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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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LAB CHRONICLE

OrderID:	Q1429	**OrderDate:**	2/25/2025 1:50:00 PM
Client:	Tris Pharma, Inc.	**Project:**	Quarterly
Contact:	Nichole Nikki Ferrari	**Location:**	D11,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1429-01	**OUTFALL-DSN-001**	**Water**			**02/25/25**			**02/25/25**
			VOCMS Group1	624.1			02/26/25	
Q1429-02	**OUTFALL-DSN-002**	**Water**			**02/25/25**			**02/25/25**
			VOCMS Group1	624.1			02/26/25	

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Hit Summary Sheet
SW-846

SDG No.: Q1429

Client: Tris Pharma, Inc.

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID:	**OUTFALL-DSN-001**							
Q1429-01	OUTFALL-DSN-00	Water	Acetone	110		4.90	25.0	ug/L
			Total Voc :	110				
			Total Concentration:	110				
Client ID:	**OUTFALL-DSN-002**							
Q1429-02	OUTFALL-DSN-00	Water	Acetone	220		4.90	25.0	ug/L
			Total Voc :	220				
			Total Concentration:	220				

QC SUMMARY

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Surrogate Summary

SDG No.: Q1429

Client: Tris Pharma, Inc.

Analytical Method: SW624.1

Lab Sample ID	Client ID	Parameter	Spike	Result	RecoveryQual	Limits Low	Limits High
Q1429-01	OUTFALL-DSN-001	1,2-Dichloroethane-d4	30	31.0	103	91	110
		Toluene-d8	30	30.1	100	91	112
		4-Bromofluorobenzene	30	27.8	93	63	112
Q1429-02	OUTFALL-DSN-002	1,2-Dichloroethane-d4	30	30.4	101	91	110
		Toluene-d8	30	29.4	98	91	112
		4-Bromofluorobenzene	30	28.8	96	63	112
VX0226WBL01	VX0226WBL01	1,2-Dichloroethane-d4	30	30.4	101	91	110
		Toluene-d8	30	29.3	98	91	112
		4-Bromofluorobenzene	30	26.8	89	63	112
VX0226WBS01	VX0226WBS01	1,2-Dichloroethane-d4	30	29.8	99	91	110
		Toluene-d8	30	30.1	100	91	112
		4-Bromofluorobenzene	30	30.0	100	63	112
VX0226WBSD0	VX0226WBSD01	1,2-Dichloroethane-d4	30	29.7	99	91	110
		Toluene-d8	30	29.8	99	91	112
		4-Bromofluorobenzene	30	29.7	99	63	112

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Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q1429

Client: Tris Pharma, Inc.

Analytical Method: SW624.1 **Datafile :** VX045045.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Limits Low	Limits High	RPD
VX0226WBS01	Ethyl Acetate	20	21.1	ug/L	106			68	140	
	Isopropyl Acetate	20	21.3	ug/L	106			70	130	
	Acetone	100	130	ug/L	130			41	148	
	Methylene Chloride	20	19.4	ug/L	97			60	140	
	n-amyl Acetate	20	19.7	ug/L	99			70	130	

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Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q1429

Client: Tris Pharma, Inc.

Analytical Method: SW624.1 **Datafile :** VX045046.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Limits Low	Limits High	Limits RPD
VX0226WBSD01	Ethyl Acetate	20	23.8	ug/L	119	12		68	140	20
	Isopropyl Acetate	20	21.7	ug/L	109	3		70	130	20
	Acetone	100	110	ug/L	110	17		41	148	20
	Methylene Chloride	20	18.6	ug/L	93	4		60	140	20
	n-amyl Acetate	20	21.1	ug/L	106	7		70	130	20

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VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VX0226WBL01

Lab Name: CHEMTECH Contract: TRIS02

Lab Code: CHEM Case No.: Q1429 SAS No.: Q1429 SDG NO.: Q1429

Lab File ID: VX045047.D Lab Sample ID: VX0226WBL01

Date Analyzed: 02/26/2025 Time Analyzed: 11:26

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

Instrument ID: MSVOA_X

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
VX0226WBS01	VX0226WBS01	VX045045.D	02/26/2025
VX0226WBSD01	VX0226WBSD01	VX045046.D	02/26/2025
OUTFALL-DSN-001	Q1429-01	VX045052.D	02/26/2025
OUTFALL-DSN-002	Q1429-02	VX045053.D	02/26/2025

COMMENTS:

Alliance TECHNICAL GROUP

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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: TRIS02

Lab Code: CHEM Case No.: Q1429 SAS No.: Q1429 SDG NO.: Q1429

Lab File ID: VX045007.D BFB Injection Date: 02/21/2025

Instrument ID: MSVOA_X BFB Injection Time: 09:31

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.2
75	30.0 - 60.0% of mass 95	52.5
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.6 (0.8) 1
174	50.0 - 100.0% of mass 95	74.5
175	5.0 - 9.0% of mass 174	5.5 (7.4) 1
176	95.0 - 101.0% of mass 174	71.6 (96.2) 1
177	5.0 - 9.0% of mass 176	4.6 (6.5) 2

1-Value is % mass 174

2-Value is % mass 176

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDICC005	VSTDICC005	VX045008.D	02/21/2025	09:58
VSTDICCC020	VSTDICCC020	VX045009.D	02/21/2025	10:21
VSTDICC050	VSTDICC050	VX045010.D	02/21/2025	10:44
VSTDICC100	VSTDICC100	VX045011.D	02/21/2025	11:07
VSTDICC150	VSTDICC150	VX045012.D	02/21/2025	11:29

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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: TRIS02

Lab Code: CHEM Case No.: Q1429 SAS No.: Q1429 SDG NO.: Q1429

Lab File ID: VX045043.D BFB Injection Date: 02/26/2025

Instrument ID: MSVOA_X BFB Injection Time: 09:33

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.2
75	30.0 - 60.0% of mass 95	52.8
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.6 (0.8) 1
174	50.0 - 100.0% of mass 95	74.4
175	5.0 - 9.0% of mass 174	5.4 (7.3) 1
176	95.0 - 101.0% of mass 174	71.9 (96.7) 1
177	5.0 - 9.0% of mass 176	4.7 (6.5) 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
VSTDCCC020	VSTDCCC020	VX045044.D	02/26/2025	10:05
VX0226WBS01	VX0226WBS01	VX045045.D	02/26/2025	10:36
VX0226WBSD01	VX0226WBSD01	VX045046.D	02/26/2025	11:03
VX0226WBL01	VX0226WBL01	VX045047.D	02/26/2025	11:26
OUTFALL-DSN-001	Q1429-01	VX045052.D	02/26/2025	13:29
OUTFALL-DSN-002	Q1429-02	VX045053.D	02/26/2025	13:52

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VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: TRIS02

Lab Code: CHEM Case No.: Q1429 SAS No.: Q1429 SDG NO.: Q1429

Lab File ID: VX045044.D Date Analyzed: 02/26/2025

Instrument ID: MSVOA_X Time Analyzed: 10:05

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

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	19230	4.89	102945	6.75	95036	10.05
UPPER LIMIT	38460	5.385	205890	7.251	190072	10.549
LOWER LIMIT	9615	4.385	51472.5	6.251	47518	9.549
EPA SAMPLE NO.						
OUTFALL-DSN-001	16649	4.89	86265	6.76	78548	10.05
OUTFALL-DSN-002	16856	4.90	90840	6.76	81481	10.06
VX0226WBL01	18408	4.90	98459	6.76	88243	10.06
VX0226WBS01	20343	4.89	110538	6.75	100826	10.05
VX0226WBSD01	16155	4.90	85912	6.76	79610	10.06

IS1 = Bromochloromethane
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: TRIS02

Lab Code: CHEM Case No.: Q1429 SAS No.: Q1429 SDG NO.: Q1429

Lab File ID: VX045044.D Date Analyzed: 02/26/2025

Instrument ID: MSVOA_X Time Analyzed: 10:05

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

	IS4 AREA #	RT #				
12 HOUR STD	0	0				
UPPER LIMIT	0					
LOWER LIMIT	0					
EPA SAMPLE NO.						
OUTFALL-DSN-001	0	0.00				
OUTFALL-DSN-002	0	0.00				
VX0226WBL01	0	0.00				
VX0226WBS01	0	0.00				
VX0226WBSD01	0	0.00				

IS4 =

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: **VX045052.D**

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Report of Analysis

Client:	Tris Pharma, Inc.	Date Collected:	02/25/25
Project:	Quarterly	Date Received:	02/25/25
Client Sample ID:	OUTFALL-DSN-001	SDG No.:	Q1429
Lab Sample ID:	Q1429-01	Matrix:	Water
Analytical Method:	E624.1	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	DB-624UI ID : 0.18	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX045052.D	1		02/26/25 13:29	VX022625

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
141-78-6	Ethyl Acetate	1.50	U	1.50	5.00	ug/L
108-21-4	Isopropyl Acetate	0.66	U	0.66	5.00	ug/L
67-64-1	Acetone	110		4.90	25.0	ug/L
75-09-2	Methylene Chloride	1.20	U	1.20	5.00	ug/L
628-63-7	n-amyl Acetate	0.91	U	0.91	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	31.0		91 - 110	103%	SPK: 30
2037-26-5	Toluene-d8	30.1		91 - 112	100%	SPK: 30
460-00-4	4-Bromofluorobenzene	27.8		63 - 112	93%	SPK: 30
INTERNAL STANDARDS						
74-97-5	Bromochloromethane	16600	4.891			
540-36-3	1,4-Difluorobenzene	86300	6.763			
3114-55-4	Chlorobenzene-d5	78500	10.049			

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: **VX045052.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022625\
Data File : VX045052.D
Acq On : 26 Feb 2025 13:29
Operator : JC/MD
Sample : Q1429-01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
OUTFALL-DSN-001

Quant Time: Feb 27 05:14:20 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 2025
Response via : Initial Calibration

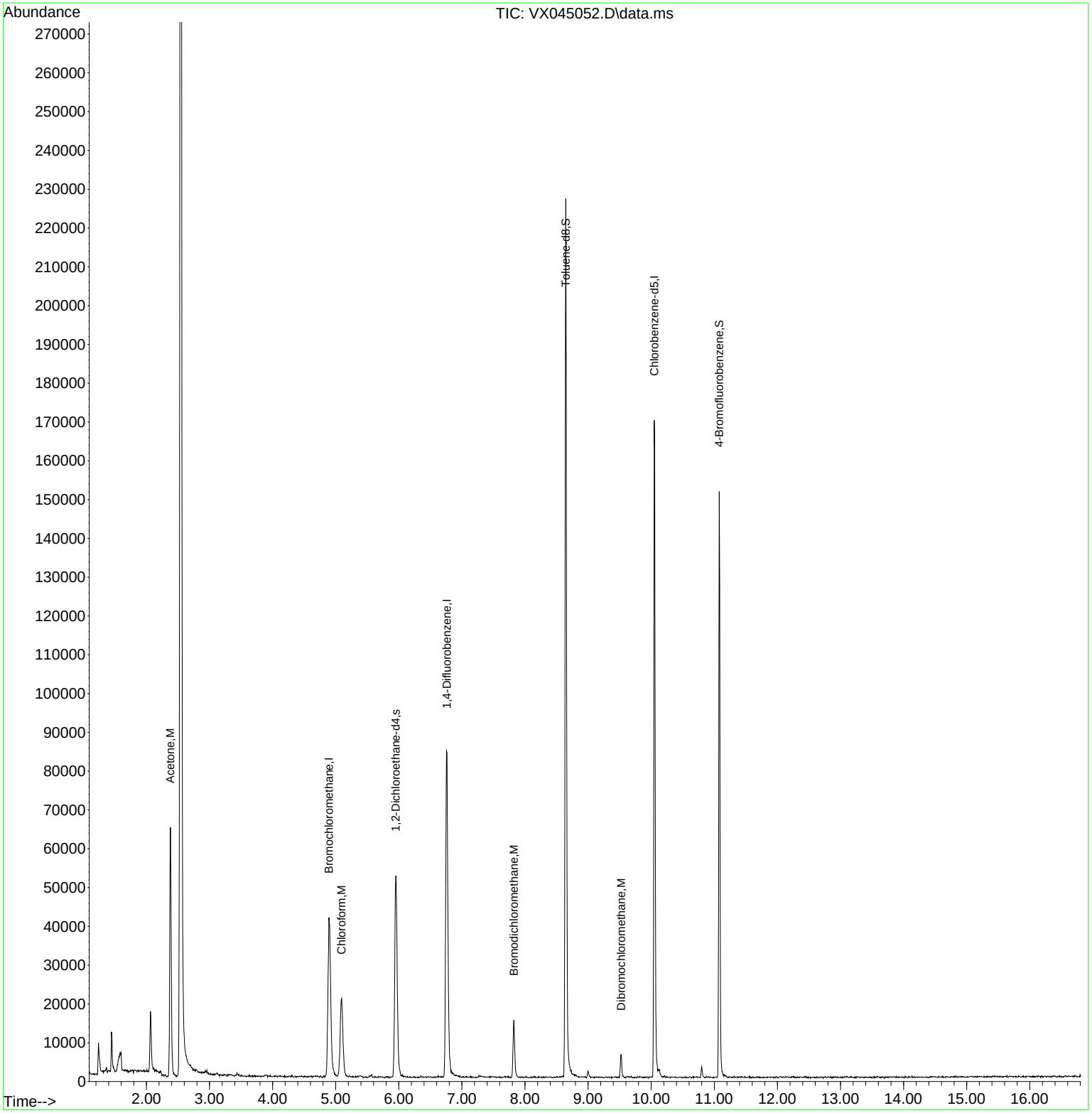
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.891	128	16649	30.000	ug/l	0.00
28) 1,4-Difluorobenzene	6.763	114	86265	30.000	ug/l	0.00
57) Chlorobenzene-d5	10.049	117	78548	30.000	ug/l	0.00
System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	5.952	65	50176	31.029	ug/l	0.00
Spiked Amount 30.000	Range 91 - 110		Recovery = 103.433%			
60) 4-Bromofluorobenzene	11.079	95	40775	27.773	ug/l	0.00
Spiked Amount 30.000	Range 63 - 112		Recovery = 92.567%			
63) Toluene-d8	8.647	98	130672	30.071	ug/l	0.00
Spiked Amount 30.000	Range 91 - 112		Recovery = 100.233%			
Target Compounds						Qvalue
15) Acetone	2.380	58	20748	105.456	ug/l	100
25) Chloroform	5.093	83	24110	9.874	ug/l	97
41) Bromodichloromethane	7.824	83	9492	5.379	ug/l	98
53) Dibromochloromethane	9.525	129	2903	2.267	ug/l	98

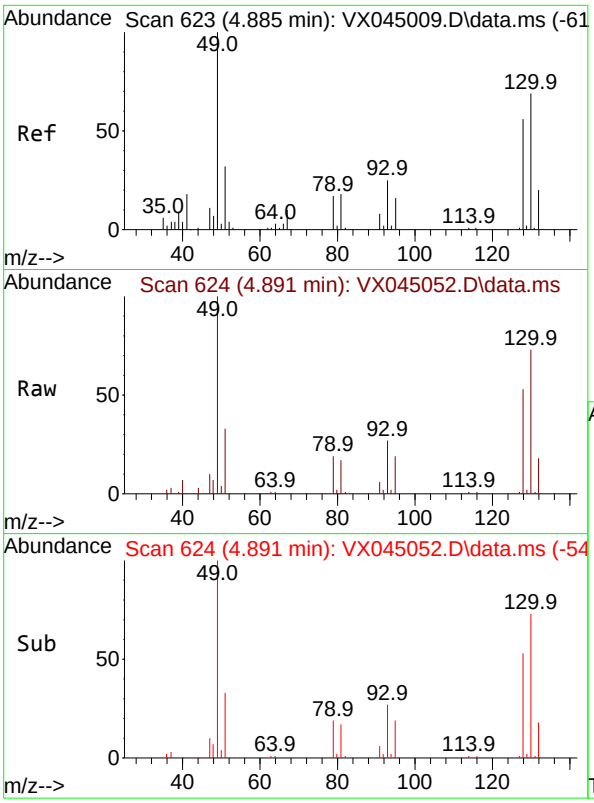
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022625\
Data File : VX045052.D
Acq On : 26 Feb 2025 13:29
Operator : JC/MD
Sample : Q1429-01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
OUTFALL-DSN-001

Quant Time: Feb 27 05:14:20 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 2025
Response via : Initial Calibration



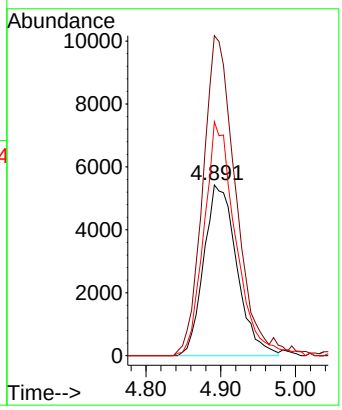


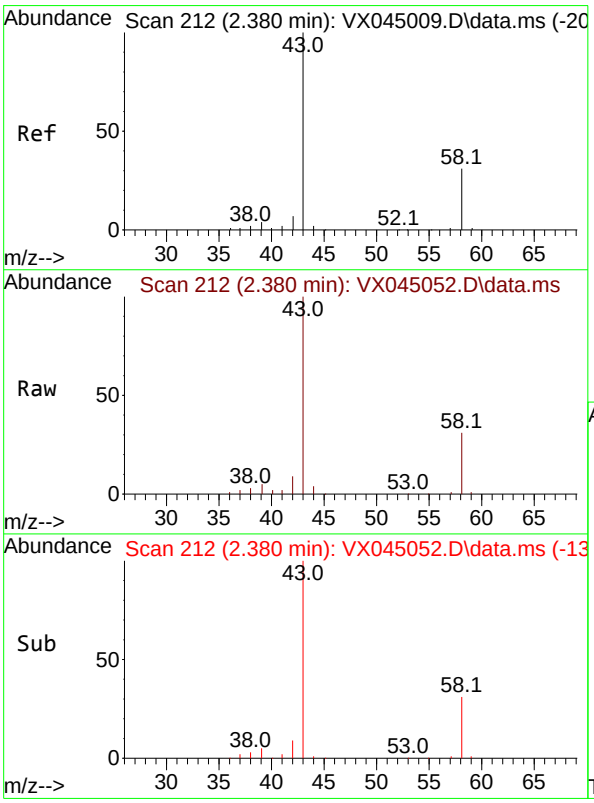
#1
Bromochloromethane
Concen: 30.000 ug/l
RT: 4.891 min Scan# 6
Delta R.T. 0.006 min
Lab File: VX045052.D
Acq: 26 Feb 2025 13:29

Instrument :
MSVOA_X
ClientSampleId :
OUTFALL-DSN-001

Tgt Ion:128 Resp: 16649

Ion	Ratio	Lower	Upper
128	100		
49	182.9	0.0	449.7
130	131.4	0.0	312.7

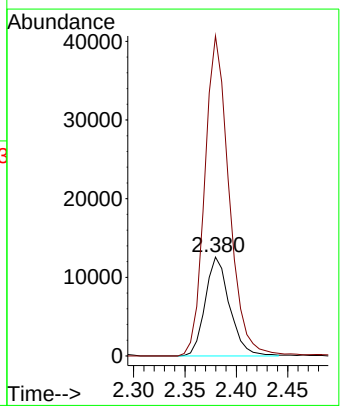


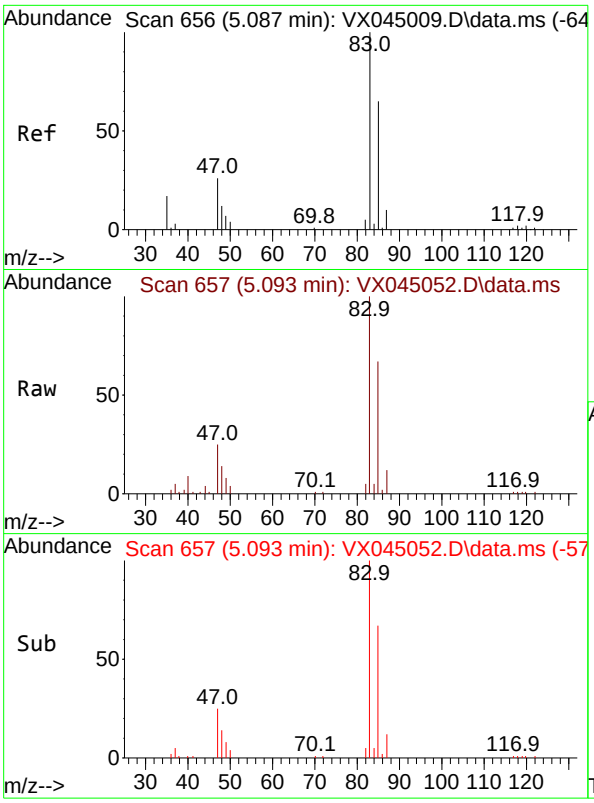


#15
Acetone
Concen: 105.456 ug/l
RT: 2.380 min Scan# 212
Delta R.T. -0.000 min
Lab File: VX045052.D
Acq: 26 Feb 2025 13:29

Tgt Ion: 58 Resp: 20748

Ion	Ratio	Lower	Upper
58	100		
43	323.8	258.6	388.0



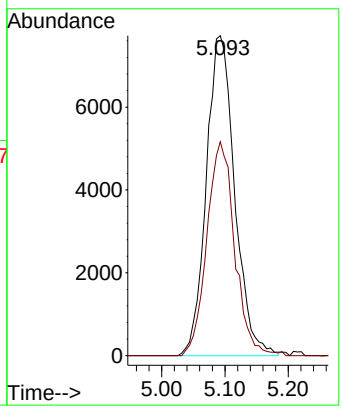


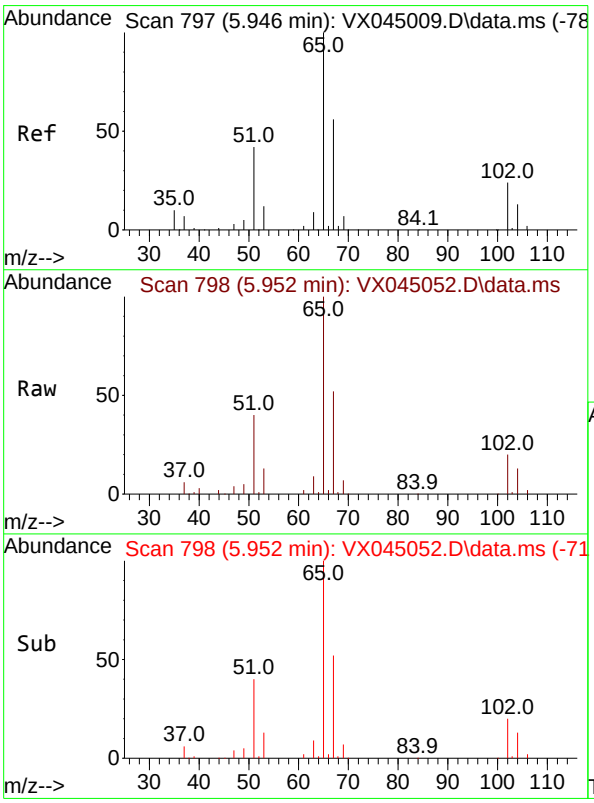
#25
Chloroform
Concen: 9.874 ug/l
RT: 5.093 min Scan# 6
Delta R.T. 0.006 min
Lab File: VX045052.D
Acq: 26 Feb 2025 13:29

Instrument :
MSVOA_X
ClientSampleId :
OUTFALL-DSN-001

Tgt Ion: 83 Resp: 24110

Ion	Ratio	Lower	Upper
83	100		
85	66.8	51.7	77.5

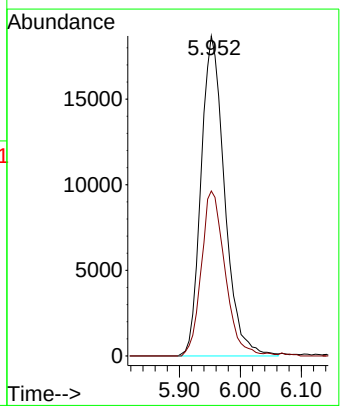


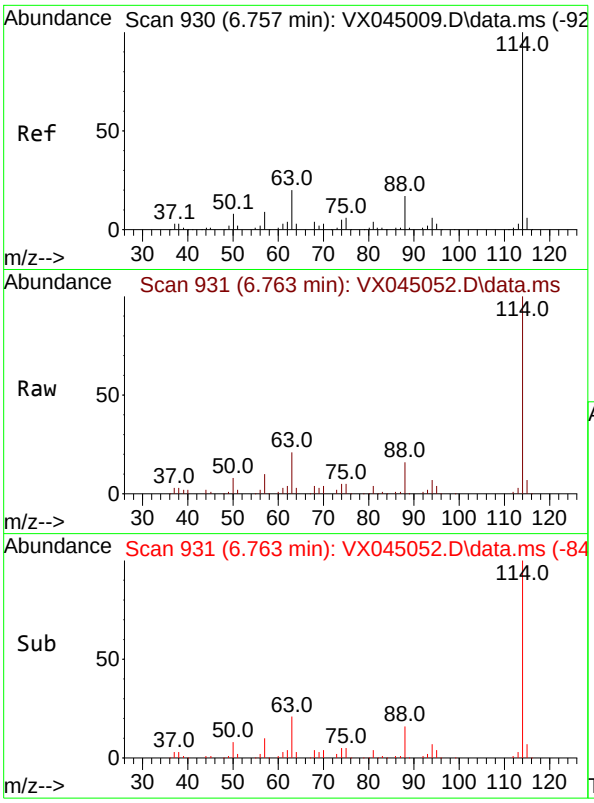


#27
1,2-Dichloroethane-d4
Concen: 31.029 ug/l
RT: 5.952 min Scan# 798
Delta R.T. 0.006 min
Lab File: VX045052.D
Acq: 26 Feb 2025 13:29

Tgt Ion: 65 Resp: 50176

Ion	Ratio	Lower	Upper
65	100		
67	51.7	42.6	64.0



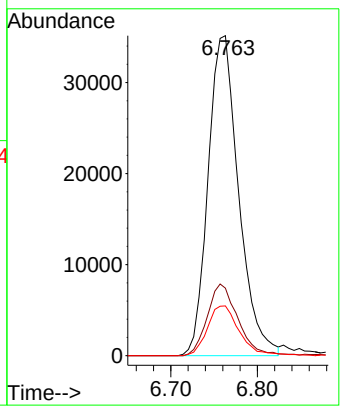


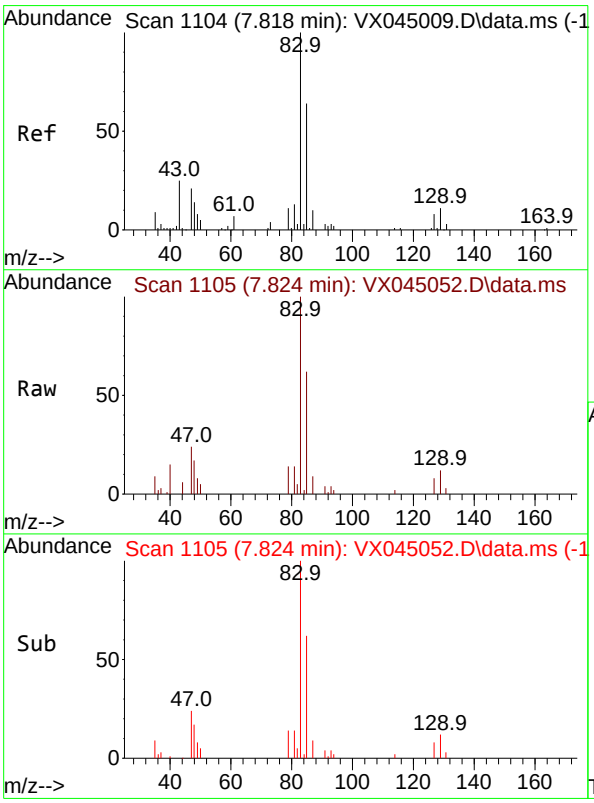
#28
1,4-Difluorobenzene
Concen: 30.000 ug/l
RT: 6.763 min Scan# 9
Delta R.T. 0.006 min
Lab File: VX045052.D
Acq: 26 Feb 2025 13:29

Instrument :
MSVOA_X
ClientSampleId :
OUTFALL-DSN-001

Tgt Ion:114 Resp: 86265

Ion	Ratio	Lower	Upper
114	100		
63	22.3	16.8	25.2
88	16.3	12.7	19.1

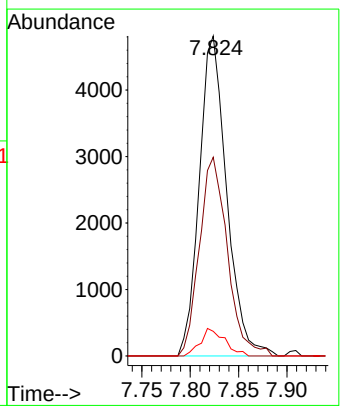


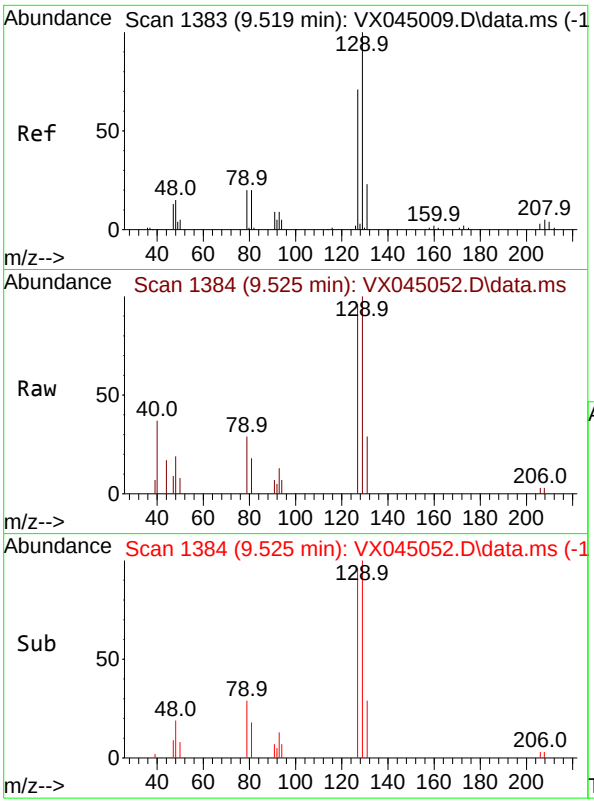


#41
Bromodichloromethane
Concen: 5.379 ug/l
RT: 7.824 min Scan# 1105
Delta R.T. 0.006 min
Lab File: VX045052.D
Acq: 26 Feb 2025 13:29

Tgt Ion: 83 Resp: 9492

Ion	Ratio	Lower	Upper
83	100		
85	62.1	51.0	76.6
127	7.7	6.1	9.1



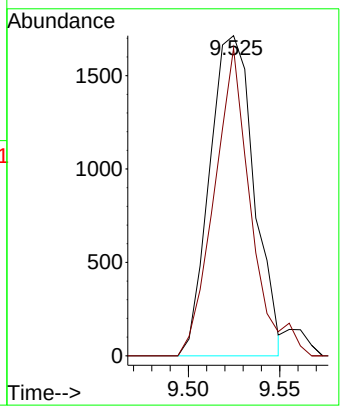


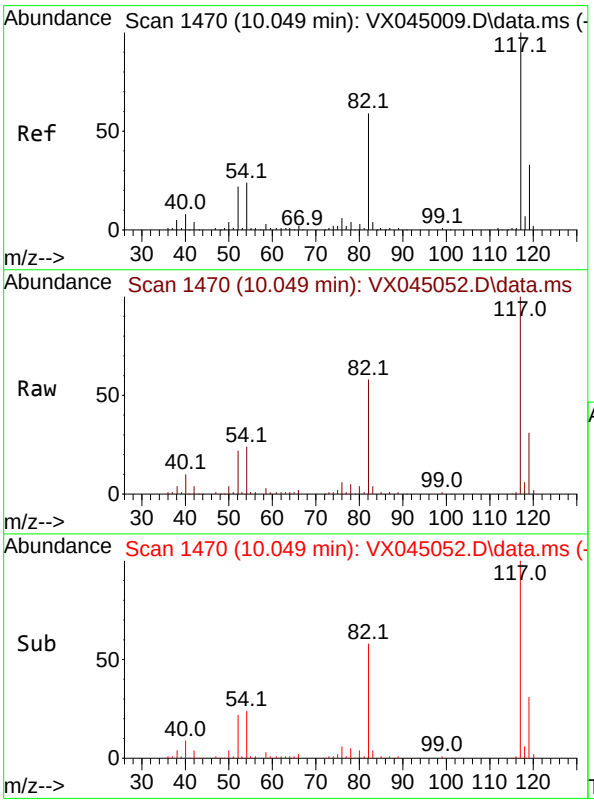
#53
Dibromochloromethane
Concen: 2.267 ug/l
RT: 9.525 min Scan# 1
Delta R.T. 0.006 min
Lab File: VX045052.D
Acq: 26 Feb 2025 13:29

Instrument :
MSVOA_X
ClientSampleId :
OUTFALL-DSN-001

Tgt Ion:129 Resp: 2903

Ion	Ratio	Lower	Upper
129	100		
127	76.4	37.3	111.9

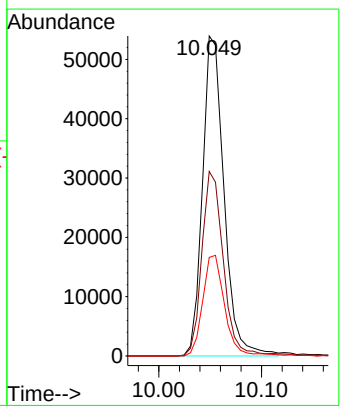


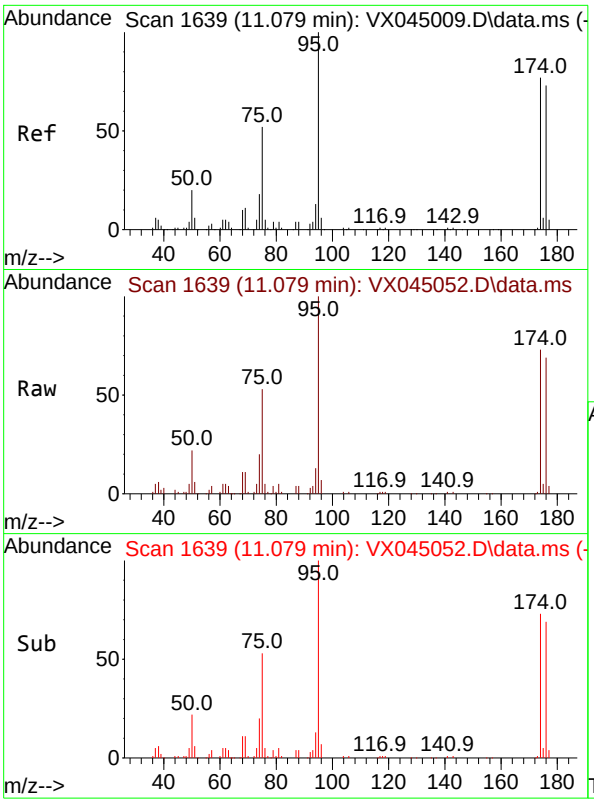


#57
Chlorobenzene-d5
Concen: 30.000 ug/l
RT: 10.049 min Scan# 1470
Delta R.T. -0.000 min
Lab File: VX045052.D
Acq: 26 Feb 2025 13:29

Tgt Ion:117 Resp: 78548

Ion	Ratio	Lower	Upper
117	100		
82	57.1	45.8	68.8
119	31.4	25.5	38.3



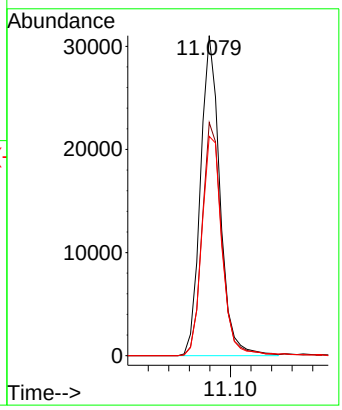


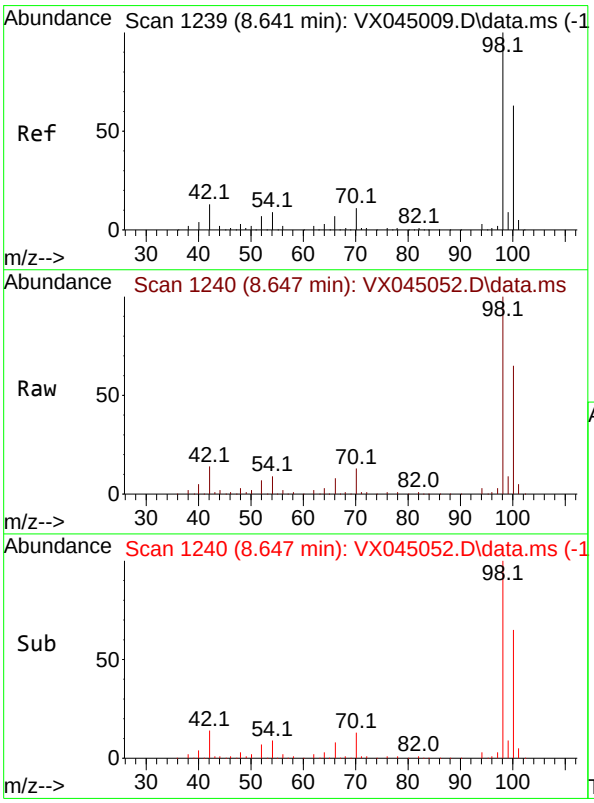
#60
4-Bromofluorobenzene
Concen: 27.773 ug/l
RT: 11.079 min Scan# 1
Delta R.T. -0.000 min
Lab File: VX045052.D
Acq: 26 Feb 2025 13:29

Instrument :
MSVOA_X
ClientSampleId :
OUTFALL-DSN-001

Tgt Ion: 95 Resp: 40775

Ion	Ratio	Lower	Upper
95	100		
174	73.6	59.5	89.3
176	71.8	55.5	83.3

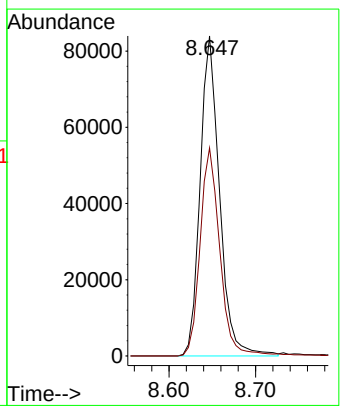




#63
Toluene-d8
Concen: 30.071 ug/l
RT: 8.647 min Scan# 1240
Delta R.T. 0.006 min
Lab File: VX045052.D
Acq: 26 Feb 2025 13:29

Tgt Ion: 98 Resp: 130672

Ion	Ratio	Lower	Upper
98	100		
100	65.6	51.7	77.5



Raw Data: **VX045053.D**

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

Report of Analysis

Client:	Tris Pharma, Inc.	Date Collected:	02/25/25
Project:	Quarterly	Date Received:	02/25/25
Client Sample ID:	OUTFALL-DSN-002	SDG No.:	Q1429
Lab Sample ID:	Q1429-02	Matrix:	Water
Analytical Method:	E624.1	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	DB-624UI ID : 0.18	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX045053.D	1		02/26/25 13:52	VX022625

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
141-78-6	Ethyl Acetate	1.50	U	1.50	5.00	ug/L
108-21-4	Isopropyl Acetate	0.66	U	0.66	5.00	ug/L
67-64-1	Acetone	220		4.90	25.0	ug/L
75-09-2	Methylene Chloride	1.20	U	1.20	5.00	ug/L
628-63-7	n-amyl Acetate	0.91	U	0.91	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	30.4		91 - 110	101%	SPK: 30
2037-26-5	Toluene-d8	29.4		91 - 112	98%	SPK: 30
460-00-4	4-Bromofluorobenzene	28.8		63 - 112	96%	SPK: 30
INTERNAL STANDARDS						
74-97-5	Bromochloromethane	16900	4.897			
540-36-3	1,4-Difluorobenzene	90800	6.757			
3114-55-4	Chlorobenzene-d5	81500	10.055			

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022625\
Data File : VX045053.D
Acq On : 26 Feb 2025 13:52
Operator : JC/MD
Sample : Q1429-02
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
OUTFALL-DSN-002

Quant Time: Feb 27 05:14:40 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 2025
Response via : Initial Calibration

