

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL110625\
 Data File : VL043175.D
 Acq On : 06 Nov 2025 19:30
 Operator : SY/MD
 Sample : Q3556-03 2X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 131-SG-1

Quant Time: Nov 07 00:27:28 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	127539	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.952	114	353509	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.872	117	299020	10.000	ppbv	-0.01

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.371	95	232369	9.998	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.000%

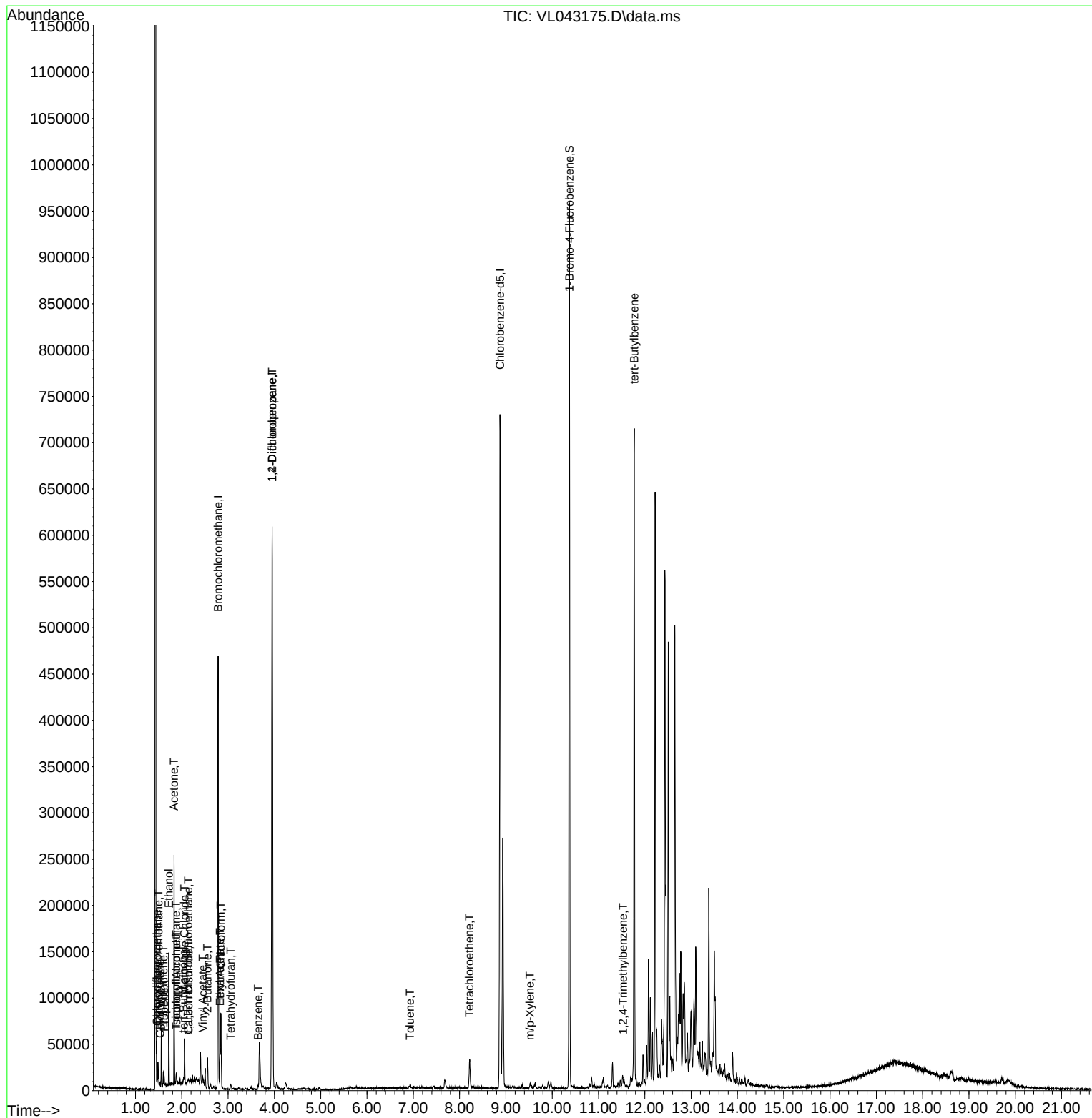
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.499	85	4484	0.247	ppbv #	74
3) Chlorodifluoromethane	1.467	51	7795	0.397	ppbv #	75
4) Chloromethane	1.531	50	787	0.110	ppbv #	72
9) Propene	1.622	41	1091	0.125	ppbv	95
11) Trichlorofluoromethane	1.878	101	2510	0.142	ppbv	94
12) 1,1,2-Trichlorotrifluo...	2.140	101	530	0.037	ppbv	94
13) Ethanol	1.719	45	46750	14.526	ppbv	97
15) Acetone	1.832	43	106525	6.197	ppbv	97
16) 1,3-Butadiene	1.603	39	1882	0.230	ppbv #	23
17) tert-Butyl alcohol	2.040	59	2540	0.108	ppbv #	85
19) Isopropyl Alcohol	1.884	45	4232	0.395	ppbv #	1
20) Methylene Chloride	2.059	84	6903	1.016	ppbv	91
23) Vinyl Acetate	2.454	43	4250	0.169	ppbv #	62
25) Ethyl Acetate	2.823	43	6532	0.153	ppbv #	82
26) Hexane	2.823	57	8524	0.434	ppbv #	41
27) Carbon Disulfide	2.146	76	840	0.047	ppbv #	1
29) Chloroform	2.842	83	33102	1.163	ppbv	98
34) 2-Butanone	2.554	43	20168	0.849	ppbv	99
36) Benzene	3.651	78	2054	0.062	ppbv #	68
39) 1,2-Dichloropropane	3.952	63	90629	7.446	ppbv #	24
41) Tetrahydrofuran	3.059	42	1049	0.079	ppbv #	58
52) Tetrachloroethene	8.212	164	3107	0.259	ppbv	91
53) Toluene	6.930	91	1473	0.037	ppbv #	42
59) m/p-Xylene	9.516	91	1252	0.031	ppbv #	29
65) tert-Butylbenzene	11.772	119	5269	0.082	ppbv #	22
74) 1,2,4-Trimethylbenzene	11.533	105	1532	0.033	ppbv #	47

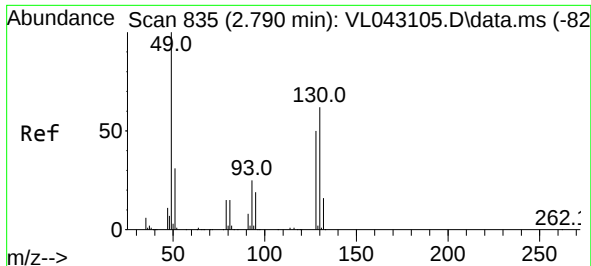
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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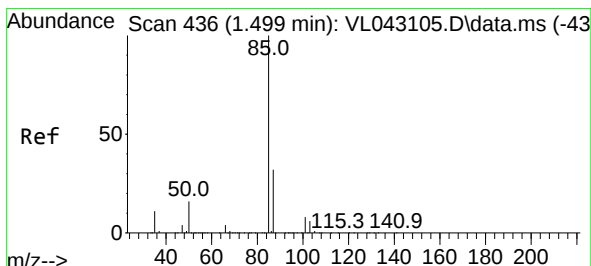
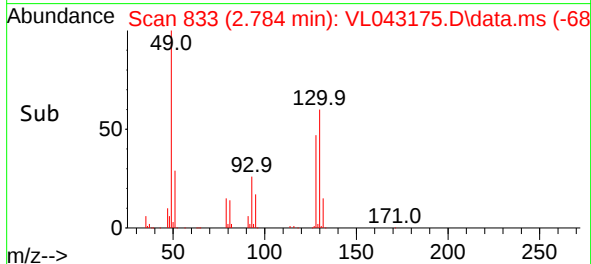
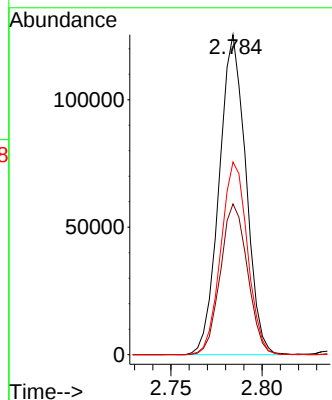
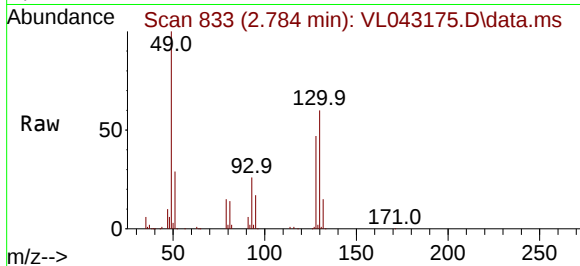




#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 2.784 min Scan# 81
 Delta R.T. -0.006 min
 Lab File: VL043175.D
 Acq: 06 Nov 2025 19:30

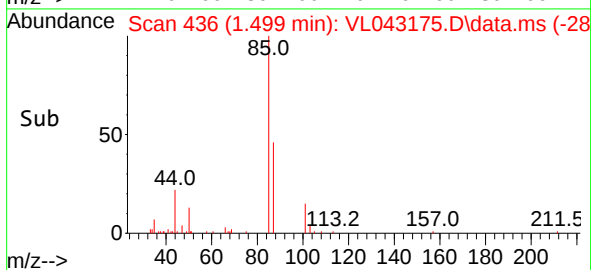
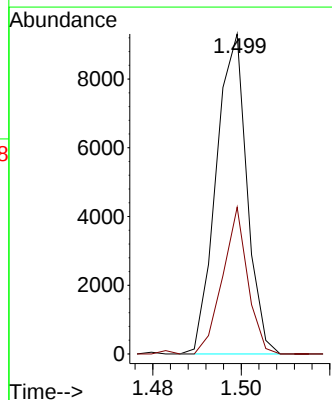
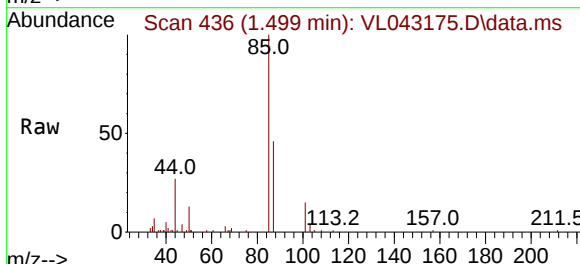
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 MSVOA_L
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 131-SG-1

