

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL032725\
 Data File : VL042189.D
 Acq On : 27 Mar 2025 20:48
 Operator : SY/MD
 Sample : Q1669-09
 Misc : 400mL/MSVOA_L
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 AA-2-3262025

Quant Time: Mar 28 02:17:14 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL032725AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Fri Mar 28 02:00:52 2025
 Response via : Initial Calibration

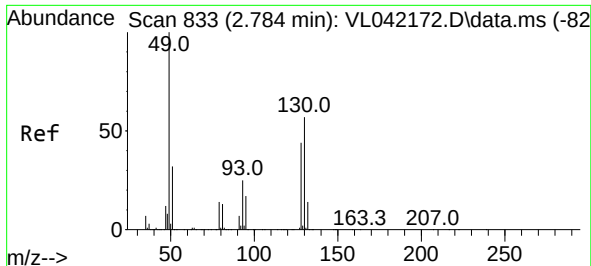
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.787	49	185013	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.962	114	523099	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.882	117	477151	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.377	95	387301	9.884	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	98.800%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.499	85	12204	0.447	ppbv	100
3) Chlorodifluoromethane	1.476	51	11994	0.430	ppbv #	85
4) Chloromethane	1.531	50	4911	0.440	ppbv	91
6) Bromomethane	1.664	94	236	0.047	ppbv #	4
9) Propene	1.619	41	5365	0.419	ppbv	96
11) Trichlorofluoromethane	1.878	101	5874	0.221	ppbv	88
12) 1,1,2-Trichlorotrifluo...	2.136	101	1274	0.058	ppbv	86
13) Ethanol	1.722	45	10166	8.407	ppbv #	27
15) Acetone	1.835	43	63981	2.473	ppbv	97
16) 1,3-Butadiene	1.599	39	831	0.066	ppbv #	11
19) Isopropyl Alcohol	1.722	45	10166	0.696	ppbv #	57
20) Methylene Chloride	2.062	84	67627	7.018	ppbv	95
23) Vinyl Acetate	2.454	43	906	0.081	ppbv #	23
25) Ethyl Acetate	2.826	43	78801	1.173	ppbv #	79
26) Hexane	2.826	57	116880	4.506	ppbv #	31
34) 2-Butanone	2.567	43	6879	0.181	ppbv	96
35) Carbon Tetrachloride	3.764	117	1236	0.030	ppbv #	61
36) Benzene	3.654	78	6925	0.134	ppbv #	90
39) 1,2-Dichloropropane	3.959	63	135050	7.151	ppbv #	22
41) Tetrahydrofuran	3.224	42	6258	0.287	ppbv #	38
53) Toluene	6.933	91	20704	0.337	ppbv	99
58) Ethyl Benzene	9.532	91	4747	0.056	ppbv	92
64) n-propylbenzene	10.989	120	1201	0.046	ppbv	84
65) tert-Butylbenzene	11.539	119	3276	0.035	ppbv #	64
72) 4-Ethyltoluene	11.128	105	7264	0.086	ppbv #	92
73) 1,3,5-Trimethylbenzene	11.202	105	7241	0.098	ppbv	88
74) 1,2,4-Trimethylbenzene	11.539	105	24773	0.291	ppbv #	65
75) 1,3-Dichlorobenzene	11.672	146	1457	0.031	ppbv	93
76) 1,4-Dichlorobenzene	11.672	146	1457	0.031	ppbv #	68
77) 1,2-Dichlorobenzene	11.672	146	1457	0.032	ppbv	91
79) Naphthalene	13.516	128	3117	0.034	ppbv #	88

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

Quant Time: Mar 28 02:17:14 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL032725AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
QLast Update : Fri Mar 28 02:00:52 2025
Response via : Initial Calibration

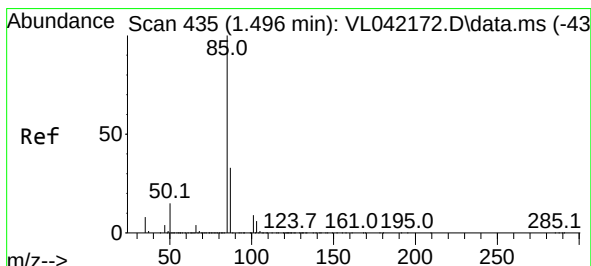
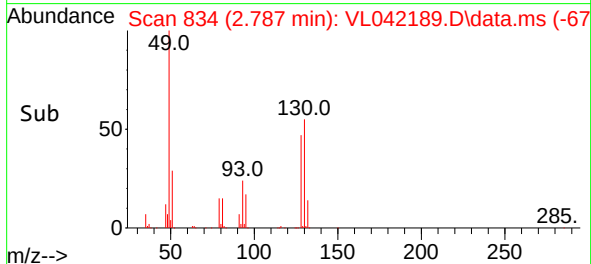
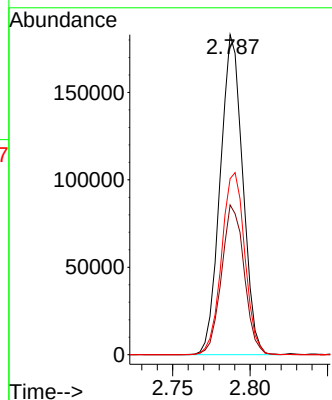
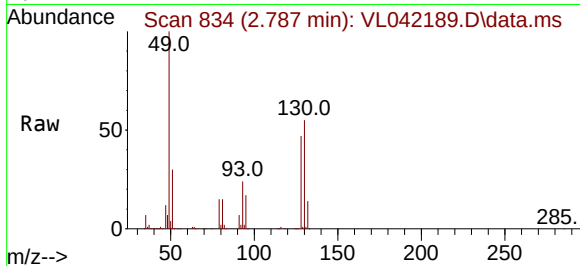




#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 2.787 min Scan# 81
 Delta R.T. 0.003 min
 Lab File: VL042189.D
 Acq: 27 Mar 2025 20:48

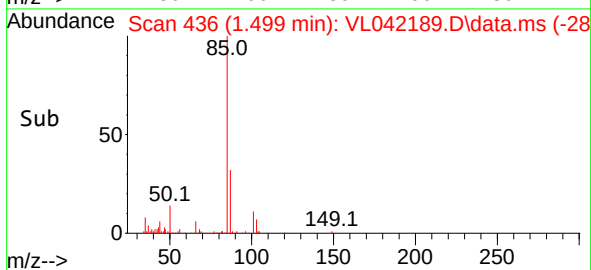
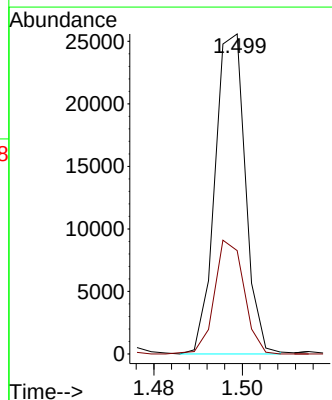
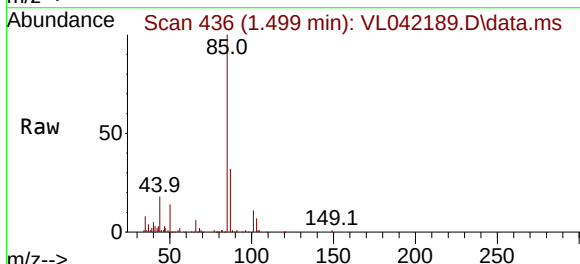
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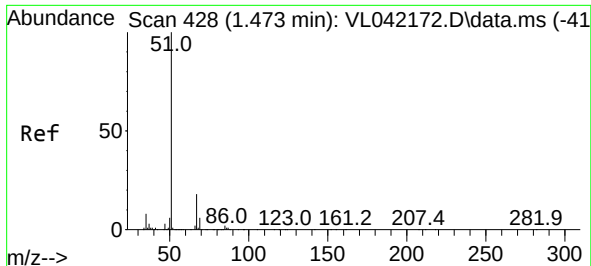
Tgt Ion: 49 Resp: 185013
 Ion Ratio Lower Upper
 49 100
 128 47.0 22.9 68.5
 130 58.7 28.8 86.4



#2
 Dichlorodifluoromethane
 Concen: 0.447 ppbv
 RT: 1.499 min Scan# 436
 Delta R.T. 0.003 min
 Lab File: VL042189.D
 Acq: 27 Mar 2025 20:48

Tgt Ion: 85 Resp: 12204
 Ion Ratio Lower Upper
 85 100
 87 32.3 26.1 39.1

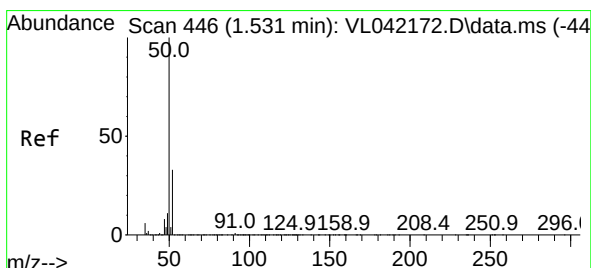
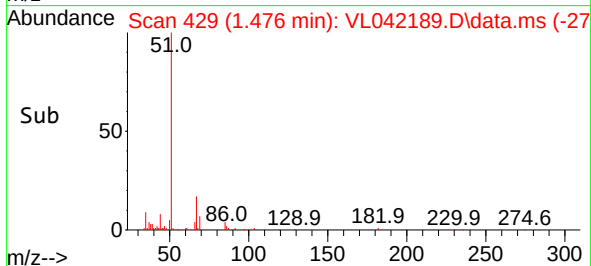
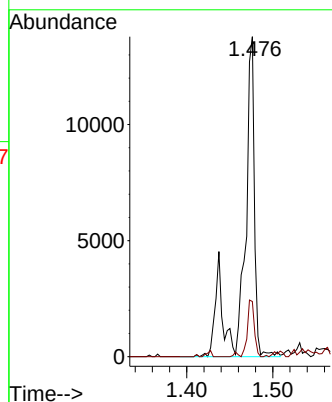
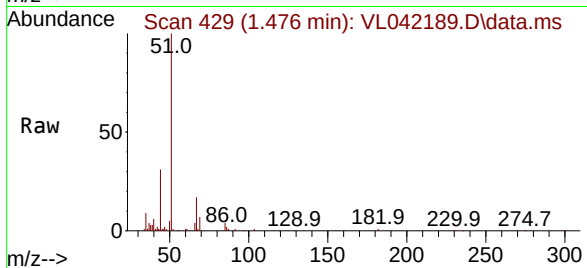




#3
Chlorodifluoromethane
Concen: 0.430 ppbv
RT: 1.476 min Scan# 428
Delta R.T. 0.003 min
Lab File: VL042189.D
Acq: 27 Mar 2025 20:48

