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

Cover Page

Order ID : Q1666

Project ID : 540 Degraw St, Brooklyn, NY - E9309

Client : ENTACT

Lab Sample Number	Client Sample Number
Q1666-01	TW-WTS-05

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: 4/2/2025

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 #: **Q1666**

	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:** **04/02/2025**

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LAB CHRONICLE

OrderID:	Q1666	**OrderDate:**	3/27/2025 1:05:00 PM
Client:	ENTACT	**Project:**	540 Degraw St, Brooklyn, NY - E9309
Contact:	Jarod Stanfield	**Location:**	I31,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1666-01	**TW-WTS-05**	**Water**			**03/25/25**			**03/27/25**
			VOCMS Group4	8260-Low			03/28/25	

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Hit Summary Sheet
SW-846

SDG No.: Q1666

Client: ENTACT

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units

Client ID:

0

Total Voc :

Total Concentration:

QC SUMMARY

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Surrogate Summary

SDG No.: Q1666

Client: ENTACT

Analytical Method: SW8260-Low

Lab Sample ID	Client ID	Parameter	Spike	Result	RecoveryQual	Limits Low	Limits High
Q1666-01	TW-WTS-05	1,2-Dichloroethane-d4	50	57.2	114	70 (74)	130 (125)
		Dibromofluoromethane	50	53.0	106	70 (75)	130 (124)
		Toluene-d8	50	48.5	97	70 (86)	130 (113)
		4-Bromofluorobenzene	50	44.8	90	70 (77)	130 (121)
VN0328WBL01	VN0328WBL01	1,2-Dichloroethane-d4	50	57.5	115	70 (74)	130 (125)
		Dibromofluoromethane	50	54.0	108	70 (75)	130 (124)
		Toluene-d8	50	48.0	96	70 (86)	130 (113)
		4-Bromofluorobenzene	50	41.9	84	70 (77)	130 (121)
VN0328WBS01	VN0328WBS01	1,2-Dichloroethane-d4	50	51.0	102	70 (74)	130 (125)
		Dibromofluoromethane	50	52.6	105	70 (75)	130 (124)
		Toluene-d8	50	54.8	110	70 (86)	130 (113)
		4-Bromofluorobenzene	50	51.7	103	70 (77)	130 (121)
VN0328WBSD0	VN0328WBSD01	1,2-Dichloroethane-d4	50	50.4	101	70 (74)	130 (125)
		Dibromofluoromethane	50	50.7	101	70 (75)	130 (124)
		Toluene-d8	50	50.9	102	70 (86)	130 (113)
		4-Bromofluorobenzene	50	48.7	97	70 (77)	130 (121)

( ) = LABORATORY INHOUSE LIMIT

( ) = LABORATORY INHOUSE LIMIT

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Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q1666

Client: ENTACT

Analytical Method: SW8260-Low **Datafile :** VN086143.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Limits Low	Limits High	Limits RPD
VN0328WBS01	Methyl tert-butyl Ether	20	18.4	ug/L	92			70 (78)	130 (114)	
	Carbon Tetrachloride	20	19.1	ug/L	96			70 (77)	130 (113)	
	Chloroform	20	20.0	ug/L	100			70 (79)	130 (113)	
	1,1,1-Trichloroethane	20	19.1	ug/L	96			70 (80)	130 (108)	
	Benzene	20	20.3	ug/L	102			70 (82)	130 (109)	
	Toluene	20	20.8	ug/L	104			70 (82)	130 (110)	
	Tetrachloroethene	20	20.2	ug/L	101			70 (67)	130 (123)	
	Ethyl Benzene	20	19.5	ug/L	98			70 (83)	130 (109)	
	m/p-Xylenes	40	40.6	ug/L	102			70 (82)	130 (110)	
	o-Xylene	20	20.0	ug/L	100			70 (83)	130 (109)	

( ) = LABORATORY INHOUSE LIMIT

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Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q1666

Client: ENTACT

Analytical Method: SW8260-Low **Datafile :** VN086144.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Limits Low	Limits High	Limits RPD
VN0328WBSD01	Methyl tert-butyl Ether	20	19.6	ug/L	98	6		70 (78)	130 (114)	20 (20)
	Carbon Tetrachloride	20	18.2	ug/L	91	5		70 (77)	130 (113)	20 (20)
	Chloroform	20	20.4	ug/L	102	2		70 (79)	130 (113)	20 (20)
	1,1,1-Trichloroethane	20	18.7	ug/L	94	2		70 (80)	130 (108)	20 (20)
	Benzene	20	20.3	ug/L	102	0		70 (82)	130 (109)	20 (20)
	Toluene	20	20.9	ug/L	104	0		70 (82)	130 (110)	20 (20)
	Tetrachloroethene	20	19.3	ug/L	97	4		70 (67)	130 (123)	20 (20)
	Ethyl Benzene	20	18.5	ug/L	93	5		70 (83)	130 (109)	20 (20)
	m/p-Xylenes	40	38.1	ug/L	95	7		70 (82)	130 (110)	20 (20)
	o-Xylene	20	19.7	ug/L	99	1		70 (83)	130 (109)	20 (20)

( ) = LABORATORY INHOUSE LIMIT

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VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VN0328WBL01

Lab Name: CHEMTECH Contract: ENTA05

Lab Code: CHEM Case No.: Q1666 SAS No.: Q1666 SDG NO.: Q1666

Lab File ID: VN086142.D Lab Sample ID: VN0328WBL01

Date Analyzed: 03/28/2025 Time Analyzed: 11:43

GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

Instrument ID: MSVOA_N

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
VN0328WBS01	VN0328WBS01	VN086143.D	03/28/2025
VN0328WBSD01	VN0328WBSD01	VN086144.D	03/28/2025
TW-WTS-05	Q1666-01	VN086161.D	03/28/2025

COMMENTS:

Alliance TECHNICAL GROUP

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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: ENTA05

Lab Code: CHEM Case No.: Q1666 SAS No.: Q1666 SDG NO.: Q1666

Lab File ID: VN085994.D BFB Injection Date: 03/18/2025

Instrument ID: MSVOA_N BFB Injection Time: 08:52

GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.2
75	30.0 - 60.0% of mass 95	52.9
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.6 (0.7) 1
174	50.0 - 100.0% of mass 95	87.1
175	5.0 - 9.0% of mass 174	6.7 (7.7) 1
176	95.0 - 101.0% of mass 174	83.7 (96.2) 1
177	5.0 - 9.0% of mass 176	5.4 (6.4) 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
VSTDICC100	VSTDICC100	VN085996.D	03/18/2025	11:44
VSTDICCC050	VSTDICCC050	VN085997.D	03/18/2025	12:08
VSTDICC020	VSTDICC020	VN085998.D	03/18/2025	12:32
VSTDICC010	VSTDICC010	VN085999.D	03/18/2025	12:57
VSTDICC005	VSTDICC005	VN086000.D	03/18/2025	13:21
VSTDICC001	VSTDICC001	VN086001.D	03/18/2025	14:09

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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: ENTA05

Lab Code: CHEM Case No.: Q1666 SAS No.: Q1666 SDG NO.: Q1666

Lab File ID: VN086139.D BFB Injection Date: 03/28/2025

Instrument ID: MSVOA_N BFB Injection Time: 10:11

GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.4
75	30.0 - 60.0% of mass 95	49.7
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	1.4 (1.6) 1
174	50.0 - 100.0% of mass 95	88
175	5.0 - 9.0% of mass 174	6.9 (7.8) 1
176	95.0 - 101.0% of mass 174	83.6 (95) 1
177	5.0 - 9.0% of mass 176	5.9 (7) 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	VN086140.D	03/28/2025	10:44
VN0328WBL01	VN0328WBL01	VN086142.D	03/28/2025	11:43
VN0328WBS01	VN0328WBS01	VN086143.D	03/28/2025	12:07
VN0328WBSD01	VN0328WBSD01	VN086144.D	03/28/2025	12:41
TW-WTS-05	Q1666-01	VN086161.D	03/28/2025	19:30

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VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: ENTA05

Lab Code: CHEM Case No.: Q1666 SAS No.: Q1666 SDG NO.: Q1666

Lab File ID: VN086140.D Date Analyzed: 03/28/2025

Instrument ID: MSVOA_N Time Analyzed: 10:44

GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	218266	8.22	341726	9.10	321573	11.87
UPPER LIMIT	436532	8.724	683452	9.6	643146	12.365
LOWER LIMIT	109133	7.724	170863	8.6	160787	11.365
EPA SAMPLE NO.						
TW-WTS-05	186773	8.22	348886	9.10	315725	11.87
VN0328WBL01	166500	8.22	307532	9.10	270205	11.87
VN0328WBS01	239264	8.22	387346	9.10	347341	11.87
VN0328WBSD01	181135	8.22	293753	9.10	265579	11.87

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: ENTA05

Lab Code: CHEM Case No.: Q1666 SAS No.: Q1666 SDG NO.: Q1666

Lab File ID: VN086140.D Date Analyzed: 03/28/2025

Instrument ID: MSVOA_N Time Analyzed: 10:44

GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	IS4 AREA #	RT #				
12 HOUR STD	177687	13.788				
UPPER LIMIT	355374	14.288				
LOWER LIMIT	88843.5	13.288				
EPA SAMPLE NO.						
TW-WTS-05	132655	13.79				
VN0328WBL01	111030	13.79				
VN0328WBS01	178334	13.79				
VN0328WBSD01	134304	13.79				

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: **VN086161.D**

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Report of Analysis

Client:	ENTACT	Date Collected:	03/25/25
Project:	540 Degraw St, Brooklyn, NY - E9309	Date Received:	03/27/25
Client Sample ID:	TW-WTS-05	SDG No.:	Q1666
Lab Sample ID:	Q1666-01	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group4
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN086161.D	1		03/28/25 19:30	VN032825

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
1634-04-4	Methyl tert-butyl Ether	0.16	U	0.16	1.00	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
71-55-6	1,1,1-Trichloroethane	0.20	U	0.20	1.00	ug/L
71-43-2	Benzene	0.15	U	0.15	1.00	ug/L
108-88-3	Toluene	0.14	U	0.14	1.00	ug/L
127-18-4	Tetrachloroethene	0.23	U	0.23	1.00	ug/L
100-41-4	Ethyl Benzene	0.13	U	0.13	1.00	ug/L
1330-20-7	Total Xylenes	0.36	U	0.36	3.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	57.2		70 (74) - 130 (125)	114%	SPK: 50
1868-53-7	Dibromofluoromethane	53.0		70 (75) - 130 (124)	106%	SPK: 50
2037-26-5	Toluene-d8	48.5		70 (86) - 130 (113)	97%	SPK: 50
460-00-4	4-Bromofluorobenzene	44.8		70 (77) - 130 (121)	90%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	187000	8.224			
540-36-3	1,4-Difluorobenzene	349000	9.1			
3114-55-4	Chlorobenzene-d5	316000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	133000	13.788			

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_N\Data\VN032825\
Data File : VN086161.D
Acq On : 28 Mar 2025 19:30
Operator : JC\MD
Sample : Q1666-01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
TW-WTS-05

Quant Time: Mar 28 23:40:12 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 2025
Response via : Initial Calibration

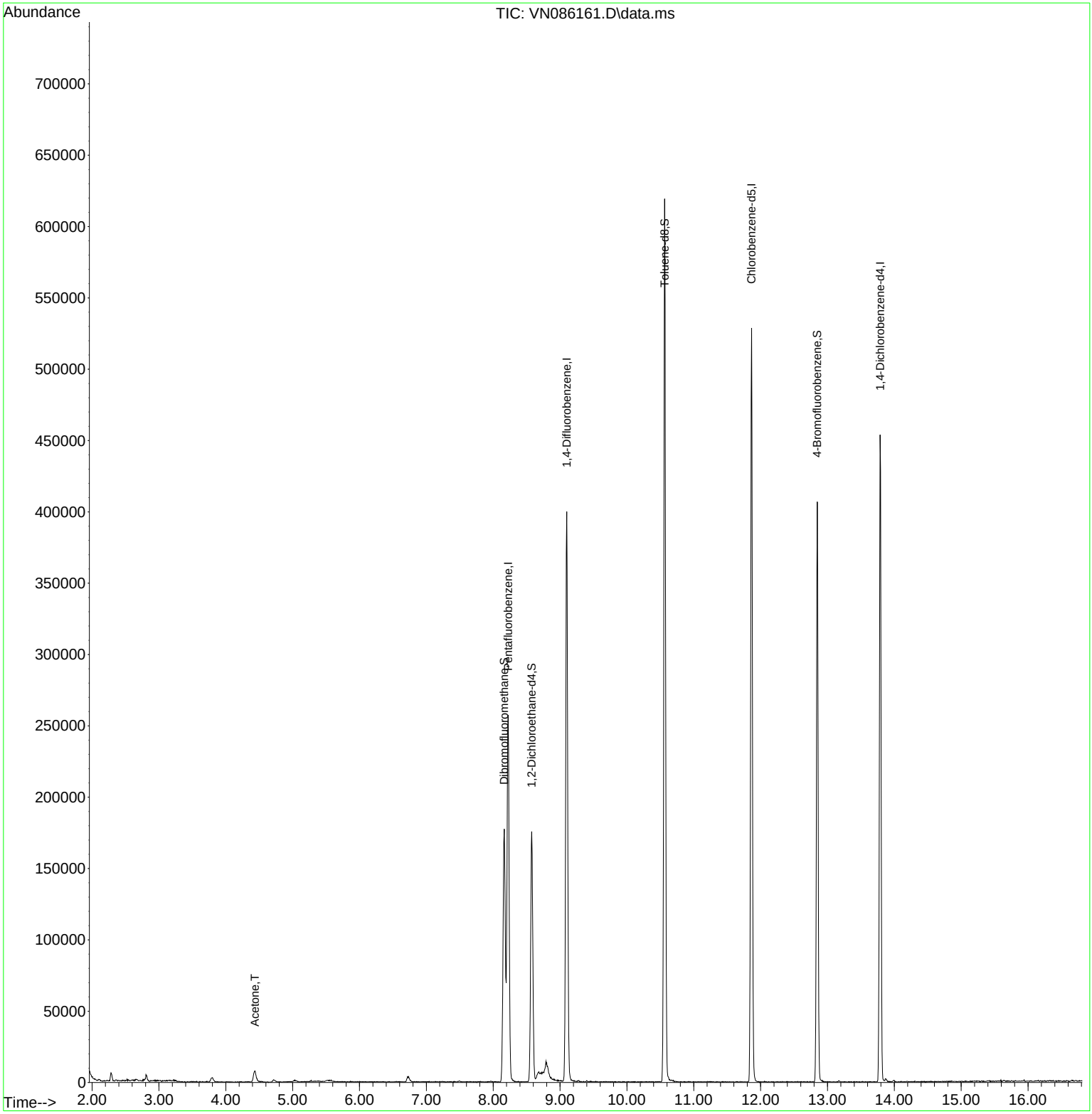
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.224	168	186773	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.100	114	348886	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.865	117	315725	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	132655	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.577	65	146315	57.209	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 114.420%			
35) Dibromofluoromethane	8.165	113	129148	53.034	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 106.060%			
50) Toluene-d8	10.565	98	428933	48.533	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 97.060%			
62) 4-Bromofluorobenzene	12.847	95	141125	44.775	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 89.540%			
Target Compounds						Qvalue
16) Acetone	4.436	43	14952	19.136	ug/l #	88

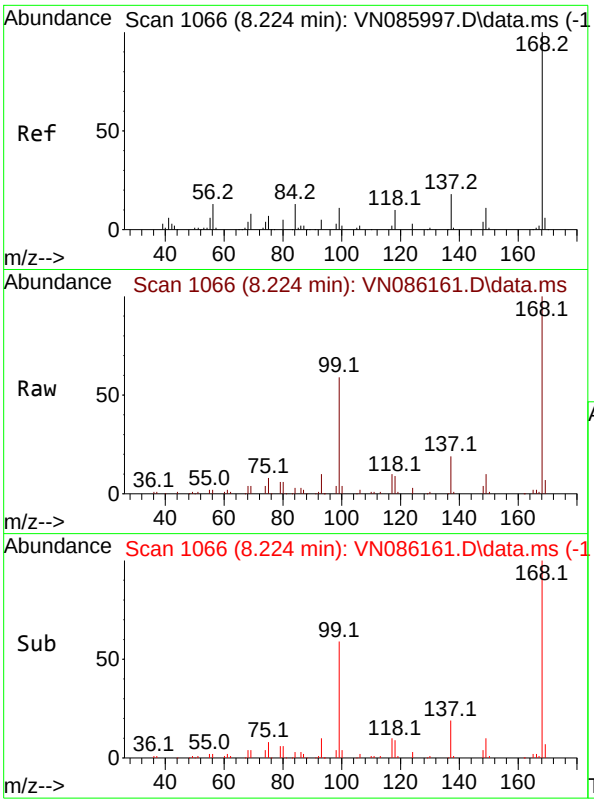
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN032825\
Data File : VN086161.D
Acq On : 28 Mar 2025 19:30
Operator : JC\MD
Sample : Q1666-01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
TW-WTS-05

Quant Time: Mar 28 23:40:12 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 2025
Response via : Initial Calibration



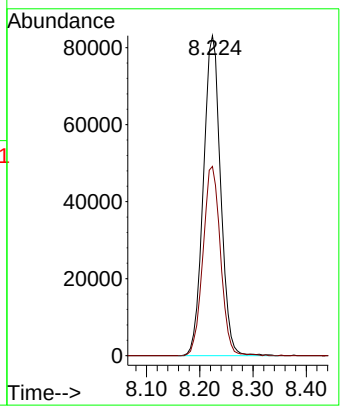


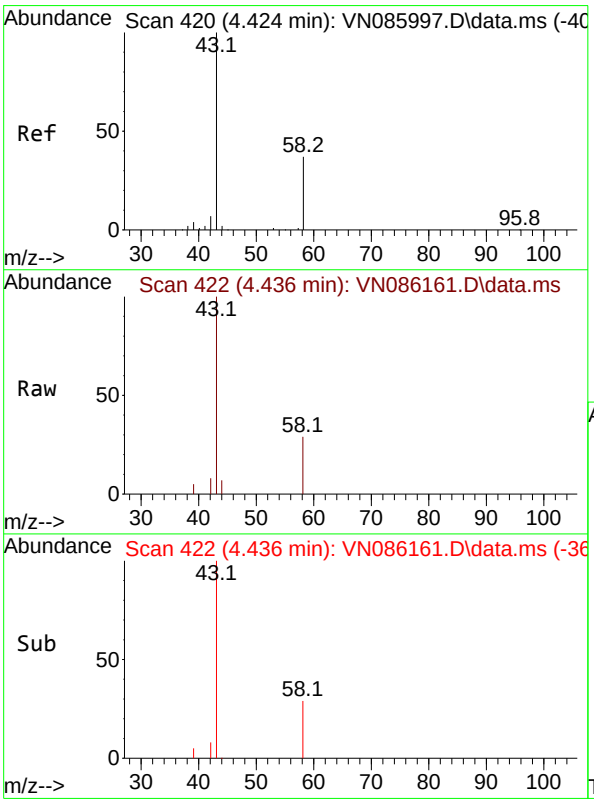
#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.224 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN086161.D
Acq: 28 Mar 2025 19:30

Instrument :
MSVOA_N
ClientSampleId :
TW-WTS-05

Tgt Ion:168 Resp: 186773

Ion	Ratio	Lower	Upper
168	100		
99	59.1	49.4	74.2

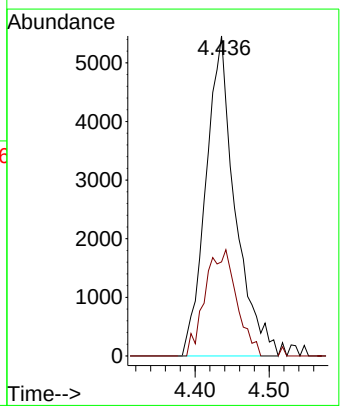


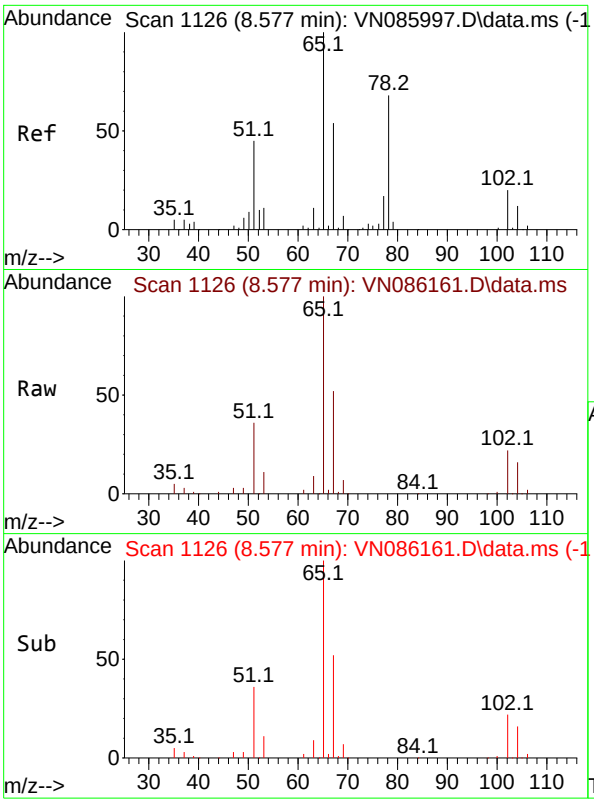


#16
Acetone
Concen: 19.136 ug/l
RT: 4.436 min Scan# 422
Delta R.T. 0.012 min
Lab File: VN086161.D
Acq: 28 Mar 2025 19:30

Tgt Ion: 43 Resp: 14952

Ion	Ratio	Lower	Upper
43	100		
58	29.4	29.4	44.2#



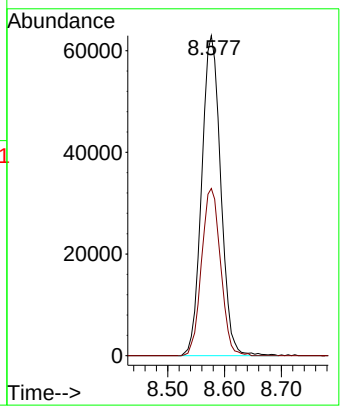


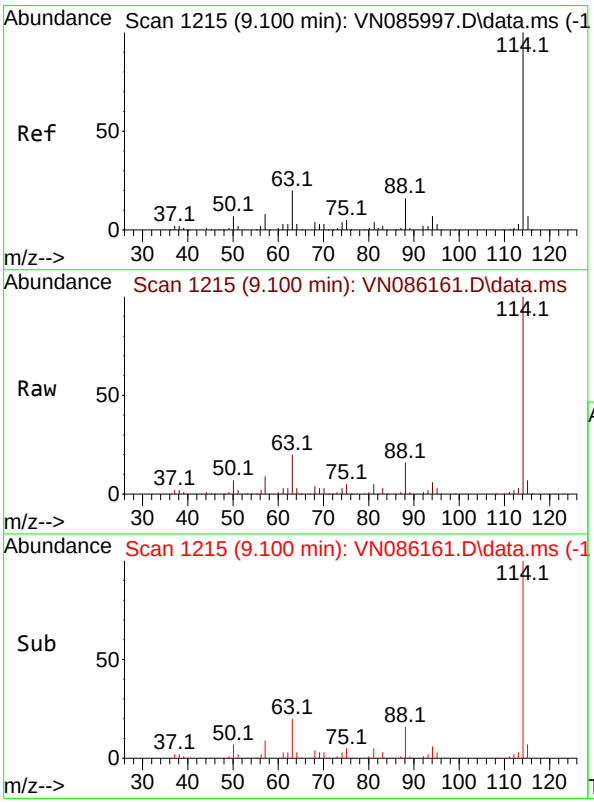
#33
1,2-Dichloroethane-d4
Concen: 57.209 ug/l
RT: 8.577 min Scan# 11
Delta R.T. -0.000 min
Lab File: VN086161.D
Acq: 28 Mar 2025 19:30

Instrument :
MSVOA_N
ClientSampleId :
TW-WTS-05

Tgt Ion: 65 Resp: 146315

Ion	Ratio	Lower	Upper
65	100		
67	52.1	0.0	102.2

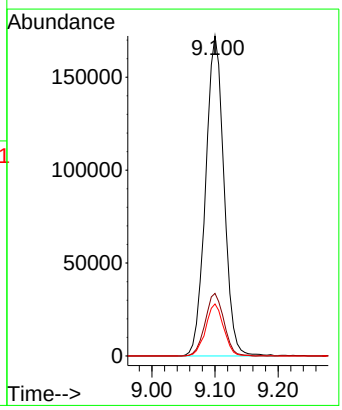


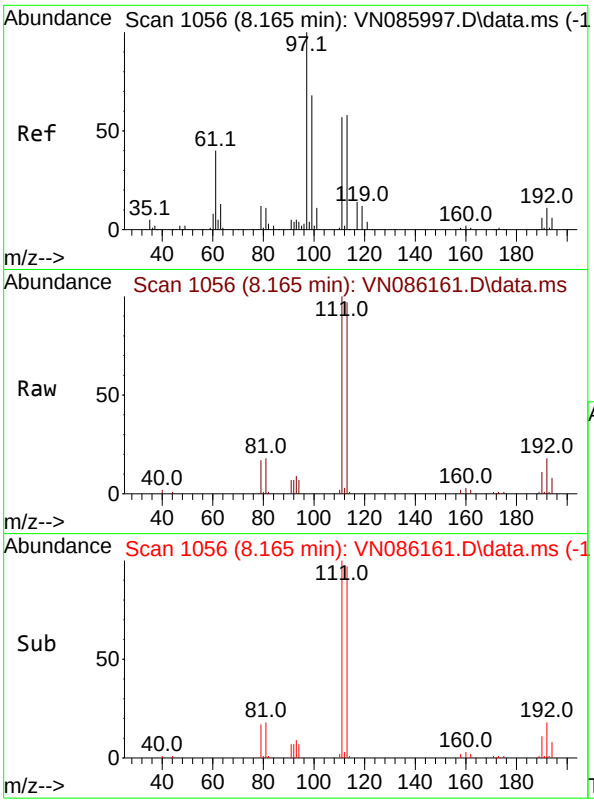


#34
1,4-Difluorobenzene
Concen: 50.000 ug/l
RT: 9.100 min Scan# 1215
Delta R.T. -0.000 min
Lab File: VN086161.D
Acq: 28 Mar 2025 19:30

Tgt Ion:114 Resp: 348886

Ion	Ratio	Lower	Upper
114	100		
63	19.6	0.0	39.6
88	16.2	0.0	32.6



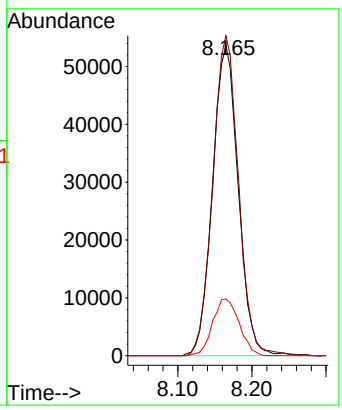


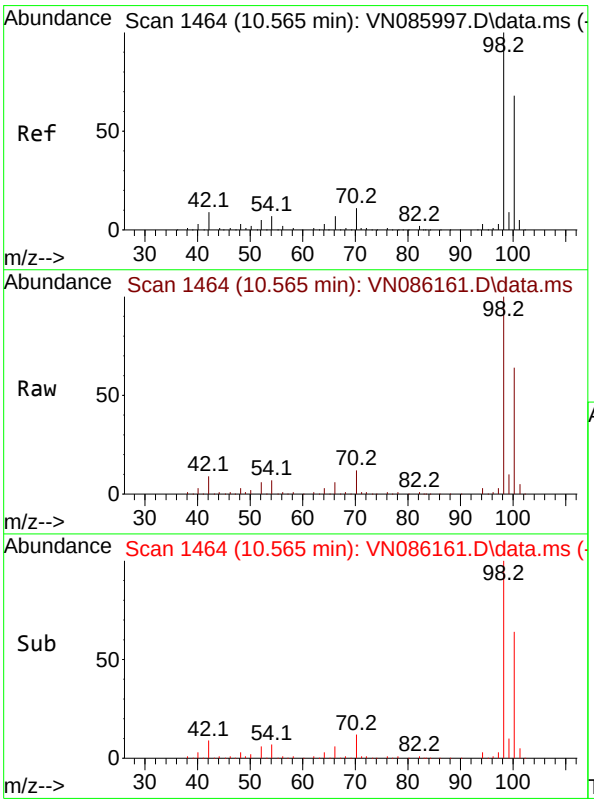
#35
Dibromofluoromethane
Concen: 53.034 ug/l
RT: 8.165 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN086161.D
Acq: 28 Mar 2025 19:30

Instrument :
MSVOA_N
ClientSampleId :
TW-WTS-05

Tgt Ion:113 Resp: 129148

Ion	Ratio	Lower	Upper
113	100		
111	102.9	81.8	122.8
192	19.0	15.9	23.9

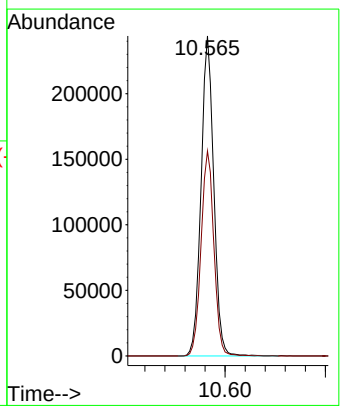


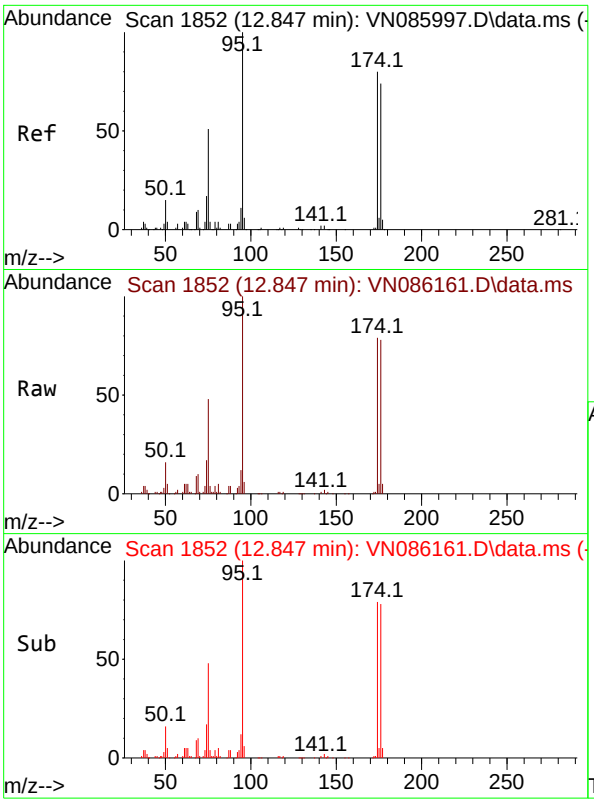


#50
Toluene-d8
Concen: 48.533 ug/l
RT: 10.565 min Scan# 1464
Delta R.T. -0.000 min
Lab File: VN086161.D
Acq: 28 Mar 2025 19:30

Tgt Ion: 98 Resp: 428933

Ion	Ratio	Lower	Upper
98	100		
100	64.7	53.1	79.7



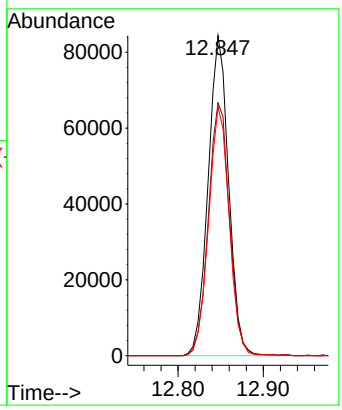


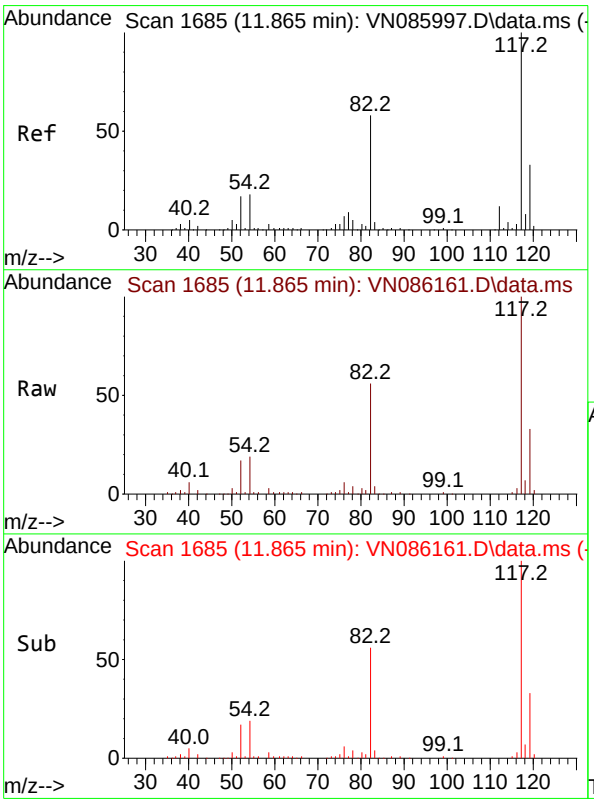
#62
4-Bromofluorobenzene
Concen: 44.775 ug/l
RT: 12.847 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN086161.D
Acq: 28 Mar 2025 19:30

Instrument :
MSVOA_N
ClientSampleId :
TW-WTS-05

Tgt Ion: 95 Resp: 141125

Ion	Ratio	Lower	Upper
95	100		
174	81.2	0.0	156.8
176	78.0	0.0	152.2

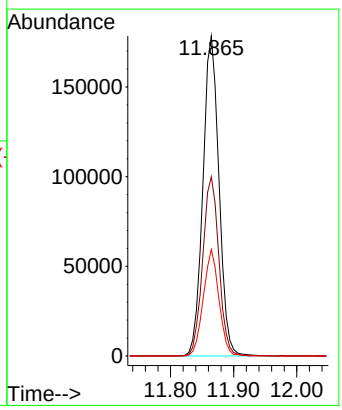


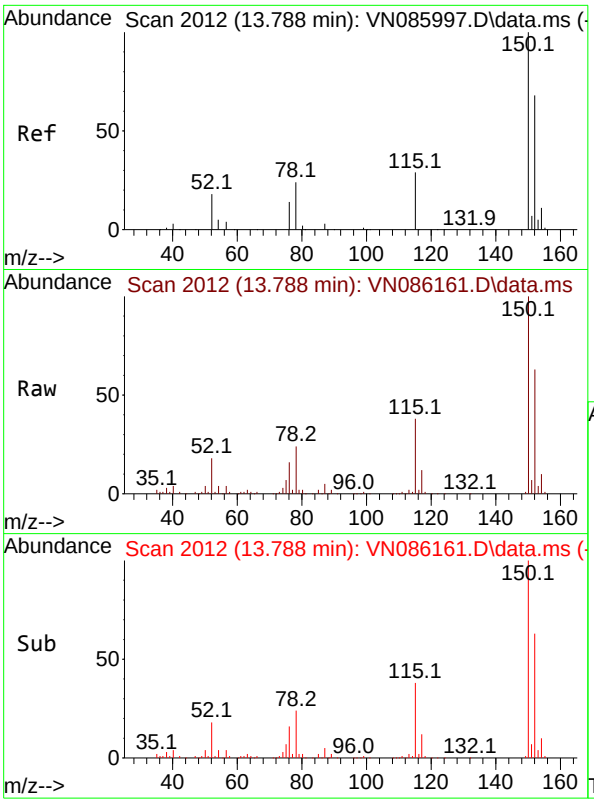


#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.865 min Scan# 1685
Delta R.T. -0.000 min
Lab File: VN086161.D
Acq: 28 Mar 2025 19:30

Tgt Ion:117 Resp: 315725

Ion	Ratio	Lower	Upper
117	100		
82	55.9	46.7	70.1
119	33.3	26.5	39.7



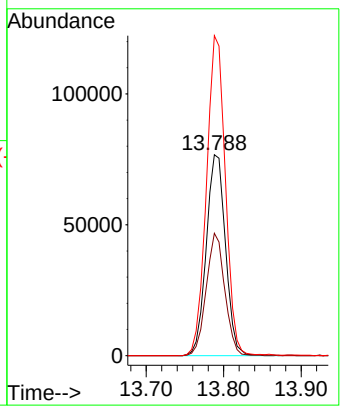


#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.788 min Scan# 2
Delta R.T. -0.000 min
Lab File: VN086161.D
Acq: 28 Mar 2025 19:30

Instrument :
MSVOA_N
ClientSampleId :
TW-WTS-05

Tgt Ion:152 Resp: 132655

Ion	Ratio	Lower	Upper
152	100		
115	58.7	31.1	93.2
150	156.3	0.0	359.6



CALIBRATION SUMMARY

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

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: ENTA05

Lab Code: CHEM Case No.: Q1666 SAS No.: Q1666 SDG No.: Q1666

Instrument ID: MSVOA_N Calibration Date(s): 03/18/2025 03/18/2025

Heated Purge: (Y/N) N Calibration Time(s): 11:44 14:09

GC Column: RXI-624 ID: 0.25 (mm)

LAB FILE ID: RRF100 = VN085996.D RRF050 = VN085997.D RRF020 = VN085998.D
RRF010 = VN085999.D RRF005 = VN086000.D RRF001 = VN086001.D

COMPOUND	RRF100	RRF050	RRF020	RRF010	RRF005	RRF001	$\overline{RRF}$	% RSD
Methyl tert-butyl Ether	1.888	1.691	1.578	1.604	1.638	1.673	1.679	6.6
Carbon Tetrachloride	0.673	0.578	0.557	0.580	0.613	0.624	0.604	6.9
Chloroform	1.119	1.017	1.011	1.101	1.149	1.245	1.107	7.9
1,1,1-Trichloroethane	1.093	0.986	0.962	1.025	1.097	1.124	1.048	6.3
Benzene	1.610	1.393	1.348	1.386	1.453	1.466	1.443	6.5
Toluene	1.074	0.915	0.862	0.878	0.856	0.727	0.885	12.7
Tetrachloroethene	0.407	0.371	0.370	0.390	0.421	0.433	0.399	6.6
Ethyl Benzene	2.209	1.918	1.744	1.769	1.755	1.586	1.830	11.7
m/p-Xylenes	0.867	0.756	0.700	0.690	0.660	0.643	0.719	11.4
o-Xylene	0.831	0.713	0.655	0.645	0.585	0.532	0.660	15.8
1,2-Dichloroethane-d4	0.632	0.665	0.669	0.721	0.737		0.685	6.3
Dibromofluoromethane	0.333	0.334	0.347	0.362	0.368		0.349	4.5
Toluene-d8	1.309	1.266	1.253	1.289	1.217		1.267	2.8
4-Bromofluorobenzene	0.514	0.466	0.447	0.440	0.391		0.452	9.8

* 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_N_NEW

Method Path : Z:\voasrv\HPCHEM1\MSVOA_N\methods\
Method File : 82N031825W.M
Title : SW846 8260
Last Update : Wed Mar 19 03:20:56 2025
Response Via : Initial Calibration

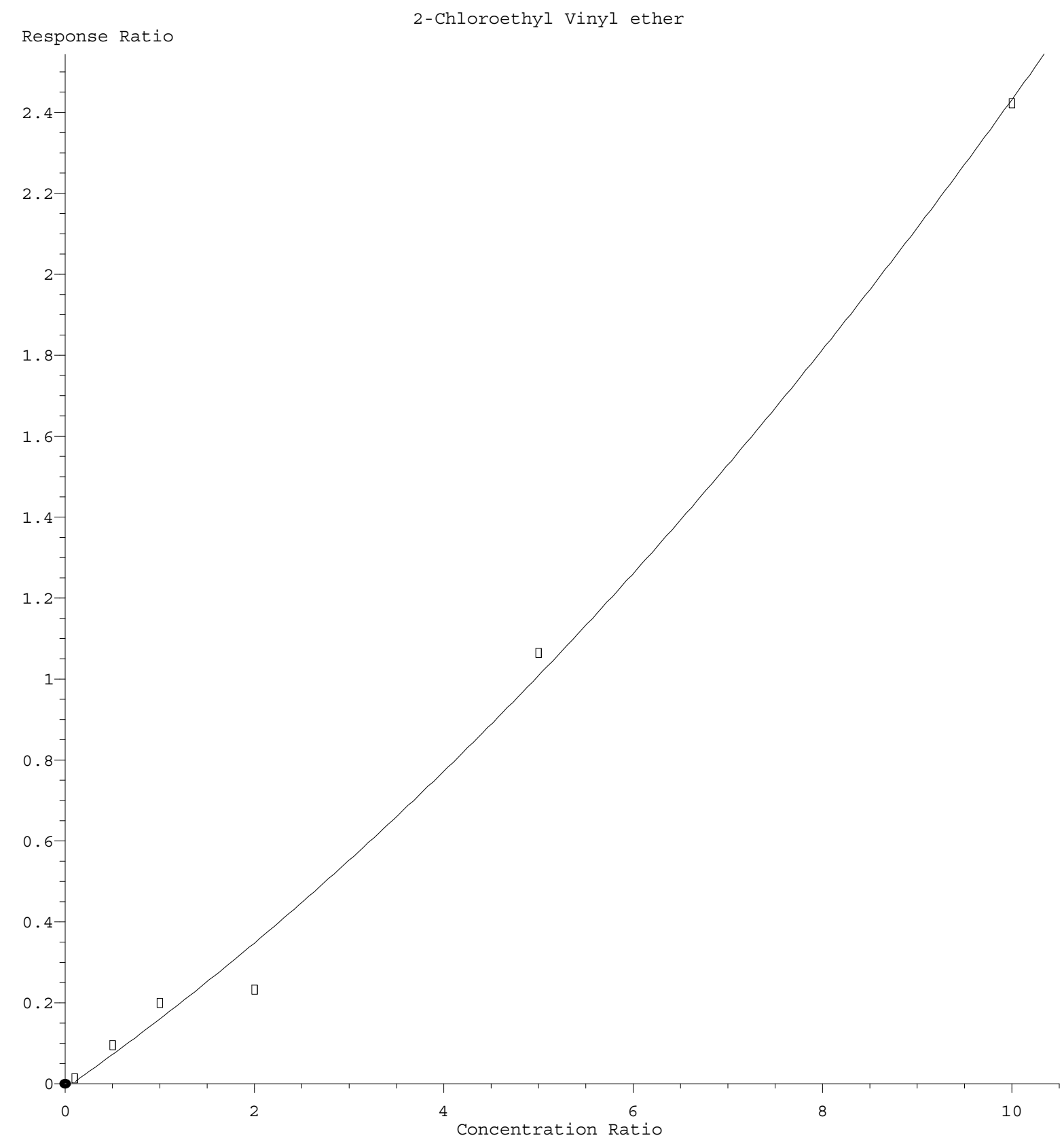
Calibration Files
1 =VN086001.D 5 =VN086000.D 10 =VN085999.D 20 =VN085998.D 50 =VN085997.D 100 =VN085996.D

