



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Cover Page

Order ID : Q2594

Project ID : Cooper Chemical - Long Valley NJ 2-COOP-ANS

Client : Environmental Restoration, LLC

Lab Sample Number

Q2594-01

Client Sample Number

CC-071325-RW

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: 7/29/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CASE NARRATIVE

Environmental Restoration, LLC

Project Name: Cooper Chemical - Long Valley NJ 2-COOP-ANS

Project # N/A

Order ID # Q2594

Test Name: VOC-TCLVOA-10

A. Number of Samples and Date of Receipt:

1 Water sample was received on 07/14/2025.

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_N 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 624.1.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries were met for all analysis.

The Internal Standards Areas were met for all analysis.

The Retention Times were met for all analysis.

The RPD for {VN0718WBSD01} with File ID: VN087361.D met criteria except for Bromomethane[42%] due to difference in results of BS and BSD.

The Blank Spike for {VN0718WBS01} with File ID: VN087354.D met requirements for all compounds except for 2-Hexanone[130%] is failing high but no positive hit in associate sample therefore no corrective action taken while Carbon disulfide[72%] is failing low but no positive hit in associate sample, also sample is dark yellow in color and foamy, therefore no corrective action taken.

The Blank Spike Duplicate for {VN0718WBSD01} with File ID: VN087361.D met requirements for all compounds except for Carbon disulfide[68%], Cyclohexane[73%] and Dichlorodifluoromethane[70%] are failing low but no positive hit in associate sample, also sample is dark yellow in color and foamy, therefore no corrective action taken.

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

The Initial Calibration met the requirements.

The Continuous Calibration met the requirements.



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The Tuning criteria met requirements.

Samples CC-071325-RW was diluted due to dark yellow and foamy in nature.

E. Additional Comments:

“As per method, MS/MSD is required to be performed with the sample analysis. However, Lab did not receive sufficient volume to perform the MS/MSD therefore MS/MSD were not performed for this project. However, Lab has performed LCS/LCSD instead.”

The temperature of the samples at the time of receipt was 24.2°C .Lab notified this issue to the client. See the communication in shipping Document section.

Trip Blank was not provided with this set of samples.

Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <35% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 35% for the Initial Calibration curve for SW-846 analysis.

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

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q2594

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: 07/29/2025

LAB CHRONICLE

OrderID:	Q2594	OrderDate:	7/14/2025 12:05:00 PM
Client:	Environmental Restoration, LLC	Project:	Cooper Chemical - Long Valley NJ 2-COOP-ANS
Contact:	Byron Hartman	Location:	O41,O42,VOA Lab

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2594-01	CC-071325-RW	Water	VOC-TCLVOA-10	624.1	07/14/25		07/18/25	07/14/25



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Hit Summary Sheet
SW-846

SDG No.: Q2594

Client: Environmental Restoration, LLC

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID: Q2594-01	CC-071325-RW CC-071325-RW	Water	Isobutyl hexadecyl ether	* 41.0	J	0	0	ug/L
			Total Tics :	41.0				
			Total Concentration:	41.0				



QC SUMMARY

Surrogate Summary

SDG No.: Q2594

Client: Environmental Restoration, LLC

Analytical Method: SW624.1

Lab Sample ID	Client ID	Parameter	Spike	Result	Recovery (%)	Qual	Limits (%)	
							Low	High
Q2594-01	CC-071325-RW	1,2-Dichloroethane-d4	30	29.8	99		70 (91)	130 (110)
		Toluene-d8	30	29.2	97		70 (91)	130 (112)
		4-Bromofluorobenzene	30	27.8	93		70 (63)	130 (112)
VN0718WBL01	VN0718WBL01	1,2-Dichloroethane-d4	30	32.8	109		70 (91)	130 (110)
		Toluene-d8	30	29.8	99		70 (91)	130 (112)
		4-Bromofluorobenzene	30	28.8	96		70 (63)	130 (112)
VN0718WBS01	VN0718WBS01	1,2-Dichloroethane-d4	30	31.3	104		70 (91)	130 (110)
		Toluene-d8	30	30.0	100		70 (91)	130 (112)
		4-Bromofluorobenzene	30	31.4	105		70 (63)	130 (112)
VN0718WBSD0	VN0718WBSD01	1,2-Dichloroethane-d4	30	32.4	108		70 (91)	130 (110)
		Toluene-d8	30	30.2	101		70 (91)	130 (112)
		4-Bromofluorobenzene	30	31.9	106		70 (63)	130 (112)

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.:	Q2594	Analytical Method:	SW624.1
Client:	Environmental Restoration, LLC	Datafile :	VN087354.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VN0718WBS01	Dichlorodifluoromethane	20	16.1	ug/L	81			40 (72)	160 (118)	
	Chloromethane	20	17.9	ug/L	90			40 (1)	160 (205)	
	Vinyl Chloride	20	17.6	ug/L	88			70 (5)	130 (195)	
	Bromomethane	20	18.6	ug/L	93			40 (15)	160 (185)	
	Chloroethane	20	20.6	ug/L	103			40 (40)	160 (160)	
	Trichlorofluoromethane	20	21.6	ug/L	108			40 (50)	160 (150)	
	1,1,2-Trichlorotrifluoroethane	20	15.9	ug/L	79			70 (64)	130 (127)	
	1,1-Dichloroethene	20	15.3	ug/L	77			70 (50)	130 (150)	
	Acetone	100	81.8	ug/L	82			40 (41)	160 (148)	
	Carbon disulfide	20	14.3	ug/L	72			40 (76)	160 (107)	
	Methyl tert-butyl Ether	20	19.6	ug/L	98			70 (82)	130 (114)	
	Methyl Acetate	20	20.9	ug/L	104			70 (63)	130 (139)	
	Methylene Chloride	20	18.5	ug/L	93			70 (60)	130 (140)	
	trans-1,2-Dichloroethene	20	15.9	ug/L	79			70 (70)	130 (130)	
	1,1-Dichloroethane	20	18.0	ug/L	90			70 (70)	130 (130)	
	Cyclohexane	20	16.5	ug/L	83			70 (79)	130 (113)	
	2-Butanone	100	110	ug/L	110			40 (69)	160 (129)	
	Carbon Tetrachloride	20	21.3	ug/L	106			70 (70)	130 (130)	
	cis-1,2-Dichloroethene	20	18.0	ug/L	90			70 (81)	130 (112)	
	Chloroform	20	19.6	ug/L	98			70 (70)	130 (135)	
	1,1,1-Trichloroethane	20	21.3	ug/L	106			70 (70)	130 (130)	
	Methylcyclohexane	20	18.8	ug/L	94			70 (79)	130 (112)	
	Benzene	20	19.1	ug/L	96			70 (65)	130 (135)	
	1,2-Dichloroethane	20	22.8	ug/L	114			70 (70)	130 (130)	
	Trichloroethene	20	19.5	ug/L	98			70 (65)	130 (135)	
	1,2-Dichloropropane	20	20.4	ug/L	102			70 (35)	130 (165)	
	Bromodichloromethane	20	21.8	ug/L	109			70 (65)	130 (135)	
	4-Methyl-2-Pentanone	100	120	ug/L	120			40 (73)	160 (131)	
	Toluene	20	19.5	ug/L	98			70 (70)	130 (130)	
	t-1,3-Dichloropropene	20	21.1	ug/L	106			70 (50)	130 (150)	
	cis-1,3-Dichloropropene	20	20.0	ug/L	100			70 (25)	130 (175)	
	1,1,2-Trichloroethane	20	20.4	ug/L	102			70 (70)	130 (130)	
	2-Hexanone	100	130	ug/L	130			40 (72)	160 (128)	
	Dibromochloromethane	20	21.7	ug/L	109			70 (70)	130 (135)	
	1,2-Dibromoethane	20	20.2	ug/L	101			70 (86)	130 (114)	
	Tetrachloroethene	20	19.9	ug/L	100			70 (70)	130 (130)	
	Chlorobenzene	20	19.7	ug/L	99			70 (65)	130 (135)	
	Ethyl Benzene	20	19.6	ug/L	98			70 (60)	130 (140)	
	m/p-Xylenes	40	39.7	ug/L	99			70 (87)	130 (111)	
	o-Xylene	20	20.5	ug/L	103			70 (87)	130 (111)	
	Styrene	20	19.2	ug/L	96			70 (85)	130 (106)	
	Bromoform	20	20.8	ug/L	104			70 (70)	130 (130)	
	Isopropylbenzene	20	20.6	ug/L	103			70 (86)	130 (112)	
	1,1,2,2-Tetrachloroethane	20	20.7	ug/L	104			70 (60)	130 (140)	
	1,3,5-Trimethylbenzene	20	21.4	ug/L	107			70 (66)	130 (139)	
	1,3-Dichlorobenzene	20	20.6	ug/L	103			70 (70)	130 (130)	
	1,4-Dichlorobenzene	20	21.5	ug/L	108			70 (65)	130 (135)	
	1,2-Dichlorobenzene	20	21.3	ug/L	106			70 (65)	130 (135)	

() = LABORATORY INHOUSE LIMIT

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.:	<u>Q2594</u>	Analytical Method:	<u>SW624.1</u>
Client:	<u>Environmental Restoration, LLC</u>	Datafile :	<u>VN087354.D</u>

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VN0718WBS01	1,2-Dibromo-3-Chloropropane	20	21.0	ug/L	105			40 (69)	160 (122)	
	1,2,4-Trichlorobenzene	20	23.0	ug/L	115			70 (61)	130 (118)	
	1,2,3-Trichlorobenzene	20	23.0	ug/L	115			70 (38)	130 (159)	

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.:	<u>Q2594</u>	Analytical Method:	<u>SW624.1</u>
Client:	<u>Environmental Restoration, LLC</u>	Datafile :	<u>VN087361.D</u>

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VN0718WBSD01	Dichlorodifluoromethane	20	14.0	ug/L	70	15		40 (72)	160 (118)	20 (20)
	Chloromethane	20	16.1	ug/L	81	11		40 (1)	160 (205)	20 (20)
	Vinyl Chloride	20	15.8	ug/L	79	11		70 (5)	130 (195)	20 (20)
	Bromomethane	20	12.2	ug/L	61	42	*	40 (15)	160 (185)	20 (20)
	Chloroethane	20	20.1	ug/L	101	2		40 (40)	160 (160)	20 (20)
	Trichlorofluoromethane	20	20.0	ug/L	100	8		40 (50)	160 (150)	20 (20)
	1,1,2-Trichlorotrifluoroethane	20	14.9	ug/L	75	5		70 (64)	130 (127)	20 (20)
	1,1-Dichloroethene	20	14.5	ug/L	73	5		70 (50)	130 (150)	20 (20)
	Acetone	100	89.4	ug/L	89	8		40 (41)	160 (148)	20 (20)
	Carbon disulfide	20	13.6	ug/L	68	6		40 (76)	160 (107)	20 (20)
	Methyl tert-butyl Ether	20	18.4	ug/L	92	6		70 (82)	130 (114)	20 (20)
	Methyl Acetate	20	20.5	ug/L	103	1		70 (63)	130 (139)	20 (20)
	Methylene Chloride	20	17.4	ug/L	87	7		70 (60)	130 (140)	20 (20)
	trans-1,2-Dichloroethene	20	15.4	ug/L	77	3		70 (70)	130 (130)	20 (20)
	1,1-Dichloroethane	20	17.7	ug/L	89	1		70 (70)	130 (130)	20 (20)
	Cyclohexane	20	14.6	ug/L	73	13		70 (79)	130 (113)	20 (20)
	2-Butanone	100	110	ug/L	110	0		40 (69)	160 (129)	20 (20)
	Carbon Tetrachloride	20	20.5	ug/L	103	3		70 (70)	130 (130)	20 (20)
	cis-1,2-Dichloroethene	20	16.8	ug/L	84	7		70 (81)	130 (112)	20 (20)
	Chloroform	20	19.0	ug/L	95	3		70 (70)	130 (135)	20 (20)
	1,1,1-Trichloroethane	20	20.4	ug/L	102	4		70 (70)	130 (130)	20 (20)
	Methylcyclohexane	20	16.5	ug/L	83	12		70 (79)	130 (112)	20 (20)
	Benzene	20	18.8	ug/L	94	2		70 (65)	130 (135)	20 (20)
	1,2-Dichloroethane	20	22.5	ug/L	113	1		70 (70)	130 (130)	20 (20)
	Trichloroethene	20	18.3	ug/L	92	6		70 (65)	130 (135)	20 (20)
	1,2-Dichloropropane	20	19.4	ug/L	97	5		70 (35)	130 (165)	20 (20)
	Bromodichloromethane	20	21.6	ug/L	108	1		70 (65)	130 (135)	20 (20)
	4-Methyl-2-Pentanone	100	120	ug/L	120	0		40 (73)	160 (131)	20 (20)
	Toluene	20	18.7	ug/L	94	4		70 (70)	130 (130)	20 (20)
	t-1,3-Dichloropropene	20	20.0	ug/L	100	6		70 (50)	130 (150)	20 (20)
	cis-1,3-Dichloropropene	20	19.7	ug/L	99	1		70 (25)	130 (175)	20 (20)
	1,1,2-Trichloroethane	20	19.8	ug/L	99	3		70 (70)	130 (130)	20 (20)
	2-Hexanone	100	120	ug/L	120	8		40 (72)	160 (128)	20 (20)
	Dibromochloromethane	20	21.8	ug/L	109	0		70 (70)	130 (135)	20 (20)
	1,2-Dibromoethane	20	19.6	ug/L	98	3		70 (86)	130 (114)	20 (20)
	Tetrachloroethene	20	18.7	ug/L	94	6		70 (70)	130 (130)	20 (20)
	Chlorobenzene	20	18.9	ug/L	95	4		70 (65)	130 (135)	20 (20)
	Ethyl Benzene	20	18.2	ug/L	91	7		70 (60)	130 (140)	20 (20)
	m/p-Xylenes	40	37.0	ug/L	93	6		70 (87)	130 (111)	20 (20)
	o-Xylene	20	18.6	ug/L	93	10		70 (87)	130 (111)	20 (20)
	Styrene	20	18.8	ug/L	94	2		70 (85)	130 (106)	20 (20)
	Bromoform	20	20.4	ug/L	102	2		70 (70)	130 (130)	20 (20)
	Isopropylbenzene	20	19.0	ug/L	95	8		70 (86)	130 (112)	20 (20)
	1,1,2,2-Tetrachloroethane	20	20.0	ug/L	100	4		70 (60)	130 (140)	20 (20)
	1,3,5-Trimethylbenzene	20	19.9	ug/L	100	7		70 (66)	130 (139)	20 (20)
	1,3-Dichlorobenzene	20	20.3	ug/L	102	1		70 (70)	130 (130)	20 (20)
	1,4-Dichlorobenzene	20	19.8	ug/L	99	9		70 (65)	130 (135)	20 (20)
	1,2-Dichlorobenzene	20	20.2	ug/L	101	5		70 (65)	130 (135)	20 (20)

() = LABORATORY INHOUSE LIMIT

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.:	<u>Q2594</u>	Analytical Method:	<u>SW624.1</u>
Client:	<u>Environmental Restoration, LLC</u>	Datafile :	<u>VN087361.D</u>

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VN0718WBSD01	1,2-Dibromo-3-Chloropropane	20	19.7	ug/L	99	6		40 (69)	160 (122)	20 (20)
	1,2,4-Trichlorobenzene	20	21.3	ug/L	106	8		70 (61)	130 (118)	20 (20)
	1,2,3-Trichlorobenzene	20	21.3	ug/L	106	8		70 (38)	130 (159)	20 (20)

VOLATILE METHOD BLANK SUMMARY

Client ID

VN0718WBL01

Lab Name: Alliance

Contract: ENVI60

Lab Code: ACE

SDG NO.: Q2594

Lab File ID: VN087356.D

Lab Sample ID: VN0718WBL01

Date Analyzed: 07/18/2025

Time Analyzed: 11:04

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

Heated Purge: (Y/N) N

Instrument ID: MSVOA_N

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
VN0718WBS01	VN0718WBS01	VN087354.D	07/18/2025
VN0718WBSD01	VN0718WBSD01	VN087361.D	07/18/2025
CC-071325-RW	Q2594-01	VN087365.D	07/18/2025

COMMENTS: _____



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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Alliance

Contract: ENVI60

Lab Code: ACE

SDG NO.: Q2594

Lab File ID: VN087161.D

BFB Injection Date: 06/25/2025

Instrument ID: MSVOA_N

BFB Injection Time: 08:25

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

Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.4
75	30.0 - 60.0% of mass 95	50.2
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.5 (0.7) 1
174	50.0 - 100.0% of mass 95	70.2
175	5.0 - 9.0% of mass 174	5.4 (7.7) 1
176	95.0 - 101.0% of mass 174	66.9 (95.3) 1
177	5.0 - 9.0% of mass 176	4.5 (6.8) 2

1-Value is % mass 174

2-Value is % mass 176

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

CLIENT ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDIC005	VSTDIC005	VN087162.D	06/25/2025	08:59
VSTDIC020	VSTDIC020	VN087163.D	06/25/2025	09:20
VSTDIC050	VSTDIC050	VN087164.D	06/25/2025	09:41
VSTDIC100	VSTDIC100	VN087165.D	06/25/2025	10:03
VSTDIC150	VSTDIC150	VN087166.D	06/25/2025	10:24



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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Alliance

Contract: ENVI60

Lab Code: ACE

SDG NO.: Q2594

Lab File ID: VN087352.D

BFB Injection Date: 07/18/2025

Instrument ID: MSVOA_N

BFB Injection Time: 08:42

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

Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.1
75	30.0 - 60.0% of mass 95	53.2
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.7 (1) 1
174	50.0 - 100.0% of mass 95	74.1
175	5.0 - 9.0% of mass 174	5.1 (6.9) 1
176	95.0 - 101.0% of mass 174	70.9 (95.7) 1
177	5.0 - 9.0% of mass 176	4.6 (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
VSTDCCC020	VSTDCCC020	VN087353.D	07/18/2025	09:15
VN0718WBS01	VN0718WBS01	VN087354.D	07/18/2025	09:49
VN0718WBL01	VN0718WBL01	VN087356.D	07/18/2025	11:04
VN0718WBSD01	VN0718WBSD01	VN087361.D	07/18/2025	13:16
CC-071325-RW	Q2594-01	VN087365.D	07/18/2025	14:41

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Alliance Contract: ENVI60
 Lab Code: ACE SDG NO.: Q2594
 Lab File ID: VN087353.D Date Analyzed: 07/18/2025
 Instrument ID: MSVOA_N Time Analyzed: 09:15
 GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	46358	7.80	246415	9.08	220107	11.85
UPPER LIMIT	92716	8.3	492830	9.583	440214	12.347
LOWER LIMIT	23179	7.3	123208	8.583	110054	11.347
EPA SAMPLE NO.						
CC-071325-RW	45269	7.80	203093	9.08	184441	11.85
VN0718WBL01	41937	7.79	219664	9.08	193250	11.85
VN0718WBS01	47522	7.80	244435	9.08	221298	11.85
VN0718WBSD01	42433	7.80	214950	9.08	202696	11.85

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

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

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



SAMPLE DATA

Report of Analysis

Client:	Environmental Restoration, LLC		Date Collected:	07/14/25	
Project:	Cooper Chemical - Long Valley NJ 2-COOP-ANS		Date Received:	07/14/25	
Client Sample ID:	CC-071325-RW		SDG No.:	Q2594	
Lab Sample ID:	Q2594-01		Matrix:	Water	
Analytical Method:	E624.1		% Solid:	0	
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000	uL
Soil Aliquot Vol:		uL	Test:	VOC-TCLVOA-10	
GC Column:	RXI-624	ID : 0.25	Level :	LOW	
Prep Method :					

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
VN087365.D	5	07/18/25 14:41	VN071825

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	3.90	U	3.90	25.0	ug/L
74-87-3	Chloromethane	3.20	U	3.20	25.0	ug/L
75-01-4	Vinyl Chloride	4.20	U	4.20	25.0	ug/L
74-83-9	Bromomethane	4.00	U	4.00	25.0	ug/L
75-00-3	Chloroethane	11.6	U	11.6	25.0	ug/L
75-69-4	Trichlorofluoromethane	4.00	U	4.00	25.0	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	4.80	U	4.80	25.0	ug/L
75-35-4	1,1-Dichloroethene	3.80	U	3.80	25.0	ug/L
67-64-1	Acetone	23.0	U	23.0	130	ug/L
75-15-0	Carbon Disulfide	4.10	U	4.10	25.0	ug/L
1634-04-4	Methyl tert-Butyl Ether	3.90	U	3.90	25.0	ug/L
79-20-9	Methyl Acetate	4.60	U	4.60	25.0	ug/L
75-09-2	Methylene Chloride	4.30	U	4.30	25.0	ug/L
156-60-5	trans-1,2-Dichloroethene	4.10	U	4.10	25.0	ug/L
75-34-3	1,1-Dichloroethane	3.40	U	3.40	25.0	ug/L
110-82-7	Cyclohexane	4.60	U	4.60	25.0	ug/L
78-93-3	2-Butanone	10.0	U	10.0	130	ug/L
56-23-5	Carbon Tetrachloride	3.70	U	3.70	25.0	ug/L
156-59-2	cis-1,2-Dichloroethene	4.00	U	4.00	25.0	ug/L
67-66-3	Chloroform	2.80	U	2.80	25.0	ug/L
71-55-6	1,1,1-Trichloroethane	3.20	U	3.20	25.0	ug/L
108-87-2	Methylcyclohexane	3.70	U	3.70	25.0	ug/L
71-43-2	Benzene	2.30	U	2.30	25.0	ug/L
107-06-2	1,2-Dichloroethane	2.50	U	2.50	25.0	ug/L
79-01-6	Trichloroethene	2.50	U	2.50	25.0	ug/L
78-87-5	1,2-Dichloropropane	2.30	U	2.30	25.0	ug/L
75-27-4	Bromodichloromethane	3.20	U	3.20	25.0	ug/L
108-10-1	4-Methyl-2-Pentanone	15.2	U	15.2	130	ug/L
108-88-3	Toluene	2.30	U	2.30	25.0	ug/L
10061-02-6	t-1,3-Dichloropropene	3.60	U	3.60	25.0	ug/L

Report of Analysis

Client:	Environmental Restoration, LLC		Date Collected:	07/14/25	
Project:	Cooper Chemical - Long Valley NJ 2-COOP-ANS		Date Received:	07/14/25	
Client Sample ID:	CC-071325-RW		SDG No.:	Q2594	
Lab Sample ID:	Q2594-01		Matrix:	Water	
Analytical Method:	E624.1		% Solid:	0	
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000	uL
Soil Aliquot Vol:		uL	Test:	VOC-TCLVOA-10	
GC Column:	RXI-624	ID : 0.25	Level :	LOW	
Prep Method :					

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
VN087365.D	5	07/18/25 14:41	VN071825

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	3.40	U	3.40	25.0	ug/L
79-00-5	1,1,2-Trichloroethane	2.30	U	2.30	25.0	ug/L
591-78-6	2-Hexanone	15.8	U	15.8	130	ug/L
124-48-1	Dibromochloromethane	3.30	U	3.30	25.0	ug/L
106-93-4	1,2-Dibromoethane	2.80	U	2.80	25.0	ug/L
127-18-4	Tetrachloroethene	4.20	U	4.20	25.0	ug/L
108-90-7	Chlorobenzene	2.40	U	2.40	25.0	ug/L
100-41-4	Ethyl Benzene	2.80	U	2.80	25.0	ug/L
179601-23-1	m/p-Xylenes	6.50	U	6.50	50.0	ug/L
95-47-6	o-Xylene	3.40	U	3.40	25.0	ug/L
100-42-5	Styrene	3.60	U	3.60	25.0	ug/L
75-25-2	Bromoform	4.70	U	4.70	25.0	ug/L
98-82-8	Isopropylbenzene	3.90	U	3.90	25.0	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	2.20	U	2.20	25.0	ug/L
108-67-8	1,3,5-Trimethylbenzene	3.00	U	3.00	25.0	ug/L
541-73-1	1,3-Dichlorobenzene	3.40	U	3.40	25.0	ug/L
106-46-7	1,4-Dichlorobenzene	4.10	U	4.10	25.0	ug/L
95-50-1	1,2-Dichlorobenzene	3.40	U	3.40	25.0	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	4.30	U	4.30	25.0	ug/L
120-82-1	1,2,4-Trichlorobenzene	5.20	U	5.20	25.0	ug/L
87-61-6	1,2,3-Trichlorobenzene	5.40	U	5.40	25.0	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	29.8		70 (91) - 130 (110)	99%	SPK: 30
2037-26-5	Toluene-d8	29.2		70 (91) - 130 (112)	97%	SPK: 30
460-00-4	4-Bromofluorobenzene	27.8		70 (63) - 130 (112)	93%	SPK: 30
INTERNAL STANDARDS						
74-97-5	Bromochloromethane	45300	7.8			
540-36-3	1,4-Difluorobenzene	203000	9.082			
3114-55-4	Chlorobenzene-d5	184000	11.847			
TENTATIVE IDENTIFIED COMPOUNDS						
1000406-32-8	Isobutyl hexadecyl ether	41.0	J		13.7	ug/L

Report of Analysis

Client:	Environmental Restoration, LLC	Date Collected:	07/14/25
Project:	Cooper Chemical - Long Valley NJ 2-COOP-ANS	Date Received:	07/14/25
Client Sample ID:	CC-071325-RW	SDG No.:	Q2594
Lab Sample ID:	Q2594-01	Matrix:	Water
Analytical Method:	E624.1	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
VN087365.D	5	07/18/25 14:41	VN071825

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN071825\
 Data File : VN087365.D
 Acq On : 18 Jul 2025 14:41
 Operator : JC\MD
 Sample : Q2594-01 5X
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 15 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 CC-071325-RW

Quant Time: Jul 18 23:20:52 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:49:56 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Bromochloromethane	7.800	128	45269	30.000	ug/l	-0.02
28) 1,4-Difluorobenzene	9.082	114	203093	30.000	ug/l	-0.02
57) Chlorobenzene-d5	11.847	117	184441	30.000	ug/l	-0.02

System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	8.565	65	101794	29.845	ug/l	-0.02
Spiked Amount	30.000	Range	91 - 110	Recovery	=	99.467%
60) 4-Bromofluorobenzene	12.829	95	79048	27.774	ug/l	-0.02
Spiked Amount	30.000	Range	63 - 112	Recovery	=	92.567%
63) Toluene-d8	10.547	98	241972	29.219	ug/l	-0.02
Spiked Amount	30.000	Range	91 - 112	Recovery	=	97.400%

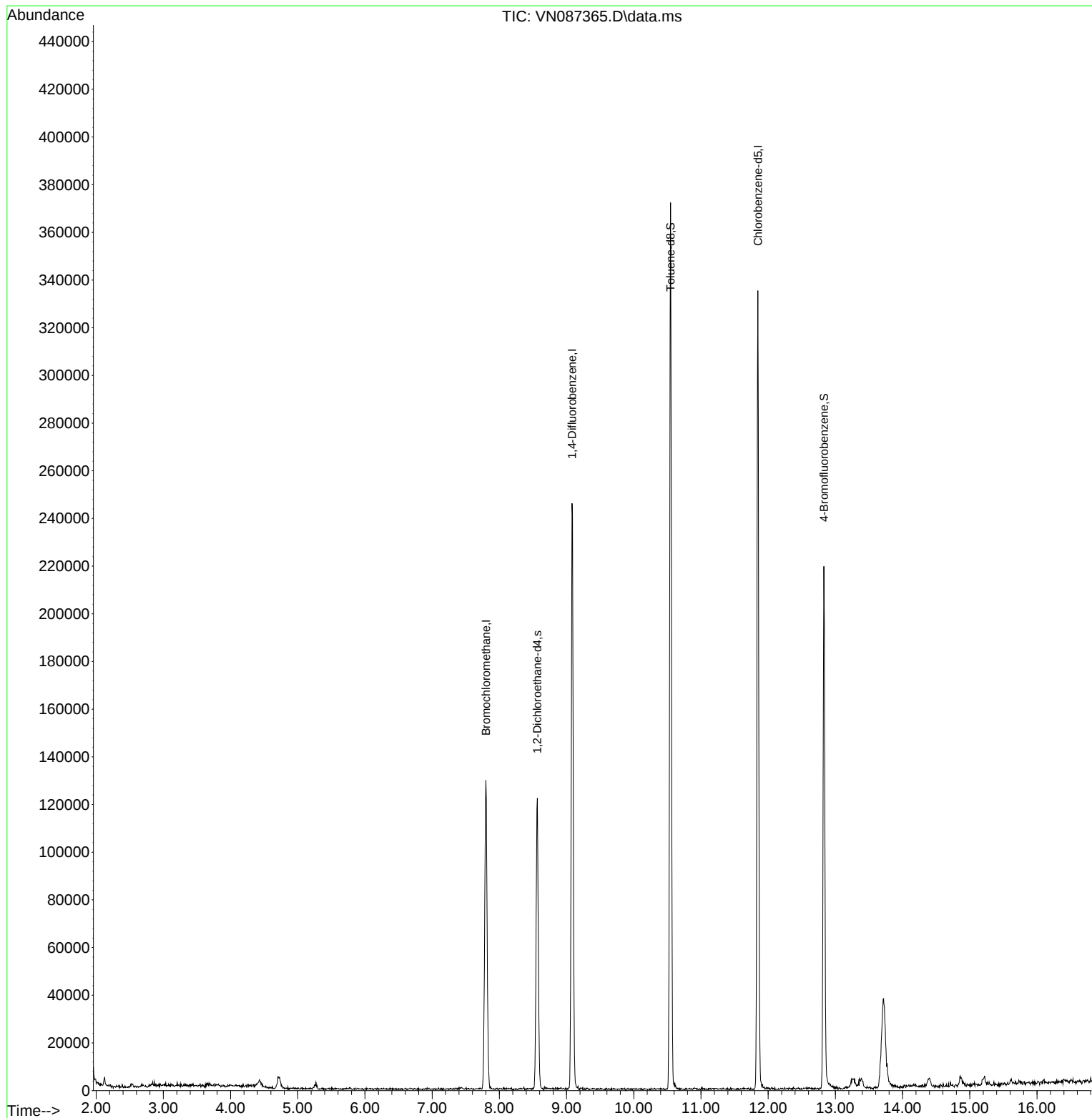
Target Compounds	Qvalue

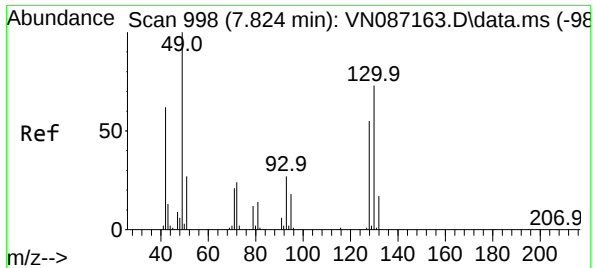
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN071825\
Data File : VN087365.D
Acq On : 18 Jul 2025 14:41
Operator : JC\MD
Sample : Q2594-01 5X
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
CC-071325-RW

Quant Time: Jul 18 23:20:52 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Wed Jun 25 10:49:56 2025
Response via : Initial Calibration

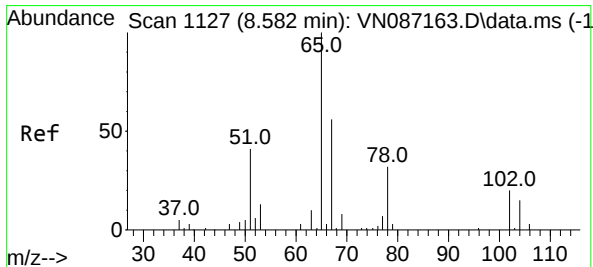
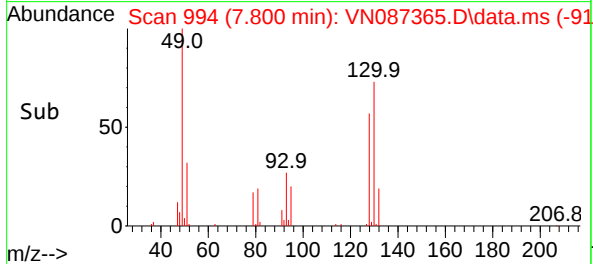
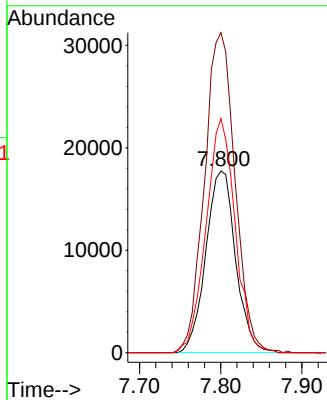
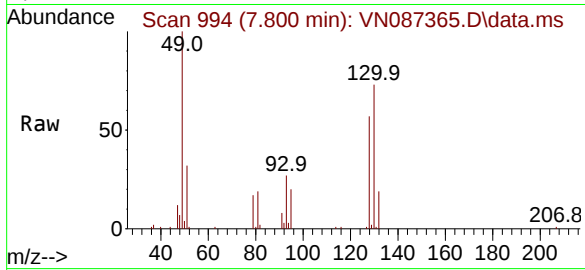




#1
Bromochloromethane
Concen: 30.000 ug/l
RT: 7.800 min Scan# 998
Delta R.T. -0.024 min
Lab File: VN087365.D
Acq: 18 Jul 2025 14:41

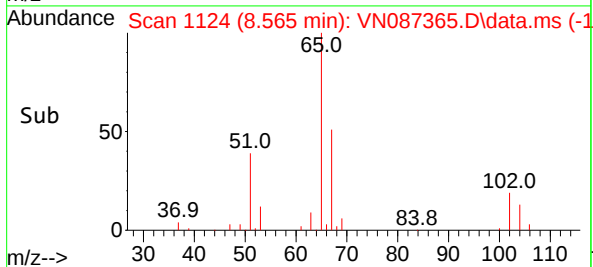
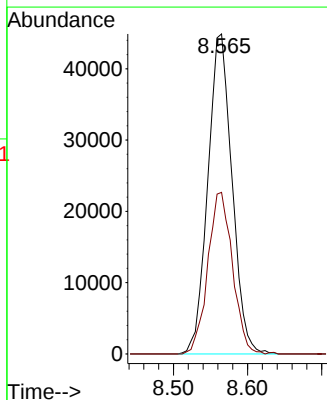
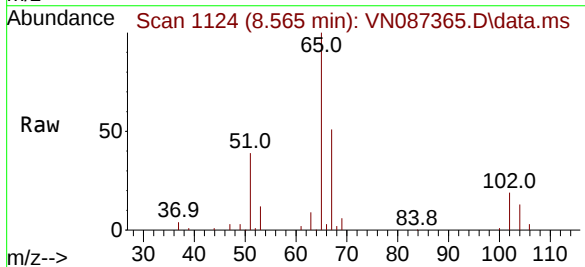
Instrument :
MSVOA_N
ClientSampleId :
CC-071325-RW

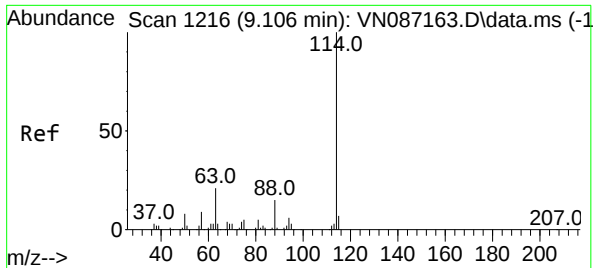
Tgt Ion	Ratio	Lower	Upper
128	100		
49	180.3	0.0	450.5
130	126.1	0.0	320.7



#27
1,2-Dichloroethane-d4
Concen: 29.845 ug/l
RT: 8.565 min Scan# 1124
Delta R.T. -0.018 min
Lab File: VN087365.D
Acq: 18 Jul 2025 14:41

Tgt Ion	Ratio	Lower	Upper
65	100		
67	51.4	41.9	62.9





#28

1,4-Difluorobenzene

Concen: 30.000 ug/l

RT: 9.082 min Scan# 11

Delta R.T. -0.024 min

Lab File: VN087365.D

Acq: 18 Jul 2025 14:41

Instrument :

MSVOA_N

ClientSampleId :

