

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL022725\
 Data File : VL042070.D
 Acq On : 27 Feb 2025 12:57
 Operator : SY/MD
 Sample : Q1450-02DUP
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DUP

Quant Time: Feb 28 00:25:32 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL022525AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Wed Feb 26 01:08:36 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Bromochloromethane	2.810	49	170602	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.991	114	392374	10.000	ppbv	0.01
55) Chlorobenzene-d5	8.911	117	332650	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.403	95	262162	10.244	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	= 102.400%	
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.505	85	7619	0.429	ppbv #	79
3) Chlorodifluoromethane	1.486	51	12235	0.493	ppbv #	88
4) Chloromethane	1.541	50	2139	0.326	ppbv #	76
6) Bromomethane	1.680	94	103	0.035	ppbv #	80
7) Chloroethane	1.716	64	95	0.038	ppbv #	39
9) Propene	1.570	41	5388	0.533	ppbv	84
10) Heptane	5.023	43	14697	0.467	ppbv	99
11) Trichlorofluoromethane	1.890	101	4143	0.233	ppbv	90
12) 1,1,2-Trichlorotrifluo...	2.152	101	1141	0.080	ppbv	92
13) Ethanol	1.735	45	7066	11.019	ppbv #	33
15) Acetone	1.848	43	106666	7.080	ppbv	99
16) 1,3-Butadiene	1.609	39	1446	0.206	ppbv #	63
17) tert-Butyl alcohol	2.059	59	1621	0.086	ppbv #	55
19) Isopropyl Alcohol	1.900	45	7506	0.867	ppbv #	1
20) Methylene Chloride	2.078	84	2706	0.475	ppbv	99
23) Vinyl Acetate	2.473	43	2833	0.267	ppbv #	43
26) Hexane	2.848	57	5295	0.217	ppbv #	45
34) 2-Butanone	2.583	43	11019	0.360	ppbv	93
35) Carbon Tetrachloride	3.790	117	1007	0.037	ppbv #	13
36) Benzene	3.683	78	4684	0.114	ppbv	95
39) 1,2-Dichloropropane	3.988	63	105418	6.762	ppbv #	24
41) Tetrahydrofuran	3.091	42	584	0.032	ppbv #	38
52) Tetrachloroethene	8.267	164	845	0.060	ppbv #	53
53) Toluene	6.975	91	139501	3.039	ppbv	98
58) Ethyl Benzene	9.386	91	10801	0.176	ppbv	95
59) m/p-Xylene	9.558	91	22859	0.469	ppbv #	100
60) o-Xylene	9.992	91	13620	0.278	ppbv	99
61) Styrene	9.895	104	3096	0.134	ppbv #	69
72) 4-Ethyltoluene	11.147	105	3649	0.061	ppbv #	69
73) 1,3,5-Trimethylbenzene	11.228	105	2739	0.053	ppbv	100
74) 1,2,4-Trimethylbenzene	11.561	105	10119	0.173	ppbv #	61
79) Naphthalene	13.536	128	4850	0.121	ppbv	97
80) Naphthalene,2-methyl-	14.484	142	467	0.043	ppbv #	43

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

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Misc : 400mL/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
IA1DUP

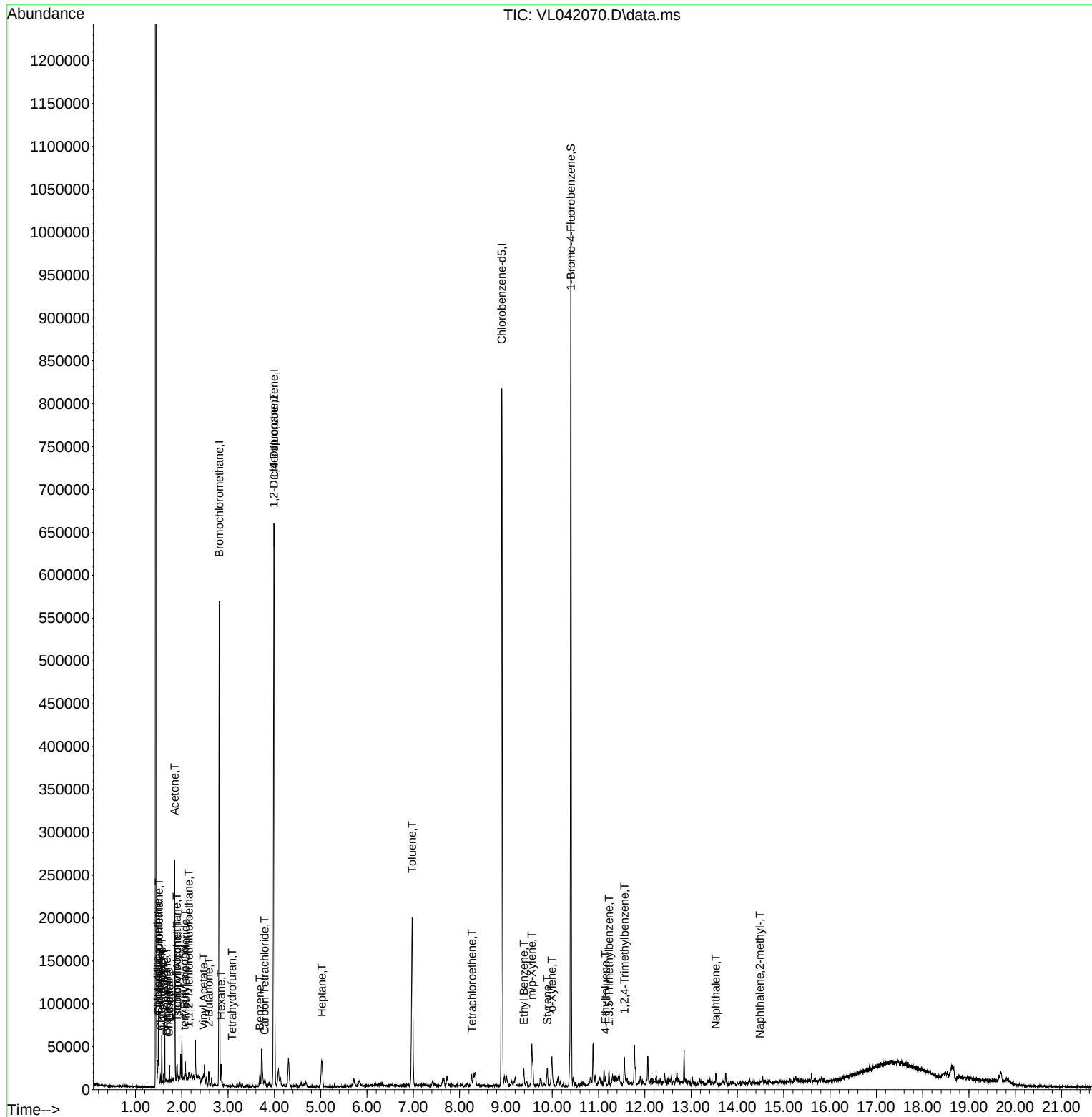
Quant Time: Feb 28 00:25:32 2025

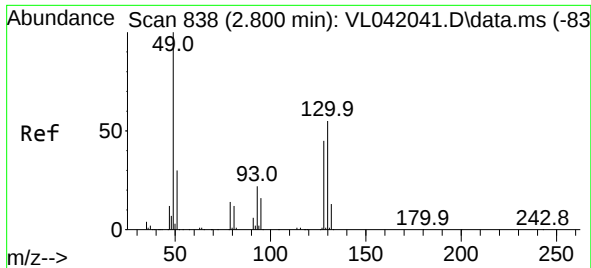
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL022525AIR.M

Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022

QLast Update : Wed Feb 26 01:08:36 2025

Response via : Initial Calibration

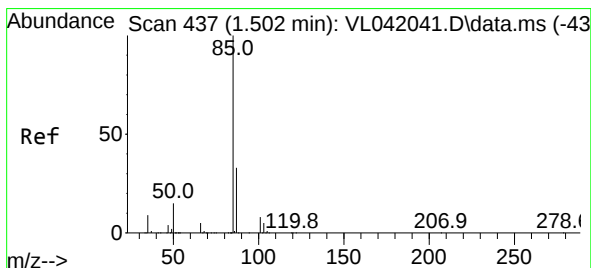
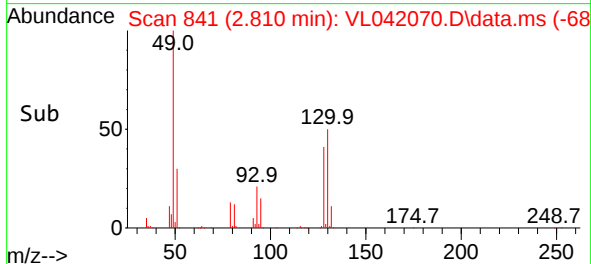
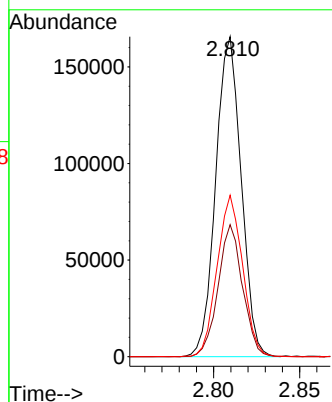
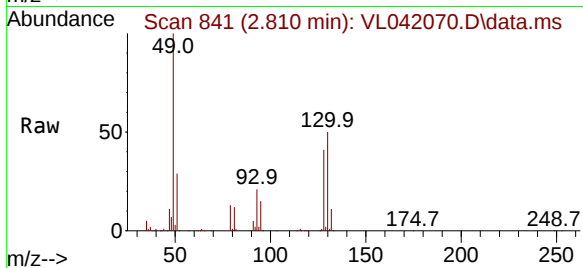