		Compound	1	5	10	20	50	100	Avg	%RSD
1)	I	Pentafluorobenzene	----------ISTD----------							
2)	T	Dichlorodifluo...	0.678	0.697	0.649	0.600	0.643	0.707	0.662	6.01
3)	P	Chloromethane	0.683	0.612	0.544	0.514	0.557	0.575	0.581	10.29
4)	C	Vinyl Chloride	0.592	0.634	0.581	0.541	0.592	0.622	0.594	5.53#
5)	T	Bromomethane		0.466	0.411	0.377	0.381	0.388	0.404	9.16
6)	T	Chloroethane	0.446	0.403	0.378	0.334	0.330	0.355	0.375	11.93
7)	T	Trichlorofluor...	1.267	1.107	1.035	0.959	0.977	1.059	1.067	10.48
8)	T	Diethyl Ether	0.336	0.309	0.322	0.315	0.324	0.354	0.327	4.93
9)	T	1,1,2-Trichlor...	0.659	0.590	0.553	0.512	0.515	0.574	0.567	9.66
10)	T	Methyl Iodide		0.766	0.710	0.681	0.728	0.811	0.739	6.80
11)	T	Tert butyl alc...		0.108	0.097	0.091	0.094	0.094	0.097	6.70
12)	CM	1,1-Dichloroet...	0.415	0.550	0.545	0.481	0.516	0.567	0.512	11.02#
13)	T	Acrolein		0.115	0.099	0.104	0.100	0.099	0.103	6.75
14)	T	Allyl chloride	0.664	0.684	0.615	0.572	0.617	0.683	0.639	7.03
15)	T	Acrylonitrile	0.252	0.271	0.255	0.245	0.248	0.266	0.256	4.01
16)	T	Acetone	0.223	0.213	0.195	0.179	0.194	0.251	0.209	12.36
17)	T	Carbon Disulfide	2.107	1.765	1.610	1.467	1.510	1.649	1.685	13.78
18)	T	Methyl Acetate	0.667	0.542	0.504	0.434	0.469	0.488	0.518	15.79
19)	T	Methyl tert-bu...	1.673	1.638	1.604	1.578	1.691	1.888	1.679	6.61
20)	T	Methylene Chlo...	0.731	0.639	0.572	0.551	0.565	0.613	0.612	10.93
21)	T	trans-1,2-Dich...	0.591	0.564	0.546	0.521	0.534	0.603	0.560	5.81
22)	T	Diisopropyl ether	1.166	1.387	1.394	1.317	1.378	1.528	1.362	8.68
23)	T	Vinyl Acetate	0.866	1.023	1.017	1.024	1.067	1.196	1.032	10.24
24)	P	1,1-Dichloroet...	1.130	1.032	0.968	0.908	0.949	1.023	1.001	7.79
25)	T	2-Butanone	0.296	0.319	0.297	0.277	0.292	0.331	0.302	6.50
26)	T	2,2-Dichloropr...	1.004	1.017	0.925	0.880	0.926	1.032	0.964	6.41
27)	T	cis-1,2-Dichlo...	0.632	0.656	0.617	0.591	0.633	0.688	0.636	5.25
28)	T	Bromochloromet...	0.521	0.430	0.404	0.398	0.391	0.403	0.424	11.60
29)	T	Tetrahydrofuran	0.152	0.197	0.189	0.183	0.194	0.204	0.186	9.74
30)	C	Chloroform	1.245	1.149	1.101	1.011	1.017	1.119	1.107	7.90#
31)	T	Cyclohexane		0.957	0.854	0.765	0.799	0.890	0.853	8.87
32)	T	1,1,1-Trichlor...	1.124	1.097	1.025	0.962	0.986	1.093	1.048	6.32
33)	S	1,2-Dichloroet...		0.737	0.721	0.669	0.665	0.632	0.685	6.30
34)	I	1,4-Difluorobenzene	----------ISTD----------							
35)	S	Dibromofluorom...		0.368	0.362	0.347	0.334	0.333	0.349	4.54
36)	T	1,1-Dichloropr...	0.457	0.454	0.443	0.421	0.454	0.528	0.460	7.89
37)	T	Ethyl Acetate	0.388	0.412	0.393	0.366	0.367	0.400	0.388	4.65
38)	T	Carbon Tetrach...	0.624	0.613	0.580	0.557	0.578	0.673	0.604	6.90
39)	T	Methylcyclohexane	0.438	0.426	0.399	0.419	0.475	0.579	0.456	14.34
40)	TM	Benzene	1.466	1.453	1.386	1.348	1.393	1.610	1.443	6.46
41)	T	Methacrylonitrile	0.132	0.188	0.191	0.187	0.193	0.220	0.185	15.66
42)	TM	1,2-Dichloroet...	0.521	0.528	0.491	0.462	0.475	0.538	0.503	6.12
43)	T	Isopropyl Acetate	1.123	0.840	0.886	0.793	0.688	0.711	0.840	18.77
44)	TM	Trichloroethene	0.435	0.380	0.353	0.335	0.346	0.394	0.374	9.98
45)	C	1,2-Dichloropr...	0.309	0.333	0.321	0.319	0.321	0.366	0.328	6.16#
46)	T	Dibromomethane	0.274	0.268	0.251	0.234	0.243	0.279	0.258	7.09
47)	T	Bromodichlorom...	0.537	0.561	0.515	0.506	0.516	0.600	0.539	6.58
48)	T	Methyl methacr...	0.255	0.257	0.265	0.268	0.289	0.328	0.277	9.99
49)	T	1,4-Dioxane	0.005	0.007	0.007	0.006	0.007	0.007	0.007	16.08
50)	S	Toluene-d8		1.217	1.289	1.253	1.266	1.309	1.267	2.78
51)	T	4-Methyl-2-Pen...	0.287	0.369	0.380	0.368	0.385	0.434	0.371	12.88
52)	CM	Toluene	0.727	0.856	0.878	0.862	0.915	1.074	0.885	12.66#
53)	T	t-1,3-Dichloro...	0.446	0.501	0.506	0.504	0.539	0.646	0.524	12.80
54)	T	cis-1,3-Dichlo...	0.464	0.537	0.555	0.533	0.568	0.659	0.553	11.46
55)	T	1,1,2-Trichlor...	0.335	0.338	0.330	0.316	0.327	0.382	0.338	6.72
56)	T	Ethyl methacry...	0.298	0.413	0.445	0.463	0.526	0.633	0.463	24.21

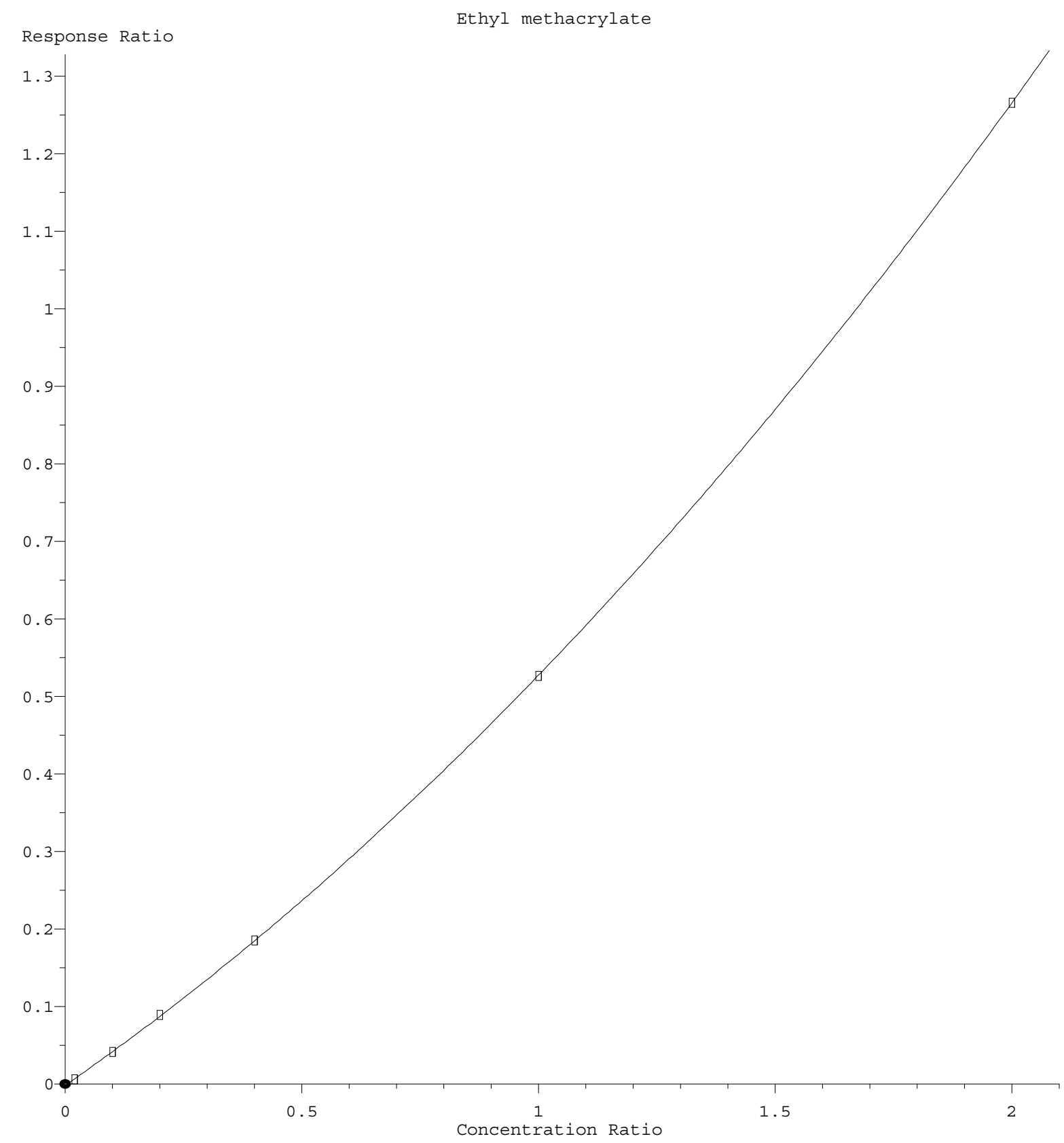
Method Path : Z:\voasrv\HPCHEM1\MSVOA_N\methods\
Method File : 82N031825W.M

57)	T	1,3-Dichloropr...	0.551	0.558	0.571	0.539	0.567	0.657	0.574	7.39
58)	T	2-Chloroethyl ...	0.134	0.190	0.200	0.116	0.213	0.242	0.183	26.31
59)	T	2-Hexanone	0.202	0.261	0.270	0.269	0.284	0.334	0.270	15.74
60)	T	Dibromochlorom...	0.416	0.436	0.422	0.408	0.432	0.503	0.436	7.83
61)	T	1,2-Dibromoethane	0.325	0.337	0.343	0.326	0.351	0.400	0.347	8.01
62)	S	4-Bromofluorob...		0.391	0.440	0.447	0.466	0.514	0.452	9.82
63)	I	Chlorobenzene-d5	----------ISTD----------							
64)	T	Tetrachloroethene	0.433	0.421	0.390	0.370	0.371	0.407	0.399	6.57
65)	PM	Chlorobenzene	1.208	1.156	1.116	1.070	1.085	1.229	1.144	5.69
66)	T	1,1,1,2-Tetrac...	0.445	0.445	0.414	0.388	0.407	0.452	0.425	6.05
67)	C	Ethyl Benzene	1.586	1.755	1.769	1.744	1.918	2.209	1.830	11.67#
68)	T	m/p-Xylenes	0.643	0.660	0.690	0.700	0.756	0.867	0.719	11.40
69)	T	o-Xylene	0.532	0.585	0.645	0.655	0.713	0.831	0.660	15.83
70)	T	Styrene	0.924	1.032	1.044	1.115	1.219	1.431	1.128	15.79
71)	P	Bromoform	0.371	0.355	0.342	0.329	0.345	0.392	0.356	6.39
72)	I	1,4-Dichlorobenzen...	----------ISTD----------							
73)	T	Isopropylbenzene	3.039	3.264	3.470	3.251	3.599	3.863	3.414	8.58
74)	T	N-amyl acetate	0.984	1.098	1.153	1.121	1.220	1.278	1.142	8.93
75)	P	1,1,2,2-Tetrac...	1.311	1.261	1.191	1.041	1.052	1.076	1.155	10.01
76)	T	1,2,3-Trichlor...	0.925	1.264	1.153	1.148	1.157	1.070	1.119	10.14
77)	T	Bromobenzene	1.000	0.994	0.966	0.878	0.910	0.964	0.952	5.10
78)	T	n-propylbenzene	3.148	3.686	3.862	3.774	4.183	4.546	3.866	12.24
79)	T	2-Chlorotoluene	2.335	2.574	2.587	2.473	2.620	2.820	2.568	6.29
80)	T	1,3,5-Trimethy...	2.392	2.639	2.903	2.845	3.118	3.399	2.883	12.25
81)	T	trans-1,4-Dich...		0.397	0.401	0.420	0.414	0.486	0.423	8.50
82)	T	4-Chlorotoluene	2.443	2.567	2.661	2.558	2.696	2.921	2.641	6.19
83)	T	tert-Butylbenzene	2.380	2.278	2.517	2.289	2.547	2.782	2.466	7.76
84)	T	1,2,4-Trimethy...	2.330	2.684	2.944	2.886	3.130	3.472	2.908	13.35
85)	T	sec-Butylbenzene	2.423	3.008	3.247	3.174	3.514	3.932	3.216	15.71
86)	T	p-Isopropyltol...	2.088	2.410	2.688	2.670	3.037	3.443	2.723	17.41
87)	T	1,3-Dichlorobe...	1.688	1.718	1.749	1.614	1.685	1.842	1.716	4.46
88)	T	1,4-Dichlorobe...	2.043	1.907	1.756	1.621	1.667	1.825	1.803	8.71
89)	T	n-Butylbenzene	1.876	1.981	2.079	2.067	2.424	2.876	2.217	16.76
90)	T	Hexachloroethane	0.766	0.648	0.595	0.542	0.582	0.637	0.628	12.37
91)	T	1,2-Dichlorobe...	2.004	1.724	1.673	1.522	1.598	1.716	1.706	9.66
92)	T	1,2-Dibromo-3-...	0.192	0.250	0.266	0.216	0.221	0.240	0.231	11.50
93)	T	1,2,4-Trichlor...	0.899	0.851	0.815	0.779	0.850	0.952	0.858	7.14
94)	T	Hexachlorobuta...	0.579	0.522	0.500	0.454	0.442	0.488	0.498	9.98
95)	T	Naphthalene	2.499	2.211	2.423	2.306	2.606	2.860	2.484	9.30
96)	T	1,2,3-Trichlor...	0.798	0.791	0.794	0.772	0.829	0.900	0.814	5.65

(#) = Out of Range



R = 8.062e-003 A*A + 1.637e-001 A - 1.134e-002
Coef of Det (r^2) = 0.995747 Curve Fit: Quadratic
Method Name: Z:\voasrv\HPCHEM1\MSVOA N\methods\82N031825W.M
Calibration Table Last Updated: Wed Mar 19 03:20:56 2025



R = 1.048e-001 A*A + 4.239e-001 A - 1.587e-003
Coef of Det (r^2) = 0.999996 Curve Fit: Quadratic
Method Name: Z:\voasrv\HPCHEM1\MSVOA N\methods\82N031825W.M
Calibration Table Last Updated: Wed Mar 19 03:20:56 2025

Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN085996.D
Acq On : 18 Mar 2025 11:44
Operator : JC\MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC100

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025

Quant Time: Mar 19 02:52:06 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.224	168	182974	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.100	114	280238	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.865	117	267544	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	147510	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.577	65	231291	92.312	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 184.620%#			
35) Dibromofluoromethane	8.165	113	186688	95.442	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 190.880%#			
50) Toluene-d8	10.565	98	733621	103.341	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 206.680%#			
62) 4-Bromofluorobenzene	12.847	95	288124	113.805	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 227.620%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.124	85	258760	106.744	ug/l	100
3) Chloromethane	2.359	50	210559	99.080	ug/l	99
4) Vinyl Chloride	2.506	62	227757	104.817	ug/l	99
5) Bromomethane	2.930	94	141847	95.836	ug/l	95
6) Chloroethane	3.106	64	130043	94.868	ug/l	90
7) Trichlorofluoromethane	3.489	101	387652	99.243	ug/l	99
8) Diethyl Ether	3.953	74	129491	108.290	ug/l	98
9) 1,1,2-Trichlorotrifluo...	4.365	101	209946	101.130	ug/l	99
10) Methyl Iodide	4.583	142	296609	109.651	ug/l	95
11) Tert butyl alcohol	5.518	59	172466	486.176	ug/l	99
12) 1,1-Dichloroethene	4.336	96	207400	110.639	ug/l	96
13) Acrolein	4.171	56	180315	476.573	ug/l	98
14) Allyl chloride	5.018	41	249826	106.826	ug/l	98
15) Acrylonitrile	5.712	53	486527	519.314	ug/l	99
16) Acetone	4.418	43	459532	600.330	ug/l	100
17) Carbon Disulfide	4.706	76	603612	97.911	ug/l	99
18) Methyl Acetate	5.018	43	178753	94.384	ug/l	100
19) Methyl tert-butyl Ether	5.789	73	690939	112.481	ug/l	99
20) Methylene Chloride	5.265	84	224327	100.177	ug/l	99
21) trans-1,2-Dichloroethene	5.783	96	220657	107.710	ug/l	99
22) Diisopropyl ether	6.665	45	559282	112.225	ug/l	99
23) Vinyl Acetate	6.600	43	2187667	579.034	ug/l	100
24) 1,1-Dichloroethane	6.559	63	374239	102.121	ug/l	99
25) 2-Butanone	7.477	43	605615	548.306	ug/l	99
26) 2,2-Dichloropropane	7.483	77	377635	107.034	ug/l	98
27) cis-1,2-Dichloroethene	7.483	96	251929	108.218	ug/l	98
28) Bromochloromethane	7.812	49	147305	94.874	ug/l	98
29) Tetrahydrofuran	7.830	42	372372	546.087	ug/l	99
30) Chloroform	7.965	83	409546	101.106	ug/l	99
31) Cyclohexane	8.253	56	325757	104.345	ug/l	99
32) 1,1,1-Trichloroethane	8.165	97	400089	104.344	ug/l	98
36) 1,1-Dichloropropene	8.365	75	296177	114.993	ug/l	100
37) Ethyl Acetate	7.559	43	224022	103.099	ug/l	98
38) Carbon Tetrachloride	8.359	117	377239	111.395	ug/l	98
39) Methylcyclohexane	9.600	83	324420	126.957	ug/l	97
40) Benzene	8.600	78	902443	111.613	ug/l	99

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN085996.D
Acq On : 18 Mar 2025 11:44
Operator : JC\MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 19 02:52:06 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC100

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	7.777	41	123440	118.971	ug/l		95
42) 1,2-Dichloroethane	8.665	62	301678	107.080	ug/l		99
43) Isopropyl Acetate	8.683	43	398367	84.427	ug/l		99
44) Trichloroethene	9.347	130	220997	105.460	ug/l		92
45) 1,2-Dichloropropane	9.618	63	205313	111.644	ug/l		97
46) Dibromomethane	9.706	93	156183	107.992	ug/l		100
47) Bromodichloromethane	9.882	83	336242	111.244	ug/l		99
48) Methyl methacrylate	9.677	41	183832	118.314	ug/l		98
49) 1,4-Dioxane	9.688	88	83630	2276.865	ug/l		94
51) 4-Methyl-2-Pentanone	10.441	43	1216534	585.839	ug/l		100
52) Toluene	10.629	92	601872	121.286	ug/l		99
53) t-1,3-Dichloropropene	10.835	75	362129	123.365	ug/l		98
54) cis-1,3-Dichloropropene	10.306	75	369494	119.304	ug/l		98
55) 1,1,2-Trichloroethane	11.012	97	213909	112.938	ug/l		96
56) Ethyl methacrylate	10.871	69	354676	100.009	ug/l		99
57) 1,3-Dichloropropane	11.159	76	368384	114.512	ug/l		100
58) 2-Chloroethyl Vinyl ether	10.159	63	678829	498.510	ug/l		99
59) 2-Hexanone	11.194	43	935328	618.290	ug/l		99
60) Dibromochloromethane	11.359	129	281651	115.239	ug/l		99
61) 1,2-Dibromoethane	11.465	107	224197	115.301	ug/l		98
64) Tetrachloroethene	11.100	164	217951	102.122	ug/l		98
65) Chlorobenzene	11.888	112	657655	107.422	ug/l		100
66) 1,1,1,2-Tetrachloroethane	11.959	131	241702	106.205	ug/l		98
67) Ethyl Benzene	11.959	91	1182051	120.702	ug/l		99
68) m/p-Xylenes	12.071	106	927553	240.977	ug/l		99
69) o-Xylene	12.394	106	444866	125.926	ug/l		99
70) Styrene	12.412	104	765959	126.938	ug/l		100
71) Bromoform	12.576	173	209637	110.191	ug/l	#	99
73) Isopropylbenzene	12.694	105	1139716	113.143	ug/l		100
74) N-amyl acetate	12.494	43	377161	111.912	ug/l		99
75) 1,1,2,2-Tetrachloroethane	12.935	83	317335	93.117	ug/l		99
76) 1,2,3-Trichloropropane	12.994	75	315551m	93.831	ug/l		
77) Bromobenzene	12.976	156	284449	101.270	ug/l		100
78) n-propylbenzene	13.035	91	1341141	117.577	ug/l		100
79) 2-Chlorotoluene	13.123	91	832060	109.823	ug/l		100
80) 1,3,5-Trimethylbenzene	13.171	105	1002727	117.902	ug/l		99
81) trans-1,4-Dichloro-2-b...	12.735	75	143254	114.684	ug/l		97
82) 4-Chlorotoluene	13.218	91	861737	110.605	ug/l		99
83) tert-Butylbenzene	13.435	119	820651	112.824	ug/l		99
84) 1,2,4-Trimethylbenzene	13.482	105	1024294	119.410	ug/l		100
85) sec-Butylbenzene	13.612	105	1160166	122.266	ug/l		100
86) p-Isopropyltoluene	13.729	119	1015859	126.470	ug/l		100
87) 1,3-Dichlorobenzene	13.729	146	543572	107.364	ug/l		100
88) 1,4-Dichlorobenzene	13.812	146	538505	101.234	ug/l		99
89) n-Butylbenzene	14.053	91	848367	129.699	ug/l		100
90) Hexachloroethane	14.329	117	187906	101.383	ug/l		100
91) 1,2-Dichlorobenzene	14.106	146	506350	100.605	ug/l		99
92) 1,2-Dibromo-3-Chloropr...	14.717	75	70713	103.948	ug/l		95
93) 1,2,4-Trichlorobenzene	15.394	180	280971	111.025	ug/l		99
94) Hexachlorobutadiene	15.500	225	144077	98.130	ug/l		99
95) Naphthalene	15.641	128	843691	115.132	ug/l		100
96) 1,2,3-Trichlorobenzene	15.835	180	265586	110.600	ug/l		99

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN085996.D
Acq On : 18 Mar 2025 11:44
Operator : JC\MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC100

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025

Quant Time: Mar 19 02:52:06 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 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

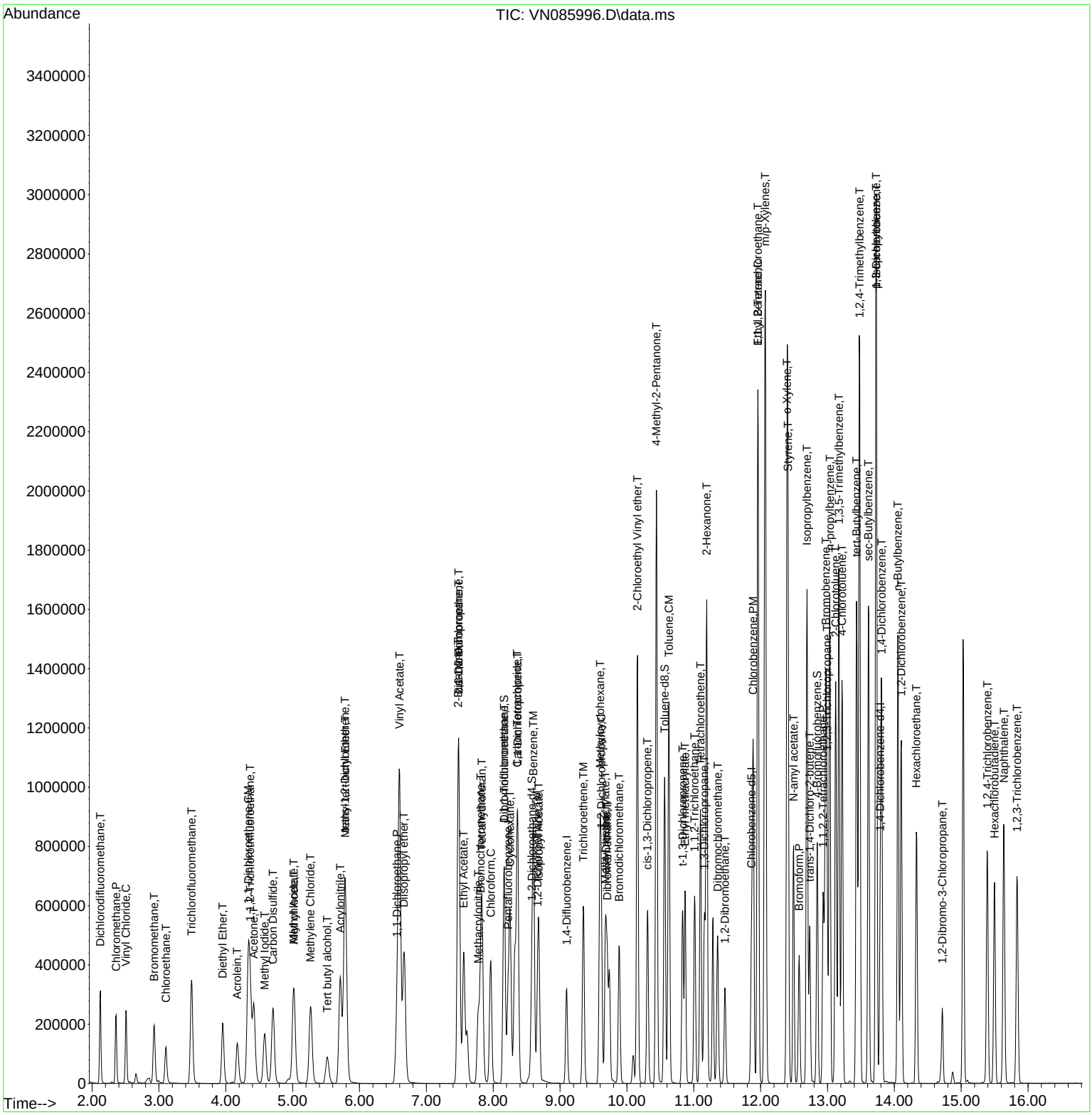
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN085996.D
Acq On : 18 Mar 2025 11:44
Operator : JC\MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 19 02:52:06 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC100

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN085997.D
Acq On : 18 Mar 2025 12:08
Operator : JC\MD
Sample : VSTDICCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025

Quant Time: Mar 19 02:53:11 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.224	168	191040	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.100	114	303794	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.865	117	273511	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	137905	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.577	65	127029	48.559	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 97.120%			
35) Dibromofluoromethane	8.165	113	101590	47.910	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 95.820%			
50) Toluene-d8	10.565	98	384569	49.972	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 99.940%			
62) 4-Bromofluorobenzene	12.847	95	141464	51.544	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 103.080%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.124	85	122875	48.549	ug/l	100
3) Chloromethane	2.360	50	106345	47.928	ug/l	100
4) Vinyl Chloride	2.507	62	113163	49.880	ug/l	100
5) Bromomethane	2.942	94	72791	47.103	ug/l	100
6) Chloroethane	3.112	64	63077	44.072	ug/l	100
7) Trichlorofluoromethane	3.489	101	186678	45.774	ug/l	100
8) Diethyl Ether	3.959	74	61984	49.647	ug/l	100
9) 1,1,2-Trichlorotrifluo...	4.365	101	98361	45.380	ug/l	100
10) Methyl Iodide	4.583	142	139044	49.232	ug/l	100
11) Tert butyl alcohol	5.524	59	90032	243.082	ug/l	100
12) 1,1-Dichloroethene	4.336	96	98583	50.369	ug/l	100
13) Acrolein	4.177	56	95299	241.241	ug/l	100
14) Allyl chloride	5.018	41	117849	48.265	ug/l	100
15) Acrylonitrile	5.718	53	236614	241.896	ug/l	100
16) Acetone	4.424	43	185613	232.246	ug/l	100
17) Carbon Disulfide	4.706	76	288424	44.810	ug/l	100
18) Methyl Acetate	5.024	43	89551	45.288	ug/l	100
19) Methyl tert-butyl Ether	5.795	73	323093	50.377	ug/l	100
20) Methylene Chloride	5.271	84	107918	46.158	ug/l	100
21) trans-1,2-Dichloroethene	5.783	96	101963	47.670	ug/l	100
22) Diisopropyl ether	6.671	45	263272	50.597	ug/l	100
23) Vinyl Acetate	6.600	43	1019460	258.439	ug/l	100
24) 1,1-Dichloroethane	6.565	63	181215	47.361	ug/l	100
25) 2-Butanone	7.483	43	278702	241.675	ug/l	100
26) 2,2-Dichloropropane	7.489	77	176949	48.036	ug/l	100
27) cis-1,2-Dichloroethene	7.483	96	120874	49.730	ug/l	100
28) Bromochloromethane	7.806	49	74679	46.067	ug/l	100
29) Tetrahydrofuran	7.836	42	185207	260.140	ug/l	100
30) Chloroform	7.965	83	194324	45.948	ug/l	100
31) Cyclohexane	8.253	56	152647	46.831	ug/l	100
32) 1,1,1-Trichloroethane	8.165	97	188288	47.032	ug/l	100
36) 1,1-Dichloropropene	8.365	75	137990	49.422	ug/l	100
37) Ethyl Acetate	7.559	43	111535	47.350	ug/l	100
38) Carbon Tetrachloride	8.359	117	175652	47.847	ug/l	100
39) Methylcyclohexane	9.600	83	144397	52.126	ug/l	100
40) Benzene	8.606	78	423071	48.268	ug/l	100

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN085997.D
Acq On : 18 Mar 2025 12:08
Operator : JC\MD
Sample : VSTDICCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 19 02:53:11 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	7.777	41	58596	52.096	ug/l		100
42) 1,2-Dichloroethane	8.671	62	144354	47.265	ug/l		100
43) Isopropyl Acetate	8.683	43	208926m	40.845	ug/l		
44) Trichloroethene	9.347	130	105089	46.260	ug/l		100
45) 1,2-Dichloropropane	9.618	63	97398	48.856	ug/l		100
46) Dibromomethane	9.706	93	73743	47.036	ug/l		100
47) Bromodichloromethane	9.883	83	156908	47.887	ug/l		100
48) Methyl methacrylate	9.677	41	87911	52.192	ug/l		100
49) 1,4-Dioxane	9.694	88	41818	1050.235	ug/l		100
51) 4-Methyl-2-Pentanone	10.441	43	584167	259.501	ug/l		100
52) Toluene	10.630	92	277914	51.661	ug/l		100
53) t-1,3-Dichloropropene	10.835	75	163659	51.430	ug/l		100
54) cis-1,3-Dichloropropene	10.312	75	172456	51.366	ug/l		100
55) 1,1,2-Trichloroethane	11.012	97	99259	48.343	ug/l		100
56) Ethyl methacrylate	10.871	69	159926	49.943	ug/l		100
57) 1,3-Dichloropropane	11.159	76	172224	49.385	ug/l		100
58) 2-Chloroethyl Vinyl ether	10.159	63	323306	261.262	ug/l		100
59) 2-Hexanone	11.194	43	431923	263.380	ug/l		100
60) Dibromochloromethane	11.359	129	131303	49.558	ug/l		100
61) 1,2-Dibromoethane	11.465	107	106539	50.543	ug/l		100
64) Tetrachloroethene	11.100	164	101407	46.478	ug/l		100
65) Chlorobenzene	11.888	112	296813	47.424	ug/l		100
66) 1,1,1,2-Tetrachloroethane	11.959	131	111333	47.853	ug/l		100
67) Ethyl Benzene	11.959	91	524655	52.405	ug/l		100
68) m/p-Xylenes	12.071	106	413470	105.075	ug/l		100
69) o-Xylene	12.394	106	195107	54.023	ug/l		100
70) Styrene	12.406	104	333544	54.070	ug/l		100
71) Bromoform	12.577	173	94268	48.469	ug/l	#	100
73) Isopropylbenzene	12.694	105	496368	52.708	ug/l		100
74) N-amyl acetate	12.494	43	168199	53.384	ug/l		100
75) 1,1,2,2-Tetrachloroethane	12.935	83	145034	45.522	ug/l		100
76) 1,2,3-Trichloropropane	12.988	75	159517m	50.737	ug/l		
77) Bromobenzene	12.976	156	125436	47.769	ug/l		100
78) n-propylbenzene	13.035	91	576797	54.089	ug/l		100
79) 2-Chlorotoluene	13.124	91	361320	51.012	ug/l		100
80) 1,3,5-Trimethylbenzene	13.171	105	430051	54.088	ug/l		100
81) trans-1,4-Dichloro-2-b...	12.735	75	57082	48.881	ug/l		100
82) 4-Chlorotoluene	13.218	91	371739	51.036	ug/l		100
83) tert-Butylbenzene	13.435	119	351295	51.660	ug/l		100
84) 1,2,4-Trimethylbenzene	13.476	105	431645	53.825	ug/l		100
85) sec-Butylbenzene	13.612	105	484551	54.622	ug/l		100
86) p-Isopropyltoluene	13.729	119	418830	55.774	ug/l		100
87) 1,3-Dichlorobenzene	13.729	146	232357	49.090	ug/l		100
88) 1,4-Dichlorobenzene	13.812	146	229820	46.213	ug/l		100
89) n-Butylbenzene	14.053	91	334309	54.669	ug/l		100
90) Hexachloroethane	14.329	117	80312	46.350	ug/l		100
91) 1,2-Dichlorobenzene	14.106	146	220326	46.825	ug/l		100
92) 1,2-Dibromo-3-Chloropr...	14.718	75	30533	48.010	ug/l		100
93) 1,2,4-Trichlorobenzene	15.388	180	117285	49.573	ug/l		100
94) Hexachlorobutadiene	15.500	225	60983	44.428	ug/l		100
95) Naphthalene	15.641	128	359331	52.451	ug/l		100
96) 1,2,3-Trichlorobenzene	15.835	180	114262	50.897	ug/l		100

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN085997.D
Acq On : 18 Mar 2025 12:08
Operator : JC\MD
Sample : VSTDICCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025

Quant Time: Mar 19 02:53:11 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 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

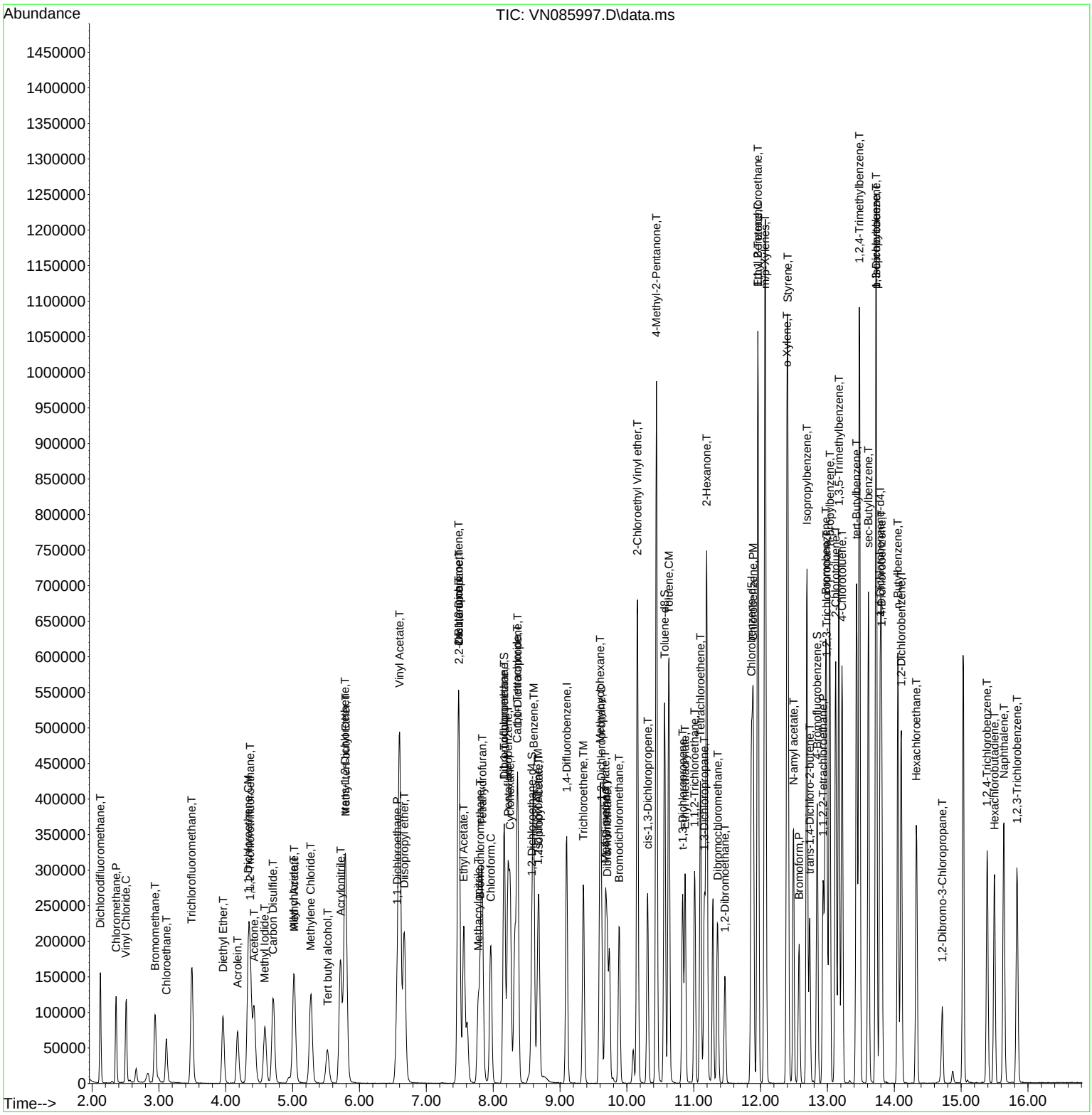
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN085997.D
Acq On : 18 Mar 2025 12:08
Operator : JC\MD
Sample : VSTDICCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 19 02:53:11 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN085998.D
Acq On : 18 Mar 2025 12:32
Operator : JC\MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC020

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025

Quant Time: Mar 19 02:54:15 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.224	168	180263	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.100	114	284537	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.865	117	251681	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	125230	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.577	65	48218	19.534	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery =	39.060%#		
35) Dibromofluoromethane	8.165	113	39531	19.905	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	39.800%#		
50) Toluene-d8	10.565	98	142597	19.783	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery =	39.560%#		
62) 4-Bromofluorobenzene	12.847	95	50895	19.799	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery =	39.600%#		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.124	85	43250	18.110	ug/l	96
3) Chloromethane	2.359	50	37051	17.697	ug/l	98
4) Vinyl Chloride	2.506	62	39037	18.236	ug/l	98
5) Bromomethane	2.942	94	27158	18.625	ug/l	97
6) Chloroethane	3.106	64	24077	17.829	ug/l #	86
7) Trichlorofluoromethane	3.495	101	69126	17.963	ug/l	99
8) Diethyl Ether	3.959	74	22721	19.287	ug/l	98
9) 1,1,2-Trichlorotrifluo...	4.365	101	36929	18.056	ug/l	99
10) Methyl Iodide	4.583	142	49138	18.439	ug/l	91
11) Tert butyl alcohol	5.518	59	32886	94.099	ug/l	99
12) 1,1-Dichloroethene	4.336	96	34693	18.786	ug/l	95
13) Acrolein	4.177	56	37669	101.056	ug/l	99
14) Allyl chloride	5.018	41	41227	17.894	ug/l	99
15) Acrylonitrile	5.718	53	88238	95.601	ug/l	98
16) Acetone	4.424	43	64377	85.367	ug/l	97
17) Carbon Disulfide	4.706	76	105800	17.420	ug/l	100
18) Methyl Acetate	5.024	43	31321	16.787	ug/l	98
19) Methyl tert-butyl Ether	5.794	73	113784	18.802	ug/l	96
20) Methylene Chloride	5.277	84	39757	18.021	ug/l	93
21) trans-1,2-Dichloroethene	5.789	96	37536	18.598	ug/l	98
22) Diisopropyl ether	6.671	45	94961	19.341	ug/l	94
23) Vinyl Acetate	6.600	43	369355m	99.232	ug/l	
24) 1,1-Dichloroethane	6.565	63	65460	18.131	ug/l	100
25) 2-Butanone	7.483	43	99742	91.662	ug/l	96
26) 2,2-Dichloropropane	7.488	77	63430	18.249	ug/l	98
27) cis-1,2-Dichloroethene	7.483	96	42598	18.573	ug/l	98
28) Bromochloromethane	7.812	49	28688	18.755	ug/l	99
29) Tetrahydrofuran	7.841	42	65915	98.119	ug/l	99
30) Chloroform	7.965	83	72867	18.259	ug/l	97
31) Cyclohexane	8.253	56	55179	17.940	ug/l	95
32) 1,1,1-Trichloroethane	8.171	97	69390	18.369	ug/l	95
36) 1,1-Dichloropropene	8.371	75	47900	18.317	ug/l	100
37) Ethyl Acetate	7.559	43	41696	18.899	ug/l	99
38) Carbon Tetrachloride	8.353	117	63404	18.440	ug/l	92
39) Methylcyclohexane	9.600	83	47633	18.359	ug/l	94
40) Benzene	8.606	78	153432	18.690	ug/l	100

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN085998.D
Acq On : 18 Mar 2025 12:32
Operator : JC\MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 19 02:54:15 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC020

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	7.777	41	21324	20.242	ug/l		96
42) 1,2-Dichloroethane	8.671	62	52637	18.401	ug/l		100
43) Isopropyl Acetate	8.688	43	90251m	18.838	ug/l		
44) Trichloroethene	9.353	130	38098	17.906	ug/l		94
45) 1,2-Dichloropropane	9.618	63	36309	19.446	ug/l		98
46) Dibromomethane	9.706	93	26612	18.123	ug/l		98
47) Bromodichloromethane	9.888	83	57646	18.784	ug/l		96
48) Methyl methacrylate	9.677	41	30533	19.354	ug/l		99
49) 1,4-Dioxane	9.694	88	14060	377.006	ug/l		90
51) 4-Methyl-2-Pentanone	10.441	43	209460	99.344	ug/l		98
52) Toluene	10.629	92	98133	19.476	ug/l		99
53) t-1,3-Dichloropropene	10.835	75	57384	19.253	ug/l		96
54) cis-1,3-Dichloropropene	10.312	75	60620	19.278	ug/l		97
55) 1,1,2-Trichloroethane	11.012	97	35992	18.716	ug/l		96
56) Ethyl methacrylate	10.871	69	52684	20.039	ug/l		99
57) 1,3-Dichloropropane	11.159	76	61369	18.788	ug/l		99
58) 2-Chloroethyl Vinyl ether	10.159	63	66141	69.674	ug/l		99
59) 2-Hexanone	11.194	43	152912	99.554	ug/l		98
60) Dibromochloromethane	11.359	129	46407	18.701	ug/l		98
61) 1,2-Dibromoethane	11.465	107	37071	18.777	ug/l		97
64) Tetrachloroethene	11.100	164	37287	18.572	ug/l		95
65) Chlorobenzene	11.888	112	107742	18.708	ug/l		97
66) 1,1,1,2-Tetrachloroethane	11.959	131	39102	18.264	ug/l		98
67) Ethyl Benzene	11.959	91	175592	19.060	ug/l		97
68) m/p-Xylenes	12.071	106	141029	38.948	ug/l		99
69) o-Xylene	12.394	106	65978	19.853	ug/l		99
70) Styrene	12.406	104	112279	19.780	ug/l		99
71) Bromoform	12.576	173	33086	18.487	ug/l	#	99
73) Isopropylbenzene	12.694	105	162838	19.041	ug/l		100
74) N-amyl acetate	12.494	43	56163	19.630	ug/l		98
75) 1,1,2,2-Tetrachloroethane	12.935	83	52144	18.023	ug/l		99
76) 1,2,3-Trichloropropane	12.988	75	57493m	20.137	ug/l		
77) Bromobenzene	12.976	156	43969	18.439	ug/l		99
78) n-propylbenzene	13.035	91	189068	19.524	ug/l		99
79) 2-Chlorotoluene	13.123	91	123854	19.256	ug/l		100
80) 1,3,5-Trimethylbenzene	13.170	105	142528	19.740	ug/l		100
81) trans-1,4-Dichloro-2-b...	12.735	75	21026	19.827	ug/l		94
82) 4-Chlorotoluene	13.218	91	128159	19.376	ug/l		99
83) tert-Butylbenzene	13.435	119	114669	18.570	ug/l		99
84) 1,2,4-Trimethylbenzene	13.482	105	144557	19.850	ug/l		100
85) sec-Butylbenzene	13.612	105	158970	19.734	ug/l		99
86) p-Isopropyltoluene	13.729	119	133733	19.611	ug/l		99
87) 1,3-Dichlorobenzene	13.729	146	80845	18.809	ug/l		100
88) 1,4-Dichlorobenzene	13.812	146	81175	17.975	ug/l		99
89) n-Butylbenzene	14.053	91	103559	18.649	ug/l		98
90) Hexachloroethane	14.329	117	27141	17.249	ug/l		100
91) 1,2-Dichlorobenzene	14.106	146	76225	17.839	ug/l		100
92) 1,2-Dibromo-3-Chloropr...	14.717	75	10795	18.692	ug/l		93
93) 1,2,4-Trichlorobenzene	15.388	180	39028	18.166	ug/l		98
94) Hexachlorobutadiene	15.494	225	22741	18.244	ug/l		98
95) Naphthalene	15.635	128	115493	18.564	ug/l		99
96) 1,2,3-Trichlorobenzene	15.835	180	38684	18.975	ug/l		98

