100011212

SDG COVER PAGE

Lab Name: ALS Environmental (SLC) Contract: NA

Lab Code: ALS Case No.: 5POINTS SOW No.: SOM02.4 SDG No.: TV9519

MA No.(s):

EPA Sample No.	Lab Sample ID	VOA Trace	Analysis Method				
5P-MW101-160-090519	1925562006	X					
5P-MW101-160-090519Y	1925562007	X					
5P-MW103-120-090519	1925562011	X					
5P-MW104-120-090519	1925562012	X					
5P-MW105-146-090519	1925562008	X					
5P-MW105-146-090519MS	1925562009	X					
5P-MW105-146-090519MSD	1925562010	X					
5P-MW106D-195-090519	1925562005	X					
5P-MW106I-145-090519	1925562004	X					
5P-MW107I-145-090519	1925562002	X					
5P-MW107D-200-090519	1925562003	X					
5P-MW108D-214-090519	1925562014	X					
5P-MW108I-149-090519	1925562013	X					
5P-MW109D-230-090519	1925562016	X					
5P-MW109I-169-090519	1925562015	X					
5P-MW110D-301-090519	1925562018	X					
5P-MW110I-208-090519	1925562017	X					
TB-090519	1925562001	X					

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the SDG Narrative. Release of the data contained in this hardcopy data package and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: /S/ Roxanne Olson Name: Roxanne Olson

Date: 09/25/2019 11:08 Title: Project Manager

(/S/ is an electronic signature that complies with 21 CFR Part 11)

Sample Delivery Group (SDG)
Cover Sheet

SDG Number: TV9519

Laboratory Name: ALS Laboratory Group (SLC)

Laboratory Code: ALS

Contract No.: 97756

Case No.: 5POINTS

Analysis Price: N/A

SDG Turnaround: 21

Modified Analysis Requested: NO

Program: SOM02.4

Modification Reference No.: N/A

EPA Sample Numbers in SDG (Listed in Numerical Order)

1) 5P-MW101-160-0905	7) 5P-MW106I-145-0905	13) 5P-MW109I-169-0905	19)
2) 5P-MW101-160-0905	8) 5P-MW1071-145-090	14) 5P-MW110D-301-090	20)
3) 5P-MW103-120-0905	9) 5P-MW107D-200-090	15) 5P-MW110I-208-0905	21)
4) 5P-MW104-120-0905	10) 5P-MW108D-214-090	16) TB-090519	22)
5) 5P-MW105-146-0905	11) 5P-MW108I-149-0905	17)	23)
6) 5P-MW106D-195-090	12) 5P-MW109D-230-090	18)	24)

5P-MW101-160-090519

First Sample in SDG

TB-090519

Last Sample in SDG

09/05/19

First Sample Receipt Date

09/05/19

Last Sample Receipt Date

Note: *There are a maximum of 20 field samples (excluding PE samples) in an SDG. Attach the TR/COC records to this form in alphanumeric order (the order listed above on this form).*

Signature: /S/ Roxanne Olson

Date: 9/6/2019 11:00:25 AM

(/S/ is an electronic signature that complies with 21 CFR Part 11)

EPA Sample Receipt

Client: AECOM Contract: 97756 Case: **5POINTS** SDG: **TV9519** MOD: None

Due to Client: **Thu, Sep 26, 2019** TAT: 21 Date Reported: Not Reported Status: **CLOSED**

Workorder Information Program: SOM02.4 Region: EDD Level: 3

Work Order	Received	PR	Fractions
1925562	09/05/19 3:15 PM	No	Volatiles Trace

Sample Information

Lab ID	Client ID	Type	Matrix	VT
1925562001	TB-090519	TRIPBK	Water	X
1925562002	5P-MW1071-145-090519	SAM	Water	X
1925562003	5P-MW107D-200-090519	SAM	Water	X
1925562004	5P-MW106I-145-090519	SAM	Water	X
1925562005	5P-MW106D-195-090519	SAM	Water	X
1925562006	5P-MW101-160-090519	SAM	Water	X
1925562007	5P-MW101-160-090519Y	SAM	Water	X
1925562008	5P-MW105-146-090519	SAM	Water	X
1925562009	5P-MW105-146-090519MS	MS	Water	X
1925562010	5P-MW105-146-090519MSD	MSD	Water	X
1925562011	5P-MW103-120-090519	SAM	Water	X
1925562012	5P-MW104-120-090519	SAM	Water	X
1925562013	5P-MW108I-149-090519	SAM	Water	X
1925562014	5P-MW108D-214-090519	SAM	Water	X
1925562015	5P-MW109I-169-090519	SAM	Water	X
1925562016	5P-MW109D-230-090519	SAM	Water	X
1925562017	5P-MW110I-208-090519	SAM	Water	X

Report Parameters = SDG:TV9519 Case:<NULL> Region:<NULL>
Mod:<NULL> Workorder:<NULL> BeginDate:<NULL> EndDate:<NULL>
OpenSummary:No SortBy:Case

EPA Sample Receipt

Client: AECOM Contract: 97756 Case: **5POINTS** SDG: **TV9519** MOD: None

Due to Client: **Thu, Sep 26, 2019** TAT: 21 Date Reported: Not Reported Status: **CLOSED**

Sample Information

Lab ID	Client ID	Type	Matrix	VT
1925562018	5P-MW110D -301-090519	SAM	Water	X

Field Samples: 16 MS: 1 MSD: 1 MD: 0 PE: 0

Report Parameters = SDG:TV9519 Case:<NULL> Region:<NULL>
Mod:<NULL> Workorder:<NULL> BeginDate:<NULL> EndDate:<NULL>
OpenSummary:No SortBy:Case

Case 5POINTS
SDG TV9519

W 1925562

1of2

ANALYTICAL REQUEST FORM

1. [X] REGULAR Status

[ ] RUSH Status Requested - ADDITIONAL CHARGE
RESULTS REQUIRED BY _____
DATE
CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 09.05.2019 Purchase Order No. _____
3. Company Name : AECOM
Address: 756 E Winchester St suite 400
Salt Lake City UT 84107
Person to Contact: Tammi Messersmith
Telephone (801) 904.4000
Fax Telephone ( ) _____
E-mail Address: tammi.messersmith@aecom.com
Billing Address (if different from above)

4. Quote No. 60546131.4
ALS Project Manager: _____
5. Sample Collection
Sampling Site 5-Points PCE
Industrial Process: _____
Date of Collection 09.05.2019
Time Collected _____
Date of Shipment 09.05.2019
Chain of Custody No.: _____
6. How did you first learn about ALS?

7. REQUEST FOR ANALYSES

Client Sample Number	~~Matrix*~~ Matrix	~~Sample/Area Volume~~	ANALYSES REQUESTED - Use method number if known	Units**	~~Lab Comments~~ Time collected
TB-090519	water		VOCs (SOM 01.2)		
5P-MW107I-145-090519	water				1000
5P-MW107D-200-090519	water				1008
5P-MW106I-145-090519	water				1025
5P-MW106D-195-090519	water				1031
5P-MW101-160-090519	water				1145
~~5P~~					
5P-MW101-160-090519 Y	water				1148
5P-MW105-146-090519	water		/MS/MSD		1230
5P-MW103-120-090519	water				1250
5P-MW104-120-090519	water				1302
5P-MW108I-149-090519	water				1330
5P-MW108D-214-090519	water				1337
5P-MW109I-6.9-090519	water				1357

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other
** 1. µg/sample 2. mg/m³ 3. ppm 4. % 5. µg/m³ 6. _____ (other) Please indicate one or more units in the column entitled Units**

Comments _____

Possible Contamination and/or Chemical Hazards _____

7. Chain of Custody (Optional)

Relinquished by	Krystal E. Adler	Date/Time	09.05.2019 1515
Received by		Date/Time	09/05/19 1515
Relinquished by		Date/Time	
Received by		Date/Time	

☒ For lab use only ☒

ANALYTICAL REQUEST FORM

1. ☒ REGULAR Status

☐ RUSH Status Requested - ADDITIONAL CHARGE
RESULTS REQUIRED BY _____
DATE
CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 090519 Purchase Order No. _____
3. Company Name : AECOM
Address: 756 E Winchester St Suite 400
Salt Lake City, UT 84107
Person to Contact: Tammi Messersmith
Telephone (801) 904-4000
Fax Telephone ( ) _____
E-mail Address: tammi.messersmith@aecom.com
Billing Address (if different from above)

4. Quote No. 60554613 1.4
ALS Project Manager: _____
5. Sample Collection
Sampling Site 5-Points PCE
Industrial Process: _____
Date of Collection 09.05.2019
Time Collected _____
Date of Shipment 09.05.2019
Chain of Custody No.: _____
6. How did you first learn about ALS?

7. REQUEST FOR ANALYSES

Client Sample Number	Matrix*	Sample/Area Volume	ANALYSES REQUESTED - Use method number if known	Units**	Lab Comments (Time collected)
SP-MW109D-230-090519		Water	VOCs (SOM 01.2)		1407
SP-MW110I-203-090519		Water	↓		1421
SP-MW110D-301-090519		Water	↓		1430
					kew 090519

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other
** 1. µg/sample 2. mg/m³ 3. ppm 4. % 5. µg/m³ 6. _____ (other) Please indicate one or more units in the column entitled Units**

Comments _____

Possible Contamination and/or Chemical Hazards _____

7. Chain of Custody (Optional)

Relinquished by	[signature]	Date/Time	09.05.2019 1515
Received by	[signature]	Date/Time	09/05/19 1515
Relinquished by		Date/Time	
Received by		Date/Time	

960 West LeVoy Drive / Salt Lake City, UT 84123 800-356-9135 or 801-266-7700 / FAX: 801-268-9992
ALS Environmental

FORM-DC-1

SAMPLE LOG-IN SHEET

Lab Name: ALS Environmental	Page 1 of 1
Received By (Print Name): Rebecca Wise	Log-In Date: 9/6/2019
Received By (Signature): [signature]	
Case Number: 5 POINTS	Sample Delivery Group No.: TV 9519
	Mod. Ref. No.: n/a

Remarks:

1. Custody Seal (s)	Present/Absent*
	Intact/Broken*
2. Custody Seal Nos.	n/a
	1
3. Traffic Report/ Chain-of Custody Records (TR/COCs) or Packing Lists	Present/Absent*
4. Airbill	Airbill/Sticker Present/Absent*
5. Airbill No.	n/a
	1
6. Sample Tags	Present/Absent*
Sample Tag Numbers	Listed/Not Listed on Chain-of-Custody
7. Sample Condition	Intact/Broken*/Leaking*
8. Shipping Container Temperature Indicator Bottle	Present/Absent*
9. Shipping Container Temperature	6°
10. Does information on TR/COCs, and sample tags agree?	Yes/No*
11. Date Received at Laboratory	9/5/2019
12. Time Received	1515

	EPA Sample #	Corresponding Assigned Lab #		Remarks: Condition of Sample
1	TB-090519	1925562001		TVOA Under
2	SP-MW107I-145-090519		002	
3	SP-MW107D-200-090519		003	
4	SP-106I-145-090519		004	
5	SP-MW106D-195-090519		005	
6	SP-MW101-160-090519		006	
7	SP-MW101-160-090519		007	
8	SP-MW105-146-090519		008,009,010	MS/MSD
9	SP-MW103-120-090519		011	
10	SP-MW104-120-090519		012	
11	SP-MW108I-149-090519		013	
12	SP-MW108D-214-090519		014	
13	SP-MW109I-169-090519		015	
14	SP-MW109D-230-090519		016	
15	SP-MW110I-208-090519		017	
16	SP-MW110D-301-090519		018	
17				
18				
19				
20				
21				
22				

RW 9/6/2019

* Contact SMO and attach record of resolution

Reviewed By: [signature]	Logbook No.: Not Applicable
Date: 9/5/19	Logbook Page No.: Not Applicable

SOM02.4 Form DC-1

FORM DC-2

FULL ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

Lab Name	ALS Environmental		
Lab Code	ALS		
Contract No	97756		
Case No	5POINTS	SDG No	TV9519
MA No			
SOW No	SOM02.4		

All documents delivered in the Complete SDG File must be original documents where possible. (Reference - Exhibit B Section 2.4)

		PAGE NOs FROM	PAGE NOs TO	CHECK LAB	CHECK REGION
1	SDG Cover Page	1	34	✓	
2	Traffic Report/Chain of Custody Record(s)	5	6	✓	
3	Sample Log-In Sheet (DC-1)	7	7	✓	
4	CSF Inventory Sheet (DC-2)	8	11A	✓	
5	SDG Narrative	12	14A	✓	
Organic Analysis					
Trace Volatiles					
	Quality Control Summary				
6	Deuterated Monitoring Compound Recovery (Form 2A-OR and Form 2B-OR)	15	16	✓	
7	Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR) (if requested by the EPA Region)	17	17	✓	
8	Method Blank Summary (Form 4-OR)	18	19	✓	
9	GC/MS Instrument Performance Check (Form 5-OR)	20	23	✓	
10	Internal Standard Area and Retention Summary (Form 8A-OR)	24	25	✓	
	Sample Data	26	178	✓	
11	TAL Results - Organic Analysis Data Sheet (Form 1A-OR)	N/A	N/A	✓	
12	Tentatively Identified Compounds (Form 1B-OR)			✓	
13	Raw Data for Each Sample:			✓	
	Reconstructed total ion chromatograms (RICs) for each sample			✓	
	Raw spectra and background-subtracted mass spectra of target analytes identified			✓	
	Quantitation reports			✓	
	Mass spectra of all reported TICs with three best library matches			✓	
	Standards Data (All Instruments)	179	237	✓	
14	GC-MS Initial Calibration Data (Form 6A-OR)	N/A	N/A	✓	
15	RICs and Quantitation Reports for all Standards			✓	
16	Continuing Calibration Verification for GC/MS (Form 7A-OR)			✓	
17	RICs and Quantitation Reports for all Standards			✓	
	Quality Control Data	238	364	✓	
18	Performance Check	238	244A	✓	
19	Blank Data	245	263	✓	
20	Matrix Spike/Matrix Spike Duplicate Data Form 3A-OR) (if requested by the EPA Region)	264	273	✓	
21	Original Prep and Analysis forms (inc. screening records if applicable)	274	364	✓	

FORM DC-2

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

		PAGE NOs		CHECK	
		FROM	TO	LAB	REGION
Low-Medium Volatiles					
	Quality Control Summary				
22	Deuterated Monitoring Compound Recovery (Form 2A-OR and Form 2B-OR)	NA	NA	✓	
23	Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR) (if requested by the EPA Region)			✓	
24	Method Blank Summary (Form 4-OR)			✓	
25	GC/MS Instrument Performance Check (Form 5-OR)			✓	
26	Internal Standard Area and Retention Summary (Form 8A-OR)			✓	
	Sample Data			✓	
27	TAL Results - Organic Analysis Data Sheet (Form 1A-OR)			✓	
28	Tentatively Identified Compounds (Form 1B-OR)			✓	
29	Raw Data for Each Sample:			✓	
	Reconstructed total ion chromatograms (RICs) for each sample			✓	
	Raw spectra and background-subtracted mass spectra of target analytes identified			✓	
	Quantitation reports			✓	
	Mass spectra of all reported TICs with three best library matches			✓	
	Standards Data (All Instruments)			✓	
30	GC-MS Initial Calibration Data (Form 6A-OR)			✓	
31	RICs and Quantitation Reports for all Standards			✓	
32	Continuing Calibration Verification for GC/MS (Form 7A-OR)			✓	
33	RICs and Quantitation Reports for all Standards			✓	
	Quality Control Data			✓	
34	Performance Check			✓	
35	Blank Data			✓	
36	Matrix Spike/Matrix Spike Duplicate Data (if requested by the EPA Region)			✓	
37	Original Prep and Analysis forms or prep and analysis logbook pages (including TCLP/SPLP logs, percent solid determination logs, and screening records if applicable)			✓	
Semivolatiles					
	Quality Control Summary				
38	Deuterated Monitoring Compound Recovery (Form 2A-OR and Form 2B-OR)			✓	
39	Matrix Spike/Matrix Spike Duplicate Recovery (Form 3A-OR) (if requested by the EPA Region)			✓	
40	Method Blank Summary (Form 4-OR)			✓	
41	GC/MS Instrument Performance Check (Form 5-OR)			✓	
42	Internal Standard Area and Retention Time Summary (Form 8A-OR)			✓	

FORM DC-2

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

		PAGE NOs FROM	PAGE NOs TO	CHECK LAB	CHECK REGION
	Sample Data	NA	NA	✓	
43	TAL Results - Organic Analysis Data Sheet (Form 1A-OR)			✓	
44	Tentatively Identified Compounds (Form 1B-OR)			✓	
45	Raw Data for Each Sample:			✓	
	Reconstructed total ion chromatograms (RICs) for each sample			✓	
	Raw Spectra and background-subtracted mass spectra of target analytes identified			✓	
	Quantitation Reports			✓	
	Mass Spectra of all reported TICs with three best library matches			✓	
	GPC chromatograms (if GPC is required)			✓	
	Standards Data (All Instruments)			✓	
46	GC-MS Initial Calibration Data (Form 6A-OR)			✓	
47	RICs and Quantitation Reports for all Standards			✓	
48	Continuing Calibration Verification for GC/MS (Form 7A-OR)			✓	
49	RICs and Quantitation Reports for all Standards			✓	
	Quality Control Data			✓	
50	Performance Check			✓	
51	Blank Data			✓	
52	Matrix Spike/Matrix Spike Duplicate Data (if requested by the EPA Region)			✓	
53	Raw GPC Data			✓	
54	For SIM analysis (if requested), at the same sequence as listed above, except for that Form 1B-OR and TIC spectra data which are not required for SIM method.			✓	
55	Original Prep and Analysis forms or prep and analysis logbook pages (including TCLP/SPLP logs, percent solid determination logs, and screening records if applicable)			✓	
Pesticides					
	Quality Control Summary				
56	Surrogate Recovery (Form 2C-OR)			✓	
57	Matrix Spike/Matrix Spike Duplicate Data (Form 3A-OR for each column			✓	
58	Laboratory Control Sample Recovery (Form 3B-OR for each column			✓	
59	Method Blank Summary (Form 4-OR)			✓	
	Sample Data			✓	
60	TAL Results - Organic Analysis Data Sheet (Form 1A-OR)			✓	
61	Raw Data for Each Sample:			✓	
	Chromatograms (Primary Column)			✓	
	Chromatograms (SecondaryColumn)			✓	
	Quantitation Reports			✓	
	Manual Worksheets			✓	
62	For Pesticides by GC/MS Confirmation:			✓	
	Copies of raw spectra and copies of background-subtracted mass spectra of target analytes (samples & standards)			✓	

FORM DC-2

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

		PAGE NOs FROM	PAGE NOs TO	CHECK LAB	CHECK REGION
	Standards Data	N/A	N/A	✓	
63	Initial calibration of single component analytes (Form 6B-OR and 6C-OR)			✓	
64	Initial calibration of multicomponent analytes (Form 6D-OR and 6E-OR)			✓	
65	Analyte resolution summary (Form 6G-OR)			✓	
66	Pesticide performance evaluation mixture calibration verification summary (Form 7B-OR)			✓	
67	Continuing Calibration Verification Summary (Form 7C-OR)			✓	
68	Multicomponent Continuing Calibration Verification Summary (Form 7D-OR)			✓	
69	Analytical sequence (Form 8B-OR)			✓	
70	Florisil cartridge check (Form 9A-OR)			✓	
71	GPC calibration verification (Form 9B-OR)			✓	
72	Identification summary for single component analytes (Form 10A-OR)			✓	
73	Identification summary for multicomponent analytes (Form 10B-OR)			✓	
74	Chromatograms and Quantitation Reports:			✓	
	A printout of retention times and corresponding peak areas or peak heights			✓	
	Quality Control Data			✓	
75	Blank Data			✓	
76	Matrix Spike/Matrix Spike Duplicate Data			✓	
77	Laboratory control sample			✓	
78	Raw GPC Data			✓	
79	Raw florisil data			✓	
80	Original Prep and Analysis forms or prep and analysis logbook pages (including TCLP/SPLP logs, percent solid determination logs, and screening records if applicable)			✓	
Aroclors					
	Quality Control Summary				
81	Surrogate Recovery (Form 2C-OR)			✓	
82	Matrix Spike/Matrix Spike Duplicate Data (Form 3A-OR for each column			✓	
83	Laboratory Control Sample Recovery (Form 3B-OR for each column			✓	
84	Method Blank Summary (Form 4-OR)			✓	
	Sample Data			✓	
85	TAL Results - Organic Analysis Data Sheet (Form 1A-OR)			✓	
86	Raw Data for Each Sample:			✓	
	Chromatograms (Primary Column)			✓	
	Chromatograms (SecondaryColumn)			✓	
	Quantitation Reports			✓	
	Manual Worksheets			✓	
87	For Aroclors by GC/MS Confirmation:			✓	
	Copies of raw spectra and copies of background-subtracted mass spectra of target analytes (samples & standards)			✓	

FORM DC-2

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

		PAGE NOs FROM	PAGE NOs TO	CHECK LAB	CHECK REGION
	Standards Data	NA	NA	✓	
88	Initial calibration of multicomponent analytes (Form 6D-OR, 6E-OR and Form 6F-OR)			✓	
89	Multicomponent Continuing Calibration Verification Summary (Form 7D-OR)			✓	
90	Analytical sequence (Form 8B-OR)			✓	
91	Identification summary for single component analytes (Form 10B-OR)			✓	
92	Chromatograms and Quantitation Reports:			✓	
	A printout of retention times and corresponding peak areas or peak heights			✓	
	Quality Control Data			✓	
93	Blank Data			✓	
94	Matrix Spike/Matrix Spike Duplicate Data			✓	
95	Laboratory control sample			✓	
96	Raw GPC Data			✓	
97	Original Prep and Analysis forms or prep and analysis logbook pages (including TCLP/SPLP logs, percent solid determination logs, and screening records if applicable)			✓	
Additional					
98	EPA Shipping/Receiving Documents				
	Airbill (no. of Shipments_____)	NA	NA	✓	
	Sample Tags	365	365	✓	
	Sample Log-in Sheet (Lab)	NA	NA	✓	
99	Misc. Shipping/Receiving Records (list all individual records)	NA	NA	✓	
100	Internal lab Sample Transfer Records & Tracking Sheets (describe or list)	366	370	✓	
101	PE/PT Instruction Forms	NA	NA	✓	
102	Other Records (describe or List)			✓	
	Communication logs				

103 Comments:

Completed by: Julie Warath

CLP Lab (Signature)

Julie Warath/Doc Control (Print Name/Title) 09/26/2019 (Date)

Audited by:

EPA (Signature)

(Print Name/Title) (Date)

ILA 10/2/19

960 W. LeVoy Drive
Salt Lake City, UT 84123
T: +1 801 266 7700
F: +1 801 268 9992
www.alsglobal.com

SDG Administrative Narrative

Contract: 97756

Case: 5POINTS

SDG: TV9519

WO No(s): 1925562

Cooler # and Temperatures of each (upon receipt)

Cooler Number	NA	Arrival temperature was	6	°C
Cooler Number		Arrival temperature was		°C
Cooler Number		Arrival temperature was		°C
Cooler Number		Arrival temperature was		°C
Cooler Number		Arrival temperature was		°C
Cooler Number		Arrival temperature was		°C
Cooler Number		Arrival temperature was		°C
Cooler Number		Arrival temperature was		°C

NW 09/26/2019

Communications:

The sample receipt for this Case/SDG is compliant with EPA CLP SOW requirements.

Comments:

None

Signature: [signature]
Document Control Officer

Date: 09/26/2019

SDG Narrative
Trace Volatiles

Contract: 97756
Laboratory: ALS Environmental
Modification Reference Number: NA

Case: 5POINTS
SDG: TV9519

Client No.	ALS Sample	pH	Dilution	Client No.	ALS Sample	pH	Dilution
5P-MW101-160-090519	1925562006	1	None	5P-MW106I-145-090519	1925562004	1	None
5P-MW101-160-090519DL	1925562006DL	1	1:5	5P-MW107D-200-090519	1925562003	1	None
5P-MW101-160-090519Y	1925562007	1	None	5P-MW108D-214-090519	1925562014	1	None
5P-MW101-160-090519YDL	1925562007DL	1	1:5	5P-MW108I-149-090519	1925562013	1	None
5P-MW103-120-090519	1925562011	1	None	5P-MW109D-230-090519	1925562016	1	None
5P-MW104-120-090519	1925562012	1	None	5P-MW109I-169-090519	1925562015	1	None
5P-MW105-146-090519	1925562008	1	None	5P-MW110D-301-090519	1925562018	1	None
5P-MW105-146-090519MS	1925562009	1	None	5P-MW110I-208-090519	1925562017	1	None
5P-MW105-146-090519MSD	1925562010	1	None	5P-MW17071-145-090519	1925562002	1	None
5P-MW106D-195-090519	1925562005	1	None	TB-090519	1925562001	1	None

General SDG Information: Samples were analyzed according to USEPA CLP Statement of Work SOM02.4. There were no modifications except as listed below.

Instrumentation: Agilent 5975-F GC/MSD with electron impact ionization and quadrupole detector scanning a mass range of 35 to 300 amu. Column: Restek Rtx-VMS (30 m, 0.25 mm id, 1.4 µm film). Purge & Trap: OI Analytical Eclipse 4660 Concentrator (#10 trap) with Varian Archon Autosampler. Carrier and Purge Gas: Helium. Purge Flow: ~50 mL/min. at ambient. Temperature Program: 45°C (5.0 min.) 15°/min. to 200° (0 min.) 30°/min to 230° (2.67 min.).

Agilent 5975-M GC/MSD with electron impact ionization and quadrupole detector scanning a mass range of 35 to 300 amu. Column: Restek Rtx-VMS (30 m, 0.25 mm id, 1.4 µm film). Purge & Trap: OI Analytical Eclipse 4660 Concentrator (#10 trap) with Varian Archon Autosampler. Carrier and Purge Gas: Helium. Purge Flow: ~50 mL/min. at ambient. Temperature Program: 45°C (5.0 min.) 15°/min. to 200° (0 min.) 30°/min to 230° (2.67 min.).

Sample Preparation: This method has no extraction procedure for the water matrix. A 25 mL aliquot of sample was spiked with internal standard/DMC solution and purged.

Instrument Calibration: The GC/MS was hardware tuned to meet the criteria for a 50 ng purging of 4-bromofluorobenzene as specified in the SOW. This tune is valid for 12 hours.

Initial Calibration and Calibration Verification: The five point initial calibration curve met the specified criteria in the SOW. All calibration verification standards met method specified criteria.

Due to interfering ions, the secondary 130 ion was used in the quantitation of trichloroethene. Occasionally the system will fail to properly integrate a given compound. In these cases (including any listed below) a manual integration may be required. Any manual integration is noted by an "m" footnote on the quantitation report and a graphics page was included to show peak integration. Analytes which required a manual integration are summarized:

Sample	Initial / Final Scan	Analyte	Justification

Blank Analysis: Method blanks were prepared using 25 mL of reagent water spiked with internal standard/DMC solution. All blanks were free of volatile organic contaminants within the specifications of the method.

Sample Analysis: All deuterated monitoring compounds and internal standard area responses were within the required acceptance criteria unless otherwise noted on forms II and VIII. All samples were analyzed within ten days of verified sample receipt.

MS/MSD Analysis: MS/MSD analyses were performed for sample 1925562008 (5P-MW105-146-090519). All recoveries met established QC acceptance criteria.

Miscellaneous Comments: As per the SOW, alkanes were not reported separately but rather were reported as "total alkanes." With regard to the naming of tentatively identified compounds (TICs), spectral matches above 85 percent are reported as a specific isomer unless the analyst has reason to assign a different name. Reasons include but are not limited to previous experience with the compound or an instance where the retention time clearly indicates that a computer generated match is in fact not the compound in question. A specific compound name may be assigned to more than one peak. In any case, TIC naming is tentative and it cannot be assumed that reported compounds and specific isomers are correct.

Dilutions were performed to bring the compounds of interest within the linear range.

Sample Calculations:

Sample(s): 5P-MW101-160-090519 Analyte: Cis-1,2-dichloroethene

$$\text{RRF} = \left\{\frac{(Ax)(Cis)}{(Ais)(Cx)}\right\} \text{ e.g. } \left\{\frac{(32487)(5.0)}{(922325)(0.5)}\right\} = 0.352$$

$$\text{Average RRF} = \left\{\frac{\sum_{i=1}^{n} \text{Xi}}{n}\right\} \text{ e.g. } \left\{\frac{(0.352)+(0.388)+(0.313)+(0.354)+(0.328)}{5}\right\} = 0.347$$

Concentration:

$$\text{Water} = \left\{\frac{(Ax)(Iis)(DF)}{(Ais)(ARF)(Vo)}\right\} \text{ e.g. } \left\{\frac{(8027)(125)(1)}{(718885)(0.347)(25)}\right\} = 0.16\ \mu\text{g/L}$$

Where,

Ax = Area of the characteristic ion of the compound to be measured.
Ais = Area of the characteristic ion of the internal standard.
Cis = Concentration of the internal standard.
Cx = Concentration of the compound to be measured.
Xi = Value.
n = Number of values.
Iis = Amount of internal standard in ng.
ARF = Mean relative response factor from the initial calibration.
Vo = Total volume of water purged in mL.
DF = Dilution factor.

FORM 2A-OR

DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Level: TRACE

Matrix: WATER

EPA SAMPLE NO.	DMC1 (VCL)	DMC2 (CLA)	DMC3 (DCE)	DMC4 (BUT)	DMC5 (CLF)	DMC6 (DCA)	DMC7 (BEN)	DMC8 (DPA)	DMC9 (TOL)
5P-MW101-160-090519	97	101	89	105	111	109	106	102	99
5P-MW101-160-090519	90	92	83	107	106	109	103	101	99
5P-MW101-160-090519	97	106	94	108	114	107	107	103	99
5P-MW101-160-090519	88	92	82	107	104	106	102	103	101
5P-MW103-120-090519	73	78	68	106	96	101	101	102	103
5P-MW104-120-090519	70	78	68	99	94	93	103	101	101
5P-MW105-146-090519	94	98	87	110	110	109	108	105	100
5P-MW106D-195-0905J	97	100	90	107	108	109	105	100	99
5P-MW106I-145-0905J	96	97	88	111	107	109	100	101	99
5P-MW107I-145-0905J	98	99	88	114	108	112	102	102	97
5P-MW107D-200-0905J	105	106	94	113	115	113	110	107	101
5P-MW108D-214-0905J	72	80	73	108	99	99	105	102	100
5P-MW108I-149-0905J	73	80	71	106	96	97	103	102	101
5P-MW109D-230-0905J	73	81	71	103	97	96	104	98	99
5P-MW109I-169-0905J	72	80	70	124	98	102	101	103	101
5P-MW110D-301-0905J	67	75	67	99	96	98	101	101	97
5P-MW110I-208-0905J	71	78	66	102	95	94	102	103	98
TB-090519	98	97	88	111	105	109	102	101	98
5P-MW105-146-090519	91	95	117	110	108	110	107	104	100
5P-MW105-146-090519	88	93	115	106	107	106	105	103	99
VBLKT1	110	105	91	112	109	108	104	100	100
VBLKT2	88	88	73	109	97	102	108	108	103
VHBLKT1	100	104	93	109	114	108	107	103	100

	QC LIMITS
DMC1 (VCL) = Vinyl chloride-d3	(40-130)
DMC2 (CLA) = Chloroethane-d5	(65-130)
DMC3 (DCE) = 1,1-Dichloroethene-d2	(60-125)
DMC4 (BUT) = 2-Butanone-d5	(40-130)
DMC5 (CLF) = Chloroform-d	(70-125)
DMC6 (DCA) = 1,2-Dichloroethane-d4	(70-130)
DMC7 (BEN) = Benzene-d6	(70-125)
DMC8 (DPA) = 1,2-Dichloropropane-d6	(60-140)
DMC9 (TOL) = Toluene-d8	(70-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D DMC diluted out

FORM 2B-OR
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Level: TRACE

Matrix: WATER

EPA SAMPLE NO.	DMC10 (TDP)	DMC11 (HEX)	DMC12 (TCA)	DMC13 (DCZ)	DMC14	DMC15	DMC16	DMC17	TOT OUT
5P-MW101-160-090519	89	101	105	103					0
5P-MW101-160-090519	94	102	100	102					0
5P-MW101-160-090519	90	102	107	105					0
5P-MW101-160-090519	97	102	100	102					0
5P-MW103-120-090519	100	102	104	102					0
5P-MW104-120-090519	95	99	104	104					0
5P-MW105-146-090519	90	102	106	102					0
5P-MW106D-195-09051	91	101	100	103					0
5P-MW106I-145-09051	94	102	101	103					0
5P-MW107I-145-09051	96	106	106	105					0
5P-MW107D-200-09051	90	105	108	105					0
5P-MW108D-214-09051	98	102	105	101					0
5P-MW108I-149-09051	99	108	106	101					0
5P-MW109D-230-09051	99	102	102	100					0
5P-MW109I-169-09051	103	113	108	101					0
5P-MW110D-301-09051	95	98	99	100					0
5P-MW110I-208-09051	95	100	100	103					0
TB-090519	93	102	103	102					0
5P-MW105-146-090519	92	104	108	105					0
5P-MW105-146-090519	90	98	100	103					0
VBLKT1	95	102	99	101					0
VBLKT2	106	106	102	99					0
VHBLKT1	87	103	105	102					0

		QC LIMITS
DMC10 (TDP)	= trans-1,3-Dichloropropene-d4	(55-130)
DMC11 (HEX)	= 2-Hexanone-d5	(45-130)
DMC12 (TCA)	= 1,1,2,2-Tetrachloroethane-d2	(65-120)
DMC13 (DCZ)	= 1,2-Dichlorobenzene-d4	(80-120)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D DMC diluted out

FORM 3A-OR

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Level: TRACE

Matrix: WATER

EPA Sample No. (Matrix Spike/Matrix Spike Duplicate): 5P-MW105-146-090519

Instrument ID: 5975-F GC Column: RTX-VMS ID: 0.25 (mm)

Concentration Units (ug/L, mg/L, ug/kg): ug/L

ANALYTE	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %R #	QC LIMITS %R
1,1-Dichloroethene	5.0	0.0	6.2	124	61-145
Trichloroethene	5.0	0.0	5.5	110	71-120
Benzene	5.0	0.0	5.7	113	76-127
Toluene	5.0	0.0	5.4	107	76-125
Chlorobenzene	5.0	0.0	5.3	106	75-130

ANALYTE	SPIKE ADDED	MSD CONCENTRATION	MSD %R #	RPD #	QC LIMITS	
					RPD	%R
1,1-Dichloroethene	5.0	5.9	119	5	0-14	61-145
Trichloroethene	5.0	5.2	104	6	0-14	71-120
Benzene	5.0	5.4	107	6	0-11	76-127
Toluene	5.0	5.1	102	5	0-13	76-125
Chlorobenzene	5.0	5.0	101	6	0-13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

FORM 4-OR

METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKT1

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method Trace VOA Level: TRACE

Matrix: WATER Lab Sample ID: 672757

Instrument ID: 5975-F Lab File ID: FP78BLK

Extraction Type: PT Date Extracted:

GC Column (1): RTX-VMS ID: 0.25 (mm) Date Analyzed: 09/11/2019

GC Column (2): ID: (mm) Time Analyzed: 07:38

Heated Purge: (Y/N) Y Cleanup (Y/N): Cleanup Types:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
TB-090519	1925562001	FP79C001	09/11/2019
5P-MW107I-145-090519	1925562002	FP80C002	09/11/2019
5P-MW107D-200-090519	1925562003	FP81C003	09/11/2019
5P-MW106I-145-090519	1925562004	FP82C004	09/11/2019
5P-MW106D-195-090519	1925562005	FP83C005	09/11/2019
5P-MW101-160-090519DL	1925562006DL	FP84R006	09/11/2019
5P-MW101-160-090519YDL	1925562007DL	FP85R007	09/11/2019
5P-MW105-146-090519	1925562008	FP86C008	09/11/2019
5P-MW105-146-090519MS	1925562009	FP87S009	09/11/2019
5P-MW105-146-090519MSD	1925562010	FP88D010	09/11/2019
5P-MW101-160-090519	1925562006	FP89C006	09/11/2019
5P-MW101-160-090519Y	1925562007	FP90C007	09/11/2019
VHBLKT1	672758	FP92HBLK	09/11/2019

FORM 4-OR

METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKT2

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method Trace VOA Level: TRACE

Matrix: WATER Lab Sample ID: 672759

Instrument ID: 5975-M Lab File ID: MS07BLK

Extraction Type: PT Date Extracted:

GC Column (1): RTX-VMS ID: 0.25 (mm) Date Analyzed: 09/11/2019

GC Column (2): ID: (mm) Time Analyzed: 08:40

Heated Purge: (Y/N) Y Cleanup (Y/N): Cleanup Types:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
5P-MW103-120-090519	1925562011	MS08C011	09/11/2019
5P-MW104-120-090519	1925562012	MS09C012	09/11/2019
5P-MW108I-149-090519	1925562013	MS10C013	09/11/2019
5P-MW108D-214-090519	1925562014	MS11C014	09/11/2019
5P-MW109I-169-090519	1925562015	MS12C015	09/11/2019
5P-MW109D-230-090519	1925562016	MS13C016	09/11/2019
5P-MW110I-208-090519	1925562017	MS14C017	09/11/2019
5P-MW110D-301-090519	1925562018	MS15C018	09/11/2019

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFBTF

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Lab File ID: FP00BFB

Instrument ID: 5975-F BFB/DFTPP BFB

GC Column: RTX-VMS ID: 0.25 (mm)

Injection Date: 07/17/2019 Injection Time: 06:43

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.2
75	30.0 - 80.0% of mass 95	49.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.3
173	Less than 2.0% of mass 174	0.7 (1.0)
174	50.0 - 120% of mass 95	76.3
175	5.0 - 9.0% of mass 174	5.4 (7.1)
176	95.0 - 101% of mass 174	75.9 (99.4)
177	5.0 - 9.0% of mass 176	5.2 (6.9)

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD0.5TF	VSTD0.5TF	FP01S005	07/17/2019	07:11
VSTD001TF	VSTD001TF	FP02S01	07/17/2019	07:39
VSTD005TF	VSTD005TF	FP03S05	07/17/2019	08:07
VSTD010TF	VSTD010TF	FP04S10	07/17/2019	08:35
VSTD020TF	VSTD020TF	FP05S20	07/17/2019	09:03
VICVTF	VICVTF	FP07V05	07/17/2019	09:58

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFBT1

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Lab File ID: FP76BFB

Instrument ID: 5975-F BFB/DFTPP BFB

GC Column: RTX-VMS ID: 0.25 (mm)

Injection Date: 09/11/2019 Injection Time: 06:34

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.6
75	30.0 - 80.0% of mass 95	50.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	1.3 (1.5)
174	50.0 - 120% of mass 95	82.1
175	5.0 - 9.0% of mass 174	6.4 (7.9)
176	95.0 - 101% of mass 174	78.7 (95.8)
177	5.0 - 9.0% of mass 176	4.9 (6.3)

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD005T1	VSTD005T1	FP77S05	09/11/2019	07:06
VBLKT1	672757	FP78BLK	09/11/2019	07:38
TB-090519	1925562001	FP79C001	09/11/2019	08:14
5P-MW1071-145-090519	1925562002	FP80C002	09/11/2019	08:42
5P-MW107D-200-090519	1925562003	FP81C003	09/11/2019	09:10
5P-MW106I-145-090519	1925562004	FP82C004	09/11/2019	09:38
5P-MW106D-195-090519	1925562005	FP83C005	09/11/2019	10:05
5P-MW101-160-090519DL	1925562006DL	FP84R006	09/11/2019	10:33
5P-MW101-160-090519YDI	1925562007DL	FP85R007	09/11/2019	11:01
5P-MW105-146-090519	1925562008	FP86C008	09/11/2019	11:29
5P-MW105-146-090519MS	1925562009	FP87S009	09/11/2019	11:57
5P-MW105-146-090519MSI	1925562010	FP88D010	09/11/2019	12:25
5P-MW101-160-090519	1925562006	FP89C006	09/11/2019	12:52
5P-MW101-160-090519Y	1925562007	FP90C007	09/11/2019	13:19
VHBLKT1	672758	FP92HBLK	09/11/2019	14:13
VSTD005T2	VSTD005T2	FP93F05	09/11/2019	14:40

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFBTM

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Lab File ID: MR59BFB

Instrument ID: 5975-M BFB/DFTPP BFB

GC Column: RTX-VMS ID: 0.25 (mm)

Injection Date: 08/27/2019 Injection Time: 07:22

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.2
75	30.0 - 80.0% of mass 95	48.6
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.9 (1.0)
174	50.0 - 120% of mass 95	90.4
175	5.0 - 9.0% of mass 174	7.1 (7.8)
176	95.0 - 101% of mass 174	87.2 (96.4)
177	5.0 - 9.0% of mass 176	5.9 (6.8)

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD0.5TM	VSTD0.5TM	MR60S005	08/27/2019	07:56
VSTD001TM	VSTD001TM	MR61S01	08/27/2019	08:24
VSTD005TM	VSTD005TM	MR62S05	08/27/2019	08:52
VSTD010TM	VSTD010TM	MR63S10	08/27/2019	09:20
VSTD020TM	VSTD020TM	MR64S20	08/27/2019	09:48
VICVTM	VICVTM	MR66V05	08/27/2019	10:43

FORM 5-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

EPA SAMPLE NO.

BFBT2

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Lab File ID: MS04BFB

Instrument ID: 5975-M BFB/DFTPP BFB

GC Column: RTX-VMS ID: 0.25 (mm)

Injection Date: 09/11/2019 Injection Time: 07:05

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.8
75	30.0 - 80.0% of mass 95	48.9
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.3 (0.4)
174	50.0 - 120% of mass 95	85.8
175	5.0 - 9.0% of mass 174	7.0 (8.1)
176	95.0 - 101% of mass 174	83.8 (97.7)
177	5.0 - 9.0% of mass 176	4.8 (5.7)

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTD005T3	VSTD005T3	MS06S05	09/11/2019	08:07
VBLKT2	672759	MS07BLK	09/11/2019	08:40
5P-MW103-120-090519	1925562011	MS08C011	09/11/2019	09:13
5P-MW104-120-090519	1925562012	MS09C012	09/11/2019	09:41
5P-MW108I-149-090519	1925562013	MS10C013	09/11/2019	10:09
5P-MW108D-214-090519	1925562014	MS11C014	09/11/2019	10:37
5P-MW109I-169-090519	1925562015	MS12C015	09/11/2019	11:05
5P-MW109D-230-090519	1925562016	MS13C016	09/11/2019	11:32
5P-MW110I-208-090519	1925562017	MS14C017	09/11/2019	12:00
5P-MW110D-301-090519	1925562018	MS15C018	09/11/2019	12:28
VSTD005T4	VSTD005T4	MS16F05	09/11/2019	12:56

FORM 8A-OR

INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Level: TRACE

EPA Sample No.: VSTD005T1 Lab File ID (Standard): FP77S05

Instrument ID: 5975-F Init. Calib Date(s): 07/17/2019 07/17/2019

GC Column: RTX-VMS ID: 0.25 (mm) Date Analyzed: 09/11/2019

Heated Purge: (Y/N) Y Time Analyzed: 07:06

	IS1 (CBZ) AREA	RT	IS2 (DFB) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	663528	10.39	837599	7.16	359641	12.80
UPPER LIMIT	1327056	10.56	1675198	7.33	719282	12.97
LOWER LIMIT	331764	10.22	418800	6.99	179821	12.63
EPA SAMPLE NO.						
VBLKT1	705116	10.39	824062	7.16	345104	12.80
TB-090519	751727	10.40	881661	7.16	367326	12.80
5P-MW1071-145-090519	627530	10.39	722569	7.16	301953	12.80
5P-MW107D-200-090519	601236	10.40	718242	7.16	310157	12.80
5P-MW106I-145-090519	677920	10.40	774198	7.16	321461	12.80
5P-MW106D-195-090519	652979	10.40	776066	7.16	322454	12.80
5P-MW101-160-090519DL	704743	10.40	840445	7.16	348130	12.80
5P-MW101-160-090519YDI	747743	10.40	892961	7.16	367397	12.80
5P-MW105-146-090519	611078	10.40	742179	7.16	313261	12.80
5P-MW105-146-090519MS	595288	10.40	731296	7.16	299830	12.80
5P-MW105-146-090519MSD	635352	10.40	770117	7.16	316097	12.80
5P-MW101-160-090519	604870	10.40	718885	7.16	317467	12.80
5P-MW101-160-090519Y	623108	10.39	735857	7.16	324006	12.80
VHBLKT1	599460	10.40	700985	7.16	321700	12.80

IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = + 0.17 minutes of internal standard RT
RT LOWER LIMIT = - 0.17 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

FORM 8A-OR

INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Level: TRACE

EPA Sample No.: VSTD005T3 Lab File ID (Standard): MS06S05

Instrument ID: 5975-M Init. Calib Date(s): 08/27/2019 08/27/2019

GC Column: RTX-VMS ID: 0.25 (mm) Date Analyzed: 09/11/2019

Heated Purge: (Y/N) Y Time Analyzed: 08:07

	IS1 (CBZ) AREA	RT	IS2 (DFB) AREA	RT	IS3 (DCB) AREA	RT
12 HOUR STD	1013283	10.63	1226584	7.44	565803	13.03
UPPER LIMIT	2026566	10.80	2453168	7.61	1131606	13.20
LOWER LIMIT	506642	10.46	613292	7.27	282902	12.86
EPA SAMPLE NO.						
VBLKT2	1041405	10.63	1289245	7.44	557280	13.03
5P-MW103-120-090519	1035221	10.64	1257009	7.45	576885	13.03
5P-MW104-120-090519	997354	10.63	1215790	7.45	549575	13.03
5P-MW108I-149-090519	958826	10.63	1139829	7.44	525181	13.03
5P-MW108D-214-090519	974545	10.63	1174192	7.45	553593	13.03
5P-MW109I-169-090519	987197	10.63	1171878	7.45	538831	13.03
5P-MW109D-230-090519	968674	10.63	1154250	7.45	531280	13.03
5P-MW110I-208-090519	1007735	10.64	1217487	7.45	549161	13.03
5P-MW110D-301-090519	1008340	10.64	1194550	7.45	545409	13.03

IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = + 0.17 minutes of internal standard RT
RT LOWER LIMIT = - 0.17 minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW101-160-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562006
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP89C006
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.19	J
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	1.7	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.16	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.52	
108-87-2	Methylcyclohexane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW101-160-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562006
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP89C006
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	50.	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
5P-MW101-160-090519

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 1925562006
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: FP89C006
% Solids:
Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
Extract Concentrated: (Y/N)
Date Analyzed: 09/11/2019
Soil Aliquot (VOA): (uL)
Extract Volume: (uL)
Heated Purge: (Y/N) Y
Extraction Type: PT
Purge Volume: 25.0 (mL)
Injection Volume: (uL)
Cleanup Types:
pH: 1.0 Dilution Factor: 1.0
Concentration Units (ug/L, ug/kg): ug/L
Cleanup Factor:

	CAS No.	ANALYTE	RT	EST. CONC.	Q
01		Unknown Isopropyl Alcohol	3.21	0.52	J
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

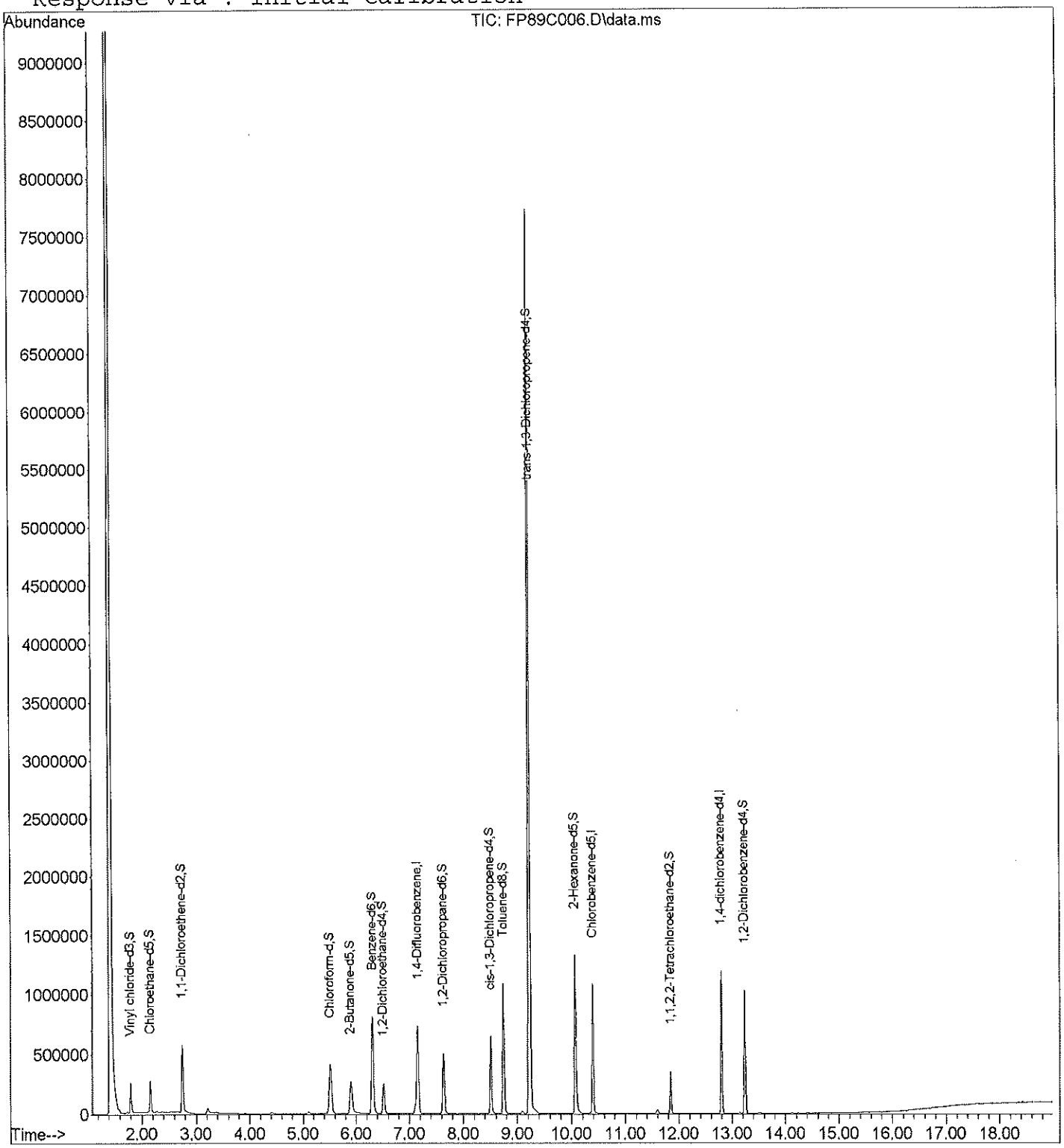
Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP89C006.D
Acq Time : 09/11/2019 12:52
Sample : 1925562006 5P-MW101-160-090519
Misc : 1925562 A
MS Integration Params: rteint.p

Vial: 14
Operator: CQC
Inst : 5975-F
Multiplr: 1.00
Column ID: Rtx-VMS

Quant Time: Sep 11 13:31:26 2019 Results File: FTRACEG5.RES

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Sep 05 08:18:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP89C006.D Vial: 14
Acq Time : 09/11/2019 12:52 Operator: CQC
Sample : 1925562006 5P-MW101-160-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 13:31:26 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.16	114	718885	5.0000 ug/L	76.40
28) Chlorobenzene-d5	10.40	117	604870	5.0000 ug/L	79.12
60) 1,4-dichlorobenzene-d4	12.80	152	317467	5.0000 ug/L	79.36
System Monitoring Compounds					%Recovery
5) Vinyl chloride-d3	1.79	65	237631	4.8581 ug/L	97.16%
8) Chloroethane-d5	2.16	69	198589	5.0447 ug/L	100.89%
11) 1,1-Dichloroethene-d2	2.74	63	440631	4.4665 ug/L	89.33%
22) 2-Butanone-d5	5.90	46	611452	52.3037 ug/L	104.61%
25) Chloroform-d	5.51	84	503625	5.5503 ug/L	111.01%
27) 1,2-Dichloroethane-d4	6.51	65	232103	5.4439 ug/L	108.88%
33) Benzene-d6	6.31	84	942929	5.2859 ug/L	105.72%
37) 1,2-Dichloropropane-d6	7.63	67	243694	5.1160 ug/L	102.32%
40) cis-1,3-Dichloropropene-d4	8.51	79	361794	4.4314 ug/L	88.63%
42) trans-1,3-Dichloropropene-	9.24	79	209060	4.4481 ug/L	88.96%
47) Toluene-d8	8.75	98	768594	4.9635 ug/L	99.27%
50) 2-Hexanone-d5	10.07	63	487887	50.4636 ug/L	100.93%
59) 1,1,2,2-Tetrachloroethane-	11.85	84	170082	5.2594 ug/L	105.19%
65) 1,2-Dichlorobenzene-d4	13.24	152	277278	5.1665 ug/L	103.33%
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.00	85		Not Detected	
3) Chloromethane	1.73	50	10404	0.1866 ug/L	95
4) Vinyl chloride	0.00	62		Not Detected	
6) Bromomethane	0.00	94		Not Detected	
7) Chloroethane	0.00	64		Not Detected	
9) Trichlorofluoromethane	0.00	101		Not Detected	
10) 1,1-Dichloroethene	0.00	96		Not Detected	
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101		Not Detected	
13) Acetone	3.38	43	10891	1.7388 ug/L	84
14) Carbon disulfide	0.00	76		Not Detected	
15) Methyl acetate	0.00	43		Not Detected	
16) Methylene chloride	0.00	84		Not Detected	
17) trans-1,2-Dichloroethene	0.00	96		Not Detected	
18) Methyl tert-butyl ether	0.00	73		Not Detected	
19) 1,1-Dichloroethane	0.00	63		Not Detected	
20) cis-1,2-Dichloroethene	5.10	96	8027	0.1608 ug/L	96
21) 2-Butanone	0.00	43		Not Detected	
23) Bromochloromethane	0.00	128		Not Detected	
24) Chloroform	5.54	83	8356	0.0999 ug/L #	1
26) 1,2-Dichloroethane	0.00	62		Not Detected	

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

Quantitation Report

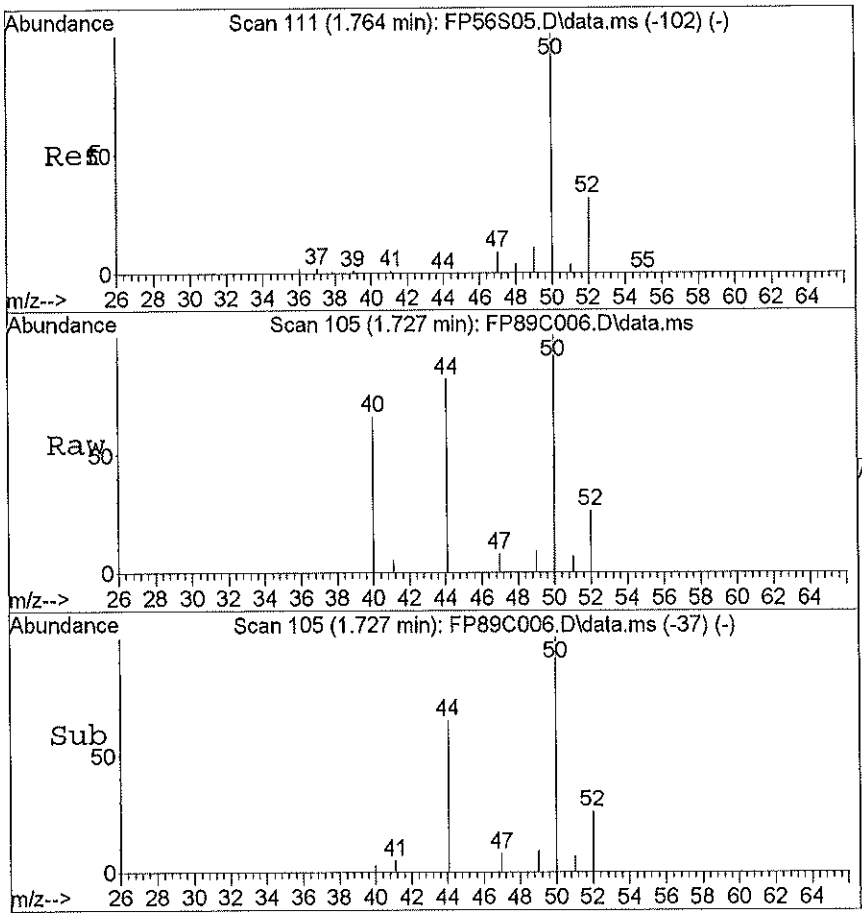
Data File : C:\msdchem\1\data\11SEP19F\FP89C006.D Vial: 14
Acq Time : 09/11/2019 12:52 Operator: CQC
Sample : 1925562006 5P-MW101-160-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 13:31:26 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	1,1,1-Trichloroethane	0.00	97		Not Detected	
30)	Cyclohexane	0.00	56		Not Detected	
31)	Carbon tetrachloride	0.00	117		Not Detected	
32)	Benzene	0.00	78		Not Detected	
34)	Trichloroethene	7.11	130	28766	0.5231 ug/L	96
35)	Methylcyclohexane	0.00	83		Not Detected	
36)	1,2-Dichloropropane	0.00	63		Not Detected	
38)	Bromodichloromethane	0.00	83		Not Detected	
39)	cis-1,3-Dichloropropene	0.00	75		Not Detected	
41)	trans-1,3-Dichloropropene	0.00	75		Not Detected	
43)	1,1,2-Trichloroethane	0.00	97		Not Detected	
44)	Dibromochloromethane	0.00	129		Not Detected	
45)	4-Methyl-2-pentanone	0.00	43		Not Detected	
46)	Toluene	0.00	91		Not Detected	
48)	Tetrachloroethene	9.23	164	1858663	49.7695 ug/L	100
49)	2-Hexanone	0.00	43		Not Detected	
51)	1,2-Dibromoethane	0.00	107		Not Detected	
52)	Chlorobenzene	0.00	112		Not Detected	
53)	Ethylbenzene	0.00	91		Not Detected	
54)	m,p-Xylene	0.00	106		Not Detected	
55)	o-Xylene	0.00	106		Not Detected	
56)	Styrene	0.00	104		Not Detected	
57)	Isopropylbenzene	0.00	105		Not Detected	
58)	1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61)	Bromoform	0.00	173		Not Detected	
62)	1,3-Dichlorobenzene	0.00	146		Not Detected	
63)	1,4-Dichlorobenzene	0.00	146		Not Detected	
64)	1,2-Dichlorobenzene	0.00	146		Not Detected	
66)	1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67)	1,2,4-Trichlorobenzene	0.00	180		Not Detected	
68)	1,2,3-Trichlorobenzene	0.00	180		Not Detected	

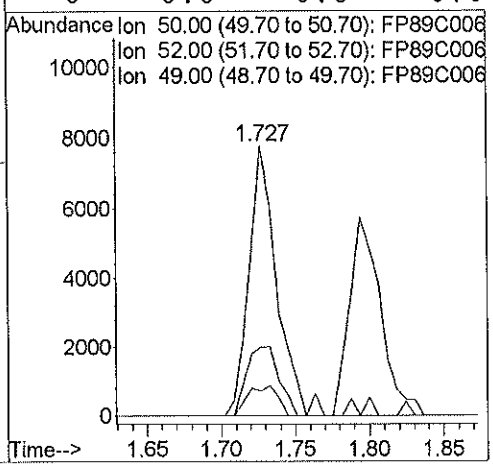
(#) = qualifier out of range (m) = manual integration

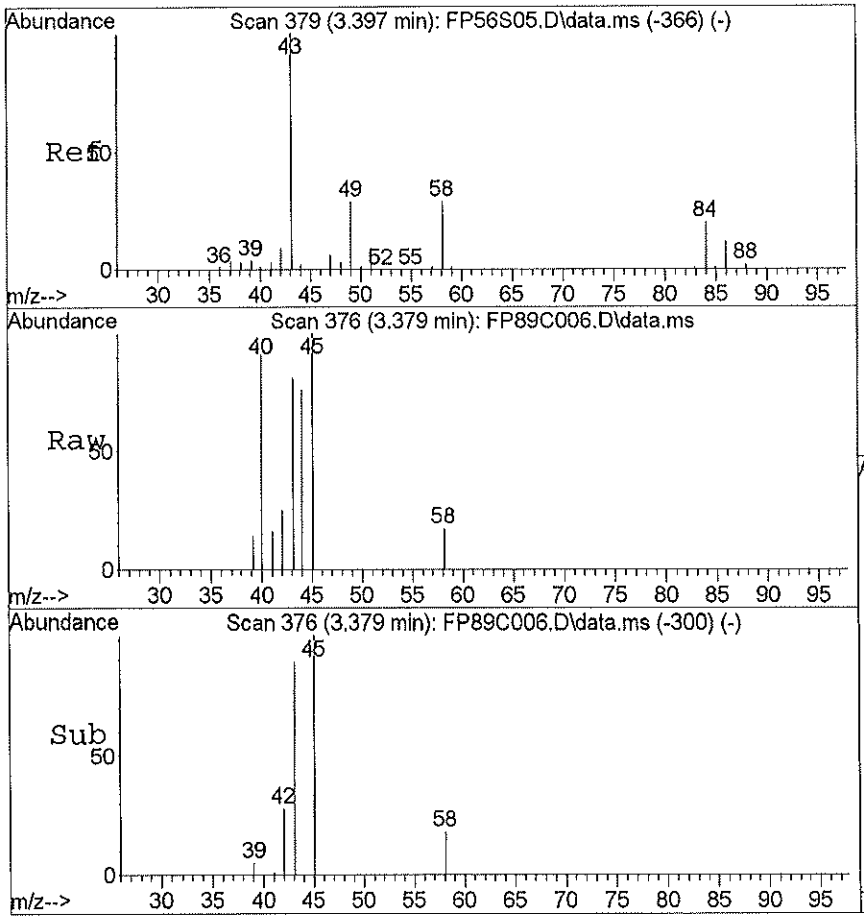


#3
Chloromethane
Concen: 0.19 ug/L
RT: 1.73 min Scan# 105
Delta R.T. -0.01 min
Lab File: FP89C006.D
Acq: 09/11/2019 12:52

Tgt Ion:50 Resp: 10404

Ion	Ratio	Lower	Upper
50	100		
52	29.3	12.7	52.7
49	11.7	0.0	30.8
0	0.0	0.0	0.0

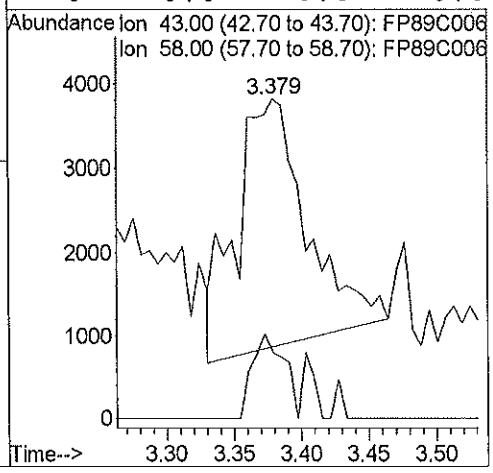


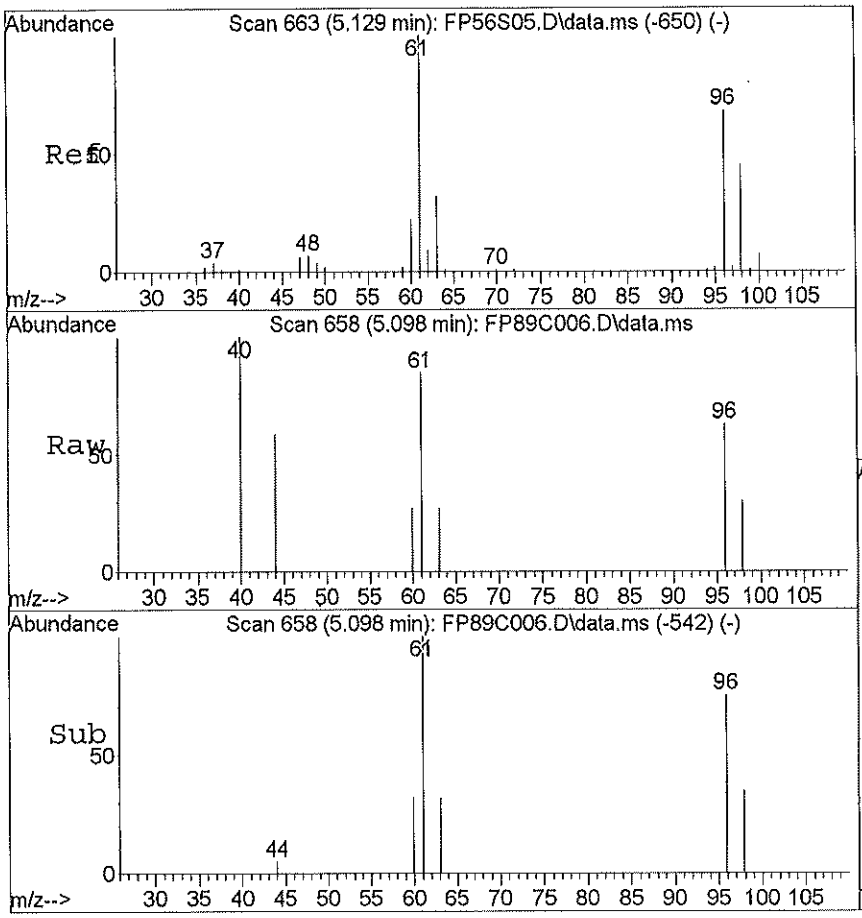


#13
Acetone
Concen: 1.74 ug/L
RT: 3.38 min Scan# 376
Delta R.T. -0.00 min
Lab File: FP89C006.D
Acq: 09/11/2019 12:52

Tgt Ion:43 Resp: 10891

Ion	Ratio	Lower	Upper
43	100		
58	21.2	9.8	49.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

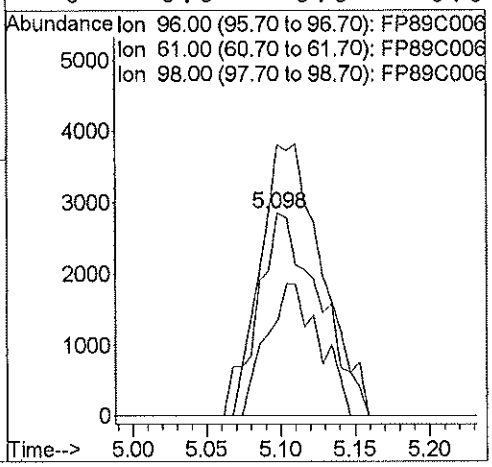


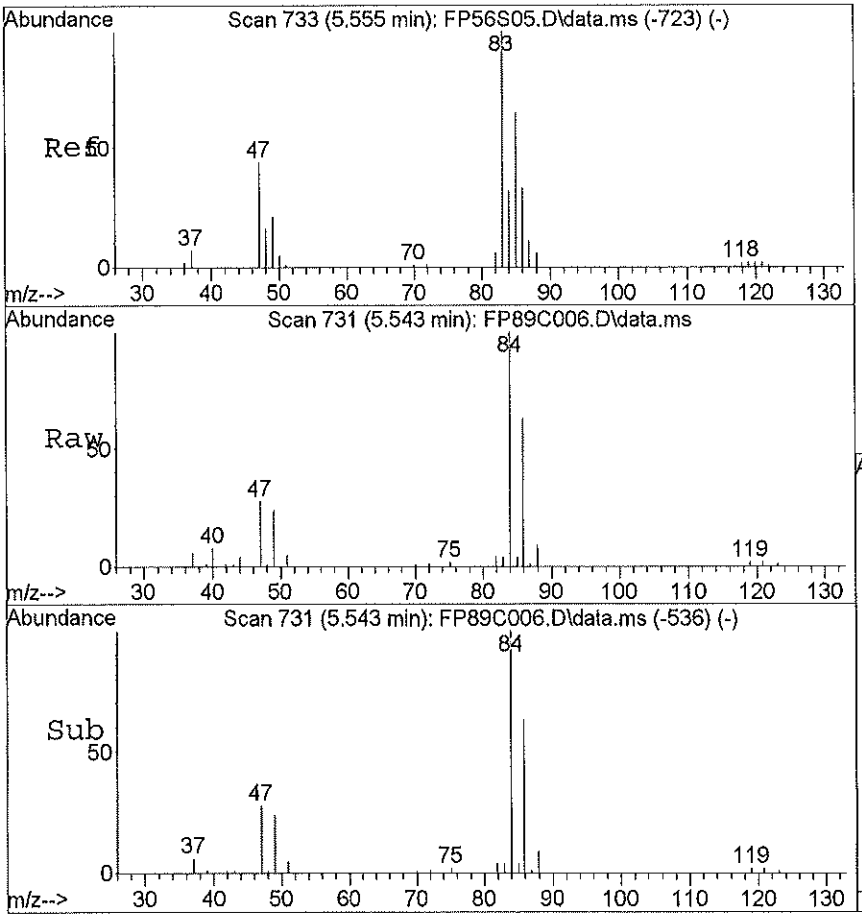


#20
cis-1,2-Dichloroethene
Concen: 0.16 ug/L
RT: 5.10 min Scan# 658
Delta R.T. -0.01 min
Lab File: FP89C006.D
Acq: 09/11/2019 12:52

Tgt Ion:96 Resp: 8027

Ion	Ratio	Lower	Upper
96	100		
61	140.5	123.0	163.0
98	57.8	43.8	83.8
0	0.0	0.0	0.0

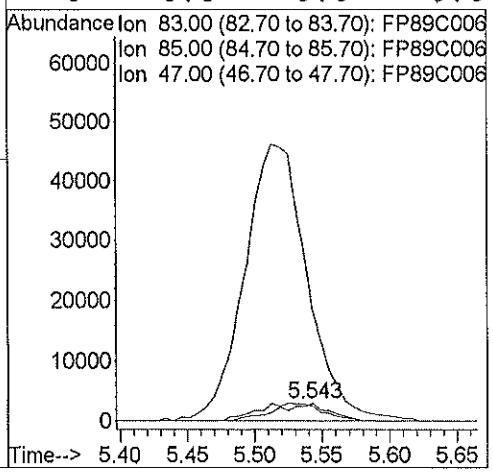


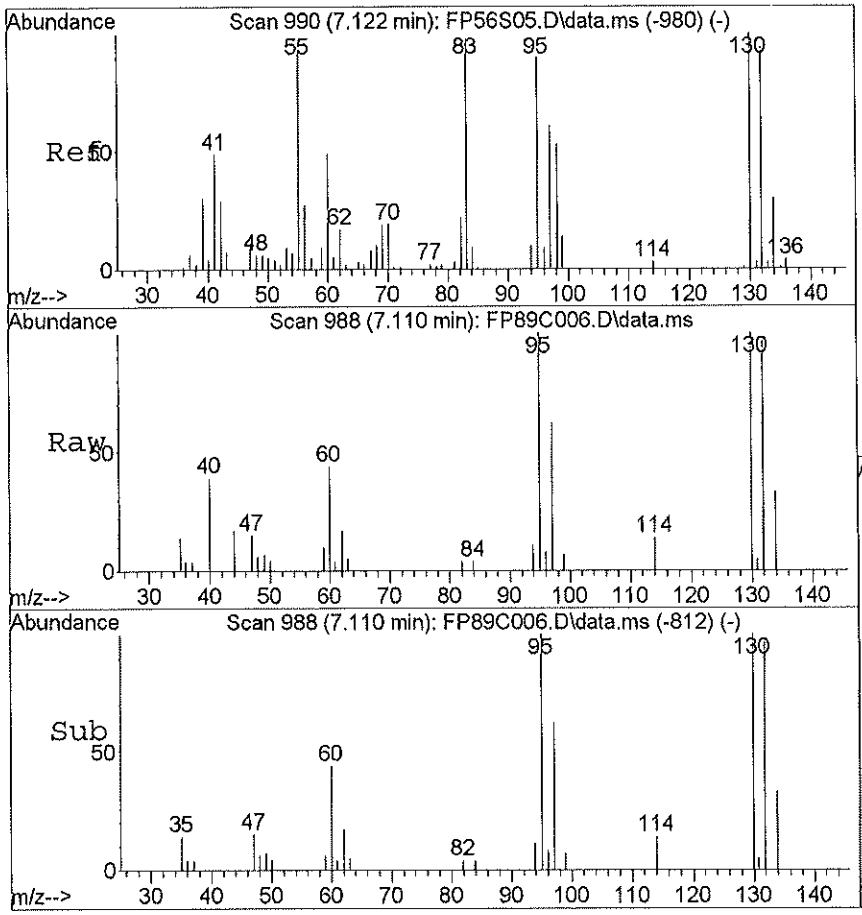


#24
Chloroform
Concen: 0.10 ug/L
RT: 5.54 min Scan# 731
Delta R.T. -0.00 min
Lab File: FP89C006.D
Acq: 09/11/2019 12:52

Tgt Ion:83 Resp: 8356

Ion	Ratio	Lower	Upper
83	100		
85	121.7	46.0	86.0#
47	1796.9	44.3	84.3#
0	0.0	0.0	0.0

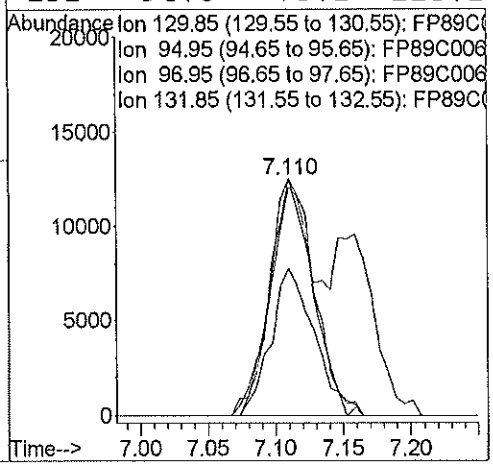


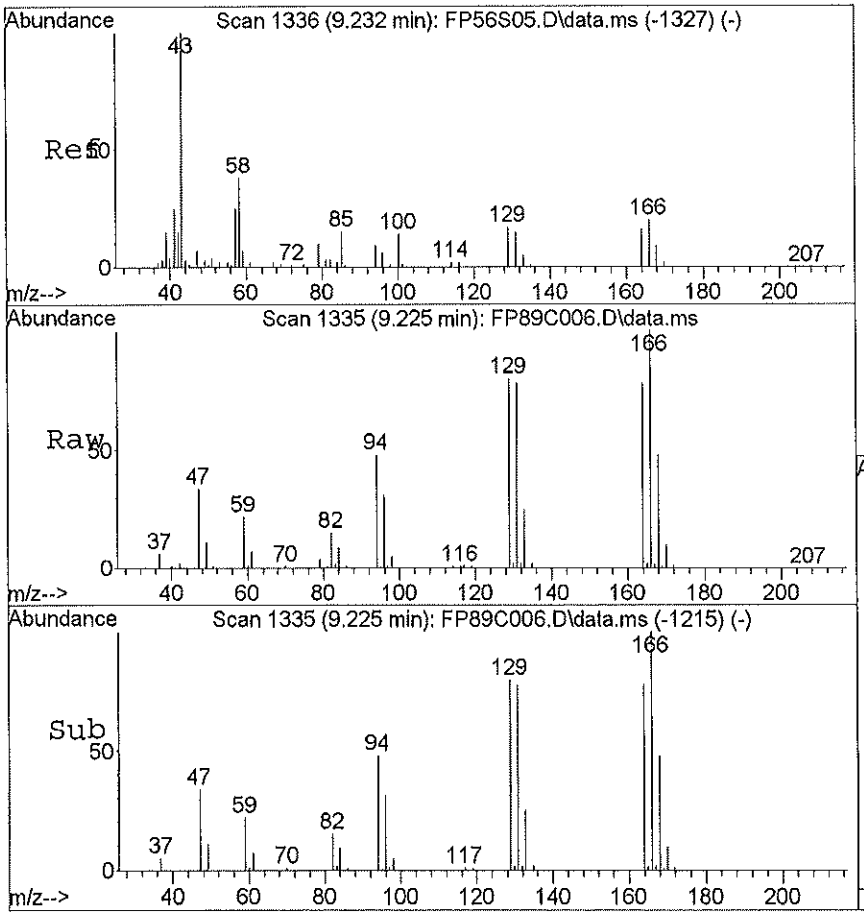


#34
Trichloroethene
Concen: 0.52 ug/L
RT: 7.11 min Scan# 988
Delta R.T. -0.01 min
Lab File: FP89C006.D
Acq: 09/11/2019 12:52

Tgt Ion:129.85 Resp: 28766

Ion	Ratio	Lower	Upper
130	100		
95	94.0	81.3	121.3
97	59.3	43.2	83.2
132	94.0	75.2	115.2

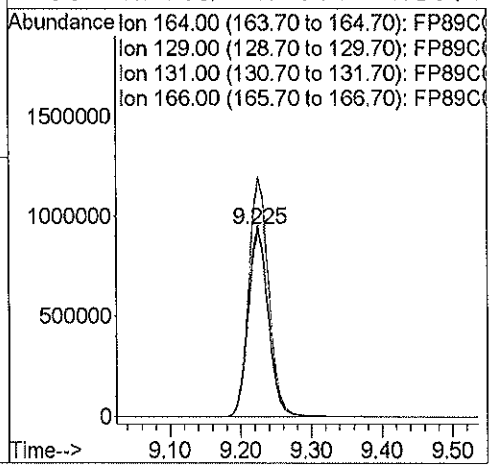




#48
Tetrachloroethene
Concen: 49.77 ug/L
RT: 9.23 min Scan# 1335
Delta R.T. -0.00 min
Lab File: FP89C006.D
Acq: 09/11/2019 12:52

Tgt Ion:164 Resp: 1858663

Ion	Ratio	Lower	Upper
164	100		
129	101.3	80.9	120.9
131	97.4	77.8	117.8
166	127.2	106.7	146.7



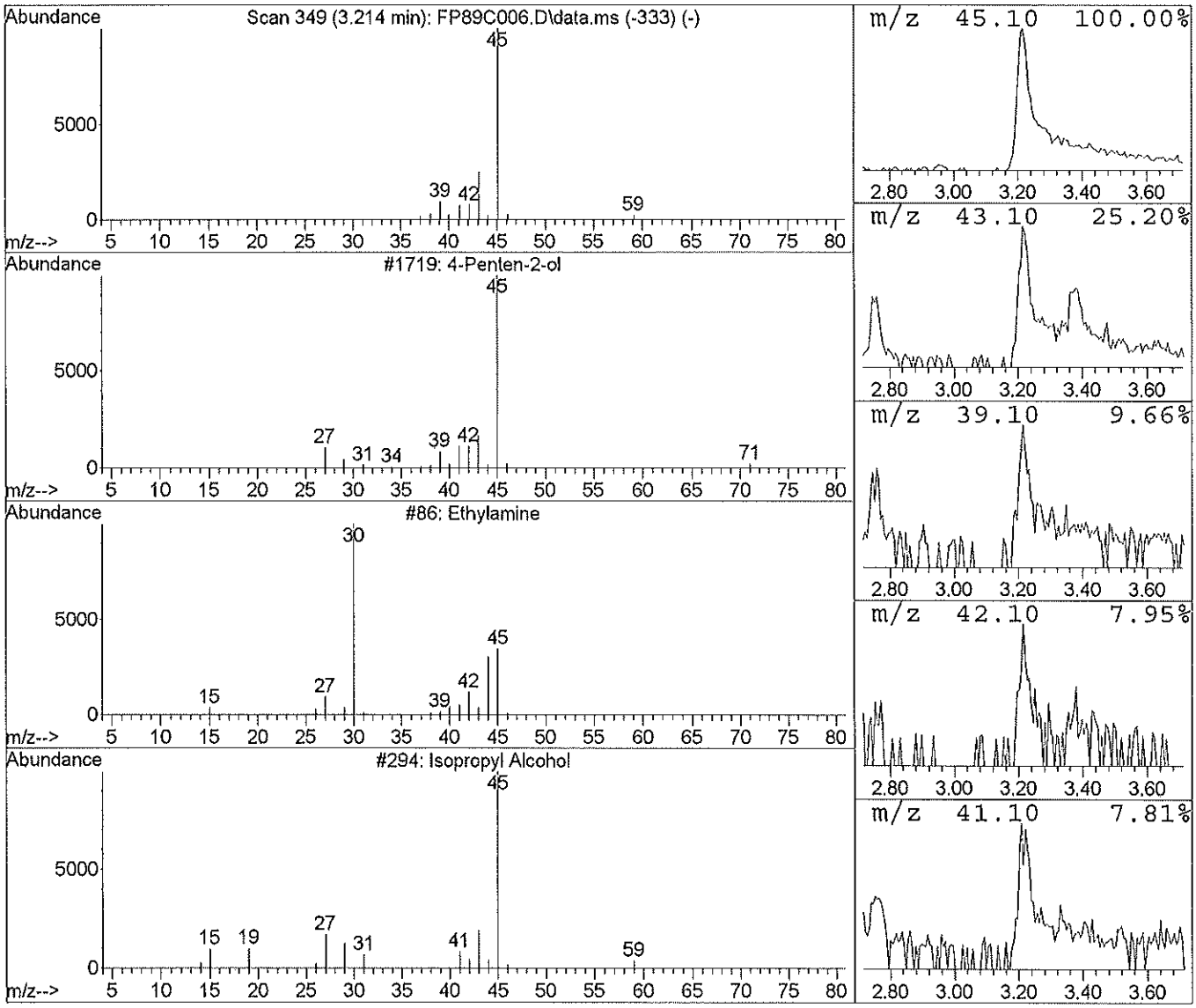
Library Search Compound Report

Data File : C:\msdchem\1\data\11SEP19F\FP89C006.D Vial: 14
Acq Time : 09/11/2019 12:52 Operator: CQC
Sample : 1925562006 5P-MW101-160-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Library : C:\Database\NIST11.L

R.T.	Conc	Area	Relative to ISTD	ISTD Area
3.21	0.52 ug/L	193013	1,4-Difluorobenzene	1857286

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	4-Penten-2-ol	1719	000625-31-0	43.00
2	Ethylamine	86	000075-04-7	5.00
3	Isopropyl Alcohol	294	000067-63-0	4.00
4	Formamide	91	000075-12-7	4.00
5	2-Propanone, 1-methoxy-	2049	005878-19-3	4.00



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW101-160-090519DL

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562006DL
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP84R006
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 5.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U
67-64-1	Acetone	25.	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25.	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	2.5	U
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U
108-87-2	Methylcyclohexane	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW101-160-090519DL

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 1925562006DL
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: FP84R006
% Solids:
Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
GC Column: ID: (mm)
Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N)
Extract Volume: (uL)
Soil Aliquot (VOA): (uL)
Extraction Type: PT
Heated Purge: (Y/N) Y
Injection Volume: (uL)
Purge Volume: 25.0 (mL)
pH: 1.0 Dilution Factor: 5.0
Cleanup Types:
Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	2.5	U
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-Pentanone	25.	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	43.	D
591-78-6	2-Hexanone	25.	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m,p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-Trichlorobenzene	2.5	U
87-61-6	1,2,3-Trichlorobenzene	2.5	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
5P-MW101-160-090519DL

Lab Name: ALS Environmental (SLC)
Lab Code: ALS Case No.: 5POINTS
Analytical Method: Trace VOA
Matrix: WATER
Sample wt/vol: 25.0 (g/mL) mL
% Solids:
GC Column: RTX-VMS ID: 0.25 (mm)
Extract Concentrated: (Y/N)
Soil Aliquot (VOA): (uL)
Heated Purge: (Y/N) Y
Purge Volume: 25.0 (mL)
Cleanup Types:
Concentration Units (ug/L, ug/kg): ug/L

Contract: 97756
MA No.: SDG No.: TV9519
Level: TRACE
Lab Sample ID: 1925562006DL
Lab File ID: FP84R006
Date Received: 09/05/2019
Date Extracted:
Date Analyzed: 09/11/2019
Extract Volume: (uL)
Extraction Type: PT
Injection Volume: (uL)
pH: 1.0 Dilution Factor: 5.0
Cleanup Factor:

	CAS No.	ANALYTE	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

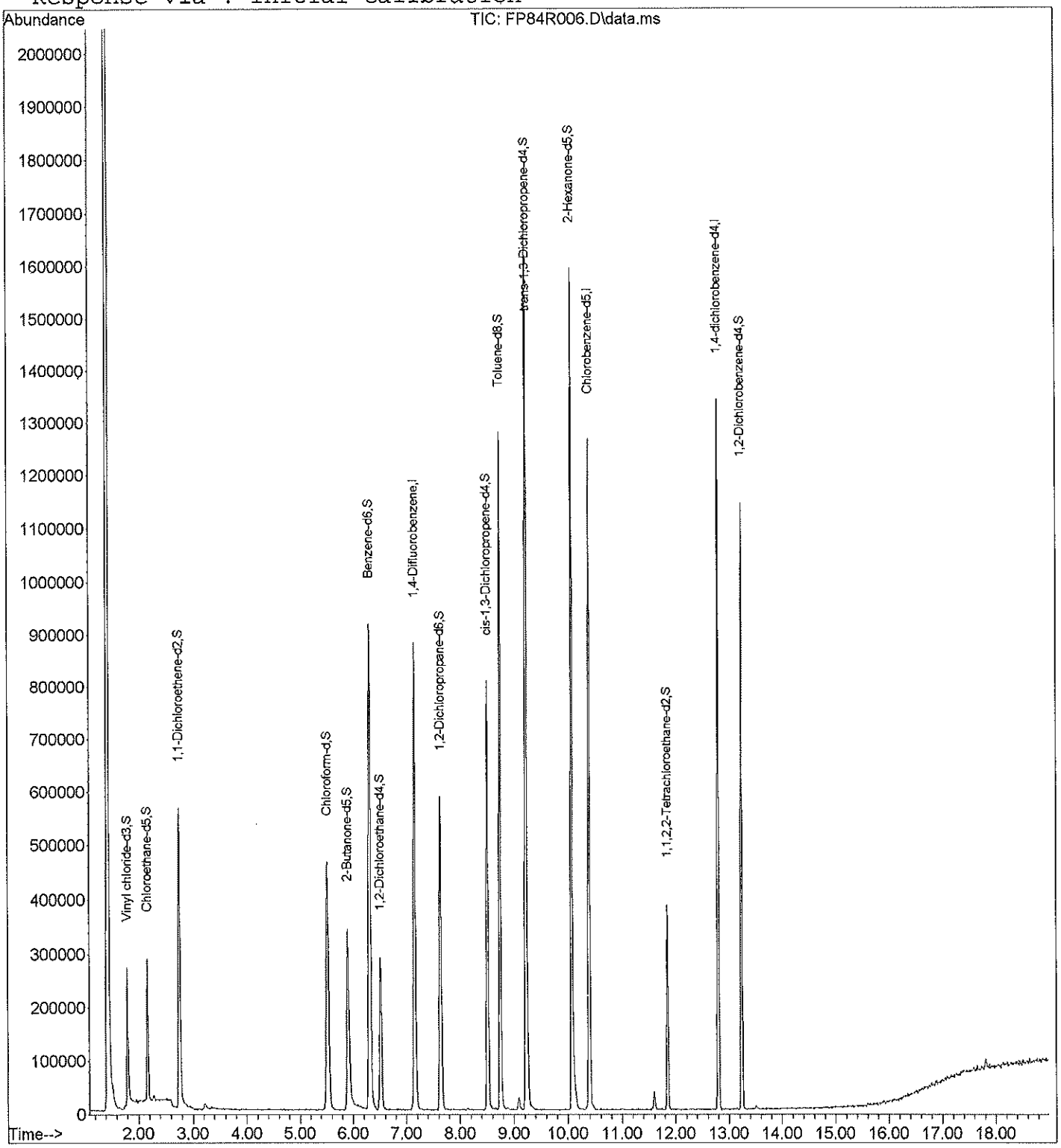
[1]EPA-designated Registry Number.

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP84R006.D Vial: 9
Acq Time : 09/11/2019 10:33 Operator: CQC
Sample : 1925562006DL 5P-MW101-160-090519DL Inst : 5975-F
Misc : 1925562 B 1:5 Dilution Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 11:34:58 2019 Results File: FTRACEG5.RES

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Sep 05 08:18:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP84R006.D Vial: 9
Acq Time : 09/11/2019 10:33 Operator: CQC
Sample : 1925562006DL 5P-MW101-160-090519DL Inst : 5975-F
Misc : 1925562 B 1:5 Dilution Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 11:34:58 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.16	114	840445	5.0000 ug/L	89.32
28) Chlorobenzene-d5	10.40	117	704743	5.0000 ug/L	92.19
60) 1,4-dichlorobenzene-d4	12.80	152	348130	5.0000 ug/L	87.02
System Monitoring Compounds					**%Recovery**
5) Vinyl chloride-d3	1.80	65	257130	4.4964 ug/L	89.93%
8) Chloroethane-d5	2.17	69	210906	4.5827 ug/L	91.65%
11) 1,1-Dichloroethene-d2	2.75	63	481462	4.1745 ug/L	83.49%
22) 2-Butanone-d5	5.90	46	731220	53.5017 ug/L	107.00%
25) Chloroform-d	5.52	84	563807	5.3148 ug/L	106.30%
27) 1,2-Dichloroethane-d4	6.52	65	272137	5.4597 ug/L	109.19%
33) Benzene-d6	6.31	84	1069356	5.1451 ug/L	102.90%
37) 1,2-Dichloropropane-d6	7.64	67	279958	5.0444 ug/L	100.89%
40) cis-1,3-Dichloropropene-d4	8.51	79	448190	4.7117 ug/L	94.23%
42) trans-1,3-Dichloropropene-	9.24	79	256135	4.6774 ug/L	93.55%
47) Toluene-d8	8.75	98	892697	4.9479 ug/L	98.96%
50) 2-Hexanone-d5	10.07	63	573314	50.8959 ug/L	101.79%
59) 1,1,2,2-Tetrachloroethane-	11.85	84	188791	5.0106 ug/L	100.21%
65) 1,2-Dichlorobenzene-d4	13.24	152	300174	5.1005 ug/L	102.01%
Target Compounds					**Qvalue**
2) Dichlorodifluoromethane	0.00	85		Not Detected	
3) Chloromethane	0.00	50		Not Detected	
4) Vinyl chloride	0.00	62		Not Detected	
6) Bromomethane	0.00	94		Not Detected	
7) Chloroethane	0.00	64		Not Detected	
9) Trichlorofluoromethane	0.00	101		Not Detected	
10) 1,1-Dichloroethene	0.00	96		Not Detected	
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101		Not Detected	
13) Acetone	0.00	43		Not Detected	
14) Carbon disulfide	0.00	76		Not Detected	
15) Methyl acetate	0.00	43		Not Detected	
16) Methylene chloride	0.00	84		Not Detected	
17) trans-1,2-Dichloroethene	0.00	96		Not Detected	
18) Methyl tert-butyl ether	0.00	73		Not Detected	
19) 1,1-Dichloroethane	0.00	63		Not Detected	
20) cis-1,2-Dichloroethene	0.00	96		Not Detected	
21) 2-Butanone	0.00	43		Not Detected	
23) Bromochloromethane	0.00	128		Not Detected	
24) Chloroform	0.00	83		Not Detected	
26) 1,2-Dichloroethane	0.00	62		Not Detected	

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

Quantitation Report

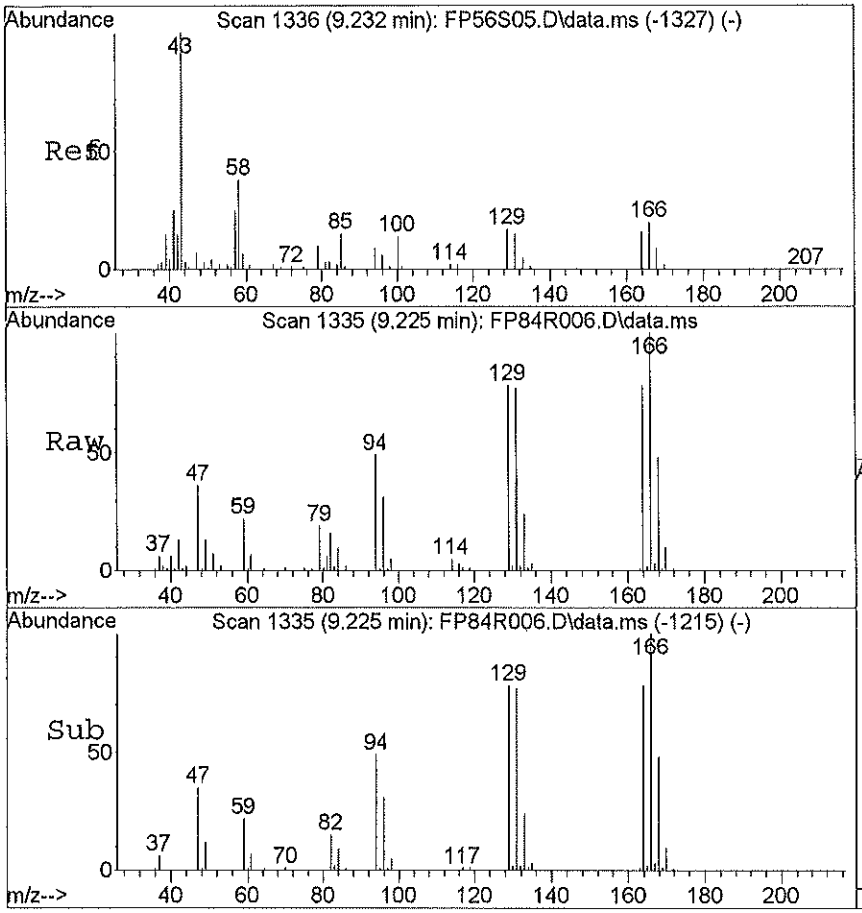
Data File : C:\msdchem\1\data\11SEP19F\FP84R006.D Vial: 9
Acq Time : 09/11/2019 10:33 Operator: CQC
Sample : 1925562006DL 5P-MW101-160-090519DL Inst : 5975-F
Misc : 1925562 B 1:5 Dilution Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 11:34:58 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	1,1,1-Trichloroethane	0.00	97		Not Detected	
30)	Cyclohexane	0.00	56		Not Detected	
31)	Carbon tetrachloride	0.00	117		Not Detected	
32)	Benzene	0.00	78		Not Detected	
34)	Trichloroethene	0.00	130		Not Detected	
35)	Methylcyclohexane	0.00	83		Not Detected	
36)	1,2-Dichloropropane	0.00	63		Not Detected	
38)	Bromodichloromethane	0.00	83		Not Detected	
39)	cis-1,3-Dichloropropene	0.00	75		Not Detected	
41)	trans-1,3-Dichloropropene	0.00	75		Not Detected	
43)	1,1,2-Trichloroethane	0.00	97		Not Detected	
44)	Dibromochloromethane	0.00	129		Not Detected	
45)	4-Methyl-2-pentanone	0.00	43		Not Detected	
46)	Toluene	0.00	91		Not Detected	
48)	Tetrachloroethene	9.23	164	373800	8.5908 ug/L	99
49)	2-Hexanone	0.00	43		Not Detected	
51)	1,2-Dibromoethane	0.00	107		Not Detected	
52)	Chlorobenzene	0.00	112		Not Detected	
53)	Ethylbenzene	0.00	91		Not Detected	
54)	m,p-Xylene	0.00	106		Not Detected	
55)	o-Xylene	0.00	106		Not Detected	
56)	Styrene	0.00	104		Not Detected	
57)	Isopropylbenzene	0.00	105		Not Detected	
58)	1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61)	Bromoform	0.00	173		Not Detected	
62)	1,3-Dichlorobenzene	0.00	146		Not Detected	
63)	1,4-Dichlorobenzene	0.00	146		Not Detected	
64)	1,2-Dichlorobenzene	0.00	146		Not Detected	
66)	1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67)	1,2,4-Trichlorobenzene	0.00	180		Not Detected	
68)	1,2,3-Trichlorobenzene	0.00	180		Not Detected	

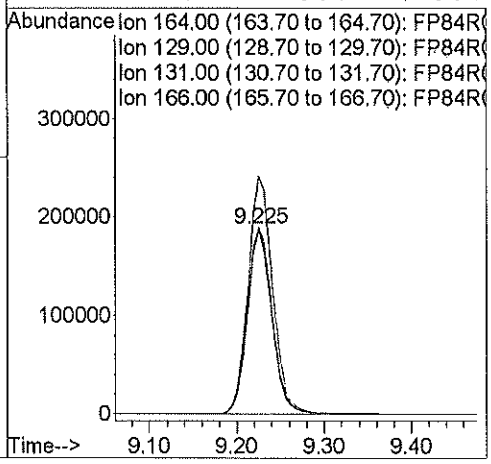
(#) = qualifier out of range (m) = manual integration



#48
Tetrachloroethene
Concen: 8.59 ug/L
RT: 9.23 min Scan# 1335
Delta R.T. -0.00 min
Lab File: FP84R006.D
Acq: 09/11/2019 10:33

Tgt Ion:164 Resp: 373800

Ion	Ratio	Lower	Upper
164	100		
129	99.8	80.9	120.9
131	96.6	77.8	117.8
166	127.3	106.7	146.7



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW101-160-090519Y

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562007
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP90C007
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.43	J
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	2.5	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.17	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.47	J
108-87-2	Methylcyclohexane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW101-160-090519Y

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562007
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP90C007
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	46.	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
5P-MW101-160-090519Y

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 1925562007
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: FP90C007
% Solids:
Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
Extract Concentrated: (Y/N)
Date Analyzed: 09/11/2019
Soil Aliquot (VOA): (uL)
Extract Volume: (uL)
Heated Purge: (Y/N) Y
Extraction Type: PT
Purge Volume: 25.0 (mL)
Injection Volume: (uL)
Cleanup Types:
pH: 1.0 Dilution Factor: 1.0
Concentration Units (ug/L, ug/kg): ug/L
Cleanup Factor:

	CAS No.	ANALYTE	RT	EST. CONC.	Q
01		Unknown Isopropyl Alcohol	3.22	0.64	J
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

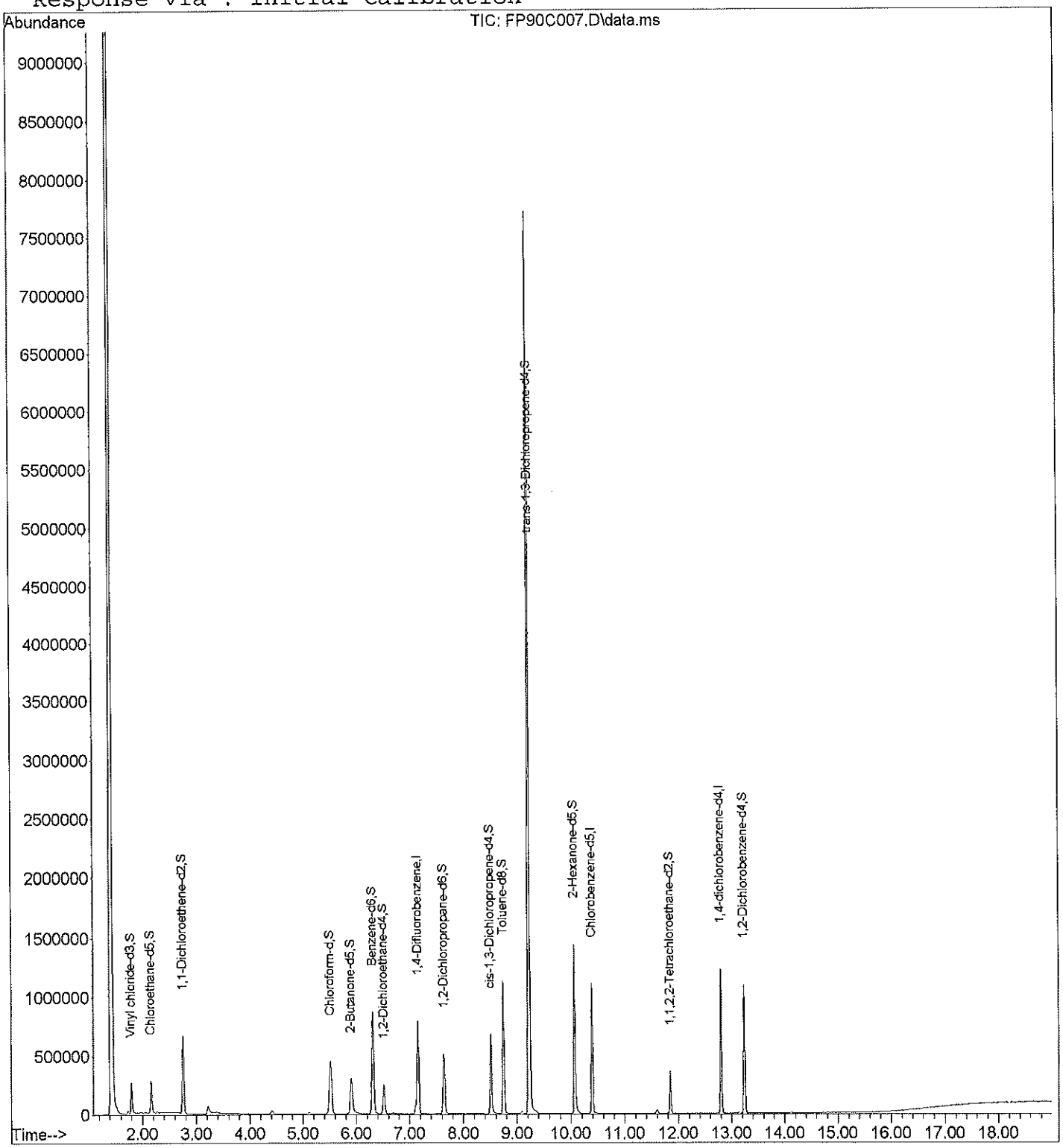
Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP90C007.D
Acq Time : 09/11/2019 13:19
Sample : 1925562007 5P-MW101-160-090519Y
Misc : 1925562 A
MS Integration Params: rteint.p

Vial: 15
Operator: CQC
Inst : 5975-F
Multiplr: 1.00
Column ID: Rtx-VMS

Quant Time: Sep 11 14:02:00 2019 Results File: FTRACEG5.RES

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Sep 05 08:18:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP90C007.D Vial: 15
Acq Time : 09/11/2019 13:19 Operator: CQC
Sample : 1925562007 5P-MW101-160-090519Y Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 14:02:00 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.16	114	735857	5.0000 ug/L	78.20
28) Chlorobenzene-d5	10.39	117	623108	5.0000 ug/L	81.51
60) 1,4-dichlorobenzene-d4	12.80	152	324006	5.0000 ug/L	80.99
System Monitoring Compounds					**%Recovery**
5) Vinyl chloride-d3	1.79	65	243320	4.8596 ug/L	97.19%
8) Chloroethane-d5	2.16	69	213529	5.2991 ug/L	105.98%
11) 1,1-Dichloroethene-d2	2.75	63	473422	4.6882 ug/L	93.76%
22) 2-Butanone-d5	5.90	46	643511	53.7764 ug/L	107.55%
25) Chloroform-d	5.52	84	527497	5.6793 ug/L	113.59%
27) 1,2-Dichloroethane-d4	6.52	65	232952	5.3378 ug/L	106.76%
33) Benzene-d6	6.31	84	985501	5.3629 ug/L	107.26%
37) 1,2-Dichloropropane-d6	7.64	67	251545	5.1262 ug/L	102.52%
40) cis-1,3-Dichloropropene-d4	8.51	79	367153	4.3655 ug/L	87.31%
42) trans-1,3-Dichloropropene-	9.24	79	217771	4.4979 ug/L	89.96%
47) Toluene-d8	8.75	98	789996	4.9523 ug/L	99.05%
50) 2-Hexanone-d5	10.07	63	508005	51.0065 ug/L	102.01%
59) 1,1,2,2-Tetrachloroethane-	11.85	84	177497	5.3281 ug/L	106.56%
65) 1,2-Dichlorobenzene-d4	13.24	152	288566	5.2683 ug/L	105.37%
Target Compounds					**Qvalue**
2) Dichlorodifluoromethane	0.00	85		Not Detected	
3) Chloromethane	1.73	50	24536	0.4299 ug/L	94
4) Vinyl chloride	0.00	62		Not Detected	
6) Bromomethane	0.00	94		Not Detected	
7) Chloroethane	0.00	64		Not Detected	
9) Trichlorofluoromethane	0.00	101		Not Detected	
10) 1,1-Dichloroethene	0.00	96		Not Detected	
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101		Not Detected	
13) Acetone	3.39	43	16277	2.5387 ug/L	98
14) Carbon disulfide	0.00	76		Not Detected	
15) Methyl acetate	0.00	43		Not Detected	
16) Methylene chloride	0.00	84		Not Detected	
17) trans-1,2-Dichloroethene	0.00	96		Not Detected	
18) Methyl tert-butyl ether	0.00	73		Not Detected	
19) 1,1-Dichloroethane	0.00	63		Not Detected	
20) cis-1,2-Dichloroethene	5.11	96	8659	0.1695 ug/L	90
21) 2-Butanone	0.00	43		Not Detected	
23) Bromochloromethane	0.00	128		Not Detected	
24) Chloroform	5.53	83	8653	0.1011 ug/L #	1
26) 1,2-Dichloroethane	0.00	62		Not Detected	

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

Quantitation Report

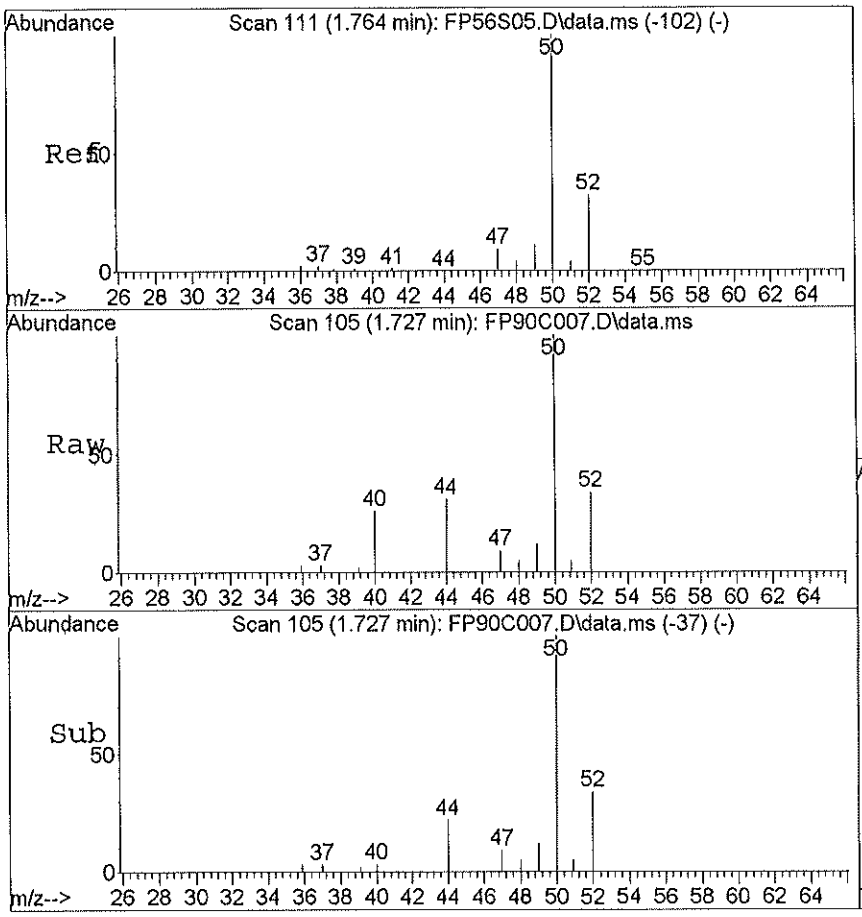
Data File : C:\msdchem\1\data\11SEP19F\FP90C007.D Vial: 15
Acq Time : 09/11/2019 13:19 Operator: CQC
Sample : 1925562007 5P-MW101-160-090519Y Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 14:02:00 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	1,1,1-Trichloroethane	0.00	97		Not Detected	
30)	Cyclohexane	0.00	56		Not Detected	
31)	Carbon tetrachloride	0.00	117		Not Detected	
32)	Benzene	0.00	78		Not Detected	
34)	Trichloroethene	7.11	130	26364	0.4654 ug/L	96
35)	Methylcyclohexane	0.00	83		Not Detected	
36)	1,2-Dichloropropane	0.00	63		Not Detected	
38)	Bromodichloromethane	0.00	83		Not Detected	
39)	cis-1,3-Dichloropropene	0.00	75		Not Detected	
41)	trans-1,3-Dichloropropene	0.00	75		Not Detected	
43)	1,1,2-Trichloroethane	0.00	97		Not Detected	
44)	Dibromochloromethane	0.00	129		Not Detected	
45)	4-Methyl-2-pentanone	0.00	43		Not Detected	
46)	Toluene	0.00	91		Not Detected	
48)	Tetrachloroethene	9.23	164	1777407	46.2007 ug/L	99
49)	2-Hexanone	0.00	43		Not Detected	
51)	1,2-Dibromoethane	0.00	107		Not Detected	
52)	Chlorobenzene	0.00	112		Not Detected	
53)	Ethylbenzene	0.00	91		Not Detected	
54)	m,p-Xylene	0.00	106		Not Detected	
55)	o-Xylene	0.00	106		Not Detected	
56)	Styrene	0.00	104		Not Detected	
57)	Isopropylbenzene	0.00	105		Not Detected	
58)	1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61)	Bromoform	0.00	173		Not Detected	
62)	1,3-Dichlorobenzene	0.00	146		Not Detected	
63)	1,4-Dichlorobenzene	0.00	146		Not Detected	
64)	1,2-Dichlorobenzene	0.00	146		Not Detected	
66)	1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67)	1,2,4-Trichlorobenzene	0.00	180		Not Detected	
68)	1,2,3-Trichlorobenzene	0.00	180		Not Detected	

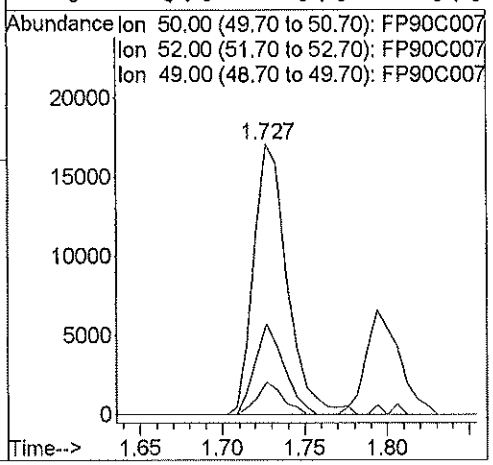
(#) = qualifier out of range (m) = manual integration

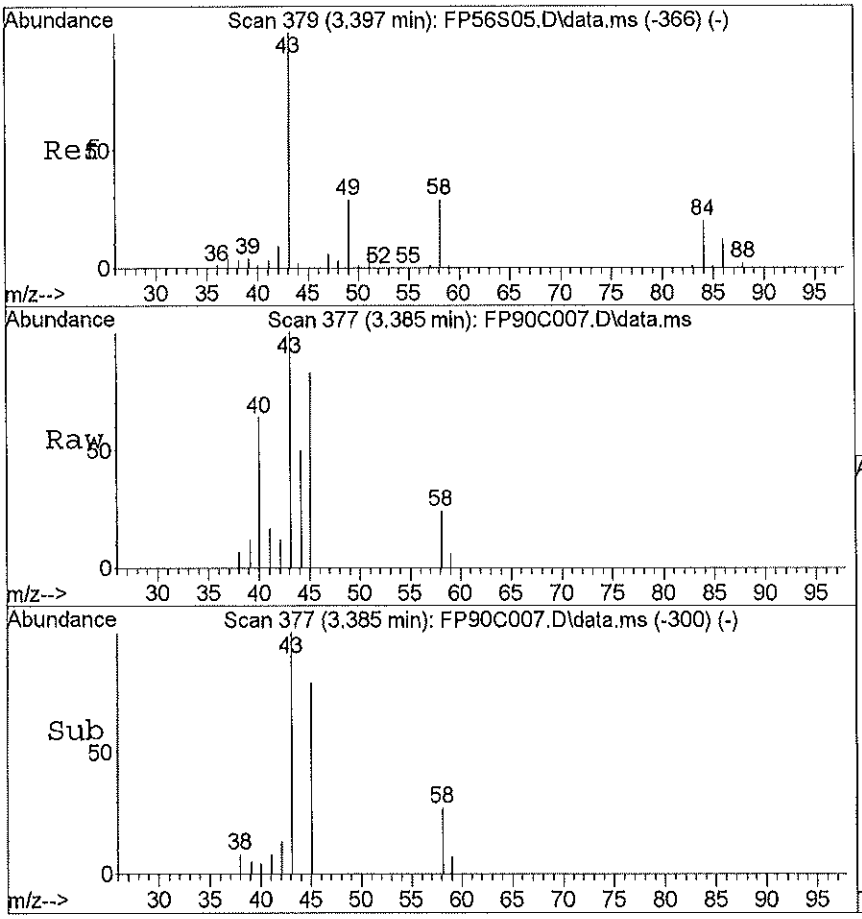


#3
Chloromethane
Concen: 0.43 ug/L
RT: 1.73 min Scan# 105
Delta R.T. -0.01 min
Lab File: FP90C007.D
Acq: 09/11/2019 13:19

Tgt Ion:50 Resp: 24536

Ion	Ratio	Lower	Upper
50	100		
52	28.9	12.7	52.7
49	9.5	0.0	30.8
0	0.0	0.0	0.0

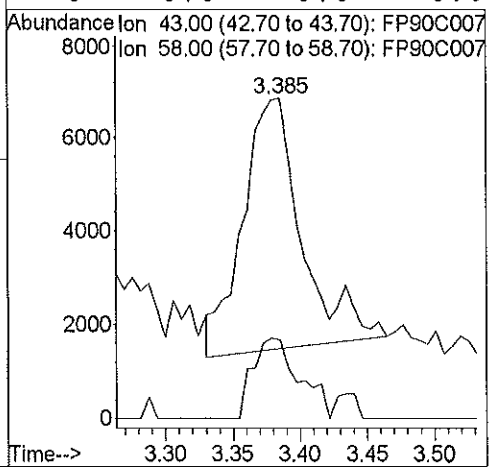


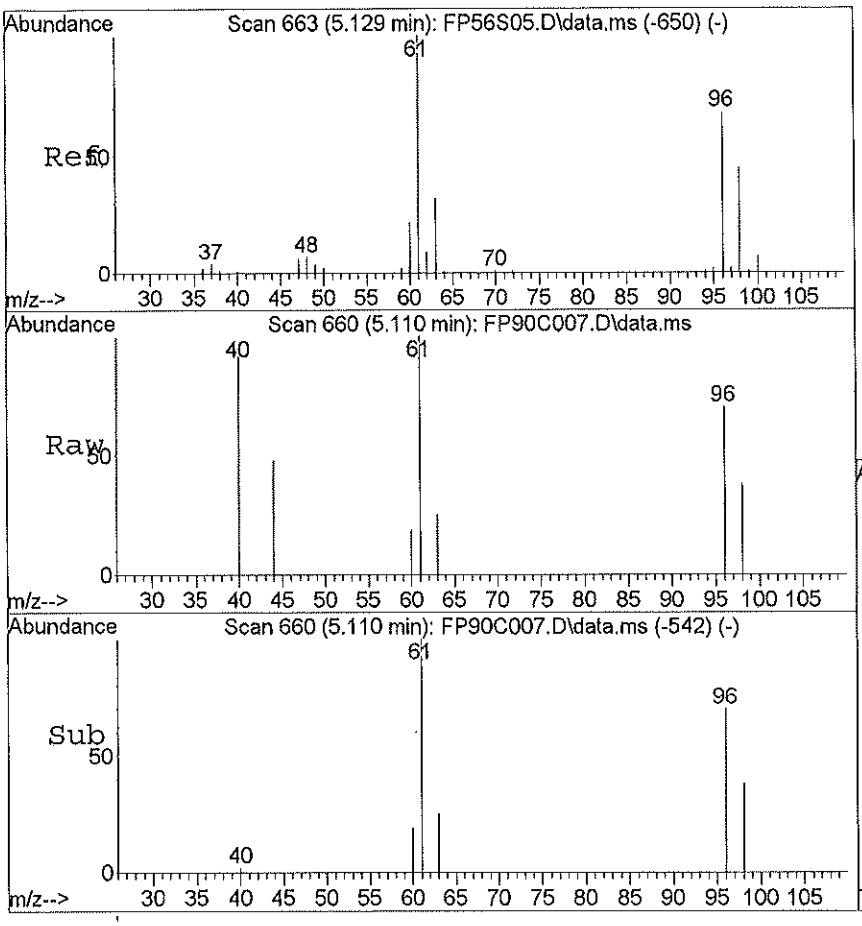


#13
Acetone
Concen: 2.54 ug/L
RT: 3.39 min Scan# 377
Delta R.T. 0.01 min
Lab File: FP90C007.D
Acq: 09/11/2019 13:19

Tgt Ion:43 Resp: 16277

Ion	Ratio	Lower	Upper
43	100		
58	28.6	9.8	49.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

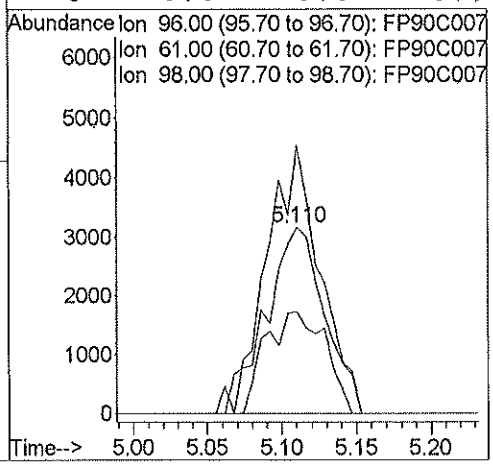


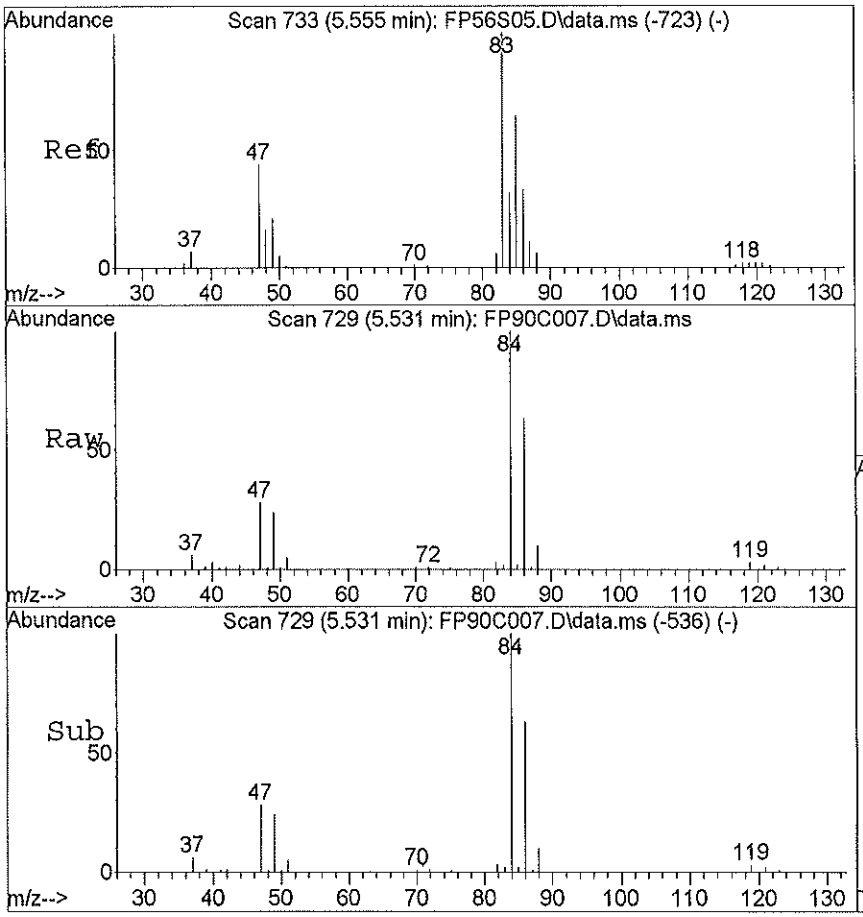


#20
cis-1,2-Dichloroethene
Concen: 0.17 ug/L
RT: 5.11 min Scan# 660
Delta R.T. 0.00 min
Lab File: FP90C007.D
Acq: 09/11/2019 13:19

Tgt Ion:96 Resp: 8659

Ion	Ratio	Lower	Upper
96	100		
61	131.2	123.0	163.0
98	55.7	43.8	83.8
0	0.0	0.0	0.0

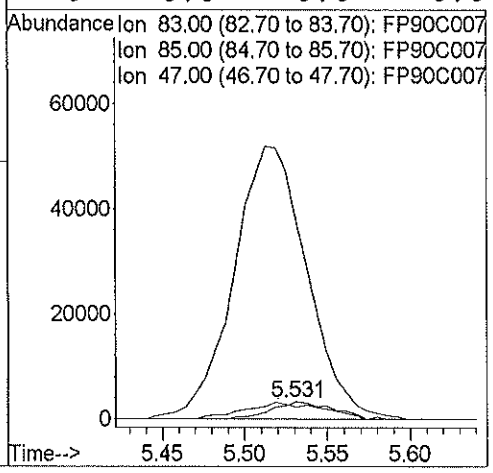


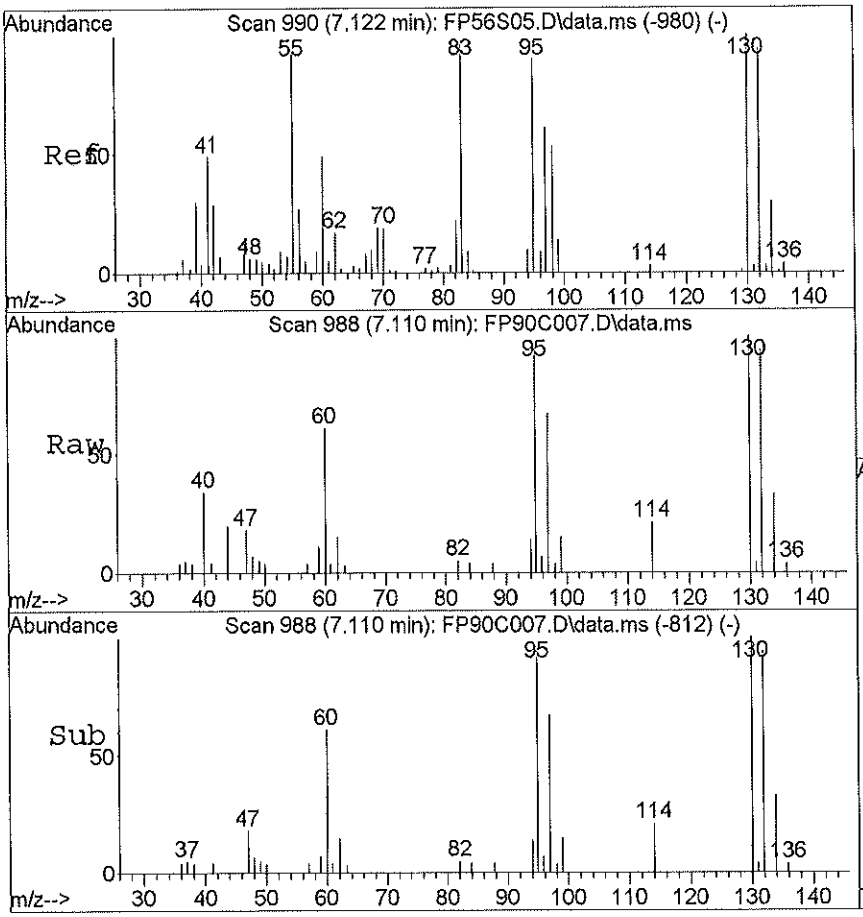


#24
Chloroform
Concen: 0.10 ug/L
RT: 5.53 min Scan# 729
Delta R.T. -0.01 min
Lab File: FP90C007.D
Acq: 09/11/2019 13:19

Tgt Ion:83 Resp: 8653

Ion	Ratio	Lower	Upper
83	100		
85	120.0	46.0	86.0#
47	1841.8	44.3	84.3#
0	0.0	0.0	0.0

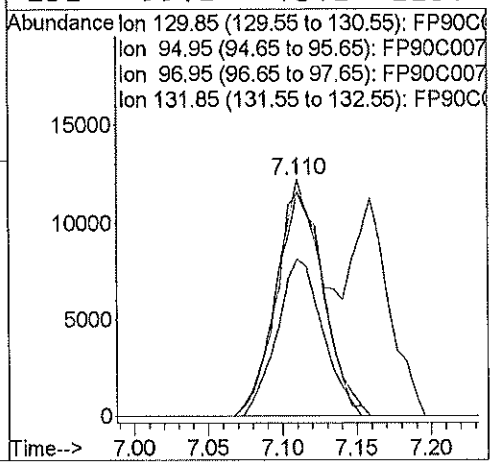


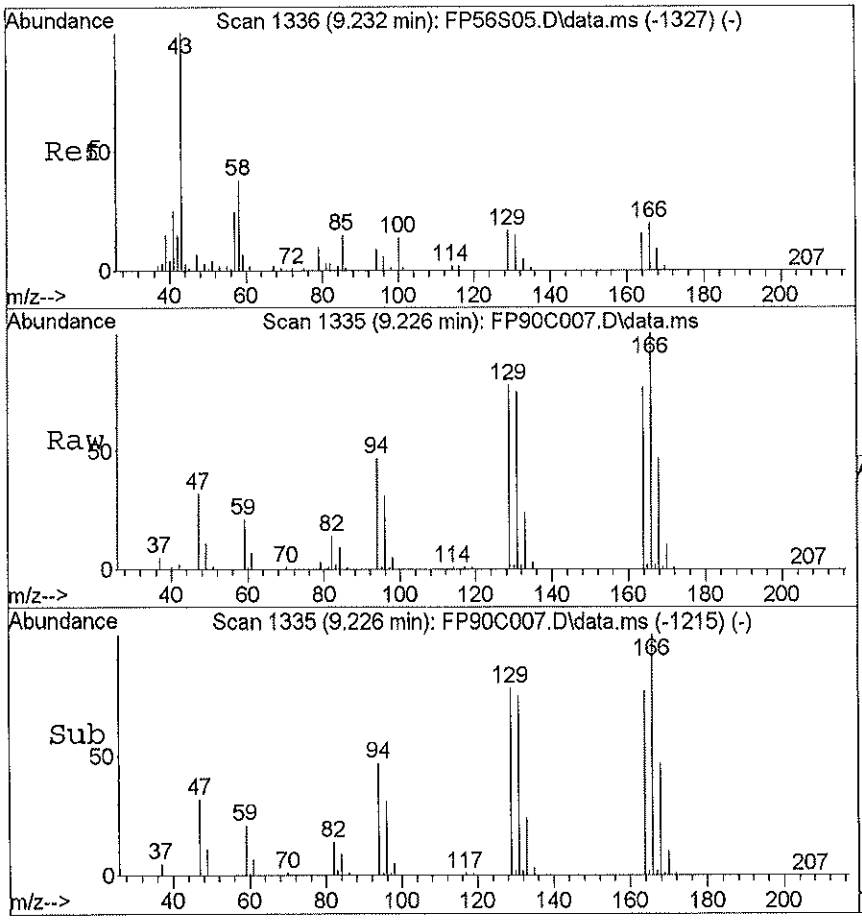


#34
Trichloroethene
Concen: 0.47 ug/L
RT: 7.11 min Scan# 988
Delta R.T. -0.01 min
Lab File: FP90C007.D
Acq: 09/11/2019 13:19

Tgt Ion:129.85 Resp: 26364

Ion	Ratio	Lower	Upper
130	100		
95	97.5	81.3	121.3
97	66.6	43.2	83.2
132	99.2	75.2	115.2

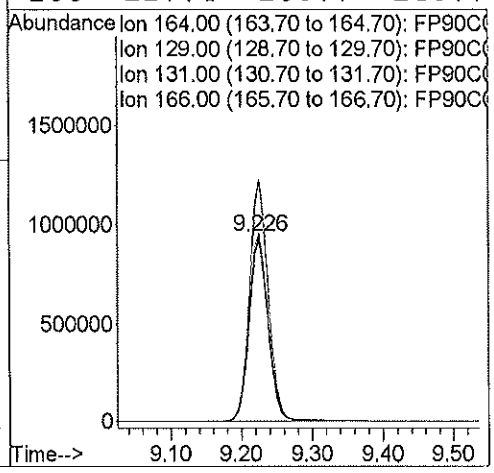




#48
Tetrachloroethene
Concen: 46.20 ug/L
RT: 9.23 min Scan# 1335
Delta R.T. 0.00 min
Lab File: FP90C007.D
Acq: 09/11/2019 13:19

Tgt Ion:164 Resp: 1777407

Ion	Ratio	Lower	Upper
164	100		
129	101.0	80.9	120.9
131	96.7	77.8	117.8
166	127.4	106.7	146.7



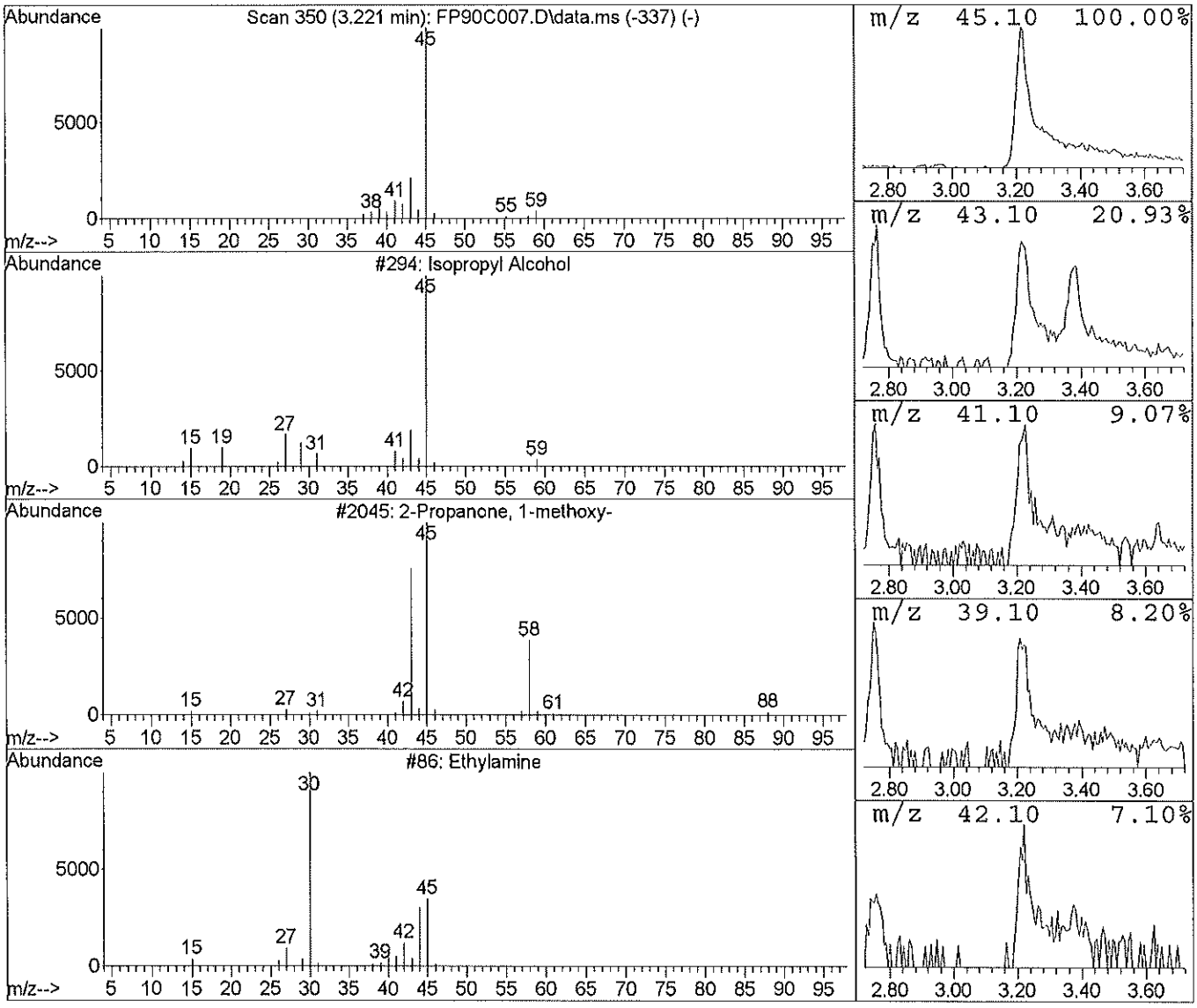
Library Search Compound Report

Data File : C:\msdchem\1\data\11SEP19F\FP90C007.D Vial: 15
Acq Time : 09/11/2019 13:19 Operator: CQC
Sample : 1925562007 5P-MW101-160-090519Y Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Library : C:\Database\NIST11.L

R.T.	Conc	Area	Relative to ISTD	ISTD Area
3.22	0.64 ug/L	244888	1,4-Difluorobenzene	1924354

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Isopropyl Alcohol	294	000067-63-0	64.00
2	2-Propanone, 1-methoxy-	2045	005878-19-3	9.00
3	Ethylamine	86	000075-04-7	5.00
4	Methane, nitroso-	92	000865-40-7	4.00
5	Oxirane, (methoxymethyl)-	2057	000930-37-0	4.00



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW101-160-090519YDL

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562007DL
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP85R007
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 5.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U
67-64-1	Acetone	25.	U
75-15-0	Carbon disulfide	2.5	U
79-20-9	Methyl acetate	2.5	U
75-09-2	Methylene chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl tert-butyl ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-Butanone	25.	U
74-97-5	Bromochloromethane	2.5	U
67-66-3	Chloroform	2.5	U
71-55-6	1,1,1-Trichloroethane	2.5	U
110-82-7	Cyclohexane	2.5	U
56-23-5	Carbon tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U
108-87-2	Methylcyclohexane	2.5	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW101-160-090519YDL

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562007DL
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP85R007
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 5.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	2.5	U
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-Pentanone	25.	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	41.	D
591-78-6	2-Hexanone	25.	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
95-47-6	o-Xylene	2.5	U
179601-23-1	m,p-Xylene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropylbenzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
120-82-1	1,2,4-Trichlorobenzene	2.5	U
87-61-6	1,2,3-Trichlorobenzene	2.5	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
5P-MW101-160-090519YDL

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 1925562007DL
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: FP85R007
% Solids:
Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
Extract Concentrated: (Y/N)
Date Analyzed: 09/11/2019
Soil Aliquot (VOA): (uL)
Extract Volume: (uL)
Heated Purge: (Y/N) Y
Extraction Type: PT
Purge Volume: 25.0 (mL)
Injection Volume: (uL)
Cleanup Types:
pH: 1.0 Dilution Factor: 5.0
Concentration Units (ug/L, ug/kg): ug/L
Cleanup Factor:

	CAS No.	ANALYTE	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
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29					
30					
	E966796[1]	Total Alkanes	N/A		

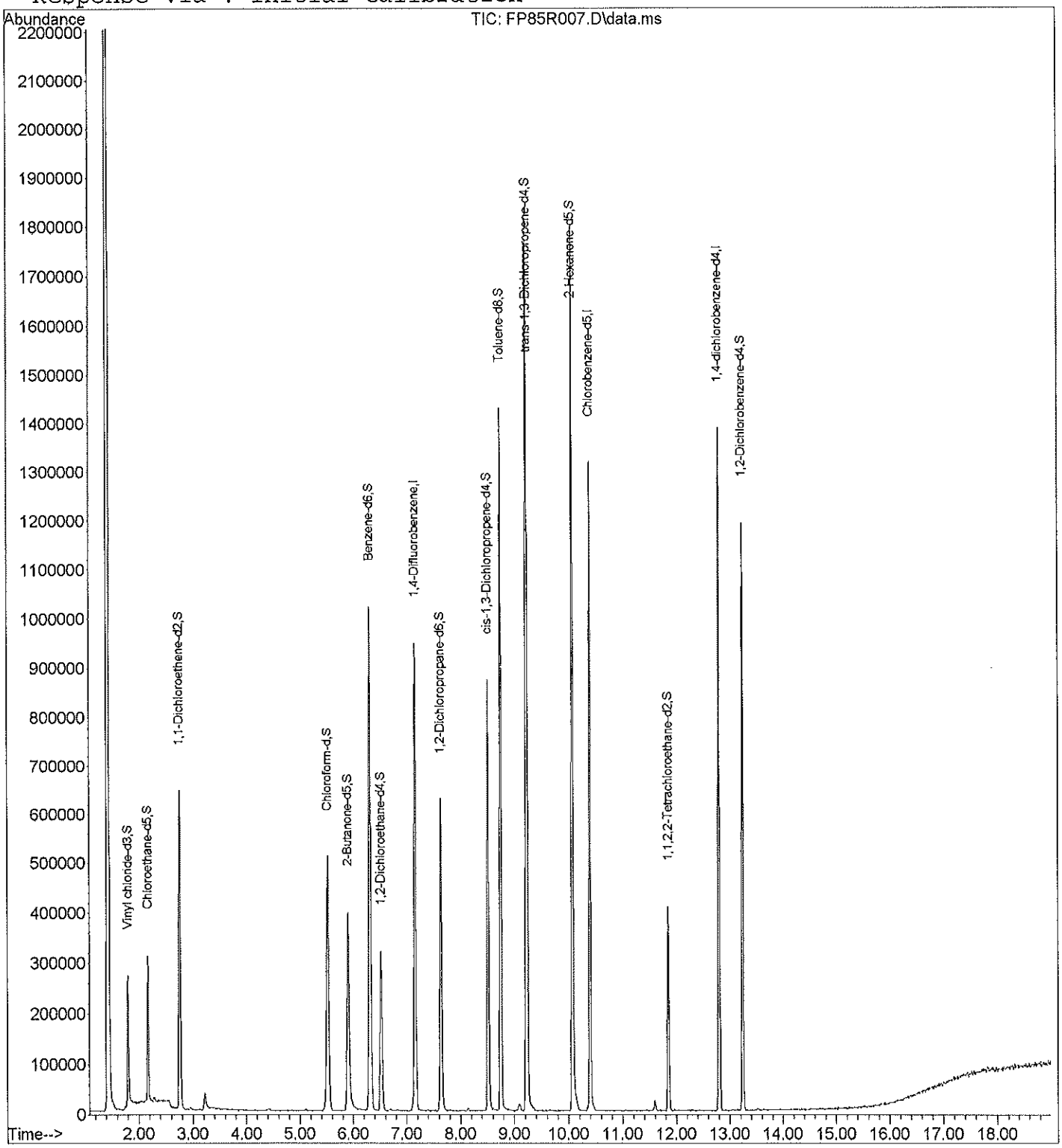
[1]EPA-designated Registry Number.