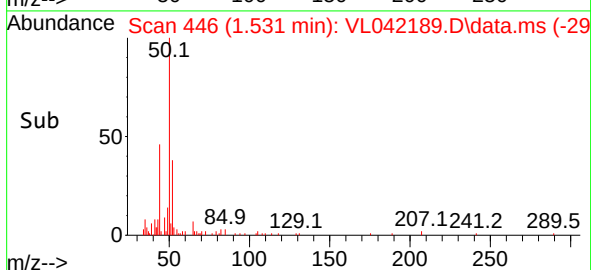
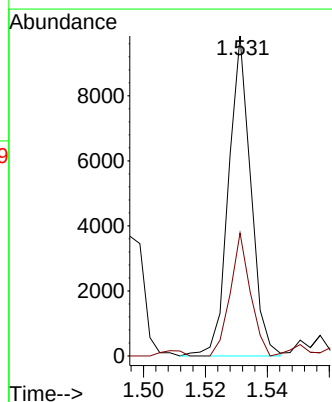
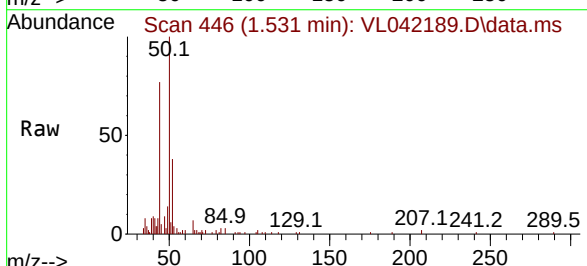
Instrument :
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ClientSampleId :
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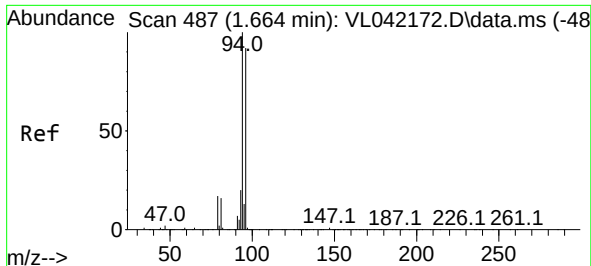
Tgt Ion: 51 Resp: 11994
Ion Ratio Lower Upper
51 100
67 12.0 15.0 22.6#



#4
Chloromethane
Concen: 0.440 ppbv
RT: 1.531 min Scan# 446
Delta R.T. -0.000 min
Lab File: VL042189.D
Acq: 27 Mar 2025 20:48

Tgt Ion: 50 Resp: 4911
Ion Ratio Lower Upper
50 100
52 37.7 26.1 39.1

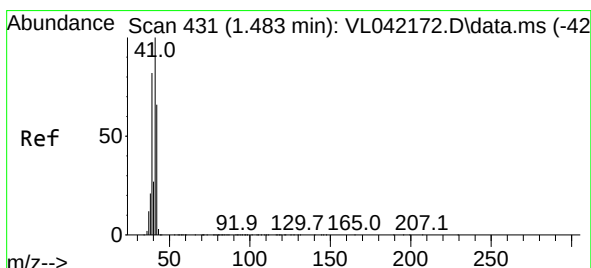
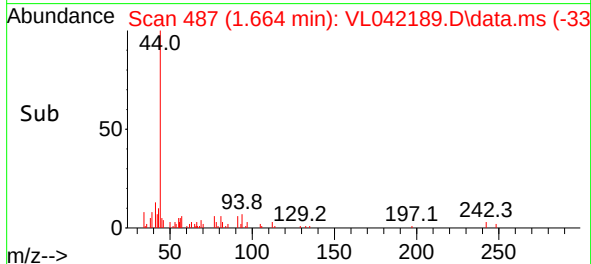
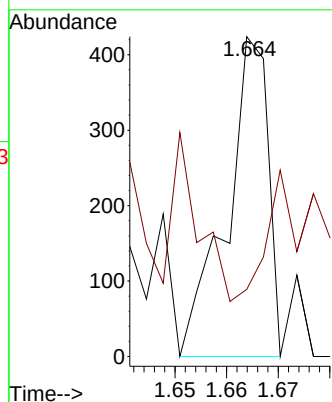
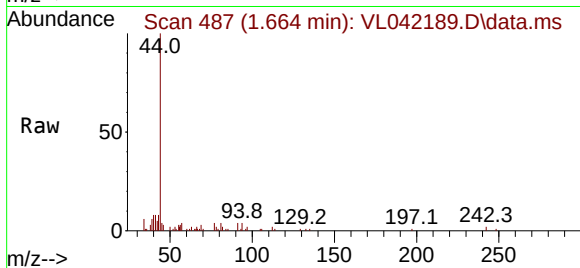




#6
Bromomethane
Concen: 0.047 ppbv
RT: 1.664 min Scan# 41
Delta R.T. -0.000 min
Lab File: VL042189.D
Acq: 27 Mar 2025 20:48

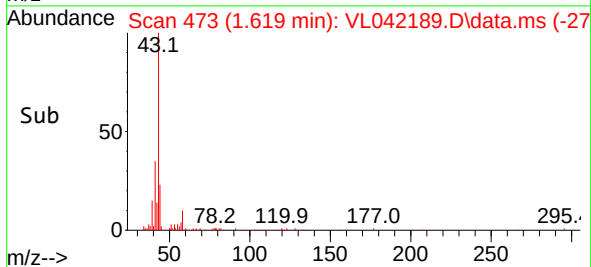
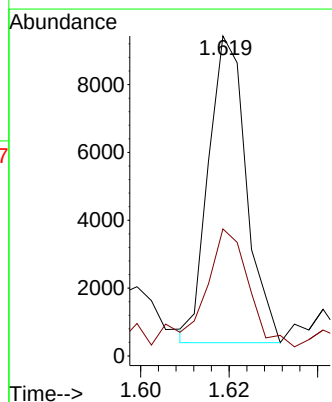
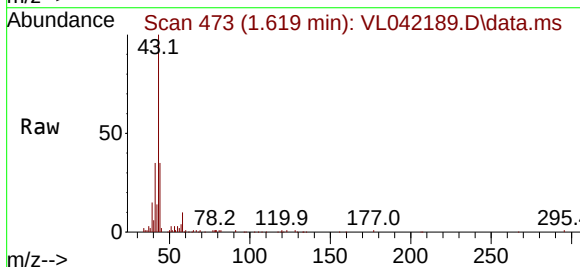
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ClientSampleId :
AA-2-3262025

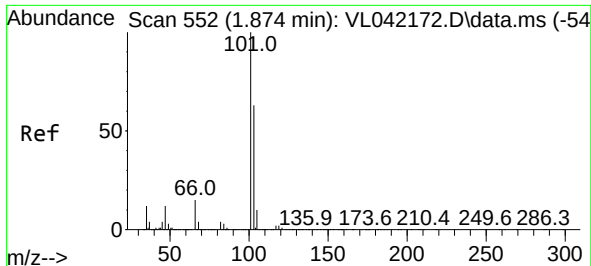
Tgt Ion: 94 Resp: 236
Ion Ratio Lower Upper
94 100
96 0.0 73.1 109.7#



#9
Propene
Concen: 0.419 ppbv
RT: 1.619 min Scan# 473
Delta R.T. 0.136 min
Lab File: VL042189.D
Acq: 27 Mar 2025 20:48

Tgt Ion: 41 Resp: 5365
Ion Ratio Lower Upper
41 100
42 65.7 55.4 83.2

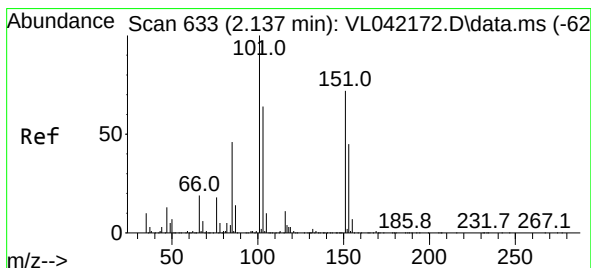
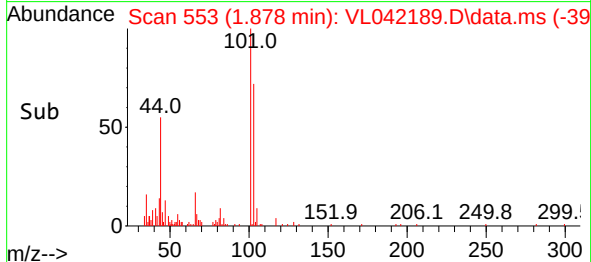
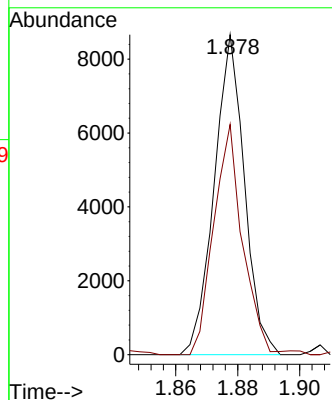
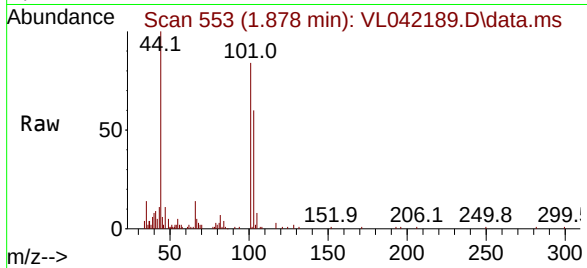




#11
 Trichlorofluoromethane
 Concen: 0.221 ppbv
 RT: 1.878 min Scan# 511
 Delta R.T. 0.003 min
 Lab File: VL042189.D
 Acq: 27 Mar 2025 20:48

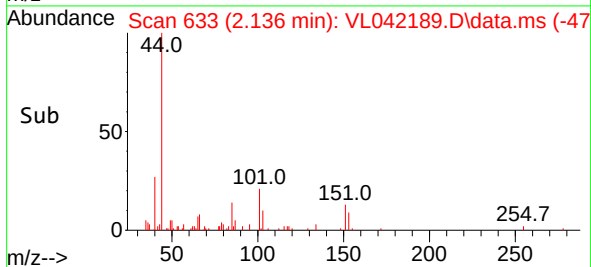
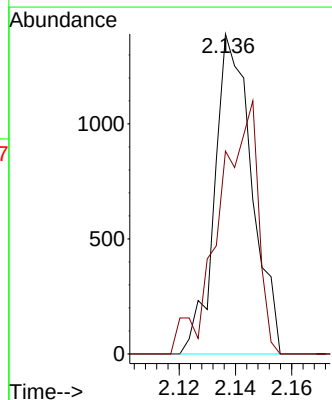
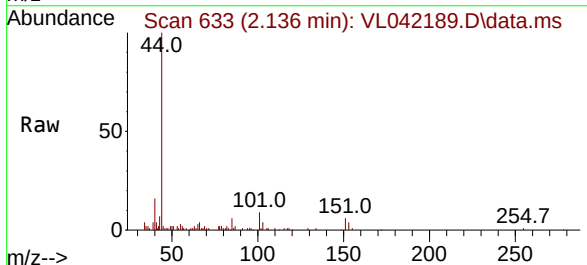
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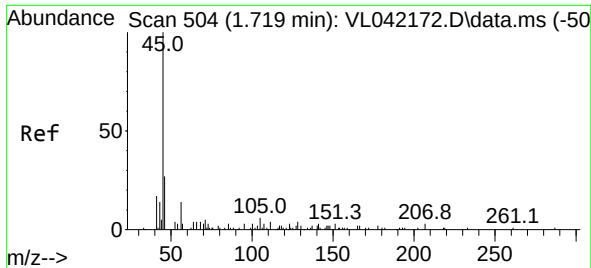
Tgt Ion:101 Resp: 5874
 Ion Ratio Lower Upper
 101 100
 103 71.9 50.2 75.2