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN085998.D
Acq On : 18 Mar 2025 12:32
Operator : JC\MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC020

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025

Quant Time: Mar 19 02:54:15 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 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

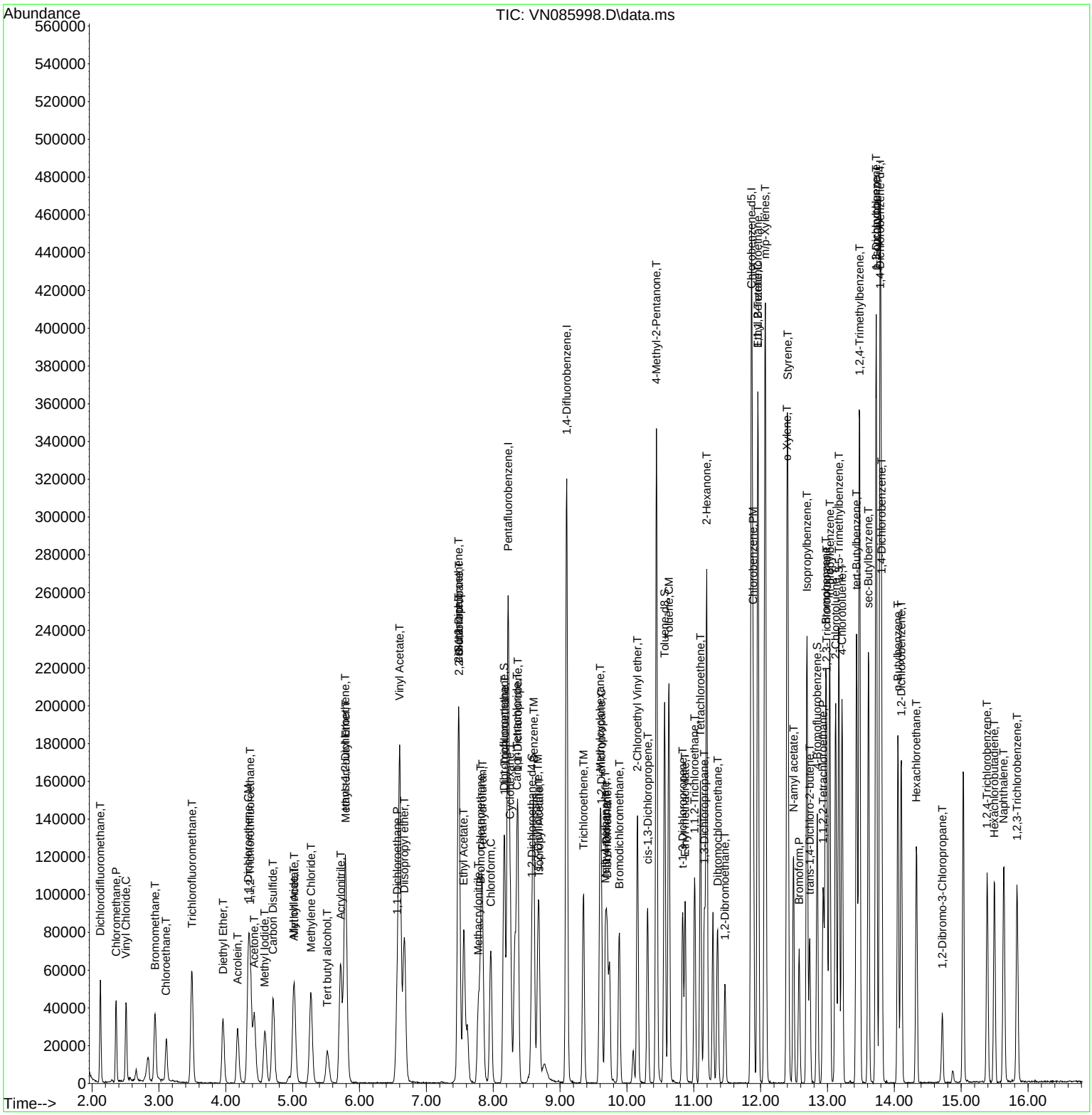
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN085998.D
Acq On : 18 Mar 2025 12:32
Operator : JC\MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 19 02:54:15 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC020

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN085999.D
Acq On : 18 Mar 2025 12:57
Operator : JC\MD
Sample : VSTDICC010
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC010

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025

Quant Time: Mar 19 02:55:17 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.224	168	177085	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.100	114	284484	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.865	117	249106	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	112825	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.576	65	25519	10.524	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery =	21.040%#		
35) Dibromofluoromethane	8.159	113	20600	10.374	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	20.740%#		
50) Toluene-d8	10.565	98	73317	10.174	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery =	20.340%#		
62) 4-Bromofluorobenzene	12.847	95	25049	9.746	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery =	19.500%#		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.124	85	22978	9.794	ug/l	100
3) Chloromethane	2.359	50	19259	9.364	ug/l	99
4) Vinyl Chloride	2.512	62	20562	9.778	ug/l	97
5) Bromomethane	2.965	94	14539	10.150	ug/l	95
6) Chloroethane	3.118	64	13400	10.101	ug/l	98
7) Trichlorofluoromethane	3.494	101	36653	9.696	ug/l	96
8) Diethyl Ether	3.959	74	11412	9.861	ug/l	99
9) 1,1,2-Trichlorotrifluo...	4.377	101	19603	9.757	ug/l	98
10) Methyl Iodide	4.589	142	25149	9.606	ug/l #	94
11) Tert butyl alcohol	5.530	59	17174	50.023	ug/l #	88
12) 1,1-Dichloroethene	4.341	96	19300	10.638	ug/l	99
13) Acrolein	4.177	56	17536	47.889	ug/l	99
14) Allyl chloride	5.030	41	21799	9.631	ug/l	99
15) Acrylonitrile	5.718	53	45069	49.706	ug/l	99
16) Acetone	4.424	43	34466	46.524	ug/l	93
17) Carbon Disulfide	4.712	76	57012	9.555	ug/l	99
18) Methyl Acetate	5.018	43	17854	9.741	ug/l	99
19) Methyl tert-butyl Ether	5.794	73	56795	9.553	ug/l	98
20) Methylene Chloride	5.271	84	20262	9.349	ug/l	98
21) trans-1,2-Dichloroethene	5.788	96	19340	9.754	ug/l	95
22) Diisopropyl ether	6.677	45	49389	10.240	ug/l	95
23) Vinyl Acetate	6.606	43	180182	49.277	ug/l	97
24) 1,1-Dichloroethane	6.571	63	34294	9.669	ug/l	97
25) 2-Butanone	7.488	43	52665	49.267	ug/l	93
26) 2,2-Dichloropropane	7.482	77	32775	9.598	ug/l	98
27) cis-1,2-Dichloroethene	7.488	96	21843	9.695	ug/l	97
28) Bromochloromethane	7.812	49	14293	9.512	ug/l	98
29) Tetrahydrofuran	7.841	42	33470	50.716	ug/l	98
30) Chloroform	7.965	83	38998	9.948	ug/l	95
31) Cyclohexane	8.259	56	30234	10.006	ug/l	96
32) 1,1,1-Trichloroethane	8.165	97	36307	9.784	ug/l	98
36) 1,1-Dichloropropene	8.371	75	25215	9.644	ug/l	99
37) Ethyl Acetate	7.559	43	22354	10.134	ug/l	99
38) Carbon Tetrachloride	8.359	117	33005	9.601	ug/l	89
39) Methylcyclohexane	9.600	83	22685	8.745	ug/l	89
40) Benzene	8.606	78	78849	9.606	ug/l	100

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN085999.D
Acq On : 18 Mar 2025 12:57
Operator : JC\MD
Sample : VSTDICC010
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 19 02:55:17 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC010

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	7.771	41	10855	10.306	ug/l		97
42) 1,2-Dichloroethane	8.671	62	27959	9.776	ug/l		98
43) Isopropyl Acetate	8.688	43	50383m	10.518	ug/l		
44) Trichloroethene	9.353	130	20094	9.446	ug/l		92
45) 1,2-Dichloropropane	9.623	63	18278	9.791	ug/l		97
46) Dibromomethane	9.706	93	14254	9.709	ug/l		98
47) Bromodichloromethane	9.888	83	29326	9.558	ug/l	#	99
48) Methyl methacrylate	9.676	41	15095	9.570	ug/l		99
49) 1,4-Dioxane	9.694	88	8137	218.227	ug/l		97
51) 4-Methyl-2-Pentanone	10.441	43	108196	51.326	ug/l		97
52) Toluene	10.629	92	49947	9.915	ug/l		98
53) t-1,3-Dichloropropene	10.835	75	28817	9.670	ug/l		95
54) cis-1,3-Dichloropropene	10.312	75	31572	10.042	ug/l		100
55) 1,1,2-Trichloroethane	11.012	97	18779	9.767	ug/l		94
56) Ethyl methacrylate	10.870	69	25340	10.180	ug/l		97
57) 1,3-Dichloropropane	11.159	76	32516	9.957	ug/l		98
58) 2-Chloroethyl Vinyl ether	10.159	63	56781	60.781	ug/l		99
59) 2-Hexanone	11.194	43	76690	49.939	ug/l		97
60) Dibromochloromethane	11.359	129	24029	9.685	ug/l		98
61) 1,2-Dibromoethane	11.470	107	19500	9.879	ug/l		97
64) Tetrachloroethene	11.100	164	19436	9.781	ug/l		95
65) Chlorobenzene	11.888	112	55590	9.752	ug/l		97
66) 1,1,1,2-Tetrachloroethane	11.959	131	20639	9.740	ug/l		97
67) Ethyl Benzene	11.959	91	88133	9.666	ug/l		97
68) m/p-Xylenes	12.070	106	68738	19.180	ug/l		99
69) o-Xylene	12.400	106	32135	9.770	ug/l		99
70) Styrene	12.412	104	51989	9.254	ug/l		98
71) Bromoform	12.576	173	17048	9.624	ug/l	#	98
73) Isopropylbenzene	12.694	105	78299	10.163	ug/l		98
74) N-amyl acetate	12.488	43	26009	10.090	ug/l		97
75) 1,1,2,2-Tetrachloroethane	12.935	83	26865	10.307	ug/l		98
76) 1,2,3-Trichloropropane	12.994	75	26024m	10.117	ug/l		
77) Bromobenzene	12.976	156	21805	10.150	ug/l		98
78) n-propylbenzene	13.035	91	87149	9.989	ug/l		100
79) 2-Chlorotoluene	13.123	91	58382	10.075	ug/l		99
80) 1,3,5-Trimethylbenzene	13.170	105	65511	10.071	ug/l		98
81) trans-1,4-Dichloro-2-b...	12.735	75	9044	9.466	ug/l		95
82) 4-Chlorotoluene	13.217	91	60050	10.077	ug/l		100
83) tert-Butylbenzene	13.435	119	56793	10.208	ug/l		96
84) 1,2,4-Trimethylbenzene	13.482	105	66424	10.124	ug/l		99
85) sec-Butylbenzene	13.611	105	73271	10.096	ug/l		100
86) p-Isopropyltoluene	13.723	119	60661	9.874	ug/l		99
87) 1,3-Dichlorobenzene	13.729	146	39474	10.194	ug/l		99
88) 1,4-Dichlorobenzene	13.811	146	39616	9.737	ug/l		97
89) n-Butylbenzene	14.053	91	46910	9.376	ug/l		97
90) Hexachloroethane	14.329	117	13417	9.464	ug/l		95
91) 1,2-Dichlorobenzene	14.106	146	37747	9.805	ug/l		97
92) 1,2-Dibromo-3-Chloropr...	14.723	75	5994	11.520	ug/l		88
93) 1,2,4-Trichlorobenzene	15.388	180	18382	9.497	ug/l		99
94) Hexachlorobutadiene	15.500	225	11293	10.056	ug/l		98
95) Naphthalene	15.635	128	54670	9.754	ug/l		99
96) 1,2,3-Trichlorobenzene	15.841	180	17914	9.753	ug/l		96

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN085999.D
Acq On : 18 Mar 2025 12:57
Operator : JC\MD
Sample : VSTDICC010
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC010

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025

Quant Time: Mar 19 02:55:17 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 2025
Response via : Initial Calibration

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

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

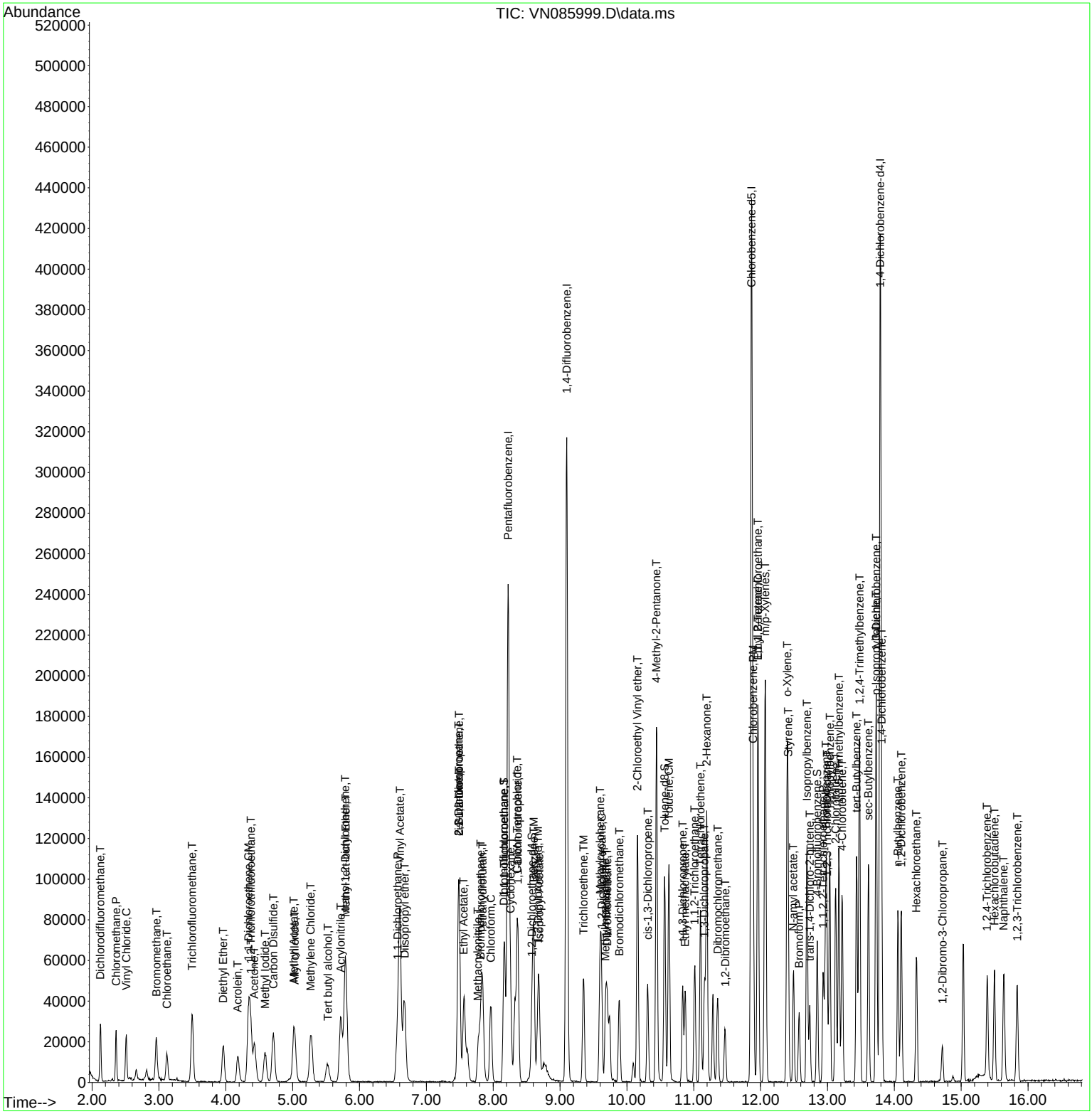
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN085999.D
Acq On : 18 Mar 2025 12:57
Operator : JC\MD
Sample : VSTDICC010
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 19 02:55:17 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC010

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN086000.D
Acq On : 18 Mar 2025 13:21
Operator : JC\MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC005

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025

Quant Time: Mar 19 02:56:20 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.224	168	163796	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.100	114	271211	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.865	117	232728	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	108673	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.577	65	12074	5.383	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery =	10.760%#		
35) Dibromofluoromethane	8.165	113	9983	5.274	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	10.540%#		
50) Toluene-d8	10.565	98	32999	4.803	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery =	9.600%#		
62) 4-Bromofluorobenzene	12.847	95	10615	4.332	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery =	8.660%#		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.124	85	11420	5.263	ug/l	92
3) Chloromethane	2.359	50	10021	5.268	ug/l	99
4) Vinyl Chloride	2.506	62	10389	5.341	ug/l	100
5) Bromomethane	2.942	94	7641	5.767	ug/l	94
6) Chloroethane	3.106	64	6607	5.384	ug/l	94
7) Trichlorofluoromethane	3.489	101	18136	5.187	ug/l	94
8) Diethyl Ether	3.965	74	5061	4.728	ug/l	95
9) 1,1,2-Trichlorotrifluo...	4.371	101	9669	5.203	ug/l	97
10) Methyl Iodide	4.589	142	12547	5.181	ug/l	94
11) Tert butyl alcohol	5.518	59	8843	27.847	ug/l #	93
12) 1,1-Dichloroethene	4.336	96	9006	5.367	ug/l	91
13) Acrolein	4.183	56	9429	27.839	ug/l	97
14) Allyl chloride	5.018	41	11201	5.350	ug/l	95
15) Acrylonitrile	5.724	53	22174	26.440	ug/l	98
16) Acetone	4.436	43	17456	25.474	ug/l	96
17) Carbon Disulfide	4.706	76	28904	5.237	ug/l	98
18) Methyl Acetate	5.024	43	8878	5.237	ug/l	96
19) Methyl tert-butyl Ether	5.794	73	26823	4.878	ug/l	94
20) Methylene Chloride	5.277	84	10471	5.223	ug/l	86
21) trans-1,2-Dichloroethene	5.783	96	9241	5.039	ug/l	85
22) Diisopropyl ether	6.671	45	22716	5.092	ug/l	91
23) Vinyl Acetate	6.606	43	83783	24.772	ug/l	98
24) 1,1-Dichloroethane	6.571	63	16897	5.151	ug/l	99
25) 2-Butanone	7.482	43	26095	26.392	ug/l	96
26) 2,2-Dichloropropane	7.488	77	16658	5.274	ug/l	97
27) cis-1,2-Dichloroethene	7.482	96	10741	5.154	ug/l	98
28) Bromochloromethane	7.812	49	7039	5.064	ug/l #	99
29) Tetrahydrofuran	7.847	42	16104	26.382	ug/l	97
30) Chloroform	7.965	83	18814	5.188	ug/l	95
31) Cyclohexane	8.247	56	15682	5.611	ug/l	87
32) 1,1,1-Trichloroethane	8.165	97	17962	5.233	ug/l	92
36) 1,1-Dichloropropene	8.365	75	12303	4.936	ug/l	96
37) Ethyl Acetate	7.565	43	11164	5.309	ug/l	98
38) Carbon Tetrachloride	8.359	117	16628	5.074	ug/l	99
39) Methylcyclohexane	9.600	83	11562	4.675	ug/l #	86
40) Benzene	8.606	78	39414	5.037	ug/l	98

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN086000.D
Acq On : 18 Mar 2025 13:21
Operator : JC\MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC005

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025

Quant Time: Mar 19 02:56:20 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
41) Methacrylonitrile	7.782	41	5095	5.074 ug/l		94
42) 1,2-Dichloroethane	8.671	62	14311	5.249 ug/l		97
43) Isopropyl Acetate	8.688	43	22794	4.992 ug/l	#	87
44) Trichloroethene	9.353	130	10304	5.081 ug/l		93
45) 1,2-Dichloropropane	9.618	63	9026	5.071 ug/l		100
46) Dibromomethane	9.706	93	7270	5.194 ug/l		95
47) Bromodichloromethane	9.888	83	15203	5.197 ug/l		93
48) Methyl methacrylate	9.682	41	6970	4.635 ug/l		95
49) 1,4-Dioxane	9.700	88	3831	107.772 ug/l	#	89
51) 4-Methyl-2-Pentanone	10.441	43	50081	24.920 ug/l		95
52) Toluene	10.629	92	23224	4.836 ug/l		99
53) t-1,3-Dichloropropene	10.835	75	13594	4.785 ug/l		100
54) cis-1,3-Dichloropropene	10.312	75	14556	4.856 ug/l		98
55) 1,1,2-Trichloroethane	11.012	97	9178	5.007 ug/l		95
56) Ethyl methacrylate	10.870	69	11206	4.940 ug/l		93
57) 1,3-Dichloropropane	11.165	76	15126	4.858 ug/l		98
58) 2-Chloroethyl Vinyl ether	10.159	63	25811	31.548 ug/l		100
59) 2-Hexanone	11.194	43	35455	24.217 ug/l		96
60) Dibromochloromethane	11.359	129	11813	4.994 ug/l		99
61) 1,2-Dibromoethane	11.465	107	9143	4.859 ug/l		90
64) Tetrachloroethene	11.106	164	9809	5.284 ug/l		93
65) Chlorobenzene	11.888	112	26908	5.053 ug/l		93
66) 1,1,1,2-Tetrachloroethane	11.959	131	10358	5.232 ug/l		96
67) Ethyl Benzene	11.965	91	40845	4.795 ug/l		99
68) m/p-Xylenes	12.065	106	30743	9.182 ug/l		98
69) o-Xylene	12.400	106	13604	4.427 ug/l		94
70) Styrene	12.406	104	24028	4.578 ug/l		99
71) Bromoform	12.570	173	8257	4.989 ug/l	#	95
73) Isopropylbenzene	12.694	105	35476	4.780 ug/l		99
74) N-amyl acetate	12.494	43	11933	4.806 ug/l		98
75) 1,1,2,2-Tetrachloroethane	12.935	83	13700	5.457 ug/l		94
76) 1,2,3-Trichloropropane	12.988	75	13734m	5.543 ug/l		
77) Bromobenzene	12.976	156	10805	5.222 ug/l		94
78) n-propylbenzene	13.035	91	40052	4.766 ug/l		98
79) 2-Chlorotoluene	13.123	91	27970	5.011 ug/l		98
80) 1,3,5-Trimethylbenzene	13.170	105	28674	4.576 ug/l		97
81) trans-1,4-Dichloro-2-b...	12.741	75	4314	4.688 ug/l		96
82) 4-Chlorotoluene	13.217	91	27891	4.859 ug/l		98
83) tert-Butylbenzene	13.435	119	24760	4.621 ug/l		98
84) 1,2,4-Trimethylbenzene	13.482	105	29165	4.615 ug/l		100
85) sec-Butylbenzene	13.617	105	32694	4.677 ug/l		97
86) p-Isopropyltoluene	13.729	119	26188	4.425 ug/l		97
87) 1,3-Dichlorobenzene	13.735	146	18666	5.004 ug/l		97
88) 1,4-Dichlorobenzene	13.806	146	20725	5.288 ug/l		96
89) n-Butylbenzene	14.059	91	21529	4.468 ug/l		96
90) Hexachloroethane	14.335	117	7037	5.154 ug/l		95
91) 1,2-Dichlorobenzene	14.106	146	18733	5.052 ug/l		98
92) 1,2-Dibromo-3-Chloropr...	14.717	75	2714	5.415 ug/l		93
93) 1,2,4-Trichlorobenzene	15.394	180	9252	4.962 ug/l		95
94) Hexachlorobutadiene	15.500	225	5668	5.240 ug/l		97
95) Naphthalene	15.641	128	24023	4.450 ug/l		100
96) 1,2,3-Trichlorobenzene	15.841	180	8594	4.858 ug/l		98

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN086000.D
Acq On : 18 Mar 2025 13:21
Operator : JC\MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC005

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025

Quant Time: Mar 19 02:56:20 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 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

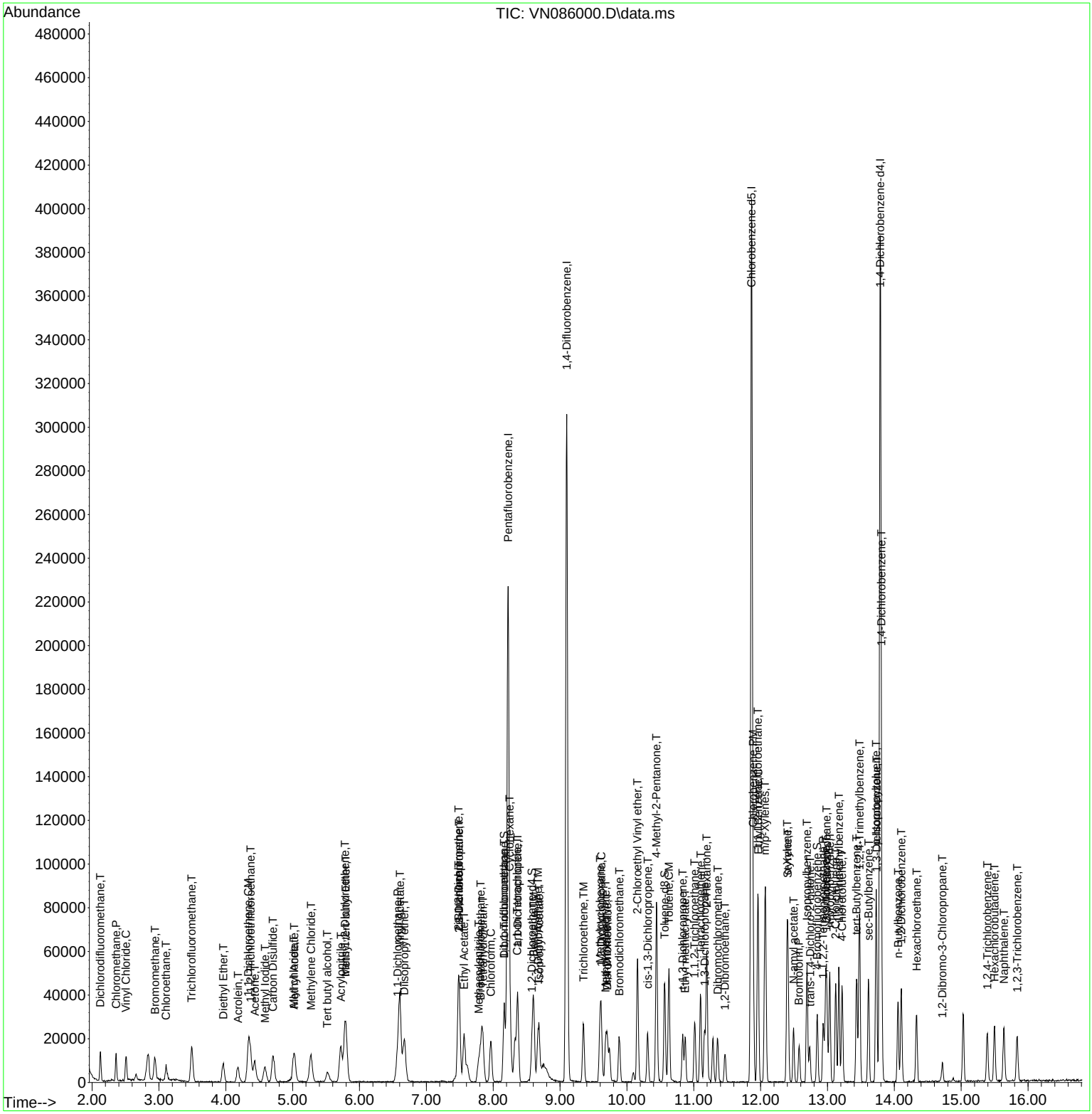
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN086000.D
Acq On : 18 Mar 2025 13:21
Operator : JC\MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 19 02:56:20 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC005

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN086001.D
Acq On : 18 Mar 2025 14:09
Operator : JC\MD
Sample : VSTDICC001
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 19 02:57:23 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC001

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.224	168	145853	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.100	114	249612	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.865	117	206893	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	83272	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	2.124	85	1979	1.024	ug/l	86
3) Chloromethane	2.359	50	1992	1.176	ug/l	99
4) Vinyl Chloride	2.512	62	1726	0.996	ug/l #	74
6) Chloroethane	3.124	64	1302	1.192	ug/l	90
7) Trichlorofluoromethane	3.500	101	3696	1.187	ug/l	86
8) Diethyl Ether	3.959	74	980	1.028	ug/l	75
9) 1,1,2-Trichlorotrifluo...	4.365	101	1923m	1.162	ug/l	
12) 1,1-Dichloroethene	4.347	96	1210	0.810	ug/l #	69
14) Allyl chloride	5.024	41	1936	1.039	ug/l #	85
15) Acrylonitrile	5.724	53	3682	4.930	ug/l #	68
16) Acetone	4.436	43	3256	5.336	ug/l	99
17) Carbon Disulfide	4.706	76	6146	1.251	ug/l #	94
18) Methyl Acetate	5.024	43	1947	1.290	ug/l #	77
19) Methyl tert-butyl Ether	5.794	73	4880	0.997	ug/l #	91
20) Methylene Chloride	5.271	84	2132	1.194	ug/l #	80
21) trans-1,2-Dichloroethene	5.794	96	1725	1.056	ug/l #	76
22) Diisopropyl ether	6.677	45	3402m	0.856	ug/l	
23) Vinyl Acetate	6.606	43	12634	4.195	ug/l	98
24) 1,1-Dichloroethane	6.577	63	3295m	1.128	ug/l	
25) 2-Butanone	7.482	43	4310	4.895	ug/l	95
26) 2,2-Dichloropropane	7.482	77	2930	1.042	ug/l #	68
27) cis-1,2-Dichloroethene	7.488	96	1845	0.994	ug/l	90
28) Bromochloromethane	7.812	49	1520	1.228	ug/l #	98
29) Tetrahydrofuran	7.841	42	2219	4.082	ug/l #	81
30) Chloroform	7.959	83	3631	1.125	ug/l	91
32) 1,1,1-Trichloroethane	8.165	97	3278	1.072	ug/l #	42
36) 1,1-Dichloropropene	8.376	75	2281	0.994	ug/l	97
37) Ethyl Acetate	7.559	43	1939m	1.002	ug/l	
38) Carbon Tetrachloride	8.365	117	3114	1.032	ug/l #	95
39) Methylcyclohexane	9.594	83	2186	0.960	ug/l	92
40) Benzene	8.606	78	7317	1.016	ug/l	96
41) Methacrylonitrile	7.777	41	657	0.711	ug/l #	72
42) 1,2-Dichloroethane	8.671	62	2601	1.036	ug/l	80
43) Isopropyl Acetate	8.694	43	5607	1.334	ug/l #	75
44) Trichloroethene	9.347	130	2173	1.164	ug/l	74
45) 1,2-Dichloropropane	9.623	63	1541	0.941	ug/l #	83

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN086001.D
Acq On : 18 Mar 2025 14:09
Operator : JC\MD
Sample : VSTDICC001
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC001

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025

Quant Time: Mar 19 02:57:23 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) Dibromomethane	9.700	93	1370	1.064	ug/l		90
47) Bromodichloromethane	9.882	83	2680	0.995	ug/l	#	82
48) Methyl methacrylate	9.682	41	1275	0.921	ug/l	#	77
49) 1,4-Dioxane	9.688	88	458	13.999	ug/l	#	47
51) 4-Methyl-2-Pentanone	10.447	43	7154	3.868	ug/l		94
52) Toluene	10.629	92	3631	0.821	ug/l		95
53) t-1,3-Dichloropropene	10.835	75	2225	0.851	ug/l		100
54) cis-1,3-Dichloropropene	10.312	75	2318	0.840	ug/l		89
55) 1,1,2-Trichloroethane	11.018	97	1670	0.990	ug/l	#	86
56) Ethyl methacrylate	10.870	69	1488	0.886	ug/l		90
57) 1,3-Dichloropropane	11.159	76	2752	0.960	ug/l		96
58) 2-Chloroethyl Vinyl ether	10.159	63	3357	7.514	ug/l		99
59) 2-Hexanone	11.194	43	5032	3.734	ug/l		87
60) Dibromochloromethane	11.359	129	2077	0.954	ug/l		92
61) 1,2-Dibromoethane	11.465	107	1624	0.938	ug/l		94
64) Tetrachloroethene	11.106	164	1792	1.086	ug/l		92
65) Chlorobenzene	11.888	112	5000	1.056	ug/l		91
66) 1,1,1,2-Tetrachloroethane	11.953	131	1843	1.047	ug/l	#	66
67) Ethyl Benzene	11.964	91	6561	0.866	ug/l		99
68) m/p-Xylenes	12.070	106	5319	1.787	ug/l		82
69) o-Xylene	12.400	106	2200	0.805	ug/l		92
70) Styrene	12.412	104	3823	0.819	ug/l		87
71) Bromoform	12.576	173	1536	1.044	ug/l	#	91
73) Isopropylbenzene	12.694	105	5061	0.890	ug/l		97
74) N-amyl acetate	12.494	43	1639	0.861	ug/l	#	91
75) 1,1,2,2-Tetrachloroethane	12.935	83	2184	1.135	ug/l	#	91
76) 1,2,3-Trichloropropane	12.994	75	1541m	0.812	ug/l		
77) Bromobenzene	12.976	156	1666	1.051	ug/l		98
78) n-propylbenzene	13.035	91	5242	0.814	ug/l		98
79) 2-Chlorotoluene	13.129	91	3888	0.909	ug/l		98
80) 1,3,5-Trimethylbenzene	13.170	105	3984	0.830	ug/l		97
82) 4-Chlorotoluene	13.223	91	4068	0.925	ug/l		100
83) tert-Butylbenzene	13.435	119	3963	0.965	ug/l		92
84) 1,2,4-Trimethylbenzene	13.482	105	3881	0.801	ug/l		97
85) sec-Butylbenzene	13.617	105	4035	0.753	ug/l		99
86) p-Isopropyltoluene	13.723	119	3477	0.767	ug/l		93
87) 1,3-Dichlorobenzene	13.735	146	2812	0.984	ug/l		92
88) 1,4-Dichlorobenzene	13.811	146	3403m	1.133	ug/l		
89) n-Butylbenzene	14.053	91	3124	0.846	ug/l		93
90) Hexachloroethane	14.335	117	1276	1.220	ug/l		76
91) 1,2-Dichlorobenzene	14.100	146	3337	1.174	ug/l		96
92) 1,2-Dibromo-3-Chloropr...	14.723	75	319	0.831	ug/l	#	20
93) 1,2,4-Trichlorobenzene	15.388	180	1497	1.048	ug/l		94
94) Hexachlorobutadiene	15.500	225	965	1.164	ug/l		80
95) Naphthalene	15.641	128	4162	1.006	ug/l	#	81
96) 1,2,3-Trichlorobenzene	15.829	180	1329	0.980	ug/l	#	86

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

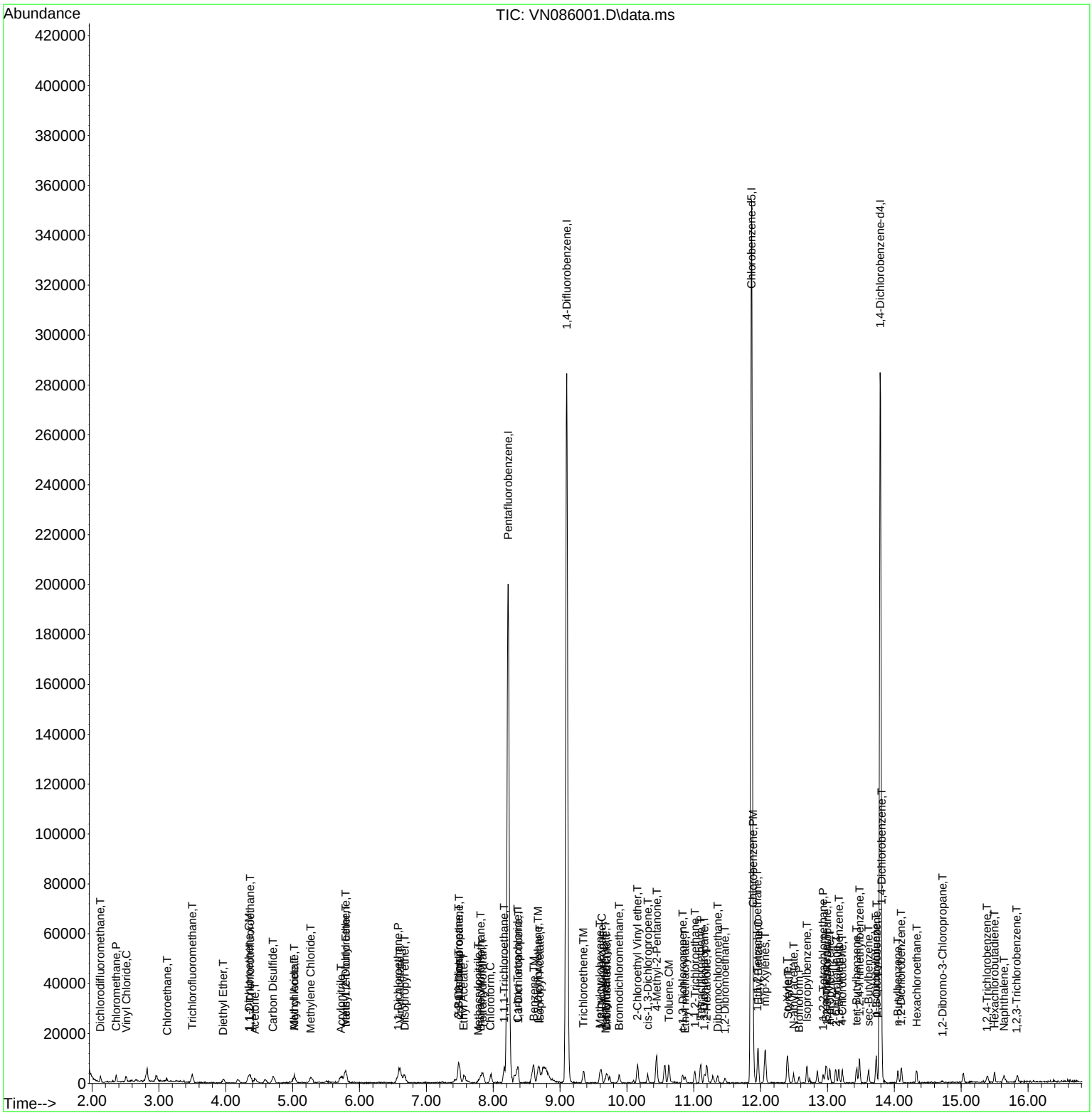
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN086001.D
Acq On : 18 Mar 2025 14:09
Operator : JC\MD
Sample : VSTDICC001
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 19 02:57:23 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 02:30:27 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC001

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN086003.D
Acq On : 18 Mar 2025 16:49
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
ICVVN031825

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025

Quant Time: Mar 19 03:39:56 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.218	168	185181	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.100	114	294426	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.859	117	272136	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	140427	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.577	65	125581	49.524	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 99.040%			
35) Dibromofluoromethane	8.165	113	100012	48.666	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 97.340%			
50) Toluene-d8	10.565	98	385868	51.736	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 103.480%			
62) 4-Bromofluorobenzene	12.847	95	141589	53.231	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 106.460%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.124	85	137956	56.232	ug/l	99
3) Chloromethane	2.359	50	112934	52.508	ug/l	99
4) Vinyl Chloride	2.512	62	123086	55.971	ug/l	98
5) Bromomethane	2.948	94	77255	51.574	ug/l	97
6) Chloroethane	3.112	64	70967	51.154	ug/l	90
7) Trichlorofluoromethane	3.495	101	209962	53.112	ug/l	97
8) Diethyl Ether	3.953	74	68372	56.496	ug/l	99
9) 1,1,2-Trichlorotrifluo...	4.365	101	111303	52.975	ug/l	100
10) Methyl Iodide	4.583	142	155175	56.682	ug/l	94
11) Tert butyl alcohol	5.512	59	85582	238.378	ug/l	99
12) 1,1-Dichloroethene	4.336	96	108747	57.321	ug/l	97
13) Acrolein	4.177	56	104529	272.978	ug/l	100
14) Allyl chloride	5.012	41	133855	56.555	ug/l	98
15) Acrylonitrile	5.712	53	246595	260.076	ug/l	98
16) Acetone	4.418	43	183647	237.056	ug/l	98
17) Carbon Disulfide	4.712	76	317235	50.845	ug/l	98
18) Methyl Acetate	5.012	43	95164	49.649	ug/l	100
19) Methyl tert-butyl Ether	5.789	73	363920	58.538	ug/l	97
20) Methylene Chloride	5.271	84	121113	53.440	ug/l	94
21) trans-1,2-Dichloroethene	5.783	96	115247	55.586	ug/l	97
22) Diisopropyl ether	6.665	45	300680	59.615	ug/l	97
23) Vinyl Acetate	6.600	43	1129550	295.428	ug/l	100
24) 1,1-Dichloroethane	6.565	63	203556	54.884	ug/l	99
25) 2-Butanone	7.477	43	283608	253.710	ug/l	99
26) 2,2-Dichloropropane	7.483	77	198771	55.667	ug/l	100
27) cis-1,2-Dichloroethene	7.483	96	134668	57.158	ug/l	98
28) Bromochloromethane	7.812	49	68612	43.664	ug/l	98
29) Tetrahydrofuran	7.836	42	185823	269.263	ug/l	99
30) Chloroform	7.959	83	222991	54.394	ug/l	99
31) Cyclohexane	8.253	56	172895	54.721	ug/l	97
32) 1,1,1-Trichloroethane	8.165	97	215524	55.539	ug/l	98
36) 1,1-Dichloropropene	8.371	75	155704	57.540	ug/l	100
37) Ethyl Acetate	7.559	43	115871	50.756	ug/l	97
38) Carbon Tetrachloride	8.359	117	201085	56.517	ug/l	95
39) Methylcyclohexane	9.600	83	163279	60.818	ug/l	98
40) Benzene	8.600	78	483089	56.869	ug/l	98

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN086003.D
Acq On : 18 Mar 2025 16:49
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 19 03:39:56 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
ICVVN031825