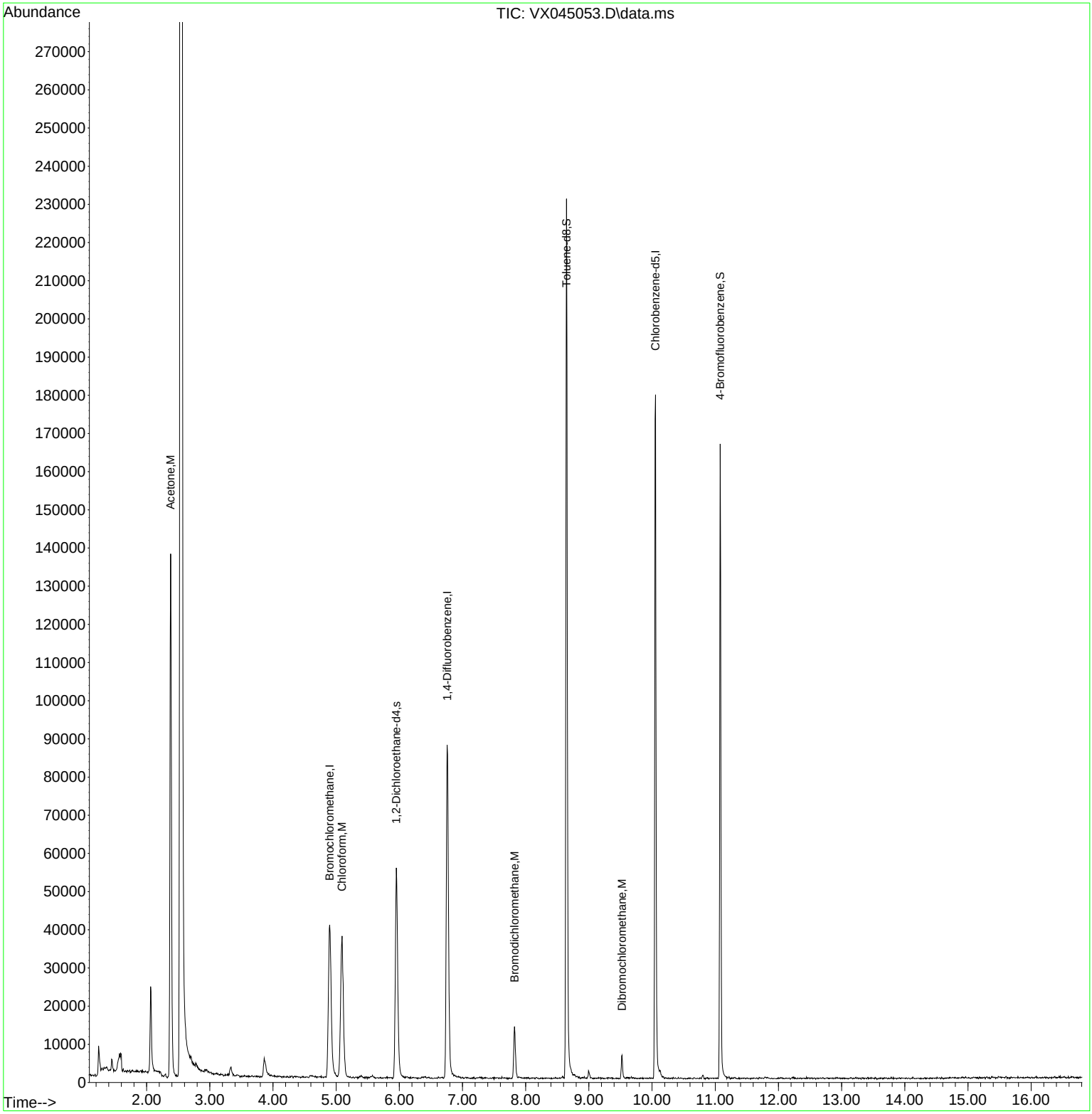
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.897	128	16856	30.000	ug/l	0.01
28) 1,4-Difluorobenzene	6.757	114	90840	30.000	ug/l	0.00
57) Chlorobenzene-d5	10.055	117	81481	30.000	ug/l	0.00
System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	5.952	65	49789	30.412	ug/l	0.00
Spiked Amount 30.000	Range 91 - 110		Recovery = 101.367%			
60) 4-Bromofluorobenzene	11.079	95	43874	28.808	ug/l	0.00
Spiked Amount 30.000	Range 63 - 112		Recovery = 96.033%			
63) Toluene-d8	8.647	98	132636	29.424	ug/l	0.00
Spiked Amount 30.000	Range 91 - 112		Recovery = 98.067%			
Target Compounds						Qvalue
15) Acetone	2.380	58	43707	219.421	ug/l	92
25) Chloroform	5.092	83	43191	17.470	ug/l	99
41) Bromodichloromethane	7.824	83	8841	4.758	ug/l #	97
53) Dibromochloromethane	9.525	129	2845	2.109	ug/l	97

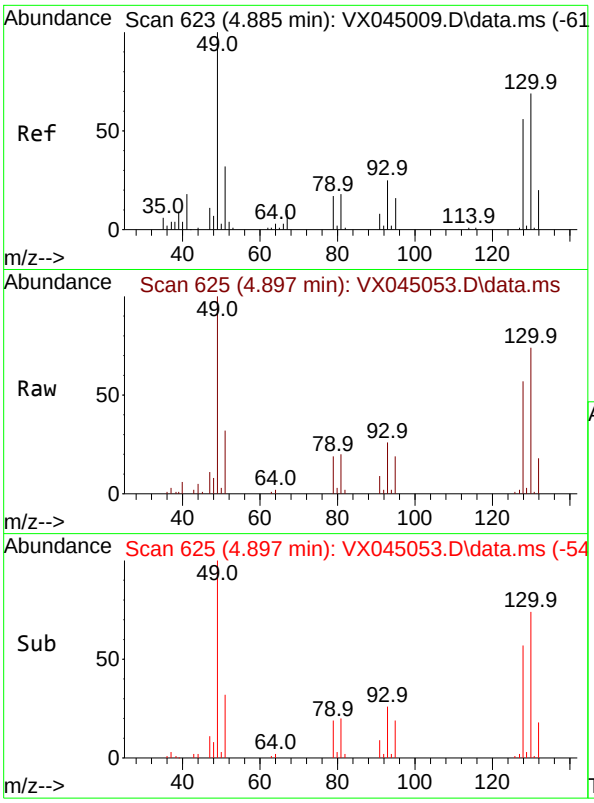
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022625\
Data File : VX045053.D
Acq On : 26 Feb 2025 13:52
Operator : JC/MD
Sample : Q1429-02
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
OUTFALL-DSN-002

Quant Time: Feb 27 05:14:40 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 2025
Response via : Initial Calibration



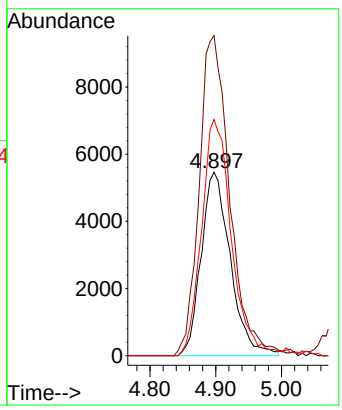


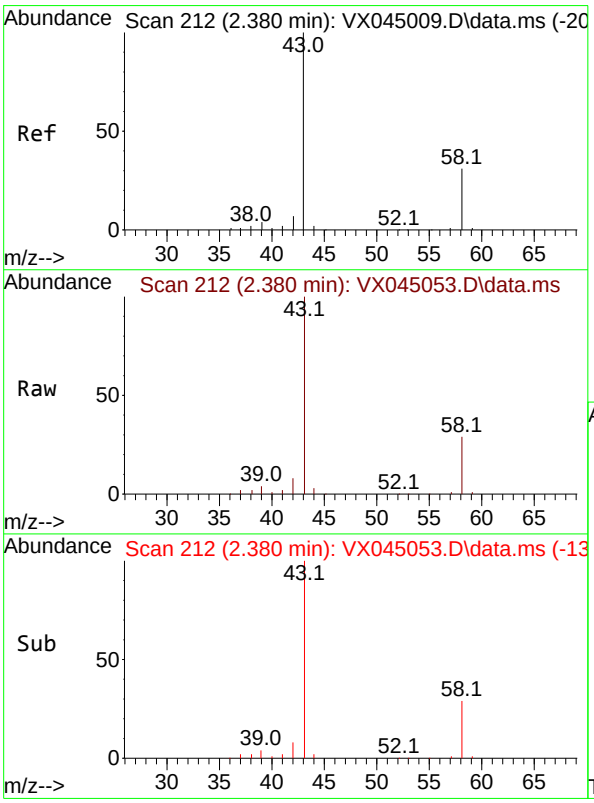
#1
Bromochloromethane
Concen: 30.000 ug/l
RT: 4.897 min Scan# 6
Delta R.T. 0.012 min
Lab File: VX045053.D
Acq: 26 Feb 2025 13:52

Instrument :
MSVOA_X
ClientSampleId :
OUTFALL-DSN-002

Tgt Ion:128 Resp: 16856

Ion	Ratio	Lower	Upper
128	100		
49	180.0	0.0	449.7
130	130.7	0.0	312.7

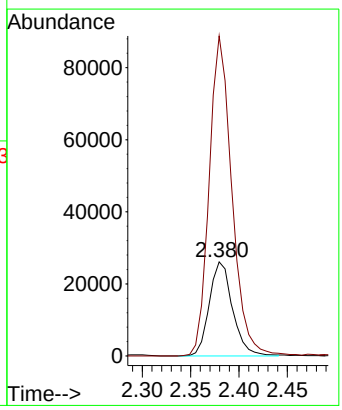


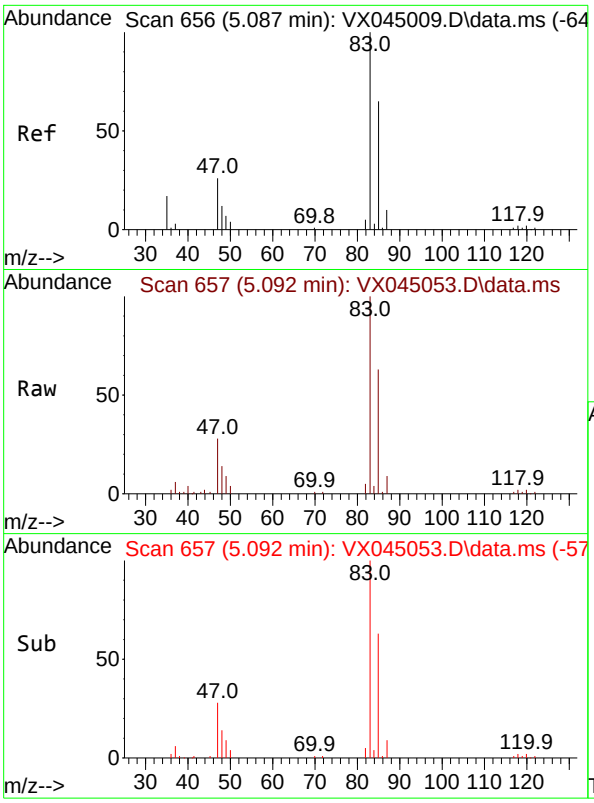


#15
Acetone
Concen: 219.421 ug/l
RT: 2.380 min Scan# 212
Delta R.T. -0.000 min
Lab File: VX045053.D
Acq: 26 Feb 2025 13:52

Tgt Ion: 58 Resp: 43707

Ion	Ratio	Lower	Upper
58	100		
43	340.1	258.6	388.0



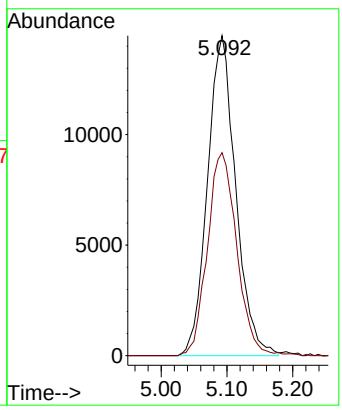


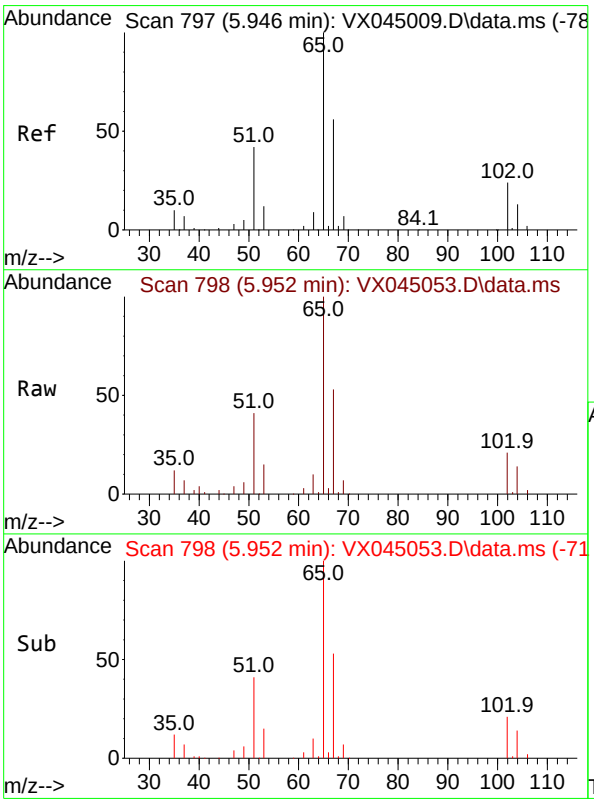
#25
Chloroform
Concen: 17.470 ug/l
RT: 5.092 min Scan# 6
Delta R.T. 0.006 min
Lab File: VX045053.D
Acq: 26 Feb 2025 13:52

Instrument :
MSVOA_X
ClientSampleId :
OUTFALL-DSN-002

Tgt Ion: 83 Resp: 43191

Ion	Ratio	Lower	Upper
83	100		
85	63.4	51.7	77.5

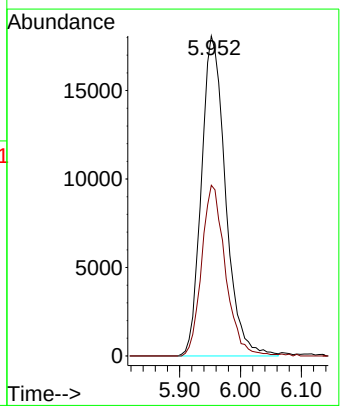


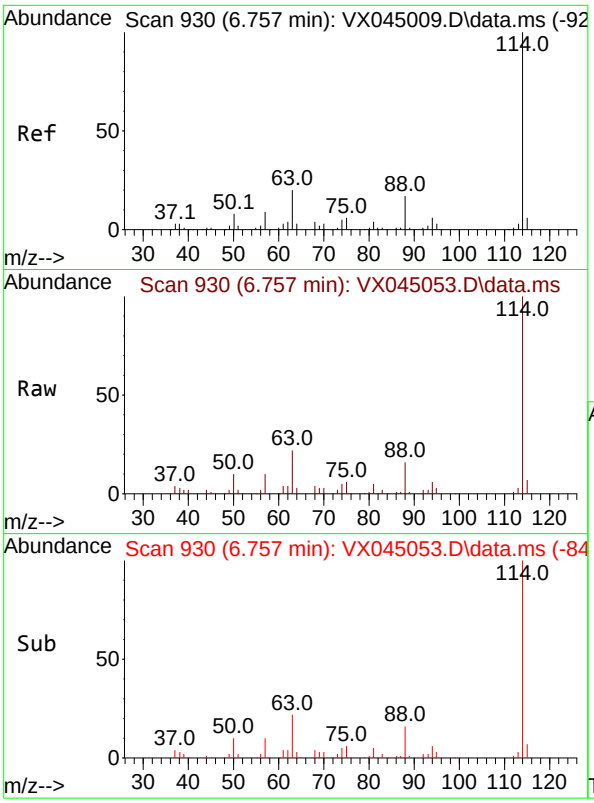


#27
1,2-Dichloroethane-d4
Concen: 30.412 ug/l
RT: 5.952 min Scan# 798
Delta R.T. 0.006 min
Lab File: VX045053.D
Acq: 26 Feb 2025 13:52

Tgt Ion: 65 Resp: 49789

Ion	Ratio	Lower	Upper
65	100		
67	52.5	42.6	64.0



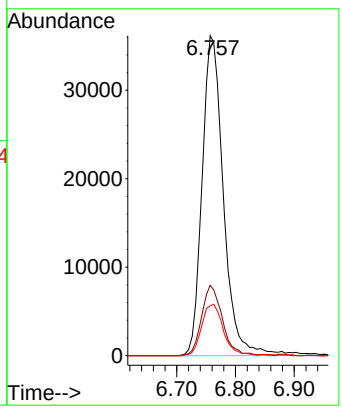


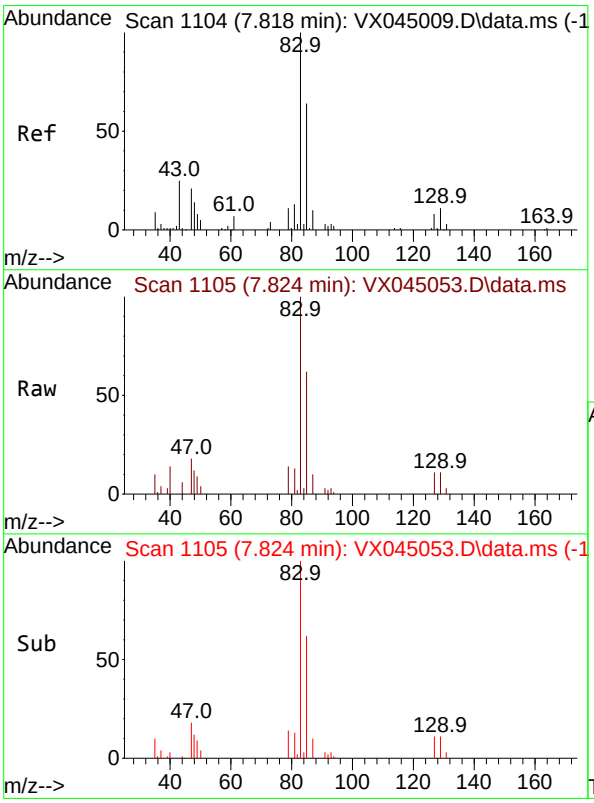
#28
1,4-Difluorobenzene
Concen: 30.000 ug/l
RT: 6.757 min Scan# 9
Delta R.T. -0.000 min
Lab File: VX045053.D
Acq: 26 Feb 2025 13:52

Instrument :
MSVOA_X
ClientSampleId :
OUTFALL-DSN-002

Tgt Ion:114 Resp: 90840

Ion	Ratio	Lower	Upper
114	100		
63	21.1	16.8	25.2
88	16.4	12.7	19.1

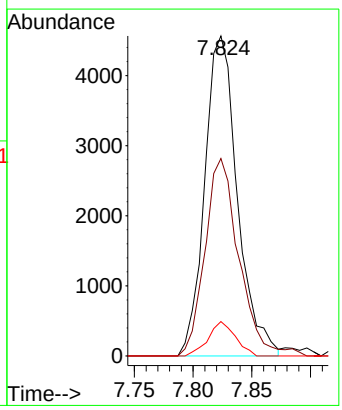


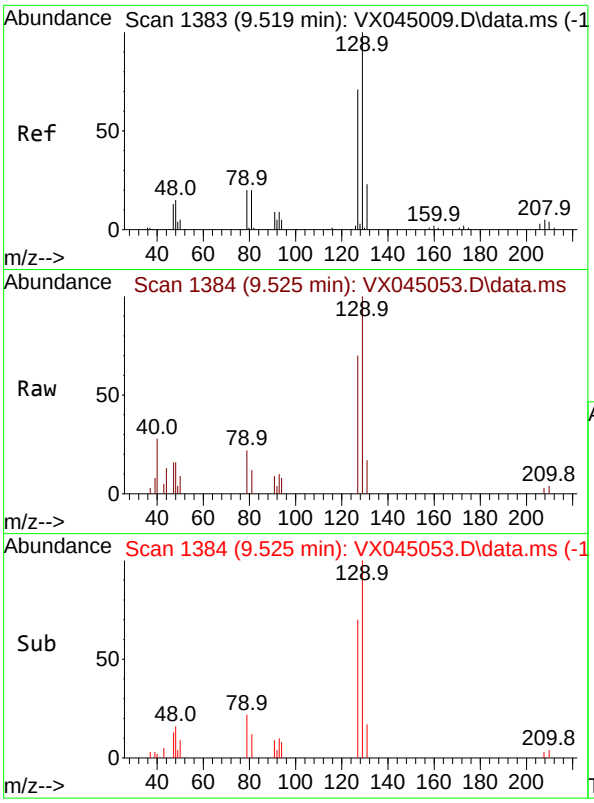


#41
Bromodichloromethane
Concen: 4.758 ug/l
RT: 7.824 min Scan# 1105
Delta R.T. 0.006 min
Lab File: VX045053.D
Acq: 26 Feb 2025 13:52

Tgt Ion: 83 Resp: 8841

Ion	Ratio	Lower	Upper
83	100		
85	61.7	51.0	76.6
127	10.7	6.1	9.1#



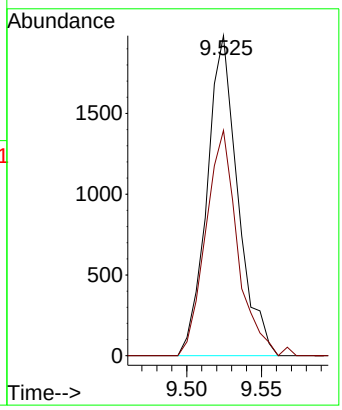


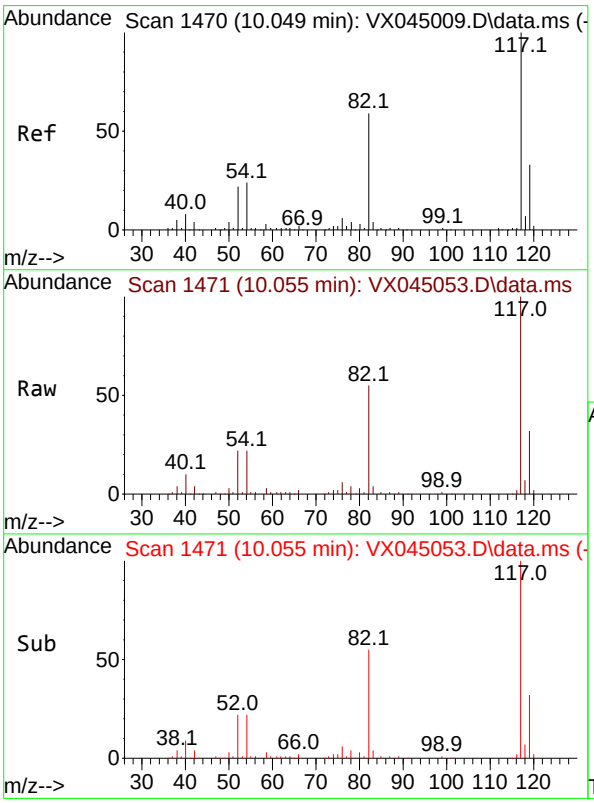
#53
Dibromochloromethane
Concen: 2.109 ug/l
RT: 9.525 min Scan# 1
Delta R.T. 0.006 min
Lab File: VX045053.D
Acq: 26 Feb 2025 13:52

Instrument :
MSVOA_X
ClientSampleId :
OUTFALL-DSN-002

Tgt Ion:129 Resp: 2845

Ion	Ratio	Lower	Upper
129	100		
127	72.3	37.3	111.9

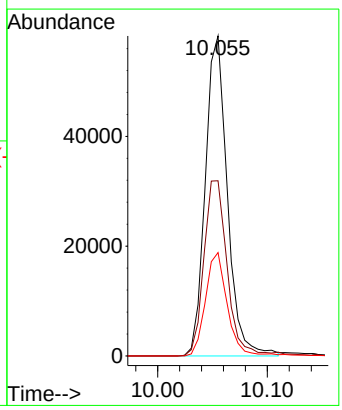


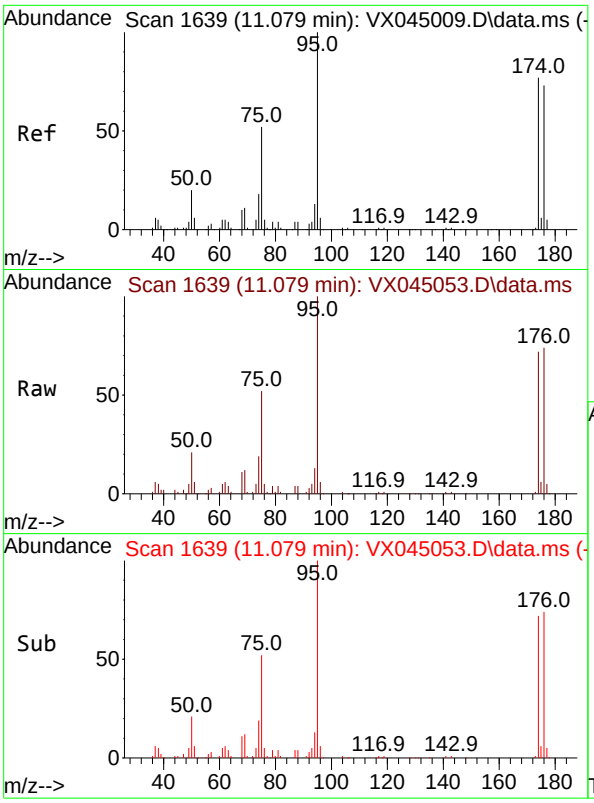


#57
Chlorobenzene-d5
Concen: 30.000 ug/l
RT: 10.055 min Scan# 1471
Delta R.T. 0.006 min
Lab File: VX045053.D
Acq: 26 Feb 2025 13:52

Tgt Ion:117 Resp: 81481

Ion	Ratio	Lower	Upper
117	100		
82	57.7	45.8	68.8
119	31.4	25.5	38.3



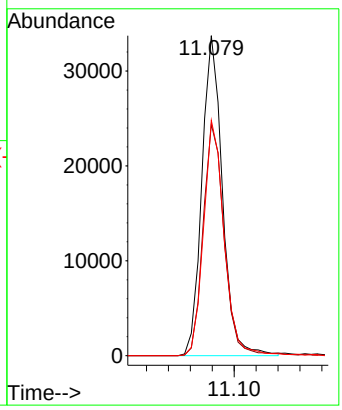


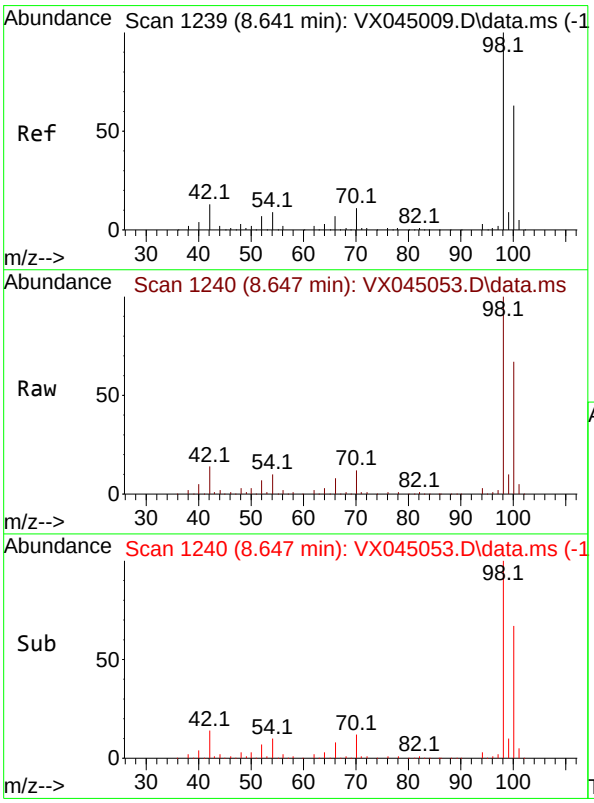
#60
4-Bromofluorobenzene
Concen: 28.808 ug/l
RT: 11.079 min Scan# 1
Delta R.T. -0.000 min
Lab File: VX045053.D
Acq: 26 Feb 2025 13:52

Instrument :
MSVOA_X
ClientSampleId :
OUTFALL-DSN-002

Tgt Ion: 95 Resp: 43874

Ion	Ratio	Lower	Upper
95	100		
174	73.9	59.5	89.3
176	73.4	55.5	83.3

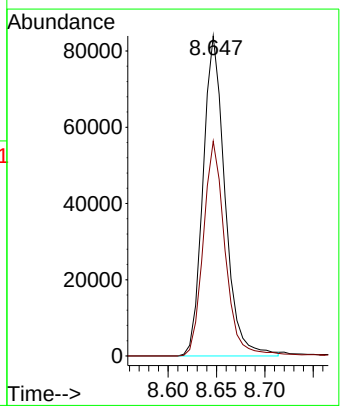




#63
Toluene-d8
Concen: 29.424 ug/l
RT: 8.647 min Scan# 1240
Delta R.T. 0.006 min
Lab File: VX045053.D
Acq: 26 Feb 2025 13:52

Tgt Ion: 98 Resp: 132636

Ion	Ratio	Lower	Upper
98	100		
100	66.5	51.7	77.5



CALIBRATION SUMMARY

Raw Data

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

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: TRIS02

Lab Code: CHEM Case No.: Q1429 SAS No.: Q1429 SDG No.: Q1429

Instrument ID: MSVOA_X Calibration Date(s): 02/21/2025 02/21/2025

Heated Purge: (Y/N) N Calibration Time(s): 09:58 11:29

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

LAB FILE ID: RRF005 = VX045008.D RRF020 = VX045009.D RRF050 = VX045010.D
RRF100 = VX045011.D RRF150 = VX045012.D RRF =

COMPOUND	RRF005	RRF020	RRF050	RRF100	RRF150	RRF	$\overline{RRF}$	% RSD
Ethyl Acetate	0.552	0.578	0.610	0.606	0.642		0.598	5.7
Isopropyl Acetate	0.889	0.917	1.033	1.005	1.075		0.984	8
Acetone	0.371	0.352	0.354	0.338	0.358		0.355	3.4
Methylene Chloride	2.462	2.482	2.619	2.509	2.745		2.563	4.6
1,2-Dichloroethane-d4	2.881	2.881	2.843	2.920	3.044		2.914	2.7
Toluene-d8	1.652	1.669	1.650	1.677	1.651		1.660	0.7
4-Bromofluorobenzene	0.539	0.560	0.565	0.563	0.578		0.561	2.5
n-amyl Acetate	0.721	0.803	0.922	0.862	0.962		0.854	11.2

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

Response Factor Report MSVOA_X2

Method Path : Z:\voasrv\HPCHEM1\MSVOA_X\Method\
Method File : 624X022125W.M
Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
Last Update : Sat Feb 22 01:06:36 2025
Response Via : Initial Calibration

Calibration Files
5 =VX045008.D 20 =VX045009.D 50 =VX045010.D 100 =VX045011.D 150 =VX045012.D

		Compound	5	20	50	100	150	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------						
2)	M	Dichlorodifluoro...	2.499	2.478	2.571	2.428	2.669	2.529	3.70
3)	M	Chloromethane	3.021	2.986	3.118	2.875	3.145	3.029	3.58
4)	M	Vinyl Chloride	2.916	2.831	2.918	2.825	3.124	2.923	4.14
5)	M	Bromomethane	1.116	0.976	0.995	0.944	1.056	1.017	6.74
6)	M	Chloroethane	1.821	1.663	1.752	1.466	1.212	1.583	15.57
7)	M	Trichlorofluorom...	3.982	3.712	3.968	3.809	4.170	3.928	4.48
8)	T	Diethyl Ether	1.506	1.429	1.478	1.436	1.582	1.486	4.17
9)		1,1,2-Trichlorot...	2.377	2.192	2.362	2.241	2.493	2.333	5.11
10)	M	1,1-Dichloroethene	2.200	2.142	2.300	2.262	2.491	2.279	5.83
11)		Methyl Iodide	1.920	2.177	2.788	2.801	3.210	2.579	20.21
12)		Methyl Acetate	2.518	2.471	2.689	2.611	2.942	2.646	7.02
13)	M	Acrolein	0.504	0.473	0.527	0.540	0.608	0.530	9.46
14)	M	Acrylonitrile	1.204	1.243	1.348	1.284	1.384	1.293	5.70
15)	M	Acetone	0.371	0.352	0.354	0.338	0.358	0.355	3.40
16)	M	Carbon Disulfide	6.269	5.990	6.491	6.437	7.134	6.464	6.53
17)		Allyl chloride	4.066	3.950	4.321	4.259	4.716	4.262	6.89
18)	M	Methylene Chloride	2.462	2.482	2.619	2.509	2.745	2.563	4.61
19)	M	trans-1,2-Dichlo...	2.232	2.191	2.345	2.260	2.501	2.306	5.33
20)	T	Diisopropyl ether	7.764	7.784	8.372	8.138	8.897	8.191	5.73
21)	M	1,1-Dichloroethane	4.525	4.343	4.508	4.473	4.929	4.555	4.84
22)	M	cis-1,2-Dichloro...	2.740	2.632	2.729	2.716	2.997	2.763	4.98
23)	M	tert-Butyl Alcohol	0.440	0.425	0.475	0.435	0.481	0.451	5.63
24)	M	Methyl tert-Buty...	7.103	7.021	7.516	7.382	8.169	7.438	6.13
25)	M	Chloroform	4.272	4.258	4.406	4.293	4.771	4.400	4.90
26)		Cyclohexane	4.050	4.037	4.272	4.100	4.564	4.205	5.28
27)	s	1,2-Dichloroetha...	2.881	2.881	2.843	2.920	3.044	2.914	2.67
28)	I	1,4-Difluorobenzene	----------ISTD----------						
29)		1,1-Dichloropropene	0.555	0.537	0.563	0.532	0.572	0.552	3.11
30)	M	2-Butanone	0.320	0.310	0.333	0.308	0.323	0.319	3.25
31)		2,2-Dichloropropane	0.614	0.588	0.635	0.616	0.667	0.624	4.73
32)	M	1,1,1-Trichloroe...	0.674	0.644	0.686	0.644	0.695	0.669	3.51
33)	M	Carbon Tetrachlo...	0.572	0.548	0.576	0.544	0.581	0.564	3.01
34)	M	Benzene	1.746	1.697	1.785	1.670	1.756	1.731	2.69
35)		Methacrylonitrile	0.307	0.333	0.367	0.341	0.357	0.341	6.80
36)	M	1,2-Dichloroethane	0.598	0.581	0.600	0.577	0.607	0.592	2.20
37)	M	Trichloroethene	0.407	0.400	0.412	0.390	0.415	0.405	2.47
38)		Methylcyclohexane	0.747	0.700	0.763	0.724	0.770	0.741	3.89
39)	M	1,2-Dichloropropane	0.430	0.425	0.427	0.427	0.444	0.430	1.77
40)		Dibromomethane	0.318	0.301	0.311	0.298	0.315	0.309	2.87
41)	M	Bromodichloromet...	0.610	0.593	0.625	0.601	0.639	0.614	2.99
42)	M	Vinyl Acetate	1.136	1.190	1.304	1.244	1.311	1.237	6.06
43)		Ethyl Acetate	0.552	0.578	0.610	0.606	0.642	0.598	5.72
44)		Isopropyl Acetate	0.889	0.917	1.033	1.005	1.075	0.984	7.97
45)	T	1,4-Dioxane	0.010	0.010	0.011	0.010	0.010	0.010	6.57
46)		Methyl methacrylate	0.421	0.456	0.510	0.495	0.530	0.482	9.09
47)		n-amyl Acetate	0.721	0.803	0.922	0.862	0.962	0.854	11.20
48)	M	t-1,3-Dichloropr...	0.527	0.530	0.616	0.618	0.666	0.591	10.28
49)	T	cis-1,3-Dichloro...	0.614	0.635	0.691	0.682	0.726	0.670	6.72
50)	M	1,1,2-Trichloroe...	0.405	0.404	0.414	0.389	0.402	0.403	2.21
51)		Ethyl methacrylate	0.543	0.586	0.676	0.653	0.709	0.633	10.70
52)		1,3-Dichloropropane	0.703	0.704	0.724	0.678	0.719	0.706	2.53
53)	M	Dibromochloromet...	0.427	0.436	0.457	0.440	0.468	0.445	3.76
54)	M	1,2-Dibromoethane	0.397	0.401	0.423	0.397	0.427	0.409	3.59
55)	M	2-Chloroethyl vi...	0.301	0.314	0.339	0.326	0.346	0.325	5.64
56)	M	Bromoform	0.251	0.258	0.298	0.281	0.308	0.279	8.85

Method Path : Z:\voasrv\HPCHEM1\MSVOA_X\Method\
Method File : 624X022125W.M

57)	I	Chlorobenzene-d5	----------ISTD----------						
58)	M	4-Methyl-2-Penta...	0.633	0.680	0.731	0.668	0.701	0.682	5.37
59)	M	2-Hexanone	0.446	0.488	0.535	0.482	0.516	0.493	6.96
60)	S	4-Bromofluoroben...	0.539	0.560	0.565	0.563	0.578	0.561	2.47
61)	M	Tetrachloroethene	0.389	0.368	0.367	0.356	0.367	0.369	3.28
62)	M	Toluene	2.015	1.952	1.995	1.956	2.019	1.987	1.61
63)	S	Toluene-d8	1.652	1.669	1.650	1.677	1.651	1.660	0.75
64)	M	Chlorobenzene	1.223	1.214	1.244	1.220	1.257	1.231	1.49
65)		1,1,1,2-Tetrachl...	0.401	0.394	0.408	0.399	0.429	0.406	3.32
66)	M	Ethyl Benzene	2.094	2.100	2.220	2.178	2.286	2.176	3.74
67)	M	m/p-Xylenes	0.785	0.816	0.823	0.799	0.831	0.811	2.32
68)	M	o-Xylene	0.767	0.798	0.813	0.783	0.816	0.795	2.58
69)	M	Styrene	1.259	1.318	1.363	1.316	1.386	1.328	3.67
70)		Isopropylbenzene	1.981	2.041	2.089	2.026	2.126	2.053	2.74
71)	M	1,1,2,2-Tetrachl...	0.665	0.664	0.703	0.647	0.695	0.675	3.44
72)		1,2,3-Trichlorop...	0.539	0.540	0.583	0.540	0.574	0.555	3.90
73)		Bromobenzene	0.462	0.467	0.485	0.463	0.486	0.473	2.52
74)		n-propylbenzene	2.281	2.387	2.539	2.437	2.569	2.443	4.78
75)		2-Chlorotoluene	1.465	1.468	1.503	1.431	1.516	1.477	2.27
76)		1,3,5-Trimethylb...	1.638	1.691	1.750	1.654	1.733	1.693	2.85
77)		t-1,4-Dichloro-2...	0.133	0.160	0.199	0.203	0.239	0.187	22.02
78)		4-Chlorotoluene	1.580	1.618	1.686	1.623	1.723	1.646	3.50
79)		tert-butylbenzene	1.628	1.703	1.779	1.667	1.753	1.706	3.61
80)		1,2,4-Trimethylb...	1.616	1.705	1.768	1.653	1.739	1.696	3.65
81)		sec-Butylbenzene	2.056	2.118	2.210	2.094	2.228	2.141	3.49
82)		p-Isopropyltoluene	1.614	1.709	1.811	1.733	1.808	1.735	4.67
83)	M	1,3-Dichlorobenzene	0.855	0.874	0.905	0.852	0.910	0.879	3.12
84)	M	1,4-Dichlorobenzene	0.824	0.854	0.910	0.848	0.897	0.867	4.12
85)		n-Butylbenzene	1.376	1.512	1.675	1.618	1.740	1.584	9.04
86)	T	Hexachloroethane	0.264	0.282	0.322	0.314	0.349	0.306	10.94
87)	M	1,2-Dichlorobenzene	0.863	0.868	0.894	0.815	0.872	0.863	3.36
88)		1,2-Dibromo-3-Ch...	0.126	0.121	0.133	0.129	0.145	0.131	7.06
89)		1,2,4-Trichlorob...	0.461	0.490	0.541	0.539	0.583	0.523	9.08
90)		Hexachlorobutadiene	0.217	0.209	0.213	0.206	0.221	0.213	2.76
91)	M	Naphthalene	1.606	1.778	1.941	1.861	2.031	1.843	8.81
92)		1,2,3-Trichlorob...	0.501	0.523	0.549	0.540	0.578	0.538	5.35

(#) = Out of Range

Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045008.D
Acq On : 21 Feb 2025 09:58
Operator : JC/MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 22 00:46:22 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 00:21:26 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC005

Manual Integrations APPROVED

Reviewed By :John Carlone
02/24/2025
Supervised By :Mahesh Dadoda
02/24/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Bromochloromethane	4.885	128	19850	30.000	ug/l		0.00
28) 1,4-Difluorobenzene	6.751	114	107647	30.000	ug/l		0.00
57) Chlorobenzene-d5	10.049	117	98661	30.000	ug/l		0.00
System Monitoring Compounds							
27) 1,2-Dichloroethane-d4	5.946	65	57190	29.664	ug/l		0.00
Spiked Amount 30.000	Range 91 - 110		Recovery = 98.867%				
60) 4-Bromofluorobenzene	11.079	95	53212	28.855	ug/l		0.00
Spiked Amount 30.000	Range 63 - 112		Recovery = 96.200%				
63) Toluene-d8	8.641	98	163004	29.865	ug/l		0.00
Spiked Amount 30.000	Range 91 - 112		Recovery = 99.533%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.167	85	8269	4.942	ug/l		90
3) Chloromethane	1.295	50	9993	4.986	ug/l		99
4) Vinyl Chloride	1.374	62	9648	4.989	ug/l		97
5) Bromomethane	1.593	94	3693	5.486	ug/l		95
6) Chloroethane	1.666	64	6026	5.753	ug/l	#	88
7) Trichlorofluoromethane	1.874	101	13174	5.068	ug/l		95
8) Diethyl Ether	2.130	74	4984	5.068	ug/l		100
9) 1,1,2-Trichlorotrifluo...	2.319	101	7865	5.095	ug/l		99
10) 1,1-Dichloroethene	2.313	96	7277	4.826	ug/l		90
11) Methyl Iodide	2.447	142	6353	3.722	ug/l		92
12) Methyl Acetate	2.697	43	8331	4.758	ug/l		99
13) Acrolein	2.233	56	8331	23.736	ug/l		98
14) Acrylonitrile	3.063	53	19916	23.285	ug/l		98
15) Acetone	2.380	58	6140	26.175	ug/l		89
16) Carbon Disulfide	2.502	76	20739	4.849	ug/l		98
17) Allyl chloride	2.654	41	13453	4.770	ug/l		99
18) Methylene Chloride	2.782	84	8146	4.803	ug/l		96
19) trans-1,2-Dichloroethene	3.081	96	7385	4.841	ug/l		90
20) Diisopropyl ether	3.751	45	25687	4.740	ug/l	#	87
21) 1,1-Dichloroethane	3.599	63	14970	4.967	ug/l		99
22) cis-1,2-Dichloroethene	4.477	96	9065	4.959	ug/l		95
23) tert-Butyl Alcohol	2.971	59	7280m	24.352	ug/l		
24) Methyl tert-Butyl Ether	3.105	73	23498	4.775	ug/l		96
25) Chloroform	5.087	83	14134	4.855	ug/l		99
26) Cyclohexane	5.452	56	13400	4.816	ug/l	#	98
29) 1,1-Dichloropropene	5.690	75	9965	5.032	ug/l		97
30) 2-Butanone	4.562	43	28712	25.103	ug/l		97
31) 2,2-Dichloropropane	4.459	77	11020	4.922	ug/l	#	69
32) 1,1,1-Trichloroethane	5.373	97	12088	5.038	ug/l		99
33) Carbon Tetrachloride	5.666	117	10269	5.071	ug/l		91
34) Benzene	6.031	78	31321	5.044	ug/l		97
35) Methacrylonitrile	4.916	41	5515m	4.506	ug/l		
36) 1,2-Dichloroethane	6.074	62	10725	5.045	ug/l	#	82
37) Trichloroethene	7.123	130	7309	5.031	ug/l		95
38) Methylcyclohexane	7.373	83	13407	5.042	ug/l		95
39) 1,2-Dichloropropane	7.428	63	7710	4.994	ug/l		96
40) Dibromomethane	7.574	93	5709	5.153	ug/l		97
41) Bromodichloromethane	7.818	83	10949	4.973	ug/l		97
42) Vinyl Acetate	3.715	43	101864	22.951	ug/l		100

