

Cover Page

Order ID : Q2600

Project ID : Kingsland Point Park Water Main

Client : T&A Construction Inc

Lab Sample Number

Q2600-01
Q2600-02
Q2600-03
Q2600-04
Q2600-05
Q2600-06
Q2600-07
Q2600-08
Q2600-09
Q2600-10
Q2600-11
Q2600-12

Client Sample Number

TRENCH
TRENCH
TRENCH
TRENCH
STOCK-PILE
STOCK-PILE
STOCK-PILE
STOCK-PILE
END-OF-TRENCH
END-OF-TRENCH
END-OF-TRENCH
END-OF-TRENCH

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : _____

Date: 7/21/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following “Results Qualifiers” are used:

Value	If the result is a value greater than or equal to the detection limit, report the value
U	Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. “10 U”. This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required.
ND	Indicates the analyte was analyzed for, but not detected
J	Indicates an estimated value. This flag is used: (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.) (2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others.
B	Indicates the analyte was found in the blank as well as the sample report as “12 B”.
E	Indicates the analyte ‘s concentration exceeds the calibrated range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
P	This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a “P”.
N	This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.
A	This flag indicates that a Tentatively Identified Compound is a suspected aldol-condensation product.
Q	Indicates the LCS did not meet the control limits requirements

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q2600

Completed

For thorough review, the report must have the following:

GENERAL:

Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)

✓

Check chain-of-custody for proper relinquish/return of samples

✓

Is the chain of custody signed and complete

✓

Check internal chain-of-custody for proper relinquish/return of samples /sample extracts

✓

Collect information for each project id from server. Were all requirements followed

✓

COVER PAGE:

Do numbers of samples correspond to the number of samples in the Chain of Custody on login page

✓

Do lab numbers and client Ids on cover page agree with the Chain of Custody

✓

CHAIN OF CUSTODY:

Do requested analyses on Chain of Custody agree with form I results

✓

Do requested analyses on Chain of Custody agree with the log-in page

✓

Were the correct method log-in for analysis according to the Analytical Request and Chain of Custody

✓

Were the samples received within hold time

✓

Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: KETAN PATEL

Date: 07/21/2025

LAB CHRONICLE

OrderID:	Q2600	OrderDate:	7/14/2025 2:21:01 PM
Client:	T&A Construction Inc	Project:	Kingsland Point Park Water Main
Contact:	Garrett Johnson	Location:	D41,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2600-03	TRENCH	SOIL	VOC-TCLVOA-10	8260D	07/14/25		07/15/25	07/14/25
Q2600-04	TRENCH	TCLP	TCLP VOA	8260D	07/14/25		07/16/25	07/14/25
Q2600-07	STOCK-PILE	SOIL	VOC-TCLVOA-10	8260D	07/14/25		07/15/25	07/14/25
Q2600-08	STOCK-PILE	TCLP	TCLP VOA	8260D	07/14/25		07/16/25	07/14/25
Q2600-11	END-OF-TRENCH	SOIL	VOC-TCLVOA-10	8260D	07/14/25		07/15/25	07/14/25
Q2600-11DL	END-OF-TRENCHDL	SOIL	VOC-TCLVOA-10	8260D	07/14/25		07/16/25	07/14/25
Q2600-12	END-OF-TRENCH	TCLP	TCLP VOA	8260D	07/14/25		07/16/25	07/14/25

Hit Summary Sheet
SW-846

SDG No.: Q2600
Client: T&A Construction Inc

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID: Q2600-04	TRENCH TRENCH	TCLP	2-Butanone	5.70	JQ	0.98	25.0	ug/L
			Total Voc :	5.70				
			Total Concentration:	5.70				
Client ID: Q2600-08	STOCK-PILE STOCK-PILE	TCLP	2-Butanone	6.60	JQ	0.98	25.0	ug/L
			Total Voc :	6.60				
			Total Concentration:	6.60				
Client ID: Q2600-12	END-OF-TRENCH END-OF-TRENCH	TCLP	2-Butanone	7.00	JQ	0.98	25.0	ug/L
Q2600-12	END-OF-TRENCH	TCLP	Benzene	1.20	J	0.15	5.00	ug/L
			Total Voc :	8.20				
			Total Concentration:	8.20				



QC SUMMARY

Surrogate Summary

SDG No.: **Q2600**

Client: **T&A Construction Inc**

Analytical Method: **SW8260D**

Lab Sample ID	Client ID	Parameter	Spike	Result	Recovery (%)	Qual	Limits (%)	
							Low	High
Q2600-04	TRENCH	1,2-Dichloroethane-d4	50	53.4	107		74	125
		Dibromofluoromethane	50	48.0	96		75	124
		Toluene-d8	50	50.0	100		86	113
		4-Bromofluorobenzene	50	55.1	110		77	121
Q2600-08	STOCK-PILE	1,2-Dichloroethane-d4	50	55.0	110		74	125
		Dibromofluoromethane	50	48.9	98		75	124
		Toluene-d8	50	50.7	101		86	113
		4-Bromofluorobenzene	50	55.5	111		77	121
Q2600-12	END-OF-TRENCH	1,2-Dichloroethane-d4	50	51.2	102		74	125
		Dibromofluoromethane	50	47.6	95		75	124
		Toluene-d8	50	49.3	99		86	113
		4-Bromofluorobenzene	50	53.0	106		77	121
VX0716WBL01	VX0716WBL01	1,2-Dichloroethane-d4	50	53.6	107		74	125
		Dibromofluoromethane	50	49.5	99		75	124
		Toluene-d8	50	48.1	96		86	113
		4-Bromofluorobenzene	50	52.5	105		77	121
VX0716WBS01	VX0716WBS01	1,2-Dichloroethane-d4	50	52.4	105		74	125
		Dibromofluoromethane	50	48.8	98		75	124
		Toluene-d8	50	48.1	96		86	113
		4-Bromofluorobenzene	50	52.0	104		77	121
VX0716WBSD01	VX0716WBSD01	1,2-Dichloroethane-d4	50	55.4	111		74	125
		Dibromofluoromethane	50	50.2	100		75	124
		Toluene-d8	50	48.0	96		86	113
		4-Bromofluorobenzene	50	52.0	104		77	121

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.:	<u>Q2600</u>	Analytical Method:	<u>SW8260D</u>
Client:	<u>T&A Construction Inc</u>	Datafile :	<u>VX047022.D</u>

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VX0716WBS01	Vinyl chloride	20	16.6	ug/L	83			65	117	
	1,1-Dichloroethene	20	17.7	ug/L	89			74	110	
	2-Butanone	100	140	ug/L	140		*	65	122	
	Carbon Tetrachloride	20	18.4	ug/L	92			77	113	
	Chloroform	20	20.0	ug/L	100			79	113	
	Benzene	20	18.5	ug/L	93			82	109	
	1,2-Dichloroethane	20	20.1	ug/L	101			80	115	
	Trichloroethene	20	17.6	ug/L	88			77	113	
	Tetrachloroethene	20	17.5	ug/L	88			67	123	
	Chlorobenzene	20	19.0	ug/L	95			82	109	

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.:	<u>Q2600</u>	Analytical Method:	<u>SW8260D</u>
Client:	<u>T&A Construction Inc</u>	Datafile :	<u>VX047023.D</u>

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VX0716WBSD01	Vinyl chloride	20	17.0	ug/L	85	2		65	117	19
	1,1-Dichloroethene	20	17.9	ug/L	90	1		74	110	20
	2-Butanone	100	150	ug/L	150	7	*	65	122	26
	Carbon Tetrachloride	20	18.3	ug/L	92	0		77	113	15
	Chloroform	20	20.7	ug/L	104	4		79	113	20
	Benzene	20	18.5	ug/L	93	0		82	109	15
	1,2-Dichloroethane	20	20.8	ug/L	104	3		80	115	20
	Trichloroethene	20	17.5	ug/L	88	0		77	113	15
	Tetrachloroethene	20	17.6	ug/L	88	0		67	123	15
	Chlorobenzene	20	19.3	ug/L	97	2		82	109	15

VOLATILE METHOD BLANK SUMMARY

Client ID

VX0716WBL01

Lab Name: Alliance

Contract: TAC001

Lab Code: ACE

SDG NO.: Q2600

Lab File ID: VX047018.D

Lab Sample ID: VX0716WBL01

Date Analyzed: 07/16/2025

Time Analyzed: 10:34

GC Column: DB-624UI ID: 0.18 (mm)

Heated Purge: (Y/N) N

Instrument ID: MSVOA_X

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
VX0716WBS01	VX0716WBS01	VX047022.D	07/16/2025
VX0716WBSD01	VX0716WBSD01	VX047023.D	07/16/2025
TRENCH	Q2600-04	VX047026.D	07/16/2025
STOCK-PILE	Q2600-08	VX047027.D	07/16/2025
END-OF-TRENCH	Q2600-12	VX047028.D	07/16/2025

COMMENTS: _____



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Alliance

Contract: TACO01

Lab Code: ACE

SDG NO.: Q2600

Lab File ID: VX046859.D

BFB Injection Date: 07/02/2025

Instrument ID: MSVOA_X

BFB Injection Time: 11:12

GC Column: DB-624UI ID: 0.18 (mm)

Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.2
75	30.0 - 60.0% of mass 95	50.1
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.8 (1) 1
174	50.0 - 100.0% of mass 95	75.5
175	5.0 - 9.0% of mass 174	5.6 (7.4) 1
176	95.0 - 101.0% of mass 174	73.3 (97.1) 1
177	5.0 - 9.0% of mass 176	4.9 (6.7) 2

1-Value is % mass 174

2-Value is % mass 176

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

CLIENT ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDIC001	VSTDIC001	VX046860.D	07/02/2025	12:11
VSTDIC005	VSTDIC005	VX046861.D	07/02/2025	12:37
VSTDIC020	VSTDIC020	VX046862.D	07/02/2025	13:18
VSTDIC050	VSTDIC050	VX046863.D	07/02/2025	13:39
VSTDIC100	VSTDIC100	VX046864.D	07/02/2025	14:10
VSTDIC150	VSTDIC150	VX046865.D	07/02/2025	14:31



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Alliance

Contract: TACO01

Lab Code: ACE

SDG NO.: Q2600

Lab File ID: VX047015.D

BFB Injection Date: 07/16/2025

Instrument ID: MSVOA_X

BFB Injection Time: 08:58

GC Column: DB-624UI ID: 0.18 (mm)

Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.7
75	30.0 - 60.0% of mass 95	51.4
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.8 (1) 1
174	50.0 - 100.0% of mass 95	72
175	5.0 - 9.0% of mass 174	5.4 (7.6) 1
176	95.0 - 101.0% of mass 174	69.2 (96.1) 1
177	5.0 - 9.0% of mass 176	4.6 (6.6) 2

1-Value is % mass 174

2-Value is % mass 176

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

CLIENT ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDCCC050	VSTDCCC050	VX047016.D	07/16/2025	09:26
VX0716WBL01	VX0716WBL01	VX047018.D	07/16/2025	10:34
VX0716WBS01	VX0716WBS01	VX047022.D	07/16/2025	12:11
VX0716WBSD01	VX0716WBSD01	VX047023.D	07/16/2025	12:38
TRENCH	Q2600-04	VX047026.D	07/16/2025	13:42
STOCK-PILE	Q2600-08	VX047027.D	07/16/2025	14:03
END-OF-TRENCH	Q2600-12	VX047028.D	07/16/2025	14:24

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Alliance Contract: TACO01
Lab Code: ACE SDG NO.: Q2600
Lab File ID: VX047016.D Date Analyzed: 07/16/2025
Instrument ID: MSVOA_X Time Analyzed: 09:26
GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	329194	5.56	557691	6.76	489553	10.06
UPPER LIMIT	658388	6.056	1115380	7.263	979106	10.555
LOWER LIMIT	164597	5.056	278846	6.263	244777	9.555
EPA SAMPLE NO.						
TRENCH	456381	5.56	801649	6.77	755525	10.06
STOCK-PILE	466941	5.57	838214	6.77	804001	10.06
END-OF-TRENCH	367687	5.57	638586	6.77	581092	10.06
VX0716WBL01	324808	5.56	553162	6.77	506524	10.06
VX0716WBS01	322183	5.57	547259	6.77	491570	10.06
VX0716WBSD01	310963	5.56	532754	6.77	475577	10.06

IS1 = Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5

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

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

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Alliance Contract: TACO01
 Lab Code: ACE SDG NO.: Q2600
 Lab File ID: VX047016.D Date Analyzed: 07/16/2025
 Instrument ID: MSVOA_X Time Analyzed: 09:26
 GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

	IS4 AREA #	RT #				
12 HOUR STD	242580	12.018				
UPPER LIMIT	485160	12.518				
LOWER LIMIT	121290	11.518				
EPA SAMPLE NO.						
TRENCH	386777	12.02				
STOCK-PILE	413019	12.02				
END-OF-TRENCH	282899	12.02				
VX0716WBL01	262675	12.02				
VX0716WBS01	246550	12.02				
VX0716WBSD01	244320	12.02				

IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

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

* Values outside of QC limits.



SAMPLE DATA

Report of Analysis

Client:	T&A Construction Inc	Date Collected:	07/14/25
Project:	Kingsland Point Park Water Main	Date Received:	07/14/25
Client Sample ID:	TRENCH	SDG No.:	Q2600
Lab Sample ID:	Q2600-04	Matrix:	TCLP
Analytical Method:	8260D	% Solid:	0
Sample Wt/Vol:	5	Units:	mL
Soil Aliquot Vol:			uL
GC Column:	DB-624UI	ID :	0.18
Prep Method :	SW5035	Level :	LOW
		Final Vol:	5000
		Test:	TCLP VOA

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
VX047026.D	1	07/16/25 13:42	VX071625

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	0.26	U	0.26	5.00	ug/L
75-35-4	1,1-Dichloroethene	0.23	U	0.23	5.00	ug/L
78-93-3	2-Butanone	5.70	JQ	0.98	25.0	ug/L
56-23-5	Carbon Tetrachloride	0.25	U	0.25	5.00	ug/L
67-66-3	Chloroform	0.25	U	0.25	5.00	ug/L
71-43-2	Benzene	0.15	U	0.15	5.00	ug/L
107-06-2	1,2-Dichloroethane	0.22	U	0.22	5.00	ug/L
79-01-6	Trichloroethene	0.090	U	0.090	5.00	ug/L
127-18-4	Tetrachloroethene	0.23	U	0.23	5.00	ug/L
108-90-7	Chlorobenzene	0.12	U	0.12	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	53.4		74 - 125	107%	SPK: 50
1868-53-7	Dibromofluoromethane	48.0		75 - 124	96%	SPK: 50
2037-26-5	Toluene-d8	50.0		86 - 113	100%	SPK: 50
460-00-4	4-Bromofluorobenzene	55.1		77 - 121	110%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	456000	5.562			
540-36-3	1,4-Difluorobenzene	802000	6.769			
3114-55-4	Chlorobenzene-d5	756000	10.055			
3855-82-1	1,4-Dichlorobenzene-d4	387000	12.018			

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
 Data File : VX047026.D
 Acq On : 16 Jul 2025 13:42
 Operator : JC/MD
 Sample : Q2600-04
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 12 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 TRENCH

Quant Time: Jul 17 03:33:20 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:51:11 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

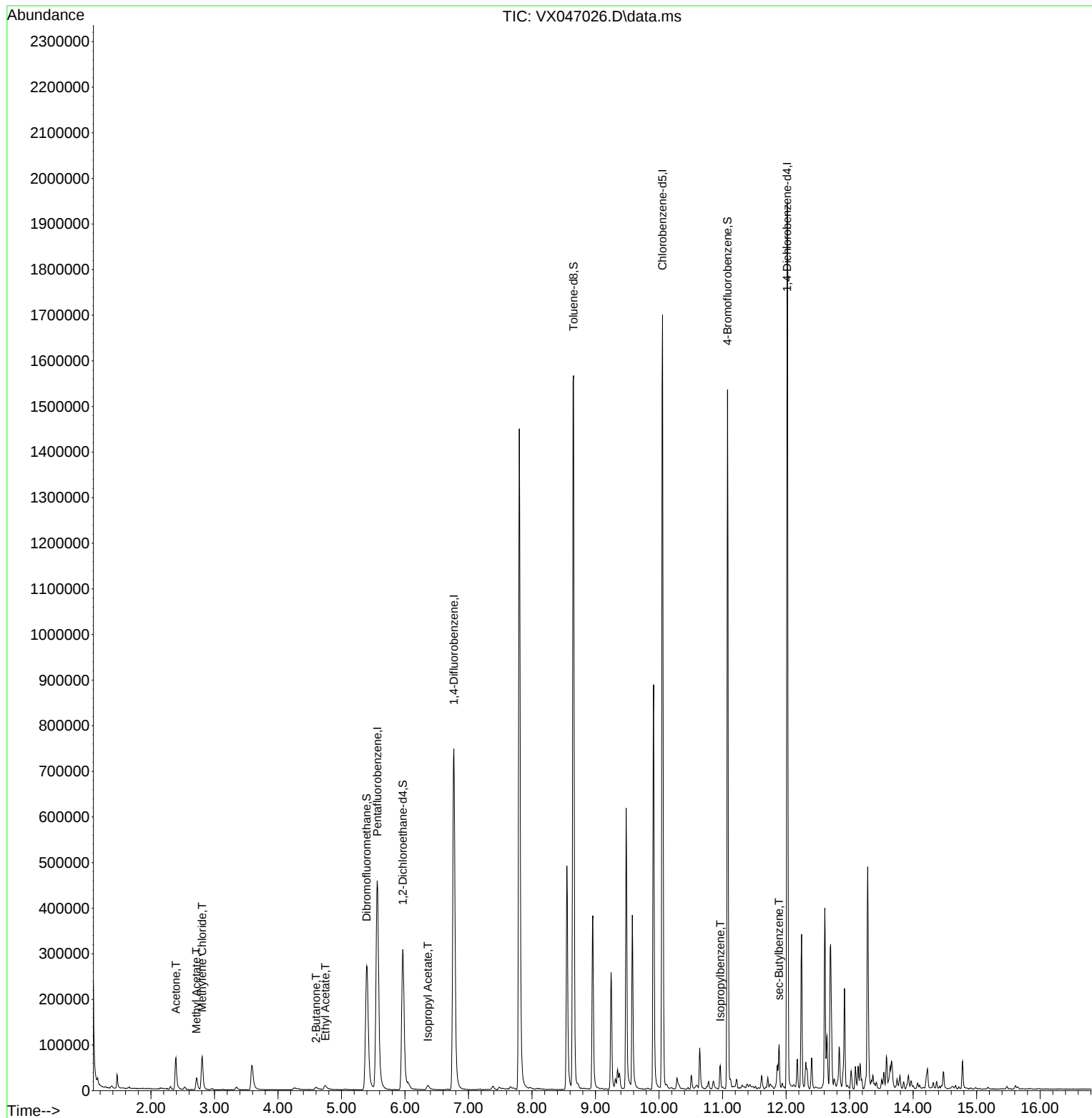
Internal Standards						
1) Pentafluorobenzene	5.562	168	456381	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.769	114	801649	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.055	117	755525	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	386777	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.964	65	321746	53.364	ug/l	0.00
Spiked Amount	50.000	Range	78 - 117	Recovery	= 106.720%	
35) Dibromofluoromethane	5.397	113	261217	48.004	ug/l	0.00
Spiked Amount	50.000	Range	75 - 124	Recovery	= 96.000%	
50) Toluene-d8	8.653	98	959240	49.963	ug/l	0.00
Spiked Amount	50.000	Range	92 - 112	Recovery	= 99.920%	
62) 4-Bromofluorobenzene	11.079	95	401786	55.063	ug/l	0.00
Spiked Amount	50.000	Range	83 - 123	Recovery	= 110.120%	
Target Compounds						Qvalue
16) Acetone	2.392	43	85287	45.540	ug/l	96
18) Methyl Acetate	2.715	43	38149	7.728	ug/l	97
20) Methylene Chloride	2.806	84	34912	6.304	ug/l	96
25) 2-Butanone	4.599	43	14120	5.651	ug/l	95
37) Ethyl Acetate	4.745	43	22713	3.632	ug/l #	93
43) Isopropyl Acetate	6.361	43	13932	1.455	ug/l	98
73) Isopropylbenzene	10.963	105	27898	1.026	ug/l	97
85) sec-Butylbenzene	11.890	105	48540	1.687	ug/l #	76

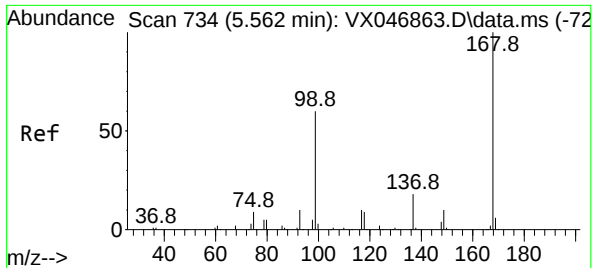
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
Data File : VX047026.D
Acq On : 16 Jul 2025 13:42
Operator : JC/MD
Sample : Q2600-04
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
TRENCH

Quant Time: Jul 17 03:33:20 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:51:11 2025
Response via : Initial Calibration

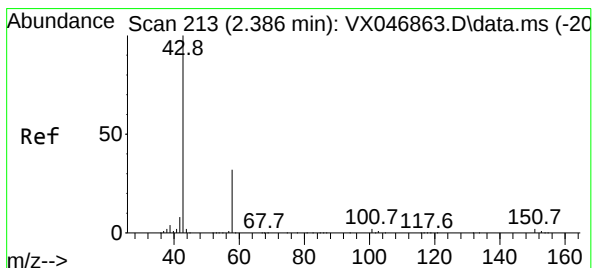
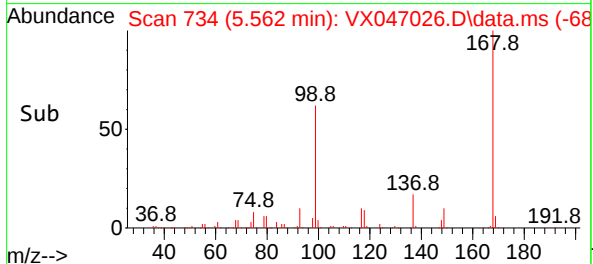
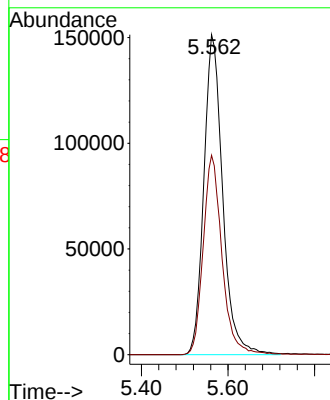
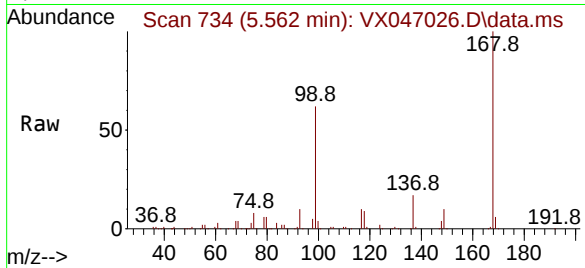




#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 5.562 min Scan# 71
Delta R.T. 0.000 min
Lab File: VX047026.D
Acq: 16 Jul 2025 13:42

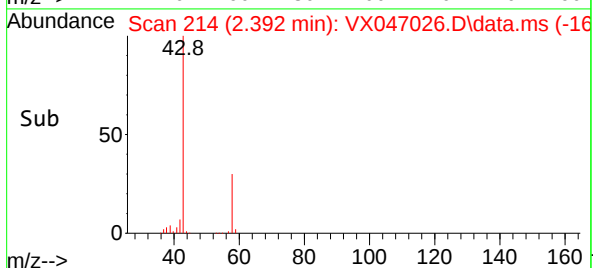
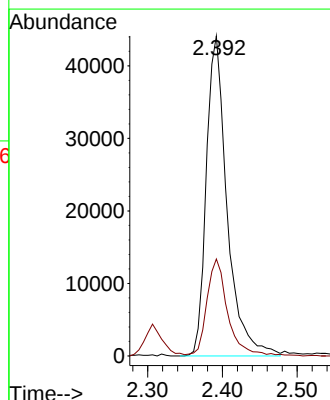
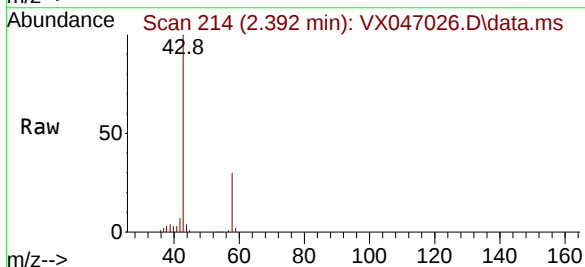
Instrument :
MSVOA_X
ClientSampleId :
TRENCH

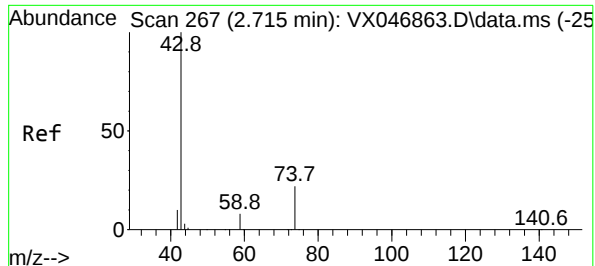
Tgt Ion:168 Resp: 456381
Ion Ratio Lower Upper
168 100
99 62.3 48.8 73.2



#16
Acetone
Concen: 45.540 ug/l
RT: 2.392 min Scan# 214
Delta R.T. 0.006 min
Lab File: VX047026.D
Acq: 16 Jul 2025 13:42

Tgt Ion: 43 Resp: 85287
Ion Ratio Lower Upper
43 100
58 29.8 25.8 38.6





#18

Methyl Acetate

Concen: 7.728 ug/l

RT: 2.715 min Scan# 2

Delta R.T. -0.000 min

Lab File: VX047026.D

Acq: 16 Jul 2025 13:42

Instrument :

MSVOA_X

ClientSampleId :

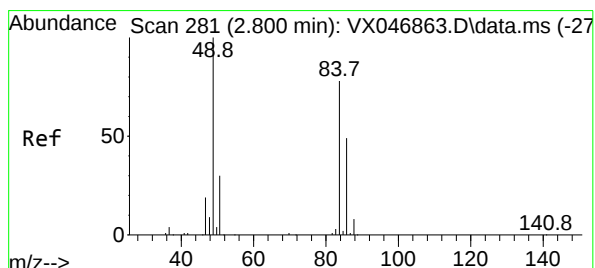
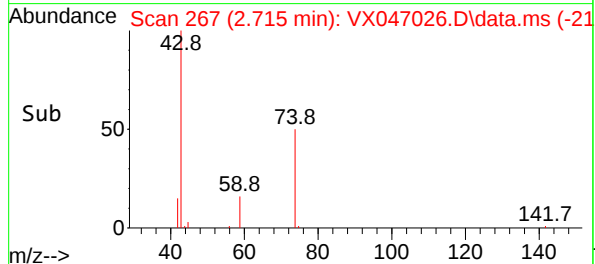
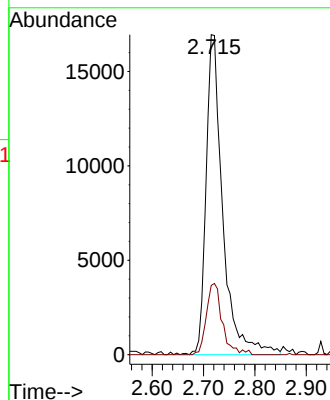
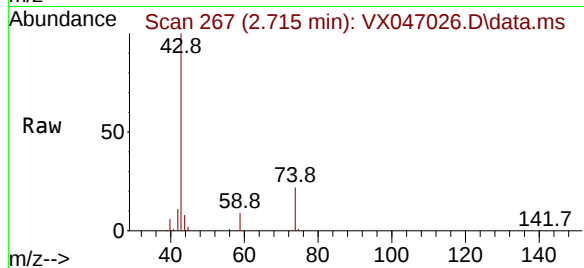
TRENCH

Tgt Ion: 43 Resp: 38149

Ion Ratio Lower Upper

43 100

74 21.3 18.3 27.5



#20

Methylene Chloride

Concen: 6.304 ug/l

RT: 2.806 min Scan# 282

Delta R.T. 0.006 min

Lab File: VX047026.D

Acq: 16 Jul 2025 13:42

Tgt Ion: 84 Resp: 34912

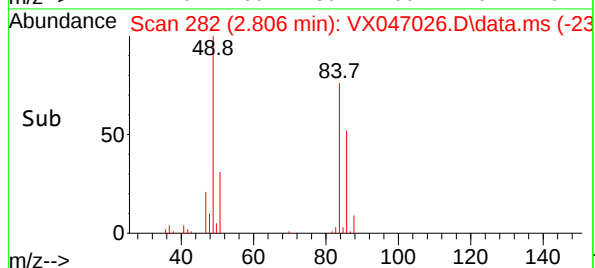
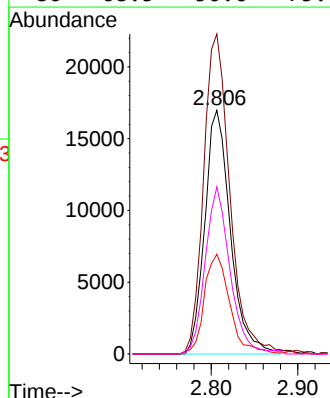
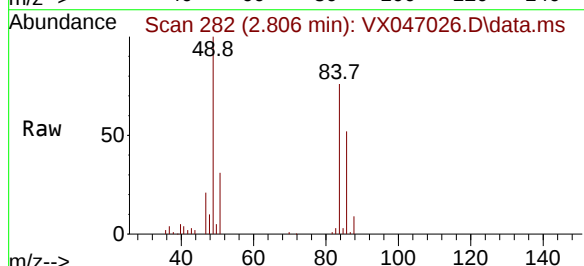
Ion Ratio Lower Upper

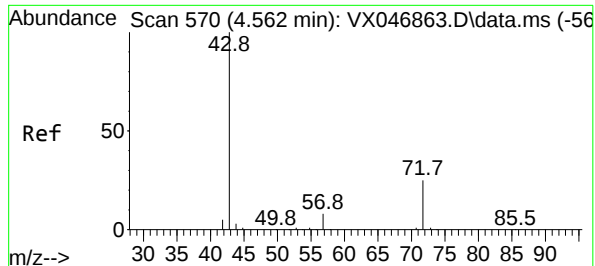
84 100

49 131.3 102.8 154.2

51 40.9 31.1 46.7

86 68.5 50.6 75.8





#25

2-Butanone

Concen: 5.651 ug/l

RT: 4.599 min Scan# 51

Delta R.T. 0.037 min

Lab File: VX047026.D

Acq: 16 Jul 2025 13:42

Instrument :

MSVOA_X

ClientSampleId :

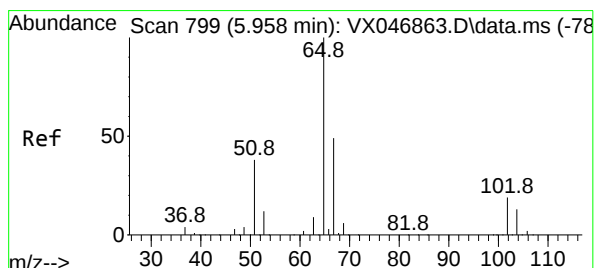
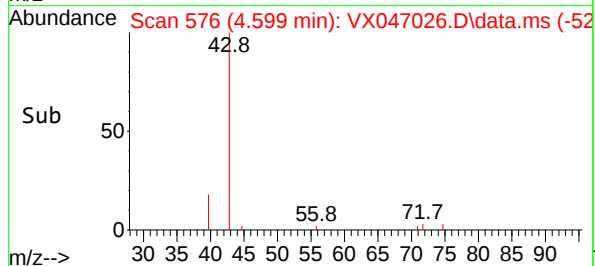
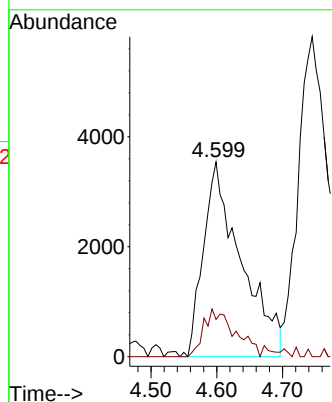
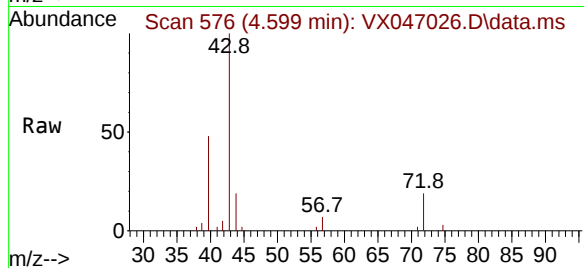
TRENCH

Tgt Ion: 43 Resp: 14120

Ion Ratio Lower Upper

43 100

72 22.5 20.0 30.0



#33

1,2-Dichloroethane-d4

Concen: 53.364 ug/l

RT: 5.964 min Scan# 800

Delta R.T. 0.006 min

Lab File: VX047026.D

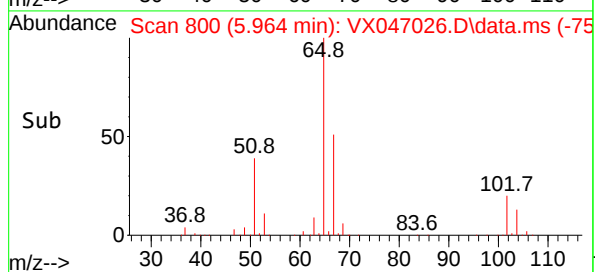
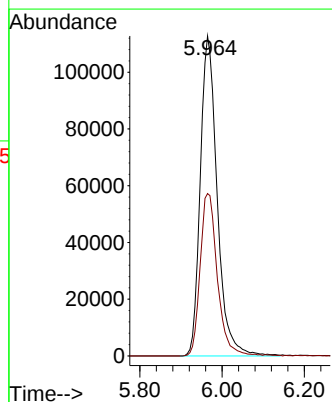
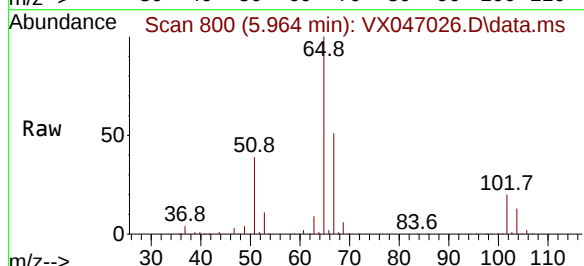
Acq: 16 Jul 2025 13:42

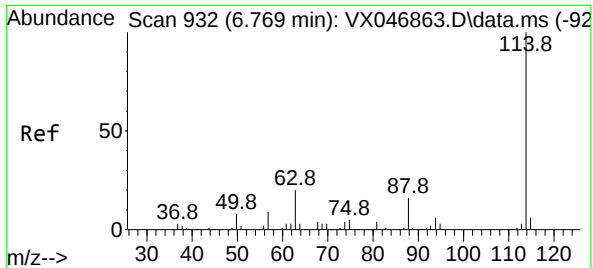
Tgt Ion: 65 Resp: 321746

Ion Ratio Lower Upper

65 100

67 51.5 0.0 105.2

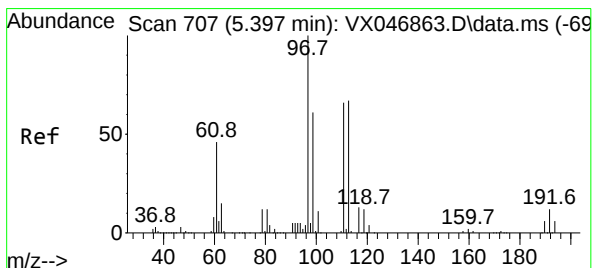
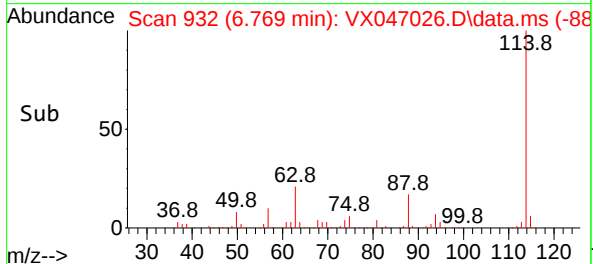
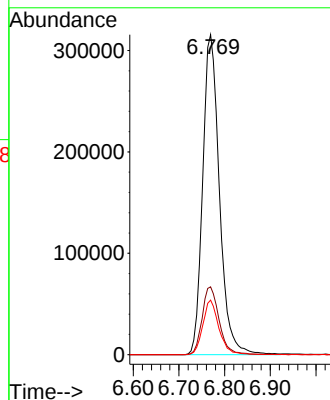
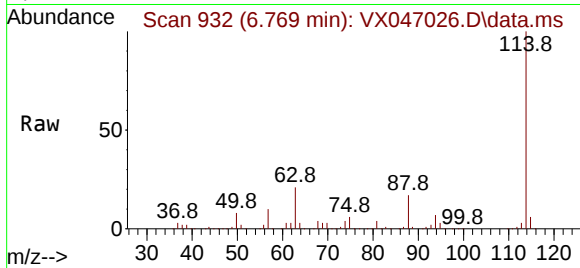




#34
1,4-Difluorobenzene
Concen: 50.000 ug/l
RT: 6.769 min Scan# 91
Delta R.T. 0.000 min
Lab File: VX047026.D
Acq: 16 Jul 2025 13:42

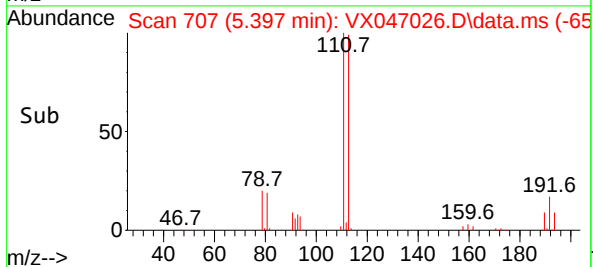
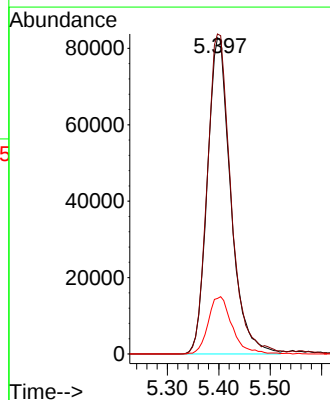
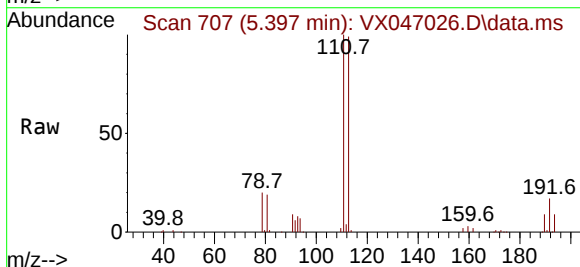
Instrument :
MSVOA_X
ClientSampleId :
TRENCH

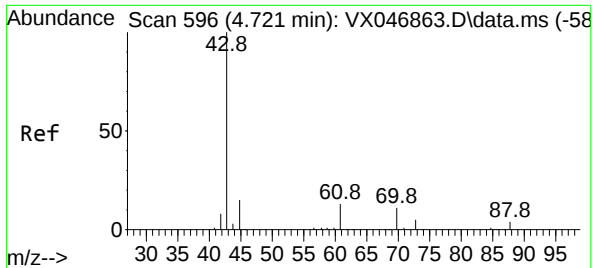
Tgt Ion:114 Resp: 801649
Ion Ratio Lower Upper
114 100
63 21.2 0.0 40.4
88 17.0 0.0 31.0



#35
Dibromofluoromethane
Concen: 48.004 ug/l
RT: 5.397 min Scan# 707
Delta R.T. -0.000 min
Lab File: VX047026.D
Acq: 16 Jul 2025 13:42

Tgt Ion:113 Resp: 261217
Ion Ratio Lower Upper
113 100
111 102.5 81.2 121.8
192 18.6 15.3 22.9





#37

Ethyl Acetate

Concen: 3.632 ug/l

RT: 4.745 min Scan# 60

Delta R.T. 0.024 min

Lab File: VX047026.D

Acq: 16 Jul 2025 13:42

Instrument :

MSVOA_X

ClientSampleId :

TRENCH

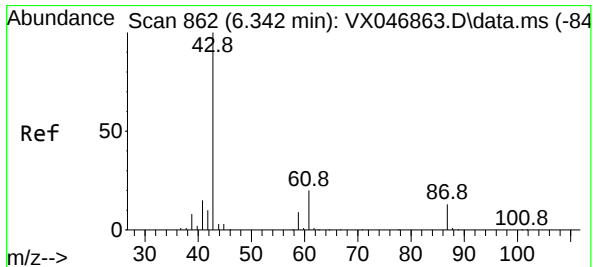
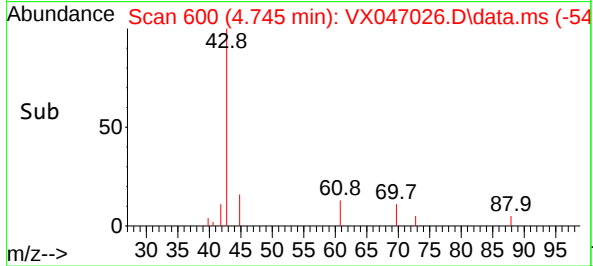
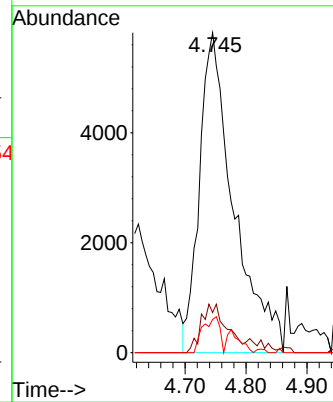
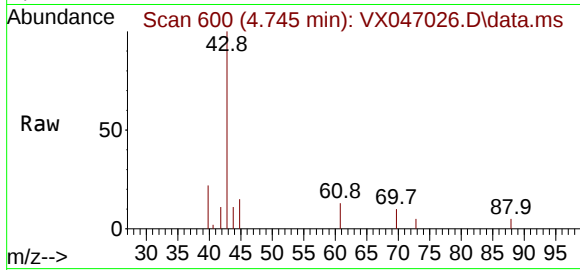
Tgt Ion: 43 Resp: 22713

Ion Ratio Lower Upper

43 100

61 11.2 9.7 14.5

70 5.5 8.3 12.5#



#43

Isopropyl Acetate

Concen: 1.455 ug/l

RT: 6.361 min Scan# 865

Delta R.T. 0.018 min

Lab File: VX047026.D

Acq: 16 Jul 2025 13:42

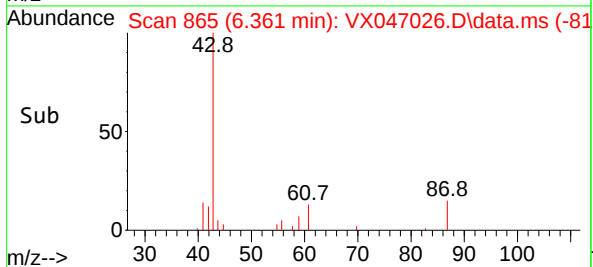
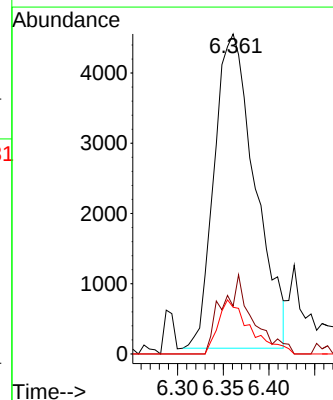
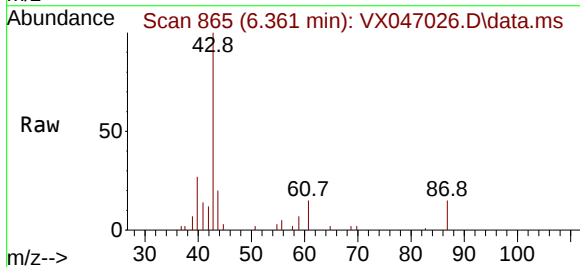
Tgt Ion: 43 Resp: 13932

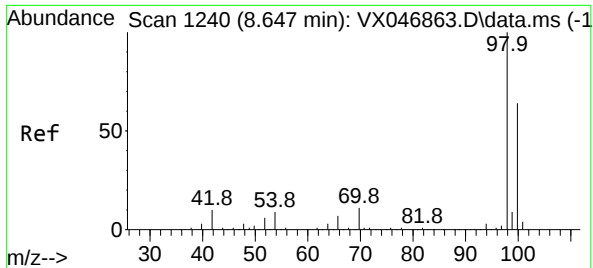
Ion Ratio Lower Upper

43 100

61 19.0 15.7 23.5

87 13.6 10.1 15.1

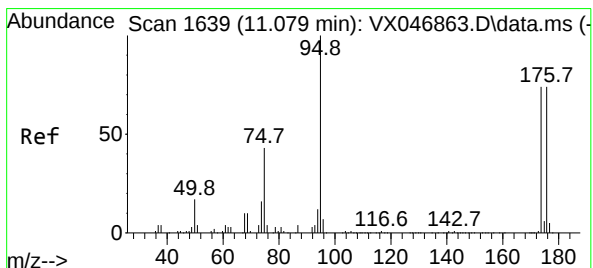
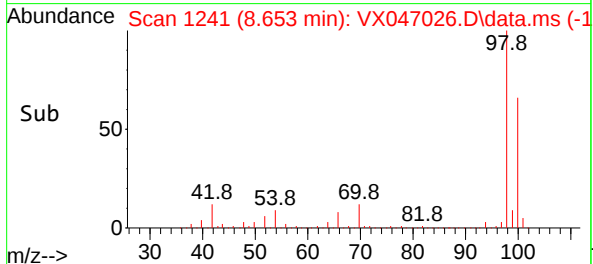
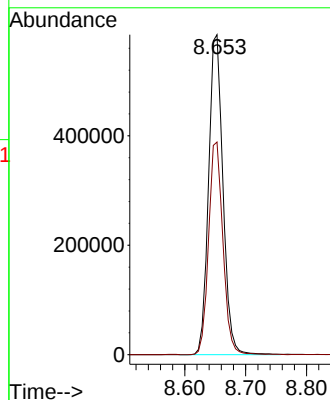
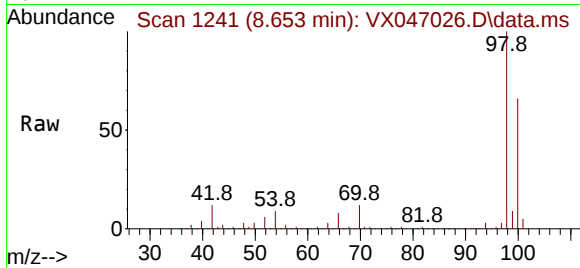




#50
Toluene-d8
Concen: 49.963 ug/l
RT: 8.653 min Scan# 1241
Delta R.T. 0.006 min
Lab File: VX047026.D
Acq: 16 Jul 2025 13:42

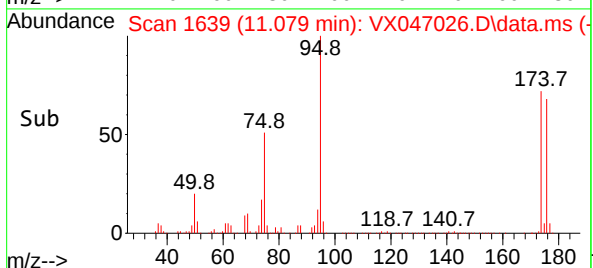
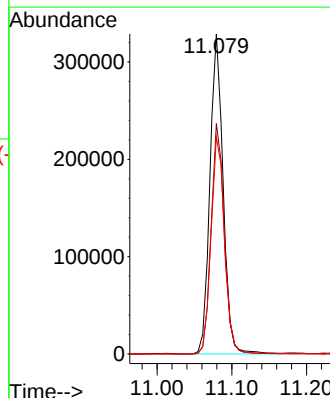
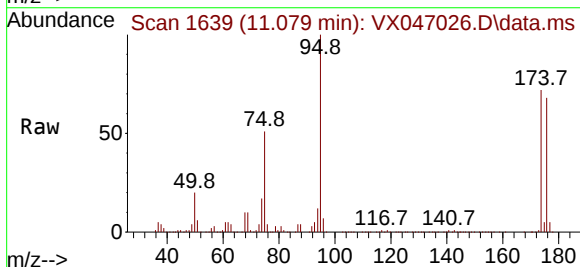
Instrument :
MSVOA_X
ClientSampleId :
TRENCH

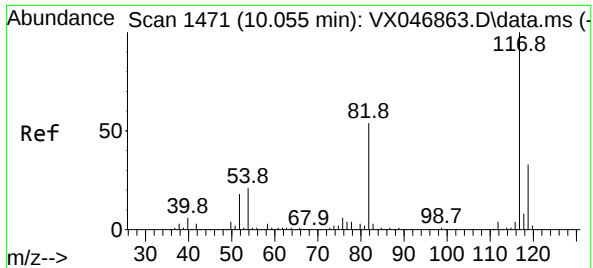
Tgt Ion: 98 Resp: 959240
Ion Ratio Lower Upper
98 100
100 66.3 53.0 79.6



#62
4-Bromofluorobenzene
Concen: 55.063 ug/l
RT: 11.079 min Scan# 1639
Delta R.T. -0.000 min
Lab File: VX047026.D
Acq: 16 Jul 2025 13:42

Tgt Ion: 95 Resp: 401786
Ion Ratio Lower Upper
95 100
174 72.3 0.0 152.0
176 69.0 0.0 145.2

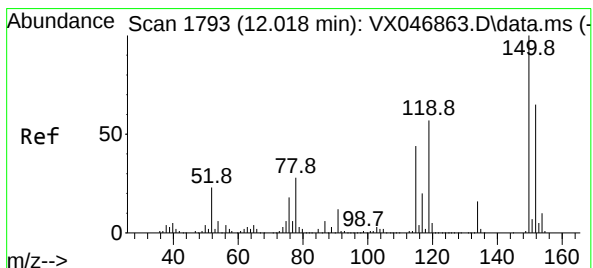
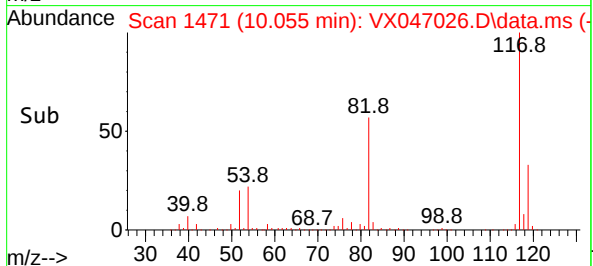
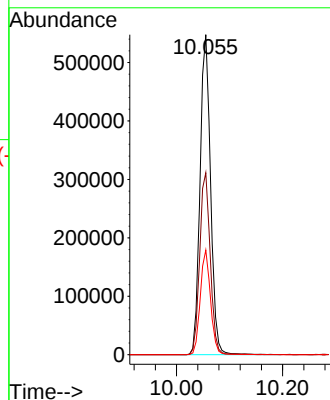
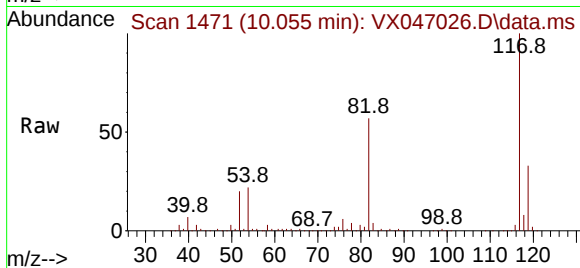




#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 10.055 min Scan# 1471
Delta R.T. -0.000 min
Lab File: VX047026.D
Acq: 16 Jul 2025 13:42

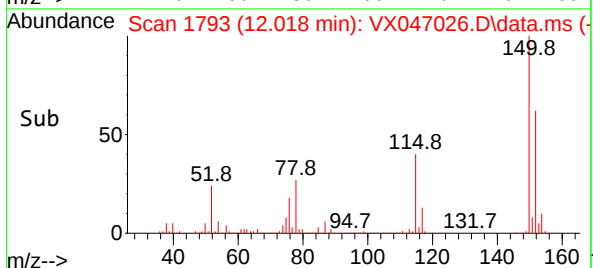
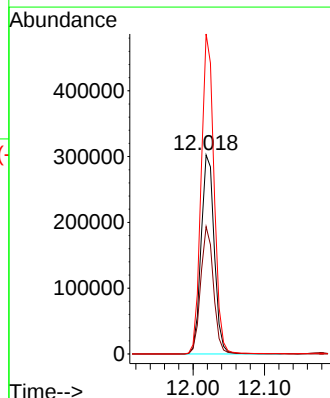
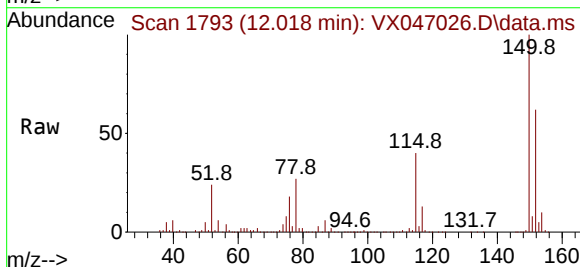
Instrument :
MSVOA_X
ClientSampleId :
TRENCH

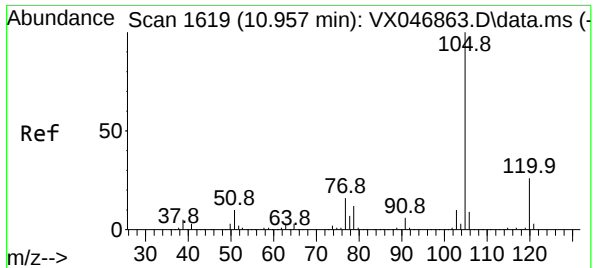
Tgt Ion:117 Resp: 755525
Ion Ratio Lower Upper
117 100
82 56.9 43.3 64.9
119 32.7 26.4 39.6



#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 12.018 min Scan# 1793
Delta R.T. -0.000 min
Lab File: VX047026.D
Acq: 16 Jul 2025 13:42

Tgt Ion:152 Resp: 386777
Ion Ratio Lower Upper
152 100
115 62.2 42.4 127.1
150 157.3 0.0 349.2

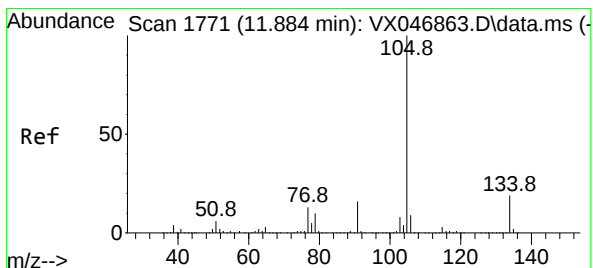
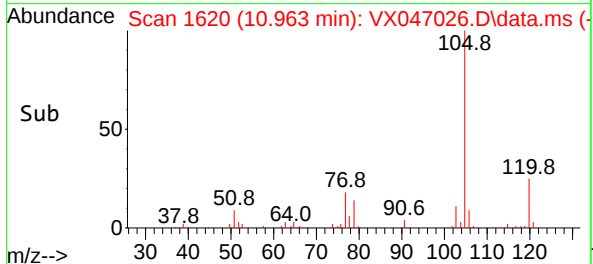
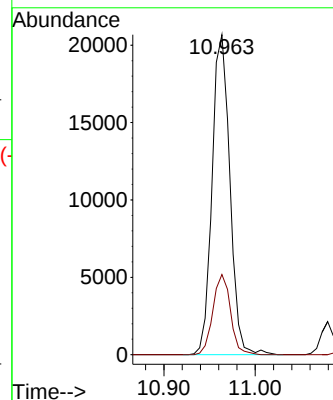
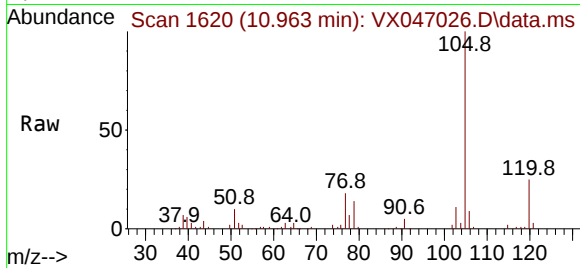




#73
Isopropylbenzene
Concen: 1.026 ug/l
RT: 10.963 min Scan# 1620
Delta R.T. 0.006 min
Lab File: VX047026.D
Acq: 16 Jul 2025 13:42

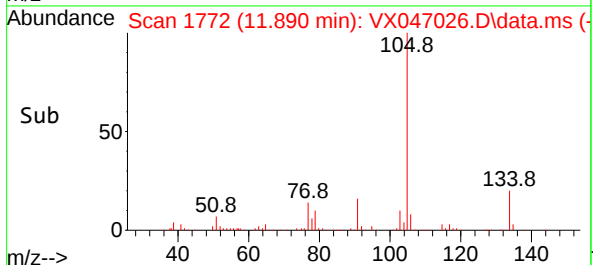
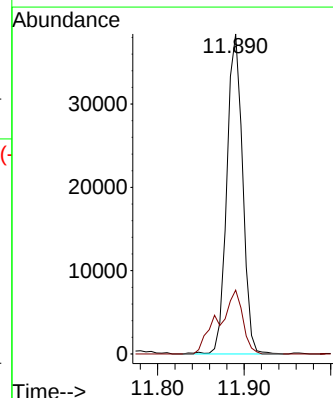
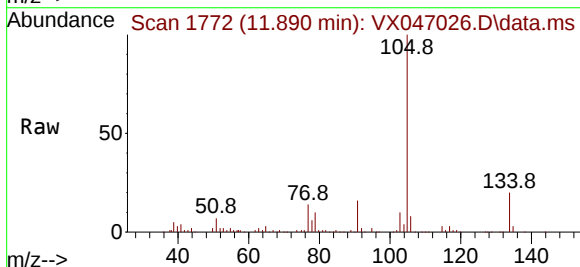
Instrument :
MSVOA_X
ClientSampleId :
TRENCH

Tgt Ion:105 Resp: 27898
Ion Ratio Lower Upper
105 100
120 24.8 13.2 39.5



#85
sec-Butylbenzene
Concen: 1.687 ug/l
RT: 11.890 min Scan# 1772
Delta R.T. 0.006 min
Lab File: VX047026.D
Acq: 16 Jul 2025 13:42

Tgt Ion:105 Resp: 48540
Ion Ratio Lower Upper
105 100
134 30.6 9.9 29.7#



Report of Analysis

Client:	T&A Construction Inc	Date Collected:	07/14/25
Project:	Kingsland Point Park Water Main	Date Received:	07/14/25
Client Sample ID:	STOCK-PILE	SDG No.:	Q2600
Lab Sample ID:	Q2600-08	Matrix:	TCLP
Analytical Method:	8260D	% Solid:	0
Sample Wt/Vol:	5	Units:	mL
Soil Aliquot Vol:			uL
GC Column:	DB-624UI	ID :	0.18
Prep Method :	SW5035	Level :	LOW
		Final Vol:	5000
		Test:	TCLP VOA

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
VX047027.D	1	07/16/25 14:03	VX071625

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	0.26	U	0.26	5.00	ug/L
75-35-4	1,1-Dichloroethene	0.23	U	0.23	5.00	ug/L
78-93-3	2-Butanone	6.60	JQ	0.98	25.0	ug/L
56-23-5	Carbon Tetrachloride	0.25	U	0.25	5.00	ug/L
67-66-3	Chloroform	0.25	U	0.25	5.00	ug/L
71-43-2	Benzene	0.15	U	0.15	5.00	ug/L
107-06-2	1,2-Dichloroethane	0.22	U	0.22	5.00	ug/L
79-01-6	Trichloroethene	0.090	U	0.090	5.00	ug/L
127-18-4	Tetrachloroethene	0.23	U	0.23	5.00	ug/L
108-90-7	Chlorobenzene	0.12	U	0.12	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55.0		74 - 125	110%	SPK: 50
1868-53-7	Dibromofluoromethane	48.9		75 - 124	98%	SPK: 50
2037-26-5	Toluene-d8	50.7		86 - 113	101%	SPK: 50
460-00-4	4-Bromofluorobenzene	55.5		77 - 121	111%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	467000	5.568			
540-36-3	1,4-Difluorobenzene	838000	6.769			
3114-55-4	Chlorobenzene-d5	804000	10.055			
3855-82-1	1,4-Dichlorobenzene-d4	413000	12.018			

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
 Data File : VX047027.D
 Acq On : 16 Jul 2025 14:03
 Operator : JC/MD
 Sample : Q2600-08
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 13 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 STOCK-PILE

Manual Integrations
 APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025
 Supervised By :Semsettin Yesilyurt 07/17/2025

Quant Time: Jul 17 03:33:50 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:51:11 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	5.568	168	466941	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.769	114	838214	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.055	117	804001	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	413019	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.964	65	339558	55.045	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 110.080%			
35) Dibromofluoromethane	5.397	113	278243	48.902	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 97.800%			
50) Toluene-d8	8.653	98	1018254	50.723	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery = 101.440%			
62) 4-Bromofluorobenzene	11.079	95	423137	55.460	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery = 110.920%			
Target Compounds						
						Qvalue
16) Acetone	2.392	43	97640	50.957	ug/l	94
18) Methyl Acetate	2.715	43	38116	7.547	ug/l	93
20) Methylene Chloride	2.806	84	38758	6.840	ug/l	97
25) 2-Butanone	4.599	43	16749	6.552	ug/l #	90
37) Ethyl Acetate	4.745	43	20993m	3.211	ug/l	
43) Isopropyl Acetate	6.361	43	14933	1.491	ug/l #	95
73) Isopropylbenzene	10.963	105	44739	1.541	ug/l	98
85) sec-Butylbenzene	11.890	105	77130	2.511	ug/l	99

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

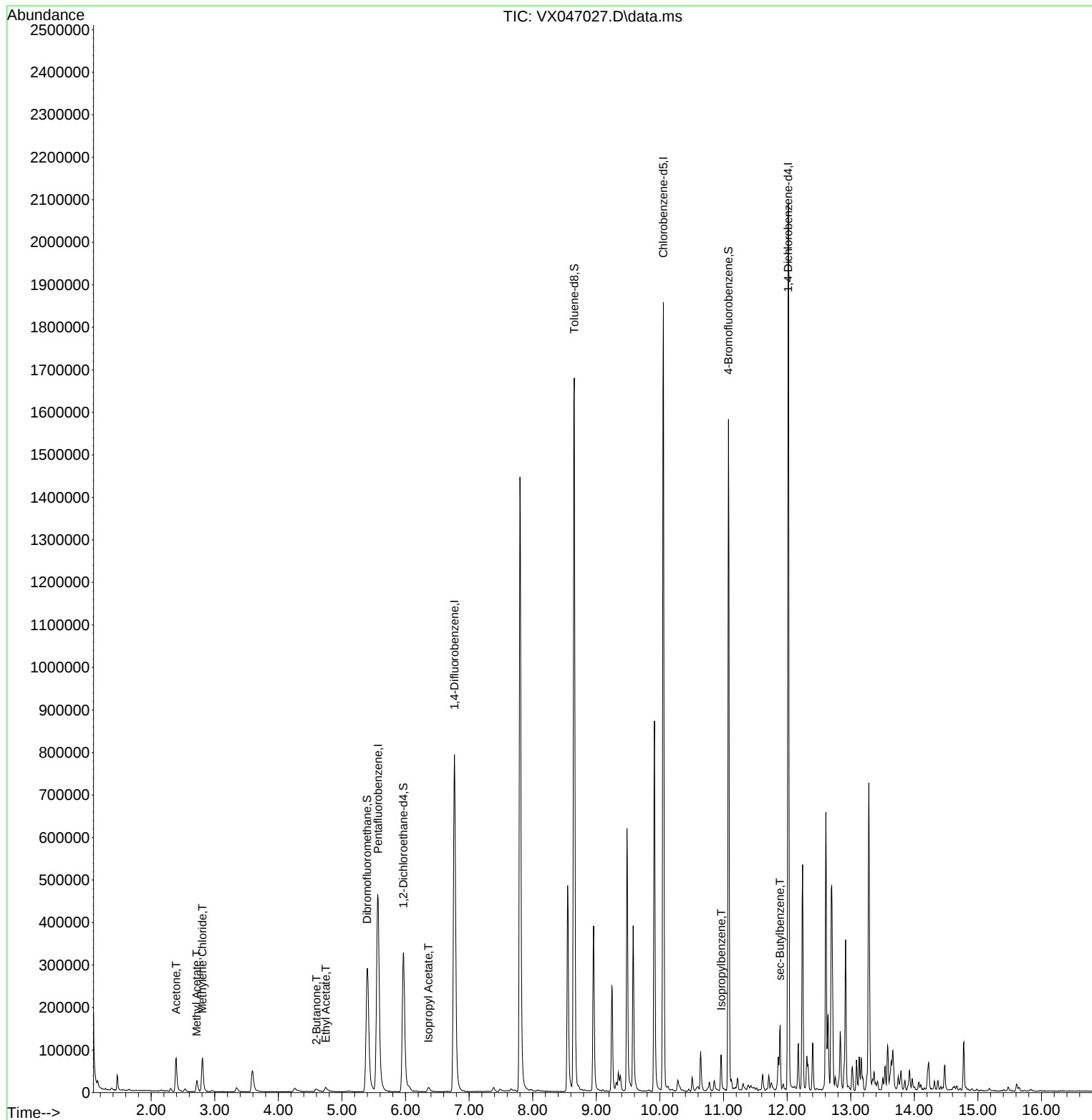
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Data File : VX047027.D
Acq On : 16 Jul 2025 14:03
Operator : JC/MD
Sample : Q2600-08
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 13 Sample Multiplier: 1

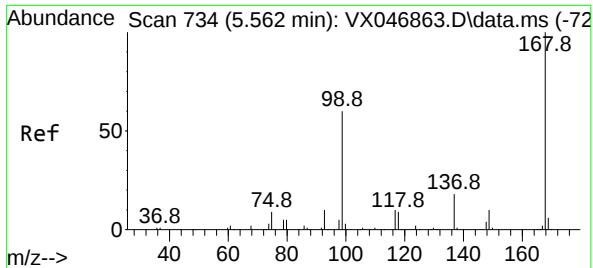
Instrument :
MSVOA_X
ClientSampleId :
STOCK-PILE

Manual Integrations
APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025
Supervised By :Semsettin Yesilyurt 07/17/2025

Quant Time: Jul 17 03:33:50 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:51:11 2025
Response via : Initial Calibration





