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

DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following " Results Qualifiers" are used:

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

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LAB CHRONICLE

OrderID:	Q3399	**OrderDate:**	10/20/2025 1:23:08 PM
Client:	ICE Service Group, Inc.	**Project:**	NWIRP Northrup Grumman Site – Bethpage, NY
Contact:	Dennis D. Morgan, II	**Location:**	D41,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q3399-03	**COMP-ROLLOFF**	**SOIL**			**10/20/25**			**10/20/25**
			VOC-TCLVOA-10	8260D			10/21/25	
Q3399-04	**COMP-ROLLOFF**	**TCLP**			**10/20/25**			**10/20/25**
			TCLP VOA	8260D			10/24/25	

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Hit Summary Sheet
SW-846

SDG No.: Q3399

Client: ICE Service Group, Inc.

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID:									
				0					

Total Voc :

Total Concentration:

QC SUMMARY

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Surrogate Summary

SDG No.: Q3399

Client: ICE Service Group, Inc.

Analytical Method: SW8260D

Lab Sample ID	Client ID	Parameter	Spike	Result	Recovery (%)	Qual	Limits (%) Low	High
Q3399-04	COMP-ROLLOFF	1,2-Dichloroethane-d4	50	54.5	109		81	118
		Dibromofluoromethane	50	39.9	80		80	119
		Toluene-d8	50	47.1	94		89	112
		4-Bromofluorobenzene	50	50.4	101		85	114

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Surrogate Summary

SDG No.: Q3399

Client: ICE Service Group, Inc.

Analytical Method: SW8260-Low

Lab Sample ID	Client ID	Parameter	Spike	Result	Recovery (%)	Qual	Limits (%) Low	High
VX1024WBL01	VX1024WBL01	1,2-Dichloroethane-d4	50	52.2	104		81	118
		Dibromofluoromethane	50	39.0	78	*	80	119
		Toluene-d8	50	43.1	86	*	89	112
		4-Bromofluorobenzene	50	42.7	85		85	114
VX1024WBS01	VX1024WBS01	1,2-Dichloroethane-d4	50	51.3	103		81	118
		Dibromofluoromethane	50	41.6	83		80	119
		Toluene-d8	50	49.6	99		89	112
		4-Bromofluorobenzene	50	48.3	97		85	114
VX1024WBSD0	VX1024WBSD01	1,2-Dichloroethane-d4	50	53.1	106		81	118
		Dibromofluoromethane	50	40.4	81		80	119
		Toluene-d8	50	49.6	99		89	112
		4-Bromofluorobenzene	50	48.4	97		85	114

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Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q3399 **Analytical Method:** SW8260-Low

Client: ICE Service Group, Inc. **Datafile :** VX048341.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Limits Low	Limits High	RPD
VX1024WBS01	Vinyl chloride	20	27.8	ug/L	139		*	58	137	
	1,1-Dichloroethene	20	20.7	ug/L	104			71	131	
	2-Butanone	100	84.6	ug/L	85			56	143	
	Carbon Tetrachloride	20	18.5	ug/L	93			72	136	
	Chloroform	20	20.8	ug/L	104			79	124	
	Benzene	20	20.2	ug/L	101			79	120	
	1,2-Dichloroethane	20	21.0	ug/L	105			73	128	
	Trichloroethene	20	19.2	ug/L	96			79	123	
	Tetrachloroethene	20	20.9	ug/L	104			74	129	
	Chlorobenzene	20	19.8	ug/L	99			82	118	

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Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q3399 **Analytical Method:** SW8260-Low

Client: ICE Service Group, Inc. **Datafile :** VX048342.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Limits Low	Limits High	RPD
VX1024WBSD01	Vinyl chloride	20	26.6	ug/L	133	4		58	137	20
	1,1-Dichloroethene	20	19.5	ug/L	98	6		71	131	20
	2-Butanone	100	95.2	ug/L	95	11		56	143	20
	Carbon Tetrachloride	20	19.0	ug/L	95	2		72	136	20
	Chloroform	20	20.8	ug/L	104	0		79	124	20
	Benzene	20	20.1	ug/L	101	0		79	120	20
	1,2-Dichloroethane	20	21.6	ug/L	108	3		73	128	20
	Trichloroethene	20	19.6	ug/L	98	2		79	123	20
	Tetrachloroethene	20	21.2	ug/L	106	2		74	129	20
	Chlorobenzene	20	19.7	ug/L	99	0		82	118	20

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VOLATILE METHOD BLANK SUMMARY

Client ID: VX1024WBL01

Lab Name: Alliance | Contract: ICES02

Lab Code: ACE | SDG NO.: Q3399

Lab File ID: VX048340.D | Lab Sample ID: VX1024WBL01

Date Analyzed: 10/24/2025 | Time Analyzed: 09:48

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
VX1024WBS01	VX1024WBS01	VX048341.D	10/24/2025
VX1024WBSD01	VX1024WBSD01	VX048342.D	10/24/2025
COMP-ROLLOFF	Q3399-04	VX048343.D	10/24/2025

COMMENTS:

Raw Data: **VX048226.D**

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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Alliance
Contract: ICES02
Lab Code: ACE
SDG NO.: Q3399
Lab File ID: VX048226.D
BFB Injection Date: 10/20/2025
Instrument ID: MSVOA_X
BFB Injection Time: 08:15
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	17.7
75	30.0 - 60.0% of mass 95	50.7
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.3 (0.4) 1
174	50.0 - 100.0% of mass 95	76.5
175	5.0 - 9.0% of mass 174	5.8 (7.5) 1
176	95.0 - 101.0% of mass 174	73.8 (96.4) 1
177	5.0 - 9.0% of mass 176	4.8 (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:

CLIENT ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDICC001	VSTDICC001	VX048229.D	10/20/2025	10:59
VSTDICC020	VSTDICC020	VX048231.D	10/20/2025	11:40
VSTDICCC050	VSTDICCC050	VX048232.D	10/20/2025	12:01
VSTDICC100	VSTDICC100	VX048233.D	10/20/2025	12:22
VSTDICC150	VSTDICC150	VX048234.D	10/20/2025	12:43
VSTDICC005	VSTDICC005	VX048236.D	10/20/2025	13:49

Raw Data: **VX048338.D**

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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Alliance
Contract: ICES02
Lab Code: ACE
SDG NO.: Q3399
Lab File ID: VX048338.D
BFB Injection Date: 10/24/2025
Instrument ID: MSVOA_X
BFB Injection Time: 08:19
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	54.7
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6
173	Less than 2.0% of mass 174	0.9 (1.2) 1
174	50.0 - 100.0% of mass 95	72.8
175	5.0 - 9.0% of mass 174	5.6 (7.8) 1
176	95.0 - 101.0% of mass 174	71.6 (98.4) 1
177	5.0 - 9.0% of mass 176	4.8 (6.8) 2

1-Value is % mass 174

2-Value is % mass 176

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

CLIENT ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDCCC050	VSTDCCC050	VX048339.D	10/24/2025	09:16
VX1024WBL01	VX1024WBL01	VX048340.D	10/24/2025	09:48
VX1024WBS01	VX1024WBS01	VX048341.D	10/24/2025	10:15
VX1024WBSD01	VX1024WBSD01	VX048342.D	10/24/2025	10:43
COMP-ROLLOFF	Q3399-04	VX048343.D	10/24/2025	11:03
VSTDCCC050EC	VSTDCCC050	VX048353.D	10/24/2025	15:49

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VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Alliance Contract: ICES02

Lab Code: ACE SDG NO.: Q3399

Lab File ID: VX048339.D Date Analyzed: 10/24/2025

Instrument ID: MSVOA_X Time Analyzed: 09:16

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	125053	5.53	210685	6.74	187763	10.04
UPPER LIMIT	250106	6.031	421370	7.239	375526	10.537
LOWER LIMIT	62526.5	5.031	105343	6.239	93881.5	9.537
EPA SAMPLE NO.						
COMP-ROLLOFF	137283	5.54	270507	6.75	270324	10.04
VX1024WBL01	90540	5.53	176490	6.74	165587	10.04
VX1024WBS01	145979	5.53	238661	6.74	208902	10.04
VX1024WBSD01	137701	5.53	225696	6.74	197290	10.04

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

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

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

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VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Alliance Contract: ICES02

Lab Code: ACE SDG NO.: Q3399

Lab File ID: VX048339.D Date Analyzed: 10/24/2025

Instrument ID: MSVOA_X Time Analyzed: 09:16

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

	IS4 AREA #	RT #				
12 HOUR STD	93479	12.006				
UPPER LIMIT	186958	12.506				
LOWER LIMIT	46739.5	11.506				
EPA SAMPLE NO.						
COMP-ROLLOFF	123520	12.01				
VX1024WBL01	72164	12.01				
VX1024WBS01	103563	12.01				
VX1024WBSD01	98612	12.00				

IS4 = 1,4-Dichlorobenzene-d4

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

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

SAMPLE DATA

Raw Data: **VX048343.D**

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

Report of Analysis

Client:	ICE Service Group, Inc.	Date Collected:	10/20/25
Project:	NWIRP Northrup Grumman Site – Bethpage, NY	Date Received:	10/20/25
Client Sample ID:	COMP-ROLLOFF	SDG No.:	Q3399
Lab Sample ID:	Q3399-04	Matrix:	TCLP
Analytical Method:	8260D Level: LOW	% Solid:	0
Sample Wt/Vol:	5 mL Final Vol: 5000 uL	Test:	TCLP VOA

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS										
75-01-4	Vinyl Chloride	0.75	UQ	1	0.26	0.75	5.00	ug/L	10/24/25 11:03	VX102425
75-35-4	1,1-Dichloroethene	0.75	U	1	0.23	0.75	5.00	ug/L	10/24/25 11:03	VX102425
78-93-3	2-Butanone	2.50	U	1	0.98	2.50	25.0	ug/L	10/24/25 11:03	VX102425
56-23-5	Carbon Tetrachloride	0.50	U	1	0.25	0.50	5.00	ug/L	10/24/25 11:03	VX102425
67-66-3	Chloroform	0.50	U	1	0.25	0.50	5.00	ug/L	10/24/25 11:03	VX102425
71-43-2	Benzene	0.50	U	1	0.15	0.50	5.00	ug/L	10/24/25 11:03	VX102425
107-06-2	1,2-Dichloroethane	0.75	U	1	0.22	0.75	5.00	ug/L	10/24/25 11:03	VX102425
79-01-6	Trichloroethene	0.75	U	1	0.090	0.75	5.00	ug/L	10/24/25 11:03	VX102425
127-18-4	Tetrachloroethene	0.50	U	1	0.23	0.50	5.00	ug/L	10/24/25 11:03	VX102425
108-90-7	Chlorobenzene	0.50	U	1	0.12	0.50	5.00	ug/L	10/24/25 11:03	VX102425
SURROGATES										
17060-07-0	1,2-Dichloroethane-d4	54.5			81 - 118		109%	SPK: 50		
1868-53-7	Dibromofluoromethane	39.9			80 - 119		80%	SPK: 50		
2037-26-5	Toluene-d8	47.1			89 - 112		94%	SPK: 50		
460-00-4	4-Bromofluorobenzene	50.4			85 - 114		101%	SPK: 50		
INTERNAL STANDARDS		**Area Count**								
363-72-4	Pentafluorobenzene	137000								
540-36-3	1,4-Difluorobenzene	271000								
3114-55-4	Chlorobenzene-d5	270000								
3855-82-1	1,4-Dichlorobenzene-d4	124000								

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\VX102425\
Data File : VX048343.D
Acq On : 24 Oct 2025 11:03
Operator : JC/MD
Sample : Q3399-04
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
COMP-ROLLOFF

Quant Time: Oct 24 23:02:39 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

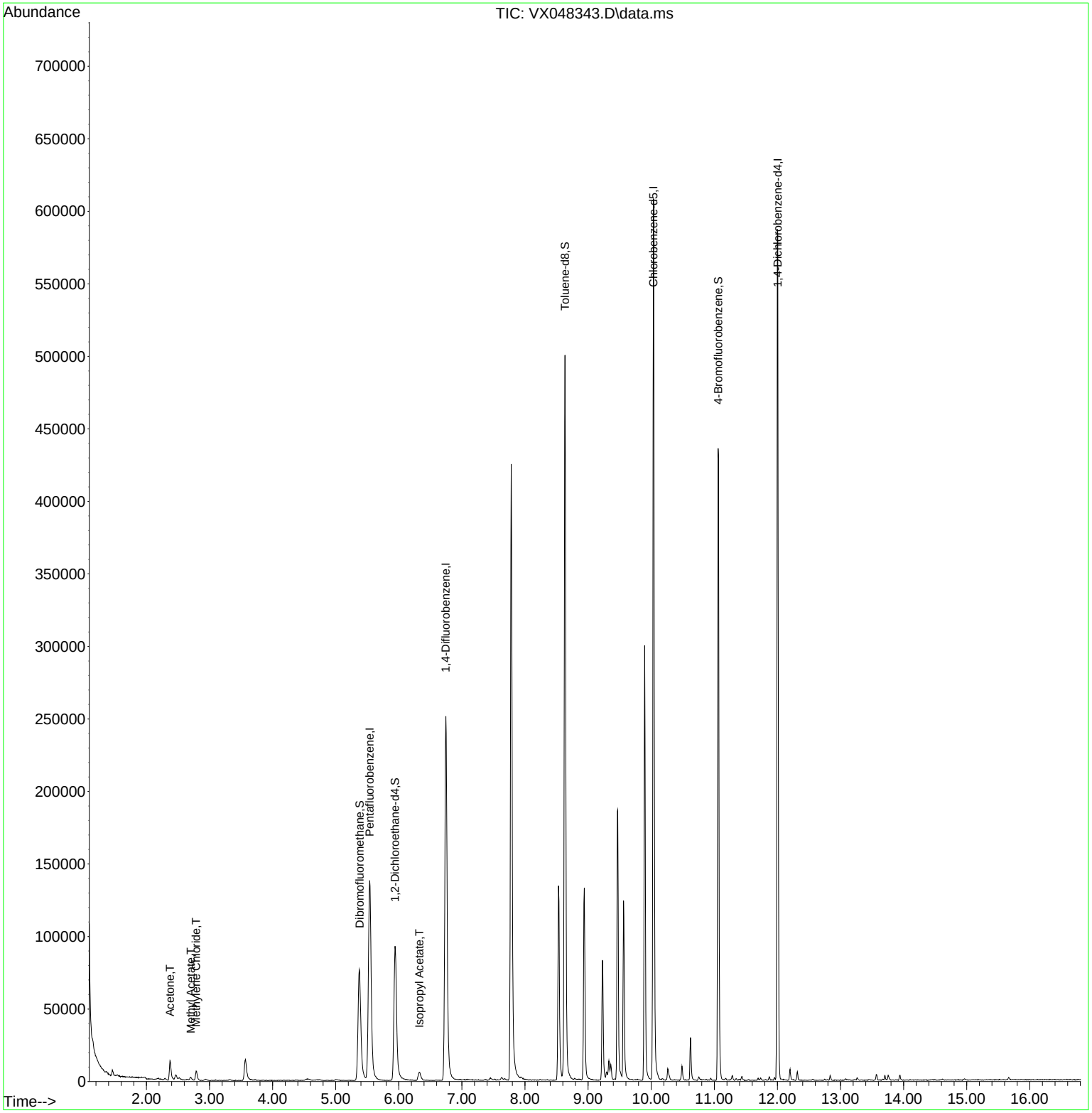
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.538	168	137283	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.745	114	270507	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.037	117	270324	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	123520	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.940	65	104937	54.518	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 109.040%			
35) Dibromofluoromethane	5.379	113	73601	39.855	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 79.700%			
50) Toluene-d8	8.635	98	305004	47.119	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery = 94.240%			
62) 4-Bromofluorobenzene	11.061	95	124188	50.431	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery = 100.860%			
Target Compounds						Qvalue
16) Acetone	2.374	43	18583	28.142	ug/l	95
18) Methyl Acetate	2.703	43	3602	2.612	ug/l #	90
20) Methylene Chloride	2.788	84	3286	2.042	ug/l	90
43) Isopropyl Acetate	6.324	43	9305	2.604	ug/l	98

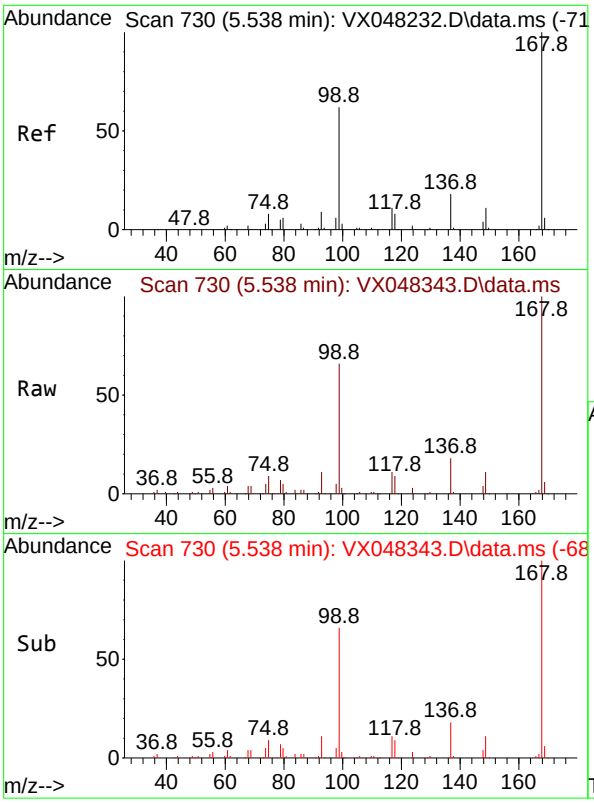
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048343.D
Acq On : 24 Oct 2025 11:03
Operator : JC/MD
Sample : Q3399-04
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
COMP-ROLLOFF

Quant Time: Oct 24 23:02:39 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration



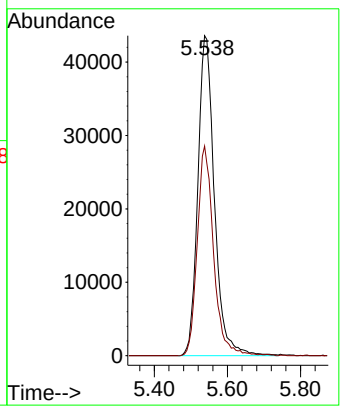


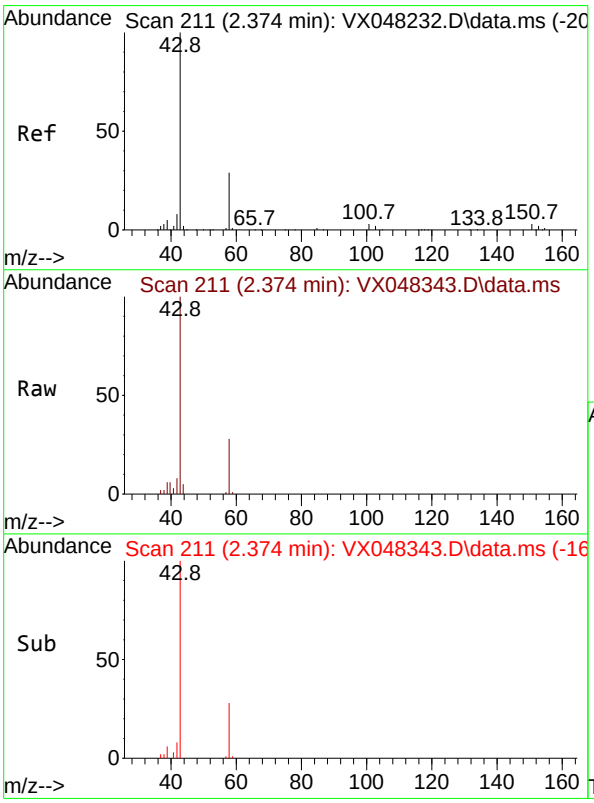
#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 5.538 min Scan# 7
Delta R.T. -0.006 min
Lab File: VX048343.D
Acq: 24 Oct 2025 11:03

Instrument :
MSVOA_X
ClientSampleId :
COMP-ROLLOFF

Tgt Ion:168 Resp: 137283

Ion	Ratio	Lower	Upper
168	100		
99	65.5	46.4	69.6

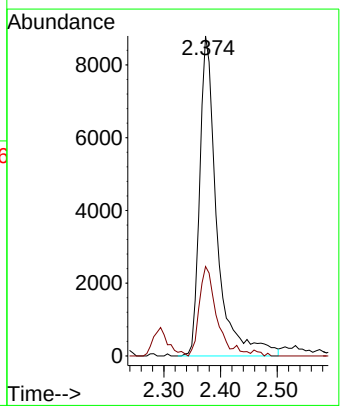


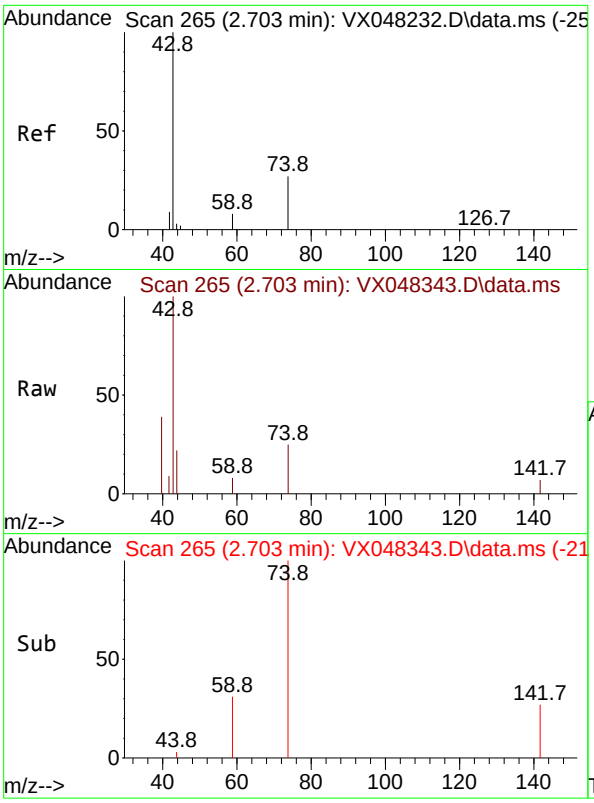


#16
Acetone
Concen: 28.142 ug/l
RT: 2.374 min Scan# 211
Delta R.T. -0.000 min
Lab File: VX048343.D
Acq: 24 Oct 2025 11:03

Tgt Ion: 43 Resp: 18583

Ion	Ratio	Lower	Upper
43	100		
58	26.6	23.4	35.2



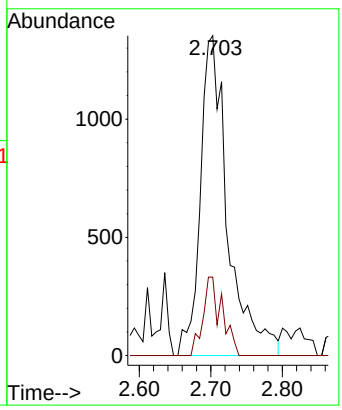


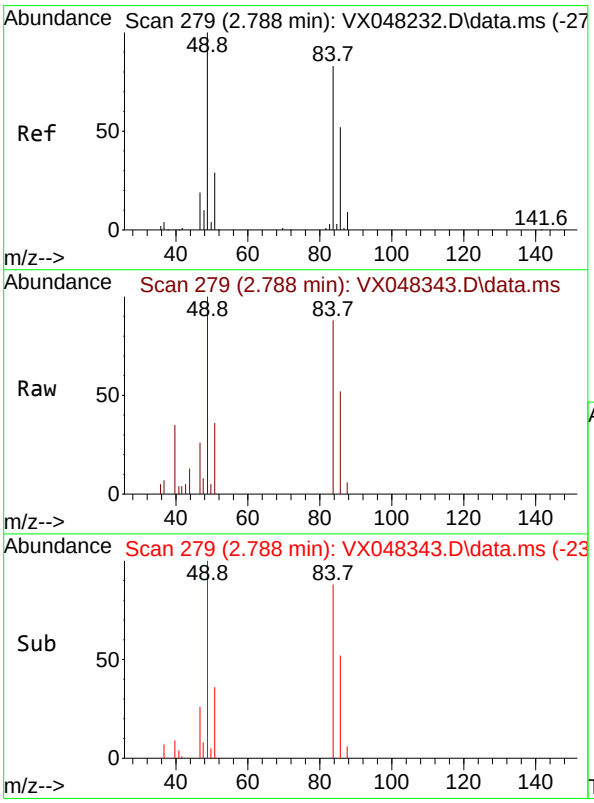
#18
Methyl Acetate
Concen: 2.612 ug/l
RT: 2.703 min Scan# 2
Delta R.T. 0.006 min
Lab File: VX048343.D
Acq: 24 Oct 2025 11:03

Instrument :
MSVOA_X
ClientSampleId :
COMP-ROLLOFF

Tgt Ion: 43 Resp: 3602

Ion	Ratio	Lower	Upper
43	100		
74	17.0	17.5	26.3#

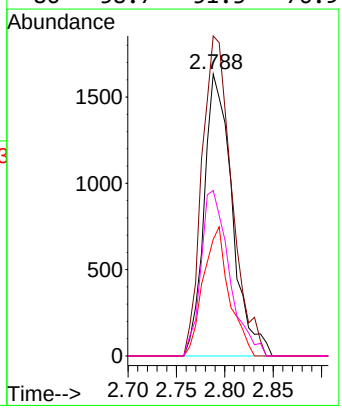


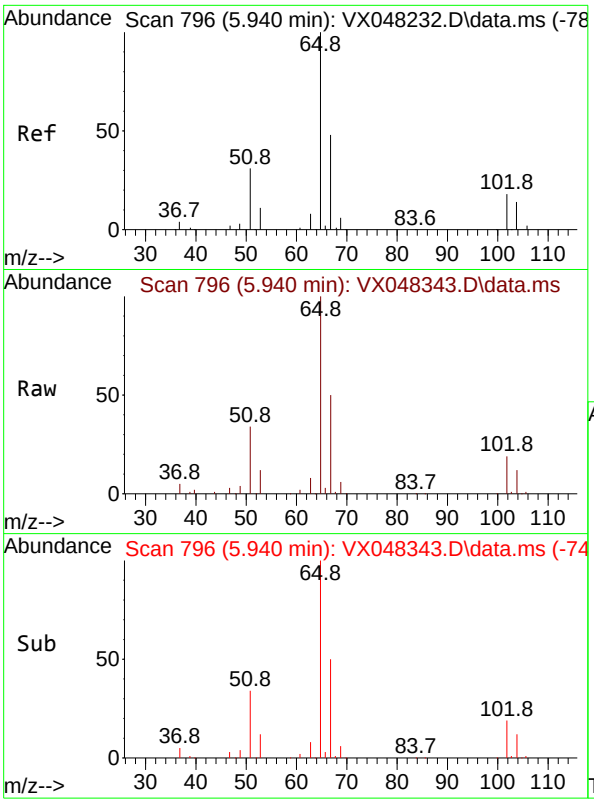


#20
Methylene Chloride
Concen: 2.042 ug/l
RT: 2.788 min Scan# 279
Delta R.T. -0.000 min
Lab File: VX048343.D
Acq: 24 Oct 2025 11:03

Tgt Ion: 84 Resp: 3286

Ion	Ratio	Lower	Upper
84	100		
49	113.5	104.1	156.1
51	41.4	31.3	46.9
86	58.7	51.3	76.9



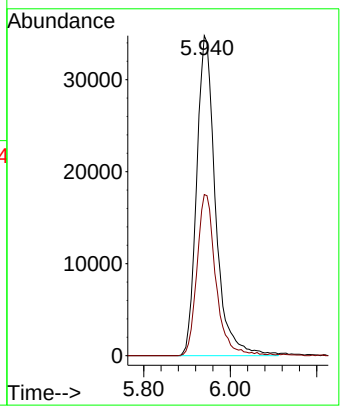


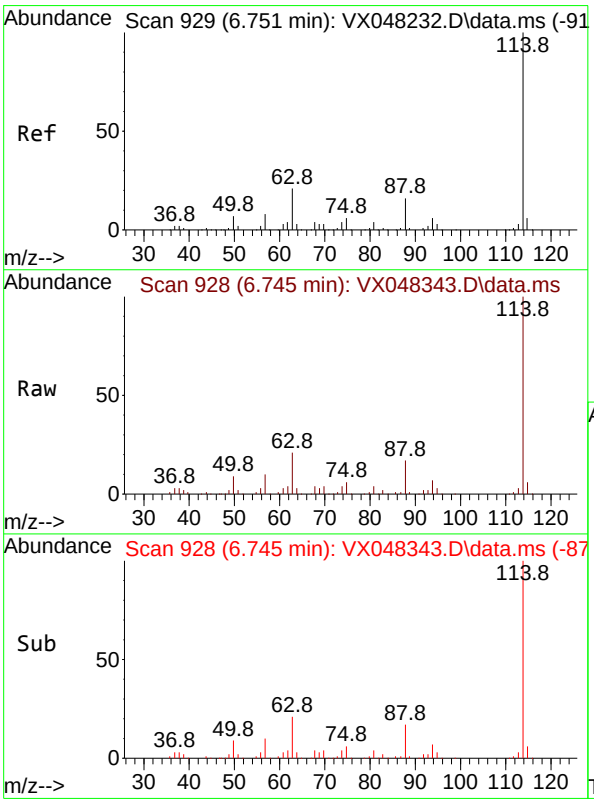
#33
1,2-Dichloroethane-d4
Concen: 54.518 ug/l
RT: 5.940 min Scan# 7
Delta R.T. -0.000 min
Lab File: VX048343.D
Acq: 24 Oct 2025 11:03

Instrument :
MSVOA_X
ClientSampleId :
COMP-ROLLOFF

Tgt Ion: 65 Resp: 104937

Ion	Ratio	Lower	Upper
65	100		
67	50.4	0.0	105.0

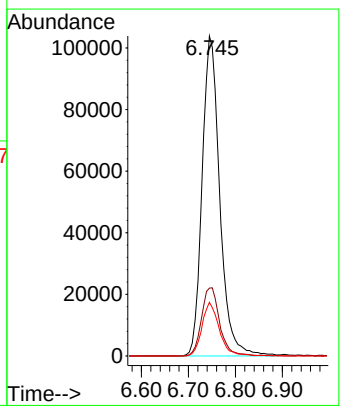


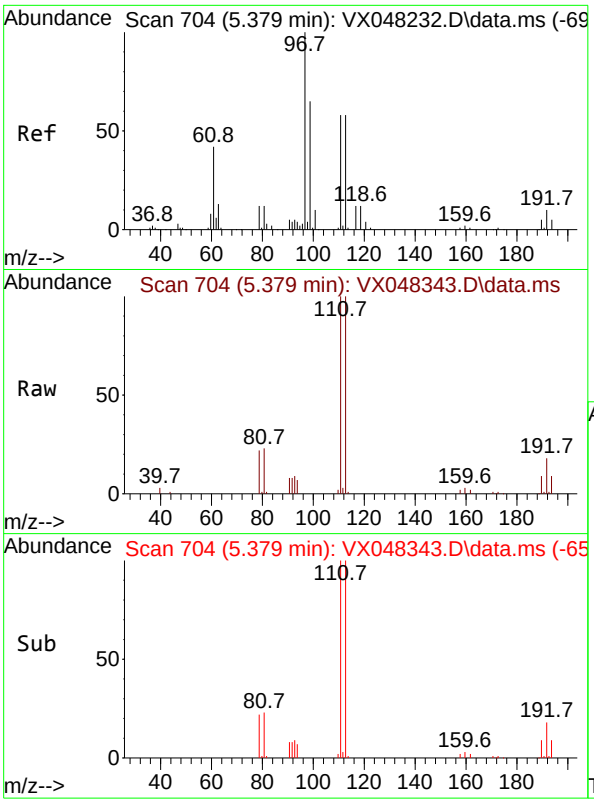


#34
1,4-Difluorobenzene
Concen: 50.000 ug/l
RT: 6.745 min Scan# 928
Delta R.T. -0.000 min
Lab File: VX048343.D
Acq: 24 Oct 2025 11:03

Tgt Ion:114 Resp: 270507

Ion	Ratio	Lower	Upper
114	100		
63	21.2	0.0	43.2
88	16.8	0.0	33.6



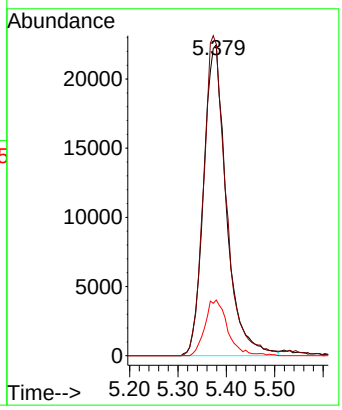


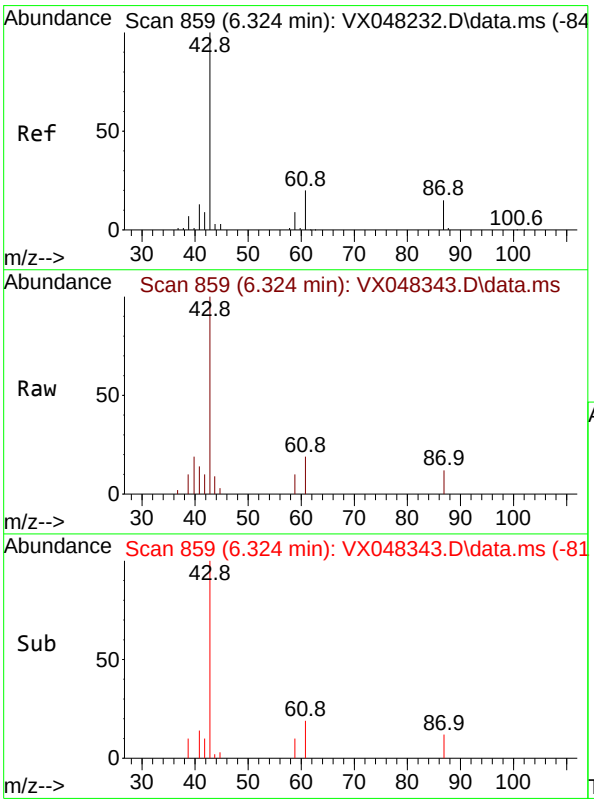
#35
Dibromofluoromethane
Concen: 39.855 ug/l
RT: 5.379 min Scan# 7
Delta R.T. 0.006 min
Lab File: VX048343.D
Acq: 24 Oct 2025 11:03

Instrument :
MSVOA_X
ClientSampleId :
COMP-ROLLOFF

Tgt Ion:113 Resp: 73601

Ion	Ratio	Lower	Upper
113	100		
111	101.7	82.2	123.4
192	17.9	15.1	22.7

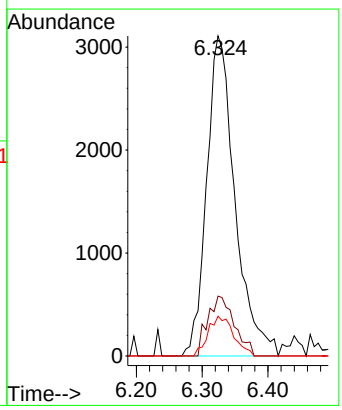


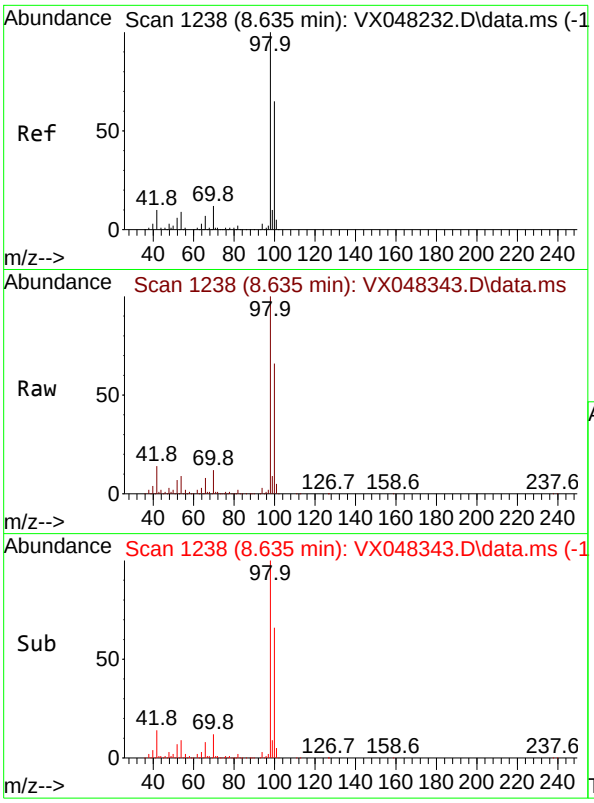


#43
Isopropyl Acetate
Concen: 2.604 ug/l
RT: 6.324 min Scan# 859
Delta R.T. -0.000 min
Lab File: VX048343.D
Acq: 24 Oct 2025 11:03

Tgt Ion: 43 Resp: 9305

Ion	Ratio	Lower	Upper
43	100		
61	17.6	14.9	22.3
87	11.1	9.4	14.2



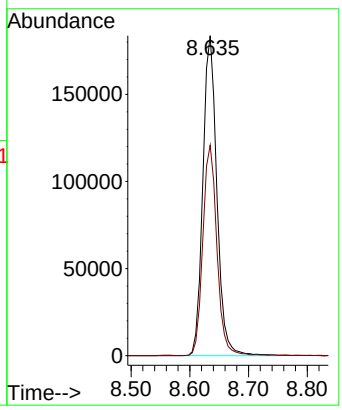


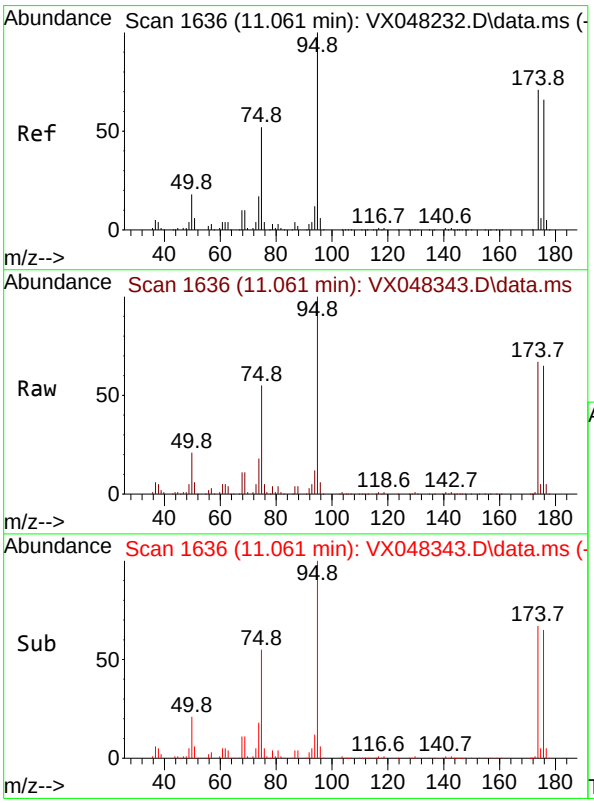
#50
Toluene-d8
Concen: 47.119 ug/l
RT: 8.635 min Scan# 1
Delta R.T. -0.000 min
Lab File: VX048343.D
Acq: 24 Oct 2025 11:03

Instrument :
MSVOA_X
ClientSampleId :
COMP-ROLLOFF

Tgt Ion: 98 Resp: 305004

Ion	Ratio	Lower	Upper
98	100		
100	66.1	53.0	79.4

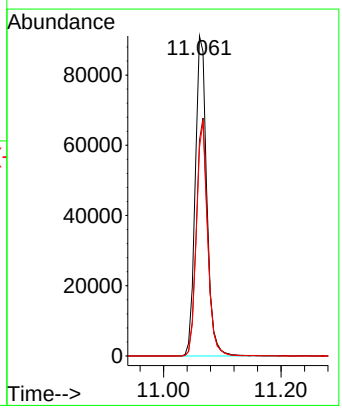


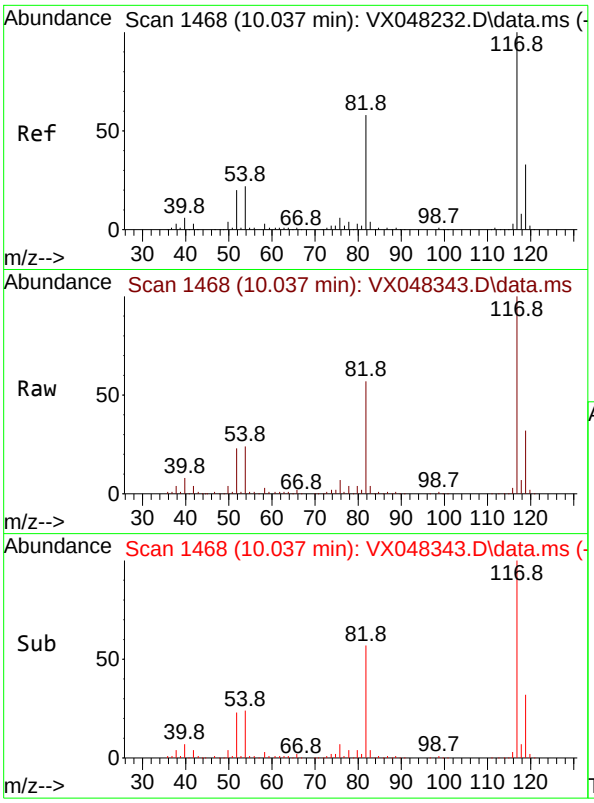


#62
4-Bromofluorobenzene
Concen: 50.431 ug/l
RT: 11.061 min Scan# 1636
Delta R.T. -0.000 min
Lab File: VX048343.D
Acq: 24 Oct 2025 11:03

Tgt Ion: 95 Resp: 124188

Ion	Ratio	Lower	Upper
95	100		
174	73.1	0.0	147.8
176	70.7	0.0	142.8



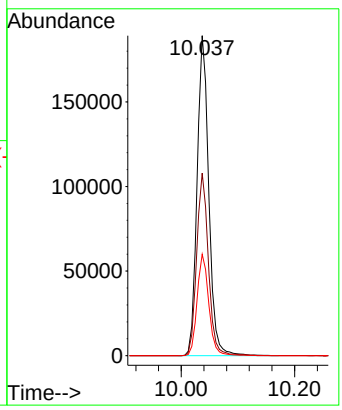


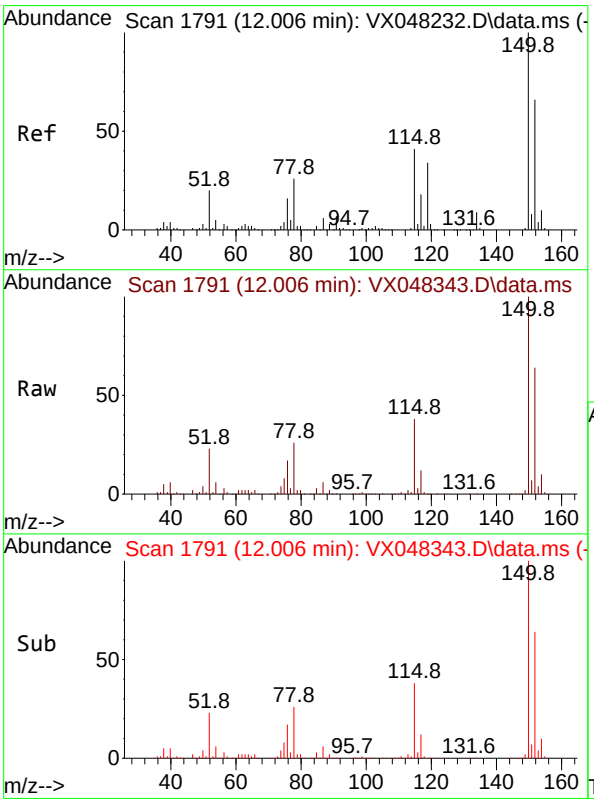
#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 10.037 min Scan# 14
Delta R.T. -0.000 min
Lab File: VX048343.D
Acq: 24 Oct 2025 11:03

Instrument :
MSVOA_X
ClientSampleId :
COMP-ROLLOFF

Tgt Ion:117 Resp: 270324

Ion	Ratio	Lower	Upper
117	100		
82	57.0	46.5	69.7
119	31.7	25.9	38.9

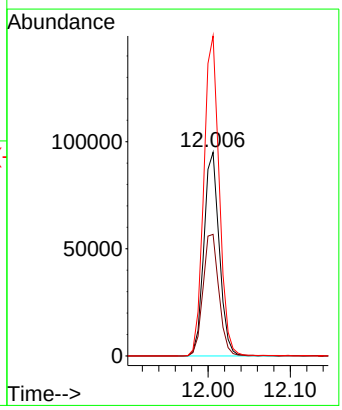




#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 12.006 min Scan# 1791
Delta R.T. -0.000 min
Lab File: VX048343.D
Acq: 24 Oct 2025 11:03

Tgt Ion:152 Resp: 123520

Ion	Ratio	Lower	Upper
152	100		
115	61.7	43.1	129.4
150	157.7	0.0	353.0



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: Alliance Contract: ICES02

Lab Code: ACE SDG No.: Q3399

Instrument ID: MSVOA_X Calibration Date(s): 10/20/2025 10/20/2025

Heated Purge: (Y/N) N Calibration Time(s): 10:59 13:49

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

LAB FILE ID: RRF001 = VX048229.D RRF020 = VX048231.D RRF050 = VX048232.D
RRF100 = VX048233.D RRF150 = VX048234.D RRF005 = VX048236.D

COMPOUND	RRF001	RRF020	RRF050	RRF100	RRF150	RRF005	$\overline{RRF}$	% RSD
Vinyl Chloride	0.447	0.437	0.416	0.462	0.445	0.458	0.444	3.7
1,1-Dichloroethene	0.515	0.548	0.485	0.558	0.531	0.514	0.525	5
2-Butanone	0.311	0.329	0.281	0.301	0.290	0.315	0.304	5.7
Carbon Tetrachloride	0.650	0.594	0.553	0.604	0.567	0.622	0.599	5.9
Chloroform	1.147	1.208	1.046	1.127	1.067	1.143	1.123	5.2
Benzene	1.493	1.480	1.301	1.426	1.347	1.405	1.409	5.3
1,2-Dichloroethane	0.529	0.566	0.500	0.528	0.496	0.499	0.520	5.2
Trichloroethene	0.400	0.373	0.348	0.380	0.363	0.366	0.372	4.7
Tetrachloroethene	0.418	0.378	0.328	0.370	0.361	0.385	0.373	7.9
Chlorobenzene	1.149	1.159	1.045	1.148	1.102	1.145	1.125	3.9
1,2-Dichloroethane-d4		0.709	0.682	0.690	0.698	0.725	0.701	2.4
Dibromofluoromethane		0.345	0.330	0.346	0.348	0.338	0.341	2.2
Toluene-d8		1.185	1.185	1.196	1.195	1.221	1.196	1.2
4-Bromofluorobenzene		0.445	0.444	0.446	0.441	0.500	0.455	5.5

* 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 : 82X102025W.M
Title : SW846 8260
Last Update : Mon Oct 20 14:13:59 2025
Response Via : Initial Calibration

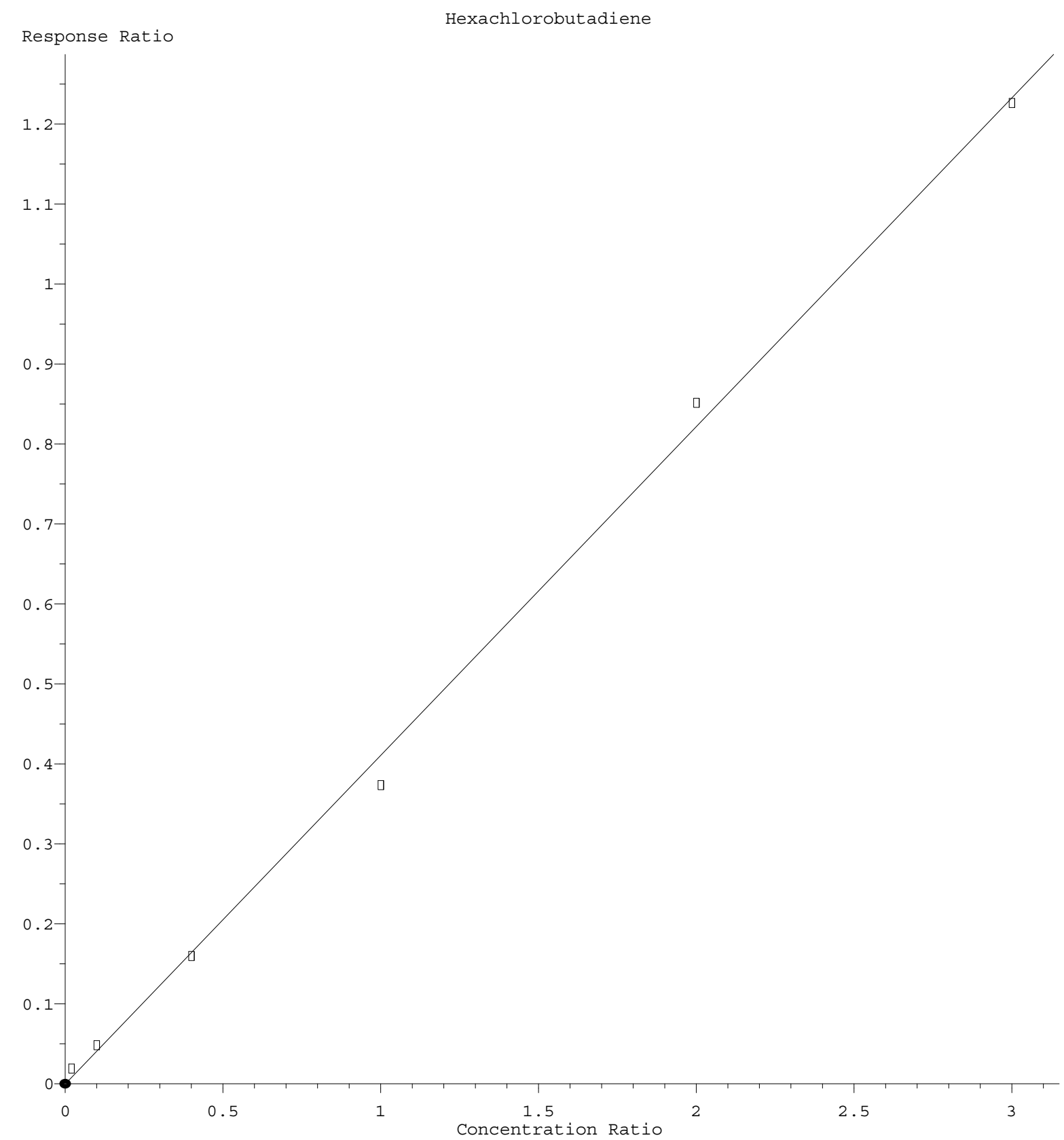
Calibration Files
1 =VX048229.D 5 =VX048236.D 20 =VX048231.D 50 =VX048232.D 100 =VX048233.D 150 =VX048234.D