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045008.D
Acq On : 21 Feb 2025 09:58
Operator : JC/MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 22 00:46:22 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 00:21:26 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC005

Manual Integrations APPROVED

Reviewed By :John Carlone
02/24/2025
Supervised By :Mahesh Dadoda
02/24/2025

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) Ethyl Acetate	4.709	43	9903	4.617 ug/l #	78
44) Isopropyl Acetate	6.336	43	15951	4.518 ug/l	95
45) 1,4-Dioxane	7.665	88	3476	94.718 ug/l #	94
46) Methyl methacrylate	7.696	41	7550	4.362 ug/l	95
47) n-amyl Acetate	10.842	43	12931	4.221 ug/l	99
48) t-1,3-Dichloropropene	8.976	75	9461	4.458 ug/l	95
49) cis-1,3-Dichloropropene	8.366	75	11016	4.585 ug/l	98
50) 1,1,2-Trichloroethane	9.147	97	7268	5.030 ug/l	96
51) Ethyl methacrylate	9.116	69	9742	4.287 ug/l	97
52) 1,3-Dichloropropane	9.305	76	12611	4.981 ug/l	99
53) Dibromochloromethane	9.519	129	7657	4.791 ug/l	97
54) 1,2-Dibromoethane	9.610	107	7119	4.851 ug/l	95
55) 2-Chloroethyl vinyl ether	8.238	63	26987	23.123 ug/l	97
56) Bromoform	10.799	173	4498	4.491 ug/l	97
58) 4-Methyl-2-Pentanone	8.568	43	52017	23.177 ug/l	99
59) 2-Hexanone	9.427	43	36637	22.584 ug/l	99
61) Tetrachloroethene	9.269	164	6401	5.269 ug/l	99
62) Toluene	8.714	91	33141	5.071 ug/l	95
64) Chlorobenzene	10.073	112	20106	4.965 ug/l	99
65) 1,1,1,2-Tetrachloroethane	10.159	131	6593	4.934 ug/l	98
66) Ethyl Benzene	10.189	91	34439	4.813 ug/l	97
67) m/p-Xylenes	10.299	106	25804	9.679 ug/l	98
68) o-Xylene	10.640	106	12618	4.824 ug/l	97
69) Styrene	10.653	104	20710	4.741 ug/l	97
70) Isopropylbenzene	10.957	105	32576	4.826 ug/l	99
71) 1,1,2,2-Tetrachloroethane	11.207	83	10940	4.929 ug/l	99
72) 1,2,3-Trichloropropane	11.238	75	8856m	4.851 ug/l	
73) Bromobenzene	11.195	156	7592	4.886 ug/l	99
74) n-propylbenzene	11.299	91	37507	4.669 ug/l	99
75) 2-Chlorotoluene	11.360	91	24091	4.961 ug/l	97
76) 1,3,5-Trimethylbenzene	11.445	105	26935	4.837 ug/l	97
77) t-1,4-Dichloro-2-butene	11.018	75	2182	3.552 ug/l	82
78) 4-Chlorotoluene	11.451	91	25983	4.800 ug/l	99
79) tert-butylbenzene	11.713	119	26773	4.772 ug/l	99
80) 1,2,4-Trimethylbenzene	11.750	105	26568	4.763 ug/l	97
81) sec-Butylbenzene	11.884	105	33807	4.801 ug/l	99
82) p-Isopropyltoluene	12.006	119	26547	4.653 ug/l	99
83) 1,3-Dichlorobenzene	11.969	146	14060	4.863 ug/l	99
84) 1,4-Dichlorobenzene	12.043	146	13556	4.755 ug/l	95
85) n-Butylbenzene	12.329	91	22634	4.344 ug/l	99
86) Hexachloroethane	12.536	117	4340	4.313 ug/l	98
87) 1,2-Dichlorobenzene	12.335	146	14188	5.001 ug/l	98
88) 1,2-Dibromo-3-Chloropr...	12.939	75	2067	4.810 ug/l	86
89) 1,2,4-Trichlorobenzene	13.585	180	7586	4.412 ug/l	98
90) Hexachlorobutadiene	13.725	225	3570	5.091 ug/l	96
91) Naphthalene	13.774	128	26410	4.356 ug/l	99
92) 1,2,3-Trichlorobenzene	13.957	180	8240	4.655 ug/l	99

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

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045008.D
Acq On : 21 Feb 2025 09:58
Operator : JC/MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 22 00:46:22 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 00:21:26 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC005

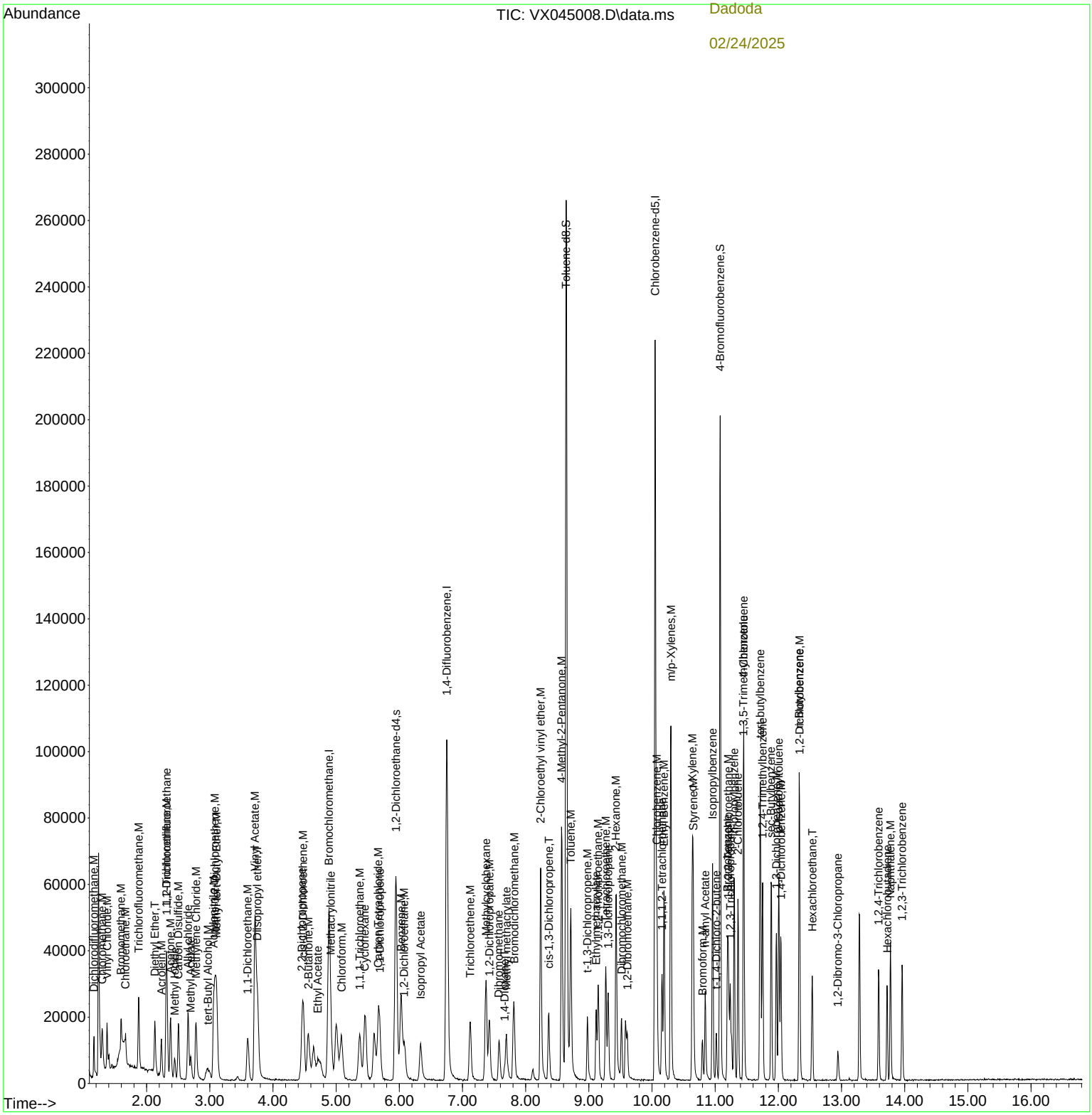
Manual Integrations APPROVED

Reviewed By :John Carlone

02/24/2025

Supervised By :Mahesh Dadoda

02/24/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045009.D
Acq On : 21 Feb 2025 10:21
Operator : JC/MD
Sample : VSTDICCC020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICCC020

Manual Integrations APPROVED

Reviewed By :John Carlone 02/24/2025
Supervised By :Mahesh Dadoda 02/24/2025

Quant Time: Feb 22 00:47:11 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 00:21:26 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.885	128	18456	30.000	ug/l	0.00
28) 1,4-Difluorobenzene	6.757	114	100876	30.000	ug/l	0.00
57) Chlorobenzene-d5	10.049	117	91818	30.000	ug/l	0.00
System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	5.946	65	53173	29.663	ug/l	0.00
Spiked Amount 30.000	Range 91 - 110		Recovery = 98.867%			
60) 4-Bromofluorobenzene	11.079	95	51382	29.939	ug/l	0.00
Spiked Amount 30.000	Range 63 - 112		Recovery = 99.800%			
63) Toluene-d8	8.641	98	153274	30.175	ug/l	0.00
Spiked Amount 30.000	Range 91 - 112		Recovery = 100.567%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.167	85	30488	19.596	ug/l	100
3) Chloromethane	1.295	50	36739	19.715	ug/l	100
4) Vinyl Chloride	1.374	62	34827	19.369	ug/l	100
5) Bromomethane	1.593	94	12009	19.186	ug/l	100
6) Chloroethane	1.666	64	20465	21.014	ug/l	100
7) Trichlorofluoromethane	1.874	101	45678	18.901	ug/l	100
8) Diethyl Ether	2.130	74	17586	19.233	ug/l	100
9) 1,1,2-Trichlorotrifluo...	2.325	101	26971	18.790	ug/l	100
10) 1,1-Dichloroethene	2.313	96	26361	18.802	ug/l	100
11) Methyl Iodide	2.447	142	26786	16.880	ug/l	100
12) Methyl Acetate	2.697	43	30401	18.673	ug/l	100
13) Acrolein	2.233	56	29114	89.216	ug/l	100
14) Acrylonitrile	3.056	53	76500	96.198	ug/l	100
15) Acetone	2.380	58	21647	99.253	ug/l	100
16) Carbon Disulfide	2.502	76	73699	18.532	ug/l	100
17) Allyl chloride	2.660	41	48603	18.535	ug/l	100
18) Methylene Chloride	2.782	84	30537	19.365	ug/l	100
19) trans-1,2-Dichloroethene	3.081	96	26955	19.003	ug/l	100
20) Diisopropyl ether	3.751	45	95769	19.005	ug/l	100
21) 1,1-Dichloroethane	3.605	63	53432	19.066	ug/l	100
22) cis-1,2-Dichloroethene	4.483	96	32387	19.054	ug/l	100
23) tert-Butyl Alcohol	2.983	59	26136	94.028	ug/l #	100
24) Methyl tert-Butyl Ether	3.105	73	86386	18.878	ug/l	100
25) Chloroform	5.087	83	52389	19.354	ug/l	100
26) Cyclohexane	5.465	56	49670	19.201	ug/l #	100
29) 1,1-Dichloropropene	5.690	75	36104	19.456	ug/l	100
30) 2-Butanone	4.550	43	104263	97.278	ug/l	100
31) 2,2-Dichloropropane	4.465	77	39511	18.830	ug/l	100
32) 1,1,1-Trichloroethane	5.373	97	43317	19.266	ug/l	100
33) Carbon Tetrachloride	5.666	117	36851	19.421	ug/l	100
34) Benzene	6.032	78	114107	19.609	ug/l	100
35) Methacrylonitrile	4.910	41	22376	19.509	ug/l	100
36) 1,2-Dichloroethane	6.080	62	39058	19.604	ug/l	100
37) Trichloroethene	7.117	130	26892	19.753	ug/l	100
38) Methylcyclohexane	7.373	83	47088	18.899	ug/l	100
39) 1,2-Dichloropropane	7.428	63	28555	19.738	ug/l	100
40) Dibromomethane	7.580	93	20254	19.509	ug/l	100
41) Bromodichloromethane	7.818	83	39895	19.335	ug/l	100
42) Vinyl Acetate	3.715	43	400180	96.216	ug/l	100

Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045009.D
Acq On : 21 Feb 2025 10:21
Operator : JC/MD
Sample : VSTDICCC020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICCC020

Manual Integrations APPROVED

Reviewed By :John Carlone 02/24/2025
Supervised By :Mahesh Dadoda 02/24/2025

Quant Time: Feb 22 00:47:11 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 00:21:26 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) Ethyl Acetate	4.709	43	38893	19.350	ug/l	100
44) Isopropyl Acetate	6.336	43	61693	18.649	ug/l	100
45) 1,4-Dioxane	7.659	88	14028	407.910	ug/l	100
46) Methyl methacrylate	7.690	41	30666	18.904	ug/l	100
47) n-amyl Acetate	10.842	43	54008	18.814	ug/l	100
48) t-1,3-Dichloropropene	8.976	75	35645	17.922	ug/l	100
49) cis-1,3-Dichloropropene	8.360	75	42718	18.974	ug/l	100
50) 1,1,2-Trichloroethane	9.147	97	27147	20.047	ug/l	100
51) Ethyl methacrylate	9.110	69	39389	18.495	ug/l	100
52) 1,3-Dichloropropane	9.305	76	47373	19.965	ug/l	100
53) Dibromochloromethane	9.519	129	29289	19.556	ug/l	100
54) 1,2-Dibromoethane	9.604	107	26948	19.597	ug/l	100
55) 2-Chloroethyl vinyl ether	8.238	63	105624	96.576	ug/l	100
56) Bromoform	10.799	173	17331	18.467	ug/l	100
58) 4-Methyl-2-Pentanone	8.568	43	208023	99.596	ug/l	100
59) 2-Hexanone	9.427	43	149308	98.899	ug/l	100
61) Tetrachloroethene	9.269	164	22529	19.926	ug/l	100
62) Toluene	8.714	91	119473	19.642	ug/l	100
64) Chlorobenzene	10.073	112	74287	19.710	ug/l	100
65) 1,1,1,2-Tetrachloroethane	10.159	131	24135	19.406	ug/l	100
66) Ethyl Benzene	10.189	91	128535	19.302	ug/l	100
67) m/p-Xylenes	10.299	106	99887	40.260	ug/l	100
68) o-Xylene	10.640	106	48859	20.071	ug/l	100
69) Styrene	10.653	104	80660	19.839	ug/l	100
70) Isopropylbenzene	10.957	105	124935	19.888	ug/l	100
71) 1,1,2,2-Tetrachloroethane	11.207	83	40659	19.683	ug/l	100
72) 1,2,3-Trichloropropane	11.238	75	33046m	19.450	ug/l	
73) Bromobenzene	11.195	156	28601	19.777	ug/l	100
74) n-propylbenzene	11.299	91	146105	19.544	ug/l	100
75) 2-Chlorotoluene	11.360	91	89859	19.883	ug/l	100
76) 1,3,5-Trimethylbenzene	11.451	105	103532	19.977	ug/l	100
77) t-1,4-Dichloro-2-butene	11.018	75	9794	17.133	ug/l	100
78) 4-Chlorotoluene	11.451	91	99015	19.654	ug/l	100
79) tert-butylbenzene	11.713	119	104250	19.965	ug/l	100
80) 1,2,4-Trimethylbenzene	11.750	105	104388	20.108	ug/l	100
81) sec-Butylbenzene	11.884	105	129645	19.783	ug/l	100
82) p-Isopropyltoluene	12.006	119	104594	19.698	ug/l	100
83) 1,3-Dichlorobenzene	11.969	146	53471	19.873	ug/l	100
84) 1,4-Dichlorobenzene	12.037	146	52302	19.714	ug/l	100
85) n-Butylbenzene	12.329	91	92551	19.087	ug/l	100
86) Hexachloroethane	12.536	117	17240	18.410	ug/l	100
87) 1,2-Dichlorobenzene	12.335	146	53134	20.126	ug/l	100
88) 1,2-Dibromo-3-Chloropr...	12.939	75	7393	18.485	ug/l	100
89) 1,2,4-Trichlorobenzene	13.585	180	30018	18.760	ug/l	100
90) Hexachlorobutadiene	13.725	225	12822	19.649	ug/l	100
91) Naphthalene	13.774	128	108844	19.291	ug/l	100
92) 1,2,3-Trichlorobenzene	13.957	180	32019	19.437	ug/l	100

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

ICAL Form

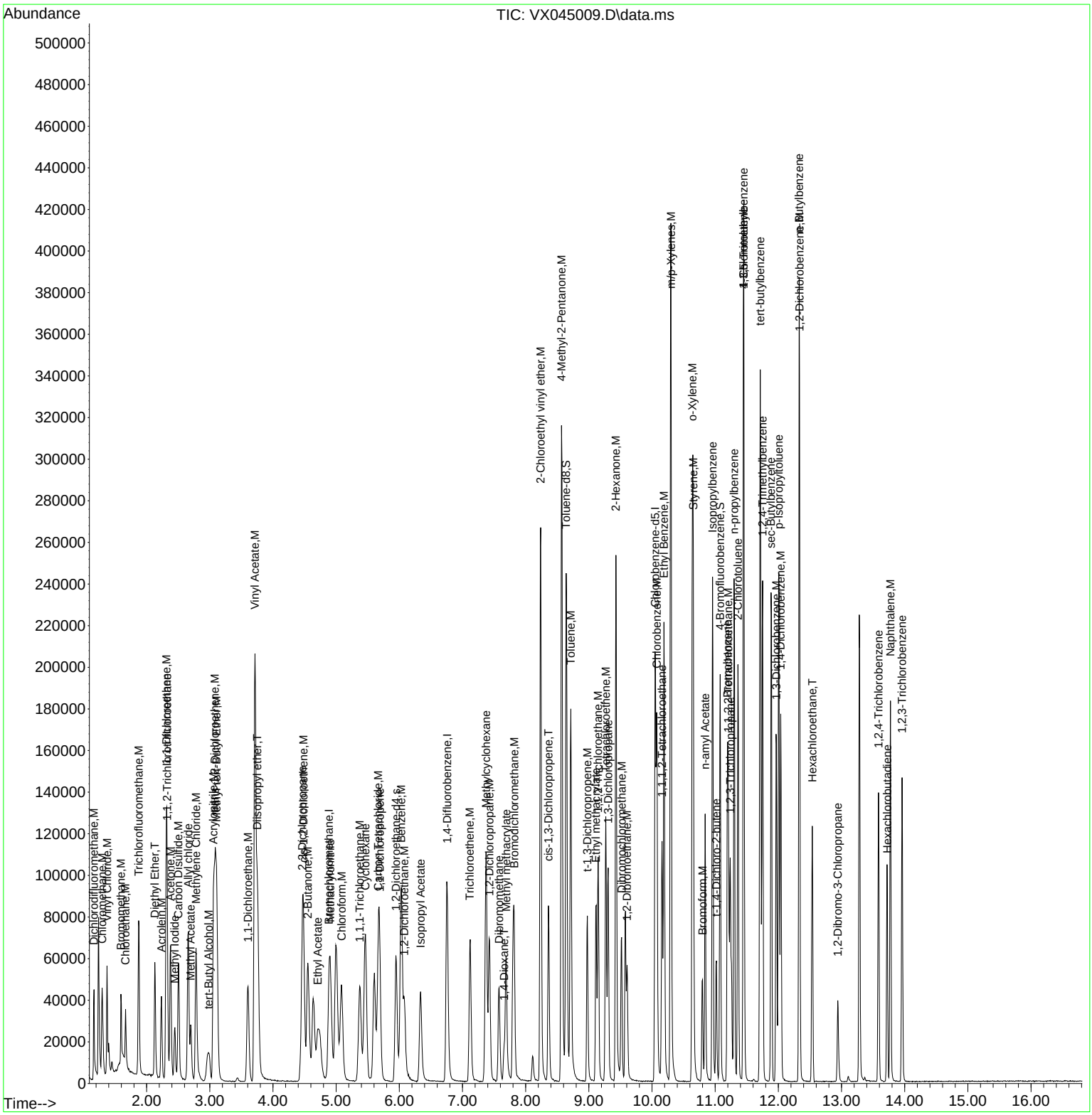
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045009.D
Acq On : 21 Feb 2025 10:21
Operator : JC/MD
Sample : VSTDICCC020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 22 00:47:11 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 00:21:26 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICCC020

Manual Integrations APPROVED

Reviewed By :John Carlone 02/24/2025
Supervised By :Mahesh Dadoda 02/24/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045010.D
Acq On : 21 Feb 2025 10:44
Operator : JC/MD
Sample : VSTDICC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC050

Manual Integrations APPROVED

Reviewed By :John Carlone 02/24/2025
Supervised By :Mahesh Dadoda 02/24/2025

Quant Time: Feb 22 00:48:00 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 00:21:26 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.891	128	17467	30.000	ug/l	0.00
28) 1,4-Difluorobenzene	6.757	114	96411	30.000	ug/l	0.00
57) Chlorobenzene-d5	10.049	117	89300	30.000	ug/l	0.00
System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	5.946	65	49656	29.270	ug/l	0.00
Spiked Amount 30.000	Range 91 - 110		Recovery = 97.567%			
60) 4-Bromofluorobenzene	11.079	95	50413	30.203	ug/l	0.00
Spiked Amount 30.000	Range 63 - 112		Recovery = 100.667%			
63) Toluene-d8	8.647	98	147315	29.819	ug/l	0.00
Spiked Amount 30.000	Range 91 - 112		Recovery = 99.400%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.166	85	74849	50.833	ug/l	98
3) Chloromethane	1.294	50	90776	51.472	ug/l	98
4) Vinyl Chloride	1.374	62	84944	49.915	ug/l	100
5) Bromomethane	1.593	94	28963	48.894	ug/l	97
6) Chloroethane	1.672	64	51012	55.346	ug/l	92
7) Trichlorofluoromethane	1.880	101	115517	50.505	ug/l	95
8) Diethyl Ether	2.130	74	43032	49.726	ug/l	97
9) 1,1,2-Trichlorotrifluo...	2.325	101	68750	50.609	ug/l	97
10) 1,1-Dichloroethene	2.312	96	66962	50.466	ug/l	92
11) Methyl Iodide	2.447	142	81166	54.046	ug/l	97
12) Methyl Acetate	2.697	43	78286	50.808	ug/l	100
13) Acrolein	2.233	56	76736	248.462	ug/l	98
14) Acrylonitrile	3.056	53	196184	260.667	ug/l	99
15) Acetone	2.373	58	51483	249.418	ug/l	95
16) Carbon Disulfide	2.508	76	188973	50.210	ug/l	100
17) Allyl chloride	2.660	41	125778	50.682	ug/l	98
18) Methylene Chloride	2.782	84	76235	51.081	ug/l	98
19) trans-1,2-Dichloroethene	3.087	96	68253	50.843	ug/l	94
20) Diisopropyl ether	3.751	45	243734	51.107	ug/l	96
21) 1,1-Dichloroethane	3.599	63	131223	49.475	ug/l	100
22) cis-1,2-Dichloroethene	4.477	96	79440	49.382	ug/l	97
23) tert-Butyl Alcohol	2.959	59	69182	262.986	ug/l #	100
24) Methyl tert-Butyl Ether	3.111	73	218792	50.521	ug/l	99
25) Chloroform	5.086	83	128252	50.062	ug/l	99
26) Cyclohexane	5.458	56	124373	50.802	ug/l #	98
29) 1,1-Dichloropropene	5.684	75	90516	51.038	ug/l	99
30) 2-Butanone	4.544	43	267770	261.401	ug/l	99
31) 2,2-Dichloropropane	4.465	77	101966	50.846	ug/l	100
32) 1,1,1-Trichloroethane	5.373	97	110282	51.322	ug/l	99
33) Carbon Tetrachloride	5.672	117	92530	51.023	ug/l	99
34) Benzene	6.031	78	286826	51.573	ug/l	98
35) Methacrylonitrile	4.910	41	59021	53.843	ug/l	98
36) 1,2-Dichloroethane	6.080	62	96405	50.630	ug/l	98
37) Trichloroethene	7.116	130	66131	50.826	ug/l	95
38) Methylcyclohexane	7.373	83	122650	51.506	ug/l	98
39) 1,2-Dichloropropane	7.421	63	68553	49.579	ug/l	97
40) Dibromomethane	7.574	93	50034	50.426	ug/l	99
41) Bromodichloromethane	7.818	83	100442	50.932	ug/l	99
42) Vinyl Acetate	3.715	43	1047506	263.518	ug/l	100

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045010.D
Acq On : 21 Feb 2025 10:44
Operator : JC/MD
Sample : VSTDICC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 22 00:48:00 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 00:21:26 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC050

Manual Integrations APPROVED

Reviewed By :John Carlone 02/24/2025
Supervised By :Mahesh Dadoda 02/24/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) Ethyl Acetate	4.708	43	97995	51.012	ug/l	98
44) Isopropyl Acetate	6.330	43	165983	52.497	ug/l	99
45) 1,4-Dioxane	7.653	88	36320	1105.035	ug/l	98
46) Methyl methacrylate	7.690	41	82008	52.896	ug/l	99
47) n-amyl Acetate	10.841	43	148104	53.981	ug/l	99
48) t-1,3-Dichloropropene	8.976	75	98986	52.075	ug/l	100
49) cis-1,3-Dichloropropene	8.360	75	110953	51.564	ug/l	99
50) 1,1,2-Trichloroethane	9.147	97	66444	51.339	ug/l	97
51) Ethyl methacrylate	9.110	69	108669	53.387	ug/l	97
52) 1,3-Dichloropropane	9.305	76	116358	51.310	ug/l	99
53) Dibromochloromethane	9.518	129	73437	51.304	ug/l	96
54) 1,2-Dibromoethane	9.604	107	67926	51.685	ug/l	99
55) 2-Chloroethyl vinyl ether	8.238	63	272372	260.575	ug/l	100
56) Bromoform	10.799	173	47891	53.392	ug/l	99
58) 4-Methyl-2-Pentanone	8.567	43	543908	267.752	ug/l	100
59) 2-Hexanone	9.427	43	398198	271.195	ug/l	99
61) Tetrachloroethene	9.269	164	54607	49.659	ug/l	94
62) Toluene	8.714	91	296930	50.195	ug/l	100
64) Chlorobenzene	10.073	112	185159	50.511	ug/l	99
65) 1,1,1,2-Tetrachloroethane	10.159	131	60773	50.244	ug/l	99
66) Ethyl Benzene	10.189	91	330414	51.018	ug/l	98
67) m/p-Xylenes	10.299	106	244916	101.498	ug/l	97
68) o-Xylene	10.640	106	120934	51.080	ug/l	100
69) Styrene	10.652	104	202875	51.306	ug/l	99
70) Isopropylbenzene	10.957	105	310911	50.888	ug/l	100
71) 1,1,2,2-Tetrachloroethane	11.207	83	104665	52.096	ug/l	100
72) 1,2,3-Trichloropropane	11.238	75	86752m	52.499	ug/l	
73) Bromobenzene	11.195	156	72207	51.338	ug/l	99
74) n-propylbenzene	11.299	91	377855	51.970	ug/l	99
75) 2-Chlorotoluene	11.360	91	223666	50.885	ug/l	100
76) 1,3,5-Trimethylbenzene	11.445	105	260432	51.669	ug/l	99
77) t-1,4-Dichloro-2-butene	11.012	75	29634	53.302	ug/l	95
78) 4-Chlorotoluene	11.451	91	250953	51.217	ug/l	99
79) tert-butylbenzene	11.713	119	264815	52.144	ug/l	98
80) 1,2,4-Trimethylbenzene	11.750	105	263122	52.114	ug/l	100
81) sec-Butylbenzene	11.884	105	328940	51.608	ug/l	100
82) p-Isopropyltoluene	12.006	119	269490	52.183	ug/l	98
83) 1,3-Dichlorobenzene	11.963	146	134685	51.467	ug/l	98
84) 1,4-Dichlorobenzene	12.036	146	135436	52.490	ug/l	99
85) n-Butylbenzene	12.329	91	249242	52.851	ug/l	98
86) Hexachloroethane	12.536	117	47866	52.555	ug/l	98
87) 1,2-Dichlorobenzene	12.329	146	133123	51.846	ug/l	99
88) 1,2-Dibromo-3-Chloropr...	12.939	75	19763	50.807	ug/l	97
89) 1,2,4-Trichlorobenzene	13.585	180	80472	51.710	ug/l	99
90) Hexachlorobutadiene	13.725	225	31734	50.003	ug/l	99
91) Naphthalene	13.774	128	288823	52.634	ug/l	99
92) 1,2,3-Trichlorobenzene	13.957	180	81734	51.015	ug/l	99

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

ICAL Form

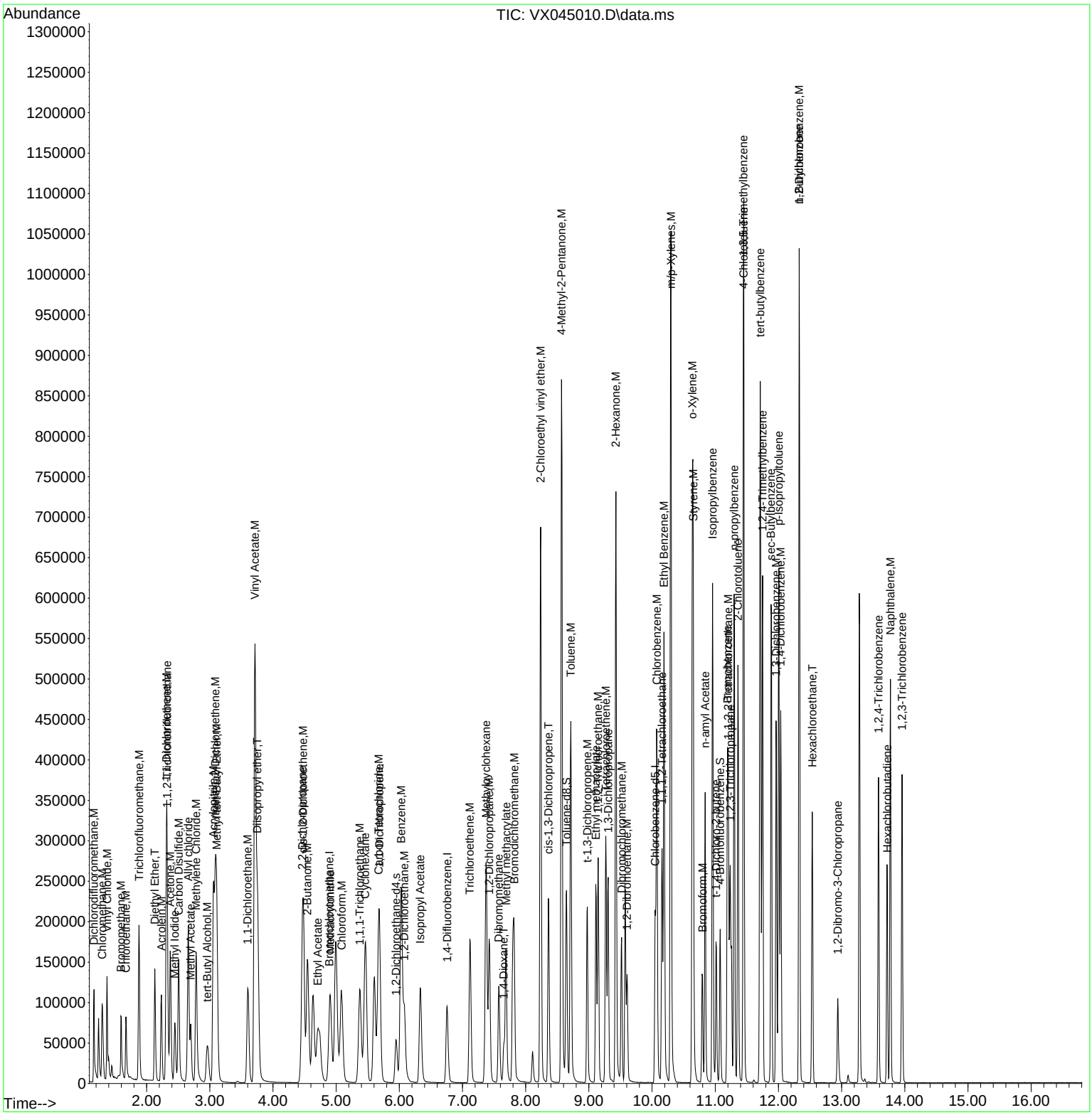
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045010.D
Acq On : 21 Feb 2025 10:44
Operator : JC/MD
Sample : VSTDICC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 22 00:48:00 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 00:21:26 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC050

Manual Integrations APPROVED

Reviewed By :John Carlone 02/24/2025
Supervised By :Mahesh Dadoda 02/24/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045011.D
Acq On : 21 Feb 2025 11:07
Operator : JC/MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC100

Manual Integrations APPROVED

Reviewed By :John Carlone 02/24/2025
Supervised By :Mahesh Dadoda 02/24/2025

Quant Time: Feb 22 00:48:54 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 00:21:26 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.891	128	17332	30.000	ug/l	0.00
28) 1,4-Difluorobenzene	6.751	114	98516	30.000	ug/l	0.00
57) Chlorobenzene-d5	10.049	117	88321	30.000	ug/l	0.00
System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	5.946	65	50601	30.059	ug/l	0.00
Spiked Amount 30.000	Range 91 - 110		Recovery = 100.200%			
60) 4-Bromofluorobenzene	11.079	95	49683	30.096	ug/l	0.00
Spiked Amount 30.000	Range 63 - 112		Recovery = 100.333%			
63) Toluene-d8	8.647	98	148078	30.306	ug/l	0.00
Spiked Amount 30.000	Range 91 - 112		Recovery = 101.033%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.166	85	140259	95.997	ug/l	97
3) Chloromethane	1.294	50	166114	94.924	ug/l	99
4) Vinyl Chloride	1.374	62	163236	96.669	ug/l	99
5) Bromomethane	1.593	94	54558	92.819	ug/l	95
6) Chloroethane	1.666	64	84688	92.599	ug/l	97
7) Trichlorofluoromethane	1.874	101	220045	96.956	ug/l	96
8) Diethyl Ether	2.130	74	82964	96.616	ug/l	97
9) 1,1,2-Trichlorotrifluo...	2.319	101	129494	96.068	ug/l	98
10) 1,1-Dichloroethene	2.313	96	130666	99.244	ug/l	94
11) Methyl Iodide	2.447	142	161844	108.607	ug/l	98
12) Methyl Acetate	2.703	43	150865	98.675	ug/l	99
13) Acrolein	2.233	56	156104	509.382	ug/l	97
14) Acrylonitrile	3.062	53	370914	496.667	ug/l	99
15) Acetone	2.380	58	97560	476.326	ug/l	98
16) Carbon Disulfide	2.502	76	371874	99.576	ug/l	100
17) Allyl chloride	2.654	41	246065	99.923	ug/l	98
18) Methylene Chloride	2.782	84	144938	97.871	ug/l	96
19) trans-1,2-Dichloroethene	3.087	96	130562	98.015	ug/l	97
20) Diisopropyl ether	3.757	45	470167	99.355	ug/l #	82
21) 1,1-Dichloroethane	3.605	63	258430	98.196	ug/l	98
22) cis-1,2-Dichloroethene	4.477	96	156933	98.314	ug/l	99
23) tert-Butyl Alcohol	2.989	59	125570	481.055	ug/l #	100
24) Methyl tert-Butyl Ether	3.111	73	426471	99.244	ug/l	99
25) Chloroform	5.080	83	248045	97.577	ug/l	99
26) Cyclohexane	5.458	56	236876	97.509	ug/l #	98
29) 1,1-Dichloropropene	5.684	75	174620	96.357	ug/l	100
30) 2-Butanone	4.550	43	505036	482.489	ug/l	99
31) 2,2-Dichloropropane	4.465	77	202370	98.758	ug/l	100
32) 1,1,1-Trichloroethane	5.373	97	211623	96.379	ug/l	99
33) Carbon Tetrachloride	5.666	117	178685	96.425	ug/l	99
34) Benzene	6.031	78	548369	96.492	ug/l	99
35) Methacrylonitrile	4.910	41	111962	99.957	ug/l	97
36) 1,2-Dichloroethane	6.080	62	189437	97.362	ug/l	98
37) Trichloroethene	7.117	130	128134	96.375	ug/l	97
38) Methylcyclohexane	7.373	83	237839	97.744	ug/l	97
39) 1,2-Dichloropropane	7.421	63	140148	99.193	ug/l	98
40) Dibromomethane	7.574	93	97805	96.465	ug/l	99
41) Bromodichloromethane	7.818	83	197339	97.929	ug/l	99
42) Vinyl Acetate	3.715	43	2042535	502.855	ug/l	99

Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045011.D
Acq On : 21 Feb 2025 11:07
Operator : JC/MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 22 00:48:54 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 00:21:26 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC100

Manual Integrations APPROVED

Reviewed By :John Carlone 02/24/2025
Supervised By :Mahesh Dadoda 02/24/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) Ethyl Acetate	4.708	43	199092	101.424	ug/l	97
44) Isopropyl Acetate	6.336	43	329903	102.113	ug/l	99
45) 1,4-Dioxane	7.659	88	63728	1897.493	ug/l	98
46) Methyl methacrylate	7.690	41	162523	102.589	ug/l	100
47) n-amyl Acetate	10.842	43	282922	100.917	ug/l	98
48) t-1,3-Dichloropropene	8.976	75	202810	104.416	ug/l	98
49) cis-1,3-Dichloropropene	8.360	75	223833	101.800	ug/l	100
50) 1,1,2-Trichloroethane	9.147	97	127690	96.553	ug/l	95
51) Ethyl methacrylate	9.110	69	214475	103.117	ug/l	97
52) 1,3-Dichloropropane	9.305	76	222694	96.102	ug/l	99
53) Dibromochloromethane	9.519	129	144384	98.713	ug/l	97
54) 1,2-Dibromoethane	9.604	107	130524	97.194	ug/l	100
55) 2-Chloroethyl vinyl ether	8.238	63	535473	501.334	ug/l	99
56) Bromoform	10.799	173	92416	100.830	ug/l	98
58) 4-Methyl-2-Pentanone	8.574	43	983713	489.624	ug/l	99
59) 2-Hexanone	9.427	43	708849	488.118	ug/l	98
61) Tetrachloroethene	9.269	164	104854	96.410	ug/l	97
62) Toluene	8.714	91	575772	98.410	ug/l	99
64) Chlorobenzene	10.073	112	359123	99.055	ug/l	99
65) 1,1,1,2-Tetrachloroethane	10.159	131	117602	98.304	ug/l	98
66) Ethyl Benzene	10.189	91	641324	100.122	ug/l	97
67) m/p-Xylenes	10.299	106	470322	197.072	ug/l	98
68) o-Xylene	10.640	106	230392	98.392	ug/l	100
69) Styrene	10.653	104	387436	99.067	ug/l	98
70) Isopropylbenzene	10.957	105	596402	98.698	ug/l	100
71) 1,1,2,2-Tetrachloroethane	11.207	83	190591	95.916	ug/l	100
72) 1,2,3-Trichloropropane	11.238	75	158994m	97.283	ug/l	
73) Bromobenzene	11.195	156	136270	97.960	ug/l	98
74) n-propylbenzene	11.299	91	717361	99.759	ug/l	99
75) 2-Chlorotoluene	11.360	91	421424	96.938	ug/l	98
76) 1,3,5-Trimethylbenzene	11.451	105	487050	97.701	ug/l	99
77) t-1,4-Dichloro-2-butene	11.018	75	59873	108.886	ug/l	98
78) 4-Chlorotoluene	11.451	91	477861	98.607	ug/l	98
79) tert-butylbenzene	11.713	119	490816	97.716	ug/l	99
80) 1,2,4-Trimethylbenzene	11.750	105	486770	97.478	ug/l	100
81) sec-Butylbenzene	11.890	105	616448	97.788	ug/l	100
82) p-Isopropyltoluene	12.006	119	510223	99.893	ug/l	99
83) 1,3-Dichlorobenzene	11.963	146	250755	96.883	ug/l	98
84) 1,4-Dichlorobenzene	12.036	146	249668	97.834	ug/l	99
85) n-Butylbenzene	12.329	91	476457	102.150	ug/l	98
86) Hexachloroethane	12.536	117	92493	102.679	ug/l	100
87) 1,2-Dichlorobenzene	12.335	146	240056	94.528	ug/l	99
88) 1,2-Dibromo-3-Chloropr...	12.939	75	37960	98.669	ug/l	98
89) 1,2,4-Trichlorobenzene	13.585	180	158594	103.039	ug/l	98
90) Hexachlorobutadiene	13.719	225	60565	96.489	ug/l	98
91) Naphthalene	13.774	128	548026	100.977	ug/l	100
92) 1,2,3-Trichlorobenzene	13.957	180	158881	100.267	ug/l	100

