

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
FORM S-I

SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

NYSDEC Sample ID/Code	Laboratory Sample ID/Code	VOA GC/MS (Method #)	BNA GC/MS (Method #)	VOA GC (Method #)	Pest PCBs (Method #)	Metals (Method #)	Other (Method #)
PR-132-S16-015094-20 251021	Q3419-01	8260D	8270E		8081B, 8082A	6020B, 7471B	7196A, Chemtech -SOP, Lloyd Kahn
PR132-S16-119133-202 51021	Q3419-04	8260D	8270E		8081B, 8082A	6020B, 7471B	7196A, Chemtech -SOP, Lloyd Kahn
PR132-S16-094119-202 51021	Q3419-05	8260D	8270E		8081B, 8082A	6020B, 7471B	7196A, Chemtech -SOP, Lloyd Kahn

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FORM S-IIa

SAMPLE PREPARATION AND ANALYSIS SUMMARY SEMIVOLATILE (BNA) ANALYSES

Laboratory Sample ID	Matrix	Date Collected	Date Rec'd at Lab	Date Extracted	Date Analyzed
Q3419-01	SOIL	10/21/25	10/21/25	10/23/25	10/29/25
Q3419-04	SOIL	10/21/25	10/21/25	10/23/25	10/29/25
Q3419-05	SOIL	10/21/25	10/21/25	10/23/25	10/28/25

* Details For Test : SVOC-TCL BNA -20

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FORM S-IIb

SAMPLE PREPARATION AND ANALYSIS SUMMARY VOLATILE (VOA) ANALYSES

Laboratory Sample ID	Matrix	Date Collected	Date Rec'd at Lab	Date Extracted	Date Analyzed
Q3419-01	SOIL	10/21/25	10/21/25		10/22/25
Q3419-04	SOIL	10/21/25	10/21/25		10/22/25
Q3419-05	SOIL	10/21/25	10/21/25		10/22/25

* Details For Test : VOC-TCLVOA-10

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FORM S-IIc

SAMPLE PREPARATION AND ANALYSIS SUMMARY PESTICIDE/PCB ANALYSES

Laboratory Sample ID	Matrix	Date Collected	Date Rec'd at Lab	Date Extracted	Date Analyzed
Q3419-01	SOIL	10/21/25	10/21/25	10/23/25	10/27/25
Q3419-04	SOIL	10/21/25	10/21/25	10/23/25	10/24/25
Q3419-05	SOIL	10/21/25	10/21/25	10/23/25	10/24/25

* Details For Test : PCB

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FORM S-IIc

SAMPLE PREPARATION AND ANALYSIS SUMMARY PESTICIDE/PCB ANALYSES

Laboratory Sample ID	Matrix	Date Collected	Date Rec'd at Lab	Date Extracted	Date Analyzed
Q3419-01	SOIL	10/21/25	10/21/25	10/23/25	10/23/25
Q3419-04	SOIL	10/21/25	10/21/25	10/23/25	10/23/25
Q3419-05	SOIL	10/21/25	10/21/25	10/23/25	10/23/25

* Details For Test : Pesticide-TCL

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FORM S-III

SAMPLE PREPARATION AND ANALYSIS SUMMARY MISCELLANEOUS ORGANIC ANALYSES

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Auxiliary Cleanup	Dil/Conc Factor
Q3419-01	Solid	8260D	5035		
Q3419-02	Solid	8260D	5035		
Q3419-03	Solid	8260D	5035		
Q3419-04	Solid	8260D	5035		
Q3419-05	Solid	8260D	5035		

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FORM S-III

SAMPLE PREPARATION AND ANALYSIS SUMMARY MISCELLANEOUS ORGANIC ANALYSES

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Auxiliary Cleanup	Dil/Conc Factor
Q3419-01	Solid	8081B	3541		
Q3419-01	Solid	8082A	3541		
Q3419-02	Solid	8081B	3541		
Q3419-02	Solid	8082A	3541		
Q3419-03	Solid	8081B	3541		
Q3419-03	Solid	8082A	3541		
Q3419-04	Solid	8081B	3541		
Q3419-04	Solid	8082A	3541		
Q3419-05	Solid	8081B	3541		
Q3419-05	Solid	8082A	3541		

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FORM S-III

SAMPLE PREPARATION AND ANALYSIS SUMMARY MISCELLANEOUS ORGANIC ANALYSES

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Auxiliary Cleanup	Dil/Conc Factor
Q3419-01	Solid	8270E	3550		
Q3419-02	Solid	8270E	3550		
Q3419-03	Solid	8270E	3550		
Q3419-04	Solid	8270E	3550		
Q3419-05	Solid	8270E	3550		

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FORM S-IV

SAMPLE PREPARATION AND ANALYSIS SUMMARY INORGANIC ANALYSES

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Auxiliary Cleanup	Dil/Conc Factor
Q3419-01	SOIL	Mercury	10/21/25	10/23/25	10/23/25
Q3419-04	SOIL	Mercury	10/21/25	10/23/25	10/23/25
Q3419-05	SOIL	Mercury	10/21/25	10/23/25	10/23/25

* Details For Test : Mercury

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FORM S-IV

SAMPLE PREPARATION AND ANALYSIS SUMMARY INORGANIC ANALYSES

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Auxiliary Cleanup	Dil/Conc Factor
Q3419-01	SOIL	Metals ICP-TAL	10/21/25	10/23/25	10/23/25
Q3419-04	SOIL	Metals ICP-TAL	10/21/25	10/23/25	10/23/25
Q3419-05	SOIL	Metals ICP-TAL	10/21/25	10/23/25	10/23/25

* Details For Test : Metals ICP-TAL

Cover Page

Order ID : Q3419

Project ID : AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206

Client : AECOM

Lab Sample Number

Q3419-01
Q3419-02
Q3419-03
Q3419-04
Q3419-05

Client Sample Number

PR-132-S16-015094-20251021
PR-132-S16-015094-20251021MS
PR-132-S16-015094-20251021MSD
PR132-S16-119133-20251021
PR132-S16-094119-20251021

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

Signature : _____

Date: 11/1/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012



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

CASE NARRATIVE

AECOM

Project Name: AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206

Project # N/A

Order ID # Q3419

Test Name: VOC-TCLVOA-10

A. Number of Samples and Date of Receipt:

5 Solid samples were received on 10/21/2025.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: VOC-TCLVOA-10. This data package contains results for VOC-TCLVOA-10.

C. Analytical Techniques:

The analysis performed on instrument MSVOA_Y were done using GC column Rxi-624SIL MS 30m, 0.25mm, 1.4 um, Cat. #13868. The analysis of VOC-TCLVOA-10 was based on method 8260D.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries were met for all analysis except for PR-132-S16-015094-20251021MSD [Toluene-d8 - 69%] due to matrix interference.

The Internal Standards Areas were met for all analysis except for PR-132-S16-015094-20251021MS, PR-132-S16-015094-20251021MSD samples were re-analyzed but still we have internal standard recovery failure due to matrix interference, lab will report first analysis with failure.

The Retention Times were met for all analysis.

The MS {Q3419-02MS} with File ID: VY023580.D recoveries met the requirements for all compounds except for 1,1,2,2-Tetrachloroethane[290%], 1,1,2-Trichloroethane[150%], 1,2-Dibromo-3-Chloropropane[240%], 4-Methyl-2-Pentanone[175%], Acetone[179%], Bromoform[150%], cis-1,3-Dichloropropene[53%] and Methyl Acetate[360%] due to matrix interference.

The MSD {Q3419-03MSD} with File ID: VY023581.D recoveries met the requirements for all compounds except for 1,1,2,2-Tetrachloroethane[354%], 1,1,2-Trichloroethane[177%], 1,2-Dibromo-3-Chloropropane[316%], 1,2-Dibromoethane[152%], 2-Butanone[249%], 2-Hexanone[238%], 4-Methyl-2-Pentanone[251%], Acetone[298%], Bromoform[190%], Carbon disulfide[142%], cis-1,3-

Dichloropropene[30%], Methyl Acetate[544%], Methyl tert-butyl Ether[190%] and t-1,3-Dichloropropene[43%] due to matrix interference.

The RPD for {Q3419-03MSD} with File ID: VY023581.D met criteria except for 1,2,3-Trichlorobenzene[29%], 1,2,4-Trichlorobenzene[22%], 1,2-Dibromo-3-Chloropropane[27%], 2-Butanone[37%], 2-Hexanone[38%], 4-Methyl-2-Pentanone[36%], Acetone[50%], Bromochloromethane[33%], Bromoform[23%], Bromomethane[29%], Carbon disulfide[45%], cis-1,3-Dichloropropene[54%], Methyl Acetate[41%], Methyl tert-butyl Ether[23%] and t-1,3-Dichloropropene[39%] due to difference in results of MS and MSD.

The Blank Spike met requirements for all compounds.

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements.

The Continuous Calibration met the requirements.

The Tuning criteria met requirements.

E. Additional Comments:

The Sample #PR-132-S16-015094-20251021, PR132-S16-119133-20251021 and PR132-S16-094119-20251021 have the concentration of target compound below Method detection limits, therefore it is not reported as Hit in Form1.

Trip Blank was not provided with this set of samples.

The soil samples results are based on a dry weight basis.

F. Manual Integration Comments:

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

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

Signature_____

DATA REPORTING QUALIFIERS- ORGANIC

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

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

ALLIANCE 284 Sheffield Street, Mountainside New Jersey 07092

NEW JERSEY LAB ID#: 20012; NEW YORK LAB ID#: 11376

GC/MS VOA CONFORMANCE/NON-CONFORMANCE SUMMARY

ORDER ID: Q3419

MATRIX: Solid

METHOD: 8260D

		NA	NO	YES
1.	Chromatograms Labeled/Compounds Identified. (Field samples and Method Blanks)			✓
2.	GC/MS Tuning Specifications BFB Meet Criteria (NOTE THAT THERE ARE DIFFERENT CRITERIA FOR NY ASP CLP, CLP AND NJ)			✓
3.	GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 Series.			✓
4.	GC/MS Calibration - Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series.			✓
5.	GC/MS Calibration Requirements. The Initial Calibration met the requirements. The Continuous Calibration met the requirements.			✓
6.	Blank Contamination - If yes, list compounds and concentrations in each blank:		✓	
7.	Surrogate Recoveries Meet Criteria		✓	

If not met, list those compounds and their recoveries which fall outside the acceptable ranges.

The Surrogate recoveries were met for all analysis except for PR-132-S16-015094-20251021MSD [Toluene-d8 - 69%] due to matrix interference.

GC/MS VOA CONFORMANCE/NON-CONFORMANCE SUMMARY (CONTINUED)

	NA	NO	YES
8. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria			✓
If not met, list those compounds and their recoveries which fall outside the acceptable range.			
The MS {Q3419-02MS} with File ID: VY023580.D recoveries met the requirements for all compounds except for 1,1,2,2-Tetrachloroethane[290%], 1,1,2-Trichloroethane[150%], 1,2-Dibromo-3-Chloropropane[240%], 4-Methyl-2-Pentanone[175%], Acetone[179%], Bromoform[150%], cis-1,3-Dichloropropene[53%] and Methyl Acetate[360%] due to matrix interference.			
The MSD {Q3419-03MSD} with File ID: VY023581.D recoveries met the requirements for all compounds except for 1,1,2,2-Tetrachloroethane[354%], 1,1,2-Trichloroethane[177%], 1,2-Dibromo-3-Chloropropane[316%], 1,2-Dibromoethane[152%], 2-Butanone[249%], 2-Hexanone[238%], 4-Methyl-2-Pentanone[251%], Acetone[298%], Bromoform[190%], Carbon disulfide[142%], cis-1,3-Dichloropropene[30%], Methyl Acetate[544%], Methyl tert-butyl Ether[190%] and t-1,3-Dichloropropene[43%] due to matrix interference.			
The RPD for {Q3419-03MSD} with File ID: VY023581.D met criteria except for 1,2,3-Trichlorobenzene[29%], 1,2,4-Trichlorobenzene[22%], 1,2-Dibromo-3-Chloropropane[27%], 2-Butanone[37%], 2-Hexanone[38%], 4-Methyl-2-Pentanone[36%], Acetone[49%], Bromochloromethane[33%], Bromoform[23%], Bromomethane[29%], Carbon disulfide[45%], cis-1,3-Dichloropropene[54%], Methyl Acetate[50%], Methyl tert-butyl Ether[23%] and t-1,3-Dichloropropene[39%] due to difference in results of MS and MSD..			
9. Internal Standard Area/Retention Time Shift Meet Criteria			✓
Comments: The Internal Standards Areas were met for all analysis except for PR-132-S16-015094-20251021MS, PR-132-S16-015094-20251021MSD samples were re-analyzed but still we have internal standard recovery failure due to matrix interference, lab will report first analysis with failure.			
10. Analysis Holding Time Met			✓
If not met, list number of days exceeded for each sample:			

ADDITIONAL COMMENTS:

The Sample #PR-132-S16-015094-20251021, PR132-S16-119133-20251021 and PR132-S16-094119-20251021 have the concentration of target compound below Method detection limits, therefore it is not reported as Hit in Form1.

Trip Blank was not provided with this set of samples.

The soil samples results are based on a dry weight basis.

QA REVIEW

Date

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q3419

Completed

For thorough review, the report must have the following:

GENERAL:

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

✓

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

✓

Is the chain of custody signed and complete

✓

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

✓

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

✓

COVER PAGE:

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

✓

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

✓

CHAIN OF CUSTODY:

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

✓

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

✓

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

✓

Were the samples received within hold time

✓

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

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: SOHIL JODHANI

Date: 11/01/2025

LAB CHRONICLE

OrderID:	Q3419	OrderDate:	10/22/2025 11:01:00 AM
Client:	AECOM	Project:	AE1-CTY 3.2.Z-PR-DOCK-Des-ODC -
Contact:	Rob Forstner	Location:	60993705-1719208 Daly VOA Ref #208 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q3419-01	PR-132-S16-015094-2 0251021	SOIL			10/21/25			10/21/25
			VOC-TCLVOA-10	8260D			10/22/25	
Q3419-04	PR132-S16-119133-2 0251021	SOIL			10/21/25			10/21/25
			VOC-TCLVOA-10	8260D			10/22/25	
Q3419-05	PR132-S16-094119-2 0251021	SOIL			10/21/25			10/21/25
			VOC-TCLVOA-10	8260D			10/22/25	

Hit Summary Sheet
SW-846

SDG No.: Q3419
Client: AECOM

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID:	PR-132-S16-015094-20251021							
Q3419-01	PR-132-S16-015094 SOIL	Acetone		36.3	J	7.60	39.9	ug/Kg
Q3419-01	PR-132-S16-015094 SOIL	Carbon Disulfide		7.80	J	1.70	8.00	ug/Kg
		Total Voc :		44.1				
		Total Concentration:		44.1				
Client ID:	PR132-S16-119133-20251021							
Q3419-04	PR132-S16-119133 SOIL	Acetone		63.1		8.70	46.1	ug/Kg
Q3419-04	PR132-S16-119133 SOIL	Carbon Disulfide		3.80	J	2.00	9.20	ug/Kg
Q3419-04	PR132-S16-119133 SOIL	2-Butanone		20.1	J	12.0	46.1	ug/Kg
Q3419-04	PR132-S16-119133 SOIL	Methylcyclohexane		16.8		1.70	9.20	ug/Kg
		Total Voc :		104				
Q3419-04	PR132-S16-119133 SOIL	Cyclohexane, 1,1,3-trimethyl-	* 140		J	0	0	ug/Kg
Q3419-04	PR132-S16-119133 SOIL	Octane, 3,6-dimethyl-	* 200		J	0	0	ug/Kg
Q3419-04	PR132-S16-119133 SOIL	Undecane, 2,6-dimethyl-	* 150		J	0	0	ug/Kg
Q3419-04	PR132-S16-119133 SOIL	1,2,4-Trimethylbenzene	* 2.30		J	1.20	9.20	ug/Kg
		Total Tics :		492				
		Total Concentration:		596				
Client ID:	PR132-S16-094119-20251021							
Q3419-05	PR132-S16-094119 SOIL	Acetone		180		10.1	53.5	ug/Kg
Q3419-05	PR132-S16-094119 SOIL	Carbon Disulfide		11.4		2.30	10.7	ug/Kg
Q3419-05	PR132-S16-094119 SOIL	2-Butanone		53.2	J	14.0	53.5	ug/Kg
Q3419-05	PR132-S16-094119 SOIL	Methylcyclohexane		16.9		1.90	10.7	ug/Kg
Q3419-05	PR132-S16-094119 SOIL	Benzene		5.70	J	1.70	10.7	ug/Kg
Q3419-05	PR132-S16-094119 SOIL	m/p-Xylenes		7.30	J	2.70	21.4	ug/Kg
Q3419-05	PR132-S16-094119 SOIL	o-Xylene		18.2		1.80	10.7	ug/Kg
		Total Voc :		293				
Q3419-05	PR132-S16-094119 SOIL	Naphthalene, decahydro-	* 64.4		J	0	0	ug/Kg
Q3419-05	PR132-S16-094119 SOIL	3-Heptene, 2,2,4,6,6-pentameth	* 98.3		J	0	0	ug/Kg
Q3419-05	PR132-S16-094119 SOIL	Cyclohexanone, 5-methyl-2-(1-	* 64.6		J	0	0	ug/Kg
Q3419-05	PR132-S16-094119 SOIL	Undecane, 2,6-dimethyl-	* 58.4		J	0	0	ug/Kg
Q3419-05	PR132-S16-094119 SOIL	1,3,5-Trimethylbenzene	* 7.00		J	1.80	10.7	ug/Kg
Q3419-05	PR132-S16-094119 SOIL	1,2,4-Trimethylbenzene	* 12.0		J	1.40	10.7	ug/Kg
		Total Tics :		305				
		Total Concentration:		597				



QC SUMMARY

Surrogate Summary

SDG No.: **Q3419**

Client: **AECOM**

Analytical Method: **SW8260D**

Lab Sample ID	Client ID	Parameter	Spike	Result	Recovery (%)	Qual	Limits (%)	
							Low	High
Q3419-01	PR-132-S16-015094-20251021	1,2-Dichloroethane-d4	50	44.2	88		63	155
		Dibromofluoromethane	50	47.8	96		70	134
		Toluene-d8	50	47.7	95		74	123
		4-Bromofluorobenzene	50	39.4	79		17	146
Q3419-02MS	PR-132-S16-015094-20251021MS	1,2-Dichloroethane-d4	50	53.2	106		63	155
		Dibromofluoromethane	50	52.5	105		70	134
		Toluene-d8	50	42.6	85		74	123
		4-Bromofluorobenzene	50	28.2	56		17	146
Q3419-03MSD	PR-132-S16-015094-20251021MSD	1,2-Dichloroethane-d4	50	54.7	109		63	155
		Dibromofluoromethane	50	46.4	93		70	134
		Toluene-d8	50	34.6	69	*	74	123
		4-Bromofluorobenzene	50	25.0	50		17	146
Q3419-04	PR132-S16-119133-20251021	1,2-Dichloroethane-d4	50	53.5	107		63	155
		Dibromofluoromethane	50	51.4	103		70	134
		Toluene-d8	50	50.6	101		74	123
		4-Bromofluorobenzene	50	47.1	94		17	146
Q3419-05	PR132-S16-094119-20251021	1,2-Dichloroethane-d4	50	52.0	104		63	155
		Dibromofluoromethane	50	50.8	102		70	134
		Toluene-d8	50	49.8	100		74	123
		4-Bromofluorobenzene	50	46.3	93		17	146
VY1022SBL01	VY1022SBL01	1,2-Dichloroethane-d4	50	48.3	97		63	155
		Dibromofluoromethane	50	49.8	100		70	134
		Toluene-d8	50	48.6	97		74	123
		4-Bromofluorobenzene	50	41.1	82		17	146
VY1022SBS01	VY1022SBS01	1,2-Dichloroethane-d4	50	45.7	91		63	155
		Dibromofluoromethane	50	49.3	99		70	134
		Toluene-d8	50	49.8	100		74	123
		4-Bromofluorobenzene	50	49.3	99		17	146
VY1022SBSD01	VY1022SBSD01	1,2-Dichloroethane-d4	50	45.1	90		63	155
		Dibromofluoromethane	50	49.3	99		70	134
		Toluene-d8	50	48.6	97		74	123
		4-Bromofluorobenzene	50	48.7	97		17	146
VY1024SBL01	VY1024SBL01	1,2-Dichloroethane-d4	50	44.4	89		63	155
		Dibromofluoromethane	50	48.7	97		70	134
		Toluene-d8	50	47.8	95		74	123
		4-Bromofluorobenzene	50	40.6	81		17	146
VY1024SBS01	VY1024SBS01	1,2-Dichloroethane-d4	50	44.2	88		63	155
		Dibromofluoromethane	50	49.5	99		70	134
		Toluene-d8	50	48.4	97		74	123
		4-Bromofluorobenzene	50	49.3	99		17	146
VY1024SBSD01	VY1024SBSD01	1,2-Dichloroethane-d4	50	44.4	89		63	155
		Dibromofluoromethane	50	49.4	99		70	134
		Toluene-d8	50	47.6	95		74	123
		4-Bromofluorobenzene	50	47.8	96		17	146

Matrix Spike/Matrix Spike Duplicate Summary

SW-846

SDG No.: Q3419

Analytical Method:

SW8260D

Client: AECOM

Datafile :

VY023580.D

		Sample				Rec	RPD	Limits			
Parameter	Spike	Result	Result	Units	Rec	Qual	RPD	Qual	Low	High	RPD
Lab Sample ID :	Q3419-02MS	Client Sample ID :	PR-132-S16-015094-20251021MS								
Dichlorodifluoromethane	100	0	130	ug/Kg	130				40	150	
Chloromethane	100	0	110	ug/Kg	110				24	175	
Vinyl chloride	100	0	120	ug/Kg	120				21	175	
Bromomethane	100	0	76.6	ug/Kg	77				46	150	
Chloroethane	100	0	130	ug/Kg	130				30	175	
Trichlorofluoromethane	100	0	130	ug/Kg	130				53	150	
1,1,2-Trichlorotrifluoroethane	100	0	120	ug/Kg	120				60	135	
1,1-Dichloroethene	100	0	130	ug/Kg	130				63	136	
Acetone	510	36.3	950	ug/Kg	179	*			41	175	
Carbon disulfide	100	7.80	97.7	ug/Kg	90				45	126	
Methyl tert-butyl Ether	100	0	150	ug/Kg	150				56	175	
Methyl Acetate	100	0	360	ug/Kg	360	*			32	175	
Methylene Chloride	100	0	130	ug/Kg	130				59	175	
trans-1,2-Dichloroethene	100	0	110	ug/Kg	110				63	137	
1,1-Dichloroethane	100	0	130	ug/Kg	130				62	154	
Cyclohexane	100	0	62.0	ug/Kg	62				41	131	
2-Butanone	510	0	870	ug/Kg	171				48	174	
Carbon Tetrachloride	100	0	70.9	ug/Kg	71				48	149	
cis-1,2-Dichloroethene	100	0	120	ug/Kg	120				59	153	
Bromochloromethane	100	0	87.2	ug/Kg	87				54	172	
Chloroform	100	0	130	ug/Kg	130				60	159	
1,1,1-Trichloroethane	100	0	130	ug/Kg	130				60	149	
Methylcyclohexane	100	0	33.3	ug/Kg	33				19	135	
Benzene	100	0	130	ug/Kg	130				59	140	
1,2-Dichloroethane	100	0	140	ug/Kg	140				63	153	
Trichloroethene	100	0	130	ug/Kg	130				45	154	
1,2-Dichloropropane	100	0	130	ug/Kg	130				67	141	
Bromodichloromethane	100	0	120	ug/Kg	120				54	160	
4-Methyl-2-Pentanone	510	0	890	ug/Kg	175	*			54	164	
Toluene	100	0	110	ug/Kg	110				61	134	
t-1,3-Dichloropropene	100	0	63.4	ug/Kg	63				47	155	
cis-1,3-Dichloropropene	100	0	52.7	ug/Kg	53	*			56	141	
1,1,2-Trichloroethane	100	0	150	ug/Kg	150	*			69	148	
2-Hexanone	510	0	830	ug/Kg	163				43	164	
Dibromochloromethane	100	0	120	ug/Kg	120				65	143	
1,2-Dibromoethane	100	0	130	ug/Kg	130				63	144	
Tetrachloroethene	100	0	100	ug/Kg	100				27	175	
Chlorobenzene	100	0	120	ug/Kg	120				66	127	
Ethyl Benzene	100	0	96.1	ug/Kg	96				54	134	
m/p-Xylenes	200	0	190	ug/Kg	95				51	137	
o-Xylene	100	0	95.7	ug/Kg	96				57	139	
Styrene	100	0	87.0	ug/Kg	87				47	136	
Bromoform	100	0	150	ug/Kg	150	*			64	144	
Isopropylbenzene	100	0	100	ug/Kg	100				44	160	
1,1,2,2-Tetrachloroethane	100	0	290	ug/Kg	290	*			18	175	

Matrix Spike/Matrix Spike Duplicate Summary

SW-846

SDG No.: Q3419

Analytical Method:

SW8260D

Client: AECOM

Datafile :

VY023580.D

Parameter	Spike	Sample Result	Result	Units	Rec			RPD		Limits	
					Rec	Qual	RPD	Qual	Low	High	RPD
1,3-Dichlorobenzene	100	0	77.7	ug/Kg	78				55	131	
1,4-Dichlorobenzene	100	0	82.3	ug/Kg	82				57	129	
1,2-Dichlorobenzene	100	0	86.7	ug/Kg	87				54	140	
1,2-Dibromo-3-Chloropropane	100	0	240	ug/Kg	240	*			46	175	
1,2,4-Trichlorobenzene	100	0	26.5	ug/Kg	26				12	127	
1,2,3-Trichlorobenzene	100	0	28.0	ug/Kg	28				10	160	

Matrix Spike/Matrix Spike Duplicate Summary

SW-846

SDG No.: Q3419

Analytical Method:

SW8260D

Client: AECOM

Datafile :

VY023581.D

		Sample				Rec	RPD		Limits		
Parameter	Spike	Result	Result	Units	Rec	Qual	RPD	Qual	Low	High	RPD
Lab Sample ID :	Q3419-03MSD	Client Sample ID :	PR-132-S16-015094-20251021MSD								
Dichlorodifluoromethane	79	0	99.9	ug/Kg	126		3		40	150	20
Chloromethane	79	0	89.3	ug/Kg	113		3		24	175	20
Vinyl chloride	79	0	95.4	ug/Kg	121		1		21	175	20
Bromomethane	79	0	45.2	ug/Kg	57		29	*	46	150	20
Chloroethane	79	0	100	ug/Kg	127		3		30	175	20
Trichlorofluoromethane	79	0	100	ug/Kg	127		3		53	150	20
1,1,2-Trichlorotrifluoroethane	79	0	83.0	ug/Kg	105		13		60	135	20
1,1-Dichloroethene	79	0	100	ug/Kg	127		3		63	136	20
Acetone	390	36.3	1200	ug/Kg	298	*	50	*	41	175	20
Carbon disulfide	79	7.80	120	ug/Kg	142	*	45	*	45	126	20
Methyl tert-butyl Ether	79	0	150	ug/Kg	190	*	23	*	56	175	20
Methyl Acetate	79	0	430	ug/Kg	544	*	41	*	32	175	20
Methylene Chloride	79	0	100	ug/Kg	127		3		59	175	20
trans-1,2-Dichloroethene	79	0	82.6	ug/Kg	105		5		63	137	20
1,1-Dichloroethane	79	0	100	ug/Kg	127		3		62	154	20
Cyclohexane	79	0	45.2	ug/Kg	57		8		41	131	20
2-Butanone	390	0	970	ug/Kg	249	*	37	*	48	174	20
Carbon Tetrachloride	79	0	58.9	ug/Kg	75		5		48	149	20
cis-1,2-Dichloroethene	79	0	95.3	ug/Kg	121		1		59	153	20
Bromochloromethane	79	0	96.1	ug/Kg	122		33	*	54	172	20
Chloroform	79	0	110	ug/Kg	139		7		60	159	20
1,1,1-Trichloroethane	79	0	98.5	ug/Kg	125		4		60	149	20
Methylcyclohexane	79	0	29.4	ug/Kg	37		11		19	135	20
Benzene	79	0	100	ug/Kg	127		3		59	140	20
1,2-Dichloroethane	79	0	120	ug/Kg	152		8		63	153	20
Trichloroethene	79	0	89.8	ug/Kg	114		13		45	154	20
1,2-Dichloropropane	79	0	110	ug/Kg	139		7		67	141	20
Bromodichloromethane	79	0	100	ug/Kg	127		5		54	160	20
4-Methyl-2-Pentanone	390	0	980	ug/Kg	251	*	36	*	54	164	20
Toluene	79	0	80.6	ug/Kg	102		8		61	134	20
t-1,3-Dichloropropene	79	0	33.6	ug/Kg	43	*	39	*	47	155	20
cis-1,3-Dichloropropene	79	0	24.0	ug/Kg	30	*	54	*	56	141	20
1,1,2-Trichloroethane	79	0	140	ug/Kg	177	*	17		69	148	20
2-Hexanone	390	0	930	ug/Kg	238	*	38	*	43	164	20
Dibromochloromethane	79	0	110	ug/Kg	139		15		65	143	20
1,2-Dibromoethane	79	0	120	ug/Kg	152	*	16		63	144	20
Tetrachloroethene	79	0	85.4	ug/Kg	108		8		27	175	20
Chlorobenzene	79	0	87.9	ug/Kg	111		8		66	127	20
Ethyl Benzene	79	0	69.7	ug/Kg	88		9		54	134	20
m/p-Xylenes	160	0	130	ug/Kg	81		16		51	137	20
o-Xylene	79	0	70.9	ug/Kg	90		6		57	139	20
Styrene	79	0	56.7	ug/Kg	72		19		47	136	20
Bromoform	79	0	150	ug/Kg	190	*	23	*	64	144	20
Isopropylbenzene	79	0	77.2	ug/Kg	98		2		44	160	20
1,1,2,2-Tetrachloroethane	79	0	280	ug/Kg	354	*	20		18	175	20

Matrix Spike/Matrix Spike Duplicate Summary

SW-846

SDG No.: Q3419

Analytical Method:

SW8260D

Client: AECOM

Datafile :

VY023581.D

Parameter	Spike	Sample	Result	Units	Rec			RPD		Limits		
		Result			Qual	RPD	Qual	Low	High	RPD		
1,3-Dichlorobenzene	79	0	62.5	ug/Kg	79		2		55	131	20	
1,4-Dichlorobenzene	79	0	65.6	ug/Kg	83		1		57	129	20	
1,2-Dichlorobenzene	79	0	72.3	ug/Kg	92		5		54	140	20	
1,2-Dibromo-3-Chloropropane	79	0	250	ug/Kg	316	*	27	*	46	175	20	
1,2,4-Trichlorobenzene	79	0	26.2	ug/Kg	33		22	*	12	127	20	
1,2,3-Trichlorobenzene	79	0	29.6	ug/Kg	37		29	*	10	160	20	

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.:	<u>Q3419</u>	Analytical Method:	<u>SW8260D</u>
Client:	<u>AECOM</u>	Datafile :	<u>VY023545.D</u>

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VY1022SBS01	Dichlorodifluoromethane	20	20.0	ug/Kg	100			64	136	
	Chloromethane	20	18.0	ug/Kg	90			52	151	
	Vinyl chloride	20	18.7	ug/Kg	94			56	148	
	Bromomethane	20	20.0	ug/Kg	100			58	141	
	Chloroethane	20	19.8	ug/Kg	99			69	130	
	Trichlorofluoromethane	20	20.2	ug/Kg	101			69	134	
	1,1,2-Trichlorotrifluoroethane	20	21.3	ug/Kg	106			81	123	
	1,1-Dichloroethene	20	20.7	ug/Kg	104			79	121	
	Acetone	100	130	ug/Kg	130			40	171	
	Carbon disulfide	20	19.3	ug/Kg	97			59	130	
	Methyl tert-butyl Ether	20	19.8	ug/Kg	99			77	129	
	Methyl Acetate	20	17.3	ug/Kg	86			69	149	
	Methylene Chloride	20	18.4	ug/Kg	92			72	131	
	trans-1,2-Dichloroethene	20	20.4	ug/Kg	102			80	123	
	1,1-Dichloroethane	20	20.5	ug/Kg	103			82	123	
	Cyclohexane	20	19.3	ug/Kg	97			76	122	
	2-Butanone	100	110	ug/Kg	110			69	131	
	Carbon Tetrachloride	20	21.4	ug/Kg	107			76	129	
	cis-1,2-Dichloroethene	20	21.2	ug/Kg	106			82	123	
	Bromochloromethane	20	19.3	ug/Kg	97			80	127	
	Chloroform	20	21.2	ug/Kg	106			82	125	
	1,1,1-Trichloroethane	20	21.3	ug/Kg	106			80	126	
	Methylcyclohexane	20	20.7	ug/Kg	104			77	123	
	Benzene	20	21.2	ug/Kg	106			84	121	
	1,2-Dichloroethane	20	19.8	ug/Kg	99			81	126	
	Trichloroethene	20	21.9	ug/Kg	110			83	122	
	1,2-Dichloropropane	20	21.0	ug/Kg	105			83	122	
	Bromodichloromethane	20	21.2	ug/Kg	106			82	123	
	4-Methyl-2-Pentanone	100	96.0	ug/Kg	96			70	135	
	Toluene	20	22.0	ug/Kg	110			83	122	
	t-1,3-Dichloropropene	20	21.0	ug/Kg	105			78	124	
	cis-1,3-Dichloropropene	20	20.9	ug/Kg	104			81	122	
	1,1,2-Trichloroethane	20	21.6	ug/Kg	108			82	125	
	2-Hexanone	100	110	ug/Kg	110			66	138	
	Dibromochloromethane	20	21.4	ug/Kg	107			79	125	
	1,2-Dibromoethane	20	21.2	ug/Kg	106			80	125	
	Tetrachloroethene	20	22.9	ug/Kg	115			83	125	
	Chlorobenzene	20	21.4	ug/Kg	107			84	122	
	Ethyl Benzene	20	21.2	ug/Kg	106			82	124	
	m/p-Xylenes	40	43.3	ug/Kg	108			83	124	
	o-Xylene	20	21.6	ug/Kg	108			83	123	
	Styrene	20	21.3	ug/Kg	106			82	124	
	Bromoform	20	20.5	ug/Kg	103			75	127	
	Isopropylbenzene	20	21.7	ug/Kg	109			82	124	
	1,1,2,2-Tetrachloroethane	20	19.2	ug/Kg	96			77	127	
	1,3-Dichlorobenzene	20	21.3	ug/Kg	106			83	122	
	1,4-Dichlorobenzene	20	21.1	ug/Kg	106			84	121	
	1,2-Dichlorobenzene	20	21.3	ug/Kg	106			83	124	



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

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q3419 Analytical Method: SW8260D
Client: AECOM Datafile : VY023545.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VY1022SBS01	1,2-Dibromo-3-Chloropropane	20	18.8	ug/Kg	94			66	134	
	1,2,4-Trichlorobenzene	20	20.4	ug/Kg	102			78	127	
	1,2,3-Trichlorobenzene	20	19.8	ug/Kg	99			70	137	

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.:	<u>Q3419</u>	Analytical Method:	<u>SW8260D</u>
Client:	<u>AECOM</u>	Datafile :	<u>VY023546.D</u>

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VY1022SBSD01	Dichlorodifluoromethane	20	19.5	ug/Kg	98	2		64	136	20
	Chloromethane	20	17.5	ug/Kg	88	2		52	151	20
	Vinyl chloride	20	18.3	ug/Kg	92	2		56	148	20
	Bromomethane	20	19.0	ug/Kg	95	5		58	141	20
	Chloroethane	20	18.9	ug/Kg	95	4		69	130	20
	Trichlorofluoromethane	20	19.5	ug/Kg	98	3		69	134	20
	1,1,2-Trichlorotrifluoroethane	20	20.4	ug/Kg	102	4		81	123	20
	1,1-Dichloroethene	20	19.9	ug/Kg	100	4		79	121	20
	Acetone	100	120	ug/Kg	120	8		40	171	20
	Carbon disulfide	20	18.8	ug/Kg	94	3		59	130	20
	Methyl tert-butyl Ether	20	19.3	ug/Kg	97	2		77	129	20
	Methyl Acetate	20	16.0	ug/Kg	80	7		69	149	20
	Methylene Chloride	20	18.0	ug/Kg	90	2		72	131	20
	trans-1,2-Dichloroethene	20	20.1	ug/Kg	101	1		80	123	20
	1,1-Dichloroethane	20	19.9	ug/Kg	100	3		82	123	20
	Cyclohexane	20	18.5	ug/Kg	93	4		76	122	20
	2-Butanone	100	110	ug/Kg	110	0		69	131	20
	Carbon Tetrachloride	20	20.5	ug/Kg	103	4		76	129	20
	cis-1,2-Dichloroethene	20	20.7	ug/Kg	104	2		82	123	20
	Bromochloromethane	20	19.3	ug/Kg	97	0		80	127	20
	Chloroform	20	20.6	ug/Kg	103	3		82	125	20
	1,1,1-Trichloroethane	20	20.7	ug/Kg	104	2		80	126	20
	Methylcyclohexane	20	20.0	ug/Kg	100	4		77	123	20
	Benzene	20	20.7	ug/Kg	104	2		84	121	20
	1,2-Dichloroethane	20	19.4	ug/Kg	97	2		81	126	20
	Trichloroethene	20	21.2	ug/Kg	106	4		83	122	20
	1,2-Dichloropropane	20	20.3	ug/Kg	102	3		83	122	20
	Bromodichloromethane	20	20.7	ug/Kg	104	2		82	123	20
	4-Methyl-2-Pentanone	100	91.4	ug/Kg	91	5		70	135	20
	Toluene	20	21.2	ug/Kg	106	4		83	122	20
	t-1,3-Dichloropropene	20	20.1	ug/Kg	101	4		78	124	20
	cis-1,3-Dichloropropene	20	20.4	ug/Kg	102	2		81	122	20
	1,1,2-Trichloroethane	20	21.2	ug/Kg	106	2		82	125	20
	2-Hexanone	100	100	ug/Kg	100	10		66	138	20
	Dibromochloromethane	20	20.7	ug/Kg	104	3		79	125	20
	1,2-Dibromoethane	20	20.5	ug/Kg	103	3		80	125	20
	Tetrachloroethene	20	22.3	ug/Kg	112	3		83	125	20
	Chlorobenzene	20	21.0	ug/Kg	105	2		84	122	20
	Ethyl Benzene	20	20.8	ug/Kg	104	2		82	124	20
	m/p-Xylenes	40	42.2	ug/Kg	106	2		83	124	20
	o-Xylene	20	21.1	ug/Kg	106	2		83	123	20
	Styrene	20	21.2	ug/Kg	106	0		82	124	20
	Bromoform	20	20.3	ug/Kg	102	1		75	127	20
	Isopropylbenzene	20	20.8	ug/Kg	104	5		82	124	20
	1,1,2,2-Tetrachloroethane	20	19.2	ug/Kg	96	0		77	127	20
	1,3-Dichlorobenzene	20	20.8	ug/Kg	104	2		83	122	20
	1,4-Dichlorobenzene	20	20.7	ug/Kg	104	2		84	121	20
	1,2-Dichlorobenzene	20	20.9	ug/Kg	104	2		83	124	20

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q3419

Analytical Method: SW8260D

Client: AECOM

Datafile : VY023546.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits	RPD
									High	
VY1022SBSD01	1,2-Dibromo-3-Chloropropane	20	19.0	ug/Kg	95	1		66	134	20
	1,2,4-Trichlorobenzene	20	20.2	ug/Kg	101	1		78	127	20
	1,2,3-Trichlorobenzene	20	19.5	ug/Kg	98	1		70	137	20

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q3419

Analytical Method: SW8260D

Client: AECOM

Datafile : VY023561.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VY1024SBS01	Dichlorodifluoromethane	20	18.6	ug/Kg	93			64	136	
	Chloromethane	20	17.3	ug/Kg	86			52	151	
	Vinyl chloride	20	18.0	ug/Kg	90			56	148	
	Bromomethane	20	20.6	ug/Kg	103			58	141	
	Chloroethane	20	18.5	ug/Kg	93			69	130	
	Trichlorofluoromethane	20	19.0	ug/Kg	95			69	134	
	1,1,2-Trichlorotrifluoroethane	20	20.0	ug/Kg	100			81	123	
	1,1-Dichloroethene	20	19.8	ug/Kg	99			79	121	
	Acetone	100	130	ug/Kg	130			40	171	
	Carbon disulfide	20	18.4	ug/Kg	92			59	130	
	Methyl tert-butyl Ether	20	20.0	ug/Kg	100			77	129	
	Methyl Acetate	20	17.2	ug/Kg	86			69	149	
	Methylene Chloride	20	18.5	ug/Kg	93			72	131	
	trans-1,2-Dichloroethene	20	20.1	ug/Kg	101			80	123	
	1,1-Dichloroethane	20	19.8	ug/Kg	99			82	123	
	Cyclohexane	20	18.3	ug/Kg	92			76	122	
	2-Butanone	100	110	ug/Kg	110			69	131	
	Carbon Tetrachloride	20	20.6	ug/Kg	103			76	129	
	cis-1,2-Dichloroethene	20	20.9	ug/Kg	104			82	123	
	Bromochloromethane	20	18.9	ug/Kg	95			80	127	
	Chloroform	20	20.4	ug/Kg	102			82	125	
	1,1,1-Trichloroethane	20	20.5	ug/Kg	103			80	126	
	Methylcyclohexane	20	20.0	ug/Kg	100			77	123	
	Benzene	20	20.7	ug/Kg	104			84	121	
	1,2-Dichloroethane	20	19.6	ug/Kg	98			81	126	
	Trichloroethene	20	21.4	ug/Kg	107			83	122	
	1,2-Dichloropropane	20	20.3	ug/Kg	102			83	122	
	Bromodichloromethane	20	20.8	ug/Kg	104			82	123	
	4-Methyl-2-Pentanone	100	96.4	ug/Kg	96			70	135	
	Toluene	20	21.3	ug/Kg	106			83	122	
	t-1,3-Dichloropropene	20	20.3	ug/Kg	102			78	124	
	cis-1,3-Dichloropropene	20	20.6	ug/Kg	103			81	122	
	1,1,2-Trichloroethane	20	21.6	ug/Kg	108			82	125	
	2-Hexanone	100	110	ug/Kg	110			66	138	
	Dibromochloromethane	20	21.3	ug/Kg	106			79	125	
	1,2-Dibromoethane	20	21.4	ug/Kg	107			80	125	
	Tetrachloroethene	20	20.6	ug/Kg	103			83	125	
	Chlorobenzene	20	20.9	ug/Kg	104			84	122	
	Ethyl Benzene	20	20.5	ug/Kg	103			82	124	
	m/p-Xylenes	40	42.3	ug/Kg	106			83	124	
	o-Xylene	20	21.1	ug/Kg	106			83	123	
	Styrene	20	20.9	ug/Kg	104			82	124	
	Bromoform	20	20.9	ug/Kg	104			75	127	
	Isopropylbenzene	20	20.6	ug/Kg	103			82	124	
	1,1,2,2-Tetrachloroethane	20	20.3	ug/Kg	102			77	127	
	1,3-Dichlorobenzene	20	20.4	ug/Kg	102			83	122	
	1,4-Dichlorobenzene	20	20.6	ug/Kg	103			84	121	
	1,2-Dichlorobenzene	20	20.4	ug/Kg	102			83	124	

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q3419

Analytical Method: SW8260D

Client: AECOM

Datafile : VY023561.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits	RPD
									High	
VY1024SBS01	1,2-Dibromo-3-Chloropropane	20	19.1	ug/Kg	96			66	134	
	1,2,4-Trichlorobenzene	20	19.9	ug/Kg	100			78	127	
	1,2,3-Trichlorobenzene	20	19.6	ug/Kg	98			70	137	

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.:	Q3419	Analytical Method:	SW8260D
Client:	AECOM	Datafile :	VY023562.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VY1024SBSD01	Dichlorodifluoromethane	20	19.0	ug/Kg	95	2		64	136	20
	Chloromethane	20	17.9	ug/Kg	90	5		52	151	20
	Vinyl chloride	20	18.8	ug/Kg	94	4		56	148	20
	Bromomethane	20	21.4	ug/Kg	107	4		58	141	20
	Chloroethane	20	19.6	ug/Kg	98	5		69	130	20
	Trichlorofluoromethane	20	20.3	ug/Kg	102	7		69	134	20
	1,1,2-Trichlorotrifluoroethane	20	21.2	ug/Kg	106	6		81	123	20
	1,1-Dichloroethene	20	20.8	ug/Kg	104	5		79	121	20
	Acetone	100	130	ug/Kg	130	0		40	171	20
	Carbon disulfide	20	19.0	ug/Kg	95	3		59	130	20
	Methyl tert-butyl Ether	20	21.1	ug/Kg	106	6		77	129	20
	Methyl Acetate	20	17.5	ug/Kg	88	2		69	149	20
	Methylene Chloride	20	19.3	ug/Kg	97	4		72	131	20
	trans-1,2-Dichloroethene	20	21.1	ug/Kg	106	5		80	123	20
	1,1-Dichloroethane	20	20.6	ug/Kg	103	4		82	123	20
	Cyclohexane	20	19.2	ug/Kg	96	4		76	122	20
	2-Butanone	100	120	ug/Kg	120	9		69	131	20
	Carbon Tetrachloride	20	21.4	ug/Kg	107	4		76	129	20
	cis-1,2-Dichloroethene	20	21.7	ug/Kg	109	5		82	123	20
	Bromochloromethane	20	20.0	ug/Kg	100	5		80	127	20
	Chloroform	20	21.3	ug/Kg	106	4		82	125	20
	1,1,1-Trichloroethane	20	21.2	ug/Kg	106	3		80	126	20
	Methylcyclohexane	20	20.7	ug/Kg	104	4		77	123	20
	Benzene	20	21.3	ug/Kg	106	2		84	121	20
	1,2-Dichloroethane	20	20.4	ug/Kg	102	4		81	126	20
	Trichloroethene	20	21.9	ug/Kg	110	3		83	122	20
	1,2-Dichloropropane	20	21.0	ug/Kg	105	3		83	122	20
	Bromodichloromethane	20	21.6	ug/Kg	108	4		82	123	20
	4-Methyl-2-Pentanone	100	100	ug/Kg	100	4		70	135	20
	Toluene	20	21.9	ug/Kg	110	4		83	122	20
	t-1,3-Dichloropropene	20	21.3	ug/Kg	106	4		78	124	20
	cis-1,3-Dichloropropene	20	21.8	ug/Kg	109	6		81	122	20
	1,1,2-Trichloroethane	20	23.0	ug/Kg	115	6		82	125	20
	2-Hexanone	100	120	ug/Kg	120	9		66	138	20
	Dibromochloromethane	20	22.7	ug/Kg	114	7		79	125	20
	1,2-Dibromoethane	20	22.5	ug/Kg	113	5		80	125	20
	Tetrachloroethene	20	21.3	ug/Kg	106	3		83	125	20
	Chlorobenzene	20	21.9	ug/Kg	110	6		84	122	20
	Ethyl Benzene	20	21.5	ug/Kg	108	5		82	124	20
	m/p-Xylenes	40	44.4	ug/Kg	111	5		83	124	20
	o-Xylene	20	22.0	ug/Kg	110	4		83	123	20
	Styrene	20	21.9	ug/Kg	110	6		82	124	20
	Bromoform	20	22.6	ug/Kg	113	8		75	127	20
	Isopropylbenzene	20	21.8	ug/Kg	109	6		82	124	20
	1,1,2,2-Tetrachloroethane	20	22.4	ug/Kg	112	9		77	127	20
	1,3-Dichlorobenzene	20	22.0	ug/Kg	110	8		83	122	20
	1,4-Dichlorobenzene	20	21.8	ug/Kg	109	6		84	121	20
	1,2-Dichlorobenzene	20	22.3	ug/Kg	112	9		83	124	20

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.:	<u>Q3419</u>	Analytical Method:	<u>SW8260D</u>
Client:	<u>AECOM</u>	Datafile :	<u>VY023562.D</u>

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VY1024SBSD01	1,2-Dibromo-3-Chloropropane	20	22.0	ug/Kg	110	14		66	134	20
	1,2,4-Trichlorobenzene	20	21.9	ug/Kg	110	10		78	127	20
	1,2,3-Trichlorobenzene	20	21.4	ug/Kg	107	9		70	137	20

VOLATILE METHOD BLANK SUMMARY

Client ID

VY1022SBL01

Lab Name: Alliance

Contract: AECO02

Lab Code: ACE

SDG NO.: Q3419

Lab File ID: VY023544.D

Lab Sample ID: VY1022SBL01

Date Analyzed: 10/22/2025

Time Analyzed: 10:00

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

Heated Purge: (Y/N) Y

Instrument ID: MSVOA_Y

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
VY1022SBS01	VY1022SBS01	VY023545.D	10/22/2025
VY1022SBSD01	VY1022SBSD01	VY023546.D	10/22/2025
PR-132-S16-015094-20251021	Q3419-01	VY023551.D	10/22/2025
PR132-S16-119133-20251021	Q3419-04	VY023552.D	10/22/2025
PR132-S16-094119-20251021	Q3419-05	VY023553.D	10/22/2025

COMMENTS: _____

VOLATILE METHOD BLANK SUMMARY

Client ID

VY1024SBL01

Lab Name: Alliance

Contract: AECO02

Lab Code: ACE

SDG NO.: Q3419

Lab File ID: VY023560.D

Lab Sample ID: VY1024SBL01

Date Analyzed: 10/24/2025

Time Analyzed: 09:24

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

Heated Purge: (Y/N) Y

Instrument ID: MSVOA_Y

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
VY1024SBS01	VY1024SBS01	VY023561.D	10/24/2025
VY1024SBSD01	VY1024SBSD01	VY023562.D	10/24/2025
PR-132-S16-015094-20251021MS	Q3419-02MS	VY023580.D	10/24/2025
PR-132-S16-015094-20251021MSD	Q3419-03MSD	VY023581.D	10/24/2025

COMMENTS: _____



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

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Alliance

Contract: AECO02

Lab Code: ACE

SDG NO.: Q3419

Lab File ID: VY023383.D

BFB Injection Date: 10/07/2025

Instrument ID: MSVOA_Y

BFB Injection Time: 08:43

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

Heated Purge: Y/N Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.9
75	30.0 - 60.0% of mass 95	48.1
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.9 (0.9) 1
174	50.0 - 100.0% of mass 95	99.1
175	5.0 - 9.0% of mass 174	7.3 (7.4) 1
176	95.0 - 101.0% of mass 174	95.4 (96.2) 1
177	5.0 - 9.0% of mass 176	6.3 (6.6) 2

1-Value is % mass 174

2-Value is % mass 176

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

CLIENT ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDIC005	VSTDIC005	VY023384.D	10/07/2025	09:17
VSTDIC010	VSTDIC010	VY023385.D	10/07/2025	10:02
VSTDIC020	VSTDIC020	VY023386.D	10/07/2025	11:24
VSTDIC050	VSTDIC050	VY023387.D	10/07/2025	11:47
VSTDIC100	VSTDIC100	VY023388.D	10/07/2025	12:09
VSTDIC150	VSTDIC150	VY023389.D	10/07/2025	12:32



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

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Alliance

Contract: AECO02

Lab Code: ACE

SDG NO.: Q3419

Lab File ID: VY023542.D

BFB Injection Date: 10/22/2025

Instrument ID: MSVOA_Y

BFB Injection Time: 09:00

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

Heated Purge: Y/N Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.8
75	30.0 - 60.0% of mass 95	47.5
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	1 (1) 1
174	50.0 - 100.0% of mass 95	99.3
175	5.0 - 9.0% of mass 174	7.2 (7.2) 1
176	95.0 - 101.0% of mass 174	97.5 (98.2) 1
177	5.0 - 9.0% of mass 176	6.3 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

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

CLIENT ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDCCC050	VSTDCCC050	VY023543.D	10/22/2025	09:30
VY1022SBL01	VY1022SBL01	VY023544.D	10/22/2025	10:00
VY1022SBS01	VY1022SBS01	VY023545.D	10/22/2025	10:28
VY1022SBSD01	VY1022SBSD01	VY023546.D	10/22/2025	10:51
PR-132-S16-015094-20251021	Q3419-01	VY023551.D	10/22/2025	14:07
PR132-S16-119133-20251021	Q3419-04	VY023552.D	10/22/2025	15:34
PR132-S16-094119-20251021	Q3419-05	VY023553.D	10/22/2025	15:58



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

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Alliance

Contract: AECO02

Lab Code: ACE

SDG NO.: Q3419

Lab File ID: VY023558.D

BFB Injection Date: 10/24/2025

Instrument ID: MSVOA_Y

BFB Injection Time: 07:47

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

Heated Purge: Y/N Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.7
75	30.0 - 60.0% of mass 95	47.4
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	1.1 (1.1) 1
174	50.0 - 100.0% of mass 95	98.2
175	5.0 - 9.0% of mass 174	7.3 (7.4) 1
176	95.0 - 101.0% of mass 174	96.3 (98) 1
177	5.0 - 9.0% of mass 176	6.4 (6.6) 2

1-Value is % mass 174

2-Value is % mass 176

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

CLIENT ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDCCC050	VSTDCCC050	VY023559.D	10/24/2025	08:56
VY1024SBL01	VY1024SBL01	VY023560.D	10/24/2025	09:24
VY1024SBS01	VY1024SBS01	VY023561.D	10/24/2025	09:52
VY1024SBSD01	VY1024SBSD01	VY023562.D	10/24/2025	10:14
PR-132-S16-015094-20251021MS	Q3419-02MS	VY023580.D	10/24/2025	17:58
PR-132-S16-015094-20251021MSD	Q3419-03MSD	VY023581.D	10/24/2025	18:20

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Alliance Contract: AECO02
 Lab Code: ACE SDG NO.: Q3419
 Lab File ID: VY023543.D Date Analyzed: 10/22/2025
 Instrument ID: MSVOA_Y Time Analyzed: 09:30
 GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) Y

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	557873	7.71	806690	8.62	720008	11.42
UPPER LIMIT	1115750	8.213	1613380	9.116	1440020	11.92
LOWER LIMIT	278937	7.213	403345	8.116	360004	10.92
EPA SAMPLE NO.						
PR-132-S16-015094-20251021	785988	7.71	1180613	8.62	922887	11.42
PR132-S16-119133-20251021	900343	7.71	1446852	8.62	1218442	11.42
PR132-S16-094119-20251021	942425	7.71	1514027	8.62	1286219	11.41
VY1022SBL01	890059	7.71	1434768	8.62	1180185	11.42
VY1022SBS01	546555	7.71	794303	8.62	700136	11.41
VY1022SBSD01	542616	7.71	794200	8.62	691787	11.41

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

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

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

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name:	<u>Alliance</u>	Contract:	<u>AECO02</u>
Lab Code:	<u>ACE</u>	SDG NO.:	<u>Q3419</u>
Lab File ID:	<u>VY023543.D</u>	Date Analyzed:	<u>10/22/2025</u>
Instrument ID:	<u>MSVOA_Y</u>	Time Analyzed:	<u>09:30</u>
GC Column:	<u>RXI-624</u>	ID:	<u>0.25</u> (mm)
		Heated Purge:	(Y/N) <u>Y</u>

	IS4 AREA #	RT #				
12 HOUR STD	373234	13.346				
UPPER LIMIT	746468	13.846				
LOWER LIMIT	186617	12.846				
EPA SAMPLE NO.						
PR-132-S16-015094-20251021	368413	13.35				
PR132-S16-119133-20251021	499022	13.35				
PR132-S16-094119-20251021	504876	13.35				
VY1022SBL01	484557	13.35				
VY1022SBS01	365280	13.35				
VY1022SBSD01	364513	13.35				

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.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Alliance Contract: AECO02
 Lab Code: ACE SDG NO.: Q3419
 Lab File ID: VY023559.D Date Analyzed: 10/24/2025
 Instrument ID: MSVOA_Y Time Analyzed: 08:56
 GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) Y

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	558901	7.71	809883	8.62	712621	11.41
UPPER LIMIT	1117800	8.213	1619770	9.115	1425240	11.914
LOWER LIMIT	279451	7.213	404942	8.115	356311	10.914
EPA SAMPLE NO.						
PR-132-S16-015094-20251021MS	271890 *	7.71	386012 *	8.62	249668 *	11.42
PR-132-S16-015094-20251021MSD	173647 *	7.71	245581 *	8.62	157959 *	11.41
VY1024SBL01	898566	7.71	1421897	8.62	1164716	11.41
VY1024SBS01	551537	7.71	799010	8.62	709717	11.41
VY1024SBSD01	536786	7.71	783587	8.62	686581	11.41

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

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

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

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name:	<u>Alliance</u>	Contract:	<u>AECO02</u>
Lab Code:	<u>ACE</u>	SDG NO.:	<u>Q3419</u>
Lab File ID:	<u>VY023559.D</u>	Date Analyzed:	<u>10/24/2025</u>
Instrument ID:	<u>MSVOA_Y</u>	Time Analyzed:	<u>08:56</u>
GC Column:	<u>RXI-624</u>	ID:	<u>0.25</u> (mm)
		Heated Purge:	(Y/N) <u>Y</u>

	IS4 AREA #	RT #				
12 HOUR STD	380279	13.346				
UPPER LIMIT	760558	13.846				
LOWER LIMIT	190140	12.846				
EPA SAMPLE NO.						
PR-132-S16-015094-20251021MS	80067 *	13.35				
PR-132-S16-015094-20251021MSI	48940 *	13.35				
VY1024SBL01	469443	13.35				
VY1024SBS01	380713	13.35				
VY1024SBSD01	360721	13.35				

IS4 = 1,4-Dichlorobenzene-d4

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

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



SAMPLE DATA

Report of Analysis

Client: AECOM
 Project: AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206
 Client Sample ID: PR-132-S16-015094-20251C
 Lab Sample ID: Q3419-01
 Analytical Method: 8260D
 Sample Wt/Vol: 5.76 g

Level: LOW
 Final Vol: 5000 uL

Date Collected: 10/21/25
 Date Received: 10/21/25
 SDG No.: Q3419
 Matrix: SOIL
 % Solid: 54.4
 Test: VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
75-71-8	Dichlorodifluoromethane	1.80	U	1	1.80	8.00	ug/Kg	10/22/25 14:07	VY102225
74-87-3	Chloromethane	1.80	U	1	1.80	8.00	ug/Kg	10/22/25 14:07	VY102225
75-01-4	Vinyl Chloride	1.30	U	1	1.30	8.00	ug/Kg	10/22/25 14:07	VY102225
74-83-9	Bromomethane	1.70	U	1	1.70	8.00	ug/Kg	10/22/25 14:07	VY102225
75-00-3	Chloroethane	2.00	U	1	2.00	8.00	ug/Kg	10/22/25 14:07	VY102225
75-69-4	Trichlorofluoromethane	1.90	U	1	1.90	8.00	ug/Kg	10/22/25 14:07	VY102225
76-13-1	1,1,2-Trichlorotrifluoroethane	1.70	U	1	1.70	8.00	ug/Kg	10/22/25 14:07	VY102225
75-35-4	1,1-Dichloroethene	1.60	U	1	1.60	8.00	ug/Kg	10/22/25 14:07	VY102225
67-64-1	Acetone	36.3	J	1	7.60	39.9	ug/Kg	10/22/25 14:07	VY102225
75-15-0	Carbon Disulfide	7.80	J	1	1.70	8.00	ug/Kg	10/22/25 14:07	VY102225
1634-04-4	Methyl tert-butyl Ether	1.20	U	1	1.20	8.00	ug/Kg	10/22/25 14:07	VY102225
79-20-9	Methyl Acetate	2.50	U	1	2.50	8.00	ug/Kg	10/22/25 14:07	VY102225
75-09-2	Methylene Chloride	5.60	U	1	5.60	16.0	ug/Kg	10/22/25 14:07	VY102225
156-60-5	trans-1,2-Dichloroethene	1.40	U	1	1.40	8.00	ug/Kg	10/22/25 14:07	VY102225
75-34-3	1,1-Dichloroethane	1.30	U	1	1.30	8.00	ug/Kg	10/22/25 14:07	VY102225
110-82-7	Cyclohexane	1.30	U	1	1.30	8.00	ug/Kg	10/22/25 14:07	VY102225
78-93-3	2-Butanone	10.4	U	1	10.4	39.9	ug/Kg	10/22/25 14:07	VY102225
56-23-5	Carbon Tetrachloride	1.50	U	1	1.50	8.00	ug/Kg	10/22/25 14:07	VY102225
156-59-2	cis-1,2-Dichloroethene	1.20	U	1	1.20	8.00	ug/Kg	10/22/25 14:07	VY102225
74-97-5	Bromochloromethane	1.80	U	1	1.80	8.00	ug/Kg	10/22/25 14:07	VY102225
67-66-3	Chloroform	1.30	U	1	1.30	8.00	ug/Kg	10/22/25 14:07	VY102225
71-55-6	1,1,1-Trichloroethane	1.50	U	1	1.50	8.00	ug/Kg	10/22/25 14:07	VY102225
108-87-2	Methylcyclohexane	1.50	U	1	1.50	8.00	ug/Kg	10/22/25 14:07	VY102225
71-43-2	Benzene	1.30	U	1	1.30	8.00	ug/Kg	10/22/25 14:07	VY102225
107-06-2	1,2-Dichloroethane	1.30	U	1	1.30	8.00	ug/Kg	10/22/25 14:07	VY102225
79-01-6	Trichloroethene	1.30	U	1	1.30	8.00	ug/Kg	10/22/25 14:07	VY102225
78-87-5	1,2-Dichloropropane	1.50	U	1	1.50	8.00	ug/Kg	10/22/25 14:07	VY102225
75-27-4	Bromodichloromethane	1.20	U	1	1.20	8.00	ug/Kg	10/22/25 14:07	VY102225
108-10-1	4-Methyl-2-Pentanone	5.70	U	1	5.70	39.9	ug/Kg	10/22/25 14:07	VY102225
108-88-3	Toluene	1.20	U	1	1.20	8.00	ug/Kg	10/22/25 14:07	VY102225
10061-02-6	t-1,3-Dichloropropene	1.00	U	1	1.00	8.00	ug/Kg	10/22/25 14:07	VY102225
10061-01-5	cis-1,3-Dichloropropene	0.99	U	1	0.99	8.00	ug/Kg	10/22/25 14:07	VY102225
79-00-5	1,1,2-Trichloroethane	1.50	U	1	1.50	8.00	ug/Kg	10/22/25 14:07	VY102225
591-78-6	2-Hexanone	5.90	U	1	5.90	39.9	ug/Kg	10/22/25 14:07	VY102225
124-48-1	Dibromochloromethane	1.40	U	1	1.40	8.00	ug/Kg	10/22/25 14:07	VY102225
106-93-4	1,2-Dibromoethane	1.40	U	1	1.40	8.00	ug/Kg	10/22/25 14:07	VY102225
127-18-4	Tetrachloroethene	1.70	U	1	1.70	8.00	ug/Kg	10/22/25 14:07	VY102225
108-90-7	Chlorobenzene	1.50	U	1	1.50	8.00	ug/Kg	10/22/25 14:07	VY102225
100-41-4	Ethyl Benzene	1.10	U	1	1.10	8.00	ug/Kg	10/22/25 14:07	VY102225
179601-23-1	m/p-Xylenes	2.00	U	1	2.00	16.0	ug/Kg	10/22/25 14:07	VY102225
95-47-6	o-Xylene	1.30	U	1	1.30	8.00	ug/Kg	10/22/25 14:07	VY102225
100-42-5	Styrene	1.10	U	1	1.10	8.00	ug/Kg	10/22/25 14:07	VY102225
75-25-2	Bromoform	1.40	U	1	1.40	8.00	ug/Kg	10/22/25 14:07	VY102225



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

Report of Analysis

Client:	AECOM	Date Collected:	10/21/25
Project:	AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206	Date Received:	10/21/25
Client Sample ID:	PR-132-S16-015094-202510	SDG No.:	Q3419
Lab Sample ID:	Q3419-01	Matrix:	SOIL
Analytical Method:	8260D	% Solid:	54.4
Sample Wt/Vol:	5.76 g	Test:	VOC-TCLVOA-10
	Level: LOW		
	Final Vol: 5000 uL		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
98-82-8	Isopropylbenzene	1.20	U	1	1.20	8.00	ug/Kg	10/22/25 14:07	VY102225
79-34-5	1,1,2,2-Tetrachloroethane	1.90	U	1	1.90	8.00	ug/Kg	10/22/25 14:07	VY102225
541-73-1	1,3-Dichlorobenzene	2.70	U	1	2.70	8.00	ug/Kg	10/22/25 14:07	VY102225
106-46-7	1,4-Dichlorobenzene	2.50	U	1	2.50	8.00	ug/Kg	10/22/25 14:07	VY102225
95-50-1	1,2-Dichlorobenzene	2.30	U	1	2.30	8.00	ug/Kg	10/22/25 14:07	VY102225
96-12-8	1,2-Dibromo-3-Chloropropane	2.90	U	1	2.90	8.00	ug/Kg	10/22/25 14:07	VY102225
120-82-1	1,2,4-Trichlorobenzene	4.70	U	1	4.70	8.00	ug/Kg	10/22/25 14:07	VY102225
87-61-6	1,2,3-Trichlorobenzene	5.10	U	1	5.10	8.00	ug/Kg	10/22/25 14:07	VY102225

SURROGATES

17060-07-0	1,2-Dichloroethane-d4	44.2			63 - 155	88%	SPK: 50
1868-53-7	Dibromofluoromethane	47.8			70 - 134	96%	SPK: 50
2037-26-5	Toluene-d8	47.7			74 - 123	95%	SPK: 50
460-00-4	4-Bromofluorobenzene	39.4			17 - 146	79%	SPK: 50

INTERNAL STANDARDS

363-72-4	Pentafluorobenzene	786000
540-36-3	1,4-Difluorobenzene	1180000
3114-55-4	Chlorobenzene-d5	923000
3855-82-1	1,4-Dichlorobenzene-d4	368000

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_Y\Data\VY102225\
 Data File : VY023551.D
 Acq On : 22 Oct 2025 14:07
 Operator : SY/MD
 Sample : Q3419-01
 Misc : 5.76g/5.0mL/MSVOA_Y/SOIL/A
 ALS Vial : 11 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 PR-132-S16-015094-20251021

Quant Time: Oct 24 02:35:35 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

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

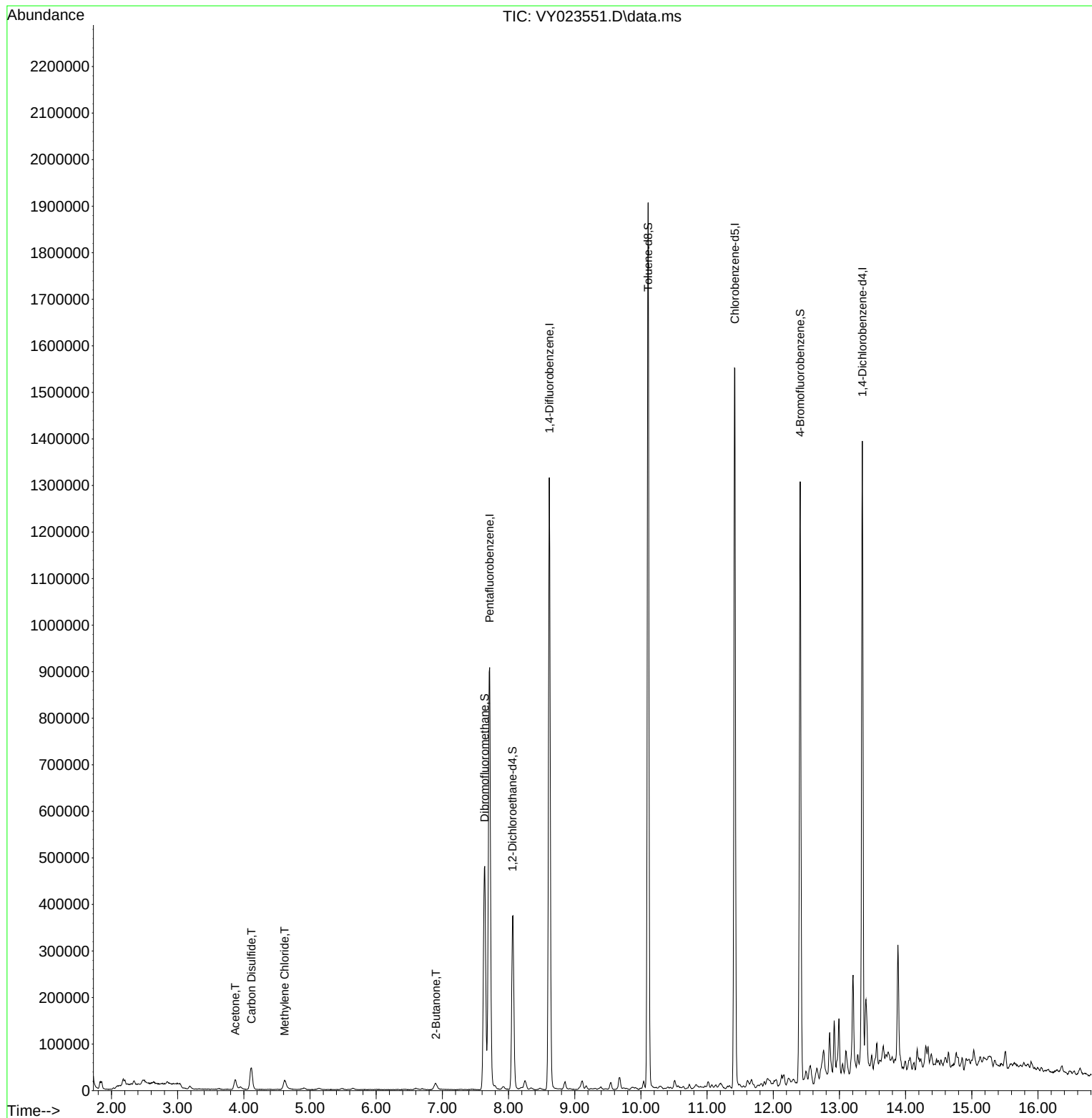
Internal Standards						
1) Pentafluorobenzene	7.713	168	785988	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	8.616	114	1180613	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.420	117	922887	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.347	152	368413	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.061	65	290223	44.157	ug/l	0.00
Spiked Amount	50.000	Range	50 - 163	Recovery	=	88.320%
35) Dibromofluoromethane	7.640	113	346742	47.798	ug/l	0.00
Spiked Amount	50.000	Range	54 - 147	Recovery	=	95.600%
50) Toluene-d8	10.109	98	1289709	47.739	ug/l	0.00
Spiked Amount	50.000	Range	58 - 134	Recovery	=	95.480%
62) 4-Bromofluorobenzene	12.408	95	351404	39.398	ug/l	0.00
Spiked Amount	50.000	Range	30 - 143	Recovery	=	78.800%
Target Compounds						
					Qvalue	
16) Acetone	3.873	43	35575	22.736	ug/l	99
17) Carbon Disulfide	4.116	76	98634	4.915	ug/l	99
20) Methylene Chloride	4.616	84	15693	1.855	ug/l	96
25) 2-Butanone	6.903	43	12134	6.352	ug/l	89

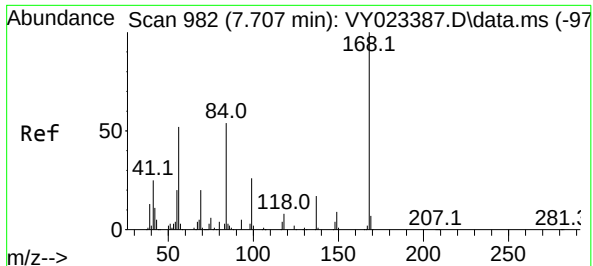
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102225\
Data File : VY023551.D
Acq On : 22 Oct 2025 14:07
Operator : SY/MD
Sample : Q3419-01
Misc : 5.76g/5.0mL/MSVOA_Y/SOIL/A
ALS Vial : 11 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
PR-132-S16-015094-20251021

Quant Time: Oct 24 02:35:35 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 05:12:50 2025
Response via : Initial Calibration

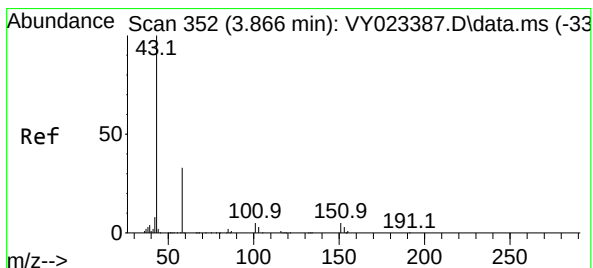
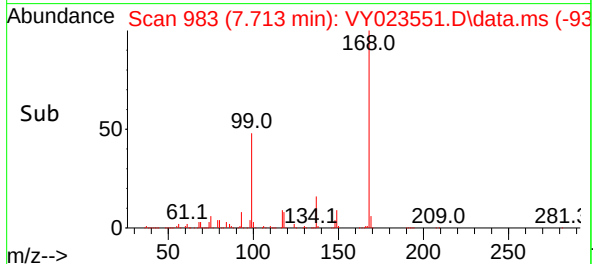
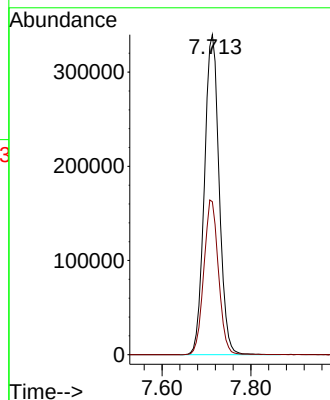
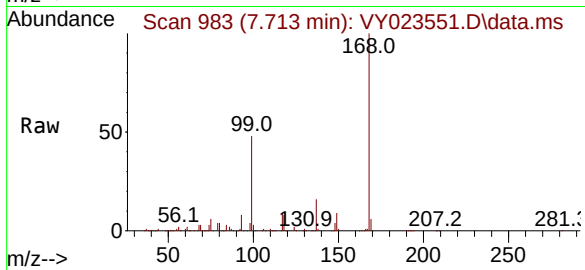




#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 7.713 min Scan# 982
Delta R.T. 0.006 min
Lab File: VY023551.D
Acq: 22 Oct 2025 14:07

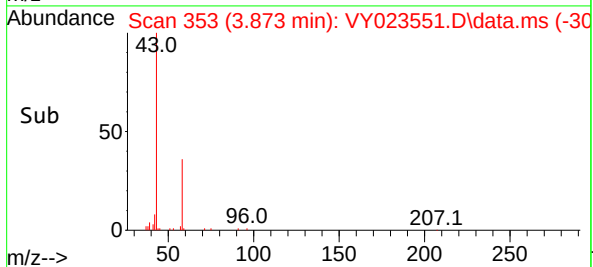
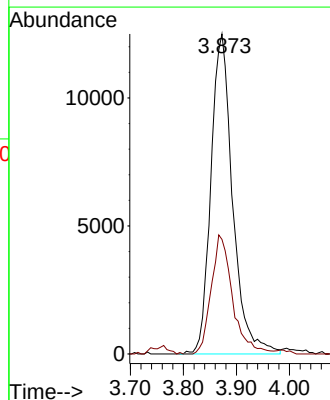
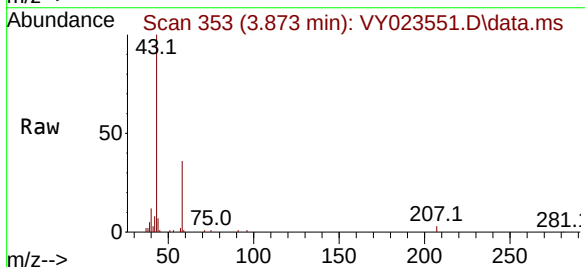
Instrument :
MSVOA_Y
ClientSampleId :
PR-132-S16-015094-20251021

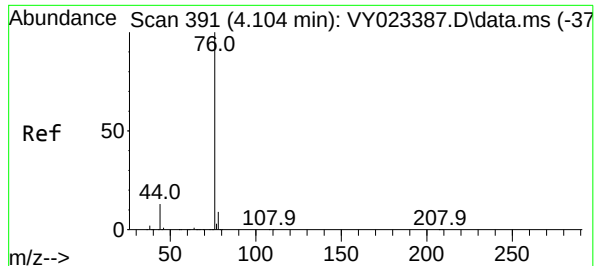
Tgt Ion:168 Resp: 785988
Ion Ratio Lower Upper
168 100
99 47.8 39.7 59.5



#16
Acetone
Concen: 22.736 ug/l
RT: 3.873 min Scan# 353
Delta R.T. 0.006 min
Lab File: VY023551.D
Acq: 22 Oct 2025 14:07

Tgt Ion: 43 Resp: 35575
Ion Ratio Lower Upper
43 100
58 35.4 27.7 41.5





#17

Carbon Disulfide

Concen: 4.915 ug/l

RT: 4.116 min Scan# 391

Delta R.T. 0.012 min

Lab File: VY023551.D

Acq: 22 Oct 2025 14:07

Instrument :

MSVOA_Y

ClientSampleId :

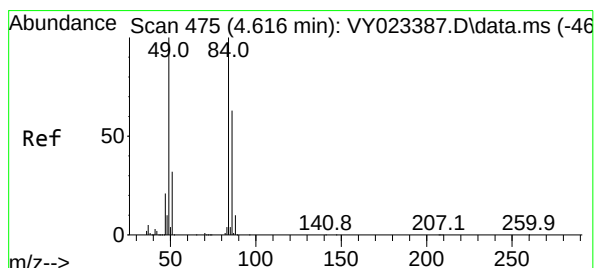
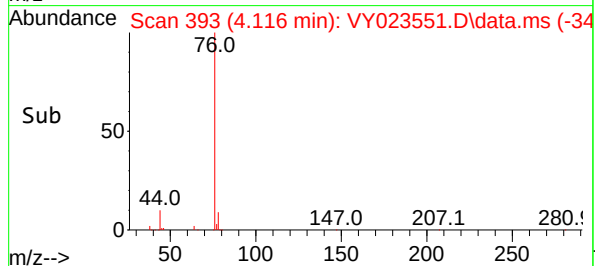
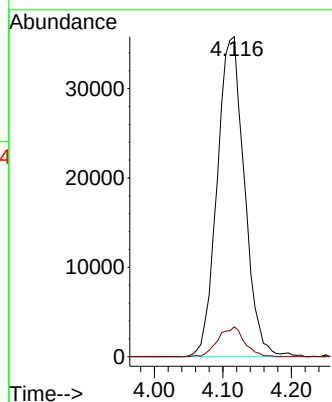
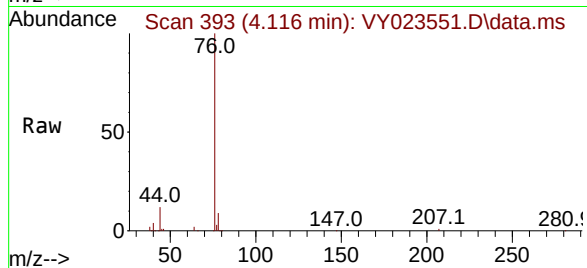
PR-132-S16-015094-20251021

Tgt Ion: 76 Resp: 98634

Ion Ratio Lower Upper

76 100

78 9.3 7.3 10.9



#20

Methylene Chloride

Concen: 1.855 ug/l

RT: 4.616 min Scan# 475

Delta R.T. 0.000 min

Lab File: VY023551.D

Acq: 22 Oct 2025 14:07

Tgt Ion: 84 Resp: 15693

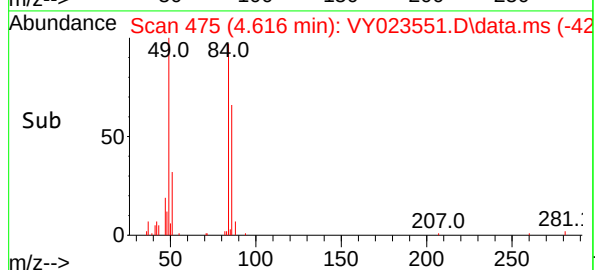
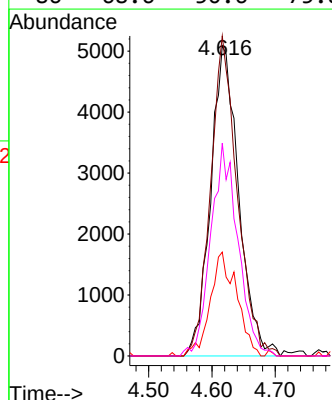
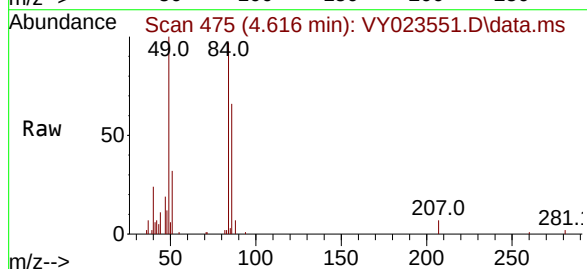
Ion Ratio Lower Upper

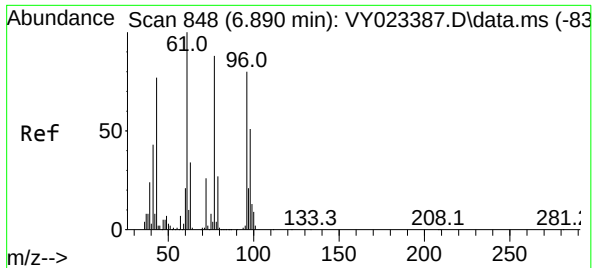
84 100

49 103.2 80.2 120.4

51 33.5 25.9 38.9

86 68.6 50.6 75.8

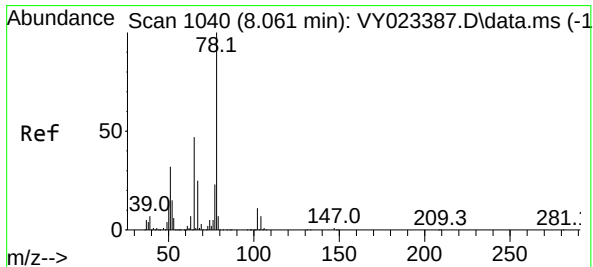
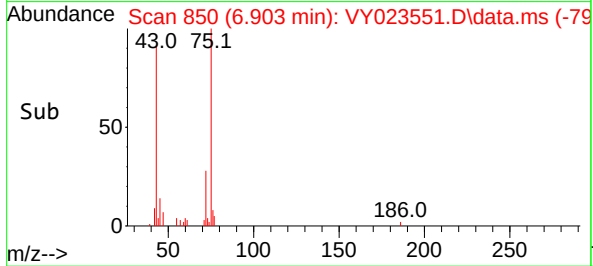
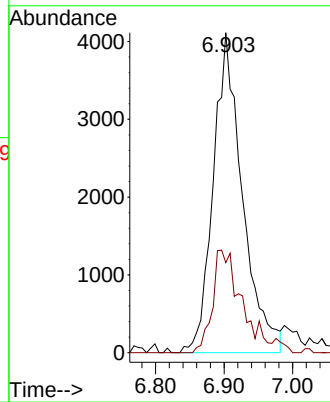
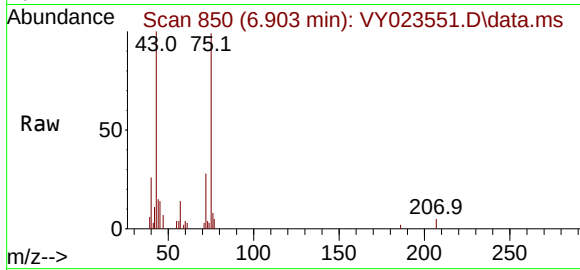




#25
2-Butanone
Concen: 6.352 ug/l
RT: 6.903 min Scan# 848
Delta R.T. 0.012 min
Lab File: VY023551.D
Acq: 22 Oct 2025 14:07

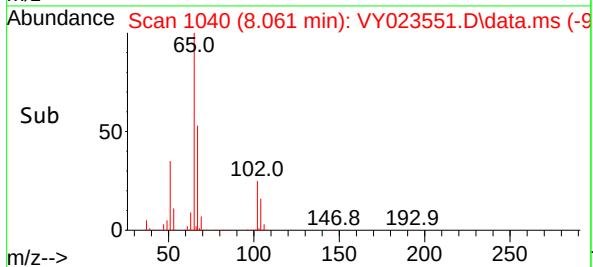
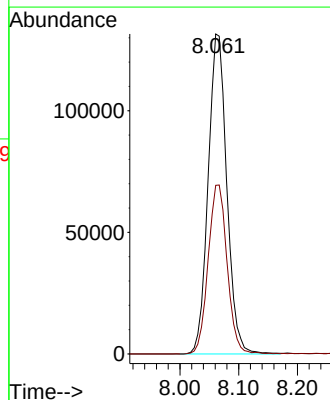
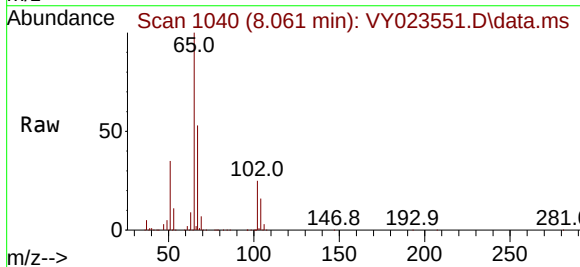
Instrument :
MSVOA_Y
ClientSampleId :
PR-132-S16-015094-20251021

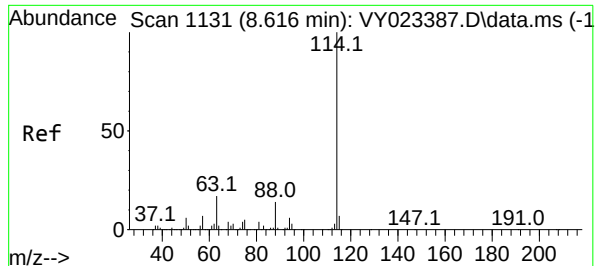
Tgt Ion: 43 Resp: 12134
Ion Ratio Lower Upper
43 100
72 28.2 27.4 41.2



#33
1,2-Dichloroethane-d4
Concen: 44.157 ug/l
RT: 8.061 min Scan# 1040
Delta R.T. 0.000 min
Lab File: VY023551.D
Acq: 22 Oct 2025 14:07

Tgt Ion: 65 Resp: 290223
Ion Ratio Lower Upper
65 100
67 53.8 0.0 105.8





#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 8.616 min Scan# 1131

Delta R.T. 0.000 min

Lab File: VY023551.D

Acq: 22 Oct 2025 14:07

Instrument :

MSVOA_Y

ClientSampleId :

PR-132-S16-015094-20251021

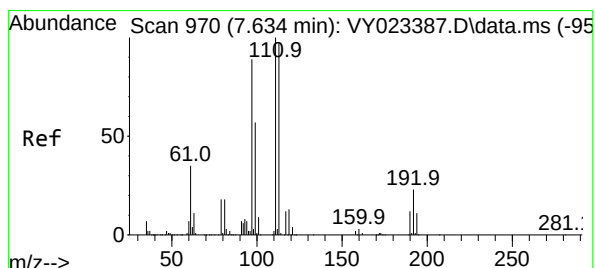
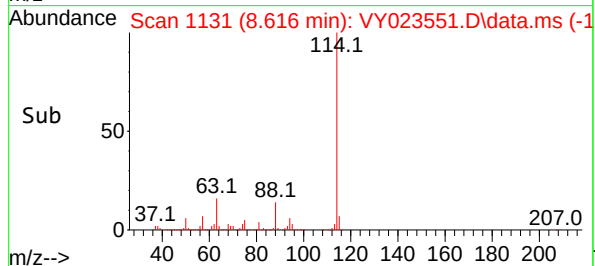
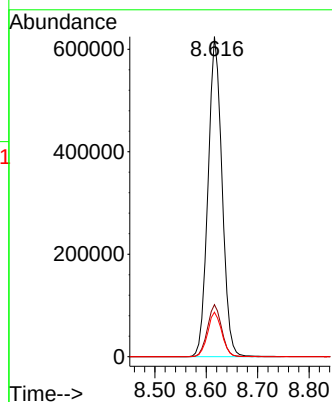
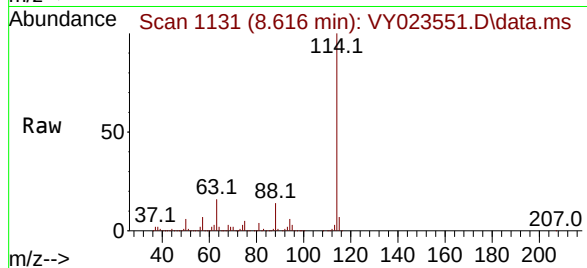
Tgt Ion:114 Resp: 1180613

Ion Ratio Lower Upper

114 100

63 16.2 0.0 34.2

88 13.9 0.0 28.4



#35

Dibromofluoromethane

Concen: 47.798 ug/l

RT: 7.640 min Scan# 971

Delta R.T. 0.006 min

Lab File: VY023551.D

Acq: 22 Oct 2025 14:07

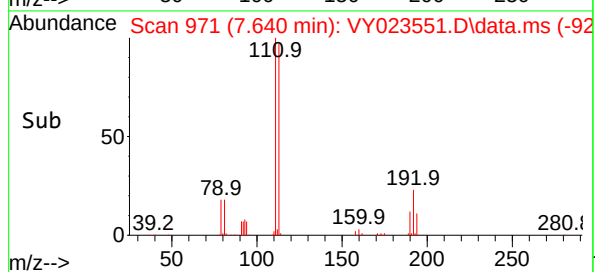
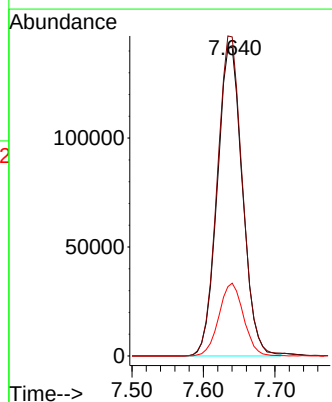
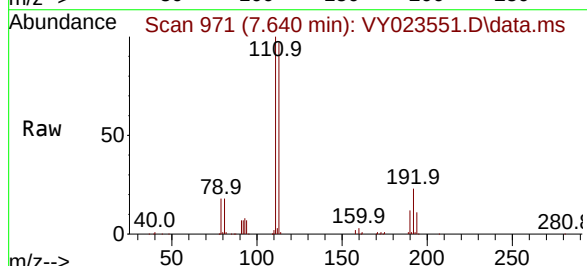
Tgt Ion:113 Resp: 346742

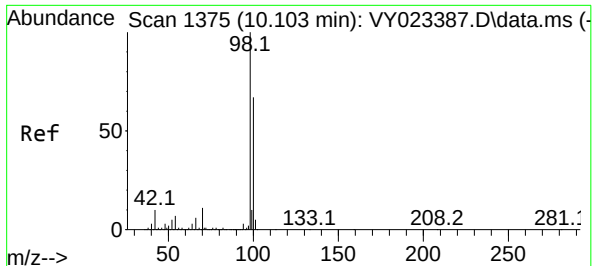
Ion Ratio Lower Upper

113 100

111 103.8 81.8 122.6

192 23.0 18.0 27.0

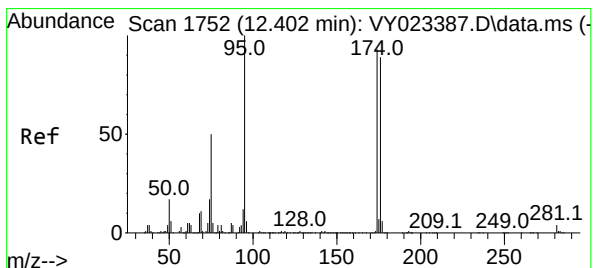
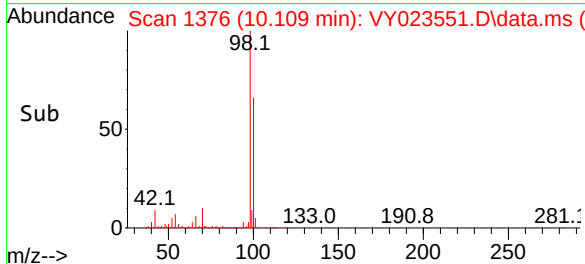
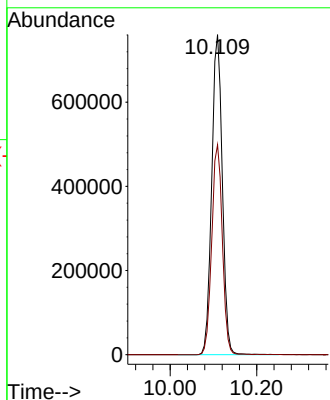
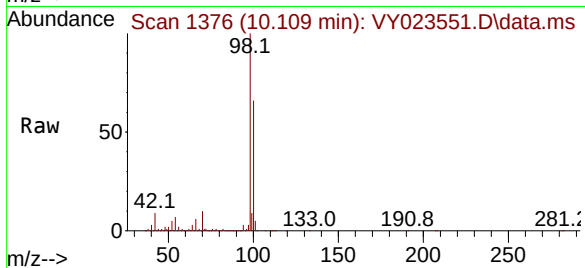




#50
Toluene-d8
Concen: 47.739 ug/l
RT: 10.109 min Scan# 11
Delta R.T. 0.006 min
Lab File: VY023551.D
Acq: 22 Oct 2025 14:07

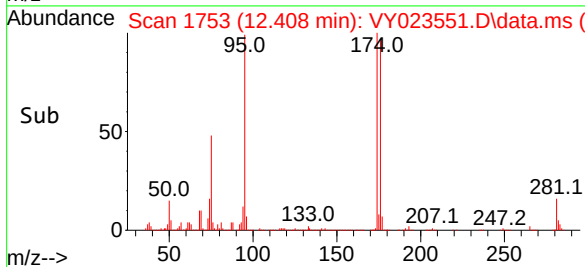
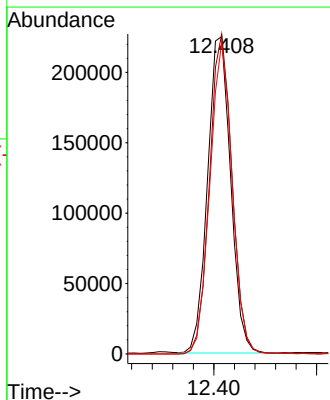
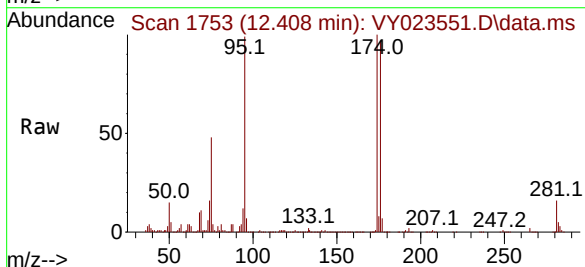
Instrument :
MSVOA_Y
ClientSampleId :
PR-132-S16-015094-20251021

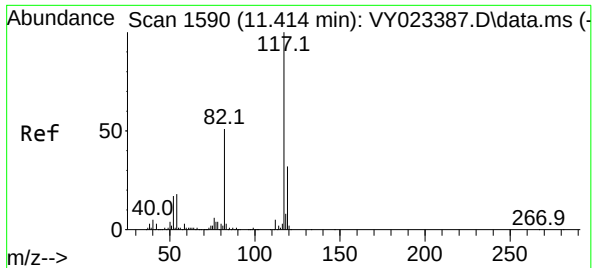
Tgt Ion: 98 Resp: 1289709
Ion Ratio Lower Upper
98 100
100 65.7 53.0 79.4



#62
4-Bromofluorobenzene
Concen: 39.398 ug/l
RT: 12.408 min Scan# 1753
Delta R.T. 0.006 min
Lab File: VY023551.D
Acq: 22 Oct 2025 14:07

Tgt Ion: 95 Resp: 351404
Ion Ratio Lower Upper
95 100
174 98.6 0.0 192.8
176 95.3 0.0 187.6

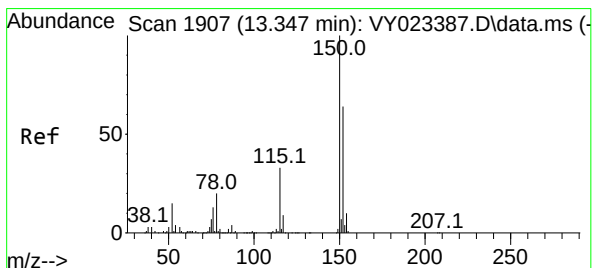
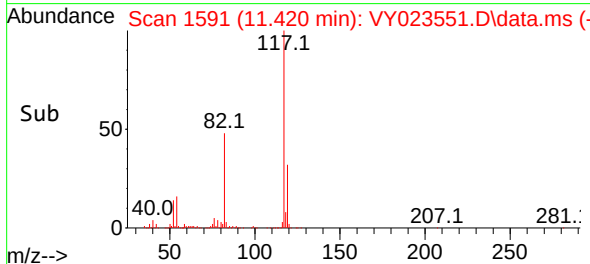
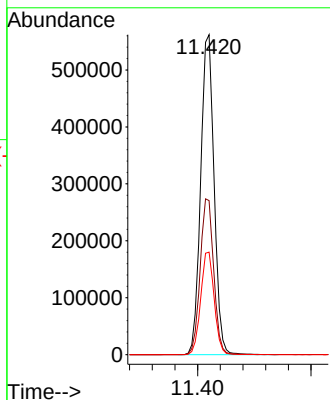
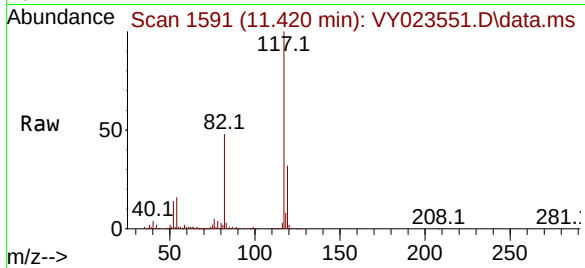