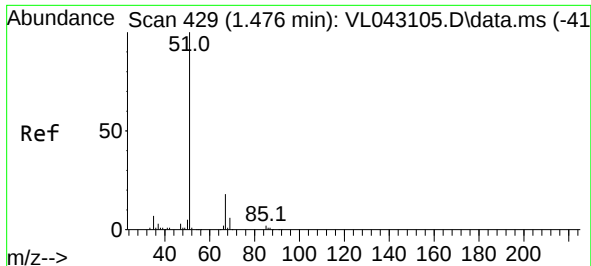
Tgt Ion: 49 Resp: 127539
 Ion Ratio Lower Upper
 49 100
 128 48.0 24.4 73.4
 130 60.1 31.0 93.0



#2
 Dichlorodifluoromethane
 Concen: 0.247 ppbv
 RT: 1.499 min Scan# 436
 Delta R.T. 0.000 min
 Lab File: VL043175.D
 Acq: 06 Nov 2025 19:30

Tgt Ion: 85 Resp: 4484
 Ion Ratio Lower Upper
 85 100
 87 45.9 25.3 37.9#

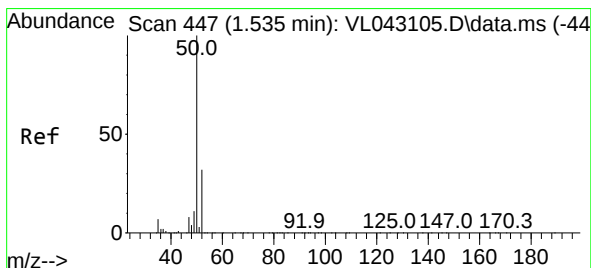
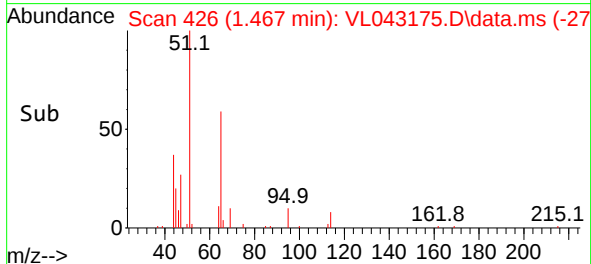
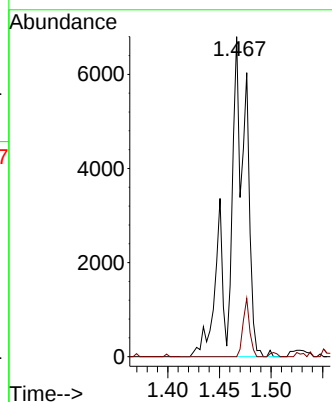
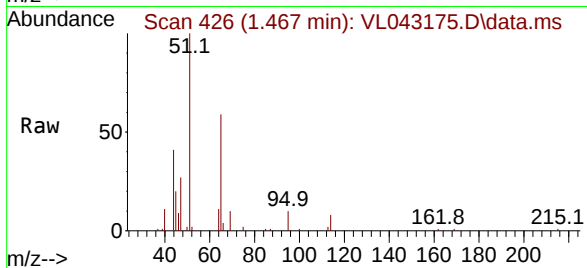




#3
Chlorodifluoromethane
Concen: 0.397 ppbv
RT: 1.467 min Scan# 41
Delta R.T. -0.010 min
Lab File: VL043175.D
Acq: 06 Nov 2025 19:30

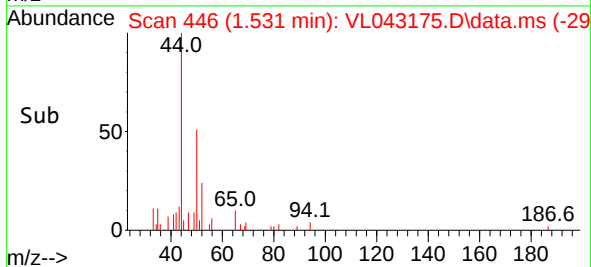
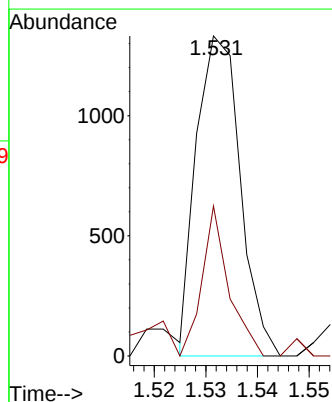
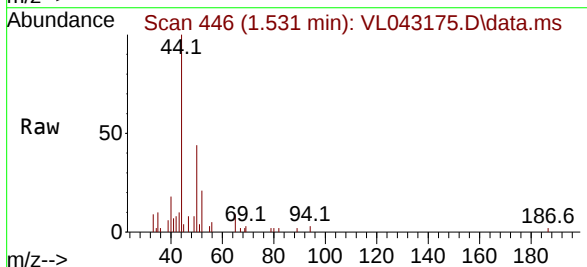
Instrument :
MSVOA_1
ClientSampleId :
131-SG-1

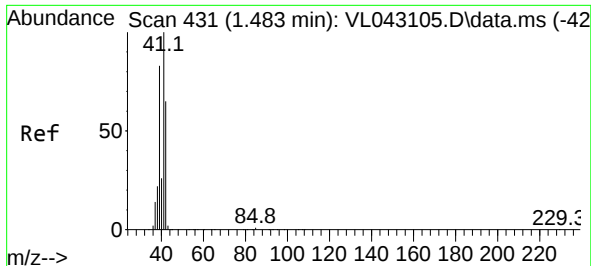
Tgt Ion: 51 Resp: 7795
Ion Ratio Lower Upper
51 100
67 7.5 15.1 22.7#



#4
Chloromethane
Concen: 0.110 ppbv
RT: 1.531 min Scan# 446
Delta R.T. -0.003 min
Lab File: VL043175.D
Acq: 06 Nov 2025 19:30

Tgt Ion: 50 Resp: 787
Ion Ratio Lower Upper
50 100
52 46.8 25.2 37.8#





#9

Propene

Concen: 0.125 ppbv

RT: 1.622 min Scan# 41

Delta R.T. 0.139 min

Lab File: VL043175.D

Acq: 06 Nov 2025 19:30

Instrument :

MSVOA_L

ClientSampleId :

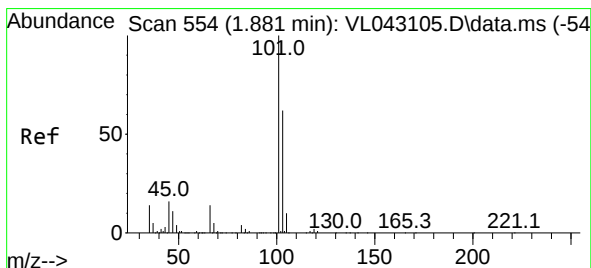
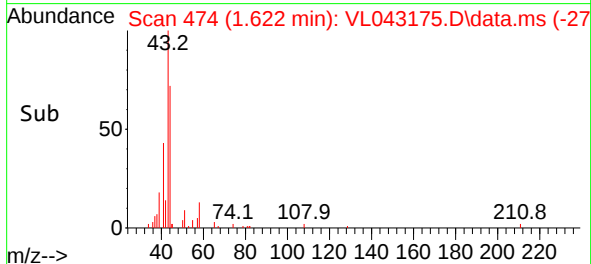
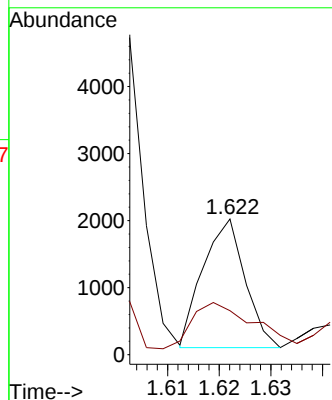
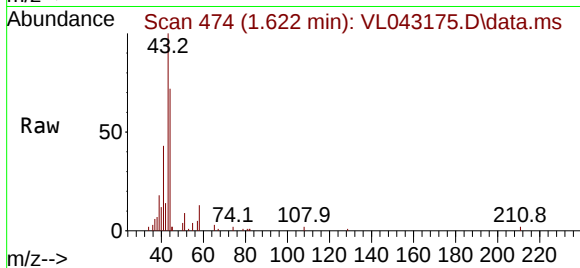
131-SG-1