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

ICAL Form

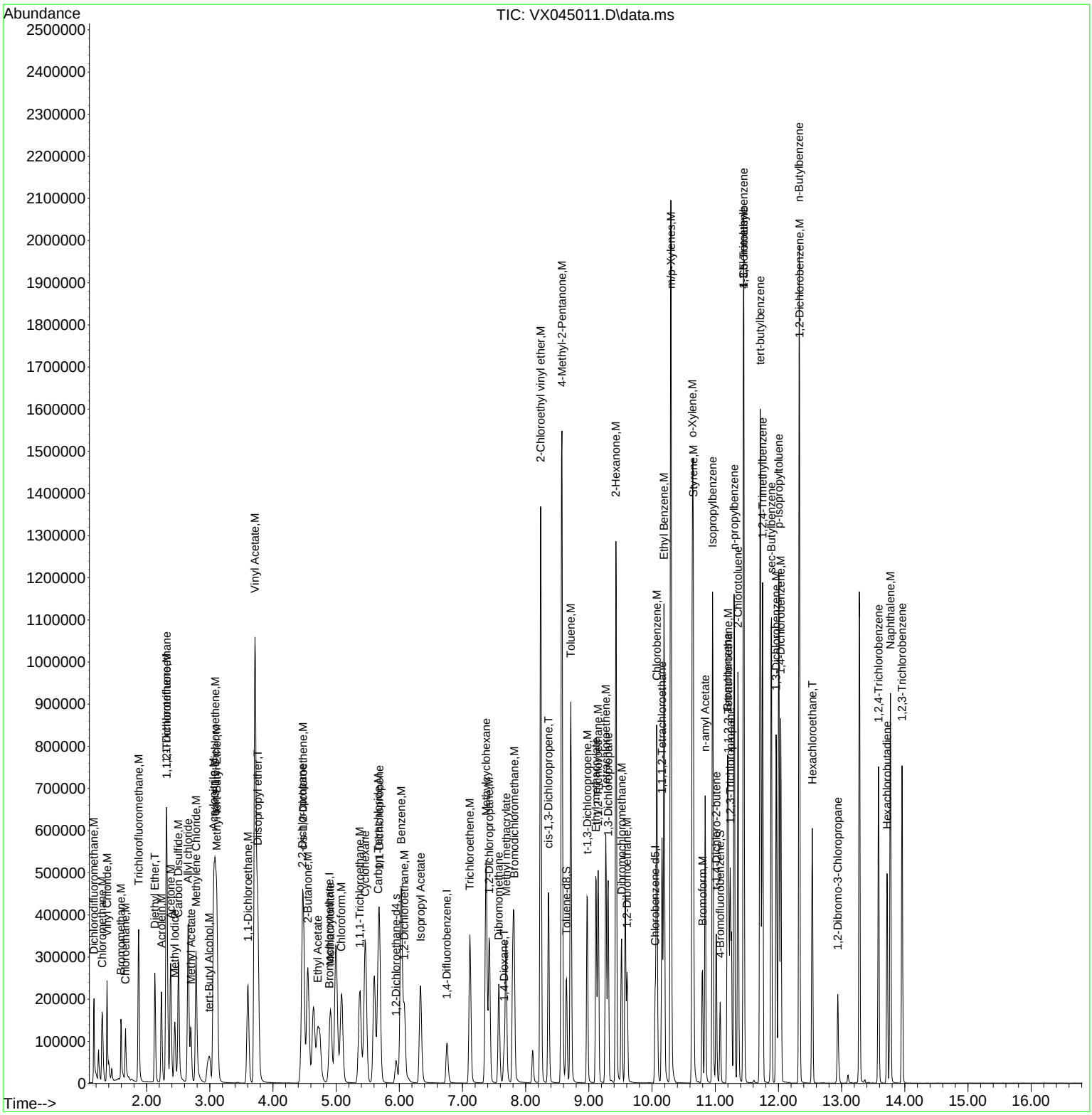
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045011.D
Acq On : 21 Feb 2025 11:07
Operator : JC/MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 22 00:48:54 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 00:21:26 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC100

Manual Integrations APPROVED

Reviewed By :John Carlone 02/24/2025
Supervised By :Mahesh Dadoda 02/24/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045012.D
Acq On : 21 Feb 2025 11:29
Operator : JC/MD
Sample : VSTDICC150
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC150

Manual Integrations APPROVED

Reviewed By :John Carlone 02/24/2025
Supervised By :Mahesh Dadoda 02/24/2025

Quant Time: Feb 22 00:49:47 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 00:21:26 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.891	128	15390	30.000	ug/l	0.00
28) 1,4-Difluorobenzene	6.757	114	91158	30.000	ug/l	0.00
57) Chlorobenzene-d5	10.049	117	81702	30.000	ug/l	0.00
System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	5.952	65	46852	31.344	ug/l	0.00
Spiked Amount 30.000	Range 91 - 110		Recovery = 104.467%			
60) 4-Bromofluorobenzene	11.079	95	47199	30.907	ug/l	0.00
Spiked Amount 30.000	Range 63 - 112		Recovery = 103.033%			
63) Toluene-d8	8.647	98	134852	29.835	ug/l	0.00
Spiked Amount 30.000	Range 91 - 112		Recovery = 99.467%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.166	85	205354	158.286	ug/l	96
3) Chloromethane	1.295	50	242022	155.752	ug/l	100
4) Vinyl Chloride	1.374	62	240390	160.323	ug/l	100
5) Bromomethane	1.593	94	81221	155.617	ug/l	97
6) Chloroethane	1.660	64	93284	114.868	ug/l	97
7) Trichlorofluoromethane	1.868	101	320914	159.243	ug/l	97
8) Diethyl Ether	2.130	74	121707	159.619	ug/l	97
9) 1,1,2-Trichlorotrifluo...	2.319	101	191867	160.302	ug/l	98
10) 1,1-Dichloroethene	2.307	96	191658	163.938	ug/l	90
11) Methyl Iodide	2.447	142	247014	186.677	ug/l	97
12) Methyl Acetate	2.703	43	226419	166.780	ug/l	99
13) Acrolein	2.233	56	233841	859.331	ug/l	99
14) Acrylonitrile	3.062	53	532462	802.955	ug/l	99
15) Acetone	2.386	58	137785	757.609	ug/l	98
16) Carbon Disulfide	2.502	76	548971	165.547	ug/l	99
17) Allyl chloride	2.654	41	362889	165.958	ug/l	100
18) Methylene Chloride	2.782	84	211221	160.628	ug/l	97
19) trans-1,2-Dichloroethene	3.087	96	192443	162.701	ug/l	97
20) Diisopropyl ether	3.757	45	684590	162.921	ug/l #	84
21) 1,1-Dichloroethane	3.599	63	379249	162.287	ug/l	99
22) cis-1,2-Dichloroethene	4.483	96	230636	162.719	ug/l	98
23) tert-Butyl Alcohol	3.014	59	185225m	799.131	ug/l	
24) Methyl tert-Butyl Ether	3.111	73	628626	164.746	ug/l	100
25) Chloroform	5.087	83	367141	162.652	ug/l	100
26) Cyclohexane	5.464	56	351233	162.829	ug/l #	99
29) 1,1-Dichloropropene	5.684	75	260684	155.458	ug/l	99
30) 2-Butanone	4.550	43	735492	759.373	ug/l	100
31) 2,2-Dichloropropane	4.465	77	304225	160.447	ug/l	100
32) 1,1,1-Trichloroethane	5.373	97	316595	155.824	ug/l	99
33) Carbon Tetrachloride	5.672	117	264905	154.492	ug/l	98
34) Benzene	6.031	78	800159	152.163	ug/l	99
35) Methacrylonitrile	4.916	41	162761	157.037	ug/l	96
36) 1,2-Dichloroethane	6.080	62	276707	153.695	ug/l	97
37) Trichloroethene	7.117	130	189307	153.878	ug/l	96
38) Methylcyclohexane	7.373	83	350907	155.851	ug/l	98
39) 1,2-Dichloropropane	7.421	63	202146	154.621	ug/l	98
40) Dibromomethane	7.574	93	143641	153.109	ug/l	99
41) Bromodichloromethane	7.818	83	291108	156.122	ug/l	99
42) Vinyl Acetate	3.715	43	2988086	795.020	ug/l	99

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045012.D
Acq On : 21 Feb 2025 11:29
Operator : JC/MD
Sample : VSTDICC150
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 22 00:49:47 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 00:21:26 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC150

Manual Integrations APPROVED

Reviewed By :John Carlone 02/24/2025
Supervised By :Mahesh Dadoda 02/24/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) Ethyl Acetate	4.709	43	292788	161.195	ug/l	97
44) Isopropyl Acetate	6.336	43	490033	163.920	ug/l	99
45) 1,4-Dioxane	7.665	88	91297	2937.775	ug/l	98
46) Methyl methacrylate	7.690	41	241575	164.798	ug/l	97
47) n-amyl Acetate	10.842	43	438261	168.943	ug/l	98
48) t-1,3-Dichloropropene	8.976	75	303740	169.001	ug/l	100
49) cis-1,3-Dichloropropene	8.360	75	331118	162.750	ug/l	98
50) 1,1,2-Trichloroethane	9.147	97	183455	149.917	ug/l	95
51) Ethyl methacrylate	9.116	69	323054	167.857	ug/l	100
52) 1,3-Dichloropropane	9.305	76	327551	152.762	ug/l	99
53) Dibromochloromethane	9.519	129	213326	157.620	ug/l	97
54) 1,2-Dibromoethane	9.604	107	194634	156.632	ug/l	99
55) 2-Chloroethyl vinyl ether	8.238	63	788934	798.256	ug/l	99
56) Bromoform	10.799	173	140224	165.340	ug/l	98
58) 4-Methyl-2-Pentanone	8.574	43	1431130	770.025	ug/l	99
59) 2-Hexanone	9.433	43	1054503	784.964	ug/l	99
61) Tetrachloroethene	9.269	164	149808	148.903	ug/l	95
62) Toluene	8.714	91	824606	152.359	ug/l	100
64) Chlorobenzene	10.073	112	513552	153.126	ug/l	99
65) 1,1,1,2-Tetrachloroethane	10.159	131	175139	158.260	ug/l	98
66) Ethyl Benzene	10.189	91	933862	157.604	ug/l	97
67) m/p-Xylenes	10.299	106	679028	307.573	ug/l	97
68) o-Xylene	10.640	106	333410	153.922	ug/l	98
69) Styrene	10.653	104	566072	156.470	ug/l	97
70) Isopropylbenzene	10.957	105	868382	155.350	ug/l	100
71) 1,1,2,2-Tetrachloroethane	11.207	83	283733	154.359	ug/l	100
72) 1,2,3-Trichloropropane	11.238	75	234613m	155.182	ug/l	
73) Bromobenzene	11.195	156	198360	154.147	ug/l	96
74) n-propylbenzene	11.299	91	1049645	157.793	ug/l	98
75) 2-Chlorotoluene	11.360	91	619308	153.997	ug/l	98
76) 1,3,5-Trimethylbenzene	11.451	105	707908	153.508	ug/l	100
77) t-1,4-Dichloro-2-butene	11.018	75	97507	191.694	ug/l	99
78) 4-Chlorotoluene	11.451	91	704032	157.047	ug/l	98
79) tert-butylbenzene	11.713	119	716064	154.110	ug/l	99
80) 1,2,4-Trimethylbenzene	11.750	105	710215	153.746	ug/l	100
81) sec-Butylbenzene	11.890	105	910294	156.100	ug/l	100
82) p-Isopropyltoluene	12.006	119	738494	156.297	ug/l	99
83) 1,3-Dichlorobenzene	11.969	146	371922	155.340	ug/l	98
84) 1,4-Dichlorobenzene	12.036	146	366532	155.264	ug/l	99
85) n-Butylbenzene	12.329	91	710846	164.749	ug/l	98
86) Hexachloroethane	12.536	117	142372	170.855	ug/l	98
87) 1,2-Dichlorobenzene	12.335	146	356347	151.688	ug/l	99
88) 1,2-Dibromo-3-Chloropr...	12.939	75	59310	166.653	ug/l	98
89) 1,2,4-Trichlorobenzene	13.585	180	238129	167.248	ug/l	98
90) Hexachlorobutadiene	13.725	225	90085	155.145	ug/l	98
91) Naphthalene	13.774	128	829698	165.262	ug/l	100
92) 1,2,3-Trichlorobenzene	13.957	180	236181	161.124	ug/l	99

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

ICAL Form

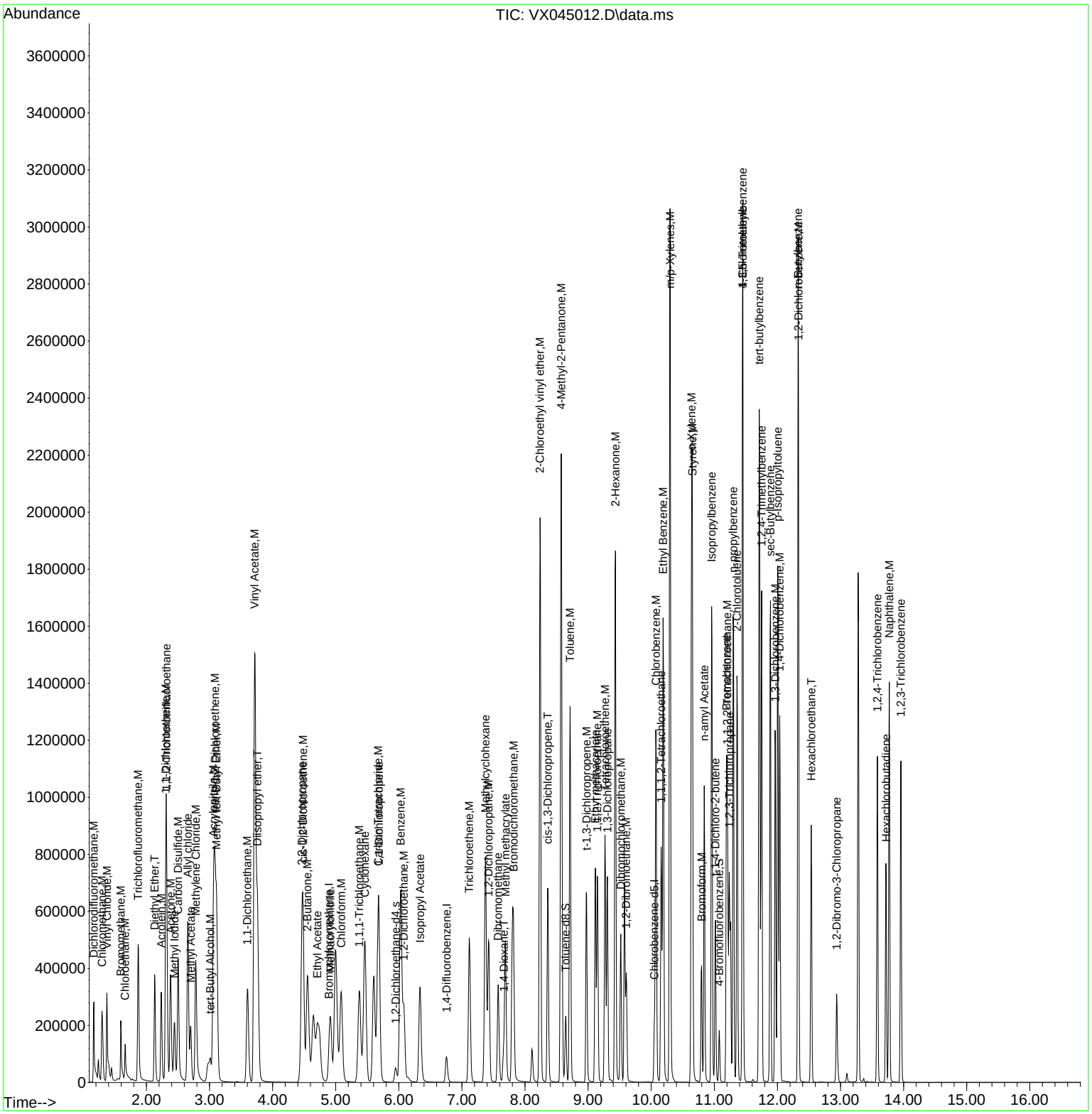
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045012.D
Acq On : 21 Feb 2025 11:29
Operator : JC/MD
Sample : VSTDICC150
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 22 00:49:47 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 00:21:26 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC150

Manual Integrations APPROVED

Reviewed By :John Carlone 02/24/2025
Supervised By :Mahesh Dadoda 02/24/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045014.D
Acq On : 21 Feb 2025 13:09
Operator : JC/MD
Sample : VSTDICV020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX022125

Manual Integrations APPROVED

Reviewed By :John Carlone 02/24/2025
Supervised By :Mahesh Dadoda 02/24/2025

Quant Time: Feb 22 01:12:33 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.885	128	17826	30.000	ug/l	0.00
28) 1,4-Difluorobenzene	6.751	114	98652	30.000	ug/l	0.00
57) Chlorobenzene-d5	10.049	117	90634	30.000	ug/l	0.00
System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	5.946	65	51483	29.736	ug/l	0.00
Spiked Amount 30.000	Range 91 - 110		Recovery = 99.133%			
60) 4-Bromofluorobenzene	11.079	95	50982	30.094	ug/l	0.00
Spiked Amount 30.000	Range 63 - 112		Recovery = 100.300%			
63) Toluene-d8	8.641	98	148516	29.620	ug/l	0.00
Spiked Amount 30.000	Range 91 - 112		Recovery = 98.733%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.166	85	27388	18.226	ug/l	95
3) Chloromethane	1.294	50	32169	17.873	ug/l	99
4) Vinyl Chloride	1.374	62	30221	17.401	ug/l	99
5) Bromomethane	1.593	94	11792	19.506	ug/l	97
6) Chloroethane	1.666	64	19435	20.662	ug/l	96
7) Trichlorofluoromethane	1.874	101	41534	17.793	ug/l	96
8) Diethyl Ether	2.130	74	15203	17.214	ug/l	97
9) 1,1,2-Trichlorotrifluo...	2.319	101	25031	18.055	ug/l	97
10) 1,1-Dichloroethene	2.313	96	24494	18.088	ug/l	95
11) Methyl Iodide	2.441	142	24257	15.827	ug/l	95
12) Methyl Acetate	2.697	43	28582	18.176	ug/l	99
13) Acrolein	2.233	56	30003	95.190	ug/l	100
14) Acrylonitrile	3.056	53	68921	89.730	ug/l	99
15) Acetone	2.374	58	22947	108.932	ug/l	97
16) Carbon Disulfide	2.502	76	68739	17.896	ug/l	100
17) Allyl chloride	2.654	41	45112	17.812	ug/l	99
18) Methylene Chloride	2.782	84	26839	17.621	ug/l	92
19) trans-1,2-Dichloroethene	3.081	96	24421	17.825	ug/l	92
20) Diisopropyl ether	3.751	45	86878	17.850	ug/l	90
21) 1,1-Dichloroethane	3.599	63	47892	17.693	ug/l	99
22) cis-1,2-Dichloroethene	4.471	96	29051	17.695	ug/l	99
23) tert-Butyl Alcohol	2.965	59	24746	92.286	ug/l #	100
24) Methyl tert-Butyl Ether	3.105	73	78186	17.690	ug/l	100
25) Chloroform	5.074	83	46912	17.943	ug/l	98
26) Cyclohexane	5.458	56	44699	17.890	ug/l #	98
29) 1,1-Dichloropropene	5.678	75	32608	17.969	ug/l	99
30) 2-Butanone	4.544	43	100841	96.206	ug/l	99
31) 2,2-Dichloropropane	4.465	77	37149	18.104	ug/l	99
32) 1,1,1-Trichloroethane	5.373	97	39458	17.945	ug/l	99
33) Carbon Tetrachloride	5.666	117	33551	18.080	ug/l	98
34) Benzene	6.025	78	102508	18.013	ug/l	98
35) Methacrylonitrile	4.910	41	20575	18.343	ug/l	97
36) 1,2-Dichloroethane	6.074	62	35686	18.316	ug/l	99
37) Trichloroethene	7.117	130	23875	17.933	ug/l	97
38) Methylcyclohexane	7.373	83	44760	18.370	ug/l	98
39) 1,2-Dichloropropane	7.421	63	24627	17.406	ug/l	98
40) Dibromomethane	7.574	93	18285	18.010	ug/l	99
41) Bromodichloromethane	7.812	83	35606	17.645	ug/l	98
42) Vinyl Acetate	3.709	43	365963	89.973	ug/l	100

Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045014.D
Acq On : 21 Feb 2025 13:09
Operator : JC/MD
Sample : VSTDICV020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX022125

Manual Integrations APPROVED

Reviewed By :John Carlone 02/24/2025
Supervised By :Mahesh Dadoda 02/24/2025

Quant Time: Feb 22 01:12:33 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) Ethyl Acetate	4.702	43	33559	17.072	ug/l	100
44) Isopropyl Acetate	6.330	43	58216	17.994	ug/l	98
45) 1,4-Dioxane	7.659	88	12655	376.282	ug/l	99
46) Methyl methacrylate	7.684	41	29063	18.320	ug/l	98
47) n-amyl Acetate	10.842	43	50309	17.920	ug/l	99
48) t-1,3-Dichloropropene	8.976	75	33010	16.972	ug/l	98
49) cis-1,3-Dichloropropene	8.360	75	38512	17.491	ug/l	99
50) 1,1,2-Trichloroethane	9.147	97	24435	18.451	ug/l	96
51) Ethyl methacrylate	9.110	69	37245	17.882	ug/l	97
52) 1,3-Dichloropropane	9.305	76	41224	17.765	ug/l	97
53) Dibromochloromethane	9.519	129	25807	17.620	ug/l	96
54) 1,2-Dibromoethane	9.604	107	23689	17.616	ug/l	96
55) 2-Chloroethyl vinyl ether	8.232	63	91907	85.929	ug/l	100
56) Bromoform	10.799	173	15981	17.412	ug/l	99
58) 4-Methyl-2-Pentanone	8.568	43	192103	93.175	ug/l	99
59) 2-Hexanone	9.427	43	142320	95.501	ug/l	99
61) Tetrachloroethene	9.269	164	19987	17.908	ug/l	95
62) Toluene	8.714	91	107324	17.876	ug/l	98
64) Chlorobenzene	10.073	112	66754	17.942	ug/l	98
65) 1,1,1,2-Tetrachloroethane	10.159	131	21314	17.362	ug/l	98
66) Ethyl Benzene	10.189	91	119085	18.117	ug/l	95
67) m/p-Xylenes	10.299	106	88668	36.205	ug/l	98
68) o-Xylene	10.634	106	44070	18.340	ug/l	97
69) Styrene	10.653	104	71782	17.886	ug/l	98
70) Isopropylbenzene	10.957	105	112344	18.117	ug/l	100
71) 1,1,2,2-Tetrachloroethane	11.207	83	37415	18.349	ug/l	100
72) 1,2,3-Trichloropropane	11.238	75	30477m	18.172	ug/l	
73) Bromobenzene	11.195	156	26006	18.218	ug/l	99
74) n-propylbenzene	11.299	91	134814	18.269	ug/l	100
75) 2-Chlorotoluene	11.360	91	80948	18.145	ug/l	100
76) 1,3,5-Trimethylbenzene	11.445	105	95320	18.633	ug/l	99
77) t-1,4-Dichloro-2-butene	11.018	75	9008	15.964	ug/l	92
78) 4-Chlorotoluene	11.451	91	90166	18.131	ug/l	99
79) tert-butylbenzene	11.713	119	94943	18.420	ug/l	100
80) 1,2,4-Trimethylbenzene	11.750	105	94408	18.423	ug/l	99
81) sec-Butylbenzene	11.884	105	119426	18.461	ug/l	99
82) p-Isopropyltoluene	12.006	119	97575	18.616	ug/l	99
83) 1,3-Dichlorobenzene	11.969	146	48430	18.234	ug/l	99
84) 1,4-Dichlorobenzene	12.036	146	48160	18.390	ug/l	99
85) n-Butylbenzene	12.329	91	87176	18.213	ug/l	99
86) Hexachloroethane	12.536	117	16000	17.309	ug/l	100
87) 1,2-Dichlorobenzene	12.329	146	48245	18.513	ug/l	99
88) 1,2-Dibromo-3-Chloropr...	12.939	75	7064	17.893	ug/l	97
89) 1,2,4-Trichlorobenzene	13.585	180	28630	18.126	ug/l	98
90) Hexachlorobutadiene	13.719	225	12062	18.726	ug/l	99
91) Naphthalene	13.774	128	101756	18.271	ug/l	99
92) 1,2,3-Trichlorobenzene	13.957	180	28151	17.312	ug/l	97

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

ICAL Form

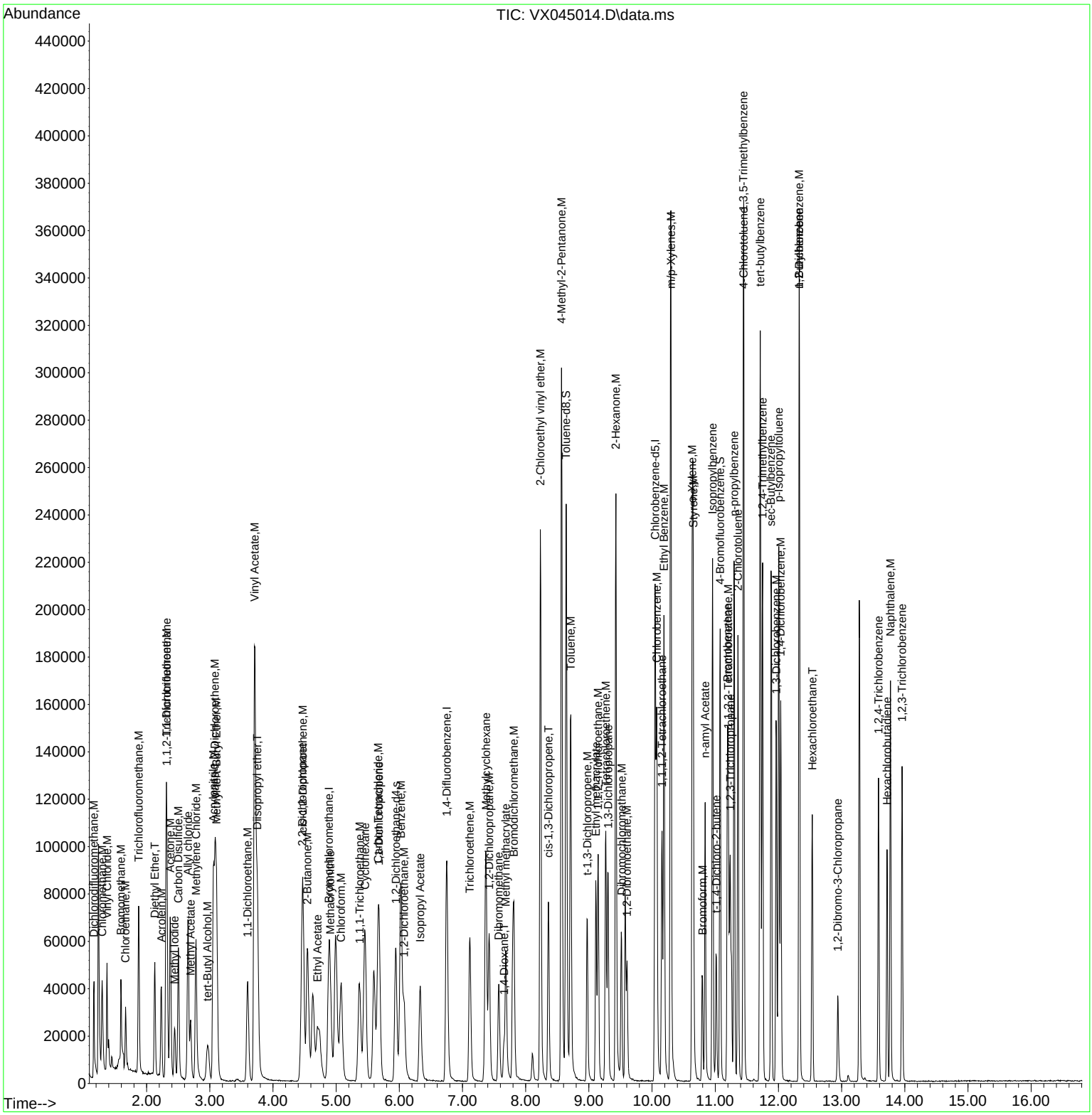
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045014.D
Acq On : 21 Feb 2025 13:09
Operator : JC/MD
Sample : VSTDICV020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 22 01:12:33 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
ICVVX022125

Manual Integrations APPROVED

Reviewed By :John Carlone 02/24/2025
Supervised By :Mahesh Dadoda 02/24/2025



Evaluate Continuing Calibration Report

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045014.D
Acq On : 21 Feb 2025 13:09
Operator : JC/MD
Sample : VSTDICV020
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ALS Vial : 8 Sample Multiplier: 1

Instrument :
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ClientSampleId :
ICVVX022125

Quant Time: Feb 22 01:12:33 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 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	Bromochloromethane	1.000	1.000	0.0	97	0.00
2	M	Dichlorodifluoromethane	2.529	2.305	8.9	90	0.00
3	M	Chloromethane	3.029	2.707	10.6	88	0.00
4	M	Vinyl Chloride	2.923	2.543	13.0	87	0.00
5	M	Bromomethane	1.017	0.992	2.5	98	0.00
6	M	Chloroethane	1.583	1.635	-3.3	95	0.00
7	M	Trichlorofluoromethane	3.928	3.495	11.0	91	0.00
8	T	Diethyl Ether	1.486	1.279	13.9	86	0.00
9		1,1,2-Trichlorotrifluoroeth	2.333	2.106	9.7	93	0.00
10	M	1,1-Dichloroethene	2.279	2.061	9.6	93	0.00
11		Methyl Iodide	2.579	2.041	20.9	91	0.00
12		Methyl Acetate	2.646	2.405	9.1	94	0.00
13	M	Acrolein	0.530	0.505	4.7	103	0.00
14	M	Acrylonitrile	1.293	1.160	10.3	90	0.00
15	M	Acetone	0.355	0.386	-8.7	106	0.00
16	M	Carbon Disulfide	6.464	5.784	10.5	93	0.00
17		Allyl chloride	4.262	3.796	10.9	93	0.00
18	M	Methylene Chloride	2.563	2.258	11.9	88	0.00
19	M	trans-1,2-Dichloroethene	2.306	2.055	10.9	91	0.00
20	T	Diisopropyl ether	8.191	7.311	10.7	91	0.00
21	M	1,1-Dichloroethane	4.555	4.030	11.5	90	0.00
22	M	cis-1,2-Dichloroethene	2.763	2.445	11.5	90	-0.01
23	M	tert-Butyl Alcohol	0.451	0.416	7.8	95	-0.02
24	M	Methyl tert-Butyl Ether	7.438	6.579	11.5	91	0.00
25	M	Chloroform	4.400	3.947	10.3	90	-0.01
26		Cyclohexane	4.205	3.761	10.6	90	0.00
27	s	1,2-Dichloroethane-d4	2.914	2.888	0.9	97	0.00
28	I	1,4-Difluorobenzene	1.000	1.000	0.0	98	0.00
29		1,1-Dichloropropene	0.552	0.496	10.1	90	-0.01
30	M	2-Butanone	0.319	0.307	3.8	97	0.00
31		2,2-Dichloropropane	0.624	0.565	9.5	94	0.00
32	M	1,1,1-Trichloroethane	0.669	0.600	10.3	91	0.00
33	M	Carbon Tetrachloride	0.564	0.510	9.6	91	0.00
34	M	Benzene	1.731	1.559	9.9	90	0.00
35		Methacrylonitrile	0.341	0.313	8.2	92	0.00
36	M	1,2-Dichloroethane	0.592	0.543	8.3	91	0.00
37	M	Trichloroethene	0.405	0.363	10.4	89	0.00
38		Methylcyclohexane	0.741	0.681	8.1	95	0.00
39	M	1,2-Dichloropropane	0.430	0.374	13.0	86	0.00
40		Dibromomethane	0.309	0.278	10.0	90	0.00
41	M	Bromodichloromethane	0.614	0.541	11.9	89	0.00
42	M	Vinyl Acetate	1.237	1.113	10.0	91	0.00
43		Ethyl Acetate	0.598	0.510	14.7	86	0.00
44		Isopropyl Acetate	0.984	0.885	10.1	94	0.00
45	T	1,4-Dioxane	0.010	0.010	0.0	90	0.00
46		Methyl methacrylate	0.482	0.442	8.3	95	0.00
47		n-amyl Acetate	0.854	0.765	10.4	93	0.00
48	M	t-1,3-Dichloropropene	0.591	0.502	15.1	93	0.00

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045014.D
Acq On : 21 Feb 2025 13:09
Operator : JC/MD
Sample : VSTDICV020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX022125

Quant Time: Feb 22 01:12:33 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 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	cis-1,3-Dichloropropene	0.670	0.586	12.5	90	0.00
50	M	1,1,2-Trichloroethane	0.403	0.372	7.7	90	0.00
51		Ethyl methacrylate	0.633	0.566	10.6	95	0.00
52		1,3-Dichloropropane	0.706	0.627	11.2	87	0.00
53	M	Dibromochloromethane	0.445	0.392	11.9	88	0.00
54	M	1,2-Dibromoethane	0.409	0.360	12.0	88	0.00
55	M	2-Chloroethyl vinyl ether	0.325	0.279	14.2	87	0.00
56	M	Bromoform	0.279	0.243	12.9	92	0.00
57	I	Chlorobenzene-d5	1.000	1.000	0.0	99	0.00
58	M	4-Methyl-2-Pentanone	0.682	0.636	6.7	92	0.00
59	M	2-Hexanone	0.493	0.471	4.5	95	0.00
60	S	4-Bromofluorobenzene	0.561	0.563	-0.4	99	0.00
61	M	Tetrachloroethene	0.369	0.331	10.3	89	0.00
62	M	Toluene	1.987	1.776	10.6	90	0.00
63	S	Toluene-d8	1.660	1.639	1.3	97	0.00
64	M	Chlorobenzene	1.231	1.105	10.2	90	0.00
65		1,1,1,2-Tetrachloroethane	0.406	0.353	13.1	88	0.00
66	M	Ethyl Benzene	2.176	1.971	9.4	93	0.00
67	M	m/p-Xylenes	0.811	0.734	9.5	89	0.00
68	M	o-Xylene	0.795	0.729	8.3	90	0.00
69	M	Styrene	1.328	1.188	10.5	89	0.00
70		Isopropylbenzene	2.053	1.859	9.4	90	0.00
71	M	1,1,2,2-Tetrachloroethane	0.675	0.619	8.3	92	0.00
72		1,2,3-Trichloropropane	0.555	0.504	9.2	92	0.00
73		Bromobenzene	0.473	0.430	9.1	91	0.00
74		n-propylbenzene	2.443	2.231	8.7	92	0.00
75		2-Chlorotoluene	1.477	1.340	9.3	90	0.00
76		1,3,5-Trimethylbenzene	1.693	1.578	6.8	92	0.00
77		t-1,4-Dichloro-2-butene	0.187	0.149	20.3	92	0.00
78		4-Chlorotoluene	1.646	1.492	9.4	91	0.00
79		tert-butylbenzene	1.706	1.571	7.9	91	0.00
80		1,2,4-Trimethylbenzene	1.696	1.562	7.9	90	0.00
81		sec-Butylbenzene	2.141	1.977	7.7	92	0.00
82		p-Isopropyltoluene	1.735	1.615	6.9	93	0.00
83	M	1,3-Dichlorobenzene	0.879	0.802	8.8	91	0.00
84	M	1,4-Dichlorobenzene	0.867	0.797	8.1	92	0.00
85		n-Butylbenzene	1.584	1.443	8.9	94	0.00
86	T	Hexachloroethane	0.306	0.265	13.4	93	0.00
87	M	1,2-Dichlorobenzene	0.863	0.798	7.5	91	0.00
88		1,2-Dibromo-3-Chloropropane	0.131	0.117	10.7	96	0.00
89		1,2,4-Trichlorobenzene	0.523	0.474	9.4	95	0.00
90		Hexachlorobutadiene	0.213	0.200	6.1	94	0.00
91	M	Naphthalene	1.843	1.684	8.6	93	0.00
92		1,2,3-Trichlorobenzene	0.538	0.466	13.4	88	0.00

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

Evaluate Continuing Calibration Report

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045014.D
Acq On : 21 Feb 2025 13:09
Operator : JC/MD
Sample : VSTDICV020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX022125

Quant Time: Feb 22 01:12:33 2025
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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	Bromochloromethane	30.000	30.000	0.0	97	0.00
2	M	Dichlorodifluoromethane	20.000	18.226	8.9	90	0.00
3	M	Chloromethane	20.000	17.873	10.6	88	0.00
4	M	Vinyl Chloride	20.000	17.401	13.0	87	0.00
5	M	Bromomethane	20.000	19.506	2.5	98	0.00
6	M	Chloroethane	20.000	20.662	-3.3	95	0.00
7	M	Trichlorofluoromethane	20.000	17.793	11.0	91	0.00
8	T	Diethyl Ether	20.000	17.214	13.9	86	0.00
9		1,1,2-Trichlorotrifluoroeth	20.000	18.055	9.7	93	0.00
10	M	1,1-Dichloroethene	20.000	18.088	9.6	93	0.00
11		Methyl Iodide	20.000	15.827	20.9	91	0.00
12		Methyl Acetate	20.000	18.176	9.1	94	0.00
13	M	Acrolein	100.000	95.190	4.8	103	0.00
14	M	Acrylonitrile	100.000	89.730	10.3	90	0.00
15	M	Acetone	100.000	108.932	-8.9	106	0.00
16	M	Carbon Disulfide	20.000	17.896	10.5	93	0.00
17		Allyl chloride	20.000	17.812	10.9	93	0.00
18	M	Methylene Chloride	20.000	17.621	11.9	88	0.00
19	M	trans-1,2-Dichloroethene	20.000	17.825	10.9	91	0.00
20	T	Diisopropyl ether	20.000	17.850	10.7	91	0.00
21	M	1,1-Dichloroethane	20.000	17.693	11.5	90	0.00
22	M	cis-1,2-Dichloroethene	20.000	17.695	11.5	90	-0.01
23	M	tert-Butyl Alcohol	100.000	92.286	7.7	95	-0.02
24	M	Methyl tert-Butyl Ether	20.000	17.690	11.5	91	0.00
25	M	Chloroform	20.000	17.943	10.3	90	-0.01
26		Cyclohexane	20.000	17.890	10.5	90	0.00
27	s	1,2-Dichloroethane-d4	30.000	29.736	0.9	97	0.00
28	I	1,4-Difluorobenzene	30.000	30.000	0.0	98	0.00
29		1,1-Dichloropropene	20.000	17.969	10.2	90	-0.01
30	M	2-Butanone	100.000	96.206	3.8	97	0.00
31		2,2-Dichloropropane	20.000	18.104	9.5	94	0.00
32	M	1,1,1-Trichloroethane	20.000	17.945	10.3	91	0.00
33	M	Carbon Tetrachloride	20.000	18.080	9.6	91	0.00
34	M	Benzene	20.000	18.013	9.9	90	0.00
35		Methacrylonitrile	20.000	18.343	8.3	92	0.00
36	M	1,2-Dichloroethane	20.000	18.316	8.4	91	0.00
37	M	Trichloroethene	20.000	17.933	10.3	89	0.00
38		Methylcyclohexane	20.000	18.370	8.1	95	0.00
39	M	1,2-Dichloropropane	20.000	17.406	13.0	86	0.00
40		Dibromomethane	20.000	18.010	9.9	90	0.00
41	M	Bromodichloromethane	20.000	17.645	11.8	89	0.00
42	M	Vinyl Acetate	100.000	89.973	10.0	91	0.00
43		Ethyl Acetate	20.000	17.072	14.6	86	0.00
44		Isopropyl Acetate	20.000	17.994	10.0	94	0.00
45	T	1,4-Dioxane	400.000	376.282	5.9	90	0.00
46		Methyl methacrylate	20.000	18.320	8.4	95	0.00
47		n-amyl Acetate	20.000	17.920	10.4	93	0.00
48	M	t-1,3-Dichloropropene	20.000	16.972	15.1	93	0.00

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045014.D
Acq On : 21 Feb 2025 13:09
Operator : JC/MD
Sample : VSTDICV020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX022125

Quant Time: Feb 22 01:12:33 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 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	cis-1,3-Dichloropropene	20.000	17.491	12.5	90	0.00
50	M	1,1,2-Trichloroethane	20.000	18.451	7.7	90	0.00
51		Ethyl methacrylate	20.000	17.882	10.6	95	0.00
52		1,3-Dichloropropane	20.000	17.765	11.2	87	0.00
53	M	Dibromochloromethane	20.000	17.620	11.9	88	0.00
54	M	1,2-Dibromoethane	20.000	17.616	11.9	88	0.00
55	M	2-Chloroethyl vinyl ether	100.000	85.929	14.1	87	0.00
56	M	Bromoform	20.000	17.412	12.9	92	0.00
57	I	Chlorobenzene-d5	30.000	30.000	0.0	99	0.00
58	M	4-Methyl-2-Pentanone	100.000	93.175	6.8	92	0.00
59	M	2-Hexanone	100.000	95.501	4.5	95	0.00
60	S	4-Bromofluorobenzene	30.000	30.094	-0.3	99	0.00
61	M	Tetrachloroethene	20.000	17.908	10.5	89	0.00
62	M	Toluene	20.000	17.876	10.6	90	0.00
63	S	Toluene-d8	30.000	29.620	1.3	97	0.00
64	M	Chlorobenzene	20.000	17.942	10.3	90	0.00
65		1,1,1,2-Tetrachloroethane	20.000	17.362	13.2	88	0.00
66	M	Ethyl Benzene	20.000	18.117	9.4	93	0.00
67	M	m/p-Xylenes	40.000	36.205	9.5	89	0.00
68	M	o-Xylene	20.000	18.340	8.3	90	0.00
69	M	Styrene	20.000	17.886	10.6	89	0.00
70		Isopropylbenzene	20.000	18.117	9.4	90	0.00
71	M	1,1,2,2-Tetrachloroethane	20.000	18.349	8.3	92	0.00
72		1,2,3-Trichloropropane	20.000	18.172	9.1	92	0.00
73		Bromobenzene	20.000	18.218	8.9	91	0.00
74		n-propylbenzene	20.000	18.269	8.7	92	0.00
75		2-Chlorotoluene	20.000	18.145	9.3	90	0.00
76		1,3,5-Trimethylbenzene	20.000	18.633	6.8	92	0.00
77		t-1,4-Dichloro-2-butene	20.000	15.964	20.2	92	0.00
78		4-Chlorotoluene	20.000	18.131	9.3	91	0.00
79		tert-butylbenzene	20.000	18.420	7.9	91	0.00
80		1,2,4-Trimethylbenzene	20.000	18.423	7.9	90	0.00
81		sec-Butylbenzene	20.000	18.461	7.7	92	0.00
82		p-Isopropyltoluene	20.000	18.616	6.9	93	0.00
83	M	1,3-Dichlorobenzene	20.000	18.234	8.8	91	0.00
84	M	1,4-Dichlorobenzene	20.000	18.390	8.0	92	0.00
85		n-Butylbenzene	20.000	18.213	8.9	94	0.00
86	T	Hexachloroethane	20.000	17.309	13.5	93	0.00
87	M	1,2-Dichlorobenzene	20.000	18.513	7.4	91	0.00
88		1,2-Dibromo-3-Chloropropane	20.000	17.893	10.5	96	0.00
89		1,2,4-Trichlorobenzene	20.000	18.126	9.4	95	0.00
90		Hexachlorobutadiene	20.000	18.726	6.4	94	0.00
91	M	Naphthalene	20.000	18.271	8.6	93	0.00
92		1,2,3-Trichlorobenzene	20.000	17.312	13.4	88	0.00

