

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL110625\
 Data File : VL043178.D
 Acq On : 06 Nov 2025 21:08
 Operator : SY/MD
 Sample : Q3557-05 2X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 141-SG-2

Quant Time: Nov 07 00:29:07 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL101425AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Wed Oct 15 02:12:58 2025
 Response via : Initial Calibration

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

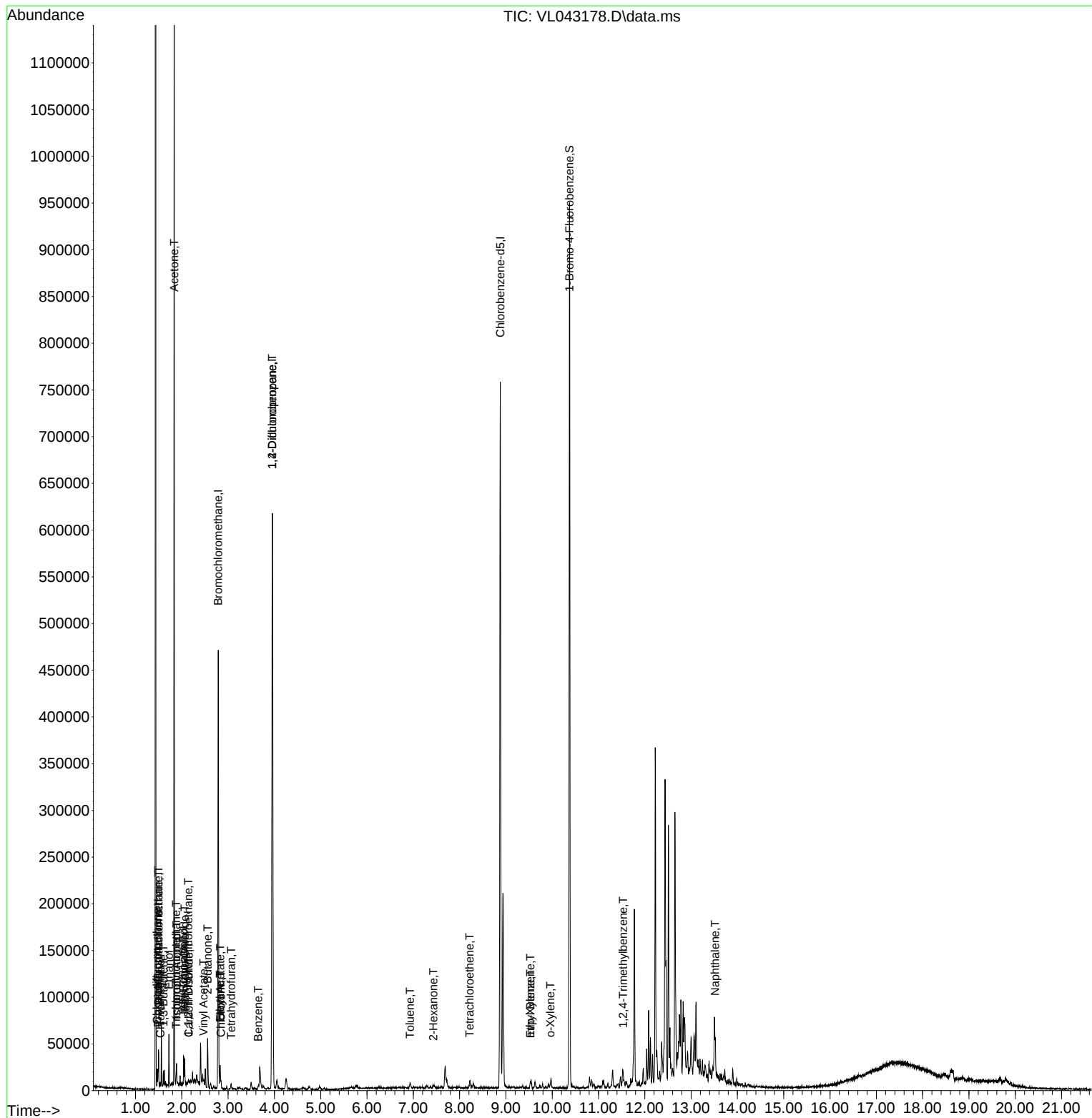
Internal Standards						
1) Bromochloromethane	2.787	49	131405	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.955	114	358615	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.878	117	303524	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.374	95	236795	10.037	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	= 100.400%	
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.499	85	9907	0.530	ppbv	99
3) Chlorodifluoromethane	1.466	51	7458	0.369	ppbv #	76
4) Chloromethane	1.534	50	719	0.097	ppbv #	81
8) Dichlorotetrafluoroethane	1.499	85	9907	0.656	ppbv #	20
9) Propene	1.486	41	2376	0.265	ppbv #	15
11) Trichlorofluoromethane	1.877	101	2805	0.154	ppbv	90
12) 1,1,2-Trichlorotrifluo...	2.140	101	497	0.034	ppbv #	51
13) Ethanol	1.722	45	18184	5.484	ppbv	92
15) Acetone	1.835	43	595518	33.623	ppbv	99
16) 1,3-Butadiene	1.602	39	2090	0.248	ppbv #	28
17) tert-Butyl alcohol	2.039	59	12433	0.511	ppbv #	94
19) Isopropyl Alcohol	1.887	45	8050	0.730	ppbv #	36
20) Methylene Chloride	2.062	84	3877	0.554	ppbv #	89
21) Allyl Chloride	2.039	41	3797	0.291	ppbv #	74
23) Vinyl Acetate	2.473	43	1109	0.043	ppbv #	41
25) Ethyl Acetate	2.829	43	4243	0.097	ppbv #	81
26) Hexane	2.826	57	5694	0.281	ppbv #	42
27) Carbon Disulfide	2.153	76	941	0.051	ppbv #	1
29) Chloroform	2.848	83	2672	0.091	ppbv #	72
34) 2-Butanone	2.557	43	32842	1.362	ppbv	98
36) Benzene	3.651	78	2082	0.062	ppbv #	82
39) 1,2-Dichloropropane	3.955	63	92451	7.487	ppbv #	25
41) Tetrahydrofuran	3.065	42	1517	0.113	ppbv #	86
51) 2-Hexanone	7.435	43	993	0.040	ppbv #	27
52) Tetrachloroethene	8.215	164	781	0.064	ppbv #	57
53) Toluene	6.930	91	3470	0.087	ppbv	95
58) Ethyl Benzene	9.526	91	1965	0.038	ppbv	93
59) m/p-Xylene	9.526	91	1965	0.047	ppbv #	55
60) o-Xylene	9.963	91	1551	0.038	ppbv	97
74) 1,2,4-Trimethylbenzene	11.532	105	3023	0.065	ppbv #	52
79) Naphthalene	13.516	128	1855	0.038	ppbv #	23

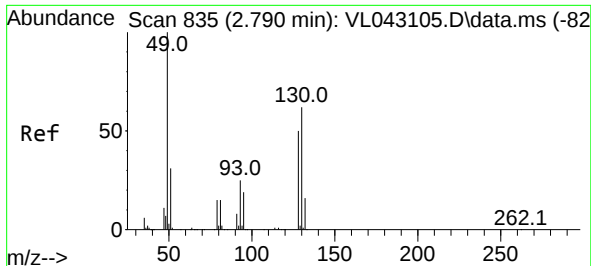
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL110625\
Data File : VL043178.D
Acq On : 06 Nov 2025 21:08
Operator : SY/MD
Sample : Q3557-05 2X
Misc : 400mL/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
141-SG-2

Quant Time: Nov 07 00:29:07 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL101425AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
QLast Update : Wed Oct 15 02:12:58 2025
Response via : Initial Calibration

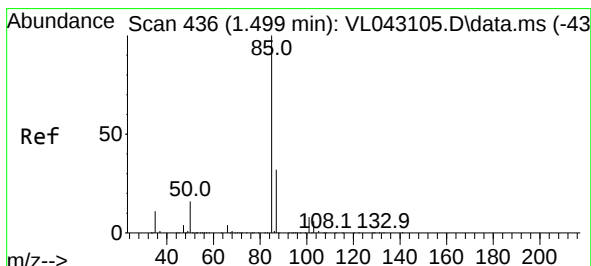
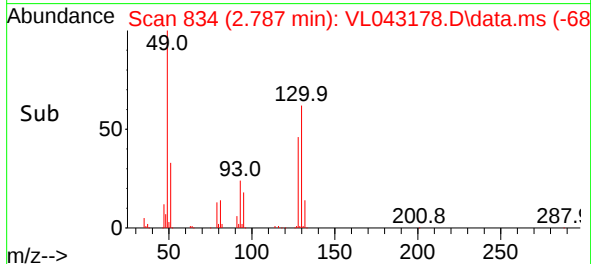
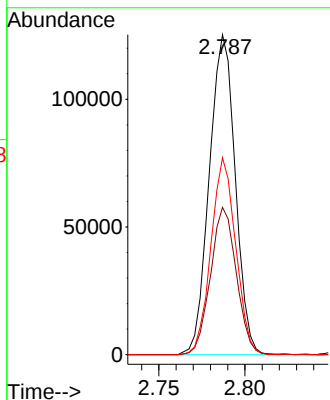
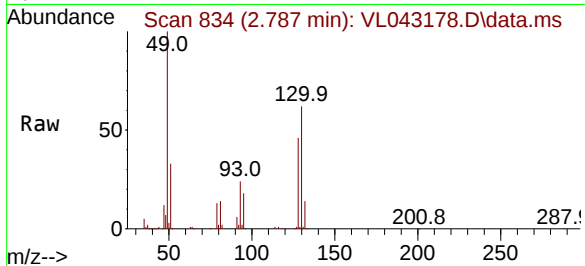




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.787 min Scan# 81
Delta R.T. -0.003 min
Lab File: VL043178.D
Acq: 06 Nov 2025 21:08

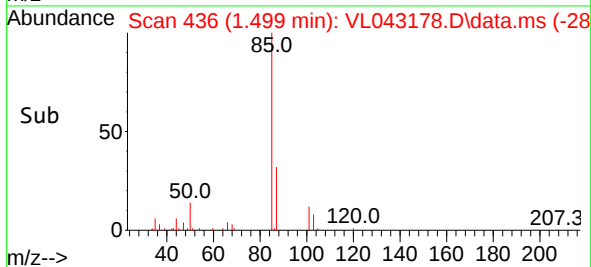
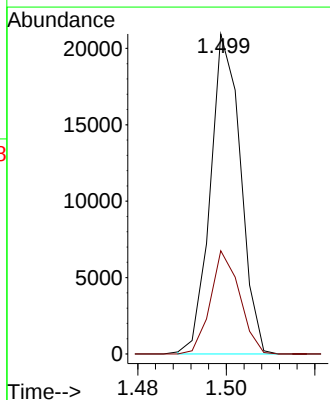
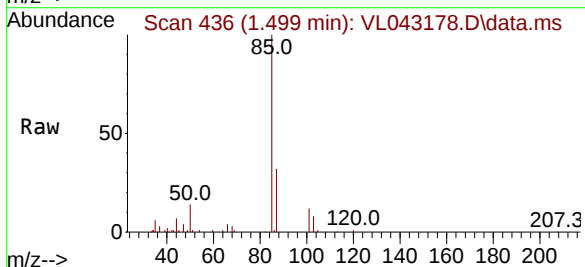
Instrument :
MSVOA_1
ClientSampleId :
141-SG-2

