

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL120825\
 Data File : VL043315.D
 Acq On : 08 Dec 2025 16:25
 Operator : SY/MD
 Sample : Q3799-05
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 13-IA-1

Quant Time: Dec 09 00:12:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL111825AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Wed Nov 19 01:11:25 2025
 Response via : Initial Calibration

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

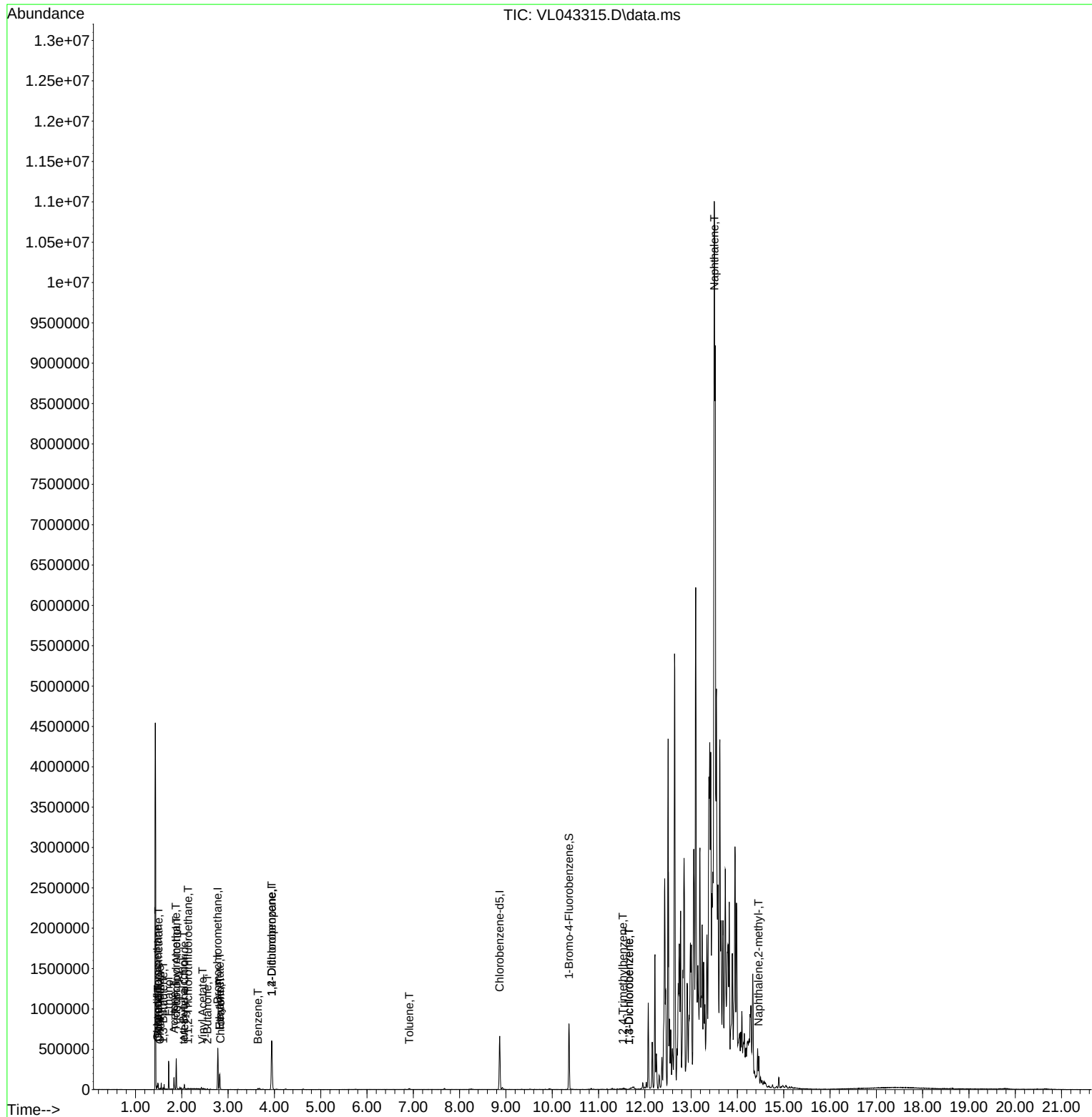
Internal Standards							
1) Bromochloromethane		2.777	49	133616	10.000	ppbv	0.00
33) 1,4-Difluorobenzene		3.943	114	344933	10.000	ppbv	0.00
55) Chlorobenzene-d5		8.865	117	261904	10.000	ppbv	0.00
System Monitoring Compounds							
68) 1-Bromo-4-Fluorobenzene		10.361	95	195928	10.206	ppbv	0.00
Spiked Amount		10.000	Range 65 - 135		Recovery	= 102.100%	
Target Compounds							
						Qvalue	
2) Dichlorodifluoromethane		1.496	85	7550	0.401	ppbv	94
3) Chlorodifluoromethane		1.473	51	24896	1.343	ppbv #	81
4) Chloromethane		1.528	50	3225	0.458	ppbv	93
9) Propene		1.486	41	6937	0.881	ppbv #	1
11) Trichlorofluoromethane		1.874	101	4607	0.252	ppbv	94
12) 1,1,2-Trichlorotrifluo...		2.136	101	1083	0.076	ppbv	96
13) Ethanol		1.716	45	117047	42.294	ppbv	99
15) Acetone		1.829	43	65404	3.523	ppbv	100
16) 1,3-Butadiene		1.599	39	2213	0.267	ppbv #	40
17) tert-Butyl alcohol		2.036	59	2347	0.096	ppbv	99
19) Isopropyl Alcohol		1.881	45	152976	14.583	ppbv #	38
20) Methylene Chloride		2.056	84	8141	0.763	ppbv #	96
23) Vinyl Acetate		2.447	43	2075	0.093	ppbv #	62
25) Ethyl Acetate		2.819	43	32153	0.803	ppbv #	82
26) Hexane		2.819	57	39916	2.274	ppbv #	44
29) Chloroform		2.836	83	836	0.034	ppbv	89
34) 2-Butanone		2.551	43	6283	0.258	ppbv	99
36) Benzene		3.645	78	6800	0.206	ppbv	97
39) 1,2-Dichloropropane		3.943	63	88762	7.342	ppbv #	24
53) Toluene		6.914	91	7294	0.186	ppbv	93
74) 1,2,4-Trimethylbenzene		11.526	105	2441	0.054	ppbv #	51
75) 1,3-Dichlorobenzene		11.659	146	947	0.036	ppbv #	79
76) 1,4-Dichlorobenzene		11.659	146	947	0.036	ppbv #	79
79) Naphthalene		13.500	128	59509	1.488	ppbv #	1
80) Naphthalene,2-methyl-		14.452	142	1880	0.179	ppbv #	1

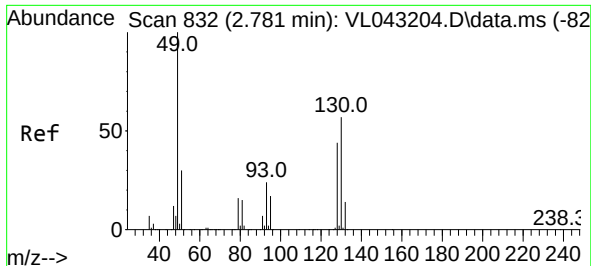
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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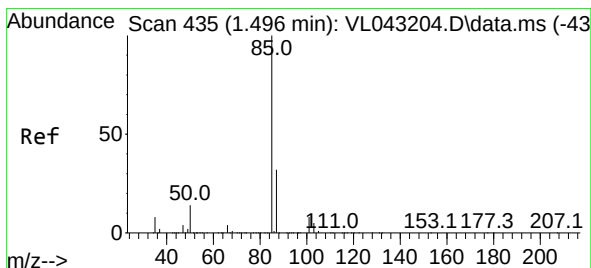
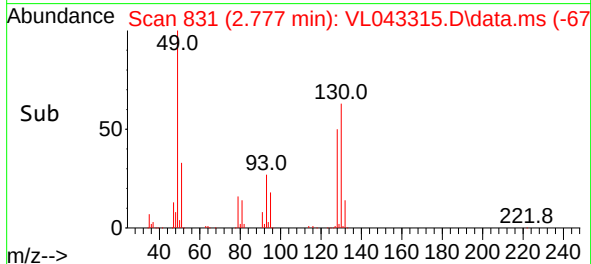
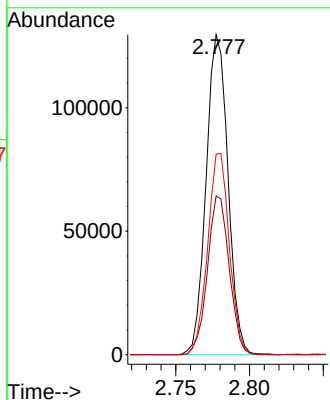
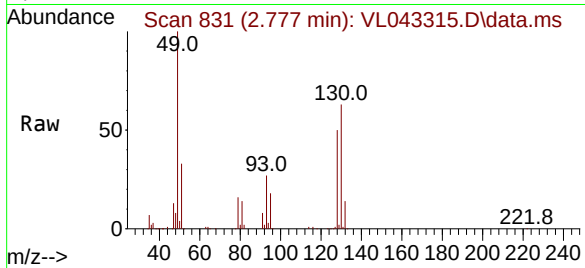




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.777 min Scan# 831
Delta R.T. -0.004 min
Lab File: VL043315.D
Acq: 08 Dec 2025 16:25