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP85R007.D Vial: 10
Acq Time : 09/11/2019 11:01 Operator: CQC
Sample : 1925562007DL 5P-MW101-160-090519YDL Inst : 5975-F
Misc : 1925562 B 1:5 Dilution Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 11:35:30 2019 Results File: FTRACEG5.RES

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Sep 05 08:18:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP85R007.D Vial: 10
Acq Time : 09/11/2019 11:01 Operator: CQC
Sample : 1925562007DL 5P-MW101-160-090519YDL Inst : 5975-F
Misc : 1925562 B 1:5 Dilution Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 11:35:30 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.16	114	892961	5.0000 ug/L	94.90
28) Chlorobenzene-d5	10.40	117	747743	5.0000 ug/L	97.81
60) 1,4-dichlorobenzene-d4	12.80	152	367397	5.0000 ug/L	91.84
System Monitoring Compounds					**%Recovery**
5) Vinyl chloride-d3	1.80	65	267566	4.4037 ug/L	88.07%
8) Chloroethane-d5	2.17	69	223744	4.5757 ug/L	91.51%
11) 1,1-Dichloroethene-d2	2.75	63	504674	4.1185 ug/L	82.37%
22) 2-Butanone-d5	5.90	46	774547	53.3390 ug/L	106.68%
25) Chloroform-d	5.52	84	585509	5.1948 ug/L	103.90%
27) 1,2-Dichloroethane-d4	6.52	65	280057	5.2882 ug/L	105.76%
33) Benzene-d6	6.31	84	1123360	5.0941 ug/L	101.88%
37) 1,2-Dichloropropane-d6	7.63	67	302093	5.1302 ug/L	102.60%
40) cis-1,3-Dichloropropene-d4	8.51	79	477405	4.7302 ug/L	94.60%
42) trans-1,3-Dichloropropene-	9.24	79	280430	4.8266 ug/L	96.53%
47) Toluene-d8	8.75	98	963174	5.0316 ug/L	100.63%
50) 2-Hexanone-d5	10.07	63	609731	51.0161 ug/L	102.03%
59) 1,1,2,2-Tetrachloroethane-	11.85	84	200239	5.0089 ug/L	100.18%
65) 1,2-Dichlorobenzene-d4	13.24	152	315407	5.0783 ug/L	101.57%
Target Compounds					**Qvalue**
2) Dichlorodifluoromethane	0.00	85		Not Detected	
3) Chloromethane	0.00	50		Not Detected	
4) Vinyl chloride	0.00	62		Not Detected	
6) Bromomethane	0.00	94		Not Detected	
7) Chloroethane	0.00	64		Not Detected	
9) Trichlorofluoromethane	0.00	101		Not Detected	
10) 1,1-Dichloroethene	0.00	96		Not Detected	
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101		Not Detected	
13) Acetone	0.00	43		Not Detected	
14) Carbon disulfide	0.00	76		Not Detected	
15) Methyl acetate	0.00	43		Not Detected	
16) Methylene chloride	0.00	84		Not Detected	
17) trans-1,2-Dichloroethene	0.00	96		Not Detected	
18) Methyl tert-butyl ether	0.00	73		Not Detected	
19) 1,1-Dichloroethane	0.00	63		Not Detected	
20) cis-1,2-Dichloroethene	0.00	96		Not Detected	
21) 2-Butanone	0.00	43		Not Detected	
23) Bromochloromethane	0.00	128		Not Detected	
24) Chloroform	0.00	83		Not Detected	
26) 1,2-Dichloroethane	0.00	62		Not Detected	

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

Quantitation Report

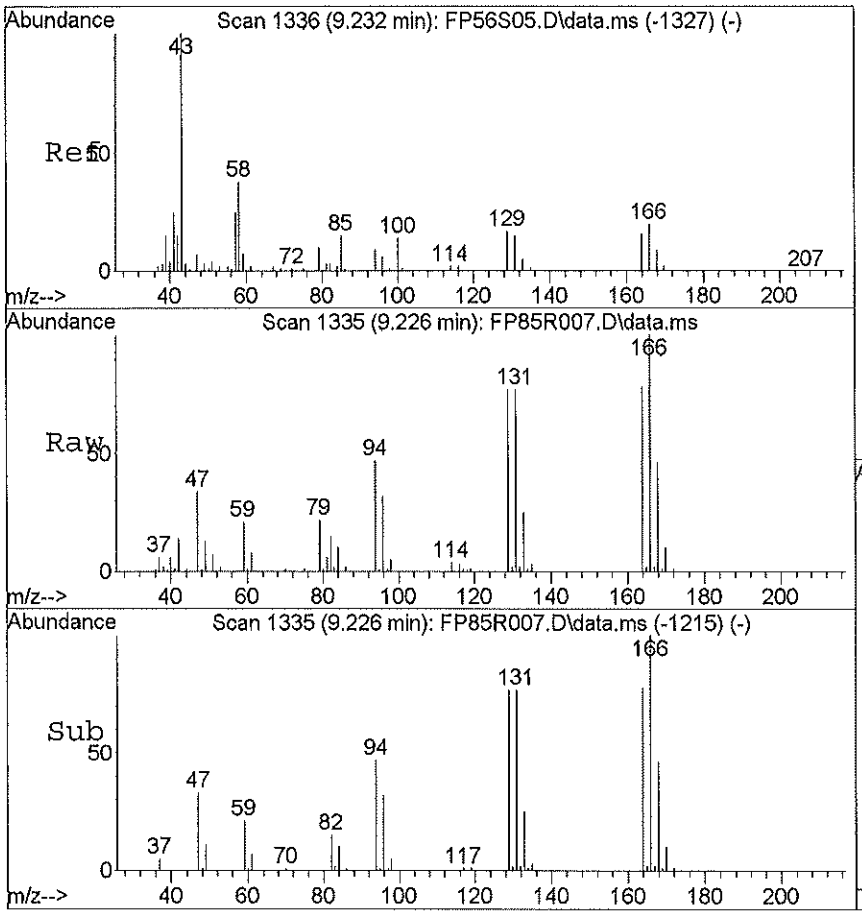
Data File : C:\msdchem\1\data\11SEP19F\FP85R007.D Vial: 10
Acq Time : 09/11/2019 11:01 Operator: CQC
Sample : 1925562007DL 5P-MW101-160-090519YDL Inst : 5975-F
Misc : 1925562 B 1:5 Dilution Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 11:35:30 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	1,1,1-Trichloroethane	0.00	97		Not Detected	
30)	Cyclohexane	0.00	56		Not Detected	
31)	Carbon tetrachloride	0.00	117		Not Detected	
32)	Benzene	0.00	78		Not Detected	
34)	Trichloroethene	0.00	130		Not Detected	
35)	Methylcyclohexane	0.00	83		Not Detected	
36)	1,2-Dichloropropane	0.00	63		Not Detected	
38)	Bromodichloromethane	0.00	83		Not Detected	
39)	cis-1,3-Dichloropropene	0.00	75		Not Detected	
41)	trans-1,3-Dichloropropene	0.00	75		Not Detected	
43)	1,1,2-Trichloroethane	0.00	97		Not Detected	
44)	Dibromochloromethane	0.00	129		Not Detected	
45)	4-Methyl-2-pentanone	0.00	43		Not Detected	
46)	Toluene	0.00	91		Not Detected	
48)	Tetrachloroethene	9.23	164	379639	8.2233 ug/L	100
49)	2-Hexanone	0.00	43		Not Detected	
51)	1,2-Dibromoethane	0.00	107		Not Detected	
52)	Chlorobenzene	0.00	112		Not Detected	
53)	Ethylbenzene	0.00	91		Not Detected	
54)	m,p-Xylene	0.00	106		Not Detected	
55)	o-Xylene	0.00	106		Not Detected	
56)	Styrene	0.00	104		Not Detected	
57)	Isopropylbenzene	0.00	105		Not Detected	
58)	1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61)	Bromoform	0.00	173		Not Detected	
62)	1,3-Dichlorobenzene	0.00	146		Not Detected	
63)	1,4-Dichlorobenzene	0.00	146		Not Detected	
64)	1,2-Dichlorobenzene	0.00	146		Not Detected	
66)	1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67)	1,2,4-Trichlorobenzene	0.00	180		Not Detected	
68)	1,2,3-Trichlorobenzene	0.00	180		Not Detected	

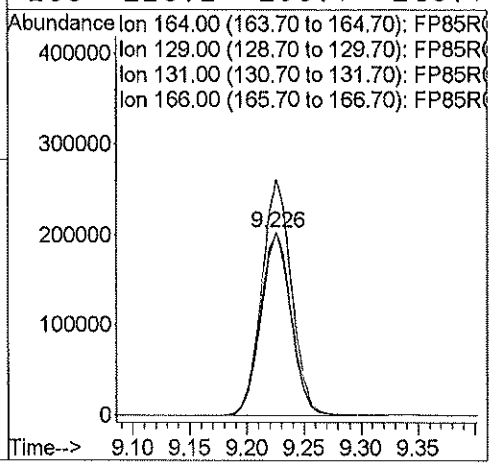
(#) = qualifier out of range (m) = manual integration



#48
Tetrachloroethene
Concen: 8.22 ug/L
RT: 9.23 min Scan# 1335
Delta R.T. 0.00 min
Lab File: FP85R007.D
Acq: 09/11/2019 11:01

Tgt Ion:164 Resp: 379639

Ion	Ratio	Lower	Upper
164	100		
129	101.2	80.9	120.9
131	97.7	77.8	117.8
166	126.2	106.7	146.7



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW103-120-090519

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 1925562011
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: MS08C011
% Solids:
Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
GC Column: ID: (mm)
Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N)
Extract Volume: (uL)
Soil Aliquot (VOA): (uL)
Extraction Type: PT
Heated Purge: (Y/N) Y
Injection Volume: (uL)
Purge Volume: 25.0 (mL)
pH: 1.0 Dilution Factor: 1.0
Cleanup Types:
Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.14	J
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	3.8	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.12	J
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW103-120-090519

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 1925562011
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: MS08C011
% Solids:
Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
GC Column: ID: (mm)
Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N)
Extract Volume: (uL)
Soil Aliquot (VOA): (uL)
Extraction Type: PT
Heated Purge: (Y/N) Y
Injection Volume: (uL)
Purge Volume: 25.0 (mL)
pH: 1.0 Dilution Factor: 1.0
Cleanup Types:
Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.096	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
5P-MW103-120-090519

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 1925562011
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: MS08C011
% Solids:
Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
Extract Concentrated: (Y/N)
Date Analyzed: 09/11/2019
Soil Aliquot (VOA): (uL)
Extract Volume: (uL)
Heated Purge: (Y/N) Y
Extraction Type: PT
Purge Volume: 25.0 (mL)
Injection Volume: (uL)
Cleanup Types:
pH: 1.0 Dilution Factor: 1.0
Concentration Units (ug/L, ug/kg): ug/L
Cleanup Factor:

	CAS No.	ANALYTE	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

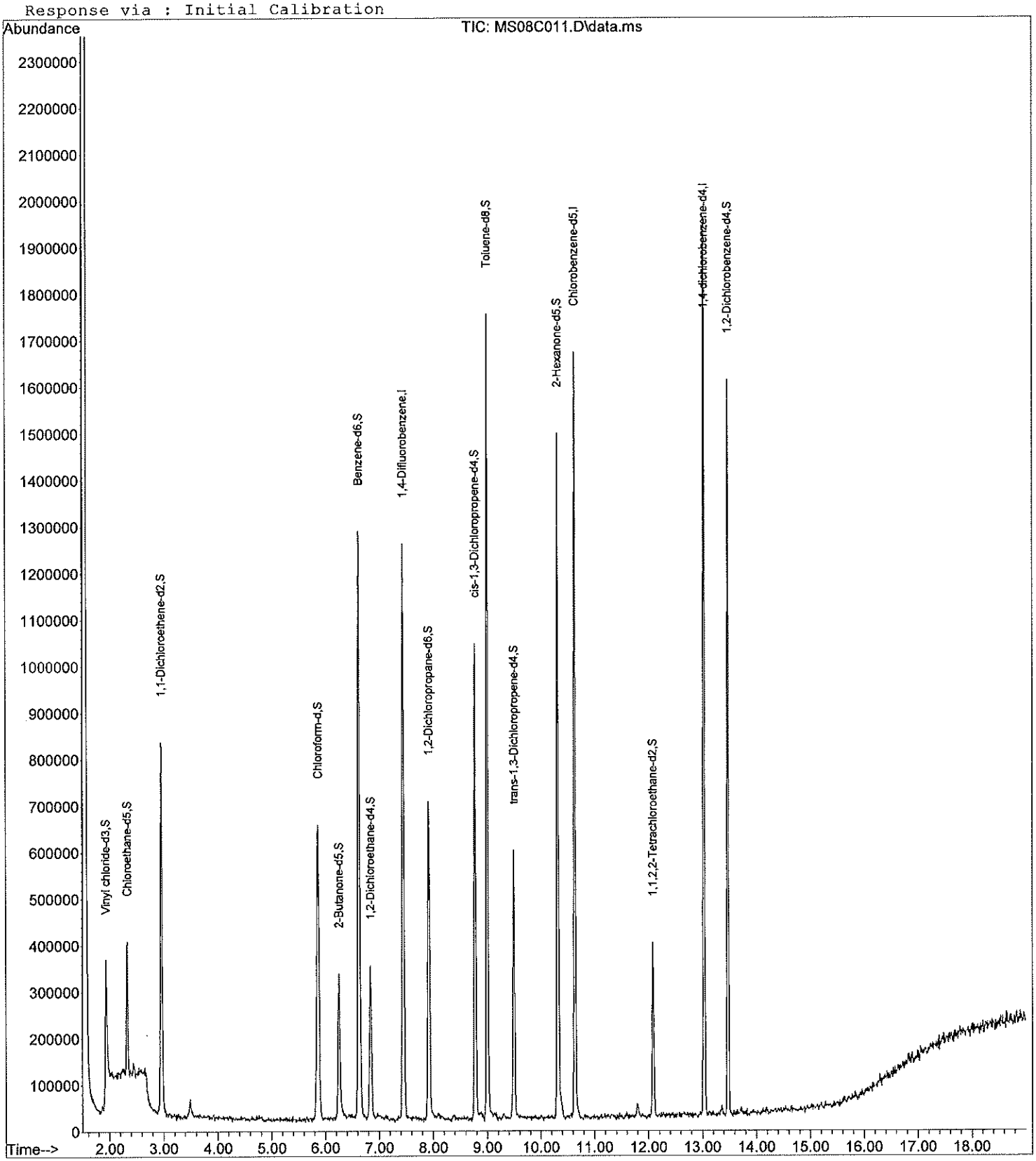
[1] EPA-designated Registry Number.

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS08C011.D Vial: 4
Acq Time : 09/11/2019 09:13 Operator: CQC
Sample : 1925562011 5P-MW Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 09:34:49 2019 Results File: MTRACEA9.RES

Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 13:23:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS08C011.D Vial: 4
Acq Time : 09/11/2019 09:13 Operator: CQC
Sample : 1925562011 5P-MW Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 09:34:49 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 11:22:27 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.45	114	1257009	5.0000 ug/L	108.29
28) Chlorobenzene-d5	10.64	117	1035221	5.0000 ug/L	103.85
60) 1,4-dichlorobenzene-d4	13.03	152	576885	5.0000 ug/L	110.68
System Monitoring Compounds					%Recovery
5) Vinyl chloride-d3	1.93	65	378546	3.6349 ug/L	72.70%
8) Chloroethane-d5	2.33	69	248492	3.8820 ug/L	77.64%
11) 1,1-Dichloroethene-d2	2.96	63	670800	3.4006 ug/L	68.01%
22) 2-Butanone-d5	6.25	46	617123	52.8441 ug/L	105.69%
25) Chloroform-d	5.86	84	728157	4.7920 ug/L	95.84%
27) 1,2-Dichloroethane-d4	6.84	65	305874	5.0442 ug/L	100.88%
33) Benzene-d6	6.62	84	1416630	5.0595 ug/L	101.19%
37) 1,2-Dichloropropane-d6	7.92	67	361112	5.1130 ug/L	102.26%
40) cis-1,3-Dichloropropene-d4	8.77	79	630902	5.1494 ug/L	102.99%
42) trans-1,3-Dichloropropene-	9.50	79	323500	4.9939 ug/L	99.88%
47) Toluene-d8	9.00	98	1294569	5.1405 ug/L	102.81%
50) 2-Hexanone-d5	10.31	63	562226	51.1054 ug/L	102.21%
59) 1,1,2,2-Tetrachloroethane-	12.08	84	211571	5.1994 ug/L	103.99%
65) 1,2-Dichlorobenzene-d4	13.47	152	467545	5.0817 ug/L	101.63%
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.00	85		Not Detected	
3) Chloromethane	1.86	50	21661	0.1414 ug/L	85
4) Vinyl chloride	0.00	62		Not Detected	
6) Bromomethane	0.00	94		Not Detected	
7) Chloroethane	0.00	64		Not Detected	
9) Trichlorofluoromethane	0.00	101		Not Detected	
10) 1,1-Dichloroethene	0.00	96		Not Detected	
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101		Not Detected	
13) Acetone	3.66	43	13378	3.8016 ug/L	93
14) Carbon disulfide	0.00	76		Not Detected	
15) Methyl acetate	0.00	43		Not Detected	
16) Methylene chloride	0.00	84		Not Detected	
17) trans-1,2-Dichloroethene	0.00	96		Not Detected	
18) Methyl tert-butyl ether	0.00	73		Not Detected	
19) 1,1-Dichloroethane	0.00	63		Not Detected	
20) cis-1,2-Dichloroethene	0.00	96		Not Detected	
21) 2-Butanone	0.00	43		Not Detected	
23) Bromochloromethane	0.00	128		Not Detected	
24) Chloroform	5.88	83	16446	0.1210 ug/L #	1
26) 1,2-Dichloroethane	0.00	62		Not Detected	
29) 1,1,1-Trichloroethane	0.00	97		Not Detected	
30) Cyclohexane	0.00	56		Not Detected	
31) Carbon tetrachloride	0.00	117		Not Detected	
32) Benzene	0.00	78		Not Detected	
34) Trichloroethene	0.00	130		Not Detected	
35) Methylcyclohexane	0.00	83		Not Detected	
36) 1,2-Dichloropropane	0.00	63		Not Detected	
38) Bromodichloromethane	0.00	83		Not Detected	
39) cis-1,3-Dichloropropene	0.00	75		Not Detected	
41) trans-1,3-Dichloropropene	0.00	75		Not Detected	
43) 1,1,2-Trichloroethane	0.00	97		Not Detected	
44) Dibromochloromethane	0.00	129		Not Detected	
45) 4-Methyl-2-pentanone	0.00	43		Not Detected	
46) Toluene	0.00	91		Not Detected	

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

Quantitation Report

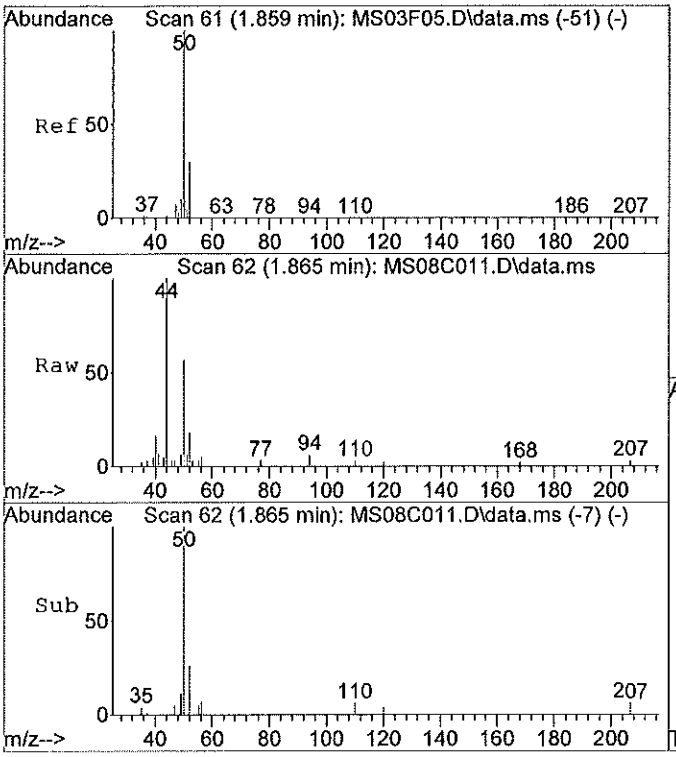
Data File : C:\msdchem\1\data\11SEP19M\MS08C011.D Vial: 4
Acq Time : 09/11/2019 09:13 Operator: CQC
Sample : 1925562011 5P-MW Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 09:34:49 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 11:22:27 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
48) Tetrachloroethene	9.46	164	6172	0.0960 ug/L	90
49) 2-Hexanone	0.00	43		Not Detected	
51) 1,2-Dibromoethane	0.00	107		Not Detected	
52) Chlorobenzene	0.00	112		Not Detected	
53) Ethylbenzene	0.00	91		Not Detected	
54) m,p-Xylene	0.00	106		Not Detected	
55) o-Xylene	0.00	106		Not Detected	
56) Styrene	0.00	104		Not Detected	
57) Isopropylbenzene	0.00	105		Not Detected	
58) 1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61) Bromoform	0.00	173		Not Detected	
62) 1,3-Dichlorobenzene	0.00	146		Not Detected	
63) 1,4-Dichlorobenzene	0.00	146		Not Detected	
64) 1,2-Dichlorobenzene	0.00	146		Not Detected	
66) 1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67) 1,2,4-Trichlorobenzene	0.00	180		Not Detected	
68) 1,2,3-Trichlorobenzene	0.00	180		Not Detected	

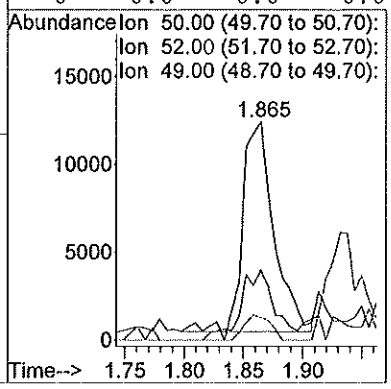
(#) = qualifier out of range (m) = manual integration

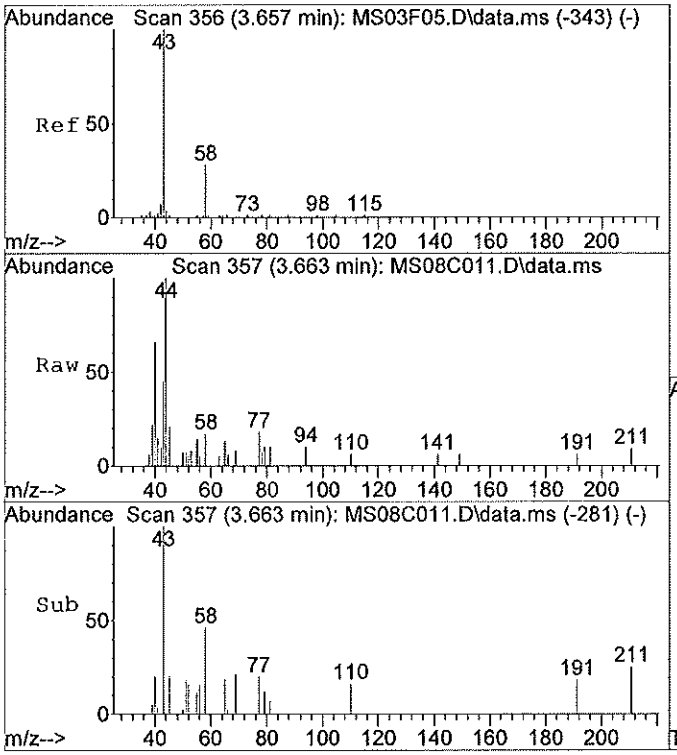


#3
Chloromethane
Concen: 0.14 ug/L
RT: 1.86 min Scan# 62
Delta R.T. 0.01 min
Lab File: MS08C011.D
Acq: 09/11/2019 09:13

Tgt Ion:50 Resp: 21661

Ion	Ratio	Lower	Upper
50	100		
52	42.2	11.4	51.4
49	9.9	0.0	29.6
0	0.0	0.0	0.0

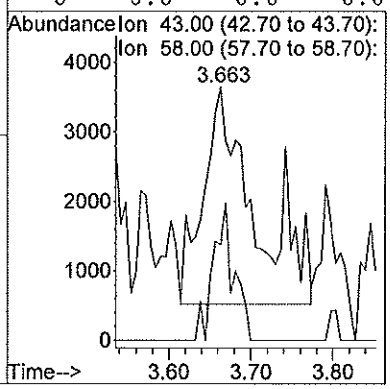


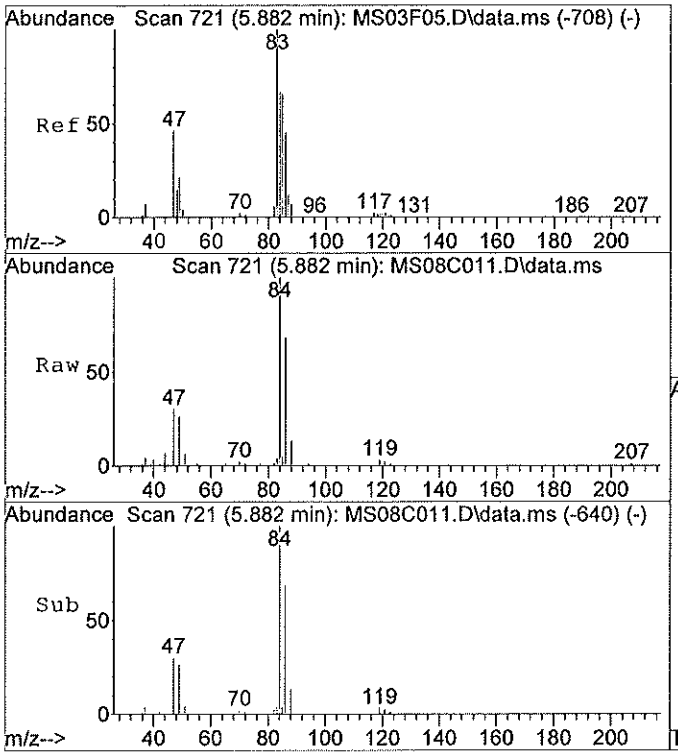


#13
Acetone
Concen: 3.80 ug/L
RT: 3.66 min Scan# 357
Delta R.T. -0.00 min
Lab File: MS08C011.D
Acq: 09/11/2019 09:13

Tgt Ion:43 Resp: 13378

Ion	Ratio	Lower	Upper
43	100		
58	25.4	9.2	49.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

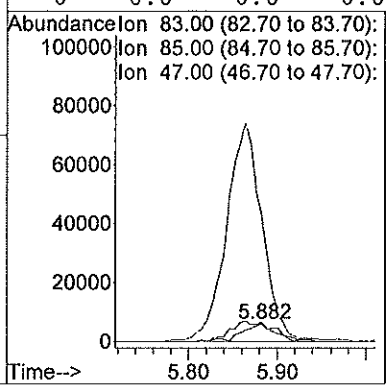


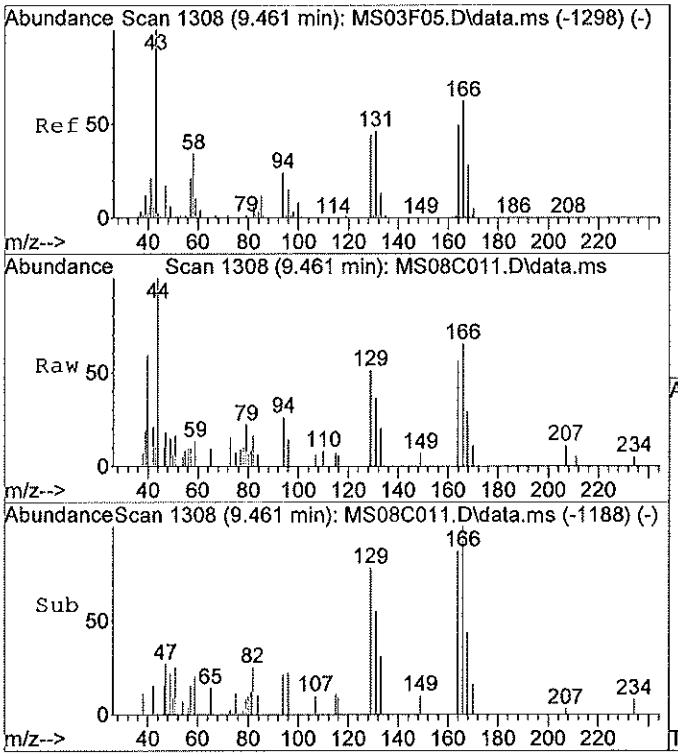


#24
Chloroform
Concen: 0.12 ug/L
RT: 5.88 min Scan# 721
Delta R.T. -0.00 min
Lab File: MS08C011.D
Acq: 09/11/2019 09:13

Tgt Ion:83 Resp: 16446

Ion	Ratio	Lower	Upper
83	100		
85	133.2	45.8	85.8#
47	1261.9	40.7	80.7#
0	0.0	0.0	0.0

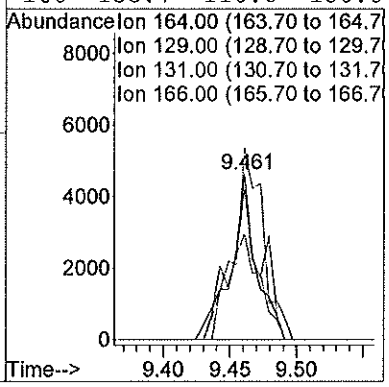




#48
Tetrachloroethene
Concen: 0.10 ug/L
RT: 9.46 min Scan# 1308
Delta R.T. -0.00 min
Lab File: MS08C011.D
Acq: 09/11/2019 09:13

Tgt Ion:164 Resp: 6172

Ion	Ratio	Lower	Upper
164	100		
129	109.5	76.0	116.0
131	78.6	73.6	113.6
166	135.7	110.8	150.8



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW104-120-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562012
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: MS09C012
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.64	
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	4.1	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.35	J
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.12	J
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.12	J
108-87-2	Methylcyclohexane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW104-120-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562012
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: MS09C012
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	13.	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
5P-MW104-120-090519

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 1925562012
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: MS09C012
% Solids:
Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
Extract Concentrated: (Y/N)
Date Analyzed: 09/11/2019
Soil Aliquot (VOA): (uL)
Extract Volume: (uL)
Heated Purge: (Y/N) Y
Extraction Type: PT
Purge Volume: 25.0 (mL)
Injection Volume: (uL)
Cleanup Types:
pH: 1.0 Dilution Factor: 1.0
Concentration Units (ug/L, ug/kg): ug/L
Cleanup Factor:

	CAS No.	ANALYTE	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

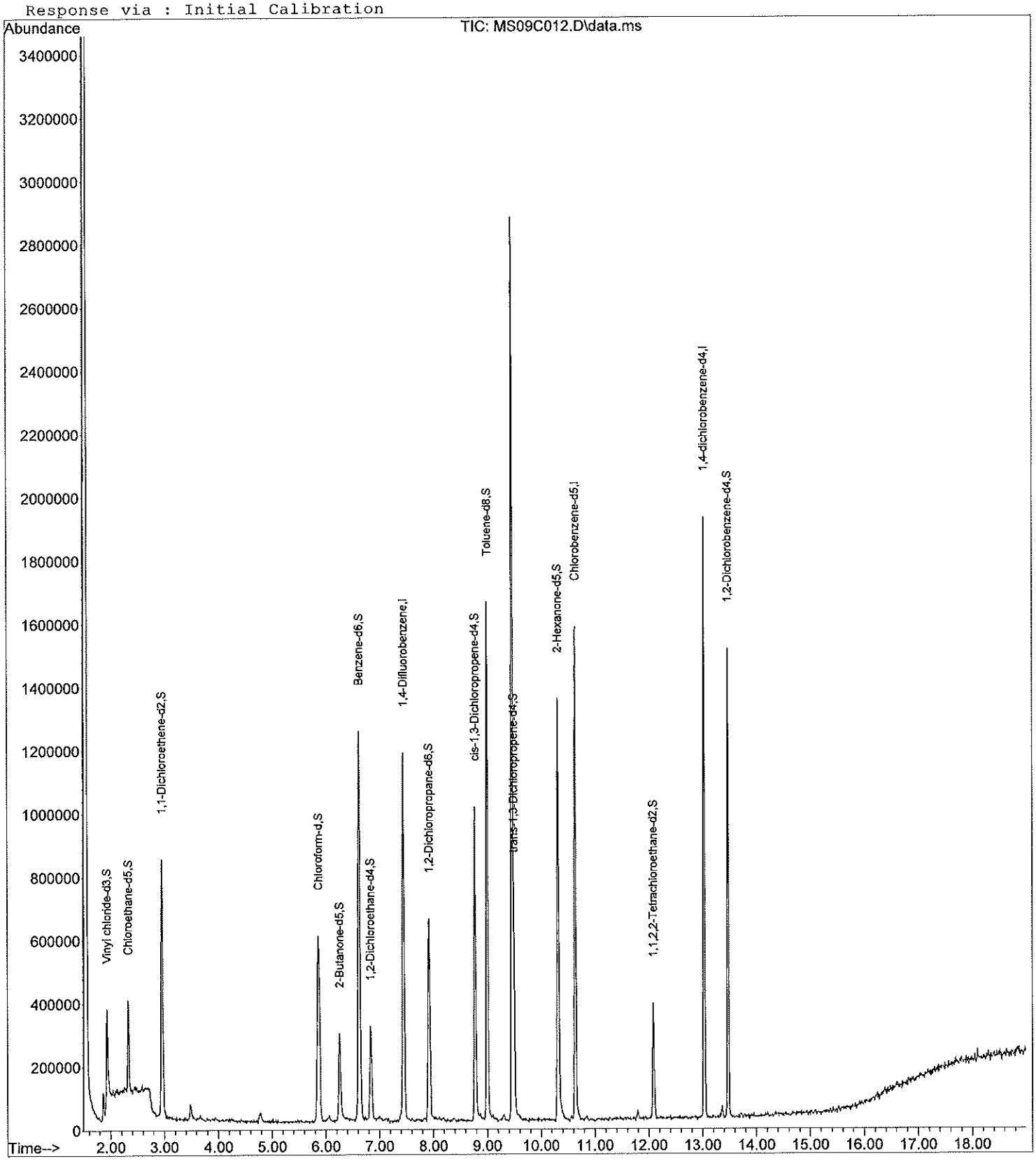
[1]EPA-designated Registry Number.

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS09C012.D Vial: 5
Acq Time : 09/11/2019 09:41 Operator: CQC
Sample : 1925562012 5P-MW104-120-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 10:08:30 2019 Results File: MTRACEA9.RES

Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 13:23:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS09C012.D Vial: 5
Acq Time : 09/11/2019 09:41 Operator: CQC
Sample : 1925562012 5P-MW104-120-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 10:08:30 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 11:22:27 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.45	114	1215790	5.0000 ug/L	104.74
28) Chlorobenzene-d5	10.63	117	997354	5.0000 ug/L	100.05
60) 1,4-dichlorobenzene-d4	13.03	152	549575	5.0000 ug/L	105.44
System Monitoring Compounds					%Recovery
5) Vinyl chloride-d3	1.93	65	354634	3.5207 ug/L	70.41%
8) Chloroethane-d5	2.32	69	242873	3.9228 ug/L	78.46%
11) 1,1-Dichloroethene-d2	2.96	63	647152	3.3920 ug/L	67.84%
22) 2-Butanone-d5	6.25	46	559885	49.5682 ug/L	99.14%
25) Chloroform-d	5.87	84	688112	4.6820 ug/L	93.64%
27) 1,2-Dichloroethane-d4	6.83	65	274049	4.6726 ug/L	93.45%
33) Benzene-d6	6.63	84	1386327	5.1392 ug/L	102.78%
37) 1,2-Dichloropropane-d6	7.92	67	342270	5.0302 ug/L	100.60%
40) cis-1,3-Dichloropropene-d4	8.77	79	564419	4.7817 ug/L	95.63%
42) trans-1,3-Dichloropropene-	9.50	79	294969	4.7263 ug/L	94.53%
47) Toluene-d8	9.00	98	1227509	5.0592 ug/L	101.18%
50) 2-Hexanone-d5	10.31	63	522587	49.3059 ug/L	98.61%
59) 1,1,2,2-Tetrachloroethane-	12.08	84	203295	5.1857 ug/L	103.71%
65) 1,2-Dichlorobenzene-d4	13.47	152	456249	5.2054 ug/L	104.11%
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.00	85		Not Detected	
3) Chloromethane	1.86	50	94183	0.6359 ug/L	96
4) Vinyl chloride	0.00	62		Not Detected	
6) Bromomethane	0.00	94		Not Detected	
7) Chloroethane	0.00	64		Not Detected	
9) Trichlorofluoromethane	0.00	101		Not Detected	
10) 1,1-Dichloroethene	0.00	96		Not Detected	
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101		Not Detected	
13) Acetone	3.66	43	13877	4.0771 ug/L	96
14) Carbon disulfide	0.00	76		Not Detected	
15) Methyl acetate	0.00	43		Not Detected	
16) Methylene chloride	0.00	84		Not Detected	
17) trans-1,2-Dichloroethene	0.00	96		Not Detected	
18) Methyl tert-butyl ether	0.00	73		Not Detected	
19) 1,1-Dichloroethane	0.00	63		Not Detected	
20) cis-1,2-Dichloroethene	0.00	96		Not Detected	
21) 2-Butanone	0.00	43		Not Detected	
23) Bromochloromethane	0.00	128		Not Detected	
24) Chloroform	5.88	83	46521	0.3539 ug/L #	1
26) 1,2-Dichloroethane	0.00	62		Not Detected	
29) 1,1,1-Trichloroethane	0.00	97		Not Detected	
30) Cyclohexane	0.00	56		Not Detected	
31) Carbon tetrachloride	6.05	117	14623	0.1188 ug/L #	64
32) Benzene	0.00	78		Not Detected	
34) Trichloroethene	7.38	130	10224	0.1210 ug/L #	1
35) Methylcyclohexane	0.00	83		Not Detected	
36) 1,2-Dichloropropane	0.00	63		Not Detected	
38) Bromodichloromethane	0.00	83		Not Detected	
39) cis-1,3-Dichloropropene	0.00	75		Not Detected	
41) trans-1,3-Dichloropropene	0.00	75		Not Detected	
43) 1,1,2-Trichloroethane	0.00	97		Not Detected	
44) Dibromochloromethane	0.00	129		Not Detected	
45) 4-Methyl-2-pentanone	0.00	43		Not Detected	
46) Toluene	0.00	91		Not Detected	

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

Quantitation Report

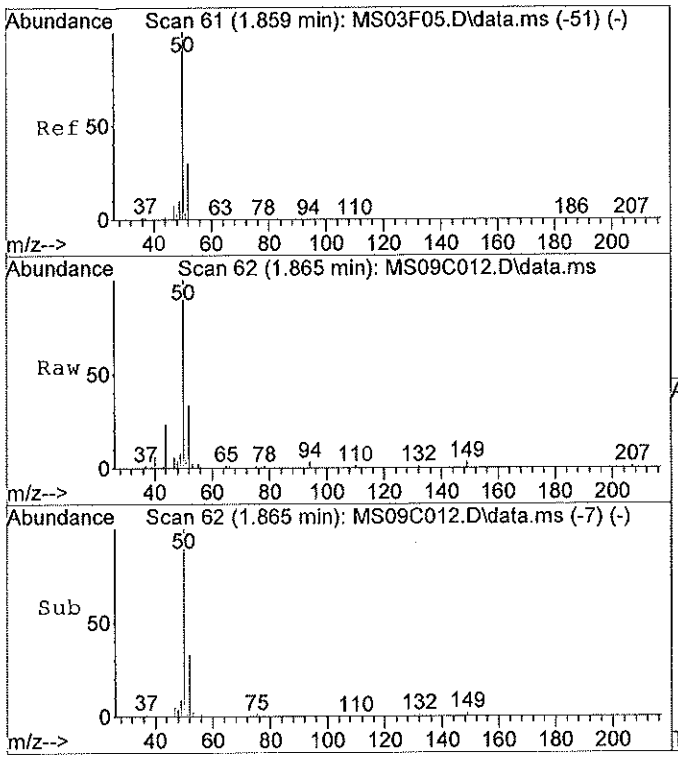
Data File : C:\msdchem\1\data\11SEP19M\MS09C012.D Vial: 5
Acq Time : 09/11/2019 09:41 Operator: CQC
Sample : 1925562012 5P-MW104-120-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 10:08:30 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 11:22:27 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
48) Tetrachloroethene	9.46	164	774914	12.5087 ug/L	97
49) 2-Hexanone	0.00	43		Not Detected	
51) 1,2-Dibromoethane	0.00	107		Not Detected	
52) Chlorobenzene	0.00	112		Not Detected	
53) Ethylbenzene	0.00	91		Not Detected	
54) m,p-Xylene	0.00	106		Not Detected	
55) o-Xylene	0.00	106		Not Detected	
56) Styrene	0.00	104		Not Detected	
57) Isopropylbenzene	0.00	105		Not Detected	
58) 1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61) Bromoform	0.00	173		Not Detected	
62) 1,3-Dichlorobenzene	0.00	146		Not Detected	
63) 1,4-Dichlorobenzene	0.00	146		Not Detected	
64) 1,2-Dichlorobenzene	0.00	146		Not Detected	
66) 1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67) 1,2,4-Trichlorobenzene	0.00	180		Not Detected	
68) 1,2,3-Trichlorobenzene	0.00	180		Not Detected	

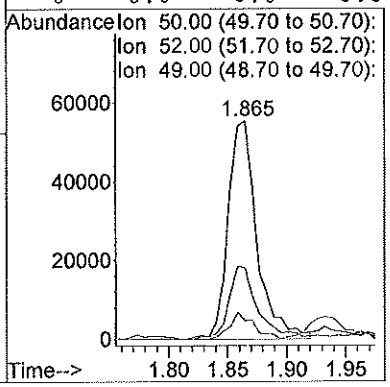
(#) = qualifier out of range (m) = manual integration

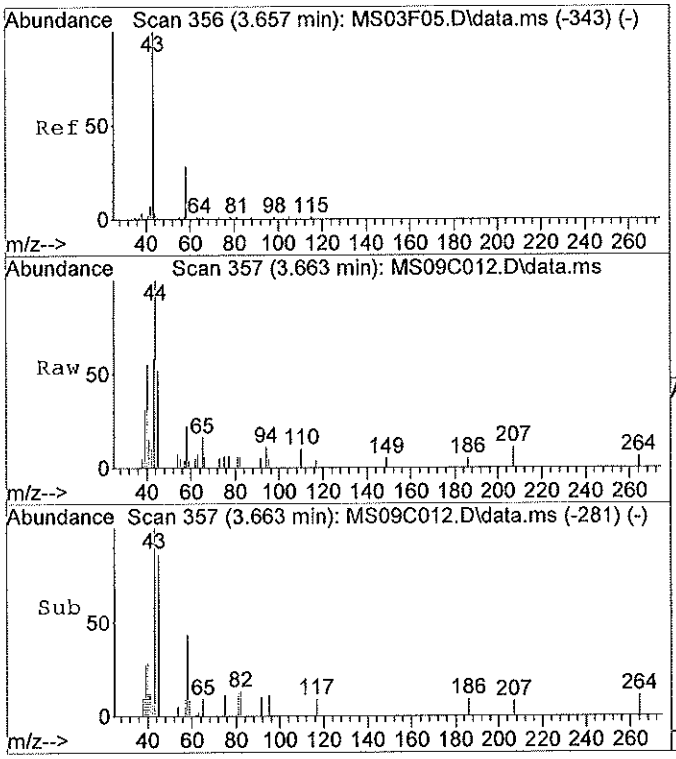


#3
Chloromethane
Concen: 0.64 ug/L
RT: 1.86 min Scan# 62
Delta R.T. 0.01 min
Lab File: MS09C012.D
Acq: 09/11/2019 09:41

Tgt Ion:50 Resp: 94183

Ion	Ratio	Lower	Upper
50	100		
52	34.1	11.4	51.4
49	10.1	0.0	29.6
0	0.0	0.0	0.0

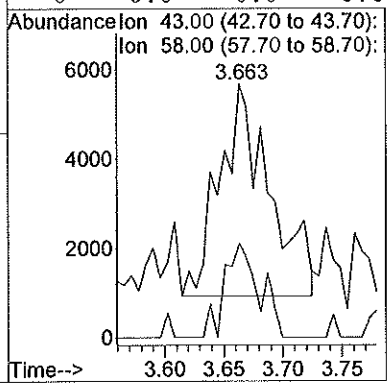


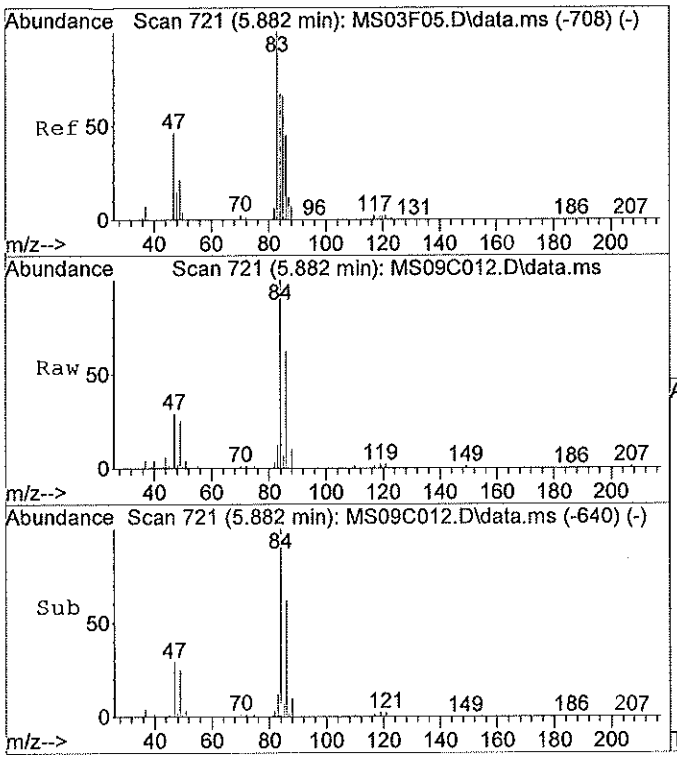


#13
Acetone
Concen: 4.08 ug/L
RT: 3.66 min Scan# 357
Delta R.T. 0.00 min
Lab File: MS09C012.D
Acq: 09/11/2019 09:41

Tgt Ion:43 Resp: 13877

Ion	Ratio	Lower	Upper
43	100		
58	31.1	9.2	49.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

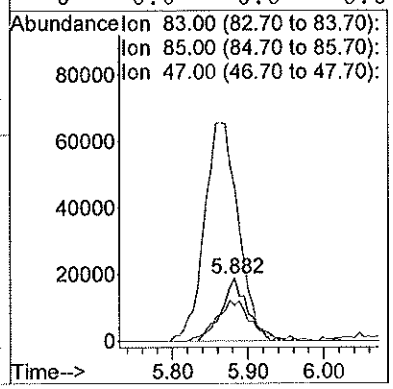


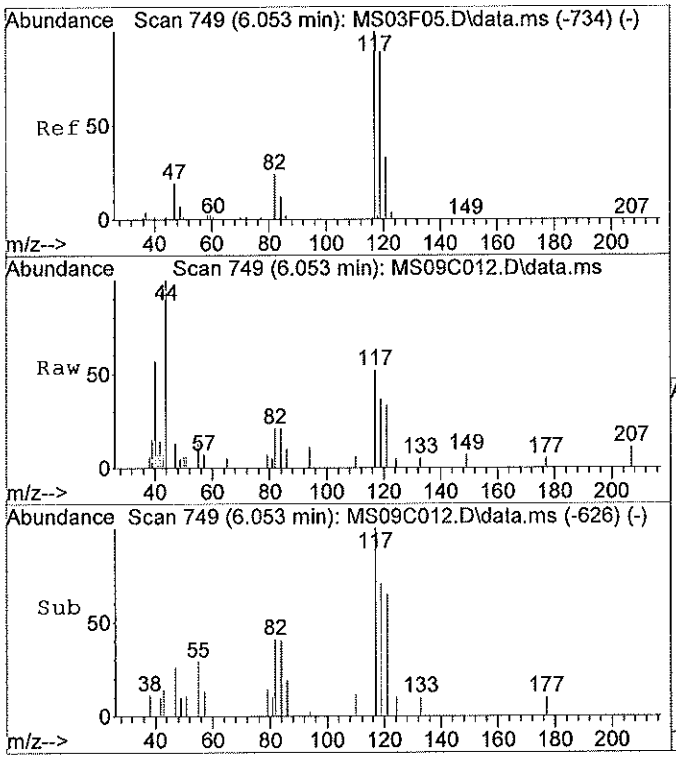


#24
Chloroform
Concen: 0.35 ug/L
RT: 5.88 min Scan# 721
Delta R.T. 0.00 min
Lab File: MS09C012.D
Acq: 09/11/2019 09:41

Tgt Ion:83 Resp: 46521

Ion	Ratio	Lower	Upper
83	100		
85	77.6	45.8	85.8
47	442.0	40.7	80.7#
0	0.0	0.0	0.0

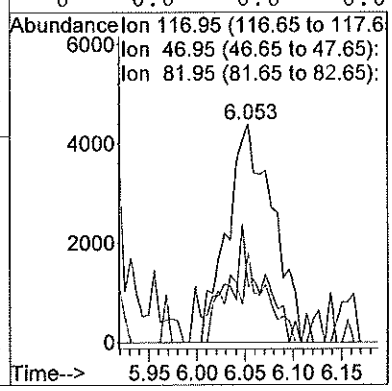


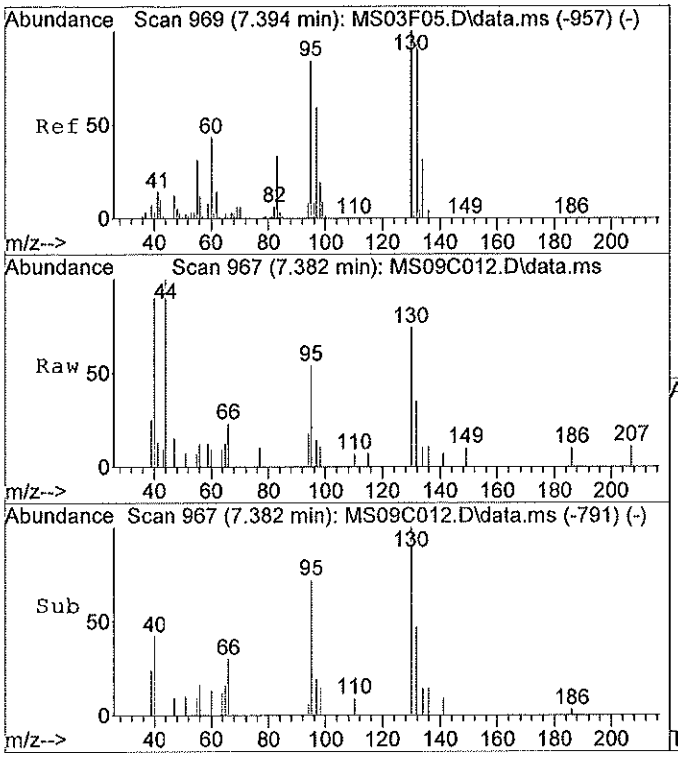


#31
Carbon tetrachloride
Concen: 0.12 ug/L
RT: 6.05 min Scan# 749
Delta R.T. 0.00 min
Lab File: MS09C012.D
Acq: 09/11/2019 09:41

Tgt Ion:116.95 Resp: 14623

Ion	Ratio	Lower	Upper
117	100		
47	43.0	0.7	40.7#
82	32.6	1.2	41.2
0	0.0	0.0	0.0

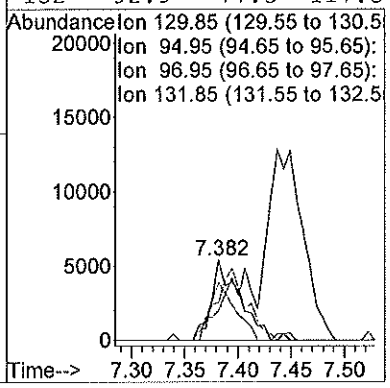


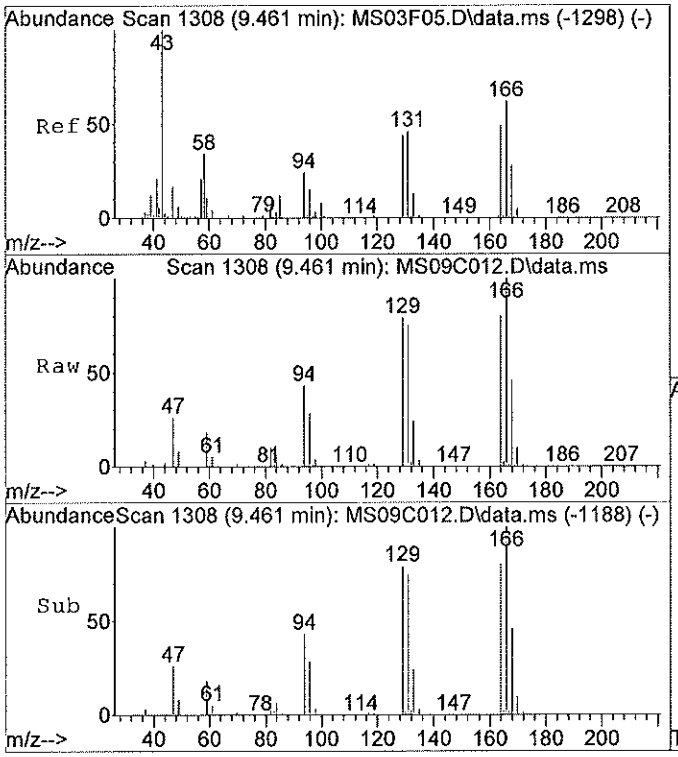


#34
Trichloroethene
Concen: 0.12 ug/L
RT: 7.38 min Scan# 967
Delta R.T. -0.01 min
Lab File: MS09C012.D
Acq: 09/11/2019 09:41

Tgt Ion:129.85 Resp: 10224

Ion	Ratio	Lower	Upper
130	100		
95	385.5	73.5	113.5#
97	52.3	39.7	79.7
132	92.9	77.3	117.3

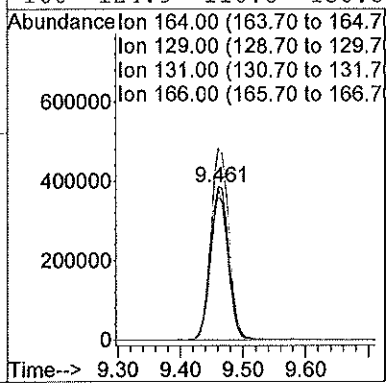




#48
Tetrachloroethene
Concen: 12.51 ug/L
RT: 9.46 min Scan# 1308
Delta R.T. 0.00 min
Lab File: MS09C012.D
Acq: 09/11/2019 09:41

Tgt Ion:164 Resp: 774914

Ion	Ratio	Lower	Upper
164	100		
129	94.3	76.0	116.0
131	92.5	73.6	113.6
166	124.9	110.8	150.8



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW105-146-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562008
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP86C008
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.26	J
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	2.1	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.20	J
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW105-146-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562008
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP86C008
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	1.5	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
5P-MW105-146-090519

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 1925562008
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: FP86C008
% Solids:
Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
Extract Concentrated: (Y/N)
Date Analyzed: 09/11/2019
Soil Aliquot (VOA): (uL)
Extract Volume: (uL)
Heated Purge: (Y/N) Y
Extraction Type: PT
Purge Volume: 25.0 (mL)
Injection Volume: (uL)
Cleanup Types:
pH: 1.0 Dilution Factor: 1.0
Concentration Units (ug/L, ug/kg): ug/L
Cleanup Factor:

	CAS No.	ANALYTE	RT	EST. CONC.	Q
01		Unknown Isopropyl Alcohol	3.21	0.69	J
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

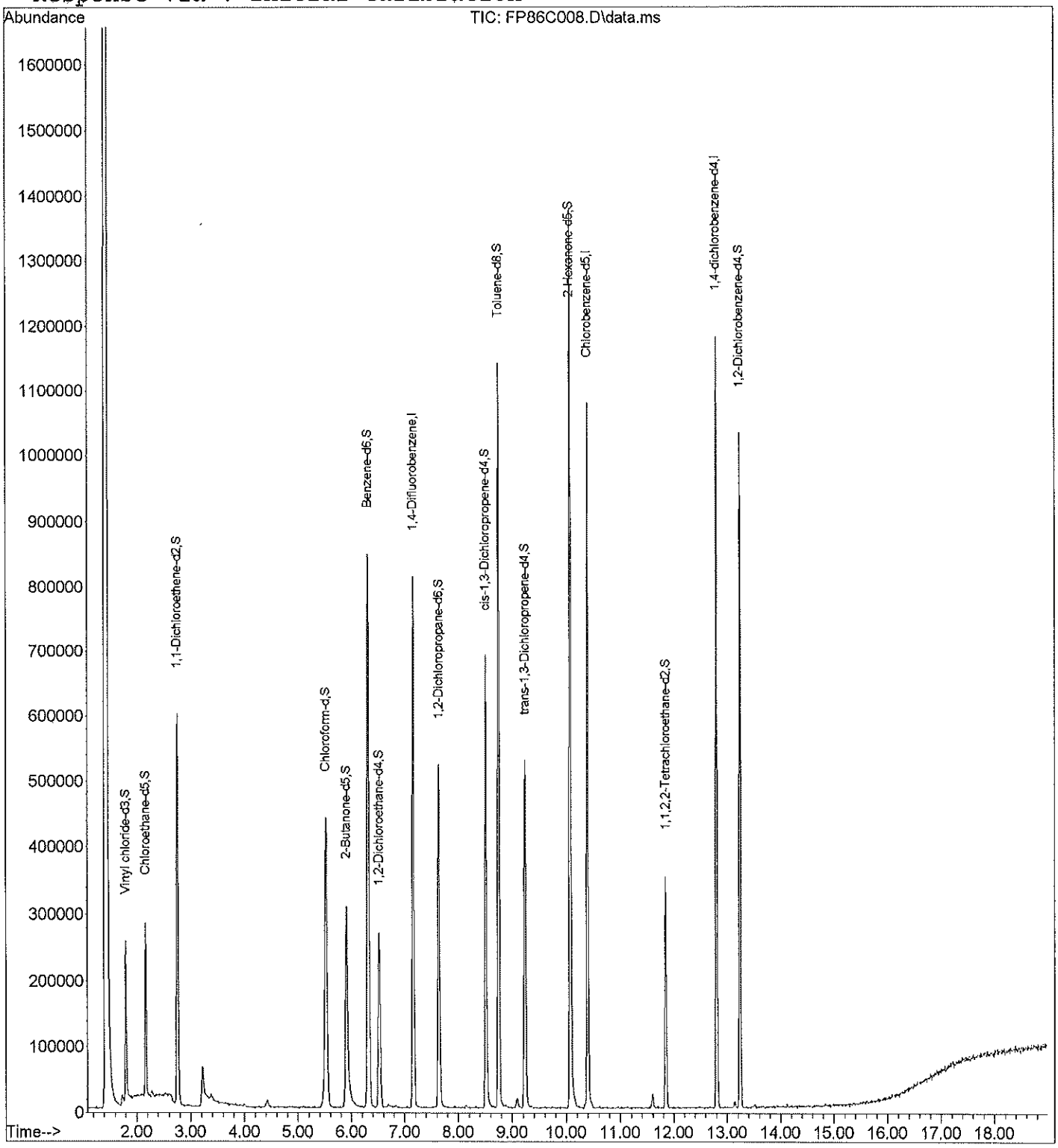
[1]EPA-designated Registry Number.

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP86C008.D Vial: 11
Acq Time : 09/11/2019 11:29 Operator: CQC
Sample : 1925562008 5P-MW105-146-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 12:22:02 2019 Results File: FTRACEG5.RES

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Sep 05 08:18:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP86C008.D Vial: 11
Acq Time : 09/11/2019 11:29 Operator: CQC
Sample : 1925562008 5P-MW105-146-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 12:22:02 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.16	114	742179	5.0000 ug/L	78.87
28) Chlorobenzene-d5	10.40	117	611078	5.0000 ug/L	79.94
60) 1,4-dichlorobenzene-d4	12.80	152	313261	5.0000 ug/L	78.30
System Monitoring Compounds					%Recovery
5) Vinyl chloride-d3	1.80	65	236702	4.6872 ug/L	93.74%
8) Chloroethane-d5	2.17	69	198505	4.8843 ug/L	97.69%
11) 1,1-Dichloroethene-d2	2.75	63	444142	4.3608 ug/L	87.22%
22) 2-Butanone-d5	5.90	46	662151	54.8628 ug/L	109.73%
25) Chloroform-d	5.52	84	516639	5.5150 ug/L	110.30%
27) 1,2-Dichloroethane-d4	6.52	65	240595	5.4660 ug/L	109.32%
33) Benzene-d6	6.32	84	976104	5.4163 ug/L	108.33%
37) 1,2-Dichloropropane-d6	7.64	67	253371	5.2651 ug/L	105.30%
40) cis-1,3-Dichloropropene-d4	8.51	79	391286	4.7440 ug/L	94.88%
42) trans-1,3-Dichloropropene-	9.24	79	213877	4.5044 ug/L	90.09%
47) Toluene-d8	8.75	98	782316	5.0008 ug/L	100.02%
50) 2-Hexanone-d5	10.07	63	495763	50.7573 ug/L	101.51%
59) 1,1,2,2-Tetrachloroethane-	11.85	84	172762	5.2880 ug/L	105.76%
65) 1,2-Dichlorobenzene-d4	13.24	152	270904	5.1155 ug/L	102.31%
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.00	85		Not Detected	
3) Chloromethane	1.73	50	14950	0.2597 ug/L	97
4) Vinyl chloride	0.00	62		Not Detected	
6) Bromomethane	0.00	94		Not Detected	
7) Chloroethane	0.00	64		Not Detected	
9) Trichlorofluoromethane	0.00	101		Not Detected	
10) 1,1-Dichloroethene	0.00	96		Not Detected	
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101		Not Detected	
13) Acetone	3.39	43	13635	2.1085 ug/L	96
14) Carbon disulfide	0.00	76		Not Detected	
15) Methyl acetate	0.00	43		Not Detected	
16) Methylene chloride	0.00	84		Not Detected	
17) trans-1,2-Dichloroethene	0.00	96		Not Detected	
18) Methyl tert-butyl ether	0.00	73		Not Detected	
19) 1,1-Dichloroethane	0.00	63		Not Detected	
20) cis-1,2-Dichloroethene	0.00	96		Not Detected	
21) 2-Butanone	0.00	43		Not Detected	
23) Bromochloromethane	0.00	128		Not Detected	
24) Chloroform	5.54	83	17580	0.2036 ug/L #	1
26) 1,2-Dichloroethane	0.00	62		Not Detected	

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

Quantitation Report

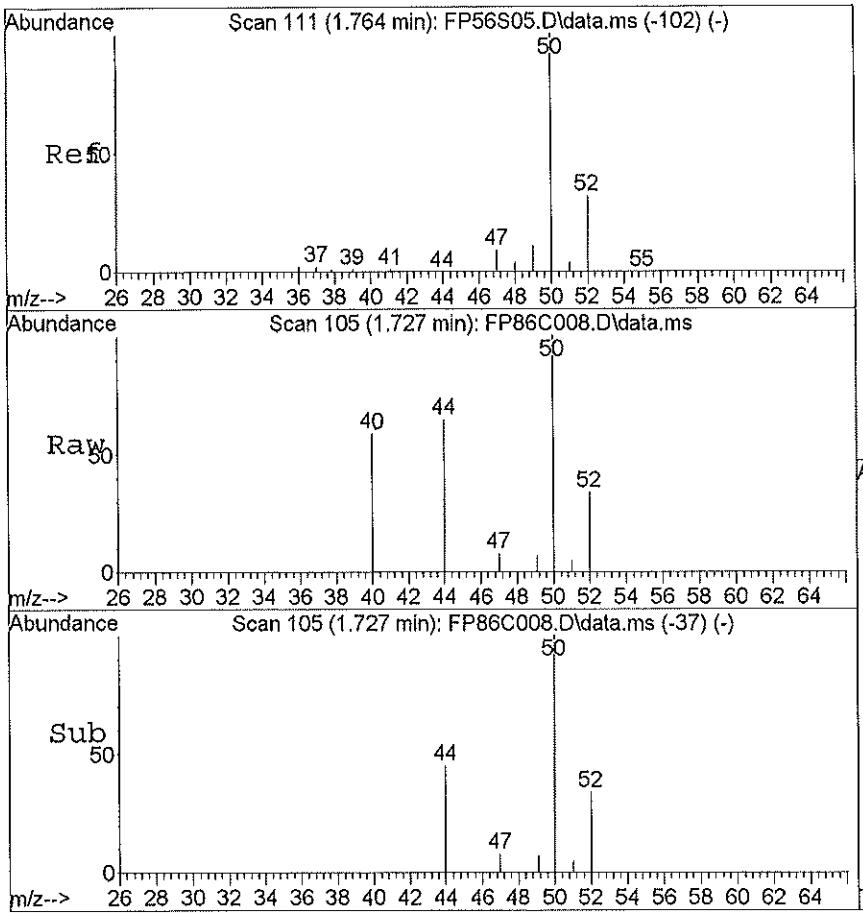
Data File : C:\msdchem\1\data\11SEP19F\FP86C008.D Vial: 11
Acq Time : 09/11/2019 11:29 Operator: CQC
Sample : 1925562008 5P-MW105-146-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 12:22:02 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	1,1,1-Trichloroethane	0.00	97		Not Detected	
30)	Cyclohexane	0.00	56		Not Detected	
31)	Carbon tetrachloride	0.00	117		Not Detected	
32)	Benzene	0.00	78		Not Detected	
34)	Trichloroethene	0.00	130		Not Detected	
35)	Methylcyclohexane	0.00	83		Not Detected	
36)	1,2-Dichloropropane	0.00	63		Not Detected	
38)	Bromodichloromethane	0.00	83		Not Detected	
39)	cis-1,3-Dichloropropene	0.00	75		Not Detected	
41)	trans-1,3-Dichloropropene	0.00	75		Not Detected	
43)	1,1,2-Trichloroethane	0.00	97		Not Detected	
44)	Dibromochloromethane	0.00	129		Not Detected	
45)	4-Methyl-2-pentanone	0.00	43		Not Detected	
46)	Toluene	0.00	91		Not Detected	
48)	Tetrachloroethene	9.23	164	55970	1.4835 ug/L	98
49)	2-Hexanone	0.00	43		Not Detected	
51)	1,2-Dibromoethane	0.00	107		Not Detected	
52)	Chlorobenzene	0.00	112		Not Detected	
53)	Ethylbenzene	0.00	91		Not Detected	
54)	m,p-Xylene	0.00	106		Not Detected	
55)	o-Xylene	0.00	106		Not Detected	
56)	Styrene	0.00	104		Not Detected	
57)	Isopropylbenzene	0.00	105		Not Detected	
58)	1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61)	Bromoform	0.00	173		Not Detected	
62)	1,3-Dichlorobenzene	0.00	146		Not Detected	
63)	1,4-Dichlorobenzene	0.00	146		Not Detected	
64)	1,2-Dichlorobenzene	0.00	146		Not Detected	
66)	1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67)	1,2,4-Trichlorobenzene	0.00	180		Not Detected	
68)	1,2,3-Trichlorobenzene	0.00	180		Not Detected	

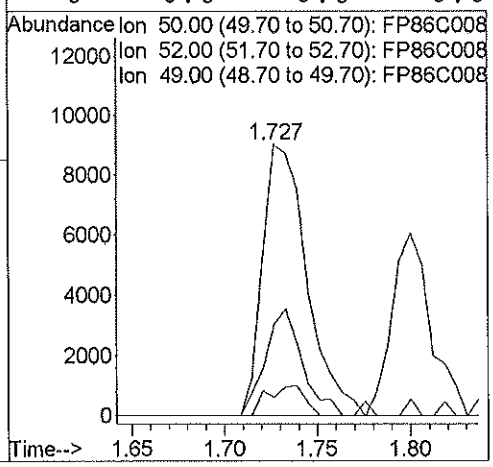
(#) = qualifier out of range (m) = manual integration

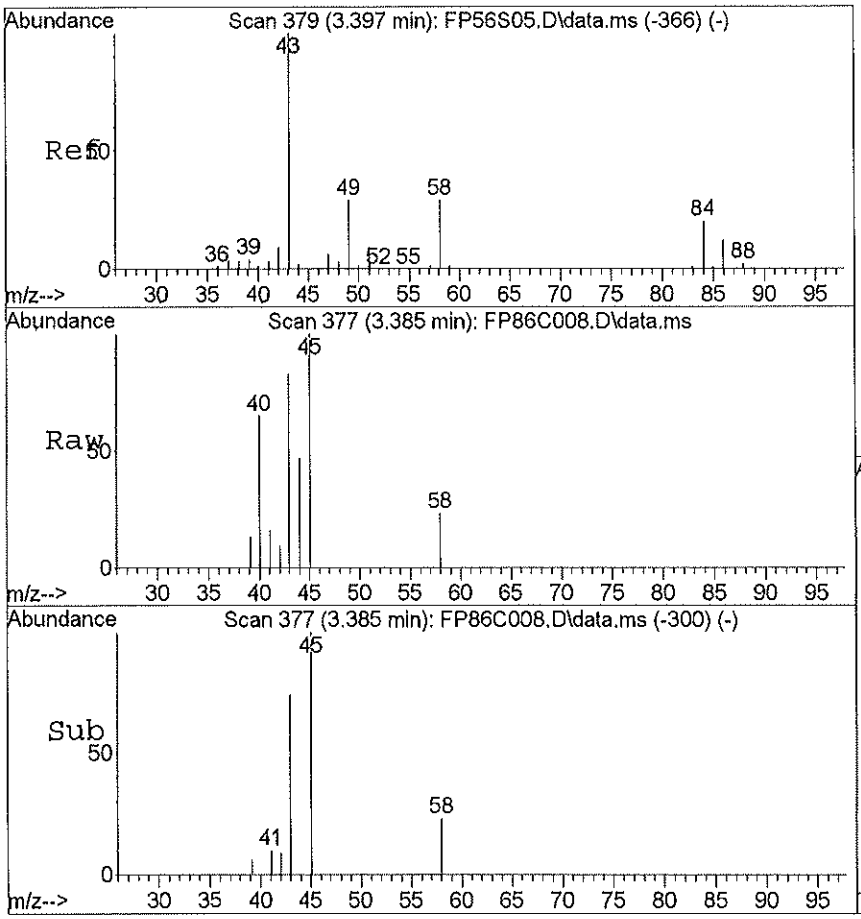


#3
Chloromethane
Concen: 0.26 ug/L
RT: 1.73 min Scan# 105
Delta R.T. -0.01 min
Lab File: FP86C008.D
Acq: 09/11/2019 11:29

Tgt Ion:50 Resp: 14950

Ion	Ratio	Lower	Upper
50	100		
52	34.1	12.7	52.7
49	9.4	0.0	30.8
0	0.0	0.0	0.0

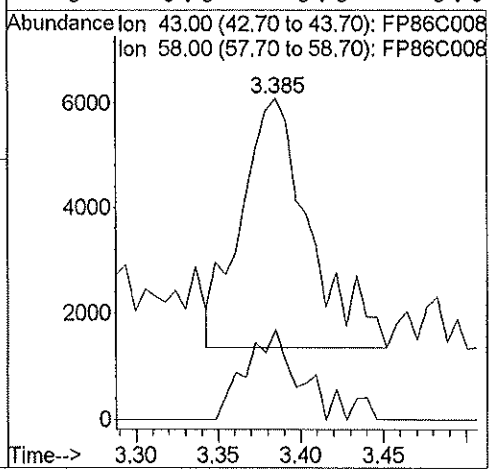


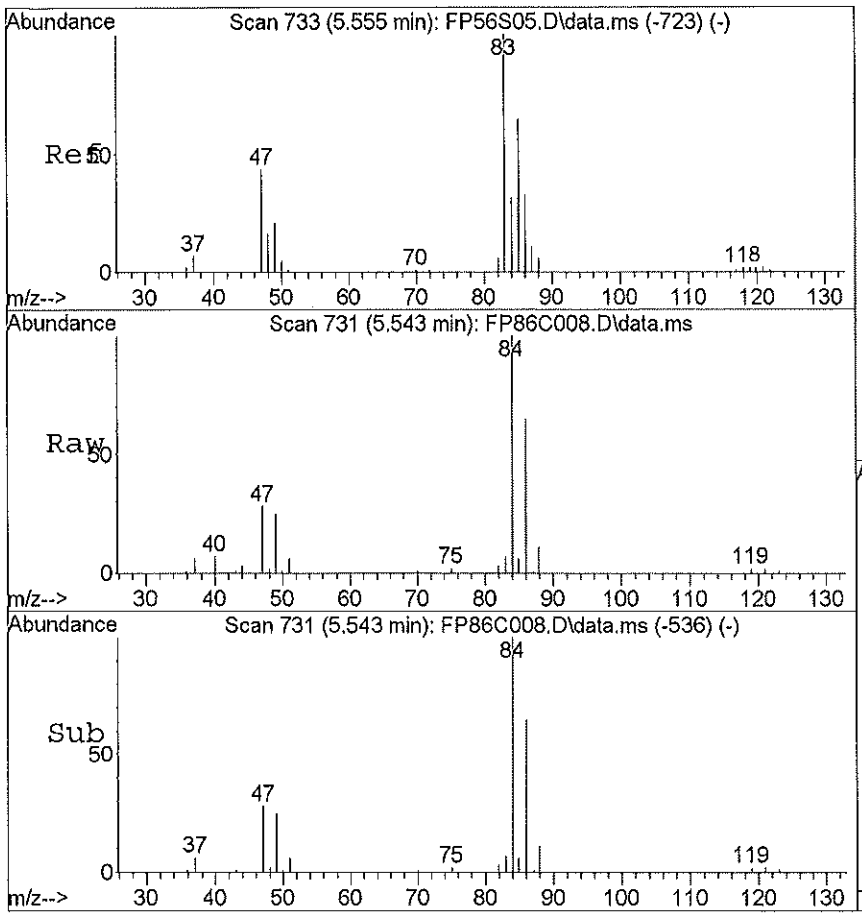


#13
Acetone
Concen: 2.11 ug/L
RT: 3.39 min Scan# 377
Delta R.T. 0.01 min
Lab File: FP86C008.D
Acq: 09/11/2019 11:29

Tgt Ion:43 Resp: 13635

Ion	Ratio	Lower	Upper
43	100		
58	27.7	9.8	49.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

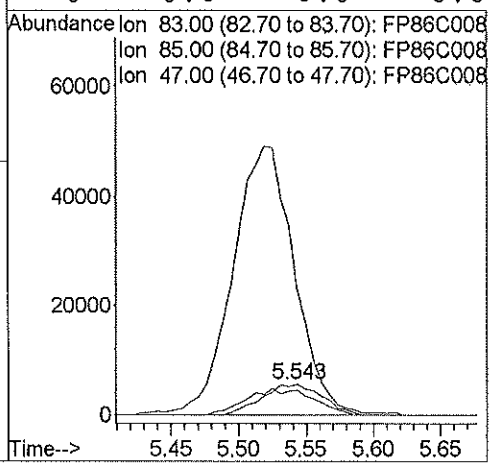


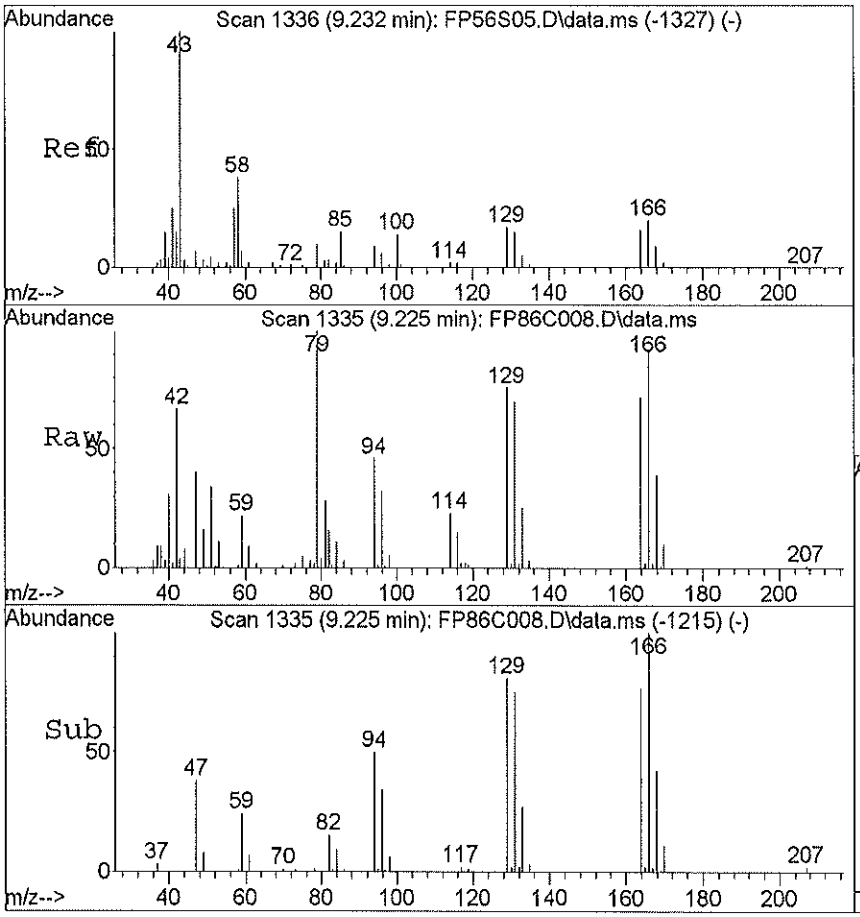


#24
Chloroform
Concen: 0.20 ug/L
RT: 5.54 min Scan# 731
Delta R.T. 0.00 min
Lab File: FP86C008.D
Acq: 09/11/2019 11:29

Tgt Ion:83 Resp: 17580

Ion	Ratio	Lower	Upper
83	100		
85	94.9	46.0	86.0#
47	893.4	44.3	84.3#
0	0.0	0.0	0.0

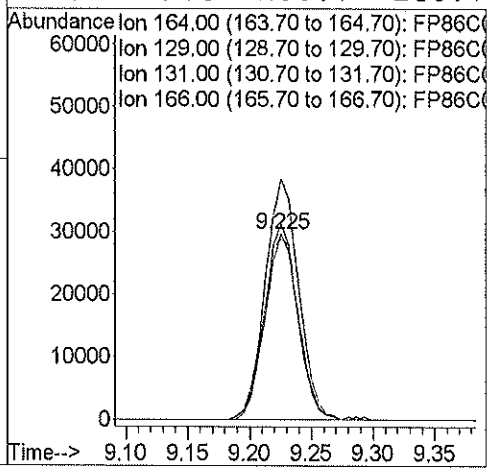




#48
Tetrachloroethene
Concen: 1.48 ug/L
RT: 9.23 min Scan# 1335
Delta R.T. 0.00 min
Lab File: FP86C008.D
Acq: 09/11/2019 11:29

Tgt Ion:164 Resp: 55970

Ion	Ratio	Lower	Upper
164	100		
129	103.2	80.9	120.9
131	99.2	77.8	117.8
166	129.8	106.7	146.7



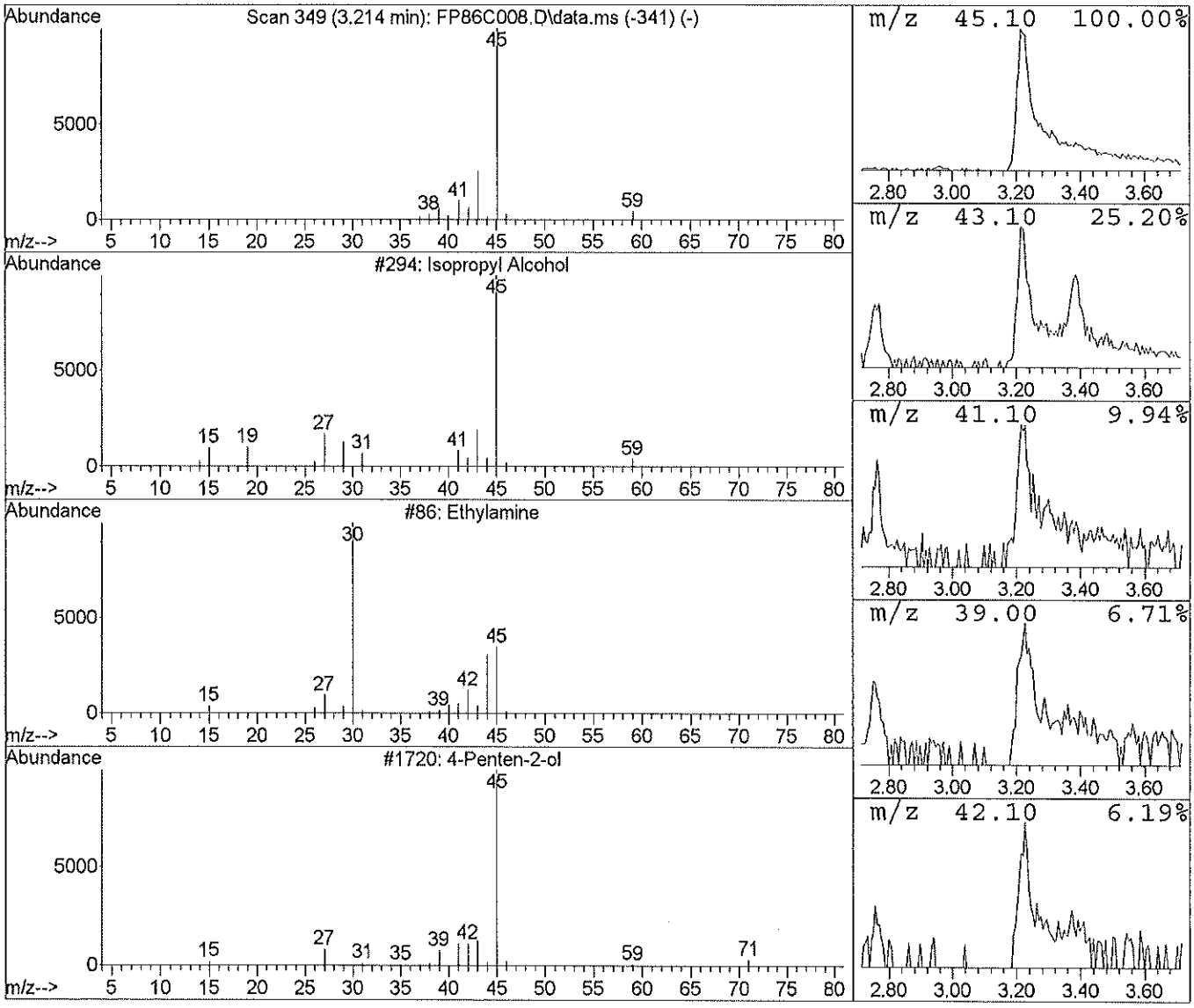
Library Search Compound Report

Data File : C:\msdchem\1\data\11SEP19F\FP86C008.D Vial: 11
Acq Time : 09/11/2019 11:29 Operator: CQC
Sample : 1925562008 5P-MW105-146-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Library : C:\Database\NIST11.L

R.T.	Conc	Area	Relative to ISTD	ISTD Area
3.21	0.69 ug/L	246280	1,4-Difluorobenzene	1781065

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Isopropyl Alcohol	294	000067-63-0	64.00
2	Ethylamine	86	000075-04-7	7.00
3	4-Penten-2-ol	1720	000625-31-0	4.00
4	Formamide	91	000075-12-7	4.00
5	Methane, nitroso-	92	000865-40-7	3.00



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW106D-195-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562005
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP83C005
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	1.1	
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	4.5	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW106D-195-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562005
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP83C005
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.32	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
5P-MW106D-195-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562005
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP83C005
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
Extract Concentrated: (Y/N) Date Analyzed: 09/11/2019
Soil Aliquot (VOA): (uL) Extract Volume: (uL)
Heated Purge: (Y/N) Y Extraction Type: PT
Purge Volume: 25.0 (mL) Injection Volume: (uL)
Cleanup Types: pH: 1.0 Dilution Factor: 1.0
Concentration Units (ug/L, ug/kg): ug/L Cleanup Factor:

	CAS No.	ANALYTE	RT	EST. CONC.	Q
01		Unknown Isopropyl Alcohol	3.22	0.83	J
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

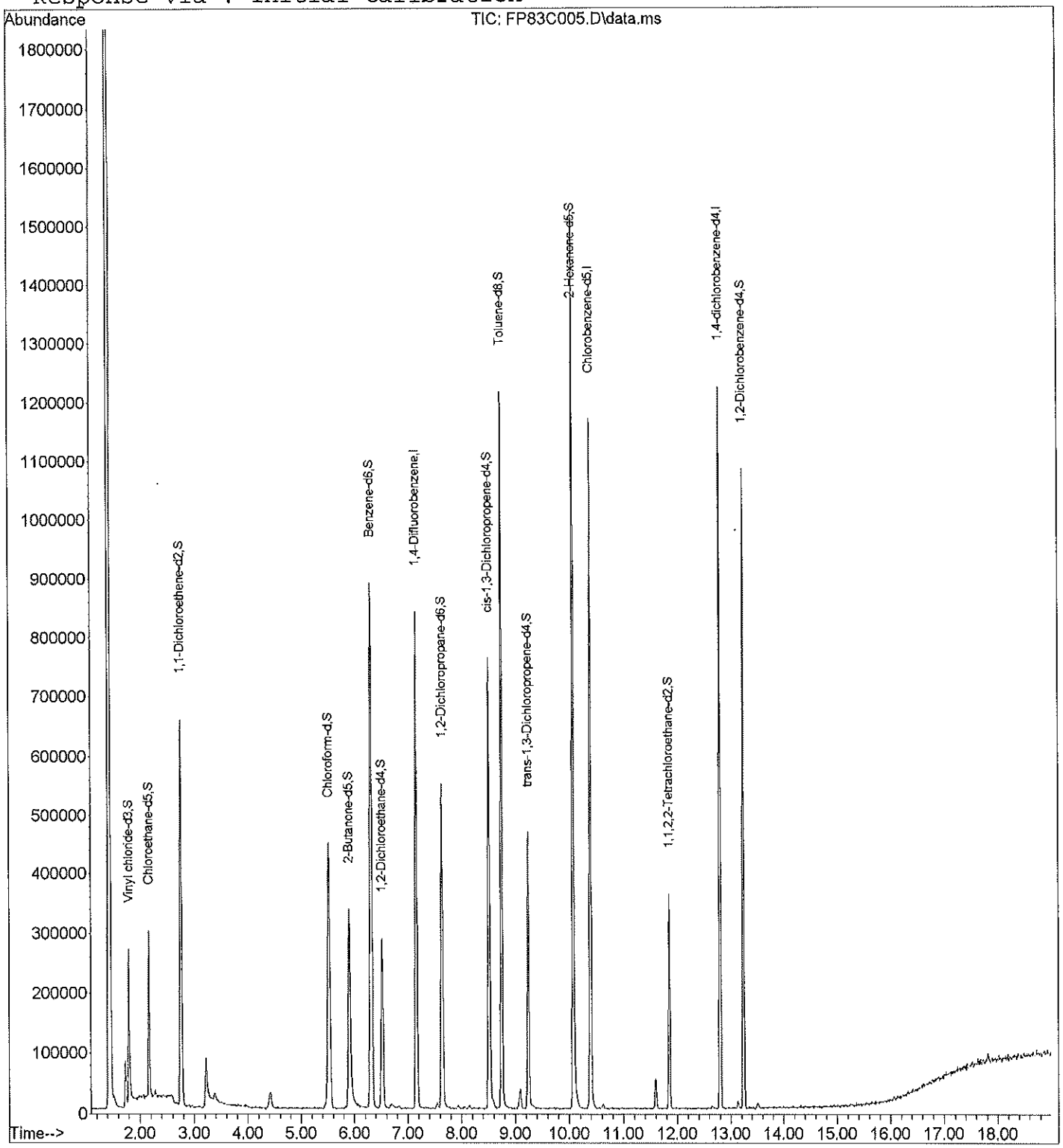
[1]EPA-designated Registry Number.

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP83C005.D Vial: 8
Acq Time : 09/11/2019 10:05 Operator: CQC
Sample : 1925562005 5P-MW106D-195-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 10:38:36 2019 Results File: FTRACEG5.RES

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Sep 05 08:18:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP83C005.D Vial: 8
Acq Time : 09/11/2019 10:05 Operator: CQC
Sample : 1925562005 5P-MW106D-195-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 10:38:36 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.16	114	776066	5.0000 ug/L	82.47
28) Chlorobenzene-d5	10.40	117	652979	5.0000 ug/L	85.42
60) 1,4-dichlorobenzene-d4	12.80	152	322454	5.0000 ug/L	80.60
System Monitoring Compounds					**%Recovery**
5) Vinyl chloride-d3	1.80	65	254935	4.8278 ug/L	96.56%
8) Chloroethane-d5	2.17	69	213276	5.0186 ug/L	100.37%
11) 1,1-Dichloroethene-d2	2.75	63	477553	4.4841 ug/L	89.68%
22) 2-Butanone-d5	5.90	46	678216	53.7401 ug/L	107.48%
25) Chloroform-d	5.52	84	530681	5.4176 ug/L	108.35%
27) 1,2-Dichloroethane-d4	6.52	65	251723	5.4691 ug/L	109.38%
33) Benzene-d6	6.31	84	1011357	5.2518 ug/L	105.04%
37) 1,2-Dichloropropane-d6	7.64	67	257882	5.0150 ug/L	100.30%
40) cis-1,3-Dichloropropene-d4	8.51	79	403908	4.5828 ug/L	91.66%
42) trans-1,3-Dichloropropene-	9.24	79	231526	4.5632 ug/L	91.26%
47) Toluene-d8	8.75	98	827743	4.9516 ug/L	99.03%
50) 2-Hexanone-d5	10.07	63	529564	50.7388 ug/L	101.48%
59) 1,1,2,2-Tetrachloroethane-	11.85	84	175000	5.0128 ug/L	100.26%
65) 1,2-Dichlorobenzene-d4	13.24	152	279887	5.1345 ug/L	102.69%
Target Compounds					**Qvalue**
2) Dichlorodifluoromethane	0.00	85		Not Detected	
3) Chloromethane	1.73	50	67497	1.1213 ug/L	99
4) Vinyl chloride	0.00	62		Not Detected	
6) Bromomethane	0.00	94		Not Detected	
7) Chloroethane	0.00	64		Not Detected	
9) Trichlorofluoromethane	0.00	101		Not Detected	
10) 1,1-Dichloroethene	0.00	96		Not Detected	
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101		Not Detected	
13) Acetone	3.38	43	30383	4.4933 ug/L	84
14) Carbon disulfide	0.00	76		Not Detected	
15) Methyl acetate	0.00	43		Not Detected	
16) Methylene chloride	0.00	84		Not Detected	
17) trans-1,2-Dichloroethene	0.00	96		Not Detected	
18) Methyl tert-butyl ether	0.00	73		Not Detected	
19) 1,1-Dichloroethane	0.00	63		Not Detected	
20) cis-1,2-Dichloroethene	0.00	96		Not Detected	
21) 2-Butanone	0.00	43		Not Detected	
23) Bromochloromethane	0.00	128		Not Detected	
24) Chloroform	0.00	83		Not Detected	
26) 1,2-Dichloroethane	0.00	62		Not Detected	

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

Quantitation Report

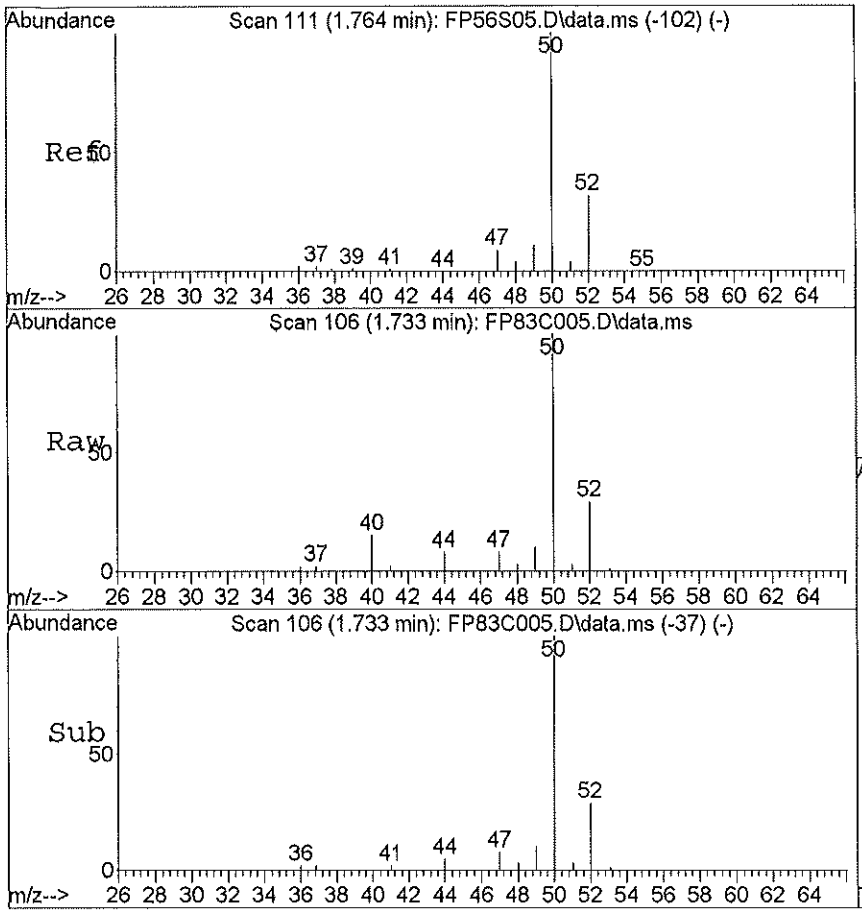
Data File : C:\msdchem\1\data\11SEP19F\FP83C005.D Vial: 8
Acq Time : 09/11/2019 10:05 Operator: CQC
Sample : 1925562005 5P-MW106D-195-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 10:38:36 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	1,1,1-Trichloroethane	0.00	97		Not Detected	
30)	Cyclohexane	0.00	56		Not Detected	
31)	Carbon tetrachloride	0.00	117		Not Detected	
32)	Benzene	0.00	78		Not Detected	
34)	Trichloroethene	0.00	130		Not Detected	
35)	Methylcyclohexane	0.00	83		Not Detected	
36)	1,2-Dichloropropane	0.00	63		Not Detected	
38)	Bromodichloromethane	0.00	83		Not Detected	
39)	cis-1,3-Dichloropropene	0.00	75		Not Detected	
41)	trans-1,3-Dichloropropene	0.00	75		Not Detected	
43)	1,1,2-Trichloroethane	0.00	97		Not Detected	
44)	Dibromochloromethane	0.00	129		Not Detected	
45)	4-Methyl-2-pentanone	0.00	43		Not Detected	
46)	Toluene	0.00	91		Not Detected	
48)	Tetrachloroethene	9.23	164	12733	0.3158 ug/L	92
49)	2-Hexanone	0.00	43		Not Detected	
51)	1,2-Dibromoethane	0.00	107		Not Detected	
52)	Chlorobenzene	0.00	112		Not Detected	
53)	Ethylbenzene	0.00	91		Not Detected	
54)	m,p-Xylene	0.00	106		Not Detected	
55)	o-Xylene	0.00	106		Not Detected	
56)	Styrene	0.00	104		Not Detected	
57)	Isopropylbenzene	0.00	105		Not Detected	
58)	1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61)	Bromoform	0.00	173		Not Detected	
62)	1,3-Dichlorobenzene	0.00	146		Not Detected	
63)	1,4-Dichlorobenzene	0.00	146		Not Detected	
64)	1,2-Dichlorobenzene	0.00	146		Not Detected	
66)	1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67)	1,2,4-Trichlorobenzene	0.00	180		Not Detected	
68)	1,2,3-Trichlorobenzene	0.00	180		Not Detected	

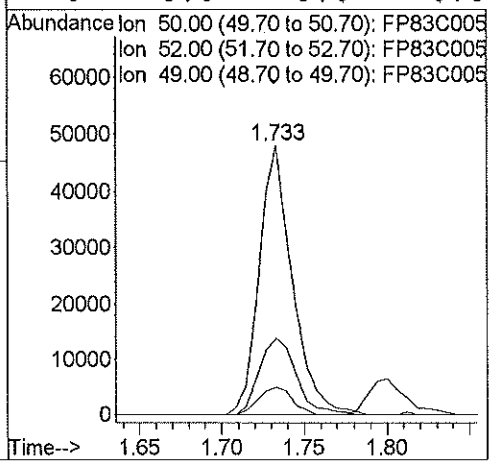
(#) = qualifier out of range (m) = manual integration

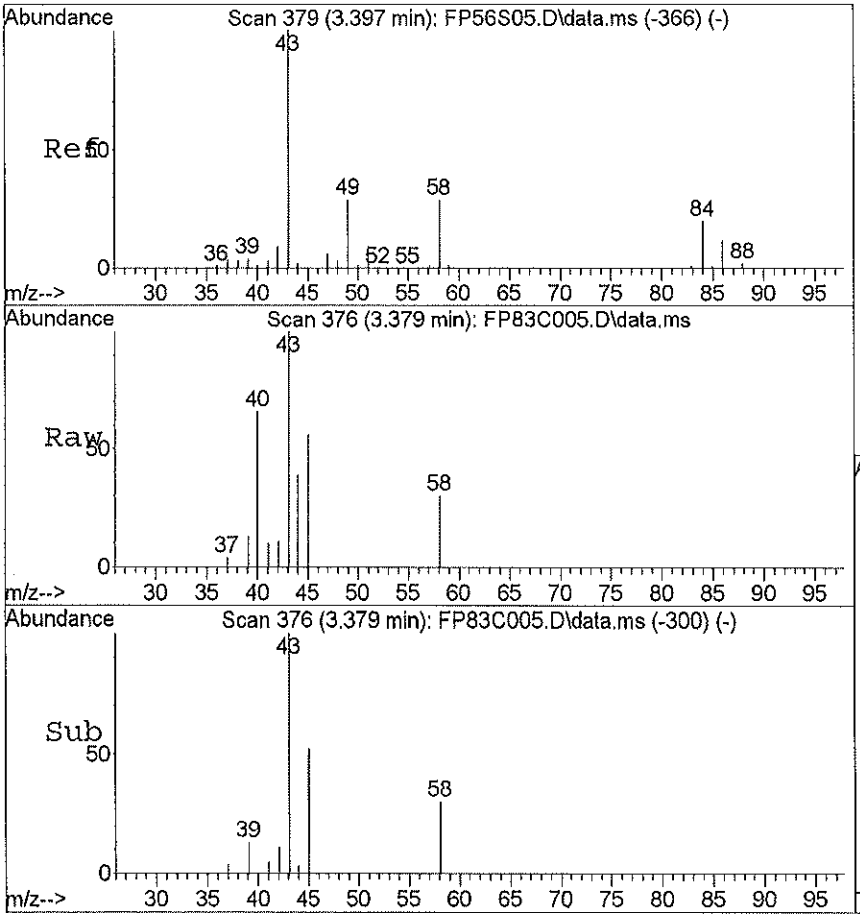


#3
Chloromethane
Concen: 1.12 ug/L
RT: 1.73 min Scan# 106
Delta R.T. 0.00 min
Lab File: FP83C005.D
Acq: 09/11/2019 10:05

Tgt Ion:50 Resp: 67497

Ion	Ratio	Lower	Upper
50	100		
52	32.0	12.7	52.7
49	10.5	0.0	30.8
0	0.0	0.0	0.0

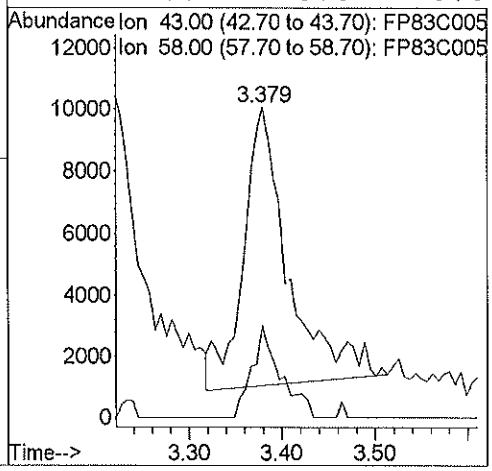


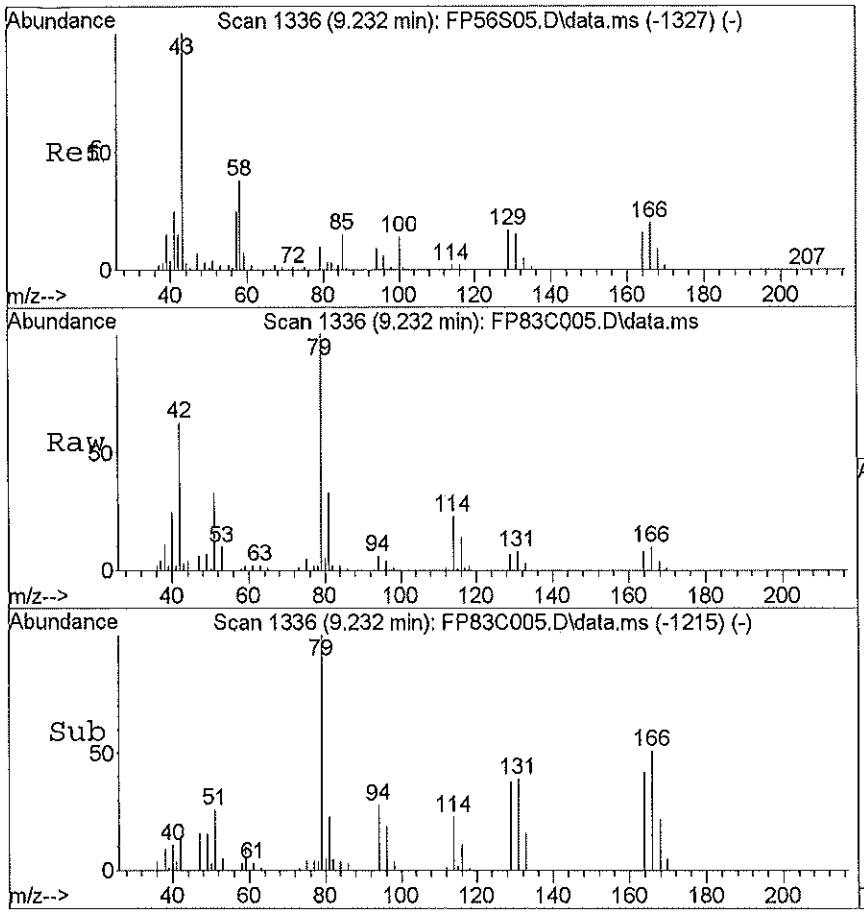


#13
Acetone
Concen: 4.49 ug/L
RT: 3.38 min Scan# 376
Delta R.T. 0.00 min
Lab File: FP83C005.D
Acq: 09/11/2019 10:05

Tgt Ion:43 Resp: 30383

Ion	Ratio	Lower	Upper
43	100		
58	21.2	9.8	49.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

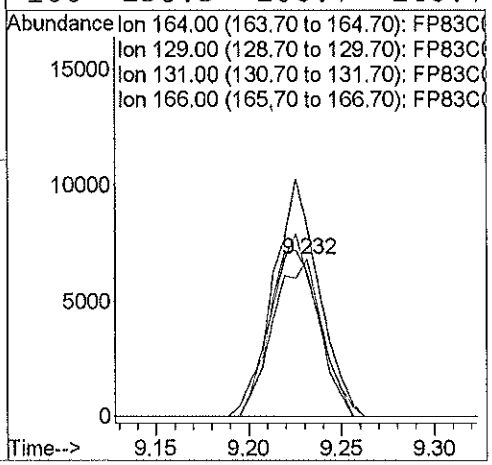




#48
Tetrachloroethene
Concen: 0.32 ug/L
RT: 9.23 min Scan# 1336
Delta R.T. 0.01 min
Lab File: FP83C005.D
Acq: 09/11/2019 10:05

Tgt Ion:164 Resp: 12733

Ion	Ratio	Lower	Upper
164	100		
129	105.7	80.9	120.9
131	105.3	77.8	117.8
166	138.3	106.7	146.7



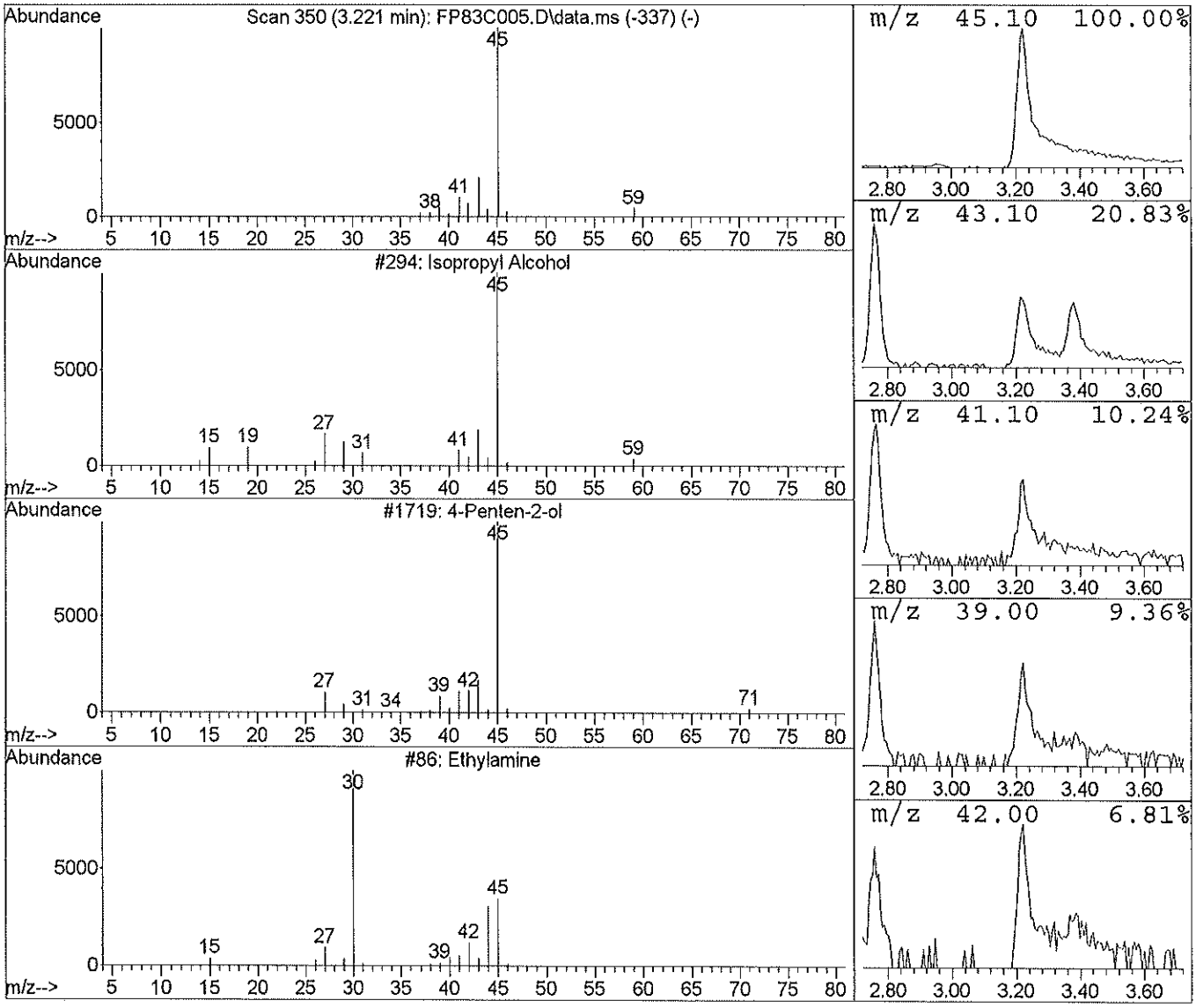
Library Search Compound Report

Data File : C:\msdchem\1\data\11SEP19F\FP83C005.D Vial: 8
Acq Time : 09/11/2019 10:05 Operator: CQC
Sample : 1925562005 5P-MW106D-195-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Library : C:\Database\NIST11.L

R.T.	Conc	Area	Relative to ISTD	ISTD Area
3.22	0.83 ug/L	308466	1,4-Difluorobenzene	1855233

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Isopropyl Alcohol	294	000067-63-0	74.00
2	4-Penten-2-ol	1719	000625-31-0	9.00
3	Ethylamine	86	000075-04-7	5.00
4	Formamide	90	000075-12-7	4.00
5	Methane, nitroso-	92	000865-40-7	3.00



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW106I-145-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562004
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP82C004
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	1.1	
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.3	
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW106I-145-090519

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 1925562004
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: FP82C004
% Solids:
Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
GC Column: ID: (mm)
Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N)
Extract Volume: (uL)
Soil Aliquot (VOA): (uL)
Extraction Type: PT
Heated Purge: (Y/N) Y
Injection Volume: (uL)
Purge Volume: 25.0 (mL)
pH: 1.0 Dilution Factor: 1.0
Cleanup Types:
Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.19	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
5P-MW106I-145-090519

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 1925562004
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: FP82C004
% Solids:
Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
Extract Concentrated: (Y/N)
Date Analyzed: 09/11/2019
Soil Aliquot (VOA): (uL)
Extract Volume: (uL)
Heated Purge: (Y/N) Y
Extraction Type: PT
Purge Volume: 25.0 (mL)
Injection Volume: (uL)
Cleanup Types:
pH: 1.0 Dilution Factor: 1.0
Concentration Units (ug/L, ug/kg): ug/L
Cleanup Factor:

	CAS No.	ANALYTE	RT	EST. CONC.	Q
01		Unknown Isopropyl Alcohol	3.21	0.73	J
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

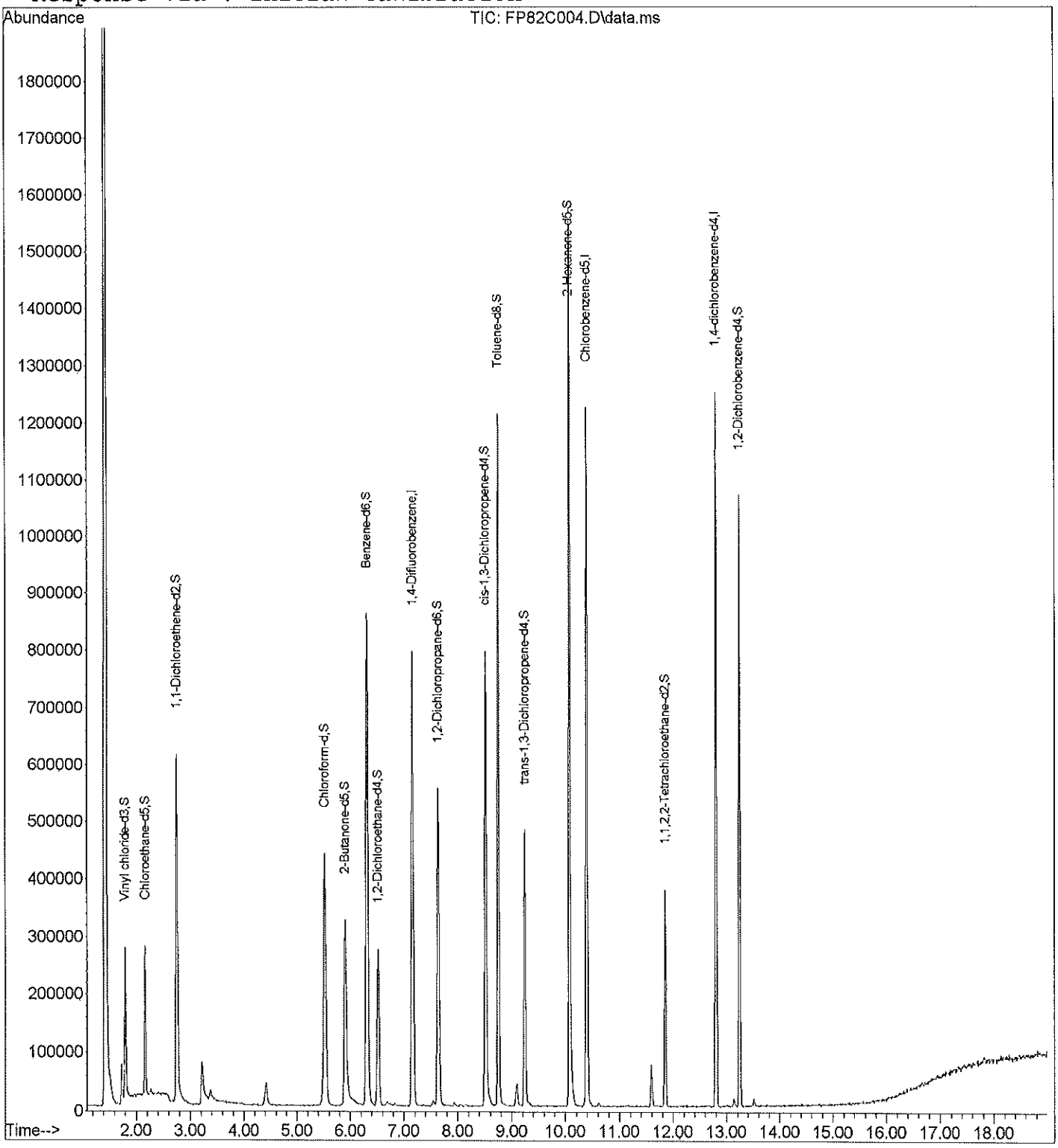
[1]EPA-designated Registry Number.

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP82C004.D Vial: 7
Acq Time : 09/11/2019 09:38 Operator: CQC
Sample : 1925562004 5P-MW106I-145-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 10:10:31 2019 Results File: FTRACEG5.RES

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Sep 05 08:18:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP82C004.D Vial: 7
Acq Time : 09/11/2019 09:38 Operator: CQC
Sample : 1925562004 5P-MW106I-145-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 10:10:31 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.16	114	774198	5.0000 ug/L	82.28
28) Chlorobenzene-d5	10.40	117	677920	5.0000 ug/L	88.68
60) 1,4-dichlorobenzene-d4	12.80	152	321461	5.0000 ug/L	80.35
System Monitoring Compounds					**%Recovery**
5) Vinyl chloride-d3	1.79	65	252824	4.7994 ug/L	95.99%
8) Chloroethane-d5	2.17	69	205779	4.8539 ug/L	97.08%
11) 1,1-Dichloroethene-d2	2.75	63	465537	4.3819 ug/L	87.64%
22) 2-Butanone-d5	5.90	46	700313	55.6249 ug/L	111.25%
25) Chloroform-d	5.52	84	522633	5.3483 ug/L	106.97%
27) 1,2-Dichloroethane-d4	6.52	65	249721	5.4387 ug/L	108.77%
33) Benzene-d6	6.31	84	1000802	5.0058 ug/L	100.12%
37) 1,2-Dichloropropane-d6	7.63	67	268718	5.0334 ug/L	100.67%
40) cis-1,3-Dichloropropene-d4	8.51	79	425735	4.6527 ug/L	93.05%
42) trans-1,3-Dichloropropene-	9.24	79	247076	4.6905 ug/L	93.81%
47) Toluene-d8	8.75	98	854996	4.9265 ug/L	98.53%
50) 2-Hexanone-d5	10.07	63	551150	50.8642 ug/L	101.73%
59) 1,1,2,2-Tetrachloroethane-	11.85	84	183325	5.0581 ug/L	101.16%
65) 1,2-Dichlorobenzene-d4	13.24	152	278934	5.1328 ug/L	102.66%
Target Compounds					**Qvalue**
2) Dichlorodifluoromethane	0.00	85		Not Detected	
3) Chloromethane	1.73	50	64560	1.0751 ug/L	99
4) Vinyl chloride	0.00	62		Not Detected	
6) Bromomethane	0.00	94		Not Detected	
7) Chloroethane	0.00	64		Not Detected	
9) Trichlorofluoromethane	0.00	101		Not Detected	
10) 1,1-Dichloroethene	0.00	96		Not Detected	
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101		Not Detected	
13) Acetone	3.38	43	35901	5.3222 ug/L	88
14) Carbon disulfide	0.00	76		Not Detected	
15) Methyl acetate	0.00	43		Not Detected	
16) Methylene chloride	0.00	84		Not Detected	
17) trans-1,2-Dichloroethene	0.00	96		Not Detected	
18) Methyl tert-butyl ether	0.00	73		Not Detected	
19) 1,1-Dichloroethane	0.00	63		Not Detected	
20) cis-1,2-Dichloroethene	0.00	96		Not Detected	
21) 2-Butanone	0.00	43		Not Detected	
23) Bromochloromethane	0.00	128		Not Detected	
24) Chloroform	0.00	83		Not Detected	
26) 1,2-Dichloroethane	0.00	62		Not Detected	

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

Quantitation Report

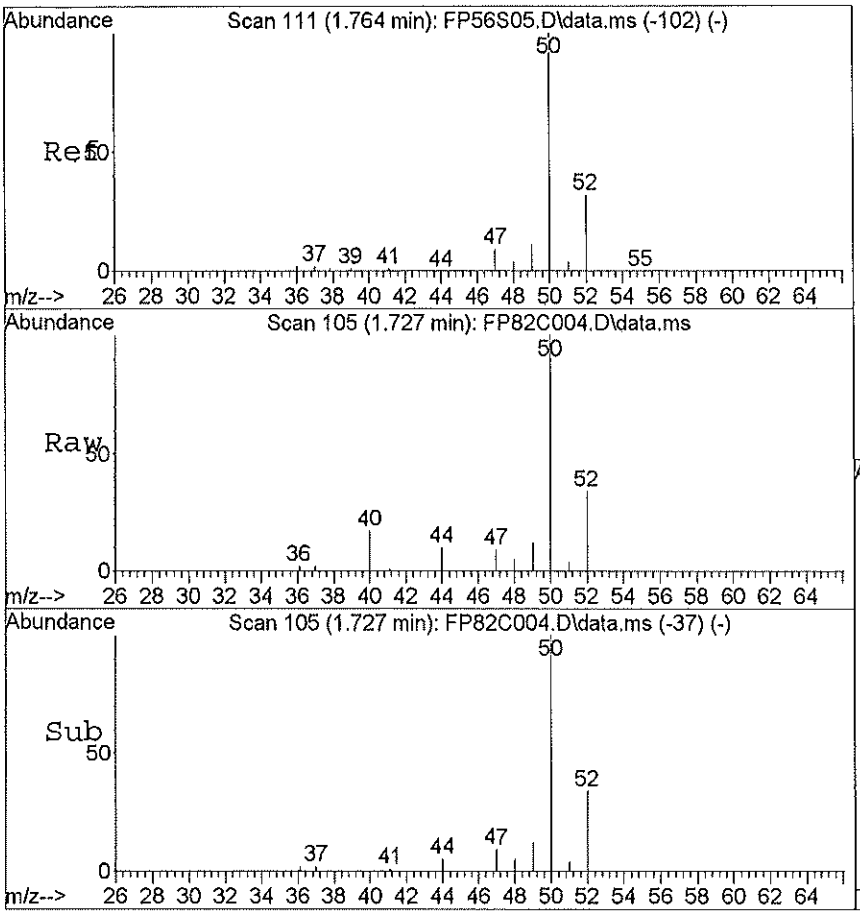
Data File : C:\msdchem\1\data\11SEP19F\FP82C004.D Vial: 7
Acq Time : 09/11/2019 09:38 Operator: CQC
Sample : 1925562004 5P-MW106I-145-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 10:10:31 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	1,1,1-Trichloroethane	0.00	97		Not Detected	
30)	Cyclohexane	0.00	56		Not Detected	
31)	Carbon tetrachloride	0.00	117		Not Detected	
32)	Benzene	0.00	78		Not Detected	
34)	Trichloroethene	0.00	130		Not Detected	
35)	Methylcyclohexane	0.00	83		Not Detected	
36)	1,2-Dichloropropane	0.00	63		Not Detected	
38)	Bromodichloromethane	0.00	83		Not Detected	
39)	cis-1,3-Dichloropropene	0.00	75		Not Detected	
41)	trans-1,3-Dichloropropene	0.00	75		Not Detected	
43)	1,1,2-Trichloroethane	0.00	97		Not Detected	
44)	Dibromochloromethane	0.00	129		Not Detected	
45)	4-Methyl-2-pentanone	0.00	43		Not Detected	
46)	Toluene	0.00	91		Not Detected	
48)	Tetrachloroethene	9.23	164	8059	0.1925 ug/L	95
49)	2-Hexanone	0.00	43		Not Detected	
51)	1,2-Dibromoethane	0.00	107		Not Detected	
52)	Chlorobenzene	0.00	112		Not Detected	
53)	Ethylbenzene	0.00	91		Not Detected	
54)	m,p-Xylene	0.00	106		Not Detected	
55)	o-Xylene	0.00	106		Not Detected	
56)	Styrene	0.00	104		Not Detected	
57)	Isopropylbenzene	0.00	105		Not Detected	
58)	1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61)	Bromoform	0.00	173		Not Detected	
62)	1,3-Dichlorobenzene	0.00	146		Not Detected	
63)	1,4-Dichlorobenzene	0.00	146		Not Detected	
64)	1,2-Dichlorobenzene	0.00	146		Not Detected	
66)	1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67)	1,2,4-Trichlorobenzene	0.00	180		Not Detected	
68)	1,2,3-Trichlorobenzene	0.00	180		Not Detected	

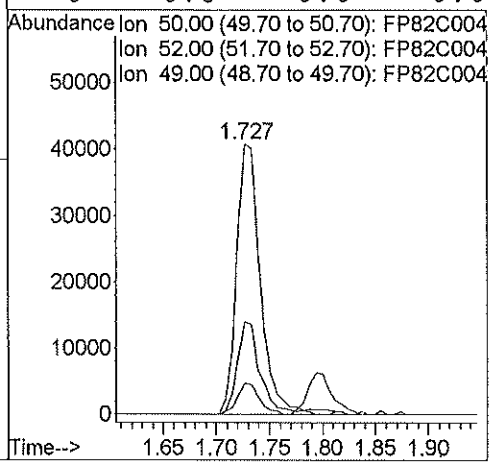
(#) = qualifier out of range (m) = manual integration

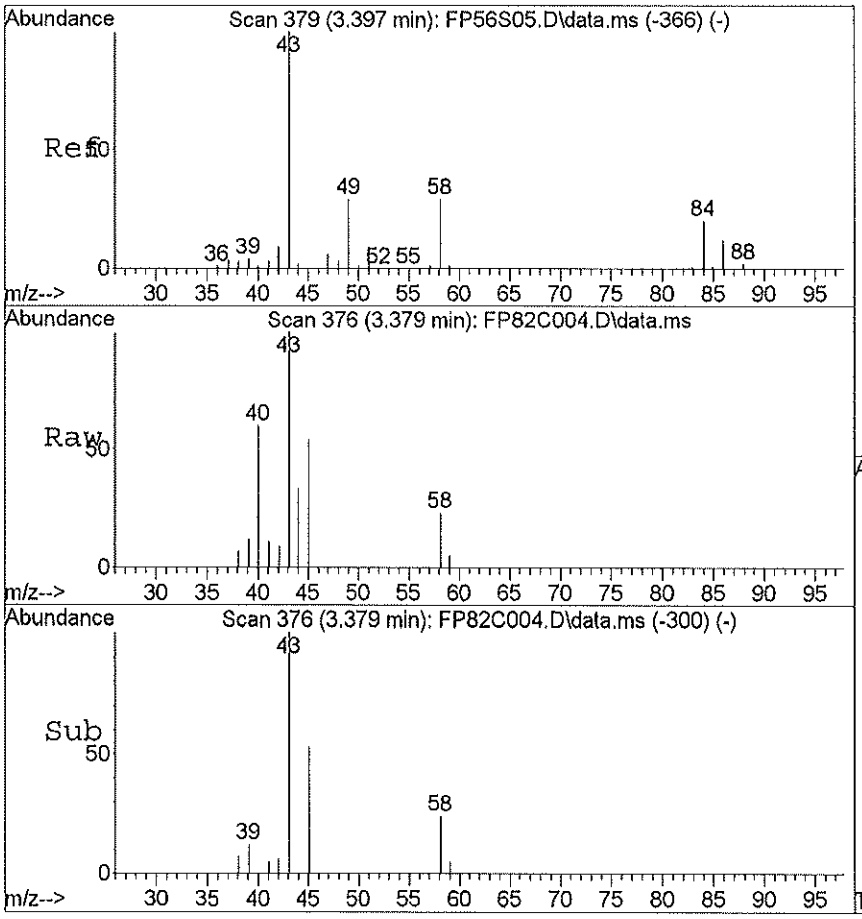


#3
Chloromethane
Concen: 1.08 ug/L
RT: 1.73 min Scan# 105
Delta R.T. -0.01 min
Lab File: FP82C004.D
Acq: 09/11/2019 09:38

Tgt Ion:50 Resp: 64560

Ion	Ratio	Lower	Upper
50	100		
52	33.2	12.7	52.7
49	10.6	0.0	30.8
0	0.0	0.0	0.0

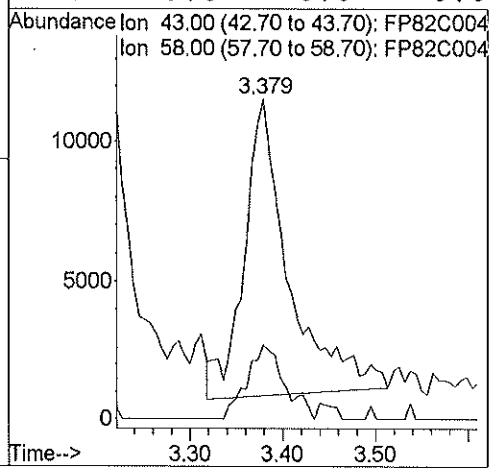


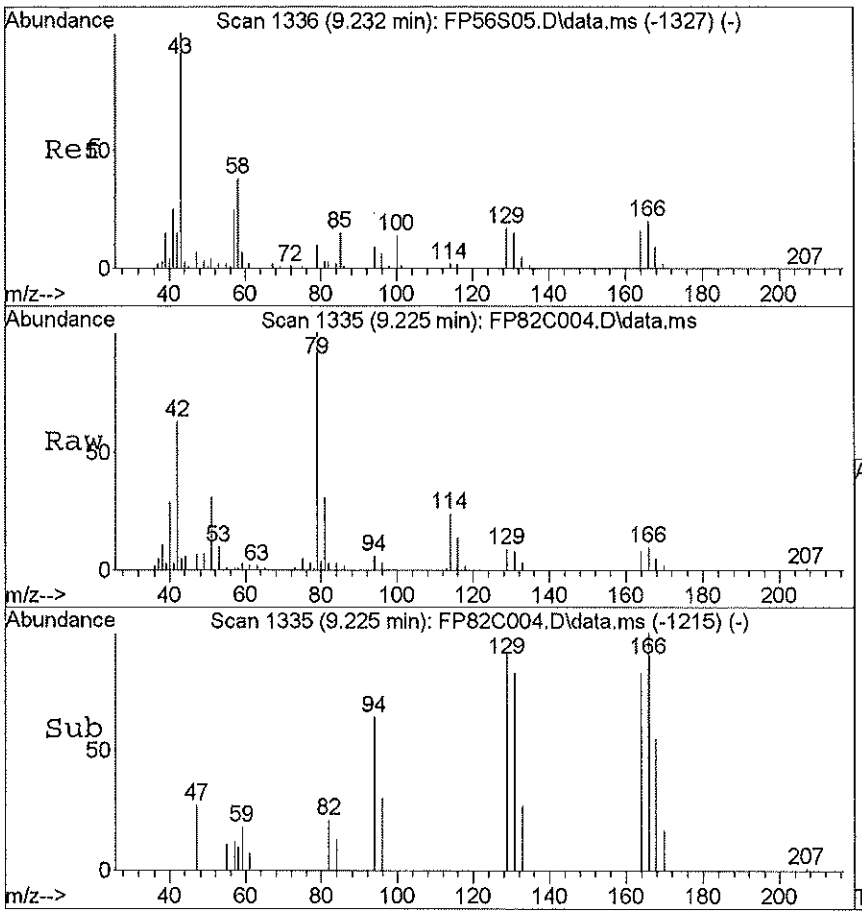


#13
Acetone
Concen: 5.32 ug/L
RT: 3.38 min Scan# 376
Delta R.T. 0.00 min
Lab File: FP82C004.D
Acq: 09/11/2019 09:38

Tgt Ion:43 Resp: 35901

Ion	Ratio	Lower	Upper
43	100		
58	23.1	9.8	49.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

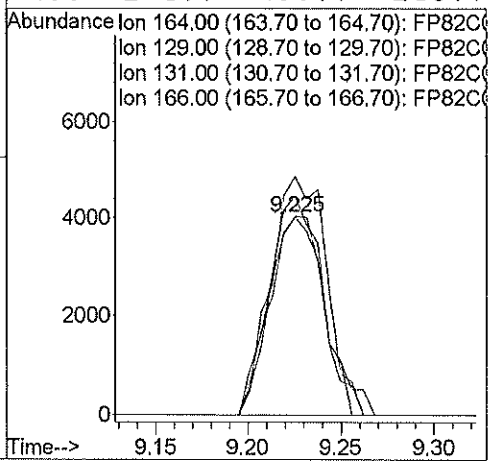




#48
Tetrachloroethene
Concen: 0.19 ug/L
RT: 9.23 min Scan# 1335
Delta R.T. 0.00 min
Lab File: FP82C004.D
Acq: 09/11/2019 09:38

Tgt Ion:164 Resp: 8059

Ion	Ratio	Lower	Upper
164	100		
129	109.2	80.9	120.9
131	103.9	77.8	117.8
166	124.7	106.7	146.7



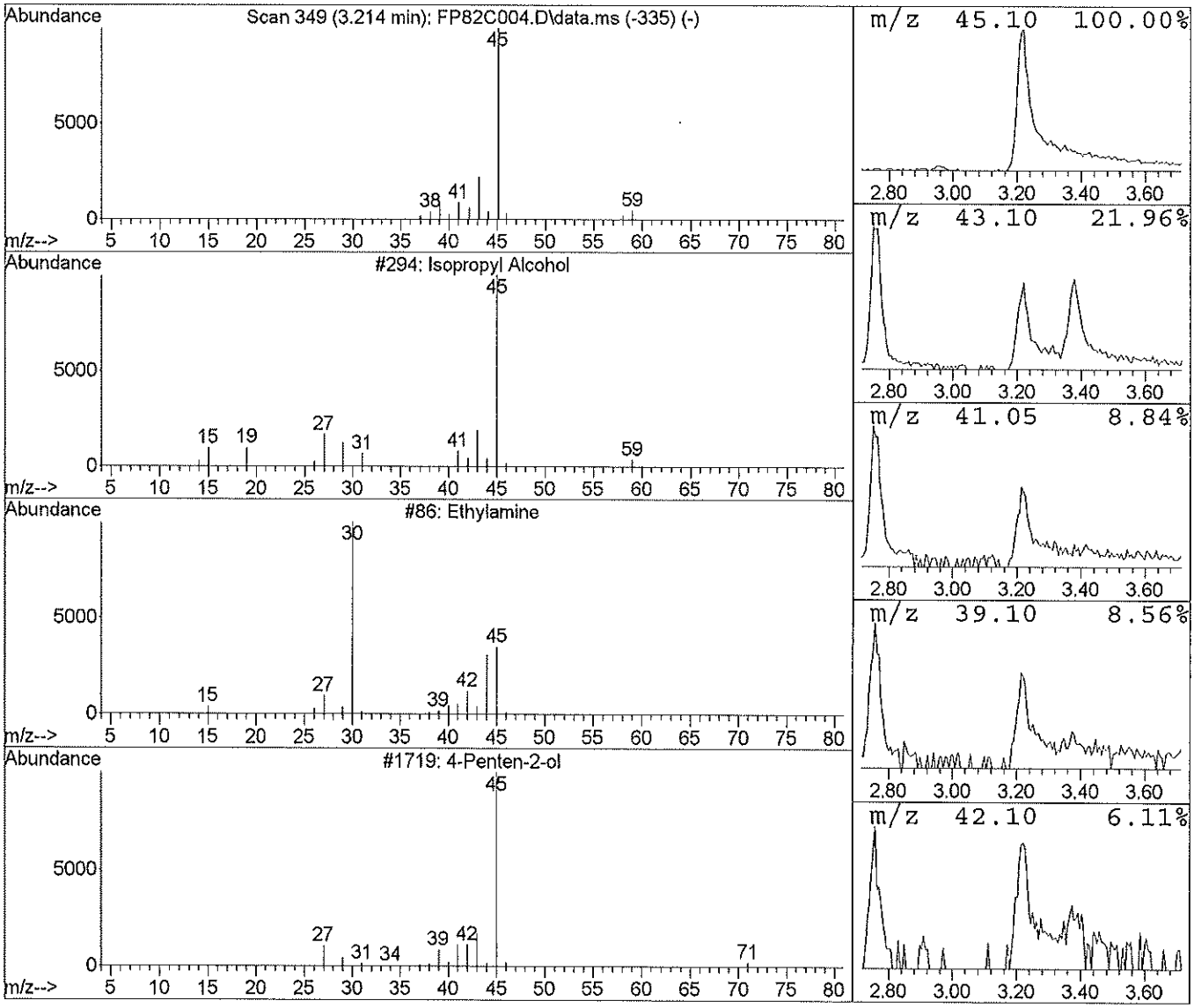
Library Search Compound Report

Data File : C:\msdchem\1\data\11SEP19F\FP82C004.D Vial: 7
Acq Time : 09/11/2019 09:38 Operator: CQC
Sample : 1925562004 5P-MW106I-145-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Library : C:\Database\NIST11.L

R.T.	Conc	Area	Relative to ISTD	ISTD Area
3.21	0.73 ug/L	272787	1,4-Difluorobenzene	1875732

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Isopropyl Alcohol	294	000067-63-0	64.00
2	Ethylamine	86	000075-04-7	5.00
3	4-Penten-2-ol	1719	000625-31-0	4.00
4	Oxirane, (methoxymethyl)-	2057	000930-37-0	4.00
5	1-Butene, 4-methoxy	1748	004696-30-4	4.00



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW1071-145-090519

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 1925562002
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: FP80C002
% Solids:
Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
GC Column: ID: (mm)
Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N)
Extract Volume: (uL)
Soil Aliquot (VOA): (uL)
Extraction Type: PT
Heated Purge: (Y/N) Y
Injection Volume: (uL)
Purge Volume: 25.0 (mL)
pH: 1.0 Dilution Factor: 1.0
Cleanup Types:
Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.19	J
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	1.3	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW1071-145-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562002
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP80C002
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.27	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
5P-MW1071-145-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562002
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP80C002
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
Extract Concentrated: (Y/N) Date Analyzed: 09/11/2019
Soil Aliquot (VOA): (uL) Extract Volume: (uL)
Heated Purge: (Y/N) Y Extraction Type: PT
Purge Volume: 25.0 (mL) Injection Volume: (uL)
Cleanup Types: pH: 1.0 Dilution Factor: 1.0
Concentration Units (ug/L, ug/kg): ug/L Cleanup Factor:

	CAS No.	ANALYTE	RT	EST. CONC.	Q
01		Unknown Isopropyl Alcohol	3.22	0.50	J
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

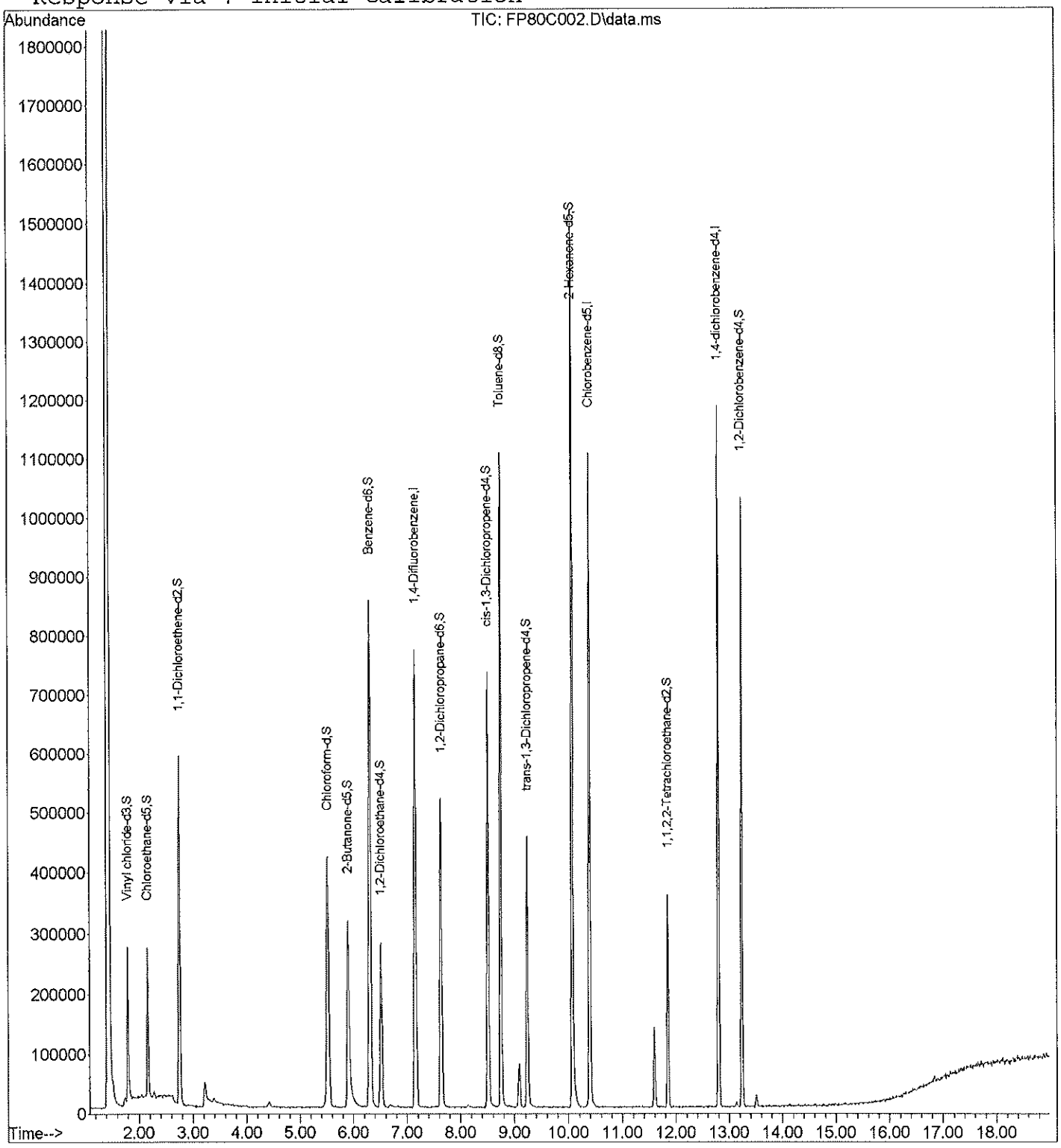
[1]EPA-designated Registry Number.

