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

Cover Page

Order ID : Q2267

Project ID : Con Ed Non MGP – Atlantic Ave 453957.600024.05

Client : PARSONS Engineering of New York, Inc.

Lab Sample Number	Client Sample Number
Q2267-01	WC-20250605

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: 6/14/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

284 Sheffield Street, Mountainside NJ 07092 Tel. 908-789-8900 Fax: 908-789-8922

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 is 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

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: **Q2267**

	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 Castody	✓
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: **PRADIP PRAJAPATI** **Date:** **06/14/2025**

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LAB CHRONICLE

OrderID:	Q2267	**OrderDate:**	6/6/2025 2:17:00 PM
Client:	PARSONS Engineering of New York, Inc.	**Project:**	Con Ed Non MGP – Atlantic Ave 453957.600024.05
Contact:	Stephen Liberatore	**Location:**	D41

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2267-01	**WC-20250605**	**TCLP**			**06/05/25**			**06/06/25**
			TCLP VOA	8260D			06/12/25	

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Hit Summary Sheet
SW-846

SDG No.: Q2267

Client: PARSONS Engineering of New York, Inc.

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID:	**WC-20250605**							
Q2267-01	WC-20250605	TCLP	Chloroform	4.20	J	0.25	5.00	ug/L
			Total Voc :	4.20				
			Total Concentration:	4.20				

QC SUMMARY

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Surrogate Summary

SDG No.: Q2267

Client: PARSONS Engineering of New York, Inc.

Analytical Method: SW8260D

Lab Sample ID	Client ID	Parameter	Spike	Result	RecoveryQual	Limits Low	Limits High
Q2267-01	WC-20250605	1,2-Dichloroethane-d4	50	48.7	97	74	125
		Dibromofluoromethane	50	53.9	108	75	124
		Toluene-d8	50	50.1	100	86	113
		4-Bromofluorobenzene	50	53.5	107	77	121

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Surrogate Summary

SDG No.: Q2267

Client: PARSONS Engineering of New York, Inc.

Analytical Method: SW8260-Low

Lab Sample ID	Client ID	Parameter	Spike	Result	RecoveryQual	Limits Low	Limits High
VX0612WBL01	VX0612WBL01	1,2-Dichloroethane-d4	50	46.2	92	74	125
		Dibromofluoromethane	50	48.5	97	75	124
		Toluene-d8	50	52.4	105	86	113
		4-Bromofluorobenzene	50	54.6	109	77	121
VX0612WBS01	VX0612WBS01	1,2-Dichloroethane-d4	50	41.5	83	74	125
		Dibromofluoromethane	50	48.0	96	75	124
		Toluene-d8	50	47.8	96	86	113
		4-Bromofluorobenzene	50	48.1	96	77	121
VX0612WBSD0	VX0612WBSD01	1,2-Dichloroethane-d4	50	44.8	90	74	125
		Dibromofluoromethane	50	49.7	99	75	124
		Toluene-d8	50	48.3	97	86	113
		4-Bromofluorobenzene	50	50.5	101	77	121

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Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q2267

Client: PARSONS Engineering of New York, Inc.

Analytical Method: SW8260-Low **Datafile :** VX046660.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Limits Low	Limits High	RPD
VX0612WBS01	Vinyl chloride	20	15.1	ug/L	76			65	117	
	1,1-Dichloroethene	20	17.3	ug/L	86			74	110	
	2-Butanone	100	88.0	ug/L	88			65	122	
	Carbon Tetrachloride	20	17.4	ug/L	87			77	113	
	Chloroform	20	18.3	ug/L	92			79	113	
	Benzene	20	18.7	ug/L	94			82	109	
	1,2-Dichloroethane	20	17.6	ug/L	88			80	115	
	Trichloroethene	20	18.5	ug/L	93			77	113	
	Tetrachloroethene	20	18.9	ug/L	95			67	123	
	Chlorobenzene	20	19.3	ug/L	97			82	109	

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Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q2267

Client: PARSONS Engineering of New York, Inc.

Analytical Method: SW8260-Low **Datafile :** VX046662.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Limits Low	Limits High	RPD
VX0612WBSD01	Vinyl chloride	20	15.3	ug/L	77	1		65	117	19
	1,1-Dichloroethene	20	17.2	ug/L	86	0		74	110	20
	2-Butanone	100	110	ug/L	110	22		65	122	26
	Carbon Tetrachloride	20	17.2	ug/L	86	1		77	113	15
	Chloroform	20	19.3	ug/L	97	5		79	113	20
	Benzene	20	19.0	ug/L	95	1		82	109	15
	1,2-Dichloroethane	20	19.1	ug/L	96	9		80	115	20
	Trichloroethene	20	18.9	ug/L	95	2		77	113	15
	Tetrachloroethene	20	18.5	ug/L	93	2		67	123	15
	Chlorobenzene	20	19.0	ug/L	95	2		82	109	15

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VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VX0612WBL01

Lab Name: CHEMTECH Contract: PARS02

Lab Code: CHEM Case No.: Q2267 SAS No.: Q2267 SDG NO.: Q2267

Lab File ID: VX046659.D Lab Sample ID: VX0612WBL01

Date Analyzed: 06/12/2025 Time Analyzed: 13:10

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
VX0612WBS01	VX0612WBS01	VX046660.D	06/12/2025
VX0612WBSD01	VX0612WBSD01	VX046662.D	06/12/2025
WC-20250605	Q2267-01	VX046669.D	06/12/2025

COMMENTS:

Raw Data: **VX046516.D**

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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: PARS02

Lab Code: CHEM Case No.: Q2267 SAS No.: Q2267 SDG NO.: Q2267

Lab File ID: VX046516.D BFB Injection Date: 06/06/2025

Instrument ID: MSVOA_X BFB Injection Time: 08:47

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	21
75	30.0 - 60.0% of mass 95	56.5
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.6 (1) 1
174	50.0 - 100.0% of mass 95	65.2
175	5.0 - 9.0% of mass 174	5 (7.7) 1
176	95.0 - 101.0% of mass 174	62.7 (96.1) 1
177	5.0 - 9.0% of mass 176	4.2 (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:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDICC005	VSTDICC005	VX046518.D	06/06/2025	09:42
VSTDICC020	VSTDICC020	VX046519.D	06/06/2025	10:18
VSTDICCC050	VSTDICCC050	VX046520.D	06/06/2025	10:40
VSTDICC100	VSTDICC100	VX046521.D	06/06/2025	11:02
VSTDICC150	VSTDICC150	VX046522.D	06/06/2025	11:25
VSTDICC001	VSTDICC001	VX046524.D	06/06/2025	12:57

Alliance TECHNICAL GROUP

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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: PARS02

Lab Code: CHEM Case No.: Q2267 SAS No.: Q2267 SDG NO.: Q2267

Lab File ID: VX046656.D BFB Injection Date: 06/12/2025

Instrument ID: MSVOA_X BFB Injection Time: 09:44

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	19.2
75	30.0 - 60.0% of mass 95	51
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.6 (0.8) 1
174	50.0 - 100.0% of mass 95	73.3
175	5.0 - 9.0% of mass 174	5.9 (8.1) 1
176	95.0 - 101.0% of mass 174	72.3 (98.6) 1
177	5.0 - 9.0% of mass 176	4.6 (6.3) 2

1-Value is % mass 174 2-Value is % mass 176

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDCCC050	VSTDCCC050	VX046657.D	06/12/2025	10:11
VX0612WBL01	VX0612WBL01	VX046659.D	06/12/2025	13:10
VX0612WBS01	VX0612WBS01	VX046660.D	06/12/2025	13:38
VX0612WBSD01	VX0612WBSD01	VX046662.D	06/12/2025	14:26
WC-20250605	Q2267-01	VX046669.D	06/12/2025	17:17

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VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: PARS02

Lab Code: CHEM Case No.: Q2267 SAS No.: Q2267 SDG NO.: Q2267

Lab File ID: VX046657.D Date Analyzed: 06/12/2025

Instrument ID: MSVOA_X Time Analyzed: 10:11

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	82603	5.56	125406	6.77	118101	10.06
UPPER LIMIT	165206	6.056	250812	7.269	236202	10.555
LOWER LIMIT	41301.5	5.056	62703	6.269	59050.5	9.555
EPA SAMPLE NO.						
WC-20250605	69359	5.57	121557	6.78	108481	10.06
VX0612WBL01	92224	5.57	180952	6.78	188641	10.06
VX0612WBS01	85578	5.56	144622	6.77	130715	10.06
VX0612WBSD01	77335	5.57	133427	6.78	124864	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.

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VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: PARS02

Lab Code: CHEM Case No.: Q2267 SAS No.: Q2267 SDG NO.: Q2267

Lab File ID: VX046657.D Date Analyzed: 06/12/2025

Instrument ID: MSVOA_X Time Analyzed: 10:11

GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

	IS4 AREA #	RT #				
12 HOUR STD	60636	12.018				
UPPER LIMIT	121272	12.518				
LOWER LIMIT	30318	11.518				
EPA SAMPLE NO.						
WC-20250605	58310	12.02				
VX0612WBL01	95358	12.02				
VX0612WBS01	69016	12.02				
VX0612WBSD01	65393	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

Raw Data: **VX046669.D**

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Fax : 908 789 8922

Report of Analysis

Client:	PARSONS Engineering of New York, Inc.	Date Collected:	06/05/25
Project:	Con Ed Non MGP – Atlantic Ave 453957.600024.05	Date Received:	06/06/25
Client Sample ID:	WC-20250605	SDG No.:	Q2267
Lab Sample ID:	Q2267-01	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:	Prep Date	Date Analyzed	Prep Batch ID
VX046669.D	1		06/12/25 17:17	VX061225

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	4.20	J	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	48.7		74 - 125	97%	SPK: 50
1868-53-7	Dibromofluoromethane	53.9		75 - 124	108%	SPK: 50
2037-26-5	Toluene-d8	50.1		86 - 113	100%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.5		77 - 121	107%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	69400	5.574			
540-36-3	1,4-Difluorobenzene	122000	6.775			
3114-55-4	Chlorobenzene-d5	108000	10.055			
3855-82-1	1,4-Dichlorobenzene-d4	58300	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

Sample Results: **VX046669.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX061225\
Data File : VX046669.D
Acq On : 12 Jun 2025 17:17
Operator : JC/MD
Sample : Q2267-01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jun 13 01:46:49 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
WC-20250605

Manual Integrations APPROVED

Reviewed By :John Carlone 06/13/2025
Supervised By :Mahesh Dadoda 06/13/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.574	168	69359	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.775	114	121557	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.055	117	108481	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	58310	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.970	65	60109	48.712	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 97.420%			
35) Dibromofluoromethane	5.403	113	48146	53.859	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 107.720%			
50) Toluene-d8	8.653	98	147659	50.102	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 100.200%			
62) 4-Bromofluorobenzene	11.079	95	65278	53.534	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 107.060%			
Target Compounds						Qvalue
16) Acetone	2.398	43	6505	17.772	ug/l	99
19) Methyl tert-butyl Ether	3.136	73	9695	3.365	ug/l #	54
30) Chloroform	5.123	83	7839	4.210	ug/l	97
31) Cyclohexane	5.489	56	3870	2.698	ug/l #	86
39) Methylcyclohexane	7.391	83	5016	3.328	ug/l	97
51) 4-Methyl-2-Pentanone	8.580	43	1818m	1.317	ug/l	
80) 1,3,5-Trimethylbenzene	11.457	105	1816	0.475	ug/l	97

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

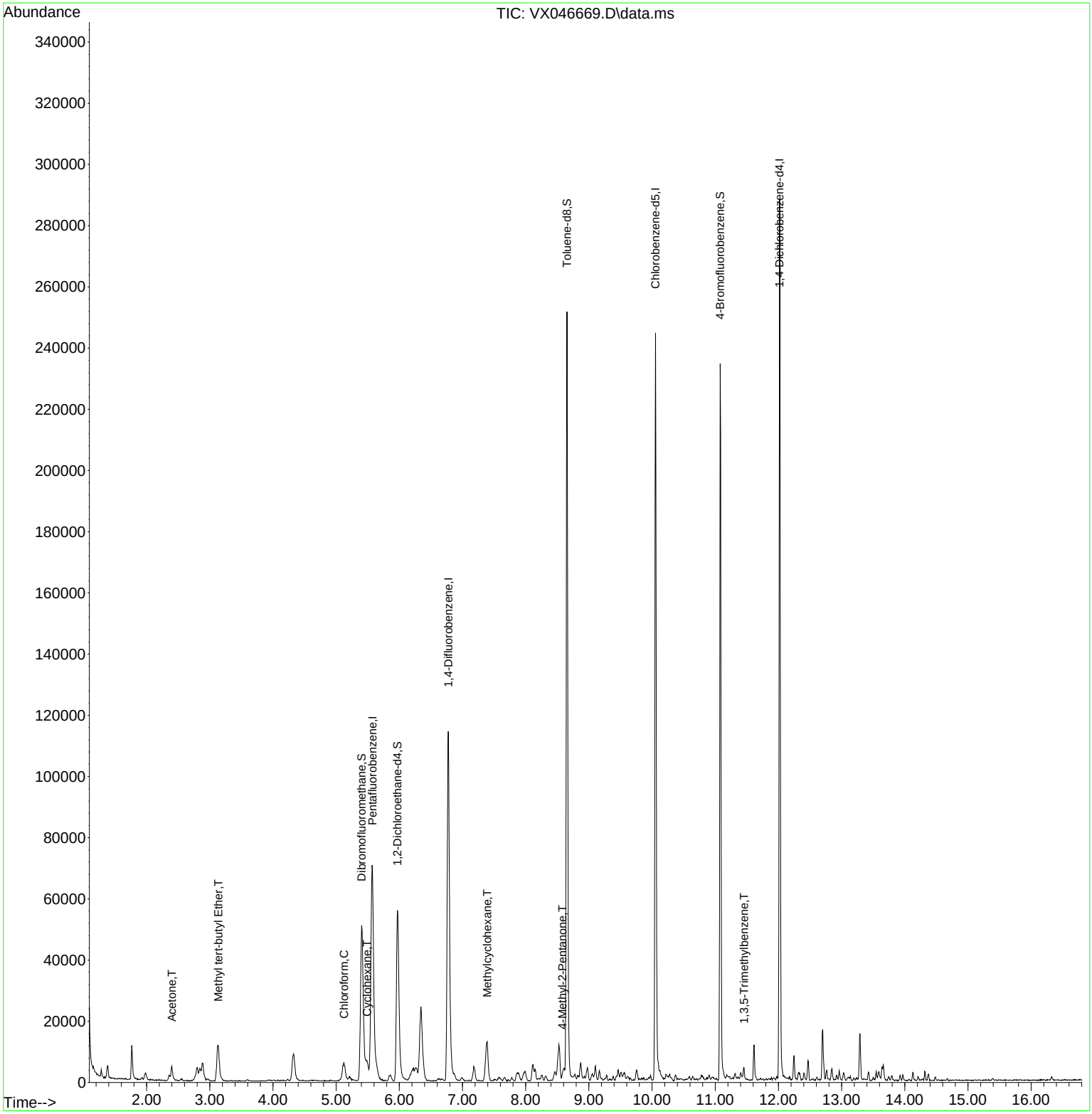
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX061225\
Data File : VX046669.D
Acq On : 12 Jun 2025 17:17
Operator : JC/MD
Sample : Q2267-01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 14 Sample Multiplier: 1

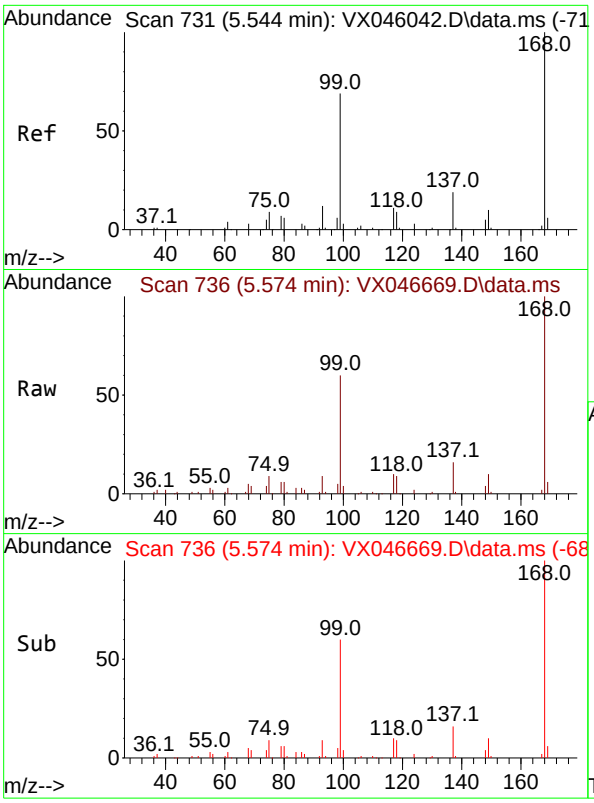
Quant Time: Jun 13 01:46:49 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
WC-20250605

Manual Integrations APPROVED

Reviewed By :John Carlone 06/13/2025
Supervised By :Mahesh Dadoda 06/13/2025

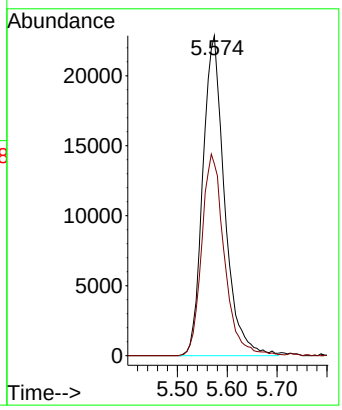




#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 5.574 min Scan# 7
Delta R.T. 0.006 min
Lab File: VX046669.D
Acq: 12 Jun 2025 17:17

Tgt Ion:168 Resp: 6935

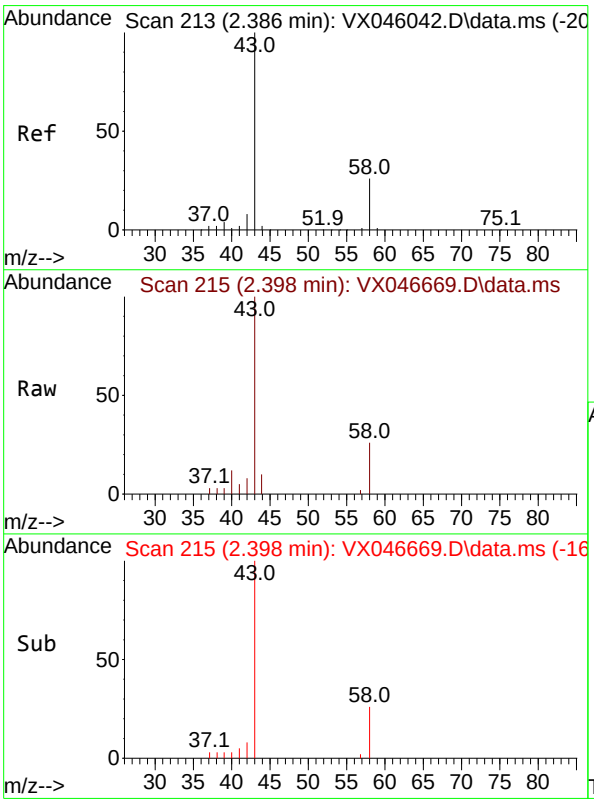
Ion	Ratio	Lower	Upper
168	100		
99	59.9	54.9	82.3



Instrument :
MSVOA_X
ClientSampleId :
WC-20250605

Manual Integrations
APPROVED

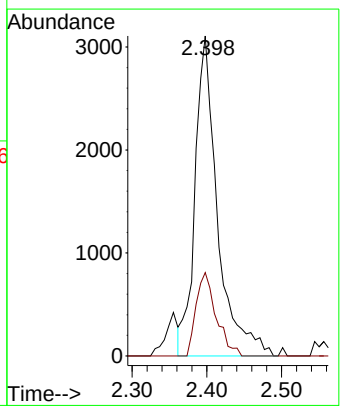
Reviewed By :John Carlone 06/13/2025
Supervised By :Mahesh Dadoda 06/13/2025

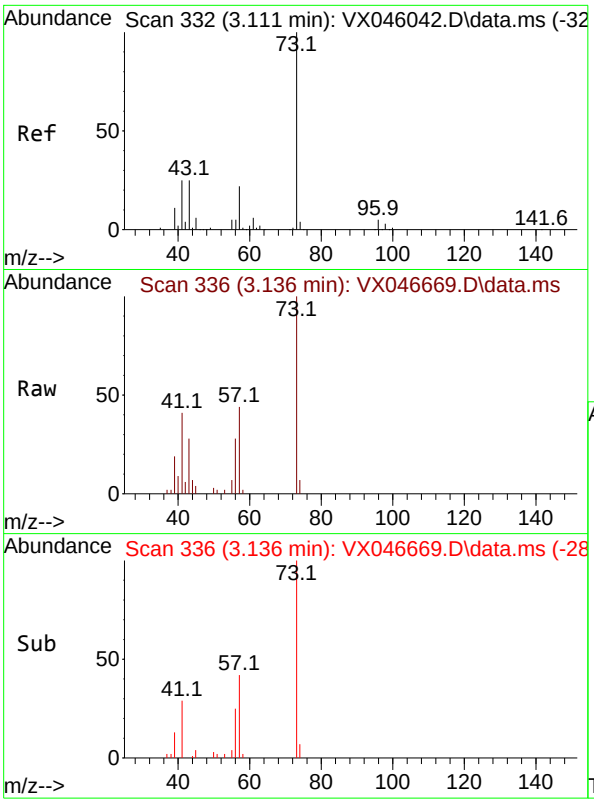


#16
Acetone
Concen: 17.772 ug/l
RT: 2.398 min Scan# 215
Delta R.T. 0.006 min
Lab File: VX046669.D
Acq: 12 Jun 2025 17:17

Tgt Ion: 43 Resp: 6505

Ion	Ratio	Lower	Upper
43	100		
58	26.0	21.2	31.8

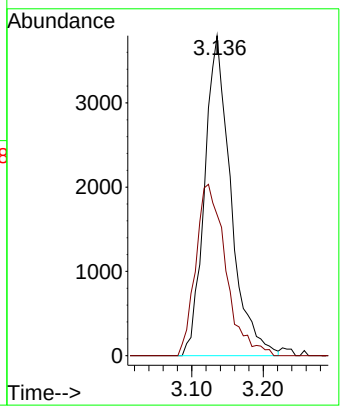




#19
Methyl tert-butyl Ether
Concen: 3.365 ug/l
RT: 3.136 min Scan# 3
Delta R.T. 0.001 min
Lab File: VX046669.D
Acq: 12 Jun 2025 17:17

Tgt Ion: 73 Resp: 969

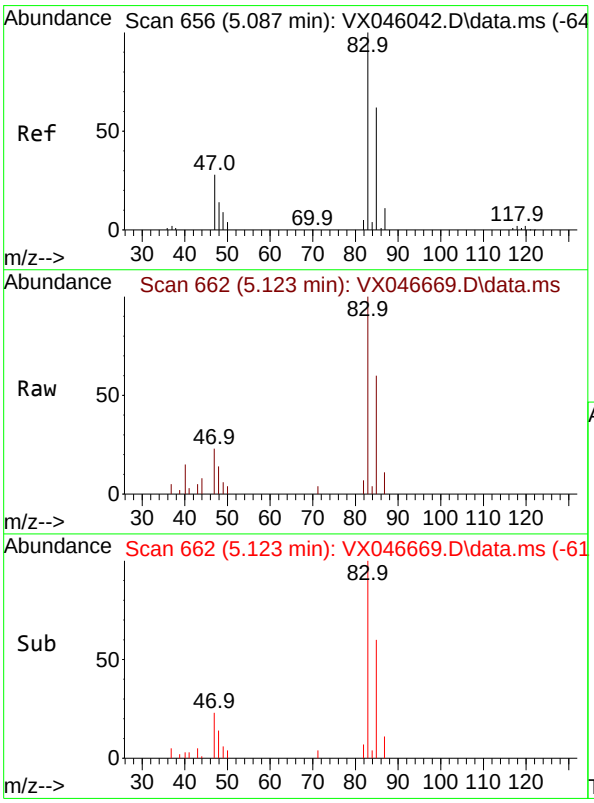
Ion	Ratio	Lower	Upper
73	100		
57	44.0	17.7	26.5#



Instrument :
MSVOA_X
ClientSampleId :
WC-20250605

Manual Integrations
APPROVED

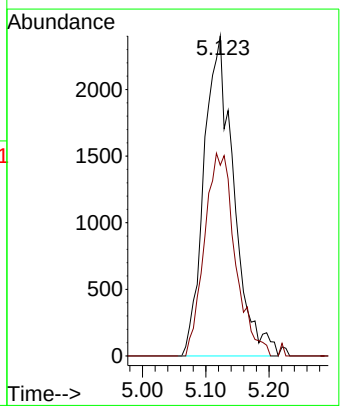
Reviewed By :John Carlone 06/13/2025
Supervised By :Mahesh Dadoda 06/13/2025

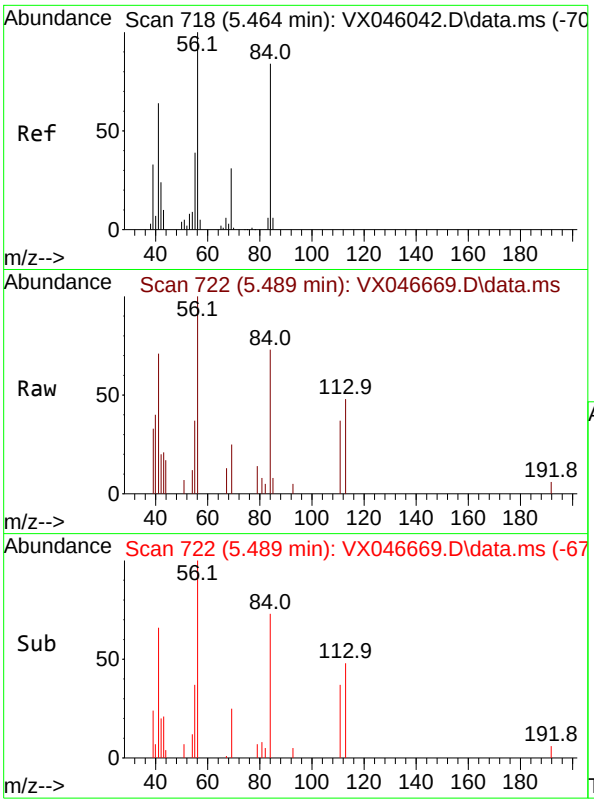


#30
Chloroform
Concen: 4.210 ug/l
RT: 5.123 min Scan# 662
Delta R.T. 0.012 min
Lab File: VX046669.D
Acq: 12 Jun 2025 17:17

Tgt Ion: 83 Resp: 7839

Ion	Ratio	Lower	Upper
83	100		
85	59.6	49.3	73.9

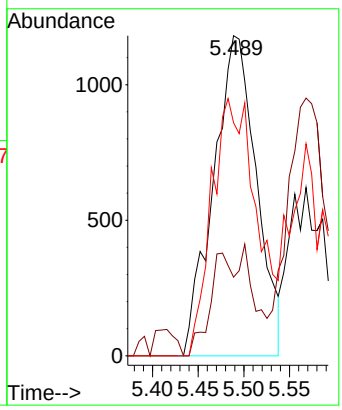




#31
Cyclohexane
Concen: 2.698 ug/l
RT: 5.489 min Scan# 7
Delta R.T. -0.000 min
Lab File: VX046669.D
Acq: 12 Jun 2025 17:17

Tgt Ion: 56 Resp: 387

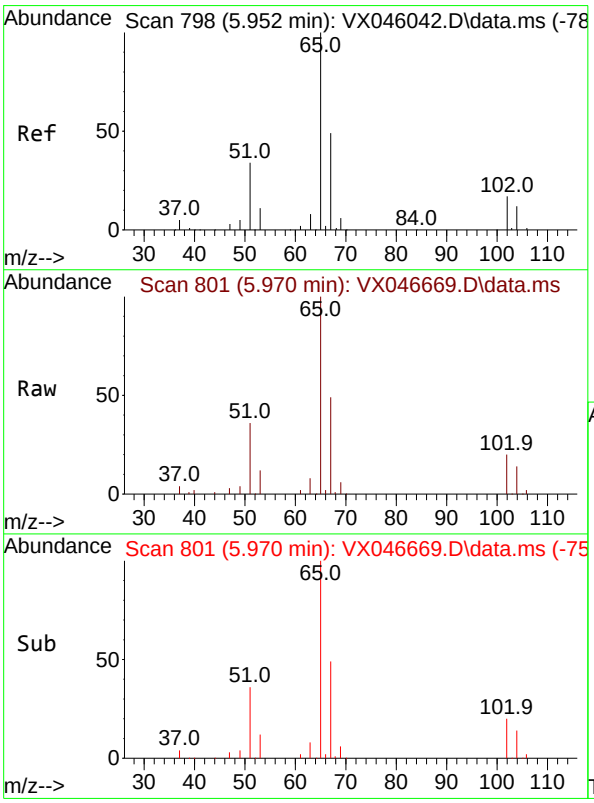
Ion	Ratio	Lower	Upper
56	100		
69	19.8	24.4	36.6
84	72.8	66.9	100.3



Instrument :
MSVOA_X
ClientSampleId :
WC-20250605

Manual Integrations
APPROVED

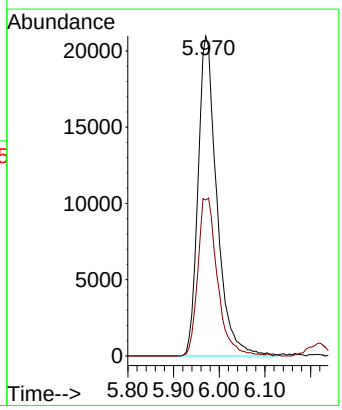
Reviewed By :John Carlone 06/13/2025
Supervised By :Mahesh Dadoda 06/13/2025

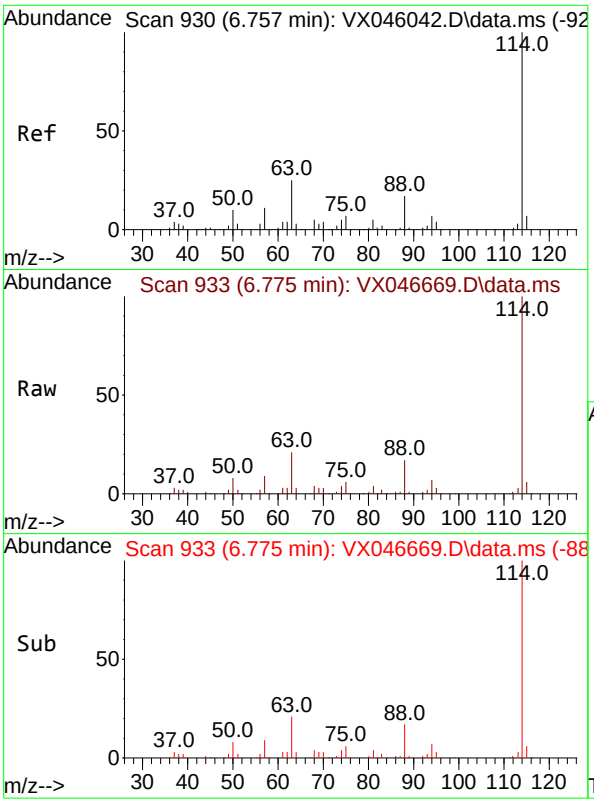


#33
1,2-Dichloroethane-d4
Concen: 48.712 ug/l
RT: 5.970 min Scan# 801
Delta R.T. 0.000 min
Lab File: VX046669.D
Acq: 12 Jun 2025 17:17

Tgt Ion: 65 Resp: 60109

Ion	Ratio	Lower	Upper
65	100		
67	51.4	0.0	99.0





#34
1,4-Difluorobenzene
Concen: 50.000 ug/l
RT: 6.775 min Scan# 9
Delta R.T. 0.000 min
Lab File: VX046669.D
Acq: 12 Jun 2025 17:17

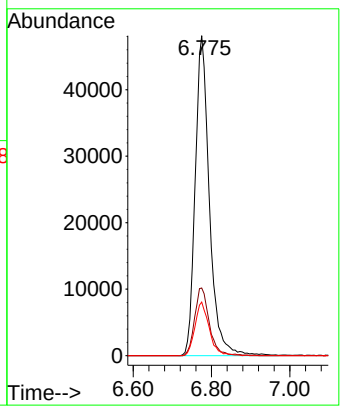
Tgt Ion:114 Resp: 12155

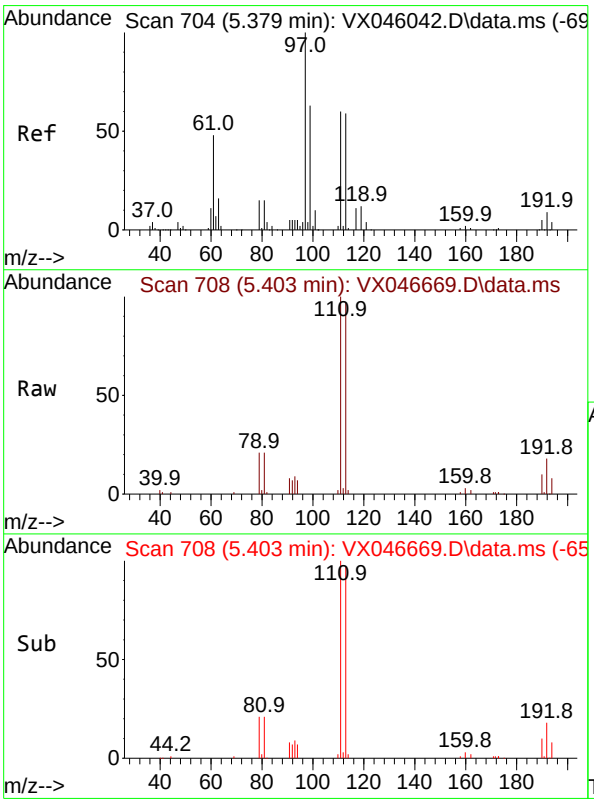
Ion	Ratio	Lower	Upper
114	100		
63	21.1	0.0	49.2
88	16.8	0.0	33.6

Instrument :
MSVOA_X
ClientSampleId :
WC-20250605

Manual Integrations
APPROVED

Reviewed By :John Carlone 06/13/2025
Supervised By :Mahesh Dadoda 06/13/2025

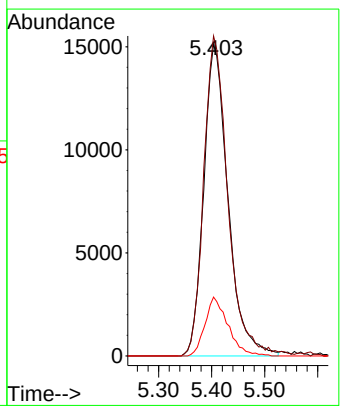


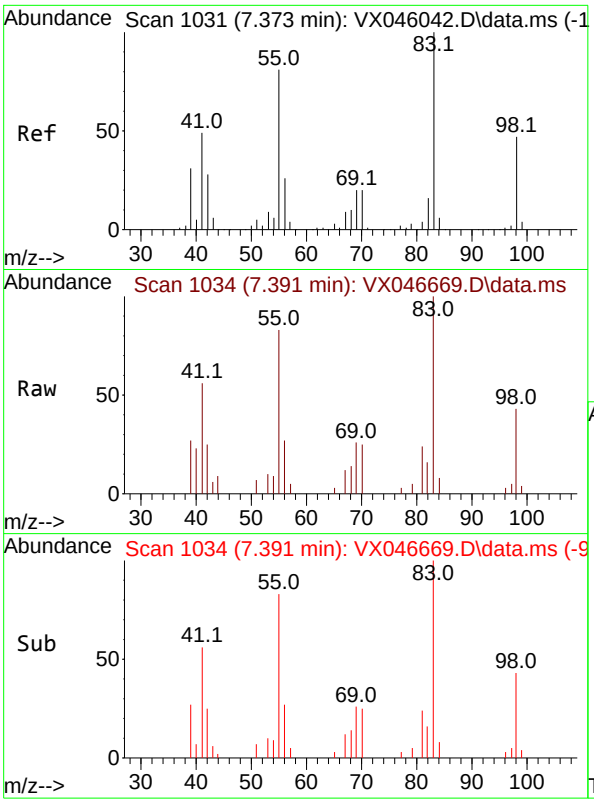


#35
Dibromofluoromethane
Concen: 53.859 ug/l
RT: 5.403 min Scan# 708
Delta R.T. 0.000 min
Lab File: VX046669.D
Acq: 12 Jun 2025 17:17

Tgt Ion:113 Resp: 48146

Ion	Ratio	Lower	Upper
113	100		
111	102.2	83.1	124.7
192	17.9	13.3	19.9





#39
Methylcyclohexane
Concen: 3.328 ug/l
RT: 7.391 min Scan# 1
Delta R.T. -0.000 min
Lab File: VX046669.D
Acq: 12 Jun 2025 17:17

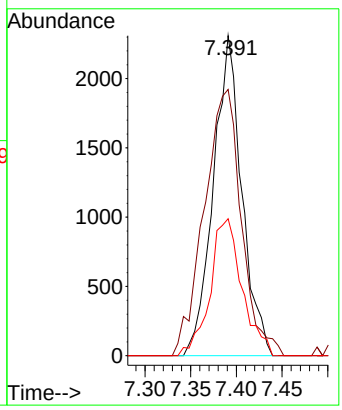
Tgt Ion: 83 Resp: 501

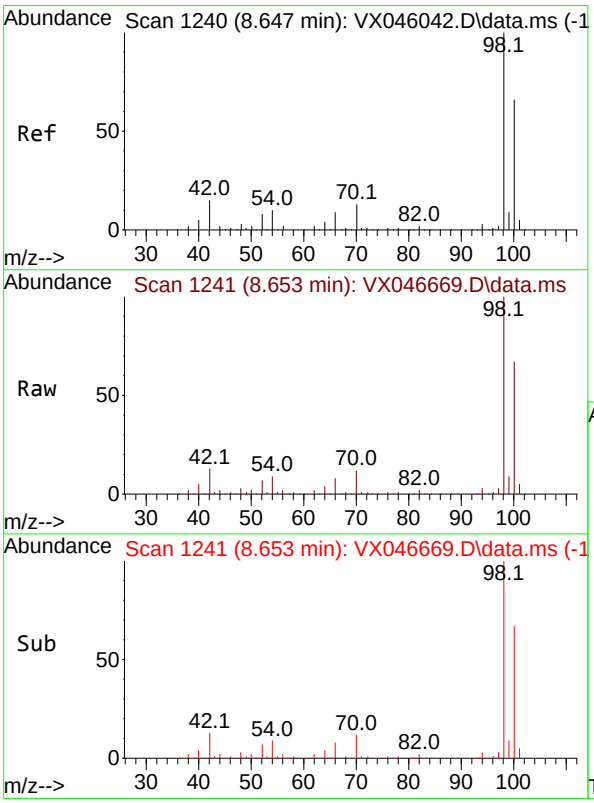
Ion	Ratio	Lower	Upper
83	100		
55	80.0	64.7	97.1
98	42.8	37.4	56.2

Instrument :
MSVOA_X
ClientSampleId :
WC-20250605

Manual Integrations
APPROVED

Reviewed By :John Carlone 06/13/2025
Supervised By :Mahesh Dadoda 06/13/2025

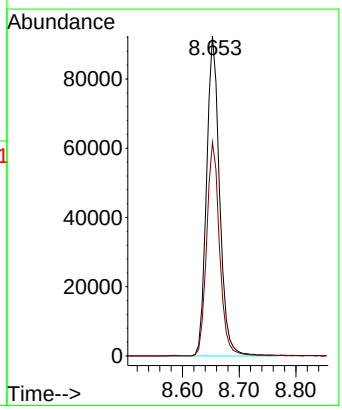


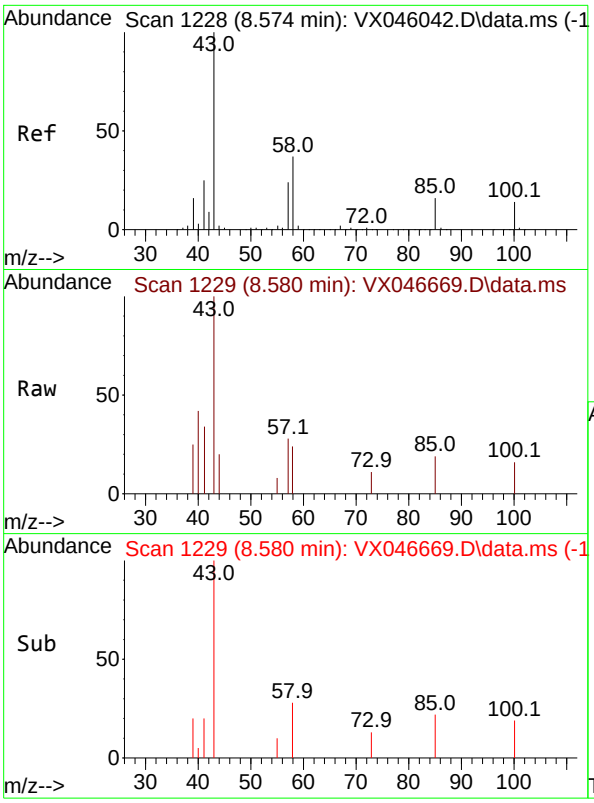


#50
Toluene-d8
Concen: 50.102 ug/l
RT: 8.653 min Scan# 1241
Delta R.T. -0.000 min
Lab File: VX046669.D
Acq: 12 Jun 2025 17:17

Tgt Ion: 98 Resp: 147659

Ion	Ratio	Lower	Upper
98	100		
100	66.1	53.5	80.3





#51
4-Methyl-2-Pentanone
Concen: 1.317 ug/l m
RT: 8.580 min Scan# 1
Delta R.T. 0.007 min
Lab File: VX046669.D
Acq: 12 Jun 2025 17:17

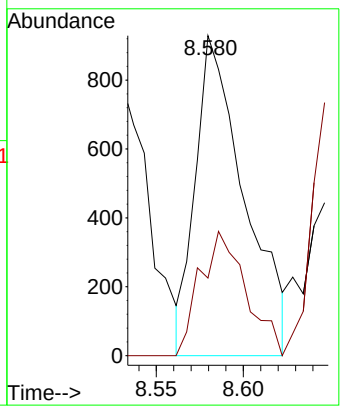
Tgt Ion: 43 Resp: 181

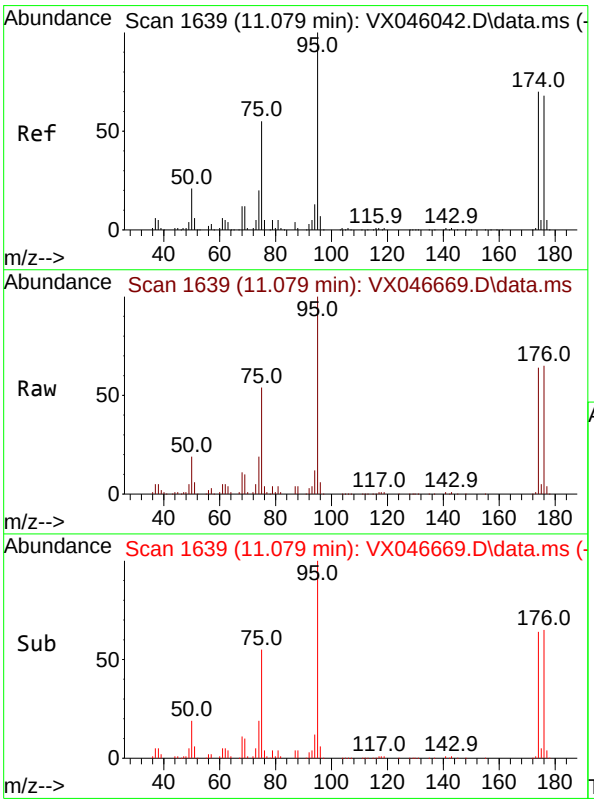
Ion	Ratio	Lower	Upper
43	100		
58	36.3	28.9	43.3

Instrument :
MSVOA_X
ClientSampleId :
WC-20250605

Manual Integrations
APPROVED

Reviewed By :John Carlone 06/13/2025
Supervised By :Mahesh Dadoda 06/13/2025

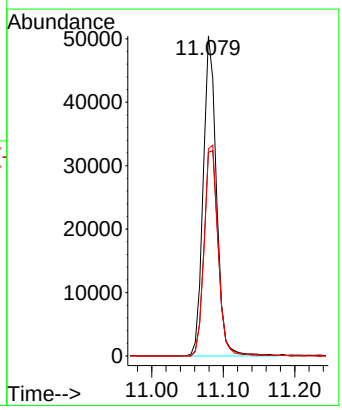


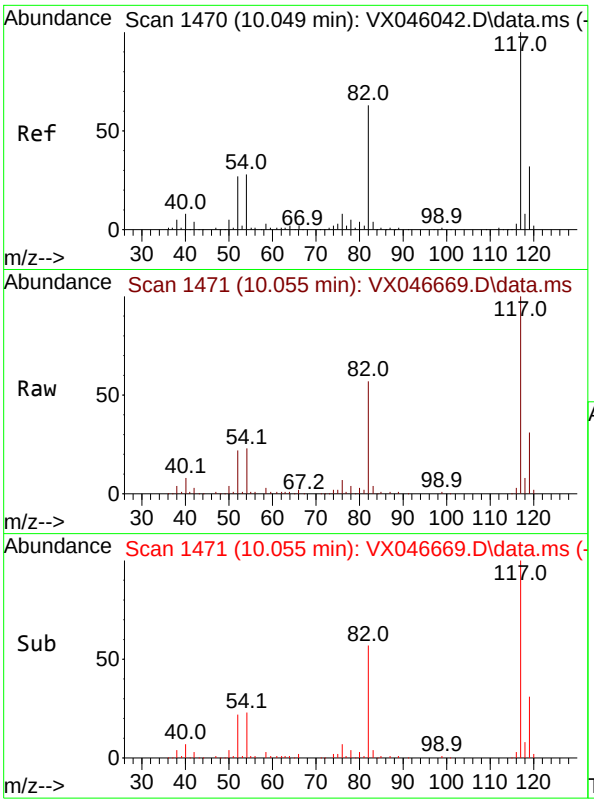


#62
4-Bromofluorobenzene
Concen: 53.534 ug/l
RT: 11.079 min Scan# 1639
Delta R.T. 0.000 min
Lab File: VX046669.D
Acq: 12 Jun 2025 17:17

Tgt Ion: 95 Resp: 65278

Ion	Ratio	Lower	Upper
95	100		
174	68.4	0.0	135.8
176	68.5	0.0	131.4





#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 10.055 min Scan# 14
Delta R.T. -0.000 min
Lab File: VX046669.D
Acq: 12 Jun 2025 17:17

Tgt Ion:117 Resp: 10848

Ion	Ratio	Lower	Upper
117	100		
82	56.8	50.6	76.0
119	31.5	25.8	38.6

Instrument :
MSVOA_X
ClientSampleId :
WC-20250605

Manual Integrations
APPROVED

Reviewed By :John Carlone 06/13/2025
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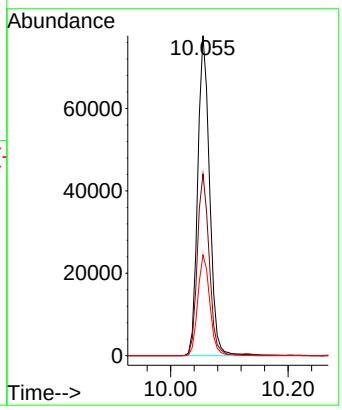
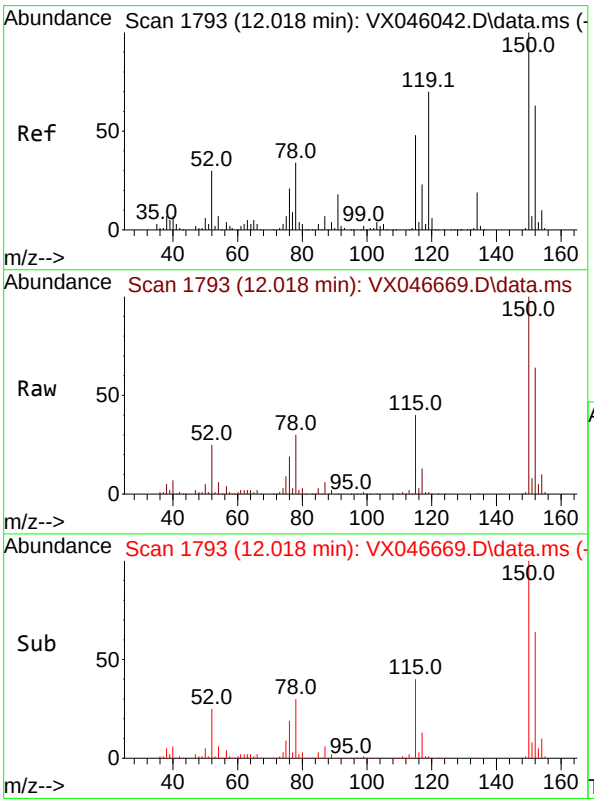
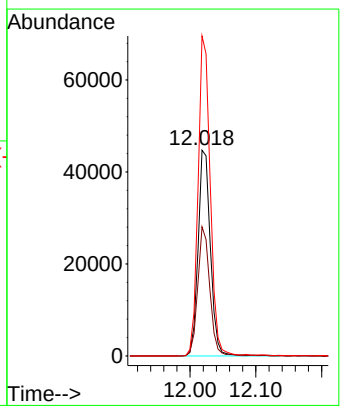


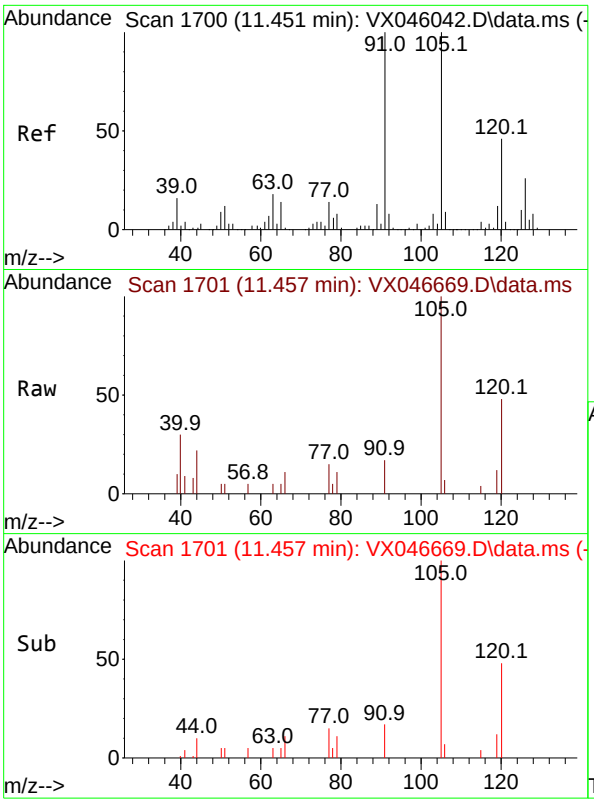


#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 12.018 min Scan# 1793
Delta R.T. -0.006 min
Lab File: VX046669.D
Acq: 12 Jun 2025 17:17

Tgt Ion:152 Resp: 58310

Ion	Ratio	Lower	Upper
152	100		
115	61.3	46.9	140.7
150	152.6	0.0	351.0

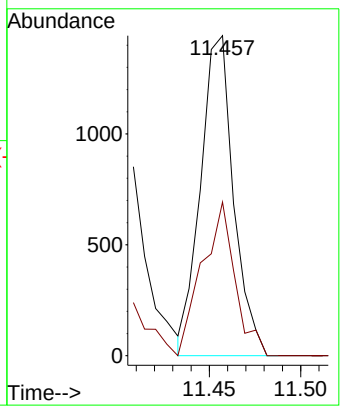




#80
1,3,5-Trimethylbenzene
Concen: 0.475 ug/l
RT: 11.457 min Scan# 1
Delta R.T. 0.006 min
Lab File: VX046669.D
Acq: 12 Jun 2025 17:17

Tgt Ion:105 Resp: 181

Ion	Ratio	Lower	Upper
105	100		
120	47.8	23.1	69.2



Instrument :
MSVOA_X
ClientSampleId :
WC-20250605

Manual Integrations
APPROVED

Reviewed By :John Carlone 06/13/2025
Supervised By :Mahesh Dadoda 06/13/2025

CALIBRATION SUMMARY

Raw Data

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

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: PARS02

Lab Code: CHEM Case No.: Q2267 SAS No.: Q2267 SDG No.: Q2267

Instrument ID: MSVOA_X Calibration Date(s): 06/06/2025 06/06/2025

Heated Purge: (Y/N) N Calibration Time(s): 09:42 12:57

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

LAB FILE ID: RRF005 = VX046518.D RRF020 = VX046519.D RRF050 = VX046520.D
RRF100 = VX046521.D RRF150 = VX046522.D RRF001 = VX046524.D

COMPOUND	RRF005	RRF020	RRF050	RRF100	RRF150	RRF001	$\overline{RRF}$	% RSD
Vinyl Chloride	0.697	0.593	0.596	0.591	0.622	0.679	0.630	7.5
1,1-Dichloroethene	0.663	0.550	0.567	0.561	0.585	0.635	0.594	7.6
2-Butanone	0.459	0.469	0.503	0.511	0.544	0.484	0.495	6.3
Carbon Tetrachloride	0.599	0.579	0.564	0.554	0.579	0.655	0.588	6.1
Chloroform	1.392	1.356	1.318	1.290	1.349	1.349	1.342	2.6
Benzene	1.597	1.503	1.427	1.380	1.442	1.522	1.479	5.3
1,2-Dichloroethane	0.646	0.641	0.610	0.586	0.602	0.606	0.615	3.8
Trichloroethene	0.385	0.356	0.351	0.332	0.354	0.476	0.376	13.8
Tetrachloroethene	0.347	0.324	0.310	0.301	0.314	0.410	0.334	12.1
Chlorobenzene	1.187	1.152	1.126	1.096	1.139	1.356	1.176	7.9
1,2-Dichloroethane-d4	0.997	0.848	0.873	0.828	0.900		0.890	7.4
Dibromofluoromethane	0.392	0.353	0.368	0.347	0.379		0.368	5
Toluene-d8	1.362	1.159	1.188	1.132	1.220		1.212	7.4
4-Bromofluorobenzene	0.564	0.482	0.493	0.468	0.501		0.502	7.4

* 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.