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	7.777	41	63723	58.457	ug/l		94
42) 1,2-Dichloroethane	8.665	62	162271	54.822	ug/l		100
43) Isopropyl Acetate	8.683	43	203943	41.226	ug/l		99
44) Trichloroethene	9.347	130	117248	53.255	ug/l		96
45) 1,2-Dichloropropane	9.618	63	111560	57.740	ug/l		97
46) Dibromomethane	9.706	93	85108	56.012	ug/l		98
47) Bromodichloromethane	9.882	83	177051	55.753	ug/l		95
48) Methyl methacrylate	9.677	41	94275	57.751	ug/l		98
49) 1,4-Dioxane	9.688	88	40821	1057.815	ug/l		97
51) 4-Methyl-2-Pentanone	10.441	43	607531	278.467	ug/l		99
52) Toluene	10.629	92	314632	60.348	ug/l		100
53) t-1,3-Dichloropropene	10.829	75	184084	59.689	ug/l		99
54) cis-1,3-Dichloropropene	10.306	75	194976	59.921	ug/l		99
55) 1,1,2-Trichloroethane	11.012	97	111563	56.064	ug/l		97
56) Ethyl methacrylate	10.871	69	174971	55.208	ug/l		99
57) 1,3-Dichloropropane	11.159	76	194964	57.684	ug/l		99
58) 2-Chloroethyl Vinyl ether	10.153	63	382073	306.978	ug/l		99
59) 2-Hexanone	11.194	43	448560	282.228	ug/l		98
60) Dibromochloromethane	11.353	129	147588	57.477	ug/l		98
61) 1,2-Dibromoethane	11.465	107	117559	57.545	ug/l		99
64) Tetrachloroethene	11.100	164	114717	52.844	ug/l		97
65) Chlorobenzene	11.888	112	334921	53.783	ug/l		100
66) 1,1,1,2-Tetrachloroethane	11.959	131	126196	54.515	ug/l		98
67) Ethyl Benzene	11.959	91	593609	59.592	ug/l		99
68) m/p-Xylenes	12.065	106	472258	120.622	ug/l		99
69) o-Xylene	12.394	106	223040	62.069	ug/l		100
70) Styrene	12.406	104	378434	61.658	ug/l		99
71) Bromoform	12.576	173	103943	53.714	ug/l	#	99
73) Isopropylbenzene	12.694	105	562565	58.664	ug/l		100
74) N-amyl acetate	12.488	43	182359	56.839	ug/l		98
75) 1,1,2,2-Tetrachloroethane	12.935	83	160871	49.586	ug/l		99
76) 1,2,3-Trichloropropane	12.988	75	153873m	48.944	ug/l		
77) Bromobenzene	12.976	156	142234	53.193	ug/l		98
78) n-propylbenzene	13.035	91	660295	60.807	ug/l		100
79) 2-Chlorotoluene	13.123	91	414442	57.461	ug/l		99
80) 1,3,5-Trimethylbenzene	13.171	105	491547	60.712	ug/l		99
81) trans-1,4-Dichloro-2-b...	12.735	75	68481	57.589	ug/l		93
82) 4-Chlorotoluene	13.218	91	422016	56.898	ug/l		99
83) tert-Butylbenzene	13.435	119	405831	58.608	ug/l		97
84) 1,2,4-Trimethylbenzene	13.476	105	503636	61.674	ug/l		99
85) sec-Butylbenzene	13.612	105	567954	62.874	ug/l		99
86) p-Isopropyltoluene	13.723	119	488020	63.821	ug/l		100
87) 1,3-Dichlorobenzene	13.729	146	267129	55.423	ug/l		100
88) 1,4-Dichlorobenzene	13.806	146	262223	51.782	ug/l		99
89) n-Butylbenzene	14.053	91	393994	63.272	ug/l		99
90) Hexachloroethane	14.329	117	93033	52.727	ug/l		99
91) 1,2-Dichlorobenzene	14.100	146	254035	53.019	ug/l		99
92) 1,2-Dibromo-3-Chloropr...	14.717	75	33218	51.293	ug/l		94
93) 1,2,4-Trichlorobenzene	15.388	180	131782	54.700	ug/l		98
94) Hexachlorobutadiene	15.494	225	70418	50.380	ug/l		99
95) Naphthalene	15.635	128	378782	54.297	ug/l		99
96) 1,2,3-Trichlorobenzene	15.835	180	127760	55.887	ug/l		99

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN086003.D
Acq On : 18 Mar 2025 16:49
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
ICVVN031825

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025

Quant Time: Mar 19 03:39:56 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 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

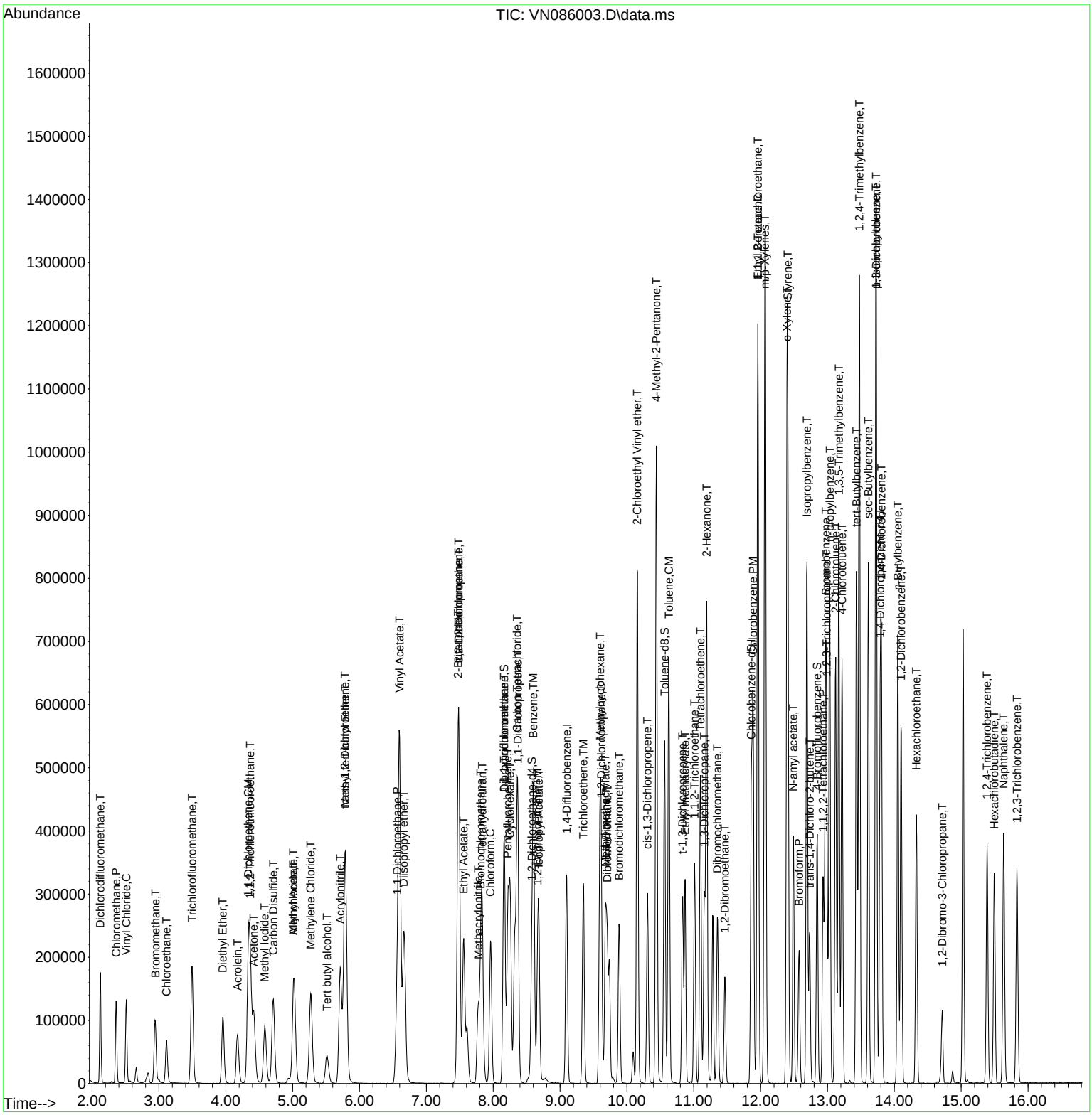
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN086003.D
Acq On : 18 Mar 2025 16:49
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 19 03:39:56 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
ICVVN031825

Manual Integrations APPROVED

Reviewed By :John Carlone 03/19/2025
Supervised By :Mahesh Dadoda 03/19/2025



Evaluate Continuing Calibration Report

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN086003.D
Acq On : 18 Mar 2025 16:49
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
ICVVN031825

Quant Time: Mar 19 03:39:56 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 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	0.662	0.745	-12.5	112	0.00
3	P	Chloromethane	0.581	0.610	-5.0	106	0.00
4	C	Vinyl Chloride	0.594	0.665	-12.0#	109	0.00
5	T	Bromomethane	0.404	0.417	-3.2	106	0.00
6	T	Chloroethane	0.375	0.383	-2.1	113	0.00
7	T	Trichlorofluoromethane	1.067	1.134	-6.3	112	0.00
8	T	Diethyl Ether	0.327	0.369	-12.8	110	0.00
9	T	1,1,2-Trichlorotrifluoroeth	0.567	0.601	-6.0	113	0.00
10	T	Methyl Iodide	0.739	0.838	-13.4	112	0.00
11	T	Tert butyl alcohol	0.097	0.092	5.2	95	-0.01
12	CM	1,1-Dichloroethene	0.512	0.587	-14.6#	110	0.00
13	T	Acrolein	0.103	0.113	-9.7	110	0.00
14	T	Allyl chloride	0.639	0.723	-13.1	114	0.00
15	T	Acrylonitrile	0.256	0.266	-3.9	104	0.00
16	T	Acetone	0.209	0.198	5.3	99	0.00
17	T	Carbon Disulfide	1.685	1.713	-1.7	110	0.00
18	T	Methyl Acetate	0.518	0.514	0.8	106	-0.01
19	T	Methyl tert-butyl Ether	1.679	1.965	-17.0	113	0.00
20	T	Methylene Chloride	0.612	0.654	-6.9	112	0.00
21	T	trans-1,2-Dichloroethene	0.560	0.622	-11.1	113	0.00
22	T	Diisopropyl ether	1.362	1.624	-19.2	114	0.00
23	T	Vinyl Acetate	1.032	1.220	-18.2	111	0.00
24	P	1,1-Dichloroethane	1.001	1.099	-9.8	112	0.00
25	T	2-Butanone	0.302	0.306	-1.3	102	0.00
26	T	2,2-Dichloropropane	0.964	1.073	-11.3	112	0.00
27	T	cis-1,2-Dichloroethene	0.636	0.727	-14.3	111	0.00
28	T	Bromochloromethane	0.424	0.371	12.5	92	0.00
29	T	Tetrahydrofuran	0.186	0.201	-8.1	100	0.00
30	C	Chloroform	1.107	1.204	-8.8#	115	0.00
31	T	Cyclohexane	0.853	0.934	-9.5	113	0.00
32	T	1,1,1-Trichloroethane	1.048	1.164	-11.1	114	0.00
33	S	1,2-Dichloroethane-d4	0.685	0.678	1.0	99	0.00
34	I	1,4-Difluorobenzene	1.000	1.000	0.0	97	0.00
35	S	Dibromofluoromethane	0.349	0.340	2.6	98	0.00
36	T	1,1-Dichloropropene	0.460	0.529	-15.0	113	0.00
37	T	Ethyl Acetate	0.388	0.394	-1.5	104	0.00
38	T	Carbon Tetrachloride	0.604	0.683	-13.1	114	0.00
39	T	Methylcyclohexane	0.456	0.555	-21.7	113	0.00
40	TM	Benzene	1.443	1.641	-13.7	114	0.00
41	T	Methacrylonitrile	0.185	0.216	-16.8	109	0.00
42	TM	1,2-Dichloroethane	0.503	0.551	-9.5	112	0.00
43	T	Isopropyl Acetate	0.840	0.693	17.5	98	0.00
44	TM	Trichloroethene	0.374	0.398	-6.4	112	0.00
45	C	1,2-Dichloropropane	0.328	0.379	-15.5#	115	0.00
46	T	Dibromomethane	0.258	0.289	-12.0	115	0.00
47	T	Bromodichloromethane	0.539	0.601	-11.5	113	0.00
48	T	Methyl methacrylate	0.277	0.320	-15.5	107	0.00

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN086003.D
Acq On : 18 Mar 2025 16:49
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
ICVVN031825

Quant Time: Mar 19 03:39:56 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 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	0.007	0.007	0.0	98	0.00
50	S	Toluene-d8	1.267	1.311	-3.5	100	0.00
51	T	4-Methyl-2-Pentanone	0.371	0.413	-11.3	104	0.00
52	CM	Toluene	0.885	1.069	-20.8#	113	0.00
53	T	t-1,3-Dichloropropene	0.524	0.625	-19.3	112	0.00
54	T	cis-1,3-Dichloropropene	0.553	0.662	-19.7	113	0.00
55	T	1,1,2-Trichloroethane	0.338	0.379	-12.1	112	0.00
56	T	Ethyl methacrylate	0.463	0.594	-28.3#	109	0.00
57	T	1,3-Dichloropropane	0.574	0.662	-15.3	113	0.00
58	T	2-Chloroethyl Vinyl ether	0.183	0.260	-42.1#	118	0.00
59	T	2-Hexanone	0.270	0.305	-13.0	104	0.00
60	T	Dibromochloromethane	0.436	0.501	-14.9	112	0.00
61	T	1,2-Dibromoethane	0.347	0.399	-15.0	110	0.00
62	S	4-Bromofluorobenzene	0.452	0.481	-6.4	100	0.00
63	I	Chlorobenzene-d5	1.000	1.000	0.0	99	0.00
64	T	Tetrachloroethene	0.399	0.422	-5.8	113	0.00
65	PM	Chlorobenzene	1.144	1.231	-7.6	113	0.00
66	T	1,1,1,2-Tetrachloroethane	0.425	0.464	-9.2	113	0.00
67	C	Ethyl Benzene	1.830	2.181	-19.2#	113	0.00
68	T	m/p-Xylenes	0.719	0.868	-20.7	114	0.00
69	T	o-Xylene	0.660	0.820	-24.2	114	0.00
70	T	Styrene	1.128	1.391	-23.3	113	0.00
71	P	Bromoform	0.356	0.382	-7.3	110	0.00
72	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	102	0.00
73	T	Isopropylbenzene	3.414	4.006	-17.3	113	0.00
74	T	N-amyl acetate	1.142	1.299	-13.7	108	0.00
75	P	1,1,2,2-Tetrachloroethane	1.155	1.146	0.8	111	0.00
76	T	1,2,3-Trichloropropane	1.119	1.096	2.1	96	0.00
77	T	Bromobenzene	0.952	1.013	-6.4	113	0.00
78	T	n-propylbenzene	3.866	4.702	-21.6	114	0.00
79	T	2-Chlorotoluene	2.568	2.951	-14.9	115	0.00
80	T	1,3,5-Trimethylbenzene	2.883	3.500	-21.4	114	0.00
81	T	trans-1,4-Dichloro-2-butene	0.423	0.488	-15.4	120	0.00
82	T	4-Chlorotoluene	2.641	3.005	-13.8	114	0.00
83	T	tert-Butylbenzene	2.466	2.890	-17.2	116	0.00
84	T	1,2,4-Trimethylbenzene	2.908	3.586	-23.3	117	0.00
85	T	sec-Butylbenzene	3.216	4.044	-25.7#	117	0.00
86	T	p-Isopropyltoluene	2.723	3.475	-27.6#	117	0.00
87	T	1,3-Dichlorobenzene	1.716	1.902	-10.8	115	0.00
88	T	1,4-Dichlorobenzene	1.803	1.867	-3.5	114	0.00
89	T	n-Butylbenzene	2.217	2.806	-26.6#	118	0.00
90	T	Hexachloroethane	0.628	0.663	-5.6	116	0.00
91	T	1,2-Dichlorobenzene	1.706	1.809	-6.0	115	0.00
92	T	1,2-Dibromo-3-Chloropropane	0.231	0.237	-2.6	109	0.00
93	T	1,2,4-Trichlorobenzene	0.858	0.938	-9.3	112	0.00
94	T	Hexachlorobutadiene	0.498	0.501	-0.6	115	0.00
95	T	Naphthalene	2.484	2.697	-8.6	105	0.00

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN086003.D
Acq On : 18 Mar 2025 16:49
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
ICVVN031825

Quant Time: Mar 19 03:39:56 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 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	0.814	0.910	-11.8	112	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_N\Data\VN031825\
Data File : VN086003.D
Acq On : 18 Mar 2025 16:49
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
ICVVN031825

Quant Time: Mar 19 03:39:56 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 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	56.232	-12.5	112	0.00
3	P	Chloromethane	50.000	52.508	-5.0	106	0.00
4	C	Vinyl Chloride	50.000	55.971	-11.9#	109	0.00
5	T	Bromomethane	50.000	51.574	-3.1	106	0.00
6	T	Chloroethane	50.000	51.154	-2.3	113	0.00
7	T	Trichlorofluoromethane	50.000	53.112	-6.2	112	0.00
8	T	Diethyl Ether	50.000	56.496	-13.0	110	0.00
9	T	1,1,2-Trichlorotrifluoroeth	50.000	52.975	-6.0	113	0.00
10	T	Methyl Iodide	50.000	56.682	-13.4	112	0.00
11	T	Tert butyl alcohol	250.000	238.378	4.6	95	-0.01
12	CM	1,1-Dichloroethene	50.000	57.321	-14.6#	110	0.00
13	T	Acrolein	250.000	272.978	-9.2	110	0.00
14	T	Allyl chloride	50.000	56.555	-13.1	114	0.00
15	T	Acrylonitrile	250.000	260.076	-4.0	104	0.00
16	T	Acetone	250.000	237.056	5.2	99	0.00
17	T	Carbon Disulfide	50.000	50.845	-1.7	110	0.00
18	T	Methyl Acetate	50.000	49.649	0.7	106	-0.01
19	T	Methyl tert-butyl Ether	50.000	58.538	-17.1	113	0.00
20	T	Methylene Chloride	50.000	53.440	-6.9	112	0.00
21	T	trans-1,2-Dichloroethene	50.000	55.586	-11.2	113	0.00
22	T	Diisopropyl ether	50.000	59.615	-19.2	114	0.00
23	T	Vinyl Acetate	250.000	295.428	-18.2	111	0.00
24	P	1,1-Dichloroethane	50.000	54.884	-9.8	112	0.00
25	T	2-Butanone	250.000	253.710	-1.5	102	0.00
26	T	2,2-Dichloropropane	50.000	55.667	-11.3	112	0.00
27	T	cis-1,2-Dichloroethene	50.000	57.158	-14.3	111	0.00
28	T	Bromochloromethane	50.000	43.664	12.7	92	0.00
29	T	Tetrahydrofuran	250.000	269.263	-7.7	100	0.00
30	C	Chloroform	50.000	54.394	-8.8#	115	0.00
31	T	Cyclohexane	50.000	54.721	-9.4	113	0.00
32	T	1,1,1-Trichloroethane	50.000	55.539	-11.1	114	0.00
33	S	1,2-Dichloroethane-d4	50.000	49.524	1.0	99	0.00
34	I	1,4-Difluorobenzene	50.000	50.000	0.0	97	0.00
35	S	Dibromofluoromethane	50.000	48.666	2.7	98	0.00
36	T	1,1-Dichloropropene	50.000	57.540	-15.1	113	0.00
37	T	Ethyl Acetate	50.000	50.756	-1.5	104	0.00
38	T	Carbon Tetrachloride	50.000	56.517	-13.0	114	0.00
39	T	Methylcyclohexane	50.000	60.818	-21.6	113	0.00
40	TM	Benzene	50.000	56.869	-13.7	114	0.00
41	T	Methacrylonitrile	50.000	58.457	-16.9	109	0.00
42	TM	1,2-Dichloroethane	50.000	54.822	-9.6	112	0.00
43	T	Isopropyl Acetate	50.000	41.226	17.5	98	0.00
44	TM	Trichloroethene	50.000	53.255	-6.5	112	0.00
45	C	1,2-Dichloropropane	50.000	57.740	-15.5#	115	0.00
46	T	Dibromomethane	50.000	56.012	-12.0	115	0.00
47	T	Bromodichloromethane	50.000	55.753	-11.5	113	0.00
48	T	Methyl methacrylate	50.000	57.751	-15.5	107	0.00

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN086003.D
Acq On : 18 Mar 2025 16:49
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
ICVVN031825

Quant Time: Mar 19 03:39:56 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 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	1057.815	-5.8	98	0.00
50	S	Toluene-d8	50.000	51.736	-3.5	100	0.00
51	T	4-Methyl-2-Pentanone	250.000	278.467	-11.4	104	0.00
52	CM	Toluene	50.000	60.348	-20.7#	113	0.00
53	T	t-1,3-Dichloropropene	50.000	59.689	-19.4	112	0.00
54	T	cis-1,3-Dichloropropene	50.000	59.921	-19.8	113	0.00
55	T	1,1,2-Trichloroethane	50.000	56.064	-12.1	112	0.00
56	T	Ethyl methacrylate	50.000	55.208	-10.4	109	0.00
57	T	1,3-Dichloropropane	50.000	57.684	-15.4	113	0.00
58	T	2-Chloroethyl Vinyl ether	250.000	306.978	-22.8	118	0.00
59	T	2-Hexanone	250.000	282.228	-12.9	104	0.00
60	T	Dibromochloromethane	50.000	57.477	-15.0	112	0.00
61	T	1,2-Dibromoethane	50.000	57.545	-15.1	110	0.00
62	S	4-Bromofluorobenzene	50.000	53.231	-6.5	100	0.00
63	I	Chlorobenzene-d5	50.000	50.000	0.0	99	0.00
64	T	Tetrachloroethene	50.000	52.844	-5.7	113	0.00
65	PM	Chlorobenzene	50.000	53.783	-7.6	113	0.00
66	T	1,1,1,2-Tetrachloroethane	50.000	54.515	-9.0	113	0.00
67	C	Ethyl Benzene	50.000	59.592	-19.2#	113	0.00
68	T	m/p-Xylenes	100.000	120.622	-20.6	114	0.00
69	T	o-Xylene	50.000	62.069	-24.1	114	0.00
70	T	Styrene	50.000	61.658	-23.3	113	0.00
71	P	Bromoform	50.000	53.714	-7.4	110	0.00
72	I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	102	0.00
73	T	Isopropylbenzene	50.000	58.664	-17.3	113	0.00
74	T	N-amyl acetate	50.000	56.839	-13.7	108	0.00
75	P	1,1,2,2-Tetrachloroethane	50.000	49.586	0.8	111	0.00
76	T	1,2,3-Trichloropropane	50.000	48.944	2.1	96	0.00
77	T	Bromobenzene	50.000	53.193	-6.4	113	0.00
78	T	n-propylbenzene	50.000	60.807	-21.6	114	0.00
79	T	2-Chlorotoluene	50.000	57.461	-14.9	115	0.00
80	T	1,3,5-Trimethylbenzene	50.000	60.712	-21.4	114	0.00
81	T	trans-1,4-Dichloro-2-butene	50.000	57.589	-15.2	120	0.00
82	T	4-Chlorotoluene	50.000	56.898	-13.8	114	0.00
83	T	tert-Butylbenzene	50.000	58.608	-17.2	116	0.00
84	T	1,2,4-Trimethylbenzene	50.000	61.674	-23.3	117	0.00
85	T	sec-Butylbenzene	50.000	62.874	-25.7#	117	0.00
86	T	p-Isopropyltoluene	50.000	63.821	-27.6#	117	0.00
87	T	1,3-Dichlorobenzene	50.000	55.423	-10.8	115	0.00
88	T	1,4-Dichlorobenzene	50.000	51.782	-3.6	114	0.00
89	T	n-Butylbenzene	50.000	63.272	-26.5#	118	0.00
90	T	Hexachloroethane	50.000	52.727	-5.5	116	0.00
91	T	1,2-Dichlorobenzene	50.000	53.019	-6.0	115	0.00
92	T	1,2-Dibromo-3-Chloropropane	50.000	51.293	-2.6	109	0.00
93	T	1,2,4-Trichlorobenzene	50.000	54.700	-9.4	112	0.00
94	T	Hexachlorobutadiene	50.000	50.380	-0.8	115	0.00
95	T	Naphthalene	50.000	54.297	-8.6	105	0.00

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN086003.D
Acq On : 18 Mar 2025 16:49
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
ICVVN031825

Quant Time: Mar 19 03:39:56 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 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	55.887	-11.8	112	0.00

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

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: ENTA05

Lab Code: CHEM Case No.: Q1666 SAS No.: Q1666 SDG No.: Q1666

Instrument ID: MSVOA_N Calibration Date/Time: 03/28/2025 10:44

Lab File ID: VN086140.D Init. Calib. Date(s): 03/18/2025 03/18/2025

Heated Purge: (Y/N) N Init. Calib. Time(s): 11:44 14:09

GC Column: RXI-624 ID: 0.25 (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Methyl tert-butyl Ether	1.679	1.680		0.06	20
Carbon Tetrachloride	0.604	0.595		-1.49	20
Chloroform	1.107	1.110		0.27	20
1,1,1-Trichloroethane	1.048	1.006		-4.01	20
Benzene	1.443	1.525		5.68	20
Toluene	0.885	1.009		14.01	20
Tetrachloroethene	0.399	0.389		-2.51	20
Ethyl Benzene	1.830	1.951		6.61	20
m/p-Xylenes	0.719	0.796		10.71	20
o-Xylene	0.660	0.739		11.97	20
1,2-Dichloroethane-d4	0.685	0.616		-10.07	20
Dibromofluoromethane	0.349	0.328		-6.02	20
Toluene-d8	1.267	1.250		-1.34	20
4-Bromofluorobenzene	0.452	0.459		1.55	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_N\Data\VN032825\
Data File : VN086140.D
Acq On : 28 Mar 2025 10:44
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 28 23:36:59 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDCCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 03/31/2025
Supervised By :Mahesh Dadoda 03/31/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.224	168	218266	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.100	114	341726	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.865	117	321573	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	177687	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.577	65	134346	44.950	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 89.900%			
35) Dibromofluoromethane	8.165	113	112230	47.053	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 94.100%			
50) Toluene-d8	10.565	98	427108	49.339	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 98.680%			
62) 4-Bromofluorobenzene	12.847	95	156781	50.784	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 101.560%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.124	85	127792	44.193	ug/l	97
3) Chloromethane	2.359	50	126147	49.761	ug/l	97
4) Vinyl Chloride	2.512	62	137241	52.948	ug/l	100
5) Bromomethane	2.942	94	85411	48.375	ug/l	99
6) Chloroethane	3.112	64	85977	52.579	ug/l	91
7) Trichlorofluoromethane	3.495	101	213341	45.786	ug/l	98
8) Diethyl Ether	3.959	74	68358	47.923	ug/l	91
9) 1,1,2-Trichlorotrifluo...	4.371	101	126471	51.070	ug/l	98
10) Methyl Iodide	4.583	142	155966	48.335	ug/l	100
11) Tert butyl alcohol	5.524	59	96684	228.480	ug/l	98
12) 1,1-Dichloroethene	4.336	96	109233	48.849	ug/l	98
13) Acrolein	4.183	56	79514	176.175	ug/l	96
14) Allyl chloride	5.018	41	134804	48.322	ug/l	97
15) Acrylonitrile	5.718	53	301308	269.611	ug/l	98
16) Acetone	4.424	43	217644	238.355	ug/l	98
17) Carbon Disulfide	4.712	76	317078	43.117	ug/l	97
18) Methyl Acetate	5.018	43	133940	59.287	ug/l	98
19) Methyl tert-butyl Ether	5.794	73	366744	50.050	ug/l	96
20) Methylene Chloride	5.271	84	134442	50.330	ug/l	94
21) trans-1,2-Dichloroethene	5.783	96	122521	50.136	ug/l	95
22) Diisopropyl ether	6.671	45	334371	56.246	ug/l	98
23) Vinyl Acetate	6.600	43	1219974	270.712	ug/l	98
24) 1,1-Dichloroethane	6.565	63	222267	50.844	ug/l	98
25) 2-Butanone	7.483	43	351958	267.129	ug/l	94
26) 2,2-Dichloropropane	7.488	77	200348	47.604	ug/l	99
27) cis-1,2-Dichloroethene	7.483	96	142345	51.259	ug/l	98
28) Bromochloromethane	7.812	49	93838	50.665	ug/l	96
29) Tetrahydrofuran	7.835	42	237361	291.808	ug/l	95
30) Chloroform	7.965	83	242183	50.121	ug/l	100
31) Cyclohexane	8.253	56	180052	48.348	ug/l	98
32) 1,1,1-Trichloroethane	8.165	97	219467	47.982	ug/l	99
36) 1,1-Dichloropropene	8.371	75	163082	51.925	ug/l	99
37) Ethyl Acetate	7.559	43	140827	53.149	ug/l	99
38) Carbon Tetrachloride	8.359	117	203489	49.277	ug/l	99
39) Methylcyclohexane	9.600	83	163933	52.610	ug/l	94
40) Benzene	8.606	78	521201	52.863	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN032825\
Data File : VN086140.D
Acq On : 28 Mar 2025 10:44
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 28 23:36:59 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDCCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 03/31/2025
Supervised By :Mahesh Dadoda 03/31/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	7.777	41	72271	57.121	ug/l		96
42) 1,2-Dichloroethane	8.665	62	168370	49.009	ug/l		98
43) Isopropyl Acetate	8.682	43	233419	40.654	ug/l		98
44) Trichloroethene	9.353	130	122575	47.968	ug/l		99
45) 1,2-Dichloropropane	9.618	63	125621	56.019	ug/l		97
46) Dibromomethane	9.706	93	94345	53.497	ug/l		98
47) Bromodichloromethane	9.882	83	191158	51.864	ug/l		99
48) Methyl methacrylate	9.677	41	108367	57.195	ug/l		98
49) 1,4-Dioxane	9.688	88	53208	1187.958	ug/l		93
51) 4-Methyl-2-Pentanone	10.441	43	764611	301.956	ug/l		98
52) Toluene	10.629	92	344803	56.980	ug/l		97
53) t-1,3-Dichloropropene	10.835	75	189701	52.997	ug/l		98
54) cis-1,3-Dichloropropene	10.312	75	204166	54.061	ug/l		99
55) 1,1,2-Trichloroethane	11.012	97	129344	56.002	ug/l		95
56) Ethyl methacrylate	10.871	69	189636	52.177	ug/l		98
57) 1,3-Dichloropropane	11.159	76	214007	54.554	ug/l		99
58) 2-Chloroethyl Vinyl ether	10.159	63	407237	286.551	ug/l		97
59) 2-Hexanone	11.194	43	572758	310.491	ug/l		97
60) Dibromochloromethane	11.359	129	160006	53.688	ug/l		97
61) 1,2-Dibromoethane	11.471	107	128563	54.221	ug/l		98
64) Tetrachloroethene	11.100	164	125011	48.733	ug/l		98
65) Chlorobenzene	11.888	112	368410	50.066	ug/l		98
66) 1,1,1,2-Tetrachloroethane	11.959	131	137086	50.116	ug/l		97
67) Ethyl Benzene	11.959	91	627394	53.301	ug/l		99
68) m/p-Xylenes	12.070	106	511977	110.663	ug/l		98
69) o-Xylene	12.394	106	237775	55.997	ug/l		97
70) Styrene	12.412	104	416893	57.481	ug/l		98
71) Bromoform	12.576	173	112868	49.359	ug/l	#	99
73) Isopropylbenzene	12.694	105	590904	48.698	ug/l		98
74) N-amyl acetate	12.494	43	207590	51.135	ug/l		98
75) 1,1,2,2-Tetrachloroethane	12.935	83	189713	46.214	ug/l		99
76) 1,2,3-Trichloropropane	12.994	75	180572m	45.392	ug/l		
77) Bromobenzene	12.976	156	158851	46.950	ug/l		99
78) n-propylbenzene	13.035	91	712397	51.848	ug/l		100
79) 2-Chlorotoluene	13.123	91	447666	49.052	ug/l		99
80) 1,3,5-Trimethylbenzene	13.170	105	532182	51.948	ug/l		98
81) trans-1,4-Dichloro-2-b...	12.735	75	70514	46.864	ug/l		98
82) 4-Chlorotoluene	13.217	91	462335	49.263	ug/l		98
83) tert-Butylbenzene	13.435	119	420738	48.020	ug/l		99
84) 1,2,4-Trimethylbenzene	13.482	105	540255	52.285	ug/l		99
85) sec-Butylbenzene	13.612	105	602307	52.695	ug/l		100
86) p-Isopropyltoluene	13.729	119	517398	53.474	ug/l		98
87) 1,3-Dichlorobenzene	13.729	146	297823	48.834	ug/l		99
88) 1,4-Dichlorobenzene	13.812	146	288219	44.981	ug/l		99
89) n-Butylbenzene	14.053	91	399115	50.654	ug/l		100
90) Hexachloroethane	14.329	117	102546	45.931	ug/l		96
91) 1,2-Dichlorobenzene	14.106	146	283182	46.709	ug/l		99
92) 1,2-Dibromo-3-Chloropr...	14.717	75	36644	44.718	ug/l		97
93) 1,2,4-Trichlorobenzene	15.388	180	135530	44.459	ug/l		100
94) Hexachlorobutadiene	15.500	225	72323	40.893	ug/l		100
95) Naphthalene	15.641	128	397897	45.076	ug/l		99
96) 1,2,3-Trichlorobenzene	15.841	180	134039	46.339	ug/l		99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN032825\
Data File : VN086140.D
Acq On : 28 Mar 2025 10:44
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 28 23:36:59 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDCCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 03/31/2025
Supervised By :Mahesh Dadoda 03/31/2025

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

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

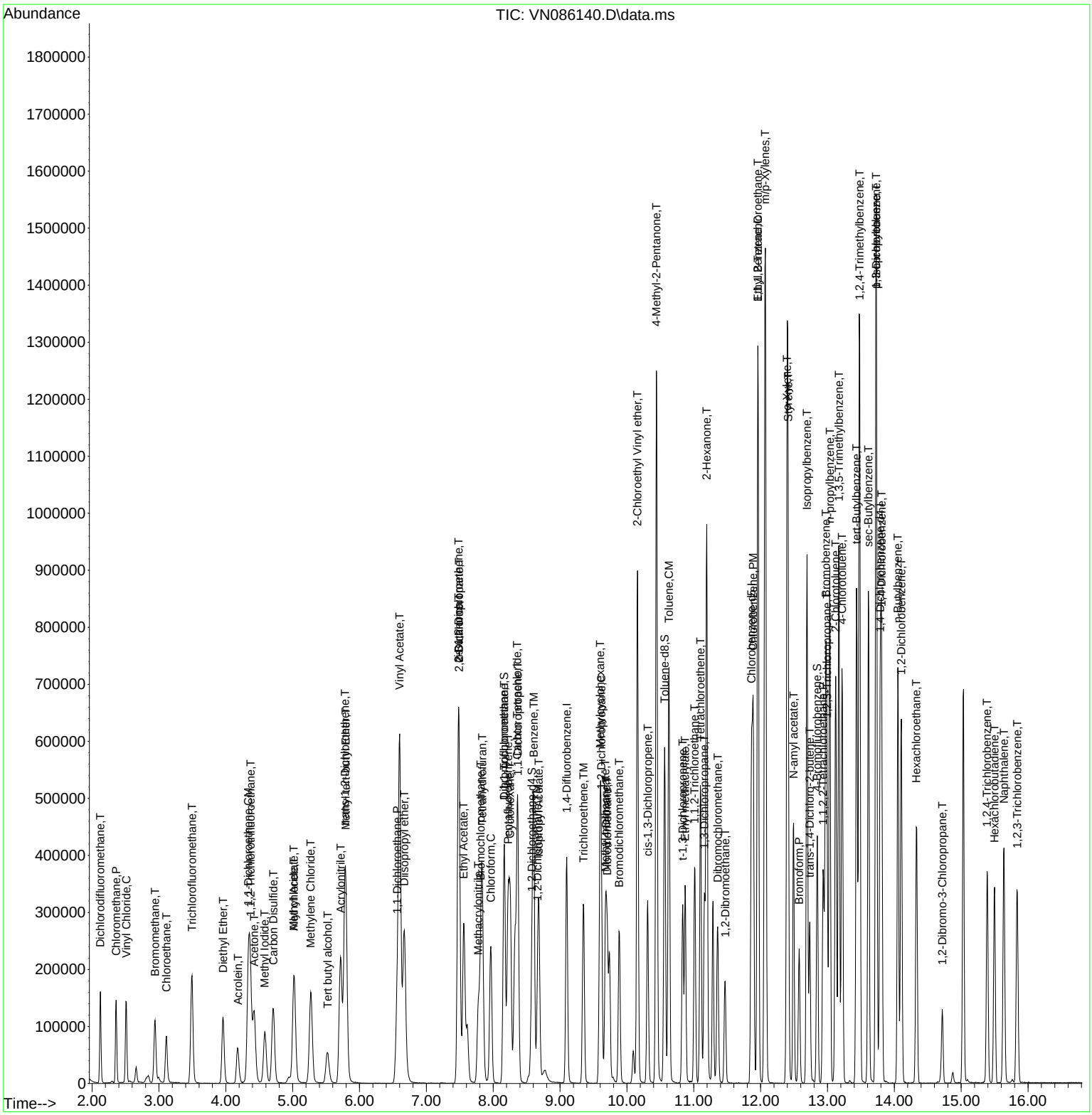
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN032825\
Data File : VN086140.D
Acq On : 28 Mar 2025 10:44
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 28 23:36:59 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDCCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 03/31/2025
Supervised By :Mahesh Dadoda 03/31/2025



Sample Results: **VN086140.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN032825\
Data File : VN086140.D
Acq On : 28 Mar 2025 10:44
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_N
LabSampleId :
VSTDCCC050

Quant Time: Mar 28 23:36:59 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 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	114	0.00
2	T	Dichlorodifluoromethane	0.662	0.585	11.6	104	0.00
3	P	Chloromethane	0.581	0.578	0.5	119	0.00
4	C	Vinyl Chloride	0.594	0.629	-5.9#	121	0.00
5	T	Bromomethane	0.404	0.391	3.2	117	0.00
6	T	Chloroethane	0.375	0.394	-5.1	136	0.00
7	T	Trichlorofluoromethane	1.067	0.977	8.4	114	0.00
8	T	Diethyl Ether	0.327	0.313	4.3	110	0.00
9	T	1,1,2-Trichlorotrifluoroeth	0.567	0.579	-2.1	129	0.00
10	T	Methyl Iodide	0.739	0.715	3.2	112	0.00
11	T	Tert butyl alcohol	0.097	0.089	8.2	107	0.00
12	CM	1,1-Dichloroethene	0.512	0.500	2.3#	111	0.00
13	T	Acrolein	0.103	0.073	29.1#	83	0.00
14	T	Allyl chloride	0.639	0.618	3.3	114	0.00
15	T	Acrylonitrile	0.256	0.276	-7.8	127	0.00
16	T	Acetone	0.209	0.199	4.8	117	0.00
17	T	Carbon Disulfide	1.685	1.453	13.8	110	0.00
18	T	Methyl Acetate	0.518	0.614	-18.5	150	0.00
19	T	Methyl tert-butyl Ether	1.679	1.680	-0.1	114	0.00
20	T	Methylene Chloride	0.612	0.616	-0.7	125	0.00
21	T	trans-1,2-Dichloroethene	0.560	0.561	-0.2	120	0.00
22	T	Diisopropyl ether	1.362	1.532	-12.5	127	0.00
23	T	Vinyl Acetate	1.032	1.118	-8.3	120	0.00
24	P	1,1-Dichloroethane	1.001	1.018	-1.7	123	0.00
25	T	2-Butanone	0.302	0.323	-7.0	126	0.00
26	T	2,2-Dichloropropane	0.964	0.918	4.8	113	0.00
27	T	cis-1,2-Dichloroethene	0.636	0.652	-2.5	118	0.00
28	T	Bromochloromethane	0.424	0.430	-1.4	126	0.00
29	T	Tetrahydrofuran	0.186	0.217	-16.7	128	0.00
30	C	Chloroform	1.107	1.110	-0.3#	125	0.00
31	T	Cyclohexane	0.853	0.825	3.3	118	0.00
32	T	1,1,1-Trichloroethane	1.048	1.006	4.0	117	0.00
33	S	1,2-Dichloroethane-d4	0.685	0.616	10.1	106	0.00
34	I	1,4-Difluorobenzene	1.000	1.000	0.0	112	0.00
35	S	Dibromofluoromethane	0.349	0.328	6.0	110	0.00
36	T	1,1-Dichloropropene	0.460	0.477	-3.7	118	0.00
37	T	Ethyl Acetate	0.388	0.412	-6.2	126	0.00
38	T	Carbon Tetrachloride	0.604	0.595	1.5	116	0.00
39	T	Methylcyclohexane	0.456	0.480	-5.3	114	0.00
40	TM	Benzene	1.443	1.525	-5.7	123	0.00
41	T	Methacrylonitrile	0.185	0.211	-14.1	123	0.00
42	TM	1,2-Dichloroethane	0.503	0.493	2.0	117	0.00
43	T	Isopropyl Acetate	0.840	0.683	18.7	112	0.00
44	TM	Trichloroethene	0.374	0.359	4.0	117	0.00
45	C	1,2-Dichloropropane	0.328	0.368	-12.2#	129	0.00
46	T	Dibromomethane	0.258	0.276	-7.0	128	0.00
47	T	Bromodichloromethane	0.539	0.559	-3.7	122	0.00
48	T	Methyl methacrylate	0.277	0.317	-14.4	123	0.00

Sample Results: **VN086140.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN032825\
Data File : VN086140.D
Acq On : 28 Mar 2025 10:44
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_N
LabSampleId :
VSTDCCC050

Quant Time: Mar 28 23:36:59 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 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	0.007	0.008	-14.3	127	0.00
50	S	Toluene-d8	1.267	1.250	1.3	111	0.00
51	T	4-Methyl-2-Pentanone	0.371	0.447	-20.5	131	0.00
52	CM	Toluene	0.885	1.009	-14.0#	124	0.00
53	T	t-1,3-Dichloropropene	0.524	0.555	-5.9	116	0.00
54	T	cis-1,3-Dichloropropene	0.553	0.597	-8.0	118	0.00
55	T	1,1,2-Trichloroethane	0.338	0.379	-12.1	130	0.00
56	T	Ethyl methacrylate	0.463	0.555	-19.9	119	0.00
57	T	1,3-Dichloropropane	0.574	0.626	-9.1	124	0.00
58	T	2-Chloroethyl Vinyl ether	0.183	0.238	-30.1#	126	0.00
59	T	2-Hexanone	0.270	0.335	-24.1	133	0.00
60	T	Dibromochloromethane	0.436	0.468	-7.3	122	0.00
61	T	1,2-Dibromoethane	0.347	0.376	-8.4	121	0.00
62	S	4-Bromofluorobenzene	0.452	0.459	-1.5	111	0.00
63	I	Chlorobenzene-d5	1.000	1.000	0.0	118	0.00
64	T	Tetrachloroethene	0.399	0.389	2.5	123	0.00
65	PM	Chlorobenzene	1.144	1.146	-0.2	124	0.00
66	T	1,1,1,2-Tetrachloroethane	0.425	0.426	-0.2	123	0.00
67	C	Ethyl Benzene	1.830	1.951	-6.6#	120	0.00
68	T	m/p-Xylenes	0.719	0.796	-10.7	124	0.00
69	T	o-Xylene	0.660	0.739	-12.0	122	0.00
70	T	Styrene	1.128	1.296	-14.9	125	0.00
71	P	Bromoform	0.356	0.351	1.4	120	0.00
72	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	129	0.00
73	T	Isopropylbenzene	3.414	3.326	2.6	119	0.00
74	T	N-amyl acetate	1.142	1.168	-2.3	123	0.00
75	P	1,1,2,2-Tetrachloroethane	1.155	1.068	7.5	131	0.00
76	T	1,2,3-Trichloropropane	1.119	1.016	9.2	113	0.00
77	T	Bromobenzene	0.952	0.894	6.1	127	0.00
78	T	n-propylbenzene	3.866	4.009	-3.7	124	0.00
79	T	2-Chlorotoluene	2.568	2.519	1.9	124	0.00
80	T	1,3,5-Trimethylbenzene	2.883	2.995	-3.9	124	0.00
81	T	trans-1,4-Dichloro-2-butene	0.423	0.397	6.1	124	0.00
82	T	4-Chlorotoluene	2.641	2.602	1.5	124	0.00
83	T	tert-Butylbenzene	2.466	2.368	4.0	120	0.00
84	T	1,2,4-Trimethylbenzene	2.908	3.040	-4.5	125	0.00
85	T	sec-Butylbenzene	3.216	3.390	-5.4	124	0.00
86	T	p-Isopropyltoluene	2.723	2.912	-6.9	124	0.00
87	T	1,3-Dichlorobenzene	1.716	1.676	2.3	128	0.00
88	T	1,4-Dichlorobenzene	1.803	1.622	10.0	125	0.00
89	T	n-Butylbenzene	2.217	2.246	-1.3	119	0.00
90	T	Hexachloroethane	0.628	0.577	8.1	128	0.00
91	T	1,2-Dichlorobenzene	1.706	1.594	6.6	129	0.00
92	T	1,2-Dibromo-3-Chloropropane	0.231	0.206	10.8	120	0.00
93	T	1,2,4-Trichlorobenzene	0.858	0.763	11.1	116	0.00
94	T	Hexachlorobutadiene	0.498	0.407	18.3	119	0.00
95	T	Naphthalene	2.484	2.239	9.9	111	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN032825\
Data File : VN086140.D
Acq On : 28 Mar 2025 10:44
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_N
LabSampleId :
VSTDCCC050

Quant Time: Mar 28 23:36:59 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 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	0.814	0.754	7.4	117	0.00

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

Sample Results: **VN086140.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN032825\
Data File : VN086140.D
Acq On : 28 Mar 2025 10:44
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_N
LabSampleId :
VSTDCCC050