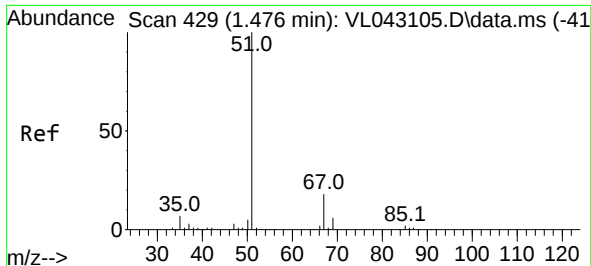
Tgt Ion: 49 Resp: 131405
Ion Ratio Lower Upper
49 100
128 45.8 24.4 73.4
130 58.7 31.0 93.0



#2
Dichlorodifluoromethane
Concen: 0.530 ppbv
RT: 1.499 min Scan# 436
Delta R.T. -0.000 min
Lab File: VL043178.D
Acq: 06 Nov 2025 21:08

Tgt Ion: 85 Resp: 9907
Ion Ratio Lower Upper
85 100
87 32.3 25.3 37.9

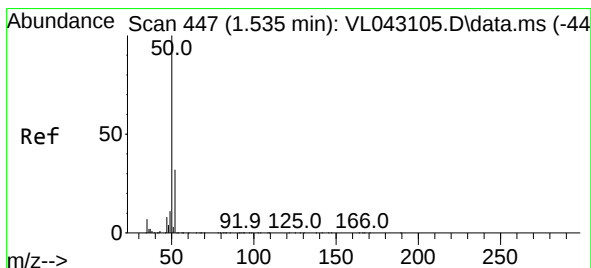
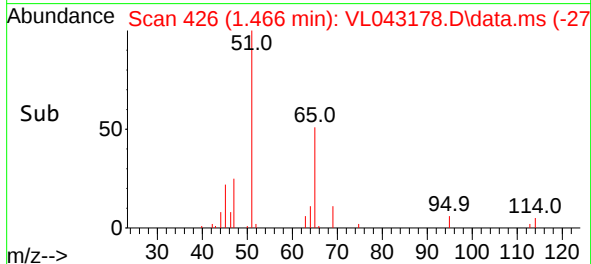
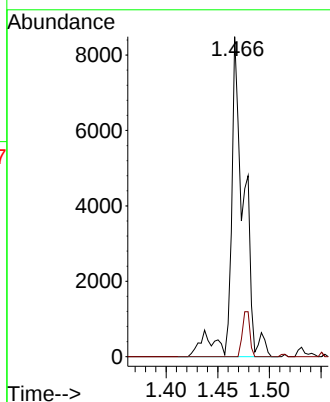
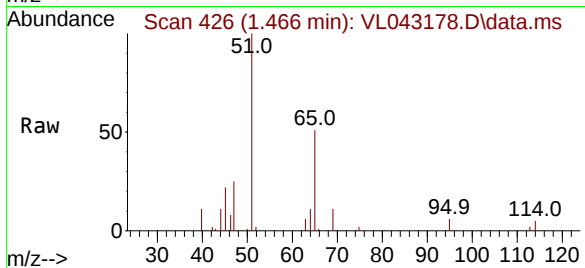




#3
Chlorodifluoromethane
Concen: 0.369 ppbv
RT: 1.466 min Scan# 41
Delta R.T. -0.010 min
Lab File: VL043178.D
Acq: 06 Nov 2025 21:08

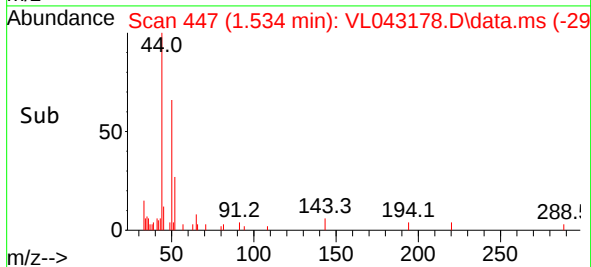
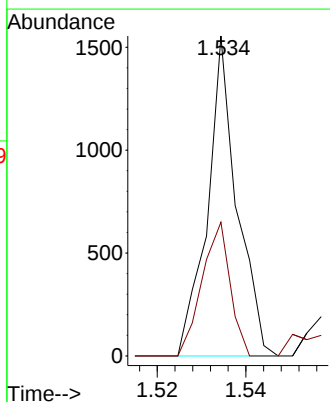
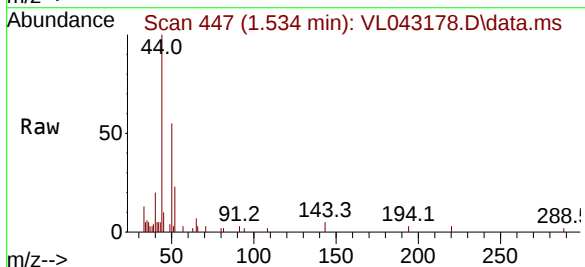
Instrument :
MSVOA_1
ClientSampleId :
141-SG-2

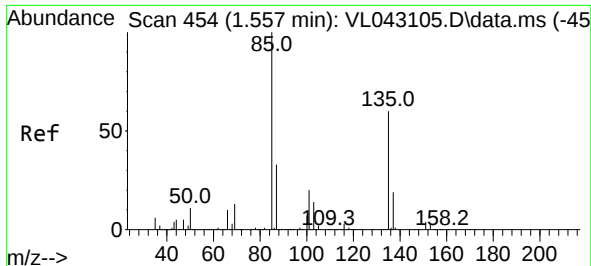
Tgt Ion: 51 Resp: 7458
Ion Ratio Lower Upper
51 100
67 8.0 15.1 22.7#



#4
Chloromethane
Concen: 0.097 ppbv
RT: 1.534 min Scan# 447
Delta R.T. -0.000 min
Lab File: VL043178.D
Acq: 06 Nov 2025 21:08

Tgt Ion: 50 Resp: 719
Ion Ratio Lower Upper
50 100
52 41.8 25.2 37.8#

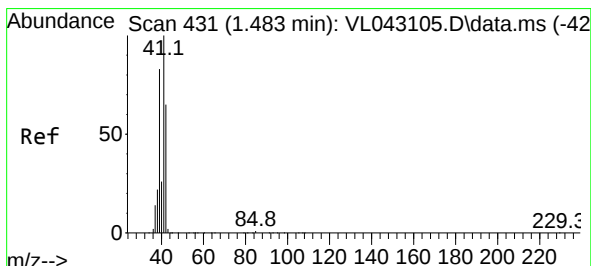
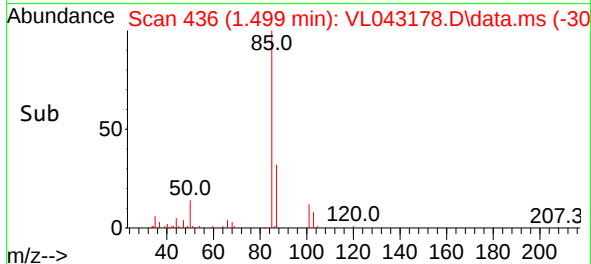
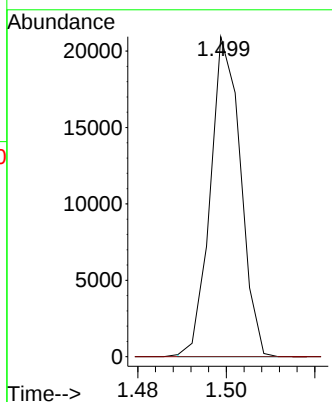
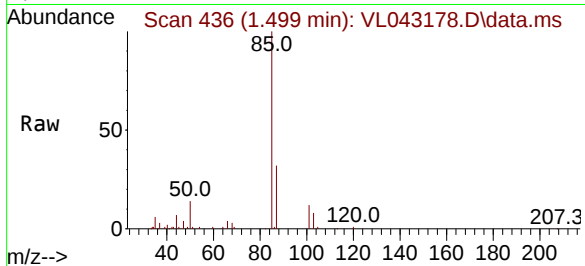




#8
 Dichlorotetrafluoroethane
 Concen: 0.656 ppbv
 RT: 1.499 min Scan# 41
 Delta R.T. -0.058 min
 Lab File: VL043178.D
 Acq: 06 Nov 2025 21:08

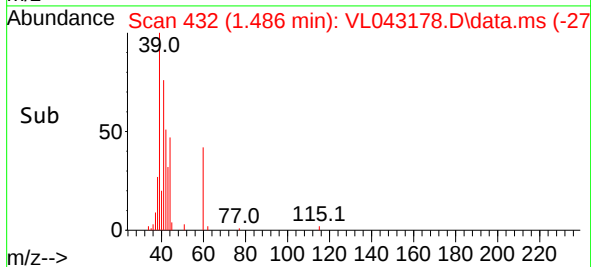
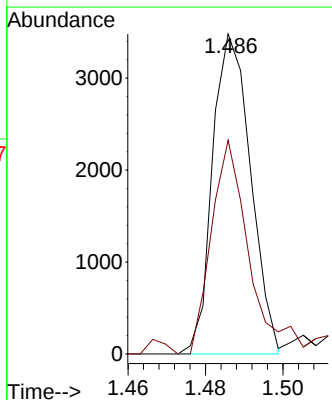
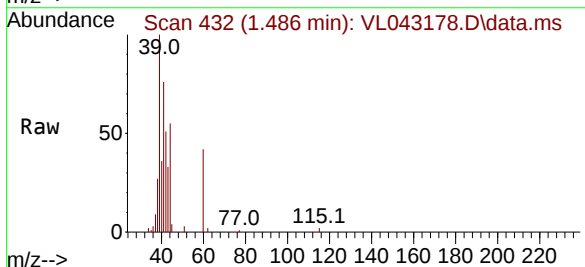
Instrument :
 MSVOA_1
 ClientSampleId :
 141-SG-2

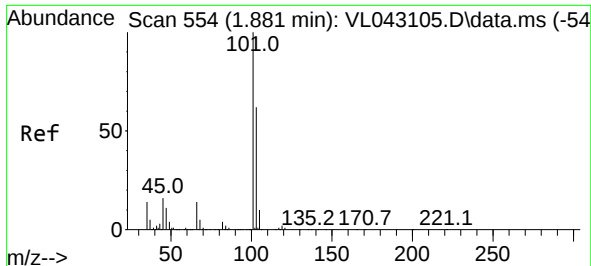
Tgt Ion: 85 Resp: 9907
 Ion Ratio Lower Upper
 85 100
 135 0.0 48.2 72.4#



#9
 Propene
 Concen: 0.265 ppbv
 RT: 1.486 min Scan# 432
 Delta R.T. 0.003 min
 Lab File: VL043178.D
 Acq: 06 Nov 2025 21:08