#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 2.810 min Scan# 841
 Delta R.T. 0.010 min
 Lab File: VL042070.D
 Acq: 27 Feb 2025 12:57

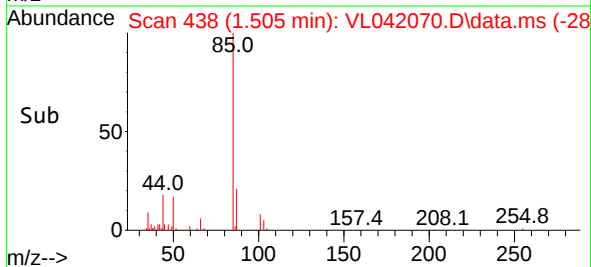
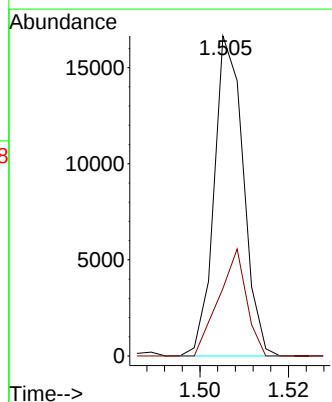
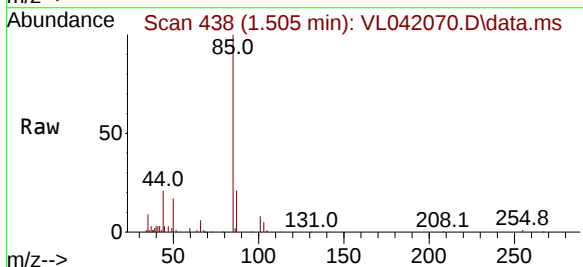
Instrument :
 MSVOA_1
 ClientSampleId :
 IA1DUP

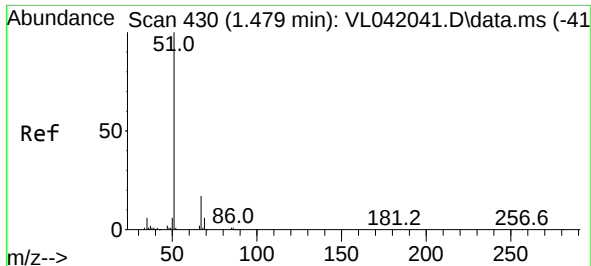
Tgt Ion: 49 Resp: 170602
 Ion Ratio Lower Upper
 49 100
 128 39.6 21.6 64.8
 130 50.5 27.8 83.4



#2
 Dichlorodifluoromethane
 Concen: 0.429 ppbv
 RT: 1.505 min Scan# 438
 Delta R.T. 0.003 min
 Lab File: VL042070.D
 Acq: 27 Feb 2025 12:57

Tgt Ion: 85 Resp: 7619
 Ion Ratio Lower Upper
 85 100
 87 21.1 26.4 39.6#

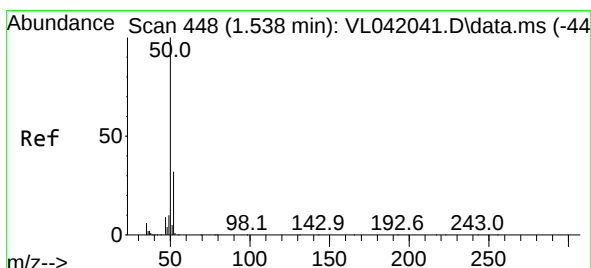
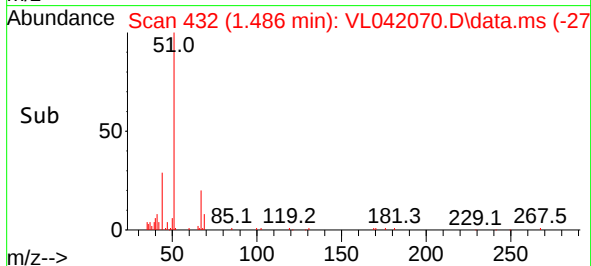
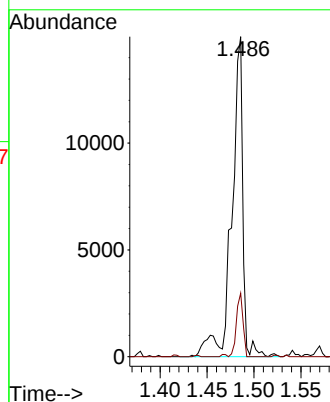
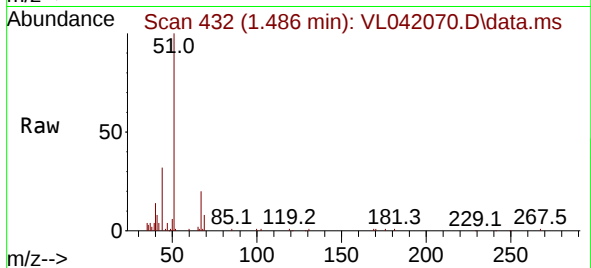




#3
Chlorodifluoromethane
Concen: 0.493 ppbv
RT: 1.486 min Scan# 41
Delta R.T. 0.006 min
Lab File: VL042070.D
Acq: 27 Feb 2025 12:57

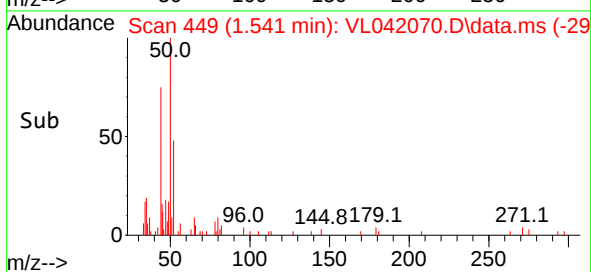
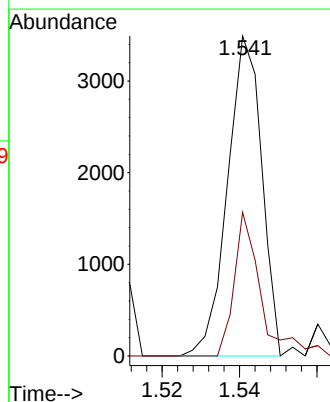
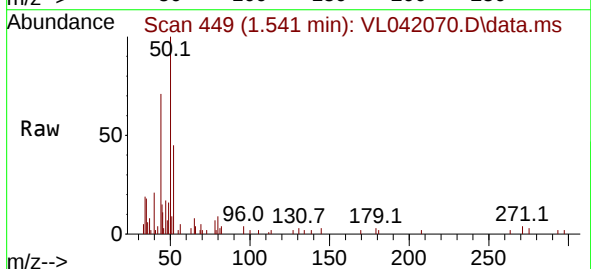
Instrument :
MSVOA_L
ClientSampleId :
IA1DUP

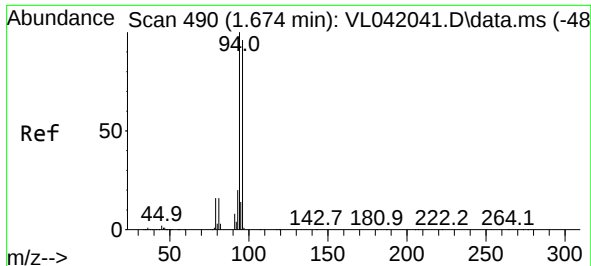
Tgt Ion: 51 Resp: 12235
Ion Ratio Lower Upper
51 100
67 12.1 13.7 20.5#



#4
Chloromethane
Concen: 0.326 ppbv
RT: 1.541 min Scan# 449
Delta R.T. 0.003 min
Lab File: VL042070.D
Acq: 27 Feb 2025 12:57