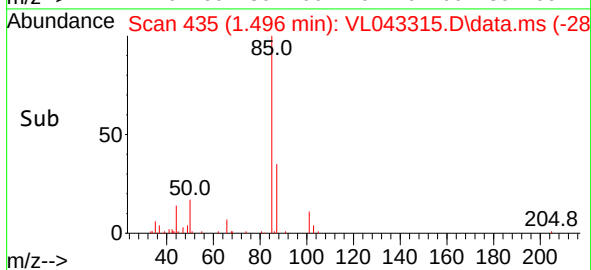
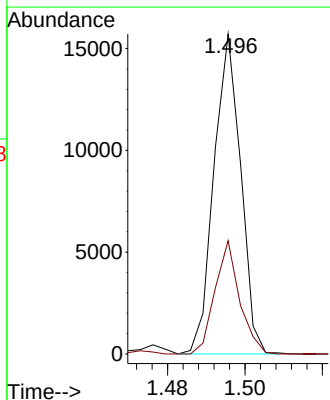
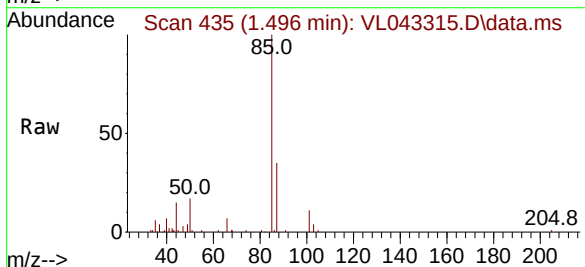
Instrument :
MSVOA_L
ClientSampleId :
13-IA-1

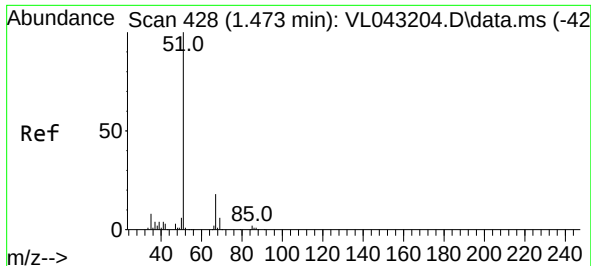
Tgt Ion: 49 Resp: 133616
Ion Ratio Lower Upper
49 100
128 49.4 23.0 69.0
130 62.4 29.9 89.7



#2
Dichlorodifluoromethane
Concen: 0.401 ppbv
RT: 1.496 min Scan# 435
Delta R.T. -0.000 min
Lab File: VL043315.D
Acq: 08 Dec 2025 16:25

Tgt Ion: 85 Resp: 7550
Ion Ratio Lower Upper
85 100
87 35.4 25.4 38.2

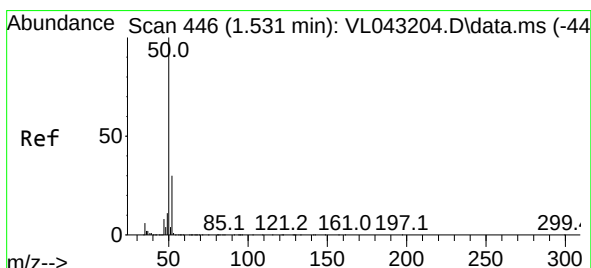
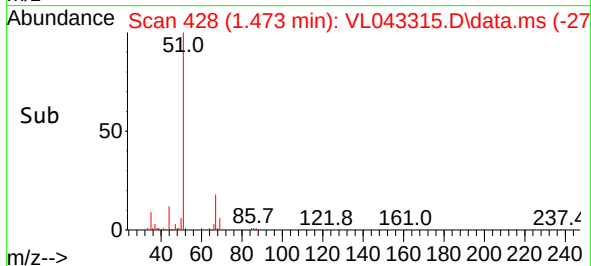
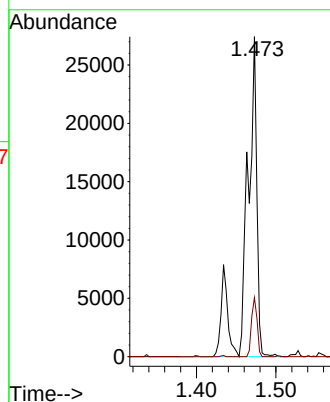
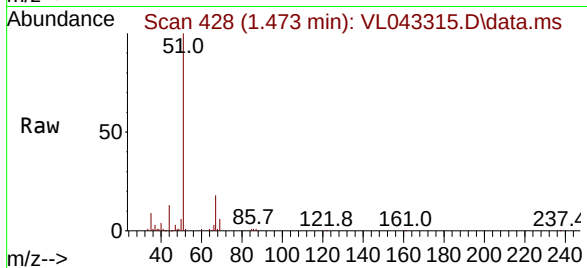




#3
Chlorodifluoromethane
Concen: 1.343 ppbv
RT: 1.473 min Scan# 41
Delta R.T. -0.000 min
Lab File: VL043315.D
Acq: 08 Dec 2025 16:25

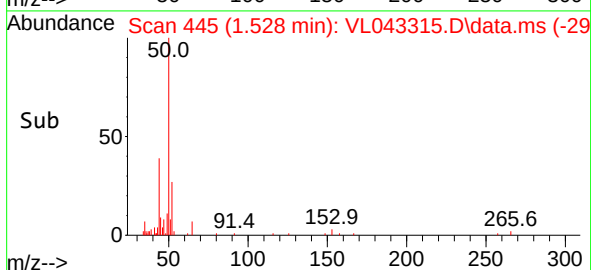
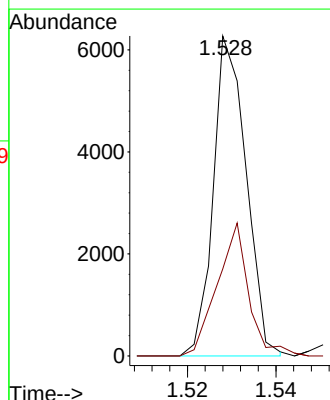
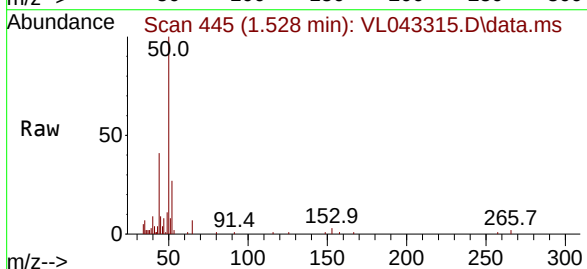
Instrument :
MSVOA_1
ClientSampleId :
13-IA-1

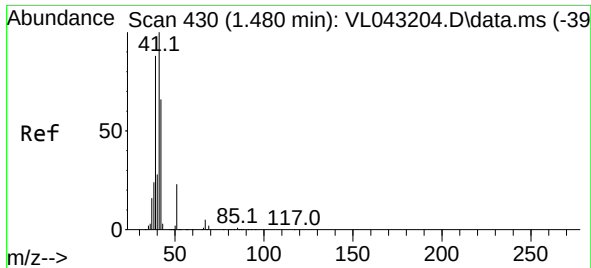
Tgt Ion: 51 Resp: 24896
Ion Ratio Lower Upper
51 100
67 9.9 14.9 22.3#



#4
Chloromethane
Concen: 0.458 ppbv
RT: 1.528 min Scan# 445
Delta R.T. -0.003 min
Lab File: VL043315.D
Acq: 08 Dec 2025 16:25

Tgt Ion: 50 Resp: 3225
Ion Ratio Lower Upper
50 100
52 26.3 24.1 36.1





#9

Propene

Concen: 0.881 ppbv

RT: 1.486 min Scan# 41

Delta R.T. 0.006 min

Lab File: VL043315.D

Acq: 08 Dec 2025 16:25

Instrument :

MSVOA_L

ClientSampleId :

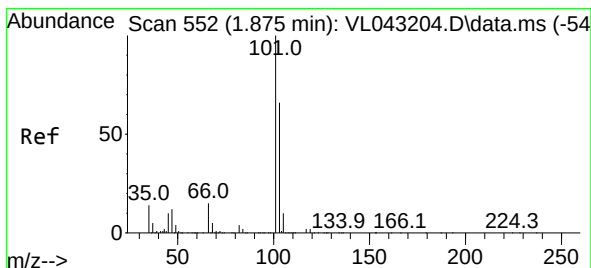
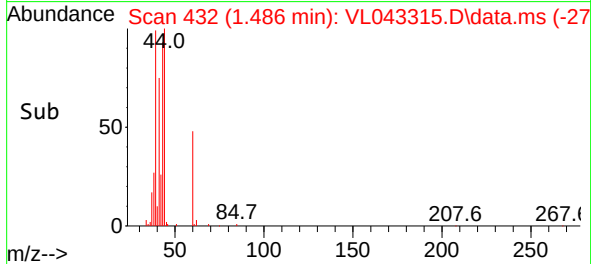
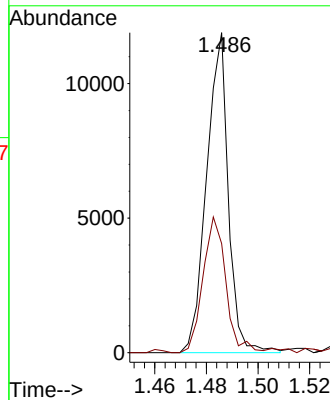
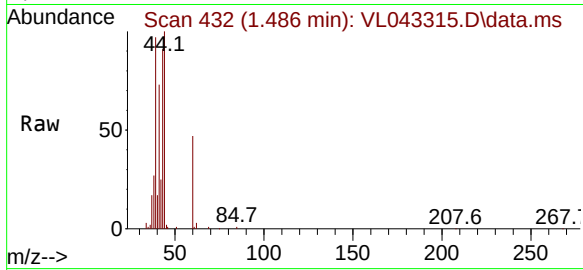
13-IA-1