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

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: TRIS02

Lab Code: CHEM Case No.: Q1429 SAS No.: Q1429 SDG No.: Q1429

Instrument ID: MSVOA_X Calibration Date/Time: 02/26/2025 10:05

Lab File ID: VX045044.D Init. Calib. Date(s): 02/21/2025 02/21/2025

Heated Purge: (Y/N) N Init. Calib. Time(s): 09:58 11:29

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

COMPOUND	RRF	RRF020	MIN RRF	%D	MAX%D
Ethyl Acetate	0.598	0.601		0.5	
Isopropyl Acetate	0.984	1.009		2.54	
Acetone	0.355	0.399		12.39	
Methylene Chloride	2.563	2.401		-6.32	
1,2-Dichloroethane-d4	2.914	2.879	0.01	-1.2	
Toluene-d8	1.660	1.673	0.01	0.78	
4-Bromofluorobenzene	0.561	0.545	0.2	-2.85	
n-amyl Acetate	0.854	0.789		-7.61	

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

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022625\
Data File : VX045044.D
Acq On : 26 Feb 2025 10:05
Operator : JC/MD
Sample : VSTDCCC020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 27 05:09:55 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDCCC020

Manual Integrations APPROVED

Reviewed By :John Carlone 02/27/2025
Supervised By :Mahesh Dadoda 02/27/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.885	128	19230	30.000	ug/l	0.00
28) 1,4-Difluorobenzene	6.751	114	102945	30.000	ug/l	0.00
57) Chlorobenzene-d5	10.049	117	95036	30.000	ug/l	0.00
System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	5.946	65	55370	29.646	ug/l	0.00
Spiked Amount 30.000	Range 91 - 110		Recovery = 98.833%			
60) 4-Bromofluorobenzene	11.079	95	51813	29.168	ug/l	0.00
Spiked Amount 30.000	Range 63 - 112		Recovery = 97.233%			
63) Toluene-d8	8.641	98	158959	30.234	ug/l	0.00
Spiked Amount 30.000	Range 91 - 112		Recovery = 100.767%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.166	85	31462	19.408	ug/l	99
3) Chloromethane	1.307	50	34040	17.532	ug/l	98
4) Vinyl Chloride	1.374	62	34434	18.379	ug/l	99
5) Bromomethane	1.593	94	13734	21.059	ug/l	95
6) Chloroethane	1.666	64	19019	18.743	ug/l	90
7) Trichlorofluoromethane	1.874	101	49435	19.632	ug/l	94
8) Diethyl Ether	2.130	74	17965	18.856	ug/l	100
9) 1,1,2-Trichlorotrifluo...	2.319	101	28198	18.855	ug/l	99
10) 1,1-Dichloroethene	2.306	96	27377	18.741	ug/l	87
11) Methyl Iodide	2.441	142	28925	17.495	ug/l	96
12) Methyl Acetate	2.697	43	37181	21.918	ug/l	97
13) Acrolein	2.233	56	44256	130.158	ug/l	98
14) Acrylonitrile	3.062	53	85687	103.413	ug/l	99
15) Acetone	2.380	58	25551	112.437	ug/l	98
16) Carbon Disulfide	2.502	76	73537	17.747	ug/l	99
17) Allyl chloride	2.654	41	51459	18.834	ug/l	98
18) Methylene Chloride	2.782	84	30781	18.734	ug/l	95
19) trans-1,2-Dichloroethene	3.081	96	27485	18.597	ug/l	97
20) Diisopropyl ether	3.757	45	99862	19.020	ug/l	88
21) 1,1-Dichloroethane	3.599	63	54908	18.804	ug/l	98
22) cis-1,2-Dichloroethene	4.477	96	33612	18.979	ug/l	99
23) tert-Butyl Alcohol	2.971	59	27816	96.162	ug/l #	100
24) Methyl tert-Butyl Ether	3.111	73	90352	18.950	ug/l	100
25) Chloroform	5.080	83	55342	19.622	ug/l	94
26) Cyclohexane	5.458	56	49397	18.327	ug/l #	97
29) 1,1-Dichloropropene	5.684	75	36670	19.364	ug/l	99
30) 2-Butanone	4.550	43	121667	111.235	ug/l	99
31) 2,2-Dichloropropane	4.465	77	40695	19.005	ug/l	99
32) 1,1,1-Trichloroethane	5.367	97	45638	19.891	ug/l	98
33) Carbon Tetrachloride	5.666	117	38939	20.109	ug/l	98
34) Benzene	6.031	78	117417	19.772	ug/l	98
35) Methacrylonitrile	4.916	41	25005	21.363	ug/l	95
36) 1,2-Dichloroethane	6.080	62	41224	20.276	ug/l	98
37) Trichloroethene	7.117	130	27352	19.687	ug/l	96
38) Methylcyclohexane	7.373	83	49126	19.321	ug/l	98
39) 1,2-Dichloropropane	7.421	63	28774	19.489	ug/l	98
40) Dibromomethane	7.580	93	21468	20.263	ug/l	98
41) Bromodichloromethane	7.818	83	42398	20.135	ug/l	96
42) Vinyl Acetate	3.715	43	415494	97.890	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022625\
Data File : VX045044.D
Acq On : 26 Feb 2025 10:05
Operator : JC/MD
Sample : VSTDCCC020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 27 05:09:55 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDCCC020

Manual Integrations APPROVED

Reviewed By :John Carlone 02/27/2025
Supervised By :Mahesh Dadoda 02/27/2025

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) Ethyl Acetate	4.708	43	41236	20.103 ug/l #	81
44) Isopropyl Acetate	6.336	43	69278	20.521 ug/l	98
45) 1,4-Dioxane	7.659	88	14555	414.728 ug/l	97
46) Methyl methacrylate	7.690	41	33818	20.429 ug/l	98
47) n-amyl Acetate	10.842	43	54130	18.477 ug/l	98
48) t-1,3-Dichloropropene	8.976	75	37126	18.292 ug/l	97
49) cis-1,3-Dichloropropene	8.360	75	44780	19.490 ug/l	96
50) 1,1,2-Trichloroethane	9.147	97	28405	20.554 ug/l	94
51) Ethyl methacrylate	9.110	69	41117	18.918 ug/l	99
52) 1,3-Dichloropropane	9.305	76	49436	20.416 ug/l	98
53) Dibromochloromethane	9.519	129	30769	20.131 ug/l	96
54) 1,2-Dibromoethane	9.604	107	28746	20.485 ug/l	98
55) 2-Chloroethyl vinyl ether	8.238	63	97607	87.452 ug/l	99
56) Bromoform	10.799	173	19184	20.030 ug/l	100
58) 4-Methyl-2-Pentanone	8.568	43	231515	107.090 ug/l	99
59) 2-Hexanone	9.427	43	163605	104.699 ug/l	100
61) Tetrachloroethene	9.269	164	23592	20.159 ug/l	96
62) Toluene	8.714	91	125287	19.901 ug/l	100
64) Chlorobenzene	10.073	112	77755	19.931 ug/l	99
65) 1,1,1,2-Tetrachloroethane	10.159	131	25296	19.651 ug/l	99
66) Ethyl Benzene	10.189	91	135083	19.599 ug/l	98
67) m/p-Xylenes	10.299	106	102314	39.842 ug/l	99
68) o-Xylene	10.640	106	50250	19.944 ug/l	98
69) Styrene	10.653	104	83136	19.756 ug/l	98
70) Isopropylbenzene	10.957	105	129729	19.952 ug/l	99
71) 1,1,2,2-Tetrachloroethane	11.207	83	42766	20.002 ug/l	99
72) 1,2,3-Trichloropropane	11.238	75	35491m	20.181 ug/l	
73) Bromobenzene	11.195	156	29403	19.643 ug/l	100
74) n-propylbenzene	11.299	91	149615	19.336 ug/l	99
75) 2-Chlorotoluene	11.360	91	90923	19.437 ug/l	99
76) 1,3,5-Trimethylbenzene	11.451	105	106138	19.787 ug/l	98
77) t-1,4-Dichloro-2-butene	11.018	75	10999	18.590 ug/l	92
78) 4-Chlorotoluene	11.451	91	100745	19.320 ug/l	100
79) tert-butylbenzene	11.713	119	107314	19.856 ug/l	99
80) 1,2,4-Trimethylbenzene	11.750	105	104704	19.486 ug/l	98
81) sec-Butylbenzene	11.890	105	132184	19.487 ug/l	99
82) p-Isopropyltoluene	12.006	119	106300	19.341 ug/l	99
83) 1,3-Dichlorobenzene	11.969	146	51967	18.660 ug/l	97
84) 1,4-Dichlorobenzene	12.036	146	52050	18.955 ug/l	98
85) n-Butylbenzene	12.329	91	93367	18.603 ug/l	98
86) Hexachloroethane	12.536	117	18705	19.298 ug/l	100
87) 1,2-Dichlorobenzene	12.335	146	52340	19.154 ug/l	99
88) 1,2-Dibromo-3-Chloropr...	12.939	75	7886	19.050 ug/l	99
89) 1,2,4-Trichlorobenzene	13.585	180	30337	18.317 ug/l	96
90) Hexachlorobutadiene	13.725	225	12973	19.208 ug/l	97
91) Naphthalene	13.774	128	108849	18.639 ug/l	99
92) 1,2,3-Trichlorobenzene	13.963	180	31303	18.359 ug/l	99

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

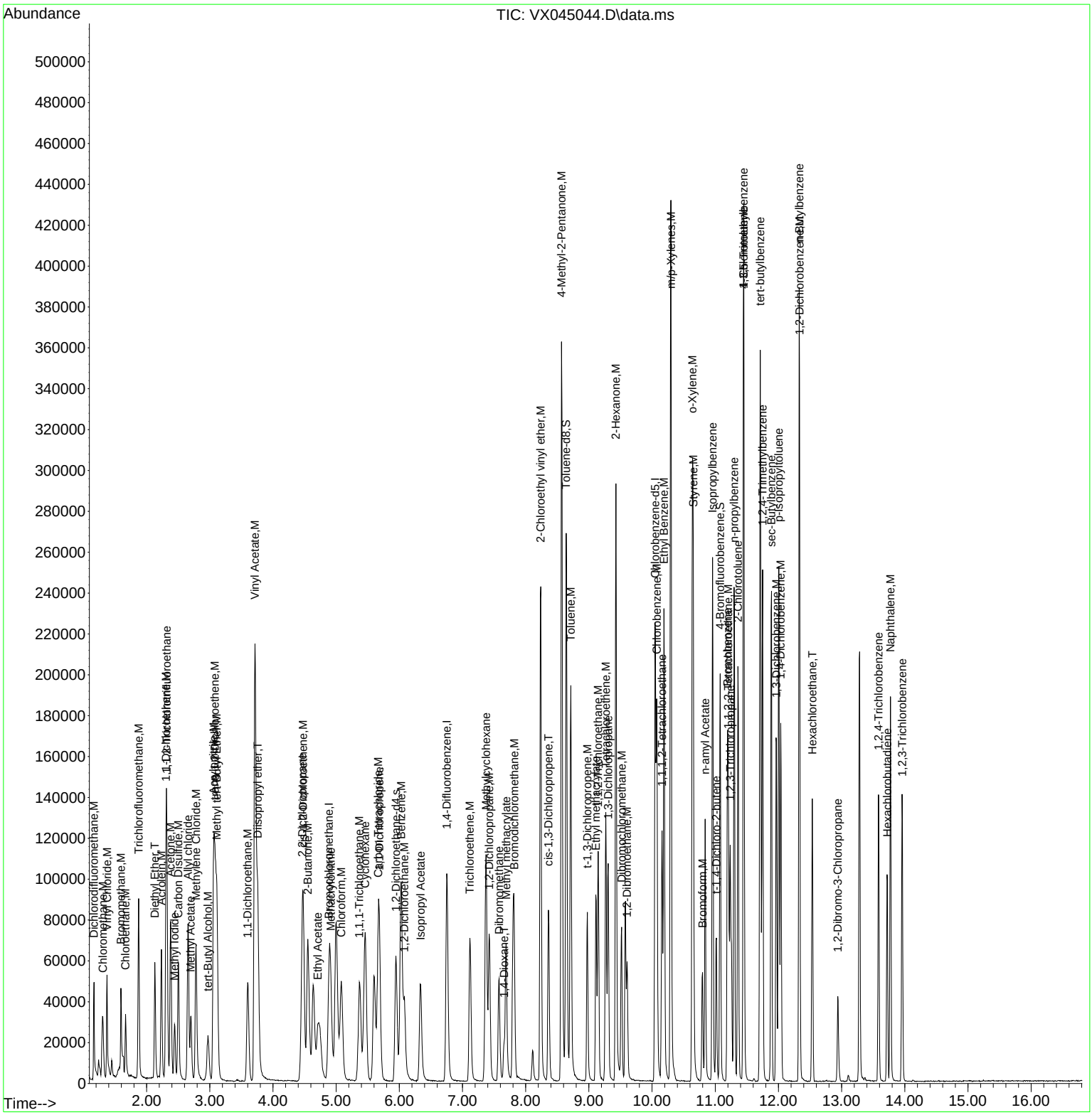
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022625\
Data File : VX045044.D
Acq On : 26 Feb 2025 10:05
Operator : JC/MD
Sample : VSTDCCC020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 27 05:09:55 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDCCC020

Manual Integrations APPROVED

Reviewed By :John Carlone 02/27/2025
Supervised By :Mahesh Dadoda 02/27/2025



Evaluate Continuing Calibration Report

Sample Results: **VX045044.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022625\
Data File : VX045044.D
Acq On : 26 Feb 2025 10:05
Operator : JC/MD
Sample : VSTDCCC020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC020

Quant Time: Feb 27 05:09:55 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 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	Bromochloromethane	1.000	1.000	0.0	104	0.00
2	M	Dichlorodifluoromethane	2.529	2.454	3.0	103	0.00
3	M	Chloromethane	3.029	2.655	12.3	93	0.01
4	M	Vinyl Chloride	2.923	2.686	8.1	99	0.00
5	M	Bromomethane	1.017	1.071	-5.3	114	0.00
6	M	Chloroethane	1.583	1.484	6.3	93	0.00
7	M	Trichlorofluoromethane	3.928	3.856	1.8	108	0.00
8	T	Diethyl Ether	1.486	1.401	5.7	102	0.00
9		1,1,2-Trichlorotrifluoroeth	2.333	2.200	5.7	105	0.00
10	M	1,1-Dichloroethene	2.279	2.135	6.3	104	0.00
11		Methyl Iodide	2.579	2.256	12.5	108	0.00
12		Methyl Acetate	2.646	2.900	-9.6	122	0.00
13	M	Acrolein	0.530	0.690	-30.2#	152#	0.00
14	M	Acrylonitrile	1.293	1.337	-3.4	112	0.00
15	M	Acetone	0.355	0.399	-12.4	118	0.00
16	M	Carbon Disulfide	6.464	5.736	11.3	100	0.00
17		Allyl chloride	4.262	4.014	5.8	106	0.00
18	M	Methylene Chloride	2.563	2.401	6.3	101	0.00
19	M	trans-1,2-Dichloroethene	2.306	2.144	7.0	102	0.00
20	T	Diisopropyl ether	8.191	7.790	4.9	104	0.00
21	M	1,1-Dichloroethane	4.555	4.283	6.0	103	0.00
22	M	cis-1,2-Dichloroethene	2.763	2.622	5.1	104	0.00
23	M	tert-Butyl Alcohol	0.451	0.434	3.8	106	-0.01
24	M	Methyl tert-Butyl Ether	7.438	7.048	5.2	105	0.00
25	M	Chloroform	4.400	4.317	1.9	106	0.00
26		Cyclohexane	4.205	3.853	8.4	99	0.00
27	s	1,2-Dichloroethane-d4	2.914	2.879	1.2	104	0.00
28	I	1,4-Difluorobenzene	1.000	1.000	0.0	102	0.00
29		1,1-Dichloropropene	0.552	0.534	3.3	102	0.00
30	M	2-Butanone	0.319	0.355	-11.3	117	0.00
31		2,2-Dichloropropane	0.624	0.593	5.0	103	0.00
32	M	1,1,1-Trichloroethane	0.669	0.665	0.6	105	0.00
33	M	Carbon Tetrachloride	0.564	0.567	-0.5	106	0.00
34	M	Benzene	1.731	1.711	1.2	103	0.00
35		Methacrylonitrile	0.341	0.364	-6.7	112	0.00
36	M	1,2-Dichloroethane	0.592	0.601	-1.5	106	0.00
37	M	Trichloroethene	0.405	0.399	1.5	102	0.00
38		Methylcyclohexane	0.741	0.716	3.4	104	0.00
39	M	1,2-Dichloropropane	0.430	0.419	2.6	101	0.00
40		Dibromomethane	0.309	0.313	-1.3	106	0.00
41	M	Bromodichloromethane	0.614	0.618	-0.7	106	0.00
42	M	Vinyl Acetate	1.237	1.211	2.1	104	0.00
43		Ethyl Acetate	0.598	0.601	-0.5	106	0.00
44		Isopropyl Acetate	0.984	1.009	-2.5	112	0.00
45	T	1,4-Dioxane	0.010	0.011	-10.0	104	0.00
46		Methyl methacrylate	0.482	0.493	-2.3	110	0.00
47		n-amyl Acetate	0.854	0.789	7.6	100	0.00
48	M	t-1,3-Dichloropropene	0.591	0.541	8.5	104	0.00

Sample Results: **VX045044.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022625\
Data File : VX045044.D
Acq On : 26 Feb 2025 10:05
Operator : JC/MD
Sample : VSTDCCC020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC020

Quant Time: Feb 27 05:09:55 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 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	cis-1,3-Dichloropropene	0.670	0.652	2.7	105	0.00
50	M	1,1,2-Trichloroethane	0.403	0.414	-2.7	105	0.00
51		Ethyl methacrylate	0.633	0.599	5.4	104	0.00
52		1,3-Dichloropropane	0.706	0.720	-2.0	104	0.00
53	M	Dibromochloromethane	0.445	0.448	-0.7	105	0.00
54	M	1,2-Dibromoethane	0.409	0.419	-2.4	107	0.00
55	M	2-Chloroethyl vinyl ether	0.325	0.284	12.6	92	0.00
56	M	Bromoform	0.279	0.280	-0.4	111	0.00
57	I	Chlorobenzene-d5	1.000	1.000	0.0	104	0.00
58	M	4-Methyl-2-Pentanone	0.682	0.731	-7.2	111	0.00
59	M	2-Hexanone	0.493	0.516	-4.7	110	0.00
60	S	4-Bromofluorobenzene	0.561	0.545	2.9	101	0.00
61	M	Tetrachloroethene	0.369	0.372	-0.8	105	0.00
62	M	Toluene	1.987	1.977	0.5	105	0.00
63	S	Toluene-d8	1.660	1.673	-0.8	104	0.00
64	M	Chlorobenzene	1.231	1.227	0.3	105	0.00
65		1,1,1,2-Tetrachloroethane	0.406	0.399	1.7	105	0.00
66	M	Ethyl Benzene	2.176	2.132	2.0	105	0.00
67	M	m/p-Xylenes	0.811	0.807	0.5	102	0.00
68	M	o-Xylene	0.795	0.793	0.3	103	0.00
69	M	Styrene	1.328	1.312	1.2	103	0.00
70		Isopropylbenzene	2.053	2.048	0.2	104	0.00
71	M	1,1,2,2-Tetrachloroethane	0.675	0.675	0.0	105	0.00
72		1,2,3-Trichloropropane	0.555	0.560	-0.9	107	0.00
73		Bromobenzene	0.473	0.464	1.9	103	0.00
74		n-propylbenzene	2.443	2.361	3.4	102	0.00
75		2-Chlorotoluene	1.477	1.435	2.8	101	0.00
76		1,3,5-Trimethylbenzene	1.693	1.675	1.1	103	0.00
77		t-1,4-Dichloro-2-butene	0.187	0.174	7.0	112	0.00
78		4-Chlorotoluene	1.646	1.590	3.4	102	0.00
79		tert-butylbenzene	1.706	1.694	0.7	103	0.00
80		1,2,4-Trimethylbenzene	1.696	1.653	2.5	100	0.00
81		sec-Butylbenzene	2.141	2.086	2.6	102	0.00
82		p-Isopropyltoluene	1.735	1.678	3.3	102	0.00
83	M	1,3-Dichlorobenzene	0.879	0.820	6.7	97	0.00
84	M	1,4-Dichlorobenzene	0.867	0.822	5.2	100	0.00
85		n-Butylbenzene	1.584	1.474	6.9	101	0.00
86	T	Hexachloroethane	0.306	0.295	3.6	108	0.00
87	M	1,2-Dichlorobenzene	0.863	0.826	4.3	99	0.00
88		1,2-Dibromo-3-Chloropropane	0.131	0.124	5.3	107	0.00
89		1,2,4-Trichlorobenzene	0.523	0.479	8.4	101	0.00
90		Hexachlorobutadiene	0.213	0.205	3.8	101	0.00
91	M	Naphthalene	1.843	1.718	6.8	100	0.00
92		1,2,3-Trichlorobenzene	0.538	0.494	8.2	98	0.00

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

Sample Results: **VX045044.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022625\
Data File : VX045044.D
Acq On : 26 Feb 2025 10:05
Operator : JC/MD
Sample : VSTDCCC020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC020

Quant Time: Feb 27 05:09:55 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 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	Bromochloromethane	30.000	30.000	0.0	104	0.00
2	M	Dichlorodifluoromethane	20.000	19.408	3.0	103	0.00
3	M	Chloromethane	20.000	17.532	12.3	93	0.01
4	M	Vinyl Chloride	20.000	18.379	8.1	99	0.00
5	M	Bromomethane	20.000	21.059	-5.3	114	0.00
6	M	Chloroethane	20.000	18.743	6.3	93	0.00
7	M	Trichlorofluoromethane	20.000	19.632	1.8	108	0.00
8	T	Diethyl Ether	20.000	18.856	5.7	102	0.00
9		1,1,2-Trichlorotrifluoroeth	20.000	18.855	5.7	105	0.00
10	M	1,1-Dichloroethene	20.000	18.741	6.3	104	0.00
11		Methyl Iodide	20.000	17.495	12.5	108	0.00
12		Methyl Acetate	20.000	21.918	-9.6	122	0.00
13	M	Acrolein	100.000	130.158	-30.2#	152	0.00
14	M	Acrylonitrile	100.000	103.413	-3.4	112	0.00
15	M	Acetone	100.000	112.437	-12.4	118	0.00
16	M	Carbon Disulfide	20.000	17.747	11.3	100	0.00
17		Allyl chloride	20.000	18.834	5.8	106	0.00
18	M	Methylene Chloride	20.000	18.734	6.3	101	0.00
19	M	trans-1,2-Dichloroethene	20.000	18.597	7.0	102	0.00
20	T	Diisopropyl ether	20.000	19.020	4.9	104	0.00
21	M	1,1-Dichloroethane	20.000	18.804	6.0	103	0.00
22	M	cis-1,2-Dichloroethene	20.000	18.979	5.1	104	0.00
23	M	tert-Butyl Alcohol	100.000	96.162	3.8	106	-0.01
24	M	Methyl tert-Butyl Ether	20.000	18.950	5.3	105	0.00
25	M	Chloroform	20.000	19.622	1.9	106	0.00
26		Cyclohexane	20.000	18.327	8.4	99	0.00
27	s	1,2-Dichloroethane-d4	30.000	29.646	1.2	104	0.00
28	I	1,4-Difluorobenzene	30.000	30.000	0.0	102	0.00
29		1,1-Dichloropropene	20.000	19.364	3.2	102	0.00
30	M	2-Butanone	100.000	111.235	-11.2	117	0.00
31		2,2-Dichloropropane	20.000	19.005	5.0	103	0.00
32	M	1,1,1-Trichloroethane	20.000	19.891	0.5	105	0.00
33	M	Carbon Tetrachloride	20.000	20.109	-0.5	106	0.00
34	M	Benzene	20.000	19.772	1.1	103	0.00
35		Methacrylonitrile	20.000	21.363	-6.8	112	0.00
36	M	1,2-Dichloroethane	20.000	20.276	-1.4	106	0.00
37	M	Trichloroethene	20.000	19.687	1.6	102	0.00
38		Methylcyclohexane	20.000	19.321	3.4	104	0.00
39	M	1,2-Dichloropropane	20.000	19.489	2.6	101	0.00
40		Dibromomethane	20.000	20.263	-1.3	106	0.00
41	M	Bromodichloromethane	20.000	20.135	-0.7	106	0.00
42	M	Vinyl Acetate	100.000	97.890	2.1	104	0.00
43		Ethyl Acetate	20.000	20.103	-0.5	106	0.00
44		Isopropyl Acetate	20.000	20.521	-2.6	112	0.00
45	T	1,4-Dioxane	400.000	414.728	-3.7	104	0.00
46		Methyl methacrylate	20.000	20.429	-2.1	110	0.00
47		n-amyl Acetate	20.000	18.477	7.6	100	0.00
48	M	t-1,3-Dichloropropene	20.000	18.292	8.5	104	0.00

Sample Results: **VX045044.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022625\
Data File : VX045044.D
Acq On : 26 Feb 2025 10:05
Operator : JC/MD
Sample : VSTDCCC020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC020

Quant Time: Feb 27 05:09:55 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 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	cis-1,3-Dichloropropene	20.000	19.490	2.6	105	0.00
50	M	1,1,2-Trichloroethane	20.000	20.554	-2.8	105	0.00
51		Ethyl methacrylate	20.000	18.918	5.4	104	0.00
52		1,3-Dichloropropane	20.000	20.416	-2.1	104	0.00
53	M	Dibromochloromethane	20.000	20.131	-0.7	105	0.00
54	M	1,2-Dibromoethane	20.000	20.485	-2.4	107	0.00
55	M	2-Chloroethyl vinyl ether	100.000	87.452	12.5	92	0.00
56	M	Bromoform	20.000	20.030	-0.2	111	0.00
57	I	Chlorobenzene-d5	30.000	30.000	0.0	104	0.00
58	M	4-Methyl-2-Pentanone	100.000	107.090	-7.1	111	0.00
59	M	2-Hexanone	100.000	104.699	-4.7	110	0.00
60	S	4-Bromofluorobenzene	30.000	29.168	2.8	101	0.00
61	M	Tetrachloroethene	20.000	20.159	-0.8	105	0.00
62	M	Toluene	20.000	19.901	0.5	105	0.00
63	S	Toluene-d8	30.000	30.234	-0.8	104	0.00
64	M	Chlorobenzene	20.000	19.931	0.3	105	0.00
65		1,1,1,2-Tetrachloroethane	20.000	19.651	1.7	105	0.00
66	M	Ethyl Benzene	20.000	19.599	2.0	105	0.00
67	M	m/p-Xylenes	40.000	39.842	0.4	102	0.00
68	M	o-Xylene	20.000	19.944	0.3	103	0.00
69	M	Styrene	20.000	19.756	1.2	103	0.00
70		Isopropylbenzene	20.000	19.952	0.2	104	0.00
71	M	1,1,2,2-Tetrachloroethane	20.000	20.002	-0.0	105	0.00
72		1,2,3-Trichloropropane	20.000	20.181	-0.9	107	0.00
73		Bromobenzene	20.000	19.643	1.8	103	0.00
74		n-propylbenzene	20.000	19.336	3.3	102	0.00
75		2-Chlorotoluene	20.000	19.437	2.8	101	0.00
76		1,3,5-Trimethylbenzene	20.000	19.787	1.1	103	0.00
77		t-1,4-Dichloro-2-butene	20.000	18.590	7.1	112	0.00
78		4-Chlorotoluene	20.000	19.320	3.4	102	0.00
79		tert-butylbenzene	20.000	19.856	0.7	103	0.00
80		1,2,4-Trimethylbenzene	20.000	19.486	2.6	100	0.00
81		sec-Butylbenzene	20.000	19.487	2.6	102	0.00
82		p-Isopropyltoluene	20.000	19.341	3.3	102	0.00
83	M	1,3-Dichlorobenzene	20.000	18.660	6.7	97	0.00
84	M	1,4-Dichlorobenzene	20.000	18.955	5.2	100	0.00
85		n-Butylbenzene	20.000	18.603	7.0	101	0.00
86	T	Hexachloroethane	20.000	19.298	3.5	108	0.00
87	M	1,2-Dichlorobenzene	20.000	19.154	4.2	99	0.00
88		1,2-Dibromo-3-Chloropropane	20.000	19.050	4.7	107	0.00
89		1,2,4-Trichlorobenzene	20.000	18.317	8.4	101	0.00
90		Hexachlorobutadiene	20.000	19.208	4.0	101	0.00
91	M	Naphthalene	20.000	18.639	6.8	100	0.00
92		1,2,3-Trichlorobenzene	20.000	18.359	8.2	98	0.00

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

QC SAMPLE DATA

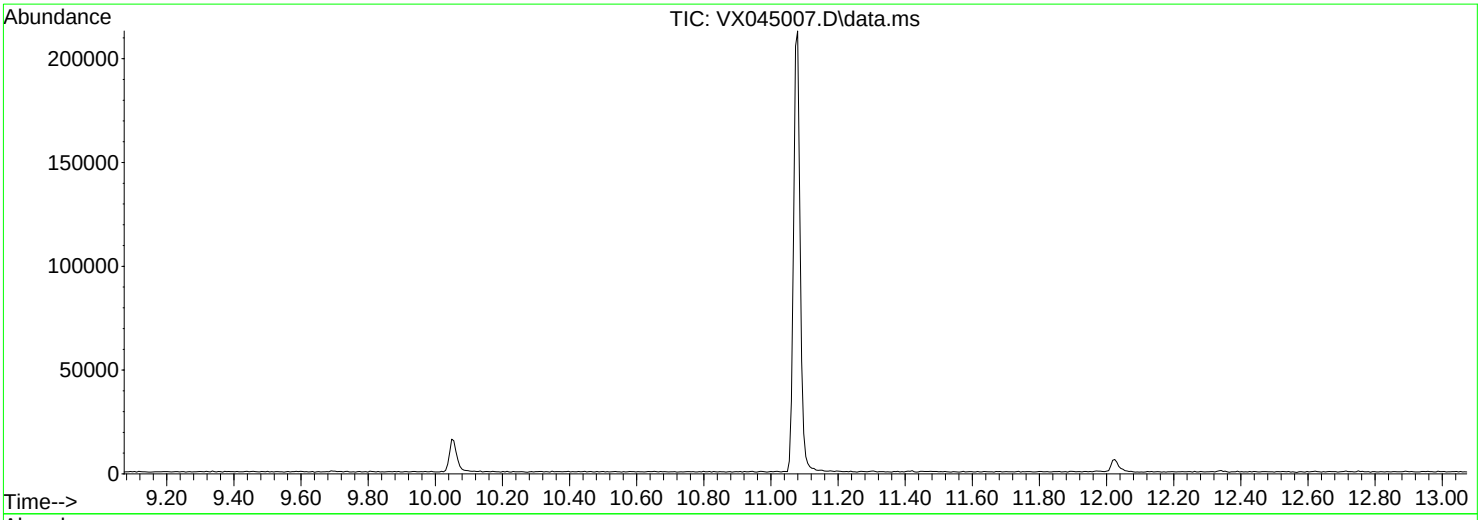
Sample Results: **VX045007.D**

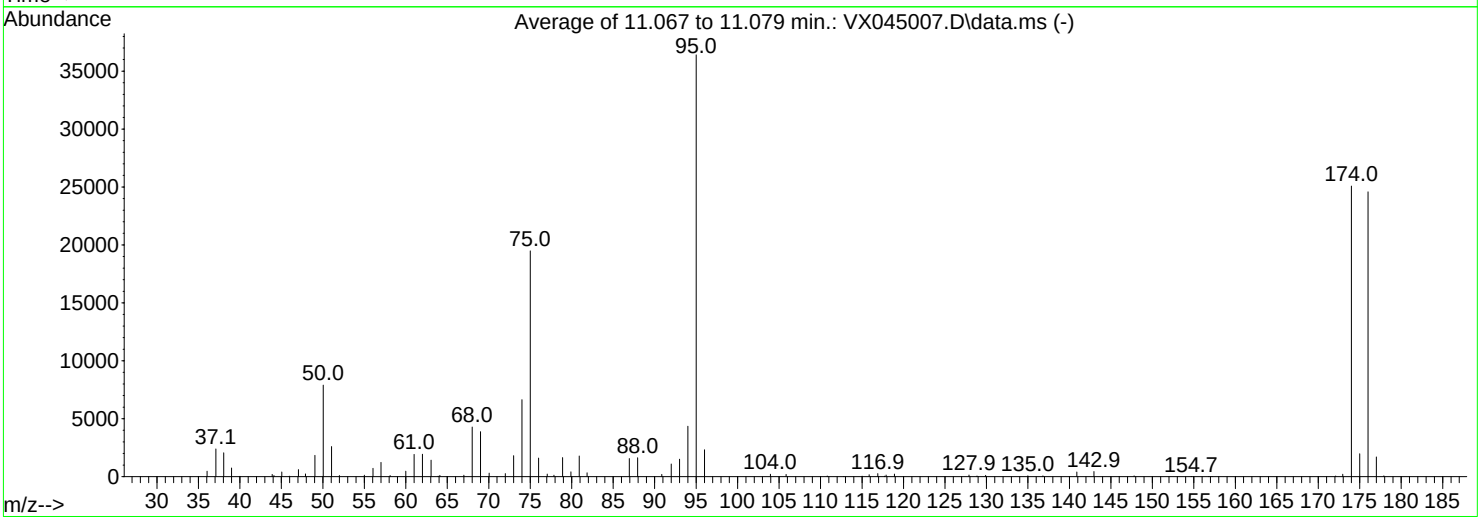
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022125\
Data File : VX045007.D
Acq On : 21 Feb 2025 09:31
Operator : JC/MD
Sample : BFB
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
BFB

Integration File: RTEINT3.P

Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
Last Update : Sat Feb 22 01:06:36 2025





AutoFind: Scans 1637, 1638, 1639; Background Corrected with Scan 1632

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.7	7903	PASS
75	95	30	60	53.5	19493	PASS
95	95	100	100	100.0	36408	PASS
96	95	5	9	6.4	2318	PASS
173	174	0.00	2	0.8	213	PASS
174	95	50	100	68.9	25081	PASS
175	174	5	9	7.9	1979	PASS
176	174	95	101	98.0	24589	PASS
177	176	5	9	6.9	1695	PASS

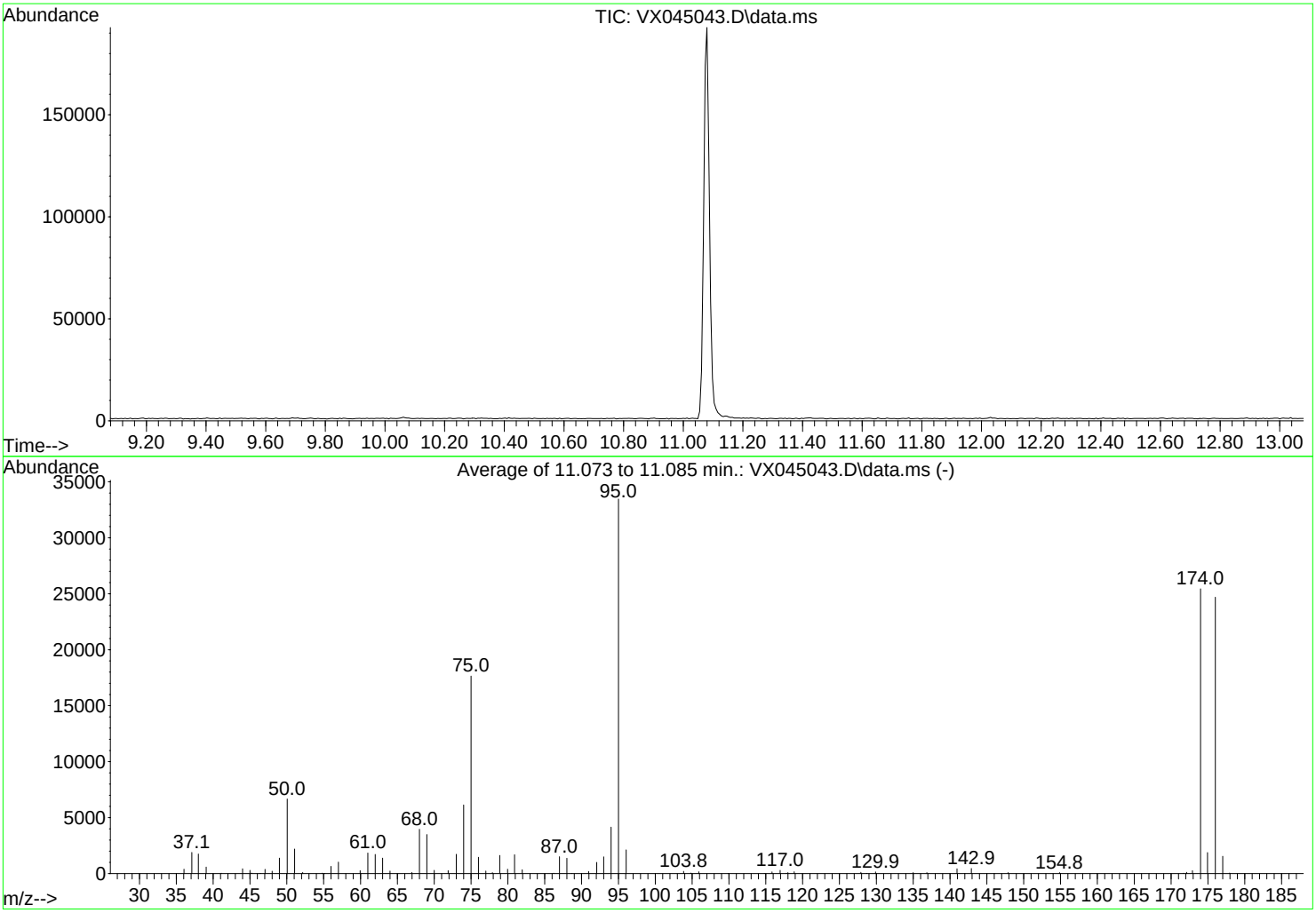
Sample Results: **VX045043.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022625\
Data File : VX045043.D
Acq On : 26 Feb 2025 09:33
Operator : JC/MD
Sample : BFB
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
BFB

Integration File: RTEINT3.P

Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
Last Update : Sat Feb 22 01:06:36 2025



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

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.9	6662	PASS
75	95	30	60	52.7	17644	PASS
95	95	100	100	100.0	33467	PASS
96	95	5	9	6.4	2127	PASS
173	174	0.00	2	1.1	270	PASS
174	95	50	100	76.0	25443	PASS
175	174	5	9	7.4	1880	PASS
176	174	95	101	97.1	24696	PASS
177	176	5	9	6.3	1545	PASS

Raw Data: **VX045047.D**

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

Report of Analysis

Client:	Tris Pharma, Inc.		Date Collected:		
Project:	Quarterly		Date Received:		
Client Sample ID:	VX0226WBL01		SDG No.:	Q1429	
Lab Sample ID:	VX0226WBL01		Matrix:	Water	
Analytical Method:	E624.1		% Solid:	0	
Sample Wt/Vol:	5 Units:	mL	Final Vol:	5000	uL
Soil Aliquot Vol:		uL	Test:	VOCMS Group1	
GC Column:	DB-624UI ID :	0.18	Level :	LOW	
Prep Method :					

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX045047.D	1		02/26/25 11:26	VX022625

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
141-78-6	Ethyl Acetate	1.50	U	1.50	5.00	ug/L
108-21-4	Isopropyl Acetate	0.66	U	0.66	5.00	ug/L
67-64-1	Acetone	4.90	U	4.90	25.0	ug/L
75-09-2	Methylene Chloride	1.20	U	1.20	5.00	ug/L
628-63-7	n-amyl Acetate	0.91	U	0.91	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	30.4		91 - 110	101%	SPK: 30
2037-26-5	Toluene-d8	29.3		91 - 112	98%	SPK: 30
460-00-4	4-Bromofluorobenzene	26.8		63 - 112	89%	SPK: 30
INTERNAL STANDARDS						
74-97-5	Bromochloromethane	18400	4.898			
540-36-3	1,4-Difluorobenzene	98500	6.757			
3114-55-4	Chlorobenzene-d5	88200	10.055			

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022625\
Data File : VX045047.D
Acq On : 26 Feb 2025 11:26
Operator : JC/MD
Sample : VX0226WBL01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX0226WBL01

Quant Time: Feb 27 05:12:46 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 2025
Response via : Initial Calibration

