

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL110625\
 Data File : VL043173.D
 Acq On : 06 Nov 2025 18:23
 Operator : SY/MD
 Sample : Q3555-03 2X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 151-SG-2

Quant Time: Nov 07 00:25:48 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	2.784	49	116388	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.952	114	320264	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.872	117	276449	10.000	ppbv	-0.01

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.370	95	217604	10.127	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.300%

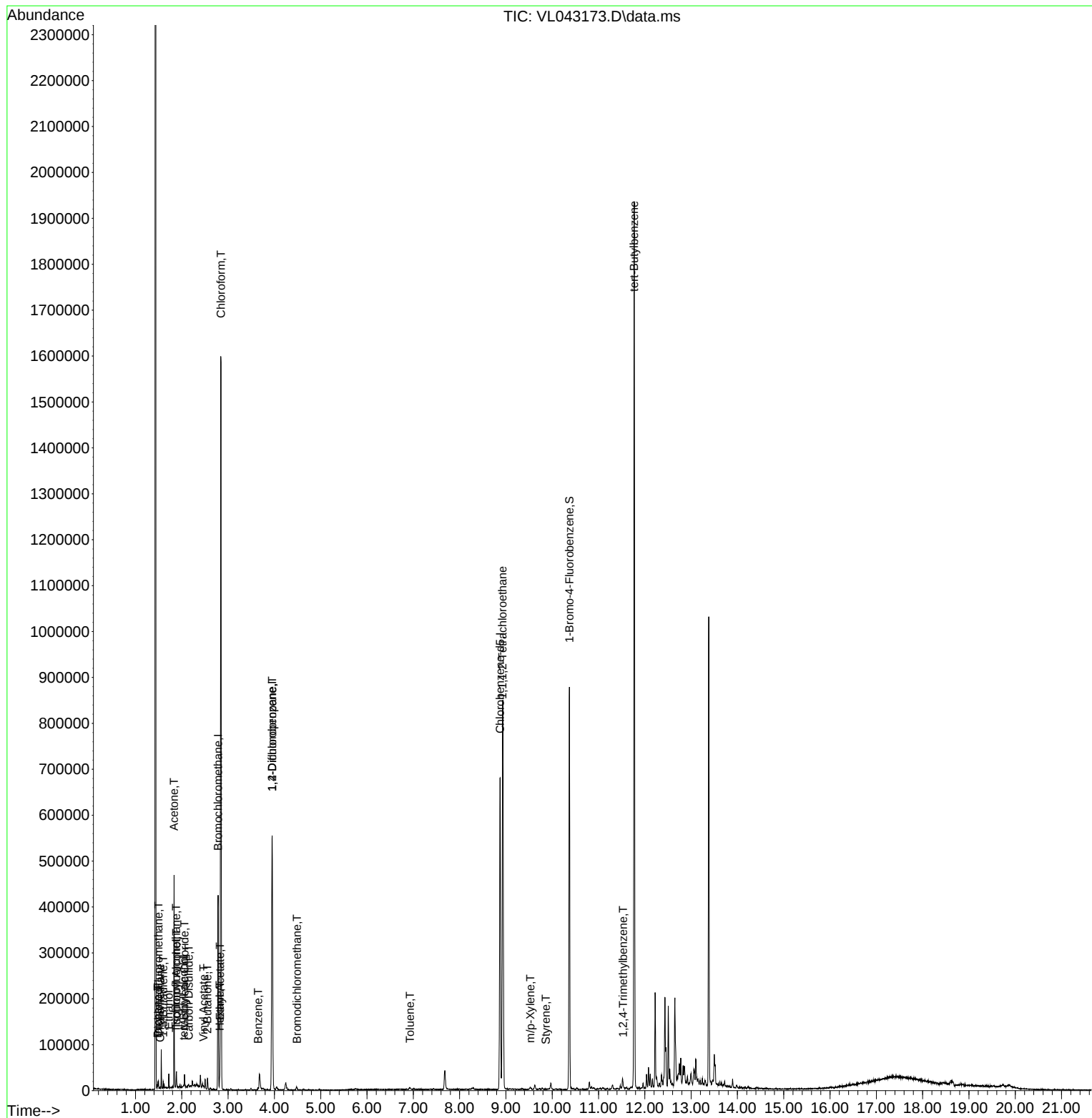
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.499	85	4332	0.262	ppbv	97
4) Chloromethane	1.531	50	879	0.134	ppbv #	52
9) Propene	1.483	41	1948	0.245	ppbv	95
11) Trichlorofluoromethane	1.877	101	2444	0.151	ppbv	90
13) Ethanol	1.719	45	9709	3.306	ppbv	88
15) Acetone	1.832	43	193000	12.303	ppbv	97
16) 1,3-Butadiene	1.599	39	1703	0.228	ppbv #	30
17) tert-Butyl alcohol	2.043	59	1846	0.086	ppbv #	82
19) Isopropyl Alcohol	1.884	45	13192	1.350	ppbv #	1
20) Methylene Chloride	2.059	84	4115	0.664	ppbv	95
23) Vinyl Acetate	2.470	43	733	0.032	ppbv #	64
25) Ethyl Acetate	2.823	43	5628	0.145	ppbv #	1
26) Hexane	2.819	57	6656	0.371	ppbv #	33
27) Carbon Disulfide	2.149	76	2110	0.128	ppbv #	1
29) Chloroform	2.845	83	670600	25.819	ppbv	100
34) 2-Butanone	2.554	43	15828	0.735	ppbv	99
36) Benzene	3.651	78	2243	0.074	ppbv #	62
39) 1,2-Dichloropropane	3.952	63	84109	7.627	ppbv #	26
42) Bromodichloromethane	4.489	83	1068	0.044	ppbv #	96
53) Toluene	6.930	91	3248	0.091	ppbv	100
56) 1,1,1,2-Tetrachloroethane	8.927	131	994	0.057	ppbv #	1
59) m/p-Xylene	9.526	91	1815	0.048	ppbv #	64
61) Styrene	9.862	104	563	0.033	ppbv #	87
65) tert-Butylbenzene	11.769	119	16149	0.271	ppbv #	21
74) 1,2,4-Trimethylbenzene	11.529	105	1615	0.038	ppbv #	49

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

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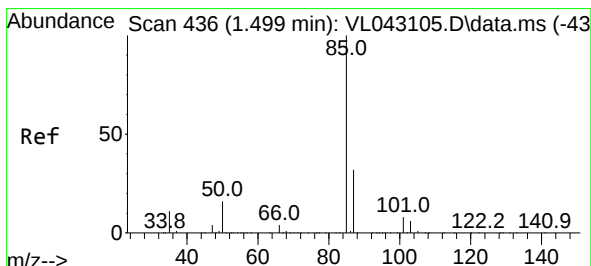
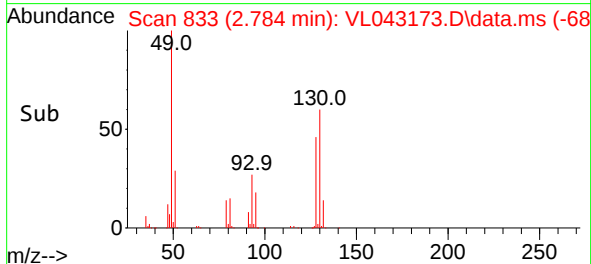
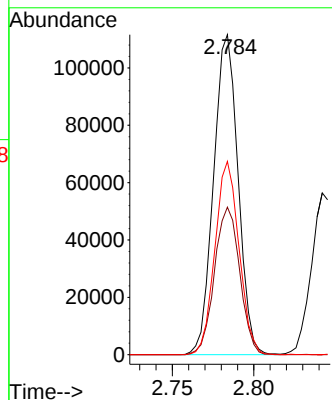
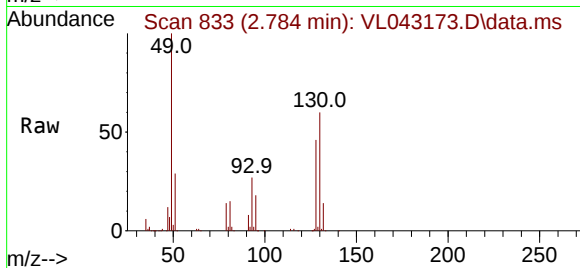




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.784 min Scan# 811
Delta R.T. -0.006 min
Lab File: VL043173.D
Acq: 06 Nov 2025 18:23

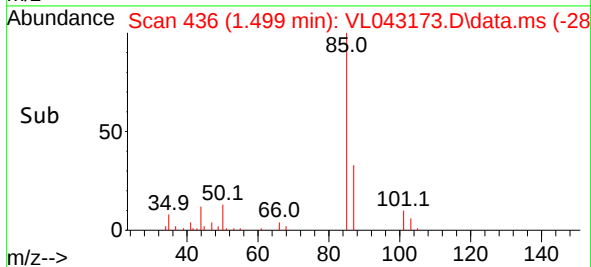
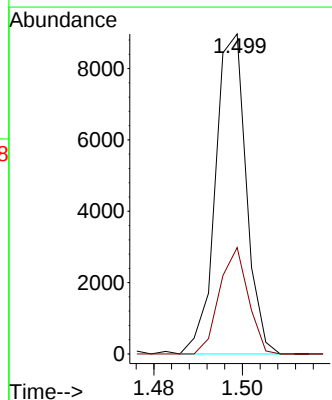
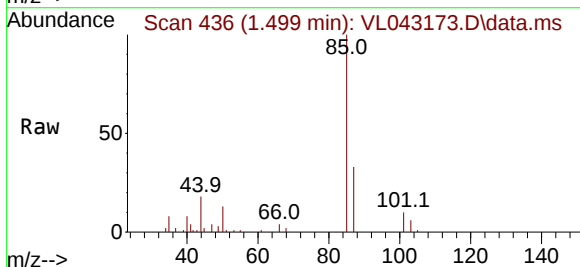
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MSVOA_1
ClientSampleId :
151-SG-2