#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.420 min Scan# 11
Delta R.T. 0.006 min
Lab File: VY023551.D
Acq: 22 Oct 2025 14:07

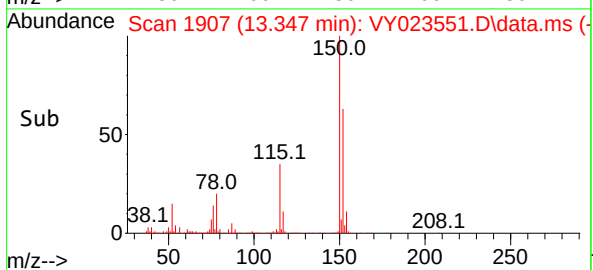
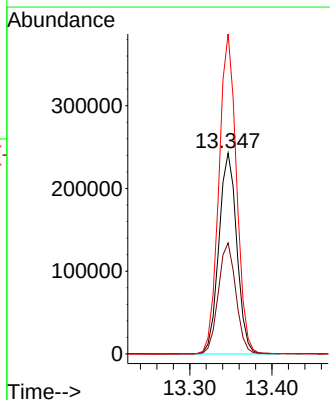
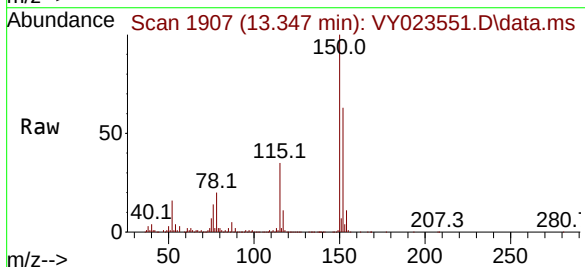
Instrument :
MSVOA_Y
ClientSampleId :
PR-132-S16-015094-20251021

Tgt Ion:117 Resp: 922887
Ion Ratio Lower Upper
117 100
82 48.1 41.0 61.4
119 32.0 25.6 38.4



#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.347 min Scan# 1907
Delta R.T. 0.000 min
Lab File: VY023551.D
Acq: 22 Oct 2025 14:07

Tgt Ion:152 Resp: 368413
Ion Ratio Lower Upper
152 100
115 54.5 27.1 81.2
150 156.4 0.0 347.4



Report of Analysis

Client: AECOM
 Project: AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206
 Client Sample ID: PR132-S16-119133-202510
 Lab Sample ID: Q3419-04
 Analytical Method: 8260D
 Sample Wt/Vol: 5.25 g

Level: LOW
 Final Vol: 5000 uL

Date Collected: 10/21/25
 Date Received: 10/21/25
 SDG No.: Q3419
 Matrix: SOIL
 % Solid: 51.7
 Test: VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
75-71-8	Dichlorodifluoromethane	2.10	U	1	2.10	9.20	ug/Kg	10/22/25 15:34	VY102225
74-87-3	Chloromethane	2.10	U	1	2.10	9.20	ug/Kg	10/22/25 15:34	VY102225
75-01-4	Vinyl Chloride	1.50	U	1	1.50	9.20	ug/Kg	10/22/25 15:34	VY102225
74-83-9	Bromomethane	2.00	U	1	2.00	9.20	ug/Kg	10/22/25 15:34	VY102225
75-00-3	Chloroethane	2.30	U	1	2.30	9.20	ug/Kg	10/22/25 15:34	VY102225
75-69-4	Trichlorofluoromethane	2.20	U	1	2.20	9.20	ug/Kg	10/22/25 15:34	VY102225
76-13-1	1,1,2-Trichlorotrifluoroethane	2.00	U	1	2.00	9.20	ug/Kg	10/22/25 15:34	VY102225
75-35-4	1,1-Dichloroethene	1.80	U	1	1.80	9.20	ug/Kg	10/22/25 15:34	VY102225
67-64-1	Acetone	63.1		1	8.70	46.1	ug/Kg	10/22/25 15:34	VY102225
75-15-0	Carbon Disulfide	3.80	J	1	2.00	9.20	ug/Kg	10/22/25 15:34	VY102225
1634-04-4	Methyl tert-butyl Ether	1.30	U	1	1.30	9.20	ug/Kg	10/22/25 15:34	VY102225
79-20-9	Methyl Acetate	2.80	U	1	2.80	9.20	ug/Kg	10/22/25 15:34	VY102225
75-09-2	Methylene Chloride	6.50	U	1	6.50	18.4	ug/Kg	10/22/25 15:34	VY102225
156-60-5	trans-1,2-Dichloroethene	1.60	U	1	1.60	9.20	ug/Kg	10/22/25 15:34	VY102225
75-34-3	1,1-Dichloroethane	1.50	U	1	1.50	9.20	ug/Kg	10/22/25 15:34	VY102225
110-82-7	Cyclohexane	1.50	U	1	1.50	9.20	ug/Kg	10/22/25 15:34	VY102225
78-93-3	2-Butanone	20.1	J	1	12.0	46.1	ug/Kg	10/22/25 15:34	VY102225
56-23-5	Carbon Tetrachloride	1.80	U	1	1.80	9.20	ug/Kg	10/22/25 15:34	VY102225
156-59-2	cis-1,2-Dichloroethene	1.40	U	1	1.40	9.20	ug/Kg	10/22/25 15:34	VY102225
74-97-5	Bromochloromethane	2.10	U	1	2.10	9.20	ug/Kg	10/22/25 15:34	VY102225
67-66-3	Chloroform	1.50	U	1	1.50	9.20	ug/Kg	10/22/25 15:34	VY102225
71-55-6	1,1,1-Trichloroethane	1.70	U	1	1.70	9.20	ug/Kg	10/22/25 15:34	VY102225
108-87-2	Methylcyclohexane	16.8		1	1.70	9.20	ug/Kg	10/22/25 15:34	VY102225
71-43-2	Benzene	1.50	U	1	1.50	9.20	ug/Kg	10/22/25 15:34	VY102225
107-06-2	1,2-Dichloroethane	1.50	U	1	1.50	9.20	ug/Kg	10/22/25 15:34	VY102225
79-01-6	Trichloroethene	1.50	U	1	1.50	9.20	ug/Kg	10/22/25 15:34	VY102225
78-87-5	1,2-Dichloropropane	1.70	U	1	1.70	9.20	ug/Kg	10/22/25 15:34	VY102225
75-27-4	Bromodichloromethane	1.40	U	1	1.40	9.20	ug/Kg	10/22/25 15:34	VY102225
108-10-1	4-Methyl-2-Pentanone	6.60	U	1	6.60	46.1	ug/Kg	10/22/25 15:34	VY102225
108-88-3	Toluene	1.40	U	1	1.40	9.20	ug/Kg	10/22/25 15:34	VY102225
10061-02-6	t-1,3-Dichloropropene	1.20	U	1	1.20	9.20	ug/Kg	10/22/25 15:34	VY102225
10061-01-5	cis-1,3-Dichloropropene	1.10	U	1	1.10	9.20	ug/Kg	10/22/25 15:34	VY102225
79-00-5	1,1,2-Trichloroethane	1.70	U	1	1.70	9.20	ug/Kg	10/22/25 15:34	VY102225
591-78-6	2-Hexanone	6.80	U	1	6.80	46.1	ug/Kg	10/22/25 15:34	VY102225
124-48-1	Dibromochloromethane	1.60	U	1	1.60	9.20	ug/Kg	10/22/25 15:34	VY102225
106-93-4	1,2-Dibromoethane	1.60	U	1	1.60	9.20	ug/Kg	10/22/25 15:34	VY102225
127-18-4	Tetrachloroethene	1.90	U	1	1.90	9.20	ug/Kg	10/22/25 15:34	VY102225
108-90-7	Chlorobenzene	1.70	U	1	1.70	9.20	ug/Kg	10/22/25 15:34	VY102225
100-41-4	Ethyl Benzene	1.20	U	1	1.20	9.20	ug/Kg	10/22/25 15:34	VY102225
179601-23-1	m/p-Xylenes	2.30	U	1	2.30	18.4	ug/Kg	10/22/25 15:34	VY102225
95-47-6	o-Xylene	1.50	U	1	1.50	9.20	ug/Kg	10/22/25 15:34	VY102225
100-42-5	Styrene	1.30	U	1	1.30	9.20	ug/Kg	10/22/25 15:34	VY102225
75-25-2	Bromoform	1.60	U	1	1.60	9.20	ug/Kg	10/22/25 15:34	VY102225



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

Report of Analysis

Client:	AECOM	Date Collected:	10/21/25
Project:	AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206	Date Received:	10/21/25
Client Sample ID:	PR132-S16-119133-202510	SDG No.:	Q3419
Lab Sample ID:	Q3419-04	Matrix:	SOIL
Analytical Method:	8260D	% Solid:	51.7
Sample Wt/Vol:	5.25 g	Level:	LOW
		Final Vol:	5000 uL
		Test:	VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
98-82-8	Isopropylbenzene	1.40	U	1	1.40	9.20	ug/Kg	10/22/25 15:34	VY102225
79-34-5	1,1,2,2-Tetrachloroethane	2.20	U	1	2.20	9.20	ug/Kg	10/22/25 15:34	VY102225
541-73-1	1,3-Dichlorobenzene	3.20	U	1	3.20	9.20	ug/Kg	10/22/25 15:34	VY102225
106-46-7	1,4-Dichlorobenzene	2.90	U	1	2.90	9.20	ug/Kg	10/22/25 15:34	VY102225
95-50-1	1,2-Dichlorobenzene	2.70	U	1	2.70	9.20	ug/Kg	10/22/25 15:34	VY102225
96-12-8	1,2-Dibromo-3-Chloropropane	3.40	U	1	3.40	9.20	ug/Kg	10/22/25 15:34	VY102225
120-82-1	1,2,4-Trichlorobenzene	5.50	U	1	5.50	9.20	ug/Kg	10/22/25 15:34	VY102225
87-61-6	1,2,3-Trichlorobenzene	5.90	U	1	5.90	9.20	ug/Kg	10/22/25 15:34	VY102225

SURROGATES

17060-07-0	1,2-Dichloroethane-d4	53.5			63 - 155	107%	SPK: 50
1868-53-7	Dibromofluoromethane	51.4			70 - 134	103%	SPK: 50
2037-26-5	Toluene-d8	50.6			74 - 123	101%	SPK: 50
460-00-4	4-Bromofluorobenzene	47.1			17 - 146	94%	SPK: 50

INTERNAL STANDARDS

INTERNAL STANDARDS		Area Count
363-72-4	Pentafluorobenzene	900000
540-36-3	1,4-Difluorobenzene	1450000
3114-55-4	Chlorobenzene-d5	1220000
3855-82-1	1,4-Dichlorobenzene-d4	499000

TENTATIVE IDENTIFIED COMPOUNDS

003073-66-3	Cyclohexane, 1,1,3-trimethyl-	140	J		11.0	ug/Kg
015869-94-0	Octane, 3,6-dimethyl-	200	J		12.1	ug/Kg
95-63-6	1,2,4-Trimethylbenzene	2.30	J		13.0	ug/Kg
017301-23-4	Undecane, 2,6-dimethyl-	150	J		14.7	ug/Kg

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_Y\Data\VY102225\
 Data File : VY023552.D
 Acq On : 22 Oct 2025 15:34
 Operator : SY/MD
 Sample : Q3419-04
 Misc : 5.25g/5.0mL/MSVOA_Y/SOIL/A
 ALS Vial : 12 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 PR132-S16-119133-20251021

Quant Time: Oct 24 02:35:55 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

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

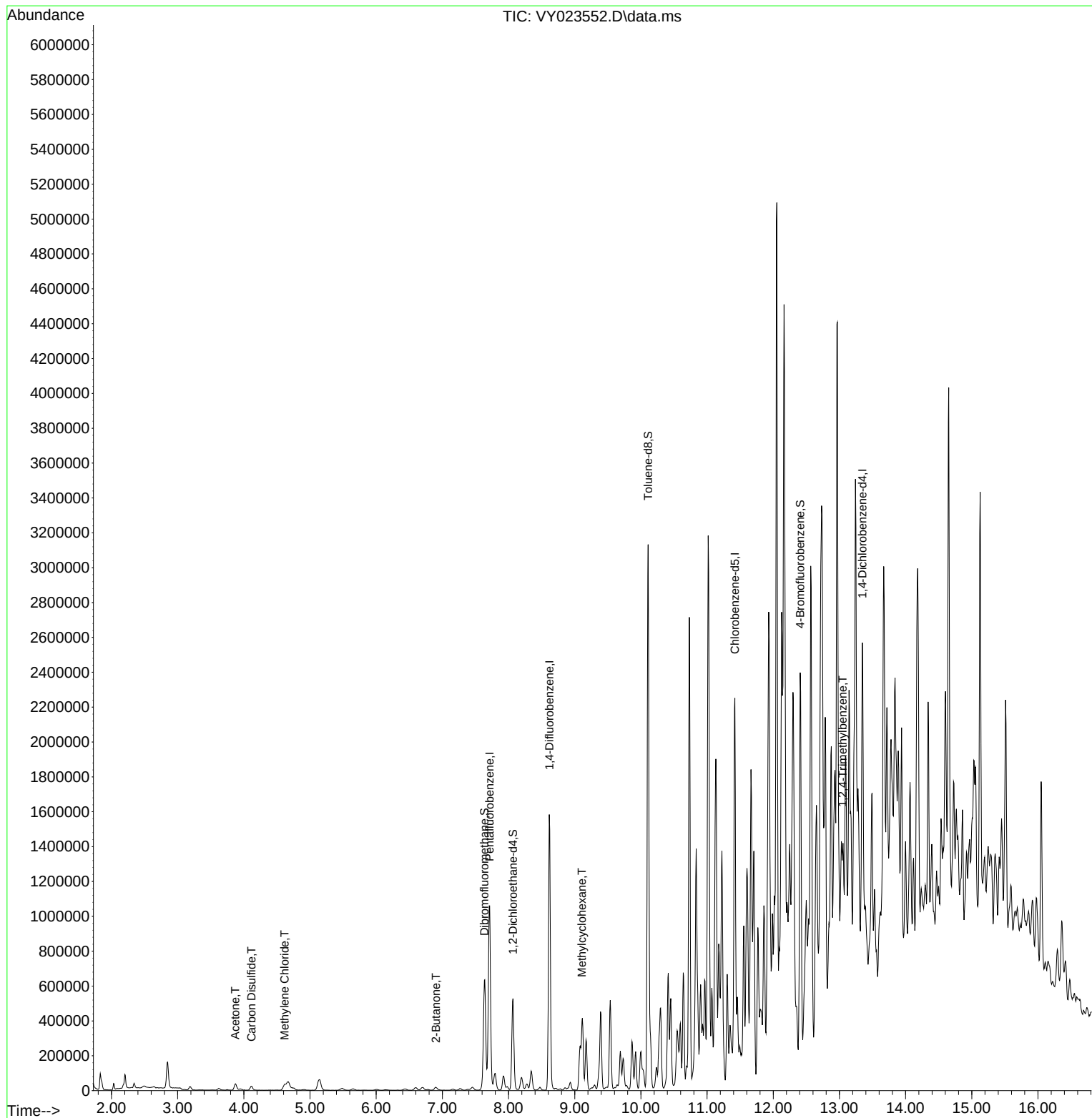
Internal Standards						
1) Pentafluorobenzene	7.713	168	900343	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	8.616	114	1446852	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.420	117	1218442	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.346	152	499022	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.067	65	402685	53.486	ug/l	0.00
Spiked Amount 50.000	Range 50 - 163		Recovery = 106.980%			
35) Dibromofluoromethane	7.634	113	456664	51.367	ug/l	0.00
Spiked Amount 50.000	Range 54 - 147		Recovery = 102.740%			
50) Toluene-d8	10.109	98	1676161	50.627	ug/l	0.00
Spiked Amount 50.000	Range 58 - 134		Recovery = 101.260%			
62) 4-Bromofluorobenzene	12.408	95	515265	47.140	ug/l	0.00
Spiked Amount 50.000	Range 30 - 143		Recovery = 94.280%			
Target Compounds					Qvalue	
16) Acetone	3.872	43	61394	34.253	ug/l	97
17) Carbon Disulfide	4.116	76	46881	2.040	ug/l	98
20) Methylene Chloride	4.616	84	19228	1.984	ug/l	94
25) 2-Butanone	6.902	43	23901	10.923	ug/l	98
39) Methylcyclohexane	9.109	83	140047	9.139	ug/l #	90
84) 1,2,4-Trimethylbenzene	13.048	105	33222	1.253	ug/l	100

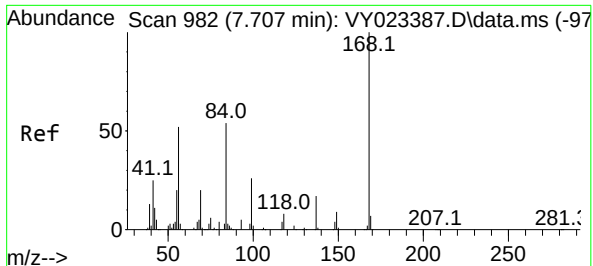
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102225\
Data File : VY023552.D
Acq On : 22 Oct 2025 15:34
Operator : SY/MD
Sample : Q3419-04
Misc : 5.25g/5.0mL/MSVOA_Y/SOIL/A
ALS Vial : 12 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
PR132-S16-119133-20251021

Quant Time: Oct 24 02:35:55 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 05:12:50 2025
Response via : Initial Calibration

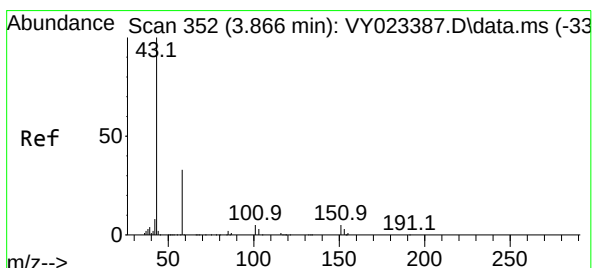
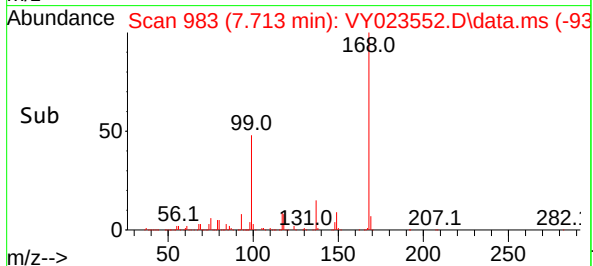
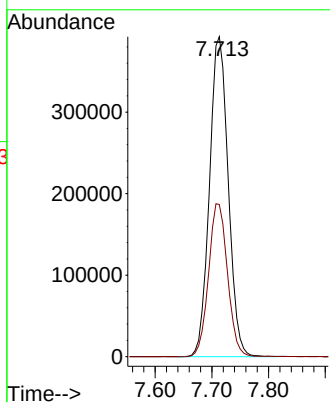
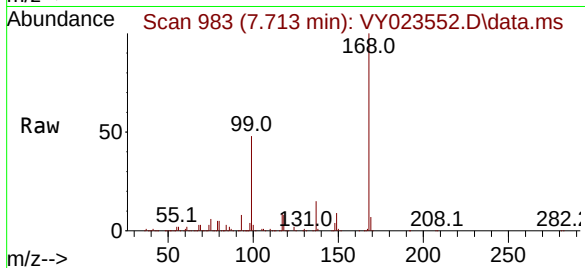




#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 7.713 min Scan# 91
Delta R.T. 0.006 min
Lab File: VY023552.D
Acq: 22 Oct 2025 15:34

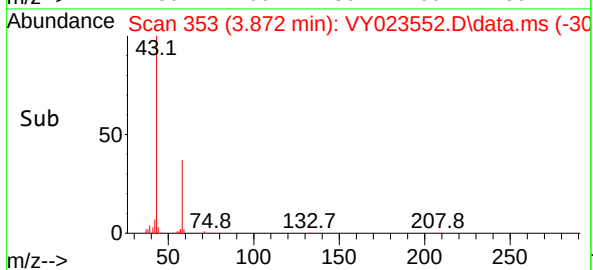
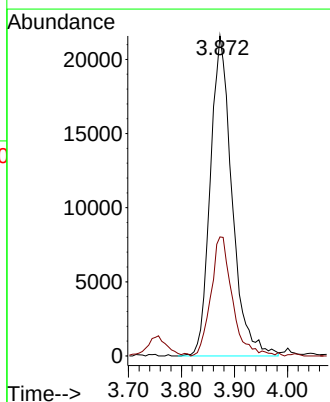
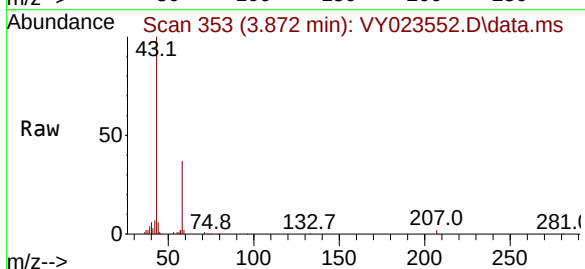
Instrument :
MSVOA_Y
ClientSampleId :
PR132-S16-119133-20251021

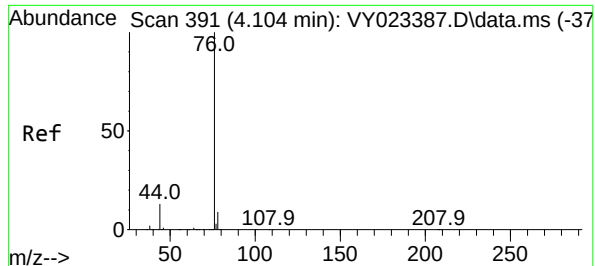
Tgt Ion:168 Resp: 900343
Ion Ratio Lower Upper
168 100
99 47.5 39.7 59.5



#16
Acetone
Concen: 34.253 ug/l
RT: 3.872 min Scan# 353
Delta R.T. 0.006 min
Lab File: VY023552.D
Acq: 22 Oct 2025 15:34

Tgt Ion: 43 Resp: 61394
Ion Ratio Lower Upper
43 100
58 36.4 27.7 41.5





#17

Carbon Disulfide

Concen: 2.040 ug/l

RT: 4.116 min Scan# 391

Delta R.T. 0.012 min

Lab File: VY023552.D

Acq: 22 Oct 2025 15:34

Instrument :

MSVOA_Y

ClientSampleId :

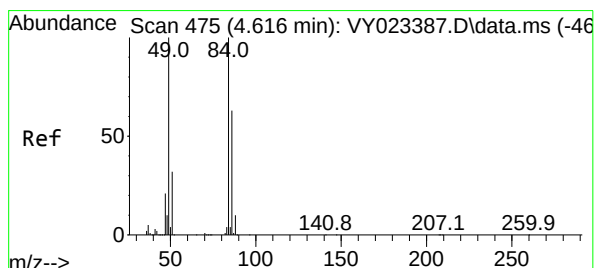
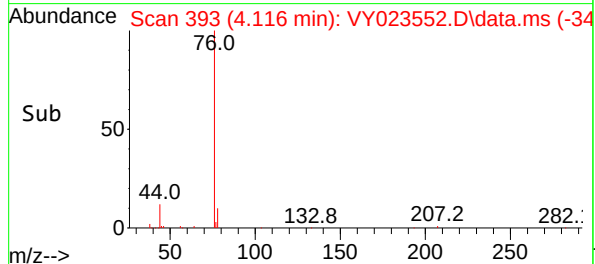
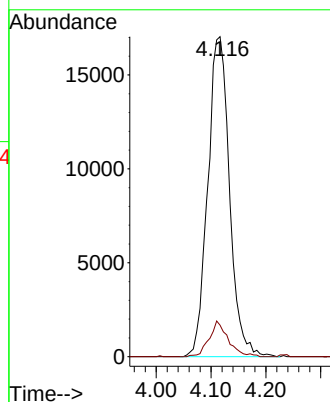
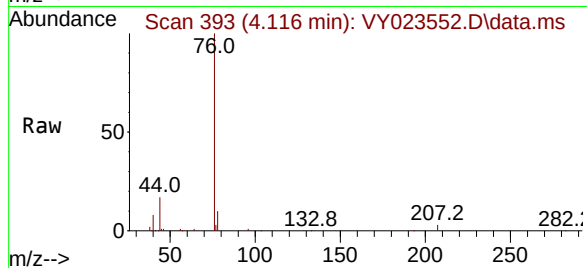
PR132-S16-119133-20251021

Tgt Ion: 76 Resp: 46881

Ion Ratio Lower Upper

76 100

78 9.9 7.3 10.9



#20

Methylene Chloride

Concen: 1.984 ug/l

RT: 4.616 min Scan# 475

Delta R.T. -0.000 min

Lab File: VY023552.D

Acq: 22 Oct 2025 15:34

Tgt Ion: 84 Resp: 19228

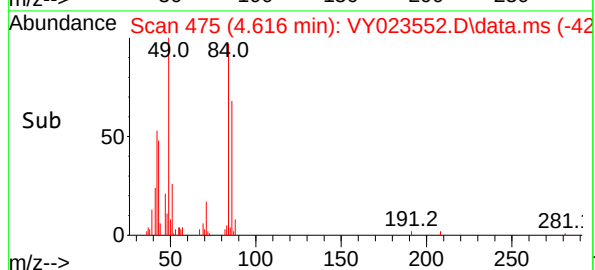
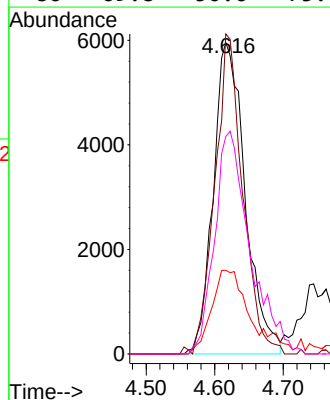
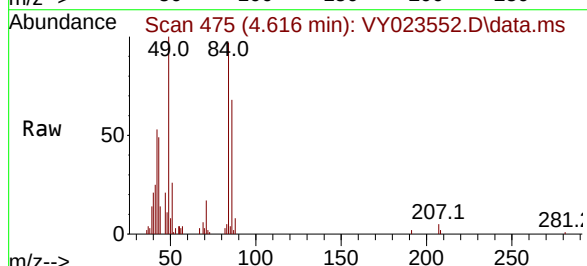
Ion Ratio Lower Upper

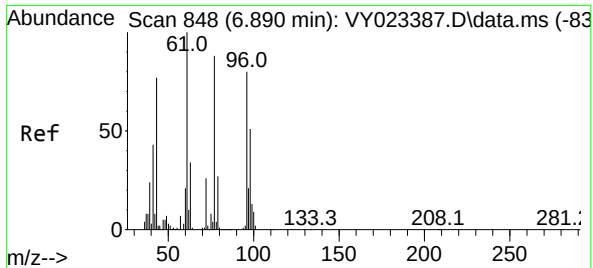
84 100

49 102.8 80.2 120.4

51 26.9 25.9 38.9

86 69.8 50.6 75.8





#25

2-Butanone

Concen: 10.923 ug/l

RT: 6.902 min Scan# 848

Delta R.T. 0.012 min

Lab File: VY023552.D

Acq: 22 Oct 2025 15:34

Instrument :

MSVOA_Y

ClientSampleId :

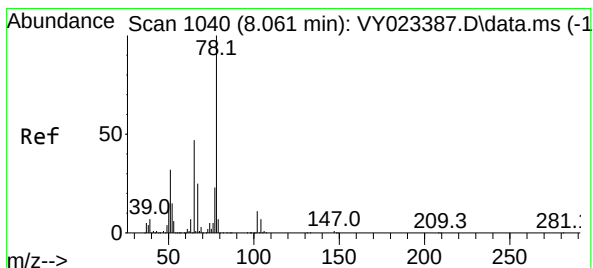
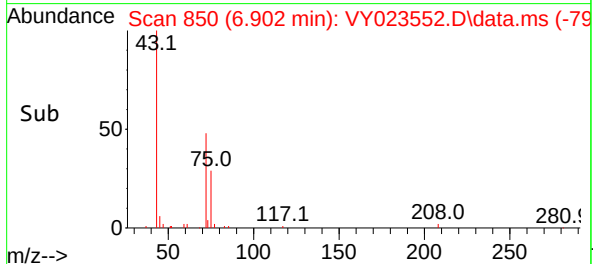
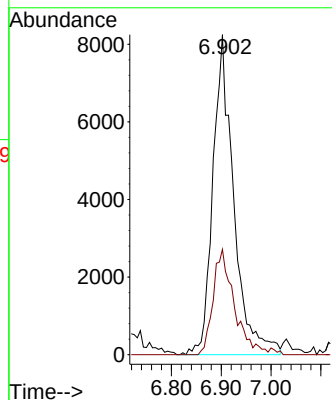
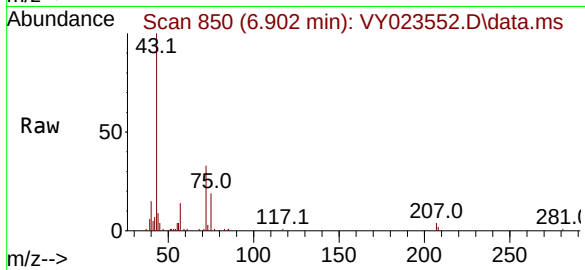
PR132-S16-119133-20251021

Tgt Ion: 43 Resp: 23901

Ion Ratio Lower Upper

43 100

72 32.9 27.4 41.2



#33

1,2-Dichloroethane-d4

Concen: 53.486 ug/l

RT: 8.067 min Scan# 1041

Delta R.T. 0.006 min

Lab File: VY023552.D

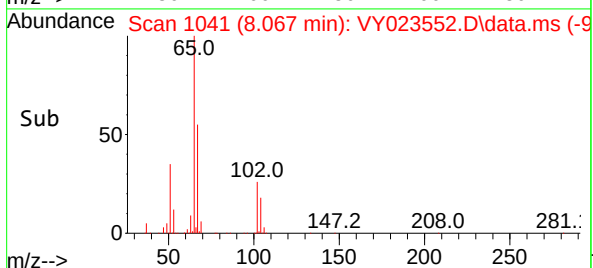
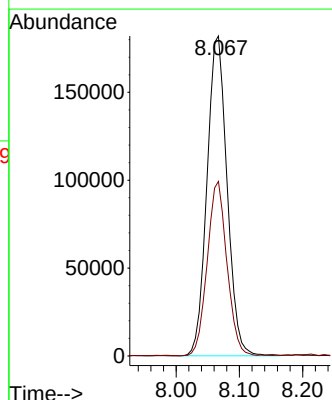
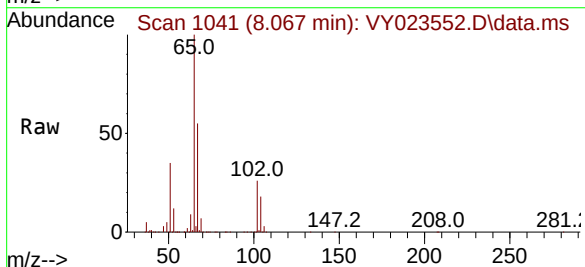
Acq: 22 Oct 2025 15:34

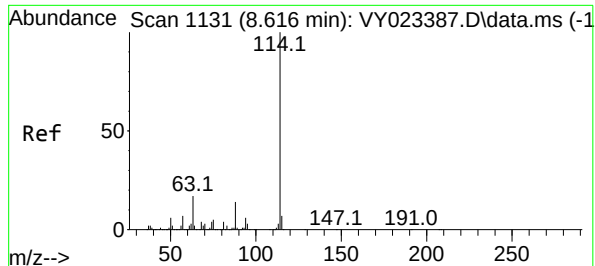
Tgt Ion: 65 Resp: 402685

Ion Ratio Lower Upper

65 100

67 53.5 0.0 105.8





#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 8.616 min Scan# 1131

Delta R.T. -0.000 min

Lab File: VY023552.D

Acq: 22 Oct 2025 15:34

Instrument :

MSVOA_Y

ClientSampleId :

PR132-S16-119133-20251021

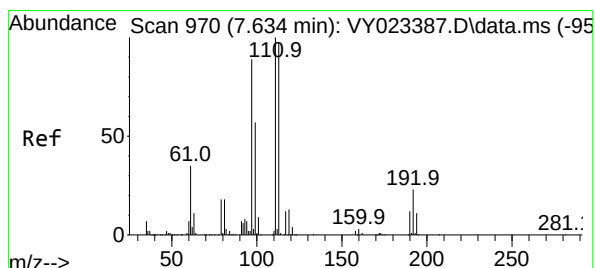
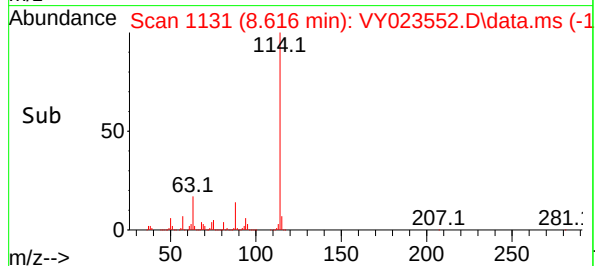
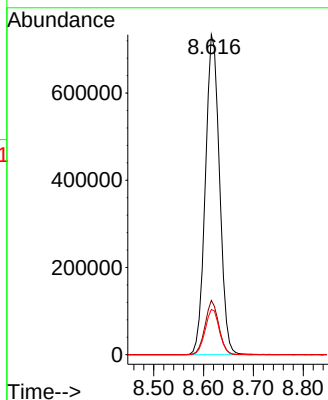
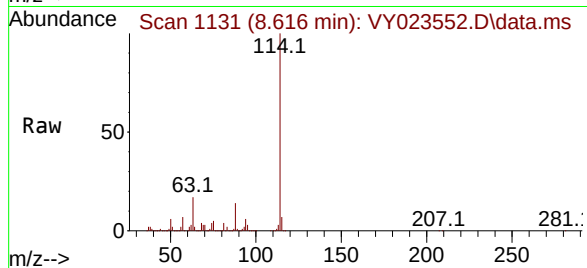
Tgt Ion:114 Resp: 1446852

Ion Ratio Lower Upper

114 100

63 17.0 0.0 34.2

88 14.1 0.0 28.4



#35

Dibromofluoromethane

Concen: 51.367 ug/l

RT: 7.634 min Scan# 970

Delta R.T. -0.000 min

Lab File: VY023552.D

Acq: 22 Oct 2025 15:34

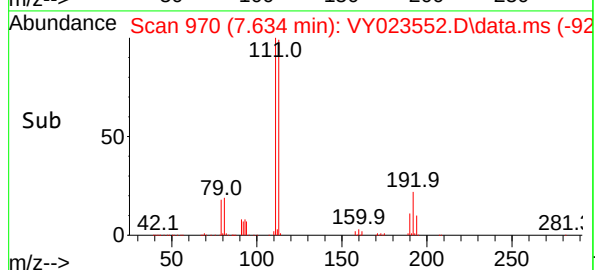
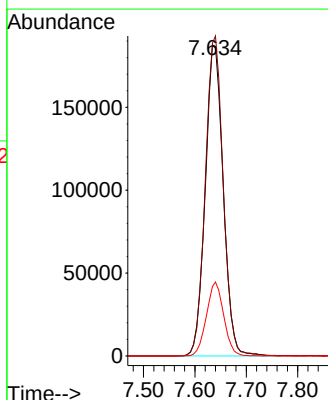
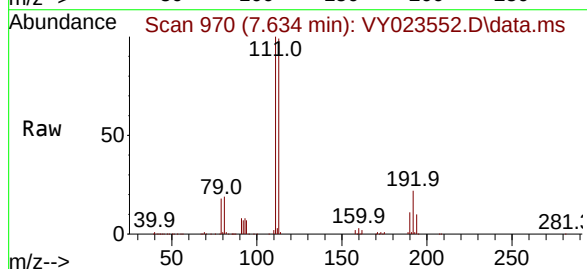
Tgt Ion:113 Resp: 456664

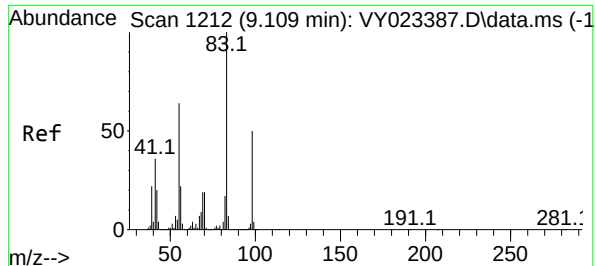
Ion Ratio Lower Upper

113 100

111 102.2 81.8 122.6

192 22.9 18.0 27.0





#39

Methylcyclohexane

Concen: 9.139 ug/l

RT: 9.109 min Scan# 1212

Delta R.T. -0.000 min

Lab File: VY023552.D

Acq: 22 Oct 2025 15:34

Instrument :

MSVOA_Y

ClientSampleId :

PR132-S16-119133-20251021

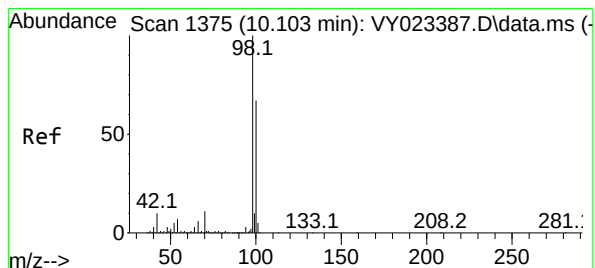
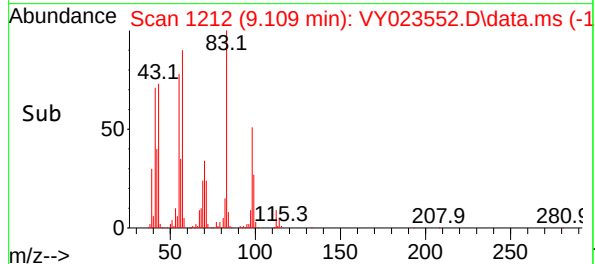
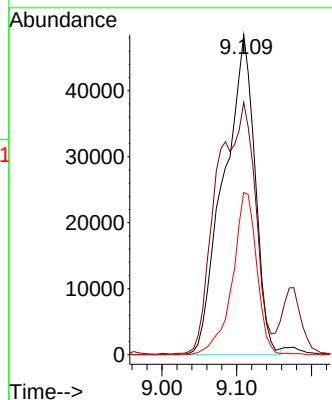
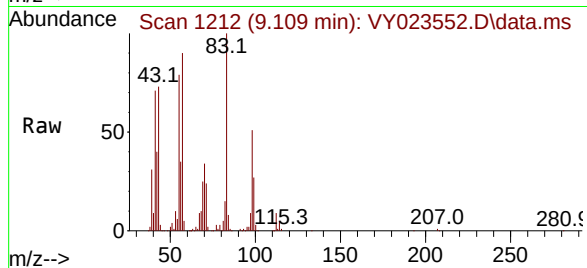
Tgt Ion: 83 Resp: 140047

Ion Ratio Lower Upper

83 100

55 78.4 51.4 77.2#

98 50.7 40.4 60.6



#50

Toluene-d8

Concen: 50.627 ug/l

RT: 10.109 min Scan# 1376

Delta R.T. 0.006 min

Lab File: VY023552.D

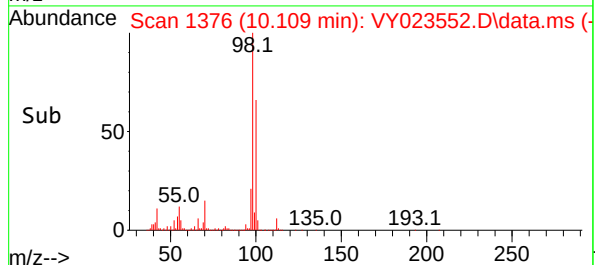
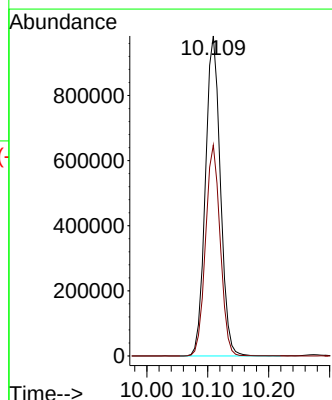
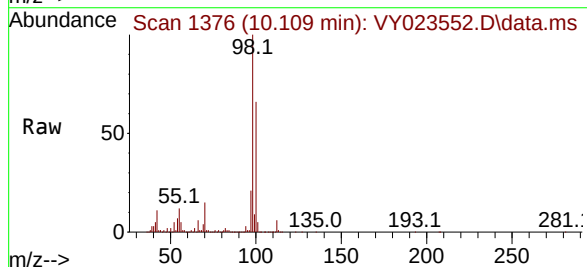
Acq: 22 Oct 2025 15:34

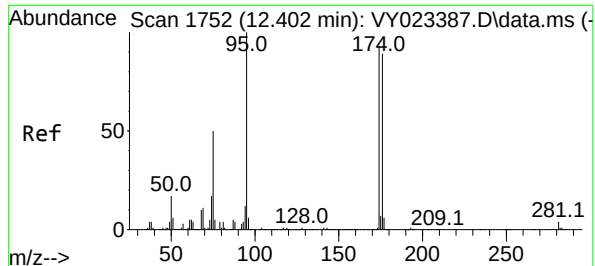
Tgt Ion: 98 Resp: 1676161

Ion Ratio Lower Upper

98 100

100 64.5 53.0 79.4





#62

4-Bromofluorobenzene

Concen: 47.140 ug/l

RT: 12.408 min Scan# 11

Delta R.T. 0.006 min

Lab File: VY023552.D

Acq: 22 Oct 2025 15:34

Instrument :

MSVOA_Y

ClientSampleId :

PR132-S16-119133-20251021

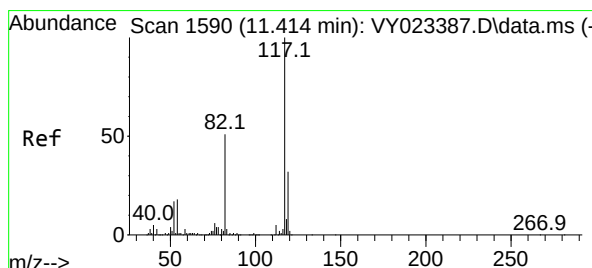
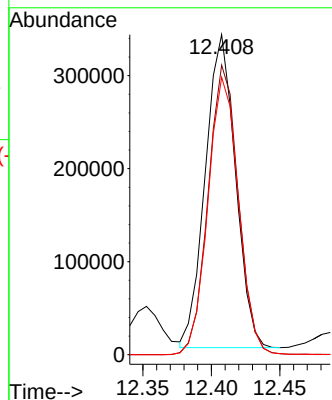
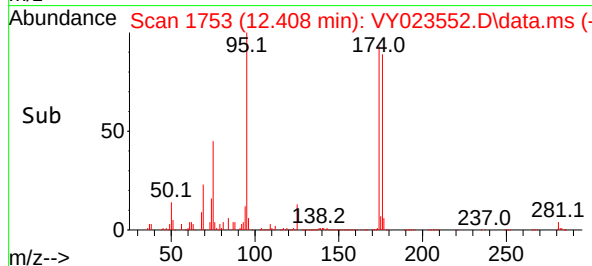
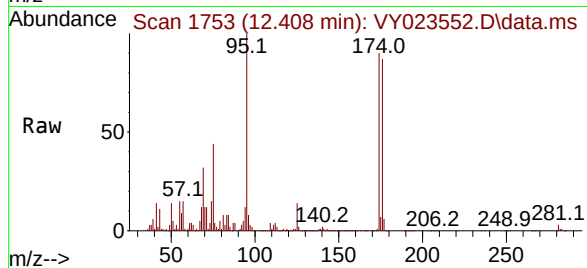
Tgt Ion: 95 Resp: 515265

Ion Ratio Lower Upper

95 100

174 92.8 0.0 192.8

176 90.0 0.0 187.6



#63

Chlorobenzene-d5

Concen: 50.000 ug/l

RT: 11.420 min Scan# 1591

Delta R.T. 0.006 min

Lab File: VY023552.D

Acq: 22 Oct 2025 15:34

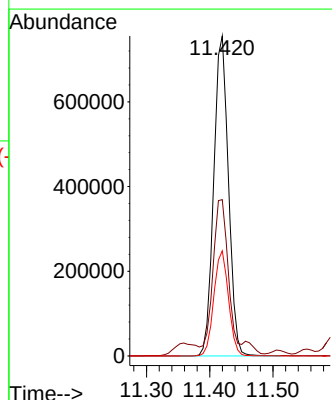
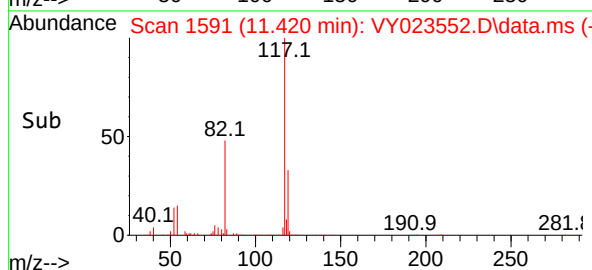
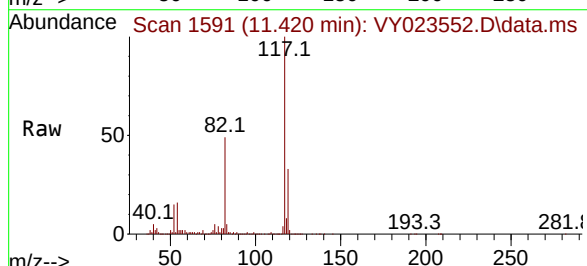
Tgt Ion: 117 Resp: 1218442

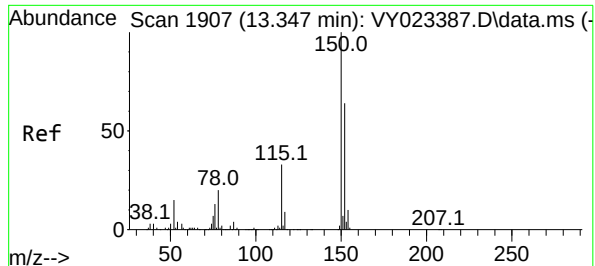
Ion Ratio Lower Upper

117 100

82 47.1 41.0 61.4

119 32.8 25.6 38.4





#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 13.346 min Scan# 1907

Delta R.T. -0.000 min

Lab File: VY023552.D

Acq: 22 Oct 2025 15:34

Instrument :

MSVOA_Y

ClientSampleId :

PR132-S16-119133-20251021

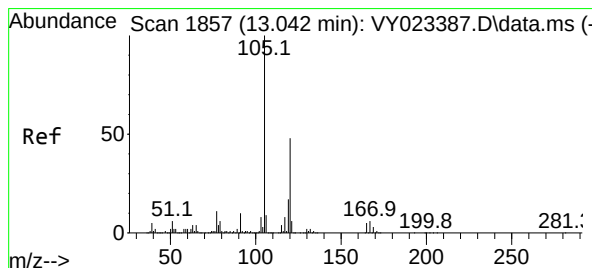
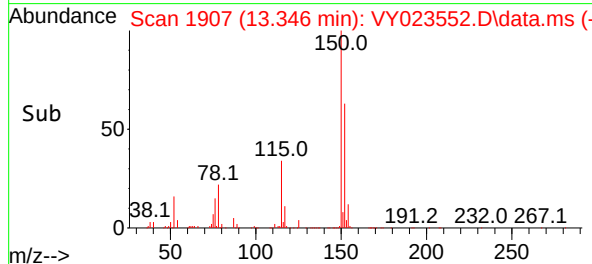
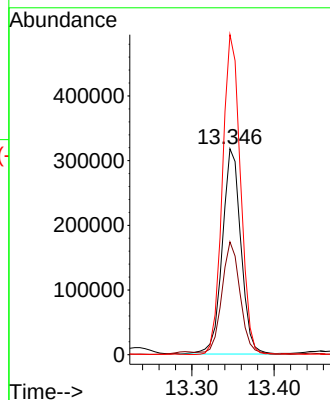
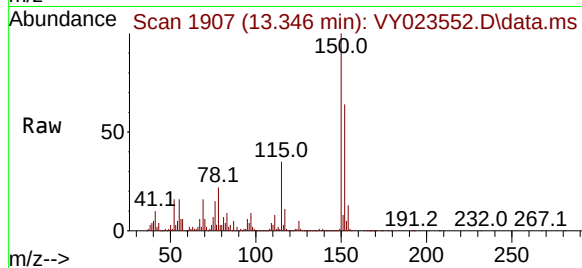
Tgt Ion:152 Resp: 499022

Ion Ratio Lower Upper

152 100

115 54.3 27.1 81.2

150 150.9 0.0 347.4



#84

1,2,4-Trimethylbenzene

Concen: 1.253 ug/l

RT: 13.048 min Scan# 1858

Delta R.T. 0.006 min

Lab File: VY023552.D

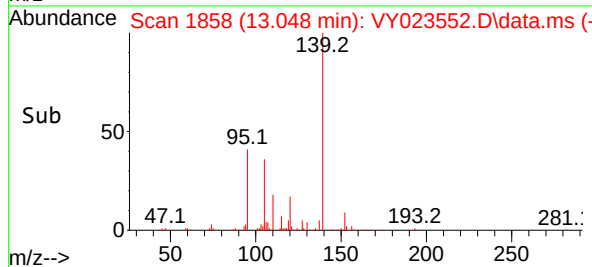
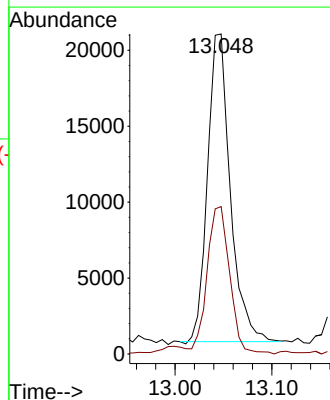
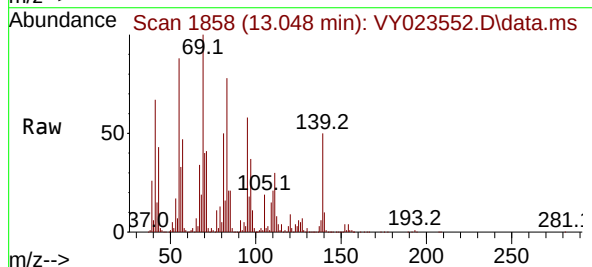
Acq: 22 Oct 2025 15:34

Tgt Ion:105 Resp: 33222

Ion Ratio Lower Upper

105 100

120 47.7 23.8 71.2





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

Report of Analysis

Client: AECOM
Project: AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206
Client Sample ID: PR132-S16-094119-202510
Lab Sample ID: Q3419-05
Analytical Method: 8260D
Sample Wt/Vol: 4.98 g

Level: LOW
Final Vol: 5000 uL

Date Collected: 10/21/25
Date Received: 10/21/25
SDG No.: Q3419
Matrix: SOIL
% Solid: 46.9
Test: VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
75-71-8	Dichlorodifluoromethane	2.40	U	1	2.40	10.7	ug/Kg	10/22/25 15:58	VY102225
74-87-3	Chloromethane	2.40	U	1	2.40	10.7	ug/Kg	10/22/25 15:58	VY102225
75-01-4	Vinyl Chloride	1.70	U	1	1.70	10.7	ug/Kg	10/22/25 15:58	VY102225
74-83-9	Bromomethane	2.30	U	1	2.30	10.7	ug/Kg	10/22/25 15:58	VY102225
75-00-3	Chloroethane	2.70	U	1	2.70	10.7	ug/Kg	10/22/25 15:58	VY102225
75-69-4	Trichlorofluoromethane	2.60	U	1	2.60	10.7	ug/Kg	10/22/25 15:58	VY102225
76-13-1	1,1,2-Trichlorotrifluoroethane	2.30	U	1	2.30	10.7	ug/Kg	10/22/25 15:58	VY102225
75-35-4	1,1-Dichloroethene	2.10	U	1	2.10	10.7	ug/Kg	10/22/25 15:58	VY102225
67-64-1	Acetone	180		1	10.1	53.5	ug/Kg	10/22/25 15:58	VY102225
75-15-0	Carbon Disulfide	11.4		1	2.30	10.7	ug/Kg	10/22/25 15:58	VY102225
1634-04-4	Methyl tert-butyl Ether	1.60	U	1	1.60	10.7	ug/Kg	10/22/25 15:58	VY102225
79-20-9	Methyl Acetate	3.30	U	1	3.30	10.7	ug/Kg	10/22/25 15:58	VY102225
75-09-2	Methylene Chloride	7.60	U	1	7.60	21.4	ug/Kg	10/22/25 15:58	VY102225
156-60-5	trans-1,2-Dichloroethene	1.80	U	1	1.80	10.7	ug/Kg	10/22/25 15:58	VY102225
75-34-3	1,1-Dichloroethane	1.70	U	1	1.70	10.7	ug/Kg	10/22/25 15:58	VY102225
110-82-7	Cyclohexane	1.70	U	1	1.70	10.7	ug/Kg	10/22/25 15:58	VY102225
78-93-3	2-Butanone	53.2	J	1	14.0	53.5	ug/Kg	10/22/25 15:58	VY102225
56-23-5	Carbon Tetrachloride	2.10	U	1	2.10	10.7	ug/Kg	10/22/25 15:58	VY102225
156-59-2	cis-1,2-Dichloroethene	1.60	U	1	1.60	10.7	ug/Kg	10/22/25 15:58	VY102225
74-97-5	Bromochloromethane	2.50	U	1	2.50	10.7	ug/Kg	10/22/25 15:58	VY102225
67-66-3	Chloroform	1.80	U	1	1.80	10.7	ug/Kg	10/22/25 15:58	VY102225
71-55-6	1,1,1-Trichloroethane	2.00	U	1	2.00	10.7	ug/Kg	10/22/25 15:58	VY102225
108-87-2	Methylcyclohexane	16.9		1	1.90	10.7	ug/Kg	10/22/25 15:58	VY102225
71-43-2	Benzene	5.70	J	1	1.70	10.7	ug/Kg	10/22/25 15:58	VY102225
107-06-2	1,2-Dichloroethane	1.70	U	1	1.70	10.7	ug/Kg	10/22/25 15:58	VY102225
79-01-6	Trichloroethene	1.70	U	1	1.70	10.7	ug/Kg	10/22/25 15:58	VY102225
78-87-5	1,2-Dichloropropane	1.90	U	1	1.90	10.7	ug/Kg	10/22/25 15:58	VY102225
75-27-4	Bromodichloromethane	1.70	U	1	1.70	10.7	ug/Kg	10/22/25 15:58	VY102225
108-10-1	4-Methyl-2-Pentanone	7.70	U	1	7.70	53.5	ug/Kg	10/22/25 15:58	VY102225
108-88-3	Toluene	1.70	U	1	1.70	10.7	ug/Kg	10/22/25 15:58	VY102225
10061-02-6	t-1,3-Dichloropropene	1.40	U	1	1.40	10.7	ug/Kg	10/22/25 15:58	VY102225
10061-01-5	cis-1,3-Dichloropropene	1.30	U	1	1.30	10.7	ug/Kg	10/22/25 15:58	VY102225
79-00-5	1,1,2-Trichloroethane	2.00	U	1	2.00	10.7	ug/Kg	10/22/25 15:58	VY102225
591-78-6	2-Hexanone	7.90	U	1	7.90	53.5	ug/Kg	10/22/25 15:58	VY102225
124-48-1	Dibromochloromethane	1.90	U	1	1.90	10.7	ug/Kg	10/22/25 15:58	VY102225
106-93-4	1,2-Dibromoethane	1.90	U	1	1.90	10.7	ug/Kg	10/22/25 15:58	VY102225
127-18-4	Tetrachloroethene	2.20	U	1	2.20	10.7	ug/Kg	10/22/25 15:58	VY102225
108-90-7	Chlorobenzene	1.90	U	1	1.90	10.7	ug/Kg	10/22/25 15:58	VY102225
100-41-4	Ethyl Benzene	1.40	U	1	1.40	10.7	ug/Kg	10/22/25 15:58	VY102225
179601-23-1	m/p-Xylenes	7.30	J	1	2.70	21.4	ug/Kg	10/22/25 15:58	VY102225
95-47-6	o-Xylene	18.2		1	1.80	10.7	ug/Kg	10/22/25 15:58	VY102225
100-42-5	Styrene	1.50	U	1	1.50	10.7	ug/Kg	10/22/25 15:58	VY102225
75-25-2	Bromoform	1.80	U	1	1.80	10.7	ug/Kg	10/22/25 15:58	VY102225



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

Report of Analysis

Client:	AECOM	Date Collected:	10/21/25
Project:	AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206	Date Received:	10/21/25
Client Sample ID:	PR132-S16-094119-202510	SDG No.:	Q3419
Lab Sample ID:	Q3419-05	Matrix:	SOIL
Analytical Method:	8260D	% Solid:	46.9
Sample Wt/Vol:	4.98 g	Level:	LOW
		Final Vol:	5000 uL
		Test:	VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
98-82-8	Isopropylbenzene	1.70	U	1	1.70	10.7	ug/Kg	10/22/25 15:58	VY102225
79-34-5	1,1,2,2-Tetrachloroethane	2.60	U	1	2.60	10.7	ug/Kg	10/22/25 15:58	VY102225
541-73-1	1,3-Dichlorobenzene	3.70	U	1	3.70	10.7	ug/Kg	10/22/25 15:58	VY102225
106-46-7	1,4-Dichlorobenzene	3.30	U	1	3.30	10.7	ug/Kg	10/22/25 15:58	VY102225
95-50-1	1,2-Dichlorobenzene	3.10	U	1	3.10	10.7	ug/Kg	10/22/25 15:58	VY102225
96-12-8	1,2-Dibromo-3-Chloropropane	3.90	U	1	3.90	10.7	ug/Kg	10/22/25 15:58	VY102225
120-82-1	1,2,4-Trichlorobenzene	6.40	U	1	6.40	10.7	ug/Kg	10/22/25 15:58	VY102225
87-61-6	1,2,3-Trichlorobenzene	6.80	U	1	6.80	10.7	ug/Kg	10/22/25 15:58	VY102225

SURROGATES

17060-07-0	1,2-Dichloroethane-d4	52.0			63 - 155	104%	SPK: 50
1868-53-7	Dibromofluoromethane	50.8			70 - 134	102%	SPK: 50
2037-26-5	Toluene-d8	49.8			74 - 123	100%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.3			17 - 146	93%	SPK: 50

INTERNAL STANDARDS

363-72-4	Pentafluorobenzene	942000
540-36-3	1,4-Difluorobenzene	1510000
3114-55-4	Chlorobenzene-d5	1290000
3855-82-1	1,4-Dichlorobenzene-d4	505000

TENTATIVE IDENTIFIED COMPOUNDS

108-67-8	1,3,5-Trimethylbenzene	7.00	J		12.7	ug/Kg
000123-48-8	3-Heptene, 2,2,4,6,6-pentamethyl-	98.3	J		12.9	ug/Kg
95-63-6	1,2,4-Trimethylbenzene	12.0	J		13.0	ug/Kg
000091-17-8	Naphthalene, decahydro-	64.4	J		13.7	ug/Kg
015932-80-6	Cyclohexanone, 5-methyl-2-(1-meth	64.6	J		14.2	ug/Kg
017301-23-4	Undecane, 2,6-dimethyl-	58.4	J		14.6	ug/Kg

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_Y\Data\VY102225\
 Data File : VY023553.D
 Acq On : 22 Oct 2025 15:58
 Operator : SY/MD
 Sample : Q3419-05
 Misc : 4.98g/5.0mL/MSVOA_Y/SOIL/A
 ALS Vial : 13 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 PR132-S16-094119-20251021

Quant Time: Oct 24 02:36:21 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

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

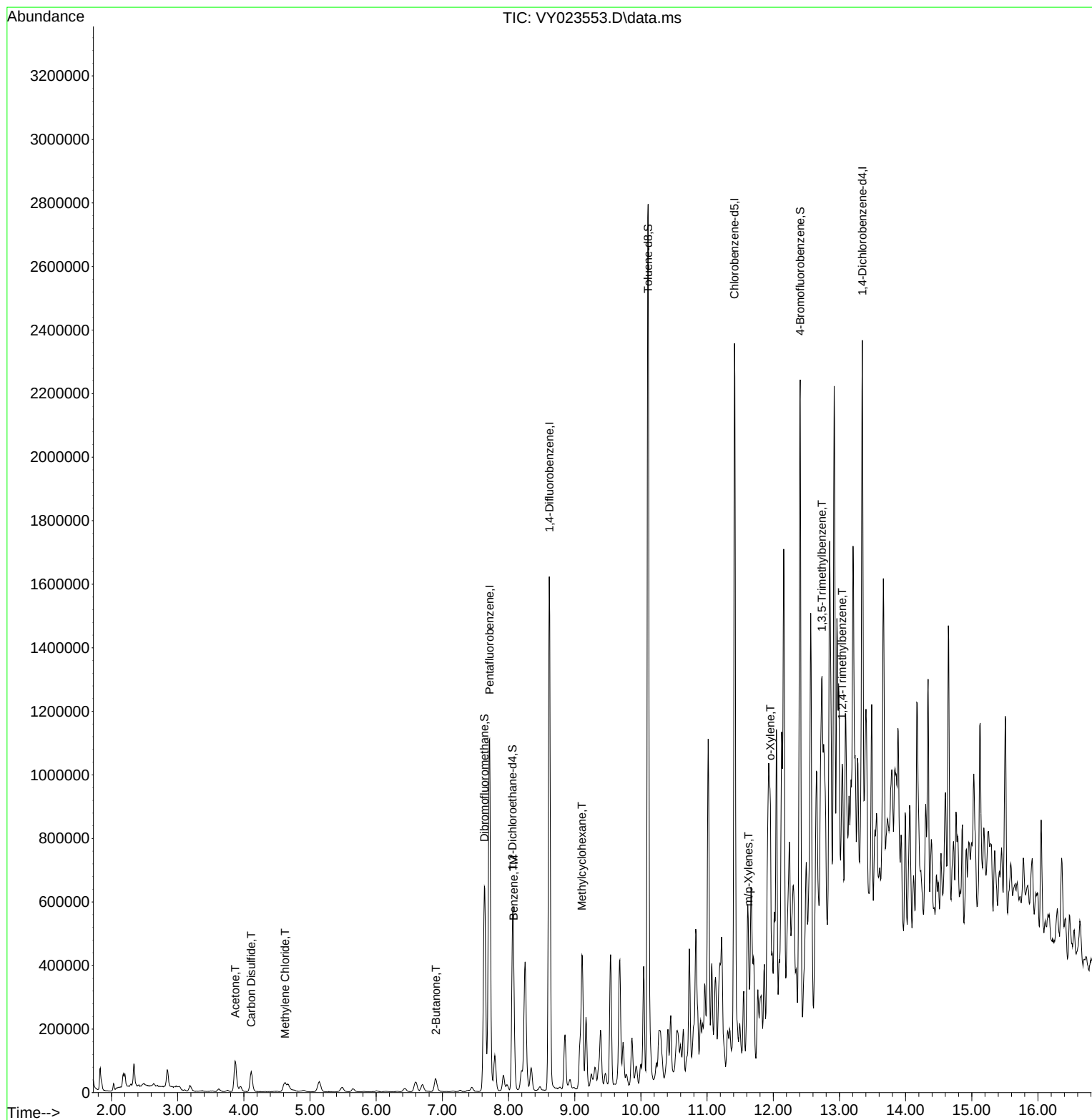
Internal Standards						
1) Pentafluorobenzene	7.713	168	942425	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	8.616	114	1514027	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.414	117	1286219	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.347	152	504876	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.061	65	409580	51.973	ug/l	0.00
Spiked Amount	50.000	Range	50 - 163	Recovery	= 103.940%	
35) Dibromofluoromethane	7.634	113	472529	50.793	ug/l	0.00
Spiked Amount	50.000	Range	54 - 147	Recovery	= 101.580%	
50) Toluene-d8	10.109	98	1725302	49.799	ug/l	0.00
Spiked Amount	50.000	Range	58 - 134	Recovery	= 99.600%	
62) 4-Bromofluorobenzene	12.408	95	529575	46.299	ug/l	0.00
Spiked Amount	50.000	Range	30 - 143	Recovery	= 92.600%	
Target Compounds						Qvalue
16) Acetone	3.873	43	161831	86.257	ug/l	94
17) Carbon Disulfide	4.110	76	128146	5.326	ug/l	99
20) Methylene Chloride	4.622	84	16514	1.628	ug/l #	95
25) 2-Butanone	6.903	43	56883	24.835	ug/l	97
39) Methylcyclohexane	9.110	83	126416	7.883	ug/l #	79
40) Benzene	8.079	78	104295	2.674	ug/l	97
68) m/p-Xylenes	11.627	106	61705	3.397	ug/l	92
69) o-Xylene	11.957	106	145222	8.524	ug/l	99
80) 1,3,5-Trimethylbenzene	12.737	105	87778	3.265	ug/l	96
84) 1,2,4-Trimethylbenzene	13.042	105	150406	5.605	ug/l	97

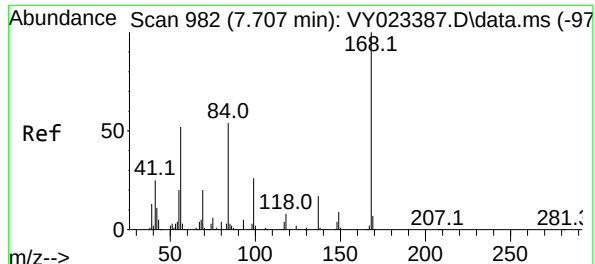
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102225\
Data File : VY023553.D
Acq On : 22 Oct 2025 15:58
Operator : SY/MD
Sample : Q3419-05
Misc : 4.98g/5.0mL/MSVOA_Y/SOIL/A
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
PR132-S16-094119-20251021

Quant Time: Oct 24 02:36:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 05:12:50 2025
Response via : Initial Calibration

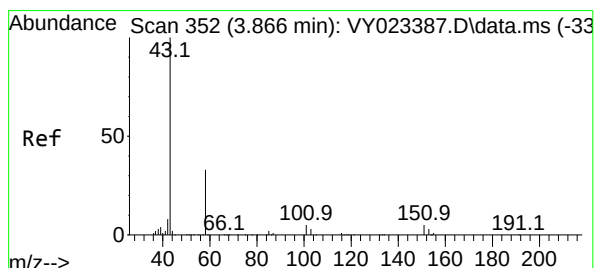
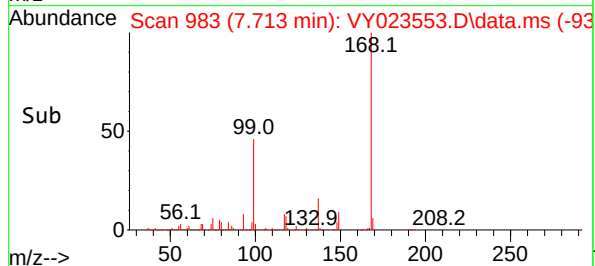
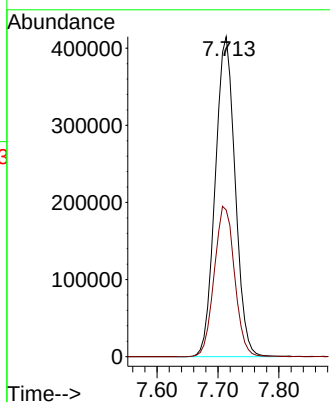
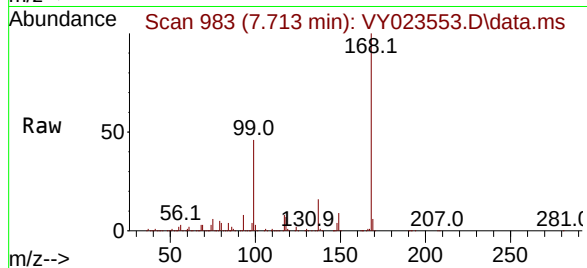




#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 7.713 min Scan# 91
Delta R.T. 0.006 min
Lab File: VY023553.D
Acq: 22 Oct 2025 15:58

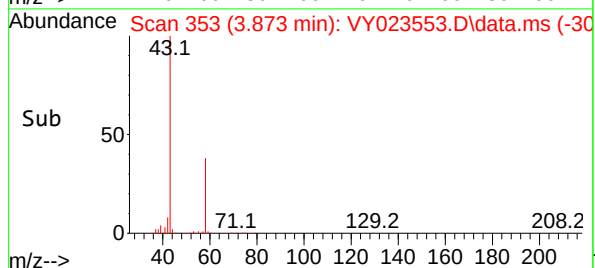
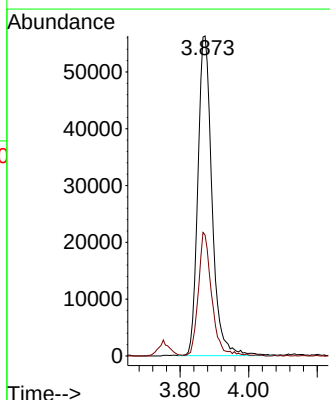
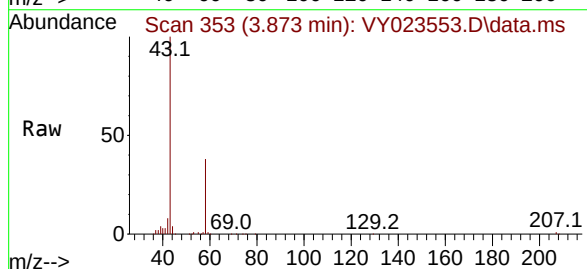
Instrument :
MSVOA_Y
ClientSampleId :
PR132-S16-094119-20251021

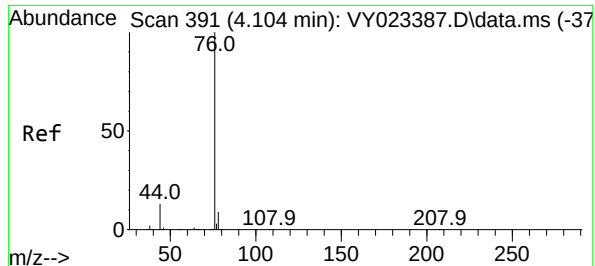
Tgt Ion:168 Resp: 942425
Ion Ratio Lower Upper
168 100
99 45.9 39.7 59.5



#16
Acetone
Concen: 86.257 ug/l
RT: 3.873 min Scan# 353
Delta R.T. 0.006 min
Lab File: VY023553.D
Acq: 22 Oct 2025 15:58

Tgt Ion: 43 Resp: 161831
Ion Ratio Lower Upper
43 100
58 37.8 27.7 41.5

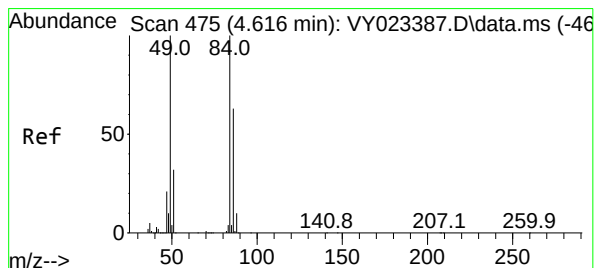
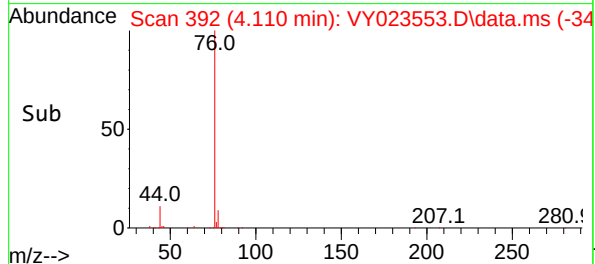
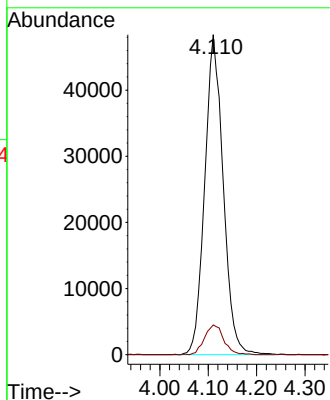
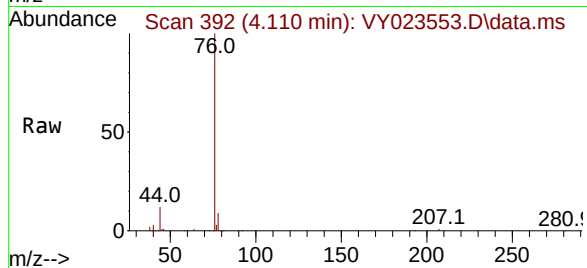




#17
Carbon Disulfide
Concen: 5.326 ug/l
RT: 4.110 min Scan# 391
Delta R.T. 0.006 min
Lab File: VY023553.D
Acq: 22 Oct 2025 15:58

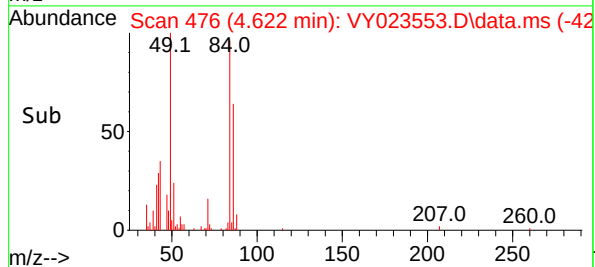
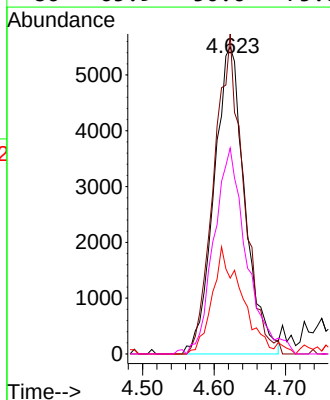
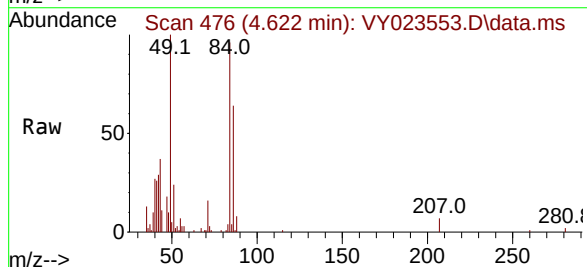
Instrument :
MSVOA_Y
ClientSampleId :
PR132-S16-094119-20251021

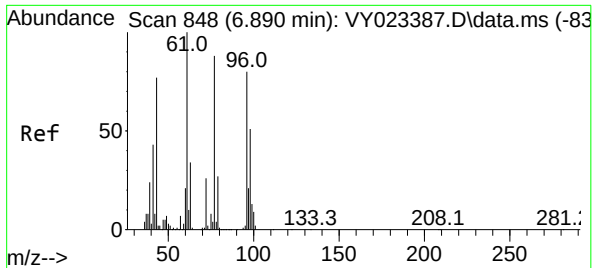
Tgt Ion: 76 Resp: 128146
Ion Ratio Lower Upper
76 100
78 9.3 7.3 10.9



#20
Methylene Chloride
Concen: 1.628 ug/l
RT: 4.622 min Scan# 476
Delta R.T. 0.006 min
Lab File: VY023553.D
Acq: 22 Oct 2025 15:58

Tgt Ion: 84 Resp: 16514
Ion Ratio Lower Upper
84 100
49 104.2 80.2 120.4
51 24.7 25.9 38.9#
86 65.9 50.6 75.8





#25

2-Butanone

Concen: 24.835 ug/l

RT: 6.903 min Scan# 848

Delta R.T. 0.012 min

Lab File: VY023553.D

Acq: 22 Oct 2025 15:58

Instrument :

MSVOA_Y

ClientSampleId :

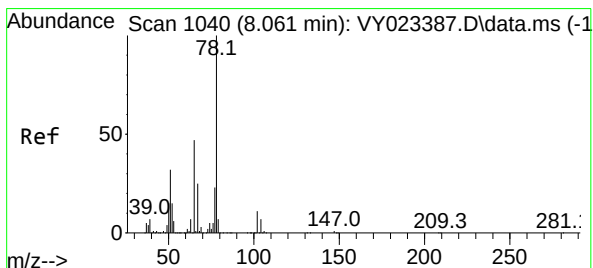
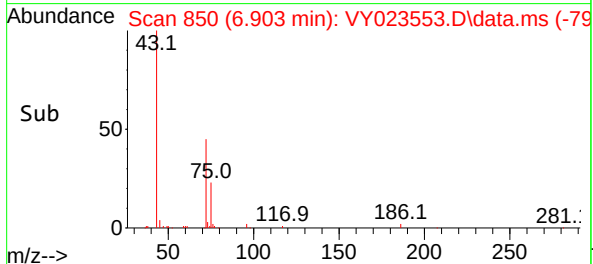
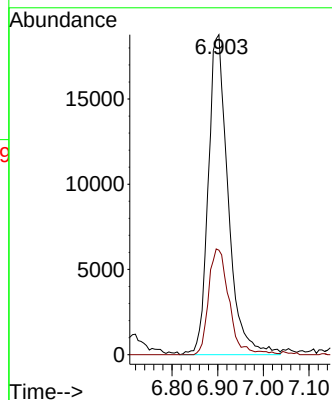
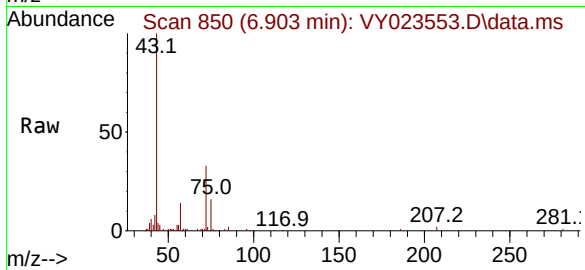
PR132-S16-094119-20251021

Tgt Ion: 43 Resp: 56883

Ion Ratio Lower Upper

43 100

72 32.7 27.4 41.2



#33

1,2-Dichloroethane-d4

Concen: 51.973 ug/l

RT: 8.061 min Scan# 1040

Delta R.T. 0.000 min

Lab File: VY023553.D

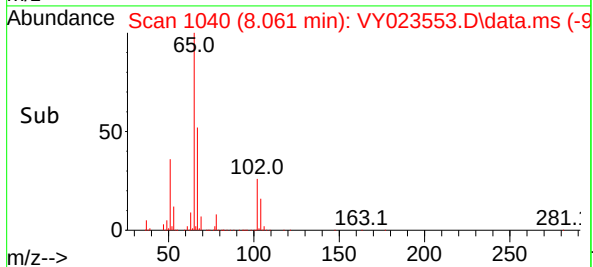
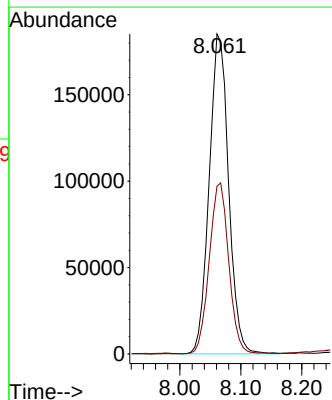
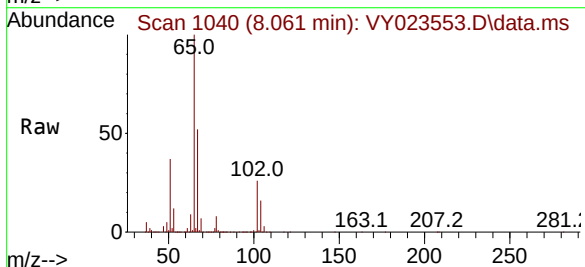
Acq: 22 Oct 2025 15:58

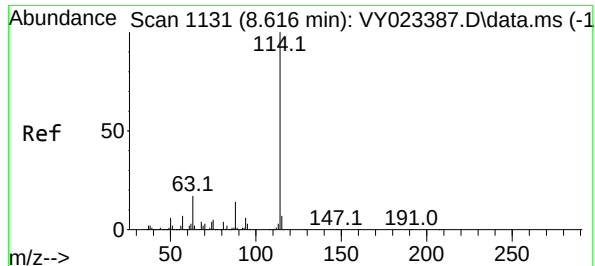
Tgt Ion: 65 Resp: 409580

Ion Ratio Lower Upper

65 100

67 53.6 0.0 105.8





#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 8.616 min Scan# 1131

Delta R.T. 0.000 min

Lab File: VY023553.D

Acq: 22 Oct 2025 15:58

Instrument :

MSVOA_Y

ClientSampleId :

PR132-S16-094119-20251021

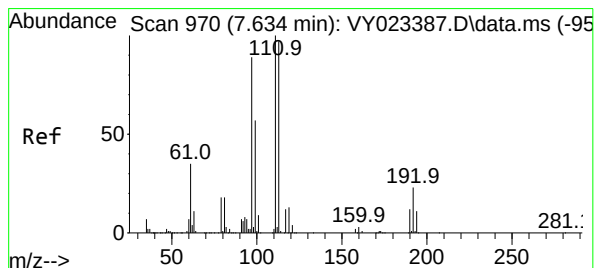
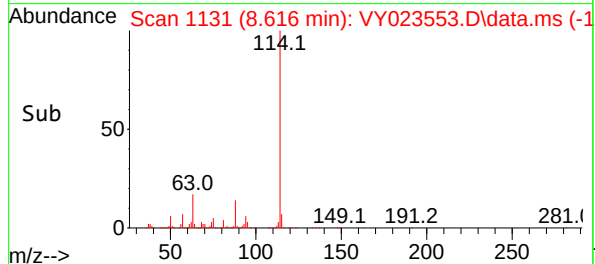
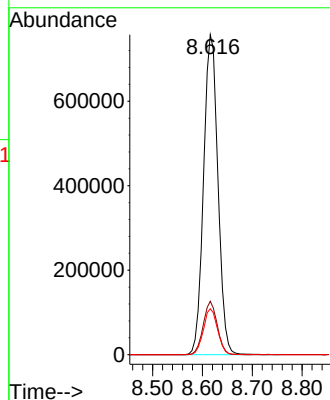
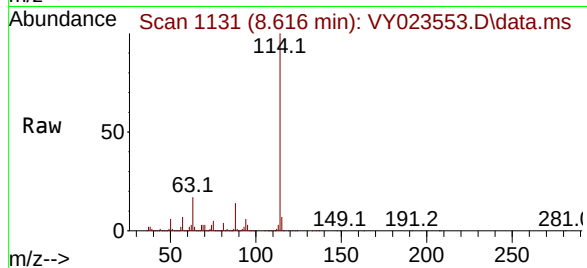
Tgt Ion:114 Resp: 1514027

Ion Ratio Lower Upper

114 100

63 16.7 0.0 34.2

88 14.3 0.0 28.4



#35

Dibromofluoromethane

Concen: 50.793 ug/l

RT: 7.634 min Scan# 970

Delta R.T. 0.000 min

Lab File: VY023553.D

Acq: 22 Oct 2025 15:58

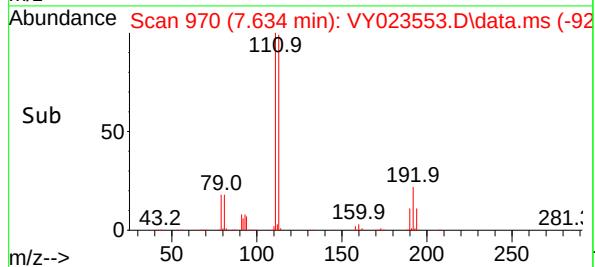
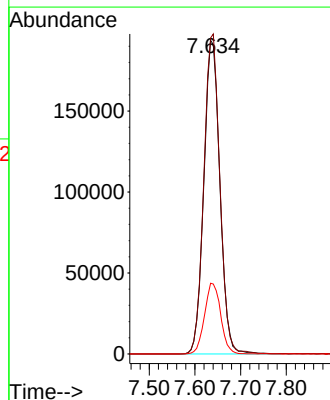
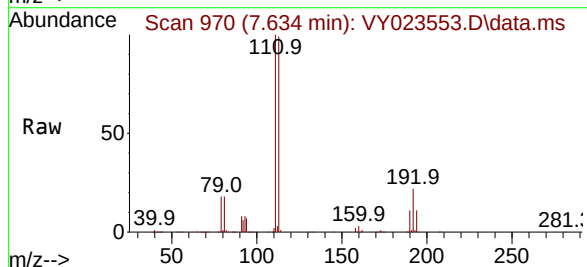
Tgt Ion:113 Resp: 472529

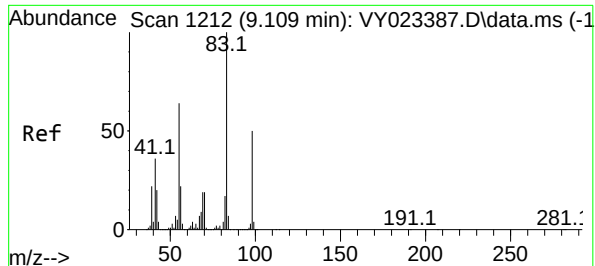
Ion Ratio Lower Upper

113 100

111 101.9 81.8 122.6

192 22.7 18.0 27.0





#39

Methylcyclohexane

Concen: 7.883 ug/l

RT: 9.110 min Scan# 1212

Delta R.T. 0.000 min

Lab File: VY023553.D

Acq: 22 Oct 2025 15:58

Instrument :

MSVOA_Y

ClientSampleId :

PR132-S16-094119-20251021

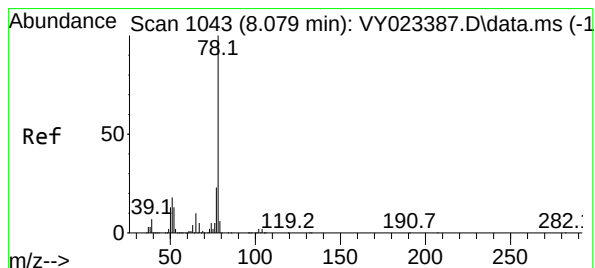
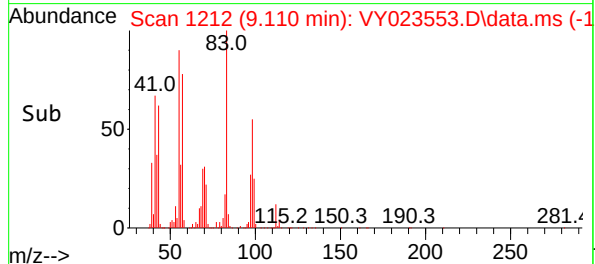
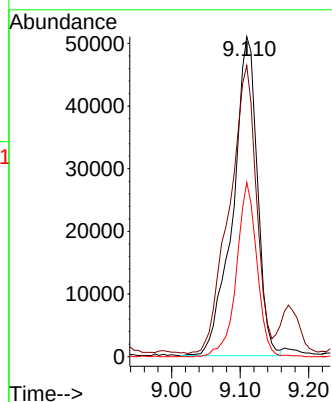
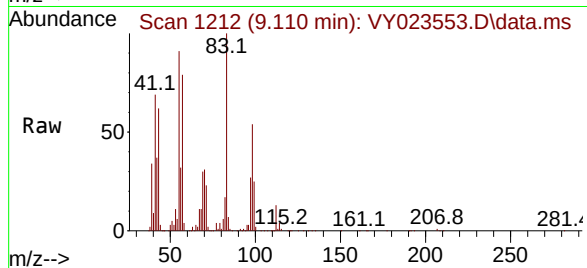
Tgt Ion: 83 Resp: 126416

Ion Ratio Lower Upper

83 100

55 90.1 51.4 77.2#

98 54.6 40.4 60.6



#40

Benzene

Concen: 2.674 ug/l

RT: 8.079 min Scan# 1043

Delta R.T. 0.000 min

Lab File: VY023553.D

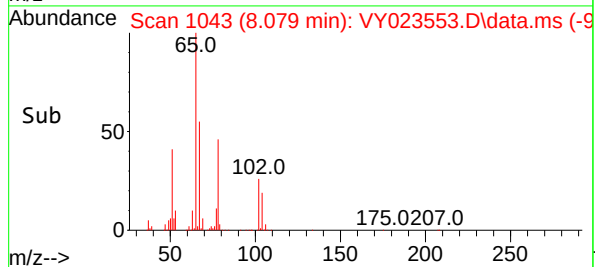
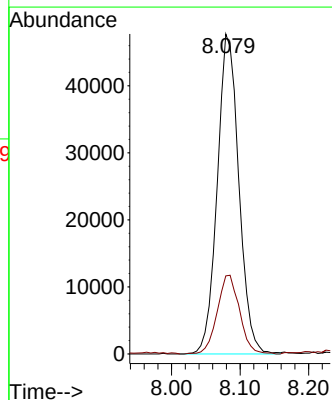
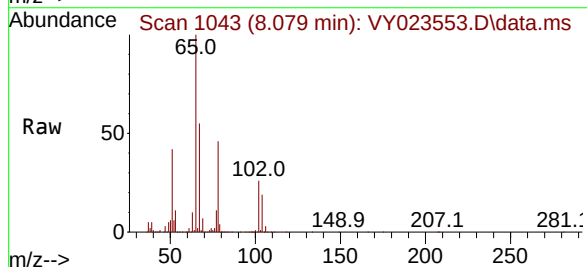
Acq: 22 Oct 2025 15:58

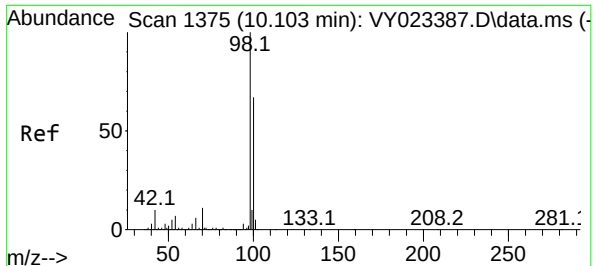
Tgt Ion: 78 Resp: 104295

Ion Ratio Lower Upper

78 100

77 24.4 18.3 27.5

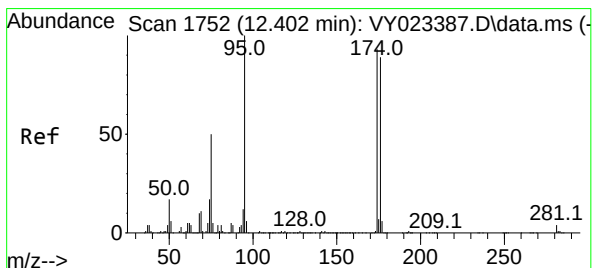
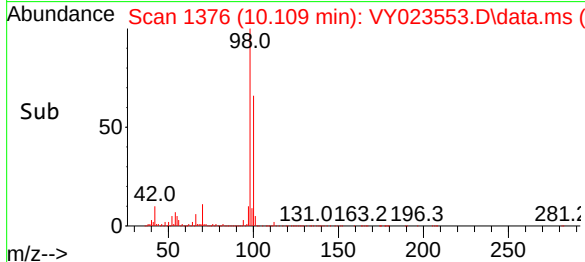
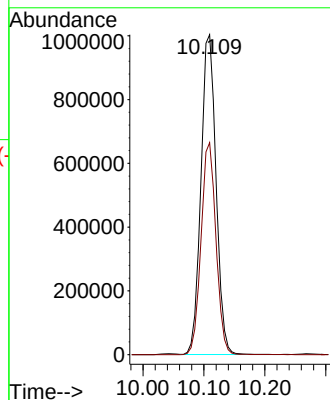
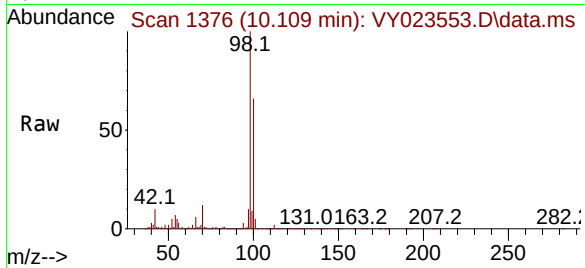




#50
Toluene-d8
Concen: 49.799 ug/l
RT: 10.109 min Scan# 11
Delta R.T. 0.006 min
Lab File: VY023553.D
Acq: 22 Oct 2025 15:58

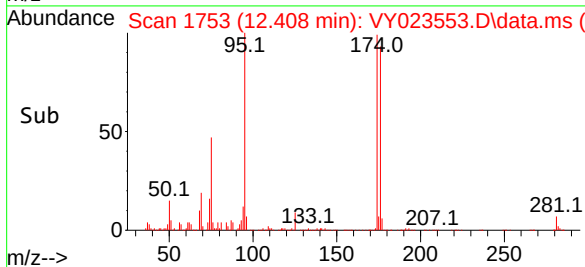
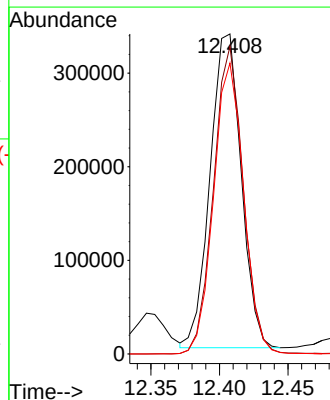
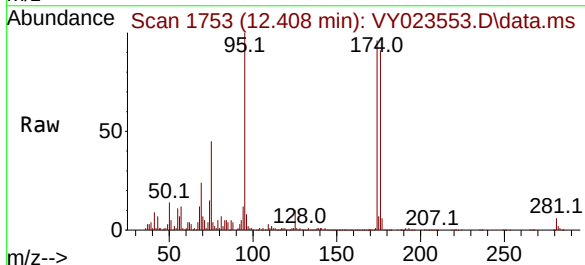
Instrument :
MSVOA_Y
ClientSampleId :
PR132-S16-094119-20251021

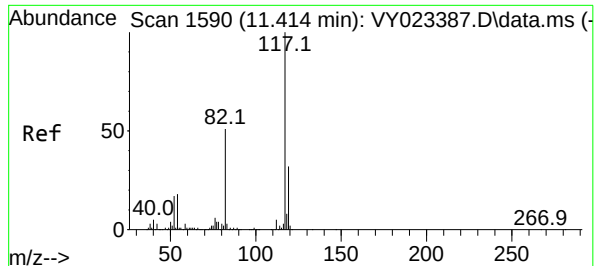
Tgt Ion: 98 Resp: 1725302
Ion Ratio Lower Upper
98 100
100 65.6 53.0 79.4



#62
4-Bromofluorobenzene
Concen: 46.299 ug/l
RT: 12.408 min Scan# 1753
Delta R.T. 0.006 min
Lab File: VY023553.D
Acq: 22 Oct 2025 15:58

Tgt Ion: 95 Resp: 529575
Ion Ratio Lower Upper
95 100
174 93.6 0.0 192.8
176 89.7 0.0 187.6





#63

Chlorobenzene-d5

Concen: 50.000 ug/l

RT: 11.414 min Scan# 1590

Delta R.T. 0.000 min

Lab File: VY023553.D

Acq: 22 Oct 2025 15:58

Instrument :

MSVOA_Y

ClientSampleId :

PR132-S16-094119-20251021

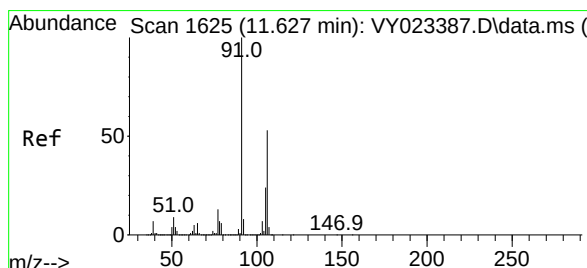
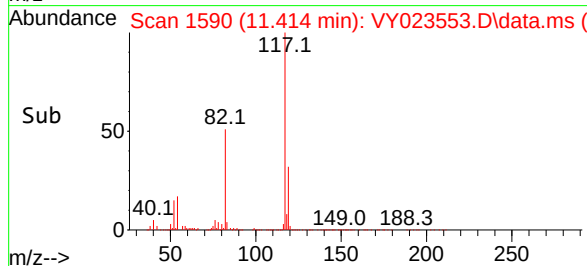
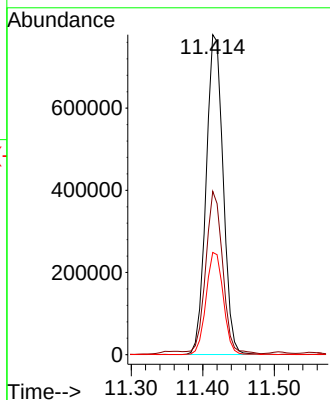
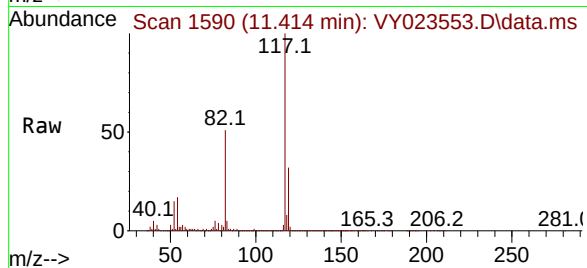
Tgt Ion:117 Resp: 1286219

Ion Ratio Lower Upper

117 100

82 50.2 41.0 61.4

119 31.9 25.6 38.4



#68

m/p-Xylenes

Concen: 3.397 ug/l

RT: 11.627 min Scan# 1625

Delta R.T. 0.000 min

Lab File: VY023553.D

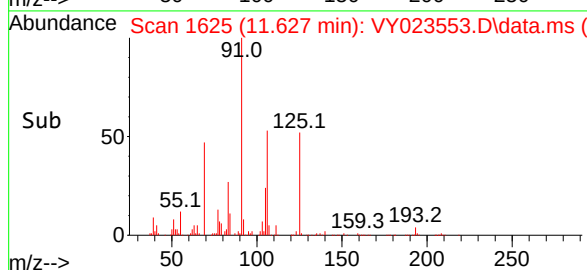
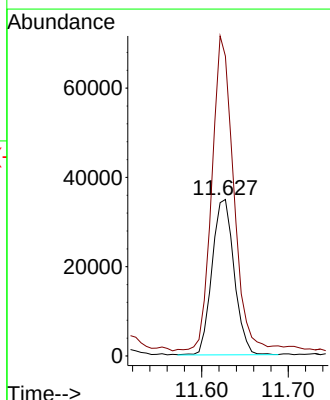
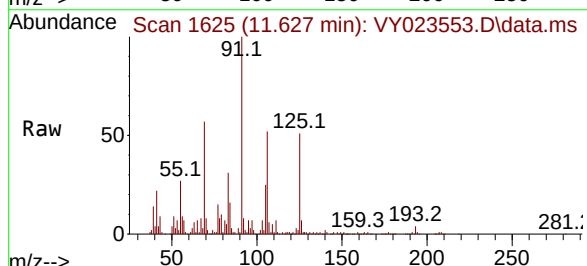
Acq: 22 Oct 2025 15:58

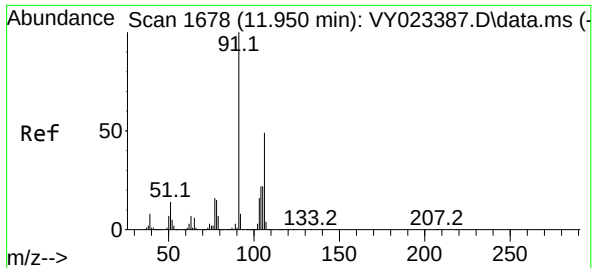
Tgt Ion:106 Resp: 61705

Ion Ratio Lower Upper

106 100

91 202.3 152.6 229.0

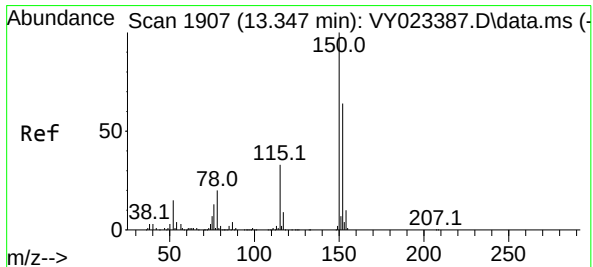
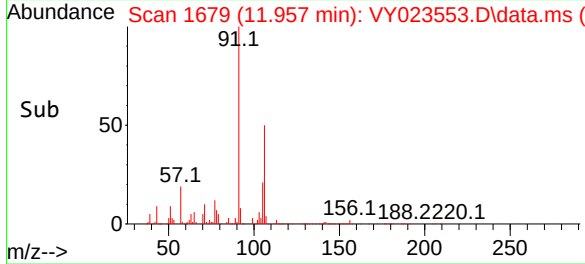
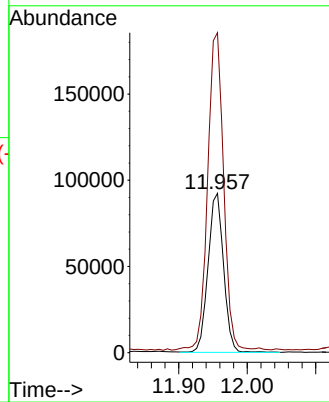
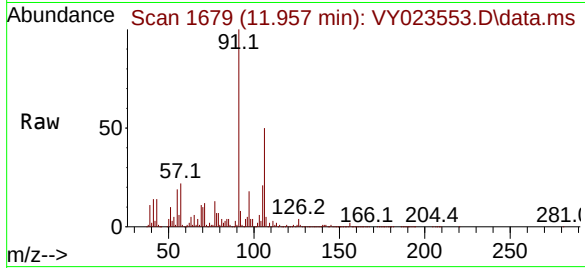




#69
o-Xylene
Concen: 8.524 ug/l
RT: 11.957 min Scan# 1679
Delta R.T. 0.006 min
Lab File: VY023553.D
Acq: 22 Oct 2025 15:58

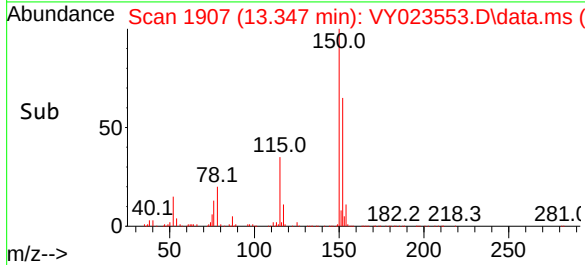
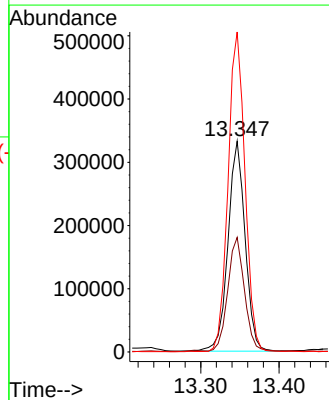
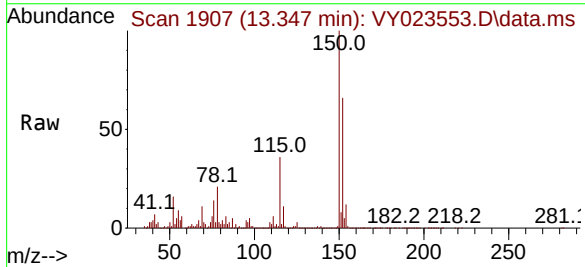
Instrument :
MSVOA_Y
ClientSampleId :
PR132-S16-094119-20251021

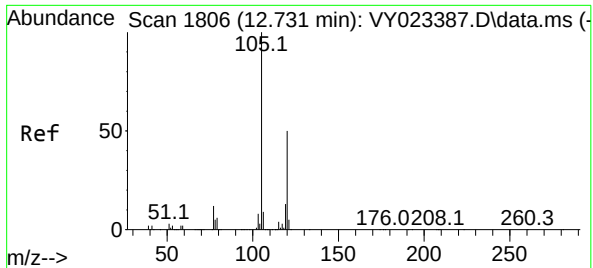
Tgt Ion:106 Resp: 145222
Ion Ratio Lower Upper
106 100
91 204.6 101.4 304.1



#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.347 min Scan# 1907
Delta R.T. 0.000 min
Lab File: VY023553.D
Acq: 22 Oct 2025 15:58

Tgt Ion:152 Resp: 504876
Ion Ratio Lower Upper
152 100
115 52.6 27.1 81.2
150 149.7 0.0 347.4





#80

1,3,5-Trimethylbenzene

Concen: 3.265 ug/l

RT: 12.737 min Scan# 1806

Delta R.T. 0.006 min

Lab File: VY023553.D

Acq: 22 Oct 2025 15:58

Instrument :

MSVOA_Y

ClientSampleId :

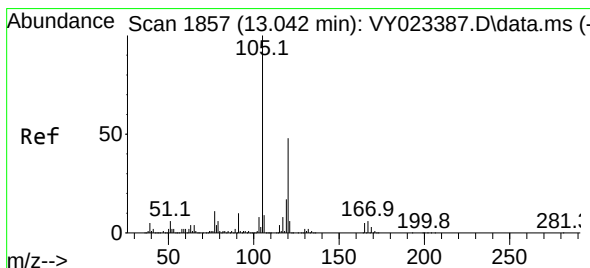
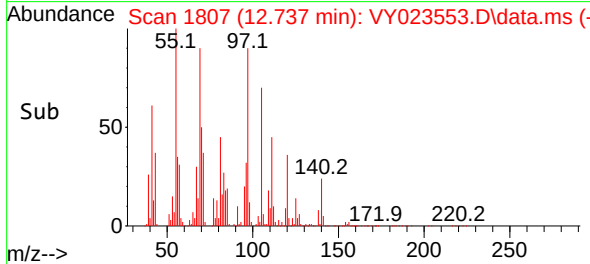
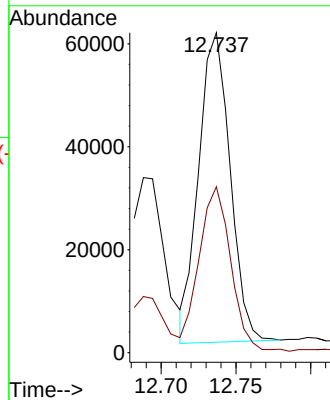
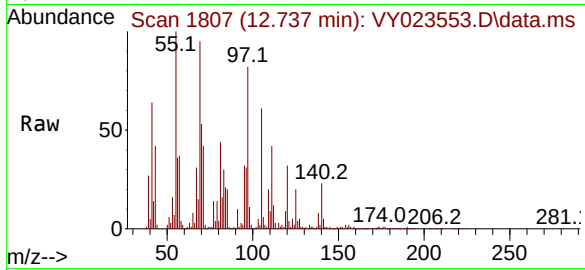
PR132-S16-094119-20251021

Tgt Ion:105 Resp: 87778

Ion Ratio Lower Upper

105 100

120 53.7 25.4 76.4



#84

1,2,4-Trimethylbenzene

Concen: 5.605 ug/l

RT: 13.042 min Scan# 1857

Delta R.T. 0.000 min

Lab File: VY023553.D

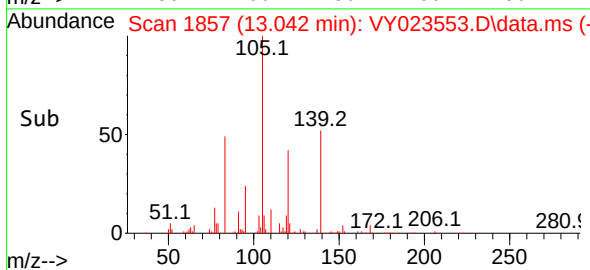
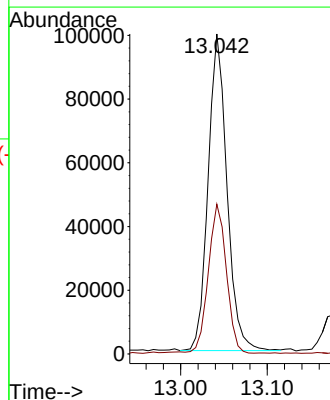
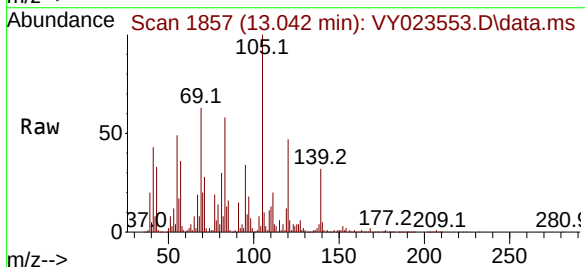
Acq: 22 Oct 2025 15:58

Tgt Ion:105 Resp: 150406

Ion Ratio Lower Upper

105 100

120 45.4 23.8 71.2





CALIBRATION SUMMARY



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

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Alliance Contract: AECO02
 Lab Code: ACE SDG No.: Q3419
 Instrument ID: MSVOA_Y Calibration Date(s): 10/07/2025 10/07/2025
 Heated Purge: (Y/N) Y Calibration Time(s): 09:17 12:32
 GC Column: RXI-624 ID: 0.25 (mm)

LAB FILE ID:		RRF005 = VY023384.D		RRF010 = VY023385.D		RRF020 = VY023386.D			
		RRF050 = VY023387.D		RRF100 = VY023388.D		RRF150 = VY023389.D			
COMPOUND	RRF005	RRF010	RRF020	RRF050	RRF100	RRF150	RRF	% RSD	
Dichlorodifluoromethane	0.397	0.399	0.400	0.321	0.310	0.333	0.360	12	
Chloromethane	0.518	0.557	0.512	0.449	0.438	0.467	0.490	9.4	
Vinyl Chloride	0.660	0.684	0.659	0.598	0.597	0.633	0.639	5.6	
Bromomethane	0.601	0.596	0.548	0.469	0.483	0.518	0.536	10.4	
Chloroethane	0.441	0.462	0.453	0.414	0.413	0.429	0.435	4.7	
Trichlorofluoromethane	0.884	0.920	0.946	0.842	0.850	0.877	0.887	4.5	
1,1,2-Trichlorotrifluoroethane	0.484	0.486	0.479	0.437	0.429	0.445	0.460	5.6	
1,1-Dichloroethene	0.449	0.475	0.456	0.427	0.426	0.443	0.446	4.1	
Acetone	0.128	0.117	0.094	0.084	0.085	0.089	0.100	18.7	
Carbon Disulfide	1.291	1.367	1.320	1.225	1.210	1.246	1.277	4.7	
Methyl tert-butyl Ether	1.006	1.075	1.075	1.020	1.091	1.165	1.072	5.3	
Methyl Acetate	0.244	0.265	0.260	0.245	0.266	0.286	0.261	6	
Methylene Chloride	0.625	0.634	0.576	0.458	0.463	0.473	0.538	15.4	
trans-1,2-Dichloroethene	0.494	0.504	0.507	0.470	0.478	0.494	0.491	2.9	
1,1-Dichloroethane	0.800	0.835	0.827	0.759	0.765	0.792	0.796	3.9	
Cyclohexane	0.797	0.717	0.697	0.643	0.644	0.676	0.696	8.3	
2-Butanone	0.133	0.134	0.115	0.105	0.115	0.126	0.122	9.6	
Carbon Tetrachloride	0.483	0.501	0.504	0.481	0.487	0.503	0.493	2.1	
cis-1,2-Dichloroethene	0.542	0.584	0.582	0.542	0.563	0.591	0.567	3.8	
Bromochloromethane	0.332	0.323	0.320	0.267	0.270	0.273	0.297	10.2	
Chloroform	0.886	0.912	0.901	0.835	0.842	0.874	0.875	3.5	
1,1,1-Trichloroethane	0.808	0.814	0.822	0.767	0.764	0.796	0.795	3.1	
Methylcyclohexane	0.491	0.486	0.537	0.527	0.554	0.583	0.530	7	
Benzene	1.253	1.302	1.322	1.259	1.281	1.312	1.288	2.2	
1,2-Dichloroethane	0.328	0.346	0.343	0.315	0.324	0.338	0.332	3.6	
Trichloroethene	0.380	0.381	0.386	0.367	0.372	0.376	0.377	1.8	
1,2-Dichloropropane	0.276	0.289	0.292	0.274	0.283	0.293	0.285	2.9	
Bromodichloromethane	0.440	0.463	0.459	0.439	0.449	0.468	0.453	2.7	
4-Methyl-2-Pentanone	0.141	0.159	0.161	0.159	0.180	0.196	0.166	11.6	
Toluene	0.777	0.818	0.855	0.827	0.855	0.885	0.836	4.5	

* 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.