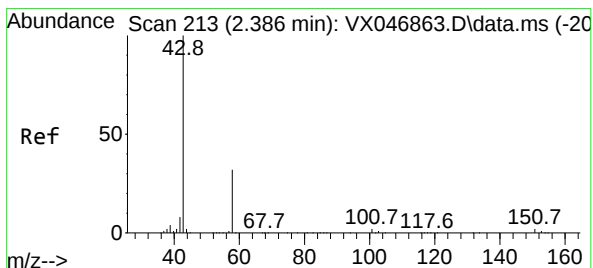
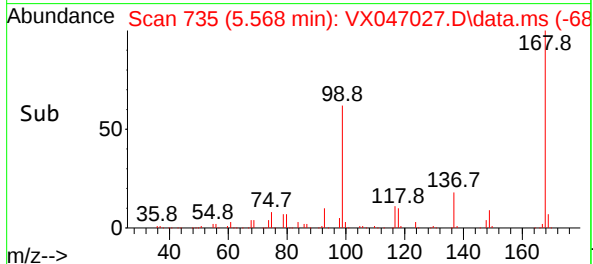
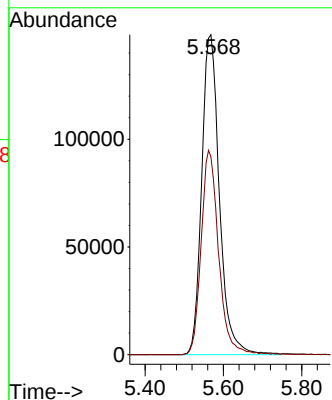
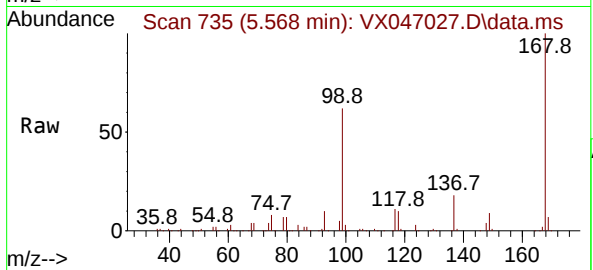
#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 5.568 min Scan# 71
Delta R.T. 0.006 min
Lab File: VX047027.D
Acq: 16 Jul 2025 14:03

Instrument :
MSVOA_X
ClientSampleId :
STOCK-PILE

Tgt Ion:168 Resp: 46694
Ion Ratio Lower Upper
168 100
99 61.9 48.8 73.2

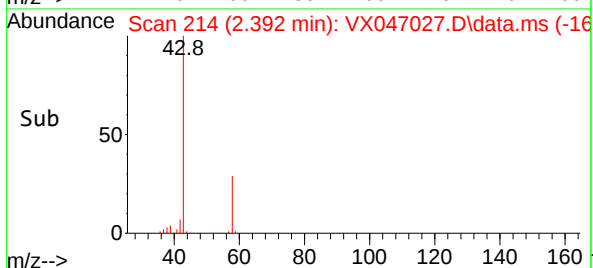
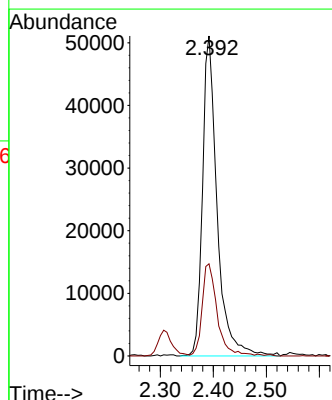
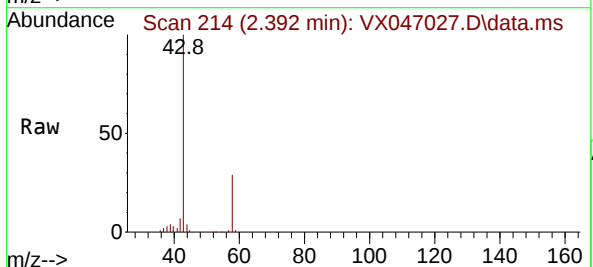
Manual Integrations
APPROVED

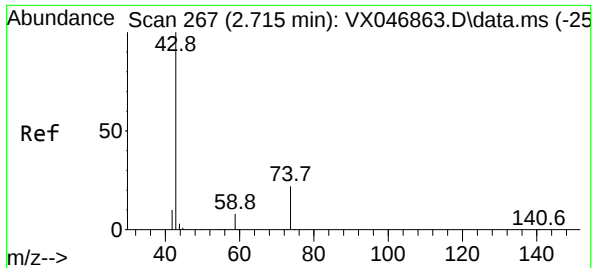
Reviewed By :Mahesh Dadoda 07/17/2025
Supervised By :Semsettin Yesilyurt 07/17/2025



#16
Acetone
Concen: 50.957 ug/l
RT: 2.392 min Scan# 214
Delta R.T. 0.006 min
Lab File: VX047027.D
Acq: 16 Jul 2025 14:03

Tgt Ion: 43 Resp: 97640
Ion Ratio Lower Upper
43 100
58 28.8 25.8 38.6





#18

Methyl Acetate

Concen: 7.547 ug/l

RT: 2.715 min Scan# 20

Delta R.T. -0.000 min

Lab File: VX047027.D

Acq: 16 Jul 2025 14:03

Instrument :

MSVOA_X

ClientSampleId :

STOCK-PILE

Tgt Ion: 43 Resp: 38110

Ion Ratio Lower Upper

43

100

74

19.7

18.3

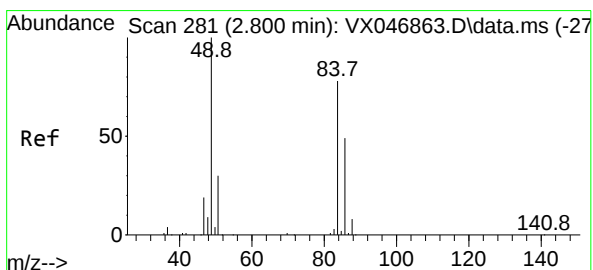
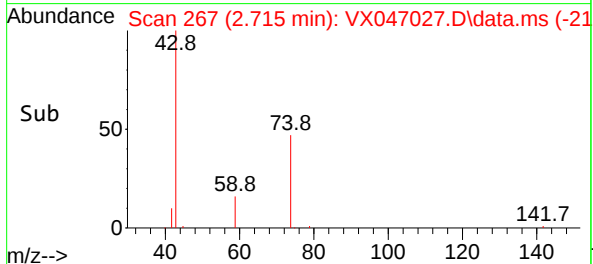
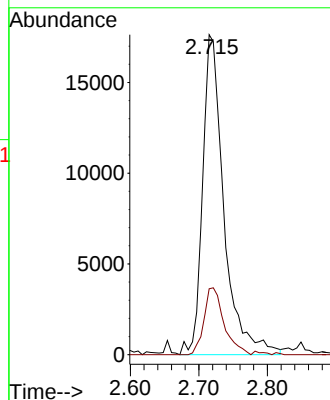
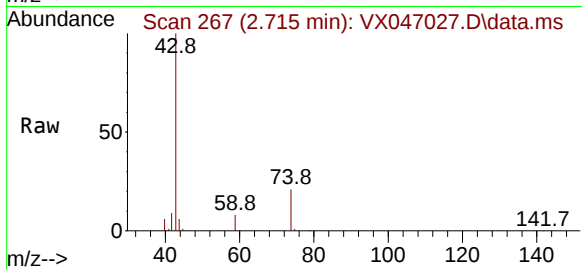
27.5

Manual Integrations

APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025

Supervised By :Semsettin Yesilyurt 07/17/2025



#20

Methylene Chloride

Concen: 6.840 ug/l

RT: 2.806 min Scan# 282

Delta R.T. 0.006 min

Lab File: VX047027.D

Acq: 16 Jul 2025 14:03

Tgt Ion: 84 Resp: 38758

Ion Ratio Lower Upper

84

100

49

125.1

51

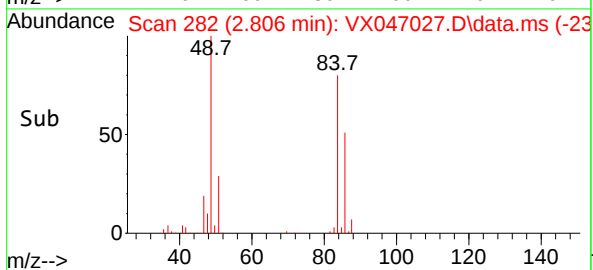
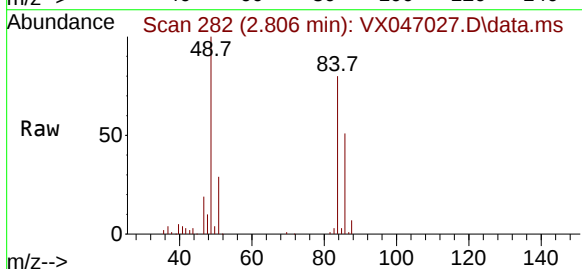
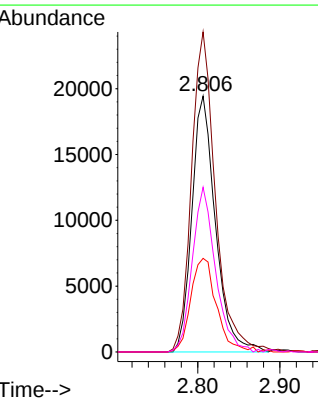
36.6

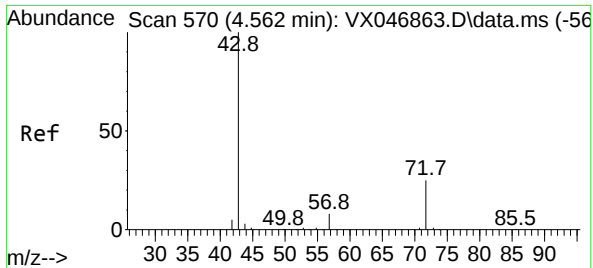
86

64.4

50.6

75.8





#25

2-Butanone

Concen: 6.552 ug/l

RT: 4.599 min Scan# 51

Delta R.T. 0.037 min

Lab File: VX047027.D

Acq: 16 Jul 2025 14:03

Instrument :

MSVOA_X

ClientSampleId :

STOCK-PILE

Tgt Ion: 43 Resp: 16749

Ion Ratio Lower Upper

43 100

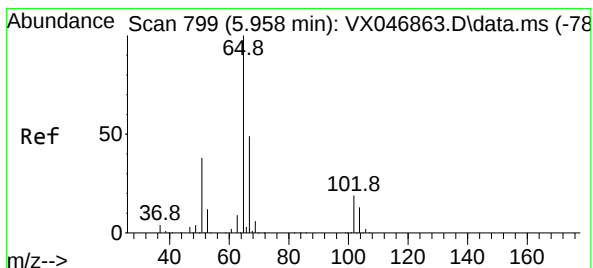
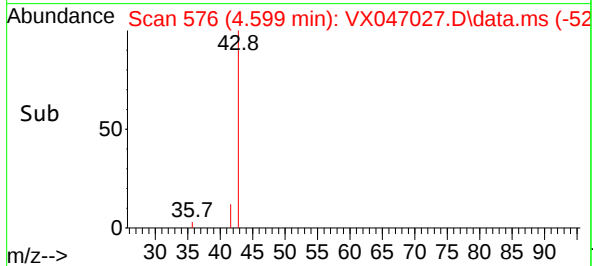
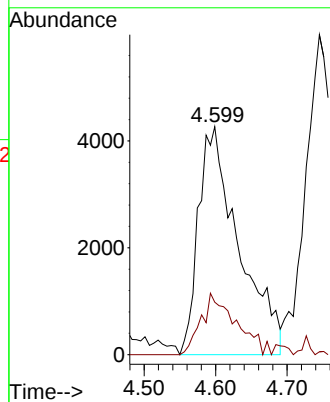
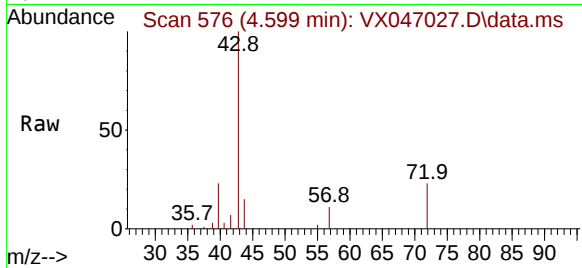
72 19.9 20.0 30.0

Manual Integrations

APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025

Supervised By :Semsettin Yesilyurt 07/17/2025



#33

1,2-Dichloroethane-d4

Concen: 55.045 ug/l

RT: 5.964 min Scan# 800

Delta R.T. 0.006 min

Lab File: VX047027.D

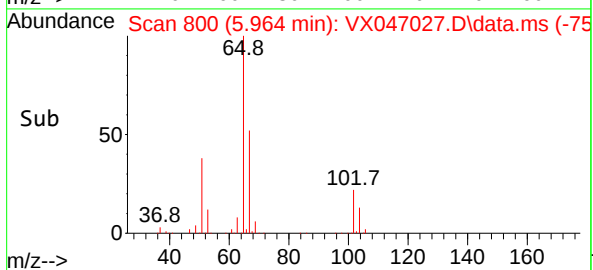
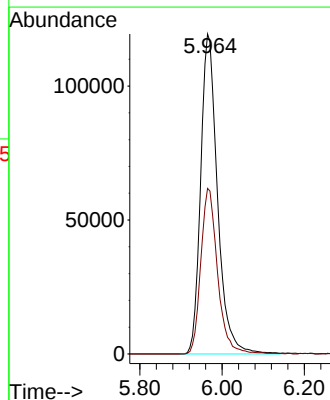
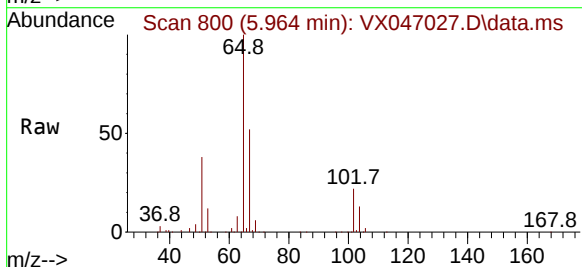
Acq: 16 Jul 2025 14:03

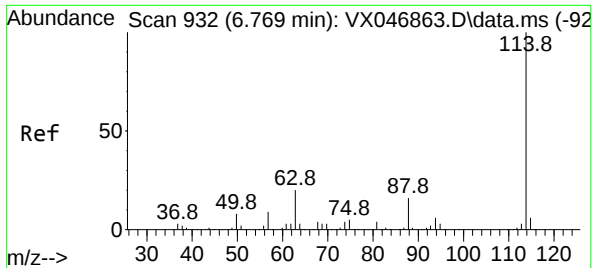
Tgt Ion: 65 Resp: 339558

Ion Ratio Lower Upper

65 100

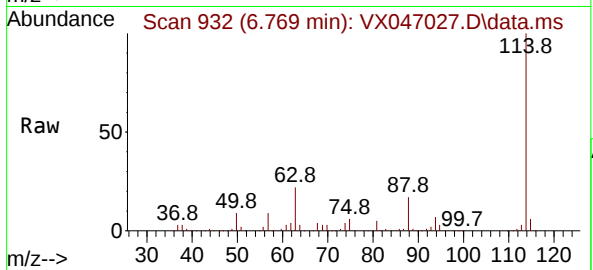
67 51.6 0.0 105.2





#34
1,4-Difluorobenzene
Concen: 50.000 ug/l
RT: 6.769 min Scan# 914
Delta R.T. 0.000 min
Lab File: VX047027.D
Acq: 16 Jul 2025 14:03

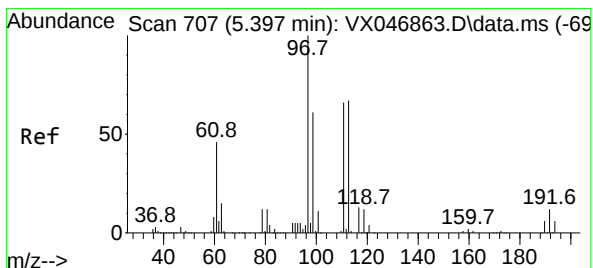
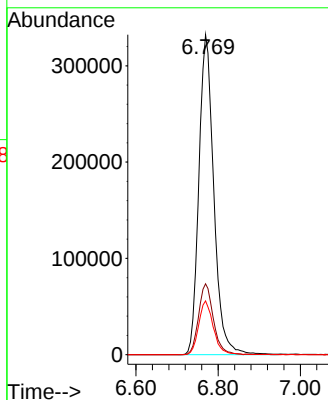
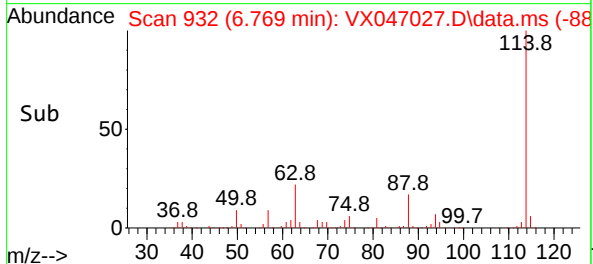
Instrument :
MSVOA_X
ClientSampleId :
STOCK-PILE



Tgt Ion:114 Resp: 838214
Ion Ratio Lower Upper
114 100
63 22.1 0.0 40.4
88 16.8 0.0 31.0

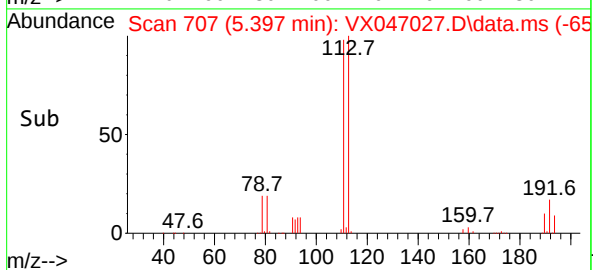
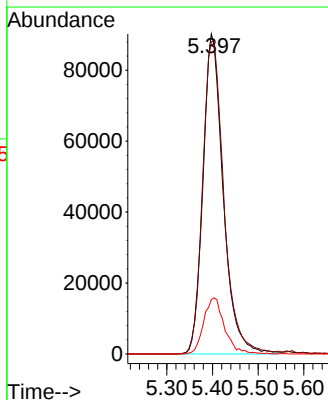
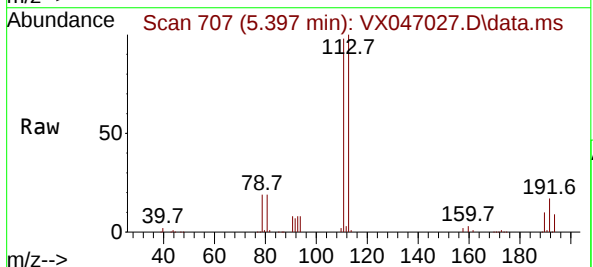
Manual Integrations
APPROVED

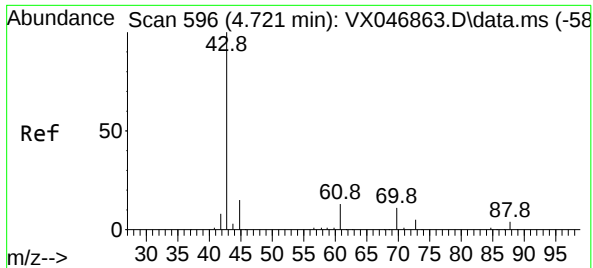
Reviewed By :Mahesh Dadoda 07/17/2025
Supervised By :Semsettin Yesilyurt 07/17/2025



#35
Dibromofluoromethane
Concen: 48.902 ug/l
RT: 5.397 min Scan# 707
Delta R.T. 0.000 min
Lab File: VX047027.D
Acq: 16 Jul 2025 14:03

Tgt Ion:113 Resp: 278243
Ion Ratio Lower Upper
113 100
111 102.1 81.2 121.8
192 18.0 15.3 22.9





#37

Ethyl Acetate

Concen: 3.211 ug/l m

RT: 4.745 min Scan# 60

Delta R.T. 0.024 min

Lab File: VX047027.D

Acq: 16 Jul 2025 14:03

Instrument :

MSVOA_X

ClientSampleId :

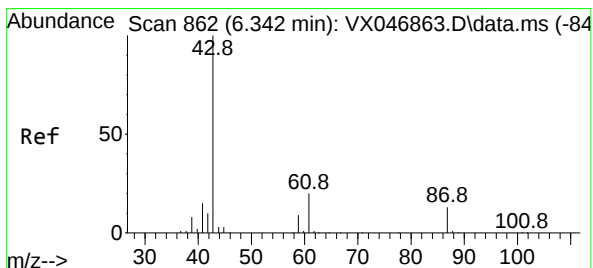
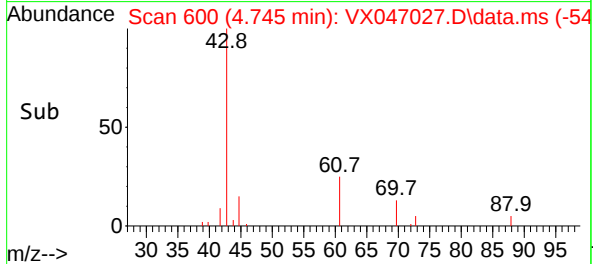
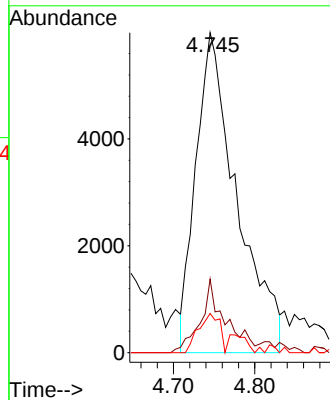
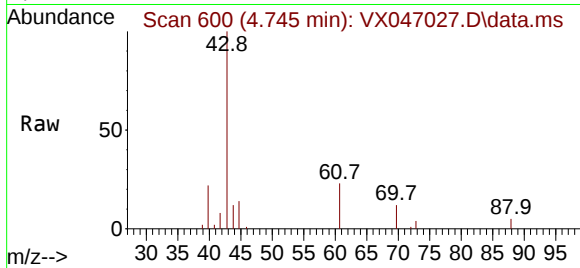
STOCK-PILE

Tgt Ion:	43	Resp:	2099
Ion	Ratio	Lower	Upper
43	100		
61	13.9	9.7	14.5
70	6.3	8.3	12.5

Manual Integrations

APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025
Supervised By :Semsettin Yesilyurt 07/17/2025



#43

Isopropyl Acetate

Concen: 1.491 ug/l

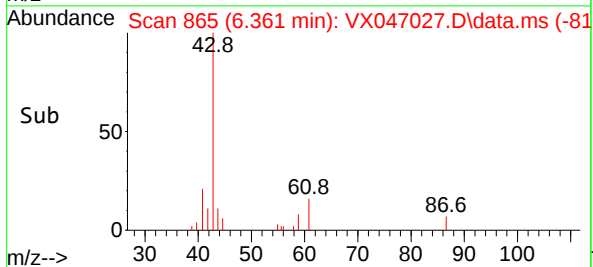
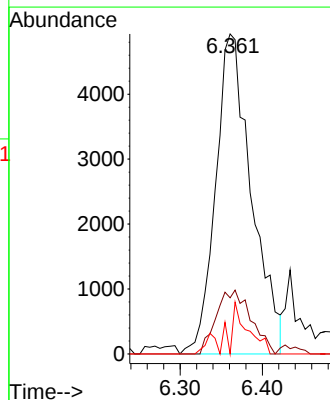
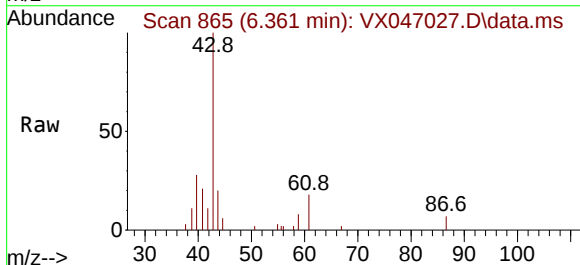
RT: 6.361 min Scan# 865

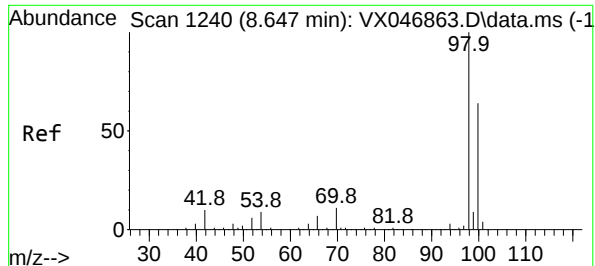
Delta R.T. 0.018 min

Lab File: VX047027.D

Acq: 16 Jul 2025 14:03

Tgt Ion:	43	Resp:	14933
Ion	Ratio	Lower	Upper
43	100		
61	19.4	15.7	23.5
87	7.8	10.1	15.1





#50

Toluene-d8

Concen: 50.723 ug/l

RT: 8.653 min Scan# 11

Delta R.T. 0.006 min

Lab File: VX047027.D

Acq: 16 Jul 2025 14:03

Instrument :

MSVOA_X

ClientSampleId :

STOCK-PILE

Tgt Ion: 98 Resp: 1018254

Ion Ratio Lower Upper

98 100

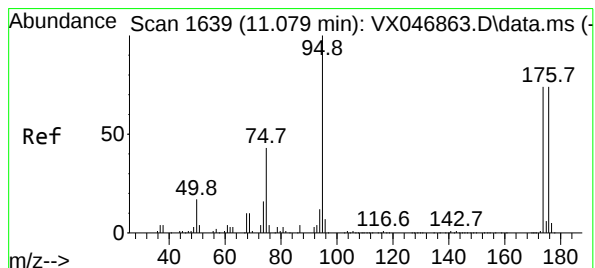
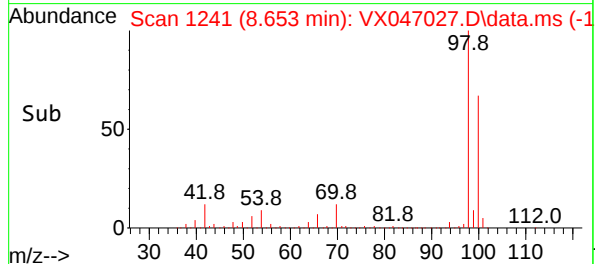
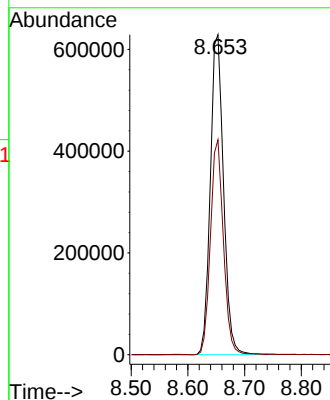
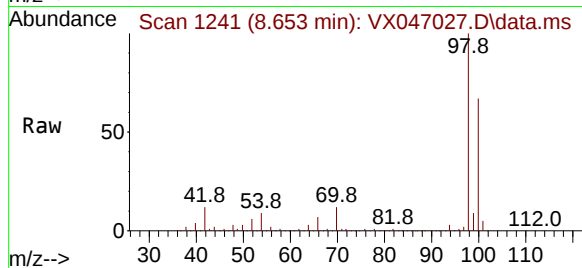
100 65.9 53.0 79.6

Manual Integrations

APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025

Supervised By :Semsettin Yesilyurt 07/17/2025



#62

4-Bromofluorobenzene

Concen: 55.460 ug/l

RT: 11.079 min Scan# 1639

Delta R.T. -0.000 min

Lab File: VX047027.D

Acq: 16 Jul 2025 14:03

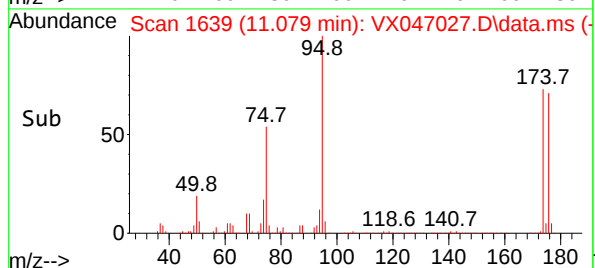
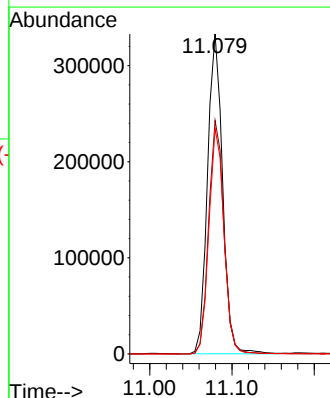
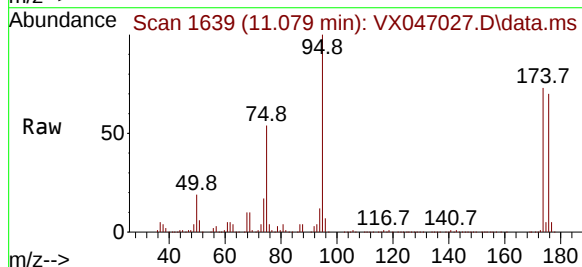
Tgt Ion: 95 Resp: 423137

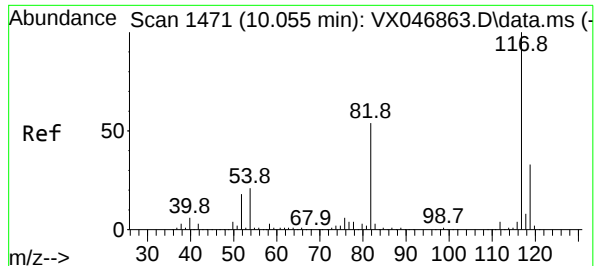
Ion Ratio Lower Upper

95 100

174 74.0 0.0 152.0

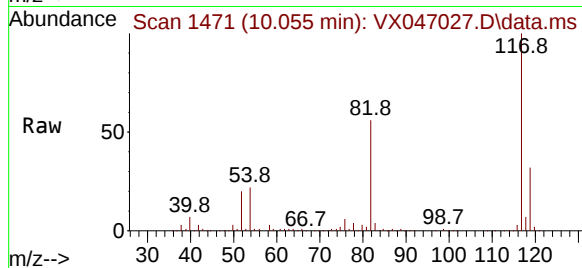
176 70.7 0.0 145.2





#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 10.055 min Scan# 1471
Delta R.T. 0.000 min
Lab File: VX047027.D
Acq: 16 Jul 2025 14:03

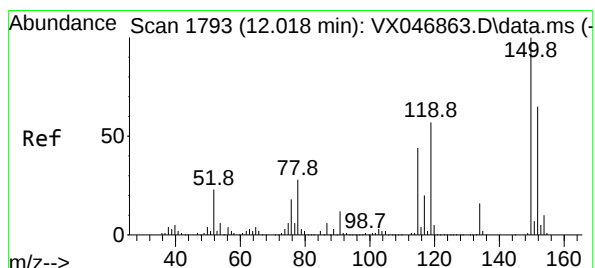
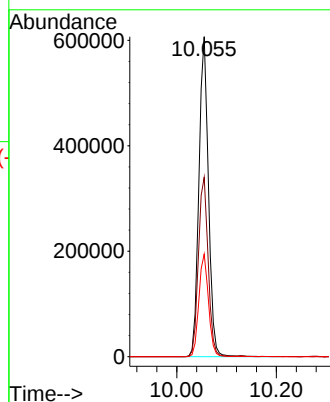
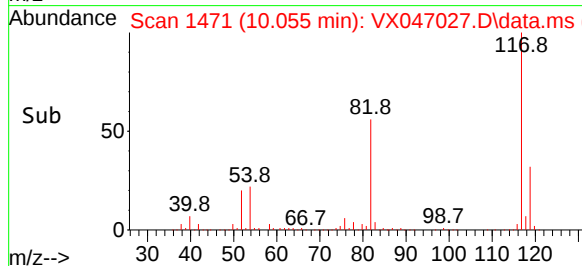
Instrument :
MSVOA_X
ClientSampleId :
STOCK-PILE



Tgt Ion:117 Resp: 80400
Ion Ratio Lower Upper
117 100
82 56.0 43.3 64.9
119 32.1 26.4 39.6

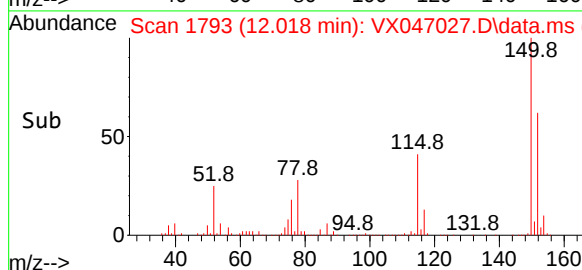
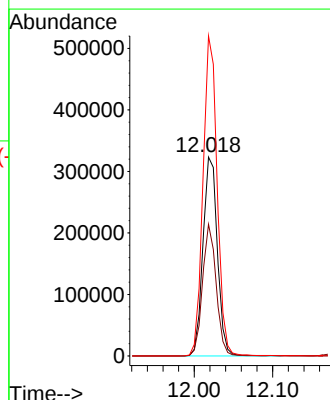
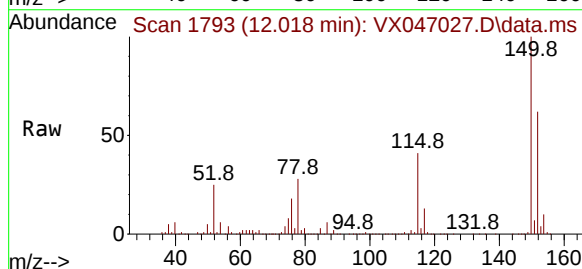
Manual Integrations
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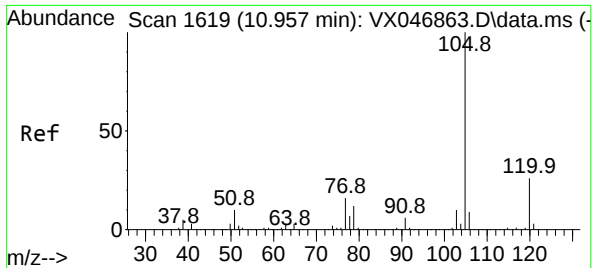
Reviewed By :Mahesh Dadoda 07/17/2025
Supervised By :Semsettin Yesilyurt 07/17/2025



#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 12.018 min Scan# 1793
Delta R.T. -0.000 min
Lab File: VX047027.D
Acq: 16 Jul 2025 14:03

Tgt Ion:152 Resp: 413019
Ion Ratio Lower Upper
152 100
115 62.8 42.4 127.1
150 157.8 0.0 349.2





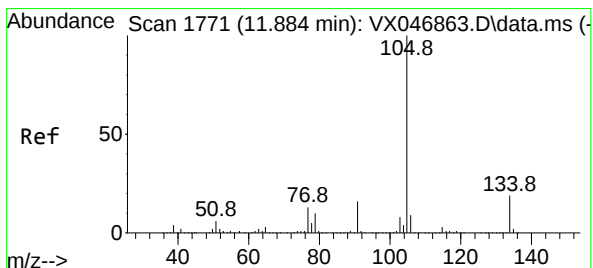
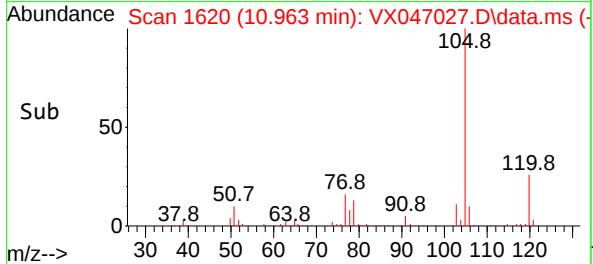
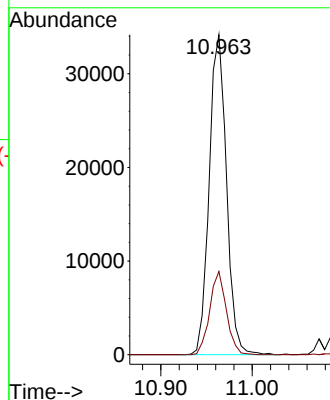
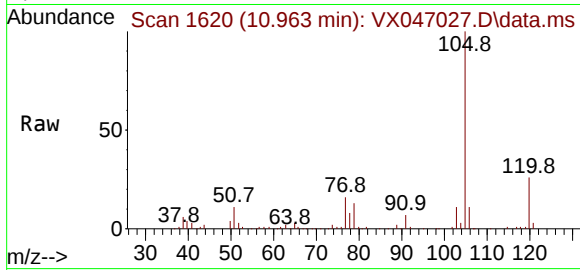
#73
Isopropylbenzene
Concen: 1.541 ug/l
RT: 10.963 min Scan# 1619
Delta R.T. 0.006 min
Lab File: VX047027.D
Acq: 16 Jul 2025 14:03

Instrument :
MSVOA_X
ClientSampleId :
STOCK-PILE

Tgt Ion:105 Resp: 44739
Ion Ratio Lower Upper
105 100
120 25.1 13.2 39.5

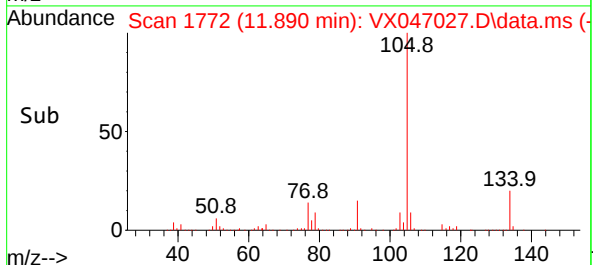
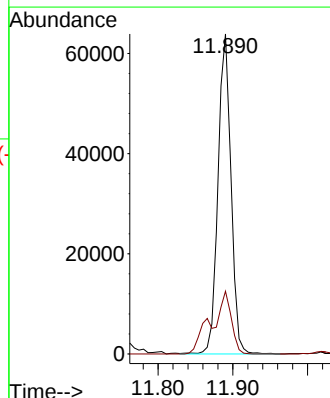
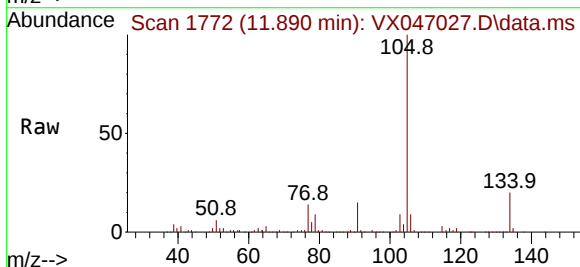
Manual Integrations
APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025
Supervised By :Semsettin Yesilyurt 07/17/2025



#85
sec-Butylbenzene
Concen: 2.511 ug/l
RT: 11.890 min Scan# 1772
Delta R.T. 0.006 min
Lab File: VX047027.D
Acq: 16 Jul 2025 14:03

Tgt Ion:105 Resp: 77130
Ion Ratio Lower Upper
105 100
134 19.1 9.9 29.7



Report of Analysis

Client:	T&A Construction Inc	Date Collected:	07/14/25
Project:	Kingsland Point Park Water Main	Date Received:	07/14/25
Client Sample ID:	END-OF-TRENCH	SDG No.:	Q2600
Lab Sample ID:	Q2600-12	Matrix:	TCLP
Analytical Method:	8260D	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	TCLP VOA
GC Column:	DB-624UI ID : 0.18	Level :	LOW
Prep Method :	SW5035		

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
VX047028.D	1	07/16/25 14:24	VX071625

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	0.26	U	0.26	5.00	ug/L
75-35-4	1,1-Dichloroethene	0.23	U	0.23	5.00	ug/L
78-93-3	2-Butanone	7.00	JQ	0.98	25.0	ug/L
56-23-5	Carbon Tetrachloride	0.25	U	0.25	5.00	ug/L
67-66-3	Chloroform	0.25	U	0.25	5.00	ug/L
71-43-2	Benzene	1.20	J	0.15	5.00	ug/L
107-06-2	1,2-Dichloroethane	0.22	U	0.22	5.00	ug/L
79-01-6	Trichloroethene	0.090	U	0.090	5.00	ug/L
127-18-4	Tetrachloroethene	0.23	U	0.23	5.00	ug/L
108-90-7	Chlorobenzene	0.12	U	0.12	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	51.2		74 - 125	102%	SPK: 50
1868-53-7	Dibromofluoromethane	47.6		75 - 124	95%	SPK: 50
2037-26-5	Toluene-d8	49.3		86 - 113	99%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.0		77 - 121	106%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	368000	5.568			
540-36-3	1,4-Difluorobenzene	639000	6.769			
3114-55-4	Chlorobenzene-d5	581000	10.055			
3855-82-1	1,4-Dichlorobenzene-d4	283000	12.018			

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
 Data File : VX047028.D
 Acq On : 16 Jul 2025 14:24
 Operator : JC/MD
 Sample : Q2600-12
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 14 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 END-OF-TRENCH

Manual Integrations
 APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025
 Supervised By :Semsettin Yesilyurt 07/17/2025

Quant Time: Jul 17 03:34:22 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:51:11 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	5.568	168	367687	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.769	114	638586	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.055	117	581092	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	282899	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.964	65	248650	51.189	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 102.380%			
35) Dibromofluoromethane	5.403	113	206211	47.572	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 95.140%			
50) Toluene-d8	8.653	98	753574	49.273	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery = 98.540%			
62) 4-Bromofluorobenzene	11.079	95	307984	52.986	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery = 105.980%			
Target Compounds					Qvalue	
16) Acetone	2.392	43	96830	64.175	ug/l	97
18) Methyl Acetate	2.721	43	36748	9.240	ug/l	97
20) Methylene Chloride	2.806	84	42006	9.415	ug/l	98
25) 2-Butanone	4.592	43	14157	7.033	ug/l	98
31) Cyclohexane	5.495	56	63208m	9.103	ug/l	
37) Ethyl Acetate	4.751	43	23732m	4.764	ug/l	
39) Methylcyclohexane	7.385	83	432172	59.073	ug/l	95
40) Benzene	6.056	78	21436	1.212	ug/l #	85
43) Isopropyl Acetate	6.354	43	19553	2.563	ug/l #	87
67) Ethyl Benzene	10.195	91	885832	41.172	ug/l	100
68) m/p-Xylenes	10.305	106	37626	4.641	ug/l	97
73) Isopropylbenzene	10.963	105	602760	30.309	ug/l	99
78) n-propylbenzene	11.305	91	2161401	90.134	ug/l	99
80) 1,3,5-Trimethylbenzene	11.451	105	21200m	1.312	ug/l	
83) tert-Butylbenzene	11.713	119	29497	1.767	ug/l	84
84) 1,2,4-Trimethylbenzene	11.750	105	1677405	102.700	ug/l	97
85) sec-Butylbenzene	11.890	105	233511	11.097	ug/l	94
89) n-Butylbenzene	12.329	91	136849m	8.265	ug/l	

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

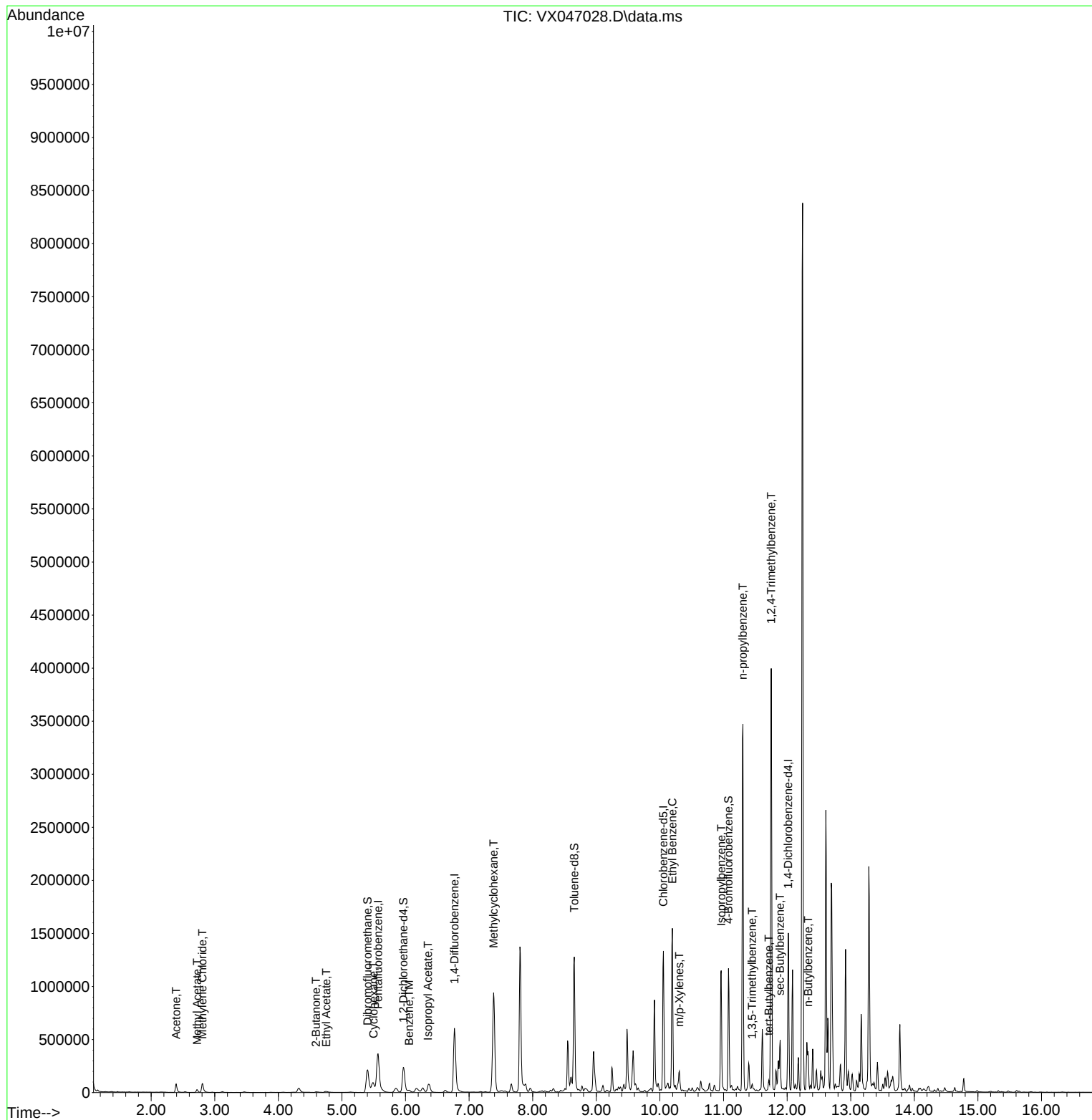
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Data File : VX047028.D
Acq On : 16 Jul 2025 14:24
Operator : JC/MD
Sample : Q2600-12
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 14 Sample Multiplier: 1

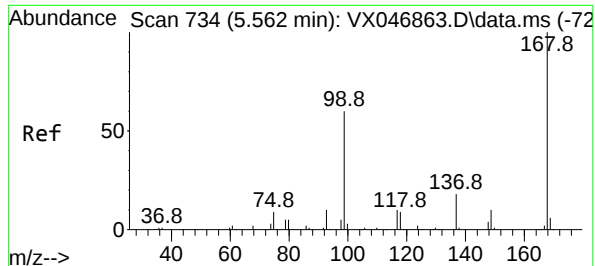
Instrument :
MSVOA_X
ClientSampleId :
END-OF-TRENCH

Quant Time: Jul 17 03:34:22 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:51:11 2025
Response via : Initial Calibration

Manual Integrations
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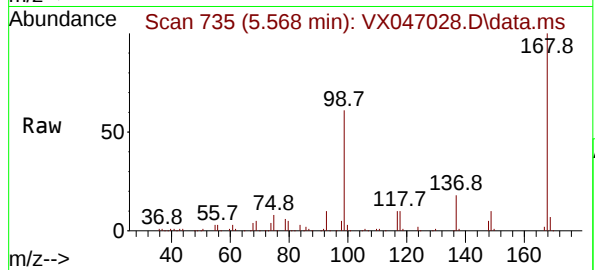
Reviewed By :Mahesh Dadoda 07/17/2025
Supervised By :Semsettin Yesilyurt 07/17/2025





#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 5.568 min Scan# 71
Delta R.T. 0.006 min
Lab File: VX047028.D
Acq: 16 Jul 2025 14:24

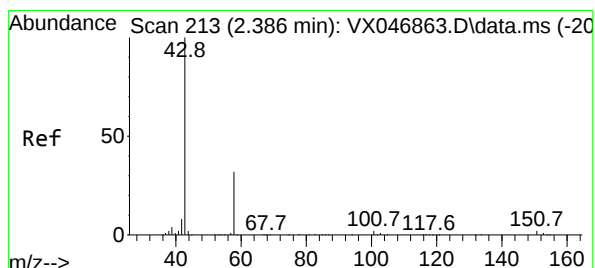
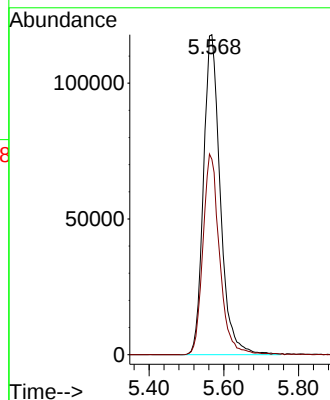
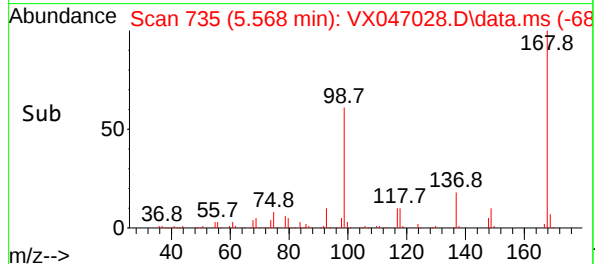
Instrument :
MSVOA_X
ClientSampleId :
END-OF-TRENCH



Tgt Ion:168 Resp: 36768
Ion Ratio Lower Upper
168 100
99 61.1 48.8 73.2

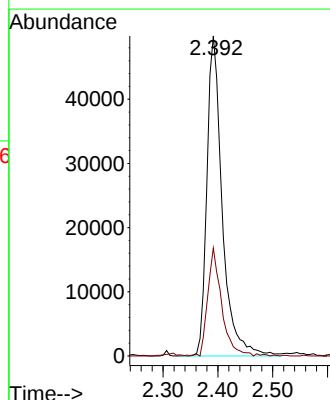
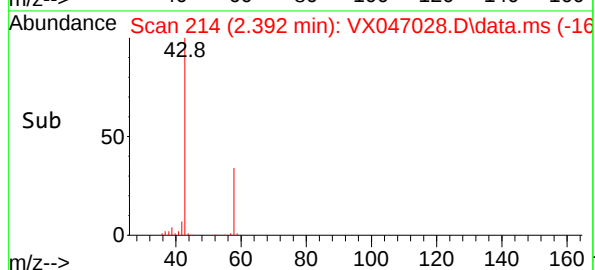
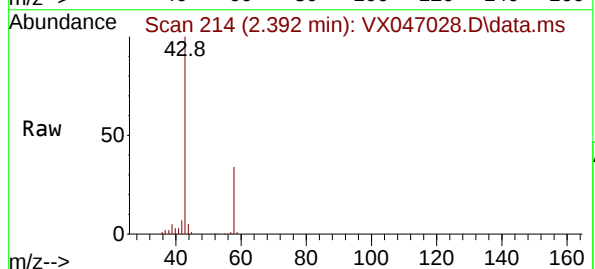
Manual Integrations
APPROVED

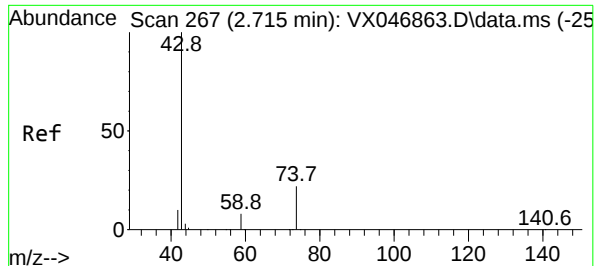
Reviewed By :Mahesh Dadoda 07/17/2025
Supervised By :Semsettin Yesilyurt 07/17/2025



#16
Acetone
Concen: 64.175 ug/l
RT: 2.392 min Scan# 214
Delta R.T. 0.006 min
Lab File: VX047028.D
Acq: 16 Jul 2025 14:24

Tgt Ion: 43 Resp: 96830
Ion Ratio Lower Upper
43 100
58 33.8 25.8 38.6





#18

Methyl Acetate

Concen: 9.240 ug/l

RT: 2.721 min Scan# 20

Delta R.T. 0.006 min

Lab File: VX047028.D

Acq: 16 Jul 2025 14:24

Instrument :

MSVOA_X

ClientSampleId :

END-OF-TRENCH

Tgt Ion: 43 Resp: 36748

Ion Ratio Lower Upper

43

100

74

21.7

18.3

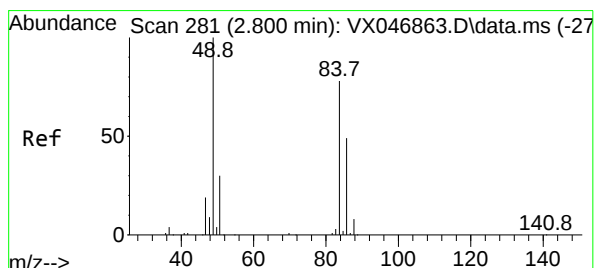
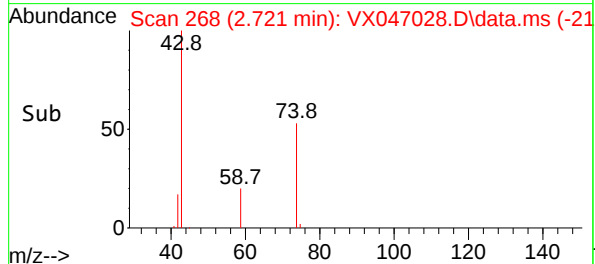
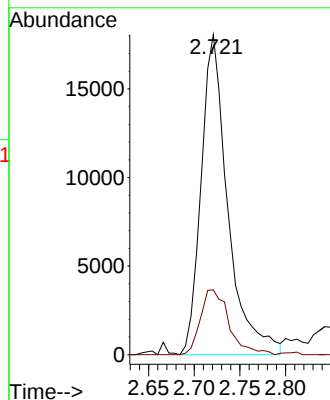
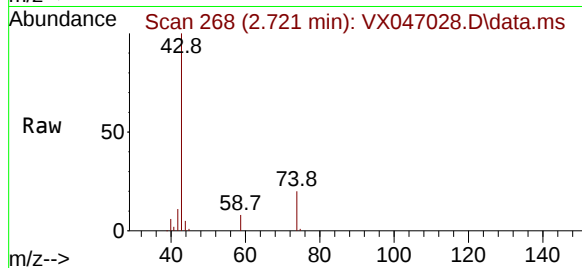
27.5

Manual Integrations

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Reviewed By :Mahesh Dadoda 07/17/2025

Supervised By :Semsettin Yesilyurt 07/17/2025



#20

Methylene Chloride

Concen: 9.415 ug/l

RT: 2.806 min Scan# 282

Delta R.T. 0.006 min

Lab File: VX047028.D

Acq: 16 Jul 2025 14:24

Tgt Ion: 84 Resp: 42006

Ion Ratio Lower Upper

84

100

49

125.9

102.8

154.2

51

39.3

31.1

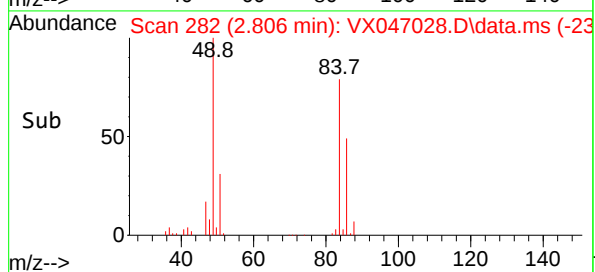
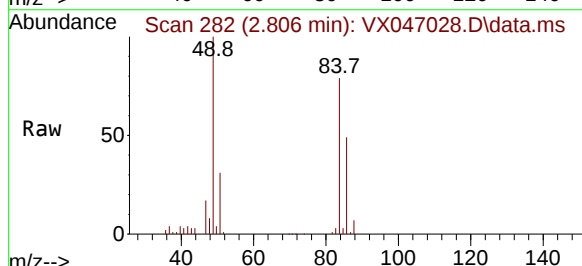
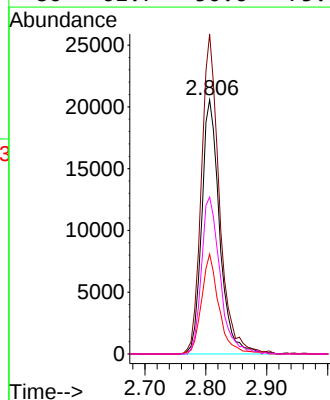
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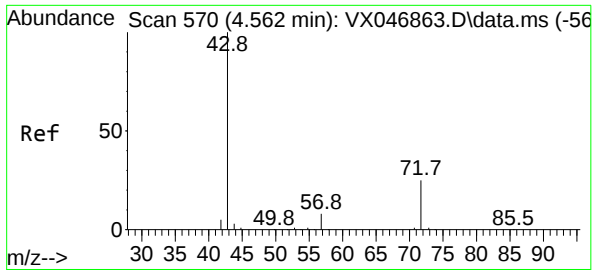
86

61.7

50.6

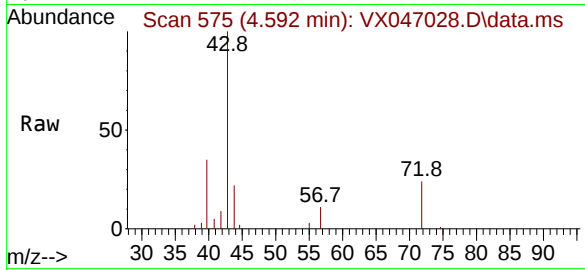
75.8





#25
2-Butanone
Concen: 7.033 ug/l
RT: 4.592 min Scan# 51
Delta R.T. 0.030 min
Lab File: VX047028.D
Acq: 16 Jul 2025 14:24

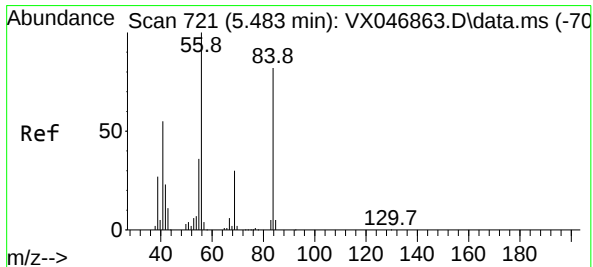
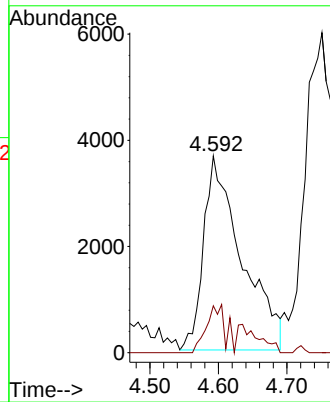
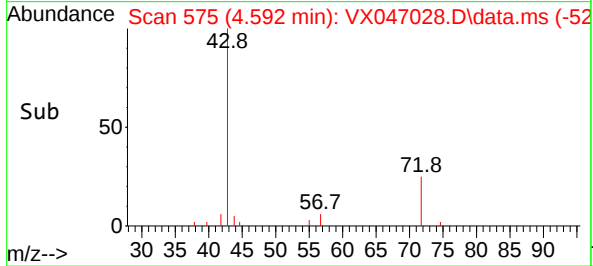
Instrument :
MSVOA_X
ClientSampleId :
END-OF-TRENCH



Tgt Ion: 43 Resp: 1415
Ion Ratio Lower Upper
43 100
72 24.2 20.0 30.0

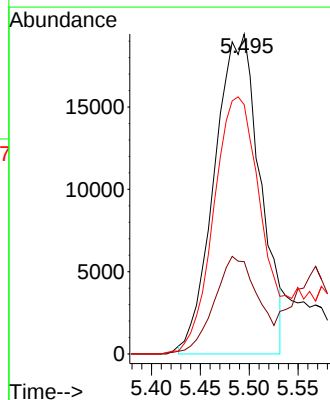
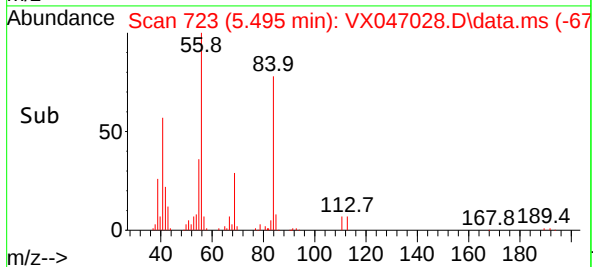
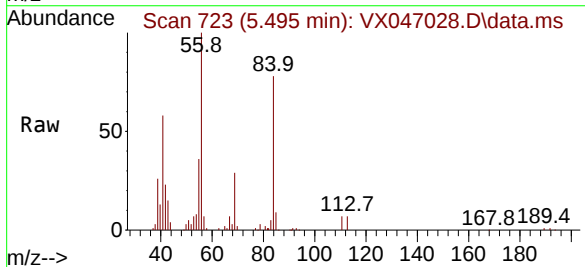
Manual Integrations
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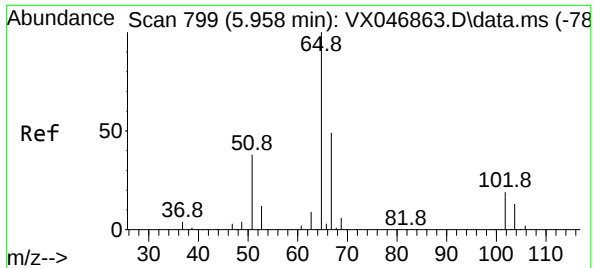
Reviewed By :Mahesh Dadoda 07/17/2025
Supervised By :Semsettin Yesilyurt 07/17/2025



#31
Cyclohexane
Concen: 9.103 ug/l m
RT: 5.495 min Scan# 723
Delta R.T. 0.012 min
Lab File: VX047028.D
Acq: 16 Jul 2025 14:24

Tgt Ion: 56 Resp: 63208
Ion Ratio Lower Upper
56 100
69 28.9 24.0 36.0
84 77.9 66.5 99.7





#33

1,2-Dichloroethane-d4

Concen: 51.189 ug/l

RT: 5.964 min Scan# 800

Delta R.T. 0.006 min

Lab File: VX047028.D

Acq: 16 Jul 2025 14:24

Instrument :

MSVOA_X

ClientSampleId :

END-OF-TRENCH

Tgt Ion: 65 Resp: 248650

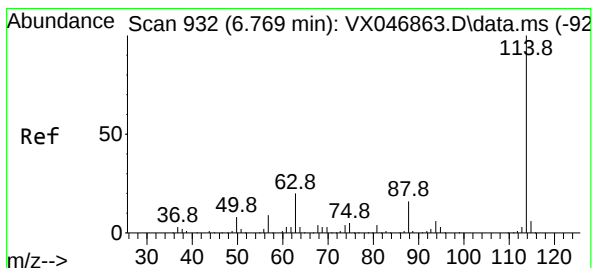
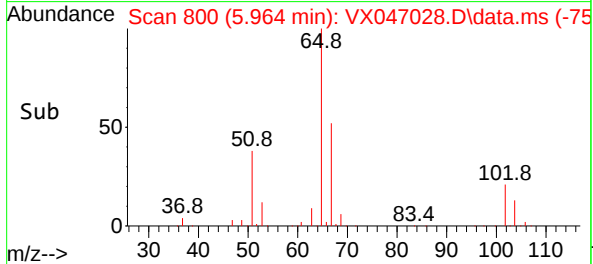
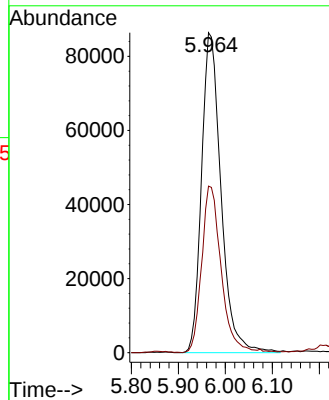
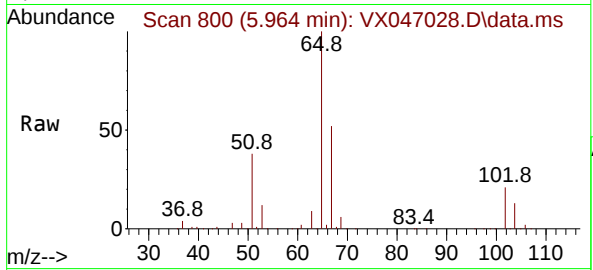
Ion Ratio Lower Upper

65 100

67 52.3 0.0 105.2

Manual Integrations

APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025
Supervised By :Semsettin Yesilyurt 07/17/2025

#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 6.769 min Scan# 932

Delta R.T. -0.000 min

Lab File: VX047028.D

Acq: 16 Jul 2025 14:24

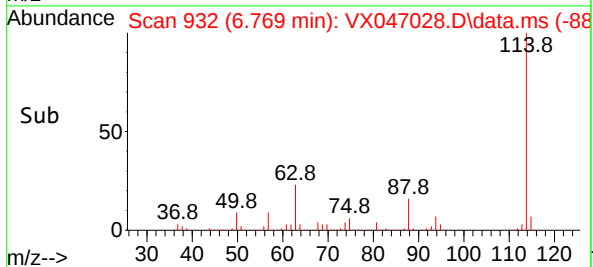
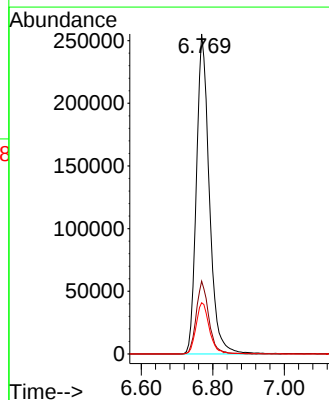
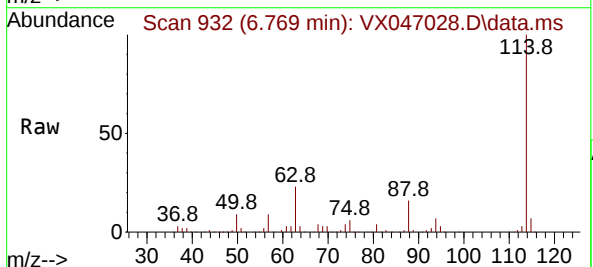
Tgt Ion:114 Resp: 638586

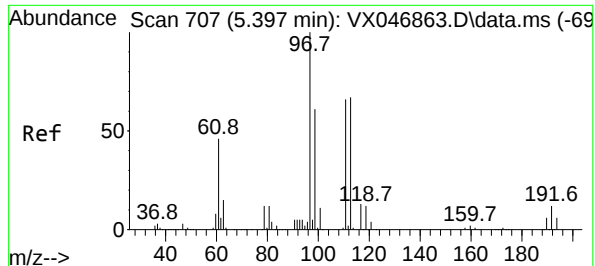
Ion Ratio Lower Upper

114 100

63 22.8 0.0 40.4

88 16.0 0.0 31.0





#35

Dibromofluoromethane

Concen: 47.572 ug/l

RT: 5.403 min Scan# 70

Delta R.T. 0.006 min

Lab File: VX047028.D

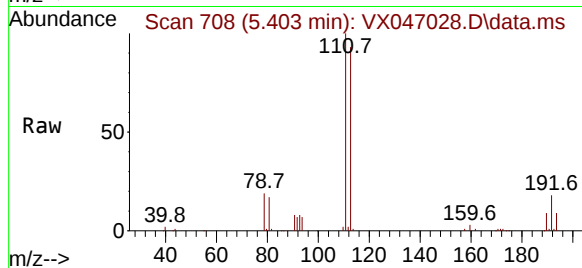
Acq: 16 Jul 2025 14:24

Instrument :