CC-071325-RW

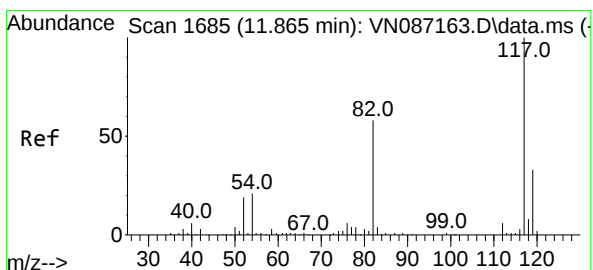
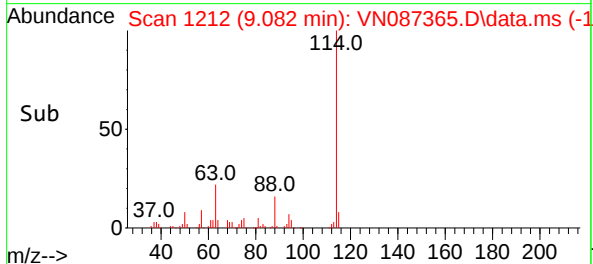
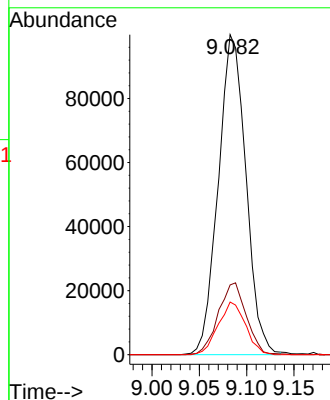
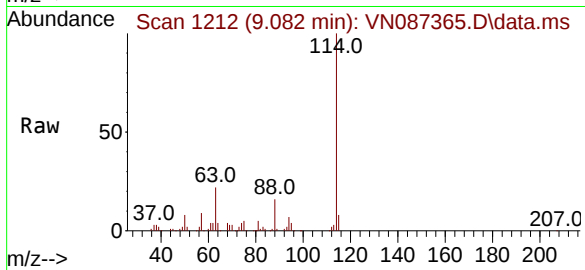
Tgt Ion:114 Resp: 203093

Ion Ratio Lower Upper

114 100

63 22.8 17.0 25.4

88 16.2 12.6 19.0



#57

Chlorobenzene-d5

Concen: 30.000 ug/l

RT: 11.847 min Scan# 1682

Delta R.T. -0.018 min

Lab File: VN087365.D

Acq: 18 Jul 2025 14:41

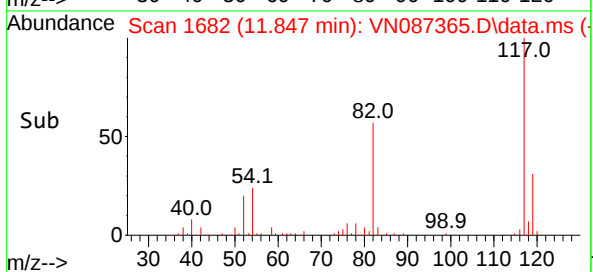
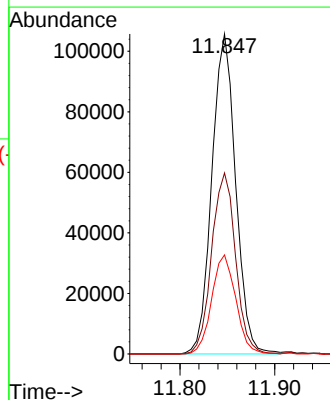
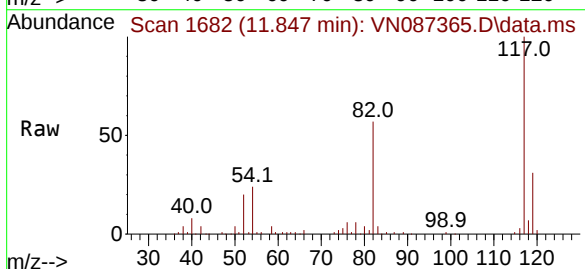
Tgt Ion:117 Resp: 184441

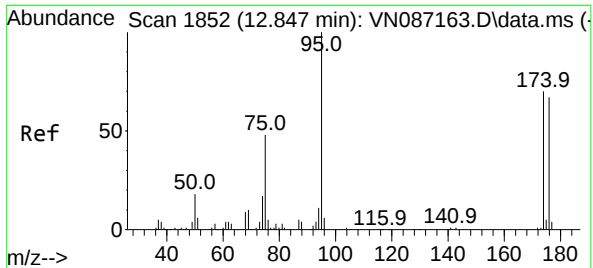
Ion Ratio Lower Upper

117 100

82 56.9 45.4 68.2

119 31.3 26.2 39.4

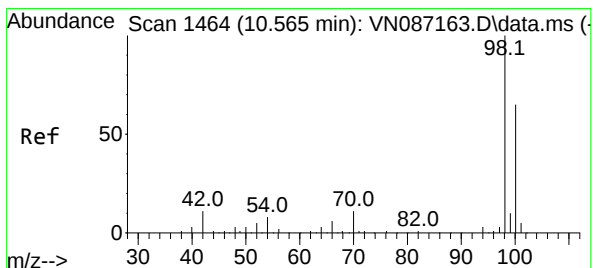
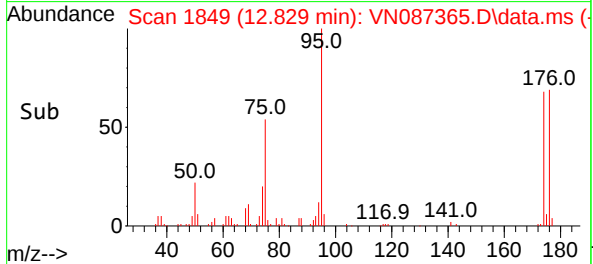
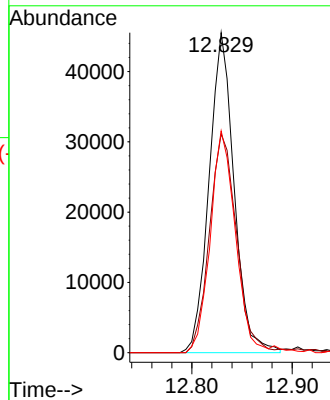
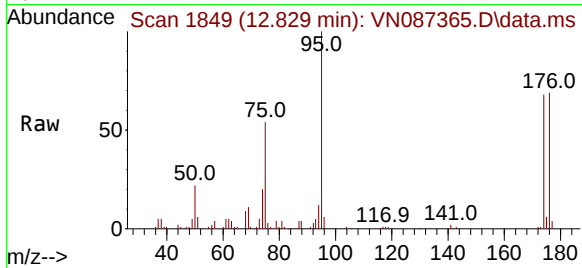




#60
4-Bromofluorobenzene
Concen: 27.774 ug/l
RT: 12.829 min Scan# 1849
Delta R.T. -0.018 min
Lab File: VN087365.D
Acq: 18 Jul 2025 14:41

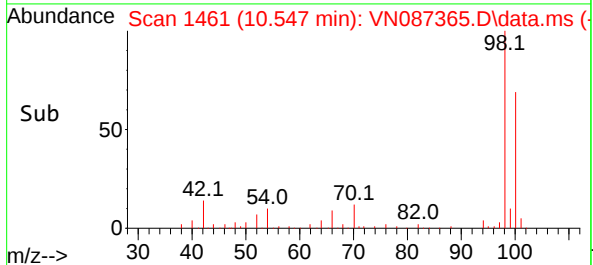
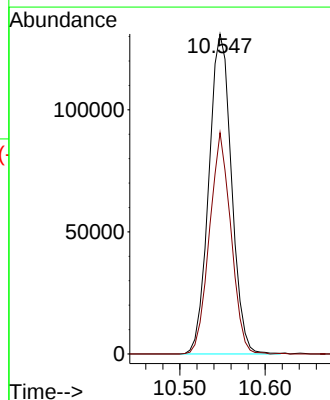
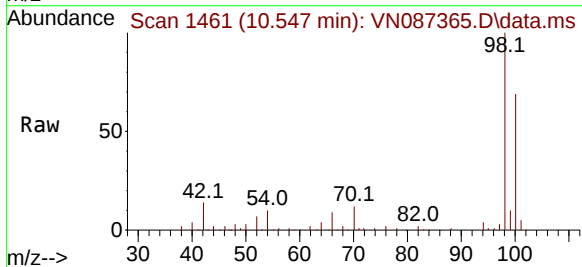
Instrument :
MSVOA_N
ClientSampleId :
CC-071325-RW

Tgt Ion: 95 Resp: 79048
Ion Ratio Lower Upper
95 100
174 73.7 54.5 81.7
176 69.3 51.9 77.9



#63
Toluene-d8
Concen: 29.219 ug/l
RT: 10.547 min Scan# 1461
Delta R.T. -0.018 min
Lab File: VN087365.D
Acq: 18 Jul 2025 14:41

Tgt Ion: 98 Resp: 241972
Ion Ratio Lower Upper
98 100
100 65.4 52.5 78.7



Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN071825\
Data File : VN087365.D
Acq On : 18 Jul 2025 14:41
Operator : JC\MD
Sample : Q2594-01 5X
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
CC-071325-RW

Integration Parameters: RTEINT3.P

Integrator: RTE

Smoothing : OFF

Sampling : 1

Start Thrs: 0.2

Stop Thrs : 0

Filtering: 5

Min Area: 0 % of largest Peak

Max Peaks: 100

Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >

Peak separation: 5

Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M

Title : METHOD 624 VOLATILE ORGANIC ANALYSIS

Signal : TIC: VN087365.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.706	460	468	476	rBV4	4902	15413	2.33%	0.523%
2	7.800	983	994	1004	rBV	129623	326542	49.33%	11.084%
3	8.565	1114	1124	1136	rBV	121995	274670	41.50%	9.323%
4	9.082	1204	1212	1224	rBV	245090	501400	75.75%	17.019%
5	10.547	1453	1461	1469	rBV	371878	661918	100.00%	22.468%
6	11.847	1673	1682	1692	rBV	335052	593808	89.71%	20.156%
7	12.829	1841	1849	1861	rBV	219014	392098	59.24%	13.309%
8	13.717	1985	2000	2013	rBV3	37290	162220	24.51%	5.506%
9	14.400	2108	2116	2124	rVB5	3532	10890	1.65%	0.370%
10	14.859	2186	2194	2195	rBV5	4660	7151	1.08%	0.243%

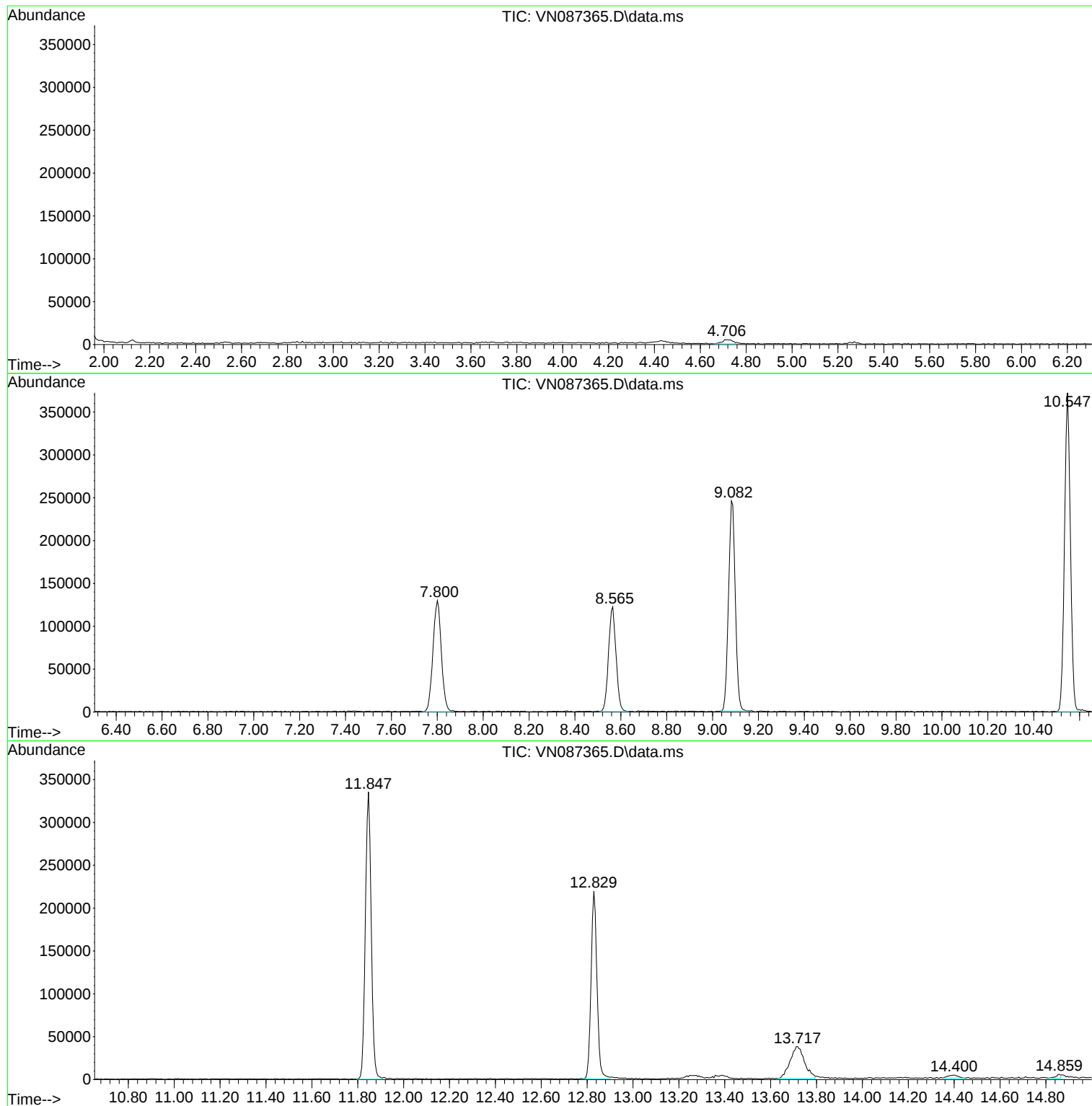
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Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN071825\
Data File : VN087365.D
Acq On : 18 Jul 2025 14:41
Operator : JC\MD
Sample : Q2594-01 5X
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
CC-071325-RW

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS

TIC Library : C:\Database\NIST20.L
TIC Integration Parameters: LSCINT.P



Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN071825\
Data File : VN087365.D
Acq On : 18 Jul 2025 14:41
Operator : JC\MD
Sample : Q2594-01 5X
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
CC-071325-RW

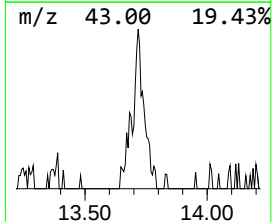
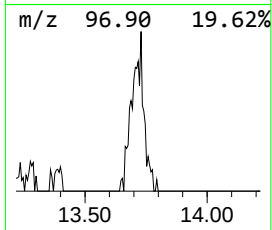
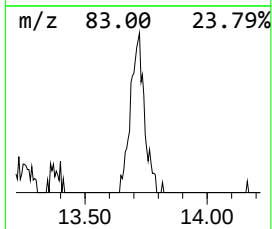
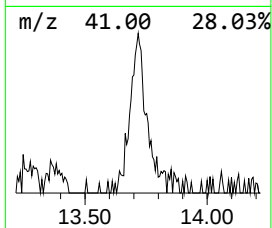
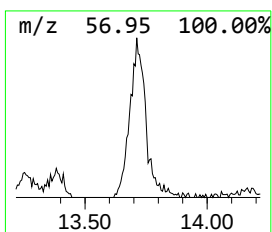
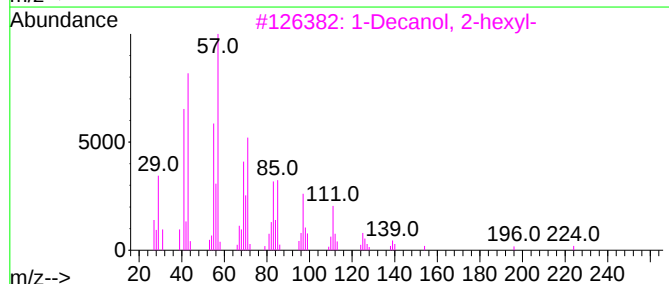
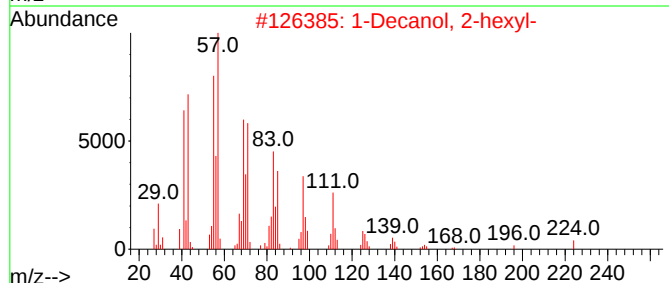
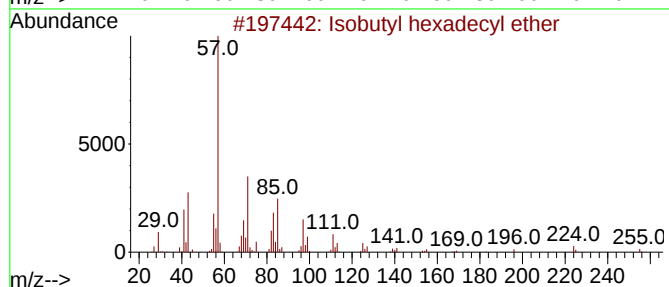
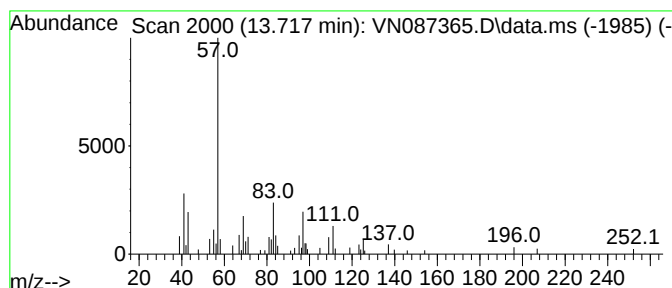
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS

TIC Library : C:\Database\NIST20.L
TIC Integration Parameters: LSCINT.P

Peak Number 1 Isobutyl hexadecyl ether Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.717	8.20 ug/l	162220	Chlorobenzene-d5	11.847

Hit#	of	5	Tentative ID	MW	MolForm	CAS#	Qual
1			Isobutyl hexadecyl ether	298	C20H42O	1000406-32-8	50
2			1-Decanol, 2-hexyl-	242	C16H34O	002425-77-6	50
3			1-Decanol, 2-hexyl-	242	C16H34O	002425-77-6	50
4			Isobutyl tetradecyl ether	270	C18H38O	1000406-32-7	50
5			Butyl tetradecyl ether	270	C18H38O	1000406-40-4	40



Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN071825\
Data File : VN087365.D
Acq On : 18 Jul 2025 14:41
Operator : JC\MD
Sample : Q2594-01 5X
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 15 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
CC-071325-RW

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS

TIC Library : C:\Database\NIST20.L
TIC Integration Parameters: LSCINT.P

TIC Top Hit name	RT	EstConc	Units	Response	--Internal Standard--			
					#	RT	Resp	Conc
Isobutyl hexade...	13.717	8.2	ug/l	162220	3	11.847	593808	30.0



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: ENVI60
 Lab Code: ACE SDG No.: Q2594
 Instrument ID: MSVOA_N Calibration Date(s): 06/25/2025 06/25/2025
 Heated Purge: (Y/N) N Calibration Time(s): 08:59 10:24
 GC Column: RXI-624 ID: 0.25 (mm)

LAB FILE ID:		RRF005 = VN087162.D		RRF020 = VN087163.D		RRF050 = VN087164.D		RRF100 = VN087165.D		RRF150 = VN087166.D		RRF =			
COMPOUND		RRF005	RRF020	RRF050	RRF100	RRF150	RRF								% RSD
Dichlorodifluoromethane		1.971	1.652	1.736	1.761	1.909		1.806		7.2					
Chloromethane		2.014	1.562	1.799	1.846	2.001		1.845		10					
Vinyl Chloride		2.146	1.799	1.922	1.946	2.209		2.005		8.4					
Bromomethane		1.205	0.965	0.990	1.020	1.139		1.064		9.7					
Chloroethane		1.140	0.966	1.040	1.070	1.161		1.075		7.3					
Trichlorofluoromethane		2.644	2.322	2.382	2.400	2.546		2.459		5.4					
1,1,2-Trichlorotrifluoroethane		1.941	1.681	1.788	1.785	1.920		1.823		5.9					
1,1-Dichloroethene		1.930	1.676	1.779	1.772	1.929		1.817		6.1					
Acetone		0.423	0.367	0.386	0.373	0.390		0.388		5.7					
Carbon Disulfide		6.114	4.847	5.126	5.051	5.429		5.313		9.3					
Methyl tert-Butyl Ether		6.446	5.734	6.377	6.408	6.903		6.374		6.5					
Methyl Acetate		2.817	2.616	2.857	2.889	3.074		2.851		5.7					
Methylene Chloride		2.339	1.947	2.062	2.025	2.153		2.105		7.1					
trans-1,2-Dichloroethene		2.191	1.821	1.955	1.916	2.054		1.987		7.1					
1,1-Dichloroethane		4.181	3.580	3.726	3.650	3.867		3.801		6.3					
Cyclohexane		0.547	0.504	0.605	0.568	0.611		0.567		7.8					
2-Butanone		0.292	0.286	0.342	0.316	0.341		0.315		8.4					
Carbon Tetrachloride		0.493	0.398	0.480	0.447	0.480		0.460		8.4					
cis-1,2-Dichloroethene		2.324	2.093	2.374	2.269	2.506		2.313		6.5					
Chloroform		3.901	3.326	3.659	3.568	3.753		3.641		5.9					
1,1,1-Trichloroethane		0.563	0.497	0.582	0.524	0.565		0.546		6.3					
Methylcyclohexane		0.545	0.472	0.533	0.551	0.582		0.537		7.5					
Benzene		1.576	1.309	1.574	1.454	1.494		1.481		7.4					
1,2-Dichloroethane		0.517	0.442	0.507	0.457	0.471		0.479		6.7					
Trichloroethene		0.371	0.294	0.352	0.336	0.355		0.342		8.5					
1,2-Dichloropropane		0.397	0.348	0.369	0.363	0.382		0.372		5.1					
Bromodichloromethane		0.537	0.482	0.522	0.485	0.525		0.510		4.9					
4-Methyl-2-Pentanone		0.557	0.547	0.645	0.630	0.637		0.603		7.8					
Toluene		1.839	1.550	1.720	1.643	1.720		1.694		6.3					
t-1,3-Dichloropropene		0.553	0.512	0.613	0.554	0.612		0.569		7.6					

* 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: ENVI60

Lab Code: ACE

SDG No.: Q2594

Instrument ID: MSVOA_N

Calibration Date(s): 06/25/2025 06/25/2025

Heated Purge: (Y/N) N

Calibration Time(s): 08:59 10:24

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

LAB FILE ID:	RRF005 = VN087162.D			RRF020 = VN087163.D		RRF050 = VN087164.D		
	RRF100 = VN087165.D			RRF150 = VN087166.D		RRF =		
COMPOUND	RRF005	RRF020	RRF050	RRF100	RRF150	RRF	RRF	% RSD
cis-1,3-Dichloropropene	0.616	0.568	0.606	0.585	0.649		0.605	5.1
1,1,2-Trichloroethane	0.388	0.333	0.376	0.332	0.366		0.359	7
2-Hexanone	0.305	0.322	0.440	0.428	0.452		0.389	18
Dibromochloromethane	0.373	0.343	0.401	0.363	0.405		0.377	7
1,2-Dibromoethane	0.381	0.344	0.382	0.358	0.389		0.371	5.1
Tetrachloroethene	0.334	0.268	0.301	0.281	0.301		0.297	8.4
Chlorobenzene	1.136	0.985	1.106	1.071	1.106		1.081	5.4
Ethyl Benzene	1.847	1.649	1.926	1.899	1.952		1.855	6.5
m/p-Xylenes	0.694	0.636	0.742	0.734	0.747		0.711	6.5
o-Xylene	0.650	0.604	0.709	0.706	0.720		0.678	7.3
Styrene	1.086	1.039	1.240	1.213	1.242		1.164	8.1
Bromoform	0.258	0.234	0.271	0.258	0.276		0.259	6.3
Isopropylbenzene	1.623	1.479	1.789	1.764	1.788		1.689	8
1,1,2,2-Tetrachloroethane	0.624	0.566	0.635	0.606	0.608		0.608	4.4
1,3,5-Trimethylbenzene	1.275	1.181	1.499	1.466	1.453		1.375	10.1
1,3-Dichlorobenzene	0.782	0.717	0.840	0.823	0.782		0.789	6.1
1,4-Dichlorobenzene	0.791	0.714	0.852	0.823	0.788		0.794	6.5
1,2-Dichlorobenzene	0.719	0.670	0.805	0.781	0.743		0.744	7.1
1,2-Dibromo-3-Chloropropane	0.130	0.122	0.143	0.142	0.147		0.137	7.6
1,2,4-Trichlorobenzene	0.399	0.379	0.416	0.449	0.460		0.421	8
1,2,3-Trichlorobenzene	0.399	0.379	0.416	0.449	0.460		0.421	8
1,2-Dichloroethane-d4	2.394	2.309	2.211	2.236	2.153		2.260	4.1
Toluene-d8	1.386	1.399	1.314	1.311	1.325		1.347	3.2
4-Bromofluorobenzene	0.439	0.448	0.470	0.489	0.468		0.463	4.3

* 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_N\methods\
 Method File : 624N062525W.M
 Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 Last Update : Wed Jun 25 10:49:56 2025
 Response Via : Initial Calibration

Calibration Files

5 =VN087162.D 20 =VN087163.D 50 =VN087164.D 100 =VN087165.D 150 =VN087166.D

Compound		5	20	50	100	150	Avg	%RSD

1) I	Bromochloromethane	-----ISTD-----						
2) M	Dichlorodifluoro...	1.971	1.652	1.736	1.761	1.909	1.806	7.24
3) M	Chloromethane	2.014	1.562	1.799	1.846	2.001	1.844	9.98
4) M	Vinyl Chloride	2.146	1.799	1.922	1.946	2.209	2.005	8.44
5) M	Bromomethane	1.205	0.965	0.990	1.020	1.139	1.064	9.72
6) M	Chloroethane	1.140	0.966	1.040	1.070	1.161	1.075	7.33
7) M	Trichlorofluorom...	2.644	2.322	2.382	2.400	2.546	2.459	5.39
8) T	Diethyl Ether	1.247	1.074	1.171	1.220	1.328	1.208	7.77
9)	1,1,2-Trichlorot...	1.941	1.681	1.788	1.785	1.920	1.823	5.89
10) M	1,1-Dichloroethene	1.930	1.676	1.779	1.772	1.929	1.817	6.06
11)	Methyl Iodide	1.117	1.292	1.735	1.883	2.114	1.628	25.45
12)	Methyl Acetate	2.817	2.616	2.857	2.889	3.074	2.851	5.75
13) M	Acrolein	0.397	0.359	0.407	0.454	0.574	0.438	18.98
14) M	Acrylonitrile	1.315	1.227	1.344	1.334	1.428	1.330	5.41
15) M	Acetone	0.423	0.367	0.386	0.373	0.390	0.388	5.66
16) M	Carbon Disulfide	6.114	4.847	5.126	5.051	5.429	5.313	9.29
17)	Allyl chloride	3.092	2.759	2.988	2.969	3.179	2.997	5.26
18) M	Methylene Chloride	2.339	1.947	2.062	2.025	2.153	2.105	7.14
19) M	trans-1,2-Dichlo...	2.191	1.821	1.955	1.916	2.054	1.987	7.11
20) T	Diisopropyl ether	6.275	6.084	6.540	6.352	6.546	6.359	3.05
21) M	1,1-Dichloroethane	4.181	3.580	3.726	3.650	3.867	3.801	6.26
22) M	cis-1,2-Dichloro...	2.324	2.093	2.374	2.269	2.506	2.313	6.53
23) M	tert-Butyl Alcohol	0.496	0.453	0.505	0.506	0.540	0.500	6.19
24) M	Methyl tert-Buty...	6.446	5.734	6.377	6.408	6.903	6.374	6.55
25) M	Chloroform	3.901	3.326	3.659	3.568	3.753	3.641	5.90
26)	Cyclohexane	3.125	2.822	3.197	3.208	3.445	3.159	7.09
27) s	1,2-Dichloroetha...	2.394	2.309	2.211	2.236	2.153	2.260	4.12
28) I	1,4-Difluorobenzene	-----ISTD-----						
29)	1,1-Dichloropropene	0.474	0.400	0.502	0.461	0.501	0.468	8.87
30) M	2-Butanone	0.292	0.286	0.342	0.316	0.341	0.315	8.38
31)	2,2-Dichloropropane	0.584	0.518	0.597	0.538	0.585	0.564	6.13
32) M	1,1,1-Trichloroe...	0.563	0.497	0.582	0.524	0.565	0.546	6.31
33) M	Carbon Tetrachlo...	0.493	0.398	0.480	0.447	0.480	0.460	8.41
34) M	Benzene	1.576	1.309	1.574	1.454	1.494	1.481	7.41
35)	Methacrylonitrile	0.314	0.284	0.342	0.314	0.335	0.318	7.03
36) M	1,2-Dichloroethane	0.517	0.442	0.507	0.457	0.471	0.479	6.70
37) M	Trichloroethene	0.371	0.294	0.352	0.336	0.355	0.342	8.55
38)	Methylcyclohexane	0.545	0.472	0.533	0.551	0.582	0.537	7.50
39) M	1,2-Dichloropropane	0.397	0.348	0.369	0.363	0.382	0.372	5.07
40)	Dibromomethane	0.268	0.235	0.258	0.247	0.257	0.253	5.03
41) M	Bromodichloromet...	0.537	0.482	0.522	0.485	0.525	0.510	4.94
42) M	Vinyl Acetate	1.007	0.948	1.108	1.006	1.062	1.026	5.95
43)	Ethyl Acetate	0.446	0.561	0.655	0.570	0.615	0.569	13.78
44)	Isopropyl Acetate	0.937	0.835	0.997	0.918	0.951	0.928	6.42
45) T	1,4-Dioxane	0.006	0.006	0.007	0.007	0.007	0.006	10.25
46)	Methyl methacrylate	0.420	0.396	0.447	0.432	0.462	0.431	5.84
47)	n-amyl Acetate	0.534	0.506	0.565	0.576	0.655	0.567	9.89
48) M	t-1,3-Dichloropr...	0.553	0.512	0.613	0.554	0.612	0.569	7.62
49) T	cis-1,3-Dichloro...	0.616	0.568	0.606	0.585	0.649	0.605	5.13
50) M	1,1,2-Trichloroe...	0.388	0.333	0.376	0.332	0.366	0.359	7.04
51)	Ethyl methacrylate	0.420	0.470	0.614	0.578	0.651	0.547	17.88
52)	1,3-Dichloropropane	0.638	0.573	0.651	0.579	0.642	0.617	6.11
53) M	Dibromochloromet...	0.373	0.343	0.401	0.363	0.405	0.377	6.99
54) M	1,2-Dibromoethane	0.381	0.344	0.382	0.358	0.389	0.371	5.10
55) M	2-Chloroethyl vi...	0.297	0.291	0.314	0.319	0.345	0.313	6.82
56) M	Bromoform	0.258	0.234	0.271	0.258	0.276	0.259	6.27

Method Path : Z:\voasrv\HPCHEM1\MSVOA_N\methods\
 Method File : 624N062525W.M

		-----ISTD-----						
57) I	Chlorobenzene-d5							
58) M	4-Methyl-2-Penta...	0.557	0.547	0.645	0.630	0.637	0.603	7.80
59) M	2-Hexanone	0.305	0.322	0.440	0.428	0.452	0.389	17.98
60) S	4-Bromofluoroben...	0.439	0.448	0.470	0.489	0.468	0.463	4.27
61) M	Tetrachloroethene	0.334	0.268	0.301	0.281	0.301	0.297	8.44
62) M	Toluene	1.839	1.550	1.720	1.643	1.720	1.694	6.31
63) S	Toluene-d8	1.386	1.399	1.314	1.311	1.325	1.347	3.15
64) M	Chlorobenzene	1.136	0.985	1.106	1.071	1.106	1.081	5.40
65)	1,1,1,2-Tetrachl...	0.376	0.326	0.365	0.354	0.365	0.357	5.38
66) M	Ethyl Benzene	1.847	1.649	1.926	1.899	1.952	1.855	6.55
67) M	m/p-Xylenes	0.694	0.636	0.742	0.734	0.747	0.711	6.52
68) M	o-Xylene	0.650	0.604	0.709	0.706	0.720	0.678	7.29
69) M	Styrene	1.086	1.039	1.240	1.213	1.242	1.164	8.14
70)	Isopropylbenzene	1.623	1.479	1.789	1.764	1.788	1.689	8.04
71) M	1,1,2,2-Tetrachl...	0.624	0.566	0.635	0.606	0.608	0.608	4.37
72)	1,2,3-Trichlorop...	0.610	0.465	0.528	0.512	0.505	0.524	10.20
73)	Bromobenzene	0.416	0.361	0.427	0.417	0.427	0.410	6.80
74)	n-propylbenzene	1.920	1.807	2.222	2.185	2.181	2.063	9.08
75)	2-Chlorotoluene	1.226	1.080	1.317	1.300	1.309	1.246	8.01
76)	1,3,5-Trimethylb...	1.275	1.181	1.499	1.466	1.453	1.375	10.12
77)	t-1,4-Dichloro-2...	0.209	0.196	0.247	0.252	0.258	0.232	12.00
78)	4-Chlorotoluene	1.220	1.108	1.372	1.339	1.345	1.276	8.70
79)	tert-butylbenzene	1.025	0.987	1.271	1.250	1.244	1.156	11.89
80)	1,2,4-Trimethylb...	1.238	1.178	1.523	1.476	1.486	1.380	11.56
81)	sec-Butylbenzene	1.576	1.473	1.845	1.794	1.711	1.680	9.16
82)	p-Isopropyltoluene	1.224	1.267	1.534	1.519	1.446	1.398	10.30
83) M	1,3-Dichlorobenzene	0.782	0.717	0.840	0.823	0.782	0.789	6.06
84) M	1,4-Dichlorobenzene	0.791	0.714	0.852	0.823	0.788	0.794	6.53
85)	n-Butylbenzene	1.118	1.152	1.432	1.368	1.307	1.275	10.68
86) T	Hexachloroethane	0.269	0.227	0.281	0.278	0.267	0.265	8.21
87) M	1,2-Dichlorobenzene	0.719	0.670	0.805	0.781	0.743	0.744	7.10
88)	1,2-Dibromo-3-Ch...	0.130	0.122	0.143	0.142	0.147	0.137	7.58
89)	1,2,4-Trichlorob...	0.399	0.379	0.416	0.449	0.460	0.421	7.97
90)	Hexachlorobutadiene	0.123	0.112	0.132	0.129	0.129	0.125	6.28
91) M	Naphthalene	1.425	1.442	1.726	1.806	1.881	1.656	12.71
92)	1,2,3-Trichlorob...	0.399	0.379	0.416	0.449	0.460	0.421	7.97

(#) = Out of Range

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
 Data File : VN087162.D
 Acq On : 25 Jun 2025 08:59
 Operator : JC\MD
 Sample : VSTDICC005
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :

MSVOA_N

ClientSampleId :

VSTDICC005

Manual Integrations

APPROVED

Reviewed By :John
 Carlone

06/25/2025

Supervised By :Mahesh
 Dadoda

06/26/2025

Quant Time: Jun 25 10:38:44 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:38:24 2025
 Response via : Initial Calibration