Response Factor Report MSVOA_X2

Method Path : Z:\voasrv\HPCHEM1\MSVOA_X\Method\
Method File : 82X060625W.M
Title : SW846 8260
Last Update : Fri Jun 06 16:56:12 2025
Response Via : Initial Calibration

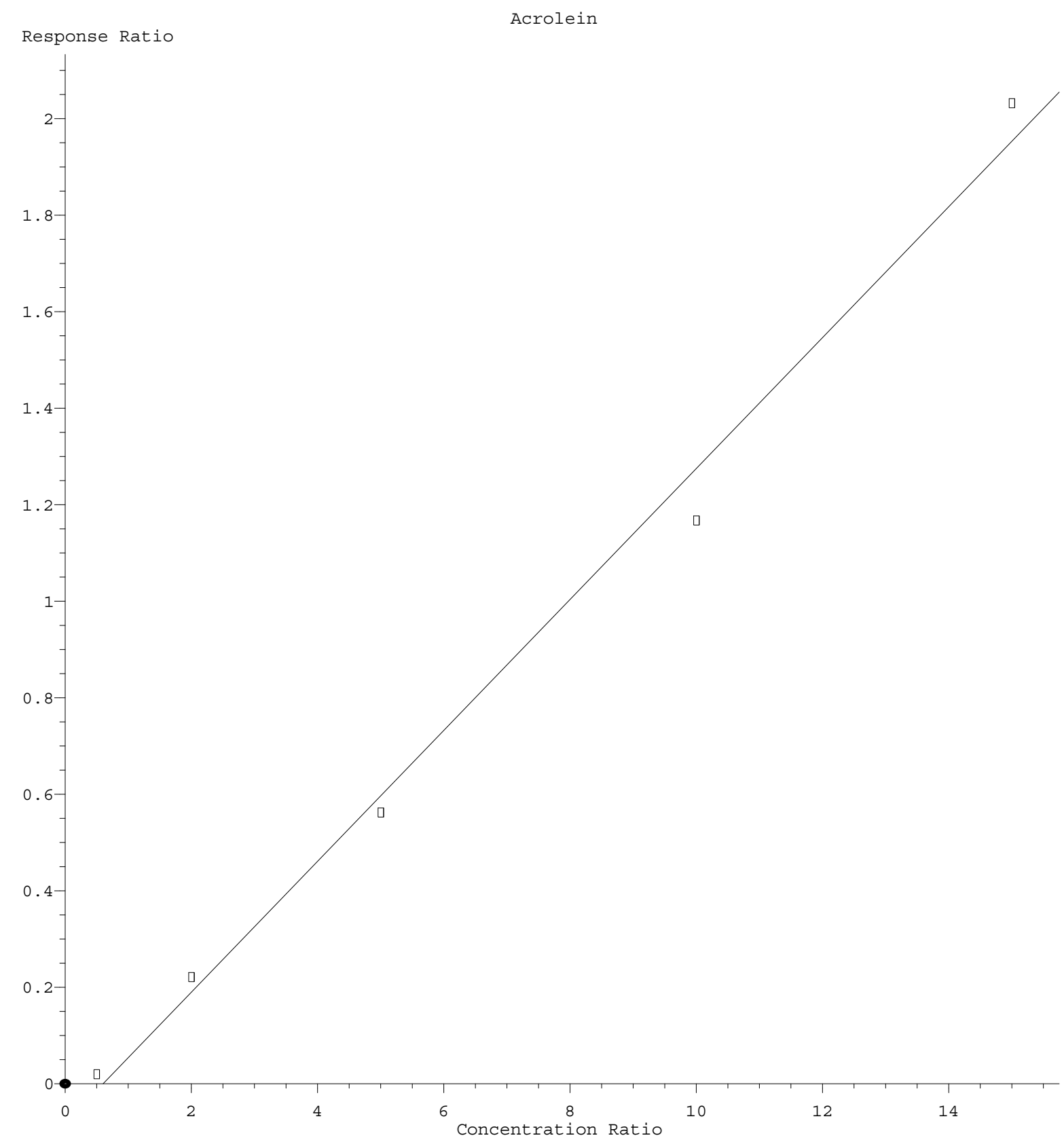
Calibration Files
1 =VX046524.D 5 =VX046518.D 20 =VX046519.D 50 =VX046520.D 100 =VX046521.D 150 =VX046522.D

		Compound	1	5	20	50	100	150	Avg	%RSD
1)	I	Pentafluorobenzene	----------ISTD----------							
2)	T	Dichlorodifluo...	0.838	0.740	0.653	0.645	0.635	0.654	0.694	11.52
3)	P	Chloromethane	0.713	0.737	0.586	0.573	0.568	0.614	0.632	11.76
4)	C	Vinyl Chloride	0.679	0.697	0.593	0.596	0.591	0.622	0.630	7.46#
5)	T	Bromomethane		0.592	0.429	0.398	0.256	0.237	0.382	37.77
6)	T	Chloroethane	0.509	0.456	0.384	0.373	0.357	0.373	0.409	14.73
7)	T	Trichlorofluor...	1.019	1.136	1.055	1.021	0.988	1.034	1.042	4.89
8)	T	Diethyl Ether	0.412	0.368	0.355	0.356	0.349	0.368	0.368	6.23
9)	T	1,1,2-Trichlor...	0.697	0.699	0.651	0.638	0.616	0.639	0.657	5.19
10)	T	Methyl Iodide		0.653	0.664	0.716	0.744	0.782	0.712	7.65
11)	T	Tert butyl alc...		0.087	0.090	0.098	0.104	0.114	0.099	10.94
12)	CM	1,1-Dichloroet...	0.635	0.663	0.550	0.567	0.561	0.585	0.594	7.64#
13)	T	Acrolein		0.040	0.110	0.112	0.117	0.135	0.103	35.72
14)	T	Allyl chloride	1.283	1.198	1.115	1.130	1.138	1.131	1.166	5.52
15)	T	Acrylonitrile	0.342	0.367	0.368	0.379	0.381	0.403	0.373	5.42
16)	T	Acetone	0.566	0.347	0.334	0.340	0.341	0.360	0.381	23.86
17)	T	Carbon Disulfide	2.313	1.618	1.229	1.218	1.220	1.288	1.481	29.41
18)	T	Methyl Acetate	0.883	0.870	1.082	1.130	1.155	1.237	1.060	14.20
19)	T	Methyl tert-bu...	1.873	2.038	2.050	2.115	2.131	2.256	2.077	6.11
20)	T	Methylene Chlo...	0.868	0.752	0.676	0.662	0.646	0.678	0.714	11.77
21)	T	trans-1,2-Dich...	0.785	0.661	0.580	0.582	0.567	0.594	0.628	13.34
22)	T	Diisopropyl ether	2.017	2.338	2.344	2.343	2.319	2.429	2.298	6.22
23)	T	Vinyl Acetate	1.639	1.727	1.682	1.828	1.831	1.940	1.775	6.31
24)	P	1,1-Dichloroet...	1.281	1.349	1.266	1.259	1.234	1.297	1.281	3.09
25)	T	2-Butanone	0.484	0.459	0.469	0.503	0.511	0.544	0.495	6.28
26)	T	2,2-Dichloropr...	0.900	0.931	0.919	0.966	0.968	1.022	0.951	4.61
27)	T	cis-1,2-Dichlo...	0.866	0.786	0.752	0.741	0.728	0.767	0.773	6.43
28)	T	Bromochloromet...	0.650	0.652	0.592	0.590	0.594	0.589	0.611	5.04
29)	T	Tetrahydrofuran	0.306	0.301	0.291	0.316	0.320	0.342	0.313	5.64
30)	C	Chloroform	1.349	1.392	1.356	1.318	1.290	1.349	1.342	2.59#
31)	T	Cyclohexane		1.172	1.012	0.995	0.974	1.018	1.034	7.64
32)	T	1,1,1-Trichlor...	1.131	1.170	1.131	1.141	1.128	1.188	1.148	2.17
33)	S	1,2-Dichloroet...		0.997	0.848	0.873	0.828	0.900	0.890	7.42
34)	I	1,4-Difluorobenzene	----------ISTD----------							
35)	S	Dibromofluorom...		0.392	0.353	0.368	0.347	0.379	0.368	5.01
36)	T	1,1-Dichloropr...	0.660	0.554	0.506	0.485	0.461	0.485	0.525	13.89
37)	T	Ethyl Acetate	0.355	0.483	0.522	0.554	0.566	0.596	0.513	16.84
38)	T	Carbon Tetrach...	0.655	0.599	0.579	0.564	0.554	0.579	0.588	6.09
39)	T	Methylcyclohexane	0.725	0.696	0.576	0.572	0.565	0.587	0.620	11.41
40)	TM	Benzene	1.522	1.597	1.503	1.427	1.380	1.442	1.479	5.25
41)	T	Methacrylonitrile	0.279	0.310	0.335	0.323	0.320	0.344	0.318	7.09
42)	TM	1,2-Dichloroet...	0.606	0.646	0.641	0.610	0.586	0.602	0.615	3.80
43)	T	Isopropyl Acetate	0.772	0.842	0.887	0.923	0.935	1.002	0.894	8.92
44)	TM	Trichloroethene	0.476	0.385	0.356	0.351	0.332	0.354	0.376	13.85
45)	C	1,2-Dichloropr...	0.359	0.393	0.396	0.381	0.370	0.390	0.382	3.84#
46)	T	Dibromomethane	0.291	0.308	0.286	0.279	0.272	0.286	0.287	4.22
47)	T	Bromodichlorom...	0.534	0.580	0.617	0.603	0.589	0.618	0.590	5.32
48)	T	Methyl methacr...	0.395	0.423	0.454	0.481	0.490	0.517	0.460	9.79
49)	T	1,4-Dioxane	0.004	0.006	0.007	0.006	0.007	0.007	0.006	14.38
50)	S	Toluene-d8		1.362	1.159	1.188	1.132	1.220	1.212	7.42
51)	T	4-Methyl-2-Pen...	0.492	0.548	0.583	0.593	0.582	0.609	0.568	7.47
52)	CM	Toluene	0.938	0.980	0.911	0.884	0.849	0.888	0.908	5.04#
53)	T	t-1,3-Dichloro...	0.480	0.469	0.524	0.542	0.559	0.601	0.529	9.38
54)	T	cis-1,3-Dichlo...	0.567	0.567	0.580	0.590	0.595	0.633	0.589	4.15
55)	T	1,1,2-Trichlor...	0.331	0.375	0.389	0.366	0.356	0.372	0.365	5.41
56)	T	Ethyl methacry...	0.456	0.536	0.566	0.583	0.594	0.632	0.561	10.79

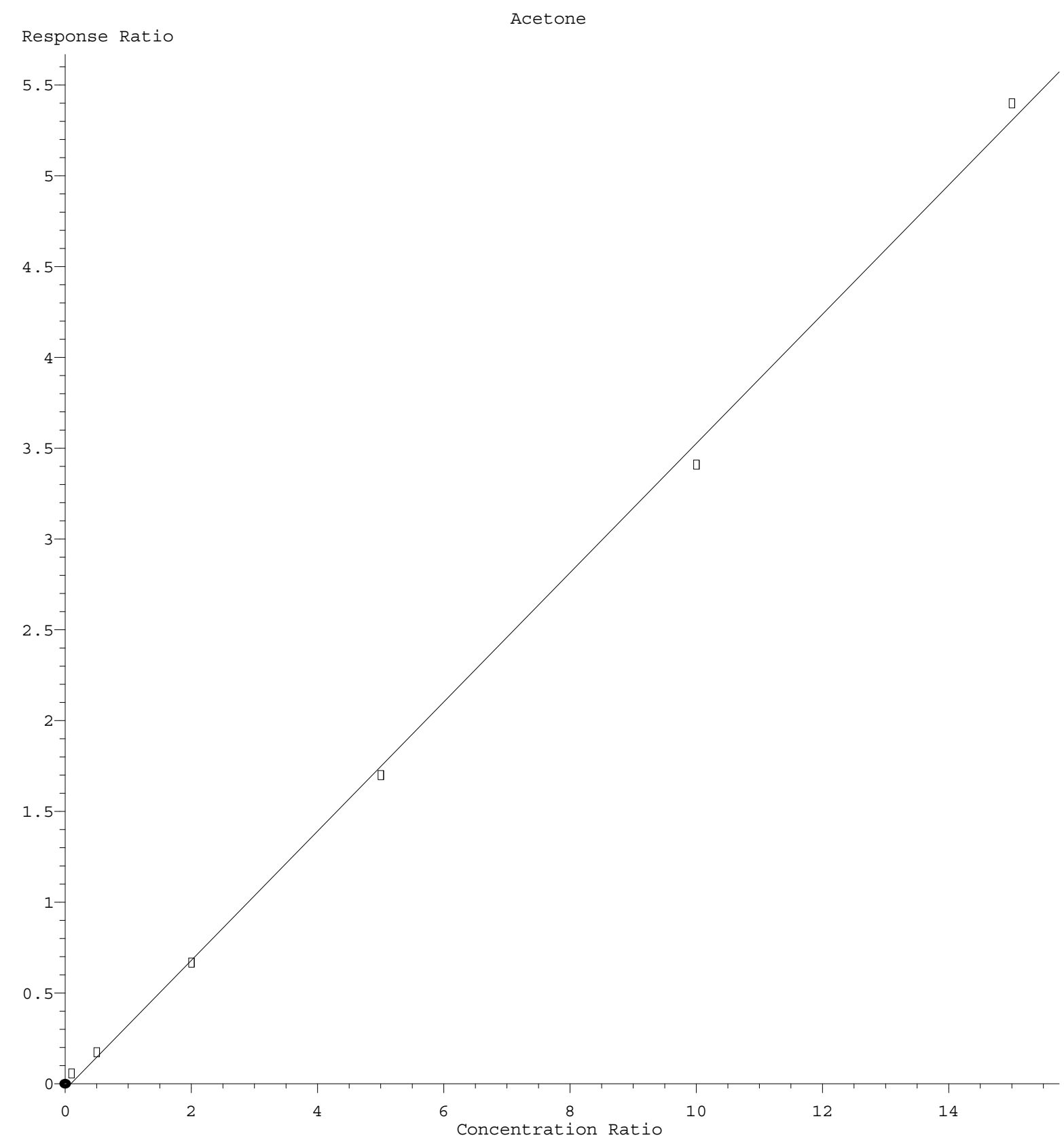
Method Path : Z:\voasrv\HPCHEM1\MSVOA_X\Method\
Method File : 82X060625W.M

57)	T	1,3-Dichloropr...	0.653	0.664	0.666	0.636	0.612	0.637	0.644	3.15
58)	T	2-Chloroethyl ...	0.278	0.301	0.302	0.316	0.312	0.326	0.306	5.46
59)	T	2-Hexanone	0.368	0.376	0.416	0.426	0.419	0.438	0.407	6.99
60)	T	Dibromochlorom...	0.405	0.431	0.438	0.432	0.422	0.447	0.429	3.35
61)	T	1,2-Dibromoethane	0.420	0.367	0.380	0.370	0.365	0.378	0.380	5.37
62)	S	4-Bromofluorob...		0.564	0.482	0.493	0.468	0.501	0.502	7.36
63)	I	Chlorobenzene-d5	----------ISTD----------							
64)	T	Tetrachloroethene	0.410	0.347	0.324	0.310	0.301	0.314	0.334	12.07
65)	PM	Chlorobenzene	1.356	1.187	1.152	1.126	1.096	1.139	1.176	7.91
66)	T	1,1,1,2-Tetrac...	0.362	0.394	0.401	0.403	0.404	0.420	0.397	4.87
67)	C	Ethyl Benzene	2.166	2.093	2.029	2.018	1.971	2.041	2.053	3.30#
68)	T	m/p-Xylenes	0.773	0.756	0.750	0.737	0.714	0.738	0.745	2.67
69)	T	o-Xylene	0.719	0.728	0.731	0.716	0.703	0.724	0.720	1.42
70)	T	Styrene	1.209	1.205	1.257	1.257	1.213	1.257	1.233	2.15
71)	P	Bromoform	0.286	0.269	0.300	0.311	0.317	0.335	0.303	7.76
72)	I	1,4-Dichlorobenzen...	----------ISTD----------							
73)	T	Isopropylbenzene	3.896	3.936	3.949	3.909	3.828	4.064	3.930	1.98
74)	T	N-amyl acetate	1.424	1.613	1.673	1.803	1.854	2.019	1.731	11.98
75)	P	1,1,2,2-Tetrac...	1.148	1.294	1.294	1.257	1.249	1.306	1.258	4.65
76)	T	1,2,3-Trichlor...	1.091	1.022	1.076	1.049	1.025	1.092	1.059	2.97
77)	T	Bromobenzene	0.958	0.904	0.925	0.881	0.878	0.928	0.912	3.36
78)	T	n-propylbenzene	5.051	4.659	4.775	4.693	4.553	4.813	4.757	3.58
79)	T	2-Chlorotoluene	3.087	2.885	2.870	2.786	2.721	2.866	2.869	4.31
80)	T	1,3,5-Trimethy...	3.322	3.329	3.297	3.243	3.147	3.314	3.275	2.14
81)	T	trans-1,4-Dich...		0.274	0.352	0.370	0.398	0.442	0.367	16.86
82)	T	4-Chlorotoluene	3.872	3.390	3.342	3.293	3.177	3.329	3.400	7.12
83)	T	tert-Butylbenzene	3.284	3.341	3.364	3.287	3.248	3.482	3.334	2.50
84)	T	1,2,4-Trimethy...	3.406	3.309	3.360	3.256	3.194	3.356	3.313	2.34
85)	T	sec-Butylbenzene	4.458	4.350	4.296	4.172	4.096	4.334	4.284	3.04
86)	T	p-Isopropyltol...	3.910	3.509	3.554	3.484	3.397	3.575	3.572	4.96
87)	T	1,3-Dichlorobe...	2.105	1.745	1.714	1.684	1.642	1.740	1.772	9.46
88)	T	1,4-Dichlorobe...	2.421	1.804	1.736	1.675	1.627	1.752	1.836	15.98
89)	T	n-Butylbenzene	4.197	3.319	3.378	3.354	3.310	3.487	3.507	9.80
90)	T	Hexachloroethane	0.682	0.599	0.602	0.610	0.633	0.683	0.635	6.11
91)	T	1,2-Dichlorobe...	1.908	1.730	1.693	1.639	1.595	1.695	1.710	6.32
92)	T	1,2-Dibromo-3-...	0.238	0.250	0.272	0.285	0.309	0.337	0.282	13.06
93)	T	1,2,4-Trichlor...	1.513	1.038	1.085	1.077	1.093	1.194	1.167	15.22
94)	T	Hexachlorobuta...	0.695	0.526	0.508	0.501	0.497	0.525	0.542	14.01
95)	T	Naphthalene	3.783	3.138	3.527	3.726	3.816	4.205	3.699	9.53
96)	T	1,2,3-Trichlor...	1.500	1.042	1.078	1.092	1.108	1.198	1.170	14.55

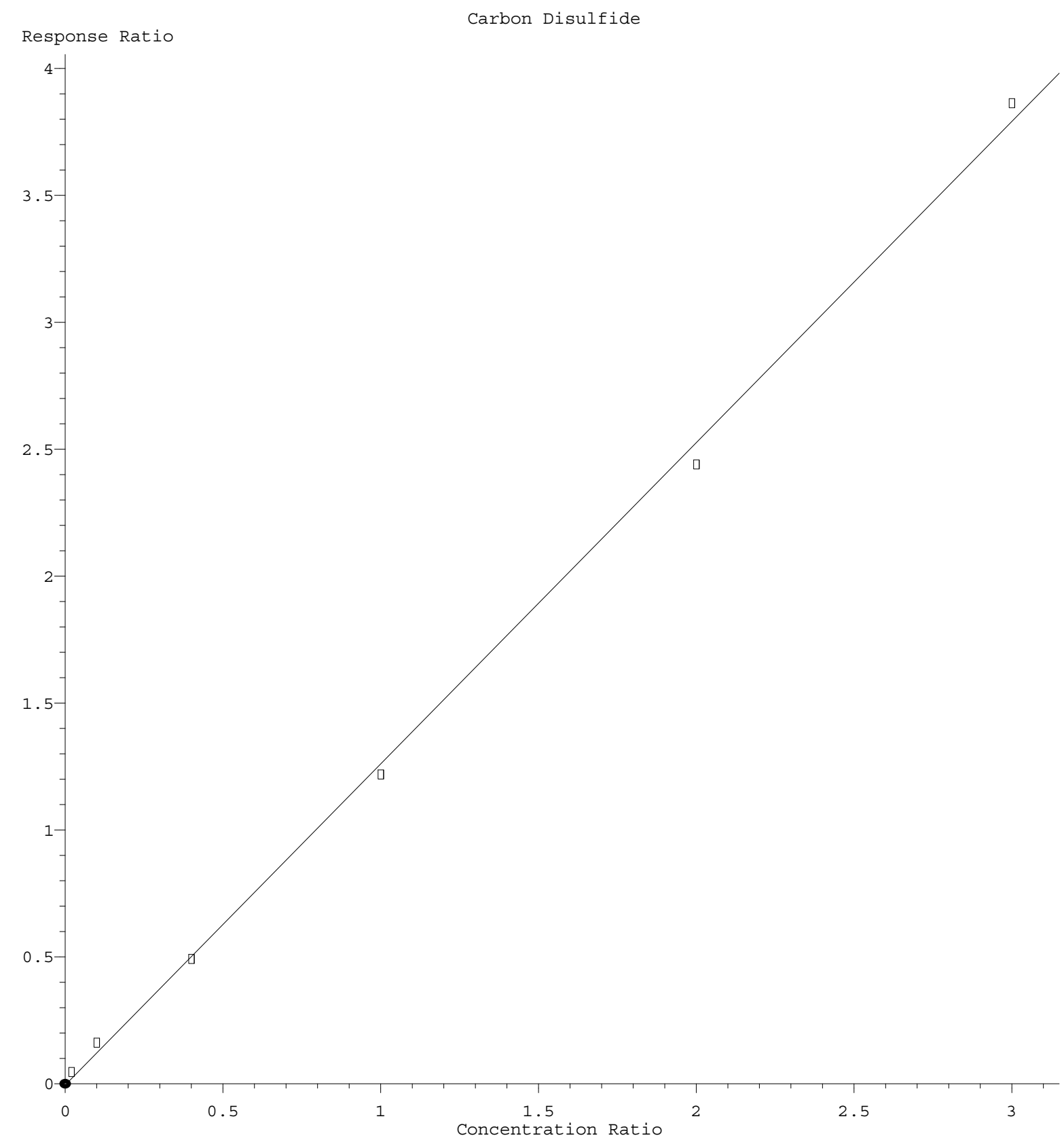
(#) = Out of Range



Response = 1.357e-001 * Amt - 8.141e-002
Coef of Det (r^2) = 0.992061 Curve Fit: Linear
Method Name: Z:\voasrv\HPCHEM1\MSVOA X\Method\82X060625W.M
Calibration Table Last Updated: Fri Jun 06 16:56:12 2025



Response = 3.559e-001 * Amt - 3.270e-002
Coef of Det (r^2) = 0.998736 Curve Fit: Linear
Method Name: Z:\voasrv\HPCHEM1\MSVOA X\Method\82X060625W.M
Calibration Table Last Updated: Fri Jun 06 16:56:12 2025



Response = 1.266e+000 * Amt - 5.124e-003
Coef of Det (r^2) = 0.998532 Curve Fit: Linear
Method Name: Z:\voasrv\HPCHEM1\MSVOA X\Method\82X060625W.M
Calibration Table Last Updated: Fri Jun 06 16:56:12 2025

Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046518.D
Acq On : 06 Jun 2025 09:42
Operator : JC/MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 06 16:40:47 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC005

Manual Integrations APPROVED

Reviewed By :John Carlone 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.562	168	104428	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.763	114	181356	50.000	ug/l	-0.01
63) Chlorobenzene-d5	10.055	117	164496	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	81515	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.964	65	10415	5.606	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery =	11.220%#		
35) Dibromofluoromethane	5.391	113	7110	5.331	ug/l	-0.01
Spiked Amount 50.000	Range 75 - 124		Recovery =	10.660%#		
50) Toluene-d8	8.653	98	24704	5.618	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery =	11.240%#		
62) 4-Bromofluorobenzene	11.079	95	10224	5.620	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery =	11.240%#		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.179	85	7726	5.329	ug/l	99
3) Chloromethane	1.307	50	7698	5.833	ug/l	99
4) Vinyl Chloride	1.386	62	7283	5.536	ug/l	92
5) Bromomethane	1.618	94	6181	7.740	ug/l	89
6) Chloroethane	1.697	64	4764	5.582	ug/l	98
7) Trichlorofluoromethane	1.904	101	11861	5.450	ug/l	97
8) Diethyl Ether	2.148	74	3843	4.997	ug/l	100
9) 1,1,2-Trichlorotrifluo...	2.349	101	7299	5.323	ug/l	98
10) Methyl Iodide	2.465	142	6815	4.585	ug/l	96
11) Tert butyl alcohol	2.971	59	4565	22.143	ug/l	97
12) 1,1-Dichloroethene	2.331	96	6923	5.584	ug/l	92
13) Acrolein	2.246	56	2067	37.301	ug/l	95
14) Allyl chloride	2.678	41	12513	5.139	ug/l	99
15) Acrylonitrile	3.075	53	19139	24.554	ug/l	100
16) Acetone	2.392	43	18117	28.970	ug/l	92
17) Carbon Disulfide	2.526	76	16895	6.594	ug/l	99
18) Methyl Acetate	2.715	43	9089	4.107	ug/l	98
19) Methyl tert-butyl Ether	3.130	73	21281	4.905	ug/l	100
20) Methylene Chloride	2.800	84	7851	5.267	ug/l	95
21) trans-1,2-Dichloroethene	3.105	96	6901	5.260	ug/l	87
22) Diisopropyl ether	3.770	45	24417	5.086	ug/l #	55
23) Vinyl Acetate	3.739	43	90187	24.333	ug/l	97
24) 1,1-Dichloroethane	3.617	63	14092	5.267	ug/l	98
25) 2-Butanone	4.581	43	23977	23.183	ug/l	98
26) 2,2-Dichloropropane	4.483	77	9718	4.893	ug/l	95
27) cis-1,2-Dichloroethene	4.495	96	8212	5.084	ug/l	97
28) Bromochloromethane	4.910	49	6807	5.334	ug/l #	99
29) Tetrahydrofuran	5.026	42	15713	24.057	ug/l	93
30) Chloroform	5.099	83	14532	5.184	ug/l	94
31) Cyclohexane	5.483	56	12241	5.667	ug/l	89
32) 1,1,1-Trichloroethane	5.391	97	12216	5.094	ug/l	97
36) 1,1-Dichloropropene	5.702	75	10048	5.274	ug/l	96
37) Ethyl Acetate	4.733	43	8766	4.716	ug/l #	89
38) Carbon Tetrachloride	5.690	117	10857	5.088	ug/l	98
39) Methylcyclohexane	7.385	83	12614	5.610	ug/l	97
40) Benzene	6.044	78	28961	5.400	ug/l	96

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046518.D
Acq On : 06 Jun 2025 09:42
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 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 06 16:40:47 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	4.940	41	5621	4.868	ug/l	#	90
42) 1,2-Dichloroethane	6.092	62	11718	5.252	ug/l		100
43) Isopropyl Acetate	6.349	43	15275	4.712	ug/l	#	97
44) Trichloroethene	7.129	130	6978	5.121	ug/l		99
45) 1,2-Dichloropropane	7.434	63	7132	5.152	ug/l		97
46) Dibromomethane	7.586	93	5588	5.366	ug/l		97
47) Bromodichloromethane	7.824	83	10524	4.915	ug/l		97
48) Methyl methacrylate	7.708	41	7663	4.595	ug/l		97
49) 1,4-Dioxane	7.665	88	2221	99.585	ug/l		98
51) 4-Methyl-2-Pentanone	8.574	43	49709	24.133	ug/l		99
52) Toluene	8.720	92	17773	5.394	ug/l		99
53) t-1,3-Dichloropropene	8.982	75	8503	4.429	ug/l		100
54) cis-1,3-Dichloropropene	8.373	75	10282	4.817	ug/l		92
55) 1,1,2-Trichloroethane	9.153	97	6794	5.136	ug/l		97
56) Ethyl methacrylate	9.122	69	9723	4.777	ug/l		97
57) 1,3-Dichloropropane	9.311	76	12033	5.148	ug/l		98
58) 2-Chloroethyl Vinyl ether	8.245	63	27324	24.645	ug/l		97
59) 2-Hexanone	9.433	43	34128	23.102	ug/l		98
60) Dibromochloromethane	9.519	129	7808	5.018	ug/l		96
61) 1,2-Dibromoethane	9.610	107	6661	4.833	ug/l		94
64) Tetrachloroethene	9.275	164	5704	5.186	ug/l		90
65) Chlorobenzene	10.080	112	19529	5.048	ug/l		99
66) 1,1,1,2-Tetrachloroethane	10.159	131	6488	4.963	ug/l		98
67) Ethyl Benzene	10.195	91	34429	5.098	ug/l		98
68) m/p-Xylenes	10.299	106	24857	10.146	ug/l		99
69) o-Xylene	10.640	106	11976	5.054	ug/l		99
70) Styrene	10.659	104	19826	4.888	ug/l		98
71) Bromoform	10.799	173	4418	4.432	ug/l	#	96
73) Isopropylbenzene	10.964	105	32087	5.007	ug/l		99
74) N-amyl acetate	10.848	43	13145	4.658	ug/l		98
75) 1,1,2,2-Tetrachloroethane	11.214	83	10551	5.144	ug/l		98
76) 1,2,3-Trichloropropane	11.238	75	8330m	4.746	ug/l		
77) Bromobenzene	11.195	156	7367	4.953	ug/l		98
78) n-propylbenzene	11.305	91	37974	4.896	ug/l		99
79) 2-Chlorotoluene	11.366	91	23514	5.028	ug/l		100
80) 1,3,5-Trimethylbenzene	11.451	105	27140	5.083	ug/l		99
81) trans-1,4-Dichloro-2-b...	11.018	75	2236	3.736	ug/l	#	77
82) 4-Chlorotoluene	11.457	91	27633	4.985	ug/l		97
83) tert-Butylbenzene	11.713	119	27238	5.011	ug/l		99
84) 1,2,4-Trimethylbenzene	11.750	105	26973	4.993	ug/l		97
85) sec-Butylbenzene	11.890	105	35458	5.077	ug/l		97
86) p-Isopropyltoluene	12.006	119	28606	4.913	ug/l		99
87) 1,3-Dichlorobenzene	11.969	146	14222	4.924	ug/l		99
88) 1,4-Dichlorobenzene	12.043	146	14704	4.913	ug/l		87
89) n-Butylbenzene	12.329	91	27055	4.731	ug/l		99
90) Hexachloroethane	12.536	117	4884	4.719	ug/l		93
91) 1,2-Dichlorobenzene	12.335	146	14100	5.058	ug/l		98
92) 1,2-Dibromo-3-Chloropr...	12.945	75	2035	4.431	ug/l		95
93) 1,2,4-Trichlorobenzene	13.585	180	8458	4.447	ug/l		99
94) Hexachlorobutadiene	13.725	225	4285	4.848	ug/l		97
95) Naphthalene	13.774	128	25583	4.242	ug/l		99
96) 1,2,3-Trichlorobenzene	13.963	180	8491	4.453	ug/l		99

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046518.D
Acq On : 06 Jun 2025 09:42
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 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 06 16:40:47 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

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

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

ICAL Form

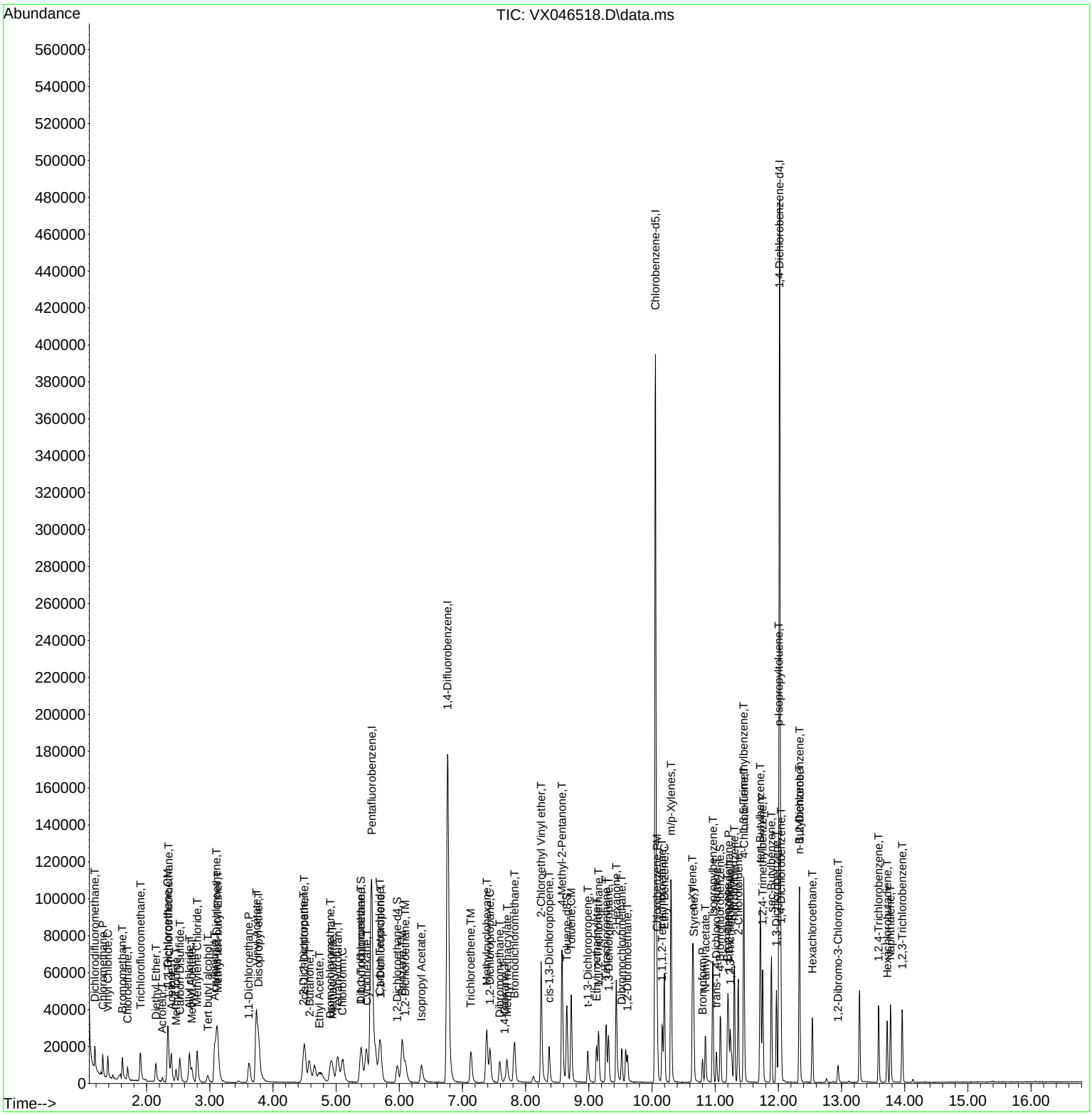
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046518.D
Acq On : 06 Jun 2025 09:42
Operator : JC/MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 06 16:40:47 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC005

Manual Integrations APPROVED

Reviewed By :John Carlone 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046519.D
Acq On : 06 Jun 2025 10:18
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 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 06 16:41:10 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.562	168	91899	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.763	114	155168	50.000	ug/l	-0.01
63) Chlorobenzene-d5	10.055	117	138173	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	69785	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.958	65	31177	19.069	ug/l	-0.01
Spiked Amount 50.000	Range 74 - 125		Recovery =	38.140%#		
35) Dibromofluoromethane	5.391	113	21913	19.203	ug/l	-0.01
Spiked Amount 50.000	Range 75 - 124		Recovery =	38.400%#		
50) Toluene-d8	8.647	98	71915	19.116	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery =	38.240%#		
62) 4-Bromofluorobenzene	11.079	95	29923	19.224	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery =	38.440%#		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.185	85	24011	18.820	ug/l	97
3) Chloromethane	1.307	50	21532	18.541	ug/l	97
4) Vinyl Chloride	1.386	62	21814	18.843	ug/l	99
5) Bromomethane	1.624	94	15765	22.432	ug/l	98
6) Chloroethane	1.703	64	14119	18.798	ug/l	97
7) Trichlorofluoromethane	1.904	101	38797	20.256	ug/l	95
8) Diethyl Ether	2.148	74	13057	19.294	ug/l	94
9) 1,1,2-Trichlorotrifluo...	2.343	101	23928	19.829	ug/l	98
10) Methyl Iodide	2.465	142	24399	18.652	ug/l	98
11) Tert butyl alcohol	2.965	59	16570	91.334	ug/l	98
12) 1,1-Dichloroethene	2.337	96	20232	18.543	ug/l	94
13) Acrolein	2.245	56	20307	111.446	ug/l	98
14) Allyl chloride	2.678	41	40999	19.133	ug/l	96
15) Acrylonitrile	3.075	53	67593	98.540	ug/l	99
16) Acetone	2.386	43	61298	98.314	ug/l	97
17) Carbon Disulfide	2.526	76	45190	19.630	ug/l	100
18) Methyl Acetate	2.715	43	39765	20.419	ug/l	100
19) Methyl tert-butyl Ether	3.123	73	75365	19.741	ug/l	99
20) Methylene Chloride	2.800	84	24863	18.955	ug/l	96
21) trans-1,2-Dichloroethene	3.105	96	21333	18.476	ug/l	93
22) Diisopropyl ether	3.770	45	86178	20.399	ug/l #	77
23) Vinyl Acetate	3.733	43	309124	94.776	ug/l	100
24) 1,1-Dichloroethane	3.623	63	46528	19.761	ug/l	99
25) 2-Butanone	4.562	43	86287	94.804	ug/l	99
26) 2,2-Dichloropropane	4.489	77	33782	19.327	ug/l	97
27) cis-1,2-Dichloroethene	4.501	96	27631	19.439	ug/l	97
28) Bromochloromethane	4.910	49	21754	19.371	ug/l	99
29) Tetrahydrofuran	5.013	42	53547	93.158	ug/l	100
30) Chloroform	5.105	83	49854	20.208	ug/l	92
31) Cyclohexane	5.483	56	37188	19.565	ug/l	90
32) 1,1,1-Trichloroethane	5.391	97	41583	19.705	ug/l	98
36) 1,1-Dichloropropene	5.702	75	31397	19.262	ug/l	99
37) Ethyl Acetate	4.733	43	32379	20.357	ug/l	98
38) Carbon Tetrachloride	5.684	117	35956	19.695	ug/l	98
39) Methylcyclohexane	7.379	83	35729	18.571	ug/l	96
40) Benzene	6.044	78	93317	20.336	ug/l	98

Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046519.D
Acq On : 06 Jun 2025 10:18
Operator : JC/MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 06 16:41:10 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC020

Manual Integrations APPROVED

Reviewed By :John Carlone 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	4.928	41	20773	21.027	ug/l		96
42) 1,2-Dichloroethane	6.098	62	39768	20.832	ug/l		100
43) Isopropyl Acetate	6.342	43	55054	19.851	ug/l		99
44) Trichloroethene	7.129	130	22094	18.950	ug/l		97
45) 1,2-Dichloropropane	7.434	63	24588	20.760	ug/l		98
46) Dibromomethane	7.586	93	17753	19.924	ug/l		97
47) Bromodichloromethane	7.824	83	38325	20.919	ug/l		100
48) Methyl methacrylate	7.696	41	28189	19.755	ug/l		98
49) 1,4-Dioxane	7.665	88	8127	425.896	ug/l		99
51) 4-Methyl-2-Pentanone	8.574	43	180974	102.687	ug/l		99
52) Toluene	8.720	92	56537	20.055	ug/l		98
53) t-1,3-Dichloropropene	8.976	75	32552	19.817	ug/l		99
54) cis-1,3-Dichloropropene	8.372	75	36009	19.716	ug/l		89
55) 1,1,2-Trichloroethane	9.153	97	24130	21.322	ug/l		98
56) Ethyl methacrylate	9.116	69	35137	20.176	ug/l		97
57) 1,3-Dichloropropane	9.305	76	41306	20.653	ug/l		98
58) 2-Chloroethyl Vinyl ether	8.244	63	93580	98.650	ug/l		99
59) 2-Hexanone	9.427	43	128964	102.032	ug/l		99
60) Dibromochloromethane	9.519	129	27175	20.414	ug/l		99
61) 1,2-Dibromoethane	9.610	107	23582	19.996	ug/l		99
64) Tetrachloroethene	9.275	164	17890	19.362	ug/l		94
65) Chlorobenzene	10.079	112	63695	19.600	ug/l		98
66) 1,1,1,2-Tetrachloroethane	10.165	131	22188	20.205	ug/l		99
67) Ethyl Benzene	10.195	91	112127	19.765	ug/l		98
68) m/p-Xylenes	10.299	106	82876	40.272	ug/l		97
69) o-Xylene	10.640	106	40415	20.304	ug/l		99
70) Styrene	10.653	104	69469	20.388	ug/l		100
71) Bromoform	10.799	173	16593	19.817	ug/l	#	97
73) Isopropylbenzene	10.963	105	110221	20.092	ug/l		100
74) N-amyl acetate	10.842	43	46707	19.334	ug/l		99
75) 1,1,2,2-Tetrachloroethane	11.213	83	36116	20.568	ug/l		99
76) 1,2,3-Trichloropropane	11.238	75	30039m	19.991	ug/l		
77) Bromobenzene	11.195	156	25827	20.283	ug/l		96
78) n-propylbenzene	11.305	91	133297	20.075	ug/l		100
79) 2-Chlorotoluene	11.360	91	80101	20.005	ug/l		98
80) 1,3,5-Trimethylbenzene	11.451	105	92024	20.131	ug/l		99
81) trans-1,4-Dichloro-2-b...	11.018	75	9832	19.187	ug/l		99
82) 4-Chlorotoluene	11.451	91	93283	19.655	ug/l		98
83) tert-Butylbenzene	11.713	119	93897	20.178	ug/l		98
84) 1,2,4-Trimethylbenzene	11.750	105	93782	20.279	ug/l		98
85) sec-Butylbenzene	11.890	105	119909	20.054	ug/l		99
86) p-Isopropyltoluene	12.006	119	99196	19.900	ug/l		99
87) 1,3-Dichlorobenzene	11.969	146	47842	19.349	ug/l		99
88) 1,4-Dichlorobenzene	12.043	146	48453	18.912	ug/l		99
89) n-Butylbenzene	12.329	91	94297	19.263	ug/l		99
90) Hexachloroethane	12.536	117	16809	18.972	ug/l		97
91) 1,2-Dichlorobenzene	12.335	146	47259	19.801	ug/l		99
92) 1,2-Dibromo-3-Chloropr...	12.939	75	7586	19.293	ug/l		98
93) 1,2,4-Trichlorobenzene	13.585	180	30280	18.598	ug/l		98
94) Hexachlorobutadiene	13.725	225	14184	18.746	ug/l		97
95) Naphthalene	13.774	128	98466	19.071	ug/l		100
96) 1,2,3-Trichlorobenzene	13.957	180	30099	18.437	ug/l		99

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046519.D
Acq On : 06 Jun 2025 10:18
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 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 06 16:41:10 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