Tgt Ion: 41 Resp: 6937

Ion Ratio Lower Upper

41 100

42 45.2 3.7 5.5#



#11

Trichlorofluoromethane

Concen: 0.252 ppbv

RT: 1.874 min Scan# 552

Delta R.T. -0.000 min

Lab File: VL043315.D

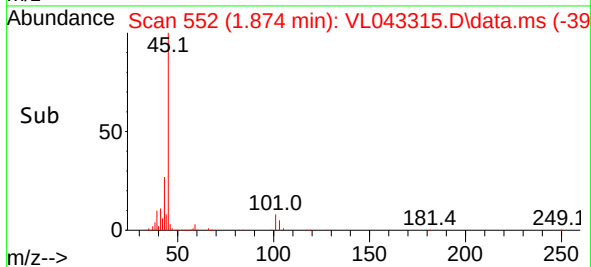
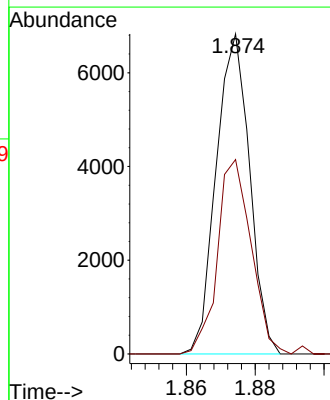
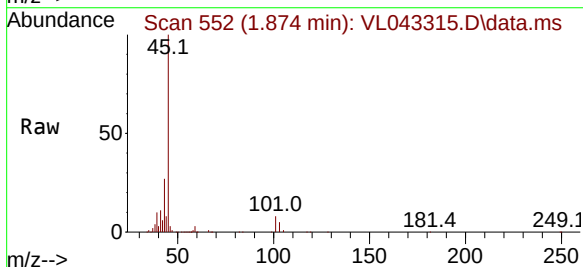
Acq: 08 Dec 2025 16:25

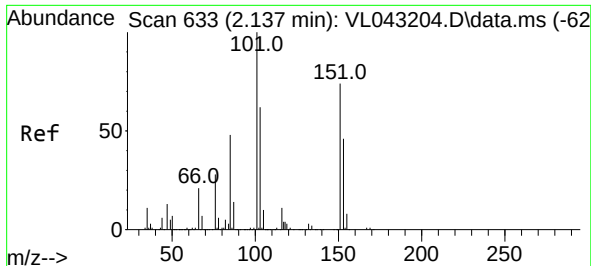
Tgt Ion:101 Resp: 4607

Ion Ratio Lower Upper

101 100

103 60.7 52.6 79.0

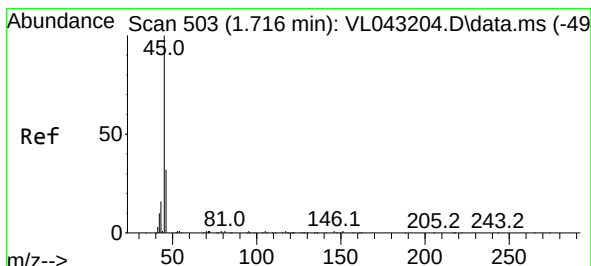
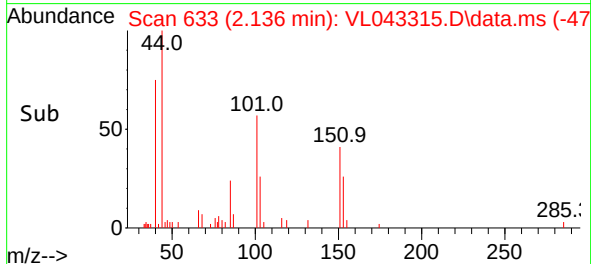
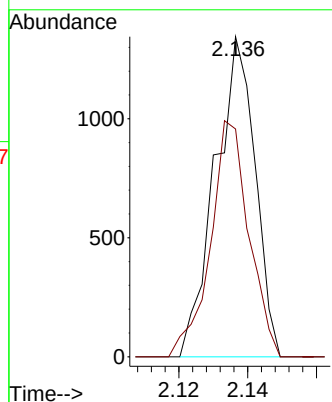
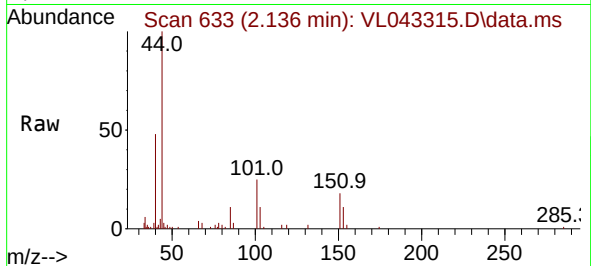




#12
1,1,2-Trichlorotrifluoroethane
Concen: 0.076 ppbv
RT: 2.136 min Scan# 61
Delta R.T. -0.000 min
Lab File: VL043315.D
Acq: 08 Dec 2025 16:25

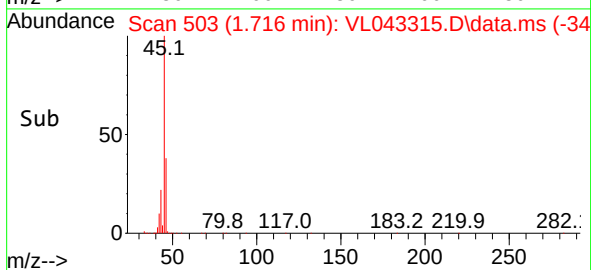
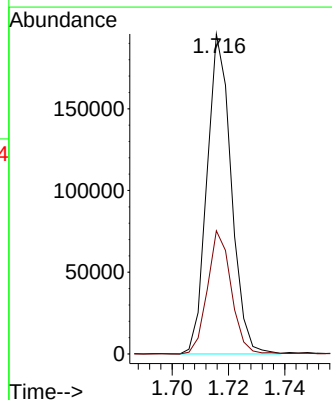
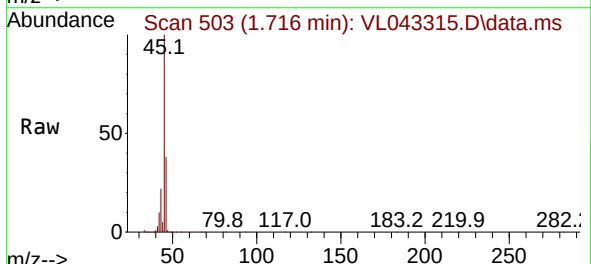
Instrument :
MSVOA_L
ClientSampleId :
13-IA-1

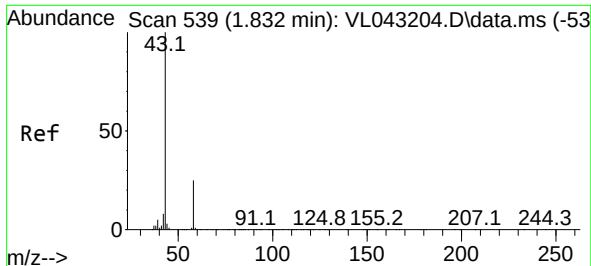
Tgt Ion:101 Resp: 1083
Ion Ratio Lower Upper
101 100
151 70.9 59.2 88.8



#13
Ethanol
Concen: 42.294 ppbv
RT: 1.716 min Scan# 503
Delta R.T. -0.000 min
Lab File: VL043315.D
Acq: 08 Dec 2025 16:25

Tgt Ion: 45 Resp: 117047
Ion Ratio Lower Upper
45 100
46 38.1 15.0 59.8

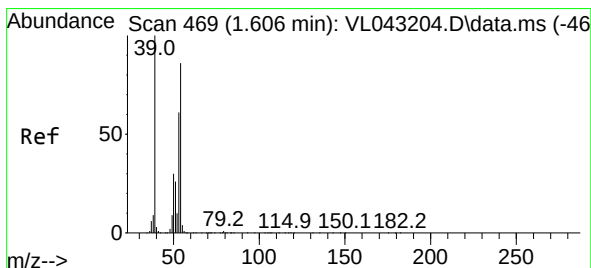
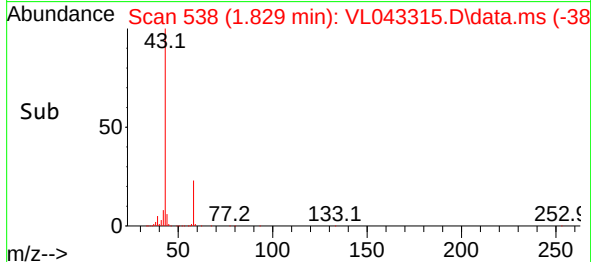
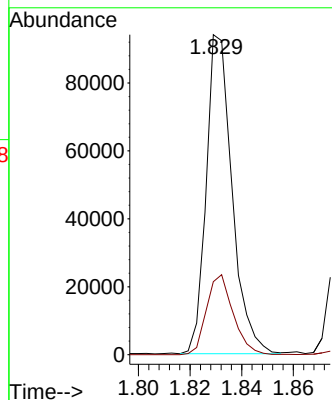
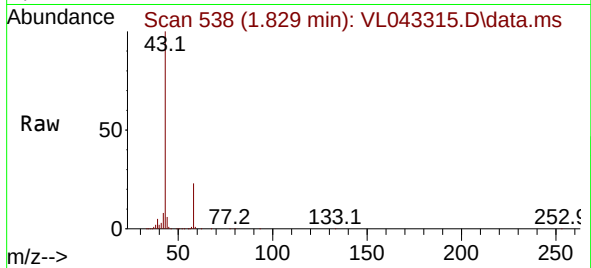




#15
Acetone
Concen: 3.523 ppbv
RT: 1.829 min Scan# 51
Delta R.T. -0.003 min
Lab File: VL043315.D
Acq: 08 Dec 2025 16:25