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.058 ppbv
 RT: 2.136 min Scan# 633
 Delta R.T. -0.000 min
 Lab File: VL042189.D
 Acq: 27 Mar 2025 20:48

Tgt Ion:101 Resp: 1274
 Ion Ratio Lower Upper
 101 100
 151 82.8 57.1 85.7

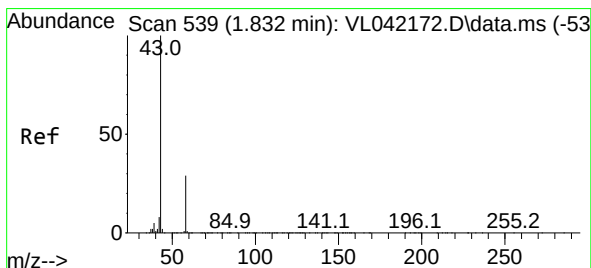
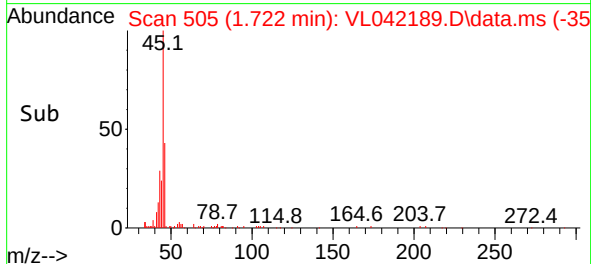
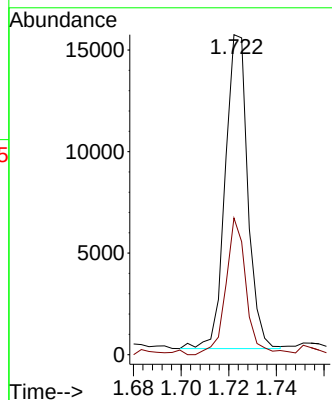
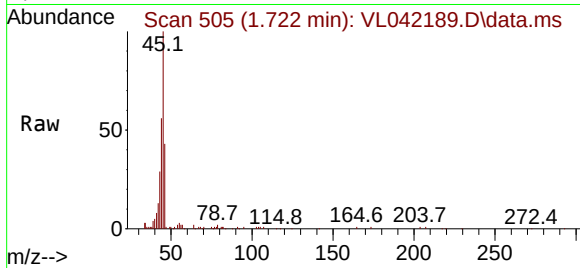




#13
Ethanol
Concen: 8.407 ppbv
RT: 1.722 min Scan# 50
Delta R.T. 0.003 min
Lab File: VL042189.D
Acq: 27 Mar 2025 20:48

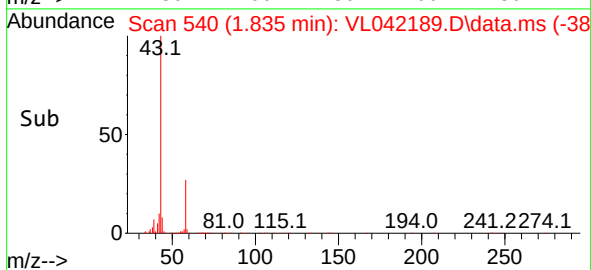
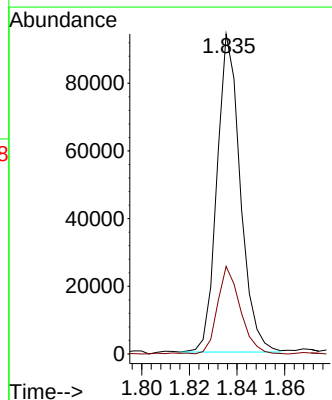
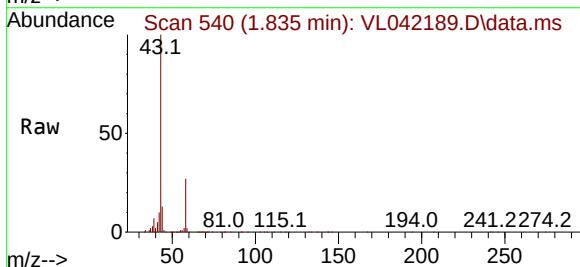
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ClientSampleId :
AA-2-3262025

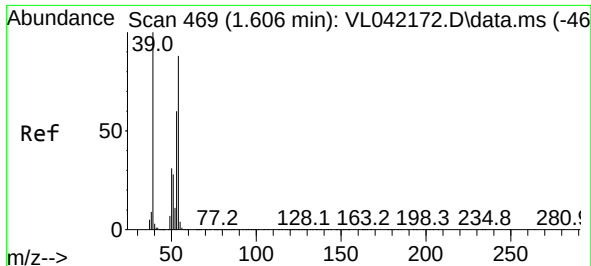
Tgt Ion: 45 Resp: 10166
Ion Ratio Lower Upper
45 100
46 0.0 20.2 80.8#



#15
Acetone
Concen: 2.473 ppbv
RT: 1.835 min Scan# 540
Delta R.T. 0.003 min
Lab File: VL042189.D
Acq: 27 Mar 2025 20:48

Tgt Ion: 43 Resp: 63981
Ion Ratio Lower Upper
43 100
58 27.4 23.2 34.8

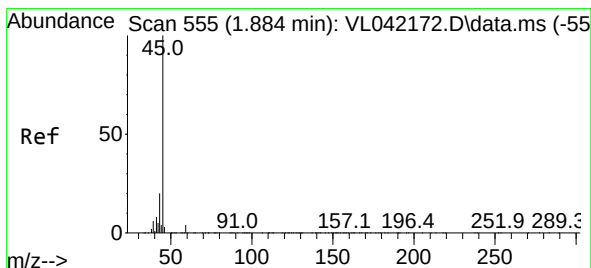
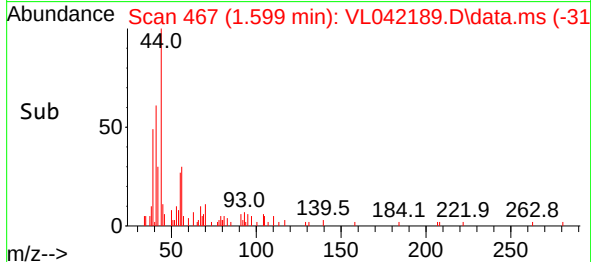
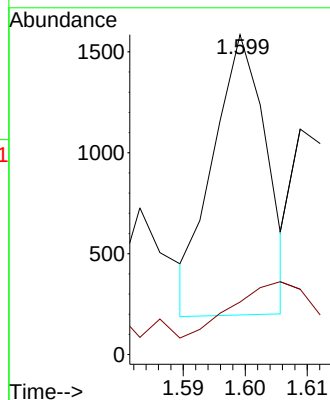
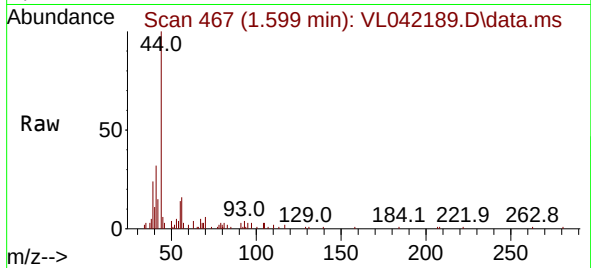




#16
1,3-Butadiene
Concen: 0.066 ppbv
RT: 1.599 min Scan# 40
Delta R.T. -0.007 min
Lab File: VL042189.D
Acq: 27 Mar 2025 20:48

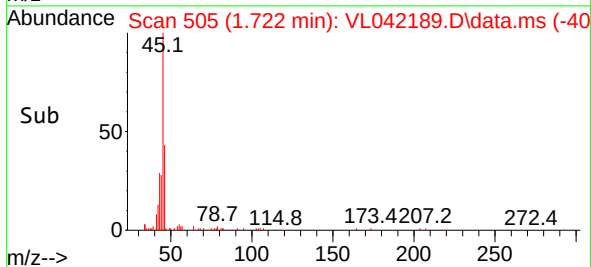
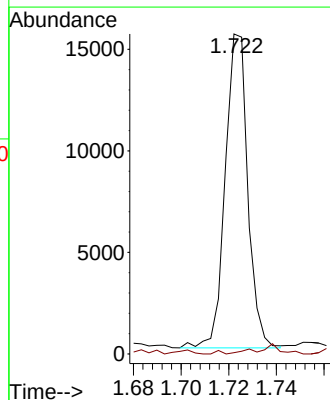
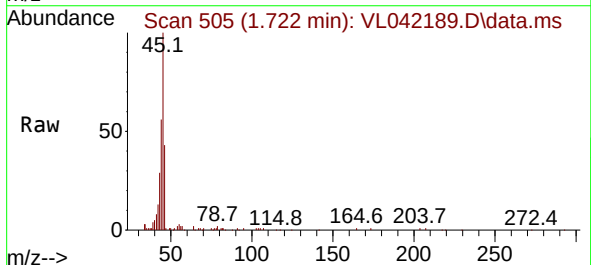
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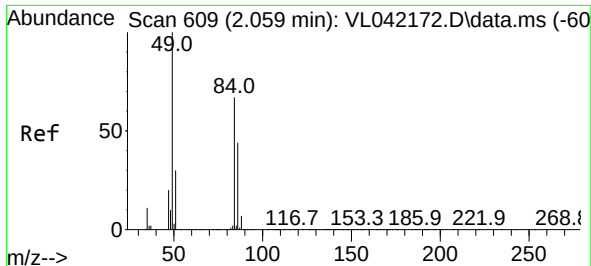
Tgt Ion: 39 Resp: 831
Ion Ratio Lower Upper
39 100
54 0.0 60.7 91.1#



#19
Isopropyl Alcohol
Concen: 0.696 ppbv
RT: 1.722 min Scan# 505
Delta R.T. -0.162 min
Lab File: VL042189.D
Acq: 27 Mar 2025 20:48