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

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Alliance Contract: AECO02
 Lab Code: ACE SDG No.: Q3419
 Instrument ID: MSVOA_Y Calibration Date(s): 10/07/2025 10/07/2025
 Heated Purge: (Y/N) Y Calibration Time(s): 09:17 12:32
 GC Column: RXI-624 ID: 0.25 (mm)

LAB FILE ID:		RRF005 = VY023384.D		RRF010 = VY023385.D		RRF020 = VY023386.D			
		RRF050 = VY023387.D		RRF100 = VY023388.D		RRF150 = VY023389.D			
COMPOUND	RRF005	RRF010	RRF020	RRF050	RRF100	RRF150	RRF	% RSD	
t-1,3-Dichloropropene	0.357	0.380	0.390	0.385	0.415	0.438	0.394	7.2	
cis-1,3-Dichloropropene	0.424	0.460	0.465	0.455	0.481	0.505	0.465	5.9	
1,1,2-Trichloroethane	0.234	0.247	0.241	0.231	0.244	0.254	0.242	3.5	
2-Hexanone	0.108	0.117	0.110	0.112	0.126	0.138	0.119	9.9	
Dibromochloromethane	0.319	0.337	0.340	0.327	0.347	0.365	0.339	4.7	
1,2-Dibromoethane	0.215	0.229	0.231	0.223	0.237	0.249	0.231	5.2	
Tetrachloroethene	0.538	0.517	0.561	0.523	0.502	0.456	0.516	6.9	
Chlorobenzene	1.086	1.095	1.092	1.053	1.083	1.116	1.087	1.9	
Ethyl Benzene	1.606	1.711	1.753	1.777	1.824	1.891	1.760	5.5	
m/p-Xylenes	0.632	0.675	0.715	0.719	0.734	0.763	0.706	6.5	
o-Xylene	0.588	0.623	0.653	0.670	0.701	0.738	0.662	8.1	
Styrene	0.902	1.026	1.098	1.109	1.166	1.233	1.089	10.5	
Bromoform	0.225	0.242	0.238	0.230	0.244	0.262	0.240	5.4	
Isopropylbenzene	2.967	3.153	3.353	3.317	3.425	3.555	3.295	6.3	
1,1,2,2-Tetrachloroethane	0.530	0.548	0.502	0.499	0.543	0.611	0.539	7.6	
1,3-Dichlorobenzene	1.667	1.698	1.718	1.657	1.701	1.794	1.706	2.9	
1,4-Dichlorobenzene	1.703	1.703	1.694	1.624	1.653	1.732	1.685	2.3	
1,2-Dichlorobenzene	1.485	1.498	1.511	1.446	1.490	1.543	1.496	2.1	
1,2-Dibromo-3-Chloropropane	0.087	0.093	0.083	0.083	0.088	0.096	0.088	6.2	
1,2,4-Trichlorobenzene	0.846	0.867	0.901	0.918	1.007	1.054	0.932	8.7	
1,2,3-Trichlorobenzene	0.719	0.753	0.795	0.793	0.866	0.920	0.808	9.1	
1,2-Dichloroethane-d4	0.455	0.436	0.429	0.392	0.392	0.405	0.418	6.2	
Dibromofluoromethane	0.311	0.314	0.317	0.298	0.299	0.303	0.307	2.6	
Toluene-d8	1.132	1.170	1.177	1.129	1.122	1.135	1.144	2	
4-Bromofluorobenzene	0.401	0.370	0.373	0.365	0.372	0.386	0.378	3.5	

* 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.

Method Path : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\
 Method File : 82Y100725S.M
 Title : SW846 8260
 Last Update : Wed Oct 08 05:12:50 2025
 Response Via : Initial Calibration

Calibration Files

5 =VY023384.D 10 =VY023385.D 20 =VY023386.D 50 =VY023387.D 100 =VY023388.D 150 =VY023389.D

	Compound	5	10	20	50	100	150	Avg	%RSD
1) I	Pentafluorobenzene	-----ISTD-----							
2) T	Dichlorodifluo...	0.397	0.399	0.400	0.321	0.310	0.333	0.360	11.97
3) P	Chloromethane	0.518	0.557	0.512	0.449	0.438	0.467	0.490	9.45
4) C	Vinyl Chloride	0.660	0.684	0.659	0.598	0.597	0.633	0.639	5.59#
5) T	Bromomethane	0.601	0.596	0.548	0.469	0.483	0.518	0.536	10.42
6) T	Chloroethane	0.441	0.462	0.453	0.414	0.413	0.429	0.435	4.67
7) T	Trichlorofluor...	0.884	0.920	0.946	0.842	0.850	0.877	0.887	4.54
8) T	Diethyl Ether	0.240	0.239	0.236	0.215	0.224	0.237	0.232	4.42
9) T	1,1,2-Trichlor...	0.484	0.486	0.479	0.437	0.429	0.445	0.460	5.57
10) T	Methyl Iodide	0.404	0.503	0.518	0.538	0.547	0.562	0.512	11.09
11) T	Tert butyl alc...	0.033	0.037	0.030	0.025	0.029	0.033	0.031	13.08
12) CM	1,1-Dichloroet...	0.449	0.475	0.456	0.427	0.426	0.443	0.446	4.14#
13) T	Acrolein	0.045	0.043	0.042	0.042	0.044	0.048	0.044	5.27
14) T	Allyl chloride	0.540	0.555	0.546	0.526	0.535	0.560	0.544	2.33
15) T	Acrylonitrile	0.088	0.093	0.086	0.082	0.088	0.095	0.089	5.52
16) T	Acetone	0.128	0.117	0.094	0.084	0.085	0.089	0.100	18.67
17) T	Carbon Disulfide	1.291	1.367	1.320	1.225	1.210	1.246	1.277	4.74
18) T	Methyl Acetate	0.244	0.265	0.260	0.245	0.266	0.286	0.261	6.00
19) T	Methyl tert-bu...	1.006	1.075	1.075	1.020	1.091	1.165	1.072	5.30
20) T	Methylene Chlo...	0.625	0.634	0.576	0.458	0.463	0.473	0.538	15.41
21) T	trans-1,2-Dich...	0.494	0.504	0.507	0.470	0.478	0.494	0.491	2.95
22) T	Diisopropyl ether	1.107	1.238	1.255	1.163	1.195	1.257	1.202	4.95
23) T	Vinyl Acetate	0.594	0.646	0.651	0.625	0.667	0.722	0.651	6.65
24) P	1,1-Dichloroet...	0.800	0.835	0.827	0.759	0.765	0.792	0.796	3.90
25) T	2-Butanone	0.133	0.134	0.115	0.105	0.115	0.126	0.122	9.56
26) T	2,2-Dichloropr...	0.752	0.771	0.731	0.705	0.699	0.726	0.731	3.74
27) T	cis-1,2-Dichlo...	0.542	0.584	0.582	0.542	0.563	0.591	0.567	3.81
28) T	Bromochloromet...	0.332	0.323	0.320	0.267	0.270	0.273	0.297	10.22
29) T	Tetrahydrofuran	0.066	0.070	0.067	0.064	0.070	0.078	0.069	7.25
30) C	Chloroform	0.886	0.912	0.901	0.835	0.842	0.874	0.875	3.54#
31) T	Cyclohexane	0.797	0.717	0.697	0.643	0.644	0.676	0.696	8.27
32) T	1,1,1-Trichlor...	0.808	0.814	0.822	0.767	0.764	0.796	0.795	3.08
33) S	1,2-Dichloroet...	0.455	0.436	0.429	0.392	0.392	0.405	0.418	6.21
34) I	1,4-Difluorobenzene	-----ISTD-----							
35) S	Dibromofluorom...	0.311	0.314	0.317	0.298	0.299	0.303	0.307	2.62
36) T	1,1-Dichloropr...	0.395	0.413	0.413	0.397	0.405	0.417	0.407	2.20
37) T	Ethyl Acetate	0.148	0.162	0.163	0.150	0.164	0.179	0.161	6.94
38) T	Carbon Tetrach...	0.483	0.501	0.504	0.481	0.487	0.503	0.493	2.14
39) T	Methylcyclohexane	0.491	0.486	0.537	0.527	0.554	0.583	0.530	7.03
40) TM	Benzene	1.253	1.302	1.322	1.259	1.281	1.312	1.288	2.22
41) T	Methacrylonitrile	0.082	0.085	0.091	0.080	0.089	0.096	0.087	7.09
42) TM	1,2-Dichloroet...	0.328	0.346	0.343	0.315	0.324	0.338	0.332	3.59
43) T	Isopropyl Acetate	0.297	0.313	0.313	0.302	0.335	0.369	0.321	8.32
44) TM	Trichloroethene	0.380	0.381	0.386	0.367	0.372	0.376	0.377	1.81
45) C	1,2-Dichloropr...	0.276	0.289	0.292	0.274	0.283	0.293	0.285	2.89#
46) T	Dibromomethane	0.172	0.182	0.183	0.173	0.181	0.188	0.180	3.43
47) T	Bromodichlorom...	0.440	0.463	0.459	0.439	0.449	0.468	0.453	2.70
48) T	Methyl methacr...	0.125	0.139	0.149	0.148	0.165	0.181	0.151	12.98
49) T	1,4-Dioxane	0.002	0.002	0.002	0.002	0.002	0.002	0.002	10.06
50) S	Toluene-d8	1.132	1.170	1.177	1.129	1.122	1.135	1.144	2.03
51) T	4-Methyl-2-Pen...	0.141	0.159	0.161	0.159	0.180	0.196	0.166	11.55
52) CM	Toluene	0.777	0.818	0.855	0.827	0.855	0.885	0.836	4.49#
53) T	t-1,3-Dichloro...	0.357	0.380	0.390	0.385	0.415	0.438	0.394	7.24
54) T	cis-1,3-Dichlo...	0.424	0.460	0.465	0.455	0.481	0.505	0.465	5.86
55) T	1,1,2-Trichlor...	0.234	0.247	0.241	0.231	0.244	0.254	0.242	3.52
56) T	Ethyl methacry...	0.219	0.248	0.262	0.279	0.321	0.345	0.279	16.80

Method Path : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\
 Method File : 82Y100725S.M

57)	T	1,3-Dichloropr...	0.361	0.381	0.383	0.374	0.392	0.409	0.383	4.26
58)	T	2-Chloroethyl ...	0.093	0.112	0.112	0.129	0.145	0.159	0.125	19.35
59)	T	2-Hexanone	0.108	0.117	0.110	0.112	0.126	0.138	0.119	9.86
60)	T	Dibromochlorom...	0.319	0.337	0.340	0.327	0.347	0.365	0.339	4.69
61)	T	1,2-Dibromoethane	0.215	0.229	0.231	0.223	0.237	0.249	0.231	5.16
62)	S	4-Bromofluorob...	0.401	0.370	0.373	0.365	0.372	0.386	0.378	3.51
63)	I	Chlorobenzene-d5	-----ISTD-----							
64)	T	Tetrachloroethene	0.538	0.517	0.561	0.523	0.502	0.456	0.516	6.92
65)	PM	Chlorobenzene	1.086	1.095	1.092	1.053	1.083	1.116	1.087	1.89
66)	T	1,1,1,2-Tetrac...	0.388	0.389	0.390	0.373	0.384	0.402	0.388	2.44
67)	C	Ethyl Benzene	1.606	1.711	1.753	1.777	1.824	1.891	1.760	5.54#
68)	T	m/p-Xylenes	0.632	0.675	0.715	0.719	0.734	0.763	0.706	6.54
69)	T	o-Xylene	0.588	0.623	0.653	0.670	0.701	0.738	0.662	8.15
70)	T	Styrene	0.902	1.026	1.098	1.109	1.166	1.233	1.089	10.55
71)	P	Bromoform	0.225	0.242	0.238	0.230	0.244	0.262	0.240	5.41
72)	I	1,4-Dichlorobenzen...	-----ISTD-----							
73)	T	Isopropylbenzene	2.967	3.153	3.353	3.317	3.425	3.555	3.295	6.30
74)	T	N-amyl acetate	0.477	0.535	0.556	0.581	0.665	0.738	0.592	15.95
75)	P	1,1,2,2-Tetrac...	0.530	0.548	0.502	0.499	0.543	0.611	0.539	7.60
76)	T	1,2,3-Trichlor...	0.406	0.399	0.484	0.433	0.455	0.469	0.441	7.76
77)	T	Bromobenzene	0.849	0.880	0.885	0.845	0.877	0.921	0.876	3.14
78)	T	n-propylbenzene	3.373	3.676	3.906	3.883	3.955	4.086	3.813	6.64
79)	T	2-Chlorotoluene	2.095	2.208	2.282	2.227	2.249	2.338	2.233	3.66
80)	T	1,3,5-Trimethy...	2.309	2.557	2.736	2.706	2.772	2.896	2.663	7.70
81)	T	trans-1,4-Dich...	0.171	0.175	0.176	0.169	0.185	0.203	0.180	7.04
82)	T	4-Chlorotoluene	2.173	2.266	2.362	2.276	2.316	2.404	2.300	3.52
83)	T	tert-Butylbenzene	2.199	2.363	2.465	2.522	2.533	2.668	2.458	6.55
84)	T	1,2,4-Trimethy...	2.301	2.552	2.701	2.706	2.782	2.903	2.657	7.86
85)	T	sec-Butylbenzene	3.175	3.388	3.571	3.583	3.664	3.778	3.527	6.08
86)	T	p-Isopropyltol...	2.575	2.804	3.032	3.087	3.183	3.334	3.003	9.09
87)	T	1,3-Dichlorobe...	1.667	1.698	1.718	1.657	1.701	1.794	1.706	2.85
88)	T	1,4-Dichlorobe...	1.703	1.703	1.694	1.624	1.653	1.732	1.685	2.33
89)	T	n-Butylbenzene	2.279	2.428	2.626	2.682	2.778	2.904	2.616	8.76
90)	T	Hexachloroethane	0.667	0.631	0.647	0.625	0.643	0.662	0.646	2.54
91)	T	1,2-Dichlorobe...	1.485	1.498	1.511	1.446	1.490	1.543	1.496	2.13
92)	T	1,2-Dibromo-3-...	0.087	0.093	0.083	0.083	0.088	0.096	0.088	6.18
93)	T	1,2,4-Trichlor...	0.846	0.867	0.901	0.918	1.007	1.054	0.932	8.75
94)	T	Hexachlorobuta...	0.590	0.571	0.572	0.577	0.587	0.590	0.581	1.52
95)	T	Naphthalene	1.206	1.281	1.346	1.466	1.722	1.887	1.485	17.98
96)	T	1,2,3-Trichlor...	0.719	0.753	0.795	0.793	0.866	0.920	0.808	9.14

(#) = Out of Range

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
 Data File : VY023384.D
 Acq On : 07 Oct 2025 09:17
 Operator : SY/MD
 Sample : VSTDICC005
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VSTDICC005

Manual Integrations
 APPROVED

Reviewed By :Semsettin Yesilyurt 10/10/2025
 Supervised By :Mahesh Dadoda 10/10/2025

Quant Time: Oct 08 04:39:47 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 04:39:16 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	7.707	168	585717	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	8.615	114	882488	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.414	117	753398	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.346	152	378104	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.061	65	26670	5.258	ug/l	0.00
Spiked Amount 50.000	Range 50 - 163		Recovery =	10.520%#		
35) Dibromofluoromethane	7.634	113	27455	5.126	ug/l	0.00
Spiked Amount 50.000	Range 54 - 147		Recovery =	10.260%#		
50) Toluene-d8	10.103	98	99905	4.946	ug/l	0.00
Spiked Amount 50.000	Range 58 - 134		Recovery =	9.900%#		
62) 4-Bromofluorobenzene	12.401	95	35355	5.548	ug/l	0.00
Spiked Amount 50.000	Range 30 - 143		Recovery =	11.100%#		
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.867	85	23245	5.038	ug/l	92
3) Chloromethane	2.074	50	30346	4.627	ug/l	94
4) Vinyl Chloride	2.202	62	38657	4.668	ug/l	95
5) Bromomethane	2.598	94	35214	5.184	ug/l	94
6) Chloroethane	2.732	64	25848	4.597	ug/l	98
7) Trichlorofluoromethane	3.055	101	51797	4.869	ug/l	98
8) Diethyl Ether	3.452	74	14079	5.060	ug/l	96
9) 1,1,2-Trichlorotrifluo...	3.818	101	28368	4.989	ug/l	99
10) Methyl Iodide	4.007	142	23692	3.606	ug/l	99
11) Tert butyl alcohol	4.854	59	9774	32.746	ug/l #	80
12) 1,1-Dichloroethene	3.787	96	26290	4.806	ug/l	94
13) Acrolein	3.653	56	13176	26.054	ug/l	100
14) Allyl chloride	4.385	41	31614	4.616	ug/l	98
15) Acrylonitrile	5.055	53	25891	23.754	ug/l	99
16) Acetone	3.866	43	37573	32.940	ug/l	96
17) Carbon Disulfide	4.104	76	75645	4.432	ug/l	99
18) Methyl Acetate	4.391	43	14279	4.926	ug/l	98
19) Methyl tert-butyl Ether	5.116	73	58919	4.600	ug/l	95
20) Methylene Chloride	4.616	84	36598	5.917	ug/l	100
21) trans-1,2-Dichloroethene	5.110	96	28923	4.754	ug/l	99
22) Diisopropyl ether	6.018	45	64833	4.269	ug/l	94
23) Vinyl Acetate	5.964	43	173851	20.824	ug/l	99
24) 1,1-Dichloroethane	5.909	63	46850	4.679	ug/l	100
25) 2-Butanone	6.890	43	38990	27.656	ug/l	93
26) 2,2-Dichloropropane	6.884	77	44062	4.953	ug/l	98
27) cis-1,2-Dichloroethene	6.884	96	31743	4.600	ug/l	98
28) Bromochloromethane	7.244	49	19445	5.006	ug/l	99
29) Tetrahydrofuran	7.262	42	19296	23.059	ug/l	98
30) Chloroform	7.421	83	51887	4.806	ug/l	97
31) Cyclohexane	7.707	56	46675	5.279	ug/l #	79
32) 1,1,1-Trichloroethane	7.616	97	47305	4.881	ug/l	99
36) 1,1-Dichloropropene	7.835	75	34888	4.617	ug/l	98
37) Ethyl Acetate	6.982	43	13082	4.379	ug/l #	93
38) Carbon Tetrachloride	7.817	117	42654	4.859	ug/l	95
39) Methylcyclohexane	9.109	83	43329	4.479	ug/l	98
40) Benzene	8.079	78	110551	4.693	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
 Data File : VY023384.D
 Acq On : 07 Oct 2025 09:17
 Operator : SY/MD
 Sample : VSTDICC005
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VSTDICC005

Manual Integrations
 APPROVED

Reviewed By :Semsettin Yesilyurt 10/10/2025
 Supervised By :Mahesh Dadoda 10/10/2025

Quant Time: Oct 08 04:39:47 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 04:39:16 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.225	41	7226m	4.658	ug/l	
42) 1,2-Dichloroethane	8.158	62	28940	4.828	ug/l	100
43) Isopropyl Acetate	8.201	43	26166	4.503	ug/l	99
44) Trichloroethene	8.859	130	33564	5.077	ug/l	99
45) 1,2-Dichloropropane	9.140	63	24358	4.595	ug/l	92
46) Dibromomethane	9.231	93	15179	4.682	ug/l	97
47) Bromodichloromethane	9.420	83	38813	4.756	ug/l	93
48) Methyl methacrylate	9.219	41	11038	4.071	ug/l	98
49) 1,4-Dioxane	9.219	88	3255	96.953	ug/l #	86
51) 4-Methyl-2-Pentanone	9.999	43	62279	20.925	ug/l	98
52) Toluene	10.170	92	68550	4.585	ug/l	99
53) t-1,3-Dichloropropene	10.396	75	31477	4.491	ug/l	99
54) cis-1,3-Dichloropropene	9.853	75	37392	4.463	ug/l	96
55) 1,1,2-Trichloroethane	10.572	97	20641	4.786	ug/l	97
56) Ethyl methacrylate	10.438	69	19324	3.891	ug/l	94
57) 1,3-Dichloropropane	10.719	76	31831	4.560	ug/l	96
58) 2-Chloroethyl Vinyl ether	9.713	63	41054m	18.894	ug/l	
59) 2-Hexanone	10.761	43	47778	23.185	ug/l	97
60) Dibromochloromethane	10.908	129	28135	4.783	ug/l	97
61) 1,2-Dibromoethane	11.017	107	18957	4.673	ug/l	97
64) Tetrachloroethene	10.646	164	40570	5.383	ug/l	98
65) Chlorobenzene	11.444	112	81802	4.997	ug/l	98
66) 1,1,1,2-Tetrachloroethane	11.517	131	29222	5.075	ug/l	97
67) Ethyl Benzene	11.517	91	121005	4.529	ug/l	99
68) m/p-Xylenes	11.633	106	95176	8.887	ug/l	100
69) o-Xylene	11.956	106	44280	4.466	ug/l	98
70) Styrene	11.969	104	67960	4.152	ug/l	99
71) Bromoform	12.133	173	16988	4.929	ug/l #	99
73) Isopropylbenzene	12.255	105	112194	4.455	ug/l	99
74) N-amyl acetate	12.066	43	18041	3.833	ug/l #	96
75) 1,1,2,2-Tetrachloroethane	12.505	83	20052	4.773	ug/l	100
76) 1,2,3-Trichloropropane	12.554	75	15359m	4.118	ug/l	
77) Bromobenzene	12.529	156	32106	4.967	ug/l	99
78) n-propylbenzene	12.596	91	127521	4.305	ug/l	99
79) 2-Chlorotoluene	12.676	91	79199	4.631	ug/l	99
80) 1,3,5-Trimethylbenzene	12.737	105	87297	4.264	ug/l	100
81) trans-1,4-Dichloro-2-b...	12.304	75	6474	4.680	ug/l	98
82) 4-Chlorotoluene	12.779	91	82155	4.600	ug/l	100
83) tert-Butylbenzene	12.999	119	83151	4.457	ug/l	100
84) 1,2,4-Trimethylbenzene	13.042	105	86988	4.294	ug/l	99
85) sec-Butylbenzene	13.176	105	120061	4.443	ug/l	99
86) p-Isopropyltoluene	13.291	119	97377	4.264	ug/l	99
87) 1,3-Dichlorobenzene	13.285	146	63027	4.936	ug/l	100
88) 1,4-Dichlorobenzene	13.365	146	64389	5.085	ug/l	95
89) n-Butylbenzene	13.615	91	86179	4.274	ug/l	99
90) Hexachloroethane	13.877	117	25204	5.084	ug/l	97
91) 1,2-Dichlorobenzene	13.657	146	56167	5.041	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	14.273	75	3305	4.964	ug/l	95
93) 1,2,4-Trichlorobenzene	14.919	180	32000	4.875	ug/l	99
94) Hexachlorobutadiene	15.023	225	22316	5.456	ug/l	99
95) Naphthalene	15.145	128	45598	4.360	ug/l	99
96) 1,2,3-Trichlorobenzene	15.328	180	27176	4.772	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
Data File : VY023384.D
Acq On : 07 Oct 2025 09:17
Operator : SY/MD
Sample : VSTDICC005
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
VSTDICC005

Manual Integrations
APPROVED

Reviewed By :Semsettin Yesilyurt 10/10/2025
Supervised By :Mahesh Dadoda 10/10/2025

Quant Time: Oct 08 04:39:47 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 04:39:16 2025
Response via : Initial Calibration

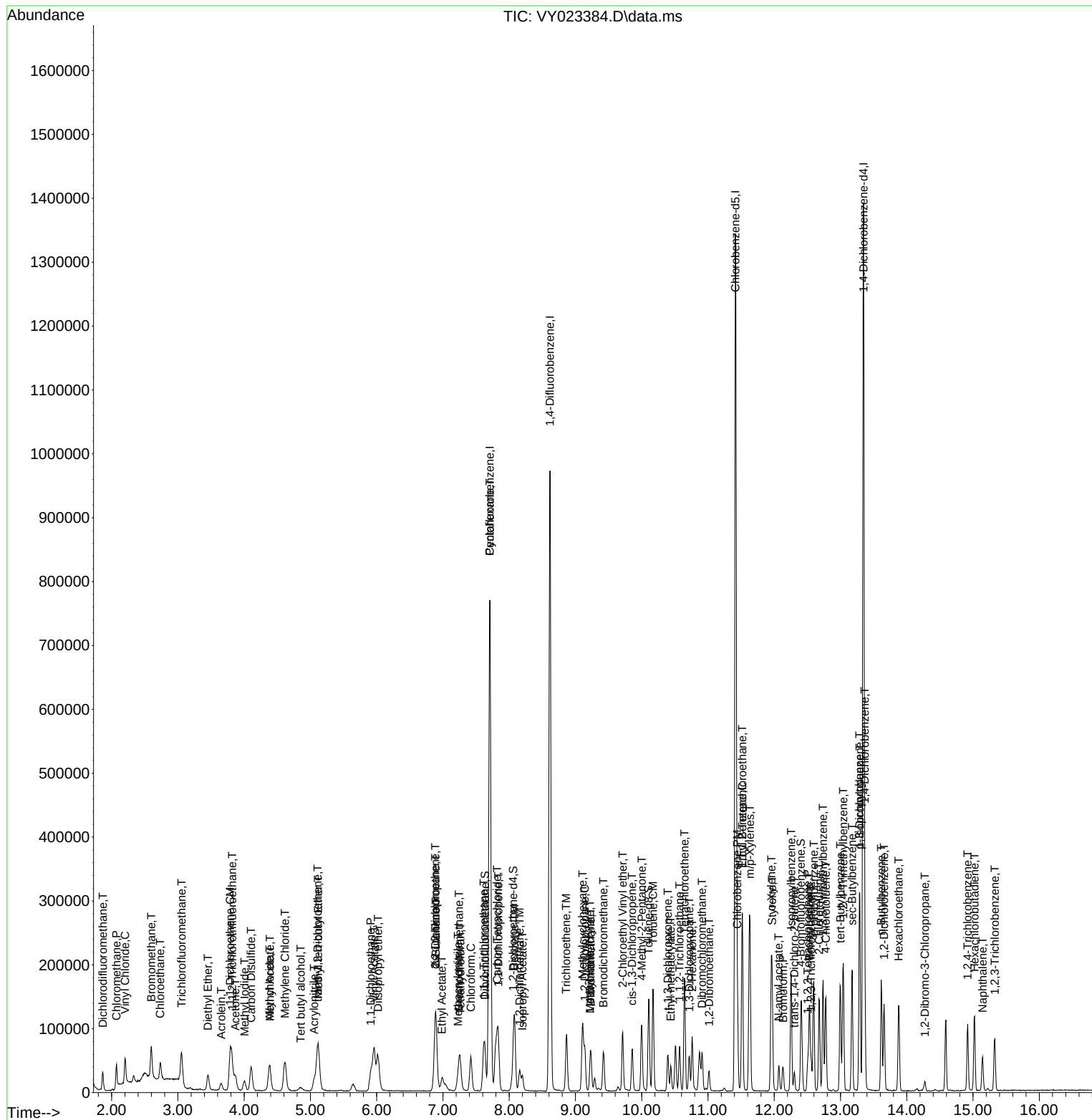
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Instrument :
MSVOA_Y
ClientSampleId :
VSTDICC005

Manual Integrations APPROVED

Reviewed By :Semsettin Yesilyurt 10/10/2025
Supervised By :Mahesh Dadoda 10/10/2025



Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
 Data File : VY023385.D
 Acq On : 07 Oct 2025 10:02
 Operator : SY/MD
 Sample : VSTDICC010
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 4 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VSTDICC010

Manual Integrations
 APPROVED

Reviewed By :Semsettin Yesilyurt 10/10/2025
 Supervised By :Mahesh Dadoda 10/10/2025

Quant Time: Oct 08 04:40:53 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 04:39:16 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	7.713	168	559828	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	8.615	114	847077	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.414	117	736152	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.346	152	374998	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.067	65	48826	10.071	ug/l	0.00
Spiked Amount 50.000	Range 50 - 163		Recovery =	20.140%#		
35) Dibromofluoromethane	7.634	113	53279	10.364	ug/l	0.00
Spiked Amount 50.000	Range 54 - 147		Recovery =	20.720%#		
50) Toluene-d8	10.109	98	198242	10.225	ug/l	0.00
Spiked Amount 50.000	Range 58 - 134		Recovery =	20.460%#		
62) 4-Bromofluorobenzene	12.401	95	62601	10.235	ug/l	0.00
Spiked Amount 50.000	Range 30 - 143		Recovery =	20.460%#		
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.867	85	44666	10.129	ug/l	97
3) Chloromethane	2.068	50	62413	9.957	ug/l	97
4) Vinyl Chloride	2.202	62	76587	9.676	ug/l	99
5) Bromomethane	2.592	94	66689	10.271	ug/l	90
6) Chloroethane	2.732	64	51757	9.632	ug/l	92
7) Trichlorofluoromethane	3.055	101	102972	10.128	ug/l	99
8) Diethyl Ether	3.458	74	26719	10.047	ug/l	96
9) 1,1,2-Trichlorotrifluo...	3.818	101	54405	10.011	ug/l	99
10) Methyl Iodide	4.007	142	56313	8.967	ug/l	99
11) Tert butyl alcohol	4.854	59	20540	71.998	ug/l #	89
12) 1,1-Dichloroethene	3.793	96	53191	10.173	ug/l	98
13) Acrolein	3.653	56	24014	49.681	ug/l	94
14) Allyl chloride	4.385	41	62154	9.494	ug/l	99
15) Acrylonitrile	5.061	53	51937	49.854	ug/l	99
16) Acetone	3.872	43	65410	59.997	ug/l	94
17) Carbon Disulfide	4.104	76	153055	9.382	ug/l	100
18) Methyl Acetate	4.391	43	29725	10.728	ug/l	100
19) Methyl tert-butyl Ether	5.116	73	120347	9.830	ug/l	100
20) Methylene Chloride	4.616	84	71034	12.016	ug/l	96
21) trans-1,2-Dichloroethene	5.116	96	56465	9.710	ug/l	97
22) Diisopropyl ether	6.024	45	138589	9.547	ug/l	98
23) Vinyl Acetate	5.963	43	361478	45.300	ug/l	99
24) 1,1-Dichloroethane	5.915	63	93512	9.772	ug/l	98
25) 2-Butanone	6.890	43	75171	55.784	ug/l	92
26) 2,2-Dichloropropane	6.890	77	86325	10.153	ug/l	99
27) cis-1,2-Dichloroethene	6.896	96	65335	9.905	ug/l	99
28) Bromochloromethane	7.244	49	36132	9.733	ug/l	99
29) Tetrahydrofuran	7.262	42	38990	48.749	ug/l	99
30) Chloroform	7.421	83	102058	9.890	ug/l	99
31) Cyclohexane	7.701	56	80245	9.495	ug/l #	88
32) 1,1,1-Trichloroethane	7.622	97	91186	9.844	ug/l	99
36) 1,1-Dichloropropene	7.835	75	69913	9.639	ug/l	99
37) Ethyl Acetate	6.988	43	27388	9.551	ug/l	96
38) Carbon Tetrachloride	7.817	117	84799	10.065	ug/l	99
39) Methylcyclohexane	9.109	83	82275	8.860	ug/l	95
40) Benzene	8.079	78	220629	9.758	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
 Data File : VY023385.D
 Acq On : 07 Oct 2025 10:02
 Operator : SY/MD
 Sample : VSTDICC010
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 4 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VSTDICC010

Manual Integrations
 APPROVED

Reviewed By : Semsettin Yesilyurt 10/10/2025
 Supervised By : Mahesh Dadoda 10/10/2025

Quant Time: Oct 08 04:40:53 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 04:39:16 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.225	41	14344	9.632	ug/l #	92
42) 1,2-Dichloroethane	8.158	62	58541	10.174	ug/l	99
43) Isopropyl Acetate	8.201	43	53042	9.510	ug/l	98
44) Trichloroethene	8.865	130	64537	10.171	ug/l	96
45) 1,2-Dichloropropane	9.140	63	49009	9.632	ug/l	100
46) Dibromomethane	9.231	93	30780	9.890	ug/l	99
47) Bromodichloromethane	9.426	83	78392	10.007	ug/l	99
48) Methyl methacrylate	9.225	41	23484	9.023	ug/l	97
49) 1,4-Dioxane	9.231	88	6822	211.693	ug/l	94
51) 4-Methyl-2-Pentanone	9.999	43	134746	47.165	ug/l	99
52) Toluene	10.170	92	138662	9.661	ug/l	100
53) t-1,3-Dichloropropene	10.396	75	64315	9.559	ug/l	96
54) cis-1,3-Dichloropropene	9.853	75	77905	9.687	ug/l	98
55) 1,1,2-Trichloroethane	10.572	97	41881	10.118	ug/l	92
56) Ethyl methacrylate	10.438	69	42096	8.830	ug/l	98
57) 1,3-Dichloropropane	10.719	76	64537	9.633	ug/l	98
58) 2-Chloroethyl Vinyl ether	9.713	63	94970m	45.535	ug/l	
59) 2-Hexanone	10.761	43	99175	50.138	ug/l	96
60) Dibromochloromethane	10.908	129	57151	10.123	ug/l	97
61) 1,2-Dibromoethane	11.011	107	38861	9.979	ug/l	99
64) Tetrachloroethene	10.646	164	76110	10.335	ug/l	98
65) Chlorobenzene	11.438	112	161155	10.074	ug/l	96
66) 1,1,1,2-Tetrachloroethane	11.517	131	57233	10.173	ug/l	98
67) Ethyl Benzene	11.517	91	251958	9.651	ug/l	98
68) m/p-Xylenes	11.627	106	198866	19.004	ug/l	99
69) o-Xylene	11.950	106	91710	9.467	ug/l	100
70) Styrene	11.969	104	151094	9.446	ug/l	99
71) Bromoform	12.133	173	35681	10.595	ug/l #	94
73) Isopropylbenzene	12.249	105	236489	9.467	ug/l	99
74) N-amyl acetate	12.066	43	40098	8.590	ug/l	97
75) 1,1,2,2-Tetrachloroethane	12.505	83	41130	9.871	ug/l	97
76) 1,2,3-Trichloropropane	12.554	75	29944m	8.095	ug/l	
77) Bromobenzene	12.529	156	66002	10.295	ug/l	99
78) n-propylbenzene	12.590	91	275671	9.384	ug/l	100
79) 2-Chlorotoluene	12.676	91	165582	9.762	ug/l	100
80) 1,3,5-Trimethylbenzene	12.731	105	191799	9.445	ug/l	100
81) trans-1,4-Dichloro-2-b...	12.298	75	13110	9.556	ug/l	99
82) 4-Chlorotoluene	12.773	91	169968	9.595	ug/l	100
83) tert-Butylbenzene	12.993	119	177250	9.579	ug/l	99
84) 1,2,4-Trimethylbenzene	13.041	105	191423	9.528	ug/l	98
85) sec-Butylbenzene	13.170	105	254134	9.483	ug/l	100
86) p-Isopropyltoluene	13.285	119	210320	9.287	ug/l	100
87) 1,3-Dichlorobenzene	13.285	146	127377	10.058	ug/l	99
88) 1,4-Dichlorobenzene	13.365	146	127757	10.172	ug/l	98
89) n-Butylbenzene	13.615	91	182116	9.107	ug/l	98
90) Hexachloroethane	13.877	117	47355	9.630	ug/l	97
91) 1,2-Dichlorobenzene	13.657	146	112325	10.165	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	14.273	75	7005	10.608	ug/l	94
93) 1,2,4-Trichlorobenzene	14.919	180	65050	9.992	ug/l	98
94) Hexachlorobutadiene	15.023	225	42813	10.554	ug/l	97
95) Naphthalene	15.139	128	96092	9.264	ug/l	99
96) 1,2,3-Trichlorobenzene	15.328	180	56499	10.004	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
Data File : VY023385.D
Acq On : 07 Oct 2025 10:02
Operator : SY/MD
Sample : VSTDICC010
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
VSTDICC010

Manual Integrations
APPROVED

Reviewed By :Semsettin Yesilyurt 10/10/2025
Supervised By :Mahesh Dadoda 10/10/2025

Quant Time: Oct 08 04:40:53 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 04:39:16 2025
Response via : Initial Calibration

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

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

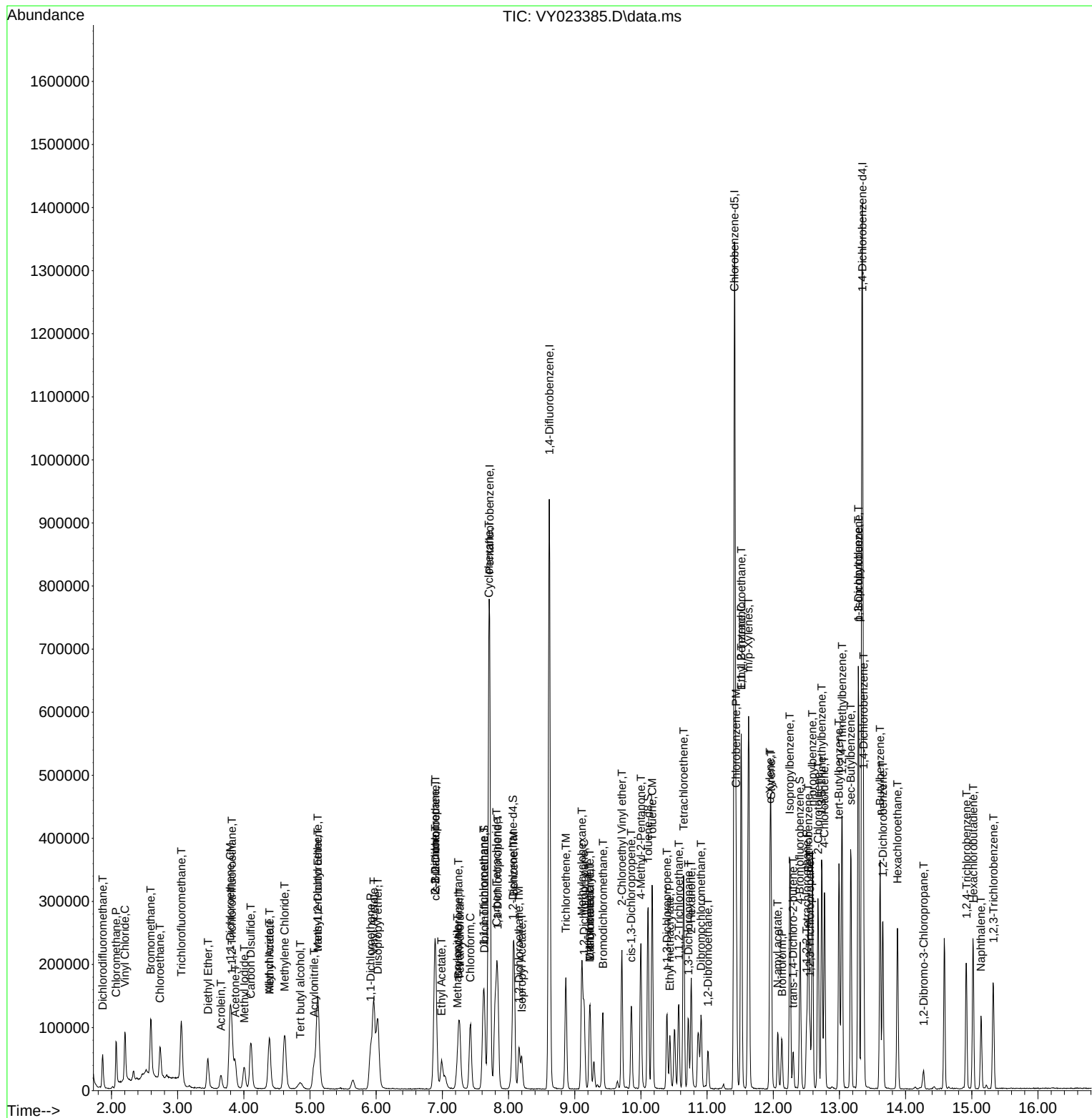
Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
Data File : VY023385.D
Acq On : 07 Oct 2025 10:02
Operator : SY/MD
Sample : VSTDIC010
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
VSTDICC010

Manual Integrations APPROVED

Reviewed By :Semsettin Yesilyurt 10/10/2025
Supervised By :Mahesh Dadoda 10/10/2025

Quant Time: Oct 08 04:40:53 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 04:39:16 2025
Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
 Data File : VY023386.D
 Acq On : 07 Oct 2025 11:24
 Operator : SY/MD
 Sample : VSTDICC020
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VSTDICC020

Manual Integrations
 APPROVED

Reviewed By : Semsettin Yesilyurt 10/10/2025
 Supervised By : Mahesh Dadoda 10/10/2025

Quant Time: Oct 08 04:41:57 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 04:39:16 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	7.707	168	574363	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	8.615	114	851961	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.414	117	746872	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.346	152	382604	50.000	ug/l	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4	8.061	65	98481	19.798	ug/l	0.00
Spiked Amount	50.000	Range	50 - 163	Recovery	=	39.600%#
35) Dibromofluoromethane	7.634	113	108034	20.895	ug/l	0.00
Spiked Amount	50.000	Range	54 - 147	Recovery	=	41.800%#
50) Toluene-d8	10.103	98	401067	20.568	ug/l	0.00
Spiked Amount	50.000	Range	58 - 134	Recovery	=	41.140%#
62) 4-Bromofluorobenzene	12.401	95	127216	20.680	ug/l	0.00
Spiked Amount	50.000	Range	30 - 143	Recovery	=	41.360%

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	1.867	85	91924	20.318	ug/l	98
3) Chloromethane	2.074	50	117585	18.284	ug/l	100
4) Vinyl Chloride	2.202	62	151460	18.652	ug/l	99
5) Bromomethane	2.586	94	125948	18.907	ug/l	97
6) Chloroethane	2.732	64	103973	18.859	ug/l	94
7) Trichlorofluoromethane	3.049	101	217452	20.846	ug/l	99
8) Diethyl Ether	3.452	74	54124	19.837	ug/l	99
9) 1,1,2-Trichlorotrifluo...	3.811	101	109936	19.718	ug/l	99
10) Methyl Iodide	4.007	142	119083	18.482	ug/l	99
11) Tert butyl alcohol	4.854	59	34346	117.345	ug/l	98
12) 1,1-Dichloroethene	3.787	96	104778	19.531	ug/l	98
13) Acrolein	3.653	56	48115	97.023	ug/l	98
14) Allyl chloride	4.384	41	125424	18.674	ug/l	98
15) Acrylonitrile	5.055	53	99018	92.641	ug/l	100
16) Acetone	3.866	43	108209	96.742	ug/l	96
17) Carbon Disulfide	4.104	76	303284	18.121	ug/l	99
18) Methyl Acetate	4.384	43	59704	21.002	ug/l	97
19) Methyl tert-butyl Ether	5.116	73	247030	19.667	ug/l	97
20) Methylene Chloride	4.616	84	132229	21.801	ug/l	98
21) trans-1,2-Dichloroethene	5.110	96	116410	19.512	ug/l	95
22) Diisopropyl ether	6.018	45	288429	19.366	ug/l	98
23) Vinyl Acetate	5.957	43	748048	91.373	ug/l	99
24) 1,1-Dichloroethane	5.915	63	190012	19.354	ug/l	99
25) 2-Butanone	6.896	43	132159	95.593	ug/l	93
26) 2,2-Dichloropropane	6.884	77	167903	19.247	ug/l	99
27) cis-1,2-Dichloroethene	6.890	96	133634	19.747	ug/l	99
28) Bromochloromethane	7.244	49	73407	19.273	ug/l	98
29) Tetrahydrofuran	7.262	42	76502	93.229	ug/l	99
30) Chloroform	7.421	83	207096	19.562	ug/l	100
31) Cyclohexane	7.701	56	160159	18.472	ug/l	97
32) 1,1,1-Trichloroethane	7.616	97	188861	19.873	ug/l	100
36) 1,1-Dichloropropene	7.835	75	140912	19.317	ug/l	100
37) Ethyl Acetate	6.982	43	55705	19.315	ug/l	98
38) Carbon Tetrachloride	7.817	117	171925	20.289	ug/l	99
39) Methylcyclohexane	9.109	83	182831	19.576	ug/l	99
40) Benzene	8.079	78	450471	19.809	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
 Data File : VY023386.D
 Acq On : 07 Oct 2025 11:24
 Operator : SY/MD
 Sample : VSTDICC020
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VSTDICC020

Manual Integrations
 APPROVED

Reviewed By :Semsettin Yesilyurt 10/10/2025
 Supervised By :Mahesh Dadoda 10/10/2025

Quant Time: Oct 08 04:41:57 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 04:39:16 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.225	41	31129m	20.783	ug/l	
42) 1,2-Dichloroethane	8.158	62	116941	20.206	ug/l	99
43) Isopropyl Acetate	8.195	43	106595	19.002	ug/l #	87
44) Trichloroethene	8.865	130	131459	20.598	ug/l	98
45) 1,2-Dichloropropane	9.140	63	99363	19.417	ug/l	98
46) Dibromomethane	9.231	93	62277	19.896	ug/l	98
47) Bromodichloromethane	9.420	83	156426	19.854	ug/l	98
48) Methyl methacrylate	9.219	41	50661	19.352	ug/l	99
49) 1,4-Dioxane	9.225	88	13636	420.712	ug/l	99
51) 4-Methyl-2-Pentanone	9.999	43	274059	95.378	ug/l	100
52) Toluene	10.170	92	291453	20.191	ug/l	100
53) t-1,3-Dichloropropene	10.390	75	132848	19.632	ug/l	99
54) cis-1,3-Dichloropropene	9.853	75	158580	19.606	ug/l	95
55) 1,1,2-Trichloroethane	10.572	97	82183	19.740	ug/l	96
56) Ethyl methacrylate	10.438	69	89244	18.613	ug/l	99
57) 1,3-Dichloropropane	10.719	76	130650	19.389	ug/l	98
58) 2-Chloroethyl Vinyl ether	9.713	63	190850m	90.982	ug/l	
59) 2-Hexanone	10.761	43	187387	94.190	ug/l	99
60) Dibromochloromethane	10.908	129	115907	20.412	ug/l	100
61) 1,2-Dibromoethane	11.011	107	78579	20.062	ug/l	100
64) Tetrachloroethene	10.646	164	167648	22.438	ug/l	97
65) Chlorobenzene	11.438	112	326360	20.109	ug/l	99
66) 1,1,1,2-Tetrachloroethane	11.517	131	116412	20.396	ug/l	99
67) Ethyl Benzene	11.517	91	523606	19.768	ug/l	99
68) m/p-Xylenes	11.627	106	426913	40.211	ug/l	100
69) o-Xylene	11.956	106	195021	19.843	ug/l	96
70) Styrene	11.968	104	327934	20.208	ug/l	99
71) Bromoform	12.133	173	71119	20.814	ug/l #	99
73) Isopropylbenzene	12.255	105	513183	20.136	ug/l	99
74) N-amyl acetate	12.072	43	85063	17.860	ug/l	98
75) 1,1,2,2-Tetrachloroethane	12.505	83	76821	18.069	ug/l	99
76) 1,2,3-Trichloropropane	12.554	75	74100m	19.634	ug/l	
77) Bromobenzene	12.529	156	135402	20.700	ug/l	98
78) n-propylbenzene	12.596	91	597829	19.945	ug/l	100
79) 2-Chlorotoluene	12.676	91	349203	20.179	ug/l	100
80) 1,3,5-Trimethylbenzene	12.737	105	418684	20.208	ug/l	100
81) trans-1,4-Dichloro-2-b...	12.304	75	26922	19.234	ug/l	98
82) 4-Chlorotoluene	12.773	91	361458	20.000	ug/l	99
83) tert-Butylbenzene	12.993	119	377277	19.983	ug/l	99
84) 1,2,4-Trimethylbenzene	13.041	105	413292	20.162	ug/l	100
85) sec-Butylbenzene	13.176	105	546582	19.990	ug/l	100
86) p-Isopropyltoluene	13.291	119	464005	20.081	ug/l	100
87) 1,3-Dichlorobenzene	13.285	146	262901	20.347	ug/l	99
88) 1,4-Dichlorobenzene	13.365	146	259217	20.230	ug/l	99
89) n-Butylbenzene	13.615	91	401893	19.697	ug/l	98
90) Hexachloroethane	13.877	117	98983	19.730	ug/l	97
91) 1,2-Dichlorobenzene	13.657	146	231199	20.507	ug/l	100
92) 1,2-Dibromo-3-Chloropr...	14.273	75	12668	18.802	ug/l	99
93) 1,2,4-Trichlorobenzene	14.919	180	137963	20.770	ug/l	99
94) Hexachlorobutadiene	15.023	225	87575	21.159	ug/l	99
95) Naphthalene	15.145	128	206017	19.467	ug/l	100
96) 1,2,3-Trichlorobenzene	15.328	180	121656	21.113	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
Data File : VY023386.D
Acq On : 07 Oct 2025 11:24
Operator : SY/MD
Sample : VSTDICC020
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
VSTDICC020

Manual Integrations
APPROVED

Reviewed By :Semsettin Yesilyurt 10/10/2025
Supervised By :Mahesh Dadoda 10/10/2025

Quant Time: Oct 08 04:41:57 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 04:39:16 2025
Response via : Initial Calibration

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

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

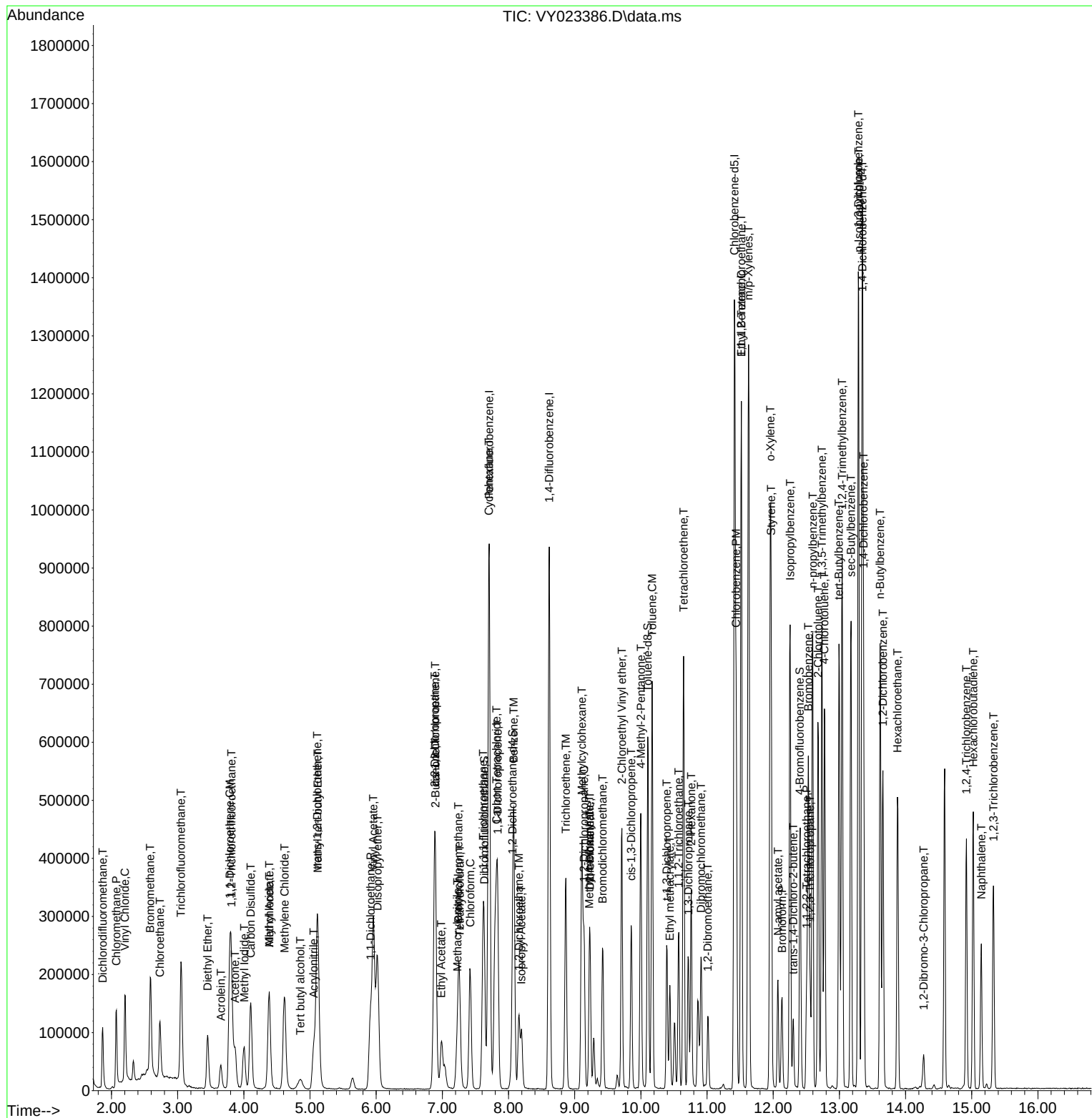
```
Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
Data File : VY023386.D
Acq On    : 07 Oct 2025  11:24
Operator  : SY/MD
Sample    : VSTDIC020
Misc      : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial  : 5      Sample Multiplier: 1
```

Instrument :
MSVOA_Y
ClientSampleId :
VSTDICC020

Quant Time: Oct 08 04:41:57 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 04:39:16 2025
Response via : Initial Calibration

Manual Integrations APPROVED

Reviewed By :Semsettin Yesilyurt 10/10/2025
Supervised By :Mahesh Dadoda 10/10/2025



Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
 Data File : VY023387.D
 Acq On : 07 Oct 2025 11:47
 Operator : SY/MD
 Sample : VSTDICCC050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VSTDICCC050

Manual Integrations
 APPROVED

Reviewed By :Semsettin Yesilyurt 10/10/2025
 Supervised By :Mahesh Dadoda 10/10/2025

Quant Time: Oct 08 04:43:02 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 04:39:16 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	7.707	168	590340	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	8.616	114	858767	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.414	117	749869	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.347	152	392169	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.061	65	231295	45.240	ug/l	0.00
Spiked Amount 50.000	Range 50 - 163		Recovery =	90.480%		
35) Dibromofluoromethane	7.634	113	256331	49.185	ug/l	0.00
Spiked Amount 50.000	Range 54 - 147		Recovery =	98.360%		
50) Toluene-d8	10.103	98	969649	49.334	ug/l	0.00
Spiked Amount 50.000	Range 58 - 134		Recovery =	98.660%		
62) 4-Bromofluorobenzene	12.402	95	313426	50.546	ug/l	0.00
Spiked Amount 50.000	Range 30 - 143		Recovery =	101.100%		
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.867	85	189467	40.745	ug/l	100
3) Chloromethane	2.068	50	265142	40.113	ug/l	100
4) Vinyl Chloride	2.202	62	352993	42.293	ug/l	100
5) Bromomethane	2.592	94	277005	40.458	ug/l	100
6) Chloroethane	2.733	64	244551	43.157	ug/l	100
7) Trichlorofluoromethane	3.056	101	496981	46.354	ug/l	100
8) Diethyl Ether	3.452	74	126634	45.158	ug/l	100
9) 1,1,2-Trichlorotrifluo...	3.812	101	258100	45.039	ug/l	100
10) Methyl Iodide	4.001	142	317731	47.979	ug/l	100
11) Tert butyl alcohol	4.860	59	73642	244.793	ug/l	100
12) 1,1-Dichloroethene	3.787	96	252190	45.738	ug/l	100
13) Acrolein	3.647	56	123642	242.575	ug/l	100
14) Allyl chloride	4.379	41	310569	44.989	ug/l	100
15) Acrylonitrile	5.055	53	240668	219.075	ug/l	100
16) Acetone	3.866	43	247122	214.955	ug/l	100
17) Carbon Disulfide	4.104	76	722982	42.028	ug/l	100
18) Methyl Acetate	4.385	43	144816	49.563	ug/l	100
19) Methyl tert-butyl Ether	5.116	73	601934	46.626	ug/l	100
20) Methylene Chloride	4.616	84	270612	43.409	ug/l	100
21) trans-1,2-Dichloroethene	5.110	96	277516	45.256	ug/l	100
22) Diisopropyl ether	6.019	45	686481	44.844	ug/l	100
23) Vinyl Acetate	5.958	43	1843784	219.119	ug/l	100
24) 1,1-Dichloroethane	5.915	63	448267	44.423	ug/l	100
25) 2-Butanone	6.890	43	310237	218.327	ug/l	100
26) 2,2-Dichloropropane	6.884	77	416391	46.440	ug/l	100
27) cis-1,2-Dichloroethene	6.890	96	320028	46.010	ug/l	100
28) Bromochloromethane	7.244	49	157414	40.211	ug/l	100
29) Tetrahydrofuran	7.262	42	187787	222.653	ug/l	100
30) Chloroform	7.421	83	493098	45.316	ug/l	100
31) Cyclohexane	7.701	56	379644	42.602	ug/l	100
32) 1,1,1-Trichloroethane	7.616	97	452713	46.347	ug/l	100
36) 1,1-Dichloropropene	7.835	75	341353	46.424	ug/l	100
37) Ethyl Acetate	6.982	43	129053	44.394	ug/l	100
38) Carbon Tetrachloride	7.817	117	413187	48.374	ug/l	100
39) Methylcyclohexane	9.109	83	452959	48.113	ug/l	100
40) Benzene	8.079	78	1080883	47.154	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
 Data File : VY023387.D
 Acq On : 07 Oct 2025 11:47
 Operator : SY/MD
 Sample : VSTDICCC050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VSTDICCC050

Manual Integrations
 APPROVED

Reviewed By :Semsettin Yesilyurt 10/10/2025
 Supervised By :Mahesh Dadoda 10/10/2025

Quant Time: Oct 08 04:43:02 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 04:39:16 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.220	41	68542	45.399	ug/l	100
42) 1,2-Dichloroethane	8.152	62	270387	46.350	ug/l	100
43) Isopropyl Acetate	8.195	43	259041	45.811	ug/l	100
44) Trichloroethene	8.866	130	315104	48.982	ug/l	100
45) 1,2-Dichloropropane	9.140	63	234978	45.555	ug/l	100
46) Dibromomethane	9.231	93	148914	47.198	ug/l	100
47) Bromodichloromethane	9.420	83	377084	47.482	ug/l	100
48) Methyl methacrylate	9.219	41	126732	48.027	ug/l	100
49) 1,4-Dioxane	9.225	88	34053	1042.312	ug/l	100
51) 4-Methyl-2-Pentanone	9.993	43	682879	235.772	ug/l	100
52) Toluene	10.170	92	710404	48.824	ug/l	100
53) t-1,3-Dichloropropene	10.390	75	330392	48.438	ug/l	100
54) cis-1,3-Dichloropropene	9.853	75	390619	47.910	ug/l	100
55) 1,1,2-Trichloroethane	10.573	97	198478	47.296	ug/l	100
56) Ethyl methacrylate	10.438	69	239407	49.535	ug/l	100
57) 1,3-Dichloropropane	10.713	76	321276	47.301	ug/l	100
58) 2-Chloroethyl Vinyl ether	9.707	63	553816	261.921	ug/l	100
59) 2-Hexanone	10.756	43	479606	239.162	ug/l	100
60) Dibromochloromethane	10.908	129	281047	49.103	ug/l	100
61) 1,2-Dibromoethane	11.012	107	191356	48.468	ug/l	100
64) Tetrachloroethene	10.646	164	392056	52.264	ug/l	100
65) Chlorobenzene	11.438	112	789650	48.460	ug/l	100
66) 1,1,1,2-Tetrachloroethane	11.511	131	279583	48.788	ug/l	100
67) Ethyl Benzene	11.518	91	1332350	50.099	ug/l	100
68) m/p-Xylenes	11.627	106	1077583	101.092	ug/l	100
69) o-Xylene	11.950	106	502722	50.946	ug/l	100
70) Styrene	11.969	104	831908	51.059	ug/l	100
71) Bromoform	12.127	173	172315	50.229	ug/l #	100
73) Isopropylbenzene	12.249	105	1301009	49.803	ug/l	100
74) N-amyl acetate	12.066	43	227684	46.640	ug/l	100
75) 1,1,2,2-Tetrachloroethane	12.505	83	195565	44.878	ug/l	100
76) 1,2,3-Trichloropropane	12.554	75	169814m	43.898	ug/l	
77) Bromobenzene	12.530	156	331331	49.419	ug/l	100
78) n-propylbenzene	12.591	91	1522965	49.572	ug/l	100
79) 2-Chlorotoluene	12.676	91	873335	49.235	ug/l	100
80) 1,3,5-Trimethylbenzene	12.731	105	1061112	49.966	ug/l	100
81) trans-1,4-Dichloro-2-b...	12.298	75	66299	46.212	ug/l	100
82) 4-Chlorotoluene	12.773	91	892764	48.192	ug/l	100
83) tert-Butylbenzene	12.993	119	988936	51.104	ug/l	100
84) 1,2,4-Trimethylbenzene	13.042	105	1061159	50.505	ug/l	100
85) sec-Butylbenzene	13.170	105	1405003	50.133	ug/l	100
86) p-Isopropyltoluene	13.286	119	1210644	51.115	ug/l	100
87) 1,3-Dichlorobenzene	13.286	146	649899	49.072	ug/l	100
88) 1,4-Dichlorobenzene	13.365	146	636694	48.476	ug/l	100
89) n-Butylbenzene	13.615	91	1051949	50.299	ug/l	100
90) Hexachloroethane	13.877	117	245108	47.664	ug/l	100
91) 1,2-Dichlorobenzene	13.657	146	567114	49.075	ug/l	100
92) 1,2-Dibromo-3-Chloropr...	14.273	75	32585	47.184	ug/l	100
93) 1,2,4-Trichlorobenzene	14.919	180	359833	52.852	ug/l	100
94) Hexachlorobutadiene	15.017	225	226316	53.346	ug/l	100
95) Naphthalene	15.139	128	575044	53.012	ug/l	100
96) 1,2,3-Trichlorobenzene	15.328	180	310831	52.628	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
Data File : VY023387.D
Acq On : 07 Oct 2025 11:47
Operator : SY/MD
Sample : VSTDICCC050
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
VSTDICCC050

Manual Integrations
APPROVED

Reviewed By :Semsettin Yesilyurt 10/10/2025
Supervised By :Mahesh Dadoda 10/10/2025

Quant Time: Oct 08 04:43:02 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 04:39:16 2025
Response via : Initial Calibration

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

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

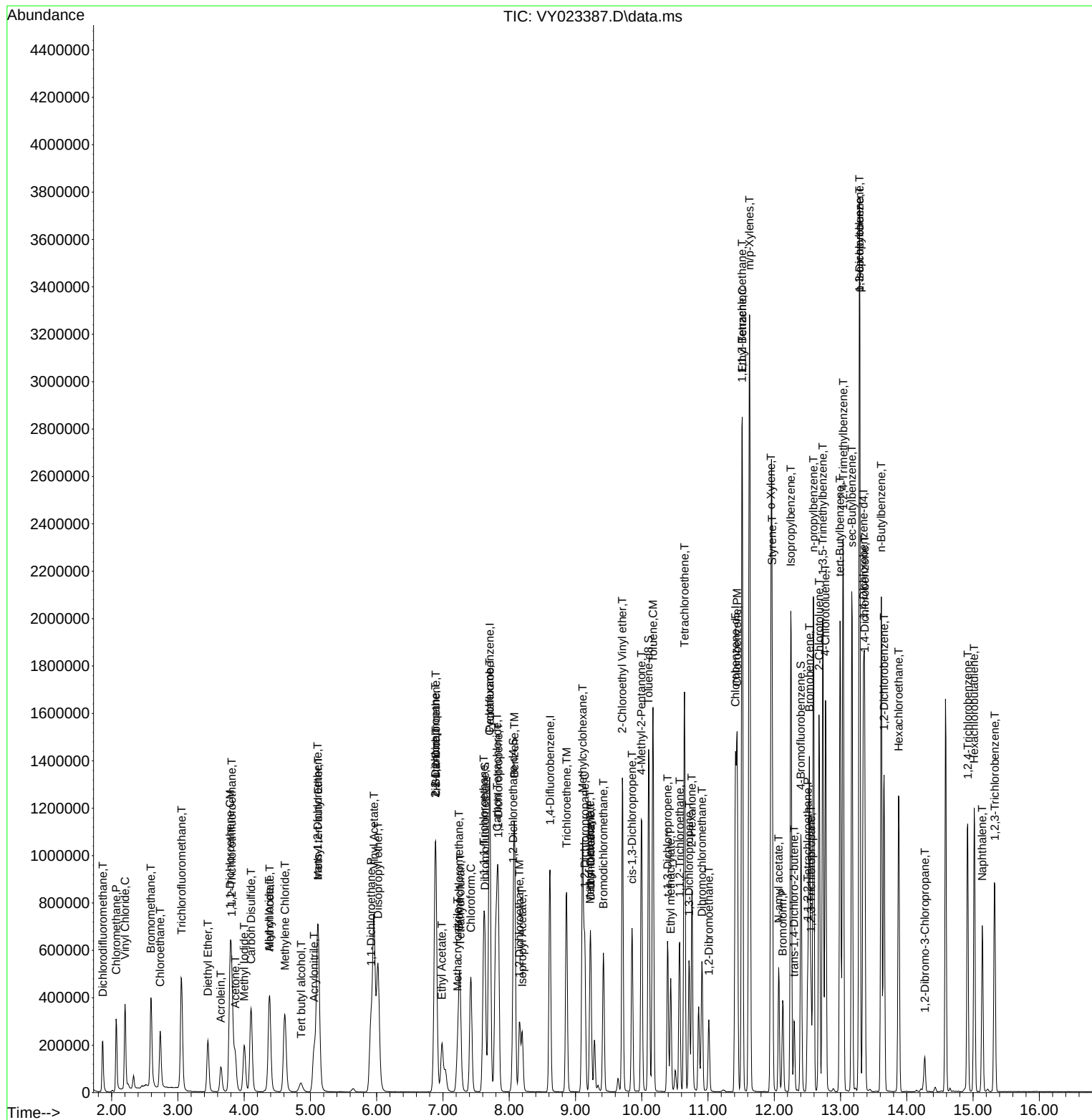
Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
 Data File : VY023387.D
 Acq On : 07 Oct 2025 11:47
 Operator : SY/MD
 Sample : VSTDICCC050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VSTDICCC050

Quant Time: Oct 08 04:43:02 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 04:39:16 2025
 Response via : Initial Calibration

Manual Integrations APPROVED

Reviewed By : Semsettin Yesilyurt 10/10/2025
 Supervised By : Mahesh Dadoda 10/10/2025



Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
 Data File : VY023388.D
 Acq On : 07 Oct 2025 12:09
 Operator : SY/MD
 Sample : VSTDICC100
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 7 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VSTDICC100

Manual Integrations
 APPROVED

Reviewed By : Semsettin Yesilyurt 10/10/2025
 Supervised By : Mahesh Dadoda 10/10/2025

Quant Time: Oct 08 04:44:07 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 04:39:16 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	7.707	168	595770	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	8.616	114	855682	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.414	117	764361	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.340	152	400285	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.061	65	467005	90.510	ug/l	0.00
Spiked Amount 50.000	Range 50 - 163		Recovery = 181.020%#			
35) Dibromofluoromethane	7.634	113	511478	98.497	ug/l	0.00
Spiked Amount 50.000	Range 54 - 147		Recovery = 197.000%#			
50) Toluene-d8	10.103	98	1919872	98.031	ug/l	0.00
Spiked Amount 50.000	Range 58 - 134		Recovery = 196.060%#			
62) 4-Bromofluorobenzene	12.401	95	636435	103.007	ug/l	0.00
Spiked Amount 50.000	Range 30 - 143		Recovery = 206.020%#			
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.867	85	368985	78.627	ug/l	96
3) Chloromethane	2.068	50	521606	78.195	ug/l	96
4) Vinyl Chloride	2.202	62	711235	84.438	ug/l	100
5) Bromomethane	2.586	94	574957	83.210	ug/l	99
6) Chloroethane	2.732	64	491625	85.968	ug/l	99
7) Trichlorofluoromethane	3.049	101	1012851	93.610	ug/l	99
8) Diethyl Ether	3.452	74	266779	94.266	ug/l	100
9) 1,1,2-Trichlorotrifluo...	3.812	101	511482	88.441	ug/l	100
10) Methyl Iodide	4.001	142	651575	97.495	ug/l	99
11) Tert butyl alcohol	4.866	59	172718	568.898	ug/l	99
12) 1,1-Dichloroethene	3.787	96	508059	91.303	ug/l	96
13) Acrolein	3.647	56	262636	510.573	ug/l	99
14) Allyl chloride	4.378	41	637073	91.446	ug/l	99
15) Acrylonitrile	5.055	53	522511	471.296	ug/l	100
16) Acetone	3.866	43	504700	435.004	ug/l	98
17) Carbon Disulfide	4.104	76	1442005	83.061	ug/l	99
18) Methyl Acetate	4.385	43	316911	107.474	ug/l	98
19) Methyl tert-butyl Ether	5.116	73	1300206	99.797	ug/l	97
20) Methylene Chloride	4.610	84	552018	87.742	ug/l	98
21) trans-1,2-Dichloroethene	5.110	96	569334	91.999	ug/l	96
22) Diisopropyl ether	6.018	45	1423347	92.133	ug/l	97
23) Vinyl Acetate	5.957	43	3975052	468.098	ug/l	99
24) 1,1-Dichloroethane	5.915	63	911619	89.517	ug/l	99
25) 2-Butanone	6.890	43	685693	478.154	ug/l	99
26) 2,2-Dichloropropane	6.884	77	833452	92.108	ug/l	98
27) cis-1,2-Dichloroethene	6.890	96	670773	95.557	ug/l	98
28) Bromochloromethane	7.244	49	321657	81.418	ug/l	99
29) Tetrahydrofuran	7.262	42	415867	488.587	ug/l	99
30) Chloroform	7.421	83	1003722	91.401	ug/l	100
31) Cyclohexane	7.701	56	767083	85.293	ug/l	98
32) 1,1,1-Trichloroethane	7.616	97	910837	92.399	ug/l	100
36) 1,1-Dichloropropene	7.835	75	692477	94.516	ug/l	99
37) Ethyl Acetate	6.982	43	280560	96.859	ug/l	98
38) Carbon Tetrachloride	7.817	117	833170	97.894	ug/l	99
39) Methylcyclohexane	9.109	83	947664	101.024	ug/l	99
40) Benzene	8.079	78	2192645	96.000	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
 Data File : VY023388.D
 Acq On : 07 Oct 2025 12:09
 Operator : SY/MD
 Sample : VSTDICC100
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 7 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VSTDICC100

Manual Integrations
 APPROVED

Reviewed By :Semsettin Yesilyurt 10/10/2025
 Supervised By :Mahesh Dadoda 10/10/2025

Quant Time: Oct 08 04:44:07 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 04:39:16 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.219	41	152239	101.200	ug/l	98
42) 1,2-Dichloroethane	8.158	62	554810	95.449	ug/l	100
43) Isopropyl Acetate	8.195	43	573653	101.815	ug/l	99
44) Trichloroethene	8.866	130	636149	99.245	ug/l	100
45) 1,2-Dichloropropane	9.140	63	485084	94.381	ug/l	99
46) Dibromomethane	9.231	93	309964	98.596	ug/l	99
47) Bromodichloromethane	9.420	83	769238	97.210	ug/l	99
48) Methyl methacrylate	9.219	41	282582	107.476	ug/l	99
49) 1,4-Dioxane	9.225	88	77305	2374.722	ug/l	99
51) 4-Methyl-2-Pentanone	9.993	43	1539324	533.386	ug/l	100
52) Toluene	10.170	92	1462927	100.905	ug/l	99
53) t-1,3-Dichloropropene	10.390	75	710475	104.537	ug/l	98
54) cis-1,3-Dichloropropene	9.853	75	822967	101.302	ug/l	98
55) 1,1,2-Trichloroethane	10.573	97	417623	99.875	ug/l	96
56) Ethyl methacrylate	10.438	69	549366	114.077	ug/l	99
57) 1,3-Dichloropropane	10.713	76	670961	99.140	ug/l	100
58) 2-Chloroethyl Vinyl ether	9.707	63	1240361	588.731	ug/l	99
59) 2-Hexanone	10.755	43	1081568	541.284	ug/l	99
60) Dibromochloromethane	10.908	129	593878	104.133	ug/l	100
61) 1,2-Dibromoethane	11.011	107	406293	103.280	ug/l	99
64) Tetrachloroethene	10.646	164	767753	100.406	ug/l	99
65) Chlorobenzene	11.438	112	1655143	99.649	ug/l	99
66) 1,1,1,2-Tetrachloroethane	11.511	131	586878	100.470	ug/l	99
67) Ethyl Benzene	11.517	91	2788252	102.856	ug/l	98
68) m/p-Xylenes	11.627	106	2243033	206.437	ug/l	100
69) o-Xylene	11.950	106	1072335	106.611	ug/l	99
70) Styrene	11.969	104	1782757	107.344	ug/l	100
71) Bromoform	12.127	173	373208	106.727	ug/l #	100
73) Isopropylbenzene	12.249	105	2741698	102.825	ug/l	100
74) N-amyl acetate	12.066	43	532255	106.818	ug/l	99
75) 1,1,2,2-Tetrachloroethane	12.505	83	434720	97.735	ug/l	98
76) 1,2,3-Trichloropropane	12.554	75	364622m	92.345	ug/l	
77) Bromobenzene	12.529	156	701741	102.545	ug/l	100
78) n-propylbenzene	12.590	91	3165894	100.958	ug/l	99
79) 2-Chlorotoluene	12.676	91	1800124	99.426	ug/l	100
80) 1,3,5-Trimethylbenzene	12.731	105	2219080	102.374	ug/l	99
81) trans-1,4-Dichloro-2-b...	12.298	75	148302	101.273	ug/l	98
82) 4-Chlorotoluene	12.773	91	1854165	98.060	ug/l	99
83) tert-Butylbenzene	12.993	119	2028198	102.684	ug/l	97
84) 1,2,4-Trimethylbenzene	13.042	105	2227197	103.853	ug/l	100
85) sec-Butylbenzene	13.170	105	2932949	102.530	ug/l	100
86) p-Isopropyltoluene	13.285	119	2548220	105.408	ug/l	100
87) 1,3-Dichlorobenzene	13.285	146	1361716	100.735	ug/l	100
88) 1,4-Dichlorobenzene	13.365	146	1323618	98.734	ug/l	100
89) n-Butylbenzene	13.615	91	2223744	104.174	ug/l	99
90) Hexachloroethane	13.877	117	514746	98.069	ug/l	99
91) 1,2-Dichlorobenzene	13.657	146	1193043	101.146	ug/l	100
92) 1,2-Dibromo-3-Chloropr...	14.267	75	70107	99.458	ug/l	94
93) 1,2,4-Trichlorobenzene	14.919	180	806328	116.031	ug/l	99
94) Hexachlorobutadiene	15.017	225	470072	108.557	ug/l	99
95) Naphthalene	15.139	128	1378291	124.485	ug/l	100
96) 1,2,3-Trichlorobenzene	15.322	180	693477	115.034	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
Data File : VY023388.D
Acq On : 07 Oct 2025 12:09
Operator : SY/MD
Sample : VSTDICC100
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
VSTDICC100

Manual Integrations
APPROVED

Reviewed By :Semsettin Yesilyurt 10/10/2025
Supervised By :Mahesh Dadoda 10/10/2025

Quant Time: Oct 08 04:44:07 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 04:39:16 2025
Response via : Initial Calibration

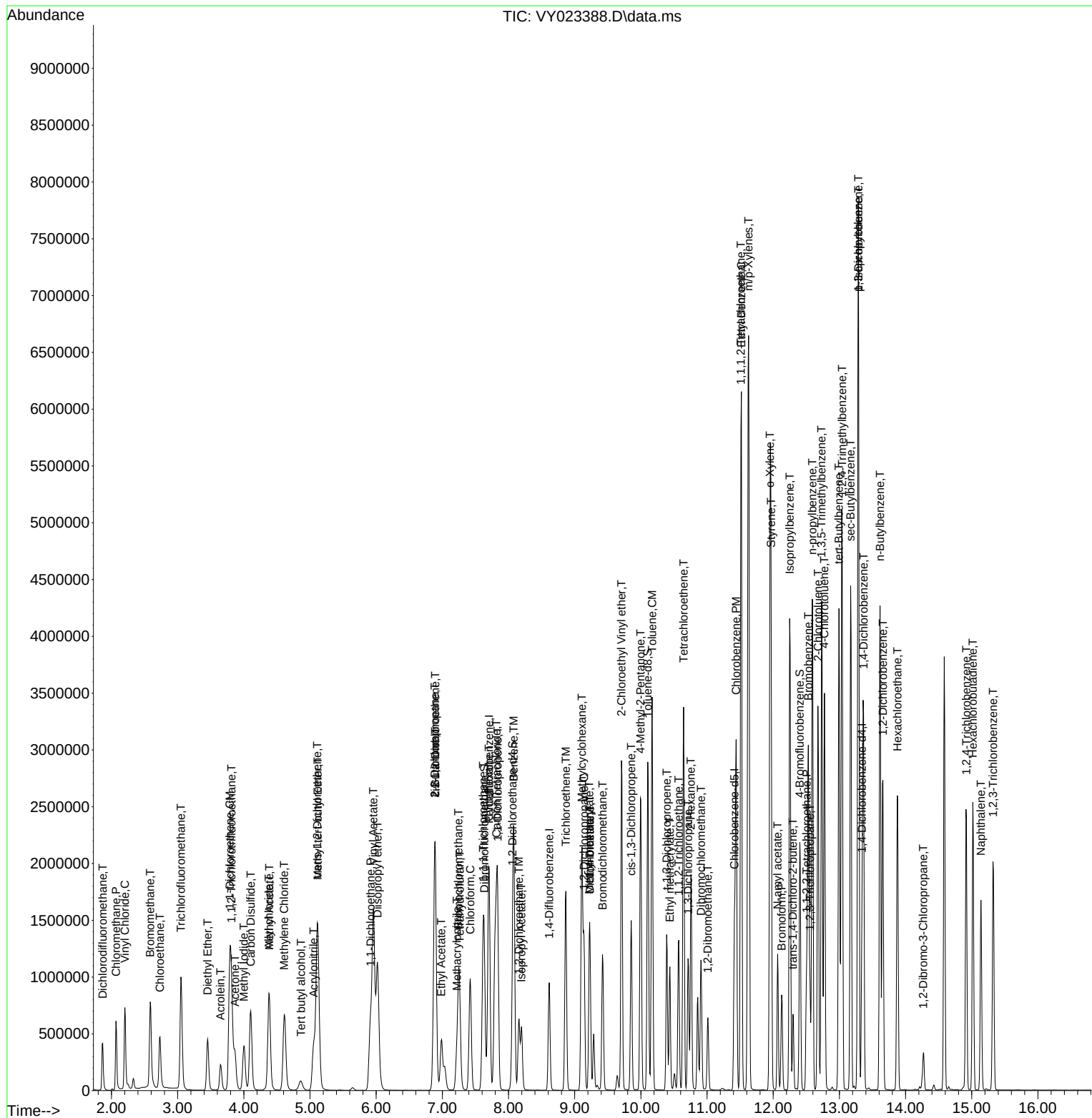
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Instrument :
MSVOA_Y
ClientSampleId :
VSTDICC100

Manual Integrations APPROVED

Reviewed By :Semsettin Yesilyurt 10/10/2025
Supervised By :Mahesh Dadoda 10/10/2025



Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
 Data File : VY023389.D
 Acq On : 07 Oct 2025 12:32
 Operator : SY/MD
 Sample : VSTDICC150
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VSTDICC150

Manual Integrations
 APPROVED

Reviewed By : Semsettin Yesilyurt 10/10/2025
 Supervised By : Mahesh Dadoda 10/10/2025

Quant Time: Oct 08 04:45:15 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 04:39:16 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	7.707	168	588489	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	8.616	114	855488	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.414	117	765357	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.346	152	402368	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.061	65	714730	140.236	ug/l	0.00
Spiked Amount 50.000	Range 50 - 163		Recovery = 280.480%#			
35) Dibromofluoromethane	7.634	113	778632	149.977	ug/l	0.00
Spiked Amount 50.000	Range 54 - 147		Recovery = 299.960%#			
50) Toluene-d8	10.103	98	2912319	148.741	ug/l	0.00
Spiked Amount 50.000	Range 58 - 134		Recovery = 297.480%#			
62) 4-Bromofluorobenzene	12.402	95	990964	160.423	ug/l	0.00
Spiked Amount 50.000	Range 30 - 143		Recovery = 320.840%#			
Target Compounds						
						Qvalue
2) Dichlorodifluoromethane	1.867	85	587619	126.766	ug/l	97
3) Chloromethane	2.068	50	825167	125.233	ug/l	100
4) Vinyl Chloride	2.208	62	1118134	134.387	ug/l	100
5) Bromomethane	2.580	94	915389	134.118	ug/l	98
6) Chloroethane	2.726	64	756912	133.994	ug/l	99
7) Trichlorofluoromethane	3.050	101	1549160	144.948	ug/l	100
8) Diethyl Ether	3.452	74	418615	149.747	ug/l	100
9) 1,1,2-Trichlorotrifluo...	3.812	101	786278	137.639	ug/l	99
10) Methyl Iodide	4.007	142	992925	150.409	ug/l	99
11) Tert butyl alcohol	4.866	59	288878	963.279	ug/l	99
12) 1,1-Dichloroethene	3.787	96	781235	142.133	ug/l	97
13) Acrolein	3.653	56	423418	833.323	ug/l	100
14) Allyl chloride	4.385	41	988378	143.628	ug/l	99
15) Acrylonitrile	5.055	53	841857	768.735	ug/l	99
16) Acetone	3.866	43	789668	689.040	ug/l	99
17) Carbon Disulfide	4.104	76	2199339	128.252	ug/l	100
18) Methyl Acetate	4.385	43	505344	173.497	ug/l	99
19) Methyl tert-butyl Ether	5.116	73	2056533	159.802	ug/l	97
20) Methylene Chloride	4.616	84	835005	134.365	ug/l	98
21) trans-1,2-Dichloroethene	5.116	96	871380	142.549	ug/l	98
22) Diisopropyl ether	6.019	45	2218430	145.375	ug/l	99
23) Vinyl Acetate	5.958	43	6377047	760.246	ug/l	99
24) 1,1-Dichloroethane	5.915	63	1398477	139.024	ug/l	98
25) 2-Butanone	6.890	43	1116343	788.091	ug/l	97
26) 2,2-Dichloropropane	6.884	77	1281633	143.391	ug/l	99
27) cis-1,2-Dichloroethene	6.890	96	1043574	150.505	ug/l	98
28) Bromochloromethane	7.244	49	482210	123.567	ug/l	99
29) Tetrahydrofuran	7.262	42	687719	817.972	ug/l	100
30) Chloroform	7.421	83	1542715	142.221	ug/l	99
31) Cyclohexane	7.701	56	1192778	134.268	ug/l	98
32) 1,1,1-Trichloroethane	7.616	97	1405131	144.305	ug/l	100
36) 1,1-Dichloropropene	7.835	75	1069665	146.031	ug/l	100
37) Ethyl Acetate	6.982	43	460027	158.853	ug/l	98
38) Carbon Tetrachloride	7.817	117	1290353	151.646	ug/l	99
39) Methylcyclohexane	9.109	83	1496612	159.580	ug/l	99
40) Benzene	8.079	78	3366812	147.442	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
 Data File : VY023389.D
 Acq On : 07 Oct 2025 12:32
 Operator : SY/MD
 Sample : VSTDICC150
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VSTDICC150