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

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

ICAL Form

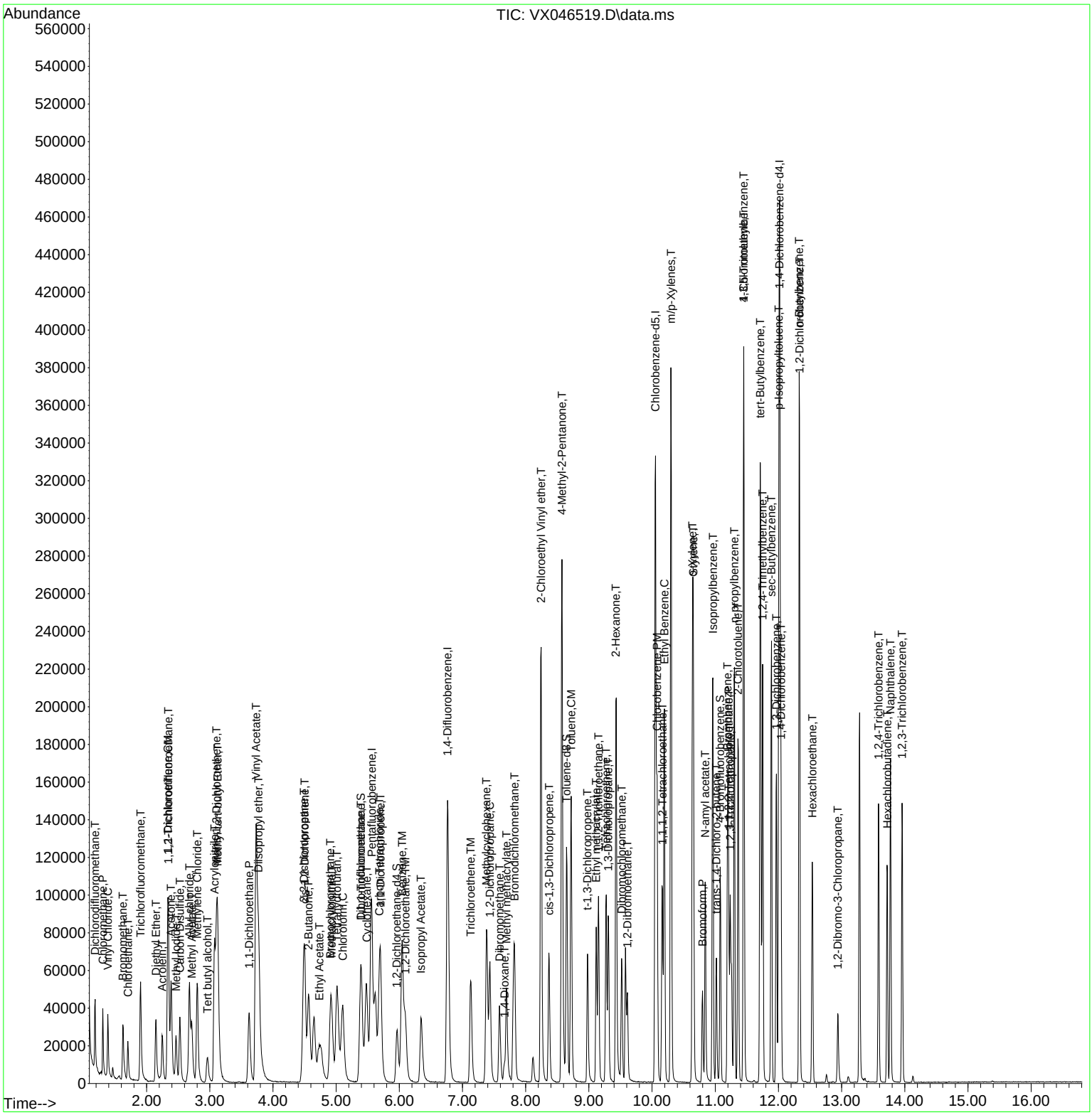
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046519.D
Acq On : 06 Jun 2025 10:18
Operator : JC/MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 06 16:41:10 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC020

Manual Integrations APPROVED

Reviewed By :John Carlone 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046520.D
Acq On : 06 Jun 2025 10:40
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 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 06 16:41:31 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.568	168	90114	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.775	114	156192	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.055	117	136564	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.024	152	68831	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.970	65	78706	49.092	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 98.180%			
35) Dibromofluoromethane	5.403	113	57416	49.986	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 99.980%			
50) Toluene-d8	8.653	98	185557	49.000	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 98.000%			
62) 4-Bromofluorobenzene	11.079	95	76988	49.137	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 98.280%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.185	85	58145	46.477	ug/l	95
3) Chloromethane	1.307	50	51612	45.324	ug/l	96
4) Vinyl Chloride	1.386	62	53673	47.282	ug/l	100
5) Bromomethane	1.624	94	35883	52.070	ug/l	96
6) Chloroethane	1.703	64	33654	45.694	ug/l	96
7) Trichlorofluoromethane	1.904	101	92019	48.994	ug/l	95
8) Diethyl Ether	2.154	74	32101	48.374	ug/l	94
9) 1,1,2-Trichlorotrifluo...	2.349	101	57448	48.549	ug/l	98
10) Methyl Iodide	2.471	142	64524	50.302	ug/l	100
11) Tert butyl alcohol	2.971	59	44039	247.552	ug/l	100
12) 1,1-Dichloroethene	2.337	96	51110	47.772	ug/l	99
13) Acrolein	2.251	56	50652	237.168	ug/l	98
14) Allyl chloride	2.684	41	101836	48.466	ug/l	96
15) Acrylonitrile	3.081	53	170615	253.656	ug/l	99
16) Acetone	2.392	43	153142	243.373	ug/l	100
17) Carbon Disulfide	2.532	76	109794	48.339	ug/l	100
18) Methyl Acetate	2.721	43	101867	53.343	ug/l	100
19) Methyl tert-butyl Ether	3.135	73	190602	50.914	ug/l	99
20) Methylene Chloride	2.806	84	59622	46.355	ug/l	94
21) trans-1,2-Dichloroethene	3.111	96	52474	46.346	ug/l	95
22) Diisopropyl ether	3.782	45	211118	50.963	ug/l #	80
23) Vinyl Acetate	3.739	43	823688	257.541	ug/l	100
24) 1,1-Dichloroethane	3.629	63	113435	49.132	ug/l	97
25) 2-Butanone	4.574	43	226668	253.975	ug/l	98
26) 2,2-Dichloropropane	4.495	77	87040	50.783	ug/l	100
27) cis-1,2-Dichloroethene	4.507	96	66760	47.898	ug/l	99
28) Bromochloromethane	4.916	49	53158	48.273	ug/l	100
29) Tetrahydrofuran	5.019	42	142276	252.427	ug/l	99
30) Chloroform	5.111	83	118738	49.084	ug/l	99
31) Cyclohexane	5.489	56	89669	48.110	ug/l	99
32) 1,1,1-Trichloroethane	5.397	97	102837	49.696	ug/l	98
36) 1,1-Dichloropropene	5.714	75	75745	46.165	ug/l	99
37) Ethyl Acetate	4.733	43	86522	54.042	ug/l	98
38) Carbon Tetrachloride	5.696	117	88063	47.920	ug/l	99
39) Methylcyclohexane	7.391	83	89357	46.141	ug/l	97
40) Benzene	6.056	78	222898	48.257	ug/l	99

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046520.D
Acq On : 06 Jun 2025 10:40
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 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 06 16:41:31 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	4.934	41	50437	50.720	ug/l		96
42) 1,2-Dichloroethane	6.098	62	95292	49.590	ug/l		99
43) Isopropyl Acetate	6.354	43	144198	51.653	ug/l		99
44) Trichloroethene	7.135	130	54791	46.686	ug/l		98
45) 1,2-Dichloropropane	7.440	63	59497	49.904	ug/l		99
46) Dibromomethane	7.586	93	43598	48.609	ug/l		98
47) Bromodichloromethane	7.830	83	94149	51.052	ug/l		98
48) Methyl methacrylate	7.702	41	75100	52.285	ug/l		97
49) 1,4-Dioxane	7.671	88	19805	1031.079	ug/l		98
51) 4-Methyl-2-Pentanone	8.573	43	462924	260.948	ug/l		100
52) Toluene	8.720	92	138129	48.677	ug/l		99
53) t-1,3-Dichloropropene	8.982	75	84697	51.223	ug/l		100
54) cis-1,3-Dichloropropene	8.372	75	92087	50.089	ug/l		91
55) 1,1,2-Trichloroethane	9.153	97	57143	50.162	ug/l		97
56) Ethyl methacrylate	9.116	69	91058	51.943	ug/l		97
57) 1,3-Dichloropropane	9.311	76	99273	49.312	ug/l		98
58) 2-Chloroethyl Vinyl ether	8.244	63	246532	258.184	ug/l		100
59) 2-Hexanone	9.433	43	333019	261.746	ug/l		99
60) Dibromochloromethane	9.525	129	67410	50.307	ug/l		99
61) 1,2-Dibromoethane	9.610	107	57774	48.669	ug/l		98
64) Tetrachloroethene	9.275	164	42288	46.308	ug/l		96
65) Chlorobenzene	10.079	112	153710	47.857	ug/l		99
66) 1,1,1,2-Tetrachloroethane	10.165	131	54990	50.666	ug/l		99
67) Ethyl Benzene	10.195	91	275626	49.157	ug/l		100
68) m/p-Xylenes	10.299	106	201325	98.982	ug/l		99
69) o-Xylene	10.640	106	97769	49.696	ug/l		97
70) Styrene	10.658	104	171642	50.968	ug/l		99
71) Bromoform	10.799	173	42521	51.382	ug/l	#	98
73) Isopropylbenzene	10.963	105	269074	49.729	ug/l		99
74) N-amyl acetate	10.841	43	124077	52.072	ug/l		99
75) 1,1,2,2-Tetrachloroethane	11.213	83	86539	49.967	ug/l		98
76) 1,2,3-Trichloropropane	11.238	75	72182m	48.702	ug/l		
77) Bromobenzene	11.195	156	60653	48.295	ug/l		100
78) n-propylbenzene	11.305	91	323032	49.325	ug/l		100
79) 2-Chlorotoluene	11.366	91	191732	48.549	ug/l		100
80) 1,3,5-Trimethylbenzene	11.451	105	223189	49.500	ug/l		99
81) trans-1,4-Dichloro-2-b...	11.018	75	25456	50.367	ug/l		98
82) 4-Chlorotoluene	11.451	91	226629	48.414	ug/l		99
83) tert-Butylbenzene	11.713	119	226214	49.285	ug/l		98
84) 1,2,4-Trimethylbenzene	11.750	105	224100	49.131	ug/l		100
85) sec-Butylbenzene	11.890	105	287196	48.696	ug/l		99
86) p-Isopropyltoluene	12.006	119	239809	48.775	ug/l		99
87) 1,3-Dichlorobenzene	11.969	146	115889	47.520	ug/l		99
88) 1,4-Dichlorobenzene	12.042	146	115263	45.612	ug/l		99
89) n-Butylbenzene	12.329	91	230830	47.808	ug/l		99
90) Hexachloroethane	12.536	117	41969	48.027	ug/l		98
91) 1,2-Dichlorobenzene	12.335	146	112815	47.923	ug/l		100
92) 1,2-Dibromo-3-Chloropr...	12.939	75	19603	50.545	ug/l		94
93) 1,2,4-Trichlorobenzene	13.585	180	74109	46.149	ug/l		99
94) Hexachlorobutadiene	13.725	225	34506	46.237	ug/l		98
95) Naphthalene	13.774	128	256456	50.359	ug/l		100
96) 1,2,3-Trichlorobenzene	13.957	180	75172	46.684	ug/l		99

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046520.D
Acq On : 06 Jun 2025 10:40
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 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 06 16:41:31 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

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

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

ICAL Form

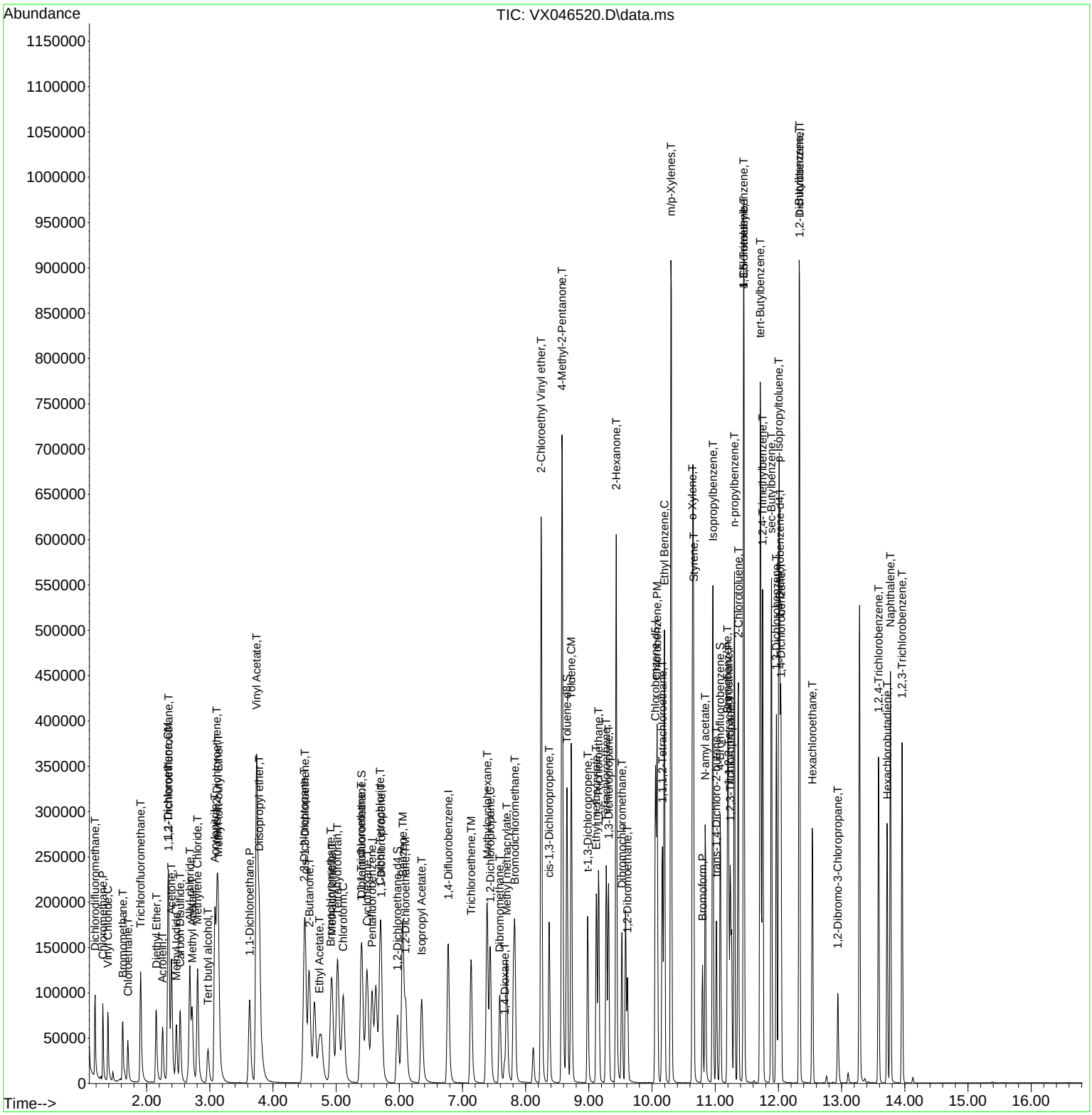
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046520.D
Acq On : 06 Jun 2025 10:40
Operator : JC/MD
Sample : VSTDICCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 06 16:41:31 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046521.D
Acq On : 06 Jun 2025 11:02
Operator : JC/MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 06 16:41:57 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC100

Manual Integrations APPROVED

Reviewed By :John Carlone 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.568	168	86761	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.775	114	151628	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.055	117	131925	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.024	152	65495	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.970	65	143754	93.131	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 186.260%#			
35) Dibromofluoromethane	5.403	113	105237	94.377	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 188.760%#			
50) Toluene-d8	8.653	98	343367	93.402	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 186.800%#			
62) 4-Bromofluorobenzene	11.079	95	141905	93.296	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 186.600%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.185	85	110112	91.417	ug/l	98
3) Chloromethane	1.307	50	98615	89.947	ug/l	99
4) Vinyl Chloride	1.386	62	102609	93.885	ug/l	98
5) Bromomethane	1.617	94	44380	66.888	ug/l	98
6) Chloroethane	1.697	64	61909	87.305	ug/l	99
7) Trichlorofluoromethane	1.904	101	171395	94.783	ug/l	98
8) Diethyl Ether	2.154	74	60580	94.817	ug/l	97
9) 1,1,2-Trichlorotrifluo...	2.349	101	106901	93.832	ug/l	97
10) Methyl Iodide	2.471	142	129059	104.501	ug/l	100
11) Tert butyl alcohol	2.977	59	90368	527.609	ug/l	99
12) 1,1-Dichloroethene	2.337	96	97296	94.457	ug/l	95
13) Acrolein	2.252	56	101278	460.232	ug/l	100
14) Allyl chloride	2.684	41	197384	97.570	ug/l	94
15) Acrylonitrile	3.081	53	330844	510.880	ug/l	100
16) Acetone	2.398	43	295803	483.635	ug/l	99
17) Carbon Disulfide	2.532	76	211673	96.592	ug/l	98
18) Methyl Acetate	2.721	43	200390	108.991	ug/l	99
19) Methyl tert-butyl Ether	3.129	73	369725	102.579	ug/l	99
20) Methylene Chloride	2.806	84	112036	90.472	ug/l	94
21) trans-1,2-Dichloroethene	3.111	96	98333	90.207	ug/l	97
22) Diisopropyl ether	3.782	45	402386	100.889	ug/l #	81
23) Vinyl Acetate	3.739	43	1588475	515.860	ug/l	100
24) 1,1-Dichloroethane	3.629	63	214175	96.351	ug/l	98
25) 2-Butanone	4.574	43	443718	516.388	ug/l	100
26) 2,2-Dichloropropane	4.501	77	168003	101.809	ug/l	99
27) cis-1,2-Dichloroethene	4.507	96	126373	94.172	ug/l	99
28) Bromochloromethane	4.916	49	103145	97.287	ug/l	100
29) Tetrahydrofuran	5.019	42	277926	512.155	ug/l	98
30) Chloroform	5.117	83	223890	96.128	ug/l	96
31) Cyclohexane	5.489	56	168997	94.175	ug/l	96
32) 1,1,1-Trichloroethane	5.397	97	195664	98.210	ug/l	98
36) 1,1-Dichloropropene	5.708	75	139920	87.846	ug/l	99
37) Ethyl Acetate	4.733	43	171559	110.381	ug/l	98
38) Carbon Tetrachloride	5.696	117	168024	94.183	ug/l	100
39) Methylcyclohexane	7.391	83	171321	91.127	ug/l	98
40) Benzene	6.056	78	418566	93.347	ug/l	99

Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046521.D
Acq On : 06 Jun 2025 11:02
Operator : JC/MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 06 16:41:57 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC100

Manual Integrations APPROVED

Reviewed By :John Carlone 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
41) Methacrylonitrile	4.940	41	96904	100.381 ug/l		96
42) 1,2-Dichloroethane	6.098	62	177798	95.311 ug/l		99
43) Isopropyl Acetate	6.354	43	283615	104.651 ug/l		100
44) Trichloroethene	7.135	130	100714	88.399 ug/l		97
45) 1,2-Dichloropropane	7.440	63	112349	97.071 ug/l		97
46) Dibromomethane	7.586	93	82614	94.883 ug/l		98
47) Bromodichloromethane	7.830	83	178755	99.847 ug/l		99
48) Methyl methacrylate	7.702	41	148448	106.461 ug/l		97
49) 1,4-Dioxane	7.671	88	39522	2119.509 ug/l		99
51) 4-Methyl-2-Pentanone	8.580	43	882926	512.682 ug/l		100
52) Toluene	8.720	92	257539	93.489 ug/l		99
53) t-1,3-Dichloropropene	8.982	75	169431	105.552 ug/l		100
54) cis-1,3-Dichloropropene	8.372	75	180299	101.023 ug/l		93
55) 1,1,2-Trichloroethane	9.153	97	107827	97.502 ug/l		99
56) Ethyl methacrylate	9.122	69	180282	105.935 ug/l		97
57) 1,3-Dichloropropane	9.311	76	185642	94.990 ug/l		99
58) 2-Chloroethyl Vinyl ether	8.250	63	472343	509.557 ug/l		100
59) 2-Hexanone	9.433	43	635829	514.792 ug/l		99
60) Dibromochloromethane	9.525	129	128006	98.404 ug/l		100
61) 1,2-Dibromoethane	9.610	107	110603	95.976 ug/l		98
64) Tetrachloroethene	9.275	164	79545	90.169 ug/l		97
65) Chlorobenzene	10.079	112	289084	93.171 ug/l		99
66) 1,1,1,2-Tetrachloroethane	10.165	131	106634	101.705 ug/l		99
67) Ethyl Benzene	10.195	91	520064	96.013 ug/l		99
68) m/p-Xylenes	10.305	106	376918	191.829 ug/l		100
69) o-Xylene	10.640	106	185444	97.576 ug/l		100
70) Styrene	10.659	104	319998	98.362 ug/l		99
71) Bromoform	10.799	173	83574	104.541 ug/l	#	97
73) Isopropylbenzene	10.963	105	501468	97.400 ug/l		100
74) N-amyl acetate	10.841	43	242879	107.123 ug/l		99
75) 1,1,2,2-Tetrachloroethane	11.213	83	163624	99.288 ug/l		100
76) 1,2,3-Trichloropropane	11.238	75	134330m	95.251 ug/l		
77) Bromobenzene	11.201	156	115005	96.236 ug/l		98
78) n-propylbenzene	11.305	91	596385	95.703 ug/l		99
79) 2-Chlorotoluene	11.366	91	356389	94.839 ug/l		99
80) 1,3,5-Trimethylbenzene	11.451	105	412251	96.089 ug/l		99
81) trans-1,4-Dichloro-2-b...	11.018	75	52102	108.338 ug/l		94
82) 4-Chlorotoluene	11.457	91	416150	93.429 ug/l		98
83) tert-Butylbenzene	11.713	119	425478	97.420 ug/l		98
84) 1,2,4-Trimethylbenzene	11.750	105	418383	96.397 ug/l		100
85) sec-Butylbenzene	11.890	105	536486	95.599 ug/l		100
86) p-Isopropyltoluene	12.006	119	445024	95.124 ug/l		99
87) 1,3-Dichlorobenzene	11.969	146	215104	92.695 ug/l		100
88) 1,4-Dichlorobenzene	12.042	146	213122	88.632 ug/l		99
89) n-Butylbenzene	12.329	91	433603	94.378 ug/l		99
90) Hexachloroethane	12.536	117	82886	99.681 ug/l		100
91) 1,2-Dichlorobenzene	12.335	146	208931	93.273 ug/l		99
92) 1,2-Dibromo-3-Chloropr...	12.939	75	40499	109.744 ug/l		98
93) 1,2,4-Trichlorobenzene	13.585	180	143150	93.683 ug/l		99
94) Hexachlorobutadiene	13.725	225	65134	91.723 ug/l		99
95) Naphthalene	13.774	128	499805	103.144 ug/l		99
96) 1,2,3-Trichlorobenzene	13.957	180	145123	94.716 ug/l		99

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046521.D
Acq On : 06 Jun 2025 11:02
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 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 06 16:41:57 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

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

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

ICAL Form

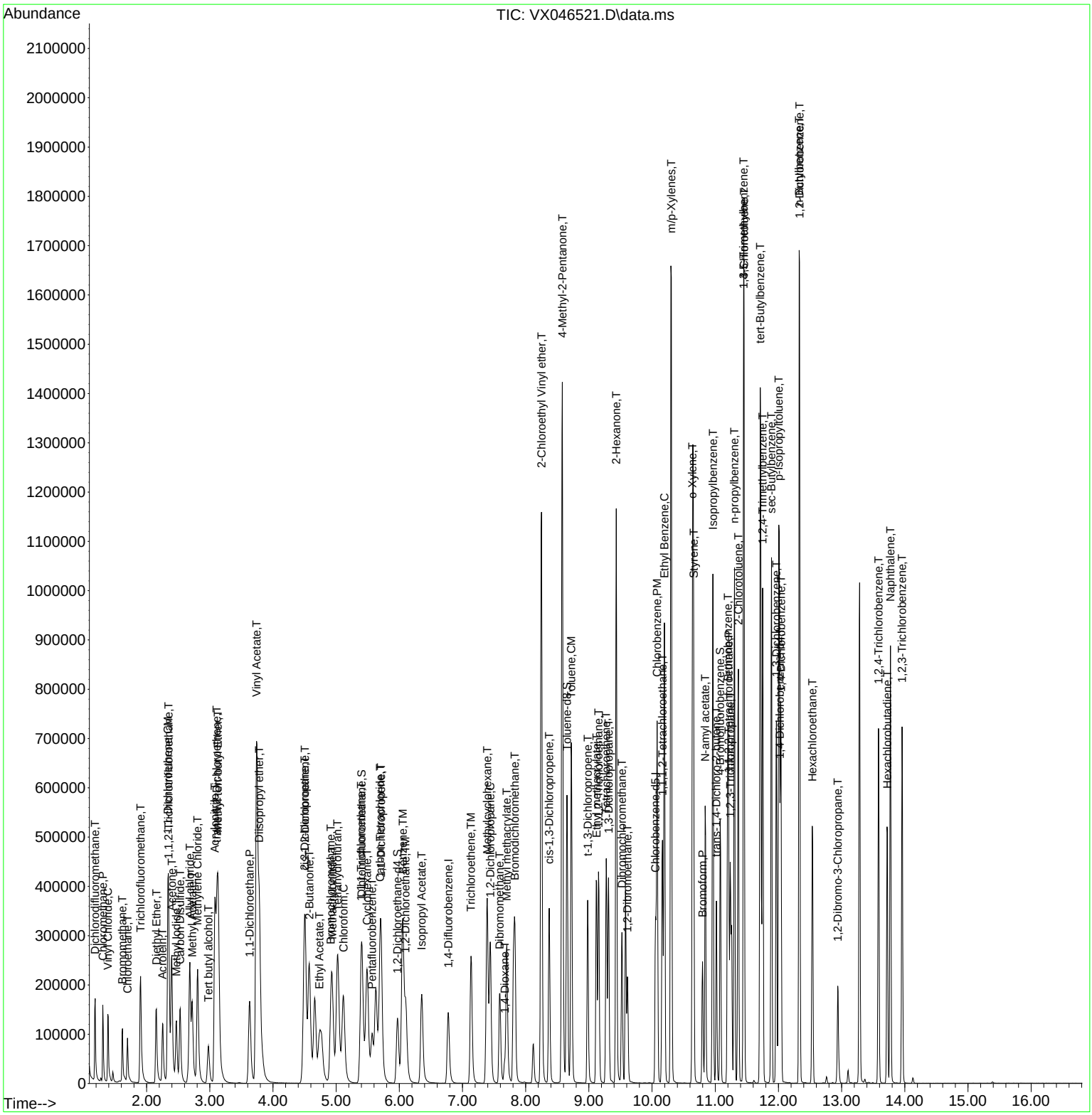
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046521.D
Acq On : 06 Jun 2025 11:02
Operator : JC/MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 06 16:41:57 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC100

Manual Integrations APPROVED

Reviewed By :John Carlone 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046522.D
Acq On : 06 Jun 2025 11:25
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 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 06 16:42:20 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.568	168	78828	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.775	114	138158	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.055	117	121245	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.024	152	58605	50.000	ug/l	# 0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.971	65	212938	151.835	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 303.660%#			
35) Dibromofluoromethane	5.404	113	156990	154.516	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 309.040%#			
50) Toluene-d8	8.653	98	505724	150.978	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 301.960%#			
62) 4-Bromofluorobenzene	11.079	95	207701	149.867	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 299.740%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.179	85	154709	141.368	ug/l	97
3) Chloromethane	1.307	50	145250	145.815	ug/l	98
4) Vinyl Chloride	1.386	62	147097	148.135	ug/l	98
5) Bromomethane	1.612	94	56077	93.023	ug/l	97
6) Chloroethane	1.691	64	88121	136.776	ug/l	98
7) Trichlorofluoromethane	1.898	101	244494	148.815	ug/l	98
8) Diethyl Ether	2.148	74	87079	150.009	ug/l	91
9) 1,1,2-Trichlorotrifluo...	2.343	101	151059	145.936	ug/l	98
10) Methyl Iodide	2.465	142	185045	164.913	ug/l	99
11) Tert butyl alcohol	2.983	59	134861	866.618	ug/l	100
12) 1,1-Dichloroethene	2.331	96	138358	147.838	ug/l	99
13) Acrolein	2.252	56	160165	778.853	ug/l	100
14) Allyl chloride	2.678	41	267359	145.460	ug/l	93
15) Acrylonitrile	3.081	53	476614	810.040	ug/l	99
16) Acetone	2.398	43	425579	763.161	ug/l	98
17) Carbon Disulfide	2.526	76	304498	152.815	ug/l	99
18) Methyl Acetate	2.721	43	292598	175.157	ug/l	98
19) Methyl tert-butyl Ether	3.130	73	533557	162.931	ug/l	99
20) Methylene Chloride	2.806	84	160400	142.563	ug/l	94
21) trans-1,2-Dichloroethene	3.111	96	140409	141.768	ug/l	98
22) Diisopropyl ether	3.782	45	574529	158.547	ug/l #	84
23) Vinyl Acetate	3.739	43	2294131	820.000	ug/l	100
24) 1,1-Dichloroethane	3.629	63	306779	151.900	ug/l	99
25) 2-Butanone	4.574	43	643633	824.425	ug/l	99
26) 2,2-Dichloropropane	4.495	77	241718	161.222	ug/l	100
27) cis-1,2-Dichloroethene	4.507	96	181365	148.753	ug/l	98
28) Bromochloromethane	4.916	49	139177	144.483	ug/l	99
29) Tetrahydrofuran	5.019	42	404249	819.909	ug/l	99
30) Chloroform	5.111	83	319000	150.747	ug/l	96
31) Cyclohexane	5.489	56	240734	147.652	ug/l	98
32) 1,1,1-Trichloroethane	5.404	97	280921	155.193	ug/l	97
36) 1,1-Dichloropropene	5.708	75	201157	138.605	ug/l	99
37) Ethyl Acetate	4.733	43	247037	174.441	ug/l	100
38) Carbon Tetrachloride	5.696	117	240128	147.722	ug/l	100
39) Methylcyclohexane	7.391	83	243263	142.009	ug/l	96
40) Benzene	6.056	78	597704	146.294	ug/l	99

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046522.D
Acq On : 06 Jun 2025 11:25
Operator : JC/MD
Sample : VSTDICC150
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 06 16:42:20 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC150

Manual Integrations APPROVED

Reviewed By :John Carlone 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
41) Methacrylonitrile	4.934	41	142496	162.001 ug/l		97
42) 1,2-Dichloroethane	6.105	62	249510	146.794 ug/l		98
43) Isopropyl Acetate	6.355	43	415327	168.193 ug/l		99
44) Trichloroethene	7.135	130	146894	141.503 ug/l		98
45) 1,2-Dichloropropane	7.440	63	161815	153.441 ug/l		96
46) Dibromomethane	7.586	93	118718	149.642 ug/l		98
47) Bromodichloromethane	7.830	83	256187	157.050 ug/l		99
48) Methyl methacrylate	7.702	41	214089	168.505 ug/l		97
49) 1,4-Dioxane	7.671	88	57504	3384.526 ug/l		97
51) 4-Methyl-2-Pentanone	8.580	43	1262813	804.759 ug/l		99
52) Toluene	8.720	92	368137	146.666 ug/l		99
53) t-1,3-Dichloropropene	8.982	75	249298	170.450 ug/l		99
54) cis-1,3-Dichloropropene	8.373	75	262248	161.266 ug/l		93
55) 1,1,2-Trichloroethane	9.153	97	154220	153.049 ug/l		98
56) Ethyl methacrylate	9.122	69	261827	168.851 ug/l		97
57) 1,3-Dichloropropane	9.311	76	263879	148.186 ug/l		99
58) 2-Chloroethyl Vinyl ether	8.251	63	676448	800.891 ug/l		100
59) 2-Hexanone	9.433	43	908142	806.953 ug/l		98
60) Dibromochloromethane	9.525	129	185185	156.239 ug/l		99
61) 1,2-Dibromoethane	9.610	107	156873	149.399 ug/l		97
64) Tetrachloroethene	9.275	164	114275	140.948 ug/l		96
65) Chlorobenzene	10.080	112	414361	145.311 ug/l		100
66) 1,1,1,2-Tetrachloroethane	10.165	131	152702	158.472 ug/l		99
67) Ethyl Benzene	10.195	91	742300	149.114 ug/l		100
68) m/p-Xylenes	10.305	106	537140	297.452 ug/l		99
69) o-Xylene	10.640	106	263508	150.865 ug/l		99
70) Styrene	10.653	104	457350	152.965 ug/l		99
71) Bromoform	10.799	173	121843	165.836 ug/l	#	97
73) Isopropylbenzene	10.964	105	714594	155.114 ug/l		100
74) N-amyl acetate	10.842	43	354967	174.965 ug/l		99
75) 1,1,2,2-Tetrachloroethane	11.213	83	229605	155.706 ug/l		99
76) 1,2,3-Trichloropropane	11.238	75	191913m	152.081 ug/l		
77) Bromobenzene	11.195	156	163113	152.540 ug/l		99
78) n-propylbenzene	11.305	91	846247	151.764 ug/l		99
79) 2-Chlorotoluene	11.366	91	503830	149.837 ug/l		100
80) 1,3,5-Trimethylbenzene	11.451	105	582683	151.781 ug/l		99
81) trans-1,4-Dichloro-2-b...	11.018	75	77638	180.416 ug/l		91
82) 4-Chlorotoluene	11.451	91	585232	146.836 ug/l		98
83) tert-Butylbenzene	11.713	119	612111	156.630 ug/l		96
84) 1,2,4-Trimethylbenzene	11.750	105	590035	151.929 ug/l		100
85) sec-Butylbenzene	11.890	105	761909	151.730 ug/l		100
86) p-Isopropyltoluene	12.006	119	628539	150.146 ug/l		99
87) 1,3-Dichlorobenzene	11.969	146	305990	147.362 ug/l		99
88) 1,4-Dichlorobenzene	12.043	146	308002	143.149 ug/l		99
89) n-Butylbenzene	12.329	91	613010	149.115 ug/l		99
90) Hexachloroethane	12.536	117	120040	161.336 ug/l		100
91) 1,2-Dichlorobenzene	12.335	146	298047	148.701 ug/l		99
92) 1,2-Dibromo-3-Chloropr...	12.939	75	59166	179.177 ug/l		97
93) 1,2,4-Trichlorobenzene	13.585	180	209982	153.577 ug/l		99
94) Hexachlorobutadiene	13.725	225	92311	145.277 ug/l		98
95) Naphthalene	13.774	128	739300	170.506 ug/l		100
96) 1,2,3-Trichlorobenzene	13.957	180	210596	153.606 ug/l		99

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046522.D
Acq On : 06 Jun 2025 11:25
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 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 06 16:42:20 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

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

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

ICAL Form

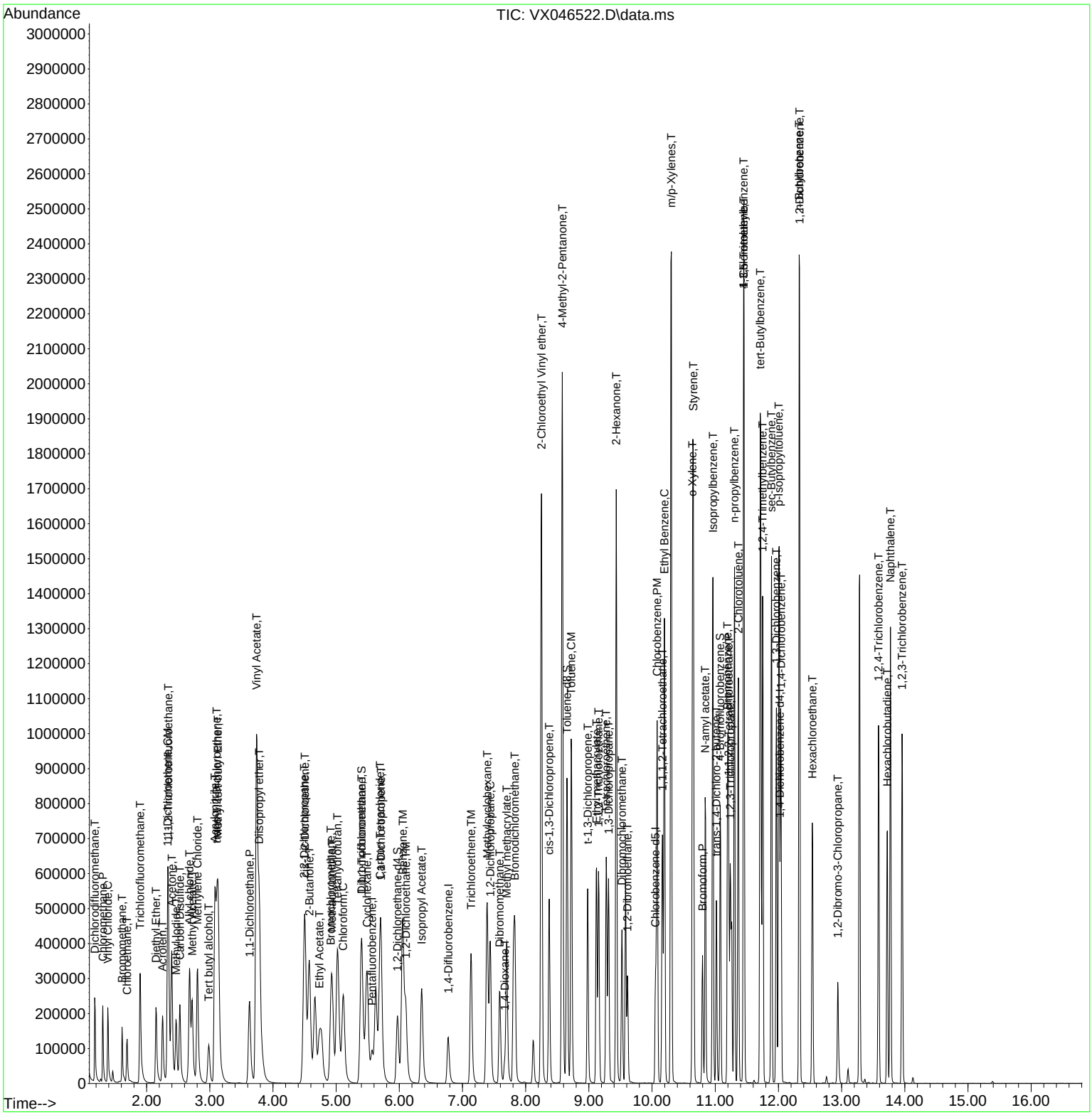
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046522.D
Acq On : 06 Jun 2025 11:25
Operator : JC/MD
Sample : VSTDICC150
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 06 16:42:20 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC150

Manual Integrations APPROVED

Reviewed By :John Carlone 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046524.D
Acq On : 06 Jun 2025 12:57
Operator : JC/MD
Sample : VSTDICC001
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC001

Manual Integrations APPROVED

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 06 16:43:02 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	5.556	168	92377	50.000	ug/l		-0.01
34) 1,4-Difluorobenzene	6.763	114	161412	50.000	ug/l		-0.01
63) Chlorobenzene-d5	10.055	117	144029	50.000	ug/l		0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	72344	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 74 - 125		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 86 - 113		Recovery =	0.000%#			
62) 4-Bromofluorobenzene	0.000	95	0d	0.000	ug/l		
Spiked Amount 50.000	Range 77 - 121		Recovery =	0.000%#			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.184	85	1548	1.207	ug/l		89
3) Chloromethane	1.306	50	1317	1.128	ug/l		95
4) Vinyl Chloride	1.386	62	1255	1.078	ug/l	#	83
6) Chloroethane	1.697	64	940	1.245	ug/l	#	76
7) Trichlorofluoromethane	1.904	101	1882	0.977	ug/l		95
8) Diethyl Ether	2.136	74	762	1.120	ug/l		100
9) 1,1,2-Trichlorotrifluo...	2.349	101	1288	1.062	ug/l		95
12) 1,1-Dichloroethene	2.337	96	1174	1.070	ug/l		78
14) Allyl chloride	2.678	41	2371	1.101	ug/l		94
15) Acrylonitrile	3.080	53	3158	4.580	ug/l		90
16) Acetone	2.392	43	5228	12.546	ug/l		99
17) Carbon Disulfide	2.526	76	4273	2.030	ug/l		100
18) Methyl Acetate	2.721	43	1631	0.833	ug/l	#	90
19) Methyl tert-butyl Ether	3.123	73	3460	0.902	ug/l		92
20) Methylene Chloride	2.806	84	1604	1.217	ug/l		93
21) trans-1,2-Dichloroethene	3.105	96	1451	1.250	ug/l		94
22) Diisopropyl ether	3.763	45	3727	0.878	ug/l	#	1
23) Vinyl Acetate	3.739	43	15142	4.618	ug/l	#	93
24) 1,1-Dichloroethane	3.617	63	2366	1.000	ug/l	#	89
25) 2-Butanone	4.598	43	4468	4.884	ug/l	#	87
26) 2,2-Dichloropropane	4.483	77	1663	0.947	ug/l		86
27) cis-1,2-Dichloroethene	4.507	96	1600	1.120	ug/l		94
28) Bromochloromethane	4.928	49	1200	1.063	ug/l	#	89
29) Tetrahydrofuran	5.037	42	2828	4.895	ug/l		89
30) Chloroform	5.098	83	2492	1.005	ug/l		98
32) 1,1,1-Trichloroethane	5.391	97	2090	0.985	ug/l	#	53
36) 1,1-Dichloropropene	5.702	75	2130	1.256	ug/l	#	70
37) Ethyl Acetate	4.739	43	1146m	0.693	ug/l		
38) Carbon Tetrachloride	5.696	117	2113	1.113	ug/l	#	65
39) Methylcyclohexane	7.391	83	2339	1.169	ug/l	#	72
40) Benzene	6.043	78	4913	1.029	ug/l		99
41) Methacrylonitrile	4.952	41	901	0.877	ug/l	#	43
42) 1,2-Dichloroethane	6.104	62	1955	0.984	ug/l		82
43) Isopropyl Acetate	6.348	43	2493	0.864	ug/l	#	92
44) Trichloroethene	7.141	130	1537	1.267	ug/l		91
45) 1,2-Dichloropropane	7.433	63	1158	0.940	ug/l		100

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046524.D
Acq On : 06 Jun 2025 12:57
Operator : JC/MD
Sample : VSTDICC001
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 06 16:43:02 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC001

Manual Integrations APPROVED

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) Dibromomethane	7.592	93	938	1.012	ug/l		92
47) Bromodichloromethane	7.830	83	1724	0.905	ug/l	#	91
48) Methyl methacrylate	7.714	41	1276	0.860	ug/l		94
49) 1,4-Dioxane	7.677	88	286	14.408	ug/l	#	79
51) 4-Methyl-2-Pentanone	8.573	43	7935	4.328	ug/l		98
52) Toluene	8.720	92	3027	1.032	ug/l		94
53) t-1,3-Dichloropropene	8.988	75	1550	0.907	ug/l		94
54) cis-1,3-Dichloropropene	8.378	75	1831	0.964	ug/l		91
55) 1,1,2-Trichloroethane	9.159	97	1069	0.908	ug/l	#	82
56) Ethyl methacrylate	9.122	69	1471	0.812	ug/l		94
57) 1,3-Dichloropropane	9.317	76	2109	1.014	ug/l		95
58) 2-Chloroethyl Vinyl ether	8.250	63	4480	4.540	ug/l		97
59) 2-Hexanone	9.439	43	5937	4.515	ug/l		91
60) Dibromochloromethane	9.524	129	1307	0.944	ug/l		89
61) 1,2-Dibromoethane	9.616	107	1355	1.105	ug/l		89
64) Tetrachloroethene	9.274	164	1182	1.227	ug/l		90
65) Chlorobenzene	10.079	112	3905	1.153	ug/l		97
66) 1,1,1,2-Tetrachloroethane	10.165	131	1042	0.910	ug/l	#	59
67) Ethyl Benzene	10.195	91	6238	1.055	ug/l	#	89
68) m/p-Xylenes	10.305	106	4454	2.076	ug/l		94
69) o-Xylene	10.640	106	2072	0.999	ug/l		96
70) Styrene	10.658	104	3482	0.980	ug/l		95
71) Bromoform	10.805	173	824	0.944	ug/l	#	95
73) Isopropylbenzene	10.963	105	5637	0.991	ug/l		99
74) N-amyl acetate	10.847	43	2060	0.823	ug/l		95
75) 1,1,2,2-Tetrachloroethane	11.213	83	1661	0.912	ug/l		86
76) 1,2,3-Trichloropropane	11.244	75	1578m	1.013	ug/l		
77) Bromobenzene	11.207	156	1386	1.050	ug/l		94
78) n-propylbenzene	11.305	91	7308	1.062	ug/l		92
79) 2-Chlorotoluene	11.366	91	4466	1.076	ug/l		98
80) 1,3,5-Trimethylbenzene	11.451	105	4806	1.014	ug/l		96
82) 4-Chlorotoluene	11.457	91	5603	1.139	ug/l		98
83) tert-Butylbenzene	11.713	119	4751	0.985	ug/l		97
84) 1,2,4-Trimethylbenzene	11.756	105	4928	1.028	ug/l		99
85) sec-Butylbenzene	11.890	105	6450	1.041	ug/l		99
86) p-Isopropyltoluene	12.012	119	5657	1.095	ug/l		96
87) 1,3-Dichlorobenzene	11.969	146	3045	1.188	ug/l		96
88) 1,4-Dichlorobenzene	12.036	146	3503m	1.319	ug/l		
89) n-Butylbenzene	12.335	91	6072	1.197	ug/l		97
90) Hexachloroethane	12.536	117	987	1.075	ug/l		88
91) 1,2-Dichlorobenzene	12.335	146	2761	1.116	ug/l		94
92) 1,2-Dibromo-3-Chloropr...	12.945	75	345	0.846	ug/l		84
93) 1,2,4-Trichlorobenzene	13.591	180	2189	1.297	ug/l		92
94) Hexachlorobutadiene	13.725	225	1006	1.283	ug/l		97
95) Naphthalene	13.780	128	5474	1.023	ug/l		99
96) 1,2,3-Trichlorobenzene	13.963	180	2171	1.283	ug/l		96

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

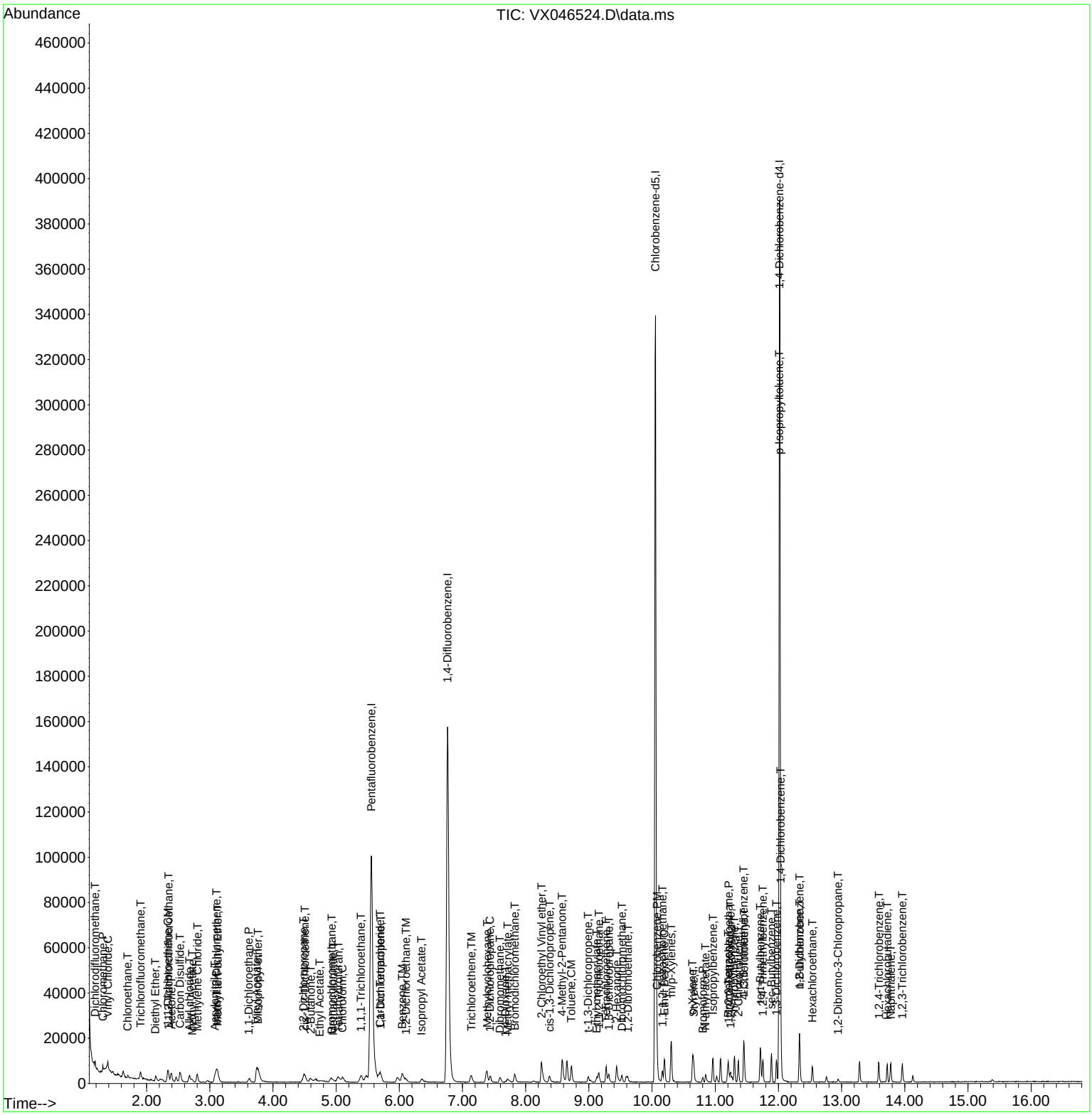
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046524.D
Acq On : 06 Jun 2025 12:57
Operator : JC/MD
Sample : VSTDICC001
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 06 16:43:02 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:38:39 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC001

Manual Integrations APPROVED

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046525.D
Acq On : 06 Jun 2025 14:11
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX060625