		Compound	1	5	20	50	100	150	Avg	%RSD
1)	I	Pentafluorobenzene	----------ISTD----------							
2)	T	Dichlorodifluo...	0.522	0.522	0.513	0.483	0.540	0.504	0.514	3.74
3)	P	Chloromethane	0.506	0.508	0.468	0.449	0.476	0.471	0.480	4.81
4)	C	Vinyl Chloride	0.447	0.458	0.437	0.416	0.462	0.445	0.444	3.69#
5)	T	Bromomethane		0.346	0.323	0.282	0.280	0.276	0.302	10.42
6)	T	Chloroethane	0.233	0.261	0.277	0.247	0.282	0.267	0.261	7.16
7)	T	Trichlorofluor...	0.776	0.880	0.874	0.807	0.907	0.869	0.852	5.83
8)	T	Diethyl Ether	0.231	0.237	0.257	0.223	0.248	0.242	0.240	5.06
9)	T	1,1,2-Trichlor...	0.512	0.553	0.540	0.501	0.583	0.549	0.540	5.48
10)	T	Methyl Iodide		0.569	0.636	0.663	0.781	0.742	0.678	12.47
11)	T	Tert butyl alc...		0.087	0.069	0.062	0.067	0.064	0.070	14.22
12)	CM	1,1-Dichloroet...	0.515	0.514	0.548	0.485	0.558	0.531	0.525	5.03#
13)	T	Acrolein		0.079	0.063	0.065	0.074	0.073	0.071	9.21
14)	T	Allyl chloride	0.897	0.833	0.909	0.805	0.911	0.874	0.872	5.00
15)	T	Acrylonitrile	0.255	0.245	0.267	0.239	0.254	0.246	0.251	3.89
16)	T	Acetone	0.300	0.262	0.250	0.202	0.221	0.206	0.240	15.70
17)	T	Carbon Disulfide	2.034	1.689	1.612	1.442	1.617	1.532	1.654	12.36
18)	T	Methyl Acetate	0.514	0.464	0.551	0.466	0.514	0.504	0.502	6.56
19)	T	Methyl tert-bu...	1.894	1.657	1.909	1.704	1.817	1.764	1.791	5.66
20)	T	Methylene Chlo...	0.555	0.595	0.651	0.552	0.597	0.567	0.586	6.36
21)	T	trans-1,2-Dich...	0.587	0.603	0.585	0.535	0.592	0.558	0.577	4.38
22)	T	Diisopropyl ether	1.697	1.701	1.881	1.662	1.787	1.701	1.738	4.69
23)	T	Vinyl Acetate	1.261	1.326	1.521	1.348	1.466	1.408	1.389	6.90
24)	P	1,1-Dichloroet...	1.116	1.054	1.085	0.977	1.055	1.019	1.051	4.64
25)	T	2-Butanone	0.311	0.315	0.329	0.281	0.301	0.290	0.304	5.70
26)	T	2,2-Dichloropr...	1.002	0.945	0.973	0.876	0.973	0.924	0.949	4.69
27)	T	cis-1,2-Dichlo...	0.682	0.673	0.700	0.626	0.695	0.661	0.673	4.03
28)	T	Bromochloromet...	0.388	0.469	0.404	0.441	0.462	0.452	0.436	7.52
29)	T	Tetrahydrofuran	0.178	0.183	0.198	0.171	0.184	0.180	0.182	5.00
30)	C	Chloroform	1.147	1.143	1.208	1.046	1.127	1.067	1.123	5.22#
31)	T	Cyclohexane		0.843	0.894	0.821	0.926	0.866	0.870	4.76
32)	T	1,1,1-Trichlor...	1.049	1.041	1.085	0.973	1.055	1.007	1.035	3.83
33)	S	1,2-Dichloroet...		0.725	0.709	0.682	0.690	0.698	0.701	2.40
34)	I	1,4-Difluorobenzene	----------ISTD----------							
35)	S	Dibromofluorom...		0.338	0.345	0.330	0.346	0.348	0.341	2.17
36)	T	1,1-Dichloropr...	0.562	0.475	0.491	0.433	0.490	0.460	0.485	8.96
37)	T	Ethyl Acetate	0.459	0.396	0.396	0.368	0.410	0.384	0.402	7.71
38)	T	Carbon Tetrach...	0.650	0.622	0.594	0.553	0.604	0.567	0.599	5.95
39)	T	Methylcyclohexane	0.551	0.590	0.548	0.540	0.626	0.582	0.573	5.73
40)	TM	Benzene	1.493	1.405	1.480	1.301	1.426	1.347	1.409	5.30
41)	T	Methacrylonitrile	0.192	0.198	0.237	0.205	0.223	0.213	0.211	7.85
42)	TM	1,2-Dichloroet...	0.529	0.499	0.566	0.500	0.528	0.496	0.520	5.23
43)	T	Isopropyl Acetate	0.659	0.612	0.709	0.635	0.682	0.665	0.661	5.16
44)	TM	Trichloroethene	0.400	0.366	0.373	0.348	0.380	0.363	0.372	4.73
45)	C	1,2-Dichloropr...	0.309	0.337	0.362	0.321	0.347	0.333	0.335	5.54#
46)	T	Dibromomethane	0.267	0.264	0.277	0.247	0.261	0.249	0.261	4.35
47)	T	Bromodichlorom...	0.570	0.567	0.592	0.538	0.573	0.538	0.563	3.79
48)	T	Methyl methacr...	0.332	0.300	0.356	0.322	0.350	0.340	0.333	6.07
49)	T	1,4-Dioxane	0.003	0.004	0.005	0.004	0.005	0.005	0.004	12.99
50)	S	Toluene-d8		1.221	1.185	1.185	1.195	1.195	1.196	1.22
51)	T	4-Methyl-2-Pen...	0.366	0.374	0.422	0.377	0.384	0.362	0.381	5.71
52)	CM	Toluene	0.881	0.925	0.944	0.861	0.910	0.849	0.895	4.15#
53)	T	t-1,3-Dichloro...	0.477	0.526	0.582	0.545	0.574	0.553	0.543	7.02
54)	T	cis-1,3-Dichlo...	0.582	0.556	0.604	0.572	0.615	0.585	0.586	3.67
55)	T	1,1,2-Trichlor...	0.318	0.355	0.357	0.321	0.333	0.313	0.333	5.78
56)	T	Ethyl methacry...	0.418	0.451	0.536	0.490	0.524	0.502	0.487	9.17

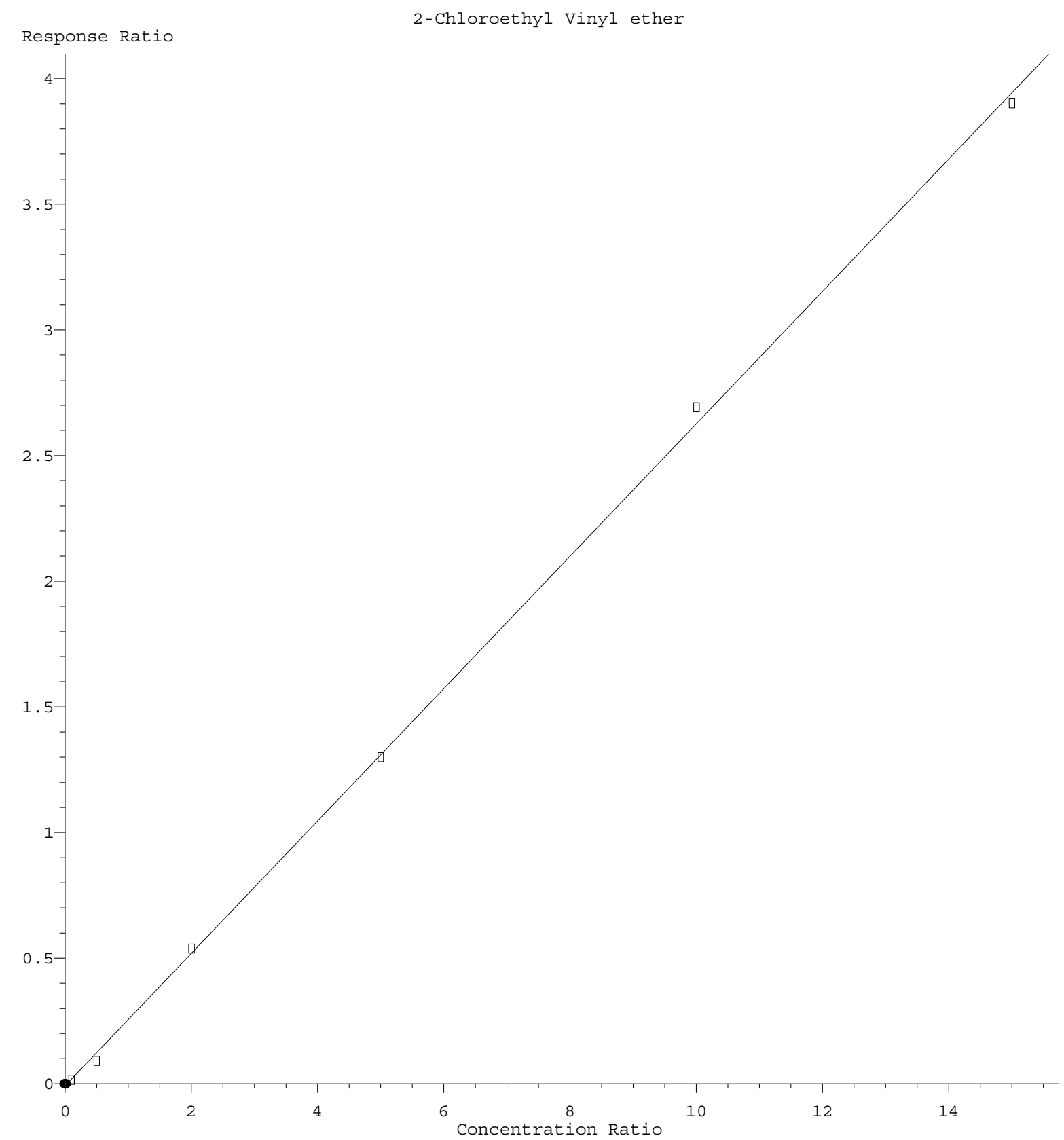
Method Path : Z:\voasrv\HPCHEM1\MSVOA_X\Method\
Method File : 82X102025W.M

57)	T	1,3-Dichloropr...	0.563	0.572	0.614	0.548	0.572	0.541	0.568	4.51
58)	T	2-Chloroethyl ...	0.154	0.182	0.269	0.260	0.269	0.260	0.232	21.93
59)	T	2-Hexanone	0.231	0.271	0.298	0.267	0.271	0.256	0.266	8.30
60)	T	Dibromochlorom...	0.482	0.441	0.476	0.425	0.442	0.418	0.447	5.89
61)	T	1,2-Dibromoethane	0.346	0.353	0.393	0.342	0.359	0.336	0.355	5.72
62)	S	4-Bromofluorob...		0.500	0.445	0.444	0.446	0.441	0.455	5.51
63)	I	Chlorobenzene-d5	----------ISTD----------							
64)	T	Tetrachloroethene	0.418	0.385	0.378	0.328	0.370	0.361	0.373	7.92
65)	PM	Chlorobenzene	1.149	1.145	1.159	1.045	1.148	1.102	1.125	3.89
66)	T	1,1,1,2-Tetrac...	0.422	0.405	0.423	0.390	0.430	0.409	0.413	3.53
67)	C	Ethyl Benzene	1.905	1.876	1.954	1.825	2.008	1.922	1.915	3.30#
68)	T	m/p-Xylenes	0.647	0.727	0.750	0.687	0.750	0.707	0.712	5.60
69)	T	o-Xylene	0.652	0.684	0.712	0.664	0.723	0.686	0.687	3.93
70)	T	Styrene	1.054	1.165	1.236	1.143	1.247	1.173	1.170	5.98
71)	P	Bromoform	0.338	0.325	0.350	0.308	0.335	0.326	0.330	4.27
72)	I	1,4-Dichlorobenzen...	----------ISTD----------							
73)	T	Isopropylbenzene	3.618	3.579	3.656	3.430	3.875	3.754	3.652	4.17
74)	T	N-amyl acetate	1.229	1.150	1.339	1.248	1.415	1.392	1.295	7.97
75)	P	1,1,2,2-Tetrac...	0.988	0.974	1.065	0.946	1.018	0.992	0.997	4.08
76)	T	1,2,3-Trichlor...	0.929	0.767	0.822	0.735	0.810	0.802	0.811	8.14
77)	T	Bromobenzene	0.940	0.897	0.930	0.858	0.953	0.916	0.916	3.73
78)	T	n-propylbenzene	4.000	4.169	4.255	4.017	4.544	4.385	4.228	5.02
79)	T	2-Chlorotoluene	2.575	2.512	2.615	2.397	2.693	2.590	2.564	3.92
80)	T	1,3,5-Trimethy...	2.988	2.889	3.079	2.861	3.222	3.094	3.022	4.53
81)	T	trans-1,4-Dich...		0.287	0.330	0.316	0.366	0.368	0.333	10.35
82)	T	4-Chlorotoluene	3.097	2.958	3.119	2.883	3.143	3.059	3.043	3.34
83)	T	tert-Butylbenzene	3.128	3.047	3.086	2.915	3.282	3.173	3.105	3.98
84)	T	1,2,4-Trimethy...	2.791	2.991	3.077	2.864	3.247	3.126	3.016	5.61
85)	T	sec-Butylbenzene	3.789	3.690	3.683	3.476	3.969	3.809	3.736	4.39
86)	T	p-Isopropyltol...	3.342	3.222	3.159	2.986	3.399	3.265	3.229	4.53
87)	T	1,3-Dichlorobe...	1.863	1.750	1.742	1.550	1.747	1.707	1.726	5.86
88)	T	1,4-Dichlorobe...	2.143	1.772	1.803	1.577	1.724	1.710	1.788	10.65
89)	T	n-Butylbenzene	3.328	2.869	2.807	2.622	3.073	2.936	2.939	8.22
90)	T	Hexachloroethane	0.680	0.647	0.621	0.569	0.664	0.645	0.638	6.11
91)	T	1,2-Dichlorobe...	1.803	1.590	1.631	1.494	1.619	1.588	1.621	6.25
92)	T	1,2-Dibromo-3-...	0.167	0.187	0.219	0.195	0.224	0.223	0.202	11.51
93)	T	1,2,4-Trichlor...	1.441	0.994	0.975	0.959	1.114	1.094	1.096	16.47
94)	T	Hexachlorobuta...	0.953	0.482	0.399	0.373	0.426	0.409	0.507	43.70
95)	T	Naphthalene	2.942	2.473	2.880	2.776	3.171	3.181	2.904	9.14
96)	T	1,2,3-Trichlor...	1.154	0.947	0.942	0.909	1.050	1.033	1.006	9.04

(#) = Out of Range



Response = 4.113e-001 * Amt - 5.482e-004
Coef of Det (r^2) = 0.997907 Curve Fit: Linear
Method Name: Z:\voasrv\HPCHEM1\MSVOA X\Method\82X102025W.M
Calibration Table Last Updated: Mon Oct 20 14:13:59 2025



Response = 2.635e-001 * Amt - 8.946e-003
Coef of Det (r^2) = 0.999382 Curve Fit: Linear
Method Name: Z:\voasrv\HPCHEM1\MSVOA X\Method\82X102025W.M
Calibration Table Last Updated: Mon Oct 20 14:13:59 2025

Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048229.D
Acq On : 20 Oct 2025 10:59
Operator : JC/MD
Sample : VSTDICC001
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC001

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:42:04 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	5.544	168	117157	50.000	ug/l		0.00
34) 1,4-Difluorobenzene	6.745	114	193186	50.000	ug/l		0.00
63) Chlorobenzene-d5	10.037	117	177252	50.000	ug/l		0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	86943	50.000	ug/l		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4	0.000	65	0d	0.000	ug/l		
Spiked Amount 50.000	Range 78 - 117		Recovery =	0.000%#			
35) Dibromofluoromethane	0.000	113	0d	0.000	ug/l		
Spiked Amount 50.000	Range 75 - 124		Recovery =	0.000%#			
50) Toluene-d8	0.000	98	0d	0.000	ug/l		
Spiked Amount 50.000	Range 92 - 112		Recovery =	0.000%#			
62) 4-Bromofluorobenzene	0.000	95	0d	0.000	ug/l		
Spiked Amount 50.000	Range 83 - 123		Recovery =	0.000%#			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.173	85	1223	0.995	ug/l		82
3) Chloromethane	1.301	50	1186	0.796	ug/l	#	62
4) Vinyl Chloride	1.380	62	1048	0.668	ug/l		92
6) Chloroethane	1.697	64	545	0.546	ug/l		91
7) Trichlorofluoromethane	1.898	101	1819	0.738	ug/l		98
8) Diethyl Ether	2.142	74	542	0.645	ug/l		81
9) 1,1,2-Trichlorotrifluo...	2.337	101	1199	0.864	ug/l		89
12) 1,1-Dichloroethene	2.325	96	1207	0.889	ug/l		88
14) Allyl chloride	2.666	41	2101	0.860	ug/l		96
15) Acrylonitrile	3.069	53	2984	5.171	ug/l		97
16) Acetone	2.380	43	3519	5.684	ug/l		98
17) Carbon Disulfide	2.520	76	4767	1.141	ug/l	#	92
18) Methyl Acetate	2.703	43	1204	0.955	ug/l	#	85
19) Methyl tert-butyl Ether	3.111	73	4437	1.085	ug/l		100
20) Methylene Chloride	2.794	84	1301	0.863	ug/l	#	76
21) trans-1,2-Dichloroethene	3.099	96	1376	0.980	ug/l		96
22) Diisopropyl ether	3.745	45	3977	0.832	ug/l	#	26
23) Vinyl Acetate	3.727	43	14769	4.131	ug/l		95
24) 1,1-Dichloroethane	3.611	63	2615	0.964	ug/l		97
25) 2-Butanone	4.574	43	3638	5.043	ug/l		98
26) 2,2-Dichloropropane	4.465	77	2347	1.012	ug/l		84
27) cis-1,2-Dichloroethene	4.489	96	1598	0.959	ug/l		94
28) Bromochloromethane	4.879	49	908	0.726	ug/l	#	69
29) Tetrahydrofuran	5.007	42	2088	4.929	ug/l	#	73
30) Chloroform	5.093	83	2688	0.941	ug/l		97
32) 1,1,1-Trichloroethane	5.379	97	2459	1.048	ug/l	#	50
36) 1,1-Dichloropropene	5.696	75	2173	1.151	ug/l	#	62
37) Ethyl Acetate	4.727	43	1772m	1.174	ug/l		
38) Carbon Tetrachloride	5.672	117	2513m	1.159	ug/l		
39) Methylcyclohexane	7.373	83	2128	0.999	ug/l		94
40) Benzene	6.032	78	5767	1.028	ug/l	#	89
41) Methacrylonitrile	4.916	41	741m	0.917	ug/l		
42) 1,2-Dichloroethane	6.080	62	2044	1.017	ug/l		87
43) Isopropyl Acetate	6.336	43	2548	1.006	ug/l	#	85
44) Trichloroethene	7.117	130	1547	1.094	ug/l		83
45) 1,2-Dichloropropane	7.422	63	1195	0.842	ug/l		96

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048229.D
Acq On : 20 Oct 2025 10:59
Operator : JC/MD
Sample : VSTDICC001
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 20 12:42:04 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC001

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) Dibromomethane	7.574	93	1032	1.011	ug/l		95
47) Bromodichloromethane	7.812	83	2204	0.999	ug/l	#	79
48) Methyl methacrylate	7.684	41	1283	0.989	ug/l		95
49) 1,4-Dioxane	7.665	88	255	21.840	ug/l	#	34
51) 4-Methyl-2-Pentanone	8.562	43	7066	5.011	ug/l		91
52) Toluene	8.708	92	3403	1.010	ug/l		95
53) t-1,3-Dichloropropene	8.970	75	1844	0.892	ug/l	#	74
54) cis-1,3-Dichloropropene	8.360	75	2250	0.998	ug/l		90
55) 1,1,2-Trichloroethane	9.147	97	1229	0.977	ug/l	#	85
56) Ethyl methacrylate	9.104	69	1616	0.945	ug/l		96
57) 1,3-Dichloropropane	9.299	76	2174	0.989	ug/l		93
58) 2-Chloroethyl Vinyl ether	8.232	63	2970	3.381	ug/l		100
59) 2-Hexanone	9.421	43	4456	4.518	ug/l		92
60) Dibromochloromethane	9.507	129	1862	1.183	ug/l		95
61) 1,2-Dibromoethane	9.598	107	1338	1.037	ug/l		98
64) Tetrachloroethene	9.257	164	1482	1.192	ug/l		92
65) Chlorobenzene	10.067	112	4073	1.051	ug/l		90
66) 1,1,1,2-Tetrachloroethane	10.147	131	1495	1.070	ug/l	#	66
67) Ethyl Benzene	10.177	91	6752	1.016	ug/l		97
68) m/p-Xylenes	10.287	106	4589	1.854	ug/l		90
69) o-Xylene	10.628	106	2313	0.993	ug/l		99
70) Styrene	10.640	104	3737	0.932	ug/l		96
71) Bromoform	10.787	173	1198	1.168	ug/l	#	99
73) Isopropylbenzene	10.945	105	6291	1.040	ug/l		93
74) N-amyl acetate	10.829	43	2137	0.947	ug/l	#	90
75) 1,1,2,2-Tetrachloroethane	11.195	83	1718	1.003	ug/l		90
76) 1,2,3-Trichloropropane	11.220	75	1615m	1.216	ug/l		
77) Bromobenzene	11.183	156	1635	1.080	ug/l		91
78) n-propylbenzene	11.287	91	6956	0.949	ug/l		94
79) 2-Chlorotoluene	11.348	91	4477	1.010	ug/l		97
80) 1,3,5-Trimethylbenzene	11.433	105	5196	1.047	ug/l		97
82) 4-Chlorotoluene	11.439	91	5385	1.034	ug/l		99
83) tert-Butylbenzene	11.695	119	5439	1.085	ug/l		91
84) 1,2,4-Trimethylbenzene	11.738	105	4854	0.982	ug/l		99
85) sec-Butylbenzene	11.872	105	6589	1.075	ug/l		99
86) p-Isopropyltoluene	11.994	119	5812	1.125	ug/l		91
87) 1,3-Dichlorobenzene	11.951	146	3239	1.145	ug/l		96
88) 1,4-Dichlorobenzene	12.024	146	3727m	1.270	ug/l		
89) n-Butylbenzene	12.317	91	5787	1.202	ug/l		98
90) Hexachloroethane	12.518	117	1182	1.084	ug/l		77
91) 1,2-Dichlorobenzene	12.317	146	3135	1.172	ug/l		96
92) 1,2-Dibromo-3-Chloropr...	12.933	75	290	0.926	ug/l		79
93) 1,2,4-Trichlorobenzene	13.573	180	2505	1.587	ug/l		90
94) Hexachlorobutadiene	13.707	225	1658	2.724	ug/l		97
95) Naphthalene	13.762	128	5116	1.230	ug/l		98
96) 1,2,3-Trichlorobenzene	13.945	180	2006	1.377	ug/l		100

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

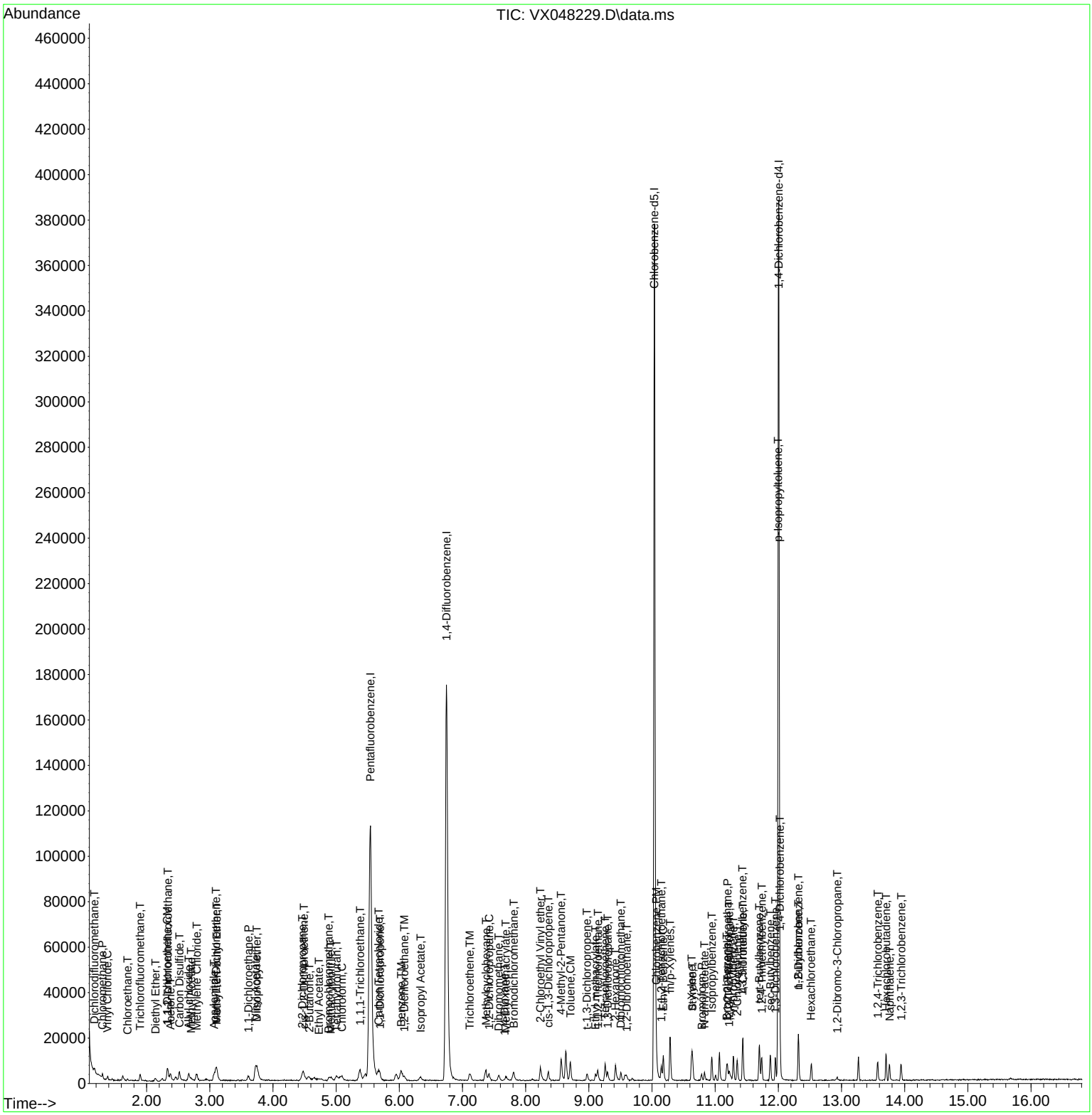
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048229.D
Acq On : 20 Oct 2025 10:59
Operator : JC/MD
Sample : VSTDICC001
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 20 12:42:04 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC001

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048231.D
Acq On : 20 Oct 2025 11:40
Operator : JC/MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC020

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:37:32 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.538	168	119626	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.745	114	195028	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.037	117	178975	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	90972	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.946	65	33936	18.312	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery =	36.620%#		
35) Dibromofluoromethane	5.373	113	26897	19.872	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	39.740%#		
50) Toluene-d8	8.635	98	92476	18.965	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery =	37.920%#		
62) 4-Bromofluorobenzene	11.061	95	34724	19.551	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery =	39.100%#		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.179	85	24524	19.532	ug/l	98
3) Chloromethane	1.300	50	22401	14.727	ug/l	100
4) Vinyl Chloride	1.380	62	20913	13.048	ug/l	94
5) Bromomethane	1.617	94	15473	14.517	ug/l	100
6) Chloroethane	1.697	64	13249	12.990	ug/l	93
7) Trichlorofluoromethane	1.898	101	41824	16.625	ug/l	98
8) Diethyl Ether	2.136	74	12293	14.325	ug/l	87
9) 1,1,2-Trichlorotrifluo...	2.337	101	25843	18.229	ug/l	96
10) Methyl Iodide	2.459	142	30452	17.934	ug/l	99
11) Tert butyl alcohol	2.947	59	16521	134.353	ug/l	100
12) 1,1-Dichloroethene	2.325	96	26209	18.907	ug/l	92
13) Acrolein	2.239	56	15157	58.651	ug/l	99
14) Allyl chloride	2.666	41	43494	17.443	ug/l	98
15) Acrylonitrile	3.056	53	63931	108.499	ug/l	97
16) Acetone	2.373	43	59884	94.723	ug/l	96
17) Carbon Disulfide	2.520	76	77142	18.087	ug/l	98
18) Methyl Acetate	2.703	43	26374	20.482	ug/l	92
19) Methyl tert-butyl Ether	3.111	73	91349	21.877	ug/l	100
20) Methylene Chloride	2.794	84	31157	20.231	ug/l	88
21) trans-1,2-Dichloroethene	3.093	96	28001	19.525	ug/l	94
22) Diisopropyl ether	3.751	45	90030	18.439	ug/l	87
23) Vinyl Acetate	3.715	43	364009	99.706	ug/l	98
24) 1,1-Dichloroethane	3.605	63	51927	18.746	ug/l	98
25) 2-Butanone	4.544	43	78643	106.774	ug/l	95
26) 2,2-Dichloropropane	4.465	77	46568	19.669	ug/l	99
27) cis-1,2-Dichloroethene	4.483	96	33508	19.688	ug/l	98
28) Bromochloromethane	4.891	49	19339	15.146	ug/l	90
29) Tetrahydrofuran	4.995	42	47457	109.718	ug/l	94
30) Chloroform	5.080	83	57780	19.813	ug/l	99
31) Cyclohexane	5.464	56	42796	18.882	ug/l	95
32) 1,1,1-Trichloroethane	5.373	97	51929	21.672	ug/l	98
36) 1,1-Dichloropropene	5.684	75	38270	20.071	ug/l	99
37) Ethyl Acetate	4.702	43	30904	20.280	ug/l #	95
38) Carbon Tetrachloride	5.666	117	46323	21.166	ug/l	98
39) Methylcyclohexane	7.366	83	42776	19.897	ug/l	94
40) Benzene	6.025	78	115488	20.398	ug/l	99

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048231.D
Acq On : 20 Oct 2025 11:40
Operator : JC/MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC020

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:37:32 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	4.916	41	18461	22.621	ug/l		97
42) 1,2-Dichloroethane	6.074	62	44176	21.778	ug/l		100
43) Isopropyl Acetate	6.324	43	55317	21.625	ug/l		96
44) Trichloroethene	7.110	130	29108	20.399	ug/l		90
45) 1,2-Dichloropropane	7.421	63	28242	19.709	ug/l		97
46) Dibromomethane	7.568	93	21605	20.955	ug/l		92
47) Bromodichloromethane	7.805	83	46221	20.743	ug/l		100
48) Methyl methacrylate	7.677	41	27751	21.193	ug/l		94
49) 1,4-Dioxane	7.647	88	7620	646.470	ug/l		91
51) 4-Methyl-2-Pentanone	8.555	43	164708	115.713	ug/l		94
52) Toluene	8.702	92	73623	21.635	ug/l		98
53) t-1,3-Dichloropropene	8.964	75	45416	21.756	ug/l		99
54) cis-1,3-Dichloropropene	8.354	75	47130	20.713	ug/l		96
55) 1,1,2-Trichloroethane	9.134	97	27884	21.961	ug/l		98
56) Ethyl methacrylate	9.104	69	41809	24.210	ug/l		93
57) 1,3-Dichloropropane	9.293	76	47896	21.591	ug/l		100
58) 2-Chloroethyl Vinyl ether	8.226	63	104883	118.278	ug/l		96
59) 2-Hexanone	9.415	43	116268	116.777	ug/l		95
60) Dibromochloromethane	9.506	129	37127	23.361	ug/l		98
61) 1,2-Dibromoethane	9.598	107	30639	23.533	ug/l		96
64) Tetrachloroethene	9.256	164	27043	21.550	ug/l		89
65) Chlorobenzene	10.061	112	83004	21.211	ug/l		99
66) 1,1,1,2-Tetrachloroethane	10.146	131	30278	21.471	ug/l		98
67) Ethyl Benzene	10.177	91	139895	20.852	ug/l		98
68) m/p-Xylenes	10.287	106	107377	42.962	ug/l		100
69) o-Xylene	10.622	106	50950	21.655	ug/l		98
70) Styrene	10.640	104	88481	21.848	ug/l		99
71) Bromoform	10.780	173	25027	24.168	ug/l	#	100
73) Isopropylbenzene	10.945	105	133034	21.025	ug/l		99
74) N-amyl acetate	10.829	43	48726	20.642	ug/l		96
75) 1,1,2,2-Tetrachloroethane	11.195	83	38748	21.616	ug/l		98
76) 1,2,3-Trichloropropane	11.219	75	29913m	21.533	ug/l		
77) Bromobenzene	11.183	156	33843	21.374	ug/l		95
78) n-propylbenzene	11.286	91	154839	20.180	ug/l		98
79) 2-Chlorotoluene	11.347	91	95156	20.526	ug/l		99
80) 1,3,5-Trimethylbenzene	11.433	105	112057	21.575	ug/l		100
81) trans-1,4-Dichloro-2-b...	11.000	75	12001	21.154	ug/l		94
82) 4-Chlorotoluene	11.439	91	113495	20.833	ug/l		98
83) tert-Butylbenzene	11.695	119	112305	21.403	ug/l		97
84) 1,2,4-Trimethylbenzene	11.732	105	111976	21.652	ug/l		100
85) sec-Butylbenzene	11.872	105	134014	20.891	ug/l		100
86) p-Isopropyltoluene	11.994	119	114969	21.263	ug/l		99
87) 1,3-Dichlorobenzene	11.951	146	63377	21.403	ug/l		99
88) 1,4-Dichlorobenzene	12.024	146	65612	21.375	ug/l		99
89) n-Butylbenzene	12.317	91	102140	20.281	ug/l		99
90) Hexachloroethane	12.518	117	22609	19.811	ug/l		94
91) 1,2-Dichlorobenzene	12.317	146	59345	21.212	ug/l		99
92) 1,2-Dibromo-3-Chloropr...	12.920	75	7983	24.372	ug/l		94
93) 1,2,4-Trichlorobenzene	13.567	180	35465	21.473	ug/l		98
94) Hexachlorobutadiene	13.707	225	14529	22.810	ug/l		98
95) Naphthalene	13.756	128	104803	24.073	ug/l		99
96) 1,2,3-Trichlorobenzene	13.945	180	34276	22.493	ug/l		99

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048231.D
Acq On : 20 Oct 2025 11:40
Operator : JC/MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC020

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:37:32 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

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

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

ICAL Form

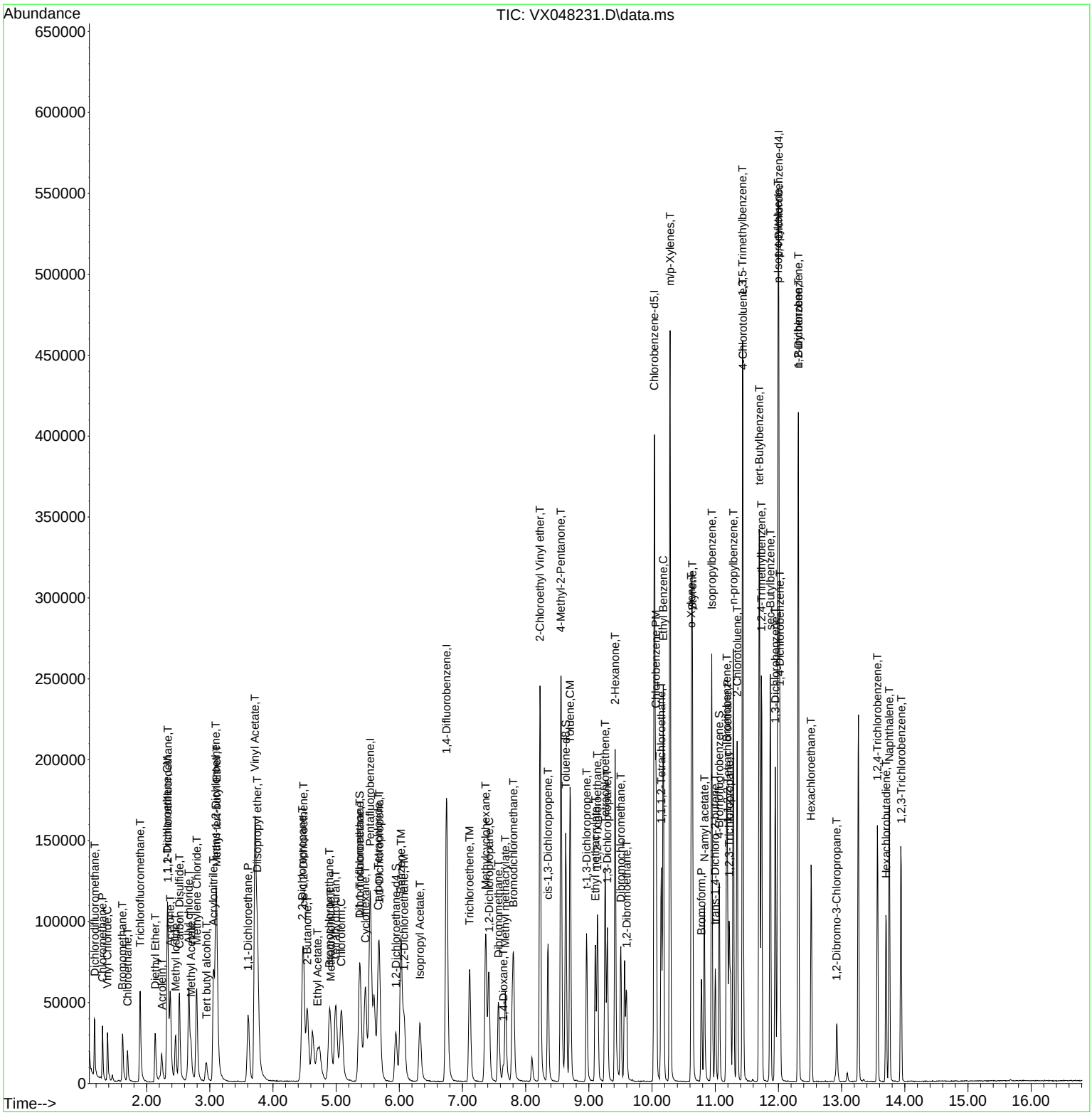
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048231.D
Acq On : 20 Oct 2025 11:40
Operator : JC/MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 20 12:37:32 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC020

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048232.D
Acq On : 20 Oct 2025 12:01
Operator : JC/MD
Sample : VSTDICCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:35:48 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.538	168	124491	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.751	114	201906	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.037	117	184494	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	92693	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.940	65	84951	44.048	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 88.100%			
35) Dibromofluoromethane	5.379	113	66593	47.523	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 95.040%			
50) Toluene-d8	8.635	98	239295	47.402	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery = 94.800%			
62) 4-Bromofluorobenzene	11.061	95	89579	48.719	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery = 97.440%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.173	85	60172	46.052	ug/l	98
3) Chloromethane	1.301	50	55934	35.336	ug/l	100
4) Vinyl Chloride	1.380	62	51819	31.067	ug/l	99
5) Bromomethane	1.618	94	35101	31.646	ug/l	98
6) Chloroethane	1.697	64	30718	28.940	ug/l	95
7) Trichlorofluoromethane	1.898	101	100423	38.358	ug/l	99
8) Diethyl Ether	2.136	74	27723	31.044	ug/l	87
9) 1,1,2-Trichlorotrifluo...	2.337	101	62391	42.290	ug/l	95
10) Methyl Iodide	2.459	142	82552	46.716	ug/l	99
11) Tert butyl alcohol	2.947	59	38534	301.123	ug/l	99
12) 1,1-Dichloroethene	2.325	96	60330	41.821	ug/l	94
13) Acrolein	2.239	56	40536	150.726	ug/l	100
14) Allyl chloride	2.666	41	100234	38.627	ug/l	97
15) Acrylonitrile	3.056	53	149009	243.004	ug/l	100
16) Acetone	2.374	43	126003	191.520	ug/l	100
17) Carbon Disulfide	2.514	76	179492	40.440	ug/l	99
18) Methyl Acetate	2.703	43	58071	43.336	ug/l	91
19) Methyl tert-butyl Ether	3.111	73	212092	48.809	ug/l	96
20) Methylene Chloride	2.788	84	68663	42.841	ug/l	94
21) trans-1,2-Dichloroethene	3.093	96	66608	44.631	ug/l	96
22) Diisopropyl ether	3.757	45	206901	40.720	ug/l	91
23) Vinyl Acetate	3.715	43	839370	220.927	ug/l	97
24) 1,1-Dichloroethane	3.611	63	121657	42.204	ug/l	99
25) 2-Butanone	4.544	43	175075	228.411	ug/l	93
26) 2,2-Dichloropropane	4.471	77	109062	44.264	ug/l	99
27) cis-1,2-Dichloroethene	4.483	96	77911	43.988	ug/l	98
28) Bromochloromethane	4.885	49	54919	41.331	ug/l	85
29) Tetrahydrofuran	4.989	42	106381	236.335	ug/l	93
30) Chloroform	5.087	83	130274	42.925	ug/l	96
31) Cyclohexane	5.465	56	102251	43.351	ug/l	92
32) 1,1,1-Trichloroethane	5.373	97	121090	48.560	ug/l	99
36) 1,1-Dichloropropene	5.684	75	87493	44.323	ug/l	98
37) Ethyl Acetate	4.702	43	74261	47.073	ug/l	97
38) Carbon Tetrachloride	5.666	117	111708	49.302	ug/l	98
39) Methylcyclohexane	7.367	83	109077	49.008	ug/l	94
40) Benzene	6.025	78	262745	44.825	ug/l	98

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048232.D
Acq On : 20 Oct 2025 12:01
Operator : JC/MD
Sample : VSTDICCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 20 12:35:48 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	4.904	41	41293	48.874	ug/l		96
42) 1,2-Dichloroethane	6.074	62	100937	48.064	ug/l		99
43) Isopropyl Acetate	6.324	43	128290	48.444	ug/l		96
44) Trichloroethene	7.111	130	70313	47.597	ug/l		98
45) 1,2-Dichloropropane	7.415	63	64895	43.746	ug/l		99
46) Dibromomethane	7.568	93	49874	46.726	ug/l		94
47) Bromodichloromethane	7.806	83	108671	47.107	ug/l		97
48) Methyl methacrylate	7.678	41	65057	47.990	ug/l		94
49) 1,4-Dioxane	7.647	88	17905	1467.288	ug/l		90
51) 4-Methyl-2-Pentanone	8.555	43	380665	258.320	ug/l		95
52) Toluene	8.702	92	173942	49.373	ug/l		100
53) t-1,3-Dichloropropene	8.964	75	109960	50.880	ug/l		99
54) cis-1,3-Dichloropropene	8.354	75	115534	49.046	ug/l		93
55) 1,1,2-Trichloroethane	9.135	97	64737	49.248	ug/l		96
56) Ethyl methacrylate	9.104	69	98851	55.290	ug/l		94
57) 1,3-Dichloropropane	9.293	76	110709	48.206	ug/l		99
58) 2-Chloroethyl Vinyl ether	8.226	63	262387	285.817	ug/l		95
59) 2-Hexanone	9.415	43	269143	261.113	ug/l		96
60) Dibromochloromethane	9.506	129	85760	52.123	ug/l		98
61) 1,2-Dibromoethane	9.592	107	69022	51.208	ug/l		99
64) Tetrachloroethene	9.257	164	60510	46.776	ug/l		96
65) Chlorobenzene	10.061	112	192841	47.805	ug/l		99
66) 1,1,1,2-Tetrachloroethane	10.147	131	71930	49.482	ug/l		98
67) Ethyl Benzene	10.177	91	336660	48.680	ug/l		99
68) m/p-Xylenes	10.287	106	253662	98.455	ug/l		100
69) o-Xylene	10.622	106	122582	50.542	ug/l		98
70) Styrene	10.640	104	210861	50.508	ug/l		100
71) Bromoform	10.781	173	56874	53.279	ug/l	#	100
73) Isopropylbenzene	10.945	105	317974	49.321	ug/l		100
74) N-amyl acetate	10.823	43	115683	48.098	ug/l		96
75) 1,1,2,2-Tetrachloroethane	11.195	83	87705	48.020	ug/l		99
76) 1,2,3-Trichloropropane	11.220	75	68104m	48.115	ug/l		
77) Bromobenzene	11.183	156	79543	49.303	ug/l		94
78) n-propylbenzene	11.287	91	372312	47.621	ug/l		98
79) 2-Chlorotoluene	11.348	91	222217	47.045	ug/l		98
80) 1,3,5-Trimethylbenzene	11.433	105	265174	50.108	ug/l		100
81) trans-1,4-Dichloro-2-b...	11.000	75	29295	50.678	ug/l		98
82) 4-Chlorotoluene	11.439	91	267236	48.142	ug/l		98
83) tert-Butylbenzene	11.695	119	270202	50.539	ug/l		96
84) 1,2,4-Trimethylbenzene	11.732	105	265485	50.381	ug/l		99
85) sec-Butylbenzene	11.872	105	322219	49.298	ug/l		100
86) p-Isopropyltoluene	11.994	119	276821	50.246	ug/l		99
87) 1,3-Dichlorobenzene	11.951	146	143699	47.627	ug/l		99
88) 1,4-Dichlorobenzene	12.024	146	146196	46.744	ug/l		99
89) n-Butylbenzene	12.317	91	243063	47.367	ug/l		99
90) Hexachloroethane	12.518	117	52735	45.350	ug/l		96
91) 1,2-Dichlorobenzene	12.317	146	138489	48.582	ug/l		99
92) 1,2-Dibromo-3-Chloropr...	12.927	75	18059	54.111	ug/l		99
93) 1,2,4-Trichlorobenzene	13.567	180	88920	52.839	ug/l		99
94) Hexachlorobutadiene	13.707	225	34615	53.334	ug/l		97
95) Naphthalene	13.756	128	257281	57.999	ug/l		100
96) 1,2,3-Trichlorobenzene	13.939	180	84279	54.281	ug/l		98

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048232.D
Acq On : 20 Oct 2025 12:01
Operator : JC/MD
Sample : VSTDICCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:35:48 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

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

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

ICAL Form

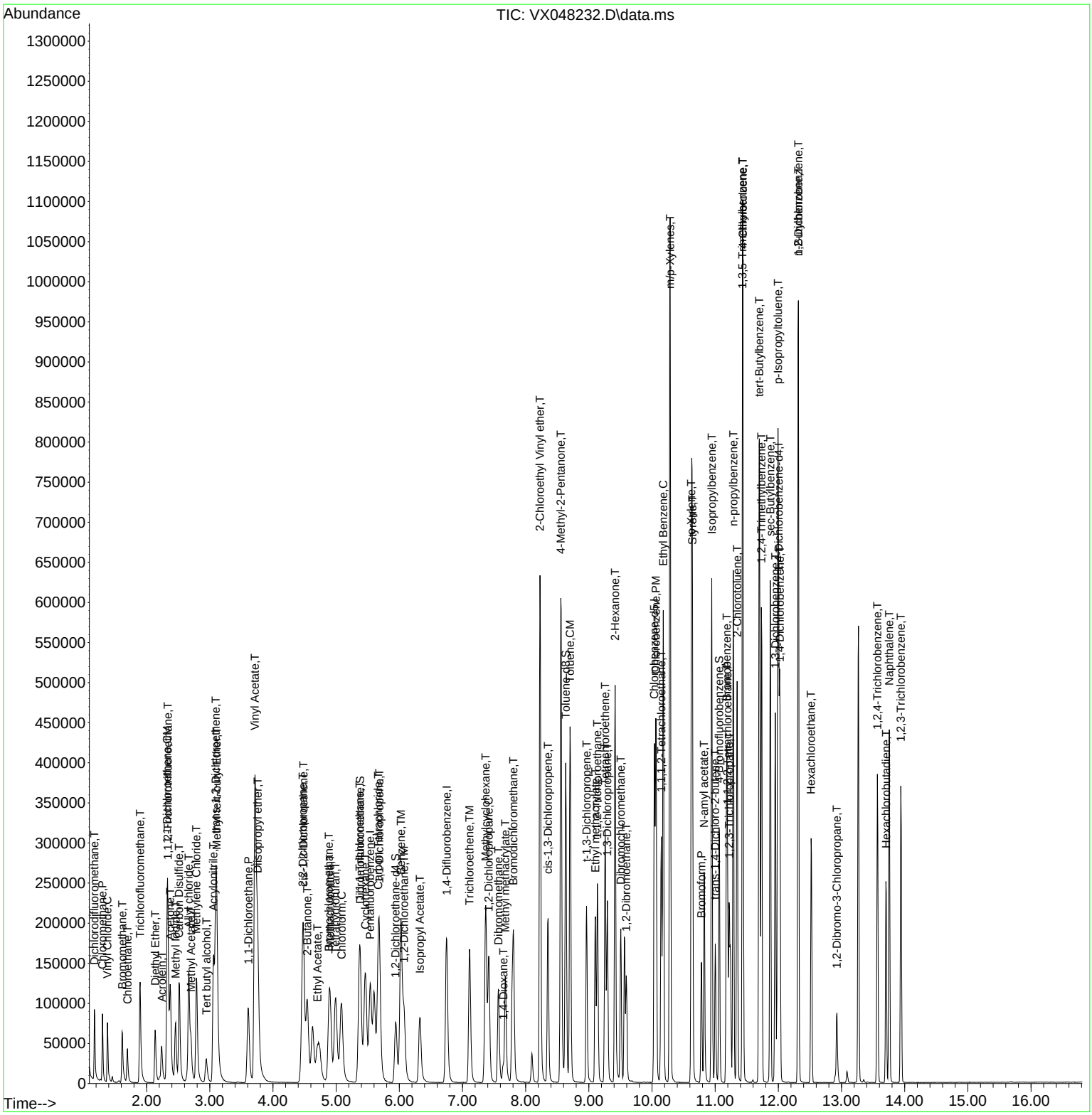
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048232.D
Acq On : 20 Oct 2025 12:01
Operator : JC/MD
Sample : VSTDICCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 20 12:35:48 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048233.D
Acq On : 20 Oct 2025 12:22
Operator : JC/MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC100

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:46:16 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.537	168	117551	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.750	114	187766	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.036	117	163588	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	80621	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.940	65	162188	89.060	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 178.120%#			
35) Dibromofluoromethane	5.373	113	129919	99.697	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 199.400%#			
50) Toluene-d8	8.634	98	448948	95.629	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery = 191.260%#			
62) 4-Bromofluorobenzene	11.061	95	167565	97.996	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery = 196.000%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.172	85	127029	102.960	ug/l	97
3) Chloromethane	1.300	50	111895	74.863	ug/l	100
4) Vinyl Chloride	1.379	62	108564	68.931	ug/l	100
5) Bromomethane	1.605	94	65752	62.780	ug/l	99
6) Chloroethane	1.690	64	66332	66.181	ug/l	92
7) Trichlorofluoromethane	1.892	101	213301	86.283	ug/l	98
8) Diethyl Ether	2.135	74	58302	69.141	ug/l	88
9) 1,1,2-Trichlorotrifluo...	2.337	101	136951	98.309	ug/l	96
10) Methyl Iodide	2.452	142	183697	110.092	ug/l	99
11) Tert butyl alcohol	2.952	59	78284	647.864	ug/l	99
12) 1,1-Dichloroethene	2.324	96	131152	96.282	ug/l	93
13) Acrolein	2.239	56	87244	343.554	ug/l	100
14) Allyl chloride	2.666	41	214290	87.456	ug/l	98
15) Acrylonitrile	3.056	53	298022	514.707	ug/l	100
16) Acetone	2.373	43	260058	418.616	ug/l	99
17) Carbon Disulfide	2.513	76	380127	90.700	ug/l	99
18) Methyl Acetate	2.702	43	120920	95.565	ug/l	93
19) Methyl tert-butyl Ether	3.111	73	427254	104.130	ug/l	97
20) Methylene Chloride	2.788	84	140317	92.718	ug/l	93
21) trans-1,2-Dichloroethene	3.093	96	139080	98.694	ug/l	96
22) Diisopropyl ether	3.751	45	420126	87.566	ug/l	89
23) Vinyl Acetate	3.714	43	1723170	480.325	ug/l	96
24) 1,1-Dichloroethane	3.605	63	248141	91.164	ug/l	99
25) 2-Butanone	4.543	43	353741	488.753	ug/l	98
26) 2,2-Dichloropropane	4.470	77	228643	98.275	ug/l	100
27) cis-1,2-Dichloroethene	4.483	96	163444	97.727	ug/l	98
28) Bromochloromethane	4.885	49	108536	86.505	ug/l	86
29) Tetrahydrofuran	4.989	42	216543	509.471	ug/l	93
30) Chloroform	5.080	83	264966	92.461	ug/l	98
31) Cyclohexane	5.464	56	217717	97.754	ug/l	91
32) 1,1,1-Trichloroethane	5.373	97	248018	105.334	ug/l	98
36) 1,1-Dichloropropene	5.684	75	183932	100.194	ug/l	99
37) Ethyl Acetate	4.702	43	153844	104.863	ug/l	99
38) Carbon Tetrachloride	5.665	117	226976	107.719	ug/l	99
39) Methylcyclohexane	7.366	83	235208	113.637	ug/l	95
40) Benzene	6.025	78	535407	98.221	ug/l	99

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048233.D
Acq On : 20 Oct 2025 12:22
Operator : JC/MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 20 12:46:16 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC100

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
41) Methacrylonitrile	4.909	41	83790	106.641 ug/l		97
42) 1,2-Dichloroethane	6.074	62	198348	101.562 ug/l		99
43) Isopropyl Acetate	6.324	43	256067	103.976 ug/l		95
44) Trichloroethene	7.110	130	142779	103.931 ug/l		99
45) 1,2-Dichloropropane	7.415	63	130188	94.368 ug/l		96
46) Dibromomethane	7.567	93	98105	98.835 ug/l		94
47) Bromodichloromethane	7.805	83	215302	100.358 ug/l		99
48) Methyl methacrylate	7.677	41	131454	104.272 ug/l		95
49) 1,4-Dioxane	7.647	88	35972	3169.845 ug/l		89
51) 4-Methyl-2-Pentanone	8.561	43	720980	526.103 ug/l		94
52) Toluene	8.701	92	341597	104.263 ug/l		99
53) t-1,3-Dichloropropene	8.963	75	215736	107.341 ug/l		99
54) cis-1,3-Dichloropropene	8.354	75	231037	105.465 ug/l		94
55) 1,1,2-Trichloroethane	9.134	97	124910	102.180 ug/l		98
56) Ethyl methacrylate	9.104	69	196699	118.305 ug/l		94
57) 1,3-Dichloropropane	9.293	76	214853	100.598 ug/l		100
58) 2-Chloroethyl Vinyl ether	8.226	63	505448	592.044 ug/l		96
59) 2-Hexanone	9.415	43	509398	531.416 ug/l		95
60) Dibromochloromethane	9.506	129	166167	108.598 ug/l		100
61) 1,2-Dibromoethane	9.591	107	134662	107.431 ug/l		97
64) Tetrachloroethene	9.256	164	121163	105.633 ug/l		97
65) Chlorobenzene	10.061	112	375532	104.990 ug/l		99
66) 1,1,1,2-Tetrachloroethane	10.146	131	140599	109.080 ug/l		97
67) Ethyl Benzene	10.177	91	656925	107.128 ug/l		98
68) m/p-Xylenes	10.286	106	490879	214.875 ug/l		100
69) o-Xylene	10.622	106	236648	110.042 ug/l		100
70) Styrene	10.640	104	407916	110.197 ug/l		99
71) Bromoform	10.780	173	109613	115.806 ug/l	#	98
73) Isopropylbenzene	10.945	105	624767	111.418 ug/l		99
74) N-amyl acetate	10.829	43	228080	109.030 ug/l		95
75) 1,1,2,2-Tetrachloroethane	11.195	83	164207	103.367 ug/l		99
76) 1,2,3-Trichloropropane	11.219	75	130599m	106.083 ug/l		
77) Bromobenzene	11.183	156	153619	109.475 ug/l		93
78) n-propylbenzene	11.286	91	732684	107.747 ug/l		98
79) 2-Chlorotoluene	11.347	91	434217	105.691 ug/l		100
80) 1,3,5-Trimethylbenzene	11.432	105	519549	112.876 ug/l		99
81) trans-1,4-Dichloro-2-b...	11.000	75	59059	117.466 ug/l		98
82) 4-Chlorotoluene	11.439	91	506861	104.983 ug/l		98
83) tert-Butylbenzene	11.695	119	529264	113.817 ug/l		98
84) 1,2,4-Trimethylbenzene	11.731	105	523474	114.214 ug/l		99
85) sec-Butylbenzene	11.871	105	639904	112.562 ug/l		100
86) p-Isopropyltoluene	11.987	119	548119	114.386 ug/l		98
87) 1,3-Dichlorobenzene	11.951	146	281617	107.314 ug/l		99
88) 1,4-Dichlorobenzene	12.024	146	277908	102.163 ug/l		98
89) n-Butylbenzene	12.316	91	495486	111.016 ug/l		99
90) Hexachloroethane	12.518	117	107057	105.851 ug/l		93
91) 1,2-Dichlorobenzene	12.316	146	261022	105.277 ug/l		99
92) 1,2-Dibromo-3-Chloropr...	12.920	75	36087	124.320 ug/l		97
93) 1,2,4-Trichlorobenzene	13.566	180	179562	122.679 ug/l		100
94) Hexachlorobutadiene	13.706	225	68645	121.605 ug/l		98
95) Naphthalene	13.755	128	511355	132.536 ug/l		99
96) 1,2,3-Trichlorobenzene	13.944	180	169248	125.328 ug/l		98

