97
10) Trichlorofluoromethane	2.933	101	131630	9.85 ppb	99
11) Acetone	3.693	58	22613	41.78 ppb	99
12) Diethyl Ether	3.308	74	42542	10.64 ppb	94
13) tert-Butanol	4.604	59	345031	537.10 ppb	99
14) 1,1-Dichloroethene	3.632	96	68767	10.78 ppb	98
15) Acrylonitrile	4.827	53	258690	109.38 ppb	97
16) Iodomethane	3.855	142	69443	8.98 ppb	98
17) Methylene Chloride	4.422	84	98067	10.64 ppb	97
18) Methyl acetate	4.199	74	10271	11.01 ppb	90
19) Allyl chloride	4.209	76	42863	10.30 ppb	97
20) 1,1,2-Trichloro-1,2,2-...	3.652	101	73071	10.26 ppb	97
21) Carbon disulfide	3.956	76	231279	10.46 ppb	97
22) trans-1,2-Dichloroethene	4.918	96	79248	10.64 ppb	98
23) Methyl-t-butyl ether	4.908	73	424533	21.21 ppb	98
24) Hexane	5.455	57	71125	9.77 ppb	97
25) 1,1-Dichloroethane	5.728	63	160933	10.77 ppb	99
26) Propionitrile	6.791	54	88705	108.05 ppb	97
27) Vinyl acetate	5.758	43	163536	10.38 ppb	99
28) Chloroprene	5.850	53	145644	10.57 ppb	98
29) 2-Butanone	6.710	72	28151	42.55 ppb	84
30) Isopropyl ether	5.819	45	321746	10.72 ppb	95
31) Methacrylonitrile	7.044	41	44479	10.07 ppb	96
32) cis-1,2-Dichloroethene	6.710	96	91269	10.89 ppb	98
33) Methyl Acrylate	0.000		0	N.D.	
34) Bromochloromethane	7.095	128	40669	10.85 ppb	70
35) Chloroform	7.257	83	165996	10.98 ppb	99
36) 2,2-Dichloropropane	6.710	77	128331	11.15 ppb	99
37) Ethyl tert-butyl ether	6.457	59	259998	10.61 ppb	98
39) Pentafluorobenzene	0.000		0	N.D.	
40) 1-Chlorobutane	7.571	56	270479	No Calib #	
41) Isobutyl Alcohol	7.875	43	65655	214.57 ppb	99

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Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44052.D
Acq On : 7 Sep 2013 17:45
Operator : sdw-sop525r16
Sample : VL130907-4CCS
Misc : 10mL un-heated purge
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 07 18:08:58 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	1,2-Dichloroethane	8.037	62	120278	10.53	ppb		98
44)	1,1,1-Trichloroethane	7.470	97	130432	10.50	ppb		97
45)	1,1-Dichloropropene	7.703	75	120688	11.00	ppb		99
46)	n-Butanol	8.675	56	85119	538.03	ppb		98
47)	Cyclohexane	7.571	84	209698	20.09	ppb		99
48)	Carbon tetrachloride	7.682	117	101037	10.96	ppb		98
49)	Benzene	7.956	78	340535	10.73	ppb		99
50)	Tert-amyl methyl ether	8.148	87	49138	10.92	ppb		92
51)	Dibromomethane	9.141	93	50508	10.73	ppb		94
52)	1,2-Dichloropropane	9.049	63	97447	11.03	ppb		98
53)	Trichloroethene	8.756	95	88350	10.79	ppb		97
54)	Bromodichloromethane	9.333	83	111653	10.89	ppb		99
55)	1,4-Dioxane	9.130	88	12134	207.49	ppb		95
56)	Methyl methacrylate	9.120	69	44122	10.57	ppb		91
57)	Methyl cyclohexane	9.019	83	102995	9.10	ppb		97
58)	Chloroacetonitrile	9.768	48	5805	No Calib		#	
59)	2-Chloroethyl vinyl ether	9.627	63	43369	11.01	ppb		93
60)	cis-1,3-Dichloropropene	9.768	75	137825	10.97	ppb		94
62)	4-Methyl-2-pentanone	9.910	100	32457	46.76	ppb		81
63)	trans-1,3-Dichloropropene	10.325	75	115390	10.69	ppb		96
64)	1,1,2-Trichloroethane	10.508	83	62288	10.95	ppb		90
66)	Toluene	10.092	92	205696	10.93	ppb		100
67)	1,3-Dichloropropane	10.649	76	119131	10.82	ppb		97
68)	Ethyl methacrylate	10.366	69	88451	10.64	ppb		97
69)	2-Hexanone	10.690	58	99448	43.32	ppb		95
70)	Dibromochloromethane	10.852	129	72778	11.30	ppb		97
71)	1,2-Dibromoethane	10.963	107	64921	10.69	ppb		95
72)	Tetrachloroethene	10.579	164	62636	10.49	ppb		94
73)	1,1,1,2-Tetrachloroethane	11.470	131	79747	11.16	ppb		93
74)	Chlorobenzene	11.389	112	219900	10.89	ppb		98
75)	1-Chlorohexane	11.368	91	93089	9.52	ppb		97
76)	Ethylbenzene	11.470	91	362320	10.62	ppb		99
77)	m+p-Xylene	11.581	106	267262	21.70	ppb		97
78)	Bromoform	12.097	173	39845	11.21	ppb		97
79)	Styrene	11.925	104	229711	11.11	ppb		98
80)	o-Xylene	11.915	106	138905	11.23	ppb		92
81)	Isopropylbenzene	12.219	105	294629	10.37	ppb		99
84)	1,1,2,2-Tetrachloroethane	12.472	83	76831	10.59	ppb		99
85)	trans-1,4-Dichloro-2-b...	12.503	53	20606	10.38	ppb		90
86)	Bromobenzene	12.503	156	91994	10.90	ppb		94
87)	1,2,3-Trichloropropane	12.523	110	23095	11.11	ppb		94
88)	n-Propylbenzene	12.563	91	366866	9.95	ppb		99
89)	2-Chlorotoluene	12.644	126	80020	10.52	ppb		81
90)	4-Chlorotoluene	12.746	126	81379	10.92	ppb		88
91)	1,3,5-Trimethylbenzene	12.715	105	245395	10.20	ppb		99
92)	tert-Butylbenzene	12.978	134	46829	10.23	ppb		98
93)	1,2,4-Trimethylbenzene	13.019	105	248366	10.33	ppb		96
94)	sec-Butylbenzene	13.151	105	283991	9.59	ppb		95
95)	1,3-Dichlorobenzene	13.262	146	154292	10.70	ppb		93
96)	1,4-Dichlorobenzene	13.353	146	155588	10.75	ppb		96
97)	p-Isopropyltoluene	13.272	119	218173	9.68	ppb		98
98)	1,2-Dichlorobenzene	13.637	146	143499	10.81	ppb	#	94
99)	n-Butylbenzene	13.606	91	205205	9.62	ppb		99
100)	1,2-Dibromo-3-chloropr...	14.264	75	10590	10.27	ppb		91
101)	Hexachloroethane	13.880	201	29307	9.61	ppb		93

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44052.D
Acq On : 7 Sep 2013 17:45
Operator : sdw-sop525r16
Sample : VL130907-4CCS
Misc : 10mL un-heated purge
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 07 18:08:58 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration

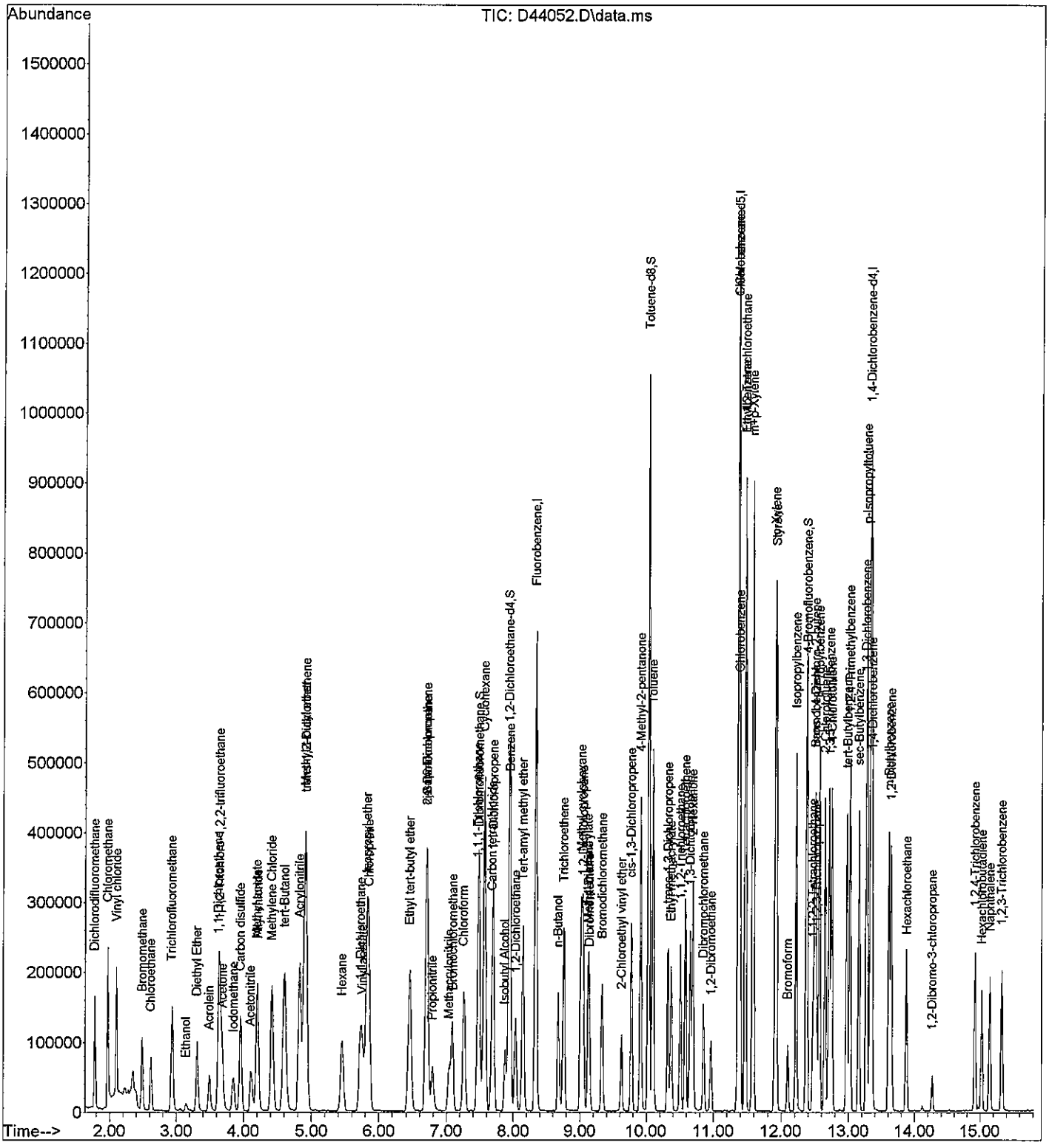
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
102) 1,2,4-Trichlorobenzene	14.923	180	70801	10.34	ppb	99
103) Naphthalene	15.145	128	147685	10.52	ppb	100
104) Hexachlorobutadiene	15.024	225	31669	11.14	ppb	96
105) 1,2,3-Trichlorobenzene	15.328	180	62745	10.40	ppb	95