Tgt Ion: 50 Resp: 2139
Ion Ratio Lower Upper
50 100
52 44.9 25.4 38.0#

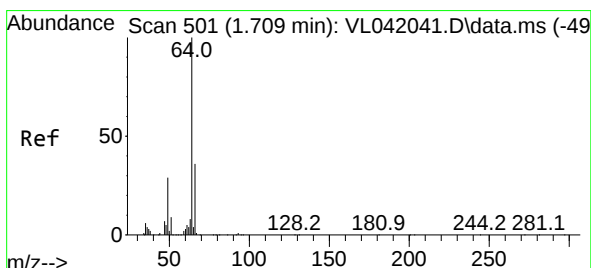
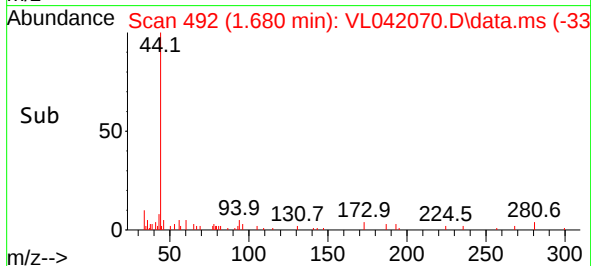
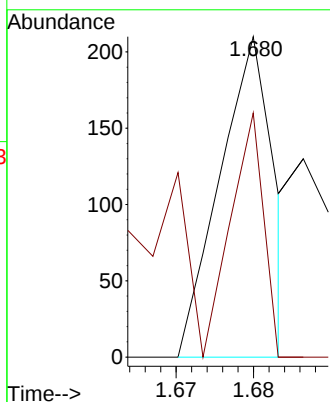
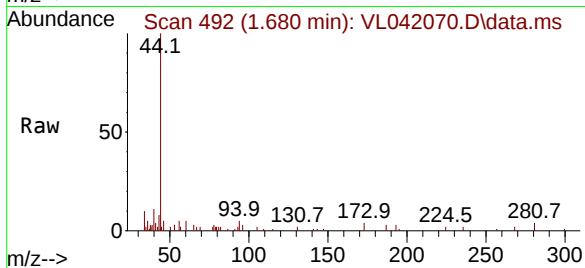




#6
Bromomethane
Concen: 0.035 ppbv
RT: 1.680 min Scan# 491
Delta R.T. 0.006 min
Lab File: VL042070.D
Acq: 27 Feb 2025 12:57

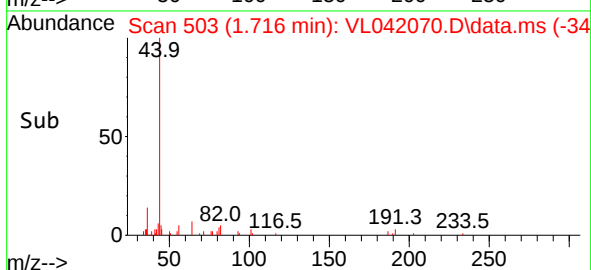
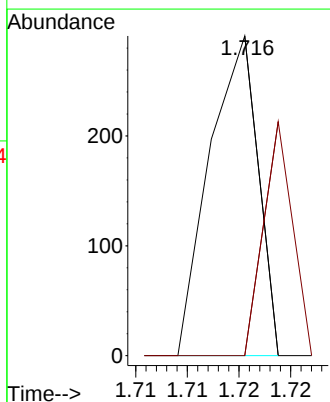
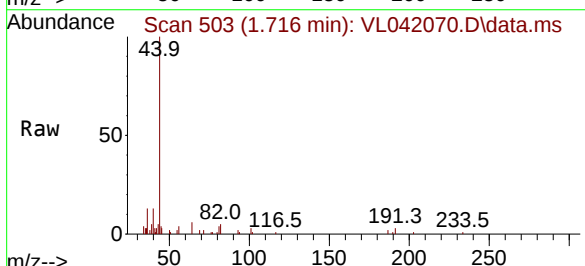
Instrument :
MSVOA_L
ClientSampleId :
IA1DUP

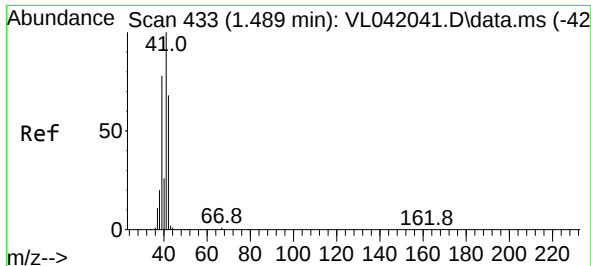
Tgt Ion: 94 Resp: 103
Ion Ratio Lower Upper
94 100
96 76.2 76.5 114.7#



#7
Chloroethane
Concen: 0.038 ppbv
RT: 1.716 min Scan# 503
Delta R.T. 0.006 min
Lab File: VL042070.D
Acq: 27 Feb 2025 12:57

Tgt Ion: 64 Resp: 95
Ion Ratio Lower Upper
64 100
66 0.0 28.4 42.6#





#9

Propene

Concen: 0.533 ppbv

RT: 1.570 min Scan# 41

Delta R.T. 0.081 min

Lab File: VL042070.D

Acq: 27 Feb 2025 12:57

Instrument :

MSVOA_L

ClientSampleId :

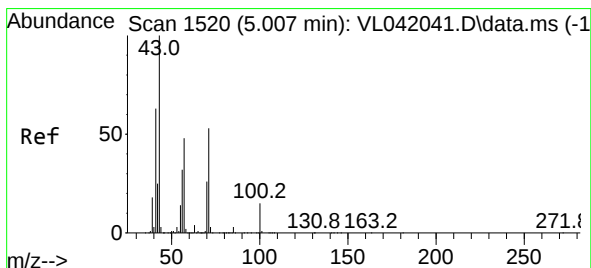
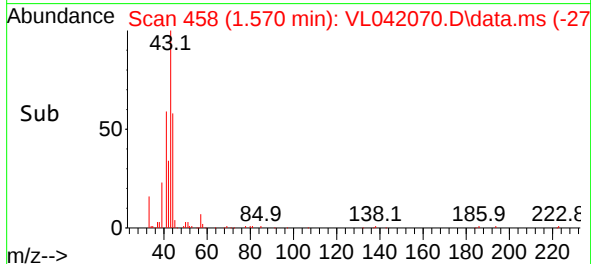
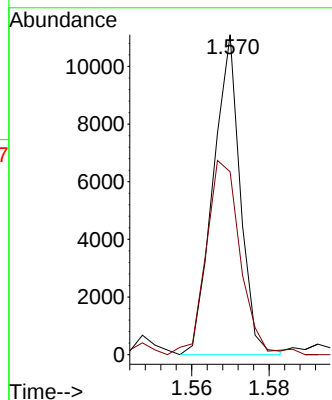
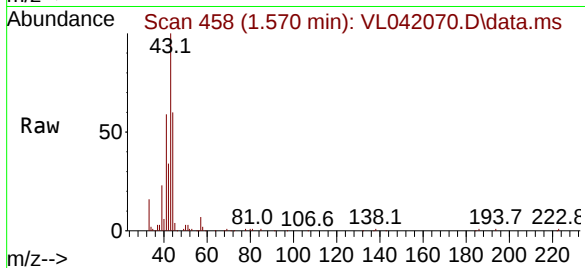
IA1DUP

Tgt Ion: 41 Resp: 5388

Ion Ratio Lower Upper

41 100

42 82.6 55.8 83.6



#10

Heptane

Concen: 0.467 ppbv

RT: 5.023 min Scan# 1525

Delta R.T. 0.016 min

Lab File: VL042070.D

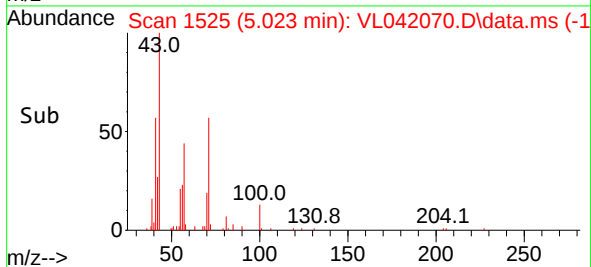
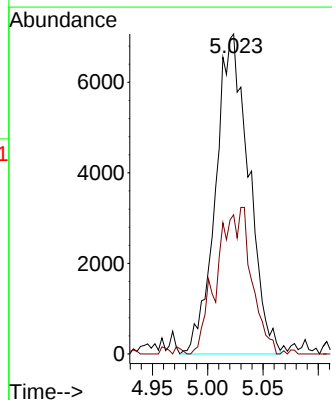
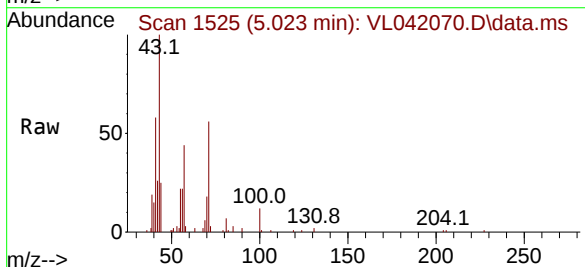
Acq: 27 Feb 2025 12:57