MSVOA_X

ClientSampleId :

END-OF-TRENCH



Tgt Ion:113 Resp: 20621

Ion Ratio Lower Upper

113 100

111 102.5 81.2 121.8

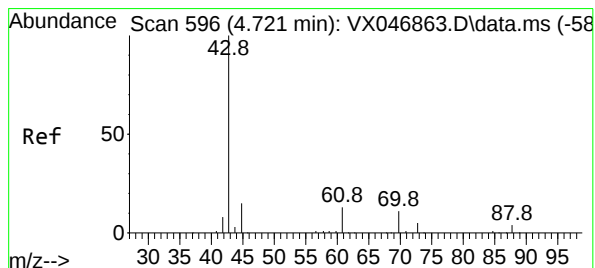
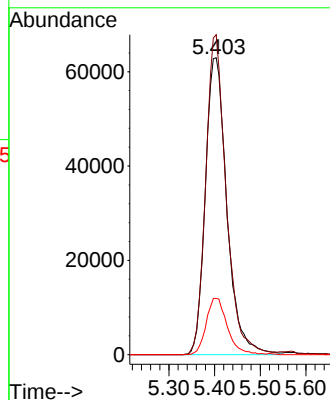
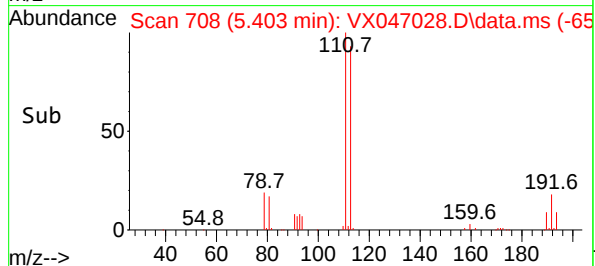
192 18.7 15.3 22.9

Manual Integrations

APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025

Supervised By :Semsettin Yesilyurt 07/17/2025



#37

Ethyl Acetate

Concen: 4.764 ug/l m

RT: 4.751 min Scan# 601

Delta R.T. 0.030 min

Lab File: VX047028.D

Acq: 16 Jul 2025 14:24

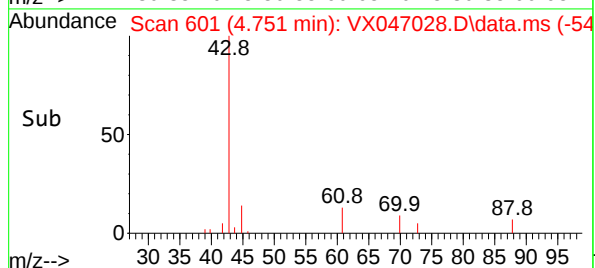
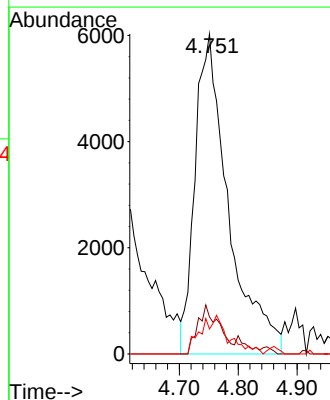
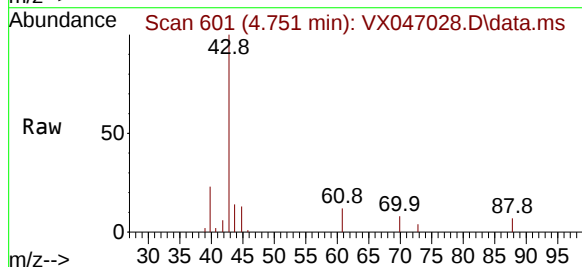
Tgt Ion: 43 Resp: 23732

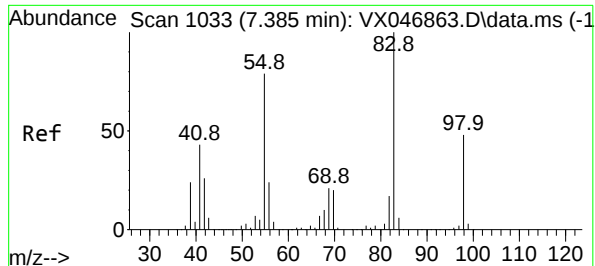
Ion Ratio Lower Upper

43 100

61 9.9 9.7 14.5

70 10.1 8.3 12.5





#39

Methylcyclohexane

Concen: 59.073 ug/l

RT: 7.385 min Scan# 1033

Delta R.T. -0.000 min

Lab File: VX047028.D

Acq: 16 Jul 2025 14:24

Instrument :

MSVOA_X

ClientSampleId :

END-OF-TRENCH

Tgt Ion: 83 Resp: 432172

Ion Ratio Lower Upper

83 100

55 83.9 63.0 94.4

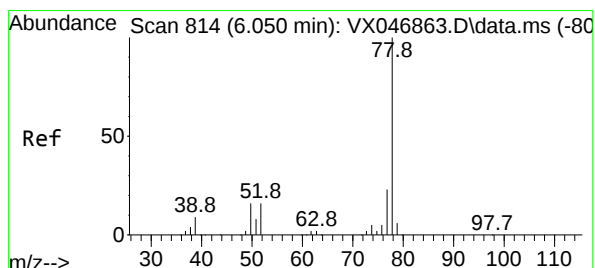
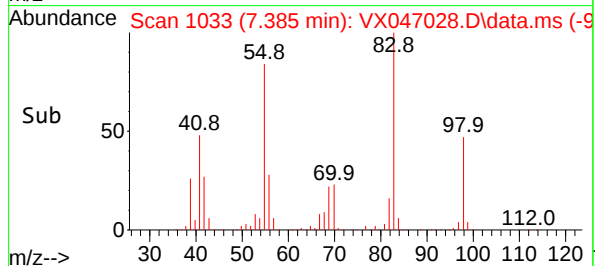
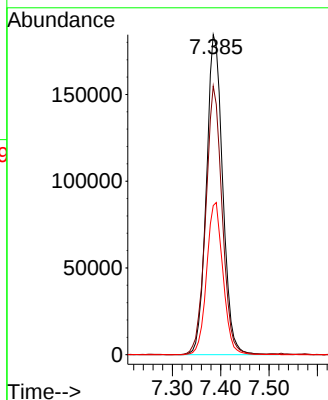
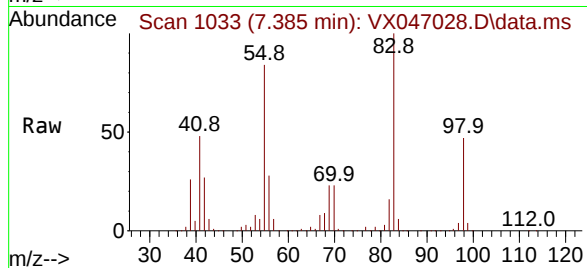
98 46.6 38.5 57.7

Manual Integrations

APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025

Supervised By :Semsettin Yesilyurt 07/17/2025



#40

Benzene

Concen: 1.212 ug/l

RT: 6.056 min Scan# 815

Delta R.T. 0.006 min

Lab File: VX047028.D

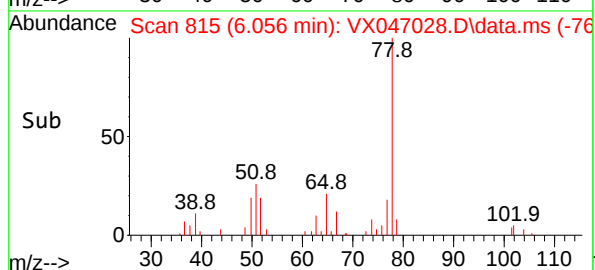
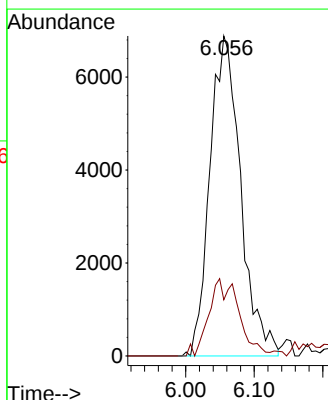
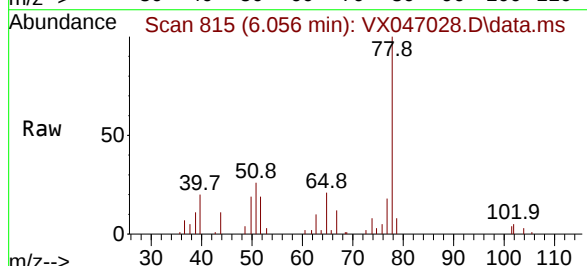
Acq: 16 Jul 2025 14:24

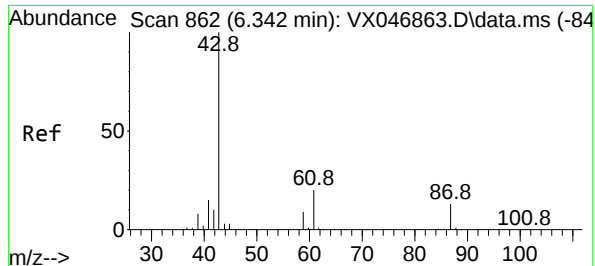
Tgt Ion: 78 Resp: 21436

Ion Ratio Lower Upper

78 100

77 16.3 18.7 28.1#





#43

Isopropyl Acetate

Concen: 2.563 ug/l

RT: 6.354 min Scan# 80

Delta R.T. 0.012 min

Lab File: VX047028.D

Acq: 16 Jul 2025 14:24

Instrument :

MSVOA_X

ClientSampleId :

END-OF-TRENCH

Tgt Ion: 43 Resp: 1955

Ion Ratio Lower Upper

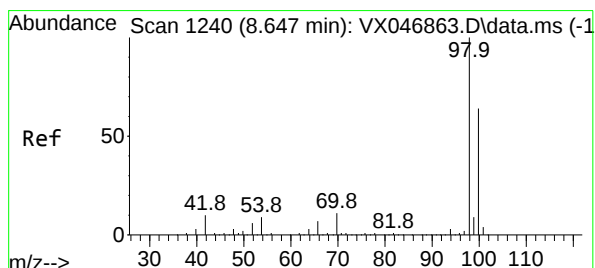
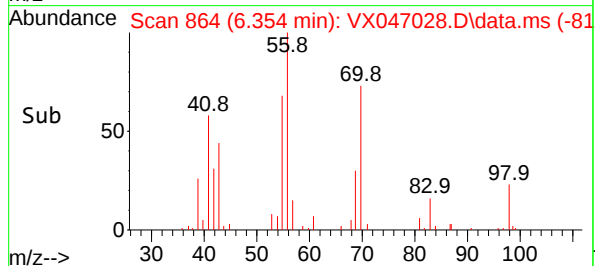
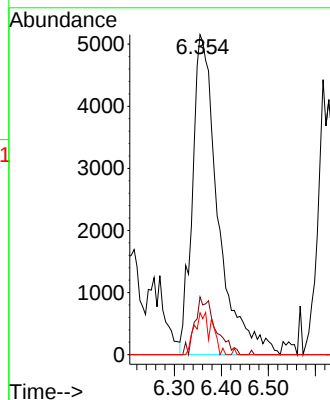
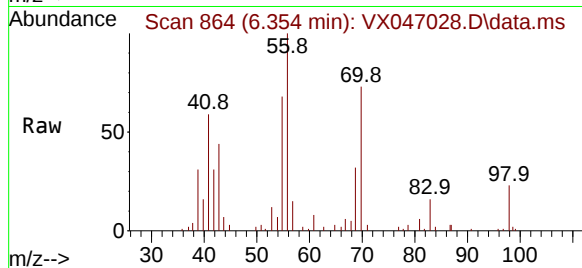
43 100

61 14.4 15.7 23.5

87 6.5 10.1 15.1

Manual Integrations

APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025
Supervised By :Semsettin Yesilyurt 07/17/2025

#50

Toluene-d8

Concen: 49.273 ug/l

RT: 8.653 min Scan# 1241

Delta R.T. 0.006 min

Lab File: VX047028.D

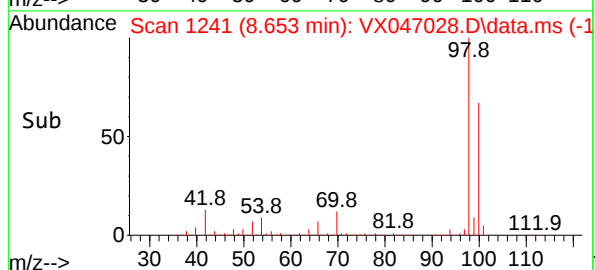
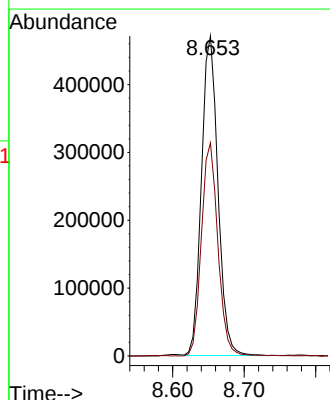
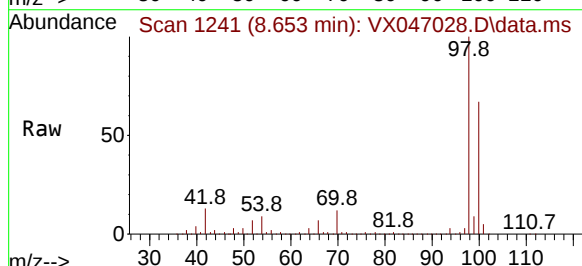
Acq: 16 Jul 2025 14:24

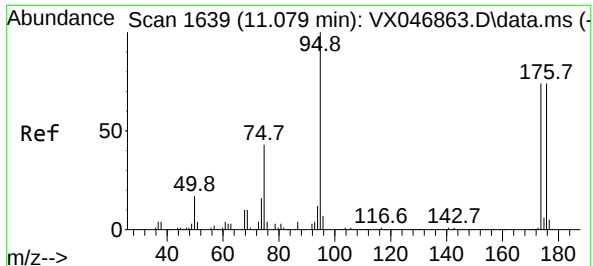
Tgt Ion: 98 Resp: 753574

Ion Ratio Lower Upper

98 100

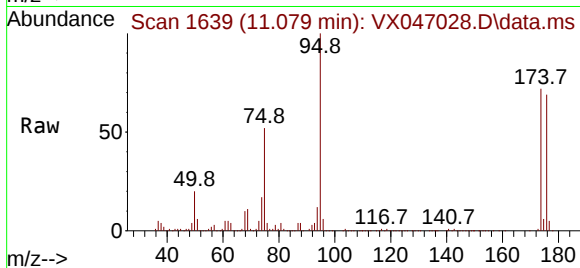
100 66.7 53.0 79.6





#62
4-Bromofluorobenzene
Concen: 52.986 ug/l
RT: 11.079 min Scan# 1639
Delta R.T. -0.000 min
Lab File: VX047028.D
Acq: 16 Jul 2025 14:24

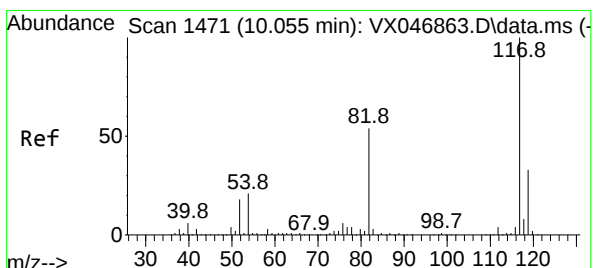
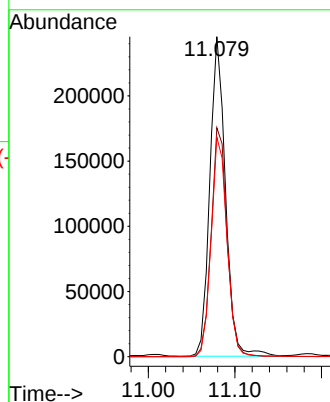
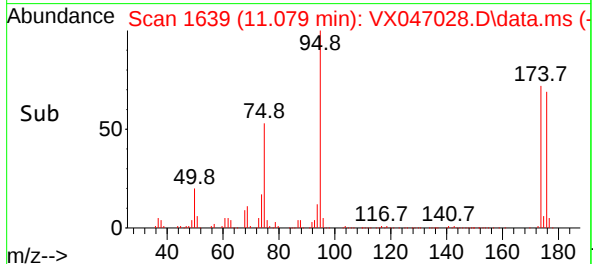
Instrument :
MSVOA_X
ClientSampleId :
END-OF-TRENCH



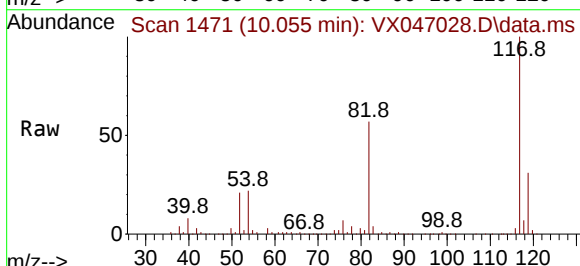
Tgt Ion: 95 Resp: 307984
Ion Ratio Lower Upper
95 100
174 72.7 0.0 152.0
176 69.5 0.0 145.2

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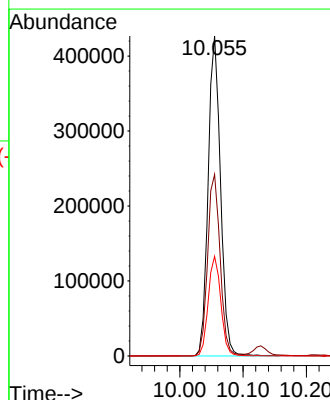
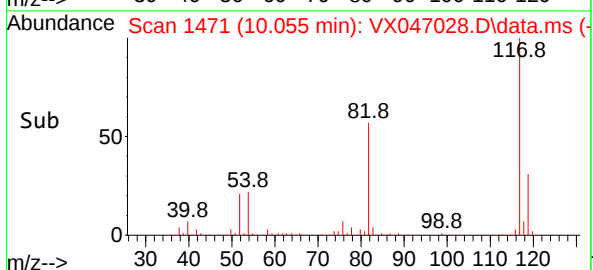
Reviewed By :Mahesh Dadoda 07/17/2025
Supervised By :Semsettin Yesilyurt 07/17/2025

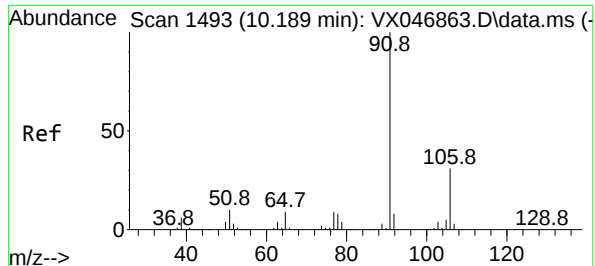


#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 10.055 min Scan# 1471
Delta R.T. -0.000 min
Lab File: VX047028.D
Acq: 16 Jul 2025 14:24



Tgt Ion:117 Resp: 581092
Ion Ratio Lower Upper
117 100
82 56.7 43.3 64.9
119 31.2 26.4 39.6





#67

Ethyl Benzene

Concen: 41.172 ug/l

RT: 10.195 min Scan# 1493

Delta R.T. 0.006 min

Lab File: VX047028.D

Acq: 16 Jul 2025 14:24

Instrument :

MSVOA_X

ClientSampleId :

END-OF-TRENCH

Tgt Ion: 91 Resp: 885832

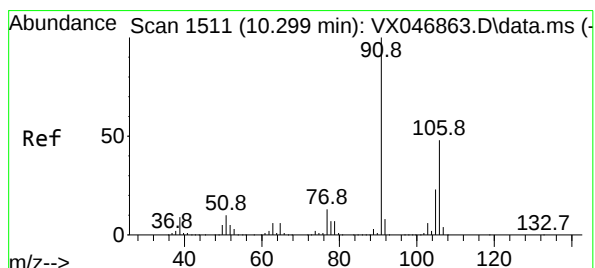
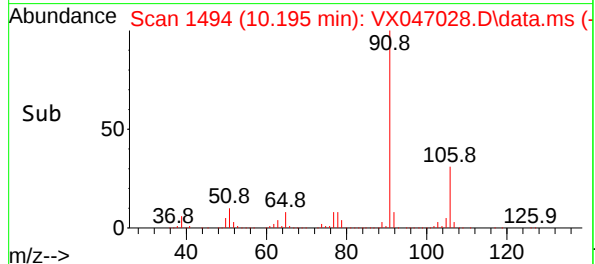
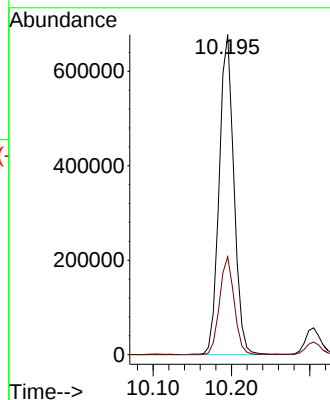
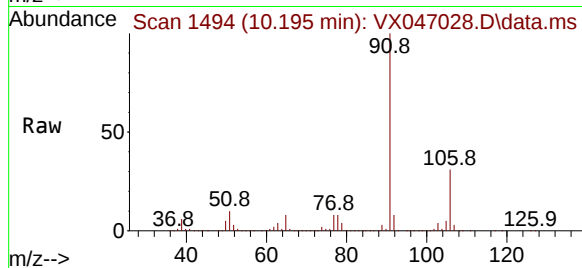
Ion Ratio Lower Upper

91 100

106 30.6 24.4 36.6

Manual Integrations

APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025
Supervised By :Semsettin Yesilyurt 07/17/2025

#68

m/p-Xylenes

Concen: 4.641 ug/l

RT: 10.305 min Scan# 1512

Delta R.T. 0.006 min

Lab File: VX047028.D

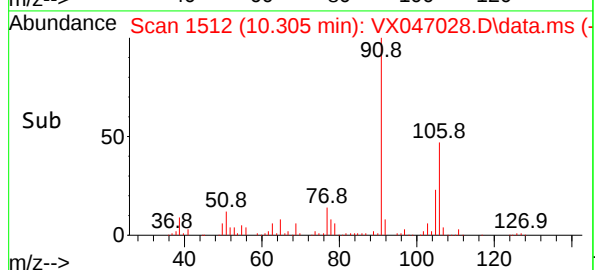
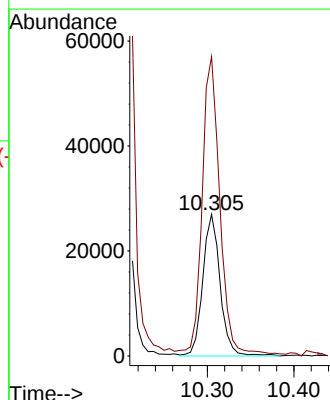
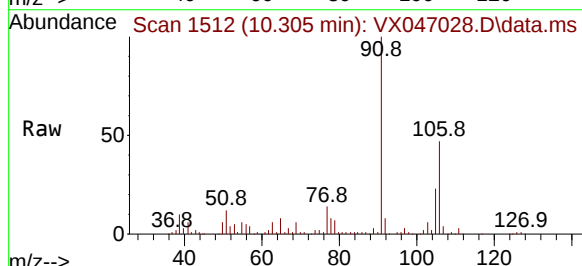
Acq: 16 Jul 2025 14:24

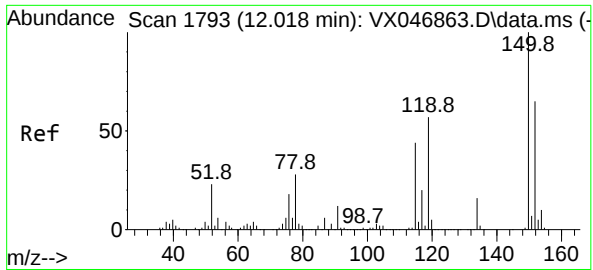
Tgt Ion:106 Resp: 37626

Ion Ratio Lower Upper

106 100

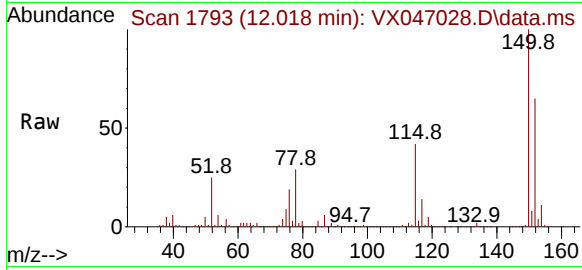
91 210.9 164.6 246.8





#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 12.018 min Scan# 11
Delta R.T. -0.000 min
Lab File: VX047028.D
Acq: 16 Jul 2025 14:24

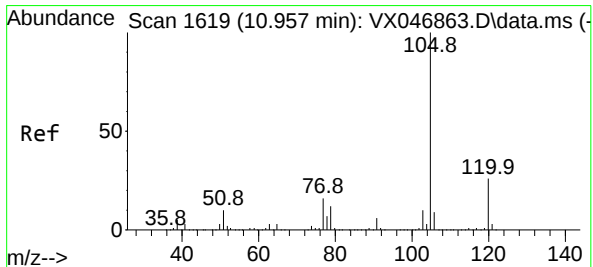
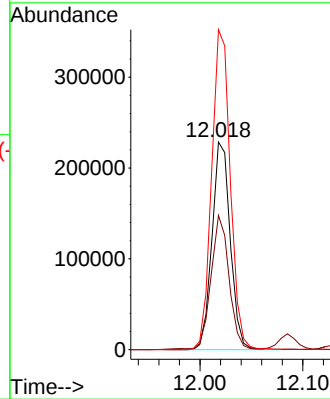
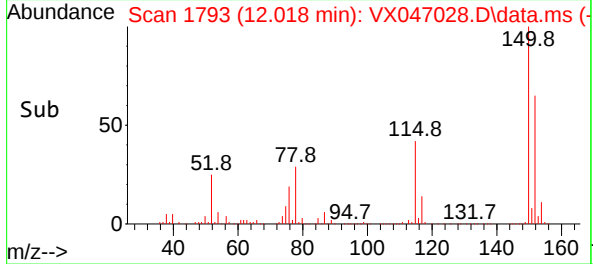
Instrument :
MSVOA_X
ClientSampleId :
END-OF-TRENCH



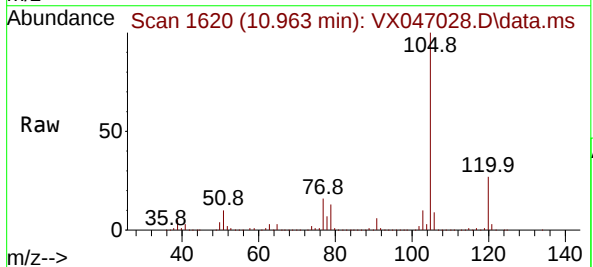
Tgt Ion:152 Resp: 28289
Ion Ratio Lower Upper
152 100
115 64.1 42.4 127.1
150 157.1 0.0 349.2

Manual Integrations
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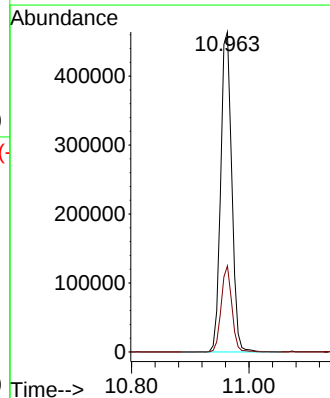
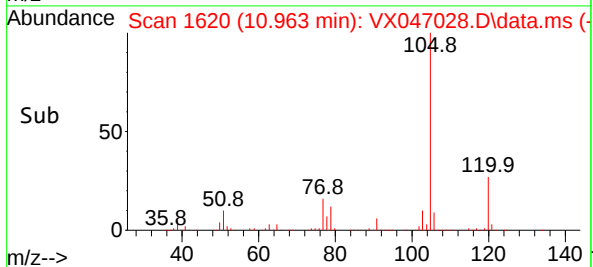
Reviewed By :Mahesh Dadoda 07/17/2025
Supervised By :Semsettin Yesilyurt 07/17/2025

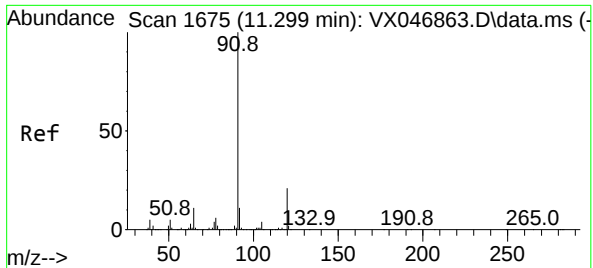


#73
Isopropylbenzene
Concen: 30.309 ug/l
RT: 10.963 min Scan# 1620
Delta R.T. 0.006 min
Lab File: VX047028.D
Acq: 16 Jul 2025 14:24



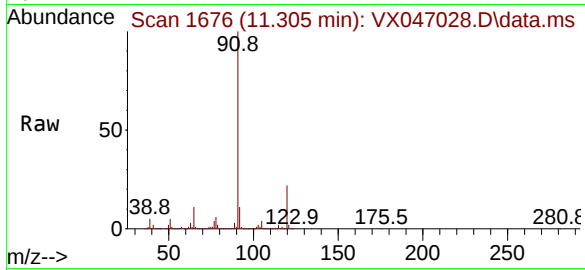
Tgt Ion:105 Resp: 602760
Ion Ratio Lower Upper
105 100
120 25.9 13.2 39.5





#78
n-propylbenzene
Concen: 90.134 ug/l
RT: 11.305 min Scan# 1676
Delta R.T. 0.006 min
Lab File: VX047028.D
Acq: 16 Jul 2025 14:24

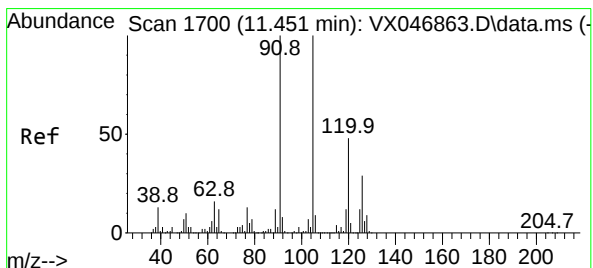
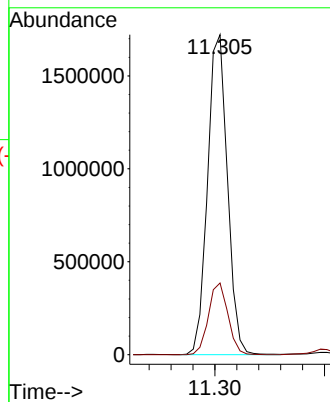
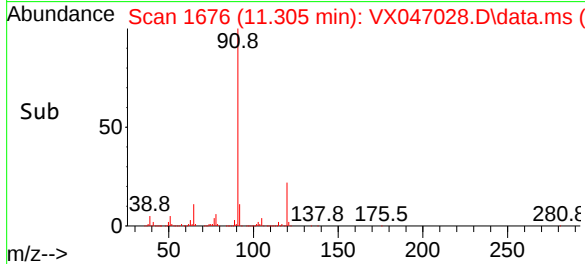
Instrument :
MSVOA_X
ClientSampleId :
END-OF-TRENCH



Tgt Ion: 91 Resp: 216140
Ion Ratio Lower Upper
91 100
120 22.0 11.2 33.5

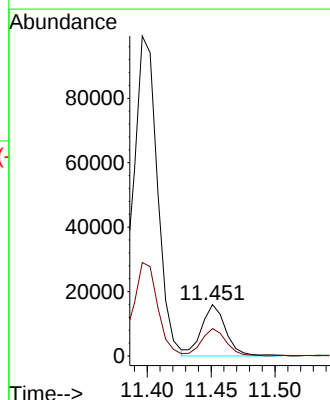
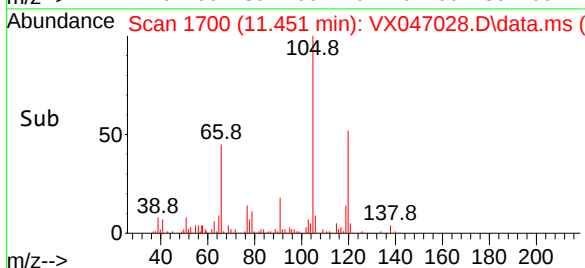
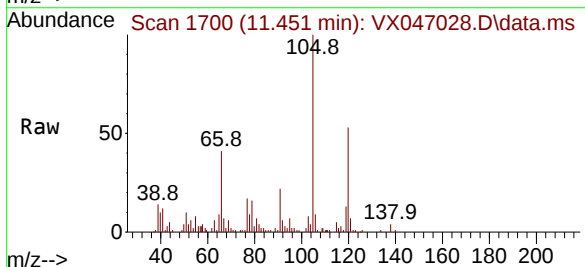
Manual Integrations
APPROVED

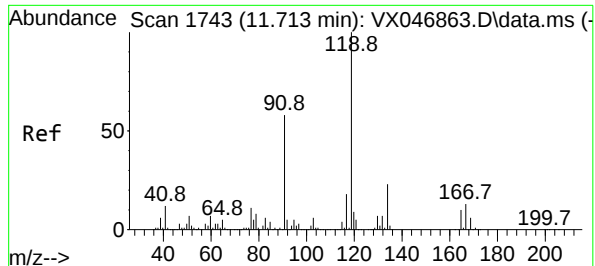
Reviewed By :Mahesh Dadoda 07/17/2025
Supervised By :Semsettin Yesilyurt 07/17/2025



#80
1,3,5-Trimethylbenzene
Concen: 1.312 ug/l m
RT: 11.451 min Scan# 1700
Delta R.T. -0.000 min
Lab File: VX047028.D
Acq: 16 Jul 2025 14:24

Tgt Ion:105 Resp: 21200
Ion Ratio Lower Upper
105 100
120 188.7 24.1 72.4#





#83

tert-Butylbenzene

Concen: 1.767 ug/l

RT: 11.713 min Scan# 11

Delta R.T. -0.000 min

Lab File: VX047028.D

Acq: 16 Jul 2025 14:24

Instrument :

MSVOA_X

ClientSampleId :

END-OF-TRENCH

Tgt Ion:119 Resp: 2949

Ion Ratio Lower Upper

119 100

91 72.0 28.7 86.3

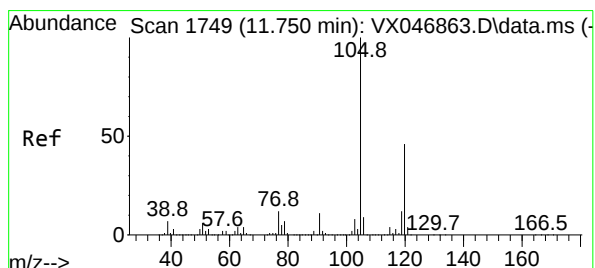
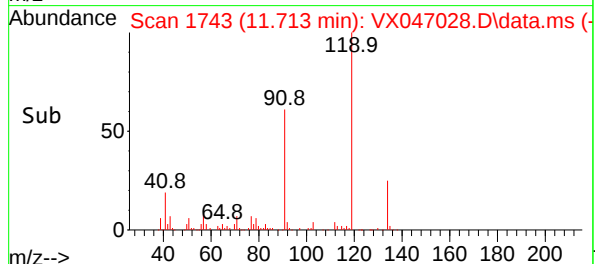
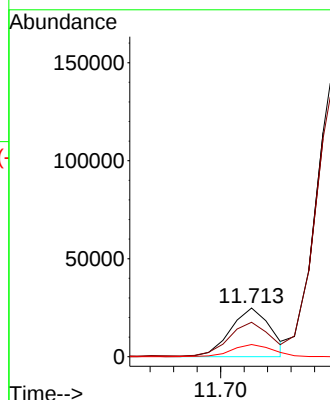
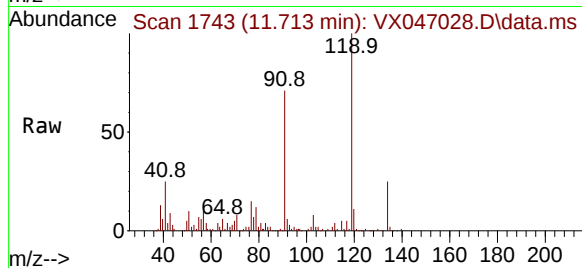
134 25.6 11.4 34.2

Manual Integrations

APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025

Supervised By :Semsettin Yesilyurt 07/17/2025



#84

1,2,4-Trimethylbenzene

Concen: 102.700 ug/l

RT: 11.750 min Scan# 1749

Delta R.T. -0.000 min

Lab File: VX047028.D

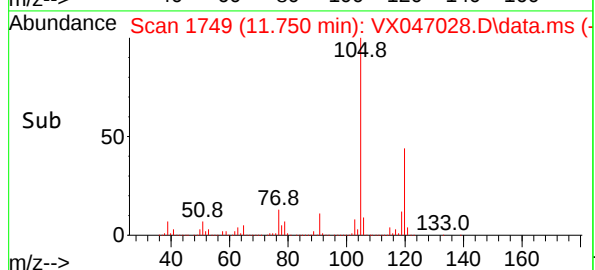
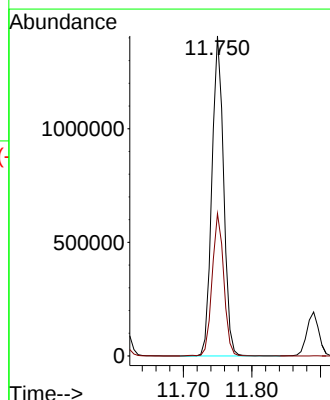
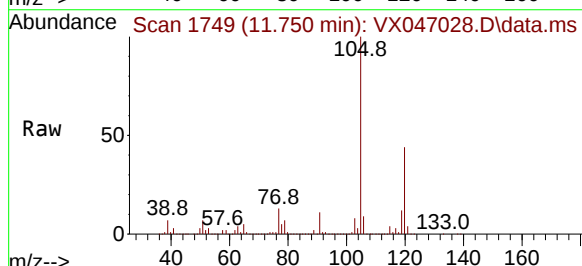
Acq: 16 Jul 2025 14:24

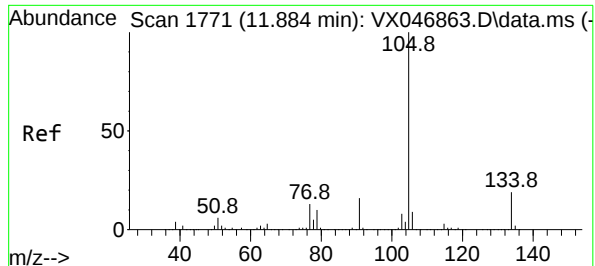
Tgt Ion:105 Resp: 1677405

Ion Ratio Lower Upper

105 100

120 44.2 23.3 69.8





#85

sec-Butylbenzene

Concen: 11.097 ug/l

RT: 11.890 min Scan# 1771

Delta R.T. 0.006 min

Lab File: VX047028.D

Acq: 16 Jul 2025 14:24

Instrument :

MSVOA_X

ClientSampleId :

END-OF-TRENCH

Tgt Ion:105 Resp: 23351

Ion Ratio Lower Upper

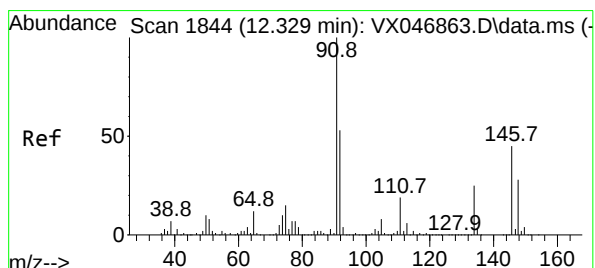
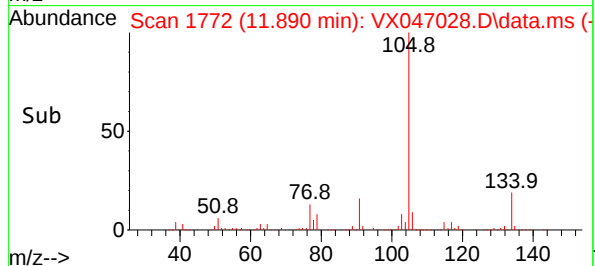
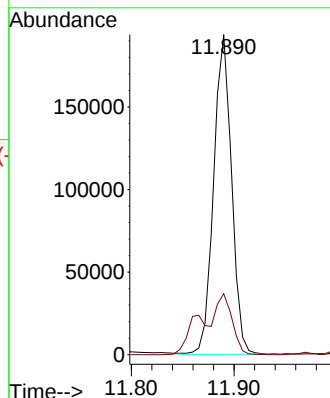
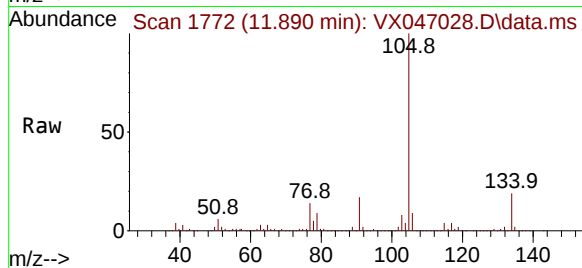
105 100

134 17.0 9.9 29.7

Manual Integrations

APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025
 Supervised By :Semsettin Yesilyurt 07/17/2025



#89

n-Butylbenzene

Concen: 8.265 ug/l m

RT: 12.329 min Scan# 1844

Delta R.T. -0.000 min

Lab File: VX047028.D

Acq: 16 Jul 2025 14:24

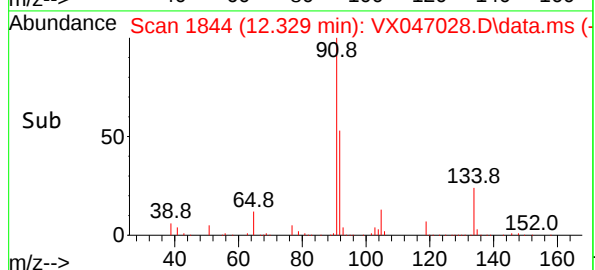
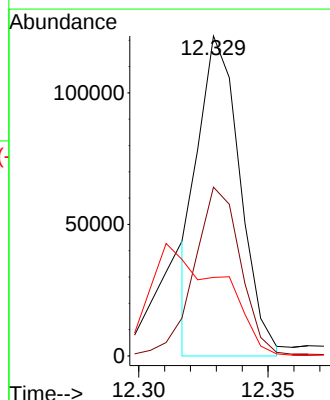
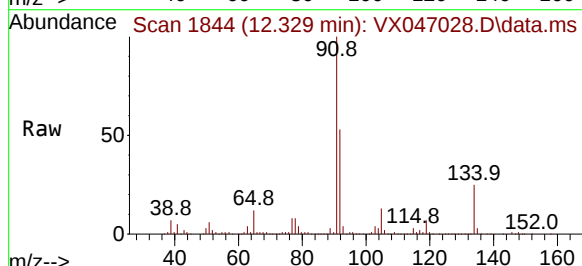
Tgt Ion: 91 Resp: 136849

Ion Ratio Lower Upper

91 100

92 59.3 27.0 81.0

134 59.8 12.8 38.4#





CALIBRATION SUMMARY



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Alliance Contract: TAC001
 Lab Code: ACE SDG No.: Q2600
 Instrument ID: MSVOA_X Calibration Date(s): 07/02/2025 07/02/2025
 Heated Purge: (Y/N) N Calibration Time(s): 12:11 14:31
 GC Column: DB-624UI ID: 0.18 (mm)

LAB FILE ID:		RRF001 = VX046860.D		RRF005 = VX046861.D		RRF020 = VX046862.D			
		RRF050 = VX046863.D		RRF100 = VX046864.D		RRF150 = VX046865.D			
COMPOUND	RRF001	RRF005	RRF020	RRF050	RRF100	RRF150	RRF	% RSD	
Vinyl Chloride	0.568	0.549	0.591	0.550	0.589	0.566	0.569	3.2	
1,1-Dichloroethene	0.543	0.555	0.546	0.524	0.546	0.540	0.542	1.9	
2-Butanone	0.260	0.270	0.275	0.275	0.276	0.286	0.274	3.1	
Carbon Tetrachloride	0.471	0.505	0.495	0.476	0.480	0.478	0.484	2.7	
Chloroform	1.150	1.106	1.112	1.048	1.052	1.050	1.087	3.9	
Benzene	1.391	1.445	1.452	1.356	1.342	1.324	1.385	3.9	
1,2-Dichloroethane	0.499	0.477	0.487	0.460	0.453	0.446	0.470	4.4	
Trichloroethene	0.386	0.377	0.365	0.344	0.347	0.344	0.361	5	
Tetrachloroethene	0.353	0.346	0.345	0.315	0.320	0.318	0.333	5.1	
Chlorobenzene	1.111	1.117	1.113	1.049	1.051	1.045	1.081	3.3	
1,2-Dichloroethane-d4		0.722	0.652	0.647	0.641	0.640	0.661	5.3	
Dibromofluoromethane		0.355	0.346	0.339	0.332	0.325	0.339	3.5	
Toluene-d8		1.278	1.220	1.195	1.160	1.135	1.197	4.6	
4-Bromofluorobenzene		0.493	0.469	0.455	0.433	0.426	0.455	6	

* Compounds with required minimum RRF and maximum %RSD values.
 All other compounds must meet a minimum RRF of 0.010.
 RRF of 1,4-Dioxane = Value should be divide by 1000.

Method Path : Z:\voasrv\HPCHEM1\MSVOA_X\Method\
 Method File : 82X070225W.M
 Title : SW846 8260
 Last Update : Thu Jul 03 05:51:11 2025
 Response Via : Initial Calibration

Calibration Files

1 =VX046860.D 5 =VX046861.D 20 =VX046862.D 50 =VX046863.D 100 =VX046864.D 150 =VX046865.D

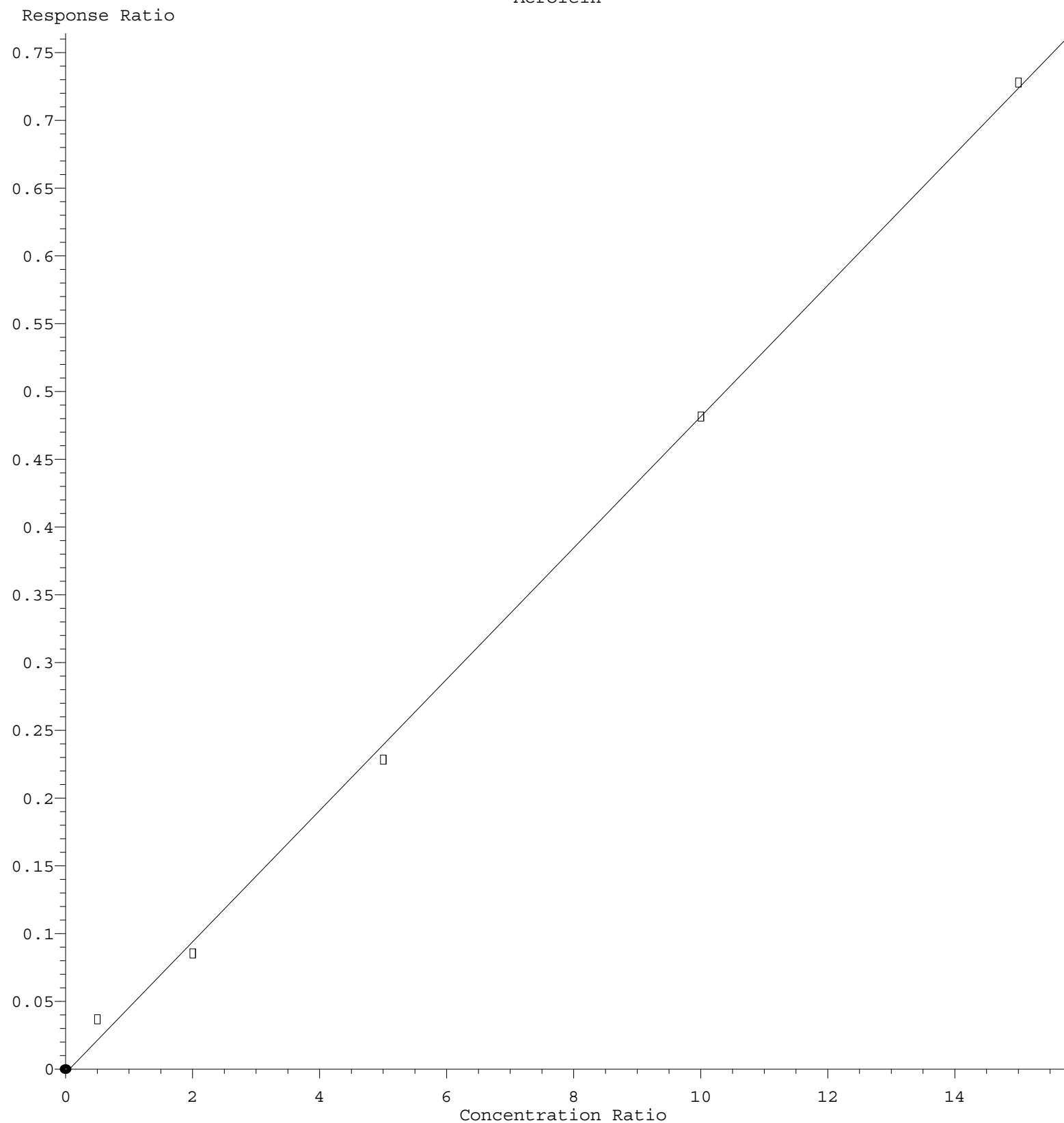
	Compound	1	5	20	50	100	150	Avg	%RSD
1) I	Pentafluorobenzene	-----ISTD-----							
2) T	Dichlorodifluo...	0.445	0.433	0.512	0.487	0.503	0.490	0.478	6.67
3) P	Chloromethane	0.505	0.507	0.541	0.508	0.543	0.530	0.522	3.38
4) C	Vinyl Chloride	0.568	0.549	0.591	0.550	0.589	0.566	0.569	3.19#
5) T	Bromomethane		0.402	0.402	0.360	0.369	0.295	0.366	12.04
6) T	Chloroethane	0.443	0.365	0.383	0.347	0.362	0.354	0.376	9.38
7) T	Trichlorofluor...	0.847	0.874	0.921	0.857	0.893	0.885	0.880	3.02
8) T	Diethyl Ether	0.315	0.308	0.316	0.304	0.317	0.317	0.313	1.78
9) T	1,1,2-Trichlor...	0.527	0.571	0.583	0.548	0.572	0.562	0.561	3.58
10) T	Methyl Iodide		0.465	0.581	0.631	0.681	0.696	0.611	15.27
11) T	Tert butyl alc...		0.044	0.042	0.042	0.043	0.045	0.043	3.54
12) CM	1,1-Dichloroet...	0.543	0.555	0.546	0.524	0.546	0.540	0.542	1.85#
13) T	Acrolein		0.074	0.043	0.046	0.048	0.049	0.052	24.05
14) T	Allyl chloride	0.975	0.939	0.963	0.943	0.988	0.983	0.965	2.12
15) T	Acrylonitrile	0.266	0.238	0.249	0.246	0.250	0.254	0.250	3.81
16) T	Acetone	0.236	0.210	0.195	0.193	0.197	0.200	0.205	7.90
17) T	Carbon Disulfide	1.585	1.425	1.405	1.342	1.398	1.376	1.422	5.98
18) T	Methyl Acetate	0.488	0.474	0.560	0.553	0.570	0.599	0.541	9.08
19) T	Methyl tert-bu...	1.447	1.470	1.540	1.528	1.587	1.615	1.531	4.25
20) T	Methylene Chlo...	0.623	0.625	0.624	0.585	0.596	0.588	0.607	3.14
21) T	trans-1,2-Dich...	0.552	0.564	0.575	0.541	0.551	0.545	0.555	2.31
22) T	Diisopropyl ether	1.666	1.831	1.967	1.905	1.927	1.893	1.865	5.75
23) T	Vinyl Acetate	1.255	1.341	1.423	1.423	1.465	1.475	1.397	6.02
24) P	1,1-Dichloroet...	1.080	1.084	1.074	1.039	1.055	1.050	1.064	1.71
25) T	2-Butanone	0.260	0.270	0.275	0.275	0.276	0.286	0.274	3.07
26) T	2,2-Dichloropr...	0.832	0.746	0.782	0.761	0.802	0.826	0.792	4.38
27) T	cis-1,2-Dichlo...	0.711	0.669	0.688	0.660	0.670	0.666	0.677	2.78
28) T	Bromochloromet...	0.529	0.543	0.524	0.528	0.516	0.508	0.525	2.29
29) T	Tetrahydrofuran	0.175	0.162	0.174	0.175	0.178	0.183	0.175	4.02
30) C	Chloroform	1.150	1.106	1.112	1.048	1.052	1.050	1.087	3.93#
31) T	Cyclohexane		0.973	0.977	0.918	0.926	0.927	0.944	3.00
32) T	1,1,1-Trichlor...	0.944	0.897	0.908	0.886	0.901	0.910	0.908	2.17
33) S	1,2-Dichloroet...		0.722	0.652	0.647	0.641	0.640	0.661	5.29
34) I	1,4-Difluorobenzene	-----ISTD-----							
35) S	Dibromofluorom...		0.355	0.346	0.339	0.332	0.325	0.339	3.47
36) T	1,1-Dichloropr...	0.499	0.477	0.461	0.439	0.434	0.437	0.458	5.71
37) T	Ethyl Acetate	0.506	0.376	0.371	0.360	0.355	0.373	0.390	14.73
38) T	Carbon Tetrach...	0.471	0.505	0.495	0.476	0.480	0.478	0.484	2.73
39) T	Methylcyclohexane	0.539	0.588	0.589	0.567	0.578	0.576	0.573	3.20
40) TM	Benzene	1.391	1.445	1.452	1.356	1.342	1.324	1.385	3.88
41) T	Methacrylonitrile	0.175	0.196	0.222	0.213	0.221	0.222	0.208	9.12
42) TM	1,2-Dichloroet...	0.499	0.477	0.487	0.460	0.453	0.446	0.470	4.39
43) T	Isopropyl Acetate	0.508	0.562	0.613	0.618	0.630	0.652	0.597	8.82
44) TM	Trichloroethene	0.386	0.377	0.365	0.344	0.347	0.344	0.361	5.02
45) C	1,2-Dichloropr...	0.364	0.340	0.362	0.346	0.345	0.342	0.350	3.03#
46) T	Dibromomethane	0.247	0.246	0.250	0.240	0.236	0.237	0.242	2.35
47) T	Bromodichlorom...	0.538	0.508	0.535	0.510	0.508	0.507	0.518	2.87
48) T	Methyl methacr...	0.257	0.294	0.307	0.322	0.329	0.343	0.308	9.89
49) T	1,4-Dioxane	0.003	0.004	0.004	0.004	0.004	0.004	0.004	2.38
50) S	Toluene-d8		1.278	1.220	1.195	1.160	1.135	1.197	4.60
51) T	4-Methyl-2-Pen...	0.330	0.340	0.368	0.366	0.353	0.357	0.353	4.26
52) CM	Toluene	0.855	0.894	0.906	0.841	0.831	0.823	0.858	3.95#
53) T	t-1,3-Dichloro...	0.408	0.431	0.467	0.472	0.490	0.504	0.462	7.81
54) T	cis-1,3-Dichlo...	0.496	0.499	0.532	0.533	0.549	0.554	0.527	4.71
55) T	1,1,2-Trichlor...	0.325	0.329	0.328	0.318	0.310	0.308	0.320	2.82
56) T	Ethyl methacry...	0.390	0.409	0.447	0.459	0.468	0.482	0.442	8.13

Method Path : Z:\voasrv\HPCHEM1\MSVOA_X\Method\
 Method File : 82X070225W.M

57)	T	1,3-Dichloropr...	0.567	0.567	0.572	0.541	0.528	0.527	0.550	3.76
58)	T	2-Chloroethyl ...	0.217	0.235	0.258	0.267	0.260	0.259	0.249	7.69
59)	T	2-Hexanone	0.205	0.227	0.245	0.247	0.238	0.242	0.234	6.83
60)	T	Dibromochlorom...	0.383	0.390	0.393	0.377	0.376	0.377	0.383	1.94
61)	T	1,2-Dibromoethane	0.323	0.317	0.332	0.320	0.317	0.317	0.321	1.82
62)	S	4-Bromofluorob...		0.493	0.469	0.455	0.433	0.426	0.455	5.97
63)	I	Chlorobenzene-d5	-----ISTD-----							
64)	T	Tetrachloroethene	0.353	0.346	0.345	0.315	0.320	0.318	0.333	5.13
65)	PM	Chlorobenzene	1.111	1.117	1.113	1.049	1.051	1.045	1.081	3.32
66)	T	1,1,1,2-Tetrac...	0.366	0.347	0.377	0.359	0.366	0.367	0.363	2.75
67)	C	Ethyl Benzene	1.810	1.868	1.929	1.830	1.846	1.824	1.851	2.32#
68)	T	m/p-Xylenes	0.702	0.710	0.731	0.688	0.683	0.672	0.698	3.05
69)	T	o-Xylene	0.676	0.677	0.703	0.665	0.663	0.660	0.674	2.36
70)	T	Styrene	1.070	1.152	1.228	1.175	1.157	1.134	1.153	4.50
71)	P	Bromoform	0.269	0.261	0.273	0.269	0.275	0.275	0.270	1.94
72)	I	1,4-Dichlorobenzen...	-----ISTD-----							
73)	T	Isopropylbenzene	3.267	3.428	3.611	3.601	3.592	3.590	3.515	3.97
74)	T	N-amyl acetate	0.953	1.079	1.194	1.270	1.303	1.367	1.194	12.93
75)	P	1,1,2,2-Tetrac...	1.000	0.948	0.981	0.963	0.939	0.968	0.966	2.26
76)	T	1,2,3-Trichlor...	0.781	0.720	0.770	0.787	0.791	0.787	0.773	3.46
77)	T	Bromobenzene	0.868	0.890	0.876	0.876	0.870	0.872	0.875	0.89
78)	T	n-propylbenzene	4.048	4.223	4.362	4.293	4.271	4.233	4.238	2.50
79)	T	2-Chlorotoluene	2.441	2.523	2.596	2.482	2.498	2.474	2.503	2.13
80)	T	1,3,5-Trimethy...	2.574	2.780	3.014	2.924	2.947	2.896	2.856	5.54
81)	T	trans-1,4-Dich...		0.236	0.267	0.292	0.312	0.333	0.288	13.09
82)	T	4-Chlorotoluene	2.755	2.916	2.982	2.915	2.899	2.859	2.888	2.64
83)	T	tert-Butylbenzene	2.733	2.876	3.036	3.020	3.031	3.002	2.950	4.13
84)	T	1,2,4-Trimethy...	2.615	2.872	3.017	2.949	2.930	2.937	2.887	4.88
85)	T	sec-Butylbenzene	3.475	3.721	3.852	3.782	3.766	3.719	3.719	3.47
86)	T	p-Isopropyltol...	2.948	3.159	3.181	3.162	3.160	3.077	3.114	2.87
87)	T	1,3-Dichlorobe...	1.615	1.664	1.673	1.627	1.625	1.619	1.637	1.50
88)	T	1,4-Dichlorobe...	1.852	1.776	1.711	1.632	1.622	1.632	1.704	5.52
89)	T	n-Butylbenzene	2.747	2.891	3.036	2.987	2.983	2.914	2.926	3.51
90)	T	Hexachloroethane	0.530	0.523	0.537	0.554	0.581	0.589	0.552	4.95
91)	T	1,2-Dichlorobe...	1.626	1.592	1.625	1.568	1.560	1.550	1.587	2.07
92)	T	1,2-Dibromo-3-...	0.158	0.151	0.164	0.171	0.178	0.192	0.169	8.69
93)	T	1,2,4-Trichlor...	1.016	1.020	1.078	1.087	1.121	1.145	1.078	4.86
94)	T	Hexachlorobuta...	0.393	0.397	0.421	0.409	0.408	0.411	0.407	2.52
95)	T	Naphthalene	2.210	2.537	2.893	3.034	3.096	3.273	2.840	13.92
96)	T	1,2,3-Trichlor...	0.900	0.965	1.033	1.045	1.069	1.099	1.019	7.20

(#) = Out of Range

Acrolein



$\text{Response} = 4.842\text{e-}002 * \text{Amt} - 2.745\text{e-}003$
 Coef of Det (r^2) = 0.998662 Curve Fit: Linear
 Method Name: Z:\voasrv\HPCHEM1\MSVOA X\Method\82X070225W.M
 Calibration Table Last Updated: Thu Jul 03 05:51:11 2025

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
 Data File : VX046860.D
 Acq On : 02 Jul 2025 12:11
 Operator : JC/MD
 Sample : VSTDIC001
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDIC001

Manual Integrations
 APPROVED

Reviewed By : John Carlone 07/03/2025
 Supervised By : Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:29:02 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:21:52 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	5.556	168	372069	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.763	114	622566	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.049	117	571866	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	290571	50.000	ug/l	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4	0.000	65	0d	0.000	ug/l	
Spiked Amount	50.000	Range	78 - 117	Recovery	=	0.000%#
35) Dibromofluoromethane	0.000	113	0d	0.000	ug/l	
Spiked Amount	50.000	Range	75 - 124	Recovery	=	0.000%#
50) Toluene-d8	0.000	98	0d	0.000	ug/l	
Spiked Amount	50.000	Range	92 - 112	Recovery	=	0.000%#
62) 4-Bromofluorobenzene	0.000	95	0d	0.000	ug/l	
Spiked Amount	50.000	Range	83 - 123	Recovery	=	0.000%#

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	1.185	85	3309	0.930	ug/l	89
3) Chloromethane	1.307	50	3761	0.967	ug/l	89
4) Vinyl Chloride	1.386	62	4227	0.998	ug/l	99
6) Chloroethane	1.703	64	3296	1.179	ug/l	94
7) Trichlorofluoromethane	1.910	101	6304	0.963	ug/l	88
8) Diethyl Ether	2.148	74	2346	1.007	ug/l	94
9) 1,1,2-Trichlorotrifluo...	2.349	101	3923	0.940	ug/l	93
12) 1,1-Dichloroethene	2.337	96	4037	1.001	ug/l	90
14) Allyl chloride	2.678	41	7259	1.011	ug/l	96
15) Acrylonitrile	3.081	53	9914m	5.298	ug/l	
16) Acetone	2.386	43	8778	5.749	ug/l	89
17) Carbon Disulfide	2.532	76	11797	1.115	ug/l #	88
18) Methyl Acetate	2.715	43	3632	0.903	ug/l	99
19) Methyl tert-butyl Ether	3.123	73	10768	0.945	ug/l	96
20) Methylene Chloride	2.800	84	4636	1.027	ug/l #	91
21) trans-1,2-Dichloroethene	3.111	96	4109	0.995	ug/l	92
22) Diisopropyl ether	3.776	45	12396	0.893	ug/l #	56
23) Vinyl Acetate	3.739	43	46702	4.492	ug/l	97
24) 1,1-Dichloroethane	3.623	63	8033	1.015	ug/l	98
25) 2-Butanone	4.599	43	9681m	4.752	ug/l	
26) 2,2-Dichloropropane	4.483	77	6192	1.051	ug/l	93
27) cis-1,2-Dichloroethene	4.501	96	5289	1.049	ug/l	98
28) Bromochloromethane	4.910	49	3938	1.008	ug/l #	95
29) Tetrahydrofuran	5.025	42	6512	5.015	ug/l #	62
30) Chloroform	5.111	83	8561	1.059	ug/l #	80
32) 1,1,1-Trichloroethane	5.391	97	7025	1.040	ug/l #	49
36) 1,1-Dichloropropene	5.702	75	6211	1.089	ug/l	91
37) Ethyl Acetate	4.763	43	6302m	1.298	ug/l	
38) Carbon Tetrachloride	5.690	117	5859m	0.959	ug/l	
39) Methylcyclohexane	7.385	83	6714	0.941	ug/l	86
40) Benzene	6.050	78	17315	1.004	ug/l #	87
41) Methacrylonitrile	4.958	41	2181m	0.842	ug/l	
42) 1,2-Dichloroethane	6.104	62	6218	1.062	ug/l	88
43) Isopropyl Acetate	6.354	43	6331	0.851	ug/l #	79
44) Trichloroethene	7.135	130	4807	1.071	ug/l	94
45) 1,2-Dichloropropane	7.446	63	4536	1.041	ug/l #	77

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
 Data File : VX046860.D
 Acq On : 02 Jul 2025 12:11
 Operator : JC/MD
 Sample : VSTDICC001
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC001

Manual Integrations
 APPROVED

Reviewed By : John Carlone 07/03/2025
 Supervised By : Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:29:02 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:21:52 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) Dibromomethane	7.592	93	3072	1.018	ug/l	96
47) Bromodichloromethane	7.830	83	6705	1.040	ug/l	91
48) Methyl methacrylate	7.714	41	3198	0.833	ug/l #	54
49) 1,4-Dioxane	7.683	88	860m	19.325	ug/l	
51) 4-Methyl-2-Pentanone	8.580	43	20561	4.684	ug/l	97
52) Toluene	8.726	92	10648	0.996	ug/l	96
53) t-1,3-Dichloropropene	8.994	75	5080	0.883	ug/l	97
54) cis-1,3-Dichloropropene	8.372	75	6171	0.940	ug/l #	47
55) 1,1,2-Trichloroethane	9.159	97	4046	1.016	ug/l #	84
56) Ethyl methacrylate	9.122	69	4850	0.880	ug/l	95
57) 1,3-Dichloropropane	9.311	76	7057	1.030	ug/l	94
58) 2-Chloroethyl Vinyl ether	8.250	63	13509	4.352	ug/l	100
59) 2-Hexanone	9.439	43	12742	4.376	ug/l	94
60) Dibromochloromethane	9.519	129	4772	1.002	ug/l	95
61) 1,2-Dibromoethane	9.610	107	4026	1.007	ug/l	100
64) Tetrachloroethene	9.275	164	4039	1.061	ug/l #	86
65) Chlorobenzene	10.079	112	12712	1.028	ug/l	99
66) 1,1,1,2-Tetrachloroethane	10.165	131	4188	1.008	ug/l #	65
67) Ethyl Benzene	10.195	91	20707	0.978	ug/l	96
68) m/p-Xylenes	10.305	106	16047	2.011	ug/l	91
69) o-Xylene	10.640	106	7726	1.002	ug/l	95
70) Styrene	10.659	104	12236	0.928	ug/l	98
71) Bromoform	10.805	173	3071	0.994	ug/l #	97
73) Isopropylbenzene	10.963	105	18985	0.929	ug/l	100
74) N-amyl acetate	10.848	43	5537	0.798	ug/l #	91
75) 1,1,2,2-Tetrachloroethane	11.213	83	5809	1.034	ug/l	94
76) 1,2,3-Trichloropropane	11.238	75	4536m	1.010	ug/l	
77) Bromobenzene	11.201	156	5045	0.992	ug/l	96
78) n-propylbenzene	11.305	91	23522	0.955	ug/l	98
79) 2-Chlorotoluene	11.366	91	14185	0.975	ug/l	99
80) 1,3,5-Trimethylbenzene	11.451	105	14958	0.901	ug/l	100
82) 4-Chlorotoluene	11.457	91	16012	0.954	ug/l	97
83) tert-Butylbenzene	11.713	119	15883	0.927	ug/l	99
84) 1,2,4-Trimethylbenzene	11.750	105	15197	0.906	ug/l	96
85) sec-Butylbenzene	11.890	105	20193	0.934	ug/l	99
86) p-Isopropyltoluene	12.006	119	17131	0.946	ug/l	93
87) 1,3-Dichlorobenzene	11.969	146	9388	0.987	ug/l	97
88) 1,4-Dichlorobenzene	12.036	146	10764m	1.087	ug/l	
89) n-Butylbenzene	12.335	91	15963	0.939	ug/l	99
90) Hexachloroethane	12.536	117	3079	0.960	ug/l	91
91) 1,2-Dichlorobenzene	12.335	146	9448	1.025	ug/l	97
92) 1,2-Dibromo-3-Chloropr...	12.945	75	920	0.937	ug/l	95
93) 1,2,4-Trichlorobenzene	13.591	180	5904	0.942	ug/l	98
94) Hexachlorobutadiene	13.725	225	2281	0.966	ug/l	87
95) Naphthalene	13.780	128	12846	0.778	ug/l	98
96) 1,2,3-Trichlorobenzene	13.963	180	5231	0.884	ug/l	95