Manual Integrations
 APPROVED

Reviewed By :Semsettin Yesilyurt 10/10/2025
 Supervised By :Mahesh Dadoda 10/10/2025

Quant Time: Oct 08 04:45:15 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 04:39:16 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.220	41	246974	164.212	ug/l	98
42) 1,2-Dichloroethane	8.158	62	866250	149.063	ug/l	100
43) Isopropyl Acetate	8.195	43	946087	167.955	ug/l	100
44) Trichloroethene	8.866	130	966011	150.740	ug/l	99
45) 1,2-Dichloropropane	9.140	63	752286	146.403	ug/l	99
46) Dibromomethane	9.231	93	483702	153.895	ug/l	99
47) Bromodichloromethane	9.420	83	1202247	151.965	ug/l	98
48) Methyl methacrylate	9.219	41	463614	176.368	ug/l	100
49) 1,4-Dioxane	9.225	88	123991	3809.726	ug/l	97
51) 4-Methyl-2-Pentanone	9.993	43	2516107	872.045	ug/l	100
52) Toluene	10.170	92	2272574	156.786	ug/l	98
53) t-1,3-Dichloropropene	10.390	75	1123644	165.367	ug/l	100
54) cis-1,3-Dichloropropene	9.853	75	1296713	159.654	ug/l	99
55) 1,1,2-Trichloroethane	10.573	97	652242	156.020	ug/l	96
56) Ethyl methacrylate	10.438	69	886127	184.048	ug/l	100
57) 1,3-Dichloropropane	10.713	76	1049593	155.122	ug/l	100
58) 2-Chloroethyl Vinyl ether	9.707	63	2040136	968.559	ug/l	100
59) 2-Hexanone	10.755	43	1776032	889.038	ug/l	99
60) Dibromochloromethane	10.908	129	935577	164.084	ug/l	99
61) 1,2-Dibromoethane	11.012	107	639895	162.699	ug/l	99
64) Tetrachloroethene	10.646	164	1046931	136.739	ug/l	98
65) Chlorobenzene	11.438	112	2563176	154.117	ug/l	99
66) 1,1,1,2-Tetrachloroethane	11.511	131	923367	157.870	ug/l	99
67) Ethyl Benzene	11.518	91	4341801	159.957	ug/l	97
68) m/p-Xylenes	11.627	106	3502137	321.899	ug/l	99
69) o-Xylene	11.950	106	1694987	168.295	ug/l	98
70) Styrene	11.969	104	2830398	170.203	ug/l	99
71) Bromoform	12.127	173	602644	172.115	ug/l #	99
73) Isopropylbenzene	12.249	105	4290662	160.084	ug/l	100
74) N-amyl acetate	12.066	43	890882	177.866	ug/l	98
75) 1,1,2,2-Tetrachloroethane	12.505	83	737773	165.010	ug/l	99
76) 1,2,3-Trichloropropane	12.554	75	565754m	142.542	ug/l	
77) Bromobenzene	12.530	156	1111318	161.555	ug/l	100
78) n-propylbenzene	12.591	91	4932015	156.465	ug/l	99
79) 2-Chlorotoluene	12.676	91	2822049	155.063	ug/l	100
80) 1,3,5-Trimethylbenzene	12.731	105	3496249	160.460	ug/l	99
81) trans-1,4-Dichloro-2-b...	12.298	75	245190	166.570	ug/l	98
82) 4-Chlorotoluene	12.773	91	2902371	152.701	ug/l	99
83) tert-Butylbenzene	12.993	119	3220384	162.197	ug/l	97
84) 1,2,4-Trimethylbenzene	13.042	105	3503639	162.527	ug/l	99
85) sec-Butylbenzene	13.170	105	4560715	158.609	ug/l	99
86) p-Isopropyltoluene	13.286	119	4024712	165.622	ug/l	100
87) 1,3-Dichlorobenzene	13.286	146	2165278	159.350	ug/l	100
88) 1,4-Dichlorobenzene	13.365	146	2090133	155.104	ug/l	100
89) n-Butylbenzene	13.615	91	3505715	163.379	ug/l	99
90) Hexachloroethane	13.877	117	799264	151.487	ug/l	99
91) 1,2-Dichlorobenzene	13.657	146	1862691	157.101	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	14.267	75	116273	164.099	ug/l	96
93) 1,2,4-Trichlorobenzene	14.913	180	1272621	182.183	ug/l	100
94) Hexachlorobutadiene	15.017	225	711748	163.518	ug/l	98
95) Naphthalene	15.139	128	2277549	204.639	ug/l	100
96) 1,2,3-Trichlorobenzene	15.322	180	1110193	183.206	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
Data File : VY023389.D
Acq On : 07 Oct 2025 12:32
Operator : SY/MD
Sample : VSTDICC150
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
VSTDICC150

Manual Integrations
APPROVED

Reviewed By :Semsettin Yesilyurt 10/10/2025
Supervised By :Mahesh Dadoda 10/10/2025

Quant Time: Oct 08 04:45:15 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 04:39:16 2025
Response via : Initial Calibration

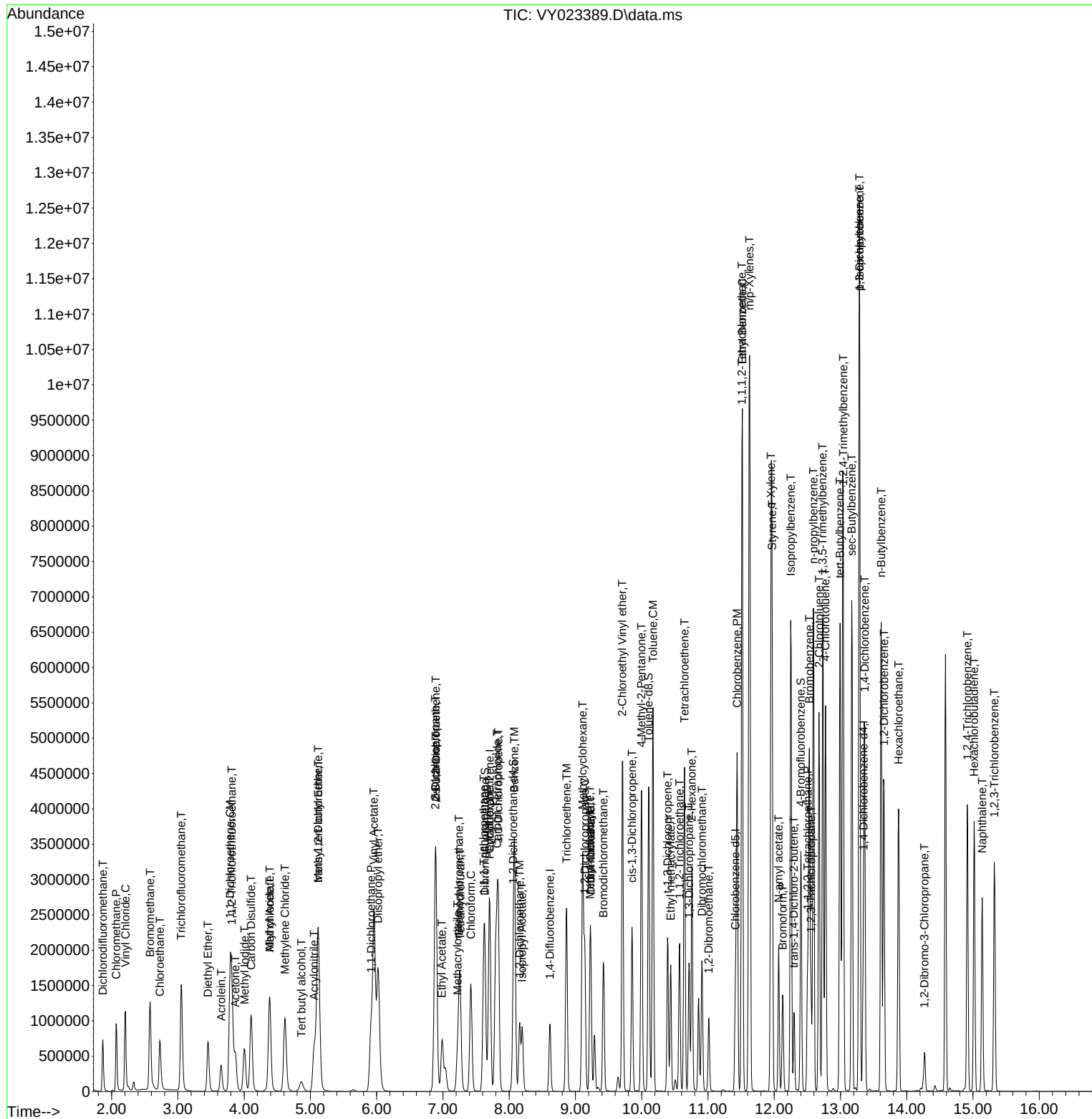
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Instrument :
MSVOA_Y
ClientSampleId :
VSTDICC150

Manual Integrations

Reviewed By :Semsettin Yesilyurt 10/10/2025
Supervised By :Mahesh Dadoda 10/10/2025



Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
 Data File : VY023391.D
 Acq On : 07 Oct 2025 14:12
 Operator : SY/MD
 Sample : VSTDICV050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 10 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 ICVVY100725

Manual Integrations
 APPROVED

Reviewed By : Semsettin Yesilyurt 10/10/2025
 Supervised By : Mahesh Dadoda 10/10/2025

Quant Time: Oct 08 05:15:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	7.707	168	574332	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	8.616	114	861639	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.414	117	771372	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.346	152	405636	50.000	ug/l	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4	8.061	65	237493	49.450	ug/l	0.00
Spiked Amount	50.000	Range	50 - 163	Recovery	=	98.900%
35) Dibromofluoromethane	7.634	113	260038	49.116	ug/l	0.00
Spiked Amount	50.000	Range	54 - 147	Recovery	=	98.240%
50) Toluene-d8	10.103	98	970614	49.228	ug/l	0.00
Spiked Amount	50.000	Range	58 - 134	Recovery	=	98.460%
62) 4-Bromofluorobenzene	12.402	95	324700	49.881	ug/l	0.00
Spiked Amount	50.000	Range	30 - 143	Recovery	=	99.760%

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	1.867	85	185683	44.916	ug/l	99
3) Chloromethane	2.068	50	295766	52.519	ug/l	98
4) Vinyl Chloride	2.208	62	362714	49.449	ug/l	100
5) Bromomethane	2.598	94	300735	48.856	ug/l	98
6) Chloroethane	2.739	64	256831	51.367	ug/l	99
7) Trichlorofluoromethane	3.056	101	494789	48.582	ug/l	99
8) Diethyl Ether	3.458	74	135857	51.050	ug/l	100
9) 1,1,2-Trichlorotrifluo...	3.812	101	257524	48.728	ug/l	100
10) Methyl Iodide	4.007	142	305209	51.875	ug/l	98
11) Tert butyl alcohol	4.860	59	82562	231.079	ug/l	100
12) 1,1-Dichloroethene	3.787	96	254382	49.653	ug/l	97
13) Acrolein	3.653	56	124288	246.184	ug/l	99
14) Allyl chloride	4.385	41	316213	50.645	ug/l	99
15) Acrylonitrile	5.055	53	256219	251.575	ug/l	99
16) Acetone	3.866	43	243433	212.910	ug/l	98
17) Carbon Disulfide	4.104	76	733457	50.021	ug/l	100
18) Methyl Acetate	4.385	43	151281	50.439	ug/l	100
19) Methyl tert-butyl Ether	5.116	73	643111	52.230	ug/l	97
20) Methylene Chloride	4.616	84	324604	52.503	ug/l	97
21) trans-1,2-Dichloroethene	5.116	96	290384	51.482	ug/l	98
22) Diisopropyl ether	6.019	45	709381	51.364	ug/l	99
23) Vinyl Acetate	5.958	43	1950969	260.981	ug/l	99
24) 1,1-Dichloroethane	5.915	63	464207	50.742	ug/l	98
25) 2-Butanone	6.890	43	325351	233.083	ug/l	99
26) 2,2-Dichloropropane	6.884	77	416585	49.626	ug/l	99
27) cis-1,2-Dichloroethene	6.890	96	341964	52.485	ug/l	97
28) Bromochloromethane	7.244	49	155146	45.427	ug/l	100
29) Tetrahydrofuran	7.262	42	200513	253.317	ug/l	99
30) Chloroform	7.421	83	513997	51.137	ug/l	98
31) Cyclohexane	7.701	56	378819	47.416	ug/l	98
32) 1,1,1-Trichloroethane	7.616	97	456112	49.934	ug/l	100
36) 1,1-Dichloropropene	7.835	75	348786	49.761	ug/l	99
37) Ethyl Acetate	6.982	43	138119	49.740	ug/l	98
38) Carbon Tetrachloride	7.817	117	413653	48.671	ug/l	99
39) Methylcyclohexane	9.109	83	456031	49.970	ug/l	99
40) Benzene	8.079	78	1107790	49.906	ug/l	97

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
 Data File : VY023391.D
 Acq On : 07 Oct 2025 14:12
 Operator : SY/MD
 Sample : VSTDICV050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 10 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 ICVVY100725

Manual Integrations
 APPROVED

Reviewed By :Semsettin Yesilyurt 10/10/2025
 Supervised By :Mahesh Dadoda 10/10/2025

Quant Time: Oct 08 05:15:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.220	41	72100	48.008	ug/l	96
42) 1,2-Dichloroethane	8.158	62	282332	49.318	ug/l	99
43) Isopropyl Acetate	8.195	43	279887	50.548	ug/l	100
44) Trichloroethene	8.866	130	319131	49.120	ug/l	98
45) 1,2-Dichloropropane	9.140	63	246887	50.355	ug/l	100
46) Dibromomethane	9.231	93	157758	50.885	ug/l	98
47) Bromodichloromethane	9.420	83	393918	50.450	ug/l	99
48) Methyl methacrylate	9.219	41	128606	49.440	ug/l	95
49) 1,4-Dioxane	9.231	88	37356	1039.252	ug/l	97
51) 4-Methyl-2-Pentanone	10.000	43	724992	253.421	ug/l	100
52) Toluene	10.170	92	743055	51.556	ug/l	99
53) t-1,3-Dichloropropene	10.390	75	347336	51.160	ug/l	99
54) cis-1,3-Dichloropropene	9.853	75	413860	51.649	ug/l	99
55) 1,1,2-Trichloroethane	10.573	97	210245	50.430	ug/l	97
56) Ethyl methacrylate	10.438	69	256731	53.385	ug/l	99
57) 1,3-Dichloropropane	10.713	76	337673	51.113	ug/l	99
58) 2-Chloroethyl Vinyl ether	9.713	63	586266	272.133	ug/l	100
59) 2-Hexanone	10.762	43	501877	245.480	ug/l	99
60) Dibromochloromethane	10.908	129	297946	50.974	ug/l	99
61) 1,2-Dibromoethane	11.018	107	201415	50.658	ug/l	100
64) Tetrachloroethene	10.646	164	382998	48.087	ug/l	99
65) Chlorobenzene	11.438	112	828466	49.381	ug/l	100
66) 1,1,1,2-Tetrachloroethane	11.518	131	296157	49.537	ug/l	99
67) Ethyl Benzene	11.518	91	1380691	50.841	ug/l	100
68) m/p-Xylenes	11.627	106	1108386	101.757	ug/l	100
69) o-Xylene	11.950	106	526954	51.577	ug/l	100
70) Styrene	11.969	104	875709	52.122	ug/l	100
71) Bromoform	12.133	173	185682	50.070	ug/l #	98
73) Isopropylbenzene	12.255	105	1345109	50.318	ug/l	100
74) N-amyl acetate	12.066	43	245291	51.087	ug/l	99
75) 1,1,2,2-Tetrachloroethane	12.505	83	217245	49.688	ug/l	99
76) 1,2,3-Trichloropropane	12.554	75	153438m	42.874	ug/l	
77) Bromobenzene	12.530	156	352420	49.590	ug/l	99
78) n-propylbenzene	12.591	91	1568180	50.694	ug/l	100
79) 2-Chlorotoluene	12.676	91	906610	50.047	ug/l	100
80) 1,3,5-Trimethylbenzene	12.737	105	1106664	51.231	ug/l	99
81) trans-1,4-Dichloro-2-b...	12.304	75	67959	46.566	ug/l	97
82) 4-Chlorotoluene	12.773	91	941314	50.455	ug/l	100
83) tert-Butylbenzene	12.993	119	1037510	52.019	ug/l	99
84) 1,2,4-Trimethylbenzene	13.042	105	1110672	51.520	ug/l	99
85) sec-Butylbenzene	13.176	105	1454774	50.848	ug/l	100
86) p-Isopropyltoluene	13.292	119	1263377	51.864	ug/l	99
87) 1,3-Dichlorobenzene	13.286	146	686854	49.632	ug/l	99
88) 1,4-Dichlorobenzene	13.365	146	671644	49.140	ug/l	100
89) n-Butylbenzene	13.615	91	1100086	51.829	ug/l	99
90) Hexachloroethane	13.877	117	257335	49.116	ug/l	98
91) 1,2-Dichlorobenzene	13.657	146	602989	49.698	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	14.273	75	34928	48.687	ug/l	99
93) 1,2,4-Trichlorobenzene	14.919	180	386806	51.138	ug/l	100
94) Hexachlorobutadiene	15.023	225	236040	50.061	ug/l	99
95) Naphthalene	15.139	128	628190	52.154	ug/l	100
96) 1,2,3-Trichlorobenzene	15.328	180	335267	51.172	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
Data File : VY023391.D
Acq On : 07 Oct 2025 14:12
Operator : SY/MD
Sample : VSTDICV050
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
ICVVY100725

Manual Integrations
APPROVED

Reviewed By :Semsettin Yesilyurt 10/10/2025
Supervised By :Mahesh Dadoda 10/10/2025

Quant Time: Oct 08 05:15:49 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 05:12:50 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_Y\Data\VY100725\
 Data File : VY023391.D
 Acq On : 07 Oct 2025 14:12
 Operator : SY/MD
 Sample : VSTDICV050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 10 Sample Multiplier: 1

Instrument :

MSVOA_Y

ClientSampleId :

ICVVY100725

Manual Integrations

APPROVED

Reviewed By :Semsettin Yesilyurt 10/10/2025
 Supervised By :Mahesh Dadoda 10/10/2025

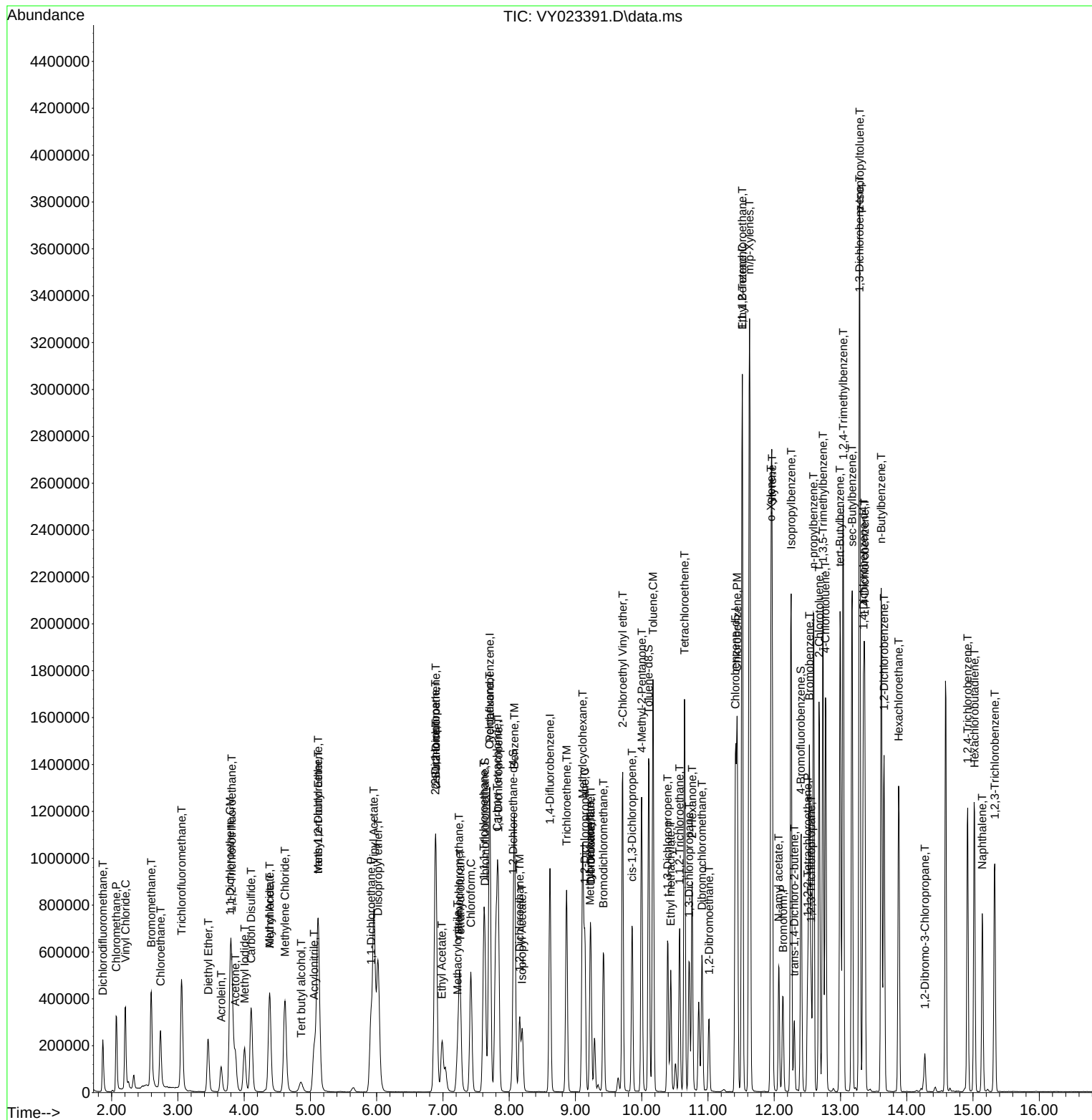
Quant Time: Oct 08 05:15:49 2025

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M

Quant Title : SW846 8260

QLast Update : Wed Oct 08 05:12:50 2025

Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
 Data File : VY023391.D
 Acq On : 07 Oct 2025 14:12
 Operator : SY/MD
 Sample : VSTDICV050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 10 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 ICVVY100725

Quant Time: Oct 08 05:15:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

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

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	Pentafluorobenzene	50.000	50.000	0.0	97	0.00
2 T	Dichlorodifluoromethane	50.000	44.916	10.2	98	0.00
3 P	Chloromethane	50.000	52.519	-5.0	112	0.00
4 C	Vinyl Chloride	50.000	49.449	1.1#	103	0.00
5 T	Bromomethane	50.000	48.856	2.3	109	0.00
6 T	Chloroethane	50.000	51.367	-2.7	105	0.00
7 T	Trichlorofluoromethane	50.000	48.582	2.8	100	0.00
8 T	Diethyl Ether	50.000	51.050	-2.1	107	0.00
9 T	1,1,2-Trichlorotrifluoroeth	50.000	48.728	2.5	100	0.00
10 T	Methyl Iodide	50.000	51.875	-3.8	96	0.00
11 T	Tert butyl alcohol	250.000	231.079	7.6	112	0.00
12 CM	1,1-Dichloroethene	50.000	49.653	0.7#	101	0.00
13 T	Acrolein	250.000	246.184	1.5	101	0.00
14 T	Allyl chloride	50.000	50.645	-1.3	102	0.00
15 T	Acrylonitrile	250.000	251.575	-0.6	106	0.00
16 T	Acetone	250.000	212.910	14.8	99	0.00
17 T	Carbon Disulfide	50.000	50.021	-0.0	101	0.00
18 T	Methyl Acetate	50.000	50.439	-0.9	104	0.00
19 T	Methyl tert-butyl Ether	50.000	52.230	-4.5	107	0.00
20 T	Methylene Chloride	50.000	52.503	-5.0	120	0.00
21 T	trans-1,2-Dichloroethene	50.000	51.482	-3.0	105	0.00
22 T	Diisopropyl ether	50.000	51.364	-2.7	103	0.00
23 T	Vinyl Acetate	250.000	260.981	-4.4	106	0.00
24 P	1,1-Dichloroethane	50.000	50.742	-1.5	104	0.00
25 T	2-Butanone	250.000	233.083	6.8	105	0.00
26 T	2,2-Dichloropropane	50.000	49.626	0.7	100	0.00
27 T	cis-1,2-Dichloroethene	50.000	52.485	-5.0	107	0.00
28 T	Bromochloromethane	50.000	45.427	9.1	99	0.00
29 T	Tetrahydrofuran	250.000	253.317	-1.3	107	0.00
30 C	Chloroform	50.000	51.137	-2.3#	104	0.00
31 T	Cyclohexane	50.000	47.416	5.2	100	0.00
32 T	1,1,1-Trichloroethane	50.000	49.934	0.1	101	0.00
33 S	1,2-Dichloroethane-d4	50.000	49.450	1.1	103	0.00
34 I	1,4-Difluorobenzene	50.000	50.000	0.0	100	0.00
35 S	Dibromofluoromethane	50.000	49.116	1.8	101	0.00
36 T	1,1-Dichloropropene	50.000	49.761	0.5	102	0.00
37 T	Ethyl Acetate	50.000	49.740	0.5	107	0.00
38 T	Carbon Tetrachloride	50.000	48.671	2.7	100	0.00
39 T	Methylcyclohexane	50.000	49.970	0.1	101	0.00
40 TM	Benzene	50.000	49.906	0.2	102	0.00
41 T	Methacrylonitrile	50.000	48.008	4.0	105	0.00
42 TM	1,2-Dichloroethane	50.000	49.318	1.4	104	0.00
43 T	Isopropyl Acetate	50.000	50.548	-1.1	108	0.00
44 TM	Trichloroethene	50.000	49.120	1.8	101	0.00
45 C	1,2-Dichloropropane	50.000	50.355	-0.7#	105	0.00
46 T	Dibromomethane	50.000	50.885	-1.8	106	0.00
47 T	Bromodichloromethane	50.000	50.450	-0.9	104	0.00
48 T	Methyl methacrylate	50.000	49.440	1.1	101	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
 Data File : VY023391.D
 Acq On : 07 Oct 2025 14:12
 Operator : SY/MD
 Sample : VSTDICV050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 10 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 ICVVY100725

Quant Time: Oct 08 05:15:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 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	1039.252	-3.9	110	0.00
50 S	Toluene-d8	50.000	49.228	1.5	100	0.00
51 T	4-Methyl-2-Pentanone	250.000	253.421	-1.4	106	0.00
52 CM	Toluene	50.000	51.556	-3.1#	105	0.00
53 T	t-1,3-Dichloropropene	50.000	51.160	-2.3	105	0.00
54 T	cis-1,3-Dichloropropene	50.000	51.649	-3.3	106	0.00
55 T	1,1,2-Trichloroethane	50.000	50.430	-0.9	106	0.00
56 T	Ethyl methacrylate	50.000	53.385	-6.8	107	0.00
57 T	1,3-Dichloropropane	50.000	51.113	-2.2	105	0.00
58 T	2-Chloroethyl Vinyl ether	250.000	272.133	-8.9	106	0.00
59 T	2-Hexanone	250.000	245.480	1.8	105	0.00
60 T	Dibromochloromethane	50.000	50.974	-1.9	106	0.00
61 T	1,2-Dibromoethane	50.000	50.658	-1.3	105	0.00
62 S	4-Bromofluorobenzene	50.000	49.881	0.2	104	0.00
63 I	Chlorobenzene-d5	50.000	50.000	0.0	103	0.00
64 T	Tetrachloroethene	50.000	48.087	3.8	98	0.00
65 PM	Chlorobenzene	50.000	49.381	1.2	105	0.00
66 T	1,1,1,2-Tetrachloroethane	50.000	49.537	0.9	106	0.00
67 C	Ethyl Benzene	50.000	50.841	-1.7#	104	0.00
68 T	m/p-Xylenes	100.000	101.757	-1.8	103	0.00
69 T	o-Xylene	50.000	51.577	-3.2	105	0.00
70 T	Styrene	50.000	52.122	-4.2	105	0.00
71 P	Bromoform	50.000	50.070	-0.1	108	0.00
72 I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	103	0.00
73 T	Isopropylbenzene	50.000	50.318	-0.6	103	0.00
74 T	N-ethyl acetate	50.000	51.087	-2.2	108	0.00
75 P	1,1,2,2-Tetrachloroethane	50.000	49.688	0.6	111	0.00
76 T	1,2,3-Trichloropropane	50.000	42.874	14.3	90	0.00
77 T	Bromobenzene	50.000	49.590	0.8	106	0.00
78 T	n-propylbenzene	50.000	50.694	-1.4	103	0.00
79 T	2-Chlorotoluene	50.000	50.047	-0.1	104	0.00
80 T	1,3,5-Trimethylbenzene	50.000	51.231	-2.5	104	0.00
81 T	trans-1,4-Dichloro-2-butene	50.000	46.566	6.9	103	0.00
82 T	4-Chlorotoluene	50.000	50.455	-0.9	105	0.00
83 T	tert-Butylbenzene	50.000	52.019	-4.0	105	0.00
84 T	1,2,4-Trimethylbenzene	50.000	51.520	-3.0	105	0.00
85 T	sec-Butylbenzene	50.000	50.848	-1.7	104	0.00
86 T	p-Isopropyltoluene	50.000	51.864	-3.7	104	0.00
87 T	1,3-Dichlorobenzene	50.000	49.632	0.7	106	0.00
88 T	1,4-Dichlorobenzene	50.000	49.140	1.7	105	0.00
89 T	n-Butylbenzene	50.000	51.829	-3.7	105	0.00
90 T	Hexachloroethane	50.000	49.116	1.8	105	0.00
91 T	1,2-Dichlorobenzene	50.000	49.698	0.6	106	0.00
92 T	1,2-Dibromo-3-Chloropropane	50.000	48.687	2.6	107	0.00
93 T	1,2,4-Trichlorobenzene	50.000	51.138	-2.3	107	0.00
94 T	Hexachlorobutadiene	50.000	50.061	-0.1	104	0.00
95 T	Naphthalene	50.000	52.154	-4.3	109	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
Data File : VY023391.D
Acq On : 07 Oct 2025 14:12
Operator : SY/MD
Sample : VSTDICV050
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
ICVVY100725

Quant Time: Oct 08 05:15:49 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 05:12:50 2025
Response via : Initial Calibration

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

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
96 T	1,2,3-Trichlorobenzene	50.000	51.172	-2.3	108	0.00

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

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
 Data File : VY023391.D
 Acq On : 07 Oct 2025 14:12
 Operator : SY/MD
 Sample : VSTDICV050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 10 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 ICVVY100725

Quant Time: Oct 08 05:15:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

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

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Pentafluorobenzene	1.000	1.000	0.0	97	0.00
2 T	Dichlorodifluoromethane	0.360	0.323	10.3	98	0.00
3 P	Chloromethane	0.490	0.515	-5.1	112	0.00
4 C	Vinyl Chloride	0.639	0.632	1.1#	103	0.00
5 T	Bromomethane	0.536	0.524	2.2	109	0.00
6 T	Chloroethane	0.435	0.447	-2.8	105	0.00
7 T	Trichlorofluoromethane	0.887	0.862	2.8	100	0.00
8 T	Diethyl Ether	0.232	0.237	-2.2	107	0.00
9 T	1,1,2-Trichlorotrifluoroeth	0.460	0.448	2.6	100	0.00
10 T	Methyl Iodide	0.512	0.531	-3.7	96	0.00
11 T	Tert butyl alcohol	0.031	0.029	6.5	112	0.00
12 CM	1,1-Dichloroethene	0.446	0.443	0.7#	101	0.00
13 T	Acrolein	0.044	0.043	2.3	101	0.00
14 T	Allyl chloride	0.544	0.551	-1.3	102	0.00
15 T	Acrylonitrile	0.089	0.089	0.0	106	0.00
16 T	Acetone	0.100	0.085	15.0	99	0.00
17 T	Carbon Disulfide	1.277	1.277	0.0	101	0.00
18 T	Methyl Acetate	0.261	0.263	-0.8	104	0.00
19 T	Methyl tert-butyl Ether	1.072	1.120	-4.5	107	0.00
20 T	Methylene Chloride	0.538	0.565	-5.0	120	0.00
21 T	trans-1,2-Dichloroethene	0.491	0.506	-3.1	105	0.00
22 T	Diisopropyl ether	1.202	1.235	-2.7	103	0.00
23 T	Vinyl Acetate	0.651	0.679	-4.3	106	0.00
24 P	1,1-Dichloroethane	0.796	0.808	-1.5	104	0.00
25 T	2-Butanone	0.122	0.113	7.4	105	0.00
26 T	2,2-Dichloropropane	0.731	0.725	0.8	100	0.00
27 T	cis-1,2-Dichloroethene	0.567	0.595	-4.9	107	0.00
28 T	Bromochloromethane	0.297	0.270	9.1	99	0.00
29 T	Tetrahydrofuran	0.069	0.070	-1.4	107	0.00
30 C	Chloroform	0.875	0.895	-2.3#	104	0.00
31 T	Cyclohexane	0.696	0.660	5.2	100	0.00
32 T	1,1,1-Trichloroethane	0.795	0.794	0.1	101	0.00
33 S	1,2-Dichloroethane-d4	0.418	0.414	1.0	103	0.00
34 I	1,4-Difluorobenzene	1.000	1.000	0.0	100	0.00
35 S	Dibromofluoromethane	0.307	0.302	1.6	101	0.00
36 T	1,1-Dichloropropene	0.407	0.405	0.5	102	0.00
37 T	Ethyl Acetate	0.161	0.160	0.6	107	0.00
38 T	Carbon Tetrachloride	0.493	0.480	2.6	100	0.00
39 T	Methylcyclohexane	0.530	0.529	0.2	101	0.00
40 TM	Benzene	1.288	1.286	0.2	102	0.00
41 T	Methacrylonitrile	0.087	0.084	3.4	105	0.00
42 TM	1,2-Dichloroethane	0.332	0.328	1.2	104	0.00
43 T	Isopropyl Acetate	0.321	0.325	-1.2	108	0.00
44 TM	Trichloroethene	0.377	0.370	1.9	101	0.00
45 C	1,2-Dichloropropane	0.285	0.287	-0.7#	105	0.00
46 T	Dibromomethane	0.180	0.183	-1.7	106	0.00
47 T	Bromodichloromethane	0.453	0.457	-0.9	104	0.00
48 T	Methyl methacrylate	0.151	0.149	1.3	101	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
 Data File : VY023391.D
 Acq On : 07 Oct 2025 14:12
 Operator : SY/MD
 Sample : VSTDICV050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 10 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 ICVVY100725

Quant Time: Oct 08 05:15:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 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	0.002	0.002	0.0	110	0.00
50 S	Toluene-d8	1.144	1.126	1.6	100	0.00
51 T	4-Methyl-2-Pentanone	0.166	0.168	-1.2	106	0.00
52 CM	Toluene	0.836	0.862	-3.1#	105	0.00
53 T	t-1,3-Dichloropropene	0.394	0.403	-2.3	105	0.00
54 T	cis-1,3-Dichloropropene	0.465	0.480	-3.2	106	0.00
55 T	1,1,2-Trichloroethane	0.242	0.244	-0.8	106	0.00
56 T	Ethyl methacrylate	0.279	0.298	-6.8	107	0.00
57 T	1,3-Dichloropropane	0.383	0.392	-2.3	105	0.00
58 T	2-Chloroethyl Vinyl ether	0.125	0.136	-8.8	106	0.00
59 T	2-Hexanone	0.119	0.116	2.5	105	0.00
60 T	Dibromochloromethane	0.339	0.346	-2.1	106	0.00
61 T	1,2-Dibromoethane	0.231	0.234	-1.3	105	0.00
62 S	4-Bromofluorobenzene	0.378	0.377	0.3	104	0.00
63 I	Chlorobenzene-d5	1.000	1.000	0.0	103	0.00
64 T	Tetrachloroethene	0.516	0.497	3.7	98	0.00
65 PM	Chlorobenzene	1.087	1.074	1.2	105	0.00
66 T	1,1,1,2-Tetrachloroethane	0.388	0.384	1.0	106	0.00
67 C	Ethyl Benzene	1.760	1.790	-1.7#	104	0.00
68 T	m/p-Xylenes	0.706	0.718	-1.7	103	0.00
69 T	o-Xylene	0.662	0.683	-3.2	105	0.00
70 T	Styrene	1.089	1.135	-4.2	105	0.00
71 P	Bromoform	0.240	0.241	-0.4	108	0.00
72 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	103	0.00
73 T	Isopropylbenzene	3.295	3.316	-0.6	103	0.00
74 T	N-amyl acetate	0.592	0.605	-2.2	108	0.00
75 P	1,1,2,2-Tetrachloroethane	0.539	0.536	0.6	111	0.00
76 T	1,2,3-Trichloropropane	0.441	0.378	14.3	90	0.00
77 T	Bromobenzene	0.876	0.869	0.8	106	0.00
78 T	n-propylbenzene	3.813	3.866	-1.4	103	0.00
79 T	2-Chlorotoluene	2.233	2.235	-0.1	104	0.00
80 T	1,3,5-Trimethylbenzene	2.663	2.728	-2.4	104	0.00
81 T	trans-1,4-Dichloro-2-butene	0.180	0.168	6.7	103	0.00
82 T	4-Chlorotoluene	2.300	2.321	-0.9	105	0.00
83 T	tert-Butylbenzene	2.458	2.558	-4.1	105	0.00
84 T	1,2,4-Trimethylbenzene	2.657	2.738	-3.0	105	0.00
85 T	sec-Butylbenzene	3.527	3.586	-1.7	104	0.00
86 T	p-Isopropyltoluene	3.003	3.115	-3.7	104	0.00
87 T	1,3-Dichlorobenzene	1.706	1.693	0.8	106	0.00
88 T	1,4-Dichlorobenzene	1.685	1.656	1.7	105	0.00
89 T	n-Butylbenzene	2.616	2.712	-3.7	105	0.00
90 T	Hexachloroethane	0.646	0.634	1.9	105	0.00
91 T	1,2-Dichlorobenzene	1.496	1.487	0.6	106	0.00
92 T	1,2-Dibromo-3-Chloropropane	0.088	0.086	2.3	107	0.00
93 T	1,2,4-Trichlorobenzene	0.932	0.954	-2.4	107	0.00
94 T	Hexachlorobutadiene	0.581	0.582	-0.2	104	0.00
95 T	Naphthalene	1.485	1.549	-4.3	109	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
Data File : VY023391.D
Acq On : 07 Oct 2025 14:12
Operator : SY/MD
Sample : VSTDICV050
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
ICVVY100725

Quant Time: Oct 08 05:15:49 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 05:12:50 2025
Response via : Initial Calibration

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

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
96 T	1,2,3-Trichlorobenzene	0.808	0.827	-2.4	108	0.00

(#) = Out of Range

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



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

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name:	<u>Alliance</u>	Contract:	<u>AECO02</u>
Lab Code:	<u>ACE</u>	SDG No.:	<u>Q3419</u>
Instrument ID:	<u>MSVOA_Y</u>	Calibration Date/Time:	<u>10/22/2025 09:30</u>
Lab File ID:	<u>VY023543.D</u>	Init. Calib. Date(s):	<u>10/07/2025 10/07/2025</u>
Heated Purge: (Y/N)	<u>Y</u>	Init. Calib. Time(s):	<u>09:17 12:32</u>
GC Column:	<u>RXI-624</u>	ID:	<u>0.25</u> (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Dichlorodifluoromethane	0.360	0.308		-14.44	20
Chloromethane	0.490	0.409	0.1	-16.53	20
Vinyl Chloride	0.639	0.552		-13.61	20
Bromomethane	0.536	0.456		-14.93	20
Chloroethane	0.435	0.403		-7.36	20
Trichlorofluoromethane	0.887	0.857		-3.38	20
1,1,2-Trichlorotrifluoroethane	0.460	0.469		1.96	20
1,1-Dichloroethene	0.446	0.456		2.24	20
Acetone	0.100	0.096		-4	20
Carbon Disulfide	1.277	1.206		-5.56	20
Methyl tert-butyl Ether	1.072	1.142		6.53	20
Methyl Acetate	0.261	0.294		12.64	20
Methylene Chloride	0.538	0.496		-7.81	20
trans-1,2-Dichloroethene	0.491	0.510		3.87	20
1,1-Dichloroethane	0.796	0.815	0.1	2.39	20
Cyclohexane	0.696	0.650		-6.61	20
2-Butanone	0.122	0.118		-3.28	20
Carbon Tetrachloride	0.493	0.522		5.88	20
cis-1,2-Dichloroethene	0.567	0.611		7.76	20
Bromochloromethane	0.297	0.257		-13.47	20
Chloroform	0.875	0.928		6.06	20
1,1,1-Trichloroethane	0.795	0.839		5.53	20
Methylcyclohexane	0.530	0.561		5.85	20
Benzene	1.288	1.371		6.44	20
1,2-Dichloroethane	0.332	0.340		2.41	20
Trichloroethene	0.377	0.411		9.02	20
1,2-Dichloropropane	0.285	0.303		6.32	20
Bromodichloromethane	0.453	0.487		7.51	20
4-Methyl-2-Pentanone	0.166	0.175		5.42	20
Toluene	0.836	0.926		10.77	20
t-1,3-Dichloropropene	0.394	0.433		9.9	20
cis-1,3-Dichloropropene	0.465	0.509		9.46	20
1,1,2-Trichloroethane	0.242	0.264		9.09	20
2-Hexanone	0.119	0.129		8.4	20
Dibromochloromethane	0.339	0.377		11.21	20
1,2-Dibromoethane	0.231	0.255		10.39	20
Tetrachloroethene	0.516	0.580		12.4	20
Chlorobenzene	1.087	1.168	0.3	7.45	20

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



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

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name:	<u>Alliance</u>	Contract:	<u>AECO02</u>
Lab Code:	<u>ACE</u>	SDG No.:	<u>Q3419</u>
Instrument ID:	<u>MSVOA_Y</u>	Calibration Date/Time:	<u>10/22/2025</u> <u>09:30</u>
Lab File ID:	<u>VY023543.D</u>	Init. Calib. Date(s):	<u>10/07/2025</u> <u>10/07/2025</u>
Heated Purge: (Y/N)	<u>Y</u>	Init. Calib. Time(s):	<u>09:17</u> <u>12:32</u>
GC Column:	<u>RXI-624</u>	ID:	<u>0.25</u> (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Ethyl Benzene	1.760	1.922		9.2	20
m/p-Xylenes	0.706	0.784		11.05	20
o-Xylene	0.662	0.739		11.63	20
Styrene	1.089	1.228		12.76	20
Bromoform	0.240	0.264	0.1	10	20
Isopropylbenzene	3.295	3.699		12.26	20
1,1,2,2-Tetrachloroethane	0.539	0.562	0.3	4.27	20
1,3-Dichlorobenzene	1.706	1.845		8.15	20
1,4-Dichlorobenzene	1.685	1.798		6.71	20
1,2-Dichlorobenzene	1.496	1.634		9.23	20
1,2-Dibromo-3-Chloropropane	0.088	0.092		4.55	20
1,2,4-Trichlorobenzene	0.932	1.020		9.44	20
1,2,3-Trichlorobenzene	0.808	0.876		8.42	20
1,2-Dichloroethane-d4	0.418	0.381		-8.85	20
Dibromofluoromethane	0.307	0.307		0	20
Toluene-d8	1.144	1.136		-0.7	20
4-Bromofluorobenzene	0.378	0.382		1.06	20

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

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102225\
 Data File : VY023543.D
 Acq On : 22 Oct 2025 09:30
 Operator : SY/MD
 Sample : VSTDCCC050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VSTDCCC050

Manual Integrations
 APPROVED

Reviewed By :Amit Patel 10/24/2025
 Supervised By :Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 02:25:18 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	7.713	168	557873	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	8.616	114	806690	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.420	117	720008	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.346	152	373234	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.067	65	212794	45.615	ug/l	0.00
Spiked Amount 50.000	Range 50 - 163		Recovery =	91.220%		
35) Dibromofluoromethane	7.634	113	247459	49.924	ug/l	0.00
Spiked Amount 50.000	Range 54 - 147		Recovery =	99.840%		
50) Toluene-d8	10.109	98	916029	49.624	ug/l	0.00
Spiked Amount 50.000	Range 58 - 134		Recovery =	99.240%		
62) 4-Bromofluorobenzene	12.408	95	307868	50.517	ug/l	0.00
Spiked Amount 50.000	Range 30 - 143		Recovery =	101.040%		
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.867	85	172025	42.840	ug/l	99
3) Chloromethane	2.074	50	228434	41.760	ug/l	100
4) Vinyl Chloride	2.208	62	307788	43.199	ug/l	98
5) Bromomethane	2.598	94	254415	42.551	ug/l	99
6) Chloroethane	2.739	64	224891	46.306	ug/l	99
7) Trichlorofluoromethane	3.062	101	477889	48.307	ug/l	100
8) Diethyl Ether	3.458	74	129976	50.281	ug/l	97
9) 1,1,2-Trichlorotrifluo...	3.818	101	261411	50.922	ug/l	98
10) Methyl Iodide	4.007	142	341595	59.772	ug/l	99
11) Tert butyl alcohol	4.860	59	86872	250.315	ug/l	99
12) 1,1-Dichloroethene	3.793	96	254223	51.086	ug/l	98
13) Acrolein	3.653	56	38914	79.353	ug/l	99
14) Allyl chloride	4.385	41	291262	48.025	ug/l	97
15) Acrylonitrile	5.061	53	248616	251.312	ug/l	99
16) Acetone	3.873	43	266925	240.345	ug/l	99
17) Carbon Disulfide	4.110	76	672714	47.232	ug/l	100
18) Methyl Acetate	4.391	43	163801	56.225	ug/l	97
19) Methyl tert-butyl Ether	5.122	73	636893	53.251	ug/l	96
20) Methylene Chloride	4.616	84	276483	46.039	ug/l	97
21) trans-1,2-Dichloroethene	5.116	96	284466	51.921	ug/l	98
22) Diisopropyl ether	6.025	45	677959	50.537	ug/l	98
23) Vinyl Acetate	5.964	43	1757567	242.046	ug/l	96
24) 1,1-Dichloroethane	5.921	63	454590	51.156	ug/l	98
25) 2-Butanone	6.896	43	328971	242.629	ug/l	100
26) 2,2-Dichloropropane	6.890	77	428536	52.555	ug/l	98
27) cis-1,2-Dichloroethene	6.896	96	340754	53.843	ug/l	96
28) Bromochloromethane	7.250	49	143454	43.243	ug/l	95
29) Tetrahydrofuran	7.268	42	185249	240.938	ug/l	94
30) Chloroform	7.427	83	517452	53.000	ug/l	99
31) Cyclohexane	7.707	56	362890	46.762	ug/l	96
32) 1,1,1-Trichloroethane	7.622	97	467952	52.741	ug/l	99
36) 1,1-Dichloropropene	7.841	75	344096	52.436	ug/l	99
37) Ethyl Acetate	6.994	43	127273	48.956	ug/l	97
38) Carbon Tetrachloride	7.823	117	421482	52.970	ug/l	99
39) Methylcyclohexane	9.109	83	452406	52.949	ug/l	97
40) Benzene	8.085	78	1105993	53.219	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102225\
 Data File : VY023543.D
 Acq On : 22 Oct 2025 09:30
 Operator : SY/MD
 Sample : VSTDCCC050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 3 Sample Multiplier: 1

Instrument :

MSVOA_Y

ClientSampleId :

VSTDCCC050

Manual Integrations

APPROVED

Reviewed By :Amit Patel 10/24/2025

Supervised By :Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 02:25:18 2025

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M

Quant Title : SW846 8260

QLast Update : Wed Oct 08 05:12:50 2025

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.219	41	68071m	48.413	ug/l	
42) 1,2-Dichloroethane	8.158	62	274669	51.247	ug/l	98
43) Isopropyl Acetate	8.201	43	259676	50.092	ug/l	96
44) Trichloroethene	8.866	130	331676	54.528	ug/l	99
45) 1,2-Dichloropropane	9.140	63	244273	53.216	ug/l	98
46) Dibromomethane	9.231	93	157780	54.359	ug/l	98
47) Bromodichloromethane	9.426	83	392784	53.731	ug/l	100
48) Methyl methacrylate	9.219	41	125981	51.729	ug/l	95
49) 1,4-Dioxane	9.231	88	35080	1042.410	ug/l	97
51) 4-Methyl-2-Pentanone	9.999	43	705865	263.542	ug/l	98
52) Toluene	10.170	92	747259	55.380	ug/l	99
53) t-1,3-Dichloropropene	10.396	75	348965	54.901	ug/l	99
54) cis-1,3-Dichloropropene	9.859	75	410362	54.701	ug/l	97
55) 1,1,2-Trichloroethane	10.573	97	212638	54.478	ug/l	97
56) Ethyl methacrylate	10.438	69	260989	57.967	ug/l	94
57) 1,3-Dichloropropane	10.719	76	337668	54.594	ug/l	99
58) 2-Chloroethyl Vinyl ether	9.713	63	574517	284.845	ug/l	98
59) 2-Hexanone	10.762	43	518755	271.019	ug/l	97
60) Dibromochloromethane	10.914	129	304516	55.647	ug/l	99
61) 1,2-Dibromoethane	11.018	107	205601	55.233	ug/l	100
64) Tetrachloroethene	10.646	164	417270	56.127	ug/l	97
65) Chlorobenzene	11.444	112	841259	53.721	ug/l	100
66) 1,1,1,2-Tetrachloroethane	11.517	131	302769	54.255	ug/l	99
67) Ethyl Benzene	11.517	91	1383613	54.584	ug/l	100
68) m/p-Xylenes	11.627	106	1128353	110.980	ug/l	99
69) o-Xylene	11.956	106	532269	55.814	ug/l	99
70) Styrene	11.969	104	884177	56.380	ug/l	99
71) Bromoform	12.133	173	190201	54.947	ug/l #	98
73) Isopropylbenzene	12.255	105	1380580	56.129	ug/l	100
74) N-amyl acetate	12.072	43	226427	51.252	ug/l	97
75) 1,1,2,2-Tetrachloroethane	12.505	83	209645	52.112	ug/l	99
76) 1,2,3-Trichloropropane	12.554	75	165233m	50.178	ug/l	
77) Bromobenzene	12.529	156	355320	54.338	ug/l	99
78) n-propylbenzene	12.597	91	1597439	56.123	ug/l	99
79) 2-Chlorotoluene	12.682	91	910692	54.637	ug/l	99
80) 1,3,5-Trimethylbenzene	12.737	105	1123341	56.518	ug/l	98
81) trans-1,4-Dichloro-2-b...	12.304	75	74591	55.547	ug/l	95
82) 4-Chlorotoluene	12.779	91	937415	54.609	ug/l	99
83) tert-Butylbenzene	12.999	119	1037184	56.518	ug/l	99
84) 1,2,4-Trimethylbenzene	13.042	105	1118689	56.397	ug/l	99
85) sec-Butylbenzene	13.176	105	1487514	56.506	ug/l	100
86) p-Isopropyltoluene	13.292	119	1282400	57.215	ug/l	100
87) 1,3-Dichlorobenzene	13.285	146	688741	54.089	ug/l	99
88) 1,4-Dichlorobenzene	13.365	146	671095	53.362	ug/l	99
89) n-Butylbenzene	13.615	91	1101186	56.385	ug/l	99
90) Hexachloroethane	13.877	117	255425	52.984	ug/l	100
91) 1,2-Dichlorobenzene	13.657	146	609689	54.613	ug/l	100
92) 1,2-Dibromo-3-Chloropr...	14.273	75	34265	51.910	ug/l	96
93) 1,2,4-Trichlorobenzene	14.919	180	380515	54.674	ug/l	100
94) Hexachlorobutadiene	15.023	225	233049	53.717	ug/l	100
95) Naphthalene	15.145	128	636726	57.452	ug/l	99
96) 1,2,3-Trichlorobenzene	15.328	180	326959	54.237	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102225\
Data File : VY023543.D
Acq On : 22 Oct 2025 09:30
Operator : SY/MD
Sample : VSTDCCC050
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
VSTDCCC050

Manual Integrations
APPROVED

Reviewed By :Amit Patel 10/24/2025
Supervised By :Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 02:25:18 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 05:12:50 2025
Response via : Initial Calibration

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

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

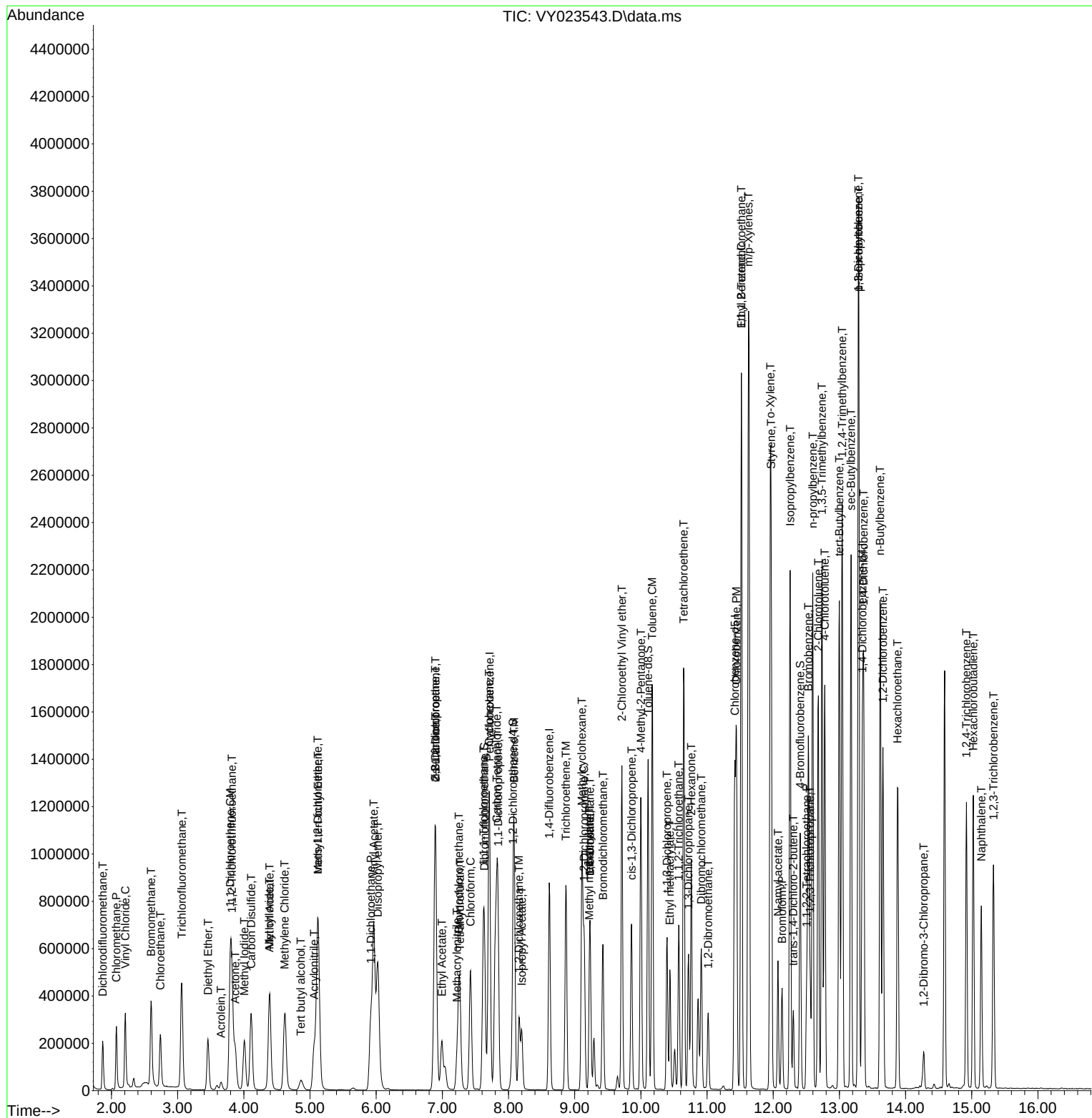
Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102225\
 Data File : VY023543.D
 Acq On : 22 Oct 2025 09:30
 Operator : SY/MD
 Sample : VSTDCCC050
 Misc : 5.00g/5.0mL/MSVOA_Y/soil
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VSTDCCC050

Manual Integrations APPROVED

Reviewed By :Amit Patel 10/24/2025
 Supervised By :Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 02:25:18 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102225\
 Data File : VY023543.D
 Acq On : 22 Oct 2025 09:30
 Operator : SY/MD
 Sample : VSTDCCC050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 24 02:25:18 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 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	95	0.00
2 T	Dichlorodifluoromethane	0.360	0.308	14.4	91	0.00
3 P	Chloromethane	0.490	0.409	16.5	86	0.00
4 C	Vinyl Chloride	0.639	0.552	13.6#	87	0.00
5 T	Bromomethane	0.536	0.456	14.9	92	0.00
6 T	Chloroethane	0.435	0.403	7.4	92	0.00
7 T	Trichlorofluoromethane	0.887	0.857	3.4	96	0.00
8 T	Diethyl Ether	0.232	0.233	-0.4	103	0.00
9 T	1,1,2-Trichlorotrifluoroeth	0.460	0.469	-2.0	101	0.00
10 T	Methyl Iodide	0.512	0.612	-19.5	108	0.00
11 T	Tert butyl alcohol	0.031	0.031	0.0	118	0.00
12 CM	1,1-Dichloroethene	0.446	0.456	-2.2#	101	0.00
13 T	Acrolein	0.044	0.014	68.2#	31#	0.00
14 T	Allyl chloride	0.544	0.522	4.0	94	0.00
15 T	Acrylonitrile	0.089	0.089	0.0	103	0.00
16 T	Acetone	0.100	0.096	4.0	108	0.00
17 T	Carbon Disulfide	1.277	1.206	5.6	93	0.00
18 T	Methyl Acetate	0.261	0.294	-12.6	113	0.00
19 T	Methyl tert-butyl Ether	1.072	1.142	-6.5	106	0.00
20 T	Methylene Chloride	0.538	0.496	7.8	102	0.00
21 T	trans-1,2-Dichloroethene	0.491	0.510	-3.9	103	0.00
22 T	Diisopropyl ether	1.202	1.215	-1.1	99	0.00
23 T	Vinyl Acetate	0.651	0.630	3.2	95	0.00
24 P	1,1-Dichloroethane	0.796	0.815	-2.4	101	0.00
25 T	2-Butanone	0.122	0.118	3.3	106	0.00
26 T	2,2-Dichloropropane	0.731	0.768	-5.1	103	0.00
27 T	cis-1,2-Dichloroethene	0.567	0.611	-7.8	106	0.00
28 T	Bromochloromethane	0.297	0.257	13.5	91	0.00
29 T	Tetrahydrofuran	0.069	0.066	4.3	99	0.00
30 C	Chloroform	0.875	0.928	-6.1#	105	0.00
31 T	Cyclohexane	0.696	0.650	6.6	96	0.00
32 T	1,1,1-Trichloroethane	0.795	0.839	-5.5	103	0.00
33 S	1,2-Dichloroethane-d4	0.418	0.381	8.9	92	0.00
34 I	1,4-Difluorobenzene	1.000	1.000	0.0	94	0.00
35 S	Dibromofluoromethane	0.307	0.307	0.0	97	0.00
36 T	1,1-Dichloropropene	0.407	0.427	-4.9	101	0.00
37 T	Ethyl Acetate	0.161	0.158	1.9	99	0.01
38 T	Carbon Tetrachloride	0.493	0.522	-5.9	102	0.00
39 T	Methylcyclohexane	0.530	0.561	-5.8	100	0.00
40 TM	Benzene	1.288	1.371	-6.4	102	0.00
41 T	Methacrylonitrile	0.087	0.084	3.4	99	0.00
42 TM	1,2-Dichloroethane	0.332	0.340	-2.4	102	0.00
43 T	Isopropyl Acetate	0.321	0.322	-0.3	100	0.00
44 TM	Trichloroethene	0.377	0.411	-9.0	105	0.00
45 C	1,2-Dichloropropane	0.285	0.303	-6.3#	104	0.00
46 T	Dibromomethane	0.180	0.196	-8.9	106	0.00
47 T	Bromodichloromethane	0.453	0.487	-7.5	104	0.00
48 T	Methyl methacrylate	0.151	0.156	-3.3	99	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102225\
 Data File : VY023543.D
 Acq On : 22 Oct 2025 09:30
 Operator : SY/MD
 Sample : VSTDCCC050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 24 02:25:18 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 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	0.002	0.002	0.0	103	0.00
50 S	Toluene-d8	1.144	1.136	0.7	94	0.00
51 T	4-Methyl-2-Pentanone	0.166	0.175	-5.4	103	0.00
52 CM	Toluene	0.836	0.926	-10.8#	105	0.00
53 T	t-1,3-Dichloropropene	0.394	0.433	-9.9	106	0.00
54 T	cis-1,3-Dichloropropene	0.465	0.509	-9.5	105	0.00
55 T	1,1,2-Trichloroethane	0.242	0.264	-9.1	107	0.00
56 T	Ethyl methacrylate	0.279	0.324	-16.1	109	0.00
57 T	1,3-Dichloropropane	0.383	0.419	-9.4	105	0.00
58 T	2-Chloroethyl Vinyl ether	0.125	0.142	-13.6	104	0.00
59 T	2-Hexanone	0.119	0.129	-8.4	108	0.00
60 T	Dibromochloromethane	0.339	0.377	-11.2	108	0.00
61 T	1,2-Dibromoethane	0.231	0.255	-10.4	107	0.00
62 S	4-Bromofluorobenzene	0.378	0.382	-1.1	98	0.00
63 I	Chlorobenzene-d5	1.000	1.000	0.0	96	0.00
64 T	Tetrachloroethene	0.516	0.580	-12.4	106	0.00
65 PM	Chlorobenzene	1.087	1.168	-7.5	107	0.00
66 T	1,1,1,2-Tetrachloroethane	0.388	0.421	-8.5	108	0.00
67 C	Ethyl Benzene	1.760	1.922	-9.2#	104	0.00
68 T	m/p-Xylenes	0.706	0.784	-11.0	105	0.00
69 T	o-Xylene	0.662	0.739	-11.6	106	0.00
70 T	Styrene	1.089	1.228	-12.8	106	0.00
71 P	Bromoform	0.240	0.264	-10.0	110	0.00
72 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	95	0.00
73 T	Isopropylbenzene	3.295	3.699	-12.3	106	0.00
74 T	N-amyl acetate	0.592	0.607	-2.5	99	0.00
75 P	1,1,2,2-Tetrachloroethane	0.539	0.562	-4.3	107	0.00
76 T	1,2,3-Trichloropropane	0.441	0.443	-0.5	97	0.00
77 T	Bromobenzene	0.876	0.952	-8.7	107	0.00
78 T	n-propylbenzene	3.813	4.280	-12.2	105	0.00
79 T	2-Chlorotoluene	2.233	2.440	-9.3	104	0.00
80 T	1,3,5-Trimethylbenzene	2.663	3.010	-13.0	106	0.00
81 T	trans-1,4-Dichloro-2-butene	0.180	0.200	-11.1	113	0.00
82 T	4-Chlorotoluene	2.300	2.512	-9.2	105	0.00
83 T	tert-Butylbenzene	2.458	2.779	-13.1	105	0.00
84 T	1,2,4-Trimethylbenzene	2.657	2.997	-12.8	105	0.00
85 T	sec-Butylbenzene	3.527	3.985	-13.0	106	0.00
86 T	p-Isopropyltoluene	3.003	3.436	-14.4	106	0.00
87 T	1,3-Dichlorobenzene	1.706	1.845	-8.1	106	0.00
88 T	1,4-Dichlorobenzene	1.685	1.798	-6.7	105	0.00
89 T	n-Butylbenzene	2.616	2.950	-12.8	105	0.00
90 T	Hexachloroethane	0.646	0.684	-5.9	104	0.00
91 T	1,2-Dichlorobenzene	1.496	1.634	-9.2	108	0.00
92 T	1,2-Dibromo-3-Chloropropane	0.088	0.092	-4.5	105	0.00
93 T	1,2,4-Trichlorobenzene	0.932	1.020	-9.4	106	0.00
94 T	Hexachlorobutadiene	0.581	0.624	-7.4	103	0.00
95 T	Naphthalene	1.485	1.706	-14.9	111	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102225\
Data File : VY023543.D
Acq On : 22 Oct 2025 09:30
Operator : SY/MD
Sample : VSTDCCC050
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_Y
LabSampleId :
VSTDCCC050

Quant Time: Oct 24 02:25:18 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 05:12:50 2025
Response via : Initial Calibration

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

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
96 T	1,2,3-Trichlorobenzene	0.808	0.876	-8.4	105	0.00

(#) = Out of Range

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

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102225\
 Data File : VY023543.D
 Acq On : 22 Oct 2025 09:30
 Operator : SY/MD
 Sample : VSTDCCC050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 24 02:25:18 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 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	95	0.00
2 T	Dichlorodifluoromethane	50.000	42.840	14.3	91	0.00
3 P	Chloromethane	50.000	41.760	16.5	86	0.00
4 C	Vinyl Chloride	50.000	43.199	13.6#	87	0.00
5 T	Bromomethane	50.000	42.551	14.9	92	0.00
6 T	Chloroethane	50.000	46.306	7.4	92	0.00
7 T	Trichlorofluoromethane	50.000	48.307	3.4	96	0.00
8 T	Diethyl Ether	50.000	50.281	-0.6	103	0.00
9 T	1,1,2-Trichlorotrifluoroeth	50.000	50.922	-1.8	101	0.00
10 T	Methyl Iodide	50.000	59.772	-19.5	108	0.00
11 T	Tert butyl alcohol	250.000	250.315	-0.1	118	0.00
12 CM	1,1-Dichloroethene	50.000	51.086	-2.2#	101	0.00
13 T	Acrolein	250.000	79.353	68.3#	31	0.00
14 T	Allyl chloride	50.000	48.025	4.0	94	0.00
15 T	Acrylonitrile	250.000	251.312	-0.5	103	0.00
16 T	Acetone	250.000	240.345	3.9	108	0.00
17 T	Carbon Disulfide	50.000	47.232	5.5	93	0.00
18 T	Methyl Acetate	50.000	56.225	-12.5	113	0.00
19 T	Methyl tert-butyl Ether	50.000	53.251	-6.5	106	0.00
20 T	Methylene Chloride	50.000	46.039	7.9	102	0.00
21 T	trans-1,2-Dichloroethene	50.000	51.921	-3.8	103	0.00
22 T	Diisopropyl ether	50.000	50.537	-1.1	99	0.00
23 T	Vinyl Acetate	250.000	242.046	3.2	95	0.00
24 P	1,1-Dichloroethane	50.000	51.156	-2.3	101	0.00
25 T	2-Butanone	250.000	242.629	2.9	106	0.00
26 T	2,2-Dichloropropane	50.000	52.555	-5.1	103	0.00
27 T	cis-1,2-Dichloroethene	50.000	53.843	-7.7	106	0.00
28 T	Bromochloromethane	50.000	43.243	13.5	91	0.00
29 T	Tetrahydrofuran	250.000	240.938	3.6	99	0.00
30 C	Chloroform	50.000	53.000	-6.0#	105	0.00
31 T	Cyclohexane	50.000	46.762	6.5	96	0.00
32 T	1,1,1-Trichloroethane	50.000	52.741	-5.5	103	0.00
33 S	1,2-Dichloroethane-d4	50.000	45.615	8.8	92	0.00
34 I	1,4-Difluorobenzene	50.000	50.000	0.0	94	0.00
35 S	Dibromofluoromethane	50.000	49.924	0.2	97	0.00
36 T	1,1-Dichloropropene	50.000	52.436	-4.9	101	0.00
37 T	Ethyl Acetate	50.000	48.956	2.1	99	0.01
38 T	Carbon Tetrachloride	50.000	52.970	-5.9	102	0.00
39 T	Methylcyclohexane	50.000	52.949	-5.9	100	0.00
40 TM	Benzene	50.000	53.219	-6.4	102	0.00
41 T	Methacrylonitrile	50.000	48.413	3.2	99	0.00
42 TM	1,2-Dichloroethane	50.000	51.247	-2.5	102	0.00
43 T	Isopropyl Acetate	50.000	50.092	-0.2	100	0.00
44 TM	Trichloroethene	50.000	54.528	-9.1	105	0.00
45 C	1,2-Dichloropropane	50.000	53.216	-6.4#	104	0.00
46 T	Dibromomethane	50.000	54.359	-8.7	106	0.00
47 T	Bromodichloromethane	50.000	53.731	-7.5	104	0.00
48 T	Methyl methacrylate	50.000	51.729	-3.5	99	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102225\
 Data File : VY023543.D
 Acq On : 22 Oct 2025 09:30
 Operator : SY/MD
 Sample : VSTDCCC050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 24 02:25:18 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 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	1042.410	-4.2	103	0.00
50 S	Toluene-d8	50.000	49.624	0.8	94	0.00
51 T	4-Methyl-2-Pentanone	250.000	263.542	-5.4	103	0.00
52 CM	Toluene	50.000	55.380	-10.8#	105	0.00
53 T	t-1,3-Dichloropropene	50.000	54.901	-9.8	106	0.00
54 T	cis-1,3-Dichloropropene	50.000	54.701	-9.4	105	0.00
55 T	1,1,2-Trichloroethane	50.000	54.478	-9.0	107	0.00
56 T	Ethyl methacrylate	50.000	57.967	-15.9	109	0.00
57 T	1,3-Dichloropropane	50.000	54.594	-9.2	105	0.00
58 T	2-Chloroethyl Vinyl ether	250.000	284.845	-13.9	104	0.00
59 T	2-Hexanone	250.000	271.019	-8.4	108	0.00
60 T	Dibromochloromethane	50.000	55.647	-11.3	108	0.00
61 T	1,2-Dibromoethane	50.000	55.233	-10.5	107	0.00
62 S	4-Bromofluorobenzene	50.000	50.517	-1.0	98	0.00
63 I	Chlorobenzene-d5	50.000	50.000	0.0	96	0.00
64 T	Tetrachloroethene	50.000	56.127	-12.3	106	0.00
65 PM	Chlorobenzene	50.000	53.721	-7.4	107	0.00
66 T	1,1,1,2-Tetrachloroethane	50.000	54.255	-8.5	108	0.00
67 C	Ethyl Benzene	50.000	54.584	-9.2#	104	0.00
68 T	m/p-Xylenes	100.000	110.980	-11.0	105	0.00
69 T	o-Xylene	50.000	55.814	-11.6	106	0.00
70 T	Styrene	50.000	56.380	-12.8	106	0.00
71 P	Bromoform	50.000	54.947	-9.9	110	0.00
72 I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	95	0.00
73 T	Isopropylbenzene	50.000	56.129	-12.3	106	0.00
74 T	N-amyl acetate	50.000	51.252	-2.5	99	0.00
75 P	1,1,2,2-Tetrachloroethane	50.000	52.112	-4.2	107	0.00
76 T	1,2,3-Trichloropropane	50.000	50.178	-0.4	97	0.00
77 T	Bromobenzene	50.000	54.338	-8.7	107	0.00
78 T	n-propylbenzene	50.000	56.123	-12.2	105	0.00
79 T	2-Chlorotoluene	50.000	54.637	-9.3	104	0.00
80 T	1,3,5-Trimethylbenzene	50.000	56.518	-13.0	106	0.00
81 T	trans-1,4-Dichloro-2-butene	50.000	55.547	-11.1	113	0.00
82 T	4-Chlorotoluene	50.000	54.609	-9.2	105	0.00
83 T	tert-Butylbenzene	50.000	56.518	-13.0	105	0.00
84 T	1,2,4-Trimethylbenzene	50.000	56.397	-12.8	105	0.00
85 T	sec-Butylbenzene	50.000	56.506	-13.0	106	0.00
86 T	p-Isopropyltoluene	50.000	57.215	-14.4	106	0.00
87 T	1,3-Dichlorobenzene	50.000	54.089	-8.2	106	0.00
88 T	1,4-Dichlorobenzene	50.000	53.362	-6.7	105	0.00
89 T	n-Butylbenzene	50.000	56.385	-12.8	105	0.00
90 T	Hexachloroethane	50.000	52.984	-6.0	104	0.00
91 T	1,2-Dichlorobenzene	50.000	54.613	-9.2	108	0.00
92 T	1,2-Dibromo-3-Chloropropane	50.000	51.910	-3.8	105	0.00
93 T	1,2,4-Trichlorobenzene	50.000	54.674	-9.3	106	0.00
94 T	Hexachlorobutadiene	50.000	53.717	-7.4	103	0.00
95 T	Naphthalene	50.000	57.452	-14.9	111	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102225\
Data File : VY023543.D
Acq On : 22 Oct 2025 09:30
Operator : SY/MD
Sample : VSTDCCC050
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_Y
LabSampleId :
VSTDCCC050

Quant Time: Oct 24 02:25:18 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 05:12:50 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	54.237	-8.5	105	0.00

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



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

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name:	<u>Alliance</u>	Contract:	<u>AECO02</u>
Lab Code:	<u>ACE</u>	SDG No.:	<u>Q3419</u>
Instrument ID:	<u>MSVOA_Y</u>	Calibration Date/Time:	<u>10/24/2025 08:56</u>
Lab File ID:	<u>VY023559.D</u>	Init. Calib. Date(s):	<u>10/07/2025 10/07/2025</u>
Heated Purge: (Y/N)	<u>Y</u>	Init. Calib. Time(s):	<u>09:17 12:32</u>
GC Column:	<u>RXI-624</u>	ID:	<u>0.25</u> (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Dichlorodifluoromethane	0.360	0.296		-17.78	20
Chloromethane	0.490	0.393	0.1	-19.8	20
Vinyl Chloride	0.639	0.540		-15.49	20
Bromomethane	0.536	0.487		-9.14	20
Chloroethane	0.435	0.389		-10.57	20
Trichlorofluoromethane	0.887	0.844		-4.85	20
1,1,2-Trichlorotrifluoroethane	0.460	0.472		2.61	20
1,1-Dichloroethene	0.446	0.451		1.12	20
Acetone	0.100	0.101		1	20
Carbon Disulfide	1.277	1.159		-9.24	20
Methyl tert-butyl Ether	1.072	1.188		10.82	20
Methyl Acetate	0.261	0.280		7.28	20
Methylene Chloride	0.538	0.506		-5.95	20
trans-1,2-Dichloroethene	0.491	0.511		4.07	20
1,1-Dichloroethane	0.796	0.814	0.1	2.26	20
Cyclohexane	0.696	0.644		-7.47	20
2-Butanone	0.122	0.124		1.64	20
Carbon Tetrachloride	0.493	0.528		7.1	20
cis-1,2-Dichloroethene	0.567	0.623		9.88	20
Bromochloromethane	0.297	0.248		-16.5	20
Chloroform	0.875	0.933		6.63	20
1,1,1-Trichloroethane	0.795	0.836		5.16	20
Methylcyclohexane	0.530	0.561		5.85	20
Benzene	1.288	1.380		7.14	20
1,2-Dichloroethane	0.332	0.338		1.81	20
Trichloroethene	0.377	0.413		9.55	20
1,2-Dichloropropane	0.285	0.304		6.67	20
Bromodichloromethane	0.453	0.497		9.71	20
4-Methyl-2-Pentanone	0.166	0.181		9.04	20
Toluene	0.836	0.928		11.01	20
t-1,3-Dichloropropene	0.394	0.436		10.66	20
cis-1,3-Dichloropropene	0.465	0.520		11.83	20
1,1,2-Trichloroethane	0.242	0.275		13.64	20
2-Hexanone	0.119	0.131		10.08	20
Dibromochloromethane	0.339	0.389		14.75	20
1,2-Dibromoethane	0.231	0.263		13.85	20
Tetrachloroethene	0.516	0.576		11.63	20
Chlorobenzene	1.087	1.224	0.3	12.6	20

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



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

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name:	<u>Alliance</u>	Contract:	<u>AECO02</u>
Lab Code:	<u>ACE</u>	SDG No.:	<u>Q3419</u>
Instrument ID:	<u>MSVOA_Y</u>	Calibration Date/Time:	<u>10/24/2025 08:56</u>
Lab File ID:	<u>VY023559.D</u>	Init. Calib. Date(s):	<u>10/07/2025 10/07/2025</u>
Heated Purge: (Y/N)	<u>Y</u>	Init. Calib. Time(s):	<u>09:17 12:32</u>
GC Column:	<u>RXI-624</u>	ID:	<u>0.25</u> (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Ethyl Benzene	1.760	1.991		13.13	20
m/p-Xylenes	0.706	0.816		15.58	20
o-Xylene	0.662	0.779		17.67	20
Styrene	1.089	1.285		18	20
Bromoform	0.240	0.278	0.1	15.83	20
Isopropylbenzene	3.295	3.754		13.93	20
1,1,2,2-Tetrachloroethane	0.539	0.600	0.3	11.32	20
1,3-Dichlorobenzene	1.706	1.896		11.14	20
1,4-Dichlorobenzene	1.685	1.876		11.34	20
1,2-Dichlorobenzene	1.496	1.689		12.9	20
1,2-Dibromo-3-Chloropropane	0.088	0.093		5.68	20
1,2,4-Trichlorobenzene	0.932	1.065		14.27	20
1,2,3-Trichlorobenzene	0.808	0.912		12.87	20
1,2-Dichloroethane-d4	0.418	0.374		-10.53	20
Dibromofluoromethane	0.307	0.304		-0.98	20
Toluene-d8	1.144	1.115		-2.54	20
4-Bromofluorobenzene	0.378	0.376		-0.53	20

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

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
 Data File : VY023559.D
 Acq On : 24 Oct 2025 08:56
 Operator : SY/MD
 Sample : VSTDCCC050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VSTDCCC050

Manual Integrations
 APPROVED

Reviewed By :Amit Patel 10/27/2025
 Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:45:30 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	7.713	168	558901	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	8.615	114	809883	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.414	117	712621	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.346	152	380279	50.000	ug/l	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4	8.060	65	208884	44.694	ug/l	0.00
Spiked Amount	50.000	Range	50 - 163	Recovery	=	89.380%
35) Dibromofluoromethane	7.634	113	246096	49.453	ug/l	0.00
Spiked Amount	50.000	Range	54 - 147	Recovery	=	98.900%
50) Toluene-d8	10.109	98	902938	48.722	ug/l	0.00
Spiked Amount	50.000	Range	58 - 134	Recovery	=	97.440%
62) 4-Bromofluorobenzene	12.407	95	304706	49.801	ug/l	0.00
Spiked Amount	50.000	Range	30 - 143	Recovery	=	99.600%

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	1.866	85	165459	41.129	ug/l	96
3) Chloromethane	2.074	50	219496	40.052	ug/l	99
4) Vinyl Chloride	2.208	62	301831	42.285	ug/l	100
5) Bromomethane	2.598	94	272400	45.475	ug/l	99
6) Chloroethane	2.738	64	217301	44.661	ug/l	99
7) Trichlorofluoromethane	3.061	101	471600	47.584	ug/l	100
8) Diethyl Ether	3.458	74	133898	51.703	ug/l	94
9) 1,1,2-Trichlorotrifluo...	3.817	101	263863	51.306	ug/l	98
10) Methyl Iodide	4.006	142	326535	57.032	ug/l	97
11) Tert butyl alcohol	4.854	59	102526	294.878	ug/l	97
12) 1,1-Dichloroethene	3.793	96	251789	50.504	ug/l	100
13) Acrolein	3.653	56	33834	68.867	ug/l	99
14) Allyl chloride	4.384	41	289064	47.575	ug/l	97
15) Acrylonitrile	5.061	53	256147	258.449	ug/l	99
16) Acetone	3.866	43	282132	253.570	ug/l	96
17) Carbon Disulfide	4.110	76	647806	45.399	ug/l	100
18) Methyl Acetate	4.384	43	156234	53.529	ug/l	97
19) Methyl tert-butyl Ether	5.122	73	663717	55.391	ug/l	94
20) Methylene Chloride	4.616	84	282698	46.987	ug/l	97
21) trans-1,2-Dichloroethene	5.116	96	285348	51.986	ug/l	99
22) Diisopropyl ether	6.018	45	690797	51.399	ug/l	96
23) Vinyl Acetate	5.963	43	1822354	250.506	ug/l	95
24) 1,1-Dichloroethane	5.921	63	454990	51.107	ug/l	99
25) 2-Butanone	6.896	43	346329	254.962	ug/l	98
26) 2,2-Dichloropropane	6.890	77	436383	53.419	ug/l	98
27) cis-1,2-Dichloroethene	6.890	96	348158	54.911	ug/l	95
28) Bromochloromethane	7.250	49	138645	41.717	ug/l	89
29) Tetrahydrofuran	7.262	42	193584	251.315	ug/l	93
30) Chloroform	7.420	83	521543	53.320	ug/l	100
31) Cyclohexane	7.707	56	360008	46.305	ug/l	96
32) 1,1,1-Trichloroethane	7.622	97	467412	52.584	ug/l	99
36) 1,1-Dichloropropene	7.835	75	345033	52.372	ug/l	99
37) Ethyl Acetate	6.981	43	131442	50.360	ug/l	96
38) Carbon Tetrachloride	7.823	117	427890	53.563	ug/l	99
39) Methylcyclohexane	9.109	83	454580	52.994	ug/l	99
40) Benzene	8.085	78	1117791	53.575	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
 Data File : VY023559.D
 Acq On : 24 Oct 2025 08:56
 Operator : SY/MD
 Sample : VSTDCCC050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VSTDCCC050

Manual Integrations
 APPROVED

Reviewed By :Amit Patel 10/27/2025
 Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:45:30 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.225	41	76239	54.008	ug/l	94
42) 1,2-Dichloroethane	8.158	62	273693	50.864	ug/l	97
43) Isopropyl Acetate	8.201	43	271189	52.107	ug/l #	85
44) Trichloroethene	8.865	130	334751	54.817	ug/l	98
45) 1,2-Dichloropropane	9.140	63	246074	53.397	ug/l	98
46) Dibromomethane	9.231	93	160236	54.988	ug/l	98
47) Bromodichloromethane	9.426	83	402796	54.883	ug/l	100
48) Methyl methacrylate	9.219	41	124097	50.755	ug/l	90
49) 1,4-Dioxane	9.231	88	38729	1146.304	ug/l	94
51) 4-Methyl-2-Pentanone	9.999	43	731786	272.142	ug/l	97
52) Toluene	10.170	92	751520	55.476	ug/l	100
53) t-1,3-Dichloropropene	10.395	75	353434	55.385	ug/l	98
54) cis-1,3-Dichloropropene	9.859	75	421103	55.911	ug/l	97
55) 1,1,2-Trichloroethane	10.572	97	222722	56.837	ug/l	98
56) Ethyl methacrylate	10.438	69	271697	60.107	ug/l	93
57) 1,3-Dichloropropane	10.719	76	346039	55.727	ug/l	99
58) 2-Chloroethyl Vinyl ether	9.713	63	547857	270.556	ug/l	97
59) 2-Hexanone	10.761	43	528461	275.001	ug/l	95
60) Dibromochloromethane	10.914	129	315067	57.348	ug/l	100
61) 1,2-Dibromoethane	11.017	107	213108	57.024	ug/l	100
64) Tetrachloroethene	10.645	164	410235	55.753	ug/l	98
65) Chlorobenzene	11.444	112	872090	56.267	ug/l	98
66) 1,1,1,2-Tetrachloroethane	11.517	131	311946	56.479	ug/l	99
67) Ethyl Benzene	11.517	91	1418642	56.546	ug/l	99
68) m/p-Xylenes	11.627	106	1162639	115.537	ug/l	98
69) o-Xylene	11.956	106	555086	58.810	ug/l	97
70) Styrene	11.968	104	915552	58.986	ug/l	99
71) Bromoform	12.133	173	198287	57.877	ug/l #	100
73) Isopropylbenzene	12.255	105	1427449	56.959	ug/l	100
74) N-amyl acetate	12.072	43	240539	53.438	ug/l	96
75) 1,1,2,2-Tetrachloroethane	12.505	83	228057	55.639	ug/l	98
76) 1,2,3-Trichloropropane	12.554	75	168230m	50.142	ug/l	
77) Bromobenzene	12.529	156	372577	55.922	ug/l	98
78) n-propylbenzene	12.596	91	1644549	56.707	ug/l	99
79) 2-Chlorotoluene	12.682	91	947547	55.795	ug/l	99
80) 1,3,5-Trimethylbenzene	12.736	105	1157792	57.172	ug/l	98
81) trans-1,4-Dichloro-2-b...	12.304	75	77712	56.799	ug/l	95
82) 4-Chlorotoluene	12.779	91	966872	55.281	ug/l	98
83) tert-Butylbenzene	12.993	119	1094487	58.535	ug/l	99
84) 1,2,4-Trimethylbenzene	13.041	105	1158715	57.333	ug/l	100
85) sec-Butylbenzene	13.175	105	1549057	57.753	ug/l	100
86) p-Isopropyltoluene	13.291	119	1337700	58.577	ug/l	99
87) 1,3-Dichlorobenzene	13.285	146	720888	55.564	ug/l	100
88) 1,4-Dichlorobenzene	13.364	146	713367	55.673	ug/l	100
89) n-Butylbenzene	13.614	91	1156866	58.138	ug/l	99
90) Hexachloroethane	13.877	117	266678	54.294	ug/l	99
91) 1,2-Dichlorobenzene	13.657	146	642214	56.461	ug/l	100
92) 1,2-Dibromo-3-Chloropr...	14.273	75	35210	52.353	ug/l	94
93) 1,2,4-Trichlorobenzene	14.919	180	405098	57.127	ug/l	99
94) Hexachlorobutadiene	15.023	225	244033	55.207	ug/l	100
95) Naphthalene	15.145	128	662767	58.694	ug/l	100
96) 1,2,3-Trichlorobenzene	15.327	180	346789	56.460	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
Data File : VY023559.D
Acq On : 24 Oct 2025 08:56
Operator : SY/MD
Sample : VSTDCCC050
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
VSTDCCC050

Manual Integrations
APPROVED

Reviewed By :Amit Patel 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:45:30 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 05:12:50 2025
Response via : Initial Calibration

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

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

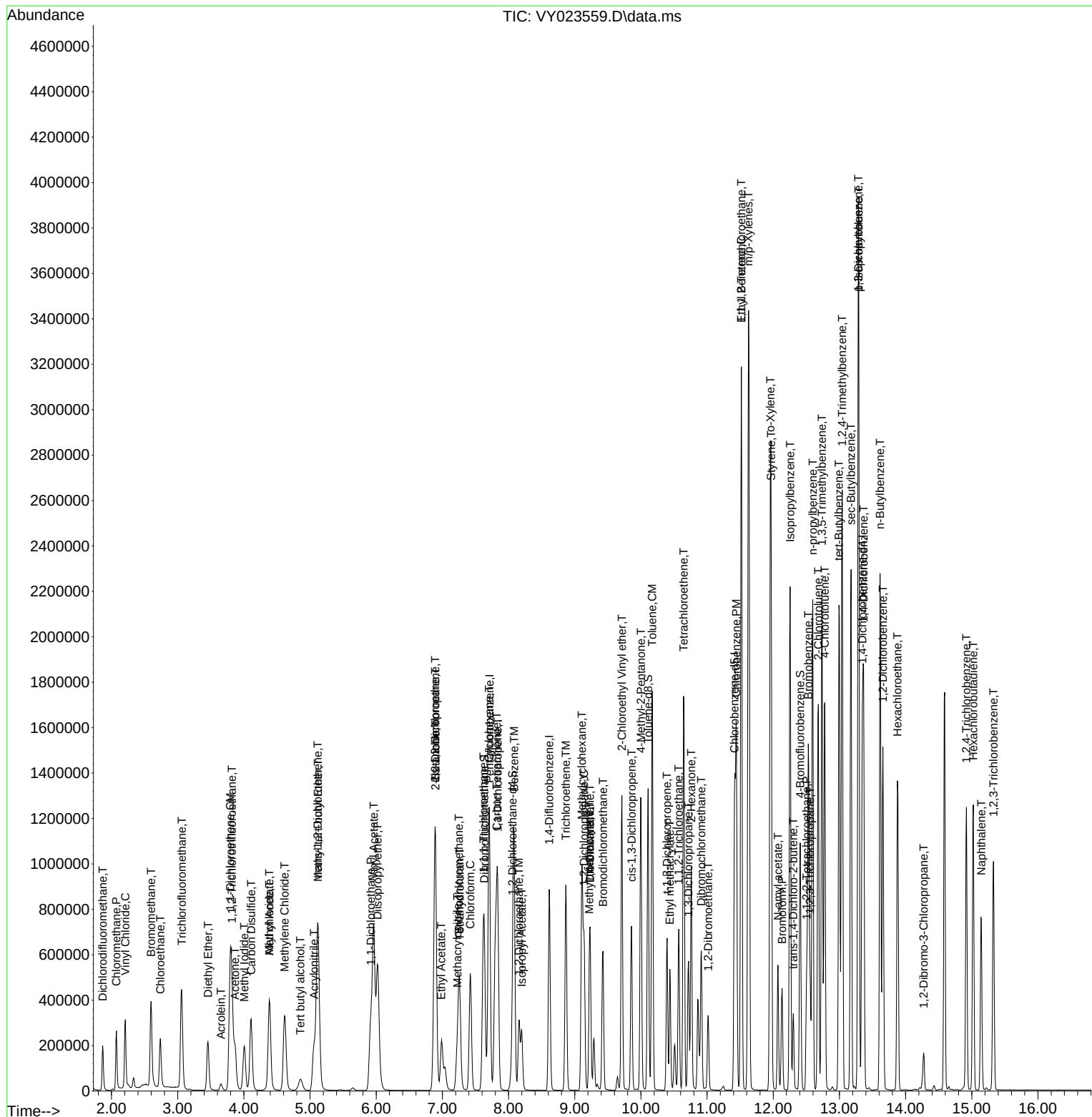
Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
 Data File : VY023559.D
 Acq On : 24 Oct 2025 08:56
 Operator : SY/MD
 Sample : VSTDCCC050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VSTDCCC050

Manual Integrations APPROVED

Reviewed By :Amit Patel 10/27/2025
 Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:45:30 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
 Data File : VY023559.D
 Acq On : 24 Oct 2025 08:56
 Operator : SY/MD
 Sample : VSTDCCC050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 24 23:45:30 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 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	95	0.00
2 T	Dichlorodifluoromethane	0.360	0.296	17.8	87	0.00
3 P	Chloromethane	0.490	0.393	19.8	83	0.00
4 C	Vinyl Chloride	0.639	0.540	15.5#	86	0.00
5 T	Bromomethane	0.536	0.487	9.1	98	0.00
6 T	Chloroethane	0.435	0.389	10.6	89	0.00
7 T	Trichlorofluoromethane	0.887	0.844	4.8	95	0.00
8 T	Diethyl Ether	0.232	0.240	-3.4	106	0.00
9 T	1,1,2-Trichlorotrifluoroeth	0.460	0.472	-2.6	102	0.00
10 T	Methyl Iodide	0.512	0.584	-14.1	103	0.00
11 T	Tert butyl alcohol	0.031	0.037	-19.4	139	0.00
12 CM	1,1-Dichloroethene	0.446	0.451	-1.1#	100	0.00
13 T	Acrolein	0.044	0.012	72.7#	27#	0.00
14 T	Allyl chloride	0.544	0.517	5.0	93	0.00
15 T	Acrylonitrile	0.089	0.092	-3.4	106	0.00
16 T	Acetone	0.100	0.101	-1.0	114	0.00
17 T	Carbon Disulfide	1.277	1.159	9.2	90	0.00
18 T	Methyl Acetate	0.261	0.280	-7.3	108	0.00
19 T	Methyl tert-butyl Ether	1.072	1.188	-10.8	110	0.00
20 T	Methylene Chloride	0.538	0.506	5.9	104	0.00
21 T	trans-1,2-Dichloroethene	0.491	0.511	-4.1	103	0.00
22 T	Diisopropyl ether	1.202	1.236	-2.8	101	0.00
23 T	Vinyl Acetate	0.651	0.652	-0.2	99	0.00
24 P	1,1-Dichloroethane	0.796	0.814	-2.3	101	0.00
25 T	2-Butanone	0.122	0.124	-1.6	112	0.00
26 T	2,2-Dichloropropane	0.731	0.781	-6.8	105	0.00
27 T	cis-1,2-Dichloroethene	0.567	0.623	-9.9	109	0.00
28 T	Bromochloromethane	0.297	0.248	16.5	88	0.00
29 T	Tetrahydrofuran	0.069	0.069	0.0	103	0.00
30 C	Chloroform	0.875	0.933	-6.6#	106	0.00
31 T	Cyclohexane	0.696	0.644	7.5	95	0.00
32 T	1,1,1-Trichloroethane	0.795	0.836	-5.2	103	0.00
33 S	1,2-Dichloroethane-d4	0.418	0.374	10.5	90	0.00
34 I	1,4-Difluorobenzene	1.000	1.000	0.0	94	0.00
35 S	Dibromofluoromethane	0.307	0.304	1.0	96	0.00
36 T	1,1-Dichloropropene	0.407	0.426	-4.7	101	0.00
37 T	Ethyl Acetate	0.161	0.162	-0.6	102	0.00
38 T	Carbon Tetrachloride	0.493	0.528	-7.1	104	0.00
39 T	Methylcyclohexane	0.530	0.561	-5.8	100	0.00
40 TM	Benzene	1.288	1.380	-7.1	103	0.00
41 T	Methacrylonitrile	0.087	0.094	-8.0	111	0.00
42 TM	1,2-Dichloroethane	0.332	0.338	-1.8	101	0.00
43 T	Isopropyl Acetate	0.321	0.335	-4.4	105	0.00
44 TM	Trichloroethene	0.377	0.413	-9.5	106	0.00
45 C	1,2-Dichloropropane	0.285	0.304	-6.7#	105	0.00
46 T	Dibromomethane	0.180	0.198	-10.0	108	0.00
47 T	Bromodichloromethane	0.453	0.497	-9.7	107	0.00
48 T	Methyl methacrylate	0.151	0.153	-1.3	98	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
 Data File : VY023559.D
 Acq On : 24 Oct 2025 08:56
 Operator : SY/MD
 Sample : VSTDCCC050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 24 23:45:30 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 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	0.002	0.002	0.0	114	0.00
50 S	Toluene-d8	1.144	1.115	2.5	93	0.00
51 T	4-Methyl-2-Pentanone	0.166	0.181	-9.0	107	0.00
52 CM	Toluene	0.836	0.928	-11.0#	106	0.00
53 T	t-1,3-Dichloropropene	0.394	0.436	-10.7	107	0.00
54 T	cis-1,3-Dichloropropene	0.465	0.520	-11.8	108	0.00
55 T	1,1,2-Trichloroethane	0.242	0.275	-13.6	112	0.00
56 T	Ethyl methacrylate	0.279	0.335	-20.1	113	0.00
57 T	1,3-Dichloropropane	0.383	0.427	-11.5	108	0.00
58 T	2-Chloroethyl Vinyl ether	0.125	0.135	-8.0	99	0.00
59 T	2-Hexanone	0.119	0.131	-10.1	110	0.00
60 T	Dibromochloromethane	0.339	0.389	-14.7	112	0.00
61 T	1,2-Dibromoethane	0.231	0.263	-13.9	111	0.00
62 S	4-Bromofluorobenzene	0.378	0.376	0.5	97	0.00
63 I	Chlorobenzene-d5	1.000	1.000	0.0	95	0.00
64 T	Tetrachloroethene	0.516	0.576	-11.6	105	0.00
65 PM	Chlorobenzene	1.087	1.224	-12.6	110	0.00
66 T	1,1,1,2-Tetrachloroethane	0.388	0.438	-12.9	112	0.00
67 C	Ethyl Benzene	1.760	1.991	-13.1#	106	0.00
68 T	m/p-Xylenes	0.706	0.816	-15.6	108	0.00
69 T	o-Xylene	0.662	0.779	-17.7	110	0.00
70 T	Styrene	1.089	1.285	-18.0	110	0.00
71 P	Bromoform	0.240	0.278	-15.8	115	0.00
72 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	97	0.00
73 T	Isopropylbenzene	3.295	3.754	-13.9	110	0.00
74 T	N-amyl acetate	0.592	0.633	-6.9	106	0.00
75 P	1,1,2,2-Tetrachloroethane	0.539	0.600	-11.3	117	0.00
76 T	1,2,3-Trichloropropane	0.441	0.442	-0.2	99	0.00
77 T	Bromobenzene	0.876	0.980	-11.9	112	0.00
78 T	n-propylbenzene	3.813	4.325	-13.4	108	0.00
79 T	2-Chlorotoluene	2.233	2.492	-11.6	108	0.00
80 T	1,3,5-Trimethylbenzene	2.663	3.045	-14.3	109	0.00
81 T	trans-1,4-Dichloro-2-butene	0.180	0.204	-13.3	117	0.00
82 T	4-Chlorotoluene	2.300	2.543	-10.6	108	0.00
83 T	tert-Butylbenzene	2.458	2.878	-17.1	111	0.00
84 T	1,2,4-Trimethylbenzene	2.657	3.047	-14.7	109	0.00
85 T	sec-Butylbenzene	3.527	4.073	-15.5	110	0.00
86 T	p-Isopropyltoluene	3.003	3.518	-17.1	110	0.00
87 T	1,3-Dichlorobenzene	1.706	1.896	-11.1	111	0.00
88 T	1,4-Dichlorobenzene	1.685	1.876	-11.3	112	0.00
89 T	n-Butylbenzene	2.616	3.042	-16.3	110	0.00
90 T	Hexachloroethane	0.646	0.701	-8.5	109	0.00
91 T	1,2-Dichlorobenzene	1.496	1.689	-12.9	113	0.00
92 T	1,2-Dibromo-3-Chloropropane	0.088	0.093	-5.7	108	0.00
93 T	1,2,4-Trichlorobenzene	0.932	1.065	-14.3	113	0.00
94 T	Hexachlorobutadiene	0.581	0.642	-10.5	108	0.00
95 T	Naphthalene	1.485	1.743	-17.4	115	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
Data File : VY023559.D
Acq On : 24 Oct 2025 08:56
Operator : SY/MD
Sample : VSTDCCC050
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_Y
LabSampleId :
VSTDCCC050