Tgt Ion: 41 Resp: 1091

Ion Ratio Lower Upper

41 100

42 73.2 55.1 82.7



#11

Trichlorofluoromethane

Concen: 0.142 ppbv

RT: 1.878 min Scan# 553

Delta R.T. -0.003 min

Lab File: VL043175.D

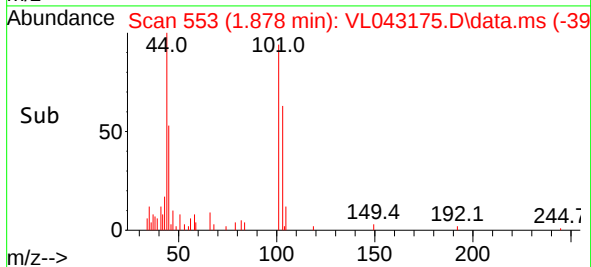
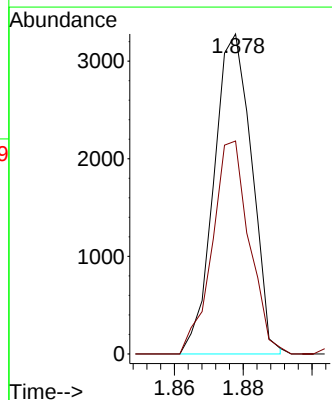
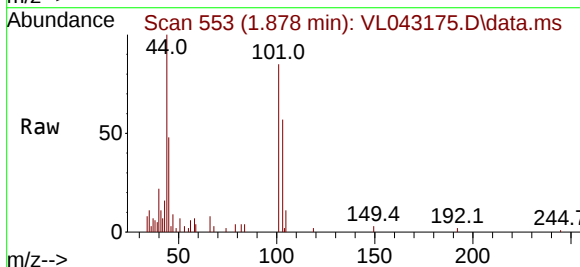
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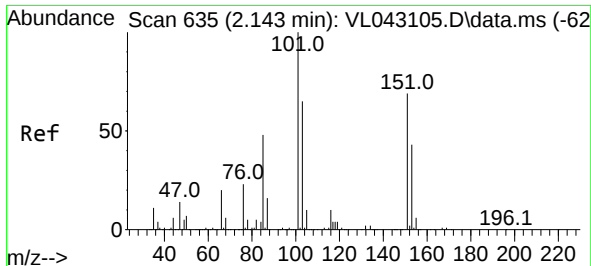
Tgt Ion:101 Resp: 2510

Ion Ratio Lower Upper

101 100

103 66.5 49.3 73.9

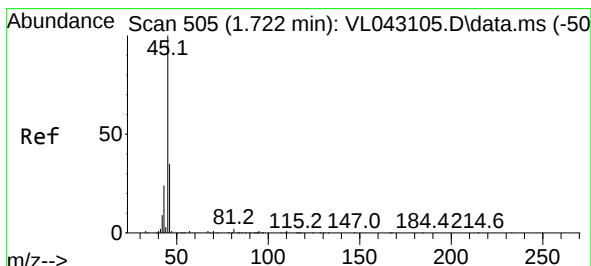
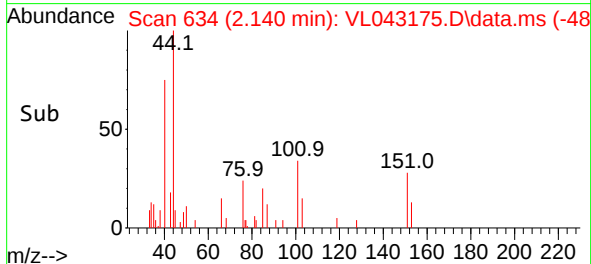
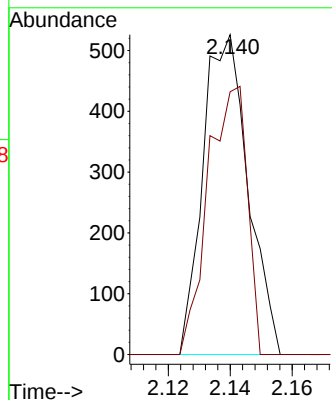
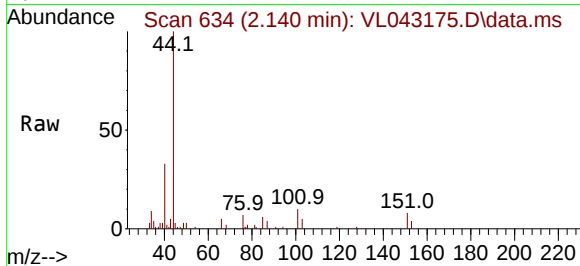




#12
1,1,2-Trichlorotrifluoroethane
Concen: 0.037 ppbv
RT: 2.140 min Scan# 61
Delta R.T. -0.003 min
Lab File: VL043175.D
Acq: 06 Nov 2025 19:30

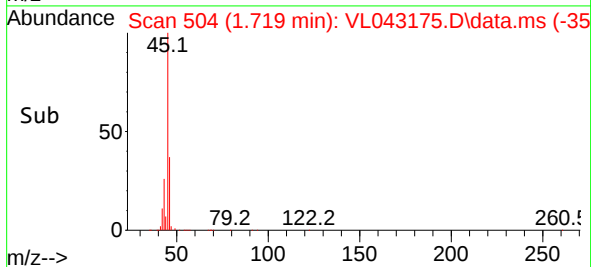
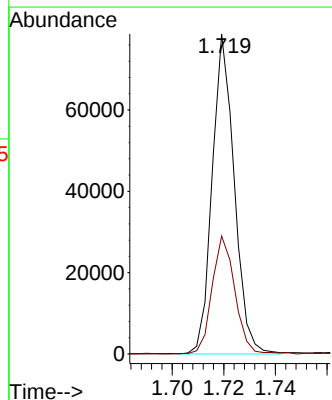
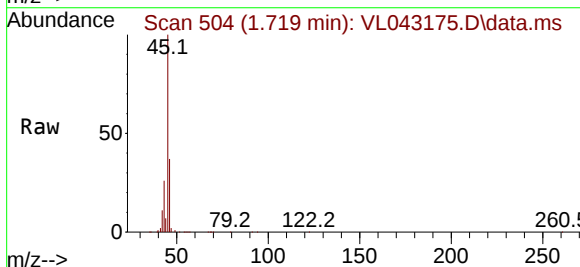
Instrument :
MSVOA_1
ClientSampleId :
131-SG-1

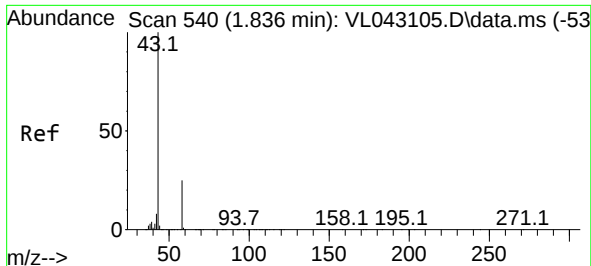
Tgt Ion:101 Resp: 530
Ion Ratio Lower Upper
101 100
151 73.0 54.7 82.1



#13
Ethanol
Concen: 14.526 ppbv
RT: 1.719 min Scan# 504
Delta R.T. -0.003 min
Lab File: VL043175.D
Acq: 06 Nov 2025 19:30

Tgt Ion: 45 Resp: 46750
Ion Ratio Lower Upper
45 100
46 38.5 14.7 58.9

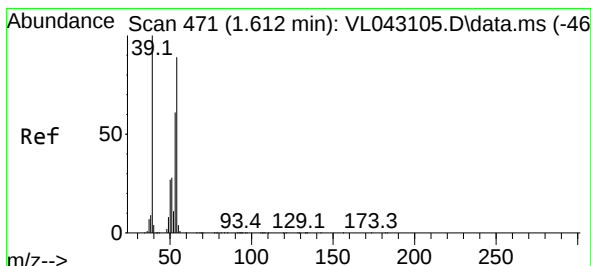
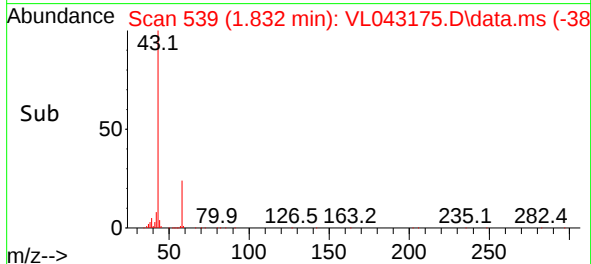
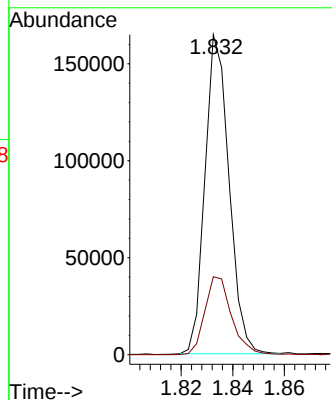
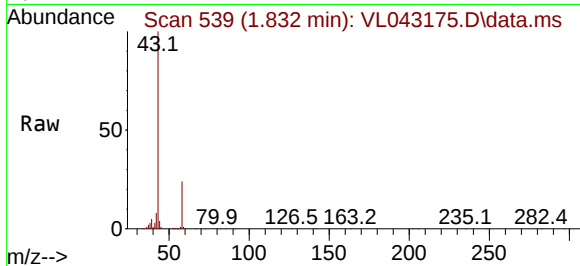




#15
Acetone
Concen: 6.197 ppbv
RT: 1.832 min Scan# 51
Delta R.T. -0.003 min
Lab File: VL043175.D
Acq: 06 Nov 2025 19:30