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44052.D
Acq On : 7 Sep 2013 17:45
Operator : sdw-sop525r16
Sample : VL130907-4CCS
Misc : 10mL un-heated purge
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 07 18:08:58 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration



Sample Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44054.D
Acq On : 7 Sep 2013 18:31
Operator : sdw-sop525r16
Sample : VL130907-4MB
Misc : 10mL un-heated purge
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 07 19:09:54 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	8.341	96	658150	25.00	ppb	0.00
61) Chlorobenzene-d5	11.368	117	455575	25.00	ppb	0.00
82) 1,4-Dichlorobenzene-d4	13.333	152	201358	25.00	ppb	0.00
System Monitoring Compounds						
38) Dibromofluoromethane	7.490	113	173840	24.25	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 97.00%			
42) 1,2-Dichloroethane-d4	7.936	67	105567	23.74	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 94.96%			
65) Toluene-d8	10.032	98	649832	24.58	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 98.32%			
83) 4-Bromofluorobenzene	12.371	176	172804	26.29	ppb	-0.01
Spiked Amount 25.000	Range 85 - 115		Recovery = 105.16%			
Target Compounds						Qvalue
11) Acetone	3.713	58	3441	4.60	ppb	65 <QL
35) Chloroform	7.267	83	7778	0.51	ppb	91 <RL

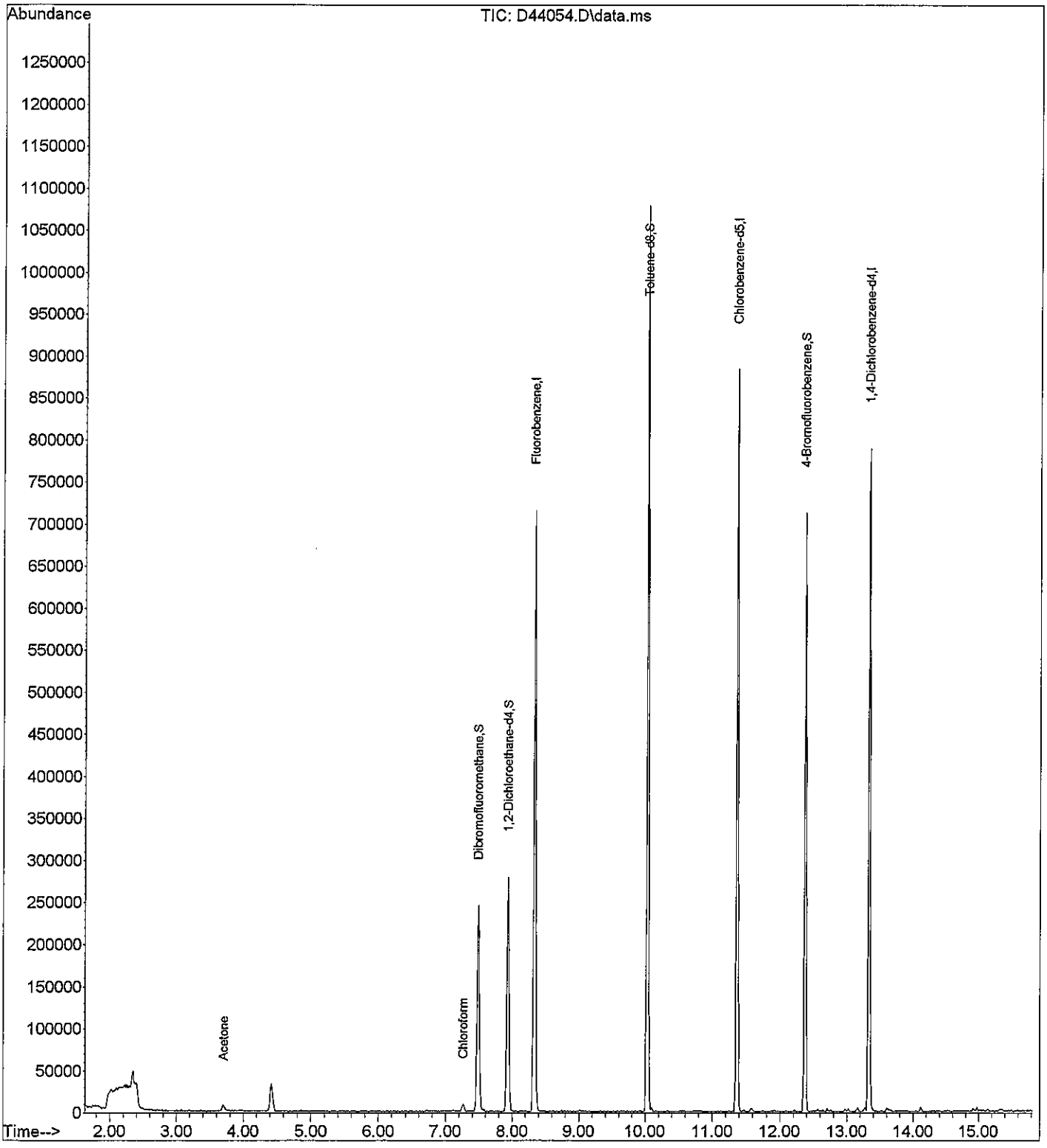
(#) = qualifier out of range (m) = manual integration (+) = signals summed

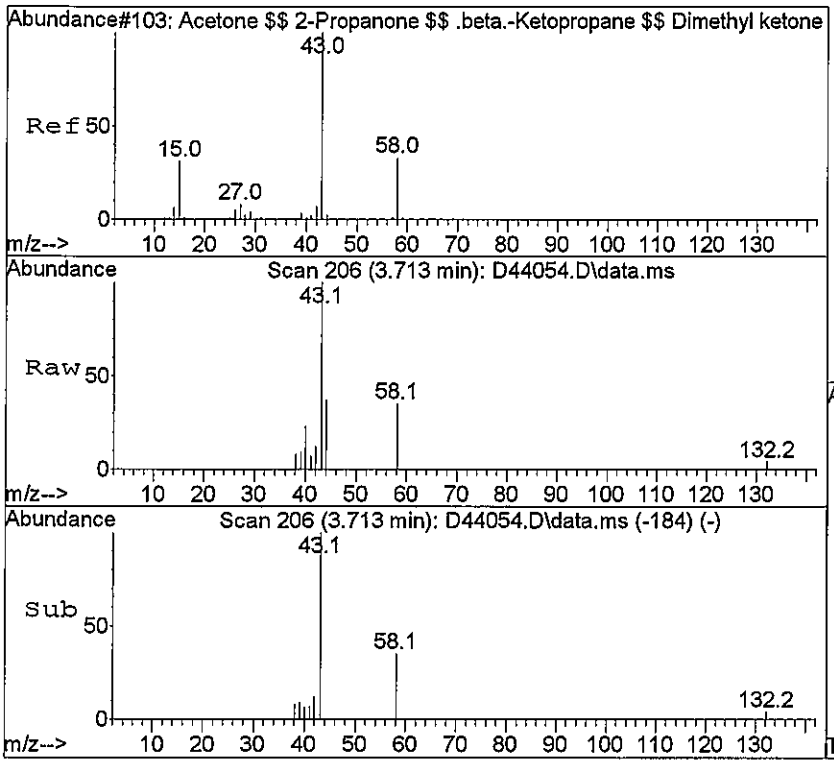
GW 9/7/17

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44054.D
Acq On : 7 Sep 2013 18:31
Operator : sdw-sop525r16
Sample : VL130907-4MB
Misc : 10mL un-heated purge
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 07 19:09:54 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration

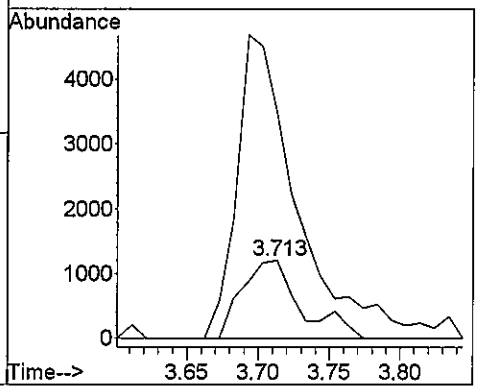


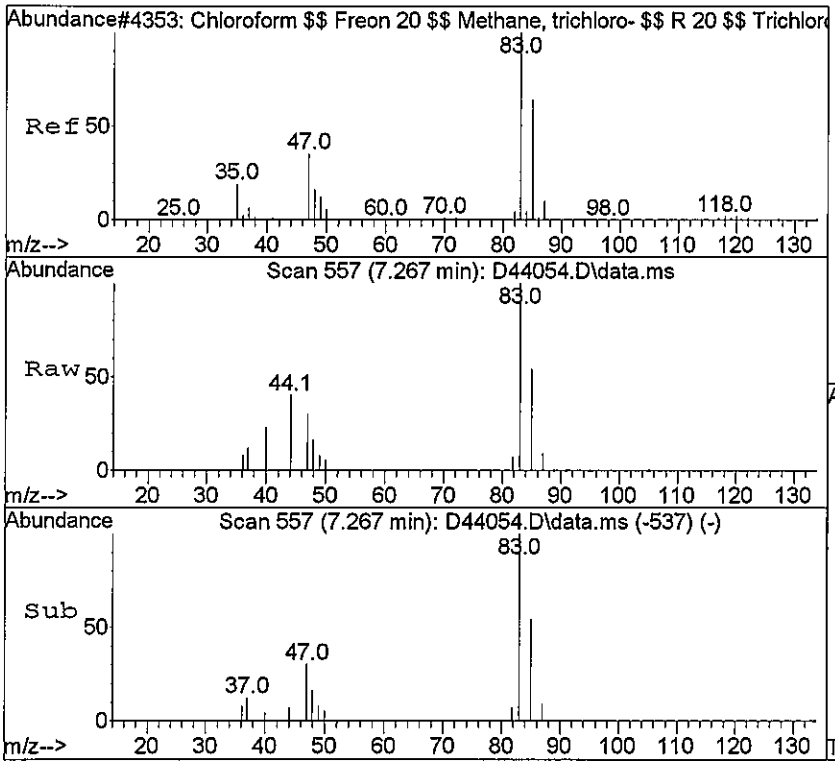


#11
Acetone
Concen: 4.60 ppb
RT: 3.713 min Scan# 206
Delta R.T. 0.021 min
Lab File: D44054.D
Acq: 7 Sep 13 6:31 pm