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

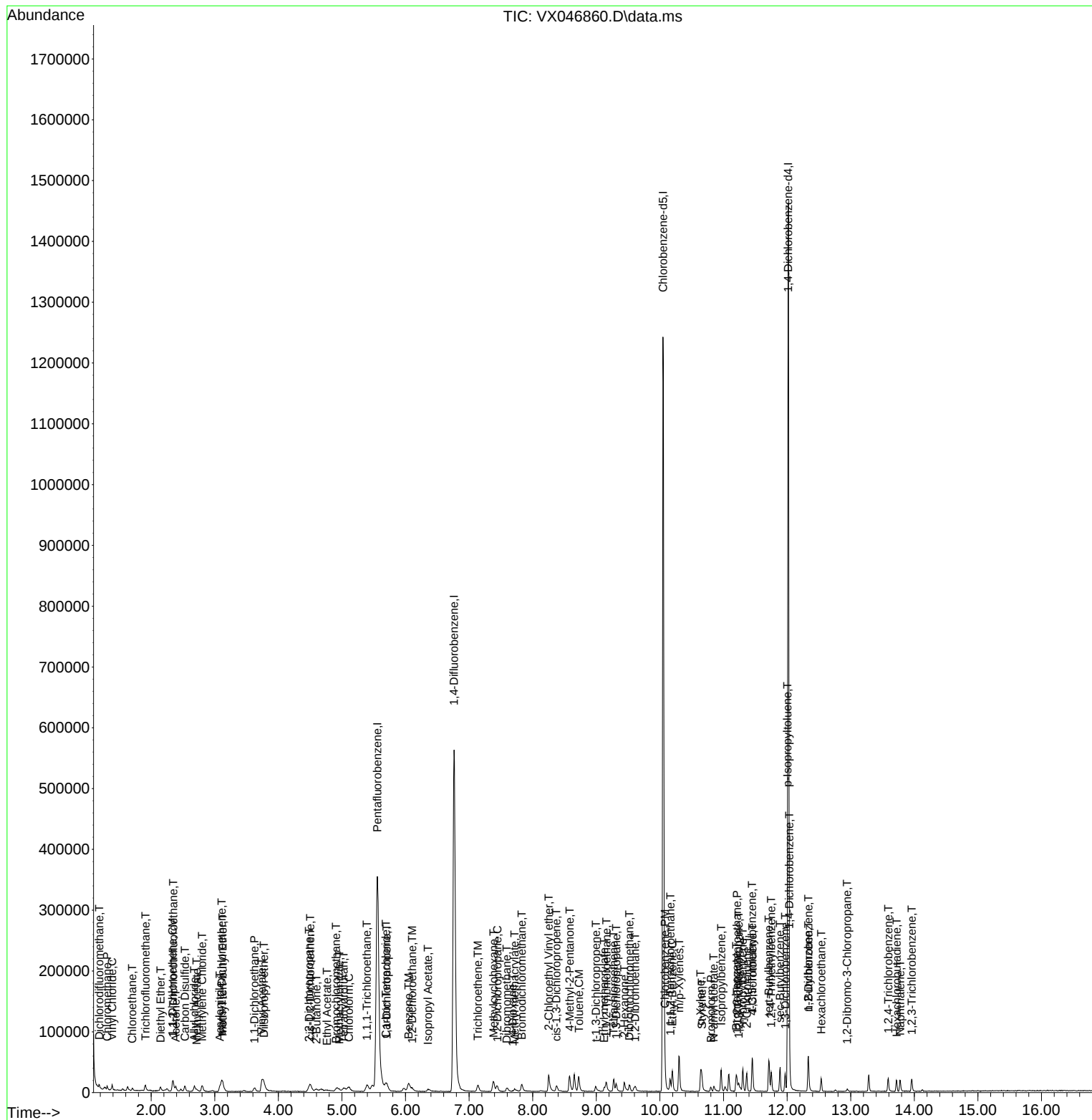
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
Data File : VX046860.D
Acq On : 02 Jul 2025 12:11
Operator : JC/MD
Sample : VSTDIC001
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDIC001

Manual Integrations
APPROVED

Reviewed By :John Carlone 07/03/2025
Supervised By :Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:29:02 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:21:52 2025
Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
 Data File : VX046861.D
 Acq On : 02 Jul 2025 12:37
 Operator : JC/MD
 Sample : VSTDICC005
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC005

Manual Integrations
 APPROVED

Reviewed By : John Carlone 07/03/2025
 Supervised By : Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:30:01 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:21:52 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	5.556	168	396691	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.763	114	652365	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.049	117	592225	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	309407	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.964	65	28658	5.468	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery =	10.940%#		
35) Dibromofluoromethane	5.397	113	23179	5.234	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	10.460%#		
50) Toluene-d8	8.647	98	83349	5.335	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery =	10.660%#		
62) 4-Bromofluorobenzene	11.079	95	32156	5.415	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery =	10.840%#		
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.178	85	17184	4.530	ug/l	99
3) Chloromethane	1.306	50	20130	4.857	ug/l	95
4) Vinyl Chloride	1.386	62	21789	4.827	ug/l	99
5) Bromomethane	1.623	94	15966	5.505	ug/l	93
6) Chloroethane	1.703	64	14497	4.864	ug/l	97
7) Trichlorofluoromethane	1.904	101	34689	4.970	ug/l	98
8) Diethyl Ether	2.148	74	12204	4.914	ug/l	98
9) 1,1,2-Trichlorotrifluo...	2.343	101	22655	5.094	ug/l	98
10) Methyl Iodide	2.465	142	18441	3.806	ug/l	95
11) Tert butyl alcohol	2.952	59	8771	25.519	ug/l	100
12) 1,1-Dichloroethene	2.337	96	22008	5.116	ug/l	100
13) Acrolein	2.245	56	14598	40.835	ug/l	98
14) Allyl chloride	2.678	41	37266	4.866	ug/l	95
15) Acrylonitrile	3.074	53	47130	23.621	ug/l	100
16) Acetone	2.385	43	41693	25.612	ug/l	94
17) Carbon Disulfide	2.526	76	56543	5.012	ug/l	98
18) Methyl Acetate	2.715	43	18796	4.381	ug/l	92
19) Methyl tert-butyl Ether	3.123	73	58304	4.800	ug/l	96
20) Methylene Chloride	2.800	84	24790	5.150	ug/l	92
21) trans-1,2-Dichloroethene	3.105	96	22385	5.086	ug/l	98
22) Diisopropyl ether	3.763	45	72646	4.910	ug/l #	74
23) Vinyl Acetate	3.733	43	265941	23.992	ug/l	97
24) 1,1-Dichloroethane	3.617	63	42994	5.095	ug/l	97
25) 2-Butanone	4.568	43	53597	24.678	ug/l	99
26) 2,2-Dichloropropane	4.483	77	29599	4.713	ug/l	79
27) cis-1,2-Dichloroethene	4.501	96	26549	4.940	ug/l	96
28) Bromochloromethane	4.915	49	21555	5.176	ug/l	94
29) Tetrahydrofuran	5.019	42	32120	23.200	ug/l	98
30) Chloroform	5.098	83	43886	5.091	ug/l	99
31) Cyclohexane	5.482	56	38601	5.153	ug/l	96
32) 1,1,1-Trichloroethane	5.391	97	35598	4.943	ug/l	95
36) 1,1-Dichloropropene	5.702	75	31138	5.212	ug/l	98
37) Ethyl Acetate	4.733	43	24519	4.818	ug/l #	92
38) Carbon Tetrachloride	5.690	117	32963	5.151	ug/l	93
39) Methylcyclohexane	7.385	83	38332	5.129	ug/l	99
40) Benzene	6.043	78	94260	5.216	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
 Data File : VX046861.D
 Acq On : 02 Jul 2025 12:37
 Operator : JC/MD
 Sample : VSTDICC005
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC005

Manual Integrations
 APPROVED

Reviewed By : John Carlone 07/03/2025
 Supervised By : Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:30:01 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:21:52 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.934	41	12777	4.707	ug/l #	94
42) 1,2-Dichloroethane	6.092	62	31102	5.068	ug/l	98
43) Isopropyl Acetate	6.348	43	36681	4.706	ug/l	98
44) Trichloroethene	7.128	130	24587	5.227	ug/l	98
45) 1,2-Dichloropropane	7.433	63	22205	4.863	ug/l	91
46) Dibromomethane	7.586	93	16018	5.063	ug/l	99
47) Bromodichloromethane	7.824	83	33143	4.907	ug/l	99
48) Methyl methacrylate	7.702	41	19166	4.762	ug/l	98
49) 1,4-Dioxane	7.671	88	4647	99.650	ug/l #	90
51) 4-Methyl-2-Pentanone	8.573	43	110844	24.096	ug/l	100
52) Toluene	8.720	92	58295	5.206	ug/l	99
53) t-1,3-Dichloropropene	8.982	75	28142	4.668	ug/l	99
54) cis-1,3-Dichloropropene	8.366	75	32562	4.732	ug/l	92
55) 1,1,2-Trichloroethane	9.153	97	21431	5.138	ug/l	96
56) Ethyl methacrylate	9.122	69	26665	4.619	ug/l	97
57) 1,3-Dichloropropane	9.311	76	37000	5.152	ug/l	99
58) 2-Chloroethyl Vinyl ether	8.244	63	76711	23.583	ug/l	99
59) 2-Hexanone	9.433	43	73995	24.251	ug/l	94
60) Dibromochloromethane	9.518	129	25465	5.101	ug/l	96
61) 1,2-Dibromoethane	9.610	107	20695	4.940	ug/l	98
64) Tetrachloroethene	9.274	164	20514	5.203	ug/l	97
65) Chlorobenzene	10.079	112	66148	5.166	ug/l	98
66) 1,1,1,2-Tetrachloroethane	10.158	131	20533	4.770	ug/l	94
67) Ethyl Benzene	10.195	91	110637	5.046	ug/l	97
68) m/p-Xylenes	10.299	106	84083	10.176	ug/l	100
69) o-Xylene	10.640	106	40078	5.021	ug/l	99
70) Styrene	10.652	104	68250	4.998	ug/l	99
71) Bromoform	10.799	173	15461	4.831	ug/l #	99
73) Isopropylbenzene	10.963	105	106065	4.876	ug/l	98
74) N-amyl acetate	10.841	43	33387	4.517	ug/l	98
75) 1,1,2,2-Tetrachloroethane	11.207	83	29333	4.905	ug/l	100
76) 1,2,3-Trichloropropane	11.238	75	22279m	4.660	ug/l	
77) Bromobenzene	11.195	156	27534	5.082	ug/l	95
78) n-propylbenzene	11.298	91	130658	4.982	ug/l	97
79) 2-Chlorotoluene	11.359	91	78075	5.042	ug/l	99
80) 1,3,5-Trimethylbenzene	11.451	105	86020	4.867	ug/l	100
81) trans-1,4-Dichloro-2-b...	11.018	75	7304	4.100	ug/l #	81
82) 4-Chlorotoluene	11.451	91	90236	5.049	ug/l	100
83) tert-Butylbenzene	11.713	119	88998	4.876	ug/l	98
84) 1,2,4-Trimethylbenzene	11.750	105	88868	4.975	ug/l	95
85) sec-Butylbenzene	11.890	105	115141	5.003	ug/l	100
86) p-Isopropyltoluene	12.006	119	97742	5.072	ug/l	99
87) 1,3-Dichlorobenzene	11.969	146	51500	5.083	ug/l	98
88) 1,4-Dichlorobenzene	12.036	146	54943	5.210	ug/l	95
89) n-Butylbenzene	12.329	91	89435	4.939	ug/l	97
90) Hexachloroethane	12.536	117	16170	4.733	ug/l	94
91) 1,2-Dichlorobenzene	12.335	146	49253	5.016	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	12.938	75	4675	4.469	ug/l	90
93) 1,2,4-Trichlorobenzene	13.585	180	31558	4.731	ug/l	100
94) Hexachlorobutadiene	13.719	225	12292	4.886	ug/l	97
95) Naphthalene	13.774	128	78483	4.465	ug/l	99
96) 1,2,3-Trichlorobenzene	13.957	180	29854	4.737	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
Data File : VX046861.D
Acq On : 02 Jul 2025 12:37
Operator : JC/MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC005

Manual Integrations
APPROVED

Reviewed By :John Carlone 07/03/2025
Supervised By :Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:30:01 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:21:52 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

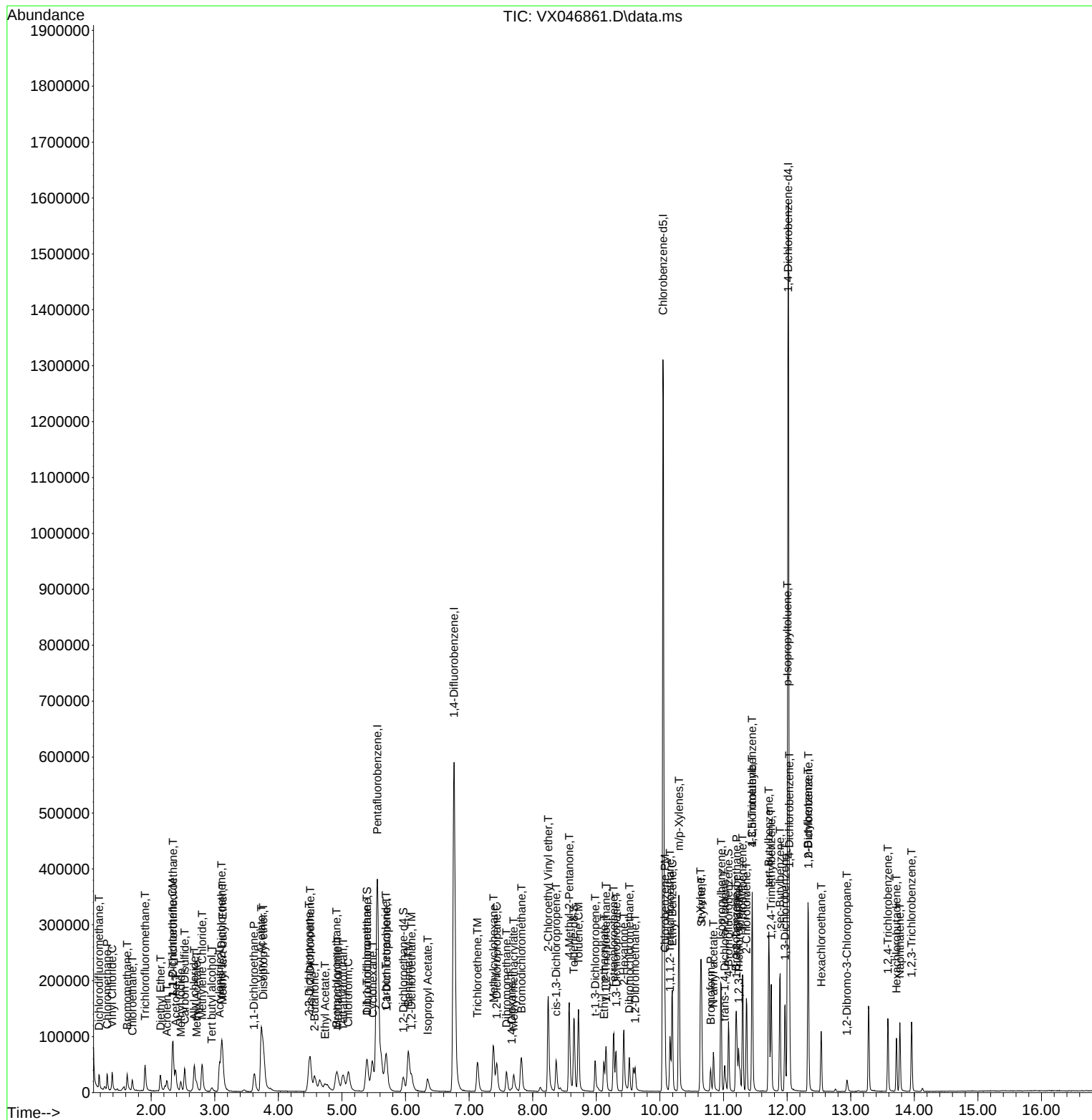
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Data File : VX046861.D
Acq On : 02 Jul 2025 12:37
Operator : JC/MD
Sample : VSTDIC005
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC005

Manual Integrations APPROVED

Reviewed By :John Carlone 07/03/2025
Supervised By :Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:30:01 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:21:52 2025
Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
 Data File : VX046862.D
 Acq On : 02 Jul 2025 13:18
 Operator : JC/MD
 Sample : VSTDICC020
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 4 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC020

Manual Integrations
 APPROVED

Reviewed By : John Carlone 07/03/2025
 Supervised By : Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:31:05 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:21:52 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	5.556	168	399111	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.763	114	642908	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.049	117	576289	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	296482	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.958	65	104091	19.742	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery =	39.480%#		
35) Dibromofluoromethane	5.391	113	88863	20.362	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	40.720%#		
50) Toluene-d8	8.647	98	313624	20.369	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery =	40.740%#		
62) 4-Bromofluorobenzene	11.079	95	120554	20.601	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery =	41.200%#		
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.184	85	81688	21.402	ug/l	99
3) Chloromethane	1.306	50	86312	20.697	ug/l	97
4) Vinyl Chloride	1.386	62	94339	20.773	ug/l	100
5) Bromomethane	1.629	94	64159	21.988	ug/l	97
6) Chloroethane	1.703	64	61209	20.412	ug/l	100
7) Trichlorofluoromethane	1.904	101	147045	20.941	ug/l	98
8) Diethyl Ether	2.142	74	50485	20.203	ug/l	99
9) 1,1,2-Trichlorotrifluo...	2.343	101	93041	20.794	ug/l	98
10) Methyl Iodide	2.465	142	92753	19.028	ug/l	100
11) Tert butyl alcohol	2.952	59	33170	95.921	ug/l	99
12) 1,1-Dichloroethene	2.337	96	87106	20.127	ug/l	99
13) Acrolein	2.245	56	34095	91.049	ug/l	97
14) Allyl chloride	2.678	41	153719	19.950	ug/l	99
15) Acrylonitrile	3.068	53	198794	99.028	ug/l	99
16) Acetone	2.379	43	155869	95.170	ug/l	98
17) Carbon Disulfide	2.526	76	224317	19.764	ug/l	98
18) Methyl Acetate	2.709	43	89471	20.726	ug/l	100
19) Methyl tert-butyl Ether	3.117	73	245776	20.110	ug/l	100
20) Methylene Chloride	2.800	84	99547	20.555	ug/l	97
21) trans-1,2-Dichloroethene	3.105	96	91856	20.742	ug/l	94
22) Diisopropyl ether	3.763	45	314003	21.094	ug/l	94
23) Vinyl Acetate	3.727	43	1136064	101.868	ug/l	100
24) 1,1-Dichloroethane	3.617	63	171529	20.204	ug/l	100
25) 2-Butanone	4.556	43	219759	100.571	ug/l	99
26) 2,2-Dichloropropane	4.483	77	124894	19.767	ug/l	99
27) cis-1,2-Dichloroethene	4.495	96	109844	20.316	ug/l	99
28) Bromochloromethane	4.903	49	83733	19.985	ug/l	97
29) Tetrahydrofuran	5.001	42	138587	99.493	ug/l	99
30) Chloroform	5.098	83	177543	20.470	ug/l	97
31) Cyclohexane	5.470	56	155952	20.692	ug/l	93
32) 1,1,1-Trichloroethane	5.391	97	144962	20.005	ug/l	98
36) 1,1-Dichloropropene	5.702	75	118611	20.144	ug/l	97
37) Ethyl Acetate	4.720	43	95352	19.013	ug/l	99
38) Carbon Tetrachloride	5.684	117	127307	20.188	ug/l	97
39) Methylcyclohexane	7.378	83	151595	20.582	ug/l	96
40) Benzene	6.043	78	373429	20.968	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
 Data File : VX046862.D
 Acq On : 02 Jul 2025 13:18
 Operator : JC/MD
 Sample : VSTDICC020
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 4 Sample Multiplier: 1

Instrument :

MSVOA_X

ClientSampleId :

VSTDICC020

Manual Integrations

APPROVED

Reviewed By :John Carlone 07/03/2025

Supervised By :Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:31:05 2025

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M

Quant Title : SW846 8260

QLast Update : Thu Jul 03 05:21:52 2025

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.922	41	57138	21.358	ug/l	95
42) 1,2-Dichloroethane	6.086	62	125114	20.689	ug/l	99
43) Isopropyl Acetate	6.336	43	157613	20.519	ug/l	100
44) Trichloroethene	7.128	130	93746	20.221	ug/l	100
45) 1,2-Dichloropropane	7.427	63	93205	20.714	ug/l	99
46) Dibromomethane	7.580	93	64260	20.612	ug/l	100
47) Bromodichloromethane	7.817	83	137600	20.670	ug/l	98
48) Methyl methacrylate	7.695	41	78897	19.892	ug/l	97
49) 1,4-Dioxane	7.659	88	18907	411.405	ug/l	97
51) 4-Methyl-2-Pentanone	8.567	43	473773	104.508	ug/l	99
52) Toluene	8.714	92	232882	21.102	ug/l	98
53) t-1,3-Dichloropropene	8.976	75	120040	20.206	ug/l	100
54) cis-1,3-Dichloropropene	8.366	75	136889	20.187	ug/l	98
55) 1,1,2-Trichloroethane	9.146	97	84451	20.545	ug/l	97
56) Ethyl methacrylate	9.116	69	114929	20.200	ug/l	99
57) 1,3-Dichloropropane	9.305	76	147193	20.795	ug/l	100
58) 2-Chloroethyl Vinyl ether	8.238	63	331143	103.298	ug/l	100
59) 2-Hexanone	9.427	43	314535	104.602	ug/l	99
60) Dibromochloromethane	9.518	129	100960	20.523	ug/l	100
61) 1,2-Dibromoethane	9.610	107	85342	20.672	ug/l	100
64) Tetrachloroethene	9.268	164	79577	20.740	ug/l	96
65) Chlorobenzene	10.073	112	256491	20.586	ug/l	99
66) 1,1,1,2-Tetrachloroethane	10.158	131	86804	20.724	ug/l	99
67) Ethyl Benzene	10.189	91	444690	20.841	ug/l	99
68) m/p-Xylenes	10.299	106	337082	41.924	ug/l	98
69) o-Xylene	10.640	106	162094	20.870	ug/l	99
70) Styrene	10.652	104	283121	21.307	ug/l	100
71) Bromoform	10.799	173	62957	20.215	ug/l #	98
73) Isopropylbenzene	10.957	105	428283	20.549	ug/l	100
74) N-amyl acetate	10.841	43	141581	19.991	ug/l	99
75) 1,1,2,2-Tetrachloroethane	11.207	83	116329	20.298	ug/l	99
76) 1,2,3-Trichloropropane	11.238	75	91349m	19.941	ug/l	
77) Bromobenzene	11.195	156	103902	20.014	ug/l	96
78) n-propylbenzene	11.298	91	517332	20.585	ug/l	100
79) 2-Chlorotoluene	11.359	91	307886	20.748	ug/l	100
80) 1,3,5-Trimethylbenzene	11.451	105	357455	21.108	ug/l	99
81) trans-1,4-Dichloro-2-b...	11.018	75	31721	18.582	ug/l	94
82) 4-Chlorotoluene	11.451	91	353678	20.654	ug/l	99
83) tert-Butylbenzene	11.713	119	360024	20.583	ug/l	99
84) 1,2,4-Trimethylbenzene	11.750	105	357753	20.900	ug/l	95
85) sec-Butylbenzene	11.890	105	456837	20.715	ug/l	100
86) p-Isopropyltoluene	12.006	119	377192	20.425	ug/l	100
87) 1,3-Dichlorobenzene	11.963	146	198351	20.429	ug/l	99
88) 1,4-Dichlorobenzene	12.036	146	202881	20.078	ug/l	99
89) n-Butylbenzene	12.329	91	360061	20.750	ug/l	99
90) Hexachloroethane	12.536	117	63705	19.459	ug/l	99
91) 1,2-Dichlorobenzene	12.329	146	192682	20.479	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	12.938	75	19455	19.409	ug/l	97
93) 1,2,4-Trichlorobenzene	13.585	180	127830	19.999	ug/l	99
94) Hexachlorobutadiene	13.725	225	49928	20.713	ug/l	99
95) Naphthalene	13.774	128	343123	20.372	ug/l	99
96) 1,2,3-Trichlorobenzene	13.957	180	122506	20.284	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
Data File : VX046862.D
Acq On : 02 Jul 2025 13:18
Operator : JC/MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC020

Manual Integrations
APPROVED

Reviewed By :John Carlone 07/03/2025
Supervised By :Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:31:05 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:21:52 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

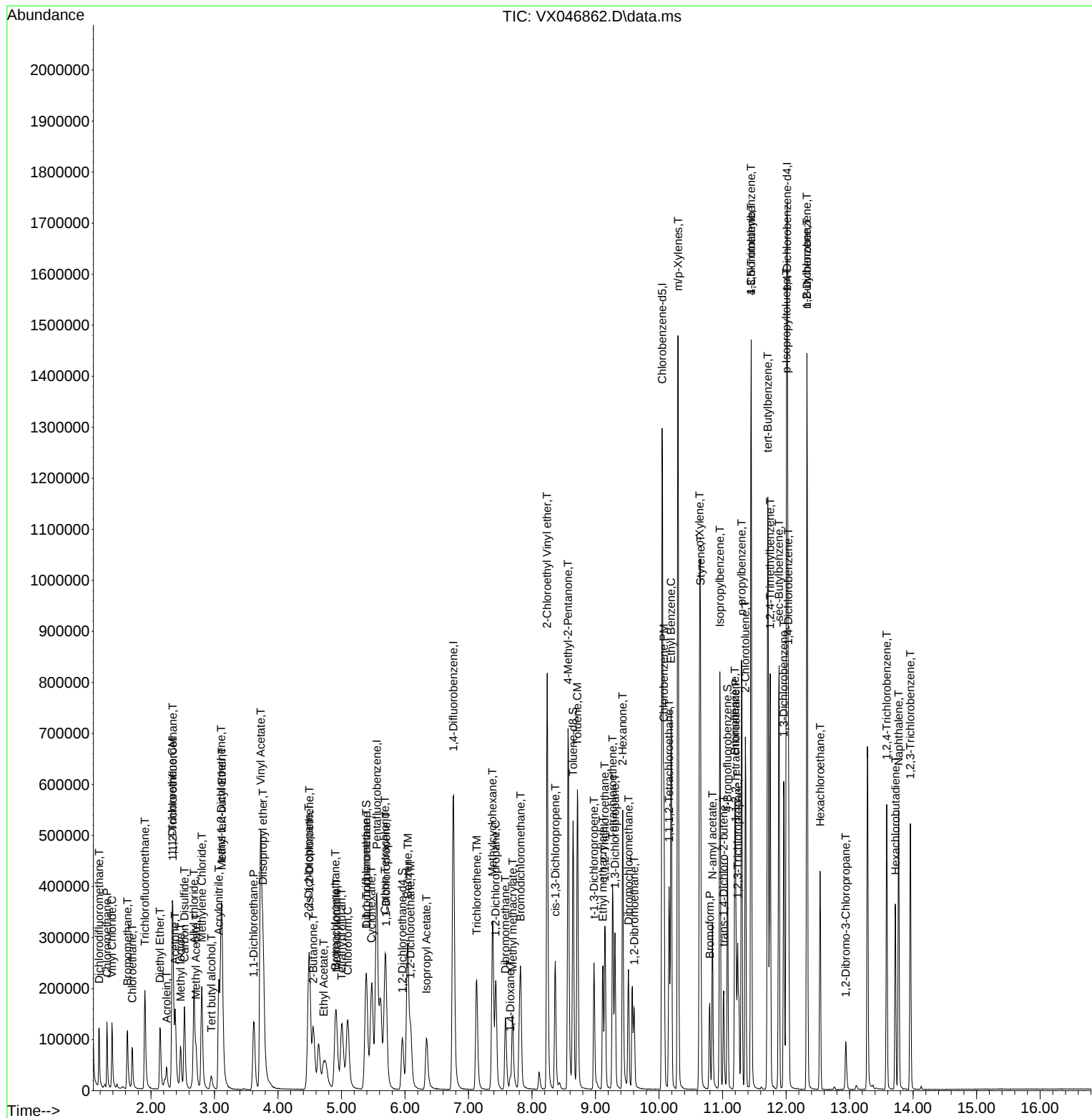
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Data File : VX046862.D
Acq On : 02 Jul 2025 13:18
Operator : JC/MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC020

Manual Integrations
APPROVED

Reviewed By : John Carlone 07/03/2025
Supervised By : Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:31:05 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:21:52 2025
Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
 Data File : VX046863.D
 Acq On : 02 Jul 2025 13:39
 Operator : JC/MD
 Sample : VSTDICCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICCC050

Manual Integrations
 APPROVED

Reviewed By : John Carlone 07/03/2025
 Supervised By : Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:32:05 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:21:52 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.562	168	368182	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.769	114	601240	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.055	117	539902	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	266829	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.958	65	238206	48.973	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery =	97.940%		
35) Dibromofluoromethane	5.397	113	203814	49.939	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	99.880%		
50) Toluene-d8	8.647	98	718232	49.879	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery =	99.760%		
62) 4-Bromofluorobenzene	11.079	95	273366	49.952	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery =	99.900%		
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.179	85	179160	50.881	ug/l	100
3) Chloromethane	1.307	50	186908	48.585	ug/l	100
4) Vinyl Chloride	1.386	62	202462	48.327	ug/l	100
5) Bromomethane	1.624	94	132366	49.174	ug/l	100
6) Chloroethane	1.703	64	127577	46.118	ug/l	100
7) Trichlorofluoromethane	1.904	101	315495	48.704	ug/l	100
8) Diethyl Ether	2.148	74	112089	48.624	ug/l	100
9) 1,1,2-Trichlorotrifluo...	2.349	101	201760	48.880	ug/l	100
10) Methyl Iodide	2.471	142	232179	51.631	ug/l	100
11) Tert butyl alcohol	2.953	59	77545	243.081	ug/l	100
12) 1,1-Dichloroethene	2.337	96	193069	48.359	ug/l	100
13) Acrolein	2.246	56	84088	238.671	ug/l	100
14) Allyl chloride	2.678	41	347253	48.854	ug/l	100
15) Acrylonitrile	3.075	53	453047	244.641	ug/l	100
16) Acetone	2.386	43	355803	235.495	ug/l	100
17) Carbon Disulfide	2.532	76	494153	47.196	ug/l	100
18) Methyl Acetate	2.715	43	203643	51.137	ug/l	100
19) Methyl tert-butyl Ether	3.123	73	562569	49.898	ug/l	100
20) Methylene Chloride	2.800	84	215411	48.215	ug/l	100
21) trans-1,2-Dichloroethene	3.105	96	199150	48.748	ug/l	100
22) Diisopropyl ether	3.770	45	701332	51.071	ug/l	100
23) Vinyl Acetate	3.733	43	2620249	254.689	ug/l	100
24) 1,1-Dichloroethane	3.623	63	382510	48.841	ug/l	100
25) 2-Butanone	4.562	43	506469	251.252	ug/l	100
26) 2,2-Dichloropropane	4.489	77	280159	48.066	ug/l	100
27) cis-1,2-Dichloroethene	4.501	96	243080	48.734	ug/l	100
28) Bromochloromethane	4.910	49	194431	50.303	ug/l	100
29) Tetrahydrofuran	5.007	42	322800	251.209	ug/l	100
30) Chloroform	5.105	83	386035	48.247	ug/l	100
31) Cyclohexane	5.483	56	337894	48.598	ug/l	100
32) 1,1,1-Trichloroethane	5.397	97	326288	48.811	ug/l	100
36) 1,1-Dichloropropene	5.702	75	264243	47.988	ug/l	100
37) Ethyl Acetate	4.721	43	216259	46.111	ug/l	100
38) Carbon Tetrachloride	5.690	117	286310	48.549	ug/l	100
39) Methylcyclohexane	7.385	83	341159	49.529	ug/l	100
40) Benzene	6.050	78	815341	48.954	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
 Data File : VX046863.D
 Acq On : 02 Jul 2025 13:39
 Operator : JC/MD
 Sample : VSTDICCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICCC050

Manual Integrations
 APPROVED

Reviewed By : John Carlone 07/03/2025
 Supervised By : Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:32:05 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:21:52 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.922	41	127915	51.128	ug/l	100
42) 1,2-Dichloroethane	6.092	62	276628	48.913	ug/l	100
43) Isopropyl Acetate	6.342	43	371859	51.765	ug/l	100
44) Trichloroethene	7.129	130	206841	47.708	ug/l	100
45) 1,2-Dichloropropane	7.434	63	207864	49.398	ug/l	100
46) Dibromomethane	7.586	93	144114	49.430	ug/l	100
47) Bromodichloromethane	7.824	83	306696	49.265	ug/l	100
48) Methyl methacrylate	7.696	41	193493	52.165	ug/l	100
49) 1,4-Dioxane	7.659	88	43664	1015.947	ug/l	100
51) 4-Methyl-2-Pentanone	8.574	43	1101634	259.847	ug/l	100
52) Toluene	8.720	92	505397	48.969	ug/l	100
53) t-1,3-Dichloropropene	8.976	75	284038	51.124	ug/l	100
54) cis-1,3-Dichloropropene	8.366	75	320678	50.567	ug/l	100
55) 1,1,2-Trichloroethane	9.153	97	191073	49.704	ug/l	100
56) Ethyl methacrylate	9.116	69	276170	51.905	ug/l	100
57) 1,3-Dichloropropane	9.305	76	325345	49.150	ug/l	100
58) 2-Chloroethyl Vinyl ether	8.244	63	802354	267.636	ug/l	100
59) 2-Hexanone	9.427	43	742855	264.164	ug/l	100
60) Dibromochloromethane	9.519	129	226427	49.218	ug/l	100
61) 1,2-Dibromoethane	9.610	107	192320	49.814	ug/l	100
64) Tetrachloroethene	9.275	164	170176	47.341	ug/l	100
65) Chlorobenzene	10.079	112	566582	48.538	ug/l	100
66) 1,1,1,2-Tetrachloroethane	10.159	131	193638	49.347	ug/l	100
67) Ethyl Benzene	10.189	91	987806	49.415	ug/l	100
68) m/p-Xylenes	10.299	106	743275	98.674	ug/l	100
69) o-Xylene	10.640	106	358798	49.311	ug/l	100
70) Styrene	10.653	104	634597	50.976	ug/l	100
71) Bromoform	10.799	173	145282	49.794	ug/l #	100
73) Isopropylbenzene	10.957	105	960979	51.232	ug/l	100
74) N-amyl acetate	10.842	43	338897	53.169	ug/l	100
75) 1,1,2,2-Tetrachloroethane	11.207	83	256928	49.814	ug/l	100
76) 1,2,3-Trichloropropane	11.238	75	210006m	50.937	ug/l	
77) Bromobenzene	11.195	156	233851	50.052	ug/l	100
78) n-propylbenzene	11.299	91	1145518	50.647	ug/l	100
79) 2-Chlorotoluene	11.360	91	662335	49.595	ug/l	100
80) 1,3,5-Trimethylbenzene	11.451	105	780315	51.198	ug/l	100
81) trans-1,4-Dichloro-2-b...	11.018	75	77831	50.659	ug/l	100
82) 4-Chlorotoluene	11.451	91	777681	50.461	ug/l	100
83) tert-Butylbenzene	11.713	119	805925	51.197	ug/l	100
84) 1,2,4-Trimethylbenzene	11.750	105	786934	51.082	ug/l	100
85) sec-Butylbenzene	11.884	105	1009027	50.840	ug/l	100
86) p-Isopropyltoluene	12.006	119	843813	50.770	ug/l	100
87) 1,3-Dichlorobenzene	11.963	146	434168	49.687	ug/l	100
88) 1,4-Dichlorobenzene	12.036	146	435439	47.882	ug/l	100
89) n-Butylbenzene	12.329	91	797119	51.042	ug/l	100
90) Hexachloroethane	12.536	117	147768	50.152	ug/l	100
91) 1,2-Dichlorobenzene	12.329	146	418287	49.398	ug/l	100
92) 1,2-Dibromo-3-Chloropr...	12.939	75	45584	50.530	ug/l	100
93) 1,2,4-Trichlorobenzene	13.585	180	290148	50.438	ug/l	100
94) Hexachlorobutadiene	13.719	225	109236	50.352	ug/l	100
95) Naphthalene	13.774	128	809540	53.405	ug/l	100
96) 1,2,3-Trichlorobenzene	13.957	180	278713	51.278	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
Data File : VX046863.D
Acq On : 02 Jul 2025 13:39
Operator : JC/MD
Sample : VSTDICCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICCC050

Manual Integrations
APPROVED

Reviewed By :John Carlone 07/03/2025
Supervised By :Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:32:05 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:21:52 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

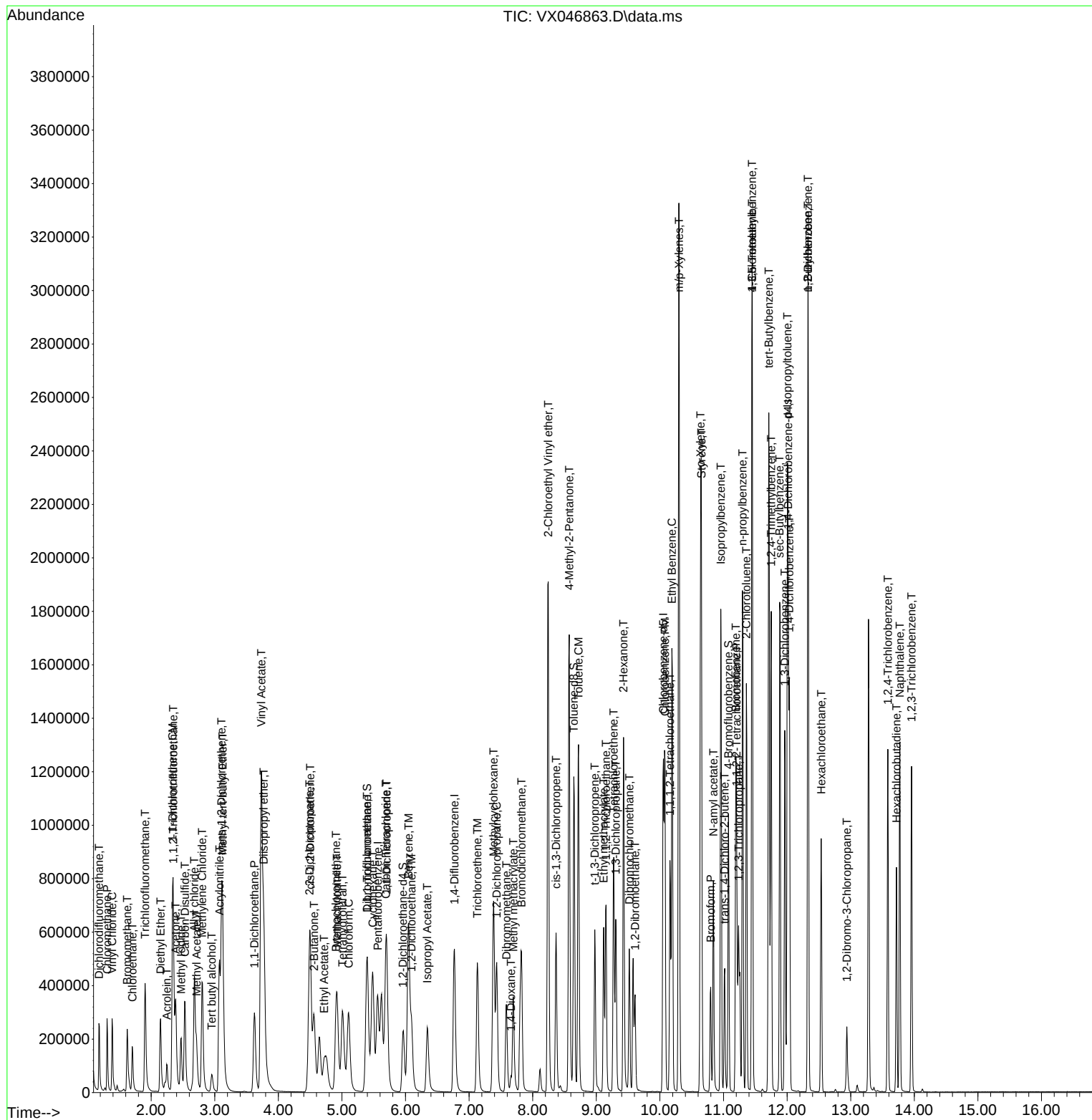
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 Data File : VX046863.D
 Acq On : 02 Jul 2025 13:39
 Operator : JC/MD
 Sample : VSTDICCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICCC050

Quant Time: Jul 03 05:32:05 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:21:52 2025
 Response via : Initial Calibration

Manual Integrations APPROVED

Reviewed By :John Carlone 07/03/2025
 Supervised By :Mahesh Dadoda 07/03/2025



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
 Data File : VX046864.D
 Acq On : 02 Jul 2025 14:10
 Operator : JC/MD
 Sample : VSTDICC100
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC100

Manual Integrations
 APPROVED

Reviewed By : John Carlone 07/03/2025
 Supervised By : Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:33:07 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:21:52 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	5.550	168	360099	50.000	ug/l	-0.01
34) 1,4-Difluorobenzene	6.763	114	591959	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.049	117	521464	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	253960	50.000	ug/l	0.00

System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.958	65	461552	97.021	ug/l	0.00
Spiked Amount	50.000	Range	78 - 117	Recovery	= 194.040%#	
35) Dibromofluoromethane	5.385	113	393465	97.920	ug/l	-0.01
Spiked Amount	50.000	Range	75 - 124	Recovery	= 195.840%#	
50) Toluene-d8	8.647	98	1373545	96.884	ug/l	0.00
Spiked Amount	50.000	Range	92 - 112	Recovery	= 193.760%#	
62) 4-Bromofluorobenzene	11.079	95	513224	95.251	ug/l	0.00
Spiked Amount	50.000	Range	83 - 123	Recovery	= 190.500%#	

Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.179	85	361969	105.107	ug/l	99
3) Chloromethane	1.307	50	391364	104.014	ug/l	98
4) Vinyl Chloride	1.386	62	424193	103.527	ug/l	100
5) Bromomethane	1.618	94	265849	100.979	ug/l	100
6) Chloroethane	1.697	64	260651	96.337	ug/l	99
7) Trichlorofluoromethane	1.904	101	643202	101.523	ug/l	98
8) Diethyl Ether	2.142	74	228526	101.358	ug/l	100
9) 1,1,2-Trichlorotrifluo...	2.343	101	412204	102.105	ug/l	99
10) Methyl Iodide	2.465	142	490208	111.457	ug/l	99
11) Tert butyl alcohol	2.953	59	156192	500.607	ug/l	99
12) 1,1-Dichloroethene	2.331	96	393053	100.660	ug/l	97
13) Acrolein	2.245	56	173378	500.012	ug/l	100
14) Allyl chloride	2.672	41	711428	102.334	ug/l	99
15) Acrylonitrile	3.068	53	898537	496.093	ug/l	100
16) Acetone	2.380	43	707647	478.882	ug/l	98
17) Carbon Disulfide	2.526	76	1006664	98.304	ug/l	99
18) Methyl Acetate	2.709	43	410853	105.486	ug/l	99
19) Methyl tert-butyl Ether	3.117	73	1142805	103.638	ug/l	98
20) Methylene Chloride	2.800	84	428892	98.153	ug/l	97
21) trans-1,2-Dichloroethene	3.105	96	396705	99.285	ug/l	97
22) Diisopropyl ether	3.764	45	1387980	103.342	ug/l	97
23) Vinyl Acetate	3.727	43	5276627	524.403	ug/l	100
24) 1,1-Dichloroethane	3.617	63	759957	99.213	ug/l	100
25) 2-Butanone	4.550	43	992659	503.497	ug/l	99
26) 2,2-Dichloropropane	4.483	77	577382	101.283	ug/l	100
27) cis-1,2-Dichloroethene	4.495	96	482620	98.931	ug/l	100
28) Bromochloromethane	4.904	49	371458	98.260	ug/l	100
29) Tetrahydrofuran	5.001	42	640795	509.872	ug/l	99
30) Chloroform	5.099	83	757773	96.834	ug/l	100
31) Cyclohexane	5.477	56	667229	98.120	ug/l	100
32) 1,1,1-Trichloroethane	5.391	97	649123	99.286	ug/l	99
36) 1,1-Dichloropropene	5.696	75	514002	94.809	ug/l	99
37) Ethyl Acetate	4.715	43	420101	90.979	ug/l	98
38) Carbon Tetrachloride	5.684	117	567706	97.774	ug/l	98
39) Methylcyclohexane	7.379	83	683852	100.837	ug/l	99
40) Benzene	6.044	78	1589318	96.921	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
 Data File : VX046864.D
 Acq On : 02 Jul 2025 14:10
 Operator : JC/MD
 Sample : VSTDICC100
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC100

Manual Integrations
 APPROVED

Reviewed By : John Carlone 07/03/2025
 Supervised By : Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:33:07 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:21:52 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.922	41	261090	105.996	ug/l	99
42) 1,2-Dichloroethane	6.086	62	536004	96.261	ug/l	100
43) Isopropyl Acetate	6.336	43	746174	105.501	ug/l	100
44) Trichloroethene	7.123	130	411222	96.336	ug/l	98
45) 1,2-Dichloropropane	7.427	63	408244	98.538	ug/l	100
46) Dibromomethane	7.580	93	279372	97.324	ug/l	99
47) Bromodichloromethane	7.818	83	601292	98.101	ug/l	98
48) Methyl methacrylate	7.690	41	389200	106.573	ug/l	100
49) 1,4-Dioxane	7.659	88	82890	1958.872	ug/l	97
51) 4-Methyl-2-Pentanone	8.568	43	2089507	500.587	ug/l	99
52) Toluene	8.714	92	984220	96.858	ug/l	98
53) t-1,3-Dichloropropene	8.976	75	580117	106.052	ug/l	99
54) cis-1,3-Dichloropropene	8.366	75	650539	104.190	ug/l	99
55) 1,1,2-Trichloroethane	9.147	97	367441	97.082	ug/l	98
56) Ethyl methacrylate	9.116	69	554620	105.873	ug/l	99
57) 1,3-Dichloropropane	9.305	76	625220	95.933	ug/l	100
58) 2-Chloroethyl Vinyl ether	8.238	63	1541497	522.248	ug/l	100
59) 2-Hexanone	9.427	43	1406681	508.068	ug/l	100
60) Dibromochloromethane	9.519	129	445393	98.331	ug/l	99
61) 1,2-Dibromoethane	9.604	107	375661	98.827	ug/l	99
64) Tetrachloroethene	9.269	164	333229	95.978	ug/l	95
65) Chlorobenzene	10.073	112	1095855	97.200	ug/l	98
66) 1,1,1,2-Tetrachloroethane	10.159	131	381396	100.632	ug/l	99
67) Ethyl Benzene	10.189	91	1925349	99.720	ug/l	99
68) m/p-Xylenes	10.299	106	1424898	195.851	ug/l	99
69) o-Xylene	10.640	106	691874	98.448	ug/l	99
70) Styrene	10.653	104	1206962	100.381	ug/l	99
71) Bromoform	10.799	173	286378	101.623	ug/l	100
73) Isopropylbenzene	10.957	105	1824241	102.183	ug/l	100
74) N-amyl acetate	10.842	43	661864	109.100	ug/l	99
75) 1,1,2,2-Tetrachloroethane	11.207	83	477117	97.192	ug/l	99
76) 1,2,3-Trichloropropane	11.238	75	401735m	102.378	ug/l	
77) Bromobenzene	11.195	156	441962	99.388	ug/l	98
78) n-propylbenzene	11.299	91	2169188	100.767	ug/l	99
79) 2-Chlorotoluene	11.360	91	1268825	99.822	ug/l	100
80) 1,3,5-Trimethylbenzene	11.451	105	1497082	103.204	ug/l	100
81) trans-1,4-Dichloro-2-b...	11.018	75	158326	108.273	ug/l	98
82) 4-Chlorotoluene	11.451	91	1472712	100.402	ug/l	100
83) tert-Butylbenzene	11.713	119	1539450	102.751	ug/l	100
84) 1,2,4-Trimethylbenzene	11.750	105	1488102	101.492	ug/l	97
85) sec-Butylbenzene	11.890	105	1912633	101.251	ug/l	99
86) p-Isopropyltoluene	12.006	119	1605082	101.466	ug/l	100
87) 1,3-Dichlorobenzene	11.963	146	825505	99.260	ug/l	99
88) 1,4-Dichlorobenzene	12.036	146	823926	95.192	ug/l	100
89) n-Butylbenzene	12.329	91	1515258	101.944	ug/l	100
90) Hexachloroethane	12.536	117	294961	105.182	ug/l	98
91) 1,2-Dichlorobenzene	12.335	146	792536	98.339	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	12.939	75	90270	105.136	ug/l	99
93) 1,2,4-Trichlorobenzene	13.585	180	569410	104.000	ug/l	100
94) Hexachlorobutadiene	13.725	225	207095	100.298	ug/l	99
95) Naphthalene	13.774	128	1572381	108.986	ug/l	100
96) 1,2,3-Trichlorobenzene	13.957	180	543127	104.988	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
Data File : VX046864.D
Acq On : 02 Jul 2025 14:10
Operator : JC/MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC100

Manual Integrations
APPROVED

Reviewed By :John Carlone 07/03/2025
Supervised By :Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:33:07 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:21:52 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

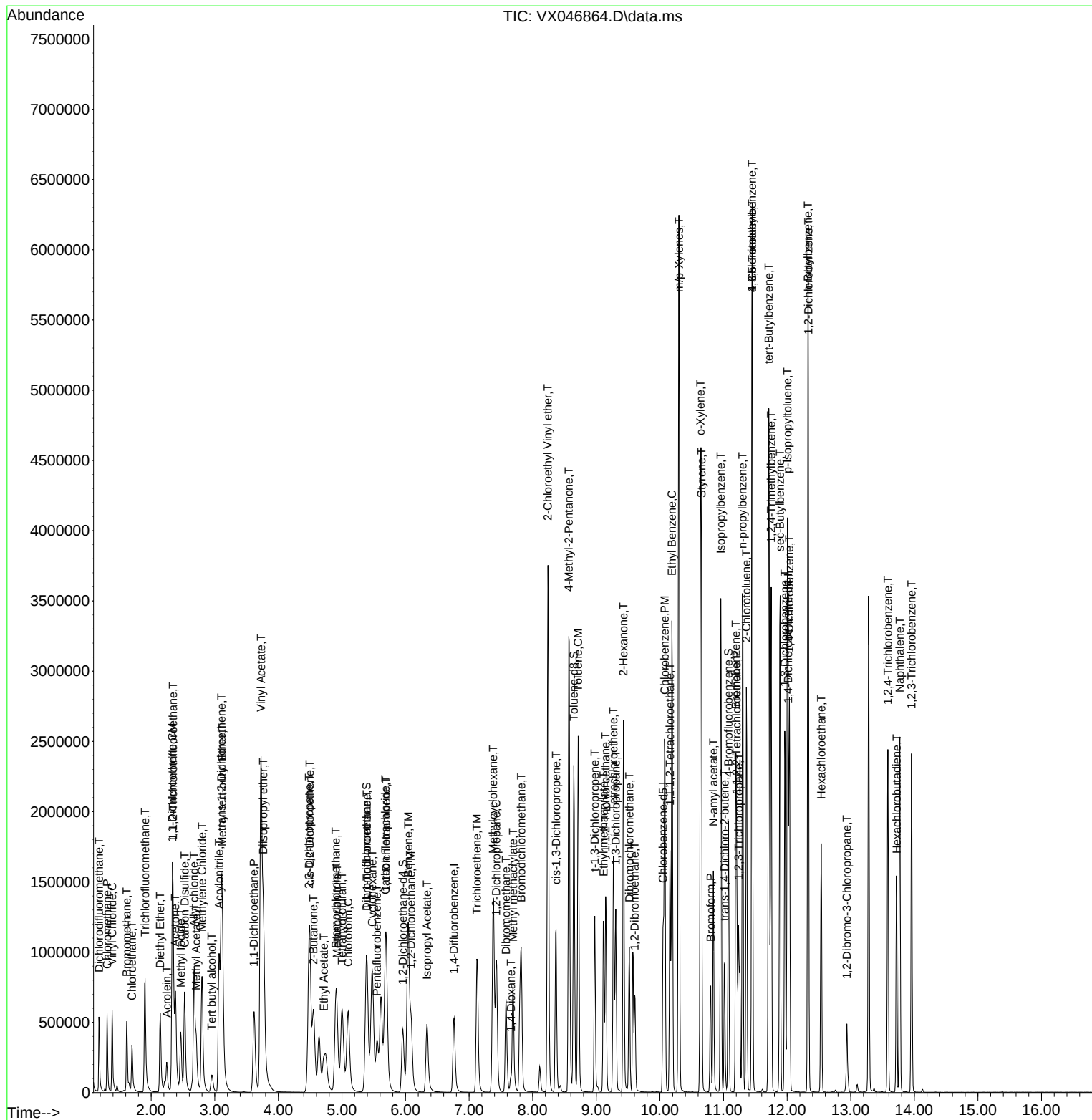
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 Data File : VX046864.D
 Acq On : 02 Jul 2025 14:10
 Operator : JC/MD
 Sample : VSTDICC100
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC100

Manual Integrations APPROVED

Reviewed By : John Carlone 07/03/2025
 Supervised By : Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:33:07 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:21:52 2025
 Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
 Data File : VX046865.D
 Acq On : 02 Jul 2025 14:31
 Operator : JC/MD
 Sample : VSTDICC150
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 7 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC150

Quant Time: Jul 03 05:34:07 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:21:52 2025
 Response via : Initial Calibration

Manual Integrations APPROVED

Reviewed By : John Carlone 07/03/2025
 Supervised By : Mahesh Dadoda 07/03/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	5.562	168	337940	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.769	114	564585	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.055	117	498758	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	240348	50.000	ug/l	# 0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4	5.964	65	649303	145.436	ug/l	0.00
Spiked Amount	50.000	Range	78 - 117	Recovery	= 290.880%#	
35) Dibromofluoromethane	5.391	113	550160	143.554	ug/l	0.00
Spiked Amount	50.000	Range	75 - 124	Recovery	= 287.100%#	
50) Toluene-d8	8.653	98	1923179	142.230	ug/l	0.00
Spiked Amount	50.000	Range	92 - 112	Recovery	= 284.460%#	
62) 4-Bromofluorobenzene	11.079	95	721016	140.303	ug/l	0.00
Spiked Amount	50.000	Range	83 - 123	Recovery	= 280.600%#	

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	1.179	85	497096	153.809	ug/l	99
3) Chloromethane	1.307	50	537388	152.188	ug/l	98
4) Vinyl Chloride	1.386	62	574277	149.346	ug/l	99
5) Bromomethane	1.611	94	298828	120.949	ug/l	100
6) Chloroethane	1.697	64	358739	141.285	ug/l	99
7) Trichlorofluoromethane	1.904	101	897728	150.988	ug/l	99
8) Diethyl Ether	2.148	74	321838	152.105	ug/l	99
9) 1,1,2-Trichlorotrifluo...	2.343	101	569627	150.352	ug/l	99
10) Methyl Iodide	2.465	142	705949	171.034	ug/l	98
11) Tert butyl alcohol	2.965	59	229819	784.885	ug/l	99
12) 1,1-Dichloroethene	2.337	96	547474	149.400	ug/l	97
13) Acrolein	2.245	56	245973	754.434	ug/l	98
14) Allyl chloride	2.678	41	996540	152.745	ug/l	99
15) Acrylonitrile	3.075	53	1288046	757.776	ug/l	99
16) Acetone	2.386	43	1013283	730.677	ug/l	99
17) Carbon Disulfide	2.526	76	1394541	145.111	ug/l	99
18) Methyl Acetate	2.709	43	607185	166.116	ug/l	99
19) Methyl tert-butyl Ether	3.123	73	1637759	158.264	ug/l	98
20) Methylene Chloride	2.800	84	596413	145.441	ug/l	98
21) trans-1,2-Dichloroethene	3.105	96	552703	147.398	ug/l	97
22) Diisopropyl ether	3.770	45	1919430	152.282	ug/l	99
23) Vinyl Acetate	3.733	43	7476523	791.755	ug/l	100
24) 1,1-Dichloroethane	3.623	63	1064068	148.024	ug/l	100
25) 2-Butanone	4.562	43	1449681	783.522	ug/l	100
26) 2,2-Dichloropropane	4.489	77	837466	156.539	ug/l	100
27) cis-1,2-Dichloroethene	4.501	96	674986	147.435	ug/l	100
28) Bromochloromethane	4.910	49	515523	145.311	ug/l	99
29) Tetrahydrofuran	5.007	42	928390	787.145	ug/l	100
30) Chloroform	5.105	83	1064448	144.942	ug/l	100
31) Cyclohexane	5.483	56	939695	147.249	ug/l	100
32) 1,1,1-Trichloroethane	5.391	97	922378	150.332	ug/l	98
36) 1,1-Dichloropropene	5.702	75	739394	142.995	ug/l	99
37) Ethyl Acetate	4.721	43	631521	143.396	ug/l	98
38) Carbon Tetrachloride	5.684	117	809906	146.250	ug/l	98
39) Methylcyclohexane	7.385	83	974901	150.724	ug/l	99
40) Benzene	6.043	78	2243029	143.418	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
 Data File : VX046865.D
 Acq On : 02 Jul 2025 14:31
 Operator : JC/MD
 Sample : VSTDICC150
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 7 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC150

Manual Integrations
 APPROVED

Reviewed By : John Carlone 07/03/2025
 Supervised By : Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:34:07 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:21:52 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.928	41	375761	159.945	ug/l	99
42) 1,2-Dichloroethane	6.092	62	756183	142.387	ug/l	100
43) Isopropyl Acetate	6.342	43	1104335	163.711	ug/l	100
44) Trichloroethene	7.129	130	583397	143.298	ug/l	97
45) 1,2-Dichloropropane	7.433	63	579224	146.587	ug/l	99
46) Dibromomethane	7.586	93	401338	146.592	ug/l	99
47) Bromodichloromethane	7.824	83	858188	146.803	ug/l	99
48) Methyl methacrylate	7.696	41	580607	166.693	ug/l	99
49) 1,4-Dioxane	7.665	88	122695	3040.136	ug/l	98
51) 4-Methyl-2-Pentanone	8.574	43	3026947	760.332	ug/l	98
52) Toluene	8.720	92	1394797	143.918	ug/l	98
53) t-1,3-Dichloropropene	8.976	75	853017	163.503	ug/l	99
54) cis-1,3-Dichloropropene	8.366	75	939003	157.682	ug/l	97
55) 1,1,2-Trichloroethane	9.153	97	521889	144.574	ug/l	98
56) Ethyl methacrylate	9.116	69	816206	163.362	ug/l	100
57) 1,3-Dichloropropane	9.305	76	893213	143.699	ug/l	100
58) 2-Chloroethyl Vinyl ether	8.244	63	2192288	778.743	ug/l	100
59) 2-Hexanone	9.427	43	2051712	776.972	ug/l	100
60) Dibromochloromethane	9.518	129	637739	147.623	ug/l	99
61) 1,2-Dibromoethane	9.610	107	536592	148.009	ug/l	100
64) Tetrachloroethene	9.275	164	475745	143.265	ug/l	96
65) Chlorobenzene	10.079	112	1563433	144.986	ug/l	98
66) 1,1,1,2-Tetrachloroethane	10.159	131	548552	151.325	ug/l	100
67) Ethyl Benzene	10.195	91	2729559	147.809	ug/l	98
68) m/p-Xylenes	10.299	106	2009645	288.799	ug/l	99
69) o-Xylene	10.640	106	987134	146.856	ug/l	99
70) Styrene	10.652	104	1697064	147.567	ug/l	98
71) Bromoform	10.799	173	411264	152.584	ug/l	97
73) Isopropylbenzene	10.963	105	2588441	153.200	ug/l	100
74) N-amyl acetate	10.841	43	986018	171.738	ug/l	99
75) 1,1,2,2-Tetrachloroethane	11.213	83	698105	150.263	ug/l	100
76) 1,2,3-Trichloropropane	11.238	75	567147m	152.717	ug/l	
77) Bromobenzene	11.195	156	628974	149.454	ug/l	99
78) n-propylbenzene	11.305	91	3052066	149.810	ug/l	99
79) 2-Chlorotoluene	11.360	91	1784161	148.315	ug/l	100
80) 1,3,5-Trimethylbenzene	11.451	105	2088013	152.092	ug/l	100
81) trans-1,4-Dichloro-2-b...	11.018	75	239775	173.259	ug/l	95
82) 4-Chlorotoluene	11.451	91	2061746	148.519	ug/l	99
83) tert-Butylbenzene	11.713	119	2164507	152.653	ug/l	99
84) 1,2,4-Trimethylbenzene	11.750	105	2118023	152.635	ug/l	97
85) sec-Butylbenzene	11.890	105	2681731	150.005	ug/l	99
86) p-Isopropyltoluene	12.006	119	2218491	148.186	ug/l	99
87) 1,3-Dichlorobenzene	11.969	146	1167669	148.354	ug/l	98
88) 1,4-Dichlorobenzene	12.036	146	1176579	143.634	ug/l	99
89) n-Butylbenzene	12.329	91	2101194	149.371	ug/l	99
90) Hexachloroethane	12.536	117	424369	159.899	ug/l	99
91) 1,2-Dichlorobenzene	12.335	146	1117598	146.526	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	12.939	75	138617	170.588	ug/l	99
93) 1,2,4-Trichlorobenzene	13.585	180	825907	159.391	ug/l	99
94) Hexachlorobutadiene	13.725	225	296507	151.734	ug/l	99
95) Naphthalene	13.774	128	2359854	172.832	ug/l	100
96) 1,2,3-Trichlorobenzene	13.957	180	792593	161.887	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
Data File : VX046865.D
Acq On : 02 Jul 2025 14:31
Operator : JC/MD
Sample : VSTDICC150
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC150

Manual Integrations
APPROVED

Reviewed By :John Carlone 07/03/2025
Supervised By :Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:34:07 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:21:52 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

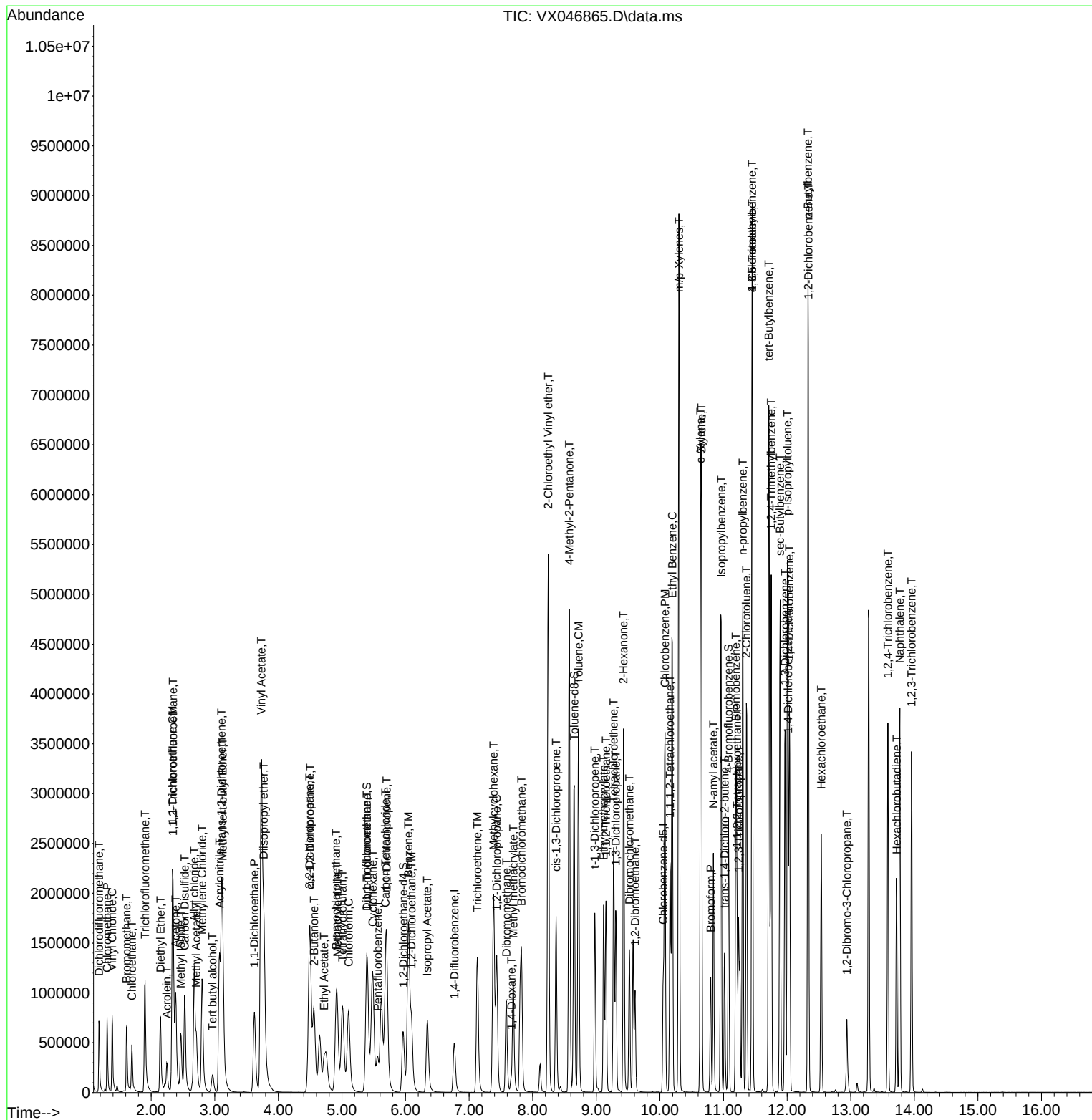
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Data File : VX046865.D
Acq On : 02 Jul 2025 14:31
Operator : JC/MD
Sample : VSTDICC150
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC150