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP80C002.D Vial: 5
Acq Time : 09/11/2019 08:42 Operator: CQC
Sample : 1925562002 5P-MW1701-145-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 09:07:53 2019 Results File: FTRACEG5.RES

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Sep 05 08:18:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP80C002.D Vial: 5
Acq Time : 09/11/2019 08:42 Operator: CQC
Sample : 1925562002 5P-MW1701-145-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 09:07:53 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.16	114	722569	5.0000 ug/L	76.79
28) Chlorobenzene-d5	10.39	117	627530	5.0000 ug/L	82.09
60) 1,4-dichlorobenzene-d4	12.80	152	301953	5.0000 ug/L	75.48
System Monitoring Compounds					**%Recovery**
5) Vinyl chloride-d3	1.79	65	242012	4.9224 ug/L	98.45%
8) Chloroethane-d5	2.17	69	196173	4.9580 ug/L	99.16%
11) 1,1-Dichloroethene-d2	2.75	63	434354	4.3805 ug/L	87.61%
22) 2-Butanone-d5	5.90	46	670804	57.0881 ug/L	114.18%
25) Chloroform-d	5.52	84	494258	5.4193 ug/L	108.39%
27) 1,2-Dichloroethane-d4	6.52	65	239020	5.5776 ug/L	111.55%
33) Benzene-d6	6.31	84	940885	5.0840 ug/L	101.68%
37) 1,2-Dichloropropane-d6	7.63	67	252111	5.1016 ug/L	102.03%
40) cis-1,3-Dichloropropene-d4	8.51	79	403108	4.7592 ug/L	95.18%
42) trans-1,3-Dichloropropene-	9.24	79	232922	4.7769 ug/L	95.54%
47) Toluene-d8	8.75	98	779102	4.8496 ug/L	96.99%
50) 2-Hexanone-d5	10.07	63	531187	52.9583 ug/L	105.92%
59) 1,1,2,2-Tetrachloroethane-	11.85	84	177886	5.3021 ug/L	106.04%
65) 1,2-Dichlorobenzene-d4	13.24	152	267673	5.2438 ug/L	104.88%
Target Compounds					**Qvalue**
2) Dichlorodifluoromethane	0.00	85		Not Detected	
3) Chloromethane	1.73	50	10687	0.1907 ug/L	96
4) Vinyl chloride	0.00	62		Not Detected	
6) Bromomethane	0.00	94		Not Detected	
7) Chloroethane	0.00	64		Not Detected	
9) Trichlorofluoromethane	0.00	101		Not Detected	
10) 1,1-Dichloroethene	0.00	96		Not Detected	
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101		Not Detected	
13) Acetone	3.38	43	8356	1.3273 ug/L	98
14) Carbon disulfide	0.00	76		Not Detected	
15) Methyl acetate	0.00	43		Not Detected	
16) Methylene chloride	0.00	84		Not Detected	
17) trans-1,2-Dichloroethene	0.00	96		Not Detected	
18) Methyl tert-butyl ether	0.00	73		Not Detected	
19) 1,1-Dichloroethane	0.00	63		Not Detected	
20) cis-1,2-Dichloroethene	0.00	96		Not Detected	
21) 2-Butanone	0.00	43		Not Detected	
23) Bromochloromethane	0.00	128		Not Detected	
24) Chloroform	0.00	83		Not Detected	
26) 1,2-Dichloroethane	0.00	62		Not Detected	

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

Quantitation Report

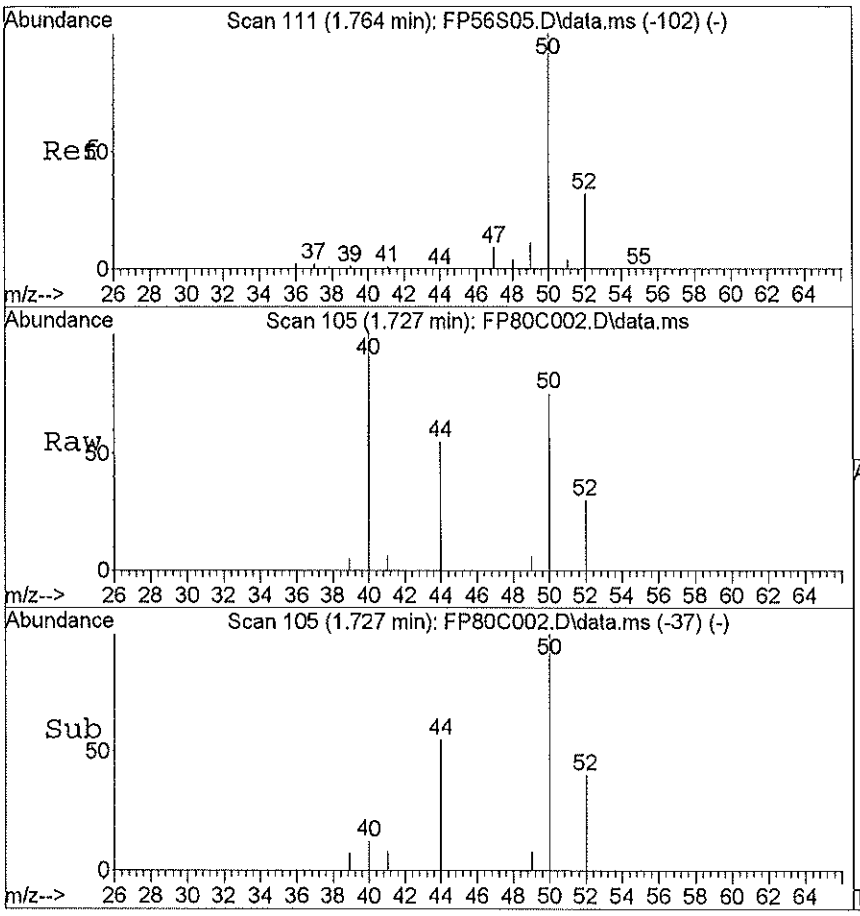
Data File : C:\msdchem\1\data\11SEP19F\FP80C002.D Vial: 5
Acq Time : 09/11/2019 08:42 Operator: CQC
Sample : 1925562002 5P-MW1701-145-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 09:07:53 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	1,1,1-Trichloroethane	0.00	97		Not Detected	
30)	Cyclohexane	0.00	56		Not Detected	
31)	Carbon tetrachloride	0.00	117		Not Detected	
32)	Benzene	0.00	78		Not Detected	
34)	Trichloroethene	0.00	130		Not Detected	
35)	Methylcyclohexane	0.00	83		Not Detected	
36)	1,2-Dichloropropane	0.00	63		Not Detected	
38)	Bromodichloromethane	0.00	83		Not Detected	
39)	cis-1,3-Dichloropropene	0.00	75		Not Detected	
41)	trans-1,3-Dichloropropene	0.00	75		Not Detected	
43)	1,1,2-Trichloroethane	0.00	97		Not Detected	
44)	Dibromochloromethane	0.00	129		Not Detected	
45)	4-Methyl-2-pentanone	0.00	43		Not Detected	
46)	Toluene	0.00	91		Not Detected	
48)	Tetrachloroethene	9.23	164	10293	0.2657 ug/L #	86
49)	2-Hexanone	0.00	43		Not Detected	
51)	1,2-Dibromoethane	0.00	107		Not Detected	
52)	Chlorobenzene	0.00	112		Not Detected	
53)	Ethylbenzene	0.00	91		Not Detected	
54)	m,p-Xylene	0.00	106		Not Detected	
55)	o-Xylene	0.00	106		Not Detected	
56)	Styrene	0.00	104		Not Detected	
57)	Isopropylbenzene	0.00	105		Not Detected	
58)	1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61)	Bromoform	0.00	173		Not Detected	
62)	1,3-Dichlorobenzene	0.00	146		Not Detected	
63)	1,4-Dichlorobenzene	0.00	146		Not Detected	
64)	1,2-Dichlorobenzene	0.00	146		Not Detected	
66)	1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67)	1,2,4-Trichlorobenzene	0.00	180		Not Detected	
68)	1,2,3-Trichlorobenzene	0.00	180		Not Detected	

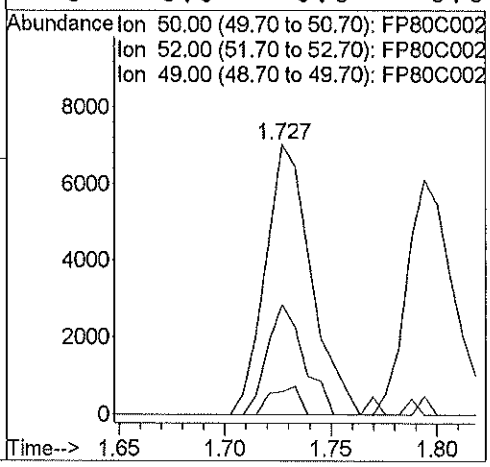
(#) = qualifier out of range (m) = manual integration

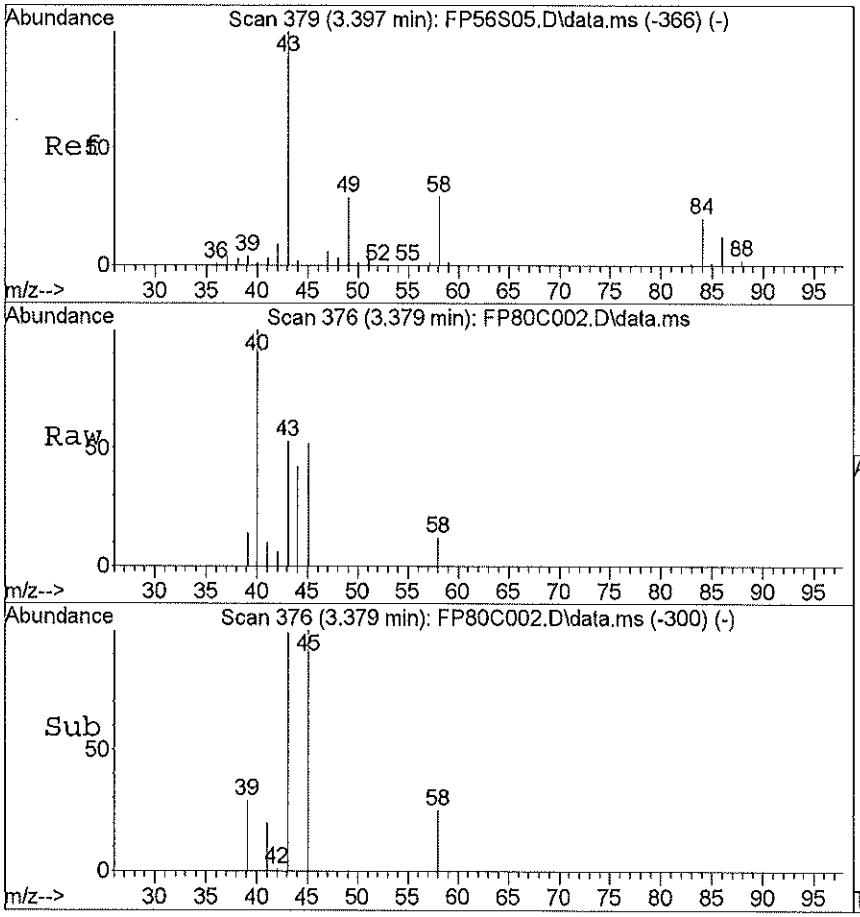


#3
Chloromethane
Concen: 0.19 ug/L
RT: 1.73 min Scan# 105
Delta R.T. -0.01 min
Lab File: FP80C002.D
Acq: 09/11/2019 08:42

Tgt Ion:50 Resp: 10687

Ion	Ratio	Lower	Upper
50	100		
52	32.0	12.7	52.7
49	6.4	0.0	30.8
0	0.0	0.0	0.0

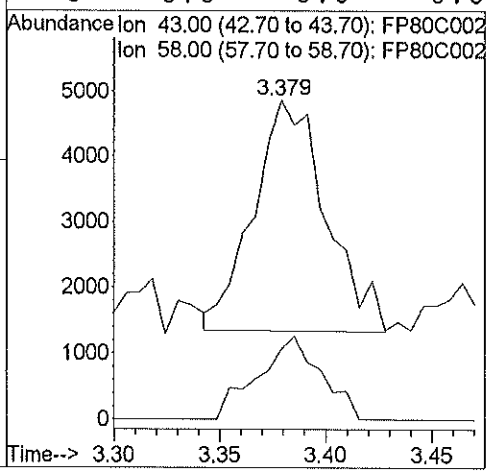


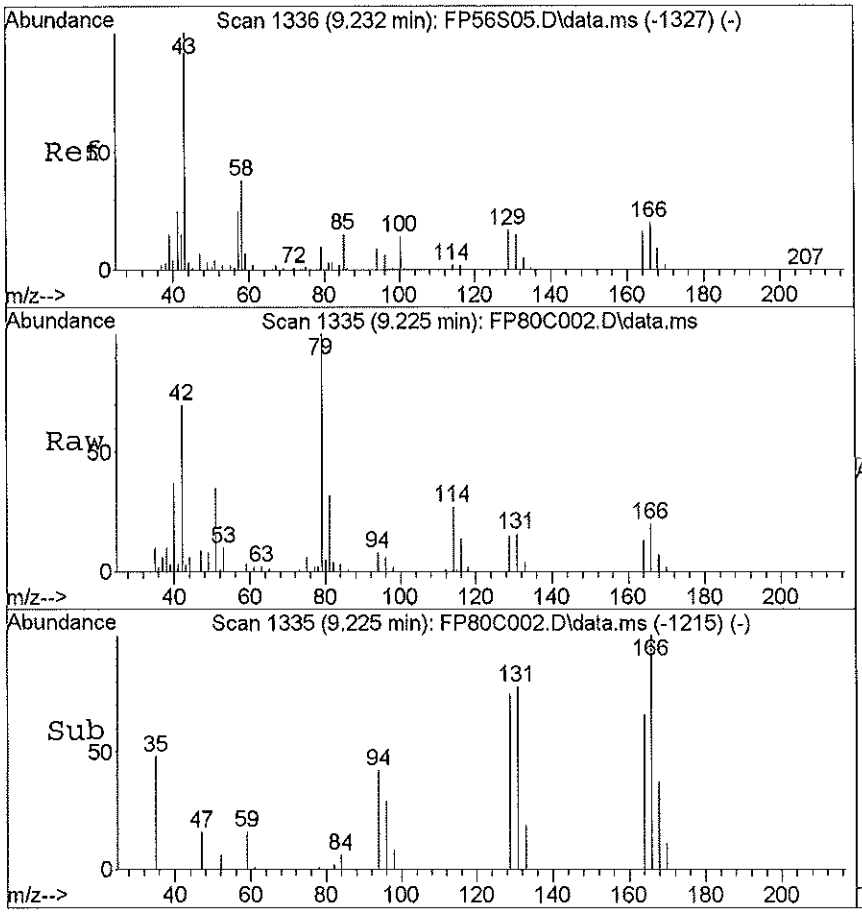


#13
Acetone
Concen: 1.33 ug/L
RT: 3.38 min Scan# 376
Delta R.T. 0.00 min
Lab File: FP80C002.D
Acq: 09/11/2019 08:42

Tgt Ion:43 Resp: 8356

Ion	Ratio	Lower	Upper
43	100		
58	31.0	9.8	49.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

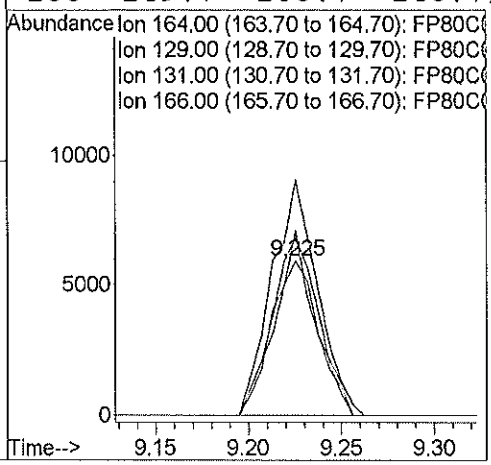




#48
Tetrachloroethene
Concen: 0.27 ug/L
RT: 9.23 min Scan# 1335
Delta R.T. 0.00 min
Lab File: FP80C002.D
Acq: 09/11/2019 08:42

Tgt Ion:164 Resp: 10293

Ion	Ratio	Lower	Upper
164	100		
129	113.8	80.9	120.9
131	106.5	77.8	117.8
166	149.7	106.7	146.7#



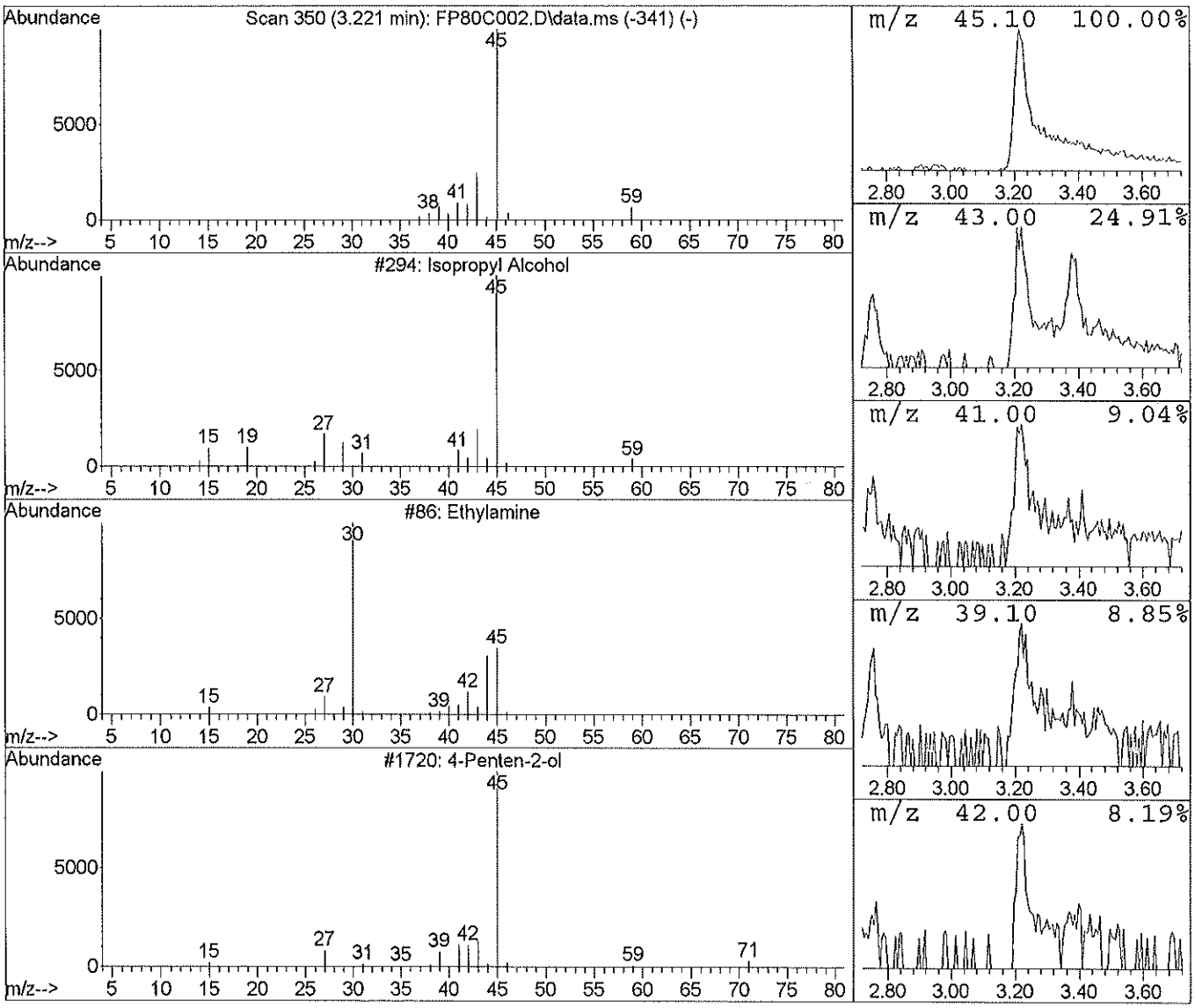
Library Search Compound Report

Data File : C:\msdchem\1\data\11SEP19F\FP80C002.D Vial: 5
Acq Time : 09/11/2019 08:42 Operator: CQC
Sample : 1925562002 5P-MW1701-145-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Library : C:\Database\NIST11.L

R.T.	Conc	Area	Relative to ISTD	ISTD Area
3.22	0.50 ug/L	174121	1,4-Difluorobenzene	1737126

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Isopropyl Alcohol	294	000067-63-0	43.00
2	Ethylamine	86	000075-04-7	5.00
3	4-Penten-2-ol	1720	000625-31-0	4.00
4	Formamide	91	000075-12-7	4.00
5	Methane, nitroso-	92	000865-40-7	3.00



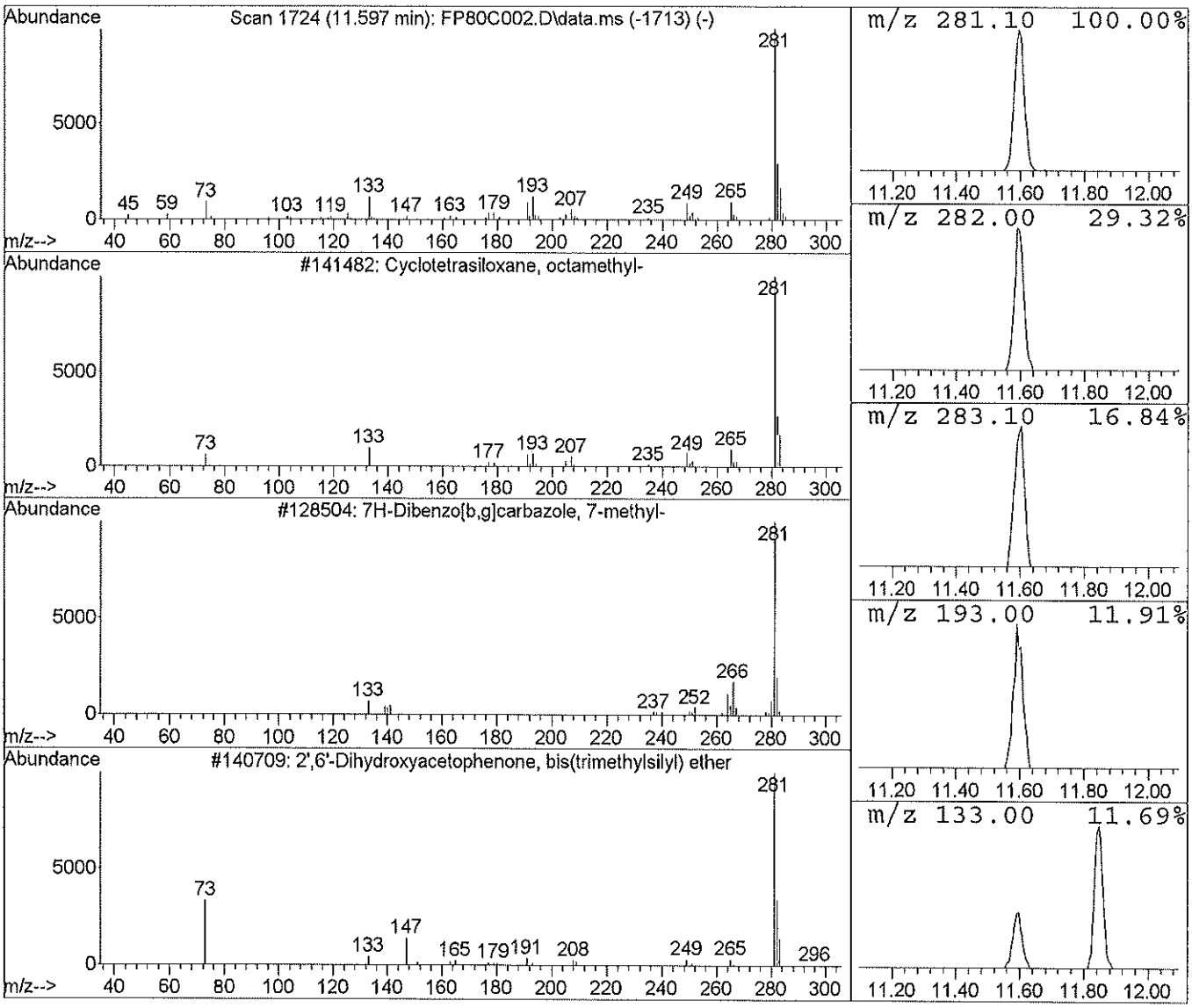
Library Search Compound Report

Data File : C:\msdchem\1\data\11SEP19F\FP80C002.D Vial: 5
Acq Time : 09/11/2019 08:42 Operator: CQC
Sample : 1925562002 5P-MW1701-145-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Library : C:\Database\NIST11.L

R.T.	Conc	Area	Relative to ISTD	ISTD Area
11.60	0.73 ug/L	280347	1,4-dichlorobenzene-d4	1924586

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Cyclotetrasiloxane, octamethyl- Column Bleed	141482	000556-67-2	91.00
2	7H-Dibenzo[b,g]carbazole, 7-methyl-	128504	003557-49-1	64.00
3	2',6'-Dihydroxyacetophenone, bis(tr	140709	1000352-81-3	59.00
4	Benzene, 1-phenyl-4-(2-cyano-2-phen	128506	027869-56-3	53.00
5	trans-4-Dimethylamino-4'-methoxycha	128405	052119-37-6	53.00



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW107D-200-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562003
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP81C003
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	1.1	
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.9	
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW107D-200-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562003
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP81C003
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.30	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
5P-MW107D-200-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562003
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP81C003
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
Extract Concentrated: (Y/N) Date Analyzed: 09/11/2019
Soil Aliquot (VOA): (uL) Extract Volume: (uL)
Heated Purge: (Y/N) Y Extraction Type: PT
Purge Volume: 25.0 (mL) Injection Volume: (uL)
Cleanup Types: pH: 1.0 Dilution Factor: 1.0
Concentration Units (ug/L, ug/kg): ug/L Cleanup Factor:

	CAS No.	ANALYTE	RT	EST. CONC.	Q
01		Unknown Isopropyl Alcohol	3.22	0.72	J
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

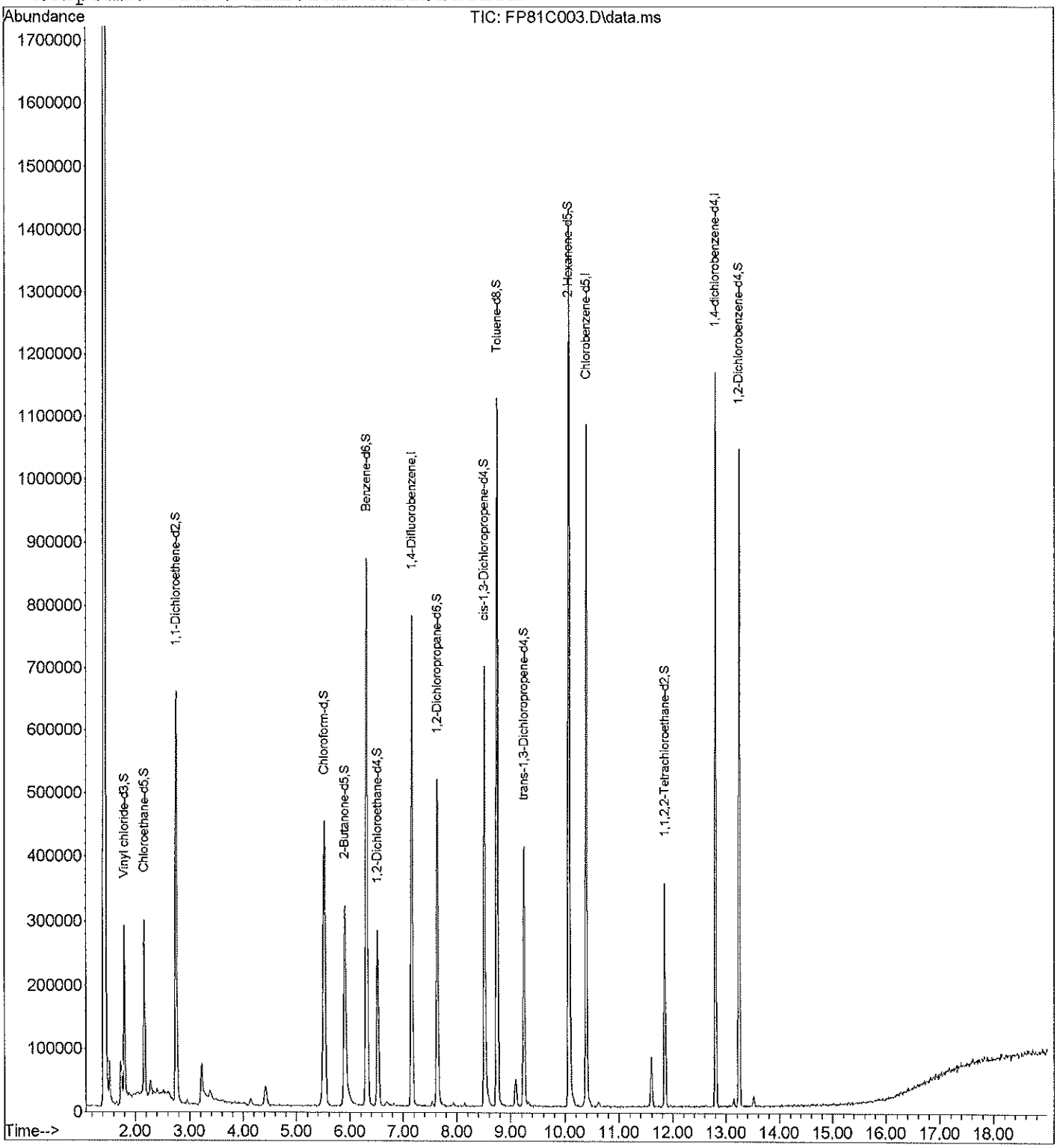
[1]EPA-designated Registry Number.

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP81C003.D Vial: 6
Acq Time : 09/11/2019 09:10 Operator: CQC
Sample : 1925562003 5P-MW107D-200-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 09:33:06 2019 Results File: FTRACEG5.RES

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Sep 05 08:18:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP81C003.D Vial: 6
Acq Time : 09/11/2019 09:10 Operator: CQC
Sample : 1925562003 5P-MW107D-200-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 09:33:06 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.16	114	718242	5.0000 ug/L	76.33
28) Chlorobenzene-d5	10.40	117	601236	5.0000 ug/L	78.65
60) 1,4-dichlorobenzene-d4	12.80	152	310157	5.0000 ug/L	77.53
System Monitoring Compounds					**%Recovery**
5) Vinyl chloride-d3	1.80	65	256189	5.2421 ug/L	104.84%
8) Chloroethane-d5	2.17	69	208126	5.2917 ug/L	105.83%
11) 1,1-Dichloroethene-d2	2.75	63	463369	4.7012 ug/L	94.02%
22) 2-Butanone-d5	5.90	46	659340	56.4505 ug/L	112.90%
25) Chloroform-d	5.52	84	521220	5.7494 ug/L	114.99%
27) 1,2-Dichloroethane-d4	6.52	65	240628	5.6489 ug/L	112.98%
33) Benzene-d6	6.31	84	974316	5.4949 ug/L	109.90%
37) 1,2-Dichloropropane-d6	7.63	67	252962	5.3427 ug/L	106.85%
40) cis-1,3-Dichloropropene-d4	8.51	79	369027	4.5474 ug/L	90.95%
42) trans-1,3-Dichloropropene-	9.24	79	209732	4.4894 ug/L	89.79%
47) Toluene-d8	8.75	98	776437	5.0444 ug/L	100.89%
50) 2-Hexanone-d5	10.07	63	504294	52.4759 ug/L	104.95%
59) 1,1,2,2-Tetrachloroethane-	11.85	84	172939	5.3801 ug/L	107.60%
65) 1,2-Dichlorobenzene-d4	13.24	152	274660	5.2383 ug/L	104.77%
Target Compounds					**Qvalue**
2) Dichlorodifluoromethane	0.00	85		Not Detected	
3) Chloromethane	1.73	50	58969	1.0585 ug/L	99
4) Vinyl chloride	0.00	62		Not Detected	
6) Bromomethane	0.00	94		Not Detected	
7) Chloroethane	0.00	64		Not Detected	
9) Trichlorofluoromethane	0.00	101		Not Detected	
10) 1,1-Dichloroethene	0.00	96		Not Detected	
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101		Not Detected	
13) Acetone	3.38	43	36857	5.8896 ug/L	76
14) Carbon disulfide	0.00	76		Not Detected	
15) Methyl acetate	0.00	43		Not Detected	
16) Methylene chloride	0.00	84		Not Detected	
17) trans-1,2-Dichloroethene	0.00	96		Not Detected	
18) Methyl tert-butyl ether	0.00	73		Not Detected	
19) 1,1-Dichloroethane	0.00	63		Not Detected	
20) cis-1,2-Dichloroethene	0.00	96		Not Detected	
21) 2-Butanone	0.00	43		Not Detected	
23) Bromochloromethane	0.00	128		Not Detected	
24) Chloroform	0.00	83		Not Detected	
26) 1,2-Dichloroethane	0.00	62		Not Detected	

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

Quantitation Report

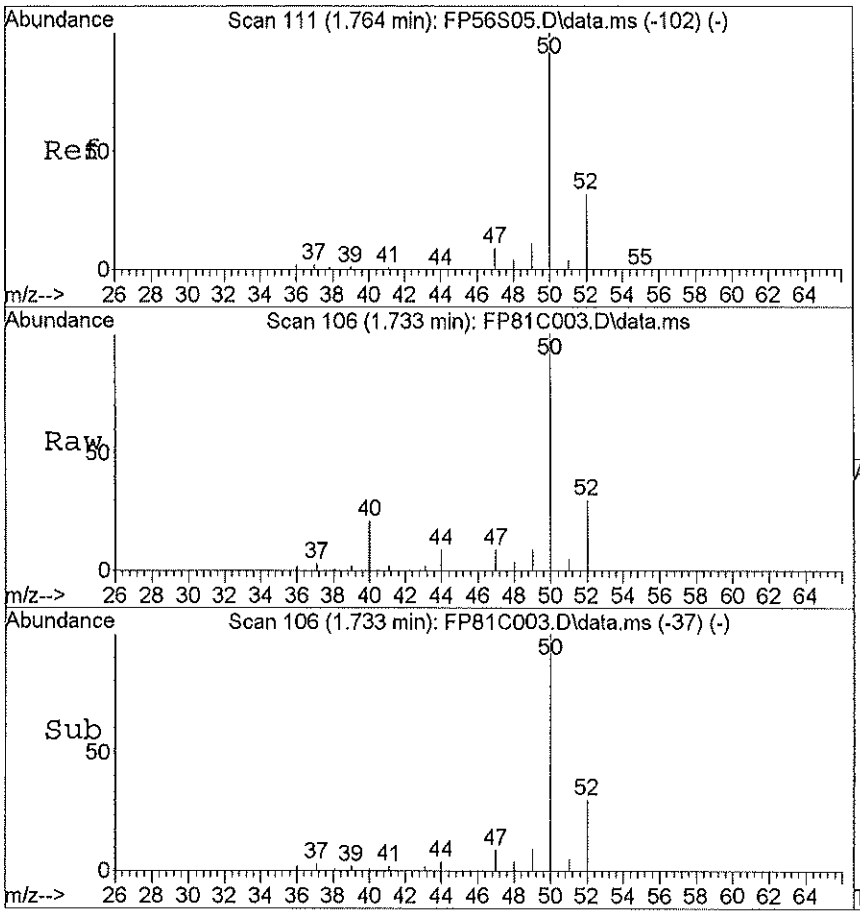
Data File : C:\msdchem\1\data\11SEP19F\FP81C003.D Vial: 6
Acq Time : 09/11/2019 09:10 Operator: CQC
Sample : 1925562003 5P-MW107D-200-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 09:33:06 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	1,1,1-Trichloroethane	0.00	97		Not Detected	
30)	Cyclohexane	0.00	56		Not Detected	
31)	Carbon tetrachloride	0.00	117		Not Detected	
32)	Benzene	0.00	78		Not Detected	
34)	Trichloroethene	0.00	130		Not Detected	
35)	Methylcyclohexane	0.00	83		Not Detected	
36)	1,2-Dichloropropane	0.00	63		Not Detected	
38)	Bromodichloromethane	0.00	83		Not Detected	
39)	cis-1,3-Dichloropropene	0.00	75		Not Detected	
41)	trans-1,3-Dichloropropene	0.00	75		Not Detected	
43)	1,1,2-Trichloroethane	0.00	97		Not Detected	
44)	Dibromochloromethane	0.00	129		Not Detected	
45)	4-Methyl-2-pentanone	0.00	43		Not Detected	
46)	Toluene	0.00	91		Not Detected	
48)	Tetrachloroethene	9.23	164	11210	0.3020 ug/L	98
49)	2-Hexanone	0.00	43		Not Detected	
51)	1,2-Dibromoethane	0.00	107		Not Detected	
52)	Chlorobenzene	0.00	112		Not Detected	
53)	Ethylbenzene	0.00	91		Not Detected	
54)	m,p-Xylene	0.00	106		Not Detected	
55)	o-Xylene	0.00	106		Not Detected	
56)	Styrene	0.00	104		Not Detected	
57)	Isopropylbenzene	0.00	105		Not Detected	
58)	1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61)	Bromoform	0.00	173		Not Detected	
62)	1,3-Dichlorobenzene	0.00	146		Not Detected	
63)	1,4-Dichlorobenzene	0.00	146		Not Detected	
64)	1,2-Dichlorobenzene	0.00	146		Not Detected	
66)	1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67)	1,2,4-Trichlorobenzene	0.00	180		Not Detected	
68)	1,2,3-Trichlorobenzene	0.00	180		Not Detected	

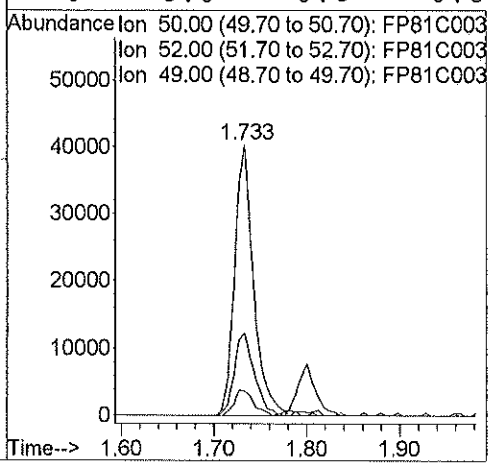
(#) = qualifier out of range (m) = manual integration

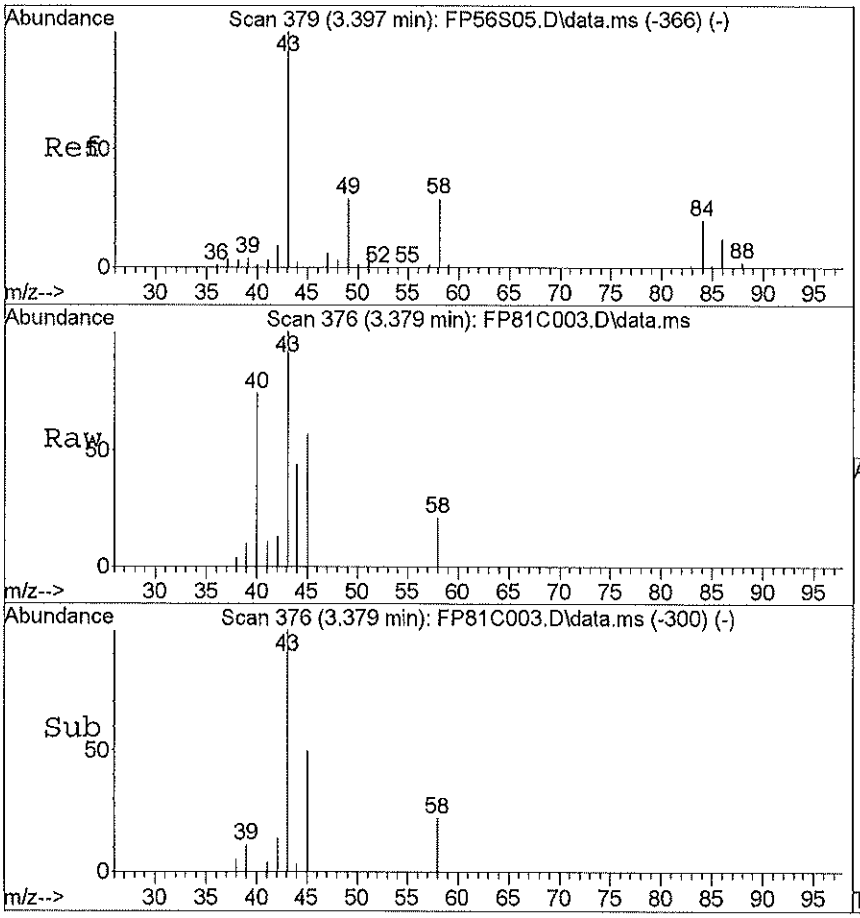


#3
Chloromethane
Concen: 1.06 ug/L
RT: 1.73 min Scan# 106
Delta R.T. -0.00 min
Lab File: FP81C003.D
Acq: 09/11/2019 09:10

Tgt Ion:50 Resp: 58969

Ion	Ratio	Lower	Upper
50	100		
52	32.4	12.7	52.7
49	9.5	0.0	30.8
0	0.0	0.0	0.0

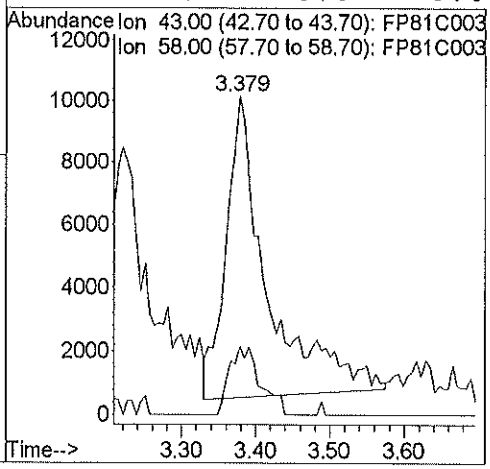


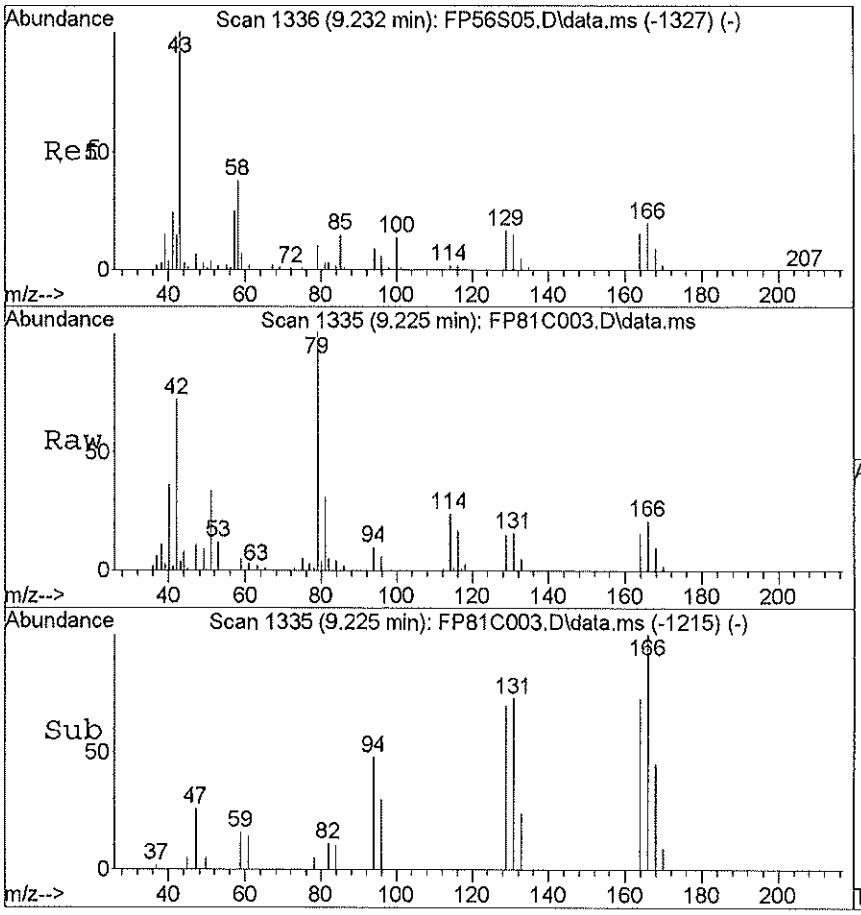


#13
Acetone
Concen: 5.89 ug/L
RT: 3.38 min Scan# 376
Delta R.T. 0.00 min
Lab File: FP81C003.D
Acq: 09/11/2019 09:10

Tgt Ion:43 Resp: 36857

Ion	Ratio	Lower	Upper
43	100		
58	17.0	9.8	49.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

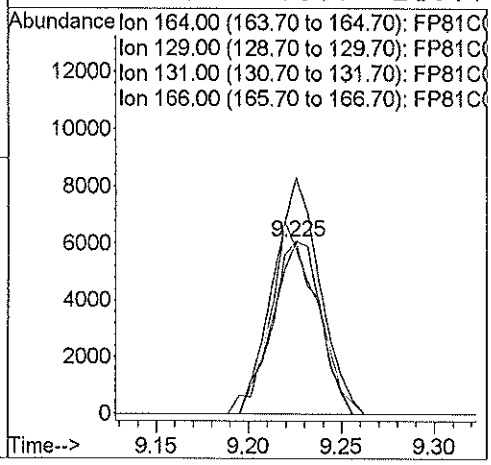




#48
Tetrachloroethene
Concen: 0.30 ug/L
RT: 9.23 min Scan# 1335
Delta R.T. 0.00 min
Lab File: FP81C003.D
Acq: 09/11/2019 09:10

Tgt Ion:164 Resp: 11210

Ion	Ratio	Lower	Upper
164	100		
129	101.3	80.9	120.9
131	94.3	77.8	117.8
166	129.8	106.7	146.7



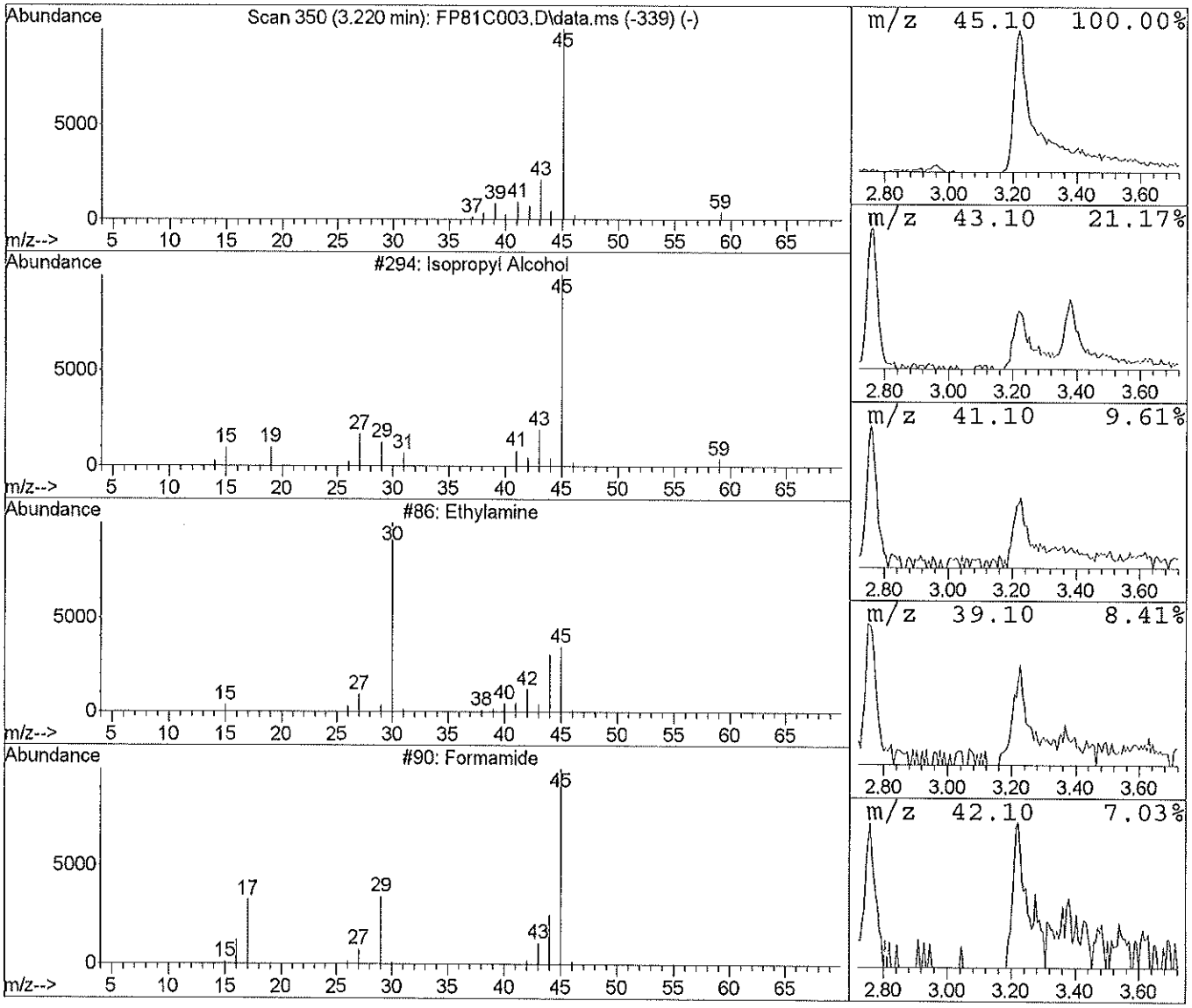
Library Search Compound Report

Data File : C:\msdchem\1\data\11SEP19F\FP81C003.D Vial: 6
Acq Time : 09/11/2019 09:10 Operator: CQC
Sample : 1925562003 5P-MW107D-200-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Library : C:\Database\NIST11.L

R.T.	Conc	Area	Relative to ISTD	ISTD Area
3.22	0.72 ug/L	252092	1,4-Difluorobenzene	1746717

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Isopropyl Alcohol	294	000067-63-0	64.00
2	Ethylamine	86	000075-04-7	5.00
3	Formamide	90	000075-12-7	4.00
4	4-Penten-2-ol	1719	000625-31-0	4.00
5	Methane, nitroso-	92	000865-40-7	3.00



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW108D-214-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562014
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: MS11C014
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.80	
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	7.7	
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW108D-214-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562014
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: MS11C014
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	1.9	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
5P-MW108D-214-090519

Lab Name: ALS Environmental (SLC)
Lab Code: ALS Case No.: 5POINTS
Analytical Method: Trace VOA
Matrix: WATER
Sample wt/vol: 25.0 (g/mL) mL
% Solids:
GC Column: RTX-VMS ID: 0.25 (mm)
Extract Concentrated: (Y/N)
Soil Aliquot (VOA): (uL)
Heated Purge: (Y/N) Y
Purge Volume: 25.0 (mL)
Cleanup Types:
Concentration Units (ug/L, ug/kg): ug/L

Contract: 97756
MA No.: SDG No.: TV9519
Level: TRACE
Lab Sample ID: 1925562014
Lab File ID: MS11C014
Date Received: 09/05/2019
Date Extracted:
Date Analyzed: 09/11/2019
Extract Volume: (uL)
Extraction Type: PT
Injection Volume: (uL)
pH: 1.0 Dilution Factor: 1.0
Cleanup Factor:

	CAS No.	ANALYTE	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

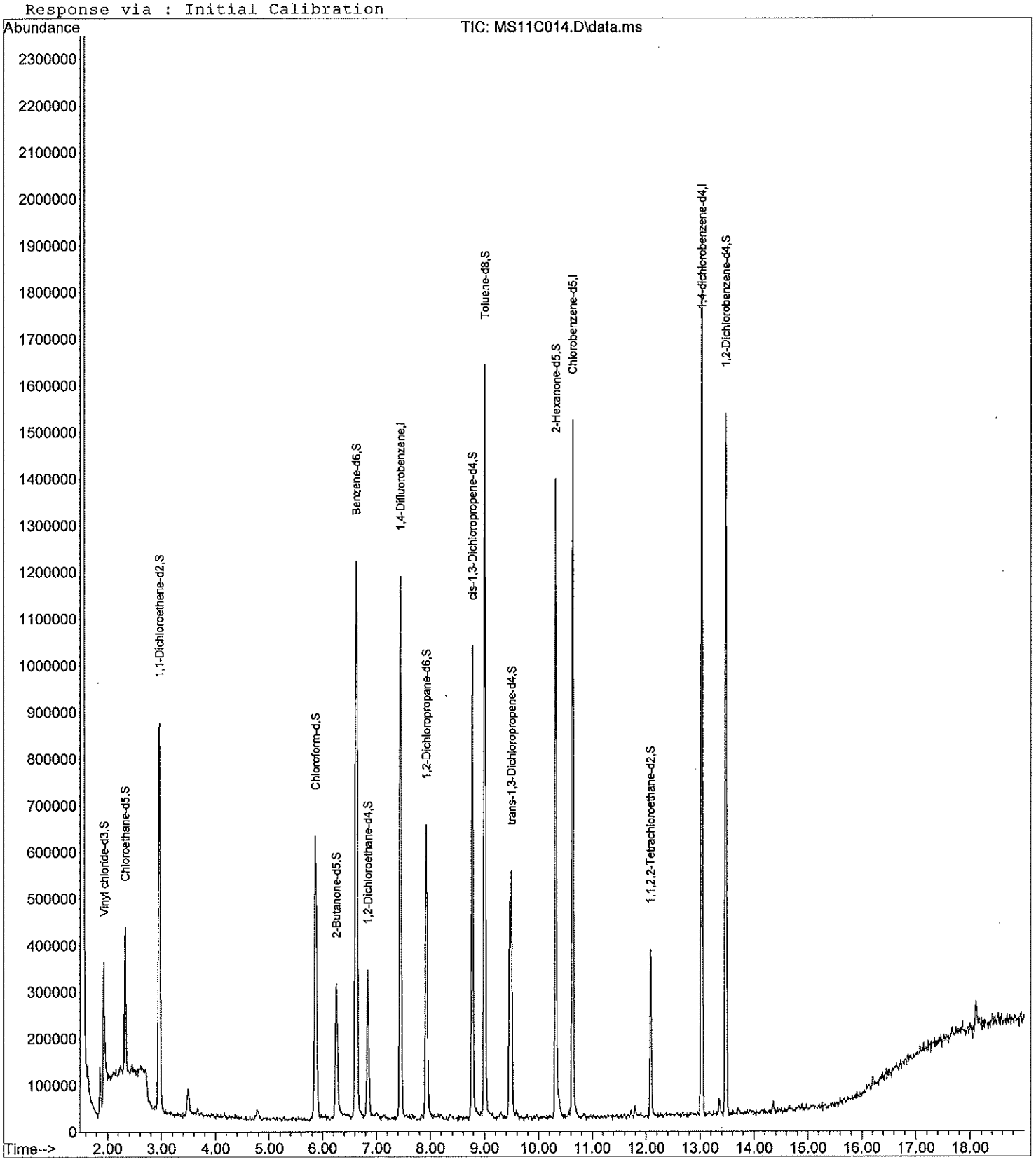
[1]EPA-designated Registry Number.

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS11C014.D Vial: 7
Acq Time : 09/11/2019 10:37 Operator: CQC
Sample : 1925562014 5P-MW108D-214-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 11:19:58 2019 Results File: MTRACEA9.RES

Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 13:23:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS11C014.D Vial: 7
Acq Time : 09/11/2019 10:37 Operator: CQC
Sample : 1925562014 5P-MW108D-214-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 11:19:58 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 11:22:27 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.45	114	1174192	5.0000 ug/L	101.15
28) Chlorobenzene-d5	10.63	117	974545	5.0000 ug/L	97.76
60) 1,4-dichlorobenzene-d4	13.03	152	553593	5.0000 ug/L	106.21
System Monitoring Compounds					%Recovery
5) Vinyl chloride-d3	1.94	65	349723	3.5950 ug/L	71.90%
8) Chloroethane-d5	2.32	69	239612	4.0073 ug/L	80.15%
11) 1,1-Dichloroethene-d2	2.96	63	671518	3.6444 ug/L	72.89%
22) 2-Butanone-d5	6.25	46	590335	54.1156 ug/L	108.23%
25) Chloroform-d	5.86	84	704837	4.9657 ug/L	99.31%
27) 1,2-Dichloroethane-d4	6.84	65	280004	4.9432 ug/L	98.86%
33) Benzene-d6	6.63	84	1382403	5.2446 ug/L	104.89%
37) 1,2-Dichloropropane-d6	7.92	67	338467	5.0907 ug/L	101.81%
40) cis-1,3-Dichloropropene-d4	8.78	79	552618	4.7913 ug/L	95.83%
42) trans-1,3-Dichloropropene-	9.50	79	297951	4.8859 ug/L	97.72%
47) Toluene-d8	9.00	98	1186193	5.0034 ug/L	100.07%
50) 2-Hexanone-d5	10.32	63	530614	51.2349 ug/L	102.47%
59) 1,1,2,2-Tetrachloroethane-	12.09	84	201728	5.2662 ug/L	105.32%
65) 1,2-Dichlorobenzene-d4	13.47	152	443793	5.0265 ug/L	100.53%
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.00	85		Not Detected	
3) Chloromethane	1.86	50	114238	0.7986 ug/L	92
4) Vinyl chloride	0.00	62		Not Detected	
6) Bromomethane	0.00	94		Not Detected	
7) Chloroethane	0.00	64		Not Detected	
9) Trichlorofluoromethane	0.00	101		Not Detected	
10) 1,1-Dichloroethene	0.00	96		Not Detected	
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101		Not Detected	
13) Acetone	3.68	43	25453	7.7432 ug/L	94
14) Carbon disulfide	0.00	76		Not Detected	
15) Methyl acetate	0.00	43		Not Detected	
16) Methylene chloride	0.00	84		Not Detected	
17) trans-1,2-Dichloroethene	0.00	96		Not Detected	
18) Methyl tert-butyl ether	0.00	73		Not Detected	
19) 1,1-Dichloroethane	0.00	63		Not Detected	
20) cis-1,2-Dichloroethene	0.00	96		Not Detected	
21) 2-Butanone	0.00	43		Not Detected	
23) Bromochloromethane	0.00	128		Not Detected	
24) Chloroform	0.00	83		Not Detected	
26) 1,2-Dichloroethane	0.00	62		Not Detected	
29) 1,1,1-Trichloroethane	0.00	97		Not Detected	
30) Cyclohexane	0.00	56		Not Detected	
31) Carbon tetrachloride	0.00	117		Not Detected	
32) Benzene	0.00	78		Not Detected	
34) Trichloroethene	0.00	130		Not Detected	
35) Methylcyclohexane	0.00	83		Not Detected	
36) 1,2-Dichloropropane	0.00	63		Not Detected	
38) Bromodichloromethane	0.00	83		Not Detected	
39) cis-1,3-Dichloropropene	0.00	75		Not Detected	
41) trans-1,3-Dichloropropene	0.00	75		Not Detected	
43) 1,1,2-Trichloroethane	0.00	97		Not Detected	
44) Dibromochloromethane	0.00	129		Not Detected	
45) 4-Methyl-2-pentanone	0.00	43		Not Detected	
46) Toluene	0.00	91		Not Detected	

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

Quantitation Report

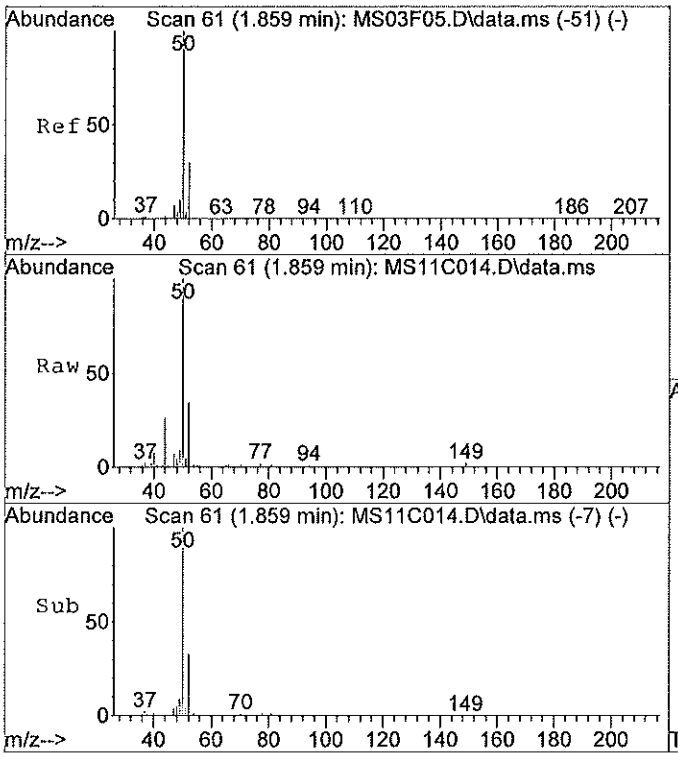
Data File : C:\msdchem\1\data\11SEP19M\MS11C014.D Vial: 7
Acq Time : 09/11/2019 10:37 Operator: CQC
Sample : 1925562014 5P-MW108D-214-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 11:19:58 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 11:22:27 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
48) Tetrachloroethene	9.47	164	115310	1.9049 ug/L	98
49) 2-Hexanone	0.00	43		Not Detected	
51) 1,2-Dibromoethane	0.00	107		Not Detected	
52) Chlorobenzene	0.00	112		Not Detected	
53) Ethylbenzene	0.00	91		Not Detected	
54) m,p-Xylene	0.00	106		Not Detected	
55) o-Xylene	0.00	106		Not Detected	
56) Styrene	0.00	104		Not Detected	
57) Isopropylbenzene	0.00	105		Not Detected	
58) 1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61) Bromoform	0.00	173		Not Detected	
62) 1,3-Dichlorobenzene	0.00	146		Not Detected	
63) 1,4-Dichlorobenzene	0.00	146		Not Detected	
64) 1,2-Dichlorobenzene	0.00	146		Not Detected	
66) 1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67) 1,2,4-Trichlorobenzene	0.00	180		Not Detected	
68) 1,2,3-Trichlorobenzene	0.00	180		Not Detected	

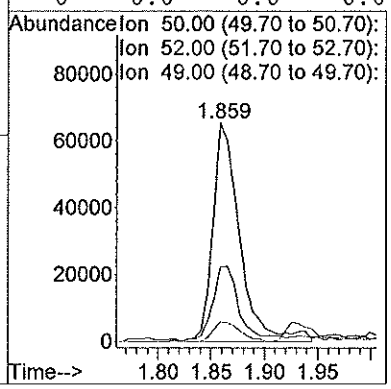
(#) = qualifier out of range (m) = manual integration

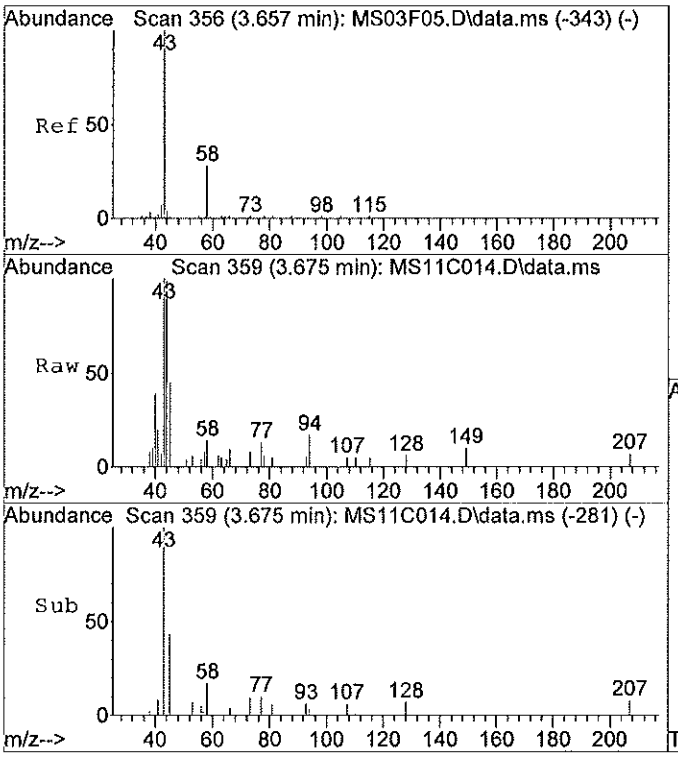


#3
Chloromethane
Concen: 0.80 ug/L
RT: 1.86 min Scan# 61
Delta R.T. 0.00 min
Lab File: MS11C014.D
Acq: 09/11/2019 10:37

Tgt Ion:50 Resp: 114238

Ion	Ratio	Lower	Upper
50	100		
52	36.9	11.4	51.4
49	8.8	0.0	29.6
0	0.0	0.0	0.0

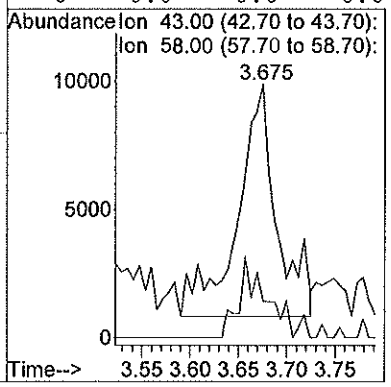


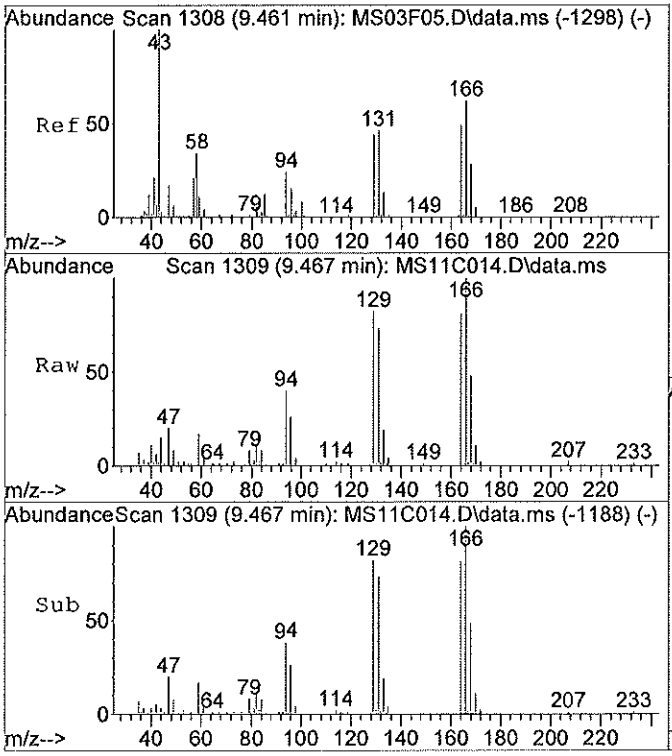


#13
Acetone
Concen: 7.74 ug/L
RT: 3.68 min Scan# 359
Delta R.T. 0.01 min
Lab File: MS11C014.D
Acq: 09/11/2019 10:37

Tgt Ion:43 Resp: 25453

Ion	Ratio	Lower	Upper
43	100		
58	25.8	9.2	49.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

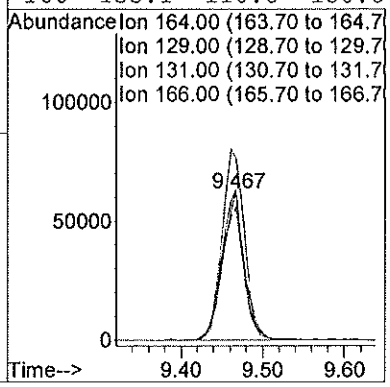




#48
Tetrachloroethene
Concen: 1.90 ug/L
RT: 9.47 min Scan# 1309
Delta R.T. 0.01 min
Lab File: MS11C014.D
Acq: 09/11/2019 10:37

Tgt Ion:164 Resp: 115310

Ion	Ratio	Lower	Upper
164	100		
129	100.0	76.0	116.0
131	93.2	73.6	113.6
166	133.1	110.8	150.8



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW108I-149-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562013
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: MS10C013
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	1.1	
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	6.8	
75-15-0	Carbon disulfide	0.082	J
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW108I-149-090519

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 1925562013
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: MS10C013
% Solids:
Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
GC Column: ID: (mm)
Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N)
Extract Volume: (uL)
Soil Aliquot (VOA): (uL)
Extraction Type: PT
Heated Purge: (Y/N) Y
Injection Volume: (uL)
Purge Volume: 25.0 (mL)
pH: 1.0 Dilution Factor: 1.0
Cleanup Types:
Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.42	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
5P-MW108I-149-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562013
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: MS10C013
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
Extract Concentrated: (Y/N) Date Analyzed: 09/11/2019
Soil Aliquot (VOA): (uL) Extract Volume: (uL)
Heated Purge: (Y/N) Y Extraction Type: PT
Purge Volume: 25.0 (mL) Injection Volume: (uL)
Cleanup Types: pH: 1.0 Dilution Factor: 1.0
Concentration Units (ug/L, ug/kg): ug/L Cleanup Factor:

	CAS No.	ANALYTE	RT	EST. CONC.	Q
01	115-07-1	Propene	1.64	1.3	JN
02	75-08-1	Ethanethiol	2.89	0.59	JN
03	420-12-2	Thiirane	4.46	0.51	JN
04	110-81-6	Diethyl disulfide	11.79	0.78	JN
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

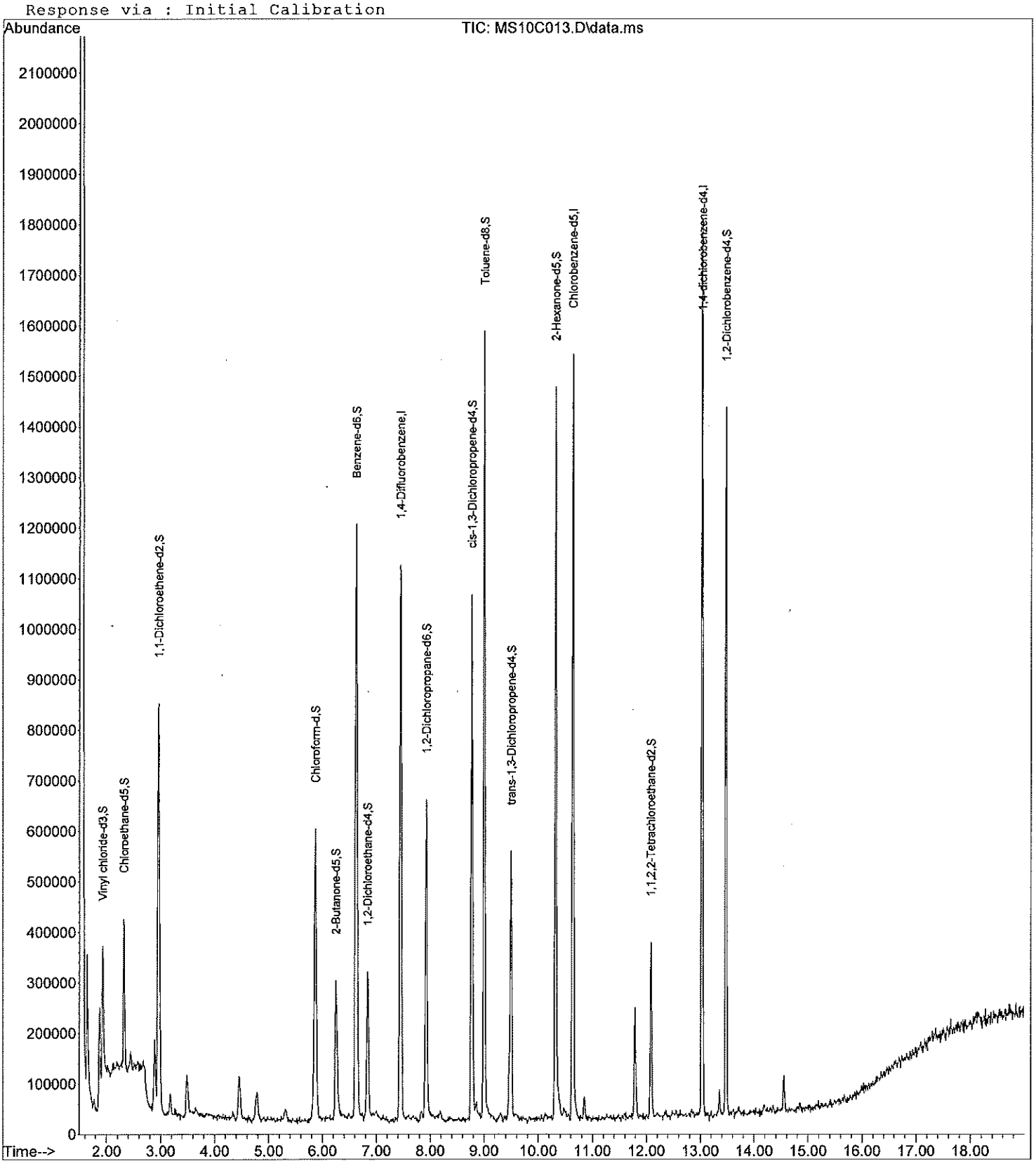
[1]EPA-designated Registry Number.

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS10C013.D Vial: 6
Acq Time : 09/11/2019 10:09 Operator: CQC
Sample : 1925562013 5P-MW108I-149-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 10:37:19 2019 Results File: MTRACEA9.RES

Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 13:23:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS10C013.D Vial: 6
Acq Time : 09/11/2019 10:09 Operator: CQC
Sample : 1925562013 5P-MW108I-149-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 10:37:19 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 11:22:27 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.44	114	1139829	5.0000 ug/L	98.19
28) Chlorobenzene-d5	10.63	117	958826	5.0000 ug/L	96.18
60) 1,4-dichlorobenzene-d4	13.03	152	525181	5.0000 ug/L	100.76
System Monitoring Compounds					%Recovery
5) Vinyl chloride-d3	1.93	65	345520	3.6589 ug/L	73.18%
8) Chloroethane-d5	2.32	69	233156	4.0168 ug/L	80.34%
11) 1,1-Dichloroethene-d2	2.96	63	637408	3.5636 ug/L	71.27%
22) 2-Butanone-d5	6.25	46	563066	53.1720 ug/L	106.34%
25) Chloroform-d	5.86	84	663285	4.8138 ug/L	96.28%
27) 1,2-Dichloroethane-d4	6.83	65	267594	4.8666 ug/L	97.33%
33) Benzene-d6	6.63	84	1331580	5.1346 ug/L	102.69%
37) 1,2-Dichloropropane-d6	7.92	67	333718	5.1016 ug/L	102.03%
40) cis-1,3-Dichloropropene-d4	8.77	79	572442	5.0446 ug/L	100.89%
42) trans-1,3-Dichloropropene-	9.50	79	295823	4.9305 ug/L	98.61%
47) Toluene-d8	9.00	98	1179126	5.0551 ug/L	101.10%
50) 2-Hexanone-d5	10.31	63	550745	54.0505 ug/L	108.10%
59) 1,1,2,2-Tetrachloroethane-	12.08	84	199673	5.2980 ug/L	105.96%
65) 1,2-Dichlorobenzene-d4	13.47	152	424124	5.0636 ug/L	101.27%
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.00	85		Not Detected	
3) Chloromethane	1.86	50	158526	1.1416 ug/L	95
4) Vinyl chloride	0.00	62		Not Detected	
6) Bromomethane	0.00	94		Not Detected	
7) Chloroethane	0.00	64		Not Detected	
9) Trichlorofluoromethane	0.00	101		Not Detected	
10) 1,1-Dichloroethene	0.00	96		Not Detected	
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101		Not Detected	
13) Acetone	3.68	43	21697	6.7995 ug/L	97
14) Carbon disulfide	3.01	76	18525	0.0816 ug/L #	1
15) Methyl acetate	0.00	43		Not Detected	
16) Methylene chloride	0.00	84		Not Detected	
17) trans-1,2-Dichloroethene	0.00	96		Not Detected	
18) Methyl tert-butyl ether	0.00	73		Not Detected	
19) 1,1-Dichloroethane	0.00	63		Not Detected	
20) cis-1,2-Dichloroethene	0.00	96		Not Detected	
21) 2-Butanone	0.00	43		Not Detected	
23) Bromochloromethane	0.00	128		Not Detected	
24) Chloroform	0.00	83		Not Detected	
26) 1,2-Dichloroethane	0.00	62		Not Detected	
29) 1,1,1-Trichloroethane	0.00	97		Not Detected	
30) Cyclohexane	0.00	56		Not Detected	
31) Carbon tetrachloride	0.00	117		Not Detected	
32) Benzene	0.00	78		Not Detected	
34) Trichloroethene	0.00	130		Not Detected	
35) Methylcyclohexane	0.00	83		Not Detected	
36) 1,2-Dichloropropane	0.00	63		Not Detected	
38) Bromodichloromethane	0.00	83		Not Detected	
39) cis-1,3-Dichloropropene	0.00	75		Not Detected	
41) trans-1,3-Dichloropropene	0.00	75		Not Detected	
43) 1,1,2-Trichloroethane	0.00	97		Not Detected	
44) Dibromochloromethane	0.00	129		Not Detected	
45) 4-Methyl-2-pentanone	0.00	43		Not Detected	
46) Toluene	0.00	91		Not Detected	

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

Quantitation Report

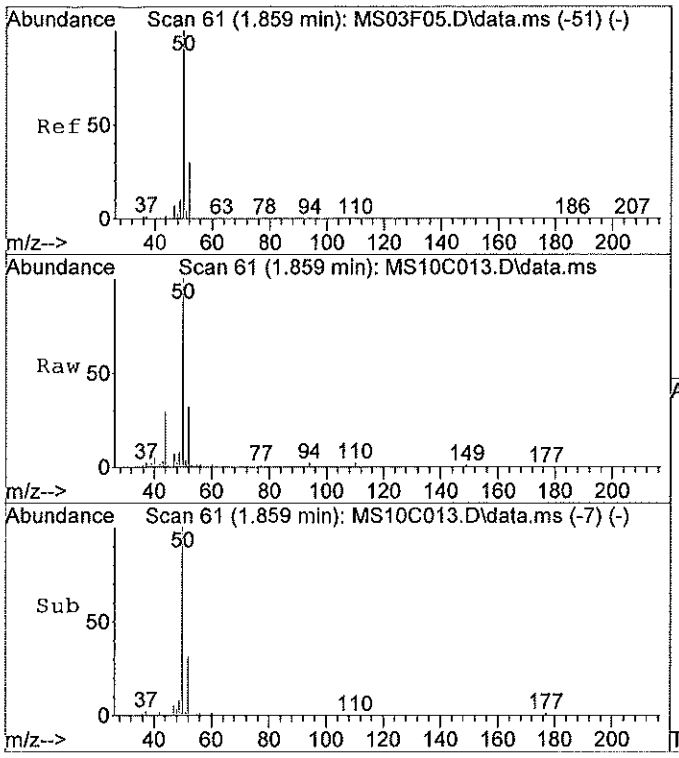
Data File : C:\msdchem\1\data\11SEP19M\MS10C013.D Vial: 6
Acq Time : 09/11/2019 10:09 Operator: CQC
Sample : 1925562013 5P-MW108I-149-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 10:37:19 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 11:22:27 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
48) Tetrachloroethene	9.46	164	24829	0.4169 ug/L	91
49) 2-Hexanone	0.00	43		Not Detected	
51) 1,2-Dibromoethane	0.00	107		Not Detected	
52) Chlorobenzene	0.00	112		Not Detected	
53) Ethylbenzene	0.00	91		Not Detected	
54) m,p-Xylene	0.00	106		Not Detected	
55) o-Xylene	0.00	106		Not Detected	
56) Styrene	0.00	104		Not Detected	
57) Isopropylbenzene	0.00	105		Not Detected	
58) 1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61) Bromoform	0.00	173		Not Detected	
62) 1,3-Dichlorobenzene	0.00	146		Not Detected	
63) 1,4-Dichlorobenzene	0.00	146		Not Detected	
64) 1,2-Dichlorobenzene	0.00	146		Not Detected	
66) 1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67) 1,2,4-Trichlorobenzene	0.00	180		Not Detected	
68) 1,2,3-Trichlorobenzene	0.00	180		Not Detected	

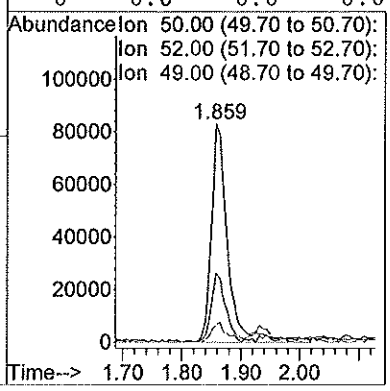
(#) = qualifier out of range (m) = manual integration

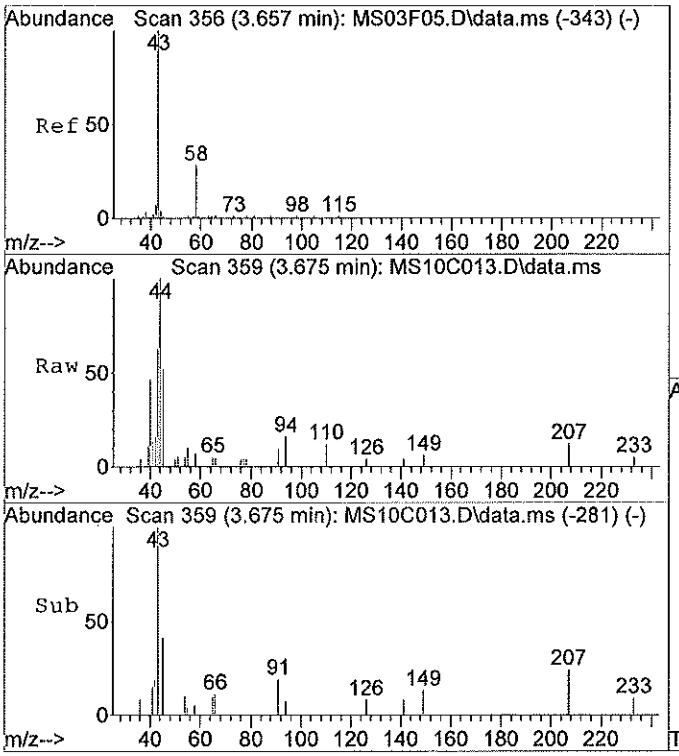


#3
Chloromethane
Concen: 1.14 ug/L
RT: 1.86 min Scan# 61
Delta R.T. -0.00 min
Lab File: MS10C013.D
Acq: 09/11/2019 10:09

Tgt Ion:50 Resp: 158526

Ion	Ratio	Lower	Upper
50	100		
52	28.4	11.4	51.4
49	8.1	0.0	29.6
0	0.0	0.0	0.0

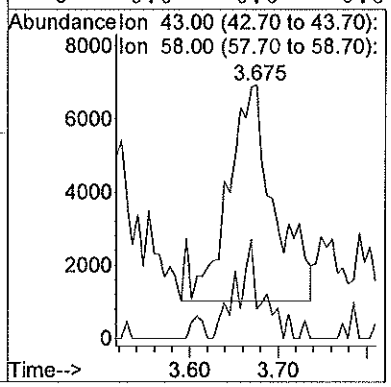


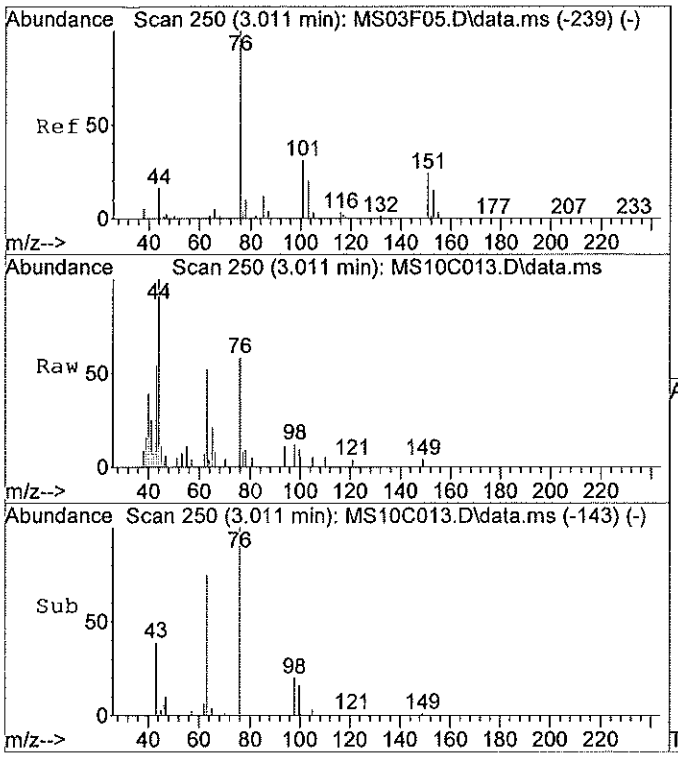


#13
Acetone
Concen: 6.80 ug/L
RT: 3.68 min Scan# 359
Delta R.T. 0.01 min
Lab File: MS10C013.D
Acq: 09/11/2019 10:09

Tgt Ion:43 Resp: 21697

Ion	Ratio	Lower	Upper
43	100		
58	27.6	9.2	49.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

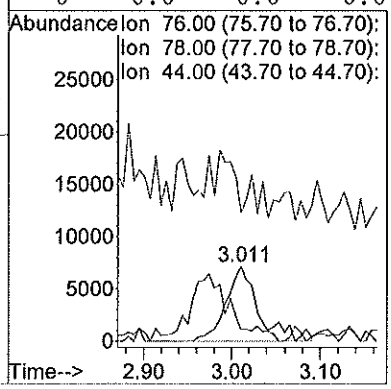


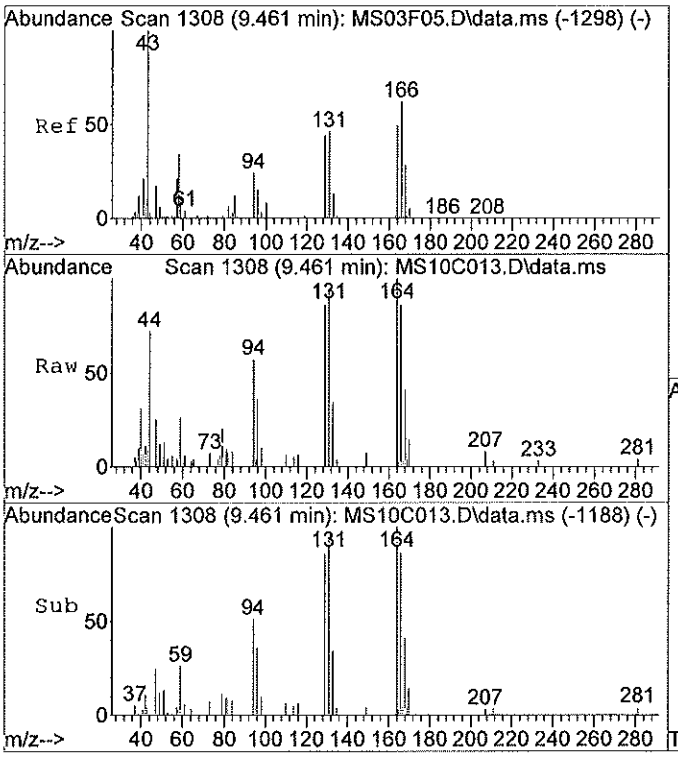


#14
Carbon disulfide
Concen: 0.08 ug/L
RT: 3.01 min Scan# 250
Delta R.T. 0.01 min
Lab File: MS10C013.D
Acq: 09/11/2019 10:09

Tgt Ion:76 Resp: 18525

Ion	Ratio	Lower	Upper
76	100		
78	112.3	0.0	30.7#
44	77.3	0.6	40.6#
0	0.0	0.0	0.0

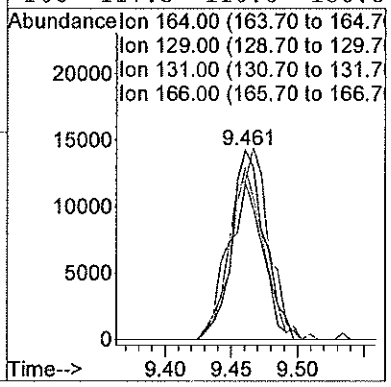




#48
Tetrachloroethene
Concen: 0.42 ug/L
RT: 9.46 min Scan# 1308
Delta R.T. -0.00 min
Lab File: MS10C013.D
Acq: 09/11/2019 10:09

Tgt Ion:164 Resp: 24829

Ion	Ratio	Lower	Upper
164	100		
129	84.0	76.0	116.0
131	90.4	73.6	113.6
166	117.3	110.8	150.8



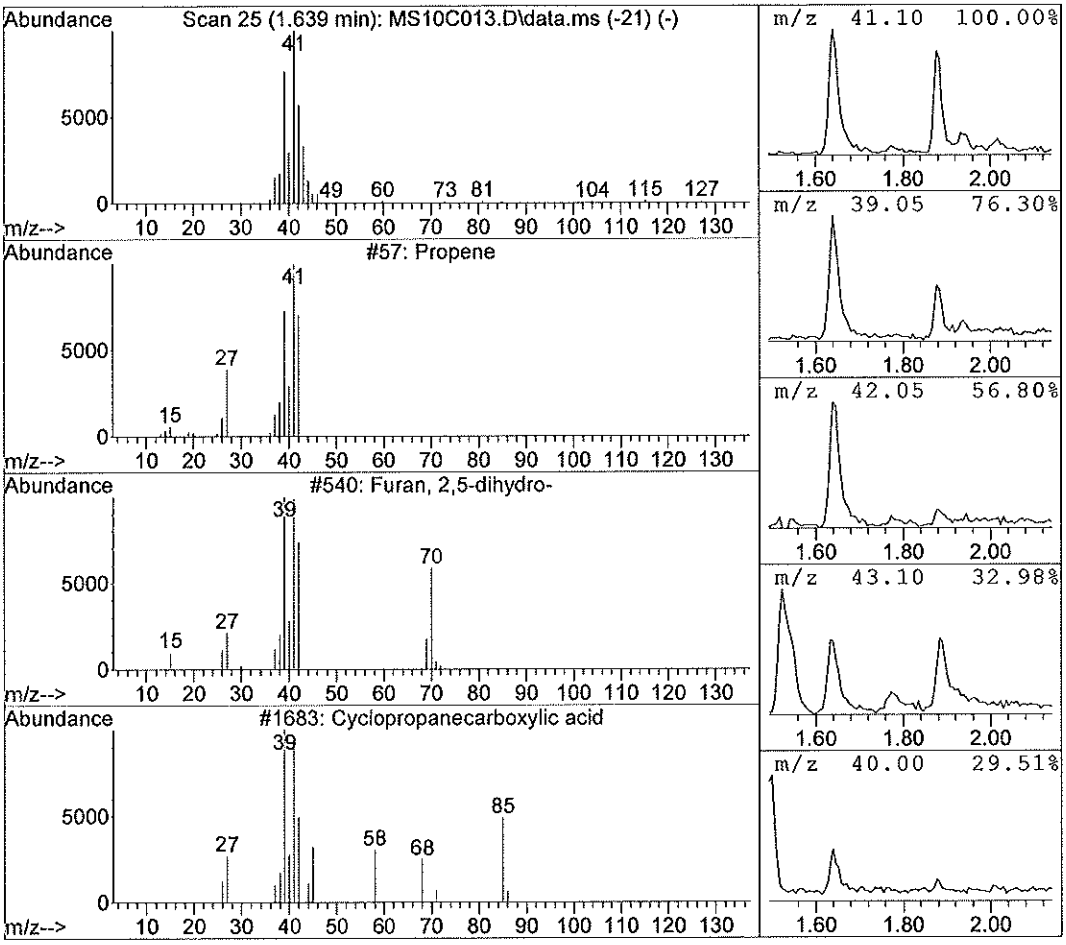
Library Search Compound Report

Data File : C:\msdchem\1\data\11SEP19M\MS10C013.D Vial: 6
Acq Time : 09/11/2019 10:09 Operator: CQC
Sample : 1925562013 5P-MW108I-149-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Library : C:\Database\NIST11.L

R.T.	Conc	Area	Relative to ISTD	ISTD Area
1.64	1.30 ug/L	654755	1,4-Difluorobenzene	2518019

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Propene	57	000115-07-1	90.00
2	Furan, 2,5-dihydro-	540	001708-29-8	83.00
3	Cyclopropanecarboxylic acid	1683	001759-53-1	74.00
4	3-Butenoic acid	1659	000625-38-7	64.00
5	Furan, 2,3-dihydro-	541	001191-99-7	64.00



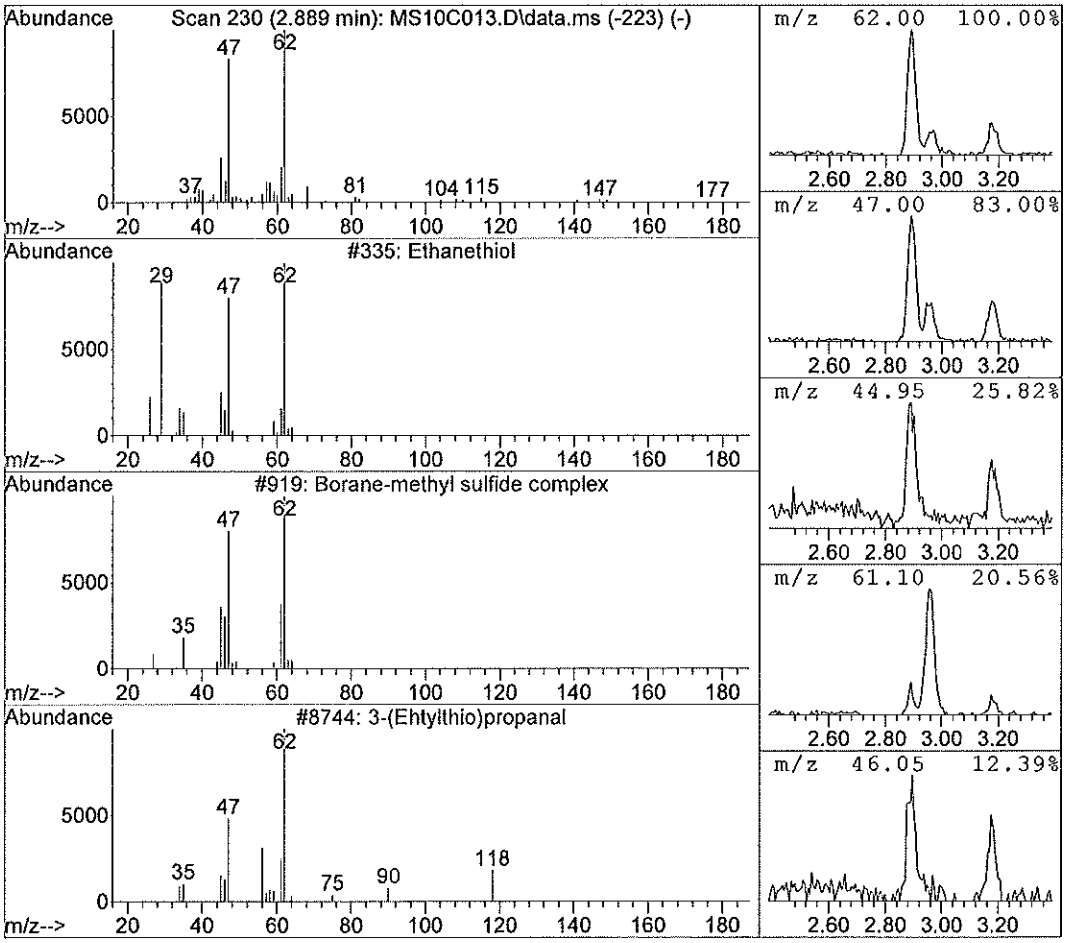
Library Search Compound Report

Data File : C:\msdchem\1\data\11SEP19M\MS10C013.D Vial: 6
Acq Time : 09/11/2019 10:09 Operator: CQC
Sample : 1925562013 5P-MW108I-149-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Library : C:\Database\NIST11.L

R.T.	Conc	Area	Relative to ISTD	ISTD Area
2.89	0.59 ug/L	297000	1,4-Difluorobenzene	2518019

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Ethanethiol	335	000075-08-1	91.00
2	Borane-methyl sulfide complex	919	013292-87-0	56.00
3	3-(Ehtylthio)propanal	8744	005454-45-5	56.00
4	Dimethyl sulfide	338	000075-18-3	56.00
5	Propanoic acid, 2,3-dichloro-	19264	000565-64-0	38.00



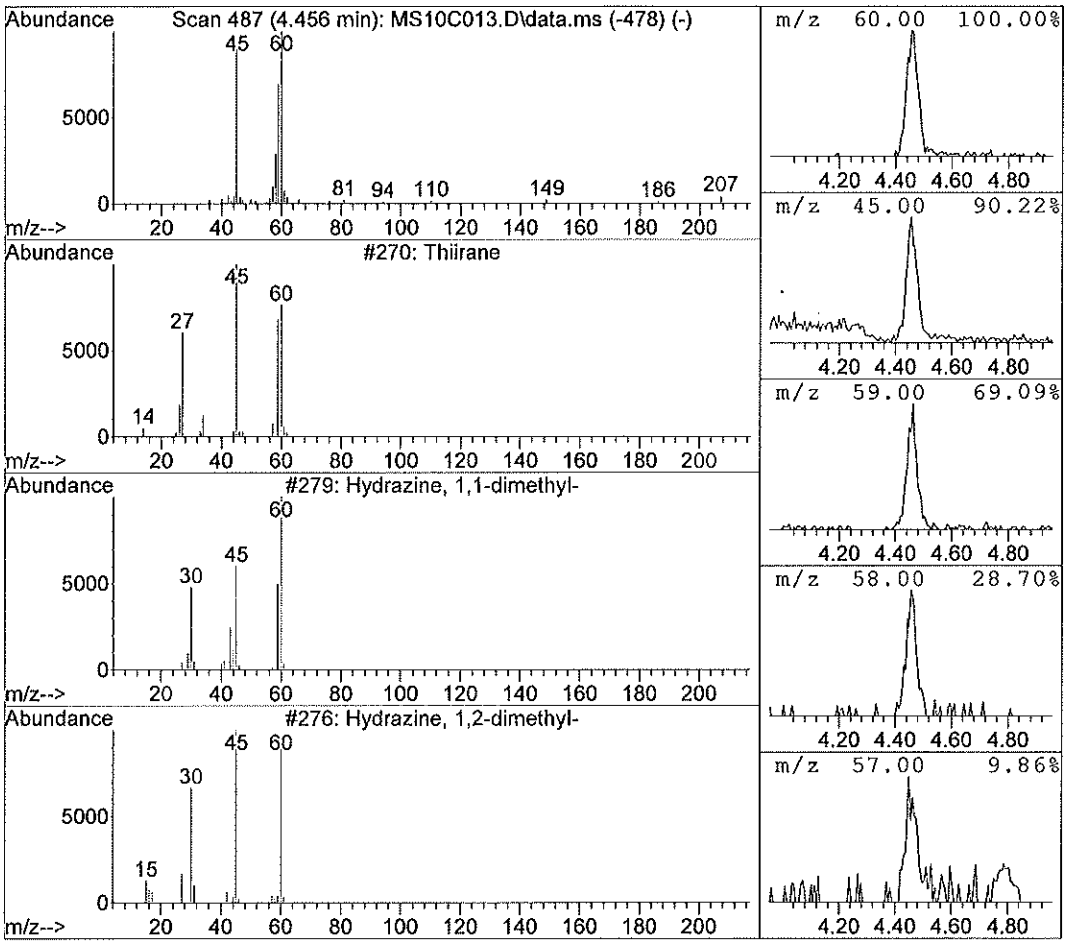
Library Search Compound Report

Data File : C:\msdchem\1\data\11SEP19M\MS10C013.D Vial: 6
Acq Time : 09/11/2019 10:09 Operator: CQC
Sample : 1925562013 5P-MW108I-149-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Library : C:\Database\NIST11.L

R.T.	Conc	Area	Relative to ISTD	ISTD Area
4.46	0.51 ug/L	254876	1,4-Difluorobenzene	2518019

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Thiirane	270	000420-12-2	86.00
2	Hydrazine, 1,1-dimethyl-	279	000057-14-7	72.00
3	Hydrazine, 1,2-dimethyl-	276	000540-73-8	58.00
4	Thiazole, 4,5-dihydro-2-methyl-	4060	002346-00-1	33.00
5	N-Carbomethoxy-N-methoxymethylamine	9059	153654-07-0	28.00



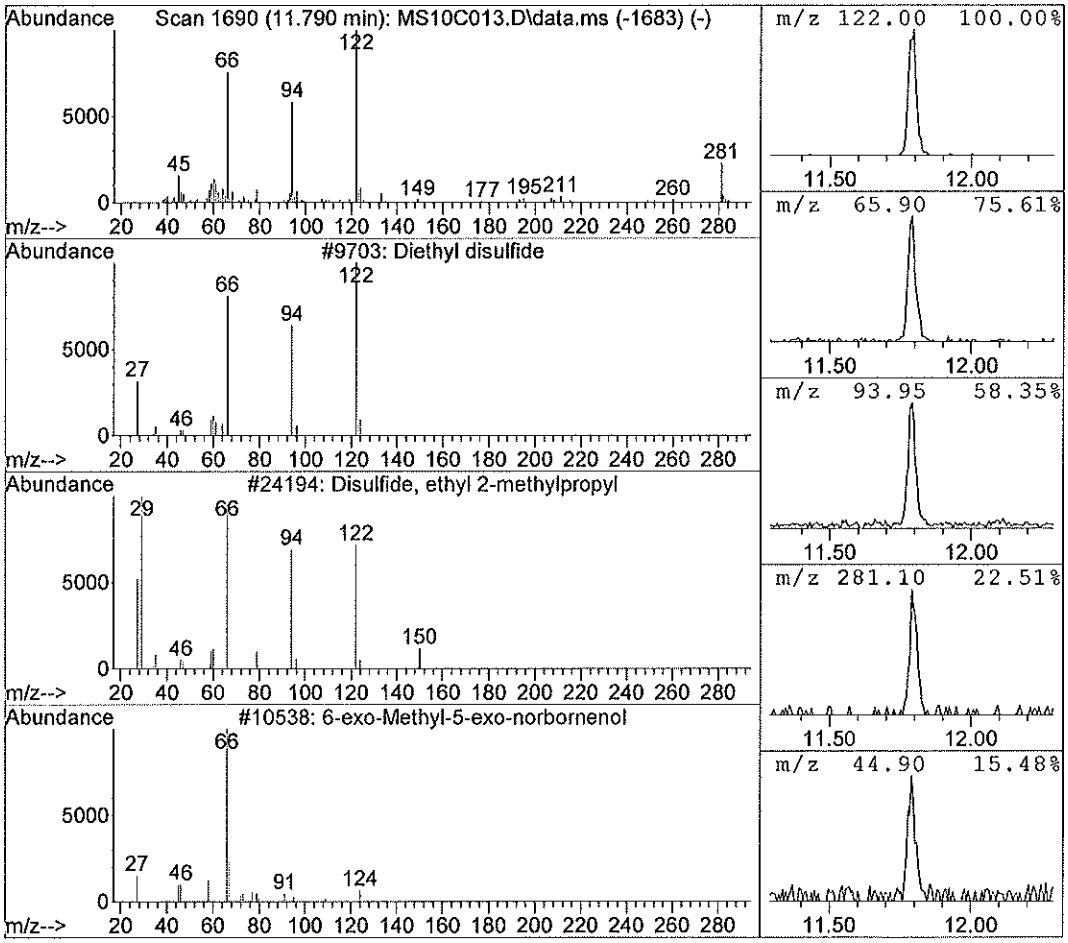
Library Search Compound Report

Data File : C:\msdchem\1\data\11SEP19M\MS10C013.D Vial: 6
Acq Time : 09/11/2019 10:09 Operator: CQC
Sample : 1925562013 5P-MW108I-149-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Library : C:\Database\NIST11.L

R.T.	Conc	Area	Relative to ISTD	ISTD Area
11.79	0.78 ug/L	451325	Chlorobenzene-d5	2882579

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Diethyl disulfide	9703	000110-81-6	94.00
2	Disulfide, ethyl 2-methylpropyl	24194	040136-66-1	78.00
3	6-exo-Methyl-5-exo-norbornenol	10538	060362-83-6	52.00
4	Benzene, ethoxy-	9905	000103-73-1	50.00
5	5-exo-Methyl-5-norbornenol	10520	003212-13-3	47.00



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW109D-230-090519

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 1925562016
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: MS13C016
% Solids:
Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
GC Column: ID: (mm)
Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N)
Extract Volume: (uL)
Soil Aliquot (VOA): (uL)
Extraction Type: PT
Heated Purge: (Y/N) Y
Injection Volume: (uL)
Purge Volume: 25.0 (mL)
pH: 1.0 Dilution Factor: 1.0
Cleanup Types:
Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.83	
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	4.4	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.19	J
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.17	J
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW109D-230-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562016
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: MS13C016
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.74	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
5P-MW109D-230-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562016
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: MS13C016
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
Extract Concentrated: (Y/N) Date Analyzed: 09/11/2019
Soil Aliquot (VOA): (uL) Extract Volume: (uL)
Heated Purge: (Y/N) Y Extraction Type: PT
Purge Volume: 25.0 (mL) Injection Volume: (uL)
Cleanup Types: pH: 1.0 Dilution Factor: 1.0
Concentration Units (ug/L, ug/kg): ug/L Cleanup Factor:

	CAS No.	ANALYTE	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

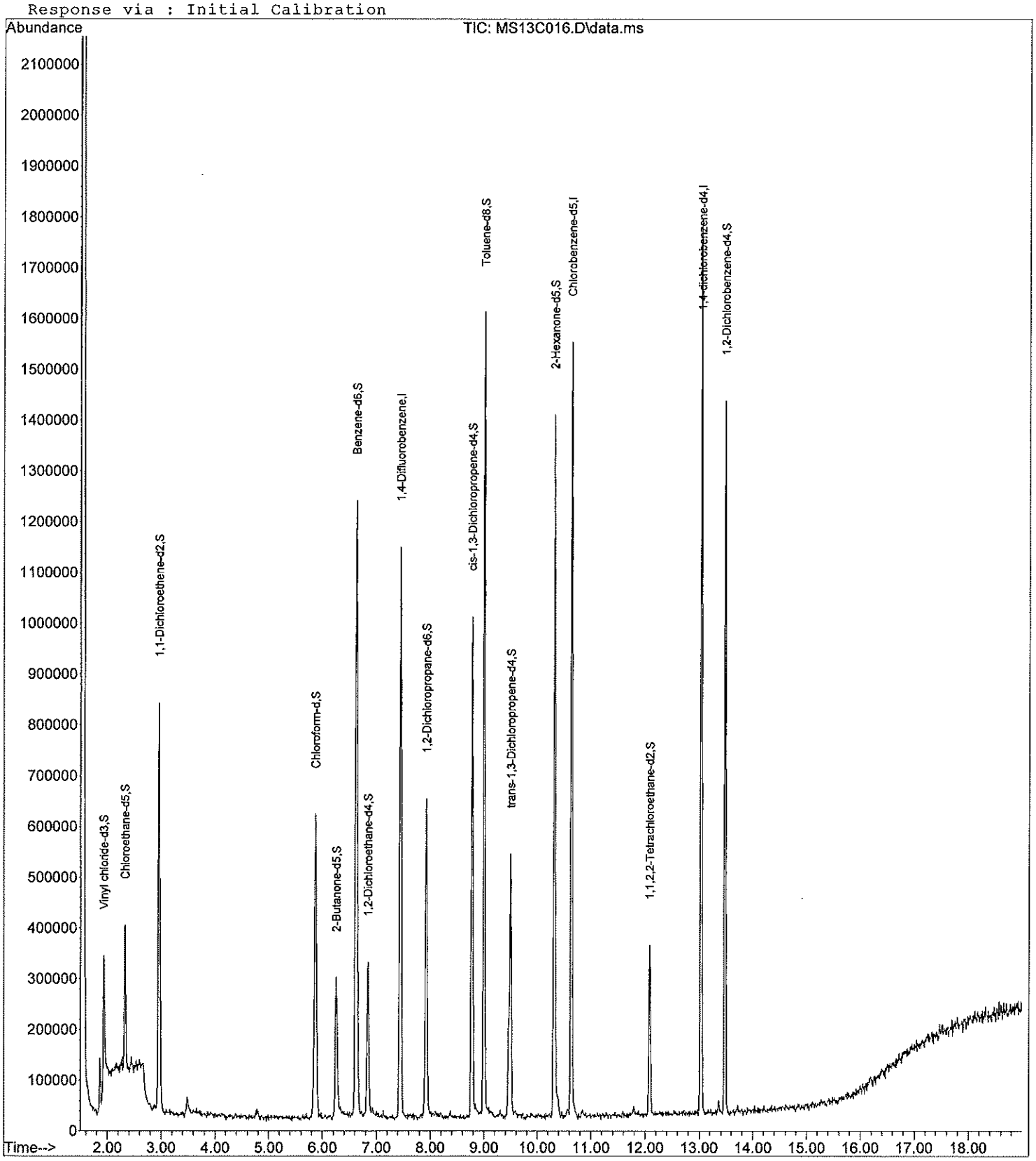
[1]EPA-designated Registry Number.

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS13C016.D Vial: 9
Acq Time : 09/11/2019 11:32 Operator: CQC
Sample : 1925562016 5P-MW109D-230-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 12:15:42 2019 Results File: MTRACEA9.RES

Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 13:23:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS13C016.D Vial: 9
Acq Time : 09/11/2019 11:32 Operator: CQC
Sample : 1925562016 5P-MW109D-230-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 12:15:42 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 11:22:27 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.45	114	1154250	5.0000 ug/L	99.43
28) Chlorobenzene-d5	10.63	117	968674	5.0000 ug/L	97.17
60) 1,4-dichlorobenzene-d4	13.03	152	531280	5.0000 ug/L	101.93
System Monitoring Compounds					%Recovery
5) Vinyl chloride-d3	1.93	65	349250	3.6521 ug/L	73.04%
8) Chloroethane-d5	2.32	69	237078	4.0334 ug/L	80.67%
11) 1,1-Dichloroethene-d2	2.96	63	640973	3.5387 ug/L	70.77%
22) 2-Butanone-d5	6.25	46	550587	51.3439 ug/L	102.69%
25) Chloroform-d	5.86	84	678583	4.8633 ug/L	97.27%
27) 1,2-Dichloroethane-d4	6.84	65	266323	4.7829 ug/L	95.66%
33) Benzene-d6	6.63	84	1365109	5.2104 ug/L	104.21%
37) 1,2-Dichloropropane-d6	7.92	67	325273	4.9219 ug/L	98.44%
40) cis-1,3-Dichloropropene-d4	8.77	79	542108	4.7287 ug/L	94.57%
42) trans-1,3-Dichloropropene-	9.50	79	301095	4.9673 ug/L	99.35%
47) Toluene-d8	9.00	98	1165169	4.9445 ug/L	98.89%
50) 2-Hexanone-d5	10.31	63	526197	51.1164 ug/L	102.23%
59) 1,1,2,2-Tetrachloroethane-	12.09	84	194099	5.0977 ug/L	101.95%
65) 1,2-Dichlorobenzene-d4	13.47	152	424682	5.0121 ug/L	100.24%
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.00	85		Not Detected	
3) Chloromethane	1.86	50	116660	0.8296 ug/L	100
4) Vinyl chloride	0.00	62		Not Detected	
6) Bromomethane	0.00	94		Not Detected	
7) Chloroethane	0.00	64		Not Detected	
9) Trichlorofluoromethane	0.00	101		Not Detected	
10) 1,1-Dichloroethene	0.00	96		Not Detected	
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101		Not Detected	
13) Acetone	3.66	43	14129	4.3725 ug/L	96
14) Carbon disulfide	0.00	76		Not Detected	
15) Methyl acetate	0.00	43		Not Detected	
16) Methylene chloride	0.00	84		Not Detected	
17) trans-1,2-Dichloroethene	0.00	96		Not Detected	
18) Methyl tert-butyl ether	0.00	73		Not Detected	
19) 1,1-Dichloroethane	0.00	63		Not Detected	
20) cis-1,2-Dichloroethene	0.00	96		Not Detected	
21) 2-Butanone	0.00	43		Not Detected	
23) Bromochloromethane	0.00	128		Not Detected	
24) Chloroform	5.88	83	24132	0.1933 ug/L #	1
26) 1,2-Dichloroethane	6.92	62	10595	0.1669 ug/L	97
29) 1,1,1-Trichloroethane	0.00	97		Not Detected	
30) Cyclohexane	0.00	56		Not Detected	
31) Carbon tetrachloride	0.00	117		Not Detected	
32) Benzene	0.00	78		Not Detected	
34) Trichloroethene	0.00	130		Not Detected	
35) Methylcyclohexane	0.00	83		Not Detected	
36) 1,2-Dichloropropane	0.00	63		Not Detected	
38) Bromodichloromethane	0.00	83		Not Detected	
39) cis-1,3-Dichloropropene	0.00	75		Not Detected	
41) trans-1,3-Dichloropropene	0.00	75		Not Detected	
43) 1,1,2-Trichloroethane	0.00	97		Not Detected	
44) Dibromochloromethane	0.00	129		Not Detected	
45) 4-Methyl-2-pentanone	0.00	43		Not Detected	
46) Toluene	0.00	91		Not Detected	

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

Quantitation Report

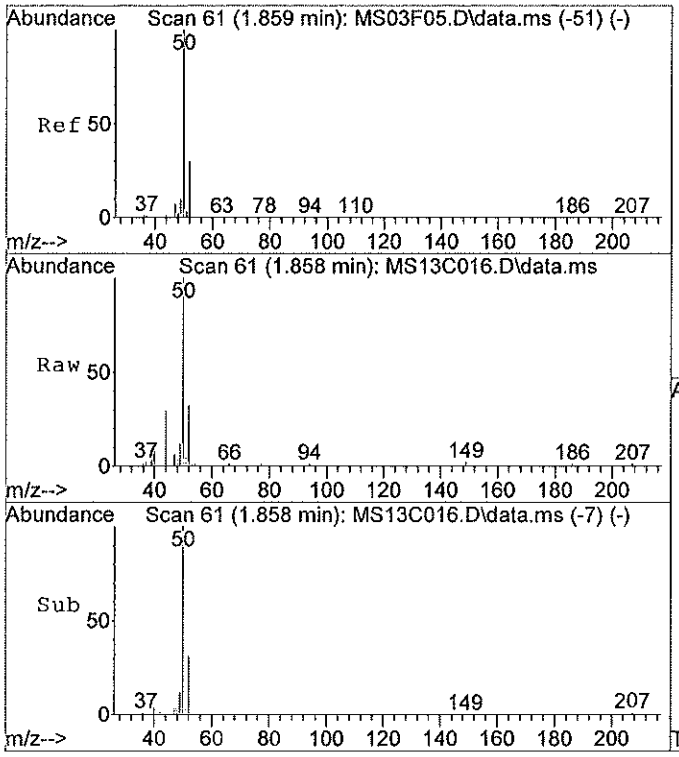
Data File : C:\msdchem\1\data\11SEP19M\MS13C016.D Vial: 9
Acq Time : 09/11/2019 11:32 Operator: CQC
Sample : 1925562016 5P-MW109D-230-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 12:15:42 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 11:22:27 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
48) Tetrachloroethene	9.46	164	44242	0.7353 ug/L	94
49) 2-Hexanone	0.00	43		Not Detected	
51) 1,2-Dibromoethane	0.00	107		Not Detected	
52) Chlorobenzene	0.00	112		Not Detected	
53) Ethylbenzene	0.00	91		Not Detected	
54) m,p-Xylene	0.00	106		Not Detected	
55) o-Xylene	0.00	106		Not Detected	
56) Styrene	0.00	104		Not Detected	
57) Isopropylbenzene	0.00	105		Not Detected	
58) 1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61) Bromoform	0.00	173		Not Detected	
62) 1,3-Dichlorobenzene	0.00	146		Not Detected	
63) 1,4-Dichlorobenzene	0.00	146		Not Detected	
64) 1,2-Dichlorobenzene	0.00	146		Not Detected	
66) 1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67) 1,2,4-Trichlorobenzene	0.00	180		Not Detected	
68) 1,2,3-Trichlorobenzene	0.00	180		Not Detected	

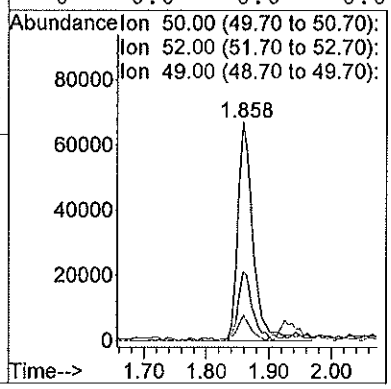
(#) = qualifier out of range (m) = manual integration

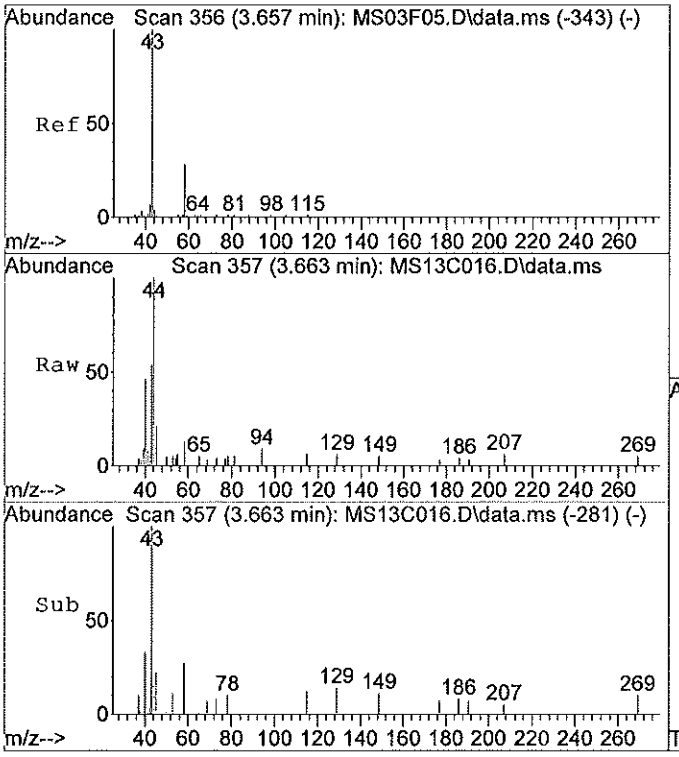


#3
Chloromethane
Concen: 0.83 ug/L
RT: 1.86 min Scan# 61
Delta R.T. -0.00 min
Lab File: MS13C016.D
Acq: 09/11/2019 11:32

Tgt Ion:50 Resp: 116660

Ion	Ratio	Lower	Upper
50	100		
52	31.1	11.4	51.4
49	9.6	0.0	29.6
0	0.0	0.0	0.0

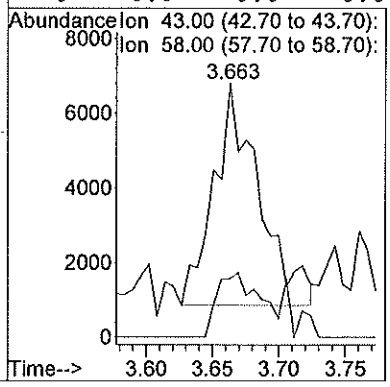


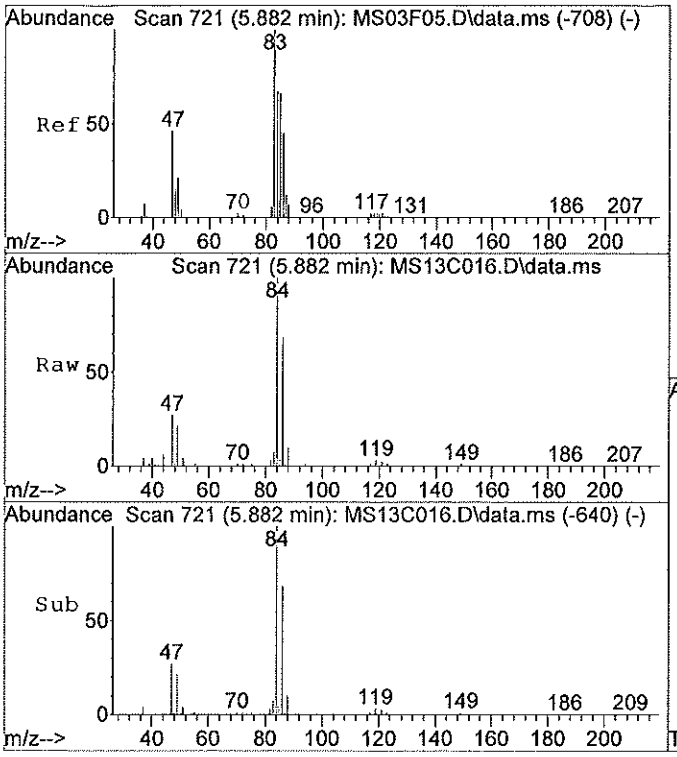


#13
Acetone
Concen: 4.37 ug/L
RT: 3.66 min Scan# 357
Delta R.T. -0.00 min
Lab File: MS13C016.D
Acq: 09/11/2019 11:32

Tgt Ion:43 Resp: 14129

Ion	Ratio	Lower	Upper
43	100		
58	31.4	9.2	49.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

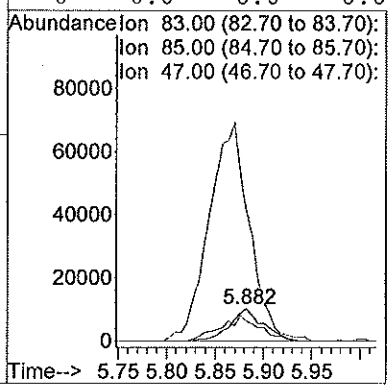


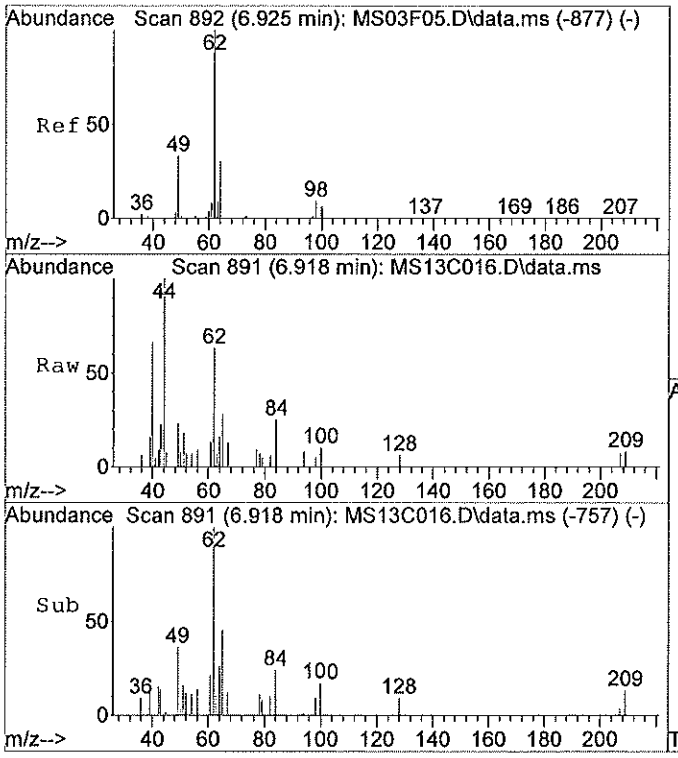


#24
Chloroform
Concen: 0.19 ug/L
RT: 5.88 min Scan# 721
Delta R.T. -0.00 min
Lab File: MS13C016.D
Acq: 09/11/2019 11:32

Tgt Ion:83 Resp: 24132

Ion	Ratio	Lower	Upper
83	100		
85	91.9	45.8	85.8#
47	828.1	40.7	80.7#
0	0.0	0.0	0.0

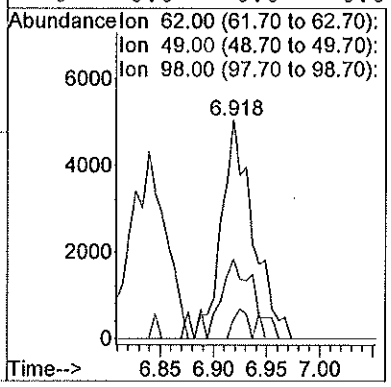


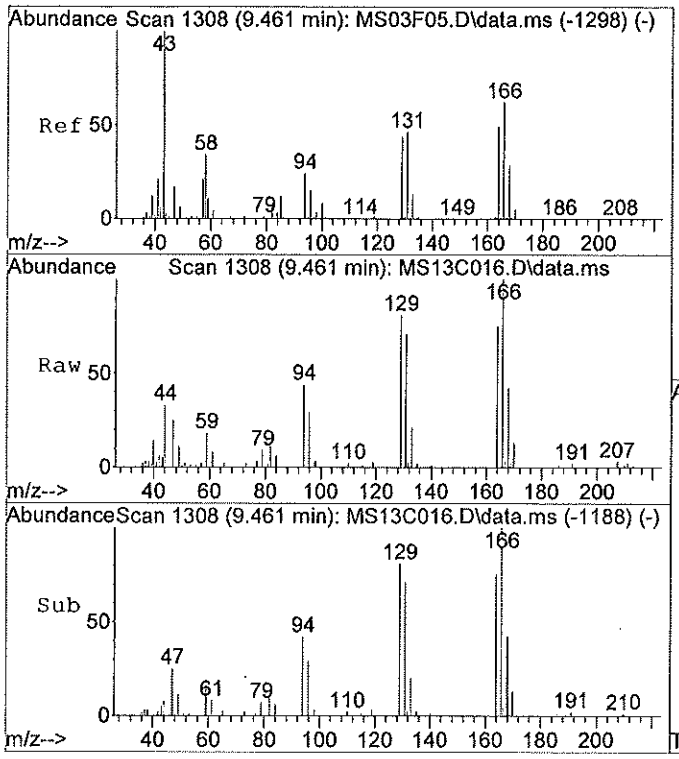


#26
1,2-Dichloroethane
Concen: 0.17 ug/L
RT: 6.92 min Scan# 891
Delta R.T. -0.01 min
Lab File: MS13C016.D
Acq: 09/11/2019 11:32

Tgt Ion:62 Resp: 10595

Ion	Ratio	Lower	Upper
62	100		
49	35.7	13.6	53.6
98	7.9	0.0	27.9
0	0.0	0.0	0.0

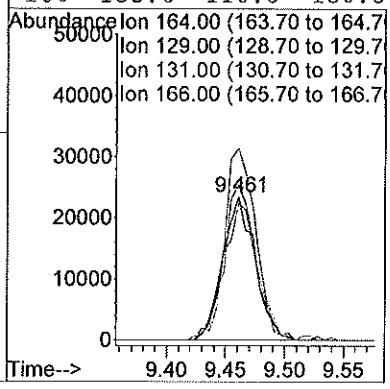




#48
Tetrachloroethene
Concen: 0.74 ug/L
RT: 9.46 min Scan# 1308
Delta R.T. -0.00 min
Lab File: MS13C016.D
Acq: 09/11/2019 11:32

Tgt Ion:164 Resp: 44242

Ion	Ratio	Lower	Upper
164	100		
129	107.0	76.0	116.0
131	96.7	73.6	113.6
166	135.6	110.8	150.8



148B

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW109I-169-090519

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 1925562015
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: MS12C015
% Solids:
Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
GC Column: ID: (mm)
Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N)
Extract Volume: (uL)
Soil Aliquot (VOA): (uL)
Extraction Type: PT
Heated Purge: (Y/N) Y
Injection Volume: (uL)
Purge Volume: 25.0 (mL)
pH: 1.0 Dilution Factor: 1.0
Cleanup Types:
Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.77	
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	4.6	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW109I-169-090519

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 1925562015
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: MS12C015
% Solids:
Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
GC Column: ID: (mm)
Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N)
Extract Volume: (uL)
Soil Aliquot (VOA): (uL)
Extraction Type: PT
Heated Purge: (Y/N) Y
Injection Volume: (uL)
Purge Volume: 25.0 (mL)
pH: 1.0 Dilution Factor: 1.0
Cleanup Types:
Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.35	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
5P-MW109I-169-090519

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 1925562015
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: MS12C015
% Solids:
Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
Extract Concentrated: (Y/N)
Date Analyzed: 09/11/2019
Soil Aliquot (VOA): (uL)
Extract Volume: (uL)
Heated Purge: (Y/N) Y
Extraction Type: PT
Purge Volume: 25.0 (mL)
Injection Volume: (uL)
Cleanup Types:
pH: 1.0 Dilution Factor: 1.0
Concentration Units (ug/L, ug/kg): ug/L
Cleanup Factor:

	CAS No.	ANALYTE	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

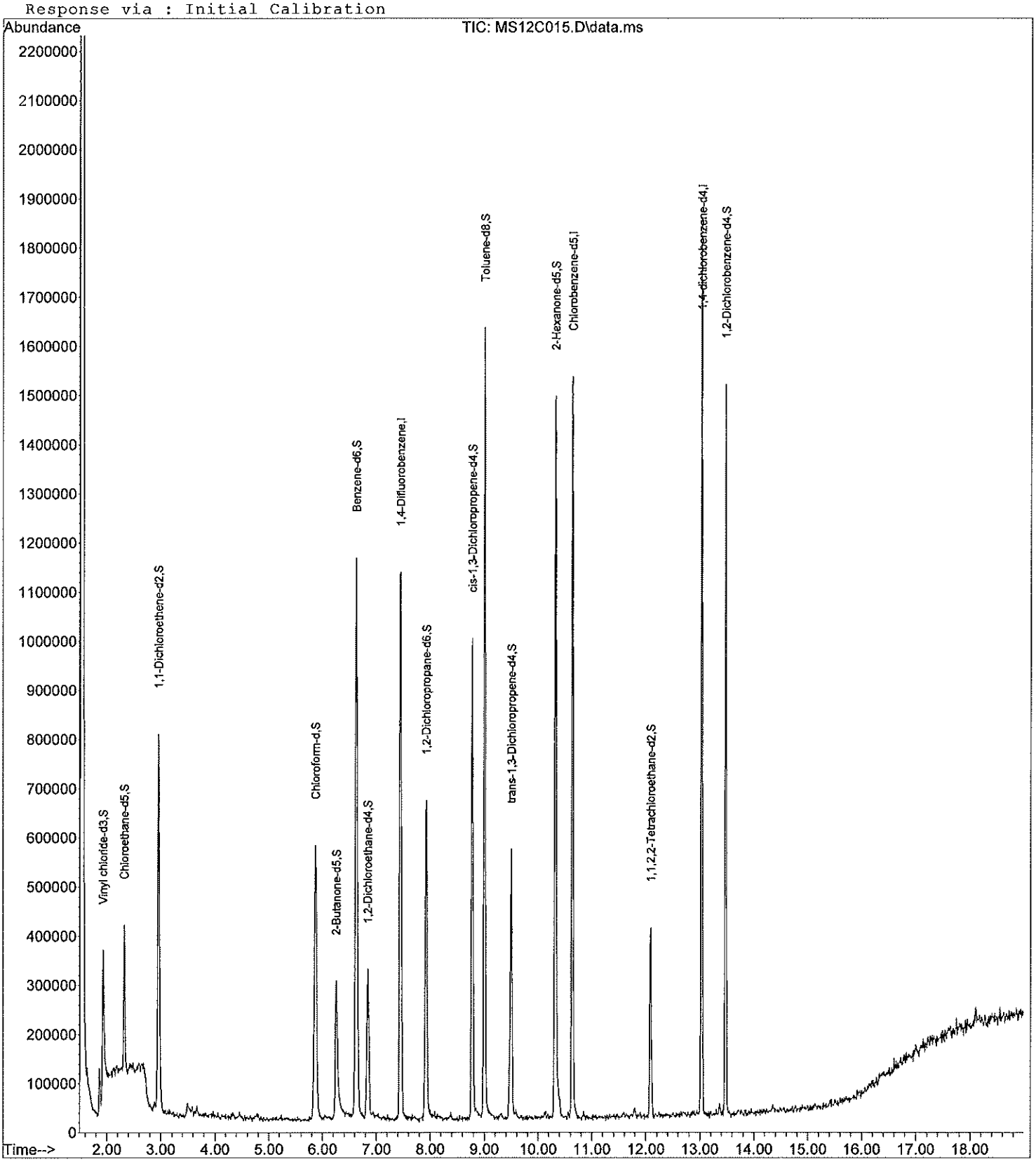
[1]EPA-designated Registry Number.

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS12C015.D Vial: 8
Acq Time : 09/11/2019 11:05 Operator: CQC
Sample : 1925562015 5P-MW109I-169-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 11:36:18 2019 Results File: MTRACEA9.RES

Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 13:23:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS12C015.D Vial: 8
Acq Time : 09/11/2019 11:05 Operator: CQC
Sample : 1925562015 5P-MW109I-169-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 11:36:18 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 11:22:27 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.45	114	1171878	5.0000 ug/L	100.95
28) Chlorobenzene-d5	10.63	117	987197	5.0000 ug/L	99.03
60) 1,4-dichlorobenzene-d4	13.03	152	538831	5.0000 ug/L	103.38

System Monitoring Compounds					%Recovery
5) Vinyl chloride-d3	1.93	65	348610	3.5906 ug/L	71.81%
8) Chloroethane-d5	2.32	69	240120	4.0237 ug/L	80.47%
11) 1,1-Dichloroethene-d2	2.96	63	647429	3.5206 ug/L	70.41%
22) 2-Butanone-d5	6.25	46	676189	62.1082 ug/L	124.22%
25) Chloroform-d	5.86	84	692590	4.8890 ug/L	97.78%
27) 1,2-Dichloroethane-d4	6.84	65	289520	5.1213 ug/L	102.43%
33) Benzene-d6	6.63	84	1346544	5.0431 ug/L	100.86%
37) 1,2-Dichloropropane-d6	7.92	67	347339	5.1572 ug/L	103.14%
40) cis-1,3-Dichloropropene-d4	8.78	79	572693	4.9017 ug/L	98.03%
42) trans-1,3-Dichloropropene-	9.50	79	318730	5.1596 ug/L	103.19%
47) Toluene-d8	9.00	98	1210012	5.0384 ug/L	100.77%
50) 2-Hexanone-d5	10.32	63	590594	56.2956 ug/L	112.59%
59) 1,1,2,2-Tetrachloroethane-	12.09	84	208816	5.3813 ug/L	107.63%
65) 1,2-Dichlorobenzene-d4	13.47	152	433902	5.0491 ug/L	100.98%

Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.00	85		Not Detected	
3) Chloromethane	1.86	50	109683	0.7682 ug/L	96
4) Vinyl chloride	0.00	62		Not Detected	
6) Bromomethane	0.00	94		Not Detected	
7) Chloroethane	0.00	64		Not Detected	
9) Trichlorofluoromethane	0.00	101		Not Detected	
10) 1,1-Dichloroethene	0.00	96		Not Detected	
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101		Not Detected	
13) Acetone	3.67	43	15250	4.6484 ug/L	93
14) Carbon disulfide	0.00	76		Not Detected	
15) Methyl acetate	0.00	43		Not Detected	
16) Methylene chloride	0.00	84		Not Detected	
17) trans-1,2-Dichloroethene	0.00	96		Not Detected	
18) Methyl tert-butyl ether	0.00	73		Not Detected	
19) 1,1-Dichloroethane	0.00	63		Not Detected	
20) cis-1,2-Dichloroethene	0.00	96		Not Detected	
21) 2-Butanone	0.00	43		Not Detected	
23) Bromochloromethane	0.00	128		Not Detected	
24) Chloroform	0.00	83		Not Detected	
26) 1,2-Dichloroethane	0.00	62		Not Detected	
29) 1,1,1-Trichloroethane	0.00	97		Not Detected	
30) Cyclohexane	0.00	56		Not Detected	
31) Carbon tetrachloride	0.00	117		Not Detected	
32) Benzene	0.00	78		Not Detected	
34) Trichloroethene	0.00	130		Not Detected	
35) Methylcyclohexane	0.00	83		Not Detected	
36) 1,2-Dichloropropane	0.00	63		Not Detected	
38) Bromodichloromethane	0.00	83		Not Detected	
39) cis-1,3-Dichloropropene	0.00	75		Not Detected	
41) trans-1,3-Dichloropropene	0.00	75		Not Detected	
43) 1,1,2-Trichloroethane	0.00	97		Not Detected	
44) Dibromochloromethane	0.00	129		Not Detected	
45) 4-Methyl-2-pentanone	0.00	43		Not Detected	
46) Toluene	0.00	91		Not Detected	

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

Quantitation Report

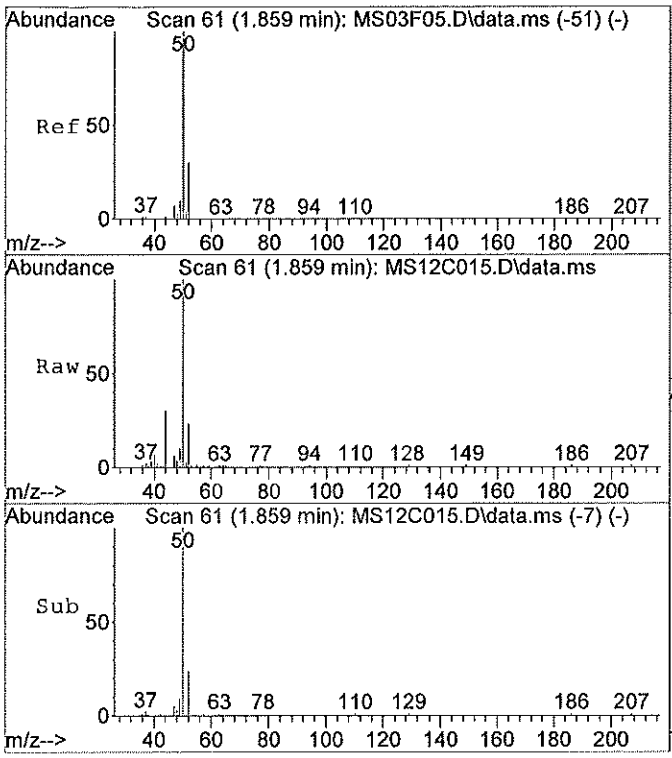
Data File : C:\msdchem\1\data\11SEP19M\MS12C015.D Vial: 8
Acq Time : 09/11/2019 11:05 Operator: CQC
Sample : 1925562015 5P-MW109I-169-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 11:36:18 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 11:22:27 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
48)	Tetrachloroethene	9.46	164	21626	0.3527 ug/L	96
49)	2-Hexanone	0.00	43		Not Detected	
51)	1,2-Dibromoethane	0.00	107		Not Detected	
52)	Chlorobenzene	0.00	112		Not Detected	
53)	Ethylbenzene	0.00	91		Not Detected	
54)	m,p-Xylene	0.00	106		Not Detected	
55)	o-Xylene	0.00	106		Not Detected	
56)	Styrene	0.00	104		Not Detected	
57)	Isopropylbenzene	0.00	105		Not Detected	
58)	1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61)	Bromoform	0.00	173		Not Detected	
62)	1,3-Dichlorobenzene	0.00	146		Not Detected	
63)	1,4-Dichlorobenzene	0.00	146		Not Detected	
64)	1,2-Dichlorobenzene	0.00	146		Not Detected	
66)	1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67)	1,2,4-Trichlorobenzene	0.00	180		Not Detected	
68)	1,2,3-Trichlorobenzene	0.00	180		Not Detected	

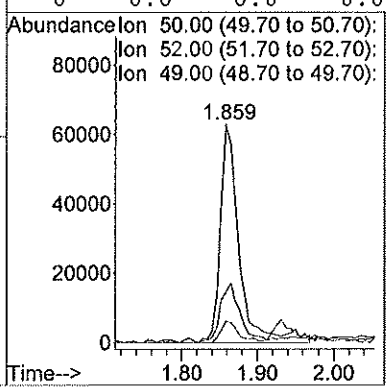
(#) = qualifier out of range (m) = manual integration

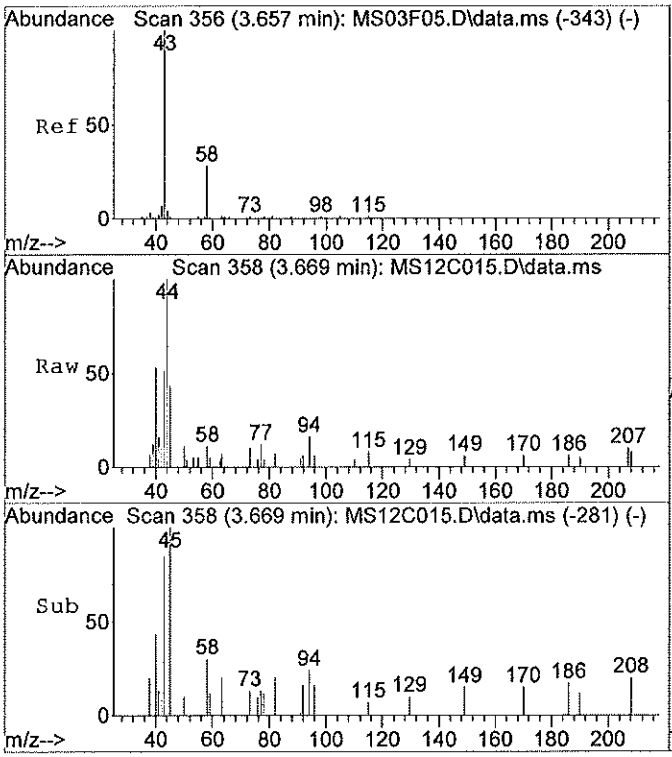


#3
Chloromethane
Concen: 0.77 ug/L
RT: 1.86 min Scan# 61
Delta R.T. 0.00 min
Lab File: MS12C015.D
Acq: 09/11/2019 11:05

Tgt Ion:50 Resp: 109683

Ion	Ratio	Lower	Upper
50	100		
52	28.8	11.4	51.4
49	9.2	0.0	29.6
0	0.0	0.0	0.0

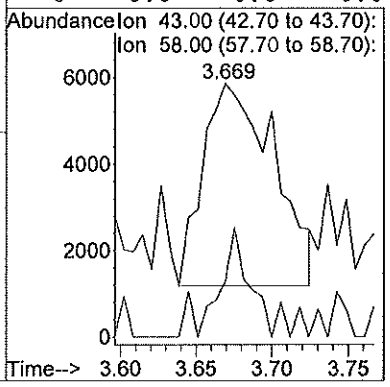


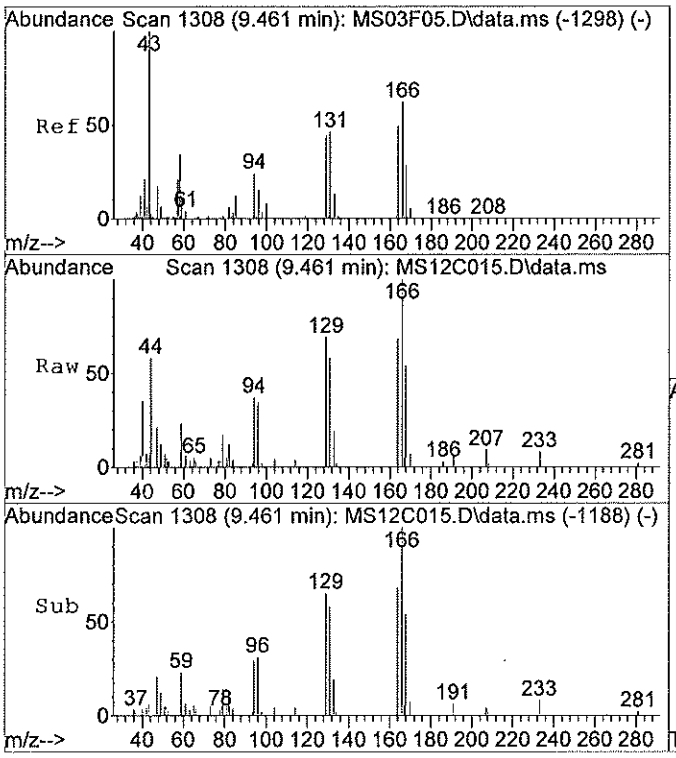


#13
Acetone
Concen: 4.65 ug/L
RT: 3.67 min Scan# 358
Delta R.T. 0.01 min
Lab File: MS12C015.D
Acq: 09/11/2019 11:05

Tgt Ion:43 Resp: 15250

Ion	Ratio	Lower	Upper
43	100		
58	25.4	9.2	49.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

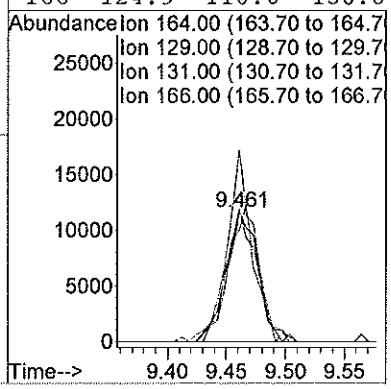




#48
Tetrachloroethene
Concen: 0.35 ug/L
RT: 9.46 min Scan# 1308
Delta R.T. 0.00 min
Lab File: MS12C015.D
Acq: 09/11/2019 11:05

Tgt Ion:164 Resp: 21626

Ion	Ratio	Lower	Upper
164	100		
129	95.5	76.0	116.0
131	100.6	73.6	113.6
166	124.9	110.8	150.8



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW110D-301-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562018
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: MS15C018
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.44	J
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	4.6	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW110D-301-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562018
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: MS15C018
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.91	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
5P-MW110D-301-090519

Lab Name: ALS Environmental (SLC)
Lab Code: ALS Case No.: 5POINTS
Analytical Method: Trace VOA
Matrix: WATER
Sample wt/vol: 25.0 (g/mL) mL
% Solids:
GC Column: RTX-VMS ID: 0.25 (mm)
Extract Concentrated: (Y/N)
Soil Aliquot (VOA): (uL)
Heated Purge: (Y/N) Y
Purge Volume: 25.0 (mL)
Cleanup Types:
Concentration Units (ug/L, ug/kg): ug/L

Contract: 97756
MA No.: SDG No.: TV9519
Level: TRACE
Lab Sample ID: 1925562018
Lab File ID: MS15C018
Date Received: 09/05/2019
Date Extracted:
Date Analyzed: 09/11/2019
Extract Volume: (uL)
Extraction Type: PT
Injection Volume: (uL)
pH: 1.0 Dilution Factor: 1.0
Cleanup Factor:

	CAS No.	ANALYTE	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

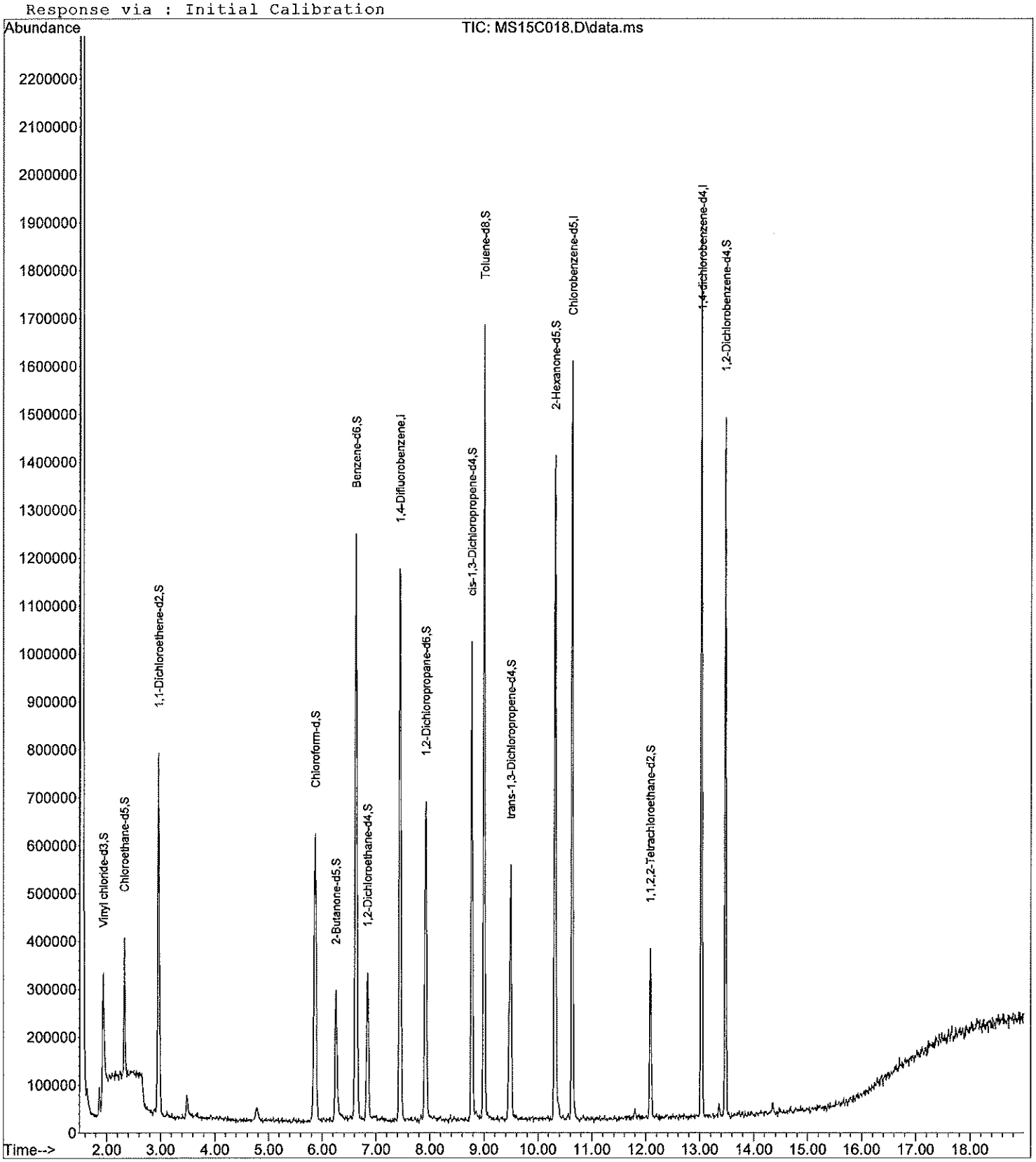
[1]EPA-designated Registry Number.