Tgt Ion: 58 Resp: 3441

Ion	Ratio	Lower	Upper
58	100		
43	287.5	256.4	476.2

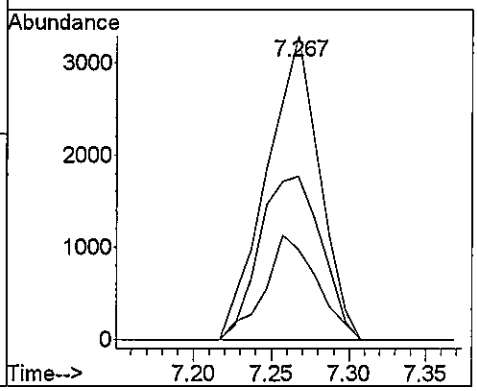




#35
Chloroform
Concen: 0.51 ppb
RT: 7.267 min Scan# 557
Delta R.T. -0.000 min
Lab File: D44054.D
Acq: 7 Sep 13 6:31 pm

Tgt Ion: 83 Resp: 7778

Ion	Ratio	Lower	Upper
83	100		
85	53.7	44.8	83.2
47	29.8	20.7	38.5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44060.D
Acq On : 7 Sep 2013 21:00
Operator : sdw-sop525r16
Sample : 1308545-1
Misc : 10mL un-heated purge
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 09 08:29:01 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	8.341	96	717699	25.00	ppb	0.00
61) Chlorobenzene-d5	11.368	117	485748	25.00	ppb	0.00
82) 1,4-Dichlorobenzene-d4	13.333	152	213330	25.00	ppb	0.00
System Monitoring Compounds						
38) Dibromofluoromethane	7.490	113	190526	24.37	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 97.48%			
42) 1,2-Dichloroethane-d4	7.936	67	115723	23.87	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 95.48%			
65) Toluene-d8	10.032	98	700233	24.84	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 99.36%			
83) 4-Bromofluorobenzene	12.381	176	181790	26.10	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 104.40%			
Target Compounds						Qvalue
13) tert-Butanol	4.614	59	36634	51.64	ppb	99

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

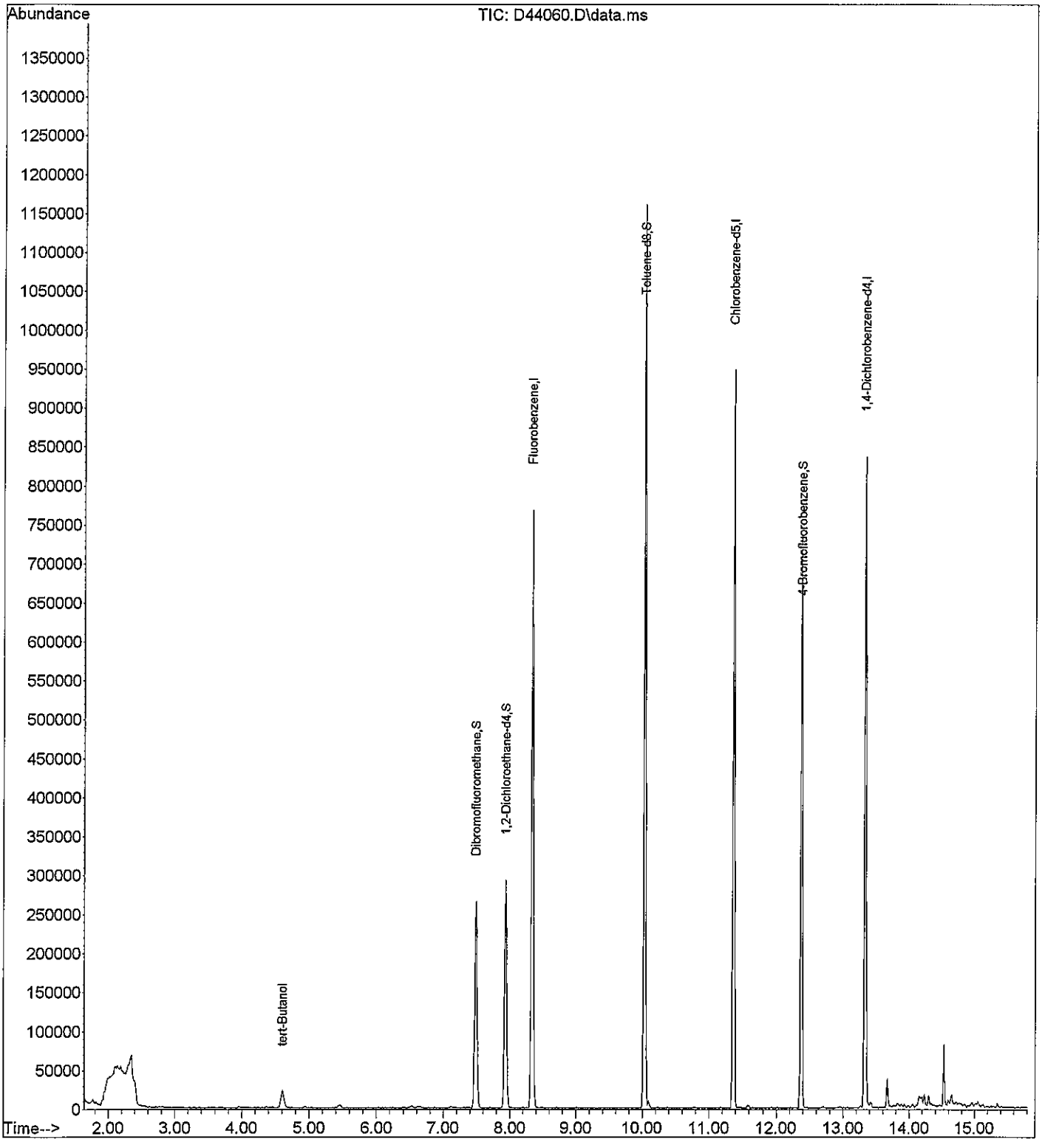
Target

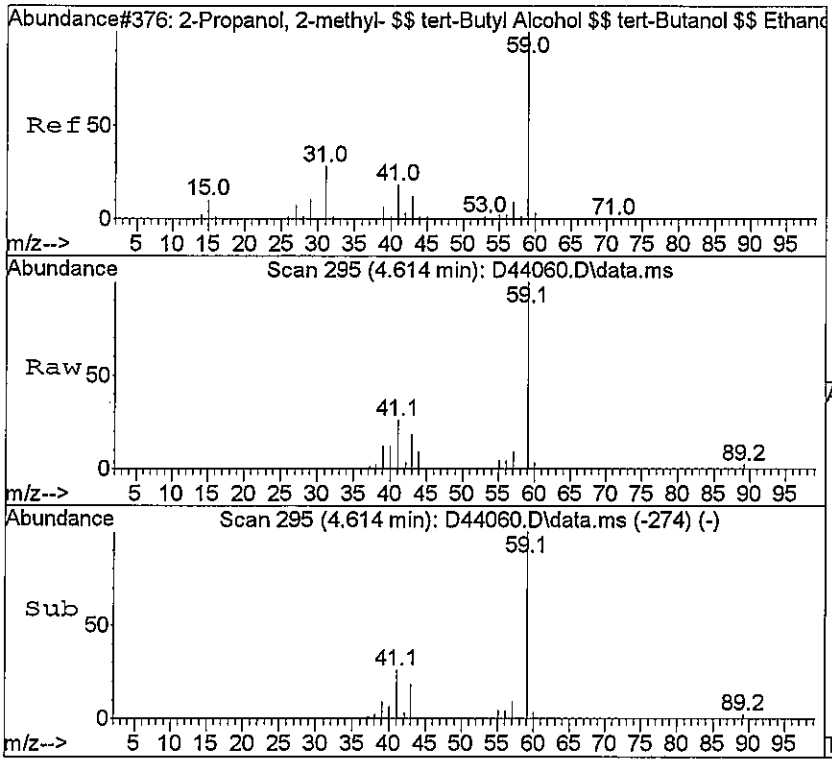
AW 9/10/13

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44060.D
Acq On : 7 Sep 2013 21:00
Operator : sdw-sop525r16
Sample : 1308545-1
Misc : 10mL un-heated purge
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 09 08:29:01 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration

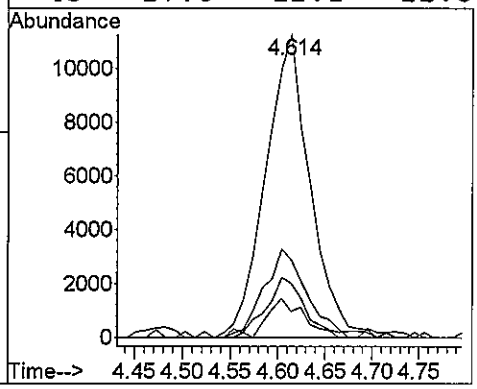




#13
tert-Butanol
Concen: 51.64 ppb
RT: 4.614 min Scan# 295
Delta R.T. 0.010 min
Lab File: D44060.D
Acq: 7 Sep 13 9:00 pm

Tgt Ion: 59 Resp: 36634

Ion	Ratio	Lower	Upper
59	100		
41	25.7	18.0	33.4
57	8.5	7.3	13.7
43	17.8	12.1	22.5



Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\2013\090713\\
Data File : D44060.D
Acq On : 7 Sep 2013 21:000
Operator : sdw-sop525r166
Sample : 1308545-11
Misc : 10mL un-heated purgee
ALS Vial : 13 Sample Multiplier: 11

Quant Method : C:\msdchem\1\METHODS\082313W.MM
Quant Title :

TIC Library : C:\Database\NIST129K.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44061.D
Acq On : 7 Sep 2013 21:24
Operator : sdw-sop525r16
Sample : 1308545-2
Misc : 10mL un-heated purge
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 09 08:38:32 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	8.341	96	718530	25.00	ppb	0.00
61) Chlorobenzene-d5	11.368	117	500729	25.00	ppb	0.00
82) 1,4-Dichlorobenzene-d4	13.333	152	220553	25.00	ppb	0.00
System Monitoring Compounds						
38) Dibromofluoromethane	7.490	113	187149	23.92	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 95.68%			
42) 1,2-Dichloroethane-d4	7.936	67	117400	24.19	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 96.76%			
65) Toluene-d8	10.032	98	708038	24.37	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 97.48%			
83) 4-Bromofluorobenzene	12.381	176	188134	26.13	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 104.52%			
Target Compounds						Qvalue