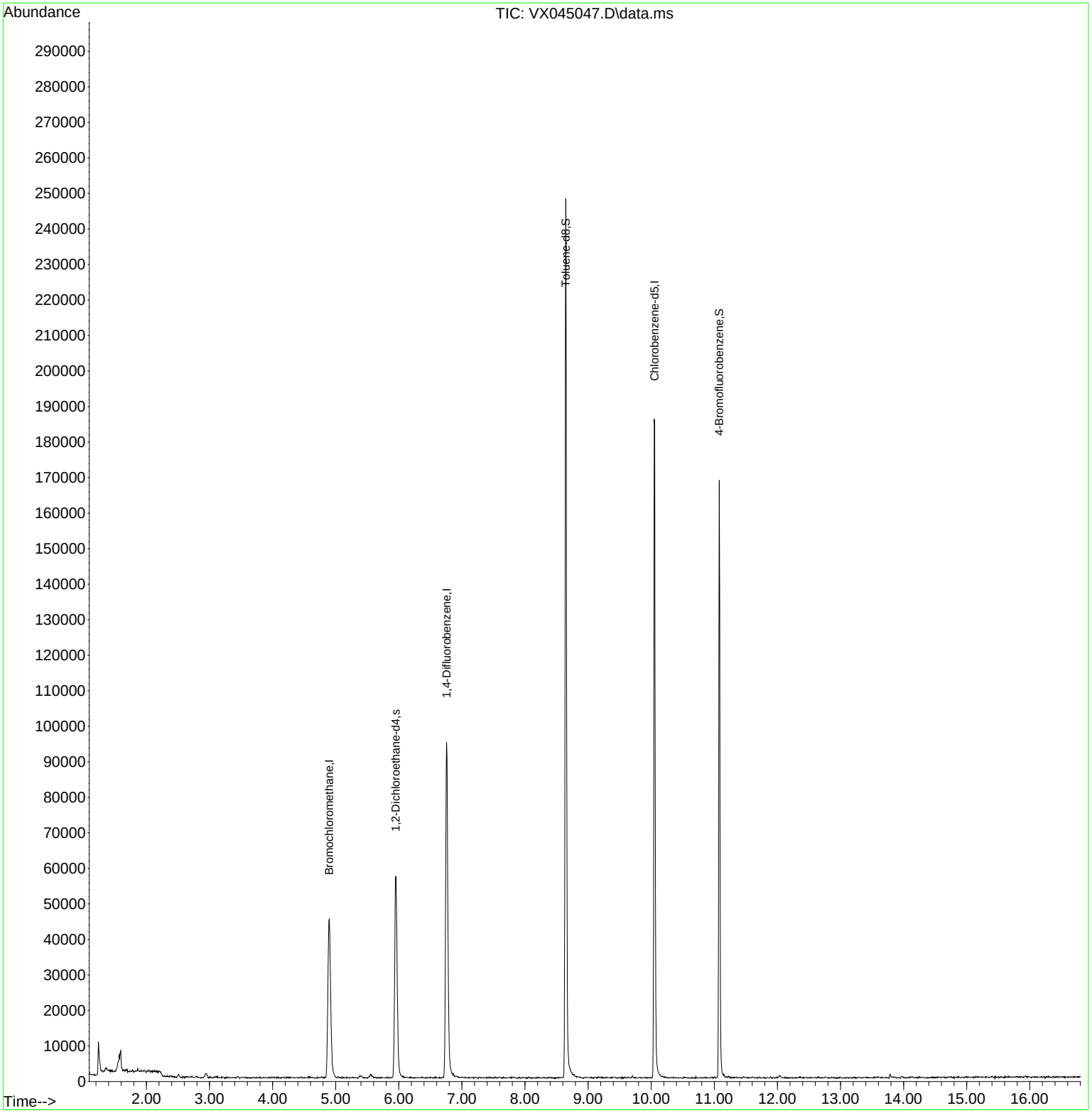
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.898	128	18408	30.000	ug/l	0.01
28) 1,4-Difluorobenzene	6.757	114	98459	30.000	ug/l	0.00
57) Chlorobenzene-d5	10.055	117	88243	30.000	ug/l	0.00
System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	5.952	65	54410	30.433	ug/l	0.00
Spiked Amount 30.000	Range 91 - 110		Recovery = 101.433%			
60) 4-Bromofluorobenzene	11.079	95	44266	26.838	ug/l	0.00
Spiked Amount 30.000	Range 63 - 112		Recovery = 89.467%			
63) Toluene-d8	8.647	98	142875	29.267	ug/l	0.00
Spiked Amount 30.000	Range 91 - 112		Recovery = 97.567%			
Target Compounds						Qvalue

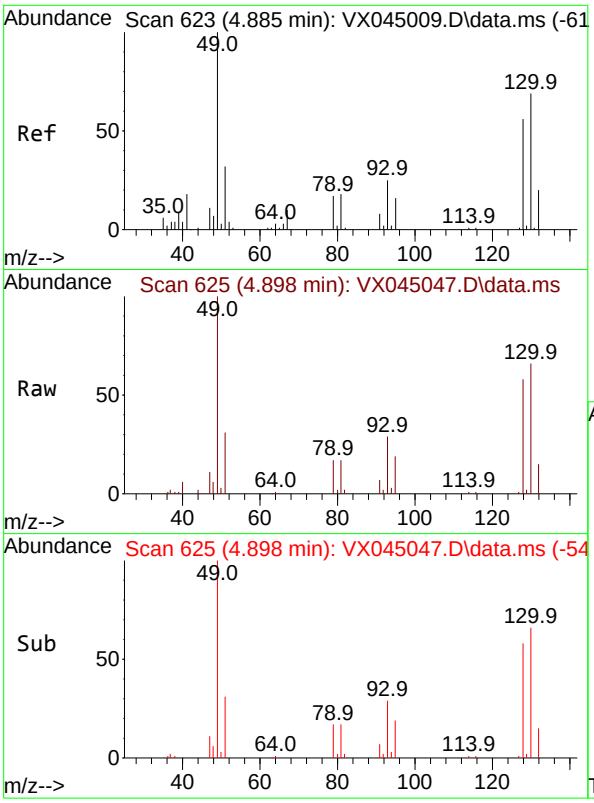
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022625\
Data File : VX045047.D
Acq On : 26 Feb 2025 11:26
Operator : JC/MD
Sample : VX0226WBL01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX0226WBL01

Quant Time: Feb 27 05:12:46 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 2025
Response via : Initial Calibration



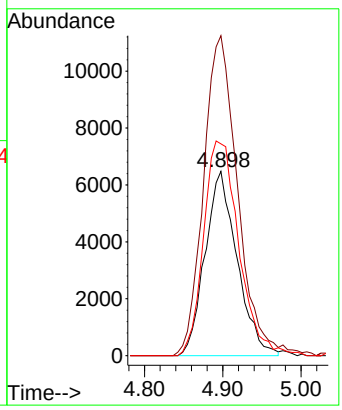


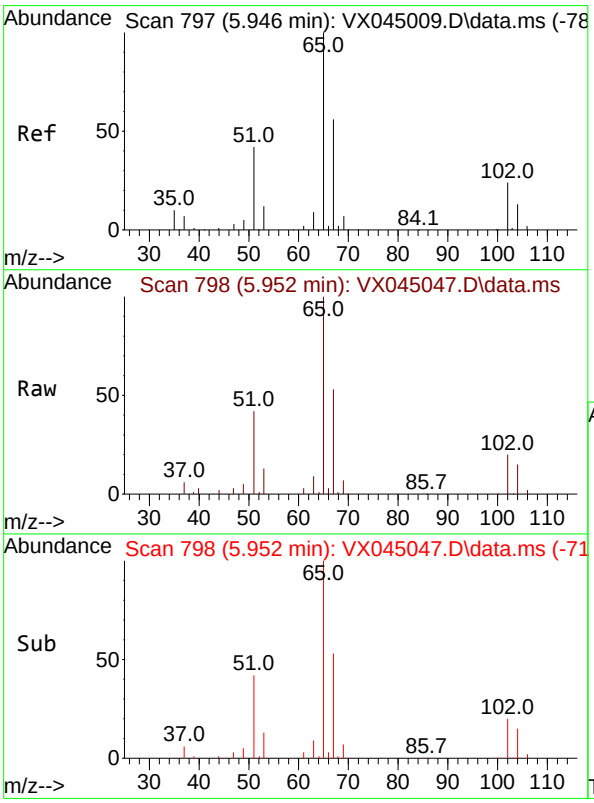
#1
Bromochloromethane
Concen: 30.000 ug/l
RT: 4.898 min Scan# 6
Delta R.T. 0.013 min
Lab File: VX045047.D
Acq: 26 Feb 2025 11:26

Instrument :
MSVOA_X
ClientSampleId :
VX0226WBL01

Tgt Ion:128 Resp: 18408

Ion	Ratio	Lower	Upper
128	100		
49	185.0	0.0	449.7
130	126.6	0.0	312.7

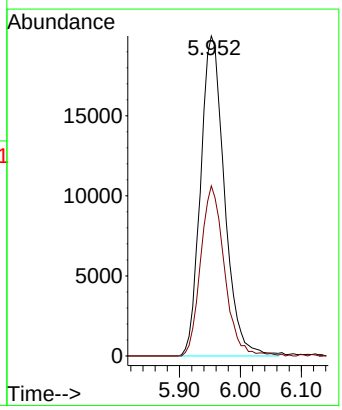


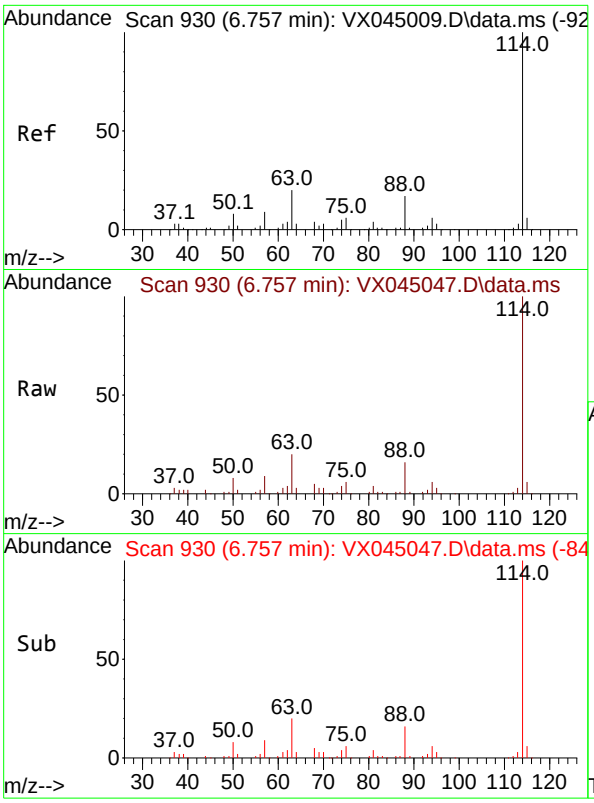


#27
1,2-Dichloroethane-d4
Concen: 30.433 ug/l
RT: 5.952 min Scan# 798
Delta R.T. 0.006 min
Lab File: VX045047.D
Acq: 26 Feb 2025 11:26

Tgt Ion: 65 Resp: 54410

Ion	Ratio	Lower	Upper
65	100		
67	52.2	42.6	64.0



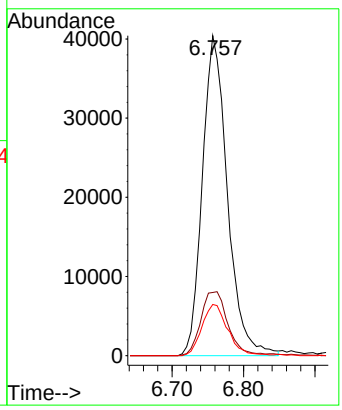


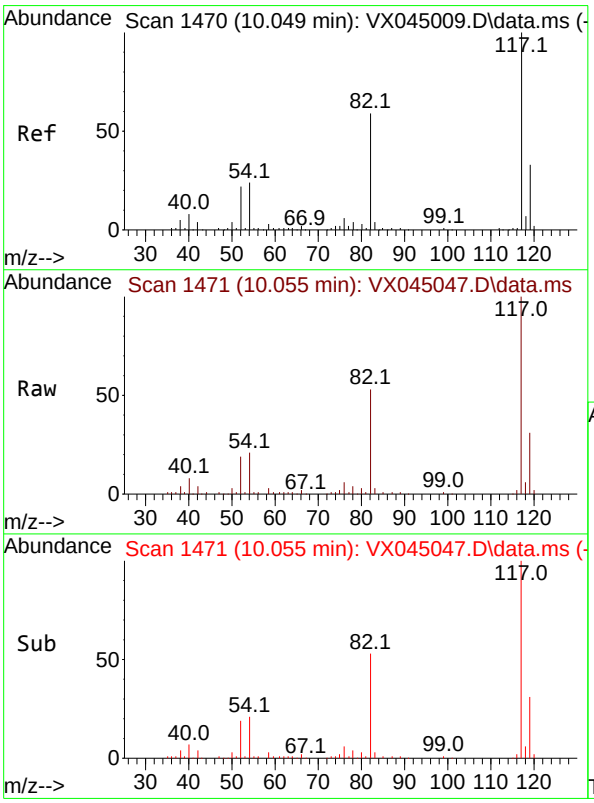
#28
1,4-Difluorobenzene
Concen: 30.000 ug/l
RT: 6.757 min Scan# 9
Delta R.T. -0.000 min
Lab File: VX045047.D
Acq: 26 Feb 2025 11:26

Instrument :
MSVOA_X
ClientSampleId :
VX0226WBL01

Tgt Ion:114 Resp: 98459

Ion	Ratio	Lower	Upper
114	100		
63	21.5	16.8	25.2
88	16.5	12.7	19.1

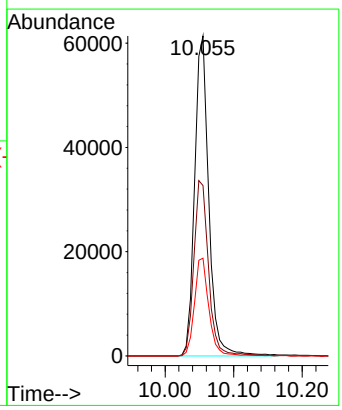


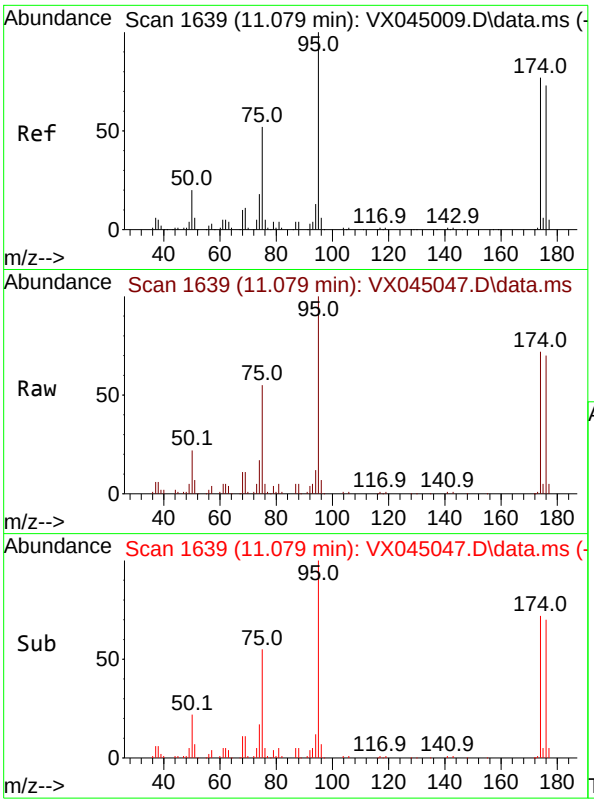


#57
Chlorobenzene-d5
Concen: 30.000 ug/l
RT: 10.055 min Scan# 1471
Delta R.T. 0.006 min
Lab File: VX045047.D
Acq: 26 Feb 2025 11:26

Tgt Ion:117 Resp: 88243

Ion	Ratio	Lower	Upper
117	100		
82	56.9	45.8	68.8
119	30.9	25.5	38.3



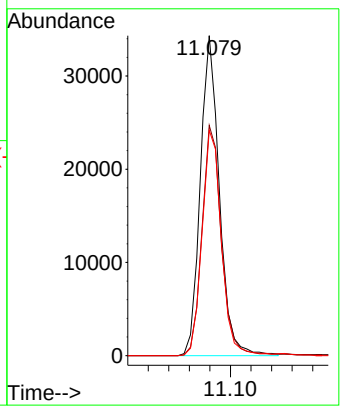


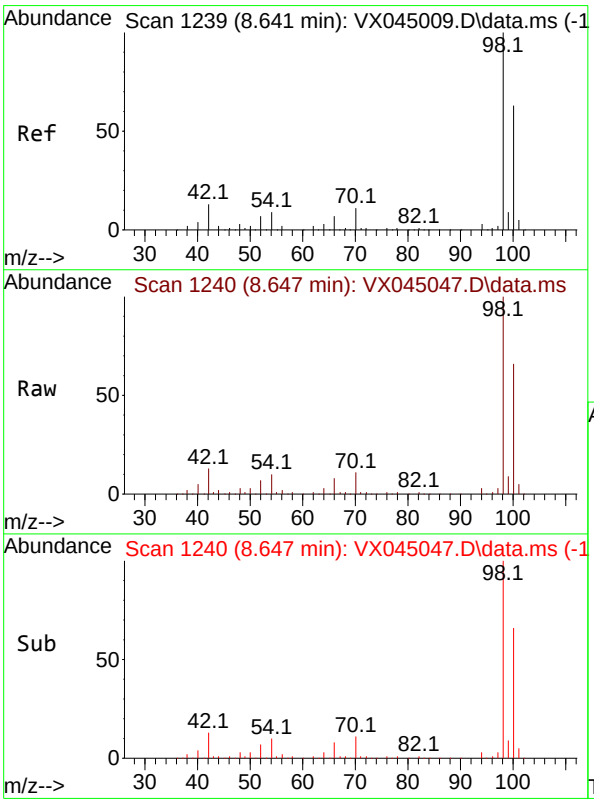
#60
4-Bromofluorobenzene
Concen: 26.838 ug/l
RT: 11.079 min Scan# 1
Delta R.T. -0.000 min
Lab File: VX045047.D
Acq: 26 Feb 2025 11:26

Instrument :
MSVOA_X
ClientSampleId :
VX0226WBL01

Tgt Ion: 95 Resp: 44266

Ion	Ratio	Lower	Upper
95	100		
174	73.6	59.5	89.3
176	71.5	55.5	83.3

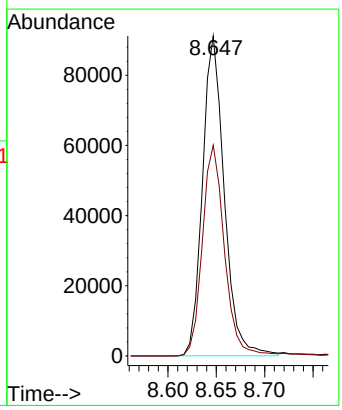




#63
Toluene-d8
Concen: 29.267 ug/l
RT: 8.647 min Scan# 1240
Delta R.T. 0.006 min
Lab File: VX045047.D
Acq: 26 Feb 2025 11:26

Tgt Ion: 98 Resp: 142875

Ion	Ratio	Lower	Upper
98	100		
100	66.6	51.7	77.5



Raw Data: **VX045045.D**

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

Report of Analysis

Client:	Tris Pharma, Inc.	Date Collected:	
Project:	Quarterly	Date Received:	
Client Sample ID:	VX0226WBS01	SDG No.:	Q1429
Lab Sample ID:	VX0226WBS01	Matrix:	Water
Analytical Method:	E624.1	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	DB-624UI ID : 0.18	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX045045.D	1		02/26/25 10:36	VX022625

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
141-78-6	Ethyl Acetate	21.1		1.50	5.00	ug/L
108-21-4	Isopropyl Acetate	21.3		0.66	5.00	ug/L
67-64-1	Acetone	130		4.90	25.0	ug/L
75-09-2	Methylene Chloride	19.4		1.20	5.00	ug/L
628-63-7	n-amyl Acetate	19.7		0.91	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	29.8		91 - 110	99%	SPK: 30
2037-26-5	Toluene-d8	30.1		91 - 112	100%	SPK: 30
460-00-4	4-Bromofluorobenzene	30.0		63 - 112	100%	SPK: 30
INTERNAL STANDARDS						
74-97-5	Bromochloromethane	20300	4.891			
540-36-3	1,4-Difluorobenzene	111000	6.751			
3114-55-4	Chlorobenzene-d5	101000	10.049			

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022625\
Data File : VX045045.D
Acq On : 26 Feb 2025 10:36
Operator : JC/MD
Sample : VX0226WBS01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 27 05:10:51 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VX0226WBS01

Manual Integrations APPROVED

Reviewed By :John Carlone 02/27/2025
Supervised By :Mahesh Dadoda 02/27/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.891	128	20343	30.000	ug/l	0.00
28) 1,4-Difluorobenzene	6.751	114	110538	30.000	ug/l	0.00
57) Chlorobenzene-d5	10.049	117	100826	30.000	ug/l	0.00
System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	5.946	65	58836	29.778	ug/l	0.00
Spiked Amount 30.000	Range 91 - 110		Recovery = 99.267%			
60) 4-Bromofluorobenzene	11.079	95	56507	29.984	ug/l	0.00
Spiked Amount 30.000	Range 63 - 112		Recovery = 99.933%			
63) Toluene-d8	8.647	98	167887	30.099	ug/l	0.00
Spiked Amount 30.000	Range 91 - 112		Recovery = 100.333%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.166	85	32879	19.173	ug/l	96
3) Chloromethane	1.300	50	37334	18.176	ug/l	97
4) Vinyl Chloride	1.374	62	36798	18.566	ug/l	100
5) Bromomethane	1.593	94	14090	20.423	ug/l	94
6) Chloroethane	1.672	64	20541	19.135	ug/l	93
7) Trichlorofluoromethane	1.874	101	52013	19.526	ug/l	95
8) Diethyl Ether	2.130	74	18794	18.647	ug/l	100
9) 1,1,2-Trichlorotrifluo...	2.319	101	30863	19.507	ug/l	98
10) 1,1-Dichloroethene	2.313	96	29623	19.169	ug/l	97
11) Methyl Iodide	2.447	142	32636	18.659	ug/l	97
12) Methyl Acetate	2.703	43	41576	23.168	ug/l	98
13) Acrolein	2.233	56	45946	127.735	ug/l	100
14) Acrylonitrile	3.056	53	93366	106.516	ug/l	99
15) Acetone	2.380	58	31279	130.113	ug/l	94
16) Carbon Disulfide	2.501	76	78848	17.988	ug/l	98
17) Allyl chloride	2.654	41	55326	19.142	ug/l	100
18) Methylene Chloride	2.782	84	33726	19.403	ug/l	97
19) trans-1,2-Dichloroethene	3.087	96	29168	18.656	ug/l	95
20) Diisopropyl ether	3.757	45	108889	19.604	ug/l #	84
21) 1,1-Dichloroethane	3.599	63	59345	19.212	ug/l	98
22) cis-1,2-Dichloroethene	4.477	96	35877	19.149	ug/l	98
23) tert-Butyl Alcohol	2.965	59	31193	101.936	ug/l #	100
24) Methyl tert-Butyl Ether	3.111	73	97876	19.405	ug/l	99
25) Chloroform	5.086	83	59439	19.921	ug/l	97
26) Cyclohexane	5.458	56	54170	18.998	ug/l #	98
29) 1,1-Dichloropropene	5.684	75	40280	19.809	ug/l	99
30) 2-Butanone	4.550	43	138311	117.765	ug/l	99
31) 2,2-Dichloropropane	4.465	77	44048	19.158	ug/l	99
32) 1,1,1-Trichloroethane	5.373	97	48297	19.603	ug/l	99
33) Carbon Tetrachloride	5.672	117	41550	19.983	ug/l	98
34) Benzene	6.031	78	127732	20.032	ug/l	98
35) Methacrylonitrile	4.910	41	27436	21.830	ug/l	94
36) 1,2-Dichloroethane	6.080	62	44403	20.339	ug/l	98
37) Trichloroethene	7.117	130	29139	19.533	ug/l	97
38) Methylcyclohexane	7.373	83	53544	19.612	ug/l	98
39) 1,2-Dichloropropane	7.427	63	31847	20.089	ug/l	98
40) Dibromomethane	7.574	93	23240	20.429	ug/l	99
41) Bromodichloromethane	7.818	83	45278	20.025	ug/l	98
42) Vinyl Acetate	3.715	43	451500	99.066	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022625\
Data File : VX045045.D
Acq On : 26 Feb 2025 10:36
Operator : JC/MD
Sample : VX0226WBS01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 27 05:10:51 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VX0226WBS01

Manual Integrations APPROVED

Reviewed By :John Carlone 02/27/2025
Supervised By :Mahesh Dadoda 02/27/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) Ethyl Acetate	4.708	43	46488	21.107	ug/l	97
44) Isopropyl Acetate	6.336	43	77209	21.299	ug/l	97
45) 1,4-Dioxane	7.659	88	14948	396.669	ug/l	97
46) Methyl methacrylate	7.690	41	36819	20.714	ug/l	98
47) n-amyl Acetate	10.841	43	61833	19.657	ug/l	100
48) t-1,3-Dichloropropene	8.976	75	41398	18.995	ug/l	96
49) cis-1,3-Dichloropropene	8.360	75	48216	19.544	ug/l	99
50) 1,1,2-Trichloroethane	9.147	97	30140	20.312	ug/l	96
51) Ethyl methacrylate	9.116	69	46741	20.028	ug/l	98
52) 1,3-Dichloropropane	9.305	76	53307	20.502	ug/l	100
53) Dibromochloromethane	9.519	129	33646	20.501	ug/l	97
54) 1,2-Dibromoethane	9.604	107	30522	20.256	ug/l	100
55) 2-Chloroethyl vinyl ether	8.238	63	111478	93.019	ug/l	99
56) Bromoform	10.799	173	21592	20.996	ug/l	98
58) 4-Methyl-2-Pentanone	8.567	43	259586	113.179	ug/l	100
59) 2-Hexanone	9.427	43	189089	114.059	ug/l	99
61) Tetrachloroethene	9.269	164	25317	20.391	ug/l	99
62) Toluene	8.714	91	134564	20.147	ug/l	98
64) Chlorobenzene	10.073	112	83535	20.183	ug/l	99
65) 1,1,1,2-Tetrachloroethane	10.159	131	28117	20.588	ug/l	99
66) Ethyl Benzene	10.189	91	145722	19.928	ug/l	97
67) m/p-Xylenes	10.299	106	111001	40.743	ug/l	99
68) o-Xylene	10.640	106	55163	20.636	ug/l	98
69) Styrene	10.652	104	90033	20.166	ug/l	99
70) Isopropylbenzene	10.957	105	140445	20.359	ug/l	100
71) 1,1,2,2-Tetrachloroethane	11.207	83	48464	21.365	ug/l	98
72) 1,2,3-Trichloropropane	11.238	75	39927m	21.400	ug/l	
73) Bromobenzene	11.195	156	32409	20.408	ug/l	98
74) n-propylbenzene	11.299	91	166229	20.249	ug/l	99
75) 2-Chlorotoluene	11.360	91	101303	20.412	ug/l	99
76) 1,3,5-Trimethylbenzene	11.451	105	117644	20.672	ug/l	100
77) t-1,4-Dichloro-2-butene	11.018	75	12941	20.616	ug/l	98
78) 4-Chlorotoluene	11.451	91	110193	19.918	ug/l	100
79) tert-butylbenzene	11.713	119	118293	20.630	ug/l	98
80) 1,2,4-Trimethylbenzene	11.750	105	116650	20.463	ug/l	100
81) sec-Butylbenzene	11.890	105	148382	20.619	ug/l	99
82) p-Isopropyltoluene	12.006	119	117889	20.218	ug/l	99
83) 1,3-Dichlorobenzene	11.969	146	58782	19.895	ug/l	97
84) 1,4-Dichlorobenzene	12.036	146	57972	19.899	ug/l	99
85) n-Butylbenzene	12.329	91	103774	19.489	ug/l	97
86) Hexachloroethane	12.536	117	21130	20.548	ug/l	98
87) 1,2-Dichlorobenzene	12.335	146	58513	20.183	ug/l	100
88) 1,2-Dibromo-3-Chloropr...	12.939	75	8994	20.479	ug/l	97
89) 1,2,4-Trichlorobenzene	13.585	180	34243	19.489	ug/l	95
90) Hexachlorobutadiene	13.725	225	14926	20.830	ug/l	98
91) Naphthalene	13.774	128	121840	19.665	ug/l	99
92) 1,2,3-Trichlorobenzene	13.963	180	34235	18.925	ug/l	96

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

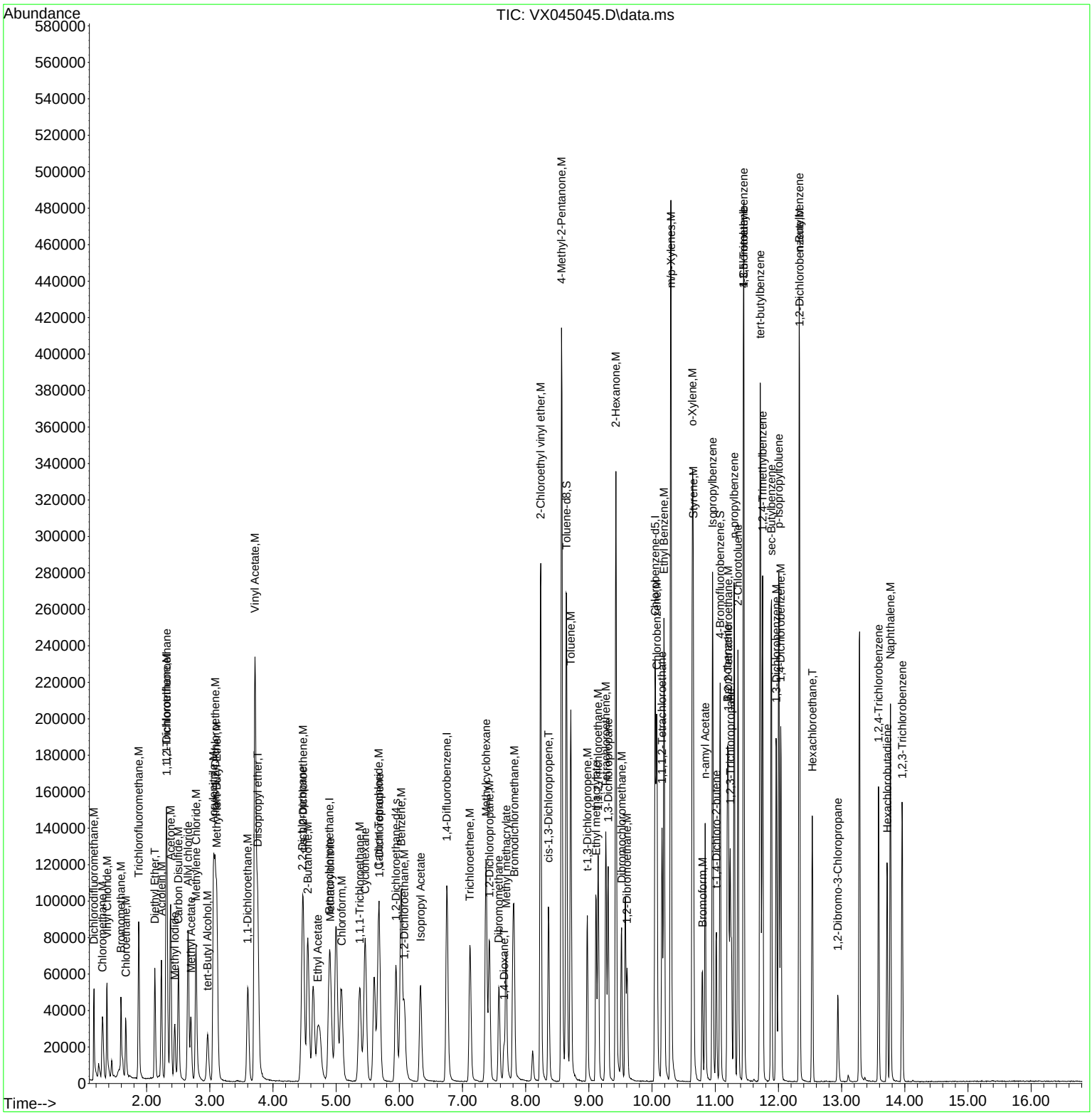
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022625\
Data File : VX045045.D
Acq On : 26 Feb 2025 10:36
Operator : JC/MD
Sample : VX0226WBS01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 27 05:10:51 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VX0226WBS01

Manual Integrations APPROVED

Reviewed By :John Carlone 02/27/2025
Supervised By :Mahesh Dadoda 02/27/2025



Raw Data: **VX045046.D**

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

Report of Analysis

Client:	Tris Pharma, Inc.		Date Collected:		
Project:	Quarterly		Date Received:		
Client Sample ID:	VX0226WBSD01		SDG No.:	Q1429	
Lab Sample ID:	VX0226WBSD01		Matrix:	Water	
Analytical Method:	E624.1		% Solid:	0	
Sample Wt/Vol:	5 Units:	mL	Final Vol:	5000	uL
Soil Aliquot Vol:		uL	Test:	VOCMS Group1	
GC Column:	DB-624UI ID :	0.18	Level :	LOW	
Prep Method :					

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX045046.D	1		02/26/25 11:03	VX022625

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
141-78-6	Ethyl Acetate	23.8		1.50	5.00	ug/L
108-21-4	Isopropyl Acetate	21.7		0.66	5.00	ug/L
67-64-1	Acetone	110		4.90	25.0	ug/L
75-09-2	Methylene Chloride	18.6		1.20	5.00	ug/L
628-63-7	n-amyl Acetate	21.1		0.91	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	29.7		91 - 110	99%	SPK: 30
2037-26-5	Toluene-d8	29.8		91 - 112	99%	SPK: 30
460-00-4	4-Bromofluorobenzene	29.7		63 - 112	99%	SPK: 30
INTERNAL STANDARDS						
74-97-5	Bromochloromethane	16200	4.897			
540-36-3	1,4-Difluorobenzene	85900	6.757			
3114-55-4	Chlorobenzene-d5	79600	10.055			

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022625\
Data File : VX045046.D
Acq On : 26 Feb 2025 11:03
Operator : JC/MD
Sample : VX0226WBSD01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 27 05:11:48 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VX0226WBSD01

Manual Integrations APPROVED

Reviewed By :John Carlone 02/27/2025
Supervised By :Mahesh Dadoda 02/27/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.897	128	16155	30.000	ug/l	0.01
28) 1,4-Difluorobenzene	6.757	114	85912	30.000	ug/l	0.00
57) Chlorobenzene-d5	10.055	117	79610	30.000	ug/l	0.00
System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	5.952	65	46599	29.699	ug/l	0.00
Spiked Amount 30.000	Range 91 - 110		Recovery = 99.000%			
60) 4-Bromofluorobenzene	11.079	95	44246	29.735	ug/l	0.00
Spiked Amount 30.000	Range 63 - 112		Recovery = 99.100%			
63) Toluene-d8	8.647	98	131437	29.844	ug/l	0.00
Spiked Amount 30.000	Range 91 - 112		Recovery = 99.467%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.166	85	24628	18.084	ug/l	93
3) Chloromethane	1.307	50	28567	17.514	ug/l	98
4) Vinyl Chloride	1.374	62	26950	17.123	ug/l	98
5) Bromomethane	1.599	94	11060	20.187	ug/l	98
6) Chloroethane	1.678	64	15829	18.569	ug/l	95
7) Trichlorofluoromethane	1.880	101	39521	18.682	ug/l	96
8) Diethyl Ether	2.130	74	14714	18.384	ug/l	99
9) 1,1,2-Trichlorotrifluo...	2.325	101	23879	19.006	ug/l	98
10) 1,1-Dichloroethene	2.312	96	22559	18.382	ug/l	94
11) Methyl Iodide	2.447	142	25358	18.256	ug/l	98
12) Methyl Acetate	2.703	43	32831	23.038	ug/l	97
13) Acrolein	2.233	56	37437	131.061	ug/l	98
14) Acrylonitrile	3.062	53	77639	111.536	ug/l	100
15) Acetone	2.380	58	21369	111.933	ug/l	96
16) Carbon Disulfide	2.508	76	58279	16.742	ug/l	98
17) Allyl chloride	2.660	41	42555	18.540	ug/l	98
18) Methylene Chloride	2.782	84	25680	18.604	ug/l	95
19) trans-1,2-Dichloroethene	3.087	96	22438	18.072	ug/l	93
20) Diisopropyl ether	3.757	45	83747	18.987	ug/l	91
21) 1,1-Dichloroethane	3.605	63	45883	18.704	ug/l	98
22) cis-1,2-Dichloroethene	4.489	96	27544	18.513	ug/l	99
23) tert-Butyl Alcohol	2.959	59	28023	115.317	ug/l #	100
24) Methyl tert-Butyl Ether	3.111	73	77091	19.247	ug/l	99
25) Chloroform	5.086	83	44887	18.944	ug/l	96
26) Cyclohexane	5.458	56	40938	18.080	ug/l #	100
29) 1,1-Dichloropropene	5.690	75	30295	19.170	ug/l	99
30) 2-Butanone	4.550	43	108781	119.171	ug/l	99
31) 2,2-Dichloropropane	4.465	77	33410	18.696	ug/l	99
32) 1,1,1-Trichloroethane	5.379	97	37740	19.709	ug/l	97
33) Carbon Tetrachloride	5.672	117	31291	19.363	ug/l	94
34) Benzene	6.031	78	96096	19.390	ug/l	99
35) Methacrylonitrile	4.916	41	22011	22.534	ug/l	93
36) 1,2-Dichloroethane	6.080	62	35302	20.806	ug/l	97
37) Trichloroethene	7.116	130	22001	18.976	ug/l	100
38) Methylcyclohexane	7.373	83	39411	18.573	ug/l	99
39) 1,2-Dichloropropane	7.421	63	23946	19.435	ug/l	97
40) Dibromomethane	7.580	93	18644	21.086	ug/l	99
41) Bromodichloromethane	7.818	83	35273	20.072	ug/l	99
42) Vinyl Acetate	3.715	43	358924	101.328	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022625\
Data File : VX045046.D
Acq On : 26 Feb 2025 11:03
Operator : JC/MD
Sample : VX0226WBSD01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 27 05:11:48 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VX0226WBSD01

Manual Integrations APPROVED

Reviewed By :John Carlone 02/27/2025
Supervised By :Mahesh Dadoda 02/27/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) Ethyl Acetate	4.714	43	40710	23.782	ug/l	97
44) Isopropyl Acetate	6.336	43	61094	21.684	ug/l	97
45) 1,4-Dioxane	7.659	88	14265	487.051	ug/l	98
46) Methyl methacrylate	7.696	41	30147	21.822	ug/l	95
47) n-amyl Acetate	10.841	43	51556	21.088	ug/l	99
48) t-1,3-Dichloropropene	8.976	75	31470	18.579	ug/l	98
49) cis-1,3-Dichloropropene	8.360	75	36715	19.148	ug/l	99
50) 1,1,2-Trichloroethane	9.147	97	23844	20.675	ug/l	91
51) Ethyl methacrylate	9.116	69	36135	19.922	ug/l	97
52) 1,3-Dichloropropane	9.305	76	42144	20.855	ug/l	99
53) Dibromochloromethane	9.518	129	25580	20.054	ug/l	97
54) 1,2-Dibromoethane	9.604	107	24411	20.844	ug/l	98
55) 2-Chloroethyl vinyl ether	8.238	63	89087	95.644	ug/l	100
56) Bromoform	10.799	173	17098	21.392	ug/l	97
58) 4-Methyl-2-Pentanone	8.567	43	212120	117.131	ug/l	99
59) 2-Hexanone	9.427	43	158291	120.927	ug/l	100
61) Tetrachloroethene	9.269	164	19076	19.459	ug/l	95
62) Toluene	8.714	91	101566	19.259	ug/l	98
64) Chlorobenzene	10.079	112	64173	19.637	ug/l	99
65) 1,1,1,2-Tetrachloroethane	10.159	131	21144	19.608	ug/l	97
66) Ethyl Benzene	10.189	91	110313	19.106	ug/l	97
67) m/p-Xylenes	10.299	106	83507	38.819	ug/l	98
68) o-Xylene	10.640	106	41098	19.472	ug/l	99
69) Styrene	10.652	104	70013	19.861	ug/l	98
70) Isopropylbenzene	10.957	105	107601	19.755	ug/l	100
71) 1,1,2,2-Tetrachloroethane	11.207	83	39487	22.047	ug/l	99
72) 1,2,3-Trichloropropane	11.238	75	32477m	22.046	ug/l	
73) Bromobenzene	11.195	156	25855	20.620	ug/l	94
74) n-propylbenzene	11.299	91	123853	19.108	ug/l	100
75) 2-Chlorotoluene	11.360	91	76774	19.592	ug/l	99
76) 1,3,5-Trimethylbenzene	11.451	105	88797	19.761	ug/l	97
77) t-1,4-Dichloro-2-butene	11.018	75	10420	21.024	ug/l	91
78) 4-Chlorotoluene	11.451	91	84767	19.406	ug/l	100
79) tert-butylbenzene	11.713	119	90101	19.901	ug/l	99
80) 1,2,4-Trimethylbenzene	11.750	105	89135	19.803	ug/l	99
81) sec-Butylbenzene	11.890	105	111434	19.611	ug/l	100
82) p-Isopropyltoluene	12.006	119	90700	19.700	ug/l	99
83) 1,3-Dichlorobenzene	11.969	146	46631	19.988	ug/l	99
84) 1,4-Dichlorobenzene	12.036	146	46137	20.057	ug/l	98
85) n-Butylbenzene	12.329	91	78874	18.761	ug/l	99
86) Hexachloroethane	12.536	117	15556	19.159	ug/l	98
87) 1,2-Dichlorobenzene	12.335	146	48179	21.047	ug/l	98
88) 1,2-Dibromo-3-Chloropr...	12.945	75	7726	22.279	ug/l	96
89) 1,2,4-Trichlorobenzene	13.585	180	26121	18.828	ug/l	99
90) Hexachlorobutadiene	13.725	225	11572	20.453	ug/l	99
91) Naphthalene	13.774	128	100826	20.611	ug/l	99
92) 1,2,3-Trichlorobenzene	13.963	180	27347	19.147	ug/l	99