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS15C018.D Vial: 11
Acq Time : 09/11/2019 12:28 Operator: CQC
Sample : 1925562018 5P-MW110D-301-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 12:53:29 2019 Results File: MTRACEA9.RES

Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 13:23:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS15C018.D Vial: 11
Acq Time : 09/11/2019 12:28 Operator: CQC
Sample : 1925562018 5P-MW110D-301-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 12:53:29 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 11:22:27 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.45	114	1194550	5.0000 ug/L	102.91
28) Chlorobenzene-d5	10.64	117	1008340	5.0000 ug/L	101.15
60) 1,4-dichlorobenzene-d4	13.03	152	545409	5.0000 ug/L	104.64
System Monitoring Compounds					%Recovery
5) Vinyl chloride-d3	1.94	65	331008	3.3446 ug/L	66.89%
8) Chloroethane-d5	2.33	69	228515	3.7565 ug/L	75.13%
11) 1,1-Dichloroethene-d2	2.96	63	623918	3.3284 ug/L	66.57%
22) 2-Butanone-d5	6.25	46	547917	49.3712 ug/L	98.74%
25) Chloroform-d	5.87	84	695422	4.8158 ug/L	96.32%
27) 1,2-Dichloroethane-d4	6.84	65	281131	4.8786 ug/L	97.57%
33) Benzene-d6	6.63	84	1375456	5.0434 ug/L	100.87%
37) 1,2-Dichloropropane-d6	7.92	67	347281	5.0482 ug/L	100.96%
40) cis-1,3-Dichloropropene-d4	8.78	79	569769	4.7745 ug/L	95.49%
42) trans-1,3-Dichloropropene-	9.50	79	301095	4.7719 ug/L	95.44%
47) Toluene-d8	9.00	98	1195338	4.8730 ug/L	97.46%
50) 2-Hexanone-d5	10.32	63	524161	48.9156 ug/L	97.83%
59) 1,1,2,2-Tetrachloroethane-	12.08	84	196997	4.9703 ug/L	99.41%
65) 1,2-Dichlorobenzene-d4	13.47	152	436575	5.0189 ug/L	100.38%
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.00	85		Not Detected	
3) Chloromethane	1.86	50	64483	0.4431 ug/L	95
4) Vinyl chloride	0.00	62		Not Detected	
6) Bromomethane	0.00	94		Not Detected	
7) Chloroethane	0.00	64		Not Detected	
9) Trichlorofluoromethane	0.00	101		Not Detected	
10) 1,1-Dichloroethene	0.00	96		Not Detected	
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101		Not Detected	
13) Acetone	3.67	43	15417	4.6101 ug/L	92
14) Carbon disulfide	0.00	76		Not Detected	
15) Methyl acetate	0.00	43		Not Detected	
16) Methylene chloride	0.00	84		Not Detected	
17) trans-1,2-Dichloroethene	0.00	96		Not Detected	
18) Methyl tert-butyl ether	0.00	73		Not Detected	
19) 1,1-Dichloroethane	0.00	63		Not Detected	
20) cis-1,2-Dichloroethene	0.00	96		Not Detected	
21) 2-Butanone	0.00	43		Not Detected	
23) Bromochloromethane	0.00	128		Not Detected	
24) Chloroform	0.00	83		Not Detected	
26) 1,2-Dichloroethane	0.00	62		Not Detected	
29) 1,1,1-Trichloroethane	0.00	97		Not Detected	
30) Cyclohexane	0.00	56		Not Detected	
31) Carbon tetrachloride	0.00	117		Not Detected	
32) Benzene	0.00	78		Not Detected	
34) Trichloroethene	0.00	130		Not Detected	
35) Methylcyclohexane	0.00	83		Not Detected	
36) 1,2-Dichloropropane	0.00	63		Not Detected	
38) Bromodichloromethane	0.00	83		Not Detected	
39) cis-1,3-Dichloropropene	0.00	75		Not Detected	
41) trans-1,3-Dichloropropene	0.00	75		Not Detected	
43) 1,1,2-Trichloroethane	0.00	97		Not Detected	
44) Dibromochloromethane	0.00	129		Not Detected	
45) 4-Methyl-2-pentanone	0.00	43		Not Detected	
46) Toluene	0.00	91		Not Detected	

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

Quantitation Report

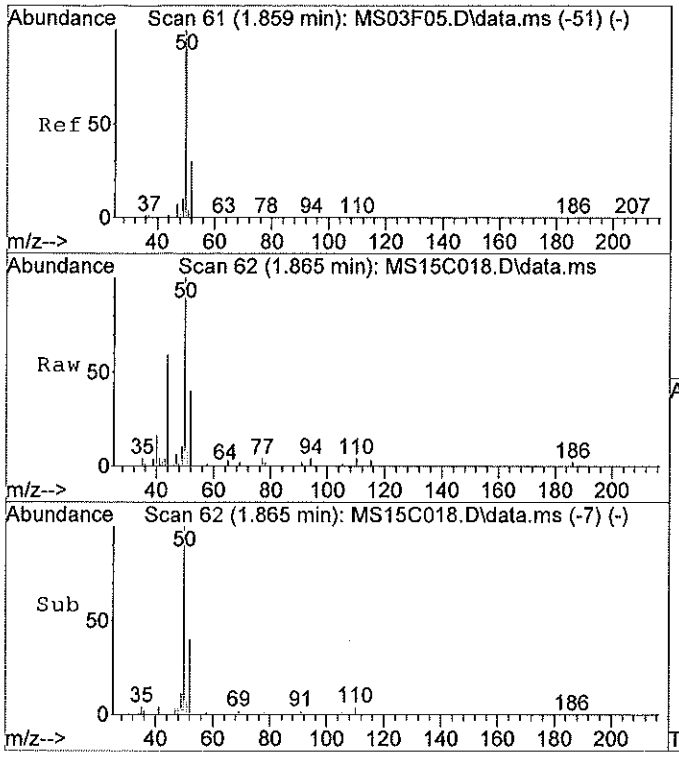
Data File : C:\msdchem\1\data\11SEP19M\MS15C018.D Vial: 11
Acq Time : 09/11/2019 12:28 Operator: CQC
Sample : 1925562018 5P-MW110D-301-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 12:53:29 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 11:22:27 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
48) Tetrachloroethene	9.46	164	57282	0.9146 ug/L	98
49) 2-Hexanone	0.00	43		Not Detected	
51) 1,2-Dibromoethane	0.00	107		Not Detected	
52) Chlorobenzene	0.00	112		Not Detected	
53) Ethylbenzene	0.00	91		Not Detected	
54) m,p-Xylene	0.00	106		Not Detected	
55) o-Xylene	0.00	106		Not Detected	
56) Styrene	0.00	104		Not Detected	
57) Isopropylbenzene	0.00	105		Not Detected	
58) 1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61) Bromoform	0.00	173		Not Detected	
62) 1,3-Dichlorobenzene	0.00	146		Not Detected	
63) 1,4-Dichlorobenzene	0.00	146		Not Detected	
64) 1,2-Dichlorobenzene	0.00	146		Not Detected	
66) 1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67) 1,2,4-Trichlorobenzene	0.00	180		Not Detected	
68) 1,2,3-Trichlorobenzene	0.00	180		Not Detected	

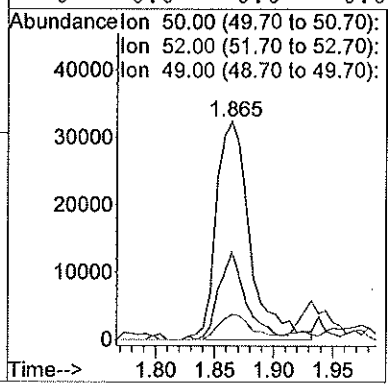
(#) = qualifier out of range (m) = manual integration

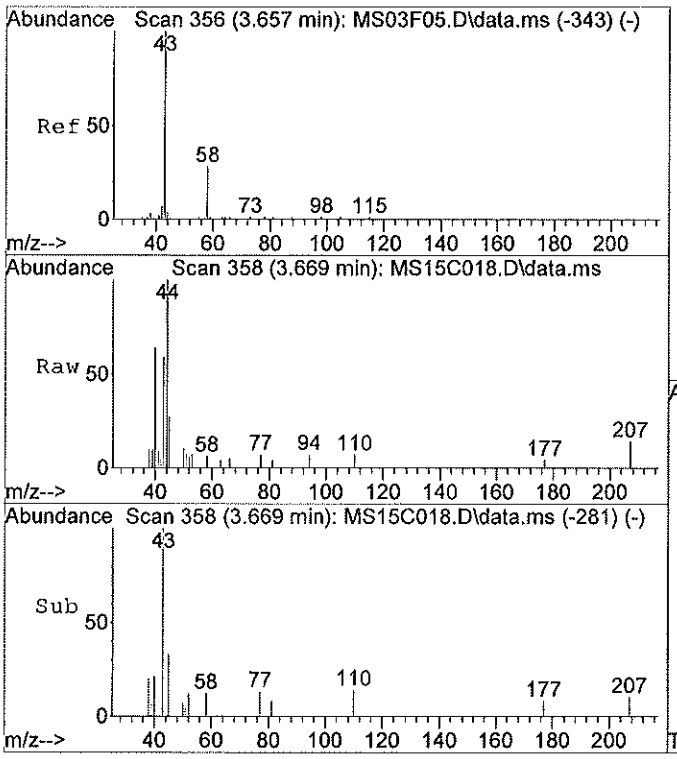


#3
Chloromethane
Concen: 0.44 ug/L
RT: 1.86 min Scan# 62
Delta R.T. 0.01 min
Lab File: MS15C018.D
Acq: 09/11/2019 12:28

Tgt Ion:50 Resp: 64483

Ion	Ratio	Lower	Upper
50	100		
52	34.5	11.4	51.4
49	11.3	0.0	29.6
0	0.0	0.0	0.0

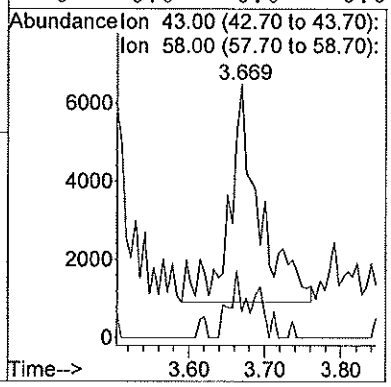


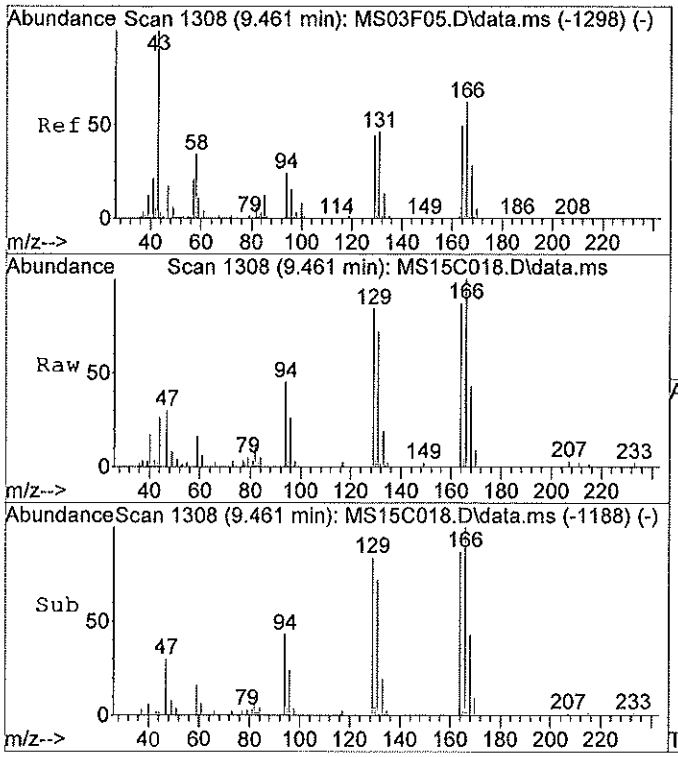


#13
Acetone
Concen: 4.61 ug/L
RT: 3.67 min Scan# 358
Delta R.T. 0.01 min
Lab File: MS15C018.D
Acq: 09/11/2019 12:28

Tgt Ion:43 Resp: 15417

Ion	Ratio	Lower	Upper
43	100		
58	24.9	9.2	49.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

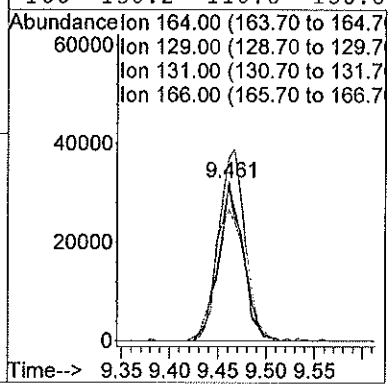




#48
Tetrachloroethene
Concen: 0.91 ug/L
RT: 9.46 min Scan# 1308
Delta R.T. -0.00 min
Lab File: MS15C018.D
Acq: 09/11/2019 12:28

Tgt Ion:164 Resp: 57282

Ion	Ratio	Lower	Upper
164	100		
129	101.4	76.0	116.0
131	93.1	73.6	113.6
166	130.2	110.8	150.8



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW110I-208-090519

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 1925562017
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: MS14C017
% Solids:
Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
GC Column: ID: (mm)
Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N)
Extract Volume: (uL)
Soil Aliquot (VOA): (uL)
Extraction Type: PT
Heated Purge: (Y/N) Y
Injection Volume: (uL)
Purge Volume: 25.0 (mL)
pH: 1.0 Dilution Factor: 1.0
Cleanup Types:
Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.28	J
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	4.7	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW110I-208-090519

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 1925562017
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: MS14C017
% Solids:
Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
GC Column: ID: (mm)
Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N)
Extract Volume: (uL)
Soil Aliquot (VOA): (uL)
Extraction Type: PT
Heated Purge: (Y/N) Y
Injection Volume: (uL)
Purge Volume: 25.0 (mL)
pH: 1.0 Dilution Factor: 1.0
Cleanup Types:
Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
5P-MW110I-208-090519

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 1925562017
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: MS14C017
% Solids:
Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
Extract Concentrated: (Y/N)
Date Analyzed: 09/11/2019
Soil Aliquot (VOA): (uL)
Extract Volume: (uL)
Heated Purge: (Y/N) Y
Extraction Type: PT
Purge Volume: 25.0 (mL)
Injection Volume: (uL)
Cleanup Types:
pH: 1.0 Dilution Factor: 1.0
Concentration Units (ug/L, ug/kg): ug/L
Cleanup Factor:

	CAS No.	ANALYTE	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

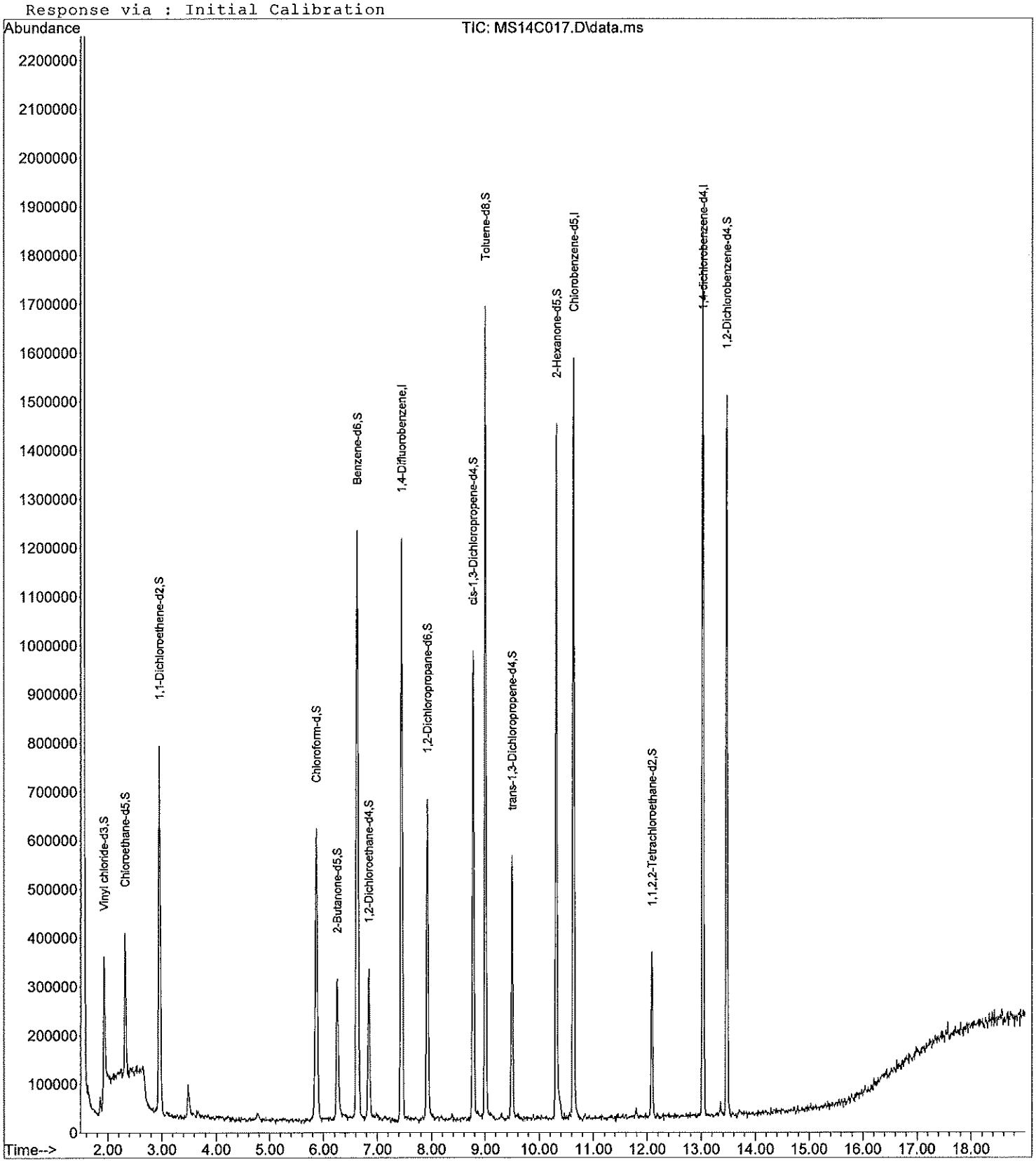
[1]EPA-designated Registry Number.

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS14C017.D Vial: 10
Acq Time : 09/11/2019 12:00 Operator: CQC
Sample : 1925562017 5P-MW110I-208-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 12:53:00 2019 Results File: MTRACEA9.RES

Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 13:23:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS14C017.D Vial: 10
Acq Time : 09/11/2019 12:00 Operator: CQC
Sample : 1925562017 5P-MW110I-208-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 12:53:00 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 11:22:27 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.45	114	1217487	5.0000 ug/L	104.88
28) Chlorobenzene-d5	10.64	117	1007735	5.0000 ug/L	101.09
60) 1,4-dichlorobenzene-d4	13.03	152	549161	5.0000 ug/L	105.36
System Monitoring Compounds					%Recovery
5) Vinyl chloride-d3	1.93	65	358735	3.5565 ug/L	71.13%
8) Chloroethane-d5	2.32	69	240540	3.8797 ug/L	77.59%
11) 1,1-Dichloroethene-d2	2.96	63	630807	3.3017 ug/L	66.03%
22) 2-Butanone-d5	6.25	46	578857	51.1764 ug/L	102.35%
25) Chloroform-d	5.86	84	697113	4.7366 ug/L	94.73%
27) 1,2-Dichloroethane-d4	6.84	65	276304	4.7045 ug/L	94.09%
33) Benzene-d6	6.63	84	1388619	5.0947 ug/L	101.89%
37) 1,2-Dichloropropane-d6	7.92	67	353592	5.1431 ug/L	102.86%
40) cis-1,3-Dichloropropene-d4	8.77	79	550969	4.6197 ug/L	92.39%
42) trans-1,3-Dichloropropene-	9.50	79	300859	4.7711 ug/L	95.42%
47) Toluene-d8	9.00	98	1197630	4.8852 ug/L	97.70%
50) 2-Hexanone-d5	10.32	63	533417	49.8092 ug/L	99.62%
59) 1,1,2,2-Tetrachloroethane-	12.08	84	198908	5.0215 ug/L	100.43%
65) 1,2-Dichlorobenzene-d4	13.47	152	450914	5.1484 ug/L	102.97%
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.00	85		Not Detected	
3) Chloromethane	1.86	50	41360	0.2788 ug/L	96
4) Vinyl chloride	0.00	62		Not Detected	
6) Bromomethane	0.00	94		Not Detected	
7) Chloroethane	0.00	64		Not Detected	
9) Trichlorofluoromethane	0.00	101		Not Detected	
10) 1,1-Dichloroethene	0.00	96		Not Detected	
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101		Not Detected	
13) Acetone	3.66	43	15970	4.6855 ug/L	91
14) Carbon disulfide	0.00	76		Not Detected	
15) Methyl acetate	0.00	43		Not Detected	
16) Methylene chloride	0.00	84		Not Detected	
17) trans-1,2-Dichloroethene	0.00	96		Not Detected	
18) Methyl tert-butyl ether	0.00	73		Not Detected	
19) 1,1-Dichloroethane	0.00	63		Not Detected	
20) cis-1,2-Dichloroethene	0.00	96		Not Detected	
21) 2-Butanone	0.00	43		Not Detected	
23) Bromochloromethane	0.00	128		Not Detected	
24) Chloroform	0.00	83		Not Detected	
26) 1,2-Dichloroethane	0.00	62		Not Detected	
29) 1,1,1-Trichloroethane	0.00	97		Not Detected	
30) Cyclohexane	0.00	56		Not Detected	
31) Carbon tetrachloride	0.00	117		Not Detected	
32) Benzene	0.00	78		Not Detected	
34) Trichloroethene	0.00	130		Not Detected	
35) Methylcyclohexane	0.00	83		Not Detected	
36) 1,2-Dichloropropane	0.00	63		Not Detected	
38) Bromodichloromethane	0.00	83		Not Detected	
39) cis-1,3-Dichloropropene	0.00	75		Not Detected	
41) trans-1,3-Dichloropropene	0.00	75		Not Detected	
43) 1,1,2-Trichloroethane	0.00	97		Not Detected	
44) Dibromochloromethane	0.00	129		Not Detected	
45) 4-Methyl-2-pentanone	0.00	43		Not Detected	
46) Toluene	0.00	91		Not Detected	

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

Quantitation Report

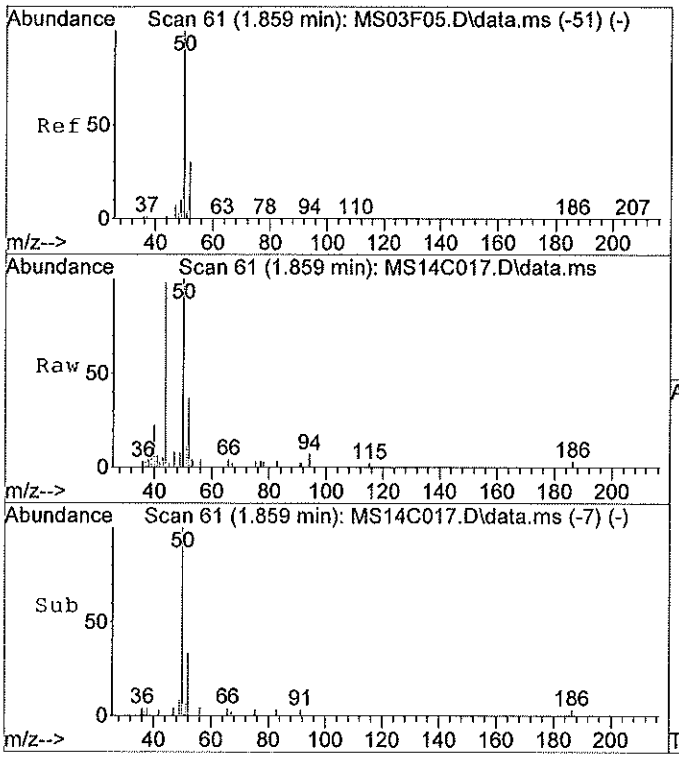
Data File : C:\msdchem\1\data\11SEP19M\MS14C017.D Vial: 10
Acq Time : 09/11/2019 12:00 Operator: CQC
Sample : 1925562017 5P-MW110I-208-090519 Inst : 5975-M
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 12:53:00 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 11:22:27 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
48)	Tetrachloroethene	0.00	164		Not Detected	
49)	2-Hexanone	0.00	43		Not Detected	
51)	1,2-Dibromoethane	0.00	107		Not Detected	
52)	Chlorobenzene	0.00	112		Not Detected	
53)	Ethylbenzene	0.00	91		Not Detected	
54)	m,p-Xylene	0.00	106		Not Detected	
55)	o-Xylene	0.00	106		Not Detected	
56)	Styrene	0.00	104		Not Detected	
57)	Isopropylbenzene	0.00	105		Not Detected	
58)	1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61)	Bromoform	0.00	173		Not Detected	
62)	1,3-Dichlorobenzene	0.00	146		Not Detected	
63)	1,4-Dichlorobenzene	0.00	146		Not Detected	
64)	1,2-Dichlorobenzene	0.00	146		Not Detected	
66)	1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67)	1,2,4-Trichlorobenzene	0.00	180		Not Detected	
68)	1,2,3-Trichlorobenzene	0.00	180		Not Detected	

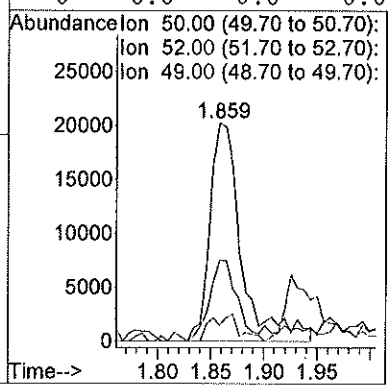
(#) = qualifier out of range (m) = manual integration

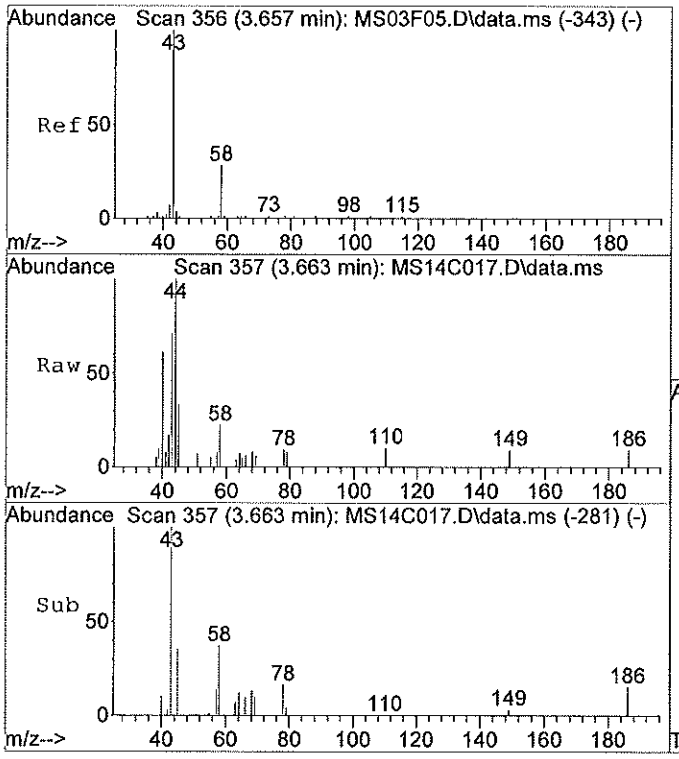


#3
Chloromethane
Concen: 0.28 ug/L
RT: 1.86 min Scan# 61
Delta R.T. -0.00 min
Lab File: MS14C017.D
Acq: 09/11/2019 12:00

Tgt Ion:50 Resp: 41360

Ion	Ratio	Lower	Upper
50	100		
52	33.3	11.4	51.4
49	11.4	0.0	29.6
0	0.0	0.0	0.0

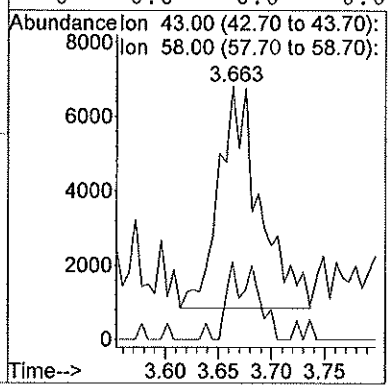




#13
Acetone
Concen: 4.69 ug/L
RT: 3.66 min Scan# 357
Delta R.T. -0.00 min
Lab File: MS14C017.D
Acq: 09/11/2019 12:00

Tgt Ion:43 Resp: 15970

Ion	Ratio	Lower	Upper
43	100		
58	24.6	9.2	49.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
TB-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562001
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP79C001
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.76	
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
TB-090519

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562001
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP79C001
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
TB-090519

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 1925562001
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: FP79C001
% Solids:
Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
Extract Concentrated: (Y/N)
Date Analyzed: 09/11/2019
Soil Aliquot (VOA): (uL)
Extract Volume: (uL)
Heated Purge: (Y/N) Y
Extraction Type: PT
Purge Volume: 25.0 (mL)
Injection Volume: (uL)
Cleanup Types:
pH: 1.0 Dilution Factor: 1.0
Concentration Units (ug/L, ug/kg): ug/L
Cleanup Factor:

	CAS No.	ANALYTE	RT	EST. CONC.	Q
01		Unknown Isopropyl Alcohol	3.21	0.90	J
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

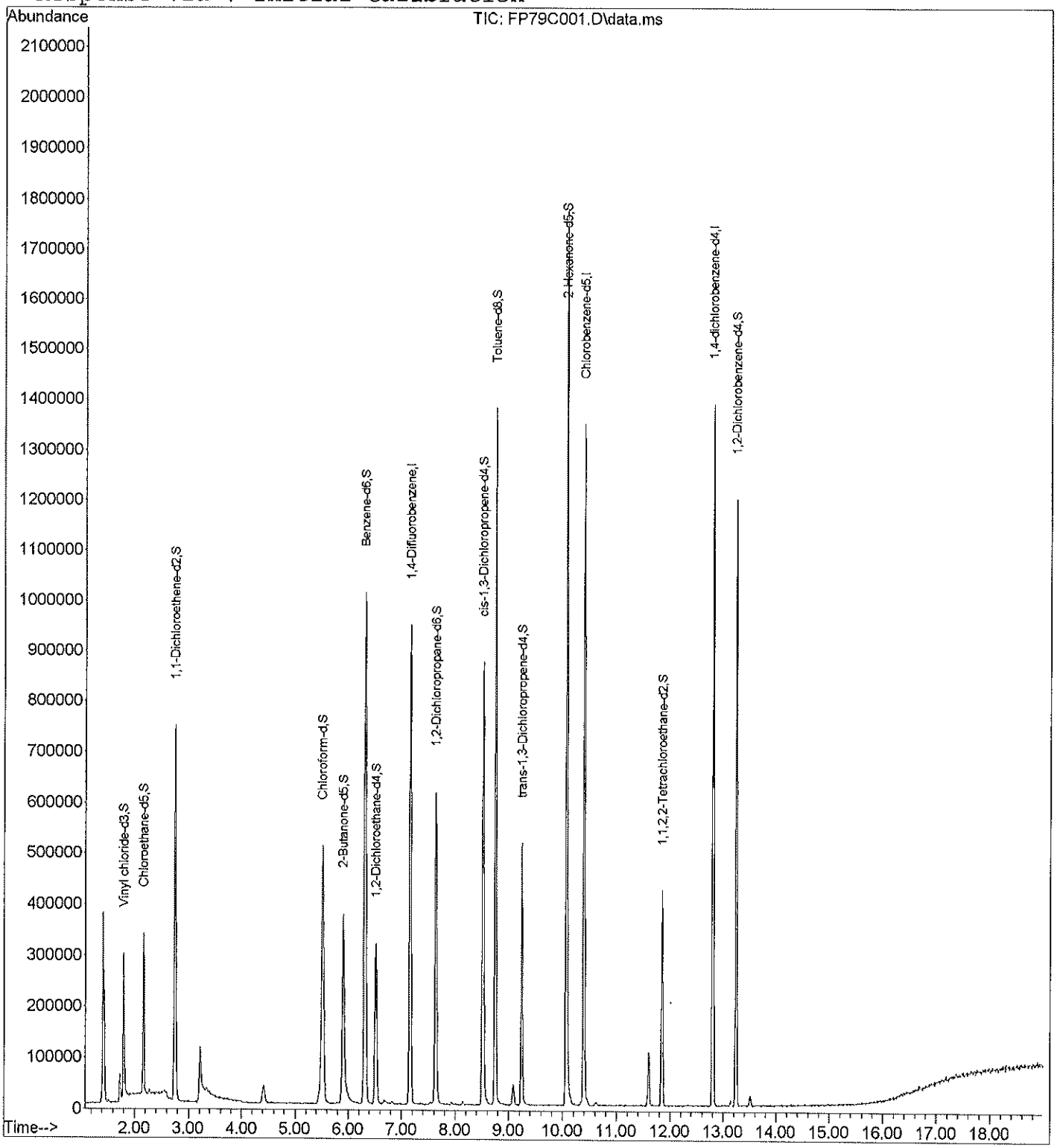
Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP79C001.D
Acq Time : 09/11/2019 08:14
Sample : 1925562001 TB-090519
Misc : 1925562 A
MS Integration Params: rteint.p

Vial: 4
Operator: CQC
Inst : 5975-F
Multiplr: 1.00
Column ID: Rtx-VMS

Quant Time: Sep 11 08:45:02 2019 Results File: FTRACEG5.RES

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Sep 05 08:18:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP79C001.D Vial: 4
Acq Time : 09/11/2019 08:14 Operator: CQC
Sample : 1925562001 TB-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 08:45:02 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.16	114	881661	5.0000 ug/L	93.70
28) Chlorobenzene-d5	10.40	117	751727	5.0000 ug/L	98.33
60) 1,4-dichlorobenzene-d4	12.80	152	367326	5.0000 ug/L	91.82
System Monitoring Compounds					**%Recovery**
5) Vinyl chloride-d3	1.80	65	293409	4.8909 ug/L	97.82%
8) Chloroethane-d5	2.17	69	234957	4.8666 ug/L	97.33%
11) 1,1-Dichloroethene-d2	2.75	63	533067	4.4059 ug/L	88.12%
22) 2-Butanone-d5	5.90	46	793909	55.3730 ug/L	110.75%
25) Chloroform-d	5.52	84	586933	5.2742 ug/L	105.48%
27) 1,2-Dichloroethane-d4	6.51	65	285262	5.4555 ug/L	109.11%
33) Benzene-d6	6.31	84	1126699	5.0822 ug/L	101.64%
37) 1,2-Dichloropropane-d6	7.64	67	299535	5.0598 ug/L	101.20%
40) cis-1,3-Dichloropropene-d4	8.51	79	479595	4.7267 ug/L	94.53%
42) trans-1,3-Dichloropropene-	9.24	79	272798	4.6704 ug/L	93.41%
47) Toluene-d8	8.75	98	947465	4.9233 ug/L	98.47%
50) 2-Hexanone-d5	10.07	63	614741	51.1627 ug/L	102.33%
59) 1,1,2,2-Tetrachloroethane-	11.85	84	206910	5.1483 ug/L	102.97%
65) 1,2-Dichlorobenzene-d4	13.24	152	316667	5.0995 ug/L	101.99%
Target Compounds					**Qvalue**
2) Dichlorodifluoromethane	0.00	85		Not Detected	
3) Chloromethane	1.73	50	52025	0.7607 ug/L	99
4) Vinyl chloride	0.00	62		Not Detected	
6) Bromomethane	0.00	94		Not Detected	
7) Chloroethane	0.00	64		Not Detected	
9) Trichlorofluoromethane	0.00	101		Not Detected	
10) 1,1-Dichloroethene	0.00	96		Not Detected	
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101		Not Detected	
13) Acetone	0.00	43		Not Detected	
14) Carbon disulfide	0.00	76		Not Detected	
15) Methyl acetate	0.00	43		Not Detected	
16) Methylene chloride	0.00	84		Not Detected	
17) trans-1,2-Dichloroethene	0.00	96		Not Detected	
18) Methyl tert-butyl ether	0.00	73		Not Detected	
19) 1,1-Dichloroethane	0.00	63		Not Detected	
20) cis-1,2-Dichloroethene	0.00	96		Not Detected	
21) 2-Butanone	0.00	43		Not Detected	
23) Bromochloromethane	0.00	128		Not Detected	
24) Chloroform	0.00	83		Not Detected	
26) 1,2-Dichloroethane	0.00	62		Not Detected	

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

Quantitation Report

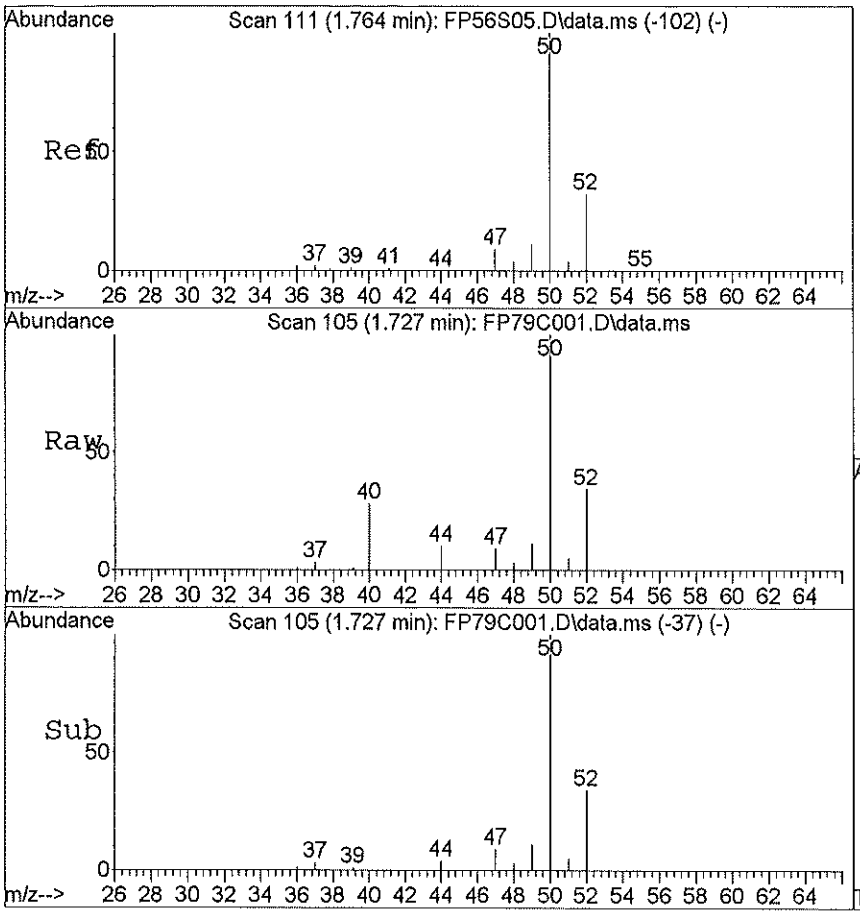
Data File : C:\msdchem\1\data\11SEP19F\FP79C001.D Vial: 4
Acq Time : 09/11/2019 08:14 Operator: CQC
Sample : 1925562001 TB-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 08:45:02 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	1,1,1-Trichloroethane	0.00	97		Not Detected	
30)	Cyclohexane	0.00	56		Not Detected	
31)	Carbon tetrachloride	0.00	117		Not Detected	
32)	Benzene	0.00	78		Not Detected	
34)	Trichloroethene	0.00	130		Not Detected	
35)	Methylcyclohexane	0.00	83		Not Detected	
36)	1,2-Dichloropropane	0.00	63		Not Detected	
38)	Bromodichloromethane	0.00	83		Not Detected	
39)	cis-1,3-Dichloropropene	0.00	75		Not Detected	
41)	trans-1,3-Dichloropropene	0.00	75		Not Detected	
43)	1,1,2-Trichloroethane	0.00	97		Not Detected	
44)	Dibromochloromethane	0.00	129		Not Detected	
45)	4-Methyl-2-pentanone	0.00	43		Not Detected	
46)	Toluene	0.00	91		Not Detected	
48)	Tetrachloroethene	0.00	164		Not Detected	
49)	2-Hexanone	0.00	43		Not Detected	
51)	1,2-Dibromoethane	0.00	107		Not Detected	
52)	Chlorobenzene	0.00	112		Not Detected	
53)	Ethylbenzene	0.00	91		Not Detected	
54)	m,p-Xylene	0.00	106		Not Detected	
55)	o-Xylene	0.00	106		Not Detected	
56)	Styrene	0.00	104		Not Detected	
57)	Isopropylbenzene	0.00	105		Not Detected	
58)	1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61)	Bromoform	0.00	173		Not Detected	
62)	1,3-Dichlorobenzene	0.00	146		Not Detected	
63)	1,4-Dichlorobenzene	0.00	146		Not Detected	
64)	1,2-Dichlorobenzene	0.00	146		Not Detected	
66)	1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67)	1,2,4-Trichlorobenzene	0.00	180		Not Detected	
68)	1,2,3-Trichlorobenzene	0.00	180		Not Detected	

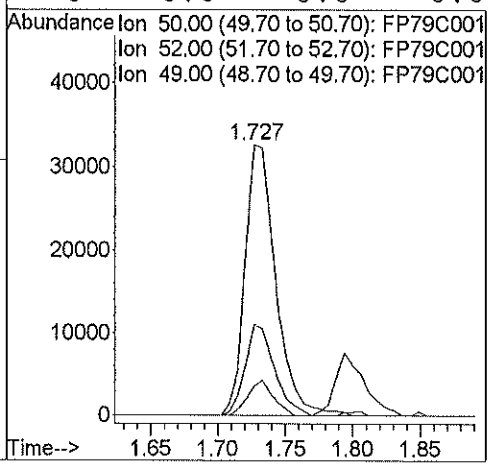
(#) = qualifier out of range (m) = manual integration



#3
Chloromethane
Concen: 0.76 ug/L
RT: 1.73 min Scan# 105
Delta R.T. -0.01 min
Lab File: FP79C001.D
Acq: 09/11/2019 08:14

Tgt Ion:50 Resp: 52025

Ion	Ratio	Lower	Upper
50	100		
52	32.0	12.7	52.7
49	10.8	0.0	30.8
0	0.0	0.0	0.0



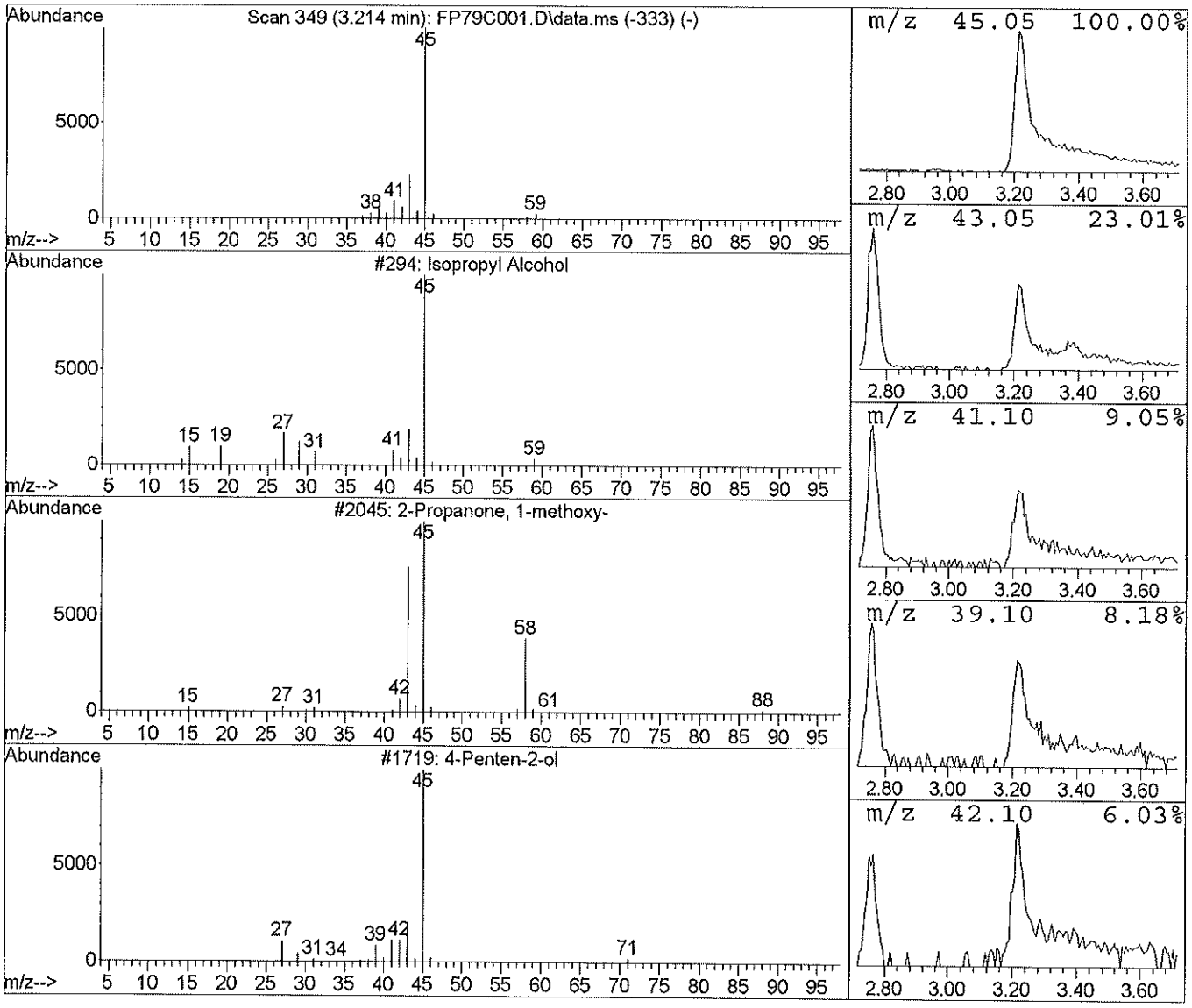
Library Search Compound Report

Data File : C:\msdchem\1\data\11SEP19F\FP79C001.D Vial: 4
Acq Time : 09/11/2019 08:14 Operator: CQC
Sample : 1925562001 TB-090519 Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Library : C:\Database\NIST11.L

R.T.	Conc	Area	Relative to ISTD	ISTD Area
3.21	0.90 ug/L	374777	1,4-Difluorobenzene	2088828

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Isopropyl Alcohol	294	000067-63-0	43.00
2	2-Propanone, 1-methoxy-	2045	005878-19-3	9.00
3	4-Penten-2-ol	1719	000625-31-0	9.00
4	Ethylamine	86	000075-04-7	5.00
5	Formamide	90	000075-12-7	4.00



FORM 6A-OR

GC/MS INITIAL CALIBRATION DATA

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Level: TRACE

Instrument ID: 5975-F Calibration Date(s): 07/17/2019 07/17/2019

GC Column: RTX-VMS ID: 0.25 (mm) Calibration Time(s): 07:11 09:03

Length: 30 (m)

Heated Purge: (Y/N) Y Purge Volume: 25.0 (mL)

LAB FILE ID: FP01S005 RRF0.5 = FP01S005 RRF1 = FP02S01
RRF5 = FP03S05 RRF10 = FP04S10 RRF20 = FP05S20

ANALYTE	RRF0.5	RRF1	RRF5	RRF10	RRF20	$\overline{RRF}$	%RSD
Dichlorodifluoromethane	0.298	0.330	0.269	0.292	0.272	0.292	8.4
Chloromethane	0.415	0.431	0.355	0.383	0.356	0.388	8.9
Vinyl chloride	0.343	0.365	0.309	0.335	0.317	0.334	6.7
Bromomethane	0.233	0.239	0.192	0.209	0.196	0.214	10.0
Chloroethane	0.223	0.241	0.191	0.204	0.193	0.210	10.2
Trichlorofluoromethane	0.499	0.536	0.449	0.492	0.453	0.486	7.4
1,1-Dichloroethene	0.308	0.307	0.268	0.294	0.274	0.290	6.4
1,1,2-Trichloro-1,2,2-trifluoroethane	0.315	0.332	0.281	0.313	0.296	0.307	6.3
Acetone	0.043	0.049	0.040	0.046	0.040	0.044	9.3
Carbon disulfide	0.927	0.972	0.815	0.879	0.834	0.885	7.3
Methyl acetate	0.138	0.135	0.112	0.126	0.115	0.125	9.4
Methylene chloride	0.305	0.324	0.265	0.290	0.271	0.291	8.4
trans-1,2-Dichloroethene	0.318	0.360	0.300	0.336	0.312	0.325	7.1
Methyl tert-butyl ether	0.736	0.776	0.661	0.734	0.698	0.721	6.0
1,1-Dichloroethane	0.610	0.663	0.549	0.617	0.573	0.602	7.2
cis-1,2-Dichloroethene	0.352	0.388	0.313	0.354	0.328	0.347	8.2
2-Butanone	0.082	0.083	0.073	0.082	0.078	0.080	5.4
Bromochloromethane	0.149	0.158	0.142	0.157	0.145	0.150	4.8
Chloroform	0.589	0.652	0.527	0.589	0.552	0.582	8.1
1,1,1-Trichloroethane	0.648	0.717	0.603	0.682	0.645	0.659	6.5
Cyclohexane	0.738	0.737	0.669	0.765	0.724	0.727	4.9
Carbon tetrachloride	0.602	0.636	0.566	0.652	0.622	0.616	5.4
Benzene	1.398	1.548	1.327	1.530	1.442	1.449	6.3
1,2-Dichloroethane	0.361	0.397	0.342	0.386	0.364	0.370	5.8
Trichloroethene	0.441	0.476	0.418	0.483	0.455	0.455	5.7
Methylcyclohexane	0.794	0.698	0.616	0.702	0.656	0.693	9.6
1,2-Dichloropropane	0.349	0.382	0.337	0.377	0.360	0.361	5.2
Bromodichloromethane	0.478	0.537	0.462	0.531	0.502	0.502	6.5
cis-1,3-Dichloropropene	0.510	0.556	0.509	0.592	0.576	0.549	6.9
4-Methyl-2-Pentanone	0.236	0.255	0.221	0.255	0.241	0.242	5.9
Toluene	1.341	1.517	1.343	1.568	1.499	1.454	7.2
trans-1,3-Dichloropropene	0.399	0.459	0.411	0.472	0.446	0.437	7.2
1,1,2-Trichloroethane	0.208	0.240	0.208	0.239	0.223	0.224	7.1
Tetrachloroethene	0.294	0.321	0.285	0.330	0.313	0.309	6.1

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Level: TRACE

Instrument ID: 5975-F Calibration Date(s): 07/17/2019 07/17/2019

GC Column: RTX-VMS ID: 0.25 (mm) Calibration Time(s): 07:11 09:03

Length: 30 (m)

Heated Purge: (Y/N) Y Purge Volume: 25.0 (mL)

LAB FILE ID: FP01S005 RRF0.5 = FP01S005 RRF1 = FP02S01
RRF5 = FP03S05 RRF10 = FP04S10 RRF20 = FP05S20

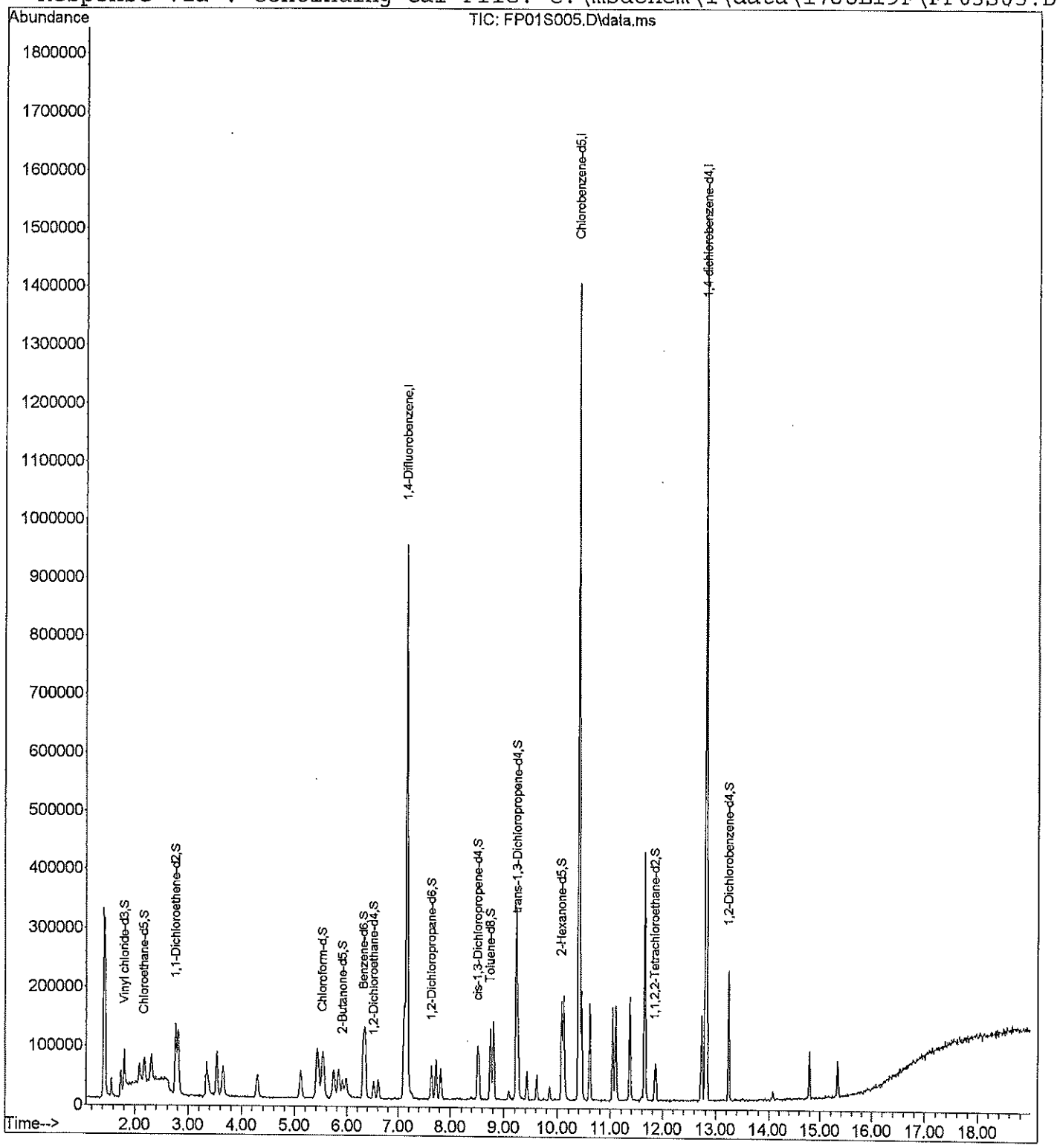
ANALYTE	RRF0.5	RRF1	RRF5	RRF10	RRF20	$\overline{RRF}$	%RSD
2-Hexanone	0.184	0.196	0.166	0.186	0.166	0.180	7.4
Dibromochloromethane	0.320	0.344	0.309	0.349	0.330	0.330	5.0
1,2-Dibromoethane	0.214	0.251	0.210	0.237	0.219	0.226	7.7
Chlorobenzene	0.924	1.067	0.891	1.031	0.969	0.976	7.5
Ethylbenzene	1.610	1.745	1.504	1.748	1.622	1.646	6.2
o-Xylene	0.599	0.670	0.579	0.684	0.627	0.632	7.1
m,p-Xylene	0.625	0.693	0.594	0.700	0.644	0.651	6.9
Styrene	0.976	1.083	0.940	1.088	0.999	1.017	6.5
Bromoform	0.352	0.370	0.330	0.382	0.374	0.362	5.7
Isopropylbenzene	1.553	1.706	1.515	1.754	1.616	1.629	6.2
1,1,2,2-Tetrachloroethane	0.267	0.285	0.247	0.276	0.244	0.264	6.8
1,3-Dichlorobenzene	1.450	1.558	1.380	1.599	1.518	1.501	5.8
1,4-Dichlorobenzene	1.466	1.654	1.417	1.621	1.543	1.540	6.5
1,2-Dichlorobenzene	1.274	1.402	1.237	1.411	1.323	1.329	5.8
1,2-Dibromo-3-chloropropane	0.087	0.091	0.081	0.094	0.086	0.088	5.9
1,2,4-Trichlorobenzene	0.580	0.674	0.626	0.736	0.630	0.649	9.1
1,2,3-Trichlorobenzene	0.479	0.517	0.477	0.542	0.479	0.499	5.9
Vinyl chloride-d3	0.331	0.319	0.389	0.341	0.321	0.340	8.4
Chloroethane-d5	0.313	0.280	0.285	0.252	0.239	0.274	10.7
1,1-Dichloroethene-d2	0.692	0.688	0.663	0.715	0.673	0.686	2.9
2-Butanone-d5	0.077	0.080	0.077	0.089	0.084	0.081	6.4
Chloroform-d	0.614	0.659	0.604	0.658	0.621	0.631	4.1
1,2-Dichloroethane-d4	0.288	0.284	0.291	0.319	0.300	0.297	4.7
Benzene-d6	1.358	1.413	1.446	1.617	1.539	1.475	7.0
1,2-Dichloropropane-d6	0.362	0.379	0.390	0.432	0.405	0.394	6.7
Toluene-d8	1.111	1.200	1.274	1.437	1.378	1.280	10.3
trans-1,3-Dichloropropene-d4	0.351	0.369	0.387	0.428	0.408	0.389	7.8
2-Hexanone-d5	0.078	0.082	0.077	0.086	0.076	0.080	5.4
1,1,2,2-Tetrachloroethane-d2	0.264	0.271	0.259	0.286	0.257	0.267	4.4
1,2-Dichlorobenzene-d4	0.776	0.803	0.846	0.930	0.872	0.845	7.1

Quantitation Report

Data File : C:\msdchem\1\data\17JUL19F\FP01S005.D Vial: 2
Acq Time : 07/17/2019 07:11 Operator: CQC
Sample : VSTD0.5TF VSTD0.5TF 0.5 ug/L ICS Inst : 5975-F
Misc : 2.5 uL of 48752; 0.5 uL of 48753, 48755/ Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Jul 17 08:43:39 2019 Results File: FTRACEG5.RES

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 08:43:21 2019
Response via : Continuing Cal File: C:\msdchem\1\data\17JUL19F\FP03S05.D



Quantitation Report

Data File : C:\msdchem\1\data\17JUL19F\FP01S005.D Vial: 2
Acq Time : 07/17/2019 07:11 Operator: CQC
Sample : VSTD0.5TF VSTD0.5TF 0.5 ug/L ICS Inst : 5975-F
Misc : 2.5 uL of 48752; 0.5 uL of 48753, 48755/ Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Jul 17 08:43:39 2019 Results File: FTRACEG5.RES

Quant Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 08:43:21 2019
Response via : Continuing Cal C:\msdchem\1\data\17JUL19F\FP03S05.D
DataAcq Meth : FTRACEG5.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.16	114	922325	5.0000 ug/L	98.02
28) Chlorobenzene-d5	10.40	117	754840	5.0000 ug/L	98.74
60) 1,4-dichlorobenzene-d4	12.80	152	402952	5.0000 ug/L	100.72
System Monitoring Compounds					%Recovery
5) Vinyl chloride-d3	1.80	65	30485	0.4248 ug/L	8.50%#
8) Chloroethane-d5	2.17	69	28897	0.5498 ug/L	11.00%#
11) 1,1-Dichloroethene-d2	2.76	63	63783	0.5216 ug/L	10.43%#
22) 2-Butanone-d5	5.91	46	70808	4.9733 ug/L	9.95%#
25) Chloroform-d	5.52	84	56604	0.5082 ug/L	10.16%#
27) 1,2-Dichloroethane-d4	6.52	65	26588	0.4951 ug/L	9.90%#
33) Benzene-d6	6.31	84	102475	0.4695 ug/L	9.39%#
37) 1,2-Dichloropropane-d6	7.64	67	27346	0.4646 ug/L	9.29%#
40) cis-1,3-Dichloropropene-d4	8.51	79	45524	0.4504 ug/L	9.01%
42) trans-1,3-Dichloropropene-	9.24	79	26509	0.4540 ug/L	9.08%#
47) Toluene-d8	8.75	98	83862	0.4359 ug/L	8.72%#
50) 2-Hexanone-d5	10.07	63	58844	5.0450 ug/L	10.09%#
59) 1,1,2,2-Tetrachloroethane-	11.85	84	19915	0.5094 ug/L	10.19%#
65) 1,2-Dichlorobenzene-d4	13.24	152	31258	0.4586 ug/L	9.17%#
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.56	85	27461	0.5532 ug/L #	96
3) Chloromethane	1.73	50	38297	0.5856 ug/L	99
4) Vinyl chloride	1.80	62	31672	0.5555 ug/L	97
6) Bromomethane	2.09	94	21528	0.6065 ug/L	96
7) Chloroethane	2.18	64	20560	0.5838 ug/L	98
9) Trichlorofluoromethane	2.31	101	45984	0.5551 ug/L	99
10) 1,1-Dichloroethene	2.76	96	28432	0.5743 ug/L	94
12) 1,1,2-Trichloro-1,2,2-trif	2.81	101	29036	0.5593 ug/L	94
13) Acetone	3.39	43	39289	5.3660 ug/L	99
14) Carbon disulfide	2.81	76	85461	0.5684 ug/L	82
15) Methyl acetate	3.53	43	12774	0.6187 ug/L	86
16) Methylene chloride	3.34	84	28090	0.5756 ug/L	97
17) trans-1,2-Dichloroethene	3.53	96	29365	0.5298 ug/L	93
18) Methyl tert-butyl ether	3.65	73	67865	0.5568 ug/L	96
19) 1,1-Dichloroethane	4.30	63	56258	0.5550 ug/L	99
20) cis-1,2-Dichloroethene	5.11	96	32487	0.5621 ug/L	98
21) 2-Butanone	5.98	43	75536	5.6237 ug/L	93
23) Bromochloromethane	5.42	128	13718	0.5251 ug/L	94
24) Chloroform	5.55	83	54367	0.5597 ug/L	97
26) 1,2-Dichloroethane	6.61	62	33306	0.5275 ug/L	99

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

Quantitation Report

Data File : C:\msdchem\1\data\17JUL19F\FP01S005.D Vial: 2
Acq Time : 07/17/2019 07:11 Operator: CQC
Sample : VSTD0.5TF VSTD0.5TF 0.5 ug/L ICS Inst : 5975-F
Misc : 2.5 uL of 48752; 0.5 uL of 48753, 48755/ Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Jul 17 08:43:39 2019 Results File: FTRACEG5.RES

Quant Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 08:43:21 2019
Response via : Continuing Cal C:\msdchem\1\data\17JUL19F\FP03S05.D
DataAcq Meth : FTRACEG5.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	1,1,1-Trichloroethane	5.84	97	48899	0.5368 ug/L	100
30)	Cyclohexane	5.44	56	55700	0.5512 ug/L	97
31)	Carbon tetrachloride	5.74	117	45476	0.5324 ug/L	98
32)	Benzene	6.35	78	105555	0.5269 ug/L	98
34)	Trichloroethene	7.12	130	33289	0.5270 ug/L	95
35)	Methylcyclohexane	7.11	83	59968	0.6453 ug/L	88
36)	1,2-Dichloropropane	7.73	63	26376	0.5184 ug/L	91
38)	Bromodichloromethane	7.82	83	36102	0.5173 ug/L	100
39)	cis-1,3-Dichloropropene	8.54	75	38504	0.5011 ug/L	89
41)	trans-1,3-Dichloropropene	9.26	75	30110	0.4852 ug/L #	79
43)	1,1,2-Trichloroethane	9.43	97	15703	0.5001 ug/L	100
44)	Dibromochloromethane	9.62	129	24146	0.5172 ug/L	98
45)	4-Methyl-2-pentanone	9.22	43	178428	5.3405 ug/L	97
46)	Toluene	8.81	91	101260	0.4996 ug/L	99
48)	Tetrachloroethene	9.23	164	22160	0.5146 ug/L	98
49)	2-Hexanone	10.11	43	138926	5.5412 ug/L	97
51)	1,2-Dibromoethane	9.85	107	16149	0.5095 ug/L #	97
52)	Chlorobenzene	10.41	112	69717	0.5181 ug/L	88
53)	Ethylbenzene	10.45	91	121513	0.5352 ug/L	100
54)	m,p-Xylene	10.60	106	47170	0.5261 ug/L	98
55)	o-Xylene	11.05	106	45197	0.5173 ug/L	97
56)	Styrene	11.10	104	73635	0.5187 ug/L	89
57)	Isopropylbenzene	11.37	105	117216	0.5124 ug/L	98
58)	1,1,2,2-Tetrachloroethane	11.87	83	20122	0.5405 ug/L	97
61)	Bromoform	11.12	173	14169	0.5320 ug/L	97
62)	1,3-Dichlorobenzene	12.72	146	58429	0.5254 ug/L	100
63)	1,4-Dichlorobenzene	12.82	146	59076	0.5171 ug/L #	64
64)	1,2-Dichlorobenzene	13.25	146	51322	0.5146 ug/L	97
66)	1,2-Dibromo-3-chloropropan	14.08	75	3509	0.5398 ug/L	98
67)	1,2,4-Trichlorobenzene	14.80	180	23384	0.4632 ug/L	96
68)	1,2,3-Trichlorobenzene	15.33	180	19298	0.5024 ug/L	93

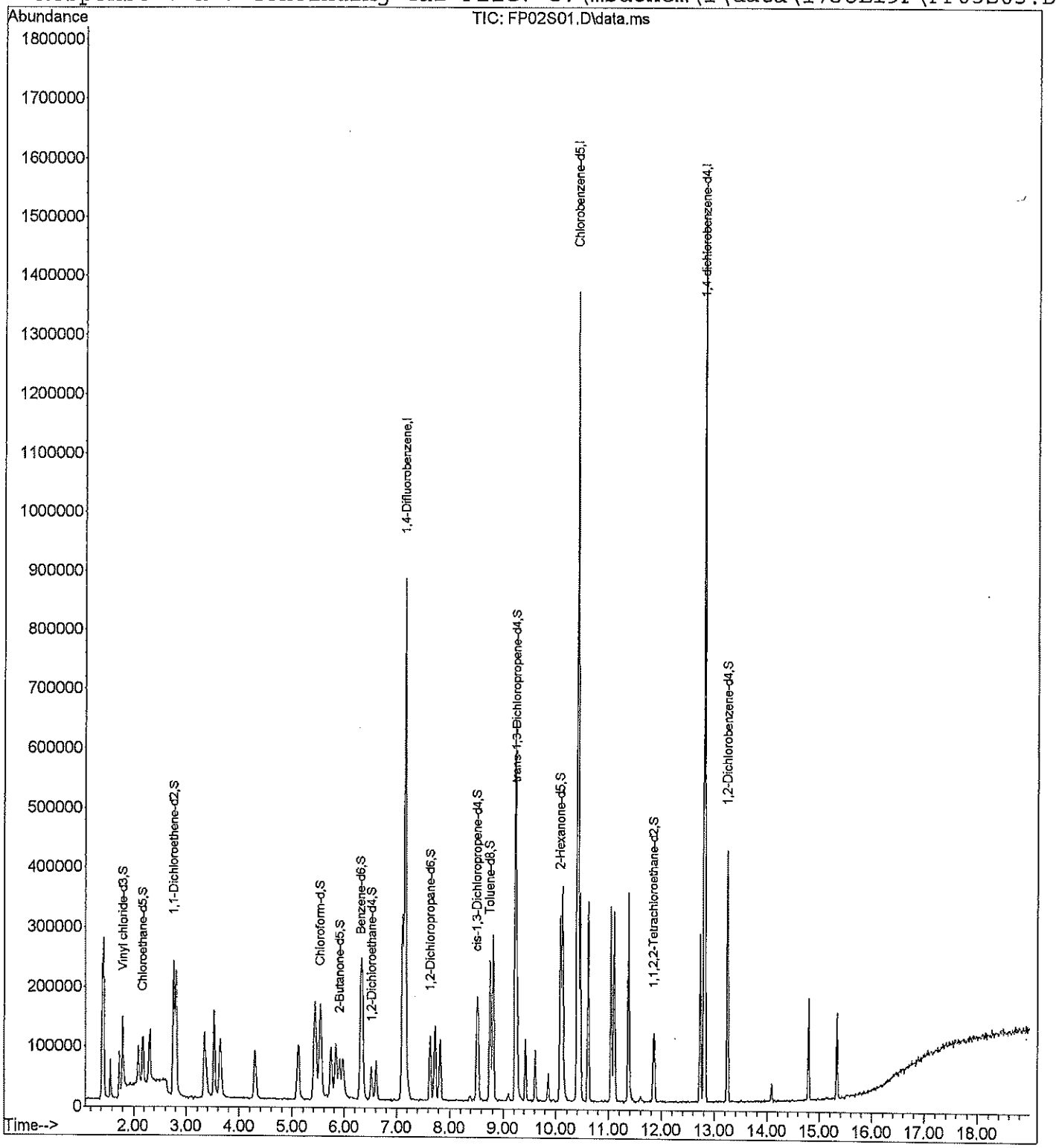
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\msdchem\1\data\17JUL19F\FP02S01.D Vial: 3
Acq Time : 07/17/2019 07:39 Operator: CQC
Sample : VSTD001TF VSTD001TF 1.0 ug/L ICS Inst : 5975-F
Misc : 2.5 uL of 48752; 1.0 uL of 48753, 48755/ Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Jul 17 08:43:52 2019 Results File: FTRACEG5.RES

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 08:43:21 2019
Response via : Continuing Cal File: C:\msdchem\1\data\17JUL19F\FP03S05.D



Quantitation Report

Data File : C:\msdchem\1\data\17JUL19F\FP02S01.D Vial: 3
Acq Time : 07/17/2019 07:39 Operator: CQC
Sample : VSTD001TF VSTD001TF 1.0 ug/L ICS Inst : 5975-F
Misc : 2.5 uL of 48752; 1.0 uL of 48753, 48755/ Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Jul 17 08:43:52 2019 Results File: FTRACEG5.RES

Quant Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 08:43:21 2019
Response via : Continuing Cal C:\msdchem\1\data\17JUL19F\FP03S05.D
DataAcq Meth : FTRACEG5.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.16	114	850807	5.0000 ug/L	90.42
28) Chlorobenzene-d5	10.40	117	693439	5.0000 ug/L	90.71
60) 1,4-dichlorobenzene-d4	12.80	152	365370	5.0000 ug/L	91.33
System Monitoring Compounds					%Recovery
5) Vinyl chloride-d3	1.79	65	54269	0.8198 ug/L	16.40%#
8) Chloroethane-d5	2.17	69	47616	0.9821 ug/L	19.64%#
11) 1,1-Dichloroethene-d2	2.76	63	117085	1.0380 ug/L	20.76%#
22) 2-Butanone-d5	5.91	46	135282	10.3004 ug/L	20.60%#
25) Chloroform-d	5.52	84	112198	1.0921 ug/L	21.84%#
27) 1,2-Dichloroethane-d4	6.52	65	48366	0.9764 ug/L	19.53%#
33) Benzene-d6	6.31	84	195945	0.9772 ug/L	19.54%#
37) 1,2-Dichloropropane-d6	7.64	67	52628	0.9734 ug/L	19.47%#
40) cis-1,3-Dichloropropene-d4	8.51	79	88036	0.9482 ug/L	18.96%
42) trans-1,3-Dichloropropene-	9.24	79	51230	0.9550 ug/L	19.10%#
47) Toluene-d8	8.75	98	166362	0.9413 ug/L	18.83%#
50) 2-Hexanone-d5	10.07	63	114218	10.6596 ug/L	21.32%#
59) 1,1,2,2-Tetrachloroethane-	11.85	84	37606	1.0470 ug/L	20.94%#
65) 1,2-Dichlorobenzene-d4	13.24	152	58704	0.9498 ug/L	19.00%#
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.56	85	56171	1.2267 ug/L #	98
3) Chloromethane	1.73	50	73318	1.2153 ug/L	97
4) Vinyl chloride	1.80	62	62178	1.1822 ug/L	96
6) Bromomethane	2.09	94	40672	1.2422 ug/L	98
7) Chloroethane	2.18	64	41041	1.2634 ug/L	95
9) Trichlorofluoromethane	2.31	101	91178	1.1932 ug/L	96
10) 1,1-Dichloroethene	2.76	96	52307	1.1453 ug/L	94
12) 1,1,2-Trichloro-1,2,2-trif	2.80	101	56431	1.1784 ug/L	98
13) Acetone	3.38	43	84004	12.4375 ug/L	96
14) Carbon disulfide	2.81	76	165323	1.1920 ug/L	89
15) Methyl acetate	3.53	43	22910	1.2029 ug/L	88
16) Methylene chloride	3.34	84	55134	1.2248 ug/L	98
17) trans-1,2-Dichloroethene	3.53	96	61217	1.1974 ug/L	100
18) Methyl tert-butyl ether	3.65	73	132022	1.1743 ug/L	98
19) 1,1-Dichloroethane	4.29	63	112863	1.2071 ug/L	99
20) cis-1,2-Dichloroethene	5.11	96	66062	1.2392 ug/L	95
21) 2-Butanone	5.98	43	141172	11.3937 ug/L	97
23) Bromochloromethane	5.42	128	26843	1.1138 ug/L	94
24) Chloroform	5.54	83	110864	1.2374 ug/L	94
26) 1,2-Dichloroethane	6.61	62	67491	1.1587 ug/L	100

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

Quantitation Report

Data File : C:\msdchem\1\data\17JUL19F\FP02S01.D Vial: 3
Acq Time : 07/17/2019 07:39 Operator: CQC
Sample : VSTD001TF VSTD001TF 1.0 ug/L ICS Inst : 5975-F
Misc : 2.5 uL of 48752; 1.0 uL of 48753, 48755/ Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Jul 17 08:43:52 2019 Results File: FTRACEG5.RES

Quant Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 08:43:21 2019
Response via : Continuing Cal C:\msdchem\1\data\17JUL19F\FP03S05.D
DataAcq Meth : FTRACEG5.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
29)	1,1,1-Trichloroethane	5.83	97	99378	1.1876 ug/L		95
30)	Cyclohexane	5.43	56	102171	1.1006 ug/L		94
31)	Carbon tetrachloride	5.74	117	88153	1.1234 ug/L		99
32)	Benzene	6.34	78	214658	1.1663 ug/L		96
34)	Trichloroethene	7.12	130	66002	1.1375 ug/L	#	85
35)	Methylcyclohexane	7.10	83	96834	1.1342 ug/L		93
36)	1,2-Dichloropropane	7.73	63	53007	1.1340 ug/L		94
38)	Bromodichloromethane	7.82	83	74542	1.1628 ug/L		99
39)	cis-1,3-Dichloropropene	8.54	75	77074	1.0918 ug/L		92
41)	trans-1,3-Dichloropropene	9.26	75	63653	1.1165 ug/L		91
43)	1,1,2-Trichloroethane	9.43	97	33326	1.1553 ug/L		97
44)	Dibromochloromethane	9.62	129	47663	1.1114 ug/L		98
45)	4-Methyl-2-pentanone	9.22	43	354129	11.5379 ug/L		99
46)	Toluene	8.80	91	210394	1.1299 ug/L		99
48)	Tetrachloroethene	9.23	164	44537	1.1259 ug/L		99
49)	2-Hexanone	10.11	43	271582	11.7915 ug/L		99
51)	1,2-Dibromoethane	9.85	107	34848	1.1969 ug/L		96
52)	Chlorobenzene	10.41	112	147950	1.1970 ug/L		96
53)	Ethylbenzene	10.45	91	241982	1.1602 ug/L		98
54)	m,p-Xylene	10.60	106	96106	1.1668 ug/L		98
55)	o-Xylene	11.04	106	92906	1.1576 ug/L		99
56)	Styrene	11.10	104	150131	1.1513 ug/L		90
57)	Isopropylbenzene	11.37	105	236608	1.1259 ug/L		97
58)	1,1,2,2-Tetrachloroethane	11.87	83	39549	1.1564 ug/L		98
61)	Bromoform	11.12	173	27066	1.1208 ug/L		99
62)	1,3-Dichlorobenzene	12.72	146	113839	1.1288 ug/L		99
63)	1,4-Dichlorobenzene	12.82	146	120899	1.1672 ug/L	#	87
64)	1,2-Dichlorobenzene	13.26	146	102477	1.1333 ug/L		97
66)	1,2-Dibromo-3-chloropropan	14.08	75	6664	1.1307 ug/L		98
67)	1,2,4-Trichlorobenzene	14.80	180	49272	1.0764 ug/L		99
68)	1,2,3-Trichlorobenzene	15.33	180	37771	1.0845 ug/L		97

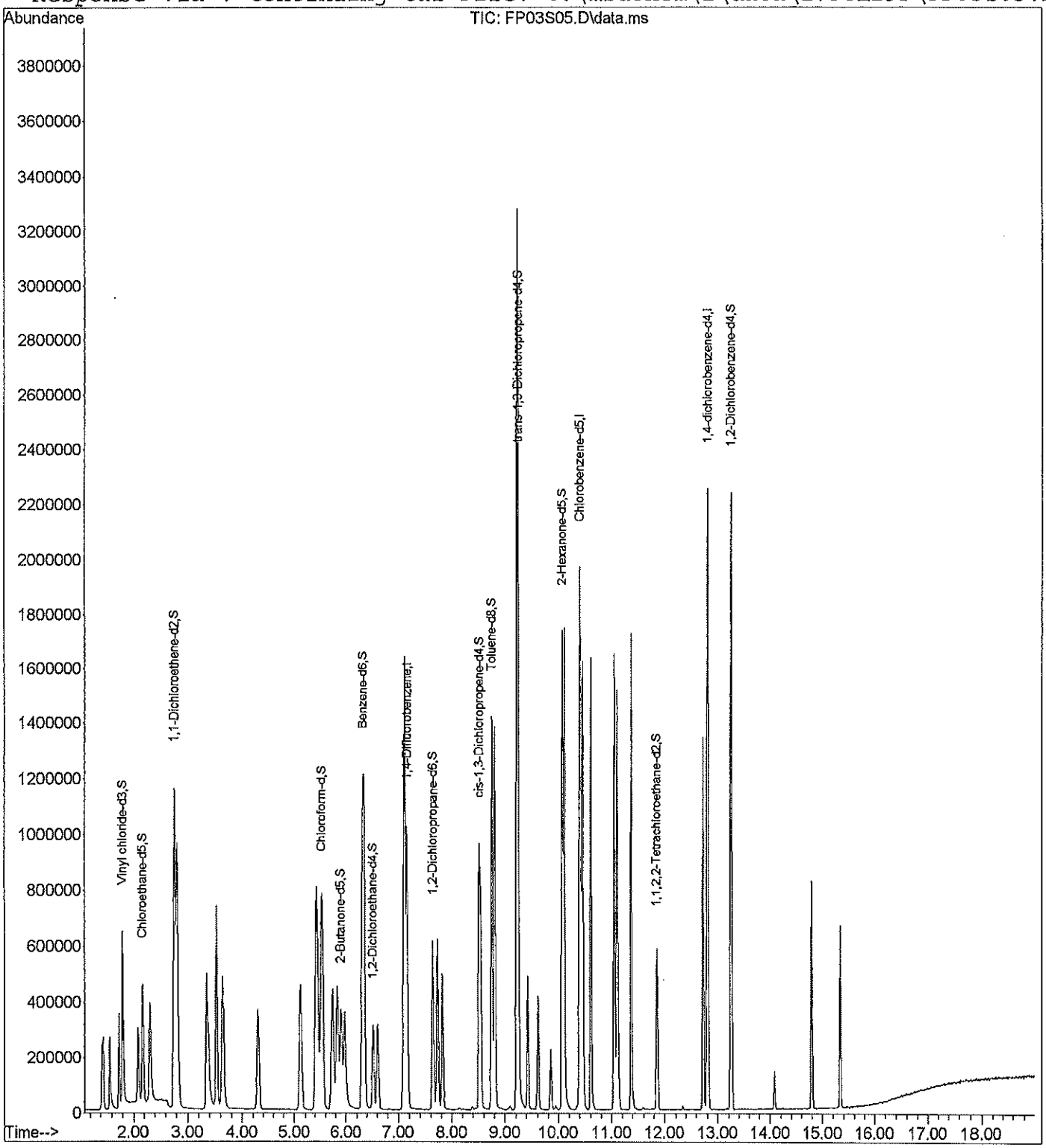
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\msdchem\1\data\17JUL19F\FP03S05.D Vial: 4
Acq Time : 07/17/2019 08:07 Operator: CQC
Sample : VSTD005TF VSTD005TF 5.0 ug/L ICS Inst : 5975-F
Misc : 2.5 uL of 48752; 5.0 uL of 48753, 48755/ Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Jul 17 08:43:30 2019 Results File: FTRACEG5.RES

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 08:43:21 2019
Response via : Continuing Cal File: C:\msdchem\1\data\17JUL19F\FP03S05.D



Quantitation Report

Data File : C:\msdchem\1\data\17JUL19F\FP03S05.D Vial: 4
Acq Time : 07/17/2019 08:07 Operator: CQC
Sample : VSTD005TF VSTD005TF 5.0 ug/L ICS Inst : 5975-F
Misc : 2.5 uL of 48752; 5.0 uL of 48753, 48755/ Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Jul 17 08:43:30 2019 Results File: FTRACEG5.RES

Quant Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 08:43:21 2019
Response via : Continuing Cal C:\msdchem\1\data\17JUL19F\FP03S05.D
DataAcq Meth : FTRACEG5.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.16	114	940986	5.0000 ug/L	100.00
28) Chlorobenzene-d5	10.40	117	764464	5.0000 ug/L	100.00
60) 1,4-dichlorobenzene-d4	12.80	152	400053	5.0000 ug/L	100.00
System Monitoring Compounds					%Recovery
5) Vinyl chloride-d3	1.80	65	366052	5.0000 ug/L	100.00%
8) Chloroethane-d5	2.17	69	268107	5.0000 ug/L	100.00%
11) 1,1-Dichloroethene-d2	2.76	63	623798	5.0000 ug/L	100.00%
22) 2-Butanone-d5	5.90	46	726285	50.0000 ug/L	100.00%
25) Chloroform-d	5.52	84	568127	5.0000 ug/L	100.00%
27) 1,2-Dichloroethane-d4	6.52	65	273937	5.0000 ug/L	100.00%
33) Benzene-d6	6.32	84	1105329	5.0000 ug/L	100.00%
37) 1,2-Dichloropropane-d6	7.64	67	298023	5.0000 ug/L	100.00%
40) cis-1,3-Dichloropropene-d4	8.51	79	511784	5.0000 ug/L	100.00%
42) trans-1,3-Dichloropropene-	9.24	79	295687	5.0000 ug/L	100.00%
47) Toluene-d8	8.75	98	974223	5.0000 ug/L	100.00%
50) 2-Hexanone-d5	10.07	63	590627	50.0000 ug/L	100.00%
59) 1,1,2,2-Tetrachloroethane-	11.85	84	197979	5.0000 ug/L	100.00%
65) 1,2-Dichlorobenzene-d4	13.24	152	338360	5.0000 ug/L	100.00%
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.56	85	253223	5.0000 ug/L #	100
3) Chloromethane	1.73	50	333626	5.0000 ug/L	100
4) Vinyl chloride	1.80	62	290838	5.0000 ug/L	100
6) Bromomethane	2.09	94	181057	5.0000 ug/L	100
7) Chloroethane	2.18	64	179641	5.0000 ug/L	100
9) Trichlorofluoromethane	2.31	101	422553	5.0000 ug/L	100
10) 1,1-Dichloroethene	2.76	96	252556	5.0000 ug/L	100
12) 1,1,2-Trichloro-1,2,2-trif	2.81	101	264815	5.0000 ug/L	100
13) Acetone	3.38	43	373499	50.0000 ug/L	100
14) Carbon disulfide	2.81	76	766990	5.0000 ug/L	99
15) Methyl acetate	3.53	43	105322	5.0000 ug/L	98
16) Methylene chloride	3.34	84	248938	5.0000 ug/L	100
17) trans-1,2-Dichloroethene	3.53	96	282725	5.0000 ug/L	100
18) Methyl tert-butyl ether	3.65	73	621707	5.0000 ug/L	100
19) 1,1-Dichloroethane	4.30	63	517050	5.0000 ug/L	100
20) cis-1,2-Dichloroethene	5.11	96	294804	5.0000 ug/L	100
21) 2-Butanone	5.98	43	685180	50.0000 ug/L	100
23) Bromochloromethane	5.41	128	133278	5.0000 ug/L	100
24) Chloroform	5.54	83	495471	5.0000 ug/L	100
26) 1,2-Dichloroethane	6.61	62	322099	5.0000 ug/L	100

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

Quantitation Report

Data File : C:\msdchem\1\data\17JUL19F\FP03S05.D Vial: 4
Acq Time : 07/17/2019 08:07 Operator: CQC
Sample : VSTD005TF VSTD005TF 5.0 ug/L ICS Inst : 5975-F
Misc : 2.5 uL of 48752; 5.0 uL of 48753, 48755/ Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Jul 17 08:43:30 2019 Results File: FTRACEG5.RES

Quant Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 08:43:21 2019
Response via : Continuing Cal C:\msdchem\1\data\17JUL19F\FP03S05.D
DataAcq Meth : FTRACEG5.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	1,1,1-Trichloroethane	5.84	97	461236	5.0000	ug/L	100
30)	Cyclohexane	5.44	56	511691	5.0000	ug/L	97
31)	Carbon tetrachloride	5.74	117	432546	5.0000	ug/L	100
32)	Benzene	6.35	78	1014484	5.0000	ug/L	100
34)	Trichloroethene	7.12	130	319835	5.0000	ug/L	100
35)	Methylcyclohexane	7.10	83	470600	5.0000	ug/L	100
36)	1,2-Dichloropropane	7.73	63	257663	5.0000	ug/L	100
38)	Bromodichloromethane	7.82	83	353371	5.0000	ug/L	100
39)	cis-1,3-Dichloropropene	8.54	75	389122	5.0000	ug/L	100
41)	trans-1,3-Dichloropropene	9.26	75	314265	5.0000	ug/L	99
43)	1,1,2-Trichloroethane	9.43	97	159010	5.0000	ug/L	100
44)	Dibromochloromethane	9.62	129	236397	5.0000	ug/L	100
45)	4-Methyl-2-pentanone	9.22	43	1691817	50.0000	ug/L	100
46)	Toluene	8.80	91	1026364	5.0000	ug/L	100
48)	Tetrachloroethene	9.23	164	218042	5.0000	ug/L	100
49)	2-Hexanone	10.11	43	1269557	50.0000	ug/L	100
51)	1,2-Dibromoethane	9.85	107	160492	5.0000	ug/L	100
52)	Chlorobenzene	10.41	112	681327	5.0000	ug/L	100
53)	Ethylbenzene	10.45	91	1149687	5.0000	ug/L	100
54)	m,p-Xylene	10.60	106	454015	5.0000	ug/L	100
55)	o-Xylene	11.04	106	442400	5.0000	ug/L	100
56)	Styrene	11.10	104	718796	5.0000	ug/L	90
57)	Isopropylbenzene	11.37	105	1158411	5.0000	ug/L	100
58)	1,1,2,2-Tetrachloroethane	11.87	83	188514	5.0000	ug/L	100
61)	Bromoform	11.12	173	132211	5.0000	ug/L	100
62)	1,3-Dichlorobenzene	12.72	146	552093	5.0000	ug/L	100
63)	1,4-Dichlorobenzene	12.82	146	567075	5.0000	ug/L	100
64)	1,2-Dichlorobenzene	13.25	146	495050	5.0000	ug/L	100
66)	1,2-Dibromo-3-chloropropan	14.08	75	32266	5.0000	ug/L	100
67)	1,2,4-Trichlorobenzene	14.80	180	250605	5.0000	ug/L	100
68)	1,2,3-Trichlorobenzene	15.33	180	190663	5.0000	ug/L	100

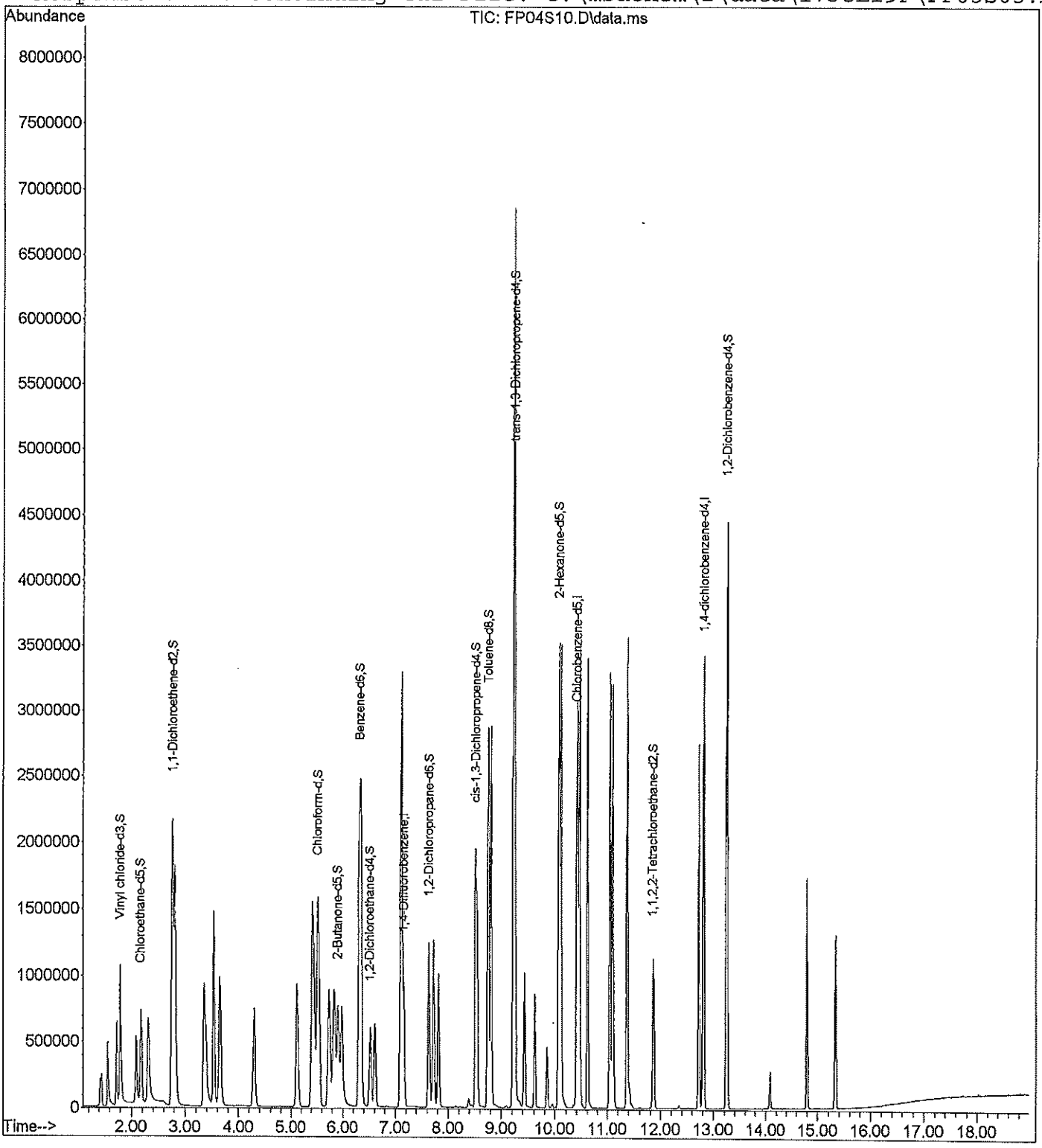
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\msdchem\1\data\17JUL19F\FP04S10.D Vial: 5
Acq Time : 07/17/2019 08:35 Operator: CQC
Sample : VSTD010TF VSTD010TF 10 ug/L ICS Inst : 5975-F
Misc : 2.5 uL of 48752; 10 uL of 48753, 48755/5 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Jul 17 08:54:46 2019 Results File: FTRACEG5.RES

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 08:43:21 2019
Response via : Continuing Cal File: C:\msdchem\1\data\17JUL19F\FP03S05.D



Quantitation Report

Data File : C:\msdchem\1\data\17JUL19F\FP04S10.D Vial: 5
Acq Time : 07/17/2019 08:35 Operator: CQC
Sample : VSTD010TF VSTD010TF 10 ug/L ICS Inst : 5975-F
Misc : 2.5 uL of 48752; 10 uL of 48753, 48755/5 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Jul 17 08:54:46 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 08:43:23 2019
Response via : Continuing Cal C:\msdchem\1\data\17JUL19F\FP03S05.D
DataAcq Meth : FTRACEG5.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.16	114	863860	5.0000 ug/L	91.80
28) Chlorobenzene-d5	10.40	117	685470	5.0000 ug/L	89.67
60) 1,4-dichlorobenzene-d4	12.80	152	358389	5.0000 ug/L	89.59
System Monitoring Compounds					%Recovery
5) Vinyl chloride-d3	1.80	65	589477	8.7707 ug/L	175.41%#
8) Chloroethane-d5	2.17	69	435057	8.8379 ug/L	176.76%#
11) 1,1-Dichloroethene-d2	2.76	63	1235875	10.7905 ug/L	215.81%#
22) 2-Butanone-d5	5.90	46	1541215	115.5755 ug/L	231.15%#
25) Chloroform-d	5.52	84	1136481	10.8950 ug/L	217.90%#
27) 1,2-Dichloroethane-d4	6.52	65	551367	10.9623 ug/L	219.25%#
33) Benzene-d6	6.32	84	2216909	11.1839 ug/L	223.68%#
37) 1,2-Dichloropropane-d6	7.64	67	592223	11.0809 ug/L	221.62%#
40) cis-1,3-Dichloropropene-d4	8.51	79	1024914	11.1671 ug/L	223.34%
42) trans-1,3-Dichloropropene-	9.24	79	586269	11.0561 ug/L	221.12%#
47) Toluene-d8	8.75	98	1970073	11.2762 ug/L	225.52%#
50) 2-Hexanone-d5	10.07	63	1183081	111.6966 ug/L	223.39%#
59) 1,1,2,2-Tetrachloroethane-	11.85	84	392024	11.0416 ug/L	220.83%#
65) 1,2-Dichlorobenzene-d4	13.24	152	666472	10.9935 ug/L	219.87%#
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.56	85	503785	10.8356 ug/L #	99
3) Chloromethane	1.73	50	661171	10.7935 ug/L	98
4) Vinyl chloride	1.80	62	578120	10.8262 ug/L	99
6) Bromomethane	2.09	94	360730	10.8512 ug/L	98
7) Chloroethane	2.18	64	352814	10.6967 ug/L	98
9) Trichlorofluoromethane	2.31	101	849638	10.9512 ug/L	99
10) 1,1-Dichloroethene	2.76	96	507863	10.9521 ug/L	99
12) 1,1,2-Trichloro-1,2,2-trif	2.81	101	541131	11.1293 ug/L	98
13) Acetone	3.38	43	791671	115.4423 ug/L	98
14) Carbon disulfide	2.81	76	1519188	10.7878 ug/L	98
15) Methyl acetate	3.53	43	218144	11.2806 ug/L	97
16) Methylene chloride	3.34	84	501331	10.9684 ug/L	99
17) trans-1,2-Dichloroethene	3.53	96	581062	11.1936 ug/L	100
18) Methyl tert-butyl ether	3.65	73	1268792	11.1151 ug/L	99
19) 1,1-Dichloroethane	4.29	63	1065164	11.2200 ug/L	100
20) cis-1,2-Dichloroethene	5.11	96	612036	11.3072 ug/L	99
21) 2-Butanone	5.97	43	1424553	113.2358 ug/L	99
23) Bromochloromethane	5.42	128	271654	11.1011 ug/L	99
24) Chloroform	5.54	83	1017402	11.1837 ug/L	99
26) 1,2-Dichloroethane	6.61	62	666162	11.2642 ug/L	99

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

Quantitation Report

Data File : C:\msdchem\1\data\17JUL19F\FP04S10.D Vial: 5
Acq Time : 07/17/2019 08:35 Operator: CQC
Sample : VSTD010TF VSTD010TF 10 ug/L ICS Inst : 5975-F
Misc : 2.5 uL of 48752; 10 uL of 48753, 48755/5 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Jul 17 08:54:46 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 08:43:23 2019
Response via : Continuing Cal C:\msdchem\1\data\17JUL19F\FP03S05.D
DataAcq Meth : FTRACEG5.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	1,1,1-Trichloroethane	5.84	97	935330	11.3079 ug/L	100
30)	Cyclohexane	5.43	56	1048977	11.4313 ug/L	97
31)	Carbon tetrachloride	5.74	117	893701	11.5212 ug/L	99
32)	Benzene	6.35	78	2097952	11.5316 ug/L	100
34)	Trichloroethene	7.12	130	661542	11.5337 ug/L	97
35)	Methylcyclohexane	7.10	83	963002	11.4107 ug/L	99
36)	1,2-Dichloropropane	7.73	63	517047	11.1897 ug/L	97
38)	Bromodichloromethane	7.82	83	728177	11.4907 ug/L	99
39)	cis-1,3-Dichloropropene	8.54	75	812111	11.6377 ug/L	99
41)	trans-1,3-Dichloropropene	9.26	75	647499	11.4890 ug/L	100
43)	1,1,2-Trichloroethane	9.43	97	327871	11.4979 ug/L	100
44)	Dibromochloromethane	9.62	129	478590	11.2891 ug/L	99
45)	4-Methyl-2-pentanone	9.23	43	3498445	115.3082 ug/L	99
46)	Toluene	8.80	91	2150038	11.6811 ug/L	100
48)	Tetrachloroethene	9.23	164	452724	11.5780 ug/L	99
49)	2-Hexanone	10.11	43	2552831	112.1265 ug/L	100
51)	1,2-Dibromoethane	9.85	107	325405	11.3060 ug/L	98
52)	Chlorobenzene	10.41	112	1413316	11.5670 ug/L	99
53)	Ethylbenzene	10.45	91	2396749	11.6247 ug/L	99
54)	m,p-Xylene	10.60	106	959491	11.7844 ug/L	98
55)	o-Xylene	11.04	106	937459	11.8161 ug/L	96
56)	Styrene	11.10	104	1491047	11.5671 ug/L	89
57)	Isopropylbenzene	11.37	105	2404100	11.5725 ug/L	99
58)	1,1,2,2-Tetrachloroethane	11.87	83	378152	11.1857 ug/L	99
61)	Bromoform	11.12	173	273568	11.5486 ug/L	99
62)	1,3-Dichlorobenzene	12.72	146	1146331	11.5886 ug/L	99
63)	1,4-Dichlorobenzene	12.82	146	1161897	11.4356 ug/L	98
64)	1,2-Dichlorobenzene	13.25	146	1011090	11.3992 ug/L	100
66)	1,2-Dibromo-3-chloropropan	14.08	75	67400	11.6586 ug/L	97
67)	1,2,4-Trichlorobenzene	14.80	180	527710	11.7527 ug/L	99
68)	1,2,3-Trichlorobenzene	15.33	180	388446	11.3710 ug/L	98

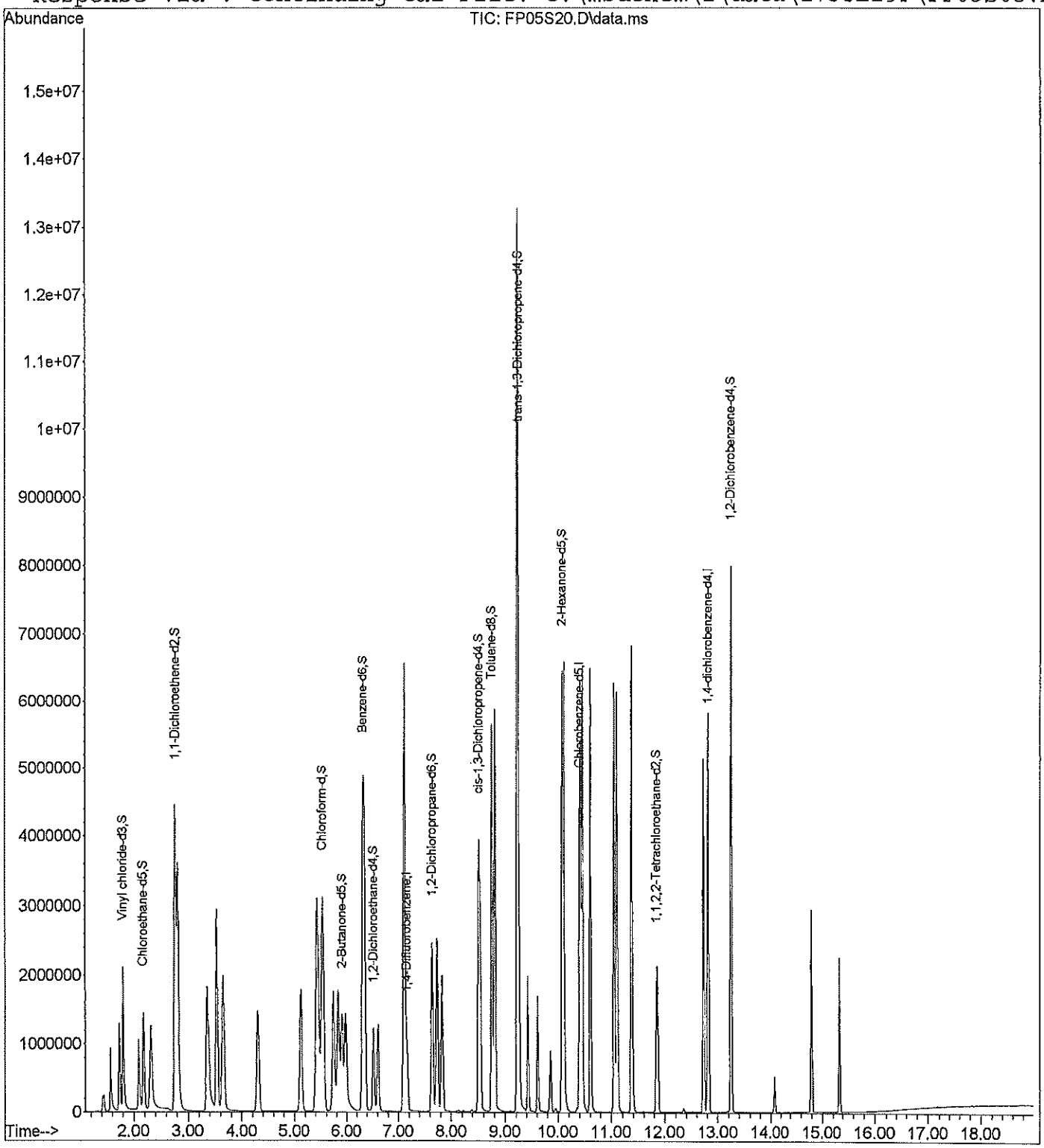
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\msdchem\1\data\17JUL19F\FP05S20.D Vial: 6
Acq Time : 07/17/2019 09:03 Operator: CQC
Sample : VSTD020TF VSTD020TF 20 ug/L ICS Inst : 5975-F
Misc : 2.5 uL of 48752; 20 uL of 48753, 48755/5 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Jul 17 09:22:50 2019 Results File: FTRACEG5.RES

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 08:43:21 2019
Response via : Continuing Cal File: C:\msdchem\1\data\17JUL19F\FP03S05.D



Quantitation Report

Data File : C:\msdchem\1\data\17JUL19F\FP05S20.D Vial: 6
Acq Time : 07/17/2019 09:03 Operator: CQC
Sample : VSTD020TF VSTD020TF 20 ug/L ICS Inst : 5975-F
Misc : 2.5 uL of 48752; 20 uL of 48753, 48755/5 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Jul 17 09:22:50 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 08:43:23 2019
Response via : Continuing Cal C:\msdchem\1\data\17JUL19F\FP03S05.D
DataAcq Meth : FTRACEG5.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Area%
1) 1,4-Difluorobenzene	7.16	114	911877	5.0000	ug/L	96.91
28) Chlorobenzene-d5	10.40	117	717309	5.0000	ug/L	93.83
60) 1,4-dichlorobenzene-d4	12.80	152	350536	5.0000	ug/L	87.62
System Monitoring Compounds						**%Recovery**
5) Vinyl chloride-d3	1.80	65	1172381	16.5251	ug/L	330.50%#
8) Chloroethane-d5	2.17	69	872177	16.7847	ug/L	335.69%#
11) 1,1-Dichloroethene-d2	2.76	63	2454205	20.2994	ug/L	405.99%#
22) 2-Butanone-d5	5.91	46	3059717	217.3657	ug/L	434.73%#
25) Chloroform-d	5.52	84	2264731	20.5678	ug/L	411.36%#
27) 1,2-Dichloroethane-d4	6.52	65	1093999	20.6055	ug/L	412.11%#
33) Benzene-d6	6.32	84	4417133	21.2946	ug/L	425.89%#
37) 1,2-Dichloropropane-d6	7.64	67	1162580	20.7871	ug/L	415.74%#
40) cis-1,3-Dichloropropene-d4	8.51	79	2064259	21.4931	ug/L	429.86%#
42) trans-1,3-Dichloropropene-	9.24	79	1169316	21.0727	ug/L	421.45%#
47) Toluene-d8	8.75	98	3954409	21.6294	ug/L	432.59%#
50) 2-Hexanone-d5	10.07	63	2172725	196.0253	ug/L	392.05%#
59) 1,1,2,2-Tetrachloroethane-	11.85	84	736456	19.8220	ug/L	396.44%#
65) 1,2-Dichlorobenzene-d4	13.24	152	1222143	20.6109	ug/L	412.22%#
Target Compounds						**Qvalue**
2) Dichlorodifluoromethane	1.57	85	992591	20.2248	ug/L #	99
3) Chloromethane	1.73	50	1297910	20.0725	ug/L	99
4) Vinyl chloride	1.81	62	1155447	20.4982	ug/L	98
6) Bromomethane	2.09	94	715409	20.3871	ug/L	99
7) Chloroethane	2.18	64	704009	20.2204	ug/L	98
9) Trichlorofluoromethane	2.31	101	1653341	20.1882	ug/L	99
10) 1,1-Dichloroethene	2.77	96	1000498	20.4397	ug/L	99
12) 1,1,2-Trichloro-1,2,2-trif	2.81	101	1078789	21.0189	ug/L	99
13) Acetone	3.38	43	1471545	203.2830	ug/L	97
14) Carbon disulfide	2.81	76	3043260	20.4723	ug/L	98
15) Methyl acetate	3.53	43	418444	20.4991	ug/L	96
16) Methylene chloride	3.35	84	986734	20.4515	ug/L	99
17) trans-1,2-Dichloroethene	3.53	96	1139233	20.7905	ug/L	99
18) Methyl tert-butyl ether	3.65	73	2546699	21.1353	ug/L	99
19) 1,1-Dichloroethane	4.30	63	2090271	20.8587	ug/L	100
20) cis-1,2-Dichloroethene	5.12	96	1196296	20.9374	ug/L	99
21) 2-Butanone	5.98	43	2826984	212.8804	ug/L	99
23) Bromochloromethane	5.42	128	529773	20.5092	ug/L	98
24) Chloroform	5.54	83	2013019	20.9627	ug/L	99
26) 1,2-Dichloroethane	6.61	62	1328188	21.2759	ug/L	99

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

Quantitation Report

Data File : C:\msdchem\1\data\17JUL19F\FP05S20.D Vial: 6
Acq Time : 07/17/2019 09:03 Operator: CQC
Sample : VSTD020TF VSTD020TF 20 ug/L ICS Inst : 5975-F
Misc : 2.5 uL of 48752; 20 uL of 48753, 48755/5 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Jul 17 09:22:50 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 08:43:23 2019
Response via : Continuing Cal C:\msdchem\1\data\17JUL19F\FP03S05.D
DataAcq Meth : FTRACEG5.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	1,1,1-Trichloroethane	5.84	97	1851235	21.3875	ug/L	99
30)	Cyclohexane	5.44	56	2077722	21.6372	ug/L	98
31)	Carbon tetrachloride	5.74	117	1784526	21.9842	ug/L	98
32)	Benzene	6.35	78	4136424	21.7270	ug/L	100
34)	Trichloroethene	7.12	130	1304989	21.7421	ug/L	97
35)	Methylcyclohexane	7.10	83	1881464	21.3042	ug/L	99
36)	1,2-Dichloropropane	7.73	63	1032496	21.3529	ug/L	97
38)	Bromodichloromethane	7.82	83	1440059	21.7155	ug/L	99
39)	cis-1,3-Dichloropropene	8.54	75	1652162	22.6249	ug/L	99
41)	trans-1,3-Dichloropropene	9.26	75	1279029	21.6873	ug/L	97
43)	1,1,2-Trichloroethane	9.43	97	639884	21.4436	ug/L	99
44)	Dibromochloromethane	9.62	129	945763	21.3187	ug/L	100
45)	4-Methyl-2-pentanone	9.22	43	6923448	218.0669	ug/L	100
46)	Toluene	8.80	91	4301023	22.3301	ug/L	99
48)	Tetrachloroethene	9.23	164	899147	21.9741	ug/L	99
49)	2-Hexanone	10.11	43	4758906	199.7449	ug/L	100
51)	1,2-Dibromoethane	9.85	107	629055	20.8860	ug/L	99
52)	Chlorobenzene	10.41	112	2780450	21.7460	ug/L	98
53)	Ethylbenzene	10.45	91	4653821	21.5700	ug/L	99
54)	m,p-Xylene	10.60	106	1848018	21.6899	ug/L	99
55)	o-Xylene	11.04	106	1798551	21.6635	ug/L	99
56)	Styrene	11.10	104	2866005	21.2467	ug/L	90
57)	Isopropylbenzene	11.37	105	4636366	21.3273	ug/L	99
58)	1,1,2,2-Tetrachloroethane	11.87	83	701141	19.8190	ug/L	97
61)	Bromoform	11.12	173	524027	22.6173	ug/L	99
62)	1,3-Dichlorobenzene	12.72	146	2128705	22.0018	ug/L	99
63)	1,4-Dichlorobenzene	12.82	146	2163404	21.7697	ug/L	97
64)	1,2-Dichlorobenzene	13.25	146	1854712	21.3788	ug/L	100
66)	1,2-Dibromo-3-chloropropan	14.08	75	120266	21.2693	ug/L	98
67)	1,2,4-Trichlorobenzene	14.80	180	883489	20.1171	ug/L	100
68)	1,2,3-Trichlorobenzene	15.33	180	671245	20.0895	ug/L	98

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

FORM 6A-OR

GC/MS INITIAL CALIBRATION DATA

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Level: TRACE

Instrument ID: 5975-M Calibration Date(s): 08/27/2019 08/27/2019

GC Column: RTX-VMS ID: 0.25 (mm) Calibration Time(s): 07:56 09:48

Length: 30 (m)

Heated Purge: (Y/N) Y Purge Volume: 25.0 (mL)

LAB FILE ID: MR60S005 RRF0.5 = MR60S005 RRF1 = MR61S01

RRF5 = MR62S05 RRF10 = MR63S10 RRF20 = MR64S20

ANALYTE	RRF0.5	RRF1	RRF5	RRF10	RRF20	$\overline{RRF}$	%RSD
Dichlorodifluoromethane	0.352	0.372	0.298	0.297	0.266	0.317	13.8
Chloromethane	0.673	0.697	0.602	0.567	0.505	0.609	12.9
Vinyl chloride	0.461	0.448	0.391	0.368	0.326	0.399	14.1
Bromomethane	0.233	0.241	0.226	0.210	0.186	0.219	10.1
Chloroethane	0.281	0.236	0.200	0.191	0.164	0.214	21.2
Trichlorofluoromethane	0.589	0.568	0.500	0.487	0.424	0.513	12.9
1,1-Dichloroethene	0.388	0.371	0.321	0.311	0.272	0.333	14.1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.409	0.389	0.336	0.316	0.274	0.345	15.9
Acetone	0.015	0.011	0.015	0.016	0.014	0.014	13.2
Carbon disulfide	1.142	1.143	0.978	0.918	0.800	0.996	14.9
Methyl acetate	0.093	0.076	0.071	0.066	0.059	0.073	17.6
Methylene chloride	0.274	0.276	0.277	0.272	0.241	0.268	5.6
trans-1,2-Dichloroethene	0.410	0.411	0.359	0.340	0.304	0.365	12.6
Methyl tert-butyl ether	0.512	0.458	0.501	0.488	0.414	0.475	8.3
1,1-Dichloroethane	0.634	0.684	0.633	0.620	0.568	0.628	6.6
cis-1,2-Dichloroethene	0.366	0.374	0.355	0.352	0.317	0.353	6.2
2-Butanone	0.048	0.044	0.043	0.045	0.034	0.043	12.5
Bromochloromethane	0.145	0.125	0.135	0.131	0.117	0.131	8.1
Chloroform	0.583	0.576	0.546	0.533	0.465	0.541	8.7
1,1,1-Trichloroethane	0.651	0.653	0.643	0.623	0.535	0.621	8.0
Cyclohexane	0.983	0.933	0.857	0.857	0.750	0.876	10.1
Carbon tetrachloride	0.675	0.651	0.629	0.599	0.532	0.617	9.0
Benzene	1.374	1.371	1.353	1.329	1.203	1.326	5.4
1,2-Dichloroethane	0.275	0.281	0.284	0.281	0.254	0.275	4.5
Trichloroethene	0.419	0.435	0.442	0.434	0.387	0.423	5.2
Methylcyclohexane	0.700	0.717	0.652	0.621	0.552	0.649	10.2
1,2-Dichloropropane	0.332	0.299	0.311	0.321	0.301	0.313	4.4
Bromodichloromethane	0.396	0.409	0.403	0.406	0.362	0.395	4.9
cis-1,3-Dichloropropene	0.431	0.433	0.440	0.454	0.400	0.432	4.6
4-Methyl-2-Pentanone	0.165	0.173	0.156	0.171	0.133	0.160	10.2
Toluene	1.372	1.369	1.334	1.360	1.207	1.328	5.2
trans-1,3-Dichloropropene	0.329	0.341	0.331	0.335	0.286	0.324	6.7
1,1,2-Trichloroethane	0.166	0.204	0.172	0.181	0.162	0.177	9.4
Tetrachloroethene	0.314	0.332	0.314	0.313	0.279	0.311	6.2

FORM 6A-OR
GC/MS INITIAL CALIBRATION DATA

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Level: TRACE

Instrument ID: 5975-M Calibration Date(s): 08/27/2019 08/27/2019

GC Column: RTX-VMS ID: 0.25 (mm) Calibration Time(s): 07:56 09:48

Length: 30 (m)

Heated Purge: (Y/N) Y Purge Volume: 25.0 (mL)

LAB FILE ID: MR60S005 RRF0.5 = MR60S005 RRF1 = MR61S01
RRF5 = MR62S05 RRF10 = MR63S10 RRF20 = MR64S20

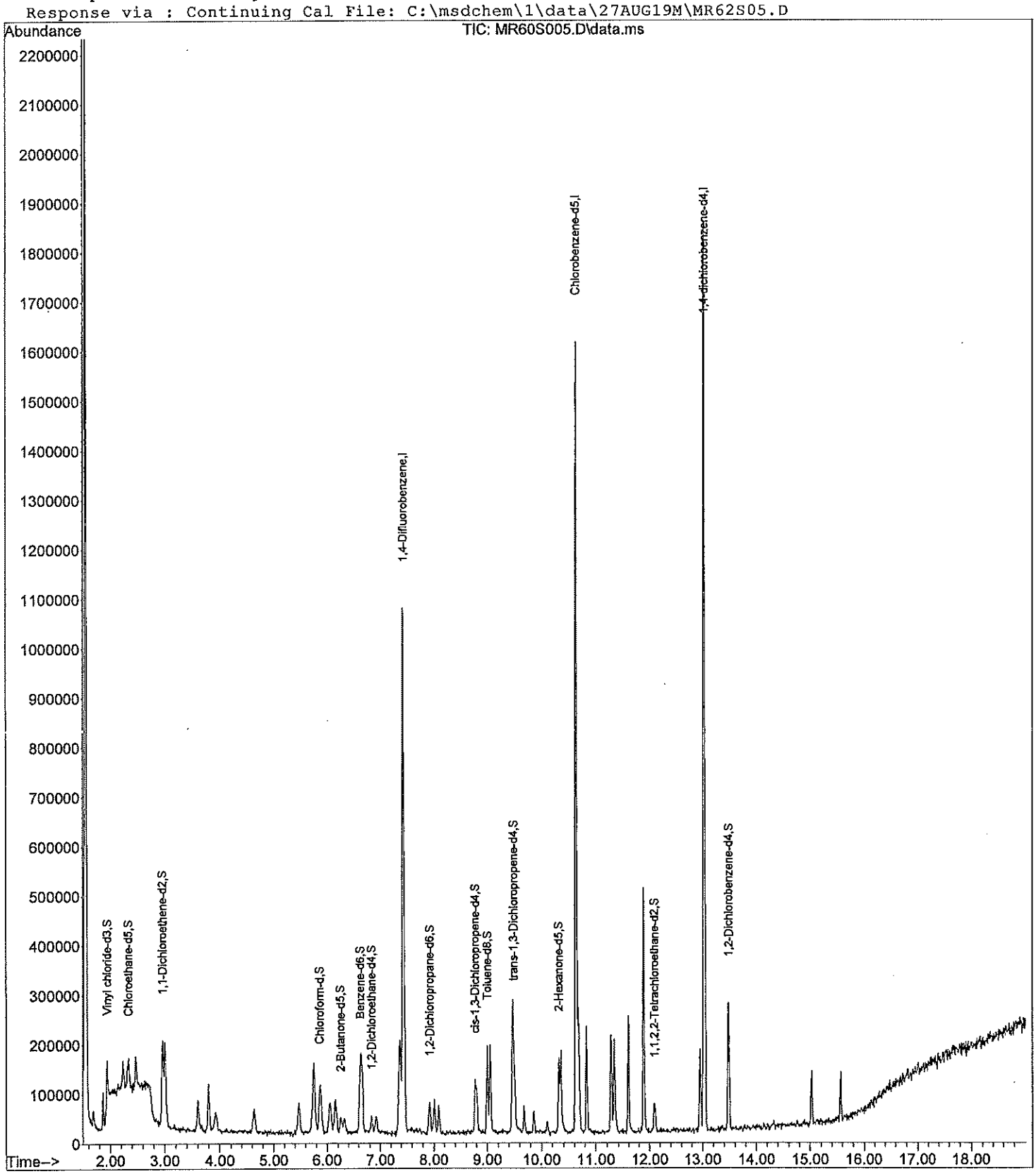
ANALYTE	RRF0.5	RRF1	RRF5	RRF10	RRF20	$\overline{RRF}$	%RSD
2-Hexanone	0.142	0.139	0.113	0.119	0.098	0.122	15.1
Dibromochloromethane	0.269	0.281	0.266	0.277	0.250	0.269	4.5
1,2-Dibromoethane	0.193	0.188	0.182	0.184	0.163	0.182	6.4
Chlorobenzene	0.934	0.943	0.890	0.899	0.813	0.896	5.7
Ethylbenzene	1.624	1.551	1.534	1.515	1.345	1.514	6.8
o-Xylene	0.679	0.599	0.656	0.641	0.551	0.625	8.1
m,p-Xylene	0.694	0.665	0.648	0.648	0.571	0.645	7.0
Styrene	0.979	0.998	0.947	0.953	0.852	0.946	5.9
Bromoform	0.264	0.283	0.272	0.267	0.238	0.265	6.2
Isopropylbenzene	1.769	1.648	1.675	1.630	1.436	1.632	7.5
1,1,2,2-Tetrachloroethane	0.193	0.196	0.179	0.193	0.163	0.185	7.6
1,3-Dichlorobenzene	1.530	1.537	1.532	1.521	1.414	1.507	3.5
1,4-Dichlorobenzene	1.473	1.521	1.483	1.479	1.362	1.464	4.1
1,2-Dichlorobenzene	1.242	1.241	1.227	1.251	1.099	1.212	5.3
1,2-Dibromo-3-chloropropane	0.062	0.056	0.052	0.055	0.045	0.054	11.5
1,2,4-Trichlorobenzene	0.650	0.637	0.639	0.759	0.636	0.664	8.0
1,2,3-Trichlorobenzene	0.477	0.480	0.511	0.596	0.486	0.510	9.8
Vinyl chloride-d3	0.510	0.474	0.388	0.362	0.337	0.414	18.0
Chloroethane-d5	0.310	0.288	0.250	0.220	0.205	0.255	17.5
1,1-Dichloroethene-d2	0.872	0.874	0.779	0.729	0.669	0.785	11.4
2-Butanone-d5	0.055	0.044	0.043	0.050	0.040	0.046	13.4
Chloroform-d	0.644	0.626	0.618	0.584	0.550	0.604	6.2
1,2-Dichloroethane-d4	0.282	0.242	0.236	0.227	0.217	0.241	10.3
Benzene-d6	1.318	1.322	1.416	1.381	1.324	1.352	3.3
1,2-Dichloropropane-d6	0.349	0.329	0.342	0.350	0.335	0.341	2.6
Toluene-d8	1.225	1.180	1.246	1.258	1.172	1.216	3.2
trans-1,3-Dichloropropene-d4	0.322	0.332	0.307	0.314	0.290	0.313	5.0
2-Hexanone-d5	0.056	0.058	0.050	0.054	0.047	0.053	8.2
1,1,2,2-Tetrachloroethane-d2	0.210	0.202	0.197	0.198	0.177	0.197	6.3
1,2-Dichlorobenzene-d4	0.831	0.790	0.804	0.807	0.756	0.797	3.5

Quantitation Report

Data File : C:\msdchem\1\data\27AUG19M\MR60S005.D Vial: 2
Acq Time : 08/27/2019 07:56 Operator: CQC
Sample : VSTD0.5TM VSTD0.5TM 0.5 ug/L ICS Inst : 5975-M
Misc : 2.5 uL of 49433; 1.0 uL of 49434, 49436/ Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Aug 27 10:17:15 2019 Results File: MTRACEA9.RES

Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Tue Aug 27 10:13:48 2019
Response via : Continuing Cal File: C:\msdchem\1\data\27AUG19M\MR62S05.D



Quantitation Report

Data File : C:\msdchem\1\data\27AUG19M\MR60S005.D Vial: 2
Acq Time : 08/27/2019 07:56 Operator: CQC
Sample : VSTD0.5TM VSTD0.5TM 0.5 ug/L ICS Inst : 5975-M
Misc : 2.5 uL of 49433; 1.0 uL of 49434, 49436/ Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Aug 27 10:17:15 2019 Results File: MTRACEA9.RES

Quant Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Tue Aug 27 10:17:13 2019
Response via : Continuing Cal C:\msdchem\1\data\27AUG19M\MR62S05.D
DataAcq Meth : MTRACEA9.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.45	114	1078562	5.0000 ug/L	92.91
28) Chlorobenzene-d5	10.63	117	977536	5.0000 ug/L	98.06
60) 1,4-dichlorobenzene-d4	13.03	152	532866	5.0000 ug/L	102.23
System Monitoring Compounds					%Recovery
5) Vinyl chloride-d3	1.94	65	55049	0.6584 ug/L	13.17%#
8) Chloroethane-d5	2.33	69	33433	0.6194 ug/L	12.39%#
11) 1,1-Dichloroethene-d2	2.96	63	94088	0.5598 ug/L	11.20%#
22) 2-Butanone-d5	6.25	46	59706	6.4182 ug/L	12.84%#
25) Chloroform-d	5.86	84	69500	0.5214 ug/L	10.43%#
27) 1,2-Dichloroethane-d4	6.84	65	30461	0.5975 ug/L	11.95%#
33) Benzene-d6	6.62	84	128871	0.4655 ug/L	9.31%#
37) 1,2-Dichloropropane-d6	7.92	67	34069	0.5090 ug/L	10.18%#
40) cis-1,3-Dichloropropene-d4	8.77	79	58955	0.5209 ug/L	10.42%
42) trans-1,3-Dichloropropene-	9.49	79	31470	0.5248 ug/L	10.50%#
47) Toluene-d8	9.00	98	119765	0.4915 ug/L	9.83%#
50) 2-Hexanone-d5	10.31	63	54844	5.5801 ug/L	11.16%#
59) 1,1,2,2-Tetrachloroethane-	12.08	84	20542	0.5346 ug/L	10.69%#
65) 1,2-Dichlorobenzene-d4	13.47	152	44275	0.5170 ug/L	10.34%#
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.68	85	37948	0.5912 ug/L #	90
3) Chloromethane	1.86	50	72640	0.5593 ug/L	96
4) Vinyl chloride	1.94	62	49722	0.5897 ug/L	89
6) Bromomethane	2.24	94	25179	0.5175 ug/L	93
7) Chloroethane	2.34	64	30350	0.7037 ug/L	93
9) Trichlorofluoromethane	2.47	101	63500	0.5893 ug/L	96
10) 1,1-Dichloroethene	2.96	96	41845	0.6038 ug/L	93
12) 1,1,2-Trichloro-1,2,2-trif	3.00	101	44140	0.6090 ug/L	98
13) Acetone	3.67	43	15818	4.9053 ug/L	93
14) Carbon disulfide	3.00	76	123221	0.5838 ug/L	83
15) Methyl acetate	3.80	43	10070	0.6589 ug/L	88
16) Methylene chloride	3.61	84	29505	0.4940 ug/L	95
17) trans-1,2-Dichloroethene	3.80	96	44192	0.5701 ug/L	92
18) Methyl tert-butyl ether	3.92	73	55207	0.5111 ug/L	95
19) 1,1-Dichloroethane	4.64	63	68372	0.5004 ug/L	87
20) cis-1,2-Dichloroethene	5.47	96	39447	0.5153 ug/L	96
21) 2-Butanone	6.33	43	52145	5.6348 ug/L	95
23) Bromochloromethane	5.77	128	15609	0.5345 ug/L	92
24) Chloroform	5.88	83	62900	0.5342 ug/L	97
26) 1,2-Dichloroethane	6.92	62	29700	0.4842 ug/L	95
29) 1,1,1-Trichloroethane	6.15	97	63595	0.5060 ug/L	99
30) Cyclohexane	5.75	56	96132	0.5735 ug/L	98
31) Carbon tetrachloride	6.05	117	66032	0.5373 ug/L	96
32) Benzene	6.65	78	134336	0.5078 ug/L #	99
34) Trichloroethene	7.39	130	40980	0.4745 ug/L	96
35) Methylcyclohexane	7.36	83	68458	0.5368 ug/L	97
36) 1,2-Dichloropropane	8.01	63	32475	0.5348 ug/L #	80
38) Bromodichloromethane	8.08	83	38745	0.4918 ug/L	94
39) cis-1,3-Dichloropropene	8.80	75	42091	0.4890 ug/L	86
41) trans-1,3-Dichloropropene	9.52	75	32146	0.4965 ug/L	93
43) 1,1,2-Trichloroethane	9.68	97	16234	0.4830 ug/L	94
44) Dibromochloromethane	9.86	129	26332	0.5067 ug/L	95
45) 4-Methyl-2-pentanone	9.47	43	161421	5.2874 ug/L	96
46) Toluene	9.05	91	134147	0.5143 ug/L	97

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

Quantitation Report

Data File : C:\msdchem\1\data\27AUG19M\MR60S005.D Vial: 2
Acq Time : 08/27/2019 07:56 Operator: CQC
Sample : VSTD0.5TM VSTD0.5TM 0.5 ug/L ICS Inst : 5975-M
Misc : 2.5 uL of 49433; 1.0 uL of 49434, 49436/ Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Aug 27 10:17:15 2019 Results File: MTRACEA9.RES

Quant Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Tue Aug 27 10:17:13 2019
Response via : Continuing Cal C:\msdchem\1\data\27AUG19M\MR62S05.D
DataAcq Meth : MTRACEA9.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
48) Tetrachloroethene	9.46	164	30691	0.5001 ug/L	94
49) 2-Hexanone	10.35	43	139243	6.3269 ug/L	95
51) 1,2-Dibromoethane	10.11	107	18895	0.5324 ug/L #	95
52) Chlorobenzene	10.66	112	91282	0.5244 ug/L	86
53) Ethylbenzene	10.69	91	158724	0.5294 ug/L	95
54) m,p-Xylene	10.83	106	67854	0.5353 ug/L	99
55) o-Xylene	11.27	106	66401	0.5178 ug/L	98
56) Styrene	11.33	104	95693	0.5171 ug/L	91
57) Isopropylbenzene	11.59	105	172957	0.5281 ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.11	83	18891	0.5409 ug/L	95
61) Bromoform	11.36	173	14050	0.4842 ug/L	89
62) 1,3-Dichlorobenzene	12.95	146	81529	0.4993 ug/L	97
63) 1,4-Dichlorobenzene	13.05	146	78511	0.4968 ug/L #	69
64) 1,2-Dichlorobenzene	13.48	146	66200	0.5063 ug/L	98
66) 1,2-Dibromo-3-chloropropan	14.32	75	3302	0.5953 ug/L	86
67) 1,2,4-Trichlorobenzene	15.02	180	34646	0.5086 ug/L	98
68) 1,2,3-Trichlorobenzene	15.57	180	25404	0.4661 ug/L	94

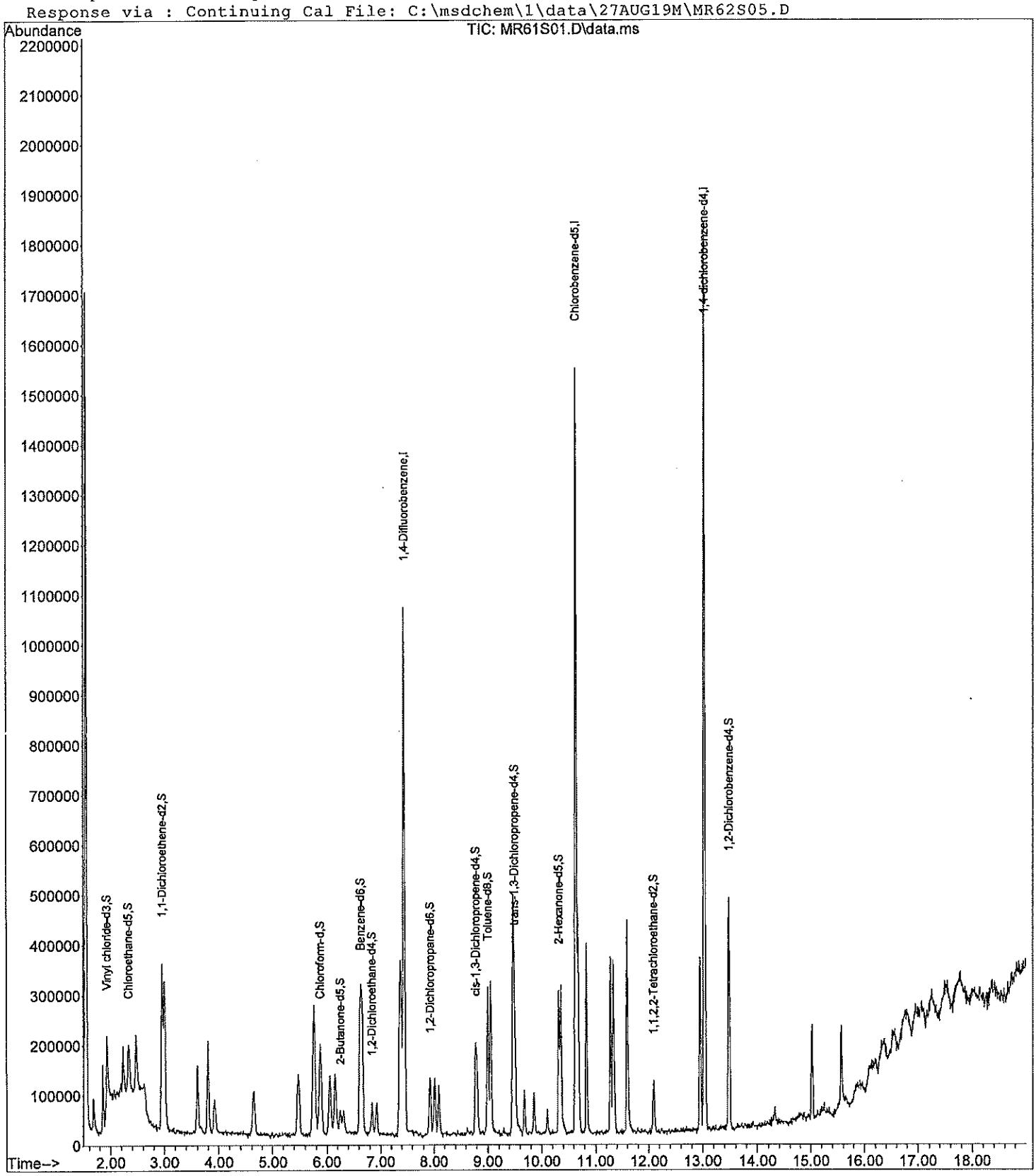
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\msdchem\1\data\27AUG19M\MR61S01.D Vial: 3
Acq Time : 08/27/2019 08:24 Operator: CQC
Sample : VSTD001TM VSTD001TM 1.0 ug/L ICS Inst : 5975-M
Misc : 2.5 uL of 49433; 2.0 uL of 49434, 49436/ Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Aug 27 10:17:38 2019 Results File: MTRACEA9.RES

Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Tue Aug 27 10:17:49 2019
Response via : Continuing Cal File: C:\msdchem\1\data\27AUG19M\MR62S05.D



Quantitation Report

Data File : C:\msdchem\1\data\27AUG19M\MR61S01.D Vial: 3
Acq Time : 08/27/2019 08:24 Operator: CQC
Sample : VSTD001TM VSTD001TM 1.0 ug/L ICS Inst : 5975-M
Misc : 2.5 uL of 49433; 2.0 uL of 49434, 49436/ Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Aug 27 10:17:38 2019 Results File: MTRACEA9.RES

Quant Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Tue Aug 27 10:17:32 2019
Response via : Continuing Cal C:\msdchem\1\data\27AUG19M\MR62S05.D
DataAcq Meth : MTRACEA9.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.44	114	1046822	5.0000 ug/L	90.18
28) Chlorobenzene-d5	10.63	117	919943	5.0000 ug/L	92.28
60) 1,4-dichlorobenzene-d4	13.03	152	498343	5.0000 ug/L	95.61
System Monitoring Compounds					%Recovery
5) Vinyl chloride-d3	1.93	65	99310	1.2238 ug/L	24.48%#
8) Chloroethane-d5	2.32	69	60334	1.1517 ug/L	23.03%#
11) 1,1-Dichloroethene-d2	2.96	63	182950	1.1215 ug/L	22.43%#
22) 2-Butanone-d5	6.25	46	92297	10.2225 ug/L	20.45%#
25) Chloroform-d	5.86	84	130995	1.0126 ug/L	20.25%#
27) 1,2-Dichloroethane-d4	6.83	65	50754	1.0257 ug/L	20.51%#
33) Benzene-d6	6.63	84	243245	0.9336 ug/L	18.67%#
37) 1,2-Dichloropropane-d6	7.93	67	60550	0.9613 ug/L	19.23%#
40) cis-1,3-Dichloropropene-d4	8.77	79	106836	1.0030 ug/L	20.06%
42) trans-1,3-Dichloropropene-	9.50	79	61008	1.0811 ug/L	21.62%#
47) Toluene-d8	9.00	98	217068	0.9465 ug/L	18.93%#
50) 2-Hexanone-d5	10.31	63	106825	11.5493 ug/L	23.10%#
59) 1,1,2,2-Tetrachloroethane-	12.08	84	37078	1.0254 ug/L	20.51%#
65) 1,2-Dichlorobenzene-d4	13.47	152	78768	0.9836 ug/L	19.67%#
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.68	85	77892	1.2503 ug/L #	96
3) Chloromethane	1.86	50	146027	1.1585 ug/L	99
4) Vinyl chloride	1.94	62	93732	1.1453 ug/L	96
6) Bromomethane	2.23	94	50518	1.0697 ug/L	98
7) Chloroethane	2.34	64	49511	1.1827 ug/L	89
9) Trichlorofluoromethane	2.47	101	118822	1.1362 ug/L	97
10) 1,1-Dichloroethene	2.97	96	77599	1.1536 ug/L	96
12) 1,1,2-Trichloro-1,2,2-trif	3.02	101	81430	1.1576 ug/L	98
13) Acetone	3.66	43	23128	7.3896 ug/L	96
14) Carbon disulfide	3.00	76	239363	1.1685 ug/L	98
15) Methyl acetate	3.81	43	15817	1.0662 ug/L	95
16) Methylene chloride	3.60	84	57735	0.9960 ug/L	96
17) trans-1,2-Dichloroethene	3.80	96	86122	1.1448 ug/L	96
18) Methyl tert-butyl ether	3.93	73	95877	0.9145 ug/L	90
19) 1,1-Dichloroethane	4.64	63	143105	1.0791 ug/L	94
20) cis-1,2-Dichloroethene	5.47	96	78243	1.0531 ug/L	98
21) 2-Butanone	6.32	43	92054	10.2491 ug/L	95
23) Bromochloromethane	5.77	128	26213	0.9249 ug/L #	91
24) Chloroform	5.88	83	120685	1.0561 ug/L	98
26) 1,2-Dichloroethane	6.92	62	58747	0.9867 ug/L	99
29) 1,1,1-Trichloroethane	6.16	97	120136	1.0156 ug/L	98
30) Cyclohexane	5.75	56	171638	1.0880 ug/L	98
31) Carbon tetrachloride	6.05	117	119713	1.0351 ug/L	98
32) Benzene	6.65	78	252340	1.0136 ug/L #	98
34) Trichloroethene	7.39	130	80127	0.9859 ug/L #	86
35) Methylcyclohexane	7.37	83	131985	1.0997 ug/L	99
36) 1,2-Dichloropropane	8.01	63	55016	0.9628 ug/L	96
38) Bromodichloromethane	8.10	83	75218	1.0145 ug/L	94
39) cis-1,3-Dichloropropene	8.80	75	79696	0.9839 ug/L	91
41) trans-1,3-Dichloropropene	9.51	75	62680	1.0288 ug/L	95
43) 1,1,2-Trichloroethane	9.68	97	37509	1.1857 ug/L	86
44) Dibromochloromethane	9.86	129	51704	1.0571 ug/L	95
45) 4-Methyl-2-pentanone	9.48	43	317950	11.0666 ug/L	95
46) Toluene	9.05	91	251794	1.0259 ug/L	97

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

Quantitation Report

Data File : C:\msdchem\1\data\27AUG19M\MR61S01.D Vial: 3
Acq Time : 08/27/2019 08:24 Operator: CQC
Sample : VSTD001TM VSTD001TM 1.0 ug/L ICS Inst : 5975-M
Misc : 2.5 uL of 49433; 2.0 uL of 49434, 49436/ Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Aug 27 10:17:38 2019 Results File: MTRACEA9.RES

Quant Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Tue Aug 27 10:17:32 2019
Response via : Continuing Cal C:\msdchem\1\data\27AUG19M\MR62S05.D
DataAcq Meth : MTRACEA9.M

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
48)	Tetrachloroethene	9.47	164	61113	1.0581 ug/L		98
49)	2-Hexanone	10.35	43	255462	12.3344 ug/L		98
51)	1,2-Dibromoethane	10.10	107	34577	1.0352 ug/L		96
52)	Chlorobenzene	10.65	112	173505	1.0592 ug/L		99
53)	Ethylbenzene	10.68	91	285303	1.0112 ug/L		98
54)	m,p-Xylene	10.83	106	122399	1.0260 ug/L		96
55)	o-Xylene	11.27	106	110293	0.9139 ug/L		94
56)	Styrene	11.33	104	183689	1.0548 ug/L		94
57)	Isopropylbenzene	11.59	105	303227	0.9838 ug/L		95
58)	1,1,2,2-Tetrachloroethane	12.10	83	36150	1.0999 ug/L		98
61)	Bromoform	11.35	173	28198	1.0391 ug/L		98
62)	1,3-Dichlorobenzene	12.95	146	153158	1.0029 ug/L		98
63)	1,4-Dichlorobenzene	13.05	146	151630	1.0259 ug/L	#	84
64)	1,2-Dichlorobenzene	13.48	146	123729	1.0118 ug/L		98
66)	1,2-Dibromo-3-chloropropan	14.32	75	5575	1.0747 ug/L		88
67)	1,2,4-Trichlorobenzene	15.03	180	63526	0.9971 ug/L		96
68)	1,2,3-Trichlorobenzene	15.56	180	47858	0.9390 ug/L		96

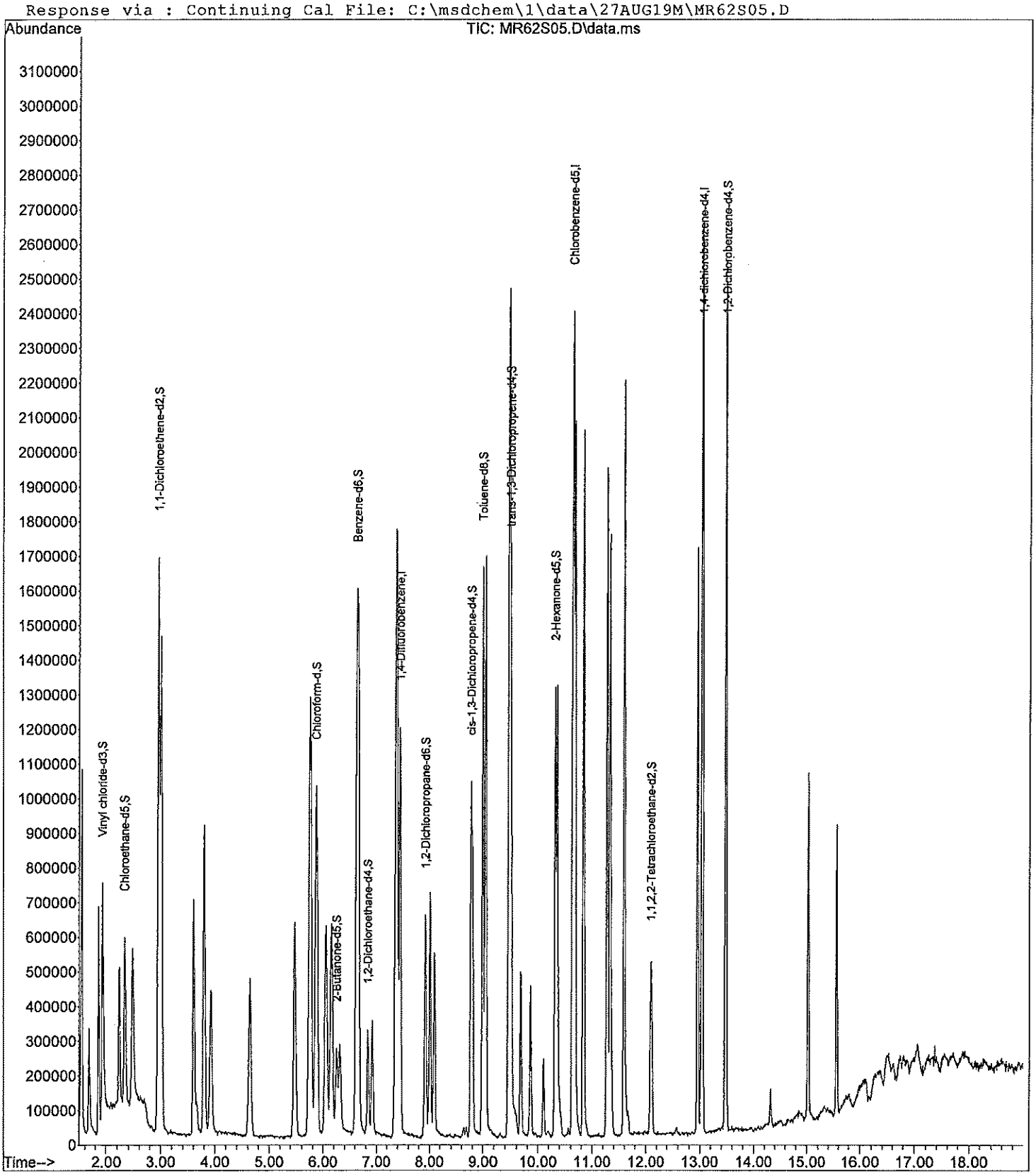
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\msdchem\1\data\27AUG19M\MR62S05.D Vial: 4
Acq Time : 08/27/2019 08:52 Operator: CQC
Sample : VSTD005TM VSTD005TM 5.0 ug/L ICS Inst : 5975-M
Misc : 2.5 uL of 49433; 10 uL of 49434, 49436/1 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Aug 27 09:33:48 2019 Results File: MTRACEA9.RES

Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Tue Aug 27 09:33:41 2019
Response via : Continuing Cal File: C:\msdchem\1\data\27AUG19M\MR62S05.D



Quantitation Report

Data File : C:\msdchem\1\data\27AUG19M\MR62S05.D Vial: 4
Acq Time : 08/27/2019 08:52 Operator: CQC
Sample : VSTD005TM VSTD005TM 5.0 ug/L ICS Inst : 5975-M
Misc : 2.5 uL of 49433; 10 uL of 49434, 49436/1 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Aug 27 09:33:48 2019 Results File: MTRACEA9.RES

Quant Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Tue Aug 27 09:33:41 2019
Response via : Continuing Cal C:\msdchem\1\data\27AUG19M\MR62S05.D
DataAcq Meth : MTRACEA9.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Area%
1) 1,4-Difluorobenzene	7.44	114	1160823	5.0000	ug/L	100.00
28) Chlorobenzene-d5	10.64	117	996862	5.0000	ug/L	100.00
60) 1,4-dichlorobenzene-d4	13.03	152	521237	5.0000	ug/L	100.00
System Monitoring Compounds						**%Recovery**
5) Vinyl chloride-d3	1.93	65	449920	5.0000	ug/L	100.00%
8) Chloroethane-d5	2.32	69	290457	5.0000	ug/L	100.00%
11) 1,1-Dichloroethene-d2	2.96	63	904477	5.0000	ug/L	100.00%
22) 2-Butanone-d5	6.25	46	500603	50.0000	ug/L	100.00%
25) Chloroform-d	5.86	84	717284	5.0000	ug/L	100.00%
27) 1,2-Dichloroethane-d4	6.83	65	274350	5.0000	ug/L	100.00%
33) Benzene-d6	6.63	84	1411716	5.0000	ug/L	100.00%
37) 1,2-Dichloropropane-d6	7.92	67	341280	5.0000	ug/L	100.00%
40) cis-1,3-Dichloropropene-d4	8.77	79	577138	5.0000	ug/L	100.00%
42) trans-1,3-Dichloropropene-	9.50	79	305745	5.0000	ug/L	100.00%
47) Toluene-d8	9.00	98	1242536	5.0000	ug/L	100.00%
50) 2-Hexanone-d5	10.31	63	501144	50.0000	ug/L	100.00%
59) 1,1,2,2-Tetrachloroethane-	12.08	84	195913	5.0000	ug/L	100.00%
65) 1,2-Dichlorobenzene-d4	13.47	152	418814	5.0000	ug/L	100.00%
Target Compounds						**Qvalue**
2) Dichlorodifluoromethane	1.68	85	345429	5.0000	ug/L #	100
3) Chloromethane	1.86	50	698901	5.0000	ug/L	100
4) Vinyl chloride	1.94	62	453754	5.0000	ug/L	100
6) Bromomethane	2.24	94	261851	5.0000	ug/L	99
7) Chloroethane	2.35	64	232109	5.0000	ug/L	99
9) Trichlorofluoromethane	2.47	101	579842	5.0000	ug/L	100
10) 1,1-Dichloroethene	2.97	96	372959	5.0000	ug/L	100
12) 1,1,2-Trichloro-1,2,2-trif	3.00	101	390036	5.0000	ug/L	100
13) Acetone	3.66	43	173532	50.0000	ug/L	100
14) Carbon disulfide	3.00	76	1135745	5.0000	ug/L	99
15) Methyl acetate	3.81	43	82249	5.0000	ug/L	99
16) Methylene chloride	3.60	84	321411	5.0000	ug/L	100
17) trans-1,2-Dichloroethene	3.80	96	417112	5.0000	ug/L	100
18) Methyl tert-butyl ether	3.93	73	581300	5.0000	ug/L	100
19) 1,1-Dichloroethane	4.63	63	735319	5.0000	ug/L	100
20) cis-1,2-Dichloroethene	5.47	96	411930	5.0000	ug/L	100
21) 2-Butanone	6.32	43	497991	50.0000	ug/L	100
23) Bromochloromethane	5.76	128	157139	5.0000	ug/L	100
24) Chloroform	5.88	83	633585	5.0000	ug/L	100
26) 1,2-Dichloroethane	6.92	62	330115	5.0000	ug/L	100
29) 1,1,1-Trichloroethane	6.15	97	640893	5.0000	ug/L	100
30) Cyclohexane	5.75	56	854697	5.0000	ug/L	100
31) Carbon tetrachloride	6.05	117	626628	5.0000	ug/L	99
32) Benzene	6.66	78	1348822	5.0000	ug/L #	100
34) Trichloroethene	7.39	130	440334	5.0000	ug/L	100
35) Methylcyclohexane	7.37	83	650263	5.0000	ug/L	100
36) 1,2-Dichloropropane	8.01	63	309599	5.0000	ug/L	99
38) Bromodichloromethane	8.10	83	401724	5.0000	ug/L	100
39) cis-1,3-Dichloropropene	8.80	75	438861	5.0000	ug/L	99
41) trans-1,3-Dichloropropene	9.52	75	330104	5.0000	ug/L	100
43) 1,1,2-Trichloroethane	9.68	97	171394	5.0000	ug/L	100
44) Dibromochloromethane	9.86	129	264994	5.0000	ug/L	100
45) 4-Methyl-2-pentanone	9.48	43	1556648	50.0000	ug/L	100
46) Toluene	9.06	91	1329850	5.0000	ug/L	100

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

Quantitation Report

Data File : C:\msdchem\1\data\27AUG19M\MR62S05.D Vial: 4
Acq Time : 08/27/2019 08:52 Operator: CQC
Sample : VSTD005TM VSTD005TM 5.0 ug/L ICS Inst : 5975-M
Misc : 2.5 uL of 49433; 10 uL of 49434, 49436/1 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Aug 27 09:33:48 2019 Results File: MTRACEA9.RES

Quant Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Tue Aug 27 09:33:41 2019
Response via : Continuing Cal C:\msdchem\1\data\27AUG19M\MR62S05.D
DataAcq Meth : MTRACEA9.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
48) Tetrachloroethene	9.46	164	312938	5.0000 ug/L	100
49) 2-Hexanone	10.35	43	1122152	50.0000 ug/L	100
51) 1,2-Dibromoethane	10.10	107	180963	5.0000 ug/L	98
52) Chlorobenzene	10.65	112	887522	5.0000 ug/L	100
53) Ethylbenzene	10.69	91	1528741	5.0000 ug/L	100
54) m,p-Xylene	10.83	106	646341	5.0000 ug/L	100
55) o-Xylene	11.27	106	653904	5.0000 ug/L	100
56) Styrene	11.33	104	943563	5.0000 ug/L	100
57) Isopropylbenzene	11.59	105	1669905	5.0000 ug/L	100
58) 1,1,2,2-Tetrachloroethane	12.11	83	178070	5.0000 ug/L	100
61) Bromoform	11.36	173	141923	5.0000 ug/L	100
62) 1,3-Dichlorobenzene	12.95	146	798631	5.0000 ug/L	100
63) 1,4-Dichlorobenzene	13.05	146	772935	5.0000 ug/L	100
64) 1,2-Dichlorobenzene	13.48	146	639525	5.0000 ug/L	100
66) 1,2-Dibromo-3-chloropropan	14.32	75	27128	5.0000 ug/L	99
67) 1,2,4-Trichlorobenzene	15.03	180	333178	5.0000 ug/L	100
68) 1,2,3-Trichlorobenzene	15.56	180	266548	5.0000 ug/L	100

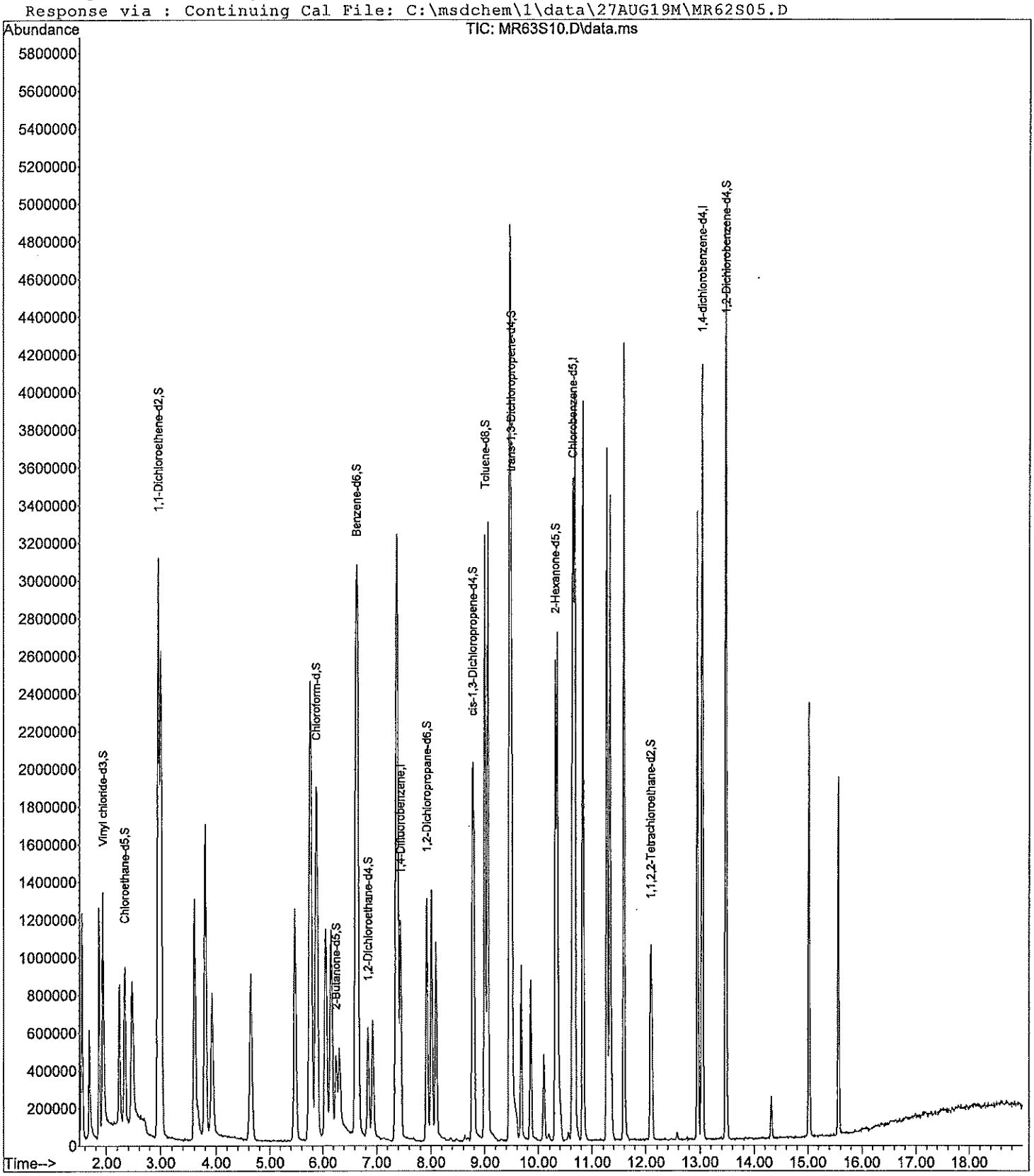
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\msdchem\1\data\27AUG19M\MR63S10.D Vial: 5
Acq Time : 08/27/2019 09:20 Operator: CQC
Sample : VSTD010TM VSTD010TM 10 ug/L ICS Inst : 5975-M
Misc : 2.5 uL of 49433; 20 uL of 49434, 49436/1 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Aug 27 09:39:41 2019 Results File: MTRACEA9.RES

Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Tue Aug 27 09:33:41 2019
Response via : Continuing Cal File: C:\msdchem\1\data\27AUG19M\MR62S05.D



Quantitation Report

Data File : C:\msdchem\1\data\27AUG19M\MR63S10.D Vial: 5
Acq Time : 08/27/2019 09:20 Operator: CQC
Sample : VSTD010TM VSTD010TM 10 ug/L ICS Inst : 5975-M
Misc : 2.5 uL of 49433; 20 uL of 49434, 49436/1 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Aug 27 09:39:41 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Tue Aug 27 09:33:43 2019
Response via : Continuing Cal C:\msdchem\1\data\27AUG19M\MR62S05.D
DataAcq Meth : MTRACEA9.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Area%
1) 1,4-Difluorobenzene	7.45	114	1172135	5.0000	ug/L	100.97
28) Chlorobenzene-d5	10.64	117	961821	5.0000	ug/L	96.48
60) 1,4-dichlorobenzene-d4	13.03	152	518786	5.0000	ug/L	99.53
System Monitoring Compounds						**%Recovery**
5) Vinyl chloride-d3	1.93	65	849149	9.3456	ug/L	186.91%#
8) Chloroethane-d5	2.33	69	516125	8.7990	ug/L	175.98%#
11) 1,1-Dichloroethene-d2	2.96	63	1708207	9.3519	ug/L	187.04%#
22) 2-Butanone-d5	6.25	46	1172242	115.9531	ug/L	231.91%#
25) Chloroform-d	5.86	84	1368589	9.4480	ug/L	188.96%#
27) 1,2-Dichloroethane-d4	6.84	65	533210	9.6239	ug/L	192.48%#
33) Benzene-d6	6.63	84	2656050	9.7499	ug/L	195.00%#
37) 1,2-Dichloropropane-d6	7.92	67	674124	10.2362	ug/L	204.72%#
40) cis-1,3-Dichloropropene-d4	8.77	79	1179958	10.5949	ug/L	211.90%
42) trans-1,3-Dichloropropene-	9.50	79	604130	10.2396	ug/L	204.79%#
47) Toluene-d8	9.00	98	2419865	10.0924	ug/L	201.85%#
50) 2-Hexanone-d5	10.31	63	1036775	107.2094	ug/L	214.42%#
59) 1,1,2,2-Tetrachloroethane-	12.08	84	380693	10.0698	ug/L	201.40%#
65) 1,2-Dichlorobenzene-d4	13.47	152	837142	10.0414	ug/L	200.83%#
Target Compounds						**Qvalue**
2) Dichlorodifluoromethane	1.68	85	696838	9.9892	ug/L #	99
3) Chloromethane	1.86	50	1330218	9.4247	ug/L	99
4) Vinyl chloride	1.94	62	863565	9.4239	ug/L	99
6) Bromomethane	2.24	94	491888	9.3019	ug/L	99
7) Chloroethane	2.35	64	447220	9.5409	ug/L	99
9) Trichlorofluoromethane	2.47	101	1141610	9.7491	ug/L	95
10) 1,1-Dichloroethene	2.97	96	729376	9.6839	ug/L	97
12) 1,1,2-Trichloro-1,2,2-trif	3.01	101	740569	9.4020	ug/L	99
13) Acetone	3.66	43	370854	105.8234	ug/L	91
14) Carbon disulfide	3.00	76	2151158	9.3789	ug/L	96
15) Methyl acetate	3.82	43	155649	9.3707	ug/L	98
16) Methylene chloride	3.60	84	637467	9.8210	ug/L	98
17) trans-1,2-Dichloroethene	3.80	96	796474	9.4553	ug/L	97
18) Methyl tert-butyl ether	3.93	73	1145110	9.7545	ug/L	98
19) 1,1-Dichloroethane	4.64	63	1454026	9.7916	ug/L	99
20) cis-1,2-Dichloroethene	5.47	96	824394	9.9099	ug/L	100
21) 2-Butanone	6.32	43	1065643	105.9616	ug/L	99
23) Bromochloromethane	5.77	128	306406	9.6554	ug/L	99
24) Chloroform	5.89	83	1249847	9.7681	ug/L	97
26) 1,2-Dichloroethane	6.92	62	658455	9.8769	ug/L	100
29) 1,1,1-Trichloroethane	6.16	97	1198098	9.6876	ug/L	99
30) Cyclohexane	5.75	56	1649190	9.9993	ug/L	100
31) Carbon tetrachloride	6.05	117	1151787	9.5252	ug/L	99
32) Benzene	6.66	78	2556186	9.8208	ug/L #	100
34) Trichloroethene	7.39	130	834925	9.8260	ug/L	97
35) Methylcyclohexane	7.36	83	1194725	9.5212	ug/L	99
36) 1,2-Dichloropropane	8.02	63	616892	10.3257	ug/L	97
38) Bromodichloromethane	8.09	83	780430	10.0674	ug/L	99
39) cis-1,3-Dichloropropene	8.80	75	873266	10.3117	ug/L	98
41) trans-1,3-Dichloropropene	9.51	75	643889	10.1081	ug/L	97
43) 1,1,2-Trichloroethane	9.68	97	348188	10.5276	ug/L	97
44) Dibromochloromethane	9.86	129	532631	10.4160	ug/L	99
45) 4-Methyl-2-pentanone	9.48	43	3284030	109.3270	ug/L	98
46) Toluene	9.06	91	2616416	10.1957	ug/L	97

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

Quantitation Report

Data File : C:\msdchem\1\data\27AUG19M\MR63S10.D Vial: 5
Acq Time : 08/27/2019 09:20 Operator: CQC
Sample : VSTD010TM VSTD010TM 10 ug/L ICS Inst : 5975-M
Misc : 2.5 uL of 49433; 20 uL of 49434, 49436/1 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Aug 27 09:39:41 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Tue Aug 27 09:33:43 2019
Response via : Continuing Cal C:\msdchem\1\data\27AUG19M\MR62S05.D
DataAcq Meth : MTRACEA9.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
48) Tetrachloroethene	9.46	164	602906	9.9839	ug/L	97
49) 2-Hexanone	10.35	43	2298629	106.1520	ug/L	99
51) 1,2-Dibromoethane	10.10	107	353843	10.1328	ug/L	94
52) Chlorobenzene	10.65	112	1728821	10.0944	ug/L	98
53) Ethylbenzene	10.68	91	2915136	9.8818	ug/L	100
54) m,p-Xylene	10.83	106	1245583	9.9867	ug/L	98
55) o-Xylene	11.28	106	1232894	9.7706	ug/L	98
56) Styrene	11.33	104	1833468	10.0696	ug/L	100
57) Isopropylbenzene	11.59	105	3135565	9.7305	ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.10	83	370548	10.7836	ug/L	97
61) Bromoform	11.36	173	277389	9.8187	ug/L	97
62) 1,3-Dichlorobenzene	12.95	146	1578499	9.9292	ug/L	99
63) 1,4-Dichlorobenzene	13.05	146	1534061	9.9705	ug/L	98
64) 1,2-Dichlorobenzene	13.48	146	1297927	10.1955	ug/L	97
66) 1,2-Dibromo-3-chloropropan	14.32	75	57292	10.6095	ug/L	95
67) 1,2,4-Trichlorobenzene	15.03	180	787809	11.8785	ug/L	96
68) 1,2,3-Trichlorobenzene	15.56	180	618380	11.6546	ug/L	99

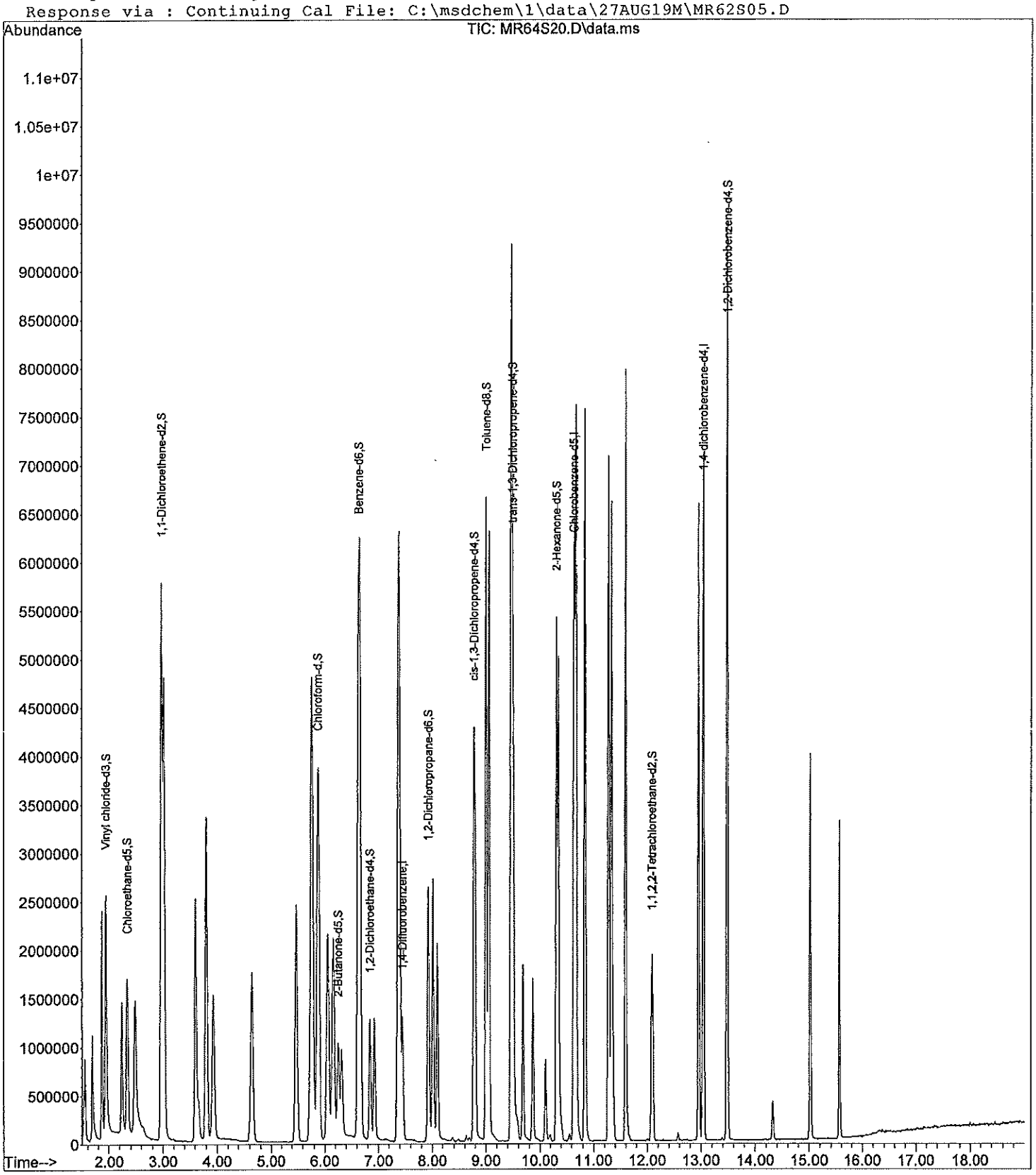
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\msdchem\1\data\27AUG19M\MR64S20.D Vial: 6
Acq Time : 08/27/2019 09:48 Operator: CQC
Sample : VSTD020TM VSTD020TM 20 ug/L ICS Inst : 5975-M
Misc : 2.5 uL of 49433; 40 uL of 49434, 49436/1 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Aug 27 10:07:33 2019 Results File: MTRACEA9.RES

Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Tue Aug 27 09:33:41 2019
Response via : Continuing Cal File: C:\msdchem\1\data\27AUG19M\MR62S05.D



Quantitation Report

Data File : C:\msdchem\1\data\27AUG19M\MR64S20.D Vial: 6
Acq Time : 08/27/2019 09:48 Operator: CQC
Sample : VSTD020TM VSTD020TM 20 ug/L ICS Inst : 5975-M
Misc : 2.5 uL of 49433; 40 uL of 49434, 49436/1 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Aug 27 10:07:33 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Tue Aug 27 09:33:43 2019
Response via : Continuing Cal C:\msdchem\1\data\27AUG19M\MR62S05.D
DataAcq Meth : MTRACEA9.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Area%
1) 1,4-Difluorobenzene	7.44	114	1275394	5.0000	ug/L	109.87
28) Chlorobenzene-d5	10.64	117	1051242	5.0000	ug/L	105.46
60) 1,4-dichlorobenzene-d4	13.03	152	543154	5.0000	ug/L	104.20
System Monitoring Compounds						%Recovery
5) Vinyl chloride-d3	1.93	65	1717631	17.3735	ug/L	347.47%#
8) Chloroethane-d5	2.33	69	1043595	16.3509	ug/L	327.02%#
11) 1,1-Dichloroethene-d2	2.96	63	3413536	17.1751	ug/L	343.50%#
22) 2-Butanone-d5	6.25	46	2024844	184.0729	ug/L	368.15%#
25) Chloroform-d	5.86	84	2807670	17.8134	ug/L	356.27%#
27) 1,2-Dichloroethane-d4	6.84	65	1108993	18.3957	ug/L	367.91%#
33) Benzene-d6	6.63	84	5569221	18.7046	ug/L	374.09%#
37) 1,2-Dichloropropane-d6	7.92	67	1409412	19.5808	ug/L	391.62%#
40) cis-1,3-Dichloropropene-d4	8.77	79	2449949	20.1270	ug/L	402.54%#
42) trans-1,3-Dichloropropene-	9.50	79	1219858	18.9170	ug/L	378.34%#
47) Toluene-d8	9.00	98	4929937	18.8120	ug/L	376.24%#
50) 2-Hexanone-d5	10.31	63	1990691	188.3405	ug/L	376.68%#
59) 1,1,2,2-Tetrachloroethane-	12.08	84	742505	17.9696	ug/L	359.39%#
65) 1,2-Dichlorobenzene-d4	13.47	152	1641755	18.8092	ug/L	376.18%#
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.68	85	1355028	17.8518	ug/L #	99
3) Chloromethane	1.86	50	2577773	16.7850	ug/L	99
4) Vinyl chloride	1.94	62	1660868	16.6574	ug/L	99
6) Bromomethane	2.24	94	947350	16.4645	ug/L	96
7) Chloroethane	2.35	64	835996	16.3909	ug/L	99
9) Trichlorofluoromethane	2.47	101	2160955	16.9601	ug/L	98
10) 1,1-Dichloroethene	2.97	96	1385088	16.9008	ug/L	99
12) 1,1,2-Trichloro-1,2,2-trif	3.01	101	1400361	16.3391	ug/L	99
13) Acetone	3.66	43	689044	180.7004	ug/L	98
14) Carbon disulfide	3.01	76	4082585	16.3586	ug/L	95
15) Methyl acetate	3.81	43	302014	16.7104	ug/L	99
16) Methylene chloride	3.61	84	1230050	17.4162	ug/L	98
17) trans-1,2-Dichloroethene	3.80	96	1552710	16.9406	ug/L	98
18) Methyl tert-butyl ether	3.93	73	2112158	16.5355	ug/L	100
19) 1,1-Dichloroethane	4.64	63	2896904	17.9287	ug/L	99
20) cis-1,2-Dichloroethene	5.47	96	1617865	17.8735	ug/L	99
21) 2-Butanone	6.32	43	1740197	159.0262	ug/L	97
23) Bromochloromethane	5.77	128	594585	17.2195	ug/L	97
24) Chloroform	5.89	83	2371137	17.0311	ug/L	99
26) 1,2-Dichloroethane	6.92	62	1294889	17.8509	ug/L	99
29) 1,1,1-Trichloroethane	6.16	97	2248899	16.6375	ug/L	99
30) Cyclohexane	5.75	56	3152099	17.4860	ug/L	99
31) Carbon tetrachloride	6.06	117	2235503	16.9148	ug/L	99
32) Benzene	6.66	78	5057438	17.7778	ug/L	100
34) Trichloroethene	7.39	130	1626385	17.5123	ug/L	97
35) Methylcyclohexane	7.36	83	2322917	16.9374	ug/L	99
36) 1,2-Dichloropropane	8.01	63	1266789	19.4002	ug/L	95
38) Bromodichloromethane	8.10	83	1521466	17.9571	ug/L	100
39) cis-1,3-Dichloropropene	8.80	75	1683954	18.1931	ug/L	99
41) trans-1,3-Dichloropropene	9.52	75	1203323	17.2836	ug/L	98
43) 1,1,2-Trichloroethane	9.68	97	680948	18.8374	ug/L	96
44) Dibromochloromethane	9.86	129	1051381	18.8116	ug/L	97
45) 4-Methyl-2-pentanone	9.47	43	5583264	170.0592	ug/L	98
46) Toluene	9.06	91	5074702	18.0930	ug/L	97

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

Quantitation Report

Data File : C:\msdchem\1\data\27AUG19M\MR64S20.D Vial: 6
Acq Time : 08/27/2019 09:48 Operator: CQC
Sample : VSTD020TM VSTD020TM 20 ug/L ICS Inst : 5975-M
Misc : 2.5 uL of 49433; 40 uL of 49434, 49436/1 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Aug 27 10:07:33 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Tue Aug 27 09:33:43 2019
Response via : Continuing Cal C:\msdchem\1\data\27AUG19M\MR62S05.D
DataAcq Meth : MTRACEA9.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
48)	Tetrachloroethene	9.46	164	1174872	17.8006	ug/L	99
49)	2-Hexanone	10.35	43	4122675	174.1926	ug/L	99
51)	1,2-Dibromoethane	10.10	107	683574	17.9101	ug/L	98
52)	Chlorobenzene	10.65	112	3419604	18.2683	ug/L	97
53)	Ethylbenzene	10.68	91	5653857	17.5353	ug/L	99
54)	m,p-Xylene	10.83	106	2402453	17.6236	ug/L	100
55)	o-Xylene	11.28	106	2316581	16.7972	ug/L	99
56)	Styrene	11.33	104	3584608	18.0125	ug/L	99
57)	Isopropylbenzene	11.59	105	6039527	17.1480	ug/L	99
58)	1,1,2,2-Tetrachloroethane	12.10	83	685670	18.2569	ug/L	96
61)	Bromoform	11.36	173	517687	17.5024	ug/L	96
62)	1,3-Dichlorobenzene	12.95	146	3072639	18.4607	ug/L	99
63)	1,4-Dichlorobenzene	13.05	146	2959862	18.3743	ug/L	97
64)	1,2-Dichlorobenzene	13.48	146	2387949	17.9164	ug/L	99
66)	1,2-Dibromo-3-chloropropan	14.32	75	97764	17.2919	ug/L	93
67)	1,2,4-Trichlorobenzene	15.02	180	1381156	19.8906	ug/L	97
68)	1,2,3-Trichlorobenzene	15.56	180	1055206	18.9952	ug/L	99

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

FORM 7A-OR

INITIAL CALIBRATION VERIFICATION AND CONTINUING CALIBRATION VERIFICATION FOR GC/M

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Level: TRACE

Instrument ID: 5975-F Date Analyzed: 07/17/2019 Time: 09:58

Lab File ID: FP07V05 Init. Calib Date(s): 07/17/2019 07/17/2019

EPA Sample No.: VICVTF Init. Calib Time(s): 07:11 09:03

GC Column: RTX-VMS ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Y Purge Volume: 25.0 (mL)

ANALYTE	$\overline{RRF}$	RRF 5	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.292	0.292	0.010	-0.1	40.0
Chloromethane	0.388	0.369	0.010	-4.7	30.0
Vinyl chloride	0.334	0.321	0.010	-3.8	30.0
Bromomethane	0.214	0.195	0.010	-8.8	30.0
Chloroethane	0.210	0.192	0.010	-8.5	30.0
Trichlorofluoromethane	0.486	0.456	0.010	-6.2	30.0
1,1-Dichloroethene	0.290	0.240	0.020	-17.4	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.307	0.240	0.010	-22.0	30.0
Acetone	0.044	0.037	0.010	-16.0	40.0
Carbon disulfide	0.885	0.709	0.010	-19.9	25.0
Methyl acetate	0.125	0.102	0.010	-18.9	40.0
Methylene chloride	0.291	0.243	0.010	-16.4	30.0
trans-1,2-Dichloroethene	0.325	0.281	0.070	-13.7	20.0
Methyl tert-butyl ether	0.721	0.609	0.010	-15.5	30.0
1,1-Dichloroethane	0.602	0.525	0.100	-12.9	20.0
cis-1,2-Dichloroethene	0.347	0.302	0.100	-12.9	20.0
2-Butanone	0.080	0.075	0.010	-5.6	40.0
Bromochloromethane	0.150	0.133	0.020	-11.3	20.0
Chloroform	0.582	0.516	0.040	-11.3	20.0
1,1,1-Trichloroethane	0.659	0.565	0.050	-14.3	20.0
Cyclohexane	0.727	0.611	0.100	-16.0	25.0
Carbon tetrachloride	0.616	0.532	0.020	-13.6	25.0
Benzene	1.449	1.230	0.300	-15.1	20.0
1,2-Dichloroethane	0.370	0.334	0.010	-9.8	25.0
Trichloroethene	0.455	0.399	0.100	-12.2	20.0
Methylcyclohexane	0.693	0.558	0.200	-19.5	25.0
1,2-Dichloropropane	0.361	0.321	0.100	-11.1	20.0
Bromodichloromethane	0.502	0.438	0.090	-12.7	20.0
cis-1,3-Dichloropropene	0.549	0.486	0.100	-11.4	20.0
4-Methyl-2-Pentanone	0.242	0.225	0.010	-7.2	30.0
Toluene	1.454	1.284	0.400	-11.7	20.0
trans-1,3-Dichloropropene	0.437	0.394	0.010	-10.0	20.0
1,1,2-Trichloroethane	0.224	0.202	0.040	-9.6	20.0
Tetrachloroethene	0.309	0.274	0.100	-11.3	20.0

FORM 7A-OR

INITIAL CALIBRATION VERIFICATION AND CONTINUING CALIBRATION VERIFICATION FOR GC/M

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Level: TRACE

Instrument ID: 5975-F Date Analyzed: 07/17/2019 Time: 09:58

Lab File ID: FP07V05 Init. Calib Date(s): 07/17/2019 07/17/2019

EPA Sample No.: VICVTF Init. Calib Time(s): 07:11 09:03

GC Column: RTX-VMS ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Y Purge Volume: 25.0 (mL)

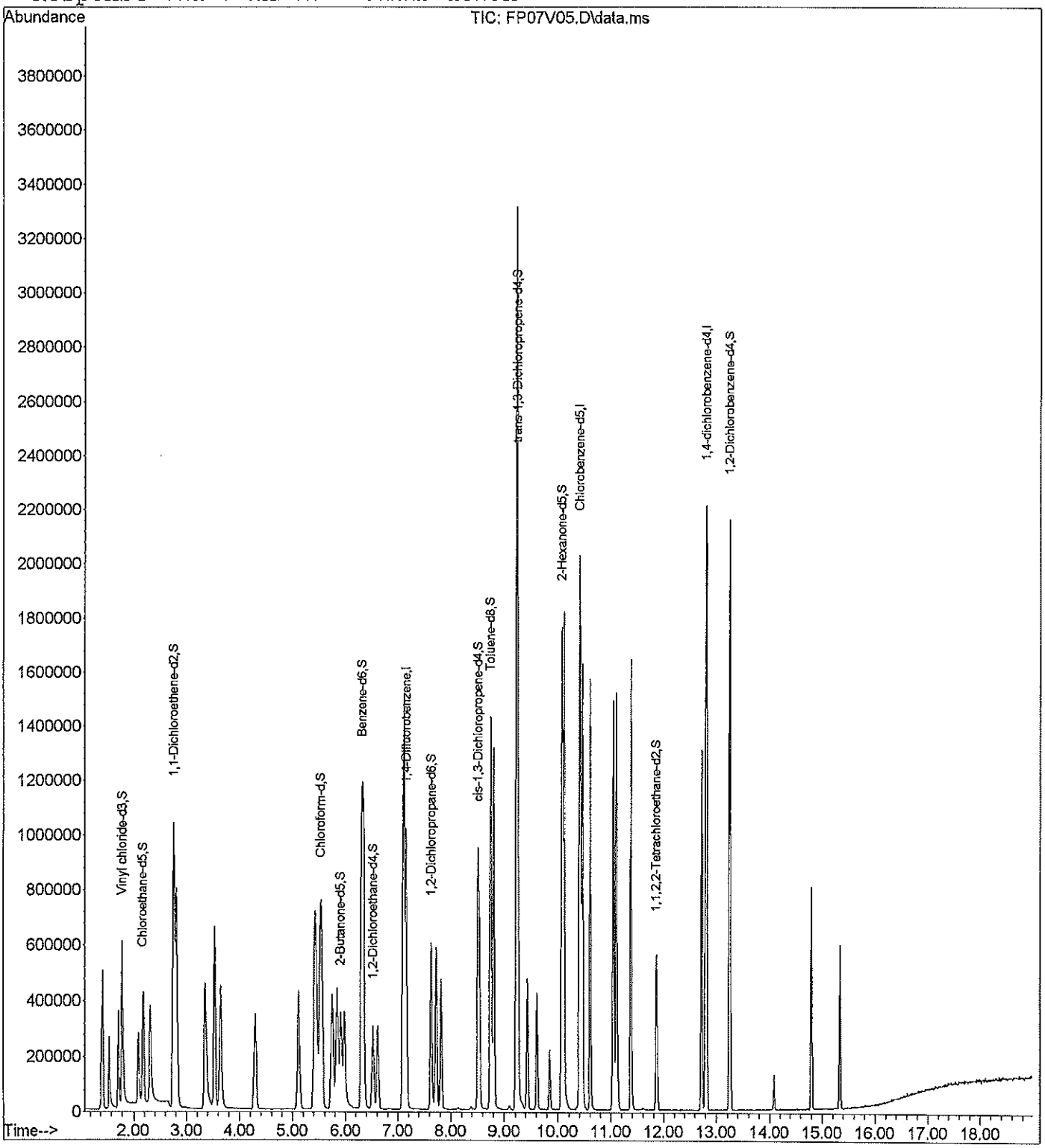
ANALYTE	$\overline{RRF}$	RRF 5	MIN RRF	%D	MAX %D
2-Hexanone	0.180	0.171	0.010	-4.7	40.0
Dibromochloromethane	0.330	0.306	0.050	-7.4	20.0
1,2-Dibromoethane	0.226	0.199	0.010	-12.3	20.0
Chlorobenzene	0.976	0.892	0.400	-8.6	20.0
Ethylbenzene	1.646	1.455	0.500	-11.6	20.0
o-Xylene	0.632	0.557	0.300	-11.8	20.0
m,p-Xylene	0.651	0.570	0.200	-12.4	20.0
Styrene	1.017	0.934	0.200	-8.1	20.0
Bromoform	0.362	0.326	0.010	-9.8	30.0
Isopropylbenzene	1.629	1.436	0.700	-11.8	25.0
1,1,2,2-Tetrachloroethane	0.264	0.235	0.050	-10.9	25.0
1,3-Dichlorobenzene	1.501	1.371	0.500	-8.7	20.0
1,4-Dichlorobenzene	1.540	1.396	0.700	-9.4	20.0
1,2-Dichlorobenzene	1.329	1.208	0.400	-9.1	20.0
1,2-Dibromo-3-chloropropane	0.088	0.079	0.010	-9.9	40.0
1,2,4-Trichlorobenzene	0.649	0.597	0.300	-8.0	30.0
1,2,3-Trichlorobenzene	0.499	0.455	0.200	-8.7	40.0
Vinyl chloride-d3	0.340	0.379	0.010	11.5	30.0
Chloroethane-d5	0.274	0.282	0.010	3.2	30.0
1,1-Dichloroethene-d2	0.686	0.646	0.010	-5.8	25.0
2-Butanone-d5	0.081	0.075	0.010	-7.6	40.0
Chloroform-d	0.631	0.628	0.010	-0.5	20.0
1,2-Dichloroethane-d4	0.297	0.285	0.010	-4.0	25.0
Benzene-d6	1.475	1.425	0.030	-3.4	20.0
1,2-Dichloropropane-d6	0.394	0.374	0.100	-4.9	20.0
Toluene-d8	1.280	1.261	0.200	-1.5	20.0
trans-1,3-Dichloropropene-d4	0.389	0.379	0.010	-2.5	25.0
2-Hexanone-d5	0.080	0.077	0.010	-3.8	40.0
1,1,2,2-Tetrachloroethane-d2	0.267	0.253	0.010	-5.3	25.0
1,2-Dichlorobenzene-d4	0.845	0.833	0.060	-1.5	20.0

Quantitation Report

Data File : C:\msdchem\1\data\17JUL19F\FP07V05.D Vial: 8
Acq Time : 07/17/2019 09:58 Operator: CQC
Sample : VICVTF VICVTF 5.0 ug/L ICV Inst : 5975-F
Misc : 2.5 uL of 48754, 48757 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Jul 17 10:17:44 2019 Results File: FTRACEG5.RES

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\17JUL19F\FP07V05.D
Acq Time : 07/17/2019 09:58
Sample : VICVTF VICVTF 5.0 ug/L ICV
Misc : 2.5 uL of 48754, 48757
MS Integration Params: rteint.p

Vial: 8
Operator: CQC
Inst : 5975-F
Multiplr: 1.00
Column ID: Rtx-VMS

Quant Time: Jul 17 10:17:44 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.16	114	937273	5.0000 ug/L	99.61
28) Chlorobenzene-d5	10.40	117	771425	5.0000 ug/L	100.91
60) 1,4-dichlorobenzene-d4	12.80	152	393188	5.0000 ug/L	98.28
System Monitoring Compounds					%Recovery
5) Vinyl chloride-d3	1.80	65	355534	5.5749 ug/L	111.50%
8) Chloroethane-d5	2.17	69	264754	5.1584 ug/L	103.17%
11) 1,1-Dichloroethene-d2	2.76	63	605845	4.7103 ug/L	94.21%
22) 2-Butanone-d5	5.90	46	704352	46.2118 ug/L	92.42%
25) Chloroform-d	5.52	84	588676	4.9760 ug/L	99.52%
27) 1,2-Dichloroethane-d4	6.52	65	266772	4.7992 ug/L	95.98%
33) Benzene-d6	6.32	84	1099394	4.8324 ug/L	96.65%
37) 1,2-Dichloropropane-d6	7.64	67	288721	4.7526 ug/L	95.05%
40) cis-1,3-Dichloropropene-d4	8.51	79	496494	4.7683 ug/L	95.37%
42) trans-1,3-Dichloropropene-	9.24	79	292129	4.8736 ug/L	97.47%
47) Toluene-d8	8.75	98	972842	4.9260 ug/L	98.52%
50) 2-Hexanone-d5	10.07	63	593042	48.0964 ug/L	96.19%
59) 1,1,2,2-Tetrachloroethane-	11.85	84	195223	4.7335 ug/L	94.67%
65) 1,2-Dichlorobenzene-d4	13.24	152	327511	4.9273 ug/L	98.55%
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.56	85	273663	4.9974 ug/L #	99
3) Chloromethane	1.73	50	346279	4.7631 ug/L	99
4) Vinyl chloride	1.80	62	300952	4.8089 ug/L	99
6) Bromomethane	2.09	94	182904	4.5604 ug/L	98
7) Chloroethane	2.18	64	180399	4.5730 ug/L	99
9) Trichlorofluoromethane	2.31	101	427234	4.6925 ug/L	99
10) 1,1-Dichloroethene	2.76	96	224807	4.1288 ug/L	95
12) 1,1,2-Trichloro-1,2,2-trif	2.81	101	224838	3.9023 ug/L	98
13) Acetone	3.38	43	342977	41.9987 ug/L	99
14) Carbon disulfide	2.81	76	664481	4.0037 ug/L	100
15) Methyl acetate	3.53	43	95179	4.0552 ug/L	97
16) Methylene chloride	3.34	84	227844	4.1803 ug/L	97
17) trans-1,2-Dichloroethene	3.53	96	263118	4.3129 ug/L	99
18) Methyl tert-butyl ether	3.65	73	570814	4.2235 ug/L	98
19) 1,1-Dichloroethane	4.30	63	491982	4.3564 ug/L	100
20) cis-1,2-Dichloroethene	5.11	96	283467	4.3555 ug/L	100
21) 2-Butanone	5.98	43	703645	47.2003 ug/L	100
23) Bromochloromethane	5.42	128	124816	4.4355 ug/L	99
24) Chloroform	5.54	83	483418	4.4336 ug/L	99
26) 1,2-Dichloroethane	6.61	62	312855	4.5113 ug/L	98

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

Quantitation Report

Data File : C:\msdchem\1\data\17JUL19F\FP07V05.D
Acq Time : 07/17/2019 09:58
Sample : VICVTF VICVTF 5.0 ug/L ICV
Misc : 2.5 uL of 48754, 48757
MS Integration Params: rteint.p

Vial: 8
Operator: CQC
Inst : 5975-F
Multiplr: 1.00
Column ID: Rtx-VMS

Quant Time: Jul 17 10:17:44 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	1,1,1-Trichloroethane	5.84	97	435713	4.2852 ug/L	99
30)	Cyclohexane	5.44	56	471117	4.2022 ug/L	97
31)	Carbon tetrachloride	5.74	117	410104	4.3183 ug/L	99
32)	Benzene	6.35	78	948854	4.2442 ug/L	98
34)	Trichloroethene	7.12	130	307750	4.3884 ug/L	99
35)	Methylcyclohexane	7.10	83	430511	4.0248 ug/L	99
36)	1,2-Dichloropropane	7.73	63	247624	4.4443 ug/L	100
38)	Bromodichloromethane	7.82	83	338187	4.3646 ug/L	98
39)	cis-1,3-Dichloropropene	8.54	75	375116	4.4318 ug/L	99
41)	trans-1,3-Dichloropropene	9.26	75	303706	4.5003 ug/L	96
43)	1,1,2-Trichloroethane	9.43	97	155961	4.5188 ug/L	99
44)	Dibromochloromethane	9.62	129	235891	4.6289 ug/L	100
45)	4-Methyl-2-pentanone	9.22	43	1732580	46.4225 ug/L	99
46)	Toluene	8.80	91	990160	4.4148 ug/L	100
48)	Tetrachloroethene	9.23	164	211218	4.4347 ug/L	99
49)	2-Hexanone	10.11	43	1320544	47.6560 ug/L	100
51)	1,2-Dibromoethane	9.85	107	153142	4.3852 ug/L	97
52)	Chlorobenzene	10.41	112	688216	4.5689 ug/L	100
53)	Ethylbenzene	10.45	91	1122684	4.4215 ug/L	99
54)	m,p-Xylene	10.60	106	440083	4.3806 ug/L	100
55)	o-Xylene	11.04	106	429627	4.4088 ug/L	98
56)	Styrene	11.10	104	720613	4.5928 ug/L	90
57)	Isopropylbenzene	11.37	105	1107907	4.4089 ug/L	100
58)	1,1,2,2-Tetrachloroethane	11.87	83	181219	4.4541 ug/L	97
61)	Bromoform	11.12	173	128217	4.5093 ug/L	99
62)	1,3-Dichlorobenzene	12.72	146	539066	4.5668 ug/L	99
63)	1,4-Dichlorobenzene	12.82	146	548794	4.5305 ug/L	100
64)	1,2-Dichlorobenzene	13.25	146	474982	4.5436 ug/L	99
66)	1,2-Dibromo-3-chloropropan	14.08	75	31084	4.5048 ug/L	95
67)	1,2,4-Trichlorobenzene	14.80	180	234847	4.5983 ug/L	99
68)	1,2,3-Trichlorobenzene	15.33	180	179082	4.5673 ug/L	100

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

FORM 7A-OR

INITIAL CALIBRATION VERIFICATION AND CONTINUING CALIBRATION VERIFICATION FOR GC/M

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Level: TRACE

Instrument ID: 5975-M Date Analyzed: 08/27/2019 Time: 10:43

Lab File ID: MR66V05 Init. Calib Date(s): 08/27/2019 08/27/2019

EPA Sample No.: VICVTM Init. Calib Time(s): 07:56 09:48

GC Column: RTX-VMS ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Y Purge Volume: 25.0 (mL)

ANALYTE	$\overline{RRF}$	RRF5	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.317	0.337	0.010	6.3	40.0
Chloromethane	0.609	0.596	0.010	-2.2	30.0
Vinyl chloride	0.399	0.394	0.010	-1.2	30.0
Bromomethane	0.219	0.214	0.010	-2.4	30.0
Chloroethane	0.214	0.200	0.010	-6.7	30.0
Trichlorofluoromethane	0.513	0.487	0.010	-5.2	30.0
1,1-Dichloroethene	0.333	0.283	0.020	-14.9	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.345	0.280	0.010	-18.9	30.0
Acetone	0.014	0.016	0.010	16.3	40.0
Carbon disulfide	0.996	0.818	0.010	-17.9	25.0
Methyl acetate	0.073	0.061	0.010	-16.1	40.0
Methylene chloride	0.268	0.248	0.010	-7.2	30.0
trans-1,2-Dichloroethene	0.365	0.322	0.070	-11.7	20.0
Methyl tert-butyl ether	0.475	0.445	0.010	-6.3	30.0
1,1-Dichloroethane	0.628	0.585	0.100	-6.9	20.0
cis-1,2-Dichloroethene	0.353	0.332	0.100	-5.8	20.0
2-Butanone	0.043	0.045	0.010	5.7	40.0
Bromochloromethane	0.131	0.126	0.020	-3.2	20.0
Chloroform	0.541	0.520	0.040	-3.9	20.0
1,1,1-Trichloroethane	0.621	0.573	0.050	-7.7	20.0
Cyclohexane	0.876	0.794	0.100	-9.4	25.0
Carbon tetrachloride	0.617	0.564	0.020	-8.5	25.0
Benzene	1.326	1.247	0.300	-6.0	20.0
1,2-Dichloroethane	0.275	0.267	0.010	-3.0	25.0
Trichloroethene	0.423	0.410	0.100	-3.3	20.0
Methylcyclohexane	0.649	0.578	0.200	-10.9	25.0
1,2-Dichloropropane	0.313	0.288	0.100	-7.9	20.0
Bromodichloromethane	0.395	0.394	0.090	-0.2	20.0
cis-1,3-Dichloropropene	0.432	0.413	0.100	-4.4	20.0
4-Methyl-2-Pentanone	0.160	0.156	0.010	-2.0	30.0
Toluene	1.328	1.271	0.400	-4.3	20.0
trans-1,3-Dichloropropene	0.324	0.310	0.010	-4.5	20.0
1,1,2-Trichloroethane	0.177	0.170	0.040	-4.1	20.0
Tetrachloroethene	0.311	0.302	0.100	-2.7	20.0

FORM 7A-OR

INITIAL CALIBRATION VERIFICATION AND CONTINUING CALIBRATION VERIFICATION FOR GC/M

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Level: TRACE

Instrument ID: 5975-M Date Analyzed: 08/27/2019 Time: 10:43

Lab File ID: MR66V05 Init. Calib Date(s): 08/27/2019 08/27/2019

EPA Sample No.: VICVTM Init. Calib Time(s): 07:56 09:48

GC Column: RTX-VMS ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Y Purge Volume: 25.0 (mL)

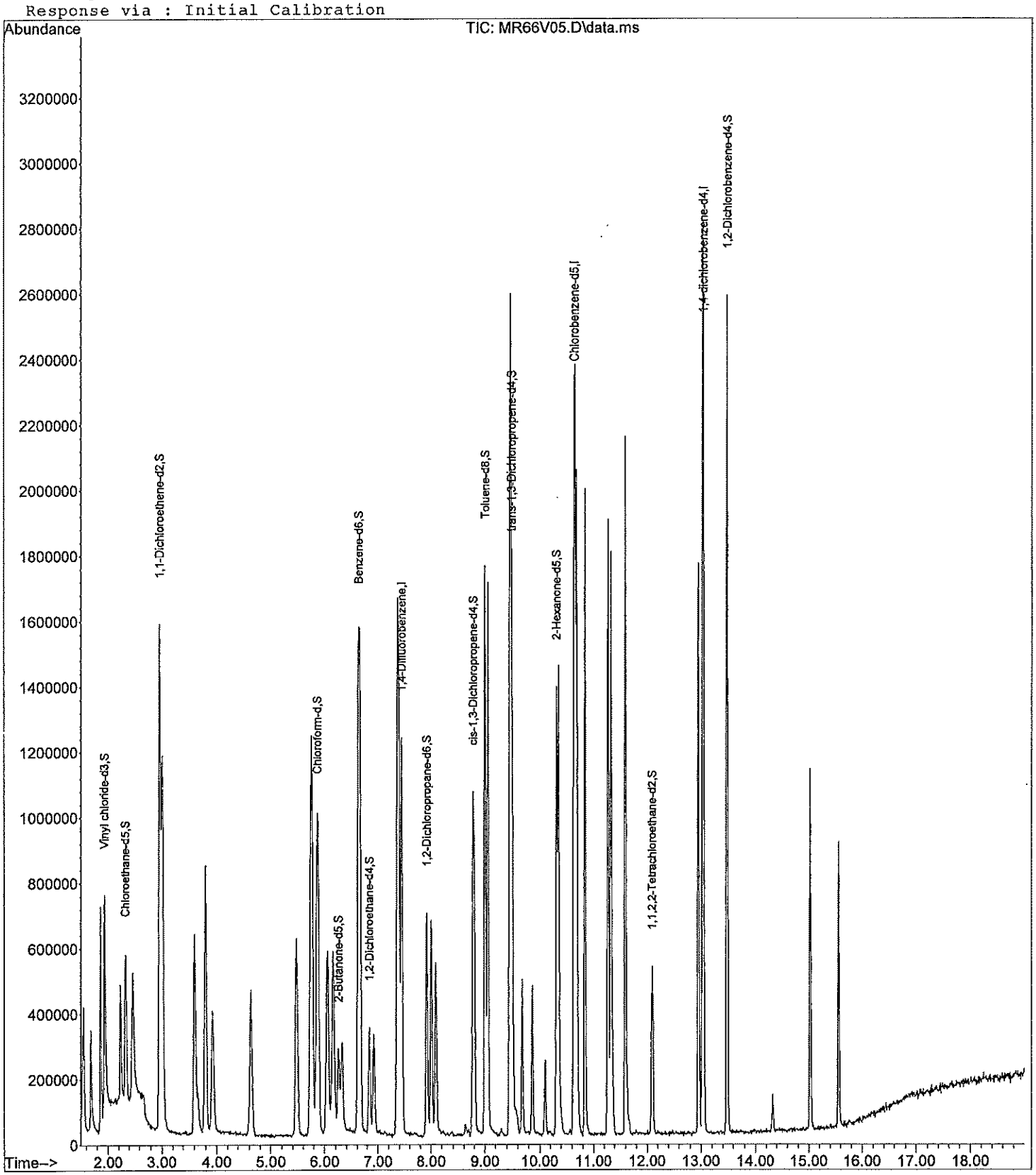
ANALYTE	$\overline{RRF}$	RRF 5	MIN RRF	%D	MAX %D
2-Hexanone	0.122	0.112	0.010	-8.2	40.0
Dibromochloromethane	0.269	0.269	0.050	0.2	20.0
1,2-Dibromoethane	0.182	0.173	0.010	-5.1	20.0
Chlorobenzene	0.896	0.880	0.400	-1.7	20.0
Ethylbenzene	1.514	1.465	0.500	-3.2	20.0
o-Xylene	0.625	0.604	0.300	-3.3	20.0
m,p-Xylene	0.645	0.607	0.200	-6.0	20.0
Styrene	0.946	0.940	0.200	-0.6	20.0
Bromoform	0.265	0.260	0.010	-1.9	30.0
Isopropylbenzene	1.632	1.540	0.700	-5.6	25.0
1,1,2,2-Tetrachloroethane	0.185	0.177	0.050	-4.2	25.0
1,3-Dichlorobenzene	1.507	1.491	0.500	-1.1	20.0
1,4-Dichlorobenzene	1.464	1.445	0.700	-1.3	20.0
1,2-Dichlorobenzene	1.212	1.177	0.400	-2.9	20.0
1,2-Dibromo-3-chloropropane	0.054	0.049	0.010	-10.1	40.0
1,2,4-Trichlorobenzene	0.664	0.665	0.300	0.2	30.0
1,2,3-Trichlorobenzene	0.510	0.527	0.200	3.3	40.0
Vinyl chloride-d3	0.414	0.359	0.010	-13.2	30.0
Chloroethane-d5	0.255	0.227	0.010	-10.9	30.0
1,1-Dichloroethene-d2	0.785	0.723	0.010	-7.8	25.0
2-Butanone-d5	0.046	0.042	0.010	-8.9	40.0
Chloroform-d	0.604	0.585	0.010	-3.2	20.0
1,2-Dichloroethane-d4	0.241	0.226	0.010	-6.3	25.0
Benzene-d6	1.352	1.361	0.030	0.6	20.0
1,2-Dichloropropane-d6	0.341	0.345	0.100	1.2	20.0
Toluene-d8	1.216	1.237	0.200	1.7	20.0
trans-1,3-Dichloropropene-d4	0.313	0.306	0.010	-2.2	25.0
2-Hexanone-d5	0.053	0.051	0.010	-3.7	40.0
1,1,2,2-Tetrachloroethane-d2	0.197	0.188	0.010	-4.3	25.0
1,2-Dichlorobenzene-d4	0.797	0.794	0.060	-0.4	20.0

Quantitation Report

Data File : C:\msdchem\1\data\27AUG19M\MR66V05.D Vial: 8
Acq Time : 08/27/2019 10:43 Operator: CQC
Sample : VICVTM VICVTM 5.0 ug/L ICV Inst : 5975-M
Misc : 2.5 uL of 49435, 49438 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Aug 27 11:02:53 2019 Results File: MTRACEA9.RES

Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Tue Aug 27 10:17:49 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\27AUG19M\MR66V05.D Vial: 8
Acq Time : 08/27/2019 10:43 Operator: CQC
Sample : VICVTM VICVTM 5.0 ug/L ICV Inst : 5975-M
Misc : 2.5 uL of 49435, 49438 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Aug 27 11:02:53 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Tue Aug 27 10:18:42 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Area%
1) 1,4-Difluorobenzene	7.44	114	1220405	5.0000	ug/L	105.13
28) Chlorobenzene-d5	10.63	117	1033348	5.0000	ug/L	103.66
60) 1,4-dichlorobenzene-d4	13.03	152	551407	5.0000	ug/L	105.79
System Monitoring Compounds						**%Recovery**
5) Vinyl chloride-d3	1.93	65	438661	4.3385	ug/L	86.77%
8) Chloroethane-d5	2.32	69	276731	4.4528	ug/L	89.06%
11) 1,1-Dichloroethene-d2	2.96	63	882791	4.6096	ug/L	92.19%
22) 2-Butanone-d5	6.25	46	516553	45.5590	ug/L	91.12%
25) Chloroform-d	5.86	84	714274	4.8416	ug/L	96.83%
27) 1,2-Dichloroethane-d4	6.84	65	275868	4.6858	ug/L	93.72%
33) Benzene-d6	6.63	84	1406168	5.0312	ug/L	100.62%
37) 1,2-Dichloropropane-d6	7.92	67	356829	5.0615	ug/L	101.23%
40) cis-1,3-Dichloropropene-d4	8.78	79	606074	4.9558	ug/L	99.12%
42) trans-1,3-Dichloropropene-	9.50	79	316319	4.8919	ug/L	97.84%
47) Toluene-d8	9.00	98	1278618	5.0863	ug/L	101.73%
50) 2-Hexanone-d5	10.31	63	528673	48.1426	ug/L	96.29%
59) 1,1,2,2-Tetrachloroethane-	12.08	84	194367	4.7853	ug/L	95.71%
65) 1,2-Dichlorobenzene-d4	13.47	152	437797	4.9782	ug/L	99.56%
Target Compounds						**Qvalue**
2) Dichlorodifluoromethane	1.68	85	411238	5.3173	ug/L	96
3) Chloromethane	1.86	50	726796	4.8882	ug/L	99
4) Vinyl chloride	1.93	62	480574	4.9383	ug/L	99
6) Bromomethane	2.24	94	261187	4.8825	ug/L	98
7) Chloroethane	2.35	64	244142	4.6633	ug/L	98
9) Trichlorofluoromethane	2.47	101	593865	4.7403	ug/L	98
10) 1,1-Dichloroethene	2.97	96	345476	4.2568	ug/L	98
12) 1,1,2-Trichloro-1,2,2-trif	3.01	101	341265	4.0536	ug/L	99
13) Acetone	3.66	43	198700	58.1583	ug/L	99
14) Carbon disulfide	3.01	76	998246	4.1046	ug/L	97
15) Methyl acetate	3.81	43	74816	4.1948	ug/L	97
16) Methylene chloride	3.61	84	303233	4.6382	ug/L	99
17) trans-1,2-Dichloroethene	3.80	96	393309	4.4159	ug/L	100
18) Methyl tert-butyl ether	3.93	73	542550	4.6835	ug/L	99
19) 1,1-Dichloroethane	4.64	63	713421	4.6558	ug/L	99
20) cis-1,2-Dichloroethene	5.47	96	405589	4.7124	ug/L	99
21) 2-Butanone	6.32	43	554274	52.8640	ug/L	100
23) Bromochloromethane	5.77	128	154219	4.8413	ug/L	97
24) Chloroform	5.88	83	634143	4.8053	ug/L	99
26) 1,2-Dichloroethane	6.92	62	325510	4.8494	ug/L	98
29) 1,1,1-Trichloroethane	6.16	97	591926	4.6135	ug/L	99
30) Cyclohexane	5.75	56	820000	4.5287	ug/L	99
31) Carbon tetrachloride	6.05	117	583179	4.5732	ug/L	98
32) Benzene	6.66	78	1288558	4.7018	ug/L #	99
34) Trichloroethene	7.39	130	423329	4.8373	ug/L	96
35) Methylcyclohexane	7.37	83	597378	4.4559	ug/L	99
36) 1,2-Dichloropropane	8.01	63	297693	4.6057	ug/L	99
38) Bromodichloromethane	8.10	83	407606	4.9913	ug/L	96
39) cis-1,3-Dichloropropene	8.80	75	426305	4.7784	ug/L	98
41) trans-1,3-Dichloropropene	9.51	75	320191	4.7772	ug/L	96
43) 1,1,2-Trichloroethane	9.68	97	175311	4.7935	ug/L	97
44) Dibromochloromethane	9.86	129	278188	5.0109	ug/L	98
45) 4-Methyl-2-pentanone	9.47	43	1616145	49.0222	ug/L	98
46) Toluene	9.06	91	1313623	4.7849	ug/L	96

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

Quantitation Report

Data File : C:\msdchem\1\data\27AUG19M\MR66V05.D Vial: 8
Acq Time : 08/27/2019 10:43 Operator: CQC
Sample : VICVTM VICVTM 5.0 ug/L ICV Inst : 5975-M
Misc : 2.5 uL of 49435, 49438 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Aug 27 11:02:53 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Tue Aug 27 10:18:42 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
48) Tetrachloroethene	9.46	164	312204	4.8641 ug/L	98
49) 2-Hexanone	10.35	43	1159925	45.8988 ug/L	99
51) 1,2-Dibromoethane	10.11	107	178253	4.7429 ug/L	98
52) Chlorobenzene	10.65	112	909554	4.9128 ug/L	98
53) Ethylbenzene	10.68	91	1514252	4.8408 ug/L	100
54) m,p-Xylene	10.83	106	626960	4.7010 ug/L	99
55) o-Xylene	11.28	106	624530	4.8327 ug/L	98
56) Styrene	11.33	104	971257	4.9684 ug/L	99
57) Isopropylbenzene	11.59	105	1591551	4.7194 ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.10	83	182950	4.7899 ug/L	98
61) Bromoform	11.36	173	143345	4.9068 ug/L	97
62) 1,3-Dichlorobenzene	12.95	146	821988	4.9463 ug/L	98
63) 1,4-Dichlorobenzene	13.05	146	796547	4.9347 ug/L	99
64) 1,2-Dichlorobenzene	13.48	146	648981	4.8548 ug/L	100
66) 1,2-Dibromo-3-chloropropan	14.32	75	26799	4.4974 ug/L	97
67) 1,2,4-Trichlorobenzene	15.03	180	366910	5.0079 ug/L	100
68) 1,2,3-Trichlorobenzene	15.56	180	290457	5.1644 ug/L	97

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

FORM 7A-OR

INITIAL CALIBRATION VERIFICATION AND CONTINUING CALIBRATION VERIFICATION FOR GC/M

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Level: TRACE

Instrument ID: 5975-F Date Analyzed: 09/11/2019 Time: 07:06

Lab File ID: FP77S05 Init. Calib Date(s): 07/17/2019 07/17/2019

EPA Sample No.: VSTD005T1 Init. Calib Time(s): 07:11 09:03

GC Column: RTX-VMS ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Y Purge Volume: 25.0 (mL)

ANALYTE	$\overline{RRF}$	RRF 5	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.292	0.272	0.010	-7.0	40.0
Chloromethane	0.388	0.397	0.010	2.3	30.0
Vinyl chloride	0.334	0.346	0.010	3.6	30.0
Bromomethane	0.214	0.213	0.010	-0.6	30.0
Chloroethane	0.210	0.218	0.010	3.5	30.0
Trichlorofluoromethane	0.486	0.505	0.010	4.0	30.0
1,1-Dichloroethene	0.290	0.306	0.020	5.3	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.307	0.316	0.010	2.8	30.0
Acetone	0.044	0.047	0.010	7.6	40.0
Carbon disulfide	0.885	0.961	0.010	8.6	25.0
Methyl acetate	0.125	0.132	0.010	5.5	40.0
Methylene chloride	0.291	0.311	0.010	6.8	30.0
trans-1,2-Dichloroethene	0.325	0.331	0.070	1.7	20.0
Methyl tert-butyl ether	0.721	0.699	0.010	-3.1	30.0
1,1-Dichloroethane	0.602	0.628	0.100	4.3	20.0
cis-1,2-Dichloroethene	0.347	0.342	0.100	-1.6	20.0
2-Butanone	0.080	0.079	0.010	-0.1	40.0
Bromochloromethane	0.150	0.152	0.020	1.2	20.0
Chloroform	0.582	0.588	0.040	1.1	20.0
1,1,1-Trichloroethane	0.659	0.688	0.050	4.4	20.0
Cyclohexane	0.727	0.760	0.100	4.6	25.0
Carbon tetrachloride	0.616	0.650	0.020	5.6	25.0
Benzene	1.449	1.459	0.300	0.7	20.0
1,2-Dichloroethane	0.370	0.362	0.010	-2.3	25.0
Trichloroethene	0.455	0.446	0.100	-2.0	20.0
Methylcyclohexane	0.693	0.674	0.200	-2.7	25.0
1,2-Dichloropropane	0.361	0.355	0.100	-1.6	20.0
Bromodichloromethane	0.502	0.486	0.090	-3.3	20.0
cis-1,3-Dichloropropene	0.549	0.495	0.100	-9.8	20.0
4-Methyl-2-Pentanone	0.242	0.239	0.010	-1.1	30.0
Toluene	1.454	1.386	0.400	-4.7	20.0
trans-1,3-Dichloropropene	0.437	0.402	0.010	-8.1	20.0
1,1,2-Trichloroethane	0.224	0.207	0.040	-7.3	20.0
Tetrachloroethene	0.309	0.294	0.100	-4.6	20.0

FORM 7A-OR

INITIAL CALIBRATION VERIFICATION AND CONTINUING CALIBRATION VERIFICATION FOR GC/M

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Level: TRACE

Instrument ID: 5975-F Date Analyzed: 09/11/2019 Time: 07:06

Lab File ID: FP77S05 Init. Calib Date(s): 07/17/2019 07/17/2019

EPA Sample No.: VSTD005T1 Init. Calib Time(s): 07:11 09:03

GC Column: RTX-VMS ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Y Purge Volume: 25.0 (mL)

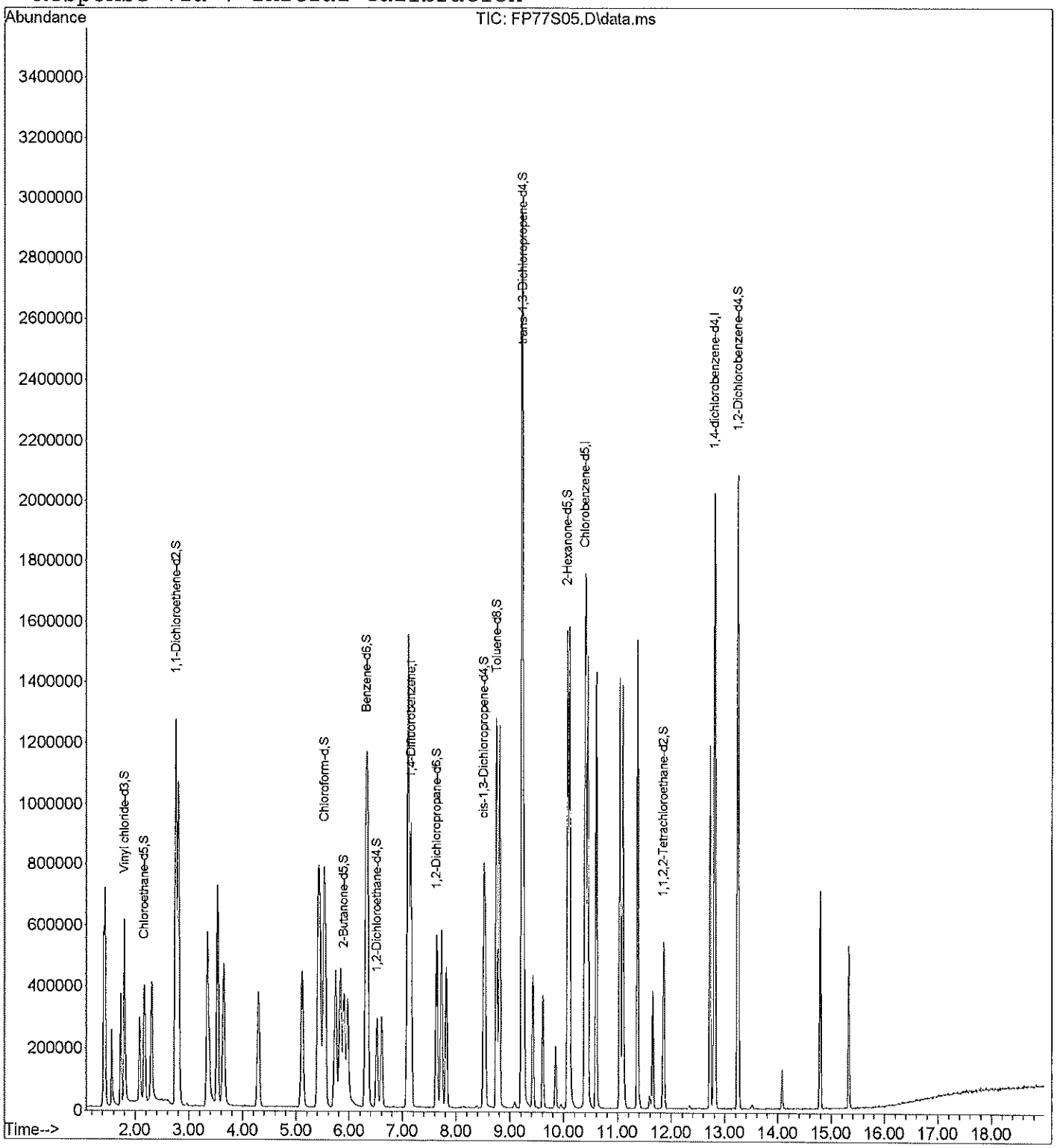
ANALYTE	$\overline{RRF}$	RRF 5	MIN RRF	%D	MAX %D
2-Hexanone	0.180	0.174	0.010	-2.9	40.0
Dibromochloromethane	0.330	0.315	0.050	-4.7	20.0
1,2-Dibromoethane	0.226	0.203	0.010	-10.2	20.0
Chlorobenzene	0.976	0.919	0.400	-5.9	20.0
Ethylbenzene	1.646	1.571	0.500	-4.5	20.0
o-Xylene	0.632	0.601	0.300	-4.8	20.0
m,p-Xylene	0.651	0.622	0.200	-4.4	20.0
Styrene	1.017	0.960	0.200	-5.6	20.0
Bromoform	0.362	0.334	0.010	-7.7	30.0
Isopropylbenzene	1.629	1.545	0.700	-5.1	25.0
1,1,2,2-Tetrachloroethane	0.264	0.261	0.050	-1.2	25.0
1,3-Dichlorobenzene	1.501	1.387	0.500	-7.6	20.0
1,4-Dichlorobenzene	1.540	1.440	0.700	-6.5	20.0
1,2-Dichlorobenzene	1.329	1.255	0.400	-5.6	20.0
1,2-Dibromo-3-chloropropane	0.088	0.080	0.010	-8.9	40.0
1,2,4-Trichlorobenzene	0.649	0.569	0.300	-12.3	30.0
1,2,3-Trichlorobenzene	0.499	0.423	0.200	-15.3	40.0
Vinyl chloride-d3	0.340	0.353	0.010	3.9	30.0
Chloroethane-d5	0.274	0.275	0.010	0.6	30.0
1,1-Dichloroethene-d2	0.686	0.790	0.010	15.2	25.0
2-Butanone-d5	0.081	0.089	0.010	10.0	40.0
Chloroform-d	0.631	0.697	0.010	10.5	20.0
1,2-Dichloroethane-d4	0.297	0.310	0.010	4.6	25.0
Benzene-d6	1.475	1.589	0.030	7.8	20.0
1,2-Dichloropropane-d6	0.394	0.407	0.100	3.5	20.0
Toluene-d8	1.280	1.298	0.200	1.4	20.0
trans-1,3-Dichloropropene-d4	0.389	0.377	0.010	-2.9	25.0
2-Hexanone-d5	0.080	0.079	0.010	-1.0	40.0
1,1,2,2-Tetrachloroethane-d2	0.267	0.279	0.010	4.4	25.0
1,2-Dichlorobenzene-d4	0.845	0.852	0.060	0.8	20.0

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP77S05.D Vial: 2
Acq Time : 09/11/2019 07:06 Operator: CQC
Sample : VSTD005T1 VSTD005T1 5.0 ug/L CVS Inst : 5975-F
Misc : 2.5 uL of 49435, 49436; 2.0 uL of 49350 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 07:25:37 2019 Results File: FTRACEG5.RES

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Sep 05 08:18:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP77S05.D Vial: 2
Acq Time : 09/11/2019 07:06 Operator: CQC
Sample : VSTD005T1 VSTD005T1 5.0 ug/L CVS Inst : 5975-F
Misc : 2.5 uL of 49435, 49436; 2.0 uL of 49350 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 07:25:37 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.16	114	837599	5.0000 ug/L	89.01
28) Chlorobenzene-d5	10.39	117	663528	5.0000 ug/L	86.80
60) 1,4-dichlorobenzene-d4	12.80	152	359641	5.0000 ug/L	89.90
System Monitoring Compounds					**%Recovery**
5) Vinyl chloride-d3	1.80	65	295983	5.1934 ug/L	103.87%
8) Chloroethane-d5	2.17	69	230605	5.0278 ug/L	100.56%
11) 1,1-Dichloroethene-d2	2.75	63	662056	5.7599 ug/L	115.20%
22) 2-Butanone-d5	5.90	46	748811	54.9750 ug/L	109.95%
25) Chloroform-d	5.52	84	584020	5.5241 ug/L	110.48%
27) 1,2-Dichloroethane-d4	6.52	65	259726	5.2284 ug/L	104.57%
33) Benzene-d6	6.31	84	1054381	5.3882 ug/L	107.76%
37) 1,2-Dichloropropane-d6	7.63	67	270304	5.1730 ug/L	103.46%
40) cis-1,3-Dichloropropene-d4	8.51	79	415493	4.6393 ug/L	92.79%
42) trans-1,3-Dichloropropene-	9.24	79	250338	4.8555 ug/L	97.11%
47) Toluene-d8	8.75	98	861087	5.0692 ug/L	101.38%
50) 2-Hexanone-d5	10.07	63	524792	49.4822 ug/L	98.96%
59) 1,1,2,2-Tetrachloroethane-	11.85	84	185096	5.2177 ug/L	104.35%
65) 1,2-Dichlorobenzene-d4	13.24	152	306314	5.0382 ug/L	100.76%
Target Compounds					**Qvalue**
2) Dichlorodifluoromethane	1.56	85	227633	4.6515 ug/L #	99
3) Chloromethane	1.73	50	332321	5.1150 ug/L	100
4) Vinyl chloride	1.80	62	289738	5.1806 ug/L	98
6) Bromomethane	2.09	94	178114	4.9695 ug/L	99
7) Chloroethane	2.18	64	182417	5.1744 ug/L	98
9) Trichlorofluoromethane	2.31	101	422920	5.1979 ug/L	100
10) 1,1-Dichloroethene	2.76	96	256228	5.2659 ug/L	96
12) 1,1,2-Trichloro-1,2,2-trif	2.81	101	264531	5.1375 ug/L	99
13) Acetone	3.38	43	392524	53.7857 ug/L	98
14) Carbon disulfide	2.80	76	805322	5.4297 ug/L	99
15) Methyl acetate	3.52	43	110656	5.2756 ug/L	92
16) Methylene chloride	3.34	84	260206	5.3421 ug/L	97
17) trans-1,2-Dichloroethene	3.53	96	277281	5.0859 ug/L	96
18) Methyl tert-butyl ether	3.64	73	585395	4.8468 ug/L	95
19) 1,1-Dichloroethane	4.29	63	526242	5.2143 ug/L	100
20) cis-1,2-Dichloroethene	5.11	96	286163	4.9201 ug/L	98
21) 2-Butanone	5.97	43	665140	49.9268 ug/L	99
23) Bromochloromethane	5.40	128	127224	5.0590 ug/L	93
24) Chloroform	5.54	83	492773	5.0572 ug/L	100
26) 1,2-Dichloroethane	6.60	62	302853	4.8868 ug/L	99

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

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP77S05.D Vial: 2
Acq Time : 09/11/2019 07:06 Operator: CQC
Sample : VSTD005T1 VSTD005T1 5.0 ug/L CVS Inst : 5975-F
Misc : 2.5 uL of 49435, 49436; 2.0 uL of 49350 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 07:25:37 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	1,1,1-Trichloroethane	5.83	97	456544	5.2202 ug/L	99
30)	Cyclohexane	5.43	56	504095	5.2276 ug/L	97
31)	Carbon tetrachloride	5.74	117	431133	5.2779 ug/L	98
32)	Benzene	6.34	78	968258	5.0353 ug/L	99
34)	Trichloroethene	7.11	130	295604	4.9007 ug/L	98
35)	Methylcyclohexane	7.10	83	447424	4.8631 ug/L	97
36)	1,2-Dichloropropane	7.73	63	235840	4.9211 ug/L	98
38)	Bromodichloromethane	7.82	83	322239	4.8351 ug/L	98
39)	cis-1,3-Dichloropropene	8.54	75	328210	4.5082 ug/L	99
41)	trans-1,3-Dichloropropene	9.26	75	266819	4.5967 ug/L	95
43)	1,1,2-Trichloroethane	9.43	97	137548	4.6334 ug/L	98
44)	Dibromochloromethane	9.62	129	208814	4.7639 ug/L	98
45)	4-Methyl-2-pentanone	9.22	43	1586701	49.4271 ug/L	99
46)	Toluene	8.80	91	919523	4.7665 ug/L	100
48)	Tetrachloroethene	9.23	164	195397	4.7696 ug/L	99
49)	2-Hexanone	10.10	43	1157431	48.5617 ug/L	100
51)	1,2-Dibromoethane	9.85	107	134937	4.4922 ug/L	98
52)	Chlorobenzene	10.41	112	609759	4.7063 ug/L	100
53)	Ethylbenzene	10.44	91	1042700	4.7743 ug/L	98
54)	m,p-Xylene	10.60	106	413028	4.7798 ug/L	99
55)	o-Xylene	11.04	106	399014	4.7605 ug/L	98
56)	Styrene	11.10	104	637258	4.7220 ug/L	89
57)	Isopropylbenzene	11.37	105	1025115	4.7427 ug/L	100
58)	1,1,2,2-Tetrachloroethane	11.87	83	172897	4.9406 ug/L	97
61)	Bromoform	11.12	173	120051	4.6160 ug/L	99
62)	1,3-Dichlorobenzene	12.72	146	498987	4.6215 ug/L	99
63)	1,4-Dichlorobenzene	12.82	146	517722	4.6727 ug/L	100
64)	1,2-Dichlorobenzene	13.25	146	451185	4.7186 ug/L	100
66)	1,2-Dibromo-3-chloropropan	14.08	75	28755	4.5560 ug/L	98
67)	1,2,4-Trichlorobenzene	14.79	180	204796	4.3839 ug/L	100
68)	1,2,3-Trichlorobenzene	15.33	180	151969	4.2373 ug/L	99

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

FORM 7A-OR

INITIAL CALIBRATION VERIFICATION AND CONTINUING CALIBRATION VERIFICATION FOR GC/M

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Level: TRACE

Instrument ID: 5975-F Date Analyzed: 09/11/2019 Time: 14:40

Lab File ID: FP93F05 Init. Calib Date(s): 07/17/2019 07/17/2019

EPA Sample No.: VSTD005T2 Init. Calib Time(s): 07:11 09:03

GC Column: RTX-VMS ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Y Purge Volume: 25.0 (mL)

ANALYTE	$\overline{RRF}$	RRF 5	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.292	0.281	0.010	-3.6	50.0
Chloromethane	0.388	0.427	0.010	10.0	50.0
Vinyl chloride	0.334	0.363	0.010	8.8	50.0
Bromomethane	0.214	0.224	0.010	4.8	50.0
Chloroethane	0.210	0.227	0.010	7.9	50.0
Trichlorofluoromethane	0.486	0.525	0.010	8.1	50.0
1,1-Dichloroethene	0.290	0.327	0.020	12.6	25.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.307	0.327	0.010	6.5	50.0
Acetone	0.044	0.044	0.010	0.6	50.0
Carbon disulfide	0.885	1.014	0.010	14.5	25.0
Methyl acetate	0.125	0.130	0.010	4.0	50.0
Methylene chloride	0.291	0.319	0.010	9.7	50.0
trans-1,2-Dichloroethene	0.325	0.349	0.070	7.1	25.0
Methyl tert-butyl ether	0.721	0.726	0.010	0.7	50.0
1,1-Dichloroethane	0.602	0.654	0.100	8.5	25.0
cis-1,2-Dichloroethene	0.347	0.363	0.100	4.6	25.0
2-Butanone	0.080	0.079	0.010	-0.2	50.0
Bromochloromethane	0.150	0.158	0.020	5.1	25.0
Chloroform	0.582	0.611	0.040	5.1	25.0
1,1,1-Trichloroethane	0.659	0.695	0.050	5.5	25.0
Cyclohexane	0.727	0.792	0.100	8.9	50.0
Carbon tetrachloride	0.616	0.652	0.020	5.9	50.0
Benzene	1.449	1.489	0.300	2.8	25.0
1,2-Dichloroethane	0.370	0.374	0.010	1.1	50.0
Trichloroethene	0.455	0.451	0.100	-0.8	25.0
Methylcyclohexane	0.693	0.685	0.200	-1.2	50.0
1,2-Dichloropropane	0.361	0.364	0.100	0.9	25.0
Bromodichloromethane	0.502	0.479	0.090	-4.6	25.0
cis-1,3-Dichloropropene	0.549	0.476	0.100	-13.3	25.0
4-Methyl-2-Pentanone	0.242	0.244	0.010	0.8	50.0
Toluene	1.454	1.421	0.400	-2.2	25.0
trans-1,3-Dichloropropene	0.437	0.394	0.010	-9.9	25.0
1,1,2-Trichloroethane	0.224	0.213	0.040	-4.9	25.0
Tetrachloroethene	0.309	0.301	0.100	-2.5	25.0

FORM 7A-OR

INITIAL CALIBRATION VERIFICATION AND CONTINUING CALIBRATION VERIFICATION FOR GC/M

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Level: TRACE

Instrument ID: 5975-F Date Analyzed: 09/11/2019 Time: 14:40

Lab File ID: FP93F05 Init. Calib Date(s): 07/17/2019 07/17/2019

EPA Sample No.: VSTD005T2 Init. Calib Time(s): 07:11 09:03

GC Column: RTX-VMS ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Y Purge Volume: 25.0 (mL)

ANALYTE	$\overline{RRF}$	RRF 5	MIN RRF	%D	MAX %D
2-Hexanone	0.180	0.181	0.010	1.0	50.0
Dibromochloromethane	0.330	0.309	0.050	-6.4	25.0
1,2-Dibromoethane	0.226	0.208	0.010	-7.9	25.0
Chlorobenzene	0.976	0.954	0.400	-2.3	25.0
Ethylbenzene	1.646	1.643	0.500	-0.2	25.0
o-Xylene	0.632	0.624	0.300	-1.2	25.0
m,p-Xylene	0.651	0.649	0.200	-0.3	25.0
Styrene	1.017	0.991	0.200	-2.5	25.0
Bromoform	0.362	0.326	0.010	-9.7	50.0
Isopropylbenzene	1.629	1.608	0.700	-1.3	25.0
1,1,2,2-Tetrachloroethane	0.264	0.270	0.050	2.3	25.0
1,3-Dichlorobenzene	1.501	1.468	0.500	-2.2	25.0
1,4-Dichlorobenzene	1.540	1.514	0.700	-1.7	25.0
1,2-Dichlorobenzene	1.329	1.318	0.400	-0.9	25.0
1,2-Dibromo-3-chloropropane	0.088	0.079	0.010	-9.8	50.0
1,2,4-Trichlorobenzene	0.649	0.576	0.300	-11.3	50.0
1,2,3-Trichlorobenzene	0.499	0.416	0.200	-16.6	50.0
Vinyl chloride-d3	0.340	0.368	0.010	8.2	50.0
Chloroethane-d5	0.274	0.286	0.010	4.5	50.0
1,1-Dichloroethene-d2	0.686	0.800	0.010	16.7	25.0
2-Butanone-d5	0.081	0.085	0.010	5.0	50.0
Chloroform-d	0.631	0.702	0.010	11.3	25.0
1,2-Dichloroethane-d4	0.297	0.307	0.010	3.4	25.0
Benzene-d6	1.475	1.563	0.030	6.0	25.0
1,2-Dichloropropane-d6	0.394	0.399	0.100	1.3	25.0
Toluene-d8	1.280	1.290	0.200	0.8	25.0
trans-1,3-Dichloropropene-d4	0.389	0.352	0.010	-9.4	25.0
2-Hexanone-d5	0.080	0.077	0.010	-3.6	50.0
1,1,2,2-Tetrachloroethane-d2	0.267	0.273	0.010	2.1	25.0
1,2-Dichlorobenzene-d4	0.845	0.864	0.060	2.3	25.0

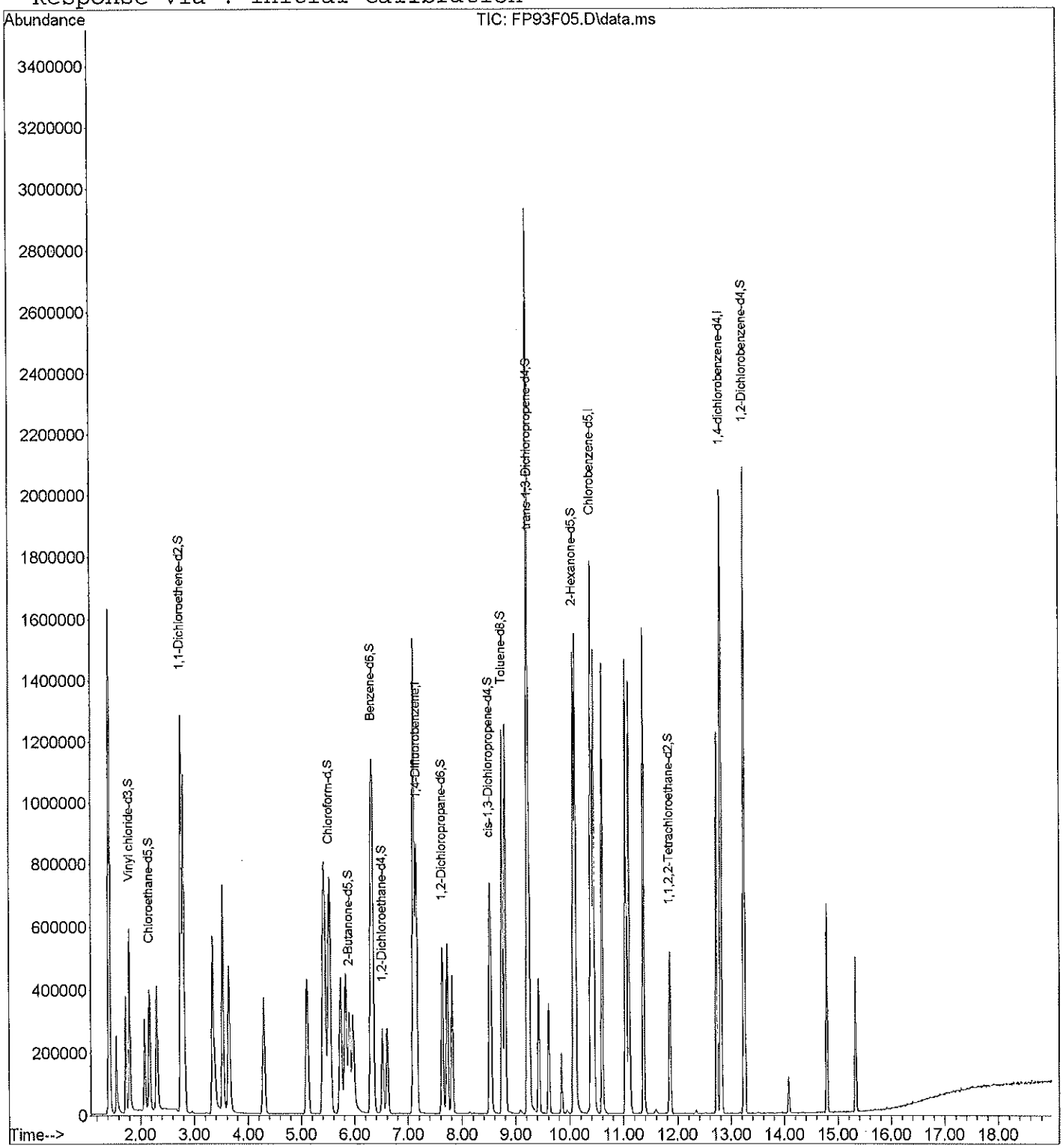
Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP93F05.D
Acq Time : 09/11/2019 14:40
Sample : VSTD005T2 VSTD005T2 5.0 ug/L FCS
Misc : 2.5 uL of 49435, 49436
MS Integration Params: rteint.p

Vial: 18
Operator: CQC
Inst : 5975-F
Multiplr: 1.00
Column ID: Rtx-VMS

Quant Time: Sep 11 14:59:47 2019 Results File: FTRACEG5.RES

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Sep 05 08:18:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP93F05.D Vial: 18
Acq Time : 09/11/2019 14:40 Operator: CQC
Sample : VSTD005T2 VSTD005T2 5.0 ug/L FCS Inst : 5975-F
Misc : 2.5 uL of 49435, 49436 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 14:59:47 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.16	114	798366	5.0000 ug/L	84.84
28) Chlorobenzene-d5	10.40	117	648667	5.0000 ug/L	84.85
60) 1,4-dichlorobenzene-d4	12.80	152	348668	5.0000 ug/L	87.16
System Monitoring Compounds					%Recovery
5) Vinyl chloride-d3	1.79	65	293760	5.4077 ug/L	108.15%
8) Chloroethane-d5	2.16	69	228458	5.2257 ug/L	104.51%
11) 1,1-Dichloroethene-d2	2.75	63	639033	5.8328 ug/L	116.66%
22) 2-Butanone-d5	5.90	46	681367	52.4817 ug/L	104.96%
25) Chloroform-d	5.51	84	560566	5.5628 ug/L	111.26%
27) 1,2-Dichloroethane-d4	6.51	65	244850	5.1712 ug/L	103.42%
33) Benzene-d6	6.31	84	1013765	5.2993 ug/L	105.99%
37) 1,2-Dichloropropane-d6	7.63	67	258654	5.0634 ug/L	101.27%
40) cis-1,3-Dichloropropene-d4	8.51	79	385811	4.4065 ug/L	88.13%
42) trans-1,3-Dichloropropene-	9.24	79	228217	4.5279 ug/L	90.56%
47) Toluene-d8	8.75	98	836799	5.0391 ug/L	100.78%
50) 2-Hexanone-d5	10.07	63	499942	48.2191 ug/L	96.44%
59) 1,1,2,2-Tetrachloroethane-	11.85	84	176957	5.1026 ug/L	102.05%
65) 1,2-Dichlorobenzene-d4	13.24	152	301388	5.1132 ug/L	102.26%
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.56	85	224720	4.8176 ug/L #	99
3) Chloromethane	1.73	50	340678	5.5013 ug/L	98
4) Vinyl chloride	1.80	62	290002	5.4402 ug/L	97
6) Bromomethane	2.08	94	179089	5.2422 ug/L	99
7) Chloroethane	2.18	64	181292	5.3952 ug/L	97
9) Trichlorofluoromethane	2.31	101	419353	5.4073 ug/L	99
10) 1,1-Dichloroethene	2.76	96	261228	5.6325 ug/L	97
12) 1,1,2-Trichloro-1,2,2-trif	2.80	101	261309	5.3243 ug/L	99
13) Acetone	3.37	43	349775	50.2832 ug/L	97
14) Carbon disulfide	2.80	76	809495	5.7260 ug/L	98
15) Methyl acetate	3.53	43	103986	5.2013 ug/L	91
16) Methylene chloride	3.34	84	254740	5.4869 ug/L	96
17) trans-1,2-Dichloroethene	3.53	96	278339	5.3562 ug/L	96
18) Methyl tert-butyl ether	3.64	73	579441	5.0333 ug/L	95
19) 1,1-Dichloroethane	4.29	63	522023	5.4266 ug/L	99
20) cis-1,2-Dichloroethene	5.10	96	289803	5.2275 ug/L	98
21) 2-Butanone	5.97	43	633492	49.8880 ug/L	99
23) Bromochloromethane	5.40	128	126004	5.2567 ug/L	94
24) Chloroform	5.54	83	487857	5.2528 ug/L	99
26) 1,2-Dichloroethane	6.60	62	298550	5.0541 ug/L	99

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

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP93F05.D Vial: 18
Acq Time : 09/11/2019 14:40 Operator: CQC
Sample : VSTD005T2 VSTD005T2 5.0 ug/L FCS Inst : 5975-F
Misc : 2.5 uL of 49435, 49436 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 14:59:47 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	1,1,1-Trichloroethane	5.83	97	450895	5.2737 ug/L	98
30)	Cyclohexane	5.43	56	513422	5.4463 ug/L	97
31)	Carbon tetrachloride	5.74	117	422804	5.2945 ug/L	98
32)	Benzene	6.34	78	965796	5.1375 ug/L	99
34)	Trichloroethene	7.11	130	292389	4.9584 ug/L	99
35)	Methylcyclohexane	7.10	83	444360	4.9405 ug/L	96
36)	1,2-Dichloropropane	7.73	63	236387	5.0455 ug/L	98
38)	Bromodichloromethane	7.82	83	310686	4.7685 ug/L	99
39)	cis-1,3-Dichloropropene	8.54	75	308578	4.3356 ug/L	100
41)	trans-1,3-Dichloropropene	9.26	75	255728	4.5065 ug/L	93
43)	1,1,2-Trichloroethane	9.42	97	137937	4.7529 ug/L	98
44)	Dibromochloromethane	9.62	129	200560	4.6804 ug/L	98
45)	4-Methyl-2-pentanone	9.22	43	1581077	50.3803 ug/L	99
46)	Toluene	8.80	91	921911	4.8884 ug/L	99
48)	Tetrachloroethene	9.23	164	195201	4.8740 ug/L	99
49)	2-Hexanone	10.10	43	1177222	50.5237 ug/L	100
51)	1,2-Dibromoethane	9.85	107	135186	4.6036 ug/L	98
52)	Chlorobenzene	10.41	112	618727	4.8849 ug/L	99
53)	Ethylbenzene	10.45	91	1065712	4.9914 ug/L	99
54)	m,p-Xylene	10.60	106	421307	4.9873 ug/L	99
55)	o-Xylene	11.04	106	404974	4.9423 ug/L	99
56)	Styrene	11.10	104	642962	4.8734 ug/L	89
57)	Isopropylbenzene	11.37	105	1042768	4.9349 ug/L	100
58)	1,1,2,2-Tetrachloroethane	11.87	83	174937	5.1134 ug/L	99
61)	Bromoform	11.12	173	113834	4.5147 ug/L	100
62)	1,3-Dichlorobenzene	12.72	146	511917	4.8905 ug/L	99
63)	1,4-Dichlorobenzene	12.82	146	528038	4.9158 ug/L	99
64)	1,2-Dichlorobenzene	13.25	146	459399	4.9557 ug/L	100
66)	1,2-Dibromo-3-chloropropan	14.07	75	27606	4.5116 ug/L	96
67)	1,2,4-Trichlorobenzene	14.79	180	200766	4.4329 ug/L	99
68)	1,2,3-Trichlorobenzene	15.33	180	144991	4.1700 ug/L	100

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

FORM 7A-OR

INITIAL CALIBRATION VERIFICATION AND CONTINUING CALIBRATION VERIFICATION FOR GC/M

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Level: TRACE

Instrument ID: 5975-M Date Analyzed: 09/11/2019 Time: 08:07

Lab File ID: MS06S05 Init. Calib Date(s): 08/27/2019 08/27/2019

EPA Sample No.: VSTD005T3 Init. Calib Time(s): 07:56 09:48

GC Column: RTX-VMS ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Y Purge Volume: 25.0 (mL)

ANALYTE	$\overline{RRF}$	RRF 5	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.317	0.258	0.010	-18.7	40.0
Chloromethane	0.609	0.549	0.010	-9.8	30.0
Vinyl chloride	0.399	0.355	0.010	-11.0	30.0
Bromomethane	0.219	0.202	0.010	-7.7	30.0
Chloroethane	0.214	0.179	0.010	-16.3	30.0
Trichlorofluoromethane	0.513	0.462	0.010	-10.0	30.0
1,1-Dichloroethene	0.333	0.315	0.020	-5.3	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.345	0.312	0.010	-9.4	30.0
Acetone	0.014	0.018	0.010	25.6	40.0
Carbon disulfide	0.996	0.934	0.010	-6.2	25.0
Methyl acetate	0.073	0.073	0.010	0.2	40.0
Methylene chloride	0.268	0.274	0.010	2.2	30.0
trans-1,2-Dichloroethene	0.365	0.347	0.070	-4.9	20.0
Methyl tert-butyl ether	0.475	0.480	0.010	1.1	30.0
1,1-Dichloroethane	0.628	0.622	0.100	-0.9	20.0
cis-1,2-Dichloroethene	0.353	0.351	0.100	-0.5	20.0
2-Butanone	0.043	0.042	0.010	-2.6	40.0
Bromochloromethane	0.131	0.130	0.020	-0.6	20.0
Chloroform	0.541	0.529	0.040	-2.1	20.0
1,1,1-Trichloroethane	0.621	0.623	0.050	0.4	20.0
Cyclohexane	0.876	0.850	0.100	-3.0	25.0
Carbon tetrachloride	0.617	0.594	0.020	-3.7	25.0
Benzene	1.326	1.338	0.300	0.9	20.0
1,2-Dichloroethane	0.275	0.270	0.010	-1.7	25.0
Trichloroethene	0.423	0.428	0.100	1.0	20.0
Methylcyclohexane	0.649	0.636	0.200	-1.9	25.0
1,2-Dichloropropane	0.313	0.303	0.100	-3.3	20.0
Bromodichloromethane	0.395	0.382	0.090	-3.3	20.0
cis-1,3-Dichloropropene	0.432	0.426	0.100	-1.4	20.0
4-Methyl-2-Pentanone	0.160	0.152	0.010	-4.7	30.0
Toluene	1.328	1.298	0.400	-2.3	20.0
trans-1,3-Dichloropropene	0.324	0.319	0.010	-1.8	20.0
1,1,2-Trichloroethane	0.177	0.163	0.040	-7.9	20.0
Tetrachloroethene	0.311	0.316	0.100	1.6	20.0

FORM 7A-OR

INITIAL CALIBRATION VERIFICATION AND CONTINUING CALIBRATION VERIFICATION FOR GC/M

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Level: TRACE

Instrument ID: 5975-M Date Analyzed: 09/11/2019 Time: 08:07

Lab File ID: MS06S05 Init. Calib Date(s): 08/27/2019 08/27/2019

EPA Sample No.: VSTD005T3 Init. Calib Time(s): 07:56 09:48

GC Column: RTX-VMS ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Y Purge Volume: 25.0 (mL)

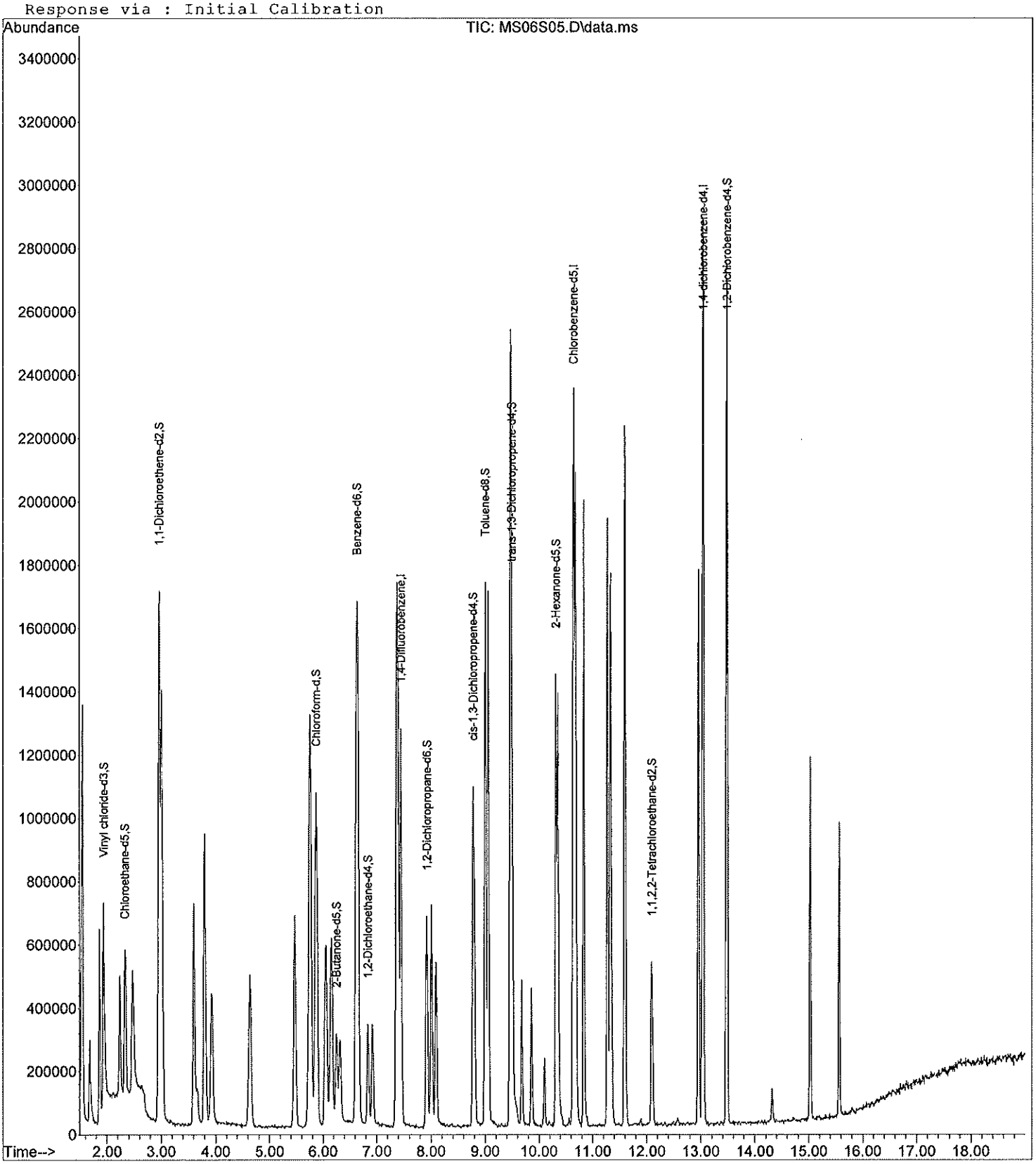
ANALYTE	$\overline{RRF}$	RRF 5	MIN RRF	%D	MAX %D
2-Hexanone	0.122	0.112	0.010	-8.1	40.0
Dibromochloromethane	0.269	0.255	0.050	-5.0	20.0
1,2-Dibromoethane	0.182	0.170	0.010	-6.5	20.0
Chlorobenzene	0.896	0.885	0.400	-1.2	20.0
Ethylbenzene	1.514	1.494	0.500	-1.3	20.0
o-Xylene	0.625	0.616	0.300	-1.5	20.0
m,p-Xylene	0.645	0.631	0.200	-2.3	20.0
Styrene	0.946	0.918	0.200	-2.9	20.0
Bromoform	0.265	0.251	0.010	-5.1	30.0
Isopropylbenzene	1.632	1.623	0.700	-0.5	25.0
1,1,2,2-Tetrachloroethane	0.185	0.189	0.050	2.3	25.0
1,3-Dichlorobenzene	1.507	1.503	0.500	-0.3	20.0
1,4-Dichlorobenzene	1.464	1.427	0.700	-2.5	20.0
1,2-Dichlorobenzene	1.212	1.170	0.400	-3.5	20.0
1,2-Dibromo-3-chloropropane	0.054	0.050	0.010	-8.4	40.0
1,2,4-Trichlorobenzene	0.664	0.676	0.300	1.7	30.0
1,2,3-Trichlorobenzene	0.510	0.524	0.200	2.8	40.0
Vinyl chloride-d3	0.414	0.371	0.010	-10.3	30.0
Chloroethane-d5	0.255	0.235	0.010	-7.5	30.0
1,1-Dichloroethene-d2	0.785	0.776	0.010	-1.1	25.0
2-Butanone-d5	0.046	0.046	0.010	-1.5	40.0
Chloroform-d	0.604	0.622	0.010	2.8	20.0
1,2-Dichloroethane-d4	0.241	0.231	0.010	-4.4	25.0
Benzene-d6	1.352	1.447	0.030	7.0	20.0
1,2-Dichloropropane-d6	0.341	0.352	0.100	3.2	20.0
Toluene-d8	1.216	1.270	0.200	4.4	20.0
trans-1,3-Dichloropropene-d4	0.313	0.296	0.010	-5.5	25.0
2-Hexanone-d5	0.053	0.052	0.010	-1.7	40.0
1,1,2,2-Tetrachloroethane-d2	0.197	0.205	0.010	4.4	25.0
1,2-Dichlorobenzene-d4	0.797	0.812	0.060	1.8	20.0

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS06S05.D Vial: 2
Acq Time : 09/11/2019 08:07 Operator: CQC
Sample : VSTD005T3 VSTD005T3 5.0 ug/L CVS Inst : 5975-M
Misc : 2.5 uL of 49435, 49436; 2.0 uL of 49350 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 08:26:26 2019 Results File: MTRACEA9.RES

Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 13:23:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS06S05.D Vial: 2
Acq Time : 09/11/2019 08:07 Operator: CQC
Sample : VSTD005T3 VSTD005T3 5.0 ug/L CVS Inst : 5975-M
Misc : 2.5 uL of 49435, 49436; 2.0 uL of 49350 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 08:26:26 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 11:22:27 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.44	114	1226584	5.0000 ug/L	105.67
28) Chlorobenzene-d5	10.63	117	1013283	5.0000 ug/L	101.65
60) 1,4-dichlorobenzene-d4	13.03	152	565803	5.0000 ug/L	108.55
System Monitoring Compounds					%Recovery
5) Vinyl chloride-d3	1.93	65	455592	4.4832 ug/L	89.66%
8) Chloroethane-d5	2.32	69	288848	4.6243 ug/L	92.49%
11) 1,1-Dichloroethene-d2	2.96	63	951912	4.9455 ug/L	98.91%
22) 2-Butanone-d5	6.25	46	561453	49.2696 ug/L	98.54%
25) Chloroform-d	5.86	84	762359	5.1415 ug/L	102.83%
27) 1,2-Dichloroethane-d4	6.83	65	282904	4.7811 ug/L	95.62%
33) Benzene-d6	6.63	84	1466093	5.3495 ug/L	106.99%
37) 1,2-Dichloropropane-d6	7.92	67	356784	5.1611 ug/L	103.22%
40) cis-1,3-Dichloropropene-d4	8.77	79	602954	5.0279 ug/L	100.56%
42) trans-1,3-Dichloropropene-	9.50	79	299523	4.7239 ug/L	94.48%
47) Toluene-d8	9.00	98	1287253	5.2221 ug/L	104.44%
50) 2-Hexanone-d5	10.31	63	529087	49.1344 ug/L	98.27%
59) 1,1,2,2-Tetrachloroethane-	12.09	84	207850	5.2186 ug/L	104.37%
65) 1,2-Dichlorobenzene-d4	13.47	152	459494	5.0920 ug/L	101.84%
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.68	85	316078	4.0663 ug/L	99
3) Chloromethane	1.86	50	673718	4.5084 ug/L	99
4) Vinyl chloride	1.94	62	435434	4.4519 ug/L	99
6) Bromomethane	2.24	94	248089	4.6143 ug/L	97
7) Chloroethane	2.35	64	220144	4.1837 ug/L	96
9) Trichlorofluoromethane	2.47	101	566731	4.5009 ug/L	99
10) 1,1-Dichloroethene	2.97	96	386329	4.7362 ug/L	98
12) 1,1,2-Trichloro-1,2,2-trif	3.00	101	383177	4.5285 ug/L	97
13) Acetone	3.67	43	215648	62.8010 ug/L	96
14) Carbon disulfide	3.00	76	1145832	4.6877 ug/L	98
15) Methyl acetate	3.80	43	89793	5.0091 ug/L	95
16) Methylene chloride	3.60	84	335828	5.1109 ug/L	99
17) trans-1,2-Dichloroethene	3.80	96	425444	4.7527 ug/L	98
18) Methyl tert-butyl ether	3.93	73	588540	5.0549 ug/L	99
19) 1,1-Dichloroethane	4.63	63	762940	4.9539 ug/L	99
20) cis-1,2-Dichloroethene	5.47	96	430555	4.9773 ug/L	100
21) 2-Butanone	6.32	43	513262	48.7059 ug/L	97
23) Bromochloromethane	5.77	128	159069	4.9684 ug/L	95
24) Chloroform	5.89	83	649384	4.8960 ug/L	100
26) 1,2-Dichloroethane	6.92	62	331722	4.9170 ug/L	97
29) 1,1,1-Trichloroethane	6.16	97	631702	5.0210 ug/L	98
30) Cyclohexane	5.75	56	861148	4.8501 ug/L	98
31) Carbon tetrachloride	6.05	117	602023	4.8145 ug/L	98
32) Benzene	6.66	78	1356232	5.0467 ug/L #	100
34) Trichloroethene	7.39	130	433263	5.0488 ug/L	97
35) Methylcyclohexane	7.37	83	644786	4.9047 ug/L	99
36) 1,2-Dichloropropane	8.01	63	306588	4.8372 ug/L	99
38) Bromodichloromethane	8.09	83	387169	4.8349 ug/L	97
39) cis-1,3-Dichloropropene	8.80	75	431288	4.9299 ug/L	98
41) trans-1,3-Dichloropropene	9.51	75	322819	4.9118 ug/L	100
43) 1,1,2-Trichloroethane	9.68	97	165196	4.6064 ug/L	97
44) Dibromochloromethane	9.86	129	258474	4.7479 ug/L	97
45) 4-Methyl-2-pentanone	9.47	43	1539846	47.6328 ug/L	98
46) Toluene	9.05	91	1315339	4.8861 ug/L	97

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

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS06S05.D
Acq Time : 09/11/2019 08:07
Sample : VSTD005T3 VSTD005T3 5.0 ug/L CVS
Misc : 2.5 uL of 49435, 49436; 2.0 uL of 49350
MS Integration Params: rteint.p

Vial: 2
Operator: CQC
Inst : 5975-M
Multiplr: 1.00
Column ID: Rtx-VMS

Quant Time: Sep 11 08:26:26 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 11:22:27 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
48) Tetrachloroethene	9.46	164	319809	5.0812 ug/L	95
49) 2-Hexanone	10.35	43	1138385	45.9385 ug/L	99
51) 1,2-Dibromoethane	10.11	107	172297	4.6752 ug/L	100
52) Chlorobenzene	10.65	112	896388	4.9376 ug/L	96
53) Ethylbenzene	10.68	91	1513826	4.9352 ug/L	99
54) m,p-Xylene	10.83	106	639143	4.8872 ug/L	99
55) o-Xylene	11.28	106	624194	4.9257 ug/L	100
56) Styrene	11.33	104	930379	4.8536 ug/L	99
57) Isopropylbenzene	11.59	105	1645009	4.9745 ug/L	99
58) 1,1,2,2-Tetrachloroethane	12.10	83	191522	5.1137 ug/L	97
61) Bromoform	11.36	173	142286	4.7467 ug/L	97
62) 1,3-Dichlorobenzene	12.95	146	850160	4.9857 ug/L	99
63) 1,4-Dichlorobenzene	13.05	146	807338	4.8743 ug/L	100
64) 1,2-Dichlorobenzene	13.48	146	662045	4.8266 ug/L	98
66) 1,2-Dibromo-3-chloropropan	14.32	75	28016	4.5820 ug/L	95
67) 1,2,4-Trichlorobenzene	15.03	180	382232	5.0843 ug/L	97
68) 1,2,3-Trichlorobenzene	15.56	180	296674	5.1407 ug/L	99

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

FORM 7A-OR

INITIAL CALIBRATION VERIFICATION AND CONTINUING CALIBRATION VERIFICATION FOR GC/M

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Level: TRACE

Instrument ID: 5975-M Date Analyzed: 09/11/2019 Time: 12:56

Lab File ID: MS16F05 Init. Calib Date(s): 08/27/2019 08/27/2019

EPA Sample No.: VSTD005T4 Init. Calib Time(s): 07:56 09:48

GC Column: RTX-VMS ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Y Purge Volume: 25.0 (mL)

ANALYTE	$\overline{RRF}$	RRF 5	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.317	0.247	0.010	-21.9	50.0
Chloromethane	0.609	0.556	0.010	-8.7	50.0
Vinyl chloride	0.399	0.355	0.010	-10.9	50.0
Bromomethane	0.219	0.208	0.010	-4.9	50.0
Chloroethane	0.214	0.189	0.010	-11.7	50.0
Trichlorofluoromethane	0.513	0.453	0.010	-11.7	50.0
1,1-Dichloroethene	0.333	0.325	0.020	-2.4	25.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.345	0.315	0.010	-8.8	50.0
Acetone	0.014	0.017	0.010	22.9	50.0
Carbon disulfide	0.996	0.911	0.010	-8.6	25.0
Methyl acetate	0.073	0.065	0.010	-11.0	50.0
Methylene chloride	0.268	0.275	0.010	2.7	50.0
trans-1,2-Dichloroethene	0.365	0.351	0.070	-3.9	25.0
Methyl tert-butyl ether	0.475	0.475	0.010	0.0	50.0
1,1-Dichloroethane	0.628	0.619	0.100	-1.4	25.0
cis-1,2-Dichloroethene	0.353	0.346	0.100	-1.8	25.0
2-Butanone	0.043	0.043	0.010	0.8	50.0
Bromochloromethane	0.131	0.126	0.020	-3.1	25.0
Chloroform	0.541	0.530	0.040	-1.9	25.0
1,1,1-Trichloroethane	0.621	0.591	0.050	-4.8	25.0
Cyclohexane	0.876	0.820	0.100	-6.4	50.0
Carbon tetrachloride	0.617	0.563	0.020	-8.7	50.0
Benzene	1.326	1.328	0.300	0.1	25.0
1,2-Dichloroethane	0.275	0.269	0.010	-2.1	50.0
Trichloroethene	0.423	0.425	0.100	0.3	25.0
Methylcyclohexane	0.649	0.617	0.200	-4.9	50.0
1,2-Dichloropropane	0.313	0.322	0.100	3.1	25.0
Bromodichloromethane	0.395	0.368	0.090	-6.8	25.0
cis-1,3-Dichloropropene	0.432	0.405	0.100	-6.1	25.0
4-Methyl-2-Pentanone	0.160	0.155	0.010	-3.0	50.0
Toluene	1.328	1.318	0.400	-0.8	25.0
trans-1,3-Dichloropropene	0.324	0.304	0.010	-6.3	25.0
1,1,2-Trichloroethane	0.177	0.178	0.040	0.5	25.0
Tetrachloroethene	0.311	0.314	0.100	1.2	25.0

FORM 7A-OR

INITIAL CALIBRATION VERIFICATION AND CONTINUING CALIBRATION VERIFICATION FOR GC/M

Lab Name: ALS Environmental (SLC) Contract: 97756

Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519

Analytical Method: Trace VOA Level: TRACE

Instrument ID: 5975-M Date Analyzed: 09/11/2019 Time: 12:56

Lab File ID: MS16F05 Init. Calib Date(s): 08/27/2019 08/27/2019

EPA Sample No.: VSTD005T4 Init. Calib Time(s): 07:56 09:48

GC Column: RTX-VMS ID: 0.25 (mm) Length: 30 (m)

Heated Purge: (Y/N) Y Purge Volume: 25.0 (mL)

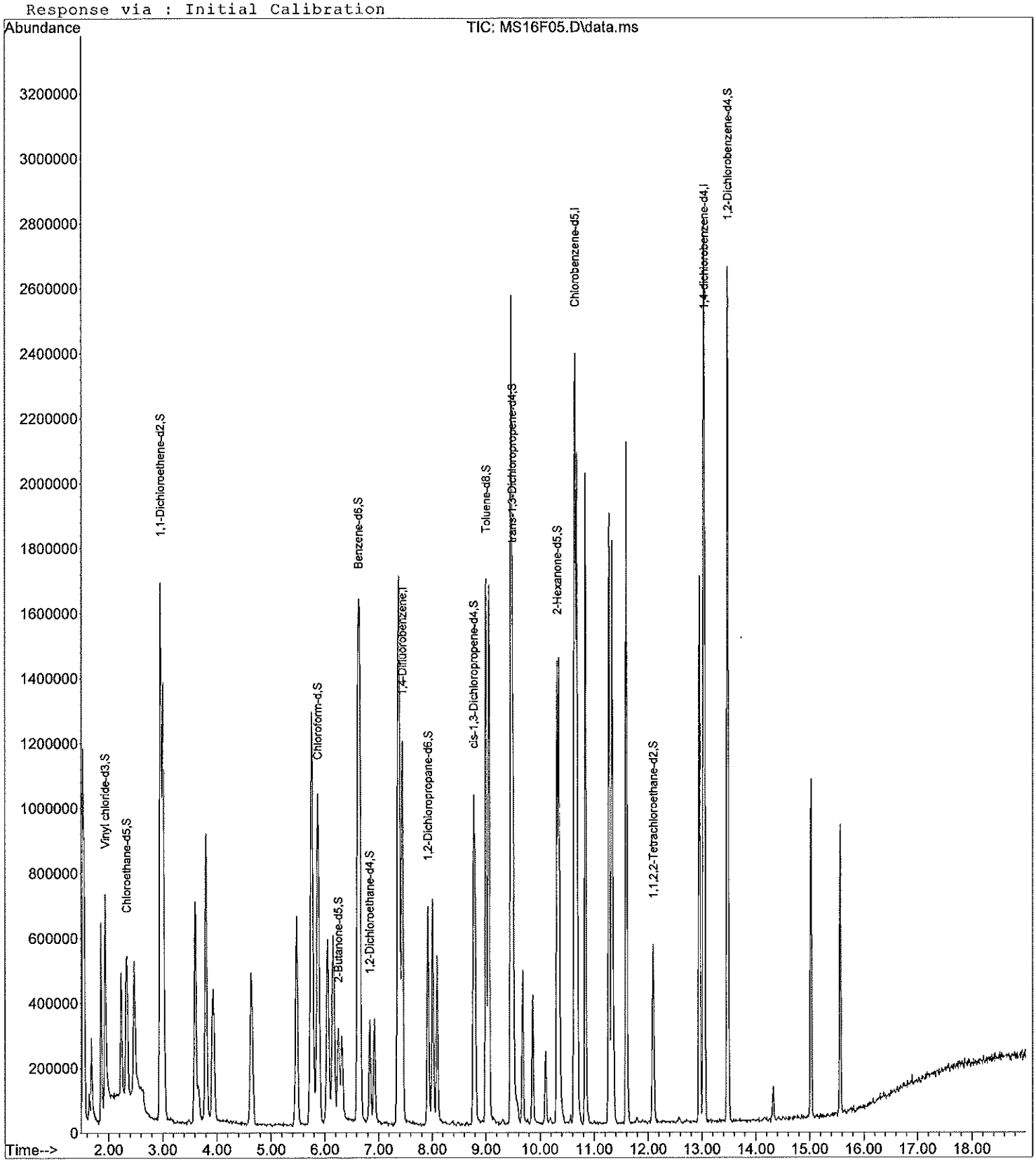
ANALYTE	$\overline{RRF}$	RRF 5	MIN RRF	%D	MAX %D
2-Hexanone	0.122	0.115	0.010	-5.8	50.0
Dibromochloromethane	0.269	0.235	0.050	-12.4	25.0
1,2-Dibromoethane	0.182	0.171	0.010	-6.2	25.0
Chlorobenzene	0.896	0.885	0.400	-1.3	25.0
Ethylbenzene	1.514	1.487	0.500	-1.8	25.0
o-Xylene	0.625	0.603	0.300	-3.6	25.0
m,p-Xylene	0.645	0.627	0.200	-2.8	25.0
Styrene	0.946	0.937	0.200	-0.9	25.0
Bromoform	0.265	0.221	0.010	-16.5	50.0
Isopropylbenzene	1.632	1.548	0.700	-5.1	25.0
1,1,2,2-Tetrachloroethane	0.185	0.182	0.050	-1.3	25.0
1,3-Dichlorobenzene	1.507	1.497	0.500	-0.6	25.0
1,4-Dichlorobenzene	1.464	1.462	0.700	-0.1	25.0
1,2-Dichlorobenzene	1.212	1.196	0.400	-1.4	25.0
1,2-Dibromo-3-chloropropane	0.054	0.049	0.010	-8.6	50.0
1,2,4-Trichlorobenzene	0.664	0.659	0.300	-0.8	50.0
1,2,3-Trichlorobenzene	0.510	0.514	0.200	0.9	50.0
Vinyl chloride-d3	0.414	0.370	0.010	-10.8	50.0
Chloroethane-d5	0.255	0.231	0.010	-9.3	50.0
1,1-Dichloroethene-d2	0.785	0.766	0.010	-2.4	25.0
2-Butanone-d5	0.046	0.047	0.010	2.0	50.0
Chloroform-d	0.604	0.614	0.010	1.6	25.0
1,2-Dichloroethane-d4	0.241	0.233	0.010	-3.3	25.0
Benzene-d6	1.352	1.409	0.030	4.2	25.0
1,2-Dichloropropane-d6	0.341	0.353	0.100	3.5	25.0
Toluene-d8	1.216	1.212	0.200	-0.4	25.0
trans-1,3-Dichloropropene-d4	0.313	0.294	0.010	-6.2	25.0
2-Hexanone-d5	0.053	0.054	0.010	1.4	50.0
1,1,2,2-Tetrachloroethane-d2	0.197	0.197	0.010	0.5	25.0
1,2-Dichlorobenzene-d4	0.797	0.807	0.060	1.2	25.0

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS16F05.D Vial: 12
Acq Time : 09/11/2019 12:56 Operator: CQC
Sample : VSTD005T4 VSTD005T4 5.0 ug/L FCS Inst : 5975-M
Misc : 2.5 uL of 49435, 49436 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 13:15:22 2019 Results File: MTRACEA9.RES

Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 13:23:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS16F05.D Vial: 12
Acq Time : 09/11/2019 12:56 Operator: CQC
Sample : VSTD005T4 VSTD005T4 5.0 ug/L FCS Inst : 5975-M
Misc : 2.5 uL of 49435, 49436 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 13:15:22 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 11:22:27 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Area%
1) 1,4-Difluorobenzene	7.45	114	1206492	5.0000	ug/L	103.93
28) Chlorobenzene-d5	10.64	117	1018591	5.0000	ug/L	102.18
60) 1,4-dichlorobenzene-d4	13.03	152	543652	5.0000	ug/L	104.30
System Monitoring Compounds						%Recovery
5) Vinyl chloride-d3	1.94	65	445885	4.4608	ug/L	89.22%
8) Chloroethane-d5	2.33	69	278572	4.5341	ug/L	90.68%
11) 1,1-Dichloroethene-d2	2.96	63	924152	4.8812	ug/L	97.62%
22) 2-Butanone-d5	6.25	46	571500	50.9865	ug/L	101.97%
25) Chloroform-d	5.86	84	741102	5.0814	ug/L	101.63%
27) 1,2-Dichloroethane-d4	6.84	65	281510	4.8368	ug/L	96.74%
33) Benzene-d6	6.63	84	1434754	5.2079	ug/L	104.16%
37) 1,2-Dichloropropane-d6	7.92	67	359758	5.1770	ug/L	103.54%
40) cis-1,3-Dichloropropene-d4	8.78	79	568542	4.7162	ug/L	94.32%
42) trans-1,3-Dichloropropene-	9.50	79	298988	4.6909	ug/L	93.82%
47) Toluene-d8	9.00	98	1234090	4.9803	ug/L	99.61%
50) 2-Hexanone-d5	10.32	63	548650	50.6856	ug/L	101.37%
59) 1,1,2,2-Tetrachloroethane-	12.09	84	201119	5.0232	ug/L	100.46%
65) 1,2-Dichlorobenzene-d4	13.47	152	438656	5.0592	ug/L	101.18%
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.68	85	298602	3.9054	ug/L #	97
3) Chloromethane	1.86	50	671234	4.5666	ug/L	99
4) Vinyl chloride	1.94	62	428484	4.4538	ug/L	99
6) Bromomethane	2.24	94	251436	4.7544	ug/L	94
7) Chloroethane	2.35	64	228576	4.4163	ug/L	99
9) Trichlorofluoromethane	2.47	101	547050	4.4170	ug/L	99
10) 1,1-Dichloroethene	2.97	96	391567	4.8804	ug/L	95
12) 1,1,2-Trichloro-1,2,2-trif	3.01	101	379670	4.5618	ug/L	97
13) Acetone	3.66	43	207540	61.4463	ug/L	98
14) Carbon disulfide	3.01	76	1098991	4.5709	ug/L	99
15) Methyl acetate	3.82	43	78488	4.4514	ug/L	94
16) Methylene chloride	3.61	84	331893	5.1352	ug/L	97
17) trans-1,2-Dichloroethene	3.80	96	423123	4.8055	ug/L	100
18) Methyl tert-butyl ether	3.93	73	572862	5.0022	ug/L	100
19) 1,1-Dichloroethane	4.64	63	746960	4.9309	ug/L	99
20) cis-1,2-Dichloroethene	5.47	96	417733	4.9095	ug/L	98
21) 2-Butanone	6.32	43	522499	50.4081	ug/L	97
23) Bromochloromethane	5.77	128	152522	4.8433	ug/L	92
24) Chloroform	5.89	83	639966	4.9053	ug/L	99
26) 1,2-Dichloroethane	6.92	62	324915	4.8963	ug/L	97
29) 1,1,1-Trichloroethane	6.16	97	602135	4.7610	ug/L	98
30) Cyclohexane	5.75	56	834957	4.6781	ug/L	99
31) Carbon tetrachloride	6.05	117	573889	4.5656	ug/L	99
32) Benzene	6.66	78	1352355	5.0060	ug/L #	100
34) Trichloroethene	7.39	130	432464	5.0132	ug/L	98
35) Methylcyclohexane	7.37	83	628146	4.7532	ug/L	98
36) 1,2-Dichloropropane	8.01	63	328353	5.1536	ug/L	95
38) Bromodichloromethane	8.09	83	375092	4.6597	ug/L	99
39) cis-1,3-Dichloropropene	8.80	75	412687	4.6927	ug/L	99
41) trans-1,3-Dichloropropene	9.52	75	309368	4.6826	ug/L	97
43) 1,1,2-Trichloroethane	9.68	97	181212	5.0266	ug/L	95
44) Dibromochloromethane	9.86	129	239612	4.3785	ug/L	99
45) 4-Methyl-2-pentanone	9.48	43	1575684	48.4873	ug/L	97
46) Toluene	9.06	91	1342722	4.9618	ug/L	96