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048233.D
Acq On : 20 Oct 2025 12:22
Operator : JC/MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC100

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:46:16 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

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

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

ICAL Form

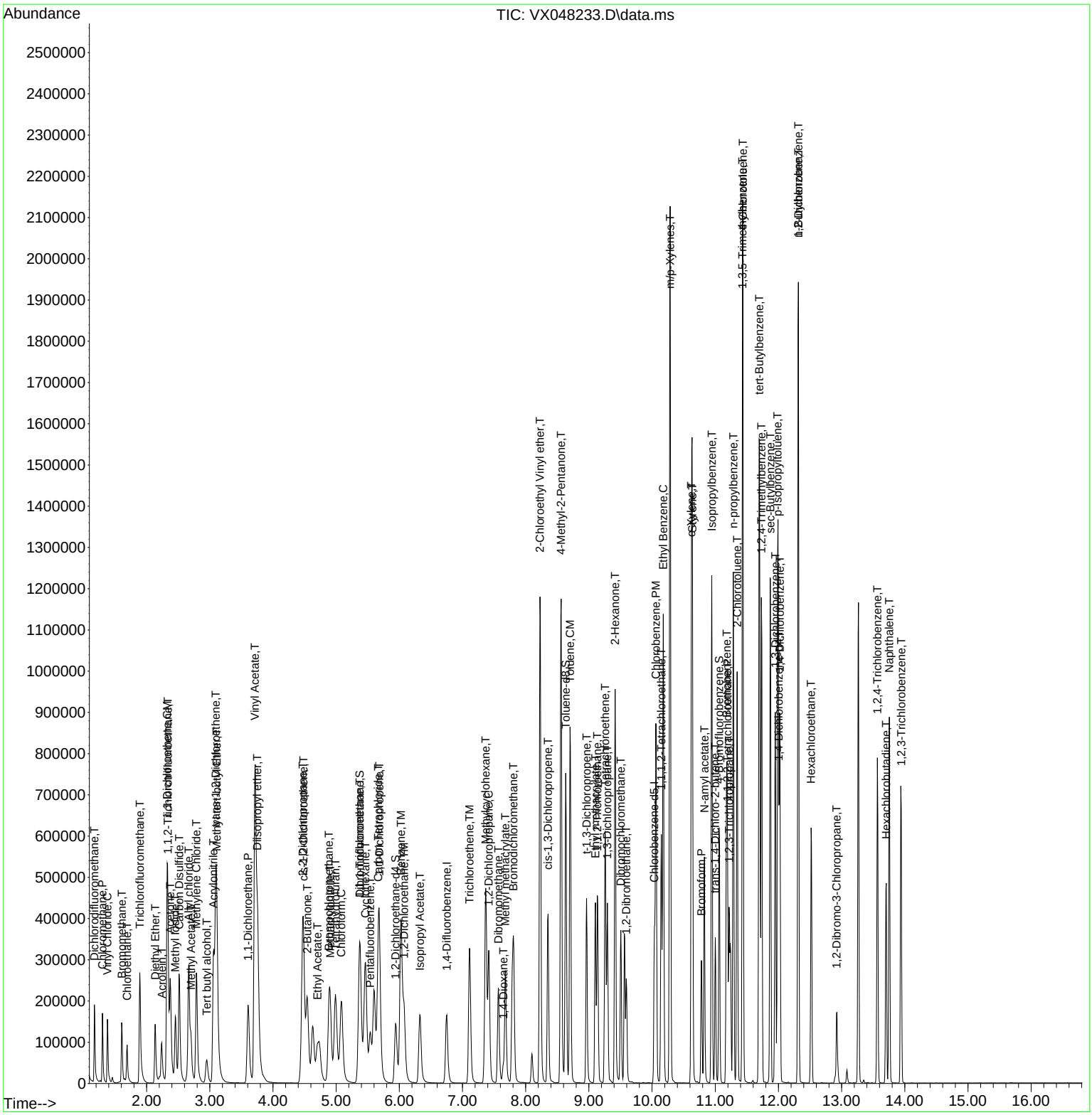
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048233.D
Acq On : 20 Oct 2025 12:22
Operator : JC/MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 20 12:46:16 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC100

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048234.D
Acq On : 20 Oct 2025 12:43
Operator : JC/MD
Sample : VSTDICC150
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC150

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 13:01:04 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.538	168	112063	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.751	114	180904	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.037	117	155759	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	75397	50.000	ug/l	# 0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.946	65	234807	135.251	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 270.500%#			
35) Dibromofluoromethane	5.373	113	188821	150.393	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 300.780%#			
50) Toluene-d8	8.635	98	648652	143.408	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery = 286.820%#			
62) 4-Bromofluorobenzene	11.061	95	239298	145.255	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery = 290.520%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.173	85	169514	144.124	ug/l	95
3) Chloromethane	1.301	50	158322	111.112	ug/l	99
4) Vinyl Chloride	1.380	62	149708	99.710	ug/l	99
5) Bromomethane	1.605	94	92946	93.091	ug/l	97
6) Chloroethane	1.685	64	89813	93.997	ug/l	96
7) Trichlorofluoromethane	1.892	101	292007	123.905	ug/l	99
8) Diethyl Ether	2.136	74	81474	101.352	ug/l	88
9) 1,1,2-Trichlorotrifluo...	2.331	101	184438	138.880	ug/l	96
10) Methyl Iodide	2.453	142	249395	156.785	ug/l	100
11) Tert butyl alcohol	2.959	59	107295	931.439	ug/l	100
12) 1,1-Dichloroethene	2.325	96	178408	137.389	ug/l	95
13) Acrolein	2.239	56	123365	509.584	ug/l	99
14) Allyl chloride	2.666	41	293697	125.734	ug/l	98
15) Acrylonitrile	3.062	53	412892	748.019	ug/l	100
16) Acetone	2.380	43	347029	585.970	ug/l	99
17) Carbon Disulfide	2.514	76	515144	128.936	ug/l	100
18) Methyl Acetate	2.697	43	169402	140.438	ug/l	93
19) Methyl tert-butyl Ether	3.111	73	593033	151.611	ug/l	97
20) Methylene Chloride	2.788	84	190483	132.030	ug/l	94
21) trans-1,2-Dichloroethene	3.093	96	187495	139.566	ug/l	98
22) Diisopropyl ether	3.757	45	571951	125.048	ug/l	93
23) Vinyl Acetate	3.715	43	2367511	692.251	ug/l	96
24) 1,1-Dichloroethane	3.605	63	342500	131.992	ug/l	99
25) 2-Butanone	4.544	43	487152	706.046	ug/l	96
26) 2,2-Dichloropropane	4.465	77	310572	140.027	ug/l	100
27) cis-1,2-Dichloroethene	4.483	96	222359	139.465	ug/l	98
28) Bromochloromethane	4.891	49	151812	126.922	ug/l	87
29) Tetrahydrofuran	4.989	42	301745	744.697	ug/l	94
30) Chloroform	5.080	83	358626	131.272	ug/l	98
31) Cyclohexane	5.464	56	291302	137.199	ug/l	91
32) 1,1,1-Trichloroethane	5.373	97	338462	150.785	ug/l	98
36) 1,1-Dichloropropene	5.684	75	249688	141.173	ug/l	99
37) Ethyl Acetate	4.702	43	208614	147.588	ug/l	97
38) Carbon Tetrachloride	5.666	117	307892	151.663	ug/l	100
39) Methylcyclohexane	7.367	83	315911	158.416	ug/l	95
40) Benzene	6.025	78	730908	139.172	ug/l	97

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048234.D
Acq On : 20 Oct 2025 12:43
Operator : JC/MD
Sample : VSTDICC150
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 20 13:01:04 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC150

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	4.910	41	115351	152.378	ug/l		97
42) 1,2-Dichloroethane	6.074	62	269245	143.093	ug/l		99
43) Isopropyl Acetate	6.324	43	361084	152.180	ug/l		96
44) Trichloroethene	7.110	130	197244	149.022	ug/l		98
45) 1,2-Dichloropropane	7.415	63	180619	135.890	ug/l		99
46) Dibromomethane	7.568	93	135105	141.273	ug/l		94
47) Bromodichloromethane	7.805	83	292063	141.302	ug/l		97
48) Methyl methacrylate	7.677	41	184354	151.780	ug/l		95
49) 1,4-Dioxane	7.647	88	49895	4563.512	ug/l		88
51) 4-Methyl-2-Pentanone	8.561	43	983125	744.604	ug/l		94
52) Toluene	8.702	92	460742	145.964	ug/l		99
53) t-1,3-Dichloropropene	8.964	75	300251	155.059	ug/l		99
54) cis-1,3-Dichloropropene	8.354	75	317375	150.373	ug/l		94
55) 1,1,2-Trichloroethane	9.135	97	169894	144.250	ug/l		98
56) Ethyl methacrylate	9.104	69	272177	169.911	ug/l		94
57) 1,3-Dichloropropane	9.293	76	293650	142.707	ug/l		99
58) 2-Chloroethyl Vinyl ether	8.232	63	705780	858.056	ug/l		95
59) 2-Hexanone	9.415	43	694736	752.256	ug/l		96
60) Dibromochloromethane	9.506	129	226642	153.740	ug/l		99
61) 1,2-Dibromoethane	9.592	107	182208	150.876	ug/l		99
64) Tetrachloroethene	9.263	164	168581	154.361	ug/l		91
65) Chlorobenzene	10.061	112	514967	151.209	ug/l		99
66) 1,1,1,2-Tetrachloroethane	10.147	131	191186	155.782	ug/l		98
67) Ethyl Benzene	10.177	91	898137	153.825	ug/l		99
68) m/p-Xylenes	10.287	106	661019	303.896	ug/l		99
69) o-Xylene	10.622	106	320334	156.444	ug/l		99
70) Styrene	10.640	104	548149	155.523	ug/l		98
71) Bromoform	10.781	173	152209	168.892	ug/l	#	99
73) Isopropylbenzene	10.945	105	849183	161.931	ug/l		100
74) N-amyl acetate	10.829	43	314879	160.952	ug/l		95
75) 1,1,2,2-Tetrachloroethane	11.195	83	224486	151.104	ug/l		99
76) 1,2,3-Trichloropropane	11.220	75	181434m	157.586	ug/l		
77) Bromobenzene	11.183	156	207212	157.899	ug/l		94
78) n-propylbenzene	11.287	91	991960	155.984	ug/l		98
79) 2-Chlorotoluene	11.348	91	585792	152.465	ug/l		99
80) 1,3,5-Trimethylbenzene	11.433	105	699885	162.591	ug/l		100
81) trans-1,4-Dichloro-2-b...	11.000	75	83158	176.858	ug/l		97
82) 4-Chlorotoluene	11.439	91	691903	153.240	ug/l		99
83) tert-Butylbenzene	11.695	119	717642	165.020	ug/l		98
84) 1,2,4-Trimethylbenzene	11.732	105	707074	164.961	ug/l		99
85) sec-Butylbenzene	11.872	105	861466	162.035	ug/l		100
86) p-Isopropyltoluene	11.994	119	738496	164.794	ug/l		99
87) 1,3-Dichlorobenzene	11.951	146	386062	157.307	ug/l		99
88) 1,4-Dichlorobenzene	12.024	146	386885	152.078	ug/l		100
89) n-Butylbenzene	12.311	91	664071	159.098	ug/l		99
90) Hexachloroethane	12.518	117	145813	154.159	ug/l		94
91) 1,2-Dichlorobenzene	12.317	146	359278	154.946	ug/l		99
92) 1,2-Dibromo-3-Chloropr...	12.920	75	50367	185.536	ug/l		98
93) 1,2,4-Trichlorobenzene	13.567	180	247472	180.791	ug/l		100
94) Hexachlorobutadiene	13.707	225	92458	175.138	ug/l		100
95) Naphthalene	13.756	128	719433	199.386	ug/l		100
96) 1,2,3-Trichlorobenzene	13.939	180	233671	185.022	ug/l		97

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048234.D
Acq On : 20 Oct 2025 12:43
Operator : JC/MD
Sample : VSTDICC150
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC150

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 13:01:04 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

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

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

ICAL Form

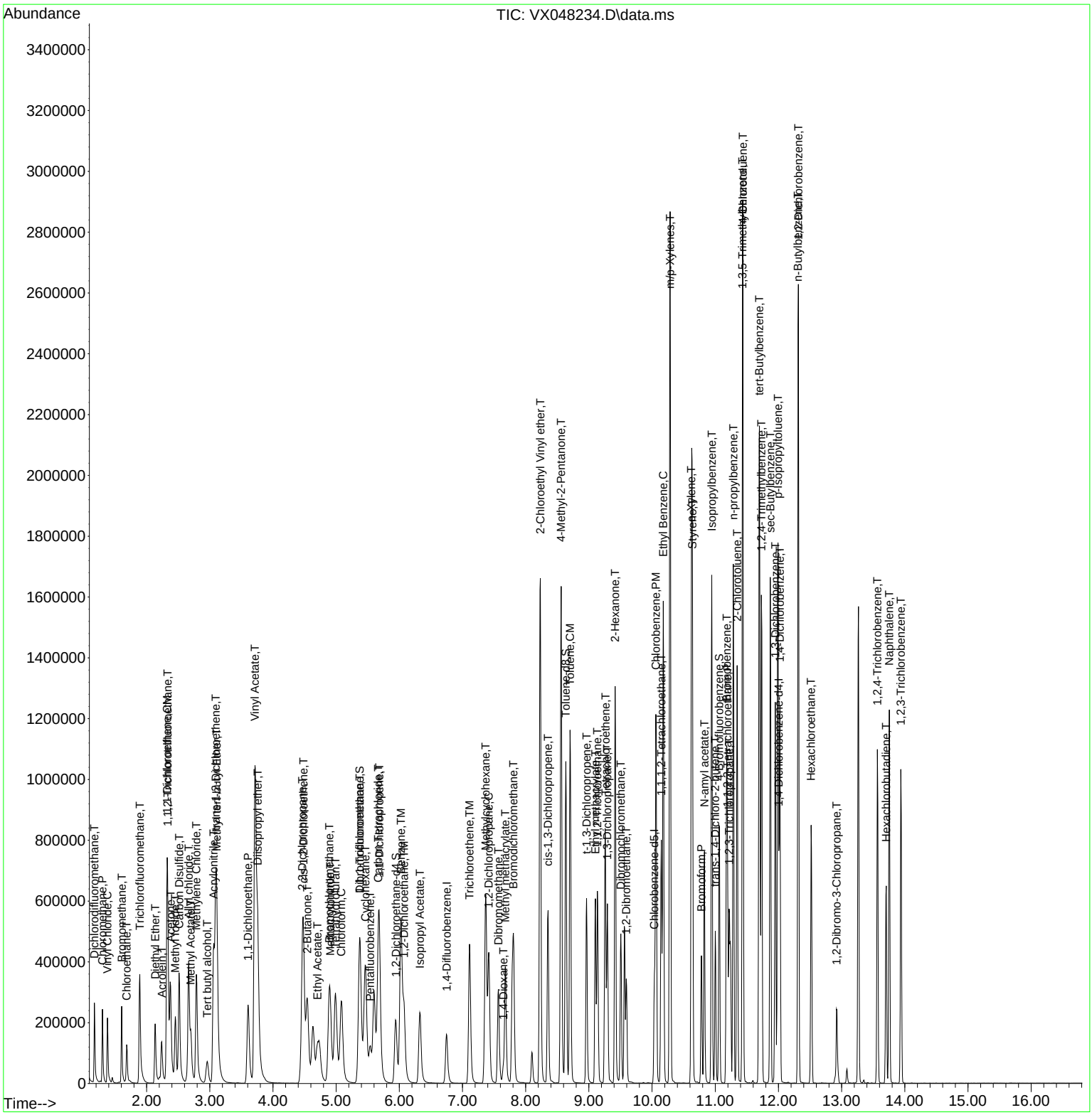
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048234.D
Acq On : 20 Oct 2025 12:43
Operator : JC/MD
Sample : VSTDICC150
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 20 13:01:04 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC150

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048236.D
Acq On : 20 Oct 2025 13:49
Operator : JC/MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC005

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 14:07:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 13:10:39 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	5.537	168	138374	50.000	ug/l		0.00
34) 1,4-Difluorobenzene	6.751	114	228619	50.000	ug/l		0.00
63) Chlorobenzene-d5	10.037	117	208481	50.000	ug/l		0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	105998	50.000	ug/l		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4	5.940	65	10036	4.008	ug/l		0.00
Spiked Amount 50.000	Range 78 - 117		Recovery =	8.020%#			
35) Dibromofluoromethane	5.379	113	7733	3.839	ug/l		0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	7.680%#			
50) Toluene-d8	8.634	98	27914	3.999	ug/l		0.00
Spiked Amount 50.000	Range 92 - 112		Recovery =	8.000%#			
62) 4-Bromofluorobenzene	11.067	95	11429	4.042	ug/l		0.00
Spiked Amount 50.000	Range 83 - 123		Recovery =	8.080%#			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.172	85	7219	5.194	ug/l		93
3) Chloromethane	1.300	50	7032	5.531	ug/l		95
4) Vinyl Chloride	1.380	62	6338	5.341	ug/l		98
5) Bromomethane	1.611	94	4789	5.918	ug/l		99
6) Chloroethane	1.691	64	3610	5.085	ug/l		99
7) Trichlorofluoromethane	1.898	101	12170	5.319	ug/l		96
8) Diethyl Ether	2.136	74	3283	5.035	ug/l		87
9) 1,1,2-Trichlorotrifluo...	2.337	101	7656	5.264	ug/l		92
10) Methyl Iodide	2.453	142	7871	4.284	ug/l		98
11) Tert butyl alcohol	2.940	59	5994	33.503	ug/l	#	80
12) 1,1-Dichloroethene	2.325	96	7107	4.991	ug/l		91
13) Acrolein	2.233	56	5456	27.637	ug/l		96
14) Allyl chloride	2.666	41	11531	4.839	ug/l		96
15) Acrylonitrile	3.062	53	16982	24.912	ug/l		97
16) Acetone	2.373	43	18141	27.636	ug/l		100
17) Carbon Disulfide	2.520	76	23369	5.270	ug/l		96
18) Methyl Acetate	2.703	43	6418	4.639	ug/l		98
19) Methyl tert-butyl Ether	3.111	73	22931	4.663	ug/l		97
20) Methylene Chloride	2.788	84	8228	5.163	ug/l	#	81
21) trans-1,2-Dichloroethene	3.093	96	8343	5.393	ug/l		94
22) Diisopropyl ether	3.757	45	23533	4.984	ug/l	#	97
23) Vinyl Acetate	3.721	43	91771	24.336	ug/l	#	90
24) 1,1-Dichloroethane	3.605	63	14582	5.126	ug/l	#	97
25) 2-Butanone	4.550	43	21808	26.293	ug/l	#	89
26) 2,2-Dichloropropane	4.471	77	13077	5.066	ug/l		99
27) cis-1,2-Dichloroethene	4.483	96	9312	5.084	ug/l		96
28) Bromochloromethane	4.885	49	6488	5.474	ug/l	#	89
29) Tetrahydrofuran	4.995	42	12637	25.353	ug/l		98
30) Chloroform	5.086	83	15814	5.159	ug/l		96
31) Cyclohexane	5.458	56	11661	4.943	ug/l		98
32) 1,1,1-Trichloroethane	5.367	97	14399	5.115	ug/l		98
36) 1,1-Dichloropropene	5.684	75	10855	5.001	ug/l		99
37) Ethyl Acetate	4.702	43	9058m	4.970	ug/l		
38) Carbon Tetrachloride	5.672	117	14225	5.323	ug/l	#	81
39) Methylcyclohexane	7.366	83	13491	5.318	ug/l		97
40) Benzene	6.031	78	32115	5.103	ug/l		99

Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048236.D
Acq On : 20 Oct 2025 13:49
Operator : JC/MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 20 14:07:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 13:10:39 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC005

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	4.922	41	4538m	4.817	ug/l		
42) 1,2-Dichloroethane	6.074	62	11412	4.870	ug/l		100
43) Isopropyl Acetate	6.330	43	13996	4.656	ug/l	#	93
44) Trichloroethene	7.110	130	8373	5.009	ug/l		93
45) 1,2-Dichloropropane	7.415	63	7709	5.129	ug/l		99
46) Dibromomethane	7.568	93	6041	5.181	ug/l		91
47) Bromodichloromethane	7.811	83	12974	5.126	ug/l		97
48) Methyl methacrylate	7.683	41	6863	4.542	ug/l		94
49) 1,4-Dioxane	7.659	88	2020	103.402	ug/l		97
51) 4-Methyl-2-Pentanone	8.555	43	42725	24.936	ug/l		97
52) Toluene	8.708	92	21137	5.296	ug/l		97
53) t-1,3-Dichloropropene	8.964	75	12015	4.914	ug/l		98
54) cis-1,3-Dichloropropene	8.354	75	12702	4.820	ug/l		90
55) 1,1,2-Trichloroethane	9.140	97	8113	5.453	ug/l		91
56) Ethyl methacrylate	9.104	69	10320	4.713	ug/l		94
57) 1,3-Dichloropropane	9.293	76	13087	5.112	ug/l		99
58) 2-Chloroethyl Vinyl ether	8.232	63	20764	19.525	ug/l		98
59) 2-Hexanone	9.415	43	30949	25.896	ug/l		96
60) Dibromochloromethane	9.506	129	10082	5.028	ug/l		99
61) 1,2-Dibromoethane	9.592	107	8079	5.075	ug/l		100
64) Tetrachloroethene	9.256	164	8020	5.341	ug/l		92
65) Chlorobenzene	10.061	112	23873	5.236	ug/l		97
66) 1,1,1,2-Tetrachloroethane	10.146	131	8450	5.012	ug/l		98
67) Ethyl Benzene	10.177	91	39121	5.044	ug/l		96
68) m/p-Xylenes	10.287	106	30310	10.586	ug/l		97
69) o-Xylene	10.628	106	14262	5.128	ug/l		98
70) Styrene	10.640	104	24289	5.138	ug/l		98
71) Bromoform	10.780	173	6766	5.031	ug/l	#	96
73) Isopropylbenzene	10.945	105	37935	5.082	ug/l		99
74) N-amyl acetate	10.829	43	12188	4.544	ug/l		97
75) 1,1,2,2-Tetrachloroethane	11.195	83	10324	4.992	ug/l		98
76) 1,2,3-Trichloropropane	11.225	75	8134m	4.889	ug/l		
77) Bromobenzene	11.183	156	9508	5.027	ug/l		94
78) n-propylbenzene	11.286	91	44189	5.097	ug/l		99
79) 2-Chlorotoluene	11.347	91	26627	5.032	ug/l		98
80) 1,3,5-Trimethylbenzene	11.433	105	30618	4.910	ug/l		99
81) trans-1,4-Dichloro-2-b...	11.000	75	3038	4.387	ug/l		96
82) 4-Chlorotoluene	11.439	91	31357	5.017	ug/l		97
83) tert-Butylbenzene	11.695	119	32297	5.086	ug/l		96
84) 1,2,4-Trimethylbenzene	11.731	105	31709	5.129	ug/l		100
85) sec-Butylbenzene	11.872	105	39113	5.118	ug/l		99
86) p-Isopropyltoluene	11.994	119	34155	5.185	ug/l		99
87) 1,3-Dichlorobenzene	11.951	146	18546	5.256	ug/l		99
88) 1,4-Dichlorobenzene	12.024	146	18787	5.081	ug/l		91
89) n-Butylbenzene	12.317	91	30409	5.069	ug/l		99
90) Hexachloroethane	12.518	117	6863	5.210	ug/l		98
91) 1,2-Dichlorobenzene	12.317	146	16849	5.076	ug/l		98
92) 1,2-Dibromo-3-Chloropr...	12.926	75	1984	4.680	ug/l		98
93) 1,2,4-Trichlorobenzene	13.573	180	10538	4.693	ug/l		98
94) Hexachlorobutadiene	13.707	225	5113	4.948	ug/l		96
95) Naphthalene	13.756	128	26218	4.374	ug/l		98
96) 1,2,3-Trichlorobenzene	13.944	180	10040	4.906	ug/l		97

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048236.D
Acq On : 20 Oct 2025 13:49
Operator : JC/MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC005

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 14:07:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 13:10:39 2025
Response via : Initial Calibration

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

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

ICAL Form

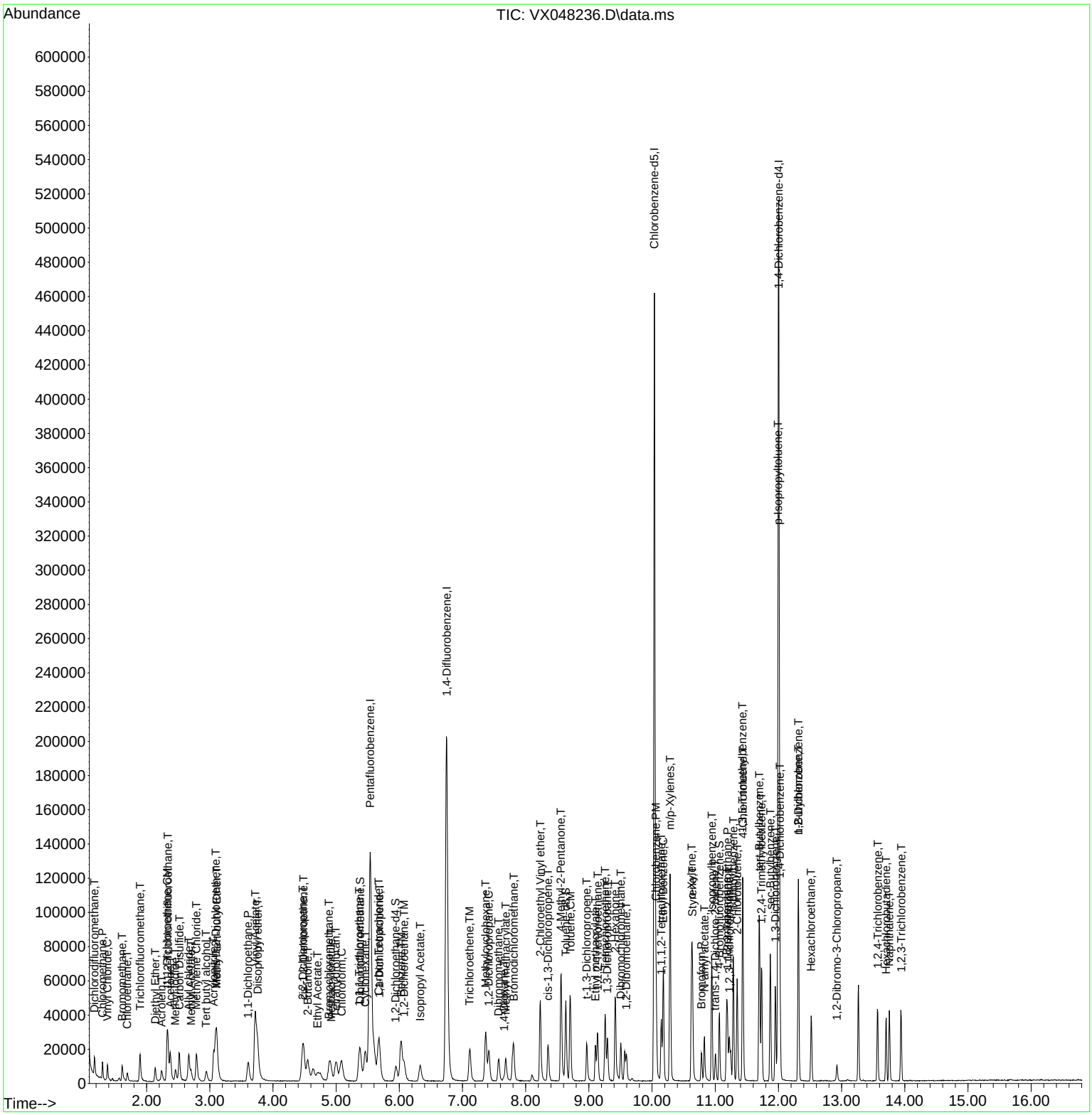
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048236.D
Acq On : 20 Oct 2025 13:49
Operator : JC/MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 20 14:07:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 13:10:39 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC005

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048237.D
Acq On : 20 Oct 2025 14:28
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX102025

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 16:37:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.531	168	144715	50.000	ug/l	-0.01
34) 1,4-Difluorobenzene	6.739	114	229650	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.037	117	201397	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.000	152	99108	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.934	65	92700	45.687	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 91.380%			
35) Dibromofluoromethane	5.367	113	76746	48.951	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 97.900%			
50) Toluene-d8	8.628	98	265898	48.386	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery = 96.780%			
62) 4-Bromofluorobenzene	11.061	95	97828	46.795	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery = 93.580%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.172	85	76365	51.331	ug/l	99
3) Chloromethane	1.301	50	74279	53.491	ug/l	99
4) Vinyl Chloride	1.380	62	71290	55.441	ug/l	99
5) Bromomethane	1.611	94	47863	54.847	ug/l	96
6) Chloroethane	1.691	64	42556	56.320	ug/l	95
7) Trichlorofluoromethane	1.892	101	128754	52.209	ug/l	97
8) Diethyl Ether	2.136	74	37292	53.742	ug/l	89
9) 1,1,2-Trichlorotrifluo...	2.331	101	83688	53.589	ug/l	96
10) Methyl Iodide	2.453	142	94222	47.994	ug/l	99
11) Tert butyl alcohol	2.934	59	45064	223.693	ug/l	98
12) 1,1-Dichloroethene	2.319	96	79070	52.043	ug/l	92
13) Acrolein	2.233	56	51257	249.473	ug/l	98
14) Allyl chloride	2.660	41	128896	51.099	ug/l	97
15) Acrylonitrile	3.050	53	182260	250.900	ug/l	100
16) Acetone	2.373	43	152988	219.789	ug/l	96
17) Carbon Disulfide	2.514	76	233630	48.792	ug/l	99
18) Methyl Acetate	2.697	43	71506	49.190	ug/l	94
19) Methyl tert-butyl Ether	3.105	73	254812	49.162	ug/l	98
20) Methylene Chloride	2.782	84	86610	51.066	ug/l	92
21) trans-1,2-Dichloroethene	3.087	96	85000	50.932	ug/l	96
22) Diisopropyl ether	3.745	45	259934	51.665	ug/l	99
23) Vinyl Acetate	3.709	43	1045584	260.168	ug/l	97
24) 1,1-Dichloroethane	3.599	63	150557	49.490	ug/l	99
25) 2-Butanone	4.532	43	209999	238.354	ug/l	97
26) 2,2-Dichloropropane	4.458	77	132433	48.230	ug/l	100
27) cis-1,2-Dichloroethene	4.471	96	98066	50.350	ug/l	96
28) Bromochloromethane	4.879	49	58764	46.587	ug/l	87
29) Tetrahydrofuran	4.977	42	127995	242.572	ug/l	95
30) Chloroform	5.074	83	157397	48.427	ug/l	99
31) Cyclohexane	5.458	56	132594	52.646	ug/l	92
32) 1,1,1-Trichloroethane	5.361	97	144706	48.309	ug/l	98
36) 1,1-Dichloropropene	5.672	75	109957	49.344	ug/l	100
37) Ethyl Acetate	4.690	43	88074	47.684	ug/l	98
38) Carbon Tetrachloride	5.659	117	132590	48.228	ug/l	99
39) Methylcyclohexane	7.360	83	138611	52.670	ug/l	94
40) Benzene	6.019	78	325041	50.241	ug/l	99

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048237.D
Acq On : 20 Oct 2025 14:28
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX102025

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 16:37:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	4.891	41	48846	50.358	ug/l		95
42) 1,2-Dichloroethane	6.068	62	116893	48.963	ug/l		98
43) Isopropyl Acetate	6.318	43	151140	49.816	ug/l		95
44) Trichloroethene	7.104	130	86410	50.582	ug/l		96
45) 1,2-Dichloropropane	7.409	63	78439	50.994	ug/l		98
46) Dibromomethane	7.562	93	58616	48.913	ug/l		94
47) Bromodichloromethane	7.799	83	125388	48.459	ug/l		99
48) Methyl methacrylate	7.671	41	75812	49.519	ug/l		94
49) 1,4-Dioxane	7.635	88	20230	1000.197	ug/l		90
51) 4-Methyl-2-Pentanone	8.555	43	428393	244.897	ug/l		95
52) Toluene	8.702	92	205867	50.088	ug/l		99
53) t-1,3-Dichloropropene	8.958	75	124683	50.004	ug/l		100
54) cis-1,3-Dichloropropene	8.348	75	134360	49.944	ug/l		93
55) 1,1,2-Trichloroethane	9.134	97	75808	49.597	ug/l		98
56) Ethyl methacrylate	9.098	69	111702	49.964	ug/l		94
57) 1,3-Dichloropropane	9.287	76	128519	49.226	ug/l		99
58) 2-Chloroethyl Vinyl ether	8.220	63	290992	242.124	ug/l		96
59) 2-Hexanone	9.409	43	300183	246.102	ug/l		96
60) Dibromochloromethane	9.500	129	97643	47.530	ug/l		99
61) 1,2-Dibromoethane	9.592	107	80363	49.319	ug/l		97
64) Tetrachloroethene	9.256	164	73198	48.686	ug/l		95
65) Chlorobenzene	10.061	112	226953	50.095	ug/l		100
66) 1,1,1,2-Tetrachloroethane	10.140	131	81561	49.014	ug/l		99
67) Ethyl Benzene	10.177	91	391830	50.798	ug/l		99
68) m/p-Xylenes	10.281	106	293516	102.416	ug/l		99
69) o-Xylene	10.622	106	139515	50.424	ug/l		99
70) Styrene	10.634	104	243341	51.651	ug/l		100
71) Bromoform	10.781	173	64170	48.250	ug/l	#	99
73) Isopropylbenzene	10.945	105	373948	51.658	ug/l		100
74) N-amyl acetate	10.823	43	131979	51.399	ug/l		96
75) 1,1,2,2-Tetrachloroethane	11.195	83	98715	49.936	ug/l		98
76) 1,2,3-Trichloropropane	11.219	75	81093m	50.456	ug/l		
77) Bromobenzene	11.177	156	91000	50.135	ug/l		94
78) n-propylbenzene	11.287	91	435662	51.980	ug/l		99
79) 2-Chlorotoluene	11.341	91	257936	50.760	ug/l		99
80) 1,3,5-Trimethylbenzene	11.433	105	305027	50.918	ug/l		99
81) trans-1,4-Dichloro-2-b...	11.000	75	33027	49.995	ug/l		96
82) 4-Chlorotoluene	11.433	91	304670	50.507	ug/l		98
83) tert-Butylbenzene	11.695	119	309524	50.288	ug/l		99
84) 1,2,4-Trimethylbenzene	11.732	105	308529	51.607	ug/l		100
85) sec-Butylbenzene	11.872	105	379368	51.230	ug/l		100
86) p-Isopropyltoluene	11.988	119	324425	50.686	ug/l		100
87) 1,3-Dichlorobenzene	11.951	146	165027	48.229	ug/l		98
88) 1,4-Dichlorobenzene	12.024	146	168102	47.423	ug/l		99
89) n-Butylbenzene	12.311	91	289706	49.728	ug/l		99
90) Hexachloroethane	12.518	117	61223	48.437	ug/l		95
91) 1,2-Dichlorobenzene	12.317	146	157812	49.123	ug/l		99
92) 1,2-Dibromo-3-Chloropr...	12.920	75	19691	49.072	ug/l		98
93) 1,2,4-Trichlorobenzene	13.567	180	101983	46.941	ug/l		99
94) Hexachlorobutadiene	13.707	225	39299	48.274	ug/l		99
95) Naphthalene	13.756	128	289882	50.362	ug/l		100
96) 1,2,3-Trichlorobenzene	13.938	180	96139	48.223	ug/l		97

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048237.D
Acq On : 20 Oct 2025 14:28
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX102025

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 16:37:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

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

ICAL Form

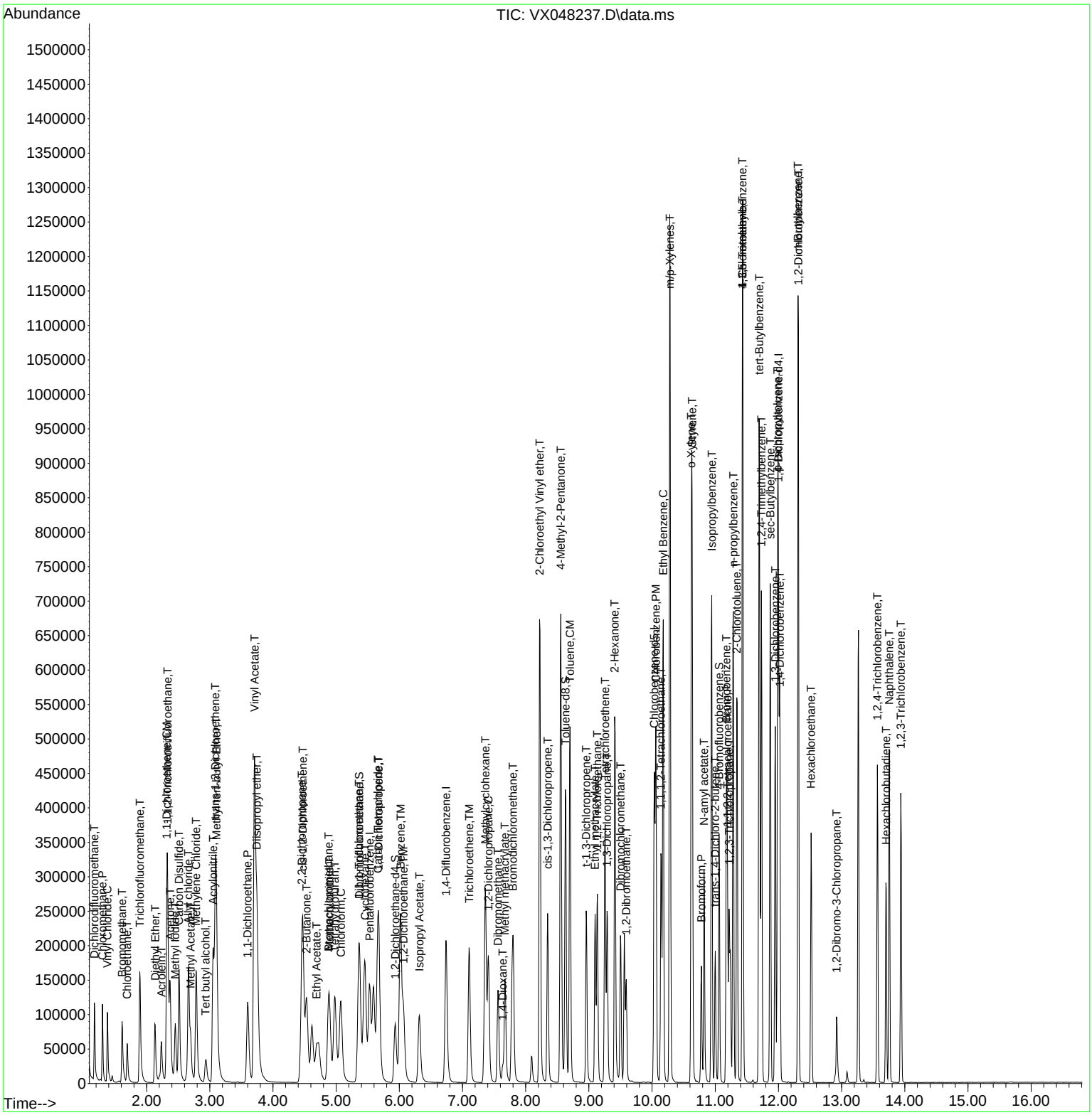
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048237.D
Acq On : 20 Oct 2025 14:28
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 20 16:37:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
ICVVX102025

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025



Evaluate Continuing Calibration Report

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048237.D
Acq On : 20 Oct 2025 14:28
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX102025

Quant Time: Oct 20 16:37:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	116	-0.01
2	T	Dichlorodifluoromethane	0.514	0.528	-2.7	127	0.00
3	P	Chloromethane	0.480	0.513	-6.9	133	0.00
4	C	Vinyl Chloride	0.444	0.493	-11.0#	138	0.00
5	T	Bromomethane	0.302	0.331	-9.6	136	0.00
6	T	Chloroethane	0.261	0.294	-12.6	139	0.00
7	T	Trichlorofluoromethane	0.852	0.890	-4.5	128	0.00
8	T	Diethyl Ether	0.240	0.258	-7.5	135	0.00
9	T	1,1,2-Trichlorotrifluoroeth	0.540	0.578	-7.0	134	0.00
10	T	Methyl Iodide	0.678	0.651	4.0	114	0.00
11	T	Tert butyl alcohol	0.070	0.062	11.4	117	0.00
12	CM	1,1-Dichloroethene	0.525	0.546	-4.0#	131	0.00
13	T	Acrolein	0.071	0.071	0.0	126	0.00
14	T	Allyl chloride	0.872	0.891	-2.2	129	0.00
15	T	Acrylonitrile	0.251	0.252	-0.4	122	0.00
16	T	Acetone	0.240	0.211	12.1	121	0.00
17	T	Carbon Disulfide	1.654	1.614	2.4	130	0.00
18	T	Methyl Acetate	0.502	0.494	1.6	123	0.00
19	T	Methyl tert-butyl Ether	1.791	1.761	1.7	120	0.00
20	T	Methylene Chloride	0.586	0.598	-2.0	126	0.00
21	T	trans-1,2-Dichloroethene	0.577	0.587	-1.7	128	0.00
22	T	Diisopropyl ether	1.738	1.796	-3.3	126	0.00
23	T	Vinyl Acetate	1.389	1.445	-4.0	125	0.00
24	P	1,1-Dichloroethane	1.051	1.040	1.0	124	0.00
25	T	2-Butanone	0.304	0.290	4.6	120	0.00
26	T	2,2-Dichloropropane	0.949	0.915	3.6	121	0.00
27	T	cis-1,2-Dichloroethene	0.673	0.678	-0.7	126	-0.01
28	T	Bromochloromethane	0.436	0.406	6.9	107	0.00
29	T	Tetrahydrofuran	0.182	0.177	2.7	120	-0.01
30	C	Chloroform	1.123	1.088	3.1#	121	0.00
31	T	Cyclohexane	0.870	0.916	-5.3	130	0.00
32	T	1,1,1-Trichloroethane	1.035	1.000	3.4	120	-0.01
33	S	1,2-Dichloroethane-d4	0.701	0.641	8.6	109	0.00
34	I	1,4-Difluorobenzene	1.000	1.000	0.0	114	0.00
35	S	Dibromofluoromethane	0.341	0.334	2.1	115	0.00
36	T	1,1-Dichloropropene	0.485	0.479	1.2	126	-0.01
37	T	Ethyl Acetate	0.402	0.384	4.5	119	0.00
38	T	Carbon Tetrachloride	0.599	0.577	3.7	119	0.00
39	T	Methylcyclohexane	0.573	0.604	-5.4	127	0.00
40	TM	Benzene	1.409	1.415	-0.4	124	0.00
41	T	Methacrylonitrile	0.211	0.213	-0.9	118	-0.01
42	TM	1,2-Dichloroethane	0.520	0.509	2.1	116	0.00
43	T	Isopropyl Acetate	0.661	0.658	0.5	118	0.00
44	TM	Trichloroethene	0.372	0.376	-1.1	123	0.00
45	C	1,2-Dichloropropane	0.335	0.342	-2.1#	121	0.00
46	T	Dibromomethane	0.261	0.255	2.3	118	0.00
47	T	Bromodichloromethane	0.563	0.546	3.0	115	0.00
48	T	Methyl methacrylate	0.333	0.330	0.9	117	0.00

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048237.D
Acq On : 20 Oct 2025 14:28
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX102025

Quant Time: Oct 20 16:37:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
49	T	1,4-Dioxane	0.004	0.004	0.0	113	0.00
50	S	Toluene-d8	1.196	1.158	3.2	111	0.00
51	T	4-Methyl-2-Pentanone	0.381	0.373	2.1	113	0.00
52	CM	Toluene	0.895	0.896	-0.1#	118	0.00
53	T	t-1,3-Dichloropropene	0.543	0.543	0.0	113	0.00
54	T	cis-1,3-Dichloropropene	0.586	0.585	0.2	116	0.00
55	T	1,1,2-Trichloroethane	0.333	0.330	0.9	117	0.00
56	T	Ethyl methacrylate	0.487	0.486	0.2	113	0.00
57	T	1,3-Dichloropropane	0.568	0.560	1.4	116	0.00
58	T	2-Chloroethyl Vinyl ether	0.232	0.253	-9.1	111	0.00
59	T	2-Hexanone	0.266	0.261	1.9	112	0.00
60	T	Dibromochloromethane	0.447	0.425	4.9	114	0.00
61	T	1,2-Dibromoethane	0.355	0.350	1.4	116	0.00
62	S	4-Bromofluorobenzene	0.455	0.426	6.4	109	0.00
63	I	Chlorobenzene-d5	1.000	1.000	0.0	109	0.00
64	T	Tetrachloroethene	0.373	0.363	2.7	121	0.00
65	PM	Chlorobenzene	1.125	1.127	-0.2	118	0.00
66	T	1,1,1,2-Tetrachloroethane	0.413	0.405	1.9	113	0.00
67	C	Ethyl Benzene	1.915	1.946	-1.6#	116	0.00
68	T	m/p-Xylenes	0.712	0.729	-2.4	116	0.00
69	T	o-Xylene	0.687	0.693	-0.9	114	0.00
70	T	Styrene	1.170	1.208	-3.2	115	0.00
71	P	Bromoform	0.330	0.319	3.3	113	0.00
72	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	107	0.00
73	T	Isopropylbenzene	3.652	3.773	-3.3	118	0.00
74	T	N-amyl acetate	1.295	1.332	-2.9	114	0.00
75	P	1,1,2,2-Tetrachloroethane	0.997	0.996	0.1	113	0.00
76	T	1,2,3-Trichloropropane	0.811	0.818	-0.9	119	0.00
77	T	Bromobenzene	0.916	0.918	-0.2	114	0.00
78	T	n-propylbenzene	4.228	4.396	-4.0	117	0.00
79	T	2-Chlorotoluene	2.564	2.603	-1.5	116	0.00
80	T	1,3,5-Trimethylbenzene	3.022	3.078	-1.9	115	0.00
81	T	trans-1,4-Dichloro-2-butene	0.333	0.333	0.0	113	0.00
82	T	4-Chlorotoluene	3.043	3.074	-1.0	114	0.00
83	T	tert-Butylbenzene	3.105	3.123	-0.6	115	0.00
84	T	1,2,4-Trimethylbenzene	3.016	3.113	-3.2	116	0.00
85	T	sec-Butylbenzene	3.736	3.828	-2.5	118	0.00
86	T	p-Isopropyltoluene	3.229	3.273	-1.4	117	0.00
87	T	1,3-Dichlorobenzene	1.726	1.665	3.5	115	0.00
88	T	1,4-Dichlorobenzene	1.788	1.696	5.1	115	0.00
89	T	n-Butylbenzene	2.939	2.923	0.5	119	0.00
90	T	Hexachloroethane	0.638	0.618	3.1	116	0.00
91	T	1,2-Dichlorobenzene	1.621	1.592	1.8	114	0.00
92	T	1,2-Dibromo-3-Chloropropane	0.202	0.199	1.5	109	0.00
93	T	1,2,4-Trichlorobenzene	1.096	1.029	6.1	115	0.00
94	T	Hexachlorobutadiene	0.507	0.397	21.7	114	0.00
95	T	Naphthalene	2.904	2.925	-0.7	113	0.00

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048237.D
Acq On : 20 Oct 2025 14:28
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX102025

Quant Time: Oct 20 16:37:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
96 T	1,2,3-Trichlorobenzene	1.006	0.970	3.6	114	0.00

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

Evaluate Continuing Calibration Report

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048237.D
Acq On : 20 Oct 2025 14:28
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX102025

Quant Time: Oct 20 16:37:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	50.000	50.000	0.0	116	-0.01
2	T	Dichlorodifluoromethane	50.000	51.331	-2.7	127	0.00
3	P	Chloromethane	50.000	53.491	-7.0	133	0.00
4	C	Vinyl Chloride	50.000	55.441	-10.9#	138	0.00
5	T	Bromomethane	50.000	54.847	-9.7	136	0.00
6	T	Chloroethane	50.000	56.320	-12.6	139	0.00
7	T	Trichlorofluoromethane	50.000	52.209	-4.4	128	0.00
8	T	Diethyl Ether	50.000	53.742	-7.5	135	0.00
9	T	1,1,2-Trichlorotrifluoroeth	50.000	53.589	-7.2	134	0.00
10	T	Methyl Iodide	50.000	47.994	4.0	114	0.00
11	T	Tert butyl alcohol	250.000	223.693	10.5	117	0.00
12	CM	1,1-Dichloroethene	50.000	52.043	-4.1#	131	0.00
13	T	Acrolein	250.000	249.473	0.2	126	0.00
14	T	Allyl chloride	50.000	51.099	-2.2	129	0.00
15	T	Acrylonitrile	250.000	250.900	-0.4	122	0.00
16	T	Acetone	250.000	219.789	12.1	121	0.00
17	T	Carbon Disulfide	50.000	48.792	2.4	130	0.00
18	T	Methyl Acetate	50.000	49.190	1.6	123	0.00
19	T	Methyl tert-butyl Ether	50.000	49.162	1.7	120	0.00
20	T	Methylene Chloride	50.000	51.066	-2.1	126	0.00
21	T	trans-1,2-Dichloroethene	50.000	50.932	-1.9	128	0.00
22	T	Diisopropyl ether	50.000	51.665	-3.3	126	0.00
23	T	Vinyl Acetate	250.000	260.168	-4.1	125	0.00
24	P	1,1-Dichloroethane	50.000	49.490	1.0	124	0.00
25	T	2-Butanone	250.000	238.354	4.7	120	0.00
26	T	2,2-Dichloropropane	50.000	48.230	3.5	121	0.00
27	T	cis-1,2-Dichloroethene	50.000	50.350	-0.7	126	-0.01
28	T	Bromochloromethane	50.000	46.587	6.8	107	0.00
29	T	Tetrahydrofuran	250.000	242.572	3.0	120	-0.01
30	C	Chloroform	50.000	48.427	3.1#	121	0.00
31	T	Cyclohexane	50.000	52.646	-5.3	130	0.00
32	T	1,1,1-Trichloroethane	50.000	48.309	3.4	120	-0.01
33	S	1,2-Dichloroethane-d4	50.000	45.687	8.6	109	0.00
34	I	1,4-Difluorobenzene	50.000	50.000	0.0	114	0.00
35	S	Dibromofluoromethane	50.000	48.951	2.1	115	0.00
36	T	1,1-Dichloropropene	50.000	49.344	1.3	126	-0.01
37	T	Ethyl Acetate	50.000	47.684	4.6	119	0.00
38	T	Carbon Tetrachloride	50.000	48.228	3.5	119	0.00
39	T	Methylcyclohexane	50.000	52.670	-5.3	127	0.00
40	TM	Benzene	50.000	50.241	-0.5	124	0.00
41	T	Methacrylonitrile	50.000	50.358	-0.7	118	-0.01
42	TM	1,2-Dichloroethane	50.000	48.963	2.1	116	0.00
43	T	Isopropyl Acetate	50.000	49.816	0.4	118	0.00
44	TM	Trichloroethene	50.000	50.582	-1.2	123	0.00
45	C	1,2-Dichloropropane	50.000	50.994	-2.0#	121	0.00
46	T	Dibromomethane	50.000	48.913	2.2	118	0.00
47	T	Bromodichloromethane	50.000	48.459	3.1	115	0.00
48	T	Methyl methacrylate	50.000	49.519	1.0	117	0.00

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048237.D
Acq On : 20 Oct 2025 14:28
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX102025