Manual Integrations APPROVED

Reviewed By :John Carlone 07/03/2025
Supervised By :Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:34:07 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:21:52 2025
Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
 Data File : VX046867.D
 Acq On : 02 Jul 2025 15:14
 Operator : JC/MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 9 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 ICVVX070225

Manual Integrations
 APPROVED

Reviewed By : John Carlone 07/03/2025
 Supervised By : Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:55:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:51:11 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	5.562	168	376229	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.769	114	610660	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.055	117	549326	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	275295	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.964	65	242648	48.819	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery =	97.640%		
35) Dibromofluoromethane	5.397	113	208822	50.377	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	100.760%		
50) Toluene-d8	8.647	98	731941	50.047	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery =	100.100%		
62) 4-Bromofluorobenzene	11.079	95	282463	50.818	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery =	101.640%		
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.179	85	178684	49.661	ug/l	98
3) Chloromethane	1.307	50	192497	48.967	ug/l	100
4) Vinyl Chloride	1.386	62	208626	48.733	ug/l	99
5) Bromomethane	1.624	94	141065	51.285	ug/l	97
6) Chloroethane	1.703	64	132155	46.751	ug/l	100
7) Trichlorofluoromethane	1.904	101	326501	49.325	ug/l	98
8) Diethyl Ether	2.148	74	117004	49.670	ug/l	99
9) 1,1,2-Trichlorotrifluo...	2.349	101	208780	49.499	ug/l	100
10) Methyl Iodide	2.471	142	229855	50.021	ug/l	97
11) Tert butyl alcohol	2.953	59	86884	266.531	ug/l	100
12) 1,1-Dichloroethene	2.337	96	197950	48.521	ug/l	99
13) Acrolein	2.252	56	87230	242.250	ug/l	98
14) Allyl chloride	2.678	41	359895	49.549	ug/l	99
15) Acrylonitrile	3.075	53	482124	255.809	ug/l	99
16) Acetone	2.386	43	376127	243.622	ug/l	97
17) Carbon Disulfide	2.532	76	501161	46.842	ug/l	100
18) Methyl Acetate	2.715	43	217113	53.354	ug/l	99
19) Methyl tert-butyl Ether	3.123	73	601377	52.199	ug/l	99
20) Methylene Chloride	2.800	84	224143	49.097	ug/l	97
21) trans-1,2-Dichloroethene	3.105	96	205950	49.334	ug/l	99
22) Diisopropyl ether	3.770	45	723627	51.568	ug/l	97
23) Vinyl Acetate	3.733	43	2777219	264.173	ug/l	99
24) 1,1-Dichloroethane	3.623	63	395739	49.449	ug/l	99
25) 2-Butanone	4.562	43	538755	261.552	ug/l	98
26) 2,2-Dichloropropane	4.489	77	293933	49.351	ug/l	100
27) cis-1,2-Dichloroethene	4.501	96	247860	48.630	ug/l	99
28) Bromochloromethane	4.910	49	198401	50.232	ug/l	98
29) Tetrahydrofuran	5.013	42	350947	267.272	ug/l	99
30) Chloroform	5.105	83	395292	48.348	ug/l	100
31) Cyclohexane	5.483	56	350463	49.328	ug/l	97
32) 1,1,1-Trichloroethane	5.397	97	335397	49.101	ug/l	99
36) 1,1-Dichloropropene	5.702	75	275506	49.261	ug/l	100
37) Ethyl Acetate	4.721	43	229364	48.151	ug/l	100
38) Carbon Tetrachloride	5.690	117	291659	49.327	ug/l	99
39) Methylcyclohexane	7.385	83	355028	50.747	ug/l	98
40) Benzene	6.050	78	835235	49.375	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
 Data File : VX046867.D
 Acq On : 02 Jul 2025 15:14
 Operator : JC/MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 9 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 ICVVX070225

Quant Time: Jul 03 05:55:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:51:11 2025
 Response via : Initial Calibration

Manual Integrations APPROVED

Reviewed By :John Carlone 07/03/2025
 Supervised By :Mahesh Dadoda 07/03/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.928	41	137841	54.246	ug/l	98
42) 1,2-Dichloroethane	6.092	62	282094	49.110	ug/l	100
43) Isopropyl Acetate	6.342	43	390969	53.586	ug/l	99
44) Trichloroethene	7.129	130	212780	48.321	ug/l	100
45) 1,2-Dichloropropane	7.434	63	213351	49.920	ug/l	98
46) Dibromomethane	7.586	93	146563	49.494	ug/l	100
47) Bromodichloromethane	7.824	83	313088	49.516	ug/l	97
48) Methyl methacrylate	7.696	41	206773	54.886	ug/l	99
49) 1,4-Dioxane	7.659	88	47208	1081.463	ug/l	98
51) 4-Methyl-2-Pentanone	8.574	43	1163206	270.137	ug/l	100
52) Toluene	8.720	92	524414	50.028	ug/l	98
53) t-1,3-Dichloropropene	8.976	75	298344	52.871	ug/l	100
54) cis-1,3-Dichloropropene	8.366	75	334998	52.010	ug/l	99
55) 1,1,2-Trichloroethane	9.153	97	194738	49.876	ug/l	98
56) Ethyl methacrylate	9.116	69	294579	54.511	ug/l	99
57) 1,3-Dichloropropane	9.305	76	334325	49.728	ug/l	100
58) 2-Chloroethyl Vinyl ether	8.245	63	817519	268.488	ug/l	100
59) 2-Hexanone	9.427	43	792449	277.453	ug/l	100
60) Dibromochloromethane	9.519	129	234044	50.089	ug/l	99
61) 1,2-Dibromoethane	9.610	107	200842	51.219	ug/l	100
64) Tetrachloroethene	9.275	164	174726	47.773	ug/l	93
65) Chlorobenzene	10.080	112	584424	49.208	ug/l	99
66) 1,1,1,2-Tetrachloroethane	10.159	131	199525	49.975	ug/l	99
67) Ethyl Benzene	10.189	91	1013473	49.829	ug/l	99
68) m/p-Xylenes	10.299	106	760571	99.238	ug/l	100
69) o-Xylene	10.640	106	368751	49.809	ug/l	99
70) Styrene	10.653	104	644744	50.903	ug/l	100
71) Bromoform	10.799	173	147395	49.651	ug/l #	99
73) Isopropylbenzene	10.957	105	981991	50.742	ug/l	100
74) N-amyl acetate	10.842	43	359547	54.674	ug/l	100
75) 1,1,2,2-Tetrachloroethane	11.207	83	269327	50.612	ug/l	100
76) 1,2,3-Trichloropropane	11.238	75	218733m	51.422	ug/l	
77) Bromobenzene	11.195	156	237950	49.363	ug/l	99
78) n-propylbenzene	11.299	91	1172148	50.231	ug/l	100
79) 2-Chlorotoluene	11.360	91	678845	49.268	ug/l	99
80) 1,3,5-Trimethylbenzene	11.451	105	808534	51.418	ug/l	99
81) trans-1,4-Dichloro-2-b...	11.018	75	82807	52.240	ug/l	99
82) 4-Chlorotoluene	11.451	91	802710	50.483	ug/l	100
83) tert-Butylbenzene	11.713	119	826920	50.916	ug/l	100
84) 1,2,4-Trimethylbenzene	11.750	105	801503	50.428	ug/l	100
85) sec-Butylbenzene	11.890	105	1032626	50.429	ug/l	100
86) p-Isopropyltoluene	12.006	119	867283	50.577	ug/l	100
87) 1,3-Dichlorobenzene	11.969	146	446776	49.558	ug/l	99
88) 1,4-Dichlorobenzene	12.037	146	448682	47.821	ug/l	99
89) n-Butylbenzene	12.329	91	817746	50.753	ug/l	99
90) Hexachloroethane	12.536	117	151888	49.965	ug/l	99
91) 1,2-Dichlorobenzene	12.335	146	424172	48.553	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	12.939	75	48557	52.171	ug/l	98
93) 1,2,4-Trichlorobenzene	13.585	180	301081	50.729	ug/l	99
94) Hexachlorobutadiene	13.719	225	117882	52.667	ug/l	99
95) Naphthalene	13.774	128	844747	54.014	ug/l	100
96) 1,2,3-Trichlorobenzene	13.957	180	285334	50.881	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
Data File : VX046867.D
Acq On : 02 Jul 2025 15:14
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX070225

Manual Integrations
APPROVED

Reviewed By :John Carlone 07/03/2025
Supervised By :Mahesh Dadoda 07/03/2025

Quant Time: Jul 03 05:55:49 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:51:11 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Instrument :
MSVOA_X
ClientSampleId :
ICVVX070225

Manual Integrations APPROVED

[illegible]

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
 Data File : VX046867.D
 Acq On : 02 Jul 2025 15:14
 Operator : JC/MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 9 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 ICSVVX070225

Quant Time: Jul 03 05:55:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:51:11 2025
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Pentafluorobenzene	1.000	1.000	0.0	102	0.00
2 T	Dichlorodifluoromethane	0.478	0.475	0.6	100	0.00
3 P	Chloromethane	0.522	0.512	1.9	103	0.00
4 C	Vinyl Chloride	0.569	0.555	2.5#	103	0.00
5 T	Bromomethane	0.366	0.375	-2.5	107	0.00
6 T	Chloroethane	0.376	0.351	6.6	104	0.00
7 T	Trichlorofluoromethane	0.880	0.868	1.4	103	0.00
8 T	Diethyl Ether	0.313	0.311	0.6	104	0.00
9 T	1,1,2-Trichlorotrifluoroeth	0.561	0.555	1.1	103	0.00
10 T	Methyl Iodide	0.611	0.611	0.0	99	0.00
11 T	Tert butyl alcohol	0.043	0.046	-7.0	112	0.00
12 CM	1,1-Dichloroethene	0.542	0.526	3.0#	103	0.00
13 T	Acrolein	0.052	0.046	11.5	104	0.00
14 T	Allyl chloride	0.965	0.957	0.8	104	0.00
15 T	Acrylonitrile	0.250	0.256	-2.4	106	0.00
16 T	Acetone	0.205	0.200	2.4	106	0.00
17 T	Carbon Disulfide	1.422	1.332	6.3	101	0.00
18 T	Methyl Acetate	0.541	0.577	-6.7	107	0.00
19 T	Methyl tert-butyl Ether	1.531	1.598	-4.4	107	0.00
20 T	Methylene Chloride	0.607	0.596	1.8	104	0.00
21 T	trans-1,2-Dichloroethene	0.555	0.547	1.4	103	0.00
22 T	Diisopropyl ether	1.865	1.923	-3.1	103	0.00
23 T	Vinyl Acetate	1.397	1.476	-5.7	106	0.00
24 P	1,1-Dichloroethane	1.064	1.052	1.1	103	0.00
25 T	2-Butanone	0.274	0.286	-4.4	106	0.00
26 T	2,2-Dichloropropane	0.792	0.781	1.4	105	0.00
27 T	cis-1,2-Dichloroethene	0.677	0.659	2.7	102	0.00
28 T	Bromochloromethane	0.525	0.527	-0.4	102	0.00
29 T	Tetrahydrofuran	0.175	0.187	-6.9	109	0.00
30 C	Chloroform	1.087	1.051	3.3#	102	0.00
31 T	Cyclohexane	0.944	0.932	1.3	104	0.00
32 T	1,1,1-Trichloroethane	0.908	0.891	1.9	103	0.00
33 S	1,2-Dichloroethane-d4	0.661	0.645	2.4	102	0.00
34 I	1,4-Difluorobenzene	1.000	1.000	0.0	102	0.00
35 S	Dibromofluoromethane	0.339	0.342	-0.9	102	0.00
36 T	1,1-Dichloropropene	0.458	0.451	1.5	104	0.00
37 T	Ethyl Acetate	0.390	0.376	3.6	106	0.00
38 T	Carbon Tetrachloride	0.484	0.478	1.2	102	0.00
39 T	Methylcyclohexane	0.573	0.581	-1.4	104	0.00
40 TM	Benzene	1.385	1.368	1.2	102	0.00
41 T	Methacrylonitrile	0.208	0.226	-8.7	108	0.00
42 TM	1,2-Dichloroethane	0.470	0.462	1.7	102	0.00
43 T	Isopropyl Acetate	0.597	0.640	-7.2	105	0.00
44 TM	Trichloroethene	0.361	0.348	3.6	103	0.00
45 C	1,2-Dichloropropane	0.350	0.349	0.3#	103	0.00
46 T	Dibromomethane	0.242	0.240	0.8	102	0.00
47 T	Bromodichloromethane	0.518	0.513	1.0	102	0.00
48 T	Methyl methacrylate	0.308	0.339	-10.1	107	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
 Data File : VX046867.D
 Acq On : 02 Jul 2025 15:14
 Operator : JC/MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 9 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 ICVVX070225

Quant Time: Jul 03 05:55:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:51:11 2025
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
49 T	1,4-Dioxane	0.004	0.004	0.0	108	0.00
50 S	Toluene-d8	1.197	1.199	-0.2	102	0.00
51 T	4-Methyl-2-Pentanone	0.353	0.381	-7.9	106	0.00
52 CM	Toluene	0.858	0.859	-0.1#	104	0.00
53 T	t-1,3-Dichloropropene	0.462	0.489	-5.8	105	0.00
54 T	cis-1,3-Dichloropropene	0.527	0.549	-4.2	104	0.00
55 T	1,1,2-Trichloroethane	0.320	0.319	0.3	102	0.00
56 T	Ethyl methacrylate	0.442	0.482	-9.0	107	0.00
57 T	1,3-Dichloropropane	0.550	0.547	0.5	103	0.00
58 T	2-Chloroethyl Vinyl ether	0.249	0.268	-7.6	102	0.00
59 T	2-Hexanone	0.234	0.260	-11.1	107	0.00
60 T	Dibromochloromethane	0.383	0.383	0.0	103	0.00
61 T	1,2-Dibromoethane	0.321	0.329	-2.5	104	0.00
62 S	4-Bromofluorobenzene	0.455	0.463	-1.8	103	0.00
63 I	Chlorobenzene-d5	1.000	1.000	0.0	102	0.00
64 T	Tetrachloroethene	0.333	0.318	4.5	103	0.00
65 PM	Chlorobenzene	1.081	1.064	1.6	103	0.00
66 T	1,1,1,2-Tetrachloroethane	0.363	0.363	0.0	103	0.00
67 C	Ethyl Benzene	1.851	1.845	0.3#	103	0.00
68 T	m/p-Xylenes	0.698	0.692	0.9	102	0.00
69 T	o-Xylene	0.674	0.671	0.4	103	0.00
70 T	Styrene	1.153	1.174	-1.8	102	0.00
71 P	Bromoform	0.270	0.268	0.7	101	0.00
72 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	103	0.00
73 T	Isopropylbenzene	3.515	3.567	-1.5	102	0.00
74 T	N-amyl acetate	1.194	1.306	-9.4	106	0.00
75 P	1,1,2,2-Tetrachloroethane	0.966	0.978	-1.2	105	0.00
76 T	1,2,3-Trichloropropane	0.773	0.795	-2.8	104	0.00
77 T	Bromobenzene	0.875	0.864	1.3	102	0.00
78 T	n-propylbenzene	4.238	4.258	-0.5	102	0.00
79 T	2-Chlorotoluene	2.503	2.466	1.5	102	0.00
80 T	1,3,5-Trimethylbenzene	2.856	2.937	-2.8	104	0.00
81 T	trans-1,4-Dichloro-2-butene	0.288	0.301	-4.5	106	0.00
82 T	4-Chlorotoluene	2.888	2.916	-1.0	103	0.00
83 T	tert-Butylbenzene	2.950	3.004	-1.8	103	0.00
84 T	1,2,4-Trimethylbenzene	2.887	2.911	-0.8	102	0.00
85 T	sec-Butylbenzene	3.719	3.751	-0.9	102	0.00
86 T	p-Isopropyltoluene	3.114	3.150	-1.2	103	0.00
87 T	1,3-Dichlorobenzene	1.637	1.623	0.9	103	0.00
88 T	1,4-Dichlorobenzene	1.704	1.630	4.3	103	0.00
89 T	n-Butylbenzene	2.926	2.970	-1.5	103	0.00
90 T	Hexachloroethane	0.552	0.552	0.0	103	0.00
91 T	1,2-Dichlorobenzene	1.587	1.541	2.9	101	0.00
92 T	1,2-Dibromo-3-Chloropropane	0.169	0.176	-4.1	107	0.00
93 T	1,2,4-Trichlorobenzene	1.078	1.094	-1.5	104	0.00
94 T	Hexachlorobutadiene	0.407	0.428	-5.2	108	0.00
95 T	Naphthalene	2.840	3.069	-8.1	104	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
Data File : VX046867.D
Acq On : 02 Jul 2025 15:14
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX070225

Quant Time: Jul 03 05:55:49 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:51:11 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
96 T	1,2,3-Trichlorobenzene	1.019	1.036	-1.7	102	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 6

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
 Data File : VX046867.D
 Acq On : 02 Jul 2025 15:14
 Operator : JC/MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 9 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 ICVVX070225

Quant Time: Jul 03 05:55:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:51:11 2025
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	Pentafluorobenzene	50.000	50.000	0.0	102	0.00
2 T	Dichlorodifluoromethane	50.000	49.661	0.7	100	0.00
3 P	Chloromethane	50.000	48.967	2.1	103	0.00
4 C	Vinyl Chloride	50.000	48.733	2.5#	103	0.00
5 T	Bromomethane	50.000	51.285	-2.6	107	0.00
6 T	Chloroethane	50.000	46.751	6.5	104	0.00
7 T	Trichlorofluoromethane	50.000	49.325	1.3	103	0.00
8 T	Diethyl Ether	50.000	49.670	0.7	104	0.00
9 T	1,1,2-Trichlorotrifluoroeth	50.000	49.499	1.0	103	0.00
10 T	Methyl Iodide	50.000	50.021	-0.0	99	0.00
11 T	Tert butyl alcohol	250.000	266.531	-6.6	112	0.00
12 CM	1,1-Dichloroethene	50.000	48.521	3.0#	103	0.00
13 T	Acrolein	250.000	242.250	3.1	104	0.00
14 T	Allyl chloride	50.000	49.549	0.9	104	0.00
15 T	Acrylonitrile	250.000	255.809	-2.3	106	0.00
16 T	Acetone	250.000	243.622	2.6	106	0.00
17 T	Carbon Disulfide	50.000	46.842	6.3	101	0.00
18 T	Methyl Acetate	50.000	53.354	-6.7	107	0.00
19 T	Methyl tert-butyl Ether	50.000	52.199	-4.4	107	0.00
20 T	Methylene Chloride	50.000	49.097	1.8	104	0.00
21 T	trans-1,2-Dichloroethene	50.000	49.334	1.3	103	0.00
22 T	Diisopropyl ether	50.000	51.568	-3.1	103	0.00
23 T	Vinyl Acetate	250.000	264.173	-5.7	106	0.00
24 P	1,1-Dichloroethane	50.000	49.449	1.1	103	0.00
25 T	2-Butanone	250.000	261.552	-4.6	106	0.00
26 T	2,2-Dichloropropane	50.000	49.351	1.3	105	0.00
27 T	cis-1,2-Dichloroethene	50.000	48.630	2.7	102	0.00
28 T	Bromochloromethane	50.000	50.232	-0.5	102	0.00
29 T	Tetrahydrofuran	250.000	267.272	-6.9	109	0.00
30 C	Chloroform	50.000	48.348	3.3#	102	0.00
31 T	Cyclohexane	50.000	49.328	1.3	104	0.00
32 T	1,1,1-Trichloroethane	50.000	49.101	1.8	103	0.00
33 S	1,2-Dichloroethane-d4	50.000	48.819	2.4	102	0.00
34 I	1,4-Difluorobenzene	50.000	50.000	0.0	102	0.00
35 S	Dibromofluoromethane	50.000	50.377	-0.8	102	0.00
36 T	1,1-Dichloropropene	50.000	49.261	1.5	104	0.00
37 T	Ethyl Acetate	50.000	48.151	3.7	106	0.00
38 T	Carbon Tetrachloride	50.000	49.327	1.3	102	0.00
39 T	Methylcyclohexane	50.000	50.747	-1.5	104	0.00
40 TM	Benzene	50.000	49.375	1.3	102	0.00
41 T	Methacrylonitrile	50.000	54.246	-8.5	108	0.00
42 TM	1,2-Dichloroethane	50.000	49.110	1.8	102	0.00
43 T	Isopropyl Acetate	50.000	53.586	-7.2	105	0.00
44 TM	Trichloroethene	50.000	48.321	3.4	103	0.00
45 C	1,2-Dichloropropane	50.000	49.920	0.2#	103	0.00
46 T	Dibromomethane	50.000	49.494	1.0	102	0.00
47 T	Bromodichloromethane	50.000	49.516	1.0	102	0.00
48 T	Methyl methacrylate	50.000	54.886	-9.8	107	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
 Data File : VX046867.D
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 Operator : JC/MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 9 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 ICVVX070225

Quant Time: Jul 03 05:55:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:51:11 2025
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
49 T	1,4-Dioxane	1000.000	1081.463	-8.1	108	0.00
50 S	Toluene-d8	50.000	50.047	-0.1	102	0.00
51 T	4-Methyl-2-Pentanone	250.000	270.137	-8.1	106	0.00
52 CM	Toluene	50.000	50.028	-0.1#	104	0.00
53 T	t-1,3-Dichloropropene	50.000	52.871	-5.7	105	0.00
54 T	cis-1,3-Dichloropropene	50.000	52.010	-4.0	104	0.00
55 T	1,1,2-Trichloroethane	50.000	49.876	0.2	102	0.00
56 T	Ethyl methacrylate	50.000	54.511	-9.0	107	0.00
57 T	1,3-Dichloropropane	50.000	49.728	0.5	103	0.00
58 T	2-Chloroethyl Vinyl ether	250.000	268.488	-7.4	102	0.00
59 T	2-Hexanone	250.000	277.453	-11.0	107	0.00
60 T	Dibromochloromethane	50.000	50.089	-0.2	103	0.00
61 T	1,2-Dibromoethane	50.000	51.219	-2.4	104	0.00
62 S	4-Bromofluorobenzene	50.000	50.818	-1.6	103	0.00
63 I	Chlorobenzene-d5	50.000	50.000	0.0	102	0.00
64 T	Tetrachloroethene	50.000	47.773	4.5	103	0.00
65 PM	Chlorobenzene	50.000	49.208	1.6	103	0.00
66 T	1,1,1,2-Tetrachloroethane	50.000	49.975	0.0	103	0.00
67 C	Ethyl Benzene	50.000	49.829	0.3#	103	0.00
68 T	m/p-Xylenes	100.000	99.238	0.8	102	0.00
69 T	o-Xylene	50.000	49.809	0.4	103	0.00
70 T	Styrene	50.000	50.903	-1.8	102	0.00
71 P	Bromoform	50.000	49.651	0.7	101	0.00
72 I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	103	0.00
73 T	Isopropylbenzene	50.000	50.742	-1.5	102	0.00
74 T	N-ethyl acetate	50.000	54.674	-9.3	106	0.00
75 P	1,1,2,2-Tetrachloroethane	50.000	50.612	-1.2	105	0.00
76 T	1,2,3-Trichloropropane	50.000	51.422	-2.8	104	0.00
77 T	Bromobenzene	50.000	49.363	1.3	102	0.00
78 T	n-propylbenzene	50.000	50.231	-0.5	102	0.00
79 T	2-Chlorotoluene	50.000	49.268	1.5	102	0.00
80 T	1,3,5-Trimethylbenzene	50.000	51.418	-2.8	104	0.00
81 T	trans-1,4-Dichloro-2-butene	50.000	52.240	-4.5	106	0.00
82 T	4-Chlorotoluene	50.000	50.483	-1.0	103	0.00
83 T	tert-Butylbenzene	50.000	50.916	-1.8	103	0.00
84 T	1,2,4-Trimethylbenzene	50.000	50.428	-0.9	102	0.00
85 T	sec-Butylbenzene	50.000	50.429	-0.9	102	0.00
86 T	p-Isopropyltoluene	50.000	50.577	-1.2	103	0.00
87 T	1,3-Dichlorobenzene	50.000	49.558	0.9	103	0.00
88 T	1,4-Dichlorobenzene	50.000	47.821	4.4	103	0.00
89 T	n-Butylbenzene	50.000	50.753	-1.5	103	0.00
90 T	Hexachloroethane	50.000	49.965	0.1	103	0.00
91 T	1,2-Dichlorobenzene	50.000	48.553	2.9	101	0.00
92 T	1,2-Dibromo-3-Chloropropane	50.000	52.171	-4.3	107	0.00
93 T	1,2,4-Trichlorobenzene	50.000	50.729	-1.5	104	0.00
94 T	Hexachlorobutadiene	50.000	52.667	-5.3	108	0.00
95 T	Naphthalene	50.000	54.014	-8.0	104	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
Data File : VX046867.D
Acq On : 02 Jul 2025 15:14
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX070225

Quant Time: Jul 03 05:55:49 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:51:11 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
96 T	1,2,3-Trichlorobenzene	50.000	50.881	-1.8	102	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 6



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name:	<u>Alliance</u>	Contract:	<u>TACO01</u>
Lab Code:	<u>ACE</u>	SDG No.:	<u>Q2600</u>
Instrument ID:	<u>MSVOA_X</u>	Calibration Date/Time:	<u>07/16/2025</u> <u>09:26</u>
Lab File ID:	<u>VX047016.D</u>	Init. Calib. Date(s):	<u>07/02/2025</u> <u>07/02/2025</u>
Heated Purge: (Y/N)	<u>N</u>	Init. Calib. Time(s):	<u>12:11</u> <u>14:31</u>
GC Column:	<u>DB-624UI</u>	ID:	<u>0.18</u> (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Vinyl Chloride	0.569	0.550		-3.34	20
1,1-Dichloroethene	0.542	0.535		-1.29	20
2-Butanone	0.274	0.363		32.48	20
Carbon Tetrachloride	0.484	0.468		-3.31	20
Chloroform	1.087	1.131		4.05	20
Benzene	1.385	1.335		-3.61	20
1,2-Dichloroethane	0.470	0.485		3.19	20
Trichloroethene	0.361	0.334		-7.48	20
Tetrachloroethene	0.333	0.298		-10.51	20
Chlorobenzene	1.081	1.054	0.3	-2.5	20
1,2-Dichloroethane-d4	0.661	0.692		4.69	20
Dibromofluoromethane	0.339	0.335		-1.18	20
Toluene-d8	1.197	1.120		-6.43	20
4-Bromofluorobenzene	0.455	0.448		-1.54	20

All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
 Data File : VX047016.D
 Acq On : 16 Jul 2025 09:26
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDCCC050

Manual Integrations
 APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025
 Supervised By :Semsettin Yesilyurt 07/17/2025

Quant Time: Jul 17 03:26:37 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:51:11 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	5.556	168	329194	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.763	114	557691	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.055	117	489553	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	242580	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.958	65	227784	52.377	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 104.760%			
35) Dibromofluoromethane	5.391	113	186872	49.364	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 98.720%			
50) Toluene-d8	8.647	98	624373	46.747	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery = 93.500%			
62) 4-Bromofluorobenzene	11.079	95	249828	49.215	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery = 98.440%			
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.179	85	150869	47.921	ug/l	98
3) Chloromethane	1.307	50	160931	46.787	ug/l	97
4) Vinyl Chloride	1.386	62	181170	48.367	ug/l	98
5) Bromomethane	1.618	94	108692	45.161	ug/l	98
6) Chloroethane	1.697	64	119884	48.469	ug/l	97
7) Trichlorofluoromethane	1.904	101	295330	50.991	ug/l	99
8) Diethyl Ether	2.148	74	112682	54.670	ug/l	98
9) 1,1,2-Trichlorotrifluo...	2.343	101	189580	51.369	ug/l	100
10) Methyl Iodide	2.465	142	172862	42.993	ug/l	95
11) Tert butyl alcohol	2.959	59	110234	386.477	ug/l	99
12) 1,1-Dichloroethene	2.331	96	176000	49.305	ug/l	95
13) Acrolein	2.245	56	84732	268.622	ug/l	98
14) Allyl chloride	2.678	41	336939	53.017	ug/l	99
15) Acrylonitrile	3.068	53	505824	306.730	ug/l	100
16) Acetone	2.386	43	412201	305.134	ug/l	95
17) Carbon Disulfide	2.526	76	363615	38.842	ug/l	98
18) Methyl Acetate	2.715	43	266331	74.800	ug/l	97
19) Methyl tert-butyl Ether	3.123	73	606375	60.153	ug/l	95
20) Methylene Chloride	2.800	84	203157	50.858	ug/l	99
21) trans-1,2-Dichloroethene	3.105	96	177141	48.496	ug/l	98
22) Diisopropyl ether	3.770	45	700243	57.031	ug/l	98
23) Vinyl Acetate	3.727	43	2623382	285.194	ug/l	99
24) 1,1-Dichloroethane	3.617	63	367114	52.427	ug/l	99
25) 2-Butanone	4.556	43	596838	331.149	ug/l	98
26) 2,2-Dichloropropane	4.483	77	276849	53.124	ug/l	99
27) cis-1,2-Dichloroethene	4.495	96	228023	51.130	ug/l	97
28) Bromochloromethane	4.904	49	184178	53.294	ug/l	97
29) Tetrahydrofuran	5.007	42	374504	325.963	ug/l	99
30) Chloroform	5.099	83	372241	52.033	ug/l	99
31) Cyclohexane	5.483	56	291459	46.885	ug/l	100
32) 1,1,1-Trichloroethane	5.391	97	313916	52.522	ug/l	99
36) 1,1-Dichloropropene	5.696	75	239871	46.963	ug/l	99
37) Ethyl Acetate	4.721	43	240378	55.256	ug/l	100
38) Carbon Tetrachloride	5.678	117	261207	48.373	ug/l	97
39) Methylcyclohexane	7.385	83	283537	44.378	ug/l	99
40) Benzene	6.044	78	744412	48.186	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
 Data File : VX047016.D
 Acq On : 16 Jul 2025 09:26
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDCCC050

Manual Integrations
 APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025
 Supervised By :Semsettin Yesilyurt 07/17/2025

Quant Time: Jul 17 03:26:37 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:51:11 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.922	41	146638	63.189	ug/l	96
42) 1,2-Dichloroethane	6.092	62	270721	51.606	ug/l	100
43) Isopropyl Acetate	6.342	43	411807	61.803	ug/l	99
44) Trichloroethene	7.129	130	186538	46.385	ug/l	100
45) 1,2-Dichloropropane	7.434	63	196465	50.335	ug/l	99
46) Dibromomethane	7.580	93	137353	50.790	ug/l	98
47) Bromodichloromethane	7.824	83	288758	50.006	ug/l	100
48) Methyl methacrylate	7.690	41	211715	61.535	ug/l	98
49) 1,4-Dioxane	7.659	88	53387	1339.175	ug/l	98
51) 4-Methyl-2-Pentanone	8.574	43	1245013	316.598	ug/l	99
52) Toluene	8.720	92	454929	47.521	ug/l	99
53) t-1,3-Dichloropropene	8.976	75	273466	53.065	ug/l	99
54) cis-1,3-Dichloropropene	8.366	75	302907	51.495	ug/l	99
55) 1,1,2-Trichloroethane	9.153	97	184006	51.604	ug/l	99
56) Ethyl methacrylate	9.116	69	291041	58.971	ug/l	97
57) 1,3-Dichloropropane	9.305	76	314115	51.159	ug/l	100
58) 2-Chloroethyl Vinyl ether	8.238	63	794246	285.619	ug/l	99
59) 2-Hexanone	9.427	43	851908	326.601	ug/l	99
60) Dibromochloromethane	9.519	129	212976	49.909	ug/l	98
61) 1,2-Dibromoethane	9.610	107	181210	50.601	ug/l	99
64) Tetrachloroethene	9.275	164	145870	44.753	ug/l	97
65) Chlorobenzene	10.079	112	516158	48.766	ug/l	100
66) 1,1,1,2-Tetrachloroethane	10.159	131	178154	50.070	ug/l	99
67) Ethyl Benzene	10.189	91	893535	49.296	ug/l	99
68) m/p-Xylenes	10.299	106	659982	96.627	ug/l	97
69) o-Xylene	10.640	106	326625	49.506	ug/l	100
70) Styrene	10.653	104	573036	50.765	ug/l	98
71) Bromoform	10.799	173	137554	51.994	ug/l #	99
73) Isopropylbenzene	10.957	105	877270	51.445	ug/l	99
74) N-amyl acetate	10.841	43	362904	62.627	ug/l	98
75) 1,1,2,2-Tetrachloroethane	11.207	83	262516	55.985	ug/l	100
76) 1,2,3-Trichloropropane	11.238	75	214158m	57.136	ug/l	
77) Bromobenzene	11.195	156	209727	49.376	ug/l	95
78) n-propylbenzene	11.299	91	1031313	50.156	ug/l	100
79) 2-Chlorotoluene	11.360	91	618288	50.925	ug/l	98
80) 1,3,5-Trimethylbenzene	11.451	105	709704	51.220	ug/l	99
81) trans-1,4-Dichloro-2-b...	11.018	75	79380	56.831	ug/l	98
82) 4-Chlorotoluene	11.451	91	716382	51.130	ug/l	99
83) tert-Butylbenzene	11.713	119	733272	51.238	ug/l	99
84) 1,2,4-Trimethylbenzene	11.750	105	710408	50.725	ug/l	95
85) sec-Butylbenzene	11.890	105	900054	49.882	ug/l	100
86) p-Isopropyltoluene	12.006	119	752885	49.827	ug/l	99
87) 1,3-Dichlorobenzene	11.969	146	390135	49.111	ug/l	98
88) 1,4-Dichlorobenzene	12.036	146	394339	47.697	ug/l	99
89) n-Butylbenzene	12.329	91	697969	49.161	ug/l	99
90) Hexachloroethane	12.536	117	129831	48.469	ug/l	96
91) 1,2-Dichlorobenzene	12.335	146	379822	49.340	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	12.939	75	50868	62.024	ug/l	93
93) 1,2,4-Trichlorobenzene	13.585	180	258543	49.437	ug/l	100
94) Hexachlorobutadiene	13.725	225	84355	42.770	ug/l	99
95) Naphthalene	13.774	128	793570	57.585	ug/l	100
96) 1,2,3-Trichlorobenzene	13.957	180	246683	49.921	ug/l	97

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
Data File : VX047016.D
Acq On : 16 Jul 2025 09:26
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDCCC050

Manual Integrations
APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025
Supervised By :Semsettin Yesilyurt 07/17/2025

Quant Time: Jul 17 03:26:37 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:51:11 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
 Data File : VX047016.D
 Acq On : 16 Jul 2025 09:26
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :

MSVOA_X

ClientSampleId :

VSTDCCC050

Manual Integrations**APPROVED**

Reviewed By :Mahesh Dadoda 07/17/2025
 Supervised By :Semsettin Yesilyurt 07/17/2025

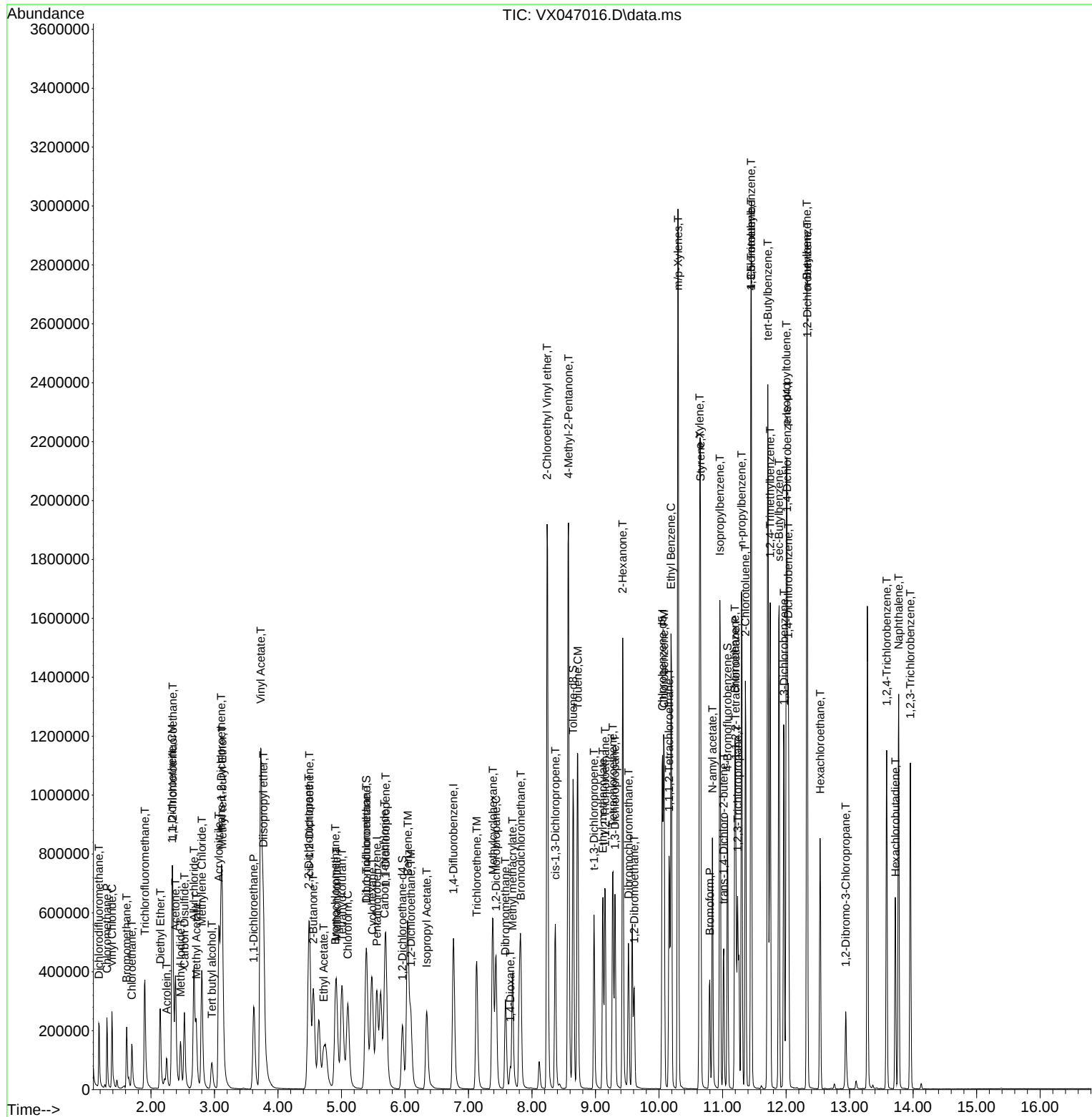
Quant Time: Jul 17 03:26:37 2025

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M

Quant Title : SW846 8260

QLast Update : Thu Jul 03 05:51:11 2025

Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
 Data File : VX047016.D
 Acq On : 16 Jul 2025 09:26
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_X
 LabSampleId :
 VSTDCCC050

Quant Time: Jul 17 03:26:37 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:51:11 2025
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Pentafluorobenzene	1.000	1.000	0.0	89	0.00
2 T	Dichlorodifluoromethane	0.478	0.458	4.2	84	0.00
3 P	Chloromethane	0.522	0.489	6.3	86	0.00
4 C	Vinyl Chloride	0.569	0.550	3.3#	89	0.00
5 T	Bromomethane	0.366	0.330	9.8	82	0.00
6 T	Chloroethane	0.376	0.364	3.2	94	0.00
7 T	Trichlorofluoromethane	0.880	0.897	-1.9	94	0.00
8 T	Diethyl Ether	0.313	0.342	-9.3	101	0.00
9 T	1,1,2-Trichlorotrifluoroeth	0.561	0.576	-2.7	94	0.00
10 T	Methyl Iodide	0.611	0.525	14.1	74	0.00
11 T	Tert butyl alcohol	0.043	0.067	-55.8#	142	0.00
12 CM	1,1-Dichloroethene	0.542	0.535	1.3#	91	0.00
13 T	Acrolein	0.052	0.051	1.9	101	0.00
14 T	Allyl chloride	0.965	1.024	-6.1	97	0.00
15 T	Acrylonitrile	0.250	0.307	-22.8	112	0.00
16 T	Acetone	0.205	0.250	-22.0	116	0.00
17 T	Carbon Disulfide	1.422	1.105	22.3	74	0.00
18 T	Methyl Acetate	0.541	0.809	-49.5#	131	0.00
19 T	Methyl tert-butyl Ether	1.531	1.842	-20.3	108	0.00
20 T	Methylene Chloride	0.607	0.617	-1.6	94	0.00
21 T	trans-1,2-Dichloroethene	0.555	0.538	3.1	89	0.00
22 T	Diisopropyl ether	1.865	2.127	-14.0	100	0.00
23 T	Vinyl Acetate	1.397	1.594	-14.1	100	0.00
24 P	1,1-Dichloroethane	1.064	1.115	-4.8	96	0.00
25 T	2-Butanone	0.274	0.363	-32.5#	118	0.00
26 T	2,2-Dichloropropane	0.792	0.841	-6.2	99	0.00
27 T	cis-1,2-Dichloroethene	0.677	0.693	-2.4	94	0.00
28 T	Bromochloromethane	0.525	0.559	-6.5	95	0.00
29 T	Tetrahydrofuran	0.175	0.228	-30.3#	116	0.00
30 C	Chloroform	1.087	1.131	-4.0#	96	0.00
31 T	Cyclohexane	0.944	0.885	6.2	86	0.00
32 T	1,1,1-Trichloroethane	0.908	0.954	-5.1	96	0.00
33 S	1,2-Dichloroethane-d4	0.661	0.692	-4.7	96	0.00
34 I	1,4-Difluorobenzene	1.000	1.000	0.0	93	0.00
35 S	Dibromofluoromethane	0.339	0.335	1.2	92	0.00
36 T	1,1-Dichloropropene	0.458	0.430	6.1	91	0.00
37 T	Ethyl Acetate	0.390	0.431	-10.5	111	0.00
38 T	Carbon Tetrachloride	0.484	0.468	3.3	91	-0.01
39 T	Methylcyclohexane	0.573	0.508	11.3	83	0.00
40 TM	Benzene	1.385	1.335	3.6	91	0.00
41 T	Methacrylonitrile	0.208	0.263	-26.4#	115	0.00
42 TM	1,2-Dichloroethane	0.470	0.485	-3.2	98	0.00
43 T	Isopropyl Acetate	0.597	0.738	-23.6	111	0.00
44 TM	Trichloroethene	0.361	0.334	7.5	90	0.00
45 C	1,2-Dichloropropane	0.350	0.352	-0.6#	95	0.00
46 T	Dibromomethane	0.242	0.246	-1.7	95	0.00
47 T	Bromodichloromethane	0.518	0.518	0.0	94	0.00
48 T	Methyl methacrylate	0.308	0.380	-23.4	109	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
 Data File : VX047016.D
 Acq On : 16 Jul 2025 09:26
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_X
 LabSampleId :
 VSTDCCC050

Quant Time: Jul 17 03:26:37 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:51:11 2025
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
49 T	1,4-Dioxane	0.004	0.005	-25.0	122	0.00
50 S	Toluene-d8	1.197	1.120	6.4	87	0.00
51 T	4-Methyl-2-Pentanone	0.353	0.446	-26.3#	113	0.00
52 CM	Toluene	0.858	0.816	4.9#	90	0.00
53 T	t-1,3-Dichloropropene	0.462	0.490	-6.1	96	0.00
54 T	cis-1,3-Dichloropropene	0.527	0.543	-3.0	94	0.00
55 T	1,1,2-Trichloroethane	0.320	0.330	-3.1	96	0.00
56 T	Ethyl methacrylate	0.442	0.522	-18.1	105	0.00
57 T	1,3-Dichloropropane	0.550	0.563	-2.4	97	0.00
58 T	2-Chloroethyl Vinyl ether	0.249	0.285	-14.5	99	0.00
59 T	2-Hexanone	0.234	0.306	-30.8#	115	0.00
60 T	Dibromochloromethane	0.383	0.382	0.3	94	0.00
61 T	1,2-Dibromoethane	0.321	0.325	-1.2	94	0.00
62 S	4-Bromofluorobenzene	0.455	0.448	1.5	91	0.00
63 I	Chlorobenzene-d5	1.000	1.000	0.0	91	0.00
64 T	Tetrachloroethene	0.333	0.298	10.5	86	0.00
65 PM	Chlorobenzene	1.081	1.054	2.5	91	0.00
66 T	1,1,1,2-Tetrachloroethane	0.363	0.364	-0.3	92	0.00
67 C	Ethyl Benzene	1.851	1.825	1.4#	90	0.00
68 T	m/p-Xylenes	0.698	0.674	3.4	89	0.00
69 T	o-Xylene	0.674	0.667	1.0	91	0.00
70 T	Styrene	1.153	1.171	-1.6	90	0.00
71 P	Bromoform	0.270	0.281	-4.1	95	0.00
72 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	91	0.00
73 T	Isopropylbenzene	3.515	3.616	-2.9	91	0.00
74 T	N-amyl acetate	1.194	1.496	-25.3#	107	0.00
75 P	1,1,2,2-Tetrachloroethane	0.966	1.082	-12.0	102	0.00
76 T	1,2,3-Trichloropropane	0.773	0.883	-14.2	102	0.00
77 T	Bromobenzene	0.875	0.865	1.1	90	0.00
78 T	n-propylbenzene	4.238	4.251	-0.3	90	0.00
79 T	2-Chlorotoluene	2.503	2.549	-1.8	93	0.00
80 T	1,3,5-Trimethylbenzene	2.856	2.926	-2.5	91	0.00
81 T	trans-1,4-Dichloro-2-butene	0.288	0.327	-13.5	102	0.00
82 T	4-Chlorotoluene	2.888	2.953	-2.3	92	0.00
83 T	tert-Butylbenzene	2.950	3.023	-2.5	91	0.00
84 T	1,2,4-Trimethylbenzene	2.887	2.929	-1.5	90	0.00
85 T	sec-Butylbenzene	3.719	3.710	0.2	89	0.00
86 T	p-Isopropyltoluene	3.114	3.104	0.3	89	0.00
87 T	1,3-Dichlorobenzene	1.637	1.608	1.8	90	0.00
88 T	1,4-Dichlorobenzene	1.704	1.626	4.6	91	0.00
89 T	n-Butylbenzene	2.926	2.877	1.7	88	0.00
90 T	Hexachloroethane	0.552	0.535	3.1	88	0.00
91 T	1,2-Dichlorobenzene	1.587	1.566	1.3	91	0.00
92 T	1,2-Dibromo-3-Chloropropane	0.169	0.210	-24.3	112	0.00
93 T	1,2,4-Trichlorobenzene	1.078	1.066	1.1	89	0.00
94 T	Hexachlorobutadiene	0.407	0.348	14.5	77	0.00
95 T	Naphthalene	2.840	3.271	-15.2	98	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
Data File : VX047016.D
Acq On : 16 Jul 2025 09:26
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Jul 17 03:26:37 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:51:11 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
96 T	1,2,3-Trichlorobenzene	1.019	1.017	0.2	89	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 6

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
 Data File : VX047016.D
 Acq On : 16 Jul 2025 09:26
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_X
 LabSampleId :
 VSTDCCC050

Quant Time: Jul 17 03:26:37 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:51:11 2025
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	Pentafluorobenzene	50.000	50.000	0.0	89	0.00
2 T	Dichlorodifluoromethane	50.000	47.921	4.2	84	0.00
3 P	Chloromethane	50.000	46.787	6.4	86	0.00
4 C	Vinyl Chloride	50.000	48.367	3.3#	89	0.00
5 T	Bromomethane	50.000	45.161	9.7	82	0.00
6 T	Chloroethane	50.000	48.469	3.1	94	0.00
7 T	Trichlorofluoromethane	50.000	50.991	-2.0	94	0.00
8 T	Diethyl Ether	50.000	54.670	-9.3	101	0.00
9 T	1,1,2-Trichlorotrifluoroeth	50.000	51.369	-2.7	94	0.00
10 T	Methyl Iodide	50.000	42.993	14.0	74	0.00
11 T	Tert butyl alcohol	250.000	386.477	-54.6#	142	0.00
12 CM	1,1-Dichloroethene	50.000	49.305	1.4#	91	0.00
13 T	Acrolein	250.000	268.622	-7.4	101	0.00
14 T	Allyl chloride	50.000	53.017	-6.0	97	0.00
15 T	Acrylonitrile	250.000	306.730	-22.7	112	0.00
16 T	Acetone	250.000	305.134	-22.1	116	0.00
17 T	Carbon Disulfide	50.000	38.842	22.3	74	0.00
18 T	Methyl Acetate	50.000	74.800	-49.6#	131	0.00
19 T	Methyl tert-butyl Ether	50.000	60.153	-20.3	108	0.00
20 T	Methylene Chloride	50.000	50.858	-1.7	94	0.00
21 T	trans-1,2-Dichloroethene	50.000	48.496	3.0	89	0.00
22 T	Diisopropyl ether	50.000	57.031	-14.1	100	0.00
23 T	Vinyl Acetate	250.000	285.194	-14.1	100	0.00
24 P	1,1-Dichloroethane	50.000	52.427	-4.9	96	0.00
25 T	2-Butanone	250.000	331.149	-32.5#	118	0.00
26 T	2,2-Dichloropropane	50.000	53.124	-6.2	99	0.00
27 T	cis-1,2-Dichloroethene	50.000	51.130	-2.3	94	0.00
28 T	Bromochloromethane	50.000	53.294	-6.6	95	0.00
29 T	Tetrahydrofuran	250.000	325.963	-30.4#	116	0.00
30 C	Chloroform	50.000	52.033	-4.1#	96	0.00
31 T	Cyclohexane	50.000	46.885	6.2	86	0.00
32 T	1,1,1-Trichloroethane	50.000	52.522	-5.0	96	0.00
33 S	1,2-Dichloroethane-d4	50.000	52.377	-4.8	96	0.00
34 I	1,4-Difluorobenzene	50.000	50.000	0.0	93	0.00
35 S	Dibromofluoromethane	50.000	49.364	1.3	92	0.00
36 T	1,1-Dichloropropene	50.000	46.963	6.1	91	0.00
37 T	Ethyl Acetate	50.000	55.256	-10.5	111	0.00
38 T	Carbon Tetrachloride	50.000	48.373	3.3	91	-0.01
39 T	Methylcyclohexane	50.000	44.378	11.2	83	0.00
40 TM	Benzene	50.000	48.186	3.6	91	0.00
41 T	Methacrylonitrile	50.000	63.189	-26.4#	115	0.00
42 TM	1,2-Dichloroethane	50.000	51.606	-3.2	98	0.00
43 T	Isopropyl Acetate	50.000	61.803	-23.6	111	0.00
44 TM	Trichloroethene	50.000	46.385	7.2	90	0.00
45 C	1,2-Dichloropropane	50.000	50.335	-0.7#	95	0.00
46 T	Dibromomethane	50.000	50.790	-1.6	95	0.00
47 T	Bromodichloromethane	50.000	50.006	-0.0	94	0.00
48 T	Methyl methacrylate	50.000	61.535	-23.1	109	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
 Data File : VX047016.D
 Acq On : 16 Jul 2025 09:26
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_X
 LabSampleId :
 VSTDCCC050

Quant Time: Jul 17 03:26:37 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:51:11 2025
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
49 T	1,4-Dioxane	1000.000	1339.175	-33.9#	122	0.00
50 S	Toluene-d8	50.000	46.747	6.5	87	0.00
51 T	4-Methyl-2-Pentanone	250.000	316.598	-26.6#	113	0.00
52 CM	Toluene	50.000	47.521	5.0#	90	0.00
53 T	t-1,3-Dichloropropene	50.000	53.065	-6.1	96	0.00
54 T	cis-1,3-Dichloropropene	50.000	51.495	-3.0	94	0.00
55 T	1,1,2-Trichloroethane	50.000	51.604	-3.2	96	0.00
56 T	Ethyl methacrylate	50.000	58.971	-17.9	105	0.00
57 T	1,3-Dichloropropane	50.000	51.159	-2.3	97	0.00
58 T	2-Chloroethyl Vinyl ether	250.000	285.619	-14.2	99	0.00
59 T	2-Hexanone	250.000	326.601	-30.6#	115	0.00
60 T	Dibromochloromethane	50.000	49.909	0.2	94	0.00
61 T	1,2-Dibromoethane	50.000	50.601	-1.2	94	0.00
62 S	4-Bromofluorobenzene	50.000	49.215	1.6	91	0.00
63 I	Chlorobenzene-d5	50.000	50.000	0.0	91	0.00
64 T	Tetrachloroethene	50.000	44.753	10.5	86	0.00
65 PM	Chlorobenzene	50.000	48.766	2.5	91	0.00
66 T	1,1,1,2-Tetrachloroethane	50.000	50.070	-0.1	92	0.00
67 C	Ethyl Benzene	50.000	49.296	1.4#	90	0.00
68 T	m/p-Xylenes	100.000	96.627	3.4	89	0.00
69 T	o-Xylene	50.000	49.506	1.0	91	0.00
70 T	Styrene	50.000	50.765	-1.5	90	0.00
71 P	Bromoform	50.000	51.994	-4.0	95	0.00
72 I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	91	0.00
73 T	Isopropylbenzene	50.000	51.445	-2.9	91	0.00
74 T	N-amyl acetate	50.000	62.627	-25.3#	107	0.00
75 P	1,1,2,2-Tetrachloroethane	50.000	55.985	-12.0	102	0.00
76 T	1,2,3-Trichloropropane	50.000	57.136	-14.3	102	0.00
77 T	Bromobenzene	50.000	49.376	1.2	90	0.00
78 T	n-propylbenzene	50.000	50.156	-0.3	90	0.00
79 T	2-Chlorotoluene	50.000	50.925	-1.8	93	0.00
80 T	1,3,5-Trimethylbenzene	50.000	51.220	-2.4	91	0.00
81 T	trans-1,4-Dichloro-2-butene	50.000	56.831	-13.7	102	0.00
82 T	4-Chlorotoluene	50.000	51.130	-2.3	92	0.00
83 T	tert-Butylbenzene	50.000	51.238	-2.5	91	0.00
84 T	1,2,4-Trimethylbenzene	50.000	50.725	-1.5	90	0.00
85 T	sec-Butylbenzene	50.000	49.882	0.2	89	0.00
86 T	p-Isopropyltoluene	50.000	49.827	0.3	89	0.00
87 T	1,3-Dichlorobenzene	50.000	49.111	1.8	90	0.00
88 T	1,4-Dichlorobenzene	50.000	47.697	4.6	91	0.00
89 T	n-Butylbenzene	50.000	49.161	1.7	88	0.00
90 T	Hexachloroethane	50.000	48.469	3.1	88	0.00
91 T	1,2-Dichlorobenzene	50.000	49.340	1.3	91	0.00
92 T	1,2-Dibromo-3-Chloropropane	50.000	62.024	-24.0	112	0.00
93 T	1,2,4-Trichlorobenzene	50.000	49.437	1.1	89	0.00
94 T	Hexachlorobutadiene	50.000	42.770	14.5	77	0.00
95 T	Naphthalene	50.000	57.585	-15.2	98	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
Data File : VX047016.D
Acq On : 16 Jul 2025 09:26
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Jul 17 03:26:37 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:51:11 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
96 T	1,2,3-Trichlorobenzene	50.000	49.921	0.2	89	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 6



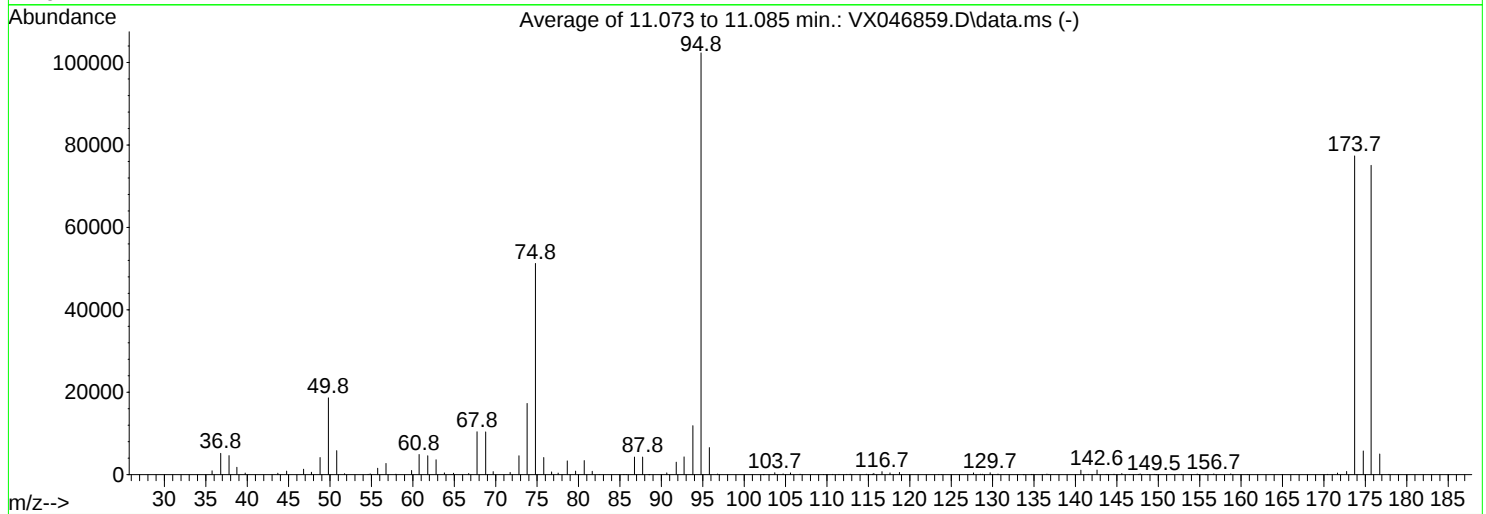
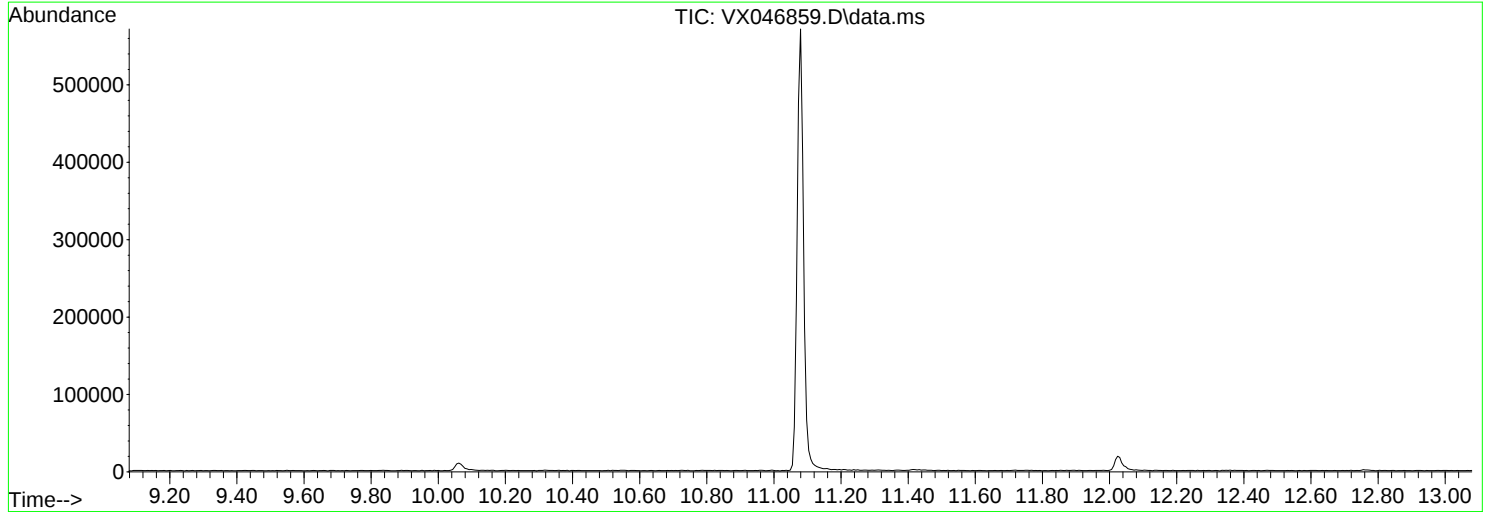
QC SAMPLE DATA

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX070225\
Data File : VX046859.D
Acq On : 02 Jul 2025 11:12
Operator : JC/MD
Sample : BFB
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
BFB

Integration File: RTEINT.P

Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Title : SW846 8260
Last Update : Thu Jul 03 05:51:11 2025



AutoFind: Scans 1638, 1639, 1640; Background Corrected with Scan 1631

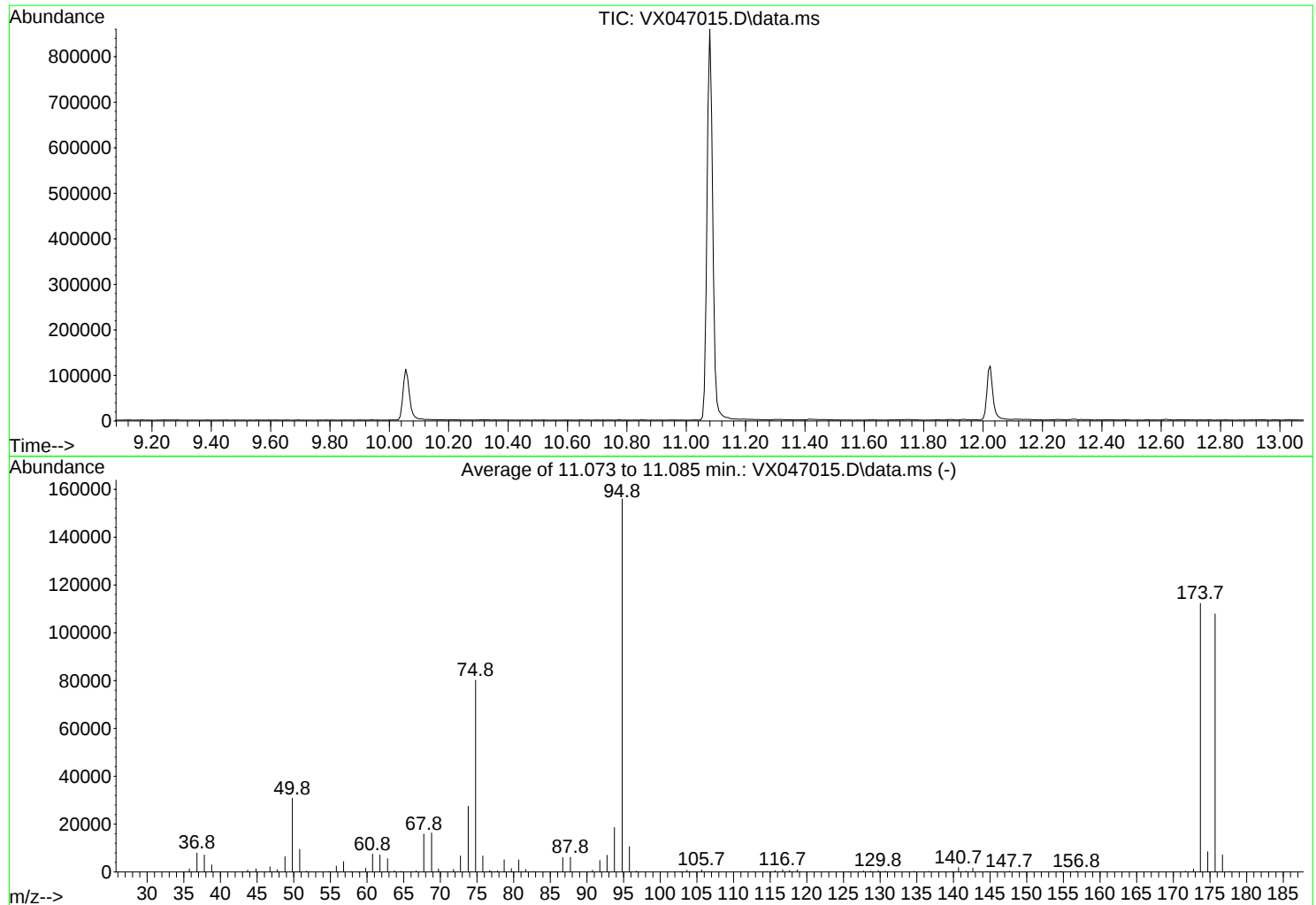
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.2	18657	PASS
75	95	30	60	50.1	51248	PASS
95	95	100	100	100.0	102357	PASS
96	95	5	9	6.4	6574	PASS
173	174	0.00	2	1.0	779	PASS
174	95	50	100	75.5	77328	PASS
175	174	5	9	7.4	5758	PASS
176	174	95	101	97.1	75051	PASS
177	176	5	9	6.7	5020	PASS

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
Data File : VX047015.D
Acq On : 16 Jul 2025 08:58
Operator : JC/MD
Sample : BFB
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
BFB

Integration File: RTEINT.P

Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Title : SW846 8260
Last Update : Thu Jul 03 05:51:11 2025



AutoFind: Scans 1638, 1639, 1640; Background Corrected with Scan 1631

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.7	30773	PASS
75	95	30	60	51.4	80213	PASS
95	95	100	100	100.0	156032	PASS
96	95	5	9	6.8	10596	PASS
173	174	0.00	2	1.0	1178	PASS
174	95	50	100	72.0	112272	PASS
175	174	5	9	7.6	8478	PASS
176	174	95	101	96.1	107928	PASS
177	176	5	9	6.6	7133	PASS

Report of Analysis

Client:	T&A Construction Inc			Date Collected:	
Project:	Kingsland Point Park Water Main			Date Received:	
Client Sample ID:	VX0716WBL01			SDG No.:	Q2600
Lab Sample ID:	VX0716WBL01			Matrix:	TCLP
Analytical Method:	8260D			% Solid:	0
Sample Wt/Vol:	5	Units:	mL	Final Vol:	5000 uL
Soil Aliquot Vol:			uL	Test:	TCLP VOA
GC Column:	DB-624UI	ID :	0.18	Level :	LOW
Prep Method :					

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
VX047018.D	1	07/16/25 10:34	VX071625

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	0.26	U	0.26	5.00	ug/L
75-35-4	1,1-Dichloroethene	0.23	U	0.23	5.00	ug/L
78-93-3	2-Butanone	0.98	U	0.98	25.0	ug/L
56-23-5	Carbon Tetrachloride	0.25	U	0.25	5.00	ug/L
67-66-3	Chloroform	0.25	U	0.25	5.00	ug/L
71-43-2	Benzene	0.15	U	0.15	5.00	ug/L
107-06-2	1,2-Dichloroethane	0.22	U	0.22	5.00	ug/L
79-01-6	Trichloroethene	0.090	U	0.090	5.00	ug/L
127-18-4	Tetrachloroethene	0.23	U	0.23	5.00	ug/L
108-90-7	Chlorobenzene	0.12	U	0.12	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	53.6		74 - 125	107%	SPK: 50
1868-53-7	Dibromofluoromethane	49.5		75 - 124	99%	SPK: 50
2037-26-5	Toluene-d8	48.1		86 - 113	96%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.5		77 - 121	105%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	325000	5.562			
540-36-3	1,4-Difluorobenzene	553000	6.769			
3114-55-4	Chlorobenzene-d5	507000	10.055			
3855-82-1	1,4-Dichlorobenzene-d4	263000	12.018			