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

Internal Standards							
1) Bromochloromethane	7.824	128	35930	30.000	ug/l	0.00	
28) 1,4-Difluorobenzene	9.106	114	205072	30.000	ug/l	0.00	
57) Chlorobenzene-d5	11.865	117	186292	30.000	ug/l	0.00	
System Monitoring Compounds							
27) 1,2-Dichloroethane-d4	8.583	65	86000	34.837	ug/l	0.00	
Spiked Amount	30.000	Range	91 - 110	Recovery	= 116.133%#		
60) 4-Bromofluorobenzene	12.847	95	81752	27.951	ug/l	0.00	
Spiked Amount	30.000	Range	63 - 112	Recovery	= 93.167%		
63) Toluene-d8	10.565	98	258286	30.207	ug/l	0.00	
Spiked Amount	30.000	Range	91 - 112	Recovery	= 100.700%		
Target Compounds							
						Qvalue	
2) Dichlorodifluoromethane	2.154	85	11802	4.836	ug/l		96
3) Chloromethane	2.401	50	12062	3.834	ug/l		94
4) Vinyl Chloride	2.554	62	12853	4.439	ug/l		96
5) Bromomethane	2.995	94	7218	4.705	ug/l		91
6) Chloroethane	3.153	64	6828	3.856	ug/l	#	84
7) Trichlorofluoromethane	3.524	101	15836	4.670	ug/l		96
8) Diethyl Ether	3.983	74	7465	5.277	ug/l		99
9) 1,1,2-Trichlorotrifluo...	4.395	101	11626	5.594	ug/l		97
10) 1,1-Dichloroethene	4.365	96	11558	5.455	ug/l		97
11) Methyl Iodide	4.618	142	6687	2.677	ug/l		96
12) Methyl Acetate	5.047	43	16869	7.169	ug/l		100
13) Acrolein	4.200	56	11876	48.853	ug/l		97
14) Acrylonitrile	5.742	53	39359	35.942	ug/l		98
15) Acetone	4.459	58	12676	45.718	ug/l		78
16) Carbon Disulfide	4.742	76	36612	5.919	ug/l		98
17) Allyl chloride	5.047	41	18516	5.882	ug/l		91
18) Methylene Chloride	5.295	84	14009	5.693	ug/l		95
19) trans-1,2-Dichloroethene	5.806	96	13122	5.918	ug/l		93
20) Diisopropyl ether	6.683	45	37574	5.420	ug/l		95
21) 1,1-Dichloroethane	6.583	63	25040	5.985	ug/l		99
22) cis-1,2-Dichloroethene	7.500	96	13914	5.181	ug/l		96
23) tert-Butyl Alcohol	5.542	59	14840m	42.200	ug/l		
24) Methyl tert-Butyl Ether	5.812	73	38602	5.528	ug/l		98
25) Chloroform	7.977	83	23358	5.704	ug/l		99
26) Cyclohexane	8.259	56	18712	5.167	ug/l	#	97
29) 1,1-Dichloropropene	8.377	75	16196	5.372	ug/l		99
30) 2-Butanone	7.494	43	49880	37.757	ug/l		100
31) 2,2-Dichloropropane	7.500	77	19968	5.610	ug/l		96
32) 1,1,1-Trichloroethane	8.183	97	19246	5.506	ug/l		97
33) Carbon Tetrachloride	8.365	117	16865m	5.645	ug/l		
34) Benzene	8.612	78	53867	5.491	ug/l	#	91
35) Methacrylonitrile	7.794	41	10743m	7.079	ug/l		
36) 1,2-Dichloroethane	8.677	62	17661	6.143	ug/l		99
37) Trichloroethene	9.359	130	12692	4.664	ug/l		85
38) Methylcyclohexane	9.600	83	18613	5.564	ug/l		97
39) 1,2-Dichloropropane	9.624	63	13584	5.751	ug/l		94
40) Dibromomethane	9.712	93	9171	5.937	ug/l		96
41) Bromodichloromethane	9.888	83	18357	5.677	ug/l		99
42) Vinyl Acetate	6.618	43	172005	44.667	ug/l		100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
 Data File : VN087162.D
 Acq On : 25 Jun 2025 08:59
 Operator : JC\MD
 Sample : VSTDICC005
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :

MSVOA_N

ClientSampleId :

VSTDICC005

Manual Integrations

APPROVED

Reviewed By :John
 Carlone

06/25/2025

Supervised By :Mahesh
 Dadoda

06/26/2025

Quant Time: Jun 25 10:38:44 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:38:24 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) Ethyl Acetate	7.571	43	15251m	5.642	ug/l	
44) Isopropyl Acetate	8.694	43	32041	6.909	ug/l	98
45) 1,4-Dioxane	9.706	88	3765	91.346	ug/l	85
46) Methyl methacrylate	9.682	41	14340	6.706	ug/l	88
47) n-amyl Acetate	12.712	43	18265m	4.906	ug/l	
48) t-1,3-Dichloropropene	10.841	75	18916	5.467	ug/l	100
49) cis-1,3-Dichloropropene	10.312	75	21045	5.529	ug/l	92
50) 1,1,2-Trichloroethane	11.024	97	13266	6.097	ug/l	90
51) Ethyl methacrylate	10.888	69	14365m	4.077	ug/l	
52) 1,3-Dichloropropane	11.165	76	21815	5.650	ug/l	100
53) Dibromochloromethane	11.359	129	12745	5.184	ug/l	98
54) 1,2-Dibromoethane	11.471	107	13009	5.849	ug/l	99
55) 2-Chloroethyl vinyl ether	10.159	63	50795	30.031	ug/l	99
56) Bromoform	12.576	173	8824	5.696	ug/l #	93
58) 4-Methyl-2-Pentanone	10.447	43	86443	31.623	ug/l	99
59) 2-Hexanone	11.224	43	47317m	24.166	ug/l	
61) Tetrachloroethene	11.100	164	10375	3.313	ug/l	91
62) Toluene	10.629	91	57093	5.442	ug/l	99
64) Chlorobenzene	11.894	112	35274	5.272	ug/l	98
65) 1,1,1,2-Tetrachloroethane	11.959	131	11689	5.318	ug/l	98
66) Ethyl Benzene	11.965	91	57341	5.053	ug/l	97
67) m/p-Xylenes	12.071	106	43110	9.681	ug/l	97
68) o-Xylene	12.394	106	20187	4.677	ug/l	97
69) Styrene	12.412	104	33711	4.688	ug/l	99
70) Isopropylbenzene	12.694	105	50380	4.908	ug/l	98
71) 1,1,2,2-Tetrachloroethane	12.935	83	19389	7.945	ug/l	98
72) 1,2,3-Trichloropropane	12.994	75	18949m	6.625	ug/l	
73) Bromobenzene	12.982	156	12917	5.063	ug/l	91
74) n-propylbenzene	13.035	91	59601	4.902	ug/l	100
75) 2-Chlorotoluene	13.123	91	38061	4.877	ug/l	100
76) 1,3,5-Trimethylbenzene	13.170	105	39593	4.636	ug/l	99
77) t-1,4-Dichloro-2-butene	12.735	75	6495	5.549	ug/l	95
78) 4-Chlorotoluene	13.223	91	37874	4.899	ug/l	99
79) tert-butylbenzene	13.435	119	31816	4.309	ug/l	99
80) 1,2,4-Trimethylbenzene	13.476	105	38448	4.486	ug/l	98
81) sec-Butylbenzene	13.612	105	48920	4.864	ug/l	99
82) p-Isopropyltoluene	13.723	119	37999	4.499	ug/l	97
83) 1,3-Dichlorobenzene	13.729	146	24271	5.185	ug/l	100
84) 1,4-Dichlorobenzene	13.812	146	24573	5.276	ug/l	99
85) n-Butylbenzene	14.053	91	34704	4.908	ug/l	98
86) Hexachloroethane	14.329	117	8365	5.811	ug/l	99
87) 1,2-Dichlorobenzene	14.106	146	22335	4.947	ug/l	99
88) 1,2-Dibromo-3-Chloropr...	14.717	75	4038	7.857	ug/l	98
89) 1,2,4-Trichlorobenzene	15.841	180	12402	6.563	ug/l	99
90) Hexachlorobutadiene	15.494	225	3815	4.711	ug/l	97
91) Naphthalene	15.635	128	44237	6.710	ug/l	98
92) 1,2,3-Trichlorobenzene	15.841	180	12402	6.563	ug/l	99

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

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
 Data File : VN087162.D
 Acq On : 25 Jun 2025 08:59
 Operator : JC\MD
 Sample : VSTDIC005
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :

MSVOA_N

Client Sample Id :

VSTDIC005

Manual Integrations

APPROVED

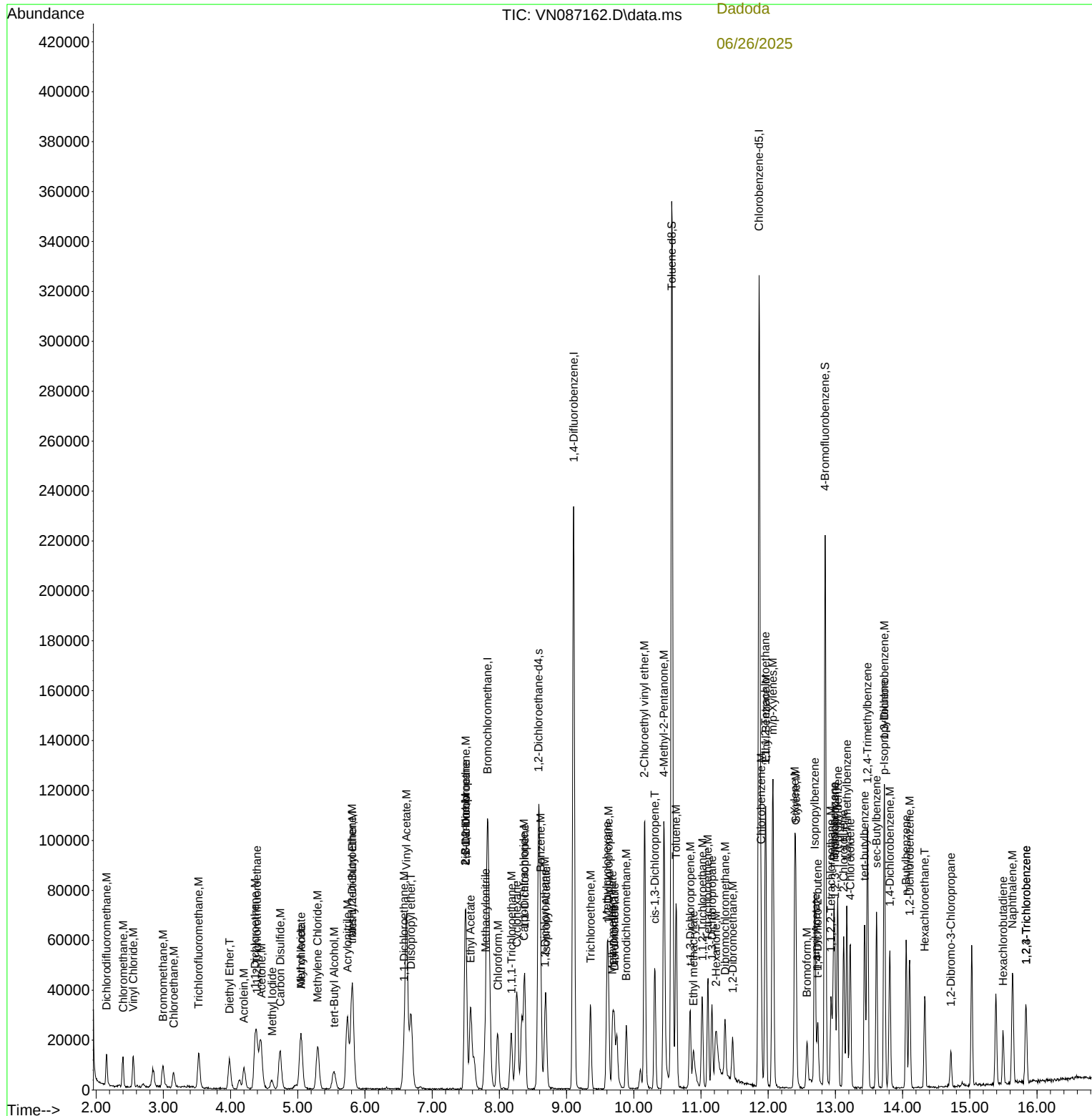
Reviewed By :John
 Carlone

06/25/2025

Supervised By :Mahesh

Dadoda

06/26/2025



Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
 Data File : VN087163.D
 Acq On : 25 Jun 2025 09:20
 Operator : JC\MD
 Sample : VSTDICCC020
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDICCC020

Manual Integrations
 APPROVED

Reviewed By : John Carlone 06/25/2025
 Supervised By : Mahesh Dadoda 06/26/2025

Quant Time: Jun 25 10:35:36 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:35:17 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Bromochloromethane	7.824	128	35021	30.000	ug/l	0.01
28) 1,4-Difluorobenzene	9.106	114	196036	30.000	ug/l	0.00
57) Chlorobenzene-d5	11.865	117	185687	30.000	ug/l	0.00
System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	8.582	65	80849	33.600	ug/l	0.00
Spiked Amount 30.000	Range 91 - 110		Recovery = 112.000%#			
60) 4-Bromofluorobenzene	12.847	95	83246	28.555	ug/l	0.00
Spiked Amount 30.000	Range 63 - 112		Recovery = 95.167%			
63) Toluene-d8	10.565	98	259828	30.486	ug/l	0.00
Spiked Amount 30.000	Range 91 - 112		Recovery = 101.633%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.154	85	38576	16.218	ug/l	97
3) Chloromethane	2.395	50	36457	11.888	ug/l	98
4) Vinyl Chloride	2.553	62	42008	14.885	ug/l	93
5) Bromomethane	3.001	94	22531	15.067	ug/l	93
6) Chloroethane	3.153	64	22548	13.062	ug/l	98
7) Trichlorofluoromethane	3.530	101	54211	16.400	ug/l	97
8) Diethyl Ether	3.983	74	25082	18.191	ug/l	94
9) 1,1,2-Trichlorotrifluo...	4.400	101	39250	19.375	ug/l	86
10) 1,1-Dichloroethene	4.371	96	39141	18.952	ug/l	99
11) Methyl Iodide	4.612	142	30168	12.391	ug/l	95
12) Methyl Acetate	5.047	43	61084	26.632	ug/l	94
13) Acrolein	4.206	56	41919	176.912	ug/l	100
14) Acrylonitrile	5.736	53	143262	134.221	ug/l	98
15) Acetone	4.453	58	42803	158.384	ug/l	88
16) Carbon Disulfide	4.736	76	113169	18.771	ug/l	100
17) Allyl chloride	5.042	41	64418	20.995	ug/l	92
18) Methylene Chloride	5.300	84	45462	18.954	ug/l	96
19) trans-1,2-Dichloroethene	5.806	96	42521	19.673	ug/l	90
20) Diisopropyl ether	6.689	45	142052	21.022	ug/l	94
21) 1,1-Dichloroethane	6.583	63	83594	20.498	ug/l	98
22) cis-1,2-Dichloroethene	7.494	96	48862	18.668	ug/l	93
23) tert-Butyl Alcohol	5.536	59	52931	154.426	ug/l #	100
24) Methyl tert-Butyl Ether	5.812	73	133867	19.667	ug/l	95
25) Chloroform	7.971	83	77659	19.456	ug/l	98
26) Cyclohexane	8.265	56	65879	18.665	ug/l #	98
29) 1,1-Dichloropropene	8.377	75	52341	18.159	ug/l	99
30) 2-Butanone	7.494	43	186786	147.905	ug/l	97
31) 2,2-Dichloropropane	7.500	77	67667	19.889	ug/l	99
32) 1,1,1-Trichloroethane	8.177	97	65006	19.456	ug/l	99
33) Carbon Tetrachloride	8.371	117	51957	18.192	ug/l	96
34) Benzene	8.612	78	171052	18.239	ug/l #	94
35) Methacrylonitrile	7.788	41	37169	25.622	ug/l	95
36) 1,2-Dichloroethane	8.671	62	57773	21.023	ug/l	96
37) Trichloroethene	9.353	130	38479	14.792	ug/l	94
38) Methylcyclohexane	9.606	83	61684	19.288	ug/l	96
39) 1,2-Dichloropropane	9.624	63	45479	20.143	ug/l	99
40) Dibromomethane	9.712	93	30677	20.774	ug/l	97
41) Bromodichloromethane	9.894	83	63009	20.384	ug/l	99
42) Vinyl Acetate	6.618	43	619269	168.226	ug/l	94

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
 Data File : VN087163.D
 Acq On : 25 Jun 2025 09:20
 Operator : JC\MD
 Sample : VSTDICCC020
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDICCC020

Manual Integrations
 APPROVED

Reviewed By : John Carlone 06/25/2025
 Supervised By : Mahesh Dadoda 06/26/2025

Quant Time: Jun 25 10:35:36 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:35:17 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) Ethyl Acetate	7.571	43	73261	28.350	ug/l	99
44) Isopropyl Acetate	8.694	43	109066	24.603	ug/l	92
45) 1,4-Dioxane	9.700	88	14898	378.114	ug/l	94
46) Methyl methacrylate	9.682	41	51785	25.335	ug/l	94
47) n-amyl Acetate	12.529	43	66120m	18.579	ug/l	
48) t-1,3-Dichloropropene	10.835	75	66870	20.216	ug/l	99
49) cis-1,3-Dichloropropene	10.312	75	74233	20.403	ug/l	95
50) 1,1,2-Trichloroethane	11.018	97	43535	20.932	ug/l	97
51) Ethyl methacrylate	10.882	69	61428	18.237	ug/l	97
52) 1,3-Dichloropropane	11.165	76	74825	20.272	ug/l	99
53) Dibromochloromethane	11.359	129	44787	19.056	ug/l	99
54) 1,2-Dibromoethane	11.471	107	44953	21.145	ug/l	98
55) 2-Chloroethyl vinyl ether	10.159	63	189897	117.448	ug/l	99
56) Bromoform	12.576	173	30532	20.618	ug/l #	98
58) 4-Methyl-2-Pentanone	10.447	43	338778	124.338	ug/l	97
59) 2-Hexanone	11.206	43	199560	102.251	ug/l	99
61) Tetrachloroethene	11.106	164	33143	10.618	ug/l	93
62) Toluene	10.629	91	191888	18.349	ug/l	99
64) Chlorobenzene	11.888	112	121902	18.278	ug/l	100
65) 1,1,1,2-Tetrachloroethane	11.959	131	40342	18.412	ug/l	99
66) Ethyl Benzene	11.965	91	204111	18.045	ug/l	97
67) m/p-Xylenes	12.070	106	157576	35.500	ug/l	98
68) o-Xylene	12.394	106	74793	17.386	ug/l	99
69) Styrene	12.412	104	128666	17.953	ug/l	98
70) Isopropylbenzene	12.694	105	183132	17.899	ug/l	100
71) 1,1,2,2-Tetrachloroethane	12.935	83	70012	28.780	ug/l	97
72) 1,2,3-Trichloropropane	12.988	75	57564m	20.191	ug/l	
73) Bromobenzene	12.982	156	44654	17.559	ug/l	89
74) n-propylbenzene	13.035	91	223685	18.457	ug/l	98
75) 2-Chlorotoluene	13.123	91	133694	17.187	ug/l	100
76) 1,3,5-Trimethylbenzene	13.170	105	146137	17.169	ug/l	100
77) t-1,4-Dichloro-2-butene	12.735	75	24271	20.803	ug/l	93
78) 4-Chlorotoluene	13.217	91	137101	17.793	ug/l	99
79) tert-butylbenzene	13.435	119	122243	16.611	ug/l	97
80) 1,2,4-Trimethylbenzene	13.482	105	145827	17.068	ug/l	99
81) sec-Butylbenzene	13.612	105	182391	18.192	ug/l	99
82) p-Isopropyltoluene	13.729	119	156830	18.630	ug/l	99
83) 1,3-Dichlorobenzene	13.729	146	88727	19.018	ug/l	99
84) 1,4-Dichlorobenzene	13.812	146	88343	19.028	ug/l	99
85) n-Butylbenzene	14.053	91	142647	20.240	ug/l	99
86) Hexachloroethane	14.329	117	28116	19.596	ug/l	98
87) 1,2-Dichlorobenzene	14.106	146	82984	18.439	ug/l	99
88) 1,2-Dibromo-3-Chloropr...	14.711	75	15132	29.539	ug/l	94
89) 1,2,4-Trichlorobenzene	15.835	180	46967	24.937	ug/l	96
90) Hexachlorobutadiene	15.494	225	13876	17.189	ug/l	99
91) Naphthalene	15.635	128	178532	27.168	ug/l	98
92) 1,2,3-Trichlorobenzene	15.835	180	46967	24.937	ug/l	96

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

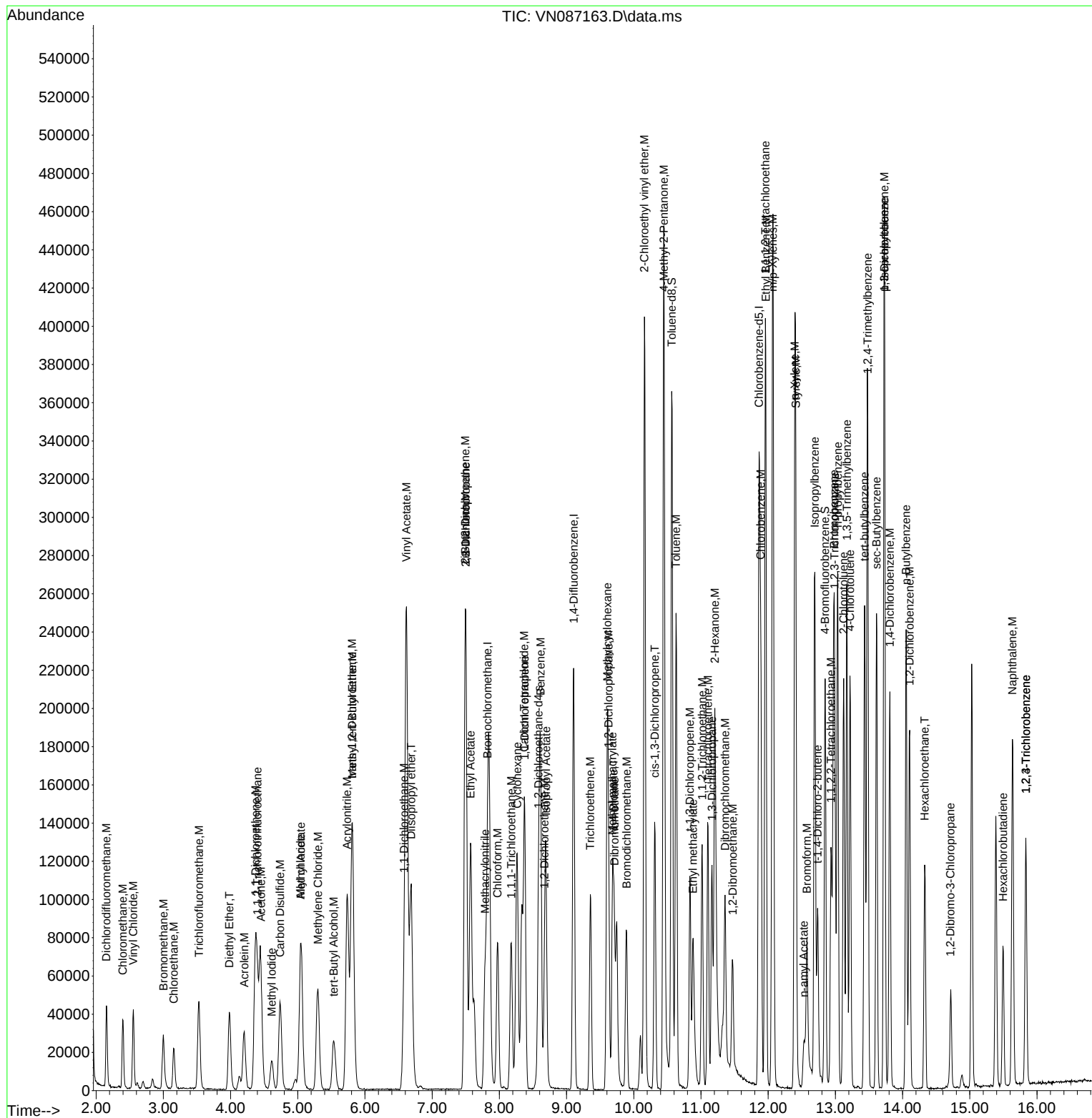
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
Data File : VN087163.D
Acq On : 25 Jun 2025 09:20
Operator : JC\MD
Sample : VSTDICCC020
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICCC020

Manual Integrations APPROVED

Reviewed By :John Carlone 06/25/2025
Supervised By :Mahesh Dadoda 06/26/2025

Quant Time: Jun 25 10:35:36 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Wed Jun 25 10:35:17 2025
Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
 Data File : VN087164.D
 Acq On : 25 Jun 2025 09:41
 Operator : JC\MD
 Sample : VSTDICC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 4 Sample Multiplier: 1

Instrument :

MSVOA_N

ClientSampleId :

VSTDICC050

Manual Integrations

APPROVED

Reviewed By :John Carlone 06/25/2025

Supervised By :Mahesh Dadoda 06/26/2025

Quant Time: Jun 25 10:41:53 2025

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M

Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS

QLast Update : Wed Jun 25 10:38:24 2025

Response via : Initial Calibration

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

Internal Standards						
1) Bromochloromethane	7.824	128	36297	30.000	ug/l	0.00
28) 1,4-Difluorobenzene	9.106	114	191792	30.000	ug/l	0.00
57) Chlorobenzene-d5	11.865	117	183711	30.000	ug/l	0.00
System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	8.583	65	80238	32.174	ug/l	0.00
Spiked Amount 30.000	Range	91 - 110	Recovery	= 107.233%		
60) 4-Bromofluorobenzene	12.847	95	86398	29.954	ug/l	0.00
Spiked Amount 30.000	Range	63 - 112	Recovery	= 99.833%		
63) Toluene-d8	10.565	98	241406	28.629	ug/l	0.00
Spiked Amount 30.000	Range	91 - 112	Recovery	= 95.433%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.154	85	105036	42.607	ug/l	97
3) Chloromethane	2.395	50	108859	34.249	ug/l	98
4) Vinyl Chloride	2.554	62	116298	39.759	ug/l	95
5) Bromomethane	2.995	94	59883	38.638	ug/l	94
6) Chloroethane	3.154	64	62900	35.158	ug/l	97
7) Trichlorofluoromethane	3.530	101	144121	42.068	ug/l	99
8) Diethyl Ether	3.983	74	70868	49.590	ug/l	98
9) 1,1,2-Trichlorotrifluo...	4.401	101	108149	51.509	ug/l #	88
10) 1,1-Dichloroethene	4.365	96	107618	50.276	ug/l	95
11) Methyl Iodide	4.612	142	104934	41.585	ug/l	91
12) Methyl Acetate	5.042	43	172834	72.704	ug/l	97
13) Acrolein	4.201	56	122967	500.718	ug/l	100
14) Acrylonitrile	5.736	53	406413	367.380	ug/l	98
15) Acetone	4.448	58	116774	416.908	ug/l	94
16) Carbon Disulfide	4.742	76	310088	49.627	ug/l	100
17) Allyl chloride	5.048	41	180781	56.849	ug/l	97
18) Methylene Chloride	5.300	84	124740	50.180	ug/l	98
19) trans-1,2-Dichloroethene	5.812	96	118244	52.785	ug/l	94
20) Diisopropyl ether	6.689	45	395621	56.488	ug/l	95
21) 1,1-Dichloroethane	6.583	63	225376	53.322	ug/l	99
22) cis-1,2-Dichloroethene	7.500	96	143629	52.945	ug/l	97
23) tert-Butyl Alcohol	5.536	59	152814	430.162	ug/l #	100
24) Methyl tert-Butyl Ether	5.812	73	385760	54.681	ug/l	98
25) Chloroform	7.971	83	221377	53.512	ug/l	98
26) Cyclohexane	8.265	56	193421	52.874	ug/l #	98
29) 1,1-Dichloropropene	8.377	75	160517	56.923	ug/l	98
30) 2-Butanone	7.489	43	546757	442.524	ug/l	99
31) 2,2-Dichloropropane	7.500	77	190958	57.368	ug/l	100
32) 1,1,1-Trichloroethane	8.177	97	185977	56.894	ug/l	99
33) Carbon Tetrachloride	8.371	117	153386	54.893	ug/l	97
34) Benzene	8.612	78	503072	54.830	ug/l	98
35) Methacrylonitrile	7.789	41	109229	76.961	ug/l	95
36) 1,2-Dichloroethane	8.677	62	161947	60.234	ug/l	97
37) Trichloroethene	9.359	130	112377	44.156	ug/l	89
38) Methylcyclohexane	9.606	83	170475	54.486	ug/l	98
39) 1,2-Dichloropropane	9.624	63	117960	53.402	ug/l	96
40) Dibromomethane	9.712	93	82459	57.075	ug/l	99
41) Bromodichloromethane	9.888	83	167016	55.227	ug/l	99
42) Vinyl Acetate	6.618	43	1770137	491.503	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
 Data File : VN087164.D
 Acq On : 25 Jun 2025 09:41
 Operator : JC\MD
 Sample : VSTDICC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 4 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDICC050

Manual Integrations
 APPROVED

Reviewed By : John Carlone 06/25/2025
 Supervised By : Mahesh Dadoda 06/26/2025

Quant Time: Jun 25 10:41:53 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:38:24 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) Ethyl Acetate	7.571	43	209283	82.779	ug/l	98
44) Isopropyl Acetate	8.694	43	318572	73.455	ug/l	97
45) 1,4-Dioxane	9.700	88	42097	1092.072	ug/l	90
46) Methyl methacrylate	9.683	41	142798	71.407	ug/l	95
47) n-amyl Acetate	12.518	43	180529	51.850	ug/l #	100
48) t-1,3-Dichloropropene	10.835	75	196045	60.579	ug/l	100
49) cis-1,3-Dichloropropene	10.312	75	193737	54.427	ug/l	95
50) 1,1,2-Trichloroethane	11.018	97	120146	59.045	ug/l	98
51) Ethyl methacrylate	10.882	69	196419	59.603	ug/l	98
52) 1,3-Dichloropropane	11.165	76	208157	57.643	ug/l	98
53) Dibromochloromethane	11.359	129	128273	55.785	ug/l	98
54) 1,2-Dibromoethane	11.471	107	122070	58.689	ug/l	97
55) 2-Chloroethyl vinyl ether	10.159	63	502611	317.734	ug/l	100
56) Bromoform	12.576	173	86503	59.706	ug/l	99
58) 4-Methyl-2-Pentanone	10.447	43	987570	366.357	ug/l	100
59) 2-Hexanone	11.200	43	673308	348.700	ug/l	97
61) Tetrachloroethene	11.106	164	92124	29.832	ug/l	96
62) Toluene	10.630	91	526581	50.894	ug/l	99
64) Chlorobenzene	11.894	112	338627	51.320	ug/l	98
65) 1,1,1,2-Tetrachloroethane	11.959	131	111613	51.489	ug/l	98
66) Ethyl Benzene	11.965	91	589779	52.700	ug/l	99
67) m/p-Xylenes	12.071	106	454250	103.437	ug/l	99
68) o-Xylene	12.400	106	217114	51.013	ug/l	99
69) Styrene	12.412	104	379767	53.558	ug/l	99
70) Isopropylbenzene	12.694	105	547639	54.100	ug/l	99
71) 1,1,2,2-Tetrachloroethane	12.935	83	194527	80.826	ug/l	97
72) 1,2,3-Trichloropropane	12.994	75	161650m	57.309	ug/l	
73) Bromobenzene	12.982	156	130892	52.023	ug/l	98
74) n-propylbenzene	13.035	91	680365	56.743	ug/l	99
75) 2-Chlorotoluene	13.123	91	403198	52.390	ug/l	98
76) 1,3,5-Trimethylbenzene	13.171	105	458902	54.494	ug/l	99
77) t-1,4-Dichloro-2-butene	12.735	75	75763	65.634	ug/l	98
78) 4-Chlorotoluene	13.218	91	420022	55.095	ug/l	99
79) tert-butylbenzene	13.435	119	389222	53.458	ug/l	98
80) 1,2,4-Trimethylbenzene	13.482	105	466397	55.177	ug/l	98
81) sec-Butylbenzene	13.612	105	564906	56.952	ug/l	99
82) p-Isopropyltoluene	13.729	119	469774	56.404	ug/l	99
83) 1,3-Dichlorobenzene	13.729	146	257282	55.740	ug/l	100
84) 1,4-Dichlorobenzene	13.812	146	260975	56.816	ug/l	99
85) n-Butylbenzene	14.053	91	438545	62.894	ug/l	99
86) Hexachloroethane	14.329	117	86176	60.709	ug/l	99
87) 1,2-Dichlorobenzene	14.106	146	246553	55.373	ug/l	100
88) 1,2-Dibromo-3-Chloropr...	14.717	75	43840	86.500	ug/l	92
89) 1,2,4-Trichlorobenzene	15.835	180	127450	68.396	ug/l	97
90) Hexachlorobutadiene	15.494	225	40360	50.535	ug/l	97
91) Naphthalene	15.635	128	528628	81.307	ug/l	99
92) 1,2,3-Trichlorobenzene	15.835	180	127450	68.396	ug/l	97

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

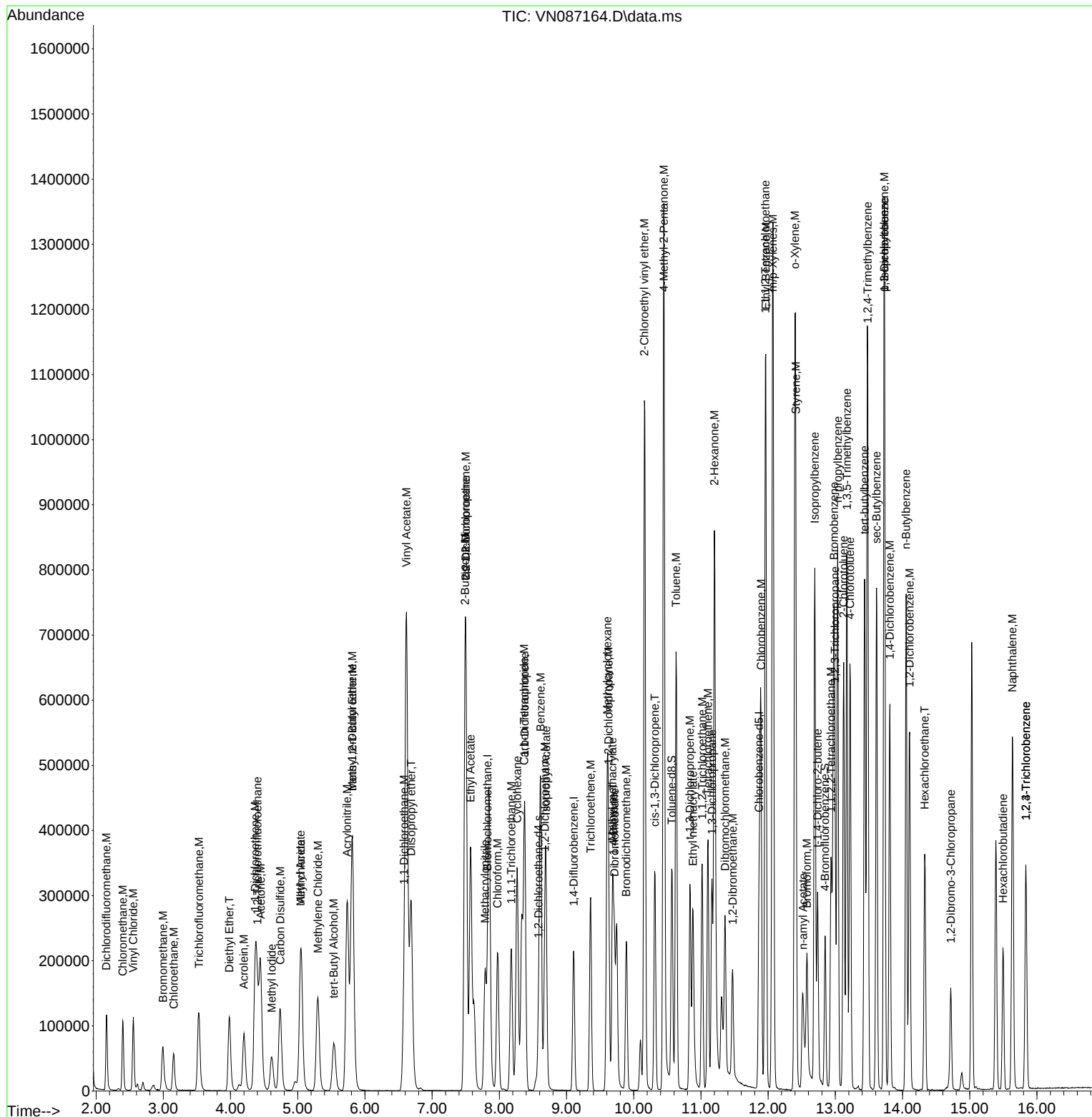
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
Data File : VN087164.D
Acq On : 25 Jun 2025 09:41
Operator : JC\MD
Sample : VSTDICC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC050

Manual Integrations APPROVED

Reviewed By :John Carlone 06/25/2025
Supervised By :Mahesh Dadoda 06/26/2025

Quant Time: Jun 25 10:41:53 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Wed Jun 25 10:38:24 2025
Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
 Data File : VN087165.D
 Acq On : 25 Jun 2025 10:03
 Operator : JC\MD
 Sample : VSTDICC100
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDICC100

Manual Integrations
 APPROVED

Reviewed By : John Carlone 06/25/2025
 Supervised By : Mahesh Dadoda 06/26/2025

Quant Time: Jun 25 10:45:11 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:38:24 2025
 Response via : Initial Calibration