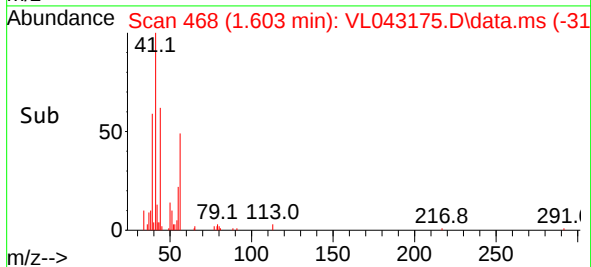
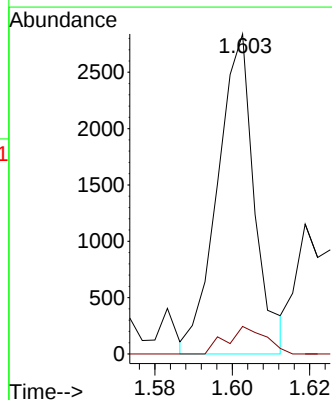
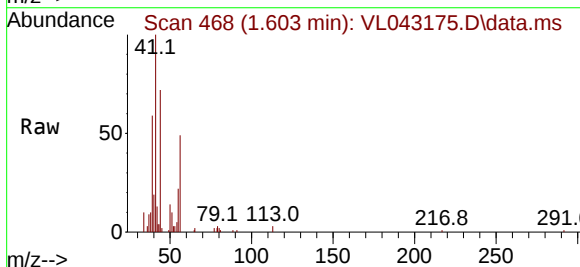
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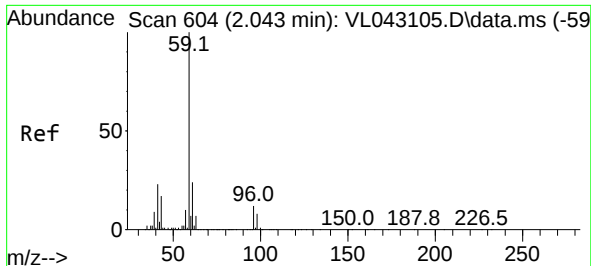
Tgt Ion: 43 Resp: 106525
Ion Ratio Lower Upper
43 100
58 27.4 20.8 31.2



#16
1,3-Butadiene
Concen: 0.230 ppbv
RT: 1.603 min Scan# 468
Delta R.T. -0.010 min
Lab File: VL043175.D
Acq: 06 Nov 2025 19:30

Tgt Ion: 39 Resp: 1882
Ion Ratio Lower Upper
39 100
54 9.1 59.0 88.4#

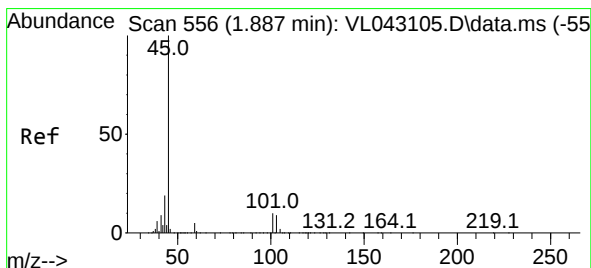
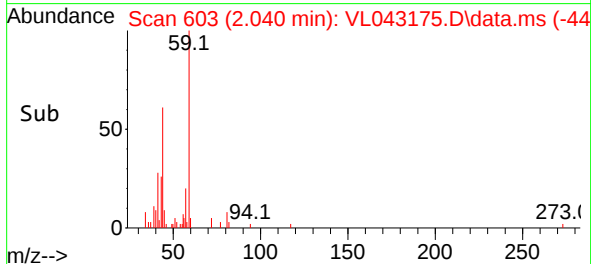
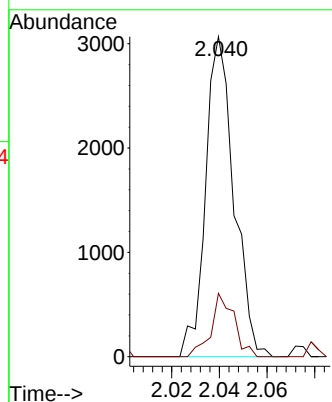
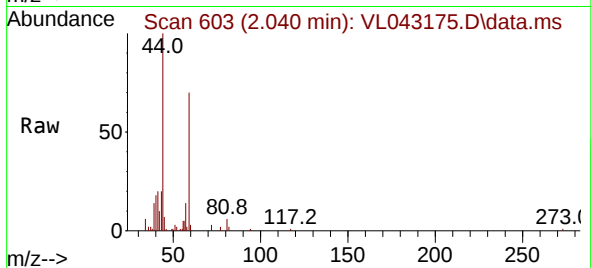




#17
tert-Butyl alcohol
Concen: 0.108 ppbv
RT: 2.040 min Scan# 604
Delta R.T. -0.003 min
Lab File: VL043175.D
Acq: 06 Nov 2025 19:30

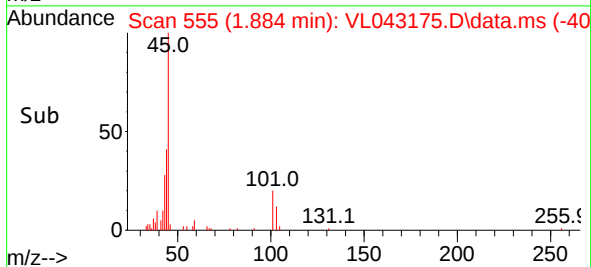
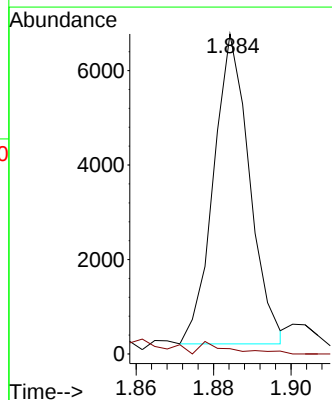
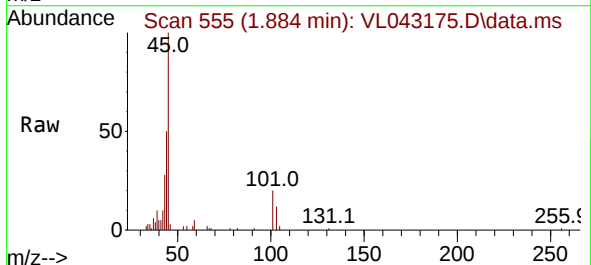
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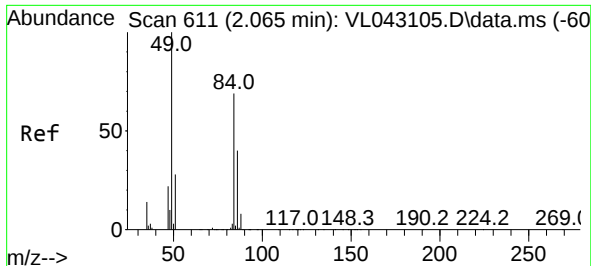
Tgt Ion: 59 Resp: 2540
Ion Ratio Lower Upper
59 100
57 15.9 8.2 12.4#



#19
Isopropyl Alcohol
Concen: 0.395 ppbv
RT: 1.884 min Scan# 555
Delta R.T. -0.003 min
Lab File: VL043175.D
Acq: 06 Nov 2025 19:30

Tgt Ion: 45 Resp: 4232
Ion Ratio Lower Upper
45 100
58 689.4 31.3 46.9#





#20

Methylene Chloride

Concen: 1.016 ppbv

RT: 2.059 min Scan# 609

Delta R.T. -0.006 min

Lab File: VL043175.D

Acq: 06 Nov 2025 19:30

Instrument :

MSVOA_1

ClientSampleId :

131-SG-1

Tgt Ion: 84 Resp: 6903

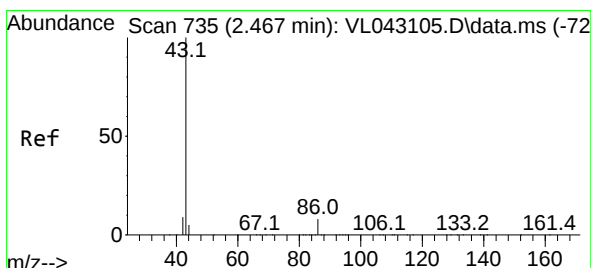
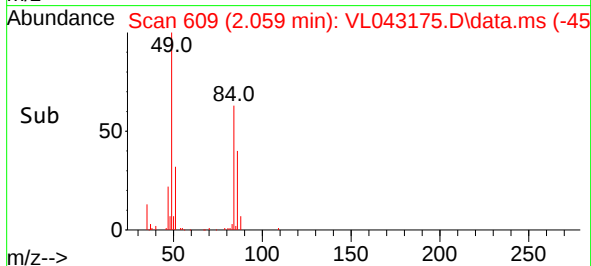
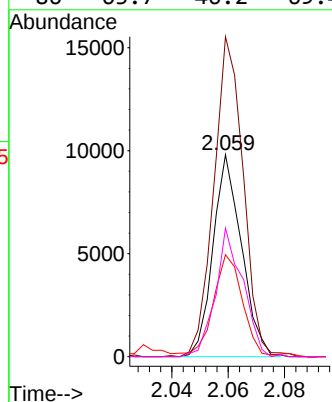
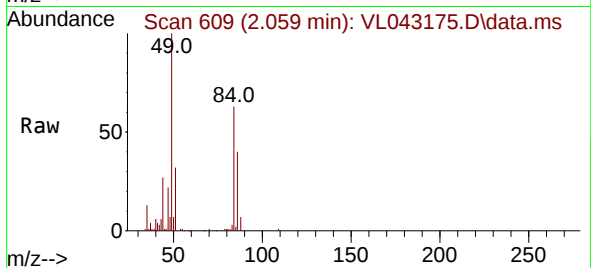
Ion Ratio Lower Upper