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

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS16F05.D Vial: 12
Acq Time : 09/11/2019 12:56 Operator: CQC
Sample : VSTD005T4 VSTD005T4 5.0 ug/L FCS Inst : 5975-M
Misc : 2.5 uL of 49435, 49436 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 13:15:22 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 11:22:27 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
48)	Tetrachloroethene	9.46	164	320244	5.0616 ug/L	95
49)	2-Hexanone	10.36	43	1172824	47.0816 ug/L	99
51)	1,2-Dibromoethane	10.10	107	173756	4.6902 ug/L	95
52)	Chlorobenzene	10.66	112	901016	4.9372 ug/L	98
53)	Ethylbenzene	10.68	91	1514322	4.9111 ug/L	99
54)	m,p-Xylene	10.83	106	638756	4.8588 ug/L	99
55)	o-Xylene	11.28	106	614256	4.8220 ug/L	99
56)	Styrene	11.33	104	954700	4.9545 ug/L	99
57)	Isopropylbenzene	11.59	105	1576511	4.7425 ug/L	100
58)	1,1,2,2-Tetrachloroethane	12.11	83	185863	4.9367 ug/L	94
61)	Bromoform	11.36	173	120240	4.1746 ug/L	94
62)	1,3-Dichlorobenzene	12.95	146	813938	4.9677 ug/L	98
63)	1,4-Dichlorobenzene	13.05	146	794763	4.9939 ug/L	100
64)	1,2-Dichlorobenzene	13.48	146	649936	4.9313 ug/L	98
66)	1,2-Dibromo-3-chloropropan	14.32	75	26845	4.5694 ug/L	98
67)	1,2,4-Trichlorobenzene	15.02	180	358371	4.9612 ug/L	98
68)	1,2,3-Trichlorobenzene	15.56	180	279622	5.0426 ug/L	98

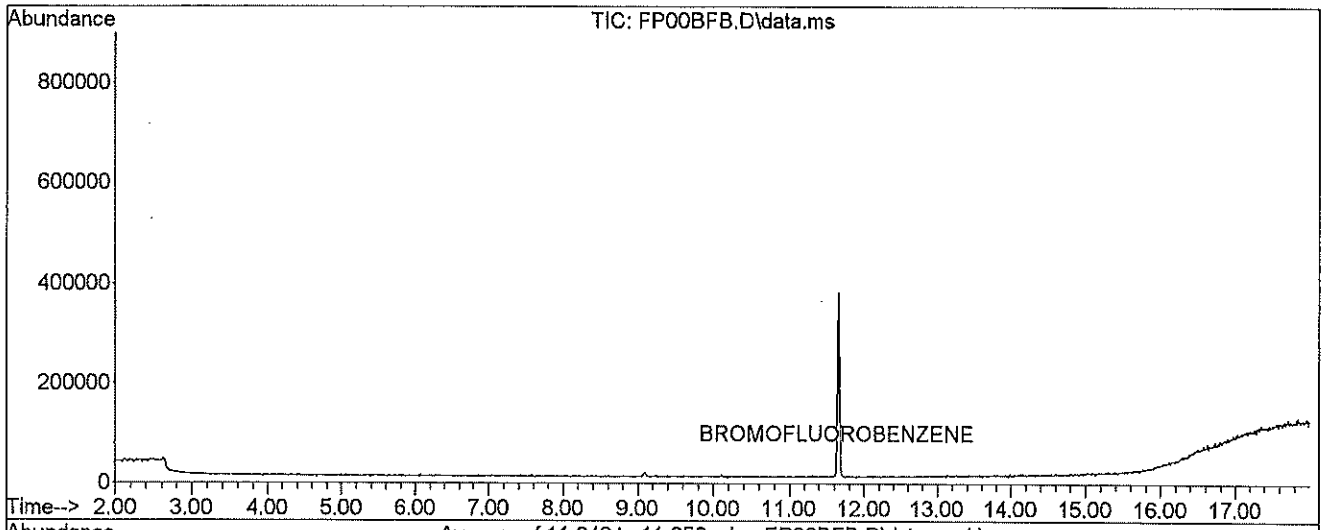
(#) = qualifier out of range (m) = manual integration

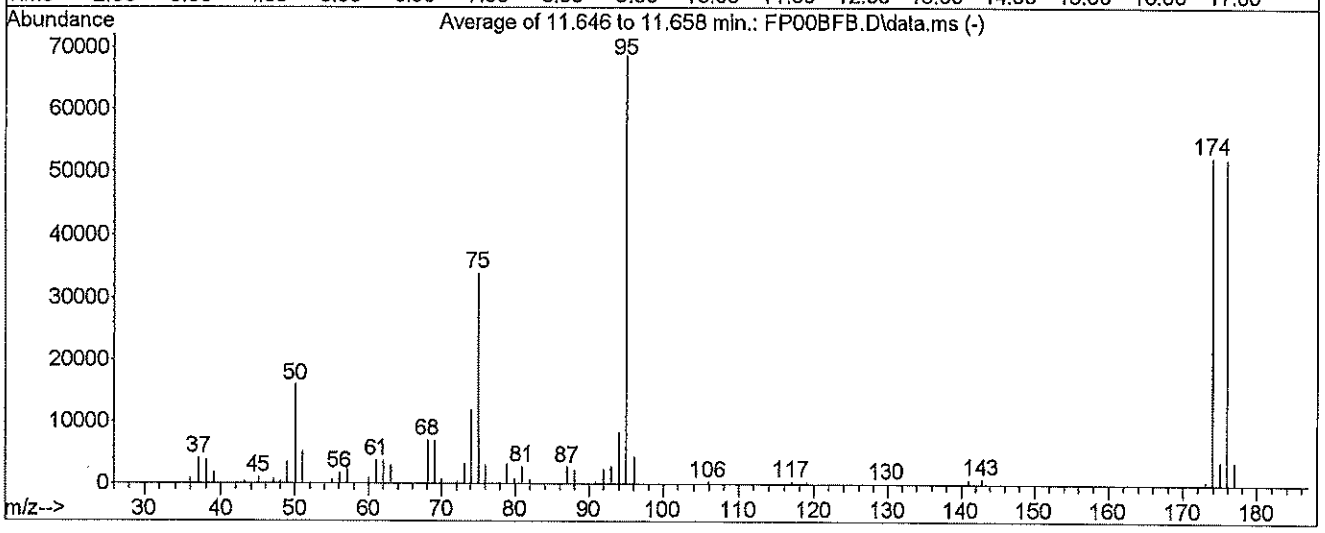
SOM01.2 BFB

Data File : C:\msdchem\1\data\17JUL19F\FP00BFB.D
Acq Time : 07/17/2019 06:43
Sample : BFBTF 50 ng BFB
Misc : 2.0 uL of 48228
MS Integration Params: rteint.p

Vial: 1
Operator: CQC
Inst : 5975-F
Multiplr: 1.00
Column ID: Rtx-VMS

Method : C:\msdchem\1\methods\BFB_SOM.M (RTE Integrator)
Title : VOA COMPOUND LIST





Peak Apex is scan: 1733
Average of 3 Scans: 1732,1733,1734 minus Background scan: 1726

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.23	15975	PASS
75	95	30	80	49.41	33979	PASS
95	95	100	100	100.00	68768	PASS
96	95	5	9	6.28	4321	PASS
173	174	0.00	2	0.97	508	PASS
174	95	50	120	76.32	52483	PASS
175	174	5	9	7.12	3735	PASS
176	174	95	101	99.40	52168	PASS
177	176	5	9	6.92	3609	PASS

Data File : C:\msdchem\1\data\17JUL19F\FP00BFB.D
Inject Time: 07/17/2019 06:43 Operator:CQC
Sample : BFBTF 5 Inst :5975-F
Misc : 2.0 uL of 48228

Average of 11.646 to 11.658 min.: FP00BFB.D\data.ms
BFBTF 50 ng BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	889	50.05	15975	67.10	143	78.95	3081
37.10	4079	51.05	5132	68.05	6974	79.95	689
38.05	3722	52.10	147	69.05	6875	80.90	2733
39.10	1791	55.00	603	70.00	643	81.95	571
41.10	43	56.05	1654	72.10	340	86.95	2652
42.10	140	57.05	2380	73.00	3205	87.95	2135
43.15	344	59.95	882	74.05	11877	90.95	356
45.00	986	61.00	3774	75.05	33979	92.00	2250
47.05	802	62.05	3652	76.05	2916	93.00	2770
48.00	385	63.05	2950	77.00	111	94.05	8128
49.00	3565	64.20	155	77.90	179	95.00	68768

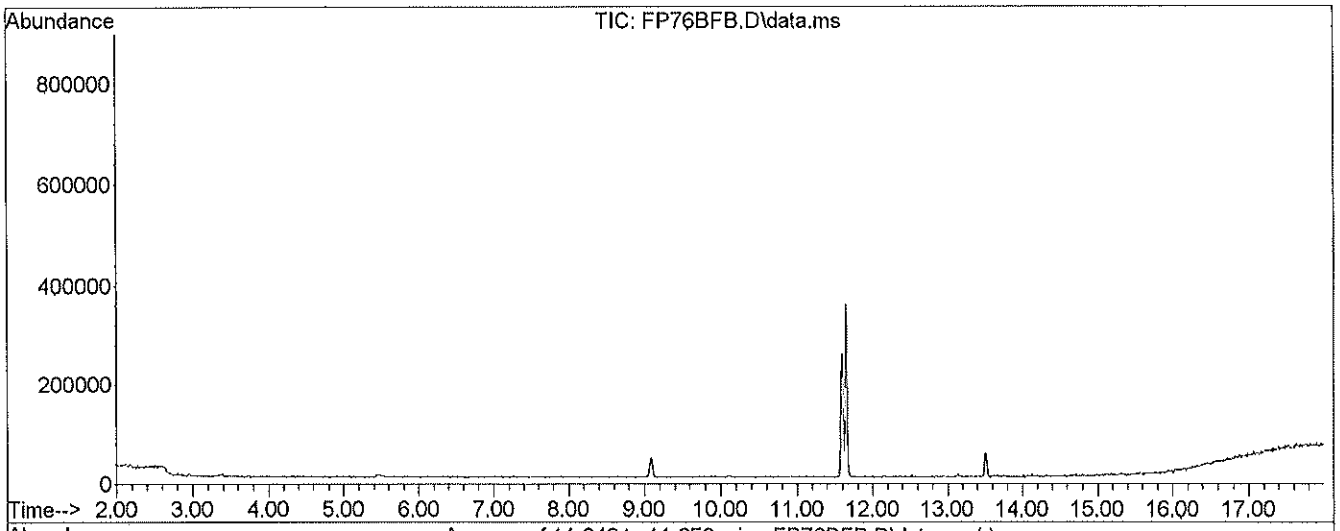
Average of 11.646 to 11.658 min.: FP00BFB.D\data.ms
BFBTF 50 ng BFB
Modified:subtracted

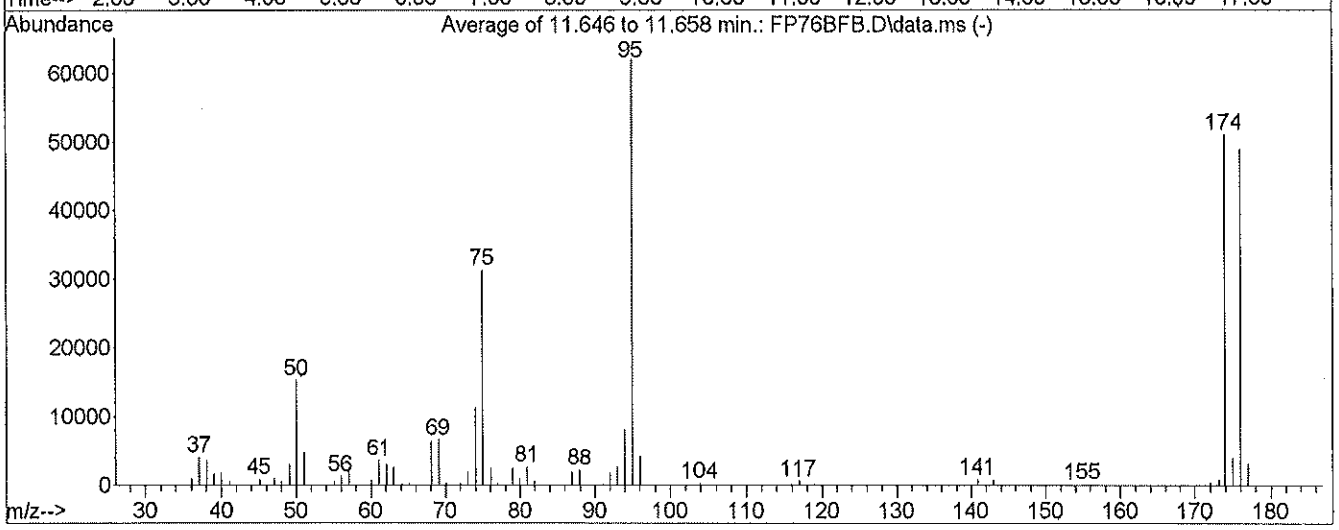
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.05	4321	174.95	3735				
103.90	160	175.90	52168				
105.90	357	176.90	3609				
116.95	478						
117.80	156						
118.95	420						
129.80	146						
140.95	770						
142.85	869						
173.00	508						
173.90	52483						

SOM01.2 BFB

Data File : C:\msdchem\1\data\11SEP19F\FP76BFB.D Vial: 1
Acq Time : 09/11/2019 06:34 Operator: CQC
Sample : BFBT1 50 ng BFB Inst : 5975-F
Misc : 2.0 uL of 49350 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Method : C:\msdchem\1\methods\BFB_SOM.M (RTE Integrator)
Title : VOA COMPOUND LIST





Peak Apex is scan: Average of 11.646 to 11.658 min.
1732, 1733, 1734 Minus Background Scan 1718

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.58	15276	PASS
75	95	30	80	50.30	31256	PASS
95	95	100	100	100.00	62144	PASS
96	95	5	9	6.82	4238	PASS
173	174	0.00	2	1.53	783	PASS
174	95	50	120	82.10	51019	PASS
175	174	5	9	7.86	4008	PASS
176	174	95	101	95.84	48899	PASS
177	176	5	9	6.25	3057	PASS

FP76BFB.D BFB_SOM.M Wed Sep 11 07:01:53 2019

Average of 11.646 to 11.658 min.: FP76BFB.D\data.ms
BFBT1 50 ng BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	936	50.05	15276	65.10	236	77.90	145
37.10	4051	51.10	4794	68.05	6323	78.95	2438
38.10	3533	52.10	145	69.05	6612	79.95	940
39.05	1639	55.05	597	70.00	250	80.95	2646
40.00	1918	56.00	1283	70.15	365	81.90	615
41.05	586	57.05	2180	72.00	268	86.90	1909
42.90	156	60.00	725	73.00	2008	87.95	2173
45.05	864	61.05	3630	74.00	11194	91.00	172
47.05	963	62.05	3088	75.00	31256	92.00	1793
48.00	512	63.05	2654	76.05	2561	93.00	2670
49.10	3085	64.10	199	76.90	175	94.00	7991

Average of 11.646 to 11.658 min.: FP76BFB.D\data.ms
BFBT1 50 ng BFB
Modified:subtracted

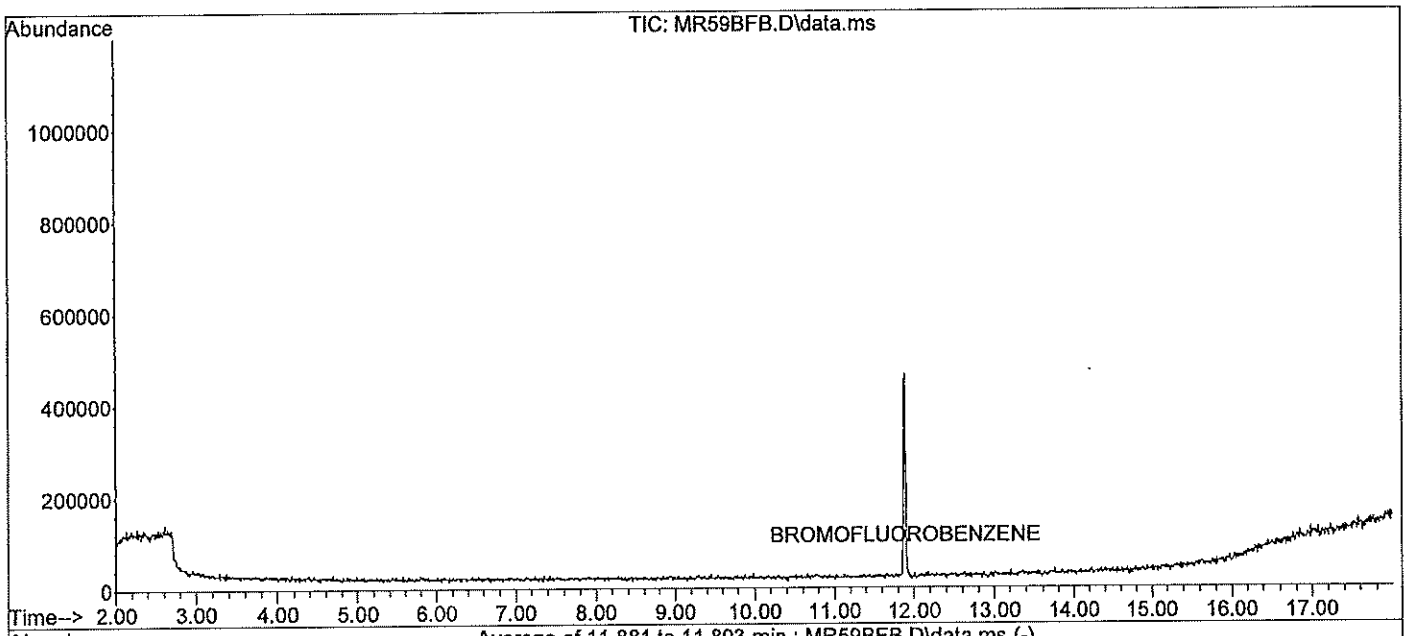
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
95.00	62144	173.10	783				
96.05	4238	173.90	51019				
103.95	360	174.95	4008				
115.90	184	175.90	48899				
116.95	639	176.95	3057				
118.90	183						
140.90	857						
142.90	790						
155.00	137						
172.00	379						
172.80	161						

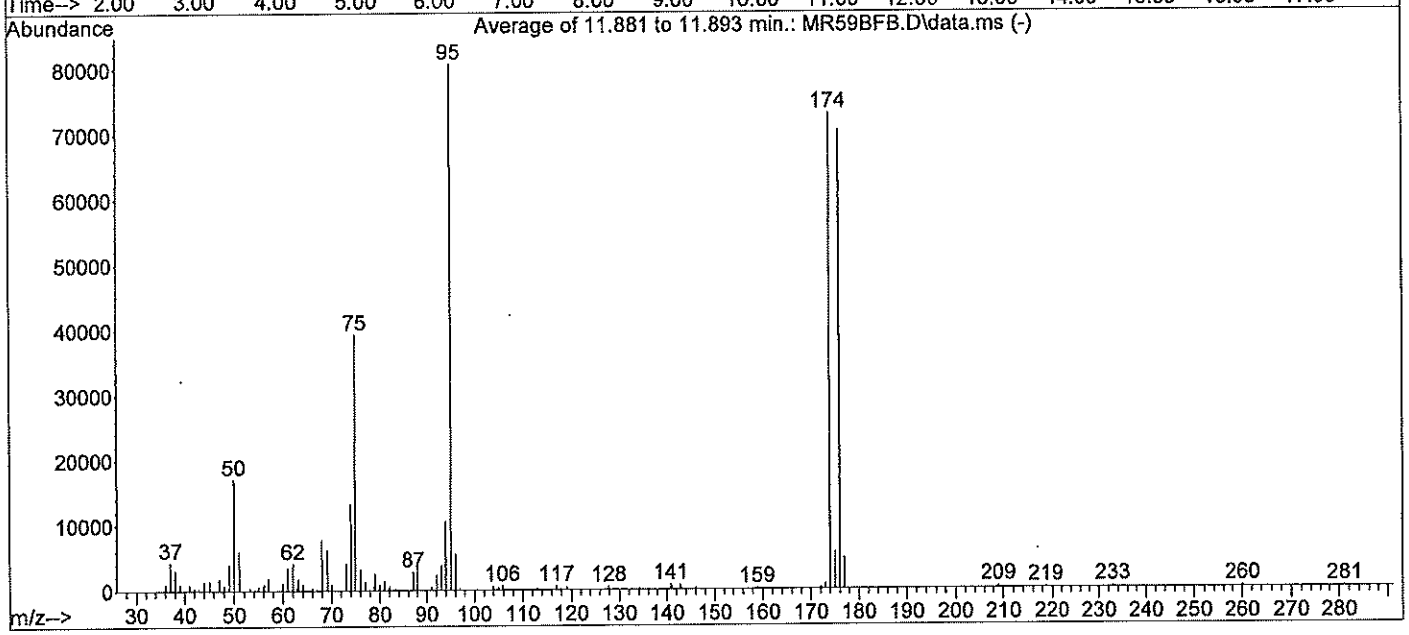
SOM01.2 BFB

Data File : C:\msdchem\1\data\27AUG19M\MR59BFB.D
Acq Time : 08/27/2019 07:22
Sample : BFBTM 50 ng BFB
Misc : 2.0 uL of 49350
MS Integration Params: rteint.p

Vial: 1
Operator: CQC
Inst : 5975-M
Multiplr: 1.00
Column ID: Rtx-VMS

Method : C:\msdchem\1\methods\BFB_SOM.M (RTE Integrator)
Title : VOA COMPOUND LIST





Peak Apex is scan: 1706
Average of 3 Scans: 1705,1706,1707 minus Background scan: 1698

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.18	17100	PASS
75	95	30	80	48.64	39267	PASS
95	95	100	100	100.00	80723	PASS
96	95	5	9	6.77	5467	PASS
173	174	0.00	2	0.99	721	PASS
174	95	50	120	90.42	72992	PASS
175	174	5	9	7.80	5691	PASS
176	174	95	101	96.39	70355	PASS
177	176	5	9	6.81	4794	PASS

Data File : C:\msdchem\1\data\27AUG19M\MR59BFB.D
Inject Time: 08/27/2019 07:22 Operator:CQC
Sample : BFBTM 5 Inst :5975-M
Misc : 2.0 uL of 49350

Average of 11.881 to 11.893 min.: MR59BFB.D\data.ms
BFBTM 50 ng BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	961	49.05	4001	62.00	4135	74.05	13210
37.05	4324	50.00	17100	62.90	399	75.00	39267
38.00	3115	51.05	5898	63.05	1709	76.05	3161
39.00	877	53.20	338	64.05	941	77.05	1258
41.05	898	54.20	167	65.00	162	78.00	150
42.10	288	54.90	564	66.05	343	78.90	2494
42.95	235	55.90	595	66.90	183	79.95	793
44.00	1317	56.10	937	68.00	7818	80.95	1488
45.05	1482	57.05	1884	69.05	6232	82.05	570
47.05	1698	60.00	1058	70.00	884	83.20	239
48.05	710	61.05	3388	73.05	4043	84.10	134

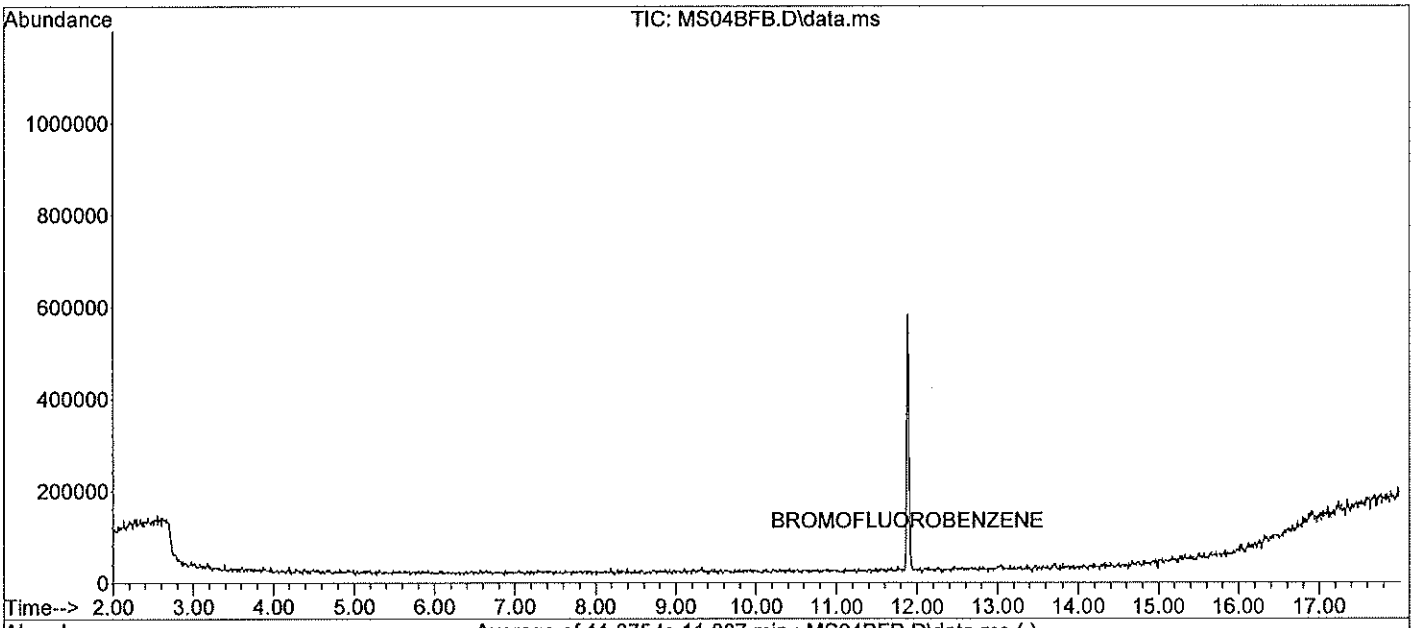
Average of 11.881 to 11.893 min.: MR59BFB.D\data.ms
BFBTM 50 ng BFB
Modified:subtracted

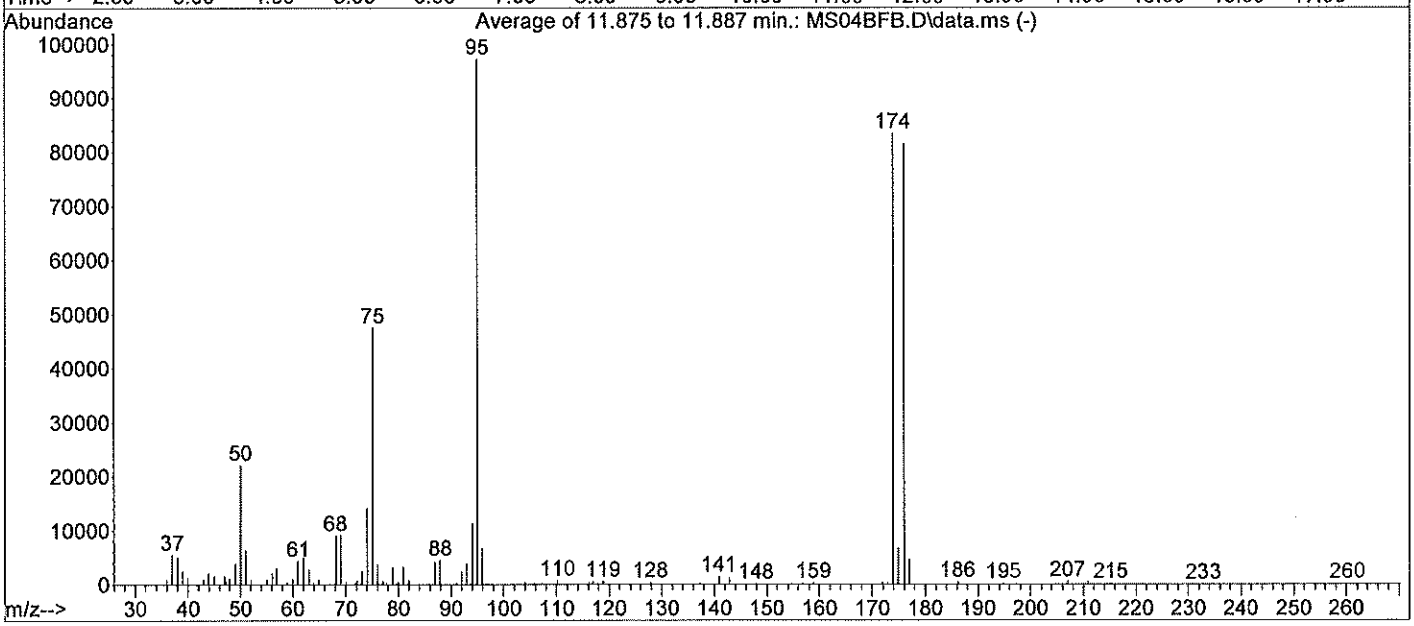
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
87.05	2838	105.85	598	146.00	264	232.95	267
88.00	3893	113.10	182	158.90	162	260.10	263
91.10	480	117.00	580	172.10	227	281.10	138
92.05	2346	117.90	134	172.30	208		
93.05	3750	119.10	360	173.00	721		
93.95	10558	127.85	484	174.00	72992		
95.05	80723	134.20	147	175.05	5691		
96.00	5467	140.85	777	176.00	70355		
97.00	185	141.10	455	176.95	4794		
103.95	537	142.75	692	208.95	370		
105.00	356	143.00	253	218.70	168		

SOM01.2 BFB

Data File : C:\msdchem\1\data\11SEP19M\MS04BFB.D Vial: 1
Acq Time : 09/11/2019 07:05 Operator: CQC
Sample : BFBT2 50 ng BFB Inst : 5975-M
Misc : 2.0 uL of 49350 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Method : C:\msdchem\1\methods\BFB_SOM.M (RTE Integrator)
Title : VOA COMPOUND LIST





Peak Apex is scan: 1705
Average of 3 Scans: 1704,1705,1706 minus Background scan: 1697

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.75	22115	PASS
75	95	30	80	48.86	47491	PASS
95	95	100	100	100.00	97197	PASS
96	95	5	9	6.88	6685	PASS
173	174	0.00	2	0.37	309	PASS
174	95	50	120	85.82	83419	PASS
175	174	5	9	8.13	6783	PASS
176	174	95	101	97.69	81491	PASS
177	176	5	9	5.68	4625	PASS

MS04BFB.D BFB_SOM.M Wed Sep 11 07:44:16 2019

Data File : C:\msdchem\1\data\11SEP19M\MS04BFB.D
Inject Time: 09/11/2019 07:05 Operator:CQC
Sample : BFBT2 5 Inst :5975-M
Misc : 2.0 uL of 49350

Average of 11.875 to 11.887 min.: MS04BFB.D\data.ms
BFBT2 50 ng BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.95	875	47.70	194	61.00	4316	73.05	2527
37.00	5519	48.00	1017	62.00	4929	74.05	14110
38.05	4908	49.05	3808	63.05	2872	75.05	47491
39.00	2426	50.05	22115	63.90	265	76.00	3695
40.00	1214	50.95	6333	64.95	877	77.00	519
41.05	122	52.05	818	67.00	194	77.70	231
43.00	879	55.05	969	68.05	9045	78.95	3132
43.95	2041	56.05	2009	69.00	9180	79.90	330
45.05	1512	56.95	3056	70.10	453	80.10	430
46.95	1579	58.85	353	71.90	275	80.90	3191
47.20	623	59.95	996	72.15	718	81.95	785

Average of 11.875 to 11.887 min.: MS04BFB.D\data.ms
BFBT2 50 ng BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
85.90	133	104.00	394	118.90	574	158.85	289
87.00	4123	105.70	251	127.85	375	171.90	297
87.95	4507	106.10	201	129.90	137	172.90	309
91.00	180	107.10	158	137.20	219	173.95	83419
91.20	154	109.70	145	140.85	1433	174.95	6783
92.00	2296	110.20	740	142.85	1213	175.95	81491
92.95	3902	111.50	141	145.10	141	177.00	4625
94.00	11227	116.10	343	147.90	178	186.15	472
95.00	97197	116.60	171	149.00	1	194.80	204
95.95	6685	116.90	612	154.70	185	207.00	523
97.00	187	117.80	230	156.80	142	210.90	475

Average of 11.875 to 11.887 min.: MS04BFB.D\data.ms
BFBT2 50 ng BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
215.20	193						
232.90	15						
259.80	160						
260.20	168						

244A [illegible]

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLKT1

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 672757
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP78BLK
% Solids: Date Received:
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLKT1

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 672757
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: FP78BLK
% Solids:
Date Received:
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
GC Column: ID: (mm)
Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N)
Extract Volume: (uL)
Soil Aliquot (VOA): (uL)
Extraction Type: PT
Heated Purge: (Y/N) Y
Injection Volume: (uL)
Purge Volume: 25.0 (mL)
pH: Dilution Factor: 1.0
Cleanup Types:
Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VBLKT1

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 672757
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP78BLK
% Solids: Date Received:
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
Extract Concentrated: (Y/N) Date Analyzed: 09/11/2019
Soil Aliquot (VOA): (uL) Extract Volume: (uL)
Heated Purge: (Y/N) Y Extraction Type: PT
Purge Volume: 25.0 (mL) Injection Volume: (uL)
Cleanup Types: pH: Dilution Factor: 1.0
Concentration Units (ug/L, ug/kg): ug/L Cleanup Factor:

	CAS No.	ANALYTE	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

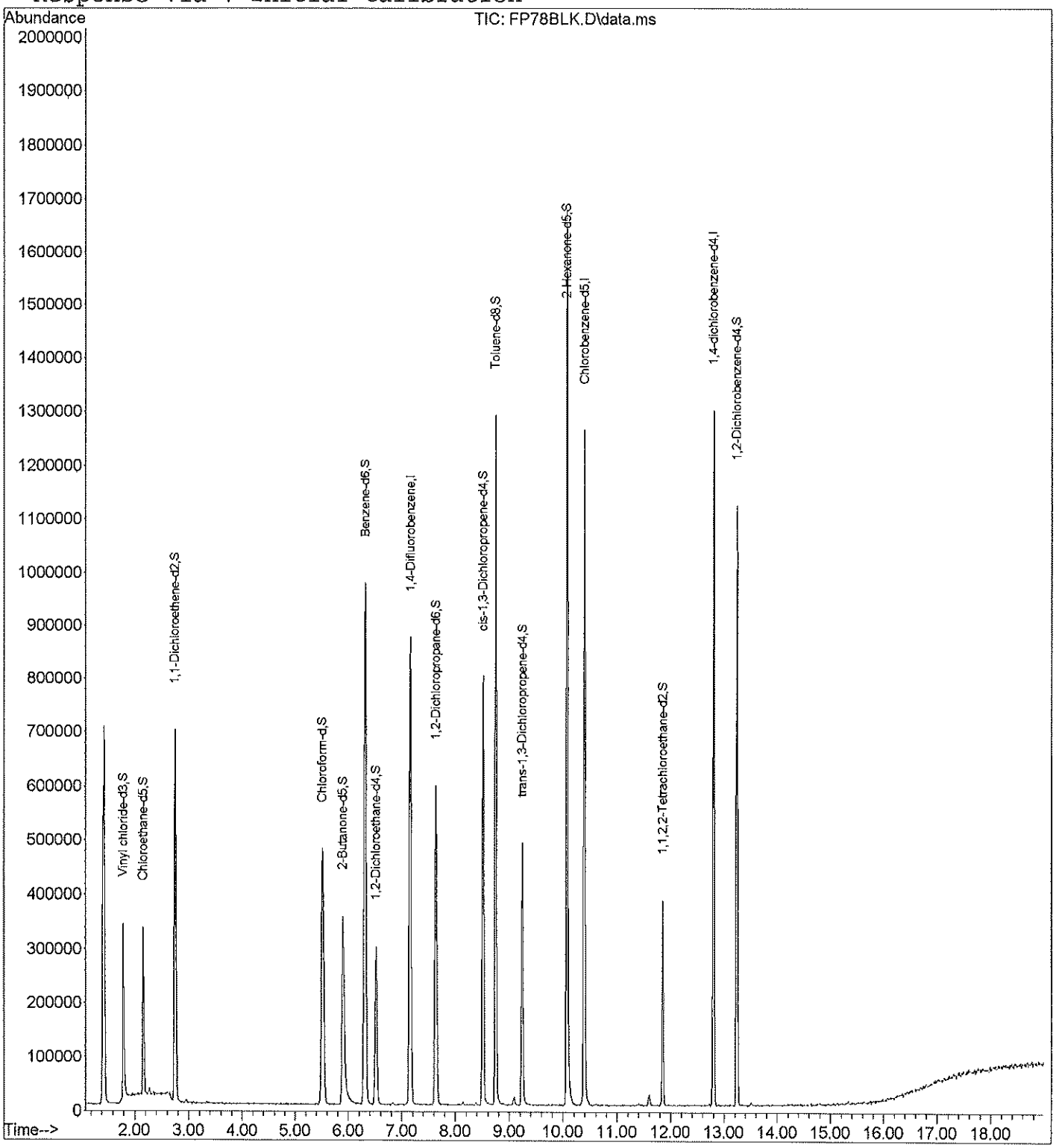
[1]EPA-designated Registry Number.

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP78BLK.D Vial: 3
Acq Time : 09/11/2019 07:38 Operator: CQC
Sample : 672757 VBLKT1 Inst : 5975-F
Misc : 2.5 uL of 49435 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 07:58:24 2019 Results File: FTRACEG5.RES

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Sep 05 08:18:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP78BLK.D
Acq Time : 09/11/2019 07:38
Sample : 672757 VBLKT1
Misc : 2.5 uL of 49435
MS Integration Params: rteint.p

Vial: 3
Operator: CQC
Inst : 5975-F
Multiplr: 1.00
Column ID: Rtx-VMS

Quant Time: Sep 11 07:58:24 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.16	114	824062	5.0000 ug/L	87.57
28) Chlorobenzene-d5	10.39	117	705116	5.0000 ug/L	92.24
60) 1,4-dichlorobenzene-d4	12.80	152	345104	5.0000 ug/L	86.26
System Monitoring Compounds					**%Recovery**
5) Vinyl chloride-d3	1.79	65	308964	5.5102 ug/L	110.20%
8) Chloroethane-d5	2.16	69	235864	5.2269 ug/L	104.54%
11) 1,1-Dichloroethene-d2	2.75	63	515446	4.5580 ug/L	91.16%
22) 2-Butanone-d5	5.90	46	749743	55.9476 ug/L	111.90%
25) Chloroform-d	5.51	84	565591	5.4377 ug/L	108.75%
27) 1,2-Dichloroethane-d4	6.52	65	262962	5.3805 ug/L	107.61%
33) Benzene-d6	6.31	84	1082123	5.2038 ug/L	104.08%
37) 1,2-Dichloropropane-d6	7.63	67	278323	5.0123 ug/L	100.25%
40) cis-1,3-Dichloropropene-d4	8.51	79	452270	4.7521 ug/L	95.04%
42) trans-1,3-Dichloropropene-	9.24	79	259628	4.7387 ug/L	94.77%
47) Toluene-d8	8.74	98	898842	4.9793 ug/L	99.59%
50) 2-Hexanone-d5	10.07	63	576043	51.1111 ug/L	102.22%
59) 1,1,2,2-Tetrachloroethane-	11.85	84	185676	4.9253 ug/L	98.51%
65) 1,2-Dichlorobenzene-d4	13.24	152	295218	5.0603 ug/L	101.21%
Target Compounds					**Qvalue**
2) Dichlorodifluoromethane	0.00	85		Not Detected	
3) Chloromethane	0.00	50		Not Detected	
4) Vinyl chloride	0.00	62		Not Detected	
6) Bromomethane	0.00	94		Not Detected	
7) Chloroethane	0.00	64		Not Detected	
9) Trichlorofluoromethane	0.00	101		Not Detected	
10) 1,1-Dichloroethene	0.00	96		Not Detected	
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101		Not Detected	
13) Acetone	0.00	43		Not Detected	
14) Carbon disulfide	0.00	76		Not Detected	
15) Methyl acetate	0.00	43		Not Detected	
16) Methylene chloride	0.00	84		Not Detected	
17) trans-1,2-Dichloroethene	0.00	96		Not Detected	
18) Methyl tert-butyl ether	0.00	73		Not Detected	
19) 1,1-Dichloroethane	0.00	63		Not Detected	
20) cis-1,2-Dichloroethene	0.00	96		Not Detected	
21) 2-Butanone	0.00	43		Not Detected	
23) Bromochloromethane	0.00	128		Not Detected	
24) Chloroform	0.00	83		Not Detected	
26) 1,2-Dichloroethane	0.00	62		Not Detected	

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

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP78BLK.D Vial: 3
Acq Time : 09/11/2019 07:38 Operator: CQC
Sample : 672757 VBLKT1 Inst : 5975-F
Misc : 2.5 uL of 49435 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 07:58:24 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	1,1,1-Trichloroethane	0.00	97		Not Detected	
30)	Cyclohexane	0.00	56		Not Detected	
31)	Carbon tetrachloride	0.00	117		Not Detected	
32)	Benzene	0.00	78		Not Detected	
34)	Trichloroethene	0.00	130		Not Detected	
35)	Methylcyclohexane	0.00	83		Not Detected	
36)	1,2-Dichloropropane	0.00	63		Not Detected	
38)	Bromodichloromethane	0.00	83		Not Detected	
39)	cis-1,3-Dichloropropene	0.00	75		Not Detected	
41)	trans-1,3-Dichloropropene	0.00	75		Not Detected	
43)	1,1,2-Trichloroethane	0.00	97		Not Detected	
44)	Dibromochloromethane	0.00	129		Not Detected	
45)	4-Methyl-2-pentanone	0.00	43		Not Detected	
46)	Toluene	0.00	91		Not Detected	
48)	Tetrachloroethene	0.00	164		Not Detected	
49)	2-Hexanone	0.00	43		Not Detected	
51)	1,2-Dibromoethane	0.00	107		Not Detected	
52)	Chlorobenzene	0.00	112		Not Detected	
53)	Ethylbenzene	0.00	91		Not Detected	
54)	m,p-Xylene	0.00	106		Not Detected	
55)	o-Xylene	0.00	106		Not Detected	
56)	Styrene	0.00	104		Not Detected	
57)	Isopropylbenzene	0.00	105		Not Detected	
58)	1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61)	Bromoform	0.00	173		Not Detected	
62)	1,3-Dichlorobenzene	0.00	146		Not Detected	
63)	1,4-Dichlorobenzene	0.00	146		Not Detected	
64)	1,2-Dichlorobenzene	0.00	146		Not Detected	
66)	1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67)	1,2,4-Trichlorobenzene	0.00	180		Not Detected	
68)	1,2,3-Trichlorobenzene	0.00	180		Not Detected	

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

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLKT2

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 672759
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: MS07BLK
% Solids: Date Received:
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VBLKT2

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 672759
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: MS07BLK
% Solids: Date Received:
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.097	J
87-61-6	1,2,3-Trichlorobenzene	0.13	J

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKT2

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 672759
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: MS07BLK
% Solids:
Date Received:
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
Extract Concentrated: (Y/N)
Date Analyzed: 09/11/2019
Soil Aliquot (VOA): (uL)
Extract Volume: (uL)
Heated Purge: (Y/N) Y
Extraction Type: PT
Purge Volume: 25.0 (mL)
Injection Volume: (uL)
Cleanup Types:
pH: Dilution Factor: 1.0
Concentration Units (ug/L, ug/kg): ug/L
Cleanup Factor:

	CAS No.	ANALYTE	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

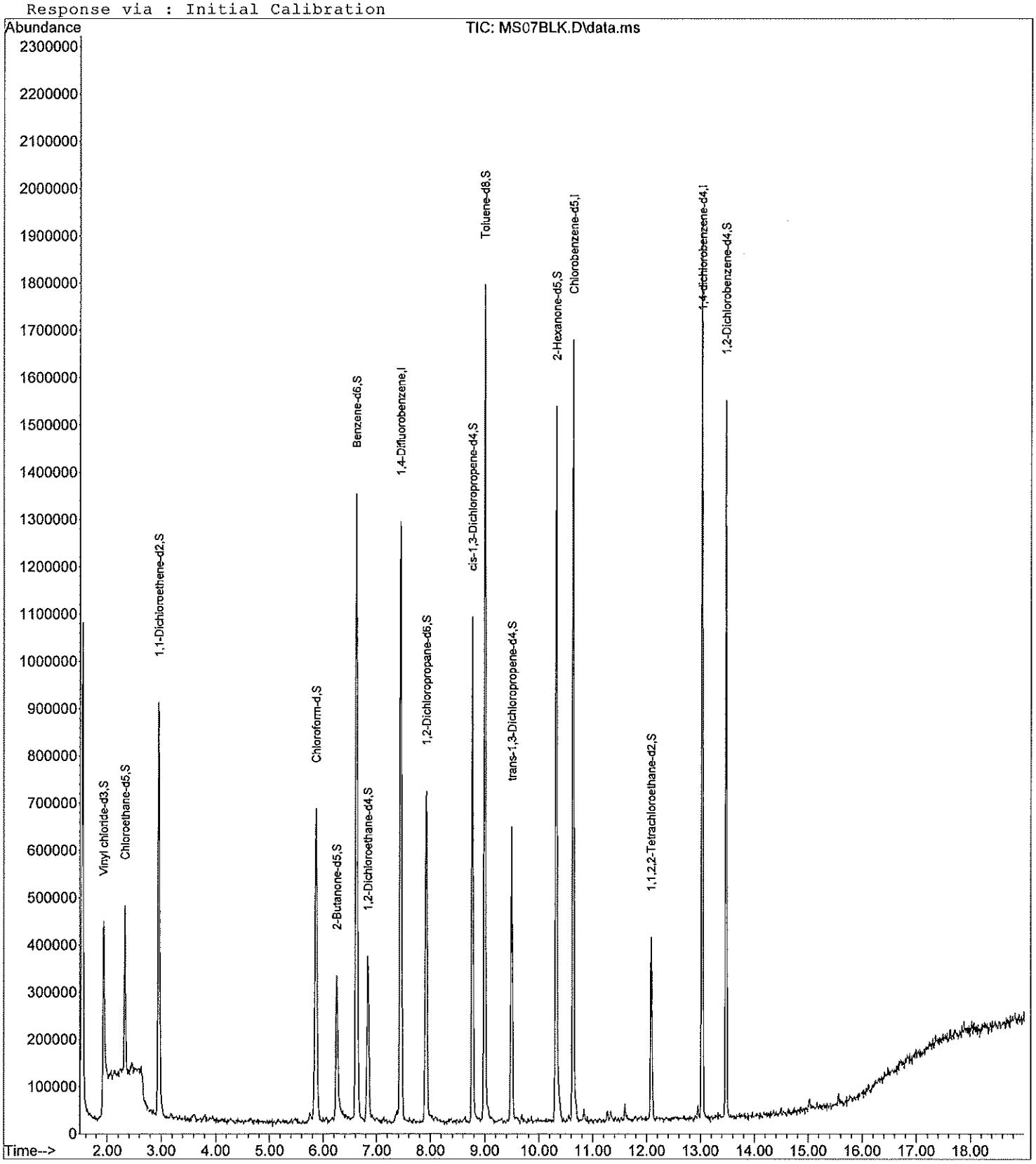
[1]EPA-designated Registry Number.

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS07BLK.D Vial: 3
Acq Time : 09/11/2019 08:40 Operator: CQC
Sample : 672759 VBLKT2 Inst : 5975-M
Misc : 2.5 uL of 49435 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 09:13:27 2019 Results File: MTRACEA9.RES

Method : C:\msdchem\1\methods\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 13:23:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19M\MS07BLK.D Vial: 3
Acq Time : 09/11/2019 08:40 Operator: CQC
Sample : 672759 VBLKT2 Inst : 5975-M
Misc : 2.5 uL of 49435 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 09:13:27 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 11:22:27 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.44	114	1289245	5.0000 ug/L	111.06
28) Chlorobenzene-d5	10.63	117	1041405	5.0000 ug/L	104.47
60) 1,4-dichlorobenzene-d4	13.03	152	557280	5.0000 ug/L	106.91

System Monitoring Compounds					%Recovery
5) Vinyl chloride-d3	1.93	65	468065	4.3821 ug/L	87.64%
8) Chloroethane-d5	2.33	69	289218	4.4052 ug/L	88.10%
11) 1,1-Dichloroethene-d2	2.96	63	743344	3.6742 ug/L	73.48%
22) 2-Butanone-d5	6.25	46	653984	54.6003 ug/L	109.20%
25) Chloroform-d	5.86	84	757490	4.8604 ug/L	97.21%
27) 1,2-Dichloroethane-d4	6.83	65	318093	5.1145 ug/L	102.29%
33) Benzene-d6	6.62	84	1515497	5.3804 ug/L	107.61%
37) 1,2-Dichloropropane-d6	7.92	67	384152	5.4069 ug/L	108.14%
40) cis-1,3-Dichloropropene-d4	8.77	79	644741	5.2312 ug/L	104.62%
42) trans-1,3-Dichloropropene-	9.50	79	345346	5.2995 ug/L	105.99%
47) Toluene-d8	9.00	98	1300737	5.1343 ug/L	102.69%
50) 2-Hexanone-d5	10.32	63	587223	53.0607 ug/L	106.12%
59) 1,1,2,2-Tetrachloroethane-	12.08	84	207974	5.0807 ug/L	101.61%
65) 1,2-Dichlorobenzene-d4	13.47	152	441376	4.9660 ug/L	99.32%

Target Compounds				Qvalue
2) Dichlorodifluoromethane	0.00	85	Not Detected	
3) Chloromethane	0.00	50	Not Detected	
4) Vinyl chloride	0.00	62	Not Detected	
6) Bromomethane	0.00	94	Not Detected	
7) Chloroethane	0.00	64	Not Detected	
9) Trichlorofluoromethane	0.00	101	Not Detected	
10) 1,1-Dichloroethene	0.00	96	Not Detected	
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101	Not Detected	
13) Acetone	0.00	43	Not Detected	
14) Carbon disulfide	0.00	76	Not Detected	
15) Methyl acetate	0.00	43	Not Detected	
16) Methylene chloride	0.00	84	Not Detected	
17) trans-1,2-Dichloroethene	0.00	96	Not Detected	
18) Methyl tert-butyl ether	0.00	73	Not Detected	
19) 1,1-Dichloroethane	0.00	63	Not Detected	
20) cis-1,2-Dichloroethene	0.00	96	Not Detected	
21) 2-Butanone	0.00	43	Not Detected	
23) Bromochloromethane	0.00	128	Not Detected	
24) Chloroform	0.00	83	Not Detected	
26) 1,2-Dichloroethane	0.00	62	Not Detected	
29) 1,1,1-Trichloroethane	0.00	97	Not Detected	
30) Cyclohexane	0.00	56	Not Detected	
31) Carbon tetrachloride	0.00	117	Not Detected	
32) Benzene	0.00	78	Not Detected	
34) Trichloroethene	0.00	130	Not Detected	
35) Methylcyclohexane	0.00	83	Not Detected	
36) 1,2-Dichloropropane	0.00	63	Not Detected	
38) Bromodichloromethane	0.00	83	Not Detected	
39) cis-1,3-Dichloropropene	0.00	75	Not Detected	
41) trans-1,3-Dichloropropene	0.00	75	Not Detected	
43) 1,1,2-Trichloroethane	0.00	97	Not Detected	
44) Dibromochloromethane	0.00	129	Not Detected	
45) 4-Methyl-2-pentanone	0.00	43	Not Detected	
46) Toluene	0.00	91	Not Detected	

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

Quantitation Report

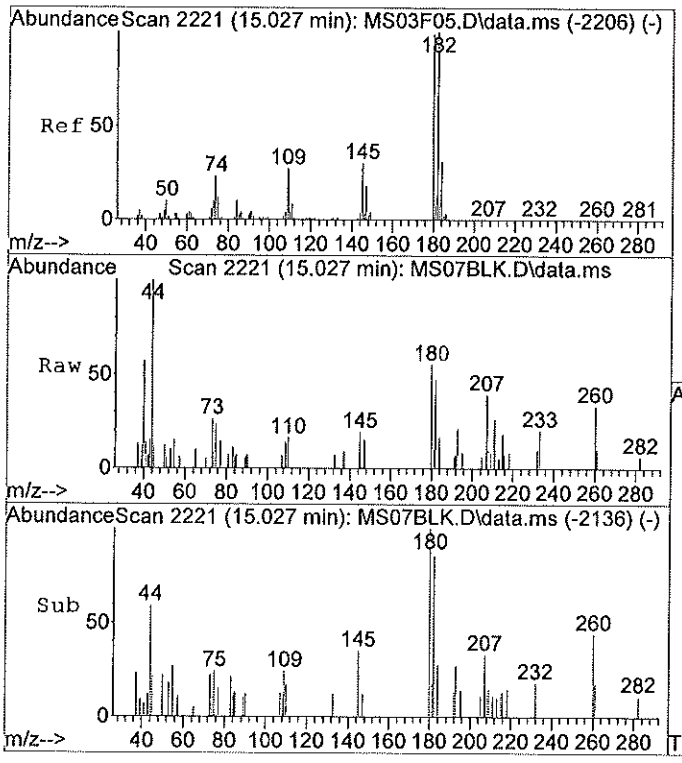
Data File : C:\msdchem\1\data\11SEP19M\MS07BLK.D Vial: 3
Acq Time : 09/11/2019 08:40 Operator: CQC
Sample : 672759 VBLKT2 Inst : 5975-M
Misc : 2.5 uL of 49435 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 09:13:27 2019 Results File: MTRACEA9.RES

Quant Method : C:\MSDCHEM\1\METHODS\MTRACEA9.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Fri Sep 06 11:22:27 2019
Response via : Initial Calibration
DataAcq Meth : MTRACEA9.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
48)	Tetrachloroethene	0.00	164		Not Detected	
49)	2-Hexanone	0.00	43		Not Detected	
51)	1,2-Dibromoethane	0.00	107		Not Detected	
52)	Chlorobenzene	0.00	112		Not Detected	
53)	Ethylbenzene	0.00	91		Not Detected	
54)	m,p-Xylene	0.00	106		Not Detected	
55)	o-Xylene	0.00	106		Not Detected	
56)	Styrene	0.00	104		Not Detected	
57)	Isopropylbenzene	0.00	105		Not Detected	
58)	1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61)	Bromoform	0.00	173		Not Detected	
62)	1,3-Dichlorobenzene	0.00	146		Not Detected	
63)	1,4-Dichlorobenzene	0.00	146		Not Detected	
64)	1,2-Dichlorobenzene	0.00	146		Not Detected	
66)	1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67)	1,2,4-Trichlorobenzene	15.03	180	7164	0.0968 ug/L	95
68)	1,2,3-Trichlorobenzene	15.56	180	7241	0.1274 ug/L #	76

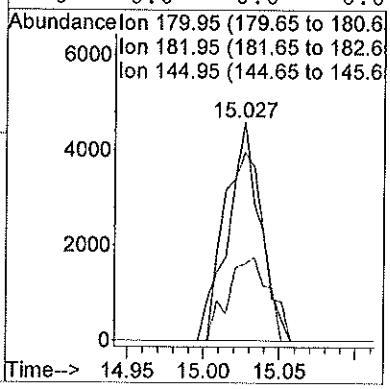
(#) = qualifier out of range (m) = manual integration

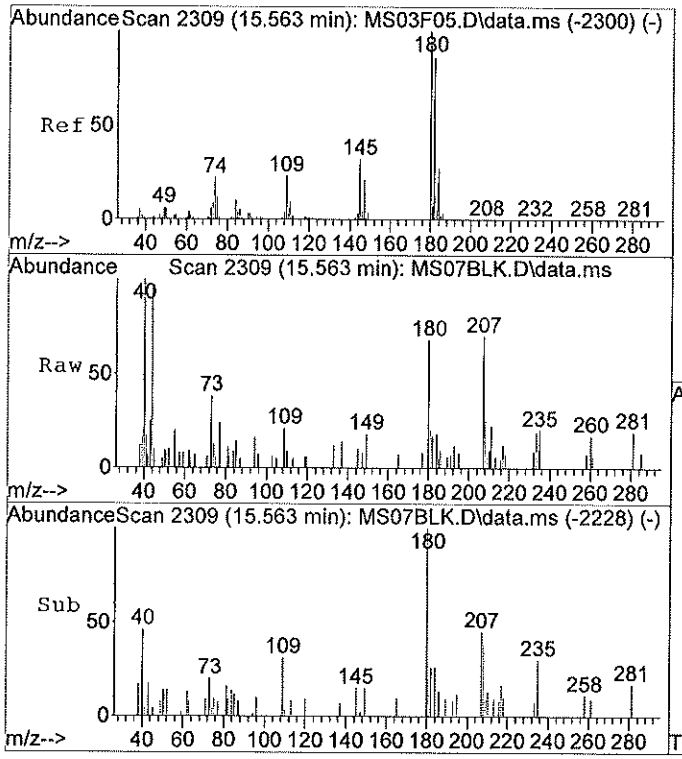


#67
1,2,4-Trichlorobenzene
Concen: 0.10 ug/L
RT: 15.03 min Scan# 2221
Delta R.T. -0.00 min
Lab File: MS07BLK.D
Acq: 09/11/2019 08:40

Tgt Ion:179.95 Resp: 7164

Ion	Ratio	Lower	Upper
180	100		
182	97.2	76.1	116.1
145	43.6	13.9	53.9
0	0.0	0.0	0.0

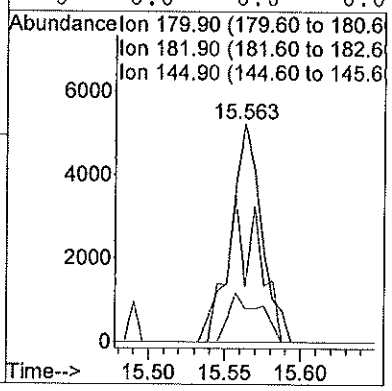




#68
1,2,3-Trichlorobenzene
Concen: 0.13 ug/L
RT: 15.56 min Scan# 2309
Delta R.T. -0.00 min
Lab File: MS07BLK.D
Acq: 09/11/2019 08:40

Tgt Ion:179.9 Resp: 7241

Ion	Ratio	Lower	Upper
180	100		
182	71.1	75.4	115.4#
145	23.2	15.1	55.1
0	0.0	0.0	0.0



FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.

VHBLKT1

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 672758
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP92HBLK
% Solids: Date Received:
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
VHBLKT1

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 672758
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: FP92HBLK
% Solids:
Date Received:
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
GC Column: ID: (mm)
Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N)
Extract Volume: (uL)
Soil Aliquot (VOA): (uL)
Extraction Type: PT
Heated Purge: (Y/N) Y
Injection Volume: (uL)
Purge Volume: 25.0 (mL)
pH: Dilution Factor: 1.0
Cleanup Types:
Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

FORM 1B-OR
ORGANIC ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VHBLKT1

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 672758
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: FP92HBLK
% Solids:
Date Received:
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
Extract Concentrated: (Y/N)
Date Analyzed: 09/11/2019
Soil Aliquot (VOA): (uL)
Extract Volume: (uL)
Heated Purge: (Y/N) Y
Extraction Type: PT
Purge Volume: 25.0 (mL)
Injection Volume: (uL)
Cleanup Types:
pH: Dilution Factor: 1.0
Concentration Units (ug/L, ug/kg): ug/L
Cleanup Factor:

	CAS No.	ANALYTE	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

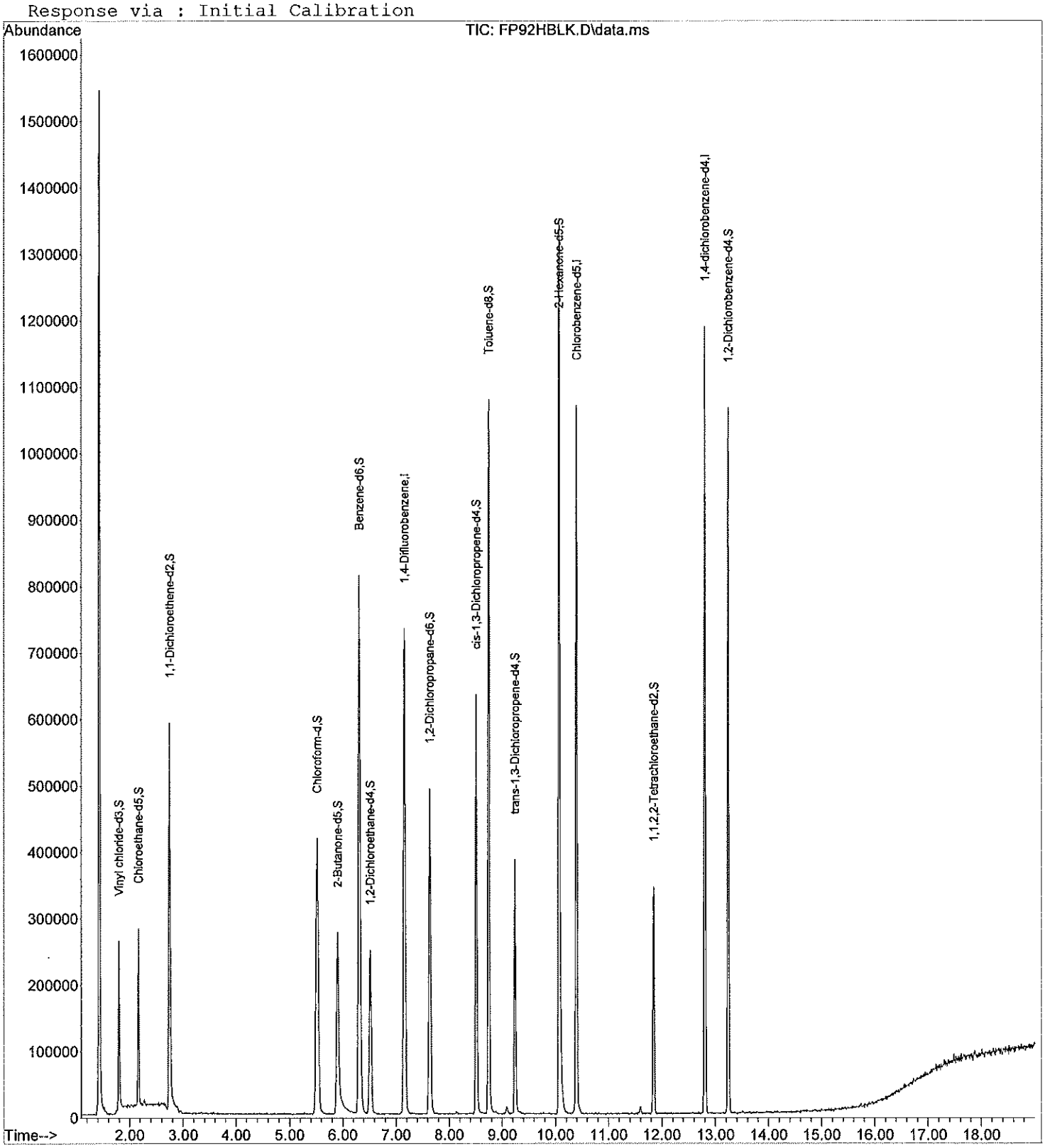
[1]EPA-designated Registry Number.

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP92HBLK.D Vial: 17
Acq Time : 09/11/2019 14:13 Operator: CQC
Sample : 672758 VHBLKT1 Inst : 5975-F
Misc : 2.5 uL of 49435 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 12 06:38:34 2019 Results File: FTRACEG5.RES

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Sep 05 08:18:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP92HBLK.D Vial: 17
Acq Time : 09/11/2019 14:13 Operator: CQC
Sample : 672758 VHBLKT1 Inst : 5975-F
Misc : 2.5 uL of 49435 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 12 06:38:34 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.16	114	700985	5.0000 ug/L	74.49
28) Chlorobenzene-d5	10.40	117	599460	5.0000 ug/L	78.42
60) 1,4-dichlorobenzene-d4	12.80	152	321700	5.0000 ug/L	80.41
System Monitoring Compounds					**%Recovery**
5) Vinyl chloride-d3	1.80	65	238630	5.0031 ug/L	100.06%
8) Chloroethane-d5	2.17	69	200165	5.2146 ug/L	104.29%
11) 1,1-Dichloroethene-d2	2.75	63	449565	4.6735 ug/L	93.47%
22) 2-Butanone-d5	5.90	46	621924	54.5579 ug/L	109.12%
25) Chloroform-d	5.52	84	505598	5.7143 ug/L	114.29%
27) 1,2-Dichloroethane-d4	6.52	65	224267	5.3945 ug/L	107.89%
33) Benzene-d6	6.31	84	942849	5.3332 ug/L	106.66%
37) 1,2-Dichloropropane-d6	7.64	67	243310	5.1540 ug/L	103.08%
40) cis-1,3-Dichloropropene-d4	8.51	79	350562	4.3326 ug/L	86.65%
42) trans-1,3-Dichloropropene-	9.24	79	203551	4.3700 ug/L	87.40%
47) Toluene-d8	8.75	98	765907	4.9907 ug/L	99.81%
50) 2-Hexanone-d5	10.07	63	495759	51.7406 ug/L	103.48%
59) 1,1,2,2-Tetrachloroethane-	11.85	84	167771	5.2348 ug/L	104.70%
65) 1,2-Dichlorobenzene-d4	13.24	152	277769	5.1075 ug/L	102.15%
Target Compounds					**Qvalue**
2) Dichlorodifluoromethane	0.00	85		Not Detected	
3) Chloromethane	0.00	50		Not Detected	
4) Vinyl chloride	0.00	62		Not Detected	
6) Bromomethane	0.00	94		Not Detected	
7) Chloroethane	0.00	64		Not Detected	
9) Trichlorofluoromethane	0.00	101		Not Detected	
10) 1,1-Dichloroethene	0.00	96		Not Detected	
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101		Not Detected	
13) Acetone	0.00	43		Not Detected	
14) Carbon disulfide	0.00	76		Not Detected	
15) Methyl acetate	0.00	43		Not Detected	
16) Methylene chloride	0.00	84		Not Detected	
17) trans-1,2-Dichloroethene	0.00	96		Not Detected	
18) Methyl tert-butyl ether	0.00	73		Not Detected	
19) 1,1-Dichloroethane	0.00	63		Not Detected	
20) cis-1,2-Dichloroethene	0.00	96		Not Detected	
21) 2-Butanone	0.00	43		Not Detected	
23) Bromochloromethane	0.00	128		Not Detected	
24) Chloroform	0.00	83		Not Detected	
26) 1,2-Dichloroethane	0.00	62		Not Detected	
29) 1,1,1-Trichloroethane	0.00	97		Not Detected	
30) Cyclohexane	0.00	56		Not Detected	
31) Carbon tetrachloride	0.00	117		Not Detected	
32) Benzene	0.00	78		Not Detected	
34) Trichloroethene	0.00	130		Not Detected	
35) Methylcyclohexane	0.00	83		Not Detected	
36) 1,2-Dichloropropane	0.00	63		Not Detected	
38) Bromodichloromethane	0.00	83		Not Detected	
39) cis-1,3-Dichloropropene	0.00	75		Not Detected	

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

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP92HBLK.D Vial: 17
Acq Time : 09/11/2019 14:13 Operator: CQC
Sample : 672758 VHBLKT1 Inst : 5975-F
Misc : 2.5 uL of 49435 Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 12 06:38:34 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
41)	trans-1,3-Dichloropropene	0.00	75		Not Detected	
43)	1,1,2-Trichloroethane	0.00	97		Not Detected	
44)	Dibromochloromethane	0.00	129		Not Detected	
45)	4-Methyl-2-pentanone	0.00	43		Not Detected	
46)	Toluene	0.00	91		Not Detected	
48)	Tetrachloroethene	0.00	164		Not Detected	
49)	2-Hexanone	0.00	43		Not Detected	
51)	1,2-Dibromoethane	0.00	107		Not Detected	
52)	Chlorobenzene	0.00	112		Not Detected	
53)	Ethylbenzene	0.00	91		Not Detected	
54)	m,p-Xylene	0.00	106		Not Detected	
55)	o-Xylene	0.00	106		Not Detected	
56)	Styrene	0.00	104		Not Detected	
57)	Isopropylbenzene	0.00	105		Not Detected	
58)	1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61)	Bromoform	0.00	173		Not Detected	
62)	1,3-Dichlorobenzene	0.00	146		Not Detected	
63)	1,4-Dichlorobenzene	0.00	146		Not Detected	
64)	1,2-Dichlorobenzene	0.00	146		Not Detected	
66)	1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67)	1,2,4-Trichlorobenzene	0.00	180		Not Detected	
68)	1,2,3-Trichlorobenzene	0.00	180		Not Detected	

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

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW105-146-090519MS

Lab Name: ALS Environmental (SLC)
Contract: 97756
Lab Code: ALS Case No.: 5POINTS
MA No.: SDG No.: TV9519
Analytical Method: Trace VOA
Level: TRACE
Matrix: WATER
Lab Sample ID: 1925562009
Sample wt/vol: 25.0 (g/mL) mL
Lab File ID: FP87S009
% Solids:
Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm)
Date Extracted:
GC Column: ID: (mm)
Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N)
Extract Volume: (uL)
Soil Aliquot (VOA): (uL)
Extraction Type: PT
Heated Purge: (Y/N) Y
Injection Volume: (uL)
Purge Volume: 25.0 (mL)
pH: 1.0 Dilution Factor: 1.0
Cleanup Types:
Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.78	
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	6.2	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	6.0	
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.21	J
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	5.7	
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	5.5	
108-87-2	Methylcyclohexane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW105-146-090519MS

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562009
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP87S009
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

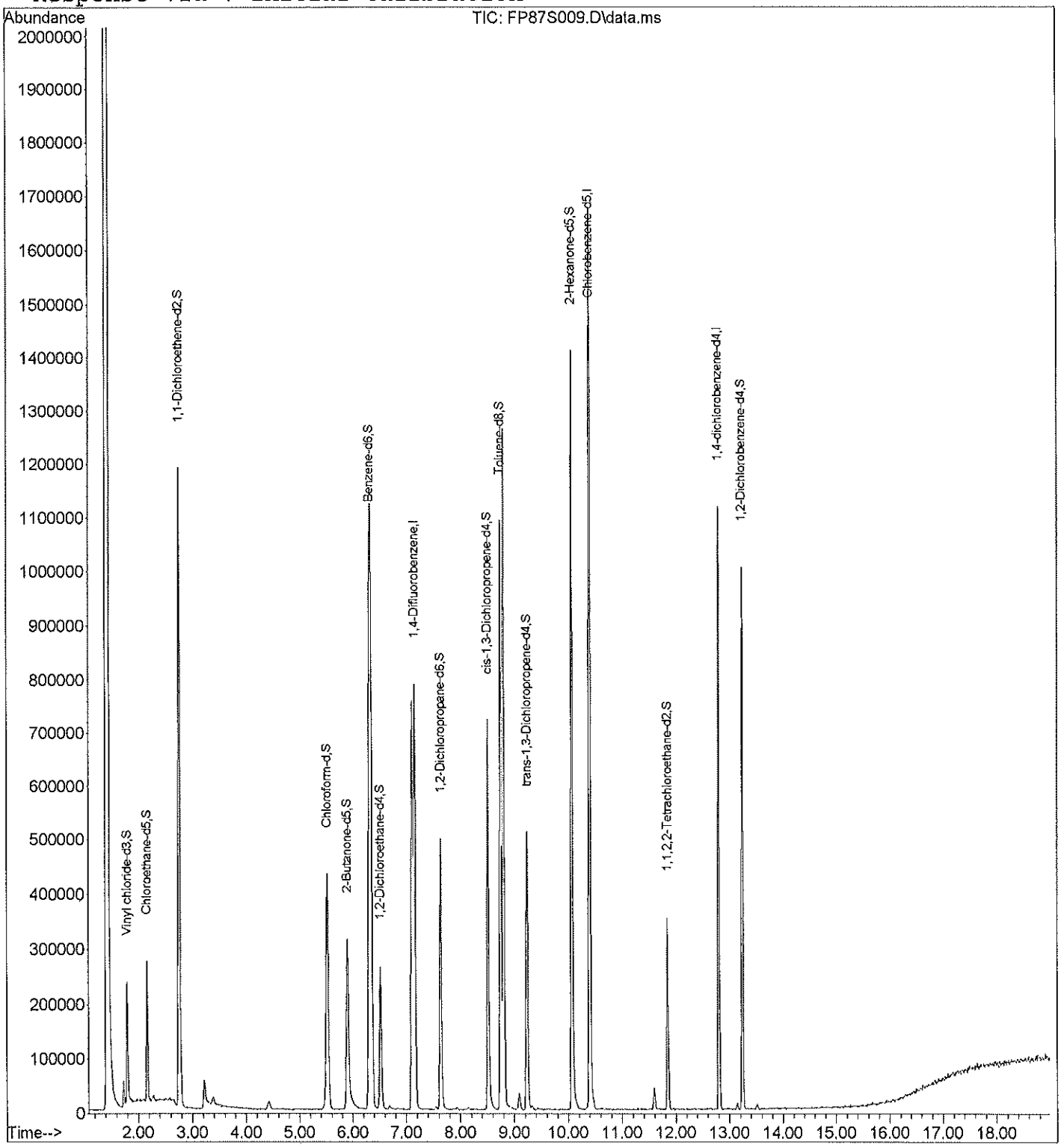
CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	5.4	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	1.5	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	5.3	
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP87S009.D Vial: 12
Acq Time : 09/11/2019 11:57 Operator: CQC
Sample : 1925562009 5P-MW105-146-090519MS Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 12:22:31 2019 Results File: FTRACEG5.RES

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Sep 05 08:18:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP87S009.D Vial: 12
Acq Time : 09/11/2019 11:57 Operator: CQC
Sample : 1925562009 5P-MW105-146-090519MS Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 12:22:31 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.16	114	731296	5.0000 ug/L	77.72
28) Chlorobenzene-d5	10.40	117	595288	5.0000 ug/L	77.87
60) 1,4-dichlorobenzene-d4	12.80	152	299830	5.0000 ug/L	74.95
System Monitoring Compounds					**%Recovery**
5) Vinyl chloride-d3	1.80	65	225261	4.5270 ug/L	90.54%
8) Chloroethane-d5	2.17	69	190499	4.7571 ug/L	95.14%
11) 1,1-Dichloroethene-d2	2.75	63	586964	5.8489 ug/L	116.98%
22) 2-Butanone-d5	5.90	46	655114	55.0875 ug/L	110.17%
25) Chloroform-d	5.52	84	497207	5.3866 ug/L	107.73%
27) 1,2-Dichloroethane-d4	6.52	65	237687	5.4803 ug/L	109.61%
33) Benzene-d6	6.31	84	936393	5.3338 ug/L	106.68%
37) 1,2-Dichloropropane-d6	7.63	67	244603	5.2177 ug/L	104.35%
40) cis-1,3-Dichloropropene-d4	8.51	79	376383	4.6843 ug/L	93.69%
42) trans-1,3-Dichloropropene-	9.24	79	211924	4.5817 ug/L	91.63%
47) Toluene-d8	8.75	98	760088	4.9875 ug/L	99.75%
50) 2-Hexanone-d5	10.07	63	495969	52.1253 ug/L	104.25%
59) 1,1,2,2-Tetrachloroethane-	11.85	84	171220	5.3798 ug/L	107.60%
65) 1,2-Dichlorobenzene-d4	13.24	152	265308	5.2343 ug/L	104.69%
Target Compounds					**Qvalue**
2) Dichlorodifluoromethane	0.00	85		Not Detected	
3) Chloromethane	1.73	50	44485	0.7842 ug/L	98
4) Vinyl chloride	0.00	62		Not Detected	
6) Bromomethane	0.00	94		Not Detected	
7) Chloroethane	0.00	64		Not Detected	
9) Trichlorofluoromethane	0.00	101		Not Detected	
10) 1,1-Dichloroethene	2.76	96	264311	6.2216 ug/L	94
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101		Not Detected	
13) Acetone	3.38	43	38292	6.0097 ug/L	79
14) Carbon disulfide	0.00	76		Not Detected	
15) Methyl acetate	0.00	43		Not Detected	
16) Methylene chloride	0.00	84		Not Detected	
17) trans-1,2-Dichloroethene	0.00	96		Not Detected	
18) Methyl tert-butyl ether	0.00	73		Not Detected	
19) 1,1-Dichloroethane	0.00	63		Not Detected	
20) cis-1,2-Dichloroethene	0.00	96		Not Detected	
21) 2-Butanone	0.00	43		Not Detected	
23) Bromochloromethane	0.00	128		Not Detected	
24) Chloroform	5.54	83	17612	0.2070 ug/L #	1
26) 1,2-Dichloroethane	0.00	62		Not Detected	

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

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP87S009.D Vial: 12
Acq Time : 09/11/2019 11:57 Operator: CQC
Sample : 1925562009 5P-MW105-146-090519MS Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 12:22:31 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	1,1,1-Trichloroethane	0.00	97		Not Detected	
30)	Cyclohexane	0.00	56		Not Detected	
31)	Carbon tetrachloride	0.00	117		Not Detected	
32)	Benzene	6.34	78	978777	5.6735 ug/L	98
34)	Trichloroethene	7.11	130	298208	5.5106 ug/L	98
35)	Methylcyclohexane	0.00	83		Not Detected	
36)	1,2-Dichloropropane	0.00	63		Not Detected	
38)	Bromodichloromethane	0.00	83		Not Detected	
39)	cis-1,3-Dichloropropene	0.00	75		Not Detected	
41)	trans-1,3-Dichloropropene	0.00	75		Not Detected	
43)	1,1,2-Trichloroethane	0.00	97		Not Detected	
44)	Dibromochloromethane	0.00	129		Not Detected	
45)	4-Methyl-2-pentanone	0.00	43		Not Detected	
46)	Toluene	8.80	91	926915	5.3557 ug/L	100
48)	Tetrachloroethene	9.23	164	54906	1.4939 ug/L	99
49)	2-Hexanone	0.00	43		Not Detected	
51)	1,2-Dibromoethane	0.00	107		Not Detected	
52)	Chlorobenzene	10.41	112	618146	5.3179 ug/L	88
53)	Ethylbenzene	0.00	91		Not Detected	
54)	m,p-Xylene	0.00	106		Not Detected	
55)	o-Xylene	0.00	106		Not Detected	
56)	Styrene	0.00	104		Not Detected	
57)	Isopropylbenzene	0.00	105		Not Detected	
58)	1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61)	Bromoform	0.00	173		Not Detected	
62)	1,3-Dichlorobenzene	0.00	146		Not Detected	
63)	1,4-Dichlorobenzene	0.00	146		Not Detected	
64)	1,2-Dichlorobenzene	0.00	146		Not Detected	
66)	1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67)	1,2,4-Trichlorobenzene	0.00	180		Not Detected	
68)	1,2,3-Trichlorobenzene	0.00	180		Not Detected	

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

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW105-146-090519MSD

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562010
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP88D010
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

CAS NO.	ANALYTE	CONCENTRATION	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.55	
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	5.9	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.6	
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.19	J
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	5.4	
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	5.2	
108-87-2	Methylcyclohexane	0.50	U

FORM 1A-OR
ORGANIC ANALYSIS DATA SHEET
TARGET ANALYTE LIST

EPA SAMPLE NO.
5P-MW105-146-090519MSD

Lab Name: ALS Environmental (SLC) Contract: 97756
Lab Code: ALS Case No.: 5POINTS MA No.: SDG No.: TV9519
Analytical Method: Trace VOA Level: TRACE
Matrix: WATER Lab Sample ID: 1925562010
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: FP88D010
% Solids: Date Received: 09/05/2019
GC Column: RTX-VMS ID: 0.25 (mm) Date Extracted:
GC Column: ID: (mm) Date Analyzed: 09/11/2019
Extract Concentrated: (Y/N) Extract Volume: (uL)
Soil Aliquot (VOA): (uL) Extraction Type: PT
Heated Purge: (Y/N) Y Injection Volume: (uL)
Purge Volume: 25.0 (mL) pH: 1.0 Dilution Factor: 1.0
Cleanup Types: Cleanup Factor:
Concentration Units (ug/L, mg/L, ug/kg): ug/L

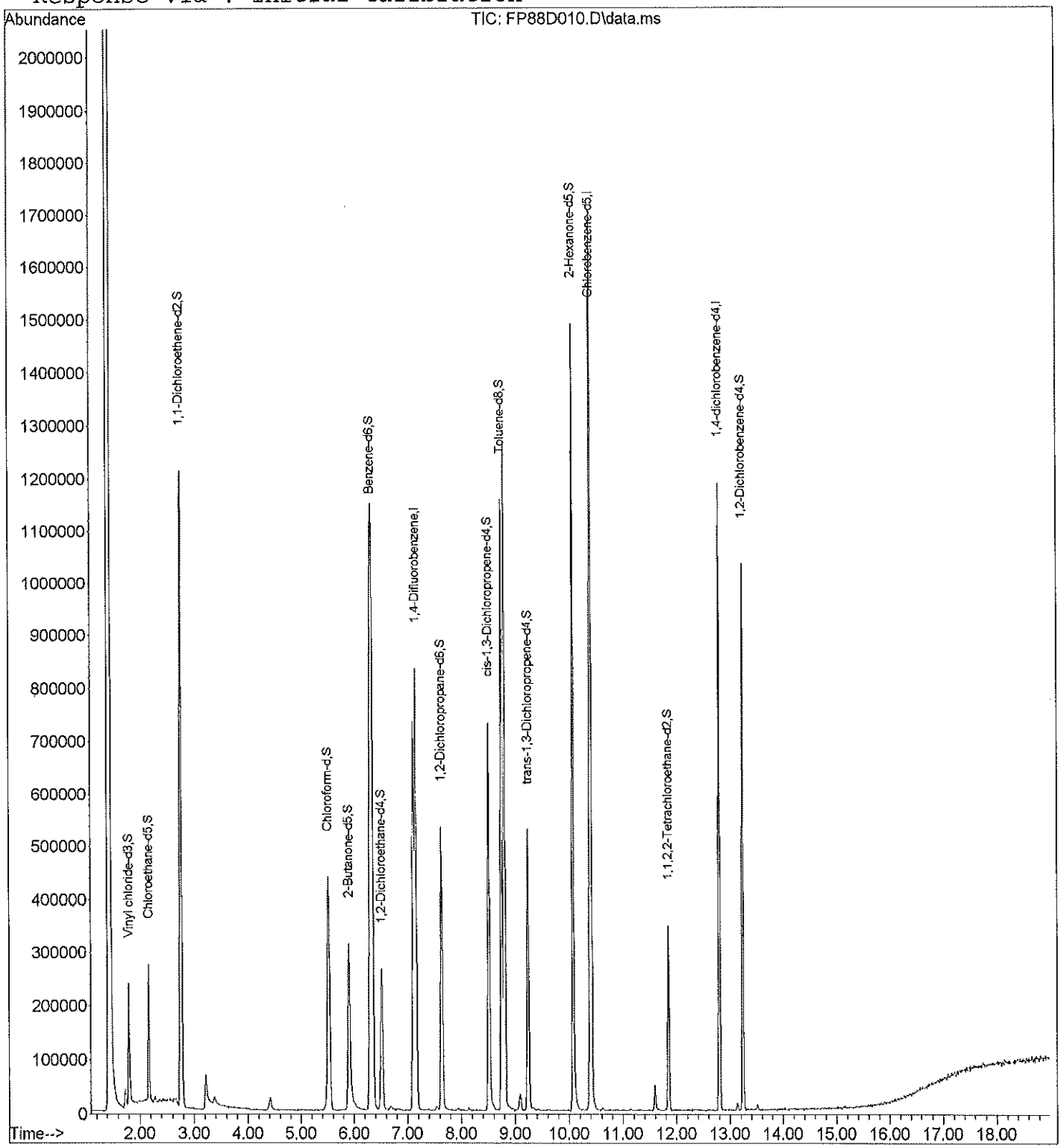
CAS NO.	ANALYTE	CONCENTRATION	Q
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	5.1	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	1.4	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	5.0	
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP88D010.D Vial: 13
Acq Time : 09/11/2019 12:25 Operator: CQC
Sample : 1925562010 5P-MW105-146-090519MSD Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 12:44:50 2019 Results File: FTRACEG5.RES

Method : C:\msdchem\1\methods\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Sep 05 08:18:26 2019
Response via : Initial Calibration



Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP88D010.D Vial: 13
Acq Time : 09/11/2019 12:25 Operator: CQC
Sample : 1925562010 5P-MW105-146-090519MSD Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 12:44:50 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) 1,4-Difluorobenzene	7.16	114	770117	5.0000 ug/L	81.84
28) Chlorobenzene-d5	10.40	117	635352	5.0000 ug/L	83.11
60) 1,4-dichlorobenzene-d4	12.80	152	316097	5.0000 ug/L	79.01
System Monitoring Compounds					**%Recovery**
5) Vinyl chloride-d3	1.80	65	230818	4.4049 ug/L	88.10%
8) Chloroethane-d5	2.17	69	195372	4.6328 ug/L	92.66%
11) 1,1-Dichloroethene-d2	2.75	63	608598	5.7588 ug/L	115.18%
22) 2-Butanone-d5	5.90	46	661504	52.8208 ug/L	105.64%
25) Chloroform-d	5.51	84	520465	5.3543 ug/L	107.09%
27) 1,2-Dichloroethane-d4	6.52	65	241939	5.2971 ug/L	105.94%
33) Benzene-d6	6.31	84	979596	5.2280 ug/L	104.56%
37) 1,2-Dichloropropane-d6	7.63	67	256721	5.1309 ug/L	102.62%
40) cis-1,3-Dichloropropene-d4	8.51	79	387980	4.5242 ug/L	90.48%
42) trans-1,3-Dichloropropene-	9.24	79	223190	4.5209 ug/L	90.42%
47) Toluene-d8	8.75	98	803224	4.9382 ug/L	98.76%
50) 2-Hexanone-d5	10.07	63	498480	49.0856 ug/L	98.17%
59) 1,1,2,2-Tetrachloroethane-	11.85	84	169627	4.9937 ug/L	99.87%
65) 1,2-Dichlorobenzene-d4	13.24	152	275584	5.1572 ug/L	103.14%
Target Compounds					**Qvalue**
2) Dichlorodifluoromethane	0.00	85		Not Detected	
3) Chloromethane	1.73	50	32616	0.5460 ug/L	97
4) Vinyl chloride	0.00	62		Not Detected	
6) Bromomethane	0.00	94		Not Detected	
7) Chloroethane	0.00	64		Not Detected	
9) Trichlorofluoromethane	0.00	101		Not Detected	
10) 1,1-Dichloroethene	2.76	96	265289	5.9299 ug/L	94
12) 1,1,2-Trichloro-1,2,2-trif	0.00	101		Not Detected	
13) Acetone	3.38	43	37536	5.5941 ug/L	77
14) Carbon disulfide	0.00	76		Not Detected	
15) Methyl acetate	0.00	43		Not Detected	
16) Methylene chloride	0.00	84		Not Detected	
17) trans-1,2-Dichloroethene	0.00	96		Not Detected	
18) Methyl tert-butyl ether	0.00	73		Not Detected	
19) 1,1-Dichloroethane	0.00	63		Not Detected	
20) cis-1,2-Dichloroethene	0.00	96		Not Detected	
21) 2-Butanone	0.00	43		Not Detected	
23) Bromochloromethane	0.00	128		Not Detected	
24) Chloroform	5.53	83	16595	0.1852 ug/L #	1
26) 1,2-Dichloroethane	0.00	62		Not Detected	

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

Quantitation Report

Data File : C:\msdchem\1\data\11SEP19F\FP88D010.D Vial: 13
Acq Time : 09/11/2019 12:25 Operator: CQC
Sample : 1925562010 5P-MW105-146-090519MSD Inst : 5975-F
Misc : 1925562 A Multiplr: 1.00
MS Integration Params: rteint.p Column ID: Rtx-VMS

Quant Time: Sep 11 12:44:50 2019 Results File: FTRACEG5.RES

Quant Method : C:\MSDCHEM\1\METHODS\FTRACEG5.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Wed Jul 17 09:30:11 2019
Response via : Initial Calibration
DataAcq Meth : FTRACEG5.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	1,1,1-Trichloroethane	0.00	97		Not Detected	
30)	Cyclohexane	0.00	56		Not Detected	
31)	Carbon tetrachloride	0.00	117		Not Detected	
32)	Benzene	6.34	78	985362	5.3515 ug/L	99
34)	Trichloroethene	7.12	130	298941	5.1758 ug/L	98
35)	Methylcyclohexane	0.00	83		Not Detected	
36)	1,2-Dichloropropane	0.00	63		Not Detected	
38)	Bromodichloromethane	0.00	83		Not Detected	
39)	cis-1,3-Dichloropropene	0.00	75		Not Detected	
41)	trans-1,3-Dichloropropene	0.00	75		Not Detected	
43)	1,1,2-Trichloroethane	0.00	97		Not Detected	
44)	Dibromochloromethane	0.00	129		Not Detected	
45)	4-Methyl-2-pentanone	0.00	43		Not Detected	
46)	Toluene	8.80	91	940826	5.0933 ug/L	100
48)	Tetrachloroethene	9.23	164	55731	1.4207 ug/L	99
49)	2-Hexanone	0.00	43		Not Detected	
51)	1,2-Dibromoethane	0.00	107		Not Detected	
52)	Chlorobenzene	10.41	112	624367	5.0327 ug/L	88
53)	Ethylbenzene	0.00	91		Not Detected	
54)	m,p-Xylene	0.00	106		Not Detected	
55)	o-Xylene	0.00	106		Not Detected	
56)	Styrene	0.00	104		Not Detected	
57)	Isopropylbenzene	0.00	105		Not Detected	
58)	1,1,2,2-Tetrachloroethane	0.00	83		Not Detected	
61)	Bromoform	0.00	173		Not Detected	
62)	1,3-Dichlorobenzene	0.00	146		Not Detected	
63)	1,4-Dichlorobenzene	0.00	146		Not Detected	
64)	1,2-Dichlorobenzene	0.00	146		Not Detected	
66)	1,2-Dibromo-3-chloropropan	0.00	75		Not Detected	
67)	1,2,4-Trichlorobenzene	0.00	180		Not Detected	
68)	1,2,3-Trichlorobenzene	0.00	180		Not Detected	

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

ALS Laboratory Group GC/MS Volatile Organic Analysis					
ALS Ref ID:	Samples:	HBN:	Case/SDG:	Date Received:	Date(s) Analyzed:
1925562	16	247493	TV9519/5POINTS	9/5/19	9/11/19

Sample Matrix: Water

Method: EPA CLP SOM02.4 VOA Trace

Instrument: 5975-F

Column: Rtx-VMS 30 m 0.250 mm

Temp. Program: 45° C (5.0 min) 15°C /min ramp to 200°C (0 min) 30°C /min ramp to 230°C (2.67 min). Run Time = 19.0 min.

Carrier Gas: Helium

Purge/Trap: OI Analytical Eclipse 4660/#10 Trap; Varian Archon Autosampler.

Purge/Trap Conditions: Purge Time: 11 min. (1 min. dry purge); Desorb Time: 0.8 min. @ 190° C.

Purge Gas: Helium

Purge Flow: ~50 mL/min. Sample heated to 40° C.

Trap Temp: < 35° C

Initial Calibration Curve: The calibration curve is FTRACEG5 analyzed on 7-17-19.

Initial Calibration Standards: VSTD0.5TF, 001TF, 005TF, 010TF, 020TF (Trace Water Curve) - 48228, 48752, 48753, 48755.

Initial Calibration Verification Standards: VICVTF - 48754, 48757.

Calibration Verification/MS Standards: VSTD005TX - 49350, 49435, 49436, 49437.

Instrument: 5975-M

Column: Rtx-VMS 30 m 0.250 mm

Temp. Program: 45° C (5.0 min) 15°C /min ramp to 200°C (0 min) 30°C /min ramp to 230°C (2.67 min). Run Time = 19.0 min.

Carrier Gas: Helium

Purge/Trap: OI Analytical Eclipse 4660/#10 Trap; Varian Archon Autosampler.

Purge/Trap Conditions: Purge Time: 11 min. (1 min. dry purge); Desorb Time: 0.8 min. @ 190° C.

Purge Gas: Helium

Purge Flow: ~50 mL/min. Sample heated to 40° C.

Trap Temp: < 35° C

Initial Calibration Curve: The calibration curve is MTRACEA9 analyzed on 8-27-19.

Initial Calibration Standards: VSTD0.5TM, 001TM, 005TM, 010TM, 020TM (Trace Water Curve) - 49350, 49433, 49434, 49436.

Initial Calibration Verification Standards: VICVTM - 49435, 49438.

Calibration Verification/MS Standards: VSTD005TX - 49350, 49435, 49436.

Balance I.D.: 40090067

All analyses meet established QC acceptance criteria.
Sample pH is recorded on the chain of custody.
Results reported in units of ug/L.

Standards generated by: Christopher Q. Coleman Data Processed by: CQC Notebook generated by: CQC

O:\Coleman\2019\Notebooks\SEP\F&M11AECW.Trace

DATACHEM LABORATORIES - GC/MS VOLATILE ANALYSIS
INJECTION LOGBOOK
INSTRUMENT 5975-M

FILE NAME	DATE & TIME INJECTED	OP	METHOD	SPAR GER#	RUN LENGTH	DIL FAC	MATRIX	SAMPLE	(STANDARD) (SOLUTION)	ISTD #1 AREA
MR58BFB	08/27/2019 06:42	CQC	MTRACEA9	1	19.00	1	WATER	BFBTX	50 ng BFB	132262
	COMMENTS: 2.0 uL of 49350 Failed.									
MR59BFB	08/27/2019 07:22	CQC	MTRACEA9	1	19.00	1	WATER	BFBTM	50 ng BFB	158849
	COMMENTS: 2.0 uL of 49350									
MR60S005	08/27/2019 07:56	CQC	MTRACEA9	2	19.00	1	WATER	VSTD0.5TM	VSTD0.5TM 0.5	1077502
	COMMENTS: 2.5 uL of 49433; 1.0 uL of 49434, 49436/100 m									
MR61S01	08/27/2019 08:24	CQC	MTRACEA9	3	19.00	1	WATER	VSTD001TM	VSTD001TM 1.0	1041074
	COMMENTS: 2.5 uL of 49433; 2.0 uL of 49434, 49436/100 m									
MR62S05	08/27/2019 08:52	CQC	MTRACEA9	4	19.00	1	WATER	VSTD005TM	VSTD005TM 5.0	1160380
	COMMENTS: 2.5 uL of 49433; 10 uL of 49434, 49436/100 m									
MR63S10	08/27/2019 09:20	CQC	MTRACEA9	5	19.00	1	WATER	VSTD010TM	VSTD010TM 10 u	1172135
	COMMENTS: 2.5 uL of 49433; 20 uL of 49434, 49436/100 m									
MR64S20	08/27/2019 09:48	CQC	MTRACEA9	6	19.00	1	WATER	VSTD020TM	VSTD020TM 20 u	1275394
	COMMENTS: 2.5 uL of 49433; 40 uL of 49434, 49436/100 m									
MR65BLK	08/27/2019 10:15	CQC	MTRACEA9	7	19.00	1	WATER	System Blank		1205708
	COMMENTS: 2.5 uL of 49435									
MR66V05	08/27/2019 10:43	CQC	MTRACEA9	8	19.00	1	WATER	VICVTM	VICVTM 5.0 ug/L I	1220405
	COMMENTS: 2.5 uL of 49435, 49438									
MR67BLK	08/27/2019 11:11	CQC	MTRACEA9	9	19.00	1	WATER	System Blank		1204477
	COMMENTS: 2.5 uL of 49435									
MR68BLK	08/27/2019 11:39	CQC	MTRACEA9	10	19.00	1	WATER	System Blank		1141907
	COMMENTS: 2.5 uL of 49435									

ALS ENVIROMENTAL - GC\MS VOLATILE ANALYSIS
INJECTION LOGBOOK
INSTRUMENT 5975-F

FILE NAME	DATE & TIME INJECTED	OP	METHOD	SPAR GER#	RUN LENGTH	DIL FAC	MATRIX	SAMPLE	(STANDARD) (SOLUTION)	ISTD #1 AREA
FP00BFB	07/17/2019 06:43	CQC	FTRACEG5	1	19.00	1	WATER	BFBTF	50 ng BFB	134416
	COMMENTS: 2.0 uL of 48228									
FP01S005	07/17/2019 07:11	CQC	FTRACEG5	2	19.00	1	WATER	VSTD0.5TF	VSTD0.5TF 0.5	926478
	COMMENTS: 2.5 uL of 48752; 0.5 uL of 48753, 48755/50 mL									
FP02S01	07/17/2019 07:39	CQC	FTRACEG5	3	19.00	1	WATER	VSTD001TF	VSTD001TF 1.0	853942
	COMMENTS: 2.5 uL of 48752; 1.0 uL of 48753, 48755/50 mL									
FP03S05	07/17/2019 08:07	CQC	FTRACEG5	4	19.00	1	WATER	VSTD005TF	VSTD005TF 5.0	943058
	COMMENTS: 2.5 uL of 48752; 5.0 uL of 48753, 48755/50 mL									
FP04S10	07/17/2019 08:35	CQC	FTRACEG5	5	19.00	1	WATER	VSTD010TF	VSTD010TF 10 u	863860
	COMMENTS: 2.5 uL of 48752; 10 uL of 48753, 48755/50 mL									
FP05S20	07/17/2019 09:03	CQC	FTRACEG5	6	19.00	1	WATER	VSTD020TF	VSTD020TF 20 u	911877
	COMMENTS: 2.5 uL of 48752; 20 uL of 48753, 48755/50 mL									
FP06BLK	07/17/2019 09:31	CQC	FTRACEG5	7	19.00	1	WATER	System Blank		909297
	COMMENTS: 2.5 uL of 48754									
FP07V05	07/17/2019 09:58	CQC	FTRACEG5	8	19.00	1	WATER	VICVTF	VICVTF 5.0 ug/L 1	937273
	COMMENTS: 2.5 uL of 48754, 48757									
FP08BLK	07/17/2019 10:26	CQC	FTRACEG5	9	19.00	1	WATER	System Blank		923461
	COMMENTS: 2.5 uL of 48754									
FP09BLK	07/17/2019 10:54	CQC	FTRACEG5	10	19.00	1	WATER	663798	VBLKT1	858562
	COMMENTS: 2.5 uL of 48754									
FP10C001	07/17/2019 11:22	CQC	FTRACEG5	11	19.00	1	WATER	1919899001	X2H21	929352
	COMMENTS: 1919899									
FP11F05	07/17/2019 11:50	CQC	FTRACEG5	12	19.00	1	WATER	VSTD005T2	VSTD005T2 5.0	941755
	COMMENTS: 2.5 uL of 48754, 48755									

ALS ENVIROMENTAL - GC\MS VOLATILE ANALYSIS
INJECTION LOGBOOK
INSTRUMENT 5975-F

FILE NAME	DATE & TIME INJECTED	OP	METHOD	SPAR GER#	RUN LENGTH	DIL FAC	MATRIX	SAMPLE	(STANDARD) (SOLUTION)	ISTD #1 AREA
FP76BFB	09/11/2019 06:34	CQC	FTRACEG5	1	19.00	1	WATER	BFBT1	50 ng BFB	120503
	COMMENTS: 2.0 uL of 49350									
FP77S05	09/11/2019 07:06	CQC	FTRACEG5	2	19.00	1	WATER	VSTD005T1	VSTD005T1 5.0	837599
	COMMENTS: 2.5 uL of 49435, 49436; 2.0 uL of 49350									
FP78BLK	09/11/2019 07:38	CQC	FTRACEG5	3	19.00	1	WATER	672757	VBLKT1	824062
	COMMENTS: 2.5 uL of 49435									
FP79C001	09/11/2019 08:14	CQC	FTRACEG5	4	19.00	1	WATER	1925562001	TB-090519	881661
	COMMENTS: 1925562 A									
FP80C002	09/11/2019 08:42	CQC	FTRACEG5	5	19.00	1	WATER	1925562002	5P-MW1701-1	722569
	COMMENTS: 1925562 A									
FP81C003	09/11/2019 09:10	CQC	FTRACEG5	6	19.00	1	WATER	1925562003	5P-MW107D-2	718242
	COMMENTS: 1925562 A									
FP82C004	09/11/2019 09:38	CQC	FTRACEG5	7	19.00	1	WATER	1925562004	5P-MW106I-1	774198
	COMMENTS: 1925562 A									
FP83C005	09/11/2019 10:05	CQC	FTRACEG5	8	19.00	1	WATER	1925562005	5P-MW106D-1	776066
	COMMENTS: 1925562 A									
FP84R006	09/11/2019 10:33	CQC	FTRACEG5	9	19.00	5	WATER	1925562006DL	5P-MW101-	840445
	COMMENTS: 1925562 B 1:5 Dilution									
FP85R007	09/11/2019 11:01	CQC	FTRACEG5	10	19.00	5	WATER	1925562007DL	5P-MW101-	892961
	COMMENTS: 1925562 B 1:5 Dilution									
FP86C008	09/11/2019 11:29	CQC	FTRACEG5	11	19.00	1	WATER	1925562008	5P-MW105-14	742179
	COMMENTS: 1925562 A									
FP87S009	09/11/2019 11:57	CQC	FTRACEG5	12	19.00	1	WATER	1925562009	5P-MW105-14	731296
	COMMENTS: 1925562 A									
FP88D010	09/11/2019 12:25	CQC	FTRACEG5	13	19.00	1	WATER	1925562010	5P-MW105-14	770117
	COMMENTS: 1925562 A									
FP89C006	09/11/2019 12:52	CQC	FTRACEG5	14	19.00	1	WATER	1925562006	5P-MW101-16	718885
	COMMENTS: 1925562 A									
FP90C007	09/11/2019 13:19	CQC	FTRACEG5	15	19.00	1	WATER	1925562007	5P-MW101-16	735857
	COMMENTS: 1925562 A									
FP91HBLK	09/11/2019 13:46	CQC	FTRACEG5	16	19.00	1	WATER	XXXXXX	VHBLKTX	717880
	COMMENTS: 2.5 uL of 49435									
FP92HBLK	09/11/2019 14:13	CQC	FTRACEG5	17	19.00	1	WATER	672758	VHBLKT1	700985
	COMMENTS: 2.5 uL of 49435									
FP93F05	09/11/2019 14:40	CQC	FTRACEG5	18	19.00	1	WATER	VSTD005T2	VSTD005T2 5.0	798366
	COMMENTS: 2.5 uL of 49435, 49436									
FP94F06	09/11/2019 15:07	CQC	FTRACEG5	19	19.00	1	WATER	VSTD005TX	VSTD005TX 5.0	820986
	COMMENTS: 2.5 uL of 49435, 49436									

DATACHEM LABORATORIES - GC/MS VOLATILE ANALYSIS
INJECTION LOGBOOK
INSTRUMENT 5975-M

FILE NAME	DATE & TIME INJECTED	OP	METHOD	SPAR GER#	RUN LENGTH	DIL FAC	MATRIX	SAMPLE	(STANDARD) (SOLUTION)	ISTD #1 AREA
MS03BFB	09/11/2019 06:33	CQC	MTRACEA9	1	19.00	1	WATER	BFBTX	50 ng BFB	196593
	COMMENTS: 2.0 uL of 49350 Failed.									
MS04BFB	09/11/2019 07:05	CQC	MTRACEA9	1	19.00	1	WATER	BFBT2	50 ng BFB	195234
	COMMENTS: 2.0 uL of 49350									
MS05S05	09/11/2019 07:35	CQC	MTRACEA9	2	19.00	1	WATER	VSTD005TX	VSTD005TX 5.0	1514772
	COMMENTS: 2.5 uL of 49435, 49436; 2.0 uL of 49350 Istd high. Mis-spike?									
MS06S05	09/11/2019 08:07	CQC	MTRACEA9	2	19.00	1	WATER	VSTD005T3	VSTD005T3 5.0	1226584
	COMMENTS: 2.5 uL of 49435, 49436; 2.0 uL of 49350									
MS07BLK	09/11/2019 08:40	CQC	MTRACEA9	3	19.00	1	WATER	672759	VBLKT2	1289245
	COMMENTS: 2.5 uL of 49435									
MS08C011	09/11/2019 09:13	CQC	MTRACEA9	4	19.00	1	WATER	1925562011	5P-MW	1257009
	COMMENTS: 1925562 A									
MS09C012	09/11/2019 09:41	CQC	MTRACEA9	5	19.00	1	WATER	1925562012	5P-MW104-12	1215790
	COMMENTS: 1925562 A									
MS10C013	09/11/2019 10:09	CQC	MTRACEA9	6	19.00	1	WATER	1925562013	5P-MW108I-1	1139829
	COMMENTS: 1925562 A									
MS11C014	09/11/2019 10:37	CQC	MTRACEA9	7	19.00	1	WATER	1925562014	5P-MW108D-2	1174192
	COMMENTS: 1925562 A									
MS12C015	09/11/2019 11:05	CQC	MTRACEA9	8	19.00	1	WATER	1925562015	5P-MW109I-1	1171878
	COMMENTS: 1925562 A									
MS13C016	09/11/2019 11:32	CQC	MTRACEA9	9	19.00	1	WATER	1925562016	5P-MW109D-2	1154250
	COMMENTS: 1925562 A									
MS14C017	09/11/2019 12:00	CQC	MTRACEA9	10	19.00	1	WATER	1925562017	5P-MW110I-2	1217487
	COMMENTS: 1925562 A									
MS15C018	09/11/2019 12:28	CQC	MTRACEA9	11	19.00	1	WATER	1925562018	5P-MW110D-3	1194550
	COMMENTS: 1925562 A									
MS16F05	09/11/2019 12:56	CQC	MTRACEA9	12	19.00	1	WATER	VSTD005T4	VSTD005T4 5.0	1206492
	COMMENTS: 2.5 uL of 49435, 49436									

STANDARD REPORT

Working Standard - 4-BFB

4-BFB — Description - 4-Bromofluorobenzene

Standard: 48228
MFG: NA
MFG Lot: CH-3248Z
Pipette ID: NA

Created By: Christopher Q. Coleman
Create Date: 05/11/2019 07:06AM

Amount: 5 mL
Expires: 05/11/2019
Usable: Yes
Lab Lot: 4-BFB CH-3248Z

Pos.	Analyte	Name	Concentration
1	460-00-4	4-Bromofluorobenzene	25 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
34352	BFB	Bromofluorobenzene Stock	BFB CH-3248Z	62.5 uL	10/31/2019
48199	Methanol	Purge & Trap Methanol Solvent	P&T MeOH DS-649	4.9375 mL	06/09/2032

STANDARD REPORT
Constituent

Solvent Standard - Methanol

Methanol — Description - Purge & Trap Methanol Solvent

Standard: 48199
MFG: B&J
MFG Lot: DS-649
Part ID: Not Provided

Created By: Christopher Q. Coleman
Create Date: 06/09/2019 01:06PM

Amount: 235 mL
Expires: 06/09/2032
Usable: Yes
Lab Lot: P&T MeOH DS-649

Pos.	Analyte	Name	Concentration
Solvent - Analyte(s) not applicable			

STANDARD REPORT
Constituent

Stock Standard - BFB

BFB — Description - Bromofluorobenzene Stock

Standard: 34352
MFG: Ultra Scientific
MFG Lot: CH-3248Z
Part ID: Not Provided

Created By: Christopher Q. Coleman
Create Date: 11/15/2016 06:11PM

Amount: Not Provided
Expires: 10/31/2019
Usable: Yes
Lab Lot: BFB CH-3248Z

Pos.	Analyte	Name	Concentration
1	460-00-4	4-Bromofluorobenzene	2000 ug/mL

STANDARD REPORT

Working Standard - Trace Istd

Trace Istd — Description - Trace Istd Only

Standard: 48752
MFG: NA
MFG Lot: NA
Pipette ID: NA

Created By: Christopher Q. Coleman
Create Date: 07/15/2019 07:07AM

Amount: 2 mL
Expires: 08/15/2019
Usable: Yes
Lab Lot: Trace Istd Only

Pos.	Analyte	Name	Concentration
1	540-36-3	1,4-Difluorobenzene	50 ug/mL
2	3114-55-4	Chlorobenzene-d5	50 ug/mL
3	3855-82-1	1,4-Dichlorobenzene-d4	50 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
36944	CLP Istd	EPA CLP Istd Stock	CLP Istd 011917	40 uL	01/19/2022
48199	Methanol	Purge & Trap Methanol Solvent	P&T MeOH DS-649	1960 uL	06/09/2032

STANDARD REPORT

Constituent

Stock Standard - CLP Istd

CLP Istd — Description: EPA CLP Istd Stock

Standard: 36944
MFG: Absolute Standards, Inc.
MFG Lot: 011917
Part ID: Not Provided

Created By: Christopher Q. Coleman
Create Date: 05/23/2017 07:05PM

Amount: Not Provided
Expires: 01/19/2022
Usable: Yes
Lab Lot: CLP Istd 011917

Pos.	Analyte	Name	Concentration
1	540-36-3	1,4-Difluorobenzene	2500 ug/mL
2	3114-55-4	Chlorobenzene-d5	2500 ug/mL
3	3855-82-1	1,4-Dichlorobenzene-d4	2500 ug/mL

STANDARD REPORT

Constituent

Solvent Standard - Methanol

Methanol — Description: Purge & Trap Methanol Solvent

Standard: 48199
MFG: B&J
MFG Lot: DS-649
Part ID: Not Provided

Created By: Christopher Q. Coleman
Create Date: 06/09/2019 01:06PM

Amount: 235 mL
Expires: 06/09/2032
Usable: Yes
Lab Lot: P&T MeOH DS-649

Pos.	Analyte	Name	Concentration
Solvent - Analyte(s) not applicable			

STANDARD REPORT

Working Standard - Trace DMC

Trace DMC — Description: Trace DMC Only

Standard: 48763
MFG: NA
MFG Lot: NA
Pipette ID: NA

Created By: Christopher Q. Coleman
Create Date: 07/15/2019 07:07AM

Amount: 2 mL
Expires: 08/15/2019
Usable: Yes
Lab Lot: Trace DMC Only

Pos.	Analyte	Name	Concentration
1	19199-91-8	Chloroethane-d5	50 ug/mL
2	6745-35-3	Vinyl Chloride-d3	50 ug/mL
3	1076-43-3	Benzene-d6	50 ug/mL
4	865-49-6	Chloroform-d	50 ug/mL
5	2199-69-1	1,2-Dichlorobenzene-d4	50 ug/mL
6	17060-07-0	1,2-Dichloroethane-d4	50 ug/mL
7	22280-73-5	1,1-Dichloroethene-d2	50 ug/mL
8	78-87-5(d6)	1,2-Dichloropropane-d6	50 ug/mL
9	93951-66-1	trans-1,3-Dichloropropene-d4	50 ug/mL
10	33685-54-0	1,1,2,2-Tetrachloroethane-d2	50 ug/mL
11	2037-26-5	Toluene-d8	50 ug/mL
12	24313-50-6	2-Butanone-d5	500 ug/mL
13	4840-82-8	2-Hexanone-d5	500 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
41785	CLP DMC	EPA CLP DMC Liquids Stock	CLP DMC 022017	50 uL	02/20/2028
46051	CLPDMCGases	EPA CLP DMC Gases Stock	CLPDMCGases121918	50 uL	12/19/2021
47747	CLP DMC KET	EPA CLP DMC Ketones Stock	CLP DMC Ket 092618	400 uL	09/28/2021
48199	Methanol	Purge & Trap Methanol Solvent	P&T MeOH DS-649	1500 uL	06/09/2032

STANDARD REPORT

Constituent

Stock Standard - CLPDMCGases

CLPDMCGases — Description: EPA CLP DMC Gases Stock

Standard: 46051
MFG: Absolute Standards, Inc.
MFG Lot: 121918
Part ID: 94156

Created By: Christopher Q. Coleman
Create Date: 02/13/2019 09:02AM

Amount: Not Provided
Expires: 12/19/2021
Usable: Yes
Lab Lot: CLPDMCGases121918

Pos.	Analyte	Name	Concentration
1	19199-91-8	Chloroethane-d5	2000 ug/mL
2	6745-35-3	Vinyl Chloride-d3	2000 ug/mL

STANDARD REPORT

Constituent

Solvent Standard - Methanol

Methanol — Description - Purge & Trap Methanol Solvent

Standard: 48199
MFG: B&J
MFG Lot: DS-649
Part ID: Not Provided

Created By: Christopher O. Coleman
Create Date: 08/09/2018 01:05PM

Amount: 235 mL
Expires: 08/09/2032
Usable: Yes
Lab Lot: P&T MeOH DS-649

Pos.	Analyte	Name	Concentration
Solvent - Analyte(s) not applicable			

STANDARD REPORT

Constituent

Stock Standard - CLP DMC KET

CLP DMC KET — Description - EPA CLP DMC Ketones Stock

Standard: 47747
MFG: Absolute Standards, Inc.
MFG Lot: 092818
Part ID: Not Provided

Created By: Christopher O. Coleman
Create Date: 05/17/2018 09:05AM

Amount: Not Provided
Expires: 09/28/2021
Usable: Yes
Lab Lot: CLP DMC Ket 092818

Pos.	Analyte	Name	Concentration
1	24313-50-6	2-Butanone-d5	2500 ug/mL
2	4840-82-8	2-Hexanone-d5	2500 ug/mL

STANDARD REPORT

Constituent

Stock Standard - CLP DMC

CLP DMC — Description - EPA CLP DMC Liquids Stock

Standard: 41765
MFG: Absolute Standards, Inc.
MFG Lot: 022017
Part ID: 94155

Created By: Christopher O. Coleman
Create Date: 05/10/2018 06:05AM

Amount: Not Provided
Expires: 02/20/2020
Usable: Yes
Lab Lot: CLP DMC 022017

Pos.	Analyte	Name	Concentration
1	1076-43-3	Benzene-d6	2000 ug/mL
2	865-49-6	Chloroform-d	2000 ug/mL
3	2199-69-1	1,2-Dichlorobenzene-d4	2000 ug/mL
4	17060-07-0	1,2-Dichloroethane-d4	2000 ug/mL
5	22280-73-5	1,1-Dichloroethene-d2	2000 ug/mL
6	78-87-5(d6)	1,2-Dichloropropane-d6	2000 ug/mL
7	93951-86-1	trans-1,3-Dichloropropene-d4	2000 ug/mL
8	33685-54-0	1,1,2,2-Tetrachloroethane-d2	2000 ug/mL
9	2037-26-5	Toluene-d8	2000 ug/mL

STANDARD REPORT

Working Standard - TraceIstdDMC

TraceIstdDMC — Description - Trace Istd/DMC

Standard: 48764
MFG: NA
MFG Lot: NA
Pipette ID: NA

Created By: Christopher O. Coleman
Create Date: 07/15/2019 07:07AM

Amount: 2 mL
Expires: 08/15/2019
Usable: Yes
Lab Lot: Trace Istd/DMC

Pos.	Analyte	Name	Concentration
1	540-36-3	1,4-Difluorobenzene	50 ug/mL
2	3114-55-4	Chlorobenzene-d5	50 ug/mL
3	3855-82-1	1,4-Dichlorobenzene-d4	50 ug/mL
4	19199-91-8	Chloroethane-d5	50 ug/mL
5	6745-35-3	Vinyl Chloride-d3	50 ug/mL
6	1076-43-3	Benzene-d6	50 ug/mL
7	865-49-6	Chloroform-d	50 ug/mL
8	2199-69-1	1,2-Dichlorobenzene-d4	50 ug/mL
9	17060-07-0	1,2-Dichloroethane-d4	50 ug/mL
10	22280-73-5	1,1-Dichloroethene-d2	50 ug/mL
11	78-87-5(d6)	1,2-Dichloropropane-d6	50 ug/mL
12	93951-86-1	trans-1,3-Dichloropropene-d4	50 ug/mL
13	33685-54-0	1,1,2,2-Tetrachloroethane-d2	50 ug/mL
14	2037-26-5	Toluene-d8	50 ug/mL
15	24313-50-6	2-Butanone-d5	500 ug/mL
16	4840-82-8	2-Hexanone-d5	500 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
36944	CLP Istd	EPA CLP Istd Stock	CLP Istd 011917	40 uL	01/19/2022
41765	CLP DMC	EPA CLP DMC Liquids Stock	CLP DMC 022017	50 uL	02/20/2020
46051	CLPDMCGases	EPA CLP DMC Gases Stock	CLPDMCGases121918	50 uL	12/19/2021
47747	CLP DMC KET	EPA CLP DMC Ketones Stock	CLP DMC Ket 092818	400 uL	09/28/2021
48199	Methanol	Purge & Trap Methanol Solvent	P&T MeOH DS-649	1460 uL	08/09/2032

STANDARD REPORT

Constituent

Stock Standard - CLPDMCGases

CLPDMCGases — Description - EPA CLP DMC Gases Stock

Standard: 46051
MFG: Absolute Standards, Inc.
MFG Lot: 121918
Part ID: 94155

Created By: Christopher O. Coleman
Create Date: 02/13/2019 09:02AM

Amount: Not Provided
Expires: 12/19/2021
Usable: Yes
Lab Lot: CLPDMCGases121918

Pos.	Analyte	Name	Concentration
1	19199-91-8	Chloroethane-d5	2000 ug/mL
2	6745-35-3	Vinyl Chloride-d3	2000 ug/mL

STANDARD REPORT

Constituent

Stock Standard - CLP Istd

CLP Istd — Description - EPA CLP Istd Stock

Standard: 36944
MFG: Absolute Standards, Inc.
MFG Lot: 011917
Part ID: Not Provided

Created By: Christopher O. Coleman
Create Date: 05/23/2017 07:05PM

Amount: Not Provided
Expires: 01/19/2022
Usable: Yes
Lab Lot: CLP Istd 011917

Pos.	Analyte	Name	Concentration
1	540-36-3	1,4-Difluorobenzene	2500 ug/mL
2	3114-55-4	Chlorobenzene-d5	2500 ug/mL
3	3855-82-1	1,4-Dichlorobenzene-d4	2500 ug/mL

STANDARD REPORT

Constituent

Solvent Standard - Methanol

Methanol — Description - Purge & Trap Methanol Solvent

Standard: 48199
MFG: B&J
MFG Lot: DS-649
Part ID: Not Provided

Created By: Christopher O. Coleman
Create Date: 06/09/2019 01:06PM

Amount: 235 mL
Expires: 06/09/2032
Usable: Yes
Lab Lot: P&T MeOH DS-649

Pos.	Analyte	Name	Concentration
Solvent - Analyte(s) not applicable			

STANDARD REPORT

Constituent

Stock Standard - CLP DMC KET

CLP DMC KET — Description - EPA CLP DMC Ketones Stock

Standard: 47747
MFG: Absolute Standards, Inc.
MFG Lot: 092818
Part ID: Not Provided

Created By: Christopher O. Coleman
Create Date: 05/17/2019 09:05AM

Amount: Not Provided
Expires: 09/28/2021
Usable: Yes
Lab Lot: CLP DMC Ket 092818

Pos.	Analyte	Name	Concentration
1	24313-50-6	2-Butanone-d5	2500 ug/mL
2	4840-82-8	2-Hexanone-d5	2500 ug/mL

STANDARD REPORT

Constituent

Stock Standard - CLP DMC

CLP DMC — Description = EPA CLP DMC Liquids Stock

Standard: 41765
MFG: Absolute Standards, Inc.
MFG Lot: 022017
Part ID: 94155

Created By: Christopher Q. Coleman
Create Date: 05/10/2018 06:05AM

Amount: Not Provided
Expires: 02/20/2020
Usable: Yes
Lab Lot: CLP DMC 022017

Pos.	Analyte	Name	Concentration
1	1076-43-3	Benzene-d6	2000 ug/mL
2	865-49-6	Chloroform-d	2000 ug/mL
3	2199-69-1	1,2-Dichlorobenzene-d4	2000 ug/mL
4	17060-07-0	1,2-Dichloroethane-d4	2000 ug/mL
5	22260-73-5	1,1-Dichloroethene-d2	2000 ug/mL
6	76-87-5(d6)	1,2-Dichloropropane-d6	2000 ug/mL
7	93951-88-1	trans-1,3-Dichloropropene-d4	2000 ug/mL
8	33685-54-0	1,1,2,2-Tetrachloroethane-d2	2000 ug/mL
9	2037-26-5	Toluene-d8	2000 ug/mL

ALSSTANDARDS V2.5
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STANDARD REPORT

Working Standard - Trace VOA

Trace VOA — Description = Trace VOA

Standard: 48765
MFG: NA
MFG Lot: NA
Pipette ID: NA

Created By: Christopher Q. Coleman
Create Date: 07/15/2019 07:07AM

Amount: 2 mL
Expires: 08/15/2019
Usable: Yes
Lab Lot: Trace VOA

Pos.	Analyte	Name	Concentration
1	75-71-8	Dichlorodifluoromethane	50 ug/mL
2	74-87-3	Methyl chloride	50 ug/mL
3	75-01-4	Vinyl chloride	50 ug/mL
4	74-83-9	Bromomethane	50 ug/mL
5	75-00-3	Ethyl chloride	50 ug/mL
6	75-69-4	Freon 11	50 ug/mL
7	71-43-2	Benzene	50 ug/mL
8	108-88-3	Toluene	50 ug/mL
9	100-41-4	Ethyl benzene	50 ug/mL
10	95-47-6	o-Xylene	50 ug/mL
11	108-38-3	m-Xylene	25 ug/mL
12	106-42-3	p-Xylene	25 ug/mL
13	75-27-4	Bromodichloromethane	50 ug/mL
14	124-48-1	Dibromochloromethane	50 ug/mL
15	75-35-4	1,1-Dichloroethene	50 ug/mL
16	156-59-2	cis-1,2-Dichloroethene	50 ug/mL
17	156-60-5	trans-1,2-Dichloroethene	50 ug/mL
18	75-09-2	Methylene chloride	50 ug/mL
19	74-97-5	Bromochloromethane	50 ug/mL
20	75-25-2	Bromoform	50 ug/mL
21	56-23-5	Carbon tetrachloride	50 ug/mL
22	67-66-3	Chloroform	50 ug/mL
23	75-34-3	1,1-Dichloroethane	50 ug/mL
24	127-18-4	Tetrachloroethene	50 ug/mL
25	71-55-6	1,1,1-Trichloroethane	50 ug/mL
26	96-12-8	1,2-Dibromo-3-Chloropropane	50 ug/mL
27	106-93-4	1,2-Dibromoethane	50 ug/mL
28	107-06-2	1,2-Dichloroethane	50 ug/mL
29	78-87-5	1,2-Dichloropropane	50 ug/mL
30	10061-01-5	cis-1,3-Dichloropropene	50 ug/mL
31	10061-02-6	trans-1,3-Dichloropropene	50 ug/mL
32	79-34-5	1,1,2,2-Tetrachloroethane	50 ug/mL
33	79-00-5	1,1,2-Trichloroethane	50 ug/mL
34	79-01-6	Trichloroethene	50 ug/mL
35	108-90-7	Chlorobenzene	50 ug/mL
36	95-50-1	1,2-Dichlorobenzene	50 ug/mL
37	541-73-1	1,3-Dichlorobenzene	50 ug/mL
38	106-46-7	1,4-Dichlorobenzene	50 ug/mL
39	98-82-8	Cumene	50 ug/mL

ALSSTANDARDS V2.5
Tue, 07/16/19 7:22 AM

STANDARD REPORT

Working Standard - Trace VOA

Trace VOA — Description = Trace VOA

Standard: 48765
MFG: NA
MFG Lot: NA
Pipette ID: NA

Created By: Christopher Q. Coleman
Create Date: 07/15/2019 07:07AM

Amount: 2 mL
Expires: 08/15/2019
Usable: Yes
Lab Lot: Trace VOA

Pos.	Analyte	Name	Concentration
40	100-42-5	Styrene	50 ug/mL
41	87-61-6	1,2,3-Trichlorobenzene	50 ug/mL
42	120-82-1	1,2,4-Trichlorobenzene	50 ug/mL
43	75-15-0	Carbon disulfide	50 ug/mL
44	110-82-7	Cyclohexane	50 ug/mL
45	79-20-9	Methyl Acetate	50 ug/mL
46	108-87-2	Methylcyclohexane	50 ug/mL
47	1634-04-4	Methyl t-butyl ether	50 ug/mL
48	76-13-1	Freon 113	50 ug/mL
49	67-64-1	Acetone	500 ug/mL
50	78-93-3	Methyl ethyl ketone	500 ug/mL
51	108-10-1	Methyl isobutyl ketone	500 ug/mL
52	591-78-6	2-Hexanone	500 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
43827	CLP VOA	EPA CLP VOA Stock	CLP VOA 091318	50 uL	09/13/2021
46049	CLP Ketones	EPA CLP Ketones Stock	CLP Ketones 011719	50 uL	01/17/2022
46050	CLP Gases	EPA CLP Gases Stock	CLP Gases 011719	50 uL	01/17/2022
48199	Methanol	Purge & Trap Methanol Solvent	P&T MeOH DS-649	1850 uL	06/09/2032

STANDARD REPORT

Constituent

Stock Standard - CLP VOA

CLP VOA — Description = EPA CLP VOA Stock

Standard: 43827
MFG: Absolute Standards, Inc.
MFG Lot: 091318
Part ID: 94159

Created By: Christopher Q. Coleman
Create Date: 09/26/2018 06:09AM

Amount: 1
Expires: 09/13/2021
Usable: Yes
Lab Lot: CLP VOA 091318

Pos.	Analyte	Name	Concentration
1	71-43-2	Benzene	2000 ug/mL
2	108-88-3	Toluene	2000 ug/mL
3	100-41-4	Ethyl benzene	2000 ug/mL
4	95-47-6	o-Xylene	2000 ug/mL
5	108-38-3	m-Xylene	1000 ug/mL
6	106-42-3	p-Xylene	1000 ug/mL
7	75-27-4	Bromodichloromethane	2000 ug/mL
8	124-48-1	Dibromochloromethane	2000 ug/mL
9	75-35-4	1,1-Dichloroethene	2000 ug/mL
10	156-59-2	cis-1,2-Dichloroethene	2000 ug/mL
11	156-60-5	trans-1,2-Dichloroethene	2000 ug/mL
12	75-09-2	Methylene chloride	2000 ug/mL
13	74-97-5	Bromochloromethane	2000 ug/mL
14	75-25-2	Bromoform	2000 ug/mL
15	56-23-5	Carbon tetrachloride	2000 ug/mL
16	67-66-3	Chloroform	2000 ug/mL
17	75-34-3	1,1-Dichloroethane	2000 ug/mL
18	127-18-4	Tetrachloroethene	2000 ug/mL
19	71-55-6	1,1,1-Trichloroethane	2000 ug/mL
20	96-12-8	1,2-Dibromo-3-Chloropropane	2000 ug/mL
21	106-93-4	1,2-Dibromoethane	2000 ug/mL
22	107-06-2	1,2-Dichloroethane	2000 ug/mL
23	78-87-5	1,2-Dichloropropane	2000 ug/mL
24	10061-01-5	cis-1,3-Dichloropropene	2000 ug/mL
25	10061-02-6	trans-1,3-Dichloropropene	2000 ug/mL
26	79-34-5	1,1,2,2-Tetrachloroethane	2000 ug/mL
27	79-00-5	1,1,2-Trichloroethane	2000 ug/mL
28	79-01-6	Trichloroethene	2000 ug/mL
29	108-90-7	Chlorobenzene	2000 ug/mL
30	95-50-1	1,2-Dichlorobenzene	2000 ug/mL
31	541-73-1	1,3-Dichlorobenzene	2000 ug/mL
32	106-46-7	1,4-Dichlorobenzene	2000 ug/mL
33	98-82-8	Cumene	2000 ug/mL
34	100-42-5	Styrene	2000 ug/mL
35	87-61-6	1,2,3-Trichlorobenzene	2000 ug/mL
36	120-82-1	1,2,4-Trichlorobenzene	2000 ug/mL
37	75-15-0	Carbon disulfide	2000 ug/mL
38	110-82-7	Cyclohexane	2000 ug/mL

STANDARD REPORT

Constituent

Stock Standard - CLP VOA

CLP VOA — Description - EPA CLP VOA Stock

Standard: 41827
MFG: Absolute Standards, Inc.
MFG Lot: 091318
Part ID: 94159

Created By: Christopher Q. Coleman
Create Date: 09/26/2018 06:09AM

Amount: 1
Expires: 09/13/2021
Usable: Yes
Lab Lot: CLP VOA 091318

Pos.	Analyte	Name	Concentration
39	79-20-9	Methyl Acetate	2000 ug/mL
40	108-87-2	Methylcyclohexane	2000 ug/mL
41	1634-04-4	Methyl t-butyl ether	2000 ug/mL
42	76-13-1	Freon 113	2000 ug/mL

STANDARD REPORT

Constituent

Stock Standard - CLP Ketones

CLP Ketones — Description - EPA CLP Ketones Stock

Standard: 46049
MFG: Absolute Standards, Inc.
MFG Lot: 011719
Part ID: 82492

Created By: Christopher Q. Coleman
Create Date: 02/13/2019 09:02AM

Amount: Not Provided
Expires: 01/17/2022
Usable: Yes
Lab Lot: CLP Ketones 011719

Pos.	Analyte	Name	Concentration
1	67-64-1	Acetone	20000 ug/mL
2	78-93-3	Methyl ethyl ketone	20000 ug/mL
3	108-10-1	Methyl isobutyl ketone	20000 ug/mL
4	591-78-6	2-Hexanone	20000 ug/mL

STANDARD REPORT

Constituent

Solvent Standard - Methanol

Methanol — Description - Purge & Trap Methanol Solvent

Standard: 46199
MFG: B&J
MFG Lot: DS-649
Part ID: Not Provided

Created By: Christopher Q. Coleman
Create Date: 06/09/2019 01:05PM

Amount: 235 mL
Expires: 06/09/2032
Usable: Yes
Lab Lot: P&T MeOH DS-649

Pos.	Analyte	Name	Concentration
Solvent - Analyte(s) not applicable			

STANDARD REPORT

Constituent

Stock Standard - CLP Gases

CLP Gases — Description - EPA CLP Gases Stock

Standard: 46050
MFG: Absolute Standards, Inc.
MFG Lot: 011719
Part ID: 30058

Created By: Christopher Q. Coleman
Create Date: 02/13/2019 09:02AM

Amount: Not Provided
Expires: 01/17/2022
Usable: Yes
Lab Lot: CLP Gases 011719

Pos.	Analyte	Name	Concentration
1	75-71-8	Dichlorodifluoromethane	2000 ug/mL
2	74-87-3	Methyl chloride	2000 ug/mL
3	75-01-4	Vinyl chloride	2000 ug/mL
4	74-83-9	Bromomethane	2000 ug/mL
5	75-00-3	Ethyl chloride	2000 ug/mL
6	75-69-4	Freon 11	2000 ug/mL

STANDARD REPORT

Working Standard - Trace MS

Trace MS — Description - Trace Matrix Spike

Standard: 48756
MFG: NA
MFG Lot: NA
Pipette ID: NA

Created By: Christopher Q. Coleman
Create Date: 07/15/2019 07:07AM

Amount: 2 mL
Expires: 06/15/2019
Usable: Yes
Lab Lot: Trace Matrix Spike

Pos.	Analyte	Name	Concentration
1	75-35-4	1,1-Dichloroethene	50 ug/mL
2	71-43-2	Benzene	50 ug/mL
3	79-01-6	Trichloroethene	50 ug/mL
4	108-88-3	Toluene	50 ug/mL
5	108-90-7	Chlorobenzene	50 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
46175	CLP M.S.	CLP Matrix Spike Stock	CLP MS CP-4257A	100 uL	11/30/2020
46199	Methanol	Purge & Trap Methanol Solvent	P&T MeOH DS-649	1900 uL	06/09/2032

STANDARD REPORT
Constituent

Stock Standard - CLP M.S.

CLP M.S. — Description - CLP Matrix Spike Stock

Standard: 46175
MFG: Ultra Scientific
MFG Lot: CP-4257A
Part ID: Not Provided

Created By: Christopher Q. Coleman
Create Date: 02/26/2019 09:02AM

Amount: Not Provided
Expires: 11/30/2020
Usable: Yes
Lab Lot: CLP MS CP-4257A

Pos.	Analyte	Name	Concentration
1	75-35-4	1,1-Dichloroethene	1000 ug/mL
2	71-43-2	Benzene	1000 ug/mL
3	79-01-6	Trichloroethene	1000 ug/mL
4	108-88-3	Toluene	1000 ug/mL
5	108-90-7	Chlorobenzene	1000 ug/mL

STANDARD REPORT
Constituent

Solvent Standard - Methanol

Methanol — Description - Purge & Trap Methanol Solvent

Standard: 46199
MFG: B&J
MFG Lot: DS-649
Part ID: Not Provided

Created By: Christopher Q. Coleman
Create Date: 06/09/2019 01:05PM

Amount: 235 mL
Expires: 06/09/2032
Usable: Yes
Lab Lot: P&T MeOH DS-649

Pos.	Analyte	Name	Concentration
Solvent - Analyte(s) not applicable			

STANDARD REPORT

Working Standard - CLP TraceICV

CLP TraceICV — Description - CLP Trace ICV

Standard: 48757
MFG: NA
MFG Lot: NA
Pipette ID: NA

Created By: Christopher Q. Coleman
Create Date: 07/15/2019 07:07AM

Amount: 2 mL
Expires: 06/15/2019
Usable: Yes
Lab Lot: CLP Trace ICV

Pos.	Analyte	Name	Concentration
1	71-43-2	Benzene	50 ug/mL
2	108-88-3	Toluene	50 ug/mL
3	100-41-4	Ethyl benzene	50 ug/mL
4	95-47-6	o-Xylene	50 ug/mL
5	108-38-3	m-Xylene	25 ug/mL
6	106-42-3	p-Xylene	25 ug/mL
7	75-27-4	Bromodichloromethane	50 ug/mL
8	124-48-1	Dibromochloromethane	50 ug/mL
9	75-35-4	1,1-Dichloroethene	50 ug/mL
10	156-59-2	cis-1,2-Dichloroethene	50 ug/mL
11	156-60-5	trans-1,2-Dichloroethene	50 ug/mL
12	75-09-2	Methylene chloride	50 ug/mL
13	74-97-5	Bromochloromethane	50 ug/mL
14	75-25-2	Bromoform	50 ug/mL
15	56-23-5	Carbon tetrachloride	50 ug/mL
16	67-66-3	Chloroform	50 ug/mL
17	75-34-3	1,1-Dichloroethane	50 ug/mL
18	127-18-4	Tetrachloroethene	50 ug/mL
19	71-55-6	1,1,1-Trichloroethane	50 ug/mL
20	96-12-8	1,2-Dibromo-3-Chloropropane	50 ug/mL
21	106-93-4	1,2-Dibromoethane	50 ug/mL
22	107-06-2	1,2-Dichloroethane	50 ug/mL
23	78-87-5	1,2-Dichloropropane	50 ug/mL
24	10061-01-5	cis-1,3-Dichloropropene	50 ug/mL
25	10061-02-6	trans-1,3-Dichloropropene	50 ug/mL
26	79-34-5	1,1,2,2-Tetrachloroethane	50 ug/mL
27	79-00-5	1,1,2-Trichloroethane	50 ug/mL
28	79-01-6	Trichloroethene	50 ug/mL
29	108-90-7	Chlorobenzene	50 ug/mL
30	95-50-1	1,2-Dichlorobenzene	50 ug/mL
31	541-73-1	1,3-Dichlorobenzene	50 ug/mL
32	106-46-7	1,4-Dichlorobenzene	50 ug/mL
33	98-82-8	Cumene	50 ug/mL
34	100-42-5	Styrene	50 ug/mL
35	87-61-6	1,2,3-Trichlorobenzene	50 ug/mL
36	120-82-1	1,2,4-Trichlorobenzene	50 ug/mL
37	75-15-0	Carbon disulfide	50 ug/mL
38	110-82-7	Cyclohexane	50 ug/mL
39	79-20-9	Methyl Acetate	50 ug/mL

STANDARD REPORT

Working Standard - CLP TraceICV

CLP TraceICV — Description - CLP Trace ICV

Standard: 45757
MFG: NA
MFG Lot: NA
Pipette ID: NA

Created By: Christopher Q. Coleman
Create Date: 07/15/2019 07:07AM

Amount: 2 mL
Expires: 08/15/2019
Usable: Yes
Lab Lot: CLP Trace ICV

Pos.	Analyte	Name	Concentration
40	108-87-2	Methylcyclohexane	50 ug/mL
41	1634-04-4	Methyl t-butyl ether	50 ug/mL
42	76-13-1	Freon 113	50 ug/mL
43	75-71-8	Dichlorodifluoromethane	50 ug/mL
44	74-87-3	Methyl chloride	50 ug/mL
45	75-01-4	Vinyl chloride	50 ug/mL
46	74-83-9	Bromomethane	50 ug/mL
47	75-00-3	Ethyl chloride	50 ug/mL
48	75-69-4	Freon 11	50 ug/mL
49	67-64-1	Acetone	500 ug/mL
50	78-93-3	Methyl ethyl ketone	500 ug/mL
51	108-10-1	Methyl isobutyl ketone	500 ug/mL
52	591-78-6	2-Hexanone	500 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
33018	Methanol	Purge & Trap Methanol Solvent	P&T MeOH DN-515	1.25 mL	08/10/2025
43826	8260 Gases	VOAL Gases Stock	Ab Gases 052618	0.5 mL	05/26/2021
44973	CLPKetoneICV	EPA CLP Ketones ICV Stock	CLP Ketones ICV	200 uL	04/30/2021
45785	CLP VOA ICV	EPA CLP VOA ICV Stock	CLP VOA ICV	50 uL	02/29/2020

STANDARD REPORT
Constituent

Stock Standard - CLPKetoneICV

CLPKetoneICV — Description - EPA CLP Ketones ICV Stock

Standard: 44973
MFG: Restek
MFG Lot: A0134324
Part ID: 30006

Created By: Christopher Q. Coleman
Create Date: 11/30/2018 06:11AM

Amount: Not Provided
Expires: 04/30/2021
Usable: Yes
Lab Lot: CLP Ketones ICV

Pos.	Analyte	Name	Concentration
1	67-64-1	Acetone	5000 ug/mL
2	78-93-3	Methyl ethyl ketone	5000 ug/mL
3	108-10-1	Methyl isobutyl ketone	5000 ug/mL
4	591-78-6	2-Hexanone	5000 ug/mL

STANDARD REPORT
Constituent

Solvent Standard - Methanol

Methanol — Description - Purge & Trap Methanol Solvent

Standard: 33018
MFG: B&J
MFG Lot: DN-515
Part ID: Not Provided

Created By: Christopher Q. Coleman
Create Date: 08/10/2016 03:03PM

Amount: 235 mL
Expires: 08/10/2025
Usable: Yes
Lab Lot: P&T MeOH DN-515

Pos.	Analyte	Name	Concentration
Solvent - Analyte(s) not applicable			

STANDARD REPORT
Constituent

Stock Standard - 8260 Gases

8260 Gases — Description - VOAL Gases Stock

Standard: 43826
MFG: Absolute Standards, Inc.
MFG Lot: 052618
Part ID: 30002

Created By: Christopher Q. Coleman
Create Date: 05/26/2018 08:09AM

Amount: Not Provided
Expires: 05/26/2021
Usable: Yes
Lab Lot: Ab Gases 052618

Pos.	Analyte	Name	Concentration
1	75-71-8	Dichlorodifluoromethane	200 ug/mL
2	74-87-3	Methyl chloride	200 ug/mL
3	75-01-4	Vinyl chloride	200 ug/mL
4	74-83-9	Bromomethane	200 ug/mL
5	75-00-3	Ethyl chloride	200 ug/mL
6	75-69-4	Freon 11	200 ug/mL

STANDARD REPORT

Constituent

Stock Standard - CLP VOA ICV

CLP VOA ICV — Description - EPA CLP VOA ICV Stock

Standard: 45795
MFG: Restek
MFG Lot: A0125239
Part ID: 30492

Created By: Christopher Q. Coleman
Create Date: 01/28/2019 09:01AM

Amount: 1
Expires: 02/29/2020
Usable: Yes
Lab Lot: CLP VOA ICV A0125239

Pos.	Analyte	Name	Concentration
1	71-43-2	Benzene	2000 ug/mL
2	108-88-3	Toluene	2000 ug/mL
3	100-41-4	Ethyl benzene	2000 ug/mL
4	95-47-6	o-Xylene	2000 ug/mL
5	108-38-3	m-Xylene	1000 ug/mL
6	106-42-3	p-Xylene	1000 ug/mL
7	75-27-4	Bromodichloromethane	2000 ug/mL
8	124-48-1	Dibromochloromethane	2000 ug/mL
9	75-35-4	1,1-Dichloroethene	2000 ug/mL
10	156-59-2	cis-1,2-Dichloroethene	2000 ug/mL
11	156-60-5	trans-1,2-Dichloroethene	2000 ug/mL
12	75-09-2	Methylene chloride	2000 ug/mL
13	74-97-5	Bromochloromethane	2000 ug/mL
14	75-25-2	Bromoform	2000 ug/mL
15	56-23-5	Carbon tetrachloride	2000 ug/mL
16	67-66-3	Chloroform	2000 ug/mL
17	75-34-3	1,1-Dichloroethane	2000 ug/mL
18	127-18-4	Tetrachloroethene	2000 ug/mL
19	71-55-6	1,1,1-Trichloroethane	2000 ug/mL
20	96-12-8	1,2-Dibromo-3-Chloropropane	2000 ug/mL
21	106-93-4	1,2-Dibromoethane	2000 ug/mL
22	107-06-2	1,2-Dichloroethane	2000 ug/mL
23	78-87-5	1,2-Dichloropropane	2000 ug/mL
24	10061-01-5	cis-1,3-Dichloropropene	2000 ug/mL
25	10061-02-6	trans-1,3-Dichloropropene	2000 ug/mL
26	79-34-5	1,1,2,2-Tetrachloroethane	2000 ug/mL
27	79-00-5	1,1,2-Trichloroethane	2000 ug/mL
28	79-01-6	Trichloroethene	2000 ug/mL
29	108-90-7	Chlorobenzene	2000 ug/mL
30	95-50-1	1,2-Dichlorobenzene	2000 ug/mL
31	541-73-1	1,3-Dichlorobenzene	2000 ug/mL
32	106-46-7	1,4-Dichlorobenzene	2000 ug/mL
33	98-82-8	Cumene	2000 ug/mL
34	100-42-5	Styrene	2000 ug/mL
35	87-61-6	1,2,3-Trichlorobenzene	2000 ug/mL
36	120-82-1	1,2,4-Trichlorobenzene	2000 ug/mL
37	75-15-0	Carbon disulfide	2000 ug/mL
38	110-82-7	Cyclohexane	2000 ug/mL

STANDARD REPORT

Constituent

Stock Standard - CLP VOA ICV

CLP VOA ICV — Description - EPA CLP VOA ICV Stock

Standard: 45795
MFG: Restek
MFG Lot: A0125239
Part ID: 30492

Created By: Christopher Q. Coleman
Create Date: 01/28/2019 09:01AM

Amount: 1
Expires: 02/29/2020
Usable: Yes
Lab Lot: CLP VOA ICV A0125239

Pos.	Analyte	Name	Concentration
39	79-20-9	Methyl Acetate	2000 ug/mL
40	108-87-2	Methylcyclohexane	2000 ug/mL
41	1634-04-4	Methyl t-butyl ether	2000 ug/mL
42	76-13-1	Freon 113	2000 ug/mL

ULTRA SCIENTIFIC
Analytical Solutions

Certificate of Analysis

4-Bromofluorobenzene Solution

Product Number:	STS-110N			Page:	1 of 1
Lot Number:	CH-3248Z	Lot Issue Date:	31-Aug-2018	Expiration Date:	31-Oct-2019

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
4-bromofluorobenzene	000460-00-4	RM03365	2005 ± 10 µg/mL

Matrix: methanol (methyl alcohol)

Storage: Store Frozen (-25° to -10°C).