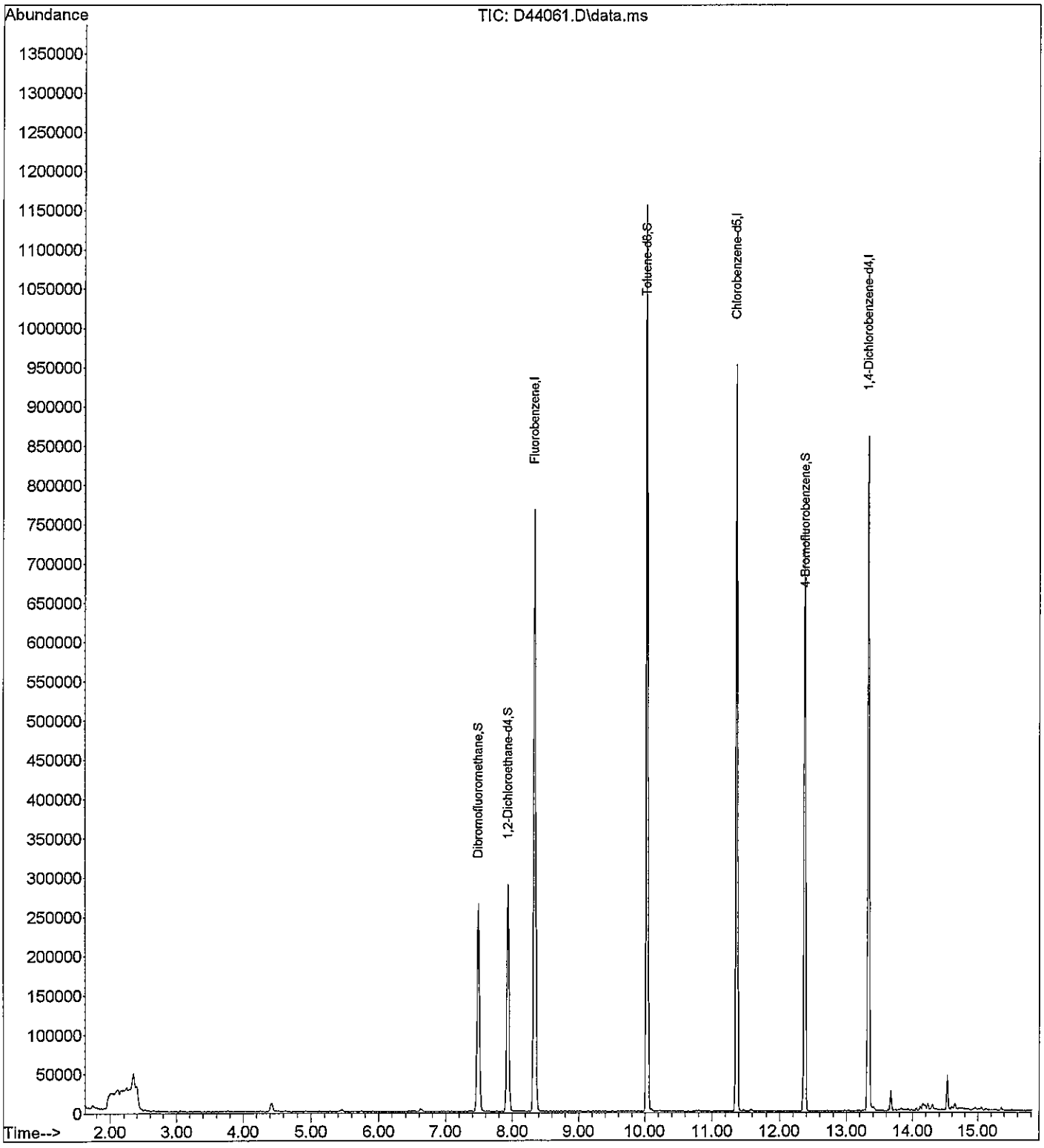
(#) = qualifier out of range (m) = manual integration (+) = signals summed

SMW 9/10/13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44061.D
Acq On : 7 Sep 2013 21:24
Operator : sdw-sop525r16
Sample : 1308545-2
Misc : 10mL un-heated purge
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 09 08:38:32 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration



Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\2013\090713\\
Data File : D44061.D
Acq On : 7 Sep 2013 21:244
Operator : sdw-sop525r166
Sample : 1308545-22
Misc : 10mL un-heated purgee
ALS Vial : 14 Sample Multiplier: 11

Quant Method : C:\msdchem\1\METHODS\082313W.MM
Quant Title :

TIC Library : C:\Database\NIST129K.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44062.D
Acq On : 7 Sep 2013 21:47
Operator : sdw-sop525r16
Sample : 1308545-3
Misc : 10mL un-heated purge
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 09 08:38:54 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	8.341	96	679001	25.00	ppb	0.00
61) Chlorobenzene-d5	11.368	117	463835	25.00	ppb	0.00
82) 1,4-Dichlorobenzene-d4	13.333	152	209158	25.00	ppb	0.00
System Monitoring Compounds						
38) Dibromofluoromethane	7.490	113	179742	24.31	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 97.24%			
42) 1,2-Dichloroethane-d4	7.935	67	112248	24.47	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 97.88%			
65) Toluene-d8	10.032	98	668707	24.84	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 99.36%			
83) 4-Bromofluorobenzene	12.381	176	178482	26.14	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 104.56%			
Target Compounds						Qvalue
13) tert-Butanol	4.604	59	36090	53.78	ppb	95

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

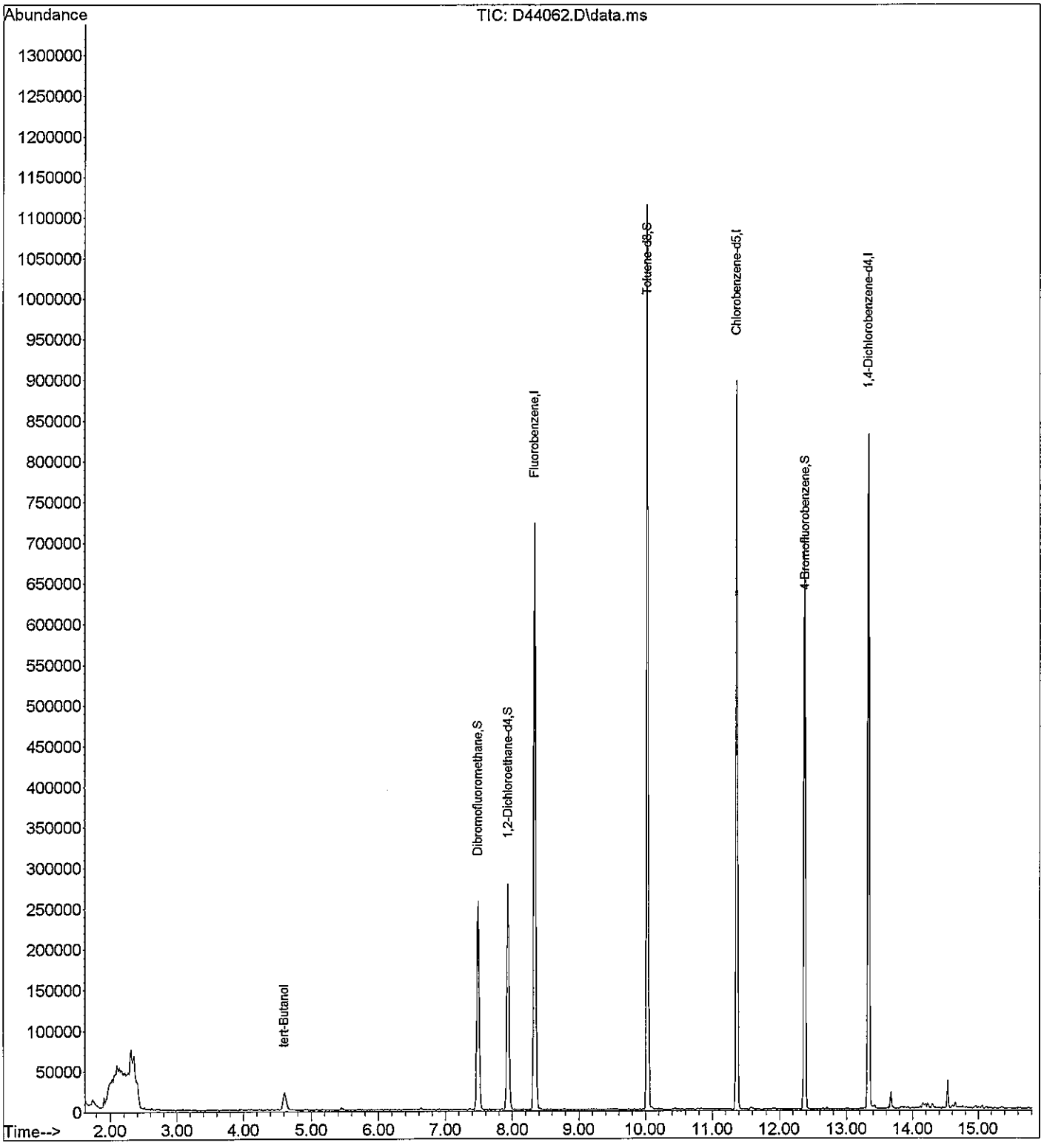
Target

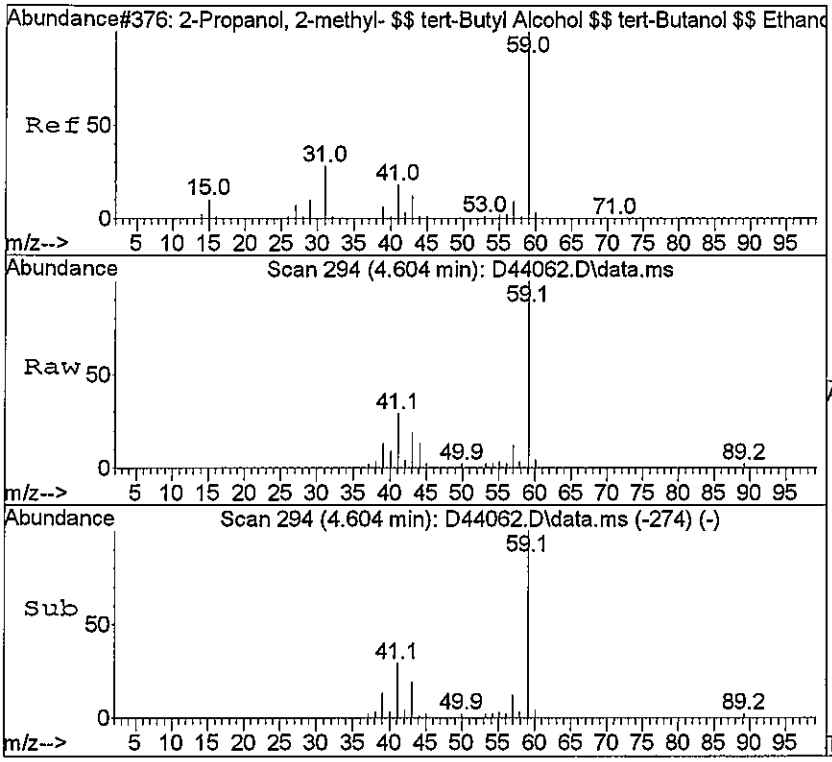
SMS 9/10/17

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44062.D
Acq On : 7 Sep 2013 21:47
Operator : sdw-sop525r16
Sample : 1308545-3
Misc : 10mL un-heated purge
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 09 08:38:54 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration

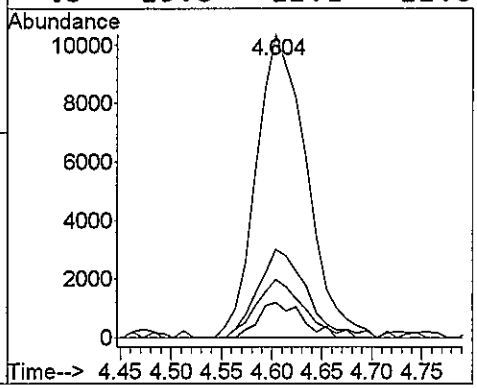




#13
tert-Butanol
Concen: 53.78 ppb
RT: 4.604 min Scan# 294
Delta R.T. -0.000 min
Lab File: D44062.D
Acq: 7 Sep 13 9:47 pm

Tgt Ion: 59 Resp: 36090

Ion	Ratio	Lower	Upper
59	100		
41	29.1	18.0	33.4
57	11.5	7.3	13.7
43	19.3	12.1	22.5



Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\2013\090713\\
Data File : D44062.D
Acq On : 7 Sep 2013 21:477
Operator : sdw-sop525r166
Sample : 1308545-33
Misc : 10mL un-heated purgee
ALS Vial : 15 Sample Multiplier: 11

Quant Method : C:\msdchem\1\METHODS\082313W.MM
Quant Title :

TIC Library : C:\Database\NIST129K.LL
TIC Integration Parameters: LSCINT.PP

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	Internal Standard RT	Internal Standard Resp	Internal Standard Conc

No Library Search Compounds Detected
****

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44063.D
Acq On : 7 Sep 2013 22:10
Operator : sdw-sop525r16
Sample : 1308545-4
Misc : 10mL un-heated purge
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Sep 09 08:29:28 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	8.341	96	695367	25.00	ppb	0.00
61) Chlorobenzene-d5	11.368	117	477523	25.00	ppb	0.00
82) 1,4-Dichlorobenzene-d4	13.333	152	212877	25.00	ppb	0.00
System Monitoring Compounds						
38) Dibromofluoromethane	7.490	113	182315	24.07	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 96.28%			
42) 1,2-Dichloroethane-d4	7.936	67	113321	24.12	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 96.48%			
65) Toluene-d8	10.032	98	685473	24.74	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 98.96%			
83) 4-Bromofluorobenzene	12.381	176	180644	25.99	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 103.96%			
Target Compounds						Qvalue
13) tert-Butanol	4.604	59	32491	47.27	ppb	97

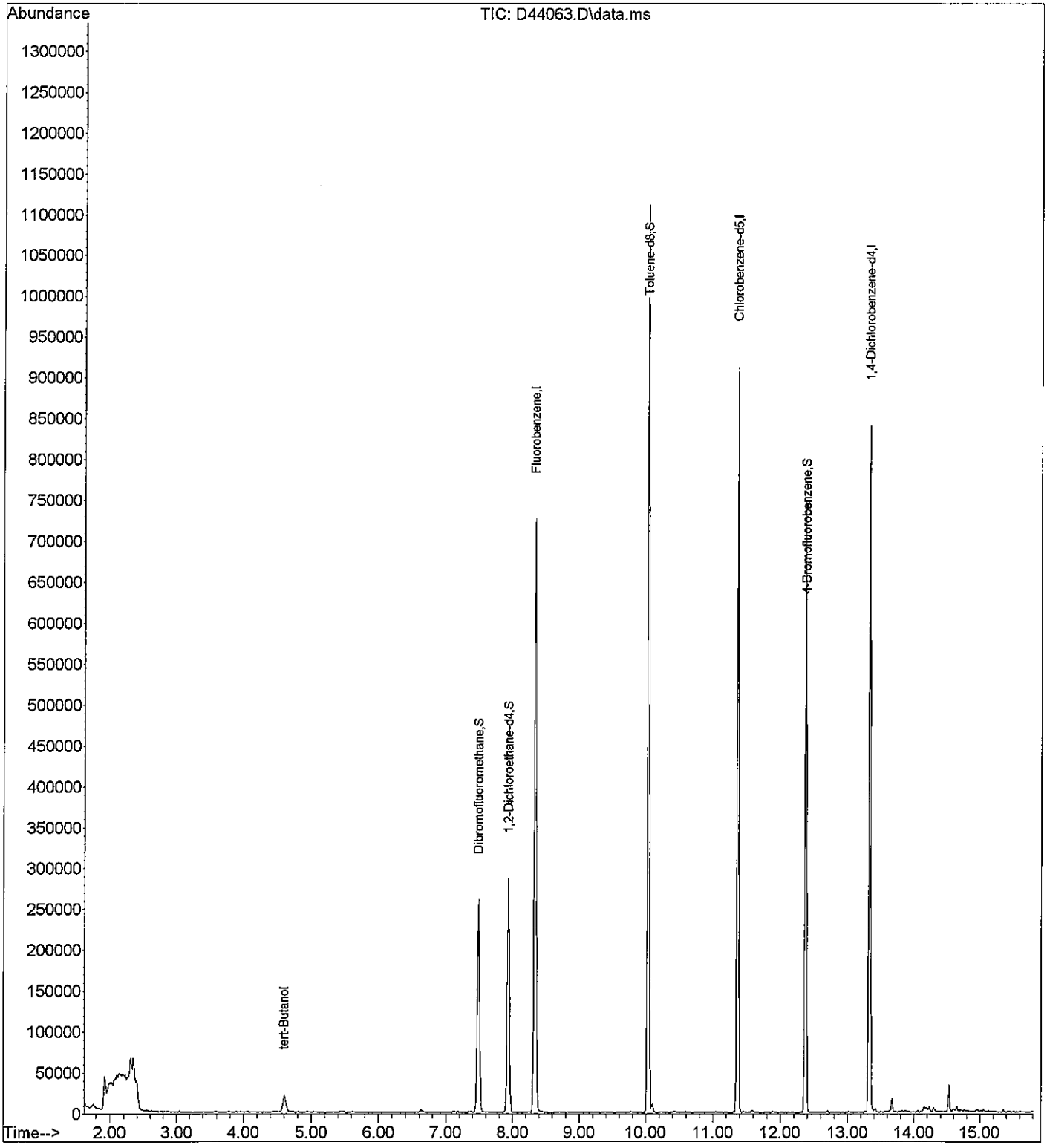
(#) = qualifier out of range (m) = manual integration (+) = signals summed

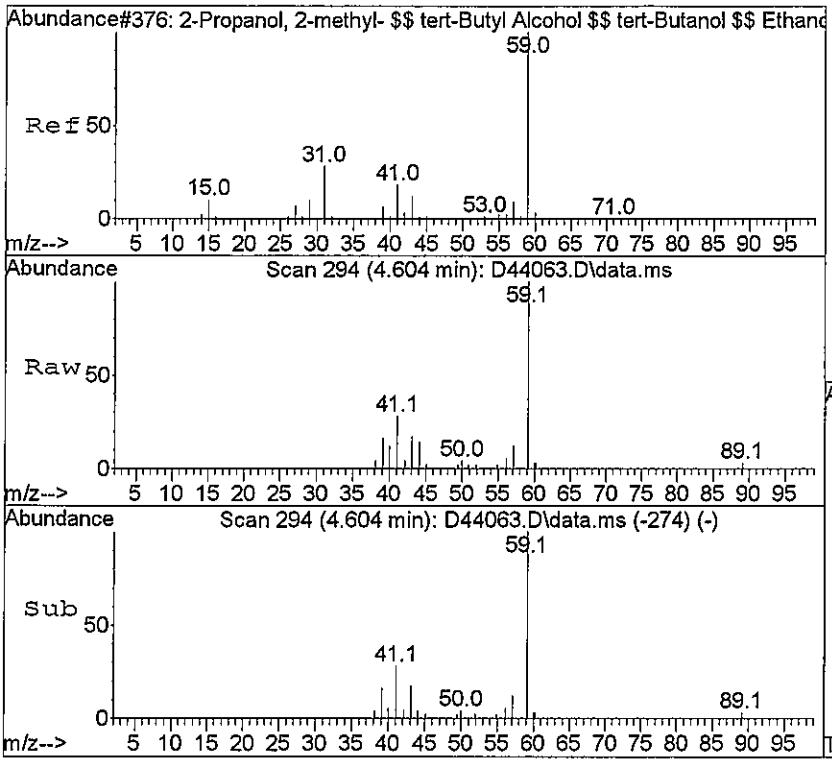
SMW 9/10/13

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44063.D
Acq On : 7 Sep 2013 22:10
Operator : sdw-sop525r16
Sample : 1308545-4
Misc : 10mL un-heated purge
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Sep 09 08:29:28 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration

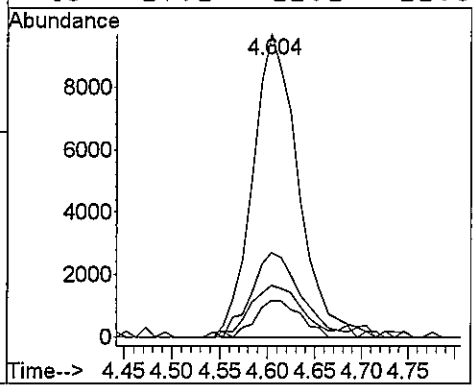




#13
tert-Butanol
Concen: 47.27 ppb
RT: 4.604 min Scan# 294
Delta R.T. 0.000 min
Lab File: D44063.D
Acq: 7 Sep 13 10:10 pm

Tgt Ion: 59 Resp: 32491

Ion	Ratio	Lower	Upper
59	100		
41	27.9	18.0	33.4
57	12.0	7.3	13.7
43	17.1	12.1	22.5



Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\2013\090713\\
Data File : D44063.D
Acq On : 7 Sep 2013 22:100
Operator : sdw-sop525r166
Sample : 1308545-44
Misc : 10mL un-heated purgee
ALS Vial : 16 Sample Multiplier: 11

Quant Method : C:\msdchem\1\METHODS\082313W.MM
Quant Title :

TIC Library : C:\Database\NIST129K.LL
TIC Integration Parameters: LSCINT.PP

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	Internal Standard RT	Internal Standard Resp	Internal Standard Conc

No Library Search Compounds Detected
****

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44064.D
Acq On : 7 Sep 2013 22:33
Operator : sdw-sop525r16
Sample : 1308545-5
Misc : 10mL un-heated purge
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 09 08:29:36 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	8.341	96	661214	25.00	ppb	0.00
61) Chlorobenzene-d5	11.368	117	467761	25.00	ppb	0.00
82) 1,4-Dichlorobenzene-d4	13.333	152	208651	25.00	ppb	0.00
System Monitoring Compounds						
38) Dibromofluoromethane	7.490	113	177328	24.62	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 98.48%			
42) 1,2-Dichloroethane-d4	7.936	67	110512	24.74	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 98.96%			
65) Toluene-d8	10.032	98	662338	24.40	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 97.60%			
83) 4-Bromofluorobenzene	12.381	176	175149	25.71	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 102.84%			
Target Compounds						Qvalue
13) tert-Butanol	4.614	59	19384	29.66	ppb	96
66) Toluene	10.092	92	23412	1.22	ppb	90