Quant Time: Oct 20 16:37:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
49	T	1,4-Dioxane	1000.000	1000.197	-0.0	113	0.00
50	S	Toluene-d8	50.000	48.386	3.2	111	0.00
51	T	4-Methyl-2-Pentanone	250.000	244.897	2.0	113	0.00
52	CM	Toluene	50.000	50.088	-0.2#	118	0.00
53	T	t-1,3-Dichloropropene	50.000	50.004	-0.0	113	0.00
54	T	cis-1,3-Dichloropropene	50.000	49.944	0.1	116	0.00
55	T	1,1,2-Trichloroethane	50.000	49.597	0.8	117	0.00
56	T	Ethyl methacrylate	50.000	49.964	0.1	113	0.00
57	T	1,3-Dichloropropane	50.000	49.226	1.5	116	0.00
58	T	2-Chloroethyl Vinyl ether	250.000	242.124	3.2	111	0.00
59	T	2-Hexanone	250.000	246.102	1.6	112	0.00
60	T	Dibromochloromethane	50.000	47.530	4.9	114	0.00
61	T	1,2-Dibromoethane	50.000	49.319	1.4	116	0.00
62	S	4-Bromofluorobenzene	50.000	46.795	6.4	109	0.00
63	I	Chlorobenzene-d5	50.000	50.000	0.0	109	0.00
64	T	Tetrachloroethene	50.000	48.686	2.6	121	0.00
65	PM	Chlorobenzene	50.000	50.095	-0.2	118	0.00
66	T	1,1,1,2-Tetrachloroethane	50.000	49.014	2.0	113	0.00
67	C	Ethyl Benzene	50.000	50.798	-1.6#	116	0.00
68	T	m/p-Xylenes	100.000	102.416	-2.4	116	0.00
69	T	o-Xylene	50.000	50.424	-0.8	114	0.00
70	T	Styrene	50.000	51.651	-3.3	115	0.00
71	P	Bromoform	50.000	48.250	3.5	113	0.00
72	I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	107	0.00
73	T	Isopropylbenzene	50.000	51.658	-3.3	118	0.00
74	T	N-amyl acetate	50.000	51.399	-2.8	114	0.00
75	P	1,1,2,2-Tetrachloroethane	50.000	49.936	0.1	113	0.00
76	T	1,2,3-Trichloropropane	50.000	50.456	-0.9	119	0.00
77	T	Bromobenzene	50.000	50.135	-0.3	114	0.00
78	T	n-propylbenzene	50.000	51.980	-4.0	117	0.00
79	T	2-Chlorotoluene	50.000	50.760	-1.5	116	0.00
80	T	1,3,5-Trimethylbenzene	50.000	50.918	-1.8	115	0.00
81	T	trans-1,4-Dichloro-2-butene	50.000	49.995	0.0	113	0.00
82	T	4-Chlorotoluene	50.000	50.507	-1.0	114	0.00
83	T	tert-Butylbenzene	50.000	50.288	-0.6	115	0.00
84	T	1,2,4-Trimethylbenzene	50.000	51.607	-3.2	116	0.00
85	T	sec-Butylbenzene	50.000	51.230	-2.5	118	0.00
86	T	p-Isopropyltoluene	50.000	50.686	-1.4	117	0.00
87	T	1,3-Dichlorobenzene	50.000	48.229	3.5	115	0.00
88	T	1,4-Dichlorobenzene	50.000	47.423	5.2	115	0.00
89	T	n-Butylbenzene	50.000	49.728	0.5	119	0.00
90	T	Hexachloroethane	50.000	48.437	3.1	116	0.00
91	T	1,2-Dichlorobenzene	50.000	49.123	1.8	114	0.00
92	T	1,2-Dibromo-3-Chloropropane	50.000	49.072	1.9	109	0.00
93	T	1,2,4-Trichlorobenzene	50.000	46.941	6.1	115	0.00
94	T	Hexachlorobutadiene	50.000	48.274	3.5	114	0.00
95	T	Naphthalene	50.000	50.362	-0.7	113	0.00

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048237.D
Acq On : 20 Oct 2025 14:28
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX102025

Quant Time: Oct 20 16:37:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
96 T	1,2,3-Trichlorobenzene	50.000	48.223	3.6	114	0.00

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

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

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name:	Alliance	Contract:	ICES02
Lab Code:	ACE	SDG No.:	Q3399
Instrument ID:	MSVOA_X	Calibration Date/Time:	10/24/2025 09:16
Lab File ID:	VX048339.D	Init. Calib. Date(s):	10/20/2025 10/20/2025
Heated Purge: (Y/N)	N	Init. Calib. Time(s):	10:59 13:49

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

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Vinyl Chloride	0.444	0.627		41.22	20
1,1-Dichloroethene	0.525	0.572		8.95	20
2-Butanone	0.304	0.271		-10.85	20
Carbon Tetrachloride	0.599	0.550		-8.18	20
Chloroform	1.123	1.261		12.29	20
Benzene	1.409	1.480		5.04	20
1,2-Dichloroethane	0.520	0.592		13.85	20
Trichloroethene	0.372	0.374		0.54	20
Tetrachloroethene	0.373	0.372		-0.27	20
Chlorobenzene	1.125	1.142	0.3	1.51	20
1,2-Dichloroethane-d4	0.701	0.754		7.56	20
Dibromofluoromethane	0.341	0.277		-18.77	20
Toluene-d8	1.196	1.133		-5.27	20
4-Bromofluorobenzene	0.455	0.434		-4.61	20

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

Sample Results: **VX048339.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048339.D
Acq On : 24 Oct 2025 09:16
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 24 22:59:00 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDCCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.531	168	125053	50.000	ug/l	-0.01
34) 1,4-Difluorobenzene	6.739	114	210685	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.037	117	187763	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	93479	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.934	65	94250	53.755	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 107.500%			
35) Dibromofluoromethane	5.367	113	58414	40.612	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 81.220%			
50) Toluene-d8	8.628	98	238621	47.331	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery = 94.660%			
62) 4-Bromofluorobenzene	11.061	95	91425	47.668	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery = 95.340%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.172	85	59098	45.970	ug/l	96
3) Chloromethane	1.300	50	28679	23.900	ug/l	98
4) Vinyl Chloride	1.380	62	78438	70.590	ug/l	99
5) Bromomethane	1.611	94	30849	40.909	ug/l	96
6) Chloroethane	1.691	64	48125	73.704	ug/l	96
7) Trichlorofluoromethane	1.892	101	135485	63.576	ug/l	97
8) Diethyl Ether	2.130	74	49757	82.980	ug/l	99
9) 1,1,2-Trichlorotrifluo...	2.331	101	74958	55.546	ug/l	99
10) Methyl Iodide	2.453	142	278558	164.198	ug/l	99
11) Tert butyl alcohol	2.934	59	42499	244.130	ug/l	98
12) 1,1-Dichloroethene	2.325	96	71588	54.527	ug/l	96
13) Acrolein	2.233	56	70039	394.484	ug/l	99
14) Allyl chloride	2.660	41	126613	58.086	ug/l	96
15) Acrylonitrile	3.050	53	180209	287.081	ug/l	99
16) Acetone	2.367	43	102142	169.814	ug/l	94
17) Carbon Disulfide	2.514	76	196078	47.388	ug/l	99
18) Methyl Acetate	2.697	43	78123	62.192	ug/l	98
19) Methyl tert-butyl Ether	3.105	73	262138	58.527	ug/l	97
20) Methylene Chloride	2.788	84	80635	55.018	ug/l	99
21) trans-1,2-Dichloroethene	3.087	96	77229	53.552	ug/l	98
22) Diisopropyl ether	3.745	45	280059	64.418	ug/l	96
23) Vinyl Acetate	3.709	43	987789	284.432	ug/l	100
24) 1,1-Dichloroethane	3.599	63	148111	56.341	ug/l	98
25) 2-Butanone	4.532	43	169634	222.811	ug/l	98
26) 2,2-Dichloropropane	4.458	77	128101	53.987	ug/l	99
27) cis-1,2-Dichloroethene	4.471	96	93213	55.383	ug/l	97
28) Bromochloromethane	4.879	49	62840	57.651	ug/l	98
29) Tetrahydrofuran	4.977	42	129863	284.809	ug/l	99
30) Chloroform	5.074	83	157726	56.158	ug/l	97
31) Cyclohexane	5.452	56	121074	55.630	ug/l	97
32) 1,1,1-Trichloroethane	5.367	97	135402	52.310	ug/l	98
36) 1,1-Dichloropropene	5.678	75	102532	50.154	ug/l	98
37) Ethyl Acetate	4.684	43	92982	54.873	ug/l	99
38) Carbon Tetrachloride	5.659	117	115868	45.939	ug/l	99
39) Methylcyclohexane	7.360	83	122210	50.618	ug/l	95
40) Benzene	6.019	78	311870	52.544	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048339.D
Acq On : 24 Oct 2025 09:16
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 24 22:59:00 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDCCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	4.897	41	50795	57.081	ug/l		96
42) 1,2-Dichloroethane	6.068	62	124623	56.900	ug/l		99
43) Isopropyl Acetate	6.318	43	163763	58.836	ug/l		99
44) Trichloroethene	7.104	130	78753	50.249	ug/l		97
45) 1,2-Dichloropropane	7.409	63	79649	56.442	ug/l		100
46) Dibromomethane	7.562	93	59016	53.679	ug/l		98
47) Bromodichloromethane	7.805	83	125556	52.892	ug/l		98
48) Methyl methacrylate	7.671	41	83235	59.262	ug/l		98
49) 1,4-Dioxane	7.641	88	18307	986.597	ug/l		96
51) 4-Methyl-2-Pentanone	8.555	43	456649	284.549	ug/l		100
52) Toluene	8.702	92	193684	51.366	ug/l		100
53) t-1,3-Dichloropropene	8.958	75	117418	51.329	ug/l		99
54) cis-1,3-Dichloropropene	8.348	75	120526	48.835	ug/l		98
55) 1,1,2-Trichloroethane	9.134	97	75795	54.053	ug/l		99
56) Ethyl methacrylate	9.098	69	112858	55.026	ug/l		95
57) 1,3-Dichloropropane	9.293	76	129442	54.042	ug/l		98
58) 2-Chloroethyl Vinyl ether	8.226	63	330441	299.294	ug/l		99
59) 2-Hexanone	9.415	43	287437	256.864	ug/l		100
60) Dibromochloromethane	9.500	129	91979	48.803	ug/l		100
61) 1,2-Dibromoethane	9.592	107	78094	52.241	ug/l		98
64) Tetrachloroethene	9.256	164	69934	49.893	ug/l		99
65) Chlorobenzene	10.061	112	214381	50.756	ug/l		99
66) 1,1,1,2-Tetrachloroethane	10.146	131	77036	49.657	ug/l		100
67) Ethyl Benzene	10.177	91	368764	51.279	ug/l		98
68) m/p-Xylenes	10.281	106	279654	104.665	ug/l		100
69) o-Xylene	10.622	106	135450	52.509	ug/l		100
70) Styrene	10.634	104	236042	53.739	ug/l		99
71) Bromoform	10.780	173	58125	46.878	ug/l	#	97
73) Isopropylbenzene	10.945	105	349236	51.150	ug/l		100
74) N-amyl acetate	10.823	43	146738	60.589	ug/l		99
75) 1,1,2,2-Tetrachloroethane	11.195	83	95793	51.376	ug/l		98
76) 1,2,3-Trichloropropane	11.219	75	77740m	51.283	ug/l		
77) Bromobenzene	11.177	156	88538	51.716	ug/l		99
78) n-propylbenzene	11.287	91	420413	53.181	ug/l		100
79) 2-Chlorotoluene	11.347	91	249581	52.073	ug/l		100
80) 1,3,5-Trimethylbenzene	11.433	105	289432	51.224	ug/l		100
81) trans-1,4-Dichloro-2-b...	11.000	75	22416	35.976	ug/l	#	66
82) 4-Chlorotoluene	11.433	91	298685	52.497	ug/l		99
83) tert-Butylbenzene	11.695	119	290306	50.006	ug/l		100
84) 1,2,4-Trimethylbenzene	11.732	105	291688	51.728	ug/l		100
85) sec-Butylbenzene	11.872	105	355586	50.910	ug/l		100
86) p-Isopropyltoluene	11.988	119	300777	49.821	ug/l		99
87) 1,3-Dichlorobenzene	11.951	146	161594	50.069	ug/l		99
88) 1,4-Dichlorobenzene	12.024	146	164145	49.095	ug/l		99
89) n-Butylbenzene	12.311	91	279165	50.804	ug/l		100
90) Hexachloroethane	12.518	117	52745	44.242	ug/l		99
91) 1,2-Dichlorobenzene	12.317	146	152380	50.288	ug/l		99
92) 1,2-Dibromo-3-Chloropr...	12.920	75	19444	51.374	ug/l		91
93) 1,2,4-Trichlorobenzene	13.567	180	101730	49.644	ug/l		99
94) Hexachlorobutadiene	13.707	225	37168	48.406	ug/l		98
95) Naphthalene	13.756	128	277956	51.198	ug/l		100
96) 1,2,3-Trichlorobenzene	13.938	180	92908	49.409	ug/l		100

Sample Results: **VX048339.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048339.D
Acq On : 24 Oct 2025 09:16
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDCCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 22:59:00 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

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

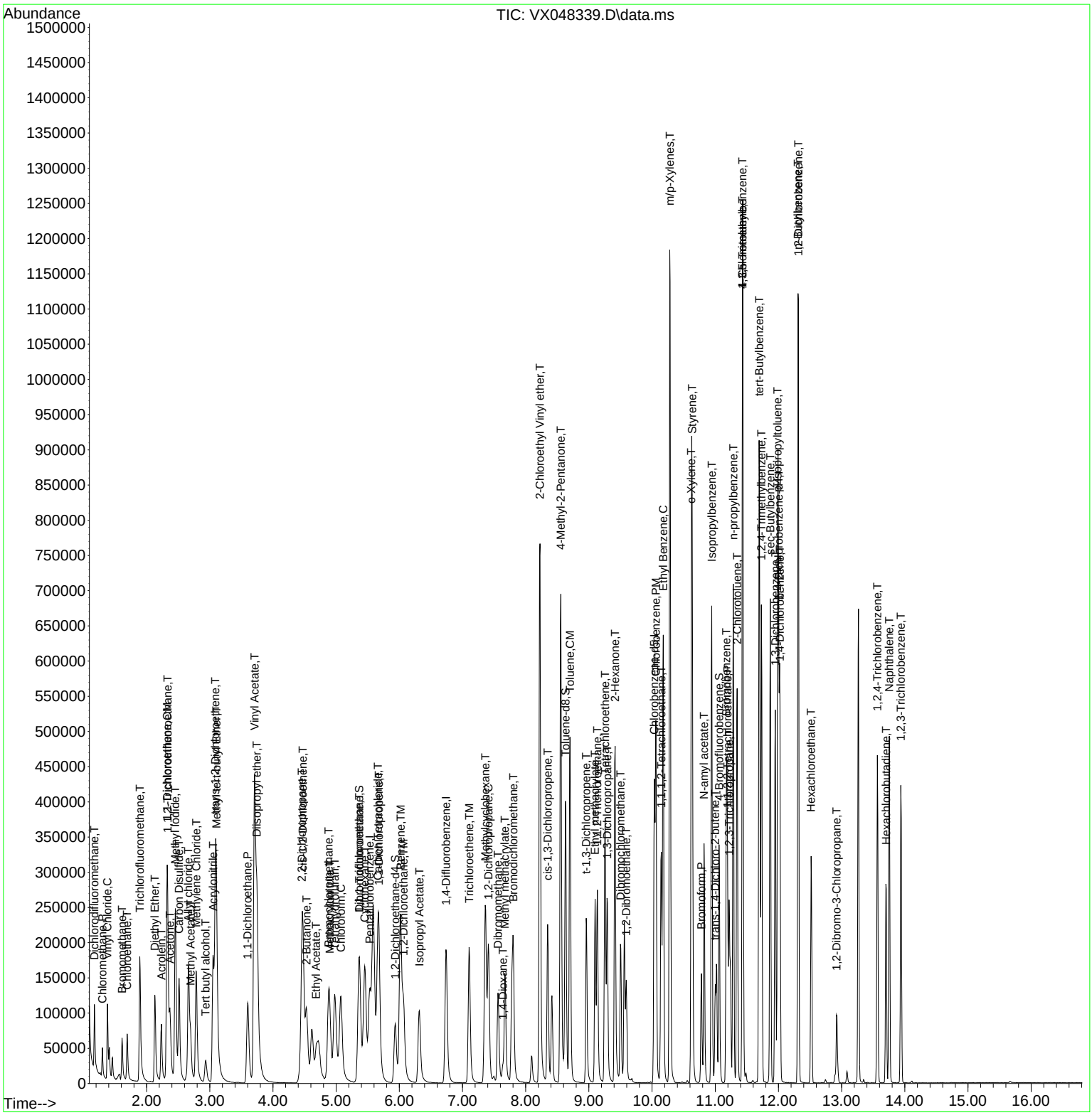
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048339.D
Acq On : 24 Oct 2025 09:16
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 24 22:59:00 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDCCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025



Evaluate Continuing Calibration Report

Sample Results: **VX048339.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048339.D
Acq On : 24 Oct 2025 09:16
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Oct 24 22:59:00 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	100	-0.01
2	T	Dichlorodifluoromethane	0.514	0.473	8.0	98	0.00
3	P	Chloromethane	0.480	0.229	52.3#	51	0.00
4	C	Vinyl Chloride	0.444	0.627	-41.2#	151#	0.00
5	T	Bromomethane	0.302	0.247	18.2	88	0.00
6	T	Chloroethane	0.261	0.385	-47.5#	157#	0.00
7	T	Trichlorofluoromethane	0.852	1.083	-27.1#	135	0.00
8	T	Diethyl Ether	0.240	0.398	-65.8#	179#	0.00
9	T	1,1,2-Trichlorotrifluoroeth	0.540	0.599	-10.9	120	0.00
10	T	Methyl Iodide	0.678	2.228	-228.6#	337#	0.00
11	T	Tert butyl alcohol	0.070	0.068	2.9	110	0.00
12	CM	1,1-Dichloroethene	0.525	0.572	-9.0#	119	0.00
13	T	Acrolein	0.071	0.112	-57.7#	173#	0.00
14	T	Allyl chloride	0.872	1.012	-16.1	126	0.00
15	T	Acrylonitrile	0.251	0.288	-14.7	121	0.00
16	T	Acetone	0.240	0.163	32.1#	81	0.00
17	T	Carbon Disulfide	1.654	1.568	5.2	109	0.00
18	T	Methyl Acetate	0.502	0.625	-24.5	135	0.00
19	T	Methyl tert-butyl Ether	1.791	2.096	-17.0	124	0.00
20	T	Methylene Chloride	0.586	0.645	-10.1	117	0.00
21	T	trans-1,2-Dichloroethene	0.577	0.618	-7.1	116	0.00
22	T	Diisopropyl ether	1.738	2.240	-28.9#	135	0.00
23	T	Vinyl Acetate	1.389	1.580	-13.8	118	0.00
24	P	1,1-Dichloroethane	1.051	1.184	-12.7	122	0.00
25	T	2-Butanone	0.304	0.271	10.9	97	0.00
26	T	2,2-Dichloropropane	0.949	1.024	-7.9	117	0.00
27	T	cis-1,2-Dichloroethene	0.673	0.745	-10.7	120	-0.01
28	T	Bromochloromethane	0.436	0.503	-15.4	114	0.00
29	T	Tetrahydrofuran	0.182	0.208	-14.3	122	-0.01
30	C	Chloroform	1.123	1.261	-12.3#	121	0.00
31	T	Cyclohexane	0.870	0.968	-11.3	118	0.00
32	T	1,1,1-Trichloroethane	1.035	1.083	-4.6	112	0.00
33	S	1,2-Dichloroethane-d4	0.701	0.754	-7.6	111	0.00
34	I	1,4-Difluorobenzene	1.000	1.000	0.0	104	0.00
35	S	Dibromofluoromethane	0.341	0.277	18.8	88	0.00
36	T	1,1-Dichloropropene	0.485	0.487	-0.4	117	0.00
37	T	Ethyl Acetate	0.402	0.441	-9.7	125	-0.01
38	T	Carbon Tetrachloride	0.599	0.550	8.2	104	0.00
39	T	Methylcyclohexane	0.573	0.580	-1.2	112	0.00
40	TM	Benzene	1.409	1.480	-5.0	119	0.00
41	T	Methacrylonitrile	0.211	0.241	-14.2	123	0.00
42	TM	1,2-Dichloroethane	0.520	0.592	-13.8	123	0.00
43	T	Isopropyl Acetate	0.661	0.777	-17.5	128	0.00
44	TM	Trichloroethene	0.372	0.374	-0.5	112	0.00
45	C	1,2-Dichloropropane	0.335	0.378	-12.8#	123	0.00
46	T	Dibromomethane	0.261	0.280	-7.3	118	0.00
47	T	Bromodichloromethane	0.563	0.596	-5.9	116	0.00
48	T	Methyl methacrylate	0.333	0.395	-18.6	128	0.00

Sample Results: **VX048339.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048339.D
Acq On : 24 Oct 2025 09:16
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Oct 24 22:59:00 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
49	T	1,4-Dioxane	0.004	0.004	0.0	102	0.00
50	S	Toluene-d8	1.196	1.133	5.3	100	0.00
51	T	4-Methyl-2-Pentanone	0.381	0.433	-13.6	120	0.00
52	CM	Toluene	0.895	0.919	-2.7#	111	0.00
53	T	t-1,3-Dichloropropene	0.543	0.557	-2.6	107	0.00
54	T	cis-1,3-Dichloropropene	0.586	0.572	2.4	104	0.00
55	T	1,1,2-Trichloroethane	0.333	0.360	-8.1	117	0.00
56	T	Ethyl methacrylate	0.487	0.536	-10.1	114	0.00
57	T	1,3-Dichloropropane	0.568	0.614	-8.1	117	0.00
58	T	2-Chloroethyl Vinyl ether	0.232	0.314	-35.3#	126	0.00
59	T	2-Hexanone	0.266	0.273	-2.6	107	0.00
60	T	Dibromochloromethane	0.447	0.437	2.2	107	0.00
61	T	1,2-Dibromoethane	0.355	0.371	-4.5	113	0.00
62	S	4-Bromofluorobenzene	0.455	0.434	4.6	102	0.00
63	I	Chlorobenzene-d5	1.000	1.000	0.0	102	0.00
64	T	Tetrachloroethene	0.373	0.372	0.3	116	0.00
65	PM	Chlorobenzene	1.125	1.142	-1.5	111	0.00
66	T	1,1,1,2-Tetrachloroethane	0.413	0.410	0.7	107	0.00
67	C	Ethyl Benzene	1.915	1.964	-2.6#	110	0.00
68	T	m/p-Xylenes	0.712	0.745	-4.6	110	0.00
69	T	o-Xylene	0.687	0.721	-4.9	110	0.00
70	T	Styrene	1.170	1.257	-7.4	112	0.00
71	P	Bromoform	0.330	0.310	6.1	102	0.00
72	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	101	0.00
73	T	Isopropylbenzene	3.652	3.736	-2.3	110	0.00
74	T	N-amyl acetate	1.295	1.570	-21.2	127	0.00
75	P	1,1,2,2-Tetrachloroethane	0.997	1.025	-2.8	109	0.00
76	T	1,2,3-Trichloropropane	0.811	0.832	-2.6	114	0.00
77	T	Bromobenzene	0.916	0.947	-3.4	111	0.00
78	T	n-propylbenzene	4.228	4.497	-6.4	113	0.00
79	T	2-Chlorotoluene	2.564	2.670	-4.1	112	0.00
80	T	1,3,5-Trimethylbenzene	3.022	3.096	-2.4	109	0.00
81	T	trans-1,4-Dichloro-2-butene	0.333	0.240	27.9#	77	0.00
82	T	4-Chlorotoluene	3.043	3.195	-5.0	112	0.00
83	T	tert-Butylbenzene	3.105	3.106	-0.0	107	0.00
84	T	1,2,4-Trimethylbenzene	3.016	3.120	-3.4	110	0.00
85	T	sec-Butylbenzene	3.736	3.804	-1.8	110	0.00
86	T	p-Isopropyltoluene	3.229	3.218	0.3	109	0.00
87	T	1,3-Dichlorobenzene	1.726	1.729	-0.2	112	0.00
88	T	1,4-Dichlorobenzene	1.788	1.756	1.8	112	0.00
89	T	n-Butylbenzene	2.939	2.986	-1.6	115	0.00
90	T	Hexachloroethane	0.638	0.564	11.6	100	0.00
91	T	1,2-Dichlorobenzene	1.621	1.630	-0.6	110	0.00
92	T	1,2-Dibromo-3-Chloropropane	0.202	0.208	-3.0	108	0.00
93	T	1,2,4-Trichlorobenzene	1.096	1.088	0.7	114	0.00
94	T	Hexachlorobutadiene	0.507	0.398	21.5	107	0.00
95	T	Naphthalene	2.904	2.973	-2.4	108	0.00

Sample Results: **VX048339.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048339.D
Acq On : 24 Oct 2025 09:16
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Oct 24 22:59:00 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
96 T	1,2,3-Trichlorobenzene	1.006	0.994	1.2	110	0.00

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

Sample Results: **VX048339.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048339.D
Acq On : 24 Oct 2025 09:16
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Oct 24 22:59:00 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	50.000	50.000	0.0	100	-0.01
2	T	Dichlorodifluoromethane	50.000	45.970	8.1	98	0.00
3	P	Chloromethane	50.000	23.900	52.2#	51	0.00
4	C	Vinyl Chloride	50.000	70.590	-41.2#	151	0.00
5	T	Bromomethane	50.000	40.909	18.2	88	0.00
6	T	Chloroethane	50.000	73.704	-47.4#	157	0.00
7	T	Trichlorofluoromethane	50.000	63.576	-27.2#	135	0.00
8	T	Diethyl Ether	50.000	82.980	-66.0#	179	0.00
9	T	1,1,2-Trichlorotrifluoroeth	50.000	55.546	-11.1	120	0.00
10	T	Methyl Iodide	50.000	164.198	-228.4#	337	0.00
11	T	Tert butyl alcohol	250.000	244.130	2.3	110	0.00
12	CM	1,1-Dichloroethene	50.000	54.527	-9.1#	119	0.00
13	T	Acrolein	250.000	394.484	-57.8#	173	0.00
14	T	Allyl chloride	50.000	58.086	-16.2	126	0.00
15	T	Acrylonitrile	250.000	287.081	-14.8	121	0.00
16	T	Acetone	250.000	169.814	32.1#	81	0.00
17	T	Carbon Disulfide	50.000	47.388	5.2	109	0.00
18	T	Methyl Acetate	50.000	62.192	-24.4	135	0.00
19	T	Methyl tert-butyl Ether	50.000	58.527	-17.1	124	0.00
20	T	Methylene Chloride	50.000	55.018	-10.0	117	0.00
21	T	trans-1,2-Dichloroethene	50.000	53.552	-7.1	116	0.00
22	T	Diisopropyl ether	50.000	64.418	-28.8#	135	0.00
23	T	Vinyl Acetate	250.000	284.432	-13.8	118	0.00
24	P	1,1-Dichloroethane	50.000	56.341	-12.7	122	0.00
25	T	2-Butanone	250.000	222.811	10.9	97	0.00
26	T	2,2-Dichloropropane	50.000	53.987	-8.0	117	0.00
27	T	cis-1,2-Dichloroethene	50.000	55.383	-10.8	120	-0.01
28	T	Bromochloromethane	50.000	57.651	-15.3	114	0.00
29	T	Tetrahydrofuran	250.000	284.809	-13.9	122	-0.01
30	C	Chloroform	50.000	56.158	-12.3#	121	0.00
31	T	Cyclohexane	50.000	55.630	-11.3	118	0.00
32	T	1,1,1-Trichloroethane	50.000	52.310	-4.6	112	0.00
33	S	1,2-Dichloroethane-d4	50.000	53.755	-7.5	111	0.00
34	I	1,4-Difluorobenzene	50.000	50.000	0.0	104	0.00
35	S	Dibromofluoromethane	50.000	40.612	18.8	88	0.00
36	T	1,1-Dichloropropene	50.000	50.154	-0.3	117	0.00
37	T	Ethyl Acetate	50.000	54.873	-9.7	125	-0.01
38	T	Carbon Tetrachloride	50.000	45.939	8.1	104	0.00
39	T	Methylcyclohexane	50.000	50.618	-1.2	112	0.00
40	TM	Benzene	50.000	52.544	-5.1	119	0.00
41	T	Methacrylonitrile	50.000	57.081	-14.2	123	0.00
42	TM	1,2-Dichloroethane	50.000	56.900	-13.8	123	0.00
43	T	Isopropyl Acetate	50.000	58.836	-17.7	128	0.00
44	TM	Trichloroethene	50.000	50.249	-0.5	112	0.00
45	C	1,2-Dichloropropane	50.000	56.442	-12.9#	123	0.00
46	T	Dibromomethane	50.000	53.679	-7.4	118	0.00
47	T	Bromodichloromethane	50.000	52.892	-5.8	116	0.00
48	T	Methyl methacrylate	50.000	59.262	-18.5	128	0.00

Sample Results: **VX048339.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048339.D
Acq On : 24 Oct 2025 09:16
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Oct 24 22:59:00 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
49	T	1,4-Dioxane	1000.000	986.597	1.3	102	0.00
50	S	Toluene-d8	50.000	47.331	5.3	100	0.00
51	T	4-Methyl-2-Pentanone	250.000	284.549	-13.8	120	0.00
52	CM	Toluene	50.000	51.366	-2.7#	111	0.00
53	T	t-1,3-Dichloropropene	50.000	51.329	-2.7	107	0.00
54	T	cis-1,3-Dichloropropene	50.000	48.835	2.3	104	0.00
55	T	1,1,2-Trichloroethane	50.000	54.053	-8.1	117	0.00
56	T	Ethyl methacrylate	50.000	55.026	-10.1	114	0.00
57	T	1,3-Dichloropropane	50.000	54.042	-8.1	117	0.00
58	T	2-Chloroethyl Vinyl ether	250.000	299.294	-19.7	126	0.00
59	T	2-Hexanone	250.000	256.864	-2.7	107	0.00
60	T	Dibromochloromethane	50.000	48.803	2.4	107	0.00
61	T	1,2-Dibromoethane	50.000	52.241	-4.5	113	0.00
62	S	4-Bromofluorobenzene	50.000	47.668	4.7	102	0.00
63	I	Chlorobenzene-d5	50.000	50.000	0.0	102	0.00
64	T	Tetrachloroethene	50.000	49.893	0.2	116	0.00
65	PM	Chlorobenzene	50.000	50.756	-1.5	111	0.00
66	T	1,1,1,2-Tetrachloroethane	50.000	49.657	0.7	107	0.00
67	C	Ethyl Benzene	50.000	51.279	-2.6#	110	0.00
68	T	m/p-Xylenes	100.000	104.665	-4.7	110	0.00
69	T	o-Xylene	50.000	52.509	-5.0	110	0.00
70	T	Styrene	50.000	53.739	-7.5	112	0.00
71	P	Bromoform	50.000	46.878	6.2	102	0.00
72	I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	101	0.00
73	T	Isopropylbenzene	50.000	51.150	-2.3	110	0.00
74	T	N-amyl acetate	50.000	60.589	-21.2	127	0.00
75	P	1,1,2,2-Tetrachloroethane	50.000	51.376	-2.8	109	0.00
76	T	1,2,3-Trichloropropane	50.000	51.283	-2.6	114	0.00
77	T	Bromobenzene	50.000	51.716	-3.4	111	0.00
78	T	n-propylbenzene	50.000	53.181	-6.4	113	0.00
79	T	2-Chlorotoluene	50.000	52.073	-4.1	112	0.00
80	T	1,3,5-Trimethylbenzene	50.000	51.224	-2.4	109	0.00
81	T	trans-1,4-Dichloro-2-butene	50.000	35.976	28.0#	77	0.00
82	T	4-Chlorotoluene	50.000	52.497	-5.0	112	0.00
83	T	tert-Butylbenzene	50.000	50.006	-0.0	107	0.00
84	T	1,2,4-Trimethylbenzene	50.000	51.728	-3.5	110	0.00
85	T	sec-Butylbenzene	50.000	50.910	-1.8	110	0.00
86	T	p-Isopropyltoluene	50.000	49.821	0.4	109	0.00
87	T	1,3-Dichlorobenzene	50.000	50.069	-0.1	112	0.00
88	T	1,4-Dichlorobenzene	50.000	49.095	1.8	112	0.00
89	T	n-Butylbenzene	50.000	50.804	-1.6	115	0.00
90	T	Hexachloroethane	50.000	44.242	11.5	100	0.00
91	T	1,2-Dichlorobenzene	50.000	50.288	-0.6	110	0.00
92	T	1,2-Dibromo-3-Chloropropane	50.000	51.374	-2.7	108	0.00
93	T	1,2,4-Trichlorobenzene	50.000	49.644	0.7	114	0.00
94	T	Hexachlorobutadiene	50.000	48.406	3.2	107	0.00
95	T	Naphthalene	50.000	51.198	-2.4	108	0.00

Sample Results: **VX048339.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048339.D
Acq On : 24 Oct 2025 09:16
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Oct 24 22:59:00 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
96 T	1,2,3-Trichlorobenzene	50.000	49.409	1.2	110	0.00

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

Raw Data: **VX048353.D**

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

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Alliance | Contract: ICES02

Lab Code: ACE | SDG No.: Q3399

Instrument ID: MSVOA_X | Calibration Date/Time: 10/24/2025 15:49

Lab File ID: VX048353.D | Init. Calib. Date(s): 10/20/2025 10/20/2025

Heated Purge: (Y/N) N | Init. Calib. Time(s): 10:59 13:49

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

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Vinyl Chloride	0.444	0.606		36.49	50
1,1-Dichloroethene	0.525	0.541		3.05	50
2-Butanone	0.304	0.265		-12.83	50
Carbon Tetrachloride	0.599	0.525		-12.35	50
Chloroform	1.123	1.134		0.98	50
Benzene	1.409	1.352		-4.05	50
1,2-Dichloroethane	0.520	0.518		-0.38	50
Trichloroethene	0.372	0.346		-6.99	50
Tetrachloroethene	0.373	0.355		-4.83	50
Chlorobenzene	1.125	1.054	0.3	-6.31	50
1,2-Dichloroethane-d4	0.701	0.681		-2.85	50
Dibromofluoromethane	0.341	0.269		-21.11	50
Toluene-d8	1.196	1.117		-6.61	50
4-Bromofluorobenzene	0.455	0.412		-9.45	50

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\VX102425\
Data File : VX048353.D
Acq On : 24 Oct 2025 15:49
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Oct 24 23:05:56 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDCCC050EC

Manual Integrations APPROVED

Reviewed By :John Carlone 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.537	168	137837	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.745	114	230908	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.037	117	201897	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	101580	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.940	65	93855	48.565	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 97.120%			
35) Dibromofluoromethane	5.373	113	62140	39.419	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 78.840%			
50) Toluene-d8	8.634	98	257823	46.661	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery = 93.320%			
62) 4-Bromofluorobenzene	11.061	95	95120	45.251	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery = 90.500%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.172	85	62926	44.408	ug/l	99
3) Chloromethane	1.300	50	31755	24.009	ug/l	97
4) Vinyl Chloride	1.380	62	83473	68.154	ug/l	99
5) Bromomethane	1.617	94	29188	35.116	ug/l	99
6) Chloroethane	1.697	64	50231	69.795	ug/l	97
7) Trichlorofluoromethane	1.898	101	143311	61.011	ug/l	99
8) Diethyl Ether	2.136	74	47003	71.117	ug/l	99
9) 1,1,2-Trichlorotrifluo...	2.337	101	77462	52.078	ug/l	98
10) Methyl Iodide	2.459	142	271342	145.110	ug/l	99
11) Tert butyl alcohol	2.934	59	36075	188.008	ug/l	99
12) 1,1-Dichloroethene	2.325	96	74594	51.547	ug/l	99
13) Acrolein	2.233	56	59385	303.455	ug/l	99
14) Allyl chloride	2.666	41	126438	52.626	ug/l	96
15) Acrylonitrile	3.056	53	165690	239.471	ug/l	99
16) Acetone	2.373	43	128465	193.768	ug/l	97
17) Carbon Disulfide	2.520	76	202530	44.407	ug/l	100
18) Methyl Acetate	2.697	43	70947	51.241	ug/l	97
19) Methyl tert-butyl Ether	3.105	73	242830	49.188	ug/l	99
20) Methylene Chloride	2.788	84	78803	48.781	ug/l	98
21) trans-1,2-Dichloroethene	3.093	96	77645	48.846	ug/l	95
22) Diisopropyl ether	3.751	45	271845	56.729	ug/l	96
23) Vinyl Acetate	3.715	43	939179	245.353	ug/l	100
24) 1,1-Dichloroethane	3.605	63	150722	52.017	ug/l	99
25) 2-Butanone	4.538	43	182514	217.495	ug/l	99
26) 2,2-Dichloropropane	4.471	77	131948	50.451	ug/l	98
27) cis-1,2-Dichloroethene	4.483	96	92543	49.885	ug/l	97
28) Bromochloromethane	4.891	49	63375	52.749	ug/l	98
29) Tetrahydrofuran	4.989	42	120176	239.119	ug/l	98
30) Chloroform	5.080	83	156317	50.495	ug/l	97
31) Cyclohexane	5.458	56	129162	53.842	ug/l	97
32) 1,1,1-Trichloroethane	5.379	97	140509	49.248	ug/l	98
36) 1,1-Dichloropropene	5.684	75	103893	46.369	ug/l	99
37) Ethyl Acetate	4.696	43	94821	51.057	ug/l	99
38) Carbon Tetrachloride	5.665	117	121202	43.846	ug/l	99
39) Methylcyclohexane	7.366	83	131596	49.732	ug/l	96
40) Benzene	6.025	78	312187	47.991	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048353.D
Acq On : 24 Oct 2025 15:49
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Oct 24 23:05:56 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDCCC050EC

Manual Integrations APPROVED

Reviewed By :John Carlone 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	4.903	41	48739	49.974	ug/l		99
42) 1,2-Dichloroethane	6.074	62	119697	49.865	ug/l		99
43) Isopropyl Acetate	6.318	43	152346	49.940	ug/l		99
44) Trichloroethene	7.110	130	79852	46.488	ug/l		99
45) 1,2-Dichloropropane	7.415	63	78729	50.904	ug/l		95
46) Dibromomethane	7.568	93	56015	46.488	ug/l		98
47) Bromodichloromethane	7.805	83	122472	47.075	ug/l		99
48) Methyl methacrylate	7.677	41	77157	50.123	ug/l		97
49) 1,4-Dioxane	7.641	88	15616	767.869	ug/l		97
51) 4-Methyl-2-Pentanone	8.555	43	427244	242.909	ug/l		98
52) Toluene	8.702	92	195954	47.417	ug/l		99
53) t-1,3-Dichloropropene	8.964	75	111521	44.482	ug/l		99
54) cis-1,3-Dichloropropene	8.354	75	115185	42.583	ug/l		98
55) 1,1,2-Trichloroethane	9.134	97	70725	46.020	ug/l		99
56) Ethyl methacrylate	9.098	69	106860	47.538	ug/l		97
57) 1,3-Dichloropropane	9.293	76	124600	47.465	ug/l		100
58) 2-Chloroethyl Vinyl ether	8.226	63	299785	248.040	ug/l		100
59) 2-Hexanone	9.415	43	289819	236.310	ug/l		99
60) Dibromochloromethane	9.506	129	88240	42.719	ug/l		100
61) 1,2-Dibromoethane	9.592	107	72202	44.069	ug/l		99
64) Tetrachloroethene	9.256	164	71595	47.502	ug/l		97
65) Chlorobenzene	10.061	112	212798	46.854	ug/l		100
66) 1,1,1,2-Tetrachloroethane	10.146	131	75776	45.425	ug/l		99
67) Ethyl Benzene	10.177	91	378873	48.997	ug/l		99
68) m/p-Xylenes	10.287	106	282564	98.351	ug/l		100
69) o-Xylene	10.622	106	134320	48.426	ug/l		100
70) Styrene	10.640	104	231504	49.017	ug/l		99
71) Bromoform	10.780	173	52852	39.641	ug/l	#	98
73) Isopropylbenzene	10.945	105	359740	48.486	ug/l		100
74) N-amyl acetate	10.823	43	136716	51.949	ug/l		99
75) 1,1,2,2-Tetrachloroethane	11.195	83	89239	44.044	ug/l		98
76) 1,2,3-Trichloropropane	11.219	75	81364m	49.393	ug/l		
77) Bromobenzene	11.183	156	84698	45.528	ug/l		99
78) n-propylbenzene	11.286	91	433271	50.437	ug/l		100
79) 2-Chlorotoluene	11.347	91	251854	48.357	ug/l		99
80) 1,3,5-Trimethylbenzene	11.433	105	297431	48.442	ug/l		99
81) trans-1,4-Dichloro-2-b...	11.000	75	19309	28.518	ug/l	#	75
82) 4-Chlorotoluene	11.433	91	300933	48.674	ug/l		100
83) tert-Butylbenzene	11.695	119	303155	48.055	ug/l		100
84) 1,2,4-Trimethylbenzene	11.731	105	297974	48.628	ug/l		99
85) sec-Butylbenzene	11.872	105	377937	49.795	ug/l		99
86) p-Isopropyltoluene	11.994	119	319358	48.680	ug/l		98
87) 1,3-Dichlorobenzene	11.951	146	157580	44.932	ug/l		98
88) 1,4-Dichlorobenzene	12.024	146	158565	43.644	ug/l		99
89) n-Butylbenzene	12.311	91	304622	51.016	ug/l		100
90) Hexachloroethane	12.518	117	55291	42.679	ug/l		99
91) 1,2-Dichlorobenzene	12.317	146	147165	44.694	ug/l		99
92) 1,2-Dibromo-3-Chloropr...	12.926	75	17860	43.426	ug/l		92
93) 1,2,4-Trichlorobenzene	13.567	180	101661	45.654	ug/l		99
94) Hexachlorobutadiene	13.707	225	42413	50.828	ug/l		97
95) Naphthalene	13.756	128	262366	44.472	ug/l		100
96) 1,2,3-Trichlorobenzene	13.938	180	93463	45.740	ug/l		99

Sample Results: **VX048353.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048353.D
Acq On : 24 Oct 2025 15:49
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDCCC050EC

Manual Integrations APPROVED

Reviewed By :John Carlone 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:05:56 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

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

Sample Results: **VX048353.D**

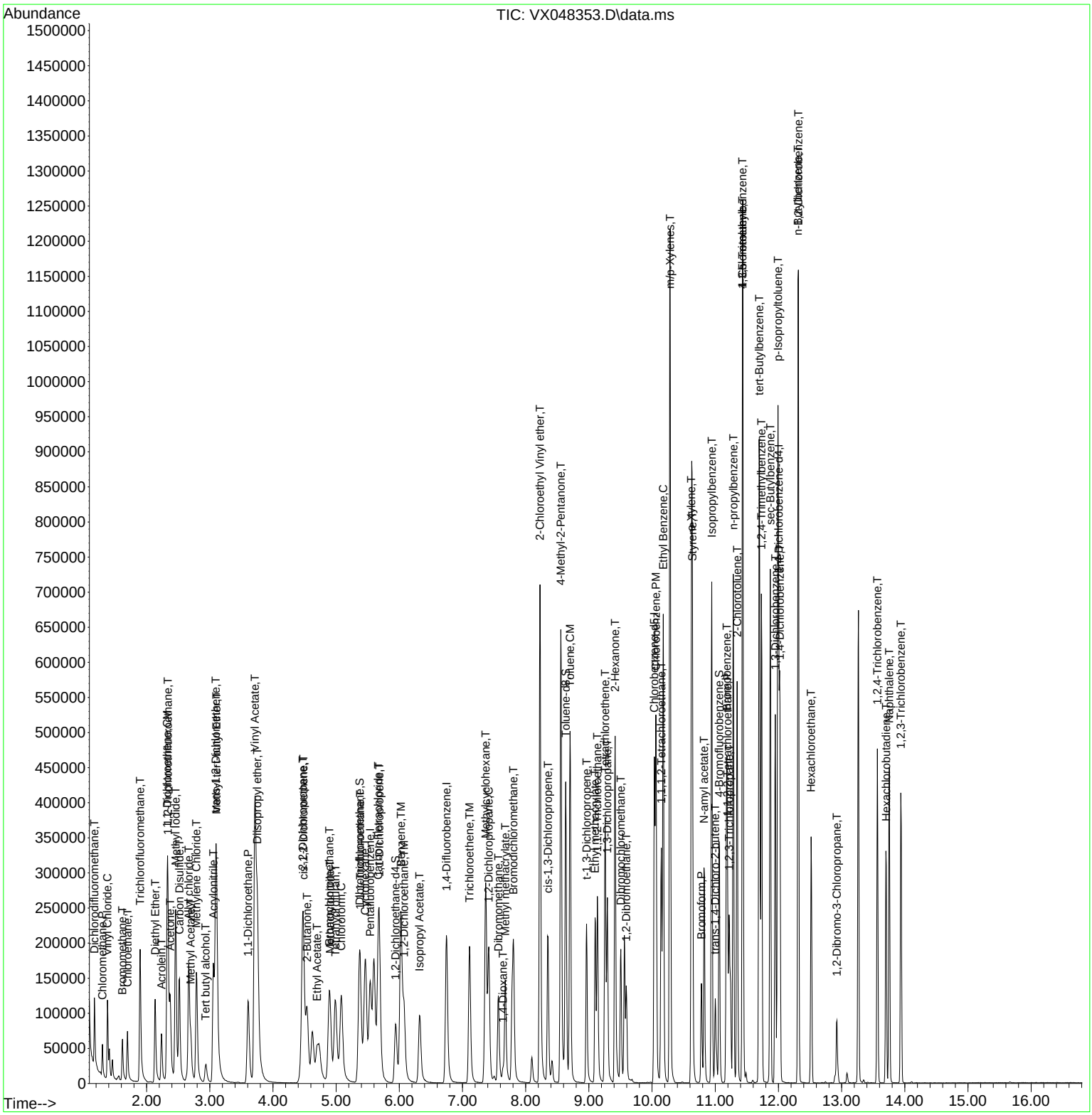
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048353.D
Acq On : 24 Oct 2025 15:49
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Oct 24 23:05:56 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VSTDCCC050EC

Manual Integrations APPROVED

Reviewed By :John Carlone 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025



Sample Results: **VX048353.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048353.D
Acq On : 24 Oct 2025 15:49
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Oct 24 23:05:56 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	111	0.00
2	T	Dichlorodifluoromethane	0.514	0.457	11.1	105	0.00
3	P	Chloromethane	0.480	0.230	52.1#	57	0.00
4	C	Vinyl Chloride	0.444	0.606	-36.5#	161#	0.00
5	T	Bromomethane	0.302	0.212	29.8#	83	0.00
6	T	Chloroethane	0.261	0.364	-39.5#	164#	0.00
7	T	Trichlorofluoromethane	0.852	1.040	-22.1	143	0.00
8	T	Diethyl Ether	0.240	0.341	-42.1#	170#	0.00
9	T	1,1,2-Trichlorotrifluoroeth	0.540	0.562	-4.1	124	0.00
10	T	Methyl Iodide	0.678	1.969	-190.4#	329#	0.00
11	T	Tert butyl alcohol	0.070	0.052	25.7#	94	0.00
12	CM	1,1-Dichloroethene	0.525	0.541	-3.0#	124	0.00
13	T	Acrolein	0.071	0.086	-21.1	146	0.00
14	T	Allyl chloride	0.872	0.917	-5.2	126	0.00
15	T	Acrylonitrile	0.251	0.240	4.4	111	0.00
16	T	Acetone	0.240	0.186	22.5	102	0.00
17	T	Carbon Disulfide	1.654	1.469	11.2	113	0.00
18	T	Methyl Acetate	0.502	0.515	-2.6	122	0.00
19	T	Methyl tert-butyl Ether	1.791	1.762	1.6	114	0.00
20	T	Methylene Chloride	0.586	0.572	2.4	115	0.00
21	T	trans-1,2-Dichloroethene	0.577	0.563	2.4	117	0.00
22	T	Diisopropyl ether	1.738	1.972	-13.5	131	0.00
23	T	Vinyl Acetate	1.389	1.363	1.9	112	0.00
24	P	1,1-Dichloroethane	1.051	1.093	-4.0	124	0.00
25	T	2-Butanone	0.304	0.265	12.8	104	0.00
26	T	2,2-Dichloropropane	0.949	0.957	-0.8	121	0.00
27	T	cis-1,2-Dichloroethene	0.673	0.671	0.3	119	0.00
28	T	Bromochloromethane	0.436	0.460	-5.5	115	0.00
29	T	Tetrahydrofuran	0.182	0.174	4.4	113	0.00
30	C	Chloroform	1.123	1.134	-1.0#	120	0.00
31	T	Cyclohexane	0.870	0.937	-7.7	126	0.00
32	T	1,1,1-Trichloroethane	1.035	1.019	1.5	116	0.00
33	S	1,2-Dichloroethane-d4	0.701	0.681	2.9	110	0.00
34	I	1,4-Difluorobenzene	1.000	1.000	0.0	114	0.00
35	S	Dibromofluoromethane	0.341	0.269	21.1	93	0.00
36	T	1,1-Dichloropropene	0.485	0.450	7.2	119	0.00
37	T	Ethyl Acetate	0.402	0.411	-2.2	128	0.00
38	T	Carbon Tetrachloride	0.599	0.525	12.4	108	0.00
39	T	Methylcyclohexane	0.573	0.570	0.5	121	0.00
40	TM	Benzene	1.409	1.352	4.0	119	0.00
41	T	Methacrylonitrile	0.211	0.211	0.0	118	0.00
42	TM	1,2-Dichloroethane	0.520	0.518	0.4	119	0.00
43	T	Isopropyl Acetate	0.661	0.660	0.2	119	0.00
44	TM	Trichloroethene	0.372	0.346	7.0	114	0.00
45	C	1,2-Dichloropropane	0.335	0.341	-1.8#	121	0.00
46	T	Dibromomethane	0.261	0.243	6.9	112	0.00
47	T	Bromodichloromethane	0.563	0.530	5.9	113	0.00
48	T	Methyl methacrylate	0.333	0.334	-0.3	119	0.00

Sample Results: **VX048353.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048353.D
Acq On : 24 Oct 2025 15:49
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Oct 24 23:05:56 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
49	T	1,4-Dioxane	0.004	0.003	25.0	87	0.00
50	S	Toluene-d8	1.196	1.117	6.6	108	0.00
51	T	4-Methyl-2-Pentanone	0.381	0.370	2.9	112	0.00
52	CM	Toluene	0.895	0.849	5.1#	113	0.00
53	T	t-1,3-Dichloropropene	0.543	0.483	11.0	101	0.00
54	T	cis-1,3-Dichloropropene	0.586	0.499	14.8	100	0.00
55	T	1,1,2-Trichloroethane	0.333	0.306	8.1	109	0.00
56	T	Ethyl methacrylate	0.487	0.463	4.9	108	0.00
57	T	1,3-Dichloropropane	0.568	0.540	4.9	113	0.00
58	T	2-Chloroethyl Vinyl ether	0.232	0.260	-12.1	114	0.00
59	T	2-Hexanone	0.266	0.251	5.6	108	0.00
60	T	Dibromochloromethane	0.447	0.382	14.5	103	0.00
61	T	1,2-Dibromoethane	0.355	0.313	11.8	105	0.00
62	S	4-Bromofluorobenzene	0.455	0.412	9.5	106	0.00
63	I	Chlorobenzene-d5	1.000	1.000	0.0	109	0.00
64	T	Tetrachloroethene	0.373	0.355	4.8	118	0.00
65	PM	Chlorobenzene	1.125	1.054	6.3	110	0.00
66	T	1,1,1,2-Tetrachloroethane	0.413	0.375	9.2	105	0.00
67	C	Ethyl Benzene	1.915	1.877	2.0#	113	0.00
68	T	m/p-Xylenes	0.712	0.700	1.7	111	0.00
69	T	o-Xylene	0.687	0.665	3.2	110	0.00
70	T	Styrene	1.170	1.147	2.0	110	0.00
71	P	Bromoform	0.330	0.262	20.6	93	0.00
72	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	110	0.00
73	T	Isopropylbenzene	3.652	3.541	3.0	113	0.00
74	T	N-amyl acetate	1.295	1.346	-3.9	118	0.00
75	P	1,1,2,2-Tetrachloroethane	0.997	0.879	11.8	102	0.00
76	T	1,2,3-Trichloropropane	0.811	0.801	1.2	119	0.00
77	T	Bromobenzene	0.916	0.834	9.0	106	0.00
78	T	n-propylbenzene	4.228	4.265	-0.9	116	0.00
79	T	2-Chlorotoluene	2.564	2.479	3.3	113	0.00
80	T	1,3,5-Trimethylbenzene	3.022	2.928	3.1	112	0.00
81	T	trans-1,4-Dichloro-2-butene	0.333	0.190	42.9#	66	0.00
82	T	4-Chlorotoluene	3.043	2.963	2.6	113	0.00
83	T	tert-Butylbenzene	3.105	2.984	3.9	112	0.00
84	T	1,2,4-Trimethylbenzene	3.016	2.933	2.8	112	0.00
85	T	sec-Butylbenzene	3.736	3.721	0.4	117	0.00
86	T	p-Isopropyltoluene	3.229	3.144	2.6	115	0.00
87	T	1,3-Dichlorobenzene	1.726	1.551	10.1	110	0.00
88	T	1,4-Dichlorobenzene	1.788	1.561	12.7	108	0.00
89	T	n-Butylbenzene	2.939	2.999	-2.0	125	0.00
90	T	Hexachloroethane	0.638	0.544	14.7	105	0.00
91	T	1,2-Dichlorobenzene	1.621	1.449	10.6	106	0.00
92	T	1,2-Dibromo-3-Chloropropane	0.202	0.176	12.9	99	0.00
93	T	1,2,4-Trichlorobenzene	1.096	1.001	8.7	114	0.00
94	T	Hexachlorobutadiene	0.507	0.418	17.6	123	0.00
95	T	Naphthalene	2.904	2.583	11.1	102	0.00