84 100

49 158.5 116.6 175.0

51 49.2 34.8 52.2

86 63.7 46.2 69.4



#23

Vinyl Acetate

Concen: 0.169 ppbv

RT: 2.454 min Scan# 731

Delta R.T. -0.013 min

Lab File: VL043175.D

Acq: 06 Nov 2025 19:30

Tgt Ion: 43 Resp: 4250

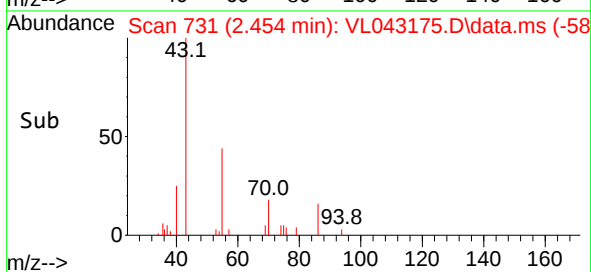
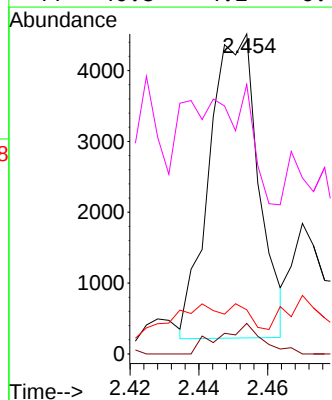
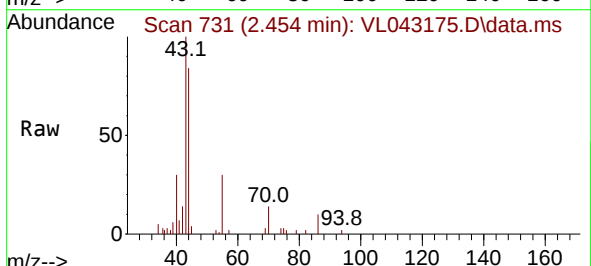
Ion Ratio Lower Upper

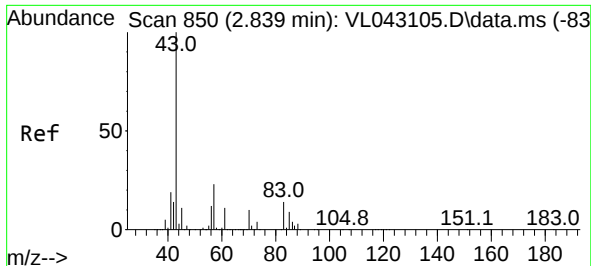
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42 0.1 7.6 11.4#

44 40.8 4.2 6.4#

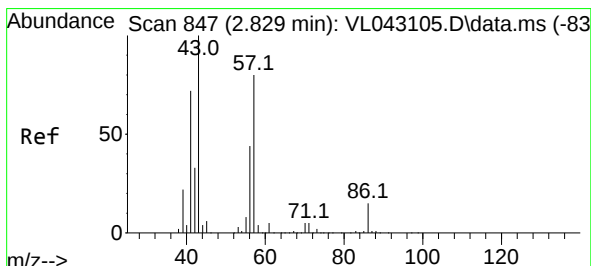
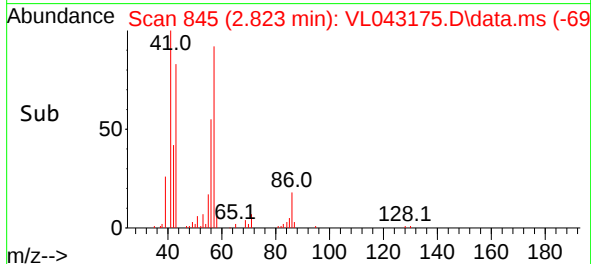
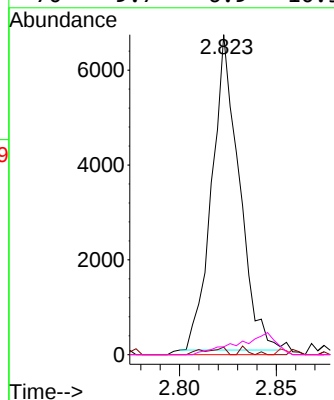
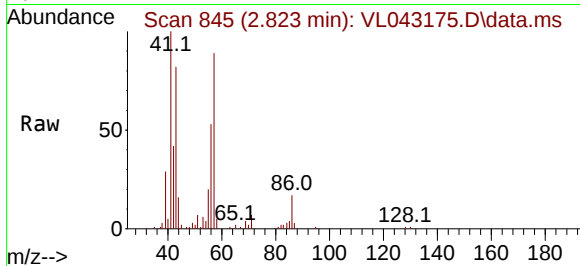




#25
Ethyl Acetate
Concen: 0.153 ppbv
RT: 2.823 min Scan# 845
Delta R.T. -0.016 min
Lab File: VL043175.D
Acq: 06 Nov 2025 19:30

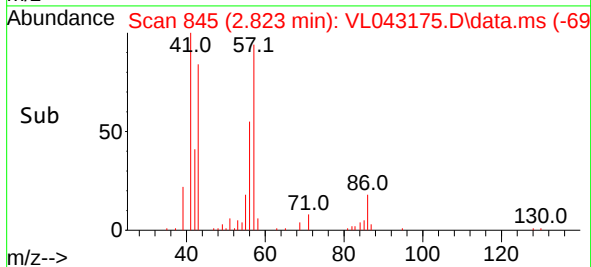
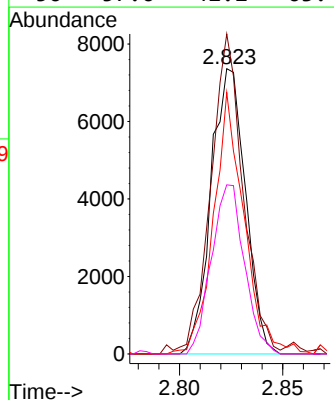
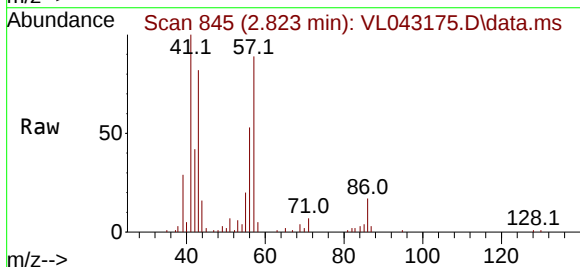
Instrument :
MSVOA_1
ClientSampleId :
131-SG-1

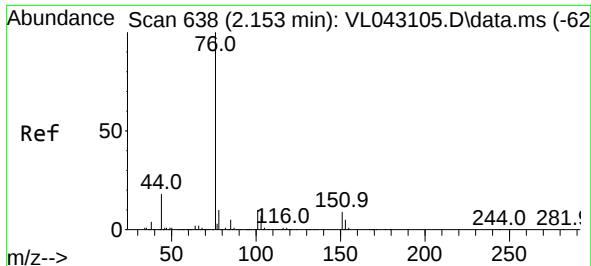
Tgt Ion: 43	Resp: 6532
Ion Ratio	Lower Upper
43 100	
45 0.0	7.8 11.8#
61 0.0	7.0 10.6#
70 9.7	6.9 10.3



#26
Hexane
Concen: 0.434 ppbv
RT: 2.823 min Scan# 845
Delta R.T. -0.006 min
Lab File: VL043175.D
Acq: 06 Nov 2025 19:30

Tgt Ion: 57	Resp:	8524	
Ion	Ratio	Lower	Upper
57	100		
41	110.2	71.4	107.0#
43	82.9	178.5	267.7#
56	57.6	42.2	63.4





#27

Carbon Disulfide

Concen: 0.047 ppbv

RT: 2.146 min Scan# 61

Delta R.T. -0.006 min

Lab File: VL043175.D

Acq: 06 Nov 2025 19:30

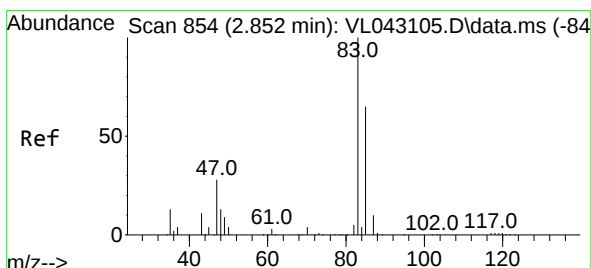
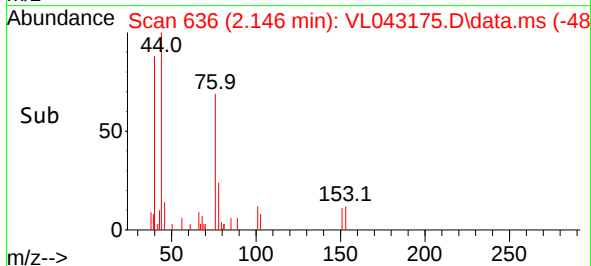
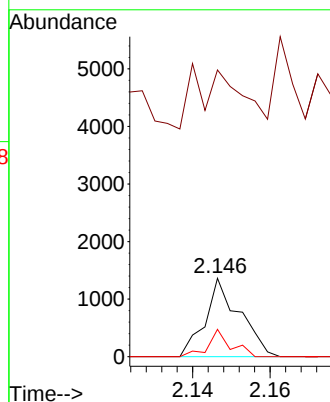
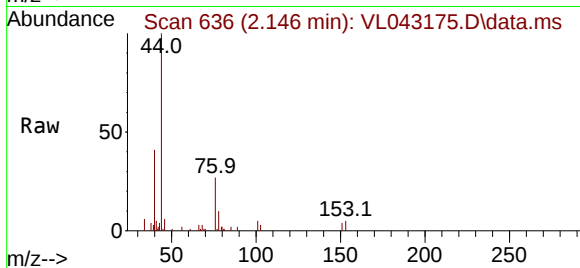
Instrument :

MSVOA_L

ClientSampleId :

131-SG-1

Tgt Ion: 76	Resp: 840
Ion Ratio	Lower Upper
76	100
44	1208.6 16.7 25.1#
78	22.3 9.3 13.9#