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

Internal Standards								
1) Bromochloromethane			7.824	128	35618	30.000	ug/l	0.00
28) 1,4-Difluorobenzene			9.106	114	201156	30.000	ug/l	0.00
57) Chlorobenzene-d5			11.865	117	183622	30.000	ug/l	0.00
System Monitoring Compounds								
27) 1,2-Dichloroethane-d4			8.588	65	79655	32.549	ug/l	0.00
Spiked Amount 30.000			Range	91 - 110	Recovery	= 108.500%		
60) 4-Bromofluorobenzene			12.847	95	89811	31.153	ug/l	0.00
Spiked Amount 30.000			Range	63 - 112	Recovery	= 103.833%		
63) Toluene-d8			10.570	98	240658	28.555	ug/l	0.00
Spiked Amount 30.000			Range	91 - 112	Recovery	= 95.167%		
Target Compounds								Qvalue
2) Dichlorodifluoromethane			2.153	85	209048	86.416	ug/l	98
3) Chloromethane			2.395	50	219144	70.260	ug/l	99
4) Vinyl Chloride			2.553	62	231029	80.487	ug/l	96
5) Bromomethane			2.977	94	121155	79.663	ug/l	96
6) Chloroethane			3.147	64	127025	72.354	ug/l	96
7) Trichlorofluoromethane			3.524	101	284892	84.743	ug/l	99
8) Diethyl Ether			3.983	74	144856	103.296	ug/l	98
9) 1,1,2-Trichlorotrifluo...			4.394	101	211983	102.887	ug/l #	89
10) 1,1-Dichloroethene			4.359	96	210381	100.157	ug/l	99
11) Methyl Iodide			4.612	142	223592	90.298	ug/l	94
12) Methyl Acetate			5.047	43	342955	147.018	ug/l	99
13) Acrolein			4.194	56	269423	1117.997	ug/l	98
14) Acrylonitrile			5.736	53	792103	729.677	ug/l	99
15) Acetone			4.447	58	221668	806.489	ug/l	88
16) Carbon Disulfide			4.736	76	599738	97.812	ug/l	99
17) Allyl chloride			5.047	41	352481	112.956	ug/l	96
18) Methylene Chloride			5.294	84	240448	98.570	ug/l	98
19) trans-1,2-Dichloroethene			5.806	96	227436	103.465	ug/l	98
20) Diisopropyl ether			6.688	45	754179	109.737	ug/l	96
21) 1,1-Dichloroethane			6.583	63	433300	104.470	ug/l	99
22) cis-1,2-Dichloroethene			7.500	96	269357	101.185	ug/l	98
23) tert-Butyl Alcohol			5.547	59	300461	861.903	ug/l #	100
24) Methyl tert-Butyl Ether			5.812	73	760825	109.903	ug/l	98
25) Chloroform			7.977	83	423559	104.336	ug/l	98
26) Cyclohexane			8.265	56	380867	106.100	ug/l #	97
29) 1,1-Dichloropropene			8.377	75	308919	104.450	ug/l	100
30) 2-Butanone			7.494	43	1060369	818.271	ug/l	99
31) 2,2-Dichloropropane			7.500	77	360566	103.280	ug/l	99
32) 1,1,1-Trichloroethane			8.177	97	351600	102.554	ug/l	99
33) Carbon Tetrachloride			8.371	117	300004	102.367	ug/l	98
34) Benzene			8.612	78	974806	101.298	ug/l	96
35) Methacrylonitrile			7.788	41	210741	141.572	ug/l	93
36) 1,2-Dichloroethane			8.677	62	306293	108.618	ug/l	98
37) Trichloroethene			9.359	130	225493	84.478	ug/l	91
38) Methylcyclohexane			9.606	83	369519	112.606	ug/l	97
39) 1,2-Dichloropropane			9.624	63	243095	104.928	ug/l	96
40) Dibromomethane			9.712	93	165326	109.106	ug/l	98
41) Bromodichloromethane			9.888	83	324962	102.452	ug/l	99
42) Vinyl Acetate			6.618	43	3371109	892.461	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
 Data File : VN087165.D
 Acq On : 25 Jun 2025 10:03
 Operator : JC\MD
 Sample : VSTDICC100
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDICC100

Manual Integrations
 APPROVED

Reviewed By : John Carlone 06/25/2025
 Supervised By : Mahesh Dadoda 06/26/2025

Quant Time: Jun 25 10:45:11 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:38:24 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) Ethyl Acetate	7.571	43	382364	144.198	ug/l	97
44) Isopropyl Acetate	8.694	43	615849	135.389	ug/l	97
45) 1,4-Dioxane	9.706	88	88061	2178.117	ug/l #	94
46) Methyl methacrylate	9.682	41	289659	138.103	ug/l	98
47) n-amyl Acetate	12.506	43	386267	105.776	ug/l #	100
48) t-1,3-Dichloropropene	10.835	75	371754	109.526	ug/l	99
49) cis-1,3-Dichloropropene	10.312	75	392118	105.031	ug/l	98
50) 1,1,2-Trichloroethane	11.018	97	222928	104.457	ug/l	98
51) Ethyl methacrylate	10.876	69	387380	112.077	ug/l	99
52) 1,3-Dichloropropane	11.165	76	388131	102.479	ug/l	99
53) Dibromochloromethane	11.359	129	243297	100.883	ug/l	98
54) 1,2-Dibromoethane	11.470	107	239775	109.913	ug/l	97
55) 2-Chloroethyl vinyl ether	10.159	63	1069566	644.669	ug/l	99
56) Bromoform	12.576	173	172827	113.736	ug/l	100
58) 4-Methyl-2-Pentanone	10.447	43	1927138	715.253	ug/l	100
59) 2-Hexanone	11.200	43	1309927	678.728	ug/l	98
61) Tetrachloroethene	11.106	164	172205	55.791	ug/l	96
62) Toluene	10.629	91	1005355	97.215	ug/l	99
64) Chlorobenzene	11.894	112	655778	99.433	ug/l	98
65) 1,1,1,2-Tetrachloroethane	11.959	131	216474	99.911	ug/l	98
66) Ethyl Benzene	11.965	91	1162597	103.936	ug/l	99
67) m/p-Xylenes	12.070	106	898830	204.771	ug/l	99
68) o-Xylene	12.394	106	432376	101.641	ug/l	99
69) Styrene	12.412	104	742364	104.745	ug/l	99
70) Isopropylbenzene	12.694	105	1079915	106.734	ug/l	99
71) 1,1,2,2-Tetrachloroethane	12.935	83	370997	154.224	ug/l	97
72) 1,2,3-Trichloropropane	12.994	75	313625m	111.241	ug/l	
73) Bromobenzene	12.976	156	255120	101.447	ug/l	98
74) n-propylbenzene	13.035	91	1337231	111.580	ug/l	98
75) 2-Chlorotoluene	13.123	91	795441	103.407	ug/l	98
76) 1,3,5-Trimethylbenzene	13.170	105	897353	106.611	ug/l	100
77) t-1,4-Dichloro-2-butene	12.735	75	154353	133.783	ug/l	91
78) 4-Chlorotoluene	13.217	91	819288	107.520	ug/l	100
79) tert-butylbenzene	13.435	119	765014	105.123	ug/l	98
80) 1,2,4-Trimethylbenzene	13.482	105	903551	106.945	ug/l	99
81) sec-Butylbenzene	13.611	105	1098188	110.769	ug/l	99
82) p-Isopropyltoluene	13.729	119	929641	111.672	ug/l	99
83) 1,3-Dichlorobenzene	13.729	146	504027	109.250	ug/l	100
84) 1,4-Dichlorobenzene	13.811	146	503947	109.765	ug/l	99
85) n-Butylbenzene	14.053	91	837235	120.131	ug/l	98
86) Hexachloroethane	14.329	117	169893	119.744	ug/l	97
87) 1,2-Dichlorobenzene	14.106	146	478012	107.409	ug/l	99
88) 1,2-Dibromo-3-Chloropr...	14.717	75	86628	171.007	ug/l	92
89) 1,2,4-Trichlorobenzene	15.835	180	274932	147.614	ug/l	98
90) Hexachlorobutadiene	15.500	225	78874	98.806	ug/l	97
91) Naphthalene	15.635	128	1105491	170.116	ug/l	99
92) 1,2,3-Trichlorobenzene	15.835	180	274932	147.614	ug/l	98

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

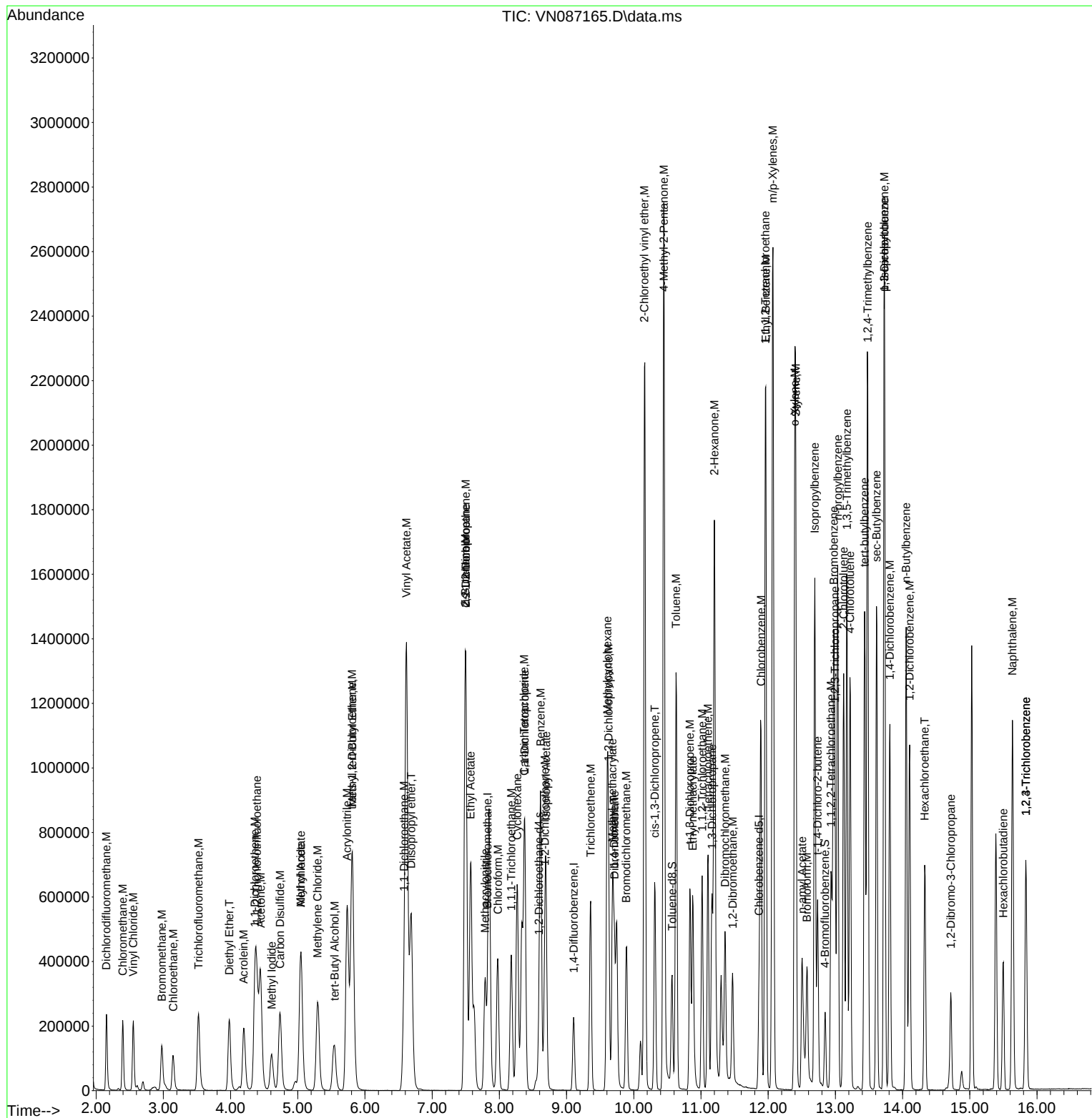
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
Data File : VN087165.D
Acq On : 25 Jun 2025 10:03
Operator : JC\MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC100

Manual Integrations APPROVED

Reviewed By :John Carlone 06/25/2025
Supervised By :Mahesh Dadoda 06/26/2025

Quant Time: Jun 25 10:45:11 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Wed Jun 25 10:38:24 2025
Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
 Data File : VN087166.D
 Acq On : 25 Jun 2025 10:24
 Operator : JC\MD
 Sample : VSTDICC150
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDICC150

Manual Integrations
 APPROVED

Reviewed By : John Carlone 06/25/2025
 Supervised By : Mahesh Dadoda 06/26/2025

Quant Time: Jun 25 10:47:00 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:38:24 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Bromochloromethane	7.824	128	34436	30.000	ug/l	0.00
28) 1,4-Difluorobenzene	9.106	114	194011	30.000	ug/l	0.00
57) Chlorobenzene-d5	11.865	117	186774	30.000	ug/l	0.00
System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	8.588	65	74130	31.331	ug/l	0.00
Spiked Amount 30.000	Range 91 - 110		Recovery =	104.433%		
60) 4-Bromofluorobenzene	12.847	95	87432	29.816	ug/l	0.00
Spiked Amount 30.000	Range 63 - 112		Recovery =	99.400%		
63) Toluene-d8	10.571	98	247397	28.859	ug/l	0.00
Spiked Amount 30.000	Range 91 - 112		Recovery =	96.200%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.153	85	328743	140.560	ug/l	99
3) Chloromethane	2.395	50	344616	114.281	ug/l	100
4) Vinyl Chloride	2.553	62	380413	137.080	ug/l	96
5) Bromomethane	2.965	94	196072	133.348	ug/l	95
6) Chloroethane	3.142	64	199925	117.788	ug/l	98
7) Trichlorofluoromethane	3.518	101	438423	134.888	ug/l	99
8) Diethyl Ether	3.977	74	228664	168.656	ug/l	97
9) 1,1,2-Trichlorotrifluo...	4.394	101	330508	165.921	ug/l #	88
10) 1,1-Dichloroethene	4.365	96	332121	163.541	ug/l	97
11) Methyl Iodide	4.612	142	363941	152.023	ug/l	96
12) Methyl Acetate	5.047	43	529248	234.665	ug/l	99
13) Acrolein	4.200	56	494100	2120.692	ug/l	100
14) Acrylonitrile	5.736	53	1229651	1171.622	ug/l	100
15) Acetone	4.447	58	335530	1262.652	ug/l	91
16) Carbon Disulfide	4.736	76	934684	157.671	ug/l	99
17) Allyl chloride	5.042	41	547297	181.407	ug/l	92
18) Methylene Chloride	5.294	84	370628	157.151	ug/l	98
19) trans-1,2-Dichloroethene	5.806	96	353679	166.418	ug/l	97
20) Diisopropyl ether	6.688	45	1127057	169.621	ug/l	96
21) 1,1-Dichloroethane	6.583	63	665820	166.042	ug/l	99
22) cis-1,2-Dichloroethene	7.500	96	431407	167.622	ug/l	96
23) tert-Butyl Alcohol	5.547	59	464693	1378.774	ug/l #	100
24) Methyl tert-Butyl Ether	5.812	73	1188591	177.588	ug/l	97
25) Chloroform	7.977	83	646145	164.630	ug/l	99
26) Cyclohexane	8.265	56	593136	170.905	ug/l #	97
29) 1,1-Dichloropropene	8.377	75	485720	170.277	ug/l	100
30) 2-Butanone	7.494	43	1653884	1323.281	ug/l	98
31) 2,2-Dichloropropane	7.500	77	567545	168.554	ug/l	100
32) 1,1,1-Trichloroethane	8.177	97	547772	165.656	ug/l	98
33) Carbon Tetrachloride	8.371	117	465916	164.834	ug/l	99
34) Benzene	8.612	78	1449530	156.178	ug/l	97
35) Methacrylonitrile	7.788	41	324629	226.112	ug/l	94
36) 1,2-Dichloroethane	8.677	62	456777	167.948	ug/l	98
37) Trichloroethene	9.359	130	344162	133.684	ug/l	91
38) Methylcyclohexane	9.606	83	564171	178.256	ug/l	96
39) 1,2-Dichloropropane	9.624	63	370597	165.854	ug/l	98
40) Dibromomethane	9.712	93	248835	170.265	ug/l	98
41) Bromodichloromethane	9.888	83	509473	166.539	ug/l	98
42) Vinyl Acetate	6.618	43	5152202	1414.217	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
 Data File : VN087166.D
 Acq On : 25 Jun 2025 10:24
 Operator : JC\MD
 Sample : VSTDICC150
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDICC150

Manual Integrations
 APPROVED

Reviewed By : John Carlone 06/25/2025
 Supervised By : Mahesh Dadoda 06/26/2025

Quant Time: Jun 25 10:47:00 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:38:24 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) Ethyl Acetate	7.571	43	596805	233.358	ug/l	97
44) Isopropyl Acetate	8.694	43	922972	210.380	ug/l	96
45) 1,4-Dioxane	9.706	88	136174	3492.194	ug/l #	93
46) Methyl methacrylate	9.682	41	448002	221.464	ug/l	98
47) n-amyl Acetate	12.500	43	635191	180.347	ug/l #	100
48) t-1,3-Dichloropropene	10.835	75	593288	181.231	ug/l	100
49) cis-1,3-Dichloropropene	10.312	75	629822	174.914	ug/l	99
50) 1,1,2-Trichloroethane	11.018	97	355131	172.532	ug/l	98
51) Ethyl methacrylate	10.876	69	631073	189.307	ug/l	97
52) 1,3-Dichloropropane	11.165	76	622735	170.477	ug/l	98
53) Dibromochloromethane	11.359	129	393072	168.990	ug/l	98
54) 1,2-Dibromoethane	11.470	107	376916	179.142	ug/l	98
55) 2-Chloroethyl vinyl ether	10.165	63	1674601	1046.520	ug/l	99
56) Bromoform	12.576	173	267364	182.430	ug/l	100
58) 4-Methyl-2-Pentanone	10.447	43	2972532	1084.631	ug/l	97
59) 2-Hexanone	11.200	43	2111404	1075.545	ug/l	98
61) Tetrachloroethene	11.106	164	281420	89.636	ug/l	97
62) Toluene	10.629	91	1606715	152.743	ug/l	98
64) Chlorobenzene	11.894	112	1032685	153.939	ug/l	100
65) 1,1,1,2-Tetrachloroethane	11.959	131	340847	154.659	ug/l	99
66) Ethyl Benzene	11.965	91	1822466	160.178	ug/l	99
67) m/p-Xylenes	12.070	106	1394481	312.329	ug/l	99
68) o-Xylene	12.394	106	672570	155.436	ug/l	99
69) Styrene	12.412	104	1159533	160.846	ug/l	98
70) Isopropylbenzene	12.694	105	1669808	162.251	ug/l	100
71) 1,1,2,2-Tetrachloroethane	12.935	83	567347	231.867	ug/l	98
72) 1,2,3-Trichloropropane	12.994	75	471614m	164.456	ug/l	
73) Bromobenzene	12.976	156	398769	155.892	ug/l	96
74) n-propylbenzene	13.035	91	2036919	167.094	ug/l	98
75) 2-Chlorotoluene	13.123	91	1222718	156.271	ug/l	98
76) 1,3,5-Trimethylbenzene	13.170	105	1356652	158.459	ug/l	99
77) t-1,4-Dichloro-2-butene	12.735	75	240560	204.982	ug/l	94
78) 4-Chlorotoluene	13.217	91	1255673	162.009	ug/l	99
79) tert-butylbenzene	13.435	119	1162060	156.987	ug/l	98
80) 1,2,4-Trimethylbenzene	13.482	105	1387864	161.497	ug/l	100
81) sec-Butylbenzene	13.612	105	1597517	158.414	ug/l	99
82) p-Isopropyltoluene	13.729	119	1349971	159.427	ug/l	99
83) 1,3-Dichlorobenzene	13.729	146	729988	155.558	ug/l	100
84) 1,4-Dichlorobenzene	13.812	146	736335	157.675	ug/l	99
85) n-Butylbenzene	14.053	91	1220446	172.161	ug/l	99
86) Hexachloroethane	14.329	117	249792	173.087	ug/l	96
87) 1,2-Dichlorobenzene	14.106	146	693617	153.225	ug/l	100
88) 1,2-Dibromo-3-Chloropr...	14.717	75	137557	266.961	ug/l	92
89) 1,2,4-Trichlorobenzene	15.835	180	429237	226.572	ug/l	97
90) Hexachlorobutadiene	15.500	225	120167	147.993	ug/l	98
91) Naphthalene	15.635	128	1756242	265.695	ug/l	99
92) 1,2,3-Trichlorobenzene	15.835	180	429237	226.572	ug/l	97

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

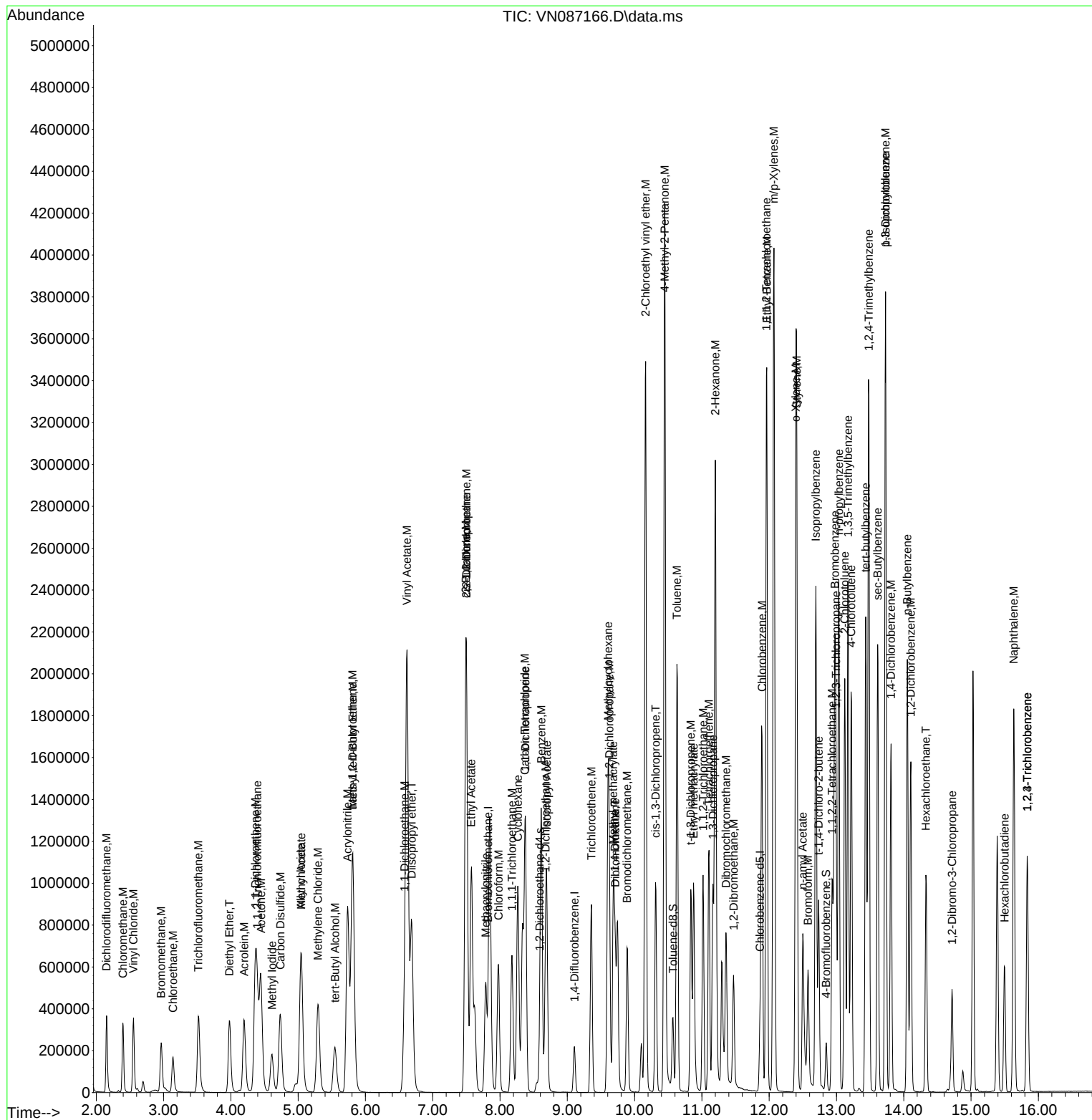
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
 Data File : VN087166.D
 Acq On : 25 Jun 2025 10:24
 Operator : JC\MD
 Sample : VSTDIC150
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDIC150

Manual Integrations APPROVED

Reviewed By : John Carlone 06/25/2025
 Supervised By : Mahesh Dadoda 06/26/2025

Quant Time: Jun 25 10:47:00 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:38:24 2025
 Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
 Data File : VN087168.D
 Acq On : 25 Jun 2025 11:08
 Operator : JC\MD
 Sample : VSTDICV020
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 ICVVN062525

Manual Integrations
 APPROVED

Reviewed By :John
 Carlone

Quant Time: Jun 25 15:29:48 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:49:56 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Bromochloromethane	7.829	128	35075	30.000	ug/l	0.00
28) 1,4-Difluorobenzene	9.106	114	195745	30.000	ug/l	0.00
57) Chlorobenzene-d5	11.865	117	185221	30.000	ug/l	0.00
System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	8.588	65	78569	29.730	ug/l	0.00
Spiked Amount	30.000	Range	91 - 110	Recovery	=	99.100%
60) 4-Bromofluorobenzene	12.847	95	87563	30.636	ug/l	0.00
Spiked Amount	30.000	Range	63 - 112	Recovery	=	102.133%
63) Toluene-d8	10.565	98	253524	30.485	ug/l	0.00
Spiked Amount	30.000	Range	91 - 112	Recovery	=	101.600%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	2.153	85	39936	18.915	ug/l	89
3) Chloromethane	2.400	50	40578	18.816	ug/l	95
4) Vinyl Chloride	2.553	62	40792	17.404	ug/l	99
5) Bromomethane	3.000	94	25492	20.494	ug/l	97
6) Chloroethane	3.153	64	24041	19.122	ug/l	99
7) Trichlorofluoromethane	3.530	101	54078	18.810	ug/l	100
8) Diethyl Ether	3.989	74	27463	19.443	ug/l	95
9) 1,1,2-Trichlorotrifluo...	4.400	101	40891	19.184	ug/l #	88
10) 1,1-Dichloroethene	4.365	96	40670	19.141	ug/l	89
11) Methyl Iodide	4.612	142	29562	15.530	ug/l	94
12) Methyl Acetate	5.047	43	65886	19.769	ug/l	96
13) Acrolein	4.206	56	54597	106.612	ug/l	100
14) Acrylonitrile	5.741	53	153387	98.671	ug/l	99
15) Acetone	4.447	58	44493	98.119	ug/l	89
16) Carbon Disulfide	4.741	76	116947	18.825	ug/l	98
17) Allyl chloride	5.053	41	64340	18.360	ug/l	93
18) Methylene Chloride	5.306	84	46095	18.727	ug/l	97
19) trans-1,2-Dichloroethene	5.812	96	44162	19.006	ug/l	97
20) Diisopropyl ether	6.688	45	142767	19.202	ug/l	99
21) 1,1-Dichloroethane	6.588	63	77314	17.398	ug/l	99
22) cis-1,2-Dichloroethene	7.494	96	51043	18.875	ug/l	97
23) tert-Butyl Alcohol	5.536	59	60387	103.292	ug/l #	100
24) Methyl tert-Butyl Ether	5.812	73	144916	19.447	ug/l	99
25) Chloroform	7.977	83	75565	17.750	ug/l	99
26) Cyclohexane	8.271	56	64739	17.527	ug/l #	99
29) 1,1-Dichloropropene	8.382	75	56214	18.425	ug/l	98
30) 2-Butanone	7.494	43	198883	96.637	ug/l	99
31) 2,2-Dichloropropane	7.500	77	71663	19.459	ug/l	97
32) 1,1,1-Trichloroethane	8.177	97	63831	17.908	ug/l	98
33) Carbon Tetrachloride	8.371	117	54332	18.113	ug/l	99
34) Benzene	8.612	78	167939	17.375	ug/l	99
35) Methacrylonitrile	7.782	41	36192	17.450	ug/l	96
36) 1,2-Dichloroethane	8.676	62	58192	18.634	ug/l	99
37) Trichloroethene	9.353	130	44053	19.760	ug/l	93
38) Methylcyclohexane	9.606	83	67623	19.317	ug/l	99
39) 1,2-Dichloropropane	9.623	63	47099	19.414	ug/l	99
40) Dibromomethane	9.712	93	31445	19.062	ug/l	98
41) Bromodichloromethane	9.894	83	65145	19.565	ug/l	96
42) Vinyl Acetate	6.618	43	564048	84.264	ug/l	97

06/25/2025
 Supervised By :Mahesh
 adoda

06/26/2025

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
 Data File : VN087168.D
 Acq On : 25 Jun 2025 11:08
 Operator : JC\MD
 Sample : VSTDICV020
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 ICVVN062525

Manual Integrations
 APPROVED

Reviewed By :John
 Carlone

Quant Time: Jun 25 15:29:48 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:49:56 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) Ethyl Acetate	7.571	43	76982	20.721	ug/l	98
44) Isopropyl Acetate	8.694	43	113470	18.746	ug/l	100
45) 1,4-Dioxane	9.700	88	17828	435.392	ug/l	98
46) Methyl methacrylate	9.682	41	53380	18.970	ug/l	96
47) n-amyl Acetate	12.541	43	61525m	16.625	ug/l	
48) t-1,3-Dichloropropene	10.835	75	72502	19.532	ug/l	96
49) cis-1,3-Dichloropropene	10.312	75	76780	19.457	ug/l	97
50) 1,1,2-Trichloroethane	11.018	97	44707	19.079	ug/l	96
51) Ethyl methacrylate	10.882	69	66937	18.768	ug/l	96
52) 1,3-Dichloropropane	11.165	76	76546	19.027	ug/l	99
53) Dibromochloromethane	11.359	129	47380	19.262	ug/l	97
54) 1,2-Dibromoethane	11.470	107	45103	18.656	ug/l	97
55) 2-Chloroethyl vinyl ether	10.165	63	184630	90.312	ug/l	99
56) Bromoform	12.576	173	31131	18.410	ug/l	98
58) 4-Methyl-2-Pentanone	10.447	43	364138	97.791	ug/l	99
59) 2-Hexanone	11.206	43	209381	87.081	ug/l	97
61) Tetrachloroethene	11.106	164	33844	18.451	ug/l	95
62) Toluene	10.629	91	196885	18.821	ug/l	97
64) Chlorobenzene	11.894	112	126668	18.982	ug/l	99
65) 1,1,1,2-Tetrachloroethane	11.959	131	41822	18.969	ug/l	98
66) Ethyl Benzene	11.965	91	211991	18.514	ug/l	100
67) m/p-Xylenes	12.070	106	164422	37.473	ug/l	99
68) o-Xylene	12.394	106	80694	19.277	ug/l	97
69) Styrene	12.412	104	133644	18.596	ug/l	100
70) Isopropylbenzene	12.694	105	203011	19.473	ug/l	98
71) 1,1,2,2-Tetrachloroethane	12.935	83	72297	19.266	ug/l	97
72) 1,2,3-Trichloropropane	12.988	75	63592m	19.651	ug/l	
73) Bromobenzene	12.982	156	47294	18.701	ug/l	99
74) n-propylbenzene	13.035	91	247990	19.471	ug/l	99
75) 2-Chlorotoluene	13.123	91	150115	19.509	ug/l	98
76) 1,3,5-Trimethylbenzene	13.170	105	166512	19.619	ug/l	100
77) t-1,4-Dichloro-2-butene	12.735	75	27150	18.914	ug/l	98
78) 4-Chlorotoluene	13.223	91	155736	19.761	ug/l	100
79) tert-butylbenzene	13.435	119	139520	19.556	ug/l	99
80) 1,2,4-Trimethylbenzene	13.482	105	166385	19.523	ug/l	98
81) sec-Butylbenzene	13.611	105	209004	20.153	ug/l	100
82) p-Isopropyltoluene	13.729	119	172978	20.042	ug/l	99
83) 1,3-Dichlorobenzene	13.729	146	94477	19.400	ug/l	100
84) 1,4-Dichlorobenzene	13.811	146	96182	19.624	ug/l	100
85) n-Butylbenzene	14.053	91	162667	20.658	ug/l	99
86) Hexachloroethane	14.335	117	30688	18.784	ug/l	95
87) 1,2-Dichlorobenzene	14.106	146	89313	19.450	ug/l	99
88) 1,2-Dibromo-3-Chloropr...	14.717	75	16536	19.570	ug/l	95
89) 1,2,4-Trichlorobenzene	15.841	180	50315	19.367	ug/l	97
90) Hexachlorobutadiene	15.494	225	17346	22.501	ug/l	96
91) Naphthalene	15.635	128	193989	18.973	ug/l	99
92) 1,2,3-Trichlorobenzene	15.841	180	50315	19.367	ug/l	97

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

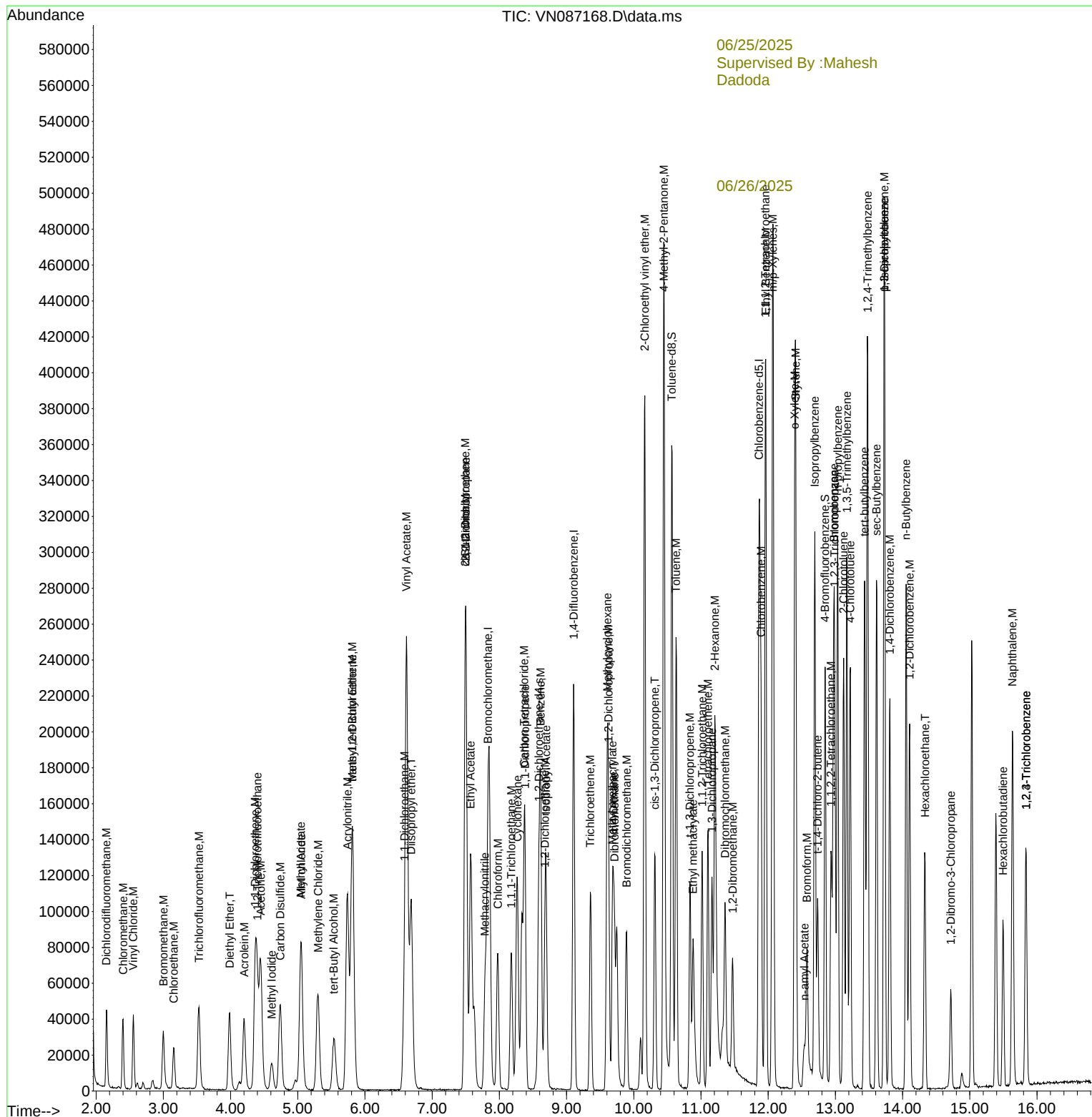
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
Data File : VN087168.D
Acq On : 25 Jun 2025 11:08
Operator : JC\MD
Sample : VSTDICV020
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
ICVVN062525

Manual Integrations APPROVED

Reviewed By :John
Carlone

Quant Time: Jun 25 15:29:48 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Wed Jun 25 10:49:56 2025
Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
 Data File : VN087168.D
 Acq On : 25 Jun 2025 11:08
 Operator : JC\MD
 Sample : VSTDICV020
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 ICSVN062525

Quant Time: Jun 25 15:29:48 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:49:56 2025
 Response via : Initial Calibration