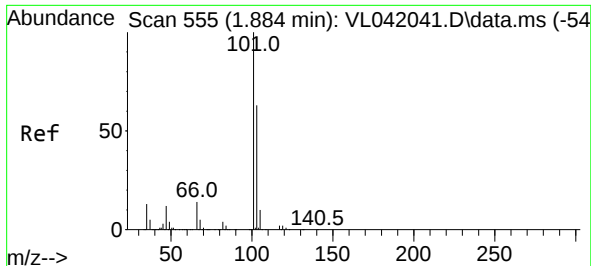
Tgt Ion: 43 Resp: 14697

Ion Ratio Lower Upper

43 100

57 48.5 39.4 59.0

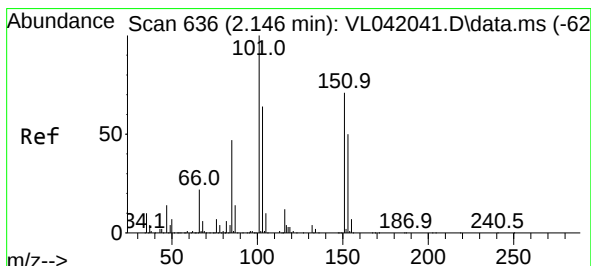
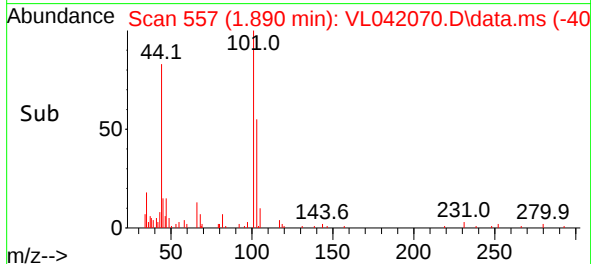
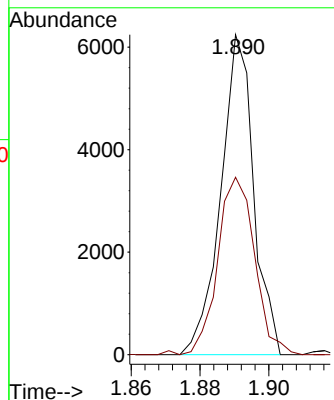
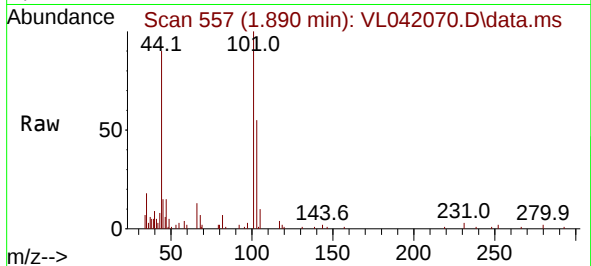




#11
 Trichlorofluoromethane
 Concen: 0.233 ppbv
 RT: 1.890 min Scan# 511
 Delta R.T. 0.006 min
 Lab File: VL042070.D
 Acq: 27 Feb 2025 12:57

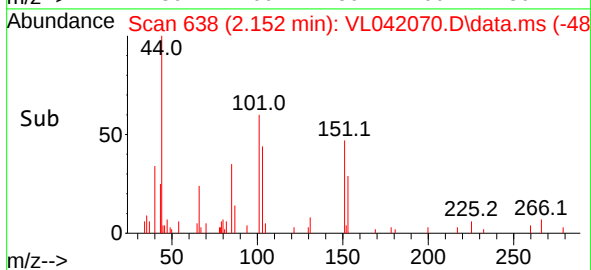
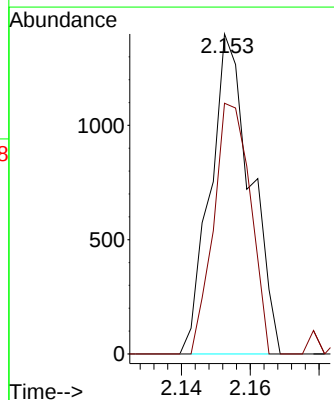
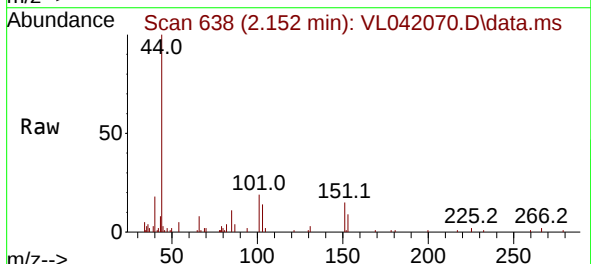
Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DUP

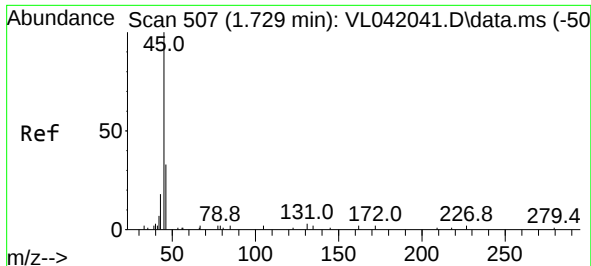
Tgt Ion:101 Resp: 4143
 Ion Ratio Lower Upper
 101 100
 103 55.5 50.6 75.8



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.080 ppbv
 RT: 2.152 min Scan# 638
 Delta R.T. 0.006 min
 Lab File: VL042070.D
 Acq: 27 Feb 2025 12:57

Tgt Ion:101 Resp: 1141
 Ion Ratio Lower Upper
 101 100
 151 71.4 62.6 94.0

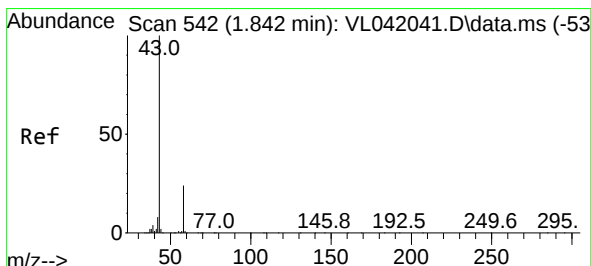
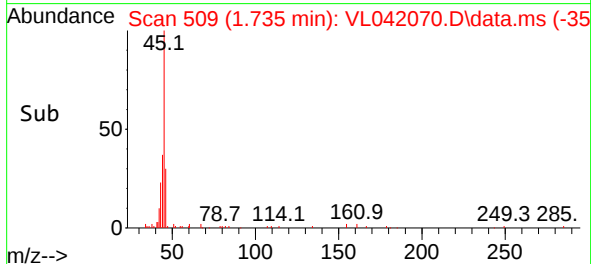
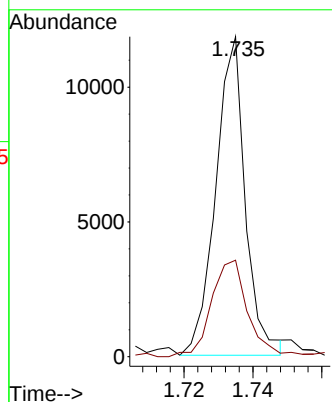
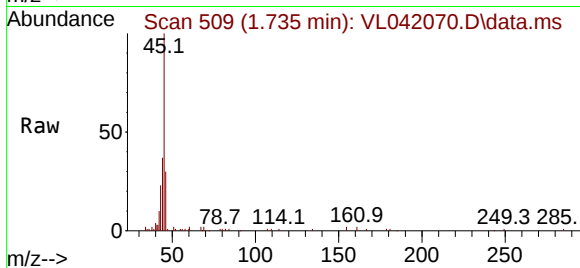




#13
Ethanol
Concen: 11.019 ppbv
RT: 1.735 min Scan# 507
Delta R.T. 0.006 min
Lab File: VL042070.D
Acq: 27 Feb 2025 12:57

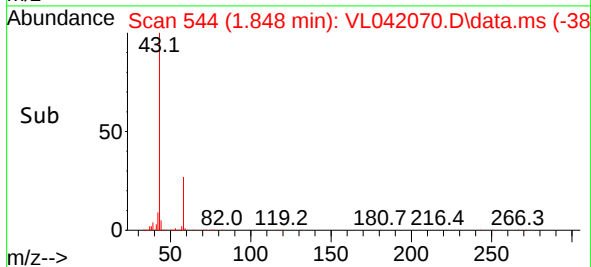
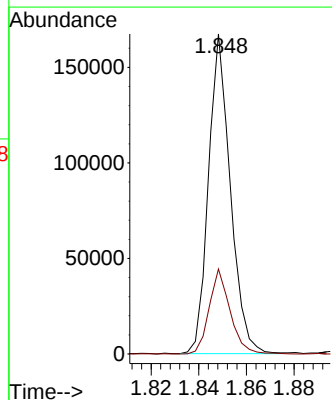
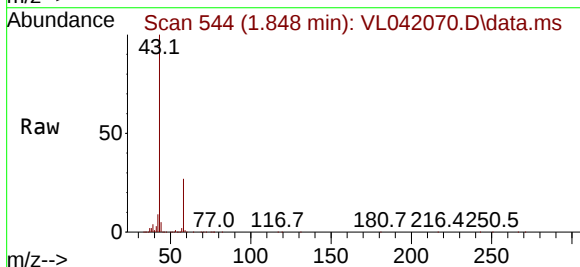
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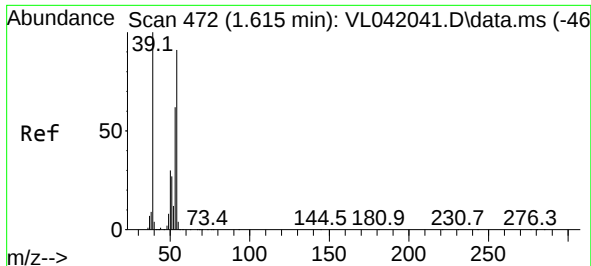
Tgt Ion: 45 Resp: 7066
Ion Ratio Lower Upper
45 100
46 0.0 17.1 68.3#



#15
Acetone
Concen: 7.080 ppbv
RT: 1.848 min Scan# 544
Delta R.T. 0.006 min
Lab File: VL042070.D
Acq: 27 Feb 2025 12:57