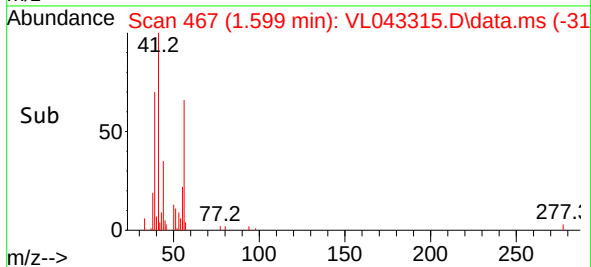
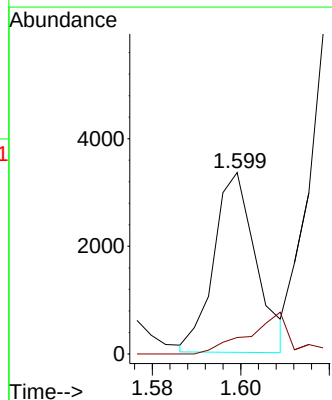
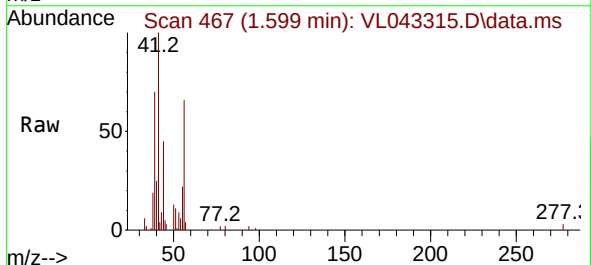
Instrument :
MSVOA_L
ClientSampleId :
13-IA-1

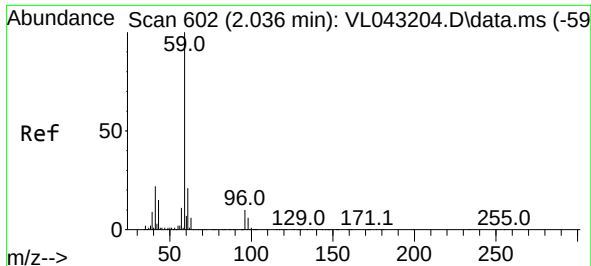
Tgt Ion: 43 Resp: 65404
Ion Ratio Lower Upper
43 100
58 25.8 20.7 31.1



#16
1,3-Butadiene
Concen: 0.267 ppbv
RT: 1.599 min Scan# 467
Delta R.T. -0.007 min
Lab File: VL043315.D
Acq: 08 Dec 2025 16:25

Tgt Ion: 39 Resp: 2213
Ion Ratio Lower Upper
39 100
54 23.1 59.4 89.2#





#17

tert-Butyl alcohol

Concen: 0.096 ppbv

RT: 2.036 min Scan# 602

Delta R.T. -0.000 min

Lab File: VL043315.D

Acq: 08 Dec 2025 16:25

Instrument :

MSVOA_L

ClientSampleId :

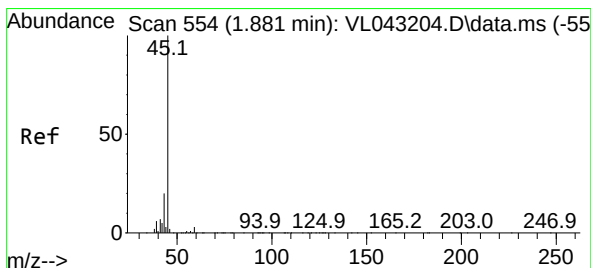
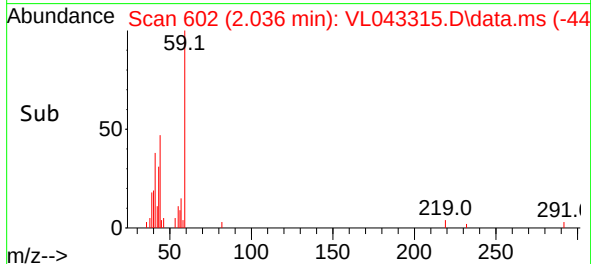
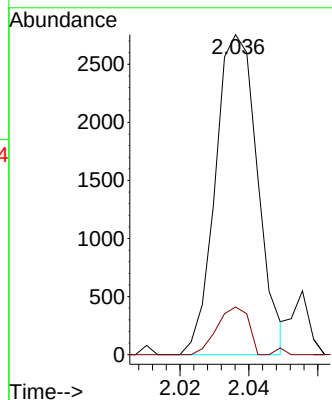
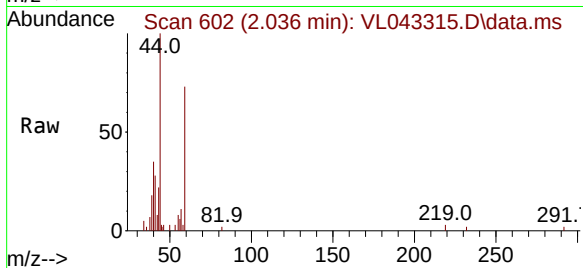
13-IA-1

Tgt Ion: 59 Resp: 2347

Ion Ratio Lower Upper

59 100

57 11.6 9.0 13.4



#19

Isopropyl Alcohol

Concen: 14.583 ppbv

RT: 1.881 min Scan# 554

Delta R.T. -0.000 min

Lab File: VL043315.D

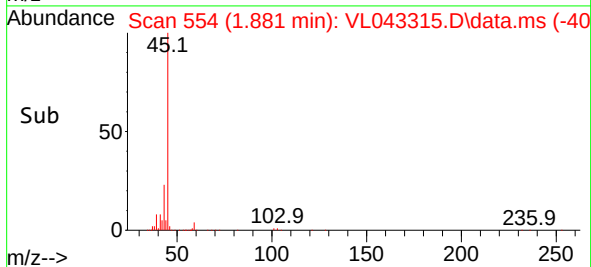
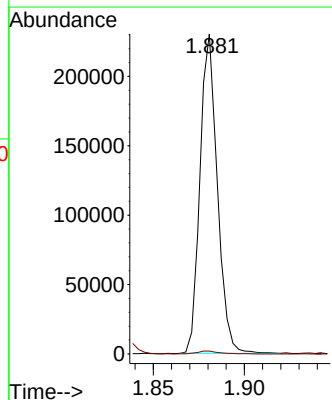
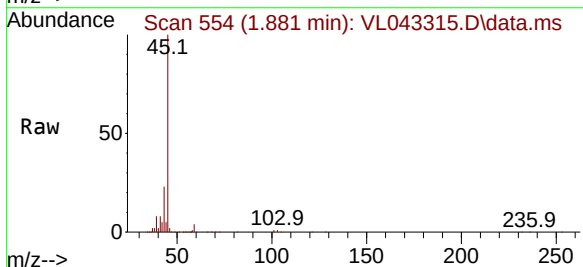
Acq: 08 Dec 2025 16:25

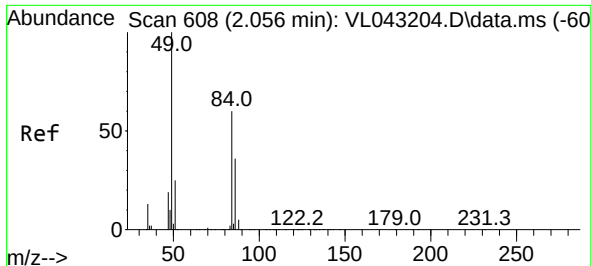
Tgt Ion: 45 Resp: 152976

Ion Ratio Lower Upper

45 100

58 1.2 31.3 46.9#



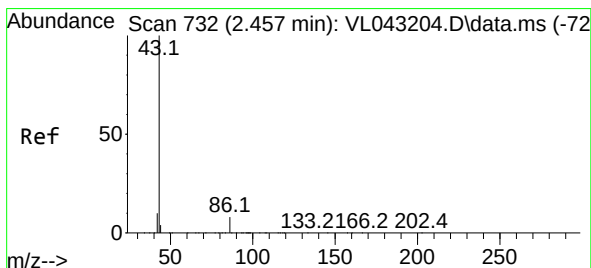
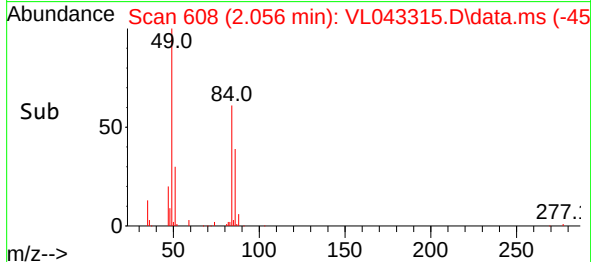
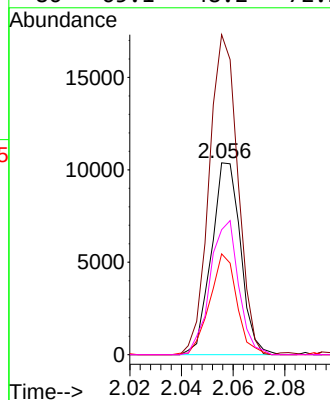
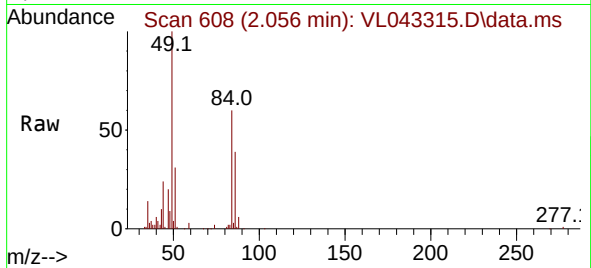