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
 Data File : VX047018.D
 Acq On : 16 Jul 2025 10:34
 Operator : JC/MD
 Sample : VX0716WBL01
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 4 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VX0716WBL01

Quant Time: Jul 17 03:27:57 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:51:11 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	5.562	168	324808	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.769	114	553162	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.055	117	506524	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	262675	50.000	ug/l	0.00

System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.964	65	230017	53.604	ug/l	0.00
Spiked Amount	50.000	Range	78 - 117	Recovery	=	107.200%
35) Dibromofluoromethane	5.397	113	185750	49.469	ug/l	0.00
Spiked Amount	50.000	Range	75 - 124	Recovery	=	98.940%
50) Toluene-d8	8.653	98	637073	48.088	ug/l	0.00
Spiked Amount	50.000	Range	92 - 112	Recovery	=	96.180%
62) 4-Bromofluorobenzene	11.079	95	264318	52.496	ug/l	0.00
Spiked Amount	50.000	Range	83 - 123	Recovery	=	105.000%

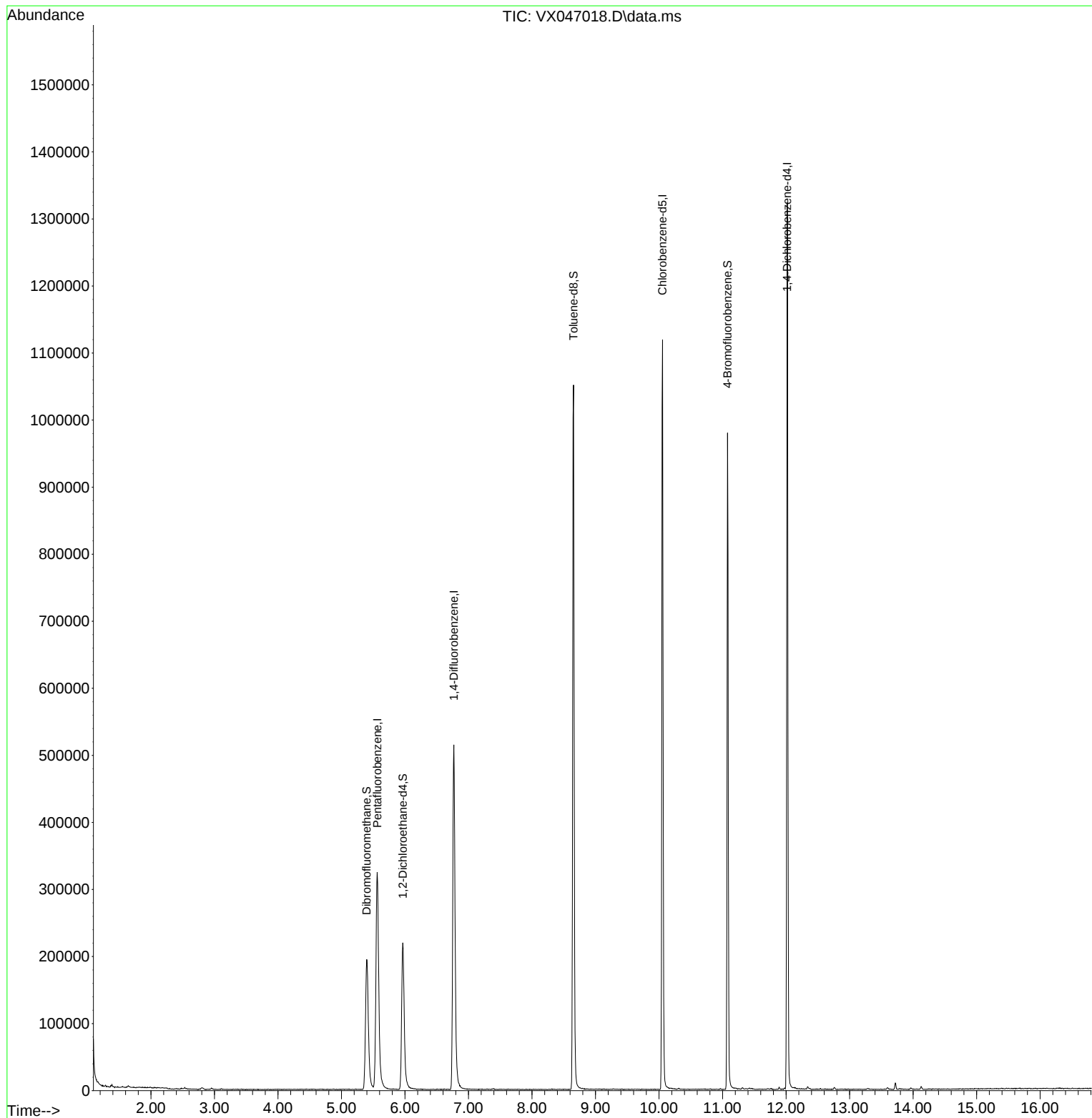
Target Compounds	Qvalue

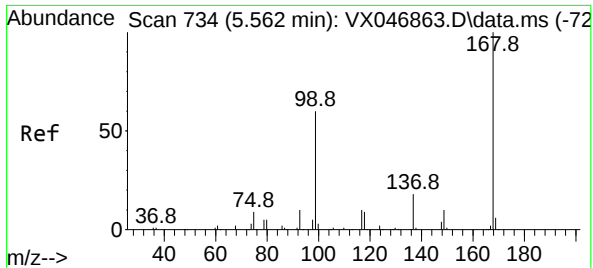
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
Data File : VX047018.D
Acq On : 16 Jul 2025 10:34
Operator : JC/MD
Sample : VX0716WBL01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX0716WBL01

Quant Time: Jul 17 03:27:57 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:51:11 2025
Response via : Initial Calibration

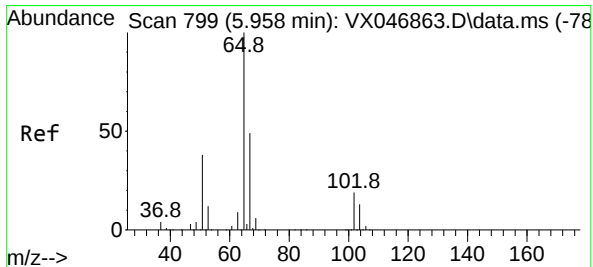
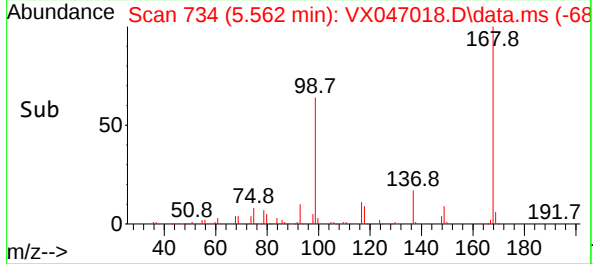
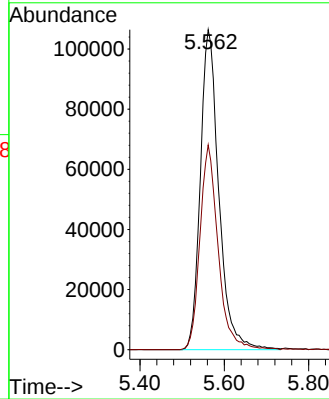
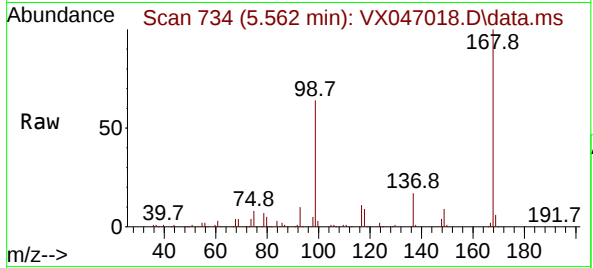




#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 5.562 min Scan# 71
Delta R.T. -0.000 min
Lab File: VX047018.D
Acq: 16 Jul 2025 10:34

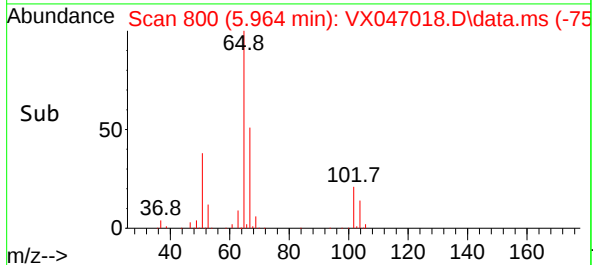
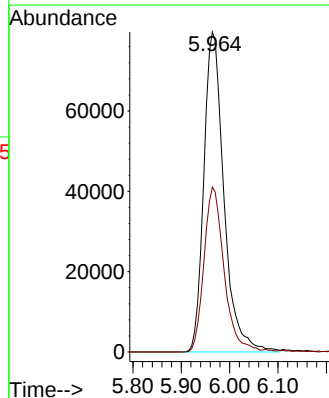
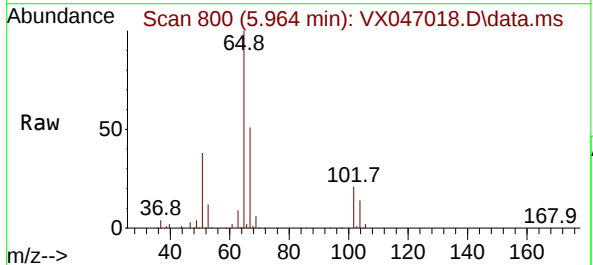
Instrument :
MSVOA_X
ClientSampleId :
VX0716WBL01

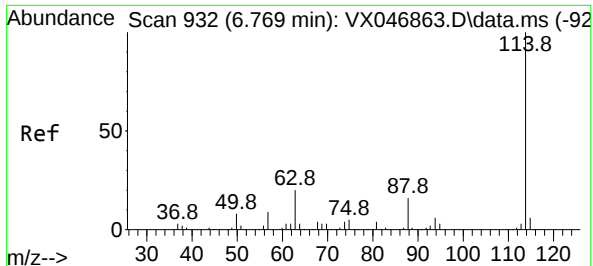
Tgt Ion:168 Resp: 324808
Ion Ratio Lower Upper
168 100
99 64.0 48.8 73.2



#33
1,2-Dichloroethane-d4
Concen: 53.604 ug/l
RT: 5.964 min Scan# 800
Delta R.T. 0.006 min
Lab File: VX047018.D
Acq: 16 Jul 2025 10:34

Tgt Ion: 65 Resp: 230017
Ion Ratio Lower Upper
65 100
67 51.5 0.0 105.2





#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 6.769 min Scan# 91

Delta R.T. -0.000 min

Lab File: VX047018.D

Acq: 16 Jul 2025 10:34

Instrument :

MSVOA_X

ClientSampleId :

VX0716WBL01

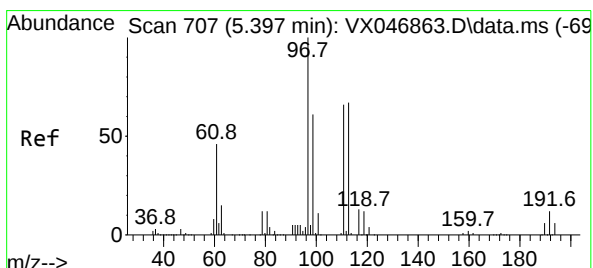
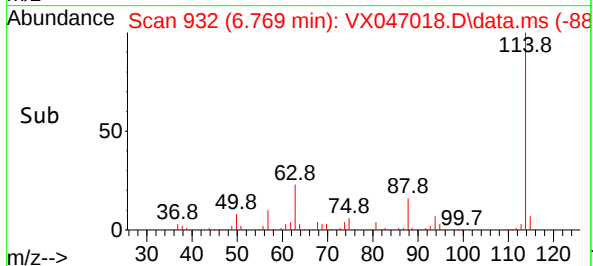
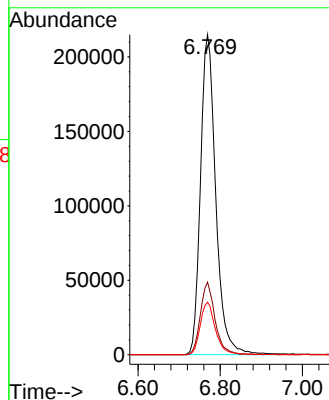
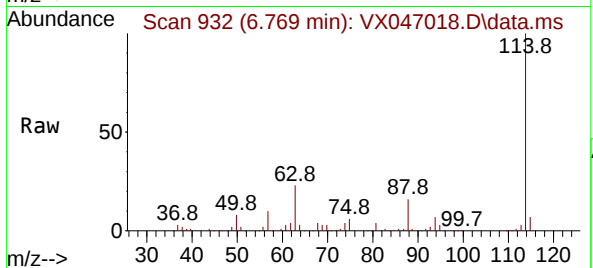
Tgt Ion:114 Resp: 553162

Ion Ratio Lower Upper

114 100

63 22.7 0.0 40.4

88 16.4 0.0 31.0



#35

Dibromofluoromethane

Concen: 49.469 ug/l

RT: 5.397 min Scan# 707

Delta R.T. -0.000 min

Lab File: VX047018.D

Acq: 16 Jul 2025 10:34

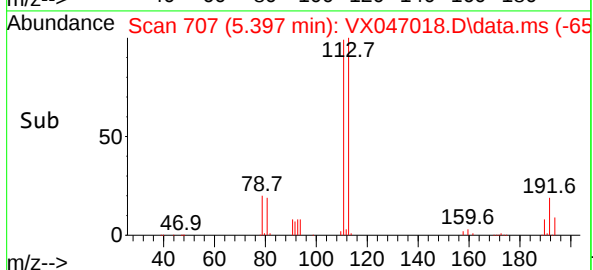
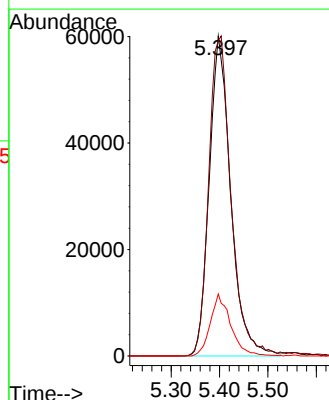
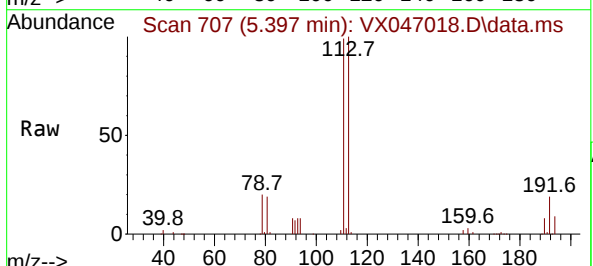
Tgt Ion:113 Resp: 185750

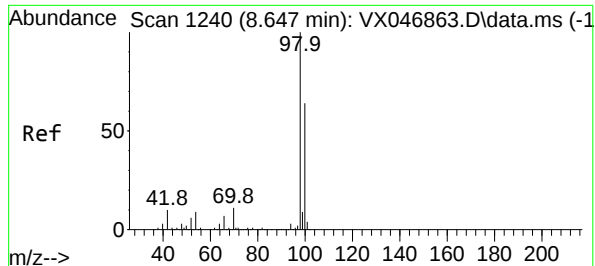
Ion Ratio Lower Upper

113 100

111 103.6 81.2 121.8

192 18.3 15.3 22.9





#50

Toluene-d8

Concen: 48.088 ug/l

RT: 8.653 min Scan# 1241

Delta R.T. 0.006 min

Lab File: VX047018.D

Acq: 16 Jul 2025 10:34

Instrument :

MSVOA_X

ClientSampleId :

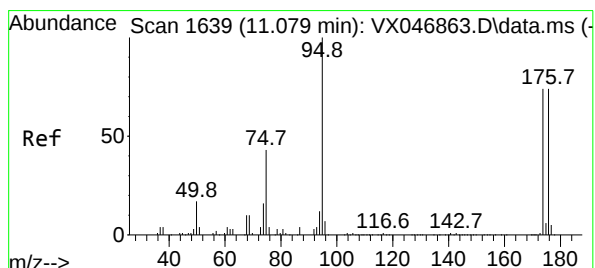
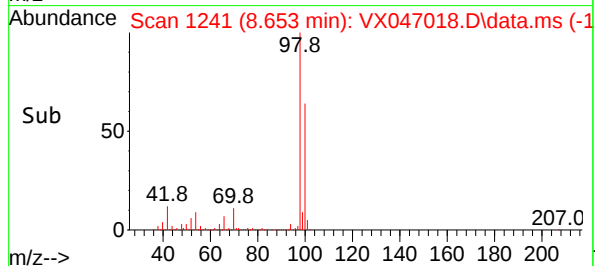
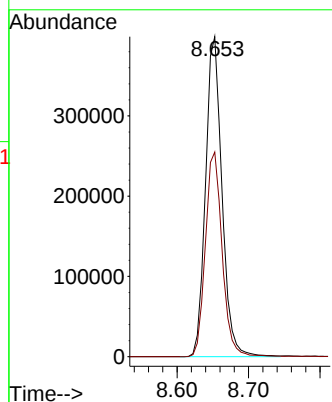
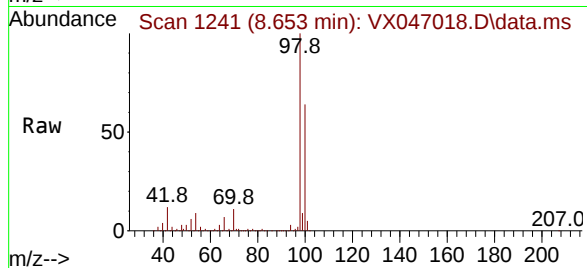
VX0716WBL01

Tgt Ion: 98 Resp: 637073

Ion Ratio Lower Upper

98 100

100 65.2 53.0 79.6



#62

4-Bromofluorobenzene

Concen: 52.496 ug/l

RT: 11.079 min Scan# 1639

Delta R.T. -0.000 min

Lab File: VX047018.D

Acq: 16 Jul 2025 10:34

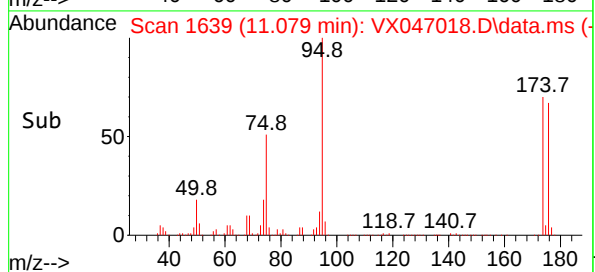
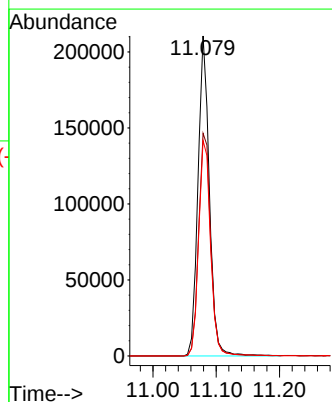
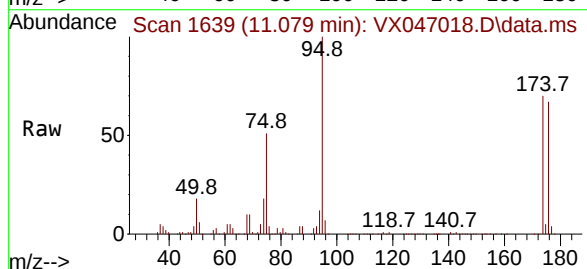
Tgt Ion: 95 Resp: 264318

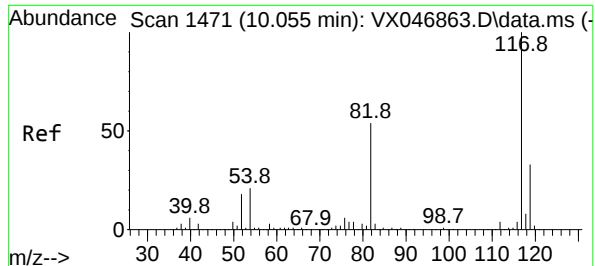
Ion Ratio Lower Upper

95 100

174 74.0 0.0 152.0

176 70.4 0.0 145.2





#63

Chlorobenzene-d5

Concen: 50.000 ug/l

RT: 10.055 min Scan# 1471

Delta R.T. -0.000 min

Lab File: VX047018.D

Acq: 16 Jul 2025 10:34

Instrument :

MSVOA_X

ClientSampleId :

VX0716WBL01

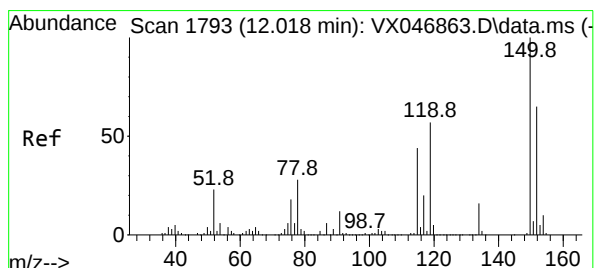
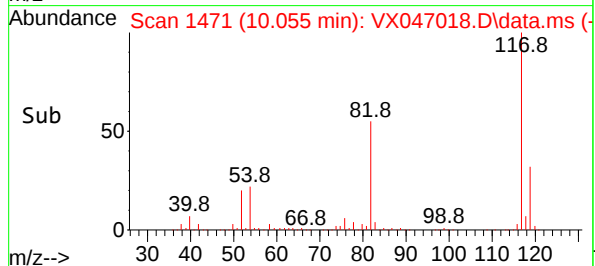
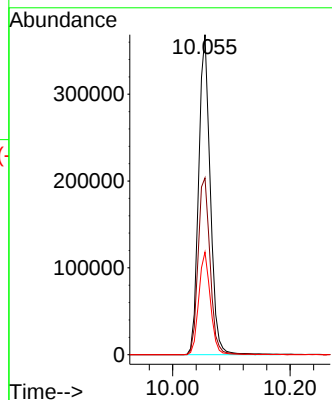
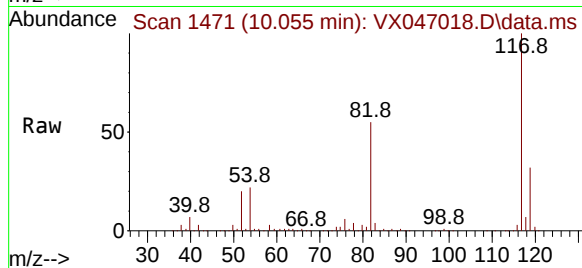
Tgt Ion:117 Resp: 506524

Ion Ratio Lower Upper

117 100

82 55.3 43.3 64.9

119 32.0 26.4 39.6



#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 12.018 min Scan# 1793

Delta R.T. -0.000 min

Lab File: VX047018.D

Acq: 16 Jul 2025 10:34

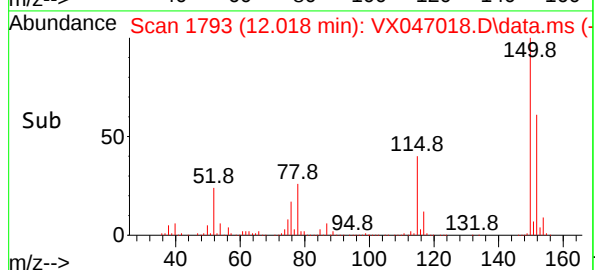
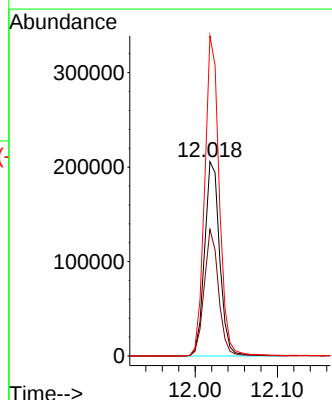
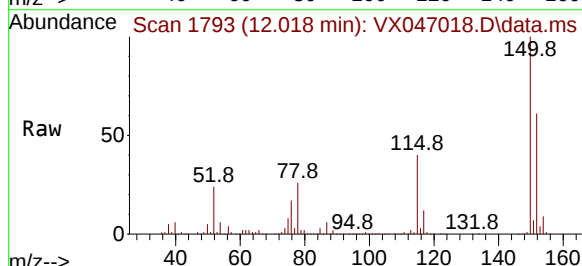
Tgt Ion:152 Resp: 262675

Ion Ratio Lower Upper

152 100

115 62.1 42.4 127.1

150 158.8 0.0 349.2



Report of Analysis

Client:	T&A Construction Inc			Date Collected:	
Project:	Kingsland Point Park Water Main			Date Received:	
Client Sample ID:	VX0716WBS01			SDG No.:	Q2600
Lab Sample ID:	VX0716WBS01			Matrix:	TCLP
Analytical Method:	8260D			% Solid:	0
Sample Wt/Vol:	5	Units:	mL	Final Vol:	5000 uL
Soil Aliquot Vol:			uL	Test:	TCLP VOA
GC Column:	DB-624UI	ID :	0.18	Level :	LOW
Prep Method :					

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
VX047022.D	1	07/16/25 12:11	VX071625

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	16.6		0.26	5.00	ug/L
75-35-4	1,1-Dichloroethene	17.7		0.23	5.00	ug/L
78-93-3	2-Butanone	140		0.98	25.0	ug/L
56-23-5	Carbon Tetrachloride	18.4		0.25	5.00	ug/L
67-66-3	Chloroform	20.0		0.25	5.00	ug/L
71-43-2	Benzene	18.5		0.15	5.00	ug/L
107-06-2	1,2-Dichloroethane	20.1		0.22	5.00	ug/L
79-01-6	Trichloroethene	17.6		0.090	5.00	ug/L
127-18-4	Tetrachloroethene	17.5		0.23	5.00	ug/L
108-90-7	Chlorobenzene	19.0		0.12	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	52.4		74 - 125	105%	SPK: 50
1868-53-7	Dibromofluoromethane	48.8		75 - 124	98%	SPK: 50
2037-26-5	Toluene-d8	48.1		86 - 113	96%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.0		77 - 121	104%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	322000	5.568			
540-36-3	1,4-Difluorobenzene	547000	6.769			
3114-55-4	Chlorobenzene-d5	492000	10.055			
3855-82-1	1,4-Dichlorobenzene-d4	247000	12.018			

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
 Data File : VX047022.D
 Acq On : 16 Jul 2025 12:11
 Operator : JC/MD
 Sample : VX0716WBS01
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VX0716WBS01

Manual Integrations
 APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025
 Supervised By :Semsettin Yesilyurt 07/17/2025

Quant Time: Jul 17 03:30:40 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:51:11 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	5.568	168	322183	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.769	114	547259	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.055	117	491570	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	246550	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.964	65	222821	52.350	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 104.700%			
35) Dibromofluoromethane	5.397	113	181294	48.803	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 97.600%			
50) Toluene-d8	8.653	98	630463	48.103	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery = 96.200%			
62) 4-Bromofluorobenzene	11.079	95	259114	52.018	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery = 104.040%			
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.184	85	50056	16.246	ug/l	98
3) Chloromethane	1.306	50	54087	16.067	ug/l	98
4) Vinyl Chloride	1.386	62	60709	16.560	ug/l	99
5) Bromomethane	1.623	94	40316	17.116	ug/l	97
6) Chloroethane	1.703	64	41315	17.067	ug/l	93
7) Trichlorofluoromethane	1.904	101	101587	17.921	ug/l	98
8) Diethyl Ether	2.148	74	39134	19.400	ug/l	96
9) 1,1,2-Trichlorotrifluo...	2.349	101	68825	19.055	ug/l	99
10) Methyl Iodide	2.471	142	59775	15.190	ug/l	97
11) Tert butyl alcohol	2.965	59	45448	162.807	ug/l	99
12) 1,1-Dichloroethene	2.337	96	61691	17.658	ug/l	97
13) Acrolein	2.251	56	27373	90.567	ug/l	98
14) Allyl chloride	2.684	41	120343	19.348	ug/l	99
15) Acrylonitrile	3.074	53	192637	119.356	ug/l	100
16) Acetone	2.391	43	155140	117.342	ug/l	98
17) Carbon Disulfide	2.532	76	124965	13.639	ug/l	98
18) Methyl Acetate	2.715	43	106167	30.466	ug/l	99
19) Methyl tert-butyl Ether	3.129	73	226902	22.999	ug/l	97
20) Methylene Chloride	2.806	84	75056	19.198	ug/l	98
21) trans-1,2-Dichloroethene	3.111	96	64223	17.965	ug/l	98
22) Diisopropyl ether	3.775	45	256906	21.379	ug/l	96
23) Vinyl Acetate	3.733	43	975222	108.326	ug/l	98
24) 1,1-Dichloroethane	3.623	63	132109	19.277	ug/l	99
25) 2-Butanone	4.568	43	241535	136.929	ug/l	98
26) 2,2-Dichloropropane	4.495	77	98068	19.227	ug/l	100
27) cis-1,2-Dichloroethene	4.507	96	84734	19.413	ug/l	98
28) Bromochloromethane	4.915	49	61188	18.091	ug/l	95
29) Tetrahydrofuran	5.019	42	152677	135.780	ug/l	99
30) Chloroform	5.104	83	139793	19.966	ug/l	97
31) Cyclohexane	5.482	56	111123	18.264	ug/l	95
32) 1,1,1-Trichloroethane	5.397	97	117326	20.057	ug/l	99
36) 1,1-Dichloropropene	5.708	75	91553	18.266	ug/l	99
37) Ethyl Acetate	4.732	43	95912	22.468	ug/l	98
38) Carbon Tetrachloride	5.690	117	97241	18.351	ug/l	99
39) Methylcyclohexane	7.384	83	109736	17.503	ug/l	99
40) Benzene	6.049	78	280563	18.507	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
 Data File : VX047022.D
 Acq On : 16 Jul 2025 12:11
 Operator : JC/MD
 Sample : VX0716WBS01
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VX0716WBS01

Manual Integrations
 APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025
 Supervised By :Semsettin Yesilyurt 07/17/2025

Quant Time: Jul 17 03:30:40 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:51:11 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.934	41	55723	24.470	ug/l	99
42) 1,2-Dichloroethane	6.104	62	103517	20.109	ug/l	100
43) Isopropyl Acetate	6.348	43	160694	24.576	ug/l	99
44) Trichloroethene	7.135	130	69390	17.584	ug/l	94
45) 1,2-Dichloropropane	7.433	63	74701	19.503	ug/l	100
46) Dibromomethane	7.586	93	53271	20.074	ug/l	96
47) Bromodichloromethane	7.823	83	109233	19.277	ug/l	99
48) Methyl methacrylate	7.695	41	84251	24.954	ug/l	96
49) 1,4-Dioxane	7.665	88	21671	553.964	ug/l	94
51) 4-Methyl-2-Pentanone	8.573	43	526373	136.404	ug/l	98
52) Toluene	8.720	92	178806	19.034	ug/l	100
53) t-1,3-Dichloropropene	8.982	75	103554	20.477	ug/l	96
54) cis-1,3-Dichloropropene	8.372	75	115124	19.944	ug/l	97
55) 1,1,2-Trichloroethane	9.152	97	73169	20.911	ug/l	98
56) Ethyl methacrylate	9.116	69	110706	22.859	ug/l	96
57) 1,3-Dichloropropane	9.311	76	123742	20.538	ug/l	99
58) 2-Chloroethyl Vinyl ether	8.244	63	285968	104.797	ug/l	100
59) 2-Hexanone	9.433	43	360756	140.941	ug/l	100
60) Dibromochloromethane	9.518	129	79783	19.053	ug/l	99
61) 1,2-Dibromoethane	9.610	107	72648	20.673	ug/l	99
64) Tetrachloroethene	9.274	164	57157	17.464	ug/l	98
65) Chlorobenzene	10.079	112	201694	18.978	ug/l	99
66) 1,1,1,2-Tetrachloroethane	10.164	131	69777	19.530	ug/l	99
67) Ethyl Benzene	10.195	91	352718	19.379	ug/l	99
68) m/p-Xylenes	10.299	106	265041	38.645	ug/l	98
69) o-Xylene	10.640	106	130181	19.650	ug/l	99
70) Styrene	10.652	104	226617	19.994	ug/l	98
71) Bromoform	10.798	173	53339	20.079	ug/l #	100
73) Isopropylbenzene	10.963	105	353756	20.411	ug/l	99
74) N-amyl acetate	10.841	43	145739	24.745	ug/l	98
75) 1,1,2,2-Tetrachloroethane	11.207	83	111268	23.347	ug/l	99
76) 1,2,3-Trichloropropane	11.237	75	86885m	22.807	ug/l	
77) Bromobenzene	11.195	156	84072	19.474	ug/l	96
78) n-propylbenzene	11.305	91	415279	19.871	ug/l	99
79) 2-Chlorotoluene	11.365	91	246338	19.963	ug/l	100
80) 1,3,5-Trimethylbenzene	11.451	105	286868	20.370	ug/l	100
81) trans-1,4-Dichloro-2-b...	11.018	75	30710	21.633	ug/l	94
82) 4-Chlorotoluene	11.451	91	288682	20.272	ug/l	99
83) tert-Butylbenzene	11.713	119	295179	20.294	ug/l	97
84) 1,2,4-Trimethylbenzene	11.750	105	291448	20.475	ug/l	98
85) sec-Butylbenzene	11.890	105	370037	20.178	ug/l	99
86) p-Isopropyltoluene	12.006	119	308064	20.060	ug/l	99
87) 1,3-Dichlorobenzene	11.969	146	159442	19.748	ug/l	99
88) 1,4-Dichlorobenzene	12.036	146	161561	19.227	ug/l	99
89) n-Butylbenzene	12.329	91	286179	19.832	ug/l	99
90) Hexachloroethane	12.536	117	49332	18.120	ug/l	97
91) 1,2-Dichlorobenzene	12.335	146	154014	19.685	ug/l	97
92) 1,2-Dibromo-3-Chloropr...	12.938	75	20327	24.386	ug/l	97
93) 1,2,4-Trichlorobenzene	13.585	180	106027	19.947	ug/l	100
94) Hexachlorobutadiene	13.725	225	36465	18.191	ug/l	97
95) Naphthalene	13.774	128	335145	23.928	ug/l	100
96) 1,2,3-Trichlorobenzene	13.956	180	101316	20.173	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
Data File : VX047022.D
Acq On : 16 Jul 2025 12:11
Operator : JC/MD
Sample : VX0716WBS01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX0716WBS01

Manual Integrations
APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025
Supervised By :Semsettin Yesilyurt 07/17/2025

Quant Time: Jul 17 03:30:40 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:51:11 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

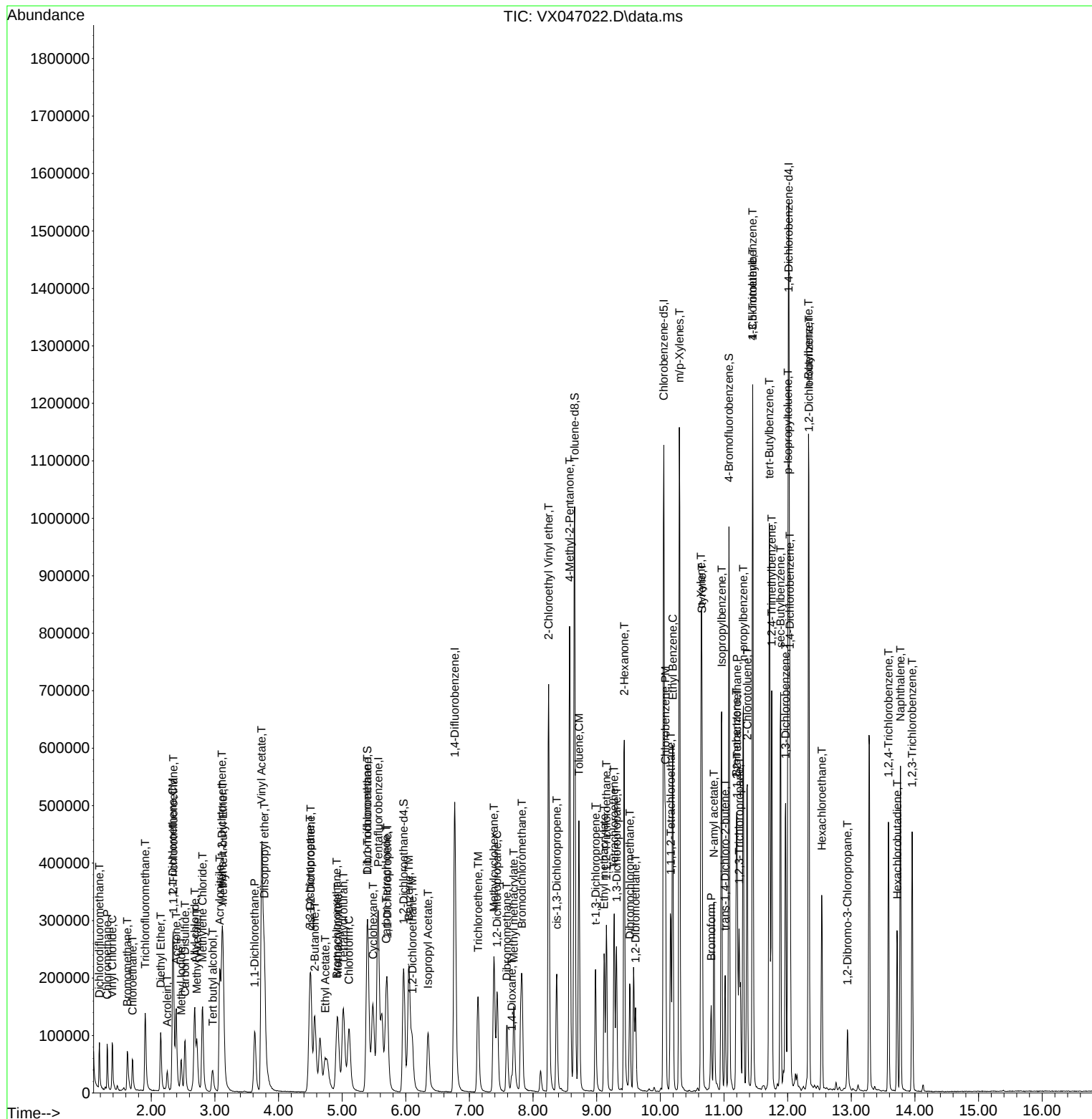
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
Data File : VX047022.D
Acq On : 16 Jul 2025 12:11
Operator : JC/MD
Sample : VX0716WBS01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX0716WBS01

Manual Integrations APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025
Supervised By :Semsettin Yesilyurt 07/17/2025

Quant Time: Jul 17 03:30:40 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:51:11 2025
Response via : Initial Calibration



Report of Analysis

Client:	T&A Construction Inc			Date Collected:	
Project:	Kingsland Point Park Water Main			Date Received:	
Client Sample ID:	VX0716WBSD01			SDG No.:	Q2600
Lab Sample ID:	VX0716WBSD01			Matrix:	TCLP
Analytical Method:	8260D			% Solid:	0
Sample Wt/Vol:	5	Units:	mL	Final Vol:	5000 uL
Soil Aliquot Vol:			uL	Test:	TCLP VOA
GC Column:	DB-624UI	ID :	0.18	Level :	LOW
Prep Method :					

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
VX047023.D	1	07/16/25 12:38	VX071625

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	17.0		0.26	5.00	ug/L
75-35-4	1,1-Dichloroethene	17.9		0.23	5.00	ug/L
78-93-3	2-Butanone	150		0.98	25.0	ug/L
56-23-5	Carbon Tetrachloride	18.3		0.25	5.00	ug/L
67-66-3	Chloroform	20.7		0.25	5.00	ug/L
71-43-2	Benzene	18.5		0.15	5.00	ug/L
107-06-2	1,2-Dichloroethane	20.8		0.22	5.00	ug/L
79-01-6	Trichloroethene	17.5		0.090	5.00	ug/L
127-18-4	Tetrachloroethene	17.6		0.23	5.00	ug/L
108-90-7	Chlorobenzene	19.3		0.12	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55.4		74 - 125	111%	SPK: 50
1868-53-7	Dibromofluoromethane	50.2		75 - 124	100%	SPK: 50
2037-26-5	Toluene-d8	48.0		86 - 113	96%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.0		77 - 121	104%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	311000	5.562			
540-36-3	1,4-Difluorobenzene	533000	6.769			
3114-55-4	Chlorobenzene-d5	476000	10.055			
3855-82-1	1,4-Dichlorobenzene-d4	244000	12.018			

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
 Data File : VX047023.D
 Acq On : 16 Jul 2025 12:38
 Operator : JC/MD
 Sample : VX0716WBSD01
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 9 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VX0716WBSD01

Manual Integrations
 APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025
 Supervised By :Semsettin Yesilyurt 07/17/2025

Quant Time: Jul 17 03:31:31 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:51:11 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Pentafluorobenzene	5.562	168	310963	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.769	114	532754	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.055	117	475577	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	244320	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.958	65	227592	55.400	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 110.800%			
35) Dibromofluoromethane	5.397	113	181433	50.170	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 100.340%			
50) Toluene-d8	8.647	98	612865	48.033	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery = 96.060%			
62) 4-Bromofluorobenzene	11.079	95	252192	52.006	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery = 104.020%			
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.185	85	49096	16.509	ug/l	98
3) Chloromethane	1.307	50	51956	15.990	ug/l	98
4) Vinyl Chloride	1.386	62	60017	16.962	ug/l	97
5) Bromomethane	1.624	94	38769	17.053	ug/l	93
6) Chloroethane	1.703	64	41048	17.569	ug/l	97
7) Trichlorofluoromethane	1.904	101	99111	18.116	ug/l	99
8) Diethyl Ether	2.148	74	39664	20.372	ug/l	96
9) 1,1,2-Trichlorotrifluo...	2.343	101	62681	17.980	ug/l	97
10) Methyl Iodide	2.465	142	60656	15.970	ug/l	97
11) Tert butyl alcohol	2.959	59	48602	180.387	ug/l	100
12) 1,1-Dichloroethene	2.337	96	60368	17.903	ug/l	95
13) Acrolein	2.246	56	30221	103.190	ug/l	98
14) Allyl chloride	2.678	41	119071	19.834	ug/l	99
15) Acrylonitrile	3.075	53	201172	129.142	ug/l	99
16) Acetone	2.386	43	156920	122.971	ug/l	99
17) Carbon Disulfide	2.526	76	121351	13.723	ug/l	99
18) Methyl Acetate	2.715	43	111328	33.100	ug/l	98
19) Methyl tert-butyl Ether	3.123	73	228526	23.999	ug/l	100
20) Methylene Chloride	2.800	84	73061	19.362	ug/l	98
21) trans-1,2-Dichloroethene	3.105	96	63740	18.473	ug/l	99
22) Diisopropyl ether	3.770	45	261236	22.524	ug/l	89
23) Vinyl Acetate	3.733	43	986860	113.574	ug/l	98
24) 1,1-Dichloroethane	3.623	63	131590	19.894	ug/l	99
25) 2-Butanone	4.562	43	248450	145.931	ug/l	98
26) 2,2-Dichloropropane	4.483	77	95586	19.417	ug/l	99
27) cis-1,2-Dichloroethene	4.501	96	82717	19.635	ug/l	97
28) Bromochloromethane	4.910	49	61014	18.690	ug/l	95
29) Tetrahydrofuran	5.013	42	160467	147.857	ug/l	98
30) Chloroform	5.105	83	139773	20.683	ug/l	97
31) Cyclohexane	5.477	56	108129	18.414	ug/l	98
32) 1,1,1-Trichloroethane	5.391	97	114572	20.293	ug/l	100
36) 1,1-Dichloropropene	5.702	75	87804	17.995	ug/l	98
37) Ethyl Acetate	4.727	43	86680	20.858	ug/l #	94
38) Carbon Tetrachloride	5.690	117	94394	18.299	ug/l	94
39) Methylcyclohexane	7.385	83	105608	17.303	ug/l	97
40) Benzene	6.050	78	273717	18.547	ug/l	97

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
 Data File : VX047023.D
 Acq On : 16 Jul 2025 12:38
 Operator : JC/MD
 Sample : VX0716WBSD01
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 9 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VX0716WBSD01

Manual Integrations
 APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025
 Supervised By :Semsettin Yesilyurt 07/17/2025

Quant Time: Jul 17 03:31:31 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
 Quant Title : SW846 8260
 QLast Update : Thu Jul 03 05:51:11 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.928	41	56984	25.705	ug/l	99
42) 1,2-Dichloroethane	6.099	62	104433	20.839	ug/l	98
43) Isopropyl Acetate	6.349	43	165597	26.016	ug/l	98
44) Trichloroethene	7.135	130	67259	17.508	ug/l	93
45) 1,2-Dichloropropane	7.434	63	71486	19.172	ug/l	100
46) Dibromomethane	7.586	93	51551	19.955	ug/l	99
47) Bromodichloromethane	7.824	83	108144	19.605	ug/l	99
48) Methyl methacrylate	7.696	41	83994	25.556	ug/l	97
49) 1,4-Dioxane	7.665	88	23431	615.261	ug/l	99
51) 4-Methyl-2-Pentanone	8.574	43	527811	140.501	ug/l	100
52) Toluene	8.720	92	171783	18.784	ug/l	99
53) t-1,3-Dichloropropene	8.982	75	100411	20.396	ug/l	96
54) cis-1,3-Dichloropropene	8.366	75	112850	20.083	ug/l	98
55) 1,1,2-Trichloroethane	9.153	97	73572	21.599	ug/l	98
56) Ethyl methacrylate	9.116	69	112484	23.859	ug/l	97
57) 1,3-Dichloropropane	9.305	76	124079	21.154	ug/l	100
58) 2-Chloroethyl Vinyl ether	8.245	63	285718	107.557	ug/l	100
59) 2-Hexanone	9.427	43	369099	148.127	ug/l	98
60) Dibromochloromethane	9.519	129	80917	19.850	ug/l	99
61) 1,2-Dibromoethane	9.610	107	72872	21.301	ug/l	100
64) Tetrachloroethene	9.275	164	55710	17.594	ug/l	96
65) Chlorobenzene	10.080	112	198911	19.345	ug/l	97
66) 1,1,1,2-Tetrachloroethane	10.159	131	68775	19.897	ug/l	99
67) Ethyl Benzene	10.195	91	342761	19.466	ug/l	100
68) m/p-Xylenes	10.299	106	254016	38.283	ug/l	98
69) o-Xylene	10.640	106	127197	19.845	ug/l	100
70) Styrene	10.653	104	222974	20.334	ug/l	98
71) Bromoform	10.799	173	53972	21.000	ug/l #	99
73) Isopropylbenzene	10.964	105	336818	19.611	ug/l	100
74) N-amyl acetate	10.842	43	145799	24.982	ug/l	98
75) 1,1,2,2-Tetrachloroethane	11.207	83	112051	23.726	ug/l	99
76) 1,2,3-Trichloropropane	11.238	75	89508m	23.710	ug/l	
77) Bromobenzene	11.195	156	81849	19.132	ug/l	96
78) n-propylbenzene	11.305	91	403821	19.499	ug/l	99
79) 2-Chlorotoluene	11.360	91	240448	19.663	ug/l	98
80) 1,3,5-Trimethylbenzene	11.451	105	276062	19.782	ug/l	100
81) trans-1,4-Dichloro-2-b...	11.018	75	30184	21.456	ug/l	94
82) 4-Chlorotoluene	11.451	91	280292	19.863	ug/l	99
83) tert-Butylbenzene	11.713	119	285261	19.791	ug/l	97
84) 1,2,4-Trimethylbenzene	11.750	105	284011	20.135	ug/l	96
85) sec-Butylbenzene	11.890	105	359225	19.767	ug/l	100
86) p-Isopropyltoluene	12.006	119	299629	19.689	ug/l	98
87) 1,3-Dichlorobenzene	11.969	146	155459	19.430	ug/l	98
88) 1,4-Dichlorobenzene	12.037	146	154431	18.546	ug/l	96
89) n-Butylbenzene	12.329	91	277265	19.390	ug/l	99
90) Hexachloroethane	12.536	117	47758	17.702	ug/l	98
91) 1,2-Dichlorobenzene	12.335	146	151809	19.580	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	12.939	75	20906	25.310	ug/l	93
93) 1,2,4-Trichlorobenzene	13.585	180	105819	20.090	ug/l	97
94) Hexachlorobutadiene	13.725	225	37519	18.888	ug/l	99
95) Naphthalene	13.774	128	329691	23.754	ug/l	99
96) 1,2,3-Trichlorobenzene	13.957	180	99385	19.969	ug/l	97

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX071625\
Data File : VX047023.D
Acq On : 16 Jul 2025 12:38
Operator : JC/MD
Sample : VX0716WBSD01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX0716WBSD01

Manual Integrations
APPROVED

Reviewed By :Mahesh Dadoda 07/17/2025
Supervised By :Semsettin Yesilyurt 07/17/2025

Quant Time: Jul 17 03:31:31 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:51:11 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

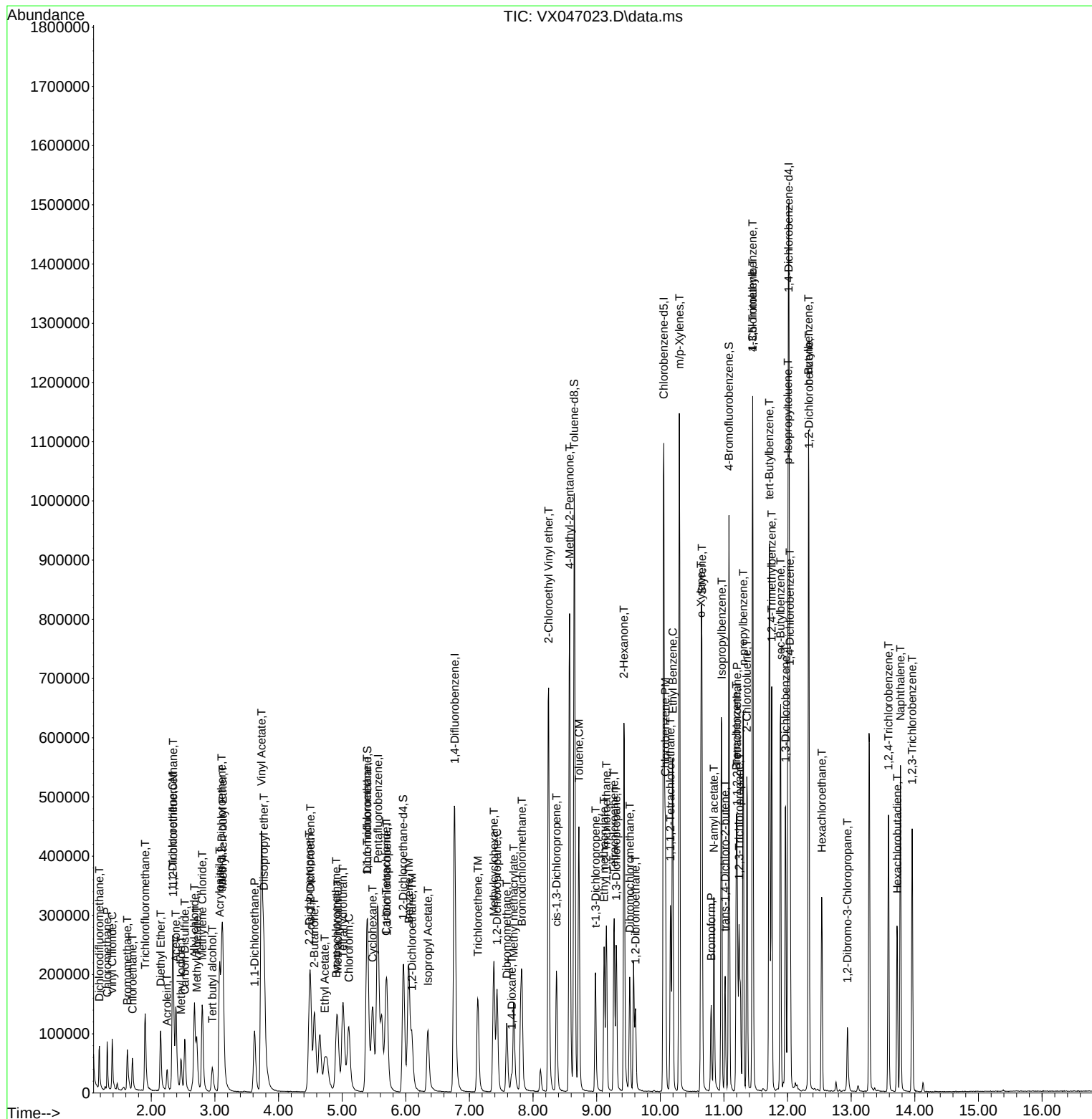
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Data File : VX047023.D
Acq On : 16 Jul 2025 12:38
Operator : JC/MD
Sample : VX0716WBSD01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX0716WBSD01

Manual Integrations APPROVED

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Quant Time: Jul 17 03:31:31 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X070225W.M
Quant Title : SW846 8260
QLast Update : Thu Jul 03 05:51:11 2025
Response via : Initial Calibration



Manual Integration Report

Sequence:	VX070225	Instrument	MSVOA_x
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDICC001	VX046860.D	1,2,3-Trichloropropane	JOHN	7/3/2025 8:43:52 AM	MMDadoda	7/3/2025 3:09:42 PM	Peak Integrated by Software
VSTDICC001	VX046860.D	1,4-Dichlorobenzene	JOHN	7/3/2025 8:43:52 AM	MMDadoda	7/3/2025 3:09:42 PM	Peak Integrated by Software
VSTDICC001	VX046860.D	1,4-Dioxane	JOHN	7/3/2025 8:43:52 AM	MMDadoda	7/3/2025 3:09:42 PM	Peak Integrated by Software
VSTDICC001	VX046860.D	2-Butanone	JOHN	7/3/2025 8:43:52 AM	MMDadoda	7/3/2025 3:09:42 PM	Peak Integrated by Software
VSTDICC001	VX046860.D	Acrylonitrile	JOHN	7/3/2025 8:43:52 AM	MMDadoda	7/3/2025 3:09:42 PM	Peak Integrated by Software
VSTDICC001	VX046860.D	Carbon Tetrachloride	JOHN	7/3/2025 8:43:52 AM	MMDadoda	7/3/2025 3:09:42 PM	Peak Integrated by Software
VSTDICC001	VX046860.D	Ethyl Acetate	JOHN	7/3/2025 8:43:52 AM	MMDadoda	7/3/2025 3:09:42 PM	Peak Integrated by Software
VSTDICC001	VX046860.D	Methacrylonitrile	JOHN	7/3/2025 8:43:52 AM	MMDadoda	7/3/2025 3:09:42 PM	Peak Integrated by Software
VSTDICC005	VX046861.D	1,2,3-Trichloropropane	JOHN	7/3/2025 8:43:57 AM	MMDadoda	7/3/2025 3:09:44 PM	Peak Integrated by Software
VSTDICC020	VX046862.D	1,2,3-Trichloropropane	JOHN	7/3/2025 8:44:01 AM	MMDadoda	7/3/2025 3:09:46 PM	Peak Integrated by Software
VSTDICCC050	VX046863.D	1,2,3-Trichloropropane	JOHN	7/3/2025 8:44:05 AM	MMDadoda	7/3/2025 3:09:47 PM	Peak Integrated by Software
VSTDICC100	VX046864.D	1,2,3-Trichloropropane	JOHN	7/3/2025 8:44:09 AM	MMDadoda	7/3/2025 3:09:49 PM	Peak Integrated by Software
VSTDICC150	VX046865.D	1,2,3-Trichloropropane	JOHN	7/3/2025 8:44:13 AM	MMDadoda	7/3/2025 3:09:51 PM	Peak Integrated by Software



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

Manual Integration Report

Sequence:

VX070225

Instrument

MSVOA_x

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDICV050	VX046867.D	1,2,3-Trichloropropane	JOHN	7/3/2025 8:44:17 AM	MMDadoda	7/3/2025 3:09:53 PM	Peak Integrated by Software

Manual Integration Report

Sequence:

vx071625

Instrument

MSVOA_x

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC050	VX047016.D	1,2,3-Trichloropropane	MMDadod a	7/17/2025 8:20:31 AM	Sam	7/17/2025 8:23:21 AM	Peak Integrated by Software
VX0716WBS01	VX047022.D	1,2,3-Trichloropropane	MMDadod a	7/17/2025 8:20:38 AM	Sam	7/17/2025 8:23:38 AM	Peak Integrated by Software
VX0716WBSD0 1	VX047023.D	1,2,3-Trichloropropane	MMDadod a	7/17/2025 8:20:41 AM	Sam	7/17/2025 8:23:41 AM	Peak Integrated by Software
Q2600-08	VX047027.D	Ethyl Acetate	MMDadod a	7/17/2025 8:20:46 AM	Sam	7/17/2025 8:23:49 AM	Peak Integrated by Software
Q2600-12	VX047028.D	1,3,5-Trimethylbenzene	MMDadod a	7/17/2025 8:20:44 AM	Sam	7/17/2025 8:23:51 AM	Peak Integrated by Software
Q2600-12	VX047028.D	Cyclohexane	MMDadod a	7/17/2025 8:20:44 AM	Sam	7/17/2025 8:23:51 AM	Peak Integrated by Software
Q2600-12	VX047028.D	Ethyl Acetate	MMDadod a	7/17/2025 8:20:44 AM	Sam	7/17/2025 8:23:51 AM	Peak Integrated by Software
Q2600-12	VX047028.D	n-Butylbenzene	MMDadod a	7/17/2025 8:20:44 AM	Sam	7/17/2025 8:23:51 AM	Peak Integrated by Software
VSTDCCC050	VX047036.D	1,2,3-Trichloropropane	MMDadod a	7/17/2025 8:20:56 AM	Sam	7/17/2025 8:24:03 AM	Peak Integrated by Software

Instrument ID: **MSVOA_X**

Daily Analysis Runlog For Sequence/QC Batch ID # VX070225

Review By	John Carlone	Review On	7/3/2025 8:44:30 AM
Supervise By	Maresh Dadoda	Supervise On	7/3/2025 3:09:59 PM
SubDirectory	VX070225	HP Acquire Method	HP Processing Method 82X070225W.M
STD. NAME	STD REF.#		
Tune/Reschk	VP134642		
Initial Calibration Stds	VP134633,VP134634,VP134635,VP134638,VP134639,VP134640		
CCC			
Internal Standard/PEM			
ICV/I.BLK	VP134641		
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VX046859.D	02 Jul 2025 11:12	JC/MD	Ok
2	VSTDIC001	VX046860.D	02 Jul 2025 12:11	JC/MD	Ok,M
3	VSTDIC005	VX046861.D	02 Jul 2025 12:37	JC/MD	Ok,M
4	VSTDIC020	VX046862.D	02 Jul 2025 13:18	JC/MD	Ok,M
5	VSTDIC050	VX046863.D	02 Jul 2025 13:39	JC/MD	Ok,M
6	VSTDIC100	VX046864.D	02 Jul 2025 14:10	JC/MD	Ok,M
7	VSTDIC150	VX046865.D	02 Jul 2025 14:31	JC/MD	Ok,M
8	VIBLK	VX046866.D	02 Jul 2025 14:53	JC/MD	Ok
9	VSTDICV050	VX046867.D	02 Jul 2025 15:14	JC/MD	Ok,M

M : Manual Integration

Instrument ID: **MSVOA_X**

Daily Analysis Runlog For Sequence/QC Batch ID # VX071625

Review By	Maresh Dadoda	Review On	7/17/2025 8:21:30 AM
Supervise By	Semsettin Yesilyurt	Supervise On	7/17/2025 8:24:32 AM
SubDirectory	VX071625	HP Acquire Method	HP Processing Method 82X070225W.M
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	VP134774		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP134775,VP134777		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VX047015.D	16 Jul 2025 08:58	JC/MD	Ok
2	VSTDCCC050	VX047016.D	16 Jul 2025 09:26	JC/MD	Ok,M
3	VX0716MBL01	VX047017.D	16 Jul 2025 10:13	JC/MD	Ok
4	VX0716WBL01	VX047018.D	16 Jul 2025 10:34	JC/MD	Ok
5	VX0716MBS01	VX047019.D	16 Jul 2025 11:02	JC/MD	Ok,M
6	VX0716MBSD01	VX047020.D	16 Jul 2025 11:29	JC/MD	Ok,M
7	Q2600-11DL	VX047021.D	16 Jul 2025 11:50	JC/MD	Ok,M
8	VX0716WBS01	VX047022.D	16 Jul 2025 12:11	JC/MD	Ok,M
9	VX0716WBSD01	VX047023.D	16 Jul 2025 12:38	JC/MD	Ok,M
10	PB168848TB	VX047024.D	16 Jul 2025 12:59	JC/MD	Ok,M
11	Q2592-02	VX047025.D	16 Jul 2025 13:20	JC/MD	Ok
12	Q2600-04	VX047026.D	16 Jul 2025 13:42	JC/MD	Ok
13	Q2600-08	VX047027.D	16 Jul 2025 14:03	JC/MD	Ok,M
14	Q2600-12	VX047028.D	16 Jul 2025 14:24	JC/MD	Ok,M
15	Q2605-01	VX047029.D	16 Jul 2025 14:46	JC/MD	Ok,M
16	Q2605-02	VX047030.D	16 Jul 2025 15:07	JC/MD	Ok,M
17	Q2605-03	VX047031.D	16 Jul 2025 15:29	JC/MD	Ok,M
18	Q2605-04	VX047032.D	16 Jul 2025 15:51	JC/MD	Ok,M
19	Q2609-04	VX047033.D	16 Jul 2025 16:12	JC/MD	Dilution
20	Q2609-08	VX047034.D	16 Jul 2025 16:34	JC/MD	Ok,M
21	Q2614-06	VX047035.D	16 Jul 2025 16:55	JC/MD	Ok

Instrument ID: **MSVOA_X**

Daily Analysis Runlog For Sequence/QC Batch ID # VX071625

Review By	Mahesh Dadoda	Review On	7/17/2025 8:21:30 AM
Supervise By	Semsettin Yesilyurt	Supervise On	7/17/2025 8:24:32 AM
SubDirectory	VX071625	HP Acquire Method	HP Processing Method 82X070225W.M
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	VP134774		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP134775,VP134777		

22	VSTDCCC050	VX047036.D	16 Jul 2025 17:17	JC/MD	Ok,M
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M : Manual Integration

Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QC Batch ID # VX070225

Review By	John Carlone	Review On	7/3/2025 8:44:30 AM
Supervise By	Maresh Dadoda	Supervise On	7/3/2025 3:09:59 PM
SubDirectory	VX070225	HP Acquire Method	HP Processing Method 82X070225W.M

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP134642 VP134633,VP134634,VP134635,VP134638,VP134639,VP134640 VP134641

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VX046859.D	02 Jul 2025 11:12		JC/MD	Ok
2	VSTDICC001	VSTDICC001	VX046860.D	02 Jul 2025 12:11		JC/MD	Ok,M
3	VSTDICC005	VSTDICC005	VX046861.D	02 Jul 2025 12:37	%D Failed for com.#13 in 5 ppb	JC/MD	Ok,M
4	VSTDICC020	VSTDICC020	VX046862.D	02 Jul 2025 13:18		JC/MD	Ok,M
5	VSTDICCC050	VSTDICCC050	VX046863.D	02 Jul 2025 13:39	LR-13	JC/MD	Ok,M
6	VSTDICC100	VSTDICC100	VX046864.D	02 Jul 2025 14:10		JC/MD	Ok,M
7	VSTDICC150	VSTDICC150	VX046865.D	02 Jul 2025 14:31		JC/MD	Ok,M
8	VIBLK	VIBLK	VX046866.D	02 Jul 2025 14:53		JC/MD	Ok
9	VSTDICV050	ICVVX070225	VX046867.D	02 Jul 2025 15:14		JC/MD	Ok,M

M : Manual Integration

Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QC Batch ID # VX071625

Review By	Maresh Dadoda	Review On	7/17/2025 8:21:30 AM
Supervise By	Semsettin Yesilyurt	Supervise On	7/17/2025 8:24:32 AM
SubDirectory	VX071625	HP Acquire Method	HP Processing Method 82X070225W.M
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	VP134774		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP134775,VP134777		

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VX047015.D	16 Jul 2025 08:58		JC/MD	Ok
2	VSTDCCC050	VSTDCCC050	VX047016.D	16 Jul 2025 09:26		JC/MD	Ok,M
3	VX0716MBL01	VX0716MBL01	VX047017.D	16 Jul 2025 10:13		JC/MD	Ok
4	VX0716WBL01	VX0716WBL01	VX047018.D	16 Jul 2025 10:34		JC/MD	Ok
5	VX0716MBS01	VX0716MBS01	VX047019.D	16 Jul 2025 11:02		JC/MD	Ok,M
6	VX0716MBSD01	VX0716MBSD01	VX047020.D	16 Jul 2025 11:29		JC/MD	Ok,M
7	Q2600-11DL	END-OF-TRENCHDL	VX047021.D	16 Jul 2025 11:50		JC/MD	Ok,M
8	VX0716WBS01	VX0716WBS01	VX047022.D	16 Jul 2025 12:11		JC/MD	Ok,M
9	VX0716WBSD01	VX0716WBSD01	VX047023.D	16 Jul 2025 12:38		JC/MD	Ok,M
10	PB168848TB	PB168848TB	VX047024.D	16 Jul 2025 12:59		JC/MD	Ok,M
11	Q2592-02	WC-SOIL-20250711	VX047025.D	16 Jul 2025 13:20	vial A pH#5.0	JC/MD	Ok
12	Q2600-04	TRENCH	VX047026.D	16 Jul 2025 13:42	vial A pH#5.0	JC/MD	Ok
13	Q2600-08	STOCK-PILE	VX047027.D	16 Jul 2025 14:03	vial A pH#5.0	JC/MD	Ok,M
14	Q2600-12	END-OF-TRENCH	VX047028.D	16 Jul 2025 14:24	vial A pH#5.0	JC/MD	Ok,M
15	Q2605-01	V908	VX047029.D	16 Jul 2025 14:46	vial A pH#5.0	JC/MD	Ok,M
16	Q2605-02	VB16135	VX047030.D	16 Jul 2025 15:07	vial A pH#5.0	JC/MD	Ok,M
17	Q2605-03	VB15061	VX047031.D	16 Jul 2025 15:29	vial A pH#5.0	JC/MD	Ok,M
18	Q2605-04	V897	VX047032.D	16 Jul 2025 15:51	vial A pH#5.0	JC/MD	Ok,M

Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QC Batch ID # VX071625

Review By	Mahesh Dadoda	Review On	7/17/2025 8:21:30 AM
Supervise By	Semsettin Yesilyurt	Supervise On	7/17/2025 8:24:32 AM
SubDirectory	VX071625	HP Acquire Method	HP Processing Method 82X070225W.M
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	VP134774		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP134775,VP134777		