Quant Time: Oct 24 23:45:30 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 05:12:50 2025
Response via : Initial Calibration

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

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
96 T	1,2,3-Trichlorobenzene	0.808	0.912	-12.9	112	0.00

(#) = Out of Range

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

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
 Data File : VY023559.D
 Acq On : 24 Oct 2025 08:56
 Operator : SY/MD
 Sample : VSTDCCC050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 24 23:45:30 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 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	95	0.00
2 T	Dichlorodifluoromethane	50.000	41.129	17.7	87	0.00
3 P	Chloromethane	50.000	40.052	19.9	83	0.00
4 C	Vinyl Chloride	50.000	42.285	15.4#	86	0.00
5 T	Bromomethane	50.000	45.475	9.0	98	0.00
6 T	Chloroethane	50.000	44.661	10.7	89	0.00
7 T	Trichlorofluoromethane	50.000	47.584	4.8	95	0.00
8 T	Diethyl Ether	50.000	51.703	-3.4	106	0.00
9 T	1,1,2-Trichlorotrifluoroeth	50.000	51.306	-2.6	102	0.00
10 T	Methyl Iodide	50.000	57.032	-14.1	103	0.00
11 T	Tert butyl alcohol	250.000	294.878	-18.0	139	0.00
12 CM	1,1-Dichloroethene	50.000	50.504	-1.0#	100	0.00
13 T	Acrolein	250.000	68.867	72.5#	27	0.00
14 T	Allyl chloride	50.000	47.575	4.8	93	0.00
15 T	Acrylonitrile	250.000	258.449	-3.4	106	0.00
16 T	Acetone	250.000	253.570	-1.4	114	0.00
17 T	Carbon Disulfide	50.000	45.399	9.2	90	0.00
18 T	Methyl Acetate	50.000	53.529	-7.1	108	0.00
19 T	Methyl tert-butyl Ether	50.000	55.391	-10.8	110	0.00
20 T	Methylene Chloride	50.000	46.987	6.0	104	0.00
21 T	trans-1,2-Dichloroethene	50.000	51.986	-4.0	103	0.00
22 T	Diisopropyl ether	50.000	51.399	-2.8	101	0.00
23 T	Vinyl Acetate	250.000	250.506	-0.2	99	0.00
24 P	1,1-Dichloroethane	50.000	51.107	-2.2	101	0.00
25 T	2-Butanone	250.000	254.962	-2.0	112	0.00
26 T	2,2-Dichloropropane	50.000	53.419	-6.8	105	0.00
27 T	cis-1,2-Dichloroethene	50.000	54.911	-9.8	109	0.00
28 T	Bromochloromethane	50.000	41.717	16.6	88	0.00
29 T	Tetrahydrofuran	250.000	251.315	-0.5	103	0.00
30 C	Chloroform	50.000	53.320	-6.6#	106	0.00
31 T	Cyclohexane	50.000	46.305	7.4	95	0.00
32 T	1,1,1-Trichloroethane	50.000	52.584	-5.2	103	0.00
33 S	1,2-Dichloroethane-d4	50.000	44.694	10.6	90	0.00
34 I	1,4-Difluorobenzene	50.000	50.000	0.0	94	0.00
35 S	Dibromofluoromethane	50.000	49.453	1.1	96	0.00
36 T	1,1-Dichloropropene	50.000	52.372	-4.7	101	0.00
37 T	Ethyl Acetate	50.000	50.360	-0.7	102	0.00
38 T	Carbon Tetrachloride	50.000	53.563	-7.1	104	0.00
39 T	Methylcyclohexane	50.000	52.994	-6.0	100	0.00
40 TM	Benzene	50.000	53.575	-7.2	103	0.00
41 T	Methacrylonitrile	50.000	54.008	-8.0	111	0.00
42 TM	1,2-Dichloroethane	50.000	50.864	-1.7	101	0.00
43 T	Isopropyl Acetate	50.000	52.107	-4.2	105	0.00
44 TM	Trichloroethene	50.000	54.817	-9.6	106	0.00
45 C	1,2-Dichloropropane	50.000	53.397	-6.8#	105	0.00
46 T	Dibromomethane	50.000	54.988	-10.0	108	0.00
47 T	Bromodichloromethane	50.000	54.883	-9.8	107	0.00
48 T	Methyl methacrylate	50.000	50.755	-1.5	98	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
 Data File : VY023559.D
 Acq On : 24 Oct 2025 08:56
 Operator : SY/MD
 Sample : VSTDCCC050
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 24 23:45:30 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 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	1146.304	-14.6	114	0.00
50 S	Toluene-d8	50.000	48.722	2.6	93	0.00
51 T	4-Methyl-2-Pentanone	250.000	272.142	-8.9	107	0.00
52 CM	Toluene	50.000	55.476	-11.0#	106	0.00
53 T	t-1,3-Dichloropropene	50.000	55.385	-10.8	107	0.00
54 T	cis-1,3-Dichloropropene	50.000	55.911	-11.8	108	0.00
55 T	1,1,2-Trichloroethane	50.000	56.837	-13.7	112	0.00
56 T	Ethyl methacrylate	50.000	60.107	-20.2	113	0.00
57 T	1,3-Dichloropropane	50.000	55.727	-11.5	108	0.00
58 T	2-Chloroethyl Vinyl ether	250.000	270.556	-8.2	99	0.00
59 T	2-Hexanone	250.000	275.001	-10.0	110	0.00
60 T	Dibromochloromethane	50.000	57.348	-14.7	112	0.00
61 T	1,2-Dibromoethane	50.000	57.024	-14.0	111	0.00
62 S	4-Bromofluorobenzene	50.000	49.801	0.4	97	0.00
63 I	Chlorobenzene-d5	50.000	50.000	0.0	95	0.00
64 T	Tetrachloroethene	50.000	55.753	-11.5	105	0.00
65 PM	Chlorobenzene	50.000	56.267	-12.5	110	0.00
66 T	1,1,1,2-Tetrachloroethane	50.000	56.479	-13.0	112	0.00
67 C	Ethyl Benzene	50.000	56.546	-13.1#	106	0.00
68 T	m/p-Xylenes	100.000	115.537	-15.5	108	0.00
69 T	o-Xylene	50.000	58.810	-17.6	110	0.00
70 T	Styrene	50.000	58.986	-18.0	110	0.00
71 P	Bromoform	50.000	57.877	-15.8	115	0.00
72 I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	97	0.00
73 T	Isopropylbenzene	50.000	56.959	-13.9	110	0.00
74 T	N-amyl acetate	50.000	53.438	-6.9	106	0.00
75 P	1,1,2,2-Tetrachloroethane	50.000	55.639	-11.3	117	0.00
76 T	1,2,3-Trichloropropane	50.000	50.142	-0.3	99	0.00
77 T	Bromobenzene	50.000	55.922	-11.8	112	0.00
78 T	n-propylbenzene	50.000	56.707	-13.4	108	0.00
79 T	2-Chlorotoluene	50.000	55.795	-11.6	108	0.00
80 T	1,3,5-Trimethylbenzene	50.000	57.172	-14.3	109	0.00
81 T	trans-1,4-Dichloro-2-butene	50.000	56.799	-13.6	117	0.00
82 T	4-Chlorotoluene	50.000	55.281	-10.6	108	0.00
83 T	tert-Butylbenzene	50.000	58.535	-17.1	111	0.00
84 T	1,2,4-Trimethylbenzene	50.000	57.333	-14.7	109	0.00
85 T	sec-Butylbenzene	50.000	57.753	-15.5	110	0.00
86 T	p-Isopropyltoluene	50.000	58.577	-17.2	110	0.00
87 T	1,3-Dichlorobenzene	50.000	55.564	-11.1	111	0.00
88 T	1,4-Dichlorobenzene	50.000	55.673	-11.3	112	0.00
89 T	n-Butylbenzene	50.000	58.138	-16.3	110	0.00
90 T	Hexachloroethane	50.000	54.294	-8.6	109	0.00
91 T	1,2-Dichlorobenzene	50.000	56.461	-12.9	113	0.00
92 T	1,2-Dibromo-3-Chloropropane	50.000	52.353	-4.7	108	0.00
93 T	1,2,4-Trichlorobenzene	50.000	57.127	-14.3	113	0.00
94 T	Hexachlorobutadiene	50.000	55.207	-10.4	108	0.00
95 T	Naphthalene	50.000	58.694	-17.4	115	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
Data File : VY023559.D
Acq On : 24 Oct 2025 08:56
Operator : SY/MD
Sample : VSTDCCC050
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_Y
LabSampleId :
VSTDCCC050

Quant Time: Oct 24 23:45:30 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 05:12:50 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	56.460	-12.9	112	0.00

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



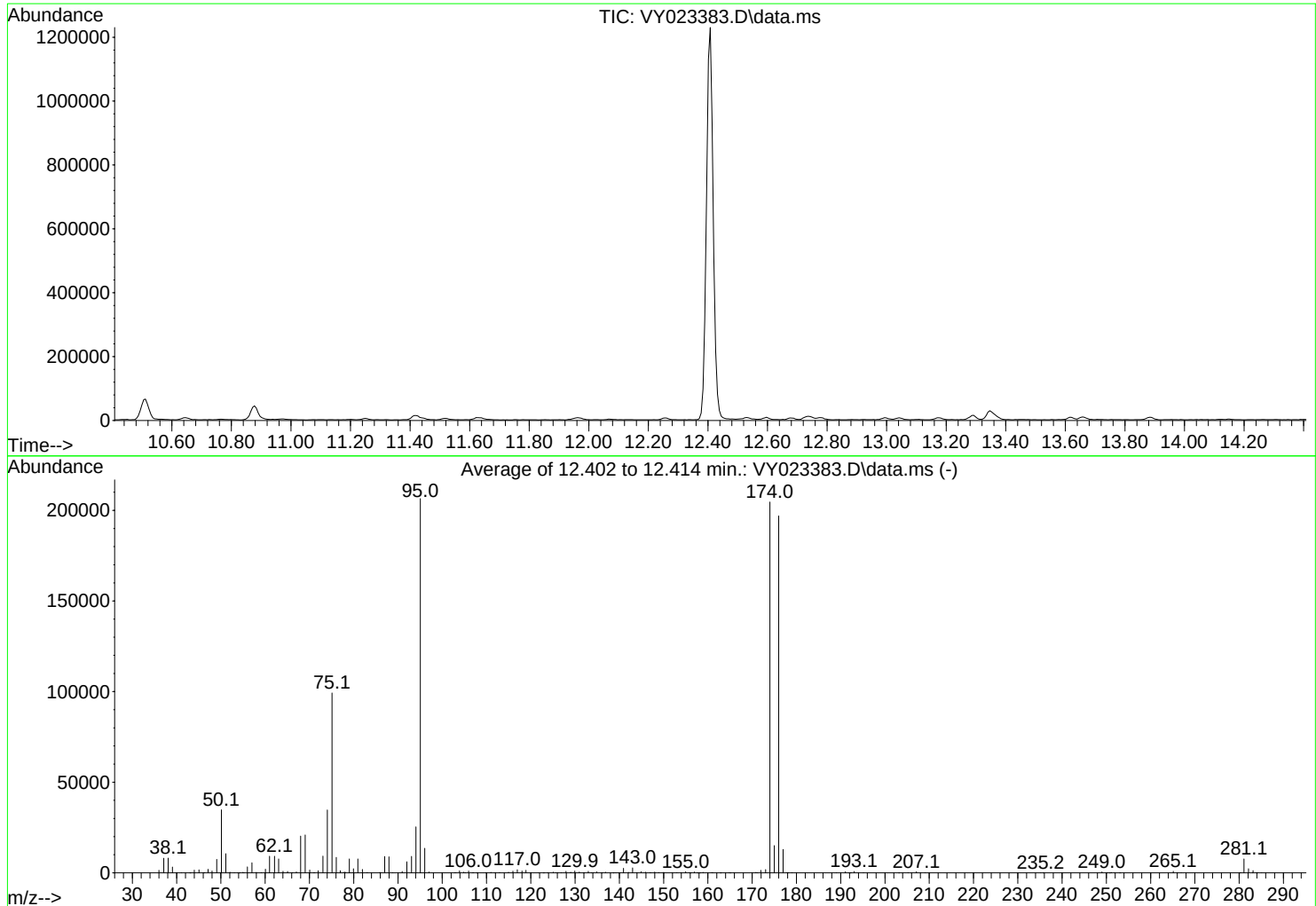
QC SAMPLE DATA

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY100725\
Data File : VY023383.D
Acq On : 07 Oct 2025 08:43
Operator : SY/MD
Sample : BFB
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
BFB

Integration File: RTEINT.P

Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Title : SW846 8260
Last Update : Wed Oct 08 05:12:50 2025



AutoFind: Scans 1752, 1753, 1754; Background Corrected with Scan 1743

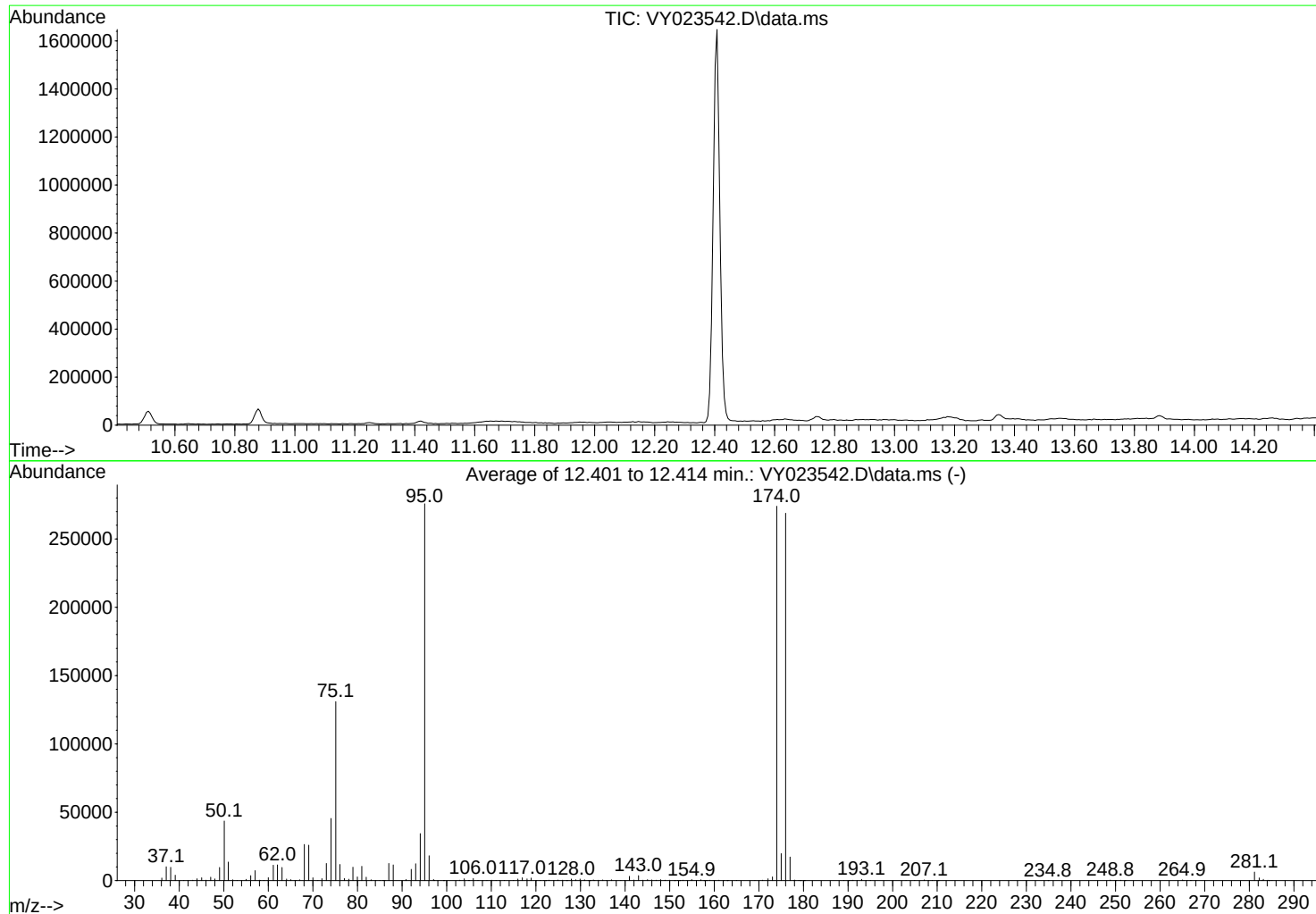
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.9	34816	PASS
75	95	30	60	48.1	99264	PASS
95	95	100	100	100.0	206507	PASS
96	95	5	9	6.6	13540	PASS
173	174	0.00	2	0.9	1817	PASS
174	95	50	100	99.1	204629	PASS
175	174	5	9	7.4	15059	PASS
176	174	95	101	96.2	196949	PASS
177	176	5	9	6.6	12912	PASS

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102225\
Data File : VY023542.D
Acq On : 22 Oct 2025 09:00
Operator : SY/MD
Sample : BFB
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
BFB

Integration File: RTEINT.P

Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Title : SW846 8260
Last Update : Wed Oct 08 05:12:50 2025



AutoFind: Scans 1752, 1753, 1754; Background Corrected with Scan 1743

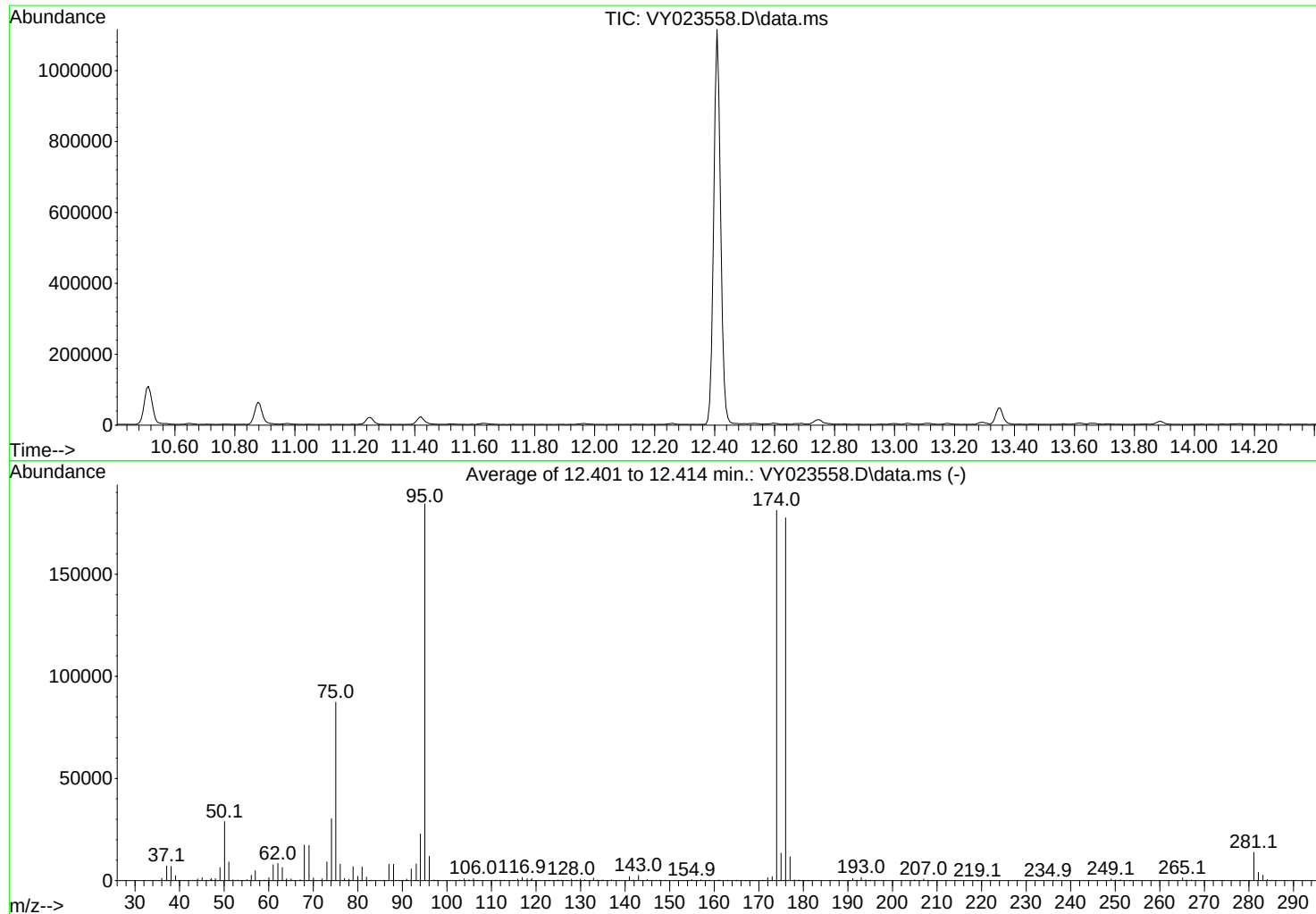
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.8	43632	PASS
75	95	30	60	47.5	130976	PASS
95	95	100	100	100.0	275756	PASS
96	95	5	9	6.6	18234	PASS
173	174	0.00	2	1.0	2756	PASS
174	95	50	100	99.3	273941	PASS
175	174	5	9	7.2	19793	PASS
176	174	95	101	98.2	268885	PASS
177	176	5	9	6.4	17309	PASS

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
Data File : VY023558.D
Acq On : 24 Oct 2025 07:47
Operator : SY/MD
Sample : BFB
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
BFB

Integration File: RTEINT.P

Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Title : SW846 8260
Last Update : Wed Oct 08 05:12:50 2025



AutoFind: Scans 1752, 1753, 1754; Background Corrected with Scan 1743

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.7	28941	PASS
75	95	30	60	47.4	87403	PASS
95	95	100	100	100.0	184491	PASS
96	95	5	9	6.5	11916	PASS
173	174	0.00	2	1.1	1956	PASS
174	95	50	100	98.2	181248	PASS
175	174	5	9	7.4	13455	PASS
176	174	95	101	98.0	177600	PASS
177	176	5	9	6.6	11721	PASS

Report of Analysis

Client: AECOM
 Project: AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206
 Client Sample ID: VY1022SBL01
 Lab Sample ID: VY1022SBL01
 Analytical Method: 8260D
 Sample Wt/Vol: 5 g

Level: LOW
 Final Vol: 5000 uL

Date Collected:
 Date Received:
 SDG No.: Q3419
 Matrix: SOIL
 % Solid: 100
 Test: VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
75-71-8	Dichlorodifluoromethane	1.10	U	1	1.10	5.00	ug/Kg	10/22/25 10:00	VY102225
74-87-3	Chloromethane	1.10	U	1	1.10	5.00	ug/Kg	10/22/25 10:00	VY102225
75-01-4	Vinyl Chloride	0.79	U	1	0.79	5.00	ug/Kg	10/22/25 10:00	VY102225
74-83-9	Bromomethane	1.10	U	1	1.10	5.00	ug/Kg	10/22/25 10:00	VY102225
75-00-3	Chloroethane	1.30	U	1	1.30	5.00	ug/Kg	10/22/25 10:00	VY102225
75-69-4	Trichlorofluoromethane	1.20	U	1	1.20	5.00	ug/Kg	10/22/25 10:00	VY102225
76-13-1	1,1,2-Trichlorotrifluoroethane	1.10	U	1	1.10	5.00	ug/Kg	10/22/25 10:00	VY102225
75-35-4	1,1-Dichloroethene	1.00	U	1	1.00	5.00	ug/Kg	10/22/25 10:00	VY102225
67-64-1	Acetone	4.70	U	1	4.70	25.0	ug/Kg	10/22/25 10:00	VY102225
75-15-0	Carbon Disulfide	1.10	U	1	1.10	5.00	ug/Kg	10/22/25 10:00	VY102225
1634-04-4	Methyl tert-butyl Ether	0.73	U	1	0.73	5.00	ug/Kg	10/22/25 10:00	VY102225
79-20-9	Methyl Acetate	1.50	U	1	1.50	5.00	ug/Kg	10/22/25 10:00	VY102225
75-09-2	Methylene Chloride	3.50	U	1	3.50	10.0	ug/Kg	10/22/25 10:00	VY102225
156-60-5	trans-1,2-Dichloroethene	0.86	U	1	0.86	5.00	ug/Kg	10/22/25 10:00	VY102225
75-34-3	1,1-Dichloroethane	0.80	U	1	0.80	5.00	ug/Kg	10/22/25 10:00	VY102225
110-82-7	Cyclohexane	0.79	U	1	0.79	5.00	ug/Kg	10/22/25 10:00	VY102225
78-93-3	2-Butanone	6.50	U	1	6.50	25.0	ug/Kg	10/22/25 10:00	VY102225
56-23-5	Carbon Tetrachloride	0.97	U	1	0.97	5.00	ug/Kg	10/22/25 10:00	VY102225
156-59-2	cis-1,2-Dichloroethene	0.75	U	1	0.75	5.00	ug/Kg	10/22/25 10:00	VY102225
74-97-5	Bromochloromethane	1.20	U	1	1.20	5.00	ug/Kg	10/22/25 10:00	VY102225
67-66-3	Chloroform	0.84	U	1	0.84	5.00	ug/Kg	10/22/25 10:00	VY102225
71-55-6	1,1,1-Trichloroethane	0.93	U	1	0.93	5.00	ug/Kg	10/22/25 10:00	VY102225
108-87-2	Methylcyclohexane	0.91	U	1	0.91	5.00	ug/Kg	10/22/25 10:00	VY102225
71-43-2	Benzene	0.79	U	1	0.79	5.00	ug/Kg	10/22/25 10:00	VY102225
107-06-2	1,2-Dichloroethane	0.79	U	1	0.79	5.00	ug/Kg	10/22/25 10:00	VY102225
79-01-6	Trichloroethene	0.81	U	1	0.81	5.00	ug/Kg	10/22/25 10:00	VY102225
78-87-5	1,2-Dichloropropane	0.91	U	1	0.91	5.00	ug/Kg	10/22/25 10:00	VY102225
75-27-4	Bromodichloromethane	0.78	U	1	0.78	5.00	ug/Kg	10/22/25 10:00	VY102225
108-10-1	4-Methyl-2-Pentanone	3.60	U	1	3.60	25.0	ug/Kg	10/22/25 10:00	VY102225
108-88-3	Toluene	0.78	U	1	0.78	5.00	ug/Kg	10/22/25 10:00	VY102225
10061-02-6	t-1,3-Dichloropropene	0.65	U	1	0.65	5.00	ug/Kg	10/22/25 10:00	VY102225
10061-01-5	cis-1,3-Dichloropropene	0.62	U	1	0.62	5.00	ug/Kg	10/22/25 10:00	VY102225
79-00-5	1,1,2-Trichloroethane	0.92	U	1	0.92	5.00	ug/Kg	10/22/25 10:00	VY102225
591-78-6	2-Hexanone	3.70	U	1	3.70	25.0	ug/Kg	10/22/25 10:00	VY102225
124-48-1	Dibromochloromethane	0.87	U	1	0.87	5.00	ug/Kg	10/22/25 10:00	VY102225
106-93-4	1,2-Dibromoethane	0.88	U	1	0.88	5.00	ug/Kg	10/22/25 10:00	VY102225
127-18-4	Tetrachloroethene	1.10	U	1	1.10	5.00	ug/Kg	10/22/25 10:00	VY102225
108-90-7	Chlorobenzene	0.91	U	1	0.91	5.00	ug/Kg	10/22/25 10:00	VY102225
100-41-4	Ethyl Benzene	0.67	U	1	0.67	5.00	ug/Kg	10/22/25 10:00	VY102225
179601-23-1	m/p-Xylenes	1.20	U	1	1.20	10.0	ug/Kg	10/22/25 10:00	VY102225
95-47-6	o-Xylene	0.82	U	1	0.82	5.00	ug/Kg	10/22/25 10:00	VY102225
100-42-5	Styrene	0.71	U	1	0.71	5.00	ug/Kg	10/22/25 10:00	VY102225
75-25-2	Bromoform	0.86	U	1	0.86	5.00	ug/Kg	10/22/25 10:00	VY102225



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

Report of Analysis

Client:	AECOM	Date Collected:	
Project:	AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206	Date Received:	
Client Sample ID:	VY1022SBL01	SDG No.:	Q3419
Lab Sample ID:	VY1022SBL01	Matrix:	SOIL
Analytical Method:	8260D	% Solid:	100
Sample Wt/Vol:	5 g	Test:	VOC-TCLVOA-10
	Level: LOW		
	Final Vol: 5000 uL		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
98-82-8	Isopropylbenzene	0.78	U	1	0.78	5.00	ug/Kg	10/22/25 10:00	VY102225
79-34-5	1,1,2,2-Tetrachloroethane	1.20	U	1	1.20	5.00	ug/Kg	10/22/25 10:00	VY102225
541-73-1	1,3-Dichlorobenzene	1.70	U	1	1.70	5.00	ug/Kg	10/22/25 10:00	VY102225
106-46-7	1,4-Dichlorobenzene	1.60	U	1	1.60	5.00	ug/Kg	10/22/25 10:00	VY102225
95-50-1	1,2-Dichlorobenzene	1.50	U	1	1.50	5.00	ug/Kg	10/22/25 10:00	VY102225
96-12-8	1,2-Dibromo-3-Chloropropane	1.80	U	1	1.80	5.00	ug/Kg	10/22/25 10:00	VY102225
120-82-1	1,2,4-Trichlorobenzene	3.00	U	1	3.00	5.00	ug/Kg	10/22/25 10:00	VY102225
87-61-6	1,2,3-Trichlorobenzene	3.20	U	1	3.20	5.00	ug/Kg	10/22/25 10:00	VY102225
SURROGATES									
17060-07-0	1,2-Dichloroethane-d4	48.3			63 - 155	97%	SPK: 50		
1868-53-7	Dibromofluoromethane	49.8			70 - 134	100%	SPK: 50		
2037-26-5	Toluene-d8	48.6			74 - 123	97%	SPK: 50		
460-00-4	4-Bromofluorobenzene	41.1			17 - 146	82%	SPK: 50		
INTERNAL STANDARDS									
		Area Count							
363-72-4	Pentafluorobenzene	890000							
540-36-3	1,4-Difluorobenzene	1430000							
3114-55-4	Chlorobenzene-d5	1180000							
3855-82-1	1,4-Dichlorobenzene-d4	485000							

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_Y\Data\VY102225\
 Data File : VY023544.D
 Acq On : 22 Oct 2025 10:00
 Operator : SY/MD
 Sample : VY1022SBL01
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 4 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VY1022SBL01

Quant Time: Oct 24 02:26:09 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	7.713	168	890059	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	8.616	114	1434768	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.420	117	1180185	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.346	152	484557	50.000	ug/l	0.00

System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.061	65	359226	48.265	ug/l	0.00
Spiked Amount	50.000	Range	50 - 163	Recovery	=	96.520%
35) Dibromofluoromethane	7.640	113	439107	49.808	ug/l	0.00
Spiked Amount	50.000	Range	54 - 147	Recovery	=	99.620%
50) Toluene-d8	10.109	98	1595601	48.600	ug/l	0.00
Spiked Amount	50.000	Range	58 - 134	Recovery	=	97.200%
62) 4-Bromofluorobenzene	12.408	95	445110	41.064	ug/l	0.00
Spiked Amount	50.000	Range	30 - 143	Recovery	=	82.120%

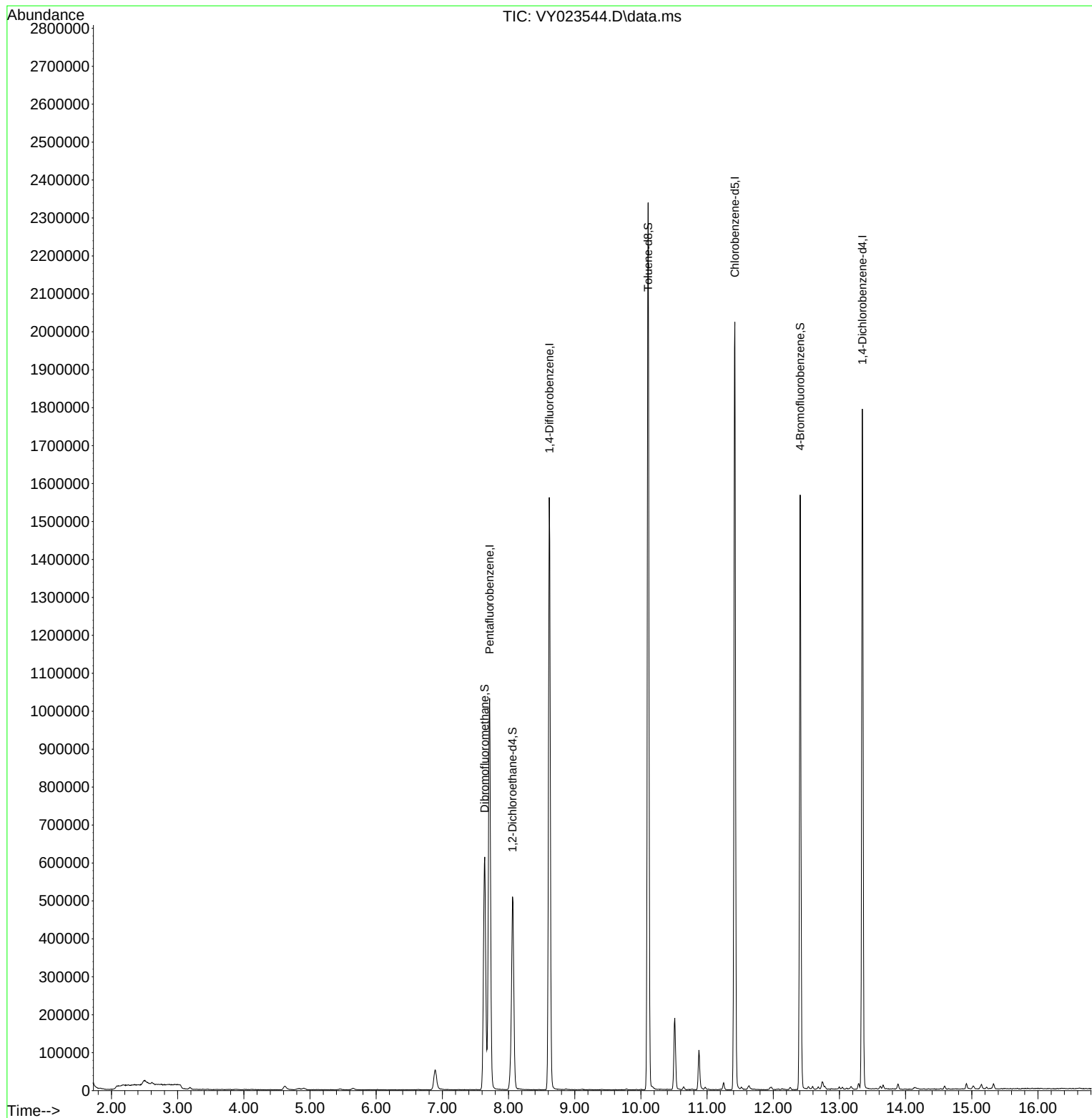
Target Compounds	Qvalue

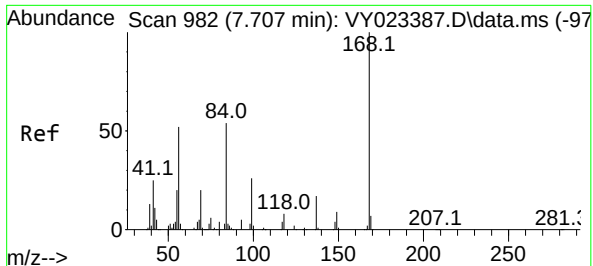
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102225\
Data File : VY023544.D
Acq On : 22 Oct 2025 10:00
Operator : SY/MD
Sample : VY1022SBL01
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
VY1022SBL01

Quant Time: Oct 24 02:26:09 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 05:12:50 2025
Response via : Initial Calibration

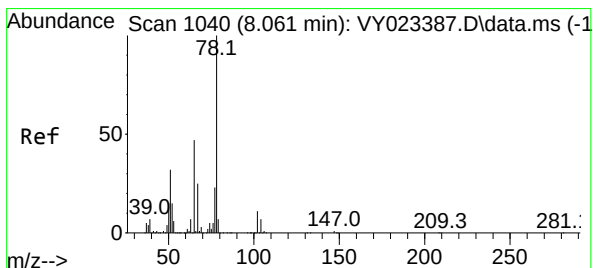
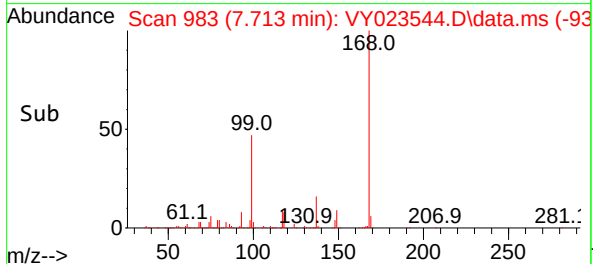
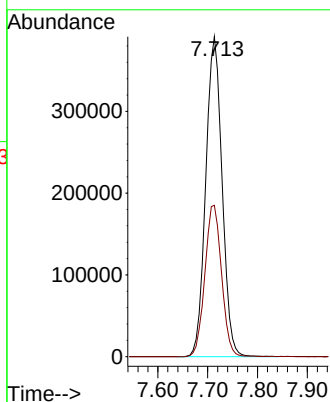
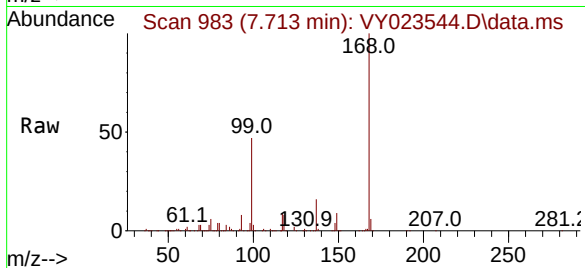




#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 7.713 min Scan# 91
Delta R.T. 0.006 min
Lab File: VY023544.D
Acq: 22 Oct 2025 10:00

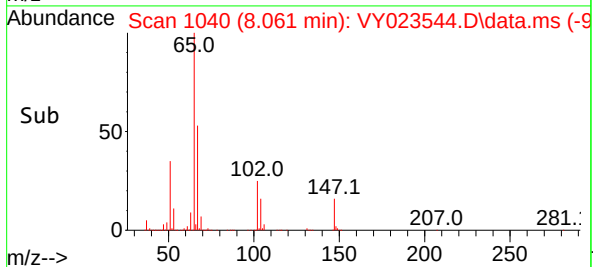
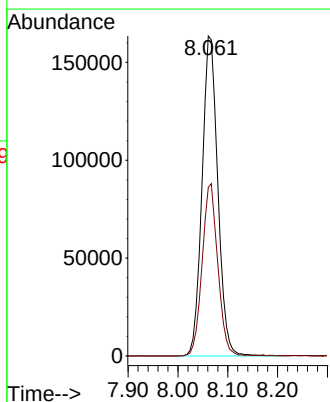
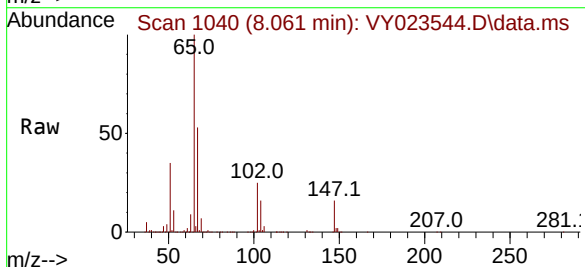
Instrument :
MSVOA_Y
ClientSampleId :
VY1022SBL01

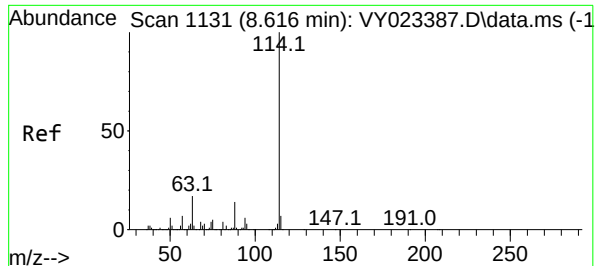
Tgt Ion:168 Resp: 890059
Ion Ratio Lower Upper
168 100
99 47.3 39.7 59.5



#33
1,2-Dichloroethane-d4
Concen: 48.265 ug/l
RT: 8.061 min Scan# 1040
Delta R.T. -0.000 min
Lab File: VY023544.D
Acq: 22 Oct 2025 10:00

Tgt Ion: 65 Resp: 359226
Ion Ratio Lower Upper
65 100
67 53.5 0.0 105.8





#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 8.616 min Scan# 1131

Delta R.T. 0.000 min

Lab File: VY023544.D

Acq: 22 Oct 2025 10:00

Instrument :

MSVOA_Y

ClientSampleId :

VY1022SBL01

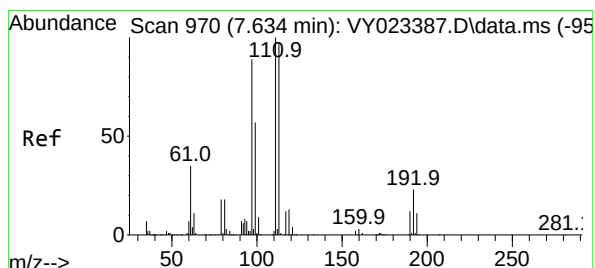
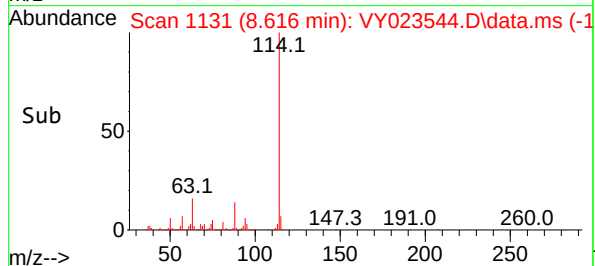
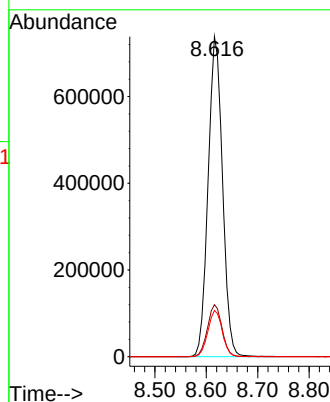
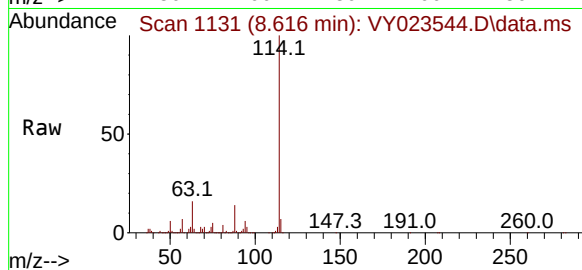
Tgt Ion:114 Resp: 1434768

Ion Ratio Lower Upper

114 100

63 16.2 0.0 34.2

88 14.5 0.0 28.4



#35

Dibromofluoromethane

Concen: 49.808 ug/l

RT: 7.640 min Scan# 971

Delta R.T. 0.006 min

Lab File: VY023544.D

Acq: 22 Oct 2025 10:00

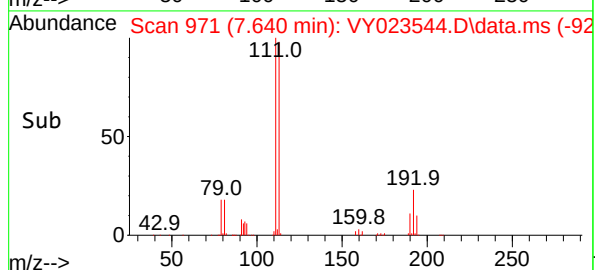
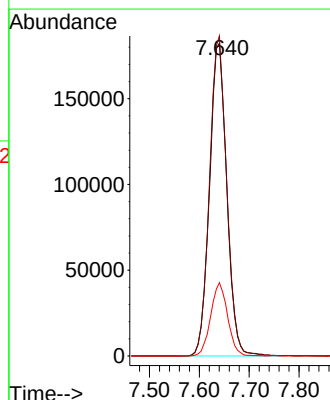
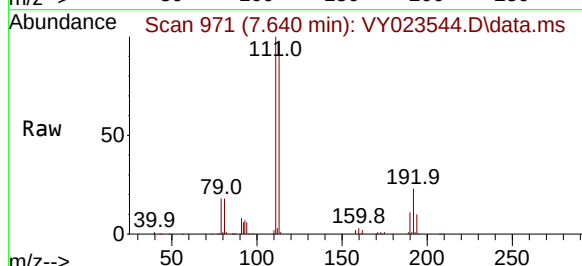
Tgt Ion:113 Resp: 439107

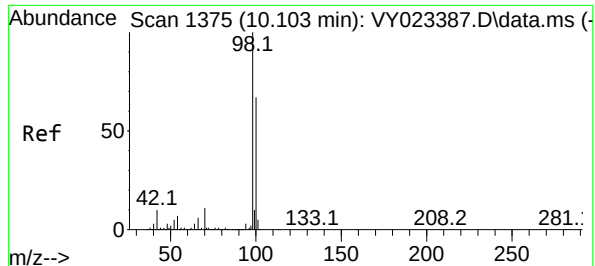
Ion Ratio Lower Upper

113 100

111 101.6 81.8 122.6

192 22.9 18.0 27.0





#50

Toluene-d8

Concen: 48.600 ug/l

RT: 10.109 min Scan# 11

Delta R.T. 0.006 min

Lab File: VY023544.D

Acq: 22 Oct 2025 10:00

Instrument :

MSVOA_Y

ClientSampleId :

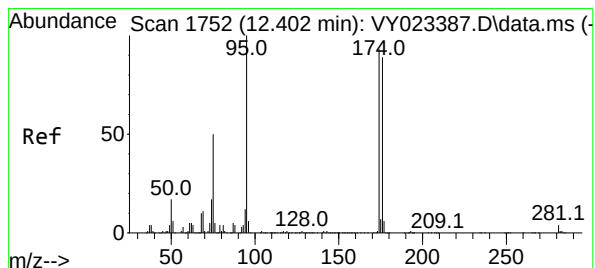
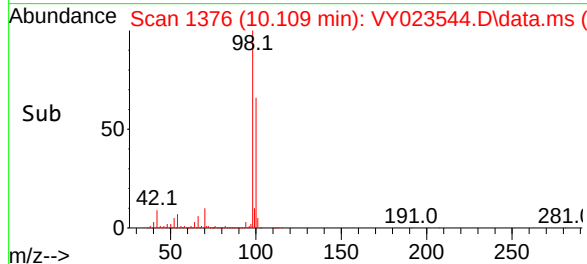
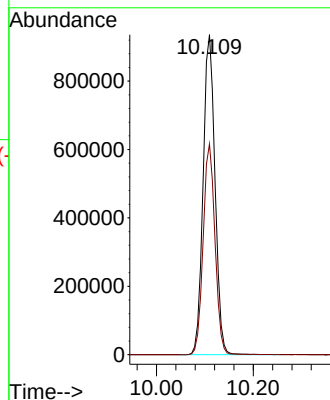
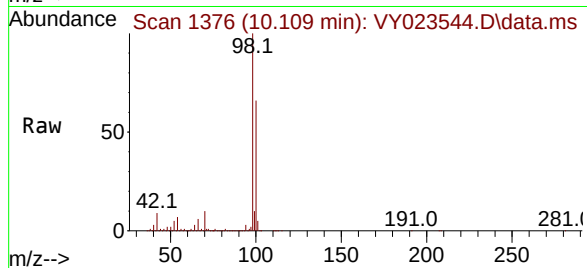
VY1022SBL01

Tgt Ion: 98 Resp: 1595601

Ion Ratio Lower Upper

98 100

100 65.5 53.0 79.4



#62

4-Bromofluorobenzene

Concen: 41.064 ug/l

RT: 12.408 min Scan# 1753

Delta R.T. 0.006 min

Lab File: VY023544.D

Acq: 22 Oct 2025 10:00

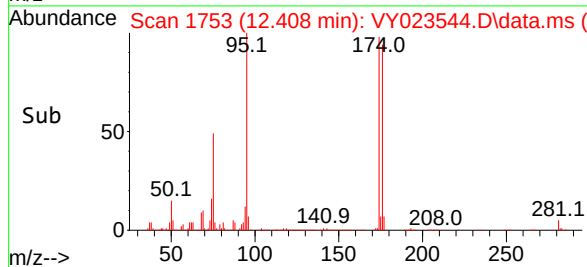
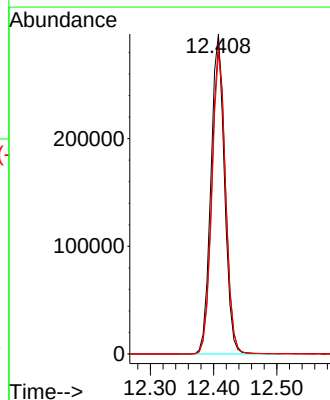
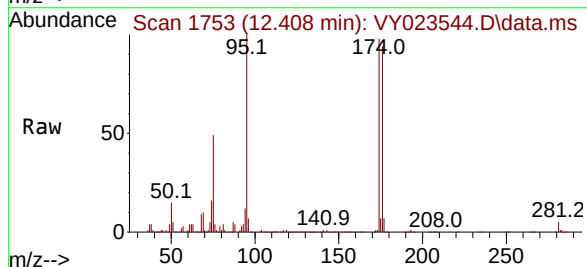
Tgt Ion: 95 Resp: 445110

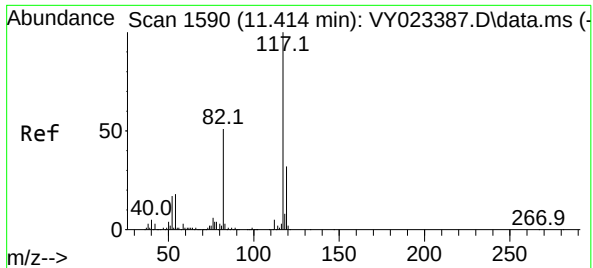
Ion Ratio Lower Upper

95 100

174 97.9 0.0 192.8

176 94.7 0.0 187.6





#63

Chlorobenzene-d5

Concen: 50.000 ug/l

RT: 11.420 min Scan# 11

Delta R.T. 0.006 min

Lab File: VY023544.D

Acq: 22 Oct 2025 10:00

Instrument :

MSVOA_Y

ClientSampleId :

VY1022SBL01

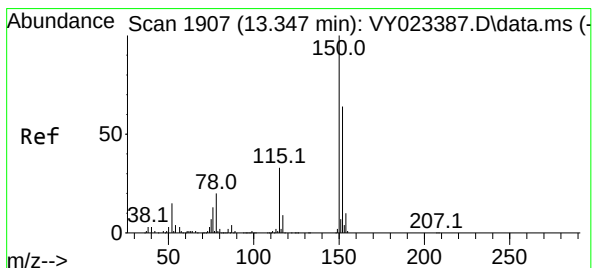
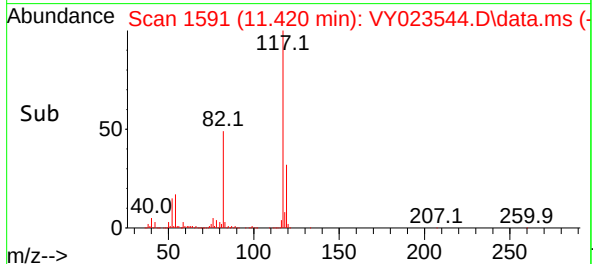
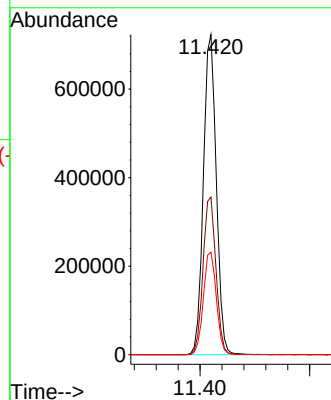
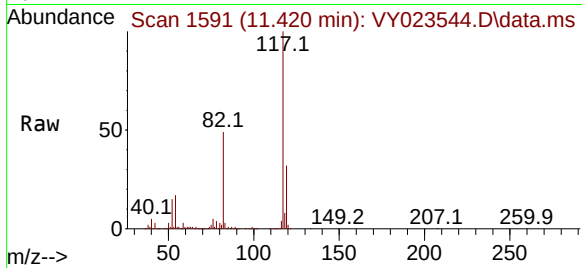
Tgt Ion:117 Resp: 1180185

Ion Ratio Lower Upper

117 100

82 49.3 41.0 61.4

119 32.0 25.6 38.4



#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 13.346 min Scan# 1907

Delta R.T. -0.000 min

Lab File: VY023544.D

Acq: 22 Oct 2025 10:00

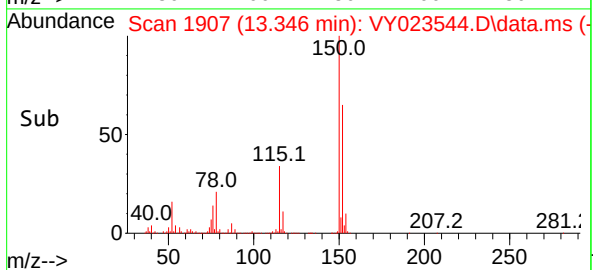
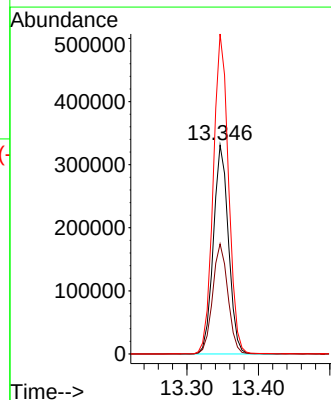
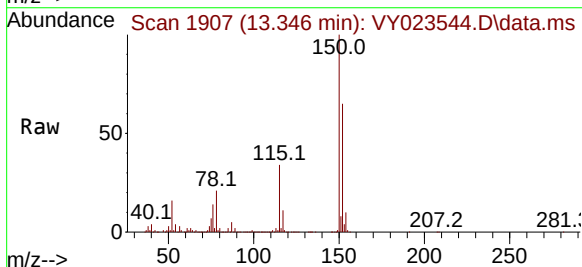
Tgt Ion:152 Resp: 484557

Ion Ratio Lower Upper

152 100

115 53.2 27.1 81.2

150 154.9 0.0 347.4



Report of Analysis

Client: AECOM
 Project: AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206
 Client Sample ID: VY1024SBL01
 Lab Sample ID: VY1024SBL01
 Analytical Method: 8260D
 Sample Wt/Vol: 5 g

Level: LOW
 Final Vol: 5000 uL

Date Collected:
 Date Received:
 SDG No.: Q3419
 Matrix: SOIL
 % Solid: 100
 Test: VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
75-71-8	Dichlorodifluoromethane	1.10	U	1	1.10	5.00	ug/Kg	10/24/25 09:24	VY102425
74-87-3	Chloromethane	1.10	U	1	1.10	5.00	ug/Kg	10/24/25 09:24	VY102425
75-01-4	Vinyl Chloride	0.79	U	1	0.79	5.00	ug/Kg	10/24/25 09:24	VY102425
74-83-9	Bromomethane	1.10	U	1	1.10	5.00	ug/Kg	10/24/25 09:24	VY102425
75-00-3	Chloroethane	1.30	U	1	1.30	5.00	ug/Kg	10/24/25 09:24	VY102425
75-69-4	Trichlorofluoromethane	1.20	U	1	1.20	5.00	ug/Kg	10/24/25 09:24	VY102425
76-13-1	1,1,2-Trichlorotrifluoroethane	1.10	U	1	1.10	5.00	ug/Kg	10/24/25 09:24	VY102425
75-35-4	1,1-Dichloroethene	1.00	U	1	1.00	5.00	ug/Kg	10/24/25 09:24	VY102425
67-64-1	Acetone	4.70	U	1	4.70	25.0	ug/Kg	10/24/25 09:24	VY102425
75-15-0	Carbon Disulfide	1.10	U	1	1.10	5.00	ug/Kg	10/24/25 09:24	VY102425
1634-04-4	Methyl tert-butyl Ether	0.73	U	1	0.73	5.00	ug/Kg	10/24/25 09:24	VY102425
79-20-9	Methyl Acetate	1.50	U	1	1.50	5.00	ug/Kg	10/24/25 09:24	VY102425
75-09-2	Methylene Chloride	3.50	U	1	3.50	10.0	ug/Kg	10/24/25 09:24	VY102425
156-60-5	trans-1,2-Dichloroethene	0.86	U	1	0.86	5.00	ug/Kg	10/24/25 09:24	VY102425
75-34-3	1,1-Dichloroethane	0.80	U	1	0.80	5.00	ug/Kg	10/24/25 09:24	VY102425
110-82-7	Cyclohexane	0.79	U	1	0.79	5.00	ug/Kg	10/24/25 09:24	VY102425
78-93-3	2-Butanone	6.50	U	1	6.50	25.0	ug/Kg	10/24/25 09:24	VY102425
56-23-5	Carbon Tetrachloride	0.97	U	1	0.97	5.00	ug/Kg	10/24/25 09:24	VY102425
156-59-2	cis-1,2-Dichloroethene	0.75	U	1	0.75	5.00	ug/Kg	10/24/25 09:24	VY102425
74-97-5	Bromochloromethane	1.20	U	1	1.20	5.00	ug/Kg	10/24/25 09:24	VY102425
67-66-3	Chloroform	0.84	U	1	0.84	5.00	ug/Kg	10/24/25 09:24	VY102425
71-55-6	1,1,1-Trichloroethane	0.93	U	1	0.93	5.00	ug/Kg	10/24/25 09:24	VY102425
108-87-2	Methylcyclohexane	0.91	U	1	0.91	5.00	ug/Kg	10/24/25 09:24	VY102425
71-43-2	Benzene	0.79	U	1	0.79	5.00	ug/Kg	10/24/25 09:24	VY102425
107-06-2	1,2-Dichloroethane	0.79	U	1	0.79	5.00	ug/Kg	10/24/25 09:24	VY102425
79-01-6	Trichloroethene	0.81	U	1	0.81	5.00	ug/Kg	10/24/25 09:24	VY102425
78-87-5	1,2-Dichloropropane	0.91	U	1	0.91	5.00	ug/Kg	10/24/25 09:24	VY102425
75-27-4	Bromodichloromethane	0.78	U	1	0.78	5.00	ug/Kg	10/24/25 09:24	VY102425
108-10-1	4-Methyl-2-Pentanone	3.60	U	1	3.60	25.0	ug/Kg	10/24/25 09:24	VY102425
108-88-3	Toluene	0.78	U	1	0.78	5.00	ug/Kg	10/24/25 09:24	VY102425
10061-02-6	t-1,3-Dichloropropene	0.65	U	1	0.65	5.00	ug/Kg	10/24/25 09:24	VY102425
10061-01-5	cis-1,3-Dichloropropene	0.62	U	1	0.62	5.00	ug/Kg	10/24/25 09:24	VY102425
79-00-5	1,1,2-Trichloroethane	0.92	U	1	0.92	5.00	ug/Kg	10/24/25 09:24	VY102425
591-78-6	2-Hexanone	3.70	U	1	3.70	25.0	ug/Kg	10/24/25 09:24	VY102425
124-48-1	Dibromochloromethane	0.87	U	1	0.87	5.00	ug/Kg	10/24/25 09:24	VY102425
106-93-4	1,2-Dibromoethane	0.88	U	1	0.88	5.00	ug/Kg	10/24/25 09:24	VY102425
127-18-4	Tetrachloroethene	1.10	U	1	1.10	5.00	ug/Kg	10/24/25 09:24	VY102425
108-90-7	Chlorobenzene	0.91	U	1	0.91	5.00	ug/Kg	10/24/25 09:24	VY102425
100-41-4	Ethyl Benzene	0.67	U	1	0.67	5.00	ug/Kg	10/24/25 09:24	VY102425
179601-23-1	m/p-Xylenes	1.20	U	1	1.20	10.0	ug/Kg	10/24/25 09:24	VY102425
95-47-6	o-Xylene	0.82	U	1	0.82	5.00	ug/Kg	10/24/25 09:24	VY102425
100-42-5	Styrene	0.71	U	1	0.71	5.00	ug/Kg	10/24/25 09:24	VY102425
75-25-2	Bromoform	0.86	U	1	0.86	5.00	ug/Kg	10/24/25 09:24	VY102425



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

Report of Analysis

Client:	AECOM	Date Collected:	
Project:	AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206	Date Received:	
Client Sample ID:	VY1024SBL01	SDG No.:	Q3419
Lab Sample ID:	VY1024SBL01	Matrix:	SOIL
Analytical Method:	8260D	% Solid:	100
Sample Wt/Vol:	5 g	Test:	VOC-TCLVOA-10
	Level: LOW		
	Final Vol: 5000 uL		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
98-82-8	Isopropylbenzene	0.78	U	1	0.78	5.00	ug/Kg	10/24/25 09:24	VY102425
79-34-5	1,1,2,2-Tetrachloroethane	1.20	U	1	1.20	5.00	ug/Kg	10/24/25 09:24	VY102425
541-73-1	1,3-Dichlorobenzene	1.70	U	1	1.70	5.00	ug/Kg	10/24/25 09:24	VY102425
106-46-7	1,4-Dichlorobenzene	1.60	U	1	1.60	5.00	ug/Kg	10/24/25 09:24	VY102425
95-50-1	1,2-Dichlorobenzene	1.50	U	1	1.50	5.00	ug/Kg	10/24/25 09:24	VY102425
96-12-8	1,2-Dibromo-3-Chloropropane	1.80	U	1	1.80	5.00	ug/Kg	10/24/25 09:24	VY102425
120-82-1	1,2,4-Trichlorobenzene	3.00	U	1	3.00	5.00	ug/Kg	10/24/25 09:24	VY102425
87-61-6	1,2,3-Trichlorobenzene	3.20	U	1	3.20	5.00	ug/Kg	10/24/25 09:24	VY102425
SURROGATES									
17060-07-0	1,2-Dichloroethane-d4	44.4			63 - 155	89%	SPK: 50		
1868-53-7	Dibromofluoromethane	48.7			70 - 134	97%	SPK: 50		
2037-26-5	Toluene-d8	47.7			74 - 123	95%	SPK: 50		
460-00-4	4-Bromofluorobenzene	40.6			17 - 146	81%	SPK: 50		
INTERNAL STANDARDS									
		Area Count							
363-72-4	Pentafluorobenzene	899000							
540-36-3	1,4-Difluorobenzene	1420000							
3114-55-4	Chlorobenzene-d5	1160000							
3855-82-1	1,4-Dichlorobenzene-d4	469000							

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_Y\Data\VY102425\
 Data File : VY023560.D
 Acq On : 24 Oct 2025 09:24
 Operator : SY/MD
 Sample : VY1024SBL01
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VY1024SBL01

Quant Time: Oct 24 23:46:37 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	7.713	168	898566	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	8.616	114	1421897	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.414	117	1164716	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.347	152	469443	50.000	ug/l	0.00

System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.061	65	333317	44.360	ug/l	0.00
Spiked Amount	50.000	Range	50 - 163	Recovery	=	88.720%
35) Dibromofluoromethane	7.634	113	425849	48.742	ug/l	0.00
Spiked Amount	50.000	Range	54 - 147	Recovery	=	97.480%
50) Toluene-d8	10.109	98	1553516	47.746	ug/l	0.00
Spiked Amount	50.000	Range	58 - 134	Recovery	=	95.500%
62) 4-Bromofluorobenzene	12.408	95	436342	40.620	ug/l	0.00
Spiked Amount	50.000	Range	30 - 143	Recovery	=	81.240%

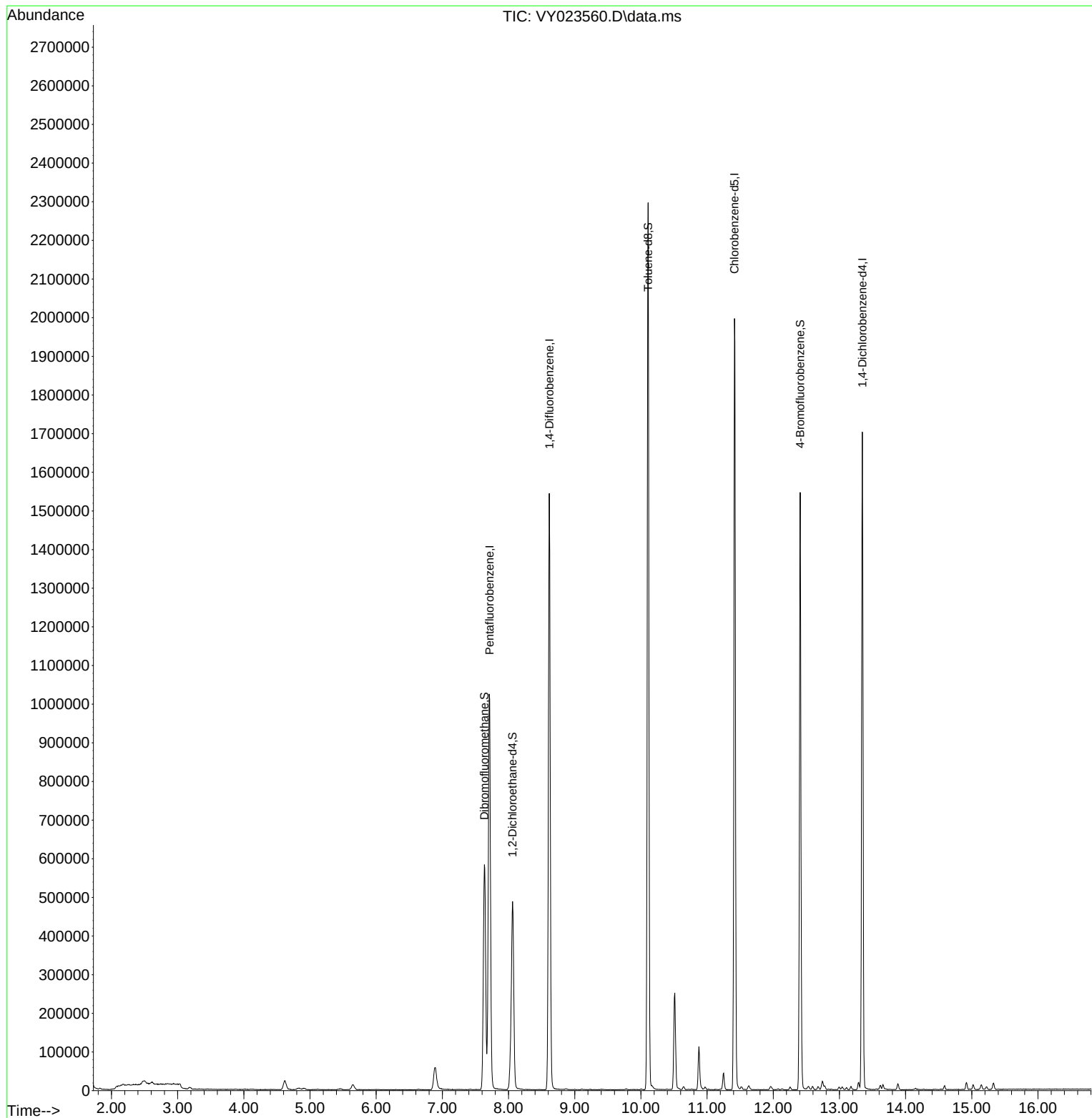
Target Compounds	Qvalue

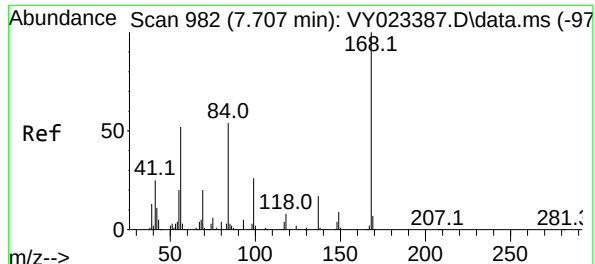
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
Data File : VY023560.D
Acq On : 24 Oct 2025 09:24
Operator : SY/MD
Sample : VY1024SBL01
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
VY1024SBL01

Quant Time: Oct 24 23:46:37 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 05:12:50 2025
Response via : Initial Calibration

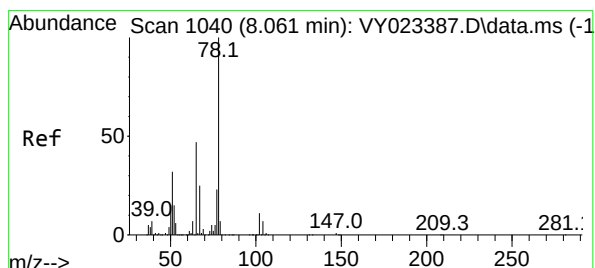
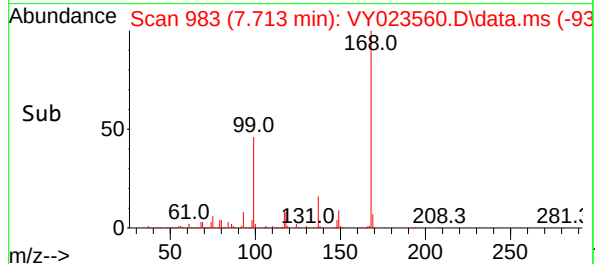
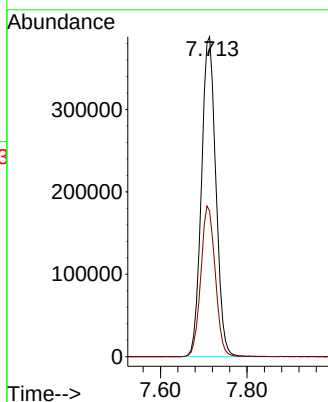
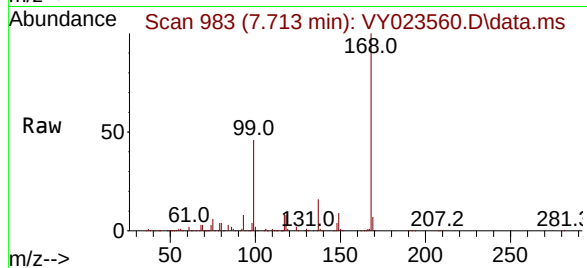




#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 7.713 min Scan# 91
Delta R.T. 0.006 min
Lab File: VY023560.D
Acq: 24 Oct 2025 09:24

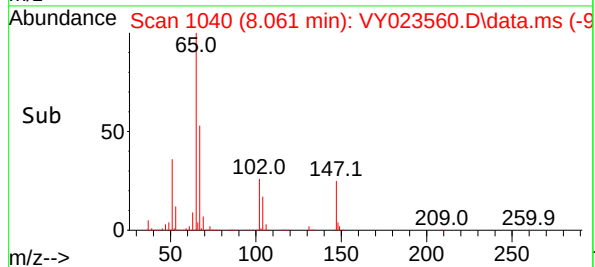
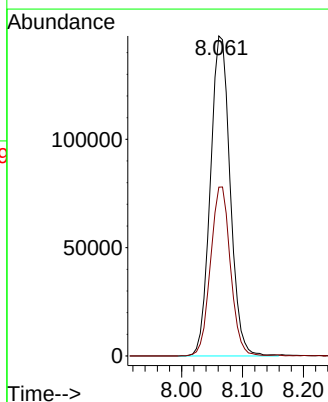
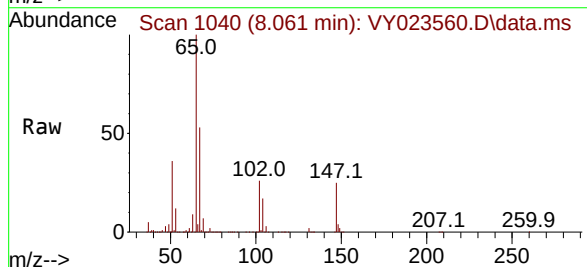
Instrument :
MSVOA_Y
ClientSampleId :
VY1024SBL01

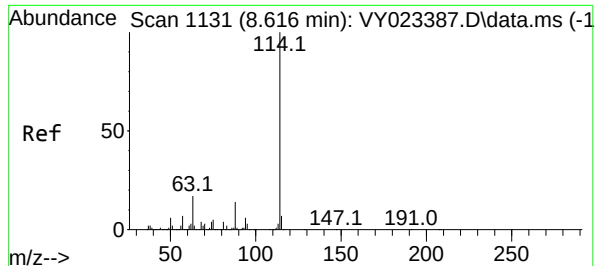
Tgt Ion:168 Resp: 898566
Ion Ratio Lower Upper
168 100
99 45.5 39.7 59.5



#33
1,2-Dichloroethane-d4
Concen: 44.360 ug/l
RT: 8.061 min Scan# 1040
Delta R.T. 0.000 min
Lab File: VY023560.D
Acq: 24 Oct 2025 09:24

Tgt Ion: 65 Resp: 333317
Ion Ratio Lower Upper
65 100
67 53.2 0.0 105.8





#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 8.616 min Scan# 1131

Delta R.T. 0.000 min

Lab File: VY023560.D

Acq: 24 Oct 2025 09:24

Instrument :

MSVOA_Y

ClientSampleId :

VY1024SBL01

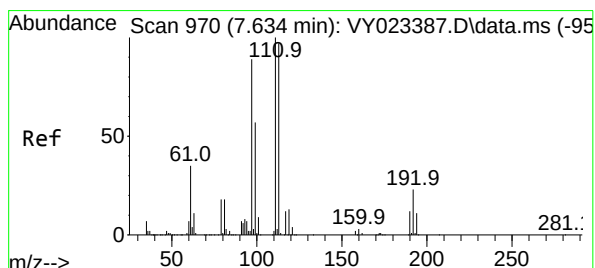
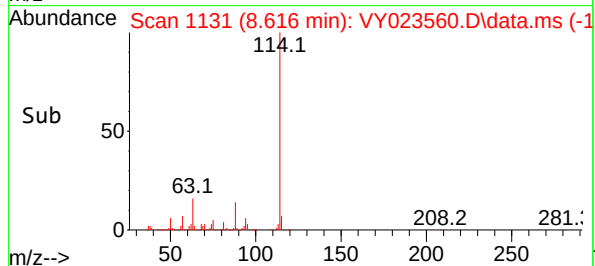
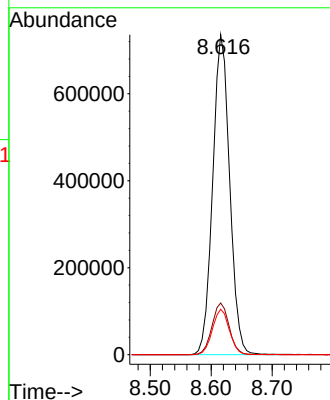
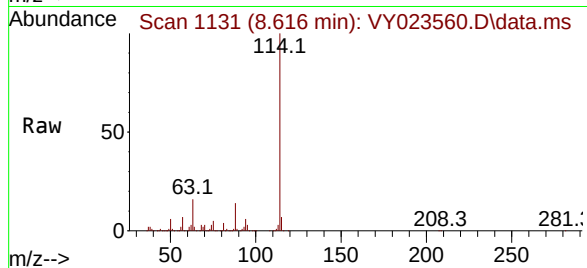
Tgt Ion:114 Resp: 1421897

Ion Ratio Lower Upper

114 100

63 16.2 0.0 34.2

88 14.2 0.0 28.4



#35

Dibromofluoromethane

Concen: 48.742 ug/l

RT: 7.634 min Scan# 970

Delta R.T. 0.000 min

Lab File: VY023560.D

Acq: 24 Oct 2025 09:24

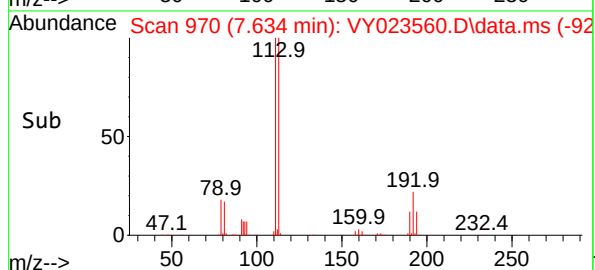
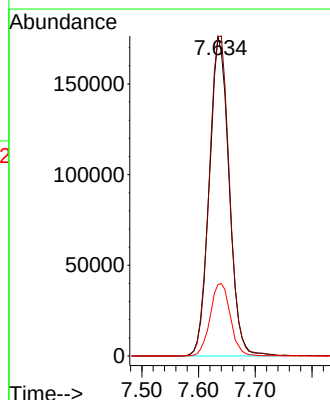
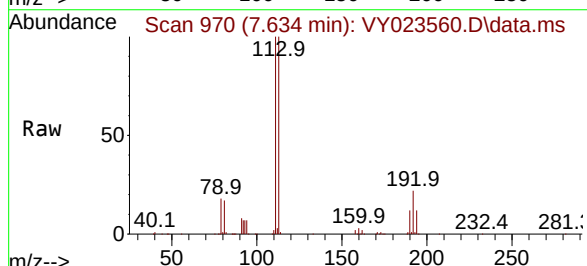
Tgt Ion:113 Resp: 425849

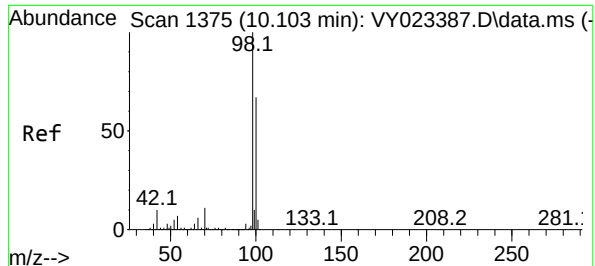
Ion Ratio Lower Upper

113 100

111 102.6 81.8 122.6

192 23.1 18.0 27.0





#50

Toluene-d8

Concen: 47.746 ug/l

RT: 10.109 min Scan# 11

Delta R.T. 0.006 min

Lab File: VY023560.D

Acq: 24 Oct 2025 09:24

Instrument :

MSVOA_Y

ClientSampleId :

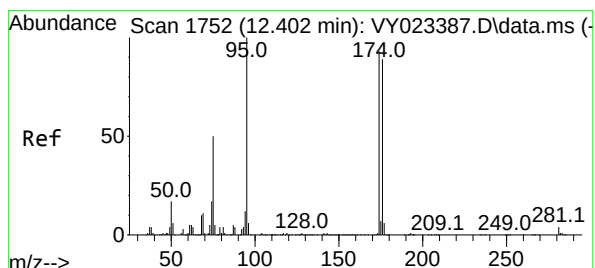
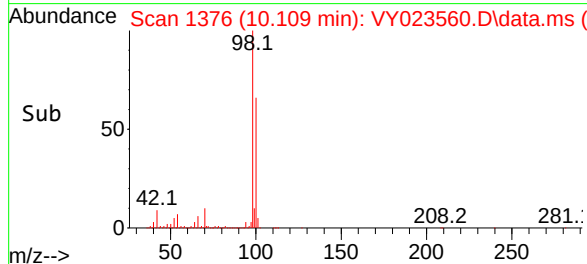
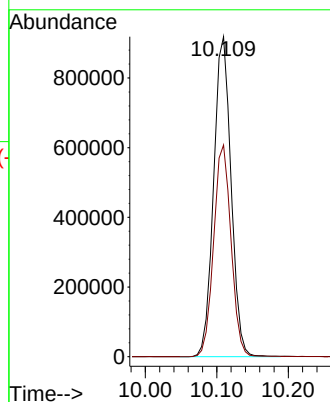
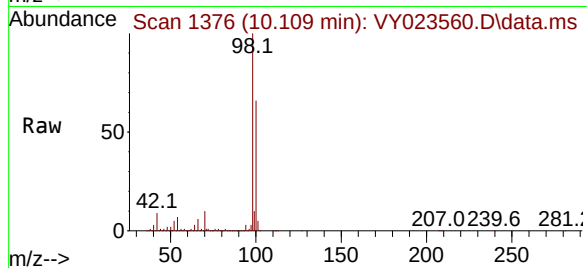
VY1024SBL01

Tgt Ion: 98 Resp: 1553516

Ion Ratio Lower Upper

98 100

100 66.0 53.0 79.4



#62

4-Bromofluorobenzene

Concen: 40.620 ug/l

RT: 12.408 min Scan# 1753

Delta R.T. 0.006 min

Lab File: VY023560.D

Acq: 24 Oct 2025 09:24

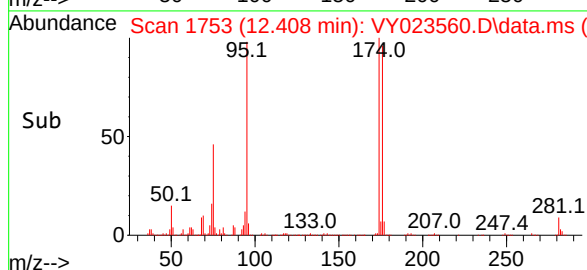
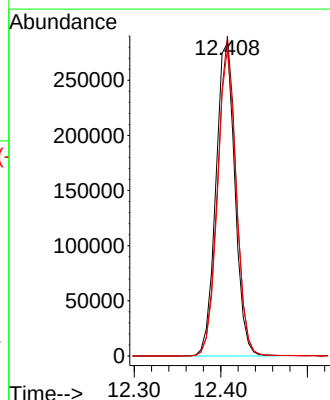
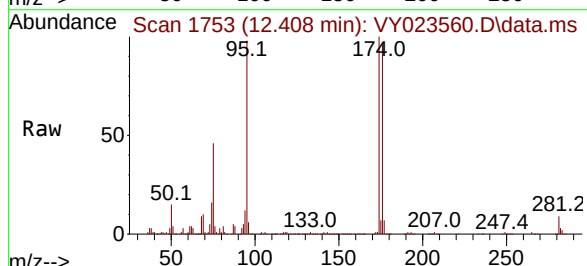
Tgt Ion: 95 Resp: 436342

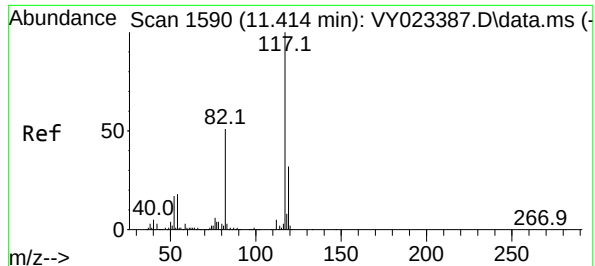
Ion Ratio Lower Upper

95 100

174 98.8 0.0 192.8

176 95.5 0.0 187.6





#63

Chlorobenzene-d5

Concen: 50.000 ug/l

RT: 11.414 min Scan# 11

Delta R.T. 0.000 min

Lab File: VY023560.D

Acq: 24 Oct 2025 09:24

Instrument :

MSVOA_Y

ClientSampleId :

VY1024SBL01

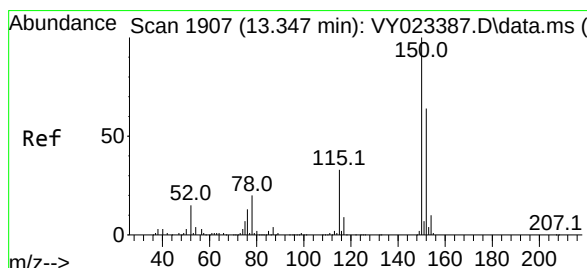
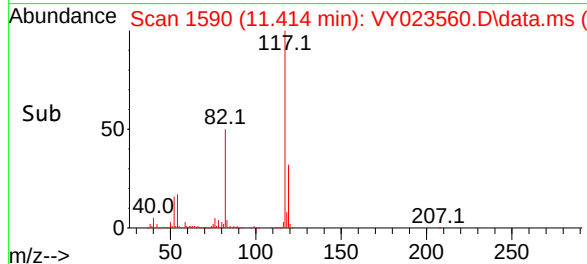
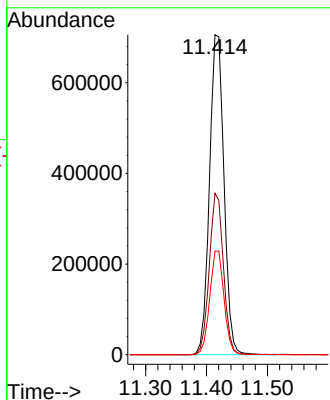
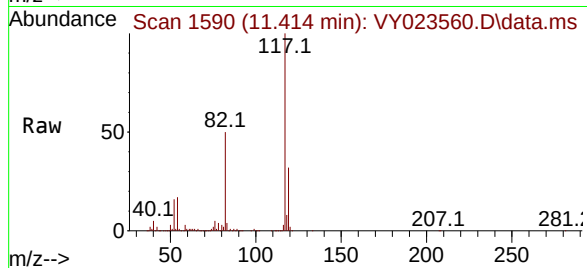
Tgt Ion:117 Resp: 1164716

Ion Ratio Lower Upper

117 100

82 50.4 41.0 61.4

119 32.4 25.6 38.4



#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 13.347 min Scan# 1907

Delta R.T. 0.000 min

Lab File: VY023560.D

Acq: 24 Oct 2025 09:24

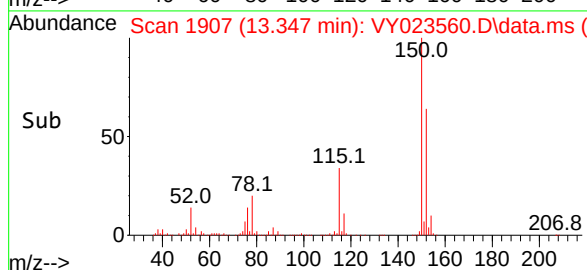
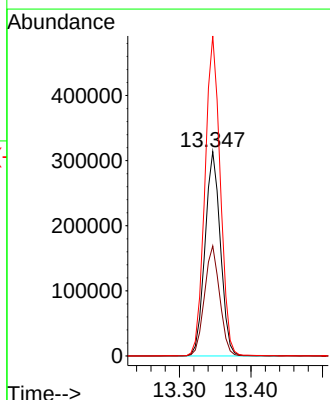
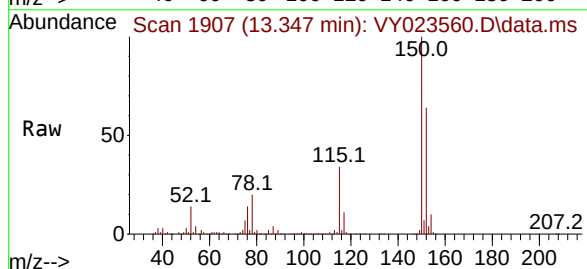
Tgt Ion:152 Resp: 469443

Ion Ratio Lower Upper

152 100

115 53.2 27.1 81.2

150 155.8 0.0 347.4





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

Report of Analysis

Client: AECOM
Project: AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206
Client Sample ID: VY1022SBS01
Lab Sample ID: VY1022SBS01
Analytical Method: 8260D
Sample Wt/Vol: 5 g

Level: LOW
Final Vol: 5000 uL

Date Collected:
Date Received:
SDG No.: Q3419
Matrix: SOIL
% Solid: 100
Test: VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
75-71-8	Dichlorodifluoromethane	20.0		1	1.10	5.00	ug/Kg	10/22/25 10:28	VY102225
74-87-3	Chloromethane	18.0		1	1.10	5.00	ug/Kg	10/22/25 10:28	VY102225
75-01-4	Vinyl Chloride	18.7		1	0.79	5.00	ug/Kg	10/22/25 10:28	VY102225
74-83-9	Bromomethane	20.0		1	1.10	5.00	ug/Kg	10/22/25 10:28	VY102225
75-00-3	Chloroethane	19.8		1	1.30	5.00	ug/Kg	10/22/25 10:28	VY102225
75-69-4	Trichlorofluoromethane	20.2		1	1.20	5.00	ug/Kg	10/22/25 10:28	VY102225
76-13-1	1,1,2-Trichlorotrifluoroethane	21.3		1	1.10	5.00	ug/Kg	10/22/25 10:28	VY102225
75-35-4	1,1-Dichloroethene	20.7		1	1.00	5.00	ug/Kg	10/22/25 10:28	VY102225
67-64-1	Acetone	130		1	4.70	25.0	ug/Kg	10/22/25 10:28	VY102225
75-15-0	Carbon Disulfide	19.3		1	1.10	5.00	ug/Kg	10/22/25 10:28	VY102225
1634-04-4	Methyl tert-butyl Ether	19.8		1	0.73	5.00	ug/Kg	10/22/25 10:28	VY102225
79-20-9	Methyl Acetate	17.3		1	1.50	5.00	ug/Kg	10/22/25 10:28	VY102225
75-09-2	Methylene Chloride	18.4		1	3.50	10.0	ug/Kg	10/22/25 10:28	VY102225
156-60-5	trans-1,2-Dichloroethene	20.4		1	0.86	5.00	ug/Kg	10/22/25 10:28	VY102225
75-34-3	1,1-Dichloroethane	20.5		1	0.80	5.00	ug/Kg	10/22/25 10:28	VY102225
110-82-7	Cyclohexane	19.3		1	0.79	5.00	ug/Kg	10/22/25 10:28	VY102225
78-93-3	2-Butanone	110		1	6.50	25.0	ug/Kg	10/22/25 10:28	VY102225
56-23-5	Carbon Tetrachloride	21.4		1	0.97	5.00	ug/Kg	10/22/25 10:28	VY102225
156-59-2	cis-1,2-Dichloroethene	21.2		1	0.75	5.00	ug/Kg	10/22/25 10:28	VY102225
74-97-5	Bromochloromethane	19.3		1	1.20	5.00	ug/Kg	10/22/25 10:28	VY102225
67-66-3	Chloroform	21.2		1	0.84	5.00	ug/Kg	10/22/25 10:28	VY102225
71-55-6	1,1,1-Trichloroethane	21.3		1	0.93	5.00	ug/Kg	10/22/25 10:28	VY102225
108-87-2	Methylcyclohexane	20.7		1	0.91	5.00	ug/Kg	10/22/25 10:28	VY102225
71-43-2	Benzene	21.2		1	0.79	5.00	ug/Kg	10/22/25 10:28	VY102225
107-06-2	1,2-Dichloroethane	19.8		1	0.79	5.00	ug/Kg	10/22/25 10:28	VY102225
79-01-6	Trichloroethene	21.9		1	0.81	5.00	ug/Kg	10/22/25 10:28	VY102225
78-87-5	1,2-Dichloropropane	21.0		1	0.91	5.00	ug/Kg	10/22/25 10:28	VY102225
75-27-4	Bromodichloromethane	21.2		1	0.78	5.00	ug/Kg	10/22/25 10:28	VY102225
108-10-1	4-Methyl-2-Pentanone	96.0		1	3.60	25.0	ug/Kg	10/22/25 10:28	VY102225
108-88-3	Toluene	22.0		1	0.78	5.00	ug/Kg	10/22/25 10:28	VY102225
10061-02-6	t-1,3-Dichloropropene	21.0		1	0.65	5.00	ug/Kg	10/22/25 10:28	VY102225
10061-01-5	cis-1,3-Dichloropropene	20.9		1	0.62	5.00	ug/Kg	10/22/25 10:28	VY102225
79-00-5	1,1,2-Trichloroethane	21.6		1	0.92	5.00	ug/Kg	10/22/25 10:28	VY102225
591-78-6	2-Hexanone	110		1	3.70	25.0	ug/Kg	10/22/25 10:28	VY102225
124-48-1	Dibromochloromethane	21.4		1	0.87	5.00	ug/Kg	10/22/25 10:28	VY102225
106-93-4	1,2-Dibromoethane	21.2		1	0.88	5.00	ug/Kg	10/22/25 10:28	VY102225
127-18-4	Tetrachloroethene	22.9		1	1.10	5.00	ug/Kg	10/22/25 10:28	VY102225
108-90-7	Chlorobenzene	21.4		1	0.91	5.00	ug/Kg	10/22/25 10:28	VY102225
100-41-4	Ethyl Benzene	21.2		1	0.67	5.00	ug/Kg	10/22/25 10:28	VY102225
179601-23-1	m/p-Xylenes	43.3		1	1.20	10.0	ug/Kg	10/22/25 10:28	VY102225
95-47-6	o-Xylene	21.6		1	0.82	5.00	ug/Kg	10/22/25 10:28	VY102225
100-42-5	Styrene	21.3		1	0.71	5.00	ug/Kg	10/22/25 10:28	VY102225
75-25-2	Bromoform	20.5		1	0.86	5.00	ug/Kg	10/22/25 10:28	VY102225



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

Report of Analysis

Client:	AECOM	Date Collected:	
Project:	AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206	Date Received:	
Client Sample ID:	VY1022SBS01	SDG No.:	Q3419
Lab Sample ID:	VY1022SBS01	Matrix:	SOIL
Analytical Method:	8260D	% Solid:	100
Sample Wt/Vol:	5 g	Test:	VOC-TCLVOA-10
	Level: LOW		
	Final Vol: 5000 uL		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
98-82-8	Isopropylbenzene	21.7		1	0.78	5.00	ug/Kg	10/22/25 10:28	VY102225
79-34-5	1,1,2,2-Tetrachloroethane	19.2		1	1.20	5.00	ug/Kg	10/22/25 10:28	VY102225
541-73-1	1,3-Dichlorobenzene	21.3		1	1.70	5.00	ug/Kg	10/22/25 10:28	VY102225
106-46-7	1,4-Dichlorobenzene	21.1		1	1.60	5.00	ug/Kg	10/22/25 10:28	VY102225
95-50-1	1,2-Dichlorobenzene	21.3		1	1.50	5.00	ug/Kg	10/22/25 10:28	VY102225
96-12-8	1,2-Dibromo-3-Chloropropane	18.8		1	1.80	5.00	ug/Kg	10/22/25 10:28	VY102225
120-82-1	1,2,4-Trichlorobenzene	20.4		1	3.00	5.00	ug/Kg	10/22/25 10:28	VY102225
87-61-6	1,2,3-Trichlorobenzene	19.8		1	3.20	5.00	ug/Kg	10/22/25 10:28	VY102225

SURROGATES

17060-07-0	1,2-Dichloroethane-d4	45.7			63 - 155	91%	SPK: 50
1868-53-7	Dibromofluoromethane	49.3			70 - 134	99%	SPK: 50
2037-26-5	Toluene-d8	49.8			74 - 123	100%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.3			17 - 146	99%	SPK: 50

INTERNAL STANDARDS

INTERNAL STANDARDS		Area Count
363-72-4	Pentafluorobenzene	547000
540-36-3	1,4-Difluorobenzene	794000
3114-55-4	Chlorobenzene-d5	700000
3855-82-1	1,4-Dichlorobenzene-d4	365000

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_Y\Data\VY102225\
 Data File : VY023545.D
 Acq On : 22 Oct 2025 10:28
 Operator : SY/MD
 Sample : VY1022SBS01
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VY1022SBS01

Manual Integrations
 APPROVED

Reviewed By :Amit Patel 10/24/2025
 Supervised By :Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 02:26:30 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	7.713	168	546555	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	8.616	114	794303	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.414	117	700136	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.346	152	365280	50.000	ug/l	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4	8.061	65	208863	45.699	ug/l	0.00
Spiked Amount	50.000	Range	50 - 163	Recovery	=	91.400%
35) Dibromofluoromethane	7.634	113	240525	49.282	ug/l	0.00
Spiked Amount	50.000	Range	54 - 147	Recovery	=	98.560%
50) Toluene-d8	10.109	98	904633	49.771	ug/l	0.00
Spiked Amount	50.000	Range	58 - 134	Recovery	=	99.540%
62) 4-Bromofluorobenzene	12.408	95	295724	49.281	ug/l	0.00
Spiked Amount	50.000	Range	30 - 143	Recovery	=	98.560%

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	1.867	85	78862	20.046	ug/l	99
3) Chloromethane	2.074	50	96728	18.049	ug/l	97
4) Vinyl Chloride	2.208	62	130661	18.718	ug/l	99
5) Bromomethane	2.592	94	117294	20.024	ug/l	99
6) Chloroethane	2.739	64	94090	19.775	ug/l	99
7) Trichlorofluoromethane	3.056	101	195620	20.184	ug/l	99
8) Diethyl Ether	3.458	74	51088	20.172	ug/l	95
9) 1,1,2-Trichlorotrifluo...	3.824	101	107027	21.280	ug/l	98
10) Methyl Iodide	4.007	142	117165	20.926	ug/l	97
11) Tert butyl alcohol	4.860	59	28049	82.495	ug/l	98
12) 1,1-Dichloroethene	3.793	96	100716	20.658	ug/l	96
13) Acrolein	3.653	56	23166	48.218	ug/l	91
14) Allyl chloride	4.391	41	110064	18.524	ug/l	96
15) Acrylonitrile	5.061	53	90176	93.042	ug/l	99
16) Acetone	3.873	43	137184	126.081	ug/l	98
17) Carbon Disulfide	4.110	76	268938	19.273	ug/l	98
18) Methyl Acetate	4.391	43	49297	17.272	ug/l	98
19) Methyl tert-butyl Ether	5.122	73	231882	19.789	ug/l	97
20) Methylene Chloride	4.622	84	108140	18.380	ug/l	98
21) trans-1,2-Dichloroethene	5.116	96	109389	20.379	ug/l	97
22) Diisopropyl ether	6.019	45	262379	19.963	ug/l	96
23) Vinyl Acetate	5.964	43	681501	95.797	ug/l	96
24) 1,1-Dichloroethane	5.915	63	178683	20.524	ug/l	100
25) 2-Butanone	6.896	43	142981	107.638	ug/l	95
26) 2,2-Dichloropropane	6.884	77	167931	21.021	ug/l	99
27) cis-1,2-Dichloroethene	6.890	96	131514	21.211	ug/l	94
28) Bromochloromethane	7.250	49	62608	19.264	ug/l	94
29) Tetrahydrofuran	7.262	42	65038	86.341	ug/l	93
30) Chloroform	7.421	83	202767	21.198	ug/l	98
31) Cyclohexane	7.707	56	146973	19.331	ug/l	89
32) 1,1,1-Trichloroethane	7.622	97	185487	21.339	ug/l	98
36) 1,1-Dichloropropene	7.835	75	134867	20.873	ug/l	98
37) Ethyl Acetate	6.988	43	47665	18.620	ug/l #	96
38) Carbon Tetrachloride	7.823	117	167506	21.380	ug/l	99
39) Methylcyclohexane	9.109	83	174367	20.726	ug/l	98
40) Benzene	8.085	78	432933	21.157	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102225\
 Data File : VY023545.D
 Acq On : 22 Oct 2025 10:28
 Operator : SY/MD
 Sample : VY1022SBS01
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VY1022SBS01