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

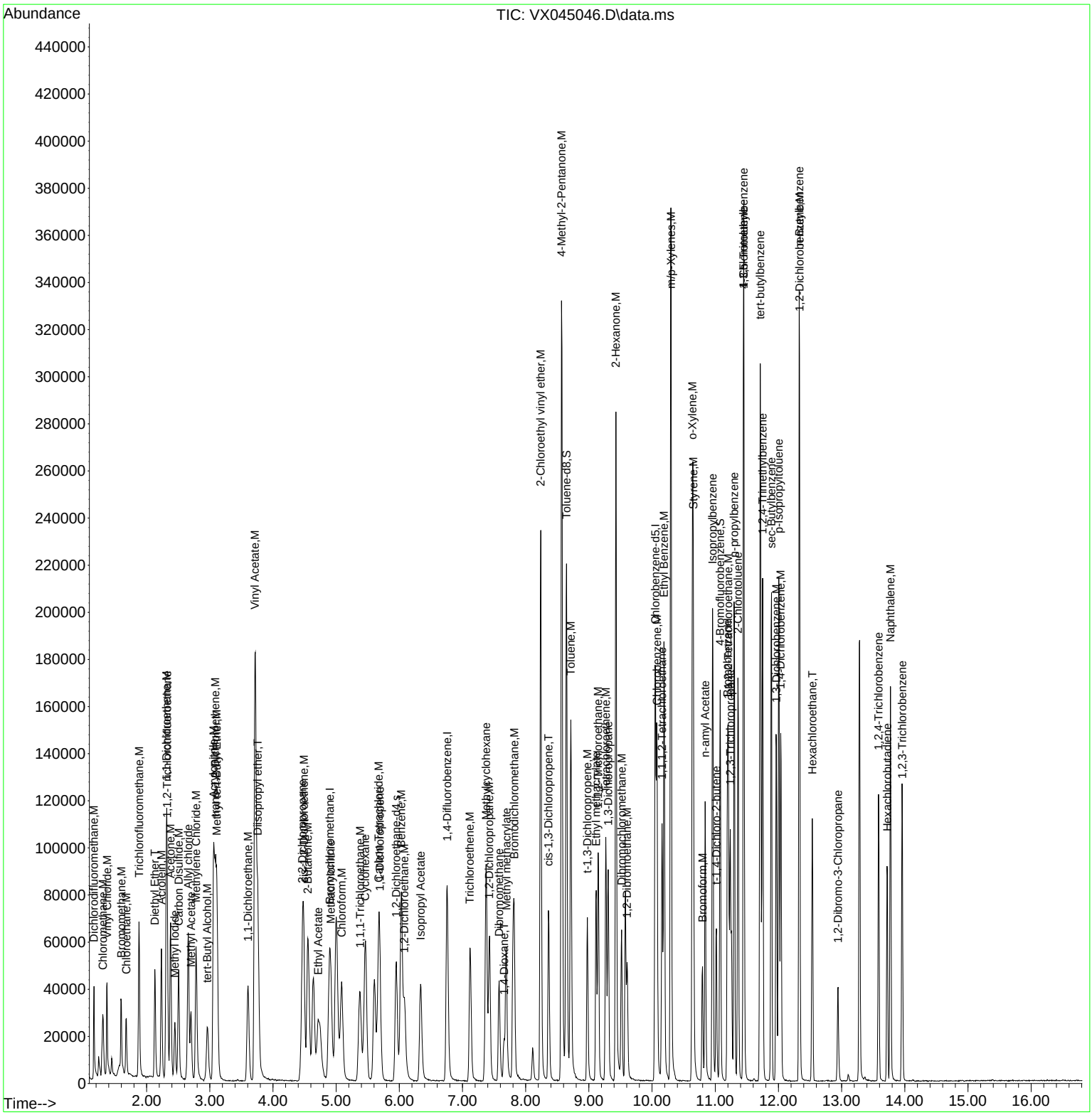
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX022625\
Data File : VX045046.D
Acq On : 26 Feb 2025 11:03
Operator : JC/MD
Sample : VX0226WBSD01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 27 05:11:48 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\624X022125W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Sat Feb 22 01:06:36 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VX0226WBSD01

Manual Integrations APPROVED

Reviewed By :John Carlone 02/27/2025
Supervised By :Mahesh Dadoda 02/27/2025



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

Manual Integration Report

Sequence:	VX022125	Instrument	MSVOA_x

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDICC005	VX045008.D	1,2,3-Trichloropropane	JOHN	2/24/2025 9:45:07 AM	MMDadoda	2/24/2025 1:32:23 PM	Peak Integrated by Software
VSTDICC005	VX045008.D	Methacrylonitrile	JOHN	2/24/2025 9:45:07 AM	MMDadoda	2/24/2025 1:32:23 PM	Peak Integrated by Software
VSTDICC005	VX045008.D	tert-Butyl Alcohol	JOHN	2/24/2025 9:45:07 AM	MMDadoda	2/24/2025 1:32:23 PM	Peak Integrated by Software
VSTDICCC020	VX045009.D	1,2,3-Trichloropropane	JOHN	2/24/2025 9:45:15 AM	MMDadoda	2/24/2025 1:32:25 PM	Peak Integrated by Software
VSTDICC050	VX045010.D	1,2,3-Trichloropropane	JOHN	2/24/2025 9:45:26 AM	MMDadoda	2/24/2025 1:32:38 PM	Peak Integrated by Software
VSTDICC100	VX045011.D	1,2,3-Trichloropropane	JOHN	2/24/2025 9:45:31 AM	MMDadoda	2/24/2025 1:32:41 PM	Peak Integrated by Software
VSTDICC150	VX045012.D	1,2,3-Trichloropropane	JOHN	2/24/2025 9:45:36 AM	MMDadoda	2/24/2025 1:32:41 PM	Peak Integrated by Software
VSTDICC150	VX045012.D	tert-Butyl Alcohol	JOHN	2/24/2025 9:45:36 AM	MMDadoda	2/24/2025 1:32:41 PM	Peak Integrated by Software
VSTDICV020	VX045014.D	1,2,3-Trichloropropane	JOHN	2/24/2025 9:45:41 AM	MMDadoda	2/24/2025 1:32:43 PM	Peak Integrated by Software
VSTDCCC020	VX045020.D	1,2,3-Trichloropropane	JOHN	2/24/2025 9:46:10 AM	MMDadoda	2/24/2025 1:32:55 PM	Peak Integrated by Software

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

Manual Integration Report

Sequence:	VX022625	Instrument	MSVOA_x

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC020	VX045044.D	1,2,3-Trichloropropane	JOHN	2/27/2025 9:25:59 AM	MMDadoda	2/27/2025 12:12:00 PM	Peak Integrated by Software
VX0226WBS01	VX045045.D	1,2,3-Trichloropropane	JOHN	2/27/2025 9:26:03 AM	MMDadoda	2/27/2025 12:12:02 PM	Peak Integrated by Software
VX0226WBSD01	VX045046.D	1,2,3-Trichloropropane	JOHN	2/27/2025 9:26:07 AM	MMDadoda	2/27/2025 12:12:04 PM	Peak Integrated by Software
VSTDCCC020	VX045055.D	1,2,3-Trichloropropane	JOHN	2/27/2025 9:26:11 AM	MMDadoda	2/27/2025 12:12:05 PM	Peak Integrated by Software

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

Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QCBatch ID # VX022125

Review By	John Carlone	Review On	2/24/2025 9:46:31 AM		
Supervise By	Mahesh Dadoda	Supervise On	2/24/2025 1:33:06 PM		
SubDirectory	VX022125	HP Acquire Method		HP Processing Method	624X022125W.M

STD. NAME	STD REF.#
Tune/Reschk	VP133095
Initial Calibration Stds	VP133103,VP133104,VP133105,VP133106,VP133107
CCC	VP133096,VP133109,VP133110
Internal Standard/PEM	
ICV/I.BLK	VP133108
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VX045007.D	21 Feb 2025 09:31	JC/MD	Ok
2	VSTDICC005	VX045008.D	21 Feb 2025 09:58	JC/MD	Ok,M
3	VSTDICCC020	VX045009.D	21 Feb 2025 10:21	JC/MD	Ok,M
4	VSTDICC050	VX045010.D	21 Feb 2025 10:44	JC/MD	Ok,M
5	VSTDICC100	VX045011.D	21 Feb 2025 11:07	JC/MD	Ok,M
6	VSTDICC150	VX045012.D	21 Feb 2025 11:29	JC/MD	Ok,M
7	IBLK	VX045013.D	21 Feb 2025 11:52	JC/MD	Ok
8	VSTDICV020	VX045014.D	21 Feb 2025 13:09	JC/MD	Ok,M
9	VX0221WBS01	VX045015.D	21 Feb 2025 13:41	JC/MD	Ok,M
10	VX0221WBSD01	VX045016.D	21 Feb 2025 14:03	JC/MD	Ok,M
11	VX0221WBL01	VX045017.D	21 Feb 2025 14:39	JC/MD	Ok
12	Q1168-07 2.5PPB	VX045018.D	21 Feb 2025 15:12	JC/MD	Ok,M
13	Q1168-08 5.0PPB	VX045019.D	21 Feb 2025 15:38	JC/MD	Ok,M
14	VSTDCCC020	VX045020.D	21 Feb 2025 16:05	JC/MD	Ok,M

M : Manual Integration

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

Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QCBatch ID # VX022625

Review By	John Carlone	Review On	2/27/2025 9:27:24 AM		
Supervise By	Mahesh Dadoda	Supervise On	2/27/2025 12:12:10 PM		
SubDirectory	VX022625	HP Acquire Method		HP Processing Method	624X022125W.M

STD. NAME	STD REF.#
Tune/Reschk	VP133155
Initial Calibration Stds	
CCC	VP133156,VP133157
Internal Standard/PEM	
ICV/I.BLK	
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VX045043.D	26 Feb 2025 09:33	JC/MD	Ok
2	VSTDCCC020	VX045044.D	26 Feb 2025 10:05	JC/MD	Ok,M
3	VX0226WBS01	VX045045.D	26 Feb 2025 10:36	JC/MD	Ok,M
4	VX0226WBSD01	VX045046.D	26 Feb 2025 11:03	JC/MD	Ok,M
5	VX0226WBL01	VX045047.D	26 Feb 2025 11:26	JC/MD	Ok
6	Q1417-02	VX045048.D	26 Feb 2025 11:56	JC/MD	Ok
7	Q1417-03	VX045049.D	26 Feb 2025 12:19	JC/MD	Ok
8	Q1417-01	VX045050.D	26 Feb 2025 12:43	JC/MD	Ok
9	IBLK	VX045051.D	26 Feb 2025 13:06	JC/MD	Ok
10	Q1429-01	VX045052.D	26 Feb 2025 13:29	JC/MD	Ok
11	Q1429-02	VX045053.D	26 Feb 2025 13:52	JC/MD	Ok
12	IBLK	VX045054.D	26 Feb 2025 14:36	JC/MD	Ok
13	VSTDCCC020	VX045055.D	26 Feb 2025 16:33	JC/MD	Ok,M

M : Manual Integration

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

Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QCBatch ID # VX022125

Review By	John Carlone	Review On	2/24/2025 9:46:31 AM		
Supervise By	Mahesh Dadoda	Supervise On	2/24/2025 1:33:06 PM		
SubDirectory	VX022125	HP Acquire Method		HP Processing Method	624X022125W.M

STD. NAME	STD REF.#
Tune/Reschk	VP133095
Initial Calibration Stds	VP133103,VP133104,VP133105,VP133106,VP133107
CCC	VP133096,VP133109,VP133110
Internal Standard/PEM	
ICV/I.BLK	VP133108
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleId	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VX045007.D	21 Feb 2025 09:31		JC/MD	Ok
2	VSTDICC005	VSTDICC005	VX045008.D	21 Feb 2025 09:58		JC/MD	Ok,M
3	VSTDICCC020	VSTDICCC020	VX045009.D	21 Feb 2025 10:21		JC/MD	Ok,M
4	VSTDICC050	VSTDICC050	VX045010.D	21 Feb 2025 10:44		JC/MD	Ok,M
5	VSTDICC100	VSTDICC100	VX045011.D	21 Feb 2025 11:07		JC/MD	Ok,M
6	VSTDICC150	VSTDICC150	VX045012.D	21 Feb 2025 11:29		JC/MD	Ok,M
7	IBLK	IBLK	VX045013.D	21 Feb 2025 11:52		JC/MD	Ok
8	VSTDICV020	ICVVX022125	VX045014.D	21 Feb 2025 13:09		JC/MD	Ok,M
9	VX0221WBS01	VX0221WBS01	VX045015.D	21 Feb 2025 13:41		JC/MD	Ok,M
10	VX0221WBSD01	VX0221WBSD01	VX045016.D	21 Feb 2025 14:03		JC/MD	Ok,M
11	VX0221WBL01	VX0221WBL01	VX045017.D	21 Feb 2025 14:39		JC/MD	Ok
12	Q1168-07 2.5PPB	LOD-MDL-WATER-01-(	VX045018.D	21 Feb 2025 15:12		JC/MD	Ok,M
13	Q1168-08 5.0PPB	LOQ-WATER-02-QT1-2	VX045019.D	21 Feb 2025 15:38		JC/MD	Ok,M
14	VSTDCCC020	VSTDCCC020EC	VX045020.D	21 Feb 2025 16:05		JC/MD	Ok,M

M : Manual Integration

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

Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QCBatch ID # VX022625

Review By	John Carlone	Review On	2/27/2025 9:27:24 AM		
Supervise By	Mahesh Dadoda	Supervise On	2/27/2025 12:12:10 PM		
SubDirectory	VX022625	HP Acquire Method		HP Processing Method	624X022125W.M

STD. NAME	STD REF.#
Tune/Reschk	VP133155
Initial Calibration Stds	
CCC	VP133156,VP133157
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	VX045043.D	26 Feb 2025 09:33		JC/MD	Ok
2	VSTDCCC020	VSTDCCC020	VX045044.D	26 Feb 2025 10:05	V13516	JC/MD	Ok,M
3	VX0226WBS01	VX0226WBS01	VX045045.D	26 Feb 2025 10:36		JC/MD	Ok,M
4	VX0226WBSD01	VX0226WBSD01	VX045046.D	26 Feb 2025 11:03		JC/MD	Ok,M
5	VX0226WBL01	VX0226WBL01	VX045047.D	26 Feb 2025 11:26		JC/MD	Ok
6	Q1417-02	LRSA-MOD-2	VX045048.D	26 Feb 2025 11:56	vial A pH#6.0	JC/MD	Ok
7	Q1417-03	LRSA-MOD-3	VX045049.D	26 Feb 2025 12:19	vial A pH#6.0	JC/MD	Ok
8	Q1417-01	LRSA-MOD-1	VX045050.D	26 Feb 2025 12:43	vial A pH<2	JC/MD	Ok
9	IBLK	IBLK	VX045051.D	26 Feb 2025 13:06		JC/MD	Ok
10	Q1429-01	OUTFALL-DSN-001	VX045052.D	26 Feb 2025 13:29	vial A pH<2	JC/MD	Ok
11	Q1429-02	OUTFALL-DSN-002	VX045053.D	26 Feb 2025 13:52	vial A pH<2	JC/MD	Ok
12	IBLK	IBLK	VX045054.D	26 Feb 2025 14:36		JC/MD	Ok
13	VSTDCCC020	VSTDCCC020EC	VX045055.D	26 Feb 2025 16:33		JC/MD	Ok,M

M : Manual Integration

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

Prep Standard - Chemical Standard Summary

Order ID : Q1429

Test : VOCMS Group1

Prepbatch ID :

Sequence ID/Qc Batch ID: VX022625,

Standard ID :
VP131767,VP132035,VP132403,VP132613,VP133036,VP133155,VP133156,VP133157,

Chemical ID :
V12666,V13391,V13446,V14154,V14175,V14176,V14433,V14439,V14521,V14522,V14580,V14614,V14624,V14630,V14631,V14632,V14633,V14722,V14723,V14724,V14754,V14756,V14801,V14814,V14872,V14873,V14874,V14875,W3112,

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

VOC STANDARD PREPARATION LOG

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

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

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VOC STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
466	624 Internal Standard and Surrogate Mix, 150PPM	VP132403	01/02/2025	02/28/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 01/02/2025

FROM 0.15000ml of V12666 + 0.15000ml of V14580 + 24.70000ml of V14614 = 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	VP132613	01/20/2025	02/28/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 01/29/2025

FROM 0.40000ml of V13446 + 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 V14722 + 1.00000ml of V14754 + 1.00000ml of V14756 + 1.00000ml of V14801 + 1.00000ml of V14814 + 1.50000ml of V14723 + 1.50000ml of V14724 + 10.60000ml of V14624 = 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	VP133036	02/14/2025	03/13/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 02/18/2025

FROM 1.00000ml of V14872 + 1.00000ml of V14873 + 1.00000ml of V14874 + 1.00000ml of V14875 + 21.00000ml of V14624 = Final Quantity: 25.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
589	BFB TUNE CHECK	VP133155	02/26/2025	02/27/2025	John Carlone	None	None	Mahesh Dadoda 02/28/2025

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
645	20 PPB CCC, 624	VP133156	02/26/2025	02/27/2025	John Carlone	None	None	Mahesh Dadoda 02/28/2025

FROM 39.97000ml of W3112 + 0.00500ml of VP132035 + 0.00500ml of VP132613 + 0.00500ml of VP133036 + 0.00800ml of VP132403 = Final Quantity: 40.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
645	20 PPB CCC, 624	VP133157	02/26/2025	02/27/2025	John Carlone	None	None	Mahesh Dadoda 02/28/2025

FROM 39.97000ml of W3112 + 0.00500ml of VP132035 + 0.00500ml of VP132613 + 0.00500ml of VP133036 + 0.00800ml of VP132403 = 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	555583 / Custom Standard, CLP VOA Internal Std [CS 5179-3]	A0181978	02/28/2025	10/21/2024 / SAM	02/22/2022 / SAM	V12666

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	30470 / VOA Stock Solution, tert-butanol std, 1mL, P&TM	A0181905	02/28/2025	01/10/2025 / SAM	01/23/2023 / SAM	V13446

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

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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	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

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 #
Restek	555584 / Custom Standard, CLP VOA SurrogateStd [CS 5179-4]	A0219012	01/02/2026	01/02/2025 / SAM	11/18/2024 / SAM	V14580

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

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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)	23I0762004	07/13/2025	01/13/2025 / SAM	11/26/2024 / SAM	V14624

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

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

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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	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	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	30042 / VOA Mix,500 series method 502.2 Calibration Std #1 gases, 2000uq/ml, PTM, 1ml	A0216826	07/10/2025	01/10/2025 / SAM	12/17/2024 / SAM	V14756

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	A0220563	06/30/2026	01/10/2025 / SAM	01/08/2025 / SAM	V14801

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

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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)	021325	03/13/2025	02/14/2025 / SAM	02/14/2025 / SAM	V14872

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	021325	03/13/2025	02/14/2025 / SAM	02/14/2025 / SAM	V14873

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	021325	03/13/2025	02/14/2025 / SAM	02/14/2025 / SAM	V14874

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	021325	03/13/2025	02/14/2025 / SAM	02/14/2025 / SAM	V14875

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

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

avantor™ | J.T.Baker®

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

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.5 ppm
Titrable Acid (µeq/g)	≤ 0.3	0.2
Titrable Base (µeq/g)	≤ 0.10	0.01
Water (by KF, coulometric)	≤ 0.08 %	< 0.01 %
Volatile Organic Trace Analysis – Below EPA 8260B CRQL	Conforms	Conforms

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

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

Ken Koehnlein
Sr. Manager, Quality Assurance

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

12 Bottles

avantor™ | J.T.Baker®

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

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.2 ppm
Titrable Acid (µeq/g)	≤ 0.3	0.2
Titrable Base (µeq/g)	≤ 0.10	0.03
Water (by KF, coulometric)	≤ 0.08 %	< 0.01 %
Volatile Organic Trace Analysis – Below EPA 8260B CRQL	Conforms	Conforms

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

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

James Ethier

Jamie Ethier
Vice President Global Quality

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

Certified Reference Material CRM

5 J14

Dec 02/14/25

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

CERTIFIED WEIGHT REPORT

Part Number: 91980
Lot Number: 021325
Description: Acrolein

Expiration Date: 031325
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 5000
NIST Test ID#: 6UTB

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

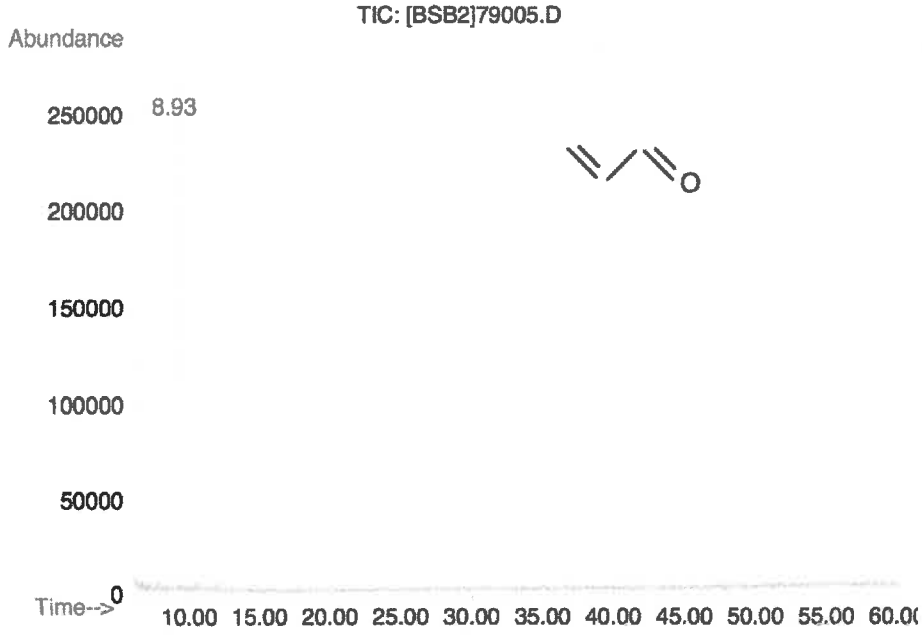
V14872 to
V14876

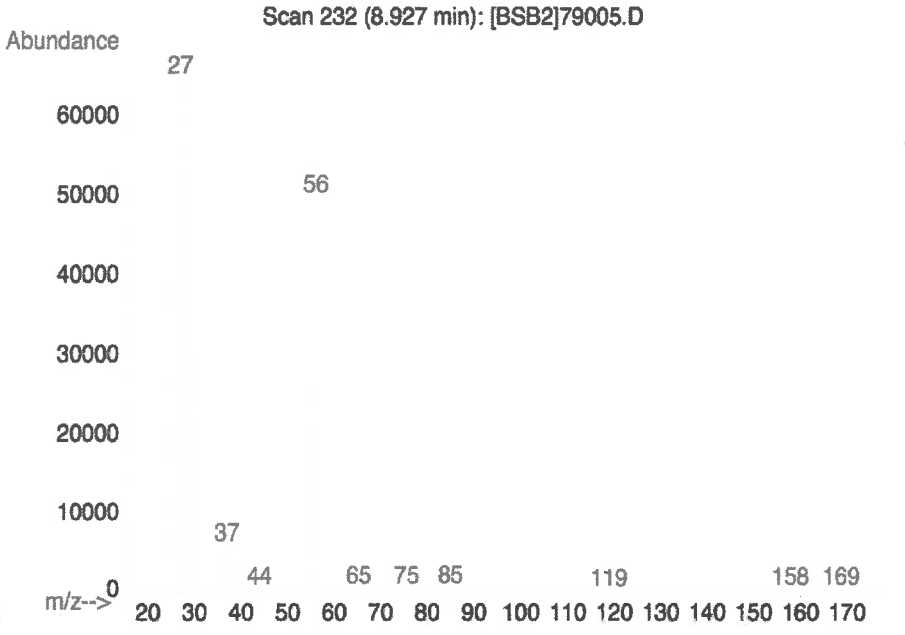
		021325
Formulated By:	Anthony Mahoney	DATE
		021325
Reviewed By:	Pedro L. Rentas	DATE

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

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	0.05178	5011.8	52.6	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. Hamden CT, 06514	Emergency Telephone International	**1-352-323-3500**
		Date Prepared/Revised	January 1, 2024

Section II - Hazards Identification

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

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	

	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

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Dec 02/14/25

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

CERTIFIED WEIGHT REPORT

Part Number: 91980
Lot Number: 021325
Description: Acrolein

Expiration Date: 031325
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 5000
NIST Test ID#: 6UTB

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

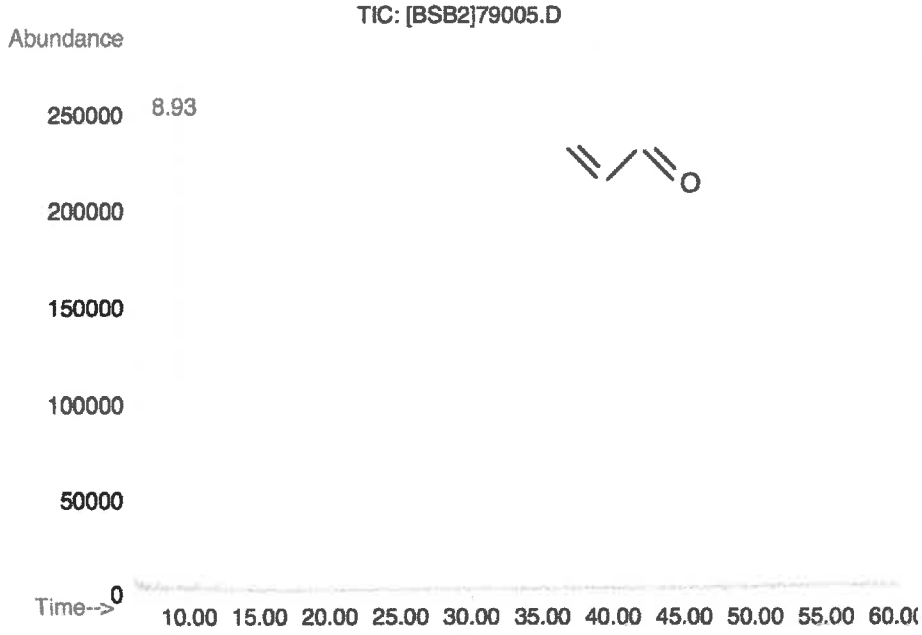
V14872 to
V14876

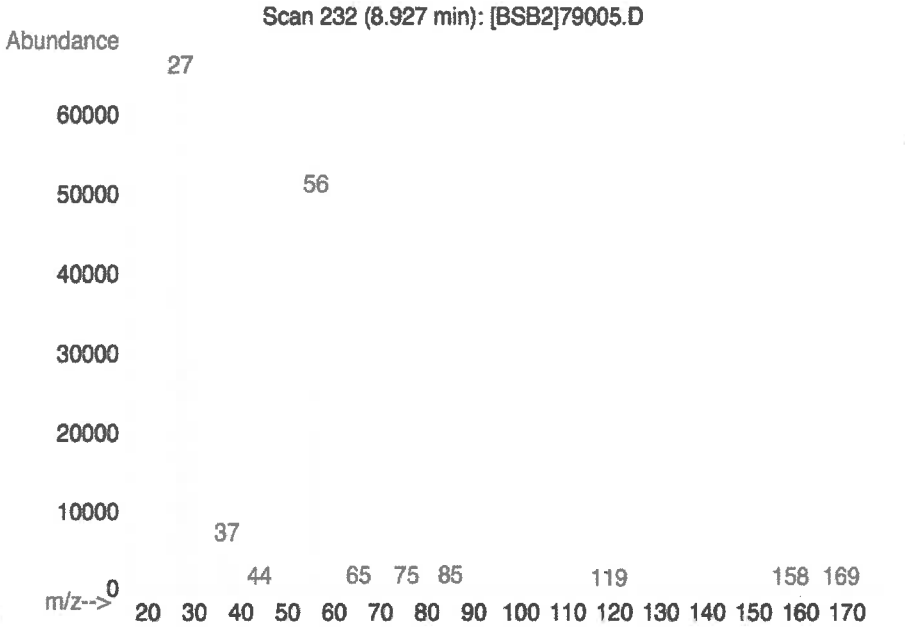
		021325
Formulated By:	Anthony Mahoney	DATE
		021325
Reviewed By:	Pedro L. Rentas	DATE

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

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	0.05178	5011.8	52.6	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. Hamden CT, 06514	Emergency Telephone International	**1-352-323-3500**
		Date Prepared/Revised	January 1, 2024

Section II - Hazards Identification

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

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	

	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

5 J14

Dec 02/14/25

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

CERTIFIED WEIGHT REPORT

Part Number: 91980
Lot Number: 021325
Description: Acrolein

Expiration Date: 031325
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 5000
NIST Test ID#: 6UTB

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

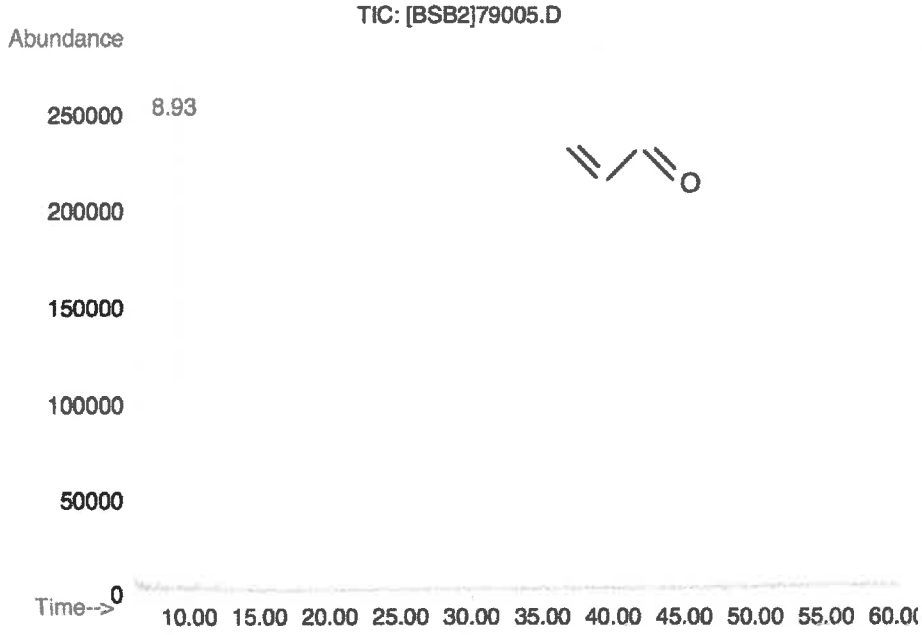
V14872 to
V14876

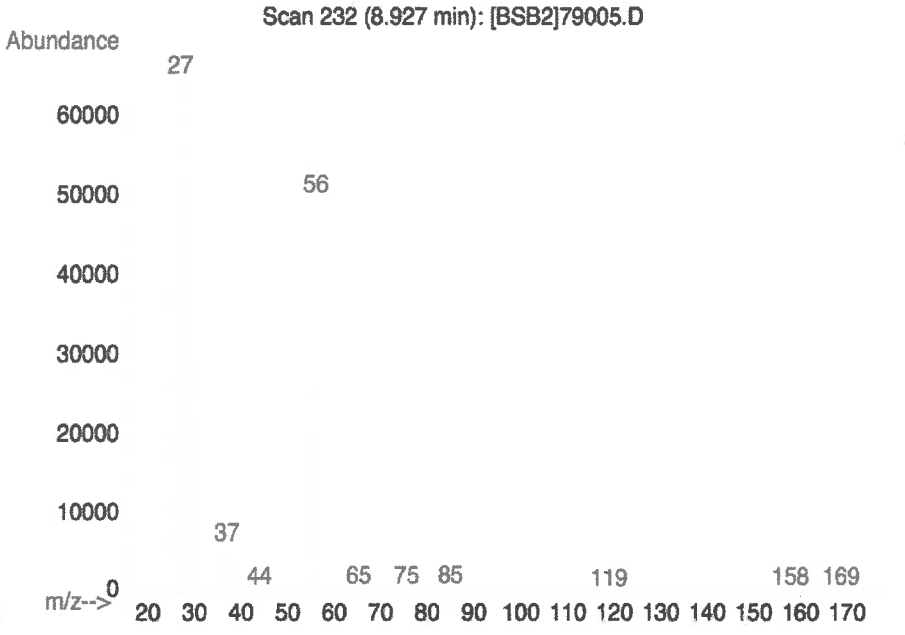
		021325
Formulated By:	Anthony Mahoney	DATE
		021325
Reviewed By:	Pedro L. Rentas	DATE

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

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	0.05178	5011.8	52.6	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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- **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. Hamden CT, 06514	Emergency Telephone International	**1-352-323-3500**
		Date Prepared/Revised	January 1, 2024

Section II - Hazards Identification

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

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	

	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

5 J14

Dec 02/14/25

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

CERTIFIED WEIGHT REPORT

Part Number: 91980
Lot Number: 021325
Description: Acrolein

Expiration Date: 031325
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 5000
NIST Test ID#: 6UTB

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

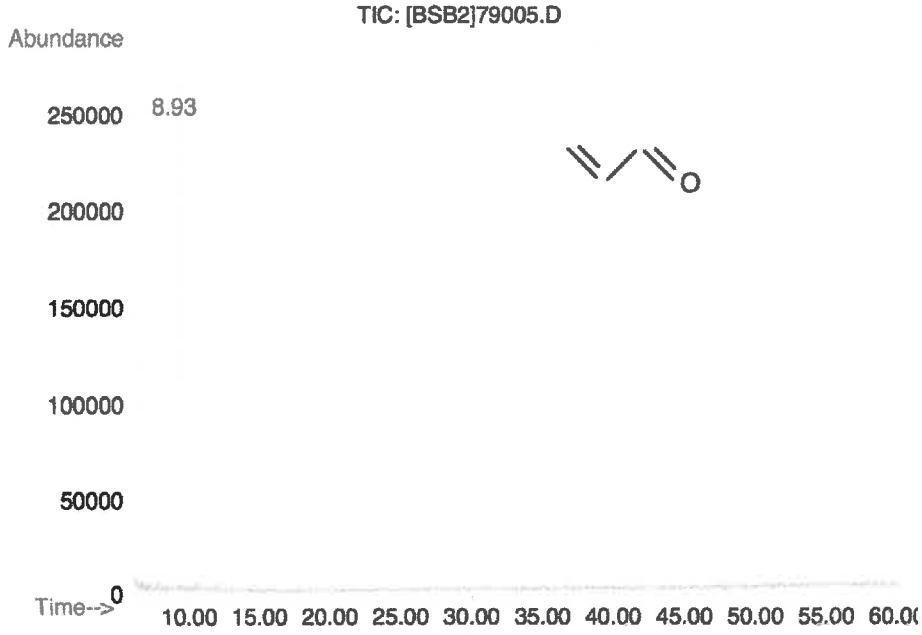
V14872 to
V14876

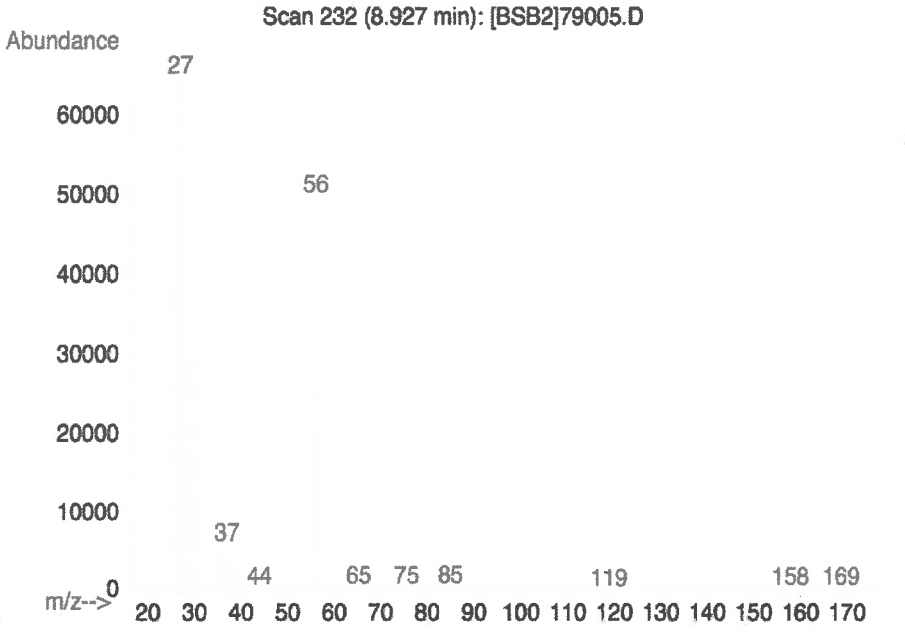
		021325
Formulated By:	Anthony Mahoney	DATE
		021325
Reviewed By:	Pedro L. Rentas	DATE

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

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	0.05178	5011.8	52.6	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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Safety Data Sheet (SDS) GHS/OSHA Compliant

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		Date Prepared/Revised	January 1, 2024

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

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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.
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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	

	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 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

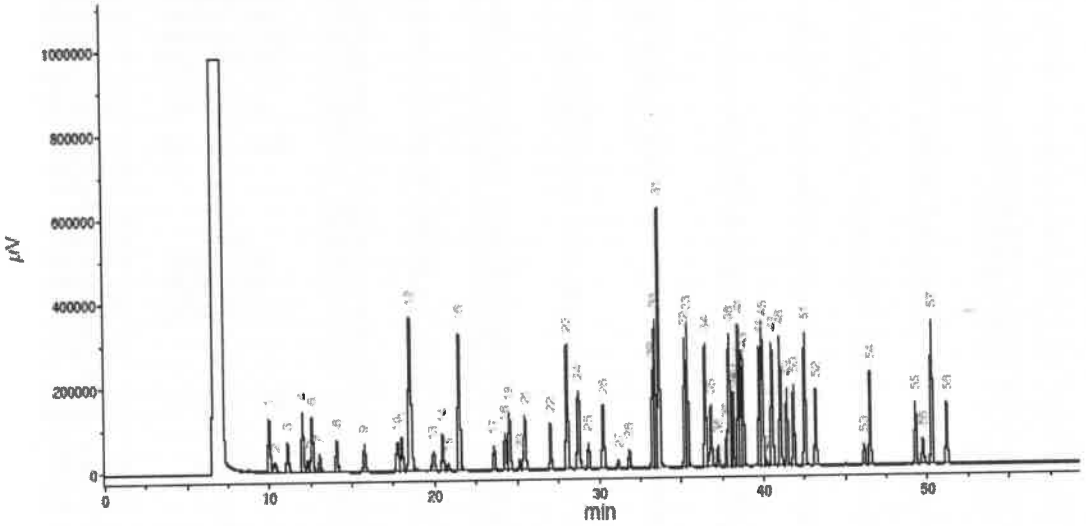
Compound	(RM#) Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Initial Conc.(ug/mL)	Nominal Conc (µg/mL)	Purity (%)	Purity Uncertainty	Uncertainty Pipette (mL)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached 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

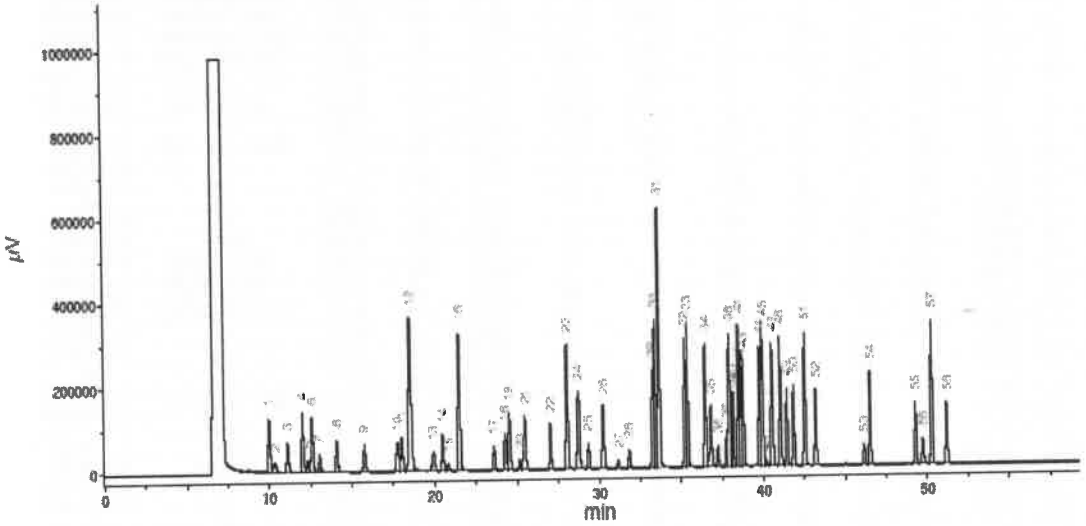
Compound	(RM#) Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Initial Conc.(ug/mL)	Nominal Conc (µg/mL)	Purity (%)	Purity Uncertainty	Uncertainty Pipette (mL)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached 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

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.