Tgt Ion: 45 Resp: 10166
Ion Ratio Lower Upper
45 100
58 17.5 36.9 55.3#

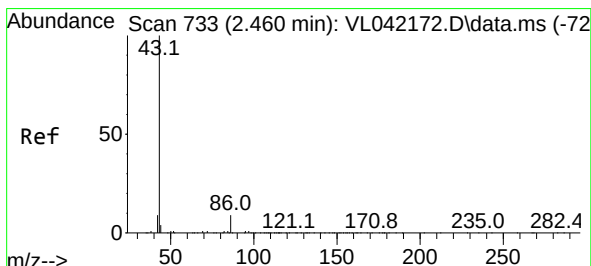
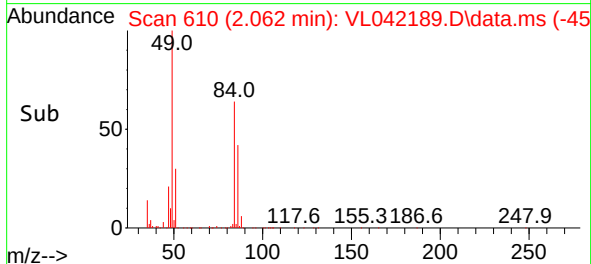
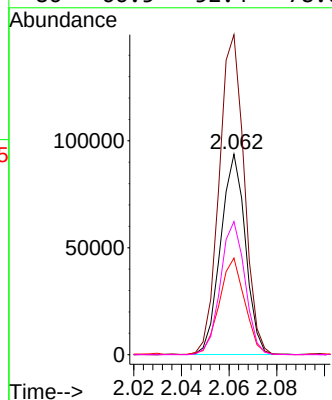
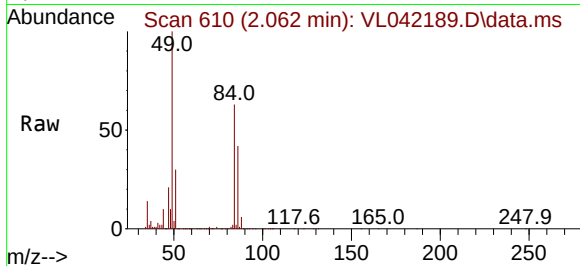




#20
Methylene Chloride
Concen: 7.018 ppbv
RT: 2.062 min Scan# 610
Delta R.T. 0.003 min
Lab File: VL042189.D
Acq: 27 Mar 2025 20:48

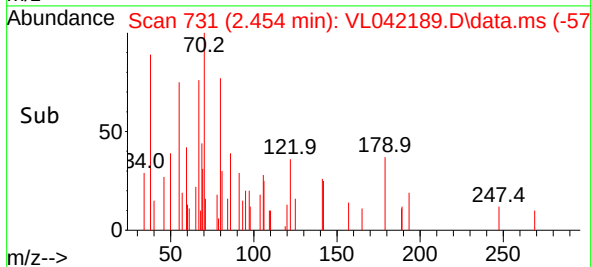
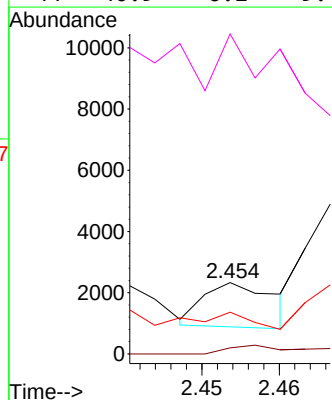
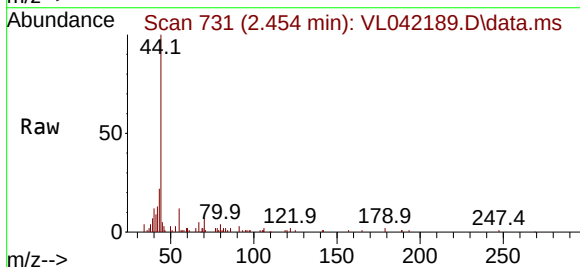
Instrument :
MSVOA_L
ClientSampleId :
AA-2-3262025

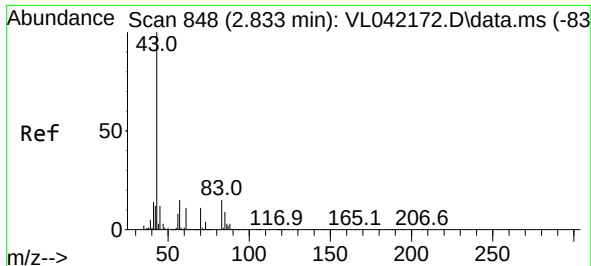
Tgt Ion:	84	Resp:	67627
Ion	Ratio	Lower	Upper
84	100		
49	159.6	120.2	180.4
51	48.2	37.4	56.0
86	66.5	52.4	78.6



#23
Vinyl Acetate
Concen: 0.081 ppbv
RT: 2.454 min Scan# 731
Delta R.T. -0.007 min
Lab File: VL042189.D
Acq: 27 Mar 2025 20:48

Tgt Ion:	43	Resp:	906
Ion	Ratio	Lower	Upper
43	100		
86	16.6	5.5	8.3#
42	46.6	8.6	13.0#
44	40.9	6.2	9.4#



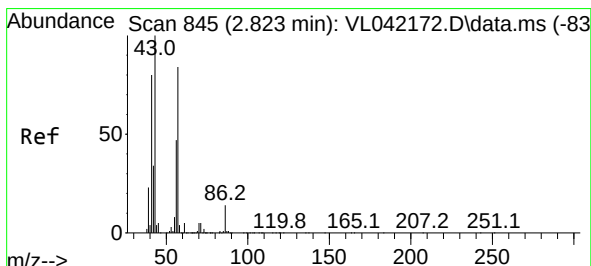
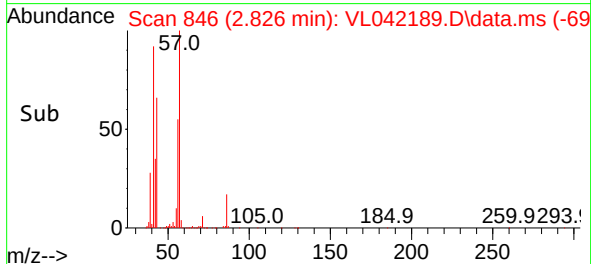
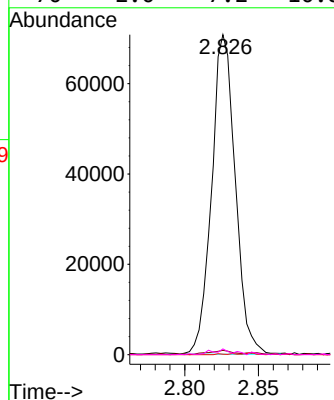
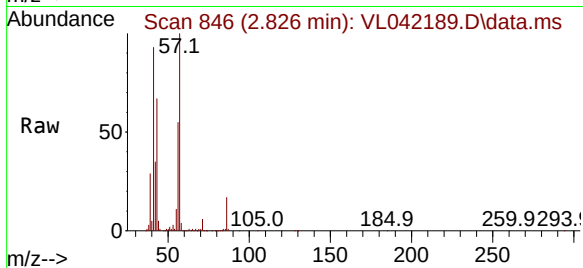


#25
Ethyl Acetate
Concen: 1.173 ppbv
RT: 2.826 min Scan# 846
Delta R.T. -0.007 min
Lab File: VL042189.D
Acq: 27 Mar 2025 20:48

Instrument :
MSVOA_L
ClientSampleId :
AA-2-3262025

Tgt Ion: 43 Resp: 78801

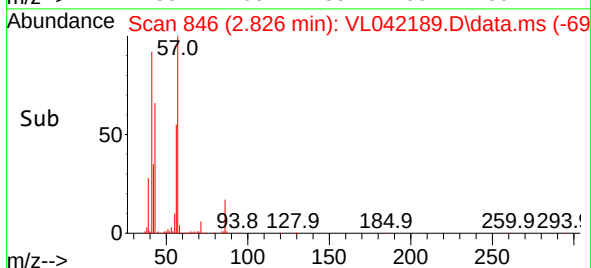
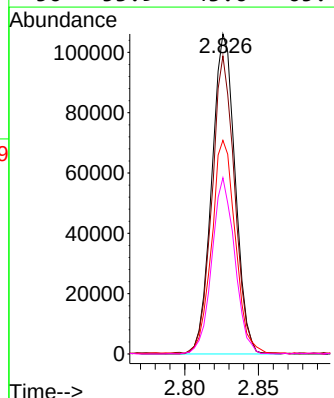
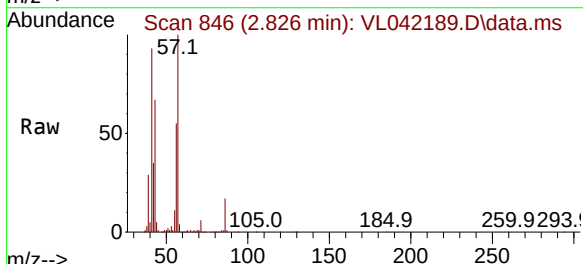
Ion	Ratio	Lower	Upper
43	100		
45	2.2	8.2	12.2#
61	0.6	7.3	10.9#
70	2.0	7.2	10.8#

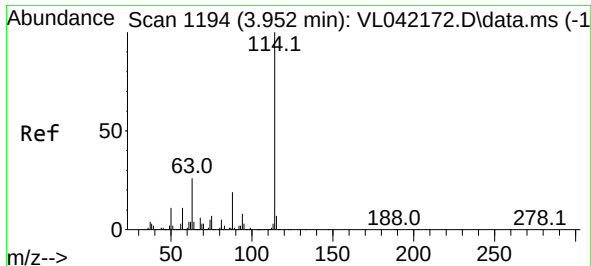


#26
Hexane
Concen: 4.506 ppbv
RT: 2.826 min Scan# 846
Delta R.T. 0.003 min
Lab File: VL042189.D
Acq: 27 Mar 2025 20:48

Tgt Ion: 57 Resp: 116880

Ion	Ratio	Lower	Upper
57	100		
41	90.1	76.6	114.8
43	68.0	207.8	311.8#
56	53.9	43.6	65.4





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.962 min Scan# 1197

Delta R.T. 0.010 min

Lab File: VL042189.D

Acq: 27 Mar 2025 20:48

Instrument :

MSVOA_L

ClientSampleId :

AA-2-3262025

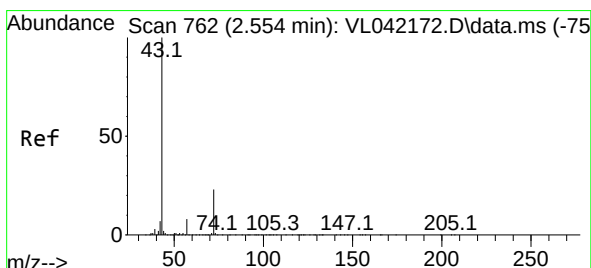
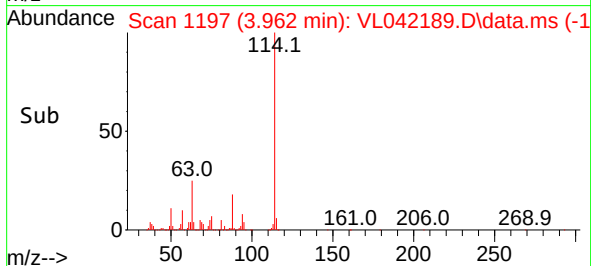
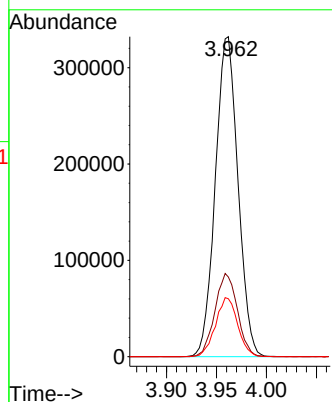
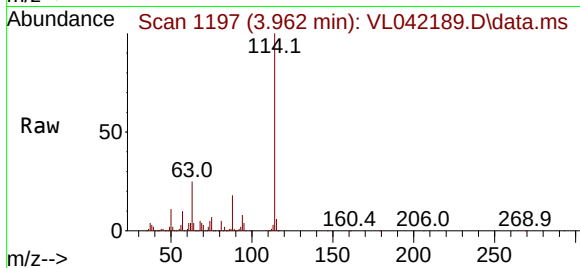
Tgt Ion:114 Resp: 523099