Manual Integrations
 APPROVED

Reviewed By :Amit Patel 10/24/2025
 Supervised By :Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 02:26:30 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.226	41	23647	17.080	ug/l #	67
42) 1,2-Dichloroethane	8.158	62	104422	19.787	ug/l	99
43) Isopropyl Acetate	8.201	43	93851	18.386	ug/l	96
44) Trichloroethene	8.866	130	131401	21.940	ug/l	99
45) 1,2-Dichloropropane	9.146	63	94941	21.006	ug/l	99
46) Dibromomethane	9.231	93	59570	20.843	ug/l	98
47) Bromodichloromethane	9.426	83	152859	21.237	ug/l	99
48) Methyl methacrylate	9.225	41	43753	18.246	ug/l	92
49) 1,4-Dioxane	9.225	88	12196	368.059	ug/l	96
51) 4-Methyl-2-Pentanone	9.999	43	253262	96.032	ug/l	99
52) Toluene	10.170	92	292104	21.986	ug/l	98
53) t-1,3-Dichloropropene	10.396	75	131626	21.031	ug/l	100
54) cis-1,3-Dichloropropene	9.859	75	154563	20.924	ug/l	97
55) 1,1,2-Trichloroethane	10.573	97	82907	21.572	ug/l	97
56) Ethyl methacrylate	10.438	69	87648	19.771	ug/l	93
57) 1,3-Dichloropropane	10.719	76	126727	20.809	ug/l	99
58) 2-Chloroethyl Vinyl ether	9.713	63	191490	96.421	ug/l	98
59) 2-Hexanone	10.762	43	201768	107.056	ug/l	97
60) Dibromochloromethane	10.908	129	115294	21.397	ug/l	99
61) 1,2-Dibromoethane	11.018	107	77772	21.218	ug/l	99
64) Tetrachloroethene	10.646	164	165184	22.850	ug/l	99
65) Chlorobenzene	11.444	112	325435	21.371	ug/l	100
66) 1,1,1,2-Tetrachloroethane	11.518	131	116407	21.452	ug/l	100
67) Ethyl Benzene	11.518	91	522038	21.179	ug/l	99
68) m/p-Xylenes	11.627	106	428308	43.322	ug/l	99
69) o-Xylene	11.956	106	200731	21.646	ug/l	97
70) Styrene	11.969	104	325186	21.324	ug/l	100
71) Bromoform	12.133	173	69048	20.514	ug/l #	99
73) Isopropylbenzene	12.255	105	521665	21.671	ug/l	100
74) N-amyl acetate	12.072	43	76665	17.731	ug/l	95
75) 1,1,2,2-Tetrachloroethane	12.505	83	75537	19.185	ug/l	97
76) 1,2,3-Trichloropropane	12.554	75	60391m	18.739	ug/l	
77) Bromobenzene	12.530	156	136360	21.307	ug/l	97
78) n-propylbenzene	12.597	91	603121	21.651	ug/l	99
79) 2-Chlorotoluene	12.676	91	348031	21.335	ug/l	99
80) 1,3,5-Trimethylbenzene	12.737	105	426677	21.935	ug/l	99
81) trans-1,4-Dichloro-2-b...	12.304	75	26519	20.178	ug/l	97
82) 4-Chlorotoluene	12.773	91	358213	21.322	ug/l	100
83) tert-Butylbenzene	12.999	119	393129	21.889	ug/l	99
84) 1,2,4-Trimethylbenzene	13.042	105	420267	21.648	ug/l	99
85) sec-Butylbenzene	13.176	105	561763	21.804	ug/l	99
86) p-Isopropyltoluene	13.292	119	485141	22.116	ug/l	100
87) 1,3-Dichlorobenzene	13.285	146	265067	21.270	ug/l	99
88) 1,4-Dichlorobenzene	13.365	146	260280	21.147	ug/l	99
89) n-Butylbenzene	13.615	91	407439	21.317	ug/l	99
90) Hexachloroethane	13.877	117	100017	21.199	ug/l	99
91) 1,2-Dichlorobenzene	13.657	146	232327	21.264	ug/l	100
92) 1,2-Dibromo-3-Chloropr...	14.273	75	12117	18.756	ug/l	97
93) 1,2,4-Trichlorobenzene	14.919	180	138915	20.394	ug/l	100
94) Hexachlorobutadiene	15.023	225	88730	20.897	ug/l	97
95) Naphthalene	15.145	128	204152	18.822	ug/l	99
96) 1,2,3-Trichlorobenzene	15.328	180	116532	19.751	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102225\
Data File : VY023545.D
Acq On : 22 Oct 2025 10:28
Operator : SY/MD
Sample : VY1022SBS01
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
VY1022SBS01

Manual Integrations
APPROVED

Reviewed By :Amit Patel 10/24/2025
Supervised By :Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 02:26:30 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 05:12:50 2025
Response via : Initial Calibration

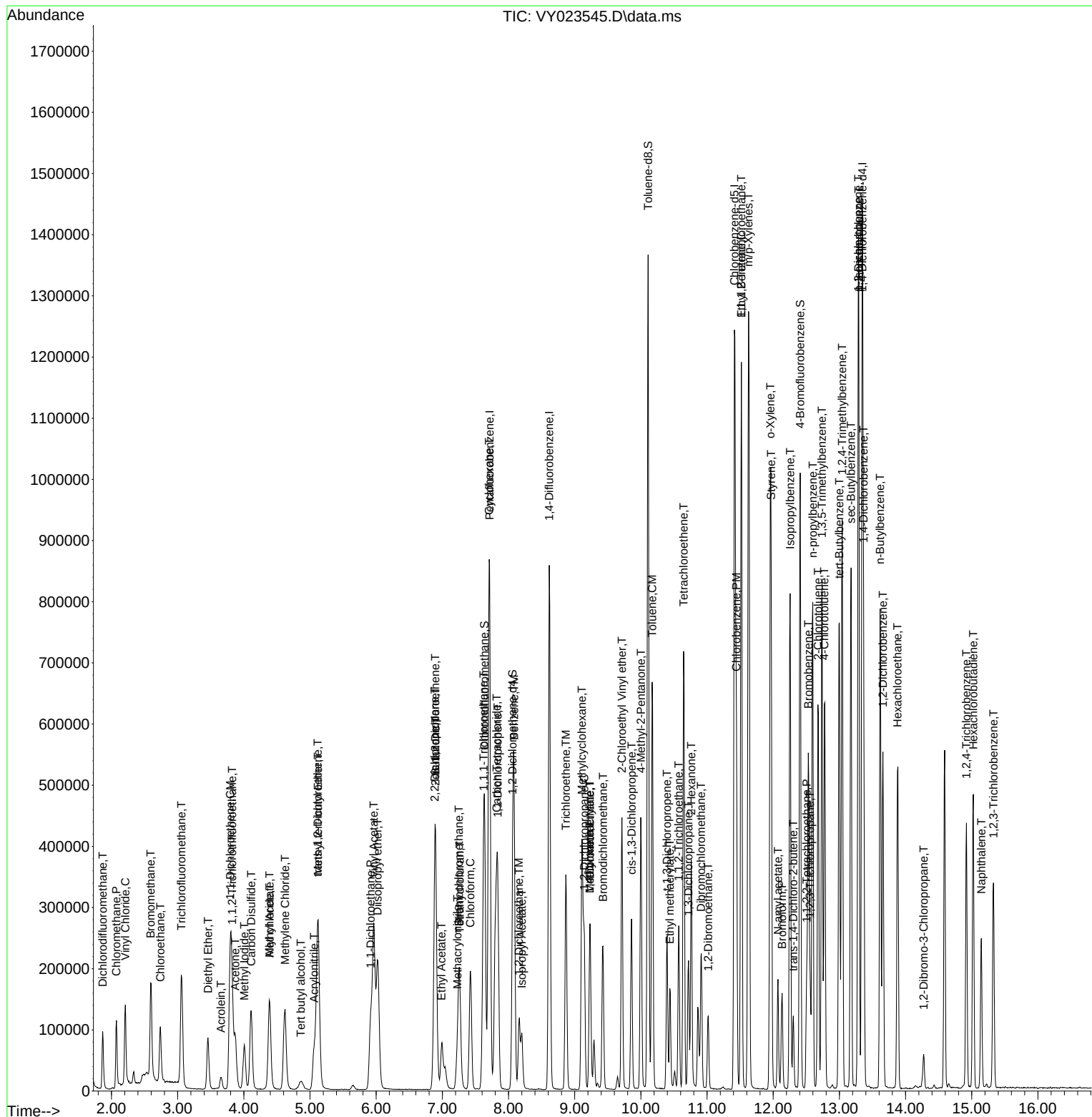
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Instrument :
MSVOA_Y
ClientSampleId :
VY1022SBS01

Manual Integrations

Reviewed By :Amit Patel 10/24/2025
Supervised By :Mahesh Dadoda 10/24/2025



Report of Analysis

Client: AECOM
 Project: AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206
 Client Sample ID: VY1024SBS01
 Lab Sample ID: VY1024SBS01
 Analytical Method: 8260D
 Sample Wt/Vol: 5 g

Level: LOW
 Final Vol: 5000 uL

Date Collected:
 Date Received:
 SDG No.: Q3419
 Matrix: SOIL
 % Solid: 100
 Test: VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
75-71-8	Dichlorodifluoromethane	18.6		1	1.10	5.00	ug/Kg	10/24/25 09:52	VY102425
74-87-3	Chloromethane	17.3		1	1.10	5.00	ug/Kg	10/24/25 09:52	VY102425
75-01-4	Vinyl Chloride	18.0		1	0.79	5.00	ug/Kg	10/24/25 09:52	VY102425
74-83-9	Bromomethane	20.6		1	1.10	5.00	ug/Kg	10/24/25 09:52	VY102425
75-00-3	Chloroethane	18.5		1	1.30	5.00	ug/Kg	10/24/25 09:52	VY102425
75-69-4	Trichlorofluoromethane	19.0		1	1.20	5.00	ug/Kg	10/24/25 09:52	VY102425
76-13-1	1,1,2-Trichlorotrifluoroethane	20.0		1	1.10	5.00	ug/Kg	10/24/25 09:52	VY102425
75-35-4	1,1-Dichloroethene	19.8		1	1.00	5.00	ug/Kg	10/24/25 09:52	VY102425
67-64-1	Acetone	130		1	4.70	25.0	ug/Kg	10/24/25 09:52	VY102425
75-15-0	Carbon Disulfide	18.4		1	1.10	5.00	ug/Kg	10/24/25 09:52	VY102425
1634-04-4	Methyl tert-butyl Ether	20.0		1	0.73	5.00	ug/Kg	10/24/25 09:52	VY102425
79-20-9	Methyl Acetate	17.2		1	1.50	5.00	ug/Kg	10/24/25 09:52	VY102425
75-09-2	Methylene Chloride	18.5		1	3.50	10.0	ug/Kg	10/24/25 09:52	VY102425
156-60-5	trans-1,2-Dichloroethene	20.1		1	0.86	5.00	ug/Kg	10/24/25 09:52	VY102425
75-34-3	1,1-Dichloroethane	19.8		1	0.80	5.00	ug/Kg	10/24/25 09:52	VY102425
110-82-7	Cyclohexane	18.3		1	0.79	5.00	ug/Kg	10/24/25 09:52	VY102425
78-93-3	2-Butanone	110		1	6.50	25.0	ug/Kg	10/24/25 09:52	VY102425
56-23-5	Carbon Tetrachloride	20.6		1	0.97	5.00	ug/Kg	10/24/25 09:52	VY102425
156-59-2	cis-1,2-Dichloroethene	20.9		1	0.75	5.00	ug/Kg	10/24/25 09:52	VY102425
74-97-5	Bromochloromethane	18.9		1	1.20	5.00	ug/Kg	10/24/25 09:52	VY102425
67-66-3	Chloroform	20.4		1	0.84	5.00	ug/Kg	10/24/25 09:52	VY102425
71-55-6	1,1,1-Trichloroethane	20.5		1	0.93	5.00	ug/Kg	10/24/25 09:52	VY102425
108-87-2	Methylcyclohexane	20.0		1	0.91	5.00	ug/Kg	10/24/25 09:52	VY102425
71-43-2	Benzene	20.7		1	0.79	5.00	ug/Kg	10/24/25 09:52	VY102425
107-06-2	1,2-Dichloroethane	19.6		1	0.79	5.00	ug/Kg	10/24/25 09:52	VY102425
79-01-6	Trichloroethene	21.4		1	0.81	5.00	ug/Kg	10/24/25 09:52	VY102425
78-87-5	1,2-Dichloropropane	20.3		1	0.91	5.00	ug/Kg	10/24/25 09:52	VY102425
75-27-4	Bromodichloromethane	20.8		1	0.78	5.00	ug/Kg	10/24/25 09:52	VY102425
108-10-1	4-Methyl-2-Pentanone	96.4		1	3.60	25.0	ug/Kg	10/24/25 09:52	VY102425
108-88-3	Toluene	21.3		1	0.78	5.00	ug/Kg	10/24/25 09:52	VY102425
10061-02-6	t-1,3-Dichloropropene	20.3		1	0.65	5.00	ug/Kg	10/24/25 09:52	VY102425
10061-01-5	cis-1,3-Dichloropropene	20.6		1	0.62	5.00	ug/Kg	10/24/25 09:52	VY102425
79-00-5	1,1,2-Trichloroethane	21.6		1	0.92	5.00	ug/Kg	10/24/25 09:52	VY102425
591-78-6	2-Hexanone	110		1	3.70	25.0	ug/Kg	10/24/25 09:52	VY102425
124-48-1	Dibromochloromethane	21.3		1	0.87	5.00	ug/Kg	10/24/25 09:52	VY102425
106-93-4	1,2-Dibromoethane	21.4		1	0.88	5.00	ug/Kg	10/24/25 09:52	VY102425
127-18-4	Tetrachloroethene	20.6		1	1.10	5.00	ug/Kg	10/24/25 09:52	VY102425
108-90-7	Chlorobenzene	20.9		1	0.91	5.00	ug/Kg	10/24/25 09:52	VY102425
100-41-4	Ethyl Benzene	20.5		1	0.67	5.00	ug/Kg	10/24/25 09:52	VY102425
179601-23-1	m/p-Xylenes	42.3		1	1.20	10.0	ug/Kg	10/24/25 09:52	VY102425
95-47-6	o-Xylene	21.1		1	0.82	5.00	ug/Kg	10/24/25 09:52	VY102425
100-42-5	Styrene	20.9		1	0.71	5.00	ug/Kg	10/24/25 09:52	VY102425
75-25-2	Bromoform	20.9		1	0.86	5.00	ug/Kg	10/24/25 09:52	VY102425



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

Report of Analysis

Client:	AECOM	Date Collected:	
Project:	AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206	Date Received:	
Client Sample ID:	VY1024SBS01	SDG No.:	Q3419
Lab Sample ID:	VY1024SBS01	Matrix:	SOIL
Analytical Method:	8260D	% Solid:	100
Sample Wt/Vol:	5 g	Test:	VOC-TCLVOA-10
	Level: LOW		
	Final Vol: 5000 uL		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
98-82-8	Isopropylbenzene	20.6		1	0.78	5.00	ug/Kg	10/24/25 09:52	VY102425
79-34-5	1,1,2,2-Tetrachloroethane	20.3		1	1.20	5.00	ug/Kg	10/24/25 09:52	VY102425
541-73-1	1,3-Dichlorobenzene	20.4		1	1.70	5.00	ug/Kg	10/24/25 09:52	VY102425
106-46-7	1,4-Dichlorobenzene	20.6		1	1.60	5.00	ug/Kg	10/24/25 09:52	VY102425
95-50-1	1,2-Dichlorobenzene	20.4		1	1.50	5.00	ug/Kg	10/24/25 09:52	VY102425
96-12-8	1,2-Dibromo-3-Chloropropane	19.1		1	1.80	5.00	ug/Kg	10/24/25 09:52	VY102425
120-82-1	1,2,4-Trichlorobenzene	19.9		1	3.00	5.00	ug/Kg	10/24/25 09:52	VY102425
87-61-6	1,2,3-Trichlorobenzene	19.6		1	3.20	5.00	ug/Kg	10/24/25 09:52	VY102425
SURROGATES									
17060-07-0	1,2-Dichloroethane-d4	44.2			63 - 155	88%	SPK: 50		
1868-53-7	Dibromofluoromethane	49.5			70 - 134	99%	SPK: 50		
2037-26-5	Toluene-d8	48.4			74 - 123	97%	SPK: 50		
460-00-4	4-Bromofluorobenzene	49.3			17 - 146	99%	SPK: 50		
INTERNAL STANDARDS									
		Area Count							
363-72-4	Pentafluorobenzene	552000							
540-36-3	1,4-Difluorobenzene	799000							
3114-55-4	Chlorobenzene-d5	710000							
3855-82-1	1,4-Dichlorobenzene-d4	381000							

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_Y\Data\VY102425\
 Data File : VY023561.D
 Acq On : 24 Oct 2025 09:52
 Operator : SY/MD
 Sample : VY1024SBS01
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 4 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VY1024SBS01

Manual Integrations
 APPROVED

Reviewed By :Amit Patel 10/27/2025
 Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:47:02 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	7.713	168	551537	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	8.615	114	799010	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.413	117	709717	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.346	152	380713	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.060	65	203935	44.218	ug/l	0.00
Spiked Amount 50.000	Range 50 - 163		Recovery =	88.440%		
35) Dibromofluoromethane	7.634	113	243016	49.499	ug/l	0.00
Spiked Amount 50.000	Range 54 - 147		Recovery =	99.000%		
50) Toluene-d8	10.109	98	884395	48.371	ug/l	0.00
Spiked Amount 50.000	Range 58 - 134		Recovery =	96.740%		
62) 4-Bromofluorobenzene	12.407	95	297693	49.317	ug/l	0.00
Spiked Amount 50.000	Range 30 - 143		Recovery =	98.640%		
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.866	85	73940	18.625	ug/l	99
3) Chloromethane	2.074	50	93760	17.337	ug/l	97
4) Vinyl Chloride	2.208	62	126898	18.015	ug/l	100
5) Bromomethane	2.592	94	121542	20.561	ug/l	100
6) Chloroethane	2.732	64	88904	18.516	ug/l	99
7) Trichlorofluoromethane	3.055	101	186017	19.019	ug/l	99
8) Diethyl Ether	3.458	74	50315	19.688	ug/l	97
9) 1,1,2-Trichlorotrifluo...	3.811	101	101494	19.998	ug/l	97
10) Methyl Iodide	4.006	142	106029	18.766	ug/l	97
11) Tert butyl alcohol	4.848	59	31189	90.901	ug/l	97
12) 1,1-Dichloroethene	3.787	96	97421	19.802	ug/l	97
13) Acrolein	3.659	56	23585	48.647	ug/l	98
14) Allyl chloride	4.384	41	109431	18.251	ug/l	97
15) Acrylonitrile	5.061	53	93885	95.993	ug/l	98
16) Acetone	3.866	43	140610	128.062	ug/l	99
17) Carbon Disulfide	4.104	76	258594	18.365	ug/l	99
18) Methyl Acetate	4.390	43	49637	17.234	ug/l	94
19) Methyl tert-butyl Ether	5.116	73	236371	19.990	ug/l	96
20) Methylene Chloride	4.616	84	109899	18.510	ug/l	98
21) trans-1,2-Dichloroethene	5.116	96	108914	20.107	ug/l	97
22) Diisopropyl ether	6.024	45	256039	19.305	ug/l	96
23) Vinyl Acetate	5.963	43	676295	94.207	ug/l	97
24) 1,1-Dichloroethane	5.921	63	174246	19.834	ug/l	98
25) 2-Butanone	6.896	43	151403	112.949	ug/l	100
26) 2,2-Dichloropropane	6.890	77	163903	20.332	ug/l	98
27) cis-1,2-Dichloroethene	6.896	96	130666	20.884	ug/l	95
28) Bromochloromethane	7.250	49	61891	18.871	ug/l	90
29) Tetrahydrofuran	7.268	42	69086	90.887	ug/l	93
30) Chloroform	7.420	83	197077	20.417	ug/l	99
31) Cyclohexane	7.701	56	140190	18.272	ug/l	98
32) 1,1,1-Trichloroethane	7.615	97	179638	20.479	ug/l	98
36) 1,1-Dichloropropene	7.841	75	130575	20.089	ug/l	99
37) Ethyl Acetate	6.987	43	49292	19.142	ug/l	97
38) Carbon Tetrachloride	7.823	117	162485	20.617	ug/l	99
39) Methylcyclohexane	9.109	83	169117	19.984	ug/l	99
40) Benzene	8.079	78	426341	20.712	ug/l	97

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
 Data File : VY023561.D
 Acq On : 24 Oct 2025 09:52
 Operator : SY/MD
 Sample : VY1024SBS01
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 4 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VY1024SBS01

Manual Integrations
 APPROVED

Reviewed By :Amit Patel 10/27/2025
 Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:47:02 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.225	41	26399m	18.956	ug/l	
42) 1,2-Dichloroethane	8.158	62	104042	19.599	ug/l	97
43) Isopropyl Acetate	8.201	43	95722	18.643	ug/l	95
44) Trichloroethene	8.865	130	128825	21.383	ug/l	95
45) 1,2-Dichloropropane	9.146	63	92312	20.304	ug/l	100
46) Dibromomethane	9.231	93	59886	20.831	ug/l	96
47) Bromodichloromethane	9.426	83	150883	20.839	ug/l	99
48) Methyl methacrylate	9.225	41	43337	17.966	ug/l	89
49) 1,4-Dioxane	9.231	88	12987	389.621	ug/l	98
51) 4-Methyl-2-Pentanone	9.999	43	255637	96.362	ug/l	96
52) Toluene	10.170	92	284413	21.281	ug/l	99
53) t-1,3-Dichloropropene	10.395	75	127577	20.264	ug/l	100
54) cis-1,3-Dichloropropene	9.859	75	153131	20.608	ug/l	97
55) 1,1,2-Trichloroethane	10.572	97	83454	21.587	ug/l	97
56) Ethyl methacrylate	10.438	69	88085	19.752	ug/l	94
57) 1,3-Dichloropropane	10.718	76	126908	20.716	ug/l	98
58) 2-Chloroethyl Vinyl ether	9.713	63	198103	99.163	ug/l	97
59) 2-Hexanone	10.761	43	211229	111.416	ug/l	96
60) Dibromochloromethane	10.914	129	115677	21.342	ug/l	100
61) 1,2-Dibromoethane	11.017	107	78817	21.377	ug/l	99
64) Tetrachloroethene	10.645	164	151245	20.639	ug/l	97
65) Chlorobenzene	11.444	112	322004	20.861	ug/l	99
66) 1,1,1,2-Tetrachloroethane	11.517	131	116589	21.195	ug/l	99
67) Ethyl Benzene	11.517	91	512753	20.521	ug/l	99
68) m/p-Xylenes	11.627	106	423494	42.257	ug/l	99
69) o-Xylene	11.956	106	198083	21.072	ug/l	97
70) Styrene	11.968	104	323830	20.949	ug/l	99
71) Bromoform	12.133	173	71371	20.917	ug/l #	99
73) Isopropylbenzene	12.255	105	516359	20.581	ug/l	100
74) N-amyl acetate	12.072	43	79625	17.669	ug/l	95
75) 1,1,2,2-Tetrachloroethane	12.505	83	83375	20.318	ug/l	99
76) 1,2,3-Trichloropropane	12.553	75	61116m	18.195	ug/l	
77) Bromobenzene	12.529	156	137052	20.547	ug/l	98
78) n-propylbenzene	12.596	91	595772	20.520	ug/l	99
79) 2-Chlorotoluene	12.675	91	344916	20.287	ug/l	98
80) 1,3,5-Trimethylbenzene	12.736	105	419394	20.686	ug/l	98
81) trans-1,4-Dichloro-2-b...	12.304	75	26936	19.665	ug/l	96
82) 4-Chlorotoluene	12.773	91	358669	20.484	ug/l	99
83) tert-Butylbenzene	12.999	119	392010	20.942	ug/l	98
84) 1,2,4-Trimethylbenzene	13.041	105	420704	20.792	ug/l	99
85) sec-Butylbenzene	13.175	105	560392	20.869	ug/l	100
86) p-Isopropyltoluene	13.291	119	476750	20.853	ug/l	99
87) 1,3-Dichlorobenzene	13.285	146	264896	20.394	ug/l	100
88) 1,4-Dichlorobenzene	13.364	146	264053	20.584	ug/l	100
89) n-Butylbenzene	13.614	91	401494	20.154	ug/l	99
90) Hexachloroethane	13.876	117	99943	20.324	ug/l	98
91) 1,2-Dichlorobenzene	13.657	146	232521	20.419	ug/l	100
92) 1,2-Dibromo-3-Chloropr...	14.273	75	12890	19.144	ug/l	96
93) 1,2,4-Trichlorobenzene	14.919	180	141537	19.937	ug/l	100
94) Hexachlorobutadiene	15.023	225	90220	20.387	ug/l	100
95) Naphthalene	15.144	128	210092	18.584	ug/l	99
96) 1,2,3-Trichlorobenzene	15.327	180	120577	19.609	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
Data File : VY023561.D
Acq On : 24 Oct 2025 09:52
Operator : SY/MD
Sample : VY1024SBS01
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
VY1024SBS01

Manual Integrations
APPROVED

Reviewed By :Amit Patel 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:47:02 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 05:12:50 2025
Response via : Initial Calibration

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

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

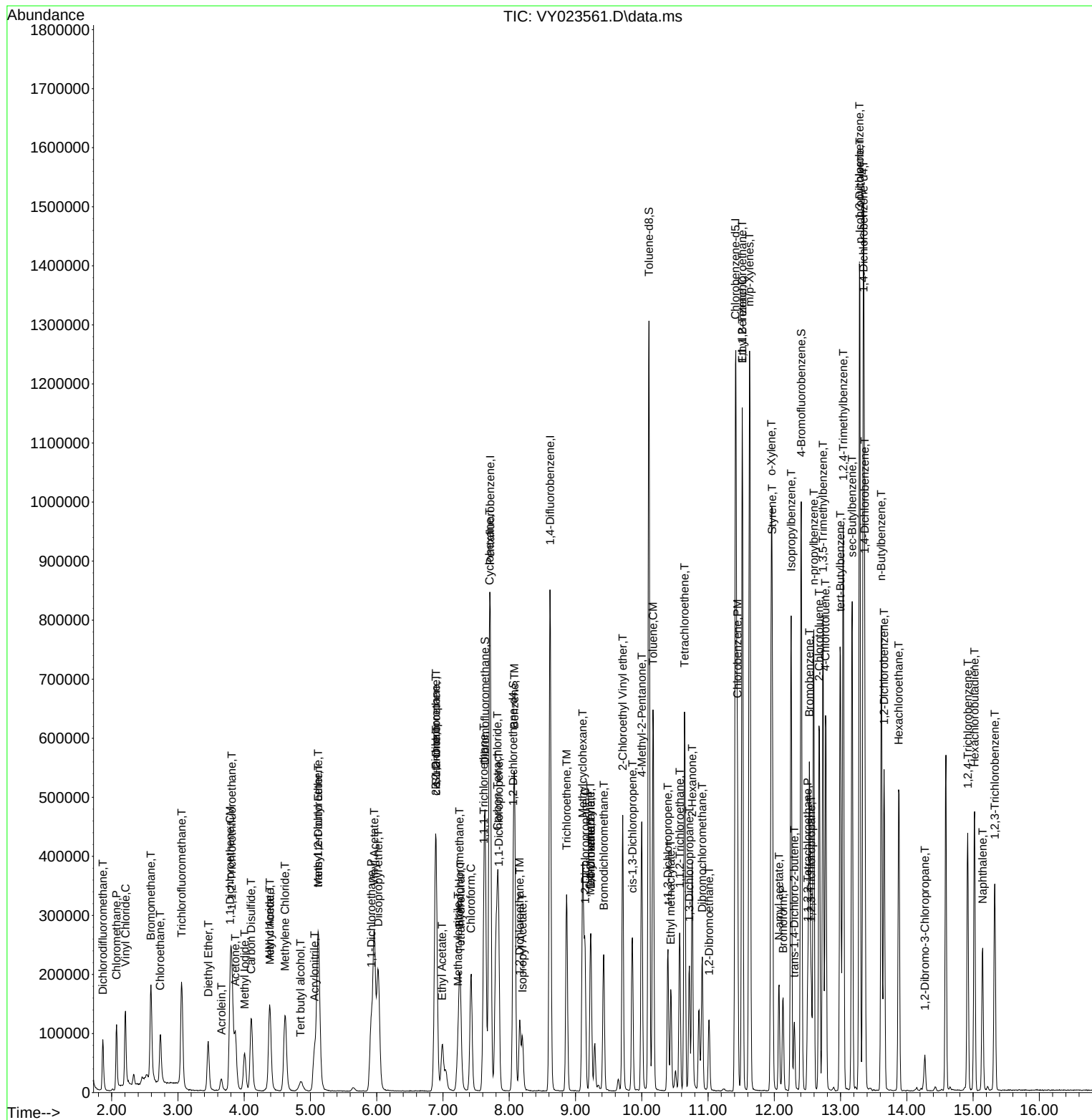
Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
 Data File : VY023561.D
 Acq On : 24 Oct 2025 09:52
 Operator : SY/MD
 Sample : VY1024SBS01
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 4 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VY1024SBS01

Manual Integrations APPROVED

Reviewed By :Amit Patel 10/27/2025
 Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:47:02 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration



Report of Analysis

Client: AECOM
 Project: AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206
 Client Sample ID: VY1022SBSD01
 Lab Sample ID: VY1022SBSD01
 Analytical Method: 8260D
 Sample Wt/Vol: 5 g

Level: LOW
 Final Vol: 5000 uL

Date Collected:
 Date Received:
 SDG No.: Q3419
 Matrix: SOIL
 % Solid: 100
 Test: VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
75-71-8	Dichlorodifluoromethane	19.5		1	1.10	5.00	ug/Kg	10/22/25 10:51	VY102225
74-87-3	Chloromethane	17.5		1	1.10	5.00	ug/Kg	10/22/25 10:51	VY102225
75-01-4	Vinyl Chloride	18.3		1	0.79	5.00	ug/Kg	10/22/25 10:51	VY102225
74-83-9	Bromomethane	19.0		1	1.10	5.00	ug/Kg	10/22/25 10:51	VY102225
75-00-3	Chloroethane	18.9		1	1.30	5.00	ug/Kg	10/22/25 10:51	VY102225
75-69-4	Trichlorofluoromethane	19.5		1	1.20	5.00	ug/Kg	10/22/25 10:51	VY102225
76-13-1	1,1,2-Trichlorotrifluoroethane	20.4		1	1.10	5.00	ug/Kg	10/22/25 10:51	VY102225
75-35-4	1,1-Dichloroethene	19.9		1	1.00	5.00	ug/Kg	10/22/25 10:51	VY102225
67-64-1	Acetone	120		1	4.70	25.0	ug/Kg	10/22/25 10:51	VY102225
75-15-0	Carbon Disulfide	18.8		1	1.10	5.00	ug/Kg	10/22/25 10:51	VY102225
1634-04-4	Methyl tert-butyl Ether	19.3		1	0.73	5.00	ug/Kg	10/22/25 10:51	VY102225
79-20-9	Methyl Acetate	16.0		1	1.50	5.00	ug/Kg	10/22/25 10:51	VY102225
75-09-2	Methylene Chloride	18.0		1	3.50	10.0	ug/Kg	10/22/25 10:51	VY102225
156-60-5	trans-1,2-Dichloroethene	20.1		1	0.86	5.00	ug/Kg	10/22/25 10:51	VY102225
75-34-3	1,1-Dichloroethane	19.9		1	0.80	5.00	ug/Kg	10/22/25 10:51	VY102225
110-82-7	Cyclohexane	18.5		1	0.79	5.00	ug/Kg	10/22/25 10:51	VY102225
78-93-3	2-Butanone	110		1	6.50	25.0	ug/Kg	10/22/25 10:51	VY102225
56-23-5	Carbon Tetrachloride	20.5		1	0.97	5.00	ug/Kg	10/22/25 10:51	VY102225
156-59-2	cis-1,2-Dichloroethene	20.7		1	0.75	5.00	ug/Kg	10/22/25 10:51	VY102225
74-97-5	Bromochloromethane	19.3		1	1.20	5.00	ug/Kg	10/22/25 10:51	VY102225
67-66-3	Chloroform	20.6		1	0.84	5.00	ug/Kg	10/22/25 10:51	VY102225
71-55-6	1,1,1-Trichloroethane	20.7		1	0.93	5.00	ug/Kg	10/22/25 10:51	VY102225
108-87-2	Methylcyclohexane	20.0		1	0.91	5.00	ug/Kg	10/22/25 10:51	VY102225
71-43-2	Benzene	20.7		1	0.79	5.00	ug/Kg	10/22/25 10:51	VY102225
107-06-2	1,2-Dichloroethane	19.4		1	0.79	5.00	ug/Kg	10/22/25 10:51	VY102225
79-01-6	Trichloroethene	21.2		1	0.81	5.00	ug/Kg	10/22/25 10:51	VY102225
78-87-5	1,2-Dichloropropane	20.3		1	0.91	5.00	ug/Kg	10/22/25 10:51	VY102225
75-27-4	Bromodichloromethane	20.7		1	0.78	5.00	ug/Kg	10/22/25 10:51	VY102225
108-10-1	4-Methyl-2-Pentanone	91.4		1	3.60	25.0	ug/Kg	10/22/25 10:51	VY102225
108-88-3	Toluene	21.2		1	0.78	5.00	ug/Kg	10/22/25 10:51	VY102225
10061-02-6	t-1,3-Dichloropropene	20.1		1	0.65	5.00	ug/Kg	10/22/25 10:51	VY102225
10061-01-5	cis-1,3-Dichloropropene	20.4		1	0.62	5.00	ug/Kg	10/22/25 10:51	VY102225
79-00-5	1,1,2-Trichloroethane	21.2		1	0.92	5.00	ug/Kg	10/22/25 10:51	VY102225
591-78-6	2-Hexanone	100		1	3.70	25.0	ug/Kg	10/22/25 10:51	VY102225
124-48-1	Dibromochloromethane	20.7		1	0.87	5.00	ug/Kg	10/22/25 10:51	VY102225
106-93-4	1,2-Dibromoethane	20.5		1	0.88	5.00	ug/Kg	10/22/25 10:51	VY102225
127-18-4	Tetrachloroethene	22.3		1	1.10	5.00	ug/Kg	10/22/25 10:51	VY102225
108-90-7	Chlorobenzene	21.0		1	0.91	5.00	ug/Kg	10/22/25 10:51	VY102225
100-41-4	Ethyl Benzene	20.8		1	0.67	5.00	ug/Kg	10/22/25 10:51	VY102225
179601-23-1	m/p-Xylenes	42.2		1	1.20	10.0	ug/Kg	10/22/25 10:51	VY102225
95-47-6	o-Xylene	21.1		1	0.82	5.00	ug/Kg	10/22/25 10:51	VY102225
100-42-5	Styrene	21.2		1	0.71	5.00	ug/Kg	10/22/25 10:51	VY102225
75-25-2	Bromoform	20.3		1	0.86	5.00	ug/Kg	10/22/25 10:51	VY102225



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

Report of Analysis

Client:	AECOM	Date Collected:	
Project:	AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206	Date Received:	
Client Sample ID:	VY1022SBSD01	SDG No.:	Q3419
Lab Sample ID:	VY1022SBSD01	Matrix:	SOIL
Analytical Method:	8260D	% Solid:	100
Sample Wt/Vol:	5 g	Test:	VOC-TCLVOA-10
	Level: LOW		
	Final Vol: 5000 uL		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
98-82-8	Isopropylbenzene	20.8		1	0.78	5.00	ug/Kg	10/22/25 10:51	VY102225
79-34-5	1,1,2,2-Tetrachloroethane	19.2		1	1.20	5.00	ug/Kg	10/22/25 10:51	VY102225
541-73-1	1,3-Dichlorobenzene	20.8		1	1.70	5.00	ug/Kg	10/22/25 10:51	VY102225
106-46-7	1,4-Dichlorobenzene	20.7		1	1.60	5.00	ug/Kg	10/22/25 10:51	VY102225
95-50-1	1,2-Dichlorobenzene	20.9		1	1.50	5.00	ug/Kg	10/22/25 10:51	VY102225
96-12-8	1,2-Dibromo-3-Chloropropane	19.0		1	1.80	5.00	ug/Kg	10/22/25 10:51	VY102225
120-82-1	1,2,4-Trichlorobenzene	20.2		1	3.00	5.00	ug/Kg	10/22/25 10:51	VY102225
87-61-6	1,2,3-Trichlorobenzene	19.5		1	3.20	5.00	ug/Kg	10/22/25 10:51	VY102225

SURROGATES

17060-07-0	1,2-Dichloroethane-d4	45.1			63 - 155	90%	SPK: 50
1868-53-7	Dibromofluoromethane	49.3			70 - 134	99%	SPK: 50
2037-26-5	Toluene-d8	48.6			74 - 123	97%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.7			17 - 146	97%	SPK: 50

INTERNAL STANDARDS

INTERNAL STANDARDS		Area Count
363-72-4	Pentafluorobenzene	543000
540-36-3	1,4-Difluorobenzene	794000
3114-55-4	Chlorobenzene-d5	692000
3855-82-1	1,4-Dichlorobenzene-d4	365000

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_Y\Data\VY102225\
 Data File : VY023546.D
 Acq On : 22 Oct 2025 10:51
 Operator : SY/MD
 Sample : VY1022SBS01
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VY1022SBS01

Manual Integrations
 APPROVED

Reviewed By :Amit Patel 10/24/2025
 Supervised By :Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 02:27:18 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	7.713	168	542616	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	8.616	114	794200	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.414	117	691787	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.346	152	364513	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.067	65	204806	45.137	ug/l	0.00
Spiked Amount 50.000	Range 50 - 163		Recovery =	90.280%		
35) Dibromofluoromethane	7.634	113	240748	49.334	ug/l	0.00
Spiked Amount 50.000	Range 54 - 147		Recovery =	98.660%		
50) Toluene-d8	10.109	98	883426	48.611	ug/l	0.00
Spiked Amount 50.000	Range 58 - 134		Recovery =	97.220%		
62) 4-Bromofluorobenzene	12.402	95	292410	48.735	ug/l	0.00
Spiked Amount 50.000	Range 30 - 143		Recovery =	97.480%		
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.867	85	75983	19.455	ug/l	97
3) Chloromethane	2.074	50	92933	17.467	ug/l	99
4) Vinyl Chloride	2.208	62	126494	18.253	ug/l	98
5) Bromomethane	2.592	94	110374	18.979	ug/l	100
6) Chloroethane	2.739	64	89057	18.853	ug/l	97
7) Trichlorofluoromethane	3.056	101	187963	19.534	ug/l	100
8) Diethyl Ether	3.458	74	48922	19.457	ug/l	92
9) 1,1,2-Trichlorotrifluo...	3.818	101	101676	20.363	ug/l	99
10) Methyl Iodide	4.007	142	118807	21.373	ug/l	98
11) Tert butyl alcohol	4.860	59	31636	93.720	ug/l	94
12) 1,1-Dichloroethene	3.793	96	96256	19.887	ug/l	92
13) Acrolein	3.653	56	23721	49.732	ug/l	96
14) Allyl chloride	4.391	41	107766	18.269	ug/l	96
15) Acrylonitrile	5.067	53	88820	92.308	ug/l	99
16) Acetone	3.866	43	128229	118.706	ug/l	100
17) Carbon Disulfide	4.110	76	260315	18.791	ug/l	99
18) Methyl Acetate	4.385	43	45233	15.963	ug/l	99
19) Methyl tert-butyl Ether	5.122	73	224408	19.290	ug/l	95
20) Methylene Chloride	4.616	84	105150	18.001	ug/l	95
21) trans-1,2-Dichloroethene	5.116	96	106942	20.068	ug/l	98
22) Diisopropyl ether	6.019	45	250099	19.167	ug/l	93
23) Vinyl Acetate	5.964	43	664719	94.117	ug/l	98
24) 1,1-Dichloroethane	5.921	63	171993	19.899	ug/l	97
25) 2-Butanone	6.896	43	138738	105.202	ug/l	100
26) 2,2-Dichloropropane	6.884	77	161087	20.311	ug/l	99
27) cis-1,2-Dichloroethene	6.896	96	127379	20.693	ug/l	95
28) Bromochloromethane	7.250	49	62387	19.335	ug/l	93
29) Tetrahydrofuran	7.268	42	63173	84.474	ug/l	93
30) Chloroform	7.427	83	195371	20.573	ug/l	99
31) Cyclohexane	7.707	56	139704	18.508	ug/l	88
32) 1,1,1-Trichloroethane	7.622	97	178412	20.674	ug/l	98
36) 1,1-Dichloropropene	7.841	75	132638	20.530	ug/l	100
37) Ethyl Acetate	6.988	43	48392	18.907	ug/l	98
38) Carbon Tetrachloride	7.823	117	160505	20.489	ug/l	95
39) Methylcyclohexane	9.109	83	168002	19.972	ug/l	99
40) Benzene	8.085	78	423056	20.677	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102225\
 Data File : VY023546.D
 Acq On : 22 Oct 2025 10:51
 Operator : SY/MD
 Sample : VY1022SBS01
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VY1022SBS01

Manual Integrations
 APPROVED

Reviewed By :Amit Patel 10/24/2025
 Supervised By :Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 02:27:18 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.220	41	23527	16.996	ug/l	88
42) 1,2-Dichloroethane	8.158	62	102298	19.387	ug/l	97
43) Isopropyl Acetate	8.201	43	92102	18.046	ug/l	98
44) Trichloroethene	8.866	130	126688	21.155	ug/l	98
45) 1,2-Dichloropropane	9.140	63	91803	20.314	ug/l	100
46) Dibromomethane	9.231	93	56943	19.927	ug/l	97
47) Bromodichloromethane	9.426	83	149048	20.710	ug/l	98
48) Methyl methacrylate	9.225	41	41870	17.463	ug/l	93
49) 1,4-Dioxane	9.231	88	12343	372.543	ug/l	98
51) 4-Methyl-2-Pentanone	10.000	43	240905	91.359	ug/l	98
52) Toluene	10.170	92	281449	21.186	ug/l	98
53) t-1,3-Dichloropropene	10.396	75	125699	20.087	ug/l	100
54) cis-1,3-Dichloropropene	9.859	75	150591	20.389	ug/l	96
55) 1,1,2-Trichloroethane	10.573	97	81403	21.184	ug/l	97
56) Ethyl methacrylate	10.438	69	84192	18.994	ug/l	95
57) 1,3-Dichloropropane	10.719	76	123408	20.266	ug/l	99
58) 2-Chloroethyl Vinyl ether	9.713	63	194748	98.074	ug/l	99
59) 2-Hexanone	10.762	43	193121	102.481	ug/l	97
60) Dibromochloromethane	10.908	129	111638	20.721	ug/l	100
61) 1,2-Dibromoethane	11.018	107	75216	20.524	ug/l	99
64) Tetrachloroethene	10.646	164	159402	22.316	ug/l	99
65) Chlorobenzene	11.444	112	315885	20.995	ug/l	100
66) 1,1,1,2-Tetrachloroethane	11.518	131	113849	21.234	ug/l	99
67) Ethyl Benzene	11.518	91	506760	20.807	ug/l	99
68) m/p-Xylenes	11.627	106	412583	42.235	ug/l	100
69) o-Xylene	11.957	106	193428	21.110	ug/l	98
70) Styrene	11.969	104	319023	21.173	ug/l	99
71) Bromoform	12.133	173	67370	20.257	ug/l	100
73) Isopropylbenzene	12.255	105	500033	20.816	ug/l	99
74) N-amyl acetate	12.072	43	76114	17.641	ug/l	97
75) 1,1,2,2-Tetrachloroethane	12.505	83	75476	19.210	ug/l	99
76) 1,2,3-Trichloropropane	12.554	75	68415m	21.273	ug/l	
77) Bromobenzene	12.530	156	135048	21.147	ug/l	95
78) n-propylbenzene	12.597	91	582648	20.960	ug/l	99
79) 2-Chlorotoluene	12.676	91	337780	20.750	ug/l	99
80) 1,3,5-Trimethylbenzene	12.737	105	412957	21.274	ug/l	100
81) trans-1,4-Dichloro-2-b...	12.304	75	25722	19.613	ug/l	97
82) 4-Chlorotoluene	12.773	91	343300	20.477	ug/l	98
83) tert-Butylbenzene	12.999	119	374031	20.869	ug/l	99
84) 1,2,4-Trimethylbenzene	13.042	105	406596	20.988	ug/l	99
85) sec-Butylbenzene	13.176	105	550279	21.403	ug/l	100
86) p-Isopropyltoluene	13.292	119	467814	21.371	ug/l	99
87) 1,3-Dichlorobenzene	13.286	146	258722	20.804	ug/l	99
88) 1,4-Dichlorobenzene	13.365	146	254047	20.684	ug/l	99
89) n-Butylbenzene	13.615	91	392922	20.600	ug/l	99
90) Hexachloroethane	13.877	117	95771	20.342	ug/l	99
91) 1,2-Dichlorobenzene	13.657	146	227404	20.857	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	14.273	75	12234	18.977	ug/l	96
93) 1,2,4-Trichlorobenzene	14.919	180	137068	20.166	ug/l	98
94) Hexachlorobutadiene	15.023	225	86848	20.497	ug/l	97
95) Naphthalene	15.145	128	204628	18.906	ug/l	99
96) 1,2,3-Trichlorobenzene	15.328	180	114859	19.509	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102225\
Data File : VY023546.D
Acq On : 22 Oct 2025 10:51
Operator : SY/MD
Sample : VY1022SBSD01
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
VY1022SBSD01

Manual Integrations
APPROVED

Reviewed By :Amit Patel 10/24/2025
Supervised By :Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 02:27:18 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 05:12:50 2025
Response via : Initial Calibration

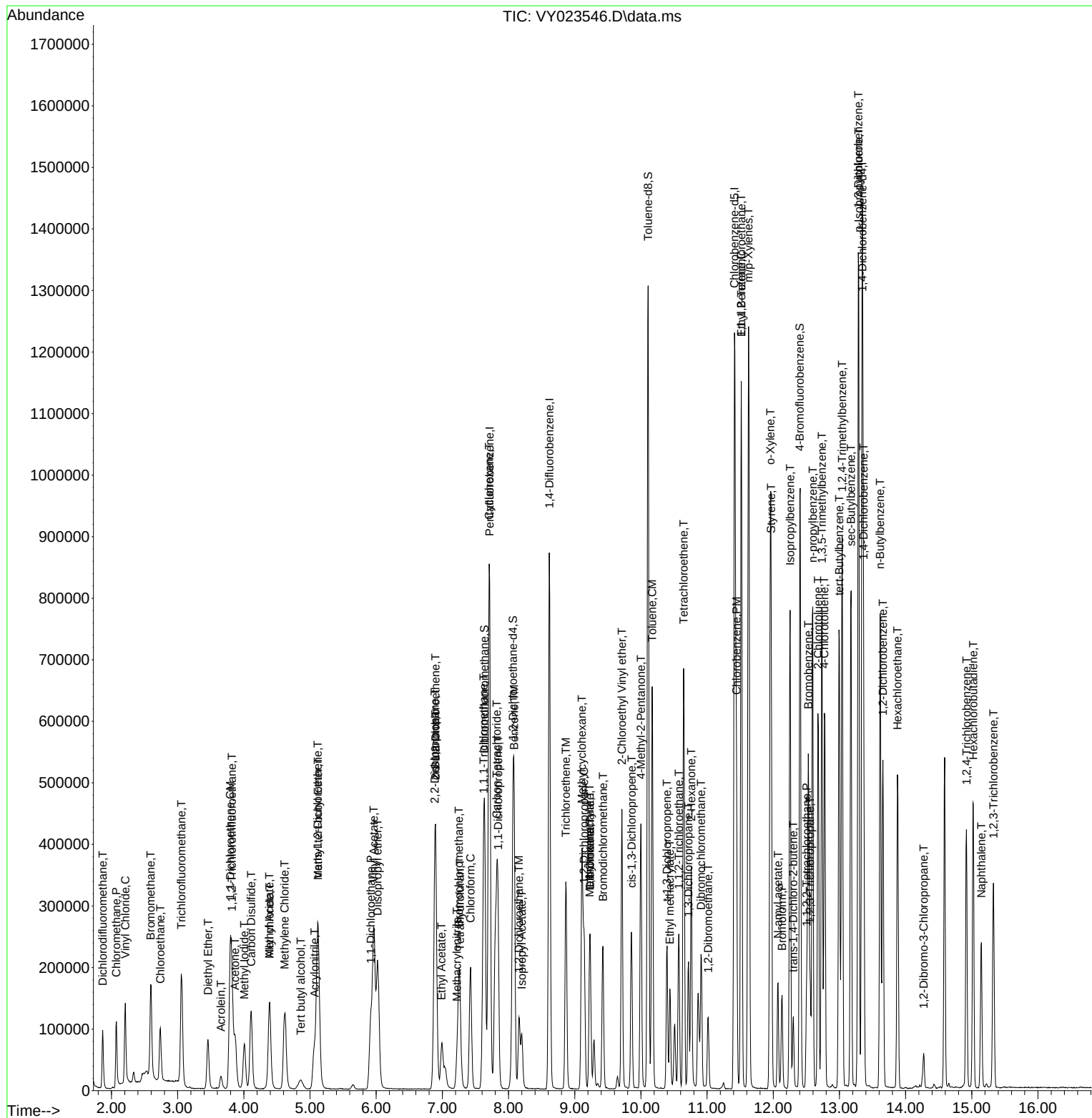
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Instrument :
MSVOA_Y
ClientSampleId :
VY1022SBSD01

Manual Integrations

Reviewed By :Amit Patel 10/24/2025
Supervised By :Mahesh Dadoda 10/24/2025



Report of Analysis

Client: AECOM
 Project: AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206
 Client Sample ID: VY1024SBSD01
 Lab Sample ID: VY1024SBSD01
 Analytical Method: 8260D
 Sample Wt/Vol: 5 g

Level: LOW
 Final Vol: 5000 uL

Date Collected:
 Date Received:
 SDG No.: Q3419
 Matrix: SOIL
 % Solid: 100
 Test: VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
75-71-8	Dichlorodifluoromethane	19.0		1	1.10	5.00	ug/Kg	10/24/25 10:14	VY102425
74-87-3	Chloromethane	17.9		1	1.10	5.00	ug/Kg	10/24/25 10:14	VY102425
75-01-4	Vinyl Chloride	18.8		1	0.79	5.00	ug/Kg	10/24/25 10:14	VY102425
74-83-9	Bromomethane	21.4		1	1.10	5.00	ug/Kg	10/24/25 10:14	VY102425
75-00-3	Chloroethane	19.6		1	1.30	5.00	ug/Kg	10/24/25 10:14	VY102425
75-69-4	Trichlorofluoromethane	20.3		1	1.20	5.00	ug/Kg	10/24/25 10:14	VY102425
76-13-1	1,1,2-Trichlorotrifluoroethane	21.2		1	1.10	5.00	ug/Kg	10/24/25 10:14	VY102425
75-35-4	1,1-Dichloroethene	20.8		1	1.00	5.00	ug/Kg	10/24/25 10:14	VY102425
67-64-1	Acetone	130		1	4.70	25.0	ug/Kg	10/24/25 10:14	VY102425
75-15-0	Carbon Disulfide	19.0		1	1.10	5.00	ug/Kg	10/24/25 10:14	VY102425
1634-04-4	Methyl tert-butyl Ether	21.1		1	0.73	5.00	ug/Kg	10/24/25 10:14	VY102425
79-20-9	Methyl Acetate	17.5		1	1.50	5.00	ug/Kg	10/24/25 10:14	VY102425
75-09-2	Methylene Chloride	19.3		1	3.50	10.0	ug/Kg	10/24/25 10:14	VY102425
156-60-5	trans-1,2-Dichloroethene	21.1		1	0.86	5.00	ug/Kg	10/24/25 10:14	VY102425
75-34-3	1,1-Dichloroethane	20.6		1	0.80	5.00	ug/Kg	10/24/25 10:14	VY102425
110-82-7	Cyclohexane	19.2		1	0.79	5.00	ug/Kg	10/24/25 10:14	VY102425
78-93-3	2-Butanone	120		1	6.50	25.0	ug/Kg	10/24/25 10:14	VY102425
56-23-5	Carbon Tetrachloride	21.4		1	0.97	5.00	ug/Kg	10/24/25 10:14	VY102425
156-59-2	cis-1,2-Dichloroethene	21.7		1	0.75	5.00	ug/Kg	10/24/25 10:14	VY102425
74-97-5	Bromochloromethane	20.0		1	1.20	5.00	ug/Kg	10/24/25 10:14	VY102425
67-66-3	Chloroform	21.3		1	0.84	5.00	ug/Kg	10/24/25 10:14	VY102425
71-55-6	1,1,1-Trichloroethane	21.2		1	0.93	5.00	ug/Kg	10/24/25 10:14	VY102425
108-87-2	Methylcyclohexane	20.7		1	0.91	5.00	ug/Kg	10/24/25 10:14	VY102425
71-43-2	Benzene	21.3		1	0.79	5.00	ug/Kg	10/24/25 10:14	VY102425
107-06-2	1,2-Dichloroethane	20.4		1	0.79	5.00	ug/Kg	10/24/25 10:14	VY102425
79-01-6	Trichloroethene	21.9		1	0.81	5.00	ug/Kg	10/24/25 10:14	VY102425
78-87-5	1,2-Dichloropropane	21.0		1	0.91	5.00	ug/Kg	10/24/25 10:14	VY102425
75-27-4	Bromodichloromethane	21.6		1	0.78	5.00	ug/Kg	10/24/25 10:14	VY102425
108-10-1	4-Methyl-2-Pentanone	100		1	3.60	25.0	ug/Kg	10/24/25 10:14	VY102425
108-88-3	Toluene	21.9		1	0.78	5.00	ug/Kg	10/24/25 10:14	VY102425
10061-02-6	t-1,3-Dichloropropene	21.3		1	0.65	5.00	ug/Kg	10/24/25 10:14	VY102425
10061-01-5	cis-1,3-Dichloropropene	21.8		1	0.62	5.00	ug/Kg	10/24/25 10:14	VY102425
79-00-5	1,1,2-Trichloroethane	23.0		1	0.92	5.00	ug/Kg	10/24/25 10:14	VY102425
591-78-6	2-Hexanone	120		1	3.70	25.0	ug/Kg	10/24/25 10:14	VY102425
124-48-1	Dibromochloromethane	22.7		1	0.87	5.00	ug/Kg	10/24/25 10:14	VY102425
106-93-4	1,2-Dibromoethane	22.5		1	0.88	5.00	ug/Kg	10/24/25 10:14	VY102425
127-18-4	Tetrachloroethene	21.3		1	1.10	5.00	ug/Kg	10/24/25 10:14	VY102425
108-90-7	Chlorobenzene	21.9		1	0.91	5.00	ug/Kg	10/24/25 10:14	VY102425
100-41-4	Ethyl Benzene	21.5		1	0.67	5.00	ug/Kg	10/24/25 10:14	VY102425
179601-23-1	m/p-Xylenes	44.4		1	1.20	10.0	ug/Kg	10/24/25 10:14	VY102425
95-47-6	o-Xylene	22.0		1	0.82	5.00	ug/Kg	10/24/25 10:14	VY102425
100-42-5	Styrene	21.9		1	0.71	5.00	ug/Kg	10/24/25 10:14	VY102425
75-25-2	Bromoform	22.6		1	0.86	5.00	ug/Kg	10/24/25 10:14	VY102425



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

Report of Analysis

Client:	AECOM	Date Collected:	
Project:	AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206	Date Received:	
Client Sample ID:	VY1024SBSD01	SDG No.:	Q3419
Lab Sample ID:	VY1024SBSD01	Matrix:	SOIL
Analytical Method:	8260D	% Solid:	100
Sample Wt/Vol:	5 g	Level:	LOW
		Final Vol:	5000 uL
		Test:	VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
98-82-8	Isopropylbenzene	21.8		1	0.78	5.00	ug/Kg	10/24/25 10:14	VY102425
79-34-5	1,1,2,2-Tetrachloroethane	22.4		1	1.20	5.00	ug/Kg	10/24/25 10:14	VY102425
541-73-1	1,3-Dichlorobenzene	22.0		1	1.70	5.00	ug/Kg	10/24/25 10:14	VY102425
106-46-7	1,4-Dichlorobenzene	21.8		1	1.60	5.00	ug/Kg	10/24/25 10:14	VY102425
95-50-1	1,2-Dichlorobenzene	22.3		1	1.50	5.00	ug/Kg	10/24/25 10:14	VY102425
96-12-8	1,2-Dibromo-3-Chloropropane	22.0		1	1.80	5.00	ug/Kg	10/24/25 10:14	VY102425
120-82-1	1,2,4-Trichlorobenzene	21.9		1	3.00	5.00	ug/Kg	10/24/25 10:14	VY102425
87-61-6	1,2,3-Trichlorobenzene	21.4		1	3.20	5.00	ug/Kg	10/24/25 10:14	VY102425
SURROGATES									
17060-07-0	1,2-Dichloroethane-d4	44.4			63 - 155	89%	SPK: 50		
1868-53-7	Dibromofluoromethane	49.4			70 - 134	99%	SPK: 50		
2037-26-5	Toluene-d8	47.6			74 - 123	95%	SPK: 50		
460-00-4	4-Bromofluorobenzene	47.8			17 - 146	96%	SPK: 50		
INTERNAL STANDARDS									
		Area Count							
363-72-4	Pentafluorobenzene	537000							
540-36-3	1,4-Difluorobenzene	784000							
3114-55-4	Chlorobenzene-d5	687000							
3855-82-1	1,4-Dichlorobenzene-d4	361000							

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_Y\Data\VY102425\
 Data File : VY023562.D
 Acq On : 24 Oct 2025 10:14
 Operator : SY/MD
 Sample : VY1024SBS01
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VY1024SBS01

Manual Integrations
 APPROVED

Reviewed By :Amit Patel 10/27/2025
 Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:48:12 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	7.707	168	536786	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	8.616	114	783587	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.414	117	686581	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.347	152	360721	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.061	65	199332	44.408	ug/l	0.00
Spiked Amount 50.000	Range 50 - 163		Recovery =	88.820%		
35) Dibromofluoromethane	7.634	113	237654	49.359	ug/l	0.00
Spiked Amount 50.000	Range 54 - 147		Recovery =	98.720%		
50) Toluene-d8	10.109	98	853846	47.619	ug/l	0.00
Spiked Amount 50.000	Range 58 - 134		Recovery =	95.240%		
62) 4-Bromofluorobenzene	12.402	95	282869	47.784	ug/l	0.00
Spiked Amount 50.000	Range 30 - 143		Recovery =	95.560%		
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.867	85	73403	18.998	ug/l	97
3) Chloromethane	2.074	50	94123	17.883	ug/l	99
4) Vinyl Chloride	2.208	62	128692	18.772	ug/l	99
5) Bromomethane	2.592	94	123016	21.383	ug/l	100
6) Chloroethane	2.733	64	91499	19.580	ug/l	99
7) Trichlorofluoromethane	3.056	101	193303	20.308	ug/l	98
8) Diethyl Ether	3.458	74	53195	21.387	ug/l	91
9) 1,1,2-Trichlorotrifluo...	3.818	101	104696	21.196	ug/l	98
10) Methyl Iodide	4.007	142	113792	20.694	ug/l	97
11) Tert butyl alcohol	4.860	59	36821	110.265	ug/l	97
12) 1,1-Dichloroethene	3.793	96	99711	20.824	ug/l	96
13) Acrolein	3.647	56	24350	51.605	ug/l	99
14) Allyl chloride	4.385	41	108412	18.578	ug/l	97
15) Acrylonitrile	5.061	53	94812	99.605	ug/l	99
16) Acetone	3.873	43	141337	132.262	ug/l	98
17) Carbon Disulfide	4.104	76	260295	18.993	ug/l	99
18) Methyl Acetate	4.391	43	48921	17.452	ug/l	97
19) Methyl tert-butyl Ether	5.116	73	243330	21.144	ug/l	99
20) Methylene Chloride	4.623	84	111608	19.315	ug/l	96
21) trans-1,2-Dichloroethene	5.116	96	111012	21.058	ug/l	98
22) Diisopropyl ether	6.025	45	259309	20.089	ug/l	99
23) Vinyl Acetate	5.964	43	706151	101.069	ug/l	96
24) 1,1-Dichloroethane	5.921	63	176426	20.634	ug/l	99
25) 2-Butanone	6.896	43	153481	117.645	ug/l	95
26) 2,2-Dichloropropane	6.884	77	168220	21.441	ug/l	99
27) cis-1,2-Dichloroethene	6.890	96	132133	21.699	ug/l	95
28) Bromochloromethane	7.244	49	63974	20.042	ug/l	91
29) Tetrahydrofuran	7.262	42	71418	96.536	ug/l	94
30) Chloroform	7.427	83	199992	21.289	ug/l	100
31) Cyclohexane	7.701	56	143461	19.213	ug/l	94
32) 1,1,1-Trichloroethane	7.616	97	181103	21.213	ug/l	98
36) 1,1-Dichloropropene	7.835	75	134460	21.094	ug/l	99
37) Ethyl Acetate	6.988	43	51097	20.234	ug/l	97
38) Carbon Tetrachloride	7.817	117	165067	21.356	ug/l	97
39) Methylcyclohexane	9.110	83	171472	20.661	ug/l	97
40) Benzene	8.079	78	429319	21.267	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
 Data File : VY023562.D
 Acq On : 24 Oct 2025 10:14
 Operator : SY/MD
 Sample : VY1024SBS01
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VY1024SBS01

Manual Integrations
 APPROVED

Reviewed By :Amit Patel 10/27/2025
 Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:48:12 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.238	41	27166m	19.890	ug/l	
42) 1,2-Dichloroethane	8.158	62	106025	20.365	ug/l	97
43) Isopropyl Acetate	8.201	43	101137	20.085	ug/l #	84
44) Trichloroethene	8.866	130	129117	21.853	ug/l	100
45) 1,2-Dichloropropane	9.140	63	93853	21.049	ug/l	97
46) Dibromomethane	9.231	93	61356	21.762	ug/l	96
47) Bromodichloromethane	9.420	83	153350	21.596	ug/l	99
48) Methyl methacrylate	9.219	41	43837	18.531	ug/l	86
49) 1,4-Dioxane	9.225	88	13942	426.504	ug/l	97
51) 4-Methyl-2-Pentanone	10.000	43	269342	103.526	ug/l	98
52) Toluene	10.170	92	287505	21.935	ug/l	98
53) t-1,3-Dichloropropene	10.396	75	131216	21.252	ug/l	98
54) cis-1,3-Dichloropropene	9.853	75	158569	21.760	ug/l	97
55) 1,1,2-Trichloroethane	10.573	97	87086	22.969	ug/l	96
56) Ethyl methacrylate	10.439	69	92237	21.090	ug/l	94
57) 1,3-Dichloropropane	10.719	76	132832	22.110	ug/l	99
58) 2-Chloroethyl Vinyl ether	9.713	63	197494	100.804	ug/l	97
59) 2-Hexanone	10.762	43	217078	116.754	ug/l	97
60) Dibromochloromethane	10.914	129	120798	22.725	ug/l	98
61) 1,2-Dibromoethane	11.012	107	81298	22.484	ug/l	98
64) Tetrachloroethene	10.646	164	151062	21.309	ug/l	99
65) Chlorobenzene	11.438	112	326646	21.874	ug/l	99
66) 1,1,1,2-Tetrachloroethane	11.518	131	118969	22.357	ug/l	99
67) Ethyl Benzene	11.518	91	519038	21.473	ug/l	98
68) m/p-Xylenes	11.627	106	430825	44.437	ug/l	98
69) o-Xylene	11.950	106	199866	21.978	ug/l	98
70) Styrene	11.969	104	327085	21.872	ug/l	99
71) Bromoform	12.133	173	74587	22.597	ug/l #	98
73) Isopropylbenzene	12.255	105	517060	21.751	ug/l	99
74) N-amyl acetate	12.066	43	85040	19.917	ug/l	95
75) 1,1,2,2-Tetrachloroethane	12.505	83	87273	22.446	ug/l	97
76) 1,2,3-Trichloropropane	12.554	75	60466m	18.999	ug/l	
77) Bromobenzene	12.530	156	139180	22.023	ug/l	97
78) n-propylbenzene	12.591	91	602594	21.905	ug/l	99
79) 2-Chlorotoluene	12.676	91	347665	21.582	ug/l	99
80) 1,3,5-Trimethylbenzene	12.737	105	429209	22.344	ug/l	98
81) trans-1,4-Dichloro-2-b...	12.298	75	27474	21.169	ug/l	97
82) 4-Chlorotoluene	12.774	91	360070	21.703	ug/l	98
83) tert-Butylbenzene	12.993	119	398925	22.492	ug/l	98
84) 1,2,4-Trimethylbenzene	13.042	105	424880	22.163	ug/l	99
85) sec-Butylbenzene	13.170	105	564414	22.184	ug/l	100
86) p-Isopropyltoluene	13.286	119	482314	22.265	ug/l	99
87) 1,3-Dichlorobenzene	13.286	146	271316	22.046	ug/l	99
88) 1,4-Dichlorobenzene	13.365	146	264489	21.761	ug/l	99
89) n-Butylbenzene	13.615	91	410914	21.770	ug/l	99
90) Hexachloroethane	13.877	117	103152	22.140	ug/l	95
91) 1,2-Dichlorobenzene	13.657	146	240455	22.286	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	14.273	75	14028	21.989	ug/l	98
93) 1,2,4-Trichlorobenzene	14.919	180	147428	21.918	ug/l	98
94) Hexachlorobutadiene	15.017	225	91078	21.721	ug/l	99
95) Naphthalene	15.139	128	228739	21.355	ug/l	99
96) 1,2,3-Trichlorobenzene	15.328	180	124725	21.407	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
Data File : VY023562.D
Acq On : 24 Oct 2025 10:14
Operator : SY/MD
Sample : VY1024SBSD01
Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
VY1024SBSD01

Manual Integrations
APPROVED

Reviewed By :Amit Patel 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:48:12 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 05:12:50 2025
Response via : Initial Calibration

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

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

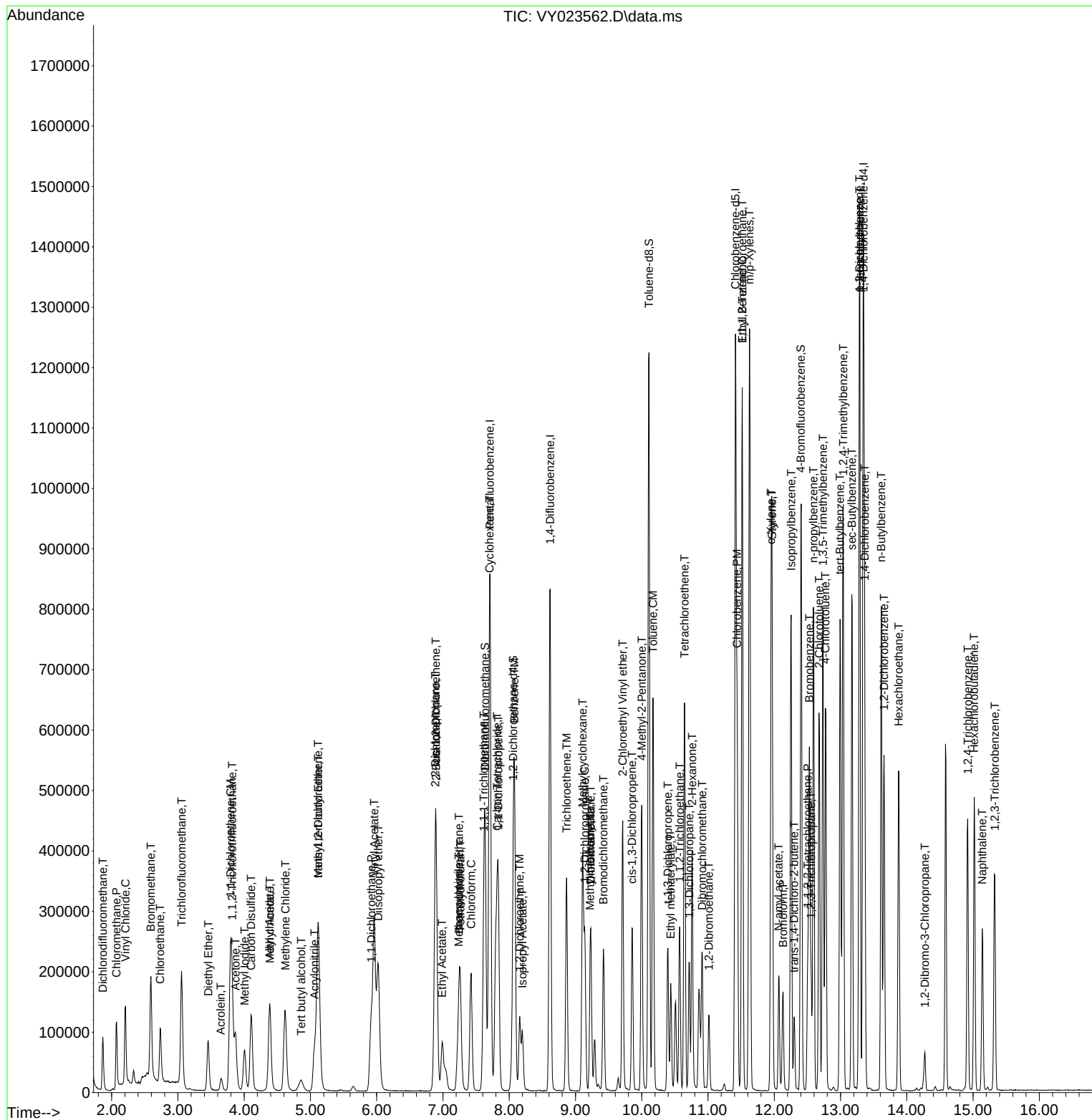
Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
 Data File : VY023562.D
 Acq On : 24 Oct 2025 10:14
 Operator : SY/MD
 Sample : VY1024SBSD01
 Misc : 5.00g/5.0mL/MSVOA_Y/SOIL
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 VY1024SBSD01

Manual Integrations APPROVED

Reviewed By :Amit Patel 10/27/2025
 Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:48:12 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration



Report of Analysis

Client: AECOM
 Project: AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206
 Client Sample ID: PR-132-S16-015094-20251C
 Lab Sample ID: Q3419-02MS
 Analytical Method: 8260D
 Sample Wt/Vol: 4.51 g

Level: LOW
 Final Vol: 5000 uL

Date Collected: 10/21/25
 Date Received: 10/21/25
 SDG No.: Q3419
 Matrix: SOIL
 % Solid: 54.4
 Test: VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
75-71-8	Dichlorodifluoromethane	130		1	2.30	10.2	ug/Kg	10/24/25 17:58	VY102425
74-87-3	Chloromethane	110		1	2.30	10.2	ug/Kg	10/24/25 17:58	VY102425
75-01-4	Vinyl Chloride	120		1	1.60	10.2	ug/Kg	10/24/25 17:58	VY102425
74-83-9	Bromomethane	76.6		1	2.20	10.2	ug/Kg	10/24/25 17:58	VY102425
75-00-3	Chloroethane	130		1	2.60	10.2	ug/Kg	10/24/25 17:58	VY102425
75-69-4	Trichlorofluoromethane	130		1	2.50	10.2	ug/Kg	10/24/25 17:58	VY102425
76-13-1	1,1,2-Trichlorotrifluoroethane	120		1	2.20	10.2	ug/Kg	10/24/25 17:58	VY102425
75-35-4	1,1-Dichloroethene	130		1	2.00	10.2	ug/Kg	10/24/25 17:58	VY102425
67-64-1	Acetone	950		1	9.70	50.9	ug/Kg	10/24/25 17:58	VY102425
75-15-0	Carbon Disulfide	97.7		1	2.20	10.2	ug/Kg	10/24/25 17:58	VY102425
1634-04-4	Methyl tert-butyl Ether	150		1	1.50	10.2	ug/Kg	10/24/25 17:58	VY102425
79-20-9	Methyl Acetate	360	E	1	3.10	10.2	ug/Kg	10/24/25 17:58	VY102425
75-09-2	Methylene Chloride	130		1	7.20	20.4	ug/Kg	10/24/25 17:58	VY102425
156-60-5	trans-1,2-Dichloroethene	110		1	1.80	10.2	ug/Kg	10/24/25 17:58	VY102425
75-34-3	1,1-Dichloroethane	130		1	1.60	10.2	ug/Kg	10/24/25 17:58	VY102425
110-82-7	Cyclohexane	62.0		1	1.60	10.2	ug/Kg	10/24/25 17:58	VY102425
78-93-3	2-Butanone	870		1	13.3	50.9	ug/Kg	10/24/25 17:58	VY102425
56-23-5	Carbon Tetrachloride	70.9		1	2.00	10.2	ug/Kg	10/24/25 17:58	VY102425
156-59-2	cis-1,2-Dichloroethene	120		1	1.50	10.2	ug/Kg	10/24/25 17:58	VY102425
74-97-5	Bromochloromethane	87.2		1	2.30	10.2	ug/Kg	10/24/25 17:58	VY102425
67-66-3	Chloroform	130		1	1.70	10.2	ug/Kg	10/24/25 17:58	VY102425
71-55-6	1,1,1-Trichloroethane	130		1	1.90	10.2	ug/Kg	10/24/25 17:58	VY102425
108-87-2	Methylcyclohexane	33.3		1	1.90	10.2	ug/Kg	10/24/25 17:58	VY102425
71-43-2	Benzene	130		1	1.60	10.2	ug/Kg	10/24/25 17:58	VY102425
107-06-2	1,2-Dichloroethane	140		1	1.60	10.2	ug/Kg	10/24/25 17:58	VY102425
79-01-6	Trichloroethene	130		1	1.70	10.2	ug/Kg	10/24/25 17:58	VY102425
78-87-5	1,2-Dichloropropane	130		1	1.90	10.2	ug/Kg	10/24/25 17:58	VY102425
75-27-4	Bromodichloromethane	120		1	1.60	10.2	ug/Kg	10/24/25 17:58	VY102425
108-10-1	4-Methyl-2-Pentanone	890		1	7.30	50.9	ug/Kg	10/24/25 17:58	VY102425
108-88-3	Toluene	110		1	1.60	10.2	ug/Kg	10/24/25 17:58	VY102425
10061-02-6	t-1,3-Dichloropropene	63.4		1	1.30	10.2	ug/Kg	10/24/25 17:58	VY102425
10061-01-5	cis-1,3-Dichloropropene	52.7		1	1.30	10.2	ug/Kg	10/24/25 17:58	VY102425
79-00-5	1,1,2-Trichloroethane	150		1	1.90	10.2	ug/Kg	10/24/25 17:58	VY102425
591-78-6	2-Hexanone	830		1	7.50	50.9	ug/Kg	10/24/25 17:58	VY102425
124-48-1	Dibromochloromethane	120		1	1.80	10.2	ug/Kg	10/24/25 17:58	VY102425
106-93-4	1,2-Dibromoethane	130		1	1.80	10.2	ug/Kg	10/24/25 17:58	VY102425
127-18-4	Tetrachloroethene	100		1	2.10	10.2	ug/Kg	10/24/25 17:58	VY102425
108-90-7	Chlorobenzene	120		1	1.90	10.2	ug/Kg	10/24/25 17:58	VY102425
100-41-4	Ethyl Benzene	96.1		1	1.40	10.2	ug/Kg	10/24/25 17:58	VY102425
179601-23-1	m/p-Xylenes	190		1	2.50	20.4	ug/Kg	10/24/25 17:58	VY102425
95-47-6	o-Xylene	95.7		1	1.70	10.2	ug/Kg	10/24/25 17:58	VY102425
100-42-5	Styrene	87.0		1	1.40	10.2	ug/Kg	10/24/25 17:58	VY102425
75-25-2	Bromoform	150		1	1.80	10.2	ug/Kg	10/24/25 17:58	VY102425



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

Report of Analysis

Client:	AECOM	Date Collected:	10/21/25
Project:	AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206	Date Received:	10/21/25
Client Sample ID:	PR-132-S16-015094-202510	SDG No.:	Q3419
Lab Sample ID:	Q3419-02MS	Matrix:	SOIL
Analytical Method:	8260D	% Solid:	54.4
Sample Wt/Vol:	4.51 g	Level:	LOW
		Final Vol:	5000 uL
		Test:	VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
98-82-8	Isopropylbenzene	100		1	1.60	10.2	ug/Kg	10/24/25 17:58	VY102425
79-34-5	1,1,2,2-Tetrachloroethane	290		1	2.50	10.2	ug/Kg	10/24/25 17:58	VY102425
541-73-1	1,3-Dichlorobenzene	77.7		1	3.50	10.2	ug/Kg	10/24/25 17:58	VY102425
106-46-7	1,4-Dichlorobenzene	82.3		1	3.20	10.2	ug/Kg	10/24/25 17:58	VY102425
95-50-1	1,2-Dichlorobenzene	86.7		1	3.00	10.2	ug/Kg	10/24/25 17:58	VY102425
96-12-8	1,2-Dibromo-3-Chloropropane	240		1	3.70	10.2	ug/Kg	10/24/25 17:58	VY102425
120-82-1	1,2,4-Trichlorobenzene	26.5		1	6.10	10.2	ug/Kg	10/24/25 17:58	VY102425
87-61-6	1,2,3-Trichlorobenzene	28.0		1	6.50	10.2	ug/Kg	10/24/25 17:58	VY102425

SURROGATES

17060-07-0	1,2-Dichloroethane-d4	53.2			63 - 155	106%	SPK: 50
1868-53-7	Dibromofluoromethane	52.5			70 - 134	105%	SPK: 50
2037-26-5	Toluene-d8	42.6			74 - 123	85%	SPK: 50
460-00-4	4-Bromofluorobenzene	28.2			17 - 146	56%	SPK: 50

INTERNAL STANDARDS

INTERNAL STANDARDS		Area Count
363-72-4	Pentafluorobenzene	272000
540-36-3	1,4-Difluorobenzene	386000
3114-55-4	Chlorobenzene-d5	250000
3855-82-1	1,4-Dichlorobenzene-d4	80100

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_Y\Data\VY102425\
 Data File : VY023580.D
 Acq On : 24 Oct 2025 17:58
 Operator : SY/MD
 Sample : Q3419-02MS
 Misc : 4.51g/5.0mL/MSVOA_Y/SOIL/A
 ALS Vial : 24 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 PR-132-S16-015094-20251021MS

Manual Integrations
 APPROVED

Reviewed By :Amit Patel 10/27/2025
 Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:55:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	7.713	168	271890	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	8.615	114	386012	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.420	117	249668	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.346	152	80067	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.067	65	120955	53.200	ug/l	0.00
Spiked Amount 50.000	Range 50 - 163		Recovery = 106.400%			
35) Dibromofluoromethane	7.640	113	124451	52.470	ug/l	0.00
Spiked Amount 50.000	Range 54 - 147		Recovery = 104.940%			
50) Toluene-d8	10.109	98	375970	42.564	ug/l	0.00
Spiked Amount 50.000	Range 58 - 134		Recovery = 85.120%			
62) 4-Bromofluorobenzene	12.407	95	82232	28.198	ug/l	0.00
Spiked Amount 50.000	Range 30 - 143		Recovery = 56.400%			
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.867	85	123303	63.005	ug/l	99
3) Chloromethane	2.074	50	142826	53.573	ug/l	97
4) Vinyl Chloride	2.208	62	208355	60.002	ug/l	97
5) Bromomethane	2.598	94	109512	37.581	ug/l	100
6) Chloroethane	2.738	64	148217	62.618	ug/l	100
7) Trichlorofluoromethane	3.062	101	316598	65.665	ug/l	99
8) Diethyl Ether	3.458	74	89273	70.860	ug/l	90
9) 1,1,2-Trichlorotrifluo...	3.818	101	141888	56.712	ug/l	98
10) Methyl Iodide	4.013	142	66058	23.717	ug/l	99
11) Tert butyl alcohol	4.860	59	72888	430.929	ug/l	99
12) 1,1-Dichloroethene	3.793	96	160081	66.004	ug/l	96
13) Acrolein	3.665	56	1782	7.456	ug/l #	78
14) Allyl chloride	4.391	41	135719	45.916	ug/l	99
15) Acrylonitrile	5.061	53	194034	402.443	ug/l	99
16) Acetone	3.872	43	251825	465.250	ug/l	96
17) Carbon Disulfide	4.110	76	332900	47.958	ug/l	98
18) Methyl Acetate	4.391	43	249670	175.841	ug/l	98
19) Methyl tert-butyl Ether	5.122	73	437575	75.068	ug/l	97
20) Methylene Chloride	4.622	84	187168	63.948	ug/l	97
21) trans-1,2-Dichloroethene	5.122	96	147659	55.299	ug/l	98
22) Diisopropyl ether	6.024	45	402936	61.629	ug/l	95
23) Vinyl Acetate	5.970	43	176253	49.804	ug/l	95
24) 1,1-Dichloroethane	5.921	63	279950	64.640	ug/l	99
25) 2-Butanone	6.896	43	283296	428.715	ug/l	98
26) 2,2-Dichloropropane	6.890	77	245108	61.678	ug/l	99
27) cis-1,2-Dichloroethene	6.896	96	186769	60.553	ug/l	96
28) Bromochloromethane	7.250	49	69155	42.773	ug/l	94
29) Tetrahydrofuran	7.268	42	158444	422.831	ug/l	94
30) Chloroform	7.427	83	313842	65.956	ug/l	97
31) Cyclohexane	7.707	56	115020	30.411	ug/l	98
32) 1,1,1-Trichloroethane	7.622	97	272172	62.941	ug/l	99
36) 1,1-Dichloropropene	7.841	75	179266	57.089	ug/l	99
37) Ethyl Acetate	6.988	43	78675	63.243	ug/l	96
38) Carbon Tetrachloride	7.817	117	132420	34.778	ug/l	94
39) Methylcyclohexane	9.109	83	66748	16.326	ug/l	97
40) Benzene	8.085	78	632004	63.553	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
 Data File : VY023580.D
 Acq On : 24 Oct 2025 17:58
 Operator : SY/MD
 Sample : Q3419-02MS
 Misc : 4.51g/5.0mL/MSVOA_Y/SOIL/A
 ALS Vial : 24 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 PR-132-S16-015094-20251021MS

Manual Integrations
 APPROVED

Reviewed By :Amit Patel 10/27/2025
 Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:55:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.225	41	55231	82.089	ug/l #	89
42) 1,2-Dichloroethane	8.158	62	179164	69.858	ug/l	99
43) Isopropyl Acetate	8.201	43	176116	70.997	ug/l	99
44) Trichloroethene	8.872	130	180969	62.175	ug/l	100
45) 1,2-Dichloropropane	9.146	63	140373	63.908	ug/l	97
46) Dibromomethane	9.231	93	98831	71.157	ug/l	98
47) Bromodichloromethane	9.426	83	210037	60.045	ug/l	99
48) Methyl methacrylate	9.225	41	97244	83.445	ug/l	91
49) 1,4-Dioxane	9.231	88	29028	1802.611	ug/l	93
51) 4-Methyl-2-Pentanone	9.999	43	558124	435.476	ug/l	98
52) Toluene	10.170	92	340114	52.676	ug/l	100
53) t-1,3-Dichloropropene	10.396	75	94649	31.118	ug/l	99
54) cis-1,3-Dichloropropene	9.859	75	92845	25.864	ug/l	97
55) 1,1,2-Trichloroethane	10.572	97	139759	74.829	ug/l	98
56) Ethyl methacrylate	10.438	69	135479	62.883	ug/l	96
57) 1,3-Dichloropropane	10.719	76	207123	69.983	ug/l	99
58) 2-Chloroethyl Vinyl ether	9.713	63	350506	363.168	ug/l	99
59) 2-Hexanone	10.761	43	375076	409.508	ug/l	96
60) Dibromochloromethane	10.914	129	151716	57.938	ug/l	99
61) 1,2-Dibromoethane	11.017	107	117891	66.185	ug/l	99
64) Tetrachloroethene	10.646	164	129361	50.180	ug/l	99
65) Chlorobenzene	11.444	112	306560	56.455	ug/l	100
66) 1,1,1,2-Tetrachloroethane	11.517	131	114295	59.065	ug/l	99
67) Ethyl Benzene	11.517	91	414287	47.133	ug/l	97
68) m/p-Xylenes	11.627	106	320246	90.836	ug/l	100
69) o-Xylene	11.956	106	155319	46.969	ug/l	99
70) Styrene	11.969	104	232107	42.682	ug/l	99
71) Bromoform	12.133	173	87609	72.989	ug/l #	100
73) Isopropylbenzene	12.255	105	262027	49.659	ug/l	99
74) N-amyl acetate	12.072	43	33094	34.919	ug/l	97
75) 1,1,2,2-Tetrachloroethane	12.505	83	121863	141.207	ug/l	98
76) 1,2,3-Trichloropropane	12.554	75	77567m	109.805	ug/l	
77) Bromobenzene	12.529	156	101958	72.684	ug/l	93
78) n-propylbenzene	12.596	91	237385	38.877	ug/l	99
79) 2-Chlorotoluene	12.682	91	171658	48.007	ug/l	99
80) 1,3,5-Trimethylbenzene	12.737	105	151905	35.627	ug/l	99
81) trans-1,4-Dichloro-2-b...	12.304	75	7609	26.414	ug/l	93
82) 4-Chlorotoluene	12.773	91	175602	47.685	ug/l	99
83) tert-Butylbenzene	12.999	119	123521	31.376	ug/l	100
84) 1,2,4-Trimethylbenzene	13.041	105	158575	37.266	ug/l	99
85) sec-Butylbenzene	13.176	105	129955	23.012	ug/l	99
86) p-Isopropyltoluene	13.291	119	103491	21.524	ug/l	98
87) 1,3-Dichlorobenzene	13.285	146	104101	38.110	ug/l	98
88) 1,4-Dichlorobenzene	13.365	146	108993	40.400	ug/l	98
89) n-Butylbenzene	13.615	91	64229	15.331	ug/l	99
90) Hexachloroethane	13.877	117	5641	5.455	ug/l	99
91) 1,2-Dichlorobenzene	13.657	146	101845	42.526	ug/l	96
92) 1,2-Dibromo-3-Chloropr...	14.273	75	16707	117.984	ug/l	91
93) 1,2,4-Trichlorobenzene	14.919	180	19425	13.011	ug/l	92
94) Hexachlorobutadiene	15.023	225	5601	6.018	ug/l	96
95) Naphthalene	15.139	128	79755	33.546	ug/l	99
96) 1,2,3-Trichlorobenzene	15.328	180	17795	13.760	ug/l	97

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
Data File : VY023580.D
Acq On : 24 Oct 2025 17:58
Operator : SY/MD
Sample : Q3419-02MS
Misc : 4.51g/5.0mL/MSVOA_Y/SOIL/A
ALS Vial : 24 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
PR-132-S16-015094-20251021MS

Manual Integrations
APPROVED

Reviewed By :Amit Patel 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:55:49 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 05:12:50 2025
Response via : Initial Calibration

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

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

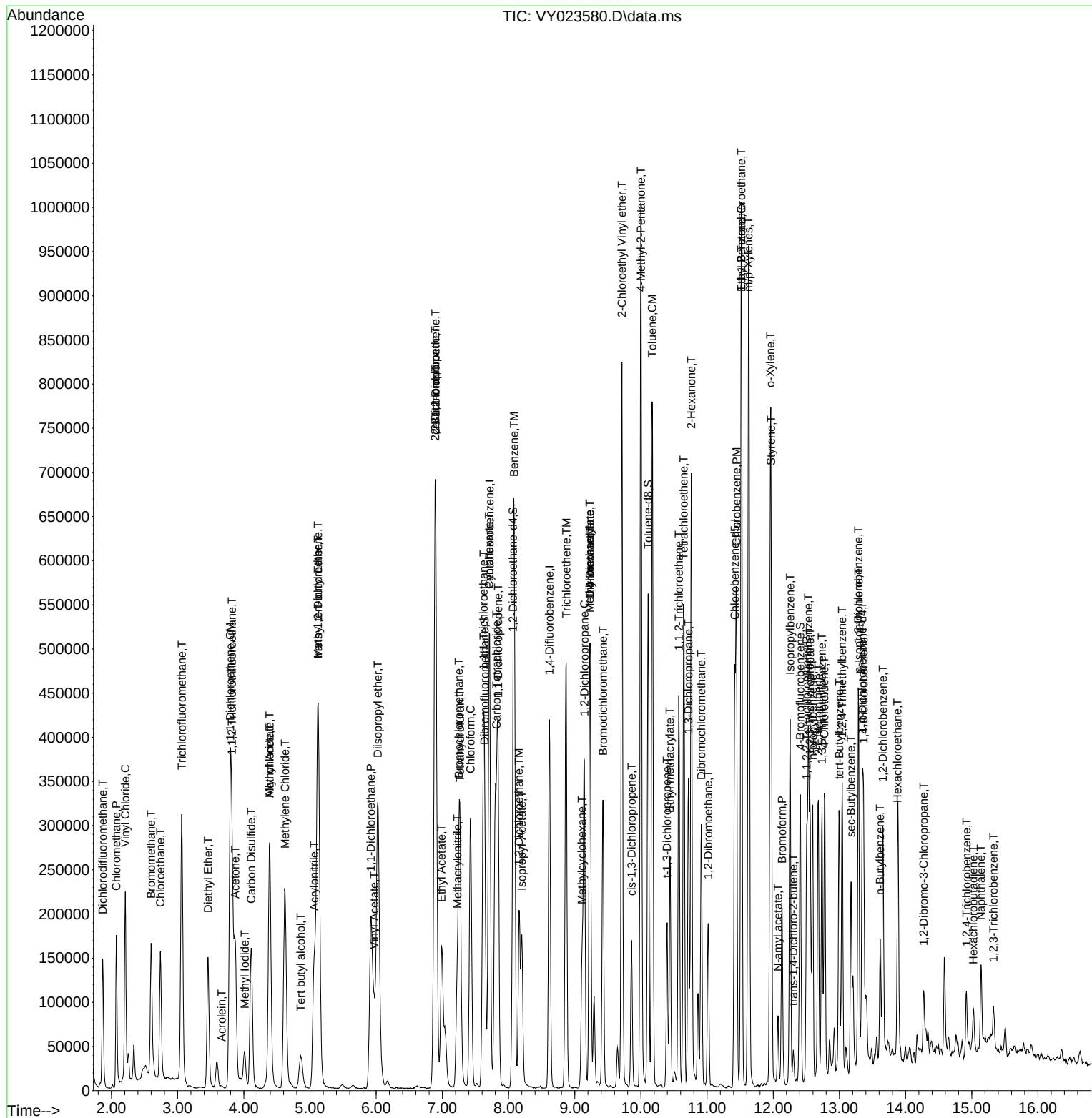
Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
Data File : VY023580.D
Acq On : 24 Oct 2025 17:58
Operator : SY/MD
Sample : Q3419-02MS
Misc : 4.51g/5.0mL/MSVOA_Y/SOIL/A
ALS Vial : 24 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
PR-132-S16-015094-20251021MS

Manual Integrations APPROVED

Reviewed By :Amit Patel 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:55:49 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 05:12:50 2025
Response via : Initial Calibration





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

Report of Analysis

Client: AECOM
Project: AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206
Client Sample ID: PR-132-S16-015094-20251C
Lab Sample ID: Q3419-03MSD
Analytical Method: 8260D
Sample Wt/Vol: 5.82 g

Level: LOW
Final Vol: 5000 uL

Date Collected: 10/21/25
Date Received: 10/21/25
SDG No.: Q3419
Matrix: SOIL
% Solid: 54.4
Test: VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
75-71-8	Dichlorodifluoromethane	99.9		1	1.80	7.90	ug/Kg	10/24/25 18:20	VY102425
74-87-3	Chloromethane	89.3		1	1.80	7.90	ug/Kg	10/24/25 18:20	VY102425
75-01-4	Vinyl Chloride	95.4		1	1.20	7.90	ug/Kg	10/24/25 18:20	VY102425
74-83-9	Bromomethane	45.2		1	1.70	7.90	ug/Kg	10/24/25 18:20	VY102425
75-00-3	Chloroethane	100		1	2.00	7.90	ug/Kg	10/24/25 18:20	VY102425
75-69-4	Trichlorofluoromethane	100		1	1.90	7.90	ug/Kg	10/24/25 18:20	VY102425
76-13-1	1,1,2-Trichlorotrifluoroethane	83.0		1	1.70	7.90	ug/Kg	10/24/25 18:20	VY102425
75-35-4	1,1-Dichloroethene	100		1	1.60	7.90	ug/Kg	10/24/25 18:20	VY102425
67-64-1	Acetone	1200		1	7.50	39.5	ug/Kg	10/24/25 18:20	VY102425
75-15-0	Carbon Disulfide	120		1	1.70	7.90	ug/Kg	10/24/25 18:20	VY102425
1634-04-4	Methyl tert-butyl Ether	150		1	1.20	7.90	ug/Kg	10/24/25 18:20	VY102425
79-20-9	Methyl Acetate	430	E	1	2.40	7.90	ug/Kg	10/24/25 18:20	VY102425
75-09-2	Methylene Chloride	100		1	5.60	15.8	ug/Kg	10/24/25 18:20	VY102425
156-60-5	trans-1,2-Dichloroethene	82.6		1	1.40	7.90	ug/Kg	10/24/25 18:20	VY102425
75-34-3	1,1-Dichloroethane	100		1	1.30	7.90	ug/Kg	10/24/25 18:20	VY102425
110-82-7	Cyclohexane	45.2		1	1.20	7.90	ug/Kg	10/24/25 18:20	VY102425
78-93-3	2-Butanone	970		1	10.3	39.5	ug/Kg	10/24/25 18:20	VY102425
56-23-5	Carbon Tetrachloride	58.9		1	1.50	7.90	ug/Kg	10/24/25 18:20	VY102425
156-59-2	cis-1,2-Dichloroethene	95.3		1	1.20	7.90	ug/Kg	10/24/25 18:20	VY102425
74-97-5	Bromochloromethane	96.1		1	1.80	7.90	ug/Kg	10/24/25 18:20	VY102425
67-66-3	Chloroform	110		1	1.30	7.90	ug/Kg	10/24/25 18:20	VY102425
71-55-6	1,1,1-Trichloroethane	98.5		1	1.50	7.90	ug/Kg	10/24/25 18:20	VY102425
108-87-2	Methylcyclohexane	29.4		1	1.40	7.90	ug/Kg	10/24/25 18:20	VY102425
71-43-2	Benzene	100		1	1.20	7.90	ug/Kg	10/24/25 18:20	VY102425
107-06-2	1,2-Dichloroethane	120		1	1.20	7.90	ug/Kg	10/24/25 18:20	VY102425
79-01-6	Trichloroethene	89.8		1	1.30	7.90	ug/Kg	10/24/25 18:20	VY102425
78-87-5	1,2-Dichloropropane	110		1	1.40	7.90	ug/Kg	10/24/25 18:20	VY102425
75-27-4	Bromodichloromethane	100		1	1.20	7.90	ug/Kg	10/24/25 18:20	VY102425
108-10-1	4-Methyl-2-Pentanone	980		1	5.70	39.5	ug/Kg	10/24/25 18:20	VY102425
108-88-3	Toluene	80.6		1	1.20	7.90	ug/Kg	10/24/25 18:20	VY102425
10061-02-6	t-1,3-Dichloropropene	33.6		1	1.00	7.90	ug/Kg	10/24/25 18:20	VY102425
10061-01-5	cis-1,3-Dichloropropene	24.0		1	0.98	7.90	ug/Kg	10/24/25 18:20	VY102425
79-00-5	1,1,2-Trichloroethane	140		1	1.50	7.90	ug/Kg	10/24/25 18:20	VY102425
591-78-6	2-Hexanone	930		1	5.80	39.5	ug/Kg	10/24/25 18:20	VY102425
124-48-1	Dibromochloromethane	110		1	1.40	7.90	ug/Kg	10/24/25 18:20	VY102425
106-93-4	1,2-Dibromoethane	120		1	1.40	7.90	ug/Kg	10/24/25 18:20	VY102425
127-18-4	Tetrachloroethene	85.4		1	1.70	7.90	ug/Kg	10/24/25 18:20	VY102425
108-90-7	Chlorobenzene	87.9		1	1.40	7.90	ug/Kg	10/24/25 18:20	VY102425
100-41-4	Ethyl Benzene	69.7		1	1.10	7.90	ug/Kg	10/24/25 18:20	VY102425
179601-23-1	m/p-Xylenes	130		1	2.00	15.8	ug/Kg	10/24/25 18:20	VY102425
95-47-6	o-Xylene	70.9		1	1.30	7.90	ug/Kg	10/24/25 18:20	VY102425
100-42-5	Styrene	56.7		1	1.10	7.90	ug/Kg	10/24/25 18:20	VY102425
75-25-2	Bromoform	150		1	1.40	7.90	ug/Kg	10/24/25 18:20	VY102425