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

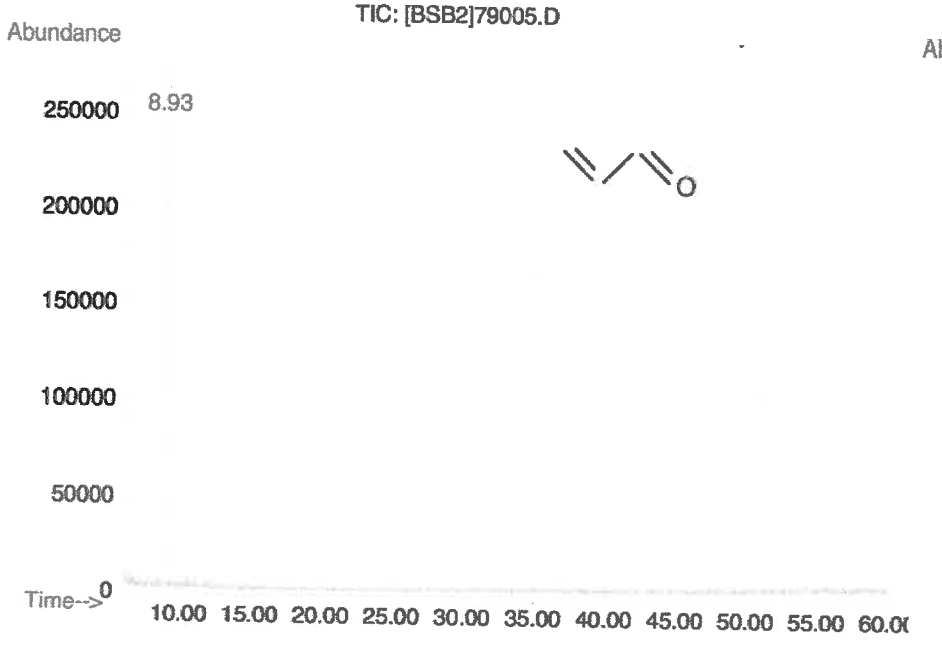
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.001 Flask Uncertainty

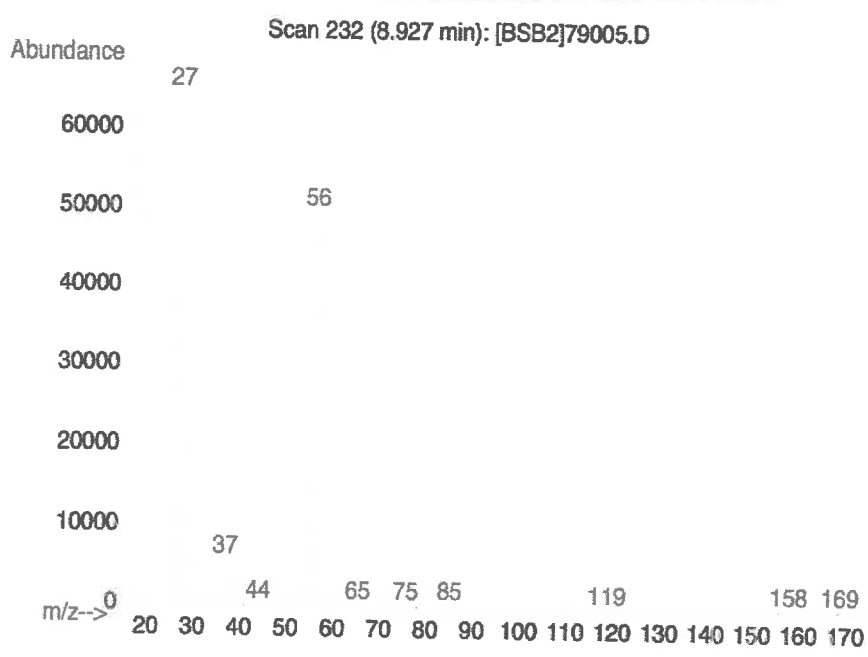
Formulated By: Justin Dippold 091424 DATE

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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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

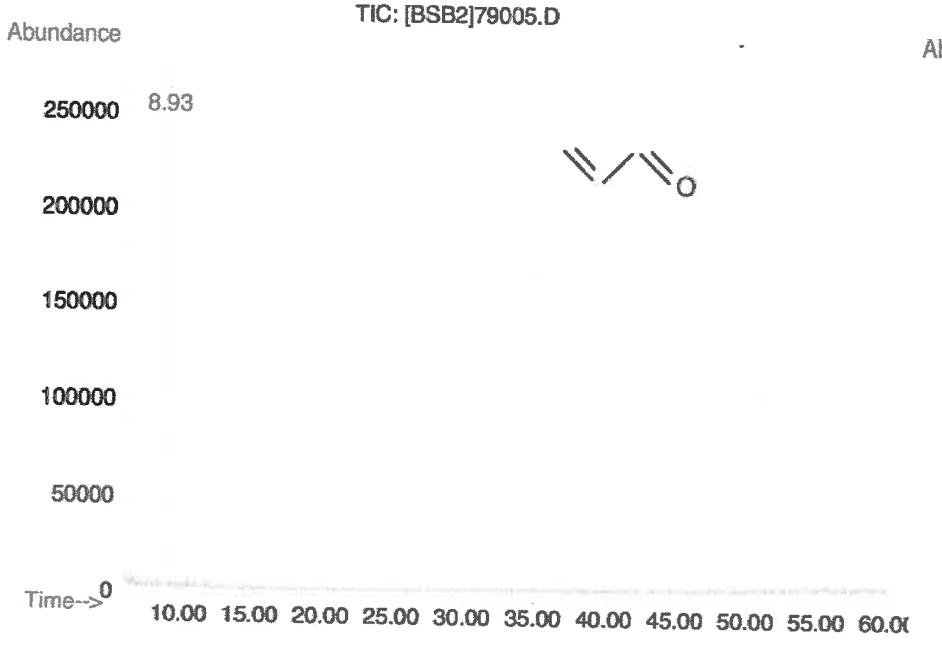
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.001 Flask Uncertainty

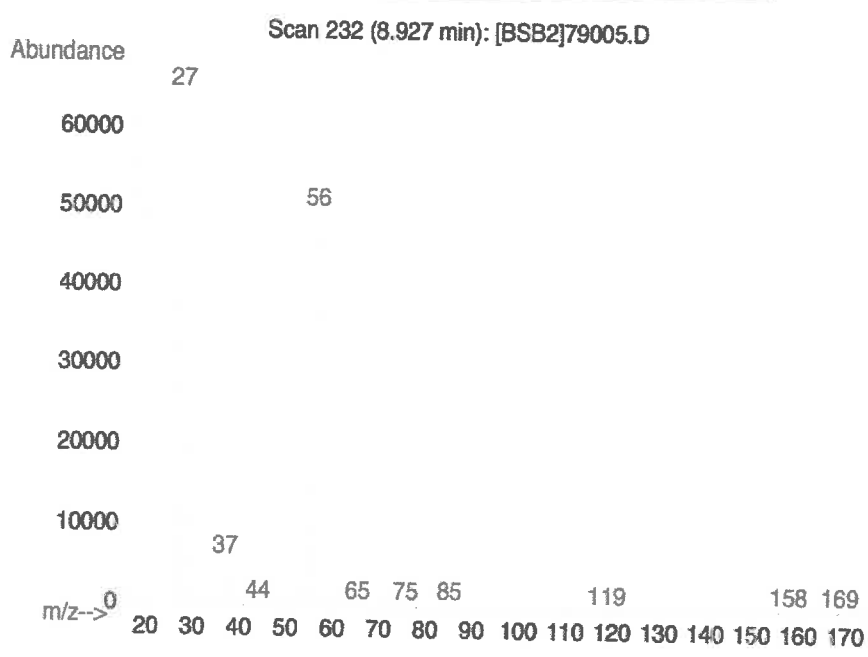
Formulated By: Justin Dippold 091424 DATE

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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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

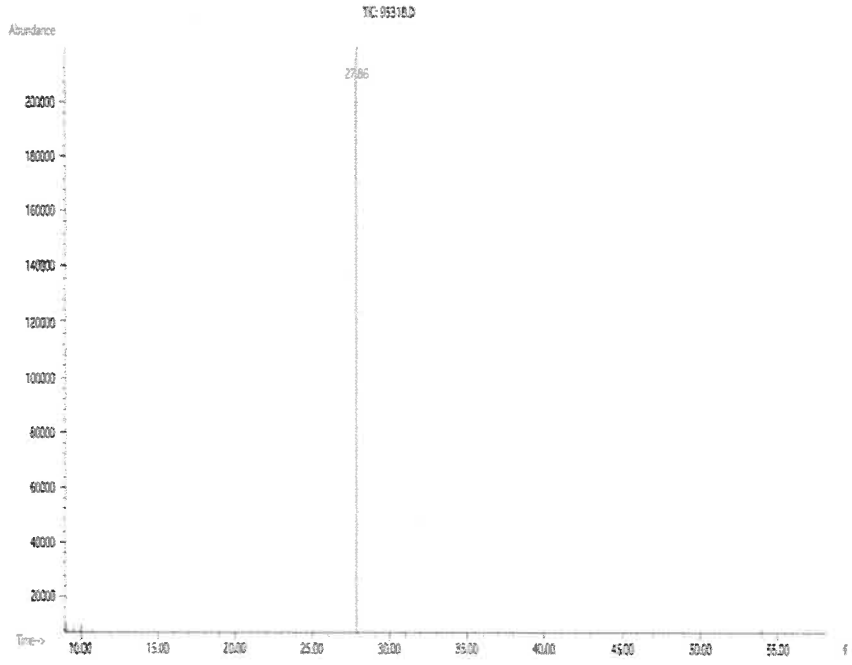
V14630 to V14649

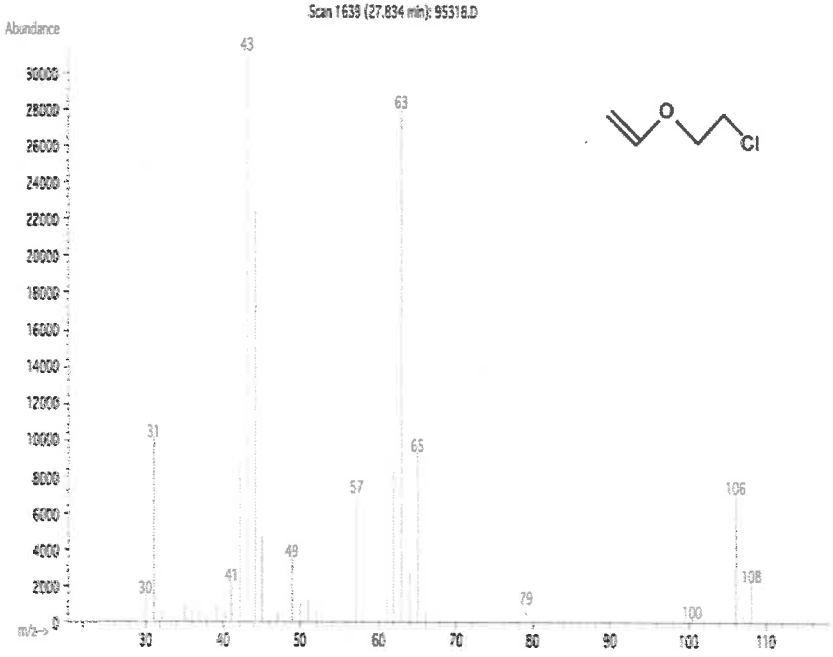
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

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.
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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Rec 12/6/24
20 vial

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https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

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

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

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

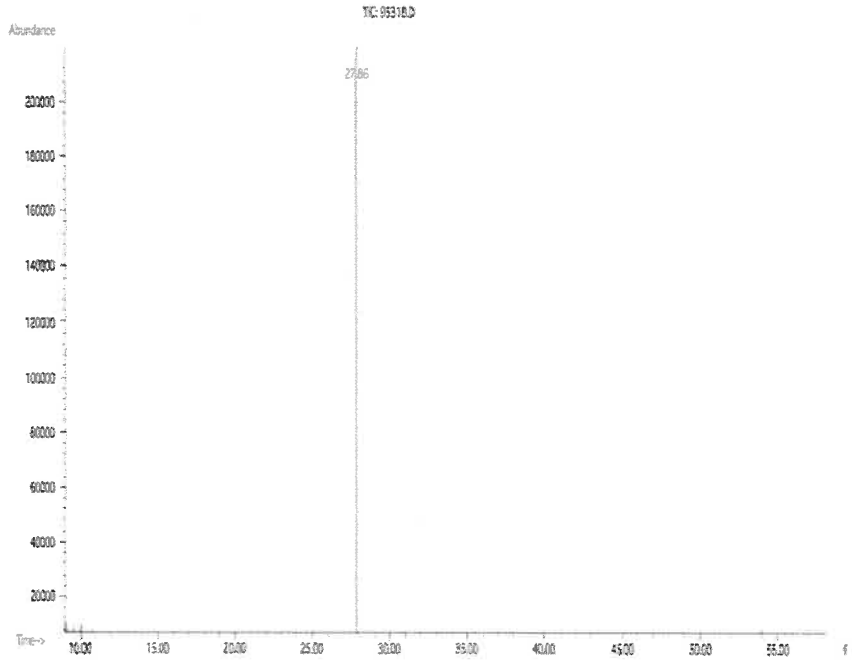
V14630 to V14649

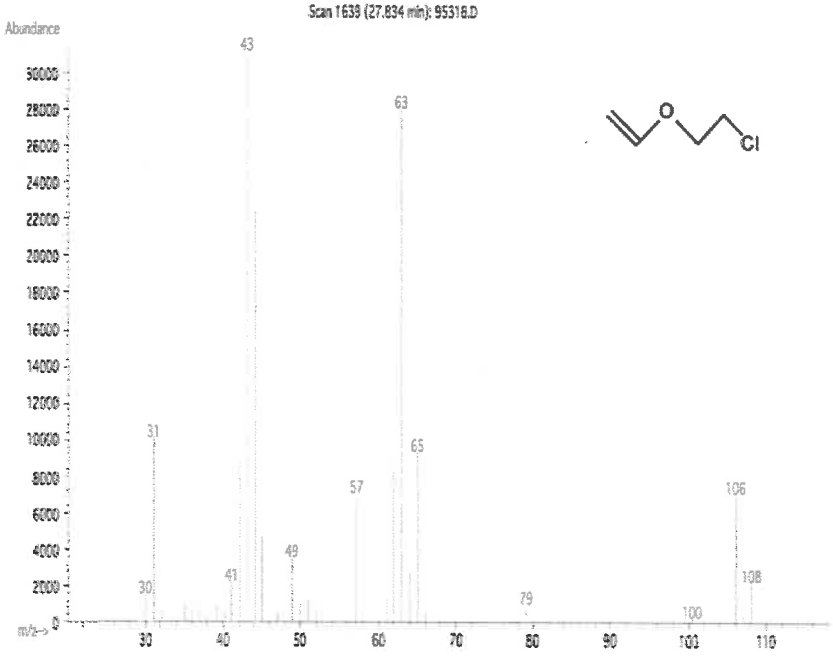
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

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

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. 2-Chloroethyl vinyl ether	74	MKCD0033	10000	99	0.2	0.50536	0.50550	10002.9	40.5	110-75-8	N/A	ori-rat 250mg/kg

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





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Signal Word: DANGER

Section III - Composition

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

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Hazardous decomposition products formed under fire conditions. - Carbon oxides

Section XI. TOXICOLOGICAL INFORMATION

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

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

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

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

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

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

Section XV. REGULATORY INFORMATION

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

Section XVI. Misc. INFORMATION

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

Certified Reference Material CRM

Rec 12/6/24
20 vial

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

CERTIFIED WEIGHT REPORT

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

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

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

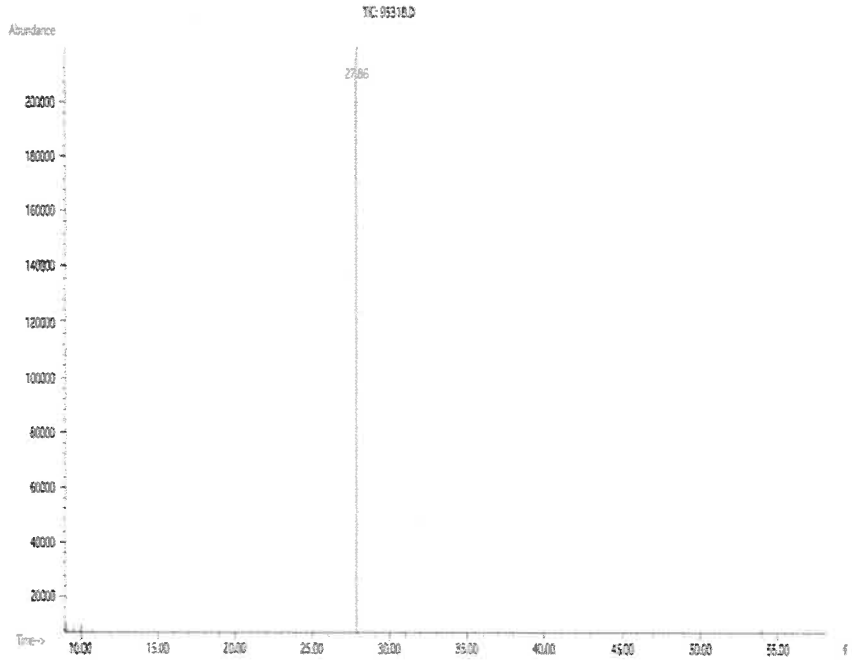
V14630 to V14649

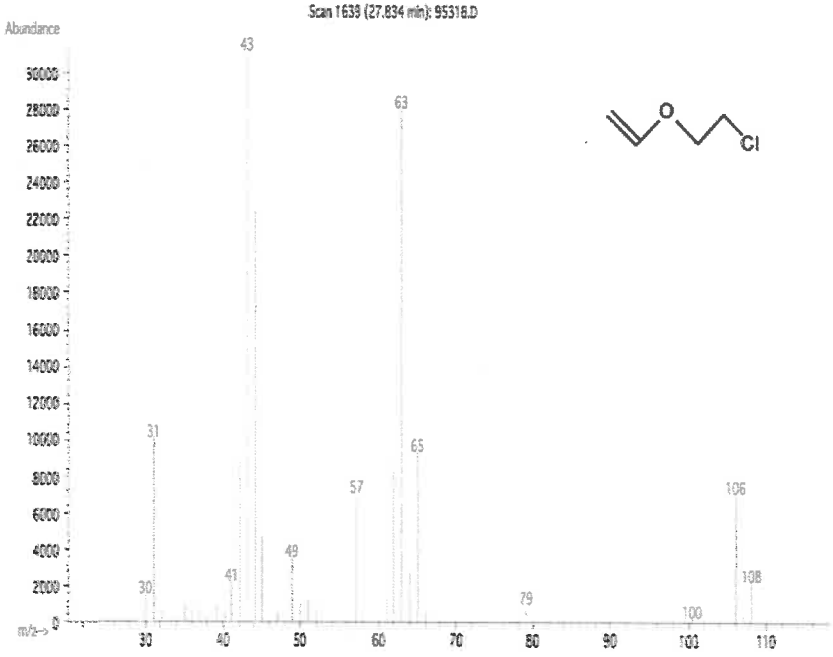
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

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

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. 2-Chloroethyl vinyl ether	74	MKCD0033	10000	99	0.2	0.50536	0.50550	10002.9	40.5	110-75-8	N/A	ori-rat 250mg/kg

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





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

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

Safety Data Sheet (SDS) GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY **ANALYTICAL STANDARD DISSOLVED IN METHANOL**

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

Section II - Hazards Identification

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

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

Signal Word: DANGER

Section III - Composition

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

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

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

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

Section V. FIREFIGHTING MEASURES

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

Section VI. ACCIDENTAL RELEASE MEASURES

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

Section VII. HANDLING AND STORAGE

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

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Section IX - Physical/Chemical Characteristics

Boiling Point	65°C	Specific Gravity (H2O = 1)	0.79
Vapor Pressure (mm Hg)	96	Melting Point	-98°C
Vapor Density (AIR = 1)	1.11	Evaporation rate (Butyl Acetate = 1)	4.6

Solubility in Water COMPLETE

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

Section X. STABILITY AND REACTIVITY

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

Section XI. TOXICOLOGICAL INFORMATION

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Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

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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

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Part Number: 95318
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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

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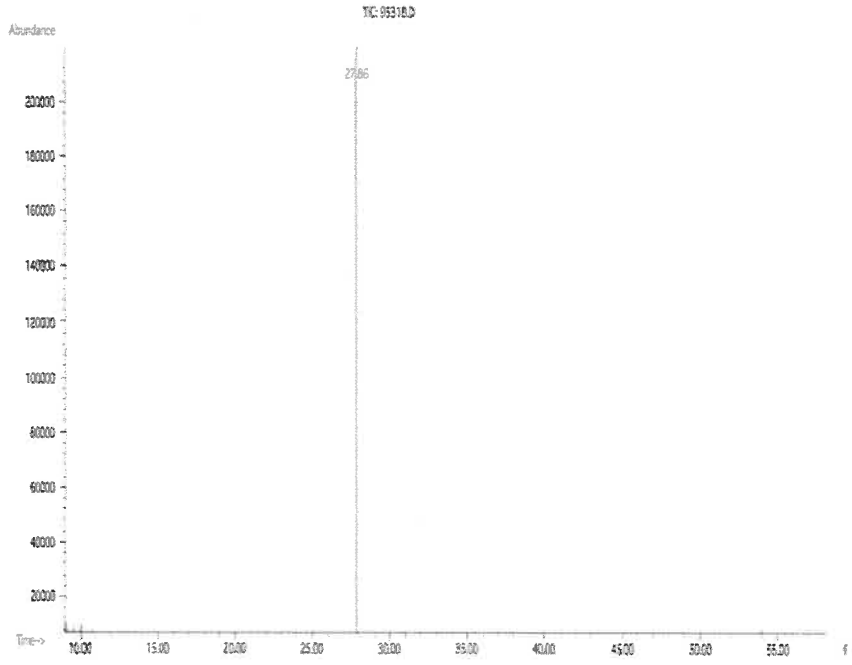

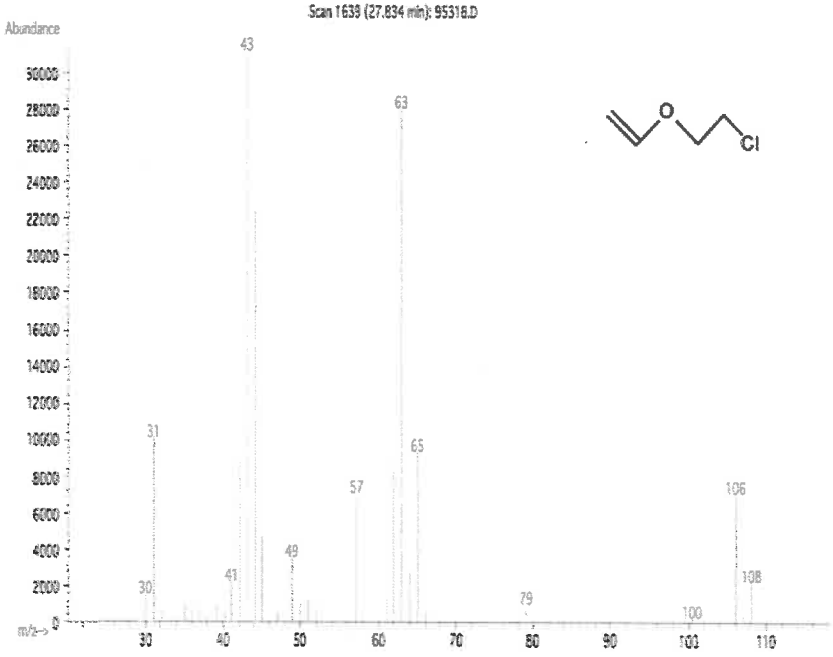

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RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Gravimetric Certificate

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. : 555583 **Lot No.:** A0181978

Description : Custom CLP VOA Internal Standard Mix

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

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

Expiration Date : February 28, 2025 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Component #	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Difluorobenzene **CAS #** 540-36-3 (Lot MKBN8571V) **Purity** 99%	25,032.0 µg/mL	+/- 231.6508 µg/mL +/- 1,415.0433 µg/mL +/- 1,447.6224 µg/mL	Gravimetric Unstressed Stressed
2	Bromochloromethane **CAS #** 74-97-5 (Lot 00008541) **Purity** 99%	25,036.0 µg/mL	+/- 231.6879 µg/mL +/- 1,415.2694 µg/mL +/- 1,447.8538 µg/mL	Gravimetric Unstressed Stressed
3	Chlorobenzene-d5 **CAS #** 3114-55-4 (Lot PR-29571) **Purity** 99%	25,104.0 µg/mL	+/- 232.3171 µg/mL +/- 1,419.1134 µg/mL +/- 1,451.7863 µg/mL	Gravimetric Unstressed Stressed

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

Miranda Kline

Miranda Kline - Operations Technician I

Date Mixed: 17-Feb-2022 **Balance:** B707717271

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 combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules 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 ampules. 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.

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
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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. : 30470 **Lot No.:** A0181905

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 : February 28, 2025 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	tert-Butanol (TBA)	50,126.0 µg/mL	+/- 293.4988 µg/mL	Gravimetric
	CAS # 75-65-0 (Lot SHBM7694)		+/- 1,073.7654 µg/mL	Unstressed
	Purity 99%		+/- 1,104.9494 µg/mL	Stressed

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

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

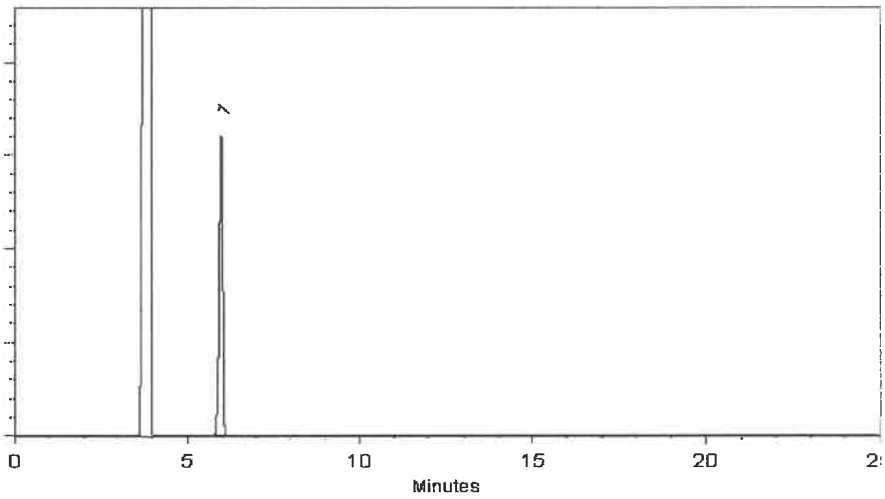
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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



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.

John Friedline - Operations Technician I

Date Mixed: 16-Feb-2022 **Balance:** B442140311

Marlina Cowan - Operations Tech I

Date Passed: 21-Feb-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 combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules 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 ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 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.)

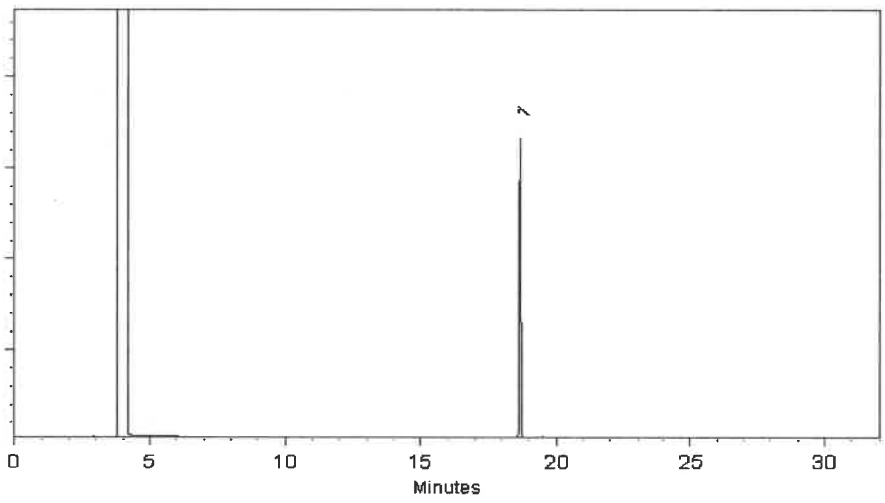
Inj. Temp:
200°C

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

Description : 8260B Acetates Mix

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

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

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

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

CERTIFIED VALUES

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

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

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

Tech Tips:

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

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

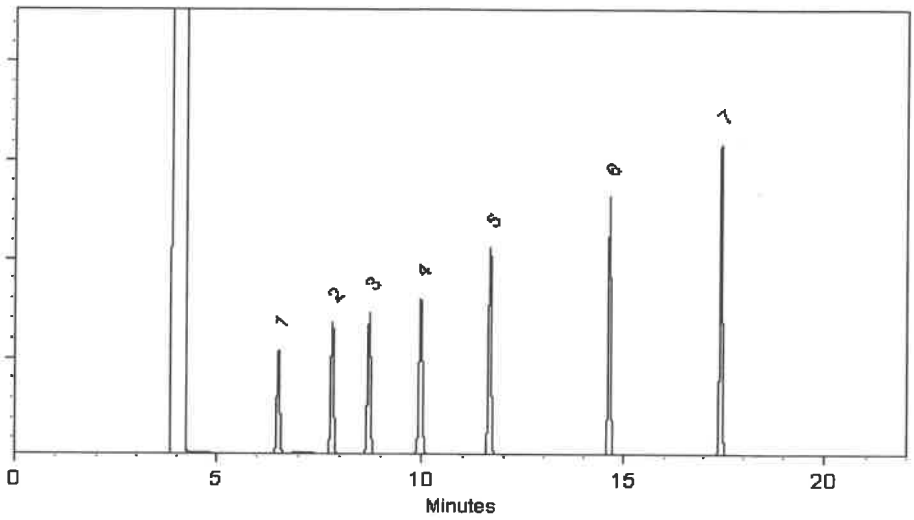
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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

Sam Moodler - Operations Tech I

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

Dillan Murphy - Operations Technician I

Date Passed: 01-Apr-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

Manufacturing Notes:

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

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 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.)

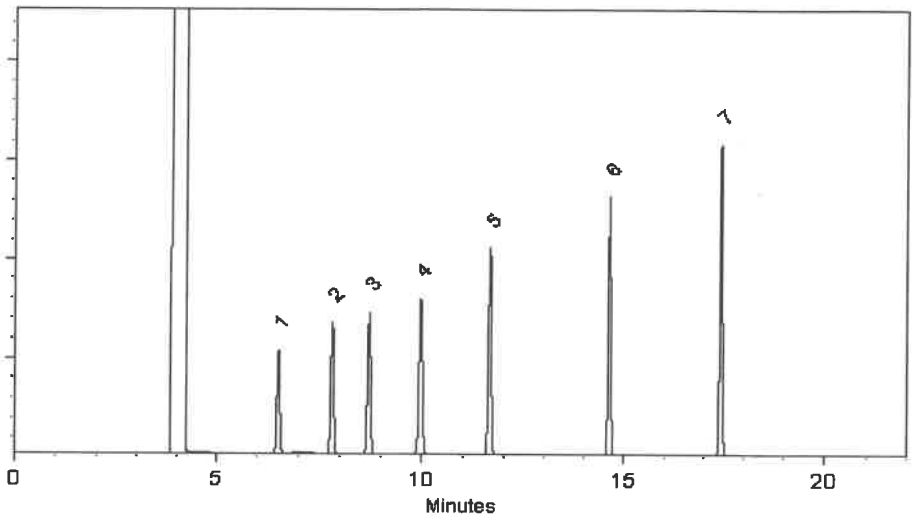
Inj. Temp:
200°C

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:

- 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.)

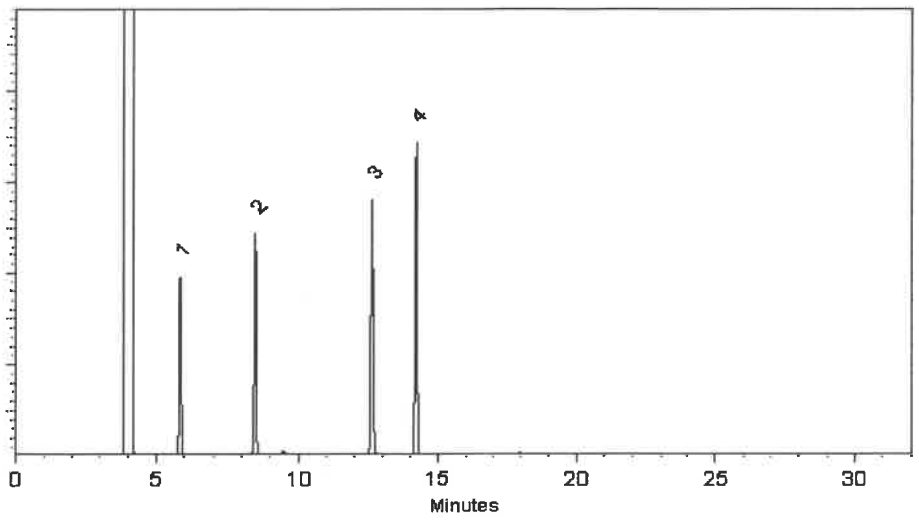
Inj. Temp:
200°C

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:

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

  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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Reference Material Producer
Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 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.)

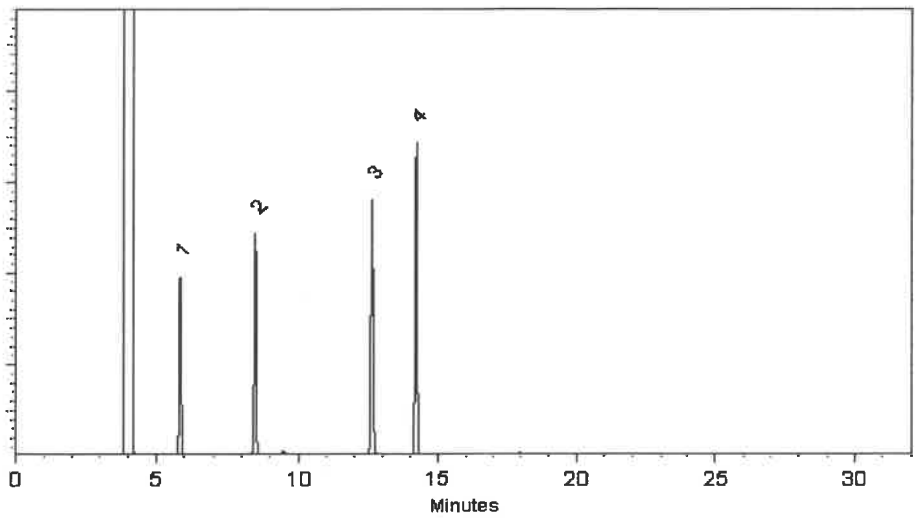
Inj. Temp:
200°C

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:

- 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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30 V.4

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30006 **Lot No.:** A0210618

Description : VOA Calibration Mix #1

VOA Calibration Mix #1 5,000µg/mL, P&T Methanol/Water(90:10), 1mL/ampul

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

Expiration Date : July 31, 2027 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

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

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

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

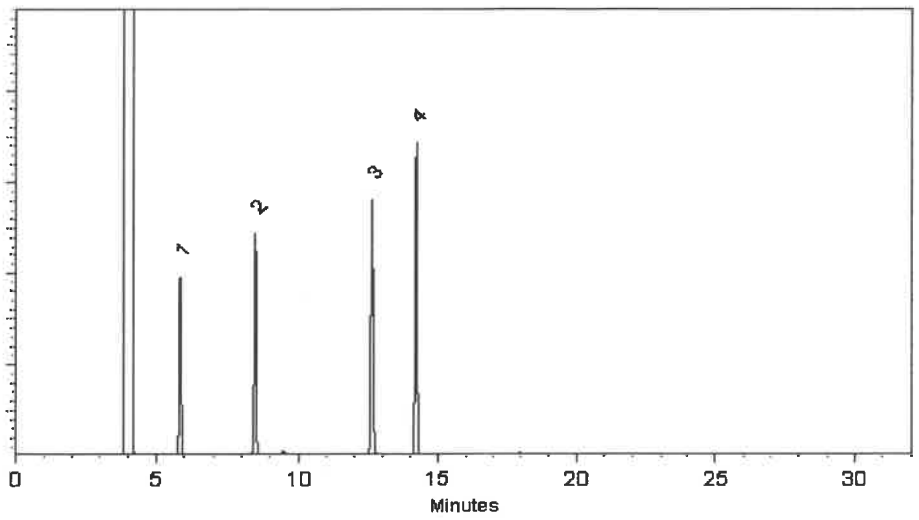
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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

Dakota Parson - Operations Technician I

Date Mixed: 22-Apr-2024 **Balance Serial #** B707717271

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 24-Apr-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

  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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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.

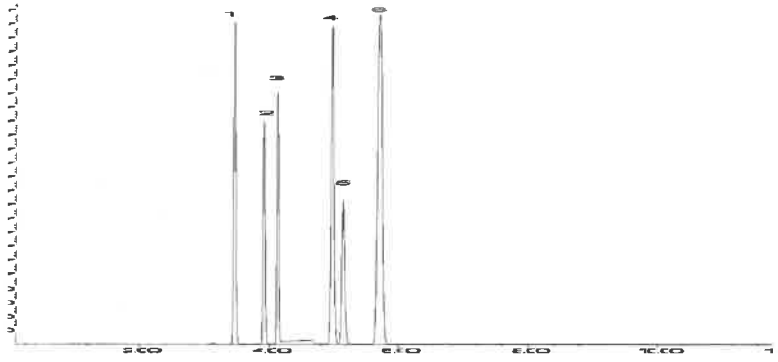
Inj. Temp:
200°C

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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CERTIFIED REFERENCE MATERIAL

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V14756

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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.

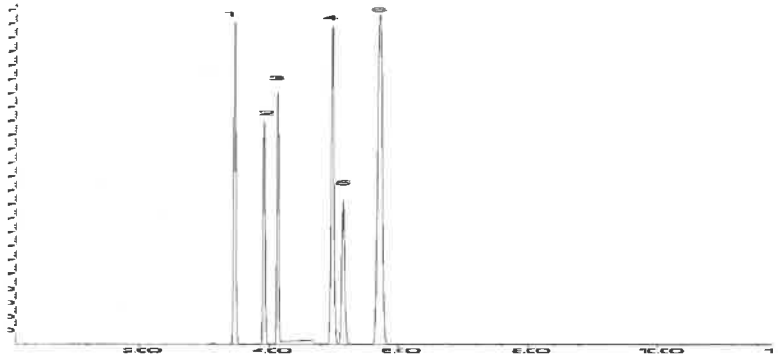
Inj. Temp:
200°C

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.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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Certificate of Analysis

gravimetric

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ilac-MRA A2LA 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. : 555584 **Lot No.:** A0219012

Description : Custom CLP VOA Surrogate Standard Mix

Custom CLP VOA Surrogate Standard Mix 25,000µg/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

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-33313	99%	25,228.0 µg/mL	+/- 1,428.7919
2	1-Bromo-4-fluorobenzene (BFB)	460-00-4	0000268853	99%	25,196.0 µg/mL	+/- 1,426.9795
3	Toluene-d8	2037-26-5	PR-34141	99%	25,228.0 µg/mL	+/- 1,428.7919

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

Jess Hoy - Operations Tech I

Date Mixed: 12-Nov-2024 **Balance:** 1127510105

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Zoviny Rec 01/08/21

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

V14803 - V14822

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 555408-SL **Lot No.:** A0220471

Description : Custom Vinyl Acetate Standard

Custom Vinyl Acetate Standard 8,000µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : June 30, 2026 **Storage:** -20°C or colder

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

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Vinyl acetate	108-05-4	RD240423RSR	99%	8,066.0 µg/mL	+/- 278.7979

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

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

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods . Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

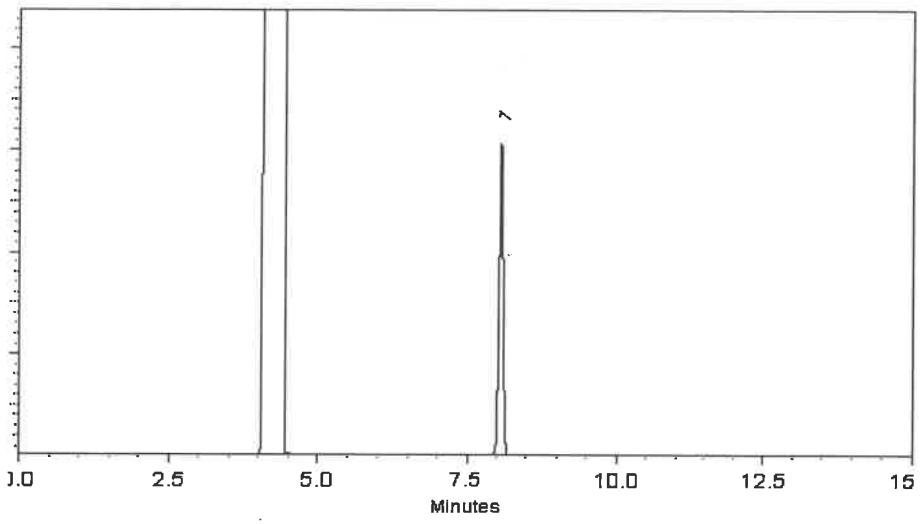
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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.

10 vial Rec 01/08/25

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

Certificate of Analysis

chromatographic

V14793 to 14802

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-FL **Lot No.:** A0220563

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%	8,060.0 µg/mL	+/- 278.5905

* 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.)

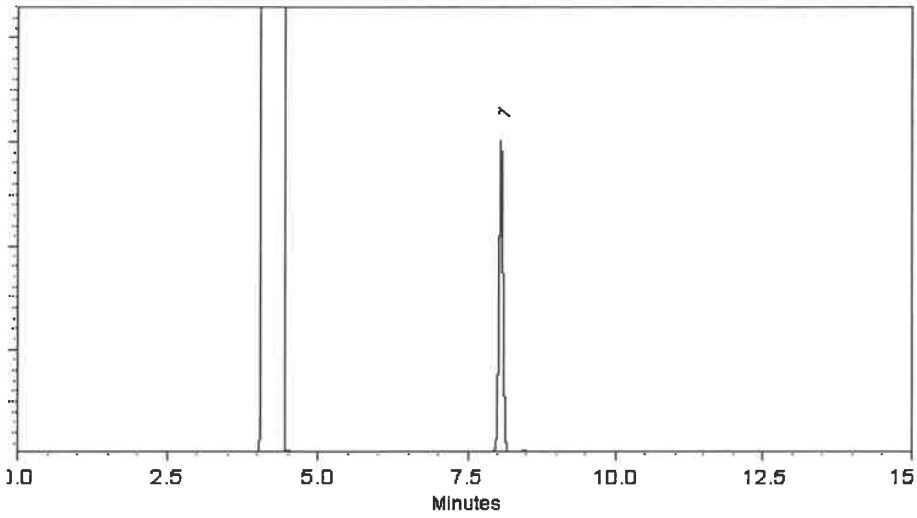
Inj. Temp:
200°C

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.

Tom Suckar - Mix Technician

Date Mixed: 30-Dec-2024 **Balance Serial #** B345965662

Dillan Murphy - Operations Technician I

Date Passed: 02-Jan-2025

REVIEWED

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

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- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

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

SHIPPING DOCUMENTS

Alliance TECHNICAL GROUP

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

ALLIANCE PROJECT NO. Q1429
QUOTE NO.
COC Number 2046144

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: TRS Pharma, INC
ADDRESS: 2033 ROUTE 130
CITY: Monmouth Junction STATE: NJ ZIP: 0885
ATTENTION: Nikki Tierney
PHONE: 732-823-4938 FAX: N/A

CLIENT PROJECT INFORMATION

PROJECT NAME: QUARTERLY
PROJECT NO.: LOCATION:
PROJECT MANAGER: Nikki TIERNEY
e-mail: nmtierney@trspharma.com
PHONE: SAME FAX: N/A

CLIENT BILLING INFORMATION

BILL TO: PO#: 211765
ADDRESS:
CITY SAME STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: 10 DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

☒ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)
☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP
☐ Level 3 (Results + QC + Raw Data) ☐ NYS ASP A ☐ NYS ASP B
☐ Other _____
☐ EDD FORMAT _____

ANALYSIS

1: BOD 5
2: TSS
3: METALS GRP 3
4: COD
5: VOCMS GRP 1
6: NON-POLAR MATERIA
7:
8:
9:

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9
1. DSN-001	OUTFALL DSN-001	WW		X	2/25/25	9:15am	7	X	X	X	X	X	X			
2. DSN-002	OUTFALL DSN-002	WW		X	2/25/25	9:49am	7	X	X	X	X	X	X			
3.																
4.																
5.																
6.																
7.																
8.																
9.																
10.																

PRESERVATIVES: E E B C A C

COMMENTS

← Specify Preservatives
A-HCl D-NaOH
B-HN03 E-ICE
C-H2SO4 F-OTHER

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

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1. JA	2/25/25 10:32am	1. 1320 2.25.25
2.		2.
3.	2-25-25 1455	3.

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 2.5 °C
Comments:

Page _____ of

CLIENT: ☐ Hand Delivered ☐ Other _____

Shipment Complete ☐ YES ☐ NO

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

CHEMTECH 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