Manual Integrations APPROVED

Reviewed By :John Carlone 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 06 16:57:15 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.562	168	87638	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.763	114	151058	50.000	ug/l	-0.01
63) Chlorobenzene-d5	10.055	117	132539	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	65454	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.958	65	78349	50.250	ug/l	-0.01
Spiked Amount 50.000	Range 74 - 125		Recovery = 100.500%			
35) Dibromofluoromethane	5.391	113	56698	51.039	ug/l	-0.01
Spiked Amount 50.000	Range 75 - 124		Recovery = 102.080%			
50) Toluene-d8	8.647	98	183212	50.025	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 100.040%			
62) 4-Bromofluorobenzene	11.079	95	75584	49.880	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 99.760%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.179	85	59758	49.116	ug/l	98
3) Chloromethane	1.307	50	53337	48.162	ug/l	98
4) Vinyl Chloride	1.386	62	54649	49.502	ug/l	99
5) Bromomethane	1.618	94	34113	50.900	ug/l	93
6) Chloroethane	1.697	64	33633	46.955	ug/l	93
7) Trichlorofluoromethane	1.898	101	90940	49.788	ug/l	100
8) Diethyl Ether	2.142	74	32152	49.819	ug/l	96
9) 1,1,2-Trichlorotrifluo...	2.343	101	57034	49.561	ug/l	97
10) Methyl Iodide	2.465	142	67786	54.338	ug/l	100
11) Tert butyl alcohol	2.965	59	47374	273.823	ug/l	99
12) 1,1-Dichloroethene	2.331	96	51107	49.119	ug/l	99
13) Acrolein	2.246	56	51802	247.857	ug/l	98
14) Allyl chloride	2.678	41	105373	51.566	ug/l	94
15) Acrylonitrile	3.069	53	174229	266.347	ug/l	98
16) Acetone	2.386	43	157823	257.624	ug/l	99
17) Carbon Disulfide	2.526	76	110616	50.069	ug/l	98
18) Methyl Acetate	2.715	43	106595	57.396	ug/l	99
19) Methyl tert-butyl Ether	3.123	73	195706	53.754	ug/l	98
20) Methylene Chloride	2.800	84	60058	48.013	ug/l	96
21) trans-1,2-Dichloroethene	3.099	96	52668	47.832	ug/l	96
22) Diisopropyl ether	3.770	45	212853	52.834	ug/l #	80
23) Vinyl Acetate	3.727	43	827531	266.053	ug/l	99
24) 1,1-Dichloroethane	3.617	63	115021	51.227	ug/l	98
25) 2-Butanone	4.562	43	232201	267.525	ug/l	99
26) 2,2-Dichloropropane	4.483	77	89180	53.502	ug/l	99
27) cis-1,2-Dichloroethene	4.501	96	66779	49.265	ug/l	99
28) Bromochloromethane	4.904	49	52893	49.390	ug/l	99
29) Tetrahydrofuran	5.013	42	146302	266.904	ug/l	98
30) Chloroform	5.099	83	119994	51.004	ug/l	95
31) Cyclohexane	5.477	56	88988	49.093	ug/l	99
32) 1,1,1-Trichloroethane	5.391	97	103945	51.651	ug/l	97
36) 1,1-Dichloropropene	5.696	75	75696	47.703	ug/l	99
37) Ethyl Acetate	4.721	43	90139	58.203	ug/l	99
38) Carbon Tetrachloride	5.684	117	87750	49.372	ug/l	96
39) Methylcyclohexane	7.385	83	89168	47.608	ug/l	99
40) Benzene	6.044	78	221890	49.672	ug/l	99

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046525.D
Acq On : 06 Jun 2025 14:11
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX060625

Manual Integrations APPROVED

Reviewed By :John Carlone 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 06 16:57:15 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	4.922	41	54128	56.282	ug/l		97
42) 1,2-Dichloroethane	6.092	62	94588	50.897	ug/l		99
43) Isopropyl Acetate	6.342	43	146579	54.290	ug/l		100
44) Trichloroethene	7.129	130	54213	47.764	ug/l		96
45) 1,2-Dichloropropane	7.434	63	59286	51.417	ug/l		99
46) Dibromomethane	7.586	93	44071	50.807	ug/l		99
47) Bromodichloromethane	7.824	83	94362	52.906	ug/l		97
48) Methyl methacrylate	7.696	41	76134	54.806	ug/l		97
49) 1,4-Dioxane	7.659	88	20118	1082.971	ug/l		94
51) 4-Methyl-2-Pentanone	8.574	43	466259	271.760	ug/l		100
52) Toluene	8.714	92	136448	49.719	ug/l		99
53) t-1,3-Dichloropropene	8.976	75	85596	53.526	ug/l		99
54) cis-1,3-Dichloropropene	8.366	75	92273	51.896	ug/l		91
55) 1,1,2-Trichloroethane	9.153	97	57283	51.993	ug/l		98
56) Ethyl methacrylate	9.116	69	92299	54.440	ug/l		97
57) 1,3-Dichloropropane	9.305	76	98748	50.718	ug/l		99
58) 2-Chloroethyl Vinyl ether	8.245	63	240616	260.553	ug/l		100
59) 2-Hexanone	9.427	43	337353	274.165	ug/l		99
60) Dibromochloromethane	9.519	129	68814	53.100	ug/l		97
61) 1,2-Dibromoethane	9.610	107	57046	49.689	ug/l		96
64) Tetrachloroethene	9.275	164	42310	47.739	ug/l		97
65) Chlorobenzene	10.080	112	154357	49.518	ug/l		100
66) 1,1,1,2-Tetrachloroethane	10.159	131	55536	52.723	ug/l		100
67) Ethyl Benzene	10.195	91	273659	50.288	ug/l		98
68) m/p-Xylenes	10.299	106	199258	100.941	ug/l		99
69) o-Xylene	10.640	106	97151	50.882	ug/l		99
70) Styrene	10.653	104	169628	51.899	ug/l		100
71) Bromoform	10.799	173	42728	53.200	ug/l	#	99
73) Isopropylbenzene	10.957	105	266347	51.765	ug/l		100
74) N-amyl acetate	10.842	43	125656	55.456	ug/l		99
75) 1,1,2,2-Tetrachloroethane	11.213	83	86308	52.405	ug/l		99
76) 1,2,3-Trichloropropane	11.238	75	73842m	53.262	ug/l		
77) Bromobenzene	11.195	156	60607	50.748	ug/l		98
78) n-propylbenzene	11.305	91	316743	50.860	ug/l		100
79) 2-Chlorotoluene	11.360	91	191582	51.014	ug/l		99
80) 1,3,5-Trimethylbenzene	11.451	105	221291	51.612	ug/l		99
81) trans-1,4-Dichloro-2-b...	11.018	75	26534	55.208	ug/l		97
82) 4-Chlorotoluene	11.451	91	224207	50.368	ug/l		99
83) tert-Butylbenzene	11.713	119	226613	51.919	ug/l		98
84) 1,2,4-Trimethylbenzene	11.750	105	223226	51.464	ug/l		99
85) sec-Butylbenzene	11.890	105	284027	50.644	ug/l		100
86) p-Isopropyltoluene	12.006	119	237583	50.815	ug/l		99
87) 1,3-Dichlorobenzene	11.969	146	114034	49.171	ug/l		99
88) 1,4-Dichlorobenzene	12.037	146	114838	47.788	ug/l		99
89) n-Butylbenzene	12.329	91	232333	50.601	ug/l		100
90) Hexachloroethane	12.536	117	42498	51.141	ug/l		99
91) 1,2-Dichlorobenzene	12.335	146	111587	49.847	ug/l		99
92) 1,2-Dibromo-3-Chloropr...	12.939	75	20611	55.886	ug/l		98
93) 1,2,4-Trichlorobenzene	13.585	180	75169	49.224	ug/l		99
94) Hexachlorobutadiene	13.725	225	33512	47.222	ug/l		98
95) Naphthalene	13.774	128	257845	53.245	ug/l		100
96) 1,2,3-Trichlorobenzene	13.957	180	75157	49.082	ug/l		99

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046525.D
Acq On : 06 Jun 2025 14:11
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX060625

Manual Integrations APPROVED

Reviewed By :John Carlone 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 06 16:57:15 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 2025
Response via : Initial Calibration

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

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

ICAL Form

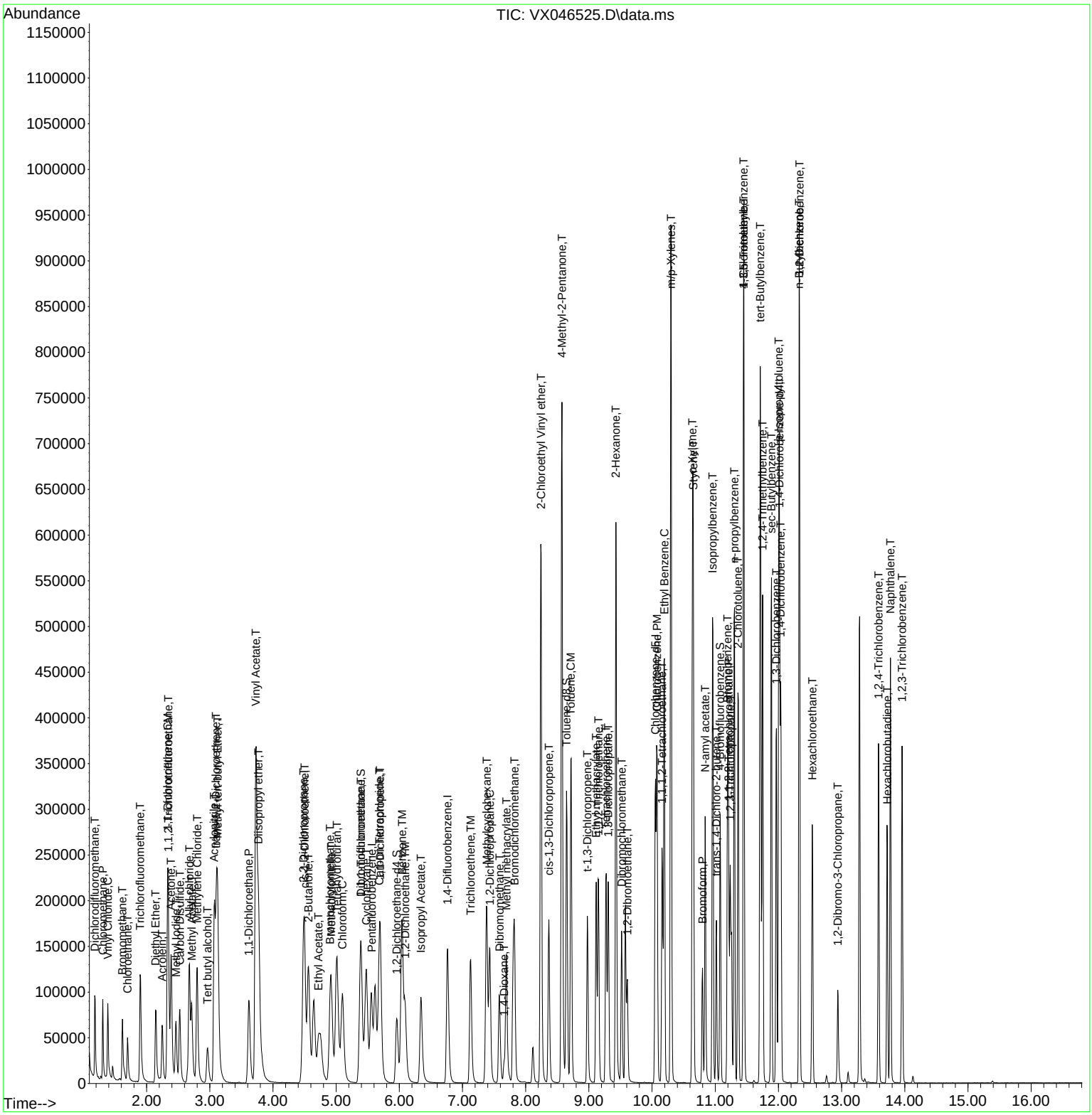
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046525.D
Acq On : 06 Jun 2025 14:11
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jun 06 16:57:15 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
ICVVX060625

Manual Integrations APPROVED

Reviewed By :John Carlone 06/06/2025
Supervised By :Mahesh Dadoda 06/09/2025



Evaluate Continuing Calibration Report

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046525.D
Acq On : 06 Jun 2025 14:11
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX060625

Quant Time: Jun 06 16:57:15 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 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	97	0.00
2	T	Dichlorodifluoromethane	0.694	0.682	1.7	103	0.00
3	P	Chloromethane	0.632	0.609	3.6	103	0.00
4	C	Vinyl Chloride	0.630	0.624	1.0#	102	0.00
5	T	Bromomethane	0.382	0.389	-1.8	95	0.00
6	T	Chloroethane	0.409	0.384	6.1	100	0.00
7	T	Trichlorofluoromethane	1.042	1.038	0.4	99	0.00
8	T	Diethyl Ether	0.368	0.367	0.3	100	-0.01
9	T	1,1,2-Trichlorotrifluoroeth	0.657	0.651	0.9	99	0.00
10	T	Methyl Iodide	0.712	0.773	-8.6	105	0.00
11	T	Tert butyl alcohol	0.099	0.108	-9.1	108	0.00
12	CM	1,1-Dichloroethene	0.594	0.583	1.9#	100	0.00
13	T	Acrolein	0.103	0.118	-14.6	102	0.00
14	T	Allyl chloride	1.166	1.202	-3.1	103	0.00
15	T	Acrylonitrile	0.373	0.398	-6.7	102	-0.01
16	T	Acetone	0.381	0.360	5.5	103	0.00
17	T	Carbon Disulfide	1.481	1.262	14.8	101	0.00
18	T	Methyl Acetate	1.060	1.216	-14.7	105	0.00
19	T	Methyl tert-butyl Ether	2.077	2.233	-7.5	103	-0.01
20	T	Methylene Chloride	0.714	0.685	4.1	101	0.00
21	T	trans-1,2-Dichloroethene	0.628	0.601	4.3	100	-0.01
22	T	Diisopropyl ether	2.298	2.429	-5.7	101	-0.01
23	T	Vinyl Acetate	1.775	1.889	-6.4	100	-0.01
24	P	1,1-Dichloroethane	1.281	1.312	-2.4	101	-0.01
25	T	2-Butanone	0.495	0.530	-7.1	102	-0.01
26	T	2,2-Dichloropropane	0.951	1.018	-7.0	102	-0.01
27	T	cis-1,2-Dichloroethene	0.773	0.762	1.4	100	0.00
28	T	Bromochloromethane	0.611	0.604	1.1	100	-0.01
29	T	Tetrahydrofuran	0.313	0.334	-6.7	103	0.00
30	C	Chloroform	1.342	1.369	-2.0#	101	-0.01
31	T	Cyclohexane	1.034	1.015	1.8	99	-0.01
32	T	1,1,1-Trichloroethane	1.148	1.186	-3.3	101	0.00
33	S	1,2-Dichloroethane-d4	0.890	0.894	-0.4	100	-0.01
34	I	1,4-Difluorobenzene	1.000	1.000	0.0	97	-0.01
35	S	Dibromofluoromethane	0.368	0.375	-1.9	99	-0.01
36	T	1,1-Dichloropropene	0.525	0.501	4.6	100	-0.02
37	T	Ethyl Acetate	0.513	0.597	-16.4	104	-0.01
38	T	Carbon Tetrachloride	0.588	0.581	1.2	100	-0.01
39	T	Methylcyclohexane	0.620	0.590	4.8	100	0.00
40	TM	Benzene	1.479	1.469	0.7	100	-0.01
41	T	Methacrylonitrile	0.318	0.358	-12.6	107	-0.01
42	TM	1,2-Dichloroethane	0.615	0.626	-1.8	99	0.00
43	T	Isopropyl Acetate	0.894	0.970	-8.5	102	-0.01
44	TM	Trichloroethene	0.376	0.359	4.5	99	0.00
45	C	1,2-Dichloropropane	0.382	0.392	-2.6#	100	0.00
46	T	Dibromomethane	0.287	0.292	-1.7	101	0.00
47	T	Bromodichloromethane	0.590	0.625	-5.9	100	0.00
48	T	Methyl methacrylate	0.460	0.504	-9.6	101	0.00

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046525.D
Acq On : 06 Jun 2025 14:11
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX060625

Quant Time: Jun 06 16:57:15 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 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	0.006	0.007	-16.7	102	-0.01
50	S	Toluene-d8	1.212	1.213	-0.1	99	0.00
51	T	4-Methyl-2-Pentanone	0.568	0.617	-8.6	101	0.00
52	CM	Toluene	0.908	0.903	0.6#	99	0.00
53	T	t-1,3-Dichloropropene	0.529	0.567	-7.2	101	0.00
54	T	cis-1,3-Dichloropropene	0.589	0.611	-3.7	100	0.00
55	T	1,1,2-Trichloroethane	0.365	0.379	-3.8	100	0.00
56	T	Ethyl methacrylate	0.561	0.611	-8.9	101	0.00
57	T	1,3-Dichloropropane	0.644	0.654	-1.6	99	0.00
58	T	2-Chloroethyl Vinyl ether	0.306	0.319	-4.2	98	0.00
59	T	2-Hexanone	0.407	0.447	-9.8	101	0.00
60	T	Dibromochloromethane	0.429	0.456	-6.3	102	0.00
61	T	1,2-Dibromoethane	0.380	0.378	0.5	99	0.00
62	S	4-Bromofluorobenzene	0.502	0.500	0.4	98	0.00
63	I	Chlorobenzene-d5	1.000	1.000	0.0	97	0.00
64	T	Tetrachloroethene	0.334	0.319	4.5	100	0.00
65	PM	Chlorobenzene	1.176	1.165	0.9	100	0.00
66	T	1,1,1,2-Tetrachloroethane	0.397	0.419	-5.5	101	0.00
67	C	Ethyl Benzene	2.053	2.065	-0.6#	99	0.00
68	T	m/p-Xylenes	0.745	0.752	-0.9	99	0.00
69	T	o-Xylene	0.720	0.733	-1.8	99	0.00
70	T	Styrene	1.233	1.280	-3.8	99	0.00
71	P	Bromoform	0.303	0.322	-6.3	100	0.00
72	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	95	0.00
73	T	Isopropylbenzene	3.930	4.069	-3.5	99	0.00
74	T	N-amyl acetate	1.731	1.920	-10.9	101	0.00
75	P	1,1,2,2-Tetrachloroethane	1.258	1.319	-4.8	100	0.00
76	T	1,2,3-Trichloropropane	1.059	1.128	-6.5	102	0.00
77	T	Bromobenzene	0.912	0.926	-1.5	100	0.00
78	T	n-propylbenzene	4.757	4.839	-1.7	98	0.00
79	T	2-Chlorotoluene	2.869	2.927	-2.0	100	0.00
80	T	1,3,5-Trimethylbenzene	3.275	3.381	-3.2	99	0.00
81	T	trans-1,4-Dichloro-2-butene	0.367	0.405	-10.4	104	0.00
82	T	4-Chlorotoluene	3.400	3.425	-0.7	99	0.00
83	T	tert-Butylbenzene	3.334	3.462	-3.8	100	0.00
84	T	1,2,4-Trimethylbenzene	3.313	3.410	-2.9	100	0.00
85	T	sec-Butylbenzene	4.284	4.339	-1.3	99	0.00
86	T	p-Isopropyltoluene	3.572	3.630	-1.6	99	0.00
87	T	1,3-Dichlorobenzene	1.772	1.742	1.7	98	0.00
88	T	1,4-Dichlorobenzene	1.836	1.754	4.5	100	0.00
89	T	n-Butylbenzene	3.507	3.550	-1.2	101	0.00
90	T	Hexachloroethane	0.635	0.649	-2.2	101	0.00
91	T	1,2-Dichlorobenzene	1.710	1.705	0.3	99	0.00
92	T	1,2-Dibromo-3-Chloropropane	0.282	0.315	-11.7	105	0.00
93	T	1,2,4-Trichlorobenzene	1.167	1.148	1.6	101	0.00
94	T	Hexachlorobutadiene	0.542	0.512	5.5	97	0.00
95	T	Naphthalene	3.699	3.939	-6.5	101	0.00

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046525.D
Acq On : 06 Jun 2025 14:11
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX060625

Quant Time: Jun 06 16:57:15 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 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	1.170	1.148	1.9	100	0.00

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

Evaluate Continuing Calibration Report

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046525.D
Acq On : 06 Jun 2025 14:11
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX060625

Quant Time: Jun 06 16:57:15 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 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	97	0.00
2	T	Dichlorodifluoromethane	50.000	49.116	1.8	103	0.00
3	P	Chloromethane	50.000	48.162	3.7	103	0.00
4	C	Vinyl Chloride	50.000	49.502	1.0#	102	0.00
5	T	Bromomethane	50.000	50.900	-1.8	95	0.00
6	T	Chloroethane	50.000	46.955	6.1	100	0.00
7	T	Trichlorofluoromethane	50.000	49.788	0.4	99	0.00
8	T	Diethyl Ether	50.000	49.819	0.4	100	-0.01
9	T	1,1,2-Trichlorotrifluoroeth	50.000	49.561	0.9	99	0.00
10	T	Methyl Iodide	50.000	54.338	-8.7	105	0.00
11	T	Tert butyl alcohol	250.000	273.823	-9.5	108	0.00
12	CM	1,1-Dichloroethene	50.000	49.119	1.8#	100	0.00
13	T	Acrolein	250.000	247.857	0.9	102	0.00
14	T	Allyl chloride	50.000	51.566	-3.1	103	0.00
15	T	Acrylonitrile	250.000	266.347	-6.5	102	-0.01
16	T	Acetone	250.000	257.624	-3.0	103	0.00
17	T	Carbon Disulfide	50.000	50.069	-0.1	101	0.00
18	T	Methyl Acetate	50.000	57.396	-14.8	105	0.00
19	T	Methyl tert-butyl Ether	50.000	53.754	-7.5	103	-0.01
20	T	Methylene Chloride	50.000	48.013	4.0	101	0.00
21	T	trans-1,2-Dichloroethene	50.000	47.832	4.3	100	-0.01
22	T	Diisopropyl ether	50.000	52.834	-5.7	101	-0.01
23	T	Vinyl Acetate	250.000	266.053	-6.4	100	-0.01
24	P	1,1-Dichloroethane	50.000	51.227	-2.5	101	-0.01
25	T	2-Butanone	250.000	267.525	-7.0	102	-0.01
26	T	2,2-Dichloropropane	50.000	53.502	-7.0	102	-0.01
27	T	cis-1,2-Dichloroethene	50.000	49.265	1.5	100	0.00
28	T	Bromochloromethane	50.000	49.390	1.2	100	-0.01
29	T	Tetrahydrofuran	250.000	266.904	-6.8	103	0.00
30	C	Chloroform	50.000	51.004	-2.0#	101	-0.01
31	T	Cyclohexane	50.000	49.093	1.8	99	-0.01
32	T	1,1,1-Trichloroethane	50.000	51.651	-3.3	101	0.00
33	S	1,2-Dichloroethane-d4	50.000	50.250	-0.5	100	-0.01
34	I	1,4-Difluorobenzene	50.000	50.000	0.0	97	-0.01
35	S	Dibromofluoromethane	50.000	51.039	-2.1	99	-0.01
36	T	1,1-Dichloropropene	50.000	47.703	4.6	100	-0.02
37	T	Ethyl Acetate	50.000	58.203	-16.4	104	-0.01
38	T	Carbon Tetrachloride	50.000	49.372	1.3	100	-0.01
39	T	Methylcyclohexane	50.000	47.608	4.8	100	0.00
40	TM	Benzene	50.000	49.672	0.7	100	-0.01
41	T	Methacrylonitrile	50.000	56.282	-12.6	107	-0.01
42	TM	1,2-Dichloroethane	50.000	50.897	-1.8	99	0.00
43	T	Isopropyl Acetate	50.000	54.290	-8.6	102	-0.01
44	TM	Trichloroethene	50.000	47.764	4.5	99	0.00
45	C	1,2-Dichloropropane	50.000	51.417	-2.8#	100	0.00
46	T	Dibromomethane	50.000	50.807	-1.6	101	0.00
47	T	Bromodichloromethane	50.000	52.906	-5.8	100	0.00
48	T	Methyl methacrylate	50.000	54.806	-9.6	101	0.00

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046525.D
Acq On : 06 Jun 2025 14:11
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX060625

Quant Time: Jun 06 16:57:15 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 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	1082.971	-8.3	102	-0.01
50	S	Toluene-d8	50.000	50.025	-0.0	99	0.00
51	T	4-Methyl-2-Pentanone	250.000	271.760	-8.7	101	0.00
52	CM	Toluene	50.000	49.719	0.6#	99	0.00
53	T	t-1,3-Dichloropropene	50.000	53.526	-7.1	101	0.00
54	T	cis-1,3-Dichloropropene	50.000	51.896	-3.8	100	0.00
55	T	1,1,2-Trichloroethane	50.000	51.993	-4.0	100	0.00
56	T	Ethyl methacrylate	50.000	54.440	-8.9	101	0.00
57	T	1,3-Dichloropropane	50.000	50.718	-1.4	99	0.00
58	T	2-Chloroethyl Vinyl ether	250.000	260.553	-4.2	98	0.00
59	T	2-Hexanone	250.000	274.165	-9.7	101	0.00
60	T	Dibromochloromethane	50.000	53.100	-6.2	102	0.00
61	T	1,2-Dibromoethane	50.000	49.689	0.6	99	0.00
62	S	4-Bromofluorobenzene	50.000	49.880	0.2	98	0.00
63	I	Chlorobenzene-d5	50.000	50.000	0.0	97	0.00
64	T	Tetrachloroethene	50.000	47.739	4.5	100	0.00
65	PM	Chlorobenzene	50.000	49.518	1.0	100	0.00
66	T	1,1,1,2-Tetrachloroethane	50.000	52.723	-5.4	101	0.00
67	C	Ethyl Benzene	50.000	50.288	-0.6#	99	0.00
68	T	m/p-Xylenes	100.000	100.941	-0.9	99	0.00
69	T	o-Xylene	50.000	50.882	-1.8	99	0.00
70	T	Styrene	50.000	51.899	-3.8	99	0.00
71	P	Bromoform	50.000	53.200	-6.4	100	0.00
72	I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	95	0.00
73	T	Isopropylbenzene	50.000	51.765	-3.5	99	0.00
74	T	N-amyl acetate	50.000	55.456	-10.9	101	0.00
75	P	1,1,2,2-Tetrachloroethane	50.000	52.405	-4.8	100	0.00
76	T	1,2,3-Trichloropropane	50.000	53.262	-6.5	102	0.00
77	T	Bromobenzene	50.000	50.748	-1.5	100	0.00
78	T	n-propylbenzene	50.000	50.860	-1.7	98	0.00
79	T	2-Chlorotoluene	50.000	51.014	-2.0	100	0.00
80	T	1,3,5-Trimethylbenzene	50.000	51.612	-3.2	99	0.00
81	T	trans-1,4-Dichloro-2-butene	50.000	55.208	-10.4	104	0.00
82	T	4-Chlorotoluene	50.000	50.368	-0.7	99	0.00
83	T	tert-Butylbenzene	50.000	51.919	-3.8	100	0.00
84	T	1,2,4-Trimethylbenzene	50.000	51.464	-2.9	100	0.00
85	T	sec-Butylbenzene	50.000	50.644	-1.3	99	0.00
86	T	p-Isopropyltoluene	50.000	50.815	-1.6	99	0.00
87	T	1,3-Dichlorobenzene	50.000	49.171	1.7	98	0.00
88	T	1,4-Dichlorobenzene	50.000	47.788	4.4	100	0.00
89	T	n-Butylbenzene	50.000	50.601	-1.2	101	0.00
90	T	Hexachloroethane	50.000	51.141	-2.3	101	0.00
91	T	1,2-Dichlorobenzene	50.000	49.847	0.3	99	0.00
92	T	1,2-Dibromo-3-Chloropropane	50.000	55.886	-11.8	105	0.00
93	T	1,2,4-Trichlorobenzene	50.000	49.224	1.6	101	0.00
94	T	Hexachlorobutadiene	50.000	47.222	5.6	97	0.00
95	T	Naphthalene	50.000	53.245	-6.5	101	0.00

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046525.D
Acq On : 06 Jun 2025 14:11
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX060625

Quant Time: Jun 06 16:57:15 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 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	49.082	1.8	100	0.00

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

Raw Data: **VX046657.D**

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

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: PARS02

Lab Code: CHEM Case No.: Q2267 SAS No.: Q2267 SDG No.: Q2267

Instrument ID: MSVOA_X Calibration Date/Time: 06/12/2025 10:11

Lab File ID: VX046657.D Init. Calib. Date(s): 06/06/2025 06/06/2025

Heated Purge: (Y/N) N Init. Calib. Time(s): 09:42 12:57

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

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Vinyl Chloride	0.630	0.498		-20.95	20
1,1-Dichloroethene	0.594	0.579		-2.53	20
2-Butanone	0.495	0.394		-20.4	20
Carbon Tetrachloride	0.588	0.606		3.06	20
Chloroform	1.342	1.269		-5.44	20
Benzene	1.479	1.498		1.28	20
1,2-Dichloroethane	0.615	0.566		-7.97	20
Trichloroethene	0.376	0.394		4.79	20
Tetrachloroethene	0.334	0.342		2.39	20
Chlorobenzene	1.176	1.222	0.3	3.91	20
1,2-Dichloroethane-d4	0.890	0.711		-20.11	20
Dibromofluoromethane	0.368	0.434		17.93	20
Toluene-d8	1.212	1.368		12.87	20
4-Bromofluorobenzene	0.502	0.561		11.75	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\VX061225\
Data File : VX046657.D
Acq On : 12 Jun 2025 10:11
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 13 01:40:38 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDCCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 06/13/2025
Supervised By :Mahesh Dadoda 06/13/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.556	168	82603	50.000	ug/l	-0.01
34) 1,4-Difluorobenzene	6.769	114	125406	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.055	117	118101	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	60636	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.958	65	58736	39.968	ug/l	-0.01
Spiked Amount 50.000	Range 74 - 125		Recovery = 79.940%			
35) Dibromofluoromethane	5.391	113	54484	59.078	ug/l	-0.01
Spiked Amount 50.000	Range 75 - 124		Recovery = 118.160%			
50) Toluene-d8	8.647	98	171603	56.439	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 112.880%			
62) 4-Bromofluorobenzene	11.079	95	70345	55.919	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 111.840%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.185	85	47986	41.844	ug/l	98
3) Chloromethane	1.307	50	40603	38.898	ug/l	98
4) Vinyl Chloride	1.386	62	41173	39.569	ug/l	97
5) Bromomethane	1.617	94	23131	36.617	ug/l	99
6) Chloroethane	1.697	64	23838	35.309	ug/l	94
7) Trichlorofluoromethane	1.904	101	74178	43.086	ug/l	98
8) Diethyl Ether	2.142	74	26788	44.038	ug/l	85
9) 1,1,2-Trichlorotrifluo...	2.343	101	52208	48.132	ug/l	92
10) Methyl Iodide	2.465	142	49604	42.187	ug/l	98
11) Tert butyl alcohol	2.965	59	31227	191.495	ug/l	98
12) 1,1-Dichloroethene	2.337	96	47795	48.736	ug/l	84
13) Acrolein	2.245	56	62360	308.244	ug/l	100
14) Allyl chloride	2.678	41	85070	44.168	ug/l	93
15) Acrylonitrile	3.068	53	138381	224.440	ug/l	99
16) Acetone	2.386	43	123430	214.546	ug/l	92
17) Carbon Disulfide	2.526	76	92448	44.419	ug/l	98
18) Methyl Acetate	2.715	43	80898	46.215	ug/l	96
19) Methyl tert-butyl Ether	3.123	73	167393	48.780	ug/l	98
20) Methylene Chloride	2.800	84	55016	46.663	ug/l	93
21) trans-1,2-Dichloroethene	3.105	96	47376	45.648	ug/l	93
22) Diisopropyl ether	3.770	45	179769	47.342	ug/l #	81
23) Vinyl Acetate	3.733	43	676467	230.742	ug/l	97
24) 1,1-Dichloroethane	3.623	63	97719	46.174	ug/l	98
25) 2-Butanone	4.562	43	162555	198.700	ug/l	96
26) 2,2-Dichloropropane	4.489	77	77371	49.247	ug/l	95
27) cis-1,2-Dichloroethene	4.501	96	63074	49.368	ug/l	89
28) Bromochloromethane	4.903	49	43653	43.246	ug/l	89
29) Tetrahydrofuran	5.007	42	104633	202.521	ug/l	96
30) Chloroform	5.105	83	104851	47.284	ug/l	98
31) Cyclohexane	5.483	56	74094	43.368	ug/l	97
32) 1,1,1-Trichloroethane	5.391	97	88809	46.820	ug/l	97
36) 1,1-Dichloropropene	5.696	75	63502	48.205	ug/l	96
37) Ethyl Acetate	4.721	43	64655	50.287	ug/l	99
38) Carbon Tetrachloride	5.684	117	76036	51.532	ug/l	99
39) Methylcyclohexane	7.385	83	74314	47.793	ug/l	95
40) Benzene	6.043	78	187904	50.668	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX061225\
Data File : VX046657.D
Acq On : 12 Jun 2025 10:11
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 13 01:40:38 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDCCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 06/13/2025
Supervised By :Mahesh Dadoda 06/13/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	4.928	41	38623	48.375	ug/l		91
42) 1,2-Dichloroethane	6.092	62	70921	45.968	ug/l		95
43) Isopropyl Acetate	6.342	43	103479	46.166	ug/l		96
44) Trichloroethene	7.129	130	49377	52.401	ug/l		99
45) 1,2-Dichloropropane	7.434	63	49574	51.789	ug/l		98
46) Dibromomethane	7.580	93	31955	44.374	ug/l		89
47) Bromodichloromethane	7.824	83	69476	46.922	ug/l		99
48) Methyl methacrylate	7.696	41	46050	39.931	ug/l		92
49) 1,4-Dioxane	7.659	88	12858	833.741	ug/l		95
51) 4-Methyl-2-Pentanone	8.574	43	335937	235.853	ug/l		96
52) Toluene	8.720	92	126444	55.498	ug/l		99
53) t-1,3-Dichloropropene	8.976	75	74282	55.952	ug/l		99
54) cis-1,3-Dichloropropene	8.366	75	77787	52.698	ug/l	#	87
55) 1,1,2-Trichloroethane	9.153	97	53066	58.018	ug/l		97
56) Ethyl methacrylate	9.116	69	78215	55.570	ug/l		90
57) 1,3-Dichloropropane	9.305	76	86547	53.544	ug/l		99
58) 2-Chloroethyl Vinyl ether	8.238	63	182816	238.457	ug/l		94
59) 2-Hexanone	9.427	43	240805	235.732	ug/l		95
60) Dibromochloromethane	9.518	129	62722	58.299	ug/l		100
61) 1,2-Dibromoethane	9.610	107	52060	54.621	ug/l		97
64) Tetrachloroethene	9.275	164	40422	51.184	ug/l		97
65) Chlorobenzene	10.079	112	144347	51.968	ug/l		98
66) 1,1,1,2-Tetrachloroethane	10.159	131	52019	55.422	ug/l		98
67) Ethyl Benzene	10.195	91	246134	50.760	ug/l		97
68) m/p-Xylenes	10.299	106	184992	105.170	ug/l		95
69) o-Xylene	10.640	106	90327	53.091	ug/l		96
70) Styrene	10.652	104	160199	55.006	ug/l		96
71) Bromoform	10.799	173	40874	57.113	ug/l	#	98
73) Isopropylbenzene	10.957	105	246450	51.704	ug/l		99
74) N-amyl acetate	10.841	43	96513	45.978	ug/l		95
75) 1,1,2,2-Tetrachloroethane	11.207	83	74710	48.967	ug/l		99
76) 1,2,3-Trichloropropane	11.238	75	61557m	47.929	ug/l		
77) Bromobenzene	11.195	156	59447	53.732	ug/l		90
78) n-propylbenzene	11.299	91	286022	49.576	ug/l		97
79) 2-Chlorotoluene	11.360	91	169410	48.694	ug/l		95
80) 1,3,5-Trimethylbenzene	11.451	105	200783	50.550	ug/l		95
81) trans-1,4-Dichloro-2-b...	11.018	75	22982	51.617	ug/l		86
82) 4-Chlorotoluene	11.451	91	200979	48.737	ug/l		95
83) tert-Butylbenzene	11.713	119	212278	52.499	ug/l		93
84) 1,2,4-Trimethylbenzene	11.750	105	202682	50.441	ug/l		96
85) sec-Butylbenzene	11.890	105	266244	51.245	ug/l		99
86) p-Isopropyltoluene	12.006	119	222767	51.432	ug/l		98
87) 1,3-Dichlorobenzene	11.969	146	111567	51.930	ug/l		98
88) 1,4-Dichlorobenzene	12.036	146	111874	50.254	ug/l		99
89) n-Butylbenzene	12.329	91	208960	49.127	ug/l		98
90) Hexachloroethane	12.536	117	39050	50.726	ug/l		93
91) 1,2-Dichlorobenzene	12.335	146	108933	52.528	ug/l		99
92) 1,2-Dibromo-3-Chloropr...	12.939	75	15368	44.981	ug/l		84
93) 1,2,4-Trichlorobenzene	13.585	180	74128	52.400	ug/l		99
94) Hexachlorobutadiene	13.725	225	31934	48.574	ug/l		97
95) Naphthalene	13.774	128	232051	51.726	ug/l		99
96) 1,2,3-Trichlorobenzene	13.957	180	73372	51.724	ug/l		99

Sample Results: **VX046657.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX061225\
Data File : VX046657.D
Acq On : 12 Jun 2025 10:11
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 :John Carlone 06/13/2025
Supervised By :Mahesh Dadoda 06/13/2025

Quant Time: Jun 13 01:40:38 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 2025
Response via : Initial Calibration

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

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

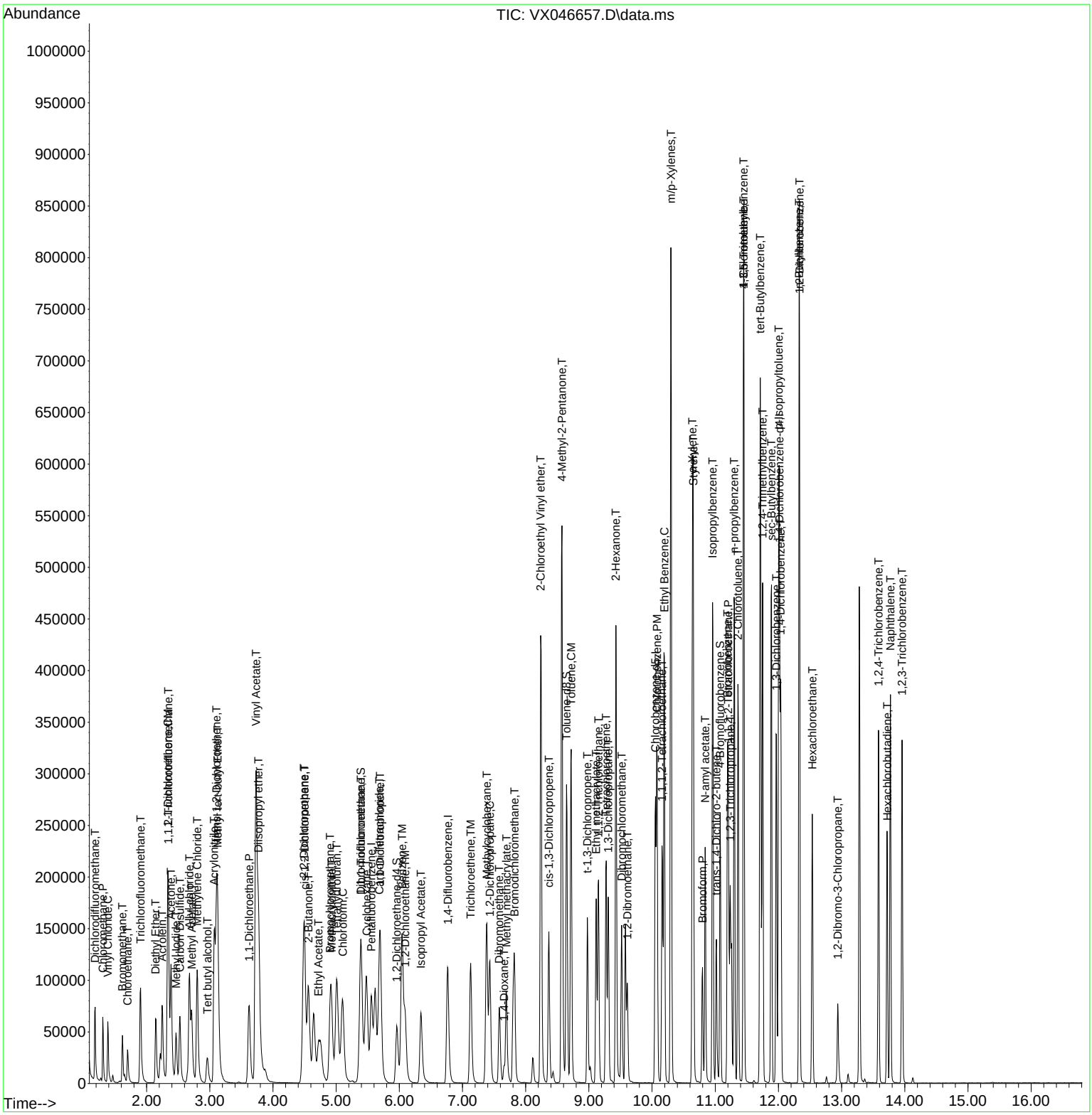
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX061225\
Data File : VX046657.D
Acq On : 12 Jun 2025 10:11
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 13 01:40:38 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDCCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 06/13/2025
Supervised By :Mahesh Dadoda 06/13/2025



Sample Results: **VX046657.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX061225\
Data File : VX046657.D
Acq On : 12 Jun 2025 10:11
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Jun 13 01:40:38 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 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	92	-0.01
2	T	Dichlorodifluoromethane	0.694	0.581	16.3	83	0.00
3	P	Chloromethane	0.632	0.492	22.2	79	0.00
4	C	Vinyl Chloride	0.630	0.498	21.0#	77	0.00
5	T	Bromomethane	0.382	0.280	26.7#	64	0.00
6	T	Chloroethane	0.409	0.289	29.3#	71	0.00
7	T	Trichlorofluoromethane	1.042	0.898	13.8	81	0.00
8	T	Diethyl Ether	0.368	0.324	12.0	83	-0.01
9	T	1,1,2-Trichlorotrifluoroeth	0.657	0.632	3.8	91	0.00
10	T	Methyl Iodide	0.712	0.601	15.6	77	0.00
11	T	Tert butyl alcohol	0.099	0.076	23.2	71	0.00
12	CM	1,1-Dichloroethene	0.594	0.579	2.5#	94	0.00
13	T	Acrolein	0.103	0.151	-46.6#	123	0.00
14	T	Allyl chloride	1.166	1.030	11.7	84	0.00
15	T	Acrylonitrile	0.373	0.335	10.2	81	-0.01
16	T	Acetone	0.381	0.299	21.5	81	0.00
17	T	Carbon Disulfide	1.481	1.119	24.4	84	0.00
18	T	Methyl Acetate	1.060	0.979	7.6	79	0.00
19	T	Methyl tert-butyl Ether	2.077	2.026	2.5	88	-0.01
20	T	Methylene Chloride	0.714	0.666	6.7	92	0.00
21	T	trans-1,2-Dichloroethene	0.628	0.574	8.6	90	0.00
22	T	Diisopropyl ether	2.298	2.176	5.3	85	-0.01
23	T	Vinyl Acetate	1.775	1.638	7.7	82	0.00
24	P	1,1-Dichloroethane	1.281	1.183	7.7	86	0.00
25	T	2-Butanone	0.495	0.394	20.4	72	-0.01
26	T	2,2-Dichloropropane	0.951	0.937	1.5	89	0.00
27	T	cis-1,2-Dichloroethene	0.773	0.764	1.2	94	0.00
28	T	Bromochloromethane	0.611	0.528	13.6	82	-0.01
29	T	Tetrahydrofuran	0.313	0.253	19.2	74	-0.01
30	C	Chloroform	1.342	1.269	5.4#	88	0.00
31	T	Cyclohexane	1.034	0.897	13.2	83	0.00
32	T	1,1,1-Trichloroethane	1.148	1.075	6.4	86	0.00
33	S	1,2-Dichloroethane-d4	0.890	0.711	20.1	75	-0.01
34	I	1,4-Difluorobenzene	1.000	1.000	0.0	80	0.00
35	S	Dibromofluoromethane	0.368	0.434	-17.9	95	-0.01
36	T	1,1-Dichloropropene	0.525	0.506	3.6	84	-0.02
37	T	Ethyl Acetate	0.513	0.516	-0.6	75	-0.01
38	T	Carbon Tetrachloride	0.588	0.606	-3.1	86	-0.01
39	T	Methylcyclohexane	0.620	0.593	4.4	83	0.00
40	TM	Benzene	1.479	1.498	-1.3	84	-0.01
41	T	Methacrylonitrile	0.318	0.308	3.1	77	0.00
42	TM	1,2-Dichloroethane	0.615	0.566	8.0	74	0.00
43	T	Isopropyl Acetate	0.894	0.825	7.7	72	-0.01
44	TM	Trichloroethene	0.376	0.394	-4.8	90	0.00
45	C	1,2-Dichloropropane	0.382	0.395	-3.4#	83	0.00
46	T	Dibromomethane	0.287	0.255	11.1	73	0.00
47	T	Bromodichloromethane	0.590	0.554	6.1	74	0.00
48	T	Methyl methacrylate	0.460	0.367	20.2	61	0.00

Sample Results: **VX046657.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX061225\
Data File : VX046657.D
Acq On : 12 Jun 2025 10:11
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Jun 13 01:40:38 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 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	0.006	0.005	16.7	65	-0.01
50	S	Toluene-d8	1.212	1.368	-12.9	92	0.00
51	T	4-Methyl-2-Pentanone	0.568	0.536	5.6	73	0.00
52	CM	Toluene	0.908	1.008	-11.0#	92	0.00
53	T	t-1,3-Dichloropropene	0.529	0.592	-11.9	88	0.00
54	T	cis-1,3-Dichloropropene	0.589	0.620	-5.3	84	0.00
55	T	1,1,2-Trichloroethane	0.365	0.423	-15.9	93	0.00
56	T	Ethyl methacrylate	0.561	0.624	-11.2	86	0.00
57	T	1,3-Dichloropropane	0.644	0.690	-7.1	87	0.00
58	T	2-Chloroethyl Vinyl ether	0.306	0.292	4.6	74	0.00
59	T	2-Hexanone	0.407	0.384	5.7	72	0.00
60	T	Dibromochloromethane	0.429	0.500	-16.6	93	0.00
61	T	1,2-Dibromoethane	0.380	0.415	-9.2	90	0.00
62	S	4-Bromofluorobenzene	0.502	0.561	-11.8	91	0.00
63	I	Chlorobenzene-d5	1.000	1.000	0.0	86	0.00
64	T	Tetrachloroethene	0.334	0.342	-2.4	96	0.00
65	PM	Chlorobenzene	1.176	1.222	-3.9	94	0.00
66	T	1,1,1,2-Tetrachloroethane	0.397	0.440	-10.8	95	0.00
67	C	Ethyl Benzene	2.053	2.084	-1.5#	89	0.00
68	T	m/p-Xylenes	0.745	0.783	-5.1	92	0.00
69	T	o-Xylene	0.720	0.765	-6.3	92	0.00
70	T	Styrene	1.233	1.356	-10.0	93	0.00
71	P	Bromoform	0.303	0.346	-14.2	96	0.00
72	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	88	0.00
73	T	Isopropylbenzene	3.930	4.064	-3.4	92	0.00
74	T	N-amyl acetate	1.731	1.592	8.0	78	0.00
75	P	1,1,2,2-Tetrachloroethane	1.258	1.232	2.1	86	0.00
76	T	1,2,3-Trichloropropane	1.059	1.015	4.2	85	0.00
77	T	Bromobenzene	0.912	0.980	-7.5	98	0.00
78	T	n-propylbenzene	4.757	4.717	0.8	89	0.00
79	T	2-Chlorotoluene	2.869	2.794	2.6	88	0.00
80	T	1,3,5-Trimethylbenzene	3.275	3.311	-1.1	90	0.00
81	T	trans-1,4-Dichloro-2-butene	0.367	0.379	-3.3	90	0.00
82	T	4-Chlorotoluene	3.400	3.315	2.5	89	0.00
83	T	tert-Butylbenzene	3.334	3.501	-5.0	94	0.00
84	T	1,2,4-Trimethylbenzene	3.313	3.343	-0.9	90	0.00
85	T	sec-Butylbenzene	4.284	4.391	-2.5	93	0.00
86	T	p-Isopropyltoluene	3.572	3.674	-2.9	93	0.00
87	T	1,3-Dichlorobenzene	1.772	1.840	-3.8	96	0.00
88	T	1,4-Dichlorobenzene	1.836	1.845	-0.5	97	0.00
89	T	n-Butylbenzene	3.507	3.446	1.7	91	0.00
90	T	Hexachloroethane	0.635	0.644	-1.4	93	0.00
91	T	1,2-Dichlorobenzene	1.710	1.797	-5.1	97	0.00
92	T	1,2-Dibromo-3-Chloropropane	0.282	0.253	10.3	78	0.00
93	T	1,2,4-Trichlorobenzene	1.167	1.223	-4.8	100	0.00
94	T	Hexachlorobutadiene	0.542	0.527	2.8	93	0.00
95	T	Naphthalene	3.699	3.827	-3.5	90	0.00

Sample Results: **VX046657.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX061225\
Data File : VX046657.D
Acq On : 12 Jun 2025 10:11
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Jun 13 01:40:38 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 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	1.170	1.210	-3.4	98	0.00