Ion Ratio Lower Upper

114 100

63 25.8 20.7 31.1

88 18.1 15.0 22.4



#34

2-Butanone

Concen: 0.181 ppbv

RT: 2.567 min Scan# 766

Delta R.T. 0.013 min

Lab File: VL042189.D

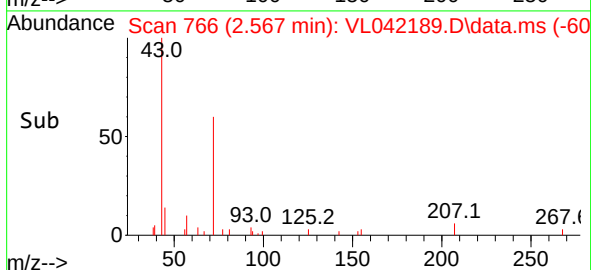
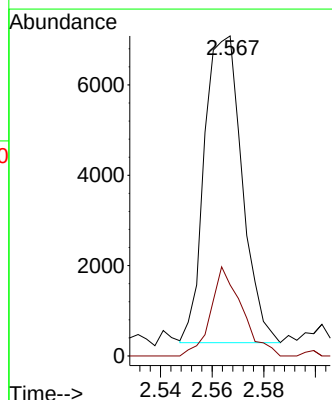
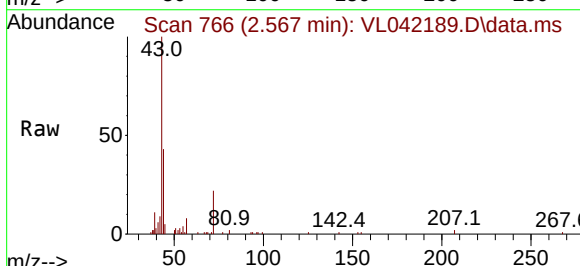
Acq: 27 Mar 2025 20:48

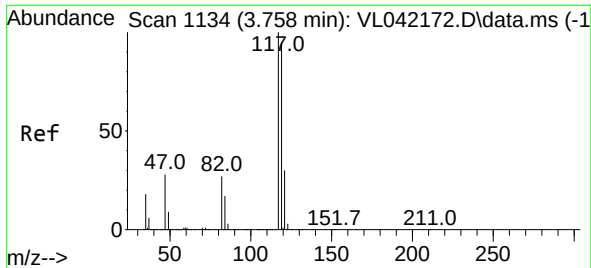
Tgt Ion: 43 Resp: 6879

Ion Ratio Lower Upper

43 100

72 24.6 18.2 27.2

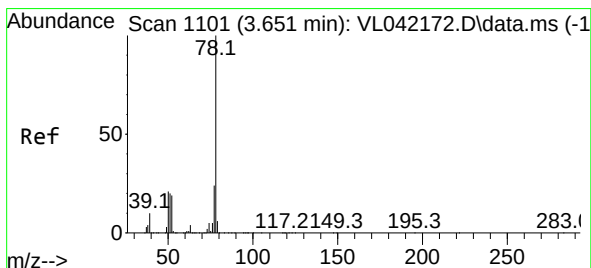
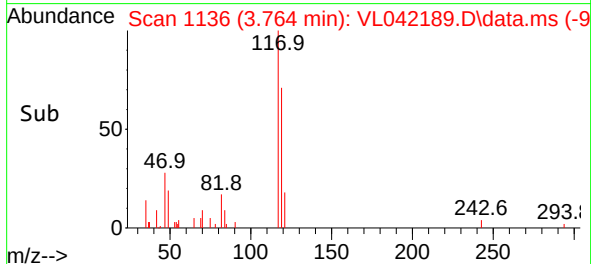
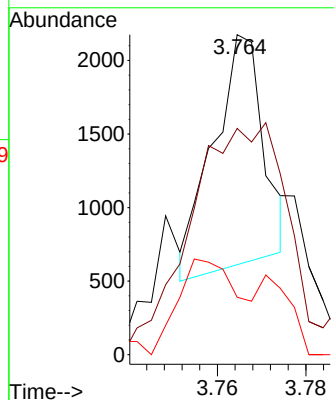
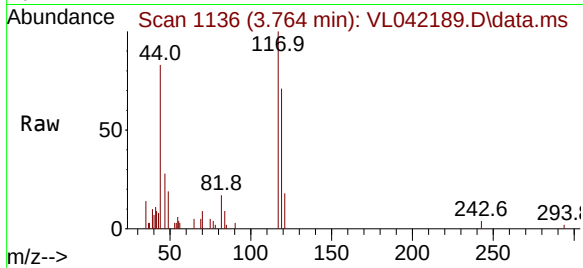




#35
Carbon Tetrachloride
Concen: 0.030 ppbv
RT: 3.764 min Scan# 1134
Delta R.T. 0.006 min
Lab File: VL042189.D
Acq: 27 Mar 2025 20:48

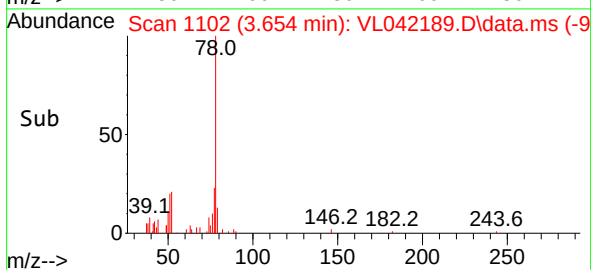
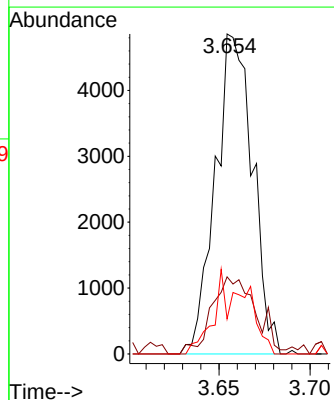
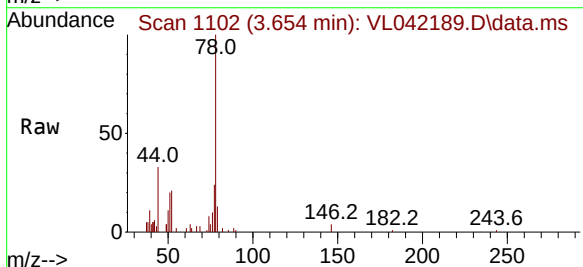
Instrument :
MSVOA_L
ClientSampleId :
AA-2-3262025

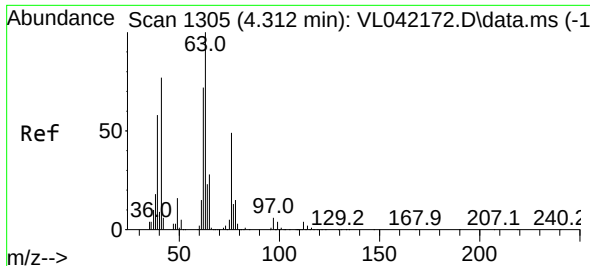
Tgt Ion:117 Resp: 1236
Ion Ratio Lower Upper
117 100
119 62.3 76.2 114.2#
121 0.1 24.2 36.4#



#36
Benzene
Concen: 0.134 ppbv
RT: 3.654 min Scan# 1102
Delta R.T. 0.003 min
Lab File: VL042189.D
Acq: 27 Mar 2025 20:48

Tgt Ion: 78 Resp: 6925
Ion Ratio Lower Upper
78 100
77 24.1 19.1 28.7
50 10.9 16.6 24.8#





#39

1,2-Dichloropropane

Concen: 7.151 ppbv

RT: 3.959 min Scan# 1196

Delta R.T. -0.353 min

Lab File: VL042189.D

Acq: 27 Mar 2025 20:48

Instrument :

MSVOA_L

ClientSampleId :

AA-2-3262025

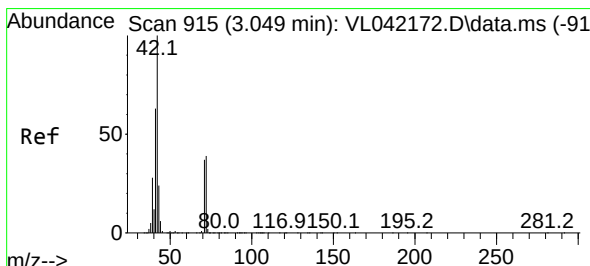
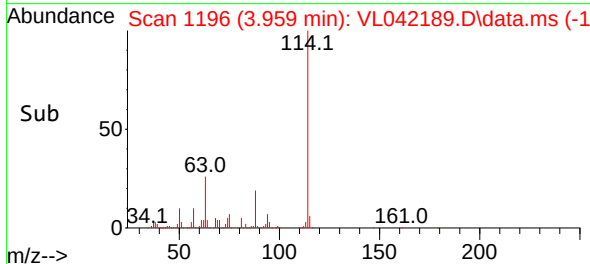
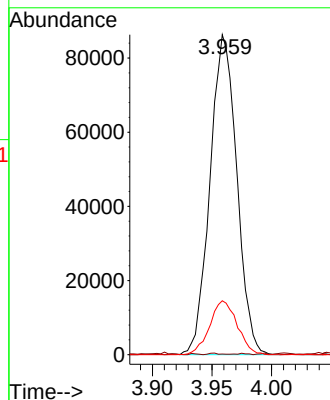
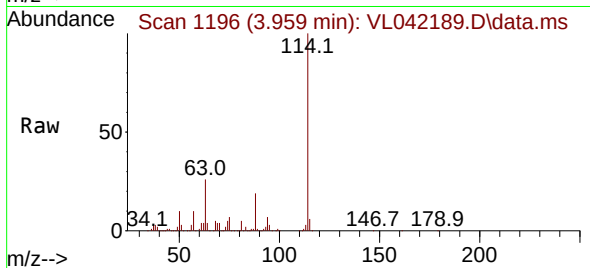
Tgt Ion: 63 Resp: 135050