Tgt Ion: 43 Resp: 106666
Ion Ratio Lower Upper
43 100
58 25.5 20.7 31.1

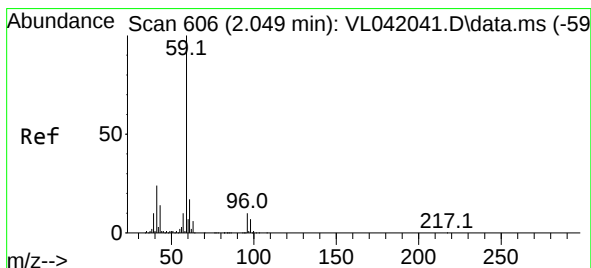
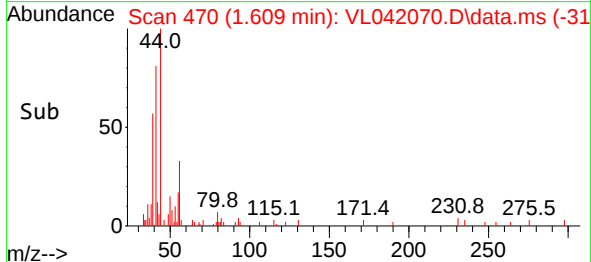
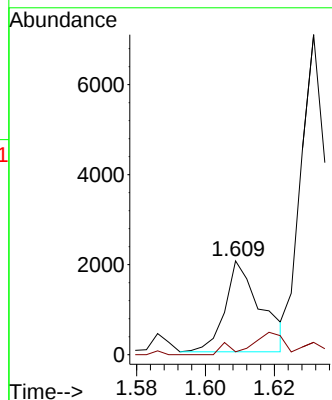
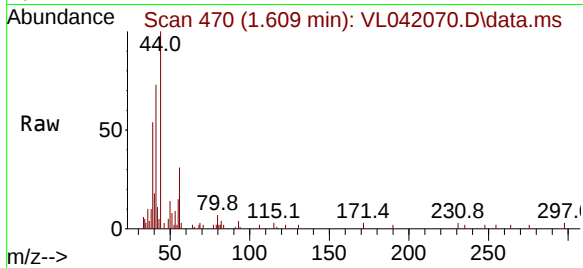




#16
1,3-Butadiene
Concen: 0.206 ppbv
RT: 1.609 min Scan# 41
Delta R.T. -0.007 min
Lab File: VL042070.D
Acq: 27 Feb 2025 12:57

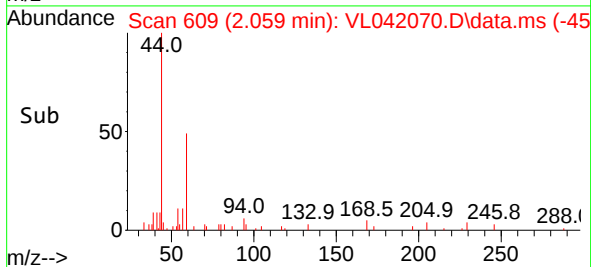
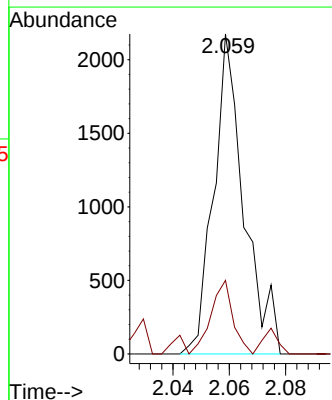
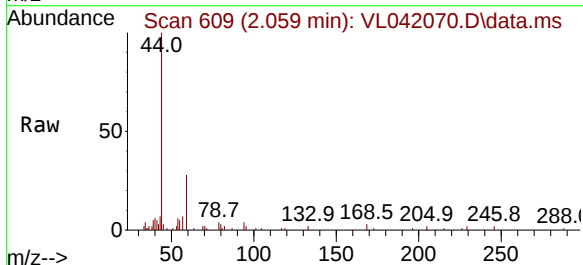
Instrument :
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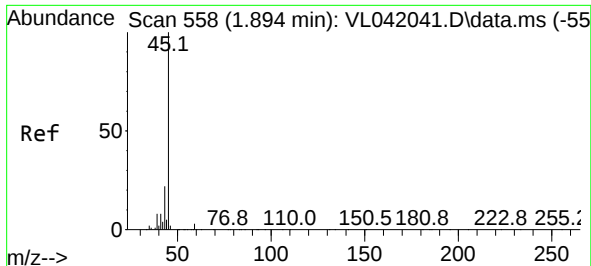
Tgt Ion: 39 Resp: 1446
Ion Ratio Lower Upper
39 100
54 42.8 59.6 89.4#



#17
tert-Butyl alcohol
Concen: 0.086 ppbv
RT: 2.059 min Scan# 609
Delta R.T. 0.010 min
Lab File: VL042070.D
Acq: 27 Feb 2025 12:57

Tgt Ion: 59 Resp: 1621
Ion Ratio Lower Upper
59 100
57 29.1 9.3 13.9#

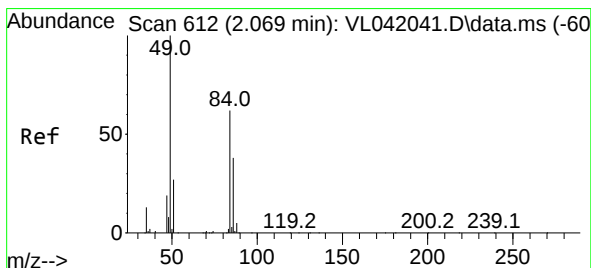
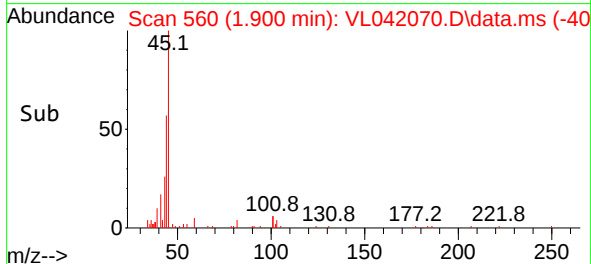
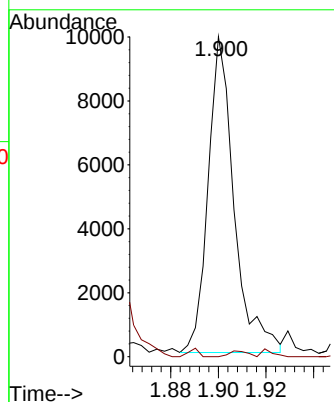
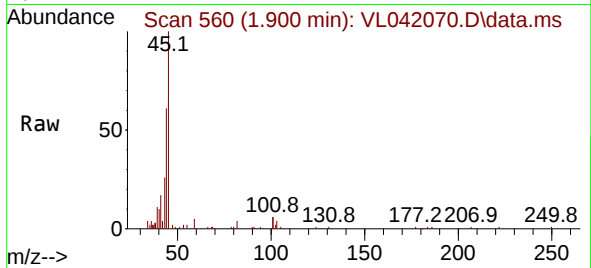




#19
Isopropyl Alcohol
Concen: 0.867 ppbv
RT: 1.900 min Scan# 51
Delta R.T. 0.006 min
Lab File: VL042070.D
Acq: 27 Feb 2025 12:57

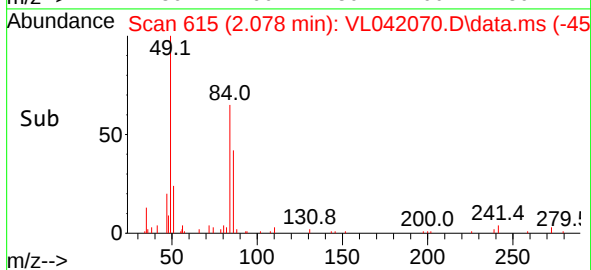
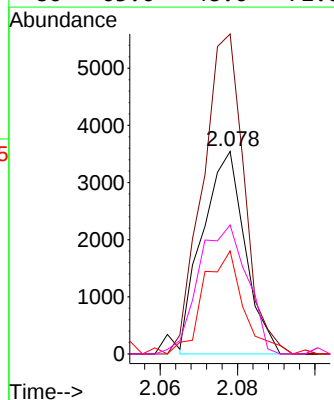
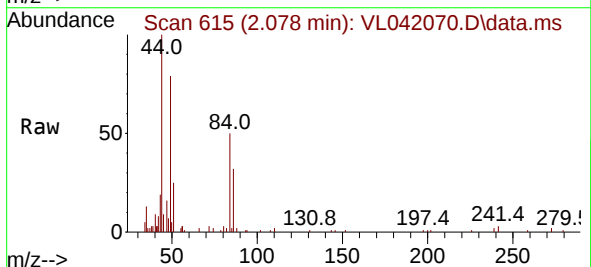
Instrument :
MSVOA_L
ClientSampleId :
IA1DUP

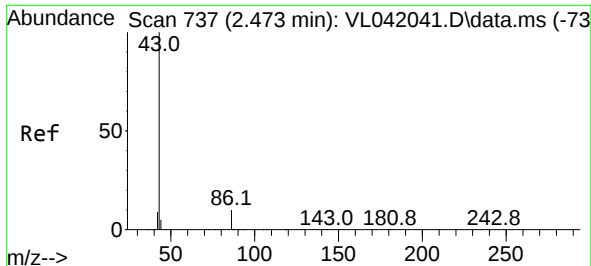
Tgt Ion: 45 Resp: 7506
Ion Ratio Lower Upper
45 100
58 363.0 35.3 52.9#