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

Sample Results: **VX046657.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX061225\
Data File : VX046657.D
Acq On : 12 Jun 2025 10:11
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Jun 13 01:40:38 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 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	92	-0.01
2	T	Dichlorodifluoromethane	50.000	41.844	16.3	83	0.00
3	P	Chloromethane	50.000	38.898	22.2	79	0.00
4	C	Vinyl Chloride	50.000	39.569	20.9#	77	0.00
5	T	Bromomethane	50.000	36.617	26.8#	64	0.00
6	T	Chloroethane	50.000	35.309	29.4#	71	0.00
7	T	Trichlorofluoromethane	50.000	43.086	13.8	81	0.00
8	T	Diethyl Ether	50.000	44.038	11.9	83	-0.01
9	T	1,1,2-Trichlorotrifluoroeth	50.000	48.132	3.7	91	0.00
10	T	Methyl Iodide	50.000	42.187	15.6	77	0.00
11	T	Tert butyl alcohol	250.000	191.495	23.4	71	0.00
12	CM	1,1-Dichloroethene	50.000	48.736	2.5#	94	0.00
13	T	Acrolein	250.000	308.244	-23.3	123	0.00
14	T	Allyl chloride	50.000	44.168	11.7	84	0.00
15	T	Acrylonitrile	250.000	224.440	10.2	81	-0.01
16	T	Acetone	250.000	214.546	14.2	81	0.00
17	T	Carbon Disulfide	50.000	44.419	11.2	84	0.00
18	T	Methyl Acetate	50.000	46.215	7.6	79	0.00
19	T	Methyl tert-butyl Ether	50.000	48.780	2.4	88	-0.01
20	T	Methylene Chloride	50.000	46.663	6.7	92	0.00
21	T	trans-1,2-Dichloroethene	50.000	45.648	8.7	90	0.00
22	T	Diisopropyl ether	50.000	47.342	5.3	85	-0.01
23	T	Vinyl Acetate	250.000	230.742	7.7	82	0.00
24	P	1,1-Dichloroethane	50.000	46.174	7.7	86	0.00
25	T	2-Butanone	250.000	198.700	20.5	72	-0.01
26	T	2,2-Dichloropropane	50.000	49.247	1.5	89	0.00
27	T	cis-1,2-Dichloroethene	50.000	49.368	1.3	94	0.00
28	T	Bromochloromethane	50.000	43.246	13.5	82	-0.01
29	T	Tetrahydrofuran	250.000	202.521	19.0	74	-0.01
30	C	Chloroform	50.000	47.284	5.4#	88	0.00
31	T	Cyclohexane	50.000	43.368	13.3	83	0.00
32	T	1,1,1-Trichloroethane	50.000	46.820	6.4	86	0.00
33	S	1,2-Dichloroethane-d4	50.000	39.968	20.1	75	-0.01
34	I	1,4-Difluorobenzene	50.000	50.000	0.0	80	0.00
35	S	Dibromofluoromethane	50.000	59.078	-18.2	95	-0.01
36	T	1,1-Dichloropropene	50.000	48.205	3.6	84	-0.02
37	T	Ethyl Acetate	50.000	50.287	-0.6	75	-0.01
38	T	Carbon Tetrachloride	50.000	51.532	-3.1	86	-0.01
39	T	Methylcyclohexane	50.000	47.793	4.4	83	0.00
40	TM	Benzene	50.000	50.668	-1.3	84	-0.01
41	T	Methacrylonitrile	50.000	48.375	3.3	77	0.00
42	TM	1,2-Dichloroethane	50.000	45.968	8.1	74	0.00
43	T	Isopropyl Acetate	50.000	46.166	7.7	72	-0.01
44	TM	Trichloroethene	50.000	52.401	-4.8	90	0.00
45	C	1,2-Dichloropropane	50.000	51.789	-3.6#	83	0.00
46	T	Dibromomethane	50.000	44.374	11.3	73	0.00
47	T	Bromodichloromethane	50.000	46.922	6.2	74	0.00
48	T	Methyl methacrylate	50.000	39.931	20.1	61	0.00

Sample Results: **VX046657.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX061225\
Data File : VX046657.D
Acq On : 12 Jun 2025 10:11
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Jun 13 01:40:38 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 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	833.741	16.6	65	-0.01
50	S	Toluene-d8	50.000	56.439	-12.9	92	0.00
51	T	4-Methyl-2-Pentanone	250.000	235.853	5.7	73	0.00
52	CM	Toluene	50.000	55.498	-11.0#	92	0.00
53	T	t-1,3-Dichloropropene	50.000	55.952	-11.9	88	0.00
54	T	cis-1,3-Dichloropropene	50.000	52.698	-5.4	84	0.00
55	T	1,1,2-Trichloroethane	50.000	58.018	-16.0	93	0.00
56	T	Ethyl methacrylate	50.000	55.570	-11.1	86	0.00
57	T	1,3-Dichloropropane	50.000	53.544	-7.1	87	0.00
58	T	2-Chloroethyl Vinyl ether	250.000	238.457	4.6	74	0.00
59	T	2-Hexanone	250.000	235.732	5.7	72	0.00
60	T	Dibromochloromethane	50.000	58.299	-16.6	93	0.00
61	T	1,2-Dibromoethane	50.000	54.621	-9.2	90	0.00
62	S	4-Bromofluorobenzene	50.000	55.919	-11.8	91	0.00
63	I	Chlorobenzene-d5	50.000	50.000	0.0	86	0.00
64	T	Tetrachloroethene	50.000	51.184	-2.4	96	0.00
65	PM	Chlorobenzene	50.000	51.968	-3.9	94	0.00
66	T	1,1,1,2-Tetrachloroethane	50.000	55.422	-10.8	95	0.00
67	C	Ethyl Benzene	50.000	50.760	-1.5#	89	0.00
68	T	m/p-Xylenes	100.000	105.170	-5.2	92	0.00
69	T	o-Xylene	50.000	53.091	-6.2	92	0.00
70	T	Styrene	50.000	55.006	-10.0	93	0.00
71	P	Bromoform	50.000	57.113	-14.2	96	0.00
72	I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	88	0.00
73	T	Isopropylbenzene	50.000	51.704	-3.4	92	0.00
74	T	N-amyl acetate	50.000	45.978	8.0	78	0.00
75	P	1,1,2,2-Tetrachloroethane	50.000	48.967	2.1	86	0.00
76	T	1,2,3-Trichloropropane	50.000	47.929	4.1	85	0.00
77	T	Bromobenzene	50.000	53.732	-7.5	98	0.00
78	T	n-propylbenzene	50.000	49.576	0.8	89	0.00
79	T	2-Chlorotoluene	50.000	48.694	2.6	88	0.00
80	T	1,3,5-Trimethylbenzene	50.000	50.550	-1.1	90	0.00
81	T	trans-1,4-Dichloro-2-butene	50.000	51.617	-3.2	90	0.00
82	T	4-Chlorotoluene	50.000	48.737	2.5	89	0.00
83	T	tert-Butylbenzene	50.000	52.499	-5.0	94	0.00
84	T	1,2,4-Trimethylbenzene	50.000	50.441	-0.9	90	0.00
85	T	sec-Butylbenzene	50.000	51.245	-2.5	93	0.00
86	T	p-Isopropyltoluene	50.000	51.432	-2.9	93	0.00
87	T	1,3-Dichlorobenzene	50.000	51.930	-3.9	96	0.00
88	T	1,4-Dichlorobenzene	50.000	50.254	-0.5	97	0.00
89	T	n-Butylbenzene	50.000	49.127	1.7	91	0.00
90	T	Hexachloroethane	50.000	50.726	-1.5	93	0.00
91	T	1,2-Dichlorobenzene	50.000	52.528	-5.1	97	0.00
92	T	1,2-Dibromo-3-Chloropropane	50.000	44.981	10.0	78	0.00
93	T	1,2,4-Trichlorobenzene	50.000	52.400	-4.8	100	0.00
94	T	Hexachlorobutadiene	50.000	48.574	2.9	93	0.00
95	T	Naphthalene	50.000	51.726	-3.5	90	0.00

Sample Results: **VX046657.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX061225\
Data File : VX046657.D
Acq On : 12 Jun 2025 10:11
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Jun 13 01:40:38 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 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	51.724	-3.4	98	0.00

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

QC SAMPLE DATA

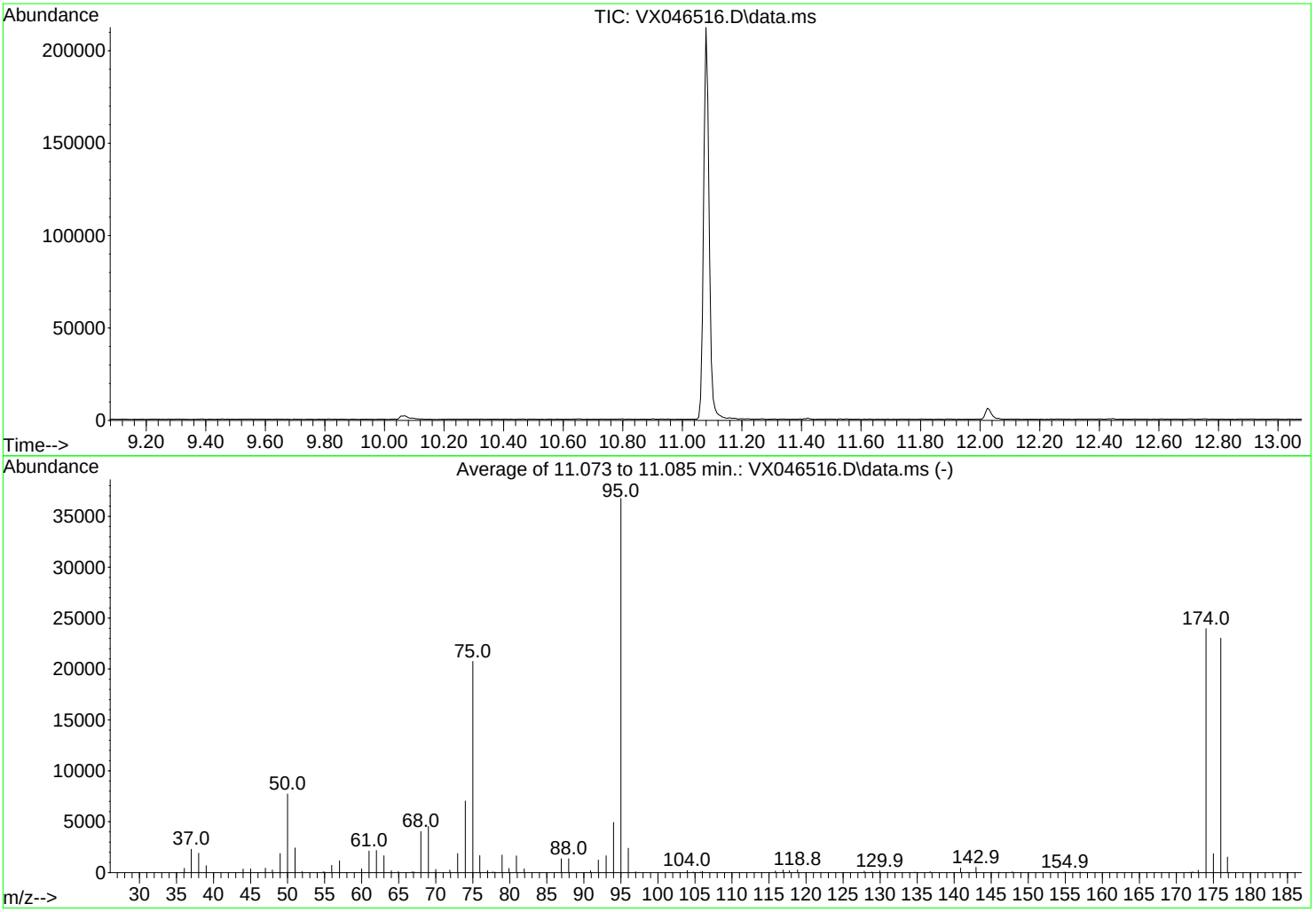
Sample Results: **VX046516.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX060625\
Data File : VX046516.D
Acq On : 06 Jun 2025 08:47
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\82X060625W.M
Title : SW846 8260
Last Update : Fri Jun 06 16:56:12 2025



AutoFind: Scans 1638, 1639, 1640; Background Corrected with Scan 1632

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.0	7727	PASS
75	95	30	60	56.5	20747	PASS
95	95	100	100	100.0	36752	PASS
96	95	5	9	6.5	2397	PASS
173	174	0.00	2	1.0	238	PASS
174	95	50	100	65.2	23963	PASS
175	174	5	9	7.7	1850	PASS
176	174	95	101	96.1	23028	PASS
177	176	5	9	6.6	1530	PASS

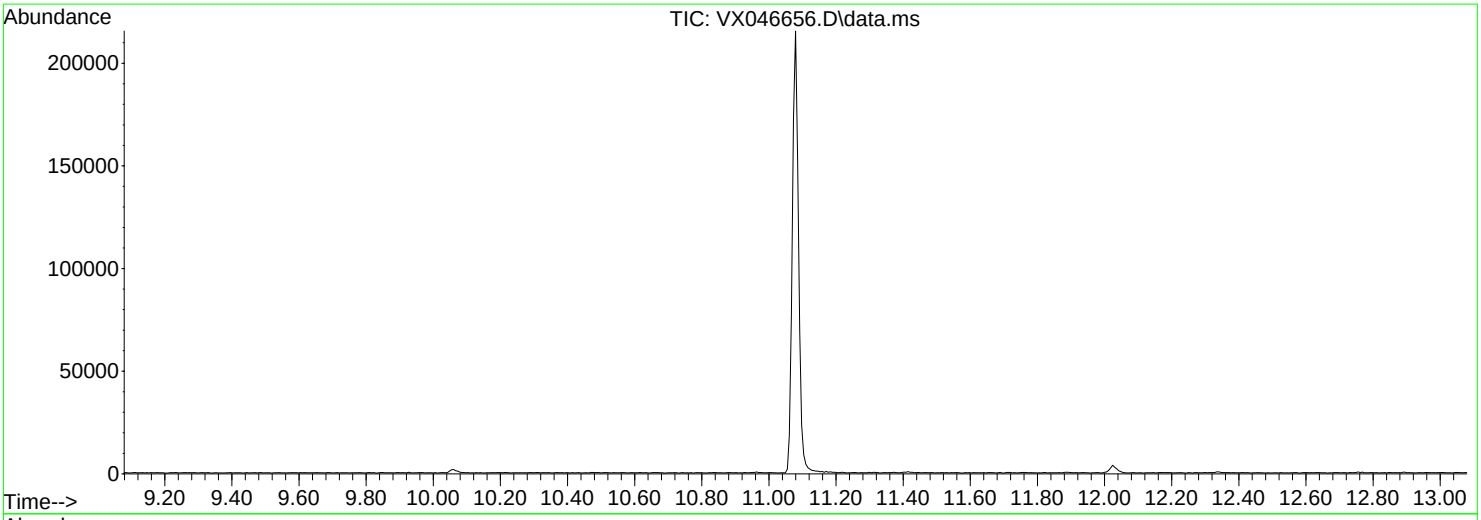
Sample Results: **VX046656.D**

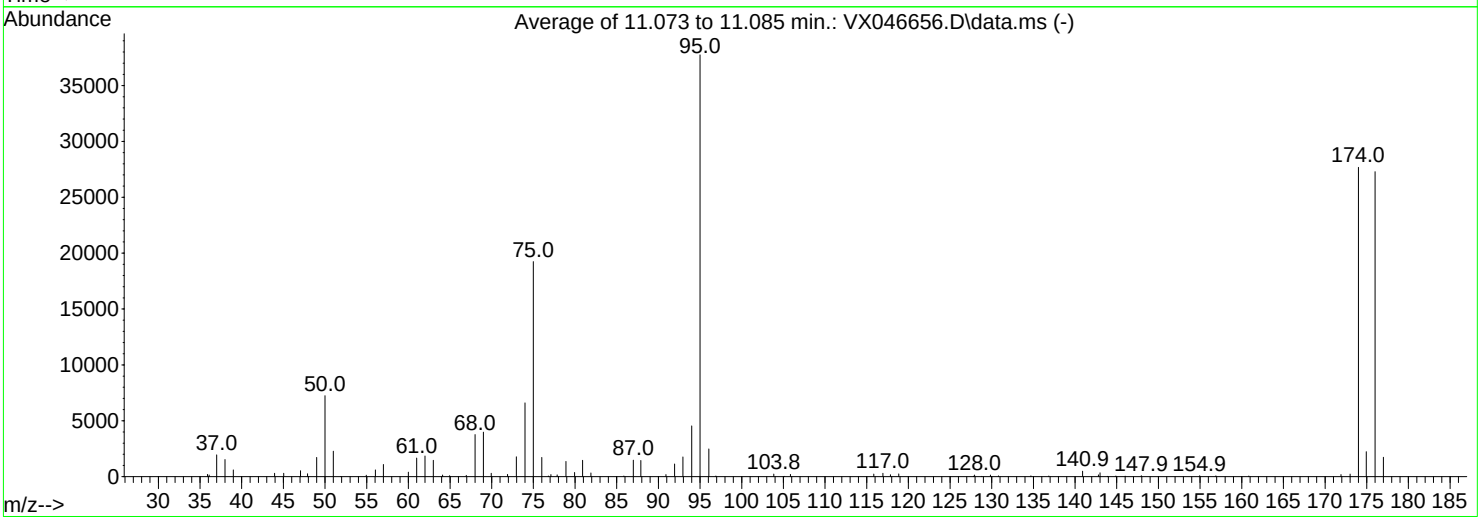
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX061225\
Data File : VX046656.D
Acq On : 12 Jun 2025 09:44
Operator : JC/MD
Sample : BFB
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
BFB

Integration File: RTEINT.P

Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Title : SW846 8260
Last Update : Fri Jun 06 16:56:12 2025





AutoFind: Scans 1638, 1639, 1640; Background Corrected with Scan 1632

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.2	7240	PASS
75	95	30	60	51.0	19246	PASS
95	95	100	100	100.0	37749	PASS
96	95	5	9	6.6	2477	PASS
173	174	0.00	2	0.8	230	PASS
174	95	50	100	73.3	27683	PASS
175	174	5	9	8.1	2237	PASS
176	174	95	101	98.6	27288	PASS
177	176	5	9	6.3	1728	PASS

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

Report of Analysis

Client:	PARSONS Engineering of New York, Inc.	Date Collected:	
Project:	Con Ed Non MGP – Atlantic Ave 453957.600024.05	Date Received:	
Client Sample ID:	VX0612WBL01	SDG No.:	Q2267
Lab Sample ID:	VX0612WBL01	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:	Prep Date	Date Analyzed	Prep Batch ID
VX046659.D	1		06/12/25 13:10	VX061225

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	0.26	U	0.26	1.00	ug/L
75-35-4	1,1-Dichloroethene	0.23	U	0.23	1.00	ug/L
78-93-3	2-Butanone	0.98	U	0.98	5.00	ug/L
56-23-5	Carbon Tetrachloride	0.25	U	0.25	1.00	ug/L
67-66-3	Chloroform	0.25	U	0.25	1.00	ug/L
71-43-2	Benzene	0.15	U	0.15	1.00	ug/L
107-06-2	1,2-Dichloroethane	0.22	U	0.22	1.00	ug/L
79-01-6	Trichloroethene	0.090	U	0.090	1.00	ug/L
127-18-4	Tetrachloroethene	0.23	U	0.23	1.00	ug/L
108-90-7	Chlorobenzene	0.12	U	0.12	1.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	46.2		74 - 125	92%	SPK: 50
1868-53-7	Dibromofluoromethane	48.5		75 - 124	97%	SPK: 50
2037-26-5	Toluene-d8	52.4		86 - 113	105%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.6		77 - 121	109%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	92200	5.568			
540-36-3	1,4-Difluorobenzene	181000	6.775			
3114-55-4	Chlorobenzene-d5	189000	10.055			
3855-82-1	1,4-Dichlorobenzene-d4	95400	12.024			

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\VX061225\
Data File : VX046659.D
Acq On : 12 Jun 2025 13:10
Operator : JC/MD
Sample : VX0612WBL01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX0612WBL01

Quant Time: Jun 13 01:42:06 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 2025
Response via : Initial Calibration

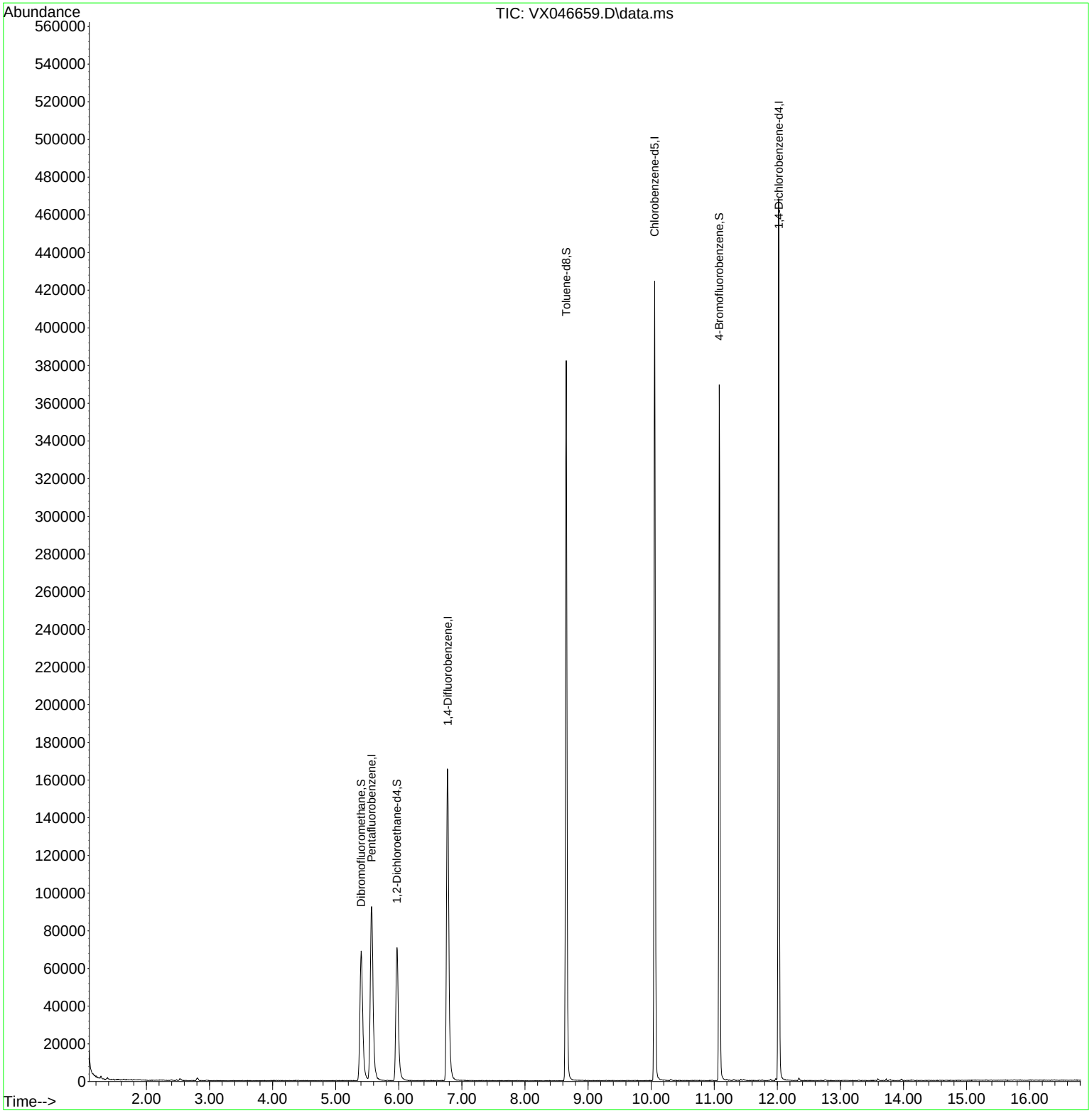
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.568	168	92224	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.775	114	180952	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.055	117	188641	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.024	152	95358	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.971	65	75758	46.173	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 92.340%			
35) Dibromofluoromethane	5.404	113	64522	48.487	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 96.980%			
50) Toluene-d8	8.653	98	229993	52.424	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 104.840%			
62) 4-Bromofluorobenzene	11.079	95	99118	54.605	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 109.200%			
Target Compounds						Qvalue

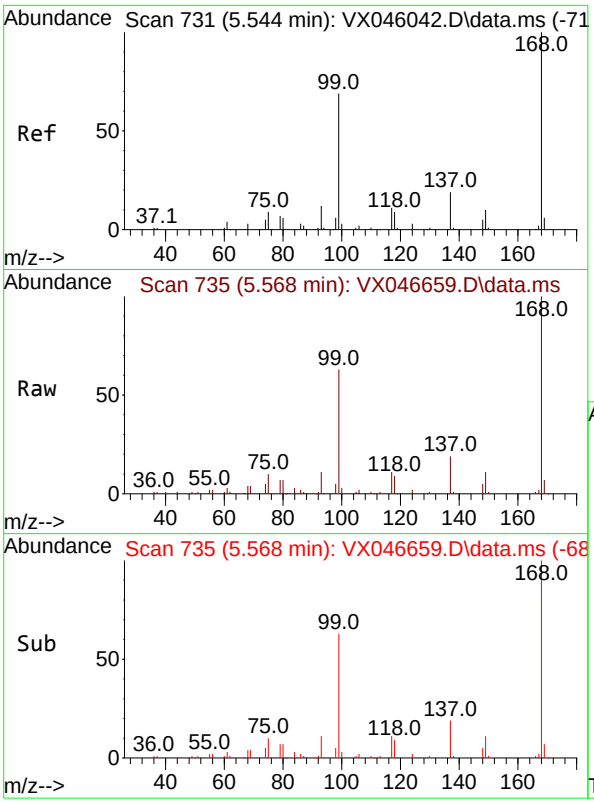
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX061225\
Data File : VX046659.D
Acq On : 12 Jun 2025 13:10
Operator : JC/MD
Sample : VX0612WBL01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX0612WBL01

Quant Time: Jun 13 01:42:06 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 2025
Response via : Initial Calibration



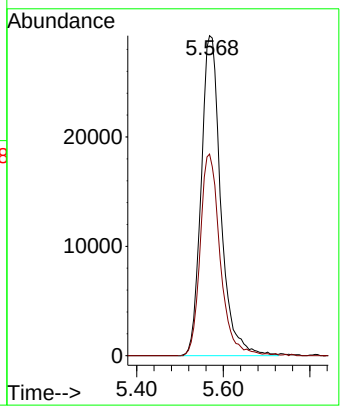


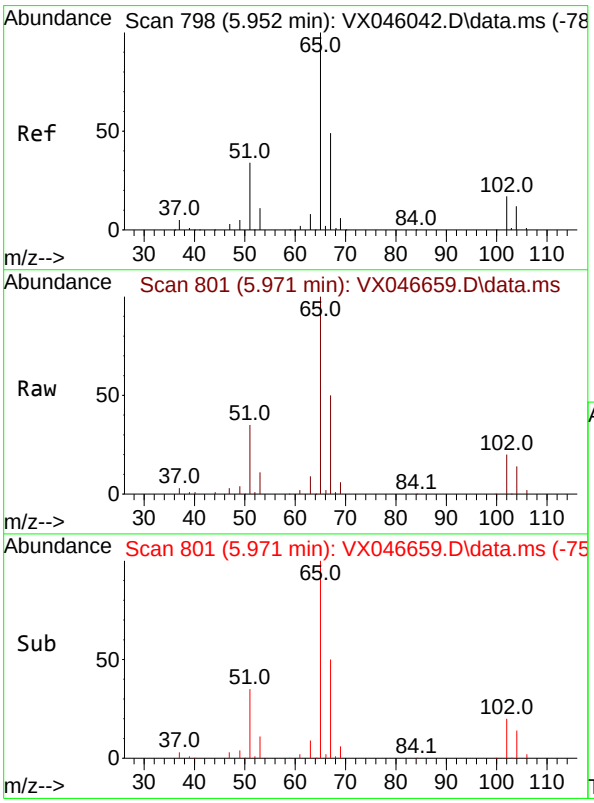
#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 5.568 min Scan# 7
Delta R.T. 0.000 min
Lab File: VX046659.D
Acq: 12 Jun 2025 13:10

Instrument :
MSVOA_X
ClientSampleId :
VX0612WBL01

Tgt Ion:168 Resp: 92224

Ion	Ratio	Lower	Upper
168	100		
99	63.0	54.9	82.3

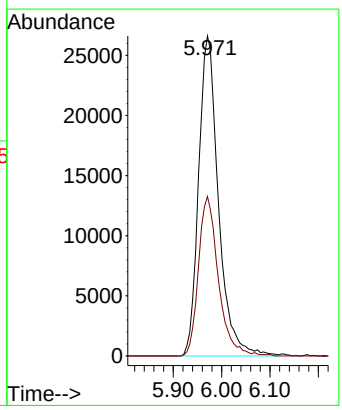


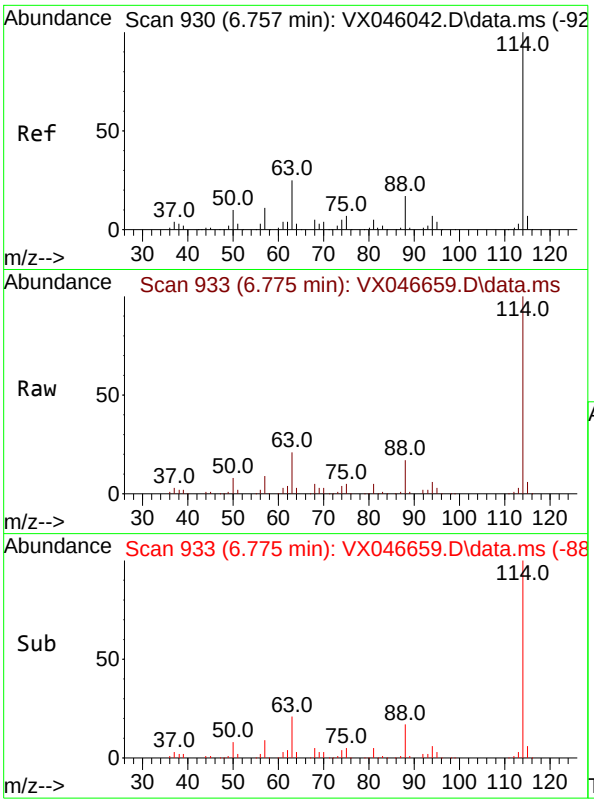


#33
1,2-Dichloroethane-d4
Concen: 46.173 ug/l
RT: 5.971 min Scan# 801
Delta R.T. 0.001 min
Lab File: VX046659.D
Acq: 12 Jun 2025 13:10

Tgt Ion: 65 Resp: 75758

Ion	Ratio	Lower	Upper
65	100		
67	50.0	0.0	99.0



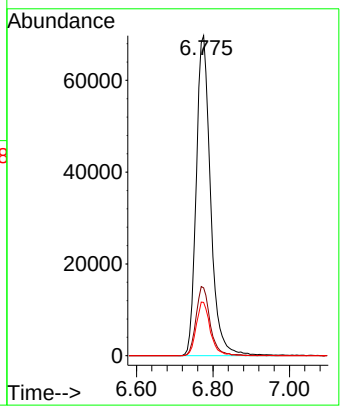


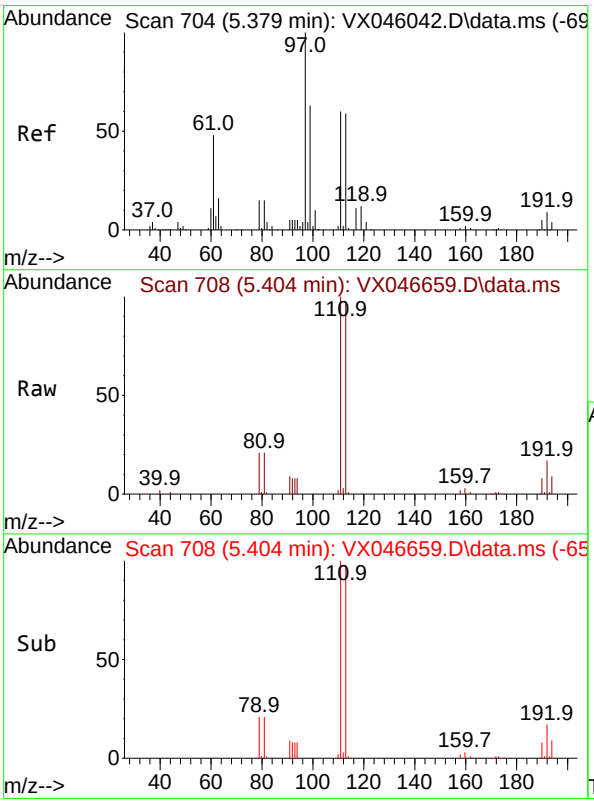
#34
1,4-Difluorobenzene
Concen: 50.000 ug/l
RT: 6.775 min Scan# 9
Delta R.T. 0.000 min
Lab File: VX046659.D
Acq: 12 Jun 2025 13:10

Instrument :
MSVOA_X
ClientSampleId :
VX0612WBL01

Tgt Ion:114 Resp: 180952

Ion	Ratio	Lower	Upper
114	100		
63	21.2	0.0	49.2
88	16.7	0.0	33.6

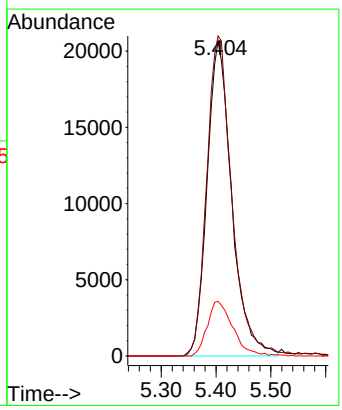


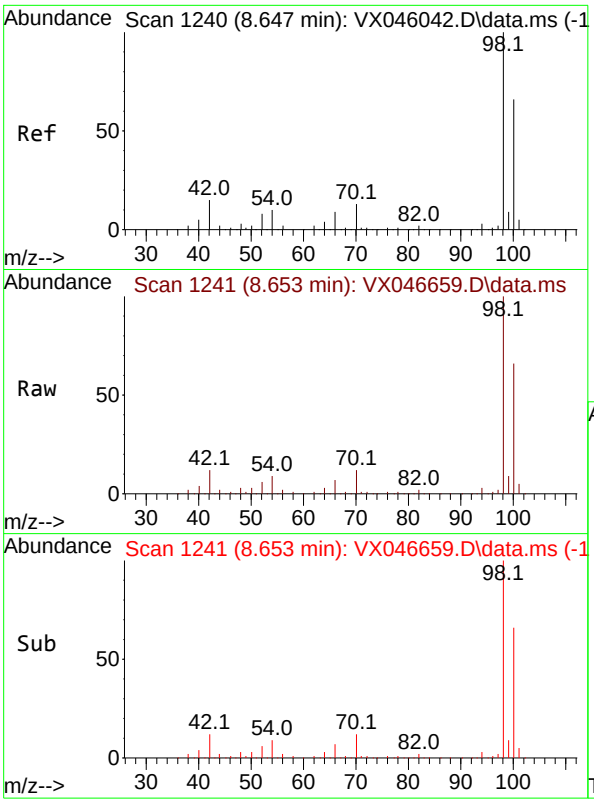


#35
Dibromofluoromethane
Concen: 48.487 ug/l
RT: 5.404 min Scan# 708
Delta R.T. 0.001 min
Lab File: VX046659.D
Acq: 12 Jun 2025 13:10

Tgt Ion:113 Resp: 64522

Ion	Ratio	Lower	Upper
113	100		
111	103.6	83.1	124.7
192	18.1	13.3	19.9



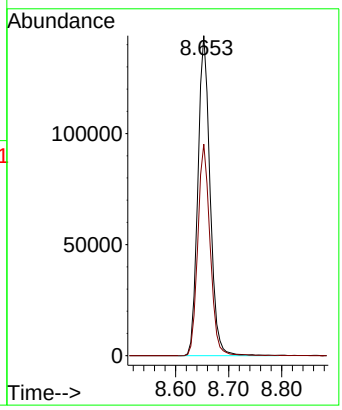


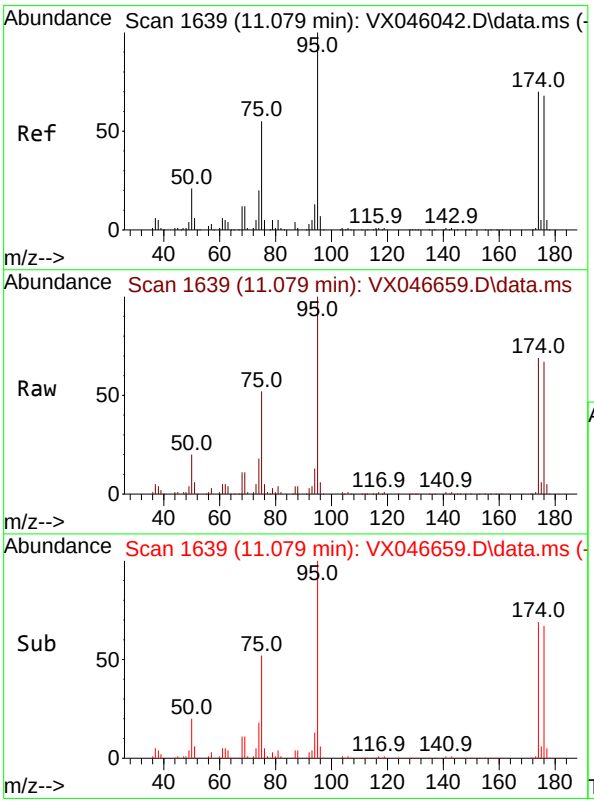
#50
Toluene-d8
Concen: 52.424 ug/l
RT: 8.653 min Scan# 1
Delta R.T. -0.000 min
Lab File: VX046659.D
Acq: 12 Jun 2025 13:10

Instrument :
MSVOA_X
ClientSampleId :
VX0612WBL01

Tgt Ion: 98 Resp: 229993

Ion	Ratio	Lower	Upper
98	100		
100	66.6	53.5	80.3

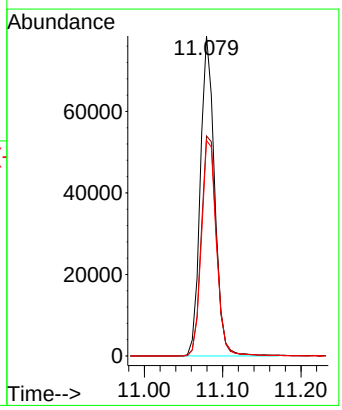


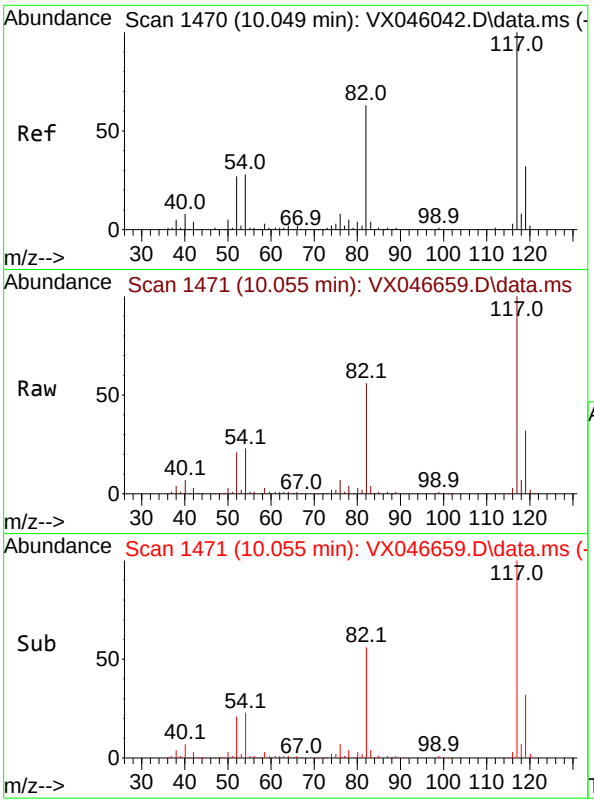


#62
4-Bromofluorobenzene
Concen: 54.605 ug/l
RT: 11.079 min Scan# 1639
Delta R.T. 0.000 min
Lab File: VX046659.D
Acq: 12 Jun 2025 13:10

Tgt Ion: 95 Resp: 99118

Ion	Ratio	Lower	Upper
95	100		
174	73.2	0.0	135.8
176	70.9	0.0	131.4



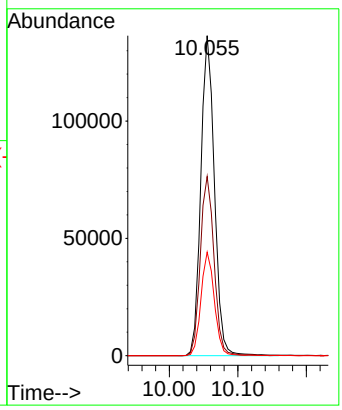


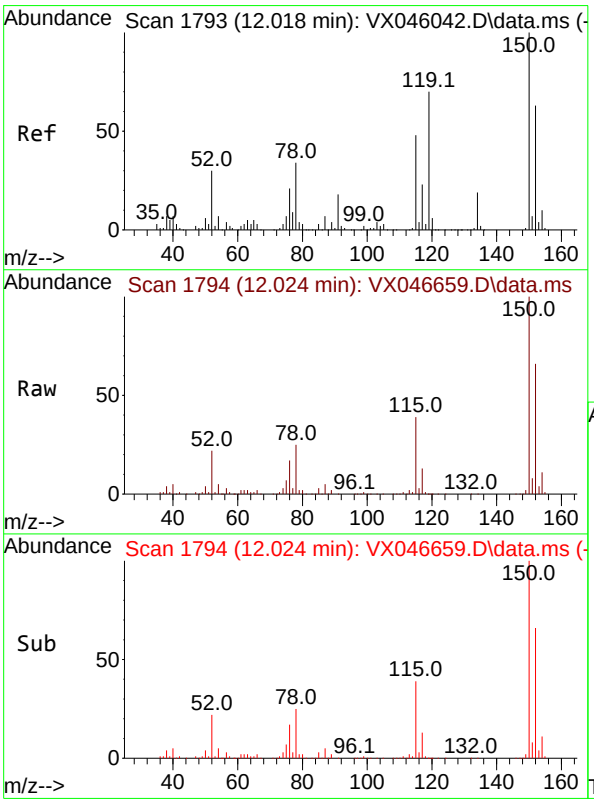
#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 10.055 min Scan# 14
Delta R.T. 0.000 min
Lab File: VX046659.D
Acq: 12 Jun 2025 13:10

Instrument :
MSVOA_X
ClientSampleId :
VX0612WBL01

Tgt Ion:117 Resp: 188641

Ion	Ratio	Lower	Upper
117	100		
82	56.0	50.6	76.0
119	32.4	25.8	38.6

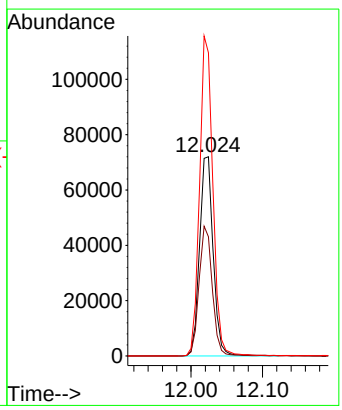




#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 12.024 min Scan# 1794
Delta R.T. 0.000 min
Lab File: VX046659.D
Acq: 12 Jun 2025 13:10

Tgt Ion:152 Resp: 95358

Ion	Ratio	Lower	Upper
152	100		
115	63.2	46.9	140.7
150	156.4	0.0	351.0



Raw Data: **VX046660.D**

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

Report of Analysis

Client:	PARSONS Engineering of New York, Inc.	Date Collected:	
Project:	Con Ed Non MGP – Atlantic Ave 453957.600024.05	Date Received:	
Client Sample ID:	VX0612WBS01	SDG No.:	Q2267
Lab Sample ID:	VX0612WBS01	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:	Prep Date	Date Analyzed	Prep Batch ID
VX046660.D	1		06/12/25 13:38	VX061225

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	15.1		0.26	1.00	ug/L
75-35-4	1,1-Dichloroethene	17.3		0.23	1.00	ug/L
78-93-3	2-Butanone	88.0		0.98	5.00	ug/L
56-23-5	Carbon Tetrachloride	17.4		0.25	1.00	ug/L
67-66-3	Chloroform	18.3		0.25	1.00	ug/L
71-43-2	Benzene	18.7		0.15	1.00	ug/L
107-06-2	1,2-Dichloroethane	17.6		0.22	1.00	ug/L
79-01-6	Trichloroethene	18.5		0.090	1.00	ug/L
127-18-4	Tetrachloroethene	18.9		0.23	1.00	ug/L
108-90-7	Chlorobenzene	19.3		0.12	1.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	41.5		74 - 125	83%	SPK: 50
1868-53-7	Dibromofluoromethane	48.0		75 - 124	96%	SPK: 50
2037-26-5	Toluene-d8	47.8		86 - 113	96%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.1		77 - 121	96%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	85600	5.556			
540-36-3	1,4-Difluorobenzene	145000	6.769			
3114-55-4	Chlorobenzene-d5	131000	10.055			
3855-82-1	1,4-Dichlorobenzene-d4	69000	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\VX061225\
Data File : VX046660.D
Acq On : 12 Jun 2025 13:38
Operator : JC/MD
Sample : VX0612WBS01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 13 01:42:29 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VX0612WBS01

Manual Integrations APPROVED

Reviewed By :John Carlone 06/13/2025
Supervised By :Mahesh Dadoda 06/13/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.556	168	85578	50.000	ug/l	-0.01
34) 1,4-Difluorobenzene	6.769	114	144622	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.055	117	130715	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	69016	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.964	65	63210	41.517	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 83.040%			
35) Dibromofluoromethane	5.397	113	51021	47.973	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 95.940%			
50) Toluene-d8	8.647	98	167446	47.755	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 95.500%			
62) 4-Bromofluorobenzene	11.079	95	69758	48.084	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 96.160%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.185	85	17232	14.504	ug/l	100
3) Chloromethane	1.306	50	15679	14.498	ug/l	97
4) Vinyl Chloride	1.386	62	16285	15.106	ug/l	100
5) Bromomethane	1.623	94	10482	16.017	ug/l	99
6) Chloroethane	1.703	64	10352	14.800	ug/l	95
7) Trichlorofluoromethane	1.904	101	27911	15.648	ug/l	92
8) Diethyl Ether	2.148	74	10221	16.219	ug/l	87
9) 1,1,2-Trichlorotrifluo...	2.343	101	19140	17.032	ug/l	95
10) Methyl Iodide	2.465	142	17822	14.630	ug/l	95
11) Tert butyl alcohol	2.965	59	14604	86.443	ug/l	99
12) 1,1-Dichloroethene	2.331	96	17566	17.289	ug/l	84
13) Acrolein	2.251	56	9994	73.047	ug/l	100
14) Allyl chloride	2.678	41	33622	16.850	ug/l	93
15) Acrylonitrile	3.074	53	58711	91.913	ug/l	99
16) Acetone	2.392	43	52132	90.187	ug/l	92
17) Carbon Disulfide	2.526	76	33805	15.809	ug/l	100
18) Methyl Acetate	2.715	43	35232	19.427	ug/l	95
19) Methyl tert-butyl Ether	3.129	73	66811	18.793	ug/l	98
20) Methylene Chloride	2.800	84	21926	17.951	ug/l	92
21) trans-1,2-Dichloroethene	3.105	96	18523	17.227	ug/l	97
22) Diisopropyl ether	3.769	45	72754	18.494	ug/l #	65
23) Vinyl Acetate	3.733	43	272827	89.826	ug/l	99
24) 1,1-Dichloroethane	3.623	63	38925	17.753	ug/l	99
25) 2-Butanone	4.568	43	74592	88.008	ug/l	96
26) 2,2-Dichloropropane	4.483	77	29645	18.213	ug/l	97
27) cis-1,2-Dichloroethene	4.501	96	23891	18.050	ug/l	95
28) Bromochloromethane	4.909	49	26095	24.953	ug/l	92
29) Tetrahydrofuran	5.013	42	45745	85.463	ug/l	96
30) Chloroform	5.105	83	41974	18.271	ug/l	97
31) Cyclohexane	5.476	56	29749	16.807	ug/l	99
32) 1,1,1-Trichloroethane	5.391	97	35020	17.821	ug/l	97
36) 1,1-Dichloropropene	5.702	75	25822	16.997	ug/l	97
37) Ethyl Acetate	4.727	43	29586	19.954	ug/l	99
38) Carbon Tetrachloride	5.690	117	29642	17.420	ug/l	99
39) Methylcyclohexane	7.385	83	29365	16.376	ug/l	95
40) Benzene	6.049	78	79810	18.661	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX061225\
Data File : VX046660.D
Acq On : 12 Jun 2025 13:38
Operator : JC/MD
Sample : VX0612WBS01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 13 01:42:29 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VX0612WBS01