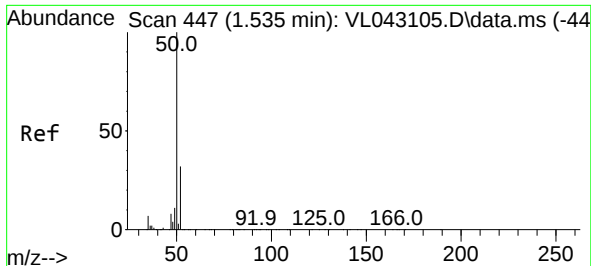
Tgt Ion: 49 Resp: 116388
Ion Ratio Lower Upper
49 100
128 47.6 24.4 73.4
130 59.4 31.0 93.0



#2
Dichlorodifluoromethane
Concen: 0.262 ppbv
RT: 1.499 min Scan# 436
Delta R.T. -0.000 min
Lab File: VL043173.D
Acq: 06 Nov 2025 18:23

Tgt Ion: 85 Resp: 4332
Ion Ratio Lower Upper
85 100
87 33.3 25.3 37.9

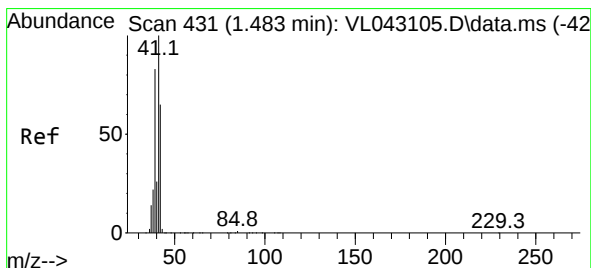
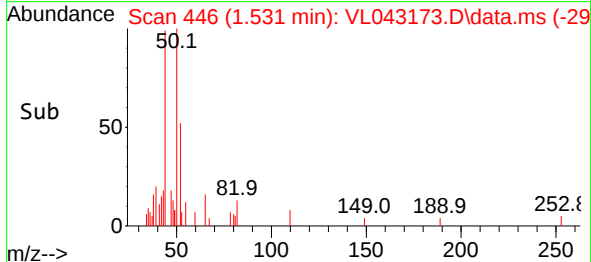
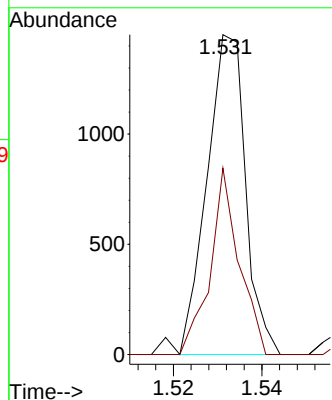
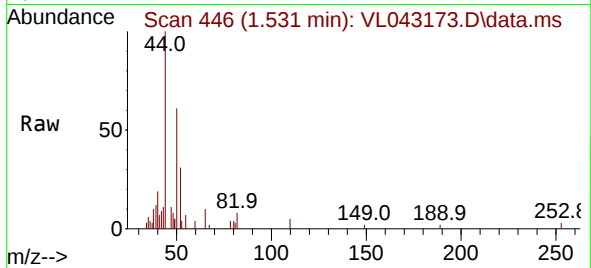




#4
Chloromethane
Concen: 0.134 ppbv
RT: 1.531 min Scan# 447
Delta R.T. -0.003 min
Lab File: VL043173.D
Acq: 06 Nov 2025 18:23

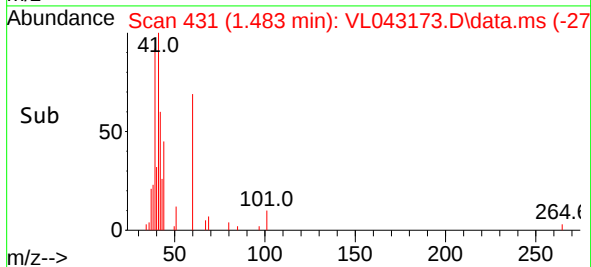
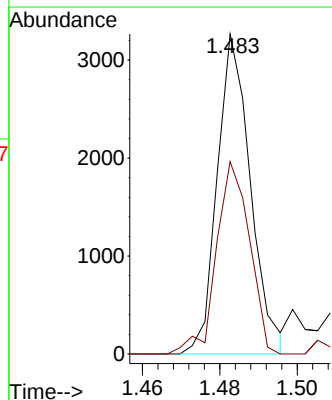
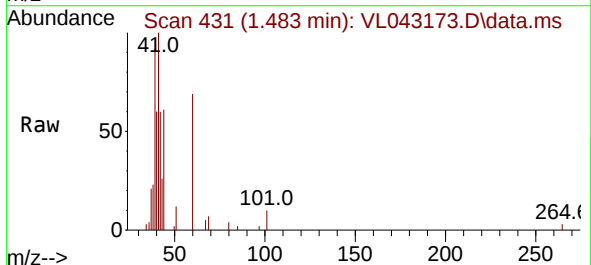
Instrument :
MSVOA_1
ClientSampleId :
151-SG-2

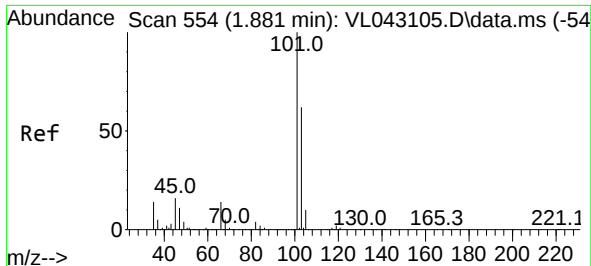
Tgt Ion: 50 Resp: 879
Ion Ratio Lower Upper
50 100
52 58.3 25.2 37.8#



#9
Propene
Concen: 0.245 ppbv
RT: 1.483 min Scan# 431
Delta R.T. -0.000 min
Lab File: VL043173.D
Acq: 06 Nov 2025 18:23

Tgt Ion: 41 Resp: 1948
Ion Ratio Lower Upper
41 100
42 64.5 55.1 82.7

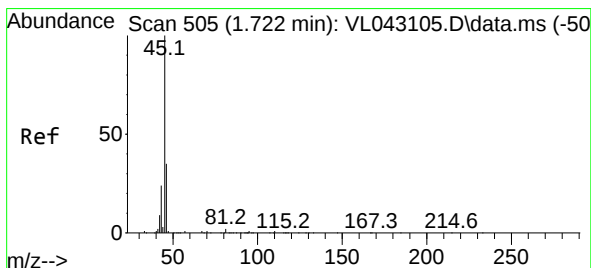
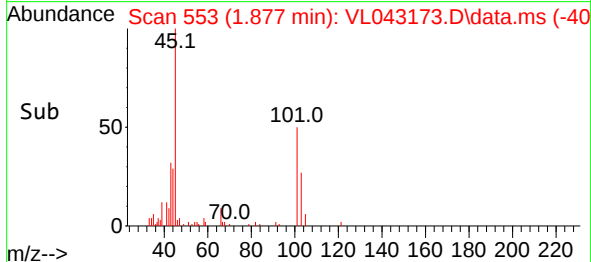
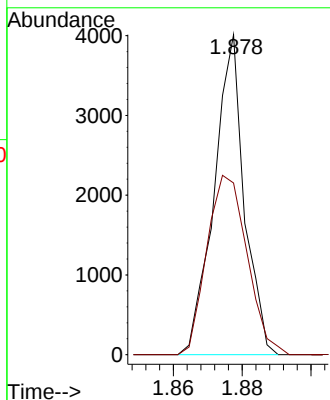
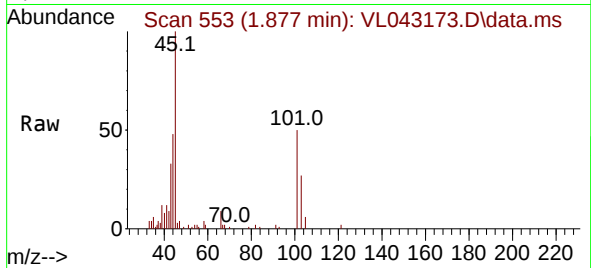




#11
Trichlorofluoromethane
Concen: 0.151 ppbv
RT: 1.877 min Scan# 51
Delta R.T. -0.003 min
Lab File: VL043173.D
Acq: 06 Nov 2025 18:23

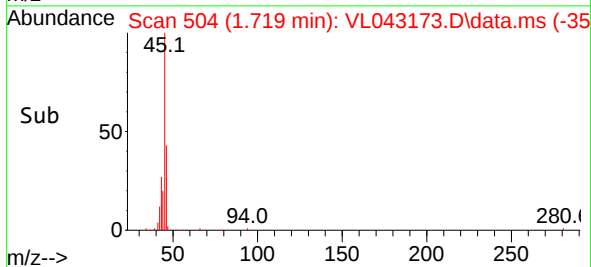
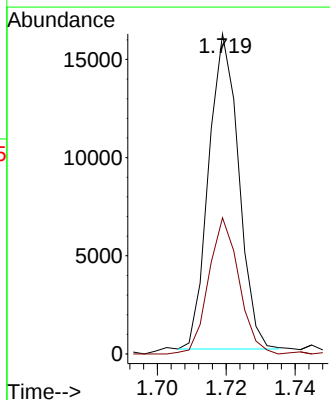
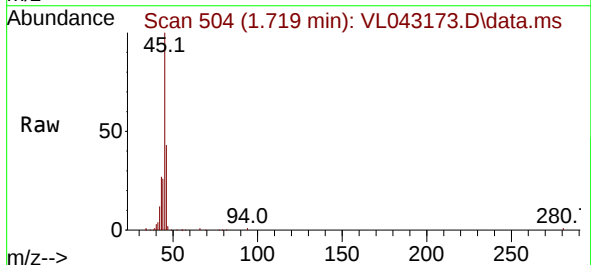
Instrument :
MSVOA_L
ClientSampleId :
151-SG-2