Sample Results: **VX048353.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048353.D
Acq On : 24 Oct 2025 15:49
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Oct 24 23:05:56 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
96 T	1,2,3-Trichlorobenzene	1.006	0.920	8.5	111	0.00

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

Evaluate Continuing Calibration Report

Sample Results: **VX048353.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048353.D
Acq On : 24 Oct 2025 15:49
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Oct 24 23:05:56 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	50.000	50.000	0.0	111	0.00
2	T	Dichlorodifluoromethane	50.000	44.408	11.2	105	0.00
3	P	Chloromethane	50.000	24.009	52.0#	57	0.00
4	C	Vinyl Chloride	50.000	68.154	-36.3#	161	0.00
5	T	Bromomethane	50.000	35.116	29.8#	83	0.00
6	T	Chloroethane	50.000	69.795	-39.6#	164	0.00
7	T	Trichlorofluoromethane	50.000	61.011	-22.0	143	0.00
8	T	Diethyl Ether	50.000	71.117	-42.2#	170	0.00
9	T	1,1,2-Trichlorotrifluoroeth	50.000	52.078	-4.2	124	0.00
10	T	Methyl Iodide	50.000	145.110	-190.2#	329	0.00
11	T	Tert butyl alcohol	250.000	188.008	24.8	94	0.00
12	CM	1,1-Dichloroethene	50.000	51.547	-3.1#	124	0.00
13	T	Acrolein	250.000	303.455	-21.4	146	0.00
14	T	Allyl chloride	50.000	52.626	-5.3	126	0.00
15	T	Acrylonitrile	250.000	239.471	4.2	111	0.00
16	T	Acetone	250.000	193.768	22.5	102	0.00
17	T	Carbon Disulfide	50.000	44.407	11.2	113	0.00
18	T	Methyl Acetate	50.000	51.241	-2.5	122	0.00
19	T	Methyl tert-butyl Ether	50.000	49.188	1.6	114	0.00
20	T	Methylene Chloride	50.000	48.781	2.4	115	0.00
21	T	trans-1,2-Dichloroethene	50.000	48.846	2.3	117	0.00
22	T	Diisopropyl ether	50.000	56.729	-13.5	131	0.00
23	T	Vinyl Acetate	250.000	245.353	1.9	112	0.00
24	P	1,1-Dichloroethane	50.000	52.017	-4.0	124	0.00
25	T	2-Butanone	250.000	217.495	13.0	104	0.00
26	T	2,2-Dichloropropane	50.000	50.451	-0.9	121	0.00
27	T	cis-1,2-Dichloroethene	50.000	49.885	0.2	119	0.00
28	T	Bromochloromethane	50.000	52.749	-5.5	115	0.00
29	T	Tetrahydrofuran	250.000	239.119	4.4	113	0.00
30	C	Chloroform	50.000	50.495	-1.0#	120	0.00
31	T	Cyclohexane	50.000	53.842	-7.7	126	0.00
32	T	1,1,1-Trichloroethane	50.000	49.248	1.5	116	0.00
33	S	1,2-Dichloroethane-d4	50.000	48.565	2.9	110	0.00
34	I	1,4-Difluorobenzene	50.000	50.000	0.0	114	0.00
35	S	Dibromofluoromethane	50.000	39.419	21.2	93	0.00
36	T	1,1-Dichloropropene	50.000	46.369	7.3	119	0.00
37	T	Ethyl Acetate	50.000	51.057	-2.1	128	0.00
38	T	Carbon Tetrachloride	50.000	43.846	12.3	108	0.00
39	T	Methylcyclohexane	50.000	49.732	0.5	121	0.00
40	TM	Benzene	50.000	47.991	4.0	119	0.00
41	T	Methacrylonitrile	50.000	49.974	0.1	118	0.00
42	TM	1,2-Dichloroethane	50.000	49.865	0.3	119	0.00
43	T	Isopropyl Acetate	50.000	49.940	0.1	119	0.00
44	TM	Trichloroethene	50.000	46.488	7.0	114	0.00
45	C	1,2-Dichloropropane	50.000	50.904	-1.8#	121	0.00
46	T	Dibromomethane	50.000	46.488	7.0	112	0.00
47	T	Bromodichloromethane	50.000	47.075	5.8	113	0.00
48	T	Methyl methacrylate	50.000	50.123	-0.2	119	0.00

Sample Results: **VX048353.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048353.D
Acq On : 24 Oct 2025 15:49
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Oct 24 23:05:56 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
49	T	1,4-Dioxane	1000.000	767.869	23.2	87	0.00
50	S	Toluene-d8	50.000	46.661	6.7	108	0.00
51	T	4-Methyl-2-Pentanone	250.000	242.909	2.8	112	0.00
52	CM	Toluene	50.000	47.417	5.2#	113	0.00
53	T	t-1,3-Dichloropropene	50.000	44.482	11.0	101	0.00
54	T	cis-1,3-Dichloropropene	50.000	42.583	14.8	100	0.00
55	T	1,1,2-Trichloroethane	50.000	46.020	8.0	109	0.00
56	T	Ethyl methacrylate	50.000	47.538	4.9	108	0.00
57	T	1,3-Dichloropropane	50.000	47.465	5.1	113	0.00
58	T	2-Chloroethyl Vinyl ether	250.000	248.040	0.8	114	0.00
59	T	2-Hexanone	250.000	236.310	5.5	108	0.00
60	T	Dibromochloromethane	50.000	42.719	14.6	103	0.00
61	T	1,2-Dibromoethane	50.000	44.069	11.9	105	0.00
62	S	4-Bromofluorobenzene	50.000	45.251	9.5	106	0.00
63	I	Chlorobenzene-d5	50.000	50.000	0.0	109	0.00
64	T	Tetrachloroethene	50.000	47.502	5.0	118	0.00
65	PM	Chlorobenzene	50.000	46.854	6.3	110	0.00
66	T	1,1,1,2-Tetrachloroethane	50.000	45.425	9.2	105	0.00
67	C	Ethyl Benzene	50.000	48.997	2.0#	113	0.00
68	T	m/p-Xylenes	100.000	98.351	1.6	111	0.00
69	T	o-Xylene	50.000	48.426	3.1	110	0.00
70	T	Styrene	50.000	49.017	2.0	110	0.00
71	P	Bromoform	50.000	39.641	20.7	93	0.00
72	I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	110	0.00
73	T	Isopropylbenzene	50.000	48.486	3.0	113	0.00
74	T	N-amyl acetate	50.000	51.949	-3.9	118	0.00
75	P	1,1,2,2-Tetrachloroethane	50.000	44.044	11.9	102	0.00
76	T	1,2,3-Trichloropropane	50.000	49.393	1.2	119	0.00
77	T	Bromobenzene	50.000	45.528	8.9	106	0.00
78	T	n-propylbenzene	50.000	50.437	-0.9	116	0.00
79	T	2-Chlorotoluene	50.000	48.357	3.3	113	0.00
80	T	1,3,5-Trimethylbenzene	50.000	48.442	3.1	112	0.00
81	T	trans-1,4-Dichloro-2-butene	50.000	28.518	43.0#	66	0.00
82	T	4-Chlorotoluene	50.000	48.674	2.7	113	0.00
83	T	tert-Butylbenzene	50.000	48.055	3.9	112	0.00
84	T	1,2,4-Trimethylbenzene	50.000	48.628	2.7	112	0.00
85	T	sec-Butylbenzene	50.000	49.795	0.4	117	0.00
86	T	p-Isopropyltoluene	50.000	48.680	2.6	115	0.00
87	T	1,3-Dichlorobenzene	50.000	44.932	10.1	110	0.00
88	T	1,4-Dichlorobenzene	50.000	43.644	12.7	108	0.00
89	T	n-Butylbenzene	50.000	51.016	-2.0	125	0.00
90	T	Hexachloroethane	50.000	42.679	14.6	105	0.00
91	T	1,2-Dichlorobenzene	50.000	44.694	10.6	106	0.00
92	T	1,2-Dibromo-3-Chloropropane	50.000	43.426	13.1	99	0.00
93	T	1,2,4-Trichlorobenzene	50.000	45.654	8.7	114	0.00
94	T	Hexachlorobutadiene	50.000	50.828	-1.7	123	0.00
95	T	Naphthalene	50.000	44.472	11.1	102	0.00

Sample Results: **VX048353.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048353.D
Acq On : 24 Oct 2025 15:49
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 16 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Oct 24 23:05:56 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
96 T	1,2,3-Trichlorobenzene	50.000	45.740	8.5	111	0.00

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

QC SAMPLE DATA

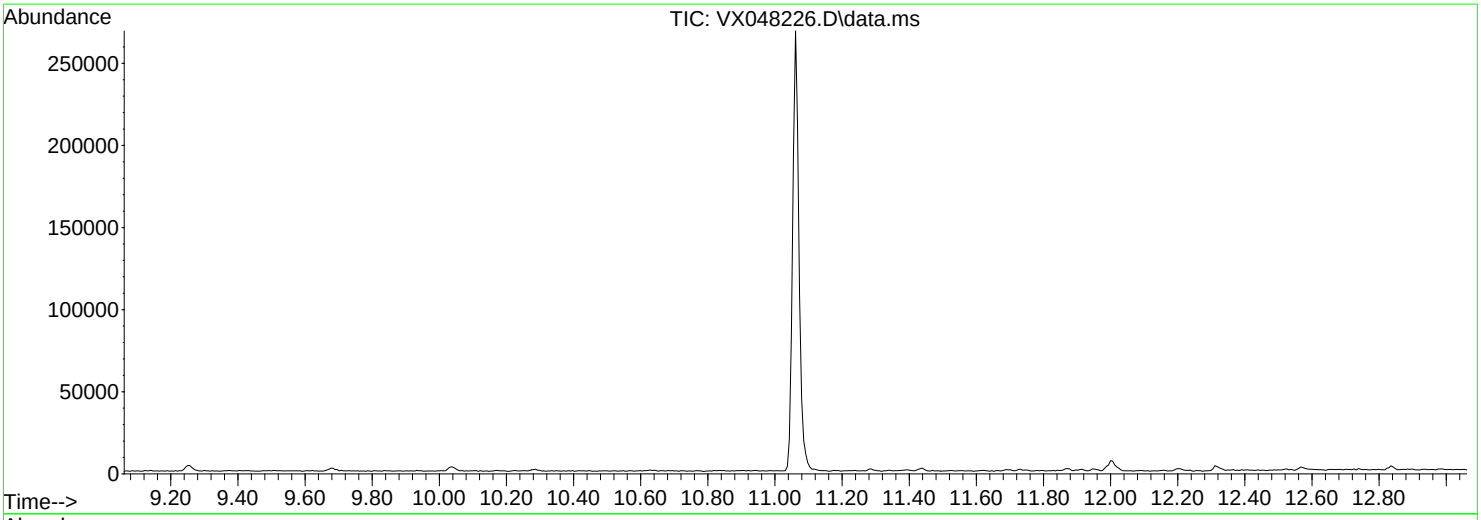
Sample Results: **VX048226.D**

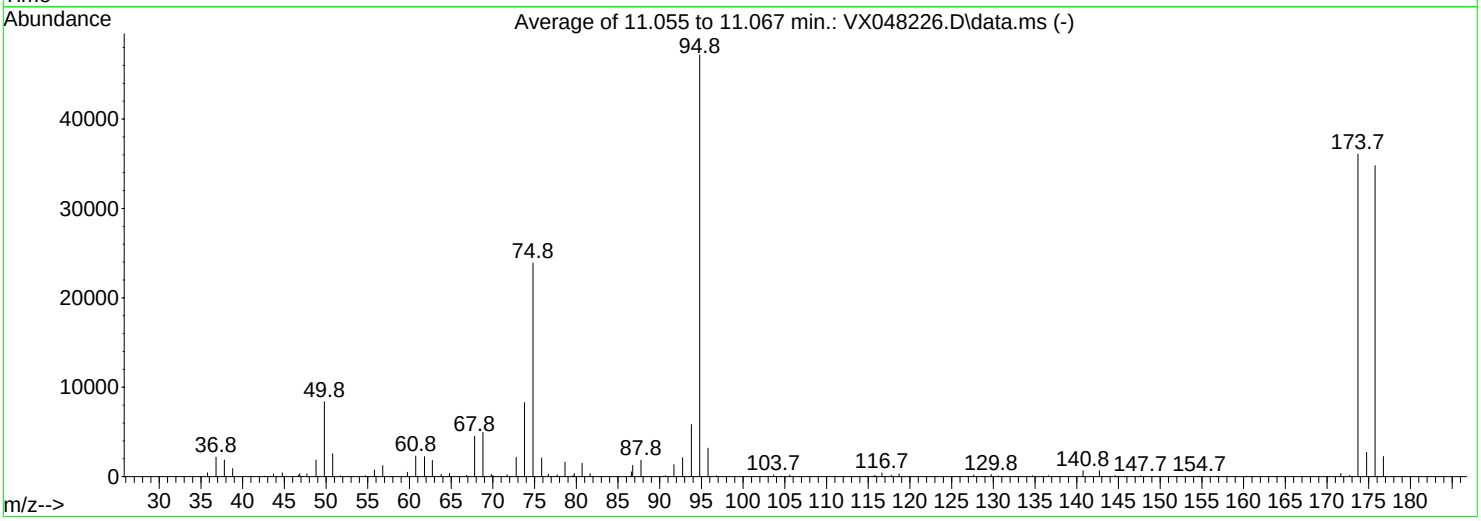
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048226.D
Acq On : 20 Oct 2025 08:15
Operator : JC/MD
Sample : BFB
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
BFB

Integration File: RTEINT.P

Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Title : SW846 8260
Last Update : Mon Oct 20 14:13:59 2025





AutoFind: Scans 1635, 1636, 1637; Background Corrected with Scan 1629

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.7	8374	PASS
75	95	30	60	50.7	23901	PASS
95	95	100	100	100.0	47184	PASS
96	95	5	9	6.8	3185	PASS
173	174	0.00	2	0.4	138	PASS
174	95	50	100	76.5	36091	PASS
175	174	5	9	7.5	2719	PASS
176	174	95	101	96.4	34800	PASS
177	176	5	9	6.5	2253	PASS

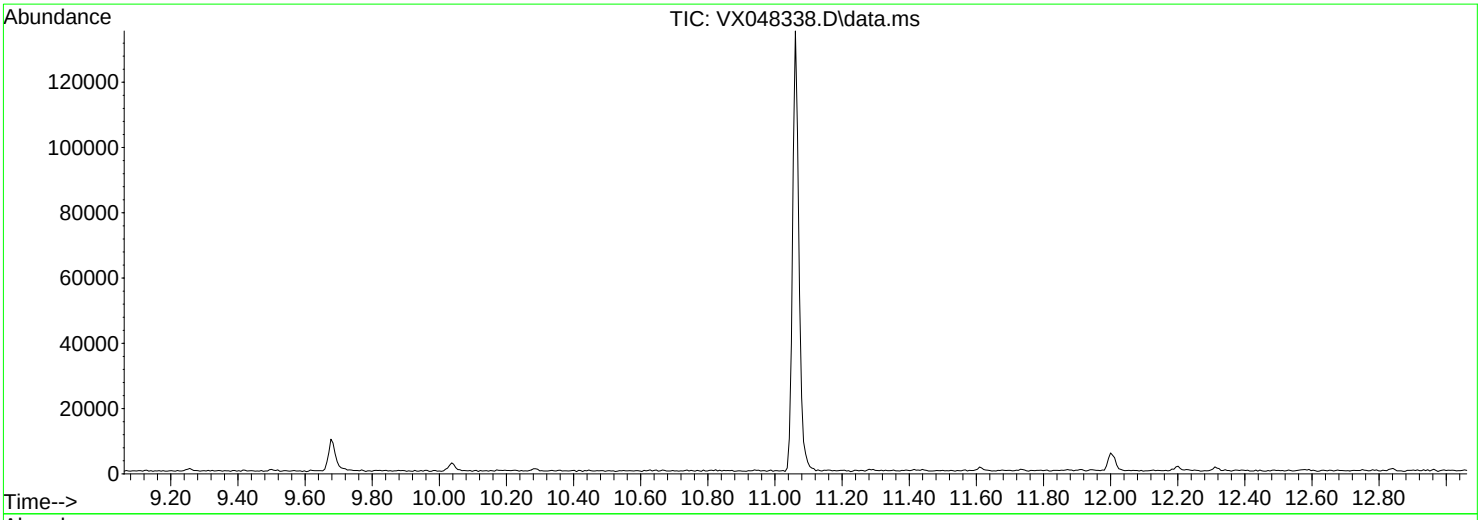
Sample Results: **VX048338.D**

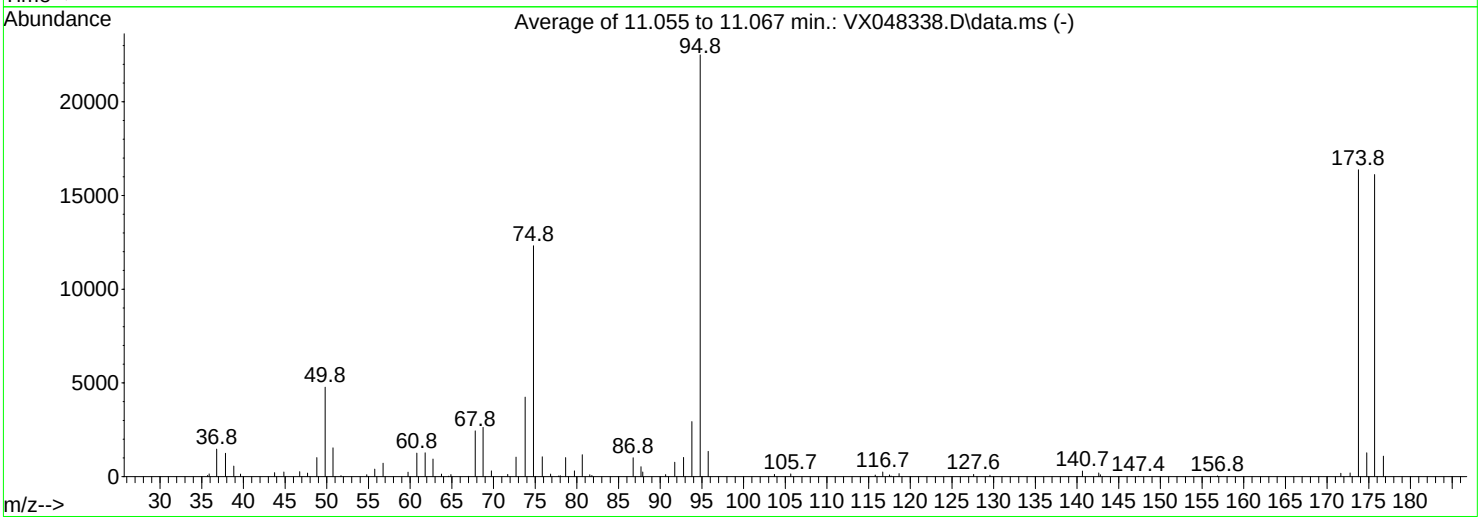
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048338.D
Acq On : 24 Oct 2025 08:19
Operator : JC/MD
Sample : BFB
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
BFB

Integration File: RTEINT.P

Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Title : SW846 8260
Last Update : Mon Oct 20 14:13:59 2025





AutoFind: Scans 1635, 1636, 1637; Background Corrected with Scan 1629

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.2	4772	PASS
75	95	30	60	54.7	12319	PASS
95	95	100	100	100.0	22504	PASS
96	95	5	9	6.0	1351	PASS
173	174	0.00	2	1.2	197	PASS
174	95	50	100	72.8	16374	PASS
175	174	5	9	7.8	1269	PASS
176	174	95	101	98.4	16118	PASS
177	176	5	9	6.8	1089	PASS

Raw Data: **VX048340.D**

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

Report of Analysis

Client:	ICE Service Group, Inc.	Date Collected:	
Project:	NWIRP Northrup Grumman Site – Bethpage, NY	Date Received:	
Client Sample ID:	VX1024WBL01	SDG No.:	Q3399
Lab Sample ID:	VX1024WBL01	Matrix:	TCLP
Analytical Method:	8260D Level: LOW	% Solid:	0
Sample Wt/Vol:	5 mL Final Vol: 5000 uL	Test:	TCLP VOA

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS										
75-01-4	Vinyl Chloride	0.75	U	1	0.26	0.75	1.00	ug/L	10/24/25 09:48	VX102425
75-35-4	1,1-Dichloroethene	0.75	U	1	0.23	0.75	1.00	ug/L	10/24/25 09:48	VX102425
78-93-3	2-Butanone	2.50	U	1	0.98	2.50	5.00	ug/L	10/24/25 09:48	VX102425
56-23-5	Carbon Tetrachloride	0.50	U	1	0.25	0.50	1.00	ug/L	10/24/25 09:48	VX102425
67-66-3	Chloroform	0.50	U	1	0.25	0.50	1.00	ug/L	10/24/25 09:48	VX102425
71-43-2	Benzene	0.50	U	1	0.15	0.50	1.00	ug/L	10/24/25 09:48	VX102425
107-06-2	1,2-Dichloroethane	0.50	U	1	0.22	0.50	1.00	ug/L	10/24/25 09:48	VX102425
79-01-6	Trichloroethene	0.75	U	1	0.090	0.75	1.00	ug/L	10/24/25 09:48	VX102425
127-18-4	Tetrachloroethene	0.50	U	1	0.23	0.50	1.00	ug/L	10/24/25 09:48	VX102425
108-90-7	Chlorobenzene	0.50	U	1	0.12	0.50	1.00	ug/L	10/24/25 09:48	VX102425
SURROGATES										
17060-07-0	1,2-Dichloroethane-d4	52.2			81 - 118		104%	SPK: 50		
1868-53-7	Dibromofluoromethane	39.0	*		80 - 119		78%	SPK: 50		
2037-26-5	Toluene-d8	43.1	*		89 - 112		86%	SPK: 50		
460-00-4	4-Bromofluorobenzene	42.7			85 - 114		85%	SPK: 50		
INTERNAL STANDARDS		**Area Count**								
363-72-4	Pentafluorobenzene	90500								
540-36-3	1,4-Difluorobenzene	176000								
3114-55-4	Chlorobenzene-d5	166000								
3855-82-1	1,4-Dichlorobenzene-d4	72200								

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\VX102425\
Data File : VX048340.D
Acq On : 24 Oct 2025 09:48
Operator : JC/MD
Sample : VX1024WBL01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX1024WBL01

Quant Time: Oct 24 23:00:13 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

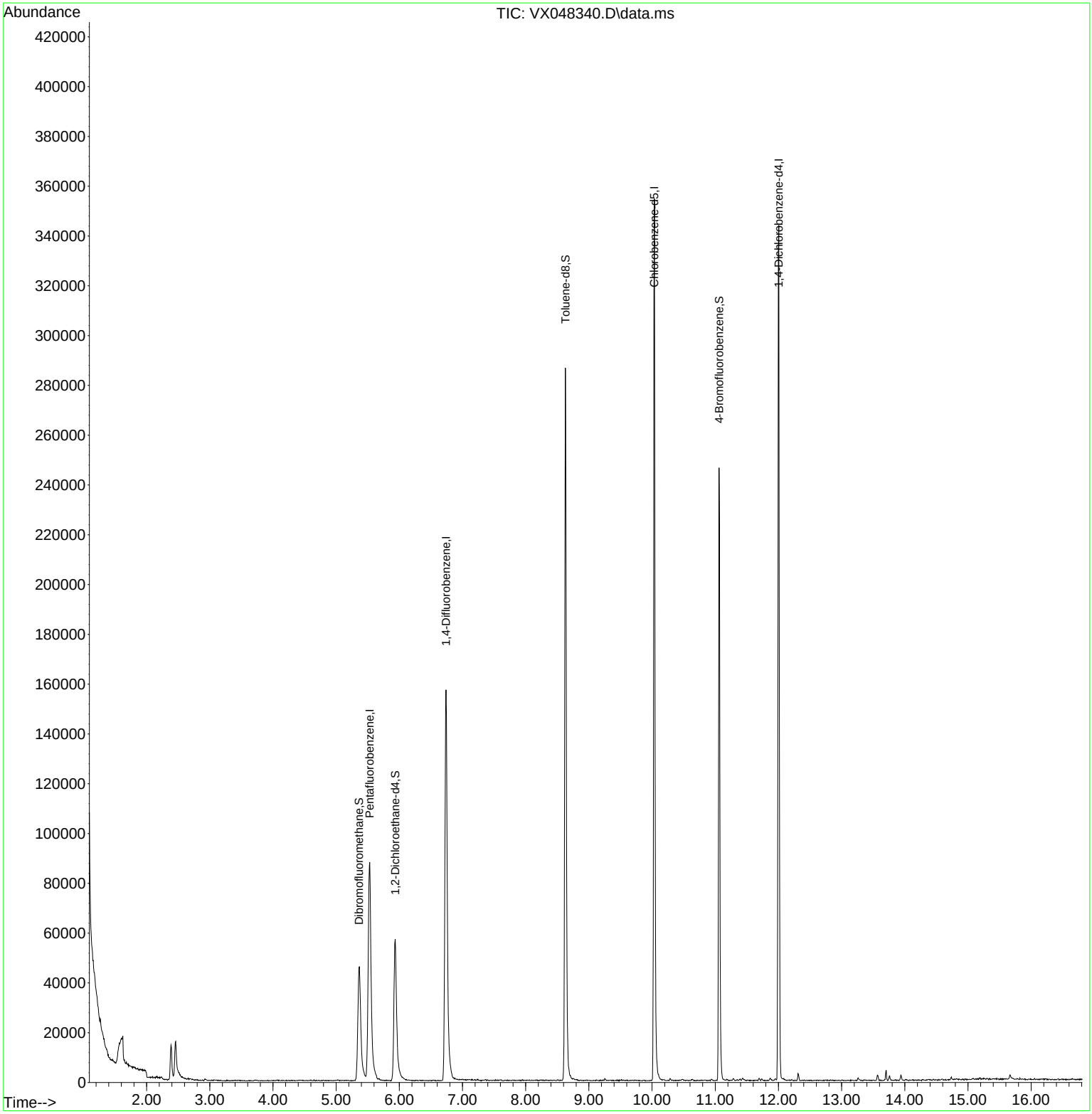
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.531	168	90540	50.000	ug/l	-0.01
34) 1,4-Difluorobenzene	6.738	114	176490	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.037	117	165587	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	72164	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.934	65	66303	52.230	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 104.460%			
35) Dibromofluoromethane	5.361	113	46939	38.957	ug/l	-0.01
Spiked Amount 50.000	Range 75 - 124		Recovery = 77.920%			
50) Toluene-d8	8.628	98	182081	43.114	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery = 86.220%#			
62) 4-Bromofluorobenzene	11.061	95	68609	42.703	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery = 85.400%			
Target Compounds						Qvalue

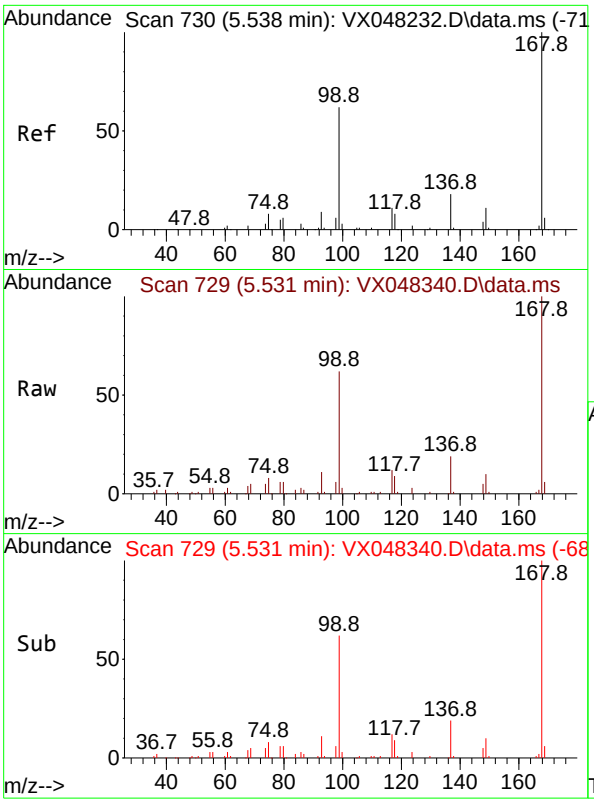
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048340.D
Acq On : 24 Oct 2025 09:48
Operator : JC/MD
Sample : VX1024WBL01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX1024WBL01

Quant Time: Oct 24 23:00:13 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration



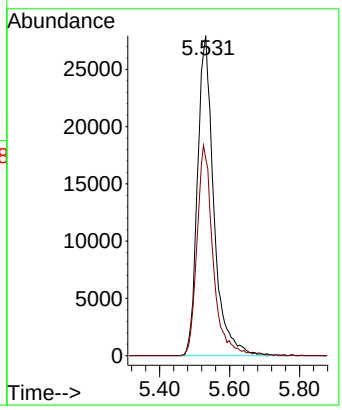


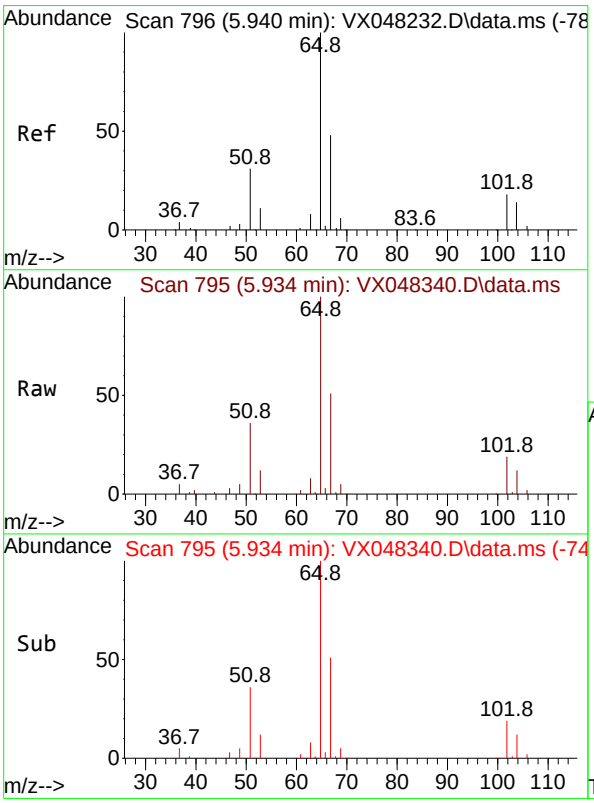
#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 5.531 min Scan# 7
Delta R.T. -0.013 min
Lab File: VX048340.D
Acq: 24 Oct 2025 09:48

Instrument :
MSVOA_X
ClientSampleId :
VX1024WBL01

Tgt Ion:168 Resp: 90540

Ion	Ratio	Lower	Upper
168	100		
99	61.6	46.4	69.6

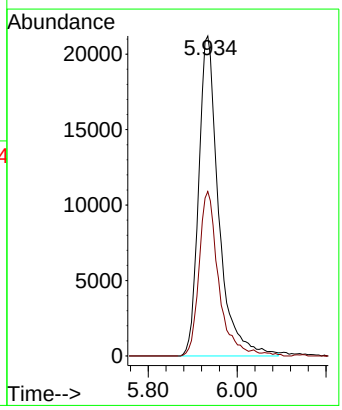


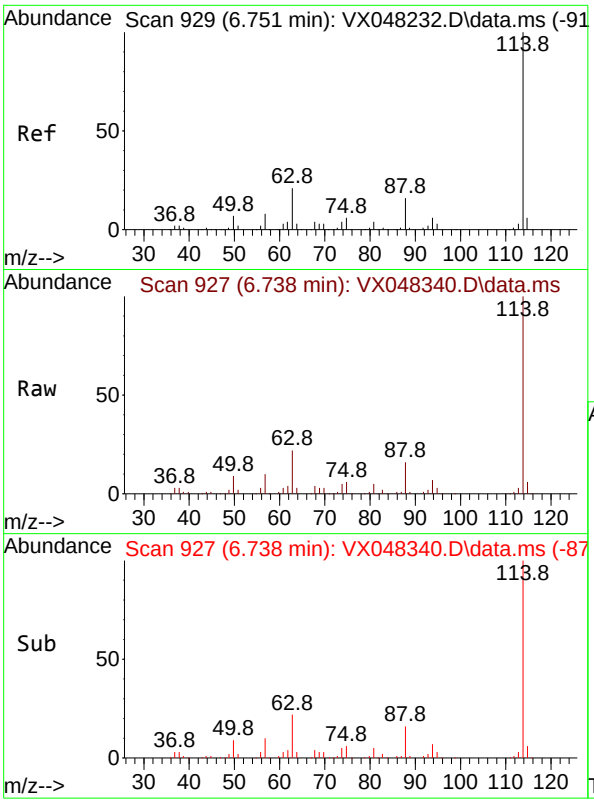


#33
1,2-Dichloroethane-d4
Concen: 52.230 ug/l
RT: 5.934 min Scan# 795
Delta R.T. -0.006 min
Lab File: VX048340.D
Acq: 24 Oct 2025 09:48

Tgt Ion: 65 Resp: 66303

Ion	Ratio	Lower	Upper
65	100		
67	50.1	0.0	105.0



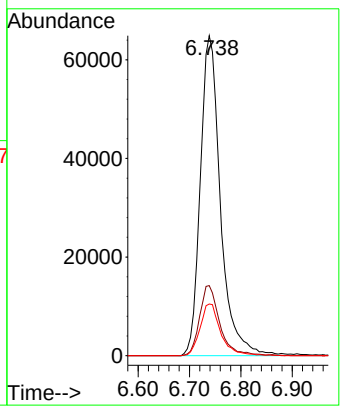


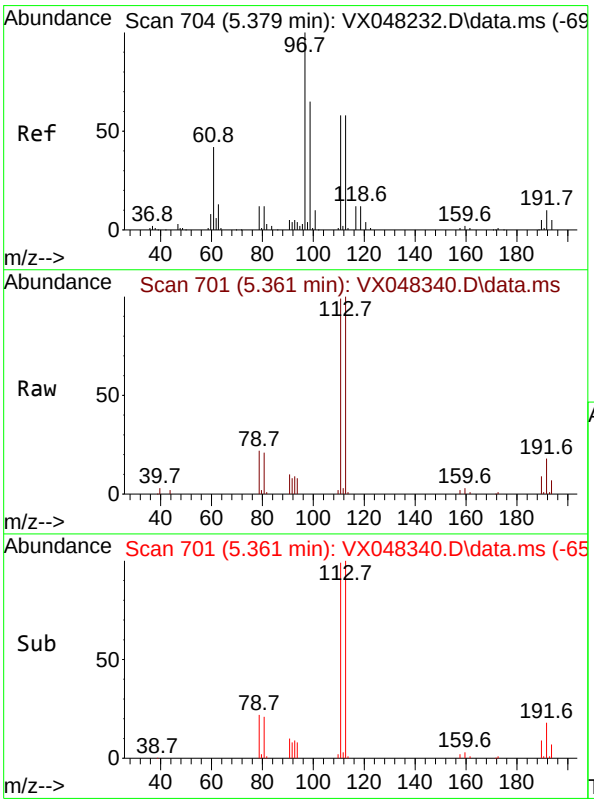
#34
1,4-Difluorobenzene
Concen: 50.000 ug/l
RT: 6.738 min Scan# 9
Delta R.T. -0.007 min
Lab File: VX048340.D
Acq: 24 Oct 2025 09:48

Instrument :
MSVOA_X
ClientSampleId :
VX1024WBL01

Tgt Ion:114 Resp: 176490

Ion	Ratio	Lower	Upper
114	100		
63	21.9	0.0	43.2
88	16.1	0.0	33.6

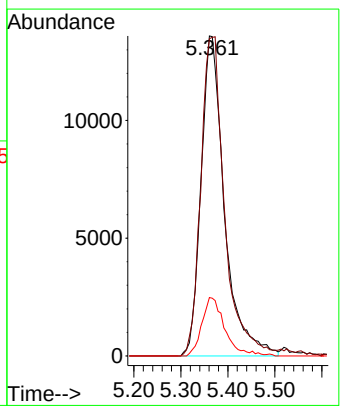


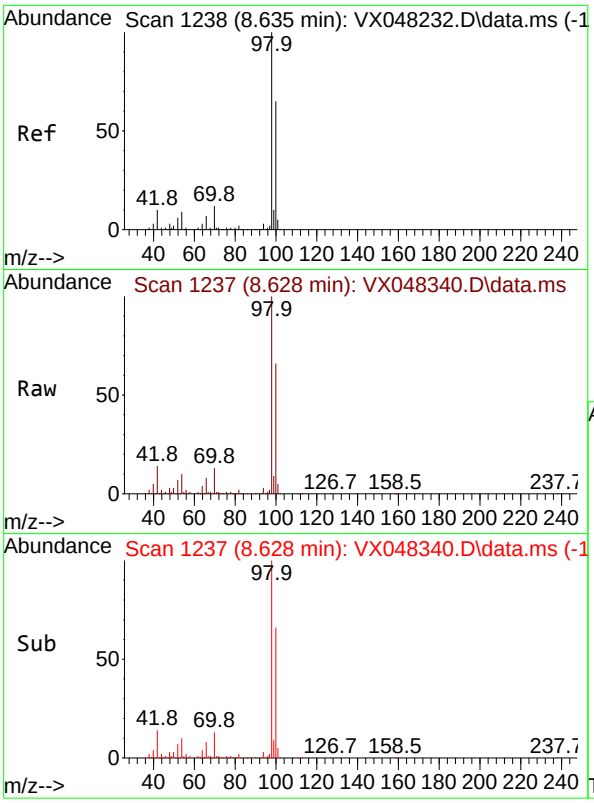


#35
Dibromofluoromethane
Concen: 38.957 ug/l
RT: 5.361 min Scan# 701
Delta R.T. -0.012 min
Lab File: VX048340.D
Acq: 24 Oct 2025 09:48

Tgt Ion:113 Resp: 46939

Ion	Ratio	Lower	Upper
113	100		
111	101.1	82.2	123.4
192	18.0	15.1	22.7



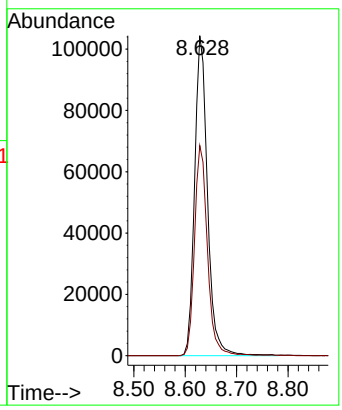


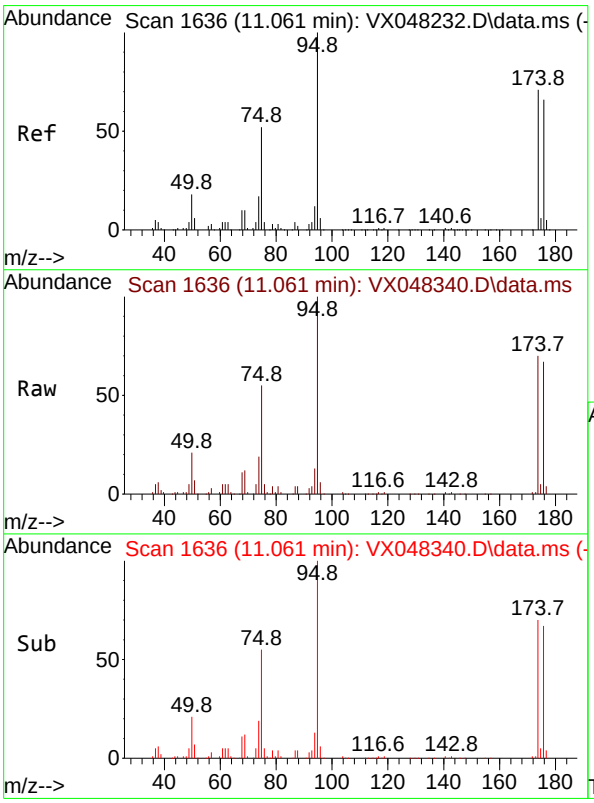
#50
Toluene-d8
Concen: 43.114 ug/l
RT: 8.628 min Scan# 1
Delta R.T. -0.006 min
Lab File: VX048340.D
Acq: 24 Oct 2025 09:48

Instrument :
MSVOA_X
ClientSampleId :
VX1024WBL01

Tgt Ion: 98 Resp: 182081

Ion	Ratio	Lower	Upper
98	100		
100	65.8	53.0	79.4

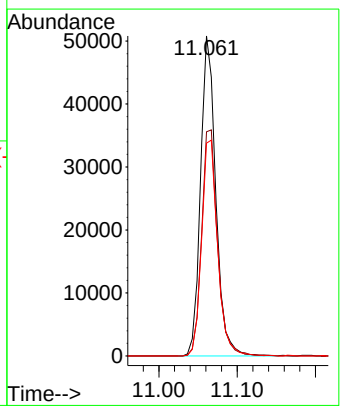


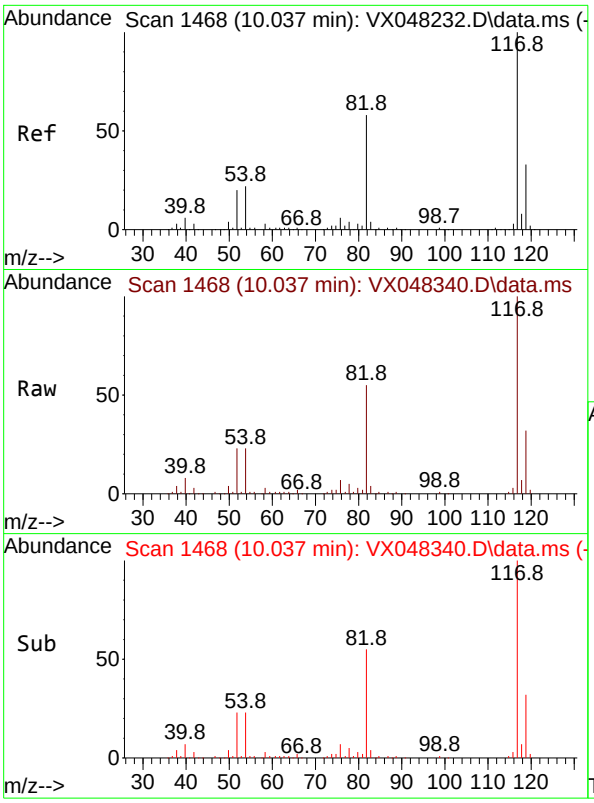


#62
4-Bromofluorobenzene
Concen: 42.703 ug/l
RT: 11.061 min Scan# 1636
Delta R.T. -0.000 min
Lab File: VX048340.D
Acq: 24 Oct 2025 09:48

Tgt Ion: 95 Resp: 68609

Ion	Ratio	Lower	Upper
95	100		
174	73.6	0.0	147.8
176	71.0	0.0	142.8



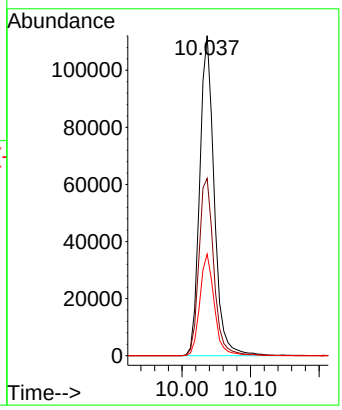


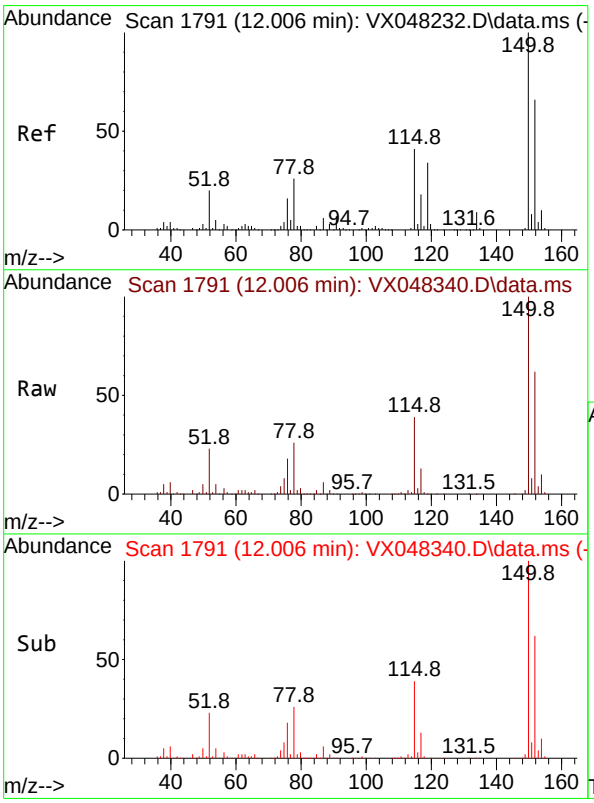
#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 10.037 min Scan# 14
Delta R.T. -0.000 min
Lab File: VX048340.D
Acq: 24 Oct 2025 09:48

Instrument :
MSVOA_X
ClientSampleId :
VX1024WBL01

Tgt Ion:117 Resp: 165587

Ion	Ratio	Lower	Upper
117	100		
82	55.4	46.5	69.7
119	31.8	25.9	38.9

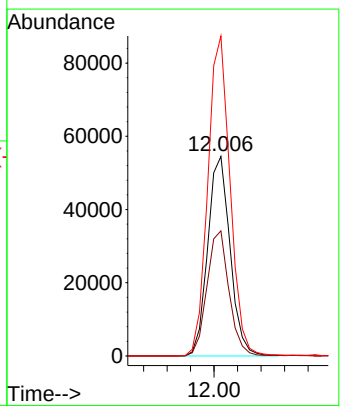




#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 12.006 min Scan# 1791
Delta R.T. -0.000 min
Lab File: VX048340.D
Acq: 24 Oct 2025 09:48

Tgt Ion:152 Resp: 72164

Ion	Ratio	Lower	Upper
152	100		
115	61.9	43.1	129.4
150	159.8	0.0	353.0



Raw Data: **VX048341.D**

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

Report of Analysis

Client:	ICE Service Group, Inc.	Date Collected:	
Project:	NWIRP Northrup Grumman Site – Bethpage, NY	Date Received:	
Client Sample ID:	VX1024WBS01	SDG No.:	Q3399
Lab Sample ID:	VX1024WBS01	Matrix:	TCLP
Analytical Method:	8260D Level: LOW	% Solid:	0
Sample Wt/Vol:	5 mL Final Vol: 5000 uL	Test:	TCLP VOA

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS										
75-01-4	Vinyl Chloride	27.8		1	0.26	0.75	1.00	ug/L	10/24/25 10:15	VX102425
75-35-4	1,1-Dichloroethene	20.7		1	0.23	0.75	1.00	ug/L	10/24/25 10:15	VX102425
78-93-3	2-Butanone	84.6		1	0.98	2.50	5.00	ug/L	10/24/25 10:15	VX102425
56-23-5	Carbon Tetrachloride	18.5		1	0.25	0.50	1.00	ug/L	10/24/25 10:15	VX102425
67-66-3	Chloroform	20.8		1	0.25	0.50	1.00	ug/L	10/24/25 10:15	VX102425
71-43-2	Benzene	20.2		1	0.15	0.50	1.00	ug/L	10/24/25 10:15	VX102425
107-06-2	1,2-Dichloroethane	21.0		1	0.22	0.50	1.00	ug/L	10/24/25 10:15	VX102425
79-01-6	Trichloroethene	19.2		1	0.090	0.75	1.00	ug/L	10/24/25 10:15	VX102425
127-18-4	Tetrachloroethene	20.9		1	0.23	0.50	1.00	ug/L	10/24/25 10:15	VX102425
108-90-7	Chlorobenzene	19.8		1	0.12	0.50	1.00	ug/L	10/24/25 10:15	VX102425
SURROGATES										
17060-07-0	1,2-Dichloroethane-d4	51.3			81 - 118		103%	SPK: 50		
1868-53-7	Dibromofluoromethane	41.6			80 - 119		83%	SPK: 50		
2037-26-5	Toluene-d8	49.6			89 - 112		99%	SPK: 50		
460-00-4	4-Bromofluorobenzene	48.3			85 - 114		97%	SPK: 50		
INTERNAL STANDARDS		**Area Count**								
363-72-4	Pentafluorobenzene	146000								
540-36-3	1,4-Difluorobenzene	239000								
3114-55-4	Chlorobenzene-d5	209000								
3855-82-1	1,4-Dichlorobenzene-d4	104000								

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\VX102425\
Data File : VX048341.D
Acq On : 24 Oct 2025 10:15
Operator : JC/MD
Sample : VX1024WBS01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 24 23:00:39 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VX1024WBS01

Manual Integrations APPROVED

Reviewed By :John Carlone 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.531	168	145979	50.000	ug/l	-0.01
34) 1,4-Difluorobenzene	6.744	114	238661	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.036	117	208902	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	103563	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.933	65	104947	51.275	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 102.560%			
35) Dibromofluoromethane	5.367	113	67722	41.564	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 83.120%			
50) Toluene-d8	8.628	98	283427	49.629	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery = 99.260%			
62) 4-Bromofluorobenzene	11.061	95	105010	48.334	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery = 96.660%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.172	85	27195	18.122	ug/l	94
3) Chloromethane	1.300	50	14115	10.077	ug/l	93
4) Vinyl Chloride	1.379	62	36112	27.840	ug/l	98
5) Bromomethane	1.617	94	12608	14.323	ug/l	92
6) Chloroethane	1.696	64	21902	28.735	ug/l	95
7) Trichlorofluoromethane	1.898	101	61799	24.842	ug/l	98
8) Diethyl Ether	2.129	74	20019	28.600	ug/l	94
9) 1,1,2-Trichlorotrifluo...	2.337	101	33915	21.529	ug/l	99
10) Methyl Iodide	2.458	142	121848	61.528	ug/l	98
11) Tert butyl alcohol	2.934	59	16210	79.768	ug/l	98
12) 1,1-Dichloroethene	2.324	96	31747	20.715	ug/l	98
13) Acrolein	2.233	56	25338	122.255	ug/l	100
14) Allyl chloride	2.666	41	54311	21.344	ug/l	95
15) Acrylonitrile	3.056	53	70500	96.210	ug/l	99
16) Acetone	2.367	43	48526	69.111	ug/l	98
17) Carbon Disulfide	2.513	76	88439	18.310	ug/l	98
18) Methyl Acetate	2.696	43	29292	19.976	ug/l	99
19) Methyl tert-butyl Ether	3.105	73	105877	20.250	ug/l	100
20) Methylene Chloride	2.788	84	34512	20.172	ug/l	98
21) trans-1,2-Dichloroethene	3.086	96	34044	20.223	ug/l	98
22) Diisopropyl ether	3.745	45	118430	23.336	ug/l	99
23) Vinyl Acetate	3.708	43	423009	104.344	ug/l	99
24) 1,1-Dichloroethane	3.599	63	65078	21.207	ug/l	98
25) 2-Butanone	4.531	43	75222	84.639	ug/l	95
26) 2,2-Dichloropropane	4.464	77	56864	20.530	ug/l	98
27) cis-1,2-Dichloroethene	4.476	96	39206	19.955	ug/l	96
28) Bromochloromethane	4.879	49	27053	21.261	ug/l	97
29) Tetrahydrofuran	4.982	42	51748	97.222	ug/l	99
30) Chloroform	5.074	83	68186	20.797	ug/l	99
31) Cyclohexane	5.452	56	57458	22.616	ug/l	89
32) 1,1,1-Trichloroethane	5.367	97	62899	20.816	ug/l	98
36) 1,1-Dichloropropene	5.677	75	46219	19.958	ug/l	96
37) Ethyl Acetate	4.690	43	41061	21.391	ug/l #	95
38) Carbon Tetrachloride	5.659	117	52919	18.522	ug/l	95
39) Methylcyclohexane	7.366	83	56949	20.823	ug/l	98
40) Benzene	6.019	78	135581	20.165	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048341.D
Acq On : 24 Oct 2025 10:15
Operator : JC/MD
Sample : VX1024WBS01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 24 23:00:39 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VX1024WBS01