#20
Methylene Chloride
Concen: 0.475 ppbv
RT: 2.078 min Scan# 615
Delta R.T. 0.010 min
Lab File: VL042070.D
Acq: 27 Feb 2025 12:57

Tgt Ion: 84 Resp: 2706
Ion Ratio Lower Upper
84 100
49 163.1 130.0 195.0
51 46.7 37.4 56.0
86 63.6 48.6 72.8





#23

Vinyl Acetate

Concen: 0.267 ppbv

RT: 2.473 min Scan# 71

Delta R.T. -0.000 min

Lab File: VL042070.D

Acq: 27 Feb 2025 12:57

Instrument :

MSVOA_L

ClientSampleId :

IA1DUP

Tgt Ion: 43 Resp: 2833

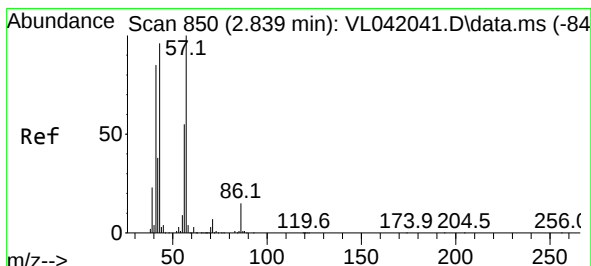
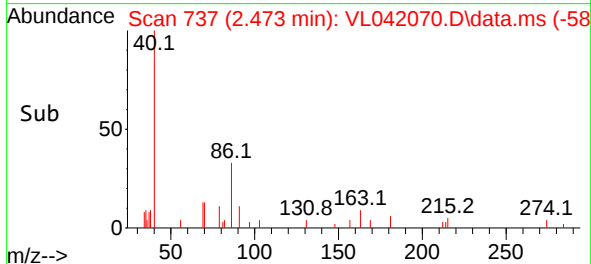
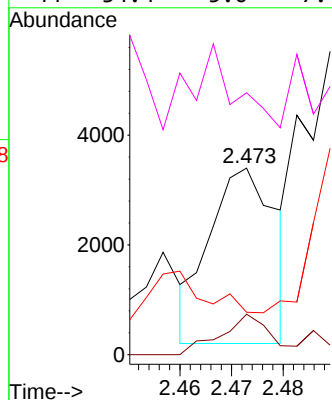
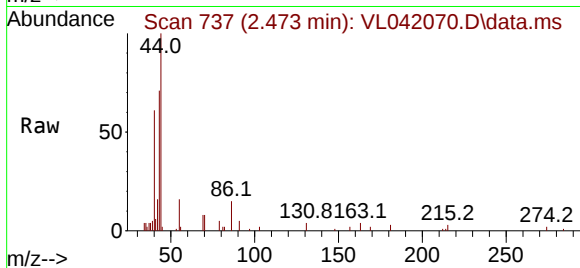
Ion Ratio Lower Upper

43 100

86 34.8 7.0 10.4#

42 0.0 7.6 11.4#

44 34.4 5.0 7.4#



#26

Hexane

Concen: 0.217 ppbv

RT: 2.848 min Scan# 853

Delta R.T. 0.010 min

Lab File: VL042070.D

Acq: 27 Feb 2025 12:57

Tgt Ion: 57 Resp: 5295

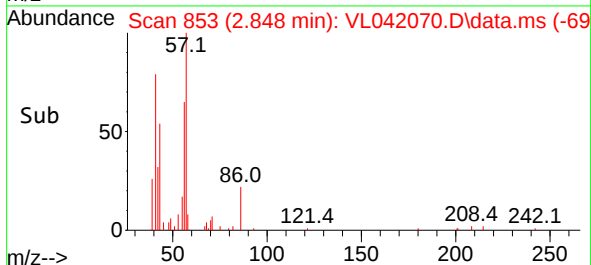
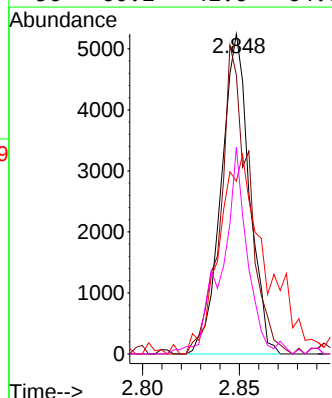
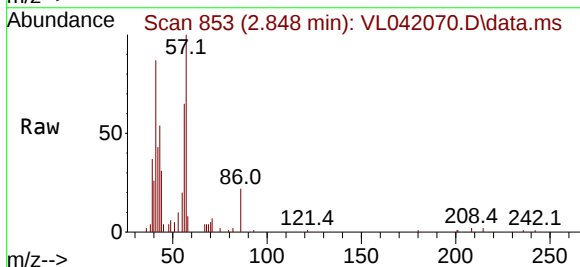
Ion Ratio Lower Upper

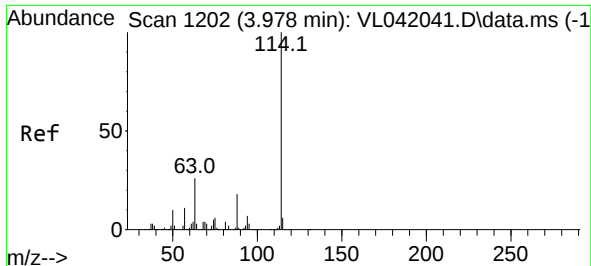
57 100

41 98.4 70.6 106.0

43 109.7 199.4 299.0#

56 60.2 42.6 64.0





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.991 min Scan# 11

Delta R.T. 0.013 min

Lab File: VL042070.D

Acq: 27 Feb 2025 12:57

Instrument :

MSVOA_L

ClientSampleId :

IA1DUP

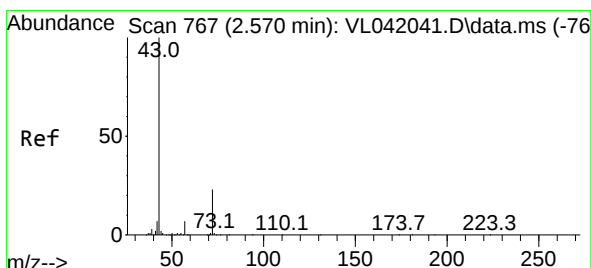
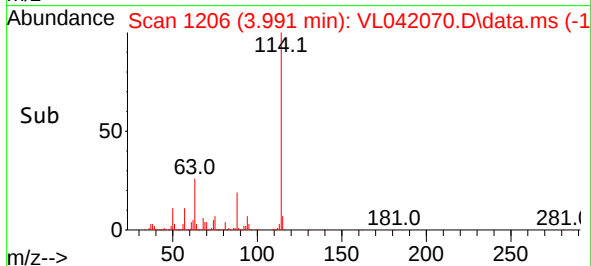
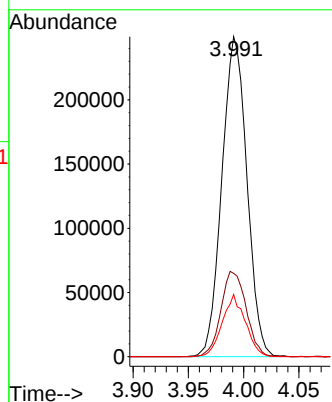
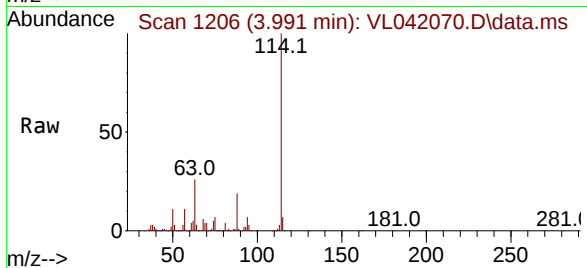
Tgt Ion:114 Resp: 392374

Ion Ratio Lower Upper

114 100

63 26.9 20.1 30.1

88 17.8 14.3 21.5



#34

2-Butanone

Concen: 0.360 ppbv

RT: 2.583 min Scan# 771

Delta R.T. 0.013 min

Lab File: VL042070.D

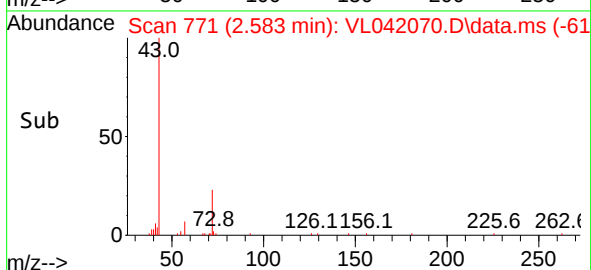
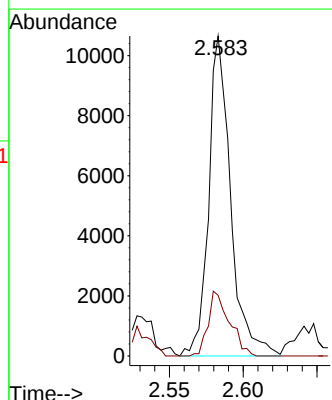
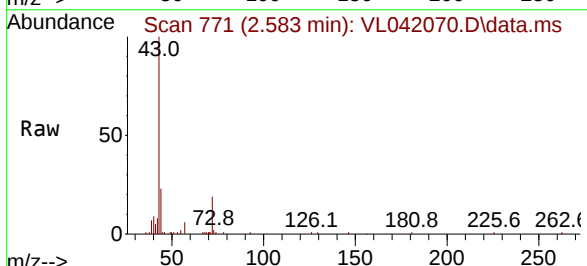
Acq: 27 Feb 2025 12:57