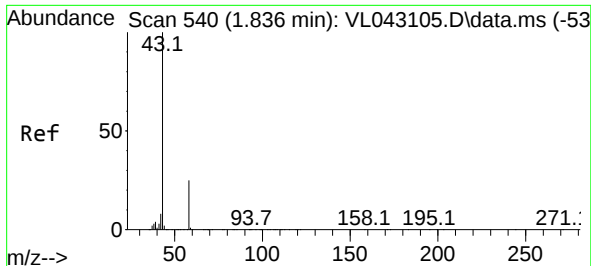
Tgt Ion:101 Resp: 2444
Ion Ratio Lower Upper
101 100
103 53.6 49.3 73.9



#13
Ethanol
Concen: 3.306 ppbv
RT: 1.719 min Scan# 504
Delta R.T. -0.003 min
Lab File: VL043173.D
Acq: 06 Nov 2025 18:23

Tgt Ion: 45 Resp: 9709
Ion Ratio Lower Upper
45 100
46 43.8 14.7 58.9

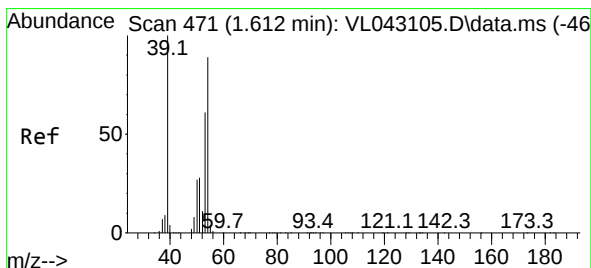
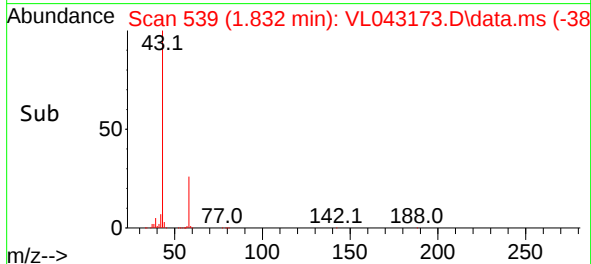
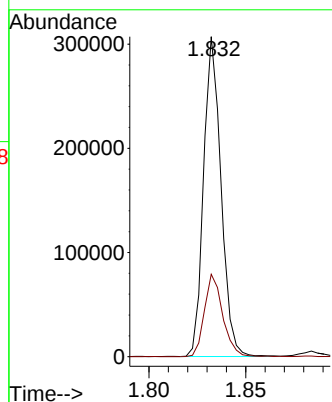
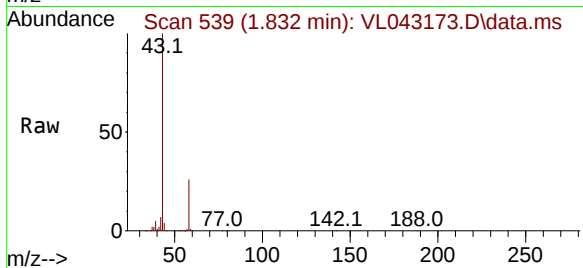




#15
Acetone
Concen: 12.303 ppbv
RT: 1.832 min Scan# 51
Delta R.T. -0.003 min
Lab File: VL043173.D
Acq: 06 Nov 2025 18:23

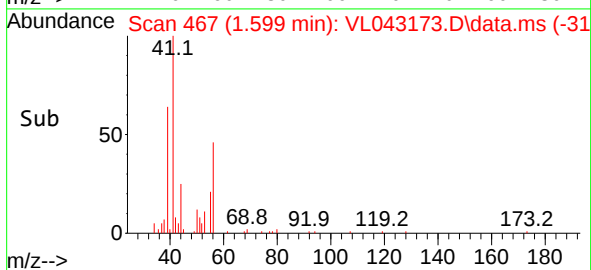
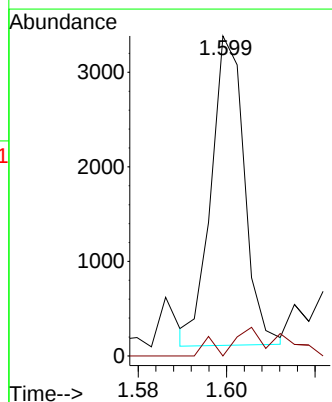
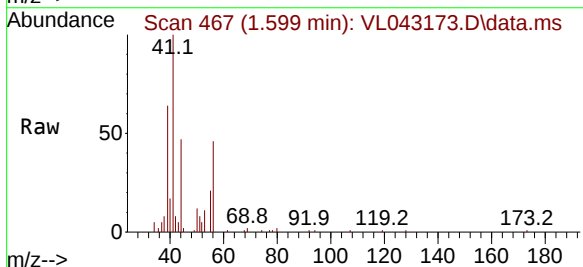
Instrument :
MSVOA_L
ClientSampleId :
151-SG-2

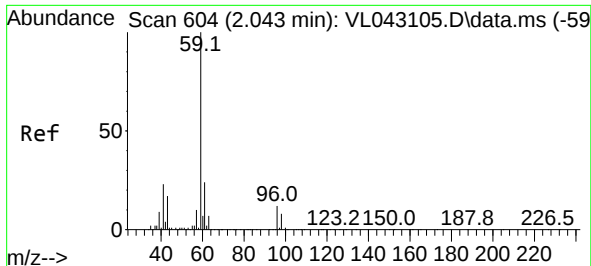
Tgt Ion: 43 Resp: 193000
Ion Ratio Lower Upper
43 100
58 27.4 20.8 31.2



#16
1,3-Butadiene
Concen: 0.228 ppbv
RT: 1.599 min Scan# 467
Delta R.T. -0.013 min
Lab File: VL043173.D
Acq: 06 Nov 2025 18:23

Tgt Ion: 39 Resp: 1703
Ion Ratio Lower Upper
39 100
54 14.4 59.0 88.4#





#17

tert-Butyl alcohol

Concen: 0.086 ppbv

RT: 2.043 min Scan# 604

Delta R.T. -0.000 min

Lab File: VL043173.D

Acq: 06 Nov 2025 18:23

Instrument :

MSVOA_1

ClientSampleId :

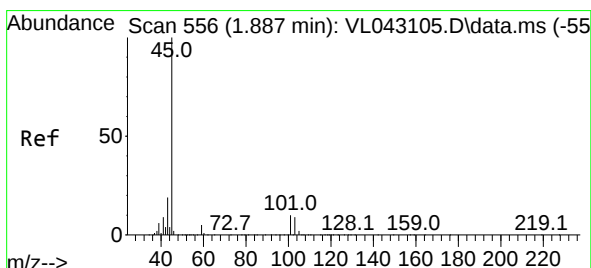
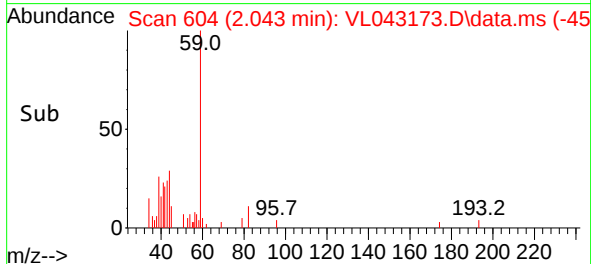
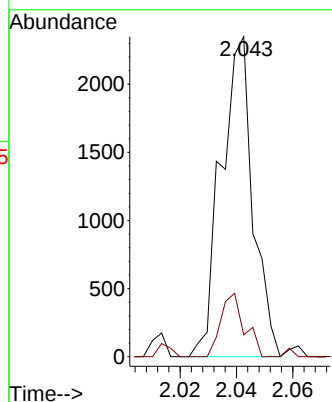
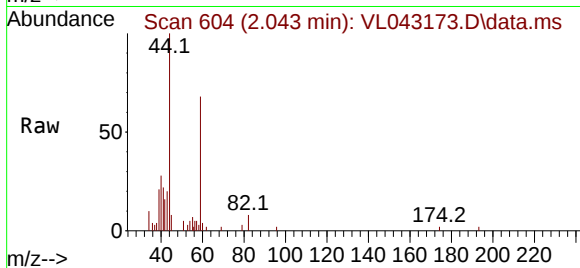
151-SG-2