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

34352

John Russo
President

Vincent Wang, Ph.D.
Director of QA/RA

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ISO 9001 QS Registered
ISO 17025-34-35-43 Accredited
Scope: http://AbsoluteStandards.com

ANAB ACCREDITED

Certified Reference Material Grill

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Part Number: 20048
Lot Number: 011917
Description: 34 Volatiles - Low Concentration Internal Standard
3 compounds
Expiration Date: 01/1922
Recommended Storage: Refrigerate (4°C)
Nominal Concentration (µg/mL): 2000
NIST Test ID#: 822-2/1822-11
Weight(s) shown below were combined and diluted to (mL): 100.0

Solvent: Methanol
Lot: DN8915

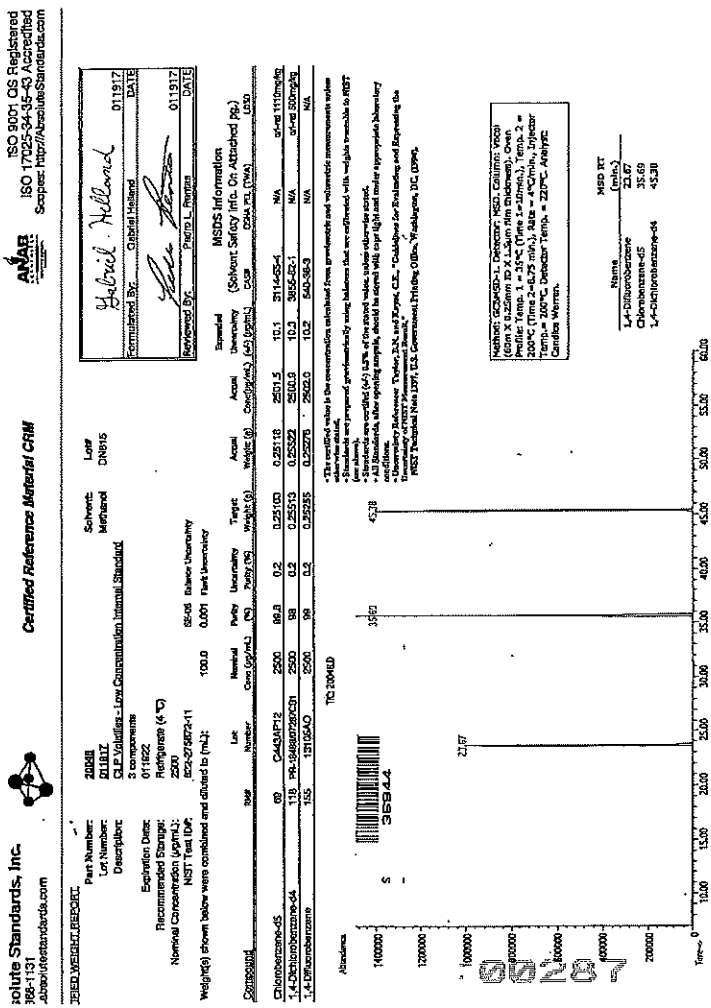
Compound	Stock	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty (%)	Target Weight (g)	Actual Weight (g)	Actual Concentration (µg/mL)	Standard Uncertainty (±µg/mL)	MSDS Information (Solvent: Safety Info. On Attached pg.) CAS#	PEL (TWA)	LSD
Chlorobenzene-d5	69	C443JP12	2500	99.8	0.2	0.25103	0.25118	2501.5	10.1	3114-55-4	N/A	of-rel 110mg/kg
1,4-Dichlorobenzene-d4	118	PR-1848/280CD1	2500	98	0.2	0.25513	0.25522	2500.9	10.3	3855-82-1	N/A	of-rel 500mg/kg
1,4-Difluorobenzene	155	1310GAO	2500	99	0.2	0.25255	0.25275	2502.0	10.2	540-36-9	N/A	N/A

TIC 20048D

Gabriel Hellewell 011917
Formulated By: Gabriel Hellewell DATE

Pietro L. Rapisa 011917
Reviewed By: Pietro L. Rapisa DATE

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST standards.
* Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards, after opening sample, should be stored with cap tight and under appropriate laboratory conditions.
* Laboratory References: Taylor, B.N. and Kuyatt, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results."
NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC (1994).



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1 of 2
20048 Lot# 011917

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Certified Reference Material CRM

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Scopes: http://AbsoluteStandards.com

IED WEIGHT REPORT

Part Number: 94157
Lot Number: 092818
Description: CLP SOM 01.1 DMC Ketones, 2 components
Expiration Date: 092821
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 2500
NIST Test ID#: 2584186 — 5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 100.0 — 0.001 Flask Uncertainty

Solvent(s):	Lot#	
Methanol	DT140	(90%)
Water	092118	(10%)

Formulated By: Eli Aliaga — 092818 DATE
Reviewed By: Pedro L. Rentas — 092818 DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity (%)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	CAS#	OSHA PEL (TWA)	LD50
2-Butanone-1,1,1,3,3-d5	2557	M-278	2500	99	0.2	0.25255	0.25280	2502.4	10.2	24313-50-6	N/A	orl-rat 2737mg/kg
2-Hexanone-1,1,1,3,3-d5	2558	1-500	2500	99.1	0.2	0.25230	0.25237	2500.7	10.1	4840-82-8	N/A	orl-rat 2590mg/kg

SDS Information (Solvent Safety Info. On Attached pg.)

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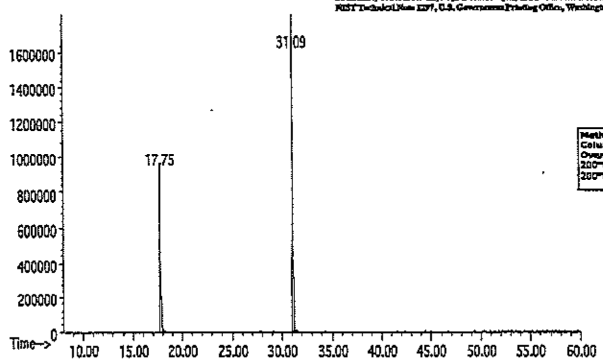
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).



Method: GC6MSD-1. Detector: Mass Selective Detector. Column: Vocol (60m X 0.25mm ID X 1.5µm film thickness). Oven Profile: Temp. 1 = 35°C (Time 1=10min.), Temp. 2 = 200°C (Time 2=8.75 min.), Rate = 4°C/min., Injector Temp.= 200°C, Detector Temp. = 220°C. Analyst: Candice Warren.

Name	MSD RT (min.)
2-Butanone-1,1,1,3,3-d5	17.75
2-Hexanone-1,1,1,3,3-d5	31.12

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CERTIFIED WEIGHT REPORT

Part Number: 94156
Lot Number: 121918
Description: CLP SOM 01.1 VOC DMC Gases, 2 components
Expiration Date: 121821
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 2000
NIST Test ID#: 2584186 — 5E-05 Balance Uncertainty
Volume(s) shown below were combined and diluted to (mL): 50.0 — 0.007 Flask Uncertainty

Solvent(s): Methanol — Lot# DT140

Formulated By: Vincent K. Criscio, Jr. — 121918 DATE
Reviewed By: Pedro L. Rentas — 121918 DATE

Compound	Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc.(µg/mL)	Final Conc.(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	CAS#	OSHA PEL (TWA)	LD50
1. Chloroethane-d5	94178	072617	0.24	12.00	0.042	8350.2	2004.8	18.3	19199-91-8	N/A	N/A
2. Vinyl chloride-d3	94177	072617	0.20	10.00	0.042	10018.8	2003.8	18.8	6745-35-3	N/A	orl-rat 500mg/kg

SDS Information (Solvent Safety Info. On Attached pg.)

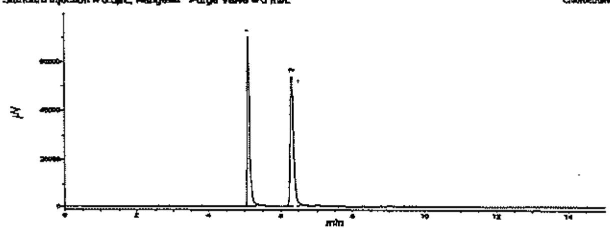
- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Run 21, "P94156 L121918 [2000µg/mL in MeOH]"

Run Length: 15.00 min, 9000 points at 10 points/second.
Created: Thu, Dec 20, 2018 at 1:50:52 PM.
Sampled: Sequence "121718-GC1", Method "GC1-M8".
Analyzed using Method "GC1-M8".

Comments
GC1-M8 Analysis by Candice Warren
Column ID SPB-Vocol 105 meter X 0.53mm X 3.0µm film thickness
Flow rates: Total flow=150mL/min., Helium (carrier)=10mL/min.,
Helium(make-up)=40mL/min., Hydrogen(make-up)=100mL/min.
Oven Profile: Temp. 1=35°C (Time 1=9 min.), Temp 2=200°C (Time 2=1 min.),
Rate = 33°C/min., Total run time=15 min. Injector temp.=200°C, FID Temp.=200°C,
ELCD Signal = Edaq Channel 1 PID Signal = Edaq Channel 2
Standard injection = 0.5µL, Range=4 Purge Valve = 0 min.

Analyte	ELCD RT (min.)
Vinyl chloride-d3	5.16
Chloroethane-d5	6.36



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IED WEIGHT REPORT

Part Number: 30058
Lot Number: 011719
Description: EPA Method 502/524 - Volatile Gases Mix #1, 6 components
Expiration Date: 011722
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 2000
NIST Test ID#: 2584186 — 5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 500.0 — 0.058 Flask Uncertainty

Solvent: Methanol — Lot# DU230-US

Formulated By: Vincent K. Criscio, Jr. — 011719 DATE
Reviewed By: Pedro L. Rentas — 011719 DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity (%)	Target Weight (g)	Actual Weight (g)	Actual Conc(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	CAS#	OSHA PEL (TWA)	LD50
Bromomethane	50	01011JX	2000	99.5	0.2	1.00503	1.0058	2001.0	8.1	74-83-9	5 ppm (20mg/m3/8H) (skin)	orl-rat 214mg/kg
Chloroethane	72	062617	2000	99	0.2	1.01016	1.0119	2003.4	8.1	75-00-3	1000 ppm (2600mg/m3/8H)	N/A
Chloromethane	79	06908MS	2000	99.5	0.2	1.00508	1.0088	2007.4	8.1	74-87-3	100 ppm	orl-rat 1800mg/kg
Dichlorodifluoromethane	134	92-0407	2000	99	0.2	1.01016	1.0153	2010.2	8.1	75-71-8	1000 ppm (4950mg/m3/8H)	N/A
Trichlorofluoromethane	294	01823MW	2000	99	0.2	1.01010	1.0120	2003.6	8.1	75-69-4	1000 ppm (5600mg/m3/8H)	ipr-mus 1743mg/kg
Vinyl chloride	306	04854EA	2000	99.5	0.2	1.00508	1.0103	2010.4	8.1	75-01-4	N/A	N/A

SDS Information (Solvent Safety Info. On Attached pg.)

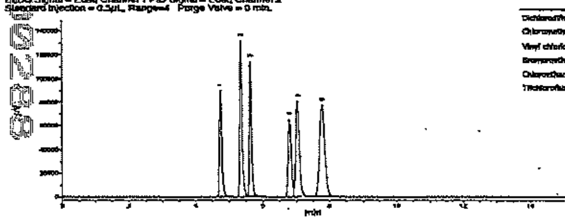
- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Run 6, "P30058 L011719 [2000µg/mL in MeOH]"

Run Length: 15.00 min, 9000 points at 10 points/second.
Created: Thu, Jan 17, 2019 at 11:39:33 AM.
Sampled: Sequence "011719-GC1", Method "GC1-M8".
Analyzed using Method "GC1-M8".

Comments
GC1-M8 Analysis by Candice Warren
Column ID SPB-Vocol 105 meter X 0.53mm X 3.0µm film thickness
Flow rates: Total flow=150mL/min., Helium (carrier)=10mL/min.,
Helium(make-up)=40mL/min., Hydrogen(make-up)=100mL/min.
Oven Profile: Temp. 1=35°C (Time 1=9 min.), Temp 2=200°C (Time 2=1 min.),
Rate = 33°C/min., Total run time=16 min. Injector temp.=200°C, FID Temp.=200°C,
ELCD Signal = Edaq Channel 1 PID Signal = Edaq Channel 2
Standard injection = 0.5µL, Range=4 Purge Valve = 0 min.

Analyte	ELCD RT (min.)
Dichlorodifluoromethane	4.34
Chloromethane	4.89
Vinyl chloride	5.14
Bromomethane	6.19
Chloroethane	6.40
Trichlorofluoromethane	7.05



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CERTIFIED WEIGHT REPORT

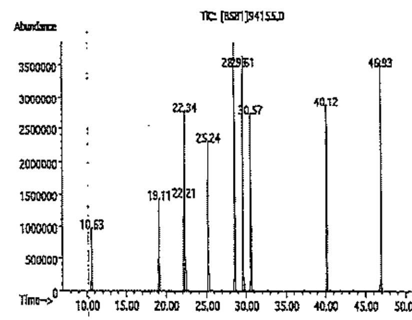
Part Number: 94155
Lot Number: 022017
Description: CLP SOM 01.1 DMC Volatiles, 9 components
Expiration Date: 022020
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 2000
NIST Test ID#: 822-275872-11 — 5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 100.0 — 0.001 Flask Uncertainty

Solvent(s): Methanol — Lot# DQ536

Formulated By: Gabriel Helland — 022017 DATE
Reviewed By: Pedro L. Rentas — 022017 DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	CAS#	OSHA PEL (TWA)	LD50
1. Benzene-d6	26	4805DKDK	2000	99	0.2	0.20204	0.20245	2004.0	8.2	1076-43-3	1 ppm (8H)	N/A
2. Chloroform-d	2556	V210P1	2000	99.6	0.2	0.20042	0.20101	2005.9	8.1	865-49-6	N/A	orl-hmn 140mg/kg
3. 1,2-Dichlorobenzene-d4	128	PR-10053/12207082	2000	99	0.2	0.20204	0.20283	2007.8	8.2	2199-69-1	50 ppm (300mg/m3) (CL)	orl-rat 500mg/kg
4. 1,2-Dichloroethane-d4	137	V266P25	2000	99.6	0.2	0.20083	0.20115	2003.2	8.1	17060-07-0	N/A	orl-mus 625mg/kg
5. 1,1-Dichloroethene-d2	2047	W151P10	2000	99	0.2	0.20204	0.20215	2001.1	8.1	22280-73-5	N/A	orl-rat 200mg/kg
6. 1,2-Dichloropropane-d6	2051	Z322P1	2000	99.4	0.2	0.20123	0.20166	2004.3	8.1	93952-08-0	N/A	orl-rat 1947mg/kg
7. cis,trans-1,3-Dichloropropene-d4	2052	Z-181	2000	42.0	0.2	0.47824	0.47735	2004.8	19.1	202656-23-3	N/A	orl-rat 470mg/kg
8. 1,1,2,2-Tetrachloroethane-d2	2053	F465P1	2000	99.6	0.2	0.20083	0.20130	2004.7	8.1	33685-54-0	N/A	orl-rat 800mg/kg
9. Toluene-d8	202	12E-434	2000	99.5	0.2	0.20103	0.20185	2008.2	8.1	2037-26-5	200 ppm	orl-rat 5000mg/kg

MSDS Information (Solvent Safety Info. On Attached pg.)



Method: GC6MSD-1. Detector: Mass Selective Detector. Column: Vocol (60m X 0.25mm ID X 1.5µm film thickness). Oven Profile: Temp. 1 = 35°C (Time 1=10min.), Temp. 2 = 200°C (Time 2=8.75 min.), Rate = 4°C/min., Injector Temp.= 200°C, Detector Temp. = 220°C. Analyst: Candice Warren.

Name	MSD RT (min.)
1,1-Dichloroethene-d2	10.61
Chloroform-d	19.13
1,2-Dichloroethane-d4	22.20
Benzene-d6	22.36
1,2-Dichloropropane-d6	25.22
cis-1,3-Dichloropropene-d4	28.83
Toluene-d8	29.61
trans-1,3-Dichloropropene-d4	30.59
1,1,2,2-Tetrachloroethane-d2	40.06
1,2-Dichlorobenzene-d4	46.93

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- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

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CERTIFIED WEIGHT REPORT

Part Number: 94159
Lot Number: 091318
Description: CLP SOM 01.1 Volatiles
42 components
Expiration Date: 091321
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): Varied
NIST Test ID#: 2584186
Volume(s) shown below were combined and diluted to (mL): 100.0

5E-05 Balance Uncertainty
0.001 Flask Uncertainty

Solvent(s): Methanol
Lot#: DT14001

Formulated By: Mario Luzi — 091318 DATE
Reviewed By: Pedro L. Rentas — 091318 DATE

Compound	Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	CAS#	OSHA PEL (TWA)	LD50
1. Benzene	93831	060618	0.10	10.00	0.042	20006.8	2000.4	18.7	71-43-2	5 ppm	orl-rat 930mg/kg
2. Toluene	93831	060618	0.10	10.00	0.042	20002.8	2000.1	18.7	108-88-3	200 ppm	orl-rat 5000mg/kg
3. Ethyl benzene	93831	060618	0.10	10.00	0.042	20002.5	2000.0	18.7	100-41-4	100 ppm (435mg/m3)(H)	orl-rat >3500mg/kg
4. o-Xylene	93831	060618	0.10	10.00	0.042	20000.8	2000.2	18.7	95-47-6	100 ppm (435mg/m3)(H)	ipr-mus 1364mg/kg
5. m-Xylene	93831	060618	0.10	10.00	0.042	10003.3	1000.2	9.3	108-38-3	100 ppm (435mg/m3)(H)	orl-rat 5g/kg
6. p-Xylene	93831	060618	0.10	10.00	0.042	10005.2	1000.4	9.3	106-42-3	100 ppm (435mg/m3)(H)	orl-rat 5g/kg
7. Bromodichloromethane	35174	051118	0.05	5.00	0.017	40001.7	1999.9	15.9	75-27-4	N/A	orl-rat 916mg/kg
8. Dibromochloromethane	35174	051118	0.05	5.00	0.017	40000.6	1999.8	15.9	124-48-1	N/A	orl-rat 848mg/kg
9. cis-1,2-Dichloroethene	35174	051118	0.05	5.00	0.017	40002.0	1999.9	15.8	156-59-2	N/A	N/A
10. trans-1,2-Dichloroethene	35174	051118	0.05	5.00	0.017	40000.8	1999.8	15.9	156-60-5	N/A	orl-rat 1235mg/kg
11. Methylene chloride	35174	051118	0.05	5.00	0.017	40003.2	1999.9	15.6	75-09-2	500 ppm	orl-rat 1600mg/kg
12. 1,1-Dichloroethene	32251	070218	0.10	10.00	0.042	20000.8	1999.9	18.7	75-35-4	1 ppm (4mg/m3)(H)	orl-rat 200mg/kg
13. Bromochloromethane	94170	010618	0.10	10.00	0.042	20017.5	2001.5	18.7	74-97-5	200 ppm (1050mg/m3)(H)	orl-rat 5000mg/kg
14. Bromoform	94170	010618	0.10	10.00	0.042	20010.4	2000.8	18.7	75-25-2	0.5 ppm (5mg/m3) (skin)	orl-rat 933mg/kg
15. Carbon tetrachloride	94170	010618	0.10	10.00	0.042	20006.0	2000.4	18.7	56-23-5	2 ppm (12.6mg/m3)(H)	orl-rat 2350mg/kg
16. Chloroform	94170	010618	0.10	10.00	0.042	20019.5	2001.7	18.7	67-66-3	50 ppm (240mg/m3) (CL)	orl-rat 908mg/kg
17. 1,1-Dichloroethane	94170	010618	0.10	10.00	0.042	20007.8	2000.5	18.7	75-34-3	100 ppm	orl-rat 725mg/kg
18. Tetrachloroethene	94170	010618	0.10	10.00	0.042	20015.7	2001.4	18.7	127-18-4	25 ppm (170mg/m3)(H)(skin)	orl-rat 2629mg/kg
19. 1,1,1-Trichloroethane	94170	010618	0.10	10.00	0.042	20007.4	2000.5	18.7	71-55-6	350 ppm (1900mg/m3)(H)	orl-rat 10300mg/kg
20. 1,2-Dibromo-3-chloropropane	94171	010618	0.10	10.00	0.042	20015.3	2001.3	18.7	96-12-8	0.001 ppm	orl-rat 170mg/kg
21. 1,2-Dibromoethane	94171	010618	0.10	10.00	0.042	20017.3	2001.5	18.7	106-93-4	20 ppm (B6)	orl-rat 108mg/kg
22. 1,2-Dichloroethane	94171	010618	0.10	10.00	0.042	20005.4	2000.3	18.7	107-06-2	50 ppm (B6)	orl-rat 670mg/kg
23. 1,2-Dichloropropane	94171	010618	0.10	10.00	0.042	20006.4	2000.4	18.7	78-87-5	75 ppm (350mg/m3)(H)	orl-rat 1117mg/kg
24. cis-1,3-Dichloropropene	94171	010618	0.10	10.00	0.042	20016.0	2001.4	18.7	10061-01-5	N/A	N/A
25. 1,3-Dichloropropene	94171	010618	0.10	10.00	0.042	20011.4	2000.9	18.7	10061-02-6	N/A	N/A
26. 2-Tetrachloroethane	94171	010618	0.10	10.00	0.042	20014.3	2001.2	18.7	79-34-5	5 ppm (35mg/m3)(H)(skin)	orl-rat 800mg/kg
27. 1,1,2-Trichloroethane	94171	010618	0.10	10.00	0.042	20024.9	2002.3	18.7	79-00-5	10 ppm (45mg/m3)(H)(skin)	orl-rat 836mg/kg
28. Trichloroethene	94171	010618	0.10	10.00	0.042	20012.9	2001.1	18.7	79-01-6	50 ppm (270mg/m3)(H)	orl-mus 2402mg/kg
29. Chlorobenzene	99763	091118	0.10	10.00	0.042	20001.8	2000.0	18.7	108-90-7	15 ppm (350mg/m3)(H)	orl-rat 2290mg/kg
30. 1,2-Dichlorobenzene	99763	091118	0.10	10.00	0.042	20002.8	2000.1	18.7	95-50-1	50 ppm (300mg/m3) (CL)	orl-rat 500mg/kg
31. 1,3-Dichlorobenzene	99763	091118	0.10	10.00	0.042	20003.7	2000.2	18.7	541-73-1	N/A	ipr-mus 1062mg/kg
32. 1,4-Dichlorobenzene	99763	091118	0.10	10.00	0.042	20005.8	2000.4	18.7	106-46-7	75 ppm (450mg/m3)(H)	orl-rat 500mg/kg
33. Isopropylbenzene	99763	091118	0.10	10.00	0.042	20003.8	2000.2	18.7	98-82-8	50 ppm (245mg/m3)(H)	orl-rat 1400mg/kg
34. 1,2,3-Trichlorobenzene	99763	091118	0.10	10.00	0.042	20003.7	2000.2	18.7	87-61-6	N/A	ipr-mus 1390mg/kg
35. 1,2,4-Trichlorobenzene	99763	091118	0.10	10.00	0.042	20003.8	2000.2	18.7	120-82-1	5 ppm (CL) (40mg/m3)	orl-rat 756mg/kg
36. Styrene	32381	020518	0.10	10.00	0.042	20000.8	1999.9	18.7	100-42-5	100 ppm	orl-rat 5000mg/kg
37. Carbon disulphide	94173	010718	0.10	10.00	0.042	20001.8	2000.0	18.7	75-15-0	4 ppm (12mg/m3) (skin)	orl-rat 1200mg/kg
38. Cyclohexane	94173	010718	0.10	10.00	0.042	20002.0	2000.0	18.7	110-82-7	300 ppm (1050mg/m3)(H)	orl-rat 12705mg/kg
39. Methyl acetate	94173	010718	0.10	10.00	0.042	20002.4	2000.0	18.7	79-20-9	200 ppm (610mg/m3)(H)	orl-rat 3705mg/kg
40. Methylcyclohexane	94173	010718	0.10	10.00	0.042	20001.7	1999.9	18.7	108-87-2	N/A	orl-mus 2250mg/kg
41. Methyl tert-butyl ether (MTBE)	94173	010718	0.10	10.00	0.042	20001.2	1999.9	18.7	1634-04-4	N/A	orl-rat 4g/kg
42. 1,1,2-Trichloro-1,2,2-trifluoroethane	94173	010718	0.10	10.00	0.042	20001.8	2000.0	18.7	76-13-1	1000 ppm (7600mg/m3)(H)	orl-rat 43g/kg

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyatt, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

S 43827

Agilent

Certificate of Analysis
ISO Guide 34

Volatiles Matrix Spiking Standard

Product Number: CLP-100N Page: 1 of 1
Lot Number: CP-4257A Lot Issue Date: 26-Oct-2018 Expiration Date: 30-Nov-2020

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with Agilent's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
benzene	000071-43-2	RM01830	1005 ± 5 µg/mL
chlorobenzene	000108-90-7	RM01874	1002 ± 5 µg/mL
1,1-dichloroethene	000075-35-4	RM09189	1003 ± 5 µg/mL
toluene	000108-88-3	RM10201	1005 ± 5 µg/mL
trichloroethene	000079-01-6	RM06644	1004 ± 5 µg/mL

Matrix: methanol (methyl alcohol)

Storage: Store Frozen (-25° to -10°C).

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

Monica Bourgeois
QMS Representative

S 46175

ANAB Accredited — ISO Guide 34 Cert No. AR-1936

Produced in accordance with TUV USA Inc S6 100 18560026 registered ISO 9001 Quality Managment System

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QNG ver 1.1

Absolute Standards, Inc.
800-368-1131
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Certified Reference Material CRM

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ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

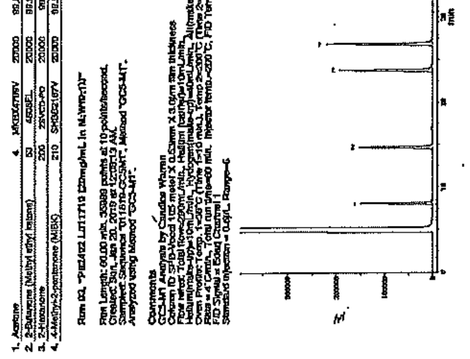
Part Number: 82402
Lot Number: 011719
Description: EPA Method 8240A - Mix #2 Conc
Ketones - 4 components
Expiration Date: 01172[illegible]
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 20000
NIST Test ID#: 2584186
Weight(s) shown below were combined and diluted to (mL): 20.0

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Solvent(s): Methanol (90%), Water (10%)
Lot#: DU220-US, 092118

Formulated By: Eli Allega — 011719 DATE
Reviewed By: Pedro L. Rentas — 011719 DATE

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	CAS#	OSHA PEL (TWA)	LD50
1. Acetone	4	MKBX4706V	20000	99.5	0.2	4.01853	4.02006	20000.8	81.2	67-64-1	750 ppm	orl-rat 5800mg/kg
2. 2-Butanone (Methyl ethyl ketone)	53	45[illegible]	20000	99.9	0.2	4.00384	4.00395	20000.5	80.9	78-93-3	200 ppm (590mg/m3)(H)	orl-rat 2737mg/kg
3. 2-Hexanone	200	25VCD-PO	20000	98	0.2	4.08148	4.08185	20000.4	82.5	591-78-6	100 ppm (410mg/m3)(H)	orl-rat 2590mg/kg
4. 4-Methyl-2-pentanone (MIBK)	210	SHBG2167V	20000	99.5	0.2	4.01853	4.02000	20000.3	81.2	108-10-1	100 ppm (410mg/m3)(H)	orl-rat 2080mg/kg



Name	FID RT (min.)
Acetone	8.21
2-Butanone	14.39
4-Methyl-2-pentanone	23.88
2-Hexanone	26.79

S 46049

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Certified Reference Material CRM

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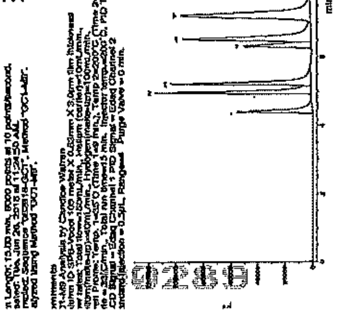
CERTIFIED WEIGHT REPORT

Part Number: 30002
Lot Number: 062818
Description: EPA Method 502.2 - Volatile Gases Mix #1
6 components
Expiration Date: 062821
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 200
NIST Test ID#: 2584186
Volume(s) shown below were combined and diluted to (mL): 200.0

Solvent(s): Methanol
Lot#: D5435

Formulated By: Vincent K. Criscio, Jr. — 062518 DATE
Reviewed By: Pedro L. Rentas — 062518 DATE

Compound	Part Number	Lot Number	DL Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	CAS#
Bromomethane	30058	041018	0.10	20.0	0.003	2006.8	200.7	1.4	74-83-9
Chloroethane	30058	041018	0.10	20.0	0.003	2001.1	200.1	1.4	75-00-3
Chloromethane	30058	041018	0.10	20.0	0.003	2003.6	200.3	1.4	74-87-3
Dichlorodifluoromethane	30058	041018	0.10	20.0	0.003	2009.6	201.0	1.4	75-71-8
Trichlorofluoromethane	30058	041018	0.10	20.0	0.003	2009.6	201.0	1.4	75-69-4
Vinyl chloride	30058	041018	0.10	20.0	0.003	2002.6	200.3	1.4	75-01-4



Analyte	ELCD RT (min.)
Dichlorodifluoromethane	4.46
Chloromethane	5.04
Vinyl chloride	5.30
Bromomethane	5.42
Chloroethane	6.64
Trichlorofluoromethane	7.33

S 43826

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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.
This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 30006 **Lot No.:** A0134324
Description: VOA Calibration Mix #1
VOA Calibration Mix #1 5,000µg/mL, P&T Methanol/Water(90:10), 1mL/ampul
Container Size: 2 mL **Pkg Amt:** > 1 mL
Expiration Date: April 30, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
	Acetone CAS # 67-64-1 Purity 99%	(Lot SHBH6933)	5,001.7 µg/mL	+/- 29.0861 µg/mL +/- 301.8351 µg/mL +/- 302.5517 µg/mL		Gravimetric Unstressed Stressed
2	2-Butanone (MEK) CAS # 78-93-3 Purity 99%	(Lot SHBF2461V)	5,004.7 µg/mL	+/- 29.0978 µg/mL +/- 301.9557 µg/mL +/- 302.6726 µg/mL		Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) CAS # 108-10-1 Purity 99%	(Lot SHBH7006)	5,000.1 µg/mL	+/- 29.0710 µg/mL +/- 301.6782 µg/mL +/- 302.3944 µg/mL		Gravimetric Unstressed Stressed
4	2-Hexanone CAS # 591-78-6 Purity 99%	(Lot MXBW0198V)	5,007.4 µg/mL	+/- 29.1135 µg/mL +/- 302.1186 µg/mL +/- 302.8359 µg/mL		Gravimetric Unstressed Stressed
Solvent:	P&T Methanol/Water (90:10) CAS # 67-56-1/7732-18-5 Purity 99%					

S 44973

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
8	1,1-Dichloroethane CAS # 75-34-3 Purity 99%	(Lot 00009677)	2,000.8 µg/mL	+/- 15.4217 µg/mL +/- 121.1385 µg/mL +/- 121.4241 µg/mL		Gravimetric Unstressed Stressed
9	cis-1,2-Dichloroethene CAS # 156-59-2 Purity 98%	(Lot MKBV2831V)	2,011.5 µg/mL	+/- 11.6043 µg/mL +/- 121.3703 µg/mL +/- 121.6584 µg/mL		Gravimetric Unstressed Stressed
10	chloroform CAS # 67-66-3 Purity 99%	(Lot MKBV2089V)	2,000.8 µg/mL	+/- 15.4261 µg/mL +/- 121.1415 µg/mL +/- 121.4271 µg/mL		Gravimetric Unstressed Stressed
11	Bromochloromethane CAS # 74-97-5 Purity 99%	(Lot 00004559)	2,019.5 µg/mL	+/- 11.8516 µg/mL +/- 121.8560 µg/mL +/- 122.1453 µg/mL		Gravimetric Unstressed Stressed
12	1,1,1-trichloroethane CAS # 71-55-6 Purity 99%	(Lot B15W12061)	2,000.8 µg/mL	+/- 15.4257 µg/mL +/- 121.1385 µg/mL +/- 121.4241 µg/mL		Gravimetric Unstressed Stressed
13	Cyclohexane CAS # 110-82-7 Purity 99%	(Lot MKBX4768V)	2,008.5 µg/mL	+/- 11.7870 µg/mL +/- 121.1923 µg/mL +/- 121.4800 µg/mL		Gravimetric Unstressed Stressed
14	carbon tetrachloride CAS # 56-23-5 Purity 99%	(Lot SHBG1763V)	2,000.8 µg/mL	+/- 15.4237 µg/mL +/- 121.1385 µg/mL +/- 121.4241 µg/mL		Gravimetric Unstressed Stressed
15	1,2-Dichloroethane CAS # 107-06-2 Purity 99%	(Lot SHBF9313V)	2,001.8 µg/mL	+/- 15.4336 µg/mL +/- 121.2006 µg/mL +/- 121.4863 µg/mL		Gravimetric Unstressed Stressed
16	Benzene CAS # 71-43-2 Purity 99%	(Lot SHBG7315V)	2,008.5 µg/mL	+/- 11.7870 µg/mL +/- 121.1923 µg/mL +/- 121.4800 µg/mL		Gravimetric Unstressed Stressed
17	Trichloroethene CAS # 79-01-6 Purity 99%	(Lot SHBF0943V)	2,001.0 µg/mL	+/- 15.4276 µg/mL +/- 121.1536 µg/mL +/- 121.4393 µg/mL		Gravimetric Unstressed Stressed
18	Methylcyclohexane CAS # 108-87-2 Purity 99%	(Lot 5099dAPV)	2,005.5 µg/mL	+/- 11.7694 µg/mL +/- 121.0113 µg/mL +/- 121.2985 µg/mL		Gravimetric Unstressed Stressed
19	1,2-Dichloropropane CAS # 78-87-5 Purity 99%	(Lot 01113D0V)	2,000.4 µg/mL	+/- 15.4216 µg/mL +/- 121.1143 µg/mL +/- 121.3998 µg/mL		Gravimetric Unstressed Stressed
20	bromodichloromethane CAS # 75-27-4 Purity 98%	(Lot MXBL1617V)	2,001.4 µg/mL	+/- 15.4305 µg/mL +/- 121.1767 µg/mL +/- 121.4623 µg/mL		Gravimetric Unstressed Stressed
21	cis-1,3-Dichloropropene CAS # 10061-01-5 Purity 99%	(Lot 22622)	2,001.0 µg/mL	+/- 15.4276 µg/mL +/- 121.1536 µg/mL +/- 121.4393 µg/mL		Gravimetric Unstressed Stressed
22	Toluene CAS # 108-88-3 Purity 99%	(Lot SHBH1932V)	2,008.0 µg/mL	+/- 11.7841 µg/mL +/- 121.1621 µg/mL +/- 121.4497 µg/mL		Gravimetric Unstressed Stressed
25	trans-1,3-Dichloropropene CAS # 10061-02-6 Purity 99%	(Lot C584177)	2,001.1 µg/mL	+/- 15.4282 µg/mL +/- 121.1582 µg/mL +/- 121.4438 µg/mL		Gravimetric Unstressed Stressed

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Certificate of Analysis

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 30492 **Lot No.:** A0125239
Description: OLC 03.2 VOA Mega Mix
OLC 03.2 VOA Mega Mix 1,000-2,000µg/mL, P&T Methanol, 1mL/ampul
Container Size: 2 mL **Pkg Amt:** > 1 mL
Expiration Date: February 29, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
	1,1,2-Trichlorotrifluoroethane (CFC-113) CAS # 76-13-1 Purity 99%	(Lot 00009482)	2,017.0 µg/mL	+/- 11.8369 µg/mL +/- 121.7052 µg/mL +/- 121.9941 µg/mL		Gravimetric Unstressed Stressed
2	1,1-dichloroethane CAS # 75-35-4 Purity 99%	(Lot 7389GKMV)	2,000.3 µg/mL	+/- 15.4219 µg/mL +/- 121.1082 µg/mL +/- 121.3937 µg/mL		Gravimetric Unstressed Stressed
3	Methyl acetate CAS # 79-20-9 Purity 99%	(Lot SHBG4345V)	2,002.5 µg/mL	+/- 11.7518 µg/mL +/- 120.8303 µg/mL +/- 121.1171 µg/mL		Gravimetric Unstressed Stressed
4	Methylene chloride (dichloromethane) CAS # 75-09-2 Purity 99%	(Lot SHBG6426V)	2,000.5 µg/mL	+/- 15.4236 µg/mL +/- 121.1218 µg/mL +/- 121.4074 µg/mL		Gravimetric Unstressed Stressed
5	Carbon disulfide CAS # 75-15-0 Purity 99%	(Lot S20A856)	2,008.0 µg/mL	+/- 11.7841 µg/mL +/- 121.1621 µg/mL +/- 121.4497 µg/mL		Gravimetric Unstressed Stressed
6	Methyl-tert-butyl ether (MTBE) CAS # 1634-04-4 Purity 99%	(Lot SHBG2635V)	2,006.0 µg/mL	+/- 11.7723 µg/mL +/- 121.0414 µg/mL +/- 121.3288 µg/mL		Gravimetric Unstressed Stressed
7	trans-1,2-Dichloroethene CAS # 156-60-5 Purity 99%	(Lot MKBH9850V)	2,000.3 µg/mL	+/- 15.4222 µg/mL +/- 121.1112 µg/mL +/- 121.3968 µg/mL		Gravimetric Unstressed Stressed

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Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
24	1,1,2-Trichloroethane CAS # 79-00-5 Purity 99%	(Lot FGB01)	2,000.2 µg/mL	+/- 15.4217 µg/mL +/- 121.1067 µg/mL +/- 121.3922 µg/mL		Gravimetric Unstressed Stressed
25	Tetrachloroethene CAS # 127-18-4 Purity 99%	(Lot SHBD9374V)	2,000.8 µg/mL	+/- 15.4263 µg/mL +/- 121.1430 µg/mL +/- 121.4286 µg/mL		Gravimetric Unstressed Stressed
26	dibromochloromethane CAS # 124-48-1 Purity 98%	(Lot MXBW3597V)	2,001.4 µg/mL	+/- 15.4304 µg/mL +/- 121.1752 µg/mL +/- 121.4609 µg/mL		Gravimetric Unstressed Stressed
27	1,2-Dibromoethane (EDB) CAS # 106-93-4 Purity 99%	(Lot BCBH3877V)	2,007.0 µg/mL	+/- 11.7782 µg/mL +/- 121.1018 µg/mL +/- 121.3893 µg/mL		Gravimetric Unstressed Stressed
28	Chlorobenzene CAS # 108-90-7 Purity 99%	(Lot SHBF0505V)	2,000.1 µg/mL	+/- 15.4224 µg/mL +/- 121.1128 µg/mL +/- 121.3983 µg/mL		Gravimetric Unstressed Stressed
29	Ethylbenzene CAS # 100-41-4 Purity 99%	(Lot SHBF8969V)	2,011.5 µg/mL	+/- 11.8046 µg/mL +/- 121.3733 µg/mL +/- 121.6614 µg/mL		Gravimetric Unstressed Stressed
30	m-Xylene CAS # 108-38-3 Purity 99%	(Lot SHBG9538V)	1,004.5 µg/mL	+/- 5.8950 µg/mL +/- 60.6132 µg/mL +/- 60.7531 µg/mL		Gravimetric Unstressed Stressed
31	p-Xylene CAS # 106-42-3 Purity 99%	(Lot SHBG3925V)	1,001.0 µg/mL	+/- 5.8744 µg/mL +/- 60.4000 µg/mL +/- 60.5434 µg/mL		Gravimetric Unstressed Stressed
32	o-Xylene CAS # 95-47-6 Purity 99%	(Lot SHBH3432V)	2,009.0 µg/mL	+/- 11.7899 µg/mL +/- 121.2225 µg/mL +/- 121.5102 µg/mL		Gravimetric Unstressed Stressed
33	Styrene CAS # 100-42-5 Purity 99%	(Lot MKBS7097V)	2,017.5 µg/mL	+/- 11.8398 µg/mL +/- 121.7354 µg/mL +/- 122.0243 µg/mL		Gravimetric Unstressed Stressed
34	Isopropylbenzene (cumene) CAS # 98-82-8 Purity 99%	(Lot 10185056)	2,010.0 µg/mL	+/- 11.7958 µg/mL +/- 121.2828 µg/mL +/- 121.5707 µg/mL		Gravimetric Unstressed Stressed
35	bromoform CAS # 75-25-2 Purity 99%	(Lot SHBD8459V)	2,003.6 µg/mL	+/- 15.4248 µg/mL +/- 121.1309 µg/mL +/- 121.4165 µg/mL		Gravimetric Unstressed Stressed
36	1,1,2,2-Tetrachloroethane CAS # 79-34-5 Purity 99%	(Lot CFA4D)	2,000.8 µg/mL	+/- 15.4259 µg/mL +/- 121.1400 µg/mL +/- 121.4256 µg/mL		Gravimetric Unstressed Stressed
37	1,3-Dichlorobenzene CAS # 541-73-1 Purity 99%	(Lot BCBM5751V)	2,000.5 µg/mL	+/- 15.4240 µg/mL +/- 121.1249 µg/mL +/- 121.4104 µg/mL		Gravimetric Unstressed Stressed
38	1,4-Dichlorobenzene CAS # 106-46-7 Purity 99%	(Lot MKBS3350V)	2,001.7 µg/mL	+/- 15.4327 µg/mL +/- 121.1930 µg/mL +/- 121.4787 µg/mL		Gravimetric Unstressed Stressed
39	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	(Lot SHBD7331V)	2,000.6 µg/mL	+/- 15.4244 µg/mL +/- 121.1279 µg/mL +/- 121.4135 µg/mL		Gravimetric Unstressed Stressed

40	1,2-Dibromo-3-chloropropane CAS # 96-12-8 Purity 99%	(Lot FBL01)	2,019.0	µg/mL	+/- 11.8486 +/- 121.8259 +/- 122.1350	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	1,2,4-Trichlorobenzene CAS # 120-82-1 Purity 99%	(Lot SHBC5541V)	2,008.0	µg/mL	+/- 11.7841 +/- 121.1621 +/- 121.4497	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,2,3-Trichlorobenzene CAS # 87-61-6 Purity 99%	(Lot J2912PFV)	2,018.5	µg/mL	+/- 11.8457 +/- 121.7957 +/- 122.0348	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx 502.1 (cat.#10915)

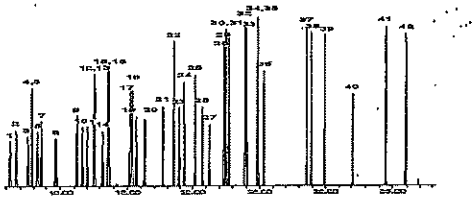
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 8°C/min. (hold 10 min.)

Temp:

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Joseph Jaglowski - Mix Technician Date Mixed: 23-Feb-2017 Balance: 1127510105

Diane Shaffer - Operations Tech AAM QC Date Passed: 28-Mar-2017

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

STANDARD REPORT

Working Standard - 4-BFB

4-BFB — Description - 4-Bromofluorobenzene

Standard: 49350
MFG: NA
MFG Lot: CH-3248Z
Pipette ID: NA

Created By: Christopher O. Coleman
Create Date: 08/21/2019 07:08AM

Amount: 5 mL
Expires: 10/21/2019
Usable: Yes
Lab Lot: 4-BFB CH-3248Z

Pos.	Analyte	Name	Concentration
1	460-00-4	4-Bromofluorobenzene	25 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
34352	BFB	Bromofluorobenzene Stock	BFB CH-3248Z	62.5 uL	10/31/2019
48199	Methanol	Purge & Trap Methanol Solvent	P&T MeOH DS-649	4.9375 mL	06/09/2032

STANDARD REPORT
Constituent

Solvent Standard - Methanol

Methanol — Description - Purge & Trap Methanol Solvent

Standard: 48199
MFG: B&J
MFG Lot: DS-649
Part ID: Not Provided

Created By: Christopher O. Coleman
Create Date: 06/09/2019 01:06PM

Amount: 235 mL
Expires: 06/09/2032
Usable: Yes
Lab Lot: P&T MeOH DS-649

Pos.	Analyte	Name	Concentration
Solvent - Analyte(s) not applicable			

STANDARD REPORT
Constituent

Stock Standard - BFB

BFB — Description - Bromofluorobenzene Stock

Standard: 34352
MFG: Ultra Scientific
MFG Lot: CH-3248Z
Part ID: Not Provided

Created By: Christopher O. Coleman
Create Date: 11/15/2018 06:11PM

Amount: Not Provided
Expires: 10/31/2019
Usable: Yes
Lab Lot: BFB CH-3248Z

Pos.	Analyte	Name	Concentration
1	460-00-4	4-Bromofluorobenzene	2000 ug/mL

STANDARD REPORT

Working Standard - Trace istd

Trace istd — Description - Trace Istd Only

Standard: 49433
MFG: NA
MFG Lot: NA
Pipette ID: NA

Created By: Christopher O. Coleman
Create Date: 08/26/2019 06:08AM

Amount: 2 mL
Expires: 09/26/2019
Usable: Yes
Lab Lot: Trace Istd Only

Pos.	Analyte	Name	Concentration
1	540-36-3	1,4-Difluorobenzene	50 ug/mL
2	3114-55-4	Chlorobenzene-d5	50 ug/mL
3	3855-82-1	1,4-Dichlorobenzene-d4	50 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
36944	CLP Istd	EPA CLP Istd Stock	CLP Istd 011917	40 uL	01/18/2022
48199	Methanol	Purge & Trap Methanol Solvent	P&T MeOH DS-649	1960 uL	06/09/2032

STANDARD REPORT

Constituent

Stock Standard - CLP Istd

CLP Istd — Description - EPA CLP Istd Stock

Standard: 35934
MFG: Absolute Standards, Inc.
MFG Lot: 011917
Part ID: Not Provided

Created By: Christopher Q. Coleman
Create Date: 05/23/2017 07:05PM

Amount: Not Provided
Expires: 01/19/2022
Usable: Yes
Lab Lot: CLP Istd 011917

Pos.	Analyte	Name	Concentration
1	540-36-3	1,4-Difluorobenzene	2500 ug/mL
2	3114-55-4	Chlorobenzene-d5	2500 ug/mL
3	3855-82-1	1,4-Dichlorobenzene-d4	2500 ug/mL

STANDARD REPORT

Constituent

Solvent Standard - Methanol

Methanol — Description - Purge & Trap Methanol Solvent

Standard: 48199
MFG: B&J
MFG Lot: DS-649
Part ID: Not Provided

Created By: Christopher Q. Coleman
Create Date: 06/09/2019 01:06PM

Amount: 235 mL
Expires: 05/09/2032
Usable: Yes
Lab Lot: P&T MeOH DS-649

Pos.	Analyte	Name	Concentration
Solvent - Analyte(s) not applicable			

STANDARD REPORT

Working Standard - Trace OMC

Trace DMC — Description - Trace DMC Only

Standard: 49434
MFG: NA
MFG Lot: NA
Pipette ID: NA

Created By: Christopher Q. Coleman
Create Date: 08/26/2019 06:03AM

Amount: 2 mL
Expires: 09/26/2019
Usable: Yes
Lab Lot: Trace DMC Only

Pos.	Analyte	Name	Concentration
1	19199-91-8	Chloroethane-d5	50 ug/mL
2	6745-35-3	Vinyl Chloride-d3	50 ug/mL
3	1076-43-3	Benzene-d6	50 ug/mL
4	865-49-6	Chloroform-d	50 ug/mL
5	2199-69-1	1,2-Dichlorobenzene-d4	50 ug/mL
6	17060-07-0	1,2-Dichloroethane-d4	50 ug/mL
7	22280-73-5	1,1-Dichloroethene-d2	50 ug/mL
8	78-87-5(d6)	1,2-Dichloropropane-d6	50 ug/mL
9	93951-86-1	trans-1,3-Dichloropropene-d4	50 ug/mL
10	33655-54-0	1,1,2,2-Tetrachloroethane-d2	50 ug/mL
11	2037-26-5	Toluene-d8	50 ug/mL
12	24313-50-6	2-Butanone-d5	500 ug/mL
13	4840-82-8	2-Hexanone-d5	500 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
41785	CLP DMC	EPA CLP DMC Liquids Stock	CLP DMC 022017	50 uL	02/20/2020
46051	CLPDMCGases	EPA CLP DMC Gases Stock	CLPDMCGases121918	50 uL	12/19/2021
47747	CLP DMC KET	EPA CLP DMC Ketones Stock	CLP DMC Ket 092818	400 uL	09/28/2021
48199	Methanol	Purge & Trap Methanol Solvent	P&T MeOH DS-649	1500 uL	06/09/2032

STANDARD REPORT

Constituent

Stock Standard - CLPDMCGases

CLPDMCGases — Description - EPA CLP DMC Gases Stock

Standard: 46051
MFG: Absolute Standards, Inc.
MFG Lot: 121918
Part ID: 84156

Created By: Christopher Q. Coleman
Create Date: 02/13/2019 09:02AM

Amount: Not Provided
Expires: 12/19/2021
Usable: Yes
Lab Lot: CLPDMCGases121918

Pos.	Analyte	Name	Concentration
1	19199-91-8	Chloroethane-d5	2000 ug/mL
2	6745-35-3	Vinyl Chloride-d3	2000 ug/mL

STANDARD REPORT

Constituent

Solvent Standard - Methanol

Methanol — Description - Purge & Trap Methanol Solvent

Standard: 48199
MFG: B&J
MFG Lot: DS-649
Part ID: Not Provided

Created By: Christopher Q. Coleman
Create Date: 06/09/2018 01:06PM

Amount: 235 mL
Expires: 06/09/2032
Usable: Yes
Lab Lot: P&T MeOH DS-649

Pos.	Analyte	Name	Concentration
Solvent - Analyte(s) not applicable			

STANDARD REPORT

Constituent

Stock Standard - CLP DMC KET

CLP DMC KET — Description - EPA CLP DMC Ketones Stock

Standard: 47747
MFG: Absolute Standards, Inc.
MFG Lot: 092818
Part ID: Not Provided

Created By: Christopher Q. Coleman
Create Date: 05/17/2018 06:05AM

Amount: Not Provided
Expires: 09/28/2021
Usable: Yes
Lab Lot: CLP DMC Ket 092818

Pos.	Analyte	Name	Concentration
1	24313-50-6	2-Butanone-d5	2500 ug/mL
2	4840-82-8	2-Hexanone-d5	2500 ug/mL

STANDARD REPORT

Constituent

Stock Standard - CLP DMC

CLP DMC — Description - EPA CLP DMC Liquids Stock

Standard: 41765
MFG: Absolute Standards, Inc.
MFG Lot: 022017
Part ID: 94155

Created By: Christopher Q. Coleman
Create Date: 05/10/2018 06:05AM

Amount: Not Provided
Expires: 02/20/2020
Usable: Yes
Lab Lot: CLP DMC 022017

Pos.	Analyte	Name	Concentration
1	1076-43-3	Benzene-d6	2000 ug/mL
2	865-49-6	Chloroform-d	2000 ug/mL
3	2199-69-1	1,2-Dichlorobenzene-d4	2000 ug/mL
4	17060-07-0	1,2-Dichloroethane-d4	2000 ug/mL
5	22280-73-5	1,1-Dichloroethene-d2	2000 ug/mL
6	78-87-5(d6)	1,2-Dichloropropane-d6	2000 ug/mL
7	93951-86-1	trans-1,3-Dichloropropene-d4	2000 ug/mL
8	33685-54-0	1,1,2,2-Tetrachloroethane-d2	2000 ug/mL
9	2037-26-5	Toluene-d8	2000 ug/mL

STANDARD REPORT

Working Standard - TraceIstdDMC

TraceIstdDMC — Description - Trace Istd/DMC

Standard: 49435
MFG: NA
MFG Lot: NA
Pipette ID: NA

Created By: Christopher Q. Coleman
Create Date: 09/26/2019 06:06AM

Amount: 2 mL
Expires: 09/26/2019
Usable: Yes
Lab Lot: Trace Istd/DMC

Pos.	Analyte	Name	Concentration
1	540-36-3	1,4-Difluorobenzene	50 ug/mL
2	3114-55-4	Chlorobenzene-d5	50 ug/mL
3	3855-82-1	1,4-Dichlorobenzene-d4	50 ug/mL
4	19199-91-8	Chloroethane-d5	50 ug/mL
5	6745-35-3	Vinyl Chloride-d3	50 ug/mL
6	1076-43-3	Benzene-d6	50 ug/mL
7	865-49-6	Chloroform-d	50 ug/mL
8	2199-69-1	1,2-Dichlorobenzene-d4	50 ug/mL
9	17060-07-0	1,2-Dichloroethane-d4	50 ug/mL
10	22280-73-5	1,1-Dichloroethene-d2	50 ug/mL
11	78-87-5(d6)	1,2-Dichloropropane-d6	50 ug/mL
12	93951-86-1	trans-1,3-Dichloropropene-d4	50 ug/mL
13	33685-54-0	1,1,2,2-Tetrachloroethane-d2	50 ug/mL
14	2037-26-5	Toluene-d8	50 ug/mL
15	24313-50-6	2-Butanone-d5	500 ug/mL
16	4840-82-8	2-Hexanone-d5	500 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
36944	CLP Istd	EPA CLP Istd Stock	CLP Istd 011917	40 uL	01/19/2022
41765	CLP DMC	EPA CLP DMC Liquids Stock	CLP DMC 022017	50 uL	02/20/2020
46051	CLPDMCGases	EPA CLP DMC Gases Stock	CLPDMCGases121918	50 uL	12/19/2021
47747	CLP DMC KET	EPA CLP DMC Ketones Stock	CLP DMC Ket 092818	400 uL	09/28/2021
48199	Methanol	Purge & Trap Methanol Solvent	P&T MeOH DS-649	1460 uL	06/09/2032

STANDARD REPORT
Constituent

Stock Standard - CLPDMCGases

CLPDMCGases	Description - EPA CLP DMC Gases Stock

Standard: 46951
MFG: Absolute Standards, Inc.
MFG Lot: 121918
Part ID: 94156

Created By: Christopher Q. Coleman
Create Date: 02/13/2019 09:02AM

Amount: Not Provided
Expires: 12/19/2021
Usable: Yes
Lab Lot: CLPDMCGases121918

Pos.	Analyte	Name	Concentration
1	19199-91-8	Chloroethane-d5	2000 ug/mL
2	6745-35-3	Vinyl Chloride-d3	2000 ug/mL

STANDARD REPORT
Constituent

Stock Standard - CLP Istd

CLP Istd	Description - EPA CLP Istd Stock

Standard: 36944
MFG: Absolute Standards, Inc.
MFG Lot: 011917
Part ID: Not Provided

Created By: Christopher Q. Coleman
Create Date: 05/23/2017 07:05PM

Amount: Not Provided
Expires: 01/19/2022
Usable: Yes
Lab Lot: CLP Istd 011917

Pos.	Analyte	Name	Concentration
1	540-36-3	1,4-Difluorobenzene	2500 ug/mL
2	3114-55-4	Chlorobenzene-d5	2500 ug/mL
3	3855-82-1	1,4-Dichlorobenzene-d4	2500 ug/mL

STANDARD REPORT
Constituent

Solvent Standard - Methanol

Methanol	Description - Purge & Trap Methanol Solvent

Standard: 48199
MFG: 88J
MFG Lot: DS-649
Part ID: Not Provided

Created By: Christopher Q. Coleman
Create Date: 06/09/2019 01:06PM

Amount: 235 mL
Expires: 06/09/2032
Usable: Yes
Lab Lot: P&T MeOH DS-649

Pos.	Analyte	Name	Concentration
Solvent - Analyte(s) not applicable			

STANDARD REPORT
Constituent

Stock Standard - CLP DMC KET

CLP DMC KET	Description - EPA CLP DMC Ketones Stock

Standard: 47747
MFG: Absolute Standards, Inc.
MFG Lot: 092818
Part ID: Not Provided

Created By: Christopher Q. Coleman
Create Date: 05/17/2019 09:05AM

Amount: Not Provided
Expires: 09/28/2021
Usable: Yes
Lab Lot: CLP DMC Ket 092818

Pos.	Analyte	Name	Concentration
1	24313-50-6	2-Butanone-d5	2500 ug/mL
2	4840-82-8	2-Hexanone-d5	2500 ug/mL

STANDARD REPORT

Constituent

Stock Standard - CLP DMC

CLP DMC — Description - EPA CLP DMC Liquids Stock

Standard: 41785
MFG: Absolute Standards, Inc.
MFG Lot: 022017
Part ID: 94155

Created By: Christopher Q. Coleman
Create Date: 05/10/2018 06:05AM

Amount: Not Provided
Expires: 02/20/2020
Usable: Yes
Lab Lot: CLP DMC 022017

Pos.	Analyte	Name	Concentration
1	1076-43-3	Benzene-d6	2000 ug/mL
2	865-49-6	Chloroform-d	2000 ug/mL
3	2199-69-1	1,2-Dichlorobenzene-d4	2000 ug/mL
4	17060-07-0	1,2-Dichloroethane-d4	2000 ug/mL
5	22280-73-5	1,1-Dichloroethene-d2	2000 ug/mL
6	78-87-5(d6)	1,2-Dichloropropane-d6	2000 ug/mL
7	93951-85-1	trans-1,3-Dichloropropene-d4	2000 ug/mL
8	33685-54-0	1,1,2,2-Tetrachloroethane-d2	2000 ug/mL
9	2037-26-5	Toluene-d8	2000 ug/mL

ALSSTANDARDS V2.5

STANDARD REPORT

Working Standard - Trace VOA

Trace VOA — Description - Trace VOA

Standard: 49436
MFG: NA
MFG Lot: NA
Pipette ID: NA

Created By: Christopher Q. Coleman
Create Date: 08/26/2018 06:08AM

Amount: 2 mL
Expires: 09/26/2019
Usable: Yes
Lab Lot: Trace VOA

Pos.	Analyte	Name	Concentration
1	75-71-8	Dichlorodifluoromethane	50 ug/mL
2	74-87-3	Methyl chloride	50 ug/mL
3	75-01-4	Vinyl chloride	50 ug/mL
4	74-83-9	Bromomethane	50 ug/mL
5	75-00-3	Ethyl chloride	50 ug/mL
6	75-69-4	Freon 11	50 ug/mL
7	71-43-2	Benzene	50 ug/mL
8	108-88-3	Toluene	50 ug/mL
9	100-41-4	Ethyl benzene	50 ug/mL
10	95-47-6	o-Xylene	50 ug/mL
11	108-38-3	m-Xylene	25 ug/mL
12	106-42-3	p-Xylene	25 ug/mL
13	75-27-4	Bromodichloromethane	50 ug/mL
14	124-48-1	Dibromochloromethane	50 ug/mL
15	75-35-4	1,1-Dichloroethene	50 ug/mL
16	156-59-2	cis-1,2-Dichloroethene	50 ug/mL
17	156-60-5	trans-1,2-Dichloroethene	50 ug/mL
18	75-09-2	Methylene chloride	50 ug/mL
19	74-97-5	Bromochloromethane	50 ug/mL
20	75-25-2	Bromoform	50 ug/mL
21	56-23-5	Carbon tetrachloride	50 ug/mL
22	67-66-3	Chloroform	50 ug/mL
23	75-34-3	1,1-Dichloroethane	50 ug/mL
24	127-18-4	Tetrachloroethene	50 ug/mL
25	71-55-6	1,1,1-Trichloroethane	50 ug/mL
26	96-12-8	1,2-Dibromo-3-Chloropropane	50 ug/mL
27	106-93-4	1,2-Dibromoethane	50 ug/mL
28	107-06-2	1,2-Dichloroethane	50 ug/mL
29	78-87-5	1,2-Dichloropropane	50 ug/mL
30	10061-01-5	cis-1,3-Dichloropropene	50 ug/mL
31	10061-02-6	trans-1,3-Dichloropropene	50 ug/mL
32	79-34-5	1,1,2,2-Tetrachloroethane	50 ug/mL
33	79-00-5	1,1,2-Trichloroethane	50 ug/mL
34	79-01-6	Trichloroethene	50 ug/mL
35	108-90-7	Chlorobenzene	50 ug/mL
36	95-50-1	1,2-Dichlorobenzene	50 ug/mL
37	541-73-1	1,3-Dichlorobenzene	50 ug/mL
38	106-46-7	1,4-Dichlorobenzene	50 ug/mL
39	98-82-8	Cumene	50 ug/mL

ALSSTANDARDS V2.5

STANDARD REPORT

Working Standard - Trace VOA

Trace VOA — Description - Trace VOA

Standard: 49436
MFG: NA
MFG Lot: NA
Pipette ID: NA

Created By: Christopher Q. Coleman
Create Date: 08/26/2018 06:08AM

Amount: 2 mL
Expires: 09/26/2019
Usable: Yes
Lab Lot: Trace VOA

Pos.	Analyte	Name	Concentration
40	100-42-5	Styrene	50 ug/mL
41	87-61-6	1,2,3-Trichlorobenzene	50 ug/mL
42	120-82-1	1,2,4-Trichlorobenzene	50 ug/mL
43	75-15-0	Carbon disulfide	50 ug/mL
44	110-82-7	Cyclohexane	50 ug/mL
45	79-20-9	Methyl Acetate	50 ug/mL
46	108-87-2	Methylcyclohexane	50 ug/mL
47	1634-04-4	Methyl t-butyl ether	50 ug/mL
48	76-13-1	Freon 113	50 ug/mL
49	67-64-1	Acetone	500 ug/mL
50	78-93-3	Methyl ethyl ketone	500 ug/mL
51	108-10-1	Methyl isobutyl ketone	500 ug/mL
52	591-78-6	2-Hexanone	500 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
43827	CLP VOA	EPA CLP VOA Stock	CLP VOA 091318	50 uL	09/13/2021
46049	CLP Ketones	EPA CLP Ketones Stock	CLP Ketones 011719	50 uL	01/17/2022
46050	CLP Gases	EPA CLP Gases Stock	CLP Gases 011719	50 uL	01/17/2022
48199	Methanol	Purge & Trap Methanol Solvent	P&T MeOH DS-649	1250 uL	06/09/2032

STANDARD REPORT

Constituent

Stock Standard - CLP VOA

CLP VOA — Description - EPA CLP VOA Stock

Standard: 43827
MFG: Absolute Standards, Inc.
MFG Lot: 091318
Part ID: 94159

Created By: Christopher Q. Coleman
Create Date: 09/26/2018 06:09AM

Amount: 1
Expires: 09/13/2021
Usable: Yes
Lab Lot: CLP VOA 091318

Pos.	Analyte	Name	Concentration
1	71-43-2	Benzene	2000 ug/mL
2	108-88-3	Toluene	2000 ug/mL
3	100-41-4	Ethyl benzene	2000 ug/mL
4	95-47-6	o-Xylene	2000 ug/mL
5	108-38-3	m-Xylene	1000 ug/mL
6	106-42-3	p-Xylene	1000 ug/mL
7	75-27-4	Bromodichloromethane	2000 ug/mL
8	124-48-1	Dibromochloromethane	2000 ug/mL
9	75-35-4	1,1-Dichloroethene	2000 ug/mL
10	156-59-2	cis-1,2-Dichloroethene	2000 ug/mL
11	156-60-5	trans-1,2-Dichloroethene	2000 ug/mL
12	75-09-2	Methylene chloride	2000 ug/mL
13	74-97-5	Bromochloromethane	2000 ug/mL
14	75-25-2	Bromoform	2000 ug/mL
15	56-23-5	Carbon tetrachloride	2000 ug/mL
16	67-66-3	Chloroform	2000 ug/mL
17	75-34-3	1,1-Dichloroethane	2000 ug/mL
18	127-18-4	Tetrachloroethene	2000 ug/mL
19	71-55-6	1,1,1-Trichloroethane	2000 ug/mL
20	96-12-8	1,2-Dibromo-3-Chloropropane	2000 ug/mL
21	106-93-4	1,2-Dibromoethane	2000 ug/mL
22	107-06-2	1,2-Dichloroethane	2000 ug/mL
23	78-87-5	1,2-Dichloropropane	2000 ug/mL
24	10061-01-5	cis-1,3-Dichloropropene	2000 ug/mL
25	10061-02-6	trans-1,3-Dichloropropene	2000 ug/mL
26	79-34-5	1,1,2,2-Tetrachloroethane	2000 ug/mL
27	79-00-5	1,1,2-Trichloroethane	2000 ug/mL
28	79-01-6	Trichloroethene	2000 ug/mL
29	108-90-7	Chlorobenzene	2000 ug/mL
30	95-50-1	1,2-Dichlorobenzene	2000 ug/mL
31	541-73-1	1,3-Dichlorobenzene	2000 ug/mL
32	106-46-7	1,4-Dichlorobenzene	2000 ug/mL
33	98-82-8	Cumene	2000 ug/mL
34	100-42-5	Styrene	2000 ug/mL
35	87-61-6	1,2,3-Trichlorobenzene	2000 ug/mL
36	120-82-1	1,2,4-Trichlorobenzene	2000 ug/mL
37	75-15-0	Carbon disulfide	2000 ug/mL
38	110-82-7	Cyclohexane	2000 ug/mL

STANDARD REPORT
Constituent

Stock Standard - CLP VOA

CLP VOA	Description - EPA CLP VOA Stock
Standard: 43927 MFG: Absolute Standards, Inc. MFG Lot: 091318 Part ID: 94159	Created By: Christopher O. Coleman Create Date: 09/26/2018 05:09AM
	Amount: 1 Expires: 09/13/2021 Usable: Yes Lab Lot: CLP VOA 091318

Pos.	Analyte	Name	Concentration
39	79-20-9	Methyl Acetate	2000 ug/mL
40	108-87-2	Methylcyclohexane	2000 ug/mL
41	1634-04-4	Methyl t-butyl ether	2000 ug/mL
42	76-13-1	Freon 113	2000 ug/mL

STANDARD REPORT
Constituent

Stock Standard - CLP Ketones

CLP Ketones	Description - EPA CLP Ketones Stock
Standard: 46049 MFG: Absolute Standards, Inc. MFG Lot: 011719 Part ID: 82492	Created By: Christopher O. Coleman Create Date: 02/13/2019 09:02AM
	Amount: Not Provided Expires: 01/17/2022 Usable: Yes Lab Lot: CLP Ketones 011719

Pos.	Analyte	Name	Concentration
1	67-64-1	Acetone	20000 ug/mL
2	78-93-3	Methyl ethyl ketone	20000 ug/mL
3	108-10-1	Methyl isobutyl ketone	20000 ug/mL
4	591-78-6	2-Hexanone	20000 ug/mL

STANDARD REPORT
Constituent

Solvent Standard - Methanol

Methanol	Description - Purge & Trap Methanol Solvent
Standard: 46199 MFG: B&J MFG Lot: DS-849 Part ID: Not Provided	Created By: Christopher O. Coleman Create Date: 06/08/2019 01:06PM
	Amount: 235 mL Expires: 06/09/2032 Usable: Yes Lab Lot: P&T MeOH DS-849

Pos.	Analyte	Name	Concentration
Solvent - Analyte(s) not applicable			

STANDARD REPORT
Constituent

Stock Standard - CLP Gases

CLP Gases	Description - EPA CLP Gases Stock
Standard: 46050 MFG: Absolute Standards, Inc. MFG Lot: 011719 Part ID: 30058	Created By: Christopher O. Coleman Create Date: 02/13/2019 09:02AM
	Amount: Not Provided Expires: 01/17/2022 Usable: Yes Lab Lot: CLP Gases 011719

Pos.	Analyte	Name	Concentration
1	75-71-8	Dichlorodifluoromethane	2000 ug/mL
2	74-87-3	Methyl chloride	2000 ug/mL
3	75-01-4	Vinyl chloride	2000 ug/mL
4	74-83-9	Bromomethane	2000 ug/mL
5	75-00-3	Ethyl chloride	2000 ug/mL
6	75-69-4	Freon 11	2000 ug/mL

STANDARD REPORT

Working Standard - Trace MS

Trace MS — Description - Trace Matrix Spike

Standard: 49437
MFG: NA
MFG Lot: NA
Pipette ID: NA

Created By: Christopher Q. Coleman
Create Date: 08/25/2019 06:08AM

Amount: 2 mL
Expires: 09/26/2019
Usable: Yes
Lab Lot: Trace Matrix Spike

Pos.	Analyte	Name	Concentration
1	75-35-4	1,1-Dichloroethene	50 ug/mL
2	71-43-2	Benzene	50 ug/mL
3	79-01-6	Trichloroethene	50 ug/mL
4	108-88-3	Toluene	50 ug/mL
5	108-90-7	Chlorobenzene	50 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
46175	CLP M.S.	CLP Matrix Spike Stock	CLP MS CP-4257A	100 uL	11/30/2020
48199	Methanol	Purge & Trap Methanol Solvent	P&T MeOH DS-649	1900 uL	08/09/2032

STANDARD REPORT
Constituent

Stock Standard - CLP M.S.

CLP M.S. — Description - CLP Matrix Spike Stock

Standard: 46175
MFG: Ultra Scientific
MFG Lot: CP-4257A
Part ID: Not Provided

Created By: Christopher Q. Coleman
Create Date: 02/25/2019 09:02AM

Amount: Not Provided
Expires: 11/30/2020
Usable: Yes
Lab Lot: CLP MS CP-4257A

Pos.	Analyte	Name	Concentration
1	75-35-4	1,1-Dichloroethene	1000 ug/mL
2	71-43-2	Benzene	1000 ug/mL
3	79-01-6	Trichloroethene	1000 ug/mL
4	108-88-3	Toluene	1000 ug/mL
5	108-90-7	Chlorobenzene	1000 ug/mL

STANDARD REPORT
Constituent

Solvent Standard - Methanol

Methanol — Description - Purge & Trap Methanol Solvent

Standard: 48199
MFG: B&J
MFG Lot: DS-649
Part ID: Not Provided

Created By: Christopher Q. Coleman
Create Date: 08/09/2019 01:06PM

Amount: 235 mL
Expires: 08/09/2032
Usable: Yes
Lab Lot: P&T MeOH DS-649

Pos.	Analyte	Name	Concentration
Solvent - Analyte(s) not applicable			

STANDARD REPORT

Working Standard - CLP VLM ICV

CLP VLM ICV — Description - CLP VLM ICV

Standard: 49438
MFG: NA
MFG Lot: NA
Pipette ID: NA

Created By: Christopher Q. Coleman
Create Date: 08/26/2019 06:08AM

Amount: 2 mL
Expires: 09/26/2019
Usable: Yes
Lab Lot: CLP VLM ICV

Pos.	Analyte	Name	Concentration
1	75-71-8	Dichlorodifluoromethane	100 ug/mL
2	74-87-3	Methyl chloride	100 ug/mL
3	75-01-4	Vinyl chloride	100 ug/mL
4	74-83-9	Bromomethane	100 ug/mL
5	75-00-3	Ethyl chloride	100 ug/mL
6	75-69-4	Freon 11	100 ug/mL
7	67-64-1	Acetone	200 ug/mL
8	78-93-3	Methyl ethyl ketone	200 ug/mL
9	108-10-1	Methyl isobutyl ketone	200 ug/mL
10	591-78-6	2-Hexanone	200 ug/mL
11	71-43-2	Benzene	100 ug/mL
12	108-88-3	Toluene	100 ug/mL
13	100-41-4	Ethyl benzene	100 ug/mL
14	95-47-6	o-Xylene	100 ug/mL
15	108-38-3	m-Xylene	50 ug/mL
16	106-42-3	p-Xylene	50 ug/mL
17	75-27-4	Bromodichloromethane	100 ug/mL
18	124-48-1	Dibromochloromethane	100 ug/mL
19	75-35-4	1,1-Dichloroethene	100 ug/mL
20	156-59-2	cis-1,2-Dichloroethene	100 ug/mL
21	156-60-5	trans-1,2-Dichloroethene	100 ug/mL
22	75-09-2	Methylene chloride	100 ug/mL
23	74-97-5	Bromochloromethane	100 ug/mL
24	75-25-2	Bromoform	100 ug/mL
25	56-23-5	Carbon tetrachloride	100 ug/mL
26	67-66-3	Chloroform	100 ug/mL
27	75-34-3	1,1-Dichloroethane	100 ug/mL
28	127-18-4	Tetrachloroethene	100 ug/mL
29	71-55-6	1,1,1-Trichloroethane	100 ug/mL
30	96-12-8	1,2-Dibromo-3-Chloropropane	100 ug/mL
31	106-93-4	1,2-Dibromoethane	100 ug/mL
32	107-06-2	1,2-Dichloroethane	100 ug/mL
33	78-87-5	1,2-Dichloropropane	100 ug/mL
34	10061-01-5	cis-1,3-Dichloropropene	100 ug/mL
35	10061-02-6	trans-1,3-Dichloropropene	100 ug/mL
36	79-34-5	1,1,2,2-Tetrachloroethane	100 ug/mL
37	79-00-5	1,1,2-Trichloroethane	100 ug/mL
38	79-01-6	Trichloroethene	100 ug/mL
39	108-90-7	Chlorobenzene	100 ug/mL

STANDARD REPORT

Working Standard - CLP VLM ICV

CLP VLM ICV — Description: CLP VLM ICV

Standard: 49436
MFG: NA
MFG Lot: NA
Pipette ID: NA

Created By: Christopher Q. Coleman
Create Date: 08/28/2019 06:08AM

Amount: 2 mL
Expires: 09/26/2019
Usable: Yes
Lab Lot: CLP VLM ICV

Pos.	Analyte	Name	Concentration
40	95-50-1	1,2-Dichlorobenzene	100 ug/mL
41	541-73-1	1,3-Dichlorobenzene	100 ug/mL
42	106-46-7	1,4-Dichlorobenzene	100 ug/mL
43	98-82-8	Cumene	100 ug/mL
44	100-42-5	Styrene	100 ug/mL
45	87-61-6	1,2,3-Trichlorobenzene	100 ug/mL
46	120-82-1	1,2,4-Trichlorobenzene	100 ug/mL
47	75-15-0	Carbon disulfide	100 ug/mL
48	110-82-7	Cyclohexane	100 ug/mL
49	79-20-9	Methyl Acetate	100 ug/mL
50	108-87-2	Methylcyclohexane	100 ug/mL
51	1634-04-4	Methyl t-butyl ether	100 ug/mL
52	76-13-1	Freon 113	100 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume	Expires
43828	8260 Gases	VOAL Gases Stock	Ab Gases 062618	1 mL	06/26/2021
44973	CLPKetoneICV	EPA CLP Ketones ICV Stock	CLP Ketones ICV	60 uL	04/30/2021
45795	CLP VOA ICV	EPA CLP VOA ICV Stock	CLP VOA ICV	100 uL	02/29/2020
48199	Methanol	Purge & Trap Methanol Solvent	P&T MeOH DS-649	0.82 mL	06/09/2032

STANDARD REPORT
Constituent

Stock Standard - CLPKetoneICV

CLPKetoneICV — Description: EPA CLP Ketones ICV Stock

Standard: 44973
MFG: Restek
MFG Lot: AD134324
Part ID: 30008

Created By: Christopher Q. Coleman
Create Date: 11/30/2018 06:11AM

Amount: Not Provided
Expires: 04/30/2021
Usable: Yes
Lab Lot: CLP Ketones ICV

Pos.	Analyte	Name	Concentration
1	67-64-1	Acetone	5000 ug/mL
2	78-93-3	Methyl ethyl ketone	5000 ug/mL
3	108-10-1	Methyl isobutyl ketone	5000 ug/mL
4	591-78-6	2-Hexanone	5000 ug/mL

STANDARD REPORT
Constituent

Solvent Standard - Methanol

Methanol — Description: Purge & Trap Methanol Solvent

Standard: 48199
MFG: B&J
MFG Lot: DS-649
Part ID: Not Provided

Created By: Christopher Q. Coleman
Create Date: 06/09/2019 01:06PM

Amount: 235 mL
Expires: 06/09/2032
Usable: Yes
Lab Lot: P&T MeOH DS-649

Pos.	Analyte	Name	Concentration
Solvent - Analyte(s) not applicable			

STANDARD REPORT
Constituent

Stock Standard - 8260 Gases

8260 Gases — Description: VOAL Gases Stock

Standard: 43828
MFG: Absolute Standards, Inc.
MFG Lot: 062618
Part ID: 30002

Created By: Christopher Q. Coleman
Create Date: 09/25/2018 08:09AM

Amount: Not Provided
Expires: 06/26/2021
Usable: Yes
Lab Lot: Ab Gases 062618

Pos.	Analyte	Name	Concentration
1	75-71-8	Dichlorodifluoromethane	200 ug/mL
2	74-87-3	Methyl chloride	200 ug/mL
3	75-01-4	Vinyl chloride	200 ug/mL
4	74-83-9	Bromomethane	200 ug/mL
5	75-00-3	Ethyl chloride	200 ug/mL
6	75-69-4	Freon 11	200 ug/mL

STANDARD REPORT

Constituent

Stock Standard - CLP VOA ICV

CLP VOA ICV	Description - EPA CLP VOA ICV Stock

Standard: 45795
MFG: Restek
MFG Lot: A0125239
Part ID: 30492

Created By: Christopher Q. Coleman
Create Date: 01/28/2019 09:01AM

Amount: 1
Expires: 02/29/2020
Usable: Yes
Lab Lot: CLP VOA ICV A0125239

Pos.	Analyte	Name	Concentration
1	71-43-2	Benzene	2000 ug/mL
2	108-88-3	Toluene	2000 ug/mL
3	100-41-4	Ethyl benzene	2000 ug/mL
4	95-47-6	o-Xylene	2000 ug/mL
5	108-38-3	m-Xylene	1000 ug/mL
6	106-42-3	p-Xylene	1000 ug/mL
7	75-27-4	Bromodichloromethane	2000 ug/mL
8	124-48-1	Dibromochloromethane	2000 ug/mL
9	75-35-4	1,1-Dichloroethene	2000 ug/mL
10	156-59-2	cis-1,2-Dichloroethene	2000 ug/mL
11	156-60-5	trans-1,2-Dichloroethene	2000 ug/mL
12	75-09-2	Methylene chloride	2000 ug/mL
13	74-97-5	Bromochloromethane	2000 ug/mL
14	75-25-2	Bromoform	2000 ug/mL
15	56-23-5	Carbon tetrachloride	2000 ug/mL
16	67-66-3	Chloroform	2000 ug/mL
17	75-34-3	1,1-Dichloroethane	2000 ug/mL
18	127-18-4	Tetrachloroethene	2000 ug/mL
19	71-55-6	1,1,1-Trichloroethane	2000 ug/mL
20	96-12-8	1,2-Dibromo-3-Chloropropane	2000 ug/mL
21	106-93-4	1,2-Dibromoethane	2000 ug/mL
22	107-06-2	1,2-Dichloroethane	2000 ug/mL
23	78-87-5	1,2-Dichloropropane	2000 ug/mL
24	10061-01-5	cis-1,3-Dichloropropene	2000 ug/mL
25	10061-02-6	trans-1,3-Dichloropropene	2000 ug/mL
26	79-34-5	1,1,2,2-Tetrachloroethane	2000 ug/mL
27	79-00-5	1,1,2-Trichloroethane	2000 ug/mL
28	79-01-6	Trichloroethene	2000 ug/mL
29	108-90-7	Chlorobenzene	2000 ug/mL
30	95-50-1	1,2-Dichlorobenzene	2000 ug/mL
31	541-73-1	1,3-Dichlorobenzene	2000 ug/mL
32	106-46-7	1,4-Dichlorobenzene	2000 ug/mL
33	98-82-8	Cumene	2000 ug/mL
34	100-42-5	Styrene	2000 ug/mL
35	87-61-6	1,2,3-Trichlorobenzene	2000 ug/mL
36	120-82-1	1,2,4-Trichlorobenzene	2000 ug/mL
37	75-15-0	Carbon disulfide	2000 ug/mL
38	110-82-7	Cyclohexane	2000 ug/mL

ALSSTANDARDS V2.5

STANDARD REPORT

Constituent

Stock Standard - CLP VOA ICV

CLP VOA ICV	Description - EPA CLP VOA ICV Stock

Standard: 45795
MFG: Restek
MFG Lot: A0125239
Part ID: 30492

Created By: Christopher Q. Coleman
Create Date: 01/28/2019 09:01AM

Amount: 1
Expires: 02/29/2020
Usable: Yes
Lab Lot: CLP VOA ICV A0125239

Pos.	Analyte	Name	Concentration
39	79-20-9	Methyl Acetate	2000 ug/mL
40	108-87-2	Methylcyclohexane	2000 ug/mL
41	1634-04-4	Methyl t-butyl ether	2000 ug/mL
42	76-13-1	Freon 113	2000 ug/mL

ALSSTANDARDS V2.6

Certificate of Analysis

ULTRA SCIENTIFIC Analytical Solutions

4-Bromofluorobenzene Solution

Product Number: STS-110N | Page: 1 of 1

Lot Number: CH-3248Z | Lot Issue Date: 31-Aug-2016 | Expiration Date: 31-Oct-2019

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
4-bromofluorobenzene	000460-00-4	RM03365	2005 ± 10 µg/mL

Matrix: methanol (methyl alcohol)

Storage: Store Frozen (-25° to -10°C).

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

34352

John Russo, President

Vincent Wang, Ph.D., Director of QA/RA

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ISO 9001 CS Registered
ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

Certified Reference Material CRM

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Solvent: Methanol
Lot# DN615

Part Number: 20048
Lot Number: 011917
Description: CLP Volatiles - Low Concentration Internal Standard
3 components
Expiration Date: 011922
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 2500
NIST Test ID#: 822-276872-11
Weight(s) shown below were combined and diluted to (mL): 100.0

Component	Rank	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Purity Uncertainty (%)	Target Weight (g)	Actual Weight (g)	Actual Conc (µg/mL)	Actual Uncertainty (µg/mL)	Density (g/mL)	CAS#	MSDS Information (Solvent: Safety Info. On Attached pg.) CGA, FG, TWA)	Uncertainty
Chlorobenzene-d5	69	CA0QAP12	2500	99.6	0.2	0.25109	0.25118	2501.5	10.1	3114-55-4	N/A	of-mt 1110mg/kg	
1,4-Dichlorobenzene-d4	119	PR-194986/2726/261	2500	98	0.2	0.25513	0.25522	2500.9	10.3	3855-82-1	N/A	of-mt 500mg/kg	
1,4-Difluorobenzene	165	1310040	2500	99	0.2	0.25255	0.25279	2502.0	10.2	540-36-3	N/A	N/A	

TE-20048.D

Weight: GENSCO-1, Detector: MSD, Column: Vocol (60m X 0.25mm ID X 1.5um film thickness), Oven Profile: Temp. 1 = 35°C (Time 1=10min.), Temp. 2 = 200°C (Time 2=0.25 min.), Rate = 4°C/min., Injector Temp.= 200°C, Detector Temp. = 220°C Analyst: Candice Warren.

Name	MSD RT (min.)
1,4-Difluorobenzene	23.67
Chlorobenzene-d5	35.69
1,4-Dichlorobenzene-d4	45.38

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1 of 2

Lot 011917

20048

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Scopes: http://AbsoluteStandards.com

WEIGHT REPORT

Part Number: 94157
Lot Number: 092818
Description: CLP SOM 01.1 DMC Ketones
2 components
Expiration Date: 092821
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 2500
NIST Test ID#: 2594158

Solvent(s): Methanol, Lot# DT140 (90%); Water, Lot# 092118 (10%)

5E-05 Balance Uncertainty
ght(s) shown below were combined and diluted to (mL): 100.0 0.001 Flask Uncertainty

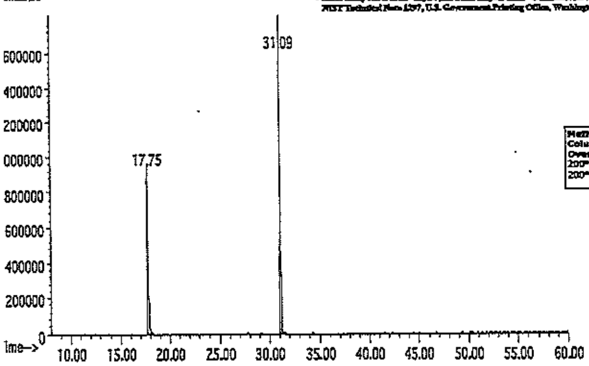
Formulated By: Eli Allaga — 092818 DATE
Reviewed By: Pedro L. Rentas — 092818 DATE

SDS Information (Solvent Safety Info. On Attached pg.)

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity (%)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	CAS#	OSHA PEL (TWA)	LD50
tanone-1,1,1,3,3-d5	2557	M-278	2500	99	0.2	0.25255	0.25280	2502.4	10.2	24313-50-6	N/A	orl-rat 2737mg/kg
xanone-1,1,1,3,3-d5	2558	1-500	2500	99.1	0.2	0.25230	0.25207	2500.7	10.1	4840-82-6	N/A	orl-rat 2590mg/kg

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise noted.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyatt, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

TIC: 94157.D



Method: GC6MSD-1. Detector: Mass Selective Detector. Column: Vocol (60m X 0.25mm ID X 1.5µm film thickness). Oven Profile: Temp. 1 = 35°C (Time 1=10min.), Temp. 2 = 200°C (Time 2=8.75 min.), Rate = 4°C/min., Injector Temp.= 200°C. Detector Temp. = 220°C. Analyst: Candice Warren.

Name	MSD RT (min.)
2-Butanone-1,1,1,3,3-d5	17.75
2-Hexanone-1,1,1,3,3-d5	31.12

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CERTIFIED WEIGHT REPORT

Part Number: 94158
Lot Number: 121918
Description: CLP SOM 01.1 VOC DMC Gases
2 components
Expiration Date: 121921
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 2000
NIST Test ID#: 2594186

Solvent(s): Methanol, Lot# DT140

5E-05 Balance Uncertainty
Volume(s) shown below were combined and diluted to (mL): 50.0 0.007 Flask Uncertainty

Formulated By: Vincent K. Crisafo, Jr. — 121918 DATE
Reviewed By: Pedro L. Rentas — 121918 DATE

SDS Information (Solvent Safety Info. On Attached pg.)

Compound	Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc. (ug/mL)	Final Conc. (ug/mL)	Expanded Uncertainty (+/-) (µg/mL)	CAS#	OSHA PEL (TWA)	LD50
1. Chloroethane-d5	94170	072617	0.24	12.00	0.042	8353.2	2004.0	10.3	19199-91-0	N/A	N/A
2. Vinyl chloride-d3	94177	072617	0.20	10.00	0.042	10019.3	2003.0	10.0	6745-35-3	N/A	orl-rat 500mg/kg

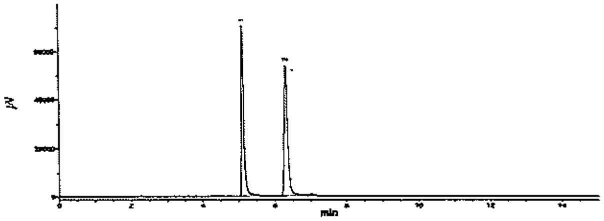
- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyatt, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Run 21, "P94158 L121918 [2000µg/mL in MeOH]"

Run Length: 15.00 min, 9000 points at 10 points/second.
Created: Thu, Dec 20, 2018 at 1:50:52 PM.
Sampled: Sequence "121718-GC1", Method "GC1-M9".
Analyzed using Method "GC1-M9".

Comments
GC1-M9 Analysis by Candice Warren
Column ID SPB-Vocol 105 meter X 0.53mm X 3.0µm film thickness
Flow rates: Total flow=150mL/min., Helium (carrier)=10mL/min., Helium(make-up)=40mL/min., Hydrogen(make-up)=100mL/min.
Oven Profile: Temp. 1=35°C (Time 1=9 min.), Temp 2=200°C (Time 2=1 min.), Rate = 33°C/min., Total run time=15 min. Injector temp.=200°C, FID Temp.=200°C.
ELCD Signal = Edaq Channel 1 PID Signal = Edaq Channel 2
Standard Injection = 0.5µL, Range=4 Purge Valve = 0 min.

Analyte	ELCD RT (min.)
Vinyl chloride-d3	5.16
Chloroethane-d5	6.35



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Certified Reference Material CRM

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ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

WEIGHT REPORT

Part Number: 30058
Lot Number: 011719
Description: EPA Method 502/524 - Volatile Gases Mix #1
6 components
Expiration Date: 011722
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 2000
NIST Test ID#: 2594186

Solvent: Methanol, Lot# DU230-US

5E-05 Balance Uncertainty
ght(s) shown below were combined and diluted to (mL): 500.0 0.058 Flask Uncertainty

Formulated By: Vincent K. Crisafo, Jr. — 011719 DATE
Reviewed By: Pedro L. Rentas — 011719 DATE

SDS Information (Solvent Safety Info. On Attached pg.)

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity (%)	Target Weight (g)	Actual Weight (g)	Actual Conc(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	CAS#	OSHA PEL (TWA)	LD50
momethane	60	01671-DX	2000	99.5	0.2	1.00608	1.0036	2001.0	8.1	74-83-9	5 ppm (20mg/m3/SH) (skin)	orl-rat 214mg/kg
oroethane	72	082817	2000	99	0.2	1.01016	1.0119	2003.4	8.1	75-00-3	1000 ppm (2600mg/m3/SH)	N/A
oromethane	79	0690GMS	2000	99.8	0.2	1.00509	1.0069	2007.4	8.1	74-87-3	100 ppm	orl-rat 1800mg/kg
hlorodifluoromethane	134	82-0497	2000	99	0.2	1.01018	1.0163	2010.2	8.1	75-71-8	1000 ppm (4950mg/m3/SH)	N/A
hlorofluoromethane	194	01823MW	2000	99	0.2	1.01016	1.0120	2003.8	8.1	75-69-4	1000 ppm (5600mg/m3/SH)	ipr-mus 1743mg/kg
yl chloride	305	04854EA	2000	99.5	0.2	1.00508	1.0103	2010.4	8.1	75-01-4	N/A	N/A

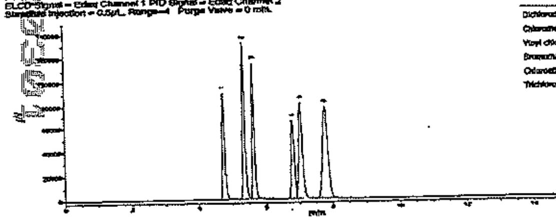
- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyatt, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Run 6, "P30058 L011719 [2000µg/mL in MeOH]"

Run Length: 15.00 min, 9000 points at 10 points/second.
Created: Thu, Jan 17, 2019 at 11:38:53 AM.
Sampled: Sequence "011719-GC1", Method "GC1-M9".
Analyzed using Method "GC1-M9".

Comments
GC1-M9 Analysis by Candice Warren
Column ID SPB-Vocol 105 meter X 0.53mm X 3.0µm film thickness
Flow rates: Total flow=150mL/min., Helium (carrier)=10mL/min., Helium(make-up)=40mL/min., Hydrogen(make-up)=100mL/min.
Oven Profile: Temp. 1=35°C (Time 1=9 min.), Temp 2=200°C (Time 2=1 min.), Rate = 33°C/min., Total run time=15 min. Injector temp.=200°C, FID Temp.=200°C.
ELCD Signal = Edaq Channel 1 PID Signal = Edaq Channel 2
Standard Injection = 0.5µL, Range=4 Purge Valve = 0 min.

Analyte	ELCD RT (min.)
Dichlorodifluoromethane	4.34
Chloromethane	4.83
Vinyl chloride	5.14
Bromomethane	5.19
Chloroethane	5.40
Trichlorofluoromethane	7.05



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CERTIFIED WEIGHT REPORT

Part Number: 94155
Lot Number: 022017
Description: CLP SOM 01.1 DMC Volatiles
9 components
Expiration Date: 022020
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 2000
NIST Test ID#: 822-275872-11

Solvent(s): Methanol, Lot# DQ538

5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 100.0 0.001 Flask Uncertainty

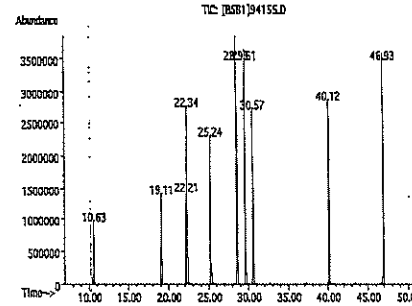
Formulated By: Gabriel Helland — 022017 DATE
Reviewed By: Pedro L. Rentas — 022017 DATE

MSDS Information (Solvent Safety Info. On Attached pg.)

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	CAS#	OSHA PEL (TWA)	LD50
1. Benzene-d6	20	4605DKDK	2000	99	0.2	0.20204	0.20245	2004.0	8.2	1076-43-3	1 ppm (SH)	N/A
2. Chloroform-d	2566	V210P1	2000	99.8	0.2	0.20042	0.20101	2005.9	8.1	865-49-6	N/A	orl-hmn 140mg/kg
3. 1,2-Dichlorobenzene-d4	128	PR-18893/1220/D62	2000	99	0.2	0.20204	0.20283	2007.8	8.2	2199-69-1	50 ppm (300mg/m3) (CL)	orl-rat 500mg/kg
4. 1,2-Dichloroethane-d4	137	V208P25	2000	99.6	0.2	0.20083	0.20115	2003.2	8.1	17060-07-0	N/A	orl-mus 625mg/kg
5. 1,1-Dichloroethene-d2	2047	W151P10	2000	99	0.2	0.20204	0.20215	2001.1	8.1	22280-73-5	N/A	orl-rat 200mg/kg
6. 1,2-Dichloropropane-d6	2051	Z322P1	2000	99.4	0.2	0.20123	0.20166	2004.3	8.1	93952-08-0	N/A	orl-rat 1947mg/kg
7. cis,trans-1,3-Dichloropropene-d4	2052	Z-181	2000	42.0	0.2	0.47624	0.47735	2004.6	19.1	202656-23-3	N/A	orl-rat 470mg/kg
8. 1,1,2,2-Tetrachloroethane-d2	2053	F465P1	2000	99.0	0.2	0.20083	0.20130	2004.7	8.1	33685-54-0	N/A	orl-rat 800mg/kg
9. Toluene-d8	282	12E-434	2000	99.5	0.2	0.20103	0.20165	2008.2	8.1	2037-26-5	200 ppm	orl-rat 5000mg/kg

Method: GC6MSD-1. Detector: Mass Selective Detector. Column: Vocol (60m X 0.25mm ID X 1.5µm film thickness). Oven Profile: Temp. 1 = 35°C (Time 1=10min.), Temp. 2 = 200°C (Time 2=8.75 min.), Rate = 4°C/min., Injector Temp.= 200°C, Detector Temp. = 220°C. Analyst: Candice Warren.

TIC: [BSB1]94155.D



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Name	MSD RT (min.)
1,1-Dichloroethene-d2	10.61
Chloroform-d	19.13
1,2-Dichloroethane-d4	22.20
Benzene-d6	22.36
1,2-Dichloropropane-d6	25.22
cis-1,3-Dichloropropene-d4	28.53
Toluene-d8	29.52
trans-1,3-Dichloropropene-d4	30.59
1,1,2,2-Tetrachloroethane-d2	40.08
1,2-Dichlorobenzene-d4	46.93

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyatt, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

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RTIFIED WEIGHT REPORT

Part Number: 94159
Lot Number: 091318
Description: CLP SOM 01.1 Volatiles
42 components
Expiration Date: 091321
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): Varied
NIST Test ID#: 2584188 — 6E-05 Balance Uncertainty
Volume(s) shown below were combined and diluted to (mL): 100.0 — 0.001 Flask Uncertainty

Solvent(s): Methanol — Lot# DT140Q1

Formulated By: Mario Lugo — 091318 DATE
Reviewed By: Pedro L. Rentas — 091318 DATE

Compound	Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	CAS#	OSHA PEL (TWA)	LD50
1. Benzene	93831	060618	0.10	10.00	0.042	20006.8	2000.6	18.7	71-43-2	1 ppm	orl-rat 424mg/kg
2. Toluene	93831	060618	0.10	10.00	0.042	20002.8	2000.1	18.7	108-88-3	100 ppm	orl-rat 5000mg/kg
3. Ethyl benzene	93831	060618	0.10	10.00	0.042	20002.5	2000.0	18.7	100-41-4	100 ppm (435mg/m3/8H)	orl-rat 3500mg/kg
4. o-Xylene	93831	060618	0.10	10.00	0.042	20003.8	2000.2	18.7	95-47-6	100 ppm (435mg/m3/8H)	ipr-mus 1364mg/kg
5. m-Xylene	93831	060618	0.10	10.00	0.042	10003.3	1000.2	9.3	108-38-3	100 ppm (435mg/m3/8H)	orl-rat 5g/kg
6. p-Xylene	93831	060618	0.10	10.00	0.042	10005.2	1000.4	9.3	106-42-3	100 ppm (435mg/m3/8H)	orl-rat 5g/kg
7. Bromodichloromethane	35171	051118	0.05	5.00	0.017	40001.7	1999.9	15.9	75-27-4	N/A	orl-rat 916mg/kg
8. Dibromochloromethane	35171	051118	0.05	5.00	0.017	40000.8	1999.8	15.9	124-48-1	N/A	orl-rat 848mg/kg
9. cis-1,2-Dichloroethene	35171	051118	0.05	5.00	0.017	40002.0	1999.9	15.8	156-59-2	N/A	N/A
10. trans-1,2-Dichloroethene	35171	051118	0.05	5.00	0.017	40000.8	1999.8	15.9	156-60-5	N/A	orl-rat 1235mg/kg
11. Methylene chloride	35171	051118	0.05	5.00	0.017	40003.2	1999.9	15.8	75-09-2	500 ppm	orl-rat 500mg/kg
12. 1,1-Dichloroethane	32251	070218	0.10	10.00	0.042	20000.8	1999.9	18.7	75-35-4	1 ppm (4mg/m3/8H)	orl-rat 200mg/kg
13. Bromochloromethane	94170	010618	0.10	10.00	0.042	20017.6	2001.6	18.7	74-97-5	200 ppm (1050mg/m3/8H)	orl-rat 5000mg/kg
14. Bromoform	94170	010618	0.10	10.00	0.042	20010.4	2000.8	18.7	75-25-2	0.5 ppm (5mg/m3) (skin)	orl-rat 933mg/kg
15. Carbon tetrachloride	94170	010618	0.10	10.00	0.042	20006.0	2000.4	18.7	56-23-5	5 ppm (12.6mg/m3/8H)	orl-rat 2350mg/kg
16. Chloroform	94170	010618	0.10	10.00	0.042	20019.5	2001.7	18.7	67-66-3	50 ppm (240mg/m3) (CL)	orl-rat 908mg/kg
17. 1,1-Dichloroethane	94170	010618	0.10	10.00	0.042	20007.8	2000.5	18.7	75-34-3	100 ppm	orl-rat 725mg/kg
18. Tetrachloroethane	94170	010618	0.10	10.00	0.042	20015.7	2001.4	18.7	127-18-4	25 ppm (170mg/m3/8-h)(skin)	orl-rat 2629mg/kg
19. 1,1,1-Trichloroethane	94170	010618	0.10	10.00	0.042	20007.4	2000.5	18.7	71-55-6	350 ppm (1900mg/m3/8H)	orl-rat 10300mg/kg
20. 1,2-Dibromo-3-chloropropane	94171	010618	0.10	10.00	0.042	20015.5	2001.3	18.7	96-12-8	0.001 ppm	orl-rat 170mg/kg
21. 1,2-Dibromoethane	94171	010618	0.10	10.00	0.042	20017.3	2001.5	18.7	106-93-4	20 ppm (8H)	orl-rat 108mg/kg
22. 1,2-Dichloroethane	94171	010618	0.10	10.00	0.042	20005.4	2000.3	18.7	107-06-2	50 ppm (8H)	orl-rat 670mg/kg
23. 1,2-Dichloropropane	94171	010618	0.10	10.00	0.042	20008.4	2000.4	18.7	78-87-5	75 ppm (350mg/m3/8H)	orl-rat 1517mg/kg
24. cis-1,3-Dichloropropene	94171	010618	0.10	10.00	0.042	20016.0	2001.4	18.7	10061-01-5	N/A	N/A
25. 1,3-Dichloropropene	94171	010618	0.10	10.00	0.042	20011.4	2000.9	18.7	10061-02-6	N/A	N/A
26. 2-Tetrachloroethane	94171	010618	0.10	10.00	0.042	20014.9	2001.2	18.7	79-34-5	5 ppm (35mg/m3/8H)(skin)	orl-rat 800mg/kg
27. 1,1,2-Trichloroethane	94171	010618	0.10	10.00	0.042	20024.9	2002.3	18.7	79-00-5	10 ppm (45mg/m3/8H)(skin)	orl-rat 836mg/kg
28. Trichloroethene	94171	010618	0.10	10.00	0.042	20012.9	2001.1	18.7	79-01-6	50 ppm (270mg/m3/8H)	orl-mus 2402mg/kg
29. Chlorobenzene	99783	091118	0.10	10.00	0.042	20001.9	2000.0	18.7	108-90-7	75 ppm (350mg/m3/8H)	orl-rat 2290mg/kg
30. 1,2-Dichlorobenzene	99783	091118	0.10	10.00	0.042	20002.9	2000.1	18.7	95-50-1	50 ppm (300mg/m3) (CL)	orl-rat 500mg/kg
31. 1,3-Dichlorobenzene	99783	091118	0.10	10.00	0.042	20003.7	2000.2	18.7	541-73-1	N/A	ipr-mus 1062mg/kg
32. 1,4-Dichlorobenzene	99783	091118	0.10	10.00	0.042	20005.9	2000.4	18.7	106-46-7	75 ppm (450mg/m3/8H)	orl-rat 500mg/kg
33. Isopropylbenzene	99783	091118	0.10	10.00	0.042	20003.9	2000.2	18.7	98-82-8	50 ppm (245mg/m3/8H)	orl-rat 1400mg/kg
34. 1,2,3-Trichlorobenzene	99783	091118	0.10	10.00	0.042	20003.7	2000.2	18.7	87-61-6	N/A	ipr-mus 1390mg/kg
35. 1,2,4-Trichlorobenzene	99783	091118	0.10	10.00	0.042	20003.9	2000.2	18.7	120-82-1	5 ppm (CL) (40mg/m3)	orl-rat 756mg/kg
36. Styrene	32361	020418	0.10	10.00	0.042	20000.8	1999.9	18.7	100-42-5	100 ppm	orl-rat 5000mg/kg
37. Carbon disulphide	94173	010718	0.10	10.00	0.042	20001.9	2000.0	18.7	75-15-0	4 ppm (12mg/m3) (skin)	orl-rat 3200mg/kg
38. Cyclohexane	94173	010718	0.10	10.00	0.042	20002.0	2000.0	18.7	110-82-7	300 ppm (1050mg/m3/8H)	orl-rat 12705mg/kg
39. Methyl acetate	94173	010718	0.10	10.00	0.042	20002.4	2000.0	18.7	79-20-9	200 ppm (610mg/m3/8H)	orl-rat 5725mg/kg
40. Methylcyclohexane	94173	010718	0.10	10.00	0.042	20001.7	1999.9	18.7	108-87-2	N/A	orl-mus 2250mg/kg
41. Methyl tert-butyl ether (MTBE)	94173	010718	0.10	10.00	0.042	20001.2	1999.9	18.7	1634-04-4	N/A	orl-rat 4g/kg
42. 1,1,2-Trichloro-1,2,2-trifluoroethane	94173	010718	0.10	10.00	0.042	20001.9	2000.0	18.7	76-13-1	1000 ppm (7600mg/m3/8H)	orl-rat 43g/kg

SDS Information (Solvent Safety Info. On Attached pg.)

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyatt, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

S 43827

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Certificate of Analysis
ISO Guide 34

Volatiles Matrix Spiking Standard

Product Number: CLP-100N — Page: 1 of 1
Lot Number: CP-4257A — Lot Issue Date: 26-Oct-2018 — Expiration Date: 30-Nov-2020

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with Agilent's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
benzene	000071-43-2	RM03830	1005 ± 5 µg/mL
chlorobenzene	000108-90-7	RM01874	1002 ± 5 µg/mL
1,1-dichloroethene	000075-35-4	RM09169	1003 ± 5 µg/mL
toluene	000108-88-3	RM10201	1005 ± 5 µg/mL
trichloroethene	000079-01-6	RM06644	1004 ± 5 µg/mL

Matrix: methanol (methyl alcohol)

Storage: Store Frozen (-25° to -10°C).

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

Monica Bourgeois
QMS Representative

S 46175

ANAB — ISO Guide 34 Cert No. AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026 registered ISO 9001 Quality Managment System

ANAB — ISO17025 Cert No. AT-1537

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CERTIFIED WEIGHT REPORT

Part Number: 82492
Lot Number: 011719
Description: EPA Method 8240A - Mix #2 Conc
Ketones - 4 components
Expiration Date: 011722
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 20000
NIST Test ID#: 2584188 — 5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 200.0 — 0.083 Flask Uncertainty

Solvent(s): Methanol (90%), Water (10%) — Lot# DI230-US, 092118

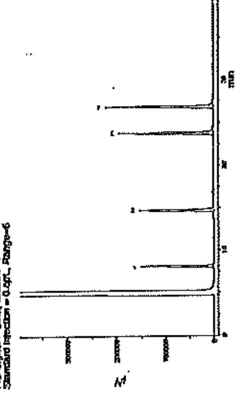
Formulated By: Eli Alloga — 011719 DATE
Reviewed By: Pedro L. Rentas — 011719 DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	CAS#	OSHA PEL (TWA)	LD50
1. Acetone	4	[illegible]	20000	99.5	0.2	4.01993	4.02005	20000.6	51.2	67-64-1	750 ppm	orl-rat 5800mg/kg
2. 2-Butanone (Methyl ethyl ketone)	53	[illegible]	20000	99.9	0.2	4.00304	4.00395	20001.8	50.9	78-93-3	200 ppm (590mg/m3/8H)	orl-rat 2737mg/kg
3. 2-Hexanone	200	[illegible]	20000	99	0.2	4.05140	4.05150	20000.4	52.5	591-78-6	100 ppm (410mg/m3/8H)	orl-rat 2590mg/kg
4. 4-Methyl-2-pentanone (MIBK)	210	[illegible]	20000	99.8	0.2	4.01983	4.02000	20000.3	51.2	108-10-1	100 ppm (410mg/m3/8H)	orl-rat 2080mg/kg

SDS Information (Solvent Safety Info. On Attached pg.)

Run 93, "P82492 L011719 (20mg/mL in MeOH)"

Comments
GC-FID Analysis by Candice Warren



Name	FID RT (min.)
Acetone	8.11
2-Butanone	14.38
4-Methyl-2-pentanone	23.40
2-Hexanone	26.79

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WEIGHT REPORT

Part Number: 30002
Lot Number: 062618
Description: EPA Method 502.2 - Volatile Gases Mix #1
6 components
Expiration Date: 062621
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 200
NIST Test ID#: 2584188
Volume(s) shown below were combined and diluted to (mL): 200.0 — 0.058

Solvent(s): Methanol — Lot# D5405

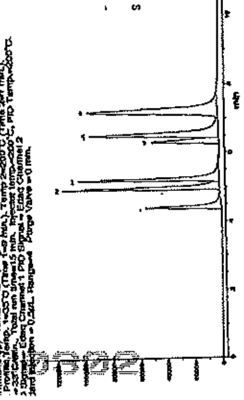
Formulated By: Vincent K. Criado, Jr. — 062618 DATE
Reviewed By: Pedro L. Rentas — 062618 DATE

Compound	Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	CAS#	OSHA PEL (TWA)	LD50
Bromomethane	30058	041018	0.10	20.0	0.003	2006.8	200.7	1.4	74-83-9	5 ppm (20mg/m3)(8-h) (skin)	orl-rat 214mg/kg
Chloroethane	30058	041018	0.10	20.0	0.003	2001.1	200.1	1.4	75-00-3	1000 ppm (2600mg/m3/8H)	N/A
Chloromethane	30058	041018	0.10	20.0	0.003	2002.8	200.3	1.4	74-87-3	100 ppm	orl-rat 1800mg/kg
Dichlorodifluoromethane	30058	041018	0.10	20.0	0.003	2009.5	201.0	1.4	75-71-8	1000 ppm (4950mg/m3/8H)	N/A
Trichlorofluoromethane	30058	041018	0.10	20.0	0.003	2009.0	201.0	1.4	75-69-4	1000 ppm (5600mg/m3/8H)	ipr-mus 1743mg/kg
Vinyl chloride	30058	041018	0.10	20.0	0.003	2002.6	200.3	1.4	75-01-4	N/A	N/A

SDS Information (Solvent Safety Info. On Attached pg.)

Run 2, "P30002 L062618 (200µg/mL in MeOH)"

Comments
MS Analysis by Candice Warren



Analyte	ELCD RT (min.)
Dichlorodifluoromethane	4.45
Chloromethane	5.04
Vinyl chloride	5.30
Bromomethane	6.42
Chloroethane	6.64
Trichlorofluoromethane	7.33

S 43826

RESTEK CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.
This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 30006 **Lot No.:** A0134324
Description: VOA Calibration Mix #1
VOA Calibration Mix #1 5,000µg/mL, P&T Methanol/Water(60:10), 1mL/ampul
Container Size: 2 mL **Pkg Amt:** > 1 mL
Expiration Date: April 30, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Acetone CAS # 67-64-1 Purity 99%	(Lot SHBH6933)	5,002.7 µg/mL	+/- 29.0861 µg/mL +/- 301.8351 µg/mL +/- 302.5517 µg/mL	Gravimetric Unstressed Stressed	
2	2-Butanone (MEK) CAS # 78-93-3 Purity 99%	(Lot SHBF2461V)	5,004.7 µg/mL	+/- 29.0978 µg/mL +/- 301.9557 µg/mL +/- 302.6726 µg/mL	Gravimetric Unstressed Stressed	
3	4-Methyl-2-pentanone (MIBK) CAS # 108-10-1 Purity 99%	(Lot SHBH7006)	5,000.1 µg/mL	+/- 29.0710 µg/mL +/- 301.6782 µg/mL +/- 302.3944 µg/mL	Gravimetric Unstressed Stressed	
4	2-Hexanone CAS # 591-78-6 Purity 99%	(Lot MKBW0198V)	5,007.4 µg/mL	+/- 29.1135 µg/mL +/- 302.1186 µg/mL +/- 302.8359 µg/mL	Gravimetric Unstressed Stressed	

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

S 44973

RESTEK CERTIFIED REFERENCE MATERIAL

110 Benner Circle
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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.
This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 30492 **Lot No.:** A0125239
Description: OLC 03.2 VOA Mega Mix
OLC 03.2 VOA Mega Mix 1,000-2,000µg/mL, P&T Methanol, 1mL/ampul
Container Size: 2 mL **Pkg Amt:** > 1 mL
Expiration Date: February 29, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,1,2-Trichlorotrifluoroethane (CFC-113) CAS # 76-13-1 Purity 99%	(Lot 00009482)	2,017.0 µg/mL	+/- 11.8369 µg/mL +/- 121.7052 µg/mL +/- 121.9941 µg/mL	Gravimetric Unstressed Stressed	
2	1,1-dichloroethene CAS # 75-35-4 Purity 99%	(Lot 738896KMV)	2,000.3 µg/mL	+/- 15.4219 µg/mL +/- 121.1082 µg/mL +/- 121.3937 µg/mL	Gravimetric Unstressed Stressed	
3	Methyl acetate CAS # 79-20-9 Purity 99%	(Lot SHBG4345V)	2,002.5 µg/mL	+/- 11.7518 µg/mL +/- 120.8303 µg/mL +/- 121.1171 µg/mL	Gravimetric Unstressed Stressed	
4	Methylene chloride (dichloromethane) CAS # 75-09-2 Purity 99%	(Lot SHBG6426V)	2,000.5 µg/mL	+/- 15.4236 µg/mL +/- 121.1218 µg/mL +/- 121.4074 µg/mL	Gravimetric Unstressed Stressed	
5	Carbon disulfide CAS # 75-15-0 Purity 99%	(Lot S20AB36)	2,008.0 µg/mL	+/- 11.7841 µg/mL +/- 121.1621 µg/mL +/- 121.4497 µg/mL	Gravimetric Unstressed Stressed	
6	Methyl-tert-butyl ether (MTBE) CAS # 1634-04-4 Purity 99%	(Lot SHBG3635V)	2,006.0 µg/mL	+/- 11.7723 µg/mL +/- 121.0414 µg/mL +/- 121.3288 µg/mL	Gravimetric Unstressed Stressed	
7	trans-1,2-Dichloroethene CAS # 156-60-5 Purity 99%	(Lot MKBH9850V)	2,000.3 µg/mL	+/- 15.4222 µg/mL +/- 121.1112 µg/mL +/- 121.3968 µg/mL	Gravimetric Unstressed Stressed	

S 46785

8	1,1-Dichloroethane CAS # 75-34-3 Purity 99%	(Lot 00009677)	2,000.8 µg/mL	+/- 15.4257 µg/mL +/- 121.1385 µg/mL +/- 121.4241 µg/mL	Gravimetric Unstressed Stressed	
9	cis-1,2-Dichloroethene CAS # 156-59-2 Purity 98%	(Lot MKBV1831V)	2,011.5 µg/mL	+/- 11.8043 µg/mL +/- 121.3703 µg/mL +/- 121.6584 µg/mL	Gravimetric Unstressed Stressed	
10	chloroform CAS # 67-66-3 Purity 99%	(Lot MKBV3089V)	2,000.8 µg/mL	+/- 15.4261 µg/mL +/- 121.1415 µg/mL +/- 121.4271 µg/mL	Gravimetric Unstressed Stressed	
11	Bromochloromethane CAS # 74-97-5 Purity 99%	(Lot 00004559)	2,019.5 µg/mL	+/- 11.8516 µg/mL +/- 121.8560 µg/mL +/- 122.1453 µg/mL	Gravimetric Unstressed Stressed	
12	1,1,1-trichloroethane CAS # 71-55-6 Purity 99%	(Lot B15W12061)	2,000.8 µg/mL	+/- 15.4257 µg/mL +/- 121.1385 µg/mL +/- 121.4241 µg/mL	Gravimetric Unstressed Stressed	
13	Cyclohexane CAS # 110-82-7 Purity 99%	(Lot MKBX4768V)	2,008.5 µg/mL	+/- 11.7870 µg/mL +/- 121.1923 µg/mL +/- 121.4800 µg/mL	Gravimetric Unstressed Stressed	
14	carbon tetrachloride CAS # 56-23-5 Purity 99%	(Lot SHBG1763V)	2,000.8 µg/mL	+/- 15.4257 µg/mL +/- 121.1385 µg/mL +/- 121.4241 µg/mL	Gravimetric Unstressed Stressed	
15	1,2-Dichloroethane CAS # 107-06-2 Purity 99%	(Lot SHBF9313V)	2,001.8 µg/mL	+/- 15.4336 µg/mL +/- 121.2006 µg/mL +/- 121.4863 µg/mL	Gravimetric Unstressed Stressed	
16	Benzene CAS # 71-43-2 Purity 99%	(Lot SHBG7315V)	2,008.5 µg/mL	+/- 11.7870 µg/mL +/- 121.1923 µg/mL +/- 121.4800 µg/mL	Gravimetric Unstressed Stressed	
17	Trichloroethene CAS # 79-01-6 Purity 99%	(Lot SHBF0943V)	2,001.0 µg/mL	+/- 15.4276 µg/mL +/- 121.1536 µg/mL +/- 121.4393 µg/mL	Gravimetric Unstressed Stressed	
18	Methylcyclohexane CAS # 108-87-2 Purity 99%	(Lot 50996APV)	2,005.5 µg/mL	+/- 11.7694 µg/mL +/- 121.0113 µg/mL +/- 121.2985 µg/mL	Gravimetric Unstressed Stressed	
19	1,2-Dichloropropane CAS # 78-87-5 Purity 99%	(Lot 01113D0V)	2,000.4 µg/mL	+/- 15.4226 µg/mL +/- 121.1143 µg/mL +/- 121.3998 µg/mL	Gravimetric Unstressed Stressed	
20	bromodichloromethane CAS # 75-27-4 Purity 98%	(Lot MKBL1617V)	2,001.4 µg/mL	+/- 15.4306 µg/mL +/- 121.1767 µg/mL +/- 121.4623 µg/mL	Gravimetric Unstressed Stressed	
21	cis-1,3-Dichloropropene CAS # 10061-01-5 Purity 99%	(Lot 22622)	2,001.0 µg/mL	+/- 15.4276 µg/mL +/- 121.1536 µg/mL +/- 121.4393 µg/mL	Gravimetric Unstressed Stressed	
22	Toluene CAS # 108-88-3 Purity 99%	(Lot SHBH1932V)	2,008.0 µg/mL	+/- 11.7841 µg/mL +/- 121.1621 µg/mL +/- 121.4497 µg/mL	Gravimetric Unstressed Stressed	
23	trans-1,3-Dichloropropene CAS # 10061-02-6 Purity 99%	(Lot CS84177)	2,001.1 µg/mL	+/- 15.4282 µg/mL +/- 121.1582 µg/mL +/- 121.4438 µg/mL	Gravimetric Unstressed Stressed	
24	1,1,2-Trichloroethane CAS # 79-00-5 Purity 99%	(Lot FUB01)	2,000.2 µg/mL	+/- 15.4217 µg/mL +/- 121.1067 µg/mL +/- 121.3923 µg/mL	Gravimetric Unstressed Stressed	
25	Tetrachloroethene CAS # 127-18-4 Purity 99%	(Lot SHBD9374V)	2,000.8 µg/mL	+/- 15.4263 µg/mL +/- 121.1430 µg/mL +/- 121.4286 µg/mL	Gravimetric Unstressed Stressed	
26	dibromochloromethane CAS # 124-48-1 Purity 98%	(Lot MKBW3597V)	2,001.4 µg/mL	+/- 15.4304 µg/mL +/- 121.1752 µg/mL +/- 121.4609 µg/mL	Gravimetric Unstressed Stressed	
27	1,2-Dibromoethane (EDB) CAS # 106-93-4 Purity 99%	(Lot BCBH0877V)	2,007.0 µg/mL	+/- 11.7782 µg/mL +/- 121.1018 µg/mL +/- 121.3893 µg/mL	Gravimetric Unstressed Stressed	
28	Chlorobenzene CAS # 108-90-7 Purity 99%	(Lot SHBF0505V)	2,000.3 µg/mL	+/- 15.4224 µg/mL +/- 121.1128 µg/mL +/- 121.3983 µg/mL	Gravimetric Unstressed Stressed	
29	Ethylbenzene CAS # 100-41-4 Purity 99%	(Lot SHBF8969V)	2,011.5 µg/mL	+/- 11.8046 µg/mL +/- 121.3733 µg/mL +/- 121.6614 µg/mL	Gravimetric Unstressed Stressed	
30	m-Xylene CAS # 108-38-3 Purity 99%	(Lot SHBG9338V)	1,004.5 µg/mL	+/- 5.8930 µg/mL +/- 60.6112 µg/mL +/- 60.7551 µg/mL	Gravimetric Unstressed Stressed	
31	p-Xylene CAS # 106-42-3 Purity 99%	(Lot SHBG3928V)	1,001.0 µg/mL	+/- 5.8744 µg/mL +/- 60.4000 µg/mL +/- 60.5434 µg/mL	Gravimetric Unstressed Stressed	
32	o-Xylene CAS # 95-47-6 Purity 99%	(Lot SHBH3432V)	2,009.0 µg/mL	+/- 11.7899 µg/mL +/- 121.2225 µg/mL +/- 121.5102 µg/mL	Gravimetric Unstressed Stressed	
33	Styrene CAS # 100-42-5 Purity 99%	(Lot MKBS7097V)	2,017.5 µg/mL	+/- 11.8398 µg/mL +/- 121.7354 µg/mL +/- 122.0243 µg/mL	Gravimetric Unstressed Stressed	
34	Isopropylbenzene (cumene) CAS # 98-82-8 Purity 99%	(Lot 10185056)	2,010.0 µg/mL	+/- 11.7958 µg/mL +/- 121.2828 µg/mL +/- 121.5707 µg/mL	Gravimetric Unstressed Stressed	
35	bromoform CAS # 75-25-2 Purity 99%	(Lot SHBD8459V)	2,000.6 µg/mL	+/- 15.4248 µg/mL +/- 121.1309 µg/mL +/- 121.4165 µg/mL	Gravimetric Unstressed Stressed	
36	1,1,2,2-Tetrachloroethane CAS # 79-34-5 Purity 99%	(Lot CFA4D)	2,000.8 µg/mL	+/- 15.4259 µg/mL +/- 121.1400 µg/mL +/- 121.4256 µg/mL	Gravimetric Unstressed Stressed	
37	1,3-Dichlorobenzene CAS # 541-73-1 Purity 99%	(Lot BCBM3751V)	2,000.5 µg/mL	+/- 15.4240 µg/mL +/- 121.1249 µg/mL +/- 121.4104 µg/mL	Gravimetric Unstressed Stressed	
38	1,4-Dichlorobenzene CAS # 106-46-7 Purity 99%	(Lot MKBS1350V)	2,001.7 µg/mL	+/- 15.4327 µg/mL +/- 121.1930 µg/mL +/- 121.4787 µg/mL	Gravimetric Unstressed Stressed	
39	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	(Lot SHBD7331V)	2,000.6 µg/mL	+/- 15.4244 µg/mL +/- 121.1279 µg/mL +/- 121.4135 µg/mL	Gravimetric Unstressed Stressed	

40	1,2-Dibromo-3-chloropropane CAS # 96-12-8 Purity 99%	(Lot FBL01)	2,019.0 µg/mL	+/- 11.8486 +/- 121.8259 +/- 122.1150	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	1,2,4-Trichlorobenzene CAS # 120-82-1 Purity 99%	(Lot SHBC5541V)	2,008.0 µg/mL	+/- 11.7841 +/- 121.1621 +/- 121.4497	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,2,3-Trichlorobenzene CAS # 87-61-6 Purity 99%	(Lot 12912PFV)	2,018.5 µg/mL	+/- 11.8457 +/- 121.7957 +/- 122.0848	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.35mm x 8.4µm
Rtx-502.2 (cat.#19916)

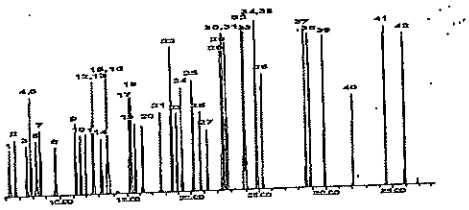
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
45°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Temp:

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Joseph Jagiewski - Mix Technician Date Mixed: 22-Feb-2017 Balance: 1122510105

Diane Shaffer - Operations Tech-Ahmed Date Passed: 23-Mar-2017

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate FFM 60337

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X002.D
Acq Time : 09/10/2019 07:35 Operator: CQC
Sample : 170I Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 8:04 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) fluorobenzene	6.90	96	3994566	50.0000 ug/Kg	83.16
42) chlorobenzene-d5	10.43	117	3250667	50.0000 ug/Kg	88.81
62) 1,4-dichlorobenzene-d4	13.59	152	1883196	50.0000 ug/Kg	78.43

System Monitoring Compounds					%Recovery
33) 1,2-dichloroethane-d4	6.56	102	350855	48.5524 ug/Kg	97.10%
48) toluene-d8	8.64	98	3428385	47.9544 ug/Kg	95.91%
63) 4-bromofluorobenzene	11.96	95	2980662	53.6751 ug/Kg	107.35%

Target Compounds				Qvalue
2) dichlorodifluoromethane	0.00	85	Not Detected	
3) chloromethane	0.00	50	Not Detected	
4) vinyl chloride	0.00	62	Not Detected	
5) bromomethane	0.00	94	Not Detected	
6) chloroethane	0.00	64	Not Detected	
7) dichlorofluoromethane	0.00	67	Not Detected	
8) trichlorofluoromethane	0.00	101	Not Detected	
9) ethyl ether	0.00	59	Not Detected	
10) 1,1-dichloroethene	0.00	96	Not Detected	
11) freon 113	0.00	151	Not Detected	
12) acetone	0.00	43	Not Detected	
13) iodomethane	0.00	142	Not Detected	
14) carbon disulfide	0.00	44	Not Detected	
15) methyl acetate	0.00	43	Not Detected	
16) allyl chloride	0.00	41	Not Detected	
17) methylene chloride	0.00	84	Not Detected	
18) trans-1,2-dichloroethene	0.00	96	Not Detected	
19) methyl-t-butyl ether	0.00	73	Not Detected	
20) cis-1,2-dichloroethene	0.00	96	Not Detected	
21) 1,1-dichloroethane	0.00	63	Not Detected	
22) 2,2-dichloropropane	0.00	77	Not Detected	
23) 2-butanone	0.00	72	Not Detected	
24) ethyl acetate	0.00	70	Not Detected	
25) bromochloromethane	0.00	128	Not Detected	
26) tetrahydrofuran	0.00	72	Not Detected	
27) chloroform	0.00	83	Not Detected	
28) 1,1,1-trichloroethane	0.00	97	Not Detected	
29) cyclohexane	0.00	56	Not Detected	
30) 1,1-dichloropropene	0.00	75	Not Detected	
31) 1,2-dichloroethane	0.00	62	Not Detected	
32) carbon tetrachloride	0.00	117	Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X002.D
Acq Time : 09/10/2019 07:35 Operator: CQC
Sample : 170I Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 8:04 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	benzene	0.00	78		Not Detected	
35)	trichloroethene	0.00	130		Not Detected	
36)	methylcyclohexane	0.00	83		Not Detected	
37)	1,2-dichloropropane	0.00	63		Not Detected	
38)	dibromomethane	0.00	93		Not Detected	
39)	bromodichloromethane	0.00	83		Not Detected	
40)	cis-1,3-dichloropropene	0.00	75		Not Detected	
41)	4-methyl-2-pentanone	0.00	43		Not Detected	
43)	trans-1,3-dichloropropene	0.00	75		Not Detected	
44)	ethyl methacrylate	0.00	69		Not Detected	
45)	1,1,2-trichloroethane	0.00	97		Not Detected	
46)	2-hexanone	0.00	43		Not Detected	
47)	1,2-dibromoethane	0.00	107		Not Detected	
49)	toluene	0.00	92		Not Detected	
50)	1,3-dichloropropane	0.00	76		Not Detected	
51)	dibromochloromethane	0.00	129		Not Detected	
52)	bromoform	0.00	173		Not Detected	
53)	tetrachloroethene	0.00	164		Not Detected	
54)	1-chlorohexane	0.00	93		Not Detected	
55)	chlorobenzene	0.00	112		Not Detected	
56)	1,1,1,2-tetrachloroethane	0.00	131		Not Detected	
57)	ethylbenzene	0.00	106		Not Detected	
58)	m,p-xylene	0.00	106		Not Detected	
59)	o-xylene	0.00	106		Not Detected	
60)	styrene	0.00	104		Not Detected	
61)	isopropylbenzene	0.00	105		Not Detected	
64)	1,1,2,2-tetrachloroethane	0.00	83		Not Detected	
65)	bromobenzene	0.00	156		Not Detected	
66)	1,2,3-trichloropropane	0.00	110		Not Detected	
67)	trans-1,4-dichloro-2-buten	0.00	88		Not Detected	
68)	pentachloroethane	0.00	167		Not Detected	
69)	n-propylbenzene	0.00	120		Not Detected	
70)	1,3,5-trimethylbenzene	0.00	105		Not Detected	
71)	2-chlorotoluene	0.00	126		Not Detected	
72)	4-chlorotoluene	0.00	126		Not Detected	
73)	tert-butylbenzene	0.00	134		Not Detected	
74)	1,2,4-trimethylbenzene	0.00	105		Not Detected	
75)	sec-butylbenzene	0.00	105		Not Detected	
76)	p-isopropyltoluene	0.00	119		Not Detected	
77)	1,3-dichlorobenzene	0.00	146		Not Detected	
78)	1,4-dichlorobenzene	0.00	146		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X002.D
Acq Time : 09/10/2019 07:35 Operator: CQC
Sample : 170I Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 8:04 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79)	n-butylbenzene	0.00	91		Not Detected	
80)	1,2-dichlorobenzene	0.00	146		Not Detected	
81)	1,2-dibromo-3-chloropropan	0.00	75		Not Detected	
82)	1,2,4-trichlorobenzene	0.00	180		Not Detected	
83)	hexachlorobutadiene	0.00	225		Not Detected	
84)	naphthalene	0.00	128		Not Detected	
85)	1,2,3-trichlorobenzene	0.00	180		Not Detected	

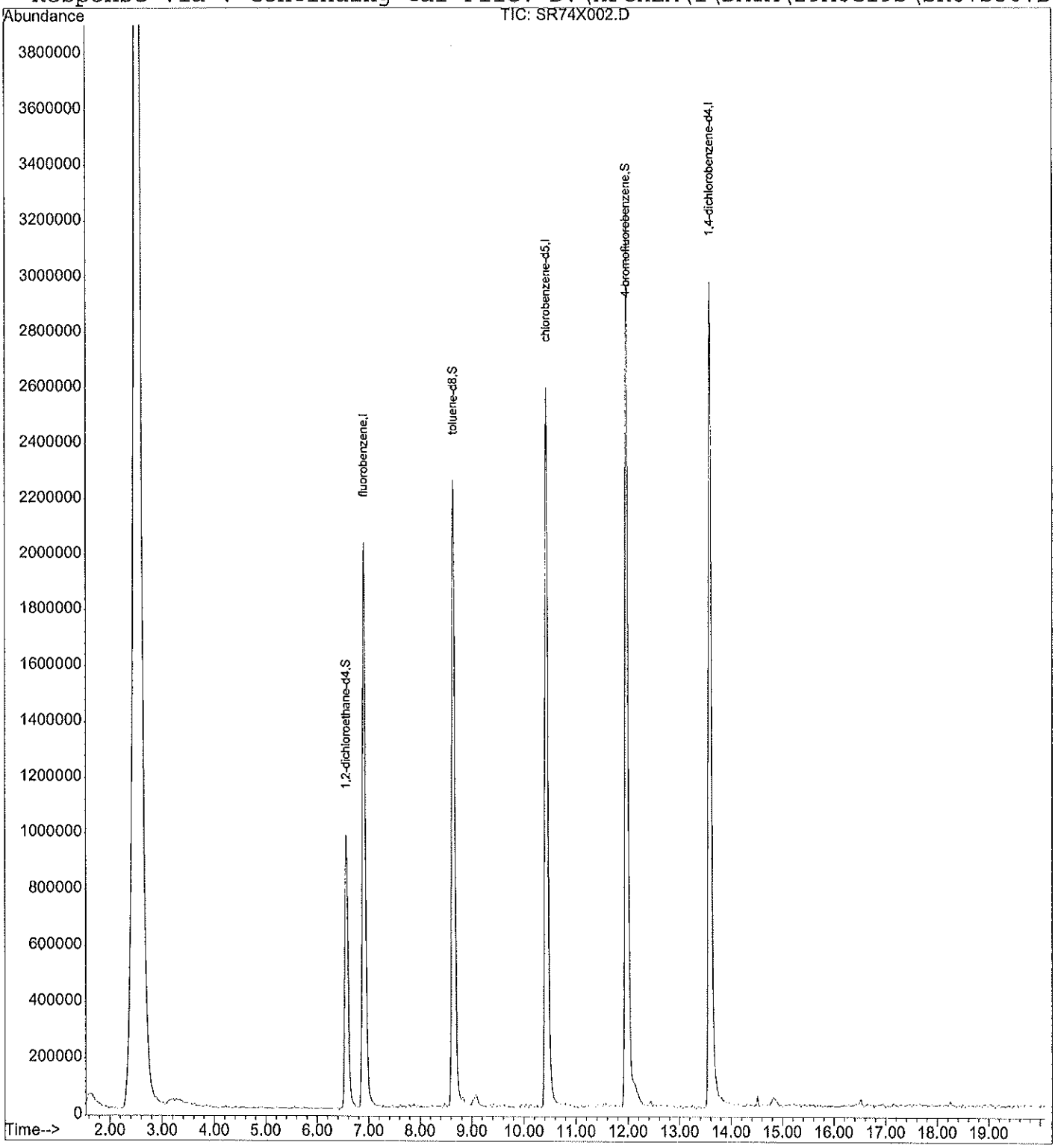
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X002.D
Acq Time : 09/10/2019 07:35 Operator: CQC
Sample : 170I Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 8:04 2019 Quant Results File: SSCREEN.RES

Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D



Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X003.D
Acq Time : 09/10/2019 08:03 Operator: CQC
Sample : 107D Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 8:32 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) fluorobenzene	6.93	96	3902788	50.0000 ug/Kg	81.25
42) chlorobenzene-d5	10.45	117	3265372	50.0000 ug/Kg	89.21
62) 1,4-dichlorobenzene-d4	13.61	152	1887689	50.0000 ug/Kg	78.62
System Monitoring Compounds					**%Recovery**
33) 1,2-dichloroethane-d4	6.58	102	348920	49.4201 ug/Kg	98.84%
48) toluene-d8	8.66	98	3383529	47.1139 ug/Kg	94.23%
63) 4-bromofluorobenzene	11.98	95	2969726	53.3508 ug/Kg	106.70%
Target Compounds					**Qvalue**
2) dichlorodifluoromethane	0.00	85		Not Detected	
3) chloromethane	0.00	50		Not Detected	
4) vinyl chloride	0.00	62		Not Detected	
5) bromomethane	0.00	94		Not Detected	
6) chloroethane	0.00	64		Not Detected	
7) dichlorofluoromethane	0.00	67		Not Detected	
8) trichlorofluoromethane	0.00	101		Not Detected	
9) ethyl ether	0.00	59		Not Detected	
10) 1,1-dichloroethene	0.00	96		Not Detected	
11) freon 113	0.00	151		Not Detected	
12) acetone	0.00	43		Not Detected	
13) iodomethane	0.00	142		Not Detected	
14) carbon disulfide	0.00	44		Not Detected	
15) methyl acetate	0.00	43		Not Detected	
16) allyl chloride	0.00	41		Not Detected	
17) methylene chloride	0.00	84		Not Detected	
18) trans-1,2-dichloroethene	0.00	96		Not Detected	
19) methyl-t-butyl ether	0.00	73		Not Detected	
20) cis-1,2-dichloroethene	0.00	96		Not Detected	
21) 1,1-dichloroethane	0.00	63		Not Detected	
22) 2,2-dichloropropane	0.00	77		Not Detected	
23) 2-butanone	0.00	72		Not Detected	
24) ethyl acetate	0.00	70		Not Detected	
25) bromochloromethane	0.00	128		Not Detected	
26) tetrahydrofuran	0.00	72		Not Detected	
27) chloroform	0.00	83		Not Detected	
28) 1,1,1-trichloroethane	0.00	97		Not Detected	
29) cyclohexane	0.00	56		Not Detected	
30) 1,1-dichloropropene	0.00	75		Not Detected	
31) 1,2-dichloroethane	0.00	62		Not Detected	
32) carbon tetrachloride	0.00	117		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X003.D
Acq Time : 09/10/2019 08:03 Operator: CQC
Sample : 107D Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 8:32 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	benzene	0.00	78		Not Detected	
35)	trichloroethene	0.00	130		Not Detected	
36)	methylcyclohexane	0.00	83		Not Detected	
37)	1,2-dichloropropane	0.00	63		Not Detected	
38)	dibromomethane	0.00	93		Not Detected	
39)	bromodichloromethane	0.00	83		Not Detected	
40)	cis-1,3-dichloropropene	0.00	75		Not Detected	
41)	4-methyl-2-pentanone	0.00	43		Not Detected	
43)	trans-1,3-dichloropropene	0.00	75		Not Detected	
44)	ethyl methacrylate	0.00	69		Not Detected	
45)	1,1,2-trichloroethane	0.00	97		Not Detected	
46)	2-hexanone	0.00	43		Not Detected	
47)	1,2-dibromoethane	0.00	107		Not Detected	
49)	toluene	0.00	92		Not Detected	
50)	1,3-dichloropropane	0.00	76		Not Detected	
51)	dibromochloromethane	0.00	129		Not Detected	
52)	bromoform	0.00	173		Not Detected	
53)	tetrachloroethene	0.00	164		Not Detected	
54)	1-chlorohexane	0.00	93		Not Detected	
55)	chlorobenzene	0.00	112		Not Detected	
56)	1,1,1,2-tetrachloroethane	0.00	131		Not Detected	
57)	ethylbenzene	0.00	106		Not Detected	
58)	m,p-xylene	0.00	106		Not Detected	
59)	o-xylene	0.00	106		Not Detected	
60)	styrene	0.00	104		Not Detected	
61)	isopropylbenzene	0.00	105		Not Detected	
64)	1,1,2,2-tetrachloroethane	0.00	83		Not Detected	
65)	bromobenzene	0.00	156		Not Detected	
66)	1,2,3-trichloropropane	0.00	110		Not Detected	
67)	trans-1,4-dichloro-2-buten	0.00	88		Not Detected	
68)	pentachloroethane	0.00	167		Not Detected	
69)	n-propylbenzene	0.00	120		Not Detected	
70)	1,3,5-trimethylbenzene	0.00	105		Not Detected	
71)	2-chlorotoluene	0.00	126		Not Detected	
72)	4-chlorotoluene	0.00	126		Not Detected	
73)	tert-butylbenzene	0.00	134		Not Detected	
74)	1,2,4-trimethylbenzene	0.00	105		Not Detected	
75)	sec-butylbenzene	0.00	105		Not Detected	
76)	p-isopropyltoluene	0.00	119		Not Detected	
77)	1,3-dichlorobenzene	0.00	146		Not Detected	
78)	1,4-dichlorobenzene	0.00	146		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X003.D
Acq Time : 09/10/2019 08:03 Operator: CQC
Sample : 107D Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 8:32 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79)	n-butylbenzene	0.00	91		Not Detected	
80)	1,2-dichlorobenzene	0.00	146		Not Detected	
81)	1,2-dibromo-3-chloropropan	0.00	75		Not Detected	
82)	1,2,4-trichlorobenzene	0.00	180		Not Detected	
83)	hexachlorobutadiene	0.00	225		Not Detected	
84)	naphthalene	0.00	128		Not Detected	
85)	1,2,3-trichlorobenzene	0.00	180		Not Detected	