Manual Integrations APPROVED

Reviewed By :John Carlone 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	4.891	41	20984	20.817	ug/l		98
42) 1,2-Dichloroethane	6.068	62	52014	20.965	ug/l		99
43) Isopropyl Acetate	6.318	43	68756	21.807	ug/l		99
44) Trichloroethene	7.104	130	34170	19.247	ug/l		98
45) 1,2-Dichloropropane	7.409	63	33220	20.781	ug/l		99
46) Dibromomethane	7.561	93	24750	19.873	ug/l		98
47) Bromodichloromethane	7.805	83	52628	19.571	ug/l		99
48) Methyl methacrylate	7.677	41	33315	20.939	ug/l		96
49) 1,4-Dioxane	7.641	88	7180	341.585	ug/l		96
51) 4-Methyl-2-Pentanone	8.555	43	189499	104.240	ug/l		99
52) Toluene	8.701	92	84824	19.859	ug/l		98
53) t-1,3-Dichloropropene	8.963	75	49569	19.129	ug/l		96
54) cis-1,3-Dichloropropene	8.348	75	52191	18.668	ug/l		95
55) 1,1,2-Trichloroethane	9.134	97	31755	19.991	ug/l		95
56) Ethyl methacrylate	9.098	69	45976	19.789	ug/l		97
57) 1,3-Dichloropropane	9.293	76	53530	19.729	ug/l		98
58) 2-Chloroethyl Vinyl ether	8.226	63	118629	96.012	ug/l		99
59) 2-Hexanone	9.415	43	125025	98.630	ug/l		98
60) Dibromochloromethane	9.506	129	38132	17.861	ug/l		99
61) 1,2-Dibromoethane	9.591	107	32346	19.101	ug/l		98
64) Tetrachloroethene	9.256	164	32600	20.904	ug/l		97
65) Chlorobenzene	10.061	112	93252	19.844	ug/l		100
66) 1,1,1,2-Tetrachloroethane	10.146	131	32783	18.993	ug/l		99
67) Ethyl Benzene	10.177	91	163786	20.471	ug/l		99
68) m/p-Xylenes	10.286	106	122538	41.221	ug/l		99
69) o-Xylene	10.622	106	57644	20.085	ug/l		100
70) Styrene	10.640	104	98123	20.079	ug/l		98
71) Bromoform	10.780	173	23162	16.790	ug/l	#	99
73) Isopropylbenzene	10.945	105	156349	20.669	ug/l		100
74) N-amyl acetate	10.823	43	58990	21.985	ug/l		100
75) 1,1,2,2-Tetrachloroethane	11.195	83	39902	19.317	ug/l		100
76) 1,2,3-Trichloropropane	11.219	75	35869m	21.358	ug/l		
77) Bromobenzene	11.176	156	36110	19.039	ug/l		98
78) n-propylbenzene	11.286	91	186273	21.269	ug/l		99
79) 2-Chlorotoluene	11.347	91	111240	20.949	ug/l		98
80) 1,3,5-Trimethylbenzene	11.432	105	129782	20.733	ug/l		99
81) trans-1,4-Dichloro-2-b...	11.000	75	8393	12.159	ug/l	#	53
82) 4-Chlorotoluene	11.432	91	129943	20.615	ug/l		100
83) tert-Butylbenzene	11.695	119	128952	20.049	ug/l		99
84) 1,2,4-Trimethylbenzene	11.731	105	129443	20.720	ug/l		99
85) sec-Butylbenzene	11.871	105	165405	21.376	ug/l		99
86) p-Isopropyltoluene	11.987	119	137775	20.599	ug/l		98
87) 1,3-Dichlorobenzene	11.951	146	68516	19.162	ug/l		99
88) 1,4-Dichlorobenzene	12.024	146	69433	18.745	ug/l		99
89) n-Butylbenzene	12.316	91	127603	20.961	ug/l		100
90) Hexachloroethane	12.518	117	22551	17.074	ug/l		99
91) 1,2-Dichlorobenzene	12.316	146	64650	19.258	ug/l		97
92) 1,2-Dibromo-3-Chloropr...	12.920	75	7646	18.235	ug/l		92
93) 1,2,4-Trichlorobenzene	13.566	180	42595	18.762	ug/l		100
94) Hexachlorobutadiene	13.706	225	18776	22.108	ug/l		95
95) Naphthalene	13.755	128	112756	18.747	ug/l		100
96) 1,2,3-Trichlorobenzene	13.944	180	39822	19.115	ug/l		98

Sample Results: **VX048341.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048341.D
Acq On : 24 Oct 2025 10:15
Operator : JC/MD
Sample : VX1024WBS01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX1024WBS01

Manual Integrations APPROVED

Reviewed By :John Carlone 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:00:39 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

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

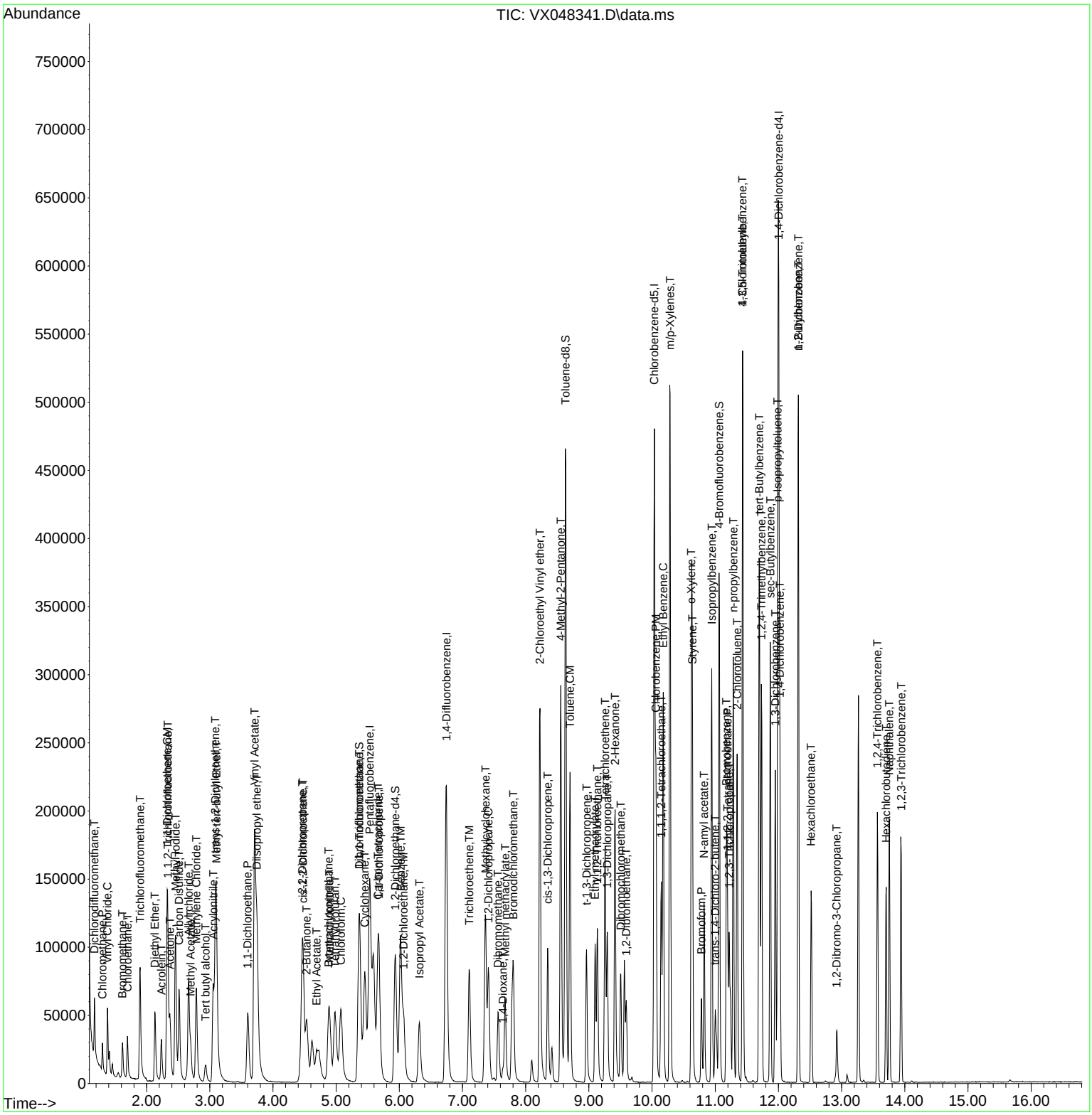
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048341.D
Acq On : 24 Oct 2025 10:15
Operator : JC/MD
Sample : VX1024WBS01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 24 23:00:39 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VX1024WBS01

Manual Integrations APPROVED

Reviewed By :John Carlone 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025



Raw Data: **VX048342.D**

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

Report of Analysis

Client:	ICE Service Group, Inc.	Date Collected:	
Project:	NWIRP Northrup Grumman Site – Bethpage, NY	Date Received:	
Client Sample ID:	VX1024WBSD01	SDG No.:	Q3399
Lab Sample ID:	VX1024WBSD01	Matrix:	TCLP
Analytical Method:	8260D Level: LOW	% Solid:	0
Sample Wt/Vol:	5 mL Final Vol: 5000 uL	Test:	TCLP VOA

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS										
75-01-4	Vinyl Chloride	26.6		1	0.26	0.75	1.00	ug/L	10/24/25 10:43	VX102425
75-35-4	1,1-Dichloroethene	19.5		1	0.23	0.75	1.00	ug/L	10/24/25 10:43	VX102425
78-93-3	2-Butanone	95.2		1	0.98	2.50	5.00	ug/L	10/24/25 10:43	VX102425
56-23-5	Carbon Tetrachloride	19.0		1	0.25	0.50	1.00	ug/L	10/24/25 10:43	VX102425
67-66-3	Chloroform	20.8		1	0.25	0.50	1.00	ug/L	10/24/25 10:43	VX102425
71-43-2	Benzene	20.1		1	0.15	0.50	1.00	ug/L	10/24/25 10:43	VX102425
107-06-2	1,2-Dichloroethane	21.6		1	0.22	0.50	1.00	ug/L	10/24/25 10:43	VX102425
79-01-6	Trichloroethene	19.6		1	0.090	0.75	1.00	ug/L	10/24/25 10:43	VX102425
127-18-4	Tetrachloroethene	21.2		1	0.23	0.50	1.00	ug/L	10/24/25 10:43	VX102425
108-90-7	Chlorobenzene	19.7		1	0.12	0.50	1.00	ug/L	10/24/25 10:43	VX102425
SURROGATES										
17060-07-0	1,2-Dichloroethane-d4	53.1			81 - 118		106%	SPK: 50		
1868-53-7	Dibromofluoromethane	40.4			80 - 119		81%	SPK: 50		
2037-26-5	Toluene-d8	49.6			89 - 112		99%	SPK: 50		
460-00-4	4-Bromofluorobenzene	48.4			85 - 114		97%	SPK: 50		
INTERNAL STANDARDS		**Area Count**								
363-72-4	Pentafluorobenzene	138000								
540-36-3	1,4-Difluorobenzene	226000								
3114-55-4	Chlorobenzene-d5	197000								
3855-82-1	1,4-Dichlorobenzene-d4	98600								

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: **VX048342.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048342.D
Acq On : 24 Oct 2025 10:43
Operator : JC/MD
Sample : VX1024WBSD01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 24 23:01:39 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VX1024WBSD01

Manual Integrations APPROVED

Reviewed By :John Carlone 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.531	168	137701	50.000	ug/l	-0.01
34) 1,4-Difluorobenzene	6.739	114	225696	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.037	117	197290	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.000	152	98612	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.934	65	102570	53.127	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 106.260%			
35) Dibromofluoromethane	5.367	113	62228	40.386	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 80.780%			
50) Toluene-d8	8.628	98	267872	49.599	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery = 99.200%			
62) 4-Bromofluorobenzene	11.061	95	99386	48.373	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery = 96.740%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.172	85	25143	17.762	ug/l	94
3) Chloromethane	1.300	50	12822	9.704	ug/l	95
4) Vinyl Chloride	1.380	62	32569	26.618	ug/l	100
5) Bromomethane	1.617	94	12351	14.874	ug/l	99
6) Chloroethane	1.697	64	20040	27.873	ug/l #	87
7) Trichlorofluoromethane	1.898	101	57777	24.622	ug/l	99
8) Diethyl Ether	2.130	74	20192	30.581	ug/l	96
9) 1,1,2-Trichlorotrifluo...	2.331	101	31911	21.475	ug/l	99
10) Methyl Iodide	2.459	142	111359	59.612	ug/l	99
11) Tert butyl alcohol	2.928	59	15744	82.132	ug/l	99
12) 1,1-Dichloroethene	2.325	96	28121	19.452	ug/l	97
13) Acrolein	2.233	56	25266	129.236	ug/l	98
14) Allyl chloride	2.666	41	50781	21.157	ug/l	96
15) Acrylonitrile	3.050	53	69449	100.473	ug/l	99
16) Acetone	2.367	43	50022	75.524	ug/l	95
17) Carbon Disulfide	2.514	76	80803	17.735	ug/l	98
18) Methyl Acetate	2.697	43	30264	21.879	ug/l	99
19) Methyl tert-butyl Ether	3.105	73	104287	21.145	ug/l	97
20) Methylene Chloride	2.788	84	31918	19.778	ug/l	100
21) trans-1,2-Dichloroethene	3.087	96	31734	19.984	ug/l	97
22) Diisopropyl ether	3.745	45	112880	23.579	ug/l	98
23) Vinyl Acetate	3.709	43	415767	108.723	ug/l	99
24) 1,1-Dichloroethane	3.605	63	60362	20.853	ug/l	99
25) 2-Butanone	4.532	43	79792	95.179	ug/l	95
26) 2,2-Dichloropropane	4.465	77	52806	20.211	ug/l	98
27) cis-1,2-Dichloroethene	4.477	96	37304	20.128	ug/l	96
28) Bromochloromethane	4.885	49	26145	21.783	ug/l	99
29) Tetrahydrofuran	4.983	42	51766	103.102	ug/l	99
30) Chloroform	5.074	83	64392	20.821	ug/l	92
31) Cyclohexane	5.452	56	54699	22.824	ug/l	95
32) 1,1,1-Trichloroethane	5.367	97	58203	20.420	ug/l	97
36) 1,1-Dichloropropene	5.678	75	44017	20.099	ug/l	98
37) Ethyl Acetate	4.690	43	39763	21.905	ug/l	99
38) Carbon Tetrachloride	5.659	117	51364	19.010	ug/l	98
39) Methylcyclohexane	7.360	83	54639	21.126	ug/l	99
40) Benzene	6.019	78	128108	20.148	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048342.D
Acq On : 24 Oct 2025 10:43
Operator : JC/MD
Sample : VX1024WBSD01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 24 23:01:39 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VX1024WBSD01

Manual Integrations APPROVED

Reviewed By :John Carlone 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	4.897	41	21026	22.057	ug/l		98
42) 1,2-Dichloroethane	6.068	62	50777	21.642	ug/l		100
43) Isopropyl Acetate	6.318	43	67251	22.554	ug/l		99
44) Trichloroethene	7.110	130	32933	19.616	ug/l		96
45) 1,2-Dichloropropane	7.415	63	32923	21.779	ug/l		97
46) Dibromomethane	7.562	93	23790	20.200	ug/l		98
47) Bromodichloromethane	7.805	83	49713	19.549	ug/l		96
48) Methyl methacrylate	7.671	41	32820	21.813	ug/l		97
49) 1,4-Dioxane	7.641	88	6826	343.399	ug/l	#	94
51) 4-Methyl-2-Pentanone	8.555	43	188686	109.755	ug/l		99
52) Toluene	8.702	92	80539	19.939	ug/l		98
53) t-1,3-Dichloropropene	8.964	75	47287	19.297	ug/l		99
54) cis-1,3-Dichloropropene	8.348	75	50121	18.957	ug/l		99
55) 1,1,2-Trichloroethane	9.134	97	30674	20.420	ug/l		98
56) Ethyl methacrylate	9.098	69	44167	20.102	ug/l		94
57) 1,3-Dichloropropane	9.293	76	53321	20.781	ug/l		98
58) 2-Chloroethyl Vinyl ether	8.226	63	118521	101.339	ug/l		99
59) 2-Hexanone	9.415	43	125081	104.343	ug/l		100
60) Dibromochloromethane	9.506	129	36681	18.168	ug/l		100
61) 1,2-Dibromoethane	9.592	107	31369	19.589	ug/l		97
64) Tetrachloroethene	9.256	164	31271	21.232	ug/l		95
65) Chlorobenzene	10.061	112	87547	19.726	ug/l		99
66) 1,1,1,2-Tetrachloroethane	10.146	131	31852	19.540	ug/l		99
67) Ethyl Benzene	10.177	91	153603	20.328	ug/l		98
68) m/p-Xylenes	10.287	106	115372	41.095	ug/l		100
69) o-Xylene	10.622	106	54907	20.258	ug/l		99
70) Styrene	10.640	104	92792	20.106	ug/l		98
71) Bromoform	10.780	173	22978	17.637	ug/l	#	99
73) Isopropylbenzene	10.945	105	148568	20.627	ug/l		100
74) N-amyl acetate	10.823	43	58253	22.801	ug/l		98
75) 1,1,2,2-Tetrachloroethane	11.195	83	39083	19.870	ug/l		98
76) 1,2,3-Trichloropropane	11.219	75	35661m	22.300	ug/l		
77) Bromobenzene	11.177	156	34578	19.146	ug/l		98
78) n-propylbenzene	11.286	91	175426	21.036	ug/l		99
79) 2-Chlorotoluene	11.347	91	102875	20.347	ug/l		98
80) 1,3,5-Trimethylbenzene	11.433	105	123122	20.656	ug/l		99
81) trans-1,4-Dichloro-2-b...	11.000	75	8998	13.689	ug/l	#	79
82) 4-Chlorotoluene	11.439	91	122719	20.446	ug/l		99
83) tert-Butylbenzene	11.695	119	123899	20.231	ug/l		100
84) 1,2,4-Trimethylbenzene	11.732	105	122164	20.537	ug/l		99
85) sec-Butylbenzene	11.872	105	154615	20.984	ug/l		100
86) p-Isopropyltoluene	11.988	119	128679	20.205	ug/l		98
87) 1,3-Dichlorobenzene	11.951	146	65372	19.201	ug/l		99
88) 1,4-Dichlorobenzene	12.024	146	66499	18.854	ug/l		98
89) n-Butylbenzene	12.311	91	122166	21.075	ug/l		99
90) Hexachloroethane	12.518	117	21976	17.474	ug/l		99
91) 1,2-Dichlorobenzene	12.317	146	62138	19.439	ug/l		100
92) 1,2-Dibromo-3-Chloropr...	12.920	75	7963	19.944	ug/l		88
93) 1,2,4-Trichlorobenzene	13.567	180	40804	18.876	ug/l		97
94) Hexachlorobutadiene	13.707	225	18104	22.386	ug/l		98
95) Naphthalene	13.756	128	110334	19.265	ug/l		99
96) 1,2,3-Trichlorobenzene	13.938	180	37968	19.140	ug/l		96

Sample Results: **VX048342.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048342.D
Acq On : 24 Oct 2025 10:43
Operator : JC/MD
Sample : VX1024WBSD01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX1024WBSD01

Manual Integrations APPROVED

Reviewed By :John Carlone 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:01:39 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

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

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

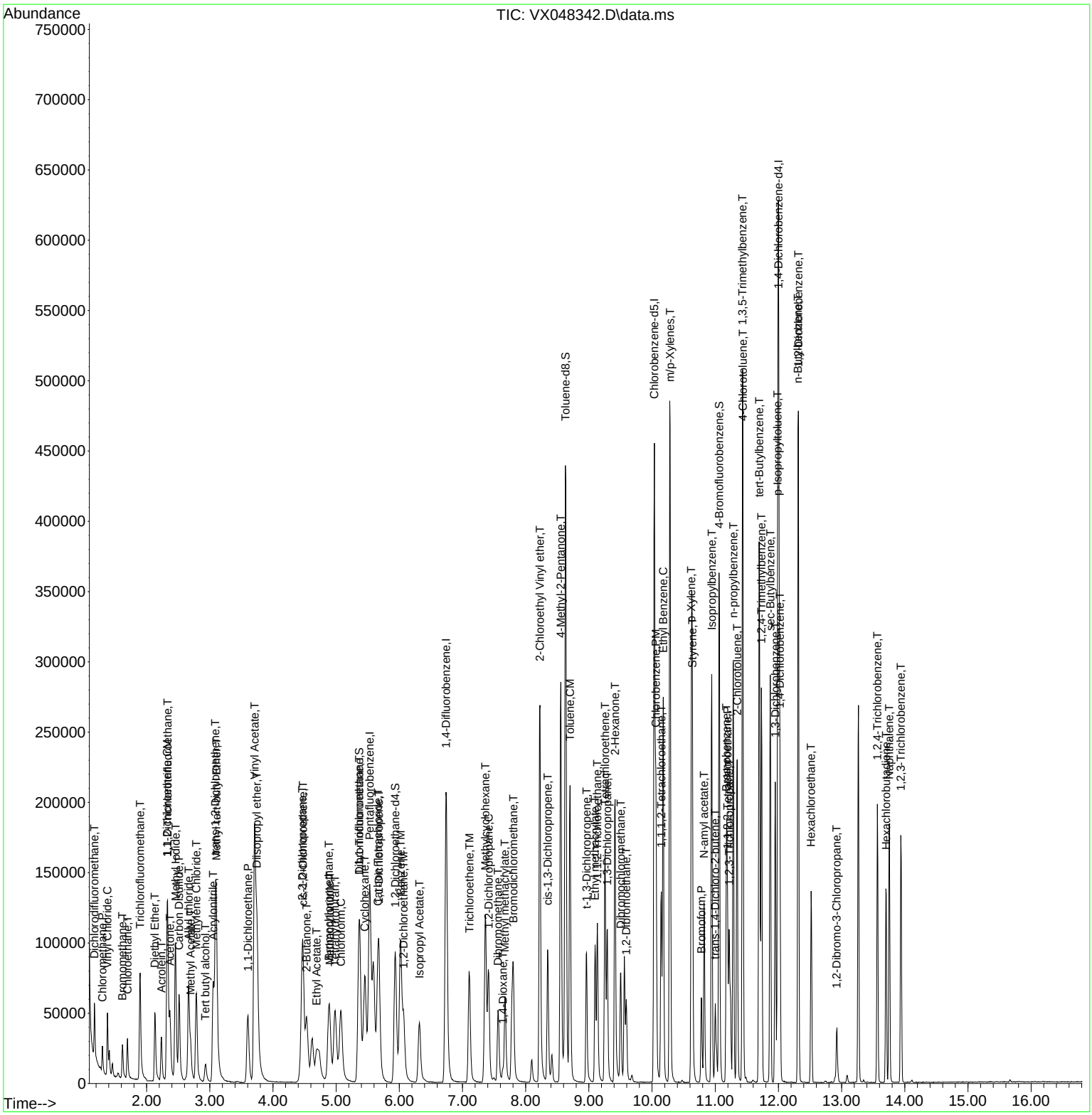
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102425\
Data File : VX048342.D
Acq On : 24 Oct 2025 10:43
Operator : JC/MD
Sample : VX1024WBSD01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 24 23:01:39 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

Instrument :
MSVOA_X
ClientSampleId :
VX1024WBSD01

Manual Integrations APPROVED

Reviewed By :John Carlone 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025



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

Manual Integration Report

Sequence:	VX102025	Instrument	MSVOA_x

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDICC001	VX048229.D	1,2,3-Trichloropropane	JOHN	10/21/2025 8:03:22 AM	sam	10/21/2025 10:41:22 AM	Peak Integrated by Software
VSTDICC001	VX048229.D	1,4-Dichlorobenzene	JOHN	10/21/2025 8:03:22 AM	sam	10/21/2025 10:41:22 AM	Peak Integrated by Software
VSTDICC001	VX048229.D	Carbon Tetrachloride	JOHN	10/21/2025 8:03:22 AM	sam	10/21/2025 10:41:22 AM	Peak Integrated by Software
VSTDICC001	VX048229.D	Ethyl Acetate	JOHN	10/21/2025 8:03:22 AM	sam	10/21/2025 10:41:22 AM	Peak Integrated by Software
VSTDICC001	VX048229.D	Methacrylonitrile	JOHN	10/21/2025 8:03:22 AM	sam	10/21/2025 10:41:22 AM	Peak Integrated by Software
VSTDICC020	VX048231.D	1,2,3-Trichloropropane	JOHN	10/21/2025 8:03:30 AM	sam	10/21/2025 10:41:32 AM	Peak Integrated by Software
VSTDICCC050	VX048232.D	1,2,3-Trichloropropane	JOHN	10/21/2025 8:03:35 AM	sam	10/21/2025 10:41:38 AM	Peak Integrated by Software
VSTDICC100	VX048233.D	1,2,3-Trichloropropane	JOHN	10/21/2025 8:03:40 AM	sam	10/21/2025 10:42:36 AM	Peak Integrated by Software
VSTDICC150	VX048234.D	1,2,3-Trichloropropane	JOHN	10/21/2025 8:03:49 AM	sam	10/21/2025 10:43:04 AM	Peak Integrated by Software
VSTDICC005	VX048236.D	1,2,3-Trichloropropane	JOHN	10/21/2025 8:03:55 AM	sam	10/21/2025 10:41:42 AM	Peak Integrated by Software
VSTDICC005	VX048236.D	Ethyl Acetate	JOHN	10/21/2025 8:03:55 AM	sam	10/21/2025 10:41:42 AM	Peak Integrated by Software
VSTDICC005	VX048236.D	Methacrylonitrile	JOHN	10/21/2025 8:03:55 AM	sam	10/21/2025 10:41:42 AM	Peak Integrated by Software
VSTDICV050	VX048237.D	1,2,3-Trichloropropane	JOHN	10/21/2025 8:03:59 AM	sam	10/21/2025 10:41:51 AM	Peak Integrated by Software

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Manual Integration Report

Sequence:	VX102025	Instrument	MSVOA_x

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC050	VX048250.D	1,2,3-Trichloropropane	JOHN	10/21/2025 8:04:26 AM	sam	10/21/2025 10:42:06 AM	Peak Integrated by Software

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Manual Integration Report

Sequence:	vx102425	Instrument	MSVOA_x

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC050	VX048339.D	1,2,3-Trichloropropane	JOHN	10/27/2025 7:59:46 AM	MMDadoda	10/27/2025 2:52:39 PM	Peak Integrated by Software
VX1024WBS01	VX048341.D	1,2,3-Trichloropropane	JOHN	10/27/2025 7:59:52 AM	MMDadoda	10/27/2025 2:52:43 PM	Peak Integrated by Software
VX1024WBSD01	VX048342.D	1,2,3-Trichloropropane	JOHN	10/27/2025 7:59:56 AM	MMDadoda	10/27/2025 2:52:47 PM	Peak Integrated by Software
VSTDCCC050	VX048353.D	1,2,3-Trichloropropane	JOHN	10/27/2025 8:00:00 AM	MMDadoda	10/27/2025 2:52:51 PM	Peak Integrated by Software

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Fax : 908 789 8922

Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QCBatch ID # VX102025

Review By	John Carlone	Review On	10/21/2025 8:15:04 AM		
Supervise By	Semsettin Yesilyurt	Supervise On	10/21/2025 10:44:02 AM		
SubDirectory	VX102025	HP Acquire Method		HP Processing Method	82X102025W.M

STD. NAME	STD REF.#
Tune/Reschk	VP135849
Initial Calibration Stds	VP135851,VP135852,VP135853,VP135854,VP135855,VP135856
CCC	VP135850
Internal Standard/PEM	
ICV/I.BLK	
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VX048226.D	20 Oct 2025 08:15	JC/MD	Ok
2	VSTDCCC050	VX048227.D	20 Oct 2025 10:13	JC/MD	Ok
3	IBLK	VX048228.D	20 Oct 2025 10:38	JC/MD	Not Ok
4	VSTDICC001	VX048229.D	20 Oct 2025 10:59	JC/MD	Ok,M
5	VSTDICC005	VX048230.D	20 Oct 2025 11:20	JC/MD	Not Ok
6	VSTDICC020	VX048231.D	20 Oct 2025 11:40	JC/MD	Ok,M
7	VSTDICCC050	VX048232.D	20 Oct 2025 12:01	JC/MD	Ok,M
8	VSTDICC100	VX048233.D	20 Oct 2025 12:22	JC/MD	Ok,M
9	VSTDICC150	VX048234.D	20 Oct 2025 12:43	JC/MD	Ok,M
10	IBLK	VX048235.D	20 Oct 2025 13:04	JC/MD	Ok
11	VSTDICC005	VX048236.D	20 Oct 2025 13:49	JC/MD	Ok,M
12	VSTDICV050	VX048237.D	20 Oct 2025 14:28	JC/MD	Ok,M
13	VX1020MBL01	VX048238.D	20 Oct 2025 14:56	JC/MD	Ok
14	VX1020WBL01	VX048239.D	20 Oct 2025 15:23	JC/MD	Ok
15	VX1020WBS01	VX048240.D	20 Oct 2025 15:50	JC/MD	Ok,M
16	Q3371-03	VX048241.D	20 Oct 2025 16:18	JC/MD	ReRun
17	Q3371-06	VX048242.D	20 Oct 2025 16:38	JC/MD	ReRun
18	Q3371-01	VX048243.D	20 Oct 2025 16:59	JC/MD	ReRun
19	Q3371-02	VX048244.D	20 Oct 2025 17:20	JC/MD	ReRun
20	Q3371-04	VX048245.D	20 Oct 2025 17:41	JC/MD	Ok
21	Q3371-05	VX048246.D	20 Oct 2025 18:02	JC/MD	Ok

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Fax : 908 789 8922

Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QCBatch ID # VX102025

Review By	John Carlone	Review On	10/21/2025 8:15:04 AM		
Supervise By	Semsettin Yesilyurt	Supervise On	10/21/2025 10:44:02 AM		
SubDirectory	VX102025	HP Acquire Method		HP Processing Method	82X102025W.M

STD. NAME	STD REF.#
Tune/Reschk	VP135849
Initial Calibration Stds	VP135851,VP135852,VP135853,VP135854,VP135855,VP135856
CCC	VP135850
Internal Standard/PEM	
ICV/I.BLK	
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

22	VX1020WBSD01	VX048247.D	20 Oct 2025 18:22	JC/MD	Ok,M
23	VX1020MBS01	VX048248.D	20 Oct 2025 18:43	JC/MD	Ok,M
24	Q3390-01	VX048249.D	20 Oct 2025 19:04	JC/MD	Ok
25	VSTDCCC050	VX048250.D	20 Oct 2025 19:25	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 # VX102425

Review By	John Carlone	Review On	10/27/2025 8:02:08 AM		
Supervise By	Mahesh Dadoda	Supervise On	10/27/2025 2:53:02 PM		
SubDirectory	VX102425	HP Acquire Method		HP Processing Method	82X102025W.M

STD. NAME	STD REF.#
Tune/Reschk	VP135915
Initial Calibration Stds	
CCC	VP135916,VP135917
Internal Standard/PEM	
ICV/I.BLK	
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VX048338.D	24 Oct 2025 08:19	JC/MD	Ok
2	VSTDCCC050	VX048339.D	24 Oct 2025 09:16	JC/MD	Ok,M
3	VX1024WBL01	VX048340.D	24 Oct 2025 09:48	JC/MD	Ok
4	VX1024WBS01	VX048341.D	24 Oct 2025 10:15	JC/MD	Ok,M
5	VX1024WBSD01	VX048342.D	24 Oct 2025 10:43	JC/MD	Ok,M
6	Q3399-04	VX048343.D	24 Oct 2025 11:03	JC/MD	Ok
7	Q3414-13DL	VX048344.D	24 Oct 2025 11:24	JC/MD	Ok
8	Q3414-11DL	VX048345.D	24 Oct 2025 11:45	JC/MD	Ok
9	Q3414-12DL	VX048346.D	24 Oct 2025 12:05	JC/MD	Ok
10	Q3403-04	VX048347.D	24 Oct 2025 12:26	JC/MD	Ok
11	Q3412-04	VX048348.D	24 Oct 2025 12:47	JC/MD	Ok
12	IBLK	VX048349.D	24 Oct 2025 13:07	JC/MD	Ok
13	Q3454-01	VX048350.D	24 Oct 2025 14:47	JC/MD	Not Ok
14	Q3464-01	VX048351.D	24 Oct 2025 15:08	JC/MD	ReRun
15	Q3464-02	VX048352.D	24 Oct 2025 15:28	JC/MD	ReRun
16	VSTDCCC050	VX048353.D	24 Oct 2025 15:49	JC/MD	Ok,M

M : Manual Integration

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

Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QCBatch ID # VX102025

Review By	John Carlone	Review On	10/21/2025 8:15:04 AM		
Supervise By	Semsettin Yesilyurt	Supervise On	10/21/2025 10:44:02 AM		
SubDirectory	VX102025	HP Acquire Method		HP Processing Method	82X102025W.M

STD. NAME	STD REF.#
Tune/Reschk	VP135849
Initial Calibration Stds	VP135851,VP135852,VP135853,VP135854,VP135855,VP135856
CCC	VP135850
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	VX048226.D	20 Oct 2025 08:15		JC/MD	Ok
2	VSTDCCC050	VSTDCCC050	VX048227.D	20 Oct 2025 10:13		JC/MD	Ok
3	IBLK	IBLK	VX048228.D	20 Oct 2025 10:38		JC/MD	Not Ok
4	VSTDICC001	VSTDICC001	VX048229.D	20 Oct 2025 10:59	LR-58,94	JC/MD	Ok,M
5	VSTDICC005	VSTDICC005	VX048230.D	20 Oct 2025 11:20		JC/MD	Not Ok
6	VSTDICC020	VSTDICC020	VX048231.D	20 Oct 2025 11:40		JC/MD	Ok,M
7	VSTDICCC050	VSTDICCC050	VX048232.D	20 Oct 2025 12:01		JC/MD	Ok,M
8	VSTDICC100	VSTDICC100	VX048233.D	20 Oct 2025 12:22		JC/MD	Ok,M
9	VSTDICC150	VSTDICC150	VX048234.D	20 Oct 2025 12:43		JC/MD	Ok,M
10	IBLK	IBLK	VX048235.D	20 Oct 2025 13:04		JC/MD	Ok
11	VSTDICC005	VSTDICC005	VX048236.D	20 Oct 2025 13:49		JC/MD	Ok,M
12	VSTDICV050	ICVVX102025	VX048237.D	20 Oct 2025 14:28	pH#Lot#V12668	JC/MD	Ok,M
13	VX1020MBL01	VX1020MBL01	VX048238.D	20 Oct 2025 14:56		JC/MD	Ok
14	VX1020WBL01	VX1020WBL01	VX048239.D	20 Oct 2025 15:23		JC/MD	Ok
15	VX1020WBS01	VX1020WBS01	VX048240.D	20 Oct 2025 15:50		JC/MD	Ok,M
16	Q3371-03	VPB184-HYD-2025101	VX048241.D	20 Oct 2025 16:18	vial A pH<2 Surrogate Fail	JC/MD	ReRun
17	Q3371-06	VPB184-HYD-2025101	VX048242.D	20 Oct 2025 16:38	vial A pH<2 Surrogate Fail	JC/MD	ReRun
18	Q3371-01	BP-VPB-184-TB-20251	VX048243.D	20 Oct 2025 16:59	vial A pH<2 TB; Surrogate Fail	JC/MD	ReRun

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Fax : 908 789 8922

Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QCBatch ID # VX102025

Review By	John Carlone	Review On	10/21/2025 8:15:04 AM		
Supervise By	Semsettin Yesilyurt	Supervise On	10/21/2025 10:44:02 AM		
SubDirectory	VX102025	HP Acquire Method		HP Processing Method	82X102025W.M

STD. NAME	STD REF.#
Tune/Reschk	VP135849
Initial Calibration Stds	VP135851,VP135852,VP135853,VP135854,VP135855,VP135856
CCC	VP135850
Internal Standard/PEM	
ICV/I.BLK	
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

19	Q3371-02	BP-VPB-184-EB-20251	VX048244.D	20 Oct 2025 17:20	vial A pH<2 EB; Surrogate Fail; Hit of com.#16	JC/MD	ReRun
20	Q3371-04	BP-VPB-184-GW-915-9	VX048245.D	20 Oct 2025 17:41	vial A pH<2	JC/MD	Ok
21	Q3371-05	BP-VPB-184-GW-920-9	VX048246.D	20 Oct 2025 18:02	vial A pH<2	JC/MD	Ok
22	VX1020WBSD01	VX1020WBSD01	VX048247.D	20 Oct 2025 18:22		JC/MD	Ok,M
23	VX1020MBS01	VX1020MBS01	VX048248.D	20 Oct 2025 18:43		JC/MD	Ok,M
24	Q3390-01	4174	VX048249.D	20 Oct 2025 19:04	cloth material	JC/MD	Ok
25	VSTDCCC050	VSTDCCC050EC	VX048250.D	20 Oct 2025 19:25		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 # VX102425

Review By	John Carlone	Review On	10/27/2025 8:02:08 AM		
Supervise By	Mahesh Dadoda	Supervise On	10/27/2025 2:53:02 PM		
SubDirectory	VX102425	HP Acquire Method		HP Processing Method	82X102025W.M

STD. NAME	STD REF.#
Tune/Reschk	VP135915
Initial Calibration Stds	
CCC	VP135916,VP135917
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	VX048338.D	24 Oct 2025 08:19		JC/MD	Ok
2	VSTDCCC050	VSTDCCC050	VX048339.D	24 Oct 2025 09:16	CCC Failed Low For Com.#03,16	JC/MD	Ok,M
3	VX1024WBL01	VX1024WBL01	VX048340.D	24 Oct 2025 09:48		JC/MD	Ok
4	VX1024WBS01	VX1024WBS01	VX048341.D	24 Oct 2025 10:15		JC/MD	Ok,M
5	VX1024WBSD01	VX1024WBSD01	VX048342.D	24 Oct 2025 10:43		JC/MD	Ok,M
6	Q3399-04	COMP-ROLLOFF	VX048343.D	24 Oct 2025 11:03	vial B pH#5.0	JC/MD	Ok
7	Q3414-13DL	SB-13DL	VX048344.D	24 Oct 2025 11:24	vial B pH#5.0	JC/MD	Ok
8	Q3414-11DL	SB-11DL	VX048345.D	24 Oct 2025 11:45	vial B pH#5.0	JC/MD	Ok
9	Q3414-12DL	SB-12DL	VX048346.D	24 Oct 2025 12:05	vial B pH#5.0	JC/MD	Ok
10	Q3403-04	MH-18	VX048347.D	24 Oct 2025 12:26	vial B pH#5.0	JC/MD	Ok
11	Q3412-04	TP-6	VX048348.D	24 Oct 2025 12:47	vial B pH#5.0	JC/MD	Ok
12	IBLK	IBLK	VX048349.D	24 Oct 2025 13:07		JC/MD	Ok
13	Q3454-01	101625	VX048350.D	24 Oct 2025 14:47	Surrogate fail; Run @ lower dilution	JC/MD	Not Ok
14	Q3464-01	MW2	VX048351.D	24 Oct 2025 15:08	vial A pH<2 CCC Failed Low, BS;BSD Failed Low	JC/MD	ReRun
15	Q3464-02	MW3	VX048352.D	24 Oct 2025 15:28	vial A pH<2 Surrogate fail; CCC Failed Low, BS;BSD Failed Low	JC/MD	ReRun
16	VSTDCCC050	VSTDCCC050EC	VX048353.D	24 Oct 2025 15:49		JC/MD	Ok,M

M : Manual Integration

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB170173

SOP ID : M1311-TCLP-16

SDG No : N/A

Weigh By : JP

Balance ID : WC SC-7

pH Meter ID : WC PH METER-1

Extraction By : JP

Filter By : JP

Pippete ID : WC

Tumbler ID : ZHE-1 / ZHE-2

TCLP Filter ID : 60828725

Start Prep Date : 10/21/2025 **Time :** 14:00

End Prep Date : 10/22/2025 **Time :** 07:20

Combination Ratio : 20

ZHE Cleaning Batch : ~~N/A~~ 18

Initial Room Temperature: 22 °C

Final Room Temperature: 21 °C

TCLP Technician Signature : JP

Supervisor By : JC

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

Chemical Used	ML/SAMPLE U	Lot Number
TCLP-FLUID-1	N/A	WP114525
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
40ml VOA Vials	4127	N/A

Extraction Conformance/Non-Conformance Comments:

ALL ZHE samples are extracted and given as vial A & B. Leck checked after 10 minutes of tumbling. TUMBLER ZHE1- /ZHE-2 checked,30 rpm.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
10/22/25 09:30	JP Prep Room	R VOC Lab
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB170173

Sample ID	ClientID	ZHE Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Prep Pos
PB170173TB	LEB173	11	N/A	500	N/A	N/A	N/A	N/A	N/A	ZHE-2
Q3368-06	OUTSIDE-DUMPSTER	01	25.02	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q3368-07	PRESS-SLUDGE	02	25.03	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q3397-04	TP-7-WC	03	25.01	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q3399-04	COMP-ROLLOFF	04	25.02	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q3402-03	41-LA	05	25.02	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q3402-06	41-RA	06	25.03	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q3402-09	41-LB	07	25.02	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q3402-12	41-RB	08	25.03	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q3403-04	MH-18	09	25.02	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q3412-04	TP-6	10	25.03	500	N/A	N/A	N/A	N/A	N/A	ZHE-1

Alliance TECHNICAL GROUP

TCLP Solid Determination

PB170173

SampleID	ClientID	Sample Weight (g)	Filter Weight (g)	Filtrate (mL)	Filter + Solid (After 100°C)	% solids	% Dry Solids
PB170173TB	LEB173	N/A	N/A	N/A	N/A	N/A	N/A
Q3368-06	OUTSIDE-DUMPSTER	N/A	N/A	N/A	N/A	100	N/A
Q3368-07	PRESS-SLUDGE	N/A	N/A	N/A	N/A	100	N/A
Q3397-04	TP-7-WC	N/A	N/A	N/A	N/A	100	N/A
Q3399-04	COMP-ROLLOFF	N/A	N/A	N/A	N/A	100	N/A
Q3402-03	41-LA	N/A	N/A	N/A	N/A	100	N/A
Q3402-06	41-RA	N/A	N/A	N/A	N/A	100	N/A
Q3402-09	41-LB	N/A	N/A	N/A	N/A	100	N/A
Q3402-12	41-RB	N/A	N/A	N/A	N/A	100	N/A
Q3403-04	MH-18	N/A	N/A	N/A	N/A	100	N/A
Q3412-04	TP-6	N/A	N/A	N/A	N/A	100	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name : TCLP ZHE Q3406 **WorkList ID :** 192577 **Department :** TCLP Extraction **Date :** 10-21-2025 09:35:20

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q3368-06	OUTSIDE-DUMPSTER	Solid	TCLP ZHE Extraction	Cool 4 deg C	ARAM01	D41	10/16/2025	1311 ZHE
Q3368-07	PRESS-SLUDGE	Solid	TCLP ZHE Extraction	Cool 4 deg C	ARAM01	D41	10/16/2025	1311 ZHE
Q3397-04	TP-7-WC	Solid	TCLP ZHE Extraction	Cool 4 deg C	PSEG03	D31	10/18/2025	1311 ZHE
Q3399-04	COMP-ROLLOFF	Solid	TCLP ZHE Extraction	Cool 4 deg C	ICES02	D41	10/20/2025	1311 ZHE
Q3402-03	41-LA	Solid	TCLP ZHE Extraction	Cool 4 deg C	PSEG03	D31	10/20/2025	1311 ZHE
Q3402-06	41-RA	Solid	TCLP ZHE Extraction	Cool 4 deg C	PSEG03	D31	10/20/2025	1311 ZHE
Q3402-09	41-LB	Solid	TCLP ZHE Extraction	Cool 4 deg C	PSEG03	D31	10/20/2025	1311 ZHE
Q3402-12	41-RB	Solid	TCLP ZHE Extraction	Cool 4 deg C	PSEG03	D31	10/20/2025	1311 ZHE
Q3403-04	MH-18	Solid	TCLP ZHE Extraction	Cool 4 deg C	PSEG03	D41	10/20/2025	1311 ZHE
Q3412-04	TP-6	Solid	TCLP ZHE Extraction	Cool 4 deg C	PSEG03	D31	10/20/2025	1311 ZHE

Date/Time 10/21/25 12:00
Raw Sample Received by:
Raw Sample Relinquished by:

Date/Time 10/21/25 15:30
Raw Sample Received by:
Raw Sample Relinquished by:

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Prep Standard - Chemical Standard Summary

Order ID : Q3399

Test : TCLP VOA

Prepbatch ID :

Sequence ID/Qc Batch ID: vx102425,

Standard ID :
VP134142,VP134149,VP134956,VP134957,VP135552,VP135834,VP135878,VP135915,VP135916,VP135917,

Chemical ID :
V13391,V14200,V14204,V14205,V14290,V14509,V14510,V14531,V14532,V14625,V14626,V14636,V14637,V14638,V14639,V14668,V14671,V14673,V14675,V14727,V14728,V14803,V14815,V14844,V14909,V14926,V14928,V14929,V14951,V14952,V15073,V15074,V15075,W3112,

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VOC STANDARD PREPARATION LOG

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

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

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

FROM 1.00000ml of V14636 + 1.00000ml of V14637 + 1.00000ml of V14638 + 1.00000ml of V14639 + 46.00000ml of V14929 = Final Quantity: 50.000 ml

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VOC STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
247	8260 Internal Standard, 250PPM	VP134956	08/01/2025	11/09/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 08/06/2025

FROM 0.25000ml of V14290 + 24.75000ml of V14626 = Final Quantity: 25.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
218	BFB, 25PPM	VP134957	08/01/2025	11/22/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 08/06/2025

FROM 0.50000ml of V13391 + 49.50000ml of V14625 = 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
257	8260 Calibration Working STD Mix-First source, 160PPM	VP135552	09/22/2025	11/03/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 09/26/2025

FROM 0.40000ml of V14844 + 1.00000ml of V14200 + 1.00000ml of V14509 + 1.00000ml of V14510 + 1.00000ml of V14531 + 1.00000ml of V14532 + 1.00000ml of V14727 + 1.00000ml of V14728 + 1.00000ml of V14803 + 1.00000ml of V14815 + 1.00000ml of V14951 + 1.00000ml of V14952 + 1.50000ml of V14204 + 1.50000ml of V14205 + 10.60000ml of V14928 = Final Quantity: 25.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
51	8260 Working STD (Acrolein) -first source, 800PPM	VP135834	10/17/2025	11/16/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 10/17/2025

FROM 1.00000ml of V15073 + 1.50000ml of V15074 + 1.50000ml of V15075 + 21.00000ml of V14928 = Final Quantity: 25.000 ml

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VOC STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
617	8260 Surrogate, 400PPM	VP135878	10/22/2025	04/20/2026	Semsettin Yesilyurt	None	None	Mahesh Dadoda 10/23/2025

FROM 0.40000ml of V14909 + 24.60000ml of V14926 = Final Quantity: 25.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
589	BFB TUNE CHECK	VP135915	10/24/2025	10/25/2025	John Carlone	None	None	Mahesh Dadoda 10/29/2025

FROM 39.98400ml of W3112 + 0.01600ml of VP134957 = Final Quantity: 40.000 ml

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VOC STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
620	50 PPB CCC, 8260-Water	VP135916	10/24/2025	10/25/2025	John Carlone	None	None	Mahesh Dadoda 10/29/2025

FROM 39.94450ml of W3112 + 0.00500ml of VP134142 + 0.00500ml of VP135878 + 0.00800ml of VP134956 + 0.01250ml of VP134149 + 0.01250ml of VP135552 + 0.01250ml of VP135834 = Final Quantity: 40.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
620	50 PPB CCC, 8260-Water	VP135917	10/24/2025	10/25/2025	John Carlone	None	None	Mahesh Dadoda 10/29/2025

FROM 39.94450ml of W3112 + 0.00500ml of VP134142 + 0.00500ml of VP135878 + 0.00800ml of VP134956 + 0.01250ml of VP134149 + 0.01250ml of VP135552 + 0.01250ml of VP135834 = Final Quantity: 40.000 ml

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CHEMICAL RECEIPT LOG BOOK

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30006 / VOA Mix, CLP method Calibration Std #1 ketones 5000uq/ml, PTM, 1ml	A0200785	03/22/2026	09/22/2025 / sam	02/28/2024 / SAM	V14200

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	A0200785	03/22/2026	09/22/2025 / sam	02/28/2024 / SAM	V14204

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	A0200785	03/22/2026	09/22/2025 / sam	02/28/2024 / SAM	V14205

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	95317 / Universal VOA Mega Mix (Min order = 5)	021624	03/22/2026	09/22/2025 / sam	09/17/2024 / SAM	V14509

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	95317 / Universal VOA Mega Mix (Min order = 5)	021624	03/22/2026	09/22/2025 / sam	09/17/2024 / SAM	V14510

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	03/22/2026	09/22/2025 / sam	09/18/2024 / SAM	V14531

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	03/22/2026	09/22/2025 / sam	09/18/2024 / SAM	V14532

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	01/29/2026	07/29/2025 / SAM	11/26/2024 / SAM	V14625

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

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

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CHEMICAL RECEIPT LOG BOOK

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

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

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

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

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

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

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CHEMICAL RECEIPT LOG BOOK

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

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	03/22/2026	09/22/2025 / sam	12/17/2024 / SAM	V14727

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	03/22/2026	09/22/2025 / sam	12/17/2024 / SAM	V14728

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	03/22/2026	09/22/2025 / sam	01/08/2025 / SAM	V14803

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	03/22/2026	09/22/2025 / sam	01/08/2025 / SAM	V14815

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30470 / VOA Stock Solution, tert-butanol std, 1mL, P&TM	A0217535	03/22/2026	09/22/2025 / sam	01/21/2025 / SAM	V14844

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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	555582 / Custom Mixture, 8260 A/B Surrogate Mix [CS 5179-2]	A0223904	04/22/2026	10/22/2025 / sam	03/24/2025 / SAM	V14909

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	24G0262002	04/20/2026	10/20/2025 / sam	05/09/2025 / SAM	V14926

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	24G0262002	03/22/2026	09/22/2025 / sam	05/09/2025 / SAM	V14928

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30489 / VOA Mix, 8260B Acetates Mix, P&TM, 1mL	A0222076	03/22/2026	09/22/2025 / sam	05/19/2025 / SAM	V14951

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	A0222076	03/22/2026	09/22/2025 / sam	05/19/2025 / SAM	V14952

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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)	101625	11/16/2025	10/17/2025 / sam	10/17/2025 / sam	V15073

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	101625	11/16/2025	10/17/2025 / sam	10/17/2025 / sam	V15074

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	101625	11/16/2025	10/17/2025 / sam	10/17/2025 / sam	V15075

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

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

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

Certified Reference Material CRM

Rec 09/17/24

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

CERTIFIED WEIGHT REPORT

Part Number: 95317
Lot Number: 021624
Description: Universal VOA Megamix
69 components
Expiration Date: 021627
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 2000
NIST Test ID#: 6UTB