Tgt Ion: 59 Resp: 1846

Ion Ratio Lower Upper

59 100

57 17.0 8.2 12.4#



#19

Isopropyl Alcohol

Concen: 1.350 ppbv

RT: 1.884 min Scan# 555

Delta R.T. -0.003 min

Lab File: VL043173.D

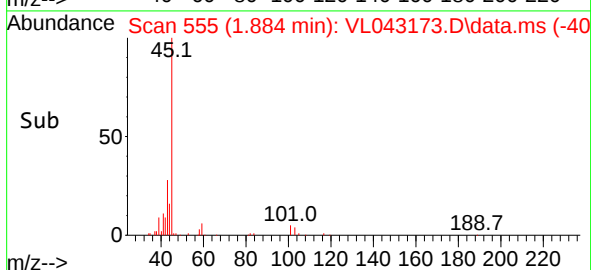
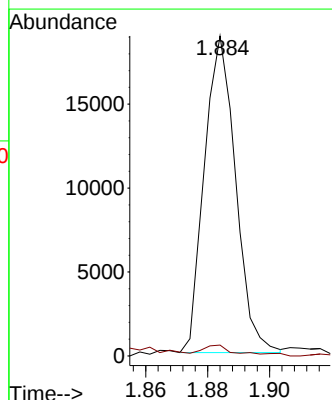
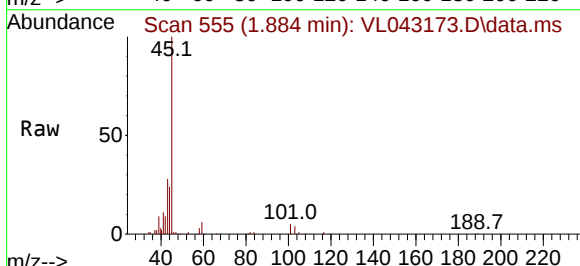
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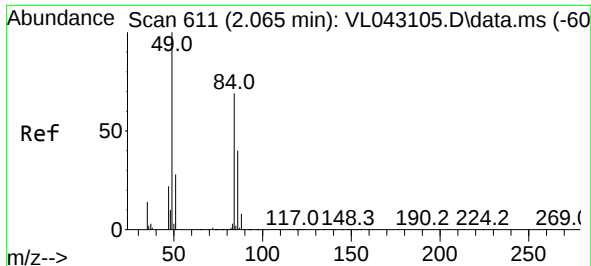
Tgt Ion: 45 Resp: 13192

Ion Ratio Lower Upper

45 100

58 401.2 31.3 46.9#





#20

Methylene Chloride

Concen: 0.664 ppbv

RT: 2.059 min Scan# 611

Delta R.T. -0.007 min

Lab File: VL043173.D

Acq: 06 Nov 2025 18:23

Instrument :

MSVOA_1

ClientSampleId :

151-SG-2

Tgt Ion: 84 Resp: 4115

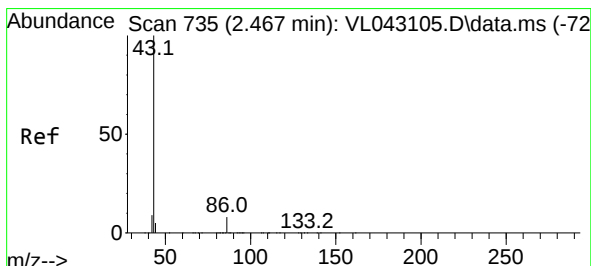
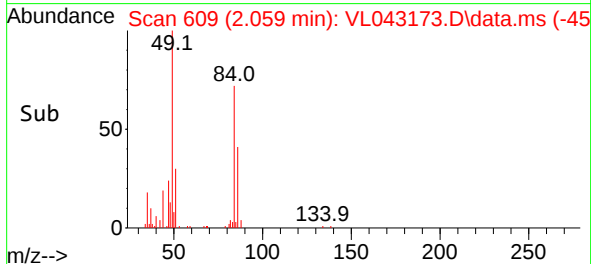
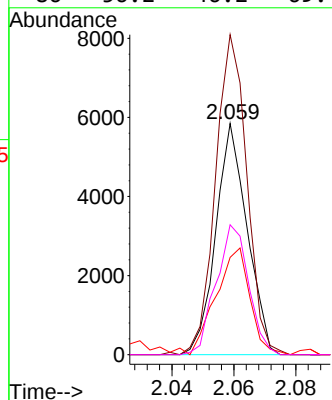
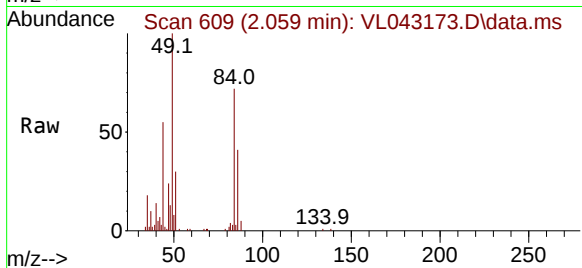
Ion Ratio Lower Upper

84 100

49 138.4 116.6 175.0

51 40.8 34.8 52.2

86 56.2 46.2 69.4



#23

Vinyl Acetate

Concen: 0.032 ppbv

RT: 2.470 min Scan# 736

Delta R.T. 0.003 min

Lab File: VL043173.D

Acq: 06 Nov 2025 18:23

Tgt Ion: 43 Resp: 733

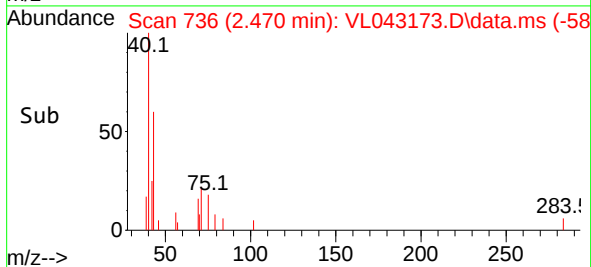
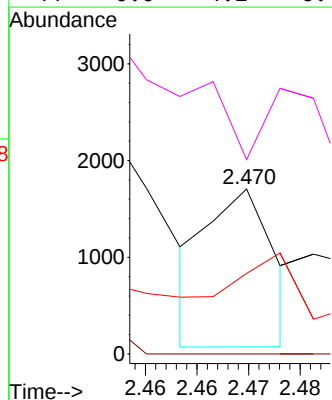
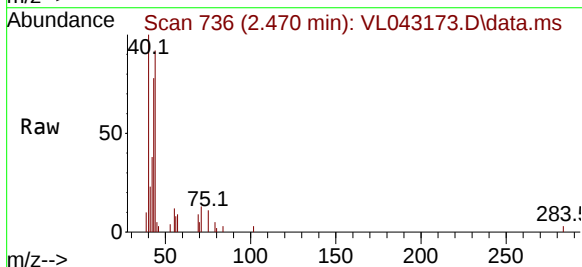
Ion Ratio Lower Upper

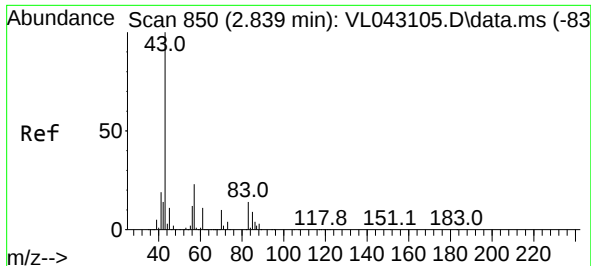
43 100

86 0.0 6.2 9.2#

42 30.8 7.6 11.4#

44 0.0 4.2 6.4#

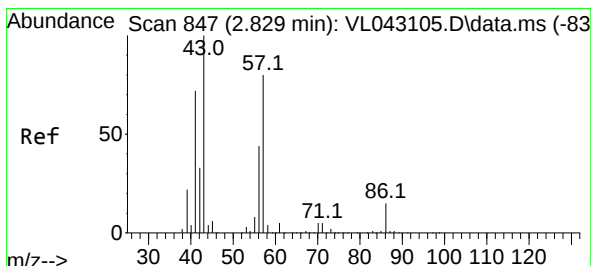
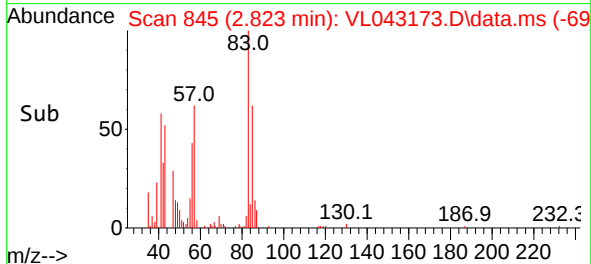
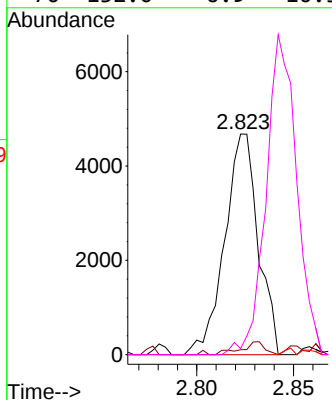
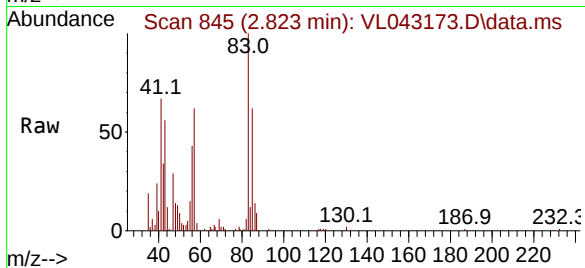




#25
Ethyl Acetate
Concen: 0.145 ppbv
RT: 2.823 min Scan# 844
Delta R.T. -0.016 min
Lab File: VL043173.D
Acq: 06 Nov 2025 18:23