#20
Methylene Chloride
Concen: 0.763 ppbv
RT: 2.056 min Scan# 608
Delta R.T. -0.000 min
Lab File: VL043315.D
Acq: 08 Dec 2025 16:25

Instrument :
MSVOA_L
ClientSampleId :
13-IA-1

Tgt Ion: 84 Resp: 8141

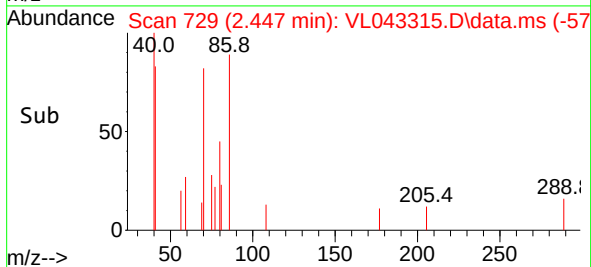
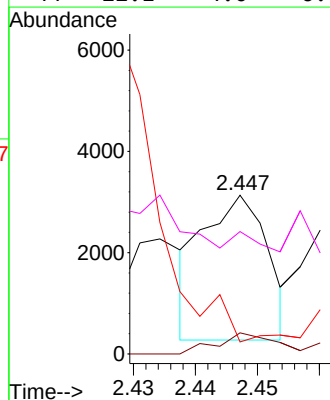
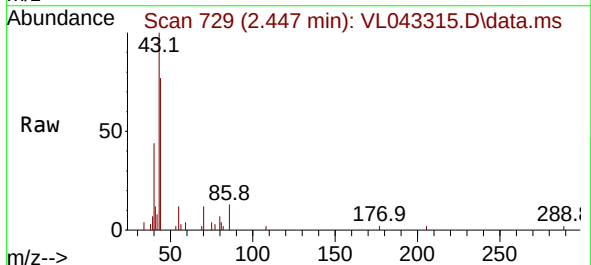
Ion	Ratio	Lower	Upper
84	100		
49	166.8	132.9	199.3
51	52.5	34.8	52.2#
86	65.1	48.2	72.2

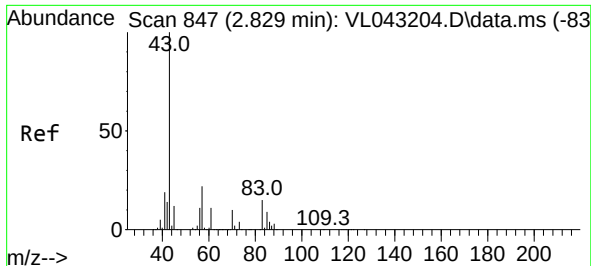


#23
Vinyl Acetate
Concen: 0.093 ppbv
RT: 2.447 min Scan# 729
Delta R.T. -0.010 min
Lab File: VL043315.D
Acq: 08 Dec 2025 16:25

Tgt Ion: 43 Resp: 2075

Ion	Ratio	Lower	Upper
43	100		
86	23.0	6.2	9.2#
42	0.0	8.0	12.0#
44	22.1	4.0	6.0#

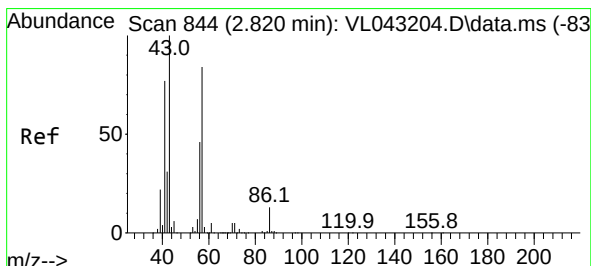
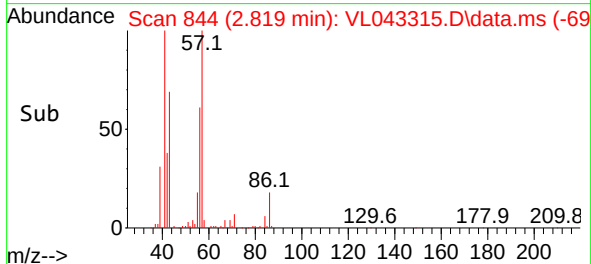
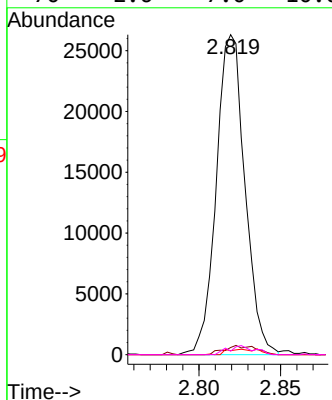
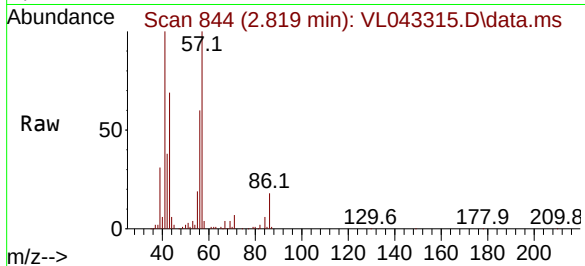




#25
Ethyl Acetate
Concen: 0.803 ppbv
RT: 2.819 min Scan# 844
Delta R.T. -0.010 min
Lab File: VL043315.D
Acq: 08 Dec 2025 16:25

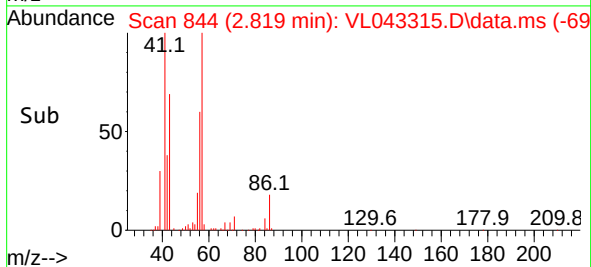
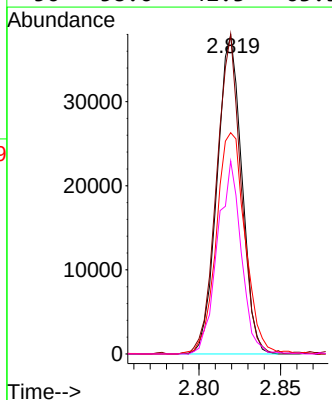
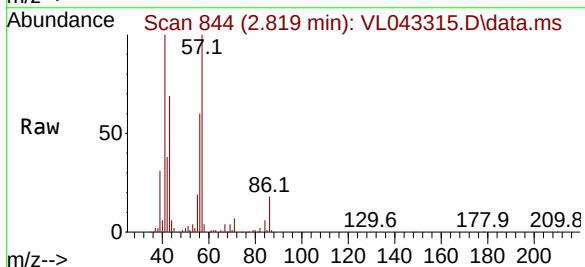
Instrument :
MSVOA_L
ClientSampleId :
13-IA-1

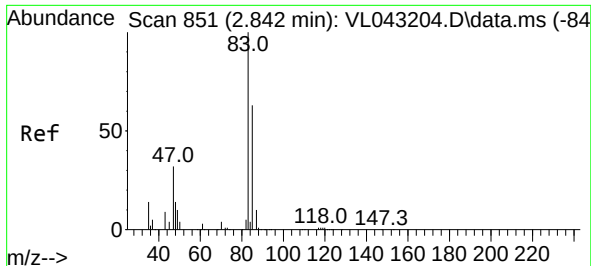
Tgt Ion: 43	Resp: 32153
Ion Ratio	Lower Upper
43 100	
45 3.3	8.1 12.1#
61 1.9	7.0 10.4#
70 2.6	7.0 10.6#



#26
Hexane
Concen: 2.274 ppbv
RT: 2.819 min Scan# 844
Delta R.T. -0.000 min
Lab File: VL043315.D
Acq: 08 Dec 2025 16:25

Tgt Ion: 57	Resp: 39916
Ion Ratio	Lower Upper
57 100	
41 100.1	74.6 111.8
43 81.2	179.0 268.4#
56 58.6	42.3 63.5

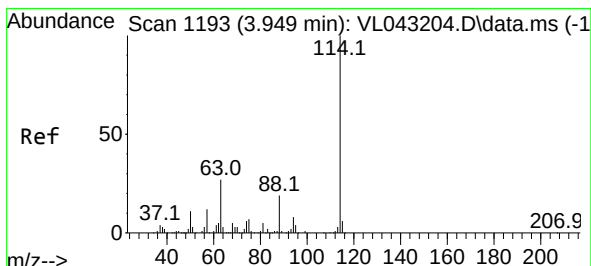
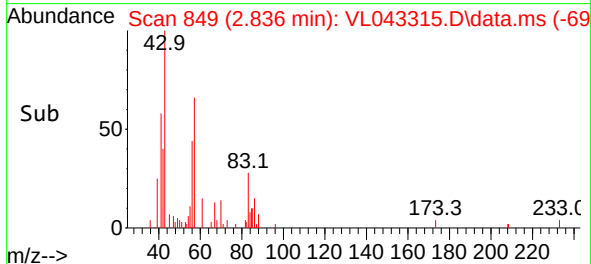
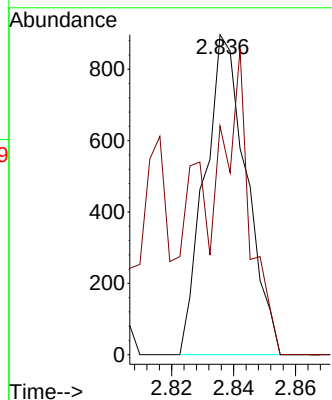
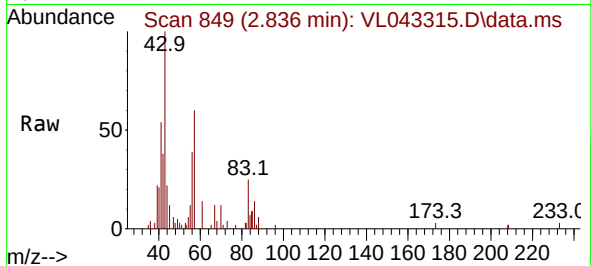