Ion Ratio Lower Upper

63 100

41 0.1 61.7 92.5#

62 16.9 57.6 86.4#



#41

Tetrahydrofuran

Concen: 0.287 ppbv

RT: 3.224 min Scan# 969

Delta R.T. 0.175 min

Lab File: VL042189.D

Acq: 27 Mar 2025 20:48

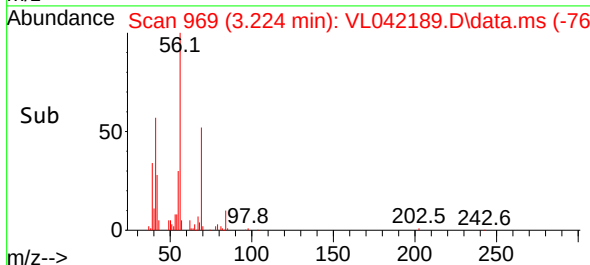
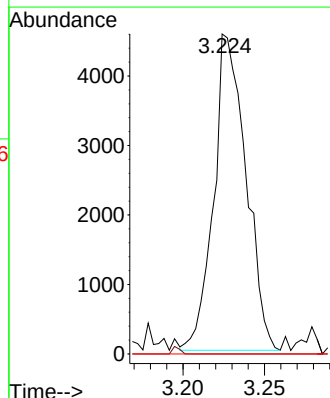
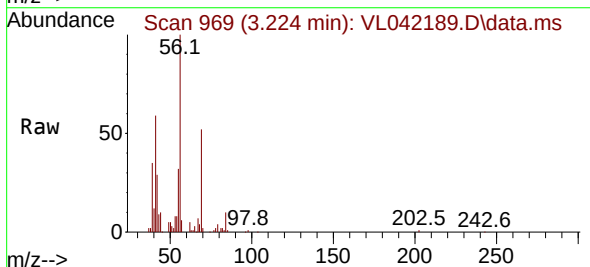
Tgt Ion: 42 Resp: 6258

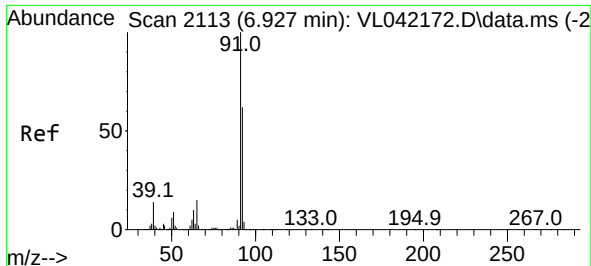
Ion Ratio Lower Upper

42 100

72 1.6 31.4 47.0#

71 0.0 30.2 45.4#

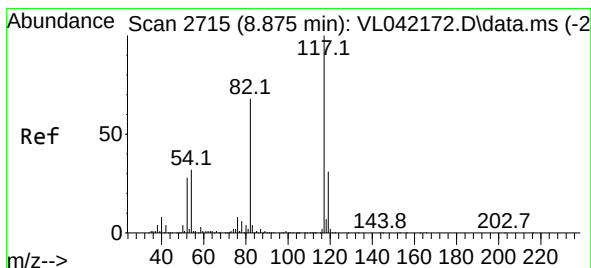
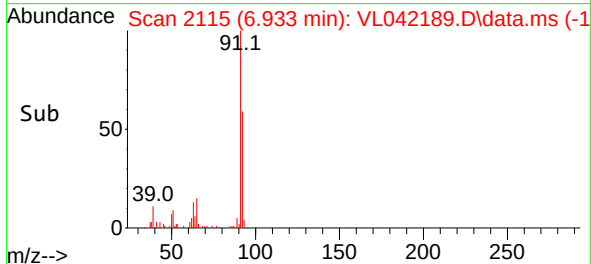
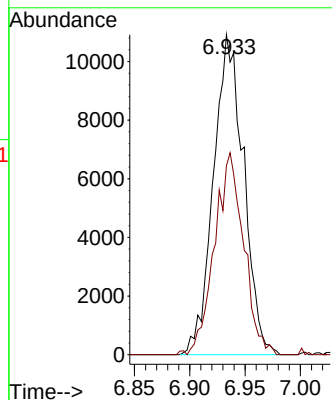
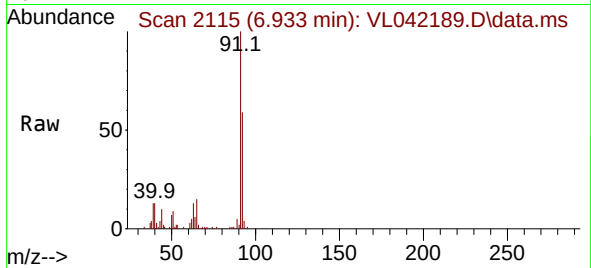




#53
Toluene
Concen: 0.337 ppbv
RT: 6.933 min Scan# 2113
Delta R.T. 0.006 min
Lab File: VL042189.D
Acq: 27 Mar 2025 20:48

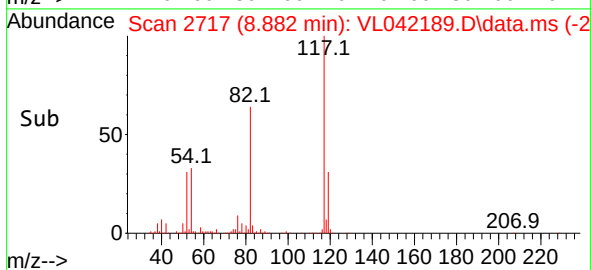
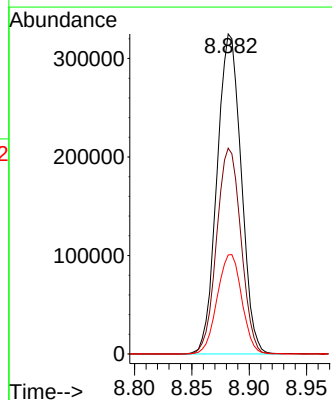
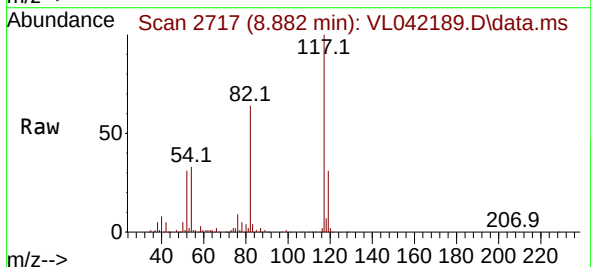
Instrument :
MSVOA_L
ClientSampleId :
AA-2-3262025

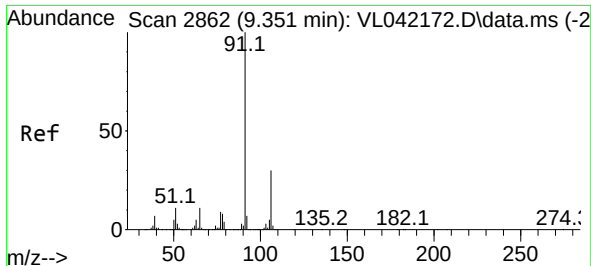
Tgt Ion: 91 Resp: 20704
Ion Ratio Lower Upper
91 100
92 60.9 48.4 72.6



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.882 min Scan# 2717
Delta R.T. 0.006 min
Lab File: VL042189.D
Acq: 27 Mar 2025 20:48

Tgt Ion: 117 Resp: 477151
Ion Ratio Lower Upper
117 100
82 64.6 55.8 83.6
119 31.6 25.5 38.3

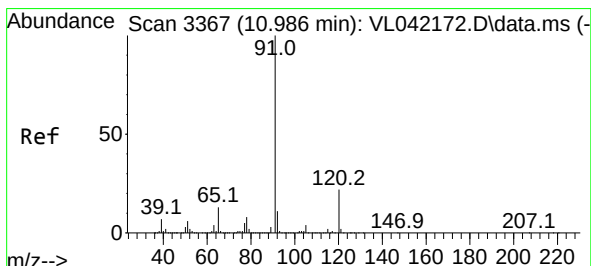
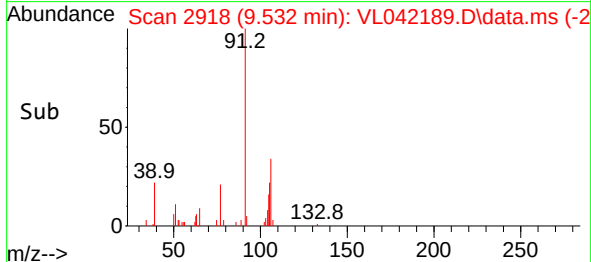
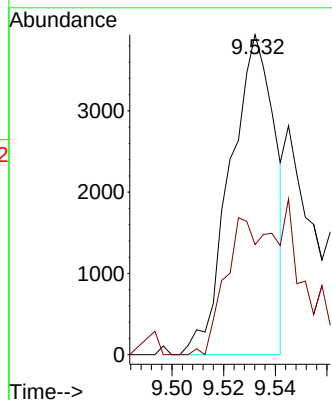
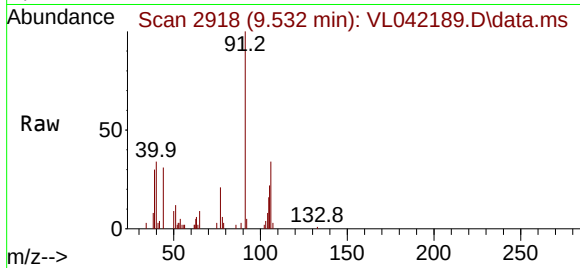




#58
Ethyl Benzene
Concen: 0.056 ppbv
RT: 9.532 min Scan# 2918
Delta R.T. 0.181 min
Lab File: VL042189.D
Acq: 27 Mar 2025 20:48

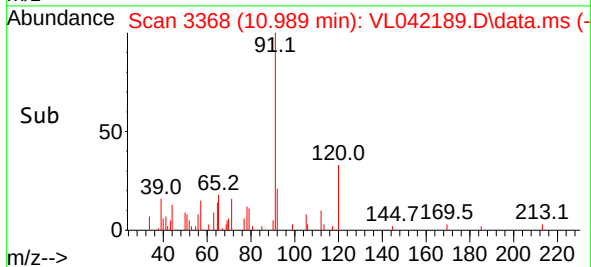
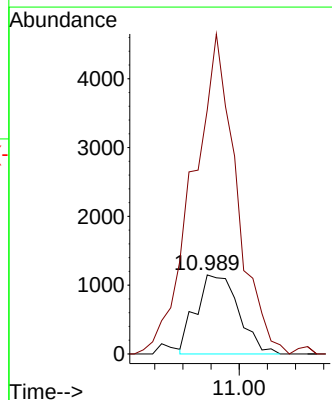
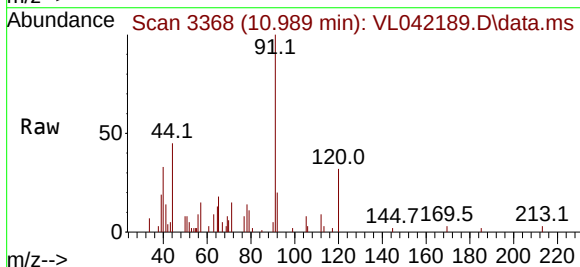
Instrument :
MSVOA_L
ClientSampleId :
AA-2-3262025