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

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane	1.000	1.000	0.0	100	0.00
2 M	Dichlorodifluoromethane	1.806	1.708	5.4	104	0.00
3 M	Chloromethane	1.844	1.735	5.9	111	0.00
4 M	Vinyl Chloride	2.005	1.744	13.0	97	0.00
5 M	Bromomethane	1.064	1.090	-2.4	113	0.00
6 M	Chloroethane	1.075	1.028	4.4	107	0.00
7 M	Trichlorofluoromethane	2.459	2.313	5.9	100	0.00
8 T	Diethyl Ether	1.208	1.174	2.8	109	0.00
9	1,1,2-Trichlorotrifluoroeth	1.823	1.749	4.1	104	0.00
10 M	1,1-Dichloroethene	1.817	1.739	4.3	104	0.00
11	Methyl Iodide	1.628	1.264	22.4	98	0.00
12	Methyl Acetate	2.851	2.818	1.2	108	0.00
13 M	Acrolein	0.438	0.467	-6.6	130	0.00
14 M	Acrylonitrile	1.330	1.312	1.4	107	0.00
15 M	Acetone	0.388	0.381	1.8	104	0.00
16 M	Carbon Disulfide	5.313	5.001	5.9	103	0.00
17	Allyl chloride	2.997	2.752	8.2	100	0.01
18 M	Methylene Chloride	2.105	1.971	6.4	101	0.00
19 M	trans-1,2-Dichloroethene	1.987	1.889	4.9	104	0.00
20 T	Diisopropyl ether	6.359	6.106	4.0	101	0.00
21 M	1,1-Dichloroethane	3.801	3.306	13.0	92	0.00
22 M	cis-1,2-Dichloroethene	2.313	2.183	5.6	104	0.00
23 M	tert-Butyl Alcohol	0.500	0.516	-3.2	114	0.00
24 M	Methyl tert-Butyl Ether	6.374	6.197	2.8	108	0.00
25 M	Chloroform	3.641	3.232	11.2	97	0.00
26	Cyclohexane	3.159	2.769	12.3	98	0.00
27 s	1,2-Dichloroethane-d4	2.260	2.240	0.9	97	0.00
28 I	1,4-Difluorobenzene	1.000	1.000	0.0	100	0.00
29	1,1-Dichloropropene	0.468	0.431	7.9	107	0.00
30 M	2-Butanone	0.315	0.305	3.2	106	0.00
31	2,2-Dichloropropane	0.564	0.549	2.7	106	0.00
32 M	1,1,1-Trichloroethane	0.546	0.489	10.4	98	0.00
33 M	Carbon Tetrachloride	0.460	0.416	9.6	105	0.00
34 M	Benzene	1.481	1.287	13.1	98	0.00
35	Methacrylonitrile	0.318	0.277	12.9	97	0.00
36 M	1,2-Dichloroethane	0.479	0.446	6.9	101	0.00
37 M	Trichloroethene	0.342	0.338	1.2	114	0.00
38	Methylcyclohexane	0.537	0.518	3.5	110	0.00
39 M	1,2-Dichloropropane	0.372	0.361	3.0	104	0.00
40	Dibromomethane	0.253	0.241	4.7	103	0.00
41 M	Bromodichloromethane	0.510	0.499	2.2	103	0.00
42 M	Vinyl Acetate	1.026	0.864	15.8	91	0.00
43	Ethyl Acetate	0.569	0.590	-3.7	105	0.00
44	Isopropyl Acetate	0.928	0.870	6.3	104	0.00
45 T	1,4-Dioxane	0.006	0.007	-16.7	120	0.00
46	Methyl methacrylate	0.431	0.409	5.1	103	0.00
47	n-amyl Acetate	0.567	0.471	16.9	93	0.01
48 M	t-1,3-Dichloropropene	0.569	0.556	2.3	108	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
 Data File : VN087168.D
 Acq On : 25 Jun 2025 11:08
 Operator : JC\MD
 Sample : VSTDICV020
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 ICVVN062525

Quant Time: Jun 25 15:29:48 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:49:56 2025
 Response via : Initial Calibration

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

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
49 T	cis-1,3-Dichloropropene	0.605	0.588	2.8	103	0.00
50 M	1,1,2-Trichloroethane	0.359	0.343	4.5	103	0.00
51	Ethyl methacrylate	0.547	0.513	6.2	109	0.00
52	1,3-Dichloropropane	0.617	0.587	4.9	102	0.00
53 M	Dibromochloromethane	0.377	0.363	3.7	106	0.00
54 M	1,2-Dibromoethane	0.371	0.346	6.7	100	0.00
55 M	2-Chloroethyl vinyl ether	0.313	0.283	9.6	97	0.00
56 M	Bromoform	0.259	0.239	7.7	102	0.00
57 I	Chlorobenzene-d5	1.000	1.000	0.0	100	0.00
58 M	4-Methyl-2-Pentanone	0.603	0.590	2.2	107	0.00
59 M	2-Hexanone	0.389	0.339	12.9	105	0.00
60 S	4-Bromofluorobenzene	0.463	0.473	-2.2	105	0.00
61 M	Tetrachloroethene	0.297	0.274	7.7	102	0.00
62 M	Toluene	1.694	1.594	5.9	103	0.00
63 S	Toluene-d8	1.347	1.369	-1.6	98	0.00
64 M	Chlorobenzene	1.081	1.026	5.1	104	0.00
65	1,1,1,2-Tetrachloroethane	0.357	0.339	5.0	104	0.00
66 M	Ethyl Benzene	1.855	1.717	7.4	104	0.00
67 M	m/p-Xylenes	0.711	0.666	6.3	104	0.00
68 M	o-Xylene	0.678	0.653	3.7	108	0.00
69 M	Styrene	1.164	1.082	7.0	104	0.00
70	Isopropylbenzene	1.689	1.644	2.7	111	0.00
71 M	1,1,2,2-Tetrachloroethane	0.608	0.585	3.8	103	0.00
72	1,2,3-Trichloropropane	0.524	0.515	1.7	110	0.00
73	Bromobenzene	0.410	0.383	6.6	106	0.00
74	n-propylbenzene	2.063	2.008	2.7	111	0.00
75	2-Chlorotoluene	1.246	1.216	2.4	112	0.00
76	1,3,5-Trimethylbenzene	1.375	1.348	2.0	114	0.00
77	t-1,4-Dichloro-2-butene	0.232	0.220	5.2	112	0.00
78	4-Chlorotoluene	1.276	1.261	1.2	114	0.00
79	tert-butylbenzene	1.156	1.130	2.2	114	0.00
80	1,2,4-Trimethylbenzene	1.380	1.347	2.4	114	0.00
81	sec-Butylbenzene	1.680	1.693	-0.8	115	0.00
82	p-Isopropyltoluene	1.398	1.401	-0.2	110	0.00
83 M	1,3-Dichlorobenzene	0.789	0.765	3.0	106	0.00
84 M	1,4-Dichlorobenzene	0.794	0.779	1.9	109	0.00
85	n-Butylbenzene	1.275	1.317	-3.3	114	0.00
86 T	Hexachloroethane	0.265	0.249	6.0	109	0.00
87 M	1,2-Dichlorobenzene	0.744	0.723	2.8	108	0.00
88	1,2-Dibromo-3-Chloropropane	0.137	0.134	2.2	109	0.00
89	1,2,4-Trichlorobenzene	0.421	0.407	3.3	107	0.00
90	Hexachlorobutadiene	0.125	0.140	-12.0	125	0.00
91 M	Naphthalene	1.656	1.571	5.1	109	0.00
92	1,2,3-Trichlorobenzene	0.421	0.407	3.3	107	0.00

(#) = Out of Range

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

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
 Data File : VN087168.D
 Acq On : 25 Jun 2025 11:08
 Operator : JC\MD
 Sample : VSTDICV020
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 ICSVN062525

Quant Time: Jun 25 15:29:48 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:49:56 2025
 Response via : Initial Calibration

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

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	Bromochloromethane	30.000	30.000	0.0	100	0.00
2 M	Dichlorodifluoromethane	20.000	18.915	5.4	104	0.00
3 M	Chloromethane	20.000	18.816	5.9	111	0.00
4 M	Vinyl Chloride	20.000	17.404	13.0	97	0.00
5 M	Bromomethane	20.000	20.494	-2.5	113	0.00
6 M	Chloroethane	20.000	19.122	4.4	107	0.00
7 M	Trichlorofluoromethane	20.000	18.810	6.0	100	0.00
8 T	Diethyl Ether	20.000	19.443	2.8	109	0.00
9	1,1,2-Trichlorotrifluoroeth	20.000	19.184	4.1	104	0.00
10 M	1,1-Dichloroethene	20.000	19.141	4.3	104	0.00
11	Methyl Iodide	20.000	15.530	22.4	98	0.00
12	Methyl Acetate	20.000	19.769	1.2	108	0.00
13 M	Acrolein	100.000	106.612	-6.6	130	0.00
14 M	Acrylonitrile	100.000	98.671	1.3	107	0.00
15 M	Acetone	100.000	98.119	1.9	104	0.00
16 M	Carbon Disulfide	20.000	18.825	5.9	103	0.00
17	Allyl chloride	20.000	18.360	8.2	100	0.01
18 M	Methylene Chloride	20.000	18.727	6.4	101	0.00
19 M	trans-1,2-Dichloroethene	20.000	19.006	5.0	104	0.00
20 T	Diisopropyl ether	20.000	19.202	4.0	101	0.00
21 M	1,1-Dichloroethane	20.000	17.398	13.0	92	0.00
22 M	cis-1,2-Dichloroethene	20.000	18.875	5.6	104	0.00
23 M	tert-Butyl Alcohol	100.000	103.292	-3.3	114	0.00
24 M	Methyl tert-Butyl Ether	20.000	19.447	2.8	108	0.00
25 M	Chloroform	20.000	17.750	11.3	97	0.00
26	Cyclohexane	20.000	17.527	12.4	98	0.00
27 s	1,2-Dichloroethane-d4	30.000	29.730	0.9	97	0.00
28 I	1,4-Difluorobenzene	30.000	30.000	0.0	100	0.00
29	1,1-Dichloropropene	20.000	18.425	7.9	107	0.00
30 M	2-Butanone	100.000	96.637	3.4	106	0.00
31	2,2-Dichloropropane	20.000	19.459	2.7	106	0.00
32 M	1,1,1-Trichloroethane	20.000	17.908	10.5	98	0.00
33 M	Carbon Tetrachloride	20.000	18.113	9.4	105	0.00
34 M	Benzene	20.000	17.375	13.1	98	0.00
35	Methacrylonitrile	20.000	17.450	12.8	97	0.00
36 M	1,2-Dichloroethane	20.000	18.634	6.8	101	0.00
37 M	Trichloroethene	20.000	19.760	1.2	114	0.00
38	Methylcyclohexane	20.000	19.317	3.4	110	0.00
39 M	1,2-Dichloropropane	20.000	19.414	2.9	104	0.00
40	Dibromomethane	20.000	19.062	4.7	103	0.00
41 M	Bromodichloromethane	20.000	19.565	2.2	103	0.00
42 M	Vinyl Acetate	100.000	84.264	15.7	91	0.00
43	Ethyl Acetate	20.000	20.721	-3.6	105	0.00
44	Isopropyl Acetate	20.000	18.746	6.3	104	0.00
45 T	1,4-Dioxane	400.000	435.392	-8.8	120	0.00
46	Methyl methacrylate	20.000	18.970	5.2	103	0.00
47	n-amyl Acetate	20.000	16.625	16.9	93	0.01
48 M	t-1,3-Dichloropropene	20.000	19.532	2.3	108	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
 Data File : VN087168.D
 Acq On : 25 Jun 2025 11:08
 Operator : JC\MD
 Sample : VSTDICV020
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 ICSVN062525

Quant Time: Jun 25 15:29:48 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:49:56 2025
 Response via : Initial Calibration

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

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
49 T	cis-1,3-Dichloropropene	20.000	19.457	2.7	103	0.00
50 M	1,1,2-Trichloroethane	20.000	19.079	4.6	103	0.00
51	Ethyl methacrylate	20.000	18.768	6.2	109	0.00
52	1,3-Dichloropropane	20.000	19.027	4.9	102	0.00
53 M	Dibromochloromethane	20.000	19.262	3.7	106	0.00
54 M	1,2-Dibromoethane	20.000	18.656	6.7	100	0.00
55 M	2-Chloroethyl vinyl ether	100.000	90.312	9.7	97	0.00
56 M	Bromoform	20.000	18.410	7.9	102	0.00
57 I	Chlorobenzene-d5	30.000	30.000	0.0	100	0.00
58 M	4-Methyl-2-Pentanone	100.000	97.791	2.2	107	0.00
59 M	2-Hexanone	100.000	87.081	12.9	105	0.00
60 S	4-Bromofluorobenzene	30.000	30.636	-2.1	105	0.00
61 M	Tetrachloroethene	20.000	18.451	7.7	102	0.00
62 M	Toluene	20.000	18.821	5.9	103	0.00
63 S	Toluene-d8	30.000	30.485	-1.6	98	0.00
64 M	Chlorobenzene	20.000	18.982	5.1	104	0.00
65	1,1,1,2-Tetrachloroethane	20.000	18.969	5.2	104	0.00
66 M	Ethyl Benzene	20.000	18.514	7.4	104	0.00
67 M	m/p-Xylenes	40.000	37.473	6.3	104	0.00
68 M	o-Xylene	20.000	19.277	3.6	108	0.00
69 M	Styrene	20.000	18.596	7.0	104	0.00
70	Isopropylbenzene	20.000	19.473	2.6	111	0.00
71 M	1,1,2,2-Tetrachloroethane	20.000	19.266	3.7	103	0.00
72	1,2,3-Trichloropropane	20.000	19.651	1.7	110	0.00
73	Bromobenzene	20.000	18.701	6.5	106	0.00
74	n-propylbenzene	20.000	19.471	2.6	111	0.00
75	2-Chlorotoluene	20.000	19.509	2.5	112	0.00
76	1,3,5-Trimethylbenzene	20.000	19.619	1.9	114	0.00
77	t-1,4-Dichloro-2-butene	20.000	18.914	5.4	112	0.00
78	4-Chlorotoluene	20.000	19.761	1.2	114	0.00
79	tert-butylbenzene	20.000	19.556	2.2	114	0.00
80	1,2,4-Trimethylbenzene	20.000	19.523	2.4	114	0.00
81	sec-Butylbenzene	20.000	20.153	-0.8	115	0.00
82	p-Isopropyltoluene	20.000	20.042	-0.2	110	0.00
83 M	1,3-Dichlorobenzene	20.000	19.400	3.0	106	0.00
84 M	1,4-Dichlorobenzene	20.000	19.624	1.9	109	0.00
85	n-Butylbenzene	20.000	20.658	-3.3	114	0.00
86 T	Hexachloroethane	20.000	18.784	6.1	109	0.00
87 M	1,2-Dichlorobenzene	20.000	19.450	2.8	108	0.00
88	1,2-Dibromo-3-Chloropropane	20.000	19.570	2.1	109	0.00
89	1,2,4-Trichlorobenzene	20.000	19.367	3.2	107	0.00
90	Hexachlorobutadiene	20.000	22.501	-12.5	125	0.00
91 M	Naphthalene	20.000	18.973	5.1	109	0.00
92	1,2,3-Trichlorobenzene	20.000	19.367	3.2	107	0.00

(#) = Out of Range

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



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>ENVI60</u>
Lab Code:	<u>ACE</u>	SDG No.:	<u>Q2594</u>
Instrument ID:	<u>MSVOA_N</u>	Calibration Date/Time:	<u>07/18/2025 09:15</u>
Lab File ID:	<u>VN087353.D</u>	Init. Calib. Date(s):	<u>06/25/2025 06/25/2025</u>
Heated Purge: (Y/N)	<u>N</u>	Init. Calib. Time(s):	<u>08:59 10:24</u>
GC Column:	<u>RXI-624</u>	ID:	<u>0.25</u> (mm)

COMPOUND	RRF	RRF020	MIN RRF	%D	MAX%D
Dichlorodifluoromethane	1.806	1.438		-20.38	
Chloromethane	1.845	1.699		-7.91	
Vinyl Chloride	2.005	1.785	0.1	-10.97	
Bromomethane	1.064	1.047	0.1	-1.6	
Chloroethane	1.075	1.179		9.67	
Trichlorofluoromethane	2.459	2.669		8.54	
1,1,2-Trichlorotrifluoroethane	1.823	1.444		-20.79	
1,1-Dichloroethene	1.817	1.427	0.1	-21.46	
Acetone	0.388	0.348		-10.31	
Carbon Disulfide	5.313	3.940		-25.84	
Methyl tert-Butyl Ether	6.374	6.346		-0.44	
Methyl Acetate	2.851	3.019		5.89	
Methylene Chloride	2.105	2.029		-3.61	
trans-1,2-Dichloroethene	1.987	1.674		-15.75	
1,1-Dichloroethane	3.801	3.616	0.2	-4.87	
Cyclohexane	0.567	0.489		-13.76	
2-Butanone	0.315	0.330		4.76	
Carbon Tetrachloride	0.460	0.485	0.1	5.43	
cis-1,2-Dichloroethene	2.313	2.136		-7.65	
Chloroform	3.641	3.679	0.2	1.04	
1,1,1-Trichloroethane	0.546	0.575	0.1	5.31	
Methylcyclohexane	0.537	0.487		-9.31	
Benzene	1.481	1.442	0.5	-2.63	
1,2-Dichloroethane	0.479	0.539	0.1	12.53	
Trichloroethene	0.342	0.321	0.3	-6.14	
1,2-Dichloropropane	0.372	0.379		1.88	
Bromodichloromethane	0.510	0.558	0.2	9.41	
4-Methyl-2-Pentanone	0.603	0.712		18.08	
Toluene	1.694	1.691	0.4	-0.18	
t-1,3-Dichloropropene	0.569	0.589	0.1	3.52	
cis-1,3-Dichloropropene	0.605	0.615	0.2	1.65	
1,1,2-Trichloroethane	0.359	0.362	0.1	0.84	
2-Hexanone	0.389	0.490		25.96	
Dibromochloromethane	0.377	0.416	0.1	10.35	
1,2-Dibromoethane	0.371	0.367		-1.08	
Tetrachloroethene	0.297	0.308	0.2	3.7	
Chlorobenzene	1.081	1.094	0.5	1.2	
Ethyl Benzene	1.855	1.825	0.1	-1.62	

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>ENVI60</u>
Lab Code:	<u>ACE</u>	SDG No.:	<u>Q2594</u>
Instrument ID:	<u>MSVOA_N</u>	Calibration Date/Time:	<u>07/18/2025 09:15</u>
Lab File ID:	<u>VN087353.D</u>	Init. Calib. Date(s):	<u>06/25/2025 06/25/2025</u>
Heated Purge: (Y/N)	<u>N</u>	Init. Calib. Time(s):	<u>08:59 10:24</u>
GC Column:	<u>RXI-624</u>	ID:	<u>0.25</u> (mm)

COMPOUND	RRF	RRF020	MIN RRF	%D	MAX%D
m/p-Xylenes	0.711	0.711	0.3	0	
o-Xylene	0.678	0.690	0.3	1.77	
Styrene	1.164	1.161	0.3	-0.26	
Bromoform	0.259	0.273	0.1	5.41	
Isopropylbenzene	1.689	1.760		4.2	
1,1,2,2-Tetrachloroethane	0.608	0.622	0.3	2.3	
1,3,5-Trimethylbenzene	1.375	1.466		6.62	
1,3-Dichlorobenzene	0.789	0.844	0.2	6.97	
1,4-Dichlorobenzene	0.794	0.801	0.2	0.88	
1,2-Dichlorobenzene	0.744	0.797	0.2	7.12	
1,2-Dibromo-3-Chloropropane	0.137	0.136		-0.73	
1,2,4-Trichlorobenzene	0.421	0.465	0.2	10.45	
1,2,3-Trichlorobenzene	0.421	0.465		10.45	
1,2-Dichloroethane-d4	2.260	2.451	0.01	8.45	
Toluene-d8	1.347	1.348	0.01	0.07	
4-Bromofluorobenzene	0.463	0.486	0.2	4.97	

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

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN071825\
 Data File : VN087353.D
 Acq On : 18 Jul 2025 09:15
 Operator : JC\MD
 Sample : VSTDCCC020
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDCCC020

Manual Integrations
 APPROVED

Reviewed By : John Carlone 07/21/2025
 Supervised By : Mahesh Dadoda 07/21/2025

Quant Time: Jul 18 23:14:38 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:49:56 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Bromochloromethane	7.800	128	46358	30.000	ug/l	-0.02
28) 1,4-Difluorobenzene	9.083	114	246415	30.000	ug/l	-0.02
57) Chlorobenzene-d5	11.847	117	220107	30.000	ug/l	-0.02
System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	8.565	65	113605	32.525	ug/l	-0.02
Spiked Amount 30.000	Range 91 - 110		Recovery = 108.400%			
60) 4-Bromofluorobenzene	12.829	95	107036	31.514	ug/l	-0.02
Spiked Amount 30.000	Range 63 - 112		Recovery = 105.033%			
63) Toluene-d8	10.547	98	296684	30.020	ug/l	-0.02
Spiked Amount 30.000	Range 91 - 112		Recovery = 100.067%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.142	85	44437	15.924	ug/l	99
3) Chloromethane	2.383	50	52502	18.420	ug/l	97
4) Vinyl Chloride	2.542	62	55153	17.804	ug/l	99
5) Bromomethane	2.977	94	32358	19.682	ug/l	88
6) Chloroethane	3.142	64	36445	21.932	ug/l	97
7) Trichlorofluoromethane	3.512	101	82490	21.710	ug/l	98
8) Diethyl Ether	3.965	74	34722m	18.599	ug/l	
9) 1,1,2-Trichlorotrifluo...	4.371	101	44626m	15.841	ug/l	
10) 1,1-Dichloroethene	4.342	96	44111	15.708	ug/l	83
11) Methyl Iodide	4.583	142	45406	18.048	ug/l	81
12) Methyl Acetate	5.018	43	93314	21.184	ug/l	93
13) Acrolein	4.177	56	47724	70.510	ug/l	99
14) Acrylonitrile	5.706	53	191174	93.047	ug/l	98
15) Acetone	4.424	58	53705	89.609	ug/l	83
16) Carbon Disulfide	4.706	76	121756	14.829	ug/l	100
17) Allyl chloride	5.018	41	85793	18.523	ug/l	94
18) Methylene Chloride	5.271	84	62718	19.279	ug/l	96
19) trans-1,2-Dichloroethene	5.771	96	51726	16.843	ug/l	96
20) Diisopropyl ether	6.659	45	205164	20.878	ug/l	97
21) 1,1-Dichloroethane	6.553	63	111760	19.029	ug/l	98
22) cis-1,2-Dichloroethene	7.471	96	66017	18.471	ug/l	99
23) tert-Butyl Alcohol	5.524	59	69826	90.368	ug/l #	100
24) Methyl tert-Butyl Ether	5.783	73	196135	19.914	ug/l	98
25) Chloroform	7.953	83	113716	20.210	ug/l	99
26) Cyclohexane	8.241	56	80329	16.454	ug/l #	97
29) 1,1-Dichloropropene	8.353	75	73342	19.096	ug/l	98
30) 2-Butanone	7.471	43	271343	104.734	ug/l	96
31) 2,2-Dichloropropane	7.477	77	92394	19.929	ug/l	98
32) 1,1,1-Trichloroethane	8.153	97	94489	21.058	ug/l	99
33) Carbon Tetrachloride	8.341	117	79595	21.079	ug/l	97
34) Benzene	8.588	78	236944	19.473	ug/l	96
35) Methacrylonitrile	7.765	41	56967	21.818	ug/l	94
36) 1,2-Dichloroethane	8.653	62	88492	22.510	ug/l	100
37) Trichloroethene	9.335	130	52709	18.781	ug/l	100
38) Methylcyclohexane	9.583	83	79927	18.137	ug/l	97
39) 1,2-Dichloropropane	9.600	63	62218	20.373	ug/l	97
40) Dibromomethane	9.688	93	44019	21.197	ug/l	96
41) Bromodichloromethane	9.871	83	91595	21.852	ug/l #	98
42) Vinyl Acetate	6.595	43	836803	99.305	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN071825\
 Data File : VN087353.D
 Acq On : 18 Jul 2025 09:15
 Operator : JC\MD
 Sample : VSTDCCC020
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :

MSVOA_N

ClientSampleId :

VSTDCCC020

Manual Integrations

APPROVED

Reviewed By : John Carlone 07/21/2025

Supervised By : Mahesh Dadoda 07/21/2025

Quant Time: Jul 18 23:14:38 2025

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M

Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS

QLast Update : Wed Jun 25 10:49:56 2025

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) Ethyl Acetate	7.547	43	104626	22.371	ug/l	94
44) Isopropyl Acetate	8.677	43	164459	21.582	ug/l	98
45) 1,4-Dioxane	9.677	88	22450	435.529	ug/l	98
46) Methyl methacrylate	9.665	41	76833	21.690	ug/l	90
47) n-amyl Acetate	12.518	43	110510m	23.721	ug/l	
48) t-1,3-Dichloropropene	10.818	75	96762	20.708	ug/l	100
49) cis-1,3-Dichloropropene	10.294	75	100992	20.330	ug/l	93
50) 1,1,2-Trichloroethane	10.994	97	59421	20.144	ug/l	96
51) Ethyl methacrylate	10.853	69	95191	21.202	ug/l	95
52) 1,3-Dichloropropane	11.141	76	106028	20.936	ug/l	99
53) Dibromochloromethane	11.341	129	68283	22.052	ug/l	97
54) 1,2-Dibromoethane	11.447	107	60238	19.793	ug/l	98
55) 2-Chloroethyl vinyl ether	10.141	63	263740	102.481	ug/l	99
56) Bromoform	12.559	173	44831	21.061	ug/l #	99
58) 4-Methyl-2-Pentanone	10.430	43	522358	118.048	ug/l	97
59) 2-Hexanone	11.177	43	359424	125.791	ug/l	91
61) Tetrachloroethene	11.082	164	45226	20.748	ug/l	98
62) Toluene	10.612	91	248127	19.960	ug/l	99
64) Chlorobenzene	11.871	112	160479	20.238	ug/l	96
65) 1,1,1,2-Tetrachloroethane	11.941	131	58313	22.256	ug/l	96
66) Ethyl Benzene	11.941	91	267868	19.686	ug/l	98
67) m/p-Xylenes	12.053	106	208770	40.039	ug/l	100
68) o-Xylene	12.376	106	101235	20.351	ug/l	100
69) Styrene	12.388	104	170293	19.940	ug/l	98
70) Isopropylbenzene	12.676	105	258198	20.841	ug/l	98
71) 1,1,2,2-Tetrachloroethane	12.918	83	91263	20.465	ug/l	97
72) 1,2,3-Trichloropropane	12.971	75	88323m	22.968	ug/l	
73) Bromobenzene	12.959	156	65368	21.751	ug/l	92
74) n-propylbenzene	13.018	91	310937	20.544	ug/l	98
75) 2-Chlorotoluene	13.106	91	187392	20.493	ug/l	98
76) 1,3,5-Trimethylbenzene	13.153	105	215176	21.335	ug/l	99
77) t-1,4-Dichloro-2-butene	12.718	75	32334	18.956	ug/l	94
78) 4-Chlorotoluene	13.200	91	198075	21.150	ug/l	99
79) tert-butylbenzene	13.418	119	182171	21.488	ug/l	97
80) 1,2,4-Trimethylbenzene	13.459	105	217511	21.477	ug/l	96
81) sec-Butylbenzene	13.594	105	264335	21.448	ug/l	98
82) p-Isopropyltoluene	13.706	119	227385	22.171	ug/l	97
83) 1,3-Dichlorobenzene	13.712	146	123794	21.391	ug/l	99
84) 1,4-Dichlorobenzene	13.794	146	117522	20.178	ug/l	93
85) n-Butylbenzene	14.035	91	209441	22.382	ug/l	99
86) Hexachloroethane	14.312	117	42865	22.079	ug/l	93
87) 1,2-Dichlorobenzene	14.082	146	117001	21.442	ug/l	100
88) 1,2-Dibromo-3-Chloropr...	14.694	75	19921	19.839	ug/l	96
89) 1,2,4-Trichlorobenzene	15.817	180	68248	22.107	ug/l	99
90) Hexachlorobutadiene	15.470	225	28055	30.624	ug/l	96
91) Naphthalene	15.617	128	248488	20.451	ug/l	99
92) 1,2,3-Trichlorobenzene	15.817	180	68248	22.107	ug/l	99

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

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Acq On : 18 Jul 2025 09:15
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Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 2 Sample Multiplier: 1

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MSVOA_N

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VSTDCCC020

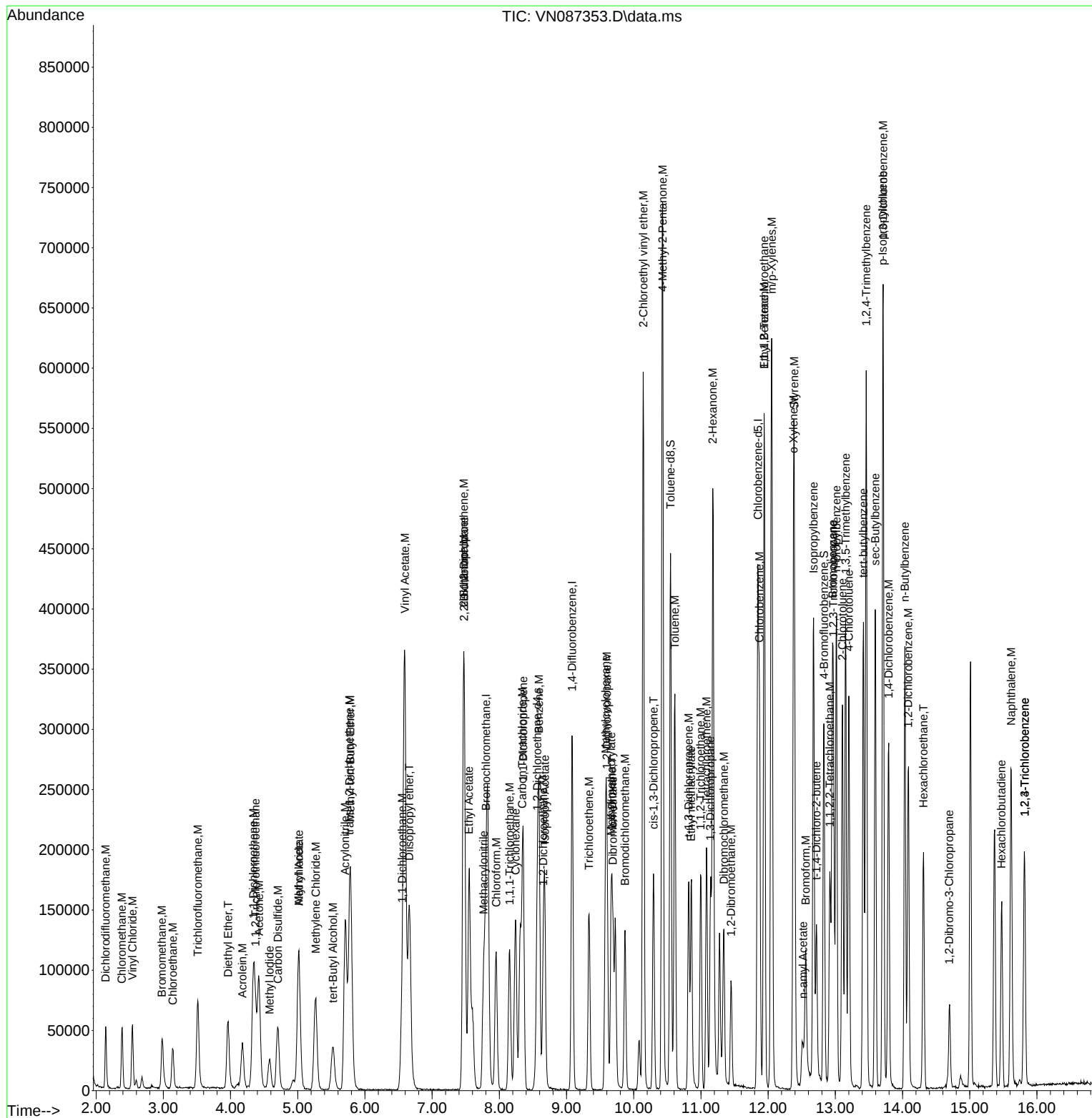
Manual Integrations

APPROVED

Reviewed By :John Carlone 07/21/2025

Supervised By :Mahesh Dadoda 07/21/2025

Quant Time: Jul 18 23:14:38 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Wed Jun 25 10:49:56 2025
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 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
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 Response via : Initial Calibration

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

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane	1.000	1.000	0.0	132	-0.02
2 M	Dichlorodifluoromethane	1.806	1.438	20.4	115	-0.01
3 M	Chloromethane	1.844	1.699	7.9	144	-0.01
4 M	Vinyl Chloride	2.005	1.785	11.0	131	-0.01
5 M	Bromomethane	1.064	1.047	1.6	144	-0.02
6 M	Chloroethane	1.075	1.179	-9.7	162#	-0.01
7 M	Trichlorofluoromethane	2.459	2.669	-8.5	152#	-0.02
8 T	Diethyl Ether	1.208	1.123	7.0	138	-0.02
9	1,1,2-Trichlorotrifluoroeth	1.823	1.444	20.8	114	-0.03
10 M	1,1-Dichloroethene	1.817	1.427	21.5	113	-0.03
11	Methyl Iodide	1.628	1.469	9.8	151#	-0.03
12	Methyl Acetate	2.851	3.019	-5.9	153#	-0.03
13 M	Acrolein	0.438	0.309	29.5#	114	-0.03
14 M	Acrylonitrile	1.330	1.237	7.0	133	-0.03
15 M	Acetone	0.388	0.348	10.3	125	-0.03
16 M	Carbon Disulfide	5.313	3.940	25.8#	108	-0.03
17	Allyl chloride	2.997	2.776	7.4	133	-0.02
18 M	Methylene Chloride	2.105	2.029	3.6	138	-0.03
19 M	trans-1,2-Dichloroethene	1.987	1.674	15.8	122	-0.04
20 T	Diisopropyl ether	6.359	6.638	-4.4	144	-0.03
21 M	1,1-Dichloroethane	3.801	3.616	4.9	134	-0.03
22 M	cis-1,2-Dichloroethene	2.313	2.136	7.7	135	-0.02
23 M	tert-Butyl Alcohol	0.500	0.452	9.6	132	-0.01
24 M	Methyl tert-Butyl Ether	6.374	6.346	0.4	147	-0.03
25 M	Chloroform	3.641	3.679	-1.0	146	-0.02
26	Cyclohexane	3.159	2.599	17.7	122	-0.02
27 s	1,2-Dichloroethane-d4	2.260	2.451	-8.5	141	-0.02
28 I	1,4-Difluorobenzene	1.000	1.000	0.0	126	-0.02
29	1,1-Dichloropropene	0.468	0.446	4.7	140	-0.02
30 M	2-Butanone	0.315	0.330	-4.8	145	-0.02
31	2,2-Dichloropropane	0.564	0.562	0.4	137	-0.02
32 M	1,1,1-Trichloroethane	0.546	0.575	-5.3	145	-0.02
33 M	Carbon Tetrachloride	0.460	0.485	-5.4	153#	-0.03
34 M	Benzene	1.481	1.442	2.6	139	-0.02
35	Methacrylonitrile	0.318	0.347	-9.1	153#	-0.02
36 M	1,2-Dichloroethane	0.479	0.539	-12.5	153#	-0.02
37 M	Trichloroethene	0.342	0.321	6.1	137	-0.02
38	Methylcyclohexane	0.537	0.487	9.3	130	-0.02
39 M	1,2-Dichloropropane	0.372	0.379	-1.9	137	-0.02
40	Dibromomethane	0.253	0.268	-5.9	143	-0.02
41 M	Bromodichloromethane	0.510	0.558	-9.4	145	-0.02
42 M	Vinyl Acetate	1.026	1.019	0.7	135	-0.02
43	Ethyl Acetate	0.569	0.637	-12.0	143	-0.02
44	Isopropyl Acetate	0.928	1.001	-7.9	151#	-0.02
45 T	1,4-Dioxane	0.006	0.007	-16.7	151#	-0.02
46	Methyl methacrylate	0.431	0.468	-8.6	148	-0.02
47	n-amyl Acetate	0.567	0.673	-18.7	167#	-0.01
48 M	t-1,3-Dichloropropene	0.569	0.589	-3.5	145	-0.02

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 Sample : VSTDCCC020
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_N
 LabSampleId :
 VSTDCCC020

Quant Time: Jul 18 23:14:38 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:49:56 2025
 Response via : Initial Calibration