#29
Chloroform
Concen: 0.034 ppbv
RT: 2.836 min Scan# 84
Delta R.T. -0.007 min
Lab File: VL043315.D
Acq: 08 Dec 2025 16:25

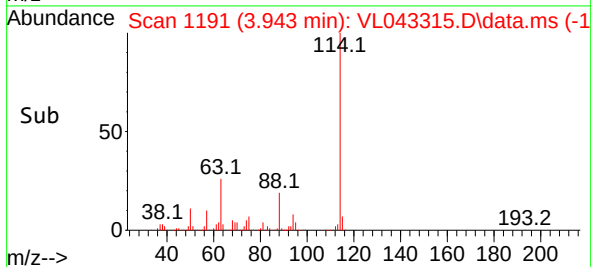
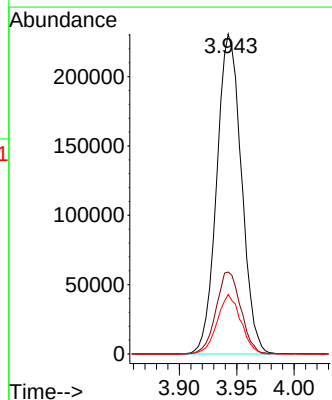
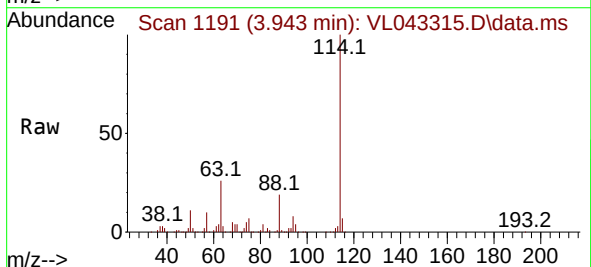
Instrument :
MSVOA_L
ClientSampleId :
13-IA-1

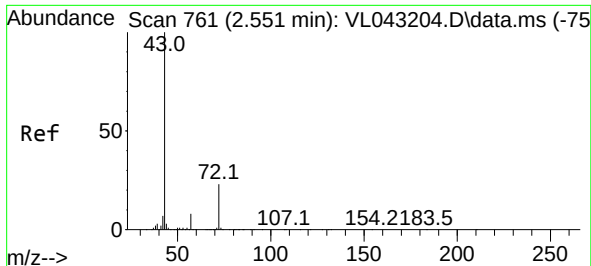
Tgt Ion: 83 Resp: 836
Ion Ratio Lower Upper
83 100
85 71.5 50.5 75.7



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 3.943 min Scan# 1191
Delta R.T. -0.007 min
Lab File: VL043315.D
Acq: 08 Dec 2025 16:25

Tgt Ion: 114 Resp: 344933
Ion Ratio Lower Upper
114 100
63 25.8 21.0 31.6
88 17.8 14.9 22.3

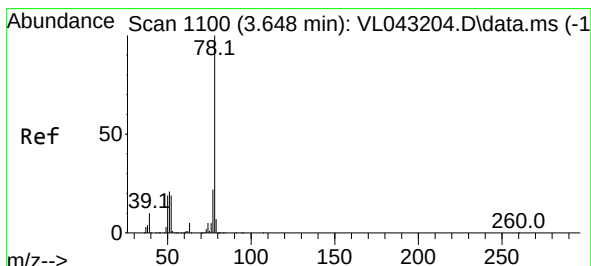
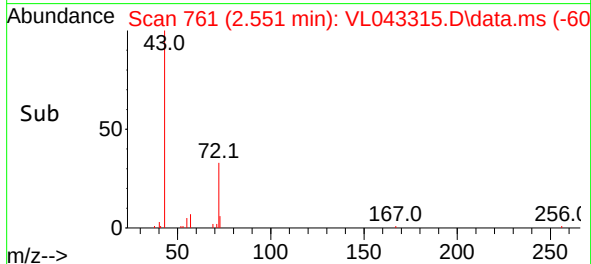
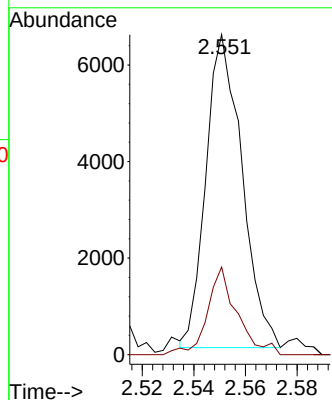
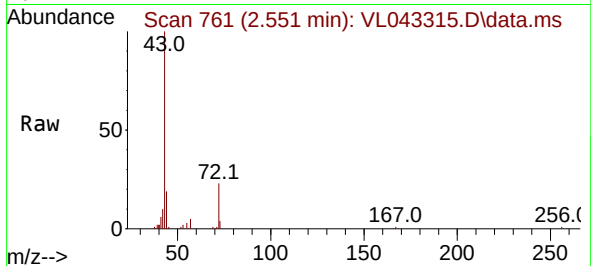




#34
2-Butanone
Concen: 0.258 ppbv
RT: 2.551 min Scan# 761
Delta R.T. -0.000 min
Lab File: VL043315.D
Acq: 08 Dec 2025 16:25

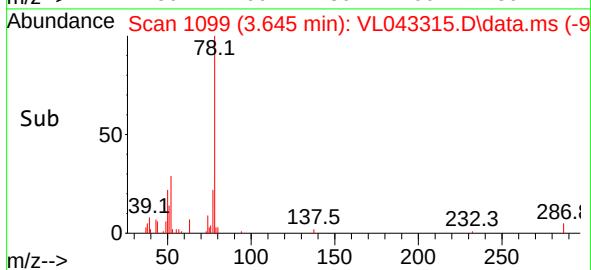
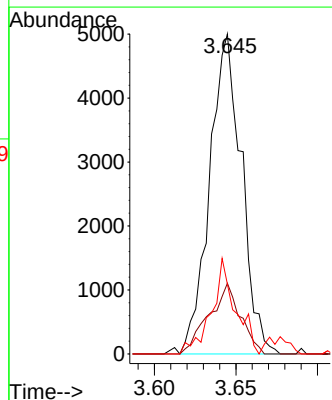
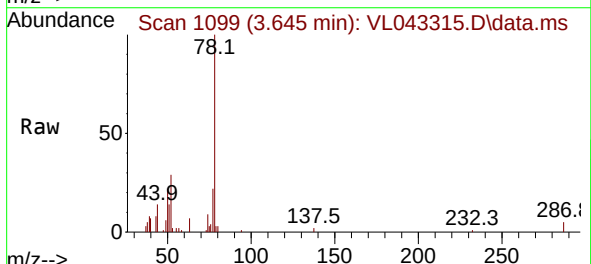
Instrument :
MSVOA_L
ClientSampleId :
13-IA-1

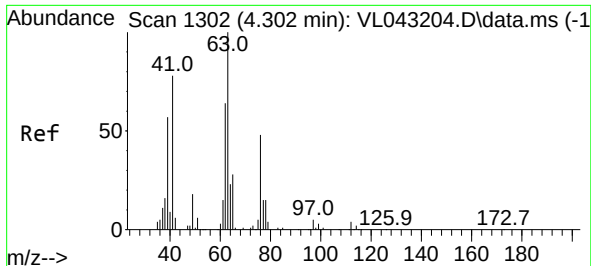
Tgt Ion: 43 Resp: 6283
Ion Ratio Lower Upper
43 100
72 23.0 18.1 27.1



#36
Benzene
Concen: 0.206 ppbv
RT: 3.645 min Scan# 1099
Delta R.T. -0.003 min
Lab File: VL043315.D
Acq: 08 Dec 2025 16:25

Tgt Ion: 78 Resp: 6800
Ion Ratio Lower Upper
78 100
77 22.1 17.5 26.3
50 21.8 15.5 23.3





#39

1,2-Dichloropropane

Concen: 7.342 ppbv

RT: 3.943 min Scan# 1191

Delta R.T. -0.359 min

Lab File: VL043315.D

Acq: 08 Dec 2025 16:25

Instrument :

MSVOA_L

ClientSampleId :

13-IA-1

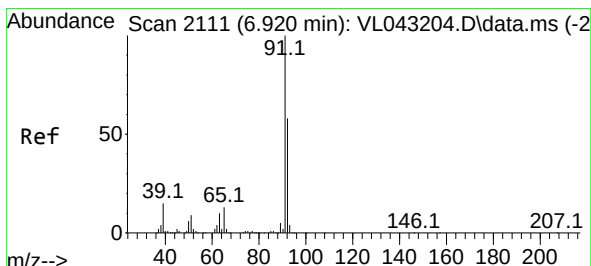
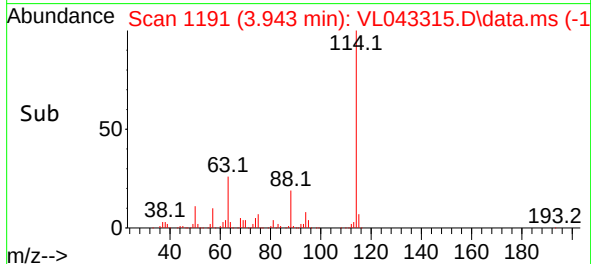
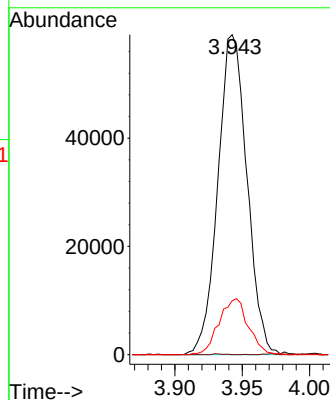
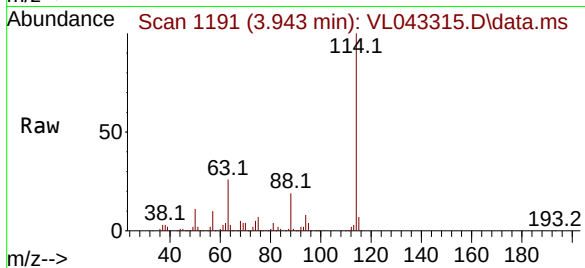
Tgt Ion: 63 Resp: 88762