#29

Chloroform

Concen: 1.163 ppbv

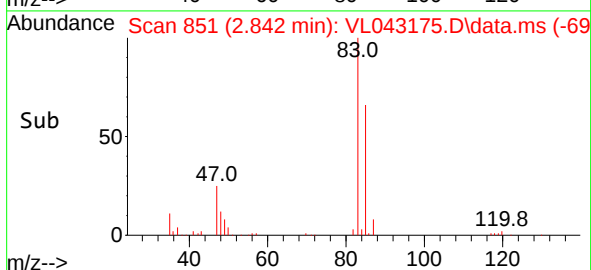
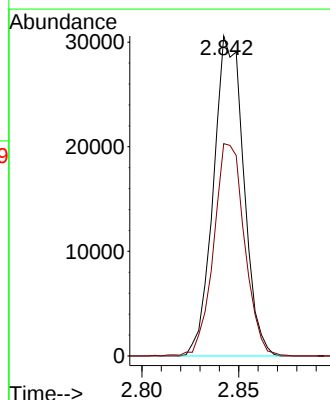
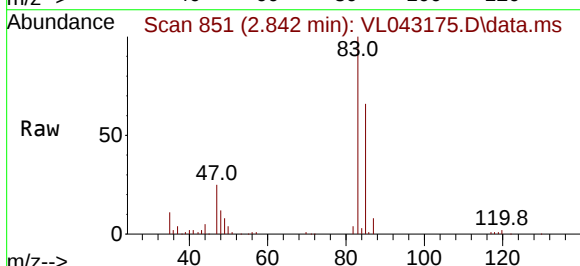
RT: 2.842 min Scan# 851

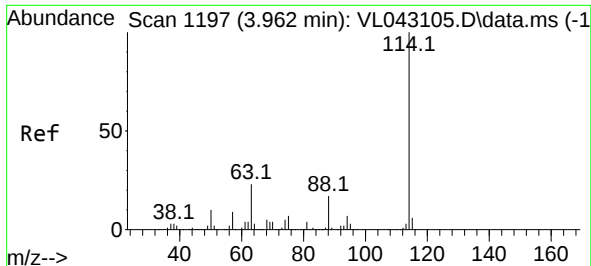
Delta R.T. -0.010 min

Lab File: VL043175.D

Acq: 06 Nov 2025 19:30

Tgt Ion: 83	Resp: 33102
Ion Ratio	Lower Upper
83	100
85	66.1 51.8 77.6

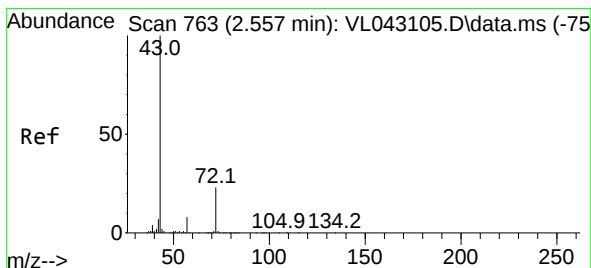
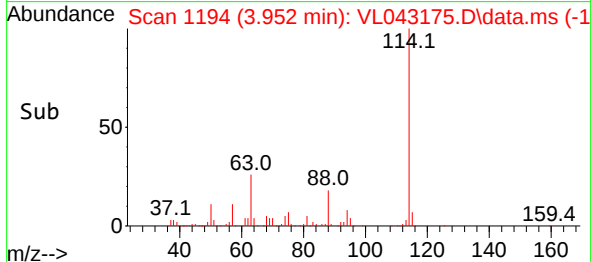
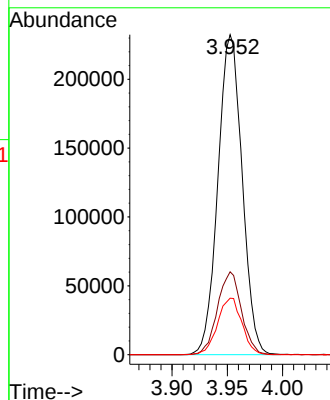
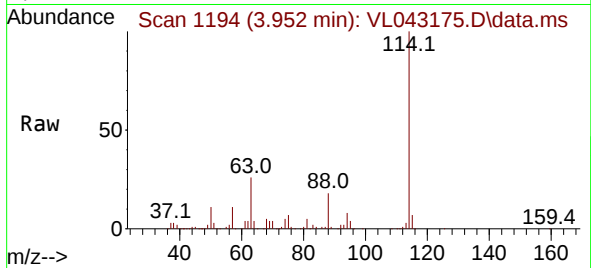




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 3.952 min Scan# 1194
 Delta R.T. -0.010 min
 Lab File: VL043175.D
 Acq: 06 Nov 2025 19:30

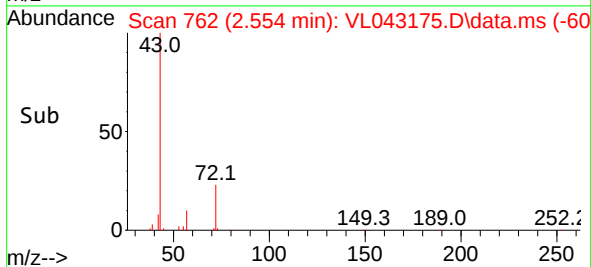
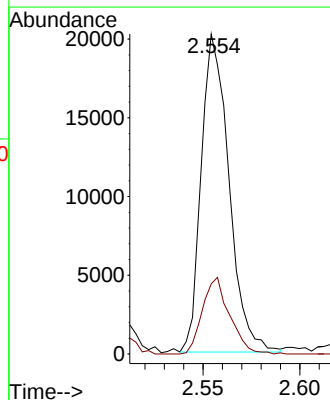
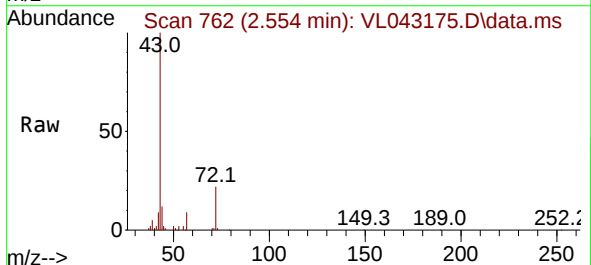
Instrument :
 MSVOA_L
 ClientSampleId :
 131-SG-1

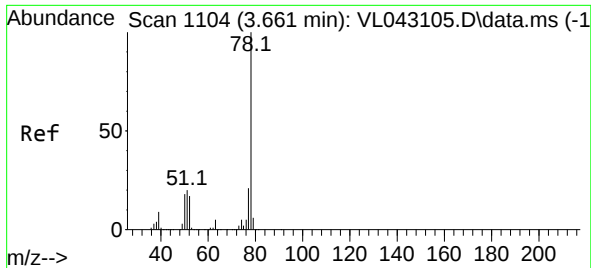
Tgt Ion:114 Resp: 353509
 Ion Ratio Lower Upper
 114 100
 63 25.7 19.3 28.9
 88 17.8 13.9 20.9



#34
 2-Butanone
 Concen: 0.849 ppbv
 RT: 2.554 min Scan# 762
 Delta R.T. -0.003 min
 Lab File: VL043175.D
 Acq: 06 Nov 2025 19:30

Tgt Ion: 43 Resp: 20168
 Ion Ratio Lower Upper
 43 100
 72 23.5 18.4 27.6

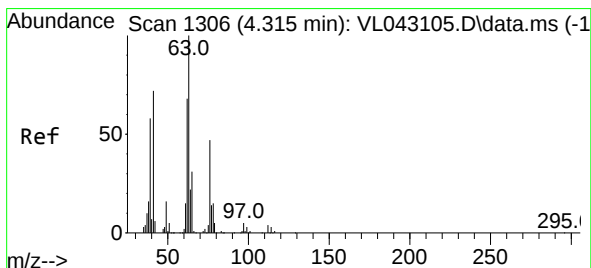
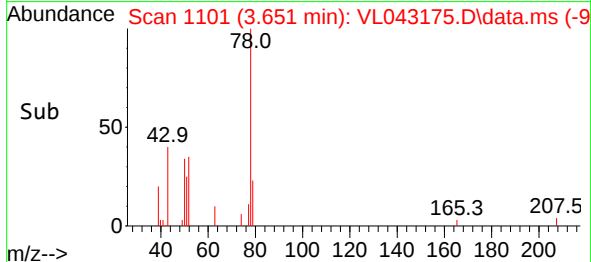
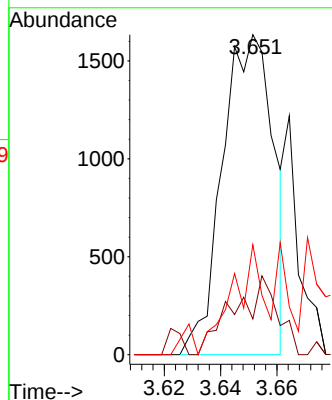
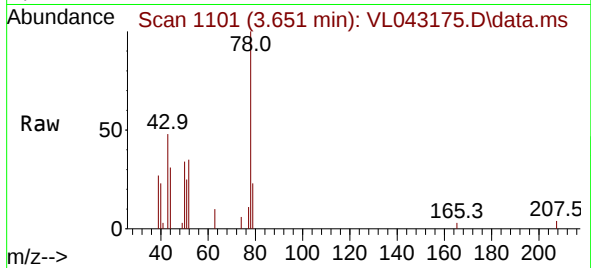




#36
Benzene
Concen: 0.062 ppbv
RT: 3.651 min Scan# 1104
Delta R.T. -0.010 min
Lab File: VL043175.D
Acq: 06 Nov 2025 19:30

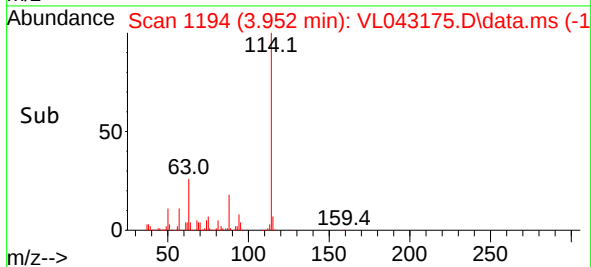
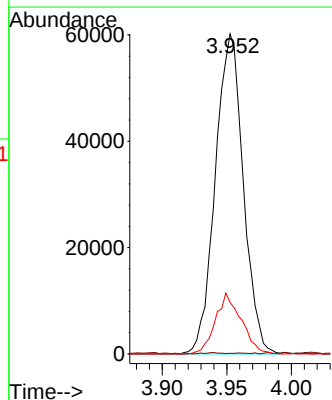
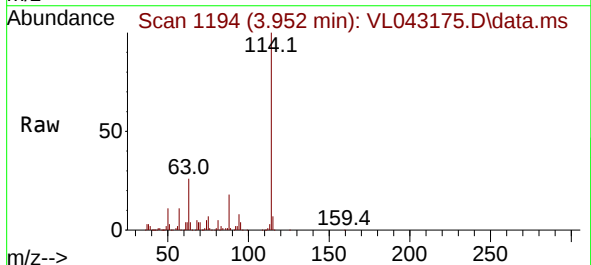
Instrument :
MSVOA_L
ClientSampleId :
131-SG-1