Tgt

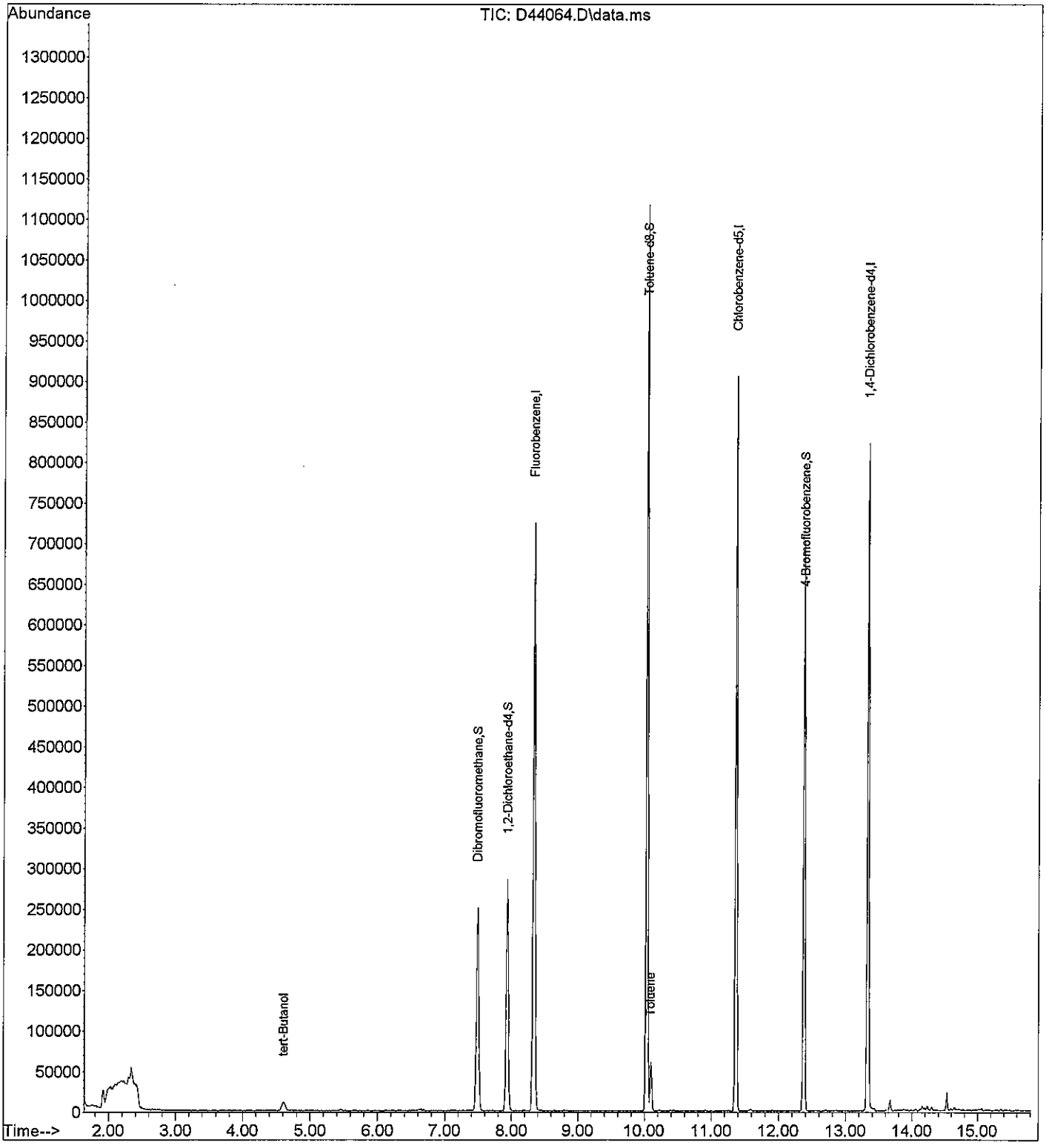
(#) = qualifier out of range (m) = manual integration (+) = signals summed

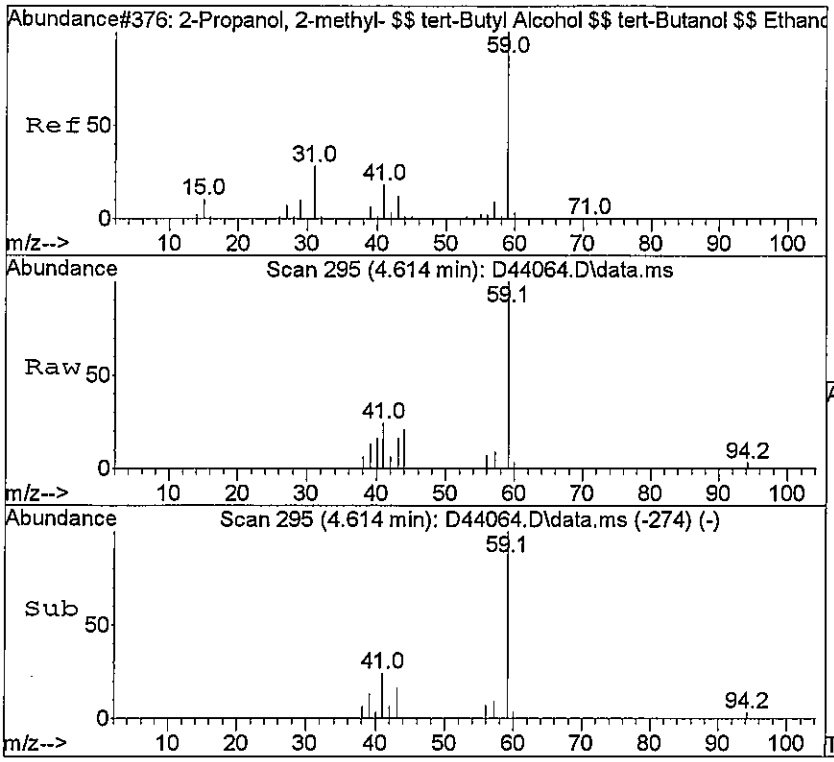
SDW 9/10/17

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44064.D
Acq On : 7 Sep 2013 22:33
Operator : sdw-sop525r16
Sample : 1308545-5
Misc : 10mL un-heated purge
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 09 08:29:36 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration

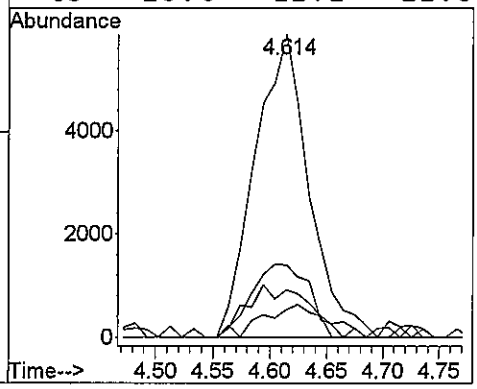


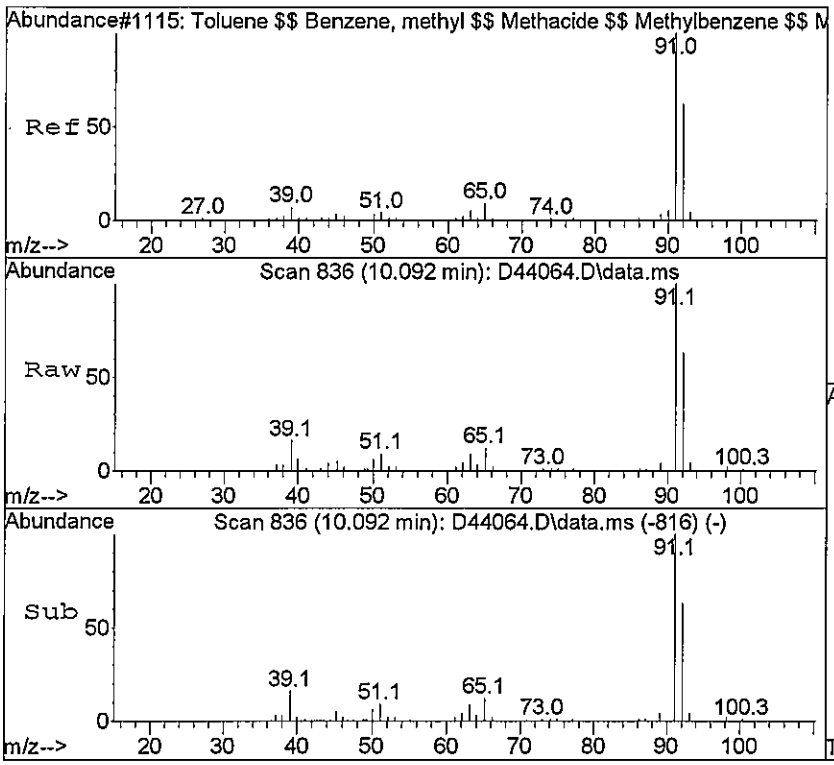


#13
tert-Butanol
Concen: 29.66 ppb
RT: 4.614 min Scan# 295
Delta R.T. 0.010 min
Lab File: D44064.D
Acq: 7 Sep 13 10:33 pm

Tgt Ion: 59 Resp: 19384

Ion	Ratio	Lower	Upper
59	100		
41	23.7	18.0	33.4
57	9.0	7.3	13.7
43	15.6	12.1	22.5

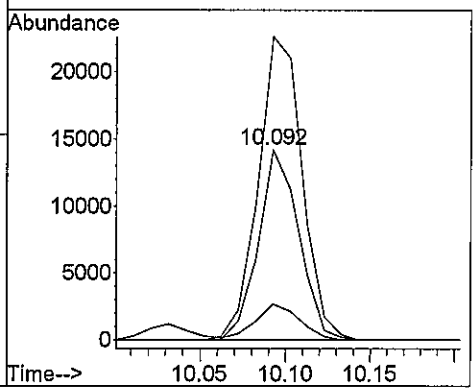




#66
Toluene
Concen: 1.22 ppb
RT: 10.092 min Scan# 836
Delta R.T. -0.000 min
Lab File: D44064.D
Acq: 7 Sep 13 10:33 pm

Tgt Ion: 92 Resp: 23412

Ion	Ratio	Lower	Upper
92	100		
91	159.4	121.7	225.9
65	18.9	15.5	28.7



Tentatively Identified Compound (LSC) summary

Data Path : C:\msdchem\1\DATA\2013\090713\\
Data File : D44064.D
Acq On : 7 Sep 2013 22:333
Operator : sdw-sop525r166
Sample : 1308545-55
Misc : 10mL un-heated purgee
ALS Vial : 17 Sample Multiplier: 11

Quant Method : C:\msdchem\1\METHODS\082313W.MM
Quant Title :

TIC Library : C:\Database\NIST129K.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Raw Data Quality Control Samples