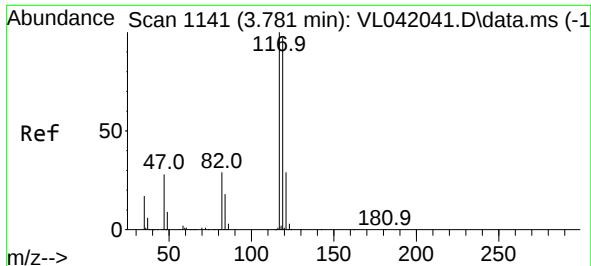
Tgt Ion: 43 Resp: 11019

Ion Ratio Lower Upper

43 100

72 19.7 18.5 27.7

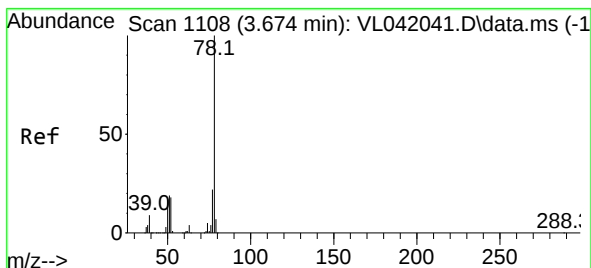
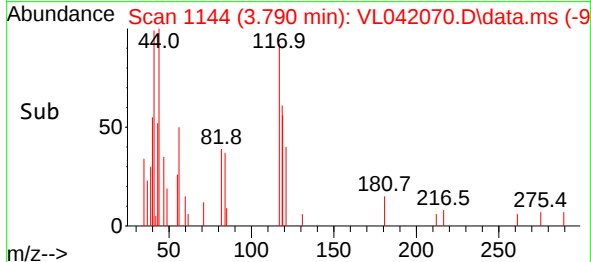
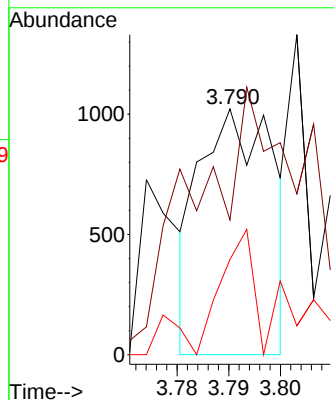
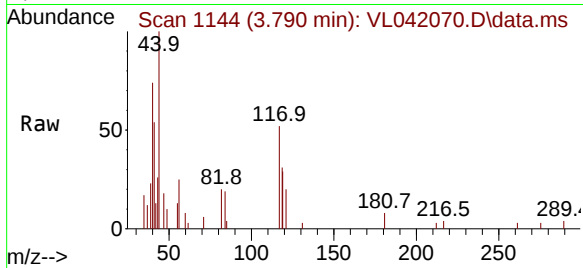




#35
Carbon Tetrachloride
Concen: 0.037 ppbv
RT: 3.790 min Scan# 1111
Delta R.T. 0.009 min
Lab File: VL042070.D
Acq: 27 Feb 2025 12:57

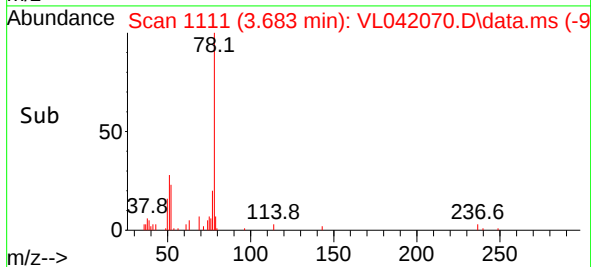
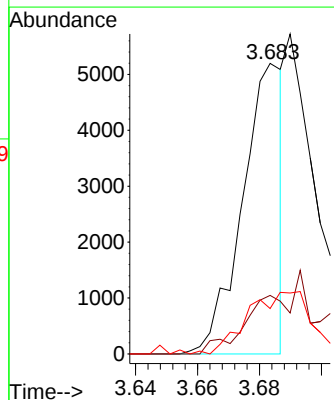
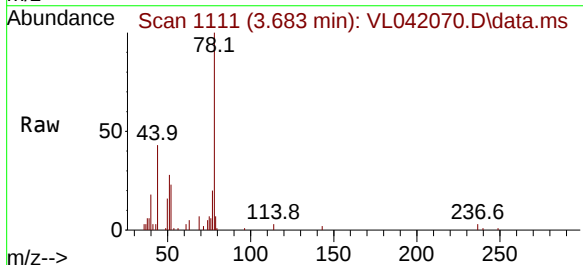
Instrument :
MSVOA_L
ClientSampleId :
IA1DUP

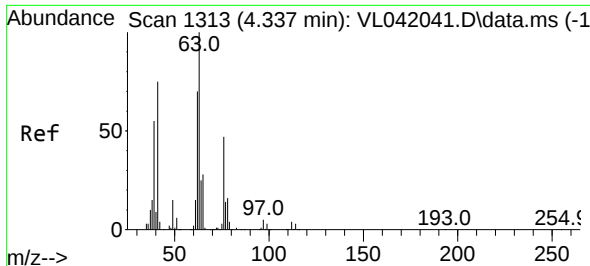
Tgt Ion:117 Resp: 1007
Ion Ratio Lower Upper
117 100
119 0.0 77.8 116.8#
121 55.8 23.4 35.0#



#36
Benzene
Concen: 0.114 ppbv
RT: 3.683 min Scan# 1111
Delta R.T. 0.010 min
Lab File: VL042070.D
Acq: 27 Feb 2025 12:57

Tgt Ion: 78 Resp: 4684
Ion Ratio Lower Upper
78 100
77 20.1 17.7 26.5
50 14.3 13.9 20.9





#39

1,2-Dichloropropane

Concen: 6.762 ppbv

RT: 3.988 min Scan# 11

Delta R.T. -0.350 min

Lab File: VL042070.D

Acq: 27 Feb 2025 12:57

Instrument :

MSVOA_L

ClientSampleId :

IA1DUP

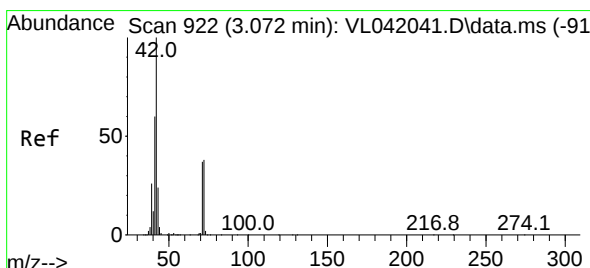
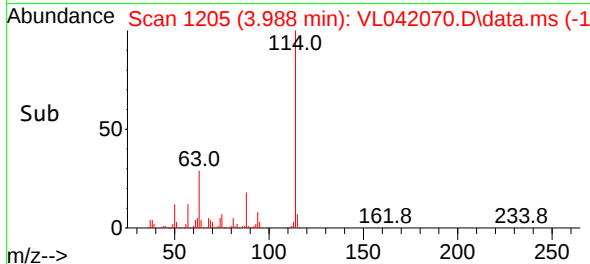
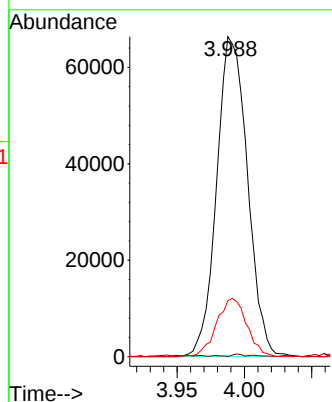
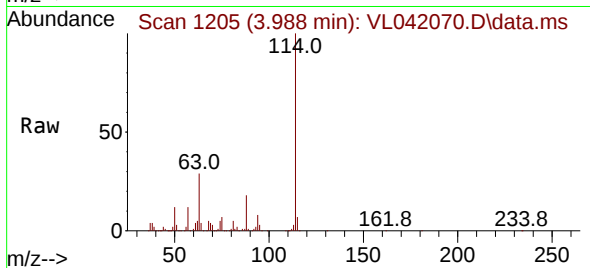
Tgt Ion: 63 Resp: 105418