Quant Time: Mar 28 23:36:59 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 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	114	0.00
2	T	Dichlorodifluoromethane	50.000	44.193	11.6	104	0.00
3	P	Chloromethane	50.000	49.761	0.5	119	0.00
4	C	Vinyl Chloride	50.000	52.948	-5.9#	121	0.00
5	T	Bromomethane	50.000	48.375	3.3	117	0.00
6	T	Chloroethane	50.000	52.579	-5.2	136	0.00
7	T	Trichlorofluoromethane	50.000	45.786	8.4	114	0.00
8	T	Diethyl Ether	50.000	47.923	4.2	110	0.00
9	T	1,1,2-Trichlorotrifluoroeth	50.000	51.070	-2.1	129	0.00
10	T	Methyl Iodide	50.000	48.335	3.3	112	0.00
11	T	Tert butyl alcohol	250.000	228.480	8.6	107	0.00
12	CM	1,1-Dichloroethene	50.000	48.849	2.3#	111	0.00
13	T	Acrolein	250.000	176.175	29.5#	83	0.00
14	T	Allyl chloride	50.000	48.322	3.4	114	0.00
15	T	Acrylonitrile	250.000	269.611	-7.8	127	0.00
16	T	Acetone	250.000	238.355	4.7	117	0.00
17	T	Carbon Disulfide	50.000	43.117	13.8	110	0.00
18	T	Methyl Acetate	50.000	59.287	-18.6	150	0.00
19	T	Methyl tert-butyl Ether	50.000	50.050	-0.1	114	0.00
20	T	Methylene Chloride	50.000	50.330	-0.7	125	0.00
21	T	trans-1,2-Dichloroethene	50.000	50.136	-0.3	120	0.00
22	T	Diisopropyl ether	50.000	56.246	-12.5	127	0.00
23	T	Vinyl Acetate	250.000	270.712	-8.3	120	0.00
24	P	1,1-Dichloroethane	50.000	50.844	-1.7	123	0.00
25	T	2-Butanone	250.000	267.129	-6.9	126	0.00
26	T	2,2-Dichloropropane	50.000	47.604	4.8	113	0.00
27	T	cis-1,2-Dichloroethene	50.000	51.259	-2.5	118	0.00
28	T	Bromochloromethane	50.000	50.665	-1.3	126	0.00
29	T	Tetrahydrofuran	250.000	291.808	-16.7	128	0.00
30	C	Chloroform	50.000	50.121	-0.2#	125	0.00
31	T	Cyclohexane	50.000	48.348	3.3	118	0.00
32	T	1,1,1-Trichloroethane	50.000	47.982	4.0	117	0.00
33	S	1,2-Dichloroethane-d4	50.000	44.950	10.1	106	0.00
34	I	1,4-Difluorobenzene	50.000	50.000	0.0	112	0.00
35	S	Dibromofluoromethane	50.000	47.053	5.9	110	0.00
36	T	1,1-Dichloropropene	50.000	51.925	-3.8	118	0.00
37	T	Ethyl Acetate	50.000	53.149	-6.3	126	0.00
38	T	Carbon Tetrachloride	50.000	49.277	1.4	116	0.00
39	T	Methylcyclohexane	50.000	52.610	-5.2	114	0.00
40	TM	Benzene	50.000	52.863	-5.7	123	0.00
41	T	Methacrylonitrile	50.000	57.121	-14.2	123	0.00
42	TM	1,2-Dichloroethane	50.000	49.009	2.0	117	0.00
43	T	Isopropyl Acetate	50.000	40.654	18.7	112	0.00
44	TM	Trichloroethene	50.000	47.968	4.1	117	0.00
45	C	1,2-Dichloropropane	50.000	56.019	-12.0#	129	0.00
46	T	Dibromomethane	50.000	53.497	-7.0	128	0.00
47	T	Bromodichloromethane	50.000	51.864	-3.7	122	0.00
48	T	Methyl methacrylate	50.000	57.195	-14.4	123	0.00

Sample Results: **VN086140.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN032825\
Data File : VN086140.D
Acq On : 28 Mar 2025 10:44
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_N
LabSampleId :
VSTDCCC050

Quant Time: Mar 28 23:36:59 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 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	1187.958	-18.8	127	0.00
50	S	Toluene-d8	50.000	49.339	1.3	111	0.00
51	T	4-Methyl-2-Pentanone	250.000	301.956	-20.8	131	0.00
52	CM	Toluene	50.000	56.980	-14.0#	124	0.00
53	T	t-1,3-Dichloropropene	50.000	52.997	-6.0	116	0.00
54	T	cis-1,3-Dichloropropene	50.000	54.061	-8.1	118	0.00
55	T	1,1,2-Trichloroethane	50.000	56.002	-12.0	130	0.00
56	T	Ethyl methacrylate	50.000	52.177	-4.4	119	0.00
57	T	1,3-Dichloropropane	50.000	54.554	-9.1	124	0.00
58	T	2-Chloroethyl Vinyl ether	250.000	286.551	-14.6	126	0.00
59	T	2-Hexanone	250.000	310.491	-24.2	133	0.00
60	T	Dibromochloromethane	50.000	53.688	-7.4	122	0.00
61	T	1,2-Dibromoethane	50.000	54.221	-8.4	121	0.00
62	S	4-Bromofluorobenzene	50.000	50.784	-1.6	111	0.00
63	I	Chlorobenzene-d5	50.000	50.000	0.0	118	0.00
64	T	Tetrachloroethene	50.000	48.733	2.5	123	0.00
65	PM	Chlorobenzene	50.000	50.066	-0.1	124	0.00
66	T	1,1,1,2-Tetrachloroethane	50.000	50.116	-0.2	123	0.00
67	C	Ethyl Benzene	50.000	53.301	-6.6#	120	0.00
68	T	m/p-Xylenes	100.000	110.663	-10.7	124	0.00
69	T	o-Xylene	50.000	55.997	-12.0	122	0.00
70	T	Styrene	50.000	57.481	-15.0	125	0.00
71	P	Bromoform	50.000	49.359	1.3	120	0.00
72	I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	129	0.00
73	T	Isopropylbenzene	50.000	48.698	2.6	119	0.00
74	T	N-amyl acetate	50.000	51.135	-2.3	123	0.00
75	P	1,1,2,2-Tetrachloroethane	50.000	46.214	7.6	131	0.00
76	T	1,2,3-Trichloropropane	50.000	45.392	9.2	113	0.00
77	T	Bromobenzene	50.000	46.950	6.1	127	0.00
78	T	n-propylbenzene	50.000	51.848	-3.7	124	0.00
79	T	2-Chlorotoluene	50.000	49.052	1.9	124	0.00
80	T	1,3,5-Trimethylbenzene	50.000	51.948	-3.9	124	0.00
81	T	trans-1,4-Dichloro-2-butene	50.000	46.864	6.3	124	0.00
82	T	4-Chlorotoluene	50.000	49.263	1.5	124	0.00
83	T	tert-Butylbenzene	50.000	48.020	4.0	120	0.00
84	T	1,2,4-Trimethylbenzene	50.000	52.285	-4.6	125	0.00
85	T	sec-Butylbenzene	50.000	52.695	-5.4	124	0.00
86	T	p-Isopropyltoluene	50.000	53.474	-6.9	124	0.00
87	T	1,3-Dichlorobenzene	50.000	48.834	2.3	128	0.00
88	T	1,4-Dichlorobenzene	50.000	44.981	10.0	125	0.00
89	T	n-Butylbenzene	50.000	50.654	-1.3	119	0.00
90	T	Hexachloroethane	50.000	45.931	8.1	128	0.00
91	T	1,2-Dichlorobenzene	50.000	46.709	6.6	129	0.00
92	T	1,2-Dibromo-3-Chloropropane	50.000	44.718	10.6	120	0.00
93	T	1,2,4-Trichlorobenzene	50.000	44.459	11.1	116	0.00
94	T	Hexachlorobutadiene	50.000	40.893	18.2	119	0.00
95	T	Naphthalene	50.000	45.076	9.8	111	0.00

Sample Results: **VN086140.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN032825\
Data File : VN086140.D
Acq On : 28 Mar 2025 10:44
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_N
LabSampleId :
VSTDCCC050

Quant Time: Mar 28 23:36:59 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 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	46.339	7.3	117	0.00

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

QC SAMPLE DATA

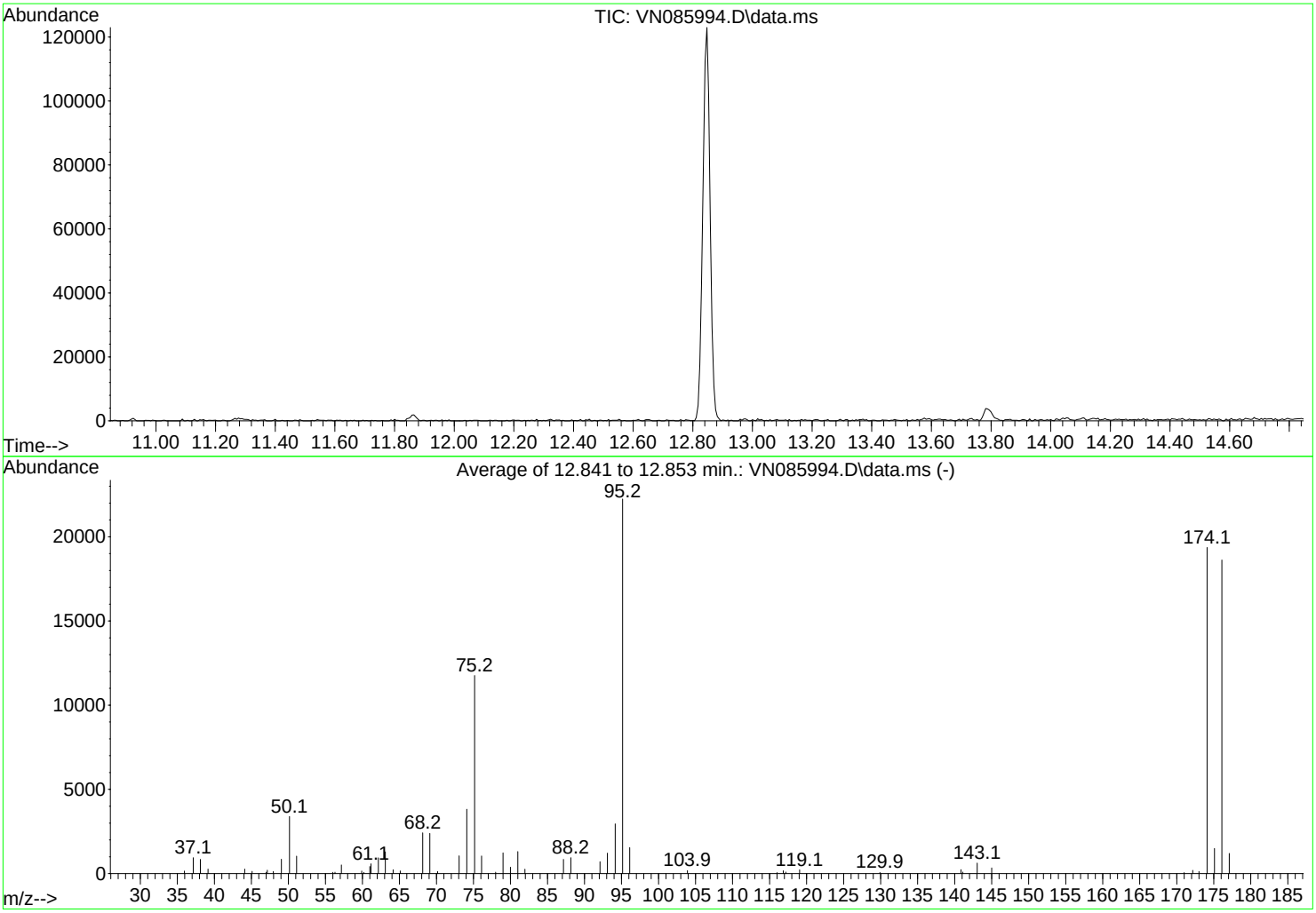
Sample Results: **VN085994.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031825\
Data File : VN085994.D
Acq On : 18 Mar 2025 08:52
Operator : JC\MD
Sample : BFB
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
BFB

Integration File: RTEINT.P

Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Title : SW846 8260
Last Update : Wed Mar 19 03:20:56 2025



AutoFind: Scans 1851, 1852, 1853; Background Corrected with Scan 1843

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.2	3392	PASS
75	95	30	60	52.9	11766	PASS
95	95	100	100	100.0	22245	PASS
96	95	5	9	6.9	1542	PASS
173	174	0.00	2	0.7	126	PASS
174	95	50	100	87.1	19365	PASS
175	174	5	9	7.7	1497	PASS
176	174	95	101	96.2	18624	PASS
177	176	5	9	6.4	1198	PASS

Average of 12.841 to 12.853 min.: VN085994.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.95	156	51.10	1035	65.10	157	81.00	131
37.15	946	56.00	73	68.15	2419	81.95	26
38.10	841	56.30	84	69.10	2389	87.15	84
39.15	274	57.15	518	70.15	126	88.15	94
44.10	272	59.90	150	73.05	1053	92.10	711
45.10	136	60.20	68	74.10	3825	93.10	1217
47.00	83	61.00	426	75.15	11766	94.15	2957
47.15	204	61.15	582	76.10	1047	95.15	22245
47.95	123	62.15	935	78.00	81	96.10	1542
49.05	855	63.10	1288	79.00	1234	103.90	175
50.15	3392	64.15	232	80.00	379	116.00	62

Instrument :
MSVOA_N
ClientSampleId :
BFB

Average of 12.841 to 12.853 min.: VN085994.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
116.85	173	174.10	19365				
117.20	93	175.10	1497				
119.05	226	176.10	18624				
129.90	71	177.10	1198				
140.85	239						
141.10	92						
143.05	623						
145.00	335						
171.00	57						
172.15	198						
173.00	126						

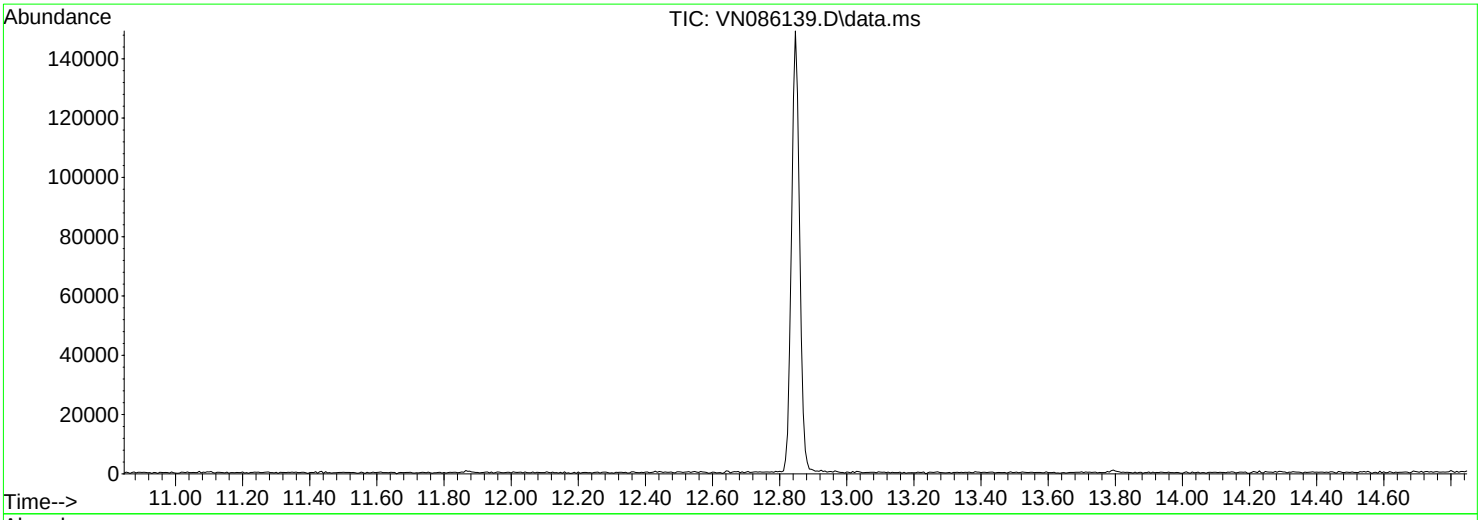
Sample Results: **VN086139.D**

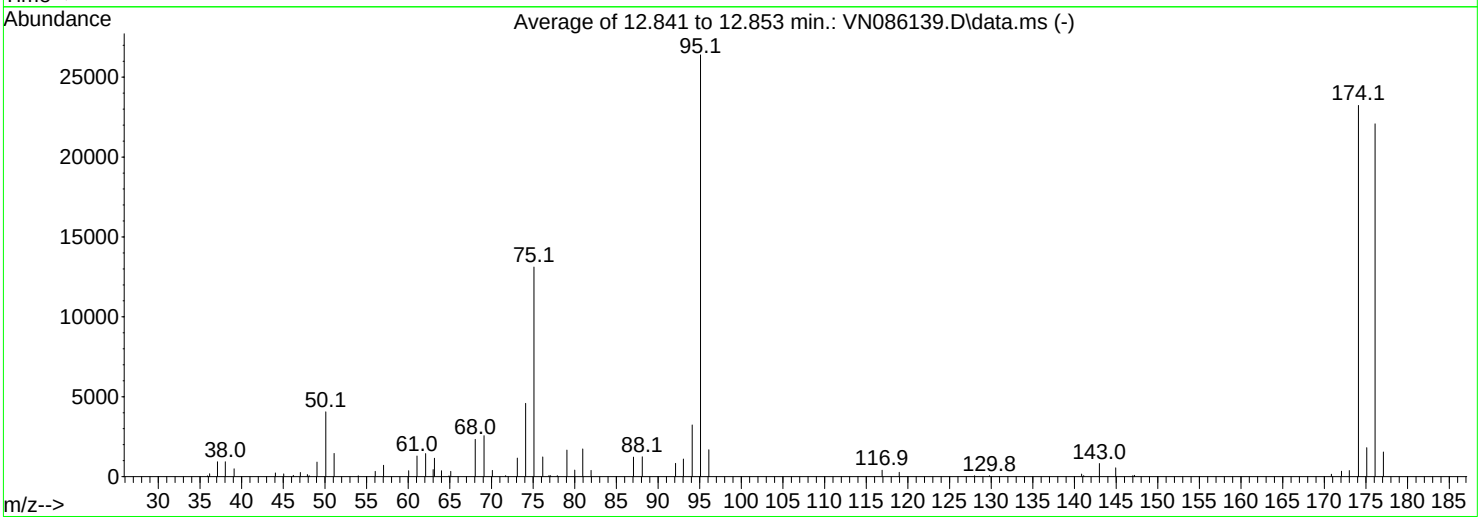
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN032825\
Data File : VN086139.D
Acq On : 28 Mar 2025 10:11
Operator : JC\MD
Sample : BFB
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
BFB

Integration File: RTEINT.P

Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Title : SW846 8260
Last Update : Wed Mar 19 03:20:56 2025





AutoFind: Scans 1851, 1852, 1853; Background Corrected with Scan 1843

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.4	4056	PASS
75	95	30	60	49.7	13115	PASS
95	95	100	100	100.0	26397	PASS
96	95	5	9	6.4	1678	PASS
173	174	0.00	2	1.6	377	PASS
174	95	50	100	88.0	23235	PASS
175	174	5	9	7.8	1814	PASS
176	174	95	101	95.0	22077	PASS
177	176	5	9	7.0	1546	PASS

Average of 12.841 to 12.853 min.: VN086139.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.90	54	49.05	912	64.00	370	76.90	6
36.15	181	50.10	4056	64.90	51	77.10	6
37.10	928	51.10	1449	65.10	333	77.90	5
38.05	934	54.00	55	68.05	2336	79.05	166
39.10	490	56.05	335	69.10	2566	80.00	409
44.05	228	57.05	713	70.10	386	80.95	1736
45.05	167	60.05	370	71.70	61	81.95	386
46.20	84	61.05	1295	73.10	1160	87.05	1220
47.05	264	62.10	1444	74.10	4584	88.10	1244
47.90	135	63.00	440	75.10	13115	92.10	834
48.10	65	63.15	1149	76.15	1232	93.05	1102

Instrument :
MSVOA_N
ClientSampleId :
BFB

Average of 12.841 to 12.853 min.: VN086139.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
94.10	3231	147.00	64				
95.10	26397	147.20	77				
96.10	1678	170.85	149				
116.90	397	172.05	344				
118.95	269	173.00	377				
128.00	57	174.10	23235				
129.80	59	175.10	1814				
140.85	163	176.10	22077				
141.10	58	177.10	1546				
143.00	819						
144.95	554						

Raw Data: **VN086142.D**

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

Report of Analysis

Client:	ENTACT	Date Collected:	
Project:	540 Degraw St, Brooklyn, NY - E9309	Date Received:	
Client Sample ID:	VN0328WBL01	SDG No.:	Q1666
Lab Sample ID:	VN0328WBL01	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group4
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN086142.D	1		03/28/25 11:43	VN032825

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
1634-04-4	Methyl tert-butyl Ether	0.16	U	0.16	1.00	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
71-55-6	1,1,1-Trichloroethane	0.20	U	0.20	1.00	ug/L
71-43-2	Benzene	0.15	U	0.15	1.00	ug/L
108-88-3	Toluene	0.14	U	0.14	1.00	ug/L
127-18-4	Tetrachloroethene	0.23	U	0.23	1.00	ug/L
100-41-4	Ethyl Benzene	0.13	U	0.13	1.00	ug/L
1330-20-7	Total Xylenes	0.36	U	0.36	3.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	57.5		70 (74) - 130 (125)	115%	SPK: 50
1868-53-7	Dibromofluoromethane	54.0		70 (75) - 130 (124)	108%	SPK: 50
2037-26-5	Toluene-d8	47.9		70 (86) - 130 (113)	96%	SPK: 50
460-00-4	4-Bromofluorobenzene	41.9		70 (77) - 130 (121)	84%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	167000	8.224			
540-36-3	1,4-Difluorobenzene	308000	9.1			
3114-55-4	Chlorobenzene-d5	270000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	111000	13.788			

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_N\Data\VN032825\
Data File : VN086142.D
Acq On : 28 Mar 2025 11:43
Operator : JC\MD
Sample : VN0328WBL01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VN0328WBL01

Quant Time: Mar 28 23:37:31 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 2025
Response via : Initial Calibration

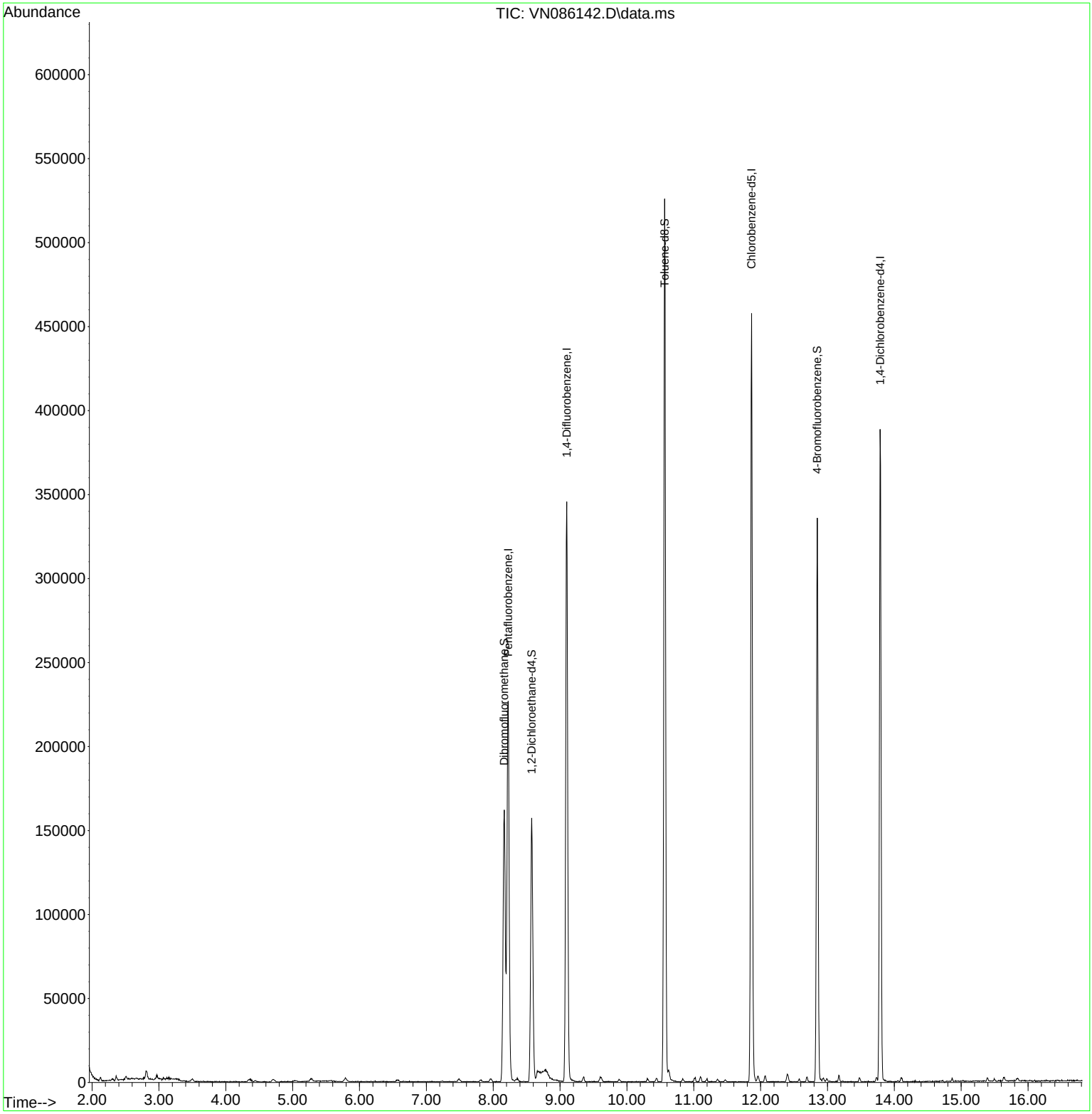
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.224	168	166500	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.100	114	307532	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.865	117	270205	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	111030	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.577	65	131033	57.472	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 114.940%			
35) Dibromofluoromethane	8.165	113	115817	53.955	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 107.920%			
50) Toluene-d8	10.565	98	373518	47.946	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 95.900%			
62) 4-Bromofluorobenzene	12.847	95	116277	41.852	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 83.700%			
Target Compounds						Qvalue

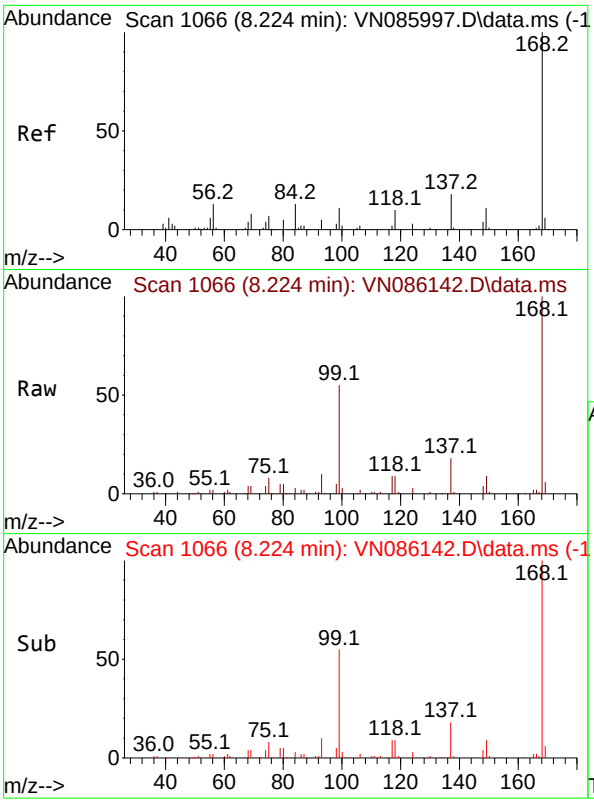
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN032825\
Data File : VN086142.D
Acq On : 28 Mar 2025 11:43
Operator : JC\MD
Sample : VN0328WBL01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VN0328WBL01

Quant Time: Mar 28 23:37:31 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 2025
Response via : Initial Calibration



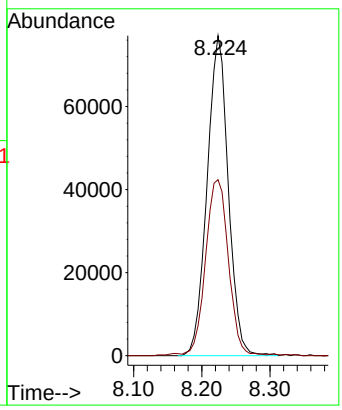


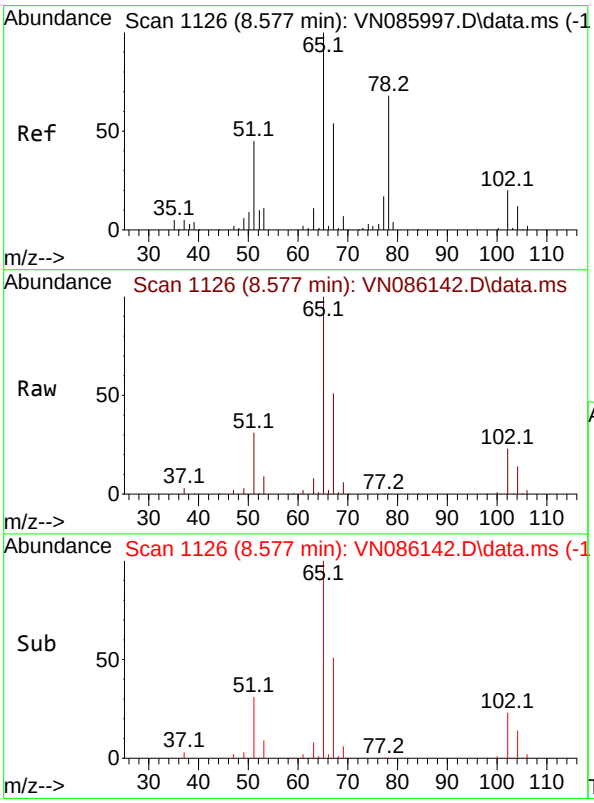
#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.224 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN086142.D
Acq: 28 Mar 2025 11:43

Instrument :
MSVOA_N
ClientSampleId :
VN0328WBL01

Tgt Ion:168 Resp: 166500

Ion	Ratio	Lower	Upper
168	100		
99	54.7	49.4	74.2

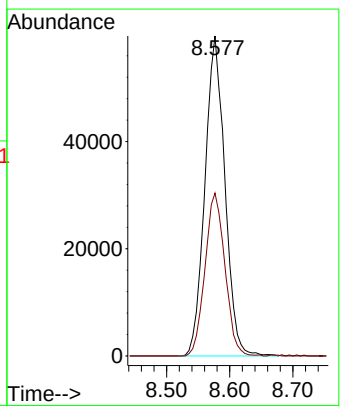


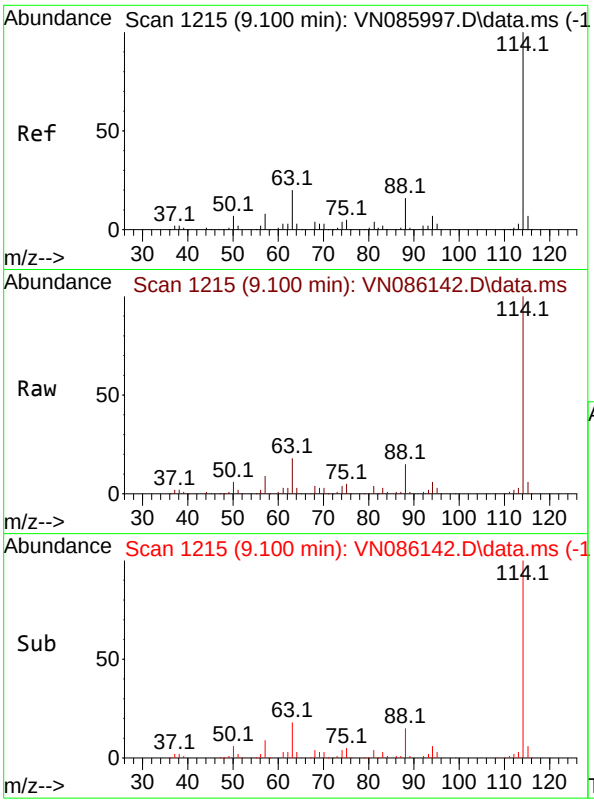


#33
1,2-Dichloroethane-d4
Concen: 57.472 ug/l
RT: 8.577 min Scan# 1126
Delta R.T. -0.000 min
Lab File: VN086142.D
Acq: 28 Mar 2025 11:43

Tgt Ion: 65 Resp: 131033

Ion	Ratio	Lower	Upper
65	100		
67	50.8	0.0	102.2



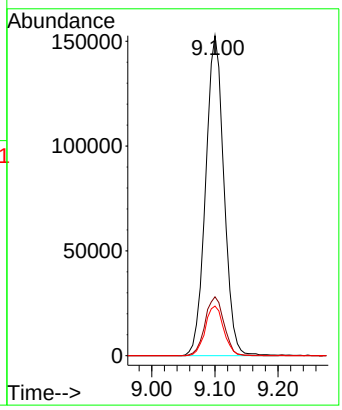


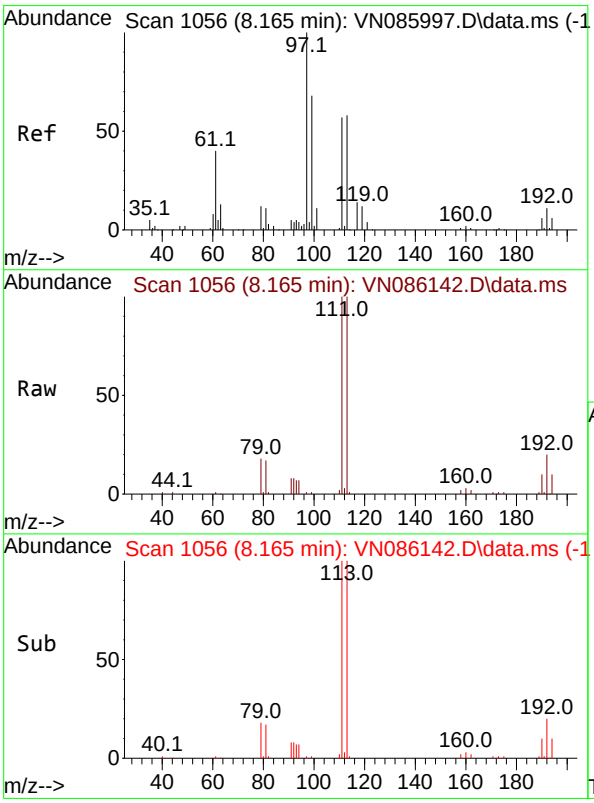
#34
1,4-Difluorobenzene
Concen: 50.000 ug/l
RT: 9.100 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN086142.D
Acq: 28 Mar 2025 11:43

Instrument :
MSVOA_N
ClientSampleId :
VN0328WBL01

Tgt Ion:114 Resp: 307532

Ion	Ratio	Lower	Upper
114	100		
63	18.4	0.0	39.6
88	15.5	0.0	32.6

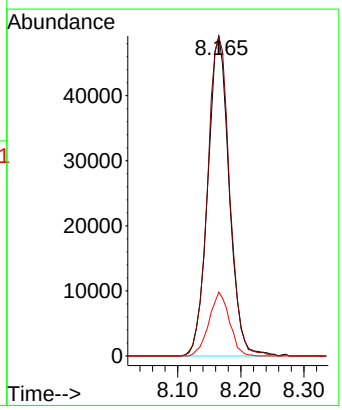


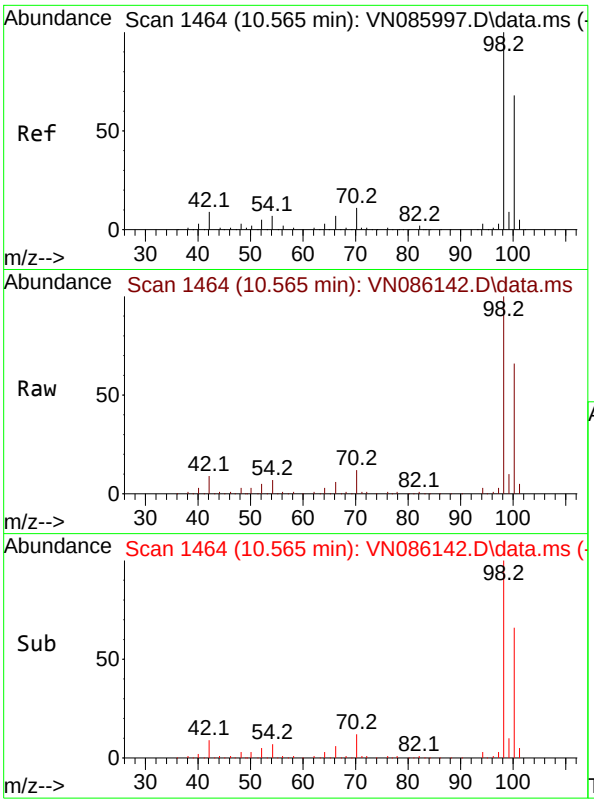


#35
Dibromofluoromethane
Concen: 53.955 ug/l
RT: 8.165 min Scan# 1056
Delta R.T. -0.000 min
Lab File: VN086142.D
Acq: 28 Mar 2025 11:43

Tgt Ion:113 Resp: 115817

Ion	Ratio	Lower	Upper
113	100		
111	102.5	81.8	122.8
192	19.1	15.9	23.9



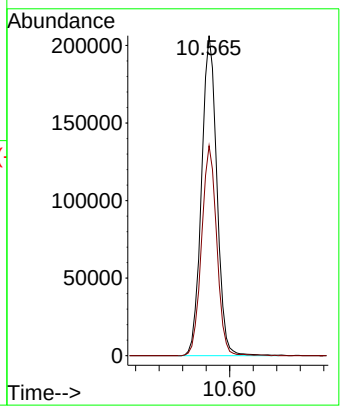


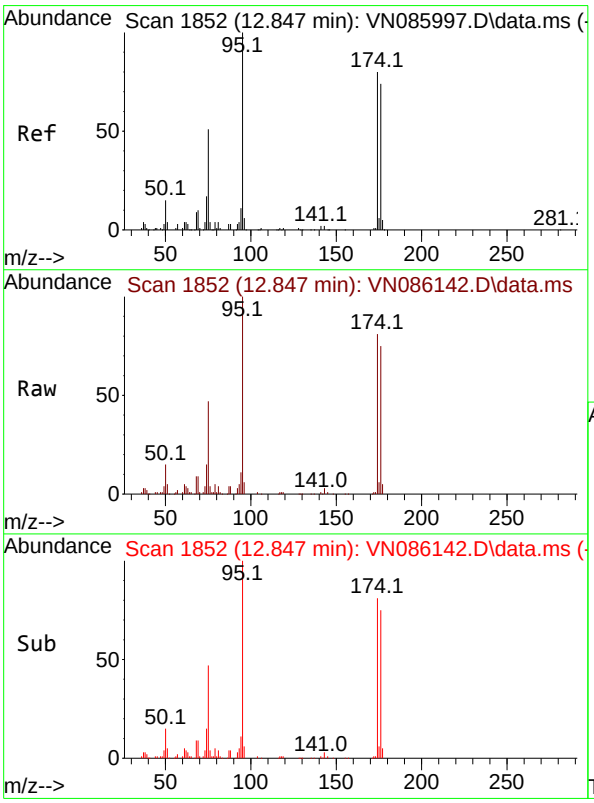
#50
Toluene-d8
Concen: 47.946 ug/l
RT: 10.565 min Scan# 14
Delta R.T. -0.000 min
Lab File: VN086142.D
Acq: 28 Mar 2025 11:43

Instrument :
MSVOA_N
ClientSampleId :
VN0328WBL01

Tgt Ion: 98 Resp: 373518

Ion	Ratio	Lower	Upper
98	100		
100	64.8	53.1	79.7

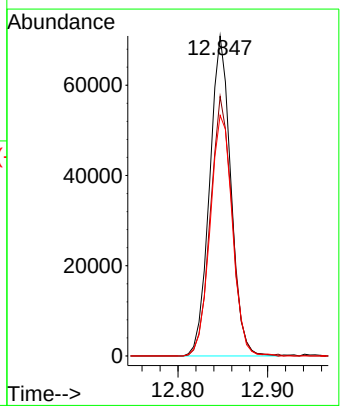


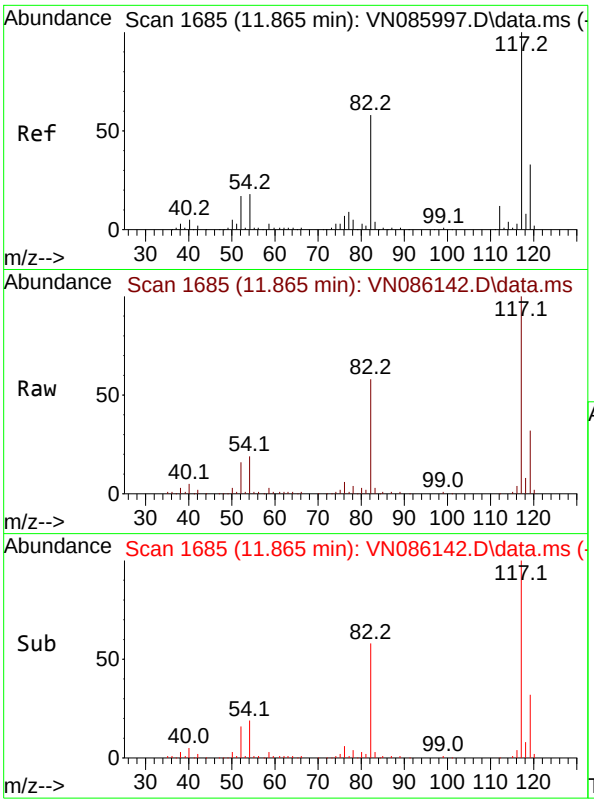


#62
4-Bromofluorobenzene
Concen: 41.852 ug/l
RT: 12.847 min Scan# 1852
Delta R.T. -0.000 min
Lab File: VN086142.D
Acq: 28 Mar 2025 11:43

Tgt Ion: 95 Resp: 116277

Ion	Ratio	Lower	Upper
95	100		
174	82.7	0.0	156.8
176	79.1	0.0	152.2



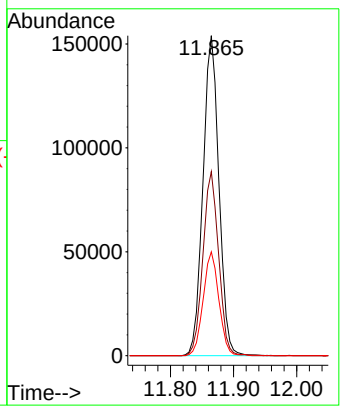


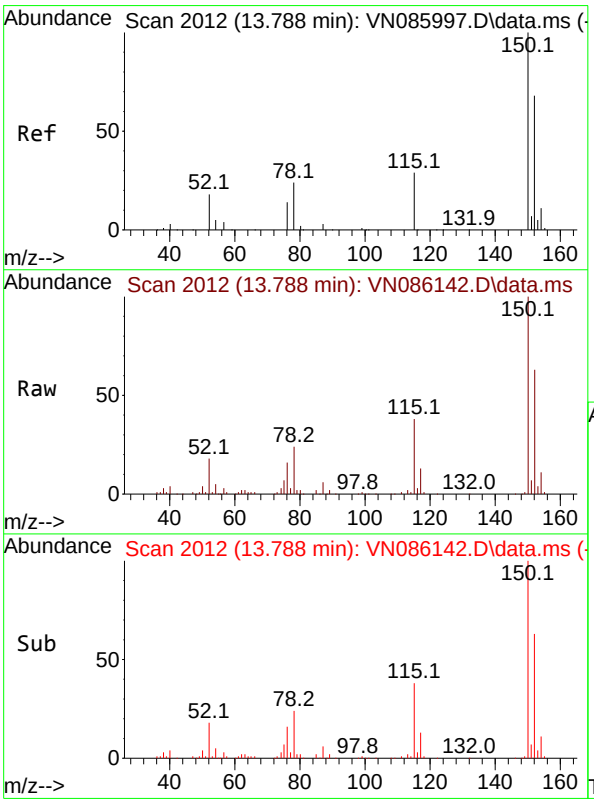
#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.865 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN086142.D
Acq: 28 Mar 2025 11:43