Ion Ratio Lower Upper

63 100

41 0.0 62.6 93.8#

62 16.9 51.0 76.6#



#53

Toluene

Concen: 0.186 ppbv

RT: 6.914 min Scan# 2109

Delta R.T. -0.007 min

Lab File: VL043315.D

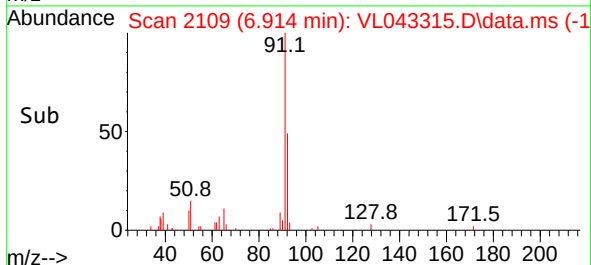
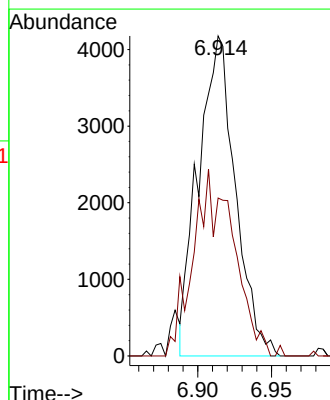
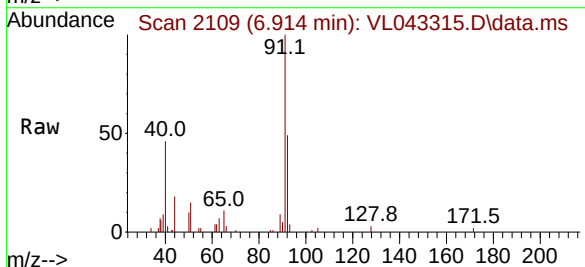
Acq: 08 Dec 2025 16:25

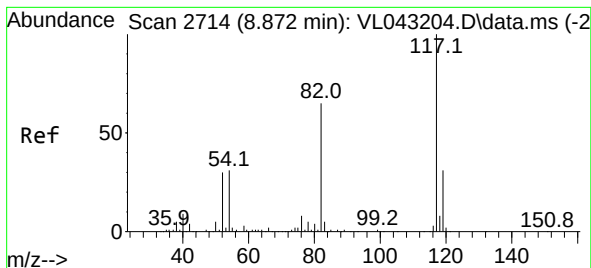
Tgt Ion: 91 Resp: 7294

Ion Ratio Lower Upper

91 100

92 64.2 47.4 71.0





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 8.865 min Scan# 21

Delta R.T. -0.007 min

Lab File: VL043315.D

Acq: 08 Dec 2025 16:25

Instrument :

MSVOA_L

ClientSampleId :

13-IA-1

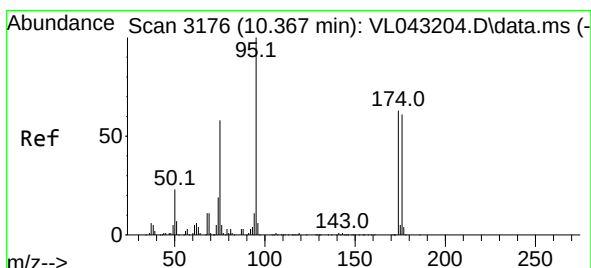
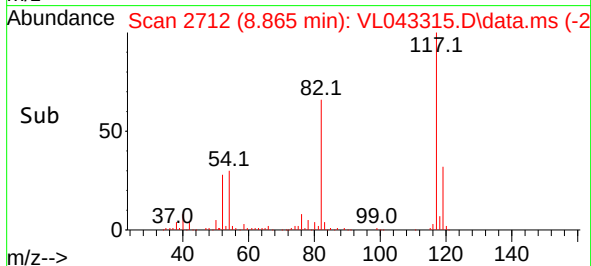
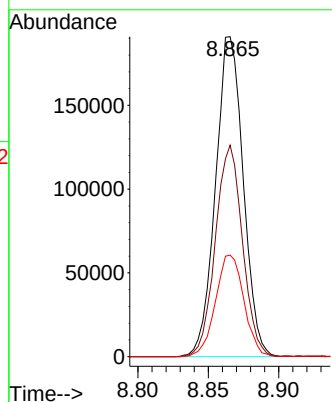
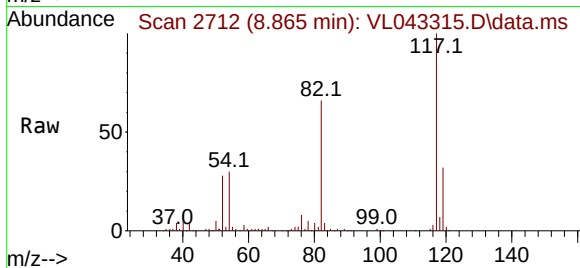
Tgt Ion:117 Resp: 261904

Ion Ratio Lower Upper

117 100

82 64.6 56.1 84.1

119 32.6 25.0 37.6



#68

1-Bromo-4-Fluorobenzene

Concen: 10.206 ppbv

RT: 10.361 min Scan# 3174

Delta R.T. -0.007 min

Lab File: VL043315.D

Acq: 08 Dec 2025 16:25

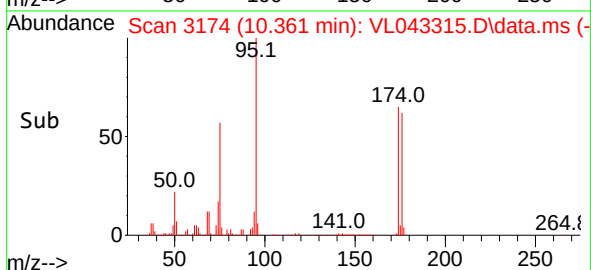
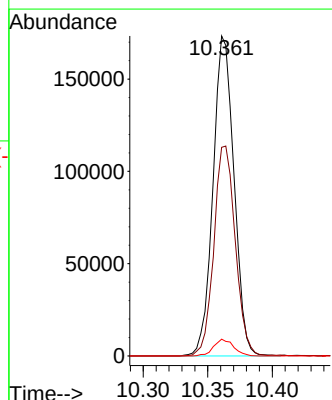
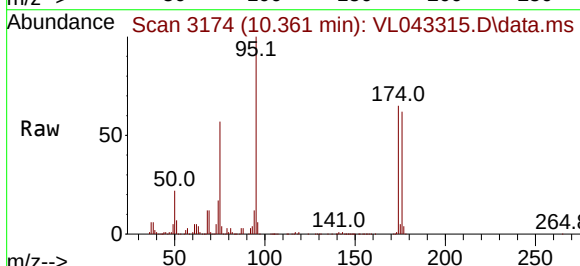
Tgt Ion: 95 Resp: 195928

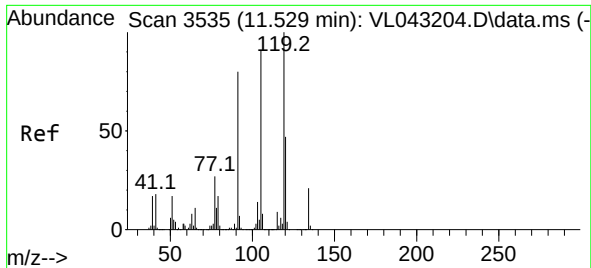
Ion Ratio Lower Upper

95 100

174 67.0 50.2 75.2

175 5.0 4.1 6.1

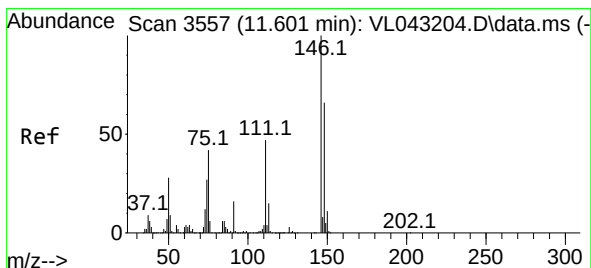
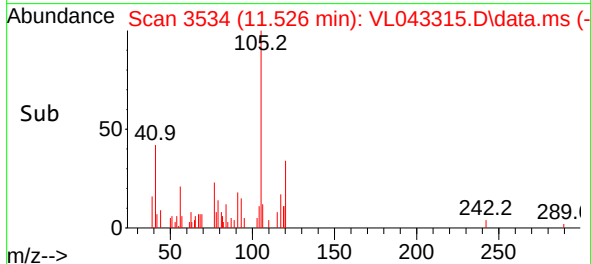
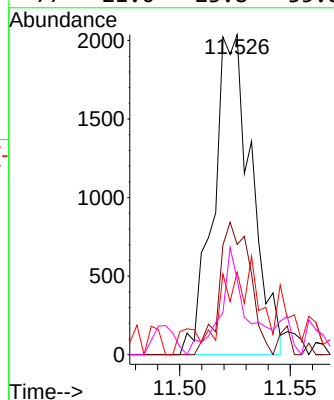
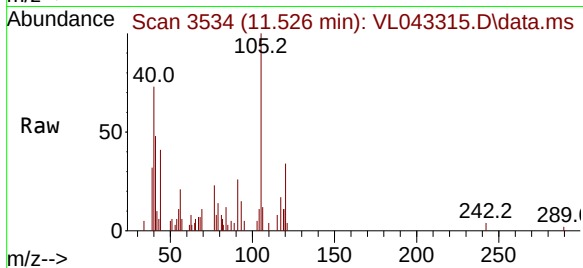