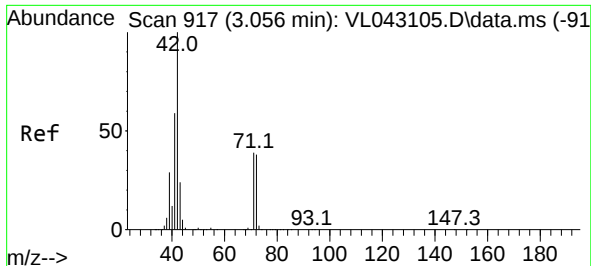
Tgt Ion: 78 Resp: 2054
Ion Ratio Lower Upper
78 100
77 4.7 17.0 25.6#
50 30.6 14.6 22.0#



#39
1,2-Dichloropropane
Concen: 7.446 ppbv
RT: 3.952 min Scan# 1194
Delta R.T. -0.362 min
Lab File: VL043175.D
Acq: 06 Nov 2025 19:30

Tgt Ion: 63 Resp: 90629
Ion Ratio Lower Upper
63 100
41 0.2 58.0 87.0#
62 16.1 54.7 82.1#

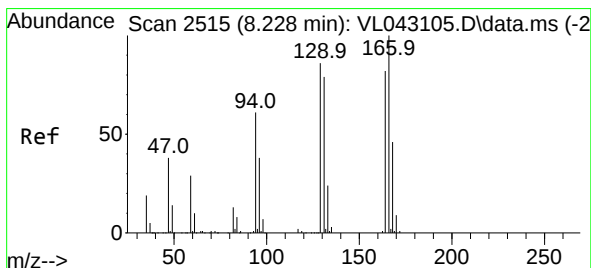
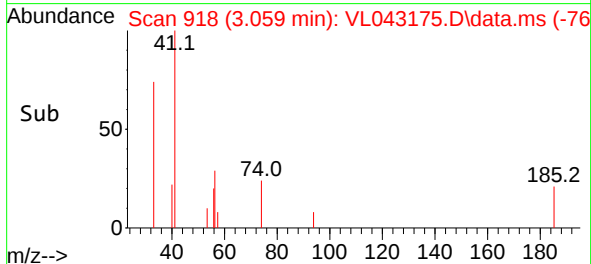
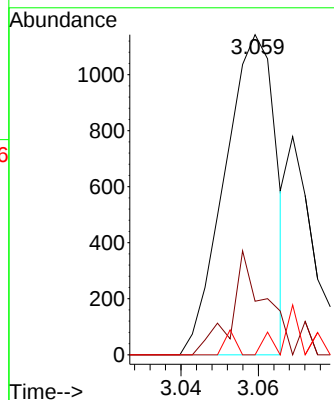
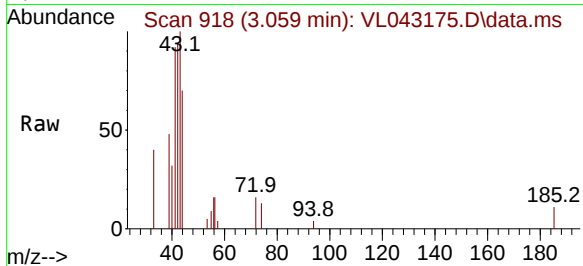




#41
Tetrahydrofuran
Concen: 0.079 ppbv
RT: 3.059 min Scan# 917
Delta R.T. 0.003 min
Lab File: VL043175.D
Acq: 06 Nov 2025 19:30

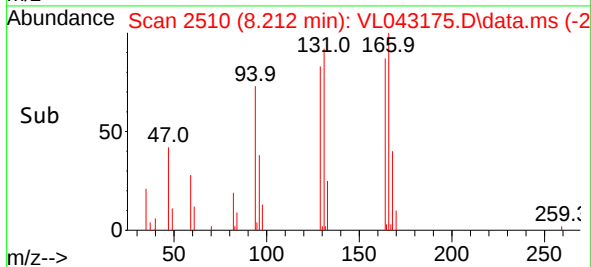
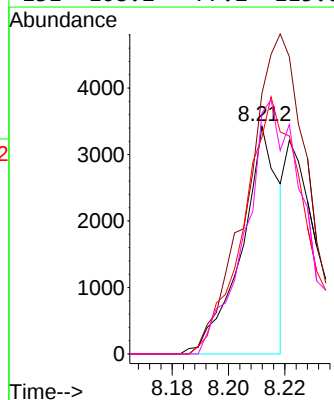
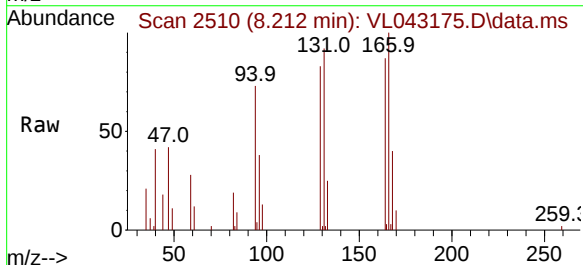
Instrument :
MSVOA_L
ClientSampleId :
131-SG-1

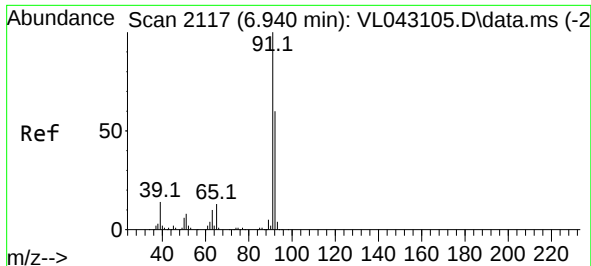
Tgt Ion: 42 Resp: 1049
Ion Ratio Lower Upper
42 100
72 26.5 31.3 46.9#
71 0.0 30.4 45.6#



#52
Tetrachloroethene
Concen: 0.259 ppbv
RT: 8.212 min Scan# 2510
Delta R.T. -0.016 min
Lab File: VL043175.D
Acq: 06 Nov 2025 19:30

Tgt Ion:164 Resp: 3107
Ion Ratio Lower Upper
164 100
166 114.5 97.6 146.4
129 95.2 84.5 126.7
131 108.2 77.2 115.8

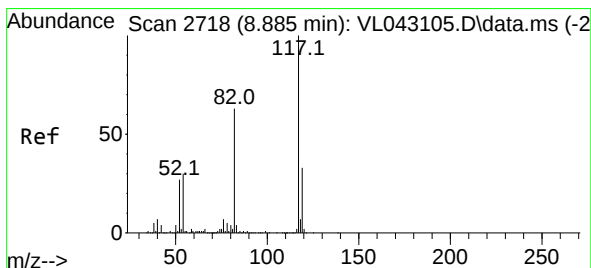
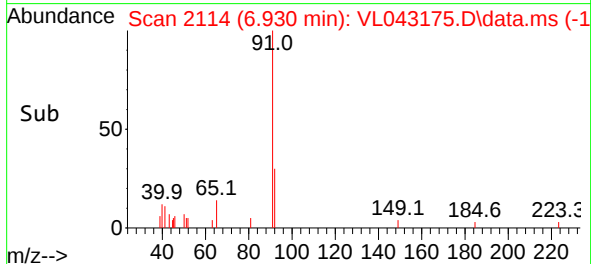
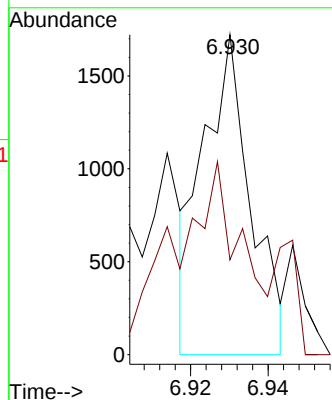
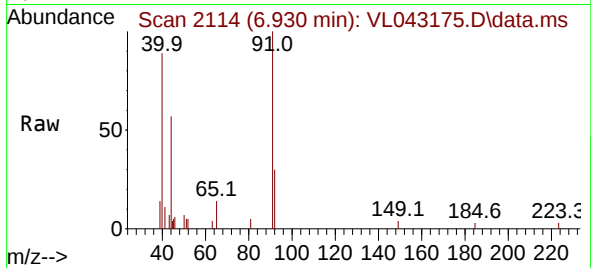




#53
Toluene
Concen: 0.037 ppbv
RT: 6.930 min Scan# 2117
Delta R.T. -0.010 min
Lab File: VL043175.D
Acq: 06 Nov 2025 19:30