Solvent(s): Lot#
Methanol EG359-USQ12

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

Formulated By: Prashant Chauhan 021624 DATE

Reviewed By: Pedro L. Rentas 021624 DATE

Compound	(RM#) Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Initial Conc.(ug/mL)	Nominal Conc (µg/mL)	Purity (%)	Purity Uncertainty	Uncertainty Pipette (mL)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Acetonitrile	(0324)	021644	NA	NA	NA	2000	99.99	0.2	NA	0.20007	0.20020	2001.3	8.1	75-05-8	40 ppm (70mg/m3/8H)	orl-rat 2460mg/kg
2. Allyl chloride (3-Chloropropene)	(0325)	102396	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20221	2001.4	8.2	107-05-1	1 ppm (3mg/m3/8H)	orl-rat 700mg/kg
3. Carbon disulphide	(0060)	MKCR8561	NA	NA	NA	2000	99.99	0.2	NA	0.20007	0.20023	2001.6	8.1	75-15-0	4 ppm (12mg/m3) (skin)	orl-rat 1200mg/kg
4. cis-1,4-Dichloro-2-butene	(1196)	14718EF	NA	NA	NA	2000	95	0.2	NA	0.21058	0.21069	2001.1	8.5	1476-11-5	N/A	N/A
5. trans-1,4-Dichloro-2-butene	(0466)	MKBP6041V	NA	NA	NA	2000	96.5	0.2	NA	0.20731	0.20748	2001.7	8.4	110-57-6	N/A	N/A
6. Diethyl ether	(0153)	IK18CAS0000	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20040	2001.5	8.1	60-29-7	N/A	N/A
7. Ethyl methacrylate	(0381)	06128PX	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20230	2002.3	8.2	97-63-2	N/A	orl-rat 14800mg/kg
8. Iodomethane	(0489)	SHBF8718V	NA	NA	NA	2000	99.5	0.2	NA	0.20106	0.20121	2001.5	8.2	74-88-4	5 ppm(28mg/m3/8H)(skin)	orl-rat 76mg/kg
9. 2-Methyl-1-propanol	(0445)	15241EB	NA	NA	NA	2000	99.5	0.2	NA	0.20106	0.20120	2001.4	8.1	78-83-1	50 ppm (150mg/m3/8H)	orl-rat 2460mg/kg
10. Methacrylonitrile	(0442)	00427ET	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20221	2001.4	8.2	126-98-7	1 ppm (3mg/m3/8H)(skin)	orl-rat 120mg/kg
11. Methyl acrylate	(1075)	SHBK0679	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20040	2001.5	8.1	96-33-3	10 ppm(35mg/m3/8H)(skin)	orl-rat 277mg/kg
12. Methyl methacrylate	(0404)	MKBW5137V	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20041	2001.6	8.1	80-62-6	100 ppm (410mg/m3/8H)	orl-rat 7872mg/kg
13. Nitrobenzene	(0228)	01213TV	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20220	2001.3	8.2	98-95-3	1 ppm (5mg/m3/8H)(skin)	orl-rat 780mg/kg
14. 2-Nitropropane	(0461)	14002JX	NA	NA	NA	2000	97.3	0.2	NA	0.20560	0.20577	2001.6	8.3	79-46-9	10 ppm (35mg/m3/8H)	orl-rat 720mg/kg
15. Pentachloroethane	(0450)	HGA01	NA	NA	NA	2000	98	0.2	NA	0.20413	0.20430	2001.6	8.3	76-01-7	N/A	N/A
16. 1,1,2-Trichlorotrifluoroethane	(0474)	18930	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20225	2001.8	8.2	76-13-1	1000 ppm (7600mg/m3/8H)	orl-rat 43g/kg
17. Bromodichloromethane	35171	101623	0.05	5.00	40001.7	2000	NA	NA	0.017	NA	NA	1999.6	22.9	75-27-4	N/A	orl-rat 916mg/kg
18. Dibromochloromethane	35171	101623	0.05	5.00	40002.1	2000	NA	NA	0.017	NA	NA	1999.6	23.0	124-48-1	N/A	orl-rat 846mg/kg
19. cis-1,2-Dichloroethene	35171	101623	0.05	5.00	40003.1	2000	NA	NA	0.017	NA	NA	1999.7	22.9	156-59-2	N/A	N/A
20. trans-1,2-Dichloroethene	35171	101623	0.05	5.00	40002.4	2000	NA	NA	0.017	NA	NA	1999.6	23.0	156-60-5	N/A	orl-rat 1235mg/kg
21. Methylene chloride	35171	101623	0.05	5.00	40002.8	2000	NA	NA	0.017	NA	NA	1999.6	22.9	75-09-2	500 ppm	orl-rat 820mg/kg
22. 1,1-Dichloroethene	32251	102023	0.10	10.00	20001.6	2000	NA	NA	0.042	NA	NA	1999.7	20.4	75-35-4	1 ppm (4mg/m3/8H)	orl-rat 200mg/kg
23. Bromoform	95321	020724	0.10	10.00	20003.2	2000	NA	NA	0.042	NA	NA	1999.8	20.5	75-25-2	0.5 ppm (5mg/m3) (skin)	orl-rat 933mg/kg
24. Carbon tetrachloride	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.4	56-23-5	2 ppm (12.6mg/m3/8H)	orl-rat 2350mg/kg
25. Chloroform	95321	020724	0.10	10.00	20024.0	2000	NA	NA	0.042	NA	NA	2001.9	20.5	67-66-3	50 ppm (240mg/m3) (CL)	orl-rat 908mg/kg
26. Dibromomethane	95321	020724	0.10	10.00	20002.9	2000	NA	NA	0.042	NA	NA	1999.8	20.5	74-95-3	N/A	orl-rat 108mg/kg
27. 1,1-Dichloroethane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.5	75-34-3	100 ppm	orl-rat 725mg/kg
28. 2,2-Dichloropropane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.4	594-20-7	N/A	N/A
29. Tetrachloroethene	95321	020724	0.10	10.00	20201.1	2000	NA	NA	0.042	NA	NA	2019.6	20.6	127-18-4	25 ppm (170mg/m3/8H)(final)	orl-rat 2629mg/kg
30. 1,1,1-Trichloroethane	95321	020724	0.10	10.00	20003.0	2000	NA	NA	0.042	NA	NA	1999.8	20.5	71-55-6	350 ppm (1900mg/m3/8H)	orl-rat 10300mg/kg
31. 1,2-Dibromo-3-chloropropane	35161	112322	0.05	5.00	40016.5	2000	NA	NA	0.017	NA	NA	2000.3	22.9	96-12-8	0.001 ppm	orl-rat 170mg/kg
32. 1,2-Dibromoethane	35161	112322	0.05	5.00	40024.8	2000	NA	NA	0.017	NA	NA	2000.7	22.9	106-93-4	20 ppm (8H)	orl-rat 108mg/kg
33. 1,2-Dichloroethane	35161	112322	0.05	5.00	40018.0	2000	NA	NA	0.017	NA	NA	2000.4	22.9	107-06-2	50 ppm (8H)	orl-rat 670mg/kg
34. 1,2-Dichloropropane	35161	112322	0.05	5.00	40051.0	2000	NA	NA	0.017	NA	NA	2002.0	22.9	78-87-5	75 ppm (350mg/m3/8H)	orl-rat 1947mg/kg
35. 1,3-Dichloropropane	35161	112322	0.05	5.00	40005.9	2000	NA	NA	0.017	NA	NA	1999.8	22.9	142-28-9	N/A	unr-mus 3600mg/kg
36. 1,1-Dichloropropene	35161	112322	0.05	5.00	40012.1	2000	NA	NA	0.017	NA	NA	2000.1	29.7	563-58-6	N/A	N/A
37. cis-1,3-Dichloropropene	35161	112322	0.05	5.00	40010.0	2000	NA	NA	0.017	NA	NA	2000.0	23.0	10061-01-5	N/A	N/A
38. trans-1,3-Dichloropropene	35161	112322	0.05	5.00	40017.6	2000	NA	NA	0.017	NA	NA	2000.4	23.0	10061-02-6	N/A	N/A
39. Hexachloro-1,3-butadiene	35161	112322	0.05	5.00	40021.9	2000	NA	NA	0.017	NA	NA	2000.6	29.7	87-68-3	0.02 ppm (0.24mg/m3/8H)	orl-rat 82mg/kg
40. 1,1,1,2-Tetrachloroethane	35161	112322	0.05	5.00	40011.9	2000	NA	NA	0.017	NA	NA	2000.1	22.9	630-20-6	N/A	orl-rat 670mg/kg
41. 1,1,2,2-Tetrachloroethane	35161	112322	0.05	5.00	40007.5	2000	NA	NA	0.017	NA	NA	1999.9	22.9	79-34-5	5 ppm (35mg/m3/8H)(skin)	orl-rat 800mg/kg
42. 1,1,2-Trichloroethane	35161	112322	0.05	5.00	40006.6	2000	NA	NA	0.017	NA	NA	1999.8	23.0	79-00-5	10 ppm (45mg/m3/8H)(skin)	orl-rat 836mg/kg
43. Trichloroethene	35161	112322	0.05	5.00	40029.0	2000	NA	NA	0.017	NA	NA	2000.9	22.9	79-01-6	50 ppm (270mg/m3/8H)	orl-mus 2402mg/kg
44. 1,2,3-Trichloropropane	35161	112322	0.05	5.00	40007.5	2000	NA	NA	0.017	NA	NA	1999.9	22.9	96-18-4	10 ppm (60mg/m3/8H)	orl-rat 149.6mg/kg
45. Benzene	35162	050823	0.05	5.00	40005.0	2000	NA	NA	0.017	NA	NA	1999.7	22.9	71-43-2	1 ppm	orl-rat 4894mg/kg
46. Bromobenzene	35162	050823	0.05	5.00	40006.9	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-86-1	N/A	orl-rat 2699mg/kg
47. n-Butyl benzene	35162	050823	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	104-51-8	N/A	N/A
48. Ethyl benzene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	100-41-4	100 ppm (435mg/m3/8H)	orl-rat >2000mg/kg
49. p-Isopropyl toluene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	99-87-6	N/A	orl-rat 4750mg/kg
50. Naphthalene	35162	050823	0.05	5.00	40006.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	91-20-3	10 ppm (50mg/m3/8H)	orl-rat 490mg/kg
51. Styrene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	100-42-5	100 ppm	orl-rat 5000mg/kg
52. Toluene	35162	050823	0.05	5.00	40006.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-88-3	200 ppm	orl-rat 5000mg/kg
53. 1,2,3-Trichlorobenzene	35162	050823	0.05	5.00	40003.1	2000	NA	NA	0.017	NA	NA	1999.7	22.9	87-61-6	N/A	ipr-mus 1390mg/kg
54. 1,2,4-Trichlorobenzene	35162	050823	0.05	5.00	40006.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	120-82-1	5 ppm (CL) (40mg/m3)	orl-rat 756mg/kg
55. 1,2,4-Trimethylbenzene	35162	050823	0.05	5.00	40001.6	2000	NA	NA	0.017	NA	NA	1999.6	23.0	95-63-6	N/A	orl-rat 5g/kg
56. 1,3,5-Trimethylbenzene	35162	050823	0.05	5.00	40006.7	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-67-8	N/A	orl-rat 5000mg/kg
57. m-Xylene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-38-3	100 ppm (435mg/m3/8H)	orl-rat 5g/kg
58. tert-Butyl benzene	35163	101923	0.05	5.00	40001.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	98-06-6	N/A	N/A
59. sec-Butyl benzene	35163	101923	0.05	5.00	40002.4	2000	NA	NA	0.017	NA	NA	1999.8	22.9	135-98-8	N/A	orl-rat 2240mg/kg
60. Chlorobenzene	35163	101923	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	108-90-7	75 ppm (350mg/m3/8H)	orl-rat 2290mg/kg
61. 2-Chlorotoluene	35163	101923	0.05	5.00	40000.3	2000	NA	NA	0.017	NA	NA	1999.5	22.9	95-49-8	50 ppm (250mg/m3/8H)	orl-rat 3900mg/kg
62. 4-Chlorotoluene	35163	101923	0.05	5.00	40003.3	2000	NA	NA	0.017	NA	NA	1999.7	22.9	106-43-4	N/A	orl-rat 2100mg/kg
63. 1,2-Dichlorobenzene	35163	101923	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	95-50-1	50 ppm (300mg/m3) (CL)	orl-rat 500mg/kg
64. 1,3-Dichlorobenzene	35163	101923	0.05	5.00	40001.7	2000	NA	NA	0.017	NA	NA	1999.6	23.0	541-73-1	N/A	ipr-mus 1062mg/kg
65. 1,4-Dichlorobenzene	35163	101923	0.05	5.00	40001.8	2000	NA	NA	0.017	NA	NA	1999.6	22.9	106-46-7	75 ppm (450mg/m3/8H)	orl-rat 500mg/kg
66. Isopropylbenzene	35163	101923	0.05	5.00	40000.8	2000	NA	NA	0.017	NA	NA	1999.5	22.9	98-82-8	50 ppm (245mg/m3/8H)	orl-rat 1400mg/kg
67. n-Propylbenzene	35163	101923	0.05	5.00	40003.4	2000	NA	NA	0.017	NA	NA	1999.7	23.0	103-65-1	N/A	orl-rat 8040mg/kg
68. o-Xylene	35163	101923	0.05	5.00	40040.8	2000	NA	NA	0.017	NA	NA	2001.5	23.0	95-47-6	100 ppm (435mg/m3/8H)	ipr-mus 1364mg/kg
69. p-Xylene	35163	101923	0.05	5.00	40000.6	2000	NA	NA	0.017	NA	NA	1999.5	22.9	106-42-3	100 ppm (435mg/m3/8H)	orl-rat 5g/kg

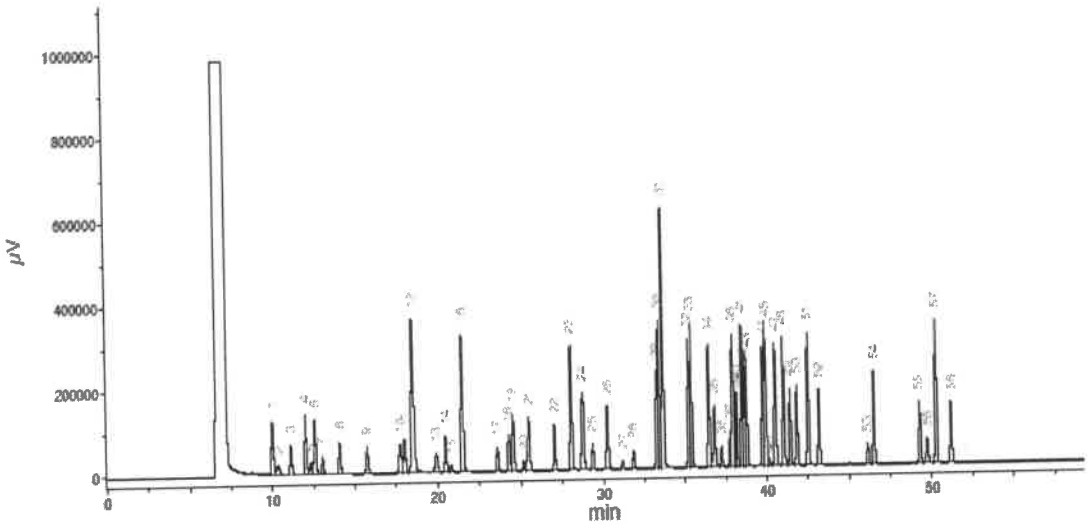
- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value,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

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

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

Comments

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



Peak #	Name	FID RT (min.)
1	Ether	9.97
2	1,1,2-Trichloro-1,2,3-trifluoroethane	10.33
3	1,1-Dichloroethene	11.10
4	Acetonitrile	12.00
5	Iodomethane	12.31
6	Allyl chloride	12.56
7	Carbon disulfide/Methylene chloride	13.04
8	trans-1,2-Dichloroethene	14.07
9	1,1-Dichloroethane	15.74
10	2,2-Dichloropropane	17.74
11	cis-1,2-Dichloroethene	18.00
12	Methacrylonitrile/Methyl acrylate/Chloroform	18.49
13	Isobutanol/1,1,1-Trichloroethane	18.91
14	1,1-Dichloropropene	19.46
15	Carbon tetrachloride	20.79
16	Benzene/1,2-Dichloroethane	21.48
17	Trichloroethene	23.86
18	1,2-Dichloropropane	24.26
19	Methyl methacrylate	24.62
20	Bromodichloromethane	25.13
21	Dibromomethane/2-Nitropropane	25.46
22	cis-1,3-Dichloropropene	27.07
23	Toluene	28.09
24	Ethyl methacrylate/trans-1,3-Dichloropropene	28.73
25	1,1,2-Trichloroethane	29.34
26	Tetrachloroethene/1,3-Dichloropropane	30.34
27	Dibromochloromethane	31.16
28	1,2-Dibromoethane	31.84
29	Chlorobenzene	33.26
30	Ethylbenzene/1,1,1,2-Tetrachloroethane	33.40
31	m-Xylene/p-Xylene	33.85
32	o-Xylene	35.33
33	Styrene	35.50
34	Isopropylbenzene/Bromoform	35.48
35	cis-1,4-Dichloro-2-butene	36.80
36	1,1,2,2-Tetrachloroethane	37.23
37	1,2,3-Trichloropropane	37.77
38	n-Propylbenzene	37.92
39	trans-1,4-Dichloro-2-butene	38.05
40	Bromobenzene	38.14
41	1,3,5-Trimethylbenzene	38.50
42	2-Chlorotoluene	38.62
43	4-Chlorotoluene	38.77
44	tert-Butylbenzene	39.76
45	1,2,4-Trimethylbenzene	39.91
46	Pentachloroethane	40.17
47	sec-Butylbenzene	40.52
48	p-Isopropyltoluene	41.02
49	1,3-Dichlorobenzene	41.12
50	1,4-Dichlorobenzene	41.63
51	n-Butylbenzene	42.52
52	1,2-Dichlorobenzene	42.18
53	1,2-Dibromo-3-chloropropane	46.12
54	Nitrobenzene	46.58
55	1,2,4-Trichlorobenzene	49.26
56	Hexachlorobutadiene	49.72
57	Naphthalene	50.46
58	1,2,3-Trichlorobenzene	51.16

Absolute Standards Inc.

PO Box 5585
Hamden, CT 06518-0585

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

Safety Data Sheet (SDS) GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY **ANALYTICAL STANDARD DISSOLVED IN METHANOL**

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

Section II - Hazards Identification

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

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

Signal Word: DANGER

Section III - Composition

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

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

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

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

Section V. FIREFIGHTING MEASURES

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

Section VI. ACCIDENTAL RELEASE MEASURES

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

Section VII. HANDLING AND STORAGE

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

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Section IX - Physical/Chemical Characteristics

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

Solubility in Water COMPLETE

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

Section X. STABILITY AND REACTIVITY

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

Section XI. TOXICOLOGICAL INFORMATION

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

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

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

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

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

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

Section XV. REGULATORY INFORMATION

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

Section XVI. Misc. INFORMATION

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

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

Certified Reference Material CRM

Rec 09/17/24

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

CERTIFIED WEIGHT REPORT

Part Number: 95317
Lot Number: 021624
Description: Universal VOA Megamix
69 components
Expiration Date: 021627
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 2000
NIST Test ID#: 6UTB

Solvent(s): Lot#
Methanol EG359-USQ12

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

Formulated By: Prashant Chauhan 021624 DATE

Reviewed By: Pedro L. Rentas 021624 DATE

Compound	(RM#) Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Initial Conc.(ug/mL)	Nominal Conc (µg/mL)	Purity (%)	Purity Uncertainty	Uncertainty Pipette (mL)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Acetonitrile	(0324)	021644	NA	NA	NA	2000	99.99	0.2	NA	0.20007	0.20020	2001.3	8.1	75-05-8	40 ppm (70mg/m3/8H)	orl-rat 2460mg/kg
2. Allyl chloride (3-Chloropropene)	(0325)	102396	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20221	2001.4	8.2	107-05-1	1 ppm (3mg/m3/8H)	orl-rat 700mg/kg
3. Carbon disulphide	(0060)	MKCR8561	NA	NA	NA	2000	99.99	0.2	NA	0.20007	0.20023	2001.6	8.1	75-15-0	4 ppm (12mg/m3) (skin)	orl-rat 1200mg/kg
4. cis-1,4-Dichloro-2-butene	(1196)	14718EF	NA	NA	NA	2000	95	0.2	NA	0.21058	0.21069	2001.1	8.5	1476-11-5	N/A	N/A
5. trans-1,4-Dichloro-2-butene	(0466)	MKBP6041V	NA	NA	NA	2000	96.5	0.2	NA	0.20731	0.20748	2001.7	8.4	110-57-6	N/A	N/A
6. Diethyl ether	(0153)	IK18CAS0000	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20040	2001.5	8.1	60-29-7	N/A	N/A
7. Ethyl methacrylate	(0381)	06128PX	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20230	2002.3	8.2	97-63-2	N/A	orl-rat 14800mg/kg
8. Iodomethane	(0489)	SHBF8718V	NA	NA	NA	2000	99.5	0.2	NA	0.20106	0.20121	2001.5	8.2	74-88-4	5 ppm(28mg/m3/8H)(skin)	orl-rat 76mg/kg
9. 2-Methyl-1-propanol	(0445)	15241EB	NA	NA	NA	2000	99.5	0.2	NA	0.20106	0.20120	2001.4	8.1	78-83-1	50 ppm (150mg/m3/8H)	orl-rat 2460mg/kg
10. Methacrylonitrile	(0442)	00427ET	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20221	2001.4	8.2	126-98-7	1 ppm (3mg/m3/8H)(skin)	orl-rat 120mg/kg
11. Methyl acrylate	(1075)	SHBK0679	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20040	2001.5	8.1	96-33-3	10 ppm(35mg/m3/8H)(skin)	orl-rat 277mg/kg
12. Methyl methacrylate	(0404)	MKBW5137V	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20041	2001.6	8.1	80-62-6	100 ppm (410mg/m3/8H)	orl-rat 7872mg/kg
13. Nitrobenzene	(0228)	01213TV	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20220	2001.3	8.2	98-95-3	1 ppm (5mg/m3/8H)(skin)	orl-rat 780mg/kg
14. 2-Nitropropane	(0461)	14002JX	NA	NA	NA	2000	97.3	0.2	NA	0.20560	0.20577	2001.6	8.3	79-46-9	10 ppm (35mg/m3/8H)	orl-rat 720mg/kg
15. Pentachloroethane	(0450)	HGA01	NA	NA	NA	2000	98	0.2	NA	0.20413	0.20430	2001.6	8.3	76-01-7	N/A	N/A
16. 1,1,2-Trichlorotrifluoroethane	(0474)	18930	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20225	2001.8	8.2	76-13-1	1000 ppm (7600mg/m3/8H)	orl-rat 43g/kg
17. Bromodichloromethane	35171	101623	0.05	5.00	40001.7	2000	NA	NA	0.017	NA	NA	1999.6	22.9	75-27-4	N/A	orl-rat 916mg/kg
18. Dibromochloromethane	35171	101623	0.05	5.00	40002.1	2000	NA	NA	0.017	NA	NA	1999.6	23.0	124-48-1	N/A	orl-rat 846mg/kg
19. cis-1,2-Dichloroethene	35171	101623	0.05	5.00	40003.1	2000	NA	NA	0.017	NA	NA	1999.7	22.9	156-59-2	N/A	N/A
20. trans-1,2-Dichloroethene	35171	101623	0.05	5.00	40002.4	2000	NA	NA	0.017	NA	NA	1999.6	23.0	156-60-5	N/A	orl-rat 1235mg/kg
21. Methylene chloride	35171	101623	0.05	5.00	40002.8	2000	NA	NA	0.017	NA	NA	1999.6	22.9	75-09-2	500 ppm	orl-rat 820mg/kg
22. 1,1-Dichloroethene	32251	102023	0.10	10.00	20001.6	2000	NA	NA	0.042	NA	NA	1999.7	20.4	75-35-4	1 ppm (4mg/m3/8H)	orl-rat 200mg/kg
23. Bromoform	95321	020724	0.10	10.00	20003.2	2000	NA	NA	0.042	NA	NA	1999.8	20.5	75-25-2	0.5 ppm (5mg/m3) (skin)	orl-rat 933mg/kg
24. Carbon tetrachloride	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.4	56-23-5	2 ppm (12.6mg/m3/8H)	orl-rat 2350mg/kg
25. Chloroform	95321	020724	0.10	10.00	20024.0	2000	NA	NA	0.042	NA	NA	2001.9	20.5	67-66-3	50 ppm (240mg/m3) (CL)	orl-rat 908mg/kg
26. Dibromomethane	95321	020724	0.10	10.00	20002.9	2000	NA	NA	0.042	NA	NA	1999.8	20.5	74-95-3	N/A	orl-rat 108mg/kg
27. 1,1-Dichloroethane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.5	75-34-3	100 ppm	orl-rat 725mg/kg
28. 2,2-Dichloropropane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.4	594-20-7	N/A	N/A
29. Tetrachloroethene	95321	020724	0.10	10.00	20201.1	2000	NA	NA	0.042	NA	NA	2019.6	20.6	127-18-4	25 ppm (170mg/m3/8H)(final)	orl-rat 2629mg/kg
30. 1,1,1-Trichloroethane	95321	020724	0.10	10.00	20003.0	2000	NA	NA	0.042	NA	NA	1999.8	20.5	71-55-6	350 ppm (1900mg/m3/8H)	orl-rat 10300mg/kg
31. 1,2-Dibromo-3-chloropropane	35161	112322	0.05	5.00	40016.5	2000	NA	NA	0.017	NA	NA	2000.3	22.9	96-12-8	0.001 ppm	orl-rat 170mg/kg
32. 1,2-Dibromoethane	35161	112322	0.05	5.00	40024.8	2000	NA	NA	0.017	NA	NA	2000.7	22.9	106-93-4	20 ppm (8H)	orl-rat 108mg/kg
33. 1,2-Dichloroethane	35161	112322	0.05	5.00	40018.0	2000	NA	NA	0.017	NA	NA	2000.4	22.9	107-06-2	50 ppm (8H)	orl-rat 670mg/kg
34. 1,2-Dichloropropane	35161	112322	0.05	5.00	40051.0	2000	NA	NA	0.017	NA	NA	2002.0	22.9	78-87-5	75 ppm (350mg/m3/8H)	orl-rat 1947mg/kg
35. 1,3-Dichloropropane	35161	112322	0.05	5.00	40005.9	2000	NA	NA	0.017	NA	NA	1999.8	22.9	142-28-9	N/A	unr-mus 3600mg/kg
36. 1,1-Dichloropropene	35161	112322	0.05	5.00	40012.1	2000	NA	NA	0.017	NA	NA	2000.1	29.7	563-58-6	N/A	N/A
37. cis-1,3-Dichloropropene	35161	112322	0.05	5.00	40010.0	2000	NA	NA	0.017	NA	NA	2000.0	23.0	10061-01-5	N/A	N/A
38. trans-1,3-Dichloropropene	35161	112322	0.05	5.00	40017.6	2000	NA	NA	0.017	NA	NA	2000.4	23.0	10061-02-6	N/A	N/A
39. Hexachloro-1,3-butadiene	35161	112322	0.05	5.00	40021.9	2000	NA	NA	0.017	NA	NA	2000.6	29.7	87-68-3	0.02 ppm (0.24mg/m3/8H)	orl-rat 82mg/kg
40. 1,1,1,2-Tetrachloroethane	35161	112322	0.05	5.00	40011.9	2000	NA	NA	0.017	NA	NA	2000.1	22.9	630-20-6	N/A	orl-rat 670mg/kg
41. 1,1,2,2-Tetrachloroethane	35161	112322	0.05	5.00	40007.5	2000	NA	NA	0.017	NA	NA	1999.9	22.9	79-34-5	5 ppm (35mg/m3/8H)(skin)	orl-rat 800mg/kg
42. 1,1,2-Trichloroethane	35161	112322	0.05	5.00	40006.6	2000	NA	NA	0.017	NA	NA	1999.8	23.0	79-00-5	10 ppm (45mg/m3/8H)(skin)	orl-rat 836mg/kg
43. Trichloroethene	35161	112322	0.05	5.00	40029.0	2000	NA	NA	0.017	NA	NA	2000.9	22.9	79-01-6	50 ppm (270mg/m3/8H)	orl-mus 2402mg/kg
44. 1,2,3-Trichloropropane	35161	112322	0.05	5.00	40007.5	2000	NA	NA	0.017	NA	NA	1999.9	22.9	96-18-4	10 ppm (60mg/m3/8H)	orl-rat 149.6mg/kg
45. Benzene	35162	050823	0.05	5.00	40005.0	2000	NA	NA	0.017	NA	NA	1999.7	22.9	71-43-2	1 ppm	orl-rat 4894mg/kg
46. Bromobenzene	35162	050823	0.05	5.00	40006.9	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-86-1	N/A	orl-rat 2699mg/kg
47. n-Butyl benzene	35162	050823	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	104-51-8	N/A	N/A
48. Ethyl benzene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	100-41-4	100 ppm (435mg/m3/8H)	orl-rat >2000mg/kg
49. p-Isopropyl toluene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	99-87-6	N/A	orl-rat 4750mg/kg
50. Naphthalene	35162	050823	0.05	5.00	40006.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	91-20-3	10 ppm (50mg/m3/8H)	orl-rat 490mg/kg
51. Styrene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	100-42-5	100 ppm	orl-rat 5000mg/kg
52. Toluene	35162	050823	0.05	5.00	40006.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-88-3	200 ppm	orl-rat 5000mg/kg
53. 1,2,3-Trichlorobenzene	35162	050823	0.05	5.00	40003.1	2000	NA	NA	0.017	NA	NA	1999.7	22.9	87-61-6	N/A	ipr-mus 1390mg/kg
54. 1,2,4-Trichlorobenzene	35162	050823	0.05	5.00	40006.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	120-82-1	5 ppm (CL) (40mg/m3)	orl-rat 756mg/kg
55. 1,2,4-Trimethylbenzene	35162	050823	0.05	5.00	40001.6	2000	NA	NA	0.017	NA	NA	1999.6	23.0	95-63-6	N/A	orl-rat 5g/kg
56. 1,3,5-Trimethylbenzene	35162	050823	0.05	5.00	40006.7	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-67-8	N/A	orl-rat 5000mg/kg
57. m-Xylene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-38-3	100 ppm (435mg/m3/8H)	orl-rat 5g/kg
58. tert-Butyl benzene	35163	101923	0.05	5.00	40001.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	98-06-6	N/A	N/A
59. sec-Butyl benzene	35163	101923	0.05	5.00	40002.4	2000	NA	NA	0.017	NA	NA	1999.8	22.9	135-98-8	N/A	orl-rat 2240mg/kg
60. Chlorobenzene	35163	101923	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	108-90-7	75 ppm (350mg/m3/8H)	orl-rat 2290mg/kg
61. 2-Chlorotoluene	35163	101923	0.05	5.00	40000.3	2000	NA	NA	0.017	NA	NA	1999.5	22.9	95-49-8	50 ppm (250mg/m3/8H)	orl-rat 3900mg/kg
62. 4-Chlorotoluene	35163	101923	0.05	5.00	40003.3	2000	NA	NA	0.017	NA	NA	1999.7	22.9	106-43-4	N/A	orl-rat 2100mg/kg
63. 1,2-Dichlorobenzene	35163	101923	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	95-50-1	50 ppm (300mg/m3) (CL)	orl-rat 500mg/kg
64. 1,3-Dichlorobenzene	35163	101923	0.05	5.00	40001.7	2000	NA	NA	0.017	NA	NA	1999.6	23.0	541-73-1	N/A	ipr-mus 1062mg/kg
65. 1,4-Dichlorobenzene	35163	101923	0.05	5.00	40001.8	2000	NA	NA	0.017	NA	NA	1999.6	22.9	106-46-7	75 ppm (450mg/m3/8H)	orl-rat 500mg/kg
66. Isopropylbenzene	35163	101923	0.05	5.00	40000.8	2000	NA	NA	0.017	NA	NA	1999.5	22.9	98-82-8	50 ppm (245mg/m3/8H)	orl-rat 1400mg/kg
67. n-Propylbenzene	35163	101923	0.05	5.00	40003.4	2000	NA	NA	0.017	NA	NA	1999.7	23.0	103-65-1	N/A	orl-rat 8040mg/kg
68. o-Xylene	35163	101923	0.05	5.00	40040.8	2000	NA	NA	0.017	NA	NA	2001.5	23.0	95-47-6	100 ppm (435mg/m3/8H)	ipr-mus 1364mg/kg
69. p-Xylene	35163	101923	0.05	5.00	40000.6	2000	NA	NA	0.017	NA	NA	1999.5	22.9	106-42-3	100 ppm (435mg/m3/8H)	orl-rat 5g/kg

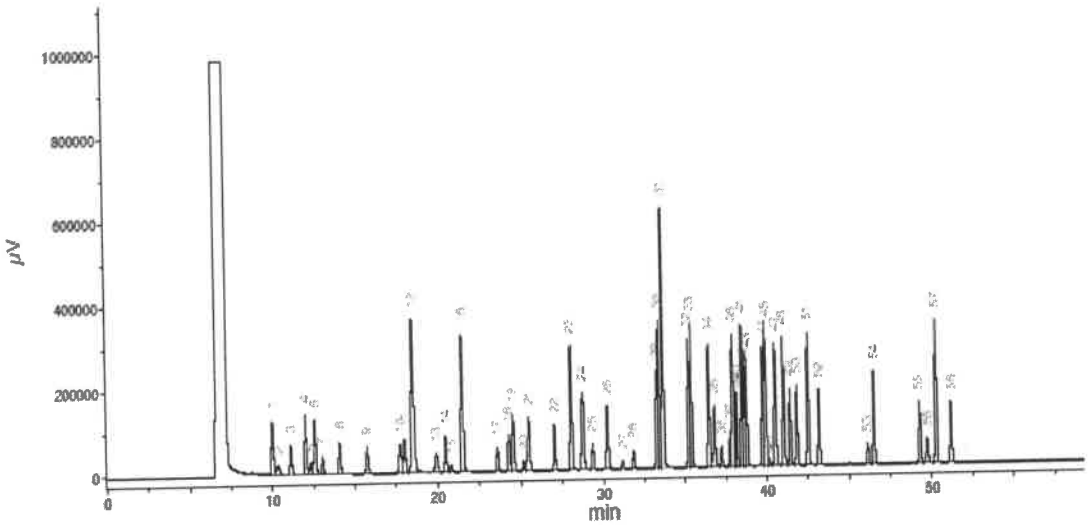
- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value,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

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

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

Comments

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



Peak #	Name	FID RT (min.)
1	Ether	9.97
2	1,1,2-Trichloro-1,2,3-trifluoroethane	10.33
3	1,1-Dichloroethene	11.10
4	Acetonitrile	12.00
5	Iodomethane	12.31
6	Allyl chloride	12.56
7	Carbon disulfide/Methylene chloride	13.04
8	trans-1,2-Dichloroethene	14.07
9	1,1-Dichloroethane	15.74
10	2,2-Dichloropropane	17.74
11	cis-1,2-Dichloroethene	18.00
12	Methacrylonitrile/Methyl acrylate/Chloroform	18.49
13	Isobutanol/1,1,1-Trichloroethane	18.91
14	1,1-Dichloropropene	19.46
15	Carbon tetrachloride	20.79
16	Benzene/1,2-Dichloroethane	21.48
17	Trichloroethene	23.86
18	1,2-Dichloropropane	24.26
19	Methyl methacrylate	24.62
20	Bromodichloromethane	25.13
21	Dibromomethane/2-Nitropropane	25.46
22	cis-1,3-Dichloropropene	27.07
23	Toluene	28.09
24	Ethyl methacrylate/trans-1,3-Dichloropropene	28.73
25	1,1,2-Trichloroethane	29.34
26	Tetrachloroethene/1,3-Dichloropropane	30.34
27	Dibromochloromethane	31.16
28	1,2-Dibromoethane	31.84
29	Chlorobenzene	33.26
30	Ethylbenzene/1,1,1,2-Tetrachloroethane	33.40
31	m-Xylene/p-Xylene	33.85
32	o-Xylene	35.33
33	Styrene	35.50
34	Isopropylbenzene/Bromoform	35.48
35	cis-1,4-Dichloro-2-butene	36.80
36	1,1,2,2-Tetrachloroethane	37.23
37	1,2,3-Trichloropropane	37.77
38	n-Propylbenzene	37.92
39	trans-1,4-Dichloro-2-butene	38.05
40	Bromobenzene	38.14
41	1,3,5-Trimethylbenzene	38.50
42	2-Chlorotoluene	38.62
43	4-Chlorotoluene	38.77
44	tert-Butylbenzene	39.76
45	1,2,4-Trimethylbenzene	39.91
46	Pentachloroethane	40.17
47	sec-Butylbenzene	40.52
48	p-Isopropyltoluene	41.02
49	1,3-Dichlorobenzene	41.12
50	1,4-Dichlorobenzene	41.63
51	n-Butylbenzene	42.52
52	1,2-Dichlorobenzene	42.18
53	1,2-Dibromo-3-chloropropane	46.12
54	Nitrobenzene	46.58
55	1,2,4-Trichlorobenzene	49.26
56	Hexachlorobutadiene	49.72
57	Naphthalene	50.46
58	1,2,3-Trichlorobenzene	51.16

Absolute Standards Inc.

PO Box 5585
Hamden, CT 06518-0585

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

Safety Data Sheet (SDS) GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY **ANALYTICAL STANDARD DISSOLVED IN METHANOL**

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

Section II - Hazards Identification

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

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

Signal Word: DANGER

Section III - Composition

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

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

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

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

Section V. FIREFIGHTING MEASURES

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

Section VI. ACCIDENTAL RELEASE MEASURES

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

Section VII. HANDLING AND STORAGE

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

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Section IX - Physical/Chemical Characteristics

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

Solubility in Water COMPLETE

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

Section X. STABILITY AND REACTIVITY

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

Section XI. TOXICOLOGICAL INFORMATION

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

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

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

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

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

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

Section XV. REGULATORY INFORMATION

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

Section XVI. Misc. INFORMATION

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

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

Certified Reference Material CRM

Rec 09/16/24 2 Vials

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

CERTIFIED WEIGHT REPORT

Part Number: 91980
Lot Number: 091424
Description: Acrolein

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

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

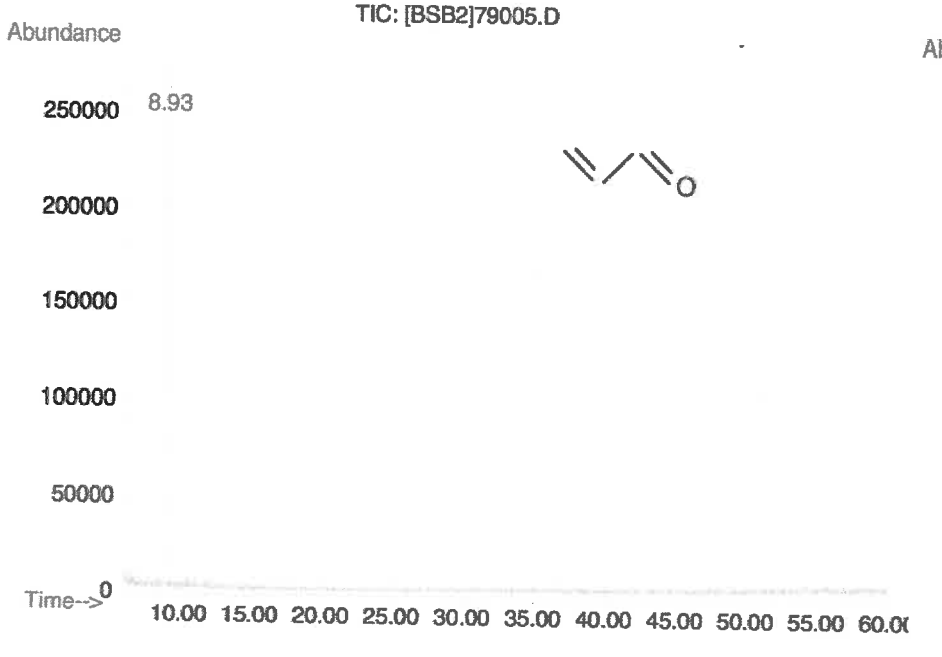
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.001 Flask Uncertainty

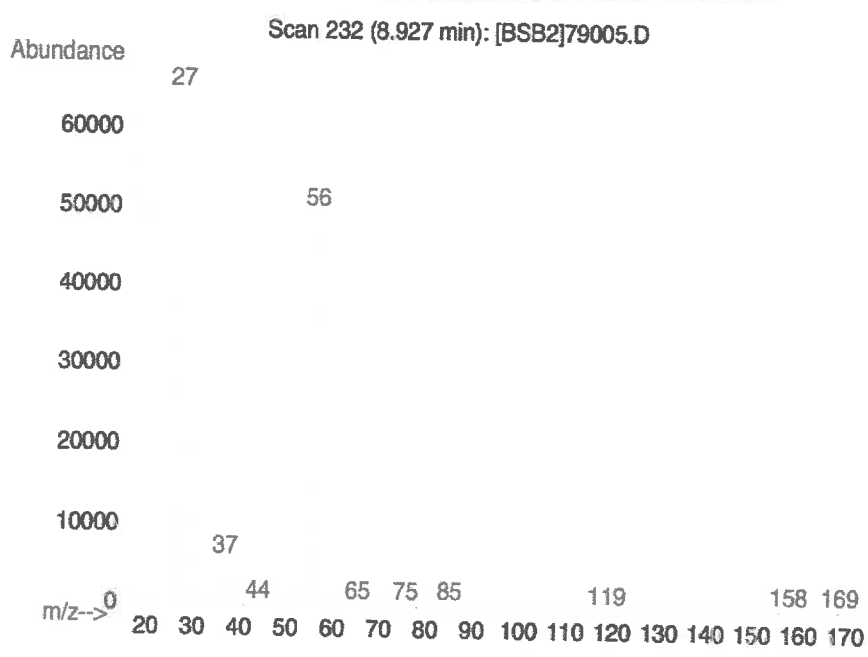
Formulated By: Justin Dippold 091424 DATE

Reviewed By: Pedro L. Rentas 091424 DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Acrolein	5	103755V10F	5000	97	0.5	0.05166	0.05175	5008.9	52.5	107-02-8	0.1 ppm	orl-rat 46mg/kg

Method: GC6MSD-1. **Detector:** Mass Selective Detector (Scan mode). **Column:** Vocol (60m X 0.25mm ID X 1.5µm film thickness). **Oven Profile:** Temp. 1 = 35°C (Time 1 = 10min.), Temp. 2=200°C (Time 2 = 8.75 min.). Rate = 4°C/min., Injector Temp. = 200°C, Detector Temp. = 220°C. **Analyst:** Pedro Rentas. **NOTE:** Due to the instability of acrolein in solution, all solutions of acrolein, and any dilutions thereof, should be used immediately Long term storage is not recommended. Please contact our technical department if further information is required.





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

Rec 09/16/24 2 Vials

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

CERTIFIED WEIGHT REPORT

Part Number: 91980
Lot Number: 091424
Description: Acrolein

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

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

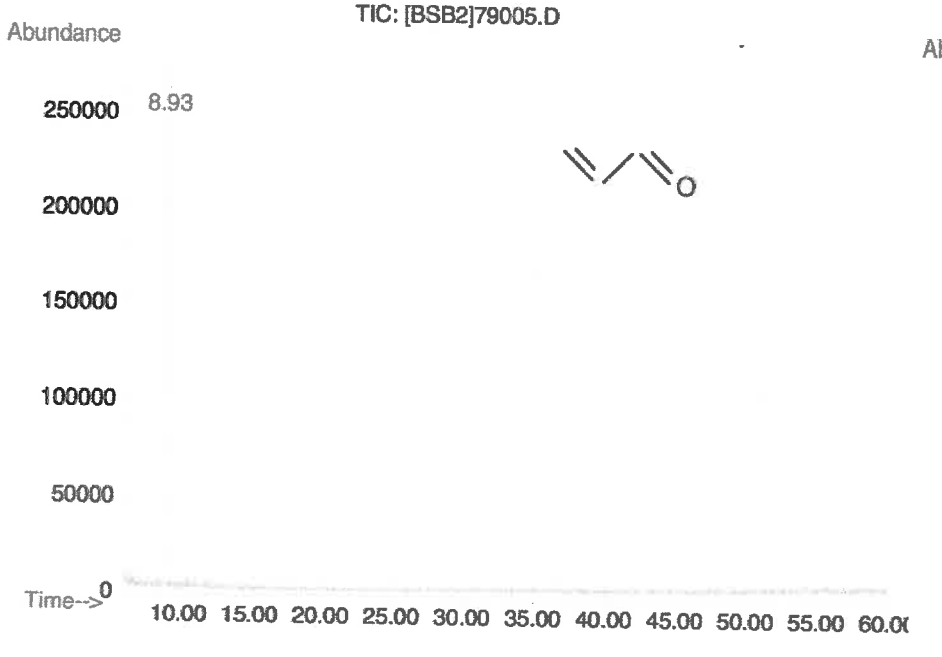
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.001 Flask Uncertainty

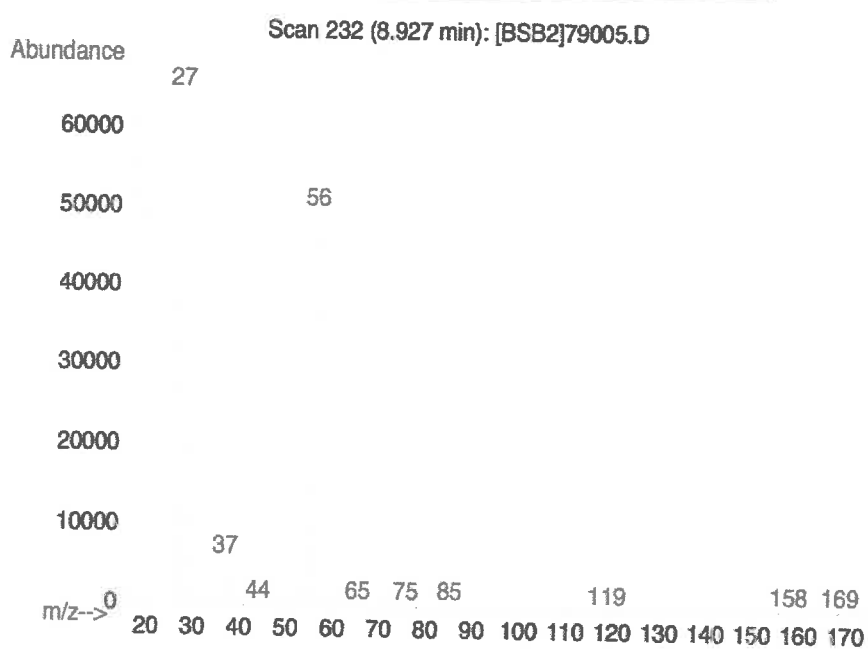
Formulated By: Justin Dippold 091424 DATE

Reviewed By: Pedro L. Rentas 091424 DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Acrolein	5	103755V10F	5000	97	0.5	0.05166	0.05175	5008.9	52.5	107-02-8	0.1 ppm	orl-rat 46mg/kg

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
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CERTIFIED WEIGHT REPORT

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

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

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

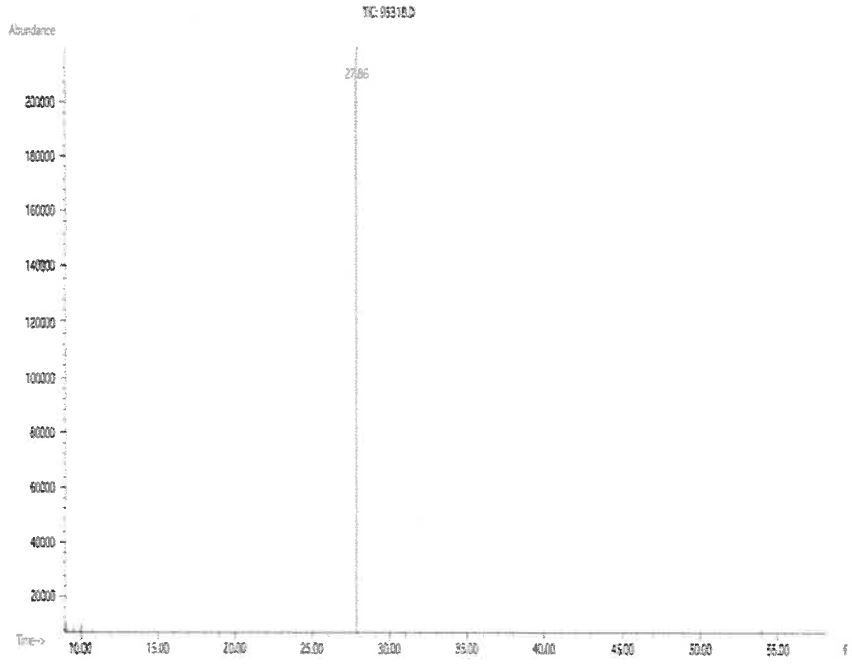
V14630 to V14649

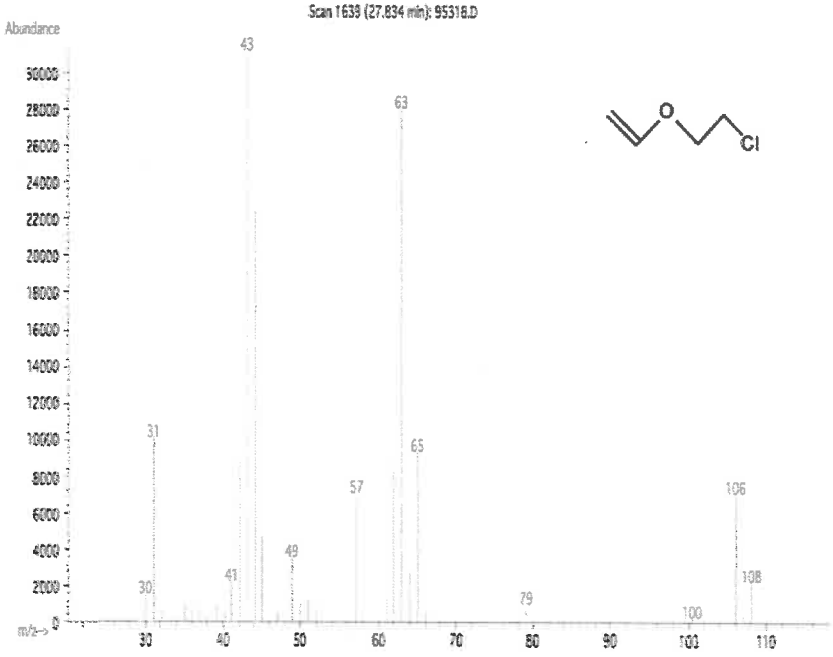
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

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

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

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





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

Safety Data Sheet (SDS) GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY **ANALYTICAL STANDARD DISSOLVED IN METHANOL**

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

Section II - Hazards Identification

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

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

Signal Word: DANGER

Section III - Composition

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

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

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

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

Section V. FIREFIGHTING MEASURES

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

Section VI. ACCIDENTAL RELEASE MEASURES

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

Section VII. HANDLING AND STORAGE

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

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Section IX - Physical/Chemical Characteristics

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

Solubility in Water COMPLETE

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

Section X. STABILITY AND REACTIVITY

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

Section XI. TOXICOLOGICAL INFORMATION

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

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

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

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

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

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

Section XV. REGULATORY INFORMATION

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

Section XVI. Misc. INFORMATION

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

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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

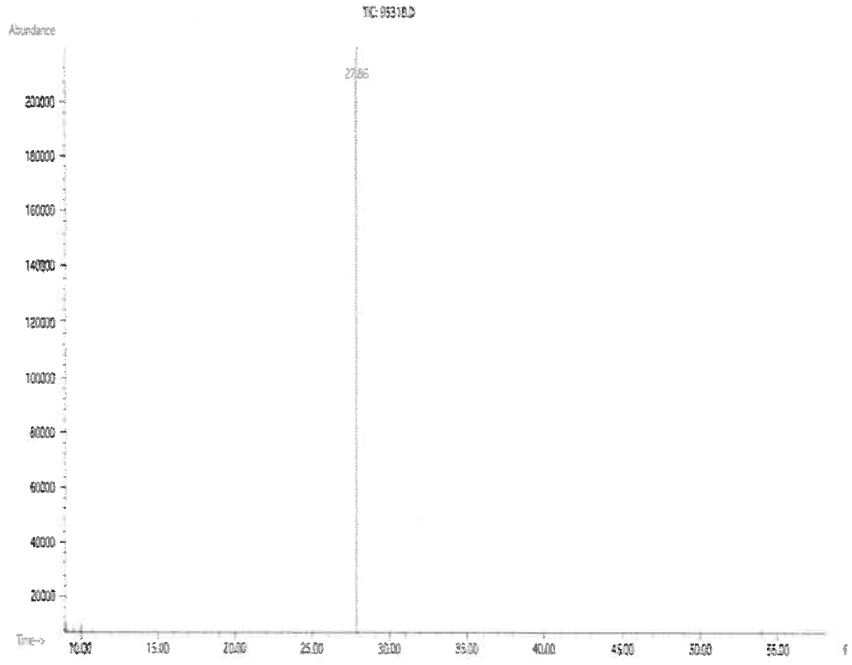
V14630 to V14649

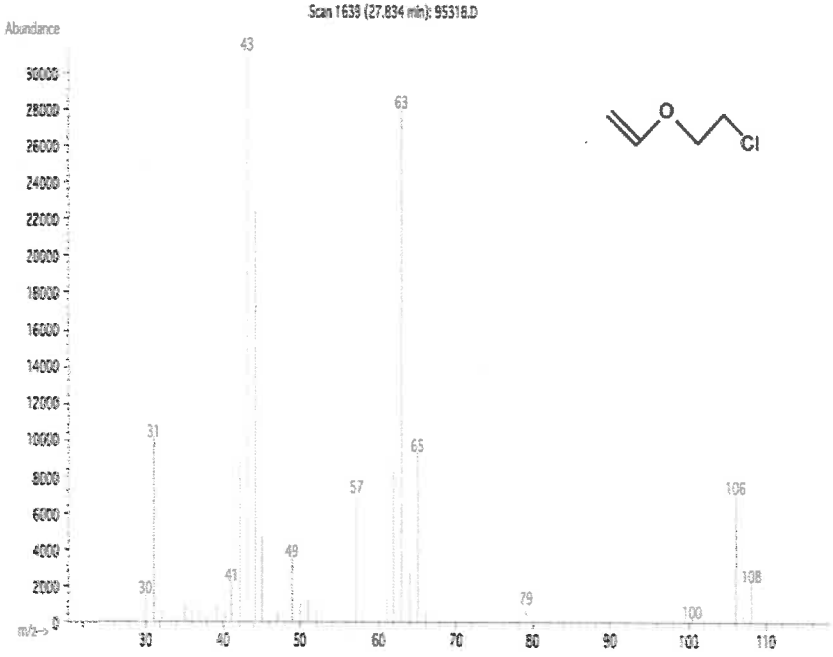
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

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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Safety Data Sheet (SDS) GHS/OSHA Compliant

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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

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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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Vapor Density (AIR = 1)	1.11	Evaporation rate (Butyl Acetate = 1)	4.6

Solubility in Water COMPLETE

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

Section X. STABILITY AND REACTIVITY

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

Section XI. TOXICOLOGICAL INFORMATION

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

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

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

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

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

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

Section XV. REGULATORY INFORMATION

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

Section XVI. Misc. INFORMATION

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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

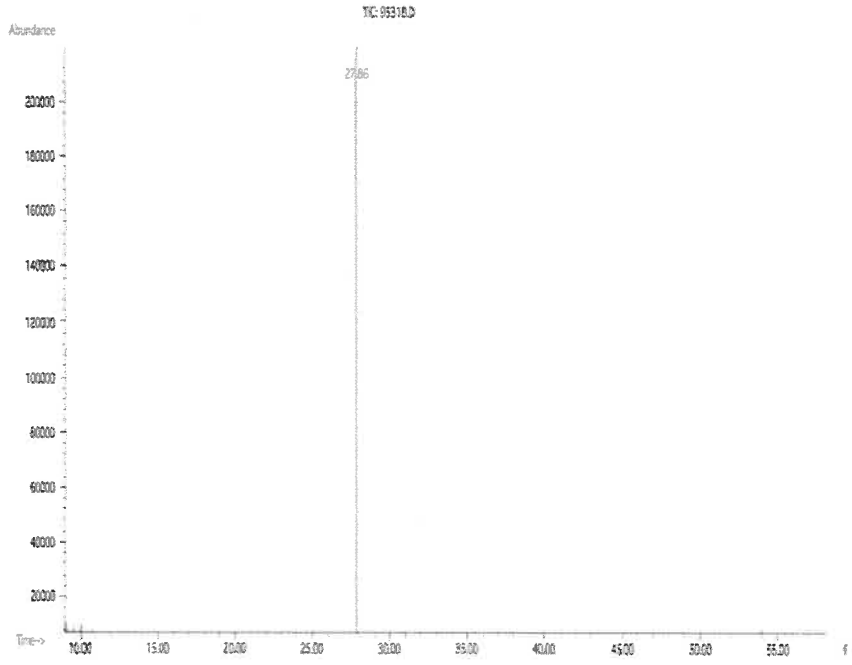
V14630 to V14649

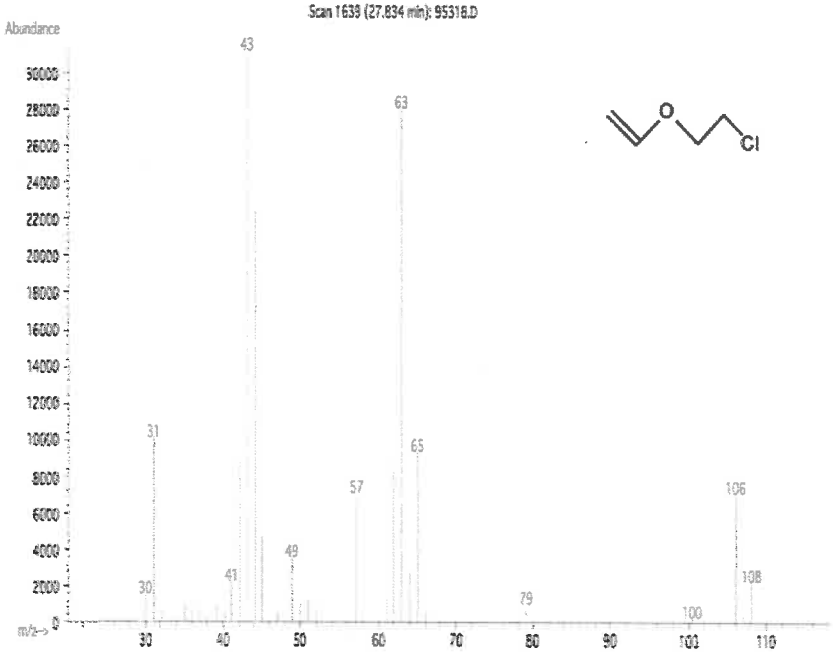
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

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.