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44052.D
Acq On : 7 Sep 2013 17:45
Operator : sdw-sop525r16
Sample : VL130907-4CCS
Misc : 10mL un-heated purge
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 07 18:08:58 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	8.341	96	649956	25.00	ppb	0.00
61) Chlorobenzene-d5	11.368	117	459351	25.00	ppb	0.00
82) 1,4-Dichlorobenzene-d4	13.333	152	217771	25.00	ppb	0.00
System Monitoring Compounds						
38) Dibromofluoromethane	7.490	113	171367	24.21	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 96.84%			
42) 1,2-Dichloroethane-d4	7.936	67	107508	24.49	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 97.96%			
65) Toluene-d8	10.032	98	651797	24.45	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 97.80%			
83) 4-Bromofluorobenzene	12.381	176	179189	25.21	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 100.84%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.779	85	104498	8.17	ppb	98
3) Chloromethane	1.971	50	137700	8.78	ppb	98
4) Vinyl chloride	2.103	62	132423	8.72	ppb	99
5) Bromomethane	2.488	96	60040	8.97	ppb	95
6) Chloroethane	2.619	64	61093	10.05	ppb	100
7) Ethanol	3.146	45	15018	215.34	ppb	94
8) Acrolein	3.490	56	52099	46.20	ppb	100
9) Acetonitrile	4.108	41	81945	106.86	ppb	97
10) Trichlorofluoromethane	2.933	101	131630	9.85	ppb	99
11) Acetone	3.693	58	22613	41.78	ppb	99
12) Diethyl Ether	3.308	74	42542	10.64	ppb	94
13) tert-Butanol	4.604	59	345031	537.10	ppb	99
14) 1,1-Dichloroethene	3.632	96	68767	10.78	ppb	98
15) Acrylonitrile	4.827	53	258690	109.38	ppb	97
16) Iodomethane	3.855	142	69443	8.98	ppb	98
17) Methylene Chloride	4.422	84	98067	10.64	ppb	97
18) Methyl acetate	4.199	74	10271	11.01	ppb	90
19) Allyl chloride	4.209	76	42863	10.30	ppb	97
20) 1,1,2-Trichloro-1,2,2-...	3.652	101	73071	10.26	ppb	97
21) Carbon disulfide	3.956	76	231279	10.46	ppb	97
22) trans-1,2-Dichloroethene	4.918	96	79248	10.64	ppb	98
23) Methyl-t-butyl ether	4.908	73	424533	21.21	ppb	98
24) Hexane	5.455	57	71125	9.77	ppb	97
25) 1,1-Dichloroethane	5.728	63	160933	10.77	ppb	99
26) Propionitrile	6.791	54	88705	108.05	ppb	97
27) Vinyl acetate	5.758	43	163536	10.38	ppb	99
28) Chloroprene	5.850	53	145644	10.57	ppb	98
29) 2-Butanone	6.710	72	28151	42.55	ppb	84
30) Isopropyl ether	5.819	45	321746	10.72	ppb	95
31) Methacrylonitrile	7.044	41	44479	10.07	ppb	96
32) cis-1,2-Dichloroethene	6.710	96	91269	10.89	ppb	98
33) Methyl Acrylate	0.000		0	N.D.		
34) Bromochloromethane	7.095	128	40669	10.85	ppb	70
35) Chloroform	7.257	83	165996	10.98	ppb	99
36) 2,2-Dichloropropane	6.710	77	128331	11.15	ppb	99
37) Ethyl tert-butyl ether	6.457	59	259998	10.61	ppb	98
39) Pentafluorobenzene	0.000		0	N.D.		
40) 1-Chlorobutane	7.571	56	270479	No Calib	#	
41) Isobutyl Alcohol	7.875	43	65655	214.57	ppb	99

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Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44052.D
Acq On : 7 Sep 2013 17:45
Operator : sdw-sop525r16
Sample : VL130907-4CCS
Misc : 10mL un-heated purge
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 07 18:08:58 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	1,2-Dichloroethane	8.037	62	120278	10.53	ppb		98
44)	1,1,1-Trichloroethane	7.470	97	130432	10.50	ppb		97
45)	1,1-Dichloropropene	7.703	75	120688	11.00	ppb		99
46)	n-Butanol	8.675	56	85119	538.03	ppb		98
47)	Cyclohexane	7.571	84	209698	20.09	ppb		99
48)	Carbon tetrachloride	7.682	117	101037	10.96	ppb		98
49)	Benzene	7.956	78	340535	10.73	ppb		99
50)	Tert-amyl methyl ether	8.148	87	49138	10.92	ppb		92
51)	Dibromomethane	9.141	93	50508	10.73	ppb		94
52)	1,2-Dichloropropane	9.049	63	97447	11.03	ppb		98
53)	Trichloroethene	8.756	95	88350	10.79	ppb		97
54)	Bromodichloromethane	9.333	83	111653	10.89	ppb		99
55)	1,4-Dioxane	9.130	88	12134	207.49	ppb		95
56)	Methyl methacrylate	9.120	69	44122	10.57	ppb		91
57)	Methyl cyclohexane	9.019	83	102995	9.10	ppb		97
58)	Chloroacetonitrile	9.768	48	5805	No Calib		#	
59)	2-Chloroethyl vinyl ether	9.627	63	43369	11.01	ppb		93
60)	cis-1,3-Dichloropropene	9.768	75	137825	10.97	ppb		94
62)	4-Methyl-2-pentanone	9.910	100	32457	46.76	ppb		81
63)	trans-1,3-Dichloropropene	10.325	75	115390	10.69	ppb		96
64)	1,1,2-Trichloroethane	10.508	83	62288	10.95	ppb		90
66)	Toluene	10.092	92	205696	10.93	ppb		100
67)	1,3-Dichloropropane	10.649	76	119131	10.82	ppb		97
68)	Ethyl methacrylate	10.366	69	88451	10.64	ppb		97
69)	2-Hexanone	10.690	58	99448	43.32	ppb		95
70)	Dibromochloromethane	10.852	129	72778	11.30	ppb		97
71)	1,2-Dibromoethane	10.963	107	64921	10.69	ppb		95
72)	Tetrachloroethene	10.579	164	62636	10.49	ppb		94
73)	1,1,1,2-Tetrachloroethane	11.470	131	79747	11.16	ppb		93
74)	Chlorobenzene	11.389	112	219900	10.89	ppb		98
75)	1-Chlorohexane	11.368	91	93089	9.52	ppb		97
76)	Ethylbenzene	11.470	91	362320	10.62	ppb		99
77)	m+p-Xylene	11.581	106	267262	21.70	ppb		97
78)	Bromoform	12.097	173	39845	11.21	ppb		97
79)	Styrene	11.925	104	229711	11.11	ppb		98
80)	o-Xylene	11.915	106	138905	11.23	ppb		92
81)	Isopropylbenzene	12.219	105	294629	10.37	ppb		99
84)	1,1,2,2-Tetrachloroethane	12.472	83	76831	10.59	ppb		99
85)	trans-1,4-Dichloro-2-b...	12.503	53	20606	10.38	ppb		90
86)	Bromobenzene	12.503	156	91994	10.90	ppb		94
87)	1,2,3-Trichloropropane	12.523	110	23095	11.11	ppb		94
88)	n-Propylbenzene	12.563	91	366866	9.95	ppb		99
89)	2-Chlorotoluene	12.644	126	80020	10.52	ppb		81
90)	4-Chlorotoluene	12.746	126	81379	10.92	ppb		88
91)	1,3,5-Trimethylbenzene	12.715	105	245395	10.20	ppb		99
92)	tert-Butylbenzene	12.978	134	46829	10.23	ppb		98
93)	1,2,4-Trimethylbenzene	13.019	105	248366	10.33	ppb		96
94)	sec-Butylbenzene	13.151	105	283991	9.59	ppb		95
95)	1,3-Dichlorobenzene	13.262	146	154292	10.70	ppb		93
96)	1,4-Dichlorobenzene	13.353	146	155588	10.75	ppb		96
97)	p-Isopropyltoluene	13.272	119	218173	9.68	ppb		98
98)	1,2-Dichlorobenzene	13.637	146	143499	10.81	ppb	#	94
99)	n-Butylbenzene	13.606	91	205205	9.62	ppb		99
100)	1,2-Dibromo-3-chloropr...	14.264	75	10590	10.27	ppb		91
101)	Hexachloroethane	13.880	201	29307	9.61	ppb		93

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44052.D
Acq On : 7 Sep 2013 17:45
Operator : sdw-sop525r16
Sample : VL130907-4CCS
Misc : 10mL un-heated purge
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 07 18:08:58 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration

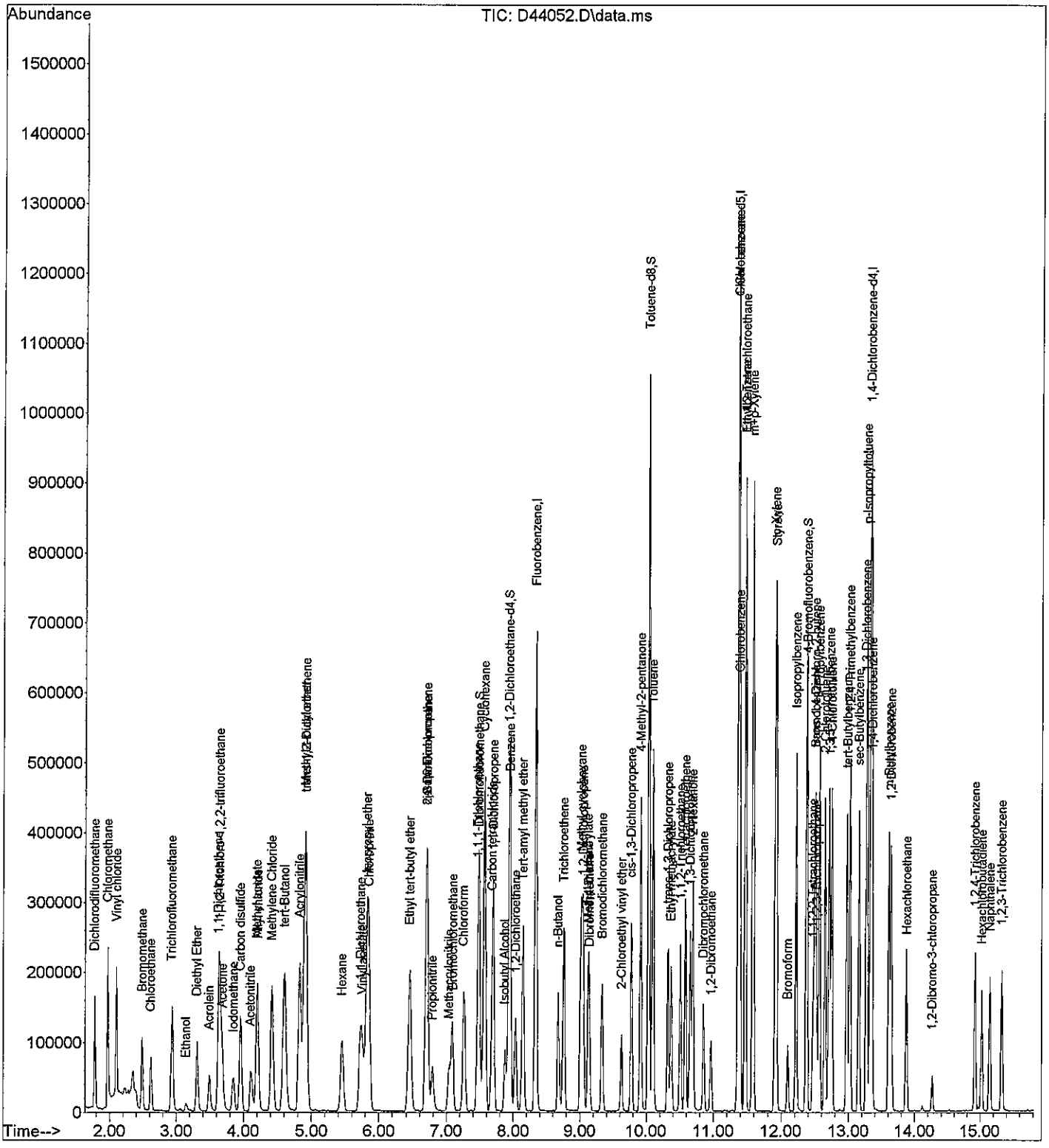
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
102) 1,2,4-Trichlorobenzene	14.923	180	70801	10.34	ppb	99
103) Naphthalene	15.145	128	147685	10.52	ppb	100
104) Hexachlorobutadiene	15.024	225	31669	11.14	ppb	96
105) 1,2,3-Trichlorobenzene	15.328	180	62745	10.40	ppb	95