Tgt Ion: 41 Resp: 2376
 Ion Ratio Lower Upper
 41 100
 42 0.0 55.1 82.7#

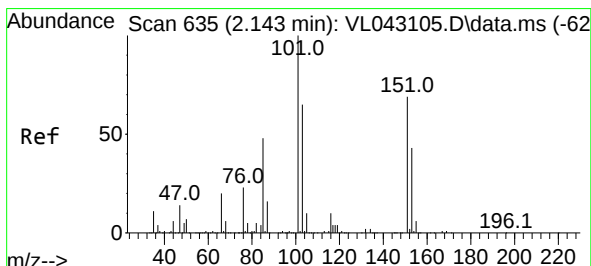
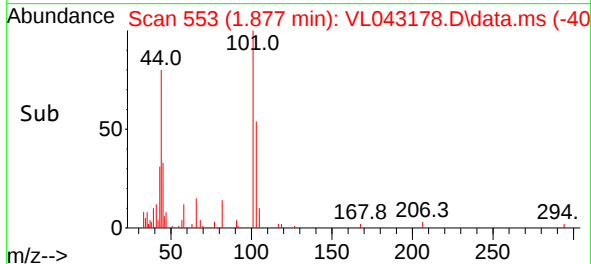
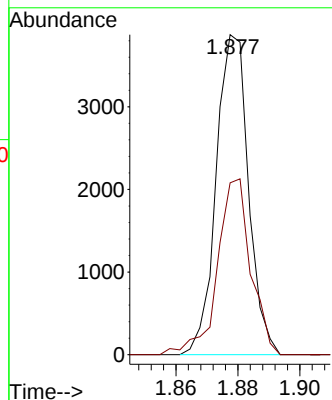
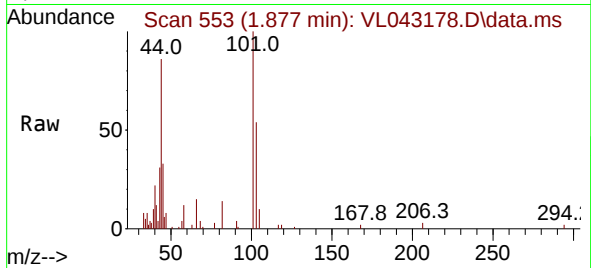




#11
 Trichlorofluoromethane
 Concen: 0.154 ppbv
 RT: 1.877 min Scan# 51
 Delta R.T. -0.003 min
 Lab File: VL043178.D
 Acq: 06 Nov 2025 21:08

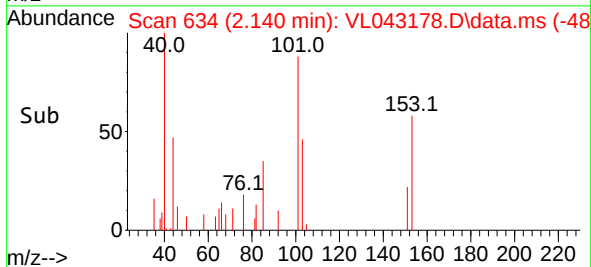
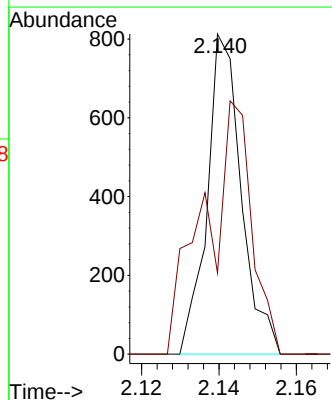
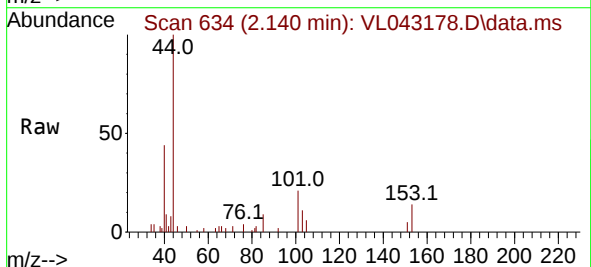
Instrument :
 MSVOA_1
 ClientSampleId :
 141-SG-2

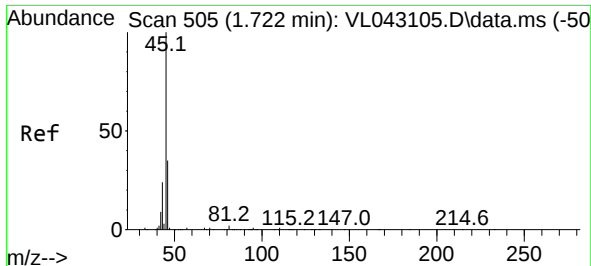
Tgt Ion:101 Resp: 2805
 Ion Ratio Lower Upper
 101 100
 103 53.7 49.3 73.9



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.034 ppbv
 RT: 2.140 min Scan# 634
 Delta R.T. -0.003 min
 Lab File: VL043178.D
 Acq: 06 Nov 2025 21:08

Tgt Ion:101 Resp: 497
 Ion Ratio Lower Upper
 101 100
 151 108.0 54.7 82.1#

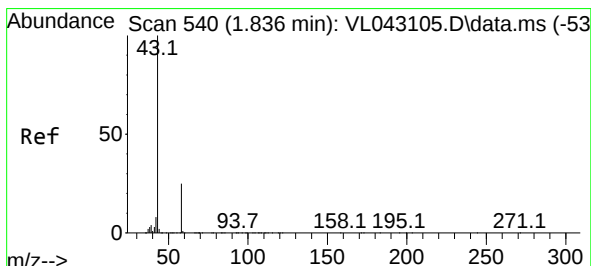
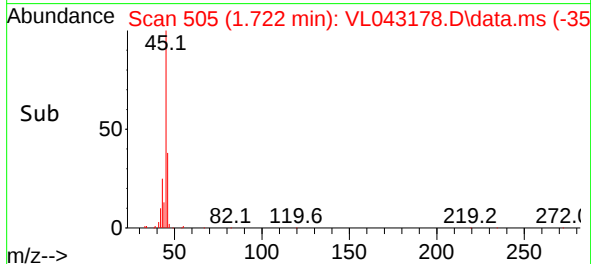
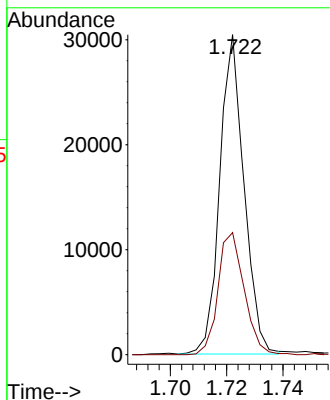
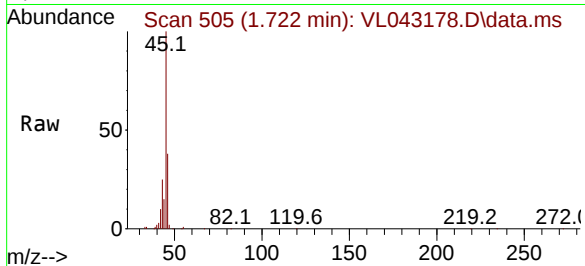




#13
Ethanol
Concen: 5.484 ppbv
RT: 1.722 min Scan# 505
Delta R.T. -0.000 min
Lab File: VL043178.D
Acq: 06 Nov 2025 21:08

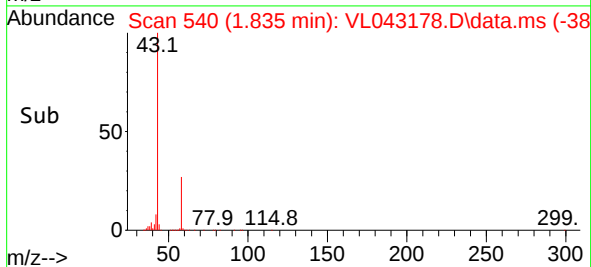
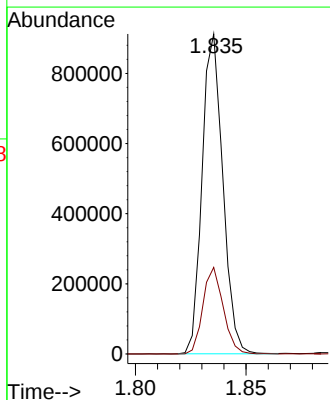
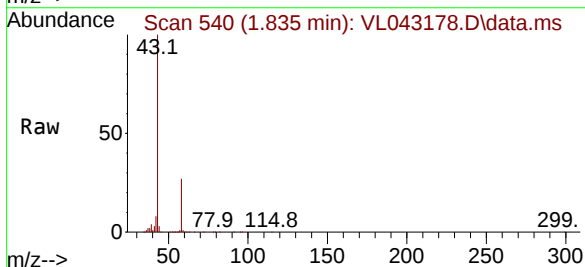
Instrument :
MSVOA_1
ClientSampleId :
141-SG-2

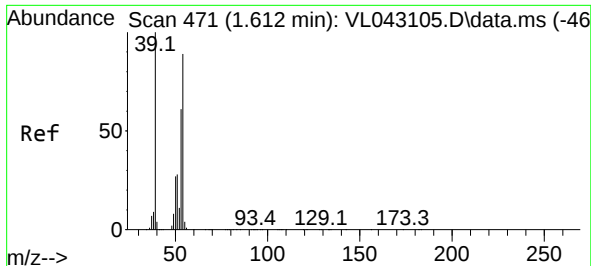
Tgt Ion: 45 Resp: 18184
Ion Ratio Lower Upper
45 100
46 41.4 14.7 58.9



#15
Acetone
Concen: 33.623 ppbv
RT: 1.835 min Scan# 540
Delta R.T. -0.000 min
Lab File: VL043178.D
Acq: 06 Nov 2025 21:08

Tgt Ion: 43 Resp: 595518
Ion Ratio Lower Upper
43 100
58 26.6 20.8 31.2





#16

1,3-Butadiene

Concen: 0.248 ppbv

RT: 1.602 min Scan# 4

Delta R.T. -0.010 min

Lab File: VL043178.D

Acq: 06 Nov 2025 21:08

Instrument :

MSVOA_1

ClientSampleId :

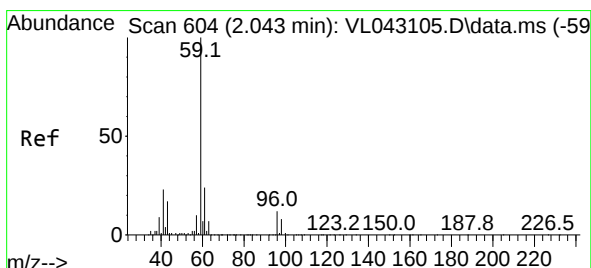
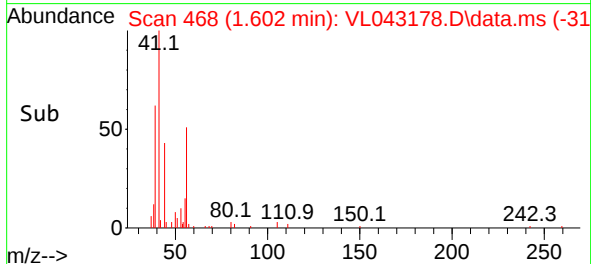
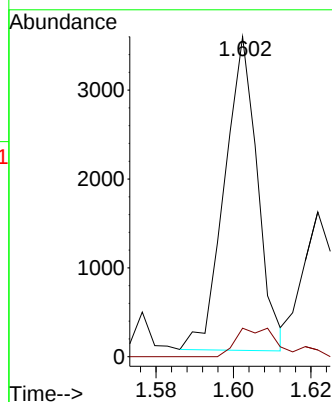
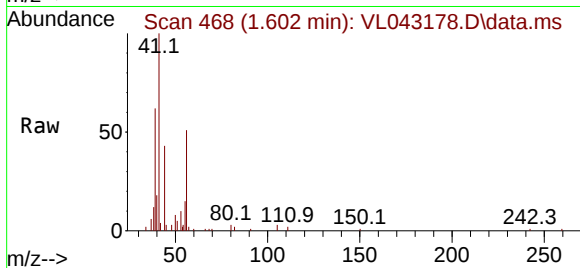
141-SG-2