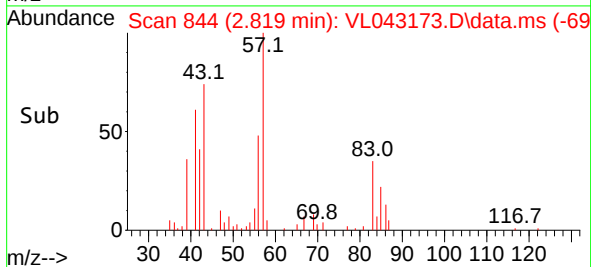
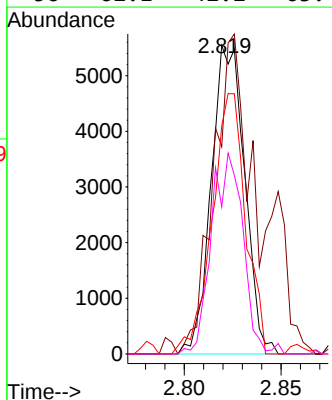
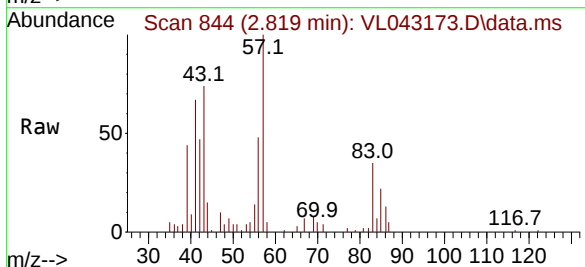
Instrument :
MSVOA_1
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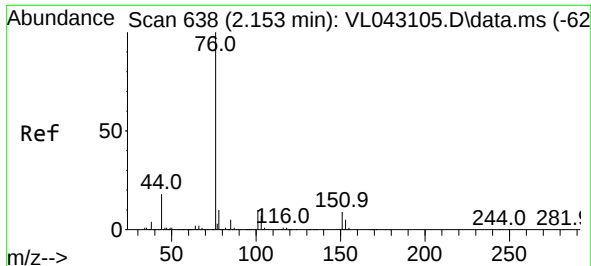
Tgt Ion: 43	Resp: 5628
Ion Ratio	Lower Upper
43 100	
45 7.4	7.8 11.8#
61 1.6	7.0 10.6#
70 132.0	6.9 10.3#



#26
Hexane
Concen: 0.371 ppbv
RT: 2.819 min Scan# 844
Delta R.T. -0.010 min
Lab File: VL043173.D
Acq: 06 Nov 2025 18:23

Tgt	Ion: 57	Resp:	6656
Ion	Ratio	Lower	Upper
57	100		
41	143.5	71.4	107.0#
43	87.5	178.5	267.7#
56	62.1	42.2	63.4

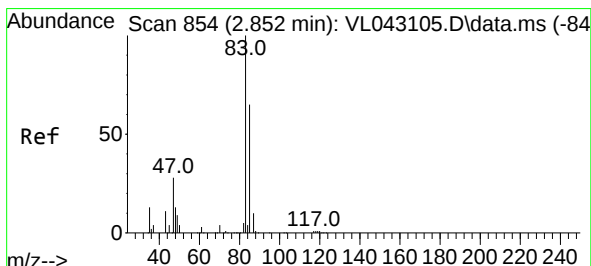
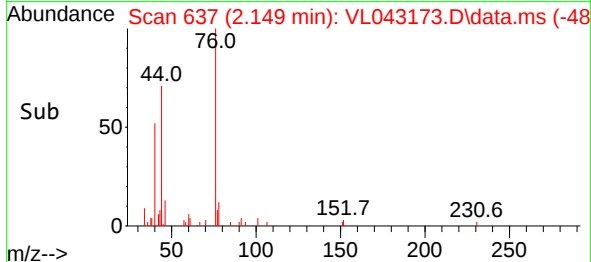
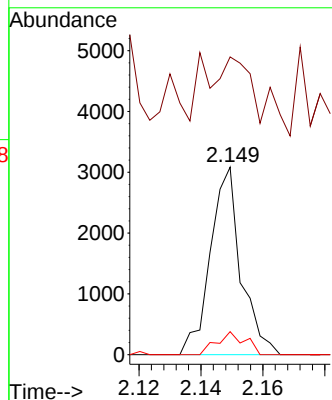
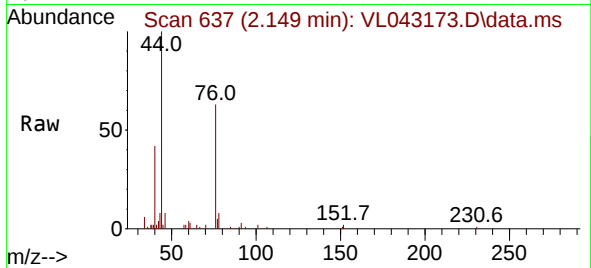




#27
Carbon Disulfide
Concen: 0.128 ppbv
RT: 2.149 min Scan# 611
Delta R.T. -0.003 min
Lab File: VL043173.D
Acq: 06 Nov 2025 18:23

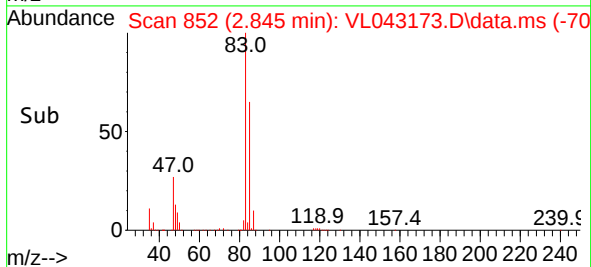
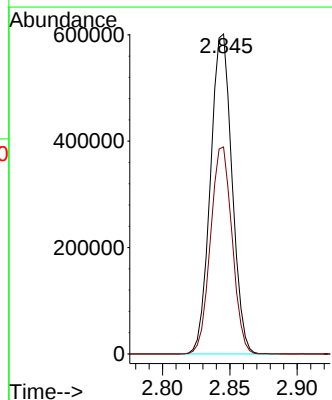
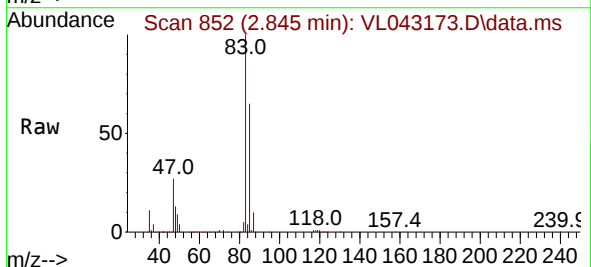
Instrument :
MSVOA_1
ClientSampleId :
151-SG-2

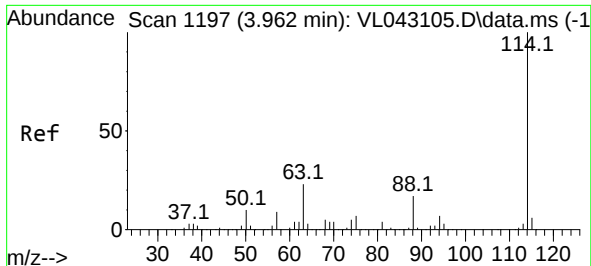
Tgt Ion: 76 Resp: 2110
Ion Ratio Lower Upper
76 100
44 363.8 16.7 25.1#
78 11.3 9.3 13.9



#29
Chloroform
Concen: 25.819 ppbv
RT: 2.845 min Scan# 852
Delta R.T. -0.007 min
Lab File: VL043173.D
Acq: 06 Nov 2025 18:23

Tgt Ion: 83 Resp: 670600
Ion Ratio Lower Upper
83 100
85 64.7 51.8 77.6





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.952 min Scan# 1197

Delta R.T. -0.010 min

Lab File: VL043173.D

Acq: 06 Nov 2025 18:23

Instrument :

MSVOA_1

ClientSampleId :

151-SG-2

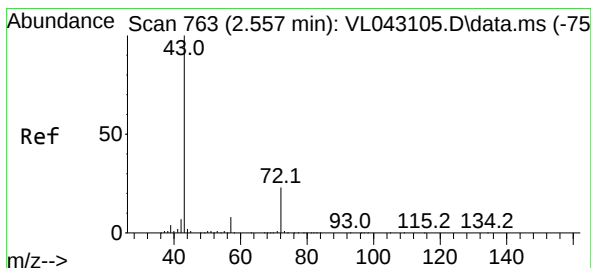
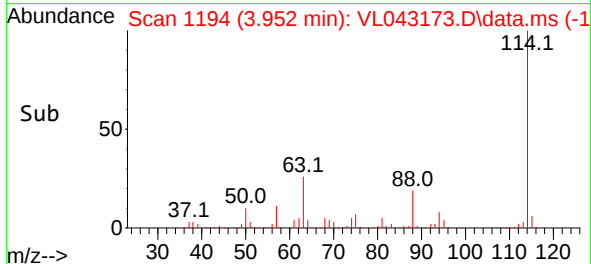
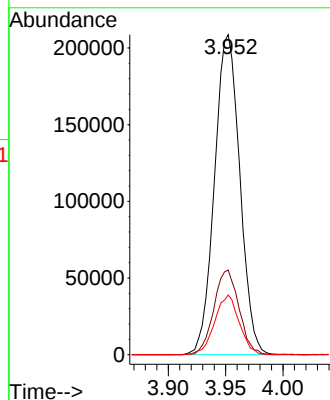
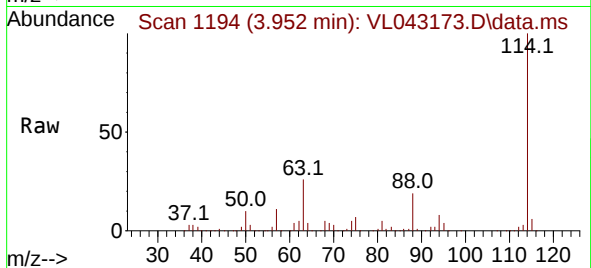
Tgt Ion:114 Resp: 320264