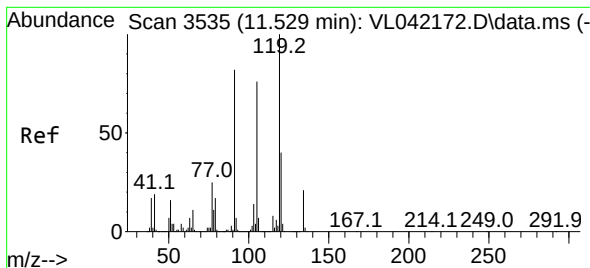
Tgt Ion: 91 Resp: 4747
Ion Ratio Lower Upper
91 100
106 34.4 24.2 36.2



#64
n-propylbenzene
Concen: 0.046 ppbv
RT: 10.989 min Scan# 3368
Delta R.T. 0.003 min
Lab File: VL042189.D
Acq: 27 Mar 2025 20:48

Tgt Ion: 120 Resp: 1201
Ion Ratio Lower Upper
120 100
91 427.6 376.9 565.3





#65

tert-Butylbenzene

Concen: 0.035 ppbv

RT: 11.539 min Scan# 3179

Delta R.T. 0.010 min

Lab File: VL042189.D

Acq: 27 Mar 2025 20:48

Instrument :

MSVOA_L

ClientSampleId :

AA-2-3262025

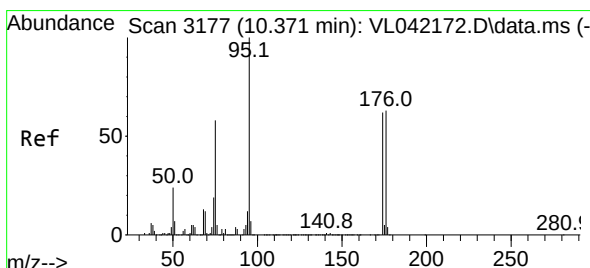
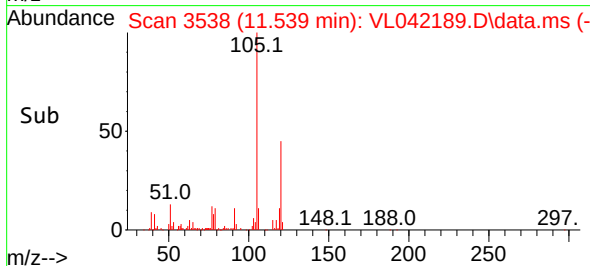
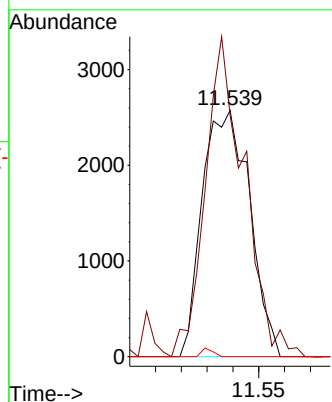
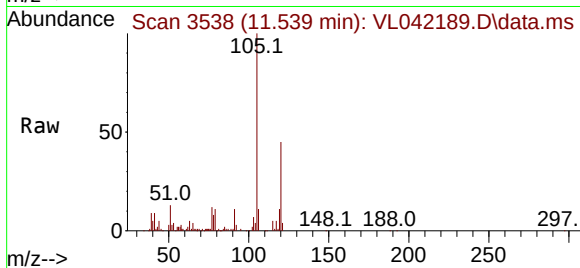
Tgt Ion:119 Resp: 3276

Ion Ratio Lower Upper

119 100

91 113.4 66.0 99.0#

134 0.8 16.7 25.1#



#68

1-Bromo-4-Fluorobenzene

Concen: 9.884 ppbv

RT: 10.377 min Scan# 3179

Delta R.T. 0.006 min

Lab File: VL042189.D

Acq: 27 Mar 2025 20:48

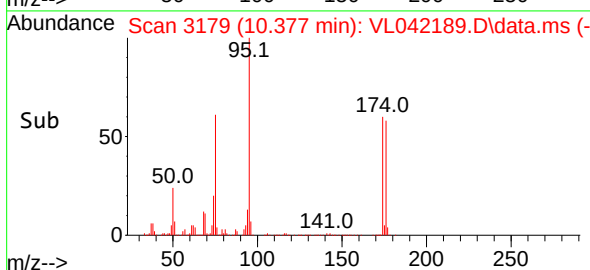
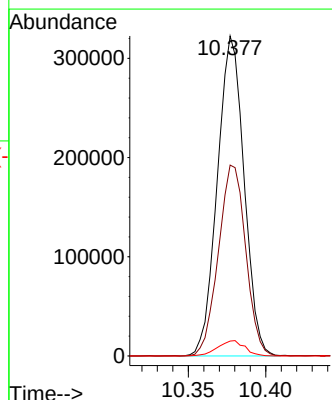
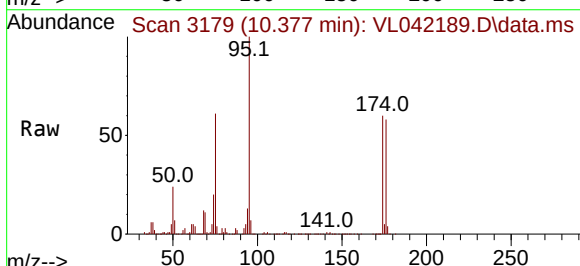
Tgt Ion: 95 Resp: 387301

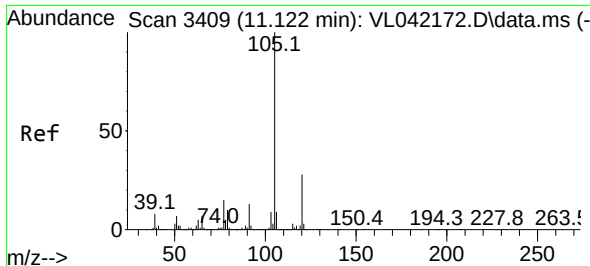
Ion Ratio Lower Upper

95 100

174 61.0 50.6 76.0

175 4.9 3.8 5.6

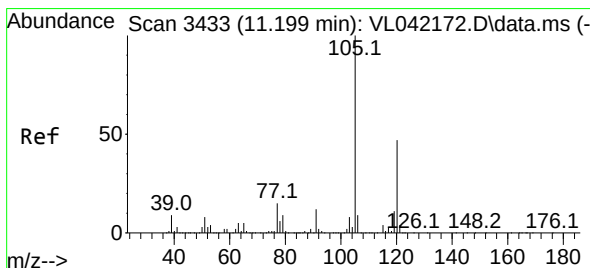
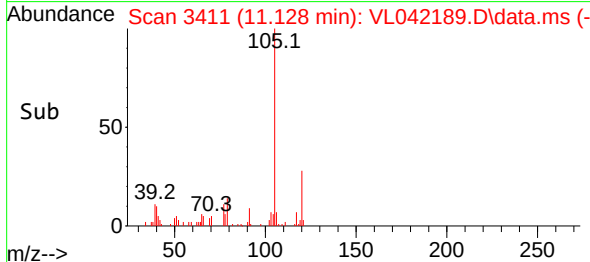
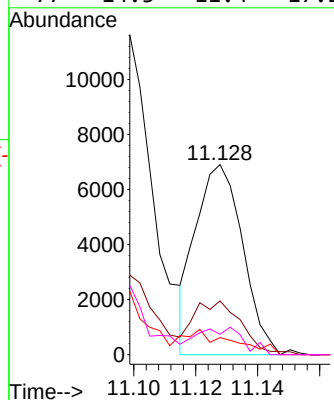
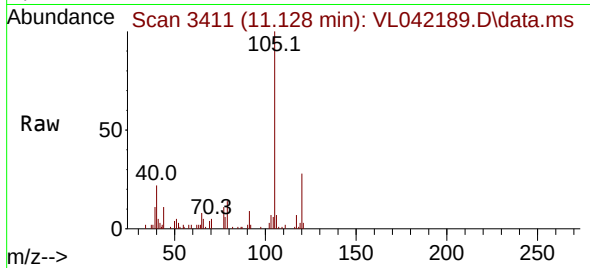




#72
4-Ethyltoluene
Concen: 0.086 ppbv
RT: 11.128 min Scan# 3409
Delta R.T. 0.006 min
Lab File: VL042189.D
Acq: 27 Mar 2025 20:48

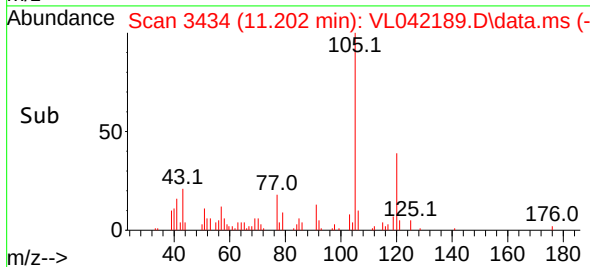
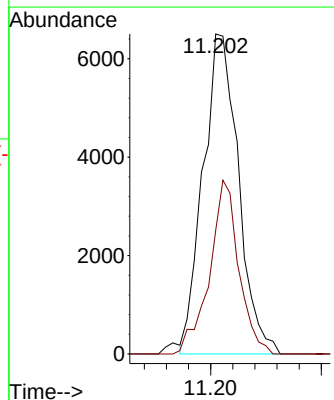
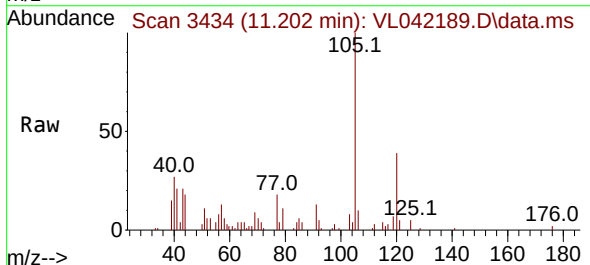
Instrument :
MSVOA_L
ClientSampleId :
AA-2-3262025

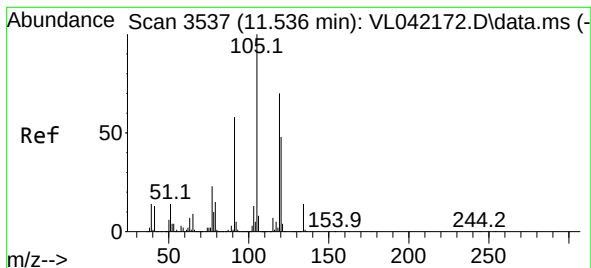
Tgt Ion:	105	Resp:	7264
Ion Ratio	Lower	Upper	
105	100		
120	28.7	23.4	35.0
91	0.0	10.3	15.5#
77	14.3	11.4	17.2



#73
1,3,5-Trimethylbenzene
Concen: 0.098 ppbv
RT: 11.202 min Scan# 3434
Delta R.T. 0.003 min
Lab File: VL042189.D
Acq: 27 Mar 2025 20:48