Tgt Ion: 39 Resp: 2090

Ion Ratio Lower Upper

39 100

54 12.6 59.0 88.4#



#17

tert-Butyl alcohol

Concen: 0.511 ppbv

RT: 2.039 min Scan# 603

Delta R.T. -0.003 min

Lab File: VL043178.D

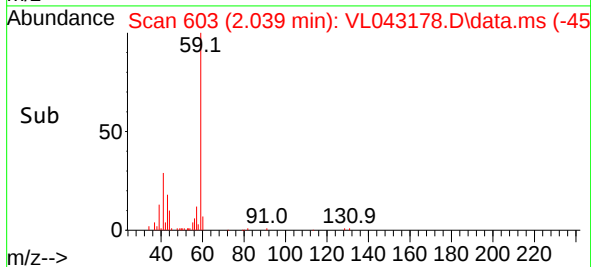
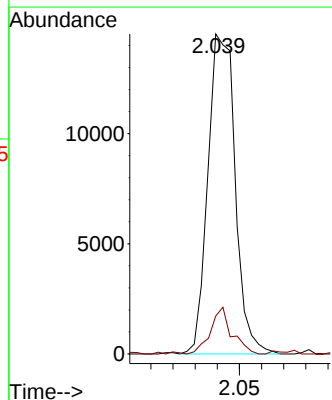
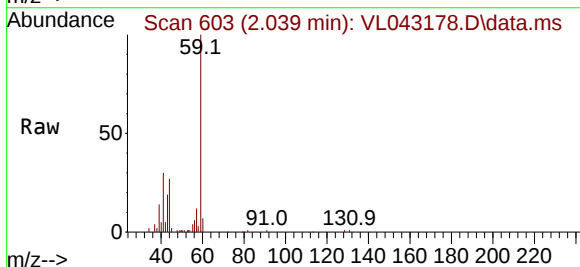
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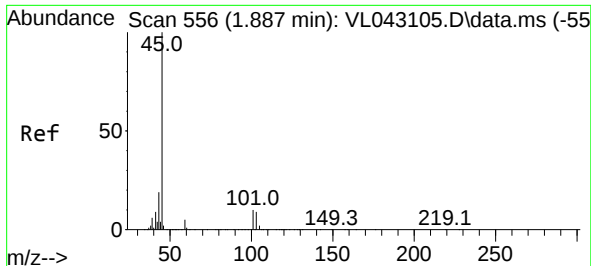
Tgt Ion: 59 Resp: 12433

Ion Ratio Lower Upper

59 100

57 12.6 8.2 12.4#

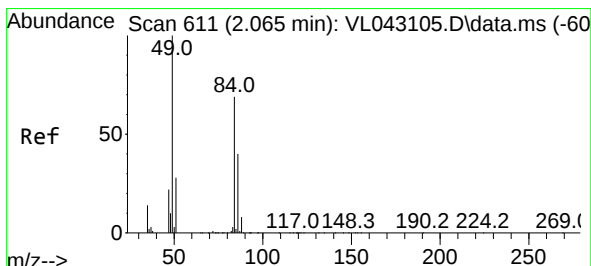
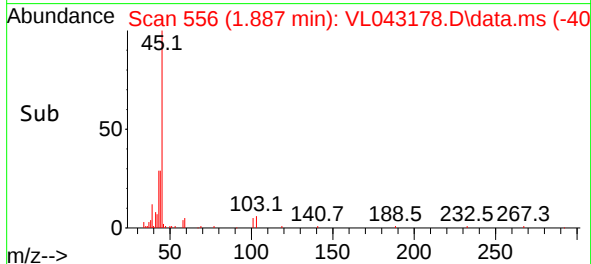
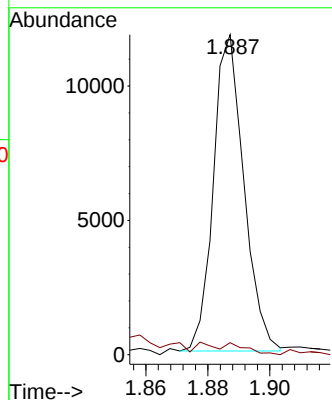
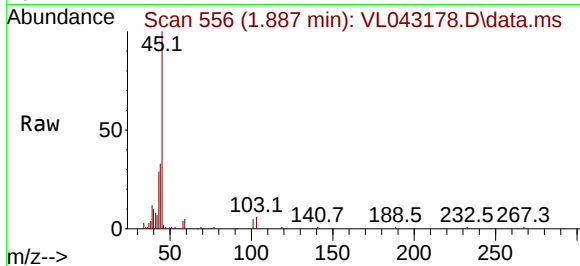




#19
Isopropyl Alcohol
Concen: 0.730 ppbv
RT: 1.887 min Scan# 511
Delta R.T. -0.000 min
Lab File: VL043178.D
Acq: 06 Nov 2025 21:08

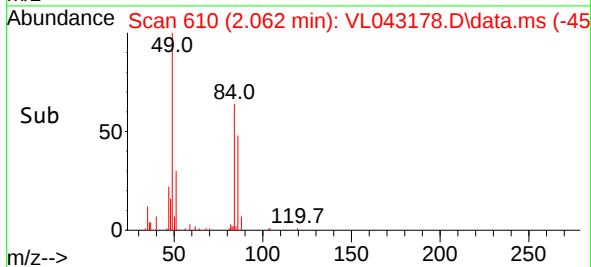
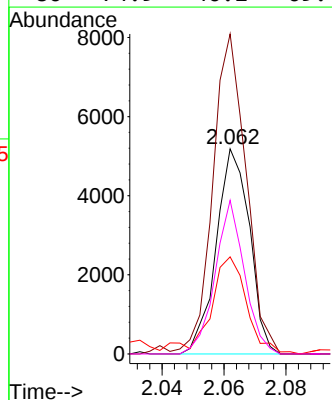
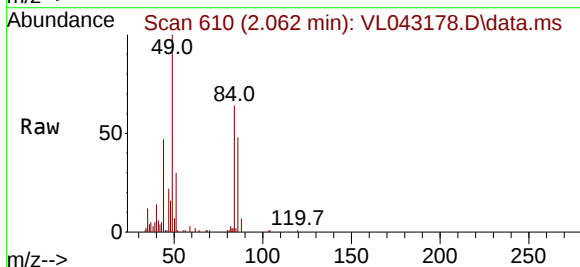
Instrument :
MSVOA_1
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141-SG-2

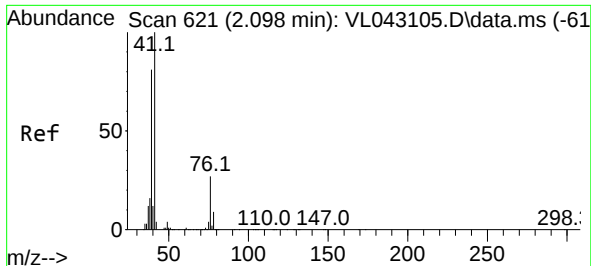
Tgt Ion: 45 Resp: 8050
Ion Ratio Lower Upper
45 100
58 0.0 31.3 46.9#



#20
Methylene Chloride
Concen: 0.554 ppbv
RT: 2.062 min Scan# 610
Delta R.T. -0.003 min
Lab File: VL043178.D
Acq: 06 Nov 2025 21:08

Tgt Ion: 84 Resp: 3877
Ion Ratio Lower Upper
84 100
49 156.0 116.6 175.0
51 46.3 34.8 52.2
86 74.9 46.2 69.4#

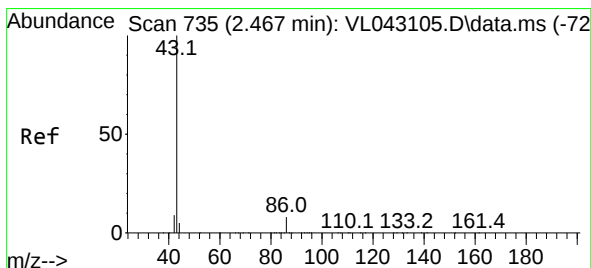
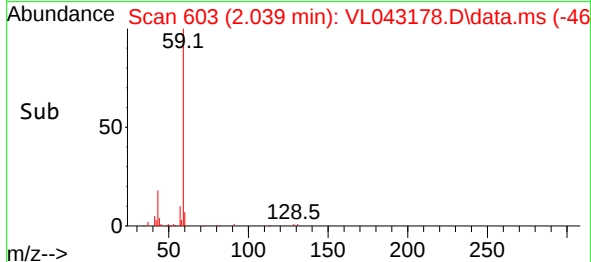
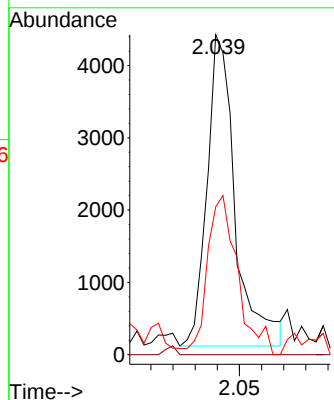
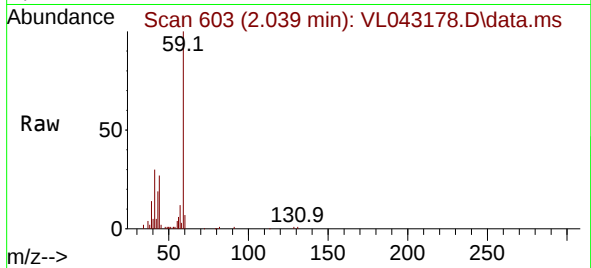




#21
 Allyl Chloride
 Concen: 0.291 ppbv
 RT: 2.039 min Scan# 60
 Delta R.T. -0.058 min
 Lab File: VL043178.D
 Acq: 06 Nov 2025 21:08

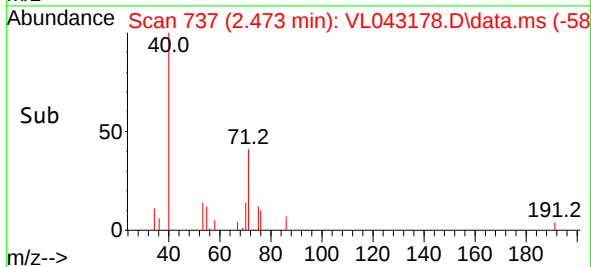
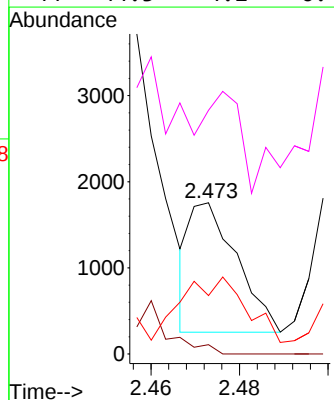
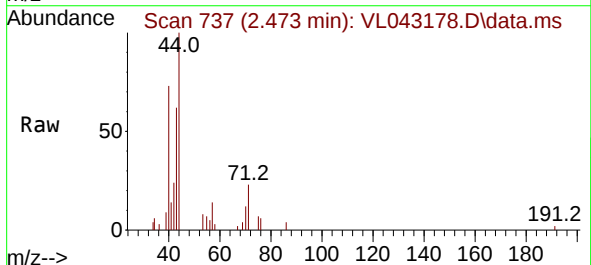
Instrument :
 MSVOA_1
 ClientSampleId :
 141-SG-2