Ion Ratio Lower Upper

114 100

63 26.3 19.3 28.9

88 18.0 13.9 20.9



#34

2-Butanone

Concen: 0.735 ppbv

RT: 2.554 min Scan# 762

Delta R.T. -0.003 min

Lab File: VL043173.D

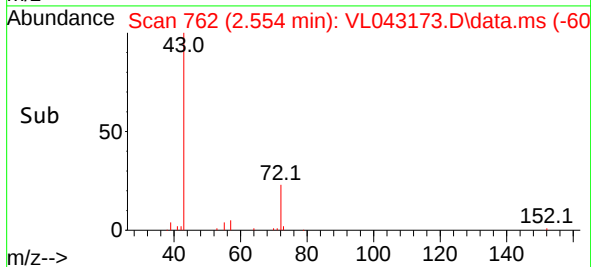
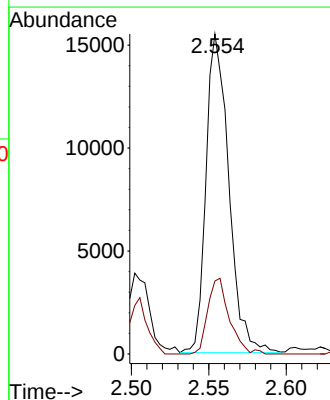
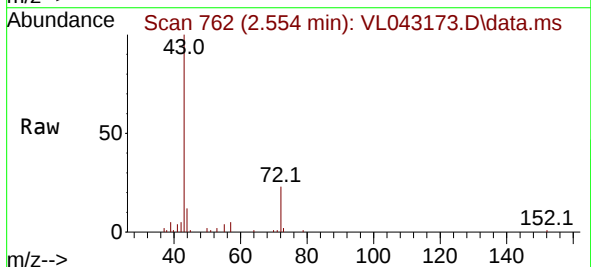
Acq: 06 Nov 2025 18:23

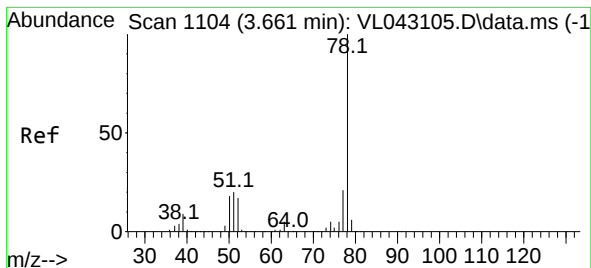
Tgt Ion: 43 Resp: 15828

Ion Ratio Lower Upper

43 100

72 22.4 18.4 27.6





#36

Benzene

Concen: 0.074 ppbv

RT: 3.651 min Scan# 1104

Delta R.T. -0.010 min

Lab File: VL043173.D

Acq: 06 Nov 2025 18:23

Instrument :

MSVOA_1

ClientSampleId :

151-SG-2

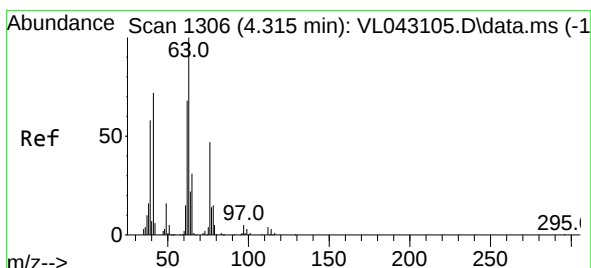
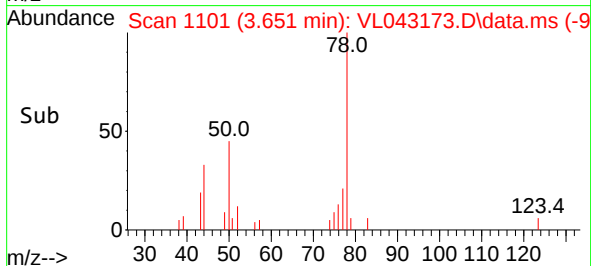
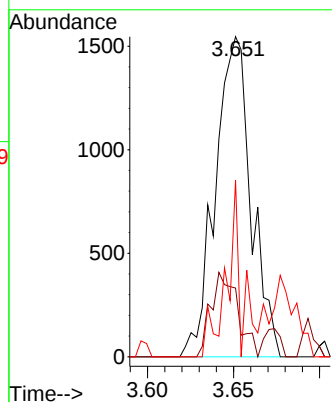
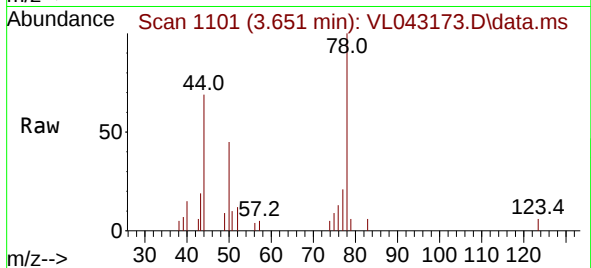
Tgt Ion: 78 Resp: 2243

Ion Ratio Lower Upper

78 100

77 21.5 17.0 25.6

50 55.1 14.6 22.0#



#39

1,2-Dichloropropane

Concen: 7.627 ppbv

RT: 3.952 min Scan# 1194

Delta R.T. -0.363 min

Lab File: VL043173.D

Acq: 06 Nov 2025 18:23

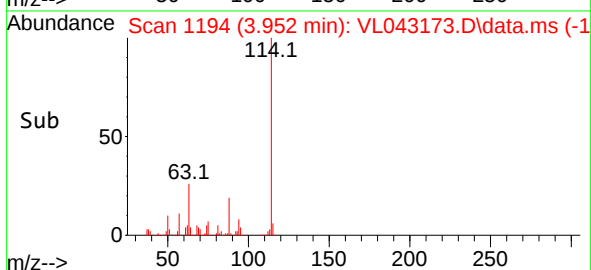
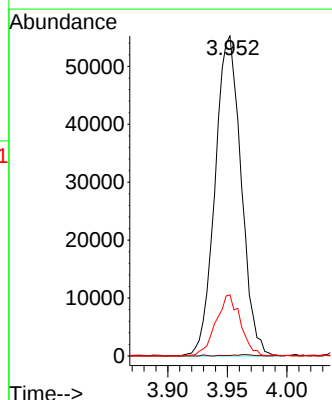
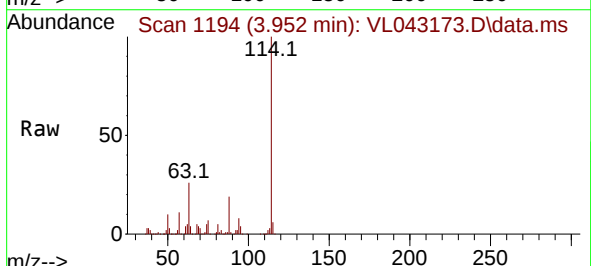
Tgt Ion: 63 Resp: 84109

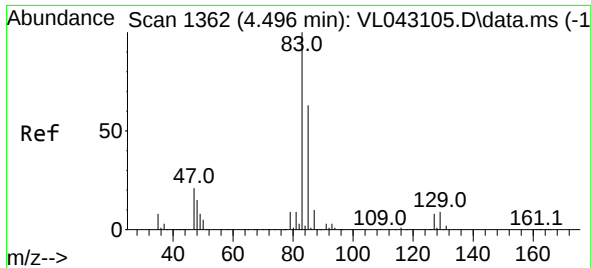
Ion Ratio Lower Upper

63 100

41 0.0 58.0 87.0#

62 19.1 54.7 82.1#





#42

Bromodichloromethane

Concen: 0.044 ppbv

RT: 4.489 min Scan# 11

Delta R.T. -0.007 min

Lab File: VL043173.D

Acq: 06 Nov 2025 18:23

Instrument :

MSVOA_1

ClientSampleId :

151-SG-2

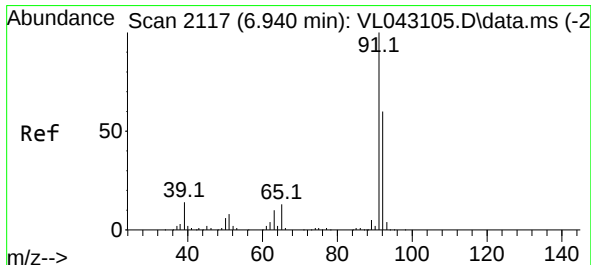
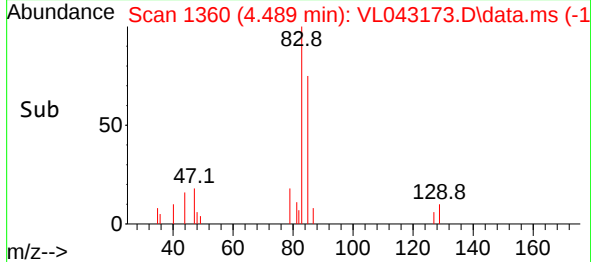
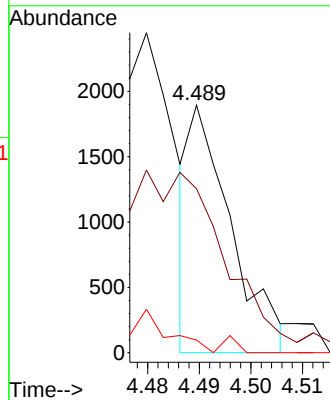
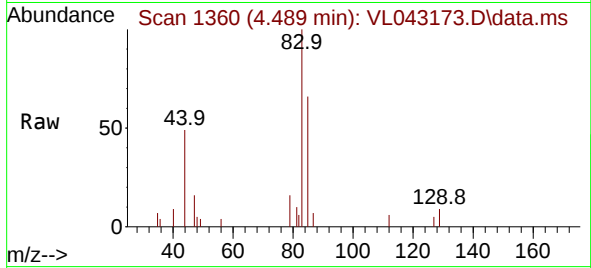
Tgt Ion: 83 Resp: 1068