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

Report of Analysis

Client:	AECOM	Date Collected:	10/21/25
Project:	AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206	Date Received:	10/21/25
Client Sample ID:	PR-132-S16-015094-202510	SDG No.:	Q3419
Lab Sample ID:	Q3419-03MSD	Matrix:	SOIL
Analytical Method:	8260D	% Solid:	54.4
Sample Wt/Vol:	5.82 g	Level:	LOW
		Final Vol:	5000 uL
		Test:	VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
98-82-8	Isopropylbenzene	77.2		1	1.20	7.90	ug/Kg	10/24/25 18:20	VY102425
79-34-5	1,1,2,2-Tetrachloroethane	280	E	1	1.90	7.90	ug/Kg	10/24/25 18:20	VY102425
541-73-1	1,3-Dichlorobenzene	62.5		1	2.70	7.90	ug/Kg	10/24/25 18:20	VY102425
106-46-7	1,4-Dichlorobenzene	65.6		1	2.50	7.90	ug/Kg	10/24/25 18:20	VY102425
95-50-1	1,2-Dichlorobenzene	72.3		1	2.30	7.90	ug/Kg	10/24/25 18:20	VY102425
96-12-8	1,2-Dibromo-3-Chloropropane	250	E	1	2.90	7.90	ug/Kg	10/24/25 18:20	VY102425
120-82-1	1,2,4-Trichlorobenzene	26.2		1	4.70	7.90	ug/Kg	10/24/25 18:20	VY102425
87-61-6	1,2,3-Trichlorobenzene	29.6		1	5.00	7.90	ug/Kg	10/24/25 18:20	VY102425

SURROGATES

17060-07-0	1,2-Dichloroethane-d4	54.7			63 - 155	109%	SPK: 50
1868-53-7	Dibromofluoromethane	46.4			70 - 134	93%	SPK: 50
2037-26-5	Toluene-d8	34.7	*		74 - 123	69%	SPK: 50
460-00-4	4-Bromofluorobenzene	25.0			17 - 146	50%	SPK: 50

INTERNAL STANDARDS

INTERNAL STANDARDS		Area Count
363-72-4	Pentafluorobenzene	174000
540-36-3	1,4-Difluorobenzene	246000
3114-55-4	Chlorobenzene-d5	158000
3855-82-1	1,4-Dichlorobenzene-d4	48900

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_Y\Data\VY102425\
 Data File : VY023581.D
 Acq On : 24 Oct 2025 18:20
 Operator : SY/MD
 Sample : Q3419-03MSD
 Misc : 5.82g/5.0mL/MSVOA_Y/SOIL/A
 ALS Vial : 25 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 PR-132-S16-015094-20251021MSD

Manual Integrations
 APPROVED

Reviewed By :Amit Patel 10/27/2025
 Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:57:37 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	7.713	168	173647	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	8.616	114	245581	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.414	117	157959	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.347	152	48940	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.067	65	79397	54.679	ug/l	0.00
Spiked Amount 50.000	Range 50 - 163		Recovery = 109.360%			
35) Dibromofluoromethane	7.640	113	69999	46.388	ug/l	0.00
Spiked Amount 50.000	Range 54 - 147		Recovery = 92.780%			
50) Toluene-d8	10.109	98	194718	34.650	ug/l	0.00
Spiked Amount 50.000	Range 58 - 134		Recovery = 69.300%			
62) 4-Bromofluorobenzene	12.408	95	46316	24.964	ug/l	0.00
Spiked Amount 50.000	Range 30 - 143		Recovery = 49.920%			
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.867	85	79103	63.288	ug/l	99
3) Chloromethane	2.074	50	96244	56.525	ug/l	98
4) Vinyl Chloride	2.208	62	134030	60.435	ug/l	99
5) Bromomethane	2.605	94	53316	28.648	ug/l	97
6) Chloroethane	2.739	64	95948	63.470	ug/l	98
7) Trichlorofluoromethane	3.062	101	198070	64.324	ug/l	95
8) Diethyl Ether	3.458	74	66810	83.032	ug/l	97
9) 1,1,2-Trichlorotrifluo...	3.818	101	84002	52.571	ug/l	99
10) Methyl Iodide	4.013	142	19632	11.036	ug/l	99
11) Tert butyl alcohol	4.866	59	64307	595.297	ug/l	100
12) 1,1-Dichloroethene	3.793	96	99787	64.421	ug/l	99
13) Acrolein	3.659	56	2104	13.784	ug/l #	74
14) Allyl chloride	4.391	41	60022	31.795	ug/l	91
15) Acrylonitrile	5.061	53	172997	561.812	ug/l	98
16) Acetone	3.873	43	256528	742.075	ug/l	98
17) Carbon Disulfide	4.110	76	337360	76.096	ug/l	99
18) Methyl Acetate	4.385	43	249309	274.928	ug/l	100
19) Methyl tert-butyl Ether	5.122	73	346226	93.001	ug/l	97
20) Methylene Chloride	4.622	84	123905	66.285	ug/l	98
21) trans-1,2-Dichloroethene	5.122	96	89197	52.303	ug/l	99
22) Diisopropyl ether	6.025	45	270915	64.879	ug/l	97
24) 1,1-Dichloroethane	5.921	63	183785	66.444	ug/l	99
25) 2-Butanone	6.896	43	259730	615.426	ug/l	100
26) 2,2-Dichloropropane	6.890	77	156385	61.616	ug/l	99
27) cis-1,2-Dichloroethene	6.903	96	118912	60.364	ug/l	97
28) Bromochloromethane	7.250	49	62830	60.847	ug/l	96
29) Tetrahydrofuran	7.268	42	146863	613.662	ug/l	95
30) Chloroform	7.427	83	207694	68.343	ug/l	97
31) Cyclohexane	7.707	56	69141	28.623	ug/l	95
32) 1,1,1-Trichloroethane	7.622	97	172234	62.365	ug/l	98
36) 1,1-Dichloropropene	7.841	75	107322	53.722	ug/l	99
37) Ethyl Acetate	6.988	43	60616	76.589	ug/l	97
38) Carbon Tetrachloride	7.823	117	90291	37.274	ug/l	97
39) Methylcyclohexane	9.109	83	48427	18.618	ug/l	96
40) Benzene	8.085	78	408926	64.635	ug/l	100
41) Methacrylonitrile	7.226	41	47920	111.951	ug/l	91

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
 Data File : VY023581.D
 Acq On : 24 Oct 2025 18:20
 Operator : SY/MD
 Sample : Q3419-03MSD
 Misc : 5.82g/5.0mL/MSVOA_Y/SOIL/A
 ALS Vial : 25 Sample Multiplier: 1

Instrument :
 MSVOA_Y
 ClientSampleId :
 PR-132-S16-015094-20251021MSD

Manual Integrations
 APPROVED

Reviewed By :Amit Patel 10/27/2025
 Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:57:37 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
 Quant Title : SW846 8260
 QLast Update : Wed Oct 08 05:12:50 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) 1,2-Dichloroethane	8.158	62	126898	77.773	ug/l	98
43) Isopropyl Acetate	8.201	43	135161	85.645	ug/l	97
44) Trichloroethene	8.872	130	105286	56.858	ug/l	99
45) 1,2-Dichloropropane	9.146	63	93324	66.784	ug/l	99
46) Dibromomethane	9.231	93	72267	81.785	ug/l	98
47) Bromodichloromethane	9.427	83	146364	65.769	ug/l	100
48) Methyl methacrylate	9.225	41	86669	116.898	ug/l	97
49) 1,4-Dioxane	9.231	88	26544	2590.939	ug/l	96
51) 4-Methyl-2-Pentanone	10.000	43	507478	622.382	ug/l	98
52) Toluene	10.170	92	209716	51.053	ug/l	99
53) t-1,3-Dichloropropene	10.396	75	41168	21.275	ug/l	97
54) cis-1,3-Dichloropropene	9.859	75	34656	15.175	ug/l	98
55) 1,1,2-Trichloroethane	10.573	97	104391	87.853	ug/l	96
56) Ethyl methacrylate	10.439	69	100718	73.481	ug/l	96
57) 1,3-Dichloropropane	10.719	76	154240	81.916	ug/l	100
58) 2-Chloroethyl Vinyl ether	9.713	63	281024	457.679	ug/l	98
59) 2-Hexanone	10.762	43	341891	586.729	ug/l	97
60) Dibromochloromethane	10.914	129	114167	68.530	ug/l	99
61) 1,2-Dibromoethane	11.018	107	85947	75.843	ug/l	99
64) Tetrachloroethene	10.652	164	88229	54.095	ug/l	94
65) Chlorobenzene	11.444	112	191312	55.686	ug/l	100
66) 1,1,1,2-Tetrachloroethane	11.518	131	83504	68.207	ug/l	99
67) Ethyl Benzene	11.518	91	245521	44.150	ug/l	99
68) m/p-Xylenes	11.627	106	190171	85.258	ug/l	98
69) o-Xylene	11.950	106	93972	44.916	ug/l	98
70) Styrene	11.969	104	123591	35.922	ug/l	99
71) Bromoform	12.133	173	69787	91.897	ug/l #	100
73) Isopropylbenzene	12.255	105	157585	48.860	ug/l	99
74) N-amyl acetate	12.072	43	8440	14.569	ug/l	94
75) 1,1,2,2-Tetrachloroethane	12.505	83	93161	176.607	ug/l	99
76) 1,2,3-Trichloropropane	12.554	75	63376m	146.778	ug/l	
77) Bromobenzene	12.530	156	64793	75.567	ug/l	86
78) n-propylbenzene	12.591	91	142211	38.103	ug/l	98
79) 2-Chlorotoluene	12.682	91	106207	48.594	ug/l	99
80) 1,3,5-Trimethylbenzene	12.737	105	92656	35.552	ug/l	98
81) trans-1,4-Dichloro-2-b...	12.304	75	1014m	5.759	ug/l	
82) 4-Chlorotoluene	12.780	91	104792	46.556	ug/l	97
83) tert-Butylbenzene	12.999	119	80984	33.655	ug/l	98
84) 1,2,4-Trimethylbenzene	13.042	105	99548	38.273	ug/l	98
85) sec-Butylbenzene	13.176	105	91190	26.418	ug/l	98
86) p-Isopropyltoluene	13.292	119	70459	23.974	ug/l	98
87) 1,3-Dichlorobenzene	13.286	146	66124	39.603	ug/l	96
88) 1,4-Dichlorobenzene	13.365	146	68453	41.511	ug/l	99
89) n-Butylbenzene	13.615	91	47002	18.354	ug/l	98
90) Hexachloroethane	13.877	117	7634	12.077	ug/l	98
91) 1,2-Dichlorobenzene	13.657	146	67020	45.784	ug/l	97
92) 1,2-Dibromo-3-Chloropr...	14.273	75	13660	157.821	ug/l	93
93) 1,2,4-Trichlorobenzene	14.919	180	15146	16.597	ug/l	96
94) Hexachlorobutadiene	15.023	225	5609	9.860	ug/l	95
95) Naphthalene	15.145	128	68160	46.903	ug/l	97
96) 1,2,3-Trichlorobenzene	15.328	180	14795	18.717	ug/l	96

Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
Data File : VY023581.D
Acq On : 24 Oct 2025 18:20
Operator : SY/MD
Sample : Q3419-03MSD
Misc : 5.82g/5.0mL/MSVOA_Y/SOIL/A
ALS Vial : 25 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
PR-132-S16-015094-20251021MSD

Manual Integrations
APPROVED

Reviewed By :Amit Patel 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:57:37 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 05:12:50 2025
Response via : Initial Calibration

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

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

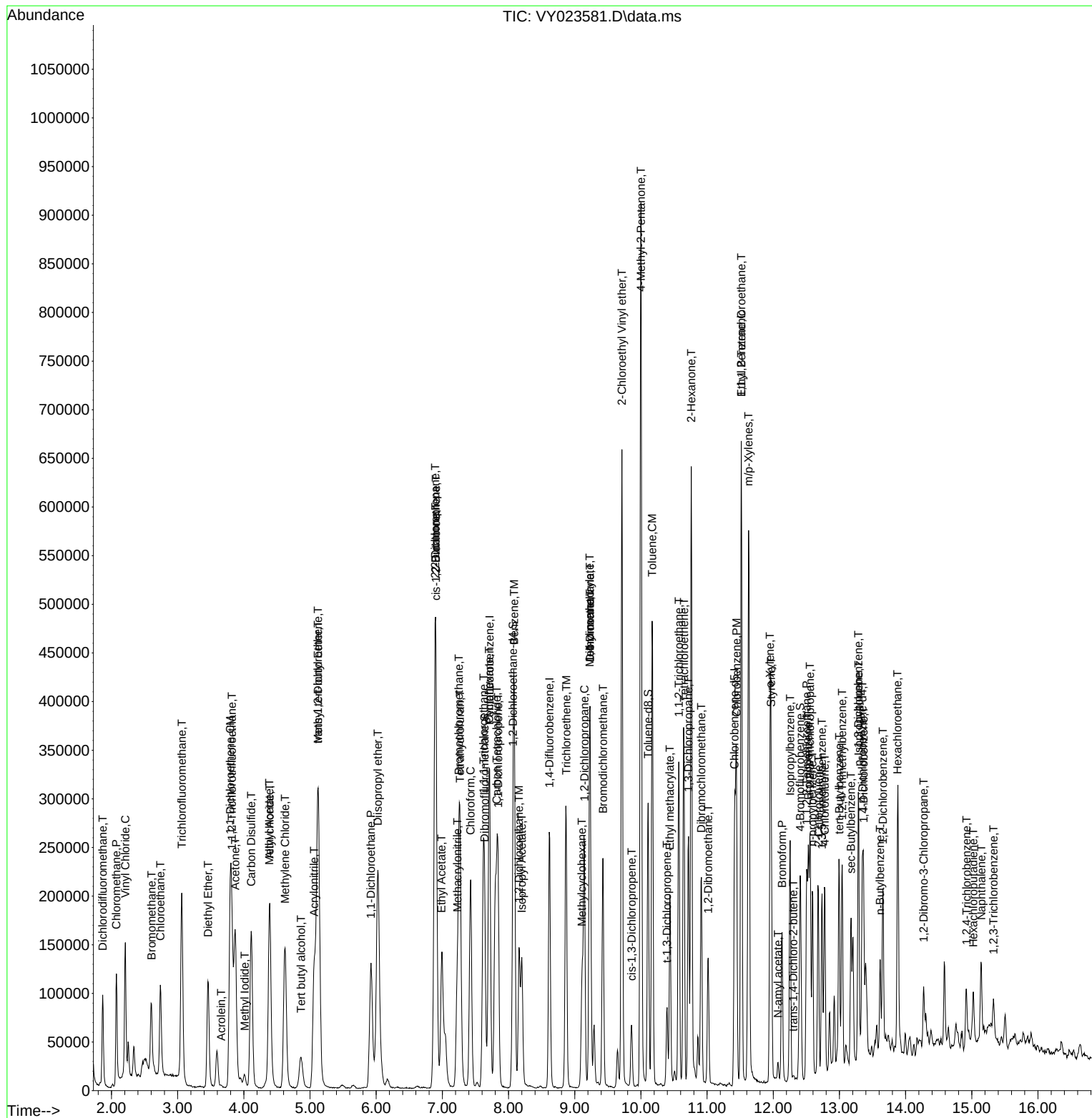
Data Path : Z:\voasrv\HPCHEM1\MSVOA_Y\Data\VY102425\
Data File : VY023581.D
Acq On : 24 Oct 2025 18:20
Operator : SY/MD
Sample : Q3419-03MSD
Misc : 5.82g/5.0mL/MSVOA_Y/SOIL/A
ALS Vial : 25 Sample Multiplier: 1

Instrument :
MSVOA_Y
ClientSampleId :
PR-132-S16-015094-20251021MSD

Manual Integrations APPROVED

Reviewed By :Amit Patel 10/27/2025
Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 23:57:37 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_Y\methods\82Y100725S.M
Quant Title : SW846 8260
QLast Update : Wed Oct 08 05:12:50 2025
Response via : Initial Calibration



Manual Integration Report

Sequence:	VY100725	Instrument	MSVOA_y

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDIC005	VY023384.D	1,2,3-Trichloropropane	sam	10/10/2025 2:59:48 AM	MMdadoda	10/10/2025 4:37:28 AM	Peak Integrated by Software
VSTDIC005	VY023384.D	2-Chloroethyl Vinyl ether	sam	10/10/2025 2:59:48 AM	MMdadoda	10/10/2025 4:37:28 AM	Peak Integrated by Software
VSTDIC005	VY023384.D	Methacrylonitrile	sam	10/10/2025 2:59:48 AM	MMdadoda	10/10/2025 4:37:28 AM	Peak Integrated by Software
VSTDIC010	VY023385.D	1,2,3-Trichloropropane	sam	10/10/2025 2:59:52 AM	MMdadoda	10/10/2025 4:37:33 AM	Peak Integrated by Software
VSTDIC010	VY023385.D	2-Chloroethyl Vinyl ether	sam	10/10/2025 2:59:52 AM	MMdadoda	10/10/2025 4:37:33 AM	Peak Integrated by Software
VSTDIC020	VY023386.D	1,2,3-Trichloropropane	sam	10/10/2025 2:59:56 AM	MMdadoda	10/10/2025 4:37:37 AM	Peak Integrated by Software
VSTDIC020	VY023386.D	2-Chloroethyl Vinyl ether	sam	10/10/2025 2:59:56 AM	MMdadoda	10/10/2025 4:37:37 AM	Peak Integrated by Software
VSTDIC020	VY023386.D	Methacrylonitrile	sam	10/10/2025 2:59:56 AM	MMdadoda	10/10/2025 4:37:37 AM	Peak Integrated by Software
VSTDICCC050	VY023387.D	1,2,3-Trichloropropane	sam	10/10/2025 3:00:01 AM	MMdadoda	10/10/2025 4:37:41 AM	Peak Integrated by Software
VSTDIC100	VY023388.D	1,2,3-Trichloropropane	sam	10/10/2025 3:00:05 AM	MMdadoda	10/10/2025 4:37:46 AM	Peak Integrated by Software
VSTDIC150	VY023389.D	1,2,3-Trichloropropane	sam	10/10/2025 3:00:09 AM	MMdadoda	10/10/2025 4:37:51 AM	Peak Integrated by Software
VSTDICV050	VY023391.D	1,2,3-Trichloropropane	sam	10/10/2025 3:00:14 AM	MMdadoda	10/10/2025 4:37:55 AM	Peak Integrated by Software



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

Manual Integration Report

Sequence:

VY100725

Instrument

MSVOA_y

Sample ID

File ID

Parameter

Review By

Review On

Supervised
By

Supervised On

Reason

Manual Integration Report

Sequence:

VY102225

Instrument

MSVOA_y

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC050	VY023543.D	1,2,3-Trichloropropane	Amit	10/24/2025 11:56:25 AM	MMDadoda	10/24/2025 2:54:05 PM	Peak Integrated by Software
VSTDCCC050	VY023543.D	Methacrylonitrile	Amit	10/24/2025 11:56:25 AM	MMDadoda	10/24/2025 2:54:05 PM	Peak Integrated by Software
VY1022SBS01	VY023545.D	1,2,3-Trichloropropane	Amit	10/24/2025 11:56:29 AM	MMDadoda	10/24/2025 2:54:10 PM	Peak Integrated by Software
VY1022SBSD0 1	VY023546.D	1,2,3-Trichloropropane	Amit	10/24/2025 11:56:34 AM	MMDadoda	10/24/2025 2:54:13 PM	Peak Integrated by Software

Manual Integration Report

Sequence:	Vy102425	Instrument	MSVOA_y

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC050	VY023559.D	1,2,3-Trichloropropane	Amit	10/27/2025 9:01:50 AM	MMDadoda	10/27/2025 2:51:01 PM	Peak Integrated by Software
VY1024SBS01	VY023561.D	1,2,3-Trichloropropane	Amit	10/27/2025 9:01:57 AM	MMDadoda	10/27/2025 2:51:05 PM	Peak Integrated by Software
VY1024SBS01	VY023561.D	Methacrylonitrile	Amit	10/27/2025 9:01:57 AM	MMDadoda	10/27/2025 2:51:05 PM	Peak Integrated by Software
VY1024SBSD0 1	VY023562.D	1,2,3-Trichloropropane	Amit	10/27/2025 9:02:06 AM	MMDadoda	10/27/2025 2:51:08 PM	Peak Integrated by Software
VY1024SBSD0 1	VY023562.D	Methacrylonitrile	Amit	10/27/2025 9:02:06 AM	MMDadoda	10/27/2025 2:51:08 PM	Peak Integrated by Software
Q3419-02MS	VY023580.D	1,2,3-Trichloropropane	Amit	10/27/2025 9:02:12 AM	MMDadoda	10/27/2025 2:51:12 PM	Peak Integrated by Software
Q3419-03MSD	VY023581.D	1,2,3-Trichloropropane	Amit	10/27/2025 9:02:22 AM	MMDadoda	10/27/2025 2:51:15 PM	Peak Integrated by Software
Q3419-03MSD	VY023581.D	trans-1,4-Dichloro-2-but ene	Amit	10/27/2025 9:02:22 AM	MMDadoda	10/27/2025 2:51:15 PM	Peak Integrated by Software
VSTDCCC050	VY023583.D	1,2,3-Trichloropropane	Amit	10/27/2025 9:02:32 AM	MMDadoda	10/27/2025 2:51:20 PM	Peak Integrated by Software

Instrument ID: **MSVOA_Y**

Daily Analysis Runlog For Sequence/QC Batch ID # VY100725

Review By	Semsettin Yesilyurt	Review On	10/10/2025 3:00:22 AM		
Supervise By	Maresh Dadoda	Supervise On	10/10/2025 4:38:02 AM		
SubDirectory	VY100725	HP Acquire Method	MSVOA_Y	HP Processing Method	82y100725s.m
STD. NAME		STD REF.#			
Tune/Reschk		VP135766			
Initial Calibration Stds		VP135767,VP135768,VP135769,VP135770,VP135771,VP135772			
CCC					
Internal Standard/PEM		VP133934			
ICV/I.BLK		VP135773			
Surrogate Standard					
MS/MSD Standard					
LCS Standard					

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VY023383.D	07 Oct 2025 08:43	SY/MD	Ok
2	VSTDIC005	VY023384.D	07 Oct 2025 09:17	SY/MD	Ok,M
3	VSTDIC010	VY023385.D	07 Oct 2025 10:02	SY/MD	Ok,M
4	VSTDIC020	VY023386.D	07 Oct 2025 11:24	SY/MD	Ok,M
5	VSTDIC050	VY023387.D	07 Oct 2025 11:47	SY/MD	Ok,M
6	VSTDIC100	VY023388.D	07 Oct 2025 12:09	SY/MD	Ok,M
7	VSTDIC150	VY023389.D	07 Oct 2025 12:32	SY/MD	Ok,M
8	VIBLK	VY023390.D	07 Oct 2025 13:02	SY/MD	Ok
9	VSTDICV050	VY023391.D	07 Oct 2025 14:12	SY/MD	Ok,M

M : Manual Integration

Instrument ID: **MSVOA_Y**

Daily Analysis Runlog For Sequence/QC Batch ID # VY102225

Review By	John Carlone	Review On	10/24/2025 2:07:41 PM		
Supervise By	Maresh Dadoda	Supervise On	10/24/2025 2:54:27 PM		
SubDirectory	VY102225	HP Acquire Method	MSVOA_Y	HP Processing Method	82y100725s.m
STD. NAME		STD REF.#			
Tune/Reschk Initial Calibration Stds		VP135879			
CCC		VP135880,VP135881			
Internal Standard/PEM		VP133934			
ICV/I.BLK					
Surrogate Standard					
MS/MSD Standard					
LCS Standard					

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VY023542.D	22 Oct 2025 09:00	SY/MD	Ok
2	VSTDCCC050	VY023543.D	22 Oct 2025 09:30	SY/MD	Ok,M
3	VY1022SBL01	VY023544.D	22 Oct 2025 10:00	SY/MD	Ok
4	VY1022SBS01	VY023545.D	22 Oct 2025 10:28	SY/MD	Ok,M
5	VY1022SBS01	VY023546.D	22 Oct 2025 10:51	SY/MD	Ok,M
6	Q3395-04MSD	VY023547.D	22 Oct 2025 11:28	SY/MD	Not Ok
7	Q3416-01	VY023548.D	22 Oct 2025 12:03	SY/MD	Ok
8	Q3404-01RE	VY023549.D	22 Oct 2025 12:52	SY/MD	Confirms
9	Q3427-03	VY023550.D	22 Oct 2025 13:43	SY/MD	Ok
10	Q3419-01	VY023551.D	22 Oct 2025 14:07	SY/MD	Ok
11	Q3419-04	VY023552.D	22 Oct 2025 15:34	SY/MD	Ok
12	Q3419-05	VY023553.D	22 Oct 2025 15:58	SY/MD	Ok
13	Q3422-01	VY023554.D	22 Oct 2025 16:22	SY/MD	Ok
14	Q3424-01	VY023555.D	22 Oct 2025 16:46	SY/MD	Ok
15	Q3424-02	VY023556.D	22 Oct 2025 17:10	SY/MD	Ok
16	Q3424-03	VY023557.D	22 Oct 2025 17:35	SY/MD	Ok

M : Manual Integration

Instrument ID: **MSVOA_Y**

Daily Analysis Runlog For Sequence/QC Batch ID # VY102425

Review By	Amit Patel	Review On	10/27/2025 2:54:16 PM		
Supervise By	Maresh Dadoda	Supervise On	10/27/2025 2:54:33 PM		
SubDirectory	VY102425	HP Acquire Method	MSVOA_Y	HP Processing Method	82y100725s.m
STD. NAME		STD REF.#			
Tune/Reschk Initial Calibration Stds		VP135928			
CCC		VP135929,VP135930			
Internal Standard/PEM		VP133934			
ICV/I.BLK					
Surrogate Standard					
MS/MSD Standard					
LCS Standard					

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VY023558.D	24 Oct 2025 07:47	SY/MD	Ok
2	VSTDCCC050	VY023559.D	24 Oct 2025 08:56	SY/MD	Ok,M
3	VY1024SBL01	VY023560.D	24 Oct 2025 09:24	SY/MD	Ok
4	VY1024SBS01	VY023561.D	24 Oct 2025 09:52	SY/MD	Ok,M
5	VY1024SBSD01	VY023562.D	24 Oct 2025 10:14	SY/MD	Ok,M
6	Q3431-01	VY023563.D	24 Oct 2025 10:58	SY/MD	Not Ok
7	Q3413-01	VY023564.D	24 Oct 2025 11:21	SY/MD	Ok
8	VIBLK	VY023565.D	24 Oct 2025 11:44	SY/MD	Ok
9	Q3431-01	VY023566.D	24 Oct 2025 12:30	SY/MD	Ok
10	Q3445-01	VY023567.D	24 Oct 2025 12:54	SY/MD	Ok
11	Q3439-03	VY023568.D	24 Oct 2025 13:17	SY/MD	Ok
12	Q3439-07	VY023569.D	24 Oct 2025 13:41	SY/MD	Ok
13	Q3440-03	VY023570.D	24 Oct 2025 14:04	SY/MD	Ok
14	Q3434-01	VY023571.D	24 Oct 2025 14:28	SY/MD	Ok
15	Q3449-02	VY023572.D	24 Oct 2025 14:51	SY/MD	Ok
16	Q3451-03	VY023573.D	24 Oct 2025 15:15	SY/MD	Ok
17	Q3451-07	VY023574.D	24 Oct 2025 15:38	SY/MD	Ok
18	Q3452-03	VY023575.D	24 Oct 2025 16:01	SY/MD	Ok
19	Q3460-03	VY023576.D	24 Oct 2025 16:25	SY/MD	Ok
20	Q3460-07	VY023577.D	24 Oct 2025 16:48	SY/MD	Ok
21	Q3460-11	VY023578.D	24 Oct 2025 17:12	SY/MD	Ok

Instrument ID: **MSVOA_Y**

Daily Analysis Runlog For Sequence/QC Batch ID # VY102425

Review By	Amit Patel	Review On	10/27/2025 2:54:16 PM		
Supervise By	Mahesh Dadoda	Supervise On	10/27/2025 2:54:33 PM		
SubDirectory	VY102425	HP Acquire Method	MSVOA_Y	HP Processing Method	82y100725s.m
STD. NAME	STD REF.#				
Tune/Reschk Initial Calibration Stds	VP135928				
CCC	VP135929,VP135930				
Internal Standard/PEM	VP133934				
ICV/I.BLK					
Surrogate Standard					
MS/MSD Standard					
LCS Standard					

22	Q3460-15	VY023579.D	24 Oct 2025 17:35	SY/MD	Ok
23	Q3419-02MS	VY023580.D	24 Oct 2025 17:58	SY/MD	Ok,M
24	Q3419-03MSD	VY023581.D	24 Oct 2025 18:20	SY/MD	Ok,M
25	VIBLK	VY023582.D	24 Oct 2025 18:44	SY/MD	Ok
26	VSTDCCC050	VY023583.D	24 Oct 2025 19:06	SY/MD	Ok,M

M : Manual Integration

Instrument ID: MSVOA_Y

Daily Analysis Runlog For Sequence/QC Batch ID # VY100725

Review By	Semsettin Yesilyurt	Review On	10/10/2025 3:00:22 AM
Supervise By	Maresh Dadoda	Supervise On	10/10/2025 4:38:02 AM
SubDirectory	VY100725	HP Acquire Method	MSVOA_Y HP Processing Method 82y100725s.m

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	VP135766 VP135767,VP135768,VP135769,VP135770,VP135771,VP135772
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP133934 VP135773

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VY023383.D	07 Oct 2025 08:43		SY/MD	Ok
2	VSTDICC005	VSTDICC005	VY023384.D	07 Oct 2025 09:17		SY/MD	Ok,M
3	VSTDICC010	VSTDICC010	VY023385.D	07 Oct 2025 10:02		SY/MD	Ok,M
4	VSTDICC020	VSTDICC020	VY023386.D	07 Oct 2025 11:24		SY/MD	Ok,M
5	VSTDICCC050	VSTDICCC050	VY023387.D	07 Oct 2025 11:47		SY/MD	Ok,M
6	VSTDICC100	VSTDICC100	VY023388.D	07 Oct 2025 12:09		SY/MD	Ok,M
7	VSTDICC150	VSTDICC150	VY023389.D	07 Oct 2025 12:32		SY/MD	Ok,M
8	VIBLK	VIBLK	VY023390.D	07 Oct 2025 13:02		SY/MD	Ok
9	VSTDICV050	ICVVY100725	VY023391.D	07 Oct 2025 14:12		SY/MD	Ok,M

M : Manual Integration

Instrument ID: MSVOA_Y

Daily Analysis Runlog For Sequence/QC Batch ID # VY102225

Review By	John Carlone	Review On	10/24/2025 2:07:41 PM
Supervise By	Maresh Dadoda	Supervise On	10/24/2025 2:54:27 PM
SubDirectory	VY102225	HP Acquire Method	MSVOA_Y HP Processing Method 82y100725s.m

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	VP135879
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP135880,VP135881 VP133934

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VY023542.D	22 Oct 2025 09:00		SY/MD	Ok
2	VSTDCCC050	VSTDCCC050	VY023543.D	22 Oct 2025 09:30		SY/MD	Ok,M
3	VY1022SBL01	VY1022SBL01	VY023544.D	22 Oct 2025 10:00		SY/MD	Ok
4	VY1022SBS01	VY1022SBS01	VY023545.D	22 Oct 2025 10:28		SY/MD	Ok,M
5	VY1022SBSD01	VY1022SBSD01	VY023546.D	22 Oct 2025 10:51		SY/MD	Ok,M
6	Q3395-04MSD	PR132-S07-000102-20	VY023547.D	22 Oct 2025 11:28	vial-B Internal Standard Fail	SY/MD	Not Ok
7	Q3416-01	NB-08-10212025	VY023548.D	22 Oct 2025 12:03	vial-A	SY/MD	Ok
8	Q3404-01RE	MOO-25-0285-0288RE	VY023549.D	22 Oct 2025 12:52	vial-B Internal standard fail	SY/MD	Confirms
9	Q3427-03	TP-8-VOC	VY023550.D	22 Oct 2025 13:43	vial-A	SY/MD	Ok
10	Q3419-01	PR-132-S16-015094-20	VY023551.D	22 Oct 2025 14:07	vial-A	SY/MD	Ok
11	Q3419-04	PR132-S16-119133-20	VY023552.D	22 Oct 2025 15:34	vial-A	SY/MD	Ok
12	Q3419-05	PR132-S16-094119-20	VY023553.D	22 Oct 2025 15:58	vial-A	SY/MD	Ok
13	Q3422-01	PR132-S15-000008-20	VY023554.D	22 Oct 2025 16:22	vial-A	SY/MD	Ok
14	Q3424-01	PR132-DP3-20251021	VY023555.D	22 Oct 2025 16:46	vial-A	SY/MD	Ok
15	Q3424-02	PR132-S11-010080-20	VY023556.D	22 Oct 2025 17:10	vial-A	SY/MD	Ok
16	Q3424-03	PR132-S14-000094-20	VY023557.D	22 Oct 2025 17:35	vial-A	SY/MD	Ok

M : Manual Integration

Instrument ID: MSVOA_Y

Daily Analysis Runlog For Sequence/QC Batch ID # VY102425

Review By	Amit Patel	Review On	10/27/2025 2:54:16 PM
Supervise By	Maresh Dadoda	Supervise On	10/27/2025 2:54:33 PM
SubDirectory	VY102425	HP Acquire Method	MSVOA_Y HP Processing Method 82y100725s.m

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	VP135928
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP135929,VP135930 VP133934

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VY023558.D	24 Oct 2025 07:47		SY/MD	Ok
2	VSTDCCC050	VSTDCCC050	VY023559.D	24 Oct 2025 08:56		SY/MD	Ok,M
3	VY1024SBL01	VY1024SBL01	VY023560.D	24 Oct 2025 09:24		SY/MD	Ok
4	VY1024SBS01	VY1024SBS01	VY023561.D	24 Oct 2025 09:52		SY/MD	Ok,M
5	VY1024SBSD01	VY1024SBSD01	VY023562.D	24 Oct 2025 10:14		SY/MD	Ok,M
6	Q3431-01	EO-02-10222025	VY023563.D	24 Oct 2025 10:58	vial-A	SY/MD	Not Ok
7	Q3413-01	BP-VPB-184-GW-980-S	VY023564.D	24 Oct 2025 11:21	vial-B	SY/MD	Ok
8	VIBLK	VIBLK	VY023565.D	24 Oct 2025 11:44		SY/MD	Ok
9	Q3431-01	EO-02-10222025	VY023566.D	24 Oct 2025 12:30	vial-B	SY/MD	Ok
10	Q3445-01	EO-01-102325	VY023567.D	24 Oct 2025 12:54	vial-A	SY/MD	Ok
11	Q3439-03	TP-9-VOC	VY023568.D	24 Oct 2025 13:17	vial-A	SY/MD	Ok
12	Q3439-07	TP-10-VOC	VY023569.D	24 Oct 2025 13:41	vial-A	SY/MD	Ok
13	Q3440-03	JB-2-VOC	VY023570.D	24 Oct 2025 14:04	vial-A	SY/MD	Ok
14	Q3434-01	PR132-WC1-20251022	VY023571.D	24 Oct 2025 14:28	vial-A	SY/MD	Ok
15	Q3449-02	CF-620-VOC-41	VY023572.D	24 Oct 2025 14:51	vial-A	SY/MD	Ok
16	Q3451-03	TP-11-VOC	VY023573.D	24 Oct 2025 15:15	vial-A	SY/MD	Ok
17	Q3451-07	TP-12-VOC	VY023574.D	24 Oct 2025 15:38	vial-A	SY/MD	Ok
18	Q3452-03	JB-1-VOC	VY023575.D	24 Oct 2025 16:01	vial-A	SY/MD	Ok

Instrument ID: MSVOA_Y

Daily Analysis Runlog For Sequence/QC Batch ID # VY102425

Review By	Amit Patel	Review On	10/27/2025 2:54:16 PM		
Supervise By	Mahesh Dadoda	Supervise On	10/27/2025 2:54:33 PM		
SubDirectory	VY102425	HP Acquire Method	MSVOA_Y	HP Processing Method	82y100725s.m
STD. NAME	STD REF.#				
Tune/Reschk Initial Calibration Stds	VP135928				
CCC	VP135929,VP135930				
Internal Standard/PEM	VP133934				
ICV/I.BLK					
Surrogate Standard					
MS/MSD Standard					
LCS Standard					

19	Q3460-03	WC-1-VOC	VY023576.D	24 Oct 2025 16:25	vial-A	SY/MD	Ok
20	Q3460-07	WC-2-VOC	VY023577.D	24 Oct 2025 16:48	vial-A	SY/MD	Ok
21	Q3460-11	WC-3-VOC	VY023578.D	24 Oct 2025 17:12	vial-A	SY/MD	Ok
22	Q3460-15	WC-4-VOC	VY023579.D	24 Oct 2025 17:35	vial-A	SY/MD	Ok
23	Q3419-02MS	PR-132-S16-015094-20	VY023580.D	24 Oct 2025 17:58	vial-A	SY/MD	Ok,M
24	Q3419-03MSD	PR-132-S16-015094-20	VY023581.D	24 Oct 2025 18:20	vial-A	SY/MD	Ok,M
25	VIBLK	VIBLK	VY023582.D	24 Oct 2025 18:44		SY/MD	Ok
26	VSTDCCC050	VSTDCCC050EC	VY023583.D	24 Oct 2025 19:06		SY/MD	Ok,M

M : Manual Integration



PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 10/23/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:15
In Date: 10/22/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 104
Time OUT: 08:15
Out Date: 10/23/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID-OVEN

QC:LB137614

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
Q3419-01	PR-132-S16-015094-20251021	1	1.15	11.01	12.16	7.14	54.4	
Q3419-02	Q3419-01MS	2	1.15	11.01	12.16	7.14	54.4	
Q3419-03	Q3419-01MSD	3	1.15	11.01	12.16	7.14	54.4	
Q3419-04	PR-132-S16-119133-20251021	4	1.16	10.07	11.23	6.37	51.7	
Q3419-05	PR-132-S16-094119-20251021	5	1.19	11.07	12.26	6.38	46.9	
Q3422-01	PR132-S15-000008-20251017	6	1.18	11.02	12.2	7.58	58.1	
Q3424-01	PR132-DP3-20251021	7	1.15	10.36	11.51	5.91	45.9	
Q3424-02	PR132-S11-010080-20251021	8	1.12	10.72	11.84	6.49	50.1	
Q3424-03	PR132-S14-00094-20251021	9	1.14	11.34	12.48	6.82	50.1	
Q3427-01	TP-8	10	1.11	10.77	11.88	10.84	90.3	
Q3427-02	TP-8-EPH	11	1.18	10.97	12.15	10.98	89.3	
Q3427-03	TP-8-VOC	12	1.19	10.26	11.45	10.52	90.9	
Q3429-01	40309	13	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q3429-02	40310	14	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q3430-01	BUR-25-0095	15	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q3431-01	EO-02-10222025	16	1.11	10.55	11.66	10.64	90.3	
Q3431-02	EO-02-10222025-E2	17	1.17	10.59	11.76	10.59	89.0	
Q3434-01	PR132-WC1-20251022	18	1.13	10.43	11.56	7.17	57.9	

$$\% \text{ Solid} = \frac{(C-A) * 100}{(B-A)}$$

WORKLIST(Hardcopy Internal Chain)

137614

WorkList Name : %1-102225 WorkList ID : 192597 Department : Wet-Chemistry Date : 10-22-2025 09:03:13

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q3419-01	PR-132-S16-015094-20251021	Solid	Percent Solids	Cool 4 deg C	AECO02	D41	10/21/2025	Chemtech -SO
Q3419-02	Q3419-01MS	Solid	Percent Solids	Cool 4 deg C	AECO02	D41	10/21/2025	Chemtech -SO
Q3419-03	Q3419-01MSD	Solid	Percent Solids	Cool 4 deg C	AECO02	D41	10/21/2025	Chemtech -SO
Q3419-04	PR-132-S16-119133-20251021	Solid	Percent Solids	Cool 4 deg C	AECO02	D41	10/21/2025	Chemtech -SO
Q3419-05	PR-132-S16-094119-20251021	Solid	Percent Solids	Cool 4 deg C	AECO02	D41	10/21/2025	Chemtech -SO
Q3422-01	PR132-S15-000008-20251017	Solid	Percent Solids	Cool 4 deg C	AECO02	D41	10/21/2025	Chemtech -SO
Q3424-01	PR132-DP3-20251021	Solid	Percent Solids	Cool 4 deg C	AECO02	D31	10/21/2025	Chemtech -SO
Q3424-02	PR132-S11-010080-20251021	Solid	Percent Solids	Cool 4 deg C	AECO02	D31	10/21/2025	Chemtech -SO
Q3424-03	PR132-S14-00094-20251021	Solid	Percent Solids	Cool 4 deg C	AECO02	D31	10/21/2025	Chemtech -SO
Q3427-01	TP-8	Solid	Percent Solids	Cool 4 deg C	PSEG03	D41	10/21/2025	Chemtech -SO
Q3427-02	TP-8-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	D41	10/21/2025	Chemtech -SO
Q3427-03	TP-8-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	D41	10/21/2025	Chemtech -SO
Q3429-01	40309	Solid	Percent Solids	Cool 4 deg C	PSEG03	D51	10/22/2025	Chemtech -SO
Q3429-02	40310	Solid	Percent Solids	Cool 4 deg C	PSEG03	D51	10/22/2025	Chemtech -SO
Q3430-01	BUR-25-0095	Solid	Percent Solids	Cool 4 deg C	PSEG03	D51	10/22/2025	Chemtech -SO
Q3431-01	EO-02-10222025	Solid	Percent Solids	Cool 4 deg C	PSEG05	D41	10/22/2025	Chemtech -SO
Q3431-02	EO-02-10222025-E2	Solid	Percent Solids	Cool 4 deg C	PSEG05	D41	10/22/2025	Chemtech -SO
Q3434-01	PR132-WC1-20251022	Solid	Percent Solids	Cool 4 deg C	AECO02	D41	10/22/2025	Chemtech -SO

Date/Time 10/22/25 15:00

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

Date/Time

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

Prep Standard - Chemical Standard Summary

Order ID : Q3419

Test : VOC-TCLVOA-10

Prepbatch ID :

Sequence ID/Qc Batch ID: VY102225,Vy102425,VY100725

Standard ID :

VP133934,VP134145,VP134147,VP134149,VP134150,VP134151,VP134263,VP134264,VP134742,VP134934,VP134935,VP134957,VP135480,VP135481,VP135482,VP135484,VP135485,VP135552,VP135553,VP135554,VP135722,VP135723,VP135766,VP135767,VP135768,VP135769,VP135770,VP135771,VP135772,VP135773,VP135834,VP135835,VP135879,VP135880,VP135881,VP135928,VP135929,VP135930,

Chemical ID :

V12968,V13391,V13450,V13583,V13584,V14130,V14183,V14200,V14204,V14205,V14290,V14509,V14510,V14531,V14532,V14625,V14629,V14636,V14637,V14638,V14639,V14673,V14675,V14727,V14728,V14796,V14803,V14815,V14844,V14906,V14921,V14928,V14929,V14951,V14952,V14973,V14992,V15010,V15066,V15067,V15068,V15069,V15070,V15073,V15074,V15075,W3112,

VOC STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1917	8260 Internal standard 50 ppm	VP133934	05/16/2025	11/12/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								05/21/2025

FROM 0.10000ml of V14290 + 49.90000ml of V14921 = Final Quantity: 50.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
253	8260 Working STD (BCM)-First source, 20PPM	VP134145	06/06/2025	12/06/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								06/10/2025

FROM 0.50000ml of V14675 + 49.50000ml of V14929 = Final Quantity: 50.000 ml

VOC STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
252	8260 Working STD (BCM)-First source, 100PPM	VP134147	06/06/2025	12/06/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								06/10/2025

FROM 1.00000ml of V14673 + 19.00000ml of V14929 = Final Quantity: 20.000 ml

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

VOC STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1811	8260 Working Std(2-CVE)-500ppm	VP134150	06/06/2025	12/06/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								06/10/2025

FROM 7.50000ml of V14929 + 12.50000ml of VP134149 = Final Quantity: 20.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1812	8260 Working Std(2-CVE)-100ppm	VP134151	06/06/2025	12/06/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								06/10/2025

FROM 0.25000ml of V14639 + 24.75000ml of V14929 = Final Quantity: 25.000 ml

VOC STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1817	8260 Working Std(2-CVE)-SS, 800ppm	VP134263	06/11/2025	11/12/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								06/12/2025

FROM 0.60000ml of V13584 + 1.00000ml of V13583 + 18.40000ml of V14921 = Final Quantity: 20.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1819	8260 Working Std(2-CVE)-SS, 500ppm	VP134264	06/11/2025	11/12/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								06/12/2025

FROM 1.87500ml of V14921 + 3.12500ml of VP134263 = Final Quantity: 5.000 ml

VOC STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
262	8260 Working STD (BCM)-Second source, 100PPM	VP134742	07/14/2025	01/07/2026	Semsettin Yesilyurt	None	None	Maresh Dadoda
								07/23/2025

FROM 1.00000ml of V12968 + 9.00000ml of V14629 = Final Quantity: 10.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
249	8260 Surrogate, 100PPM	VP134934	07/29/2025	01/29/2026	Semsettin Yesilyurt	None	None	Maresh Dadoda
								08/06/2025

FROM 0.10000ml of V14906 + 24.90000ml of V14625 = Final Quantity: 25.000 ml

VOC STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1738	8260 surrogate 20 ppm	VP134935	07/29/2025	01/29/2026	Semsettin Yesilyurt	None	None	Maresh Dadoda
08/06/2025								

FROM 0.02000ml of V14906 + 24.99000ml of V14625 = Final Quantity: 25.000 ml

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

FROM 0.50000ml of V13391 + 49.50000ml of V14625 = Final Quantity: 50.000 ml

VOC STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
51	8260 Working STD (Acrolein) -first source, 800PPM	VP135480	09/16/2025	10/15/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								09/19/2025

FROM 1.00000ml of V15066 + 1.50000ml of V15067 + 1.50000ml of V15068 + 21.00000ml of V14625 = Final Quantity: 25.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
56	8260 Working STD (Acrolein) -first source, 500PPM	VP135481	09/16/2025	10/15/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								09/19/2025

FROM 5.62500ml of V14625 + 9.37500ml of VP135480 = Final Quantity: 15.000 ml

VOC STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
180	8260 Working STD (Acrolein)-First source, 100PPM	VP135482	09/16/2025	10/15/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								09/19/2025

FROM 17.50000ml of V14625 + 2.50000ml of VP135480 = Final Quantity: 20.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
263	8260 Working STD (Acrolein)-Second source, 800PPM	VP135484	09/16/2025	10/13/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								09/19/2025

FROM 0.60000ml of V15070 + 1.00000ml of V15069 + 8.40000ml of V14625 = Final Quantity: 10.000 ml



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
264	8260 Working STD (Acrolein)-Second source, 500PPM	VP135485	09/16/2025	10/13/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 09/19/2025
<u>FROM</u>	1.87500ml of V14625 + 3.12500ml of VP135484 = Final Quantity: 5.000 ml							

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
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
<u>FROM</u>	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							

VOC STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
244	8260 Calibration Working STD Mix-First source, 100PPM	VP135553	09/22/2025	11/03/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda 09/26/2025

FROM 5.62500ml of V14928 + 9.37500ml of VP135552 = Final Quantity: 15.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
245	8260 Calibration Working STD Mix-First source, 20PPM	VP135554	09/22/2025	11/03/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda 09/26/2025

FROM 17.50000ml of V14928 + 2.50000ml of VP135552 = Final Quantity: 20.000 ml



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
259	8260 Calibration Working STD Mix-Second source, 160PPM	VP135722	10/01/2025	11/11/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda 10/17/2025
<u>FROM</u>	0.16000ml of V13450 + 0.80000ml of V14130 + 0.80000ml of V14183 + 0.80000ml of V14796 + 0.80000ml of V14973 + 0.80000ml of V14992 + 1.60000ml of V15010 + 4.24000ml of V14928 = Final Quantity: 10.000 ml							

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
260	8260 Calibration Working STD Mix-Second source, 100PPM	VP135723	10/01/2025	11/11/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 10/17/2025
<u>FROM</u> 1.87500ml of V14928 + 3.12500ml of VP135722 = Final Quantity: 5.000 ml								

VOC STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
732	BFB TUNE CHECK - SOIL	VP135766	10/07/2025	10/08/2025	Amit Patel	None	None	Maresh Dadoda
								10/11/2025

FROM 4.99800ml of W3112 + 0.00200ml of VP134957 = Final Quantity: 5.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
267	5 PPB ICC, 8260-SOIL	VP135767	10/07/2025	10/08/2025	Amit Patel	None	None	Maresh Dadoda
								10/11/2025

FROM 4.98800ml of W3112 + 0.00130ml of VP134145 + 0.00130ml of VP134151 + 0.00130ml of VP134935 + 0.00130ml of VP135482
+ 0.00130ml of VP135554 + 0.00500ml of VP133934 = Final Quantity: 5.000 ml



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
269	10 PPB ICC, 8260-SOIL	VP135768	10/07/2025	10/08/2025	Amit Patel	None	None	Mahesh Dadoda 10/11/2025
<u>FROM</u> 4.98000ml of W3112 + 0.00250ml of VP134145 + 0.00250ml of VP134151 + 0.00250ml of VP134935 + 0.00250ml of VP135482 + 0.00250ml of VP135554 + 0.00500ml of VP133934 = Final Quantity: 5.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
270	20 PPB ICC, 8260-SOIL	VP135769	10/07/2025	10/08/2025	Amit Patel	None	None	Mahesh Dadoda 10/11/2025
<u>FROM</u> 4.96500ml of W3112 + 0.00500ml of VP133934 + 0.00500ml of VP134145 + 0.00500ml of VP134151 + 0.00500ml of VP134935 + 0.00500ml of VP135482 + 0.00500ml of VP135554 = Final Quantity: 5.000 ml								

VOC STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
273	50 PPB ICC, 8260-SOIL	VP135770	10/07/2025	10/08/2025	Amit Patel	None	None	Mahesh Dadoda 10/11/2025

FROM 4.98000ml of W3112 + 0.00250ml of VP134147 + 0.00250ml of VP134150 + 0.00250ml of VP134934 + 0.00250ml of VP135481 + 0.00250ml of VP135553 + 0.00500ml of VP133934 = Final Quantity: 5.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
280	100 PPB ICC, 8260-SOIL	VP135771	10/07/2025	10/08/2025	Amit Patel	None	None	Mahesh Dadoda 10/11/2025

FROM 4.96500ml of W3112 + 0.00500ml of VP133934 + 0.00500ml of VP134147 + 0.00500ml of VP134150 + 0.00500ml of VP134934
+ 0.00500ml of VP135481 + 0.00500ml of VP135553 = Final Quantity: 5.000 ml

VOC STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1653	150 PPB ICC,8260-SOIL	VP135772	10/07/2025	10/08/2025	Amit Patel	None	None	Maresh Dadoda
								10/11/2025

FROM 4.95000ml of W3112 + 0.00500ml of VP133934 + 0.00750ml of VP134147 + 0.00750ml of VP134150 + 0.00750ml of VP134934 + 0.00750ml of VP135481 + 0.00750ml of VP135553 = Final Quantity: 5.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
287	50 PPB ICV, 8260-SOIL	VP135773	10/07/2025	10/08/2025	Amit Patel	None	None	Maresh Dadoda
								10/11/2025

FROM 4.98000ml of W3112 + 0.00250ml of VP134264 + 0.00250ml of VP134742 + 0.00250ml of VP134934 + 0.00250ml of VP135485 + 0.00250ml of VP135723 + 0.00500ml of VP133934 = Final Quantity: 5.000 ml

VOC STANDARD PREPARATION LOG

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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
56	8260 Working STD (Acrolein) -first source, 500PPM	VP135835	10/17/2025	11/16/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								10/17/2025

FROM 7.50000ml of V14928 + 12.50000ml of VP135834 = Final Quantity: 20.000 ml

VOC STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
732	BFB TUNE CHECK - SOIL	VP135879	10/22/2025	10/23/2025	Amit Patel	None	None	Maresh Dadoda
								10/23/2025

FROM 4.99800ml of W3112 + 0.00200ml of VP134957 = Final Quantity: 5.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
773	50 PPB CCC, 8260-SOIL	VP135880	10/22/2025	10/23/2025	Amit Patel	None	None	Maresh Dadoda
								10/23/2025

FROM 4.98000ml of W3112 + 0.00250ml of VP134147 + 0.00250ml of VP134150 + 0.00250ml of VP134934 + 0.00250ml of VP135553
+ 0.00250ml of VP135835 + 0.00500ml of VP133934 = Final Quantity: 5.000 ml



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
773	50 PPB CCC, 8260-SOIL	VP135881	10/22/2025	10/23/2025	Amit Patel	None	None	Mahesh Dadoda 10/23/2025
FROM 4.98000ml of W3112 + 0.00250ml of VP134147 + 0.00250ml of VP134150 + 0.00250ml of VP134934 + 0.00250ml of VP135553 + 0.00250ml of VP135835 + 0.00500ml of VP133934 = Final Quantity: 5.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
732	BFB TUNE CHECK - SOIL	VP135928	10/24/2025	10/25/2025	Amit Patel	None	None	Mahesh Dadoda 10/29/2025
<u>FROM</u> 4.99800ml of W3112 + 0.00200ml of VP134957 = Final Quantity: 5.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
773	50 PPB CCC, 8260-SOIL	VP135929	10/24/2025	10/25/2025	Amit Patel	None	None	Mahesh Dadoda 10/29/2025
<u>FROM</u>	4.98000ml of W3112 + 0.00250ml of VP134147 + 0.00250ml of VP134150 + 0.00250ml of VP134934 + 0.00250ml of VP135553 + 0.00250ml of VP135835 + 0.00500ml of VP133934 = Final Quantity: 5.000 ml							

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
773	50 PPB CCC, 8260-SOIL	VP135930	10/24/2025	10/25/2025	Amit Patel	None	None	Mahesh Dadoda 10/29/2025
<u>FROM</u>	4.98000ml of W3112 + 0.00250ml of VP134147 + 0.00250ml of VP134150 + 0.00250ml of VP134934 + 0.00250ml of VP135553 + 0.00250ml of VP135835 + 0.00500ml of VP133934 = Final Quantity: 5.000 ml							

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	70046 / Bromochloromethane Std. sol/methanol 1000ppm	070122	01/14/2026	07/14/2025 / SAM	07/06/2022 / SAM	V12968

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30470 / VOA Stock Solution, tert-butanol std, 1mL, P&TM	A0191703	11/15/2025	05/15/2025 / SAM	01/23/2023 / SAM	V13450

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	95318 / 2-Chloroethyl Vinyl Ether (Min = 5)	111722	11/17/2025	06/11/2025 / SAM	01/30/2023 / SAM	V13583

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	95318 / 2-Chloroethyl Vinyl Ether (Min = 5)	111722	11/17/2025	06/11/2025 / SAM	01/30/2023 / SAM	V13584

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)	011624	03/22/2026	09/22/2025 / sam	01/17/2024 / SAM	V14130

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)	021524	12/23/2025	06/23/2025 / SAM	02/20/2024 / SAM	V14183

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

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)	2310762004	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)	2310762004	01/09/2026	07/07/2025 / SAM	11/26/2024 / SAM	V14629

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

CHEMICAL RECEIPT LOG BOOK

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

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

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

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

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30042 / VOA Mix,500 series method 502.2 Calibration Std #1 gases, 2000uq/ml, PTM, 1ml	A0216826	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	A0220563	03/22/2026	09/22/2025 / sam	01/08/2025 / SAM	V14796

LOTS

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	555408 / Custom Standard, Vinyl Acetate Standard w/ Grav [CS 5066-6] TWO SEPARATE	A0220471	03/22/2026	09/22/2025 / sam	01/08/2025 / SAM	V14803

LOTS

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	555408 / Custom Standard, Vinyl Acetate Standard w/ Grav [CS 5066-6] TWO SEPARATE	A0220471	03/22/2026	09/22/2025 / sam	01/08/2025 / SAM	V14815

LOTS

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

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	07/29/2026	07/29/2025 / SAM	03/24/2025 / SAM	V14906

CHEMICAL RECEIPT LOG BOOK

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

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

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	A0220531	03/22/2026	09/22/2025 / sam	05/19/2025 / SAM	V14973

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30042 / VOA Mix,500 series method 502.2 Calibration Std #1 gases, 2000uq/ml, PTM, 1ml	A0221541	03/22/2026	09/22/2025 / sam	05/19/2025 / SAM	V14992

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	A0220242	03/22/2026	09/22/2025 / sam	06/02/2023 / SAM	V15010

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	091525	10/15/2025	09/16/2025 / sam	09/16/2025 / sam	V15066

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	091525	10/15/2025	09/16/2025 / sam	09/16/2025 / sam	V15067

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	091525	10/15/2025	09/16/2025 / sam	09/16/2025 / sam	V15068

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	091325	10/13/2025	09/16/2025 / sam	09/16/2025 / sam	V15069

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)	091325	10/13/2025	09/16/2025 / sam	09/16/2025 / sam	V15070

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 / lwona	07/03/2024 / lwona	W3112

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis



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

Certificate of Analysis

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

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

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

Ken Koehnlein
Sr. Manager, Quality Assurance

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis



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

Certificate of Analysis

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

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

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

Ken Koehnlein
Sr. Manager, Quality Assurance



CERTIFIED WEIGHT REPORT

Part Number: 95319
Lot Number: 011624
Description: Revised Additions Mix
11 components
011627
Refrigerate (4 °C)
Varied
6UTB
NIST Test ID#: 6UTB
Weight(s) shown below were combined and diluted to (mL): 100.0

5E-05 Balance Uncertainty
0.021 Flask Uncertainty

Solvent(s): Methanol
Lot# EH471-US

Formulated By: Prashant Chauhan DATE 011624	
Reviewed By: Pedro L. Rentas DATE 011624	

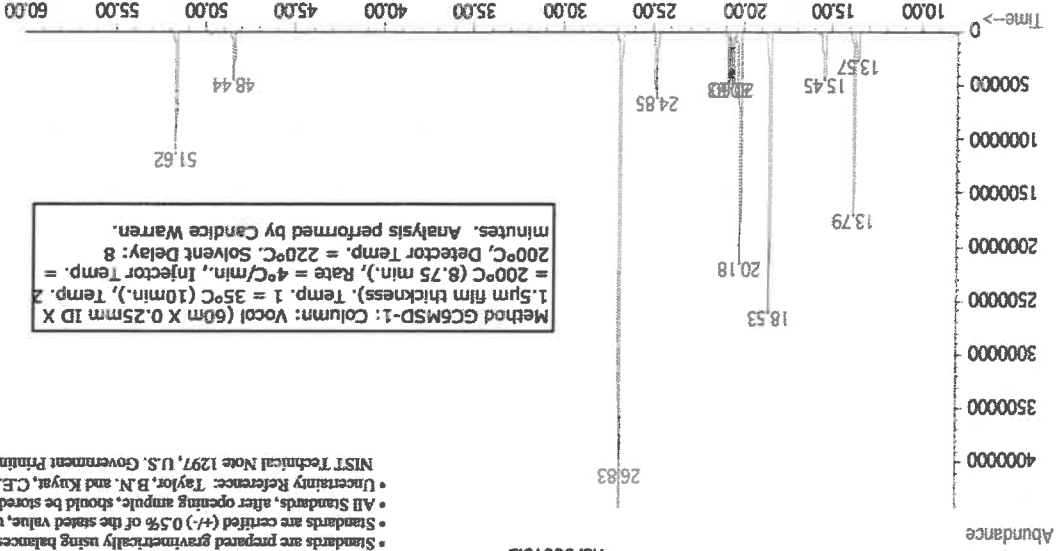
SDS Information

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

1. Acrylonitrile	7	4718CK	10000	99	0.2	1.01035	1.01080	10004.4	40.6	107-13-1	N/A	ort-rat 78 mg/kg
2. 1-Chlorobutane	1072	MKCM5711	2000	99.99	0.2	0.20007	0.20035	2002.8	8.1	109-69-3	N/A	ort-rat 2670mg/kg
3. Cyclohexane	1023	28930	2000	99	0.2	0.20207	0.20222	2001.5	8.2	110-82-7	N/A	ort-rat 12705mg/kg
4. Di-isopropyl ether (DIPE)	987	00412MX	2000	99	0.2	0.20207	0.20227	2002.0	8.2	108-20-3	500 ppm (2100mg/m3/8h)	ort-rat 8470mg/kg
5. 1,4-Dioxane	373	03953KE	40000	99	0.2	4.04142	4.04213	40007.0	162.5	123-91-1	25 ppm (90mg/m3/8h)(skdn)	ort-mus 5700mg/kg
6. Hexachloroethane	199	12604HBV	2000	99	0.2	0.20207	0.20221	2001.4	8.2	67-72-1	1 ppm (10mg/m3/8h)(skdn)	ort-gp 4870mg/kg
7. Methylcyclohexane	1627	SHBG0199V	2000	99	0.2	0.20207	0.20230	2002.3	8.2	108-87-2	N/A	ort-mus 2250mg/kg
8. Methyl tert-butyl ether (MTBE)	209	21880	2000	99	0.2	0.20207	0.20227	2002.0	8.2	1634-04-4	N/A	ort-rat 4g/kg
9. Propionitrile	349	1395468	20000	99	0.2	2.02071	2.02150	20007.8	81.3	107-12-0	N/A	ort-rat 39mg/kg
10. Tetrahydrofuran	380	SHBH8330	10000	99.9	0.2	1.00125	1.00200	10007.5	40.3	109-99-9	20 ppm (590mg/m3/8h)	ort-rat 1650mg/kg
11. 1,2,3,4-Tetramethylbenzene	481	AP01	2000	93	0.2	0.21511	0.21522	2001.0	8.7	488-23-3	N/A	ort-rat 6408mg/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).

TC: 95319.D



MSD RT	Name	(min.)
13.56	Methyl tert-butyl ether (MTBE)	
13.79	Acrylonitrile	
15.44	Di-isopropyl ether	
18.53	Propionitrile	
20.17	Tetrahydrofuran	
20.58	Cyclohexane	
20.83	1-Chlorobutane	
24.84	Methylcyclohexane	
26.84	1,4-Dioxane	
48.44	Hexachloroethane	
51.62	1,2,3,4-Tetramethylbenzene	



CERTIFIED WEIGHT REPORT

Part Number: **95317**
Lot Number: **021524**
Description: **Universal VOA Megamix**
69 components
Expiration Date: 021527
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 2000
NIST Test ID#: BUTB

Solvent(s): **Methanol**
Lot#: **EG359-USQ12**

		021524
Formulated By:	Mario Luis	DATE
		021524
Reviewed By:	Pedro L. Rentes	DATE

Weight(s) shown below were combined and diluted to (mL): 100.0 0.021 Flask Uncertainty

														SDS Information		
														(Solvent Safety Info. On Attached pg.)		
Compound	(RM#)	Lot	Dr.	Initial	Initial	Nominal	Purity	Purity	Uncertainty	Target	Actual	Actual	Expanded	CAS#	OSHA PEL (TWA)	LD50
	Part Number	Number	Factor	Vol. (mL)	Conc. (µg/mL)	Conc (µg/mL)	(%)	Uncertainty	Pipette (mL)	Weight(g)	Weight(g)	Conc (µg/mL)	(+/-) (µg/mL)			
1. Acetonitrile	(0324)	021644	NA	NA	NA	2000	99.99	0.2	NA	0.20007	0.20022	2001.5	8.1	75-05-8	40 ppm (70mg/m3/8h)	or-rat 2450mg/kg
2. Allyl chloride (3-Chloropropene)	(0325)	102398	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20222	2001.5	8.2	107-05-1	1 ppm (3mg/m3/8h)	or-rat 700mg/kg
3. Carbon disulfide	(0060)	MKCR8581	NA	NA	NA	2000	99.99	0.2	NA	0.20007	0.20020	2001.3	8.1	75-15-0	4 ppm (12mg/m3) (skin)	or-rat 1200mg/kg
4. cis-1,4-Dichloro-2-butene	(1196)	14718EF	NA	NA	NA	2000	95	0.2	NA	0.21058	0.21060	2000.2	8.5	1478-11-5	N/A	N/A
5. trans-1,4-Dichloro-2-butene	(0466)	MKBP8041V	NA	NA	NA	2000	96.5	0.2	NA	0.20731	0.20734	2000.3	8.4	110-57-5	N/A	N/A
6. Diethyl ether	(0153)	JK18CASA000K	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20042	2001.7	8.1	60-29-7	N/A	N/A
7. Ethyl methacrylate	(0381)	061826PX	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20231	2002.4	8.2	97-83-2	N/A	or-rat 14800mg/kg
8. Iodomethane	(0489)	SHBF8716V	NA	NA	NA	2000	99.5	0.2	NA	0.20106	0.20118	2001.2	8.1	74-88-4	5 ppm (28mg/m3/8h) (skin)	or-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)	or-rat 2450mg/kg
10. Methacrylonitrile	(0442)	00427ET	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20209	2000.2	8.2	128-98-7	1 ppm (3mg/m3/8h) (skin)	or-rat 120mg/kg
11. Methyl acrylate	(1075)	SHBK0679	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20042	2001.7	8.1	96-33-3	10 ppm (35mg/m3/8h) (skin)	or-rat 277mg/kg
12. Methyl methacrylate	(0404)	MKBW5137V	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20030	2000.5	8.1	80-62-6	100 ppm (410mg/m3/8h)	or-rat 787mg/kg
13. Nitrobenzene	(0228)	01213TV	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20230	2002.3	8.2	98-95-3	1 ppm (5mg/m3/8h) (skin)	or-rat 780mg/kg
14. 2-Nitropropane	(0461)	14002JX	NA	NA	NA	2000	97.3	0.2	NA	0.20560	0.20670	2001.0	8.3	79-46-9	10 ppm (35mg/m3/8h)	or-rat 720mg/kg
15. Pentachloroethane	(0450)	HGA01	NA	NA	NA	2000	98	0.2	NA	0.20413	0.20415	2000.2	8.3	78-01-7	N/A	N/A
16. 1,1,2-Trichloro-1,2,2,2-tetrafluoroethane	(0474)	18930	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20210	2000.3	8.2	78-13-1	1000 ppm (7600mg/m3/8h)	or-rat 43g/kg
17. Bromodichloromethane	35171	101623	0.05	5.00	40001.7	2000	NA	NA	0.017	NA	NA	1999.6	22.9	75-27-4	N/A	or-rat 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	or-rat 848mg/kg
19. cis-1,2-Dichloroethane	35171	101623	0.05	5.00	40003.1	2000	NA	NA	0.017	NA	NA	1999.7	22.9	156-60-2	N/A	N/A
20. trans-1,2-Dichloroethane	35171	101623	0.05	5.00	40002.4	2000	NA	NA	0.017	NA	NA	1999.6	23.0	156-60-5	N/A	or-rat 1235mg/kg
21. Methylene chloride	35171	101623	0.05	5.00	40002.8	2000	NA	NA	0.017	NA	NA	1999.6	22.9	75-09-2	500 ppm	or-rat 800mg/kg
22. 1,1-Dichloroethane	32251	102023	0.10	10.00	20001.6	2000	NA	NA	0.042	NA	NA	1999.7	20.4	75-36-4	1 ppm (4mg/m3/8h)	or-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)	or-rat 930mg/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 (12.8mg/m3/8h)	or-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)	or-rat 900mg/kg
26. Dibromomethane	95321	020724	0.10	10.00	20002.9	2000	NA	NA	0.042	NA	NA	1999.8	20.5	74-06-3	N/A	or-rat 108mg/kg
27. 1,1-Dichloroethane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.5	75-34-3	100 ppm	or-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	584-20-7	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)	or-rat 262mg/kg
30. 1,1,1-Trichloroethane	95321	020724	0.10	10.00	20003.0	2000	NA	NA	0.042	NA	NA	1999.8	20.5	71-55-6	350 ppm (1900mg/m3/8h)	or-rat 10300mg/kg
31. 1,2-Dibromo-3-chloropropane	35161	112322	0.05	5.00	40018.5	2000	NA	NA	0.017	NA	NA	2000.3	22.9	96-12-8	0.001 ppm	or-rat 170mg/kg
32. 1,2-Dibromoethane	35161	112322	0.05	5.00	40024.8	2000	NA	NA	0.017	NA	NA	2000.7	22.9	106-93-4	20 ppm (8h)	or-rat 108mg/kg
33. 1,2-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)	or-rat 670mg/kg
34. 1,2-Dichloropropane	35161	112322	0.05	5.00	40051.0	2000	NA	NA	0.017	NA	NA	2002.0	22.9	78-87-5	75 ppm (350mg/m3/8h)	or-rat 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	ure-mus 3600mg/kg
36. 1,1-Dichloropropane	35161	112322	0.05	5.00	40012.1	2000	NA	NA	0.017	NA	NA	2000.1	29.7	563-56-6	N/A	N/A
37. cis-1,3-Dichloropropene	35161	112322	0.05	5.00	40010.0	2000	NA	NA	0.017	NA	NA	2000.0	23.0	10061-01-5	N/A	N/A
38. trans-1,3-Dichloropropene	35161	112322	0.05	5.00	40017.8	2000	NA	NA	0.017	NA	NA	2000.4	23.0	10061-02-6	N/A	N/A
39. Hexachloro-1,3-butadiene	35161	112322	0.05	5.00	40021.9	2000	NA	NA	0.017	NA	NA	2000.6	29.7	87-68-3	0.02 ppm (0.24mg/m3/8h)	or-rat 82mg/kg
40. 1,1,1,2-Tetrachloroethane	35161	112322	0.05	5.00	40011.9	2000	NA	NA	0.017	NA	NA	2000.1	22.9	630-20-6	N/A	or-rat 670mg/kg
41. 1,1,2,2-Tetrachloroethane	35161	112322	0.05	5.00	40007.5	2000	NA	NA	0.017	NA	NA	1999.9	22.9	79-34-5	5 ppm (35mg/m3/8h) (skin)	or-rat 800mg/kg
42. 1,1,2-Trichloroethane	35161	112322	0.05	5.00	40006.6	2000	NA	NA	0.017	NA	NA	1999.8	23.0	79-00-5	10 ppm (45mg/m3/8h) (skin)	or-rat 836mg/kg
43. Trichloroethane	35161	112322	0.05	5.00	40029.0	2000	NA	NA	0.017	NA	NA	2000.9	22.9	79-01-6	50 ppm (270mg/m3/8h)	or-mus 2400mg/kg
44. 1,2,3-Trichloropropane	35161	112322	0.05	5.00	40007.5	2000	NA	NA	0.017	NA	NA	1999.9	22.9	96-18-4	10 ppm (60mg/m3/8h)	or-rat 149.8mg/kg
45. Benzene	35162	050823	0.05	5.00	40005.0	2000	NA	NA	0.017	NA	NA	1999.7	22.9	71-43-2	1 ppm	or-rat 4694mg/kg
46. Bromobenzene	35162	050823	0.05	5.00	40006.9	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-88-1	N/A	or-rat 2699mg/kg
47. n-Butyl benzene	35162	050823	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	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)	or-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	99-87-8	N/A	or-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)	or-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	or-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	or-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 1300mg/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)	or-rat 750mg/kg
55. 1,2,4-Trimethylbenzene	35162	050823	0.05	5.00	40001.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	95-63-6	N/A	or-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	or-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)	or-rat 5g/kg
58. tert-Butyl benzene	35163	101923	0.05	5.00	40001.2	2000	NA	NA	0.017	NA	NA	1999.6	22.9	98-06-6	N/A	N/A
59. sec-Butyl benzene	35163	101923	0.05	5.00	40002.4	2000	NA	NA	0.017	NA	NA	1999.6	22.9	135-98-8	N/A	or-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)	or-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	95-49-5	50 ppm (250mg/m3/8h)	or-rat 3900mg/kg
62. 4-Chlorotoluene	35163	101923	0.05	5.00	40003.3	2000	NA	NA	0.017</							

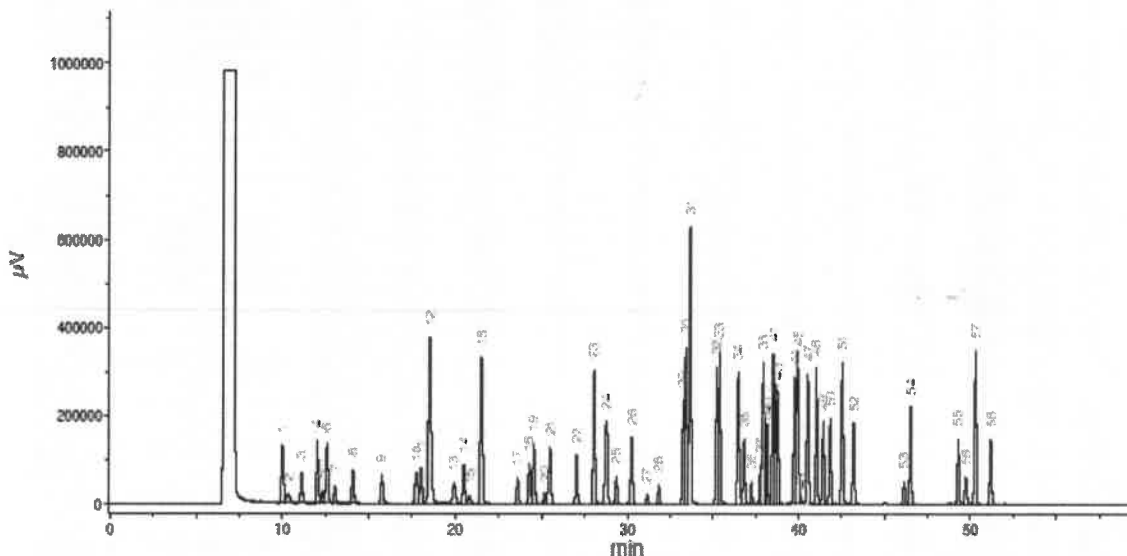


Run 17, "P95317 L021524 [2000µg/mL in MeOH]"

Run Length: 60.00 min, 35998 points at 10 points/second.
Created: Sat, Feb 17, 2024 at 10:04:27 AM.
Sampled: Sequence "021624-GC5M1", Method "GC5-M1".
Analyzed using Method "GC5-M1".

Comments

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



Peak #	Name	FID RT (min.)
1	Ether	9.97
2	1,1,2-Trichloro-1,2,2-trifluoroethane	10.33
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	15.34
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	19.91
14	1,1-Dichloropropane	20.46
15	Carbon tetrachloride	20.79
16	Benzene/1,2-Dichloroethane	21.48
17	Trichloroethene	22.58
18	1,2-Dichloropropane	24.26
19	Methyl methacrylate	24.52
20	Bromodichloromethane	25.13
21	Dibromomethane/2-Nitropropane	25.46
22	cis-1,2-Dichloropropane	27.02
23	Toluene	28.05
24	Ethyl methacrylate/trans-1,3-Dichloropropane	28.73
25	1,1,2-Trichloroethane	29.34
26	Tetrachloroethene/1,3-Dichloropropane	30.24
27	Dibromochloromethane	31.18
28	1,2-Dibromomethane	31.84
29	Chlorobenzene	33.39
30	Ethylbenzene/1,1,1,2-Tetrachloroethane	33.40
31	m-Xylene/p-Xylene	33.66
32	o-Xylene	33.72
33	Styrene	35.39
34	Isopropylbenzene/Bromoform	36.48
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	40.32
48	p-Isopropyltoluene	41.02
49	1,3-Dichlorobenzene	41.42
50	1,4-Dichlorobenzene	41.83
51	n-Butylbenzene	42.52
52	1,2-Dichlorobenzene	43.10
53	1,2-Dibromo-3-chloropropane	46.12
54	Nitrobenzene	46.48
55	1,2,4-Trichlorobenzene	49.26
56	Hexachlorobutadiene	49.72
57	Naphthalene	50.26
58	1,2,3-Trichlorobenzene	51.16



Ree 03117/24

CERTIFIED WEIGHT REPORT

Part Number: 95317

Lot Number: 021624

Description: Universal VOA Megamix

69 components

Expiration Date: 021627

Recommended Storage: Freezer (0 °C)

Nominal Concentration (µg/mL): 2000

NIST Test ID#: BUTB

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

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

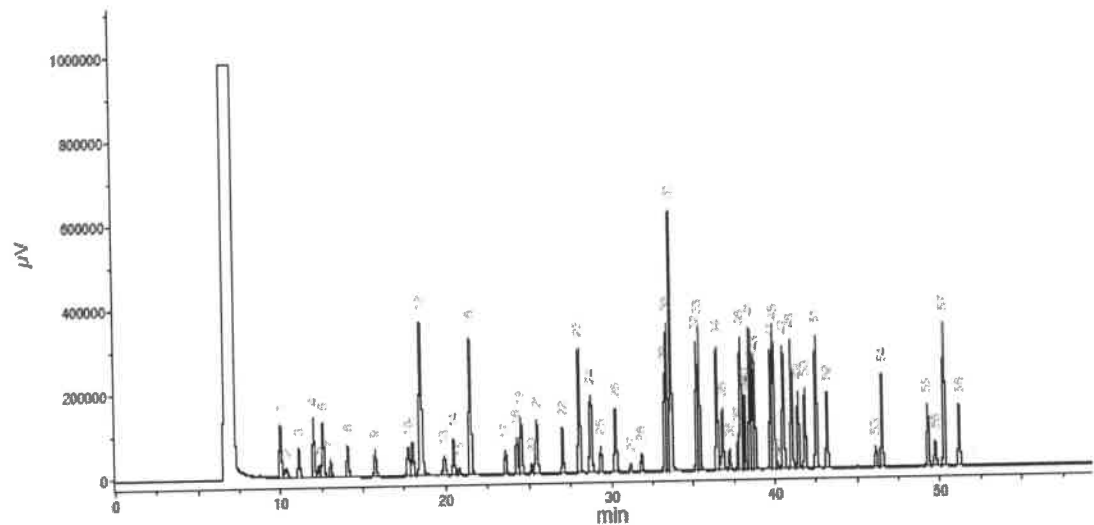
Compound	(KMe)	Lot	Dir.	Initial	Initial	Nominal	Purity	Purity	Uncertainty	Target	Actual	Actual	Expanded	SDS Information			
	Part Number	Number	Factor	Vol. (mL)	Conc.(µg/mL)	Conc (µg/mL)	(%)	Uncertainty	Pipette (mL)	Weight(g)	Weight(g)	Conc (µg/mL)	Uncertainty	(+/-) (µg/mL)	CASE	OSHA PEL (TWA)	LD50
1. Acetonitrile	(0324)	021644	NA	NA	NA	2000	99.99	0.2	NA	0.20007	0.20020	2001.3	8.1	75-05-8	40 ppm (70mg/m3/8H)	or-rat 2450mg/kg	
2. Allyl chloride (3-Chloropropene)	(0325)	102396	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20221	2001.4	8.2	107-05-1	1 ppm (3mg/m3/8H)	or-rat 700mg/kg	
3. Carbon disulfide	(0060)	MKCR8561	NA	NA	NA	2000	99.99	0.2	NA	0.20007	0.20023	2001.6	8.1	75-15-0	4 ppm (12mg/m3) (skin)	or-rat 1200mg/kg	
4. cis-1,4-Dichloro-2-butene	(1196)	14718EF	NA	NA	NA	2000	95	0.2	NA	0.21056	0.21069	2001.1	8.5	1478-11-5	NA	N/A	
5. trans-1,4-Dichloro-2-butene	(0486)	MKBP6041V	NA	NA	NA	2000	96.5	0.2	NA	0.20731	0.20746	2001.7	8.4	110-57-6	NA	N/A	
6. Diethyl ether	(0153)	IK18CAS000C	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20040	2001.5	8.1	60-29-7	NA	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	NA	N/A	or-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)	or-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)	or-rat 2460mg/kg	
10. Methacrylonitrile	(0442)	00427ET	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20221	2001.4	8.2	128-98-7	1 ppm (3mg/m3/8H)(skin)	or-rat 120mg/kg	
11. Methyl acrylate	(0755)	SHBK0679	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20040	2001.5	8.1	96-33-3	10 ppm(35mg/m3/8H)(skin)	or-rat 277mg/kg	
12. Methyl methacrylate	(0404)	MKGW6137V	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20041	2001.6	8.1	80-62-6	100 ppm (410mg/m3/8H)	or-rat 7872mg/kg	
13. Nitrobenzene	(0228)	01213TV	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20220	2001.3	8.2	98-95-3	1 ppm (5mg/m3/8H)(skin)	or-rat 780mg/kg	
14. 2-Nitropropane	(0461)	14002JK	NA	NA	NA	2000	97.3	0.2	NA	0.20560	0.20577	2001.6	8.3	78-46-9	10 ppm (30mg/m3/8H)	or-rat 720mg/kg	
15. Perchloroethane	(0460)	HGA01	NA	NA	NA	2000	98	0.2	NA	0.20413	0.20430	2001.6	8.3	78-01-7	NA	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)	or-rat 43g/kg	
17. Bromodichloromethane	35171	101623	0.05	5.00	40001.7	2000	NA	NA	0.017	NA	NA	1999.6	22.9	75-27-4	NA	or-rat 915mg/kg	
18. Dibromochloromethane	35171	101623	0.05	5.00	40002.1	2000	NA	NA	0.017	NA	NA	1999.6	23.0	124-48-1	NA	or-rat 848mg/kg	
19. cis-1,2-Dichloroethene	35171	101623	0.05	5.00	40003.1	2000	NA	NA	0.017	NA	NA	1999.7	22.9	156-59-2	NA	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	NA	N/A	
21. Methylene chloride	35171	101623	0.05	5.00	40002.8	2000	NA	NA	0.017	NA	NA	1999.6	22.9	75-09-2	500 ppm	or-rat 1235mg/kg	
22. 1,1-Dichloroethane	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)	or-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)	or-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)	or-rat 2350mg/kg	
25. Chloroform	95321	020724	0.10	10.00	20024.0	2000	NA	NA	0.042	NA	NA	2001.3	20.5	67-68-3	60 ppm (240mg/m3) (CL)	or-rat 908mg/kg	
26. Dibromomethane	95321	020724	0.10	10.00	20002.9	2000	NA	NA	0.042	NA	NA	1999.8	20.5	74-95-3	100 ppm	or-rat 725mg/kg	
27. 1,1-Dichloroethane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.4	594-20-7	NA	N/A	
28. 2,2-Dichloropropane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	2019.8	20.8	127-18-4	25 ppm (170mg/m3/8H)(final)	or-rat 2629mg/kg	
29. Trichloroethene	95321	020724	0.10	10.00	20201.1	2000	NA	NA	0.042	NA	NA	1999.8	20.5	71-55-6	350 ppm (1900mg/m3/8H)	or-rat 10300mg/kg	
30. 1,1,1-Trichloroethane	95321	020724	0.10	10.00	20003.0	2000	NA	NA	0.042	NA	NA	2000.3	22.9	86-12-8	0.001 ppm	or-rat 170mg/kg	
31. 1,2-Dibromo-3-chloropropane	35161	112322	0.05	5.00	40018.5	2000	NA	NA	0.017	NA	NA	2000.7	22.9	106-93-4	20 ppm (8H)	or-rat 108mg/kg	
32. 1,2-Dibromoethane	35161	112322	0.05	5.00	40024.8	2000	NA	NA	0.017	NA	NA	2000.4	22.9	107-06-2	50 ppm (8H)	or-rat 670mg/kg	
33. 1,2-Dichloroethane	35161	112322	0.05	5.00	40018.0	2000	NA	NA	0.017	NA	NA	2002.0	22.9	78-87-5	75 ppm (350mg/m3/8H)	or-rat 1947mg/kg	
34. 1,2-Dichloropropane	35161	112322	0.05	5.00	40051.0	2000	NA	NA	0.017	NA	NA	1999.8	22.9	142-28-9	NA	or-mus 3600mg/kg	
35. 1,3-Dichloropropane	35161	112322	0.05	5.00	40005.9	2000	NA	NA	0.017	NA	NA	2000.1	28.7	563-58-6	NA	N/A	
36. 1,1-Dichloropropene	35161	112322	0.05	5.00	40012.1	2000	NA	NA	0.017	NA	NA	2000.0	23.0	10061-01-5	NA	N/A	
37. cis-1,3-Dichloropropene	35161	112322	0.05	5.00	40010.0	2000	NA	NA	0.017	NA	NA	2000.4	23.0	10061-02-6	NA	N/A	
38. trans-1,3-Dichloropropene	35161	112322	0.05	5.00	40017.6	2000	NA	NA	0.017	NA	NA	2000.6	29.7	87-68-3	0.02 ppm (0.24mg/m3/8H)	or-rat 82mg/kg	
39. Hexachloro-1,3-butadiene	35161	112322	0.05	5.00	40021.9	2000	NA	NA	0.017	NA	NA	2000.1	22.9	830-20-6	NA	or-rat 670mg/kg	
40. 1,1,1,2-Tetrachloroethane	35161	112322	0.05	5.00	40011.9	2000	NA	NA	0.017	NA	NA	1999.9	22.9	79-34-5	5 ppm (35mg/m3/8H)(skin)	or-rat 800mg/kg	
41. 1,1,2,2-Tetrachloroethane	35161	112322	0.05	5.00	40007.5	2000	NA	NA	0.017	NA	NA	1999.8	23.0	79-00-5	10 ppm (45mg/m3/8H)(skin)	or-rat 936mg/kg	
42. 1,1,2-Trichloroethane	35161	112322	0.05	5.00	40006.6	2000	NA	NA	0.017	NA	NA	2000.9	22.9	79-01-6	50 ppm (270mg/m3/8H)	or-mus 2402mg/kg	
43. Trichloroethene	35161	112322	0.05	5.00	40029.0	2000	NA	NA	0.017	NA	NA	1999.9	22.9	96-18-4	10 ppm (60mg/m3/8H)	or-rat 149.8mg/kg	
44. 1,2,3-Trichloropropane	35161	112322	0.05	5.00	40007.5	2000	NA	NA	0.017	NA	NA	1999.7	22.9	71-43-2	1 ppm	or-rat 4894mg/kg	
45. Benzene	35162	050823	0.05	5.00	40006.0	2000	NA	NA	0.017	NA	NA	1999.7	22.9	104-51-8	NA	or-rat 2699mg/kg	
46. Bromobenzene	35162	050823	0.05	5.00	40006.9	2000	NA	NA	0.017	NA	NA	1999.7	22.9	100-41-4	100 ppm (435mg/m3/8H)	or-rat >2000mg/kg	
47. n-Butyl benzene	35162	050823	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	99-87-6	NA	or-rat 4750mg/kg	
48. Ethyl benzene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	91-20-3	10 ppm (50mg/m3/8H)	or-rat 490mg/kg	
49. p-Isopropyl toluene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	100-42-5	100 ppm	or-rat 5000mg/kg	
50. Naphthalene	35162	050823	0.05	5.00	40005.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-98-3	200 ppm	or-rat 5000mg/kg	
51. Styrene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	87-81-6	NA	or-mus 1390mg/kg	
52. Toluene	35162	050823	0.05	5.00	40006.2	2000	NA	NA	0.017	NA	NA	1999.8	23.0	120-82-1	5 ppm (CL) (40mg/m3)	or-rat 756mg/kg	
53. 1,2,3-Trichlorobenzene	35162	050823	0.05	5.00	40003.1	2000	NA	NA	0.017	NA	NA	1999.8	22.9	95-63-6	NA	or-rat 5g/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	108-87-6	NA	or-rat 5000mg/kg	
55. 1,2,4-Trimethylbenzene	35162	050823	0.05	5.00	40001.6	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-38-3	100 ppm (435mg/m3/8H)	or-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	96-06-6	NA	N/A	
57. m-Xylene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	135-98-6	NA	or-rat 2240mg/kg	
58. tert-Butyl benzene	35163	101923	0.05	5.00	40001.2	2000	NA	NA	0.017	NA	NA	1999.7	22.9	108-90-7	75 ppm (350mg/m3/8H)	or-rat 2290mg/kg	
59. sec-Butyl benzene	35163	101923	0.05	5.00	40002.4	2000	NA	NA	0.017	NA	NA	1999.8	22.9	95-49-8	50 ppm (250mg/m3/8H)	or-rat 3900mg/kg	
60. Chlorobenzene	35163	101923	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	106-43-4	NA	or-rat 2100mg/kg	
61. 2-Chlorotoluene	35163	101923	0.05	5.00	40000.3	2000	NA	NA	0.017	NA	NA	1999.7	22.9	95-50-1	50 ppm (300mg/m3) (CL)	or-rat 500mg/kg	
62. 4-Chlorotoluene	35163	101923	0.05	5.00	40003.3	2000	NA	NA	0.017	NA	NA	1999.6	23.0	541-73-1	NA	or-mus 1062mg/kg	
63. 1,2-Dichlorobenzene	35163	101923	0.05	5.00	40003.3	2000	NA	NA	0.017	NA	NA	1999.6	22.9	108-			



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

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

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



Peak #	Name	FID RT (min.)
1	Ether	9.97
2	1,1,2-Trichloro-1,2,2-trifluoroethane	10.53
3	1,1-Dichloroethane	11.10
4	Acetonitrile	12.60
5	Iodomethane	12.91
6	Allyl chloride	12.96
7	Carbon disulfide/Methylene chloride	13.04
8	trans-1,2-Dichloroethane	14.07
9	1,1-Dichloroethane	15.74
10	2,2-Dichloropropane	17.74
11	cis-1,2-Dichloroethane	18.00
12	Methoxyvinyltoluene/Methyl acrylate/Chloroform	18.49
13	Isobutanol/1,1,1-Trichloroethane	18.91
14	1,1-Dichloropropane	20.46
15	Carbon tetrachloride	20.79
16	Benzene/1,2-Dichloroethane	21.48
17	Trichloroethane	23.88
18	1,2-Dichloropropane	24.52
19	Methyl methacrylate	25.13
20	Bromochloropropane	25.46
21	Dibromomethane/2-Pentopropane	27.07
22	cis-1,2-Dichloroethane	28.03
23	Toluene	28.73
24	Ethyl methacrylate/Trans-1,2-Dichloropropane	29.34
25	1,1,2-Trichloroethane	30.34
26	Tetrachloroethane/1,2-Dichloropropane	31.16
27	Dibromochloromethane	32.84
28	1,2-Dibromomethane	33.26
29	Chlorobenzene	33.40
30	Ethylbenzene/1,1,1,2-Tetrachloroethane	33.85
31	m-Xylene/p-Xylene	35.33
32	o-Xylene	35.70
33	Styrene	35.70
34	Isopropylbenzene/Bromofarm	36.48
35	cis-1,4-Dichloro-3-butene	36.80
36	1,1,2-Trichloropropane	37.23
37	n-Propylbenzene	37.77
38	trans-1,4-Dichloro-3-butene	37.92
39	Bromobenzene	38.05
40	1,3,5-Trimethylbenzene	38.14
41	1,3,5-Trimethylbenzene	38.50
42	Chlorobenzene	38.63
43	4-Chlorobenzene	38.77
44	tert-Butylbenzene	39.76
45	1,2,4-Trimethylbenzene	39.91
46	Pentachloroethane	40.17
47	sec-Butylbenzene	40.52
48	p-Isopropyltoluene	41.02
49	1,3-Trichlorobenzene	41.42
50	1,4-Dichlorobenzene	41.83
51	n-Butylbenzene	42.52
52	1,2-Dichlorobenzene	42.18
53	1,2-Dibromo-3-chloropropane	46.12
54	Nitrobenzene	46.40
55	1,2,4-Trifluorobenzene	49.28
56	Hexachlorocyclopentadiene	49.72
57	Naphthalene	50.56
58	1,2,3-Trichlorobenzene	51.16

Safety Data Sheet (SDS)

GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY ANALYTICAL STANDARD DISSOLVED IN METHANOL

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

Section II - Hazards Identification

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

H225
H370
P271
P302,332

Highly Flammable Liquid and Vapor
Cause damage to organs
Use in ventilated area
If on skin, wash with soap and water

H301, 311, 331
H351
P280
P305,351,338

Toxic if swallowed, skin contact, inhaled
Suspected of causing cancer
Use gloves, eye protection/face shield
If in eyes, remove contacts, rinse with water



Signal Word: DANGER

Section III - Composition

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

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

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

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

Section V. FIREFIGHTING MEASURES

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

Section VI. ACCIDENTAL RELEASE MEASURES

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

Section VII. HANDLING AND STORAGE

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

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Section IX - Physical/Chemical Characteristics

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

Section X. STABILITY AND REACTIVITY

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

Section XI. TOXICOLOGICAL INFORMATION

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

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

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

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

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

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

Section XV. REGULATORY INFORMATION

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

Section XVI. Misc. INFORMATION

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



Ree 03117/24

CERTIFIED WEIGHT REPORT

Part Number: 95317

Lot Number: 021624

Description: Universal VOA Megamix

69 components

Expiration Date: 021627

Recommended Storage: Freezer (0 °C)