Manual Integrations APPROVED

Reviewed By :John Carlone 06/13/2025
Supervised By :Mahesh Dadoda 06/13/2025

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
41) Methacrylonitrile	4.940	41	16120	17.507 ug/l #	92
42) 1,2-Dichloroethane	6.098	62	31253	17.565 ug/l	97
43) Isopropyl Acetate	6.348	43	46852	18.125 ug/l	96
44) Trichloroethene	7.129	130	20132	18.526 ug/l	97
45) 1,2-Dichloropropane	7.433	63	21411	19.396 ug/l	96
46) Dibromomethane	7.586	93	15723	18.933 ug/l	94
47) Bromodichloromethane	7.824	83	33506	19.622 ug/l	98
48) Methyl methacrylate	7.696	41	24360	18.316 ug/l	92
49) 1,4-Dioxane	7.659	88	6794	382.003 ug/l	99
51) 4-Methyl-2-Pentanone	8.573	43	158516	96.503 ug/l	97
52) Toluene	8.720	92	52013	19.796 ug/l	98
53) t-1,3-Dichloropropene	8.982	75	29385	19.193 ug/l	98
54) cis-1,3-Dichloropropene	8.372	75	32617	19.161 ug/l #	85
55) 1,1,2-Trichloroethane	9.153	97	21748	20.618 ug/l	99
56) Ethyl methacrylate	9.116	69	32307	19.903 ug/l	92
57) 1,3-Dichloropropane	9.311	76	35837	19.225 ug/l	99
58) 2-Chloroethyl Vinyl ether	8.244	63	87671	99.160 ug/l	97
59) 2-Hexanone	9.433	43	113348	96.217 ug/l	95
60) Dibromochloromethane	9.518	129	25395	20.468 ug/l	98
61) 1,2-Dibromoethane	9.610	107	21756	19.793 ug/l	98
64) Tetrachloroethene	9.275	164	16534	18.916 ug/l	98
65) Chlorobenzene	10.079	112	59264	19.277 ug/l	99
66) 1,1,1,2-Tetrachloroethane	10.165	131	21995	21.172 ug/l	98
67) Ethyl Benzene	10.195	91	99830	18.601 ug/l	97
68) m/p-Xylenes	10.299	106	77489	39.802 ug/l	94
69) o-Xylene	10.640	106	37114	19.709 ug/l	98
70) Styrene	10.652	104	66406	20.601 ug/l	96
71) Bromoform	10.799	173	16330	20.616 ug/l #	99
73) Isopropylbenzene	10.963	105	101339	18.679 ug/l	99
74) N-amyl acetate	10.841	43	42555	17.811 ug/l	97
75) 1,1,2,2-Tetrachloroethane	11.213	83	33322	19.188 ug/l	98
76) 1,2,3-Trichloropropane	11.238	75	26882m	18.389 ug/l	
77) Bromobenzene	11.195	156	24285	19.285 ug/l	93
78) n-propylbenzene	11.305	91	118689	18.075 ug/l	98
79) 2-Chlorotoluene	11.366	91	72123	18.214 ug/l	98
80) 1,3,5-Trimethylbenzene	11.451	105	85488	18.909 ug/l	97
81) trans-1,4-Dichloro-2-b...	11.018	75	9208	18.170 ug/l	91
82) 4-Chlorotoluene	11.451	91	86099	18.344 ug/l	97
83) tert-Butylbenzene	11.713	119	84512	18.363 ug/l	95
84) 1,2,4-Trimethylbenzene	11.750	105	85107	18.609 ug/l	98
85) sec-Butylbenzene	11.890	105	106791	18.059 ug/l	99
86) p-Isopropyltoluene	12.006	119	92930	18.850 ug/l	98
87) 1,3-Dichlorobenzene	11.969	146	47662	19.491 ug/l	98
88) 1,4-Dichlorobenzene	12.036	146	48120	18.991 ug/l	99
89) n-Butylbenzene	12.329	91	85715	17.705 ug/l	99
90) Hexachloroethane	12.536	117	15279	17.437 ug/l	91
91) 1,2-Dichlorobenzene	12.335	146	45679	19.352 ug/l	99
92) 1,2-Dibromo-3-Chloropr...	12.945	75	6541	16.820 ug/l	80
93) 1,2,4-Trichlorobenzene	13.585	180	31308	19.444 ug/l	97
94) Hexachlorobutadiene	13.725	225	13715	18.328 ug/l	99
95) Naphthalene	13.774	128	101037	19.787 ug/l	99
96) 1,2,3-Trichlorobenzene	13.957	180	30574	18.936 ug/l	99

Sample Results: **VX046660.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX061225\
Data File : VX046660.D
Acq On : 12 Jun 2025 13:38
Operator : JC/MD
Sample : VX0612WBS01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX0612WBS01

Manual Integrations APPROVED

Reviewed By :John Carlone 06/13/2025
Supervised By :Mahesh Dadoda 06/13/2025

Quant Time: Jun 13 01:42:29 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 2025
Response via : Initial Calibration

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

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

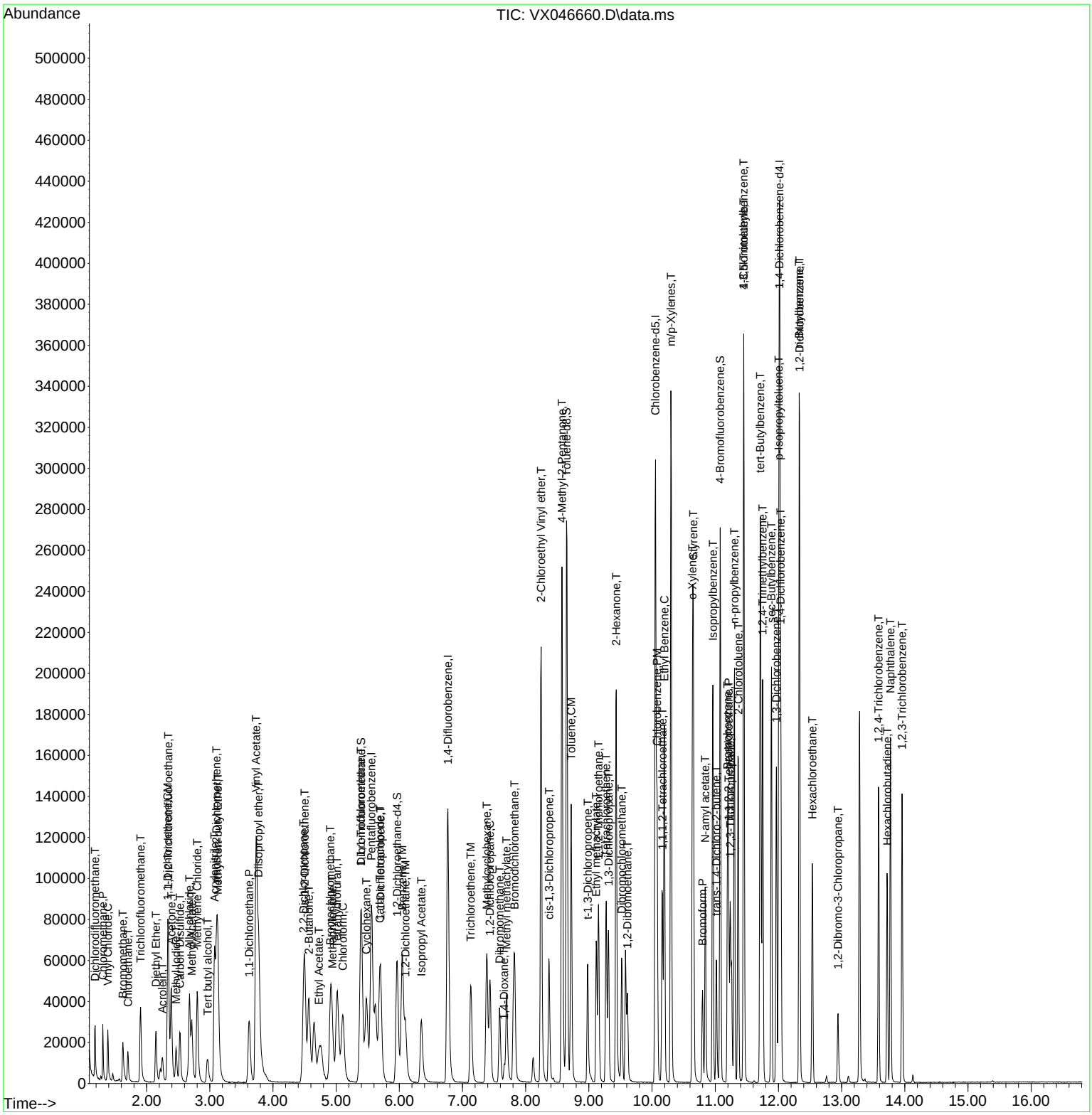
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX061225\
Data File : VX046660.D
Acq On : 12 Jun 2025 13:38
Operator : JC/MD
Sample : VX0612WBS01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 13 01:42:29 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VX0612WBS01

Manual Integrations APPROVED

Reviewed By :John Carlone 06/13/2025
Supervised By :Mahesh Dadoda 06/13/2025



Raw Data: **VX046662.D**

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

Report of Analysis

Client:	PARSONS Engineering of New York, Inc.	Date Collected:	
Project:	Con Ed Non MGP – Atlantic Ave 453957.600024.05	Date Received:	
Client Sample ID:	VX0612WBSD01	SDG No.:	Q2267
Lab Sample ID:	VX0612WBSD01	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:	Prep Date	Date Analyzed	Prep Batch ID
VX046662.D	1		06/12/25 14:26	VX061225

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	15.3		0.26	1.00	ug/L
75-35-4	1,1-Dichloroethene	17.2		0.23	1.00	ug/L
78-93-3	2-Butanone	110		0.98	5.00	ug/L
56-23-5	Carbon Tetrachloride	17.2		0.25	1.00	ug/L
67-66-3	Chloroform	19.3		0.25	1.00	ug/L
71-43-2	Benzene	19.0		0.15	1.00	ug/L
107-06-2	1,2-Dichloroethane	19.1		0.22	1.00	ug/L
79-01-6	Trichloroethene	18.9		0.090	1.00	ug/L
127-18-4	Tetrachloroethene	18.5		0.23	1.00	ug/L
108-90-7	Chlorobenzene	19.0		0.12	1.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	44.8		74 - 125	90%	SPK: 50
1868-53-7	Dibromofluoromethane	49.7		75 - 124	99%	SPK: 50
2037-26-5	Toluene-d8	48.3		86 - 113	97%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.5		77 - 121	101%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	77300	5.568			
540-36-3	1,4-Difluorobenzene	133000	6.775			
3114-55-4	Chlorobenzene-d5	125000	10.055			
3855-82-1	1,4-Dichlorobenzene-d4	65400	12.024			

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\VX061225\
Data File : VX046662.D
Acq On : 12 Jun 2025 14:26
Operator : JC/MD
Sample : VX0612WBSD01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 13 01:43:28 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VX0612WBSD01

Manual Integrations APPROVED

Reviewed By :John Carlone 06/13/2025
Supervised By :Mahesh Dadoda 06/13/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.568	168	77335	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.775	114	133427	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.055	117	124864	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.024	152	65393	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.970	65	61672	44.824	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 89.640%			
35) Dibromofluoromethane	5.409	113	48780	49.714	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 99.420%			
50) Toluene-d8	8.653	98	156263	48.305	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 96.600%			
62) 4-Bromofluorobenzene	11.079	95	67540	50.462	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 100.920%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.185	85	15159	14.119	ug/l	96
3) Chloromethane	1.307	50	14237	14.568	ug/l	97
4) Vinyl Chloride	1.386	62	14877	15.271	ug/l	96
5) Bromomethane	1.624	94	10127	17.124	ug/l	98
6) Chloroethane	1.709	64	10193	16.126	ug/l	96
7) Trichlorofluoromethane	1.904	101	25875	16.053	ug/l	97
8) Diethyl Ether	2.148	74	9926	17.429	ug/l	91
9) 1,1,2-Trichlorotrifluo...	2.349	101	17146	16.884	ug/l	94
10) Methyl Iodide	2.471	142	16573	15.055	ug/l	97
11) Tert butyl alcohol	2.971	59	15766	103.268	ug/l	99
12) 1,1-Dichloroethene	2.337	96	15836	17.248	ug/l	90
13) Acrolein	2.252	56	10925	82.071	ug/l	97
14) Allyl chloride	2.684	41	31675	17.566	ug/l	92
15) Acrylonitrile	3.081	53	62440	108.170	ug/l	99
16) Acetone	2.398	43	52285	99.588	ug/l	95
17) Carbon Disulfide	2.532	76	30557	15.813	ug/l	99
18) Methyl Acetate	2.721	43	37422	22.834	ug/l	98
19) Methyl tert-butyl Ether	3.129	73	65699	20.450	ug/l	99
20) Methylene Chloride	2.806	84	20169	18.272	ug/l	96
21) trans-1,2-Dichloroethene	3.111	96	16904	17.397	ug/l	96
22) Diisopropyl ether	3.782	45	69021	19.415	ug/l #	77
23) Vinyl Acetate	3.739	43	275263	100.288	ug/l	98
24) 1,1-Dichloroethane	3.629	63	36498	18.421	ug/l	98
25) 2-Butanone	4.574	43	81745	106.728	ug/l	96
26) 2,2-Dichloropropane	4.501	77	26479	18.002	ug/l	99
27) cis-1,2-Dichloroethene	4.513	96	22731	19.004	ug/l	94
28) Bromochloromethane	4.916	49	24813	26.256	ug/l	94
29) Tetrahydrofuran	5.025	42	51560	106.594	ug/l	97
30) Chloroform	5.117	83	40022	19.278	ug/l	98
31) Cyclohexane	5.489	56	26131	16.337	ug/l	98
32) 1,1,1-Trichloroethane	5.403	97	32623	18.370	ug/l	96
36) 1,1-Dichloropropene	5.708	75	23651	16.874	ug/l	97
37) Ethyl Acetate	4.739	43	31194m	22.803	ug/l	
38) Carbon Tetrachloride	5.696	117	27030	17.218	ug/l	95
39) Methylcyclohexane	7.391	83	27000	16.321	ug/l	96
40) Benzene	6.056	78	75001	19.008	ug/l	96

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX061225\
Data File : VX046662.D
Acq On : 12 Jun 2025 14:26
Operator : JC/MD
Sample : VX0612WBSD01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 13 01:43:28 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VX0612WBSD01

Manual Integrations APPROVED

Reviewed By :John Carlone 06/13/2025
Supervised By :Mahesh Dadoda 06/13/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	4.946	41	17391	20.473	ug/l		92
42) 1,2-Dichloroethane	6.104	62	31275	19.052	ug/l		97
43) Isopropyl Acetate	6.354	43	48318	20.261	ug/l		98
44) Trichloroethene	7.135	130	18936	18.888	ug/l		99
45) 1,2-Dichloropropane	7.446	63	20974	20.594	ug/l		99
46) Dibromomethane	7.586	93	15538	20.280	ug/l		97
47) Bromodichloromethane	7.830	83	31910	20.255	ug/l		100
48) Methyl methacrylate	7.702	41	24860	20.261	ug/l		93
49) 1,4-Dioxane	7.671	88	7152	435.873	ug/l		99
51) 4-Methyl-2-Pentanone	8.580	43	169429	111.801	ug/l		98
52) Toluene	8.726	92	47973	19.790	ug/l		99
53) t-1,3-Dichloropropene	8.982	75	28068	19.871	ug/l		94
54) cis-1,3-Dichloropropene	8.372	75	31374	19.977	ug/l	#	86
55) 1,1,2-Trichloroethane	9.159	97	21487	22.080	ug/l		97
56) Ethyl methacrylate	9.122	69	33081	22.090	ug/l		91
57) 1,3-Dichloropropane	9.311	76	34906	20.297	ug/l		99
58) 2-Chloroethyl Vinyl ether	8.244	63	88144	108.060	ug/l		97
59) 2-Hexanone	9.433	43	122560	112.765	ug/l		95
60) Dibromochloromethane	9.525	129	24681	21.562	ug/l		97
61) 1,2-Dibromoethane	9.610	107	21425	21.128	ug/l		98
64) Tetrachloroethene	9.275	164	15466	18.523	ug/l		92
65) Chlorobenzene	10.079	112	55650	18.950	ug/l		99
66) 1,1,1,2-Tetrachloroethane	10.165	131	20124	20.279	ug/l		98
67) Ethyl Benzene	10.195	91	93152	18.170	ug/l		99
68) m/p-Xylenes	10.305	106	71271	38.324	ug/l		95
69) o-Xylene	10.640	106	34941	19.425	ug/l		97
70) Styrene	10.659	104	62281	20.227	ug/l		96
71) Bromoform	10.799	173	16530	21.846	ug/l	#	100
73) Isopropylbenzene	10.963	105	94452	18.374	ug/l		99
74) N-amyl acetate	10.841	43	43589	19.255	ug/l		98
75) 1,1,2,2-Tetrachloroethane	11.213	83	34369	20.888	ug/l		99
76) 1,2,3-Trichloropropane	11.238	75	27152m	19.603	ug/l		
77) Bromobenzene	11.201	156	23326	19.550	ug/l		93
78) n-propylbenzene	11.305	91	111370	17.900	ug/l		98
79) 2-Chlorotoluene	11.366	91	67642	18.028	ug/l		97
80) 1,3,5-Trimethylbenzene	11.451	105	79297	18.512	ug/l		96
81) trans-1,4-Dichloro-2-b...	11.018	75	9232	19.227	ug/l		93
82) 4-Chlorotoluene	11.457	91	80597	18.123	ug/l		95
83) tert-Butylbenzene	11.713	119	83097	19.056	ug/l		94
84) 1,2,4-Trimethylbenzene	11.750	105	80595	18.598	ug/l		99
85) sec-Butylbenzene	11.890	105	102518	18.297	ug/l		100
86) p-Isopropyltoluene	12.012	119	86541	18.527	ug/l		98
87) 1,3-Dichlorobenzene	11.969	146	44009	18.994	ug/l		98
88) 1,4-Dichlorobenzene	12.042	146	44978	18.734	ug/l		98
89) n-Butylbenzene	12.329	91	81561	17.780	ug/l		99
90) Hexachloroethane	12.536	117	14475	17.435	ug/l		93
91) 1,2-Dichlorobenzene	12.335	146	44738	20.004	ug/l		99
92) 1,2-Dibromo-3-Chloropr...	12.939	75	7269	19.728	ug/l		82
93) 1,2,4-Trichlorobenzene	13.585	180	28666	18.789	ug/l		98
94) Hexachlorobutadiene	13.725	225	12471	17.589	ug/l		99
95) Naphthalene	13.774	128	100632	20.800	ug/l		99
96) 1,2,3-Trichlorobenzene	13.963	180	29289	19.145	ug/l		100

Sample Results: **VX046662.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX061225\
Data File : VX046662.D
Acq On : 12 Jun 2025 14:26
Operator : JC/MD
Sample : VX0612WBSD01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX0612WBSD01

Manual Integrations APPROVED

Reviewed By :John Carlone 06/13/2025
Supervised By :Mahesh Dadoda 06/13/2025

Quant Time: Jun 13 01:43:28 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 2025
Response via : Initial Calibration

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

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

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX061225\
Data File : VX046662.D
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Operator : JC/MD
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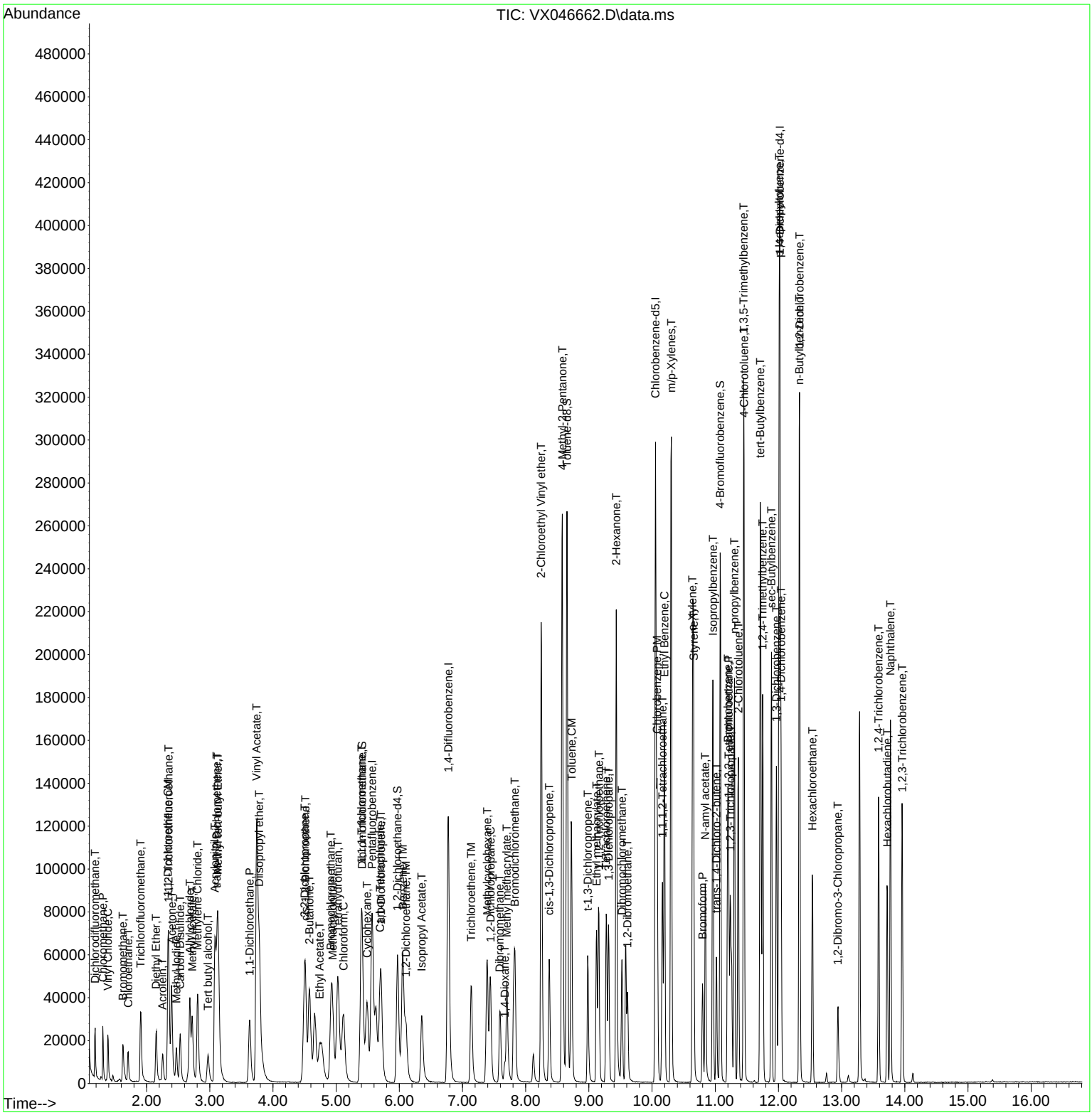
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X060625W.M
Quant Title : SW846 8260
QLast Update : Fri Jun 06 16:56:12 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VX0612WBSD01

Manual Integrations APPROVED

Reviewed By :John Carlone 06/13/2025
Supervised By :Mahesh Dadoda 06/13/2025



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

Manual Integration Report

Sequence:	VX060625	Instrument	MSVOA_x

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDICC005	VX046518.D	1,2,3-Trichloropropane	JOHN	6/6/2025 5:25:36 PM	MMDadoda	6/9/2025 1:14:56 PM	Peak Integrated by Software
VSTDICC020	VX046519.D	1,2,3-Trichloropropane	JOHN	6/6/2025 5:25:40 PM	MMDadoda	6/9/2025 1:14:59 PM	Peak Integrated by Software
VSTDICCC050	VX046520.D	1,2,3-Trichloropropane	JOHN	6/6/2025 5:25:44 PM	MMDadoda	6/9/2025 1:15:03 PM	Peak Integrated by Software
VSTDICC100	VX046521.D	1,2,3-Trichloropropane	JOHN	6/6/2025 5:25:48 PM	MMDadoda	6/9/2025 1:15:08 PM	Peak Integrated by Software
VSTDICC150	VX046522.D	1,2,3-Trichloropropane	JOHN	6/6/2025 5:25:52 PM	MMDadoda	6/9/2025 1:15:37 PM	Peak Integrated by Software
VSTDICC001	VX046524.D	1,2,3-Trichloropropane	JOHN	6/9/2025 8:08:38 AM	MMDadoda	6/9/2025 1:15:41 PM	Peak Integrated by Software
VSTDICC001	VX046524.D	1,4-Dichlorobenzene	JOHN	6/9/2025 8:08:38 AM	MMDadoda	6/9/2025 1:15:41 PM	Peak Integrated by Software
VSTDICC001	VX046524.D	Ethyl Acetate	JOHN	6/9/2025 8:08:38 AM	MMDadoda	6/9/2025 1:15:41 PM	Peak Integrated by Software
VSTDICV050	VX046525.D	1,2,3-Trichloropropane	JOHN	6/6/2025 5:26:01 PM	MMDadoda	6/9/2025 1:16:01 PM	Peak Integrated by Software
VSTDCCC050	VX046544.D	1,2,3-Trichloropropane	JOHN	6/9/2025 8:10:18 AM	MMDadoda	6/9/2025 1:16:52 PM	Peak Integrated by Software
VSTDCCC050	VX046546.D	1,2,3-Trichloropropane	JOHN	6/9/2025 8:10:22 AM	MMDadoda	6/9/2025 1:16:54 PM	Peak Integrated by Software
VSTDCCC050	VX046565.D	1,2,3-Trichloropropane	JOHN	6/9/2025 8:12:06 AM	Sam	6/9/2025 1:18:52 PM	Peak Integrated by Software

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

Manual Integration Report

Sequence:	VX060625	Instrument	MSVOA_x

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason

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

Manual Integration Report

Sequence:	vx061225	Instrument	MSVOA_x

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC050	VX046657.D	1,2,3-Trichloropropane	JOHN	6/13/2025 10:02:14 AM	MMDadoda	6/13/2025 10:58:05 AM	Peak Integrated by Software
VX0612WBS01	VX046660.D	1,2,3-Trichloropropane	JOHN	6/13/2025 10:02:18 AM	MMDadoda	6/13/2025 10:58:06 AM	Peak Integrated by Software
VX0612WBSD01	VX046662.D	1,2,3-Trichloropropane	JOHN	6/13/2025 10:02:22 AM	MMDadoda	6/13/2025 10:58:07 AM	Peak Integrated by Software
VX0612WBSD01	VX046662.D	Ethyl Acetate	JOHN	6/13/2025 10:02:22 AM	MMDadoda	6/13/2025 10:58:07 AM	Peak Integrated by Software
Q2267-01	VX046669.D	4-Methyl-2-Pentanone	JOHN	6/13/2025 10:02:27 AM	MMDadoda	6/13/2025 10:58:09 AM	Peak Integrated by Software
VSTDCCC050	VX046673.D	1,2,3-Trichloropropane	JOHN	6/13/2025 10:02:43 AM	MMDadoda	6/13/2025 10:58:16 AM	Peak Integrated by Software

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

Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QCBatch ID # VX060625

Review By	Mahesh Dadoda	Review On	6/9/2025 1:15:21 PM		
Supervise By	Semsettin Yesilyurt	Supervise On	6/9/2025 1:19:58 PM		
SubDirectory	VX060625	HP Acquire Method		HP Processing Method	82X060625W.M

STD. NAME	STD REF.#
Tune/Reschk	VP134153
Initial Calibration Stds	VP134235,VP134236,VP134237,VP134238,VP134239,VP134240
CCC	VP134154
Internal Standard/PEM	
ICV/I.BLK	VP134241
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VX046516.D	06 Jun 2025 08:47	JC/MD	Ok
2	VSTDICC001	VX046517.D	06 Jun 2025 09:13	JC/MD	Not Ok
3	VSTDICC005	VX046518.D	06 Jun 2025 09:42	JC/MD	Ok,M
4	VSTDICC020	VX046519.D	06 Jun 2025 10:18	JC/MD	Ok,M
5	VSTDICCC050	VX046520.D	06 Jun 2025 10:40	JC/MD	Ok,M
6	VSTDICC100	VX046521.D	06 Jun 2025 11:02	JC/MD	Ok,M
7	VSTDICC150	VX046522.D	06 Jun 2025 11:25	JC/MD	Ok,M
8	IBLK	VX046523.D	06 Jun 2025 11:47	JC/MD	Ok
9	VSTDICC001	VX046524.D	06 Jun 2025 12:57	JC/MD	Ok,M
10	VSTDICV050	VX046525.D	06 Jun 2025 14:11	JC/MD	Ok,M
11	VX0606MBL01	VX046526.D	06 Jun 2025 14:39	JC/MD	Ok
12	VX0606WBL01	VX046527.D	06 Jun 2025 15:02	JC/MD	Ok
13	VX0606WBS01	VX046528.D	06 Jun 2025 15:25	JC/MD	Ok,M
14	VX0606MBS01	VX046529.D	06 Jun 2025 15:51	JC/MD	Ok,M
15	Q2168-11MEDL	VX046530.D	06 Jun 2025 16:13	JC/MD	Ok
16	VX0606WBSD01	VX046531.D	06 Jun 2025 16:36	JC/MD	Ok,M
17	Q2194-02	VX046532.D	06 Jun 2025 16:58	JC/MD	Ok
18	Q2194-04	VX046533.D	06 Jun 2025 17:21	JC/MD	Ok
19	Q2207-09	VX046534.D	06 Jun 2025 17:43	JC/MD	Ok,M
20	Q2207-18	VX046535.D	06 Jun 2025 18:06	JC/MD	Ok,M
21	Q2207-27	VX046536.D	06 Jun 2025 18:28	JC/MD	Ok,M

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Fax : 908 789 8922

Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QCBatch ID # VX060625

Review By	Mahesh Dadoda	Review On	6/9/2025 1:15:21 PM		
Supervise By	Semsettin Yesilyurt	Supervise On	6/9/2025 1:19:58 PM		
SubDirectory	VX060625	HP Acquire Method		HP Processing Method	82X060625W.M

STD. NAME	STD REF.#
Tune/Reschk	VP134153
Initial Calibration Stds	VP134235,VP134236,VP134237,VP134238,VP134239,VP134240
CCC	VP134154
Internal Standard/PEM	
ICV/I.BLK	VP134241
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

22	Q2207-36	VX046537.D	06 Jun 2025 18:51	JC/MD	Ok,M
23	Q2207-45	VX046538.D	06 Jun 2025 19:13	JC/MD	Ok,M
24	Q2208-09	VX046539.D	06 Jun 2025 19:35	JC/MD	Ok,M
25	Q2208-18	VX046540.D	06 Jun 2025 19:58	JC/MD	Ok,M
26	Q2208-27	VX046541.D	06 Jun 2025 20:20	JC/MD	Ok,M
27	Q2208-36	VX046542.D	06 Jun 2025 20:42	JC/MD	Ok,M
28	Q2236-01	VX046543.D	06 Jun 2025 21:04	JC/MD	Not Ok
29	VSTDCCC050	VX046544.D	06 Jun 2025 21:26	JC/MD	Not Ok
30	BFB	VX046545.D	06 Jun 2025 23:59	JC/MD	Ok
31	VSTDCCC050	VX046546.D	07 Jun 2025 00:34	JC/MD	Ok,M
32	VX0606WBL02	VX046547.D	07 Jun 2025 01:17	JC/MD	Ok
33	VX0606WBS02	VX046548.D	07 Jun 2025 02:00	JC/MD	Ok,M
34	VX0606WBSD02	VX046549.D	07 Jun 2025 02:22	JC/MD	Ok,M
35	PB168312TB	VX046550.D	07 Jun 2025 02:43	JC/MD	Ok,M
36	PB168272TB	VX046551.D	07 Jun 2025 03:05	JC/MD	Ok,M
37	Q2236-05	VX046552.D	07 Jun 2025 03:26	JC/MD	ReRun
38	Q2236-09	VX046553.D	07 Jun 2025 03:48	JC/MD	ReRun
39	Q2236-13	VX046554.D	07 Jun 2025 04:09	JC/MD	Ok
40	Q2236-17	VX046555.D	07 Jun 2025 04:31	JC/MD	ReRun
41	Q2227-04	VX046556.D	07 Jun 2025 04:52	JC/MD	Ok,M
42	Q2228-04	VX046557.D	07 Jun 2025 05:14	JC/MD	ReRun
43	Q2235-01	VX046558.D	07 Jun 2025 05:36	JC/MD	ReRun
44	Q2240-04	VX046559.D	07 Jun 2025 05:57	JC/MD	ReRun

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Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QCBatch ID # VX060625

Review By	Mahesh Dadoda	Review On	6/9/2025 1:15:21 PM		
Supervise By	Semsettin Yesilyurt	Supervise On	6/9/2025 1:19:58 PM		
SubDirectory	VX060625	HP Acquire Method		HP Processing Method	82X060625W.M

STD. NAME	STD REF.#
Tune/Reschk	VP134153
Initial Calibration Stds	VP134235,VP134236,VP134237,VP134238,VP134239,VP134240
CCC	VP134154
Internal Standard/PEM	
ICV/I.BLK	VP134241
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

45	Q2240-08	VX046560.D	07 Jun 2025 06:18	JC/MD	ReRun
46	Q2240-12	VX046561.D	07 Jun 2025 06:40	JC/MD	ReRun
47	Q2241-04	VX046562.D	07 Jun 2025 07:01	JC/MD	ReRun
48	Q2241-08	VX046563.D	07 Jun 2025 07:23	JC/MD	ReRun
49	Q2226-04	VX046564.D	07 Jun 2025 07:44	JC/MD	ReRun
50	VSTDCCC050	VX046565.D	07 Jun 2025 08:06	JC/MD	Ok,M

M : Manual Integration

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Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QCBatch ID # VX061225

Review By	John Carlone	Review On	6/13/2025 10:05:11 AM		
Supervise By	Mahesh Dadoda	Supervise On	6/13/2025 10:58:22 AM		
SubDirectory	VX061225	HP Acquire Method		HP Processing Method	82X060625W.M

STD. NAME	STD REF.#
Tune/Reschk	VP134305
Initial Calibration Stds	
CCC	VP134306,VP134307
Internal Standard/PEM	
ICV/I.BLK	
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VX046656.D	12 Jun 2025 09:44	JC/MD	Ok
2	VSTDCCC050	VX046657.D	12 Jun 2025 10:11	JC/MD	Ok,M
3	VX0612MBL01	VX046658.D	12 Jun 2025 12:48	JC/MD	Ok
4	VX0612WBL01	VX046659.D	12 Jun 2025 13:10	JC/MD	Ok
5	VX0612WBS01	VX046660.D	12 Jun 2025 13:38	JC/MD	Ok,M
6	Q2249-01RE	VX046661.D	12 Jun 2025 14:04	JC/MD	Confirms
7	VX0612WBSD01	VX046662.D	12 Jun 2025 14:26	JC/MD	Ok,M
8	Q2249-01	VX046663.D	12 Jun 2025 14:53	JC/MD	Not Ok
9	Q2249-01	VX046664.D	12 Jun 2025 15:24	JC/MD	Not Ok
10	Q2275-01	VX046665.D	12 Jun 2025 15:46	JC/MD	Ok
11	Q2275-05	VX046666.D	12 Jun 2025 16:10	JC/MD	ReRun
12	Q2275-03	VX046667.D	12 Jun 2025 16:32	JC/MD	Ok
13	Q2275-05	VX046668.D	12 Jun 2025 16:55	JC/MD	Ok
14	Q2267-01	VX046669.D	12 Jun 2025 17:17	JC/MD	Ok,M
15	Q2278-04	VX046670.D	12 Jun 2025 17:40	JC/MD	Ok,M
16	Q2285-05	VX046671.D	12 Jun 2025 18:02	JC/MD	Ok,M
17	PB168448TB	VX046672.D	12 Jun 2025 18:24	JC/MD	Ok,M
18	VSTDCCC050	VX046673.D	12 Jun 2025 18:47	JC/MD	Ok,M

M : Manual Integration

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Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QCBatch ID # VX060625

Review By	Mahesh Dadoda	Review On	6/9/2025 1:15:21 PM		
Supervise By	Semsettin Yesilyurt	Supervise On	6/9/2025 1:19:58 PM		
SubDirectory	VX060625	HP Acquire Method		HP Processing Method	82X060625W.M

STD. NAME	STD REF.#
Tune/Reschk	VP134153
Initial Calibration Stds	VP134235,VP134236,VP134237,VP134238,VP134239,VP134240
CCC	VP134154
Internal Standard/PEM	
ICV/I.BLK	VP134241
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleId	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VX046516.D	06 Jun 2025 08:47		JC/MD	Ok
2	VSTDICC001	VSTDICC001	VX046517.D	06 Jun 2025 09:13		JC/MD	Not Ok
3	VSTDICC005	VSTDICC005	VX046518.D	06 Jun 2025 09:42	for TCLP	JC/MD	Ok,M
4	VSTDICC020	VSTDICC020	VX046519.D	06 Jun 2025 10:18	Comp #05 fail	JC/MD	Ok,M
5	VSTDICCC050	VSTDICCC050	VX046520.D	06 Jun 2025 10:40	LR-13,16,17	JC/MD	Ok,M
6	VSTDICC100	VSTDICC100	VX046521.D	06 Jun 2025 11:02		JC/MD	Ok,M
7	VSTDICC150	VSTDICC150	VX046522.D	06 Jun 2025 11:25		JC/MD	Ok,M
8	IBLK	IBLK	VX046523.D	06 Jun 2025 11:47		JC/MD	Ok
9	VSTDICC001	VSTDICC001	VX046524.D	06 Jun 2025 12:57		JC/MD	Ok,M
10	VSTDICV050	ICVVX060625	VX046525.D	06 Jun 2025 14:11		JC/MD	Ok,M
11	VX0606MBL01	VX0606MBL01	VX046526.D	06 Jun 2025 14:39		JC/MD	Ok
12	VX0606WBL01	VX0606WBL01	VX046527.D	06 Jun 2025 15:02		JC/MD	Ok
13	VX0606WBS01	VX0606WBS01	VX046528.D	06 Jun 2025 15:25		JC/MD	Ok,M
14	VX0606MBS01	VX0606MBS01	VX046529.D	06 Jun 2025 15:51		JC/MD	Ok,M
15	Q2168-11MEDL	C2MEDL	VX046530.D	06 Jun 2025 16:13		JC/MD	Ok
16	VX0606WBSD01	VX0606WBSD01	VX046531.D	06 Jun 2025 16:36		JC/MD	Ok,M
17	Q2194-02	COMP-12	VX046532.D	06 Jun 2025 16:58	vial A pH#5.0	JC/MD	Ok
18	Q2194-04	COMP-13	VX046533.D	06 Jun 2025 17:21	vial A pH#5.0	JC/MD	Ok

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Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QCBatch ID # VX060625

Review By	Mahesh Dadoda	Review On	6/9/2025 1:15:21 PM		
Supervise By	Semsettin Yesilyurt	Supervise On	6/9/2025 1:19:58 PM		
SubDirectory	VX060625	HP Acquire Method		HP Processing Method	82X060625W.M

STD. NAME	STD REF.#
Tune/Reschk	VP134153
Initial Calibration Stds	VP134235,VP134236,VP134237,VP134238,VP134239,VP134240
CCC	VP134154
Internal Standard/PEM	
ICV/I.BLK	VP134241
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

19	Q2207-09	BU-703-COMP-01	VX046534.D	06 Jun 2025 17:43	vial A pH#5.0	JC/MD	Ok,M
20	Q2207-18	BU-703-COMP-02	VX046535.D	06 Jun 2025 18:06	vial A pH#5.0	JC/MD	Ok,M
21	Q2207-27	BU-703-COMP-03	VX046536.D	06 Jun 2025 18:28	vial A pH#5.0	JC/MD	Ok,M
22	Q2207-36	BU-703-COMP-04	VX046537.D	06 Jun 2025 18:51	vial A pH#5.0	JC/MD	Ok,M
23	Q2207-45	BU-703-COMP-05	VX046538.D	06 Jun 2025 19:13	vial A pH#5.0	JC/MD	Ok,M
24	Q2208-09	BU-703-COMP-06	VX046539.D	06 Jun 2025 19:35	vial A pH#5.0	JC/MD	Ok,M
25	Q2208-18	BU-703-COMP-07	VX046540.D	06 Jun 2025 19:58	vial A pH#5.0	JC/MD	Ok,M
26	Q2208-27	BU-703-COMP-08	VX046541.D	06 Jun 2025 20:20	vial A pH#5.0	JC/MD	Ok,M
27	Q2208-36	BU-703-COMP-09	VX046542.D	06 Jun 2025 20:42	vial A pH#5.0	JC/MD	Ok,M
28	Q2236-01	WC-A4-05A-G	VX046543.D	06 Jun 2025 21:04	vial A pH#5.0 Out of tune	JC/MD	Not Ok
29	VSTDCCC050	VSTDCCC050EC	VX046544.D	06 Jun 2025 21:26	Out of tune	JC/MD	Not Ok
30	BFB	BFB	VX046545.D	06 Jun 2025 23:59		JC/MD	Ok
31	VSTDCCC050	VSTDCCC050	VX046546.D	07 Jun 2025 00:34		JC/MD	Ok,M
32	VX0606WBL02	VX0606WBL02	VX046547.D	07 Jun 2025 01:17		JC/MD	Ok
33	VX0606WBS02	VX0606WBS02	VX046548.D	07 Jun 2025 02:00		JC/MD	Ok,M
34	VX0606WBSD02	VX0606WBSD02	VX046549.D	07 Jun 2025 02:22		JC/MD	Ok,M
35	PB168312TB	PB168312TB	VX046550.D	07 Jun 2025 02:43		JC/MD	Ok,M
36	PB168272TB	PB168272TB	VX046551.D	07 Jun 2025 03:05		JC/MD	Ok,M
37	Q2236-05	WC-A2-04-G	VX046552.D	07 Jun 2025 03:26	Surrogate Fail	JC/MD	ReRun

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Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QCBatch ID # VX060625

Review By	Mahesh Dadoda	Review On	6/9/2025 1:15:21 PM		
Supervise By	Semsettin Yesilyurt	Supervise On	6/9/2025 1:19:58 PM		
SubDirectory	VX060625	HP Acquire Method		HP Processing Method	82X060625W.M

STD. NAME	STD REF.#
Tune/Reschk	VP134153
Initial Calibration Stds	VP134235,VP134236,VP134237,VP134238,VP134239,VP134240
CCC	VP134154
Internal Standard/PEM	
ICV/I.BLK	VP134241
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

38	Q2236-09	WC-A2-05-G	VX046553.D	07 Jun 2025 03:48	Internal Standard Fail	JC/MD	ReRun
39	Q2236-13	WC-A2-06-G	VX046554.D	07 Jun 2025 04:09	vial A pH#5.0	JC/MD	Ok
40	Q2236-17	WC-A2-07-G	VX046555.D	07 Jun 2025 04:31	Internal Standard Fail; Surrogate fail	JC/MD	ReRun
41	Q2227-04	TP07-MHH-WC	VX046556.D	07 Jun 2025 04:52		JC/MD	Ok,M
42	Q2228-04	TP08-MHI-WC	VX046557.D	07 Jun 2025 05:14	Internal Standard Fail	JC/MD	ReRun
43	Q2235-01	WC-A2-08-G	VX046558.D	07 Jun 2025 05:36	Internal Standard Fail	JC/MD	ReRun
44	Q2240-04	TP-3	VX046559.D	07 Jun 2025 05:57	Internal Standard Fail	JC/MD	ReRun
45	Q2240-08	TP-2	VX046560.D	07 Jun 2025 06:18	Internal Standard Fail	JC/MD	ReRun
46	Q2240-12	TP-1	VX046561.D	07 Jun 2025 06:40	Internal Standard Fail	JC/MD	ReRun
47	Q2241-04	TP-N	VX046562.D	07 Jun 2025 07:01	Internal Standard Fail	JC/MD	ReRun
48	Q2241-08	TP-S	VX046563.D	07 Jun 2025 07:23	Internal Standard Fail	JC/MD	ReRun
49	Q2226-04	TP06-MHI-WC	VX046564.D	07 Jun 2025 07:44	Internal Standard Fail	JC/MD	ReRun
50	VSTDCCC050	VSTDCCC050EC	VX046565.D	07 Jun 2025 08:06		JC/MD	Ok,M

M : Manual Integration

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

Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QCBatch ID # VX061225

Review By	John Carlone	Review On	6/13/2025 10:05:11 AM		
Supervise By	Mahesh Dadoda	Supervise On	6/13/2025 10:58:22 AM		
SubDirectory	VX061225	HP Acquire Method		HP Processing Method	82X060625W.M

STD. NAME	STD REF.#
Tune/Reschk	VP134305
Initial Calibration Stds	
CCC	VP134306,VP134307
Internal Standard/PEM	
ICV/I.BLK	
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleId	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VX046656.D	12 Jun 2025 09:44		JC/MD	Ok
2	VSTDCCC050	VSTDCCC050	VX046657.D	12 Jun 2025 10:11		JC/MD	Ok,M
3	VX0612MBL01	VX0612MBL01	VX046658.D	12 Jun 2025 12:48		JC/MD	Ok
4	VX0612WBL01	VX0612WBL01	VX046659.D	12 Jun 2025 13:10		JC/MD	Ok
5	VX0612WBS01	VX0612WBS01	VX046660.D	12 Jun 2025 13:38		JC/MD	Ok,M
6	Q2249-01RE	MW-06-6.5-060525RE	VX046661.D	12 Jun 2025 14:04	vial B pH<2 ISTD Fail	JC/MD	Confirms
7	VX0612WBSD01	VX0612WBSD01	VX046662.D	12 Jun 2025 14:26		JC/MD	Ok,M
8	Q2249-01	MW-06-6.5-060525	VX046663.D	12 Jun 2025 14:53	Not req	JC/MD	Not Ok
9	Q2249-01	MW-06-6.5-060525	VX046664.D	12 Jun 2025 15:24	Not req	JC/MD	Not Ok
10	Q2275-01	OW-08B-72.5-060925	VX046665.D	12 Jun 2025 15:46	vial A pH<2	JC/MD	Ok
11	Q2275-05	TB01-060925	VX046666.D	12 Jun 2025 16:10	vial A pH<2 TB; Surrogate Fail	JC/MD	ReRun
12	Q2275-03	EB01-060925	VX046667.D	12 Jun 2025 16:32	vial A pH<2 EB	JC/MD	Ok
13	Q2275-05	TB01-060925	VX046668.D	12 Jun 2025 16:55	vial B pH<2 TB	JC/MD	Ok
14	Q2267-01	WC-20250605	VX046669.D	12 Jun 2025 17:17	vial A pH#5.0	JC/MD	Ok,M
15	Q2278-04	TP-2	VX046670.D	12 Jun 2025 17:40	vial B pH#5.0	JC/MD	Ok,M
16	Q2285-05	HAM-CONCRETE	VX046671.D	12 Jun 2025 18:02	vial B pH#5.0	JC/MD	Ok,M
17	PB168448TB	PB168448TB	VX046672.D	12 Jun 2025 18:24		JC/MD	Ok,M
18	VSTDCCC050	VSTDCCC050EC	VX046673.D	12 Jun 2025 18:47		JC/MD	Ok,M

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Fax : 908 789 8922

Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QCBatch ID # VX061225

Review By	John Carlone	Review On	6/13/2025 10:05:11 AM		
Supervise By	Mahesh Dadoda	Supervise On	6/13/2025 10:58:22 AM		
SubDirectory	VX061225	HP Acquire Method		HP Processing Method	82X060625W.M

STD. NAME	STD REF.#
Tune/Reschk	VP134305
Initial Calibration Stds	
CCC	VP134306,VP134307
Internal Standard/PEM	
ICV/I.BLK	
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

M : Manual Integration

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB168448

SOP ID : M1311-TCLP-16

SDG No : N/A

Weigh By : N/A

Balance ID : N/A

pH Meter ID : WC PH METER-1

Extraction By : N/A

Filter By : N/A

Pippete ID : N/A

Tumbler ID : N/A

TCLP Filter ID : N/A

Start Prep Date : N/A **Time :** N/A

End Prep Date : N/A **Time :** N/A

Combination Ratio : N/A

ZHE Cleaning Batch : N/A

Initial Room Temperature: N/A

Final Room Temperature: N/A

TCLP Technician Signature : JB

Supervisor By : IR

Standared 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

Chemical Used	ML/SAMPLE U	Lot Number
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
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

We receive water sample in 40 ml vial tr to VOC LAB without fiftation and tumbling.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
06/12/25 13:40	JB / ICP Room	JC / VOC LAB
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB168448

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
PB168448TB	LEB448	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Q2267-01	WC-20250605	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SampleID	ClientID	Sample Weight (g)	Filter Weight (g)	Filtrate (mL)	Filter + Solid (After 100°C)	% solids	% Dry Solids
PB168448TB	LEB448	N/A	N/A	N/A	N/A	N/A	N/A
Q2267-01	WC-20250605	N/A	N/A	N/A	N/A	<0.5	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name : tclp zhe w q2267 **WorkList ID :** 190151 **Department :** TCLP Extraction **Date :** 06-12-2025 12:56:29

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2267-01	WC-20250605	Water	TCLP ZHE Extraction	Cool 4 deg C	PARS02	D41	06/05/2025	1311 ZHE

Date/Time 06-12-25 13:10
Raw Sample Received by: [illegible]
Raw Sample Relinquished by: CP SM

Date/Time 06-12-25 15:30
Raw Sample Received by: CP SM
Raw Sample Relinquished by: [illegible]

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Prep Standard - Chemical Standard Summary

Order ID : Q2267

Test : TCLP VOA

Prepbatch ID :

Sequence ID/Qc Batch ID: VX061225,

Standard ID :
VP133174,VP133887,VP133935,VP133953,VP133991,VP134142,VP134149,VP134305,VP134306,VP134307,

Chemical ID :
V13391,V13706,V14290,V14432,V14435,V14503,V14504,V14525,V14526,V14613,V14620,V14626,V14636,V14637,V14638,V14639,V14668,V14671,V14673,V14675,V14711,V14717,V14718,V14721,V14749,V14750,V14811,V14812,V14843,V14921,V14929,V14944,V14945,V14946,V14947,W3112,

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Fax : 908 789 8922

VOC STANDARD PREPARATION LOG

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

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
257	8260 Calibration Working STD Mix-First source, 160PPM	VP133887	05/12/2025	06/23/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 05/14/2025

FROM 0.40000ml of V14843 + 1.00000ml of V14432 + 1.00000ml of V14435 + 1.00000ml of V14503 + 1.00000ml of V14504 + 1.00000ml of V14525 + 1.00000ml of V14526 + 1.00000ml of V14711 + 1.00000ml of V14717 + 1.00000ml of V14718 + 1.00000ml of V14721 + 1.00000ml of V14749 + 1.00000ml of V14750 + 1.00000ml of V14811 + 1.00000ml of V14812 + 10.60000ml of V14921 = Final Quantity: 25.000 ml

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VOC STANDARD PREPARATION LOG

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

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

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

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

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VOC STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
51	8260 Working STD (Acrolein) -first source, 800PPM	VP133991	05/22/2025	06/19/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 05/24/2025

FROM 1.00000ml of V14944 + 1.00000ml of V14945 + 1.00000ml of V14946 + 1.00000ml of V14947 + 21.00000ml of V14620 = Final Quantity: 25.000 ml