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

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
49 T	cis-1,3-Dichloropropene	0.605	0.615	-1.7	136	-0.02
50 M	1,1,2-Trichloroethane	0.359	0.362	-0.8	136	-0.02
51	Ethyl methacrylate	0.547	0.579	-5.9	155#	-0.03
52	1,3-Dichloropropane	0.617	0.645	-4.5	142	-0.02
53 M	Dibromochloromethane	0.377	0.416	-10.3	152#	-0.02
54 M	1,2-Dibromoethane	0.371	0.367	1.1	134	-0.02
55 M	2-Chloroethyl vinyl ether	0.313	0.321	-2.6	139	-0.02
56 M	Bromoform	0.259	0.273	-5.4	147	-0.02
57 I	Chlorobenzene-d5	1.000	1.000	0.0	119	-0.02
58 M	4-Methyl-2-Pentanone	0.603	0.712	-18.1	154#	-0.02
59 M	2-Hexanone	0.389	0.490	-26.0#	180#	-0.03
60 S	4-Bromofluorobenzene	0.463	0.486	-5.0	129	-0.02
61 M	Tetrachloroethene	0.297	0.308	-3.7	136	-0.02
62 M	Toluene	1.694	1.691	0.2	129	-0.02
63 S	Toluene-d8	1.347	1.348	-0.1	114	-0.02
64 M	Chlorobenzene	1.081	1.094	-1.2	132	-0.02
65	1,1,1,2-Tetrachloroethane	0.357	0.397	-11.2	145	-0.02
66 M	Ethyl Benzene	1.855	1.825	1.6	131	-0.02
67 M	m/p-Xylenes	0.711	0.711	0.0	132	-0.02
68 M	o-Xylene	0.678	0.690	-1.8	135	-0.02
69 M	Styrene	1.164	1.161	0.3	132	-0.02
70	Isopropylbenzene	1.689	1.760	-4.2	141	-0.02
71 M	1,1,2,2-Tetrachloroethane	0.608	0.622	-2.3	130	-0.02
72	1,2,3-Trichloropropane	0.524	0.602	-14.9	153#	-0.02
73	Bromobenzene	0.410	0.445	-8.5	146	-0.02
74	n-propylbenzene	2.063	2.119	-2.7	139	-0.02
75	2-Chlorotoluene	1.246	1.277	-2.5	140	-0.02
76	1,3,5-Trimethylbenzene	1.375	1.466	-6.6	147	-0.02
77	t-1,4-Dichloro-2-butene	0.232	0.220	5.2	133	-0.02
78	4-Chlorotoluene	1.276	1.350	-5.8	144	-0.02
79	tert-butylbenzene	1.156	1.241	-7.4	149	-0.02
80	1,2,4-Trimethylbenzene	1.380	1.482	-7.4	149	-0.02
81	sec-Butylbenzene	1.680	1.801	-7.2	145	-0.02
82	p-Isopropyltoluene	1.398	1.550	-10.9	145	-0.02
83 M	1,3-Dichlorobenzene	0.789	0.844	-7.0	140	-0.02
84 M	1,4-Dichlorobenzene	0.794	0.801	-0.9	133	-0.02
85	n-Butylbenzene	1.275	1.427	-11.9	147	-0.02
86 T	Hexachloroethane	0.265	0.292	-10.2	152#	-0.02
87 M	1,2-Dichlorobenzene	0.744	0.797	-7.1	141	-0.02
88	1,2-Dibromo-3-Chloropropane	0.137	0.136	0.7	132	-0.02
89	1,2,4-Trichlorobenzene	0.421	0.465	-10.5	145	-0.02
90	Hexachlorobutadiene	0.125	0.191	-52.8#	202#	-0.02
91 M	Naphthalene	1.656	1.693	-2.2	139	-0.02
92	1,2,3-Trichlorobenzene	0.421	0.465	-10.5	145	-0.02

(#) = Out of Range

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

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 ALS Vial : 2 Sample Multiplier: 1

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Quant Time: Jul 18 23:14:38 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:49:56 2025
 Response via : Initial Calibration

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

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	Bromochloromethane	30.000	30.000	0.0	132	-0.02
2 M	Dichlorodifluoromethane	20.000	15.924	20.4	115	-0.01
3 M	Chloromethane	20.000	18.420	7.9	144	-0.01
4 M	Vinyl Chloride	20.000	17.804	11.0	131	-0.01
5 M	Bromomethane	20.000	19.682	1.6	144	-0.02
6 M	Chloroethane	20.000	21.932	-9.7	162	-0.01
7 M	Trichlorofluoromethane	20.000	21.710	-8.6	152	-0.02
8 T	Diethyl Ether	20.000	18.599	7.0	138	-0.02
9	1,1,2-Trichlorotrifluoroeth	20.000	15.841	20.8	114	-0.03
10 M	1,1-Dichloroethene	20.000	15.708	21.5	113	-0.03
11	Methyl Iodide	20.000	18.048	9.8	151	-0.03
12	Methyl Acetate	20.000	21.184	-5.9	153	-0.03
13 M	Acrolein	100.000	70.510	29.5#	114	-0.03
14 M	Acrylonitrile	100.000	93.047	7.0	133	-0.03
15 M	Acetone	100.000	89.609	10.4	125	-0.03
16 M	Carbon Disulfide	20.000	14.829	25.9#	108	-0.03
17	Allyl chloride	20.000	18.523	7.4	133	-0.02
18 M	Methylene Chloride	20.000	19.279	3.6	138	-0.03
19 M	trans-1,2-Dichloroethene	20.000	16.843	15.8	122	-0.04
20 T	Diisopropyl ether	20.000	20.878	-4.4	144	-0.03
21 M	1,1-Dichloroethane	20.000	19.029	4.9	134	-0.03
22 M	cis-1,2-Dichloroethene	20.000	18.471	7.6	135	-0.02
23 M	tert-Butyl Alcohol	100.000	90.368	9.6	132	-0.01
24 M	Methyl tert-Butyl Ether	20.000	19.914	0.4	147	-0.03
25 M	Chloroform	20.000	20.210	-1.1	146	-0.02
26	Cyclohexane	20.000	16.454	17.7	122	-0.02
27 s	1,2-Dichloroethane-d4	30.000	32.525	-8.4	141	-0.02
28 I	1,4-Difluorobenzene	30.000	30.000	0.0	126	-0.02
29	1,1-Dichloropropene	20.000	19.096	4.5	140	-0.02
30 M	2-Butanone	100.000	104.734	-4.7	145	-0.02
31	2,2-Dichloropropane	20.000	19.929	0.4	137	-0.02
32 M	1,1,1-Trichloroethane	20.000	21.058	-5.3	145	-0.02
33 M	Carbon Tetrachloride	20.000	21.079	-5.4	153	-0.03
34 M	Benzene	20.000	19.473	2.6	139	-0.02
35	Methacrylonitrile	20.000	21.818	-9.1	153	-0.02
36 M	1,2-Dichloroethane	20.000	22.510	-12.6	153	-0.02
37 M	Trichloroethene	20.000	18.781	6.1	137	-0.02
38	Methylcyclohexane	20.000	18.137	9.3	130	-0.02
39 M	1,2-Dichloropropane	20.000	20.373	-1.9	137	-0.02
40	Dibromomethane	20.000	21.197	-6.0	143	-0.02
41 M	Bromodichloromethane	20.000	21.852	-9.3	145	-0.02
42 M	Vinyl Acetate	100.000	99.305	0.7	135	-0.02
43	Ethyl Acetate	20.000	22.371	-11.9	143	-0.02
44	Isopropyl Acetate	20.000	21.582	-7.9	151	-0.02
45 T	1,4-Dioxane	400.000	435.529	-8.9	151	-0.02
46	Methyl methacrylate	20.000	21.690	-8.5	148	-0.02
47	n-amyl Acetate	20.000	23.721	-18.6	167	-0.01
48 M	t-1,3-Dichloropropene	20.000	20.708	-3.5	145	-0.02

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN071825\
 Data File : VN087353.D
 Acq On : 18 Jul 2025 09:15
 Operator : JC\MD
 Sample : VSTDCCC020
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_N
 LabSampleId :
 VSTDCCC020

Quant Time: Jul 18 23:14:38 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:49:56 2025
 Response via : Initial Calibration

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

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
49 T	cis-1,3-Dichloropropene	20.000	20.330	-1.6	136	-0.02
50 M	1,1,2-Trichloroethane	20.000	20.144	-0.7	136	-0.02
51	Ethyl methacrylate	20.000	21.202	-6.0	155	-0.03
52	1,3-Dichloropropane	20.000	20.936	-4.7	142	-0.02
53 M	Dibromochloromethane	20.000	22.052	-10.3	152	-0.02
54 M	1,2-Dibromoethane	20.000	19.793	1.0	134	-0.02
55 M	2-Chloroethyl vinyl ether	100.000	102.481	-2.5	139	-0.02
56 M	Bromoform	20.000	21.061	-5.3	147	-0.02
57 I	Chlorobenzene-d5	30.000	30.000	0.0	119	-0.02
58 M	4-Methyl-2-Pentanone	100.000	118.048	-18.0	154	-0.02
59 M	2-Hexanone	100.000	125.791	-25.8#	180	-0.03
60 S	4-Bromofluorobenzene	30.000	31.514	-5.0	129	-0.02
61 M	Tetrachloroethene	20.000	20.748	-3.7	136	-0.02
62 M	Toluene	20.000	19.960	0.2	129	-0.02
63 S	Toluene-d8	30.000	30.020	-0.1	114	-0.02
64 M	Chlorobenzene	20.000	20.238	-1.2	132	-0.02
65	1,1,1,2-Tetrachloroethane	20.000	22.256	-11.3	145	-0.02
66 M	Ethyl Benzene	20.000	19.686	1.6	131	-0.02
67 M	m/p-Xylenes	40.000	40.039	-0.1	132	-0.02
68 M	o-Xylene	20.000	20.351	-1.8	135	-0.02
69 M	Styrene	20.000	19.940	0.3	132	-0.02
70	Isopropylbenzene	20.000	20.841	-4.2	141	-0.02
71 M	1,1,2,2-Tetrachloroethane	20.000	20.465	-2.3	130	-0.02
72	1,2,3-Trichloropropane	20.000	22.968	-14.8	153	-0.02
73	Bromobenzene	20.000	21.751	-8.8	146	-0.02
74	n-propylbenzene	20.000	20.544	-2.7	139	-0.02
75	2-Chlorotoluene	20.000	20.493	-2.5	140	-0.02
76	1,3,5-Trimethylbenzene	20.000	21.335	-6.7	147	-0.02
77	t-1,4-Dichloro-2-butene	20.000	18.956	5.2	133	-0.02
78	4-Chlorotoluene	20.000	21.150	-5.7	144	-0.02
79	tert-butylbenzene	20.000	21.488	-7.4	149	-0.02
80	1,2,4-Trimethylbenzene	20.000	21.477	-7.4	149	-0.02
81	sec-Butylbenzene	20.000	21.448	-7.2	145	-0.02
82	p-Isopropyltoluene	20.000	22.171	-10.9	145	-0.02
83 M	1,3-Dichlorobenzene	20.000	21.391	-7.0	140	-0.02
84 M	1,4-Dichlorobenzene	20.000	20.178	-0.9	133	-0.02
85	n-Butylbenzene	20.000	22.382	-11.9	147	-0.02
86 T	Hexachloroethane	20.000	22.079	-10.4	152	-0.02
87 M	1,2-Dichlorobenzene	20.000	21.442	-7.2	141	-0.02
88	1,2-Dibromo-3-Chloropropane	20.000	19.839	0.8	132	-0.02
89	1,2,4-Trichlorobenzene	20.000	22.107	-10.5	145	-0.02
90	Hexachlorobutadiene	20.000	30.624	-53.1#	202	-0.02
91 M	Naphthalene	20.000	20.451	-2.3	139	-0.02
92	1,2,3-Trichlorobenzene	20.000	22.107	-10.5	145	-0.02

(#) = Out of Range

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



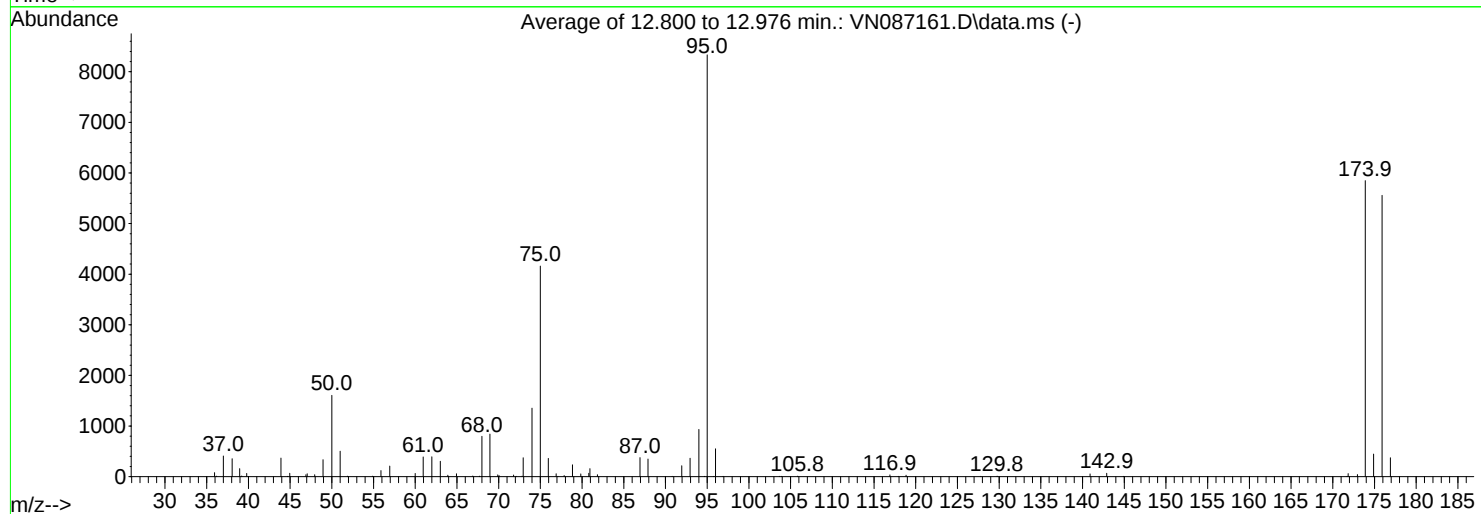
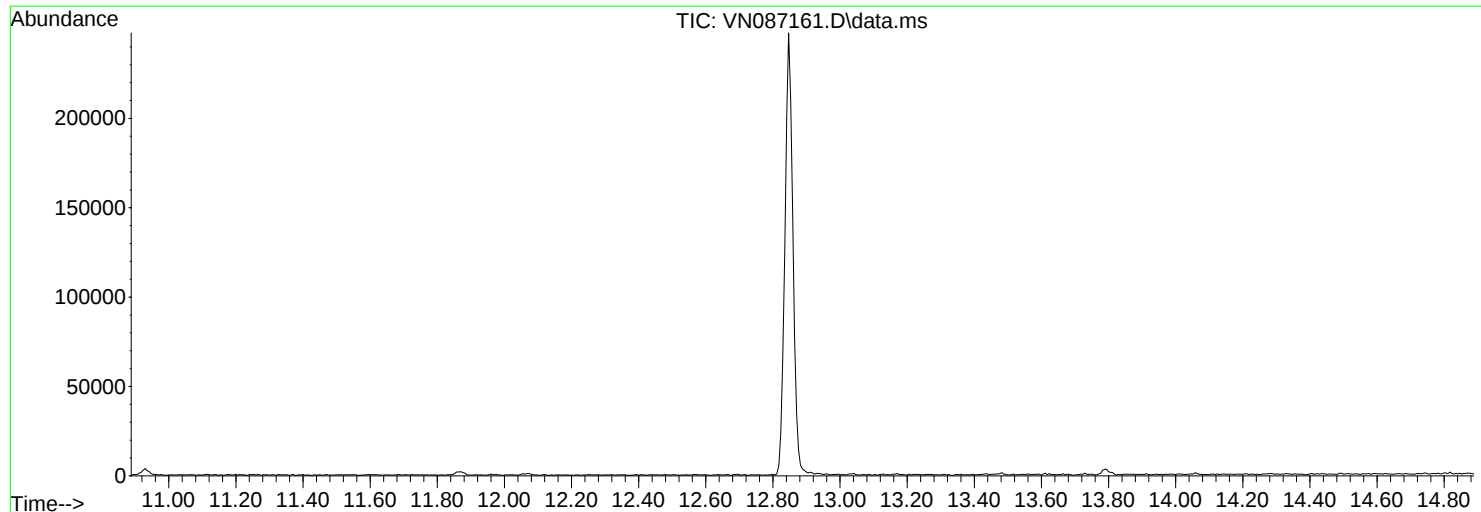
QC SAMPLE DATA

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN062525\
Data File : VN087161.D
Acq On : 25 Jun 2025 08:25
Operator : JC\MD
Sample : BFB
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
BFB

Integration File: RTEINT.P

Method : Z:\voasrv\HPCHEM1\MSVOA_U\Method\82U070825W.M
Title : SW846 8260
Last Update : Wed Jul 09 04:25:34 2025



AutoFind: Averaged scan 1844 to 1874; Bkg corrected with scan 1843

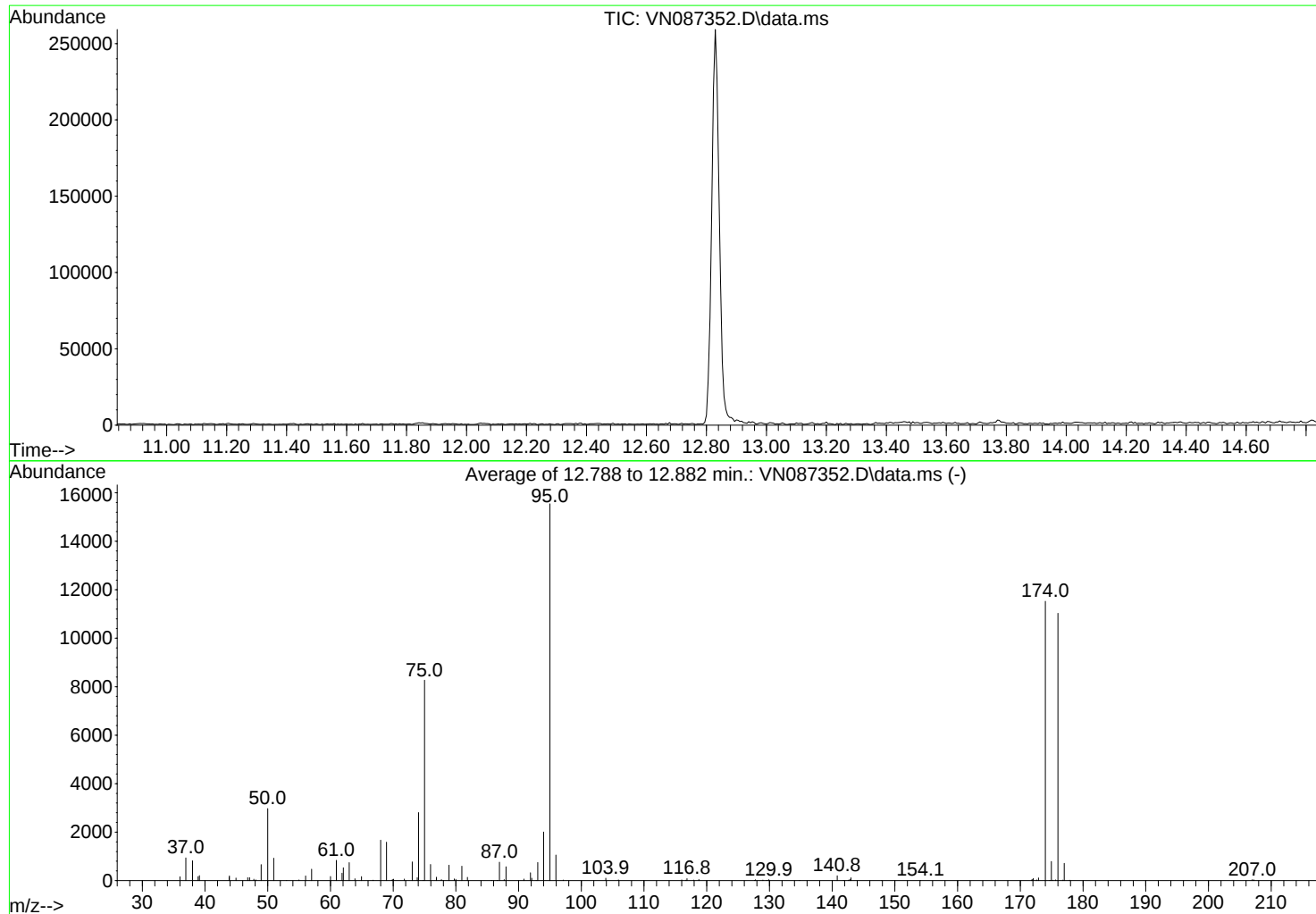
Target	Rel. to	Lower	Upper	Rel.	Raw	Result
Mass	Mass	Limit%	Limit%	Abn%	Abn	Pass/Fail
50	95	15	40	19.3	1607	PASS
75	95	30	60	49.9	4160	PASS
95	95	100	100	100.0	8333	PASS
96	95	5	9	6.6	550	PASS
173	174	0.00	2	0.7	41	PASS
174	95	50	100	70.2	5847	PASS
175	174	5	9	7.6	447	PASS
176	174	95	101	95.0	5556	PASS
177	176	5	9	6.7	373	PASS

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN071825\
Data File : VN087352.D
Acq On : 18 Jul 2025 08:42
Operator : JC\MD
Sample : BFB
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
BFB

Integration File: RTEINT3.P

Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
Last Update : Wed Jun 25 10:49:56 2025



AutoFind: Averaged scan 1842 to 1858; Bkg corrected with scan 1841

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.1	2975	PASS
75	95	30	60	53.2	8266	PASS
95	95	100	100	100.0	15548	PASS
96	95	5	9	6.8	1053	PASS
173	174	0.00	2	1.0	113	PASS
174	95	50	100	74.1	11523	PASS
175	174	5	9	6.9	793	PASS
176	174	95	101	95.7	11028	PASS
177	176	5	9	6.4	711	PASS

Report of Analysis

Client:	Environmental Restoration, LLC		Date Collected:	
Project:	Cooper Chemical - Long Valley NJ 2-COOP-ANS		Date Received:	
Client Sample ID:	VN0718WBL01		SDG No.:	Q2594
Lab Sample ID:	VN0718WBL01		Matrix:	Water
Analytical Method:	E624.1		% Solid:	0
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624	ID : 0.25	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
VN087356.D	1	07/18/25 11:04	VN071825

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.77	U	0.77	5.00	ug/L
74-87-3	Chloromethane	0.64	U	0.64	5.00	ug/L
75-01-4	Vinyl Chloride	0.83	U	0.83	5.00	ug/L
74-83-9	Bromomethane	0.80	U	0.80	5.00	ug/L
75-00-3	Chloroethane	2.30	U	2.30	5.00	ug/L
75-69-4	Trichlorofluoromethane	0.80	U	0.80	5.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.96	U	0.96	5.00	ug/L
75-35-4	1,1-Dichloroethene	0.76	U	0.76	5.00	ug/L
67-64-1	Acetone	4.60	U	4.60	25.0	ug/L
75-15-0	Carbon Disulfide	0.82	U	0.82	5.00	ug/L
1634-04-4	Methyl tert-Butyl Ether	0.77	U	0.77	5.00	ug/L
79-20-9	Methyl Acetate	0.91	U	0.91	5.00	ug/L
75-09-2	Methylene Chloride	0.86	U	0.86	5.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.82	U	0.82	5.00	ug/L
75-34-3	1,1-Dichloroethane	0.68	U	0.68	5.00	ug/L
110-82-7	Cyclohexane	0.92	U	0.92	5.00	ug/L
78-93-3	2-Butanone	2.00	U	2.00	25.0	ug/L
56-23-5	Carbon Tetrachloride	0.74	U	0.74	5.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.80	U	0.80	5.00	ug/L
67-66-3	Chloroform	0.55	U	0.55	5.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.63	U	0.63	5.00	ug/L
108-87-2	Methylcyclohexane	0.73	U	0.73	5.00	ug/L
71-43-2	Benzene	0.45	U	0.45	5.00	ug/L
107-06-2	1,2-Dichloroethane	0.50	U	0.50	5.00	ug/L
79-01-6	Trichloroethene	0.49	U	0.49	5.00	ug/L
78-87-5	1,2-Dichloropropane	0.46	U	0.46	5.00	ug/L
75-27-4	Bromodichloromethane	0.64	U	0.64	5.00	ug/L
108-10-1	4-Methyl-2-Pentanone	3.00	U	3.00	25.0	ug/L
108-88-3	Toluene	0.46	U	0.46	5.00	ug/L
10061-02-6	t-1,3-Dichloropropene	0.72	U	0.72	5.00	ug/L

Report of Analysis

Client:	Environmental Restoration, LLC			Date Collected:	
Project:	Cooper Chemical - Long Valley NJ 2-COOP-ANS			Date Received:	
Client Sample ID:	VN0718WBL01			SDG No.:	Q2594
Lab Sample ID:	VN0718WBL01			Matrix:	Water
Analytical Method:	E624.1			% Solid:	0
Sample Wt/Vol:	5	Units:	mL	Final Vol:	5000 uL
Soil Aliquot Vol:			uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624	ID :	0.25	Level :	LOW
Prep Method :					

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
VN087356.D	1	07/18/25 11:04	VN071825

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.67	U	0.67	5.00	ug/L
79-00-5	1,1,2-Trichloroethane	0.45	U	0.45	5.00	ug/L
591-78-6	2-Hexanone	3.20	U	3.20	25.0	ug/L
124-48-1	Dibromochloromethane	0.66	U	0.66	5.00	ug/L
106-93-4	1,2-Dibromoethane	0.56	U	0.56	5.00	ug/L
127-18-4	Tetrachloroethene	0.84	U	0.84	5.00	ug/L
108-90-7	Chlorobenzene	0.47	U	0.47	5.00	ug/L
100-41-4	Ethyl Benzene	0.56	U	0.56	5.00	ug/L
179601-23-1	m/p-Xylenes	1.30	U	1.30	10.0	ug/L
95-47-6	o-Xylene	0.67	U	0.67	5.00	ug/L
100-42-5	Styrene	0.72	U	0.72	5.00	ug/L
75-25-2	Bromoform	0.94	U	0.94	5.00	ug/L
98-82-8	Isopropylbenzene	0.78	U	0.78	5.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.44	U	0.44	5.00	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.59	U	0.59	5.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.67	U	0.67	5.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.81	U	0.81	5.00	ug/L
95-50-1	1,2-Dichlorobenzene	0.67	U	0.67	5.00	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.86	U	0.86	5.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	1.00	U	1.00	5.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	1.10	U	1.10	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	32.8		70 (91) - 130 (110)	109%	SPK: 30
2037-26-5	Toluene-d8	29.8		70 (91) - 130 (112)	99%	SPK: 30
460-00-4	4-Bromofluorobenzene	28.8		70 (63) - 130 (112)	96%	SPK: 30
INTERNAL STANDARDS						
74-97-5	Bromochloromethane	41900	7.794			
540-36-3	1,4-Difluorobenzene	220000	9.083			
3114-55-4	Chlorobenzene-d5	193000	11.847			

Report of Analysis

Client:	Environmental Restoration, LLC	Date Collected:	
Project:	Cooper Chemical - Long Valley NJ 2-COOP-ANS	Date Received:	
Client Sample ID:	VN0718WBL01	SDG No.:	Q2594
Lab Sample ID:	VN0718WBL01	Matrix:	Water
Analytical Method:	E624.1	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
VN087356.D	1	07/18/25 11:04	VN071825

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN071825\
 Data File : VN087356.D
 Acq On : 18 Jul 2025 11:04
 Operator : JC\MD
 Sample : VN0718WBL01
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VN0718WBL01

Quant Time: Jul 18 23:17:17 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:49:56 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Bromochloromethane	7.794	128	41937	30.000	ug/l	-0.03
28) 1,4-Difluorobenzene	9.083	114	219664	30.000	ug/l	-0.02
57) Chlorobenzene-d5	11.847	117	193250	30.000	ug/l	-0.02

System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	8.565	65	103673	32.810	ug/l	-0.02
Spiked Amount	30.000	Range	91 - 110	Recovery	=	109.367%
60) 4-Bromofluorobenzene	12.829	95	85866	28.794	ug/l	-0.02
Spiked Amount	30.000	Range	63 - 112	Recovery	=	95.967%
63) Toluene-d8	10.547	98	258214	29.759	ug/l	-0.02
Spiked Amount	30.000	Range	91 - 112	Recovery	=	99.200%

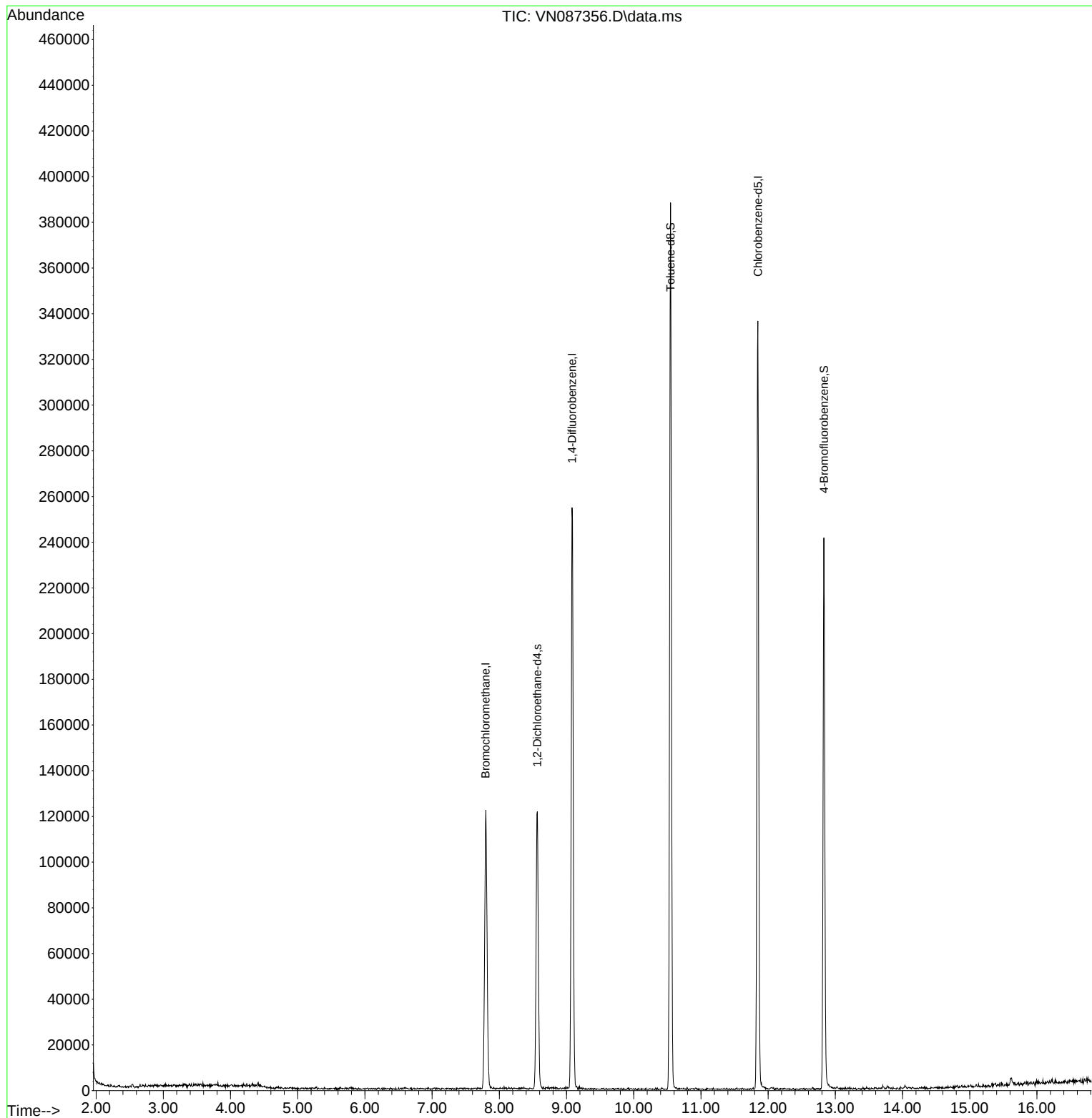
Target Compounds	Qvalue

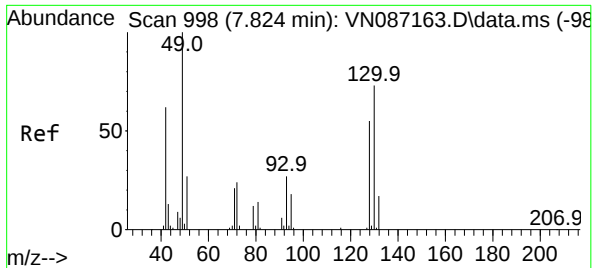
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN071825\
Data File : VN087356.D
Acq On : 18 Jul 2025 11:04
Operator : JC\MD
Sample : VN0718WBL01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VN0718WBL01

Quant Time: Jul 18 23:17:17 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Wed Jun 25 10:49:56 2025
Response via : Initial Calibration

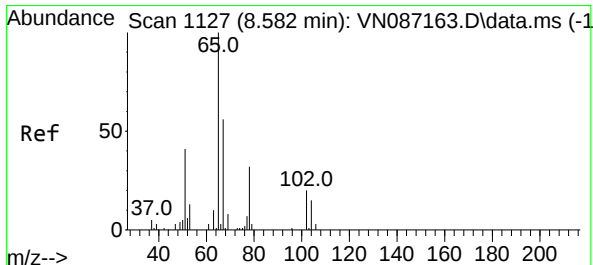
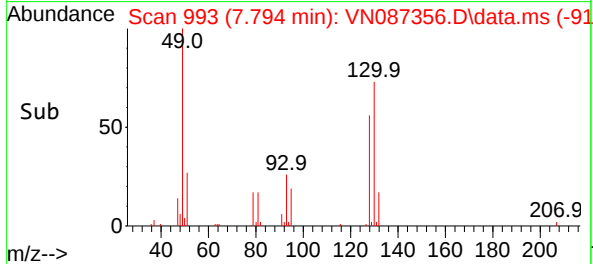
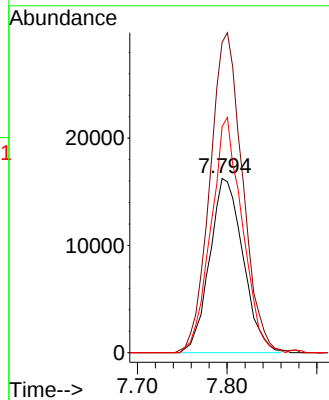
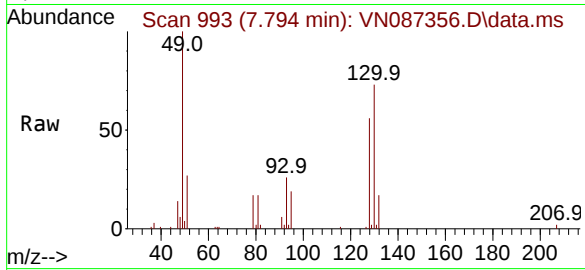




#1
Bromochloromethane
Concen: 30.000 ug/l
RT: 7.794 min Scan# 998
Delta R.T. -0.030 min
Lab File: VN087356.D
Acq: 18 Jul 2025 11:04

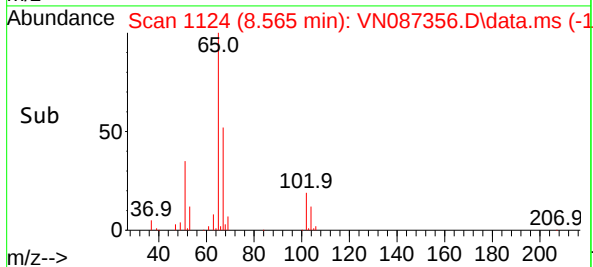
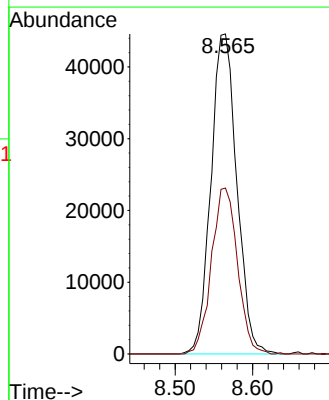
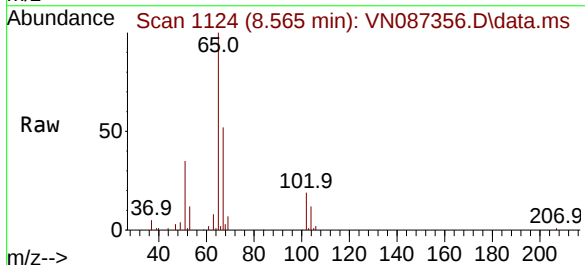
Instrument :
MSVOA_N
ClientSampleId :
VN0718WBL01