Ion Ratio Lower Upper

83 100

85 66.1 50.6 75.8

127 5.8 6.3 9.5#



#53

Toluene

Concen: 0.091 ppbv

RT: 6.930 min Scan# 2114

Delta R.T. -0.010 min

Lab File: VL043173.D

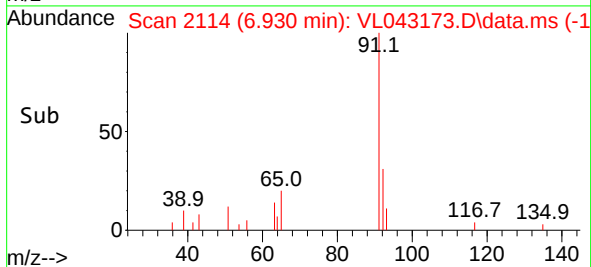
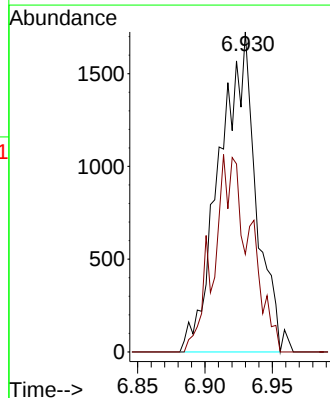
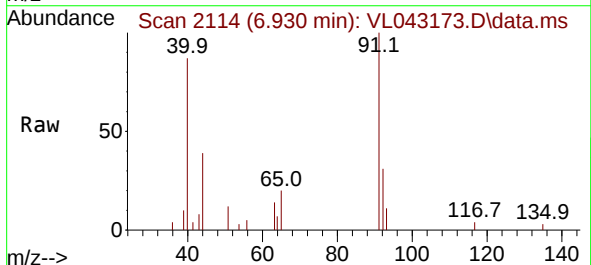
Acq: 06 Nov 2025 18:23

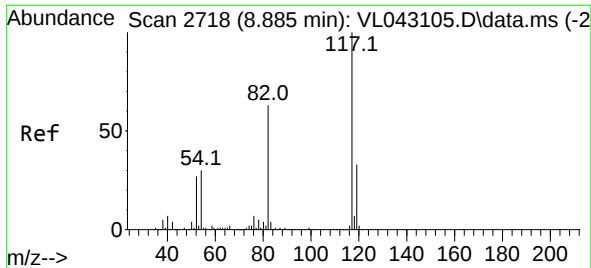
Tgt Ion: 91 Resp: 3248

Ion Ratio Lower Upper

91 100

92 61.2 48.8 73.2

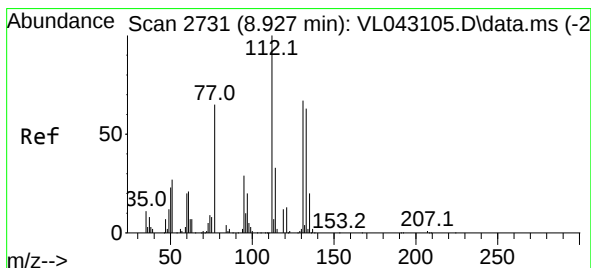
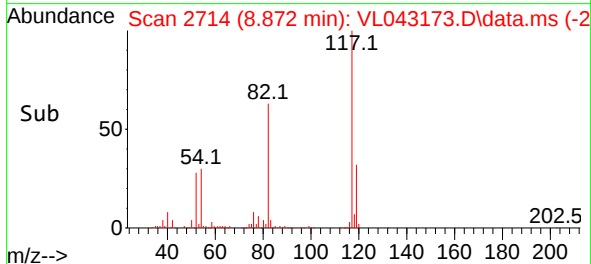
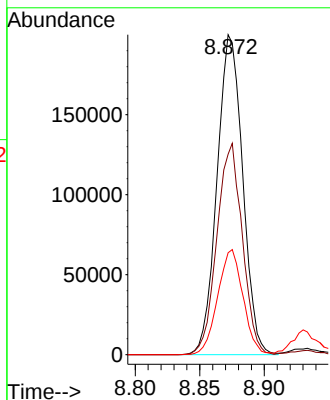
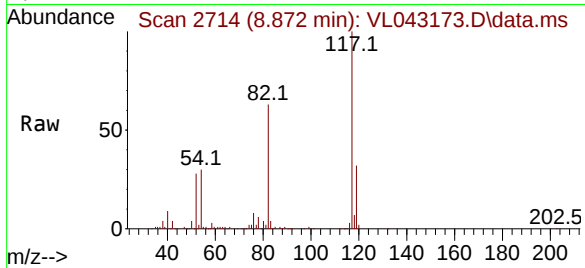




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.872 min Scan# 2117
Delta R.T. -0.013 min
Lab File: VL043173.D
Acq: 06 Nov 2025 18:23

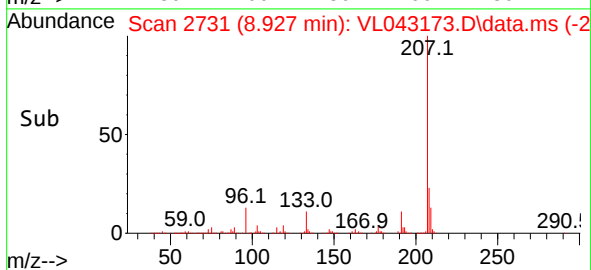
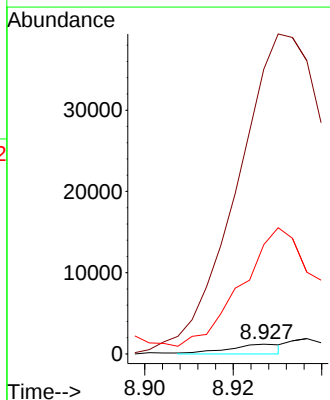
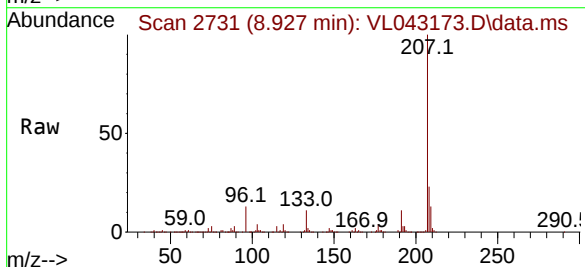
Instrument :
MSVOA_1
ClientSampleId :
151-SG-2

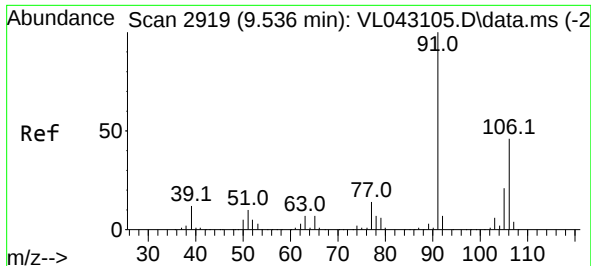
Tgt Ion:117 Resp: 276449
Ion Ratio Lower Upper
117 100
82 65.6 53.8 80.8
119 32.5 25.4 38.0



#56
1,1,1,2-Tetrachloroethane
Concen: 0.057 ppbv
RT: 8.927 min Scan# 2731
Delta R.T. -0.000 min
Lab File: VL043173.D
Acq: 06 Nov 2025 18:23

Tgt Ion:131 Resp: 994
Ion Ratio Lower Upper
131 100
133 6074.8 75.7 113.5#
119 2195.2 50.6 76.0#





#59

m/p-Xylene

Concen: 0.048 ppbv

RT: 9.526 min Scan# 2919

Delta R.T. -0.010 min

Lab File: VL043173.D

Acq: 06 Nov 2025 18:23

Instrument :

MSVOA_1

ClientSampleId :

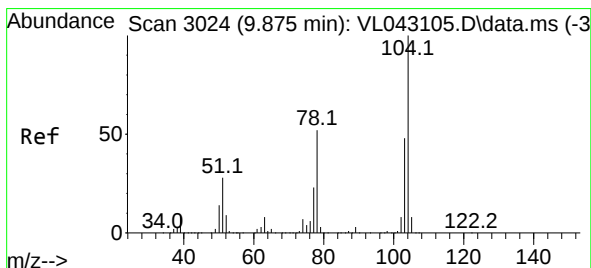
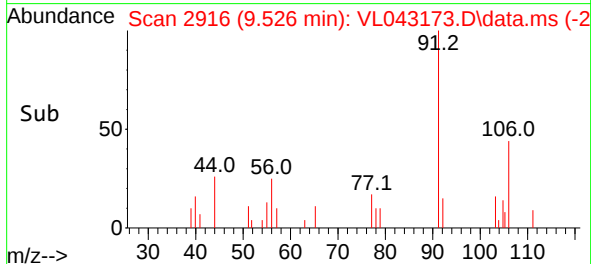
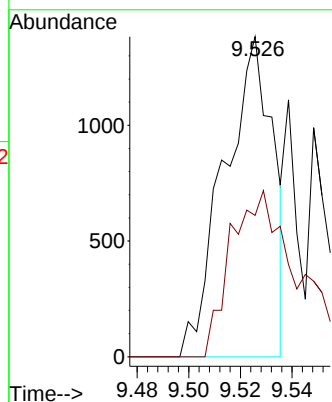
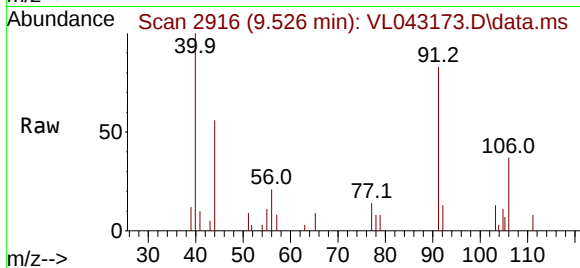
151-SG-2