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

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VOC STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1810	8260 Working Std(2-CVE)-800ppm	VP134149	06/06/2025	12/06/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 06/10/2025

FROM 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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
589	BFB TUNE CHECK	VP134305	06/12/2025	06/13/2025	John Carlone	None	None	Amit Patel 06/13/2025

FROM 39.98400ml of W3112 + 0.01600ml of VP133953 = Final Quantity: 40.000 ml

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VOC STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
620	50 PPB CCC, 8260-Water	VP134306	06/12/2025	06/13/2025	John Carlone	None	None	Amit Patel 06/13/2025

FROM 39.94450ml of W3112 + 0.00500ml of VP133174 + 0.00500ml of VP134142 + 0.00800ml of VP133935 + 0.01250ml of VP133887 + 0.01250ml of VP133991 + 0.01250ml of VP134149 = Final Quantity: 40.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
620	50 PPB CCC, 8260-Water	VP134307	06/12/2025	06/13/2025	John Carlone	None	None	Amit Patel 06/13/2025

FROM 39.94450ml of W3112 + 0.00500ml of VP133174 + 0.00500ml of VP134142 + 0.00800ml of VP133935 + 0.01250ml of VP133887 + 0.01250ml of VP133991 + 0.01250ml of VP134149 = Final Quantity: 40.000 ml

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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	05/12/2025 / SAM	08/15/2024 / SAM	V14432

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	09/20/2025	03/20/2025 / SAM	08/15/2024 / SAM	V14435

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	11/12/2025	05/12/2025 / SAM	09/17/2024 / SAM	V14503

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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	11/12/2025	05/12/2025 / SAM	09/17/2024 / SAM	V14504

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	11/12/2025	05/12/2025 / SAM	09/18/2024 / SAM	V14525

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	11/12/2025	05/12/2025 / SAM	09/18/2024 / SAM	V14526

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)	22L0562016	10/25/2025	05/09/2025 / SAM	11/26/2024 / SAM	V14620

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

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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	V14636

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

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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	V14673

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	11/12/2025	05/12/2025 / SAM	12/17/2024 / SAM	V14711

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	11/12/2025	05/12/2025 / SAM	12/17/2024 / SAM	V14717

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	11/12/2025	05/12/2025 / SAM	12/17/2024 / SAM	V14718

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	11/12/2025	05/12/2025 / SAM	12/17/2024 / SAM	V14721

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CHEMICAL RECEIPT LOG BOOK

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	11/13/2025	05/12/2025 / SAM	12/17/2024 / SAM	V14749

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	11/12/2025	05/12/2025 / SAM	12/17/2024 / SAM	V14750

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 LOTS	A0220471	11/12/2025	05/12/2025 / SAM	01/08/2025 / SAM	V14811

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 LOTS	A0220471	06/30/2026	05/12/2025 / SAM	01/08/2025 / SAM	V14812

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

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CHEMICAL RECEIPT LOG BOOK

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)	051925	06/19/2025	05/22/2025 / SAM	05/21/2025 / SAM	V14944

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	051925	06/19/2025	05/22/2025 / SAM	05/21/2025 / SAM	V14945

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	051925	06/19/2025	05/22/2025 / SAM	05/21/2025 / SAM	V14946

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	051925	06/19/2025	05/22/2025 / SAM	05/21/2025 / SAM	V14947

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 / Iwona	07/03/2024 / Iwona	W3112

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

avantor™ | J.T.Baker®

Material No.: 9077-02
Batch No.: 2310762004
Manufactured Date: 2023-08-11
Expiration Date: 2026-08-10
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.5 ppm
Titrable Acid (µeq/g)	≤ 0.3	0.2
Titrable 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

12 Bottles

avantor™ | J.T.Baker®

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_3OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.2 ppm
Titrable Acid (µeq/g)	≤ 0.3	0.2
Titrable 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

James Ethier

Jamie Ethier
Vice President Global Quality

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

12 Bottles

avantor™ | J.T.Baker®

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_3OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.2 ppm
Titrable Acid (µeq/g)	≤ 0.3	0.2
Titrable 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

James Ethier

Jamie Ethier
Vice President Global Quality

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

Rec 09/17/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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#: 6UTB

Solvent(s): Lot#
Methanol EG359-USQ12

5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 100.0 0.021 Flask Uncertainty

Formulated By: Prashant Chauhan 021624 DATE

Reviewed By: Pedro L. Rentas 021624 DATE

Compound	(RM#) Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Initial Conc.(ug/mL)	Nominal Conc (µg/mL)	Purity (%)	Purity Uncertainty	Uncertainty Pipette (mL)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	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)	orl-rat 2460mg/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)	orl-rat 700mg/kg
3. Carbon disulphide	(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)	orl-rat 1200mg/kg
4. cis-1,4-Dichloro-2-butene	(1196)	14718EF	NA	NA	NA	2000	95	0.2	NA	0.21058	0.21069	2001.1	8.5	1476-11-5	N/A	N/A
5. trans-1,4-Dichloro-2-butene	(0466)	MKBP6041V	NA	NA	NA	2000	96.5	0.2	NA	0.20731	0.20748	2001.7	8.4	110-57-6	N/A	N/A
6. Diethyl ether	(0153)	IK18CAS0000	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	orl-rat 14800mg/kg
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)	orl-rat 76mg/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)	orl-rat 2460mg/kg
10. Methacrylonitrile	(0442)	00427ET	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20221	2001.4	8.2	126-98-7	1 ppm (3mg/m3/8H)(skin)	orl-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)	orl-rat 277mg/kg
12. Methyl methacrylate	(0404)	MKBW5137V	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)	orl-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)	orl-rat 780mg/kg
14. 2-Nitropropane	(0461)	14002JX	NA	NA	NA	2000	97.3	0.2	NA	0.20560	0.20577	2001.6	8.3	79-46-9	10 ppm (35mg/m3/8H)	orl-rat 720mg/kg
15. Pentachloroethane	(0450)	HGA01	NA	NA	NA	2000	98	0.2	NA	0.20413	0.20430	2001.6	8.3	76-01-7	N/A	N/A
16. 1,1,2-Trichlorotrifluoroethane	(0474)	18930	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20225	2001.8	8.2	76-13-1	1000 ppm (7600mg/m3/8H)	orl-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	orl-rat 916mg/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	orl-rat 846mg/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	40002.4	2000	NA	NA	0.017	NA	NA	1999.6	23.0	156-60-5	N/A	orl-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	orl-rat 820mg/kg
22. 1,1-Dichloroethene	32251	102023	0.10	10.00	20001.6	2000	NA	NA	0.042	NA	NA	1999.7	20.4	75-35-4	1 ppm (4mg/m3/8H)	orl-rat 200mg/kg
23. Bromoform	95321	020724	0.10	10.00	20003.2	2000	NA	NA	0.042	NA	NA	1999.8	20.5	75-25-2	0.5 ppm (5mg/m3) (skin)	orl-rat 933mg/kg
24. Carbon tetrachloride	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.4	56-23-5	2 ppm (12.6mg/m3/8H)	orl-rat 2350mg/kg
25. Chloroform	95321	020724	0.10	10.00	20024.0	2000	NA	NA	0.042	NA	NA	2001.9	20.5	67-66-3	50 ppm (240mg/m3) (CL)	orl-rat 908mg/kg
26. Dibromomethane	95321	020724	0.10	10.00	20002.9	2000	NA	NA	0.042	NA	NA	1999.8	20.5	74-95-3	N/A	orl-rat 108mg/kg
27. 1,1-Dichloroethane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.5	75-34-3	100 ppm	orl-rat 725mg/kg
28. 2,2-Dichloropropane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.4	594-20-7	N/A	N/A
29. Tetrachloroethene	95321	020724	0.10	10.00	20201.1	2000	NA	NA	0.042	NA	NA	2019.6	20.6	127-18-4	25 ppm (170mg/m3/8H)(final)	orl-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)	orl-rat 10300mg/kg
31. 1,2-Dibromo-3-chloropropane	35161	112322	0.05	5.00	40016.5	2000	NA	NA	0.017	NA	NA	2000.3	22.9	96-12-8	0.001 ppm	orl-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)	orl-rat 108mg/kg
33. 1,2-Dichloroethane	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)	orl-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)	orl-rat 1947mg/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	unr-mus 3600mg/kg
36. 1,1-Dichloropropene	35161	112322	0.05	5.00	40012.1	2000	NA	NA	0.017	NA	NA	2000.1	29.7	563-58-6	N/A	N/A
37. cis-1,3-Dichloropropene	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-Dichloropropene	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)	orl-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	630-20-6	N/A	orl-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)	orl-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)	orl-rat 836mg/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)	orl-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)	orl-rat 149.6mg/kg
45. Benzene	35162	050823	0.05	5.00	40005.0	2000	NA	NA	0.017	NA	NA	1999.7	22.9	71-43-2	1 ppm	orl-rat 4894mg/kg
46. Bromobenzene	35162	050823	0.05	5.00	40006.9	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-86-1	N/A	orl-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	104-51-8	N/A	N/A
48. Ethyl benzene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	100-41-4	100 ppm (435mg/m3/8H)	orl-rat >2000mg/kg
49. p-Isopropyl toluene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	99-87-6	N/A	orl-rat 4750mg/kg
50. Naphthalene	35162	050823	0.05	5.00	40006.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	91-20-3	10 ppm (50mg/m3/8H)	orl-rat 490mg/kg
51. Styrene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	100-42-5	100 ppm	orl-rat 5000mg/kg
52. Toluene	35162	050823	0.05	5.00	40006.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-88-3	200 ppm	orl-rat 5000mg/kg
53. 1,2,3-Trichlorobenzene	35162	050823	0.05	5.00	40003.1	2000	NA	NA	0.017	NA	NA	1999.7	22.9	87-61-6	N/A	ipr-mus 1390mg/kg
54. 1,2,4-Trichlorobenzene	35162	050823	0.05	5.00	40006.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	120-82-1	5 ppm (CL) (40mg/m3)	orl-rat 756mg/kg
55. 1,2,4-Trimethylbenzene	35162	050823	0.05	5.00	40001.6	2000	NA	NA	0.017	NA	NA	1999.6	23.0	95-63-6	N/A	orl-rat 5g/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	108-67-8	N/A	orl-rat 5000mg/kg
57. m-Xylene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-38-3	100 ppm (435mg/m3/8H)	orl-rat 5g/kg
58. tert-Butyl benzene	35163	101923	0.05	5.00	40001.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	98-06-6	N/A	N/A
59. sec-Butyl benzene	35163	101923	0.05	5.00	40002.4	2000	NA	NA	0.017	NA	NA	1999.8	22.9	135-98-8	N/A	orl-rat 2240mg/kg
60. Chlorobenzene	35163	101923	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	108-90-7	75 ppm (350mg/m3/8H)	orl-rat 2290mg/kg
61. 2-Chlorotoluene	35163	101923	0.05	5.00	40000.3	2000	NA	NA	0.017	NA	NA	1999.5	22.9	95-49-8	50 ppm (250mg/m3/8H)	orl-rat 3900mg/kg
62. 4-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	orl-rat 2100mg/kg
63. 1,2-Dichlorobenzene	35163	101923	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	95-50-1	50 ppm (300mg/m3) (CL)	orl-rat 500mg/kg
64. 1,3-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	ipr-mus 1062mg/kg
65. 1,4-Dichlorobenzene	35163	101923	0.05	5.00	40001.8	2000	NA	NA	0.017	NA	NA	1999.6	22.9	106-46-7	75 ppm (450mg/m3/8H)	orl-rat 500mg/kg
66. Isopropylbenzene	35163	101923	0.05	5.00	40000.8	2000	NA	NA	0.017	NA	NA	1999.5	22.9	98-82-8	50 ppm (245mg/m3/8H)	orl-rat 1400mg/kg
67. n-Propylbenzene	35163	101923	0.05	5.00	40003.4	2000	NA	NA	0.017	NA	NA	1999.7	23.0	103-65-1	N/A	orl-rat 8040mg/kg
68. o-Xylene	35163	101923	0.05	5.00	40040.8	2000	NA	NA	0.017	NA	NA	2001.5	23.0	95-47-6	100 ppm (435mg/m3/8H)	ipr-mus 1364mg/kg
69. p-Xylene	35163	101923	0.05	5.00	40000.6	2000	NA	NA	0.017	NA	NA	1999.5	22.9	106-42-3	100 ppm (435mg/m3/8H)	orl-rat 5g/kg

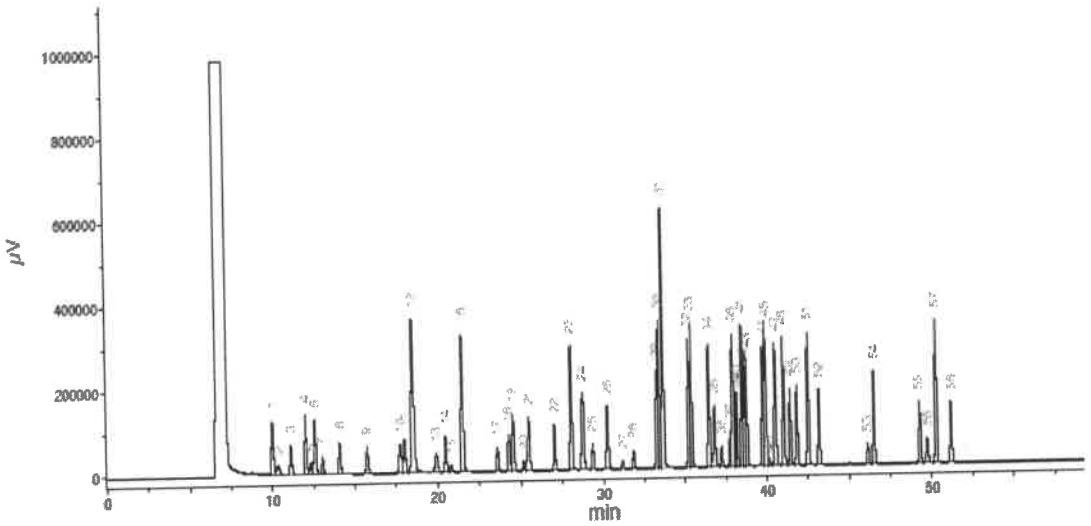
- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Run 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., Hydogen(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-1,2,3-trifluoroethane	10.33
3	1,1-Dichloroethene	11.10
4	Acetonitrile	12.00
5	Iodomethane	12.31
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	Methacrylonitrile/Methyl acrylate/Chloroform	18.49
13	Isobutanol/1,1,1-Trichloroethane	18.91
14	1,1-Dichloropropene	19.46
15	Carbon tetrachloride	20.79
16	Benzene/1,2-Dichloroethane	21.48
17	Trichloroethene	23.86
18	1,2-Dichloropropane	24.26
19	Methyl methacrylate	24.62
20	Bromodichloromethane	25.13
21	Dibromomethane/2-Nitropropane	25.46
22	cis-1,3-Dichloropropene	27.07
23	Toluene	28.09
24	Ethyl methacrylate/trans-1,3-Dichloropropene	28.73
25	1,1,2-Trichloroethane	29.34
26	Tetrachloroethene/1,3-Dichloropropane	30.34
27	Dibromochloromethane	31.16
28	1,2-Dibromoethane	31.84
29	Chlorobenzene	33.26
30	Ethylbenzene/1,1,1,2-Tetrachloroethane	33.40
31	m-Xylene/p-Xylene	33.85
32	o-Xylene	35.33
33	Styrene	35.50
34	Isopropylbenzene/Bromoform	35.48
35	cis-1,4-Dichloro-2-butene	36.80
36	1,1,2,2-Tetrachloroethane	37.23
37	1,2,3-Trichloropropane	37.77
38	n-Propylbenzene	37.92
39	trans-1,4-Dichloro-2-butene	38.05
40	Bromobenzene	38.14
41	1,3,5-Trimethylbenzene	38.50
42	2-Chlorotoluene	38.62
43	4-Chlorotoluene	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-Isopropyltoluene	41.02
49	1,3-Dichlorobenzene	41.12
50	1,4-Dichlorobenzene	41.63
51	n-Butylbenzene	42.52
52	1,2-Dichlorobenzene	42.18
53	1,2-Dibromo-3-chloropropane	46.12
54	Nitrobenzene	46.58
55	1,2,4-Trichlorobenzene	49.26
56	Hexachlorobutadiene	49.72
57	Naphthalene	50.46
58	1,2,3-Trichlorobenzene	51.16

Absolute Standards Inc.

PO Box 5585
Hamden, CT 06518-0585

Phone: 203-281-2917
FAX: 203-281-2922

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	**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 sheild**
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	CAS#: 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. 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 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 (H2O = 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.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

Rec 09/17/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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#: 6UTB

Solvent(s): Lot#
Methanol EG359-USQ12

5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 100.0 0.021 Flask Uncertainty

Formulated By: Prashant Chauhan 021624 DATE

Reviewed By: Pedro L. Rentas 021624 DATE

Compound	(RM#) Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Initial Conc.(ug/mL)	Nominal Conc (µg/mL)	Purity (%)	Purity Uncertainty	Uncertainty Pipette (mL)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	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)	orl-rat 2460mg/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)	orl-rat 700mg/kg
3. Carbon disulphide	(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)	orl-rat 1200mg/kg
4. cis-1,4-Dichloro-2-butene	(1196)	14718EF	NA	NA	NA	2000	95	0.2	NA	0.21058	0.21069	2001.1	8.5	1476-11-5	N/A	N/A
5. trans-1,4-Dichloro-2-butene	(0466)	MKBP6041V	NA	NA	NA	2000	96.5	0.2	NA	0.20731	0.20748	2001.7	8.4	110-57-6	N/A	N/A
6. Diethyl ether	(0153)	IK18CAS0000	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	orl-rat 14800mg/kg
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)	orl-rat 76mg/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)	orl-rat 2460mg/kg
10. Methacrylonitrile	(0442)	00427ET	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20221	2001.4	8.2	126-98-7	1 ppm (3mg/m3/8H)(skin)	orl-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)	orl-rat 277mg/kg
12. Methyl methacrylate	(0404)	MKBW5137V	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)	orl-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)	orl-rat 780mg/kg
14. 2-Nitropropane	(0461)	14002JX	NA	NA	NA	2000	97.3	0.2	NA	0.20560	0.20577	2001.6	8.3	79-46-9	10 ppm (35mg/m3/8H)	orl-rat 720mg/kg
15. Pentachloroethane	(0450)	HGA01	NA	NA	NA	2000	98	0.2	NA	0.20413	0.20430	2001.6	8.3	76-01-7	N/A	N/A
16. 1,1,2-Trichlorotrifluoroethane	(0474)	18930	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20225	2001.8	8.2	76-13-1	1000 ppm (7600mg/m3/8H)	orl-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	orl-rat 916mg/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	orl-rat 846mg/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	40002.4	2000	NA	NA	0.017	NA	NA	1999.6	23.0	156-60-5	N/A	orl-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	orl-rat 820mg/kg
22. 1,1-Dichloroethene	32251	102023	0.10	10.00	20001.6	2000	NA	NA	0.042	NA	NA	1999.7	20.4	75-35-4	1 ppm (4mg/m3/8H)	orl-rat 200mg/kg
23. Bromoform	95321	020724	0.10	10.00	20003.2	2000	NA	NA	0.042	NA	NA	1999.8	20.5	75-25-2	0.5 ppm (5mg/m3) (skin)	orl-rat 933mg/kg
24. Carbon tetrachloride	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.4	56-23-5	2 ppm (12.6mg/m3/8H)	orl-rat 2350mg/kg
25. Chloroform	95321	020724	0.10	10.00	20024.0	2000	NA	NA	0.042	NA	NA	2001.9	20.5	67-66-3	50 ppm (240mg/m3) (CL)	orl-rat 908mg/kg
26. Dibromomethane	95321	020724	0.10	10.00	20002.9	2000	NA	NA	0.042	NA	NA	1999.8	20.5	74-95-3	N/A	orl-rat 108mg/kg
27. 1,1-Dichloroethane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.5	75-34-3	100 ppm	orl-rat 725mg/kg
28. 2,2-Dichloropropane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.4	594-20-7	N/A	N/A
29. Tetrachloroethene	95321	020724	0.10	10.00	20201.1	2000	NA	NA	0.042	NA	NA	2019.6	20.6	127-18-4	25 ppm (170mg/m3/8H)(final)	orl-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)	orl-rat 10300mg/kg
31. 1,2-Dibromo-3-chloropropane	35161	112322	0.05	5.00	40016.5	2000	NA	NA	0.017	NA	NA	2000.3	22.9	96-12-8	0.001 ppm	orl-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)	orl-rat 108mg/kg
33. 1,2-Dichloroethane	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)	orl-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)	orl-rat 1947mg/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	unr-mus 3600mg/kg
36. 1,1-Dichloropropene	35161	112322	0.05	5.00	40012.1	2000	NA	NA	0.017	NA	NA	2000.1	29.7	563-58-6	N/A	N/A
37. cis-1,3-Dichloropropene	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-Dichloropropene	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)	orl-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	630-20-6	N/A	orl-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)	orl-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)	orl-rat 836mg/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)	orl-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)	orl-rat 149.6mg/kg
45. Benzene	35162	050823	0.05	5.00	40005.0	2000	NA	NA	0.017	NA	NA	1999.7	22.9	71-43-2	1 ppm	orl-rat 4894mg/kg
46. Bromobenzene	35162	050823	0.05	5.00	40006.9	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-86-1	N/A	orl-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	104-51-8	N/A	N/A
48. Ethyl benzene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	100-41-4	100 ppm (435mg/m3/8H)	orl-rat >2000mg/kg
49. p-Isopropyl toluene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	99-87-6	N/A	orl-rat 4750mg/kg
50. Naphthalene	35162	050823	0.05	5.00	40006.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	91-20-3	10 ppm (50mg/m3/8H)	orl-rat 490mg/kg
51. Styrene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	100-42-5	100 ppm	orl-rat 5000mg/kg
52. Toluene	35162	050823	0.05	5.00	40006.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-88-3	200 ppm	orl-rat 5000mg/kg
53. 1,2,3-Trichlorobenzene	35162	050823	0.05	5.00	40003.1	2000	NA	NA	0.017	NA	NA	1999.7	22.9	87-61-6	N/A	ipr-mus 1390mg/kg
54. 1,2,4-Trichlorobenzene	35162	050823	0.05	5.00	40006.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	120-82-1	5 ppm (CL) (40mg/m3)	orl-rat 756mg/kg
55. 1,2,4-Trimethylbenzene	35162	050823	0.05	5.00	40001.6	2000	NA	NA	0.017	NA	NA	1999.6	23.0	95-63-6	N/A	orl-rat 5g/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	108-67-8	N/A	orl-rat 5000mg/kg
57. m-Xylene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-38-3	100 ppm (435mg/m3/8H)	orl-rat 5g/kg
58. tert-Butyl benzene	35163	101923	0.05	5.00	40001.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	98-06-6	N/A	N/A
59. sec-Butyl benzene	35163	101923	0.05	5.00	40002.4	2000	NA	NA	0.017	NA	NA	1999.8	22.9	135-98-8	N/A	orl-rat 2240mg/kg
60. Chlorobenzene	35163	101923	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	108-90-7	75 ppm (350mg/m3/8H)	orl-rat 2290mg/kg
61. 2-Chlorotoluene	35163	101923	0.05	5.00	40000.3	2000	NA	NA	0.017	NA	NA	1999.5	22.9	95-49-8	50 ppm (250mg/m3/8H)	orl-rat 3900mg/kg
62. 4-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	orl-rat 2100mg/kg
63. 1,2-Dichlorobenzene	35163	101923	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	95-50-1	50 ppm (300mg/m3) (CL)	orl-rat 500mg/kg
64. 1,3-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	ipr-mus 1062mg/kg
65. 1,4-Dichlorobenzene	35163	101923	0.05	5.00	40001.8	2000	NA	NA	0.017	NA	NA	1999.6	22.9	106-46-7	75 ppm (450mg/m3/8H)	orl-rat 500mg/kg
66. Isopropylbenzene	35163	101923	0.05	5.00	40000.8	2000	NA	NA	0.017	NA	NA	1999.5	22.9	98-82-8	50 ppm (245mg/m3/8H)	orl-rat 1400mg/kg
67. n-Propylbenzene	35163	101923	0.05	5.00	40003.4	2000	NA	NA	0.017	NA	NA	1999.7	23.0	103-65-1	N/A	orl-rat 8040mg/kg
68. o-Xylene	35163	101923	0.05	5.00	40040.8	2000	NA	NA	0.017	NA	NA	2001.5	23.0	95-47-6	100 ppm (435mg/m3/8H)	ipr-mus 1364mg/kg
69. p-Xylene	35163	101923	0.05	5.00	40000.6	2000	NA	NA	0.017	NA	NA	1999.5	22.9	106-42-3	100 ppm (435mg/m3/8H)	orl-rat 5g/kg

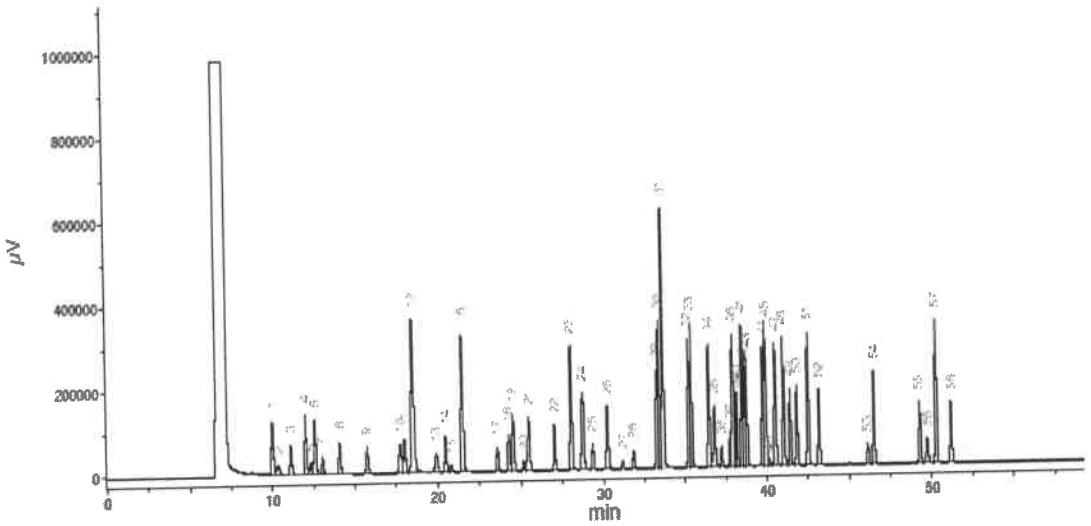
- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Run 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., Hydogen(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-1,2,3-trifluoroethane	10.33
3	1,1-Dichloroethene	11.10
4	Acetonitrile	12.00
5	Iodomethane	12.31
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	Methacrylonitrile/Methyl acrylate/Chloroform	18.49
13	Isobutanol/1,1,1-Trichloroethane	18.91
14	1,1-Dichloropropene	19.46
15	Carbon tetrachloride	20.79
16	Benzene/1,2-Dichloroethane	21.48
17	Trichloroethene	23.86
18	1,2-Dichloropropane	24.26
19	Methyl methacrylate	24.62
20	Bromodichloromethane	25.13
21	Dibromomethane/2-Nitropropane	25.46
22	cis-1,3-Dichloropropene	27.07
23	Toluene	28.09
24	Ethyl methacrylate/trans-1,3-Dichloropropene	28.73
25	1,1,2-Trichloroethane	29.34
26	Tetrachloroethene/1,3-Dichloropropane	30.34
27	Dibromochloromethane	31.16
28	1,2-Dibromoethane	31.84
29	Chlorobenzene	33.26
30	Ethylbenzene/1,1,1,2-Tetrachloroethane	33.40
31	m-Xylene/p-Xylene	33.85
32	o-Xylene	35.33
33	Styrene	35.50
34	Isopropylbenzene/Bromoform	35.48
35	cis-1,4-Dichloro-2-butene	36.80
36	1,1,2,2-Tetrachloroethane	37.23
37	1,2,3-Trichloropropane	37.77
38	n-Propylbenzene	37.92
39	trans-1,4-Dichloro-2-butene	38.05
40	Bromobenzene	38.14
41	1,3,5-Trimethylbenzene	38.50
42	2-Chlorotoluene	38.62
43	4-Chlorotoluene	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-Isopropyltoluene	41.02
49	1,3-Dichlorobenzene	41.12
50	1,4-Dichlorobenzene	41.63
51	n-Butylbenzene	42.52
52	1,2-Dichlorobenzene	42.18
53	1,2-Dibromo-3-chloropropane	46.12
54	Nitrobenzene	46.58
55	1,2,4-Trichlorobenzene	49.26
56	Hexachlorobutadiene	49.72
57	Naphthalene	50.46
58	1,2,3-Trichlorobenzene	51.16

Absolute Standards Inc.

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Phone: 203-281-2917
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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. 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	**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 sheild**
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	CAS#: 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. 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 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 (H2O = 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.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

Rec 09/16/24 2 Vials

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

Part Number: 91980
Lot Number: 091424
Description: Acrolein

Expiration Date: 101424
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 5000
NIST Test ID#: 6UTB

Solvent(s): **Lot#**
Water 072324Q

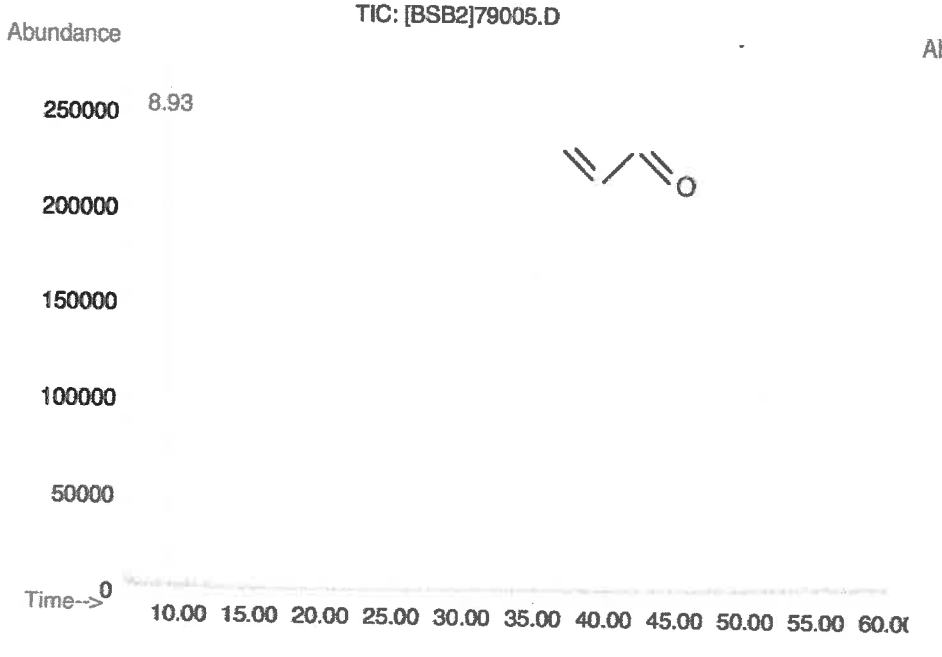
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.001 Flask Uncertainty

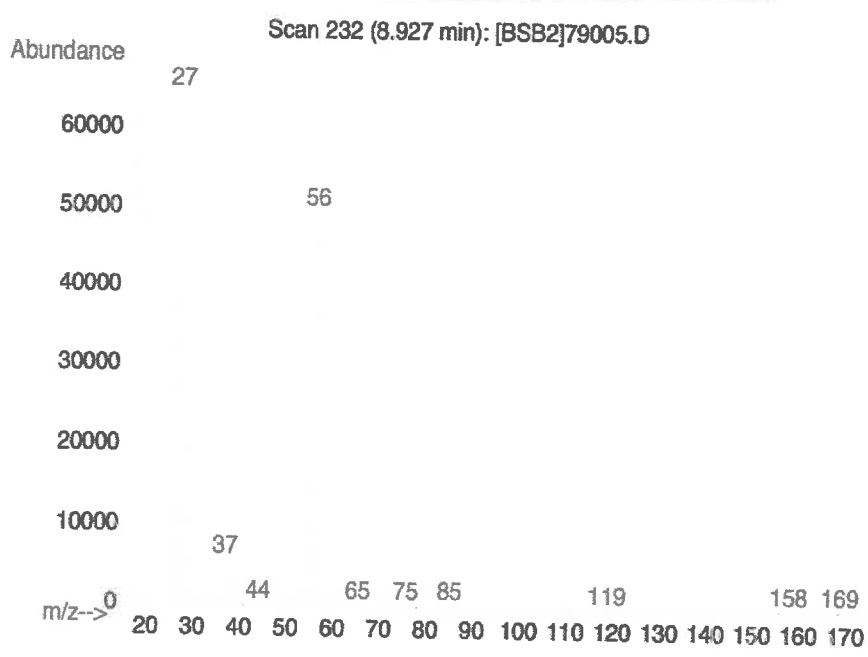
Formulated By: Justin Dippold 091424 DATE

Reviewed By: Pedro L. Rentas 091424 DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	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	orl-rat 46mg/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 Rentas. **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.





- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
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Certified Reference Material CRM

Rec 09/16/24 2 Vials

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

Part Number: 91980
Lot Number: 091424
Description: Acrolein

Expiration Date: 101424
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 5000
NIST Test ID#: 6UTB

Solvent(s): **Lot#**
Water 072324Q

5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.001 Flask Uncertainty

Formulated By: Justin Dippold 091424 DATE

Reviewed By: Pedro L. Rentas 091424 DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	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	orl-rat 46mg/kg

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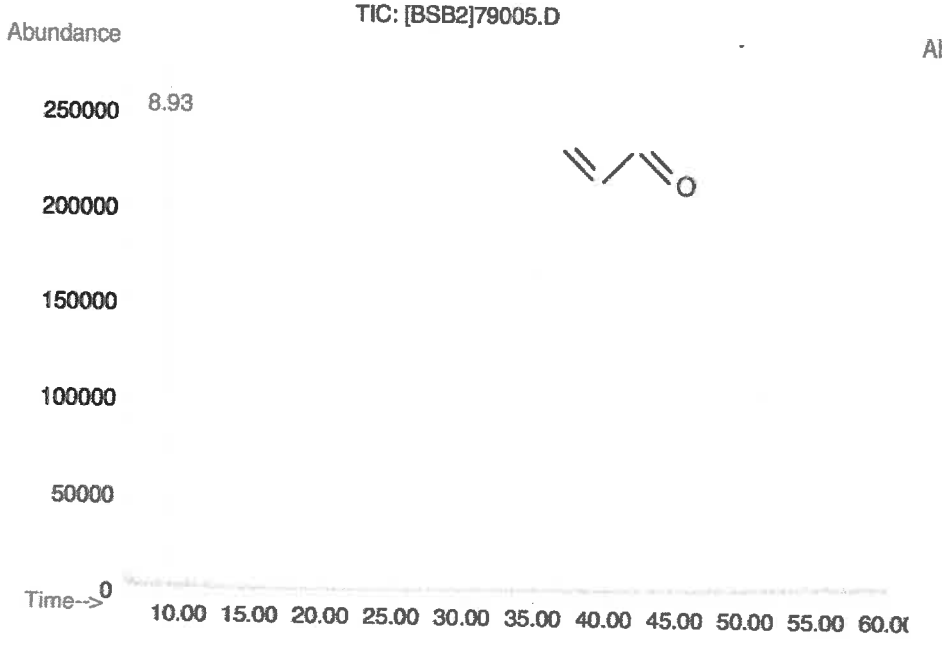

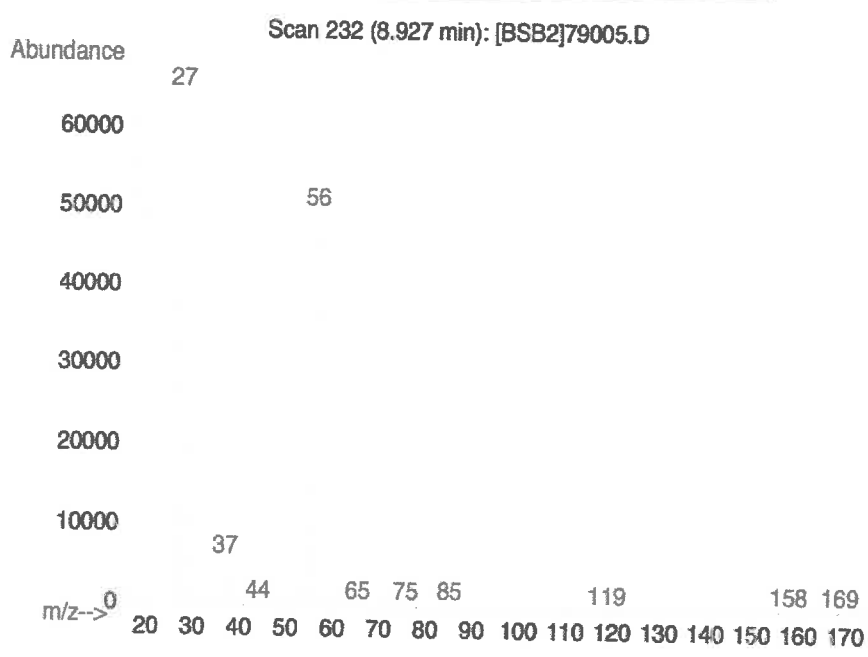

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Certified Reference Material CRM

Rec 12/6/24
20 vial

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT

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

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

Solvent(s): Methanol **Lot#** EJ143-US

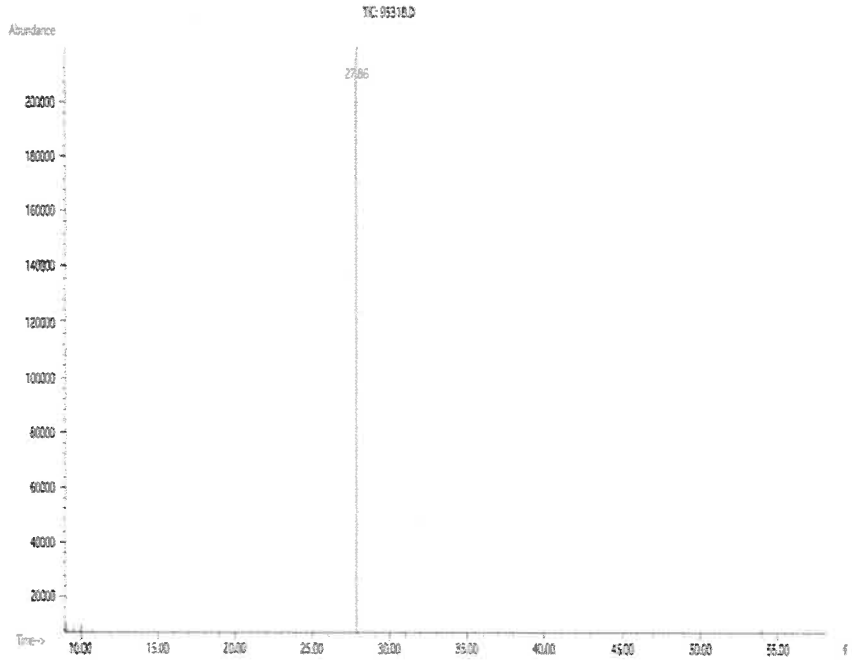
V14630 to V14649

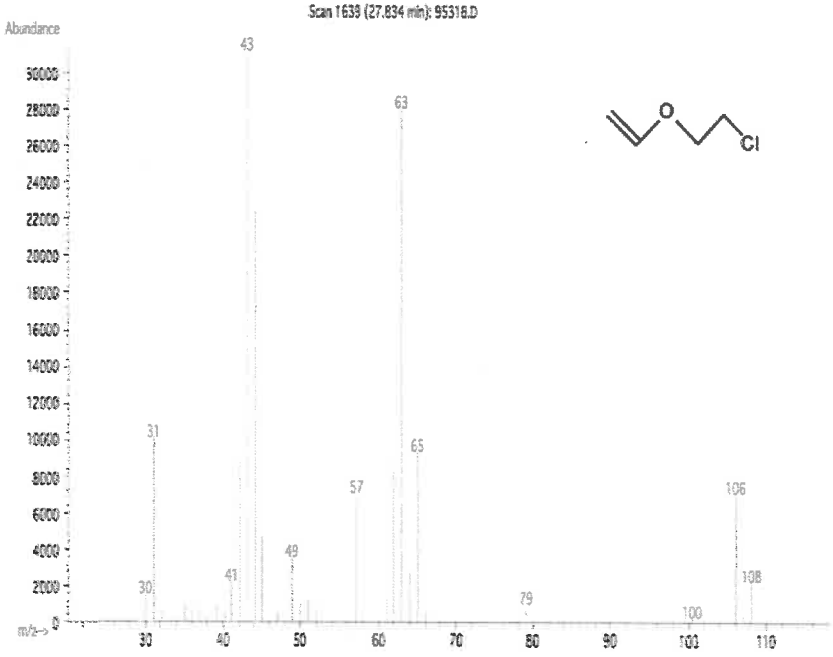
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

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

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. 2-Chloroethyl vinyl ether	74	MKCD0033	10000	99	0.2	0.50536	0.50550	10002.9	40.5	110-75-8	N/A	ori-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.





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Absolute Standards Inc.
PO Box 5585
Hamden, CT 06518-0585
Phone: 203-281-2917
FAX: 203-281-2922

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 Date Prepared/Revised	**1-352-323-3500** 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 sheild**
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	CAS#: 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. 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 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 (H2O = 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.

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20 vial

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https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

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

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

Solvent(s): Methanol **Lot#** EJ143-US

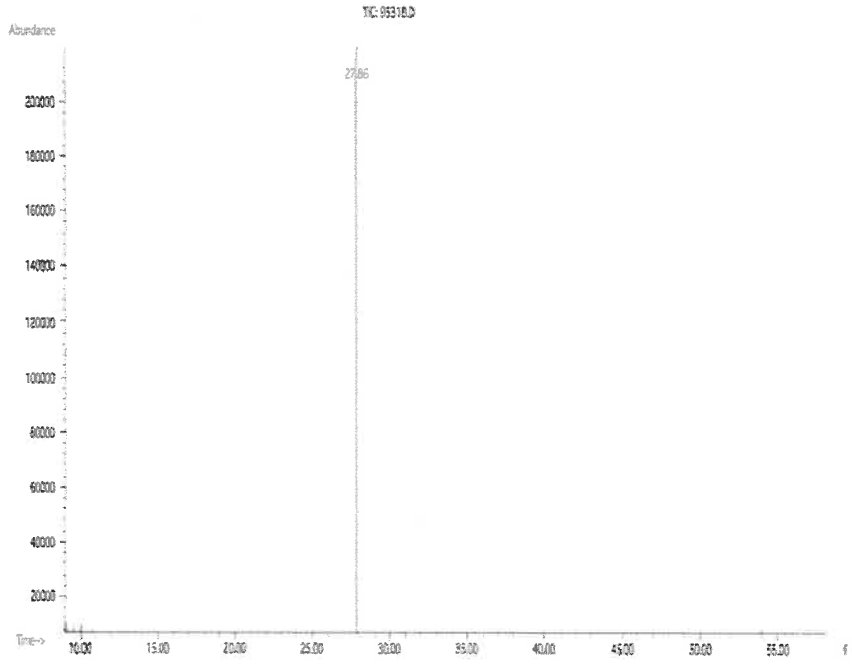
V14630 to V14649

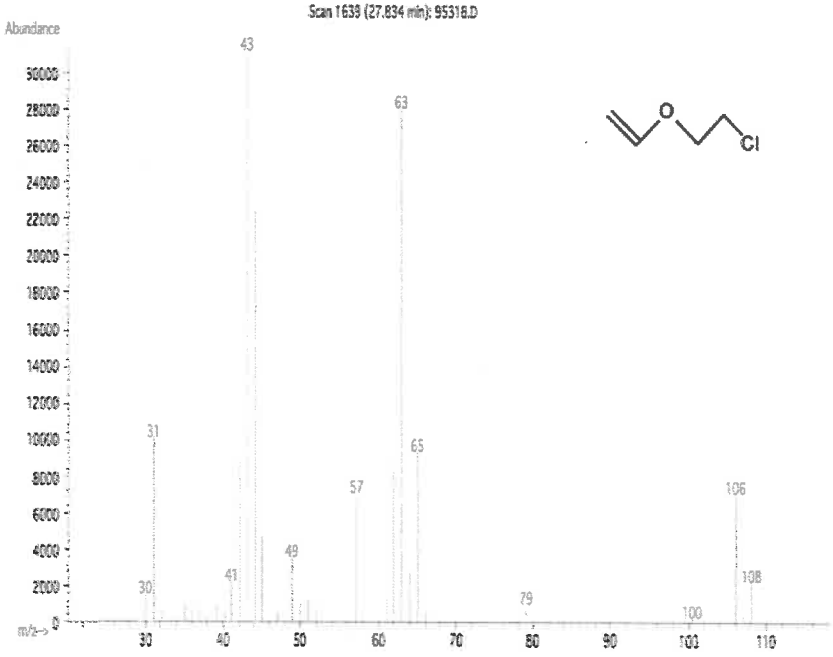
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

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

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. 2-Chloroethyl vinyl ether	74	MKCD0033	10000	99	0.2	0.50536	0.50550	10002.9	40.5	110-75-8	N/A	ori-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.





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H225	**Highly Flammable Liquid and Vapor**	**H301, 311, 331**	**Toxic if swallowed, skin contact, inhaled**
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Signal Word: DANGER

Section III - Composition

Components (Specific Chemical Identity; Common Name(s))			% (optional)
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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.
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Solubility in Water COMPLETE

Appearance and Odor CLEAR, COLORLESS LIQUID WITH CHARACTERISTIC PUNGENT ODOR.

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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

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Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

Rec 12/6/24
20 vial

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

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

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

Solvent(s): Methanol **Lot#** EJ143-US

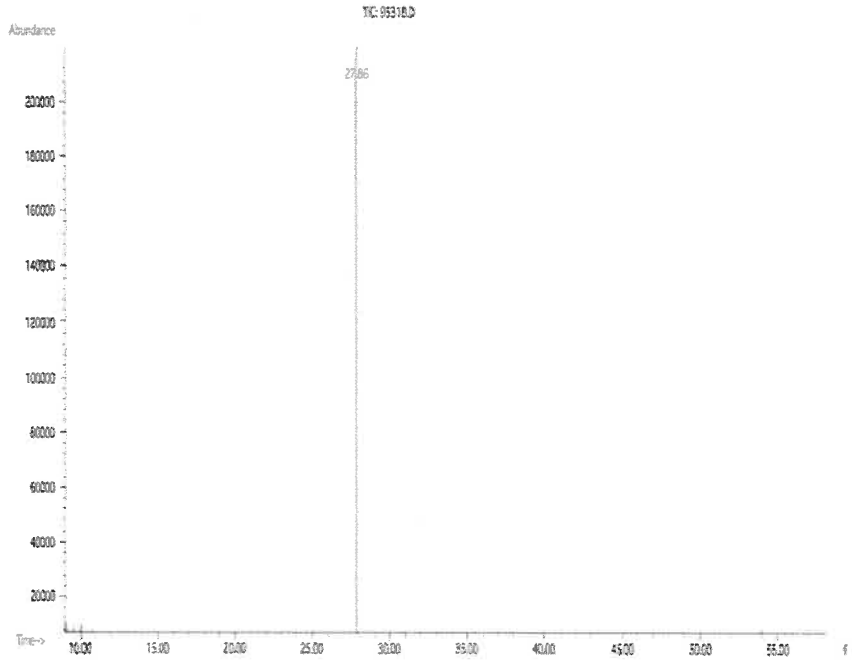
V14630 to V14649

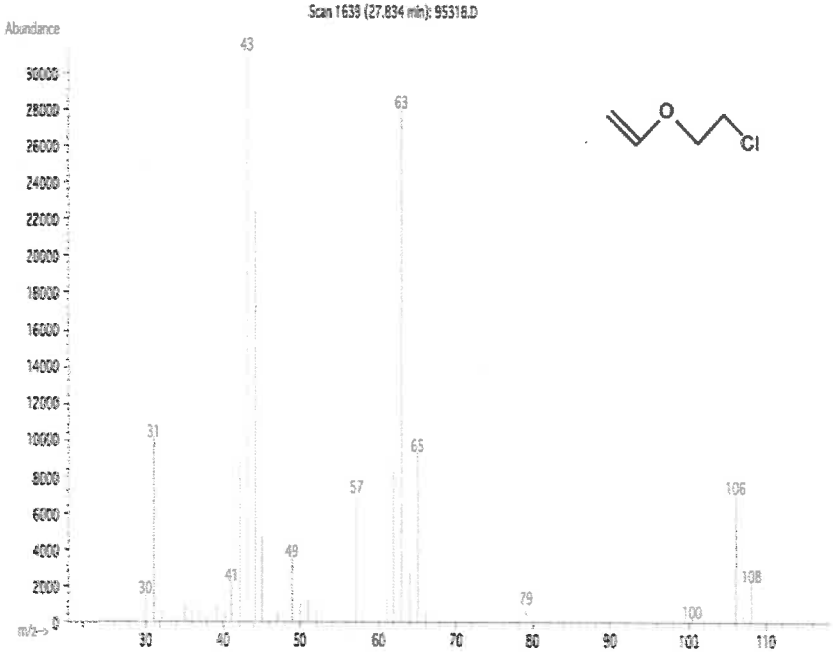
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

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

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. 2-Chloroethyl vinyl ether	74	MKCD0033	10000	99	0.2	0.50536	0.50550	10002.9	40.5	110-75-8	N/A	ori-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 certifed (+/-) 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).

Absolute Standards Inc.
PO Box 5585
Hamden, CT 06518-0585
Phone: 203-281-2917
FAX: 203-281-2922

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 Date Prepared/Revised	**1-352-323-3500** 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 sheild**
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	CAS#: 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. 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 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 (H2O = 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

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Dispose with normal Laboratory Solvent Waste.