Tgt Ion:	105	Resp:	7241
Ion Ratio	Lower	Upper	
105	100		
120	38.6	37.4	56.0





#74

1,2,4-Trimethylbenzene

Concen: 0.291 ppbv

RT: 11.539 min Scan# 31

Delta R.T. 0.003 min

Lab File: VL042189.D

Acq: 27 Mar 2025 20:48

Instrument :

MSVOA_L

ClientSampleId :

AA-2-3262025

Tgt Ion:105 Resp: 24773

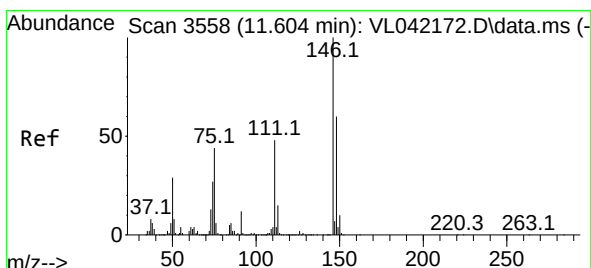
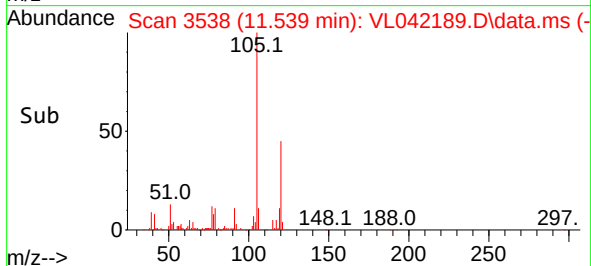
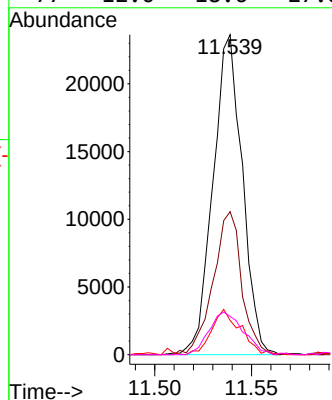
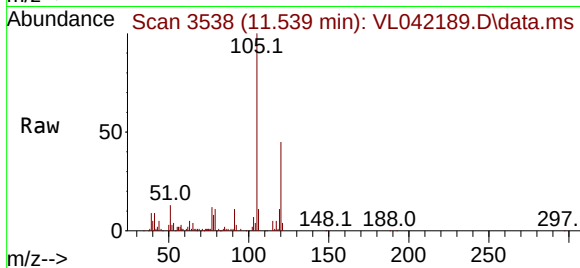
Ion Ratio Lower Upper

105 100

120 44.7 38.6 58.0

91 10.5 46.2 69.2#

77 12.0 18.6 27.8#



#75

1,3-Dichlorobenzene

Concen: 0.031 ppbv

RT: 11.672 min Scan# 3579

Delta R.T. 0.068 min

Lab File: VL042189.D

Acq: 27 Mar 2025 20:48

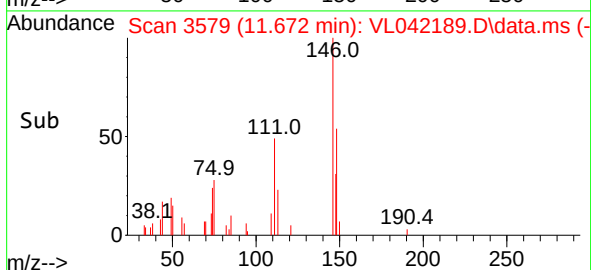
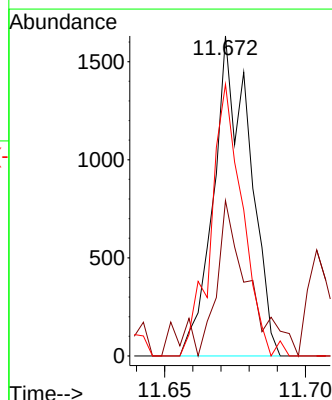
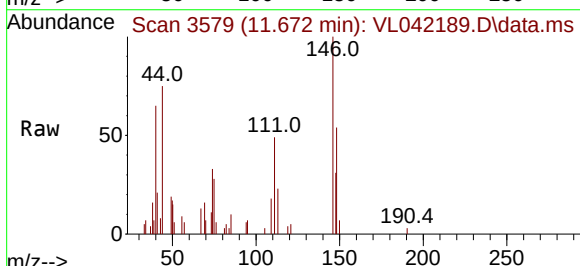
Tgt Ion:146 Resp: 1457

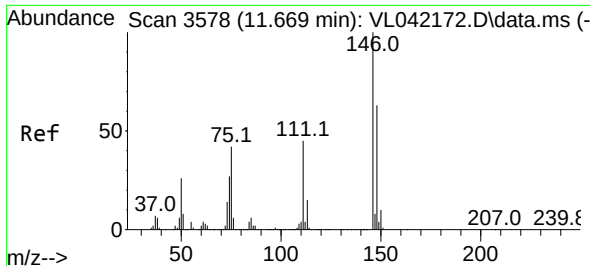
Ion Ratio Lower Upper

146 100

111 47.4 23.8 71.2

148 74.1 31.9 95.9

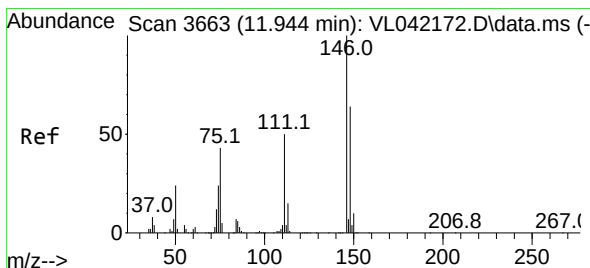
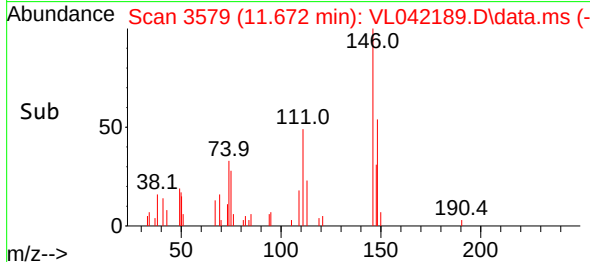
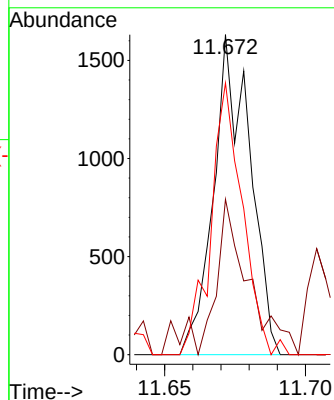
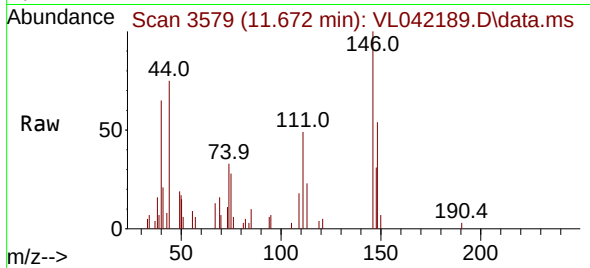




#76
1,4-Dichlorobenzene
Concen: 0.031 ppbv
RT: 11.672 min Scan# 3579
Delta R.T. 0.003 min
Lab File: VL042189.D
Acq: 27 Mar 2025 20:48

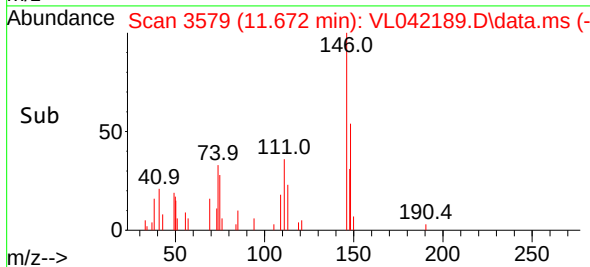
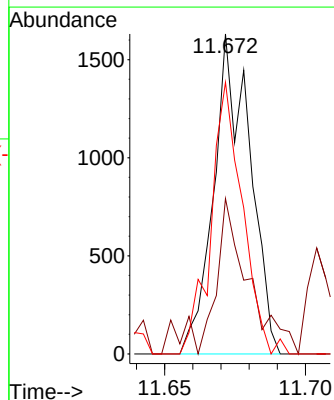
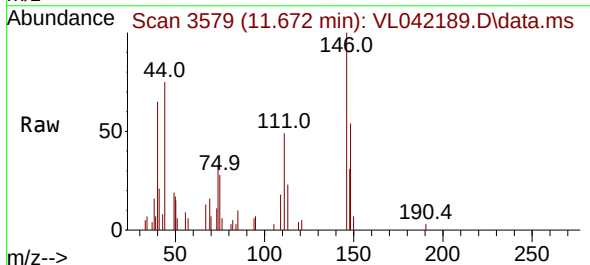
Instrument :
MSVOA_L
ClientSampleId :
AA-2-3262025

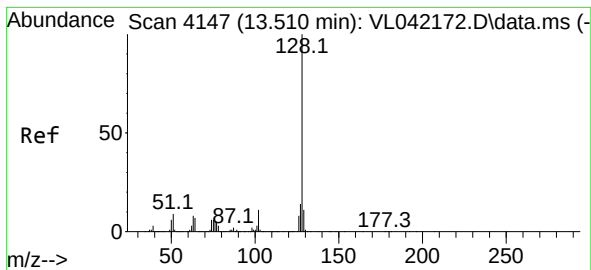
Tgt Ion:146 Resp: 1457
Ion Ratio Lower Upper
146 100
111 80.4 23.0 69.0#
148 76.9 31.9 95.7



#77
1,2-Dichlorobenzene
Concen: 0.032 ppbv
RT: 11.672 min Scan# 3579
Delta R.T. -0.272 min
Lab File: VL042189.D
Acq: 27 Mar 2025 20:48

Tgt Ion:146 Resp: 1457
Ion Ratio Lower Upper
146 100
111 47.4 24.8 74.3
148 74.1 31.6 94.8





#79

Naphthalene

Concen: 0.034 ppbv

RT: 13.516 min Scan# 41

Delta R.T. 0.006 min

Lab File: VL042189.D

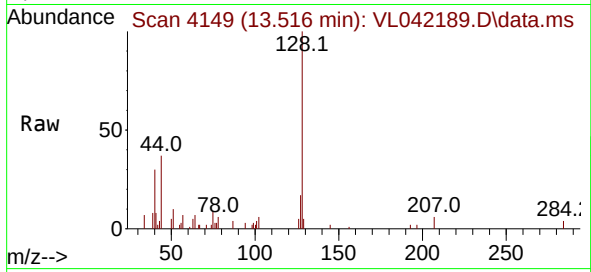
Acq: 27 Mar 2025 20:48

Instrument :

MSVOA_L

ClientSampleId :

AA-2-3262025



Tgt Ion:	128	Resp:	3117
Ion	Ratio	Lower	Upper
128	100		
127	16.7	10.8	16.2#
129	4.6	9.0	13.4#