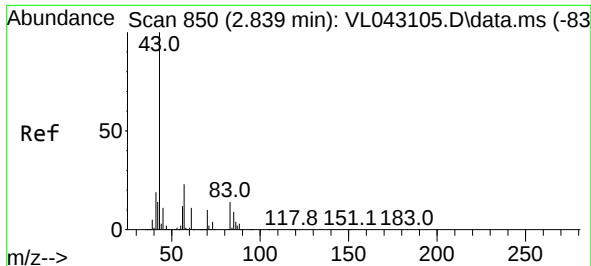
Tgt Ion: 41 Resp: 3797
 Ion Ratio Lower Upper
 41 100
 76 0.0 21.5 32.3#
 39 62.0 60.8 91.2



#23
 Vinyl Acetate
 Concen: 0.043 ppbv
 RT: 2.473 min Scan# 737
 Delta R.T. 0.006 min
 Lab File: VL043178.D
 Acq: 06 Nov 2025 21:08

Tgt Ion: 43 Resp: 1109
 Ion Ratio Lower Upper
 43 100
 86 7.2 6.2 9.2
 42 36.2 7.6 11.4#
 44 44.3 4.2 6.4#

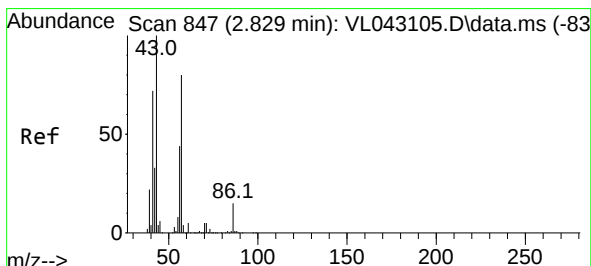
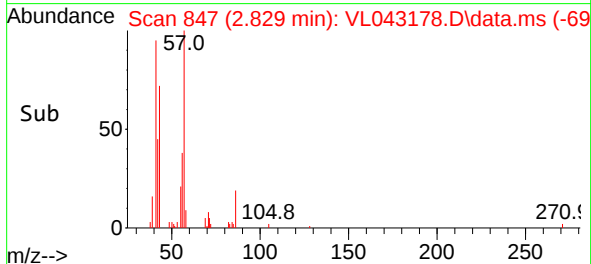
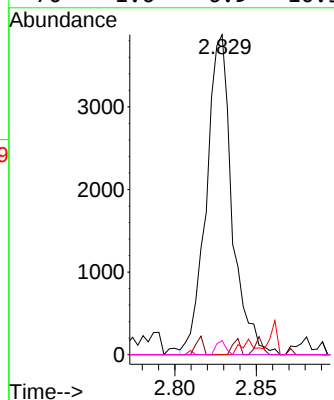
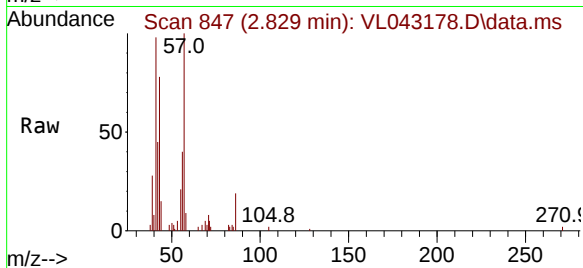




#25
Ethyl Acetate
Concen: 0.097 ppbv
RT: 2.829 min Scan# 847
Delta R.T. -0.010 min
Lab File: VL043178.D
Acq: 06 Nov 2025 21:08

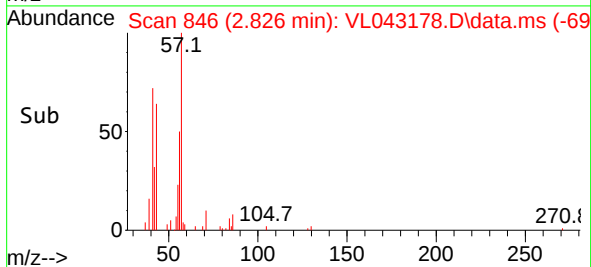
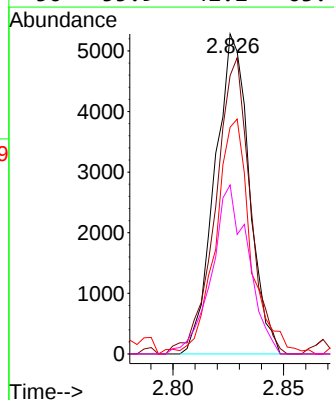
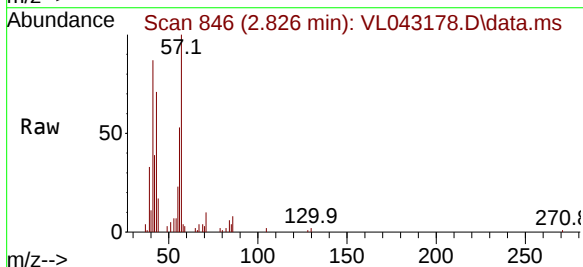
Instrument :
MSVOA_1
ClientSampleId :
141-SG-2

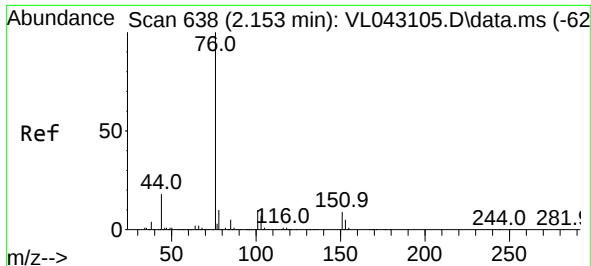
Tgt Ion: 43 Resp: 4243
Ion Ratio Lower Upper
43 100
45 0.0 7.8 11.8#
61 5.6 7.0 10.6#
70 1.6 6.9 10.3#



#26
Hexane
Concen: 0.281 ppbv
RT: 2.826 min Scan# 846
Delta R.T. -0.003 min
Lab File: VL043178.D
Acq: 06 Nov 2025 21:08

Tgt Ion: 57 Resp: 5694
Ion Ratio Lower Upper
57 100
41 95.1 71.4 107.0
43 75.2 178.5 267.7#
56 55.9 42.2 63.4





#27

Carbon Disulfide

Concen: 0.051 ppbv

RT: 2.153 min Scan# 61

Delta R.T. -0.000 min

Lab File: VL043178.D

Acq: 06 Nov 2025 21:08

Instrument :

MSVOA_L

ClientSampleId :

141-SG-2

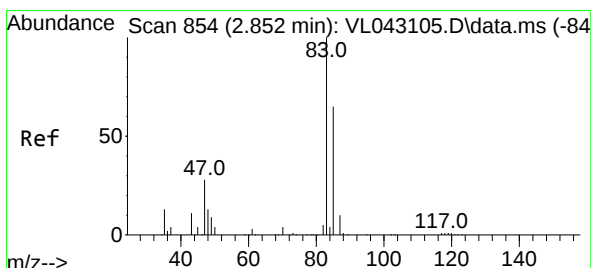
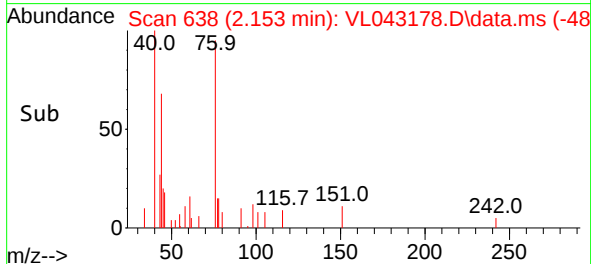
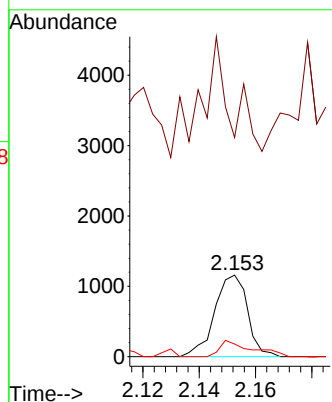
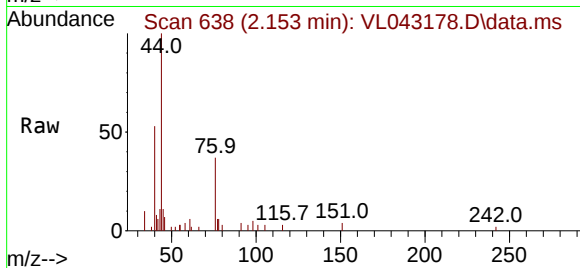
Tgt Ion: 76 Resp: 941

Ion Ratio Lower Upper

76 100

44 522.5 16.7 25.1#

78 19.3 9.3 13.9#



#29

Chloroform

Concen: 0.091 ppbv

RT: 2.848 min Scan# 853

Delta R.T. -0.003 min

Lab File: VL043178.D

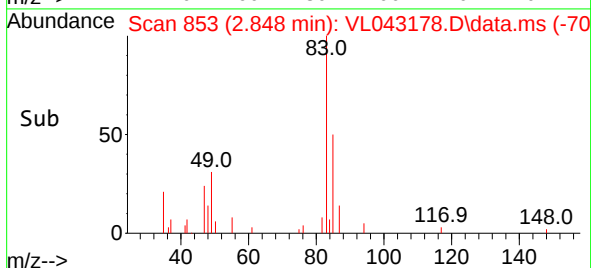
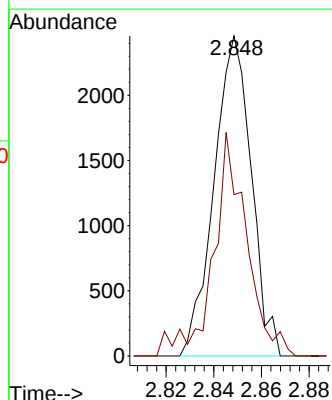
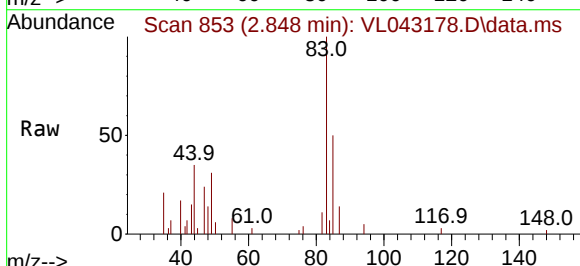
Acq: 06 Nov 2025 21:08

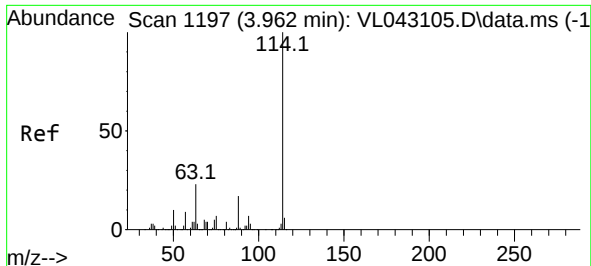
Tgt Ion: 83 Resp: 2672

Ion Ratio Lower Upper

83 100

85 42.8 51.8 77.6#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.955 min Scan# 1195

Delta R.T. -0.007 min

Lab File: VL043178.D

Acq: 06 Nov 2025 21:08

Instrument :

MSVOA_1

ClientSampleId :