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Proper shipping name: Methanol

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UN number: 1230 Class: 3 Packing group: II
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Description: 2-Chloroethyl vinyl ether

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Nominal Concentration (µg/mL): 10000
NIST Test ID#: 6UTB

Solvent(s): Methanol **Lot#** EJ143-US

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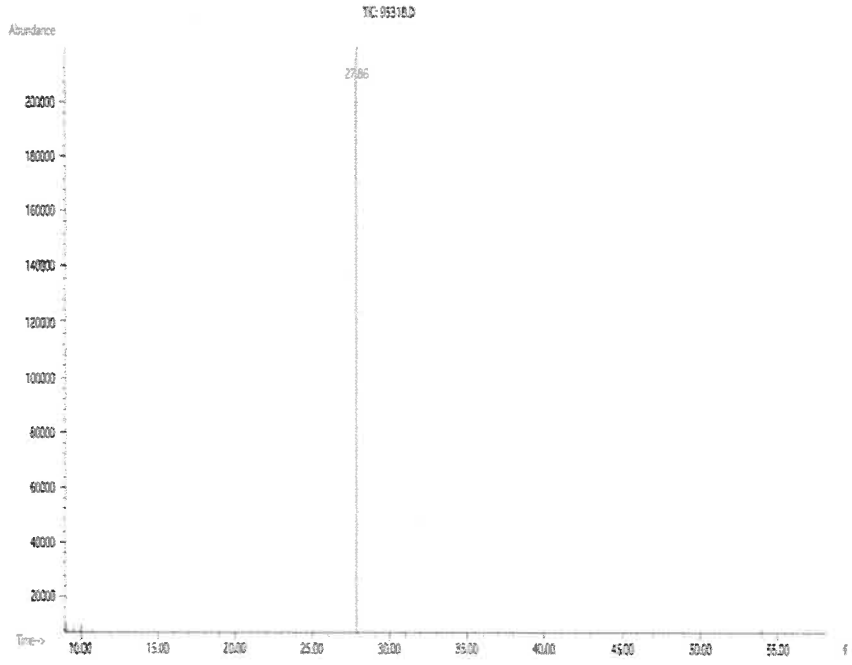

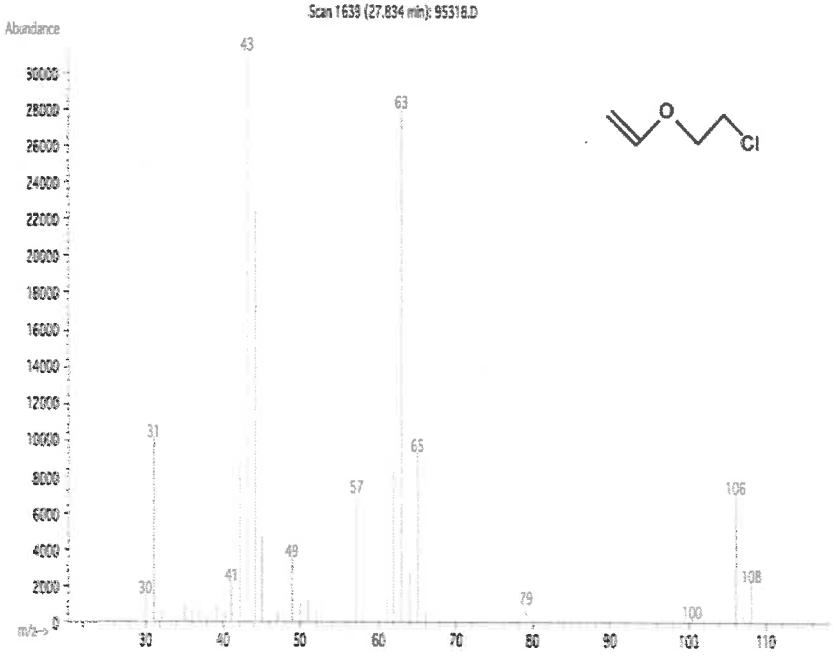

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UN number: 1230 Class: 3 Packing group: II
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UN number: 1230 Class: 3 Packing group: II
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RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

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.)

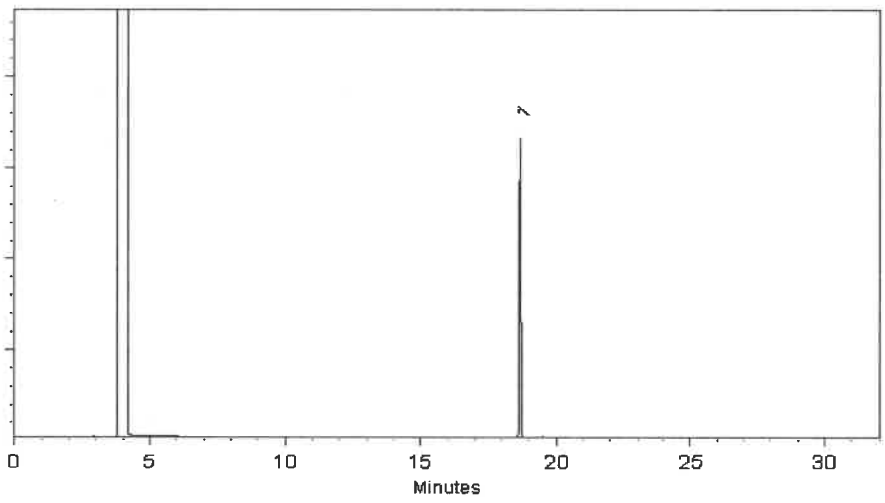
Inj. Temp:
200°C

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:

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

  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.

RESTEK
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

gravimetric

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

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:

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

  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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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.)

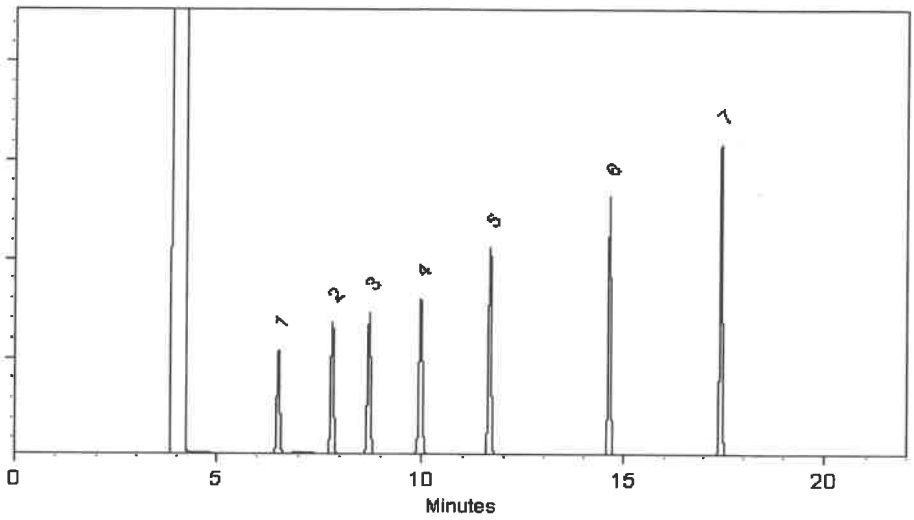
Inj. Temp:
200°C

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 - Operations Tech I

Date Mixed: 28-Mar-2024 **Balance Serial #** B707717271

Dillan 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:

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

  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. : 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.)

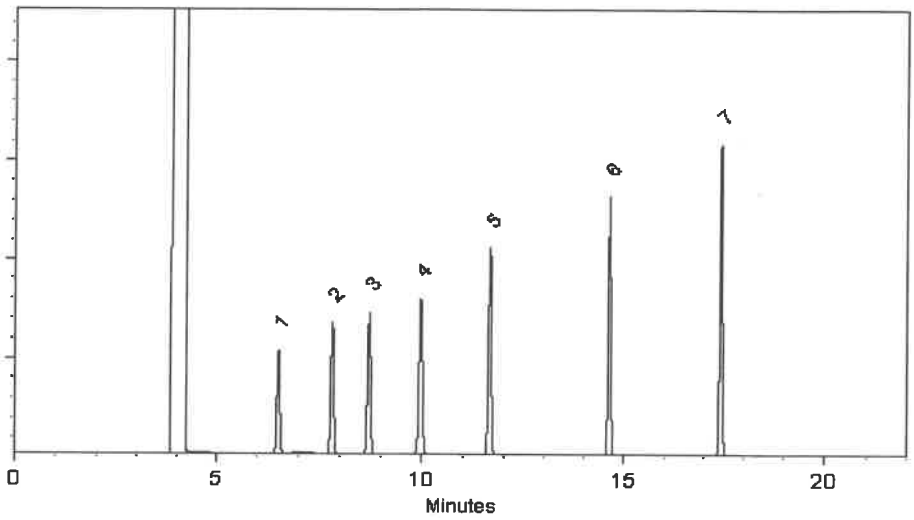
Inj. Temp:
200°C

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 - Operations Tech I

Date Mixed: 28-Mar-2024 **Balance Serial #** B707717271

Dillan 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:

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

  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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Certificate #3222.02

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:** 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:

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

  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.)

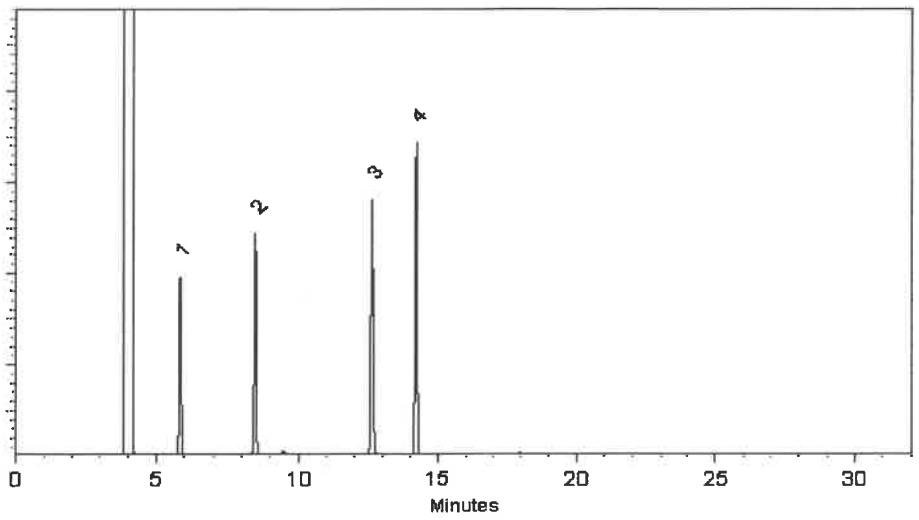
Inj. Temp:
200°C

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:

- 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.
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Certificate #3222.02

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.)

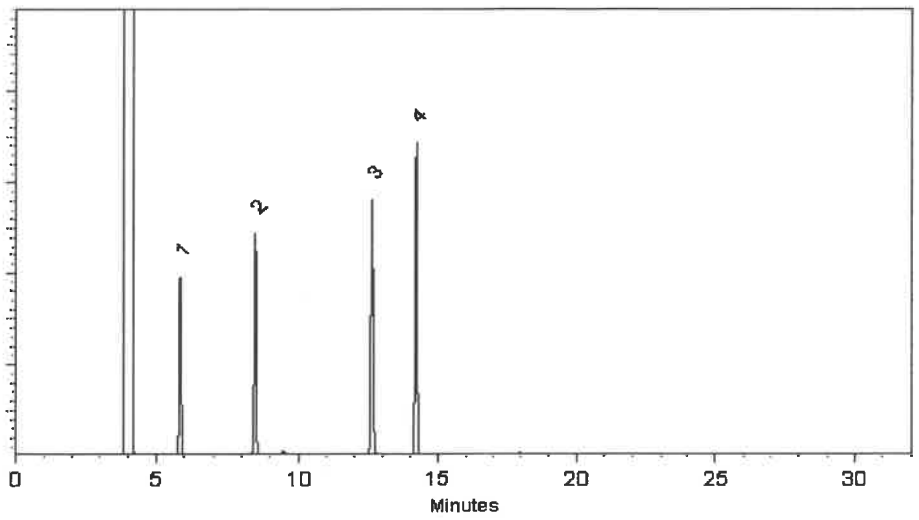
Inj. Temp:
200°C

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:

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

  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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Certificate #3222.02

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.)

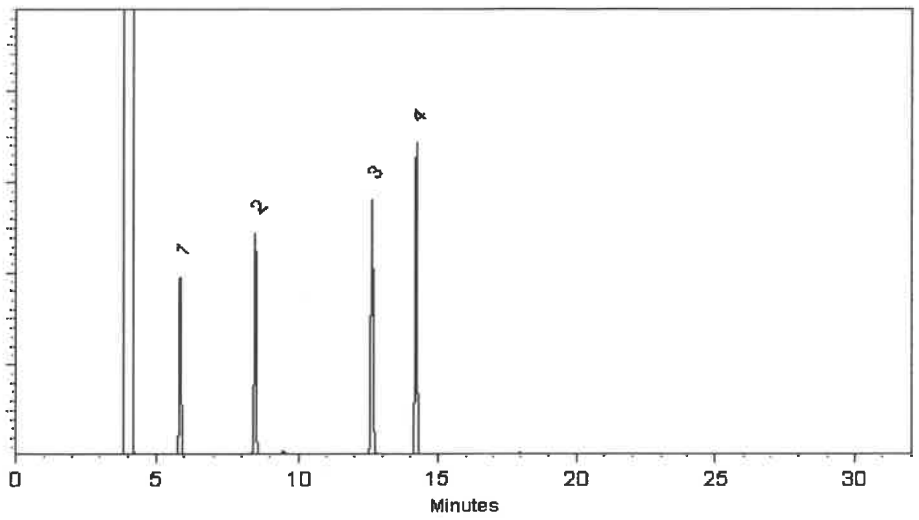
Inj. Temp:
200°C

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.
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Manufacturing Notes:

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Handling Notes:

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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.)

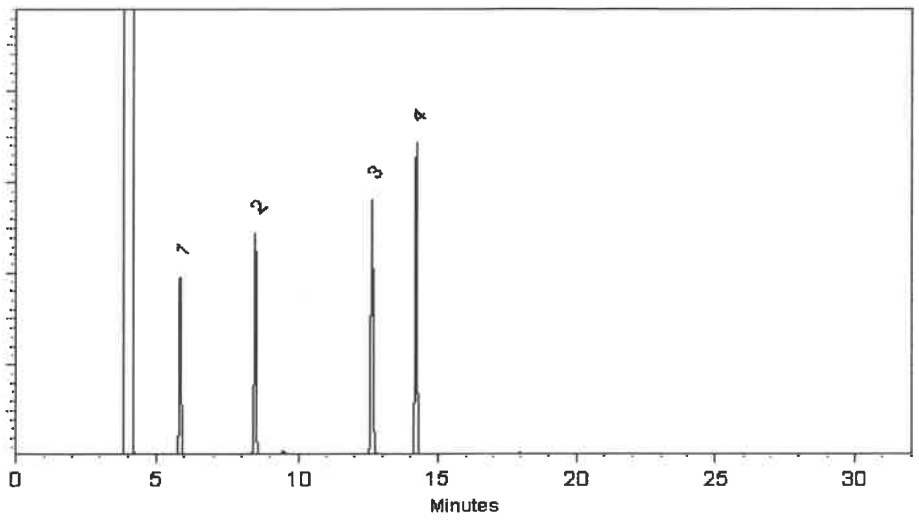
Inj. Temp:
200°C

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:

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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:

- 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.
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Testing Laboratory
Certificate #3222.02

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.)

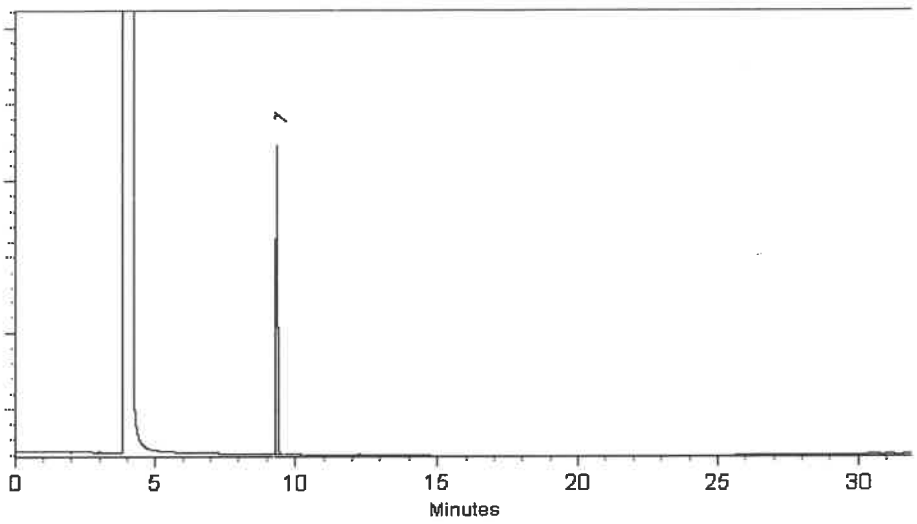
Inj. Temp:
200°C

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/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:

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

  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.)

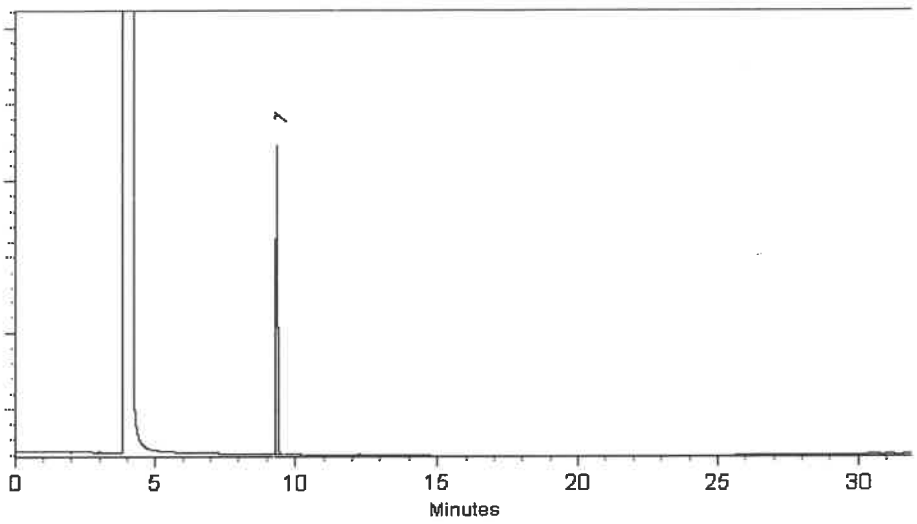
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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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/μECD, GC/MS, LC/MS, RI, and/or melting point.
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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

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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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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.)

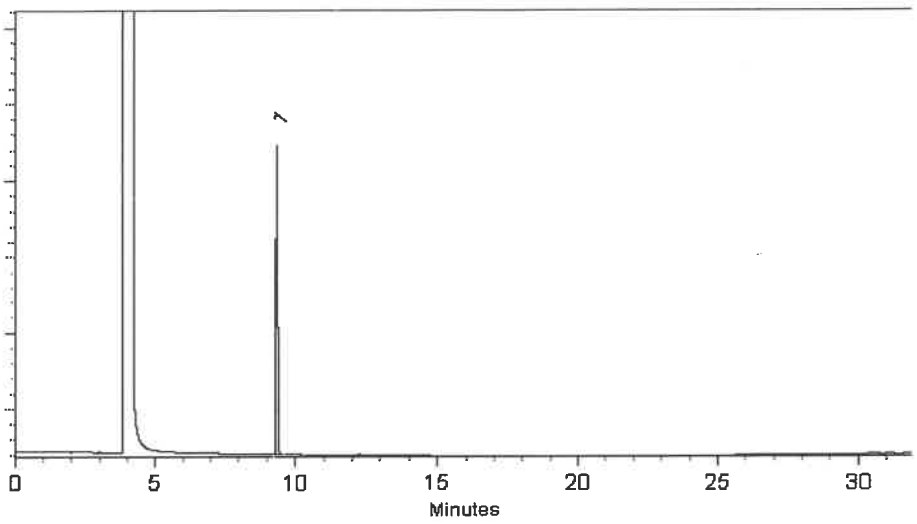
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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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:

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Certificate #3222.02

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.)

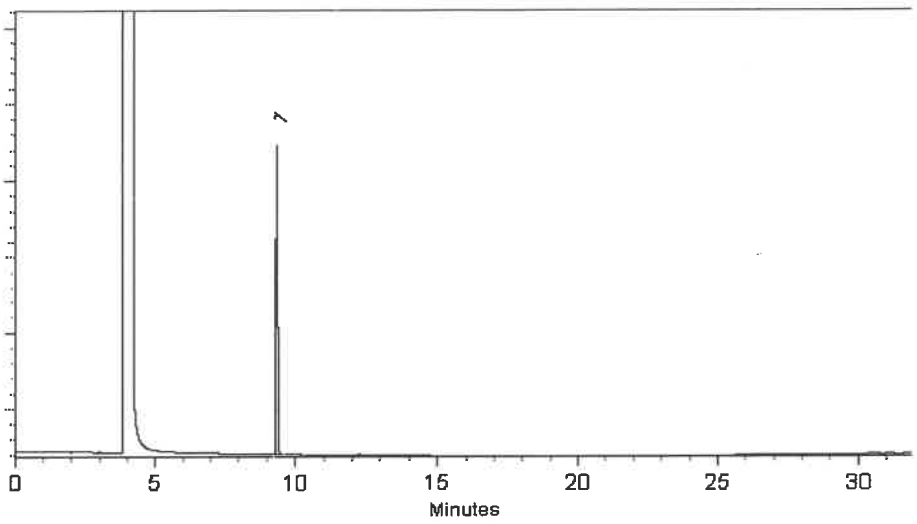
Inj. Temp:
200°C

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/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:

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

  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

CERTIFIED REFERENCE MATERIAL

30 Vial

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V14727 to
V14756

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Reference Material Producer
Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

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.

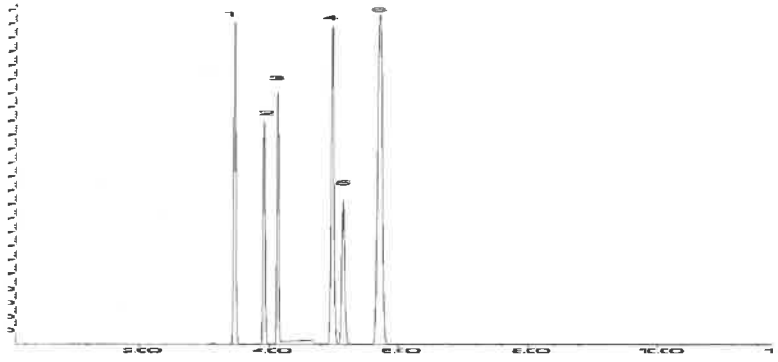
Inj. Temp:
200°C

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 Suckar - 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:

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

  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

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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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
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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.

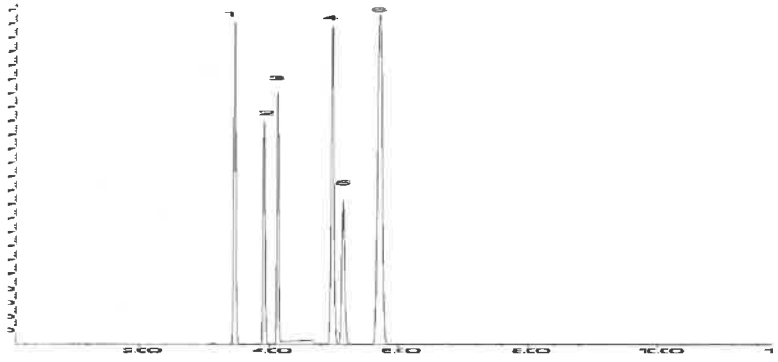
Inj. Temp:
200°C

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 Suckar - 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:

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

  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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J14842 to 14846

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Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

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.)

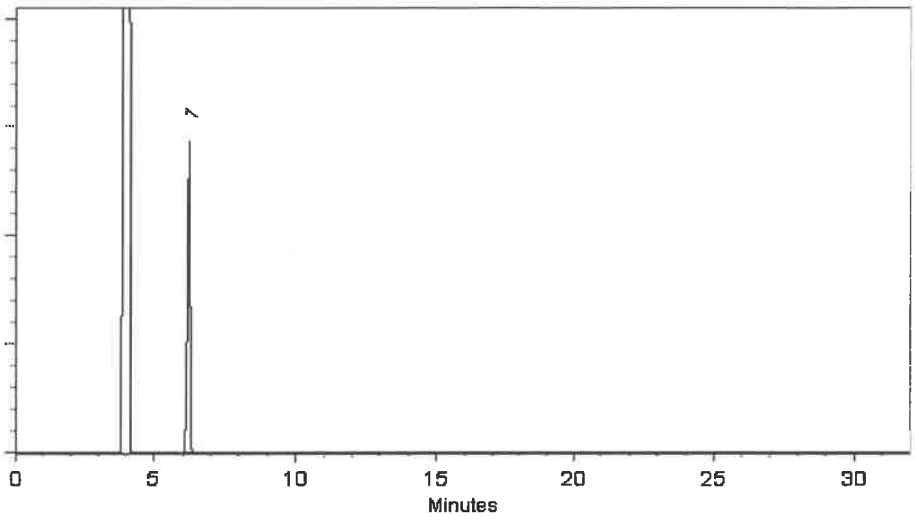
Inj. Temp:
200°C

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.

Aaron Enyart - Operations Tech I

Date Mixed: 07-Oct-2024 **Balance Serial #** B251644995

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/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:

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

  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.

Zoviny Rec 01/08/21

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

V14803 - V14822

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

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.)

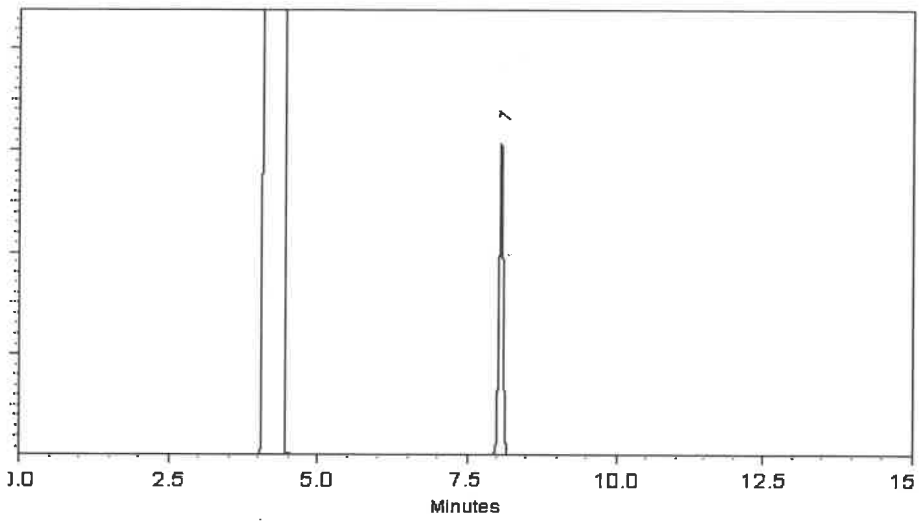
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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Ethan Winiarski - Operations Tech I

Date Mixed: 24-Dec-2024 **Balance Serial #** 1127510105

Dillan Murphy - Operations Technician I

Date Passed: 02-Jan-2025

REVIEWED

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.
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Purity Notes:

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Handling Notes:

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Zoviny Rec 01/08/21

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

V14803 - V14822

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ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

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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.)

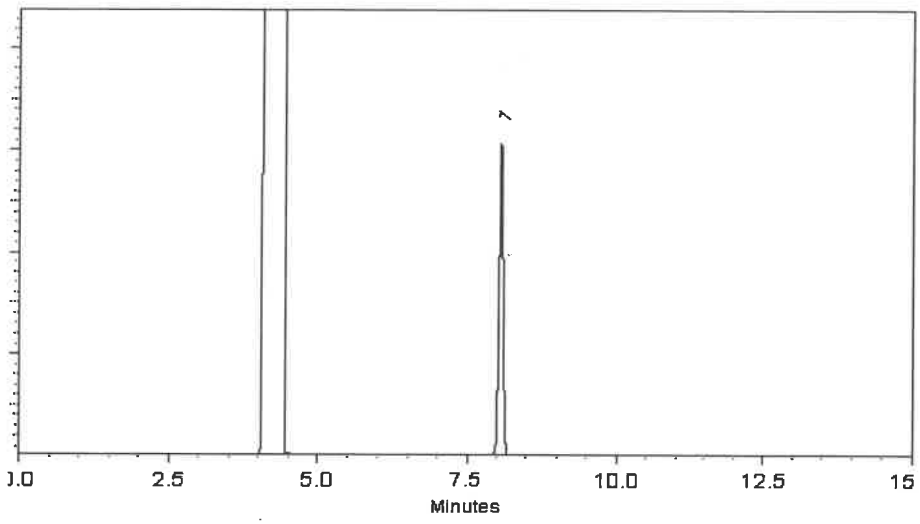
Inj. Temp:
200°C

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

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:

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

  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.

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

Rec 05/09/25

avantor™ | J.T.Baker®

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_3OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.3 ppm
Titrable Acid (µeq/g)	≤ 0.3	0.3
Titrable 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

JCroak

Jamie Croak
Director Quality Operations, Bioscience Production

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

Rec 05/09/25

avantor™ | J.T.Baker®

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_3OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.3 ppm
Titrable Acid (µeq/g)	≤ 0.3	0.3
Titrable 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

JCroak

Jamie Croak
Director Quality Operations, Bioscience Production

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

Rec 05/21/25

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

5.014

Part Number:	91980
Lot Number:	051925
Description:	Acrolein
Expiration Date:	061925
Recommended Storage:	Refrigerate (4 °C)
Nominal Concentration (µg/mL):	5000
NIST Test ID#:	6UTB

Solvent(s): Water **Lot#** 041725Q

J14944-V14948

5E-05 Balance Uncertainty

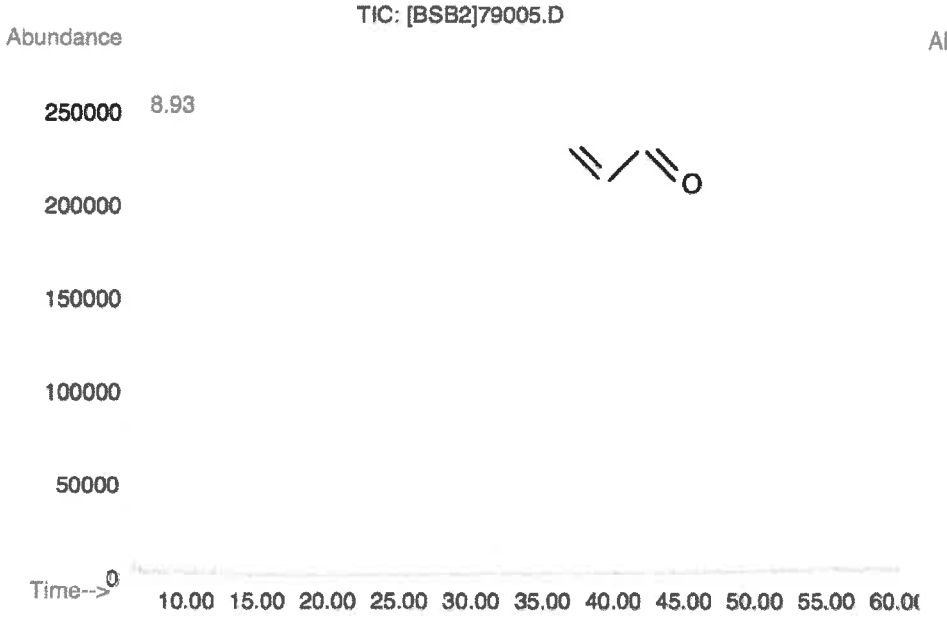
Weight(s) shown below were combined and diluted to (mL): 10.0 0.001 Flask Uncertainty

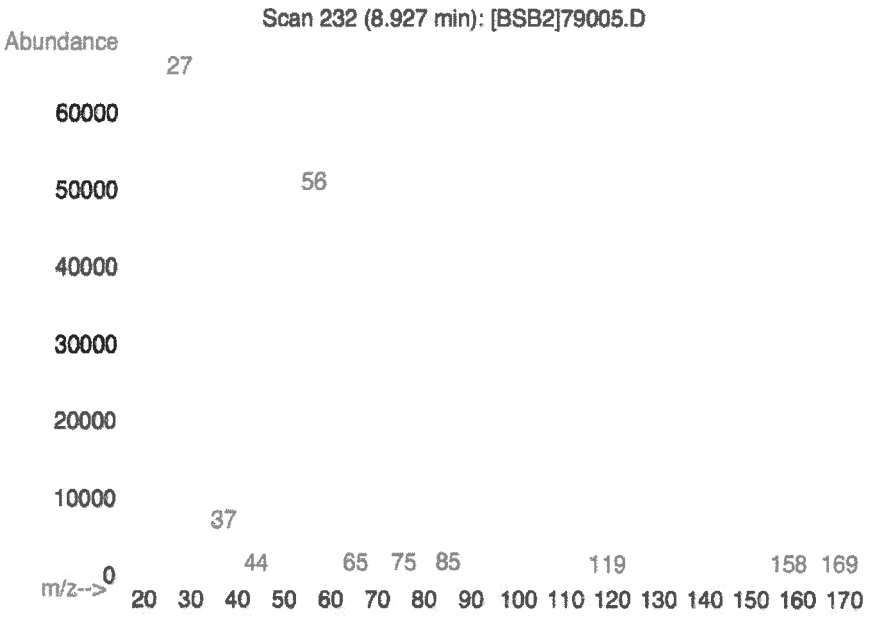
Lawrence Barry 051925
Formulated By: Lawrence Barry DATE

Pedro Rentas 051925
Reviewed By: Pedro L. Rentas DATE

	Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1.	Acrolein	5	103755V10F	5000	97	0.5	0.05166	0.05170	5004.1	52.5	107-02-8	0.1 ppm	orl-rat 46mg/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 Rentas. **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.





- **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

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www.absolutestandards.com

Certified Reference Material CRM

Rec 05/21/25

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

5.014

Part Number:	91980
Lot Number:	051925
Description:	Acrolein
Expiration Date:	061925
Recommended Storage:	Refrigerate (4 °C)
Nominal Concentration (µg/mL):	5000
NIST Test ID#:	6UTB

Solvent(s): Water **Lot#** 041725Q

J14944-V14948

5E-05 Balance Uncertainty

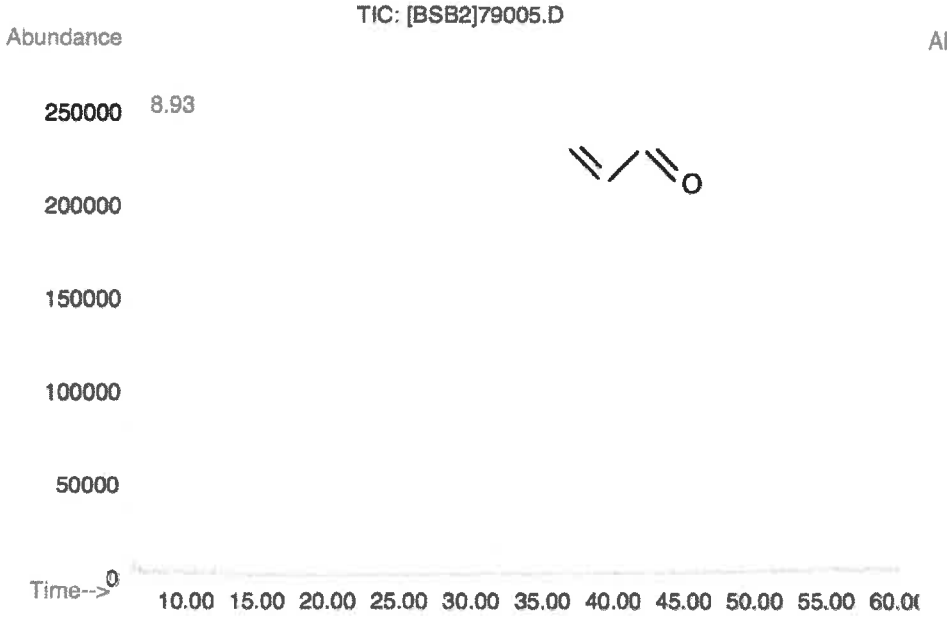
Weight(s) shown below were combined and diluted to (mL): 10.0 0.001 Flask Uncertainty

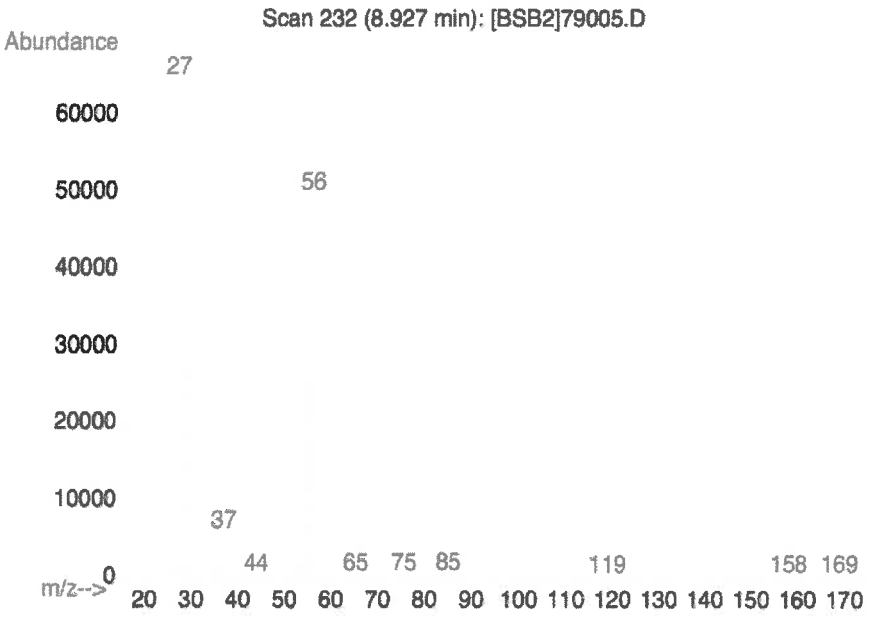
Lawrence Barry 051925
Formulated By: Lawrence Barry DATE

Pedro Rentas 051925
Reviewed By: Pedro L. Rentas DATE

	Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1.	Acrolein	5	103755V10F	5000	97	0.5	0.05166	0.05170	5004.1	52.5	107-02-8	0.1 ppm	orl-rat 46mg/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 Rentas. **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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  Rev 1.0, 2/25/2025

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Certified Reference Material CRM

Rec 05/21/25

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CERTIFIED WEIGHT REPORT

5.014

Part Number:	91980
Lot Number:	051925
Description:	Acrolein
Expiration Date:	061925
Recommended Storage:	Refrigerate (4 °C)
Nominal Concentration (µg/mL):	5000
NIST Test ID#:	6UTB

Solvent(s): Water **Lot#** 041725Q

J14944-V14948

5E-05 Balance Uncertainty

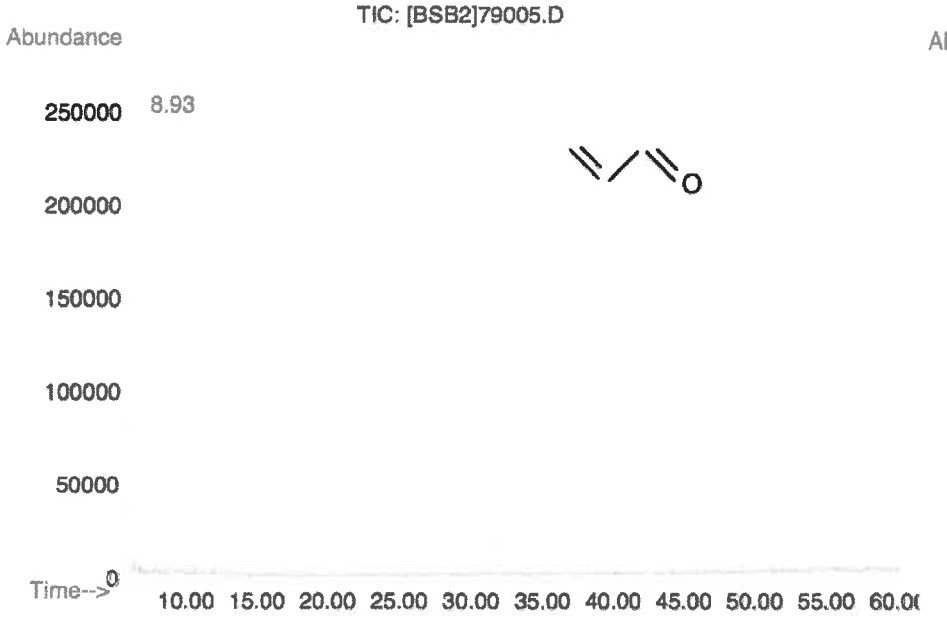
Weight(s) shown below were combined and diluted to (mL): 10.0 0.001 Flask Uncertainty

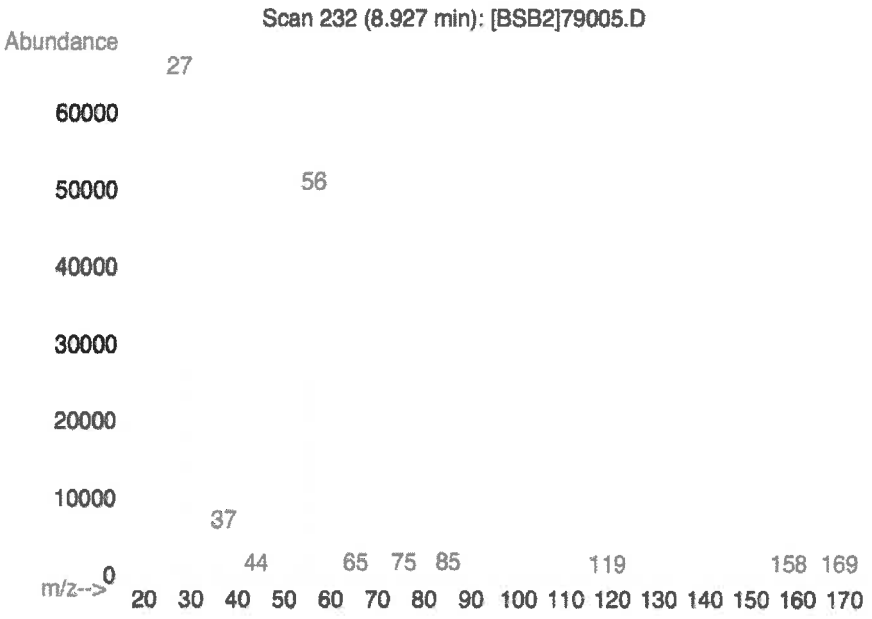
Lawrence Barry 051925
Formulated By: Lawrence Barry DATE

Pedro Rentas 051925
Reviewed By: Pedro L. Rentas DATE

	Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1.	Acrolein	5	103755V10F	5000	97	0.5	0.05166	0.05170	5004.1	52.5	107-02-8	0.1 ppm	orl-rat 46mg/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 Rentas. **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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Rec 05/21/25

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CERTIFIED WEIGHT REPORT

5.014

Part Number:	91980
Lot Number:	051925
Description:	Acrolein
Expiration Date:	061925
Recommended Storage:	Refrigerate (4 °C)
Nominal Concentration (µg/mL):	5000
NIST Test ID#:	6UTB

Solvent(s): Water **Lot#** 041725Q

J14944-V14948

5E-05 Balance Uncertainty

Weight(s) shown below were combined and diluted to (mL): 10.0 0.001 Flask Uncertainty

Lawrence Barry 051925
Formulated By: Lawrence Barry DATE

Pedro Rentas 051925
Reviewed By: Pedro L. Rentas DATE

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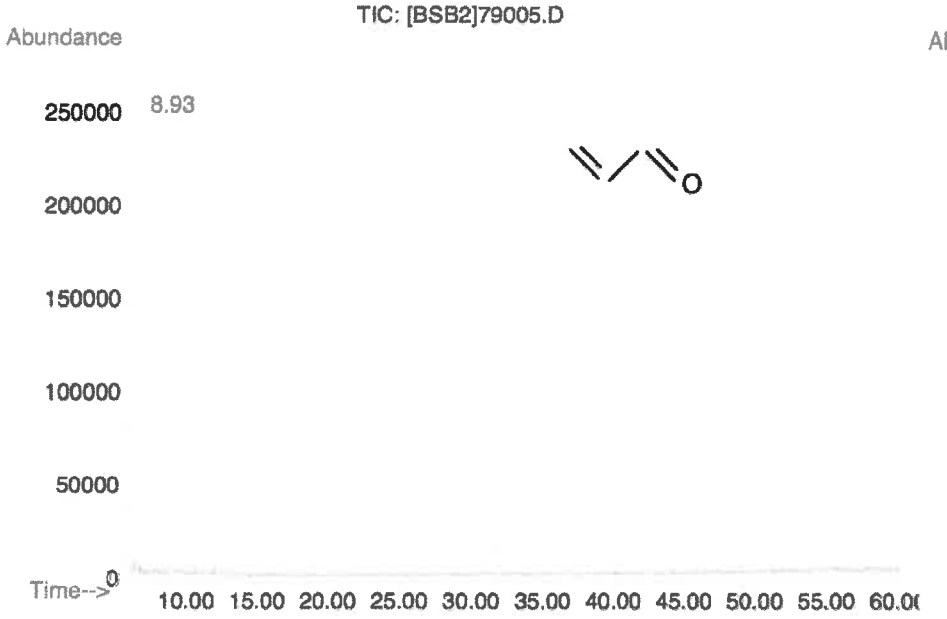

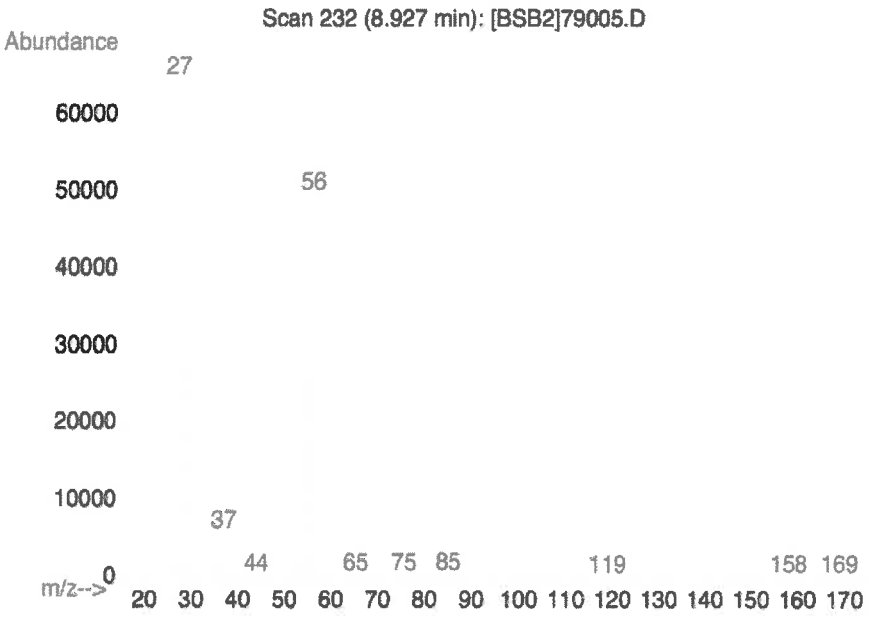

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  Rev 1.0, 2/25/2025

SHIPPING DOCUMENTS

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 · Fax (908) 789-8922
www.chemtech.net

ALLIANCE PROJECT NO. Q2267
QUOTE NO.
COC Number 2046471

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Parsons
ADDRESS: 301 Plainfield Rd
CITY Syracuse STATE: NY ZIP: 13212
ATTENTION: Stephen Liberatore
PHONE: 315-418-8767 FAX: NA

CLIENT PROJECT INFORMATION

PROJECT NAME: Con Ed Atlantic Ave
PROJECT NO.: 453957-0100 LOCATION: Brooklyn, NY
PROJECT MANAGER: Stephen Liberatore
e-mail: Stephen.Liberatore@parsons.com
PHONE: 315-418-8767 FAX: NA

CLIENT BILLING INFORMATION

BILL TO: Parsons PO#:
ADDRESS: 301 Plainfield Rd
CITY Syracuse STATE: NY ZIP: 13212
ATTENTION: Stephen Liberatore PHONE: 315-418-8767

DATA TURNAROUND INFORMATION

FAX (RUSH) 5 Day TAT 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 + Raw Data) ☐ NYS ASP A ☐ NYS ASP B
☐ Other
☐ EDD FORMAT

ANALYSIS

1: TCLP VOCs
2: TCLP SVOCs
3: PCB
4: Flash point
5: TCLP Extraction
6: TCLP metals/mercury
7: pH & reactive cyanide & reactive sulfide
8:
9:

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
								E	E	E	E	E	E	E			← Specify Preservatives
1.	WC_20250605	W		X	6/5/25	1520	8	X	X	X	X	X	X	X			A-HCl D-NaOH
2.																	B-HN03 E-ICE
3.																	C-H2SO4 F-OTHER
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1.	6-5-25/1330	1. 1330 6-6-25
2.		2.
3.	6-6-25 1642	3.

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 3.0 °C
Comments: Please CC kirsten.valentini@parsons.com

Page 1 of 1

CLIENT: ☐ Hand Delivered ☐ Other

Shipment Complete ☐ YES ☐ NO

WHITE - ALLIANCE COPY FOR RETURN TO CLIENT YELLOW - ALLIANCE COPY PINK - SAMPLER COPY

284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

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

QA Control Code: A2070148