19	Q2609-04	710-C	VX047033.D	16 Jul 2025 16:12	vial A pH#5.0 Need 5X	JC/MD	Dilution
20	Q2609-08	709-A	VX047034.D	16 Jul 2025 16:34	vial A pH#5.0	JC/MD	Ok,M
21	Q2614-06	HR-MCN-COMP-01	VX047035.D	16 Jul 2025 16:55	vial A pH#5.0	JC/MD	Ok
22	VSTDCCC050	VSTDCCC050EC	VX047036.D	16 Jul 2025 17:17		JC/MD	Ok,M

M : Manual Integration

SOP ID : M1311-TCLP-16

SDG No : N/A

Weigh By : JP

Balance ID : WC SC-7.

pH Meter ID : WC PH METER-1

Extraction By : JP

Filter By : JP

Pipette ID : WC

Tumbler ID : ZHE-1 / ZHE-2

TCLP Filter ID : 50223706

Start Prep Date : 07/15/2025 Time : 15:30

End Prep Date : 07/16/2025 Time : 08:15

Combination Ratio : 20

ZHE Cleaning Batch : 78 N/A

Initial Room Temperature: 23 °C

Final Room Temperature: 22 °C

TCLP Technician Signature : *JP*

Supervisor By : 12

Standard Name	MLS USED	STD REF. # FROM LOG
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE U	Lot Number
TCLP-FLUID-1	N/A	WP112804
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
40ml VOA Vials	430992	N/A

Extraction Conformance/Non-Conformance Comments:

TUMBLER ZHE-1 / ZHE-2 checked, 30 rpm. ALL ZHE samples are extracted and given as vial A & B. Leak checked after 10 minutes of tumbling.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
07/16/25 10:00	<i>JP</i> / <i>Lab Room</i>	<i>JP</i> / <i>NOC Lab</i>
	Preparation Group	Analysis Group

TCLP EXTRACTION LOGPAGE

PB168848

Sample ID	ClientID	ZHE Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi-phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Prep Pos
PB168848TB	LEB848	12	N/A	500	N/A	N/A	N/A	4.95	N/A	ZHE-2
Q2592-02	WC-SOIL-20250711	01	25.02	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q2600-04	TRENCH	02	25.03	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q2600-08	STOCK-PILE	03	25.01	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q2600-12	END-OF-TRENCH	04	25.02	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q2605-01	V908	05	25.02	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q2605-02	VB16135	06	25.03	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q2605-03	VB15061	07	25.02	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q2605-04	V897	08	25.01	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q2609-04	710-C	09	25.02	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q2609-08	709-A	10	25.03	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q2614-06	HR-MCN-COMP-01	11	25.04	500	N/A	N/A	N/A	N/A	N/A	ZHE-2

SampleID	ClientID	Sample Weight (g)	Filter Weight (g)	Filtrate (mL)	Filter + Solid (After 100°C)	% solids	% Dry Solids
PB168848TB	LEB848	N/A	N/A	N/A	N/A	N/A	N/A
Q2592-02	WC-SOIL-20250711	N/A	N/A	N/A	N/A	100	N/A
Q2600-04	TRENCH	N/A	N/A	N/A	N/A	100	N/A
Q2600-08	STOCK-PILE	N/A	N/A	N/A	N/A	100	N/A
Q2600-12	END-OF-TRENCH	N/A	N/A	N/A	N/A	100	N/A
Q2605-01	V908	N/A	N/A	N/A	N/A	100	N/A
Q2605-02	VB16135	N/A	N/A	N/A	N/A	100	N/A
Q2605-03	VB15061	N/A	N/A	N/A	N/A	100	N/A
Q2605-04	V897	N/A	N/A	N/A	N/A	100	N/A
Q2609-04	710-C	N/A	N/A	N/A	N/A	100	N/A
Q2609-08	709-A	N/A	N/A	N/A	N/A	100	N/A
Q2614-06	HR-MCN-COMP-01	N/A	N/A	N/A	N/A	100	N/A

WORKLIST(Hardcopy Internal Chain)

W3

WorkList Name : tclp zhe q2600

WorkList ID : 190735

Department : TCLP Extraction

Date : 07-15-2025 11:57:01

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2592-02	WC-SOIL-20250711	Solid	TCLP ZHE Extraction	Cool 4 deg C	PARS02	D51	07/11/2025	1311 ZHE
Q2600-04	TRENCH	Solid	TCLP ZHE Extraction	Cool 4 deg C	TACO01	D41	07/14/2025	1311 ZHE
Q2600-08	STOCK-PILE	Solid	TCLP ZHE Extraction	Cool 4 deg C	TACO01	D41	07/14/2025	1311 ZHE
Q2600-12	END-OF-TRENCH	Solid	TCLP ZHE Extraction	Cool 4 deg C	TACO01	D41	07/14/2025	1311 ZHE
Q2605-01	V908	Solid	TCLP ZHE Extraction	Cool 4 deg C	PSEG03	D41	07/15/2025	1311 ZHE
Q2605-02	VB16135	Solid	TCLP ZHE Extraction	Cool 4 deg C	PSEG03	D41	07/15/2025	1311 ZHE
Q2605-03	VB15061	Solid	TCLP ZHE Extraction	Cool 4 deg C	PSEG03	D41	07/15/2025	1311 ZHE
Q2605-04	V897	Solid	TCLP ZHE Extraction	Cool 4 deg C	PSEG03	D41	07/15/2025	1311 ZHE
Q2609-04	710-C	Solid	TCLP ZHE Extraction	Cool 4 deg C	PSEG03	D41	07/15/2025	1311 ZHE
Q2609-08	709-C	Solid	TCLP ZHE Extraction	Cool 4 deg C	PSEG03	D41	07/15/2025	1311 ZHE
Q2614-06	HR-MCN-COMP-01	Solid	TCLP ZHE Extraction	Cool 4 deg C	PSEG03	D41	07/15/2025	1311 ZHE

Date/Time 07-15-25 15:20

Raw Sample Received by: SA WCC

Raw Sample Relinquished by: SA WCC

Date/Time 07-15-25

Raw Sample Received by: SA WCC

Raw Sample Relinquished by: SA WCC

Prep Standard - Chemical Standard Summary

Order ID : Q2600

Test : TCLP VOA

Prepbatch ID :

Sequence ID/Qc Batch ID: vx071625,

Standard ID :

VP133174,VP133935,VP133953,VP134142,VP134149,VP134431,VP134478,VP134774,VP134775,VP134777,

Chemical ID :

V13391,V13706,V14290,V14438,V14440,V14505,V14506,V14527,V14528,V14613,V14626,V14636,V14637,V14638,V14639,V14668,V14671,V14673,V14675,V14708,V14712,V14713,V14748,V14752,V14808,V14822,V14843,V14921,V14929,V15028,V15029,V15030,W3112,

VOC STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
617	8260 Surrogate, 400PPM	VP133174	02/27/2025	08/27/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								03/04/2025

FROM 0.40000ml of V13706 + 24.60000ml of V14613 = Final Quantity: 25.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
247	8260 Internal Standard, 250PPM	VP133935	05/16/2025	11/12/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								05/21/2025

FROM 0.25000ml of V14290 + 24.75000ml of V14921 = Final Quantity: 25.000 ml

VOC STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
218	BFB, 25PPM	VP133953	05/19/2025	11/09/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								05/21/2025

FROM 0.25000ml of V13391 + 24.75000ml of V14626 = Final Quantity: 25.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
719	8260 Working STD (BCM)-First source, 400PPM	VP134142	06/06/2025	12/06/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								06/10/2025

FROM 1.00000ml of V14668 + 1.00000ml of V14671 + 1.00000ml of V14673 + 1.00000ml of V14675 + 16.00000ml of V14929 = Final Quantity: 20.000 ml



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1810	8260 Working Std(2-CVE)-800ppm	VP134149	06/06/2025	12/06/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 06/10/2025
<u>FROM</u> 1.00000ml of V14636 + 1.00000ml of V14637 + 1.00000ml of V14638 + 1.00000ml of V14639 + 46.00000ml of V14929 = Final Quantity: 50.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
51	8260 Working STD (Acrolein) -first source, 800PPM	VP134431	06/20/2025	07/19/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda 07/15/2025
<u>FROM</u>	1.00000ml of V15030 + 1.50000ml of V15028 + 1.50000ml of V15029 + 21.00000ml of V14921 = Final Quantity: 25.000 ml							



VOC STANDARD PREPARATION LOG

[illegible]

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
589	BFB TUNE CHECK	VP134774	07/16/2025	07/17/2025	John Carlone	None	None	Mahesh Dadoda 07/21/2025
<u>FROM</u> 39.98400ml of W3112 + 0.01600ml of VP133953 = Final Quantity: 40.000 ml								

[illegible]

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
620	50 PPB CCC, 8260-Water	VP134777	07/16/2025	07/17/2025	John Carlone	None	None	Mahesh Dadoda 07/21/2025
<u>FROM</u> 39.94450ml of W3112 + 0.00500ml of VP133174 + 0.00500ml of VP134142 + 0.00800ml of VP133935 + 0.01250ml of VP134149 + 0.01250ml of VP134431 + 0.01250ml of VP134478 = Final Quantity: 40.000 ml								

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30067 / BFB tuneing solution	A0191805	11/22/2025	11/22/2024 / SAM	01/13/2023 / SAM	V13391

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	555582 / Custom Mixture, 8260 A/B Surrogate Mix [CS 5179-2]	A0196865	02/27/2026	02/27/2025 / SAM	04/12/2023 / SAM	V13706

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	555581 / Custom Standard, 8260 Internal Std [CS 5179-1]	A0210184	12/12/2025	12/12/2024 / SAM	04/15/2024 / SAM	V14290

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30489 / VOA Mix, 8260B Acetates Mix, P&TM, 1mL	A0209618	09/30/2025	06/23/2025 / SAM	08/15/2024 / SAM	V14438

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30489 / VOA Mix, 8260B Acetates Mix, P&TM, 1mL	A0209618	09/30/2025	06/23/2025 / SAM	08/15/2024 / SAM	V14440

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	95317 / Universal VOA Mega Mix (Min order = 5)	021624	12/23/2025	06/23/2025 / SAM	09/17/2024 / SAM	V14505

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	95317 / Universal VOA Mega Mix (Min order = 5)	021624	12/23/2025	06/23/2025 / SAM	09/17/2024 / SAM	V14506

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	95319 / Revised Additions Mix (Min = 5)	091724	12/23/2025	06/23/2025 / SAM	09/18/2024 / SAM	V14527

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	95319 / Revised Additions Mix (Min = 5)	091724	12/23/2025	06/23/2025 / SAM	09/18/2024 / SAM	V14528

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	22L0562016	08/27/2025	02/27/2025 / SAM	11/26/2024 / SAM	V14613

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	23I0762004	11/09/2025	05/09/2025 / SAM	11/26/2024 / SAM	V14626

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ 2-Chloroethyl vinyl ether	120524	12/06/2025	06/06/2025 / SAM	12/06/2024 / SAM	V14636

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ 2-Chloroethyl vinyl ether	120524	12/06/2025	06/06/2025 / SAM	12/06/2024 / SAM	V14637

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ 2-Chloroethyl vinyl ether	120524	12/06/2025	06/06/2025 / SAM	12/06/2024 / SAM	V14638

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ 2-Chloroethyl vinyl ether	120524	12/06/2025	06/06/2025 / SAM	12/06/2024 / SAM	V14639

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30225 / VOA Mix, bromochloromethane, 2000ug/mL, P&TM, 1mL/ampul	A0214960	12/06/2025	06/06/2025 / SAM	12/09/2024 / SAM	V14668

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30225 / VOA Mix, bromochloromethane, 2000ug/mL, P&TM, 1mL/ampul	A0214960	12/06/2025	06/06/2025 / SAM	12/09/2024 / SAM	V14671

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30225 / VOA Mix, bromochloromethane, 2000ug/mL, P&TM, 1mL/ampul	A0214960	12/06/2025	06/06/2025 / SAM	12/09/2024 / SAM	V14673

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30225 / VOA Mix, bromochloromethane, 2000ug/mL, P&TM, 1mL/ampul	A0214960	12/06/2025	06/06/2025 / SAM	12/09/2024 / SAM	V14675

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30006 / VOA Mix, CLP method Calibration Std #1 ketones 5000uq/ml, PTM, 1ml	A02110618	12/23/2025	06/23/2025 / SAM	12/17/2024 / SAM	V14708

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30006 / VOA Mix, CLP method Calibration Std #1 ketones 5000uq/ml, PTM, 1ml	A02110618	12/23/2025	06/23/2025 / SAM	12/17/2024 / SAM	V14712

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30006 / VOA Mix, CLP method Calibration Std #1 ketones 5000uq/ml, PTM, 1ml	A02110618	12/23/2025	06/23/2025 / SAM	12/17/2024 / SAM	V14713

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30042 / VOA Mix, 500 series method 502.2 Calibration Std #1 gases, 2000uq/ml, PTM, 1ml	A0216826	12/23/2025	06/23/2025 / SAM	12/17/2024 / SAM	V14748

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30042 / VOA Mix, 500 series method 502.2 Calibration Std #1 gases, 2000uq/ml, PTM, 1ml	A0216826	12/23/2025	06/23/2025 / SAM	12/17/2024 / SAM	V14752

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	555408 / Custom Standard, Vinyl Acetate Standard w/ Grav [CS 5066-6] TWO SEPARATE	A0220471	12/23/2025	06/23/2025 / SAM	01/08/2025 / SAM	V14808

LOTS

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	555408 / Custom Standard, Vinyl Acetate Standard w/ Grav [CS 5066-6] TWO SEPARATE	A0220471	12/23/2025	06/23/2025 / SAM	01/08/2025 / SAM	V14822

LOTS

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30470 / VOA Stock Solution, tert-butanol std, 1mL, P&TM	A0217535	11/12/2025	05/12/2025 / SAM	01/21/2025 / SAM	V14843

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	24G0262002	11/12/2025	05/12/2025 / SAM	05/09/2025 / SAM	V14921

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	24G0262002	12/06/2025	06/06/2025 / SAM	05/09/2025 / SAM	V14929

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	061925	07/19/2025	06/20/2025 / SAM	06/20/2025 / SAM	V15028

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	061925	07/19/2025	06/20/2025 / SAM	06/20/2025 / SAM	V15029

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	061925	07/19/2025	06/20/2025 / SAM	06/20/2025 / SAM	V15030

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / lwona	07/03/2024 / lwona	W3112

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis



Material No.: 9077-02
Batch No.: 23I0762004
Manufactured Date: 2023-08-11
Expiration Date: 2026-08-10
Revision No.: 0

Certificate of Analysis

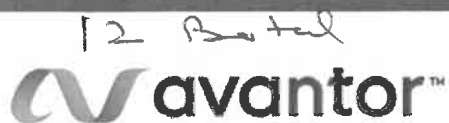
Test	Specification	Result
Assay (CH ₃ OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.5 ppm
Titration Acid (μeq/g)	≤ 0.3	0.2
Titration Base (μeq/g)	≤ 0.10	0.01
Water (by KF, coulometric)	≤ 0.08 %	< 0.01 %
Volatile Organic Trace Analysis – Below EPA 8260B CRQL	Conforms	Conforms

For Laboratory, Research, or Manufacturing Use
Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Ken Koehnlein
Sr. Manager, Quality Assurance

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis



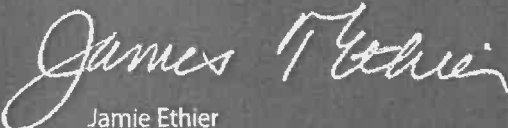
Material No.: 9077-02
Batch No.: 22L0562016
Manufactured Date: 2022-10-26
Expiration Date: 2025-10-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (CH ₃ OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.2 ppm
Titration Acid (μeq/g)	≤ 0.3	0.2
Titration Base (μeq/g)	≤ 0.10	0.03
Water (by KF, coulometric)	≤ 0.08 %	< 0.01 %
Volatile Organic Trace Analysis – Below EPA 8260B CRQL	Conforms	Conforms

For Laboratory, Research, or Manufacturing Use
Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC


Jamie Ethier
Vice President Global Quality



Ree 03117/24

CERTIFIED WEIGHT REPORT

Part Number: 95317

Lot Number: 021624

Description: Universal VOA Megamix

69 components

Expiration Date: 021627

Recommended Storage: Freezer (0 °C)

Nominal Concentration (µg/mL): 2000

NIST Test ID#: BUTB

Solvent(s): Lot#
Methanol EG359-USQ12Weight(s) shown below were combined and diluted to (mL): 100.0 0.021 Balance Uncertainty
Flask Uncertainty

Formulated By:	Prashant Chauhan	021624
Reviewed By:	Pedro L. Renteria	021624
DATE		

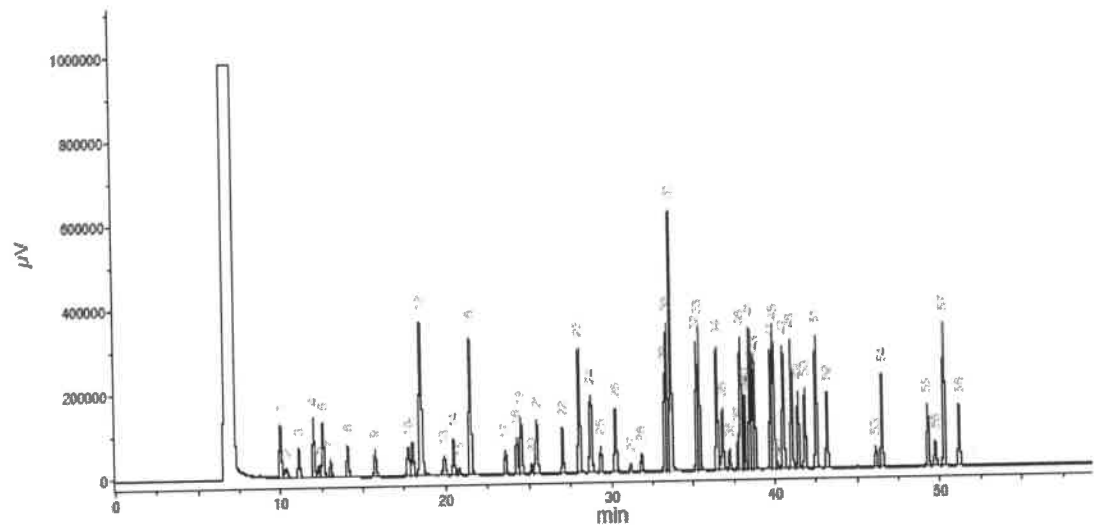
Compound	(KME)	Lot	DR	Initial	Initial	Nominal	Purity	Purity	Uncertainty	Target	Actual	Actual	Expanded	SDS Information		
														(Solvent Safety Info. On Attached pg.)	OSHA PEL (TWA)	LD50
1. Acetonitrile	(0324)	021644	NA	NA	NA	2000	99.99	0.2	NA	0.20007	0.20020	2001.3	8.1	75-05-8	40 ppm (70mg/m3/8H)	or-rat 2400mg/kg
2. Allyl chloride (3-Chloropropene)	(0325)	102396	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20221	2001.4	8.2	107-05-1	1 ppm (3mg/m3/8H)	or-rat 700mg/kg
3. Carbon disulfide	(0060)	MKCR8561	NA	NA	NA	2000	99.99	0.2	NA	0.20007	0.20023	2001.6	8.1	75-15-0	4 ppm (12mg/m3) (skin)	or-rat 1200mg/kg
4. cis-1,4-Dichloro-2-butene	(1196)	14718EF	NA	NA	NA	2000	95	0.2	NA	0.21056	0.21069	2001.1	8.5	1478-11-6	N/A	N/A
5. trans-1,4-Dichloro-2-butene	(0486)	MKBP9041V	NA	NA	NA	2000	96.5	0.2	NA	0.20731	0.20746	2001.7	8.4	110-57-6	N/A	N/A
6. Diethyl ether	(0153)	IK18CAS000C	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20040	2001.5	8.1	60-29-7	N/A	N/A
7. Ethyl methacrylate	(0381)	06128PX	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20230	2002.3	8.2	97-63-2	N/A	N/A
8. Iodomethane	(0489)	SHBF8718V	NA	NA	NA	2000	99.5	0.2	NA	0.20106	0.20121	2001.5	8.2	74-88-4	5 ppm (28mg/m3/8H) (skin)	or-rat 14800mg/kg
9. 2-Methyl-1-propanol	(0445)	15241EB	NA	NA	NA	2000	99.5	0.2	NA	0.20106	0.20120	2001.4	8.1	78-83-1	50 ppm (150mg/m3/8H)	or-rat 3460mg/kg
10. Methacrylonitrile	(0472)	00427ET	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20221	2001.4	8.2	128-98-7	1 ppm (3mg/m3/8H) (skin)	or-rat 120mg/kg
11. Methyl acrylate	(1075)	SHBK0679	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20040	2001.5	8.1	96-33-3	10 ppm (35mg/m3/8H) (skin)	or-rat 277mg/kg
12. Methyl methacrylate	(0404)	MKGW6137V	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20041	2001.6	8.1	80-62-6	100 ppm (410mg/m3/8H)	or-rat 7872mg/kg
13. Nitrobenzene	(0228)	01213TV	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20220	2001.3	8.2	98-95-3	1 ppm (5mg/m3/8H) (skin)	or-rat 780mg/kg
14. 2-Nitropropane	(0461)	HG002JK	NA	NA	NA	2000	97.3	0.2	NA	0.20560	0.20577	2001.6	8.3	78-46-9	10 ppm (35mg/m3/8H)	or-rat 720mg/kg
15. Pentachloroethane	(0460)	HGA01	NA	NA	NA	2000	98	0.2	NA	0.20413	0.20430	2001.6	8.3	78-01-7	N/A	N/A
16. 1,1,2-Trichlorotrifluoroethane	(0474)	18990	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20225	2001.8	8.2	78-13-1	1000 ppm (7600mg/m3/8H)	or-rat 43g/kg
17. Bromodichloromethane	35171	101623	0.05	5.00	40001.7	2000	NA	NA	0.017	NA	NA	1999.6	22.9	75-27-4	N/A	or-rat 915mg/kg
18. Dibromochloromethane	35171	101623	0.05	5.00	40002.1	2000	NA	NA	0.017	NA	NA	1999.6	23.0	124-48-1	N/A	or-rat 848mg/kg
19. cis-1,2-Dichloroethene	35171	101623	0.05	5.00	40003.1	2000	NA	NA	0.017	NA	NA	1999.7	22.9	156-59-2	N/A	N/A
20. trans-1,2-Dichloroethene	35171	101623	0.05	5.00	40003.2	2000	NA	NA	0.017	NA	NA	1999.6	22.9	156-60-5	N/A	or-rat 1235mg/kg
21. Methylene chloride	35171	101623	0.05	5.00	40002.8	2000	NA	NA	0.017	NA	NA	1999.6	22.9	75-09-2	500 ppm	or-rat 820mg/kg
22. 1,1-Dichloroethane	35171	101623	0.05	5.00	40003.2	2000	NA	NA	0.017	NA	NA	1999.7	20.4	75-35-4	1 ppm (4mg/m3/8H)	or-rat 200mg/kg
23. Bromoform	95321	020724	0.10	10.00	20001.6	2000	NA	NA	0.042	NA	NA	1999.7	20.5	75-25-2	0.5 ppm (5mg/m3) (skin)	or-rat 930mg/kg
24. Carbon tetrachloride	95321	020724	0.10	10.00	20003.2	2000	NA	NA	0.042	NA	NA	1999.6	20.4	56-23-5	2 ppm (12.6mg/m3/8H)	or-rat 2350mg/kg
25. Chloroform	95321	020724	0.10	10.00	20004.0	2000	NA	NA	0.042	NA	NA	1999.6	20.5	67-68-3	60 ppm (240mg/m3) (CL)	or-rat 908mg/kg
26. Dibromomethane	95321	020724	0.10	10.00	20002.9	2000	NA	NA	0.042	NA	NA	1999.6	20.5	74-95-3	N/A	or-rat 108mg/kg
27. 1,1-Dichloroethane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.6	20.4	594-20-7	N/A	N/A
28. 2,2-Dichloropropane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.6	20.4	594-20-7	N/A	N/A
29. Trichloroethene	95321	020724	0.10	10.00	20201.1	2000	NA	NA	0.042	NA	NA	2019.8	20.8	127-18-4	25 ppm (170mg/m3/8H) (final)	or-rat 2629mg/kg
30. 1,1,1-Trichloroethane	95321	020724	0.10	10.00	20003.0	2000	NA	NA	0.042	NA	NA	1999.8	20.5	71-55-6	350 ppm (1900mg/m3/8H)	or-rat 10300mg/kg
31. 1,2-Dibromo-3-chloropropane	35161	112322	0.05	5.00	40018.5	2000	NA	NA	0.017	NA	NA	2000.3	22.9	86-12-8	0.001 ppm	or-rat 170mg/kg
32. 1,2-Dibromoethane	35161	112322	0.05	5.00	40024.8	2000	NA	NA	0.017	NA	NA	2000.7	22.9	106-93-4	20 ppm (8H)	or-rat 108mg/kg
33. 1,2-Dichloropropane	35161	112322	0.05	5.00	40018.0	2000	NA	NA	0.017	NA	NA	2000.4	22.9	107-06-2	50 ppm (8H)	or-rat 670mg/kg
34. 1,2-Dichloropropane	35161	112322	0.05	5.00	40051.0	2000	NA	NA	0.017	NA	NA	2002.0	22.9	78-87-5	75 ppm (350mg/m3/8H)	or-rat 1847mg/kg
35. 1,3-Dichloropropane	35161	112322	0.05	5.00	40005.9	2000	NA	NA	0.017	NA	NA	1999.8	22.9	142-28-9	N/A	or-rat 3600mg/kg
36. 1,1-Dichloropropane	35161	112322	0.05	5.00	40012.1	2000	NA	NA	0.017	NA	NA	2000.1	28.7	563-58-6	N/A	N/A
37. cis-1,3-Dichloropropane	35161	112322	0.05	5.00	40010.0	2000	NA	NA	0.017	NA	NA	2000.0	23.0	10061-01-5	N/A	N/A
38. trans-1,3-Dichloropropane	35161	112322	0.05	5.00	40017.6	2000	NA	NA	0.017	NA	NA	2000.4	23.0	10061-02-6	N/A	N/A
39. Hexachloro-1,3-butadiene	35161	112322	0.05	5.00	40021.9	2000	NA	NA	0.017	NA	NA	2000.6	29.7	87-68-3	0.02 ppm (0.24mg/m3/8H)	or-rat 82mg/kg
40. 1,1,1,2-Tetrachloroethane	35161	112322	0.05	5.00	40011.9	2000	NA	NA	0.017	NA	NA	2000.1	22.9	830-20-6	N/A	or-rat 670mg/kg
41. 1,1,2,2-Tetrachloroethane	35161	112322	0.05	5.00	40007.5	2000	NA	NA	0.017	NA	NA	1999.9	22.9	79-34-5	5 ppm (35mg/m3/8H) (skin)	or-rat 800mg/kg
42. 1,1,2-Trichloroethane	35161	112322	0.05	5.00	40006.6	2000	NA	NA	0.017	NA	NA	1999.8	23.0	79-00-5	10 ppm (45mg/m3/8H) (skin)	or-rat 936mg/kg
43. Trichloroethene	35161	112322	0.05	5.00	40029.0	2000	NA	NA	0.017	NA	NA	2000.9	22.9	79-01-6	50 ppm (270mg/m3/8H)	or-mus 2402mg/kg
44. 1,2,3-Trichloropropane	35161	112322	0.05	5.00	40007.5	2000	NA	NA	0.017	NA	NA	1999.9	22.9	96-18-4	10 ppm (60mg/m3/8H)	or-rat 149.8mg/kg
45. Benzene	35162	050823	0.05	5.00	40007.5	2000	NA	NA	0.017	NA	NA	1999.7	22.9	71-43-2	1 ppm	or-rat 4894mg/kg
46. Bromobenzene	35162	050823	0.05	5.00	40006.0	2000	NA	NA	0.017	NA	NA	1999.7	22.9	104-51-8	N/A	or-rat 2699mg/kg
47. n-Butyl benzene	35162	050823	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	100-41-4	100 ppm (435mg/m3/8H)	or-rat >2000mg/kg
48. Ethyl benzene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	99-87-6	N/A	or-rat 4750mg/kg
49. p-Isopropyl toluene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	91-20-3	10 ppm (50mg/m3/8H)	or-rat 490mg/kg
50. Naphthalene	35162	050823	0.05	5.00	40005.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	100-42-5	100 ppm	or-rat 5000mg/kg
51. Styrene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	108-98-3	200 ppm	or-rat 5000mg/kg
52. Toluene	35162	050823	0.05	5.00	40006.2	2000	NA	NA	0.017	NA	NA	1999.7	22.9	87-81-6	N/A	or-rat 1390mg/kg
53. 1,2,3-Trichlorobenzene	35162	050823	0.05	5.00	40003.1	2000	NA	NA	0.017	NA	NA	1999.8	22.9	120-82-1	5 ppm (CL) (40mg/m3)	or-rat 756mg/kg
54. 1,2,4-Trichlorobenzene	35162	050823	0.05	5.00	40006.8	2000	NA	NA	0.017	NA	NA	1999.6	23.0	95-63-6	N/A	or-rat 5g/kg
55. 1,2,4-Trimethylbenzene	35162	050823	0.05	5.00	40001.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-87-6	N/A	or-rat 5000mg/kg
56. 1,3,5-Trimethylbenzene	35162	050823	0.05	5.00	40006.7	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-38-3	100 ppm (435mg/m3/8H)	or-rat 5g/kg
57. m-Xylene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	96-06-6	N/A	N/A
58. tert-Butyl benzene	35163	101923	0.05	5.00	40001.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	135-98-6	N/A	or-rat 2240mg/kg
59. sec-Butyl benzene	35163	101923	0.05	5.00	40002.4	2000	NA	NA	0.017	NA	NA	1999.7	22.9	108-90-7	75 ppm (350mg/m3/8H)	or-rat 2290mg/kg
60. Chlorobenzene	35163	101923	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.5	22.9	95-49-8	50 ppm (250mg/m3/8H)	or-rat 3900mg/kg
61. 2-Chlorotoluene	35163	101923	0.05	5.00	40003.3	2000	NA	NA	0.017	NA	NA	1999.7	22.9	106-43-4	N/A	or-rat 2100mg/kg
62. 4-Chlorotoluene	35163	101923	0.05	5.00	40003.3	2000	NA	NA	0.017	NA	NA	1999.7	22.9	95-50-1	50 ppm (300mg/m3) (CL)	or-rat 500mg/kg
63. 1,2-Dichlorobenzene	35163	101923	0.05	5.00	40001.7	2000	NA	NA	0.017	NA	NA	1999.6	23.0	541-73-1	N/A	or-mus 1060mg/kg
64. 1,3-Dichlorobenzene	35163	101923	0.05	5.00	40001.7	2000	NA	NA	0.017	NA	NA	1999.6	22.9	108-46-7	75 ppm (450mg/m3/8H)	or-rat 500mg/kg
65. 1,4-Dichlorobenzene	35163	101923	0.05	5.00	40001.8											



Run 16, "P95317 L021624 (2000µg/mL in MeOH)"

Run Length: 60.00 min, 35998 points at 10 points/second.
Created: Sat, Feb 17, 2024 at 8:56:46 AM.
Sampled: Sequence "021624-GC5M1", Method "GC5-M1".
Analyzed using Method "GC5-M1".

Comments
GC5-M1 Analysis by Candice Warren
Column ID SPB-Vocol 105 meter X 0.53mm X 3.0µm film thickness
Flow rates: Total flow=290mL/min., Helium (carrier)=10mL/min.,
Helium(make-up)=10mL/min., Hydrogen(make-up)=40mL/min., Air(make-up)=230mL/min.
Oven Profile: Temp. 1=35°C (Time 1=10 min.), Temp 2=200°C (Time 2=8.75 min.),
Rate = 4°C/min., Total run time=60 min. Injector temp.=200°C, FID Temp.=200°C.
FID Signal = Edaq Channel 1
Standard injection = 0.5µL, Range=3



Peak #	Name	FID RT (min.)
1	Ether	9.97
2	1,1,2-Trichloro-1,2,2-trifluoroethane	10.53
3	1,1-Dichloroethane	11.10
4	Acetonitrile	12.60
5	Iodomethane	12.91
6	Allyl chloride	12.96
7	Carbon disulfide/Methylene chloride	13.04
8	trans-1,2-Dichloroethene	14.07
9	1,1-Dichloroethane	15.74
10	2,2-Dichloropropane	17.74
11	cis-1,2-Dichloroethene	18.00
12	Methoxyvinylbenzene/Methyl acrylate/Chloroform	18.49
13	Isobutene/1,1,1-Trichloroethane	18.91
14	1,1-Dichloropropane	20.46
15	Carbon tetrachloride	20.79
16	Benzene/1,2-Dichloroethane	21.48
17	Trichloroethene	23.88
18	1,2-Dichloropropane	24.52
19	Methyl methacrylate	25.13
20	Bromochloropropane	25.46
21	Dibromomethane/2-Pentene	27.07
22	cis-1,2-Dichloroethene	28.03
23	Toluene	28.73
24	Ethyl methacrylate/Trans-1,2-Dichloroethene	29.34
25	1,1,2-Trichloroethane	30.34
26	Tetrachloroethane/1,2-Dichloropropane	31.16
27	Dibromochloromethane	31.84
28	1,2-Dibromomethane	33.06
29	Chlorobenzene	33.40
30	Ethylbenzene/1,1,1,2-Tetrachloroethane	33.85
31	m-Xylene/p-Xylene	35.33
32	o-Xylene	35.70
33	Styrene	35.70
34	Isopropylbenzene/Bromofarm	36.48
35	cis-1,4-Dichloro-3-butene	36.80
36	1,1,2-Trichloropropane	37.23
37	n-Propylbenzene	37.77
38	trans-1,4-Dichloro-3-butene	37.92
39	Bromobenzene	38.05
40	1,3,5-Trimethylbenzene	38.14
41	1,3,5-Trimethylbenzene	38.50
42	Chlorobenzene	38.63
43	4-Chlorobenzene	38.77
44	tert-Butylbenzene	39.76
45	1,2,4-Trimethylbenzene	39.91
46	Pentachloroethane	40.17
47	sec-Butylbenzene	40.52
48	p-Isopropylbenzene	41.02
49	1,3-Dichlorobenzene	41.42
50	1,4-Dichlorobenzene	41.83
51	n-Butylbenzene	42.52
52	1,2-Dichlorobenzene	42.18
53	1,2-Dibromo-3-chloropropane	46.12
54	Nitrobenzene	46.40
55	1,2,4-Trifluorobenzene	49.28
56	Hexachlorobutadiene	49.72
57	Naphthalene	50.56
58	1,2,3-Trichlorobenzene	51.16

Safety Data Sheet (SDS)

GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY ANALYTICAL STANDARD DISSOLVED IN METHANOL

Manufacturer's Name	ABSOLUTE STANDARDS INC	Emergency Telephone USA & CANADA	1-800-535-5053
Address	44 Rossotto Dr. Hamden CT, 06514	Emergency Telephone International	1-352-323-3500
		Date Prepared/Revised	January 1, 2024

Section II - Hazards Identification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

H225 H370 P271 P302,332	Highly Flammable Liquid and Vapor Cause damage to organs Use in ventilated area If on skin, wash with soap and water	H301, 311, 331 H351 P280 P305,351,338	Toxic if swallowed, skin contact, inhaled Suspected of causing cancer Use gloves, eye protection/face shield If in eyes, remove contacts, rinse with water
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Signal Word: DANGER

Section III - Composition

Components (Specific Chemical Identity; Common Name(s))	CAS#	% (optional)
Methanol METHYL ALCOHOL	67-56-1	> 97

See Certified Weight Report For Other Analytes Present At Trace Quantities.

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance. Move to safe area.
If inhaled	If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	Wash with soap and water. Consult a physician.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Do NOT induce vomiting. Rinse mouth with water. Consult a physician.

Section V. FIREFIGHTING MEASURES

Flammability	Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.
Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Protective equipment for fire	Wear self contained breathing apparatus for fire fighting if necessary.

Section VI. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Vapours accumulate to form explosive concentrations.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Clean up	Contain spillage, and then collect and place in container for disposal according to local regulations (see section 13).

Section VII. HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Storage Conditions	Use ventilation. Keep away from sources of ignition. No smoking. Prevent the build up of electrostatic charge. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Methanol	67-56-1 TWA 200 ppm
Skin notation	TWA 200 ppm
Potential for skin absorption, ingestion and inhalation.	
Personal protective equipment	Respiratory protection Handle with gloves. Gloves must be inspected prior to use. Eye protection.
Avoid contact with skin, eyes and clothing. Wash hands thoroughly after handling the product.	

Section IX - Physical/Chemical Characteristics

Boiling Point	65°C	Specific Gravity (H ₂ O = 1)	0.79
Vapor Pressure (mm Hg)	96	Melting Point	-98°C
Vapor Density (AIR = 1)	1.11	Evaporation rate (Butyl Acetate = 1)	4.6
Solubility in Water	COMPLETE		
Appearance and Odor	CLEAR, COLORLESS LIQUID WITH CHARACTERISTIC PUNGENT ODOR.		

Section X. STABILITY AND REACTIVITY

Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Vapours may form explosive mixture with air.
Conditions to avoid	Heat, flames, sparks, extreme temperature and sunlight.
Materials to avoid	Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids
Hazardous decomposition products formed under fire conditions.	- Carbon oxides

Section XI. TOXICOLOGICAL INFORMATION

LD50 Oral - rat - 5,628 mg/kg
LC50 Inhalation - rat - 4 h - 64000 ppm
LD50 Dermal - rabbit - 15,800 mg/kg
Toxic if absorbed through skin. Causes skin irritation.
Eye damage/eye irritation
Toxic if inhaled. Causes respiratory tract irritation.
Toxic if swallowed.

Section XII. ECOLOGICAL INFORMATION FOR REPORTABLE QUANTITY OF 5000 lbs.

LC50 15,400 mg/l - 96 h
EC50 24,500.00 mg/l - 48 h
EC100 10,000.00 mg/l - 24 h

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

DOT (US)
UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol

IATA
UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol

Section XV. REGULATORY INFORMATION

OSHA Hazards Flammable liquid, Target Organ Effect, Toxic by inhalation., Toxic by ingestion, Toxic by skin absorption, Irritant
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Section XVI. Misc. INFORMATION

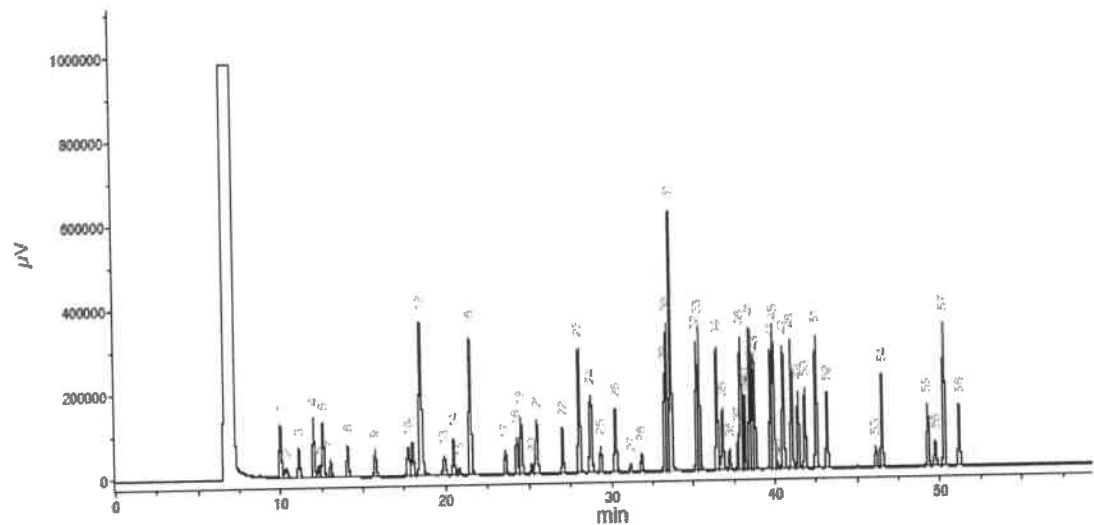
The information in this Material Safety Data Sheet meets the requirements of the United States Occupational Safety and Health Act and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and Global Harmonized System (GHS). This document is intended only as a guide to the appropriate precautionary handling of the material by trained personnel, or supervised by a person trained in chemical handling. The user is responsible for determining the precautions and dangers of this chemical for his or her particular application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes. Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, ABSOLUTE STANDARDS INC. cannot warn of all the potential dangers of use or interaction with other chemicals or substances. ABSOLUTE STANDARDS INC. warrants that the chemical meets the specifications set forth on the label. ABSOLUTE STANDARDS INC DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR APPLICATION. The user should recognize that this product can cause severe injury or death, especially if improperly handled or the known dangers of use are not heeded. READ ALL PRECAUTIONARY INFORMATION. As new documented general safety information becomes available, Absolute Standards Inc. will periodically revise this Safety Data Sheet. If you have any questions, please call Technical Service at 1-203-281-2917 for assistance.



Run 16, "P95317 L021624 (2000µg/mL in MeOH)"

Run Length: 60.00 min, 35998 points at 10 points/second.
Created: Sat, Feb 17, 2024 at 8:56:46 AM.
Sampled: Sequence "021624-GC5M1", Method "GC5-M1".
Analyzed using Method "GC5-M1".

Comments
GC5-M1 Analysis by Candice Warren
Column ID SPB-Vocol 105 meter X 0.53mm X 3.0µm film thickness
Flow rates: Total flow=290mL/min., Helium (carrier)=10mL/min.,
Helium(make-up)=10mL/min., Hydrogen(make-up)=40mL/min., Air(make-up)=230mL/min.
Oven Profile: Temp. 1=35°C (Time 1=10 min.), Temp 2=200°C (Time 2=8.75 min.),
Rate = 4°C/min., Total run time=60 min. Injector temp.=200°C, FID Temp.=200°C.
FID Signal = Edaq Channel 1
Standard injection = 0.5µL, Range=3



Peak #	Name	FID RT (min.)
1	Ether	9.97
2	1,1,2-Trichloro-1,2,2-trifluoroethane	10.53
3	1,1-Dichloroethane	11.10
4	Acetonitrile	12.00
5	Iodomethane	12.21
6	Allyl chloride	12.56
7	Carbon disulfide/Methylene chloride	13.04
8	trans-1,2-Dichloroethene	14.07
9	1,1-Dichloroethane	15.74
10	2,2-Dichloropropane	17.74
11	cis-1,2-Dichloroethene	18.00
12	Methoxyvinylbenzene/Methyl acrylate/Chloroform	18.49
13	Isobutene/1,1,1-Trichloroethane	18.91
14	1,1-Dichloropropane	20.46
15	Carbon tetrachloride	20.79
16	Benzene/1,2-Dichloroethane	21.48
17	Trichloroethene	23.88
18	1,2-Dichloropropane	24.52
19	Methyl methacrylate	25.13
20	Bromochloropropane	25.46
21	Dibromomethane/2-Pentene	27.07
22	cis-1,2-Dichloroethene	28.03
23	Toluene	28.73
24	Ethyl methacrylate/trans-1,2-Dichloroethene	29.34
25	1,1,2-Trichloroethane	30.34
26	Tetrachloroethane/1,2-Dichloropropane	31.16
27	Dibromochloromethane	31.84
28	1,2-Dibromomethane	33.05
29	Chlorobenzene	33.40
30	Ethylbenzene/1,1,1,2-Tetrachloroethane	33.85
31	m-Xylene/p-Xylene	35.53
32	o-Xylene	35.70
33	Styrene	35.70
34	Isopropylbenzene/Bromofarm	36.48
35	cis-1,4-Dichloro-3-butene	36.80
36	1,1,2-Trichloropropane	37.23
37	n-Propylbenzene	37.77
38	trans-1,4-Dichloro-3-butene	37.92
39	Bromobenzene	38.05
40	1,3,5-Trimethylbenzene	38.14
41	1,3,5-Trimethylbenzene	38.50
42	Chlorobenzene	38.63
43	4-Chlorobenzene	38.77
44	tert-Butylbenzene	39.76
45	1,2,4-Trimethylbenzene	39.91
46	Pentachloroethane	40.17
47	sec-Butylbenzene	40.52
48	p-Isopropylbenzene	41.02
49	1,3-Dichlorobenzene	41.42
50	1,4-Dichlorobenzene	41.83
51	n-Butylbenzene	42.52
52	1,2-Dichlorobenzene	42.18
53	1,2-Dibromo-3-chloropropane	46.12
54	Nitrobenzene	46.40
55	1,2,4-Trifluorobenzene	49.28
56	Hexachlorocyclopentadiene	49.72
57	Naphthalene	50.56
58	1,2,3-Trichlorobenzene	51.16

Safety Data Sheet (SDS)

GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY ANALYTICAL STANDARD DISSOLVED IN METHANOL

Manufacturer's Name	ABSOLUTE STANDARDS INC	Emergency Telephone USA & CANADA	1-800-535-5053
Address	44 Rossotto Dr. Hamden CT, 06514	Emergency Telephone International	1-352-323-3500
		Date Prepared/Revised	January 1, 2024

Section II - Hazards Identification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

H225 H370 P271 P302,332	Highly Flammable Liquid and Vapor Cause damage to organs Use in ventilated area If on skin, wash with soap and water	H301, 311, 331 H351 P280 P305,351,338	Toxic if swallowed, skin contact, inhaled Suspected of causing cancer Use gloves, eye protection/face shield If in eyes, remove contacts, rinse with water
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Signal Word: DANGER

Section III - Composition

Components (Specific Chemical Identity; Common Name(s))		
Methanol	METHYL ALCOHOL	CAS#: 67-56-1
		% (optional) > 97

See Certified Weight Report For Other Analytes Present At Trace Quantities.

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance. Move to safe area.
If inhaled	If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	Wash with soap and water. Consult a physician.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Do NOT induce vomiting. Rinse mouth with water. Consult a physician.

Section V. FIREFIGHTING MEASURES

Flammability	Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.
Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Protective equipment for fire	Wear self contained breathing apparatus for fire fighting if necessary.

Section VI. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Vapours accumulate to form explosive concentrations.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Clean up	Contain spillage, and then collect and place in container for disposal according to local regulations (see section 13).

Section VII. HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Storage Conditions	Use ventilation. Keep away from sources of ignition. No smoking. Prevent the build up of electrostatic charge. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Methanol	67-56-1 TWA 200 ppm
Skin notation	TWA 200 ppm
Potential for skin absorption, ingestion and inhalation.	
Personal protective equipment	Respiratory protection Handle with gloves. Gloves must be inspected prior to use. Eye protection.
Avoid contact with skin, eyes and clothing. Wash hands thoroughly after handling the product.	

Section IX - Physical/Chemical Characteristics

Boiling Point	65°C	Specific Gravity (H ₂ O = 1)	0.79
Vapor Pressure (mm Hg)	96	Melting Point	-98°C
Vapor Density (AIR = 1)	1.11	Evaporation rate (Butyl Acetate = 1)	4.6
Solubility in Water	COMPLETE		
Appearance and Odor	CLEAR, COLORLESS LIQUID WITH CHARACTERISTIC PUNGENT ODOR.		

Section X. STABILITY AND REACTIVITY

Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Vapours may form explosive mixture with air.
Conditions to avoid	Heat, flames, sparks, extreme temperature and sunlight.
Materials to avoid	Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids
Hazardous decomposition products formed under fire conditions.	- Carbon oxides

Section XI. TOXICOLOGICAL INFORMATION

LD50 Oral - rat - 5,628 mg/kg
LC50 Inhalation - rat - 4 h - 64000 ppm
LD50 Dermal - rabbit - 15,800 mg/kg
Toxic if absorbed through skin. Causes skin irritation.
Eye damage/eye irritation
Toxic if inhaled. Causes respiratory tract irritation.
Toxic if swallowed.

Section XII. ECOLOGICAL INFORMATION FOR REPORTABLE QUANTITY OF 5000 lbs.

LC50 15,400 mg/l - 96 h
EC50 24,500.00 mg/l - 48 h
EC100 10,000.00 mg/l - 24 h

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

DOT (US)
UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol

IATA
UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol

Section XV. REGULATORY INFORMATION

OSHA Hazards Flammable liquid, Target Organ Effect, Toxic by inhalation., Toxic by ingestion, Toxic by skin absorption, Irritant
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Section XVI. Misc. INFORMATION

The information in this Material Safety Data Sheet meets the requirements of the United States Occupational Safety and Health Act and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and Global Harmonized System (GHS). This document is intended only as a guide to the appropriate precautionary handling of the material by trained personnel, or supervised by a person trained in chemical handling. The user is responsible for determining the precautions and dangers of this chemical for his or her particular application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes. Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, ABSOLUTE STANDARDS INC. cannot warn of all the potential dangers of use or interaction with other chemicals or substances. ABSOLUTE STANDARDS INC. warrants that the chemical meets the specifications set forth on the label. ABSOLUTE STANDARDS INC DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR APPLICATION. The user should recognize that this product can cause severe injury or death, especially if improperly handled or the known dangers of use are not heeded. READ ALL PRECAUTIONARY INFORMATION. As new documented general safety information becomes available, Absolute Standards Inc. will periodically revise this Safety Data Sheet. If you have any questions, please call Technical Service at 1-203-281-2917 for assistance.



Certified Reference Material CRM



Dec 09/17/24

CERTIFIED WEIGHT REPORT

Part Number:

91980

Lot Number:

091424

Description:

Acrolein

Solvent(s):

Water

Lot#

072324Q

Expiration Date:

101424

Recommended Storage:

Refrigerate (4 °C)

Nominal Concentration (µg/mL):

5000

NIST Test ID#:

6UTB

Weight(s) shown below were combined and diluted to (mL):

10.0

5E-05 Balance Uncertainty

0.001 Flask Uncertainty

Formulated By:	Justin Dippold	DATE	091424
Reviewed By:	Pedro L. Rentas	DATE	091424

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	(Solvent Safety Info. On Attached pg.)	OSHA PEL (TWA)	LD50
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1. Acrolein	5	103755V10F	5000	97	0.5	0.05166	0.05175	5008.9	52.5	107-02-8	0.1 ppm	ori-rat 46mg/kg
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Method: GC6MSD-1, Detector: Mass Selective Detector (Scan mode). Columns: Vocol (60m X 0.25mm ID X 1.5µm film thickness), Oven Profile: Temp. 1 = 35°C (Time 1 = 0min.), Temp. 2 = 200°C (Time 2 = 8.75 min.), Rate = 4°C/min., Injector Temp. = 200°C, Detector Temp. = 220°C. Analyst: Pedro Rentas, NOTE: Due to the instability of acrolein in solution, all solutions thereof, should be used immediately. Long term storage is not recommended. Please contact our technical department if further information is required.

TIC: [BSB2]79005.D

Scan 232 (8.927 min): [BSB2]79005.D

Abundance

27

250000

8.93

200000

CC=CC=O

56

150000

30000

100000

20000

50000

10000

Time-->

m/z-->

10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00 65 75 85 119 158 169

* 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).



Certified Reference Material CRM



Dec 09/17/24

CERTIFIED WEIGHT REPORT

Part Number:

91980

Lot Number:

091424

Description:

Acrolein

Solvent(s):

Water

Lot#

072324Q

Expiration Date:

101424

Recommended Storage:

Refrigerate (4 °C)

Nominal Concentration (µg/mL):

5000

NIST Test ID#:

6UTB

5E-05 Balance Uncertainty

0.001 Flask Uncertainty

10.0

Weight(s) shown below were combined and diluted to (mL):

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	(Solvent Safety Info. On Attached pg.)	OSHA PEL (TWA)	LD50
----------	-----	------------	----------------------	------------	-------------	------------------	------------------	---------------------	------------------------------------	--	----------------	------

1. Acrolein	5	103755V10F	5000	97	0.5	0.05166	0.05175	5008.9	52.5	107-02-8	0.1 ppm	ori-rat 46mg/kg
-------------	---	------------	------	----	-----	---------	---------	--------	------	----------	---------	-----------------

Method: GC/MSD-1, Detector: Mass Selective Detector (Scan mode). Columns: Vocol (60m X 0.25mm ID X 1.5µm film thickness), Oven Profile: Temp. 1 = 35°C (Time 1 = 0min.), Temp. 2 = 200°C (Time 2 = 8.75 min.), Rate = 4°C/min., Injector Temp. = 200°C, Detector Temp. = 220°C. Analyst: Pedro Rentas, NOTE: Due to the instability of acrolein in solution, all solutions thereof, should be used immediately. Long term storage is not recommended. Please contact our technical department if further information is required.

TIC: [BSB2]79005.D

Scan 232 (8.927 min): [BSB2]79005.D

Abundance

27

250000

8.93

200000

C=CC=O

50000

56

150000

40000

30000

20000

10000

37

Time-->

0

10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00

m/z-->

0

20

30

40

50

60

70

80

85

119

158

169

- 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).



Dec 12/6/24
20 vial

CERTIFIED WEIGHT REPORT

Part Number: 95318
Lot Number: 120524
Description: 2-Chloroethyl vinyl ether

Solvent(s): Lot#
Methanol EJ143-US

Expiration Date: 120527
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 10000
NIST Test ID#: 6UTB

✓ 14630 to
✓ 14649

Weight(s) shown below were combined and diluted to (mL):

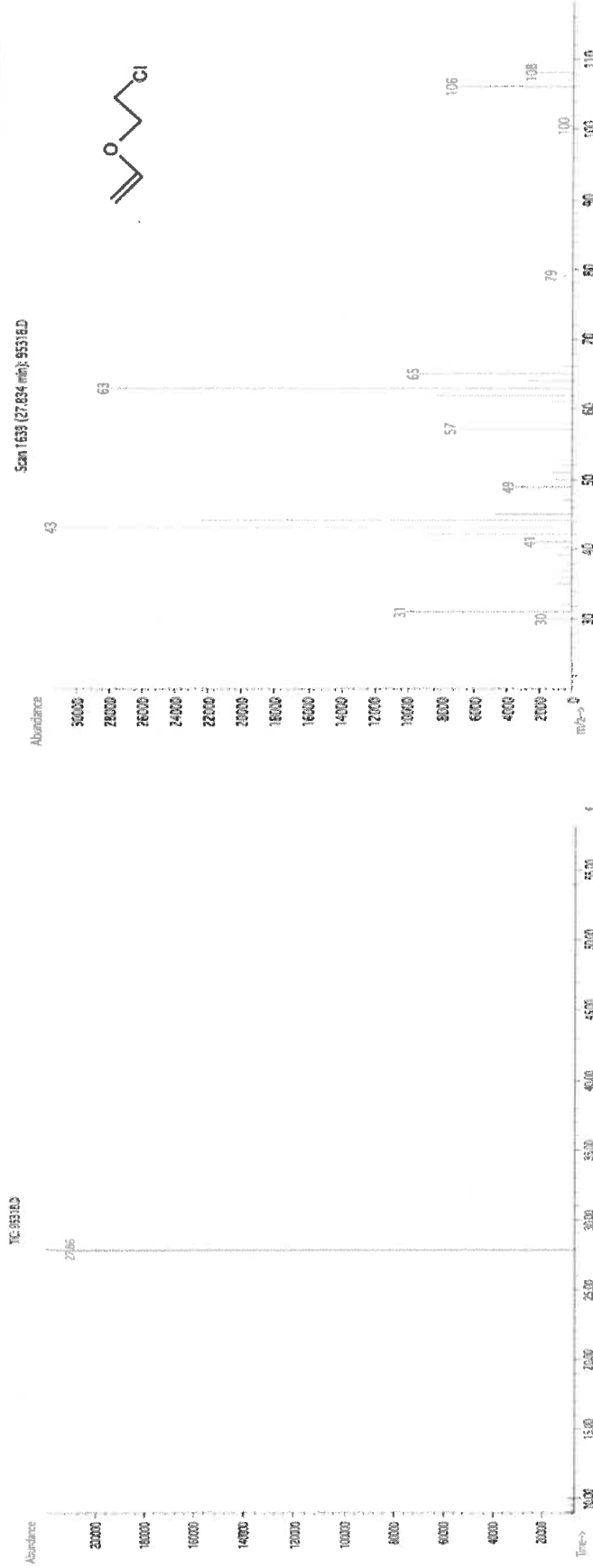
5E-05 Balance Uncertainty
0.001 Flask Uncertainty

Expanded Uncertainty (Solvent Safety Info. On Attached pg.)
Uncertainty (±) (µg/mL) CAS# OSHA PEL (TWA) LDSO

SDS Information

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)	LDSO
1. 2-Chloroethyl vinyl ether	74	MKCD0033	10000	99	0.2	0.50536	0.50550	10002.9	40.5	110-75-8	N/A	or-rat 250mg/kg

Method: GC6MSD-1.M. Detector: MSD. Column: (60m X 0.25mm X 1.5 µm). Oven Profile: Temp 1 = 35°C (Time 1=10min.), Temp 2 = 200°C (Time 2=8.75 min.), Rate = 4°C/min., Injector B Temp = 200°C, Detector B Temp = 220°C. Analyst: Candice Warren.



* 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).

Safety Data Sheet (SDS)

GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY ANALYTICAL STANDARD DISSOLVED IN METHANOL

Manufacturer's Name	ABSOLUTE STANDARDS INC	Emergency Telephone USA & CANADA	1-800-535-5053
Address	44 Rossotto Dr.	Emergency Telephone International	1-352-323-3500
	Hamden CT, 06514	Date Prepared/Revised	January 1, 2024

Section II - Hazards Identification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

H225	Highly Flammable Liquid and Vapor	H301, 311, 331	Toxic if swallowed, skin contact, inhaled
H370	Cause damage to organs	H351	Suspected of causing cancer
P271	Use in ventilated area	P280	Use gloves, eye protection/face shield
P302,332	If on skin, wash with soap and water	P305,351,338	If in eyes, remove contacts, rinse with water



Signal Word: DANGER

Section III - Composition

Components (Specific Chemical Identity; Common Name(s))		% (optional)
Methanol	METHYL ALCOHOL	> 97

See Certified Weight Report For Other Analytes Present At Trace Quantities.

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance. Move to safe area.
If inhaled	If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	Wash with soap and water. Consult a physician.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Do NOT induce vomiting. Rinse mouth with water. Consult a physician.

Section V. FIREFIGHTING MEASURES

Flammability	Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.
Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Protective equipment for fire	Wear self contained breathing apparatus for fire fighting if necessary.

Section VI. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Vapours accumulate to form explosive concentrations.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Clean up	Contain spillage, and then collect and place in container for disposal according to local regulations (see section 13).

Section VII. HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use ventilation. Keep away from sources of ignition. No smoking. Prevent the build up of electrostatic charge.
Storage Conditions	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Methanol	67-56-1	67-56-1	TWA 200 ppm
Skin notation			TWA 200 ppm
Potential for skin absorption, ingestion and inhalation.			
Personal protective equipment	Respiratory protection	Handle with gloves. Gloves must be inspected prior to use.	Eye protection.
Avoid contact with skin, eyes and clothing. Wash hands thoroughly after handling the product.			

Section IX - Physical/Chemical Characteristics

Boiling Point	65°C	Specific Gravity (H ₂ O = 1)	0.79
Vapor Pressure (mm Hg)	96	Melting Point	-98°C
Vapor Density (AIR = 1)	1.11	Evaporation rate (Butyl Acetate = 1)	4.6
Solubility in Water	COMPLETE		
Appearance and Odor	CLEAR, COLORLESS LIQUID WITH CHARACTERISTIC PUNGENT ODOR.		

Section X. STABILITY AND REACTIVITY

Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Vapours may form explosive mixture with air.
Conditions to avoid	Heat, flames, sparks, extreme temperature and sunlight.
Materials to avoid	Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids
Hazardous decomposition products formed under fire conditions.	- Carbon oxides

Section XI. TOXICOLOGICAL INFORMATION

LD50 Oral - rat - 5,628 mg/kg
LC50 Inhalation - rat - 4 h - 64000 ppm
LD50 Dermal - rabbit - 15,800 mg/kg
Toxic if absorbed through skin. Causes skin irritation.
Eye damage/eye irritation
Toxic if inhaled. Causes respiratory tract irritation.
Toxic if swallowed.

Section XII. ECOLOGICAL INFORMATION FOR REPORTABLE QUANTITY OF 5000 lbs.

LC50 15,400 mg/l - 96 h
EC50 24,500.00 mg/l - 48 h
EC100 10,000.00 mg/l - 24 h

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

DOT (US)	IATA
UN number: 1230 Class: 3 Packing group: II	UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol	Proper shipping name: Methanol

Section XV. REGULATORY INFORMATION

OSHA Hazards Flammable liquid, Target Organ Effect, Toxic by inhalation., Toxic by ingestion, Toxic by skin absorption, Irritant
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Section XVI. Misc. INFORMATION

The information in this Material Safety Data Sheet meets the requirements of the United States Occupational Safety and Health Act and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and Global Harmonized System (GHS). This document is intended only as a guide to the appropriate precautionary handling of the material by trained personnel, or supervised by a person trained in chemical handling. The user is responsible for determining the precautions and dangers of this chemical for his or her particular application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes. Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, ABSOLUTE STANDARDS INC. cannot warn of all the potential dangers of use or interaction with other chemicals or substances. ABSOLUTE STANDARDS INC. warrants that the chemical meets the specifications set forth on the label. ABSOLUTE STANDARDS INC DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR APPLICATION. The user should recognize that this product can cause severe injury or death, especially if improperly handled or the known dangers of use are not heeded. READ ALL PRECAUTIONARY INFORMATION. As new documented general safety information becomes available, Absolute Standards Inc. will periodically revise this Safety Data Sheet. If you have any questions, please call Technical Service at 1-203-281-2917 for assistance.



See 1216124
20 vial

CERTIFIED WEIGHT REPORT

Part Number: 95318
Lot Number: 120524
Description: 2-Chloroethyl vinyl ether

Solvent(s): Lot#
Methanol EJ143-US

Expiration Date: 120527
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 10000
NIST Test ID#: 6UTB

✓ 14630 to
✓ 14649

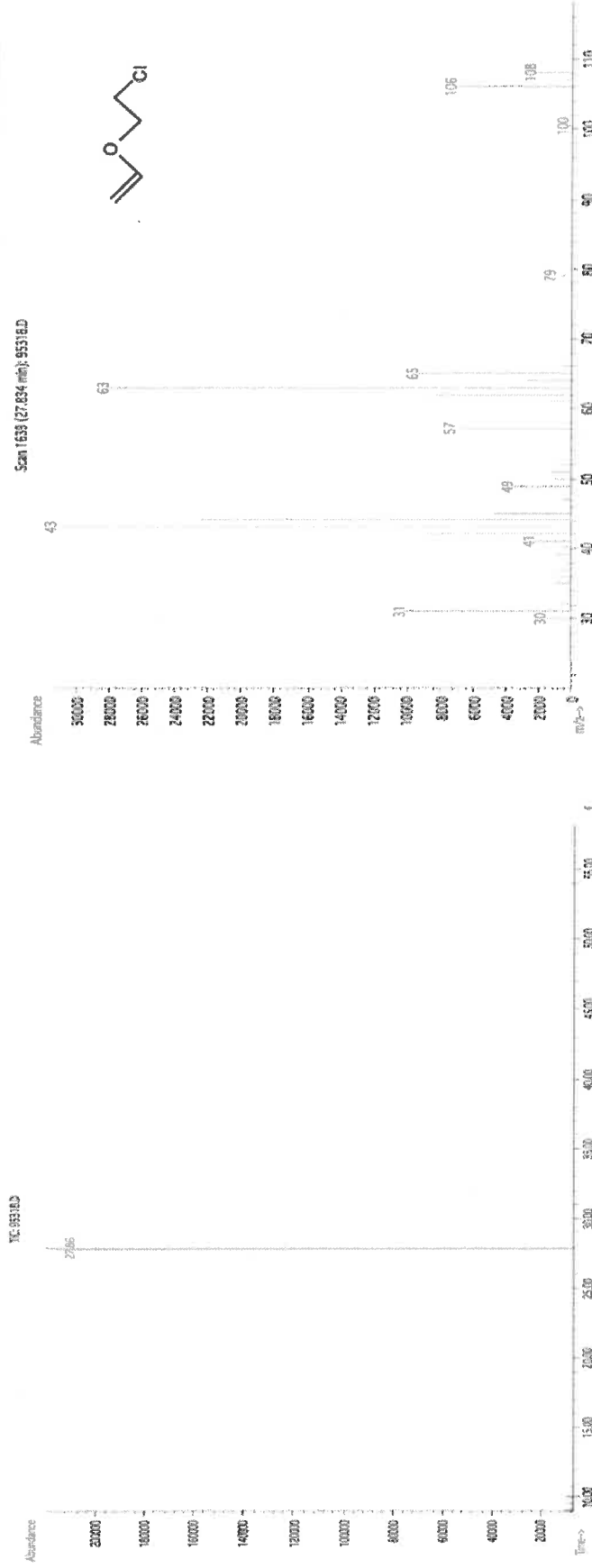
Weight(s) shown below were combined and diluted to (mL):

5E-05 Balance Uncertainty
0.001 Flask Uncertainty

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Purity Uncertainty	Target Weight (g)	Actual Weight (g)	Actual Conc (µg/mL)	Expanded Uncertainty (Solvent Safety Info. On Attached pg.)	OSHA PEL (TWA)	LD50
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1. 2-Chloroethyl vinyl ether	74	MKCD0033	10000	99	0.2	0.50536	0.50550	10002.9	40.5	110-75-8	N/A	or-rat 250mg/kg
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Method: GC6MSD-1.M. Detector: MSD. Column: (60m X 0.25mm X 1.5 µm). Oven Profile: Temp 1 = 35°C (Time 1=10min.), Temp 2 = 200°C (Time 2=8.75 min.), Rate = 4°C/min., Injector B Temp = 200°C, Detector B Temp. = 220°C. Analyst: Candice Warren.



* 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).

Safety Data Sheet (SDS)

GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY ANALYTICAL STANDARD DISSOLVED IN METHANOL

Manufacturer's Name	ABSOLUTE STANDARDS INC	Emergency Telephone USA & CANADA	1-800-535-5053
Address	44 Rossotto Dr.	Emergency Telephone International	1-352-323-3500
	Hamden CT, 06514	Date Prepared/Revised	January 1, 2024

Section II - Hazards Identification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

H225	Highly Flammable Liquid and Vapor	H301, 311, 331	Toxic if swallowed, skin contact, inhaled
H370	Cause damage to organs	H351	Suspected of causing cancer
P271	Use in ventilated area	P280	Use gloves, eye protection/face shield
P302,332	If on skin, wash with soap and water	P305,351,338	If in eyes, remove contacts, rinse with water



Signal Word: DANGER

Section III - Composition

Components (Specific Chemical Identity; Common Name(s))		% (optional)
Methanol	METHYL ALCOHOL	> 97

See Certified Weight Report For Other Analytes Present At Trace Quantities.

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance. Move to safe area.
If inhaled	If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	Wash with soap and water. Consult a physician.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Do NOT induce vomiting. Rinse mouth with water. Consult a physician.