141-SG-2

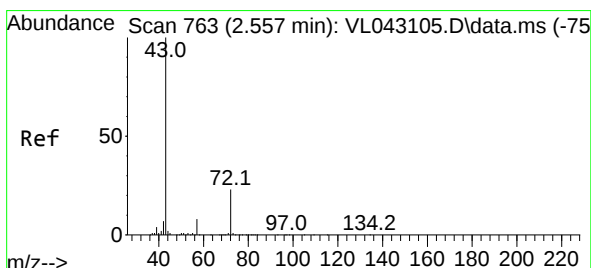
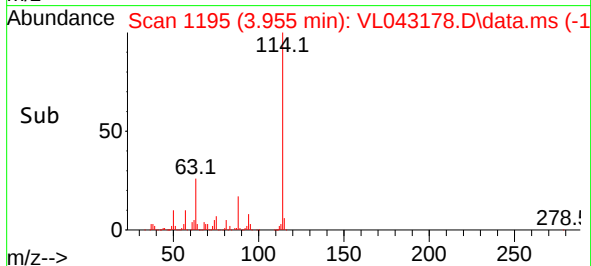
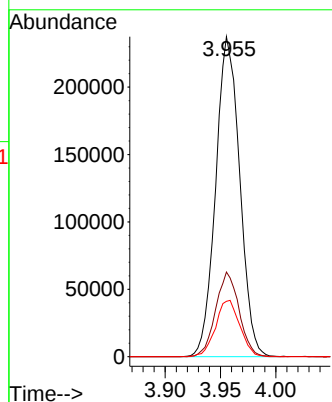
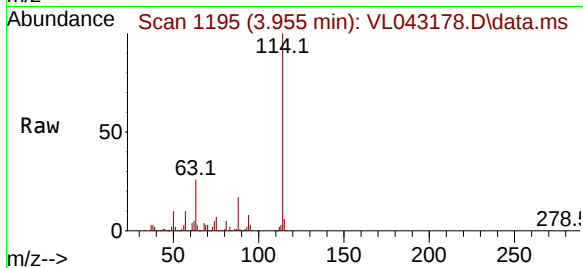
Tgt Ion:114 Resp: 358615

Ion Ratio Lower Upper

114 100

63 25.8 19.3 28.9

88 17.8 13.9 20.9



#34

2-Butanone

Concen: 1.362 ppbv

RT: 2.557 min Scan# 763

Delta R.T. -0.000 min

Lab File: VL043178.D

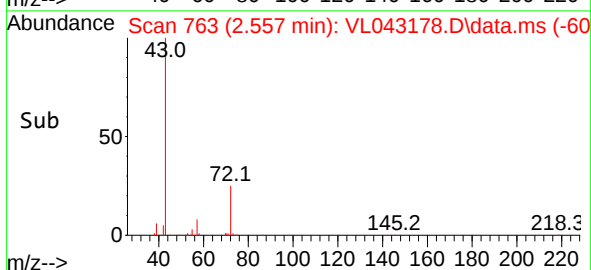
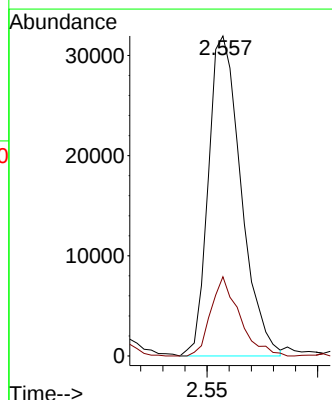
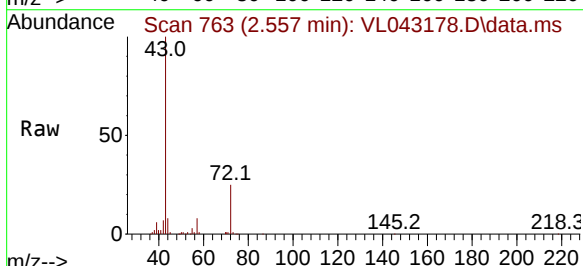
Acq: 06 Nov 2025 21:08

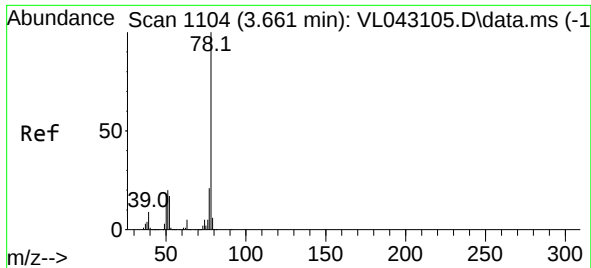
Tgt Ion: 43 Resp: 32842

Ion Ratio Lower Upper

43 100

72 22.0 18.4 27.6

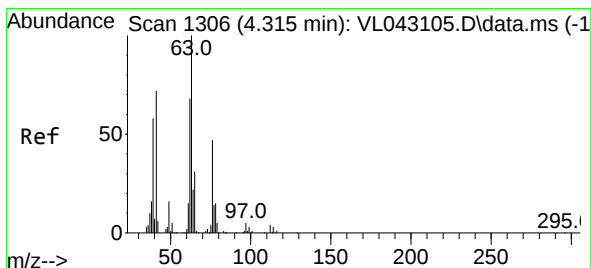
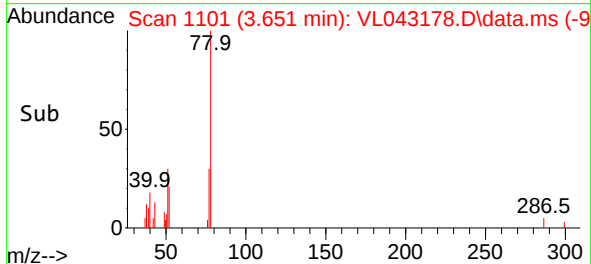
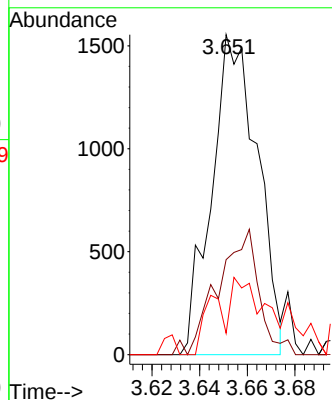
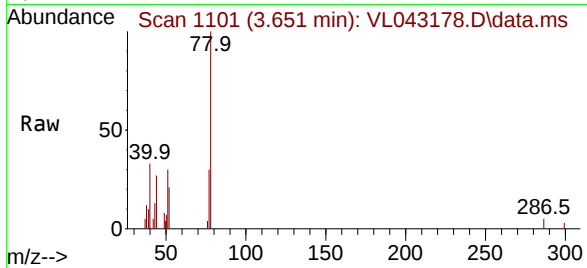




#36
Benzene
Concen: 0.062 ppbv
RT: 3.651 min Scan# 1104
Delta R.T. -0.010 min
Lab File: VL043178.D
Acq: 06 Nov 2025 21:08

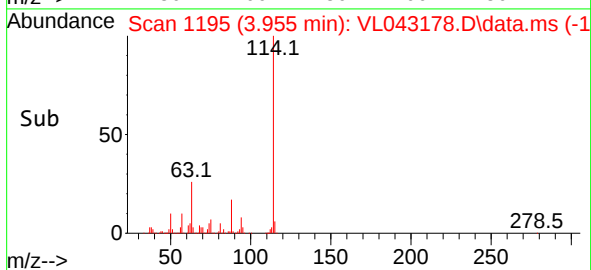
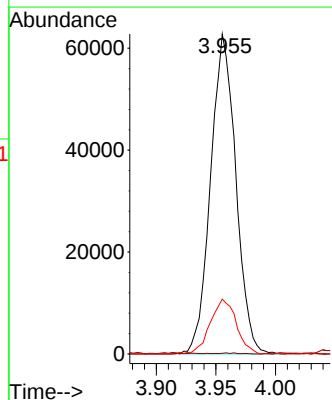
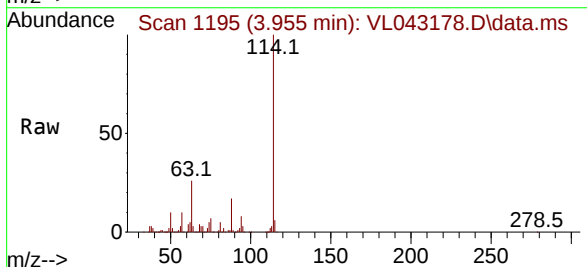
Instrument :
MSVOA_1
ClientSampleId :
141-SG-2

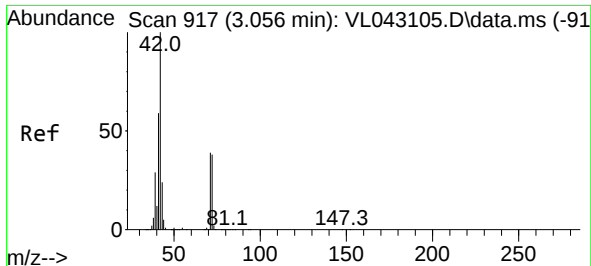
Tgt Ion: 78 Resp: 2082
Ion Ratio Lower Upper
78 100
77 26.1 17.0 25.6#
50 6.7 14.6 22.0#



#39
1,2-Dichloropropane
Concen: 7.487 ppbv
RT: 3.955 min Scan# 1195
Delta R.T. -0.360 min
Lab File: VL043178.D
Acq: 06 Nov 2025 21:08

Tgt Ion: 63 Resp: 92451
Ion Ratio Lower Upper
63 100
41 0.0 58.0 87.0#
62 17.0 54.7 82.1#

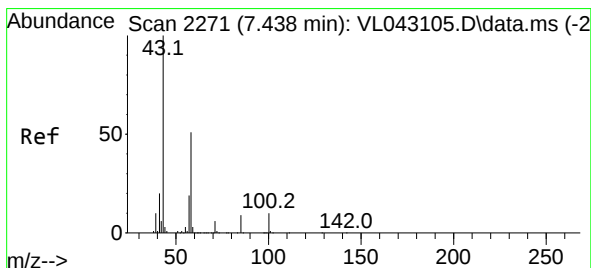
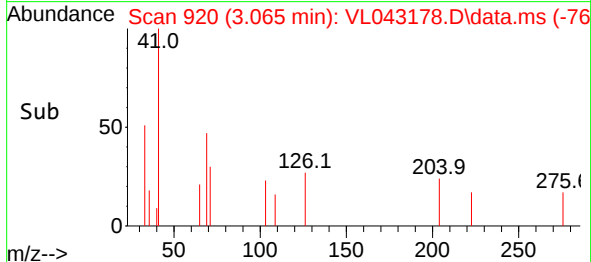
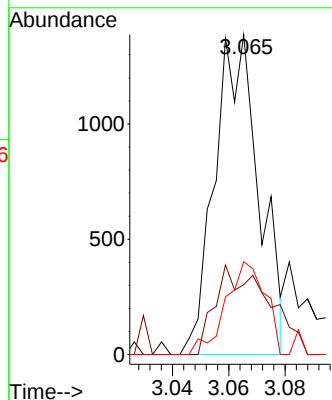
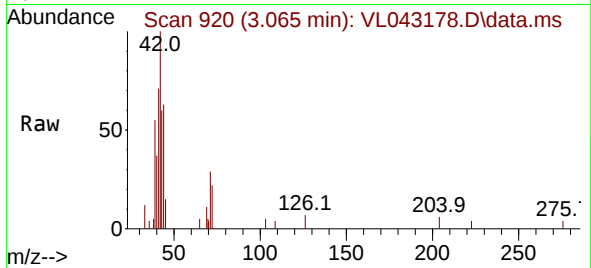