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44052.D
Acq On : 7 Sep 2013 17:45
Operator : sdw-sop525r16
Sample : VL130907-4CCS
Misc : 10mL un-heated purge
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 07 18:08:58 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44053.D
Acq On : 7 Sep 2013 18:08
Operator : sdw-sop525r16
Sample : VL130907-4LCSD
Misc : 10mL un-heated purge
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 07 18:30:53 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	8.341	96	675365	25.00	ppb	0.00
61) Chlorobenzene-d5	11.368	117	479850	25.00	ppb	0.00
82) 1,4-Dichlorobenzene-d4	13.333	152	230738	25.00	ppb	0.00
System Monitoring Compounds						
38) Dibromofluoromethane	7.490	113	184172	25.04	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 100.16%			
42) 1,2-Dichloroethane-d4	7.936	67	114683	25.14	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 100.56%			
65) Toluene-d8	10.032	98	678478	24.37	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 97.48%			
83) 4-Bromofluorobenzene	12.381	176	187432	24.88	ppb	0.00
Spiked Amount 25.000	Range 85 - 115		Recovery = 99.52%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.779	85	103020	7.75	ppb	99
3) Chloromethane	1.971	50	134007	8.22	ppb	99
4) Vinyl chloride	2.103	62	131949	8.36	ppb	99
5) Bromomethane	2.488	96	60039	8.64	ppb	96
6) Chloroethane	2.619	64	57987	9.18	ppb	97
7) Ethanol	3.146	45	16547	228.34	ppb	93
8) Acrolein	3.490	56	62951	53.73	ppb	96
9) Acetonitrile	4.108	41	84290	105.78	ppb	98
10) Trichlorofluoromethane	2.933	101	130238	9.38	ppb	98
11) Acetone	3.693	58	24419	43.49	ppb	97
12) Diethyl Ether	3.308	74	41596	10.01	ppb	97
13) tert-Butanol	4.604	59	356129	533.52	ppb	98
14) 1,1-Dichloroethene	3.642	96	63839	9.63	ppb	98
15) Acrylonitrile	4.827	53	264066	107.45	ppb	94
16) Iodomethane	3.845	142	65070	8.19	ppb	96
17) Methylene Chloride	4.422	84	99329	10.31	ppb	98
18) Methyl acetate	4.199	74	10820	11.16	ppb	72
19) Allyl chloride	4.209	76	42122	9.74	ppb	93
20) 1,1,2-Trichloro-1,2,2-...	3.652	101	70069	9.47	ppb	96
21) Carbon disulfide	3.956	76	222348	9.68	ppb	98
22) trans-1,2-Dichloroethene	4.918	96	77715	10.04	ppb	96
23) Methyl-t-butyl ether	4.908	73	420122	20.20	ppb	98
24) Hexane	5.455	57	65452	8.65	ppb	96
25) 1,1-Dichloroethane	5.728	63	157104	10.12	ppb	97
26) Propionitrile	6.791	54	90136	105.67	ppb	93
27) Vinyl acetate	5.758	43	170322	10.40	ppb	99
28) Chloroprene	5.850	53	138794	9.69	ppb	97
29) 2-Butanone	6.700	72	29023	42.22	ppb	98
30) Isopropyl ether	5.819	45	321432	10.31	ppb	99
31) Methacrylonitrile	7.034	41	46241	10.08	ppb	93
32) cis-1,2-Dichloroethene	6.710	96	87453	10.04	ppb	97
33) Methyl Acrylate	0.000		0	N.D.		
34) Bromochloromethane	7.095	128	38336	9.84	ppb	85
35) Chloroform	7.257	83	166376	10.60	ppb	97
36) 2,2-Dichloropropane	6.710	77	126153	10.55	ppb	96
37) Ethyl tert-butyl ether	6.457	59	261171	10.25	ppb	98
39) Pentafluorobenzene	0.000		0	N.D.		
40) 1-Chlorobutane	7.571	56	261650	No Calib		
41) Isobutyl Alcohol	7.875	43	67664	212.82	ppb #	98

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44053.D
Acq On : 7 Sep 2013 18:08
Operator : sdw-sop525r16
Sample : VL130907-4LCSD
Misc : 10mL un-heated purge
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 07 18:30:53 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43)	1,2-Dichloroethane	8.037	62	120059	10.12	ppb		98
44)	1,1,1-Trichloroethane	7.480	97	129306	10.02	ppb		98
45)	1,1-Dichloropropene	7.703	75	117053	10.27	ppb		98
46)	n-Butanol	8.675	56	89157	542.36	ppb		99
47)	Cyclohexane	7.571	84	197862	18.24	ppb		97
48)	Carbon tetrachloride	7.682	117	99203	10.35	ppb		98
49)	Benzene	7.956	78	333229	10.11	ppb		99
50)	Tert-amyl methyl ether	8.148	87	47887	10.24	ppb	#	97
51)	Dibromomethane	9.141	93	49711	10.16	ppb		97
52)	1,2-Dichloropropane	9.050	63	95396	10.39	ppb		96
53)	Trichloroethene	8.756	95	86256	10.14	ppb		97
54)	Bromodichloromethane	9.333	83	110940	10.41	ppb		98
55)	1,4-Dioxane	9.120	88	12193	200.65	ppb	#	76
56)	Methyl methacrylate	9.120	69	45953	10.60	ppb		90
57)	Methyl cyclohexane	9.019	83	97278	8.27	ppb		91
58)	Chloroacetonitrile	9.779	48	5266	No Calib		#	
59)	2-Chloroethyl vinyl ether	9.627	63	43029	10.52	ppb		96
60)	cis-1,3-Dichloropropene	9.768	75	133808	10.24	ppb		96
62)	4-Methyl-2-pentanone	9.910	100	33080	45.63	ppb		70
63)	trans-1,3-Dichloropropene	10.325	75	115625	10.25	ppb		99
64)	1,1,2-Trichloroethane	10.508	83	59155	9.95	ppb		93
66)	Toluene	10.093	92	197322	10.04	ppb		98
67)	1,3-Dichloropropane	10.649	76	116609	10.14	ppb		96
68)	Ethyl methacrylate	10.366	69	92394	10.64	ppb		97
69)	2-Hexanone	10.690	58	98442	41.05	ppb		97
70)	Dibromochloromethane	10.852	129	71692	10.66	ppb		100
71)	1,2-Dibromoethane	10.963	107	66323	10.46	ppb		99
72)	Tetrachloroethene	10.589	164	62985	10.10	ppb		93
73)	1,1,1,2-Tetrachloroethane	11.470	131	76906	10.30	ppb		93
74)	Chlorobenzene	11.389	112	213414	10.12	ppb		97
75)	1-Chlorohexane	11.368	91	88164	8.63	ppb		93
76)	Ethylbenzene	11.470	91	351895	9.87	ppb		98
77)	m+p-Xylene	11.581	106	258860	20.12	ppb		100
78)	Bromoform	12.098	173	41036	11.05	ppb		97
79)	Styrene	11.925	104	220372	10.21	ppb		99
80)	o-Xylene	11.915	106	130126	10.07	ppb		98
81)	Isopropylbenzene	12.219	105	283610	9.56	ppb		98
84)	1,1,2,2-Tetrachloroethane	12.472	83	77073	10.03	ppb		99
85)	trans-1,4-Dichloro-2-b...	12.503	53	20729	9.85	ppb		97
86)	Bromobenzene	12.503	156	90270	10.10	ppb		98
87)	1,2,3-Trichloropropane	12.523	110	23235	10.55	ppb		93
88)	n-Propylbenzene	12.563	91	361601	9.26	ppb		100
89)	2-Chlorotoluene	12.644	126	76852	9.54	ppb		76
90)	4-Chlorotoluene	12.746	126	78245	9.91	ppb		100
91)	1,3,5-Trimethylbenzene	12.705	105	240409	9.43	ppb		96
92)	tert-Butylbenzene	12.979	134	44422	9.16	ppb		95
93)	1,2,4-Trimethylbenzene	13.019	105	238439	9.36	ppb		98
94)	sec-Butylbenzene	13.151	105	273292	8.71	ppb		96
95)	1,3-Dichlorobenzene	13.272	146	149680	9.80	ppb		97
96)	1,4-Dichlorobenzene	13.353	146	151322	9.87	ppb		96
97)	p-Isopropyltoluene	13.272	119	215494	9.02	ppb		98
98)	1,2-Dichlorobenzene	13.637	146	142568	10.13	ppb		94
99)	n-Butylbenzene	13.606	91	196069	8.67	ppb		98
100)	1,2-Dibromo-3-chloropr...	14.265	75	10071	9.21	ppb		94
101)	Hexachloroethane	13.880	201	28603	8.86	ppb		93

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44053.D
Acq On : 7 Sep 2013 18:08
Operator : sdw-sop525r16
Sample : VL130907-4LCSD
Misc : 10mL un-heated purge
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 07 18:30:53 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
102) 1,2,4-Trichlorobenzene	14.923	180	71408	9.85	ppb	99
103) Naphthalene	15.146	128	146955	9.88	ppb	99
104) Hexachlorobutadiene	15.024	225	29891	9.93	ppb	97
105) 1,2,3-Trichlorobenzene	15.328	180	62552	9.79	ppb	97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2013\090713\
Data File : D44053.D
Acq On : 7 Sep 2013 18:08
Operator : sdw-sop525r16
Sample : VL130907-4LCSD
Misc : 10mL un-heated purge
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 07 18:30:53 2013
Quant Method : C:\msdchem\1\METHODS\082313W.M
Quant Title :
QLast Update : Fri Aug 30 20:44:53 2013
Response via : Initial Calibration