Instrument :
MSVOA_N
ClientSampleId :
VN0328WBL01

Tgt Ion:117 Resp: 270205

Ion	Ratio	Lower	Upper
117	100		
82	57.5	46.7	70.1
119	32.4	26.5	39.7

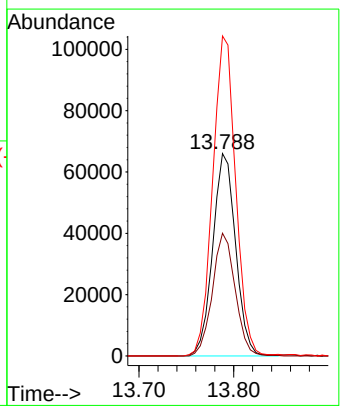




#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.788 min Scan# 2012
Delta R.T. -0.000 min
Lab File: VN086142.D
Acq: 28 Mar 2025 11:43

Tgt Ion:152 Resp: 111030

Ion	Ratio	Lower	Upper
152	100		
115	60.2	31.1	93.2
150	159.2	0.0	359.6



Raw Data: **VN086143.D**

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

Report of Analysis

Client:	ENTACT	Date Collected:	
Project:	540 Degraw St, Brooklyn, NY - E9309	Date Received:	
Client Sample ID:	VN0328WBS01	SDG No.:	Q1666
Lab Sample ID:	VN0328WBS01	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group4
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN086143.D	1		03/28/25 12:07	VN032825

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
1634-04-4	Methyl tert-butyl Ether	18.4		0.16	1.00	ug/L
56-23-5	Carbon Tetrachloride	19.1		0.25	1.00	ug/L
67-66-3	Chloroform	20.0		0.25	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	19.1		0.20	1.00	ug/L
71-43-2	Benzene	20.3		0.15	1.00	ug/L
108-88-3	Toluene	20.8		0.14	1.00	ug/L
127-18-4	Tetrachloroethene	20.2		0.23	1.00	ug/L
100-41-4	Ethyl Benzene	19.5		0.13	1.00	ug/L
1330-20-7	Total Xylenes	60.6		0.36	3.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	50.9		70 (74) - 130 (125)	102%	SPK: 50
1868-53-7	Dibromofluoromethane	52.6		70 (75) - 130 (124)	105%	SPK: 50
2037-26-5	Toluene-d8	54.8		70 (86) - 130 (113)	110%	SPK: 50
460-00-4	4-Bromofluorobenzene	51.7		70 (77) - 130 (121)	103%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	239000	8.224			
540-36-3	1,4-Difluorobenzene	387000	9.1			
3114-55-4	Chlorobenzene-d5	347000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	178000	13.788			

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: **VN086143.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN032825\
Data File : VN086143.D
Acq On : 28 Mar 2025 12:07
Operator : JC\MD
Sample : VN0328WBS01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 28 23:37:47 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VN0328WBS01

Manual Integrations APPROVED

Reviewed By :John Carlone 03/31/2025
Supervised By :Mahesh Dadoda 03/31/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.224	168	239264	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.100	114	387346	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.865	117	347341	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	178334	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.577	65	166924	50.948	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 101.900%			
35) Dibromofluoromethane	8.165	113	142340	52.648	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 105.300%			
50) Toluene-d8	10.565	98	537648	54.793	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 109.580%			
62) 4-Bromofluorobenzene	12.847	95	181055	51.739	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 103.480%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.124	85	53703	16.942	ug/l	96
3) Chloromethane	2.359	50	53907	19.398	ug/l	98
4) Vinyl Chloride	2.512	62	58747	20.676	ug/l	96
5) Bromomethane	2.959	94	37652	19.454	ug/l	96
6) Chloroethane	3.118	64	37326	20.824	ug/l	95
7) Trichlorofluoromethane	3.500	101	92695	18.148	ug/l	95
8) Diethyl Ether	3.965	74	28979	18.533	ug/l	91
9) 1,1,2-Trichlorotrifluo...	4.371	101	53496	19.706	ug/l	97
10) Methyl Iodide	4.589	142	65984	18.654	ug/l	99
11) Tert butyl alcohol	5.518	59	37271	80.348	ug/l #	91
12) 1,1-Dichloroethene	4.336	96	47633	19.432	ug/l	95
13) Acrolein	4.183	56	34850	70.439	ug/l	95
14) Allyl chloride	5.024	41	57553	18.820	ug/l	95
15) Acrylonitrile	5.718	53	117970	96.296	ug/l	98
16) Acetone	4.424	43	89137	89.052	ug/l	94
17) Carbon Disulfide	4.712	76	134113	16.636	ug/l	97
18) Methyl Acetate	5.024	43	55443	22.387	ug/l	97
19) Methyl tert-butyl Ether	5.794	73	147757	18.395	ug/l	97
20) Methylene Chloride	5.271	84	57867	19.762	ug/l	98
21) trans-1,2-Dichloroethene	5.789	96	51475	19.215	ug/l	98
22) Diisopropyl ether	6.671	45	145319	22.299	ug/l	98
23) Vinyl Acetate	6.606	43	482504	97.671	ug/l	99
24) 1,1-Dichloroethane	6.571	63	96932	20.228	ug/l	97
25) 2-Butanone	7.482	43	136294	94.366	ug/l	100
26) 2,2-Dichloropropane	7.488	77	86236	18.692	ug/l	99
27) cis-1,2-Dichloroethene	7.482	96	58713	19.287	ug/l	96
28) Bromochloromethane	7.806	49	40303	19.851	ug/l	96
29) Tetrahydrofuran	7.841	42	93684	105.066	ug/l	94
30) Chloroform	7.965	83	106081	20.027	ug/l	99
31) Cyclohexane	8.259	56	79518	19.478	ug/l	96
32) 1,1,1-Trichloroethane	8.165	97	95903	19.127	ug/l	98
36) 1,1-Dichloropropene	8.371	75	67485	18.956	ug/l	98
37) Ethyl Acetate	7.559	43	60763	20.232	ug/l	97
38) Carbon Tetrachloride	8.359	117	89256	19.068	ug/l	97
39) Methylcyclohexane	9.600	83	62612	17.727	ug/l	95
40) Benzene	8.606	78	226337	20.253	ug/l	97

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN032825\
Data File : VN086143.D
Acq On : 28 Mar 2025 12:07
Operator : JC\MD
Sample : VN0328WBS01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 28 23:37:47 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VN0328WBS01

Manual Integrations APPROVED

Reviewed By :John Carlone 03/31/2025
Supervised By :Mahesh Dadoda 03/31/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	7.777	41	28918	20.164	ug/l		97
42) 1,2-Dichloroethane	8.671	62	74133	19.037	ug/l		97
43) Isopropyl Acetate	8.688	43	100676	15.469	ug/l		97
44) Trichloroethene	9.347	130	53703	18.541	ug/l		99
45) 1,2-Dichloropropane	9.618	63	53884	21.199	ug/l		97
46) Dibromomethane	9.706	93	39653	19.836	ug/l		99
47) Bromodichloromethane	9.882	83	84083	20.126	ug/l		98
48) Methyl methacrylate	9.676	41	43554	20.280	ug/l		96
49) 1,4-Dioxane	9.694	88	20236	398.591	ug/l		95
51) 4-Methyl-2-Pentanone	10.441	43	300347	104.642	ug/l		97
52) Toluene	10.629	92	142366	20.756	ug/l		98
53) t-1,3-Dichloropropene	10.835	75	77526	19.108	ug/l		98
54) cis-1,3-Dichloropropene	10.312	75	87743	20.497	ug/l		97
55) 1,1,2-Trichloroethane	11.012	97	55943	21.369	ug/l		96
56) Ethyl methacrylate	10.871	69	71289	19.930	ug/l		97
57) 1,3-Dichloropropane	11.159	76	88423	19.886	ug/l		99
58) 2-Chloroethyl Vinyl ether	10.159	63	147179	108.017	ug/l		98
59) 2-Hexanone	11.194	43	212621	101.686	ug/l		95
60) Dibromochloromethane	11.359	129	66962	19.822	ug/l		97
61) 1,2-Dibromoethane	11.465	107	52683	19.602	ug/l		96
64) Tetrachloroethene	11.100	164	55906	20.177	ug/l		98
65) Chlorobenzene	11.888	112	152763	19.220	ug/l		96
66) 1,1,1,2-Tetrachloroethane	11.959	131	57418	19.433	ug/l		96
67) Ethyl Benzene	11.965	91	247677	19.481	ug/l		97
68) m/p-Xylenes	12.070	106	202723	40.568	ug/l		96
69) o-Xylene	12.400	106	91701	19.994	ug/l		97
70) Styrene	12.412	104	156977	20.038	ug/l		97
71) Bromoform	12.576	173	46324	18.755	ug/l	#	99
73) Isopropylbenzene	12.694	105	228983	18.803	ug/l		98
74) N-amyl acetate	12.494	43	78177	19.187	ug/l		95
75) 1,1,2,2-Tetrachloroethane	12.935	83	77481	18.806	ug/l		97
76) 1,2,3-Trichloropropane	12.988	75	71467m	17.900	ug/l		
77) Bromobenzene	12.976	156	63200	18.612	ug/l		99
78) n-propylbenzene	13.035	91	270846	19.641	ug/l		99
79) 2-Chlorotoluene	13.123	91	175303	19.139	ug/l		99
80) 1,3,5-Trimethylbenzene	13.170	105	200388	19.489	ug/l		98
81) trans-1,4-Dichloro-2-b...	12.735	75	25977	17.202	ug/l		88
82) 4-Chlorotoluene	13.217	91	180075	19.118	ug/l		99
83) tert-Butylbenzene	13.435	119	160550	18.257	ug/l		97
84) 1,2,4-Trimethylbenzene	13.482	105	203809	19.653	ug/l		100
85) sec-Butylbenzene	13.612	105	225569	19.663	ug/l		99
86) p-Isopropyltoluene	13.729	119	183923	18.940	ug/l		98
87) 1,3-Dichlorobenzene	13.729	146	117095	19.130	ug/l		99
88) 1,4-Dichlorobenzene	13.806	146	114724	17.839	ug/l		100
89) n-Butylbenzene	14.053	91	139625	17.656	ug/l		98
90) Hexachloroethane	14.335	117	39502	17.629	ug/l		97
91) 1,2-Dichlorobenzene	14.106	146	113644	18.677	ug/l		98
92) 1,2-Dibromo-3-Chloropr...	14.717	75	13801	16.781	ug/l		97
93) 1,2,4-Trichlorobenzene	15.388	180	47341	15.473	ug/l		97
94) Hexachlorobutadiene	15.500	225	27945	15.743	ug/l		99
95) Naphthalene	15.641	128	126634	14.294	ug/l		99
96) 1,2,3-Trichlorobenzene	15.835	180	47837	16.478	ug/l		98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN032825\
Data File : VN086143.D
Acq On : 28 Mar 2025 12:07
Operator : JC\MD
Sample : VN0328WBS01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 28 23:37:47 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VN0328WBS01

Manual Integrations APPROVED

Reviewed By :John Carlone 03/31/2025
Supervised By :Mahesh Dadoda 03/31/2025

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

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

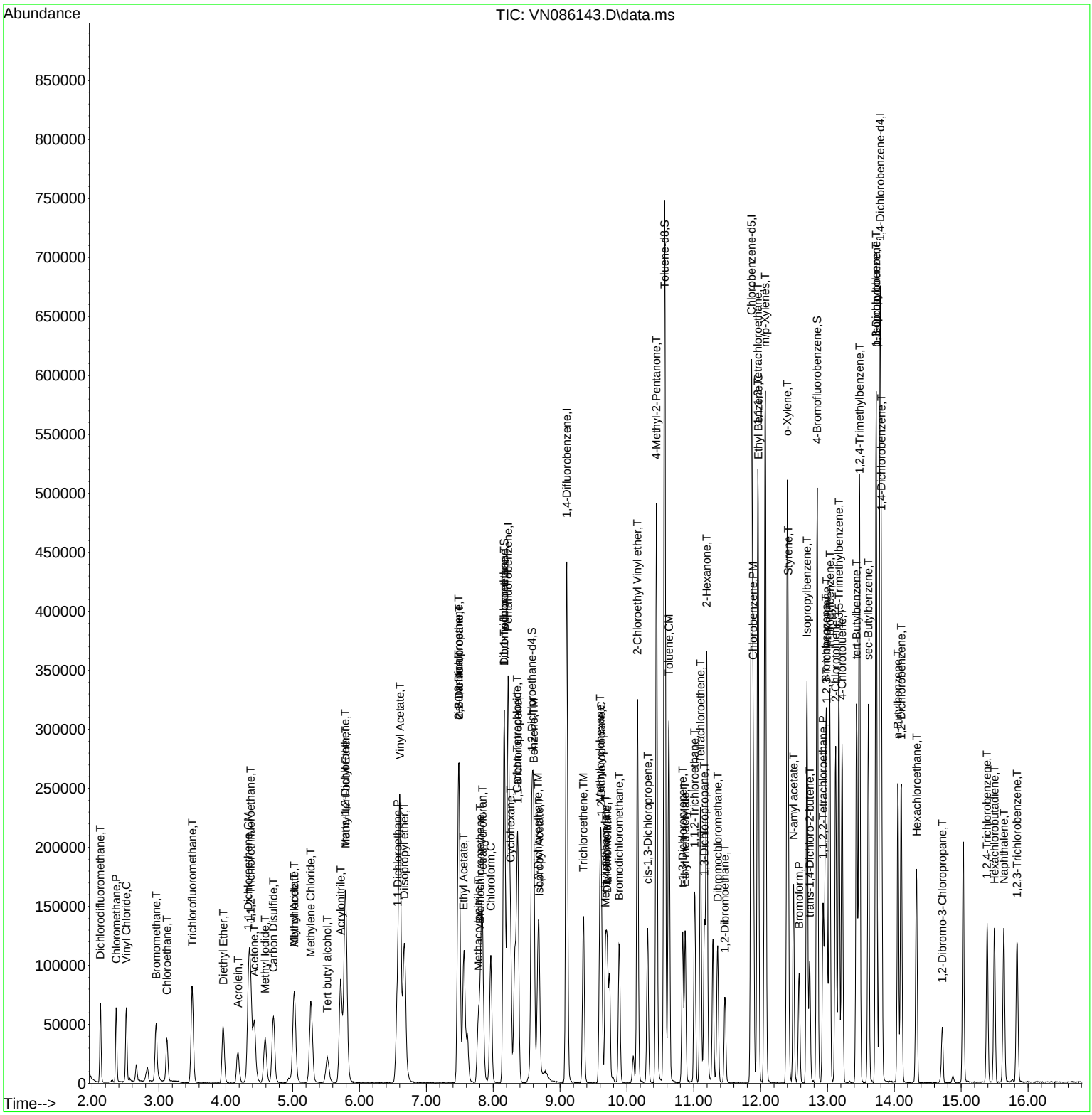
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN032825\
Data File : VN086143.D
Acq On : 28 Mar 2025 12:07
Operator : JC\MD
Sample : VN0328WBS01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 28 23:37:47 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VN0328WBS01

Manual Integrations APPROVED

Reviewed By :John Carlone 03/31/2025
Supervised By :Mahesh Dadoda 03/31/2025



Raw Data: **VN086144.D**

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

Report of Analysis

Client:	ENTACT	Date Collected:	
Project:	540 Degraw St, Brooklyn, NY - E9309	Date Received:	
Client Sample ID:	VN0328WBSD01	SDG No.:	Q1666
Lab Sample ID:	VN0328WBSD01	Matrix:	Water
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group4
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN086144.D	1		03/28/25 12:41	VN032825

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
1634-04-4	Methyl tert-butyl Ether	19.6		0.16	1.00	ug/L
56-23-5	Carbon Tetrachloride	18.2		0.25	1.00	ug/L
67-66-3	Chloroform	20.4		0.25	1.00	ug/L
71-55-6	1,1,1-Trichloroethane	18.7		0.20	1.00	ug/L
71-43-2	Benzene	20.3		0.15	1.00	ug/L
108-88-3	Toluene	20.9		0.14	1.00	ug/L
127-18-4	Tetrachloroethene	19.3		0.23	1.00	ug/L
100-41-4	Ethyl Benzene	18.5		0.13	1.00	ug/L
1330-20-7	Total Xylenes	57.8		0.36	3.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	50.4		70 (74) - 130 (125)	101%	SPK: 50
1868-53-7	Dibromofluoromethane	50.7		70 (75) - 130 (124)	101%	SPK: 50
2037-26-5	Toluene-d8	50.9		70 (86) - 130 (113)	102%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.7		70 (77) - 130 (121)	97%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	181000	8.224			
540-36-3	1,4-Difluorobenzene	294000	9.1			
3114-55-4	Chlorobenzene-d5	266000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	134000	13.788			

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_N\Data\VN032825\
Data File : VN086144.D
Acq On : 28 Mar 2025 12:41
Operator : JC\MD
Sample : VN0328WBSD01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 28 23:38:08 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VN0328WBSD01

Manual Integrations APPROVED

Reviewed By :John Carlone 03/31/2025
Supervised By :Mahesh Dadoda 03/31/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.224	168	181135	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.100	114	293753	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.865	117	265579	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	134304	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.577	65	124963	50.381	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 100.760%			
35) Dibromofluoromethane	8.165	113	103943	50.695	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 101.400%			
50) Toluene-d8	10.565	98	378798	50.904	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 101.800%			
62) 4-Bromofluorobenzene	12.847	95	129351	48.741	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 97.480%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.124	85	42527	17.721	ug/l	100
3) Chloromethane	2.360	50	44326	21.070	ug/l	100
4) Vinyl Chloride	2.512	62	44543	20.707	ug/l	95
5) Bromomethane	2.959	94	30889	21.081	ug/l	96
6) Chloroethane	3.124	64	28333	20.879	ug/l	88
7) Trichlorofluoromethane	3.501	101	69639	18.009	ug/l	97
8) Diethyl Ether	3.959	74	22733	19.204	ug/l	87
9) 1,1,2-Trichlorotrifluo...	4.371	101	40733	19.820	ug/l	98
10) Methyl Iodide	4.589	142	51454	19.215	ug/l #	94
11) Tert butyl alcohol	5.512	59	29250	83.292	ug/l #	87
12) 1,1-Dichloroethene	4.342	96	36110	19.459	ug/l	95
13) Acrolein	4.177	56	26688	71.253	ug/l	94
14) Allyl chloride	5.024	41	44431	19.192	ug/l	95
15) Acrylonitrile	5.712	53	92926	100.195	ug/l	96
16) Acetone	4.424	43	70858	93.508	ug/l	99
17) Carbon Disulfide	4.706	76	103263	16.920	ug/l	98
18) Methyl Acetate	5.024	43	45006	24.005	ug/l	96
19) Methyl tert-butyl Ether	5.795	73	119285	19.616	ug/l	97
20) Methylene Chloride	5.277	84	46337	20.903	ug/l #	94
21) trans-1,2-Dichloroethene	5.789	96	40218	19.831	ug/l	94
22) Diisopropyl ether	6.671	45	114083	23.124	ug/l	96
23) Vinyl Acetate	6.606	43	387929	103.727	ug/l	99
24) 1,1-Dichloroethane	6.571	63	73448	20.246	ug/l	99
25) 2-Butanone	7.483	43	108180	98.937	ug/l	96
26) 2,2-Dichloropropane	7.489	77	63591	18.207	ug/l	99
27) cis-1,2-Dichloroethene	7.483	96	46183	20.040	ug/l	98
28) Bromochloromethane	7.812	49	34091	22.180	ug/l	98
29) Tetrahydrofuran	7.836	42	72935	108.046	ug/l	94
30) Chloroform	7.965	83	81840	20.409	ug/l	97
31) Cyclohexane	8.259	56	57827	18.711	ug/l	95
32) 1,1,1-Trichloroethane	8.165	97	71066	18.722	ug/l	97
36) 1,1-Dichloropropene	8.365	75	51703	19.151	ug/l	99
37) Ethyl Acetate	7.559	43	47035	20.650	ug/l	98
38) Carbon Tetrachloride	8.359	117	64604	18.199	ug/l	98
39) Methylcyclohexane	9.594	83	46488	17.355	ug/l	98
40) Benzene	8.606	78	172081	20.304	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN032825\
Data File : VN086144.D
Acq On : 28 Mar 2025 12:41
Operator : JC\MD
Sample : VN0328WBSD01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 28 23:38:08 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VN0328WBSD01

Manual Integrations APPROVED

Reviewed By :John Carlone 03/31/2025
Supervised By :Mahesh Dadoda 03/31/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	7.777	41	22097	20.317	ug/l		98
42) 1,2-Dichloroethane	8.665	62	58446	19.791	ug/l		96
43) Isopropyl Acetate	8.683	43	80016	16.212	ug/l		96
44) Trichloroethene	9.347	130	40461	18.420	ug/l		100
45) 1,2-Dichloropropane	9.618	63	42240	21.912	ug/l		98
46) Dibromomethane	9.706	93	31047	20.480	ug/l		99
47) Bromodichloromethane	9.883	83	64791	20.449	ug/l		94
48) Methyl methacrylate	9.683	41	32807	20.143	ug/l		96
49) 1,4-Dioxane	9.694	88	15649	406.449	ug/l		89
51) 4-Methyl-2-Pentanone	10.441	43	232538	106.830	ug/l		98
52) Toluene	10.630	92	108927	20.940	ug/l		99
53) t-1,3-Dichloropropene	10.835	75	61796	20.083	ug/l		100
54) cis-1,3-Dichloropropene	10.312	75	66044	20.344	ug/l		99
55) 1,1,2-Trichloroethane	11.012	97	43733	22.028	ug/l		96
56) Ethyl methacrylate	10.871	69	56508	20.747	ug/l		96
57) 1,3-Dichloropropane	11.159	76	70616	20.941	ug/l		100
58) 2-Chloroethyl Vinyl ether	10.159	63	119242	114.520	ug/l		99
59) 2-Hexanone	11.194	43	163144	102.883	ug/l		96
60) Dibromochloromethane	11.359	129	53052	20.708	ug/l		100
61) 1,2-Dibromoethane	11.465	107	40818	20.026	ug/l		93
64) Tetrachloroethene	11.100	164	40855	19.284	ug/l		96
65) Chlorobenzene	11.888	112	116410	19.155	ug/l		98
66) 1,1,1,2-Tetrachloroethane	11.959	131	44208	19.569	ug/l		97
67) Ethyl Benzene	11.959	91	180001	18.516	ug/l		100
68) m/p-Xylenes	12.071	106	145711	38.136	ug/l		99
69) o-Xylene	12.394	106	69126	19.712	ug/l		93
70) Styrene	12.412	104	116489	19.448	ug/l		99
71) Bromoform	12.576	173	37171	19.683	ug/l	#	96
73) Isopropylbenzene	12.694	105	166250	18.127	ug/l		99
74) N-amyl acetate	12.494	43	59254	19.311	ug/l		97
75) 1,1,2,2-Tetrachloroethane	12.935	83	60884	19.622	ug/l		98
76) 1,2,3-Trichloropropane	12.994	75	50045m	16.644	ug/l		
77) Bromobenzene	12.976	156	48714	19.049	ug/l		99
78) n-propylbenzene	13.035	91	196208	18.893	ug/l		98
79) 2-Chlorotoluene	13.124	91	130996	18.990	ug/l		99
80) 1,3,5-Trimethylbenzene	13.171	105	145267	18.760	ug/l		98
81) trans-1,4-Dichloro-2-b...	12.735	75	19623	17.254	ug/l		93
82) 4-Chlorotoluene	13.218	91	133668	18.843	ug/l		98
83) tert-Butylbenzene	13.435	119	114149	17.236	ug/l		96
84) 1,2,4-Trimethylbenzene	13.482	105	147040	18.827	ug/l		99
85) sec-Butylbenzene	13.612	105	162233	18.778	ug/l		99
86) p-Isopropyltoluene	13.729	119	133053	18.193	ug/l		100
87) 1,3-Dichlorobenzene	13.729	146	85791	18.611	ug/l		100
88) 1,4-Dichlorobenzene	13.812	146	86812	17.925	ug/l		100
89) n-Butylbenzene	14.053	91	105199	17.664	ug/l		96
90) Hexachloroethane	14.329	117	29769	17.641	ug/l		98
91) 1,2-Dichlorobenzene	14.106	146	84504	18.441	ug/l		98
92) 1,2-Dibromo-3-Chloropr...	14.718	75	11168	18.031	ug/l		90
93) 1,2,4-Trichlorobenzene	15.388	180	36662	15.911	ug/l		99
94) Hexachlorobutadiene	15.500	225	21308	15.940	ug/l		99
95) Naphthalene	15.641	128	100191	15.017	ug/l		99
96) 1,2,3-Trichlorobenzene	15.835	180	36899	16.877	ug/l		98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN032825\
Data File : VN086144.D
Acq On : 28 Mar 2025 12:41
Operator : JC\MD
Sample : VN0328WBSD01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 28 23:38:08 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VN0328WBSD01

Manual Integrations APPROVED

Reviewed By :John Carlone 03/31/2025
Supervised By :Mahesh Dadoda 03/31/2025

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

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

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN032825\
Data File : VN086144.D
Acq On : 28 Mar 2025 12:41
Operator : JC\MD
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Misc : 5.0mL/MSVOA_N/WATER
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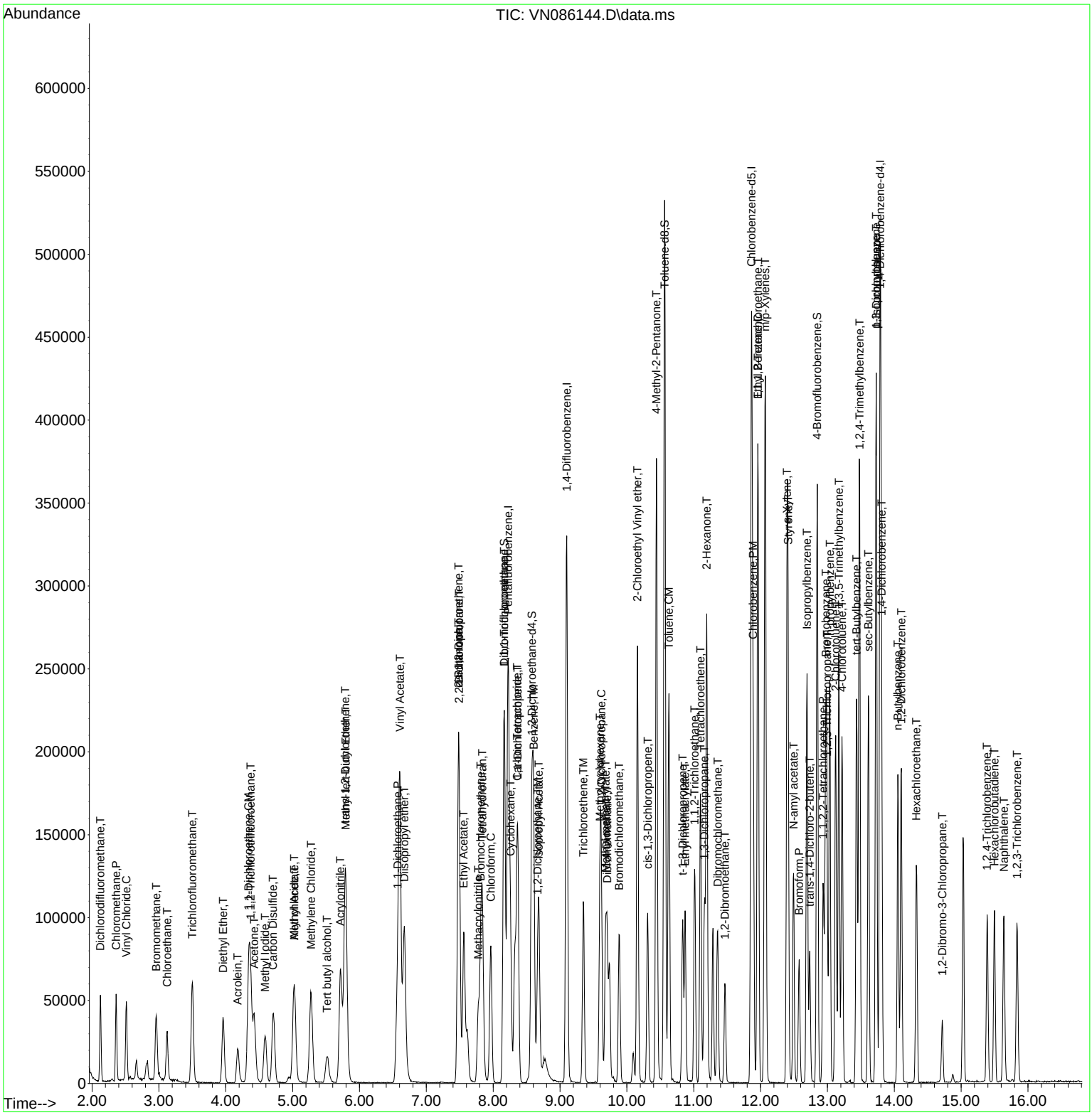
Quant Time: Mar 28 23:38:08 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N031825W.M
Quant Title : SW846 8260
QLast Update : Wed Mar 19 03:20:56 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VN0328WBSD01

Manual Integrations APPROVED

Reviewed By :John Carlone 03/31/2025
Supervised By :Mahesh Dadoda 03/31/2025



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

Manual Integration Report

Sequence:	VN031825	Instrument	MSVOA_n

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDICC100	VN085996.D	1,2,3-Trichloropropane	JOHN	3/19/2025 9:42:30 AM	MMDadoda	3/19/2025 2:21:56 PM	Peak Integrated by Software
VSTDICCC050	VN085997.D	1,2,3-Trichloropropane	JOHN	3/19/2025 9:42:35 AM	MMDadoda	3/19/2025 2:21:58 PM	Peak Integrated by Software
VSTDICCC050	VN085997.D	Isopropyl Acetate	JOHN	3/19/2025 9:42:35 AM	MMDadoda	3/19/2025 2:21:58 PM	Peak Integrated by Software
VSTDICC020	VN085998.D	1,2,3-Trichloropropane	JOHN	3/19/2025 9:42:41 AM	MMDadoda	3/19/2025 2:22:00 PM	Peak Integrated by Software
VSTDICC020	VN085998.D	Isopropyl Acetate	JOHN	3/19/2025 9:42:41 AM	MMDadoda	3/19/2025 2:22:00 PM	Peak Integrated by Software
VSTDICC020	VN085998.D	Vinyl Acetate	JOHN	3/19/2025 9:42:41 AM	MMDadoda	3/19/2025 2:22:00 PM	Peak Integrated by Software
VSTDICC010	VN085999.D	1,2,3-Trichloropropane	JOHN	3/19/2025 9:42:46 AM	MMDadoda	3/19/2025 2:22:02 PM	Peak Integrated by Software
VSTDICC010	VN085999.D	Isopropyl Acetate	JOHN	3/19/2025 9:42:46 AM	MMDadoda	3/19/2025 2:22:02 PM	Peak Integrated by Software
VSTDICC005	VN086000.D	1,2,3-Trichloropropane	JOHN	3/19/2025 9:42:51 AM	MMDadoda	3/19/2025 2:22:03 PM	Peak Integrated by Software
VSTDICC001	VN086001.D	1,1,2-Trichlorotrifluoroethane	JOHN	3/19/2025 9:42:57 AM	MMDadoda	3/19/2025 2:22:05 PM	Peak Integrated by Software
VSTDICC001	VN086001.D	1,1-Dichloroethane	JOHN	3/19/2025 9:42:57 AM	MMDadoda	3/19/2025 2:22:05 PM	Peak Integrated by Software
VSTDICC001	VN086001.D	1,2,3-Trichloropropane	JOHN	3/19/2025 9:42:57 AM	MMDadoda	3/19/2025 2:22:05 PM	Peak Integrated by Software
VSTDICC001	VN086001.D	1,4-Dichlorobenzene	JOHN	3/19/2025 9:42:57 AM	MMDadoda	3/19/2025 2:22:05 PM	Peak Integrated by Software

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

Manual Integration Report

Sequence:	VN031825	Instrument	MSVOA_n

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDICC001	VN086001.D	Diisopropyl ether	JOHN	3/19/2025 9:42:57 AM	MMDadoda	3/19/2025 2:22:05 PM	Peak Integrated by Software
VSTDICC001	VN086001.D	Ethyl Acetate	JOHN	3/19/2025 9:42:57 AM	MMDadoda	3/19/2025 2:22:05 PM	Peak Integrated by Software
VSTDICV050	VN086003.D	1,2,3-Trichloropropane	JOHN	3/19/2025 9:43:04 AM	MMDadoda	3/19/2025 2:22:08 PM	Peak Integrated by Software

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Manual Integration Report

Sequence:	VN032825	Instrument	MSVOA_n

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC050	VN086140.D	1,2,3-Trichloropropane	JOHN	3/31/2025 9:49:13 AM	MMDadoda	3/31/2025 9:56:29 AM	Peak Integrated by Software
VN0328WBS01	VN086143.D	1,2,3-Trichloropropane	JOHN	3/31/2025 9:49:17 AM	MMDadoda	3/31/2025 9:56:28 AM	Peak Integrated by Software
VN0328WBSD01	VN086144.D	1,2,3-Trichloropropane	JOHN	3/31/2025 9:49:21 AM	MMDadoda	3/31/2025 9:56:26 AM	Peak Integrated by Software
VSTDCCC050	VN086166.D	1,2,3-Trichloropropane	JOHN	3/31/2025 9:49:51 AM	MMDadoda	3/31/2025 9:56:20 AM	Peak Integrated by Software

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

Instrument ID: MSVOA_N

Daily Analysis Runlog For Sequence/QCBatch ID # VN031825

Review By	John Carlone	Review On	3/19/2025 9:43:20 AM		
Supervise By	Mahesh Dadoda	Supervise On	3/19/2025 2:22:13 PM		
SubDirectory	VN031825	HP Acquire Method		HP Processing Method	82N031825W.M

STD. NAME	STD REF.#
Tune/Reschk	VP133352
Initial Calibration Stds	VP133393,VP133394,VP133395,VP133396,VP133397,VP133399
CCC	VP133353
Internal Standard/PEM	
ICV/I.BLK	VP133401
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VN085994.D	18 Mar 2025 08:52	JC\MD	Ok
2	VSTDCCC050	VN085995.D	18 Mar 2025 10:55	JC\MD	Not Ok
3	VSTDICC100	VN085996.D	18 Mar 2025 11:44	JC\MD	Ok,M
4	VSTDICCC050	VN085997.D	18 Mar 2025 12:08	JC\MD	Ok,M
5	VSTDICC020	VN085998.D	18 Mar 2025 12:32	JC\MD	Ok,M
6	VSTDICC010	VN085999.D	18 Mar 2025 12:57	JC\MD	Ok,M
7	VSTDICC005	VN086000.D	18 Mar 2025 13:21	JC\MD	Ok,M
8	VSTDICC001	VN086001.D	18 Mar 2025 14:09	JC\MD	Ok,M
9	IBLK	VN086002.D	18 Mar 2025 14:34	JC\MD	Ok
10	VSTDICV050	VN086003.D	18 Mar 2025 16:49	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_N

Daily Analysis Runlog For Sequence/QCBatch ID # VN032825

Review By	John Carlone	Review On	3/31/2025 9:53:34 AM		
Supervise By	Mahesh Dadoda	Supervise On	3/31/2025 9:56:37 AM		
SubDirectory	VN032825	HP Acquire Method		HP Processing Method	82N031825W.M

STD. NAME	STD REF.#
Tune/Reschk	VP133515
Initial Calibration Stds	
CCC	VP133516,VP133517
Internal Standard/PEM	
ICV/I.BLK	
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VN086139.D	28 Mar 2025 10:11	JC\MD	Ok
2	VSTDCCC050	VN086140.D	28 Mar 2025 10:44	JC\MD	Ok,M
3	VN0328MBL01	VN086141.D	28 Mar 2025 11:19	JC\MD	Ok
4	VN0328WBL01	VN086142.D	28 Mar 2025 11:43	JC\MD	Ok
5	VN0328WBS01	VN086143.D	28 Mar 2025 12:07	JC\MD	Ok,M
6	VN0328WBSD01	VN086144.D	28 Mar 2025 12:41	JC\MD	Ok,M
7	Q1648-02	VN086145.D	28 Mar 2025 13:05	JC\MD	Ok
8	Q1648-04	VN086146.D	28 Mar 2025 13:29	JC\MD	Ok
9	Q1648-06	VN086147.D	28 Mar 2025 13:53	JC\MD	Ok
10	Q1648-08	VN086148.D	28 Mar 2025 14:18	JC\MD	Ok
11	Q1648-10	VN086149.D	28 Mar 2025 14:42	JC\MD	Ok
12	Q1648-12	VN086150.D	28 Mar 2025 15:06	JC\MD	Ok
13	Q1648-14	VN086151.D	28 Mar 2025 15:30	JC\MD	Ok
14	Q1661-02	VN086152.D	28 Mar 2025 15:54	JC\MD	Ok
15	Q1664-08	VN086153.D	28 Mar 2025 16:18	JC\MD	Ok
16	Q1664-10	VN086154.D	28 Mar 2025 16:42	JC\MD	Ok
17	Q1664-12	VN086155.D	28 Mar 2025 17:06	JC\MD	Ok
18	Q1664-14	VN086156.D	28 Mar 2025 17:30	JC\MD	Ok
19	Q1664-16	VN086157.D	28 Mar 2025 17:54	JC\MD	Ok
20	Q1664-18	VN086158.D	28 Mar 2025 18:18	JC\MD	Ok
21	Q1664-20	VN086159.D	28 Mar 2025 18:42	JC\MD	Ok

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

Instrument ID: MSVOA_N

Daily Analysis Runlog For Sequence/QCBatch ID # VN032825

Review By	John Carlone	Review On	3/31/2025 9:53:34 AM		
Supervise By	Mahesh Dadoda	Supervise On	3/31/2025 9:56:37 AM		
SubDirectory	VN032825	HP Acquire Method		HP Processing Method	82N031825W.M

STD. NAME	STD REF.#
Tune/Reschk	VP133515
Initial Calibration Stds	
CCC	VP133516,VP133517
Internal Standard/PEM	
ICV/I.BLK	
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

22	Q1664-22	VN086160.D	28 Mar 2025 19:06	JC\MD	Ok
23	Q1666-01	VN086161.D	28 Mar 2025 19:30	JC\MD	Ok
24	Q1664-04	VN086162.D	28 Mar 2025 19:54	JC\MD	Ok
25	Q1664-05MS	VN086163.D	28 Mar 2025 20:18	JC\MD	Ok,M
26	Q1664-06MSD	VN086164.D	28 Mar 2025 20:42	JC\MD	Ok,M
27	VN0328MBS01	VN086165.D	28 Mar 2025 21:06	JC\MD	Ok,M
28	VSTDCCC050	VN086166.D	28 Mar 2025 21:30	JC\MD	Ok,M

M : Manual Integration

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Instrument ID: MSVOA_N

Daily Analysis Runlog For Sequence/QCBatch ID # VN031825

Review By	John Carlone	Review On	3/19/2025 9:43:20 AM		
Supervise By	Mahesh Dadoda	Supervise On	3/19/2025 2:22:13 PM		
SubDirectory	VN031825	HP Acquire Method		HP Processing Method	82N031825W.M

STD. NAME	STD REF.#
Tune/Reschk	VP133352
Initial Calibration Stds	VP133393,VP133394,VP133395,VP133396,VP133397,VP133399
CCC	VP133353
Internal Standard/PEM	
ICV/I.BLK	VP133401
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleId	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VN085994.D	18 Mar 2025 08:52		JC\MD	Ok
2	VSTDCCC050	VSTDCCC050	VN085995.D	18 Mar 2025 10:55	Need ICAL	JC\MD	Not Ok
3	VSTDICC100	VSTDICC100	VN085996.D	18 Mar 2025 11:44		JC\MD	Ok,M
4	VSTDICCC050	VSTDICCC050	VN085997.D	18 Mar 2025 12:08	Comp.#56 and 58 is on Quadratic Regression	JC\MD	Ok,M
5	VSTDICC020	VSTDICC020	VN085998.D	18 Mar 2025 12:32		JC\MD	Ok,M
6	VSTDICC010	VSTDICC010	VN085999.D	18 Mar 2025 12:57	%D failed for Comp. #58 in 01PPB and 20PPB	JC\MD	Ok,M
7	VSTDICC005	VSTDICC005	VN086000.D	18 Mar 2025 13:21		JC\MD	Ok,M
8	VSTDICC001	VSTDICC001	VN086001.D	18 Mar 2025 14:09		JC\MD	Ok,M
9	IBLK	IBLK	VN086002.D	18 Mar 2025 14:34		JC\MD	Ok
10	VSTDICV050	ICVVN031825	VN086003.D	18 Mar 2025 16:49	ICV Failed for comp. #39,52,58,68,69,70,78,80,84,85, 86,89 For DOD	JC\MD	Ok,M

M : Manual Integration

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Instrument ID: MSVOA_N

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Review By	John Carlone	Review On	3/31/2025 9:53:34 AM		
Supervise By	Mahesh Dadoda	Supervise On	3/31/2025 9:56:37 AM		
SubDirectory	VN032825	HP Acquire Method		HP Processing Method	82N031825W.M

STD. NAME	STD REF.#
Tune/Reschk	VP133515
Initial Calibration Stds	
CCC	VP133516,VP133517
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	VN086139.D	28 Mar 2025 10:11		JC\MD	Ok
2	VSTDCCC050	VSTDCCC050	VN086140.D	28 Mar 2025 10:44	pH#Lot#V12668	JC\MD	Ok,M
3	VN0328MBL01	VN0328MBL01	VN086141.D	28 Mar 2025 11:19		JC\MD	Ok
4	VN0328WBL01	VN0328WBL01	VN086142.D	28 Mar 2025 11:43		JC\MD	Ok
5	VN0328WBS01	VN0328WBS01	VN086143.D	28 Mar 2025 12:07		JC\MD	Ok,M
6	VN0328WBSD01	VN0328WBSD01	VN086144.D	28 Mar 2025 12:41		JC\MD	Ok,M
7	Q1648-02	TP-4	VN086145.D	28 Mar 2025 13:05	vial A pH#5.0	JC\MD	Ok
8	Q1648-04	TP-5	VN086146.D	28 Mar 2025 13:29	vial A pH#5.0	JC\MD	Ok
9	Q1648-06	TP-3	VN086147.D	28 Mar 2025 13:53	vial A pH#5.0	JC\MD	Ok
10	Q1648-08	TP-6	VN086148.D	28 Mar 2025 14:18	vial A pH#5.0	JC\MD	Ok
11	Q1648-10	TP-7	VN086149.D	28 Mar 2025 14:42	vial A pH#5.0	JC\MD	Ok
12	Q1648-12	TP-8	VN086150.D	28 Mar 2025 15:06	vial A pH#5.0	JC\MD	Ok
13	Q1648-14	TP-2	VN086151.D	28 Mar 2025 15:30	vial A pH#5.0	JC\MD	Ok
14	Q1661-02	351	VN086152.D	28 Mar 2025 15:54		JC\MD	Ok
15	Q1664-08	P001-BBDGA-001-02	VN086153.D	28 Mar 2025 16:18	vial A pH#6.0	JC\MD	Ok
16	Q1664-10	P001-BBDGA-002-01	VN086154.D	28 Mar 2025 16:42	vial A pH#6.0	JC\MD	Ok
17	Q1664-12	P001-BBDGA-003-01	VN086155.D	28 Mar 2025 17:06	vial A pH#6.0	JC\MD	Ok
18	Q1664-14	P001-BBDGA-004-01	VN086156.D	28 Mar 2025 17:30	vial A pH#6.0	JC\MD	Ok

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Review By	John Carlone	Review On	3/31/2025 9:53:34 AM		
Supervise By	Mahesh Dadoda	Supervise On	3/31/2025 9:56:37 AM		
SubDirectory	VN032825	HP Acquire Method		HP Processing Method	82N031825W.M

STD. NAME	STD REF.#
Tune/Reschk	VP133515
Initial Calibration Stds	
CCC	VP133516,VP133517
Internal Standard/PEM	
ICV/I.BLK	
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

19	Q1664-16	P001-BBDGA-005-01	VN086157.D	28 Mar 2025 17:54	vial A pH#6.0	JC\MD	Ok
20	Q1664-18	P001-BBDGA-006-01	VN086158.D	28 Mar 2025 18:18	vial A pH#6.0	JC\MD	Ok
21	Q1664-20	P001-BBDGA-007-01	VN086159.D	28 Mar 2025 18:42	vial A pH#6.0	JC\MD	Ok
22	Q1664-22	P001-BBDGA-008-01	VN086160.D	28 Mar 2025 19:06	vial A pH#6.0	JC\MD	Ok
23	Q1666-01	TW-WTS-05	VN086161.D	28 Mar 2025 19:30	vial A pH<2	JC\MD	Ok
24	Q1664-04	P001-BBDGA-001-01	VN086162.D	28 Mar 2025 19:54	vial A pH#6.0	JC\MD	Ok
25	Q1664-05MS	P001-BBDGA-001-01M	VN086163.D	28 Mar 2025 20:18	vial A pH#6.0	JC\MD	Ok,M
26	Q1664-06MSD	P001-BBDGA-001-01M	VN086164.D	28 Mar 2025 20:42	vial A pH#6.0	JC\MD	Ok,M
27	VN0328MBS01	VN0328MBS01	VN086165.D	28 Mar 2025 21:06		JC\MD	Ok,M
28	VSTDCCC050	VSTDCCC050EC	VN086166.D	28 Mar 2025 21:30		JC\MD	Ok,M