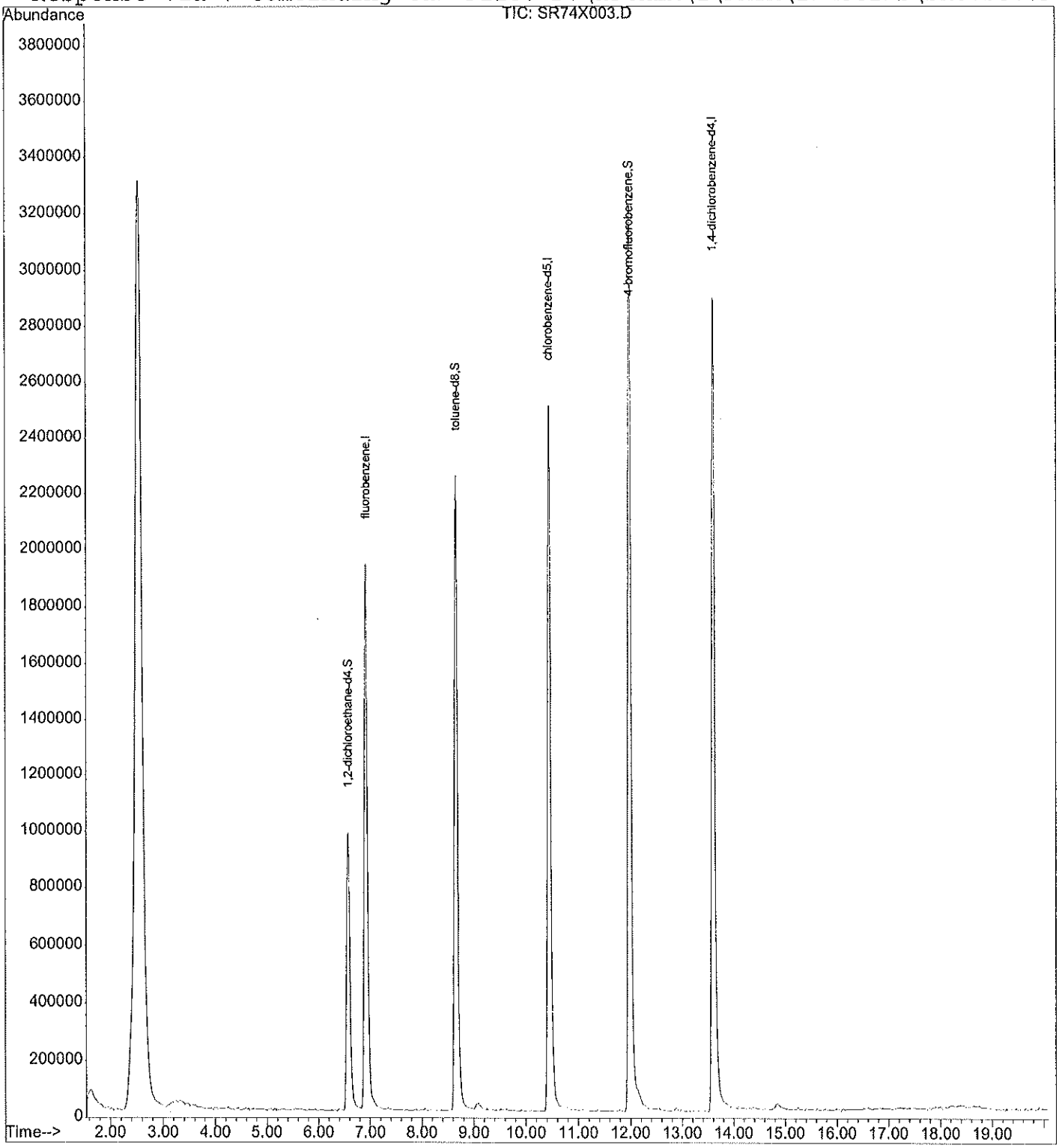
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X003.D
Acq Time : 09/10/2019 08:03 Operator: CQC
Sample : 107D Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 8:32 2019 Quant Results File: SSCREEN.RES

Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D



Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X004.D
Acq Time : 09/10/2019 08:32 Operator: CQC
Sample : 106I Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 9:14 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) fluorobenzene	6.91	96	4036673	50.0000 ug/Kg	84.03
42) chlorobenzene-d5	10.44	117	3371174	50.0000 ug/Kg	92.10
62) 1,4-dichlorobenzene-d4	13.60	152	1907785	50.0000 ug/Kg	79.46
System Monitoring Compounds					**%Recovery**
33) 1,2-dichloroethane-d4	6.58	102	361324	49.4795 ug/Kg	98.96%
48) toluene-d8	8.66	98	3458414	46.6452 ug/Kg	93.29%
63) 4-bromofluorobenzene	11.97	95	3056555	54.3323 ug/Kg	108.66%
Target Compounds					**Qvalue**
2) dichlorodifluoromethane	0.00	85		Not Detected	
3) chloromethane	0.00	50		Not Detected	
4) vinyl chloride	0.00	62		Not Detected	
5) bromomethane	0.00	94		Not Detected	
6) chloroethane	0.00	64		Not Detected	
7) dichlorofluoromethane	0.00	67		Not Detected	
8) trichlorofluoromethane	0.00	101		Not Detected	
9) ethyl ether	0.00	59		Not Detected	
10) 1,1-dichloroethene	0.00	96		Not Detected	
11) freon 113	0.00	151		Not Detected	
12) acetone	0.00	43		Not Detected	
13) iodomethane	0.00	142		Not Detected	
14) carbon disulfide	0.00	44		Not Detected	
15) methyl acetate	0.00	43		Not Detected	
16) allyl chloride	0.00	41		Not Detected	
17) methylene chloride	0.00	84		Not Detected	
18) trans-1,2-dichloroethene	0.00	96		Not Detected	
19) methyl-t-butyl ether	0.00	73		Not Detected	
20) cis-1,2-dichloroethene	0.00	96		Not Detected	
21) 1,1-dichloroethane	0.00	63		Not Detected	
22) 2,2-dichloropropane	0.00	77		Not Detected	
23) 2-butanone	0.00	72		Not Detected	
24) ethyl acetate	0.00	70		Not Detected	
25) bromochloromethane	0.00	128		Not Detected	
26) tetrahydrofuran	0.00	72		Not Detected	
27) chloroform	0.00	83		Not Detected	
28) 1,1,1-trichloroethane	0.00	97		Not Detected	
29) cyclohexane	0.00	56		Not Detected	
30) 1,1-dichloropropene	0.00	75		Not Detected	
31) 1,2-dichloroethane	0.00	62		Not Detected	
32) carbon tetrachloride	0.00	117		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X004.D
Acq Time : 09/10/2019 08:32 Operator: CQC
Sample : 106I Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 9:14 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	benzene	0.00	78		Not Detected	
35)	trichloroethene	0.00	130		Not Detected	
36)	methylcyclohexane	0.00	83		Not Detected	
37)	1,2-dichloropropane	0.00	63		Not Detected	
38)	dibromomethane	0.00	93		Not Detected	
39)	bromodichloromethane	0.00	83		Not Detected	
40)	cis-1,3-dichloropropene	0.00	75		Not Detected	
41)	4-methyl-2-pentanone	0.00	43		Not Detected	
43)	trans-1,3-dichloropropene	0.00	75		Not Detected	
44)	ethyl methacrylate	0.00	69		Not Detected	
45)	1,1,2-trichloroethane	0.00	97		Not Detected	
46)	2-hexanone	0.00	43		Not Detected	
47)	1,2-dibromoethane	0.00	107		Not Detected	
49)	toluene	0.00	92		Not Detected	
50)	1,3-dichloropropane	0.00	76		Not Detected	
51)	dibromochloromethane	0.00	129		Not Detected	
52)	bromoform	0.00	173		Not Detected	
53)	tetrachloroethene	0.00	164		Not Detected	
54)	1-chlorohexane	0.00	93		Not Detected	
55)	chlorobenzene	0.00	112		Not Detected	
56)	1,1,1,2-tetrachloroethane	0.00	131		Not Detected	
57)	ethylbenzene	0.00	106		Not Detected	
58)	m,p-xylene	0.00	106		Not Detected	
59)	o-xylene	0.00	106		Not Detected	
60)	styrene	0.00	104		Not Detected	
61)	isopropylbenzene	0.00	105		Not Detected	
64)	1,1,2,2-tetrachloroethane	0.00	83		Not Detected	
65)	bromobenzene	0.00	156		Not Detected	
66)	1,2,3-trichloropropane	0.00	110		Not Detected	
67)	trans-1,4-dichloro-2-buten	0.00	88		Not Detected	
68)	pentachloroethane	0.00	167		Not Detected	
69)	n-propylbenzene	0.00	120		Not Detected	
70)	1,3,5-trimethylbenzene	0.00	105		Not Detected	
71)	2-chlorotoluene	0.00	126		Not Detected	
72)	4-chlorotoluene	0.00	126		Not Detected	
73)	tert-butylbenzene	0.00	134		Not Detected	
74)	1,2,4-trimethylbenzene	0.00	105		Not Detected	
75)	sec-butylbenzene	0.00	105		Not Detected	
76)	p-isopropyltoluene	0.00	119		Not Detected	
77)	1,3-dichlorobenzene	0.00	146		Not Detected	
78)	1,4-dichlorobenzene	0.00	146		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X004.D
Acq Time : 09/10/2019 08:32 Operator: CQC
Sample : 106I Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 9:14 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79)	n-butylbenzene	0.00	91		Not Detected	
80)	1,2-dichlorobenzene	0.00	146		Not Detected	
81)	1,2-dibromo-3-chloropropan	0.00	75		Not Detected	
82)	1,2,4-trichlorobenzene	0.00	180		Not Detected	
83)	hexachlorobutadiene	0.00	225		Not Detected	
84)	naphthalene	0.00	128		Not Detected	
85)	1,2,3-trichlorobenzene	0.00	180		Not Detected	

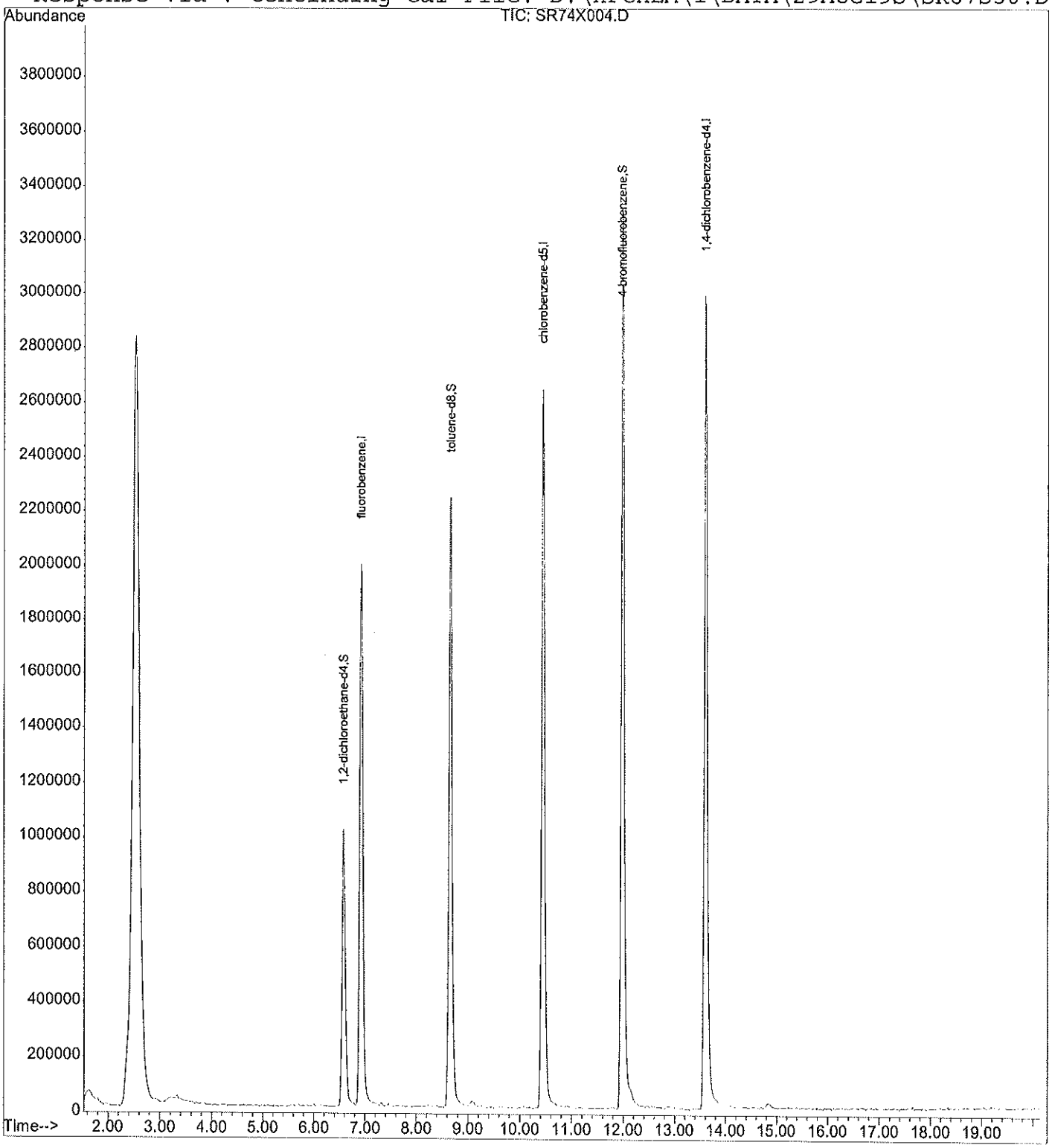
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X004.D
Acq Time : 09/10/2019 08:32 Operator: CQC
Sample : 106I Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 9:14 2019 Quant Results File: SSCREEN.RES

Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D



Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X005.D
Acq Time : 09/10/2019 09:00 Operator: CQC
Sample : 106D Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 9:38 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) fluorobenzene	6.91	96	4029491	50.0000 ug/Kg	83.88
42) chlorobenzene-d5	10.43	117	3370934	50.0000 ug/Kg	92.10
62) 1,4-dichlorobenzene-d4	13.59	152	1918720	50.0000 ug/Kg	79.91

System Monitoring Compounds					%Recovery
33) 1,2-dichloroethane-d4	6.56	102	358244	49.1452 ug/Kg	98.29%
48) toluene-d8	8.64	98	3457882	46.6414 ug/Kg	93.28%
63) 4-bromofluorobenzene	11.97	95	3038987	53.7122 ug/Kg	107.42%

Target Compounds				Qvalue
2) dichlorodifluoromethane	0.00	85	Not Detected	
3) chloromethane	0.00	50	Not Detected	
4) vinyl chloride	0.00	62	Not Detected	
5) bromomethane	0.00	94	Not Detected	
6) chloroethane	0.00	64	Not Detected	
7) dichlorofluoromethane	0.00	67	Not Detected	
8) trichlorofluoromethane	0.00	101	Not Detected	
9) ethyl ether	0.00	59	Not Detected	
10) 1,1-dichloroethene	0.00	96	Not Detected	
11) freon 113	0.00	151	Not Detected	
12) acetone	0.00	43	Not Detected	
13) iodomethane	0.00	142	Not Detected	
14) carbon disulfide	0.00	44	Not Detected	
15) methyl acetate	0.00	43	Not Detected	
16) allyl chloride	0.00	41	Not Detected	
17) methylene chloride	0.00	84	Not Detected	
18) trans-1,2-dichloroethene	0.00	96	Not Detected	
19) methyl-t-butyl ether	0.00	73	Not Detected	
20) cis-1,2-dichloroethene	0.00	96	Not Detected	
21) 1,1-dichloroethane	0.00	63	Not Detected	
22) 2,2-dichloropropane	0.00	77	Not Detected	
23) 2-butanone	0.00	72	Not Detected	
24) ethyl acetate	0.00	70	Not Detected	
25) bromochloromethane	0.00	128	Not Detected	
26) tetrahydrofuran	0.00	72	Not Detected	
27) chloroform	0.00	83	Not Detected	
28) 1,1,1-trichloroethane	0.00	97	Not Detected	
29) cyclohexane	0.00	56	Not Detected	
30) 1,1-dichloropropene	0.00	75	Not Detected	
31) 1,2-dichloroethane	0.00	62	Not Detected	
32) carbon tetrachloride	0.00	117	Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X005.D
Acq Time : 09/10/2019 09:00 Operator: CQC
Sample : 106D Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 9:38 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	benzene	0.00	78		Not Detected	
35)	trichloroethene	0.00	130		Not Detected	
36)	methylcyclohexane	0.00	83		Not Detected	
37)	1,2-dichloropropane	0.00	63		Not Detected	
38)	dibromomethane	0.00	93		Not Detected	
39)	bromodichloromethane	0.00	83		Not Detected	
40)	cis-1,3-dichloropropene	0.00	75		Not Detected	
41)	4-methyl-2-pentanone	0.00	43		Not Detected	
43)	trans-1,3-dichloropropene	0.00	75		Not Detected	
44)	ethyl methacrylate	0.00	69		Not Detected	
45)	1,1,2-trichloroethane	0.00	97		Not Detected	
46)	2-hexanone	0.00	43		Not Detected	
47)	1,2-dibromoethane	0.00	107		Not Detected	
49)	toluene	0.00	92		Not Detected	
50)	1,3-dichloropropane	0.00	76		Not Detected	
51)	dibromochloromethane	0.00	129		Not Detected	
52)	bromoform	0.00	173		Not Detected	
53)	tetrachloroethene	0.00	164		Not Detected	
54)	1-chlorohexane	0.00	93		Not Detected	
55)	chlorobenzene	0.00	112		Not Detected	
56)	1,1,1,2-tetrachloroethane	0.00	131		Not Detected	
57)	ethylbenzene	0.00	106		Not Detected	
58)	m,p-xylene	0.00	106		Not Detected	
59)	o-xylene	0.00	106		Not Detected	
60)	styrene	0.00	104		Not Detected	
61)	isopropylbenzene	0.00	105		Not Detected	
64)	1,1,2,2-tetrachloroethane	0.00	83		Not Detected	
65)	bromobenzene	0.00	156		Not Detected	
66)	1,2,3-trichloropropane	0.00	110		Not Detected	
67)	trans-1,4-dichloro-2-buten	0.00	88		Not Detected	
68)	pentachloroethane	0.00	167		Not Detected	
69)	n-propylbenzene	0.00	120		Not Detected	
70)	1,3,5-trimethylbenzene	0.00	105		Not Detected	
71)	2-chlorotoluene	0.00	126		Not Detected	
72)	4-chlorotoluene	0.00	126		Not Detected	
73)	tert-butylbenzene	0.00	134		Not Detected	
74)	1,2,4-trimethylbenzene	0.00	105		Not Detected	
75)	sec-butylbenzene	0.00	105		Not Detected	
76)	p-isopropyltoluene	0.00	119		Not Detected	
77)	1,3-dichlorobenzene	0.00	146		Not Detected	
78)	1,4-dichlorobenzene	0.00	146		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X005.D
Acq Time : 09/10/2019 09:00 Operator: CQC
Sample : 106D Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 9:38 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79)	n-butylbenzene	0.00	91		Not Detected	
80)	1,2-dichlorobenzene	0.00	146		Not Detected	
81)	1,2-dibromo-3-chloropropan	0.00	75		Not Detected	
82)	1,2,4-trichlorobenzene	0.00	180		Not Detected	
83)	hexachlorobutadiene	0.00	225		Not Detected	
84)	naphthalene	0.00	128		Not Detected	
85)	1,2,3-trichlorobenzene	0.00	180		Not Detected	

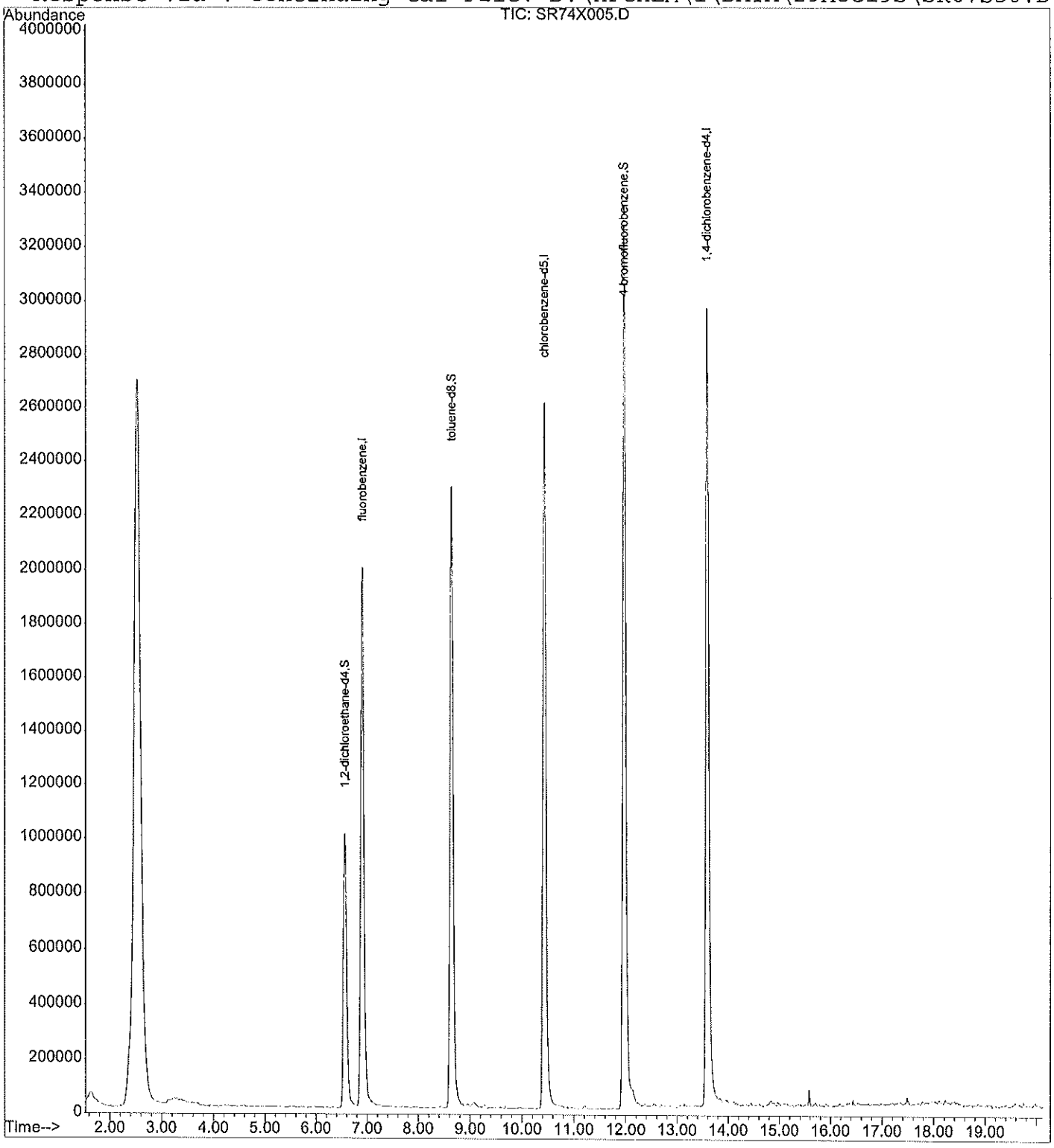
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X005.D
Acq Time : 09/10/2019 09:00 Operator: CQC
Sample : 106D Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 9:38 2019 Quant Results File: SSCREEN.RES

Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D



Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X006.D
Acq Time : 09/10/2019 09:29 Operator: CQC
Sample : 101 Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 10:39 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) fluorobenzene	6.91	96	4011513	50.0000 ug/Kg	83.51
42) chlorobenzene-d5	10.42	117	3329946	50.0000 ug/Kg	90.98
62) 1,4-dichlorobenzene-d4	13.58	152	1881581	50.0000 ug/Kg	78.37
System Monitoring Compounds					**%Recovery**
33) 1,2-dichloroethane-d4	6.56	102	349322	48.1360 ug/Kg	96.27%
48) toluene-d8	8.64	98	3461504	47.2650 ug/Kg	94.53%
63) 4-bromofluorobenzene	11.96	95	3015674	54.3522 ug/Kg	108.70%
Target Compounds					**Qvalue**
2) dichlorodifluoromethane	0.00	85		Not Detected	
3) chloromethane	0.00	50		Not Detected	
4) vinyl chloride	0.00	62		Not Detected	
5) bromomethane	0.00	94		Not Detected	
6) chloroethane	0.00	64		Not Detected	
7) dichlorofluoromethane	0.00	67		Not Detected	
8) trichlorofluoromethane	0.00	101		Not Detected	
9) ethyl ether	0.00	59		Not Detected	
10) 1,1-dichloroethene	0.00	96		Not Detected	
11) freon 113	0.00	151		Not Detected	
12) acetone	0.00	43		Not Detected	
13) iodomethane	0.00	142		Not Detected	
14) carbon disulfide	0.00	44		Not Detected	
15) methyl acetate	0.00	43		Not Detected	
16) allyl chloride	0.00	41		Not Detected	
17) methylene chloride	0.00	84		Not Detected	
18) trans-1,2-dichloroethene	0.00	96		Not Detected	
19) methyl-t-butyl ether	0.00	73		Not Detected	
20) cis-1,2-dichloroethene	0.00	96		Not Detected	
21) 1,1-dichloroethane	0.00	63		Not Detected	
22) 2,2-dichloropropane	0.00	77		Not Detected	
23) 2-butanone	0.00	72		Not Detected	
24) ethyl acetate	0.00	70		Not Detected	
25) bromochloromethane	0.00	128		Not Detected	
26) tetrahydrofuran	0.00	72		Not Detected	
27) chloroform	0.00	83		Not Detected	
28) 1,1,1-trichloroethane	0.00	97		Not Detected	
29) cyclohexane	0.00	56		Not Detected	
30) 1,1-dichloropropene	0.00	75		Not Detected	
31) 1,2-dichloroethane	0.00	62		Not Detected	
32) carbon tetrachloride	0.00	117		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X006.D
Acq Time : 09/10/2019 09:29 Operator: CQC
Sample : 101 Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 10:39 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	benzene	0.00	78		Not Detected	
35)	trichloroethene	0.00	130		Not Detected	
36)	methylcyclohexane	0.00	83		Not Detected	
37)	1,2-dichloropropane	0.00	63		Not Detected	
38)	dibromomethane	0.00	93		Not Detected	
39)	bromodichloromethane	0.00	83		Not Detected	
40)	cis-1,3-dichloropropene	0.00	75		Not Detected	
41)	4-methyl-2-pentanone	0.00	43		Not Detected	
43)	trans-1,3-dichloropropene	0.00	75		Not Detected	
44)	ethyl methacrylate	0.00	69		Not Detected	
45)	1,1,2-trichloroethane	0.00	97		Not Detected	
46)	2-hexanone	0.00	43		Not Detected	
47)	1,2-dibromoethane	0.00	107		Not Detected	
49)	toluene	0.00	92		Not Detected	
50)	1,3-dichloropropane	0.00	76		Not Detected	
51)	dibromochloromethane	0.00	129		Not Detected	
52)	bromoform	0.00	173		Not Detected	
53)	tetrachloroethene	9.39	164	132574	3.2852 ug/Kg	95
54)	1-chlorohexane	0.00	93		Not Detected	
55)	chlorobenzene	0.00	112		Not Detected	
56)	1,1,1,2-tetrachloroethane	0.00	131		Not Detected	
57)	ethylbenzene	0.00	106		Not Detected	
58)	m,p-xylene	0.00	106		Not Detected	
59)	o-xylene	0.00	106		Not Detected	
60)	styrene	0.00	104		Not Detected	
61)	isopropylbenzene	0.00	105		Not Detected	
64)	1,1,2,2-tetrachloroethane	0.00	83		Not Detected	
65)	bromobenzene	0.00	156		Not Detected	
66)	1,2,3-trichloropropane	0.00	110		Not Detected	
67)	trans-1,4-dichloro-2-buten	0.00	88		Not Detected	
68)	pentachloroethane	0.00	167		Not Detected	
69)	n-propylbenzene	0.00	120		Not Detected	
70)	1,3,5-trimethylbenzene	0.00	105		Not Detected	
71)	2-chlorotoluene	0.00	126		Not Detected	
72)	4-chlorotoluene	0.00	126		Not Detected	
73)	tert-butylbenzene	0.00	134		Not Detected	
74)	1,2,4-trimethylbenzene	0.00	105		Not Detected	
75)	sec-butylbenzene	0.00	105		Not Detected	
76)	p-isopropyltoluene	0.00	119		Not Detected	
77)	1,3-dichlorobenzene	0.00	146		Not Detected	
78)	1,4-dichlorobenzene	0.00	146		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X006.D
Acq Time : 09/10/2019 09:29 Operator: CQC
Sample : 101 Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 10:39 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79)	n-butylbenzene	0.00	91		Not Detected	
80)	1,2-dichlorobenzene	0.00	146		Not Detected	
81)	1,2-dibromo-3-chloropropan	0.00	75		Not Detected	
82)	1,2,4-trichlorobenzene	0.00	180		Not Detected	
83)	hexachlorobutadiene	0.00	225		Not Detected	
84)	naphthalene	0.00	128		Not Detected	
85)	1,2,3-trichlorobenzene	0.00	180		Not Detected	

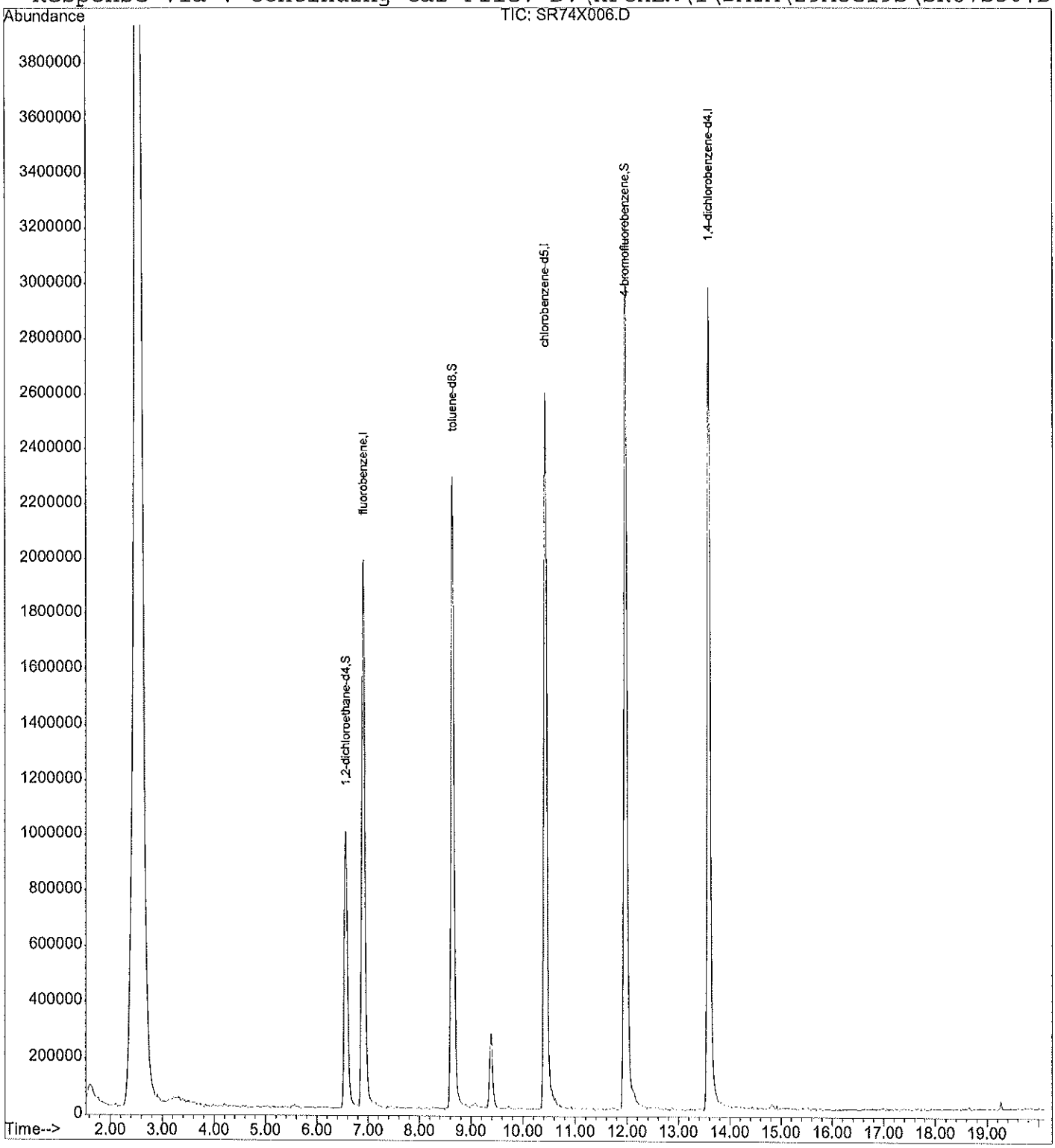
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X006.D
Acq Time : 09/10/2019 09:29 Operator: CQC
Sample : 101 Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 10:39 2019 Quant Results File: SSCREEN.RES

Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D



Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X007.D
Acq Time : 09/10/2019 09:57 Operator: CQC
Sample : 101-Y Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 10:39 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) fluorobenzene	6.92	96	4091315	50.0000 ug/Kg	85.17
42) chlorobenzene-d5	10.43	117	3373123	50.0000 ug/Kg	92.16
62) 1,4-dichlorobenzene-d4	13.58	152	1932410	50.0000 ug/Kg	80.48

System Monitoring Compounds					%Recovery
33) 1,2-dichloroethane-d4	6.57	102	365572	49.3927 ug/Kg	98.79%
48) toluene-d8	8.64	98	3454783	46.5694 ug/Kg	93.14%
63) 4-bromofluorobenzene	11.97	95	3082598	54.0970 ug/Kg	108.19%

Target Compounds				Qvalue
2) dichlorodifluoromethane	0.00	85	Not Detected	
3) chloromethane	0.00	50	Not Detected	
4) vinyl chloride	0.00	62	Not Detected	
5) bromomethane	0.00	94	Not Detected	
6) chloroethane	0.00	64	Not Detected	
7) dichlorofluoromethane	0.00	67	Not Detected	
8) trichlorofluoromethane	0.00	101	Not Detected	
9) ethyl ether	0.00	59	Not Detected	
10) 1,1-dichloroethene	0.00	96	Not Detected	
11) freon 113	0.00	151	Not Detected	
12) acetone	0.00	43	Not Detected	
13) iodomethane	0.00	142	Not Detected	
14) carbon disulfide	0.00	44	Not Detected	
15) methyl acetate	0.00	43	Not Detected	
16) allyl chloride	0.00	41	Not Detected	
17) methylene chloride	0.00	84	Not Detected	
18) trans-1,2-dichloroethene	0.00	96	Not Detected	
19) methyl-t-butyl ether	0.00	73	Not Detected	
20) cis-1,2-dichloroethene	0.00	96	Not Detected	
21) 1,1-dichloroethane	0.00	63	Not Detected	
22) 2,2-dichloropropane	0.00	77	Not Detected	
23) 2-butanone	0.00	72	Not Detected	
24) ethyl acetate	0.00	70	Not Detected	
25) bromochloromethane	0.00	128	Not Detected	
26) tetrahydrofuran	0.00	72	Not Detected	
27) chloroform	0.00	83	Not Detected	
28) 1,1,1-trichloroethane	0.00	97	Not Detected	
29) cyclohexane	0.00	56	Not Detected	
30) 1,1-dichloropropene	0.00	75	Not Detected	
31) 1,2-dichloroethane	0.00	62	Not Detected	
32) carbon tetrachloride	0.00	117	Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X007.D
Acq Time : 09/10/2019 09:57 Operator: CQC
Sample : 101-Y Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 10:39 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	benzene	0.00	78		Not Detected	
35)	trichloroethene	0.00	130		Not Detected	
36)	methylcyclohexane	0.00	83		Not Detected	
37)	1,2-dichloropropane	0.00	63		Not Detected	
38)	dibromomethane	0.00	93		Not Detected	
39)	bromodichloromethane	0.00	83		Not Detected	
40)	cis-1,3-dichloropropene	0.00	75		Not Detected	
41)	4-methyl-2-pentanone	0.00	43		Not Detected	
43)	trans-1,3-dichloropropene	0.00	75		Not Detected	
44)	ethyl methacrylate	0.00	69		Not Detected	
45)	1,1,2-trichloroethane	0.00	97		Not Detected	
46)	2-hexanone	0.00	43		Not Detected	
47)	1,2-dibromoethane	0.00	107		Not Detected	
49)	toluene	0.00	92		Not Detected	
50)	1,3-dichloropropane	0.00	76		Not Detected	
51)	dibromochloromethane	0.00	129		Not Detected	
52)	bromoform	0.00	173		Not Detected	
53)	tetrachloroethene	9.40	164	127122	3.1098 ug/Kg	94
54)	1-chlorohexane	0.00	93		Not Detected	
55)	chlorobenzene	0.00	112		Not Detected	
56)	1,1,1,2-tetrachloroethane	0.00	131		Not Detected	
57)	ethylbenzene	0.00	106		Not Detected	
58)	m,p-xylene	0.00	106		Not Detected	
59)	o-xylene	0.00	106		Not Detected	
60)	styrene	0.00	104		Not Detected	
61)	isopropylbenzene	0.00	105		Not Detected	
64)	1,1,2,2-tetrachloroethane	0.00	83		Not Detected	
65)	bromobenzene	0.00	156		Not Detected	
66)	1,2,3-trichloropropane	0.00	110		Not Detected	
67)	trans-1,4-dichloro-2-buten	0.00	88		Not Detected	
68)	pentachloroethane	0.00	167		Not Detected	
69)	n-propylbenzene	0.00	120		Not Detected	
70)	1,3,5-trimethylbenzene	0.00	105		Not Detected	
71)	2-chlorotoluene	0.00	126		Not Detected	
72)	4-chlorotoluene	0.00	126		Not Detected	
73)	tert-butylbenzene	0.00	134		Not Detected	
74)	1,2,4-trimethylbenzene	0.00	105		Not Detected	
75)	sec-butylbenzene	0.00	105		Not Detected	
76)	p-isopropyltoluene	0.00	119		Not Detected	
77)	1,3-dichlorobenzene	0.00	146		Not Detected	
78)	1,4-dichlorobenzene	0.00	146		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X007.D
Acq Time : 09/10/2019 09:57 Operator: CQC
Sample : 101-Y Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 10:39 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79)	n-butylbenzene	0.00	91		Not Detected	
80)	1,2-dichlorobenzene	0.00	146		Not Detected	
81)	1,2-dibromo-3-chloropropan	0.00	75		Not Detected	
82)	1,2,4-trichlorobenzene	0.00	180		Not Detected	
83)	hexachlorobutadiene	0.00	225		Not Detected	
84)	naphthalene	0.00	128		Not Detected	
85)	1,2,3-trichlorobenzene	0.00	180		Not Detected	

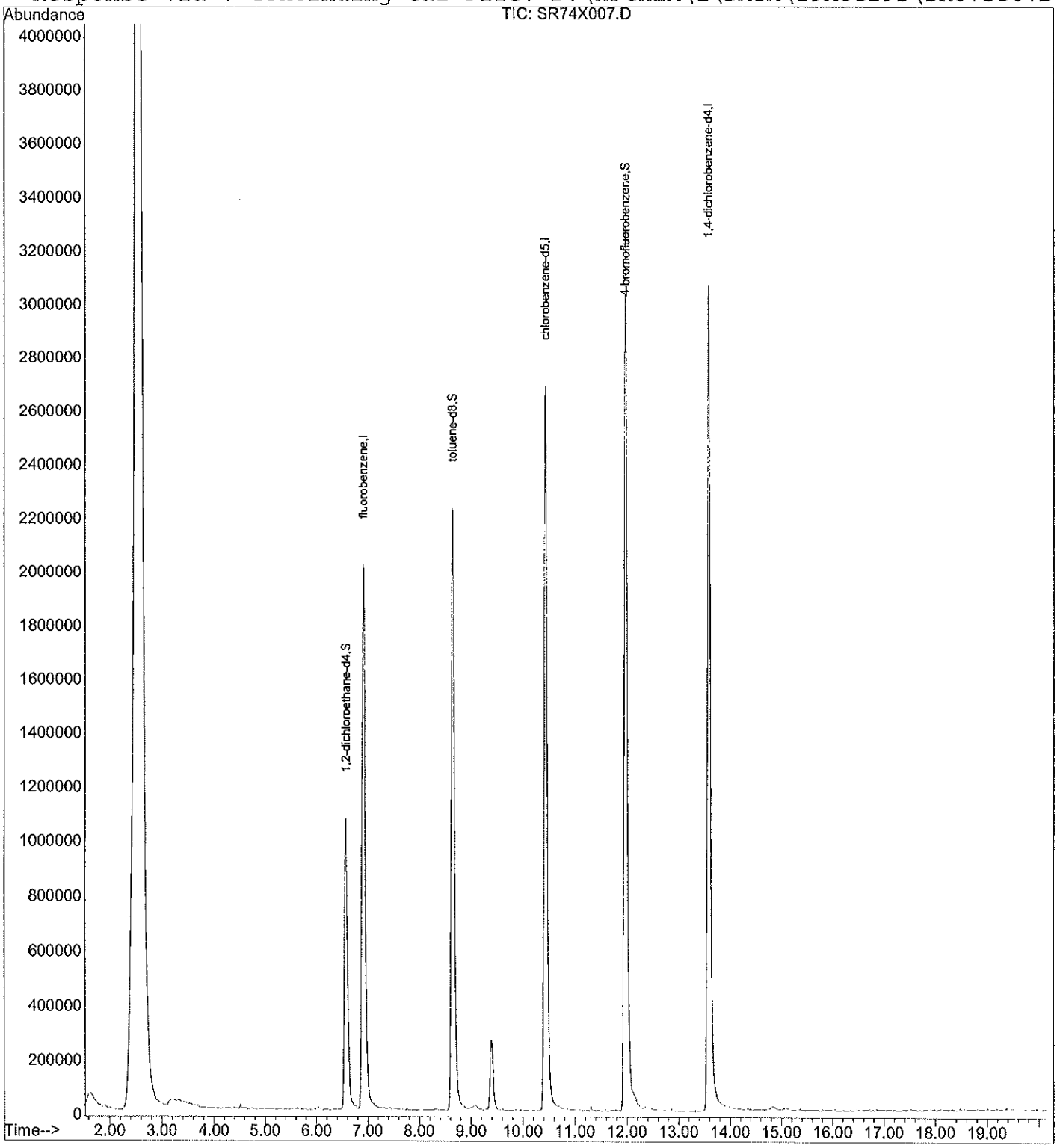
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X007.D
Acq Time : 09/10/2019 09:57 Operator: CQC
Sample : 101-Y Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 10:39 2019 Quant Results File: SSCREEN.RES

Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D



Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X008.D
Acq Time : 09/10/2019 10:26 Operator: CQC
Sample : 105 Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 12:33 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) fluorobenzene	6.91	96	4248028	50.0000 ug/Kg	88.43
42) chlorobenzene-d5	10.42	117	3534720	50.0000 ug/Kg	96.57
62) 1,4-dichlorobenzene-d4	13.58	152	2015429	50.0000 ug/Kg	83.94
System Monitoring Compounds					%Recovery
33) 1,2-dichloroethane-d4	6.57	102	379975	49.4447 ug/Kg	98.89%
48) toluene-d8	8.64	98	3658576	47.0618 ug/Kg	94.12%
63) 4-bromofluorobenzene	11.96	95	3249857	54.6830 ug/Kg	109.37%
Target Compounds					Qvalue
2) dichlorodifluoromethane	0.00	85		Not Detected	
3) chloromethane	0.00	50		Not Detected	
4) vinyl chloride	0.00	62		Not Detected	
5) bromomethane	0.00	94		Not Detected	
6) chloroethane	0.00	64		Not Detected	
7) dichlorofluoromethane	0.00	67		Not Detected	
8) trichlorofluoromethane	0.00	101		Not Detected	
9) ethyl ether	0.00	59		Not Detected	
10) 1,1-dichloroethene	0.00	96		Not Detected	
11) freon 113	0.00	151		Not Detected	
12) acetone	0.00	43		Not Detected	
13) iodomethane	0.00	142		Not Detected	
14) carbon disulfide	0.00	44		Not Detected	
15) methyl acetate	0.00	43		Not Detected	
16) allyl chloride	0.00	41		Not Detected	
17) methylene chloride	0.00	84		Not Detected	
18) trans-1,2-dichloroethene	0.00	96		Not Detected	
19) methyl-t-butyl ether	0.00	73		Not Detected	
20) cis-1,2-dichloroethene	0.00	96		Not Detected	
21) 1,1-dichloroethane	0.00	63		Not Detected	
22) 2,2-dichloropropane	0.00	77		Not Detected	
23) 2-butanone	0.00	72		Not Detected	
24) ethyl acetate	0.00	70		Not Detected	
25) bromochloromethane	0.00	128		Not Detected	
26) tetrahydrofuran	0.00	72		Not Detected	
27) chloroform	0.00	83		Not Detected	
28) 1,1,1-trichloroethane	0.00	97		Not Detected	
29) cyclohexane	0.00	56		Not Detected	
30) 1,1-dichloropropene	0.00	75		Not Detected	
31) 1,2-dichloroethane	0.00	62		Not Detected	
32) carbon tetrachloride	0.00	117		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X008.D
Acq Time : 09/10/2019 10:26 Operator: CQC
Sample : 105 Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 12:33 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	benzene	0.00	78		Not Detected	
35)	trichloroethene	0.00	130		Not Detected	
36)	methylcyclohexane	0.00	83		Not Detected	
37)	1,2-dichloropropane	0.00	63		Not Detected	
38)	dibromomethane	0.00	93		Not Detected	
39)	bromodichloromethane	0.00	83		Not Detected	
40)	cis-1,3-dichloropropene	0.00	75		Not Detected	
41)	4-methyl-2-pentanone	0.00	43		Not Detected	
43)	trans-1,3-dichloropropene	0.00	75		Not Detected	
44)	ethyl methacrylate	0.00	69		Not Detected	
45)	1,1,2-trichloroethane	0.00	97		Not Detected	
46)	2-hexanone	0.00	43		Not Detected	
47)	1,2-dibromoethane	0.00	107		Not Detected	
49)	toluene	0.00	92		Not Detected	
50)	1,3-dichloropropane	0.00	76		Not Detected	
51)	dibromochloromethane	0.00	129		Not Detected	
52)	bromoform	0.00	173		Not Detected	
53)	tetrachloroethene	0.00	164		Not Detected	
54)	1-chlorohexane	0.00	93		Not Detected	
55)	chlorobenzene	0.00	112		Not Detected	
56)	1,1,1,2-tetrachloroethane	0.00	131		Not Detected	
57)	ethylbenzene	0.00	106		Not Detected	
58)	m,p-xylene	0.00	106		Not Detected	
59)	o-xylene	0.00	106		Not Detected	
60)	styrene	0.00	104		Not Detected	
61)	isopropylbenzene	0.00	105		Not Detected	
64)	1,1,2,2-tetrachloroethane	0.00	83		Not Detected	
65)	bromobenzene	0.00	156		Not Detected	
66)	1,2,3-trichloropropane	0.00	110		Not Detected	
67)	trans-1,4-dichloro-2-buten	0.00	88		Not Detected	
68)	pentachloroethane	0.00	167		Not Detected	
69)	n-propylbenzene	0.00	120		Not Detected	
70)	1,3,5-trimethylbenzene	0.00	105		Not Detected	
71)	2-chlorotoluene	0.00	126		Not Detected	
72)	4-chlorotoluene	0.00	126		Not Detected	
73)	tert-butylbenzene	0.00	134		Not Detected	
74)	1,2,4-trimethylbenzene	0.00	105		Not Detected	
75)	sec-butylbenzene	0.00	105		Not Detected	
76)	p-isopropyltoluene	0.00	119		Not Detected	
77)	1,3-dichlorobenzene	0.00	146		Not Detected	
78)	1,4-dichlorobenzene	0.00	146		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X008.D
Acq Time : 09/10/2019 10:26 Operator: CQC
Sample : 105 Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 12:33 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79)	n-butylbenzene	0.00	91		Not Detected	
80)	1,2-dichlorobenzene	0.00	146		Not Detected	
81)	1,2-dibromo-3-chloropropan	0.00	75		Not Detected	
82)	1,2,4-trichlorobenzene	0.00	180		Not Detected	
83)	hexachlorobutadiene	0.00	225		Not Detected	
84)	naphthalene	0.00	128		Not Detected	
85)	1,2,3-trichlorobenzene	0.00	180		Not Detected	

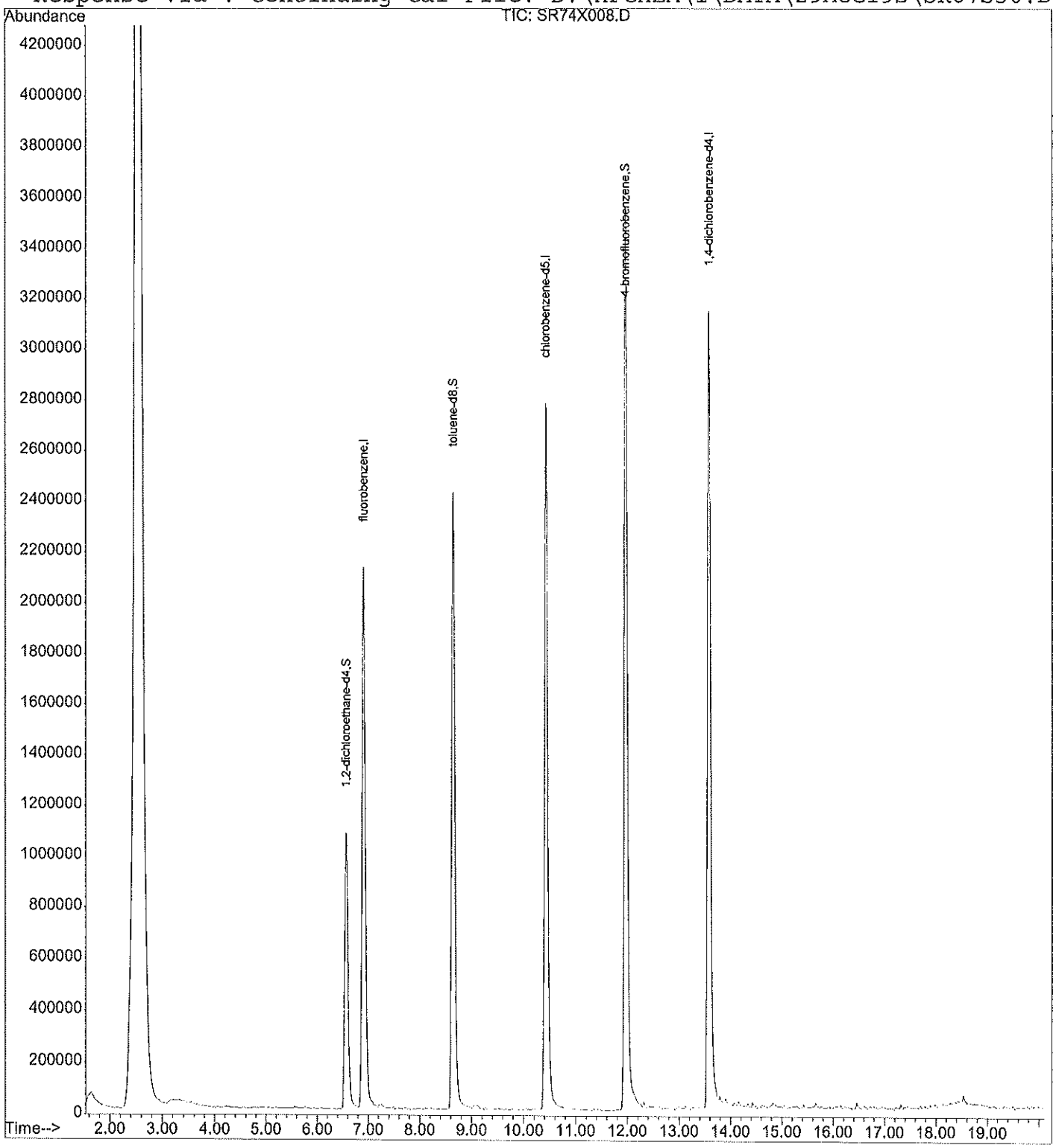
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X008.D
Acq Time : 09/10/2019 10:26 Operator: CQC
Sample : 105 Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 12:33 2019 Quant Results File: SSCREEN.RES

Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D



Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X011.D
Acq Time : 09/10/2019 10:55 Operator: CQC
Sample : 103 Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 12:34 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) fluorobenzene	6.91	96	4024520	50.0000 ug/Kg	83.78
42) chlorobenzene-d5	10.42	117	3304582	50.0000 ug/Kg	90.28
62) 1,4-dichlorobenzene-d4	13.58	152	1917042	50.0000 ug/Kg	79.84
System Monitoring Compounds					%Recovery
33) 1,2-dichloroethane-d4	6.57	102	365139	50.1530 ug/Kg	100.31%
48) toluene-d8	8.64	98	3405695	46.8598 ug/Kg	93.72%
63) 4-bromofluorobenzene	11.96	95	3030440	53.6080 ug/Kg	107.22%
Target Compounds					Qvalue
2) dichlorodifluoromethane	0.00	85		Not Detected	
3) chloromethane	0.00	50		Not Detected	
4) vinyl chloride	0.00	62		Not Detected	
5) bromomethane	0.00	94		Not Detected	
6) chloroethane	0.00	64		Not Detected	
7) dichlorofluoromethane	0.00	67		Not Detected	
8) trichlorofluoromethane	0.00	101		Not Detected	
9) ethyl ether	0.00	59		Not Detected	
10) 1,1-dichloroethene	0.00	96		Not Detected	
11) freon 113	0.00	151		Not Detected	
12) acetone	0.00	43		Not Detected	
13) iodomethane	0.00	142		Not Detected	
14) carbon disulfide	0.00	44		Not Detected	
15) methyl acetate	0.00	43		Not Detected	
16) allyl chloride	0.00	41		Not Detected	
17) methylene chloride	0.00	84		Not Detected	
18) trans-1,2-dichloroethene	0.00	96		Not Detected	
19) methyl-t-butyl ether	0.00	73		Not Detected	
20) cis-1,2-dichloroethene	0.00	96		Not Detected	
21) 1,1-dichloroethane	0.00	63		Not Detected	
22) 2,2-dichloropropane	0.00	77		Not Detected	
23) 2-butanone	0.00	72		Not Detected	
24) ethyl acetate	0.00	70		Not Detected	
25) bromochloromethane	0.00	128		Not Detected	
26) tetrahydrofuran	0.00	72		Not Detected	
27) chloroform	0.00	83		Not Detected	
28) 1,1,1-trichloroethane	0.00	97		Not Detected	
29) cyclohexane	0.00	56		Not Detected	
30) 1,1-dichloropropene	0.00	75		Not Detected	
31) 1,2-dichloroethane	0.00	62		Not Detected	
32) carbon tetrachloride	0.00	117		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X011.D
Acq Time : 09/10/2019 10:55 Operator: CQC
Sample : 103 Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 12:34 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	benzene	0.00	78		Not Detected	
35)	trichloroethene	0.00	130		Not Detected	
36)	methylcyclohexane	0.00	83		Not Detected	
37)	1,2-dichloropropane	0.00	63		Not Detected	
38)	dibromomethane	0.00	93		Not Detected	
39)	bromodichloromethane	0.00	83		Not Detected	
40)	cis-1,3-dichloropropene	0.00	75		Not Detected	
41)	4-methyl-2-pentanone	0.00	43		Not Detected	
43)	trans-1,3-dichloropropene	0.00	75		Not Detected	
44)	ethyl methacrylate	0.00	69		Not Detected	
45)	1,1,2-trichloroethane	0.00	97		Not Detected	
46)	2-hexanone	0.00	43		Not Detected	
47)	1,2-dibromoethane	0.00	107		Not Detected	
49)	toluene	0.00	92		Not Detected	
50)	1,3-dichloropropane	0.00	76		Not Detected	
51)	dibromochloromethane	0.00	129		Not Detected	
52)	bromoform	0.00	173		Not Detected	
53)	tetrachloroethene	0.00	164		Not Detected	
54)	1-chlorohexane	0.00	93		Not Detected	
55)	chlorobenzene	0.00	112		Not Detected	
56)	1,1,1,2-tetrachloroethane	0.00	131		Not Detected	
57)	ethylbenzene	0.00	106		Not Detected	
58)	m,p-xylene	0.00	106		Not Detected	
59)	o-xylene	0.00	106		Not Detected	
60)	styrene	0.00	104		Not Detected	
61)	isopropylbenzene	0.00	105		Not Detected	
64)	1,1,2,2-tetrachloroethane	0.00	83		Not Detected	
65)	bromobenzene	0.00	156		Not Detected	
66)	1,2,3-trichloropropane	0.00	110		Not Detected	
67)	trans-1,4-dichloro-2-buten	0.00	88		Not Detected	
68)	pentachloroethane	0.00	167		Not Detected	
69)	n-propylbenzene	0.00	120		Not Detected	
70)	1,3,5-trimethylbenzene	0.00	105		Not Detected	
71)	2-chlorotoluene	0.00	126		Not Detected	
72)	4-chlorotoluene	0.00	126		Not Detected	
73)	tert-butylbenzene	0.00	134		Not Detected	
74)	1,2,4-trimethylbenzene	0.00	105		Not Detected	
75)	sec-butylbenzene	0.00	105		Not Detected	
76)	p-isopropyltoluene	0.00	119		Not Detected	
77)	1,3-dichlorobenzene	0.00	146		Not Detected	
78)	1,4-dichlorobenzene	0.00	146		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X011.D
Acq Time : 09/10/2019 10:55 Operator: CQC
Sample : 103 Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 12:34 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79)	n-butylbenzene	0.00	91		Not Detected	
80)	1,2-dichlorobenzene	0.00	146		Not Detected	
81)	1,2-dibromo-3-chloropropan	0.00	75		Not Detected	
82)	1,2,4-trichlorobenzene	0.00	180		Not Detected	
83)	hexachlorobutadiene	0.00	225		Not Detected	
84)	naphthalene	0.00	128		Not Detected	
85)	1,2,3-trichlorobenzene	0.00	180		Not Detected	

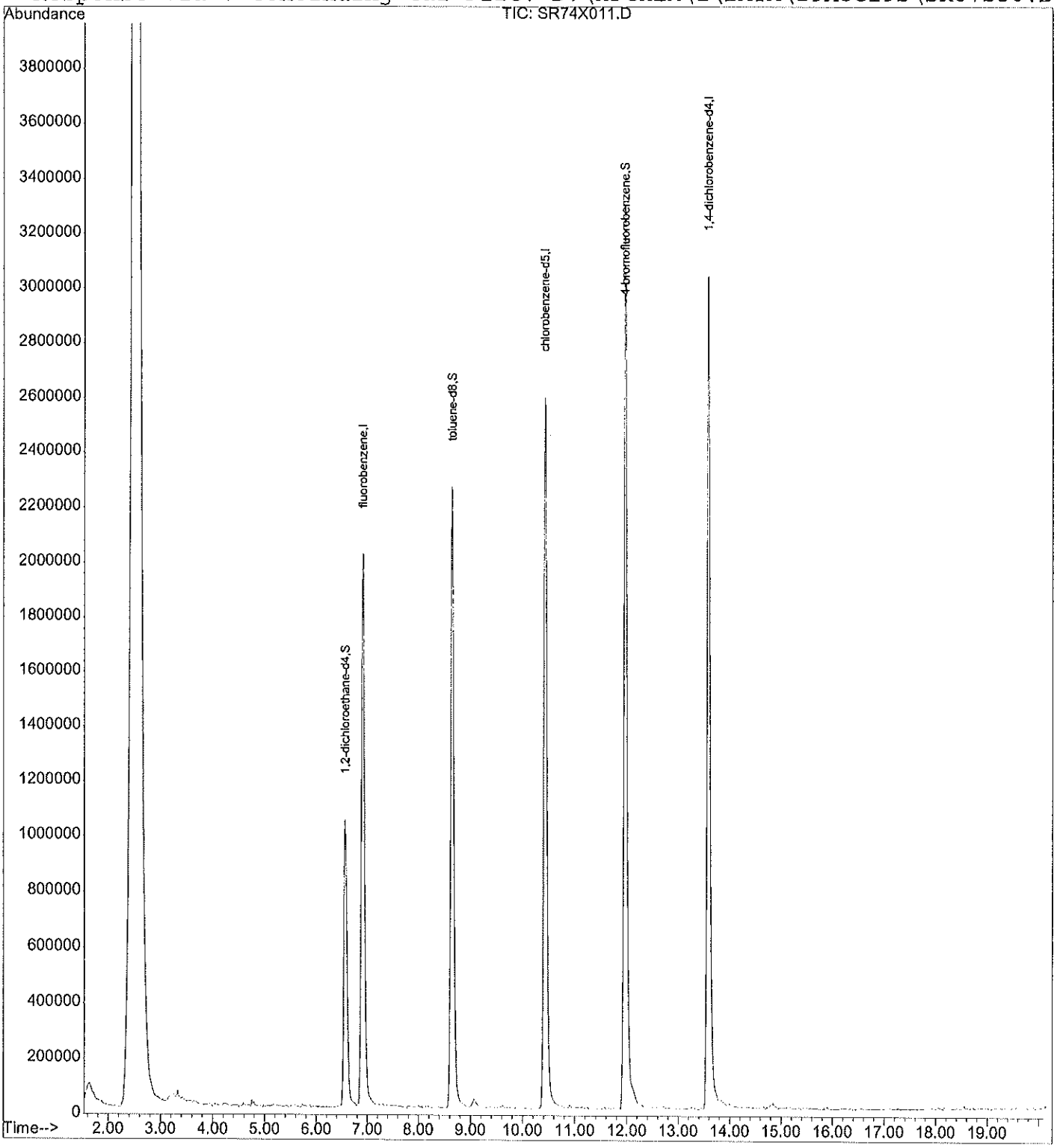
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X011.D
Acq Time : 09/10/2019 10:55 Operator: CQC
Sample : 103 Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 12:34 2019 Quant Results File: SSCREEN.RES

Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D



Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X012.D
Acq Time : 09/10/2019 11:24 Operator: CQC
Sample : 104 Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 12:34 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) fluorobenzene	6.91	96	4033171	50.0000 ug/Kg	83.96
42) chlorobenzene-d5	10.42	117	3340458	50.0000 ug/Kg	91.26
62) 1,4-dichlorobenzene-d4	13.58	152	1877506	50.0000 ug/Kg	78.20
System Monitoring Compounds					%Recovery
33) 1,2-dichloroethane-d4	6.57	102	367909	50.4250 ug/Kg	100.85%
48) toluene-d8	8.64	98	3441840	46.8486 ug/Kg	93.70%
63) 4-bromofluorobenzene	11.97	95	2997768	54.1467 ug/Kg	108.29%
Target Compounds					Qvalue
2) dichlorodifluoromethane	0.00	85		Not Detected	
3) chloromethane	0.00	50		Not Detected	
4) vinyl chloride	0.00	62		Not Detected	
5) bromomethane	0.00	94		Not Detected	
6) chloroethane	0.00	64		Not Detected	
7) dichlorofluoromethane	0.00	67		Not Detected	
8) trichlorofluoromethane	0.00	101		Not Detected	
9) ethyl ether	0.00	59		Not Detected	
10) 1,1-dichloroethene	0.00	96		Not Detected	
11) freon 113	0.00	151		Not Detected	
12) acetone	0.00	43		Not Detected	
13) iodomethane	0.00	142		Not Detected	
14) carbon disulfide	0.00	44		Not Detected	
15) methyl acetate	0.00	43		Not Detected	
16) allyl chloride	0.00	41		Not Detected	
17) methylene chloride	0.00	84		Not Detected	
18) trans-1,2-dichloroethene	0.00	96		Not Detected	
19) methyl-t-butyl ether	0.00	73		Not Detected	
20) cis-1,2-dichloroethene	0.00	96		Not Detected	
21) 1,1-dichloroethane	0.00	63		Not Detected	
22) 2,2-dichloropropane	0.00	77		Not Detected	
23) 2-butanone	0.00	72		Not Detected	
24) ethyl acetate	0.00	70		Not Detected	
25) bromochloromethane	0.00	128		Not Detected	
26) tetrahydrofuran	0.00	72		Not Detected	
27) chloroform	0.00	83		Not Detected	
28) 1,1,1-trichloroethane	0.00	97		Not Detected	
29) cyclohexane	0.00	56		Not Detected	
30) 1,1-dichloropropene	0.00	75		Not Detected	
31) 1,2-dichloroethane	0.00	62		Not Detected	
32) carbon tetrachloride	0.00	117		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X012.D
Acq Time : 09/10/2019 11:24 Operator: CQC
Sample : 104 Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 12:34 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	benzene	0.00	78		Not Detected	
35)	trichloroethene	0.00	130		Not Detected	
36)	methylcyclohexane	0.00	83		Not Detected	
37)	1,2-dichloropropane	0.00	63		Not Detected	
38)	dibromomethane	0.00	93		Not Detected	
39)	bromodichloromethane	0.00	83		Not Detected	
40)	cis-1,3-dichloropropene	0.00	75		Not Detected	
41)	4-methyl-2-pentanone	0.00	43		Not Detected	
43)	trans-1,3-dichloropropene	0.00	75		Not Detected	
44)	ethyl methacrylate	0.00	69		Not Detected	
45)	1,1,2-trichloroethane	0.00	97		Not Detected	
46)	2-hexanone	0.00	43		Not Detected	
47)	1,2-dibromoethane	0.00	107		Not Detected	
49)	toluene	0.00	92		Not Detected	
50)	1,3-dichloropropane	0.00	76		Not Detected	
51)	dibromochloromethane	0.00	129		Not Detected	
52)	bromoform	0.00	173		Not Detected	
53)	tetrachloroethene	9.40	164	31290	0.7729 ug/Kg	92
54)	1-chlorohexane	0.00	93		Not Detected	
55)	chlorobenzene	0.00	112		Not Detected	
56)	1,1,1,2-tetrachloroethane	0.00	131		Not Detected	
57)	ethylbenzene	0.00	106		Not Detected	
58)	m,p-xylene	0.00	106		Not Detected	
59)	o-xylene	0.00	106		Not Detected	
60)	styrene	0.00	104		Not Detected	
61)	isopropylbenzene	0.00	105		Not Detected	
64)	1,1,2,2-tetrachloroethane	0.00	83		Not Detected	
65)	bromobenzene	0.00	156		Not Detected	
66)	1,2,3-trichloropropane	0.00	110		Not Detected	
67)	trans-1,4-dichloro-2-buten	0.00	88		Not Detected	
68)	pentachloroethane	0.00	167		Not Detected	
69)	n-propylbenzene	0.00	120		Not Detected	
70)	1,3,5-trimethylbenzene	0.00	105		Not Detected	
71)	2-chlorotoluene	0.00	126		Not Detected	
72)	4-chlorotoluene	0.00	126		Not Detected	
73)	tert-butylbenzene	0.00	134		Not Detected	
74)	1,2,4-trimethylbenzene	0.00	105		Not Detected	
75)	sec-butylbenzene	0.00	105		Not Detected	
76)	p-isopropyltoluene	0.00	119		Not Detected	
77)	1,3-dichlorobenzene	0.00	146		Not Detected	
78)	1,4-dichlorobenzene	0.00	146		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X012.D
Acq Time : 09/10/2019 11:24 Operator: CQC
Sample : 104 Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 12:34 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79)	n-butylbenzene	0.00	91		Not Detected	
80)	1,2-dichlorobenzene	0.00	146		Not Detected	
81)	1,2-dibromo-3-chloropropan	0.00	75		Not Detected	
82)	1,2,4-trichlorobenzene	0.00	180		Not Detected	
83)	hexachlorobutadiene	0.00	225		Not Detected	
84)	naphthalene	0.00	128		Not Detected	
85)	1,2,3-trichlorobenzene	0.00	180		Not Detected	

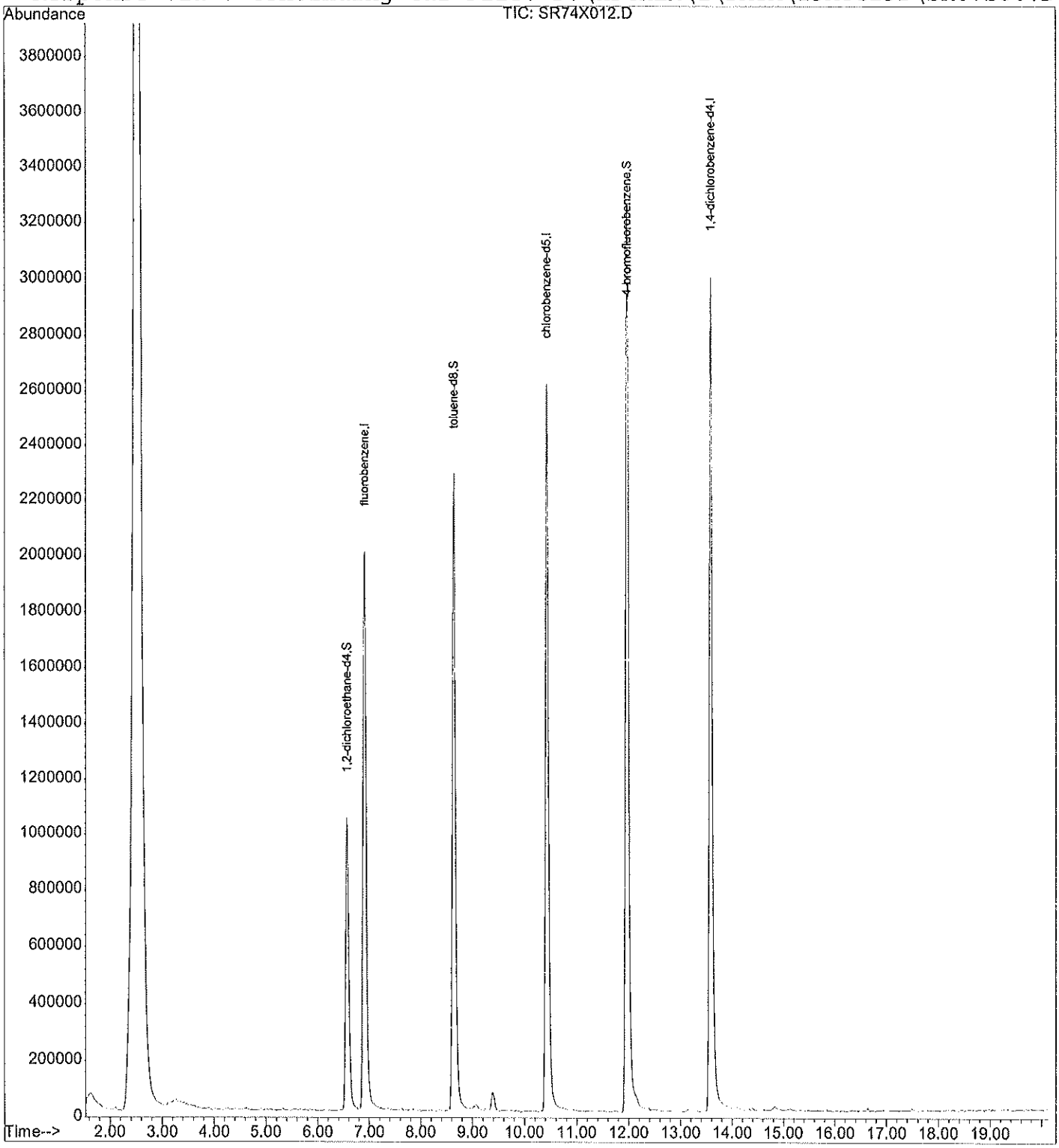
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X012.D
Acq Time : 09/10/2019 11:24 Operator: CQC
Sample : 104 Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 12:34 2019 Quant Results File: SSCREEN.RES

Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D



Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X013.D
Acq Time : 09/10/2019 11:53 Operator: CQC
Sample : 108I Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 12:34 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) fluorobenzene	6.91	96	4256256	50.0000 ug/Kg	88.60
42) chlorobenzene-d5	10.43	117	3550090	50.0000 ug/Kg	96.99
62) 1,4-dichlorobenzene-d4	13.58	152	1999741	50.0000 ug/Kg	83.29
System Monitoring Compounds					**%Recovery**
33) 1,2-dichloroethane-d4	6.56	102	391204	50.8075 ug/Kg	101.62%
48) toluene-d8	8.64	98	3617537	46.3324 ug/Kg	92.66%
63) 4-bromofluorobenzene	11.97	95	3260273	55.2886 ug/Kg	110.58%
Target Compounds					**Qvalue**
2) dichlorodifluoromethane	0.00	85		Not Detected	
3) chloromethane	0.00	50		Not Detected	
4) vinyl chloride	0.00	62		Not Detected	
5) bromomethane	0.00	94		Not Detected	
6) chloroethane	0.00	64		Not Detected	
7) dichlorofluoromethane	0.00	67		Not Detected	
8) trichlorofluoromethane	0.00	101		Not Detected	
9) ethyl ether	0.00	59		Not Detected	
10) 1,1-dichloroethene	0.00	96		Not Detected	
11) freon 113	0.00	151		Not Detected	
12) acetone	0.00	43		Not Detected	
13) iodomethane	0.00	142		Not Detected	
14) carbon disulfide	0.00	44		Not Detected	
15) methyl acetate	0.00	43		Not Detected	
16) allyl chloride	0.00	41		Not Detected	
17) methylene chloride	0.00	84		Not Detected	
18) trans-1,2-dichloroethene	0.00	96		Not Detected	
19) methyl-t-butyl ether	0.00	73		Not Detected	
20) cis-1,2-dichloroethene	0.00	96		Not Detected	
21) 1,1-dichloroethane	0.00	63		Not Detected	
22) 2,2-dichloropropane	0.00	77		Not Detected	
23) 2-butanone	0.00	72		Not Detected	
24) ethyl acetate	0.00	70		Not Detected	
25) bromochloromethane	0.00	128		Not Detected	
26) tetrahydrofuran	0.00	72		Not Detected	
27) chloroform	0.00	83		Not Detected	
28) 1,1,1-trichloroethane	0.00	97		Not Detected	
29) cyclohexane	0.00	56		Not Detected	
30) 1,1-dichloropropene	0.00	75		Not Detected	
31) 1,2-dichloroethane	0.00	62		Not Detected	
32) carbon tetrachloride	0.00	117		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X013.D
Acq Time : 09/10/2019 11:53 Operator: CQC
Sample : 108I Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 12:34 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	benzene	0.00	78		Not Detected	
35)	trichloroethene	0.00	130		Not Detected	
36)	methylcyclohexane	0.00	83		Not Detected	
37)	1,2-dichloropropane	0.00	63		Not Detected	
38)	dibromomethane	0.00	93		Not Detected	
39)	bromodichloromethane	0.00	83		Not Detected	
40)	cis-1,3-dichloropropene	0.00	75		Not Detected	
41)	4-methyl-2-pentanone	0.00	43		Not Detected	
43)	trans-1,3-dichloropropene	0.00	75		Not Detected	
44)	ethyl methacrylate	0.00	69		Not Detected	
45)	1,1,2-trichloroethane	0.00	97		Not Detected	
46)	2-hexanone	0.00	43		Not Detected	
47)	1,2-dibromoethane	0.00	107		Not Detected	
49)	toluene	0.00	92		Not Detected	
50)	1,3-dichloropropane	0.00	76		Not Detected	
51)	dibromochloromethane	0.00	129		Not Detected	
52)	bromoform	0.00	173		Not Detected	
53)	tetrachloroethene	0.00	164		Not Detected	
54)	1-chlorohexane	0.00	93		Not Detected	
55)	chlorobenzene	0.00	112		Not Detected	
56)	1,1,1,2-tetrachloroethane	0.00	131		Not Detected	
57)	ethylbenzene	0.00	106		Not Detected	
58)	m,p-xylene	0.00	106		Not Detected	
59)	o-xylene	0.00	106		Not Detected	
60)	styrene	0.00	104		Not Detected	
61)	isopropylbenzene	0.00	105		Not Detected	
64)	1,1,2,2-tetrachloroethane	0.00	83		Not Detected	
65)	bromobenzene	0.00	156		Not Detected	
66)	1,2,3-trichloropropane	0.00	110		Not Detected	
67)	trans-1,4-dichloro-2-buten	0.00	88		Not Detected	
68)	pentachloroethane	0.00	167		Not Detected	
69)	n-propylbenzene	0.00	120		Not Detected	
70)	1,3,5-trimethylbenzene	0.00	105		Not Detected	
71)	2-chlorotoluene	0.00	126		Not Detected	
72)	4-chlorotoluene	0.00	126		Not Detected	
73)	tert-butylbenzene	0.00	134		Not Detected	
74)	1,2,4-trimethylbenzene	0.00	105		Not Detected	
75)	sec-butylbenzene	0.00	105		Not Detected	
76)	p-isopropyltoluene	0.00	119		Not Detected	
77)	1,3-dichlorobenzene	0.00	146		Not Detected	
78)	1,4-dichlorobenzene	0.00	146		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X013.D
Acq Time : 09/10/2019 11:53 Operator: CQC
Sample : 108I Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 12:34 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79)	n-butylbenzene	0.00	91		Not Detected	
80)	1,2-dichlorobenzene	0.00	146		Not Detected	
81)	1,2-dibromo-3-chloropropan	0.00	75		Not Detected	
82)	1,2,4-trichlorobenzene	0.00	180		Not Detected	
83)	hexachlorobutadiene	0.00	225		Not Detected	
84)	naphthalene	0.00	128		Not Detected	
85)	1,2,3-trichlorobenzene	0.00	180		Not Detected	

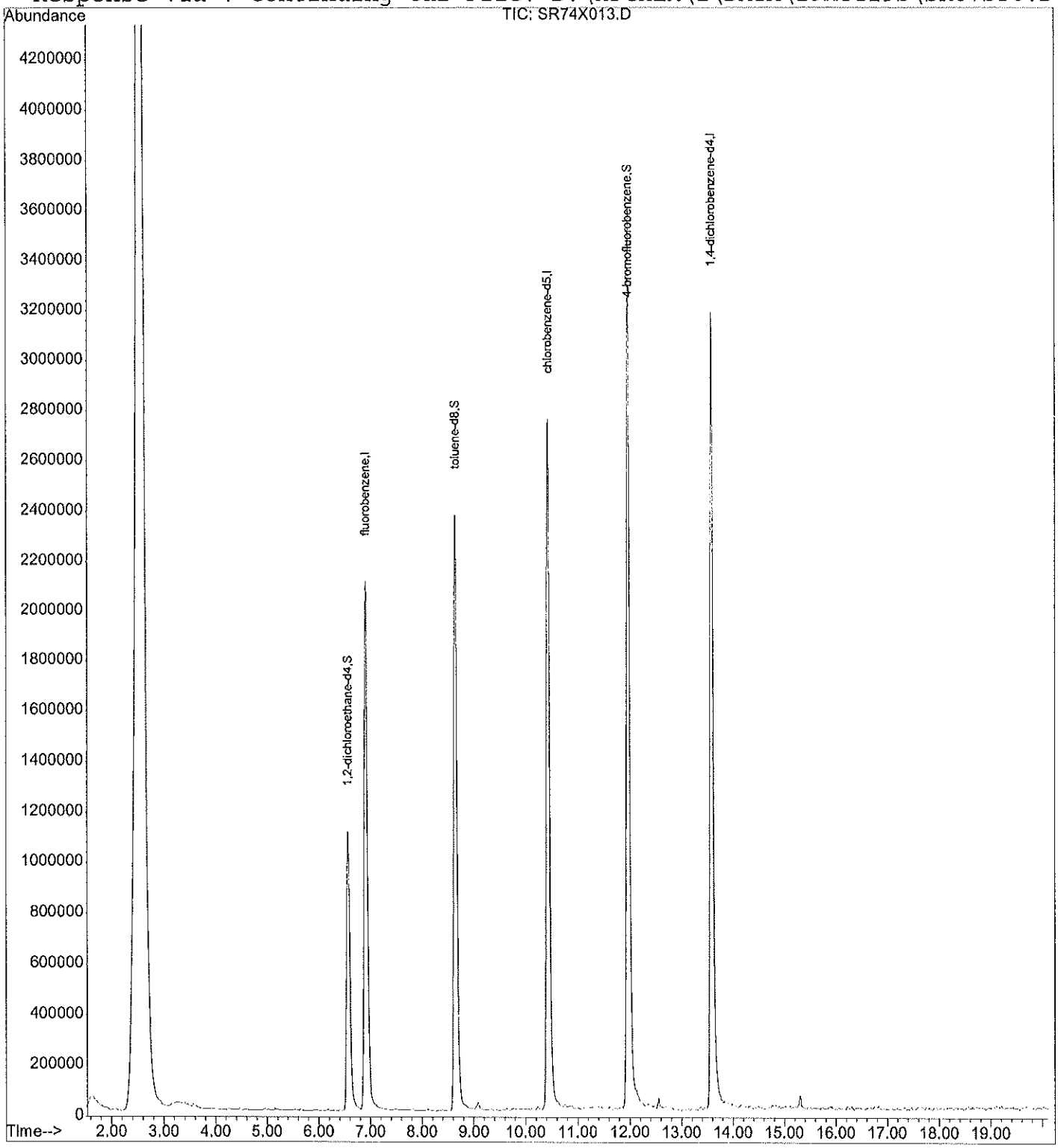
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X013.D
Acq Time : 09/10/2019 11:53 Operator: CQC
Sample : 108I Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 12:34 2019 Quant Results File: SSCREEN.RES

Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D



Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X014.D
Acq Time : 09/10/2019 12:22 Operator: CQC
Sample : 108D Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 12:49 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) fluorobenzene	6.90	96	3917746	50.0000 ug/Kg	81.56
42) chlorobenzene-d5	10.43	117	3226651	50.0000 ug/Kg	88.15
62) 1,4-dichlorobenzene-d4	13.58	152	1844978	50.0000 ug/Kg	76.84

System Monitoring Compounds					%Recovery
33) 1,2-dichloroethane-d4	6.57	102	359840	50.7722 ug/Kg	101.54%
48) toluene-d8	8.64	98	3308291	46.6190 ug/Kg	93.24%
63) 4-bromofluorobenzene	11.96	95	2934932	53.9464 ug/Kg	107.89%

Target Compounds				Qvalue
2) dichlorodifluoromethane	0.00	85	Not Detected	
3) chloromethane	0.00	50	Not Detected	
4) vinyl chloride	0.00	62	Not Detected	
5) bromomethane	0.00	94	Not Detected	
6) chloroethane	0.00	64	Not Detected	
7) dichlorofluoromethane	0.00	67	Not Detected	
8) trichlorofluoromethane	0.00	101	Not Detected	
9) ethyl ether	0.00	59	Not Detected	
10) 1,1-dichloroethene	0.00	96	Not Detected	
11) freon 113	0.00	151	Not Detected	
12) acetone	0.00	43	Not Detected	
13) iodomethane	0.00	142	Not Detected	
14) carbon disulfide	0.00	44	Not Detected	
15) methyl acetate	0.00	43	Not Detected	
16) allyl chloride	0.00	41	Not Detected	
17) methylene chloride	0.00	84	Not Detected	
18) trans-1,2-dichloroethene	0.00	96	Not Detected	
19) methyl-t-butyl ether	0.00	73	Not Detected	
20) cis-1,2-dichloroethene	0.00	96	Not Detected	
21) 1,1-dichloroethane	0.00	63	Not Detected	
22) 2,2-dichloropropane	0.00	77	Not Detected	
23) 2-butanone	0.00	72	Not Detected	
24) ethyl acetate	0.00	70	Not Detected	
25) bromochloromethane	0.00	128	Not Detected	
26) tetrahydrofuran	0.00	72	Not Detected	
27) chloroform	0.00	83	Not Detected	
28) 1,1,1-trichloroethane	0.00	97	Not Detected	
29) cyclohexane	0.00	56	Not Detected	
30) 1,1-dichloropropene	0.00	75	Not Detected	
31) 1,2-dichloroethane	0.00	62	Not Detected	
32) carbon tetrachloride	0.00	117	Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X014.D
Acq Time : 09/10/2019 12:22 Operator: CQC
Sample : 108D Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 12:49 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	benzene	0.00	78		Not Detected	
35)	trichloroethene	0.00	130		Not Detected	
36)	methylcyclohexane	0.00	83		Not Detected	
37)	1,2-dichloropropane	0.00	63		Not Detected	
38)	dibromomethane	0.00	93		Not Detected	
39)	bromodichloromethane	0.00	83		Not Detected	
40)	cis-1,3-dichloropropene	0.00	75		Not Detected	
41)	4-methyl-2-pentanone	0.00	43		Not Detected	
43)	trans-1,3-dichloropropene	0.00	75		Not Detected	
44)	ethyl methacrylate	0.00	69		Not Detected	
45)	1,1,2-trichloroethane	0.00	97		Not Detected	
46)	2-hexanone	0.00	43		Not Detected	
47)	1,2-dibromoethane	0.00	107		Not Detected	
49)	toluene	0.00	92		Not Detected	
50)	1,3-dichloropropane	0.00	76		Not Detected	
51)	dibromochloromethane	0.00	129		Not Detected	
52)	bromoform	0.00	173		Not Detected	
53)	tetrachloroethene	0.00	164		Not Detected	
54)	1-chlorohexane	0.00	93		Not Detected	
55)	chlorobenzene	0.00	112		Not Detected	
56)	1,1,1,2-tetrachloroethane	0.00	131		Not Detected	
57)	ethylbenzene	0.00	106		Not Detected	
58)	m,p-xylene	0.00	106		Not Detected	
59)	o-xylene	0.00	106		Not Detected	
60)	styrene	0.00	104		Not Detected	
61)	isopropylbenzene	0.00	105		Not Detected	
64)	1,1,2,2-tetrachloroethane	0.00	83		Not Detected	
65)	bromobenzene	0.00	156		Not Detected	
66)	1,2,3-trichloropropane	0.00	110		Not Detected	
67)	trans-1,4-dichloro-2-buten	0.00	88		Not Detected	
68)	pentachloroethane	0.00	167		Not Detected	
69)	n-propylbenzene	0.00	120		Not Detected	
70)	1,3,5-trimethylbenzene	0.00	105		Not Detected	
71)	2-chlorotoluene	0.00	126		Not Detected	
72)	4-chlorotoluene	0.00	126		Not Detected	
73)	tert-butylbenzene	0.00	134		Not Detected	
74)	1,2,4-trimethylbenzene	0.00	105		Not Detected	
75)	sec-butylbenzene	0.00	105		Not Detected	
76)	p-isopropyltoluene	0.00	119		Not Detected	
77)	1,3-dichlorobenzene	0.00	146		Not Detected	
78)	1,4-dichlorobenzene	0.00	146		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X014.D
Acq Time : 09/10/2019 12:22 Operator: CQC
Sample : 108D Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 12:49 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79)	n-butylbenzene	0.00	91		Not Detected	
80)	1,2-dichlorobenzene	0.00	146		Not Detected	
81)	1,2-dibromo-3-chloropropan	0.00	75		Not Detected	
82)	1,2,4-trichlorobenzene	0.00	180		Not Detected	
83)	hexachlorobutadiene	0.00	225		Not Detected	
84)	naphthalene	0.00	128		Not Detected	
85)	1,2,3-trichlorobenzene	0.00	180		Not Detected	

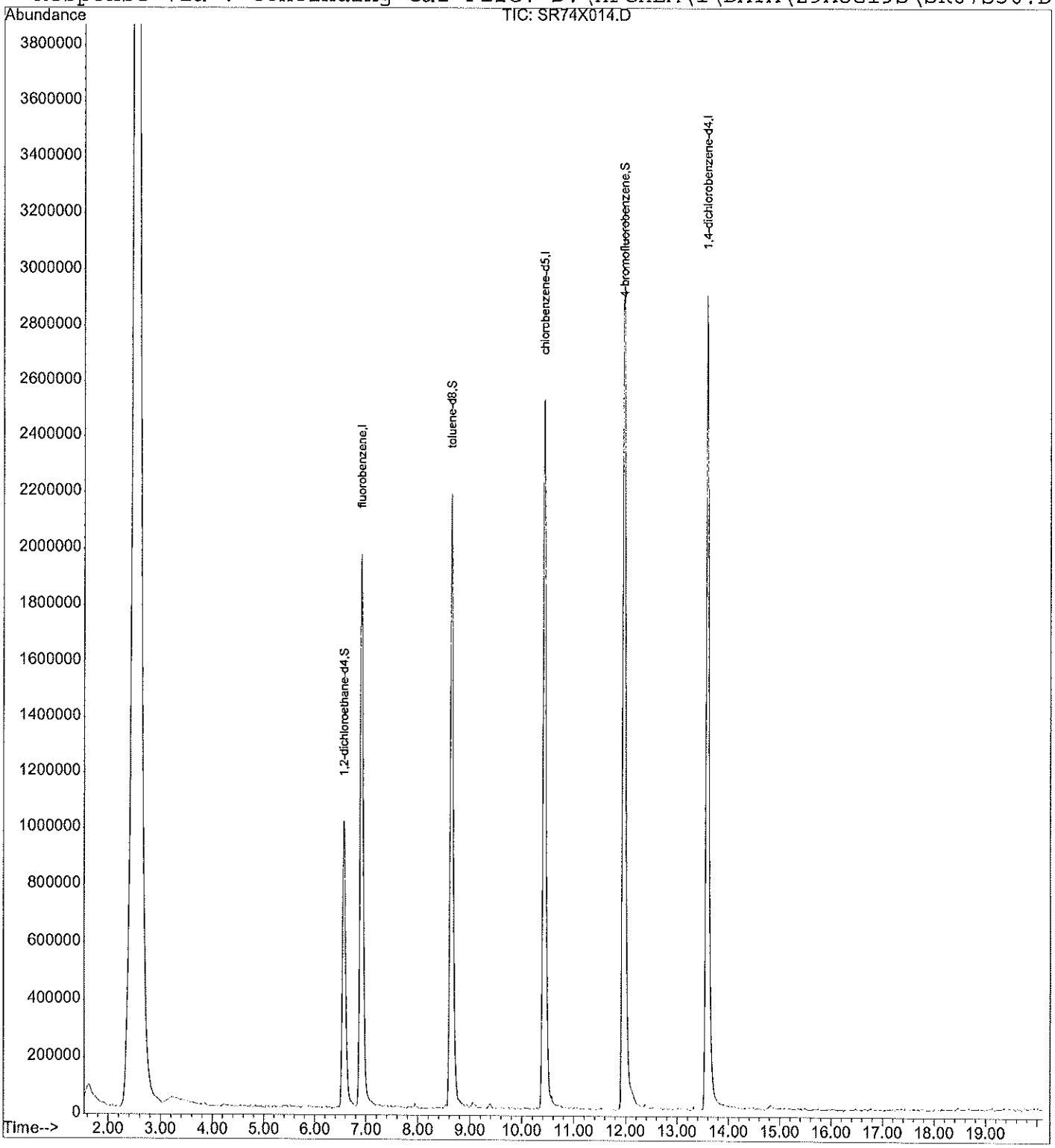
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X014.D
Acq Time : 09/10/2019 12:22 Operator: CQC
Sample : 108D Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 12:49 2019 Quant Results File: SSCREEN.RES

Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D



Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X015.D
Acq Time : 09/10/2019 12:50 Operator: CQC
Sample : 109I Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 13:20 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) fluorobenzene	6.90	96	4125398	50.0000 ug/Kg	85.88
42) chlorobenzene-d5	10.42	117	3414419	50.0000 ug/Kg	93.28
62) 1,4-dichlorobenzene-d4	13.58	152	1923002	50.0000 ug/Kg	80.09

System Monitoring Compounds					%Recovery
33) 1,2-dichloroethane-d4	6.56	102	377288	50.5545 ug/Kg	101.11%
48) toluene-d8	8.64	98	3542612	47.1757 ug/Kg	94.35%
63) 4-bromofluorobenzene	11.95	95	3109205	54.8308 ug/Kg	109.66%

Target Compounds				Qvalue
2) dichlorodifluoromethane	0.00	85	Not Detected	
3) chloromethane	0.00	50	Not Detected	
4) vinyl chloride	0.00	62	Not Detected	
5) bromomethane	0.00	94	Not Detected	
6) chloroethane	0.00	64	Not Detected	
7) dichlorofluoromethane	0.00	67	Not Detected	
8) trichlorofluoromethane	0.00	101	Not Detected	
9) ethyl ether	0.00	59	Not Detected	
10) 1,1-dichloroethene	0.00	96	Not Detected	
11) freon 113	0.00	151	Not Detected	
12) acetone	0.00	43	Not Detected	
13) iodomethane	0.00	142	Not Detected	
14) carbon disulfide	0.00	44	Not Detected	
15) methyl acetate	0.00	43	Not Detected	
16) allyl chloride	0.00	41	Not Detected	
17) methylene chloride	0.00	84	Not Detected	
18) trans-1,2-dichloroethene	0.00	96	Not Detected	
19) methyl-t-butyl ether	0.00	73	Not Detected	
20) cis-1,2-dichloroethene	0.00	96	Not Detected	
21) 1,1-dichloroethane	0.00	63	Not Detected	
22) 2,2-dichloropropane	0.00	77	Not Detected	
23) 2-butanone	0.00	72	Not Detected	
24) ethyl acetate	0.00	70	Not Detected	
25) bromochloromethane	0.00	128	Not Detected	
26) tetrahydrofuran	0.00	72	Not Detected	
27) chloroform	0.00	83	Not Detected	
28) 1,1,1-trichloroethane	0.00	97	Not Detected	
29) cyclohexane	0.00	56	Not Detected	
30) 1,1-dichloropropene	0.00	75	Not Detected	
31) 1,2-dichloroethane	0.00	62	Not Detected	
32) carbon tetrachloride	0.00	117	Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X015.D
Acq Time : 09/10/2019 12:50 Operator: CQC
Sample : 109I Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 13:20 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	benzene	0.00	78		Not Detected	
35)	trichloroethene	0.00	130		Not Detected	
36)	methylcyclohexane	0.00	83		Not Detected	
37)	1,2-dichloropropane	0.00	63		Not Detected	
38)	dibromomethane	0.00	93		Not Detected	
39)	bromodichloromethane	0.00	83		Not Detected	
40)	cis-1,3-dichloropropene	0.00	75		Not Detected	
41)	4-methyl-2-pentanone	0.00	43		Not Detected	
43)	trans-1,3-dichloropropene	0.00	75		Not Detected	
44)	ethyl methacrylate	0.00	69		Not Detected	
45)	1,1,2-trichloroethane	0.00	97		Not Detected	
46)	2-hexanone	0.00	43		Not Detected	
47)	1,2-dibromoethane	0.00	107		Not Detected	
49)	toluene	0.00	92		Not Detected	
50)	1,3-dichloropropane	0.00	76		Not Detected	
51)	dibromochloromethane	0.00	129		Not Detected	
52)	bromoform	0.00	173		Not Detected	
53)	tetrachloroethene	0.00	164		Not Detected	
54)	1-chlorohexane	0.00	93		Not Detected	
55)	chlorobenzene	0.00	112		Not Detected	
56)	1,1,1,2-tetrachloroethane	0.00	131		Not Detected	
57)	ethylbenzene	0.00	106		Not Detected	
58)	m,p-xylene	0.00	106		Not Detected	
59)	o-xylene	0.00	106		Not Detected	
60)	styrene	0.00	104		Not Detected	
61)	isopropylbenzene	0.00	105		Not Detected	
64)	1,1,2,2-tetrachloroethane	0.00	83		Not Detected	
65)	bromobenzene	0.00	156		Not Detected	
66)	1,2,3-trichloropropane	0.00	110		Not Detected	
67)	trans-1,4-dichloro-2-buten	0.00	88		Not Detected	
68)	pentachloroethane	0.00	167		Not Detected	
69)	n-propylbenzene	0.00	120		Not Detected	
70)	1,3,5-trimethylbenzene	0.00	105		Not Detected	
71)	2-chlorotoluene	0.00	126		Not Detected	
72)	4-chlorotoluene	0.00	126		Not Detected	
73)	tert-butylbenzene	0.00	134		Not Detected	
74)	1,2,4-trimethylbenzene	0.00	105		Not Detected	
75)	sec-butylbenzene	0.00	105		Not Detected	
76)	p-isopropyltoluene	0.00	119		Not Detected	
77)	1,3-dichlorobenzene	0.00	146		Not Detected	
78)	1,4-dichlorobenzene	0.00	146		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X015.D
Acq Time : 09/10/2019 12:50 Operator: CQC
Sample : 109I Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 13:20 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79)	n-butylbenzene	0.00	91		Not Detected	
80)	1,2-dichlorobenzene	0.00	146		Not Detected	
81)	1,2-dibromo-3-chloropropan	0.00	75		Not Detected	
82)	1,2,4-trichlorobenzene	0.00	180		Not Detected	
83)	hexachlorobutadiene	0.00	225		Not Detected	
84)	naphthalene	0.00	128		Not Detected	
85)	1,2,3-trichlorobenzene	0.00	180		Not Detected	

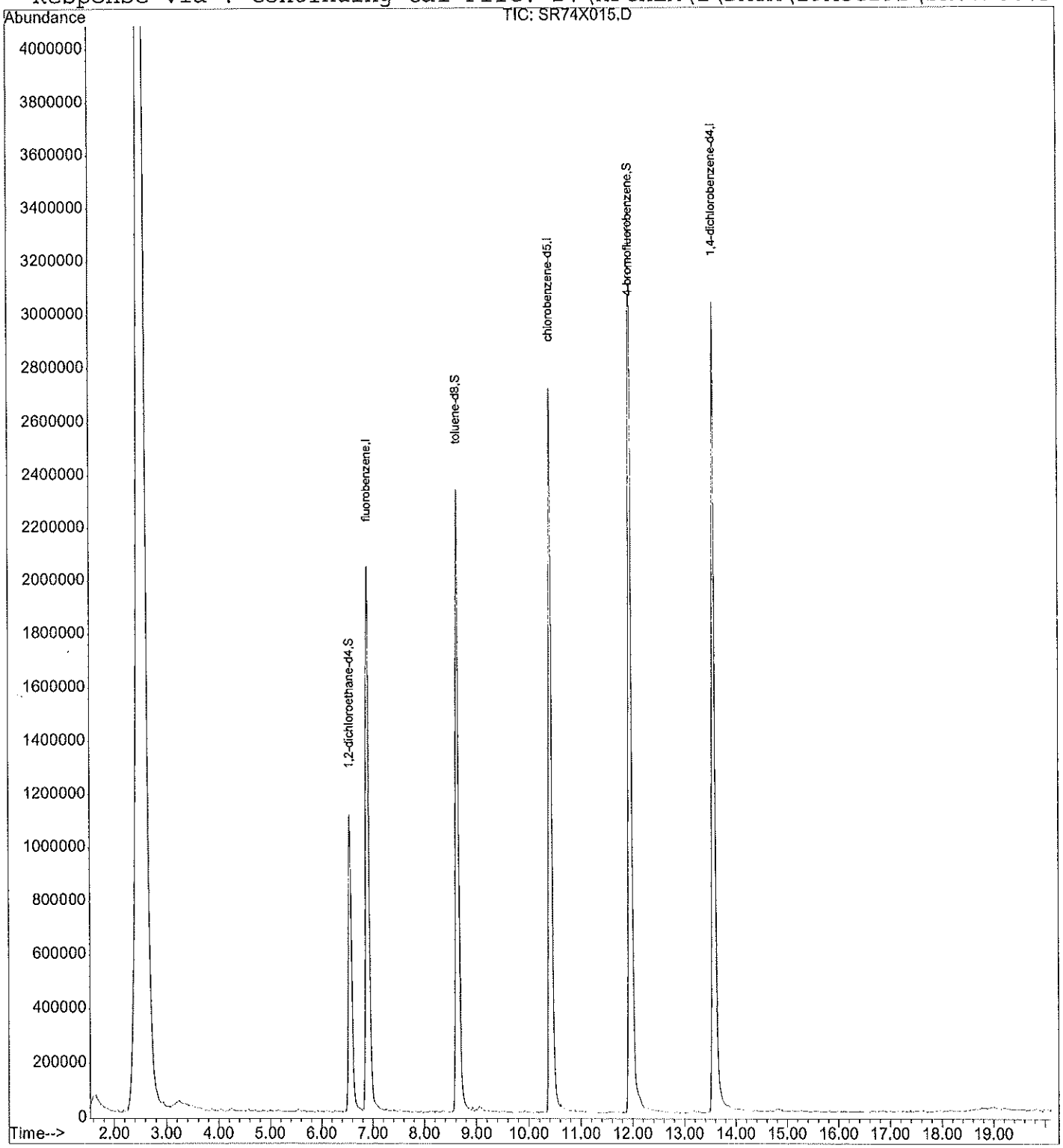
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X015.D
Acq Time : 09/10/2019 12:50 Operator: CQC
Sample : 109I Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 10 13:20 2019 Quant Results File: SSCREEN.RES

Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D



Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X016.D
Acq Time : 09/10/2019 13:19 Operator: CQC
Sample : 109D Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 11 7:19 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) fluorobenzene	6.89	96	4072994	50.0000 ug/Kg	84.79
42) chlorobenzene-d5	10.42	117	3360835	50.0000 ug/Kg	91.82
62) 1,4-dichlorobenzene-d4	13.57	152	1888429	50.0000 ug/Kg	78.65
System Monitoring Compounds					**%Recovery**
33) 1,2-dichloroethane-d4	6.56	102	363431	49.3243 ug/Kg	98.65%
48) toluene-d8	8.64	98	3462295	46.8413 ug/Kg	93.68%
63) 4-bromofluorobenzene	11.95	95	3079200	55.2959 ug/Kg	110.59%
Target Compounds					**Qvalue**
2) dichlorodifluoromethane	0.00	85		Not Detected	
3) chloromethane	0.00	50		Not Detected	
4) vinyl chloride	0.00	62		Not Detected	
5) bromomethane	0.00	94		Not Detected	
6) chloroethane	0.00	64		Not Detected	
7) dichlorofluoromethane	0.00	67		Not Detected	
8) trichlorofluoromethane	0.00	101		Not Detected	
9) ethyl ether	0.00	59		Not Detected	
10) 1,1-dichloroethene	0.00	96		Not Detected	
11) freon 113	0.00	151		Not Detected	
12) acetone	0.00	43		Not Detected	
13) iodomethane	0.00	142		Not Detected	
14) carbon disulfide	0.00	44		Not Detected	
15) methyl acetate	0.00	43		Not Detected	
16) allyl chloride	0.00	41		Not Detected	
17) methylene chloride	0.00	84		Not Detected	
18) trans-1,2-dichloroethene	0.00	96		Not Detected	
19) methyl-t-butyl ether	0.00	73		Not Detected	
20) cis-1,2-dichloroethene	0.00	96		Not Detected	
21) 1,1-dichloroethane	0.00	63		Not Detected	
22) 2,2-dichloropropane	0.00	77		Not Detected	
23) 2-butanone	0.00	72		Not Detected	
24) ethyl acetate	0.00	70		Not Detected	
25) bromochloromethane	0.00	128		Not Detected	
26) tetrahydrofuran	0.00	72		Not Detected	
27) chloroform	0.00	83		Not Detected	
28) 1,1,1-trichloroethane	0.00	97		Not Detected	
29) cyclohexane	0.00	56		Not Detected	
30) 1,1-dichloropropene	0.00	75		Not Detected	
31) 1,2-dichloroethane	0.00	62		Not Detected	
32) carbon tetrachloride	0.00	117		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X016.D
Acq Time : 09/10/2019 13:19 Operator: CQC
Sample : 109D Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 11 7:19 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	benzene	0.00	78		Not Detected	
35)	trichloroethene	0.00	130		Not Detected	
36)	methylcyclohexane	0.00	83		Not Detected	
37)	1,2-dichloropropane	0.00	63		Not Detected	
38)	dibromomethane	0.00	93		Not Detected	
39)	bromodichloromethane	0.00	83		Not Detected	
40)	cis-1,3-dichloropropene	0.00	75		Not Detected	
41)	4-methyl-2-pentanone	0.00	43		Not Detected	
43)	trans-1,3-dichloropropene	0.00	75		Not Detected	
44)	ethyl methacrylate	0.00	69		Not Detected	
45)	1,1,2-trichloroethane	0.00	97		Not Detected	
46)	2-hexanone	0.00	43		Not Detected	
47)	1,2-dibromoethane	0.00	107		Not Detected	
49)	toluene	0.00	92		Not Detected	
50)	1,3-dichloropropane	0.00	76		Not Detected	
51)	dibromochloromethane	0.00	129		Not Detected	
52)	bromoform	0.00	173		Not Detected	
53)	tetrachloroethene	0.00	164		Not Detected	
54)	1-chlorohexane	0.00	93		Not Detected	
55)	chlorobenzene	0.00	112		Not Detected	
56)	1,1,1,2-tetrachloroethane	0.00	131		Not Detected	
57)	ethylbenzene	0.00	106		Not Detected	
58)	m,p-xylene	0.00	106		Not Detected	
59)	o-xylene	0.00	106		Not Detected	
60)	styrene	0.00	104		Not Detected	
61)	isopropylbenzene	0.00	105		Not Detected	
64)	1,1,2,2-tetrachloroethane	0.00	83		Not Detected	
65)	bromobenzene	0.00	156		Not Detected	
66)	1,2,3-trichloropropane	0.00	110		Not Detected	
67)	trans-1,4-dichloro-2-buten	0.00	88		Not Detected	
68)	pentachloroethane	0.00	167		Not Detected	
69)	n-propylbenzene	0.00	120		Not Detected	
70)	1,3,5-trimethylbenzene	0.00	105		Not Detected	
71)	2-chlorotoluene	0.00	126		Not Detected	
72)	4-chlorotoluene	0.00	126		Not Detected	
73)	tert-butylbenzene	0.00	134		Not Detected	
74)	1,2,4-trimethylbenzene	0.00	105		Not Detected	
75)	sec-butylbenzene	0.00	105		Not Detected	
76)	p-isopropyltoluene	0.00	119		Not Detected	
77)	1,3-dichlorobenzene	0.00	146		Not Detected	
78)	1,4-dichlorobenzene	0.00	146		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X016.D
Acq Time : 09/10/2019 13:19 Operator: CQC
Sample : 109D Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 11 7:19 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79)	n-butylbenzene	0.00	91		Not Detected	
80)	1,2-dichlorobenzene	0.00	146		Not Detected	
81)	1,2-dibromo-3-chloropropan	0.00	75		Not Detected	
82)	1,2,4-trichlorobenzene	0.00	180		Not Detected	
83)	hexachlorobutadiene	0.00	225		Not Detected	
84)	naphthalene	0.00	128		Not Detected	
85)	1,2,3-trichlorobenzene	0.00	180		Not Detected	

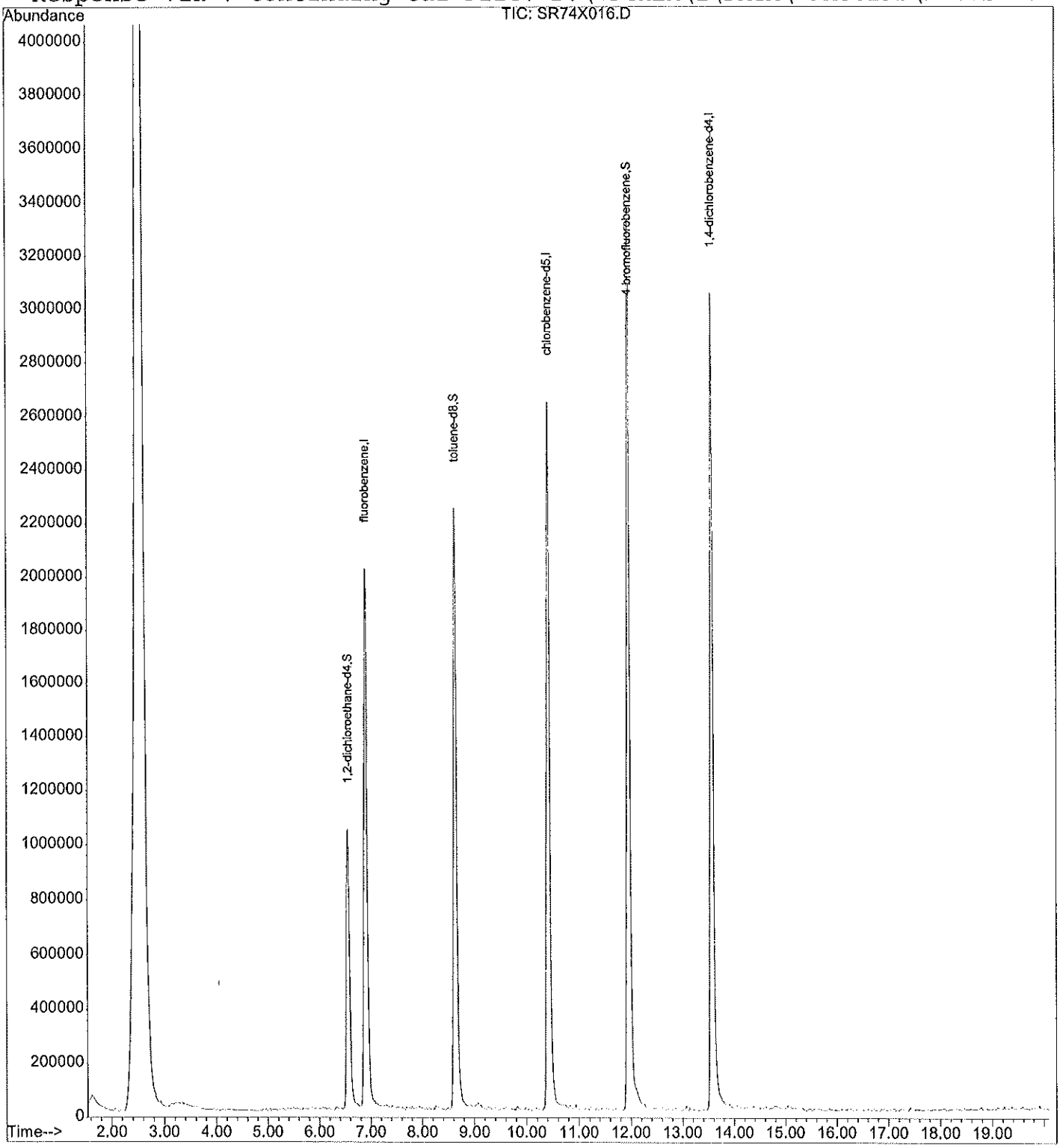
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X016.D
Acq Time : 09/10/2019 13:19 Operator: CQC
Sample : 109D Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 11 7:19 2019 Quant Results File: SSCREEN.RES

Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D



Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X017.D
Acq Time : 09/10/2019 13:48 Operator: CQC
Sample : 110I Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 11 7:20 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) fluorobenzene	6.88	96	4032043	50.0000 ug/Kg	83.94
42) chlorobenzene-d5	10.40	117	3392983	50.0000 ug/Kg	92.70
62) 1,4-dichlorobenzene-d4	13.56	152	1920212	50.0000 ug/Kg	79.97
System Monitoring Compounds					%Recovery
33) 1,2-dichloroethane-d4	6.55	102	372141	51.0193 ug/Kg	102.04%
48) toluene-d8	8.61	98	3503026	46.9433 ug/Kg	93.89%
63) 4-bromofluorobenzene	11.94	95	3085456	54.4911 ug/Kg	108.98%
Target Compounds					Qvalue
2) dichlorodifluoromethane	0.00	85		Not Detected	
3) chloromethane	0.00	50		Not Detected	
4) vinyl chloride	0.00	62		Not Detected	
5) bromomethane	0.00	94		Not Detected	
6) chloroethane	0.00	64		Not Detected	
7) dichlorofluoromethane	0.00	67		Not Detected	
8) trichlorofluoromethane	0.00	101		Not Detected	
9) ethyl ether	0.00	59		Not Detected	
10) 1,1-dichloroethene	0.00	96		Not Detected	
11) freon 113	0.00	151		Not Detected	
12) acetone	0.00	43		Not Detected	
13) iodomethane	0.00	142		Not Detected	
14) carbon disulfide	0.00	44		Not Detected	
15) methyl acetate	0.00	43		Not Detected	
16) allyl chloride	0.00	41		Not Detected	
17) methylene chloride	0.00	84		Not Detected	
18) trans-1,2-dichloroethene	0.00	96		Not Detected	
19) methyl-t-butyl ether	0.00	73		Not Detected	
20) cis-1,2-dichloroethene	0.00	96		Not Detected	
21) 1,1-dichloroethane	0.00	63		Not Detected	
22) 2,2-dichloropropane	0.00	77		Not Detected	
23) 2-butanone	0.00	72		Not Detected	
24) ethyl acetate	0.00	70		Not Detected	
25) bromochloromethane	0.00	128		Not Detected	
26) tetrahydrofuran	0.00	72		Not Detected	
27) chloroform	0.00	83		Not Detected	
28) 1,1,1-trichloroethane	0.00	97		Not Detected	
29) cyclohexane	0.00	56		Not Detected	
30) 1,1-dichloropropene	0.00	75		Not Detected	
31) 1,2-dichloroethane	0.00	62		Not Detected	
32) carbon tetrachloride	0.00	117		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X017.D
Acq Time : 09/10/2019 13:48 Operator: CQC
Sample : 110I Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 11 7:20 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	benzene	0.00	78		Not Detected	
35)	trichloroethene	0.00	130		Not Detected	
36)	methylcyclohexane	0.00	83		Not Detected	
37)	1,2-dichloropropane	0.00	63		Not Detected	
38)	dibromomethane	0.00	93		Not Detected	
39)	bromodichloromethane	0.00	83		Not Detected	
40)	cis-1,3-dichloropropene	0.00	75		Not Detected	
41)	4-methyl-2-pentanone	0.00	43		Not Detected	
43)	trans-1,3-dichloropropene	0.00	75		Not Detected	
44)	ethyl methacrylate	0.00	69		Not Detected	
45)	1,1,2-trichloroethane	0.00	97		Not Detected	
46)	2-hexanone	0.00	43		Not Detected	
47)	1,2-dibromoethane	0.00	107		Not Detected	
49)	toluene	0.00	92		Not Detected	
50)	1,3-dichloropropane	0.00	76		Not Detected	
51)	dibromochloromethane	0.00	129		Not Detected	
52)	bromoform	0.00	173		Not Detected	
53)	tetrachloroethene	0.00	164		Not Detected	
54)	1-chlorohexane	0.00	93		Not Detected	
55)	chlorobenzene	0.00	112		Not Detected	
56)	1,1,1,2-tetrachloroethane	0.00	131		Not Detected	
57)	ethylbenzene	0.00	106		Not Detected	
58)	m,p-xylene	0.00	106		Not Detected	
59)	o-xylene	0.00	106		Not Detected	
60)	styrene	0.00	104		Not Detected	
61)	isopropylbenzene	0.00	105		Not Detected	
64)	1,1,2,2-tetrachloroethane	0.00	83		Not Detected	
65)	bromobenzene	0.00	156		Not Detected	
66)	1,2,3-trichloropropane	0.00	110		Not Detected	
67)	trans-1,4-dichloro-2-buten	0.00	88		Not Detected	
68)	pentachloroethane	0.00	167		Not Detected	
69)	n-propylbenzene	0.00	120		Not Detected	
70)	1,3,5-trimethylbenzene	0.00	105		Not Detected	
71)	2-chlorotoluene	0.00	126		Not Detected	
72)	4-chlorotoluene	0.00	126		Not Detected	
73)	tert-butylbenzene	0.00	134		Not Detected	
74)	1,2,4-trimethylbenzene	0.00	105		Not Detected	
75)	sec-butylbenzene	0.00	105		Not Detected	
76)	p-isopropyltoluene	0.00	119		Not Detected	
77)	1,3-dichlorobenzene	0.00	146		Not Detected	
78)	1,4-dichlorobenzene	0.00	146		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X017.D
Acq Time : 09/10/2019 13:48 Operator: CQC
Sample : 110I Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 11 7:20 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79)	n-butylbenzene	0.00	91		Not Detected	
80)	1,2-dichlorobenzene	0.00	146		Not Detected	
81)	1,2-dibromo-3-chloropropan	0.00	75		Not Detected	
82)	1,2,4-trichlorobenzene	0.00	180		Not Detected	
83)	hexachlorobutadiene	0.00	225		Not Detected	
84)	naphthalene	0.00	128		Not Detected	
85)	1,2,3-trichlorobenzene	0.00	180		Not Detected	

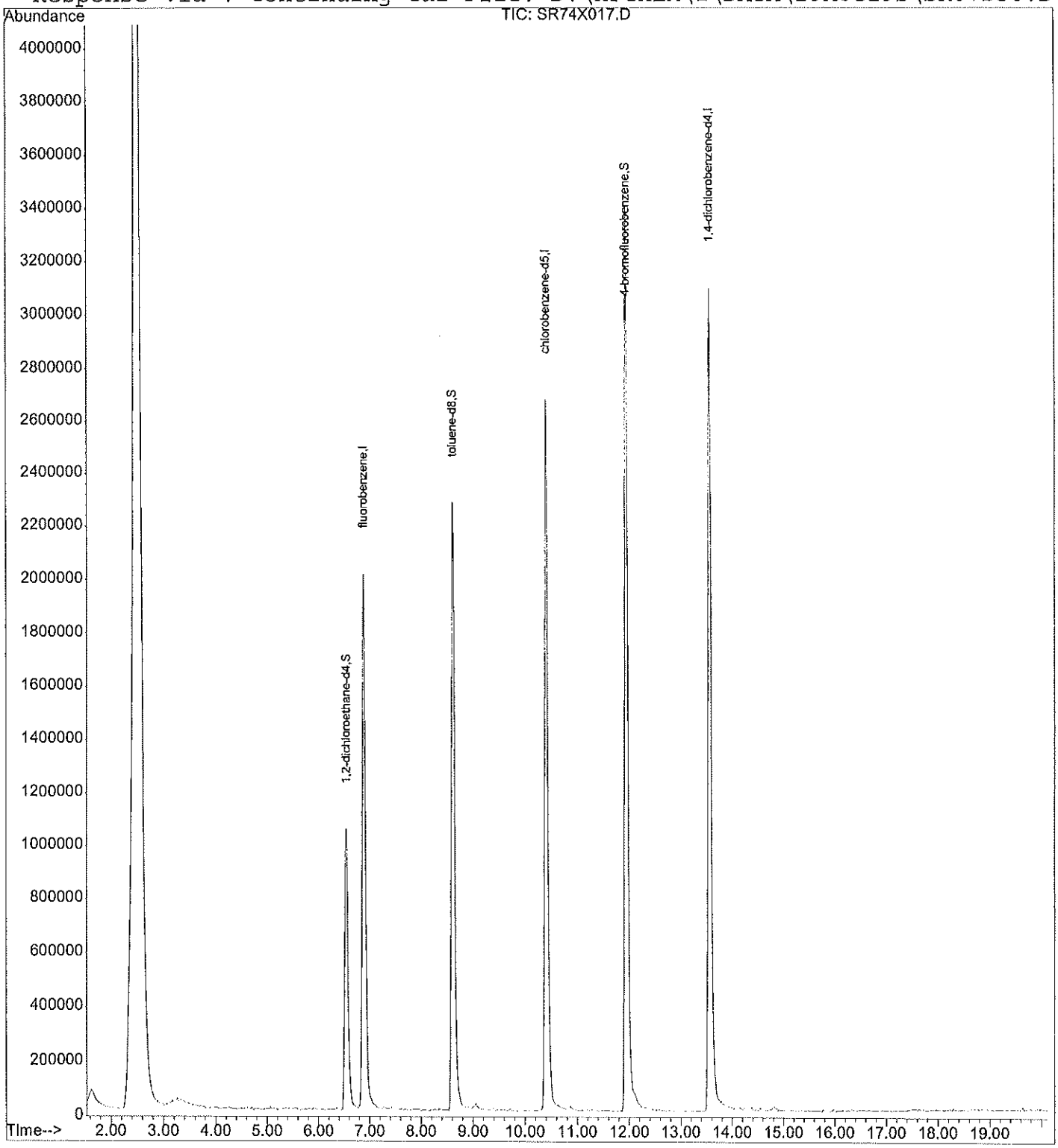
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X017.D
Acq Time : 09/10/2019 13:48 Operator: CQC
Sample : 110I Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 11 7:20 2019 Quant Results File: SSCREEN.RES

Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D



Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X018.D
Acq Time : 09/10/2019 14:17 Operator: CQC
Sample : 110D Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 11 7:20 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

Internal Standards	R.T.	QIon	Response	Conc Units	Area%
1) fluorobenzene	6.89	96	4089585	50.0000 ug/Kg	85.13
42) chlorobenzene-d5	10.41	117	3328253	50.0000 ug/Kg	90.93
62) 1,4-dichlorobenzene-d4	13.57	152	1870601	50.0000 ug/Kg	77.91
System Monitoring Compounds					%Recovery
33) 1,2-dichloroethane-d4	6.55	102	360932	48.7864 ug/Kg	97.57%
48) toluene-d8	8.62	98	3453531	47.1801 ug/Kg	94.36%
63) 4-bromofluorobenzene	11.95	95	3061263	55.4977 ug/Kg	111.00%
Target Compounds					Qvalue
2) dichlorodifluoromethane	0.00	85		Not Detected	
3) chloromethane	0.00	50		Not Detected	
4) vinyl chloride	0.00	62		Not Detected	
5) bromomethane	0.00	94		Not Detected	
6) chloroethane	0.00	64		Not Detected	
7) dichlorofluoromethane	0.00	67		Not Detected	
8) trichlorofluoromethane	0.00	101		Not Detected	
9) ethyl ether	0.00	59		Not Detected	
10) 1,1-dichloroethene	0.00	96		Not Detected	
11) freon 113	0.00	151		Not Detected	
12) acetone	0.00	43		Not Detected	
13) iodomethane	0.00	142		Not Detected	
14) carbon disulfide	0.00	44		Not Detected	
15) methyl acetate	0.00	43		Not Detected	
16) allyl chloride	0.00	41		Not Detected	
17) methylene chloride	0.00	84		Not Detected	
18) trans-1,2-dichloroethene	0.00	96		Not Detected	
19) methyl-t-butyl ether	0.00	73		Not Detected	
20) cis-1,2-dichloroethene	0.00	96		Not Detected	
21) 1,1-dichloroethane	0.00	63		Not Detected	
22) 2,2-dichloropropane	0.00	77		Not Detected	
23) 2-butanone	0.00	72		Not Detected	
24) ethyl acetate	0.00	70		Not Detected	
25) bromochloromethane	0.00	128		Not Detected	
26) tetrahydrofuran	0.00	72		Not Detected	
27) chloroform	0.00	83		Not Detected	
28) 1,1,1-trichloroethane	0.00	97		Not Detected	
29) cyclohexane	0.00	56		Not Detected	
30) 1,1-dichloropropene	0.00	75		Not Detected	
31) 1,2-dichloroethane	0.00	62		Not Detected	
32) carbon tetrachloride	0.00	117		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X018.D
Acq Time : 09/10/2019 14:17 Operator: CQC
Sample : 110D Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 11 7:20 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
34)	benzene	0.00	78		Not Detected	
35)	trichloroethene	0.00	130		Not Detected	
36)	methylcyclohexane	0.00	83		Not Detected	
37)	1,2-dichloropropane	0.00	63		Not Detected	
38)	dibromomethane	0.00	93		Not Detected	
39)	bromodichloromethane	0.00	83		Not Detected	
40)	cis-1,3-dichloropropene	0.00	75		Not Detected	
41)	4-methyl-2-pentanone	0.00	43		Not Detected	
43)	trans-1,3-dichloropropene	0.00	75		Not Detected	
44)	ethyl methacrylate	0.00	69		Not Detected	
45)	1,1,2-trichloroethane	0.00	97		Not Detected	
46)	2-hexanone	0.00	43		Not Detected	
47)	1,2-dibromoethane	0.00	107		Not Detected	
49)	toluene	0.00	92		Not Detected	
50)	1,3-dichloropropane	0.00	76		Not Detected	
51)	dibromochloromethane	0.00	129		Not Detected	
52)	bromoform	0.00	173		Not Detected	
53)	tetrachloroethene	0.00	164		Not Detected	
54)	1-chlorohexane	0.00	93		Not Detected	
55)	chlorobenzene	0.00	112		Not Detected	
56)	1,1,1,2-tetrachloroethane	0.00	131		Not Detected	
57)	ethylbenzene	0.00	106		Not Detected	
58)	m,p-xylene	0.00	106		Not Detected	
59)	o-xylene	0.00	106		Not Detected	
60)	styrene	0.00	104		Not Detected	
61)	isopropylbenzene	0.00	105		Not Detected	
64)	1,1,2,2-tetrachloroethane	0.00	83		Not Detected	
65)	bromobenzene	0.00	156		Not Detected	
66)	1,2,3-trichloropropane	0.00	110		Not Detected	
67)	trans-1,4-dichloro-2-buten	0.00	88		Not Detected	
68)	pentachloroethane	0.00	167		Not Detected	
69)	n-propylbenzene	0.00	120		Not Detected	
70)	1,3,5-trimethylbenzene	0.00	105		Not Detected	
71)	2-chlorotoluene	0.00	126		Not Detected	
72)	4-chlorotoluene	0.00	126		Not Detected	
73)	tert-butylbenzene	0.00	134		Not Detected	
74)	1,2,4-trimethylbenzene	0.00	105		Not Detected	
75)	sec-butylbenzene	0.00	105		Not Detected	
76)	p-isopropyltoluene	0.00	119		Not Detected	
77)	1,3-dichlorobenzene	0.00	146		Not Detected	
78)	1,4-dichlorobenzene	0.00	146		Not Detected	

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X018.D
Acq Time : 09/10/2019 14:17 Operator: CQC
Sample : 110D Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 11 7:20 2019 Quant Results File: SSCREEN.RES

Quant Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D
DataAcq Meth : SSCREEN

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
79)	n-butylbenzene	0.00	91		Not Detected	
80)	1,2-dichlorobenzene	0.00	146		Not Detected	
81)	1,2-dibromo-3-chloropropan	0.00	75		Not Detected	
82)	1,2,4-trichlorobenzene	0.00	180		Not Detected	
83)	hexachlorobutadiene	0.00	225		Not Detected	
84)	naphthalene	0.00	128		Not Detected	
85)	1,2,3-trichlorobenzene	0.00	180		Not Detected	

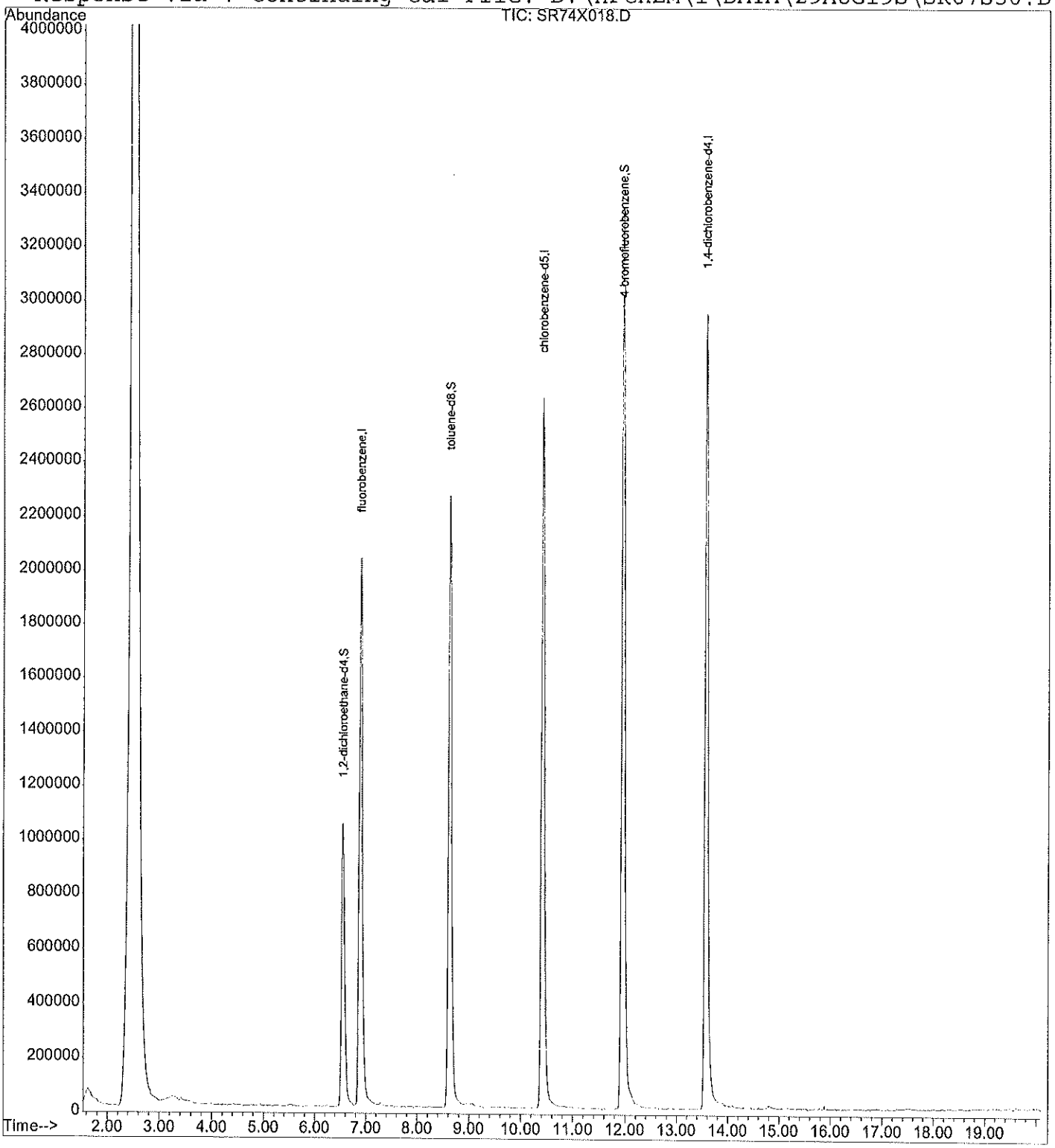
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\10SEP19S\SR74X018.D
Acq Time : 09/10/2019 14:17 Operator: CQC
Sample : 110D Inst : 5972-S
Misc : 1925562 C 1:10 Dilution Screen Multiplr: 1.00

Quant Time: Sep 11 7:20 2019 Quant Results File: SSCREEN.RES

Method : D:\HPCHEM\1\METHODS\SSCREEN.M (RTE Integrator)
Title : VOA COMPOUND LIST
Last Update : Thu Aug 29 11:17:13 2019
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\29AUG19S\SR67S50.D



SAMPLE TAG INFORMATION SHEET

There are no Sample Tags included with this SDG

Notations concerning the location of the Sample Tags are included in Forms DC-1,, DC-2 and in the SDG Administrative Narrative (if it is required).

EPA-CLP CHECKING DOCUMENTATION FORM
FOR GC/MS ORGANICS ANALYSIS

Case 5POINTS SDG TV9519 Fraction Trace

DELIVERABLE CHECK - All forms are present and have been checked for completeness and accuracy. All raw data such as quantitation reports, chromatograms, and spectra are included and are in the correct order.

Signature _____ Date 9.24.19

CHEMIST CHECK or PEER REVIEW - Target compounds reported have been verified against the reference spectra. For target compounds which have isomers, the relative retention time has been verified against the relative retention time of the continuing standard. All target compounds present are reported on the Form 1 and the reported values are correct.

Signature _____ Date 9.24.19

MANAGER CHECK - The data package for the fraction includes all samples submitted for the sample delivery group. All QC requirements of the contract were met with the exeption of items specifically mentioned in the narrative. All documents necessary for the case file are included.

Signature _____ Date 9.24.19

DOCUMENT CONTROL CHECK - All documents, forms, and data required for reporting are present and in the correct order. All required miscellaneous data (e.g. Traffic Reports, Sample Tags, Airbills, etc.) are also included.

Signature _____ Date 09/26/2019

GC/MS QC Checklist

Method: SOM02.4 Instrument: 5975-E, M Analysis Date: 9.11.19

- [x] **1. Tune pass all acceptance criteria.**
  - a. All abundances were within appropriate method limits
  - b. Area of primary ion was as expected.
- [x] **2. Calibration curve, ICV, and Continuing Calibration all passed acceptance criteria.**
  - a. Curve - All compounds of interest calibrated and within appropriate method limits.
  - b. All reference spectra updated to new calibration.
  - c. Appropriate curve fit was set up and documented.
  - d. ICV passed appropriate method limits.
  - e. Continuing Calibration passed appropriate method limits.
- [NA] **3. Laboratory Control Spikes passed all acceptance criteria.**
  - a. Internal Standards pass appropriate QC limits.
  - b. Surrogates/DMCs pass appropriate QC limits.
  - c. All spiked target compounds passed appropriate QC limits.
- [NA] **4. RLVS passed all acceptance criteria.**
  - a. All analytes of interest were detected at or above 1/2 the reporting limit.
- [x] **5. Method Blank passed all acceptance criteria.**
  - a. Internal Standards pass appropriate method limits.
  - b. Surrogates/DMCs pass appropriate method limits.
  - c. No target compounds above the reporting limits.
  - d. No TIC's above 10% of ISTD.
- [x] **6. Each sample passed Internal Standard, Surrogate/DMC, and Dilution Criteria.**
  - a. Internal Standards pass appropriate QC limits.
  - b. Surrogates/DMCs pass appropriate QC limits.
  - c. All target compounds are appropriately identified.
  - d. All identified target compounds are within the range of the curve.
  - e. All dilutions have been performed as per method/SOP requirements.
  - f. All diluted results match undiluted results.
  - g. All requested TICs are searched and identified.
  - h. All appropriate instrument blanks were analyzed after high level samples (VOAs).
  - i. All samples analyzed within the appropriate methods analytical clock.
- [x] **7. MS/MSD were analyzed and reviewed.**
  - a. Spiked compounds were within QC Limits.
  - b. If any QC out, was it due to an obvious mis-spike or instrument issue.
- [x] **8. Ending Calibration was performed and passed all acceptance criteria.**
  - a. Calibration passed appropriate method limits.
  - b. Calibration was analyzed within the appropriate methods analytical clock.

Comments: _____

Analyst Signature: _____ Date: 9.11.19

5.6 GC/MS Technical Review

Note: It is the peer reviewer's responsibility to ensure that appropriate criteria are used as defined in the HORIZON PROFILE. The evaluation criteria are prioritized as per Section 2.2 of this SOP. These items must be checked for all projects. The following checklist will be completed by both the analyst and the peer reviewer and scanned into the HBN folder with the raw data.

GC/MS Technical Review Criteria **Batch(es)/SDG:** 247493 SPOINTS TV9519 **Sample Set IDs if Applicable:** 1925562	**Analyst Initials**	**Reviewer Initials**
Sample positions on autosampler verified against instrument sequence	CAL	NA
GC/MS Tuning passed criteria (BFB or DFTPP)	CAL	[illegible]
Calibration standards analyzed and meets criteria	CAL	[illegible]
Standards traceability checked and meets criteria	CAL	[illegible]
Standard curve coefficient evaluated and meets criteria	CAL	[illegible]
ICVs analyzed and meet acceptance criteria	CAL	[illegible]
CCVs analyzed and meet acceptance criteria	CAL	[illegible]
Review of spectral assignments	CAL	[illegible]
Relative Retention Time checked	CAL	[illegible]
Internal Standards checked	CAL	[illegible]
Surrogate recoveries checked and appropriately addressed	CAL	[illegible]
Sample Frequency – Analyzed within appropriate tune window	CAL	[illegible]
Method Preparation Blanks analyzed and meet acceptance criteria	CAL	[illegible]
MSs, MSDs, and/or MDs analyzed and calculations checked; applicable flags applied on QC reports; LCSs analyzed and meet acceptance criteria when performed	CAL	[illegible]
RLVS analyzed	CAL	[illegible]
Preparation and analysis hold times met	CAL	[illegible]
Preparation deviations and re-preparations noted when performed	CAL	[illegible]
Analysis deviations and re-analyses noted when performed	CAL	[illegible]
Sample dilution factors noted on reports	CAL	[illegible]
Electronic records in HBN transcription accuracy and completeness checked	CAL	[illegible]
Preparation and analysis calculations checked	CAL	[illegible]
NCRs are completed as necessary NC/CAR#	CAL	[illegible]
Report forms are complete and accurate	CAL	[illegible]
Manual integrations checked	CAL	[illegible]

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task: 97756	Split:	Workorder ID: 1925562	Level: EPACLP_PDF
Client: AECOM [5POINTS/TV9519]		Account: 8201	Type: 40AGVOA
Comments:			Preservatives: HCL

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	Containers ID(s)	Containers Count	EPA-CLP VOA Trace, Water											
1	09/05/2019 00:00 LZ	TB-090519 ✓	1925562001	TRIPBK	Water	A,B,C	3	A											
2	09/05/2019 10:00 LZ	5P-MW1071-145-090519 ✓	1925562002		Water	A,B,C	3	A											
3	09/05/2019 10:08 LZ	5P-MW107D-200-090519 ✓	1925562003		Water	A,B,C	3	A											
4	09/05/2019 10:25 LZ	5P-MW106I-145-090519 ✓	1925562004		Water	A,B,C	3	A											
5	09/05/2019 10:31 LZ	5P-MW106D-195-090519 ✓	1925562005		Water	A,B,C	3	A											
6	09/05/2019 11:45 LZ	5P-MW101-160-090519 1:1/1:5	1925562006		Water	A,B,C	3	A					33						
7	09/05/2019 11:48 LZ	5P-MW101-160-090519Y 1:1/1:5	1925562007		Water	A,B,C	3	A					31						
8	09/05/2019 12:30 LZ	5P-MW105-146-090519 ✓	1925562008		Water	A,B,C	3	A											
9	09/05/2019 12:30 LZ	5P-MW105-146-090519MS ✓	1925562009	MS	Water	A,B,C	3	A											
10	09/05/2019 12:30 LZ	5P-MW105-146-090519MSD ✓	1925562010	MSD	Water	A,B,C	3	A											

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Edwards, Meredith D.	09/06/2019 15:5 ~~09/06/2019 09:30~~	ALS Sample Receiving	Sample Login
[signature]	9/6/2019 1050	[signature]	[signature]
[signature]	9.10.19 0625	[signature]	[signature]

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: _____ Lab Notebook No.: _____

Prepared / Analyzed by: _____ Date / Time: _____

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location

Fri, 09/06/19 10:36 AM

ALSCOCV3.1

ALS Environmental

CHAIN-OF-CUSTODY

Project / Job / Task: 97756	Split:	Workorder ID: 1925562	Level: EPACLP_PDF
Client: AECOM [5POINTS/TV9519]		Account: 8201	Type: 40AGVOA
Comments:			Preservatives: HCL

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	Containers ID(s)	Containers Count	EPA-CLP VOA Trace, Water											
11	09/05/2019 12:50 LZ	5P-MW103-120-090519 ✓	1925562011		Water	A,B,C	3	A					PLE						
12	09/05/2019 13:02 LZ	5P-MW104-120-090519	1925562012		Water	A,B,C	3	A											
13	09/05/2019 13:30 LZ	5P-MW108I-149-090519 ✓	1925562013		Water	A,B,C	3	A					7.7						
14	09/05/2019 13:37 LZ	5P-MW108D-214-090519 ✓	1925562014		Water	A,B,C	3	A											
15	09/05/2019 13:57 LZ	5P-MW109I-169-090519 ✓	1925562015		Water	A,B,C	3	A											
16	09/05/2019 14:07 LZ	5P-MW109D-230-090519 ✓	1925562016		Water	A,B,C	3	A											
17	09/05/2019 14:21 LZ	5P-MW110I-208-090519 ✓	1925562017		Water	A,B,C	3	A											
18	09/05/2019 14:30 LZ	5P-MW110D-301-090519 ✓	1925562018		Water	A,B,C	3	A											
19																			
20																			

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Edwards, Meredith D.	09/06/2019 09:38	ALS Sample Receiving	Sample Login

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: _____ Lab Notebook No.: _____

Prepared / Analyzed by: _____ Date / Time: _____

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location

Fri, 09/06/19 10:36 AM

ALSCOCV3.1

000376