Tgt Ion: 91 Resp: 1815

Ion Ratio Lower Upper

91 100

106 71.3 38.0 57.0#



#61

Styrene

Concen: 0.033 ppbv

RT: 9.862 min Scan# 3020

Delta R.T. -0.013 min

Lab File: VL043173.D

Acq: 06 Nov 2025 18:23

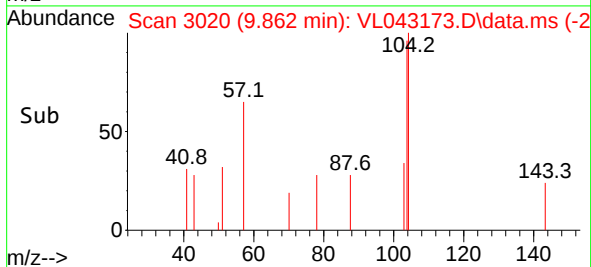
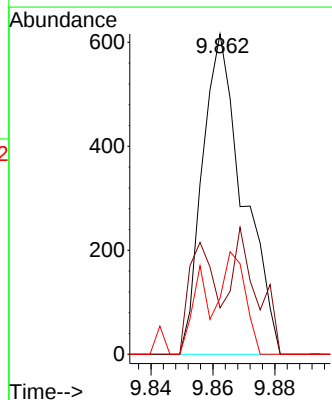
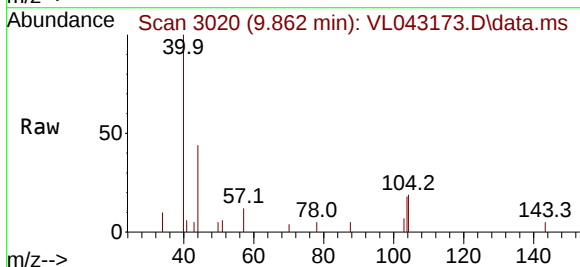
Tgt Ion: 104 Resp: 563

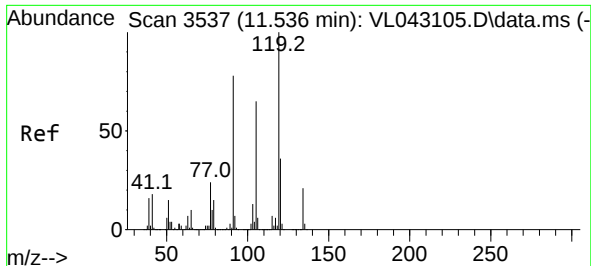
Ion Ratio Lower Upper

104 100

78 47.1 40.2 60.2

103 31.4 36.9 55.3#

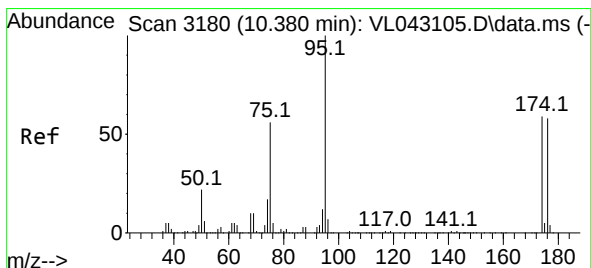
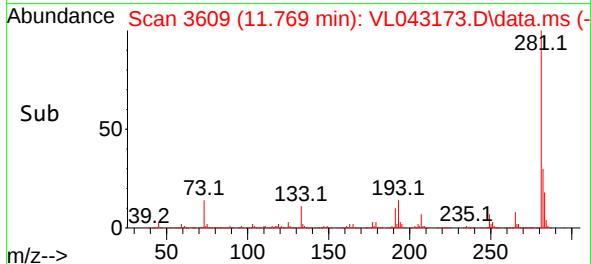
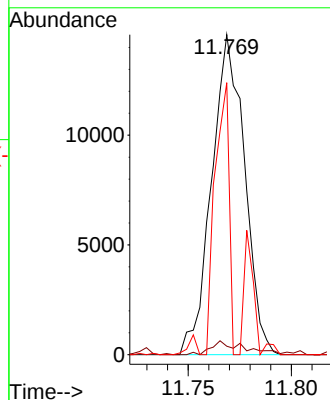
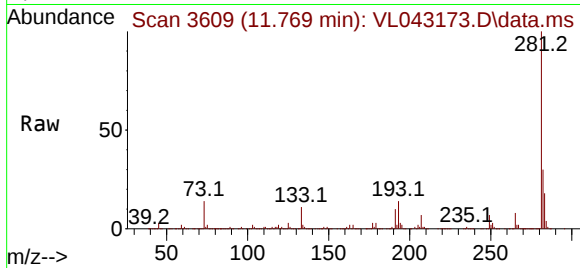




#65
tert-Butylbenzene
Concen: 0.271 ppbv
RT: 11.769 min Scan# 3177
Delta R.T. 0.233 min
Lab File: VL043173.D
Acq: 06 Nov 2025 18:23

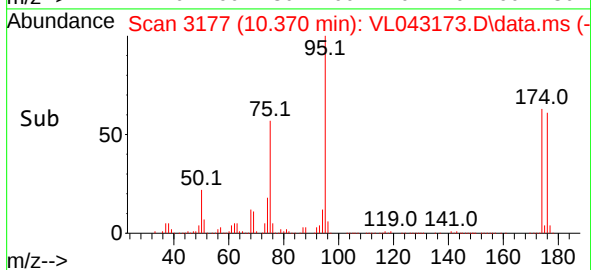
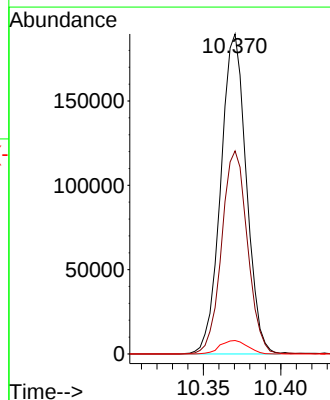
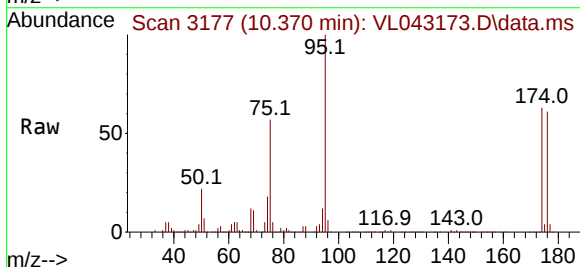
Instrument :
MSVOA_1
ClientSampleId :
151-SG-2

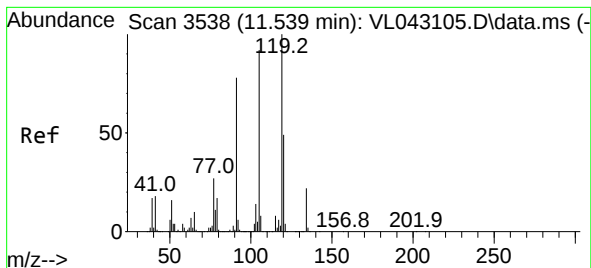
Tgt Ion:119 Resp: 16149
Ion Ratio Lower Upper
119 100
91 4.8 63.4 95.0#
134 49.9 17.3 25.9#



#68
1-Bromo-4-Fluorobenzene
Concen: 10.127 ppbv
RT: 10.370 min Scan# 3177
Delta R.T. -0.010 min
Lab File: VL043173.D
Acq: 06 Nov 2025 18:23

Tgt Ion: 95 Resp: 217604
Ion Ratio Lower Upper
95 100
174 64.5 48.3 72.5
175 4.5 3.8 5.8





#74

1,2,4-Trimethylbenzene

Concen: 0.038 ppbv

RT: 11.529 min Scan# 3

Delta R.T. -0.010 min

Lab File: VL043173.D

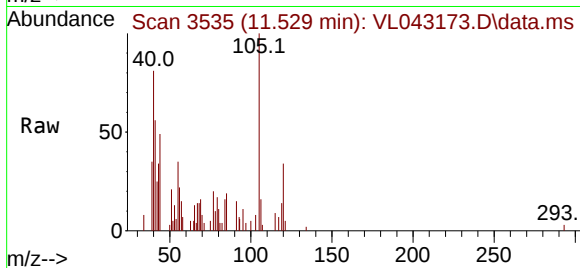
Acq: 06 Nov 2025 18:23

Instrument :

MSVOA_L

ClientSampleId :

151-SG-2



Tgt Ion:105 Resp: 1615

Ion Ratio Lower Upper

105 100

120 33.6 42.8 64.2#

91 15.3 68.3 102.5#

77 20.0 23.4 35.0#