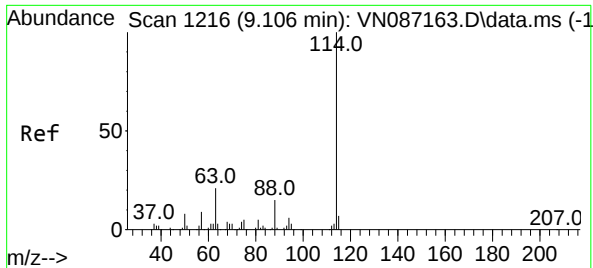
Tgt Ion:128 Resp: 41937
Ion Ratio Lower Upper
128 100
49 179.4 0.0 450.5
130 126.5 0.0 320.7



#27
1,2-Dichloroethane-d4
Concen: 32.810 ug/l
RT: 8.565 min Scan# 1124
Delta R.T. -0.018 min
Lab File: VN087356.D
Acq: 18 Jul 2025 11:04

Tgt Ion: 65 Resp: 103673
Ion Ratio Lower Upper
65 100
67 52.1 41.9 62.9

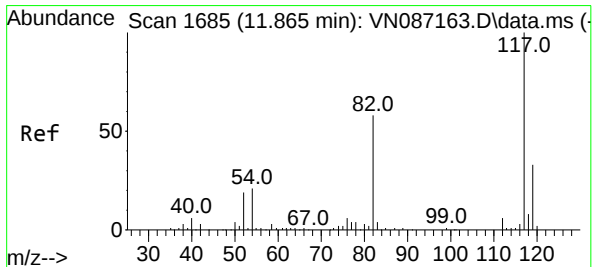
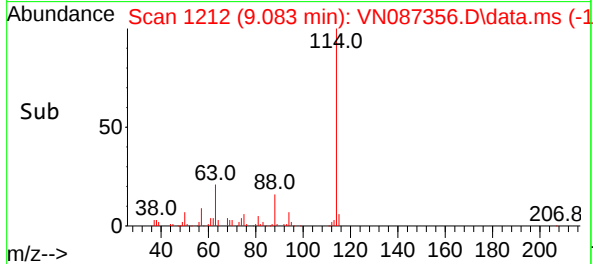
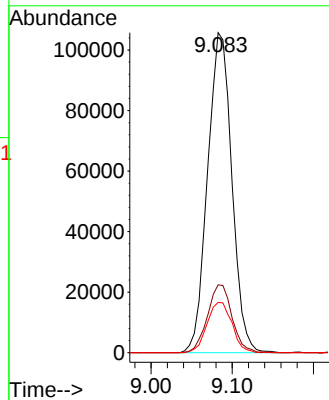
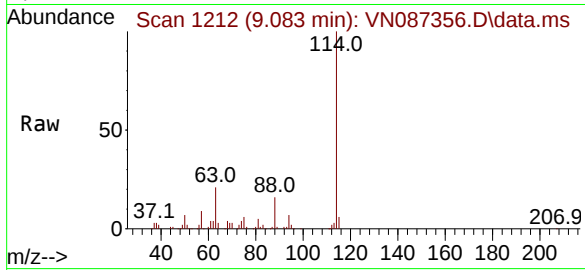




#28
1,4-Difluorobenzene
Concen: 30.000 ug/l
RT: 9.083 min Scan# 11
Delta R.T. -0.023 min
Lab File: VN087356.D
Acq: 18 Jul 2025 11:04

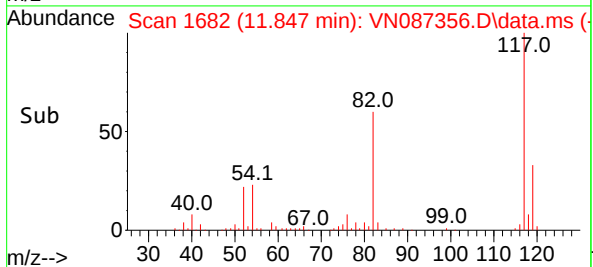
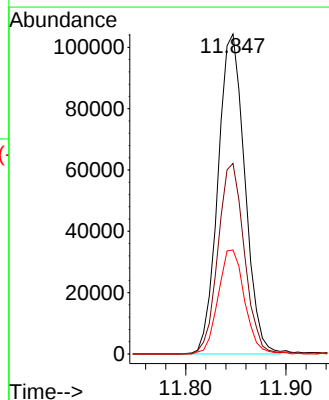
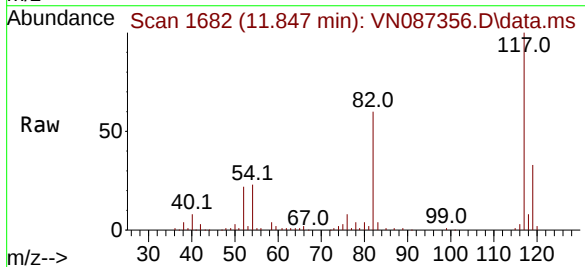
Instrument :
MSVOA_N
ClientSampleId :
VN0718WBL01

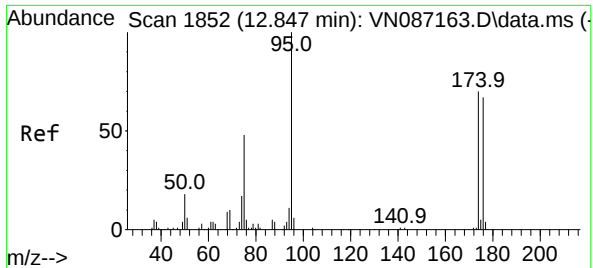
Tgt Ion:	114	Resp:	219664
Ion	Ratio	Lower	Upper
114	100		
63	21.4	17.0	25.4
88	16.1	12.6	19.0



#57
Chlorobenzene-d5
Concen: 30.000 ug/l
RT: 11.847 min Scan# 1682
Delta R.T. -0.018 min
Lab File: VN087356.D
Acq: 18 Jul 2025 11:04

Tgt Ion:	117	Resp:	193250
Ion	Ratio	Lower	Upper
117	100		
82	58.4	45.4	68.2
119	31.8	26.2	39.4

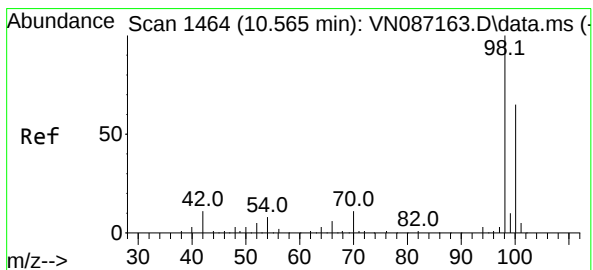
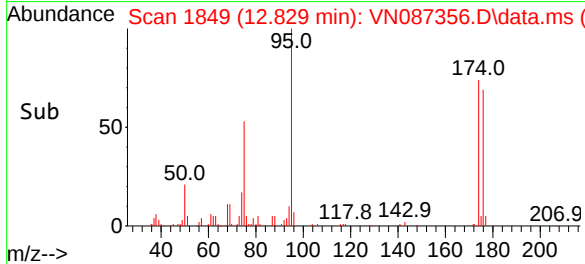
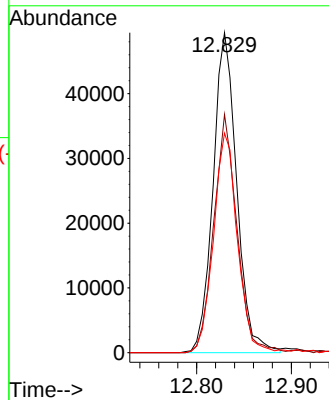
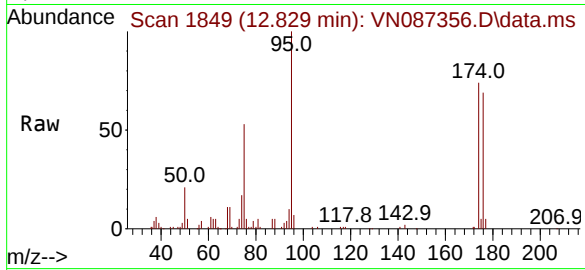




#60
4-Bromofluorobenzene
Concen: 28.794 ug/l
RT: 12.829 min Scan# 1849
Delta R.T. -0.018 min
Lab File: VN087356.D
Acq: 18 Jul 2025 11:04

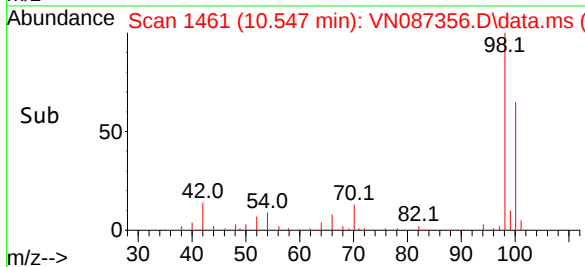
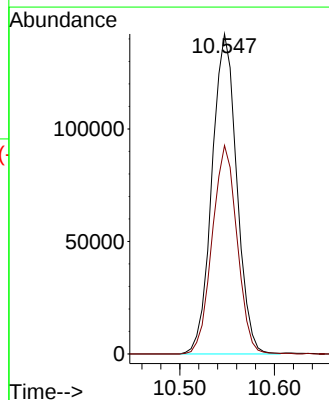
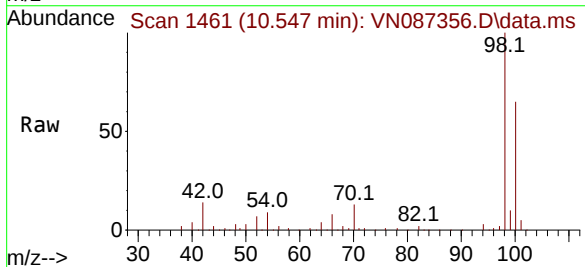
Instrument :
MSVOA_N
ClientSampleId :
VN0718WBL01

Tgt Ion: 95 Resp: 85866
Ion Ratio Lower Upper
95 100
174 72.9 54.5 81.7
176 69.1 51.9 77.9



#63
Toluene-d8
Concen: 29.759 ug/l
RT: 10.547 min Scan# 1461
Delta R.T. -0.018 min
Lab File: VN087356.D
Acq: 18 Jul 2025 11:04

Tgt Ion: 98 Resp: 258214
Ion Ratio Lower Upper
98 100
100 65.4 52.5 78.7



Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN071825\
Data File : VN087356.D
Acq On : 18 Jul 2025 11:04
Operator : JC\MD
Sample : VN0718WBL01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VN0718WBL01

Integration Parameters: RTEINT3.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 0 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
Title : METHOD 624 VOLATILE ORGANIC ANALYSIS

Signal : TIC: VN087356.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	7.800	984	994	1005	rBV	122020	304404	43.01%	10.607%
2	8.565	1113	1124	1138	rVB	121497	282392	39.90%	9.840%
3	9.083	1204	1212	1222	rBV	254052	531031	75.03%	18.503%
4	10.547	1452	1461	1470	rBV	388194	707735	100.00%	24.660%
5	11.847	1672	1682	1694	rBV	336335	625660	88.40%	21.801%
6	12.829	1842	1849	1860	rBV	241113	418699	59.16%	14.589%

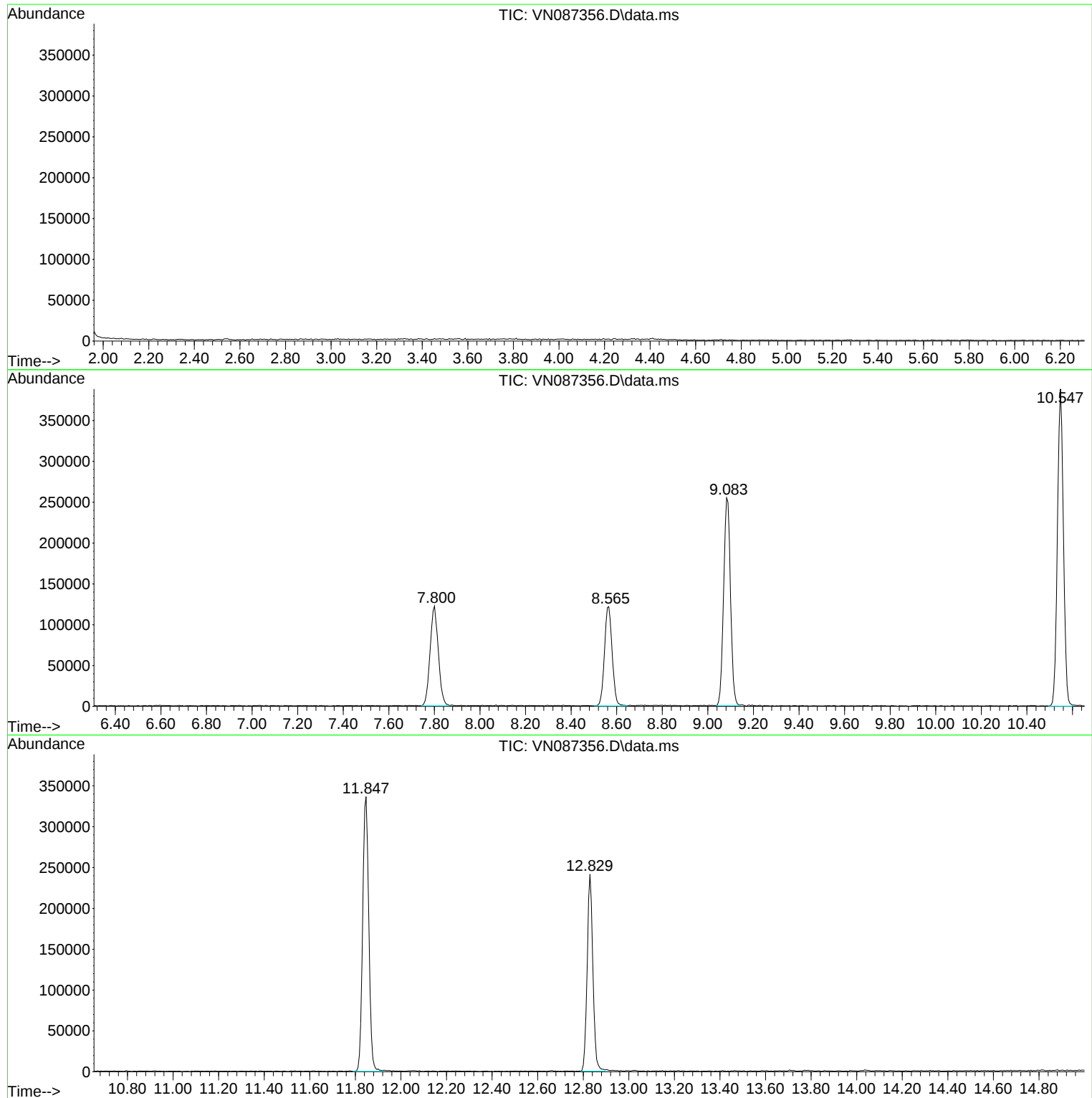
Sum of corrected areas: 2869921

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN071825\
Data File : VN087356.D
Acq On : 18 Jul 2025 11:04
Operator : JC\MD
Sample : VN0718WBL01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VN0718WBL01

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS

TIC Library : C:\Database\NIST20.L
TIC Integration Parameters: LSCINT.P



Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN071825\
Data File : VN087356.D
Acq On : 18 Jul 2025 11:04
Operator : JC\MD
Sample : VN0718WBL01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VN0718WBL01

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS

TIC Library : C:\Database\NIST20.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN071825\
Data File : VN087356.D
Acq On : 18 Jul 2025 11:04
Operator : JC\MD
Sample : VN0718WBL01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VN0718WBL01

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS

TIC Library : C:\Database\NIST20.L
TIC Integration Parameters: LSCINT.P

TIC Top Hit name	RT	EstConc	Units	Response	--Internal Standard--			
					#	RT	Resp	Conc

Report of Analysis

Client:	Environmental Restoration, LLC		Date Collected:	
Project:	Cooper Chemical - Long Valley NJ 2-COOP-ANS		Date Received:	
Client Sample ID:	VN0718WBS01		SDG No.:	Q2594
Lab Sample ID:	VN0718WBS01		Matrix:	Water
Analytical Method:	E624.1		% Solid:	0
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624	ID : 0.25	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
VN087354.D	1	07/18/25 09:49	VN071825

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	16.1		0.77	5.00	ug/L
74-87-3	Chloromethane	17.9		0.64	5.00	ug/L
75-01-4	Vinyl Chloride	17.6		0.83	5.00	ug/L
74-83-9	Bromomethane	18.6		0.80	5.00	ug/L
75-00-3	Chloroethane	20.6		2.30	5.00	ug/L
75-69-4	Trichlorofluoromethane	21.6		0.80	5.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	15.9		0.96	5.00	ug/L
75-35-4	1,1-Dichloroethene	15.3		0.76	5.00	ug/L
67-64-1	Acetone	81.8		4.60	25.0	ug/L
75-15-0	Carbon Disulfide	14.3		0.82	5.00	ug/L
1634-04-4	Methyl tert-Butyl Ether	19.6		0.77	5.00	ug/L
79-20-9	Methyl Acetate	20.9		0.91	5.00	ug/L
75-09-2	Methylene Chloride	18.5		0.86	5.00	ug/L
156-60-5	trans-1,2-Dichloroethene	15.9		0.82	5.00	ug/L
75-34-3	1,1-Dichloroethane	18.0		0.68	5.00	ug/L
110-82-7	Cyclohexane	16.5		0.92	5.00	ug/L
78-93-3	2-Butanone	110		2.00	25.0	ug/L
56-23-5	Carbon Tetrachloride	21.3		0.74	5.00	ug/L
156-59-2	cis-1,2-Dichloroethene	18.0		0.80	5.00	ug/L
67-66-3	Chloroform	19.6		0.55	5.00	ug/L
71-55-6	1,1,1-Trichloroethane	21.3		0.63	5.00	ug/L
108-87-2	Methylcyclohexane	18.8		0.73	5.00	ug/L
71-43-2	Benzene	19.1		0.45	5.00	ug/L
107-06-2	1,2-Dichloroethane	22.8		0.50	5.00	ug/L
79-01-6	Trichloroethene	19.5		0.49	5.00	ug/L
78-87-5	1,2-Dichloropropane	20.4		0.46	5.00	ug/L
75-27-4	Bromodichloromethane	21.8		0.64	5.00	ug/L
108-10-1	4-Methyl-2-Pentanone	120		3.00	25.0	ug/L
108-88-3	Toluene	19.5		0.46	5.00	ug/L
10061-02-6	t-1,3-Dichloropropene	21.1		0.72	5.00	ug/L

Report of Analysis

Client:	Environmental Restoration, LLC		Date Collected:	
Project:	Cooper Chemical - Long Valley NJ 2-COOP-ANS		Date Received:	
Client Sample ID:	VN0718WBS01		SDG No.:	Q2594
Lab Sample ID:	VN0718WBS01		Matrix:	Water
Analytical Method:	E624.1		% Solid:	0
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624	ID : 0.25	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
VN087354.D	1	07/18/25 09:49	VN071825

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	20.0		0.67	5.00	ug/L
79-00-5	1,1,2-Trichloroethane	20.4		0.45	5.00	ug/L
591-78-6	2-Hexanone	130		3.20	25.0	ug/L
124-48-1	Dibromochloromethane	21.7		0.66	5.00	ug/L
106-93-4	1,2-Dibromoethane	20.2		0.56	5.00	ug/L
127-18-4	Tetrachloroethene	19.9		0.84	5.00	ug/L
108-90-7	Chlorobenzene	19.7		0.47	5.00	ug/L
100-41-4	Ethyl Benzene	19.6		0.56	5.00	ug/L
179601-23-1	m/p-Xylenes	39.7		1.30	10.0	ug/L
95-47-6	o-Xylene	20.5		0.67	5.00	ug/L
100-42-5	Styrene	19.2		0.72	5.00	ug/L
75-25-2	Bromoform	20.8		0.94	5.00	ug/L
98-82-8	Isopropylbenzene	20.6		0.78	5.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	20.7		0.44	5.00	ug/L
108-67-8	1,3,5-Trimethylbenzene	21.4		0.59	5.00	ug/L
541-73-1	1,3-Dichlorobenzene	20.6		0.67	5.00	ug/L
106-46-7	1,4-Dichlorobenzene	21.5		0.81	5.00	ug/L
95-50-1	1,2-Dichlorobenzene	21.3		0.67	5.00	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	21.0		0.86	5.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	23.0		1.00	5.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	23.0		1.10	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	31.3		70 (91) - 130 (110)	104%	SPK: 30
2037-26-5	Toluene-d8	30.0		70 (91) - 130 (112)	100%	SPK: 30
460-00-4	4-Bromofluorobenzene	31.4		70 (63) - 130 (112)	105%	SPK: 30
INTERNAL STANDARDS						
74-97-5	Bromochloromethane	47500	7.8			
540-36-3	1,4-Difluorobenzene	244000	9.083			
3114-55-4	Chlorobenzene-d5	221000	11.847			

Report of Analysis

Client:	Environmental Restoration, LLC	Date Collected:	
Project:	Cooper Chemical - Long Valley NJ 2-COOP-ANS	Date Received:	
Client Sample ID:	VN0718WBS01	SDG No.:	Q2594
Lab Sample ID:	VN0718WBS01	Matrix:	Water
Analytical Method:	E624.1	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
VN087354.D	1	07/18/25 09:49	VN071825

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN071825\
 Data File : VN087354.D
 Acq On : 18 Jul 2025 09:49
 Operator : JC\MD
 Sample : VN0718WBS01
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VN0718WBS01

Manual Integrations
 APPROVED

Reviewed By : John Carlone 07/21/2025
 Supervised By : Mahesh Dadoda 07/21/2025

Quant Time: Jul 18 23:15:32 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:49:56 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Bromochloromethane	7.800	128	47522	30.000	ug/l	-0.02
28) 1,4-Difluorobenzene	9.083	114	244435	30.000	ug/l	-0.02
57) Chlorobenzene-d5	11.847	117	221298	30.000	ug/l	-0.02
System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	8.565	65	111922	31.258	ug/l	-0.02
Spiked Amount 30.000	Range 91 - 110		Recovery = 104.200%			
60) 4-Bromofluorobenzene	12.829	95	107177	31.385	ug/l	-0.02
Spiked Amount 30.000	Range 63 - 112		Recovery = 104.633%			
63) Toluene-d8	10.547	98	297958	29.987	ug/l	-0.02
Spiked Amount 30.000	Range 91 - 112		Recovery = 99.967%			
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	2.142	85	46040	16.094	ug/l	92
3) Chloromethane	2.383	50	52156	17.851	ug/l	95
4) Vinyl Chloride	2.542	62	55991	17.632	ug/l	97
5) Bromomethane	2.983	94	31368	18.613	ug/l	94
6) Chloroethane	3.142	64	35021	20.559	ug/l	89
7) Trichlorofluoromethane	3.512	101	84060	21.581	ug/l	94
8) Diethyl Ether	3.959	74	35222	18.405	ug/l	94
9) 1,1,2-Trichlorotrifluo...	4.365	101	45806	15.862	ug/l #	86
10) 1,1-Dichloroethene	4.336	96	44010	15.288	ug/l	93
11) Methyl Iodide	4.577	142	45963	17.822	ug/l	83
12) Methyl Acetate	5.012	43	94157	20.852	ug/l	98
13) Acrolein	4.171	56	46346	66.797	ug/l	99
14) Acrylonitrile	5.706	53	194390	92.295	ug/l	99
15) Acetone	4.424	58	50273	81.828	ug/l #	67
16) Carbon Disulfide	4.700	76	120368	14.301	ug/l	99
17) Allyl chloride	5.006	41	83723	17.633	ug/l	95
18) Methylene Chloride	5.265	84	61633	18.481	ug/l #	88
19) trans-1,2-Dichloroethene	5.765	96	50015	15.887	ug/l	94
20) Diisopropyl ether	6.665	45	200651	19.919	ug/l	95
21) 1,1-Dichloroethane	6.553	63	108440	18.011	ug/l	97
22) cis-1,2-Dichloroethene	7.471	96	66003	18.014	ug/l	99
23) tert-Butyl Alcohol	5.518	59	70858	89.457	ug/l #	100
24) Methyl tert-Butyl Ether	5.789	73	197607	19.572	ug/l #	85
25) Chloroform	7.953	83	112809	19.558	ug/l	98
26) Cyclohexane	8.241	56	82625	16.510	ug/l #	97
29) 1,1-Dichloropropene	8.353	75	73612	19.322	ug/l	97
30) 2-Butanone	7.471	43	273944	106.594	ug/l	97
31) 2,2-Dichloropropane	7.477	77	88722	19.292	ug/l	97
32) 1,1,1-Trichloroethane	8.153	97	94766	21.291	ug/l	99
33) Carbon Tetrachloride	8.341	117	79873	21.324	ug/l	94
34) Benzene	8.588	78	230543	19.101	ug/l	98
35) Methacrylonitrile	7.765	41	54370	20.992	ug/l	92
36) 1,2-Dichloroethane	8.653	62	89095	22.847	ug/l	100
37) Trichloroethene	9.335	130	54222	19.476	ug/l	90
38) Methylcyclohexane	9.583	83	82279	18.822	ug/l	97
39) 1,2-Dichloropropane	9.600	63	61741	20.380	ug/l	95
40) Dibromomethane	9.688	93	44656	21.678	ug/l	97
41) Bromodichloromethane	9.871	83	90440	21.751	ug/l	100
42) Vinyl Acetate	6.589	43	814344	97.423	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN071825\
 Data File : VN087354.D
 Acq On : 18 Jul 2025 09:49
 Operator : JC\MD
 Sample : VN0718WBS01
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VN0718WBS01

Manual Integrations
 APPROVED

Reviewed By : John Carlone 07/21/2025
 Supervised By : Mahesh Dadoda 07/21/2025

Quant Time: Jul 18 23:15:32 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:49:56 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) Ethyl Acetate	7.547	43	104599	22.546	ug/l	99
44) Isopropyl Acetate	8.677	43	168318	22.268	ug/l	97
45) 1,4-Dioxane	9.683	88	22395	437.982	ug/l	96
46) Methyl methacrylate	9.665	41	77417	22.032	ug/l	91
47) n-amyl Acetate	12.518	43	103268m	22.346	ug/l	
48) t-1,3-Dichloropropene	10.818	75	97826	21.105	ug/l	97
49) cis-1,3-Dichloropropene	10.294	75	98514	19.992	ug/l	94
50) 1,1,2-Trichloroethane	11.000	97	59759	20.422	ug/l	96
51) Ethyl methacrylate	10.859	69	99466	22.333	ug/l	95
52) 1,3-Dichloropropane	11.147	76	103837	20.670	ug/l	100
53) Dibromochloromethane	11.341	129	66541	21.663	ug/l	98
54) 1,2-Dibromoethane	11.453	107	60898	20.172	ug/l	98
55) 2-Chloroethyl vinyl ether	10.141	63	250674	98.193	ug/l	99
56) Bromoform	12.559	173	43849	20.766	ug/l #	99
58) 4-Methyl-2-Pentanone	10.430	43	538352	121.008	ug/l	97
59) 2-Hexanone	11.177	43	364057	126.726	ug/l	91
61) Tetrachloroethene	11.082	164	43638	19.912	ug/l	95
62) Toluene	10.612	91	243667	19.496	ug/l	97
64) Chlorobenzene	11.871	112	156878	19.677	ug/l	94
65) 1,1,1,2-Tetrachloroethane	11.941	131	55487	21.064	ug/l	98
66) Ethyl Benzene	11.941	91	267636	19.563	ug/l	98
67) m/p-Xylenes	12.053	106	207896	39.657	ug/l	99
68) o-Xylene	12.376	106	102410	20.476	ug/l	96
69) Styrene	12.394	104	164445	19.152	ug/l	97
70) Isopropylbenzene	12.676	105	257201	20.649	ug/l	100
71) 1,1,2,2-Tetrachloroethane	12.918	83	92663	20.667	ug/l	96
72) 1,2,3-Trichloropropane	12.976	75	88121m	22.792	ug/l	
73) Bromobenzene	12.959	156	63051	20.867	ug/l	95
74) n-propylbenzene	13.018	91	317325	20.853	ug/l	99
75) 2-Chlorotoluene	13.106	91	185378	20.164	ug/l	98
76) 1,3,5-Trimethylbenzene	13.153	105	217196	21.419	ug/l	98
77) t-1,4-Dichloro-2-butene	12.724	75	31906	18.604	ug/l	98
78) 4-Chlorotoluene	13.200	91	191958	20.387	ug/l	98
79) tert-butylbenzene	13.418	119	188065	22.063	ug/l	98
80) 1,2,4-Trimethylbenzene	13.465	105	213138	20.932	ug/l	100
81) sec-Butylbenzene	13.594	105	275791	22.258	ug/l	100
82) p-Isopropyltoluene	13.706	119	233831	22.676	ug/l	99
83) 1,3-Dichlorobenzene	13.712	146	119952	20.616	ug/l	98
84) 1,4-Dichlorobenzene	13.794	146	125908	21.501	ug/l	99
85) n-Butylbenzene	14.035	91	217503	23.118	ug/l	97
86) Hexachloroethane	14.306	117	41372	21.196	ug/l	86
87) 1,2-Dichlorobenzene	14.088	146	117040	21.333	ug/l	98
88) 1,2-Dibromo-3-Chloropr...	14.700	75	21197	20.996	ug/l	96
89) 1,2,4-Trichlorobenzene	15.812	180	71387	22.999	ug/l	99
90) Hexachlorobutadiene	15.476	225	30129	32.711	ug/l	96
91) Naphthalene	15.617	128	251907	20.621	ug/l	100
92) 1,2,3-Trichlorobenzene	15.812	180	71387	22.999	ug/l	99

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

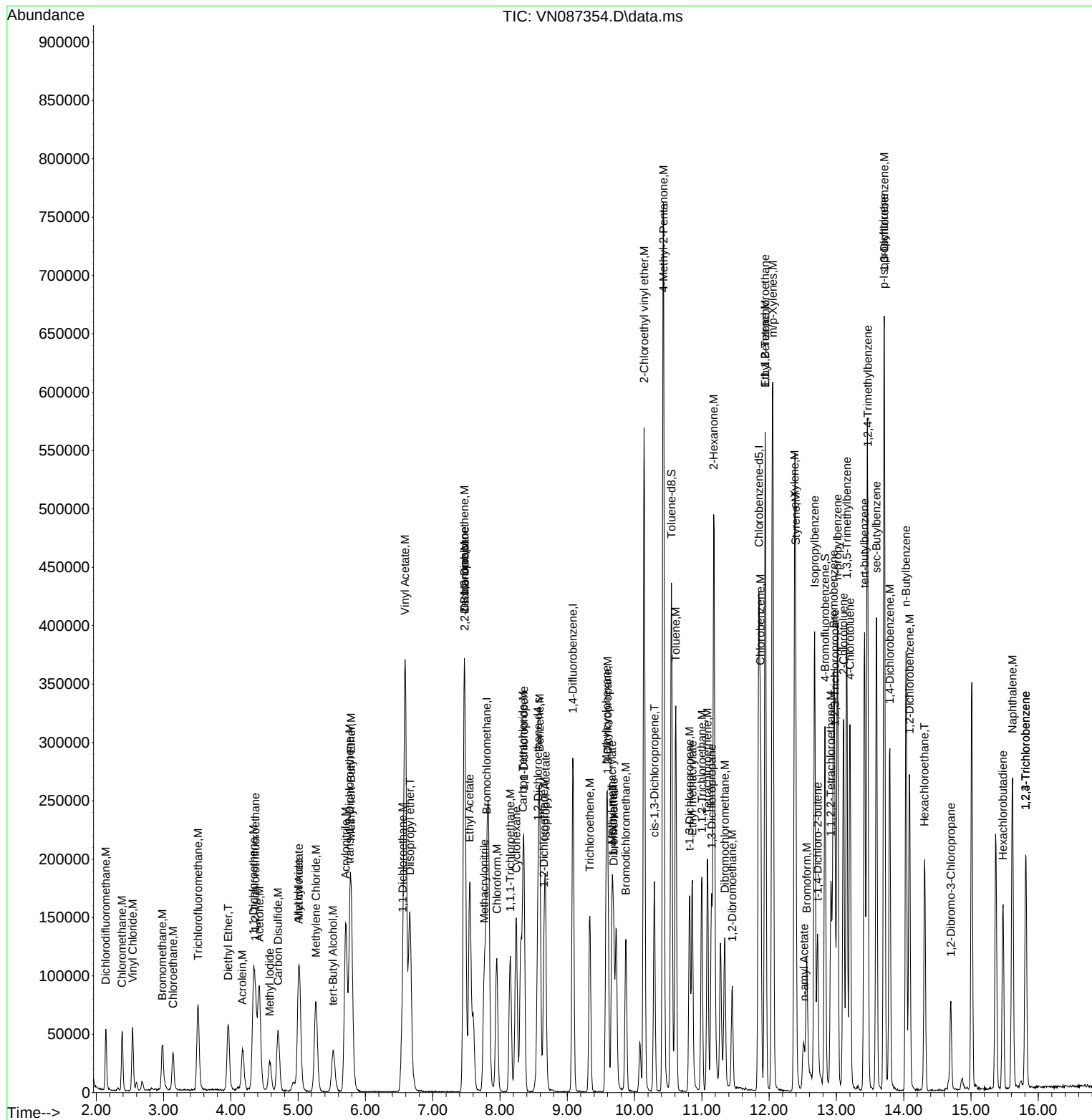
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN071825\
Data File : VN087354.D
Acq On : 18 Jul 2025 09:49
Operator : JC\MD
Sample : VN0718WBS01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VN0718WBS01

Manual Integrations APPROVED

Reviewed By :John Carlone 07/21/2025
Supervised By :Mahesh Dadoda 07/21/2025

Quant Time: Jul 18 23:15:32 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Wed Jun 25 10:49:56 2025
Response via : Initial Calibration



Report of Analysis

Client:	Environmental Restoration, LLC			Date Collected:	
Project:	Cooper Chemical - Long Valley NJ 2-COOP-ANS			Date Received:	
Client Sample ID:	VN0718WBSD01			SDG No.:	Q2594
Lab Sample ID:	VN0718WBSD01			Matrix:	Water
Analytical Method:	E624.1			% Solid:	0
Sample Wt/Vol:	5	Units:	mL	Final Vol:	5000 uL
Soil Aliquot Vol:			uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624	ID :	0.25	Level :	LOW
Prep Method :					

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
VN087361.D	1	07/18/25 13:16	VN071825

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	14.0		0.77	5.00	ug/L
74-87-3	Chloromethane	16.1		0.64	5.00	ug/L
75-01-4	Vinyl Chloride	15.8		0.83	5.00	ug/L
74-83-9	Bromomethane	12.2		0.80	5.00	ug/L
75-00-3	Chloroethane	20.1		2.30	5.00	ug/L
75-69-4	Trichlorofluoromethane	20.0		0.80	5.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	14.9		0.96	5.00	ug/L
75-35-4	1,1-Dichloroethene	14.5		0.76	5.00	ug/L
67-64-1	Acetone	89.4		4.60	25.0	ug/L
75-15-0	Carbon Disulfide	13.6		0.82	5.00	ug/L
1634-04-4	Methyl tert-Butyl Ether	18.4		0.77	5.00	ug/L
79-20-9	Methyl Acetate	20.5		0.91	5.00	ug/L
75-09-2	Methylene Chloride	17.4		0.86	5.00	ug/L
156-60-5	trans-1,2-Dichloroethene	15.4		0.82	5.00	ug/L
75-34-3	1,1-Dichloroethane	17.7		0.68	5.00	ug/L
110-82-7	Cyclohexane	14.6		0.92	5.00	ug/L
78-93-3	2-Butanone	110		2.00	25.0	ug/L
56-23-5	Carbon Tetrachloride	20.5		0.74	5.00	ug/L
156-59-2	cis-1,2-Dichloroethene	16.8		0.80	5.00	ug/L
67-66-3	Chloroform	19.0		0.55	5.00	ug/L
71-55-6	1,1,1-Trichloroethane	20.4		0.63	5.00	ug/L
108-87-2	Methylcyclohexane	16.5		0.73	5.00	ug/L
71-43-2	Benzene	18.8		0.45	5.00	ug/L
107-06-2	1,2-Dichloroethane	22.5		0.50	5.00	ug/L
79-01-6	Trichloroethene	18.3		0.49	5.00	ug/L
78-87-5	1,2-Dichloropropane	19.4		0.46	5.00	ug/L
75-27-4	Bromodichloromethane	21.6		0.64	5.00	ug/L
108-10-1	4-Methyl-2-Pentanone	120		3.00	25.0	ug/L
108-88-3	Toluene	18.7		0.46	5.00	ug/L
10061-02-6	t-1,3-Dichloropropene	20.0		0.72	5.00	ug/L

Report of Analysis

Client:	Environmental Restoration, LLC		Date Collected:	
Project:	Cooper Chemical - Long Valley NJ 2-COOP-ANS		Date Received:	
Client Sample ID:	VN0718WBSD01		SDG No.:	Q2594
Lab Sample ID:	VN0718WBSD01		Matrix:	Water
Analytical Method:	E624.1		% Solid:	0
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624	ID : 0.25	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
VN087361.D	1	07/18/25 13:16	VN071825