M : Manual Integration

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Prep Standard - Chemical Standard Summary

Order ID : Q1666

Test : VOCMS Group4

Prepbatch ID :

Sequence ID/Qc Batch ID: VN032825,

Standard ID :
VP131746,VP131767,VP132035,VP132096,VP133174,VP133178,VP133342,VP133515,VP133516,VP133517,

Chemical ID :
V13391,V13457,V13460,V13465,V13466,V13706,V14154,V14175,V14176,V14289,V14433,V14439,V14521,V14522,V14613,V14614,V14630,V14631,V14632,V14633,V14722,V14723,V14724,V14744,V14754,V14809,V14814,V14842,V14883,V14896,V14897,V14898,V14899,W3112,

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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	VP131746	11/22/2024	05/18/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 11/23/2024

FROM 0.50000ml of V14289 + 49.50000ml of V14154 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
218	BFB, 25PPM	VP131767	11/22/2024	05/18/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 11/27/2024

FROM 0.50000ml of V13391 + 49.50000ml of V14154 = Final Quantity: 50.000 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	VP132035	12/10/2024	06/10/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 12/12/2024

FROM 1.00000ml of V14630 + 1.00000ml of V14631 + 1.00000ml of V14632 + 1.00000ml of V14633 + 46.00000ml of V14614 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
719	8260 Working STD (BCM)-First source, 400PPM	VP132096	12/12/2024	06/10/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 12/19/2024

FROM 1.00000ml of V13465 + 1.00000ml of V13466 + 1.50000ml of V13457 + 1.50000ml of V13460 + 20.00000ml of V14614 = 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
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	VP133178	02/27/2025	03/31/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 03/04/2025

FROM 0.40000ml of V14842 + 1.00000ml of V14175 + 1.00000ml of V14176 + 1.00000ml of V14433 + 1.00000ml of V14439 + 1.00000ml of V14521 + 1.00000ml of V14522 + 1.00000ml of V14724 + 1.00000ml of V14744 + 1.00000ml of V14754 + 1.00000ml of V14809 + 1.00000ml of V14814 + 1.50000ml of V14722 + 1.50000ml of V14723 + 10.60000ml of V14613 = 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	VP133342	03/18/2025	04/17/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 03/20/2025

FROM 1.00000ml of V14896 + 1.00000ml of V14897 + 1.00000ml of V14898 + 1.00000ml of V14899 + 21.00000ml of V14883 = Final Quantity: 25.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
589	BFB TUNE CHECK	VP133515	03/28/2025	03/29/2025	John Carlone	None	None	Mahesh Dadoda 03/31/2025

FROM 39.98400ml of W3112 + 0.01600ml of VP131767 = 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	VP133516	03/28/2025	03/29/2025	John Carlone	None	None	Mahesh Dadoda 03/31/2025

FROM 39.94450ml of W3112 + 0.00500ml of VP132096 + 0.00500ml of VP133174 + 0.00800ml of VP131746 + 0.01250ml of VP132035 + 0.01250ml of VP133178 + 0.01250ml of VP133342 = 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	VP133517	03/28/2025	03/29/2025	John Carlone	None	None	Mahesh Dadoda 03/31/2025

FROM 39.94450ml of W3112 + 0.00500ml of VP132096 + 0.00500ml of VP133174 + 0.00800ml of VP131746 + 0.01250ml of VP132035 + 0.01250ml of VP133178 + 0.01250ml of VP133342 = 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	30225 / VOA Mix, bromochloromethane, 2000ug/mL, P&TM, 1mL/ampul	A0193071	06/12/2025	12/12/2024 / SAM	01/27/2023 / SAM	V13457

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	A0193071	06/12/2025	12/12/2024 / SAM	01/27/2023 / SAM	V13460

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	A0193071	06/12/2025	12/12/2024 / SAM	01/27/2023 / SAM	V13465

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	A0193071	06/12/2025	12/12/2024 / SAM	01/27/2023 / SAM	V13466

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

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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)	22L0562016	05/18/2025	11/18/2024 / pedro	02/06/2024 / SAM	V14154

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	07/10/2025	01/10/2025 / SAM	02/20/2024 / SAM	V14175

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	07/10/2025	01/10/2025 / SAM	02/20/2024 / SAM	V14176

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	11/22/2025	11/22/2024 / SAM	04/15/2024 / SAM	V14289

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	07/10/2025	01/10/2025 / SAM	08/15/2024 / SAM	V14433

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	07/10/2025	01/10/2025 / SAM	08/15/2024 / SAM	V14439

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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.	95319 / Revised Additions Mix (Min = 5)	091724	07/10/2025	01/10/2025 / SAM	09/18/2024 / SAM	V14521

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	07/10/2025	01/10/2025 / SAM	09/18/2024 / SAM	V14522

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	06/10/2025	12/10/2024 / SAM	11/26/2024 / SAM	V14614

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ 2-Chloroethyl vinyl ether	120524	06/10/2025	12/10/2024 / SAM	12/06/2024 / SAM	V14630

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ 2-Chloroethyl vinyl ether	120524	06/10/2025	12/10/2024 / SAM	12/06/2024 / SAM	V14631

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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	06/10/2025	12/10/2024 / SAM	12/06/2024 / SAM	V14632

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ 2-Chloroethyl vinyl ether	120524	06/10/2025	12/10/2024 / SAM	12/06/2024 / SAM	V14633

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	07/10/2025	01/10/2025 / SAM	12/17/2024 / SAM	V14722

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	07/10/2025	01/10/2025 / SAM	12/17/2024 / SAM	V14723

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	07/10/2025	01/10/2025 / SAM	12/17/2024 / SAM	V14724

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	08/27/2025	02/27/2025 / SAM	12/17/2024 / SAM	V14744

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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	05/31/2031	01/10/2025 / SAM	12/17/2024 / SAM	V14754

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	07/10/2025	01/10/2025 / SAM	01/08/2025 / SAM	V14809

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	07/10/2025	01/10/2025 / SAM	01/08/2025 / SAM	V14814

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	08/27/2025	02/27/2025 / SAM	01/21/2025 / SAM	V14842

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	02/19/2025 / Jaswal	04/22/2024 / Jaswal	V14883

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	031725	04/17/2025	03/18/2025 / SAM	03/18/2025 / SAM	V14896

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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.	91980 / Acrolin Std (Min = 5)	031725	04/17/2025	03/18/2025 / SAM	03/18/2025 / SAM	V14897

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	031725	04/17/2025	03/18/2025 / SAM	03/18/2025 / SAM	V14898

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	031725	04/17/2025	03/18/2025 / SAM	03/18/2025 / SAM	V14899

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

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

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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

Formulated By: Prashant Chauhan 021624 DATE

Reviewed By: Pedro L. Rentas 021624 DATE

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

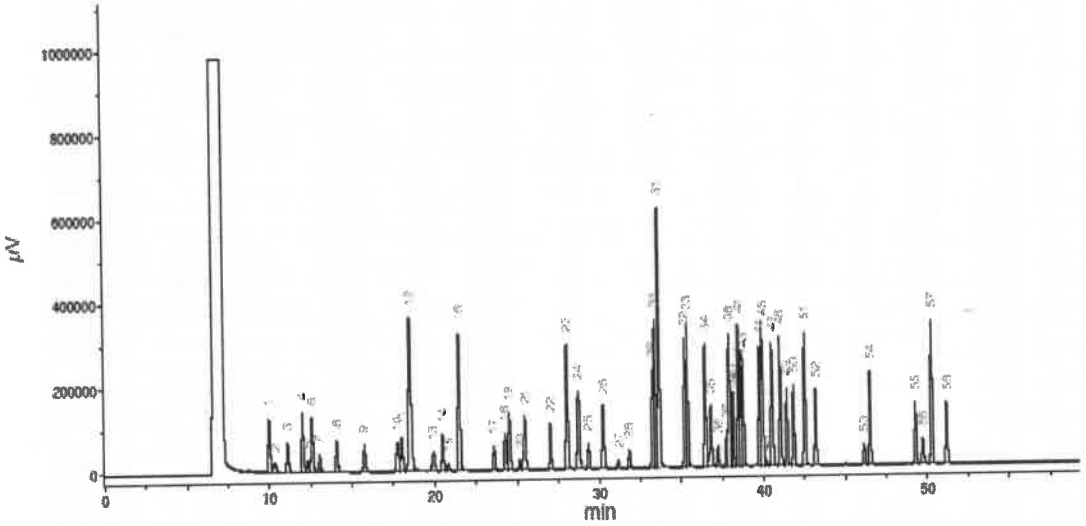
Compound	(RM#) Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Initial Conc.(ug/mL)	Nominal Conc (µg/mL)	Purity (%)	Purity Uncertainty	Uncertainty Pipette (mL)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached 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	(0486)	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)	IK18CAS000(	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	(0361)	06126PX	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 848mg/kg
19. cis-1,2-Dichloroethene	35171	101623	0.05	5.00	40003.1	2000	NA	NA	0.017	NA	NA	1999.7	22.9	156-59-2	N/A	N/A
20. trans-1,2-Dichloroethene	35171	101623	0.05	5.00	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	40017.8	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 (46mg/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	1999.6	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	1999.6	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 6040mg/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 sample, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty References: 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-1,2,2-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	18.46
13	Isobutanol/1,1,1-Trichloroethane	19.91
14	1,1-Dichloropropene	20.46
15	Carbon tetrachloride	20.79
16	Benzene/1,2-Dichloroethane	21.49
17	Trichloroethene	23.58
18	1,2-Dichloropropane	24.28
19	Methyl methacrylate	24.52
20	Bromodichloromethane	25.13
21	Dibromomethane/2-Nitropropane	25.46
22	cis-1,3-Dichloropropene	27.02
23	Toluene	28.05
24	Ethyl methacrylate/trans-1,3-Dichloropropene	28.73
25	1,1,2-Trichloroethane	29.34
26	Tetrachloroethene/1,3-Dichloropropane	30.24
27	Dibromochloromethane	31.16
28	1,2-Dibromoethene	31.84
29	Chlorobenzene	33.26
30	Ethylbenzene/1,1,1,2-Tetrachloroethane	33.40
31	m-Xylene/p-Xylene	33.88
32	o-Xylene	35.22
33	Styrene	35.38
34	Isopropylbenzene/Bromoform	36.18
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	37.93
39	trans-1,4-Dichloro-2-Butene	38.05
40	Bromobenzene	38.14
41	1,3,5-Trimethylbenzene	38.80
42	2-Chlorotoluene	38.82
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	41.42
50	1,4-Dichlorobenzene	41.83
51	n-Butylbenzene	42.53
52	1,2-Dichlorobenzene	43.18
53	1,2-Dibromo-3-chloropropane	46.12
54	Nitrobenzene	46.46
55	1,2,4-Trichlorobenzene	49.26
56	Hexachlorobutadiene	49.72
57	Naphthalene	50.26
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, 2023

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.

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

Formulated By: Prashant Chauhan 021624 DATE

Reviewed By: Pedro L. Rentas 021624 DATE

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

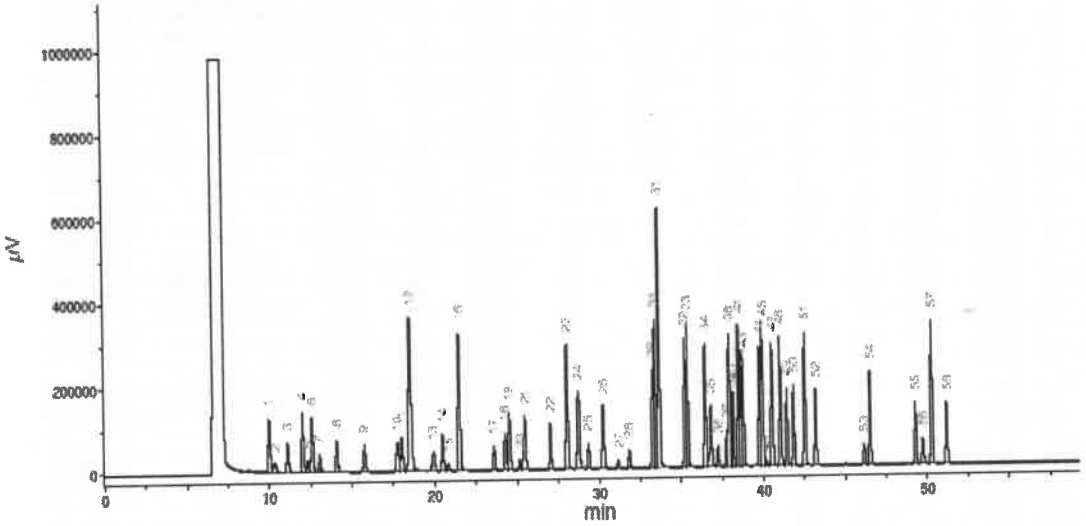
Compound	(RM#) Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Initial Conc.(ug/mL)	Nominal Conc (µg/mL)	Purity (%)	Purity Uncertainty	Uncertainty Pipette (mL)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached 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	(0486)	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)	IK18CAS000(	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	(0361)	06126PX	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 848mg/kg
19. cis-1,2-Dichloroethene	35171	101623	0.05	5.00	40003.1	2000	NA	NA	0.017	NA	NA	1999.7	22.9	156-59-2	N/A	N/A
20. trans-1,2-Dichloroethene	35171	101623	0.05	5.00	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	40017.8	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 (46mg/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	1999.6	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	1999.6	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 6040mg/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 sample, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty References: 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-1,2,2-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	18.46
13	Isobutanol/1,1,1-Trichloroethane	19.91
14	1,1-Dichloropropene	20.46
15	Carbon tetrachloride	20.79
16	Benzene/1,2-Dichloroethane	21.49
17	Trichloroethene	23.58
18	1,2-Dichloropropane	24.28
19	Methyl methacrylate	24.52
20	Bromodichloromethane	25.13
21	Dibromomethane/2-Nitropropane	25.46
22	cis-1,3-Dichloropropene	27.02
23	Toluene	28.05
24	Ethyl methacrylate/trans-1,3-Dichloropropene	28.73
25	1,1,2-Trichloroethane	29.34
26	Tetrachloroethene/1,3-Dichloropropane	30.24
27	Dibromochloromethane	31.16
28	1,2-Dibromoethene	31.84
29	Chlorobenzene	33.26
30	Ethylbenzene/1,1,1,2-Tetrachloroethane	33.40
31	m-Xylene/p-Xylene	33.88
32	o-Xylene	35.22
33	Styrene	35.38
34	Isopropylbenzene/Bromoform	36.18
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	37.93
39	trans-1,4-Dichloro-2-Butene	38.05
40	Bromobenzene	38.14
41	1,3,5-Trimethylbenzene	38.80
42	2-Chlorotoluene	38.82
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	41.42
50	1,4-Dichlorobenzene	41.83
51	n-Butylbenzene	42.53
52	1,2-Dichlorobenzene	43.18
53	1,2-Dibromo-3-chloropropane	46.12
54	Nitrobenzene	46.46
55	1,2,4-Trichlorobenzene	49.26
56	Hexachlorobutadiene	49.72
57	Naphthalene	50.26
58	1,2,3-Trichlorobenzene	51.16

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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, 2023

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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Certified Reference Material CRM

Exp 03/18/24

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

CERTIFIED WEIGHT REPORT

5 vial

Part Number:	91980
Lot Number:	031725
Description:	Acrolein
Expiration Date:	041725
Recommended Storage:	Refrigerate (4 °C)
Nominal Concentration (µg/mL):	5000
NIST Test ID#:	6UTB

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

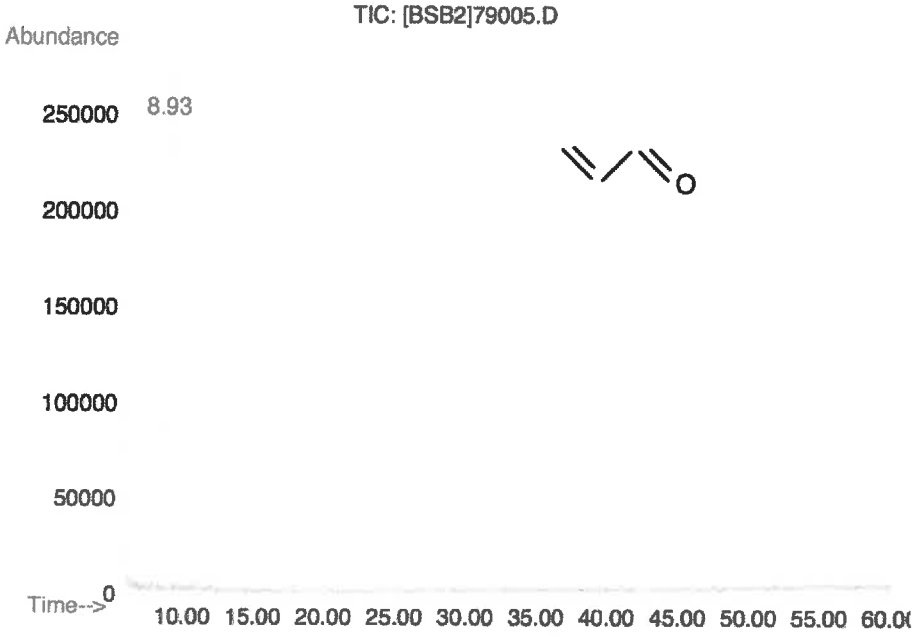
V14895 to V14899

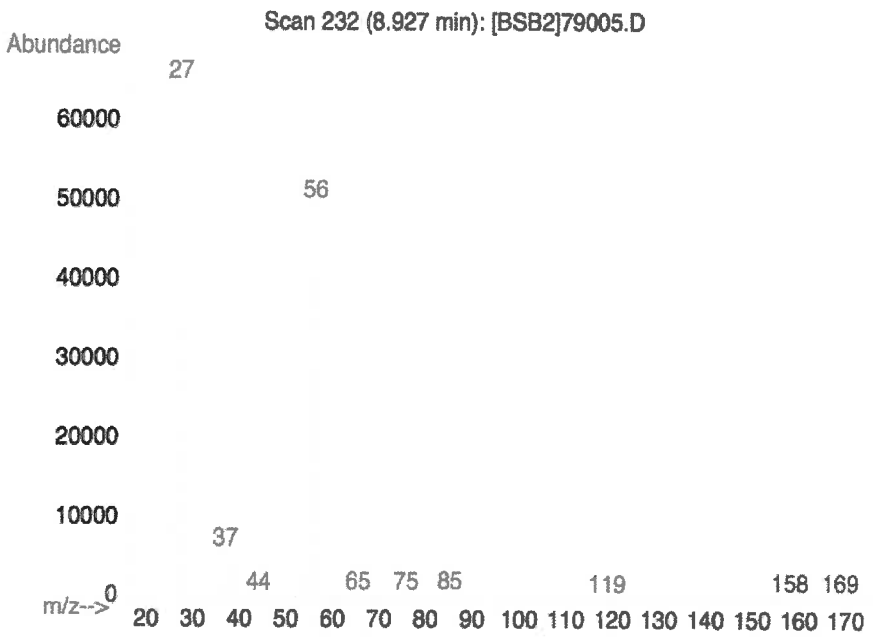
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.001 Flask Uncertainty

Formulated By:	Lawrence Barry	031725 DATE
Reviewed By:	Pedro L. Rentas	031725 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 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).**

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Safety Data Sheet (SDS) GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY **ANALYTICAL STANDARD DISSOLVED IN WATER**

Manufacturer's Name	ABSOLUTE STANDARDS INC	Emergency Telephone USA & CANADA	**1-800-535-5053**
Address	44 Rossotto Dr.	Emergency Telephone International	**1-352-323-3500**
	Hamden CT, 06514	Date Prepared/Revised	January 1, 2025

Section II - Hazards Identification

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

P271	**Use in ventilated area**	**H315**	**Causes skin and eye irritation.**
P302,332	**If on skin, wash with soap and water**	**P280**	**Use gloves, eye protection/face sheild**
		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)
Water	CAS#: 7732-18-5	> 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

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.
Hazardous Decomposition products	Carbon oxides

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

Water CAS#: 7732-18-5 TWA: 500 ppm

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	100°C	Specific Gravity (H2O = 1)	1
Vapor Pressure (mm Hg)		Melting Point	

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	NA		0°C
Vapor Density (AIR = 1)	NA	Evaporation rate (Butyl Acetate = 1)	NA

Solubility in Water Completely miscible

Appearance and Odor CLEAR, COLORLESS LIQUID WITH SLIGHT CHEMICAL ODOR.

Section X. STABILITY AND REACTIVITY

Chemical stability Stable under recommended storage conditions.
Possibility of hazardous reactions NA
Conditions to avoid NA
Materials to avoid NA
Hazardous decomposition products - No data available

Section XI. TOXICOLOGICAL INFORMATION

LD50 Oral - Rat NA
LC50 Inhalation - Rat NA
LD50 Dermal - Guinea pig NA
Causes skin irritation.
Eye irritation

Section XII. ECOLOGICAL INFORMATION

LC50 NA
EC50 NA

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods
Proper shipping name: Water

IATA
Not dangerous goods
Proper shipping name: Water

Section XV. REGULATORY INFORMATION

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 Material Safety Data Sheet. If you have any questions, please call Technical Service at 1-203-281-2917 for assistance.

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Certified Reference Material CRM

Exp 03/18/24

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

5 vial

Part Number:	91980
Lot Number:	031725
Description:	Acrolein
Expiration Date:	041725
Recommended Storage:	Refrigerate (4 °C)
Nominal Concentration (µg/mL):	5000
NIST Test ID#:	6UTB

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

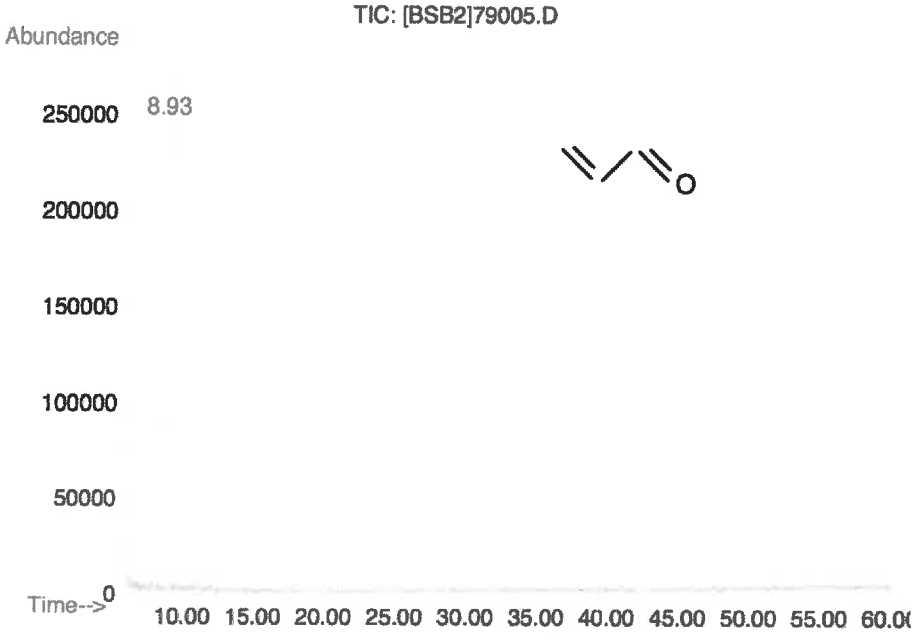
V14895 to V14899

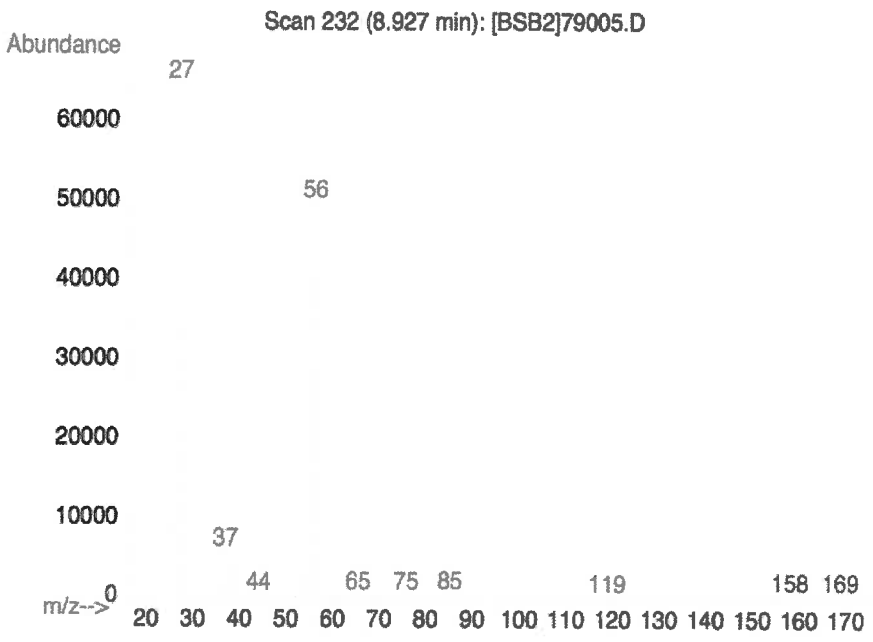
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.001 Flask Uncertainty

Formulated By:	Lawrence Barry	031725 DATE
Reviewed By:	Pedro L. Rentas	031725 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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- **Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).**
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- **All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.**
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Safety Data Sheet (SDS) GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY **ANALYTICAL STANDARD DISSOLVED IN WATER**

Manufacturer's Name	ABSOLUTE STANDARDS INC	Emergency Telephone USA & CANADA	**1-800-535-5053**
Address	44 Rossotto Dr.	Emergency Telephone International	**1-352-323-3500**
	Hamden CT, 06514	Date Prepared/Revised	January 1, 2025

Section II - Hazards Identification

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

P271	**Use in ventilated area**	**H315**	**Causes skin and eye irritation.**
P302,332	**If on skin, wash with soap and water**	**P280**	**Use gloves, eye protection/face sheild**
		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)
Water	CAS#: 7732-18-5	> 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

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.
Hazardous Decomposition products	Carbon oxides

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

Water CAS#: 7732-18-5 TWA: 500 ppm

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	100°C	Specific Gravity (H2O = 1)	1
Vapor Pressure (mm Hg)		Melting Point	

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

	NA		0°C
Vapor Density (AIR = 1)	NA	Evaporation rate (Butyl Acetate = 1)	NA

Solubility in Water Completely miscible

Appearance and Odor CLEAR, COLORLESS LIQUID WITH SLIGHT CHEMICAL ODOR.

Section X. STABILITY AND REACTIVITY

Chemical stability Stable under recommended storage conditions.
Possibility of hazardous reactions NA
Conditions to avoid NA
Materials to avoid NA
Hazardous decomposition products - No data available

Section XI. TOXICOLOGICAL INFORMATION

LD50 Oral - Rat NA
LC50 Inhalation - Rat NA
LD50 Dermal - Guinea pig NA
Causes skin irritation.
Eye irritation

Section XII. ECOLOGICAL INFORMATION

LC50 NA
EC50 NA

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods
Proper shipping name: Water

IATA
Not dangerous goods
Proper shipping name: Water

Section XV. REGULATORY INFORMATION

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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Certified Reference Material CRM

Exp 03/18/24

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

CERTIFIED WEIGHT REPORT

5 vial

Part Number:	91980
Lot Number:	031725
Description:	Acrolein
Expiration Date:	041725
Recommended Storage:	Refrigerate (4 °C)
Nominal Concentration (µg/mL):	5000
NIST Test ID#:	6UTB

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

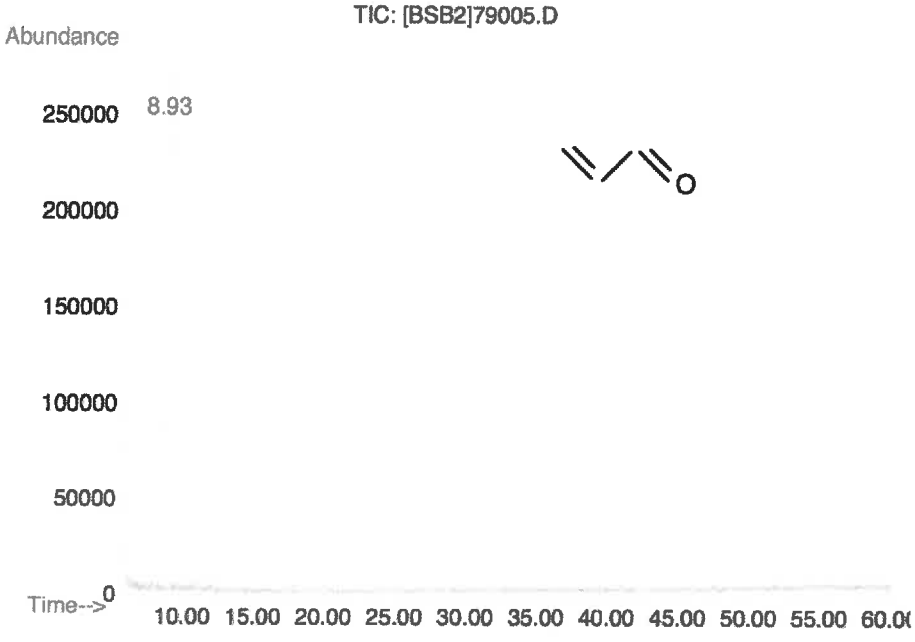
V14895 to V14899

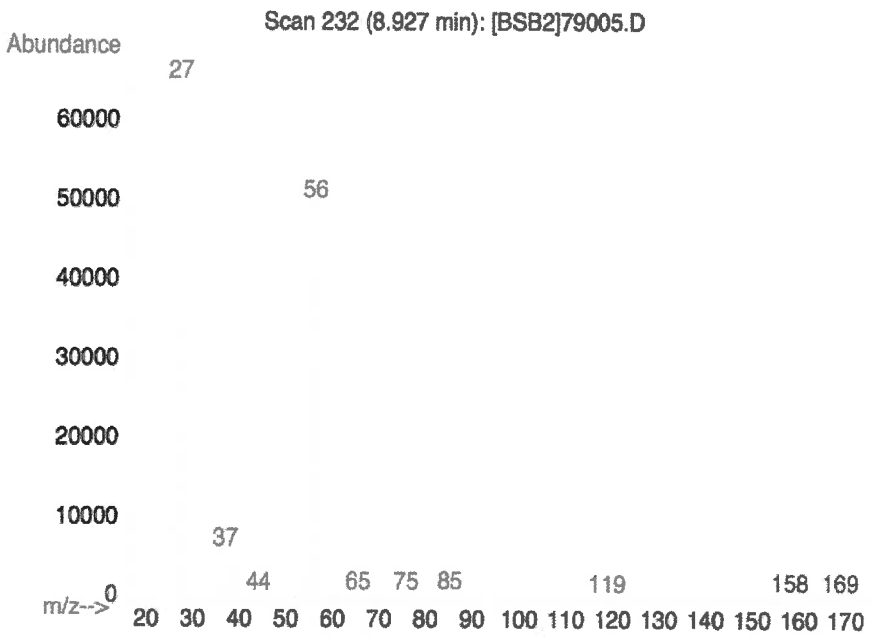
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.001 Flask Uncertainty

Formulated By:	Lawrence Barry	031725 DATE
Reviewed By:	Pedro L. Rentas	031725 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 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 WATER**

Manufacturer's Name	ABSOLUTE STANDARDS INC	Emergency Telephone USA & CANADA	**1-800-535-5053**
Address	44 Rossotto Dr.	Emergency Telephone International	**1-352-323-3500**
	Hamden CT, 06514	Date Prepared/Revised	January 1, 2025

Section II - Hazards Identification

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

P271	**Use in ventilated area**	**H315**	**Causes skin and eye irritation.**
P302,332	**If on skin, wash with soap and water**	**P280**	**Use gloves, eye protection/face sheild**
		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)
Water	CAS#: 7732-18-5	> 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

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.
Hazardous Decomposition products	Carbon oxides

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

Water CAS#: 7732-18-5 TWA: 500 ppm

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	100°C	Specific Gravity (H2O = 1)	1
Vapor Pressure (mm Hg)		Melting Point	

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	NA		0°C
Vapor Density (AIR = 1)	NA	Evaporation rate (Butyl Acetate = 1)	NA

Solubility in Water Completely miscible

Appearance and Odor CLEAR, COLORLESS LIQUID WITH SLIGHT CHEMICAL ODOR.

Section X. STABILITY AND REACTIVITY

Chemical stability Stable under recommended storage conditions.
Possibility of hazardous reactions NA
Conditions to avoid NA
Materials to avoid NA
Hazardous decomposition products - No data available

Section XI. TOXICOLOGICAL INFORMATION

LD50 Oral - Rat NA
LC50 Inhalation - Rat NA
LD50 Dermal - Guinea pig NA
Causes skin irritation.
Eye irritation

Section XII. ECOLOGICAL INFORMATION

LC50 NA
EC50 NA

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods
Proper shipping name: Water

IATA
Not dangerous goods
Proper shipping name: Water

Section XV. REGULATORY INFORMATION

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 Material 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

Exp 03/18/24

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

CERTIFIED WEIGHT REPORT

5 vial

Part Number:	91980
Lot Number:	031725
Description:	Acrolein
Expiration Date:	041725
Recommended Storage:	Refrigerate (4 °C)
Nominal Concentration (µg/mL):	5000
NIST Test ID#:	6UTB

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

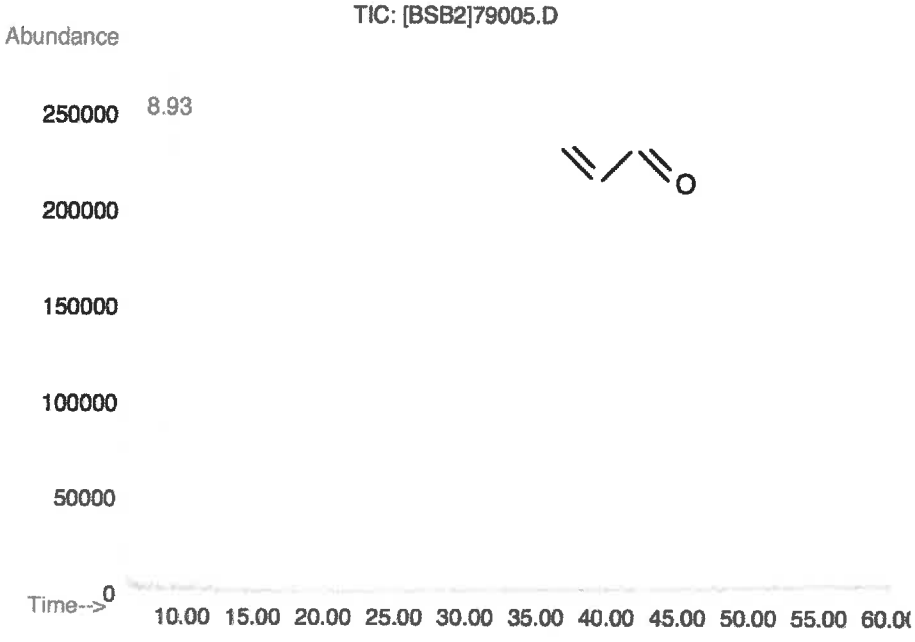
V14895 to V14899

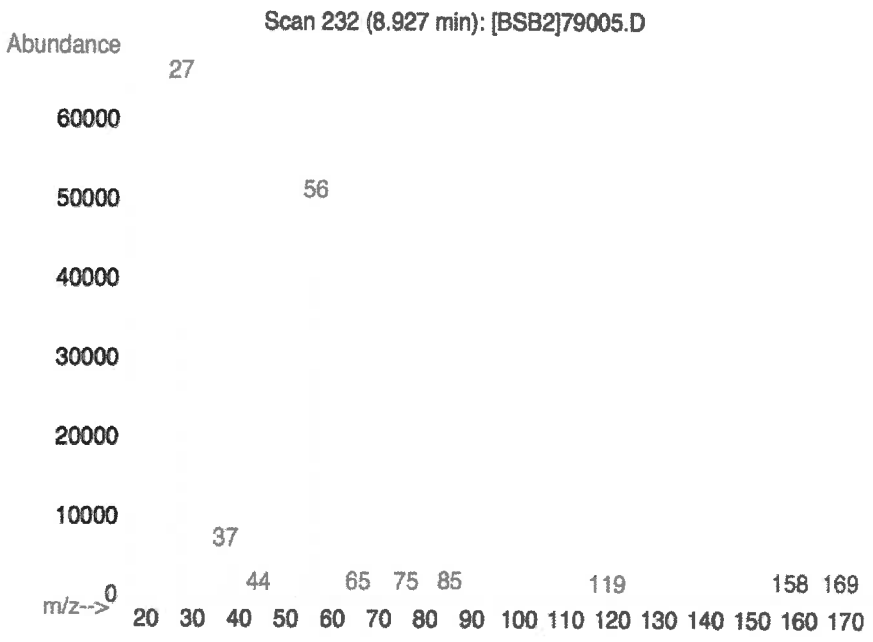
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.001 Flask Uncertainty

Formulated By:	Lawrence Barry	031725 DATE
Reviewed By:	Pedro L. Rentas	031725 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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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 WATER**

Manufacturer's Name	ABSOLUTE STANDARDS INC	Emergency Telephone USA & CANADA	**1-800-535-5053**
Address	44 Rossotto Dr.	Emergency Telephone International	**1-352-323-3500**
	Hamden CT, 06514	Date Prepared/Revised	January 1, 2025

Section II - Hazards Identification

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

P271	**Use in ventilated area**	**H315**	**Causes skin and eye irritation.**
P302,332	**If on skin, wash with soap and water**	**P280**	**Use gloves, eye protection/face sheild**
		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)
Water	CAS#: 7732-18-5	> 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

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.
Hazardous Decomposition products	Carbon oxides

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

Water CAS#: 7732-18-5 TWA: 500 ppm

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	100°C	Specific Gravity (H2O = 1)	1
Vapor Pressure (mm Hg)		Melting Point	

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

	NA		0°C
Vapor Density (AIR = 1)	NA	Evaporation rate (Butyl Acetate = 1)	NA

Solubility in Water Completely miscible

Appearance and Odor CLEAR, COLORLESS LIQUID WITH SLIGHT CHEMICAL ODOR.

Section X. STABILITY AND REACTIVITY

Chemical stability Stable under recommended storage conditions.
Possibility of hazardous reactions NA
Conditions to avoid NA
Materials to avoid NA
Hazardous decomposition products - No data available

Section XI. TOXICOLOGICAL INFORMATION

LD50 Oral - Rat NA
LC50 Inhalation - Rat NA
LD50 Dermal - Guinea pig NA
Causes skin irritation.
Eye irritation

Section XII. ECOLOGICAL INFORMATION

LC50 NA
EC50 NA

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods
Proper shipping name: Water

IATA
Not dangerous goods
Proper shipping name: Water

Section XV. REGULATORY INFORMATION

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 Material 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

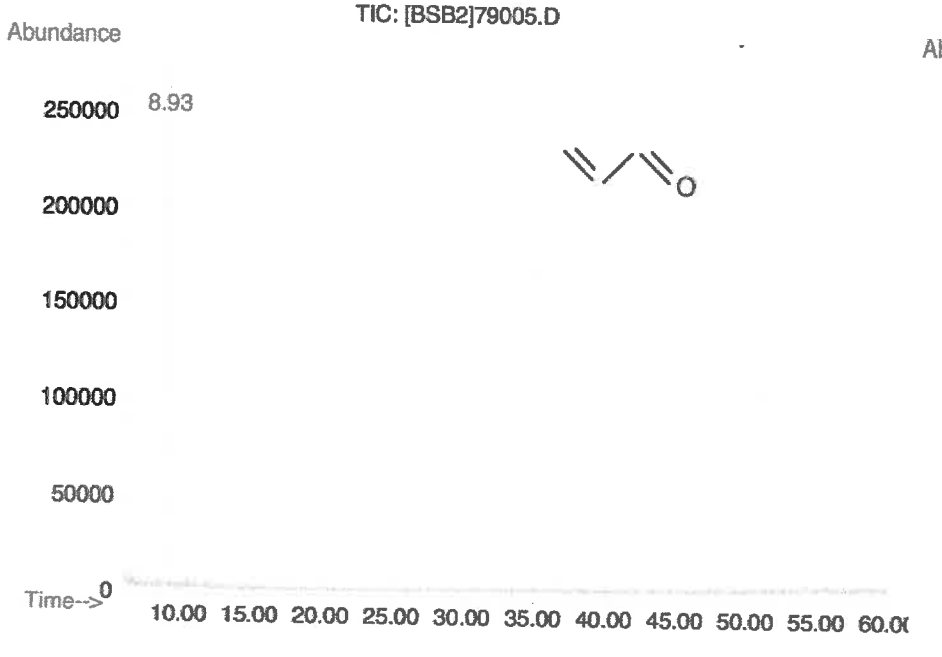
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.001 Flask Uncertainty

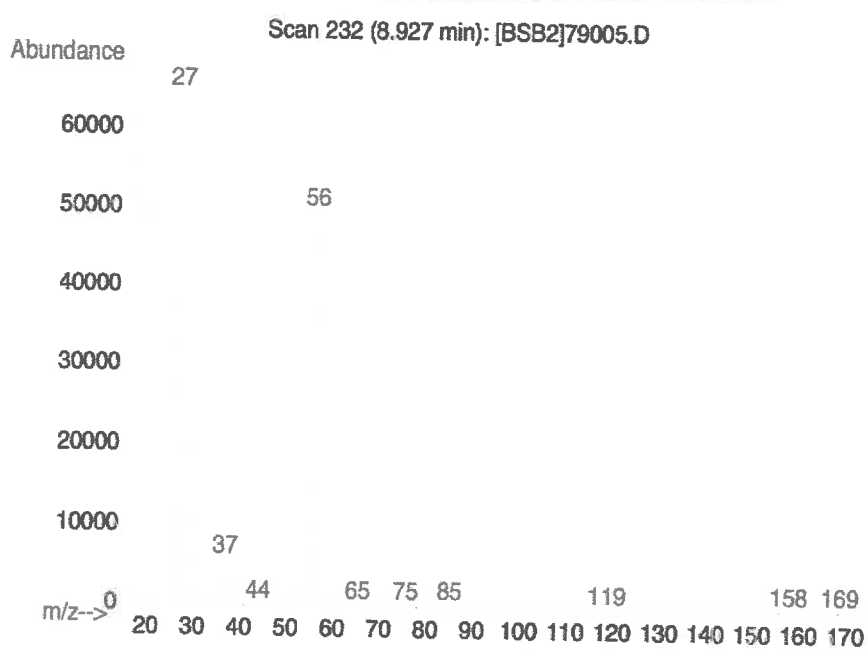
Formulated By: Justin Dippold 091424 DATE

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.