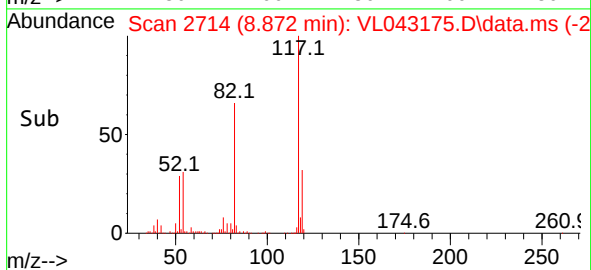
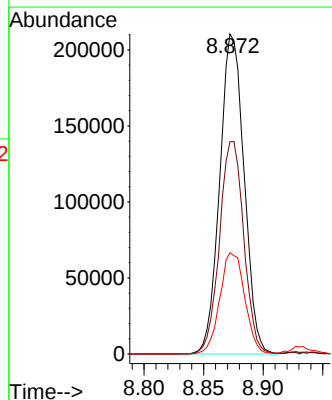
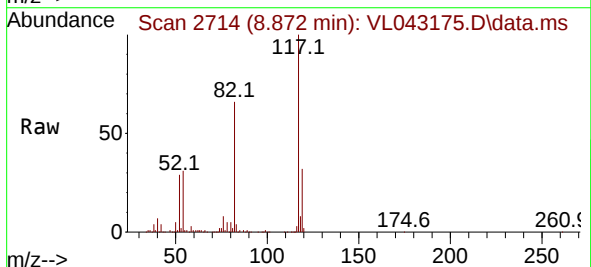
Instrument :
MSVOA_L
ClientSampleId :
131-SG-1

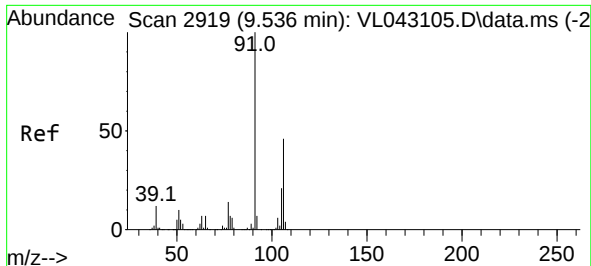
Tgt Ion: 91 Resp: 1473
Ion Ratio Lower Upper
91 100
92 105.5 48.8 73.2#



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.872 min Scan# 2714
Delta R.T. -0.013 min
Lab File: VL043175.D
Acq: 06 Nov 2025 19:30

Tgt Ion: 117 Resp: 299020
Ion Ratio Lower Upper
117 100
82 66.2 53.8 80.8
119 32.4 25.4 38.0





#59

m/p-Xylene

Concen: 0.031 ppbv

RT: 9.516 min Scan# 2919

Delta R.T. -0.019 min

Lab File: VL043175.D

Acq: 06 Nov 2025 19:30

Instrument :

MSVOA_1

ClientSampleId :

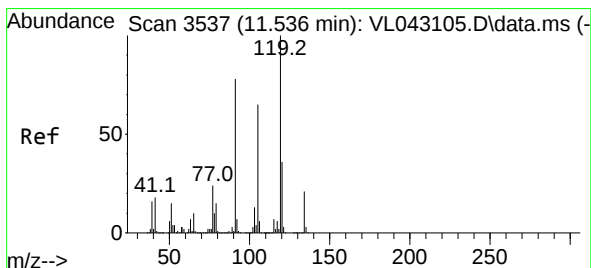
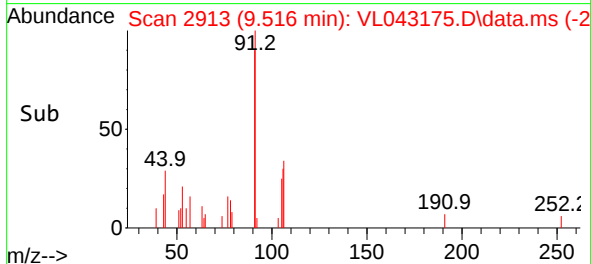
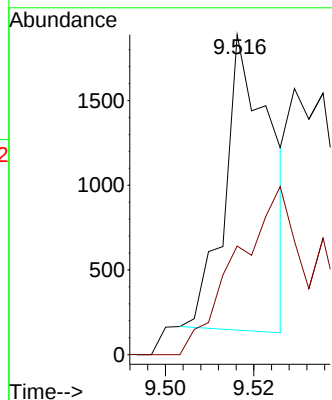
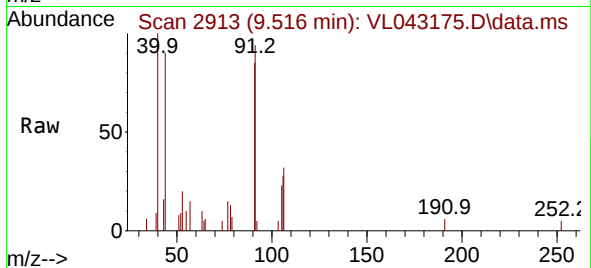
131-SG-1

Tgt Ion: 91 Resp: 1252

Ion Ratio Lower Upper

91 100

106 0.0 38.0 57.0#



#65

tert-Butylbenzene

Concen: 0.082 ppbv

RT: 11.772 min Scan# 3610

Delta R.T. 0.236 min

Lab File: VL043175.D

Acq: 06 Nov 2025 19:30

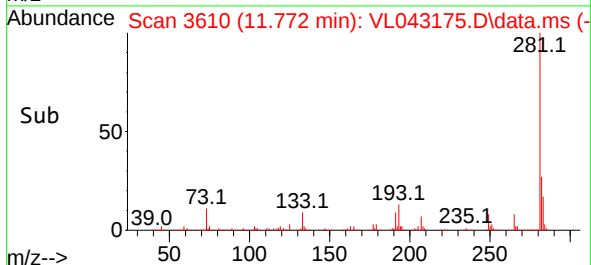
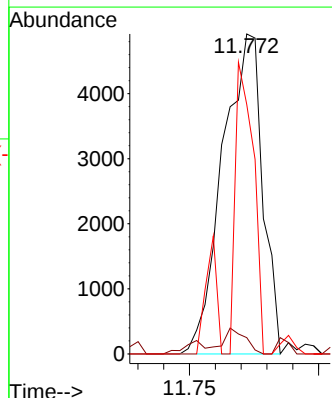
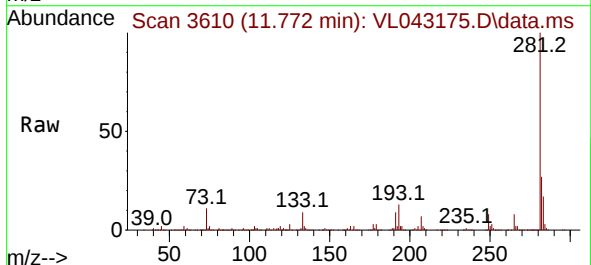
Tgt Ion: 119 Resp: 5269

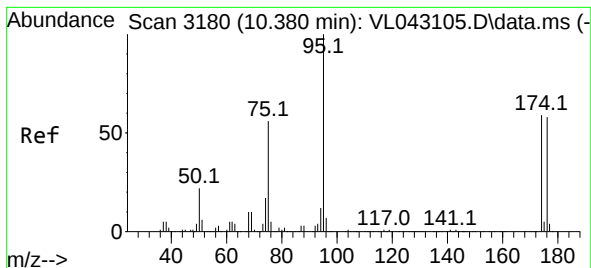
Ion Ratio Lower Upper

119 100

91 8.7 63.4 95.0#

134 54.7 17.3 25.9#

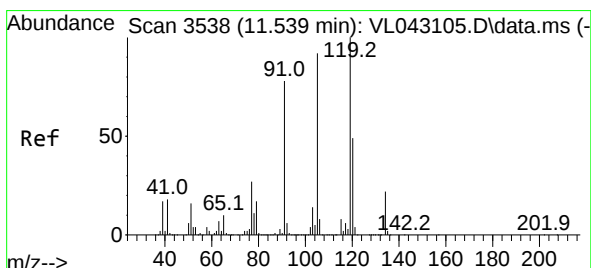
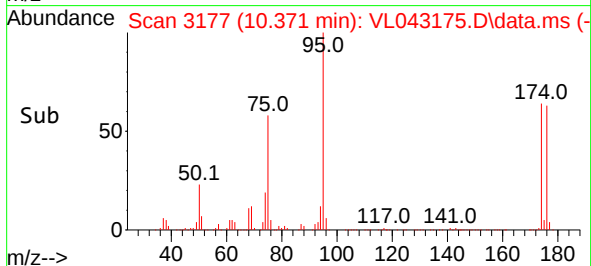
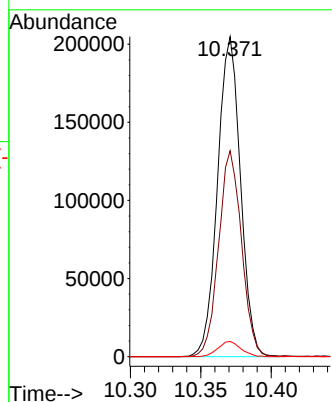
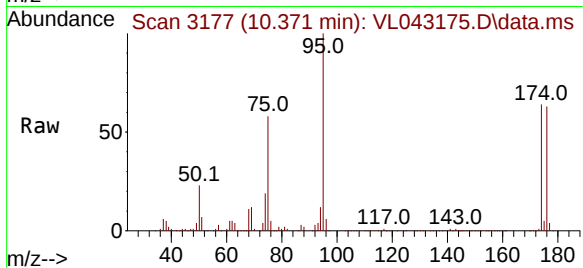




#68
1-Bromo-4-Fluorobenzene
Concen: 9.998 ppbv
RT: 10.371 min Scan# 3177
Delta R.T. -0.010 min
Lab File: VL043175.D
Acq: 06 Nov 2025 19:30

Instrument :
MSVOA_1
ClientSampleId :
131-SG-1

Tgt Ion: 95 Resp: 232369
Ion Ratio Lower Upper
95 100
174 64.4 48.3 72.5
175 4.8 3.8 5.8



#74
1,2,4-Trimethylbenzene
Concen: 0.033 ppbv
RT: 11.533 min Scan# 3536
Delta R.T. -0.006 min
Lab File: VL043175.D
Acq: 06 Nov 2025 19:30

Tgt Ion: 105 Resp: 1532
Ion Ratio Lower Upper
105 100
120 34.7 42.8 64.2#
91 18.8 68.3 102.5#
77 5.9 23.4 35.0#