Section V. FIREFIGHTING MEASURES

Flammability	Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.
Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Protective equipment for fire	Wear self contained breathing apparatus for fire fighting if necessary.

Section VI. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Vapours accumulate to form explosive concentrations.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Clean up	Contain spillage, and then collect and place in container for disposal according to local regulations (see section 13).

Section VII. HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use ventilation. Keep away from sources of ignition. No smoking. Prevent the build up of electrostatic charge.
Storage Conditions	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Methanol	67-56-1	67-56-1	TWA 200 ppm
Skin notation			TWA 200 ppm
Potential for skin absorption, ingestion and inhalation.			
Personal protective equipment	Respiratory protection	Handle with gloves. Gloves must be inspected prior to use.	Eye protection.
Avoid contact with skin, eyes and clothing. Wash hands thoroughly after handling the product.			

Section IX - Physical/Chemical Characteristics

Boiling Point	65°C	Specific Gravity (H ₂ O = 1)	0.79
Vapor Pressure (mm Hg)	96	Melting Point	-98°C
Vapor Density (AIR = 1)	1.11	Evaporation rate (Butyl Acetate = 1)	4.6
Solubility in Water	COMPLETE		
Appearance and Odor	CLEAR, COLORLESS LIQUID WITH CHARACTERISTIC PUNGENT ODOR.		

Section X. STABILITY AND REACTIVITY

Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Vapours may form explosive mixture with air.
Conditions to avoid	Heat, flames, sparks, extreme temperature and sunlight.
Materials to avoid	Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids
Hazardous decomposition products formed under fire conditions.	- Carbon oxides

Section XI. TOXICOLOGICAL INFORMATION

LD50 Oral - rat - 5,628 mg/kg
LC50 Inhalation - rat - 4 h - 64000 ppm
LD50 Dermal - rabbit - 15,800 mg/kg
Toxic if absorbed through skin. Causes skin irritation.
Eye damage/eye irritation
Toxic if inhaled. Causes respiratory tract irritation.
Toxic if swallowed.

Section XII. ECOLOGICAL INFORMATION FOR REPORTABLE QUANTITY OF 5000 lbs.

LC50 15,400 mg/l - 96 h
EC50 24,500.00 mg/l - 48 h
EC100 10,000.00 mg/l - 24 h

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

DOT (US)	IATA
UN number: 1230 Class: 3 Packing group: II	UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol	Proper shipping name: Methanol

Section XV. REGULATORY INFORMATION

OSHA Hazards Flammable liquid, Target Organ Effect, Toxic by inhalation., Toxic by ingestion, Toxic by skin absorption, Irritant
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Section XVI. Misc. INFORMATION

The information in this Material Safety Data Sheet meets the requirements of the United States Occupational Safety and Health Act and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and Global Harmonized System (GHS). This document is intended only as a guide to the appropriate precautionary handling of the material by trained personnel, or supervised by a person trained in chemical handling. The user is responsible for determining the precautions and dangers of this chemical for his or her particular application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes. Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, ABSOLUTE STANDARDS INC. cannot warn of all the potential dangers of use or interaction with other chemicals or substances. ABSOLUTE STANDARDS INC. warrants that the chemical meets the specifications set forth on the label. ABSOLUTE STANDARDS INC DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR APPLICATION. The user should recognize that this product can cause severe injury or death, especially if improperly handled or the known dangers of use are not heeded. READ ALL PRECAUTIONARY INFORMATION. As new documented general safety information becomes available, Absolute Standards Inc. will periodically revise this Safety Data Sheet. If you have any questions, please call Technical Service at 1-203-281-2917 for assistance.



Dec 12/16/24
20 vial

CERTIFIED WEIGHT REPORT

Part Number: 95318
Lot Number: 120524
Description: 2-Chloroethyl vinyl ether

Solvent(s): Lot#
Methanol EJ143-US

Expiration Date: 120527
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 10000
NIST Test ID#: 6UTB

Weight(s) shown below were combined and diluted to (mL):

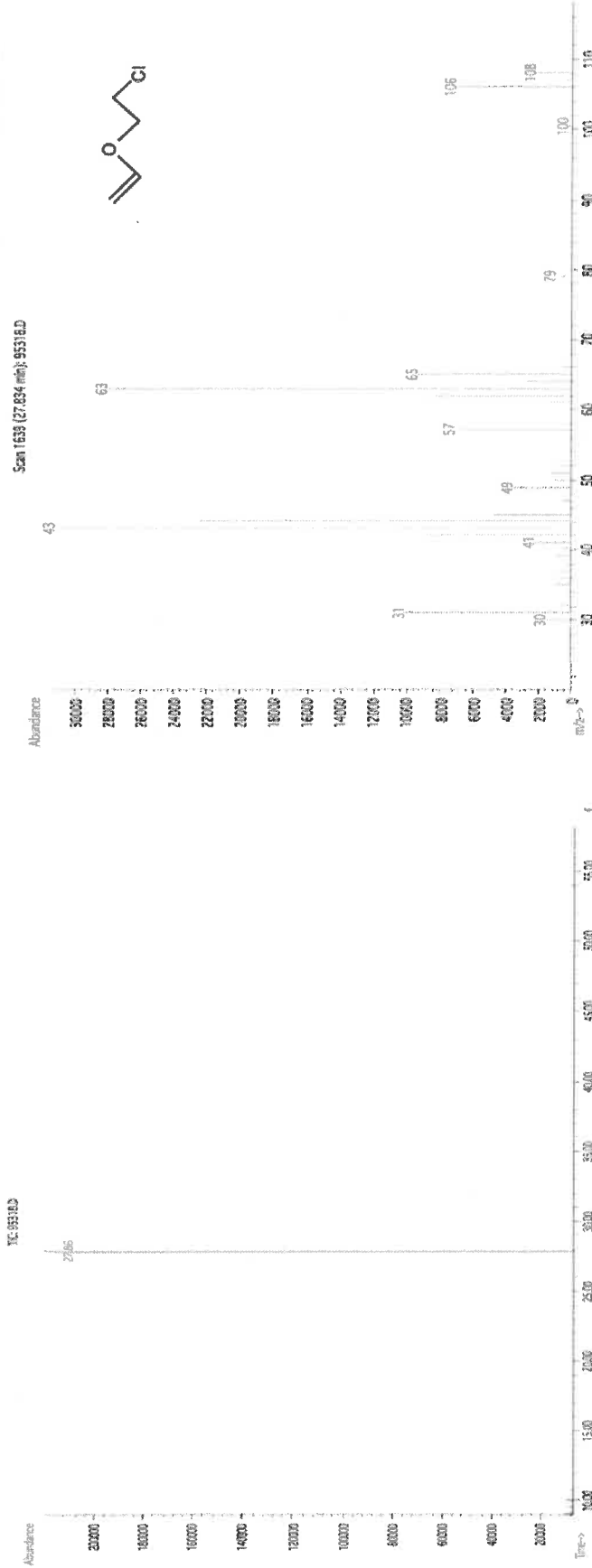
5E-05 Balance Uncertainty
0.001 Flask Uncertainty

Formulated By: Prashant Chauhan 120524
Reviewed By: Pedro L. Rentas 120524

Expanded Uncertainty (Solvent Safety Info. On Attached pg.)
Uncertainty (±) (µg/mL) CAS# OSHA PEL (TWA) LD50

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc (µg/mL)	or-rat 250mg/kg
1. 2-Chloroethyl vinyl ether	74	MKCD0033	10000	99	0.2	0.50536	0.50550	10002.9	N/A

Method: GC6MSD-1.M. Detector: MSD. Column: (60m X 0.25mm X 1.5 µm). Oven Profile: Temp 1 = 35°C (Time 1=10min.), Temp 2 = 200°C (Time 2=8.75 min.), Rate = 4°C/min., Injector B Temp = 200°C, Detector B Temp = 220°C. Analyst: Candice Warren.



* 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.
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Safety Data Sheet (SDS)

GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY ANALYTICAL STANDARD DISSOLVED IN METHANOL

Manufacturer's Name	ABSOLUTE STANDARDS INC	Emergency Telephone USA & CANADA	1-800-535-5053
Address	44 Rossotto Dr.	Emergency Telephone International	1-352-323-3500
	Hamden CT, 06514	Date Prepared/Revised	January 1, 2024

Section II - Hazards Identification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

H225	Highly Flammable Liquid and Vapor	H301, 311, 331	Toxic if swallowed, skin contact, inhaled
H370	Cause damage to organs	H351	Suspected of causing cancer
P271	Use in ventilated area	P280	Use gloves, eye protection/face shield
P302,332	If on skin, wash with soap and water	P305,351,338	If in eyes, remove contacts, rinse with water



Signal Word: DANGER

Section III - Composition

Components (Specific Chemical Identity; Common Name(s))		% (optional)
Methanol	METHYL ALCOHOL	> 97

See Certified Weight Report For Other Analytes Present At Trace Quantities.

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance. Move to safe area.
If inhaled	If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	Wash with soap and water. Consult a physician.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Do NOT induce vomiting. Rinse mouth with water. Consult a physician.

Section V. FIREFIGHTING MEASURES

Flammability	Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.
Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Protective equipment for fire	Wear self contained breathing apparatus for fire fighting if necessary.

Section VI. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Vapours accumulate to form explosive concentrations.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Clean up	Contain spillage, and then collect and place in container for disposal according to local regulations (see section 13).

Section VII. HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use ventilation. Keep away from sources of ignition. No smoking. Prevent the build up of electrostatic charge.
Storage Conditions	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Methanol	67-56-1	67-56-1	TWA 200 ppm
Skin notation			TWA 200 ppm
Potential for skin absorption, ingestion and inhalation.			
Personal protective equipment	Respiratory protection	Handle with gloves. Gloves must be inspected prior to use.	Eye protection.
Avoid contact with skin, eyes and clothing. Wash hands thoroughly after handling the product.			

Section IX - Physical/Chemical Characteristics

Boiling Point	65°C	Specific Gravity (H ₂ O = 1)	0.79
Vapor Pressure (mm Hg)	96	Melting Point	-98°C
Vapor Density (AIR = 1)	1.11	Evaporation rate (Butyl Acetate = 1)	4.6
Solubility in Water	COMPLETE		
Appearance and Odor	CLEAR, COLORLESS LIQUID WITH CHARACTERISTIC PUNGENT ODOR.		

Section X. STABILITY AND REACTIVITY

Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Vapours may form explosive mixture with air.
Conditions to avoid	Heat, flames, sparks, extreme temperature and sunlight.
Materials to avoid	Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids
Hazardous decomposition products formed under fire conditions.	- Carbon oxides

Section XI. TOXICOLOGICAL INFORMATION

LD50 Oral - rat - 5,628 mg/kg
LC50 Inhalation - rat - 4 h - 64000 ppm
LD50 Dermal - rabbit - 15,800 mg/kg
Toxic if absorbed through skin. Causes skin irritation.
Eye damage/eye irritation
Toxic if inhaled. Causes respiratory tract irritation.
Toxic if swallowed.

Section XII. ECOLOGICAL INFORMATION FOR REPORTABLE QUANTITY OF 5000 lbs.

LC50 15,400 mg/l - 96 h
EC50 24,500.00 mg/l - 48 h
EC100 10,000.00 mg/l - 24 h

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

DOT (US)	IATA
UN number: 1230 Class: 3 Packing group: II	UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol	Proper shipping name: Methanol

Section XV. REGULATORY INFORMATION

OSHA Hazards Flammable liquid, Target Organ Effect, Toxic by inhalation., Toxic by ingestion, Toxic by skin absorption, Irritant
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Section XVI. Misc. INFORMATION

The information in this Material Safety Data Sheet meets the requirements of the United States Occupational Safety and Health Act and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and Global Harmonized System (GHS). This document is intended only as a guide to the appropriate precautionary handling of the material by trained personnel, or supervised by a person trained in chemical handling. The user is responsible for determining the precautions and dangers of this chemical for his or her particular application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes. Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, ABSOLUTE STANDARDS INC. cannot warn of all the potential dangers of use or interaction with other chemicals or substances. ABSOLUTE STANDARDS INC. warrants that the chemical meets the specifications set forth on the label. ABSOLUTE STANDARDS INC DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR APPLICATION. The user should recognize that this product can cause severe injury or death, especially if improperly handled or the known dangers of use are not heeded. READ ALL PRECAUTIONARY INFORMATION. As new documented general safety information becomes available, Absolute Standards Inc. will periodically revise this Safety Data Sheet. If you have any questions, please call Technical Service at 1-203-281-2917 for assistance.



Dec 12/6/24
20 vial

CERTIFIED WEIGHT REPORT

Part Number: 95318
Lot Number: 120524
Description: 2-Chloroethyl vinyl ether

Solvent(s): Lot#
Methanol EJ143-US

Expiration Date: 120527
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 10000
NIST Test ID#: 6UTB

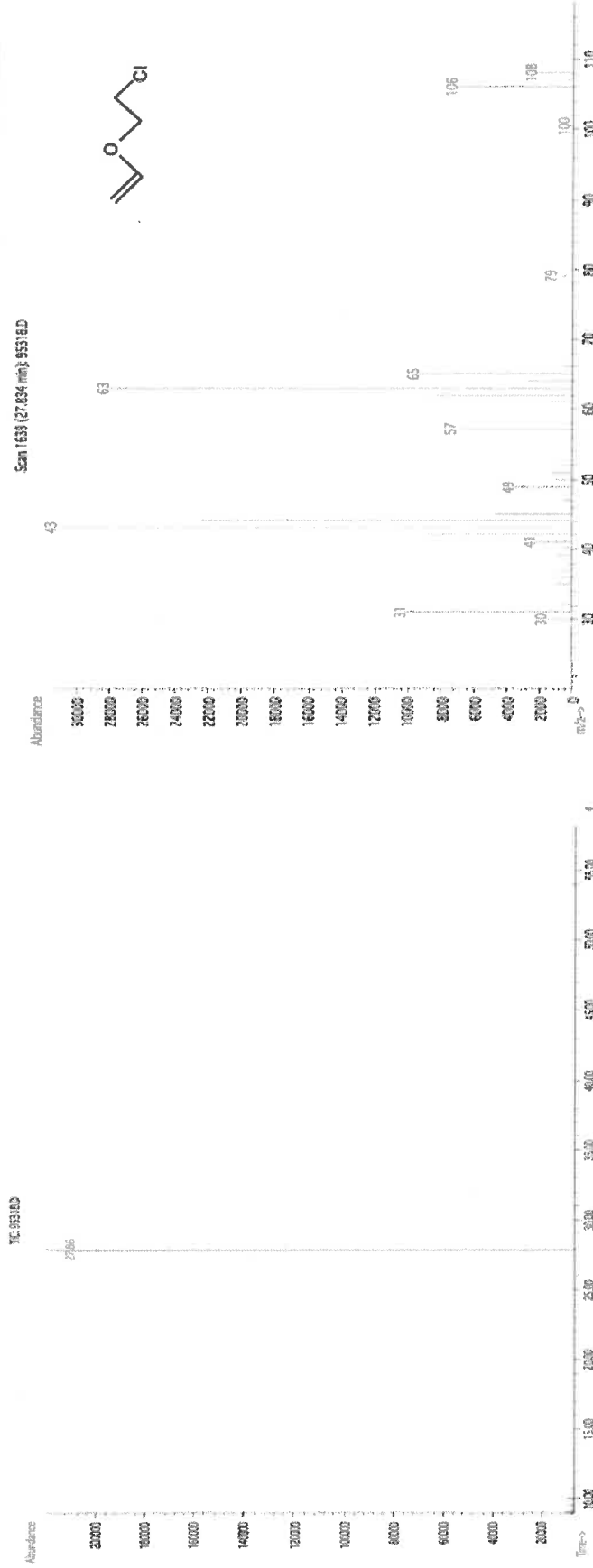
✓ 14630 to
✓ 14649

Weight(s) shown below were combined and diluted to (mL):

5E-05 Balance Uncertainty
0.001 Flask Uncertainty

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Purity Uncertainty	Target Weight (g)	Actual Weight (g)	Actual Conc (µg/mL)	Expanded Uncertainty (±) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)
1. 2-Chloroethyl vinyl ether	74	MKCD0033	10000	99	0.2	0.50536	0.50550	10002.9	40.5	110-75-8 N/A or-rat 250mg/kg

Method: GC6MSD-1.M. Detector: MSD. Column: (60m X 0.25mm X 1.5 µm). Oven Profile: Temp 1 = 35°C (Time 1=10min.), Temp 2 = 200°C (Time 2=8.75 min.), Rate = 4°C/min., Injector B Temp = 200°C, Detector B Temp = 220°C. Analyst: Candice Warren.



* 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).

Safety Data Sheet (SDS)

GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY ANALYTICAL STANDARD DISSOLVED IN METHANOL

Manufacturer's Name	ABSOLUTE STANDARDS INC	Emergency Telephone USA & CANADA	1-800-535-5053
Address	44 Rossotto Dr.	Emergency Telephone International	1-352-323-3500
	Hamden CT, 06514	Date Prepared/Revised	January 1, 2024

Section II - Hazards Identification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

H225	Highly Flammable Liquid and Vapor	H301, 311, 331	Toxic if swallowed, skin contact, inhaled
H370	Cause damage to organs	H351	Suspected of causing cancer
P271	Use in ventilated area	P280	Use gloves, eye protection/face shield
P302,332	If on skin, wash with soap and water	P305,351,338	If in eyes, remove contacts, rinse with water



Signal Word: DANGER

Section III - Composition

Components (Specific Chemical Identity; Common Name(s))		% (optional)
Methanol	METHYL ALCOHOL	> 97

See Certified Weight Report For Other Analytes Present At Trace Quantities.

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance. Move to safe area.
If inhaled	If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	Wash with soap and water. Consult a physician.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Do NOT induce vomiting. Rinse mouth with water. Consult a physician.

Section V. FIREFIGHTING MEASURES

Flammability	Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.
Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Protective equipment for fire	Wear self contained breathing apparatus for fire fighting if necessary.

Section VI. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Vapours accumulate to form explosive concentrations.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Clean up	Contain spillage, and then collect and place in container for disposal according to local regulations (see section 13).

Section VII. HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use ventilation. Keep away from sources of ignition. No smoking. Prevent the build up of electrostatic charge.
Storage Conditions	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Methanol	67-56-1	67-56-1	TWA 200 ppm
Skin notation			TWA 200 ppm
Potential for skin absorption, ingestion and inhalation.			
Personal protective equipment	Respiratory protection	Handle with gloves. Gloves must be inspected prior to use.	Eye protection.
Avoid contact with skin, eyes and clothing. Wash hands thoroughly after handling the product.			

Section IX - Physical/Chemical Characteristics

Boiling Point	65°C	Specific Gravity (H ₂ O = 1)	0.79
Vapor Pressure (mm Hg)	96	Melting Point	-98°C
Vapor Density (AIR = 1)	1.11	Evaporation rate (Butyl Acetate = 1)	4.6
Solubility in Water	COMPLETE		
Appearance and Odor	CLEAR, COLORLESS LIQUID WITH CHARACTERISTIC PUNGENT ODOR.		

Section X. STABILITY AND REACTIVITY

Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Vapours may form explosive mixture with air.
Conditions to avoid	Heat, flames, sparks, extreme temperature and sunlight.
Materials to avoid	Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids
Hazardous decomposition products formed under fire conditions.	- Carbon oxides

Section XI. TOXICOLOGICAL INFORMATION

LD50 Oral - rat - 5,628 mg/kg
LC50 Inhalation - rat - 4 h - 64000 ppm
LD50 Dermal - rabbit - 15,800 mg/kg
Toxic if absorbed through skin. Causes skin irritation.
Eye damage/eye irritation
Toxic if inhaled. Causes respiratory tract irritation.
Toxic if swallowed.

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LC50 15,400 mg/l - 96 h
EC50 24,500.00 mg/l - 48 h
EC100 10,000.00 mg/l - 24 h

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

DOT (US)	IATA
UN number: 1230 Class: 3 Packing group: II	UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol	Proper shipping name: Methanol

Section XV. REGULATORY INFORMATION

OSHA Hazards Flammable liquid, Target Organ Effect, Toxic by inhalation., Toxic by ingestion, Toxic by skin absorption, Irritant
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Section XVI. Misc. INFORMATION

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110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



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. : 30067 **Lot No.:** A0191805

Description : 4-Bromofluorobenzene Standard

4-Bromofluorobenzene Standard 2,500µg/mL, P&T Methanol,
1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2027 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1-Bromo-4-fluorobenzene (BFB)	460-00-4	184975	99%	2,483.9 µg/mL	+/- 139.5488

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Quality Confirmation Test

Column:

105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

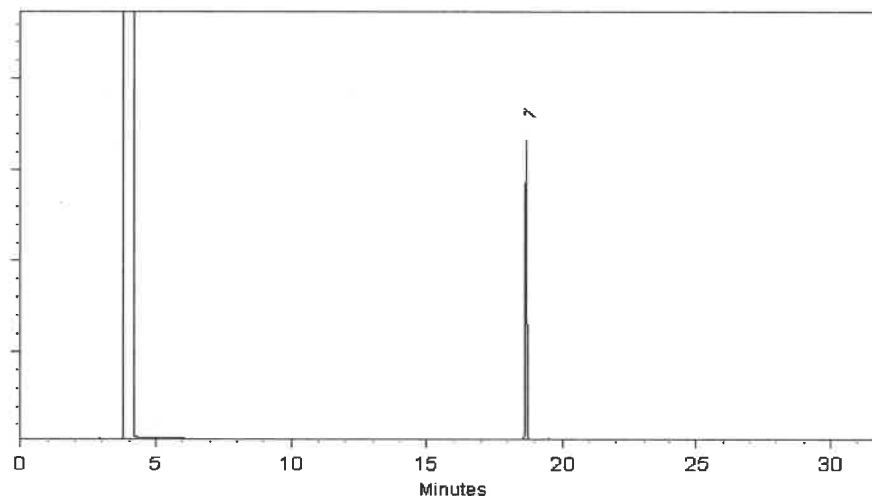
FID

Split Vent:

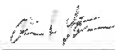
40 ml/min

Inj. Vol

1µl



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.


Alicia Leathers - Operation Technician I

Date Mixed: 17-Nov-2022

Balance Serial # B251644995


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 21-Nov-2022

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k \sqrt{u_{gravimetric}^2 + u_{homogeneity}^2 + u_{storage\ stability}^2 + u_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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Fax: 1-814-353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

gravimetric



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. : 555582 **Lot No.:** A0196865

Description : Custom 8260A/B Surrogate Mix
Custom 8260A/B Surrogate Mix 25,000µg/mL, P&T Methanol,
1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2026 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Component #	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2-Dichloroethane-d4	17060-07-0	PR-32845	99%	25,036.0 µg/mL	+/- 1,417.9179
2	1-Bromo-4-fluorobenzene (BFB)	460-00-4	184975	99%	25,132.0 µg/mL	+/- 1,423.3549
3	Dibromofluoromethane	1868-53-7	022013	99%	25,040.0 µg/mL	+/- 1,418.1445
4	Toluene-d8	2037-26-5	PR-33397	99%	25,028.0 µg/mL	+/- 1,417.4648

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Russ Bookhamer - Operations Technician I

Date Mixed: 11-Apr-2023

Balance: 1127510105

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k \sqrt{u_{gravimetric}^2 + u_{homogeneity}^2 + u_{storage\ stability}^2 + u_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



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. : 30489 **Lot No.:** A0209618

Description : 8260B Acetates Mix
8260B Acetates Mix 2,000 µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2025 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Methyl acetate	79-20-9	SHBP3100	99%	2,019.3 µg/mL	+/- 69.7974
2	Vinyl acetate	108-05-4	RP231030CTH	98%	2,016.8 µg/mL	+/- 69.7112
3	Ethyl acetate	141-78-6	SHBQ9682	99%	2,010.7 µg/mL	+/- 69.4979
4	Isopropyl acetate	108-21-4	BCCG7069	99%	2,016.0 µg/mL	+/- 69.6822
5	Propyl acetate	109-60-4	P8XLN	99%	2,008.0 µg/mL	+/- 69.4057
6	Butyl acetate	123-86-4	SHBP6314	99%	2,007.3 µg/mL	+/- 69.3826
7	Amyl acetate	628-63-7	41325/1	97%	2,004.7 µg/mL	+/- 69.2905

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this

reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Quality Confirmation Test

Column:

105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

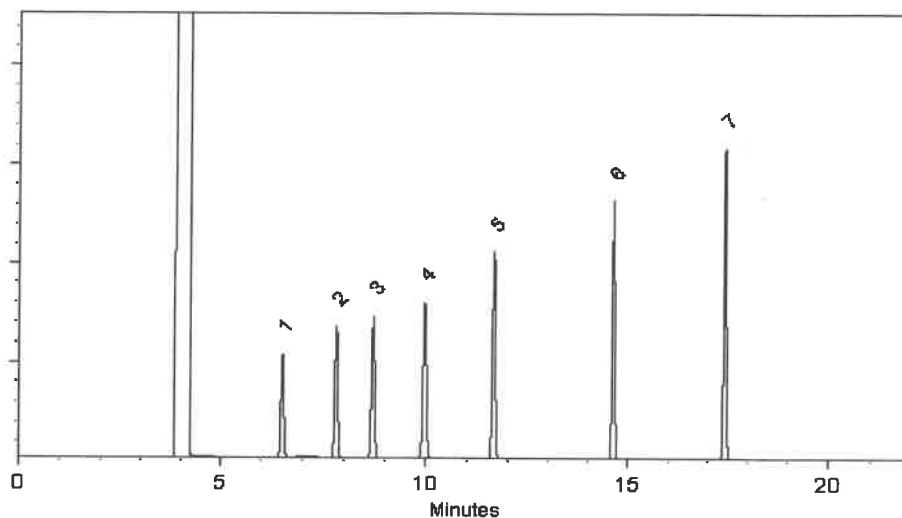
FID

Split Vent:

40 ml/min

Inj. Vol

1µl



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.

Sam Moodler
Sam Moodler - Operations Tech I

Date Mixed: 28-Mar-2024

Balance Serial # B707717271

Dillon Murphy
Dillon Murphy - Operations Technician I

Date Passed: 01-Apr-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k \sqrt{u_{gravimetric}^2 + u_{homogeneity}^2 + u_{storage\ stability}^2 + u_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



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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. : 30489 **Lot No.:** A0209618

Description : 8260B Acetates Mix
8260B Acetates Mix 2,000 µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2025 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Methyl acetate	79-20-9	SHBP3100	99%	2,019.3 µg/mL	+/- 69.7974
2	Vinyl acetate	108-05-4	RP231030CTH	98%	2,016.8 µg/mL	+/- 69.7112
3	Ethyl acetate	141-78-6	SHBQ9682	99%	2,010.7 µg/mL	+/- 69.4979
4	Isopropyl acetate	108-21-4	BCCG7069	99%	2,016.0 µg/mL	+/- 69.6822
5	Propyl acetate	109-60-4	P8XLN	99%	2,008.0 µg/mL	+/- 69.4057
6	Butyl acetate	123-86-4	SHBP6314	99%	2,007.3 µg/mL	+/- 69.3826
7	Amyl acetate	628-63-7	41325/1	97%	2,004.7 µg/mL	+/- 69.2905

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this

reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Quality Confirmation Test

Column:

105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

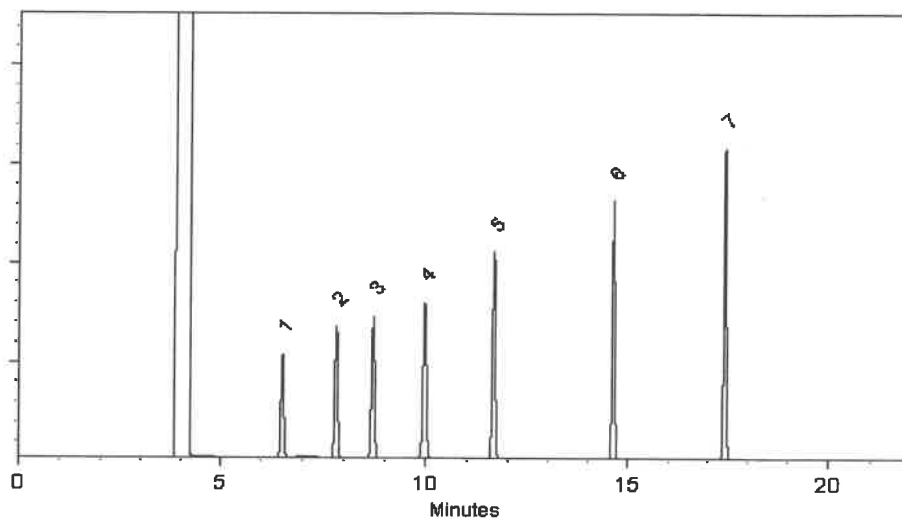
FID

Split Vent:

40 ml/min

Inj. Vol

1µl



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.

Sam Moodler
Sam Moodler - Operations Tech I

Date Mixed: 28-Mar-2024

Balance Serial # B707717271

Dillon Murphy
Dillon Murphy - Operations Technician I

Date Passed: 01-Apr-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k \sqrt{u_{gravimetric}^2 + u_{homogeneity}^2 + u_{storage\ stability}^2 + u_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



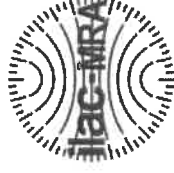
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

gravimetric



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.: 555581 **Lot No.:** A0210184

Description: Custom 8260 Internal Standard Mix

Custom 8260 Internal Standard Mix 25,000µg/mL, P&T Methanol, 1mL/ampul

Container Size: 2 mL **Pkg Amt:** > 1 mL

Expiration Date: April 30, 2027 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Component #	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,4-Dichlorobenzene-d4	3855-82-1	PR-30447	99%	25,212.0 µg/mL	+/- 1,427.8857
2	1,4-Difluorobenzene	540-36-3	MKCS8657	99%	25,220.0 µg/mL	+/- 1,428.3388
3	Chlorobenzene-d5	3114-55-4	PR-31132	99%	25,116.0 µg/mL	+/- 1,422.4487
4	Pentafluorobenzene	363-72-4	MKCR9383	99%	25,180.0 µg/mL	+/- 1,426.0734

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

John Friedline - Operations Technician I

Date Mixed: 11-Apr-2024

Balance: 11275.10105



Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
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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.:** A0210618
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 : July 31, 2027 **Storage:** 0°C or colder
Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Acetone	67-64-1	SHBQ8504	99%	5,014.8 µg/mL	+/- 173.2883
2	2-Butanone (MEK)	78-93-3	SHBQ4704	99%	5,012.4 µg/mL	+/- 173.2054
3	4-Methyl-2-pentanone (MIBK)	108-10-1	SHBP9200	99%	5,011.6 µg/mL	+/- 173.1777
4	2-Hexanone	591-78-6	MKCQ6663	99%	5,013.0 µg/mL	+/- 173.2261

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Quality Confirmation Test

Column:

105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

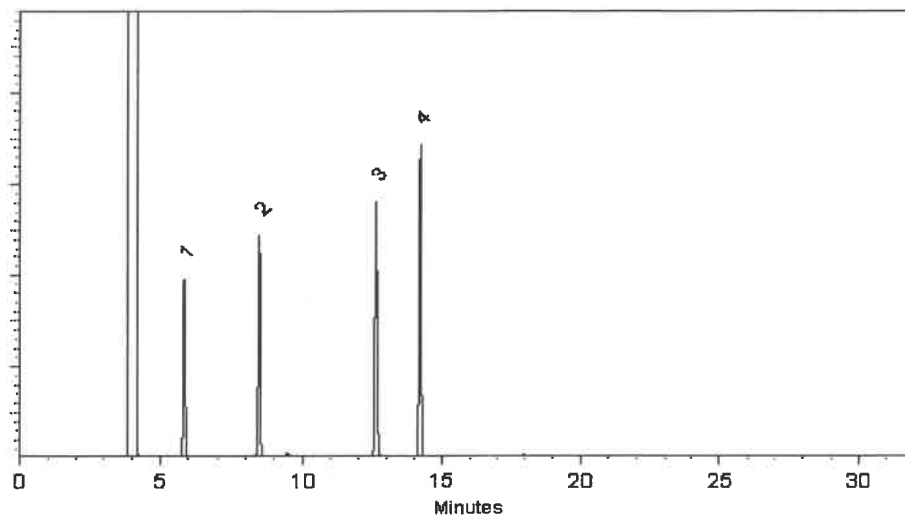
FID

Split Vent:

40 ml/min

Inj. Vol

1µl

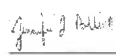


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Dakota Parson - Operations Technician I

Date Mixed: 22-Apr-2024

Balance Serial # B707717271


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 24-Apr-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

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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.:** A0210618
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 : July 31, 2027 **Storage:** 0°C or colder
Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Acetone	67-64-1	SHBQ8504	99%	5,014.8 µg/mL	+/- 173.2883
2	2-Butanone (MEK)	78-93-3	SHBQ4704	99%	5,012.4 µg/mL	+/- 173.2054
3	4-Methyl-2-pentanone (MIBK)	108-10-1	SHBP9200	99%	5,011.6 µg/mL	+/- 173.1777
4	2-Hexanone	591-78-6	MKCQ6663	99%	5,013.0 µg/mL	+/- 173.2261

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Quality Confirmation Test

Column:

105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

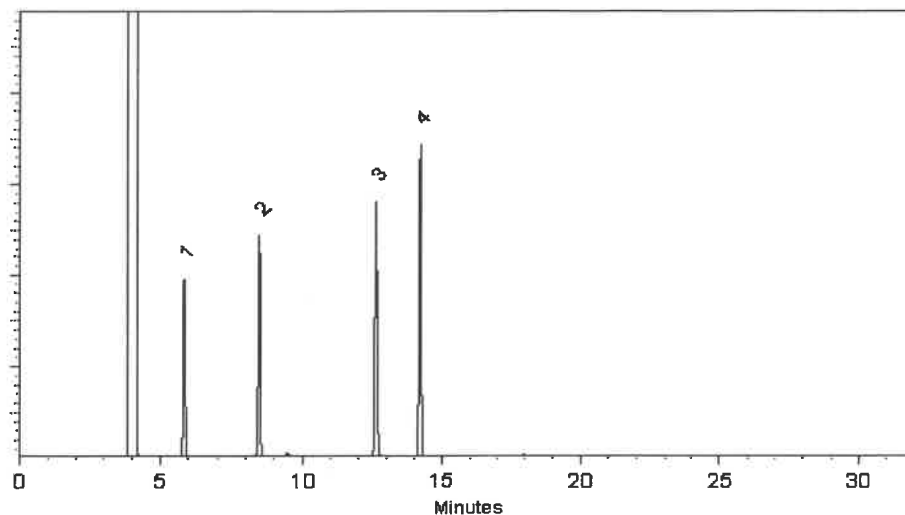
FID

Split Vent:

40 ml/min

Inj. Vol

1µl

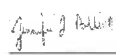


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Dakota Parson - Operations Technician I

Date Mixed: 22-Apr-2024

Balance Serial # B707717271


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 24-Apr-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k \sqrt{u_{gravimetric}^2 + u_{homogeneity}^2 + u_{storage\ stability}^2 + u_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
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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.:** A0210618
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 : July 31, 2027 **Storage:** 0°C or colder
Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Acetone	67-64-1	SHBQ8504	99%	5,014.8 µg/mL	+/- 173.2883
2	2-Butanone (MEK)	78-93-3	SHBQ4704	99%	5,012.4 µg/mL	+/- 173.2054
3	4-Methyl-2-pentanone (MIBK)	108-10-1	SHBP9200	99%	5,011.6 µg/mL	+/- 173.1777
4	2-Hexanone	591-78-6	MKCQ6663	99%	5,013.0 µg/mL	+/- 173.2261

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Quality Confirmation Test

Column:

105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

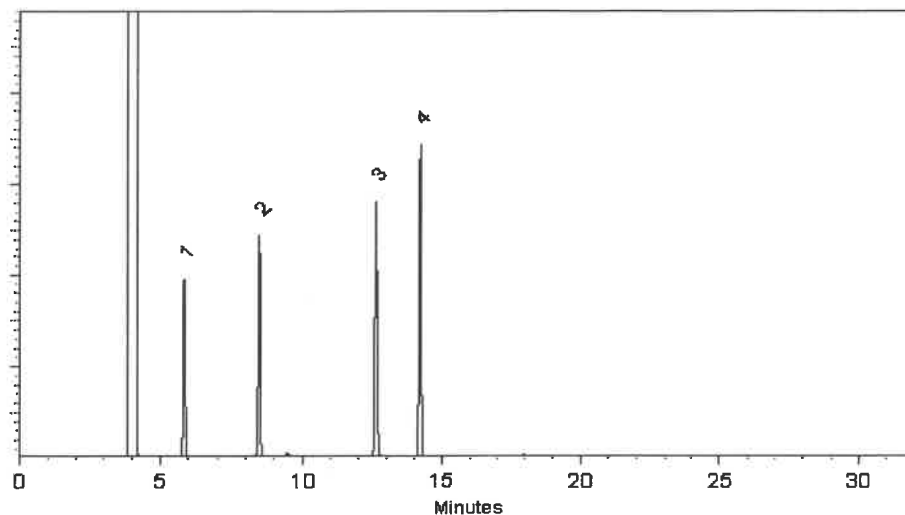
FID

Split Vent:

40 ml/min

Inj. Vol

1µl

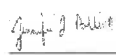


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Dakota Parson - Operations Technician I

Date Mixed: 22-Apr-2024

Balance Serial # B707717271


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 24-Apr-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k \sqrt{u_{gravimetric}^2 + u_{homogeneity}^2 + u_{storage\ stability}^2 + u_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
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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. : 30225 **Lot No.:** A0214960
Description : Bromochloromethane Standard
Bromochloromethane 2000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : August 31, 2029 **Storage:** 0°C or colder
Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Bromochloromethane	74-97-5	SYN240416CTH	99%	2,012.0 µg/mL	+/- 113.0519

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Quality Confirmation Test

Column:

105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

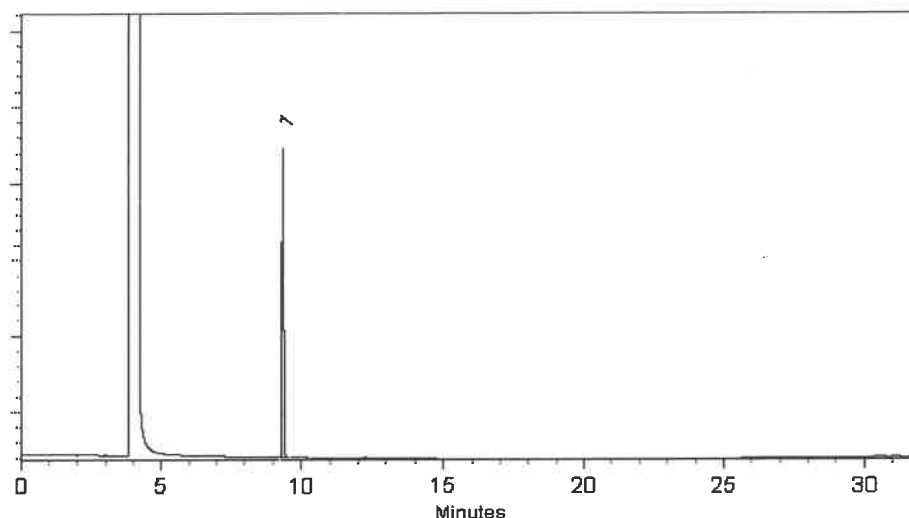
FID

Split Vent:

40 ml/min

Inj. Vol

1µl



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.

Stacey Wanner - Operations Technician I

Date Mixed: 08-Aug-2024

Balance Serial # 1127510105

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 14-Aug-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
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- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
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10 vial.
CERTIFIED REFERENCE MATERIAL

Dec: 12/09/24
Certificate of Analysis
chromatographic plus
V14667-5
V14676



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. : 30225 **Lot No.:** A0214960
Description : Bromochloromethane Standard
Bromochloromethane 2000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : August 31, 2029 **Storage:** 0°C or colder
Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Bromochloromethane	74-97-5	SYN240416CTH	99%	2,012.0 µg/mL	+/- 113.0519

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Quality Confirmation Test

Column:

105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

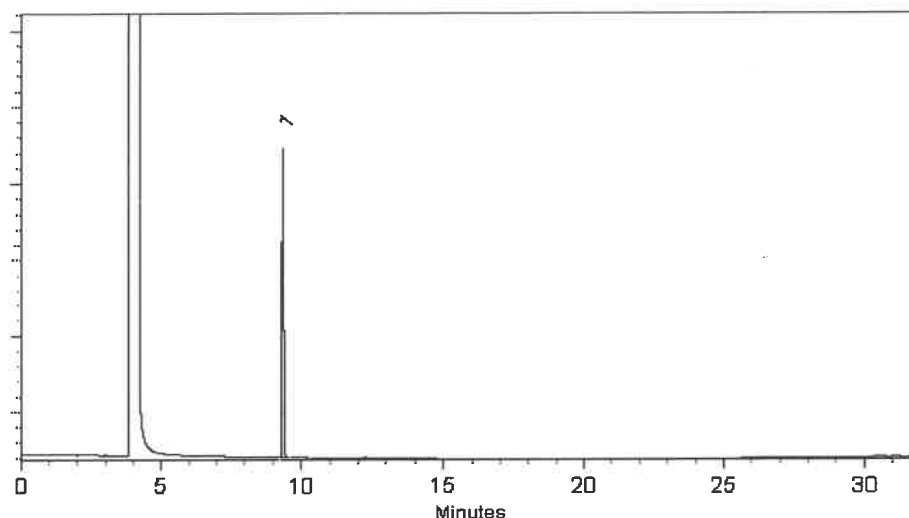
FID

Split Vent:

40 ml/min

Inj. Vol

1µl



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.

Stacey Wanner - Operations Technician I

Date Mixed: 08-Aug-2024

Balance Serial # 1127510105

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 14-Aug-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k \sqrt{u_{gravimetric}^2 + u_{homogeneity}^2 + u_{storage\ stability}^2 + u_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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CERTIFIED REFERENCE MATERIAL

Dec: 12/09/24

Certificate of Analysis

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V14667-5

V14676



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. : 30225 **Lot No.:** A0214960

Description : Bromochloromethane Standard

Bromochloromethane 2000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2029 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Bromochloromethane	74-97-5	SYN240416CTH	99%	2,012.0 µg/mL	+/- 113.0519

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Quality Confirmation Test

Column:

105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

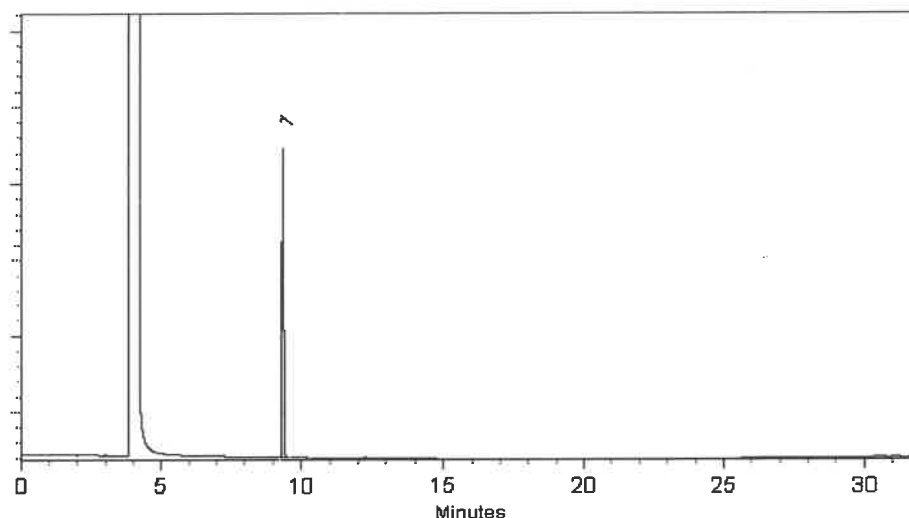
FID

Split Vent:

40 ml/min

Inj. Vol

1µl



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.

Stacey Wanner - Operations Technician I

Date Mixed: 08-Aug-2024

Balance Serial # 1127510105

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 14-Aug-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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$$U_{combined\ uncertainty} = k \sqrt{u_{gravimetric}^2 + u_{homogeneity}^2 + u_{storage\ stability}^2 + u_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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Certificate of Analysis
chromatographic plus

V14667-5
V14676



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. : 30225 **Lot No.:** A0214960
Description : Bromochloromethane Standard
Bromochloromethane 2000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : August 31, 2029 **Storage:** 0°C or colder
Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Bromochloromethane	74-97-5	SYN240416CTH	99%	2,012.0 µg/mL	+/- 113.0519

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Quality Confirmation Test

Column:

105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

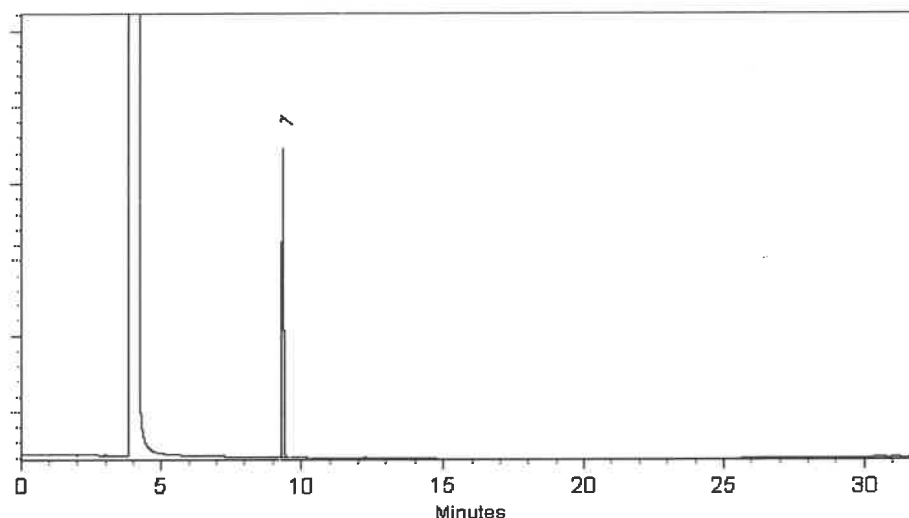
FID

Split Vent:

40 ml/min

Inj. Vol

1µl



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.

Stacey Wanner - Operations Technician I

Date Mixed: 08-Aug-2024

Balance Serial # 1127510105

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 14-Aug-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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$$U_{combined\ uncertainty} = k \sqrt{u_{gravimetric}^2 + u_{homogeneity}^2 + u_{storage\ stability}^2 + u_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

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- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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30 ml
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chromatographic plus

V14727 to
V14756



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. : 30042 **Lot No.:** A0216826
Description : 502.2 Calibration Mix #1
502.2 Calibration Mix #1 2,000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : May 31, 2031 **Storage:** 0°C or colder
Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Dichlorodifluoromethane (CFC-12)	75-71-8	00022922	99%	2,000.9 µg/mL	+/- 112.4144
2	Chloromethane (methyl chloride)	74-87-3	00022694	99%	2,000.7 µg/mL	+/- 112.3998
3	Vinyl chloride	75-01-4	00015559	99%	2,000.3 µg/mL	+/- 112.3779
4	Bromomethane (methyl bromide)	74-83-9	00017022	99%	2,001.8 µg/mL	+/- 112.4650
5	Chloroethane (ethyl chloride)	75-00-3	107-401039114-1	99%	2,000.1 µg/mL	+/- 112.3700
6	Trichlorofluoromethane (CFC-11)	75-69-4	MKCJ8658	99%	2,000.7 µg/mL	+/- 112.3992

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Quality Confirmation Test

Column:

60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

Carrier Gas:

helium-constant flow 2.0 mL/min.

Temp. Program:

40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

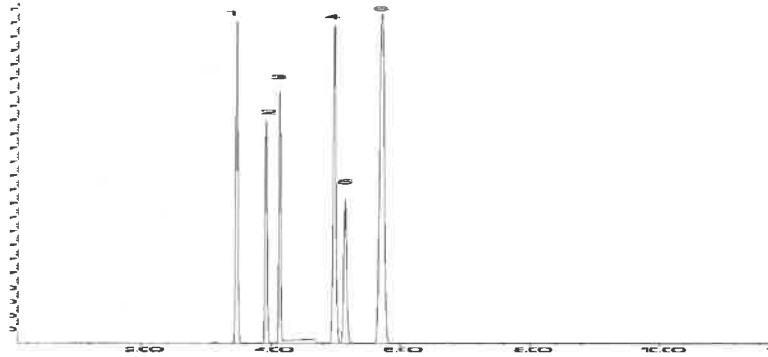
MSD

Split Vent:

Split ratio 10:1

Inj. Vol

1µl



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.



Tom Suckal - Mix Technician

Date Mixed: 23-Sep-2024

Balance Serial # B707717271



Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 04-Oct-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k \sqrt{u_{gravimetric}^2 + u_{homogeneity}^2 + u_{storage\ stability}^2 + u_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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Rec 12/17/24
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V14727 to
V14756



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. : 30042 **Lot No.:** A0216826
Description : 502.2 Calibration Mix #1
502.2 Calibration Mix #1 2,000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : May 31, 2031 **Storage:** 0°C or colder
Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Dichlorodifluoromethane (CFC-12)	75-71-8	00022922	99%	2,000.9 µg/mL	+/- 112.4144
2	Chloromethane (methyl chloride)	74-87-3	00022694	99%	2,000.7 µg/mL	+/- 112.3998
3	Vinyl chloride	75-01-4	00015559	99%	2,000.3 µg/mL	+/- 112.3779
4	Bromomethane (methyl bromide)	74-83-9	00017022	99%	2,001.8 µg/mL	+/- 112.4650
5	Chloroethane (ethyl chloride)	75-00-3	107-401039114-1	99%	2,000.1 µg/mL	+/- 112.3700
6	Trichlorofluoromethane (CFC-11)	75-69-4	MKCJ8658	99%	2,000.7 µg/mL	+/- 112.3992

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Quality Confirmation Test

Column:

60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

Carrier Gas:

helium-constant flow 2.0 mL/min.

Temp. Program:

40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

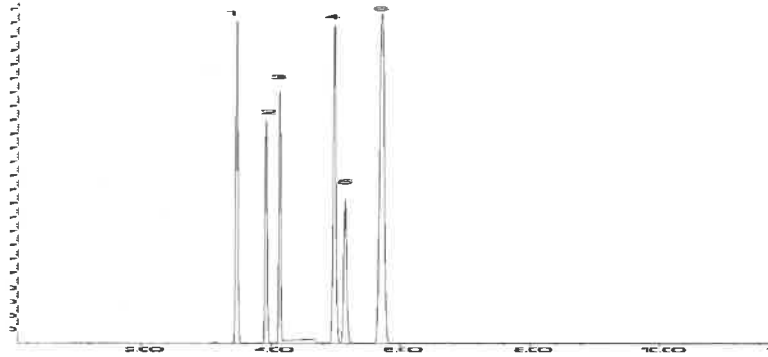
MSD

Split Vent:

Split ratio 10:1

Inj. Vol

1µl



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.



Tom Suckal - Mix Technician

Date Mixed: 23-Sep-2024

Balance Serial # B707717271



Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 04-Oct-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k \sqrt{u_{gravimetric}^2 + u_{homogeneity}^2 + u_{storage\ stability}^2 + u_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

✓ 14842 to 14846



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. : 30470 **Lot No.:** A0217535
Description : tert-Butanol Standard
tert-Butanol Std 50,000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : October 31, 2027 **Storage:** 0°C or colder
Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	tert-Butanol (TBA)	75-65-0	SHBQ8002-1	99%	50,007.5 µg/mL	+/- 717.6137

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Quality Confirmation Test

Column:

105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

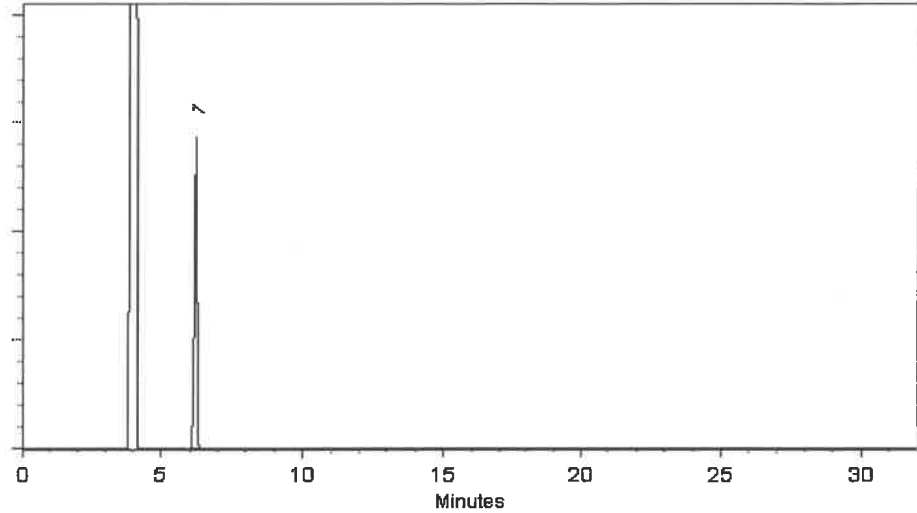
FID

Split Vent:

40 ml/min

Inj. Vol

1µl



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.

A. O. E.
Aaron Enyart - Operations Tech I

Date Mixed: 07-Oct-2024

Balance Serial # B251644995

Brittany Federinko
Brittany Federinko - Operations Tech I

Date Passed: 09-Oct-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

2014 Dec 01/08/21
CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

V14803 - V14822



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. : 555408-SL **Lot No.:** A0220471
Description : Custom Vinyl Acetate Standard
Custom Vinyl Acetate Standard 8,000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : June 30, 2026 **Storage:** -20°C or colder
Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Vinyl acetate	108-05-4	RD240423RSR	99%	8,066.0 µg/mL	+/- 278.7979

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Quality Confirmation Test

Column:

105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

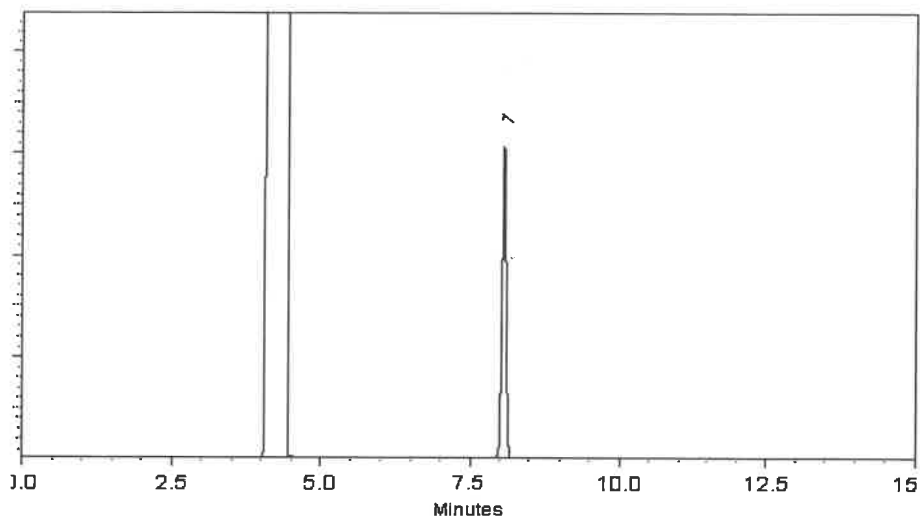
FID

Split Vent:

40 ml/min

Inj. Vol

1µl



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.

Ethan Winiarski - Operations Tech I

Date Mixed: 24-Dec-2024

Balance Serial # 1127510105

Dillan Murphy - Operations Technician I

Date Passed: 02-Jan-2025

REVIEWED
By Jennifer Pollock at 7:12 am, Jan 05, 2025

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k \sqrt{u_{gravimetric}^2 + u_{homogeneity}^2 + u_{storage\ stability}^2 + u_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
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www.restek.com

2014 Dec 01/08/21
CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

V14803 - V14822



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Expiration Date : June 30, 2026 **Storage:** -20°C or colder
Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
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Quality Confirmation Test

Column:

105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

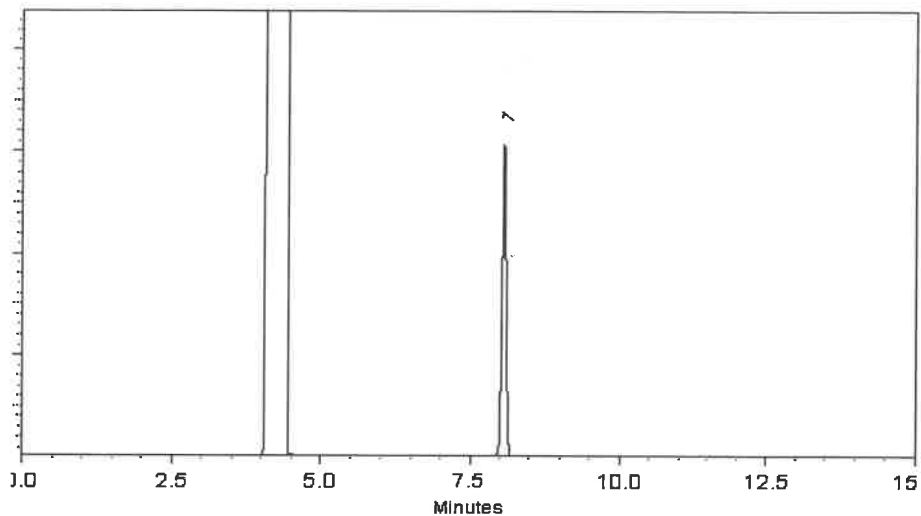
FID

Split Vent:

40 ml/min

Inj. Vol

1µl



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.

Ethan Winiarski - Operations Tech I

Date Mixed: 24-Dec-2024

Balance Serial # 1127510105

Dillan Murphy - Operations Technician I

Date Passed: 02-Jan-2025

REVIEWED
By Jennifer Pollock at 7:12 am, Jan 05, 2025

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k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

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Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

Rec 05/09/25
Avantor™



*V14921 to
V14938*

Material No.: 9077-02
Batch No.: 24G0262002
Manufactured Date: 2024-05-14
Expiration Date: 2027-05-14
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (CH ₃ OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.3 ppm
Titration Acid (μeq/g)	≤ 0.3	0.3
Titration Base (μeq/g)	≤ 0.10	0.03
Water (by KF, coulometric)	≤ 0.08 %	< 0.01 %
Volatile Organic Trace Analysis - Below EPA 8260B CRQL	Conforms	Conforms

For Laboratory, Research, or Manufacturing Use
Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Mark
Jamie Croak
Director Quality Operations, Bioscience Production

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis



V14921 to
V14938

Material No.: 9077-02
Batch No.: 24G0262002
Manufactured Date: 2024-05-14
Expiration Date: 2027-05-14
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Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Mark
Jamie Croak
Director Quality Operations, Bioscience Production



Certified Reference Material CRM



See 06/20/25 5 vial

CERTIFIED WEIGHT REPORT

Part Number:

91980

Lot Number:

061925

Description:

Acrolein

Expiration Date:

071925

Recommended Storage:

Refrigerate (4 °C)

Nominal Concentration (µg/mL):

5000

NIST Test ID#:

6UTB

Weight(s) shown below were combined and diluted to (mL):

10.0

5E-05 Balance Uncertainty

0.001 Flask Uncertainty

Solvent(s):

Water

Lot#

041725Q

115028 to
115032

Formulated By:

Prashant Chauhan

DATE

061925

Reviewed By:

Pedro L. Renias

DATE

061925

Expanded
Uncertainty
(+/-) (µg/mL)

52.6

107-02-8

0.1 ppm

ori-rat 48mg/kg

OSHA PEL (TWA)

LDSO

CAS#

SDS Information
(Solvent Safety Info. On Attached pg.)

1. Acrolein 5 103755V10F 5000 97 0.5 0.05168 0.05180 5013.7 52.6 107-02-8 0.1 ppm ori-rat 48mg/kg

Method: GC6MSD-1. Detector: Mass Selective Detector (Scan mode). 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: Pedro Renias. NOTE: Due to the instability of acrolein in solution, all solutions of acrolein, and any dilutions thereof, should be used immediately. Long term storage is not recommended. Please contact our technical department if further information is required.

TIC: [BSB2]79005.D

Scan 232 (8.927 min): [BSB2]79005.D

Abundance

Abundance

27

250000 8.93

200000



56

150000

100000

50000

10000 37

44

65 75 85

119

158 169

Time--> 0

10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00

m/z--> 0

• The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.

• Standards are prepared gravimetrically using balances that are calibrated by an ISO 17025 certified organization with weights traceable through NIST to the SI kilogram (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).

Rev 1.0, 2/25/2025



Certified Reference Material CRM



See 06/20/25 5 vial

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5E-05 Balance Uncertainty

0.001 Flask Uncertainty

Solvent(s):

Water

Lot#

041725Q

115028 to
115032

Formulated By:

Prashant Chauhan

061925

DATE

Reviewed By:

Pedro L. Renias

061925

DATE

Expanded
Uncertainty
(Solvent Safety Info. On Attached pg.)
CAS# OSHA PEL (TWA) LDSO

SDS Information
(Solvent Safety Info. On Attached pg.)
CAS# OSHA PEL (TWA) LDSO

1. Acrolein 5 103755V10F 5000 97 0.5 0.05168 0.05180 5013.7 52.6 107-02-8 0.1 ppm orl-rat 48mg/kg

Method: GC6MSD-1. Detector: Mass Selective Detector (Scan mode). 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: Pedro Renias. NOTE: Due to the instability of acrolein in solution, all solutions of acrolein, and any dilutions thereof, should be used immediately. Long term storage is not recommended. Please contact our technical department if further information is required.

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Time--> 0

m/z--> 0

10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00

119

65 75 85

44

158 169

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Rev 1.0, 2/25/2025



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Rev 1.0, 2/25/2025



SHIPPING DOCUMENTS

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: T & A Construction INC.

ADDRESS: Tarrytown Light-Kingsland Point Park

CITY Sleepy Hollow STATE: NY ZIP: 10591

ATTENTION: Garrett Johnson

PHONE: (862) 298-0150 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Kingsland Point Park water main

PROJECT NO.: LOCATION:

PROJECT MANAGER:

e-mail:

PHONE:

FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:

ADDRESS:

CITY STATE: ZIP:

ATTENTION: PHONE:

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) DAYS*

HARDCOPY (DATA PACKAGE): DAYS*

EDD: DAYS*

*TO BE APPROVED BY CHEMTECH

STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

- ☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)
☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP
☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B
+ Raw Data ☐ Other
☐ EDD FORMAT

VOCs
TCLP VOC
EM, Hex, Cu, Pb
Turbidity, % Solids
FICD
Full TCLP
Cup, Mercury, Met, JCP, etc.
Pb, Pest, SVOC

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	
1.	TRENCH	S.	X		7-14	1300	6			X	X	X	X	X	X		
2.	TRENCH			X		1305	5	X	X								PPM - 65.5
3.	Stock Pile		X			1310	6			X	X	X	X	X	X		
4.	Stock Pile			X		1315	5	X	X								PPM - 82.9
5.	End of TRENCH		X			1320	6			X	X	X	X	X	X		
6.	End of TRENCH			X		1325	5	X	X								PPM - 644.3
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME: 1335	RECEIVED BY:	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 4.9°C
1.	7/14/25	1.	Comments:
RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	
2.		2.	
RELINQUISHED BY SAMPLER:	DATE/TIME: 1505	RECEIVED BY:	
3.	7/14/25	3.	

CHEMTECH

Environmental Laboratory

www.chemtech.net | EMAIL: PM@chemtech.net

Project Name: Kingsland Point Tank

Water Main

Service Order #: _____

Work Order #: _____

Labor WBS #: _____

Facility/Site: _____

Site Address: Tenneytown Legat - Kingsland

Point Park, Sleepy Hollow NY 10591

Chemtech Order ID: _____

Sampler Name: Gorge Negron

Client Project Coordinator & Phone: Gorge Negron (862) 298-0150

Page #: 1 of 1

Date: 7-14-25

Arrive Time: 1230

Depart Time: 1335

Waste Stream (circle one): drum / roll-off / soil pile / in-situ / linear construction / frac-tank

Sample Matrices (circle all that apply): Water / Solid / NAPL / Concrete / Wipe

Collection Depths: _____

Temp (range): _____ °C

PID Readings (range): _____

PPM

Odor ☒ Y ☐ N

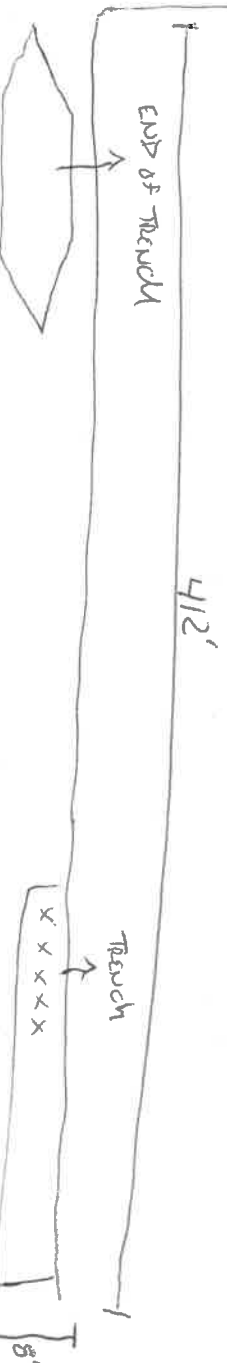
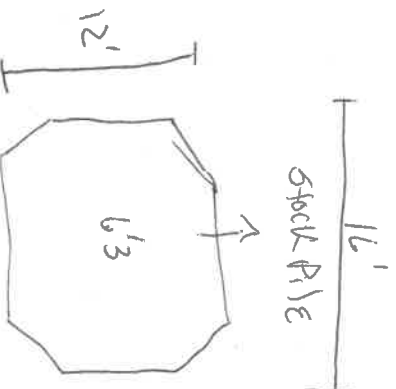
Color ☒ Y ☐ N

Sample Description: Black Oily Soil (rocks present) very strong smell

Field Observations: Sample Along the trench + Stock Pile

Grid/Area Composite Map:

QA Control # A3041134



Sampler Signature: _____

Client Signature: _____

Supervisor Review/Date: _____

Date/Time Arrived at Lab: _____

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2600 TACO01
Client Name : T&A Construction Inc
Client Contact : Garrett Johnson
Invoice Name : T&A Construction Inc
Invoice Contact : Garrett Johnson

Order Date : 7/14/2025 2:21:01 PM
Project Name : Kingsland Point Park Water
Receive DateTime : 7/14/2025 12:00:00 AM
Purchase Order : 15051m

Project Mgr :
Report Type : Analytical Summary 1
EDD Type : Excel NY
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q2600-03	TRENCH	Solid	07/14/2025	13:05	VOC-TCLVOA-10		8260D		3 Bus. Days
Q2600-07	STOCK-PILE	Solid	07/14/2025	13:15	VOC-TCLVOA-10		8260D		3 Bus. Days
Q2600-11	END-OF-TRENCH	Solid	07/14/2025	13:25	VOC-TCLVOA-10		8260D		3 Bus. Days

Relinquished By : 

Date / Time : 7/14/25 1540

Received By : 

Date / Time : 7/14/25 1540

Storage Area : VOA Refridgerator Room