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Absolute Standards, Inc.
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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

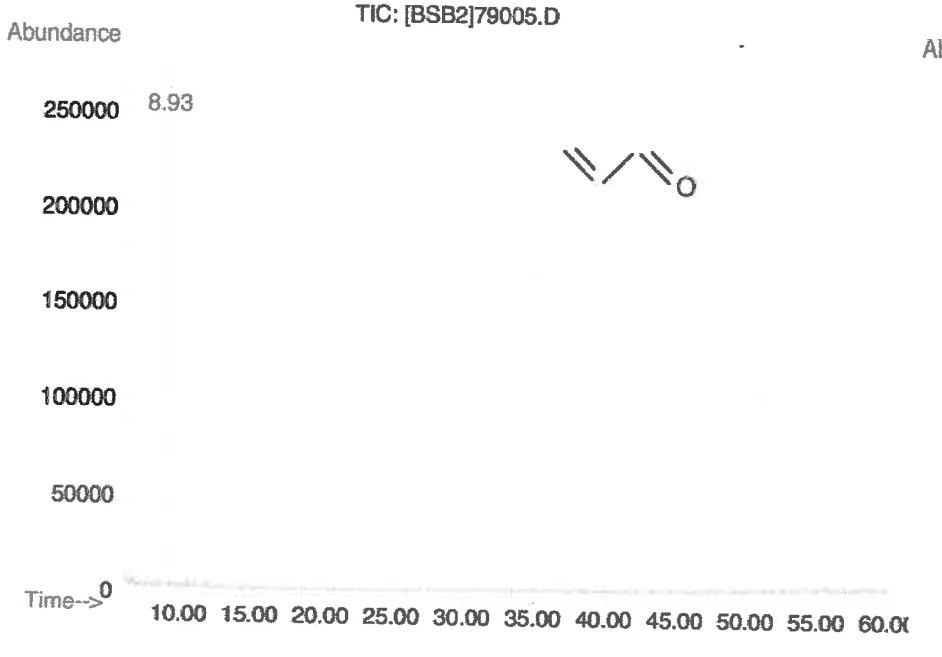
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.001 Flask Uncertainty

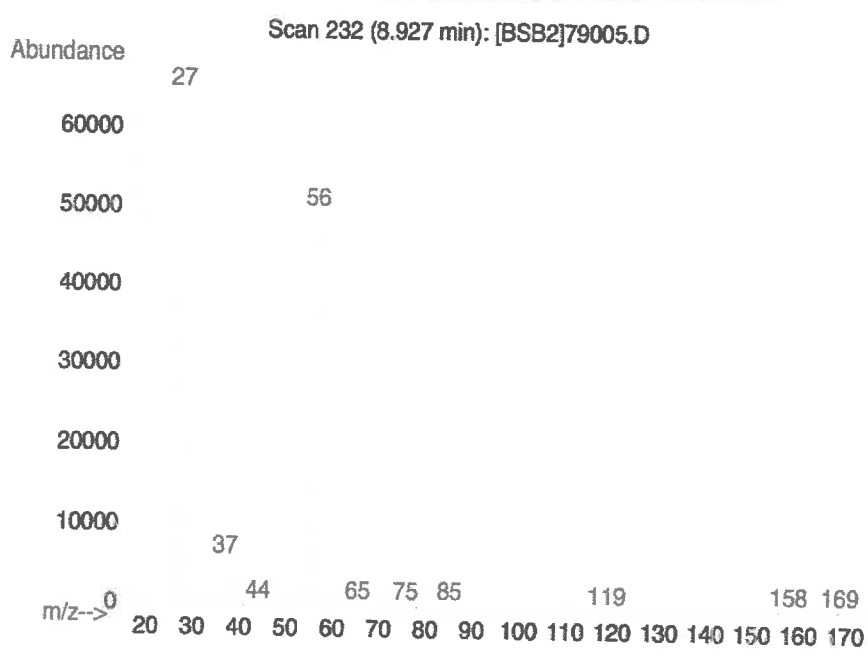
Formulated By: Justin Dippold 091424 DATE

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

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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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

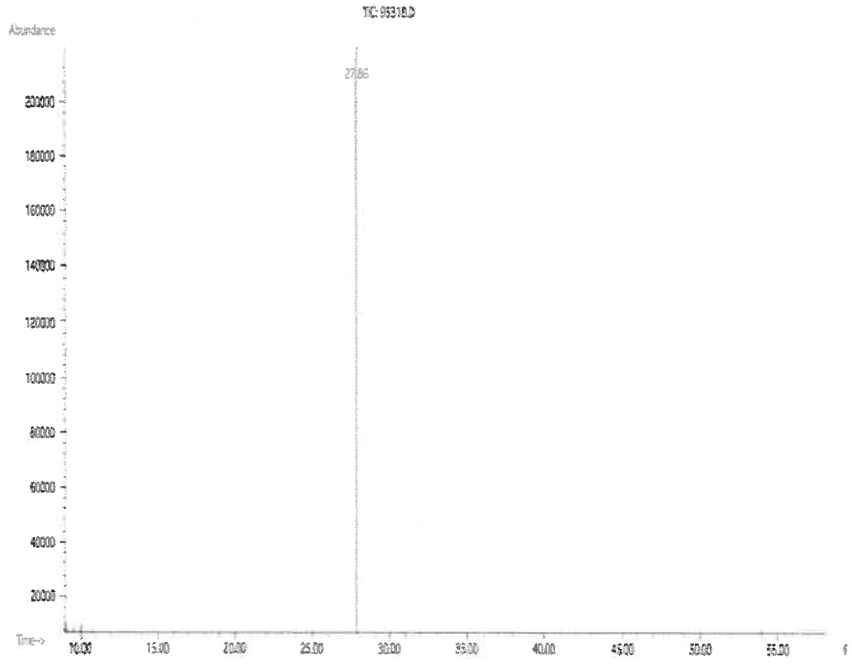
V14630 to V14649

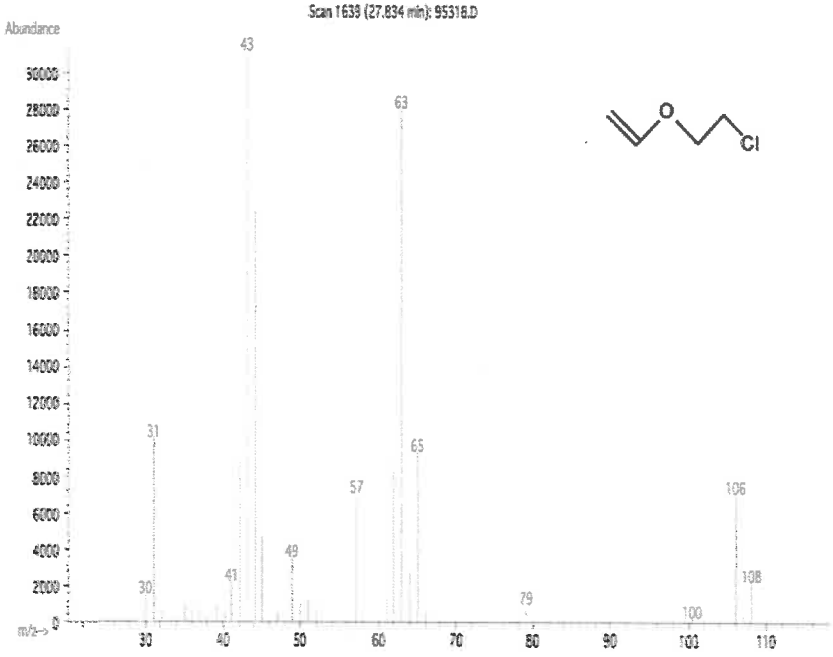
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

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.





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Absolute Standards Inc.
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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.

Absolute Standards, Inc.
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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

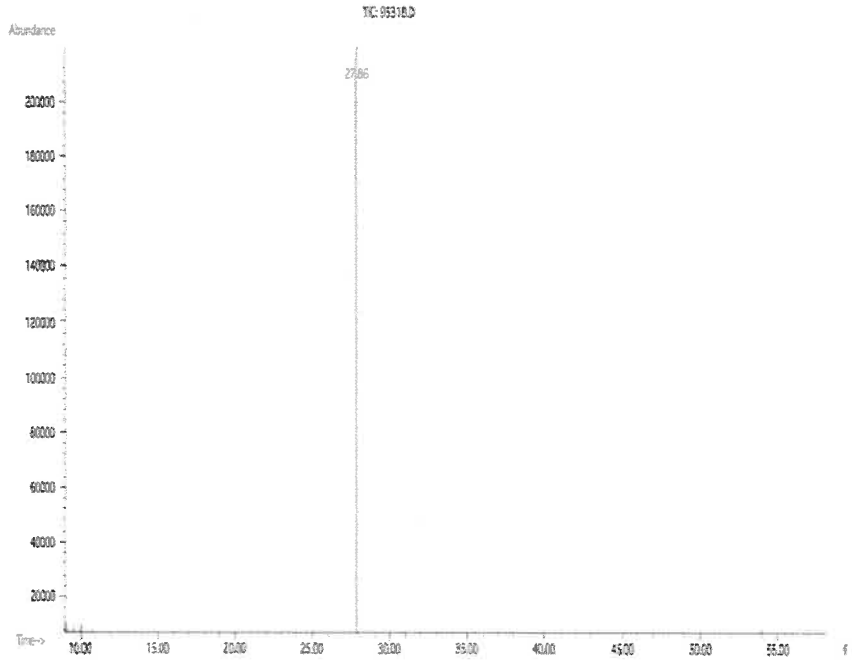
V14630 to V14649

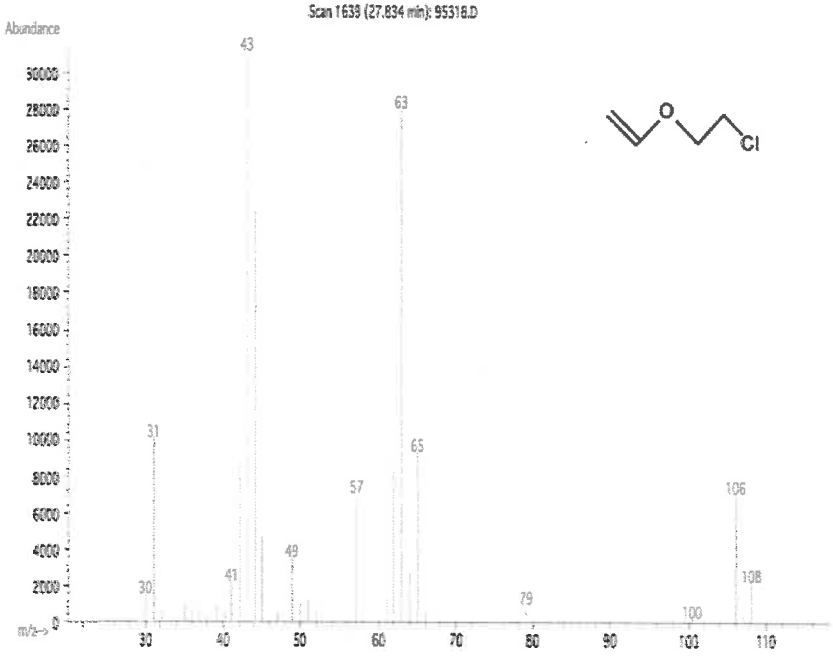
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

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

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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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
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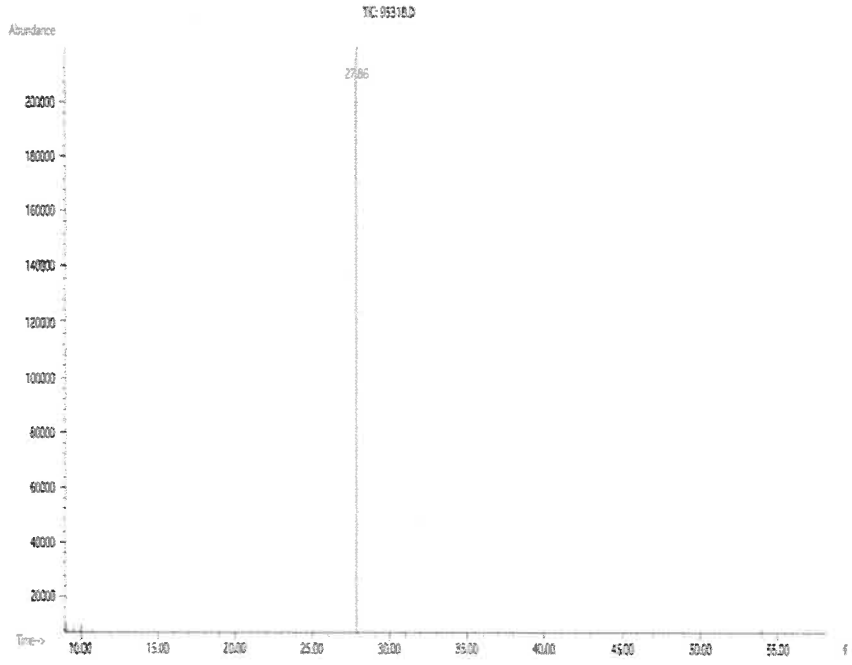
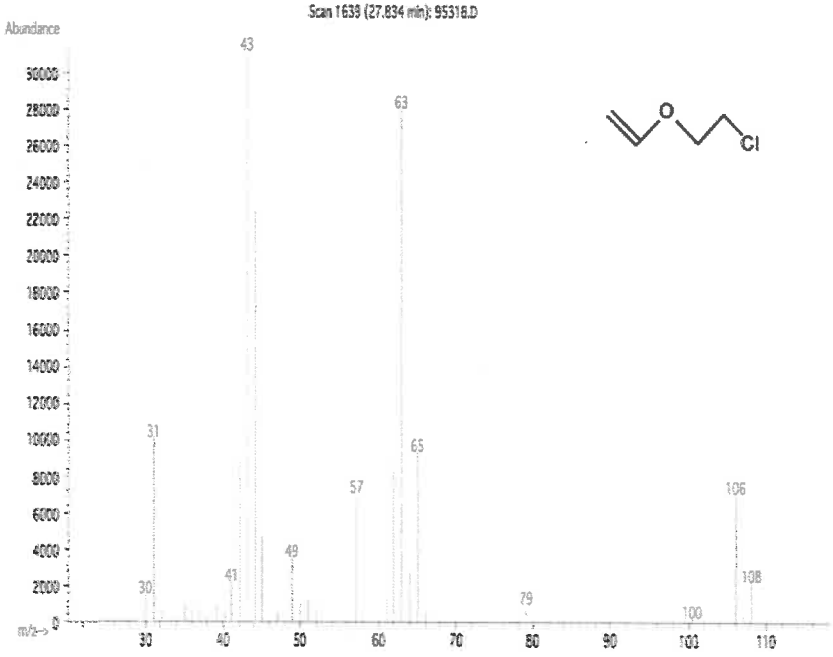
Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. 2-Chloroethyl vinyl ether	74	MKCD0033	10000	99	0.2	0.50536	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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Signal Word: DANGER

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

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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.

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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

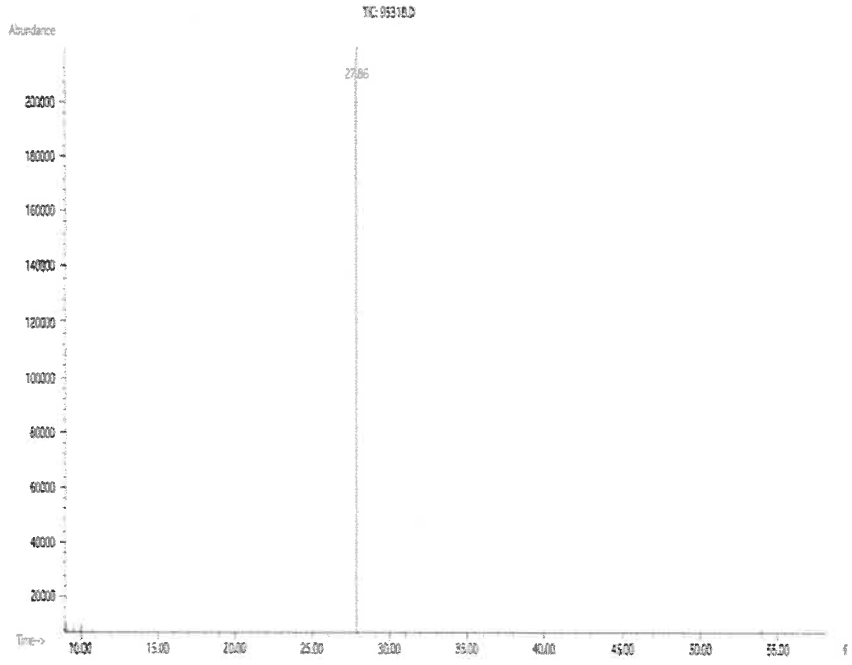
V14630 to V14649

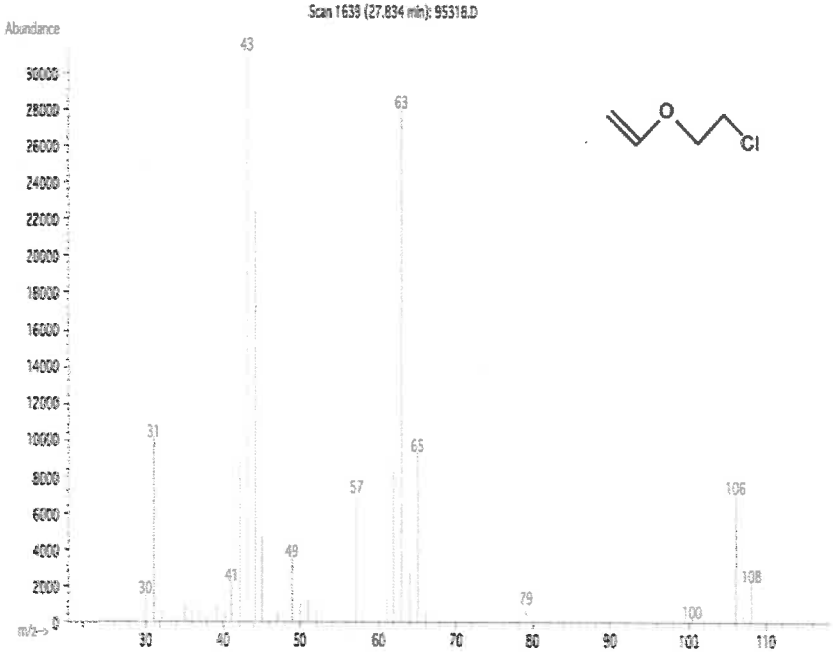
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

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.





- 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

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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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. : 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.)

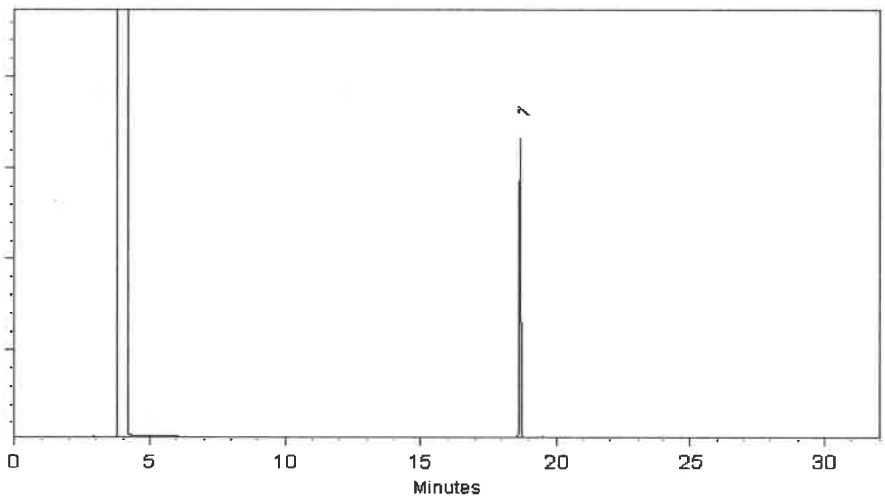
Inj. Temp:
200°C

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.

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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.:** A0193071

Description : Bromochloromethane Standard

Bromochloromethane 2000µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : December 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	Bromochloromethane	74-97-5	00008541	99%	2,018.0 µg/mL	+/- 113.3890

* 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.)

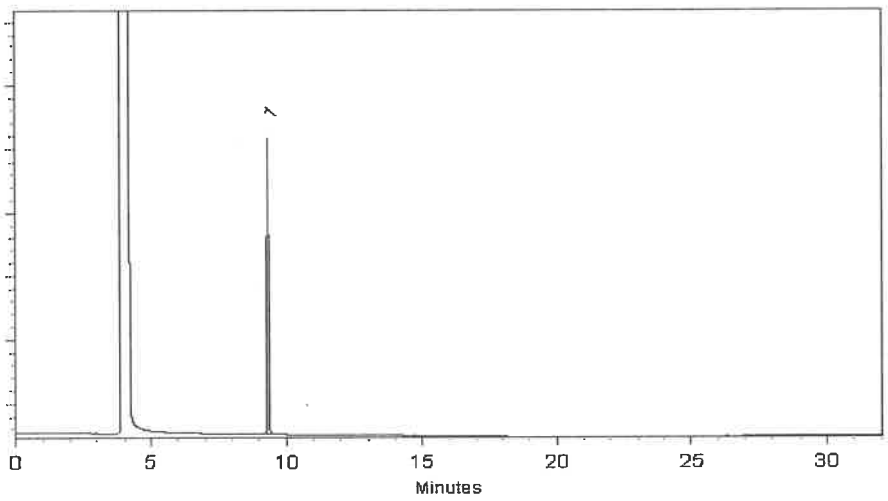
Inj. Temp:
200°C

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.

Tom Suckar - Mix Technician

Date Mixed: 29-Dec-2022 **Balance Serial #** B707717271

Christie Mills - Operations Tech II - ARM QC

Date Passed: 03-Jan-2023

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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Catalog No. : 30225 **Lot No.:** A0193071

Description : Bromochloromethane Standard

Bromochloromethane 2000µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : December 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	Bromochloromethane	74-97-5	00008541	99%	2,018.0 µg/mL	+/- 113.3890

* 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.)

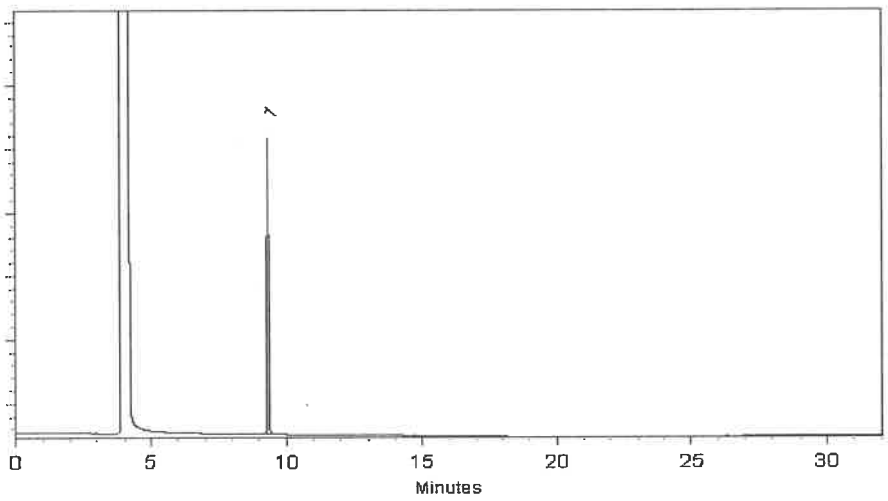
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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Tom Suckar - Mix Technician

Date Mixed: 29-Dec-2022 **Balance Serial #** B707717271

Christie Mills - Operations Tech II - ARM QC

Date Passed: 03-Jan-2023

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:

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

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

Handling Notes:

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Catalog No. : 30225 **Lot No.:** A0193071

Description : Bromochloromethane Standard

Bromochloromethane 2000µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : December 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	Bromochloromethane	74-97-5	00008541	99%	2,018.0 µg/mL	+/- 113.3890

* 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.)

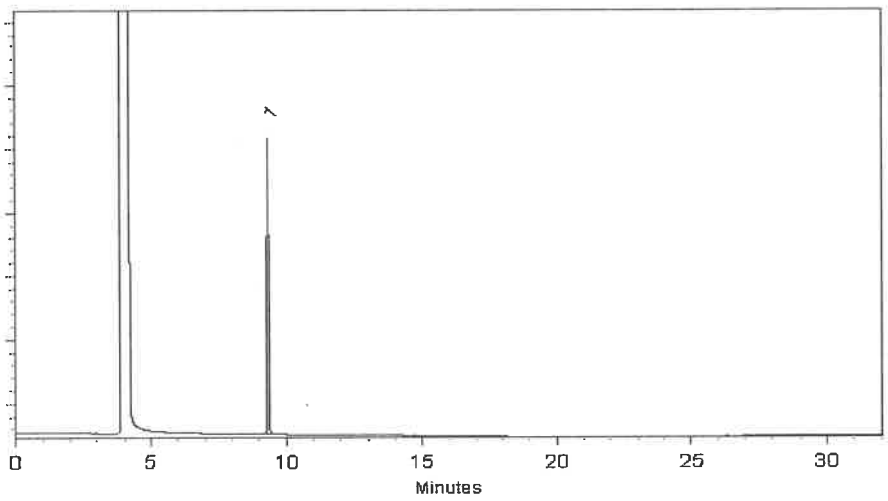
Inj. Temp:
200°C

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.

Tom Suckar - Mix Technician

Date Mixed: 29-Dec-2022 **Balance Serial #** B707717271

Christie Mills - Operations Tech II - ARM QC

Date Passed: 03-Jan-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Manufacturing Notes:

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Handling Notes:

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Catalog No. : 30225 **Lot No.:** A0193071

Description : Bromochloromethane Standard

Bromochloromethane 2000µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : December 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	Bromochloromethane	74-97-5	00008541	99%	2,018.0 µg/mL	+/- 113.3890

* 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.)

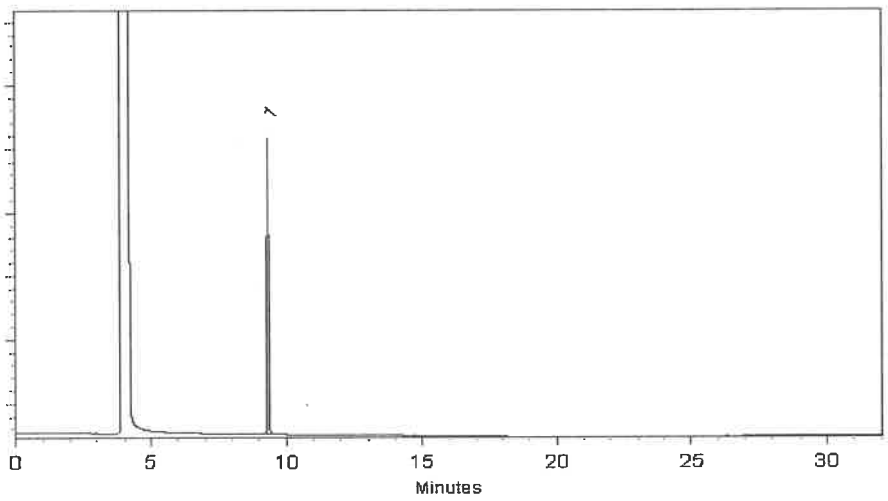
Inj. Temp:
200°C

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.

Tom Suckar - Mix Technician

Date Mixed: 29-Dec-2022 **Balance Serial #** B707717271

Christie Mills - Operations Tech II - ARM QC

Date Passed: 03-Jan-2023

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. : 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.
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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.)

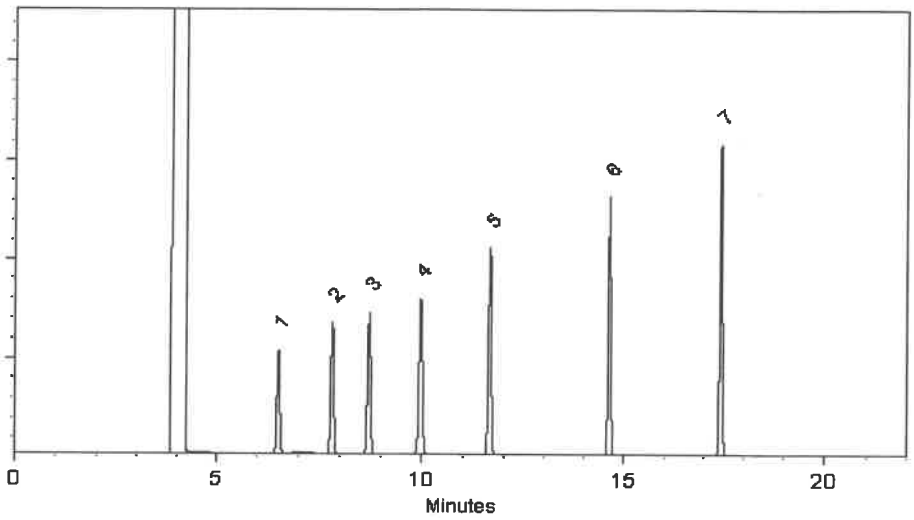
Inj. Temp:
200°C

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.
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- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

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

Handling Notes:

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

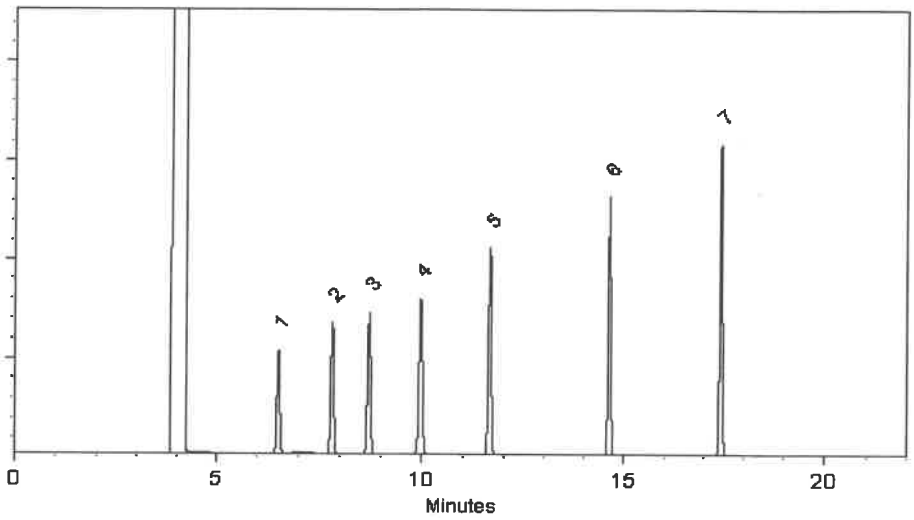
Inj. Temp:
200°C

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. : 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:

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- 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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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.)

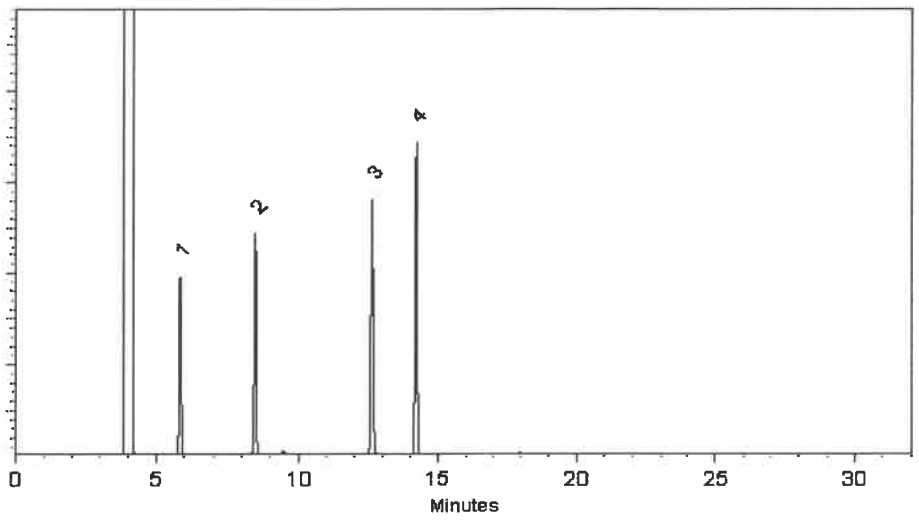
Inj. Temp:
200°C

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.
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- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

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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.)

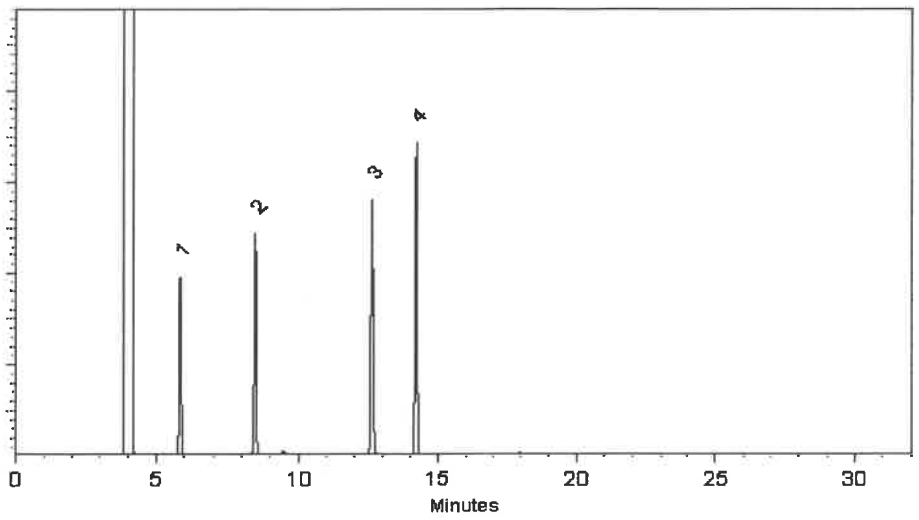
Inj. Temp:
200°C

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.
- 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:

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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.)

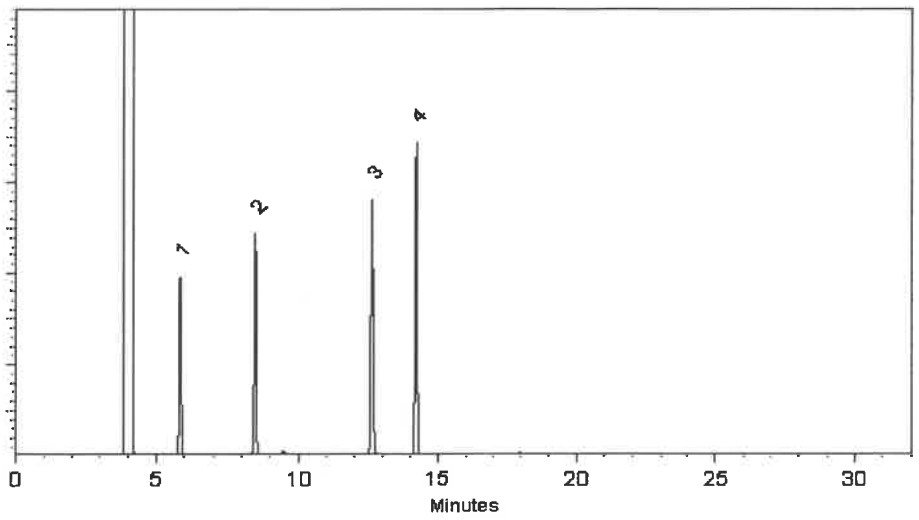
Inj. Temp:
200°C

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:

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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. : 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.

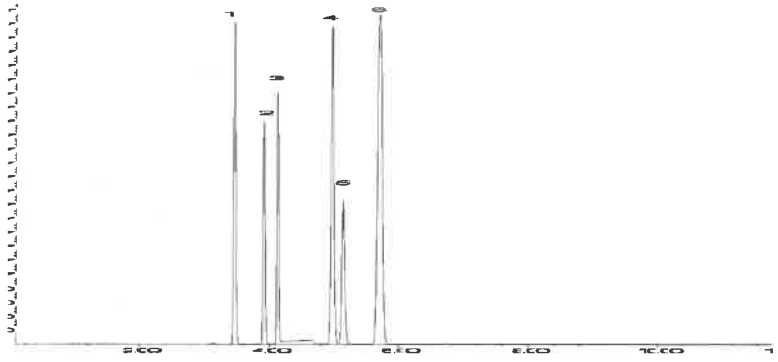
Inj. Temp:
200°C

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:

- 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:

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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. : 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.

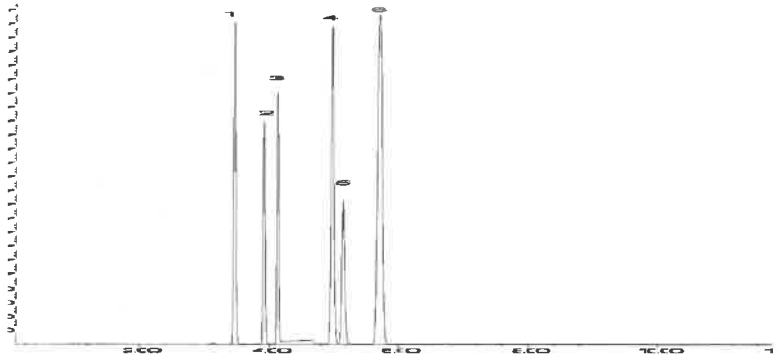
Inj. Temp:
200°C

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:

- 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 #3222.01

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.)

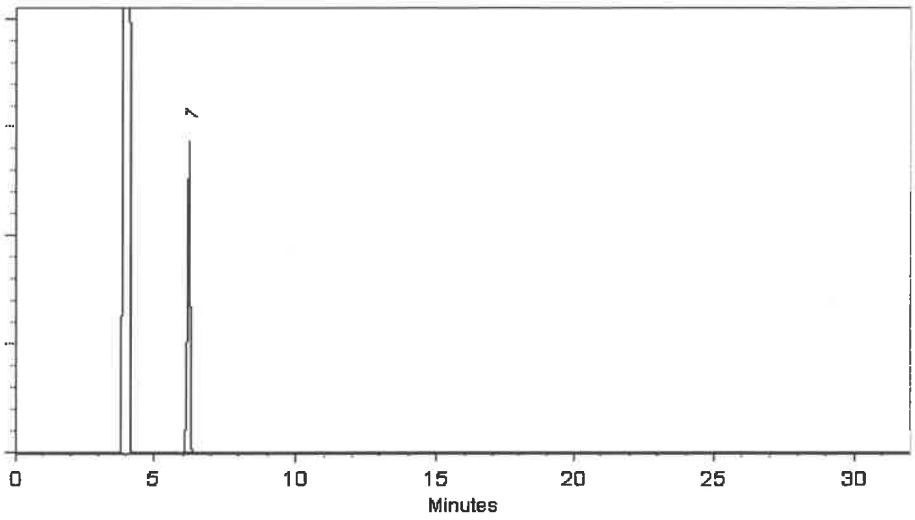
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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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.
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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.
- 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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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.)

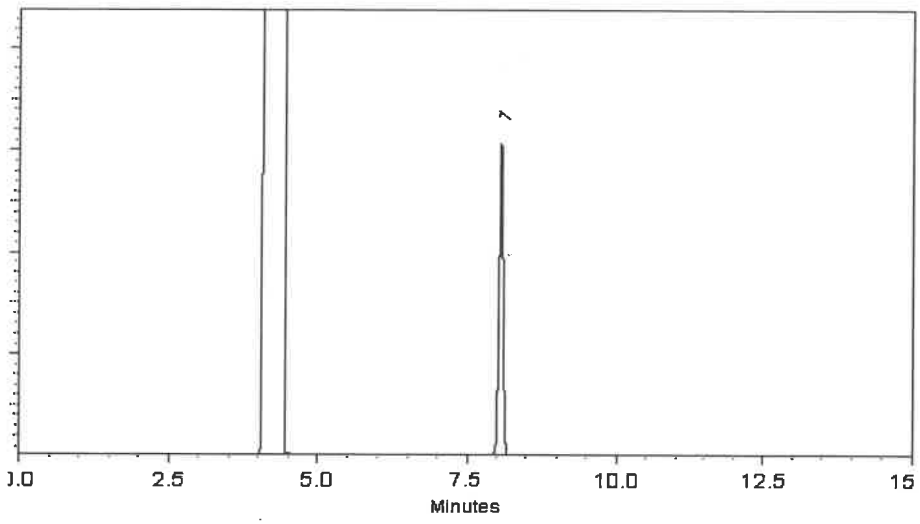
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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.

Zoviny Rec 01/08/21

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

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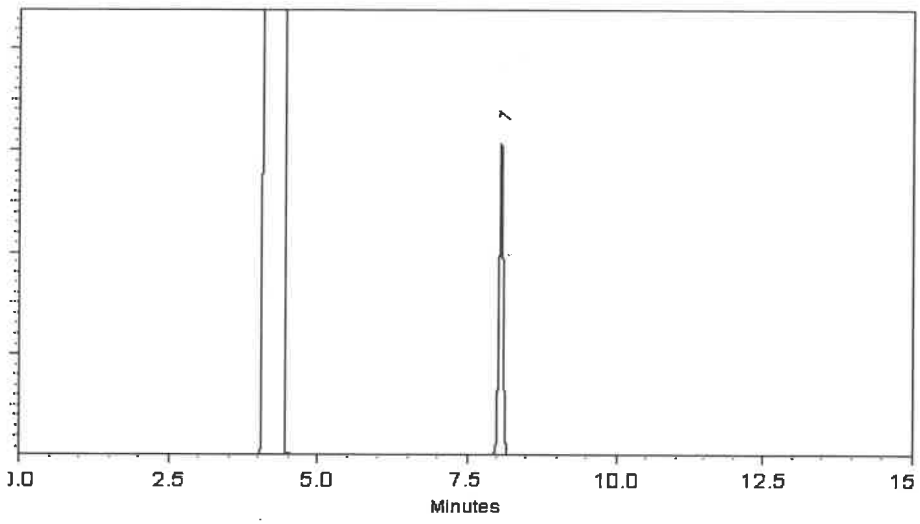

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Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

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 T Ethier

Jamie Ethier
Vice President Global Quality

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

avantor™ | J.T.Baker®

V14883
V14884

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

Certificate of Analysis

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

James T Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

SHIPPING DOCUMENTS

Alliance TECHNICAL GROUP

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax: (908) 788-9222
www.chemtech.net

CHAIN OF CUSTODY RECORD

Alliance Project Number: Q16646

COC Number: 2042112

CLIENT INFORMATION

COMPANY: **ENTACT, LLC**
ADDRESS: **150 Bay Street, Suite 806**
CITY: **Jersey City** STATE: **NJ** ZIP: **07302**
ATTENTION: **Jarod Stanfield**
PHONE: **570-886-0442** FAX:

PROJECT INFORMATION

PROJECT NAME: **540 Degraw St Brooklyn, NY**
PROJECT #: **E9309** LOCATION: **Brooklyn, NY**
PROJECT MANAGER: **Jarod Stanfield**
E-MAIL: **jstanfield@entact.com**
PHONE: **570-886-0442** FAX:

BILLING INFORMATION

BILL TO: **ENTACT, LLC** PO# **E9309**
ADDRESS: **999 Oakmont Plaza Drive, Suite 300**
CITY: **Westmont** STATE: **IL** ZIP: **60559**
ATTENTION: **Wendy Murray** PHONE: **800-936-8228**

DATA TURNAROUND INFORMATION

FAX: 5 DAYS*
HARD COPY: _____ DAYS*
EDD 5 DAYS*
* TO BE APPROVED BY ALLIANCE
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ☐ RESEULTS ONLY
- ☐ RESULTS + QC
- ☐ New Jersey REDUCED
- ☐ New Jersey CLP
- ☐ USEPA CLP
- ☐ New York State ASP "B"
- ☐ New York State ASP "A"
- ☐ Other _____
- ☐ EDD Format _____

ANALYSIS

1	2	3	4	5	6	7	8	9
Metals	Flashpoint + PCB	VOC	SVOC + Chloride (Anions)	BOD+TSS				

CHEMTECH 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
								B	E	E	E	E					<-- Specify Preservatives A-HCl B-HNO3 C-H2SO4 D-NaOH E-ICE F-Other
1.	TW-WTS-05	Surface Water		X	3/25	10:00	4	X	X	X	X	X					
2.																	
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

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

RELINQUISHED BY SAMPLER 1. **Jarod Stanfield**	DATE/TIME 03/26/25 16:00	RECEIVED BY 1. 1230 3-27-25	**Conditions of bottles or coolers at receipt:** ☐ Compliant ☐ Non Compliant ☐ Cooler Temp 3.3C ☐ Ice in Cooler?: _____
RELINQUISHED BY 2.	DATE/TIME	RECEIVED BY 2.	**Comments:**
RELINQUISHED BY 3.	DATE/TIME 1638 3-27-25	RECEIVED FOR LAB BY 3.	Page _____ of _____

SHIPPED VIA: CLIENT: ☐ Hand Delivered ☐ Overnight
ALLIANCE: ☐ Picked Up ☐ Overnight

Shipment Complete ☐ YES ☐ NO

WHITE - ALLIANCE COPYFOR 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

Alliance TECHNICAL GROUP

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q1666 ENTA05
Client Name : ENTACT
Client Contact : Jarod Stanfield
Invoice Name : ENTACT
Invoice Contact : Jarod Stanfield

Order Date : 3/27/2025 1:05:00 PM
Project Name : 540 Degraw St, Brooklyn, N
Receive DateTime : 3/27/2025 ~~12~~16:38:00 AM
Purchase Order :

Project Mgr :
Report Type : Level 1
EDD Type : Excel NJ
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q1666-01	TW-WTS-05	Water	03/25/2025	10:00					
					VOCMS Group4		8260-Low		5 Bus. Days

Relinguished By :
Date / Time : 3/28/25 0900

Received By :
Date / Time : 3.28.25 09:00

Storage Area : VOA Refridgerator Room