#41
Tetrahydrofuran
Concen: 0.113 ppbv
RT: 3.065 min Scan# 917
Delta R.T. 0.009 min
Lab File: VL043178.D
Acq: 06 Nov 2025 21:08

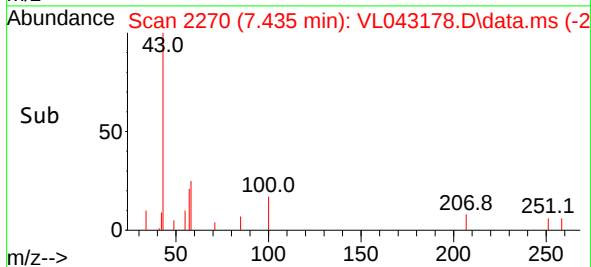
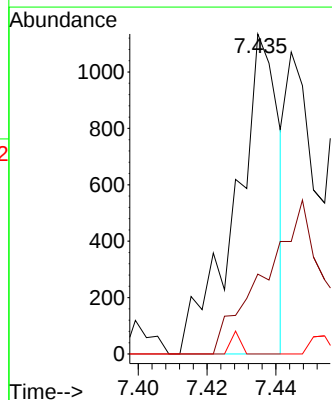
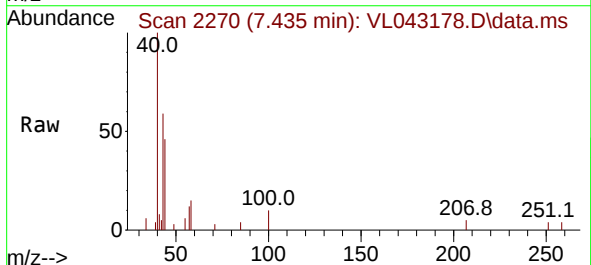
Instrument :
MSVOA_1
ClientSampleId :
141-SG-2

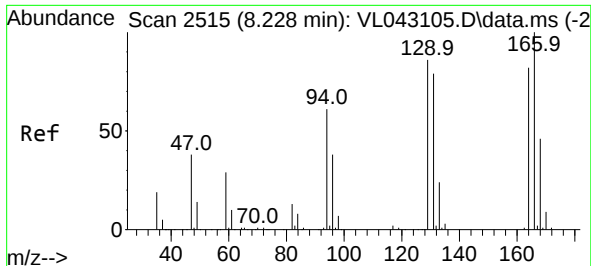
Tgt Ion: 42 Resp: 1517
Ion Ratio Lower Upper
42 100
72 33.4 31.3 46.9
71 27.2 30.4 45.6#



#51
2-Hexanone
Concen: 0.040 ppbv
RT: 7.435 min Scan# 2270
Delta R.T. -0.003 min
Lab File: VL043178.D
Acq: 06 Nov 2025 21:08

Tgt Ion: 43 Resp: 993
Ion Ratio Lower Upper
43 100
58 0.0 40.4 60.6#
98 0.0 0.1 0.1#

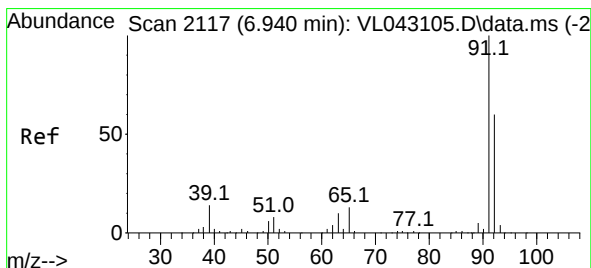
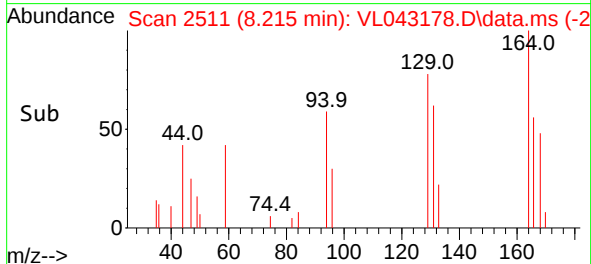
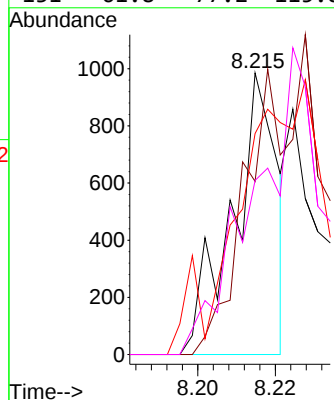
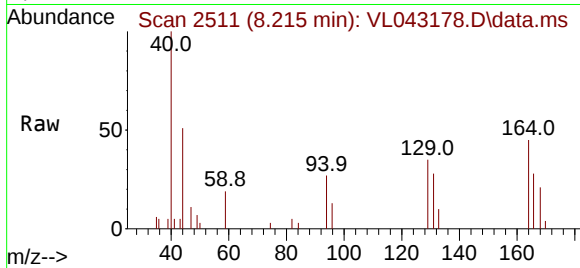




#52
Tetrachloroethene
Concen: 0.064 ppbv
RT: 8.215 min Scan# 2114
Delta R.T. -0.013 min
Lab File: VL043178.D
Acq: 06 Nov 2025 21:08

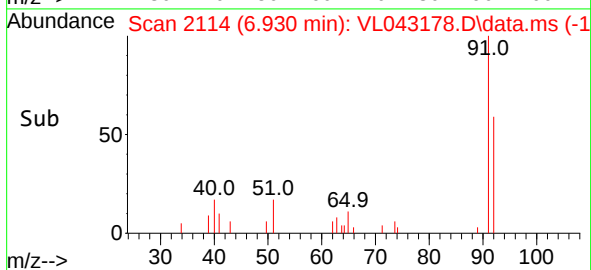
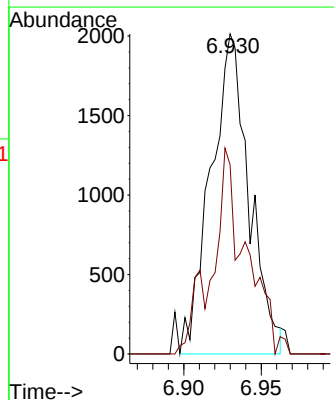
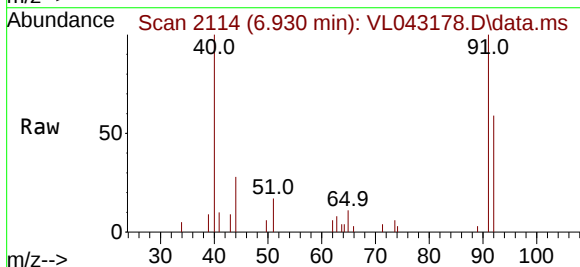
Instrument :
MSVOA_1
ClientSampleId :
141-SG-2

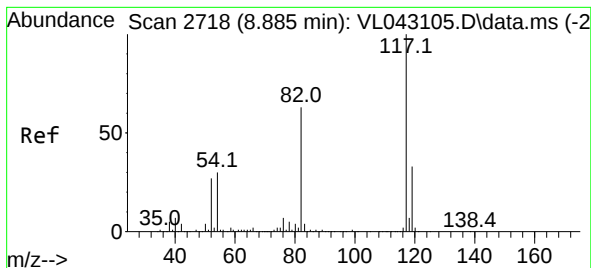
Tgt Ion:164 Resp: 781
Ion Ratio Lower Upper
164 100
166 61.5 97.6 146.4#
129 67.5 84.5 126.7#
131 61.8 77.2 115.8#



#53
Toluene
Concen: 0.087 ppbv
RT: 6.930 min Scan# 2114
Delta R.T. -0.010 min
Lab File: VL043178.D
Acq: 06 Nov 2025 21:08

Tgt Ion: 91 Resp: 3470
Ion Ratio Lower Upper
91 100
92 57.2 48.8 73.2





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 8.878 min Scan# 21

Delta R.T. -0.007 min

Lab File: VL043178.D

Acq: 06 Nov 2025 21:08

Instrument :

MSVOA_1

ClientSampleId :

141-SG-2

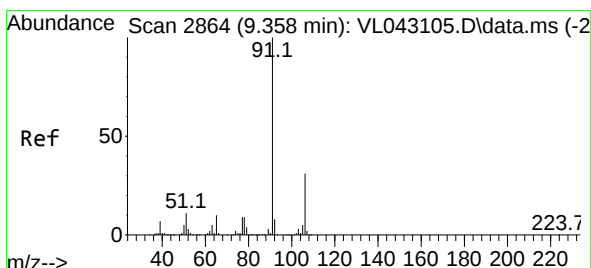
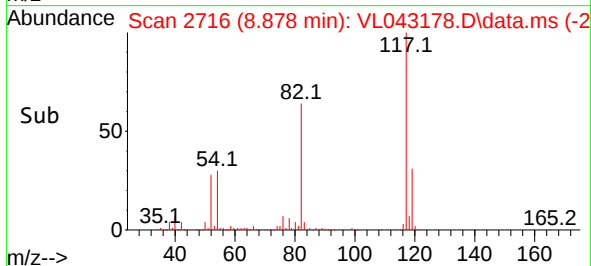
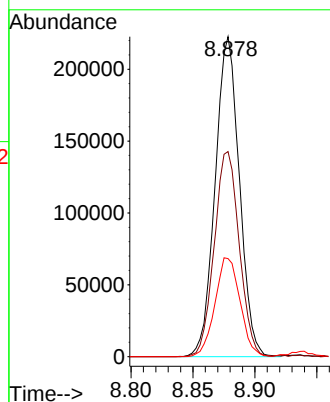
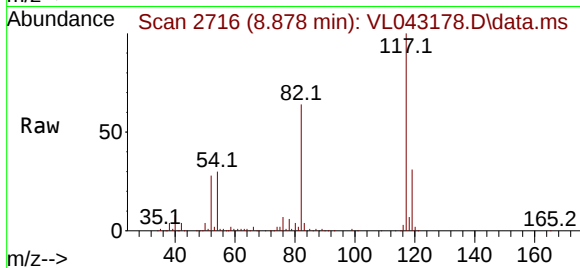
Tgt Ion:117 Resp: 303524

Ion Ratio Lower Upper

117 100

82 66.5 53.8 80.8

119 32.1 25.4 38.0



#58

Ethyl Benzene

Concen: 0.038 ppbv

RT: 9.526 min Scan# 2916

Delta R.T. 0.168 min

Lab File: VL043178.D

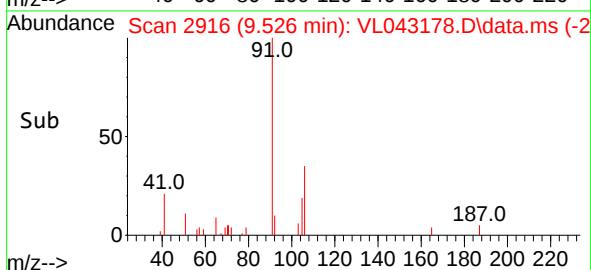
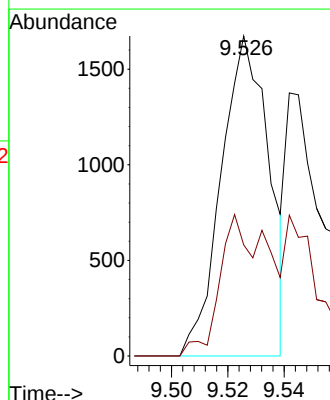
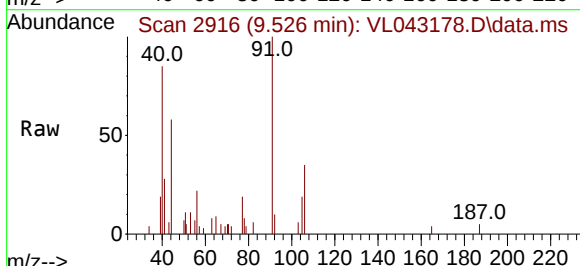
Acq: 06 Nov 2025 21:08