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Nominal Concentration (µg/mL): 10000
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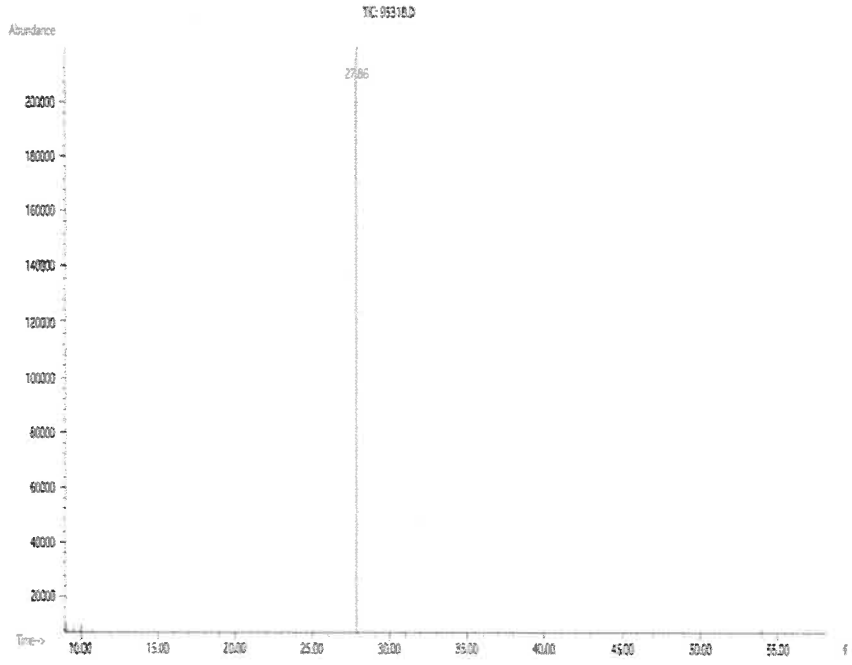

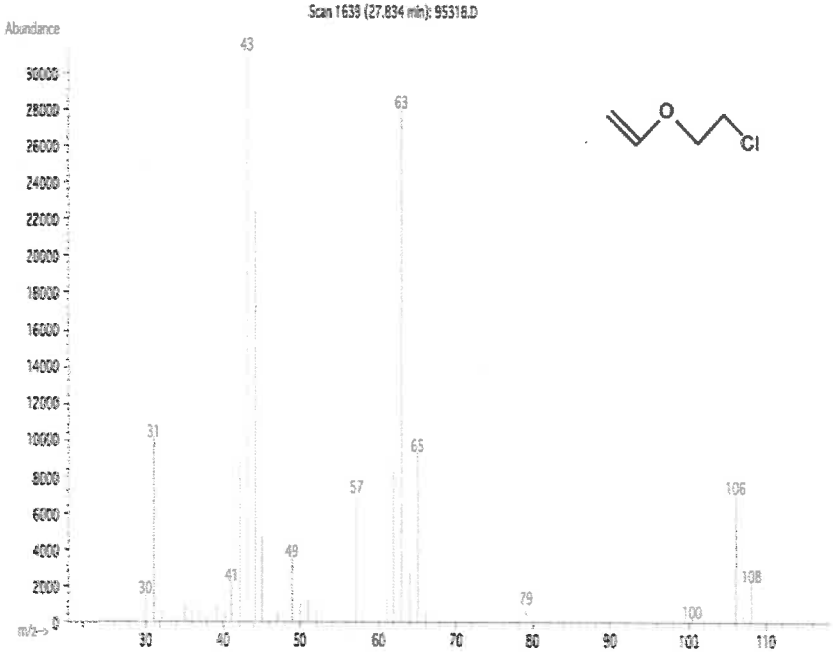

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RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

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

Description : 4-Bromofluorobenzene Standard

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

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

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

Ship: Ambient

CERTIFIED VALUES

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

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

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

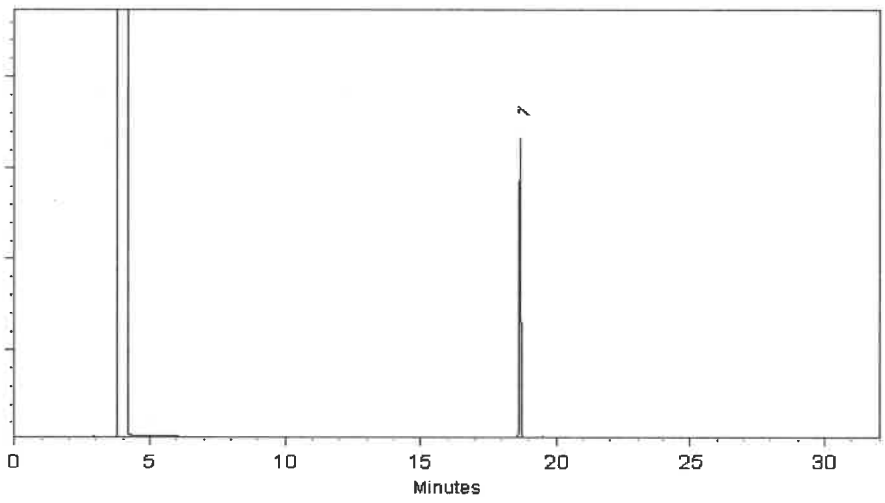
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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

Alicia Leathers - Operation Technician I **Date Mixed:** 17-Nov-2022 **Balance Serial #** B251644995

Jennifer Pollino - Operations Tech III - ARM QC **Date Passed:** 21-Nov-2022

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED
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Certificate #3222.02

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Catalog No. : 30006 **Lot No.:** A0200785

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 : November 30, 2026 **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	SHBP8774	99%	5,018.5 µg/mL	+/- 173.4162
2	2-Butanone (MEK)	78-93-3	SHBL5543	99%	5,016.0 µg/mL	+/- 173.3298
3	4-Methyl-2-pentanone (MIBK)	108-10-1	SHBP4724	99%	5,010.7 µg/mL	+/- 173.1455
4	2-Hexanone	591-78-6	MKCQ6663	99%	5,015.0 µg/mL	+/- 173.2952

* 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.)

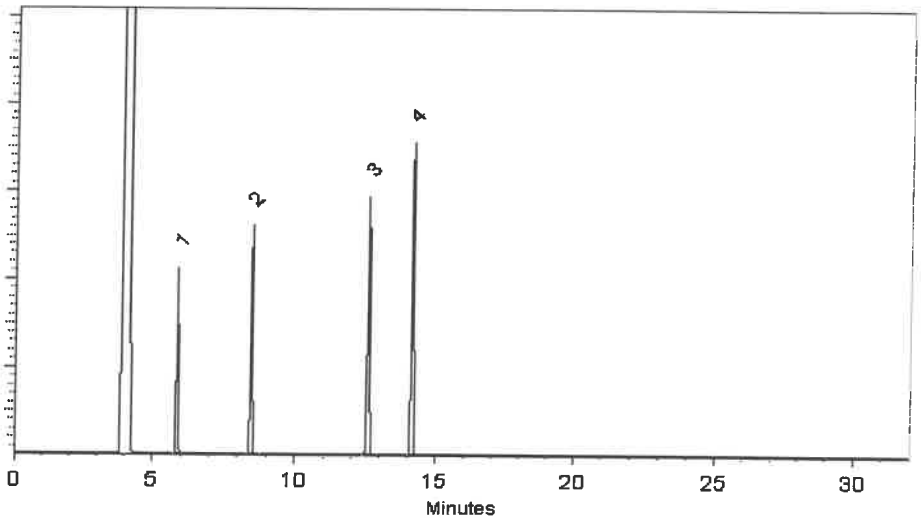
Inj. Temp:
200°C

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.

Laith Clemente - Operations Technician I

Date Mixed: 09-Aug-2023 **Balance Serial #** B707717271

Marlina Cowan – Operations Tech II ARM QC

Date Passed: 16-Aug-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30006 **Lot No.:** A0200785

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 : November 30, 2026 **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	SHBP8774	99%	5,018.5 µg/mL	+/- 173.4162
2	2-Butanone (MEK)	78-93-3	SHBL5543	99%	5,016.0 µg/mL	+/- 173.3298
3	4-Methyl-2-pentanone (MIBK)	108-10-1	SHBP4724	99%	5,010.7 µg/mL	+/- 173.1455
4	2-Hexanone	591-78-6	MKCQ6663	99%	5,015.0 µg/mL	+/- 173.2952

* 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.)

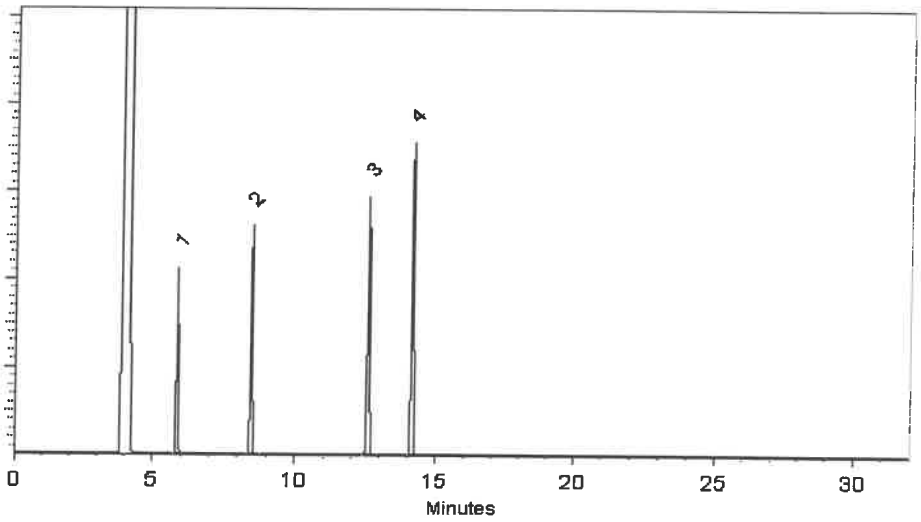
Inj. Temp:
200°C

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.

Laith Clemente - Operations Technician I

Date Mixed: 09-Aug-2023 **Balance Serial #** B707717271

Marlina Cowan – Operations Tech II ARM QC

Date Passed: 16-Aug-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

Manufacturing Notes:

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

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
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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.:** A0200785

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 : November 30, 2026 **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	SHBP8774	99%	5,018.5 µg/mL	+/- 173.4162
2	2-Butanone (MEK)	78-93-3	SHBL5543	99%	5,016.0 µg/mL	+/- 173.3298
3	4-Methyl-2-pentanone (MIBK)	108-10-1	SHBP4724	99%	5,010.7 µg/mL	+/- 173.1455
4	2-Hexanone	591-78-6	MKCQ6663	99%	5,015.0 µg/mL	+/- 173.2952

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

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

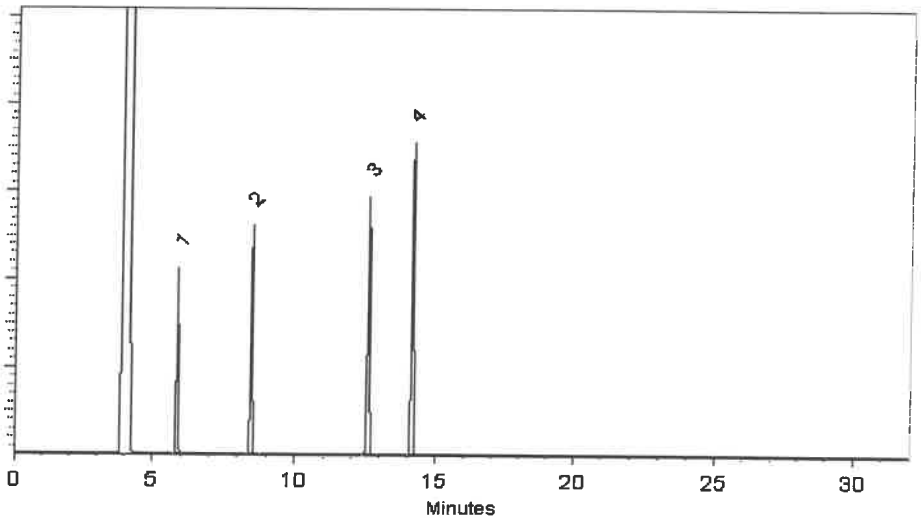
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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Laith Clemente - Operations Technician I

Date Mixed: 09-Aug-2023 **Balance Serial #** B707717271

Marlina Cowan – Operations Tech II ARM QC

Date Passed: 16-Aug-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

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

Description : Custom 8260 Internal Standard Mix

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

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

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

Ship: Ambient

CERTIFIED VALUES

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

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

John Friedline - Operations Technician I

Date Mixed: 11-Apr-2024 **Balance:** 1127510105

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

Manufacturing Notes:

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

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
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Dec: 12/09/24

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

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

Description : Bromochloromethane Standard

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

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

Expiration Date : August 31, 2029 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

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

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

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

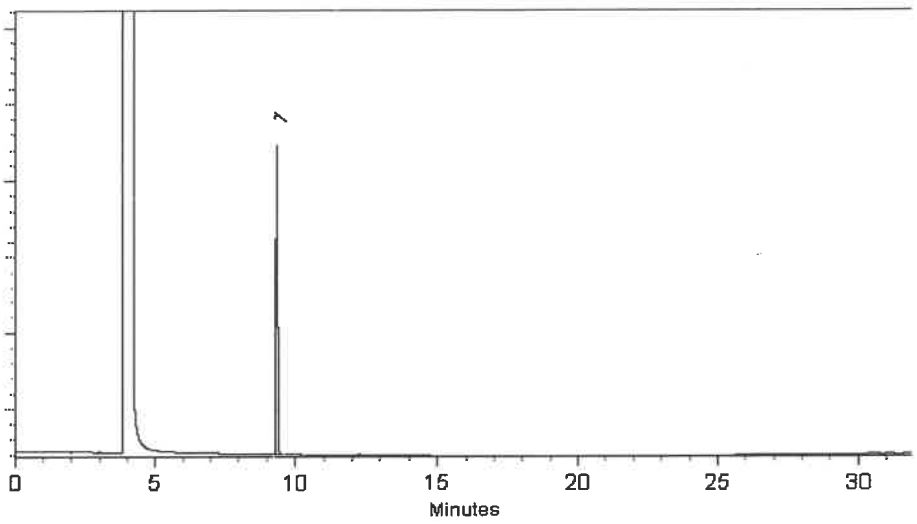
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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Stacey Wanner - Operations Technician I

Date Mixed: 08-Aug-2024 **Balance Serial #** 1127510105

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 14-Aug-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- 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

Dec: 12/09/24

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

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

Description : Bromochloromethane Standard

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

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

Expiration Date : August 31, 2029 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

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

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

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

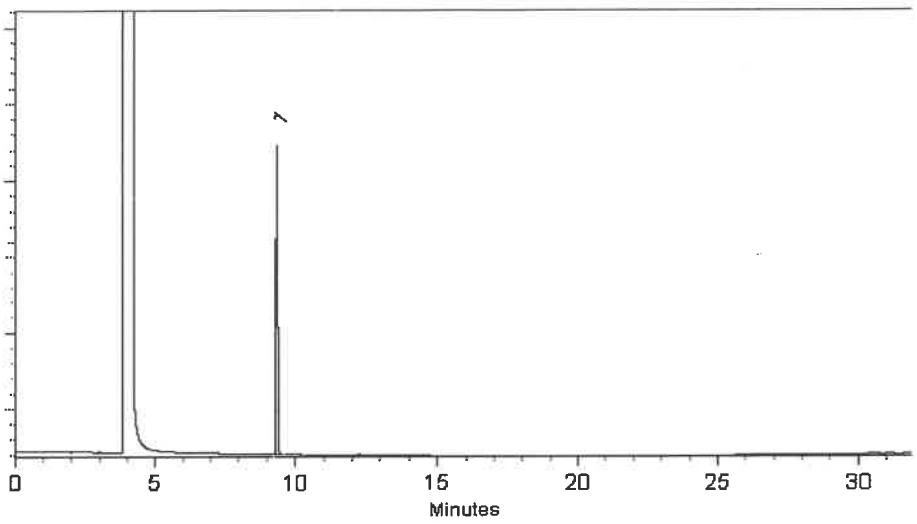
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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Stacey Wanner - Operations Technician I

Date Mixed: 08-Aug-2024 **Balance Serial #** 1127510105

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 14-Aug-2024

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

General Certified Reference Material Notes

Expiration Notes:

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Purity Notes:

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

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

Manufacturing Notes:

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

Handling Notes:

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

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Dec: 12/09/24

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

Description : Bromochloromethane Standard

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

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

Expiration Date : August 31, 2029 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

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

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

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

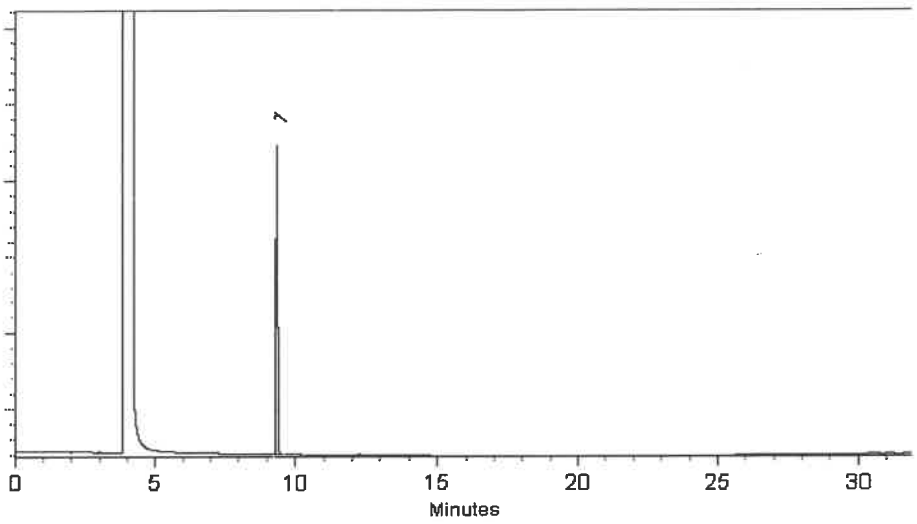
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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

Stacey Wanner - Operations Technician I

Date Mixed: 08-Aug-2024 **Balance Serial #** 1127510105

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 14-Aug-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

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Dec: 12/09/24

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

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

Description : Bromochloromethane Standard

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

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

Expiration Date : August 31, 2029 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

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

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

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

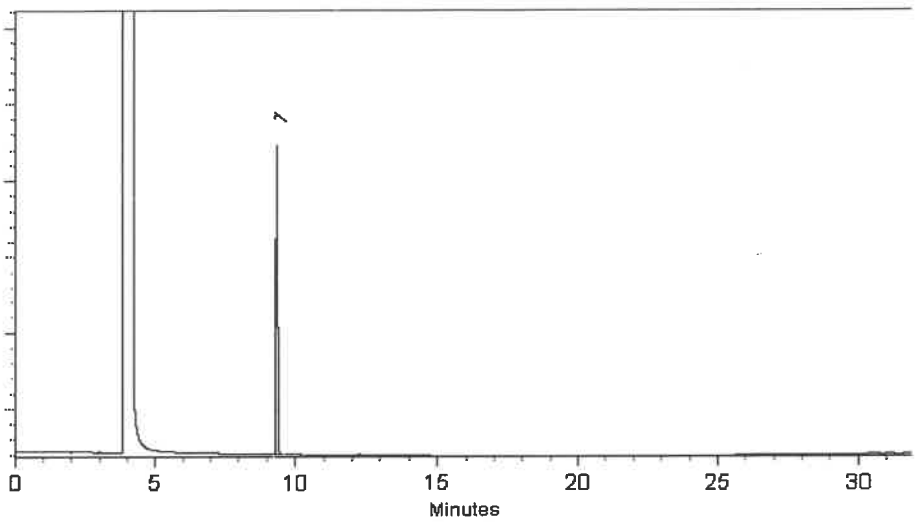
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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

Stacey Wanner - Operations Technician I

Date Mixed: 08-Aug-2024 **Balance Serial #** 1127510105

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 14-Aug-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

30 Vial

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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. : 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.

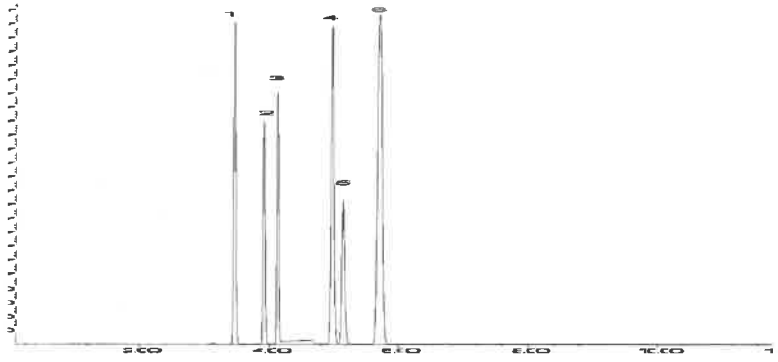
Inj. Temp:
200°C

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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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.

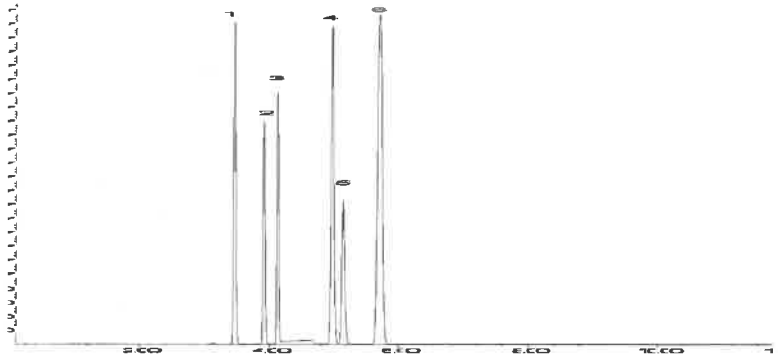
Inj. Temp:
200°C

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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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30470 **Lot No.:** A0217535

Description : tert-Butanol Standard

tert-Butanol Std 50,000µg/mL, P&T Methanol, 1mL/ampul

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

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

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	tert-Butanol (TBA)	75-65-0	SHBQ8002-1	99%	50,007.5 µg/mL	+/- 717.6137

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

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

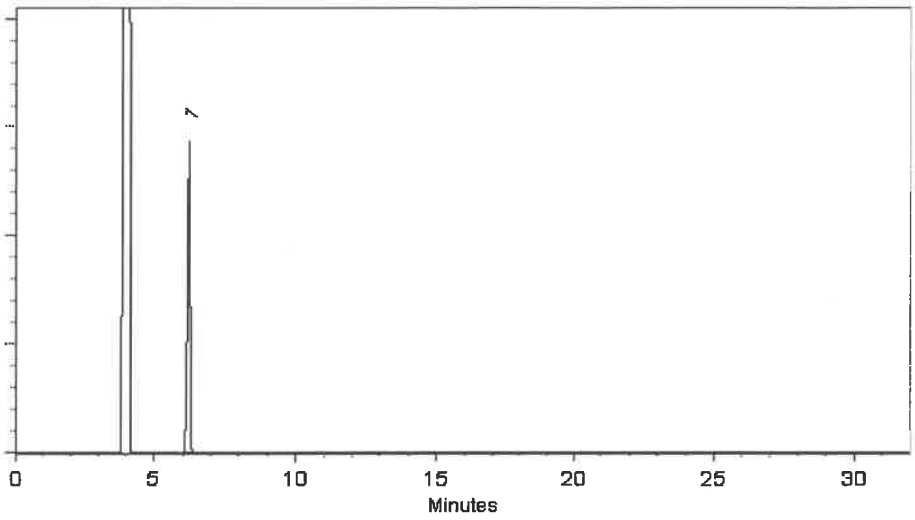
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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

Aaron Enyart - Operations Tech I

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

Brittany Federinko - Operations Tech I

Date Passed: 09-Oct-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Zoviny Rec 01/08/21

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

V14803 - V14822

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

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

Description : Custom Vinyl Acetate Standard

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

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

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

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

CERTIFIED VALUES

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

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

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

Tech Tips:

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

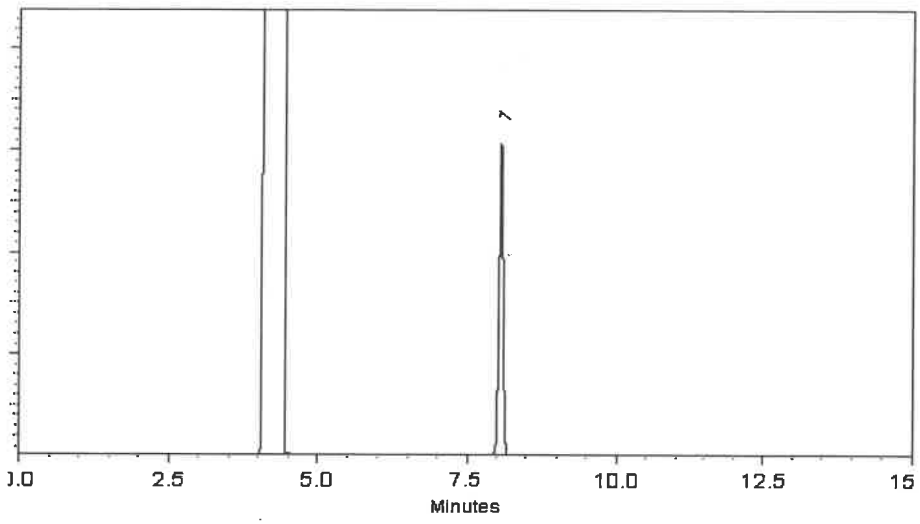
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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

Ethan Winiarski - Operations Tech I

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

Dillan Murphy - Operations Technician I

Date Passed: 02-Jan-2025

REVIEWED

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Zoviny Rec 01/08/21

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Fax: 1-814-353-1309

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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.)

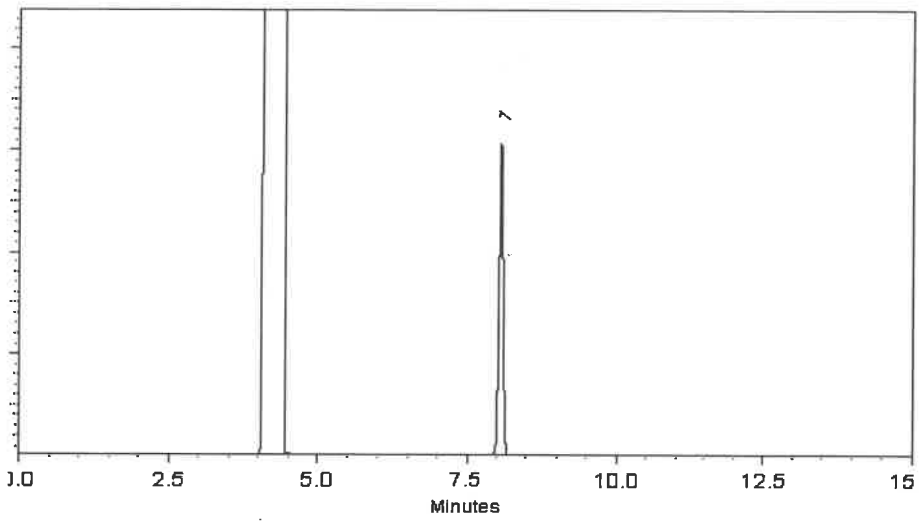
Inj. Temp:
200°C

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.

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10 vial

CERTIFIED REFERENCE MATERIAL

Lee 03/31/25

Certificate of Analysis

gravimetric

V14904 to V14913

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 555582 **Lot No.:** A0223904

Description : Custom 8260A/B Surrogate Mix

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

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

Expiration Date : March 31, 2028 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Component #	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2-Dichloroethane-d4	17060-07-0	PR-33313	99%	25,108.0 µg/mL	+/- 1,421.9957
2	1-Bromo-4-fluorobenzene (BFB)	460-00-4	0000268853	99%	25,108.0 µg/mL	+/- 1,421.9957
3	Dibromofluoromethane	1868-53-7	VENKAT02	99%	25,232.0 µg/mL	+/- 1,429.0184
4	Toluene-d8	2037-26-5	PR-34141	99%	25,156.0 µg/mL	+/- 1,424.7141

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

Brittany Federinko - Operations Tech I

Date Mixed: 27-Mar-2025 **Balance:** B251644995

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

Rec 05/09/25

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V14921 to
V14938

Material No.: 9077-02
Batch No.: 24G0262002
Manufactured Date: 2024-05-14
Expiration Date: 2027-05-14
Revision No.: 0

Certificate of Analysis

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

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

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

JCroak

Jamie Croak
Director Quality Operations, Bioscience Production

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

Rec 05/09/25

avantor™ | J.T.Baker®

V14921 to
V14938

Material No.: 9077-02
Batch No.: 24G0262002
Manufactured Date: 2024-05-14
Expiration Date: 2027-05-14
Revision No.: 0

Certificate of Analysis

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

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

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

JCroak

Jamie Croak
Director Quality Operations, Bioscience Production

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

Rec 05/09/25

avantor™ | J.T.Baker®

V14921 to
V14938

Material No.: 9077-02
Batch No.: 24G0262002
Manufactured Date: 2024-05-14
Expiration Date: 2027-05-14
Revision No.: 0

Certificate of Analysis

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

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

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

JCroak

Jamie Croak
Director Quality Operations, Bioscience Production

Rec 05/19/25

RESTEK
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Bellefonte, PA 16823-8812
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Fax: 1-814-353-1309

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CERTIFIED REFERENCE MATERIAL
20 Vial

Certificate of Analysis

chromatographic plus

VJ14951 to VJ14970

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. : 30489 **Lot No.:** A0222076

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 : August 31, 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	Methyl acetate	79-20-9	SHBR1889	99%	2,004.0 µg/mL	+/- 69.2674
2	Vinyl acetate	108-05-4	RD240423RSR	99%	2,010.0 µg/mL	+/- 69.4748
3	Ethyl acetate	141-78-6	SHBS3323	99%	2,019.3 µg/mL	+/- 69.7974
4	Isopropyl acetate	108-21-4	BCCG7069	99%	2,008.0 µg/mL	+/- 69.4057
5	Propyl acetate	109-60-4	P8XLN	99%	2,008.0 µg/mL	+/- 69.4057
6	Butyl acetate	123-86-4	SHBR2024	99%	2,008.0 µg/mL	+/- 69.4057
7	Amyl acetate	628-63-7	BCBT7442	99%	2,006.7 µg/mL	+/- 69.3596

* 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

Rec 05/19/25

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CERTIFIED REFERENCE MATERIAL
20 Vial

Certificate of Analysis

chromatographic plus

VJ14951 to VJ14970

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. : 30489 **Lot No.:** A0222076

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 : August 31, 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	Methyl acetate	79-20-9	SHBR1889	99%	2,004.0 µg/mL	+/- 69.2674
2	Vinyl acetate	108-05-4	RD240423RSR	99%	2,010.0 µg/mL	+/- 69.4748
3	Ethyl acetate	141-78-6	SHBS3323	99%	2,019.3 µg/mL	+/- 69.7974
4	Isopropyl acetate	108-21-4	BCCG7069	99%	2,008.0 µg/mL	+/- 69.4057
5	Propyl acetate	109-60-4	P8XLN	99%	2,008.0 µg/mL	+/- 69.4057
6	Butyl acetate	123-86-4	SHBR2024	99%	2,008.0 µg/mL	+/- 69.4057
7	Amyl acetate	628-63-7	BCBT7442	99%	2,006.7 µg/mL	+/- 69.3596

* 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

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

Certified Reference Material CRM

Rec 10/16/25 5 Vial

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

CERTIFIED WEIGHT REPORT

Part Number: 91980
Lot Number: 101625
Description: Acrolein

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

Expiration Date: 111625
Recommended Storage: Refrigerate (2°C to 8°C)
Nominal Concentration (µg/mL): 5000
NIST Test ID#: 6UTB

V15071 – V15075

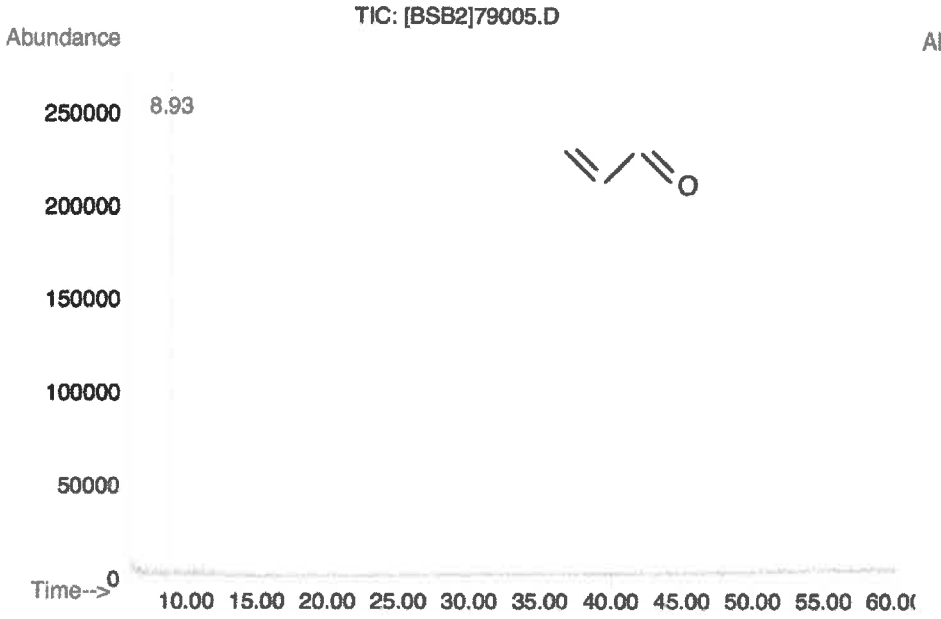
5E-05 Balance Uncertainty
0.001 Flask Uncertainty

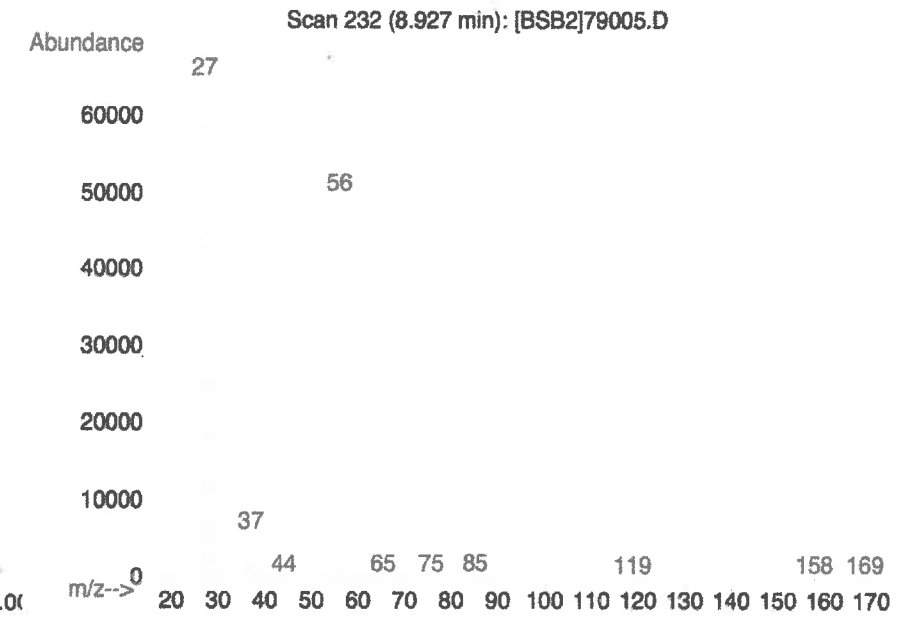
Weight(s) shown below were combined and diluted to (mL): 10.0

Prashant Chauhan		101625
Formulated By:	Prashant Chauhan	DATE
Pedro Rentas		101625
Reviewed By:	Pedro L. Rentas	DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Acrolein	5	103755V10F	5000	97	0.5	0.05166	0.05180	5013.7	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 by an ISO 17025 certified organization with weights traceable through NIST to the SI kilogram (see above).**
- **Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.**
- **All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.**
- **Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Goverament Printing Office, Washington, DC, (1994).**
  Rev 1.0, 2/25/2025

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

Certified Reference Material CRM

Rec 10/16/25 5 Vial

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

CERTIFIED WEIGHT REPORT

Part Number: 91980
Lot Number: 101625
Description: Acrolein

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

Expiration Date: 111625
Recommended Storage: Refrigerate (2°C to 8°C)
Nominal Concentration (µg/mL): 5000
NIST Test ID#: 6UTB

V15071 – V15075

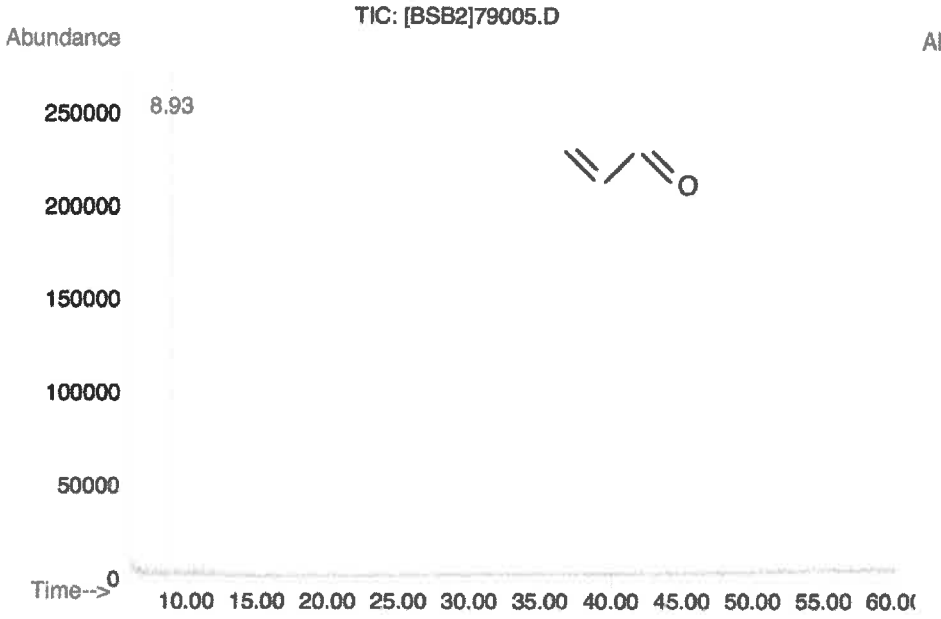
5E-05 Balance Uncertainty
0.001 Flask Uncertainty

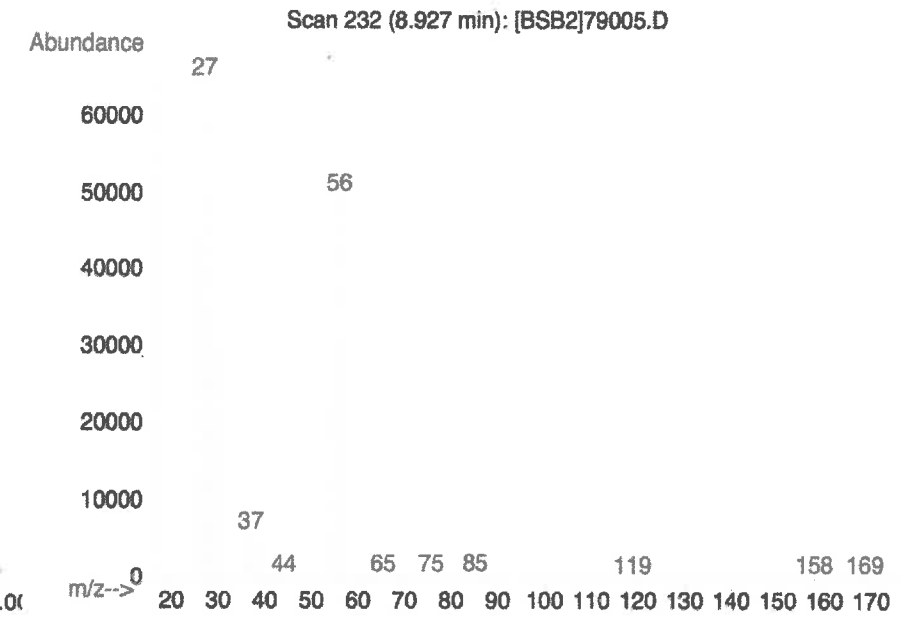
Weight(s) shown below were combined and diluted to (mL): 10.0

Prashant Chauhan		101625
Formulated By:	Prashant Chauhan	DATE
Pedro Rentas		101625
Reviewed By:	Pedro L. Rentas	DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Acrolein	5	103755V10F	5000	97	0.5	0.05166	0.05180	5013.7	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 by an ISO 17025 certified organization with weights traceable through NIST to the SI kilogram (see above).**
- **Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.**
- **All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.**
- **Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Goverament Printing Office, Washington, DC, (1994).**
  Rev 1.0, 2/25/2025

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

Certified Reference Material CRM

Rec 10/16/25 5 Vial

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

CERTIFIED WEIGHT REPORT

Part Number: 91980
Lot Number: 101625
Description: Acrolein

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

Expiration Date: 111625
Recommended Storage: Refrigerate (2°C to 8°C)
Nominal Concentration (µg/mL): 5000
NIST Test ID#: 6UTB

V15071 – V15075

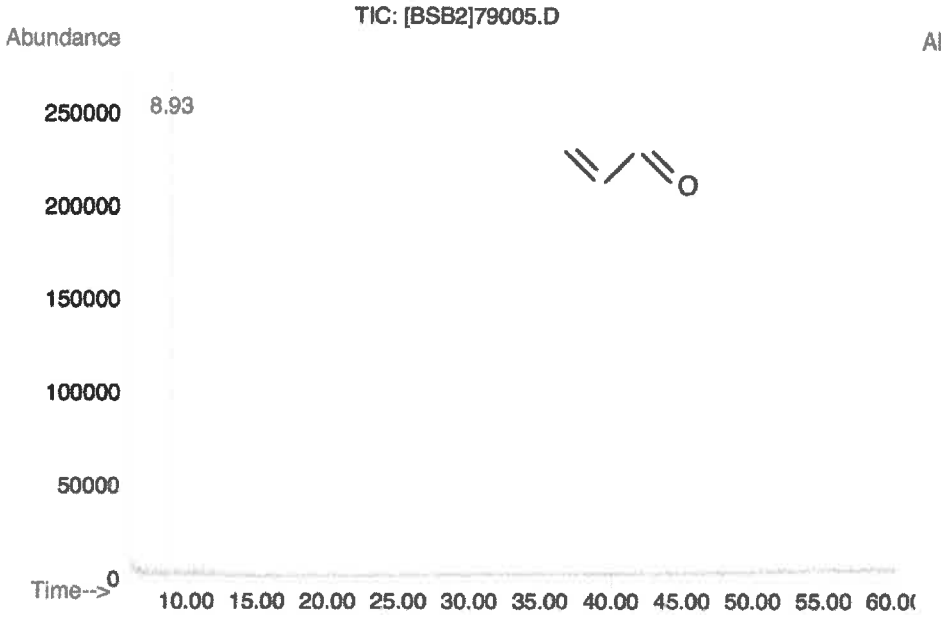
5E-05 Balance Uncertainty
0.001 Flask Uncertainty

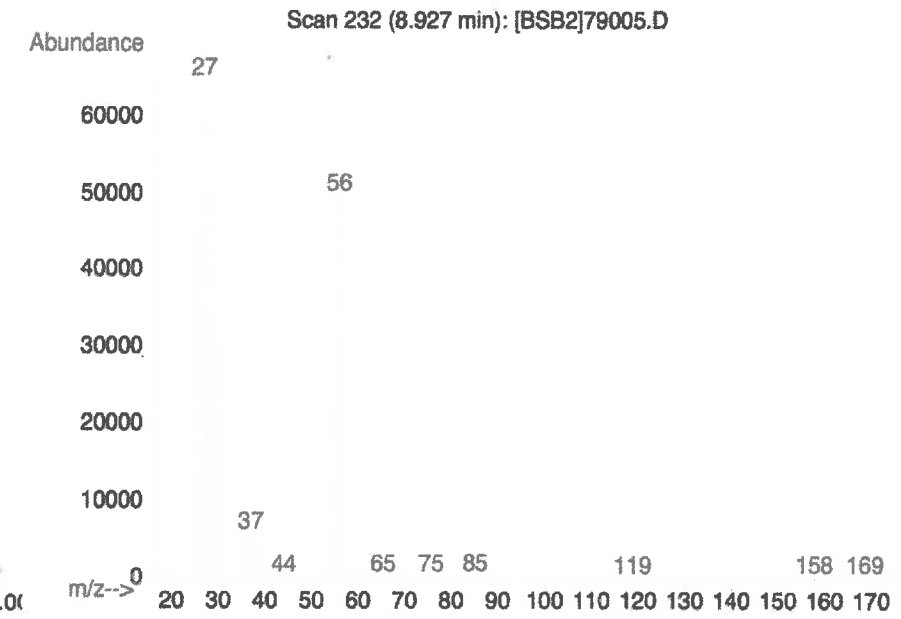
Weight(s) shown below were combined and diluted to (mL): 10.0

Prashant Chauhan		101625
Formulated By:	Prashant Chauhan	DATE
Pedro Rentas		101625
Reviewed By:	Pedro L. Rentas	DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Acrolein	5	103755V10F	5000	97	0.5	0.05166	0.05180	5013.7	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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  Rev 1.0, 2/25/2025

SHIPPING DOCUMENTS

Alliance TECHNICAL GROUP

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

ALLIANCE PROJECT NO.
QUOTE NO. Q 35399
COC Number 2044531

CLIENT INFORMATION (REPORT TO BE SENT TO:)

COMPANY: ICE service Group, INC.
ADDRESS: 125 Bloomingdale RD
CITY Levittown STATE: N.Y ZIP:
ATTENTION: Dennis d. morgan, ii
PHONE: FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: ICES 02
PROJECT NO.: LOCATION:
PROJECT MANAGER:
e-mail:
PHONE: FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY Same STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): 72 HR TAT DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

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

ANALYSIS

1 TCL 2 TCLP 3. Hexd 4 PE 5 RL 6 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	COMMENTS
1.	Comp-Roll OFF	SOL	X		10-20-25	12:00	6			X	X	X					PID = 1.3
2.	↓	↓		X	↓	12:04	3	X	X								PID = 1.3
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

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.	1700 10.20.2025	1.
2.		2.
3.	1754 10.20.2025	3.

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☒ COOLER TEMP 3.5° °C
Comments: *PID Meter Calibrated 10.20.2025 *
Equal Volume of soil used,

Page ____ of

CLIENT: ☐ Hand Delivered ☐ Other

Shipment Complete ☐ YES ☐ NO

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

1

CHEMTECH
Environmental Laboratory
www.chemtech.net | EMAIL: PM@chemtech.net

Project Name: ICES 02
Service Order #:
Work Order #:
Labor WBS #:
Facility/Site:
Site Address: 125 Bloomingdale Rd. Levittown, N.Y.

Chemtech Order ID:
Sampler Name: Lawrence Cerami
Client Project Coordinator & Phone:

Page #: 1 of 1
Date: 10.20.2025
Arrive Time: 11:28 am
Depart Time: 1300

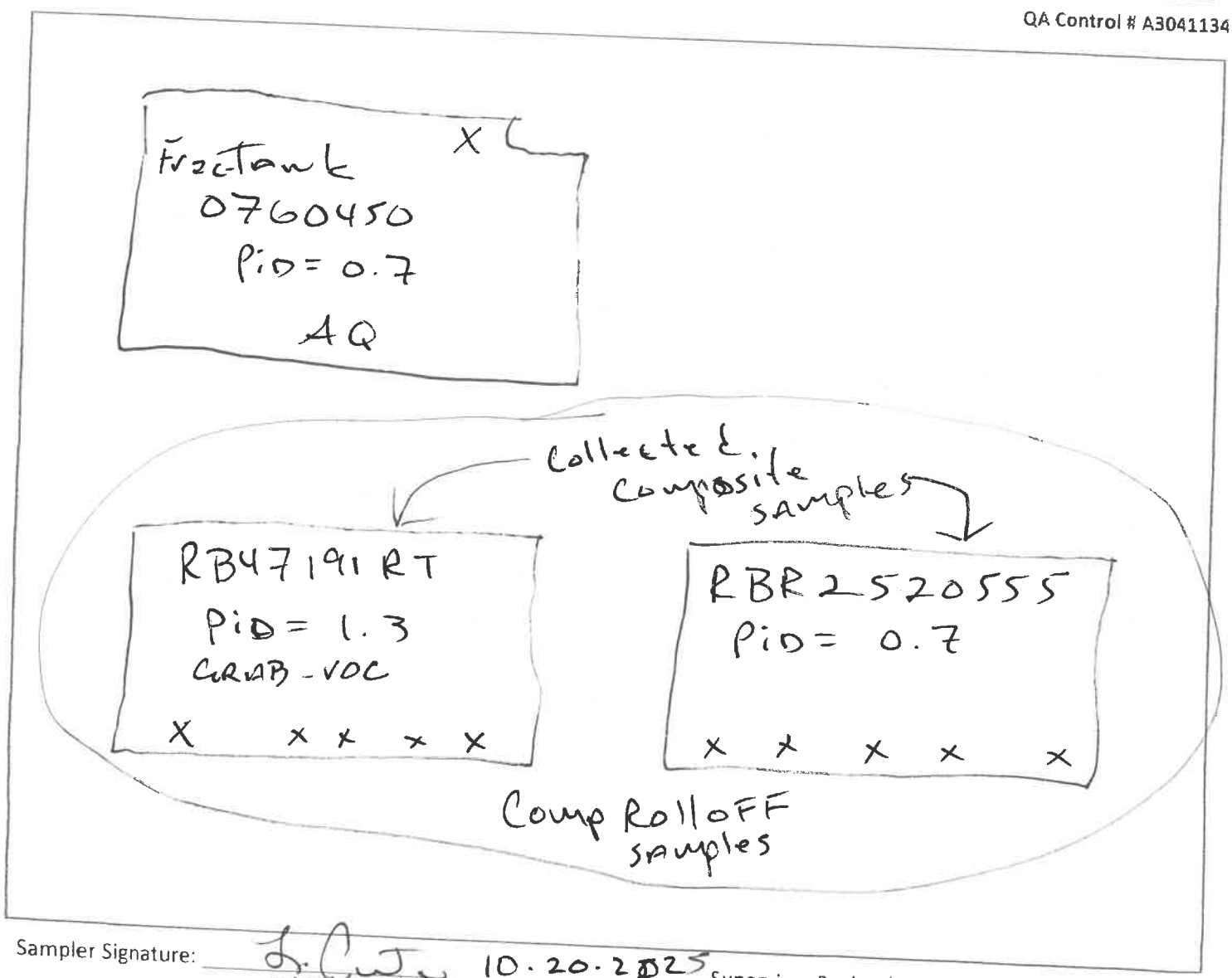
Waste Stream (circle one): drum / (roll-off) / soil pile / in-situ / linear construction / (frac-tank)
Sample Matrices (circle all that apply): Water / (Solid) / NAPL / Concrete / Wipe / (AQ)

Collection Depths:
Dimensions/CY:
Temp (range): °C PID Readings (range): PPM Odor: Y / (N) Color (Y) / N

Sample Description: Water Soil, Soil water Bonder, Brown AQ.
Field Observations: Sampled, RB47191RT, RBR2520555, Fractank 0760450 (Comp RollOFF) 2

Grid/Area Composite Map:

QA Control # A3041134



Sampler Signature: 10.20.2025
Client Signature:
Supervisor Review/Date:

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

Laboratory Certification

Certified By	License No.
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255425
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	TX-C25-00189
Virginia	460312

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q3399 ICES02
Client Name : ICE Service Group, Inc.
Client Contact : Dennis D. Morgan, II
Invoice Name : ICE Service Group, Inc.
Invoice Contact : Dennis D. Morgan, II

Order Date : 10/20/2025 1:23:08 PM
Project Name : NWIRP Northrup Grummar
Receive DateTime : 10/20/2025 ~~12:00:00 AM~~ 5:54 PM
Purchase Order :

Project Mgr :
Report Type : NYS ASP A
EDD Type : NYSDEC EDD V-4
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q3399-03	COMP-ROLLOFF	Solid	10/20/2025	12:04					
					VOC-TCLVOA-10		8260D		3 Bus. Days

Relinquished By :
Date / Time : 10/21/25 0740

Received By :
Date / Time : 10/21/25 08:00 Ag #6 D2

Storage Area : VOA Refridgerator Room