#74
1,2,4-Trimethylbenzene
Concen: 0.054 ppbv
RT: 11.526 min Scan# 3534
Delta R.T. -0.003 min
Lab File: VL043315.D
Acq: 08 Dec 2025 16:25

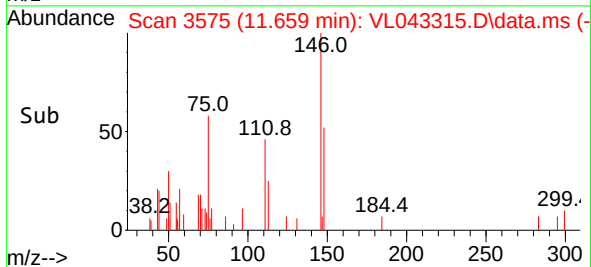
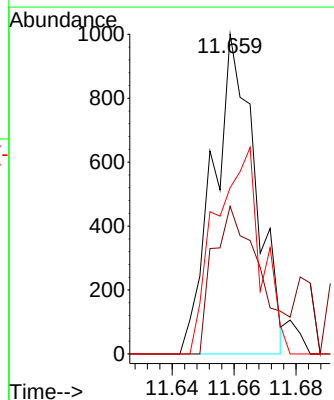
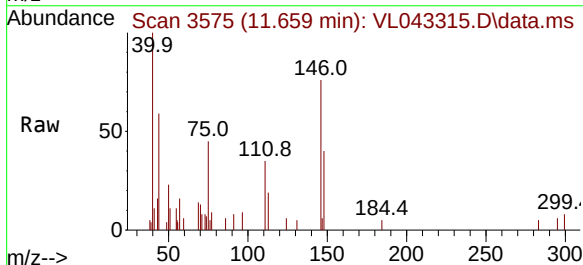
Instrument :
MSVOA_L
ClientSampleId :
13-IA-1

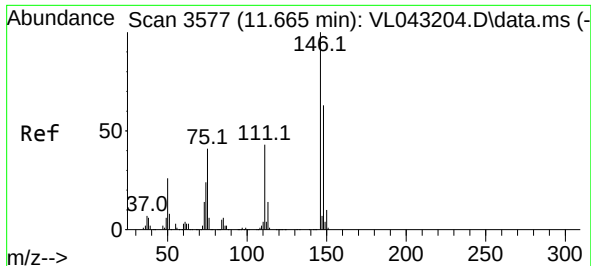
Tgt Ion:	105	Resp:	2441
Ion	Ratio	Lower	Upper
105	100		
120	34.5	41.7	62.5#
91	18.6	70.0	105.0#
77	21.0	23.8	35.8#



#75
1,3-Dichlorobenzene
Concen: 0.036 ppbv
RT: 11.659 min Scan# 3575
Delta R.T. 0.058 min
Lab File: VL043315.D
Acq: 08 Dec 2025 16:25

Tgt Ion:	146	Resp:	947
Ion	Ratio	Lower	Upper
146	100		
111	72.0	23.4	70.3#
148	69.5	31.6	95.0

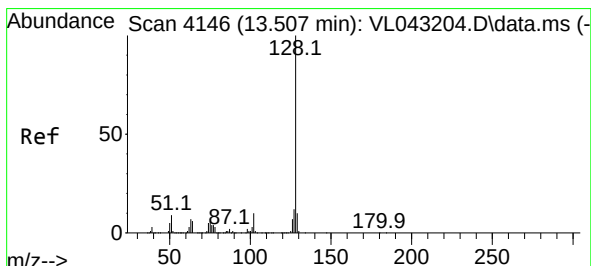
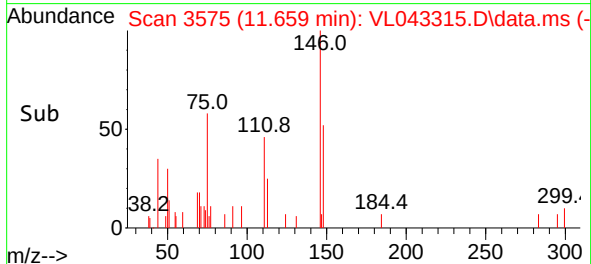
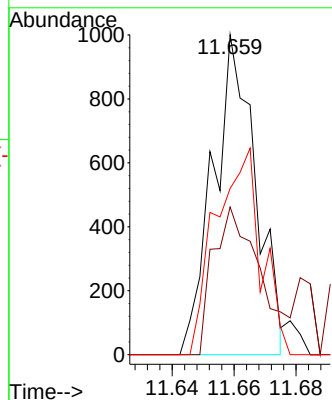
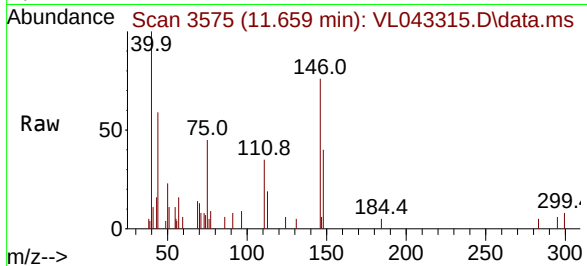




#76
1,4-Dichlorobenzene
Concen: 0.036 ppbv
RT: 11.659 min Scan# 31
Delta R.T. -0.007 min
Lab File: VL043315.D
Acq: 08 Dec 2025 16:25

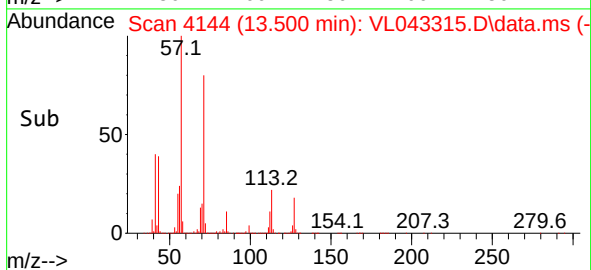
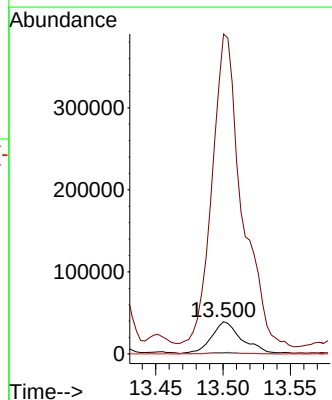
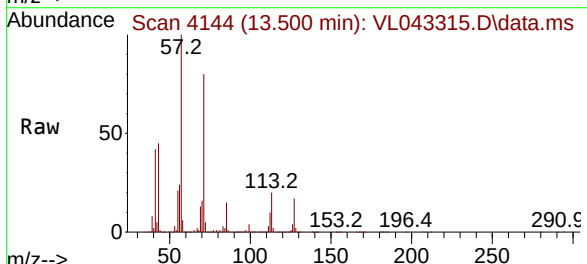
Instrument :
MSVOA_L
ClientSampleId :
13-IA-1

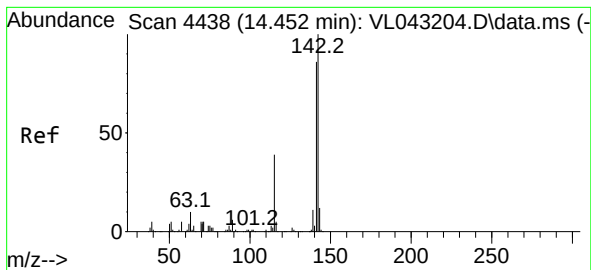
Tgt Ion:146 Resp: 947
Ion Ratio Lower Upper
146 100
111 72.0 22.8 68.3#
148 69.5 31.8 95.4



#79
Naphthalene
Concen: 1.488 ppbv
RT: 13.500 min Scan# 4144
Delta R.T. -0.007 min
Lab File: VL043315.D
Acq: 08 Dec 2025 16:25

Tgt Ion:128 Resp: 59509
Ion Ratio Lower Upper
128 100
127 975.9 9.9 14.9#
129 3.9 8.4 12.6#





#80

Naphthalene, 2-methyl-

Concen: 0.179 ppbv

RT: 14.452 min Scan# 44

Delta R.T. -0.000 min

Lab File: VL043315.D

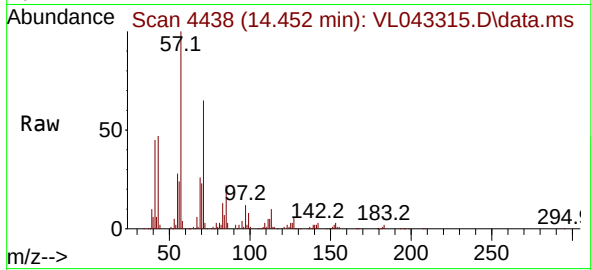
Acq: 08 Dec 2025 16:25

Instrument :

MSVOA_L

ClientSampleId :

13-IA-1



Tgt Ion:	142	Resp:	1880
Ion	Ratio	Lower	Upper
142	100		
141	382.4	67.1	100.7#
115	45.4	31.9	47.9