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	19.7		0.67	5.00	ug/L
79-00-5	1,1,2-Trichloroethane	19.8		0.45	5.00	ug/L
591-78-6	2-Hexanone	120		3.20	25.0	ug/L
124-48-1	Dibromochloromethane	21.8		0.66	5.00	ug/L
106-93-4	1,2-Dibromoethane	19.6		0.56	5.00	ug/L
127-18-4	Tetrachloroethene	18.7		0.84	5.00	ug/L
108-90-7	Chlorobenzene	18.9		0.47	5.00	ug/L
100-41-4	Ethyl Benzene	18.2		0.56	5.00	ug/L
179601-23-1	m/p-Xylenes	37.0		1.30	10.0	ug/L
95-47-6	o-Xylene	18.6		0.67	5.00	ug/L
100-42-5	Styrene	18.8		0.72	5.00	ug/L
75-25-2	Bromoform	20.4		0.94	5.00	ug/L
98-82-8	Isopropylbenzene	19.0		0.78	5.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	20.0		0.44	5.00	ug/L
108-67-8	1,3,5-Trimethylbenzene	19.9		0.59	5.00	ug/L
541-73-1	1,3-Dichlorobenzene	20.3		0.67	5.00	ug/L
106-46-7	1,4-Dichlorobenzene	19.8		0.81	5.00	ug/L
95-50-1	1,2-Dichlorobenzene	20.2		0.67	5.00	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	19.7		0.86	5.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	21.3		1.00	5.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	21.3		1.10	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	32.4		70 (91) - 130 (110)	108%	SPK: 30
2037-26-5	Toluene-d8	30.2		70 (91) - 130 (112)	101%	SPK: 30
460-00-4	4-Bromofluorobenzene	31.9		70 (63) - 130 (112)	106%	SPK: 30
INTERNAL STANDARDS						
74-97-5	Bromochloromethane	42400	7.8			
540-36-3	1,4-Difluorobenzene	215000	9.083			
3114-55-4	Chlorobenzene-d5	203000	11.847			

Report of Analysis

Client:	Environmental Restoration, LLC		Date Collected:	
Project:	Cooper Chemical - Long Valley NJ 2-COOP-ANS		Date Received:	
Client Sample ID:	VN0718WBSD01		SDG No.:	Q2594
Lab Sample ID:	VN0718WBSD01		Matrix:	Water
Analytical Method:	E624.1		% Solid:	0
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOC-TCLVOA-10
GC Column:	RXI-624	ID : 0.25	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Date Analyzed	Prep Batch ID
VN087361.D	1	07/18/25 13:16	VN071825

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN071825\
 Data File : VN087361.D
 Acq On : 18 Jul 2025 13:16
 Operator : JC\MD
 Sample : VN0718WBSD01
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 11 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VN0718WBSD01

Manual Integrations
 APPROVED

Reviewed By : John Carlone 07/21/2025
 Supervised By : Mahesh Dadoda 07/21/2025

Quant Time: Jul 18 23:18:57 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:49:56 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Bromochloromethane	7.800	128	42433	30.000	ug/l	-0.02
28) 1,4-Difluorobenzene	9.083	114	214950	30.000	ug/l	-0.02
57) Chlorobenzene-d5	11.847	117	202696	30.000	ug/l	-0.02
System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	8.559	65	103525	32.381	ug/l	-0.02
Spiked Amount 30.000	Range 91 - 110		Recovery = 107.933%			
60) 4-Bromofluorobenzene	12.829	95	99771	31.898	ug/l	-0.02
Spiked Amount 30.000	Range 63 - 112		Recovery = 106.333%			
63) Toluene-d8	10.547	98	275131	30.231	ug/l	-0.02
Spiked Amount 30.000	Range 91 - 112		Recovery = 100.767%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.142	85	35853	14.036	ug/l	97
3) Chloromethane	2.383	50	41885	16.055	ug/l	96
4) Vinyl Chloride	2.536	62	44855	15.819	ug/l	95
5) Bromomethane	2.983	94	18361	12.202	ug/l	89
6) Chloroethane	3.142	64	30637	20.142	ug/l	96
7) Trichlorofluoromethane	3.518	101	69722	20.047	ug/l	89
8) Diethyl Ether	3.959	74	30088	17.608	ug/l	91
9) 1,1,2-Trichlorotrifluo...	4.359	101	38544	14.948	ug/l	95
10) 1,1-Dichloroethene	4.336	96	37395	14.548	ug/l	86
11) Methyl Iodide	4.577	142	26704	11.596	ug/l	91
12) Methyl Acetate	5.018	43	82847	20.548	ug/l #	85
13) Acrolein	4.183	56	48089	77.621	ug/l	98
14) Acrylonitrile	5.712	53	167411	89.018	ug/l	98
15) Acetone	4.424	58	49031	89.378	ug/l	79
16) Carbon Disulfide	4.701	76	102241	13.604	ug/l	100
17) Allyl chloride	5.012	41	75076	17.708	ug/l	93
18) Methylene Chloride	5.259	84	51714	17.367	ug/l	96
19) trans-1,2-Dichloroethene	5.771	96	43214	15.373	ug/l	97
20) Diisopropyl ether	6.659	45	173529	19.292	ug/l	96
21) 1,1-Dichloroethane	6.553	63	94938	17.660	ug/l	95
22) cis-1,2-Dichloroethene	7.471	96	54987	16.808	ug/l	95
23) tert-Butyl Alcohol	5.524	59	59706	84.418	ug/l #	100
24) Methyl tert-Butyl Ether	5.789	73	165732	18.384	ug/l	98
25) Chloroform	7.953	83	98002	19.028	ug/l	100
26) Cyclohexane	8.241	56	65075	14.563	ug/l #	98
29) 1,1-Dichloropropene	8.359	75	60948	18.192	ug/l	97
30) 2-Butanone	7.471	43	246967	109.279	ug/l	96
31) 2,2-Dichloropropane	7.471	77	80501	19.905	ug/l	95
32) 1,1,1-Trichloroethane	8.147	97	80024	20.445	ug/l	99
33) Carbon Tetrachloride	8.347	117	67642	20.536	ug/l	96
34) Benzene	8.589	78	199829	18.827	ug/l	98
35) Methacrylonitrile	7.765	41	50200	22.041	ug/l	95
36) 1,2-Dichloroethane	8.659	62	77012	22.457	ug/l	98
37) Trichloroethene	9.336	130	44812	18.304	ug/l	98
38) Methylcyclohexane	9.583	83	63597	16.544	ug/l	97
39) 1,2-Dichloropropane	9.606	63	51797	19.443	ug/l	98
40) Dibromomethane	9.694	93	37885	20.914	ug/l	98
41) Bromodichloromethane	9.871	83	78887	21.575	ug/l #	96
42) Vinyl Acetate	6.589	43	786848	107.046	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN071825\
 Data File : VN087361.D
 Acq On : 18 Jul 2025 13:16
 Operator : JC\MD
 Sample : VN0718WBSD01
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 11 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VN0718WBSD01

Manual Integrations
 APPROVED

Reviewed By : John Carlone 07/21/2025
 Supervised By : Mahesh Dadoda 07/21/2025

Quant Time: Jul 18 23:18:57 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:49:56 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) Ethyl Acetate	7.553	43	92098	22.575	ug/l	100
44) Isopropyl Acetate	8.677	43	147643	22.212	ug/l	97
45) 1,4-Dioxane	9.683	88	18109	402.741	ug/l #	96
46) Methyl methacrylate	9.665	41	65982	21.353	ug/l	91
47) n-amyl Acetate	12.518	43	88985m	21.896	ug/l	
48) t-1,3-Dichloropropene	10.818	75	81666	20.035	ug/l	97
49) cis-1,3-Dichloropropene	10.294	75	85567	19.747	ug/l	91
50) 1,1,2-Trichloroethane	10.994	97	51059	19.843	ug/l	97
51) Ethyl methacrylate	10.859	69	78913	20.149	ug/l	86
52) 1,3-Dichloropropane	11.147	76	89110	20.171	ug/l	99
53) Dibromochloromethane	11.341	129	58941	21.821	ug/l	97
54) 1,2-Dibromoethane	11.447	107	51936	19.563	ug/l	100
55) 2-Chloroethyl vinyl ether	10.141	63	229622	102.285	ug/l	100
56) Bromoform	12.559	173	37792	20.353	ug/l #	95
58) 4-Methyl-2-Pentanone	10.430	43	484568	118.914	ug/l	94
59) 2-Hexanone	11.182	43	321652	122.241	ug/l	91
61) Tetrachloroethene	11.082	164	37558	18.711	ug/l	89
62) Toluene	10.612	91	214455	18.733	ug/l	99
64) Chlorobenzene	11.871	112	138176	18.922	ug/l	100
65) 1,1,1,2-Tetrachloroethane	11.941	131	49360	20.457	ug/l	98
66) Ethyl Benzene	11.947	91	228458	18.232	ug/l	100
67) m/p-Xylenes	12.053	106	177611	36.990	ug/l	98
68) o-Xylene	12.377	106	85132	18.584	ug/l	96
69) Styrene	12.394	104	147470	18.751	ug/l	98
70) Isopropylbenzene	12.677	105	216730	18.996	ug/l	99
71) 1,1,2,2-Tetrachloroethane	12.918	83	82216	20.020	ug/l	99
72) 1,2,3-Trichloropropane	12.971	75	80548m	22.745	ug/l	
73) Bromobenzene	12.959	156	55891	20.195	ug/l	93
74) n-propylbenzene	13.012	91	275814	19.788	ug/l	99
75) 2-Chlorotoluene	13.106	91	161776	19.212	ug/l	97
76) 1,3,5-Trimethylbenzene	13.153	105	184498	19.864	ug/l	100
77) t-1,4-Dichloro-2-butene	12.718	75	21439	13.648	ug/l	86
78) 4-Chlorotoluene	13.200	91	170444	19.763	ug/l	99
79) tert-butylbenzene	13.418	119	159673	20.452	ug/l	98
80) 1,2,4-Trimethylbenzene	13.459	105	187139	20.065	ug/l	98
81) sec-Butylbenzene	13.594	105	231192	20.370	ug/l	99
82) p-Isopropyltoluene	13.706	119	192583	20.390	ug/l	97
83) 1,3-Dichlorobenzene	13.712	146	107976	20.260	ug/l	98
84) 1,4-Dichlorobenzene	13.788	146	106059	19.774	ug/l	98
85) n-Butylbenzene	14.035	91	178654	20.732	ug/l	99
86) Hexachloroethane	14.312	117	35454	19.831	ug/l	91
87) 1,2-Dichlorobenzene	14.082	146	101395	20.178	ug/l	98
88) 1,2-Dibromo-3-Chloropr...	14.694	75	18194	19.675	ug/l	98
89) 1,2,4-Trichlorobenzene	15.812	180	60524	21.289	ug/l	98
90) Hexachlorobutadiene	15.476	225	24689	29.265	ug/l	95
91) Naphthalene	15.612	128	211981	18.945	ug/l	99
92) 1,2,3-Trichlorobenzene	15.812	180	60524	21.289	ug/l	98

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

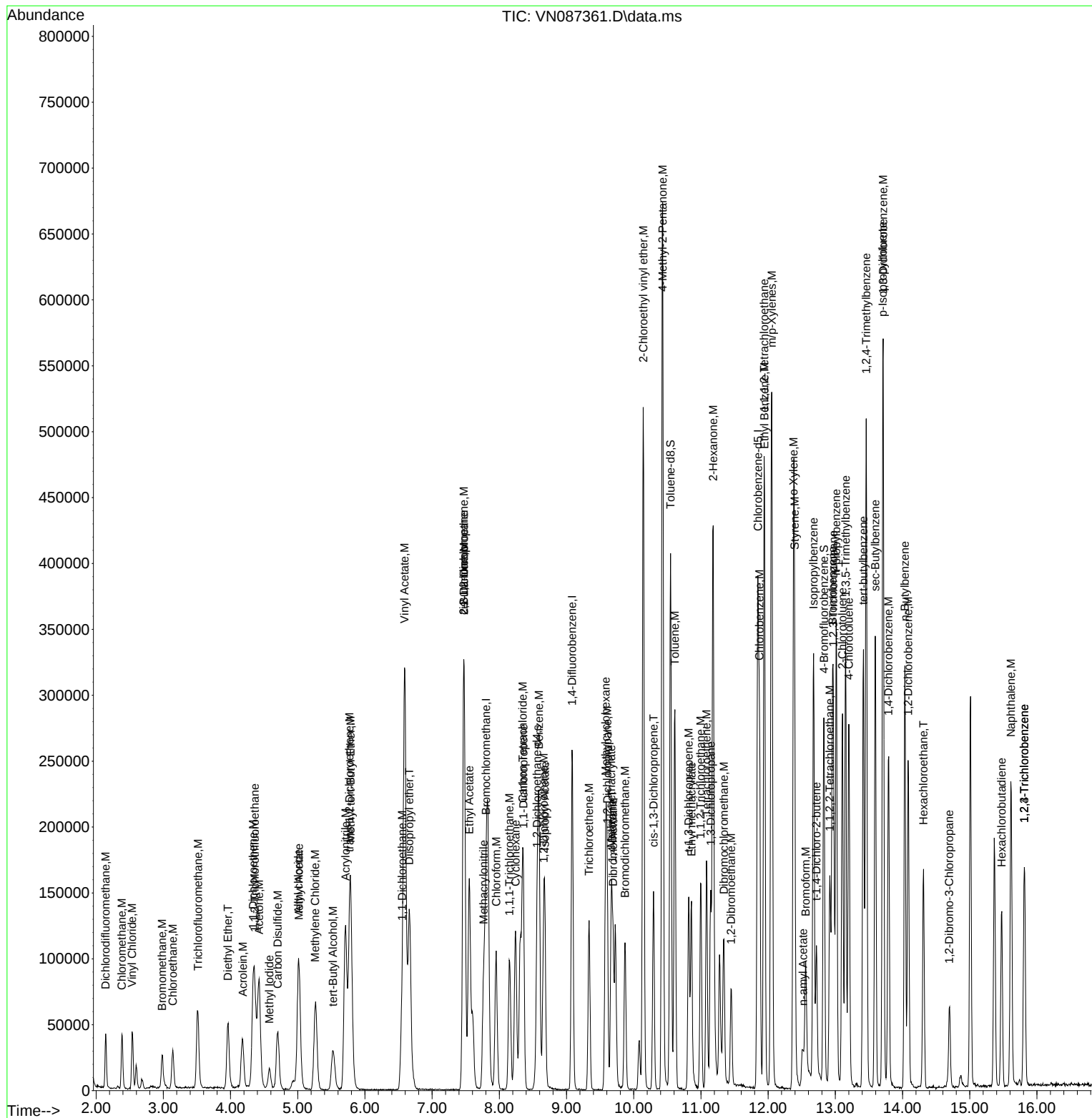
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Data File : VN087361.D
Acq On : 18 Jul 2025 13:16
Operator : JC\MD
Sample : VN0718WBSD01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 11 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VN0718WBSD01

Manual Integrations
APPROVED

Reviewed By : John Carlone 07/21/2025
Supervised By : Mahesh Dadoda 07/21/2025

Quant Time: Jul 18 23:18:57 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Wed Jun 25 10:49:56 2025
Response via : Initial Calibration



Manual Integration Report

Sequence:

VN062525

Instrument

MSVOA_n

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDIC005	VN087162.D	1,2,3-Trichloropropane	JOHN	6/25/2025 3:54:52 PM	MMDadoda	6/26/2025 2:39:55 PM	Peak Integrated by Software
VSTDIC005	VN087162.D	2-Hexanone	JOHN	6/25/2025 3:54:52 PM	MMDadoda	6/26/2025 2:39:55 PM	Peak Integrated by Software
VSTDIC005	VN087162.D	Carbon Tetrachloride	JOHN	6/25/2025 3:54:52 PM	MMDadoda	6/26/2025 2:39:55 PM	Peak Integrated by Software
VSTDIC005	VN087162.D	Ethyl Acetate	JOHN	6/25/2025 3:54:52 PM	MMDadoda	6/26/2025 2:39:55 PM	Peak Integrated by Software
VSTDIC005	VN087162.D	Ethyl methacrylate	JOHN	6/25/2025 3:54:52 PM	MMDadoda	6/26/2025 2:39:55 PM	Peak Integrated by Software
VSTDIC005	VN087162.D	Methacrylonitrile	JOHN	6/25/2025 3:54:52 PM	MMDadoda	6/26/2025 2:39:55 PM	Peak Integrated by Software
VSTDIC005	VN087162.D	n-amyl Acetate	JOHN	6/25/2025 3:54:52 PM	MMDadoda	6/26/2025 2:39:55 PM	Peak Integrated by Software
VSTDIC005	VN087162.D	tert-Butyl Alcohol	JOHN	6/25/2025 3:54:52 PM	MMDadoda	6/26/2025 2:39:55 PM	Peak Integrated by Software
VSTDICCC020	VN087163.D	1,2,3-Trichloropropane	JOHN	6/25/2025 3:54:56 PM	MMDadoda	6/26/2025 2:39:57 PM	Peak Integrated by Software
VSTDICCC020	VN087163.D	n-amyl Acetate	JOHN	6/25/2025 3:54:56 PM	MMDadoda	6/26/2025 2:39:57 PM	Peak Integrated by Software
VSTDIC050	VN087164.D	1,2,3-Trichloropropane	JOHN	6/25/2025 3:55:01 PM	MMDadoda	6/26/2025 2:40:07 PM	Peak Integrated by Software
VSTDIC100	VN087165.D	1,2,3-Trichloropropane	JOHN	6/25/2025 3:55:06 PM	MMDadoda	6/26/2025 2:40:11 PM	Peak Integrated by Software
VSTDIC150	VN087166.D	1,2,3-Trichloropropane	JOHN	6/25/2025 3:55:12 PM	MMDadoda	6/26/2025 2:40:18 PM	Peak Integrated by Software

Manual Integration Report

Sequence:

VN062525

Instrument

MSVOA_n

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDICV020	VN087168.D	1,2,3-Trichloropropane	JOHN	6/25/2025 3:55:16 PM	MMDadoda	6/26/2025 2:40:24 PM	Peak Integrated by Software
VSTDICV020	VN087168.D	n-amyl Acetate	JOHN	6/25/2025 3:55:16 PM	MMDadoda	6/26/2025 2:40:24 PM	Peak Integrated by Software
VSTDCCC020	VN087179.D	1,2,3-Trichloropropane	JOHN	6/26/2025 8:29:10 AM	MMDadoda	6/26/2025 2:40:36 PM	Peak Integrated by Software
VSTDCCC020	VN087179.D	n-amyl Acetate	JOHN	6/26/2025 8:29:10 AM	MMDadoda	6/26/2025 2:40:36 PM	Peak Integrated by Software

Manual Integration Report

Sequence:

VN071825

Instrument

MSVOA_n

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC020	VN087353.D	1,1,2-Trichlorotrifluoroethane	JOHN	7/21/2025 8:43:29 AM	MMDadoda	7/21/2025 1:55:25 PM	Peak Integrated by Software
VSTDCCC020	VN087353.D	1,2,3-Trichloropropane	JOHN	7/21/2025 8:43:29 AM	MMDadoda	7/21/2025 1:55:25 PM	Peak Integrated by Software
VSTDCCC020	VN087353.D	Diethyl Ether	JOHN	7/21/2025 8:43:29 AM	MMDadoda	7/21/2025 1:55:25 PM	Peak Integrated by Software
VSTDCCC020	VN087353.D	n-amyl Acetate	JOHN	7/21/2025 8:43:29 AM	MMDadoda	7/21/2025 1:55:25 PM	Peak Integrated by Software
VN0718WBS01	VN087354.D	1,2,3-Trichloropropane	JOHN	7/21/2025 8:43:34 AM	MMDadoda	7/21/2025 1:55:27 PM	Peak Integrated by Software
VN0718WBS01	VN087354.D	n-amyl Acetate	JOHN	7/21/2025 8:43:34 AM	MMDadoda	7/21/2025 1:55:27 PM	Peak Integrated by Software
VN0718WBSD01	VN087361.D	1,2,3-Trichloropropane	JOHN	7/21/2025 8:43:58 AM	MMDadoda	7/21/2025 1:55:43 PM	Peak Integrated by Software
VN0718WBSD01	VN087361.D	n-amyl Acetate	JOHN	7/21/2025 8:43:58 AM	MMDadoda	7/21/2025 1:55:43 PM	Peak Integrated by Software
VSTDCCC020	VN087366.D	1,2,3-Trichloropropane	JOHN	7/21/2025 8:46:40 AM	MMDadoda	7/21/2025 1:55:44 PM	Peak Integrated by Software
VSTDCCC020	VN087366.D	Methylene Chloride	JOHN	7/21/2025 8:46:40 AM	MMDadoda	7/21/2025 1:55:44 PM	Peak Integrated by Software
VSTDCCC020	VN087366.D	n-amyl Acetate	JOHN	7/21/2025 8:46:40 AM	MMDadoda	7/21/2025 1:55:44 PM	Peak Integrated by Software
VSTDCCC020	VN087366.D	trans-1,2-Dichloroethene	JOHN	7/21/2025 8:46:40 AM	MMDadoda	7/21/2025 1:55:44 PM	Peak Integrated by Software



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

Manual Integration Report

Sequence:

VN071825

Instrument

MSVOA_n

Sample ID

File ID

Parameter

Review By

Review On

Supervised
By

Supervised On

Reason

Instrument ID: **MSVOA_N**

Daily Analysis Runlog For Sequence/QC Batch ID # VN062525

Review By	John Carlone	Review On	6/26/2025 8:30:28 AM
Supervise By	Maresh Dadoda	Supervise On	6/26/2025 2:41:09 PM
SubDirectory	VN062525	HP Acquire Method	HP Processing Method 624N062525W.M
STD. NAME	STD REF.#		
Tune/Reschk	VP134497		
Initial Calibration Stds	VP134518,VP134519,VP134520,VP134521,VP134522		
CCC	VP134498,VP134524,VP134525		
Internal Standard/PEM			
ICV/I.BLK	VP134523		
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VN087161.D	25 Jun 2025 08:25	JC\MD	Ok
2	VSTDIC005	VN087162.D	25 Jun 2025 08:59	JC\MD	Ok,M
3	VSTDICCC020	VN087163.D	25 Jun 2025 09:20	JC\MD	Ok,M
4	VSTDIC050	VN087164.D	25 Jun 2025 09:41	JC\MD	Ok,M
5	VSTDIC0100	VN087165.D	25 Jun 2025 10:03	JC\MD	Ok,M
6	VSTDIC0150	VN087166.D	25 Jun 2025 10:24	JC\MD	Ok,M
7	IBLK	VN087167.D	25 Jun 2025 10:46	JC\MD	Ok
8	VSTDICV020	VN087168.D	25 Jun 2025 11:08	JC\MD	Ok,M
9	VN0625WBS01	VN087169.D	25 Jun 2025 11:41	JC\MD	Ok,M
10	VN0625WBSD01	VN087170.D	25 Jun 2025 12:15	JC\MD	Ok,M
11	VN0625WBL01	VN087171.D	25 Jun 2025 12:36	JC\MD	Ok
12	Q2349-01	VN087172.D	25 Jun 2025 13:11	JC\MD	Dilution
13	Q2349-04	VN087173.D	25 Jun 2025 13:33	JC\MD	Dilution
14	Q2349-01DL	VN087174.D	25 Jun 2025 13:54	JC\MD	Ok
15	Q2349-04DL	VN087175.D	25 Jun 2025 14:15	JC\MD	Ok
16	IBLK	VN087176.D	25 Jun 2025 14:37	JC\MD	Ok
17	Q2126-07 2.5PPB	VN087177.D	25 Jun 2025 14:58	JC\MD	Ok,M
18	Q2126-08 5.0PPB	VN087178.D	25 Jun 2025 15:20	JC\MD	Ok,M
19	VSTDCCC020	VN087179.D	25 Jun 2025 16:12	JC\MD	Ok,M

M : Manual Integration

Instrument ID: **MSVOA_N**

Daily Analysis Runlog For Sequence/QC Batch ID # VN071825

Review By	John Carlone	Review On	7/21/2025 8:49:59 AM		
Supervise By	Maresh Dadoda	Supervise On	7/21/2025 1:55:50 PM		
SubDirectory	VN071825	HP Acquire Method	MSVOA_N	HP Processing Method	624n062525w.m
STD. NAME		STD REF.#			
Tune/Reschk Initial Calibration Stds		VP134817			
CCC		VP134818,VP134819			
Internal Standard/PEM		VP134691			
ICV/I.BLK					
Surrogate Standard					
MS/MSD Standard					
LCS Standard					

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VN087352.D	18 Jul 2025 08:42	JC\MD	Ok
2	VSTDCCC020	VN087353.D	18 Jul 2025 09:15	JC\MD	Ok,M
3	VN0718WBS01	VN087354.D	18 Jul 2025 09:49	JC\MD	Ok,M
4	VN0718WBS02	VN087355.D	18 Jul 2025 10:21	JC\MD	Not Ok
5	VN0718WBL01	VN087356.D	18 Jul 2025 11:04	JC\MD	Ok
6	Q2630-01	VN087357.D	18 Jul 2025 11:51	JC\MD	Dilution
7	Q2630-02	VN087358.D	18 Jul 2025 12:12	JC\MD	Dilution
8	Q2585-01	VN087359.D	18 Jul 2025 12:34	JC\MD	ReRun
9	Q2594-01	VN087360.D	18 Jul 2025 12:55	JC\MD	Not Ok
10	VN0718WBSD01	VN087361.D	18 Jul 2025 13:16	JC\MD	Ok,M
11	Q2630-01DL	VN087362.D	18 Jul 2025 13:37	JC\MD	Ok
12	Q2630-02DL	VN087363.D	18 Jul 2025 13:59	JC\MD	Ok
13	Q2585-01	VN087364.D	18 Jul 2025 14:20	JC\MD	Ok
14	Q2594-01	VN087365.D	18 Jul 2025 14:41	JC\MD	Ok
15	VSTDCCC020	VN087366.D	18 Jul 2025 15:02	JC\MD	Ok,M

M : Manual Integration

Instrument ID: MSVOA_N

Daily Analysis Runlog For Sequence/QC Batch ID # VN062525

Review By	John Carlone	Review On	6/26/2025 8:30:28 AM
Supervise By	Maresh Dadoda	Supervise On	6/26/2025 2:41:09 PM
SubDirectory	VN062525	HP Acquire Method	HP Processing Method 624N062525W.M

STD. NAME	STD REF.#
Tune/Reschk	VP134497
Initial Calibration Stds	VP134518,VP134519,VP134520,VP134521,VP134522
CCC	VP134498,VP134524,VP134525
Internal Standard/PEM	
ICV/I.BLK	VP134523
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VN087161.D	25 Jun 2025 08:25		JC\MD	Ok
2	VSTDIC005	VSTDIC005	VN087162.D	25 Jun 2025 08:59		JC\MD	Ok,M
3	VSTDICCC020	VSTDICCC020	VN087163.D	25 Jun 2025 09:20		JC\MD	Ok,M
4	VSTDIC050	VSTDIC050	VN087164.D	25 Jun 2025 09:41		JC\MD	Ok,M
5	VSTDIC100	VSTDIC100	VN087165.D	25 Jun 2025 10:03		JC\MD	Ok,M
6	VSTDIC150	VSTDIC150	VN087166.D	25 Jun 2025 10:24		JC\MD	Ok,M
7	IBLK	IBLK	VN087167.D	25 Jun 2025 10:46		JC\MD	Ok
8	VSTDICV020	ICVVN062525	VN087168.D	25 Jun 2025 11:08	pH#Lot#V12668	JC\MD	Ok,M
9	VN0625WBS01	VN0625WBS01	VN087169.D	25 Jun 2025 11:41		JC\MD	Ok,M
10	VN0625WBSD01	VN0625WBSD01	VN087170.D	25 Jun 2025 12:15		JC\MD	Ok,M
11	VN0625WBL01	VN0625WBL01	VN087171.D	25 Jun 2025 12:36		JC\MD	Ok
12	Q2349-01	001-WILLETS-PT-BLVD	VN087172.D	25 Jun 2025 13:11	vial A pH<2 need 20X	JC\MD	Dilution
13	Q2349-04	002-35TH-AVE(JUNE)	VN087173.D	25 Jun 2025 13:33	vial A pH<2 need 20X	JC\MD	Dilution
14	Q2349-01DL	001-WILLETS-PT-BLVD	VN087174.D	25 Jun 2025 13:54	vial B pH<2	JC\MD	Ok
15	Q2349-04DL	002-35TH-AVE(JUNE)	VN087175.D	25 Jun 2025 14:15	vial B pH<2	JC\MD	Ok
16	IBLK	IBLK	VN087176.D	25 Jun 2025 14:37		JC\MD	Ok
17	Q2126-07 2.5PPB	LOD-MDL-WATER-01-CL	VN087177.D	25 Jun 2025 14:58		JC\MD	Ok,M
18	Q2126-08 5.0PPB	LOQ-WATER-02-QT2-2	VN087178.D	25 Jun 2025 15:20		JC\MD	Ok,M

Instrument ID: MSVOA_N

Daily Analysis Runlog For Sequence/QC Batch ID # VN062525

Review By	John Carlone	Review On	6/26/2025 8:30:28 AM
Supervise By	Mahesh Dadoda	Supervise On	6/26/2025 2:41:09 PM
SubDirectory	VN062525	HP Acquire Method	HP Processing Method 624N062525W.M

STD. NAME	STD REF.#
Tune/Reschk	VP134497
Initial Calibration Stds	VP134518,VP134519,VP134520,VP134521,VP134522
CCC	VP134498,VP134524,VP134525
Internal Standard/PEM	
ICV/I.BLK	VP134523
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

19	VSTDCCC020	VSTDCCC020EC	VN087179.D	25 Jun 2025 16:12		JC\MD	Ok,M
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M : Manual Integration

Instrument ID: MSVOA_N

Daily Analysis Runlog For Sequence/QC Batch ID # VN071825

Review By	John Carlone	Review On	7/21/2025 8:49:59 AM
Supervise By	Maresh Dadoda	Supervise On	7/21/2025 1:55:50 PM
SubDirectory	VN071825	HP Acquire Method	MSVOA_N HP Processing Method 624n062525w.m

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	VP134817
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP134818,VP134819 VP134691

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VN087352.D	18 Jul 2025 08:42		JC\MD	Ok
2	VSTDCCC020	VSTDCCC020	VN087353.D	18 Jul 2025 09:15		JC\MD	Ok,M
3	VN0718WBS01	VN0718WBS01	VN087354.D	18 Jul 2025 09:49		JC\MD	Ok,M
4	VN0718WBS02	VN0718WBS02	VN087355.D	18 Jul 2025 10:21	surrogate failed	JC\MD	Not Ok
5	VN0718WBL01	VN0718WBL01	VN087356.D	18 Jul 2025 11:04		JC\MD	Ok
6	Q2630-01	001 Willets Pt Blvd (Jur	VN087357.D	18 Jul 2025 11:51	vial A pH<2 Need 5X	JC\MD	Dilution
7	Q2630-02	002 35th Ave (JUNE)	VN087358.D	18 Jul 2025 12:12	vial A pH<2 Surrogate Fail;Need 5X	JC\MD	Dilution
8	Q2585-01	EFF-WW	VN087359.D	18 Jul 2025 12:34	vial A pH<2 Surrogate fail;E flag of previous sample	JC\MD	ReRun
9	Q2594-01	CC-071325-RW	VN087360.D	18 Jul 2025 12:55	Surrogate Fail;Run @ lower dilution	JC\MD	Not Ok
10	VN0718WBSD01	VN0718WBSD01	VN087361.D	18 Jul 2025 13:16	BSD Failed Low for com.#16,26	JC\MD	Ok,M
11	Q2630-01DL	001 Willets Pt Blvd (Jur	VN087362.D	18 Jul 2025 13:37	vial B pH<2	JC\MD	Ok
12	Q2630-02DL	002 35th Ave (JUNE)DI	VN087363.D	18 Jul 2025 13:59	vial B pH<2	JC\MD	Ok
13	Q2585-01	EFF-WW	VN087364.D	18 Jul 2025 14:20	vial B pH<2	JC\MD	Ok
14	Q2594-01	CC-071325-RW	VN087365.D	18 Jul 2025 14:41	vial A pH<2	JC\MD	Ok
15	VSTDCCC020	VSTDCCC020EC	VN087366.D	18 Jul 2025 15:02		JC\MD	Ok,M

M : Manual Integration



SHIPPING DOCUMENTS



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

CHAIN OF CUSTODY RECORD

Alliance Project Number:

22594

COC Number:

CC-002

CLIENT INFORMATION

COMPANY: ENVIRONMENTAL RESTORATION LLC
ADDRESS: 1666 FABICK DR.
CITY: FENTON STATE: MO ZIP: 63026
ATTENTION: Byron Hartman
PHONE: 801 209 0368 FAX:

PROJECT INFORMATION

PROJECT NAME: COOPER CHEMICAL
PROJECT #: CC2-16 LOCATION: LONG VALLEY NJ
PROJECT MANAGER: BYRON HARTMAN
E-MAIL: b.hartman@erllc.com
PHONE: 801 209 0368 FAX:

BILLING INFORMATION

BILL TO: ENVIRONMENTAL REST. PO# CC.2 - 16
ADDRESS: 1666 FABICK DR
CITY: FENTON STATE: MO ZIP: 63026
ATTENTION: Ryan Simpson PHONE: 636-227-7477

DATA TURNAROUND INFORMATION

FAX: _____ DAYS*
HARD COPY: 14 (STANDARD) DAYS*
EDD: 10 (STANDARD) DAYS*
* TO BE APPROVED BY ALLIANCE
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

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

ANALYSIS								
EPA METH 624 VOA	EPA METH 625 NVO	EPA METH 608 PCBs	EPA METH 608 PEST					
1	2	3	4	5	6	7	8	9

PRESERVATIVES

COMMENTS

<-- Specify Preservatives
A-HCl B-HNO3
C-H2SO4 D-NaOH
E-ICE F-Other

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# of Bottles									
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9
1.	CC-071325 - RW	W			7-14-25	1030	8									
2.																
3.																
4.																
5.																
6.																
7.																
8.																
9.																
10.																

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

RELINQUISHED BY SAMPLER	DATE/TIME	15	RECEIVED BY	1153	7-14-25	Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant ☐ Cooler Temp 24.2 C
1. [Signature]	7/14/25		1. [Signature]			MeOH extraction requires an additional 4oz. Jar for percent solid
RELINQUISHED BY	DATE/TIME		RECEIVED BY			Comments:
2.			2.			
RELINQUISHED BY	DATE/TIME		RECEIVED FOR LAB BY			SHIPPED VIA: CLIENT: ☐ Hand Delivered ☐ Overnight
3.			3.			ALLIANCE: ☐ Picked Up ☐ Overnight
						Shipment Complete ☐ YES ☐ NO

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

From: Byron Hartman <b.hartman@erllc.com>
Sent: Tuesday, July 15, 2025 2:10 PM
Subject: Re: [EXT]no ice

EXTERNAL EMAIL - This email was sent by a person from outside your organization. Exercise caution when clicking links, opening attachments or taking further action, before validating its authenticity.

Secured by Check Point

Please proceed as normal with analytical and make a notation on ice.

From: Deepak Parmar <Deepak.Parmar@alliancetg.com>
Sent: Monday, July 14, 2025 2:05 PM
To: Byron Hartman <b.hartman@erllc.com>
Subject: [EXT]no ice

*****CAUTION*** This email originates from a source outside the company. Please use caution when opening attachments, clicking on links, or following the senders request.**

Good afternoon,

sample received with melted ice with Temp 24.2 cel on 7/14/2025 let us know how to proceed with analysis ?

Thanks & Regards,



Deepak Parmar
Sr. Project Manager
An Alliance Technical Group Company
Main: 908-789-8900
Direct: 908-728-3154
Address: 284 Sheffield St, Ste 1, Mountainside, NJ 07092
www.alliancetg.com



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system that may occur while using data contained in, or transmitted with, this e-mail. If you have received this e-mail in error, please immediately notify by return e-mail. Thank you.

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2594	ENVI60	Order Date : 7/14/2025 12:05:00 PM	Project Mgr :
Client Name : Environmental Restoration,		Project Name : Cooper Chemical - Long Va	Report Type : NJ Reduced
Client Contact : Byron Hartman		Receive DateTime : 7/14/2025 11:53:00 AM	EDD Type : Excel NJ
Invoice Name : Environmental Restoration,		Purchase Order :	Hard Copy Date :
Invoice Contact : Byron Hartman			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q2594-01	CC-071325-RW	Water	07/14/2025	10:30	VOC-TCLVOA-10		624.1		10 Bus. Days

Relinquished By :

Date / Time :

[Signature]
7-14-25 1250

Received By :

Date / Time :

JL
7/14/25 1250

Storage Area : VOA Refridgerator Room