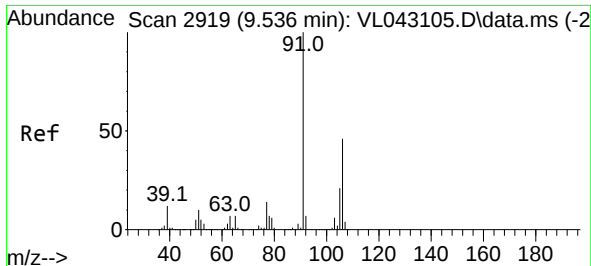
Tgt Ion: 91 Resp: 1965

Ion Ratio Lower Upper

91 100

106 34.7 24.8 37.2





#59

m/p-Xylene

Concen: 0.047 ppbv

RT: 9.526 min Scan# 2916

Delta R.T. -0.010 min

Lab File: VL043178.D

Acq: 06 Nov 2025 21:08

Instrument :

MSVOA_1

ClientSampleId :

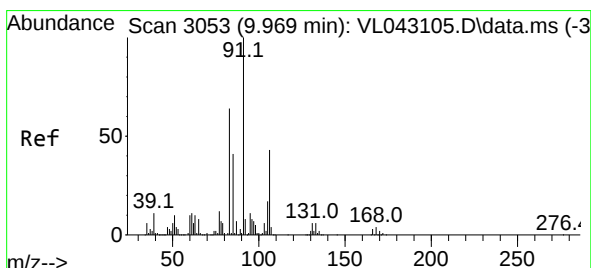
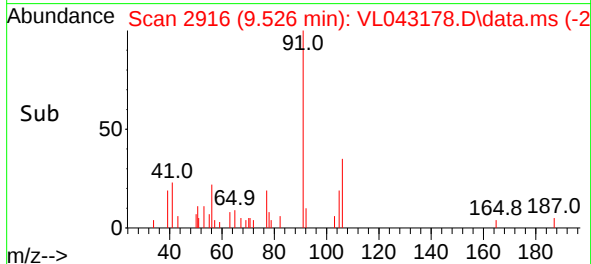
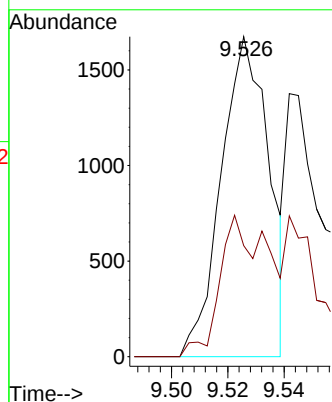
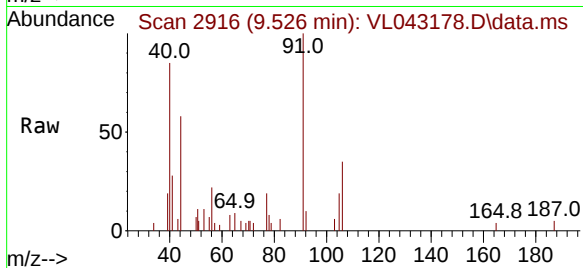
141-SG-2

Tgt Ion: 91 Resp: 1965

Ion Ratio Lower Upper

91 100

106 77.5 38.0 57.0#



#60

o-Xylene

Concen: 0.038 ppbv

RT: 9.963 min Scan# 3051

Delta R.T. -0.007 min

Lab File: VL043178.D

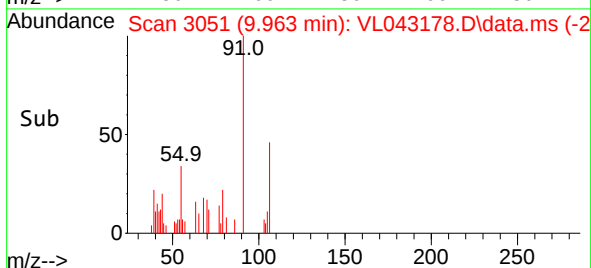
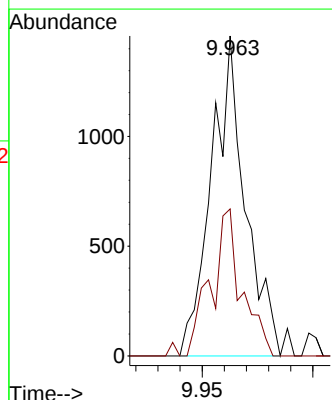
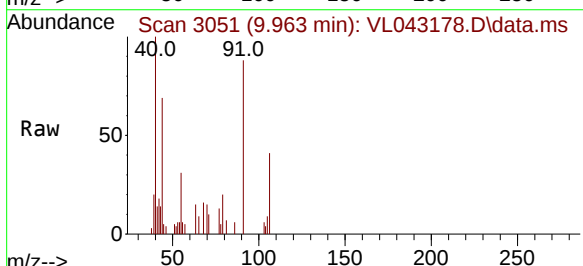
Acq: 06 Nov 2025 21:08

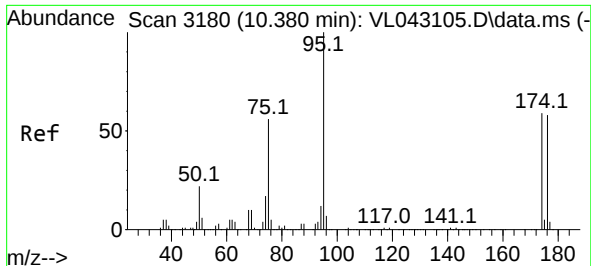
Tgt Ion: 91 Resp: 1551

Ion Ratio Lower Upper

91 100

106 42.2 21.9 65.8

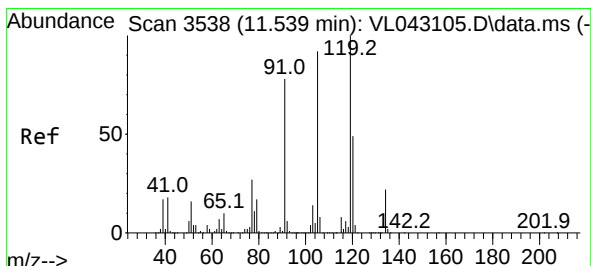
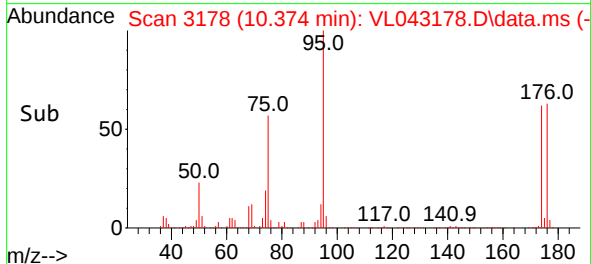
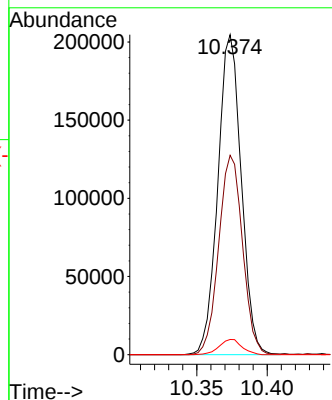
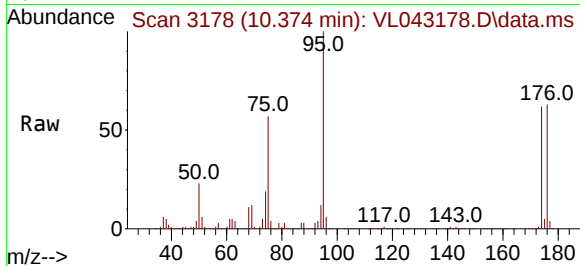




#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.037 ppbv
 RT: 10.374 min Scan# 3180
 Delta R.T. -0.007 min
 Lab File: VL043178.D
 Acq: 06 Nov 2025 21:08

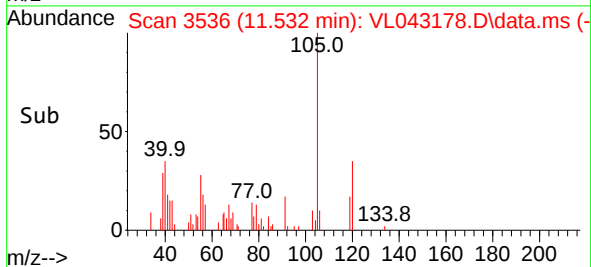
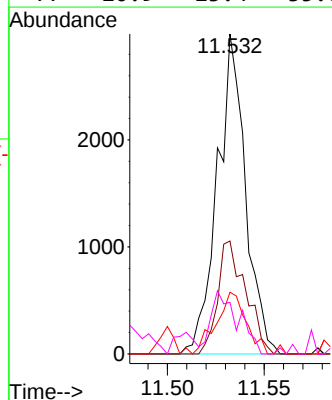
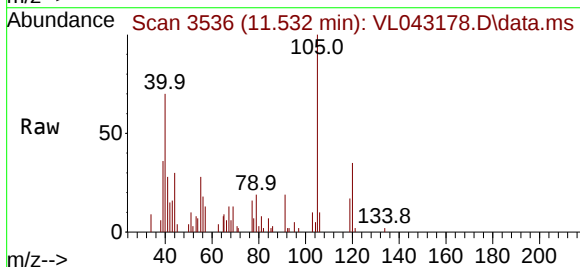
Instrument :
 MSVOA_1
 ClientSampleId :
 141-SG-2

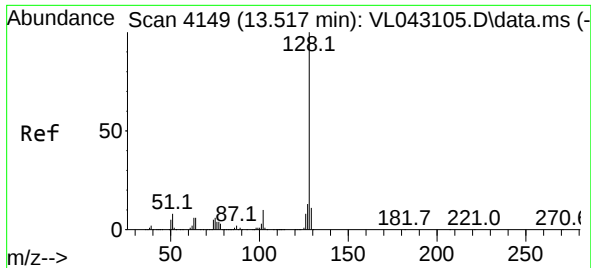
Tgt Ion: 95 Resp: 236795
 Ion Ratio Lower Upper
 95 100
 174 63.5 48.3 72.5
 175 4.6 3.8 5.8



#74
 1,2,4-Trimethylbenzene
 Concen: 0.065 ppbv
 RT: 11.532 min Scan# 3536
 Delta R.T. -0.007 min
 Lab File: VL043178.D
 Acq: 06 Nov 2025 21:08

Tgt Ion: 105 Resp: 3023
 Ion Ratio Lower Upper
 105 100
 120 35.3 42.8 64.2#
 91 19.3 68.3 102.5#
 77 20.9 23.4 35.0#





#79
Naphthalene
Concen: 0.038 ppbv
RT: 13.516 min Scan# 4149
Delta R.T. -0.000 min
Lab File: VL043178.D
Acq: 06 Nov 2025 21:08

Instrument :
MSVOA_1
ClientSampleId :
141-SG-2

Tgt Ion:128 Resp: 1855
Ion Ratio Lower Upper
128 100
127 68.0 10.5 15.7#
129 13.7 9.1 13.7#