Nominal Concentration (µg/mL): 2000

NIST Test ID#: BUTB

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

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

Compound	(K049)	Lot	Dir.	Initial	Initial	Nominal	Purity	Purity	Uncertainty	Target	Actual	Actual	Expanded	SDS Information			
	Part Number	Number	Factor	Vol. (mL)	Conc. (µg/mL)	Conc. (µg/mL)	(%)	Uncertainty	Pipette (mL)	Weight(g)	Weight(g)	Conc. (µg/mL)	Uncertainty	(+/-) (µg/mL)	CASE	OSHA PEL (TWA)	LD50
1. Acetonitrile	(0324)	021644	NA	NA	NA	2000	99.99	0.2	NA	0.20007	0.20020	2001.3	8.1	75-05-8	40 ppm (70mg/m3/8H)	or-rat 2450mg/kg	
2. Allyl chloride (3-Chloropropene)	(0325)	102396	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20221	2001.4	8.2	107-05-1	1 ppm (3mg/m3/8H)	or-rat 700mg/kg	
3. Carbon disulfide	(0060)	MKCR8561	NA	NA	NA	2000	99.99	0.2	NA	0.20007	0.20023	2001.6	8.1	75-15-0	4 ppm (12mg/m3) (skin)	or-rat 1200mg/kg	
4. cis-1,4-Dichloro-2-butene	(1196)	14718EF	NA	NA	NA	2000	95	0.2	NA	0.21056	0.21069	2001.1	8.5	1478-11-5	N/A	N/A	
5. trans-1,4-Dichloro-2-butene	(0486)	MKBP6041V	NA	NA	NA	2000	96.5	0.2	NA	0.20731	0.20746	2001.7	8.4	110-57-6	N/A	N/A	
6. Diethyl ether	(0153)	IK18CAS000C	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20040	2001.5	8.1	60-29-7	N/A	N/A	
7. Ethyl methacrylate	(0381)	06128PX	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20230	2002.3	8.2	97-63-2	N/A	or-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)	or-rat 75mg/kg	
9. 2-Methyl-1-propanol	(0445)	15241EB	NA	NA	NA	2000	99.5	0.2	NA	0.20106	0.20120	2001.4	8.1	78-83-1	50 ppm (150mg/m3/8H)	or-rat 2460mg/kg	
10. Methacrylonitrile	(0442)	00427ET	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20221	2001.4	8.2	128-98-7	1 ppm (3mg/m3/8H)(skin)	or-rat 120mg/kg	
11. Methyl acrylate	(1075)	SHBK0679	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20040	2001.5	8.1	96-33-3	10 ppm(35mg/m3/8H)(skin)	or-rat 277mg/kg	
12. Methyl methacrylate	(0404)	MKGW6137V	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20041	2001.6	8.1	80-62-6	100 ppm (410mg/m3/8H)	or-rat 7872mg/kg	
13. Nitrobenzene	(0228)	01213TV	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20220	2001.3	8.2	98-95-3	1 ppm (5mg/m3/8H)(skin)	or-rat 780mg/kg	
14. 2-Nitropropane	(0461)	14002JX	NA	NA	NA	2000	97.3	0.2	NA	0.20560	0.20577	2001.6	8.3	78-46-9	10 ppm (35mg/m3/8H)	or-rat 720mg/kg	
15. Perchloroethane	(0460)	HGA01	NA	NA	NA	2000	98	0.2	NA	0.20413	0.20430	2001.6	8.3	78-01-7	N/A	N/A	
16. 1,1,2-Trichlorotrifluoroethane	(0474)	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)	or-rat 435g/kg	
17. Bromodichloromethane	35171	101623	0.05	5.00	40001.7	2000	NA	NA	0.017	NA	NA	1999.6	22.9	75-27-4	N/A	or-rat 915mg/kg	
18. Dibromochloromethane	35171	101623	0.05	5.00	40002.1	2000	NA	NA	0.017	NA	NA	1999.6	23.0	124-48-1	N/A	or-rat 848mg/kg	
19. cis-1,2-Dichloroethene	35171	101623	0.05	5.00	40003.1	2000	NA	NA	0.017	NA	NA	1999.7	22.9	156-59-2	N/A	N/A	
20. trans-1,2-Dichloroethene	35171	101623	0.05	5.00	40003.2	2000	NA	NA	0.017	NA	NA	1999.6	23.0	156-60-5	N/A	N/A	
21. Methylene chloride	35171	101623	0.05	5.00	40002.8	2000	NA	NA	0.017	NA	NA	1999.6	22.9	75-09-2	500 ppm	or-rat 1235mg/kg	
22. 1,1-Dichloroethane	32261	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)	or-rat 200mg/kg	
23. Bromoform	95321	020724	0.10	10.00	20003.2	2000	NA	NA	0.042	NA	NA	1999.8	20.5	78-25-2	0.5 ppm (5mg/m3) (skin)	or-rat 933mg/kg	
24. Carbon tetrachloride	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.6	20.4	56-23-5	2 ppm (12.6mg/m3/8H)	or-rat 2350mg/kg	
25. Chloroform	95321	020724	0.10	10.00	20002.9	2000	NA	NA	0.042	NA	NA	1999.8	20.5	67-68-3	60 ppm (240mg/m3) (CL)	or-rat 908mg/kg	
26. Dibromomethane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.5	74-95-3	N/A	or-rat 108mg/kg	
27. 1,1-Dichloroethane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.4	594-20-7	N/A	N/A	
28. 2,2-Dichloropropane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.4	594-20-7	N/A	N/A	
29. Trichloroethene	95321	020724	0.10	10.00	20201.1	2000	NA	NA	0.042	NA	NA	2019.8	20.8	127-18-4	25 ppm (170mg/m3/8H)(final)	or-rat 2629mg/kg	
30. 1,1,1-Trichloroethane	95321	020724	0.10	10.00	20003.0	2000	NA	NA	0.042	NA	NA	1999.8	20.5	71-55-6	350 ppm (1900mg/m3/8H)	or-rat 10300mg/kg	
31. 1,2-Dibromo-3-chloropropane	35161	112322	0.05	5.00	40016.5	2000	NA	NA	0.017	NA	NA	2000.3	22.9	86-12-8	0.001 ppm	or-rat 170mg/kg	
32. 1,2-Dibromoethane	35161	112322	0.05	5.00	40024.8	2000	NA	NA	0.017	NA	NA	2000.7	22.9	106-93-4	20 ppm (8H)	or-rat 108mg/kg	
33. 1,2-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)	or-rat 670mg/kg	
34. 1,2-Dichloropropane	35161	112322	0.05	5.00	40051.0	2000	NA	NA	0.017	NA	NA	2002.0	22.9	78-87-5	75 ppm (350mg/m3/8H)	or-rat 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	or-rat 3600mg/kg	
36. 1,1-Dichloropropene	35161	112322	0.05	5.00	40012.1	2000	NA	NA	0.017	NA	NA	2000.1	28.7	563-58-6	N/A	N/A	
37. cis-1,3-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)	or-rat 82mg/kg	
40. 1,1,1,2-Tetrachloroethane	35161	112322	0.05	5.00	40011.9	2000	NA	NA	0.017	NA	NA	2000.1	22.9	830-20-6	N/A	or-rat 670mg/kg	
41. 1,1,2,2-Tetrachloroethane	35161	112322	0.05	5.00	40007.5	2000	NA	NA	0.017	NA	NA	1999.9	22.9	79-34-5	5 ppm (35mg/m3/8H)(skin)	or-rat 800mg/kg	
42. 1,1,2-Trichloroethane	35161	112322	0.05	5.00	40006.6	2000	NA	NA	0.017	NA	NA	1999.8	23.0	79-00-5	10 ppm (45mg/m3/8H)(skin)	or-rat 936mg/kg	
43. Trichloroethene	35161	112322	0.05	5.00	40029.0	2000	NA	NA	0.017	NA	NA	2000.9	22.9	79-01-6	50 ppm (270mg/m3/8H)	or-mus 2402mg/kg	
44. 1,2,3-Trichloropropane	35161	112322	0.05	5.00	40007.5	2000	NA	NA	0.017	NA	NA	1999.9	22.9	96-18-4	10 ppm (60mg/m3/8H)	or-rat 149.8mg/kg	
45. Benzene	35162	050823	0.05	5.00	40006.0	2000	NA	NA	0.017	NA	NA	1999.7	22.9	71-43-2	1 ppm	or-rat 4894mg/kg	
46. Bromobenzene	35162	050823	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	104-51-8	N/A	or-rat 2699mg/kg	
47. n-Butyl 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)	or-rat >2000mg/kg	
48. Ethyl benzene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	99-87-6	N/A	or-rat 4750mg/kg	
49. p-Isopropyl toluene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	91-20-3	10 ppm (50mg/m3/8H)	or-rat 490mg/kg	
50. Naphthalene	35162	050823	0.05	5.00	40005.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	100-42-5	100 ppm	or-rat 5000mg/kg	
51. Styrene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	108-98-3	200 ppm (435mg/m3/8H)	or-rat 5g/kg	
52. Toluene	35162	050823	0.05	5.00	40006.2	2000	NA	NA	0.017	NA	NA	1999.7	22.9	87-81-6	N/A	N/A	
53. 1,2,3-Trichlorobenzene	35162	050823	0.05	5.00	40003.1	2000	NA	NA	0.017	NA	NA	1999.8	22.9	120-82-1	5 ppm (CL) (40mg/m3)	or-rat 756mg/kg	
54. 1,2,4-Trichlorobenzene	35162	050823	0.05	5.00	40006.8	2000	NA	NA	0.017	NA	NA	1999.6	23.0	95-63-6	N/A	or-rat 5g/kg	
55. 1,2,4-Trimethylbenzene	35162	050823	0.05	5.00	40001.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-87-6	N/A	or-rat 5000mg/kg	
56. 1,3,5-Trimethylbenzene	35162	050823	0.05	5.00	40006.7	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-38-3	100 ppm (435mg/m3/8H)	or-rat 5g/kg	
57. m-Xylene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	96-06-6	N/A	N/A	
58. tert-Butyl benzene	35163	101923	0.05	5.00	40001.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	135-98-6	N/A	or-rat 2240mg/kg	
59. sec-Butyl benzene	35163	101923	0.05	5.00	40002.4	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-90-7	75 ppm (350mg/m3/8H)	or-rat 2290mg/kg	
60. Chlorobenzene	35163	101923	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	95-49-8	50 ppm (250mg/m3/8H)	or-rat 3900mg/kg	
61. 2-Chlorotoluene	35163	101923	0.05	5.00	40003.3	2000	NA	NA	0.017	NA	NA	1999.7	22.9	106-43-4	N/A	or-rat 2100mg/kg	
62. 4-Chlorotoluene	35163	101923	0.05	5.00	40003.3	2000	NA	NA	0.017	NA	NA	1999.7	22.9	95-50-1	50 ppm (300mg/m3) (CL)	or-rat 500mg/kg	
63. 1,2-Dichlorobenzene	35163	101923	0.05	5.00	40001.7	2000	NA	NA	0.017	NA	NA	1999.6	23.0	541-73-1	N/A		

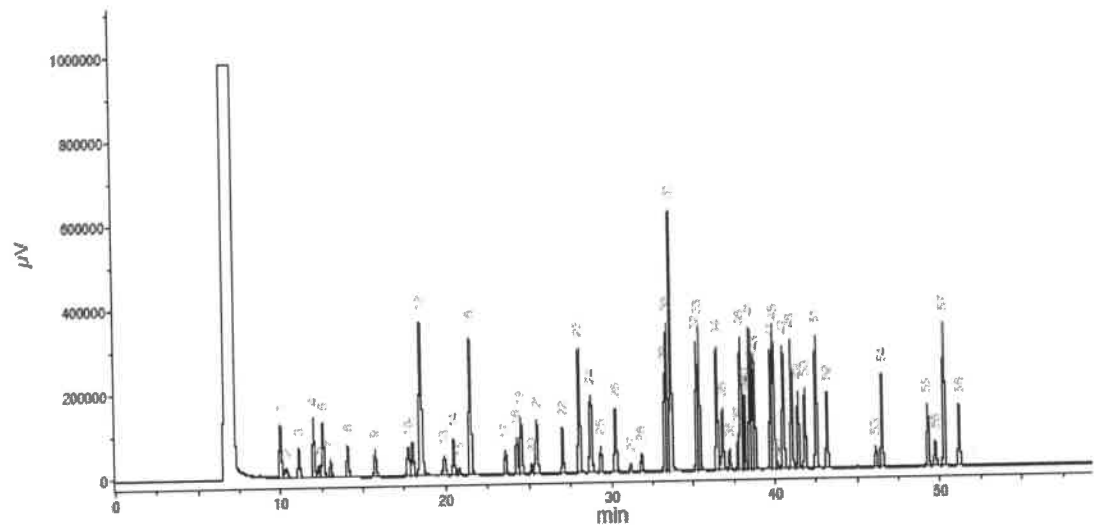


Run 16, "P95317 L021624 (2000µg/mL in MeOH)"

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

Comments

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



Peak #	Name	FID RT (min.)
1	Ether	9.97
2	1,1,2-Trichloro-1,2,2-trifluoroethane	10.53
3	1,1-Dichloroethane	11.10
4	Acetonitrile	12.60
5	Iodomethane	12.91
6	Allyl chloride	12.96
7	Carbon disulfide/Methylene chloride	13.04
8	trans-1,2-Dichloroethene	14.07
9	1,1-Dichloroethane	15.74
10	2,2-Dichloropropane	17.74
11	cis-1,2-Dichloroethene	18.00
12	Methoxyvinylbenzene/Methyl acrylate/Chloroform	18.49
13	Isobutene/1,1,1-Trichloroethane	18.91
14	1,1-Dichloropropane	20.46
15	Carbon tetrachloride	20.79
16	Benzene/1,2-Dichloroethane	21.48
17	Trichloroethene	23.88
18	1,2-Dichloropropane	24.52
19	Methyl methacrylate	25.13
20	Bromochloropropane	25.46
21	Dibromomethane/2-Pentene	27.07
22	cis-1,2-Dichloroethene	28.03
23	Toluene	28.73
24	Ethyl methacrylate/Trans-1,2-Dichloroethene	29.34
25	1,1,2-Trichloroethane	30.34
26	Tetrachloroethane/1,2-Dichloropropane	31.16
27	Dibromochloromethane	31.84
28	1,2-Dibromomethane	33.06
29	Chlorobenzene	33.40
30	Ethylbenzene/1,1,1,2-Tetrachloroethane	33.85
31	m-Xylene/p-Xylene	35.33
32	o-Xylene	35.70
33	Styrene	35.70
34	Isopropylbenzene/Bromofarm	36.48
35	cis-1,4-Dichloro-3-butene	36.80
36	1,1,2-Trichloropropane	37.23
37	n-Propylbenzene	37.77
38	trans-1,4-Dichloro-3-butene	37.92
39	Bromobenzene	38.05
40	1,3,5-Trimethylbenzene	38.14
41	1,3,5-Trimethylbenzene	38.50
42	Chlorobenzene	38.63
43	4-Chlorobenzene	38.77
44	tert-Butylbenzene	39.76
45	1,2,4-Trimethylbenzene	39.91
46	Pentachloroethane	40.17
47	sec-Butylbenzene	40.52
48	p-Isopropylbenzene	41.02
49	1,3-Dichlorobenzene	41.42
50	1,4-Dichlorobenzene	41.83
51	n-Butylbenzene	42.52
52	1,2-Dichlorobenzene	42.18
53	1,2-Dibromo-3-chloropropane	46.12
54	Nitrobenzene	46.40
55	1,2,4-Trifluorobenzene	49.26
56	Hexachlorocyclopentadiene	49.72
57	Naphthalene	50.56
58	1,2,3-Trichlorobenzene	51.16

Safety Data Sheet (SDS)

GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY ANALYTICAL STANDARD DISSOLVED IN METHANOL

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

Section II - Hazards Identification

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

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



Signal Word: DANGER

Section III - Composition

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

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

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

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

Section V. FIREFIGHTING MEASURES

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

Section VI. ACCIDENTAL RELEASE MEASURES

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

Section VII. HANDLING AND STORAGE

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

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Section IX - Physical/Chemical Characteristics

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

Section X. STABILITY AND REACTIVITY

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

Section XI. TOXICOLOGICAL INFORMATION

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

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

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

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

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

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

Section XV. REGULATORY INFORMATION

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

Section XVI. Misc. INFORMATION

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



Certified Reference Material CRM



Dec 09/17/24

CERTIFIED WEIGHT REPORT

Part Number:
Lot Number:
Description:91980
091424
AcroleinSolvent(s):
WaterLot#
072324QExpiration Date:
Recommended Storage:
Refrigerate (4 °C)
Nominal Concentration (µg/mL):
NIST Test ID#:101424
5000
6UTBWeight(s) shown below were combined and diluted to (mL):
10.0
5E-05 Balance Uncertainty
0.001 Flask Uncertainty

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	Solvent Safety Info. On Attached pg.)	OSHA PEL (TWA)	LD50
1. Acrolein	5	103755V10F	5000	97	0.5	0.05186	0.05175	5008.9	52.5	107-02-8	0.1 ppm	ori-rat 46mg/kg

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

TIC: [BSB2]79005.D

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

Abundance
27250000
8.93

60000

56

50000

40000

30000

20000

10000

37

Time--> 10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00 m/z--> 20 30 40 50 60 70 80 85 119 158 169

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



Certified Reference Material CRM



Dec 09/17/24

CERTIFIED WEIGHT REPORT

Part Number:

91980

Lot Number:

091424

Description:

Acrolein

Solvent(s):

Water

Lot#

072324Q

Expiration Date:

101424

Recommended Storage:

Refrigerate (4 °C)

Nominal Concentration (µg/mL):

5000

NIST Test ID#:

6UTB

5E-05 Balance Uncertainty

0.001 Flask Uncertainty

10.0

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

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

1. Acrolein	5	103755V10F	5000	97	0.5	0.05186	0.05175	5008.9	52.5	107-02-8	0.1 ppm	ori-rat 46mg/kg

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

TIC: [BSB2]79005.D

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

Abundance

27

250000

8.93

200000

C=CC=O

50000

56

150000

40000

30000

20000

50000

10000

37

Time-->

0

10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00

m/z-->

0

20

30

40

50

60

70

80

85

119

158

169

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



CERTIFIED WEIGHT REPORT

Part Number: **95318**
Lot Number: **111722**
Description: **2-Chloroethyl vinyl ether**

Solvent(s): **Methanol**
Lot#: **EB679-US**

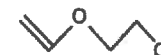
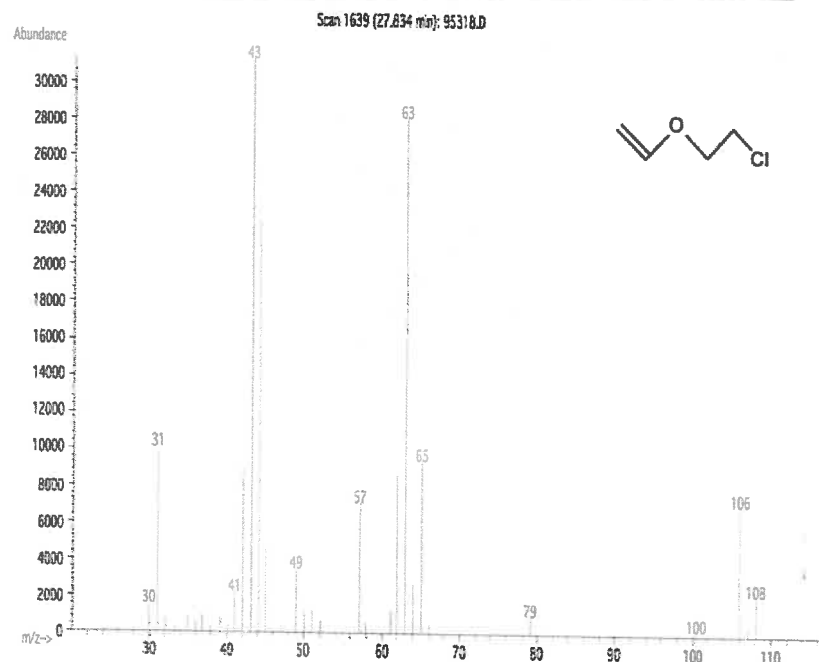
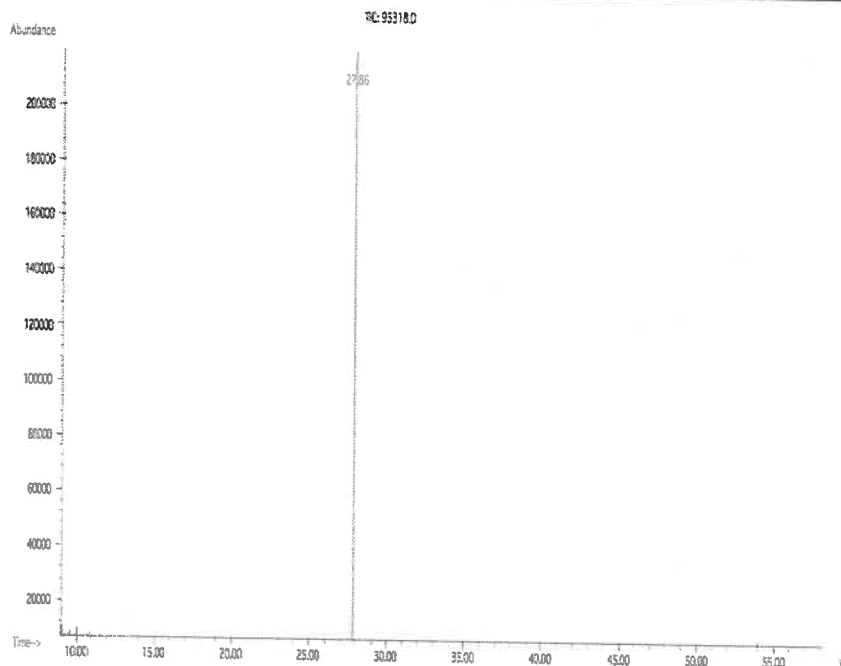
Expiration Date: **111725**
Recommended Storage: **Refrigerate (4 °C)**
Nominal Concentration (µg/mL): **10000**
NIST Test ID#: **6UTB**

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

<i>Eli Aliaga</i>		111722
Formulated By:	Eli Aliaga	DATE
<i>Pedro L. Rentas</i>		111722
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	0.50541	0.50551	10001.9	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 certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).



CERTIFIED WEIGHT REPORT

Part Number: **95318**
Lot Number: **111722**
Description: **2-Chloroethyl vinyl ether**

Solvent(s): **Lot#**
Methanol **EB679-US**

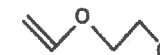
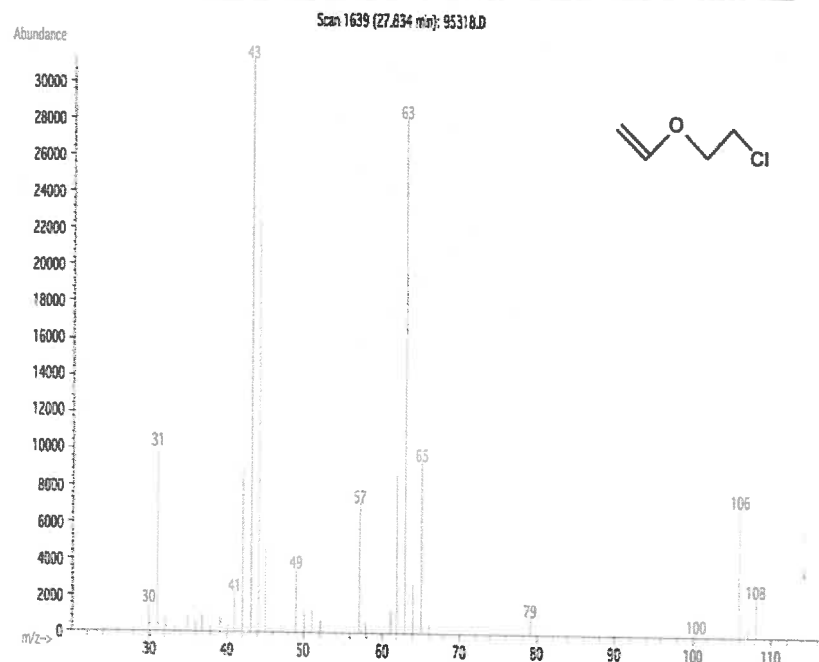
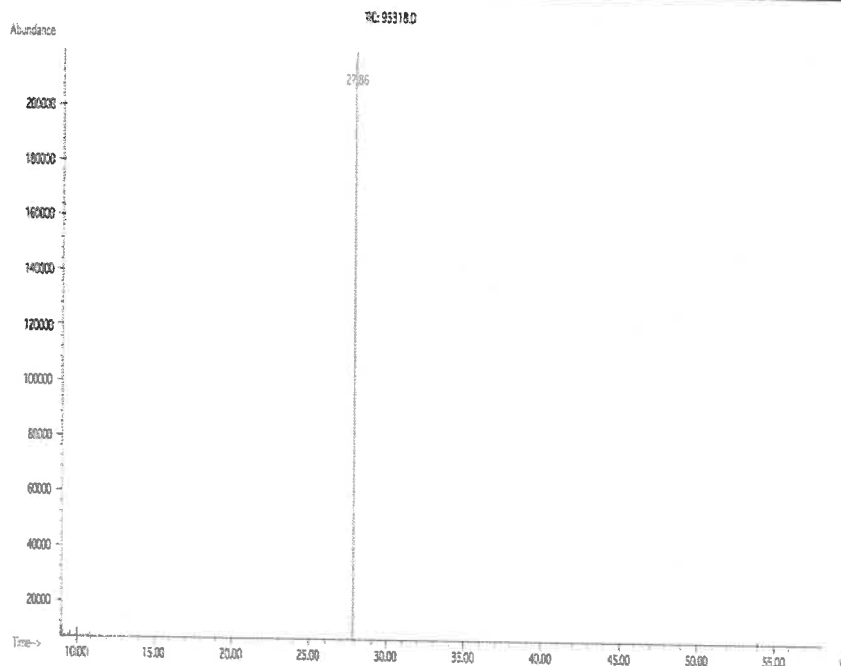
Expiration Date: **111725**
Recommended Storage: **Refrigerate (4 °C)**
Nominal Concentration (µg/mL): **10000**
NIST Test ID#: **6UTB**

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

<i>Eli Aliaga</i>		111722
Formulated By:	Eli Aliaga	DATE
<i>Pedro L. Rentas</i>		111722
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	0.50541	0.50551	10001.9	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 certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).



Dec 12/6/24
20 vial

CERTIFIED WEIGHT REPORT

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

Solvent(s): Lot#
Methanol EJ143-US

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

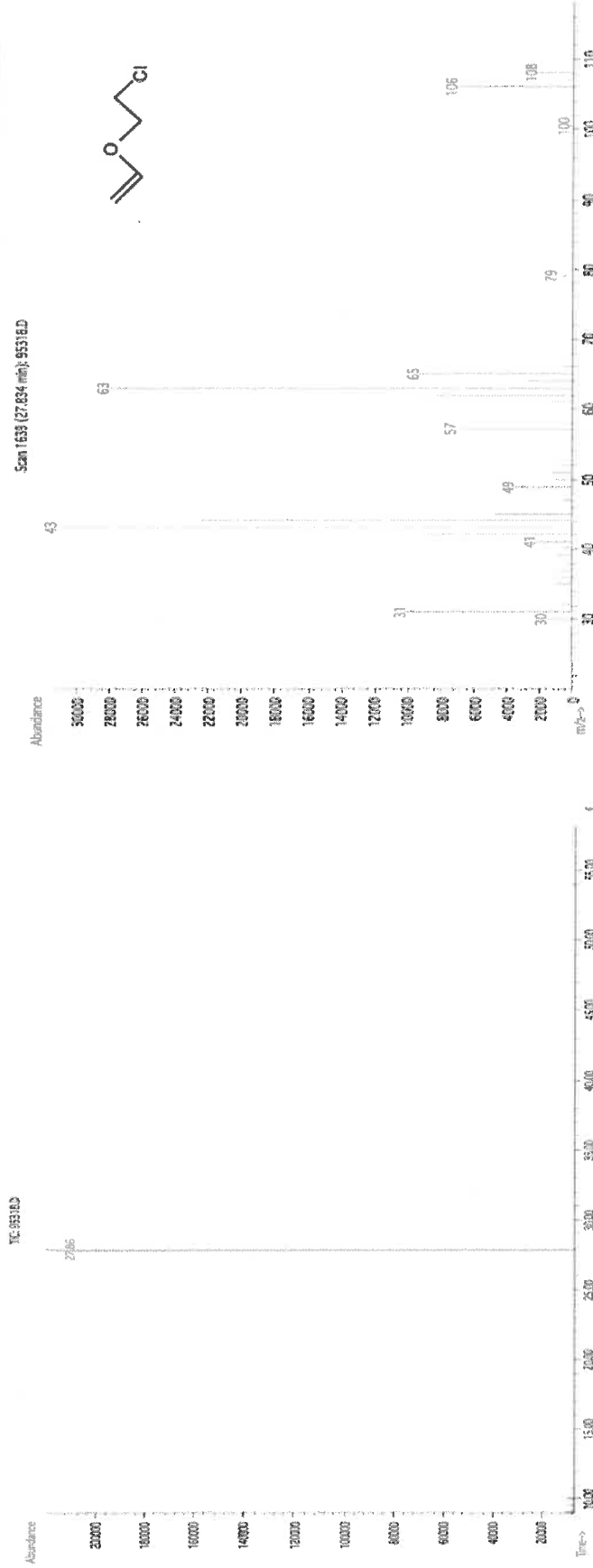
✓ 14630 to
✓ 14649

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

5E-05 Balance Uncertainty
0.001 Flask Uncertainty

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

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



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

Safety Data Sheet (SDS)

GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY ANALYTICAL STANDARD DISSOLVED IN METHANOL

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

Section II - Hazards Identification

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

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



Signal Word: DANGER

Section III - Composition

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

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

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

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

Section V. FIREFIGHTING MEASURES

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

Section VI. ACCIDENTAL RELEASE MEASURES

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

Section VII. HANDLING AND STORAGE

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

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Section IX - Physical/Chemical Characteristics

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

Section X. STABILITY AND REACTIVITY

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

Section XI. TOXICOLOGICAL INFORMATION

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

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

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

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

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

Section XV. REGULATORY INFORMATION

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

Section XVI. Misc. INFORMATION

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



Dec 12/6/24
20 vial

CERTIFIED WEIGHT REPORT

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

Solvent(s): Lot#
Methanol EJ143-US

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

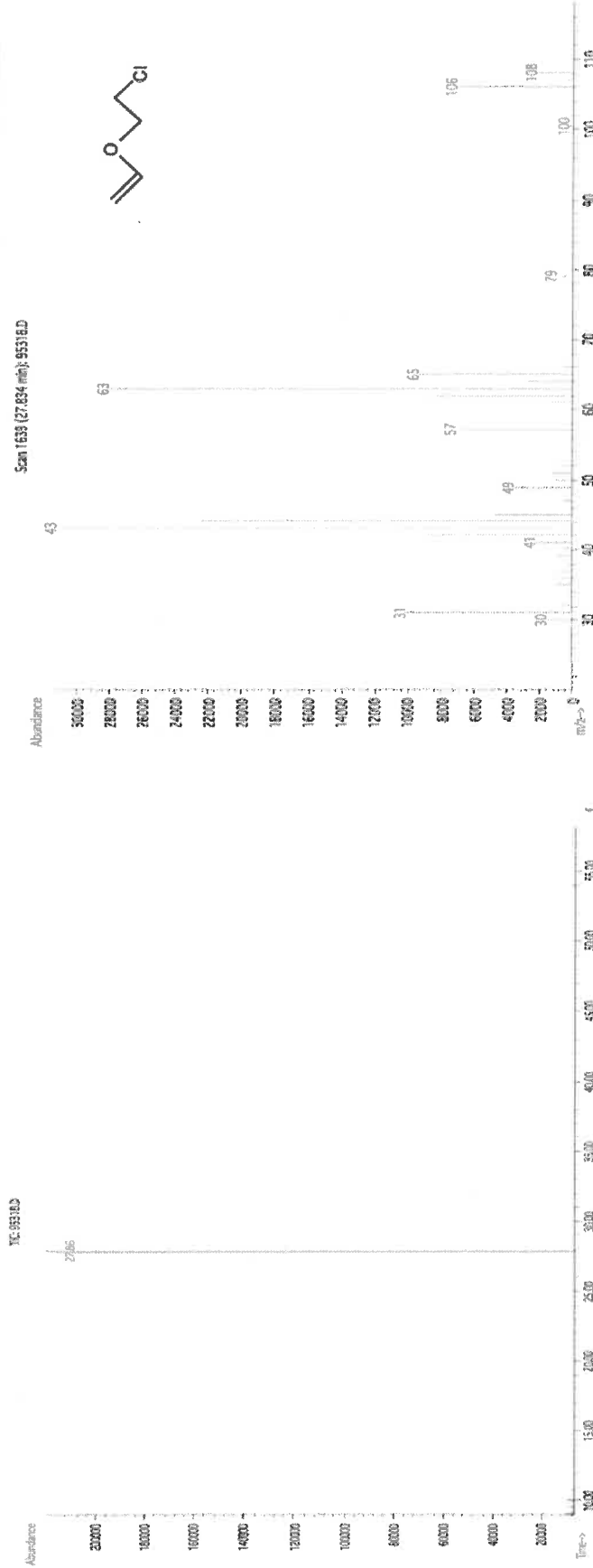
✓ 14630 to
✓ 14649

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

5E-05 Balance Uncertainty
0.001 Flask Uncertainty

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

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



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

Safety Data Sheet (SDS)

GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY ANALYTICAL STANDARD DISSOLVED IN METHANOL

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

Section II - Hazards Identification

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

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



Signal Word: DANGER

Section III - Composition

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

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

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

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

Section V. FIREFIGHTING MEASURES

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

Section VI. ACCIDENTAL RELEASE MEASURES

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

Section VII. HANDLING AND STORAGE

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

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Section IX - Physical/Chemical Characteristics

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

Section X. STABILITY AND REACTIVITY

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

Section XI. TOXICOLOGICAL INFORMATION

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

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

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

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

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

Section XV. REGULATORY INFORMATION

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

Section XVI. Misc. INFORMATION

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



See 1216124
20 vial

CERTIFIED WEIGHT REPORT

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

Solvent(s): Lot#
Methanol EJ143-US

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

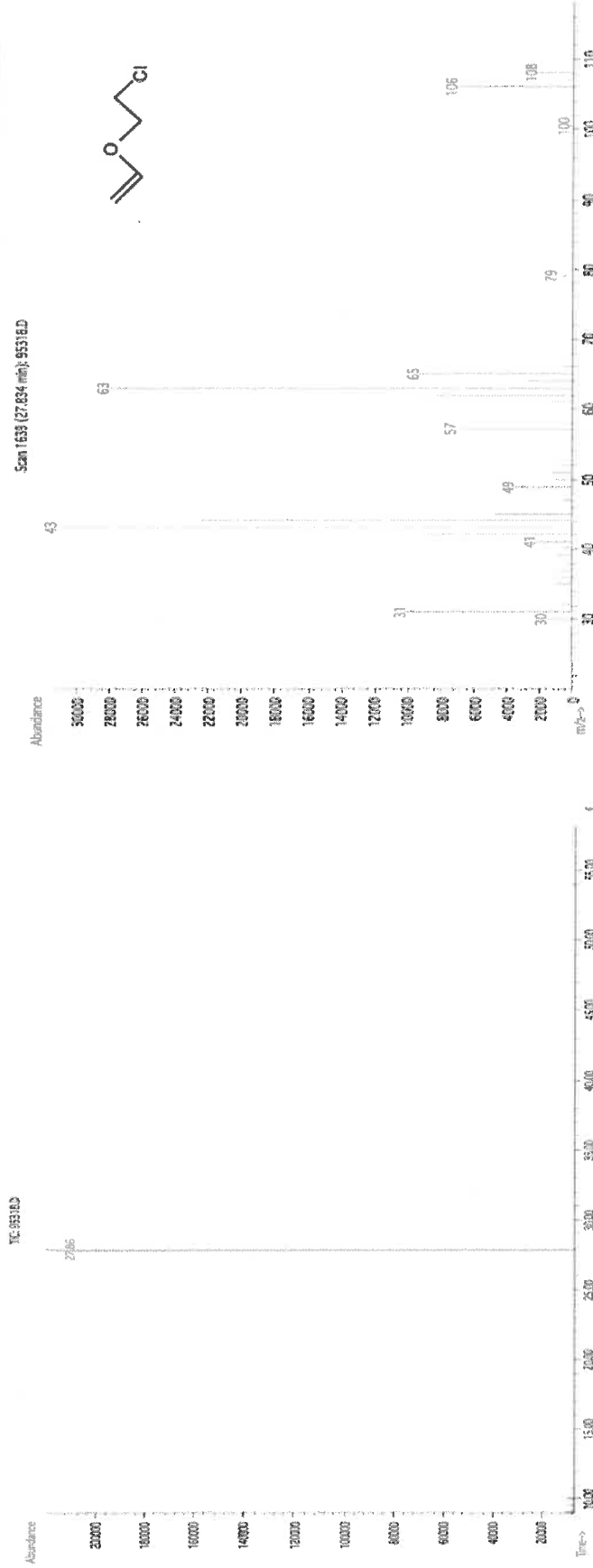
Formulated By: Prashant Chauhan 120524
Reviewed By: Pedro L. Rentas 120524

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

5E-05 Balance Uncertainty
0.001 Flask Uncertainty

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

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



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

Safety Data Sheet (SDS)

GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY ANALYTICAL STANDARD DISSOLVED IN METHANOL

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

Section II - Hazards Identification

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

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



Signal Word: DANGER

Section III - Composition

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

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

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

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

Section V. FIREFIGHTING MEASURES

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

Section VI. ACCIDENTAL RELEASE MEASURES

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

Section VII. HANDLING AND STORAGE

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

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Section IX - Physical/Chemical Characteristics

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

Section X. STABILITY AND REACTIVITY

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

Section XI. TOXICOLOGICAL INFORMATION

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

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

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

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

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

Section XV. REGULATORY INFORMATION

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

Section XVI. Misc. INFORMATION

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



CERTIFIED WEIGHT REPORT

Part Number:
Lot Number:
Description:

95318
120524
2-Chloroethyl vinyl ether

Solvent(s): Lot#
Methanol EJ143-US

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test ID#:

120527
Refrigerate (4 °C)
10000
6UTB

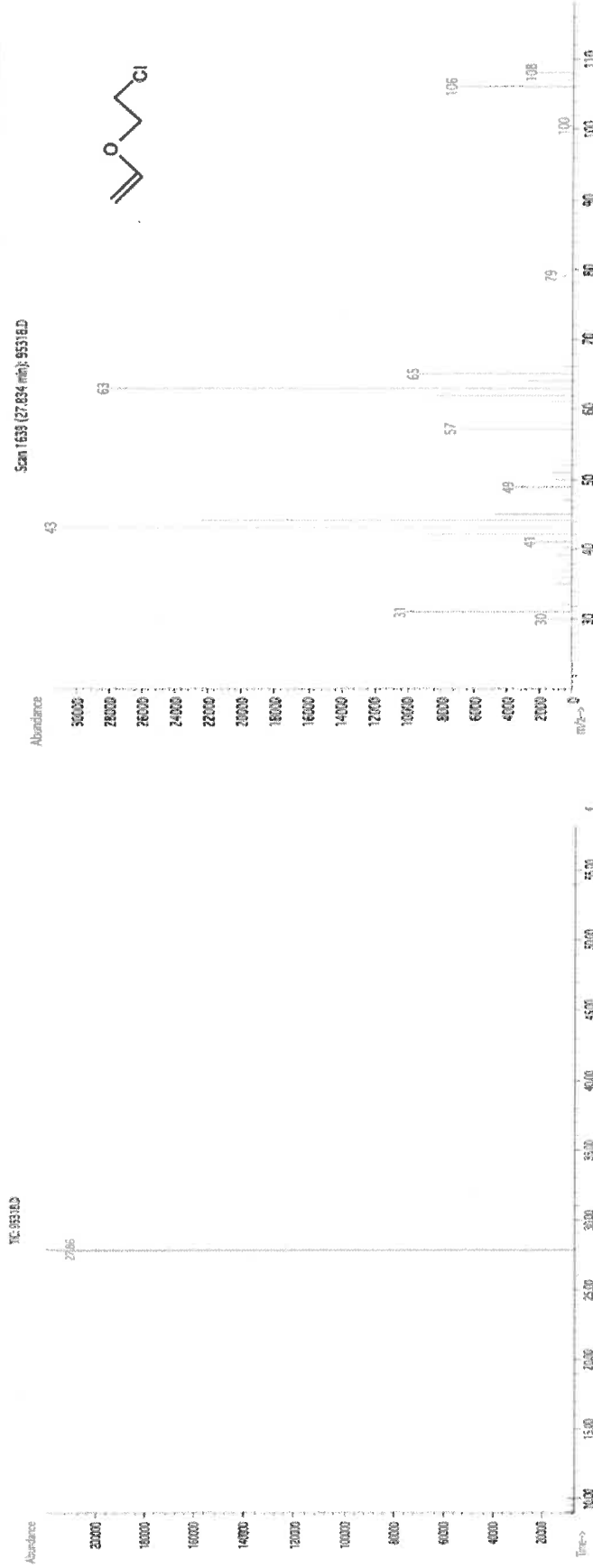
Weight(s) shown below were combined and diluted to (mL):

5E-05 Balance Uncertainty
0.001 Flask Uncertainty

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

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

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



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

Safety Data Sheet (SDS)

GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY ANALYTICAL STANDARD DISSOLVED IN METHANOL

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

Section II - Hazards Identification

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

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



Signal Word: DANGER

Section III - Composition

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

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

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

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

Section V. FIREFIGHTING MEASURES

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

Section VI. ACCIDENTAL RELEASE MEASURES

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

Section VII. HANDLING AND STORAGE

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

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Section IX - Physical/Chemical Characteristics

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

Section X. STABILITY AND REACTIVITY

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

Section XI. TOXICOLOGICAL INFORMATION

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

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

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

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

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

Section XV. REGULATORY INFORMATION

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

Section XVI. Misc. INFORMATION

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



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



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.: A0191703
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 : November 30, 2025 Storage: 0°C or colder
Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	tert-Butanol (TBA) CAS # 75-65-0 Purity 99% (Lot 101619K21F-1)	50,122.0 µg/mL	+/- 293.4753 µg/mL Gravimetric +/- 1,073.6797 µg/mL Unstressed +/- 1,104.8612 µg/mL Stressed

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

Column:

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

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

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

Inj. Temp:

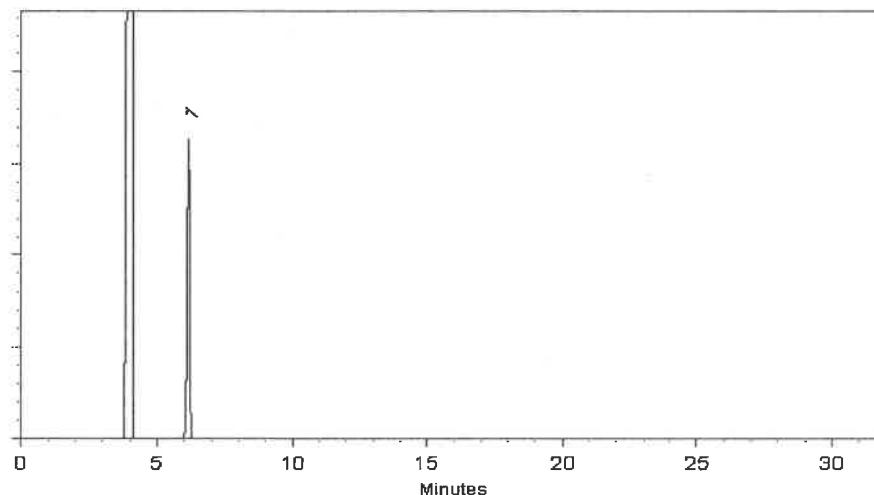
200°C

Det. Temp:

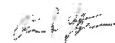
250°C

Det. Type:

FID



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


Alicia Leathers - Operation Technician I

Date Mixed: 15-Nov-2022

Balance: 1127510105


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 17-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/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

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

Description : 4-Bromofluorobenzene Standard

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

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

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

Ship: Ambient

CERTIFIED VALUES

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

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

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

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

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

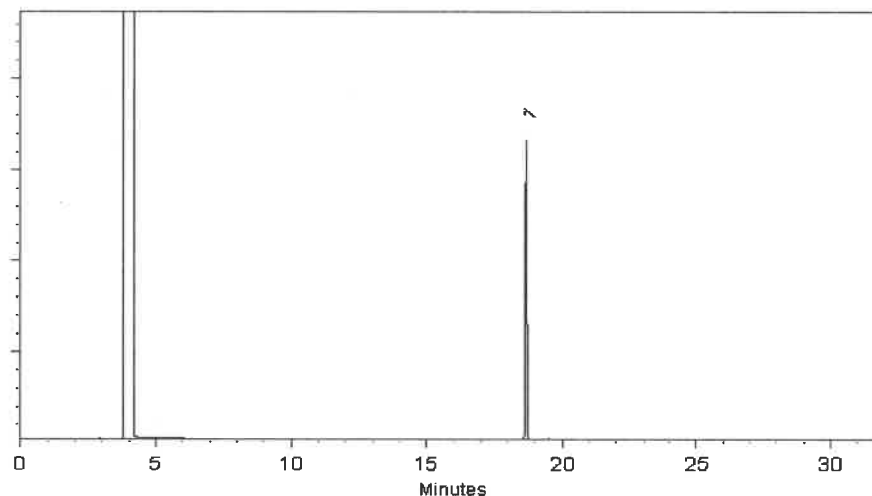
FID

Split Vent:

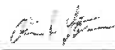
40 ml/min

Inj. Vol

1µl



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


Alicia Leathers - Operation Technician I

Date Mixed: 17-Nov-2022

Balance Serial # B251644995


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 21-Nov-2022

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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:

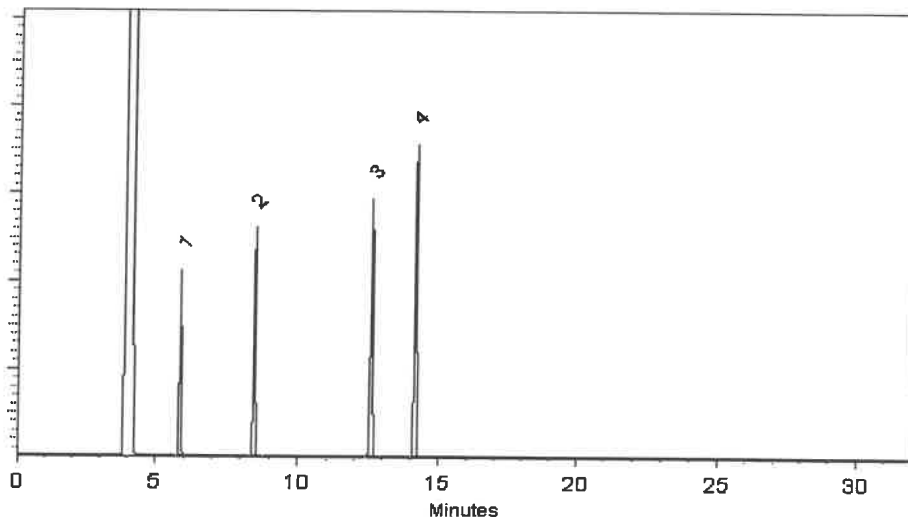
FID

Split Vent:

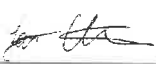
40 ml/min

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:

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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:

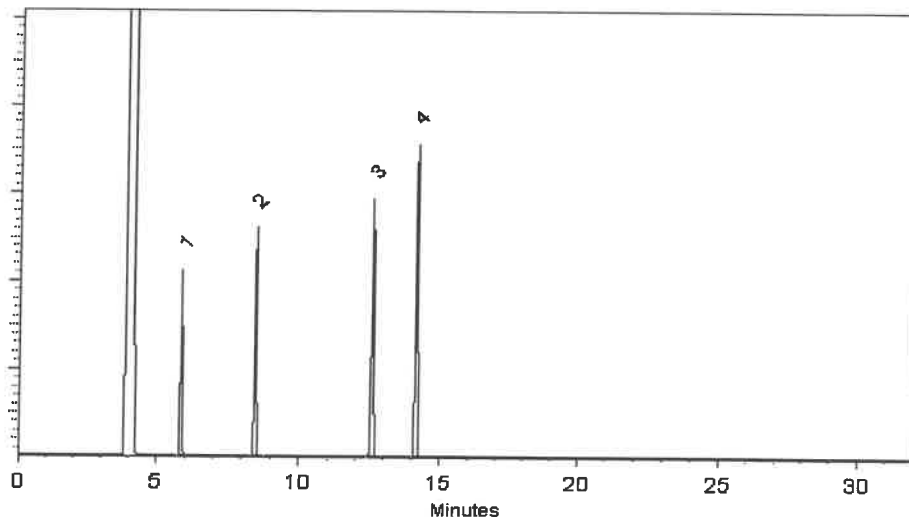
FID

Split Vent:

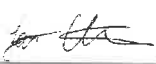
40 ml/min

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:

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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:

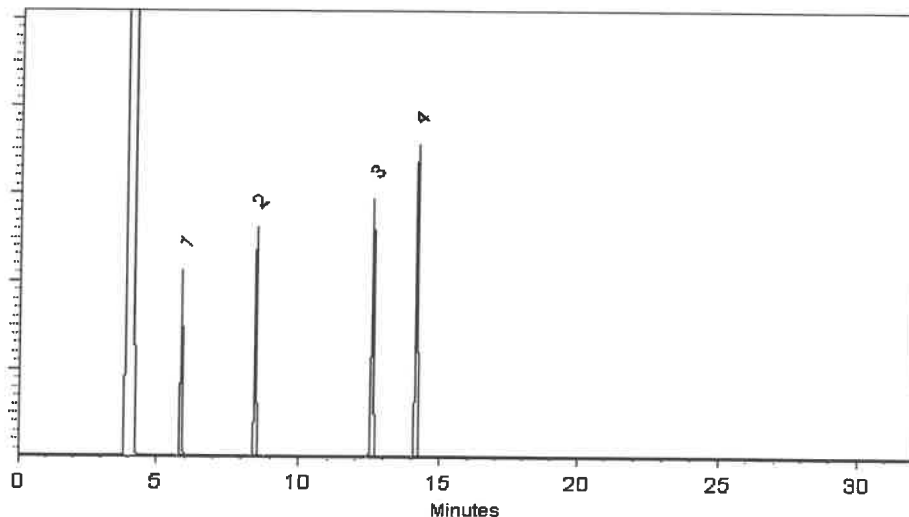
FID

Split Vent:

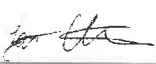
40 ml/min

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:

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



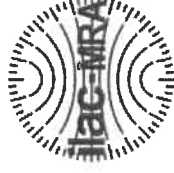
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

gravimetric



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No.: 555581 Lot No.: A0210184

Description: Custom 8260 Internal Standard Mix

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

Container Size: 2 mL Pkg Amt: > 1 mL

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

Ship: Ambient

CERTIFIED VALUES

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

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

John Friedline - Operations Technician I

Date Mixed: 11-Apr-2024 Balance: 11275.10105



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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



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

www.restek.com

10 vial.
Dec: 12/09/24
CERTIFIED REFERENCE MATERIAL

Certificate of Analysis
chromatographic plus

V14667-5
V14676



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

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

CERTIFIED VALUES

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

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

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

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

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

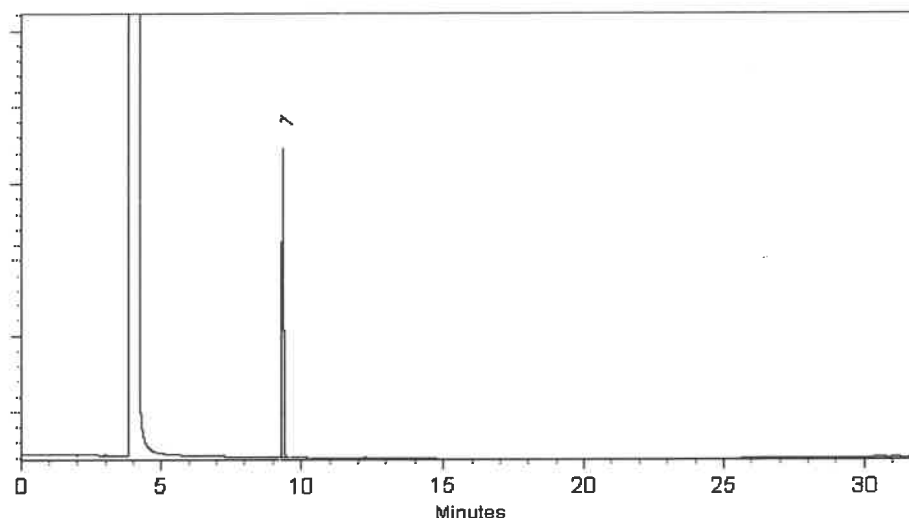
FID

Split Vent:

40 ml/min

Inj. Vol

1µl



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

Stacey Wanner - Operations Technician I

Date Mixed: 08-Aug-2024

Balance Serial # 1127510105

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 14-Aug-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



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

www.restek.com

10 vial.
CERTIFIED REFERENCE MATERIAL

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



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

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

CERTIFIED VALUES

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

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

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

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

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

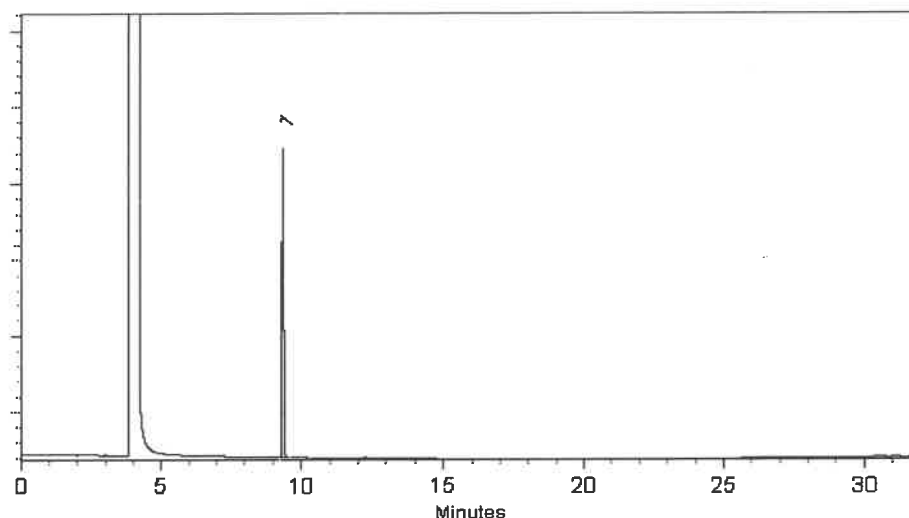
FID

Split Vent:

40 ml/min

Inj. Vol

1µl



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

Stacey Wanner - Operations Technician I

Date Mixed: 08-Aug-2024

Balance Serial # 1127510105

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 14-Aug-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



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

www.restek.com

Rec 12/17/24
30 ml
CERTIFIED REFERENCE MATERIAL

Certificate of Analysis
chromatographic plus

V14727 to
V14756



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30042 **Lot No.:** A0216826
Description : 502.2 Calibration Mix #1
502.2 Calibration Mix #1 2,000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : May 31, 2031 **Storage:** 0°C or colder
Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Dichlorodifluoromethane (CFC-12)	75-71-8	00022922	99%	2,000.9 µg/mL	+/- 112.4144
2	Chloromethane (methyl chloride)	74-87-3	00022694	99%	2,000.7 µg/mL	+/- 112.3998
3	Vinyl chloride	75-01-4	00015559	99%	2,000.3 µg/mL	+/- 112.3779
4	Bromomethane (methyl bromide)	74-83-9	00017022	99%	2,001.8 µg/mL	+/- 112.4650
5	Chloroethane (ethyl chloride)	75-00-3	107-401039114-1	99%	2,000.1 µg/mL	+/- 112.3700
6	Trichlorofluoromethane (CFC-11)	75-69-4	MKCJ8658	99%	2,000.7 µg/mL	+/- 112.3992

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

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

Quality Confirmation Test

Column:

60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

Carrier Gas:

helium-constant flow 2.0 mL/min.

Temp. Program:

40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

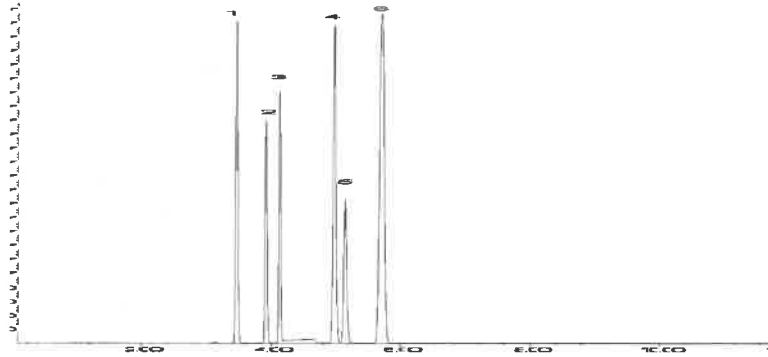
MSD

Split Vent:

Split ratio 10:1

Inj. Vol

1µl



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



Tom Suckal - Mix Technician

Date Mixed: 23-Sep-2024

Balance Serial # B707717271



Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 04-Oct-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



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

www.restek.com

Rec 12/17/24
CERTIFIED REFERENCE MATERIAL

30 ml
Certificate of Analysis
chromatographic plus

V14727 to
V14756



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30042 **Lot No.:** A0216826
Description : 502.2 Calibration Mix #1
502.2 Calibration Mix #1 2,000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : May 31, 2031 **Storage:** 0°C or colder
Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Dichlorodifluoromethane (CFC-12)	75-71-8	00022922	99%	2,000.9 µg/mL	+/- 112.4144
2	Chloromethane (methyl chloride)	74-87-3	00022694	99%	2,000.7 µg/mL	+/- 112.3998
3	Vinyl chloride	75-01-4	00015559	99%	2,000.3 µg/mL	+/- 112.3779
4	Bromomethane (methyl bromide)	74-83-9	00017022	99%	2,001.8 µg/mL	+/- 112.4650
5	Chloroethane (ethyl chloride)	75-00-3	107-401039114-1	99%	2,000.1 µg/mL	+/- 112.3700
6	Trichlorofluoromethane (CFC-11)	75-69-4	MKCJ8658	99%	2,000.7 µg/mL	+/- 112.3992

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

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

Quality Confirmation Test

Column:

60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

Carrier Gas:

helium-constant flow 2.0 mL/min.

Temp. Program:

40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

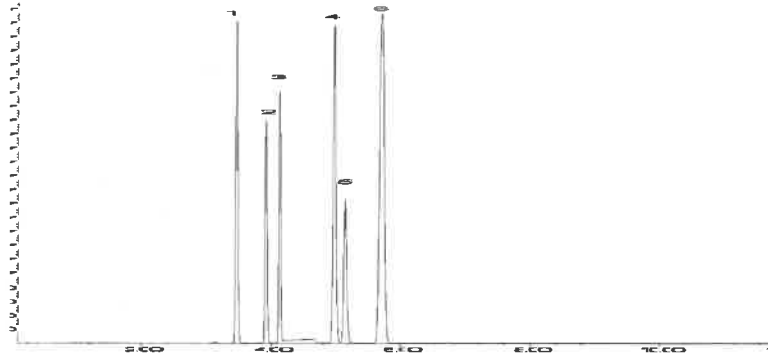
MSD

Split Vent:

Split ratio 10:1

Inj. Vol

1µl



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



Tom Suckal - Mix Technician

Date Mixed: 23-Sep-2024

Balance Serial # B707717271



Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 04-Oct-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



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

✓ 14842 to 14846



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30470 **Lot No.:** A0217535
Description : tert-Butanol Standard
tert-Butanol Std 50,000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : October 31, 2027 **Storage:** 0°C or colder
Ship: Ambient

CERTIFIED VALUES

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

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

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

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

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

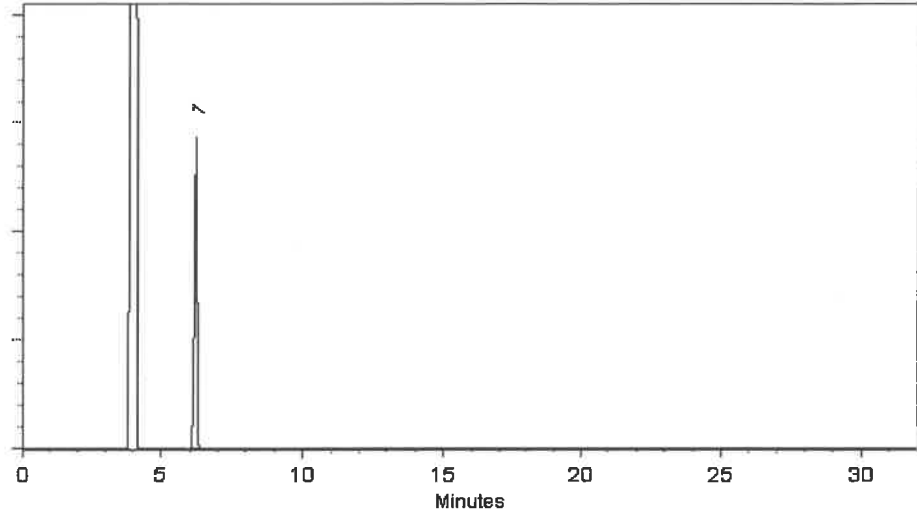
FID

Split Vent:

40 ml/min

Inj. Vol

1µl



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

A.O.E.
Aaron Enyart - Operations Tech I

Date Mixed: 07-Oct-2024

Balance Serial # B251644995

Brittany Federinko
Brittany Federinko - Operations Tech I

Date Passed: 09-Oct-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



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

www.restek.com

2014 Dec 01/08/21
CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

V14803 - V14822



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 555408-SL **Lot No.:** A0220471
Description : Custom Vinyl Acetate Standard
Custom Vinyl Acetate Standard 8,000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : June 30, 2026 **Storage:** -20°C or colder
Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

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

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

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

Tech Tips:

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

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

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

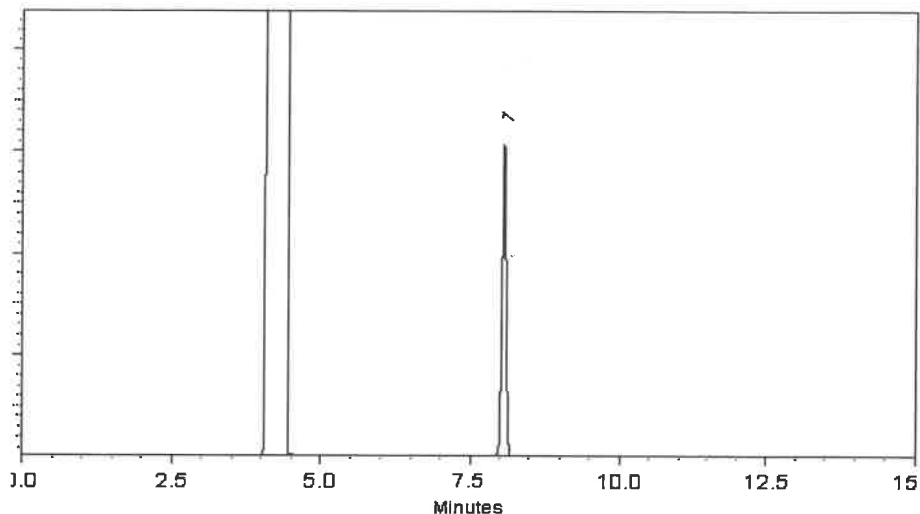
FID

Split Vent:

40 ml/min

Inj. Vol

1µl



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

Ethan Winiarski - Operations Tech I

Date Mixed: 24-Dec-2024

Balance Serial # 1127510105

Dillan Murphy - Operations Technician I

Date Passed: 02-Jan-2025

REVIEWED
By Jennifer Pollock at 7:12 am, Jan 05, 2025

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



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

www.restek.com

2014 Dec 01/08/21
CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

V14803 - V14822



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 555408-SL **Lot No.:** A0220471
Description : Custom Vinyl Acetate Standard
Custom Vinyl Acetate Standard 8,000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : June 30, 2026 **Storage:** -20°C or colder
Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

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

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

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

Tech Tips:

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

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

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

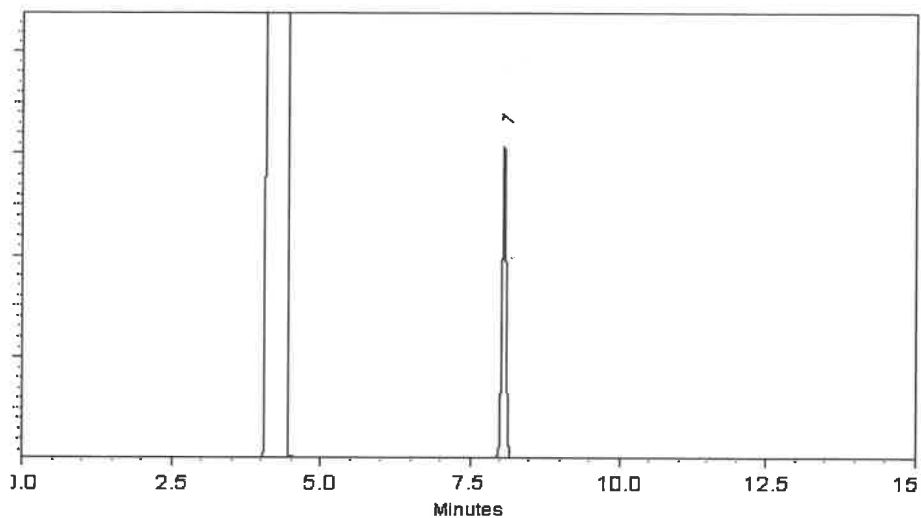
FID

Split Vent:

40 ml/min

Inj. Vol

1µl



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

Ethan Winiarski - Operations Tech I

Date Mixed: 24-Dec-2024

Balance Serial # 1127510105

Dillan Murphy - Operations Technician I

Date Passed: 02-Jan-2025

REVIEWED
By Jennifer Pollock at 7:12 am, Jan 05, 2025

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



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

www.restek.com

10 vol Rec 01/08/25
CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

✓ 14793 to 14802



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 555408-FL **Lot No.:** A0220563
Description : Custom Vinyl Acetate Standard
Custom Vinyl Acetate Standard 8,000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : June 30, 2026 **Storage:** -20°C or colder
Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Vinyl acetate	108-05-4	RD240423RSR	99%	8,060.0 µg/mL	+/- 278.5905

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

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

Tech Tips:

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

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

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

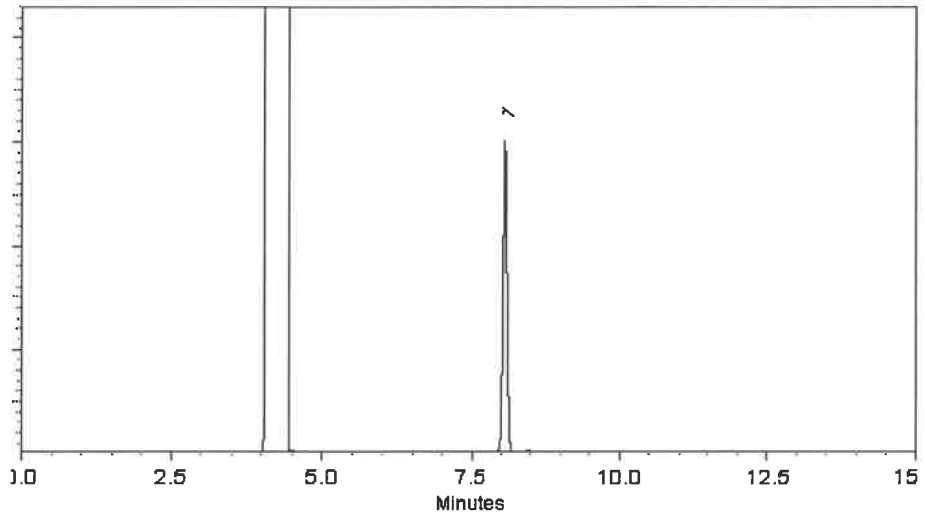
FID

Split Vent:

40 ml/min

Inj. Vol

1µl

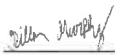


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Tom Suckal - Mix Technician

Date Mixed: 30-Dec-2024

Balance Serial # B345965662


Dillan Murphy - Operations Technician I

Date Passed: 02-Jan-2025

REVIEWED
By Jennifer Pothier at 7:11 am, Jan 03, 2025

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



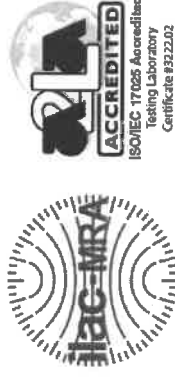
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

gravimetric



10 vial
See 03/31/25
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 Federlino

Brittany Federlino - 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:

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

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

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

Manufacturing Notes:

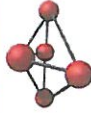
- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

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



Certified Reference Material CRM



CERTIFIED WEIGHT REPORT

Part Number: **70046**
Lot Number: **070122**
Description: **Bromochloromethane**

Solvent: **Methanol**
Lot# **EC592-US**

Expiration Date: **070127**
Recommended Storage: **Refrigerate (4 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UTB**

Weight(s) shown below were combined and diluted to (mL): **25.0**

5E-05 Balance Uncertainty
0.0002 Flask Uncertainty

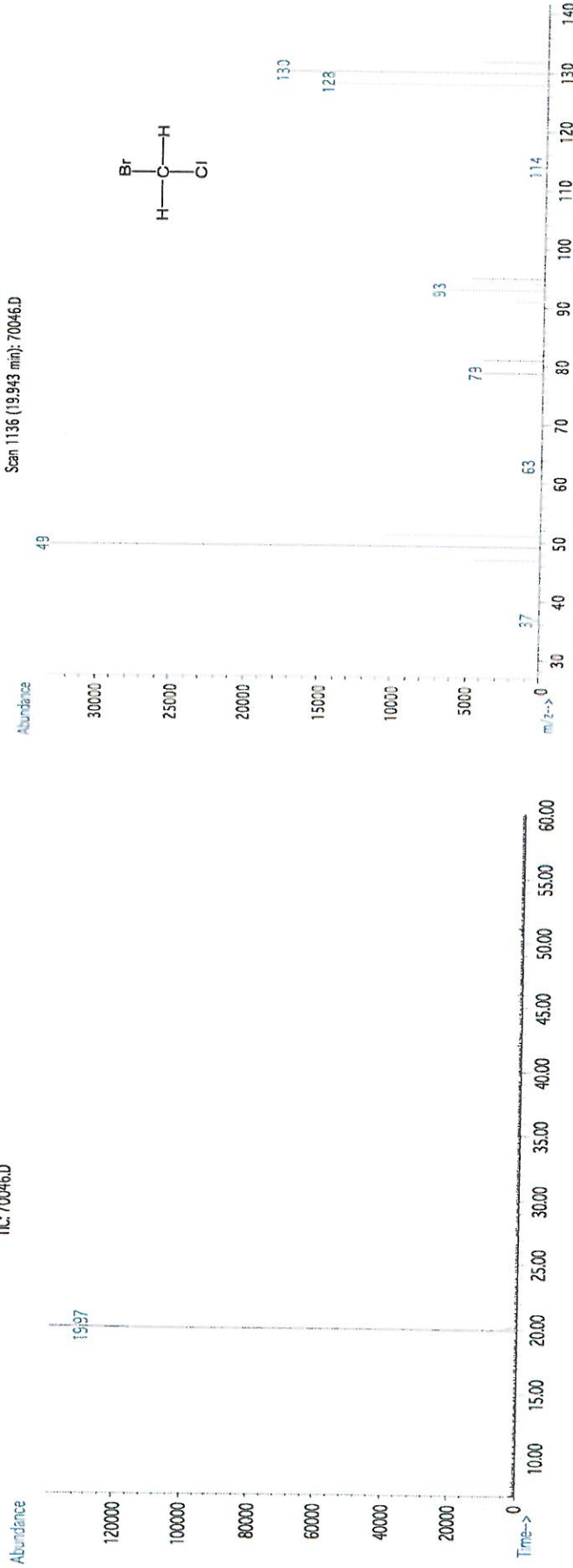
Formulated By:	Gabriel Helland	070122
DATE		
Reviewed By:	Pedro L. Rentas	070122
DATE		

SDS Information

Expanded Uncertainty (µg/mL) **5.7**
Actual Weight(g) **0.02540**
Actual Conc (µg/mL) **1004.1**
(Solvent Safety Info. On Attached pg.)
OSHA PEL (TWA) **LD50**

1. Bromochloromethane	46	AY01	1000	99	0.2	0.02530	0.02540	1004.1	5.7	74-97-5	200 ppm (1050mg/m ³ /8H)	ori-rat 5000mg/kg
Method GC/MSD-1.M: Column : (60m X 0.25mm X 1.5 µm) Temp 1 = 35°C (10min.), Temp 2 = 200°C (8.75 min.), Rate = 4°C/min., Injector B= 200°C, Detector B = 220°C. Analyst: Candice Warren												

TIC: 70046.D



* 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).

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

Rec 05/09/25
Avantor™



*V 14921 to
V 14938*

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

Certificate of Analysis

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

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

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

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

Rec 05/09/25
Avantor™



*V14921 to
V14938*

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

Certificate of Analysis

Test	Specification	Result
Assay (CH ₃ OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.3 ppm
Titration Acid (μeq/g)	≤ 0.3	0.3
Titration Base (μeq/g)	≤ 0.10	0.03
Water (by KF, coulometric)	≤ 0.08 %	< 0.01 %
Volatile Organic Trace Analysis - Below EPA 82608 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

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

Rec 05/09/25
Avantor™



*V14921 to
V14938*

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

Certificate of Analysis

Test	Specification	Result
Assay (CH ₃ OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.3 ppm
Titration Acid (μeq/g)	≤ 0.3	0.3
Titration Base (μeq/g)	≤ 0.10	0.03
Water (by KF, coulometric)	≤ 0.08 %	< 0.01 %
Volatile Organic Trace Analysis - Below EPA 82608 CRQL	Conforms	Conforms

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

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

Mark
Jamie Croak
Director Quality Operations, Bioscience Production



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

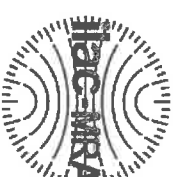
CERTIFIED REFERENCE MATERIAL

22 05113125
20 vial

Certificate of Analysis

chromatographic plus

✓ 149516 ✓ 14970



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



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

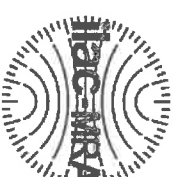
CERTIFIED REFERENCE MATERIAL

22 05113125
20 vial

Certificate of Analysis

chromatographic plus

✓ 149516 ✓ 14970



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



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

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30489 Lot No.: A0220531

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 : 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	Methyl acetate	79-20-9	SHBR1889	99%	2,018.7 µg/mL	+/- 69.7744
2	Vinyl acetate	108-05-4	RD240423RSR	99%	2,014.7 µg/mL	+/- 69.6361
3	Ethyl acetate	141-78-6	SHBR4534	99%	2,010.7 µg/mL	+/- 69.4979
4	Isopropyl acetate	108-21-4	BCCG7069	99%	2,010.7 µg/mL	+/- 69.4979
5	Propyl acetate	109-60-4	P8XLN	99%	2,017.3 µg/mL	+/- 69.7283
6	Butyl acetate	123-86-4	SHBR2024	99%	2,010.7 µg/mL	+/- 69.4979
7	Amyl acetate	628-63-7	BCBT7442	99%	2,017.3 µg/mL	+/- 69.7283

* 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



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

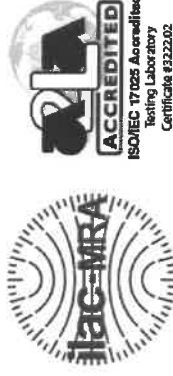
www.restek.com

Rec 05/19/25
15 vial
CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

V14981-v14995



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.:** A0221541

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 : September 30, 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%	2,021.5 µg/mL	+/- 113.7071
2	Chloromethane (methyl chloride)	74-87-3	1462282	99%	2,018.0 µg/mL	+/- 113.8848
3	Vinyl chloride	75-01-4	00015559	99%	2,020.4 µg/mL	+/- 113.8532
4	Bromomethane (methyl bromide)	74-83-9	00017022	99%	2,019.4 µg/mL	+/- 114.1656
5	Chloroethane (ethyl chloride)	75-00-3	107-401039114-1	99%	2,019.2 µg/mL	+/- 113.8076
6	Trichlorofluoromethane (CFC-11)	75-69-4	29320	99%	2,022.2 µg/mL	+/- 114.4552

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

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



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

www.restek.com

REC 06/02/25
15 V141
CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

V14996 to V15010



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.:** A0220242

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 : March 31, 2028 **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	SHBR5966	99%	5,033.8 µg/mL	+/- 173.9449
2	2-Butanone (MEK)	78-93-3	SHBQ9020	99%	5,011.4 µg/mL	+/- 173.1708
3	4-Methyl-2-pentanone (MIBK)	108-10-1	SHBR0467	99%	5,043.0 µg/mL	+/- 174.2628
4	2-Hexanone	591-78-6	MKCV1997	99%	5,028.8 µg/mL	+/- 173.7721

* 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:

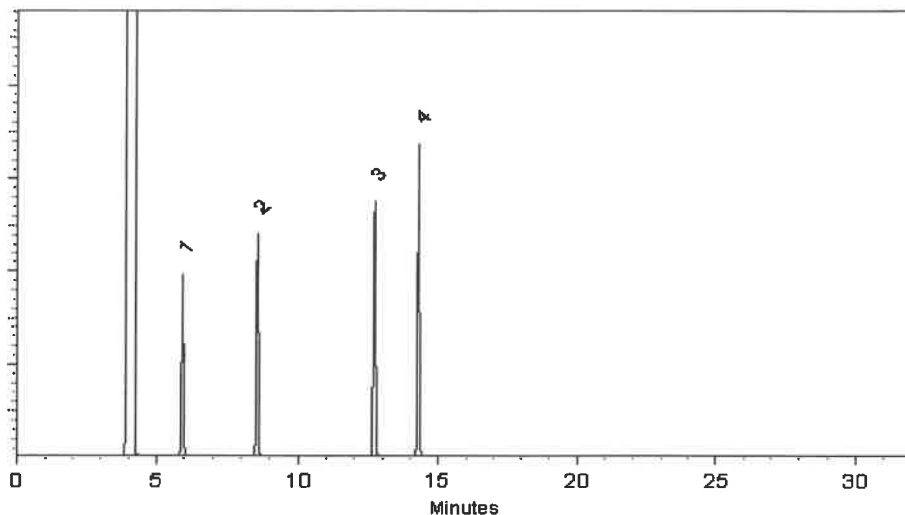
FID

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.

Stacey Wanner - Operations Technician I

Date Mixed: 17-Dec-2024

Balance Serial # B707717271

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 20-Dec-2024

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



See 09/16/25 5 vial



CERTIFIED WEIGHT REPORT

Part Number:
Lot Number:
Description:

91980
091525
Acrolein

Solvent(s):
Water

Lot#
041725Q

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test ID#:

101525
Refrigerate (2°C to 8°C)
5000
6UTB

V15064 to
V15068

5E-05 Balance Uncertainty
0.001 Flask Uncertainty

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

10.0

Expanded

Uncertainty

(Solvent Safety Info. On Attached pg.)

OSHA PEL (TWA)

LDSO

0.1 ppm

ori-rat 46mg/kg

091525

DATE

091525

DATE

Compound

RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Target Weight(g)	Actual Weight(g)	Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	CAS#	OSHA PEL (TWA)	LDSO
5	103755V10F	5000	97	0.05166	0.05176	5009.9	52.6	107-02-8	0.1 ppm	ori-rat 46mg/kg

Method: GC6MSD-1.1. 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 Renteria. NOTE: Due to the instability of acrolein in solution, all solutions thereof, should be used immediately. Long term storage is not recommended. Please contact our technical department if further information is required.

TIC: [BSB2]79005.D

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

Abundance

Abundance

27

250000

8.93

200000



56

150000

100000

50000

Time-->

10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00

m/z-->

20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated by an ISO 17025 certified organization with weights traceable through NIST to the SI kilogram (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).
- Rev 1.0, 2/25/2025



See 09/16/25 5 vial



CERTIFIED WEIGHT REPORT

Part Number:
Lot Number:
Description:

91980
091525
Acrolein

Solvent(s):
Water

Lot#
041725Q

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test ID#:

101525
Refrigerate (2°C to 8°C)
5000
6UTB

V15064 to
V15068

5E-05 Balance Uncertainty
0.001 Flask Uncertainty

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

10.0

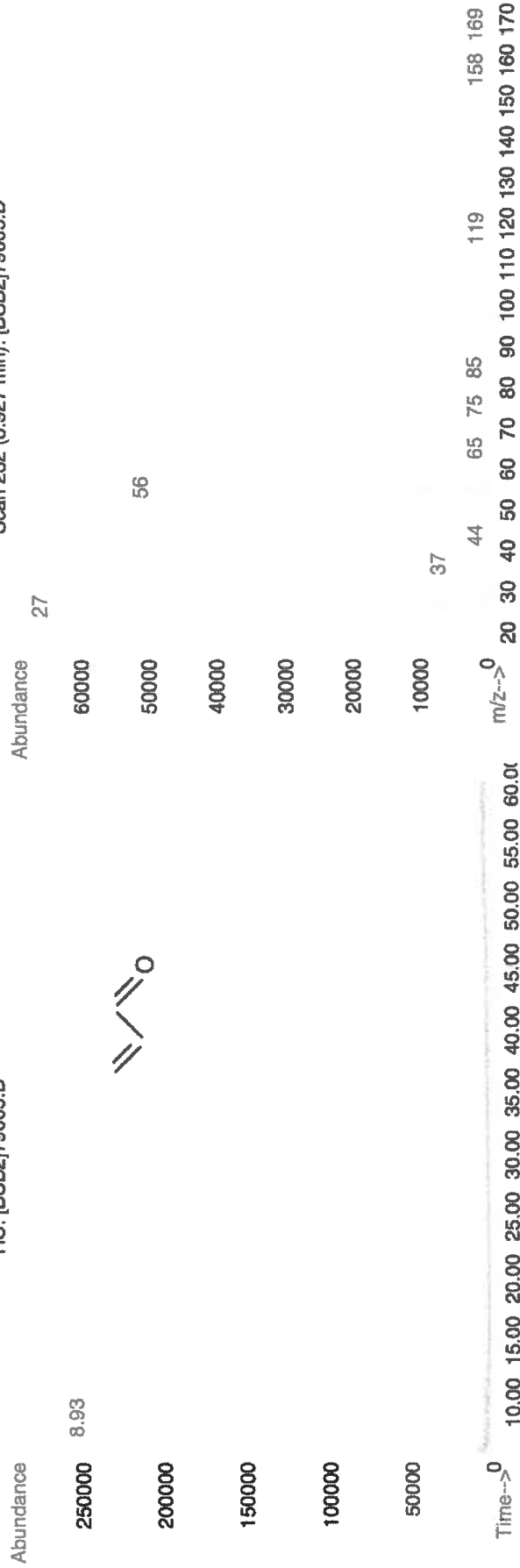
Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	CAS#	OSHA PEL (TWA)	LDSO

1. Acrolein 5 103755V10F 5000 97 0.5 0.05166 0.05176 5009.9 52.6 107-02-8 0.1 ppm orl-rat 46mg/kg

Method: GC6MSD-1.1. 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 Renteria. NOTE: Due to the instability of acrolein in solution, all solutions thereof, should be used immediately. Long term storage is not recommended. Please contact our technical department if further information is required.

TIC: [BSB2]79005.D

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



• The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
• Standards are prepared gravimetrically using balances that are calibrated by an ISO 17025 certified organization with weights traceable through NIST to the SI kilogram (see above).
• Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
• All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
• Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).
Rev 1.0, 2/25/2025



See 09/16/25 5 vial



CERTIFIED WEIGHT REPORT

Part Number:
Lot Number:
Description:

91980
091525
Acrolein

Solvent(s):
Water

Lot#
041725Q

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test ID#:

101525
Refrigerate (2°C to 8°C)
5000
6UTB

V15064 to
V15068

5E-05 Balance Uncertainty
0.001 Flask Uncertainty

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

10.0

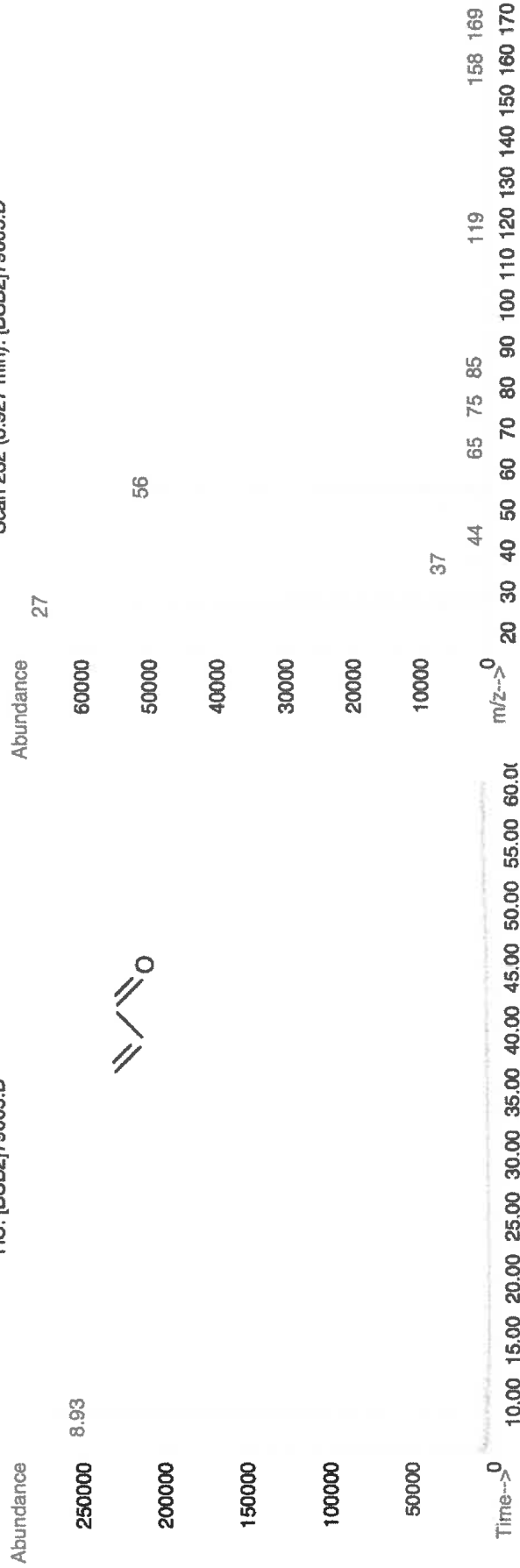
Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	CAS#	OSHA PEL (TWA)	LDSO

1. Acrolein 5 103755V10F 5000 97 0.5 0.05166 0.05176 5009.9 52.6 107-02-8 0.1 ppm orl-rat 46mg/kg

Method: GC6MSD-1.1. 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 Renteria. NOTE: Due to the instability of acrolein in solution, all solutions thereof, should be used immediately. Long term storage is not recommended. Please contact our technical department if further information is required.

TIC: [BSB2]79005.D

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



• The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
• Standards are prepared gravimetrically using balances that are calibrated by an ISO 17025 certified organization with weights traceable through NIST to the SI kilogram (see above).
• Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
• All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
• Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).
Rev 1.0, 2/25/2025



Rec 09/16/25 2.3% v/c



CERTIFIED WEIGHT REPORT

Part Number:
Lot Number:
Description:91980
091325
AcroleinSolvent(s):
WaterLot#
041725Q

Expiration Date:

101325

Recommended Storage:

Refrigerate (2°C to 8°C)

Nominal Concentration (µg/mL):

5000

NIST Test ID#:

6UTB

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

10.0

5E-05 Balance Uncertainty

0.001 Flask Uncertainty

V15069
V15070

Formulated By:	Justin Dippold	091325
Reviewed By:	Pedro L. Rentas	091325
DATE		
DATE		

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

SDS Information

1. Acrolein 5 103755R02H 5000 97 0.5 0.05166 0.05175 5008.9 52.5 107-02-8 0.1 ppm orl-rat 46mg/kg

Method: GC/MSD-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.

TIC: [BSB2]79005.D

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

Abundance

Abundance

27

250000

8.93

200000



56

150000

100000

50000

10000

37

Time-->

10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00

m/z-->

0

44 65 75 85 119 158 169

• The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
 • Standards are prepared gravimetrically using balances that are calibrated by an ISO 17025 certified organization with weights traceable through NIST to the SI kilogram (see above).
 • Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
 • All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
 • Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).
 Rev 1.0, 2/25/2025



Rec 09/16/25 2.3% v/c



CERTIFIED WEIGHT REPORT

Part Number:
Lot Number:
Description:91980
091325
AcroleinSolvent(s):
WaterLot#
041725Q

Expiration Date:

101325

Recommended Storage:

Refrigerate (2°C to 8°C)

Nominal Concentration (µg/mL):

5000

NIST Test ID#:

6UTB

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

10.0

5E-05 Balance Uncertainty

0.001 Flask Uncertainty

V15069
V15070

Formulated By:	Justin Dippold	091325
Reviewed By:	Pedro L. Rentas	091325
DATE		
DATE		

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

SDS Information

1. Acrolein 5 103755R02H 5000 97 0.5 0.05166 0.05175 5008.9 52.5 107-02-8 0.1 ppm orl-rat 46mg/kg

Method: GC/MSD-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.

TIC: [BSB2]79005.D

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

Abundance

Abundance

27

250000

8.93

200000



56

150000

100000

50000

10000

37

Time-->

10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00

m/z-->

0

44 65 75 85 119 158 169

The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
Standards are prepared gravimetrically using balances that are calibrated by an ISO 17025 certified organization with weights traceable through NIST to the SI kilogram (see above).
Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).
Rev 1.0, 2/25/2025



Certified Reference Material CRM



Rec 10/16/25 5:10p

CERTIFIED WEIGHT REPORT

Part Number:
Lot Number:
Description:

91980
101625
Acrolein

Solvent(s):
Water

Lot#
041725Q

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test ID#:

111625
Refrigerate (2°C to 8°C)
5000
6UTB

5E-05 Balance Uncertainty
0.001 Flask Uncertainty

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

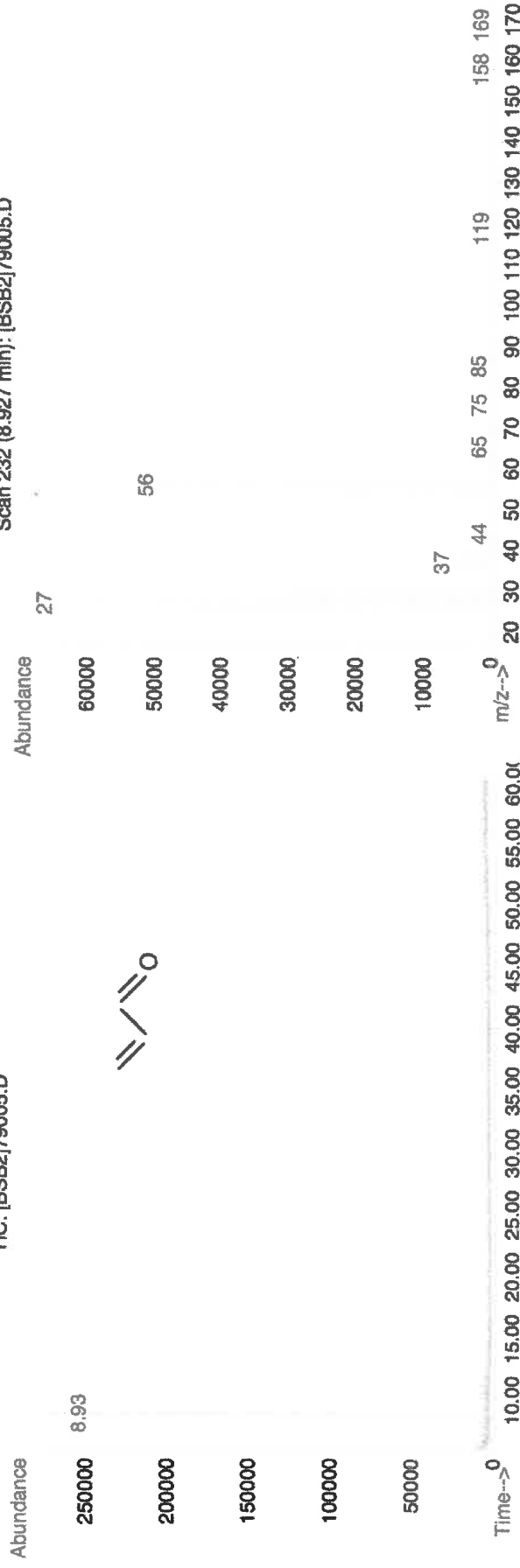
10.0

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (±) (µg/mL)	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 48mg/kg

Method: GC6MSD-1. Detector: Mass Selective Detector (Scan mode). Columns: Vool (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 Renteria. NOTE: Due to the instability of acrolein in solution, all solutions of acrolein, and any dilutions thereof, should be used immediately. Long term storage is not recommended. Please contact our technical department if further information is required.

TIC: [BSB2]79005.D



• The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
• Standards are prepared gravimetrically using balances that are calibrated by an ISO 17025 certified organization with weights traceable through NIST to the SI Kilogram (see above).
• Standards are certified (±) 0.5% of the stated value, unless otherwise stated.
• All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
• Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).
Rev 1A, 2/25/2025



Certified Reference Material CRM



Rec 10/16/25 5:10p

CERTIFIED WEIGHT REPORT

Part Number:
Lot Number:
Description:

91980
101625
Acrolein

Solvent(s):
Water

Lot#
041725Q

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test ID#:

111625
Refrigerate (2°C to 8°C)
5000
6UTB

11507H-115075

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

5E-05 Balance Uncertainty
0.001 Flask Uncertainty

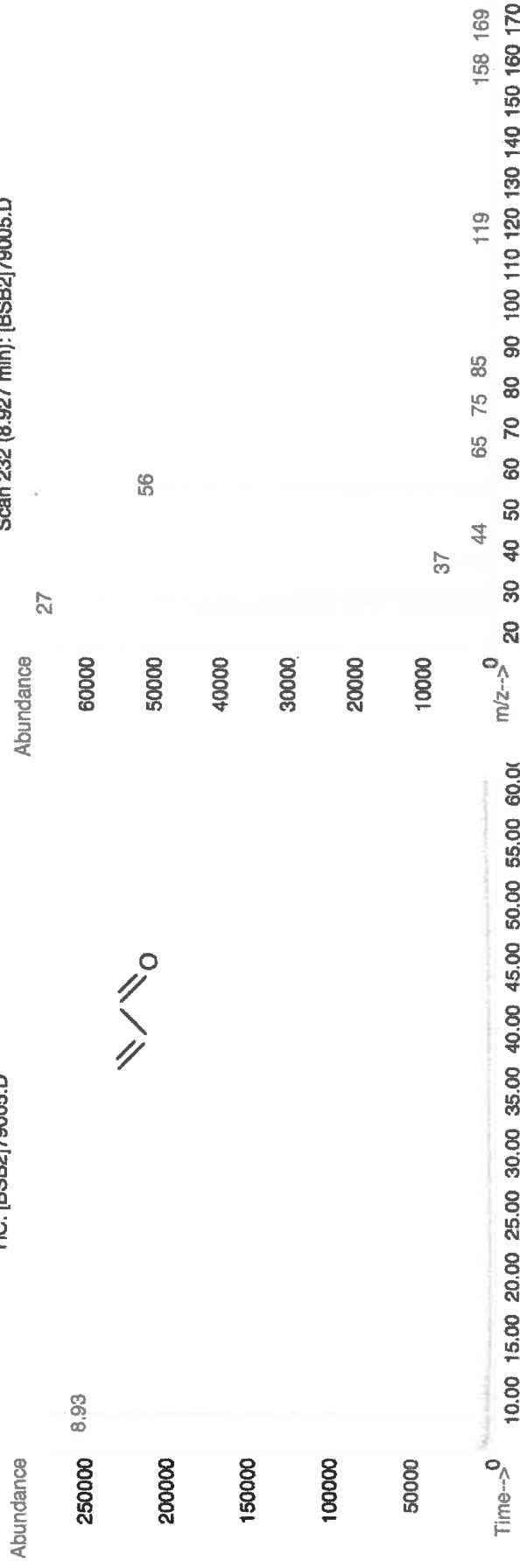
10.0

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	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 48mg/kg

Method: GC6MSD-1. Detector: Mass Selective Detector (Scan mode). Columns: Vool (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 Renteria. NOTE: Due to the instability of acrolein in solution, all solutions of acrolein, and any dilutions thereof, should be used immediately. Long term storage is not recommended. Please contact our technical department if further information is required.

TIC: [BSB2]79005.D



• The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
• Standards are prepared gravimetrically using balances that are calibrated by an ISO 17025 certified organization with weights traceable through NIST to the SI kilogram (see above).
• Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
• All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
• Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).
Rev 1A, 2/25/2025

Preservation Log

BalanceID: VOA-SC-2

Review By: Amit

Supervise By: MMDadoda

Seq	LabID	Vial A Weight(g)= Total Wt-Tare Wt	Vial A Time	Vial B Weight(g)= Total Wt-Tare Wt	Vial B Time	Vial C Weight(g) Preserve with MeOH	Vial C Time	Methanol ID	Preservation Date	Comments
1	Q3419-01	38.70-32.94=5.76	14:01	38.38-32.60=5.78	14:02	36.05-27.88=8.17	14:03	V14921	10/22/2025	TERRACORE SAMPLE 8260
2	Q3419-02	37.53-33.02=4.51	14:03	38.61-32.82=5.79	14:04	34.08-28.93=5.15	14:05	V14921	10/22/2025	
3	Q3419-03	38.59-32.77=5.82	14:06	36.24-32.90=3.34	14:07	35.15-27.98=7.17	14:08	V14921	10/22/2025	
4	Q3419-04	38.49-33.24=5.25	14:09	37.59-32.48=5.11	14:10	34.05-28.32=5.73	14:11	V14921	10/22/2025	
5	Q3419-05	37.82-32.84=4.98	14:12	38.15-32.87=5.28	14:14	33.05-28.00=5.05	14:15	V14921	10/22/2025	

Instructions : For medium Level analysis, 5ml MeOH added for CLP(SOM/SFAM) method and 10ml for regular 8260.

If the samples are not to be analyzed within 48hrs of sampling, preserve samples immediately, Vials A and B are stored in the VOA-FRZ-2.

Vial C - MeOH preserved vials are kept in VOA-REF #6.



SHIPPING DOCUMENTS

CLIENT INFORMATION

CLIENT PROJECT INFORMATION

CLIENT BILLING INFORMATION

REPORT TO BE SENT TO:
COMPANY: AECOM
ADDRESS: 605 3rd Ave
CITY: New York STATE: NY ZIP: 10158
ATTENTION: Rob Forstner
PHONE: 212-377-8721 FAX:

PROJECT NAME: Port Richmond
PROJECT NO.: 60693795 LOCATION: Staten Isl
PROJECT MANAGER: Rob Forstner
e-mail: Robert.Forstner@aecom.com
PHONE: 11 FAX:

BILL TO: AECOM PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: Rob Forstner PHONE: 11

ANALYSIS

DATA TURNAROUND INFORMATION

DATA DELIVERABLE INFORMATION

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

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

1. SVOCs 2. Pesticides TCL 3. Hg Metals 4. PCBs Hexachlorine 5. Dioxin 6. 5 rain size TOCS 7. VOCs 8. 9.

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	
1.	PR-132-S16-015094-20251021	S		X	10/21	9:31	11	X	X	X	X	X	X	X	X		
2.	PR-132-S16-015094-20251021-HS	S		X	10/21	9:31	10	X	X	X	X	X		X	X		
3.	PR132-S16-015094-20251021-MSD	S		X	10/21	9:31	10	X	X	X	X	X		X	X		
4.	PR132-S16-119133-20281021	S		X	10/21	9:33	11	X	X	X	X	X	X	X	X		
5.	PR132-S16-094119-20281021	S		X	10/21	9:33	11	X	X	X	X	X	X	X	X		
6.	Temp Blank	A			10/21		1	X	X	X	X	X			X		
7.																	
8.																	
9.																	
10.																	

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

RELINQUISHED BY SAMPLER: 1. <u>Jim Alderson</u>	DATE/TIME: <u>10/21/25 430</u>	RECEIVED BY: <u>[Signature]</u> <u>10-21-25</u>	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP <u>2</u> °C
RELINQUISHED BY SAMPLER: 2. <u>[Signature]</u>	DATE/TIME:	RECEIVED BY:	Comments:
RELINQUISHED BY SAMPLER: 3. <u>[Signature]</u>	DATE/TIME: <u>10-21-25</u>	RECEIVED BY:	

Page ____ of CLIENT: ☐ Hand Delivered ☐ Other Shipment Complete ☐ YES ☐ NO

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q3419	AECO02	Order Date : 10/22/2025 11:01:00 AM	Project Mgr :
Client Name : AECOM		Project Name : AE1-CTY 3.2.Z-PR-DOCK	Report Type : NYS ASP <i>B</i>
Client Contact : Rob Forstner		Receive DateTime : 10/21/2025 5:40:00 PM	EDD Type : EQUIS
Invoice Name : AECOM		Purchase Order :	Hard Copy Date :
Invoice Contact : Rob Forstner			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q3419-01	PR-132-S16-015094-20251021	Solid	10/21/2025	09:31					
					VOC-TCLVOA-10		8260D		10 Bus. Days
Q3419-02	Q3419-01MS	Solid	10/21/2025	09:31					
					VOC-TCLVOA-10		8260D		10 Bus. Days
Q3419-03	Q3419-01MSD	Solid	10/21/2025	09:31					
					VOC-TCLVOA-10		8260D		10 Bus. Days
Q3419-04	<i>PR132</i> ~~PR-132~~ -S16-119133-20251021	Solid	10/21/2025	09:35					
					VOC-TCLVOA-10		8260D		10 Bus. Days
Q3419-05	<i>PR132</i> ~~PR-132~~ -S16-094119-20251021	Solid	10/21/2025	09:33					
					VOC-TCLVOA-10		8260D		10 Bus. Days

Relinquished By : *[Signature]*

Date / Time : 10/22/25 1245

Received By : *[Signature]*

Date / Time : 10/22/25

1245

Storage Area : VOA Refridgerator Room