Ion Ratio Lower Upper

63 100

41 0.0 60.1 90.1#

62 17.5 55.8 83.8#



#41

Tetrahydrofuran

Concen: 0.032 ppbv

RT: 3.091 min Scan# 928

Delta R.T. 0.019 min

Lab File: VL042070.D

Acq: 27 Feb 2025 12:57

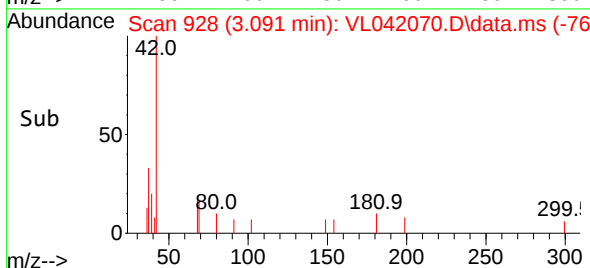
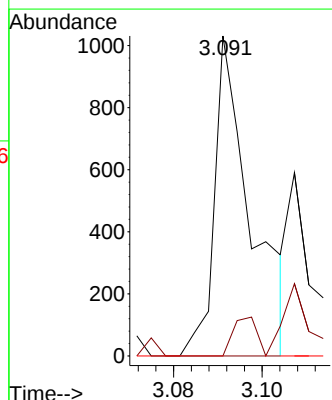
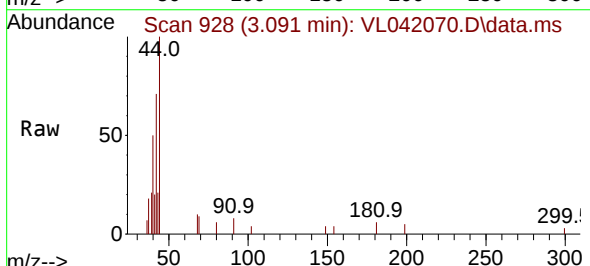
Tgt Ion: 42 Resp: 584

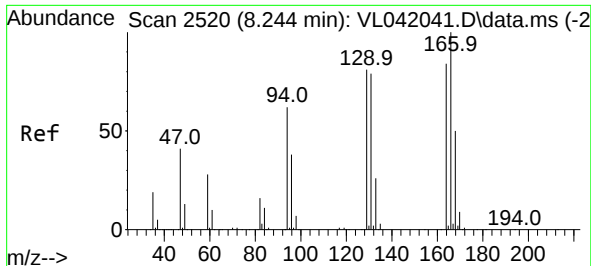
Ion Ratio Lower Upper

42 100

72 0.0 30.2 45.2#

71 0.0 28.2 42.4#

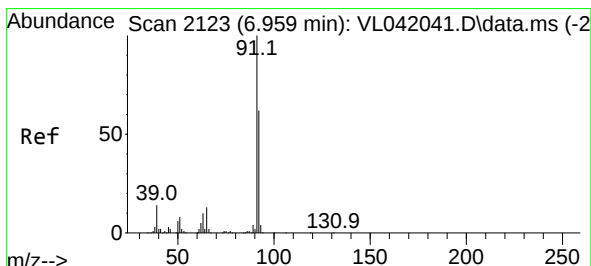
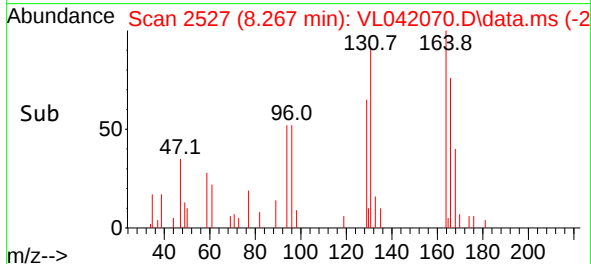
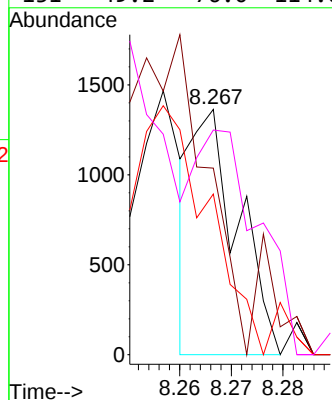
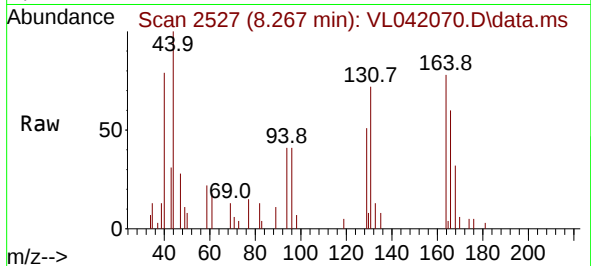




#52
Tetrachloroethene
Concen: 0.060 ppbv
RT: 8.267 min Scan# 2128
Delta R.T. 0.022 min
Lab File: VL042070.D
Acq: 27 Feb 2025 12:57

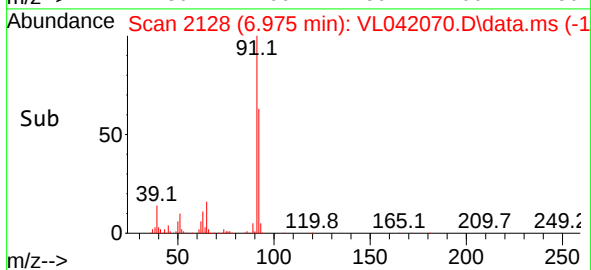
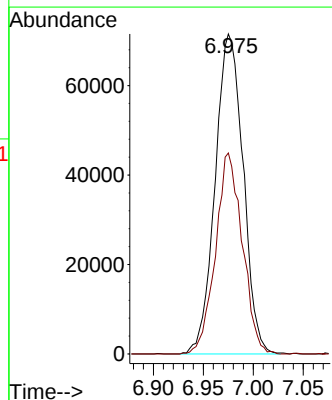
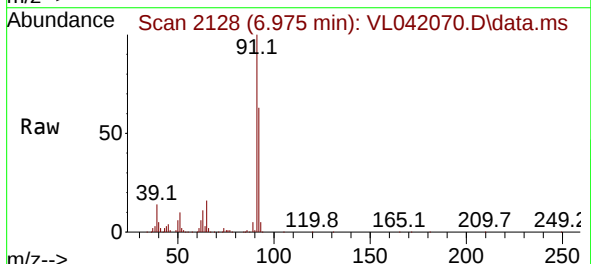
Instrument :
MSVOA_L
ClientSampleId :
IA1DUP

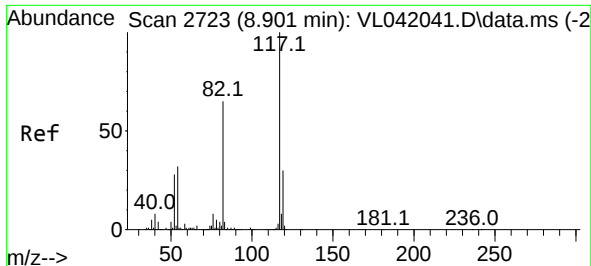
Tgt Ion:164 Resp: 845
Ion Ratio Lower Upper
164 100
166 64.7 95.7 143.5#
129 54.3 77.1 115.7#
131 49.2 76.0 114.0#



#53
Toluene
Concen: 3.039 ppbv
RT: 6.975 min Scan# 2128
Delta R.T. 0.016 min
Lab File: VL042070.D
Acq: 27 Feb 2025 12:57

Tgt Ion: 91 Resp: 139501
Ion Ratio Lower Upper
91 100
92 60.0 49.0 73.6

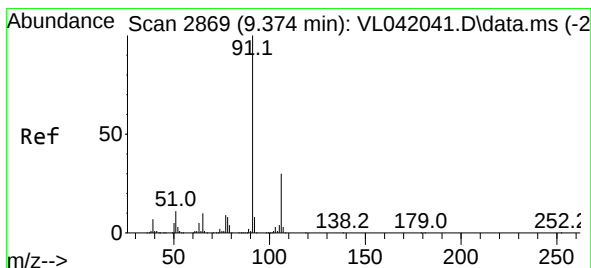
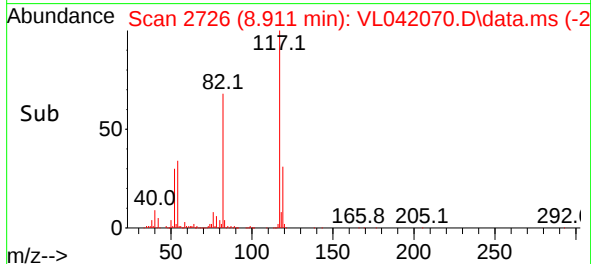
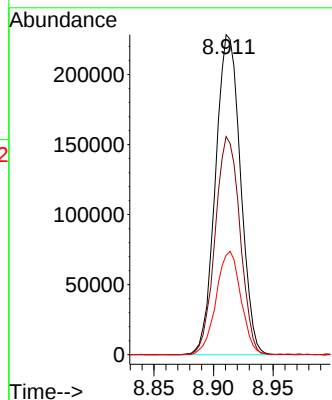
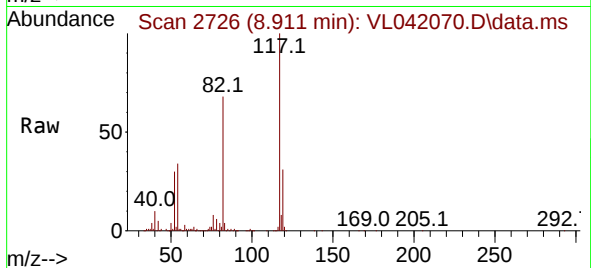




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.911 min Scan# 21
Delta R.T. 0.010 min
Lab File: VL042070.D
Acq: 27 Feb 2025 12:57

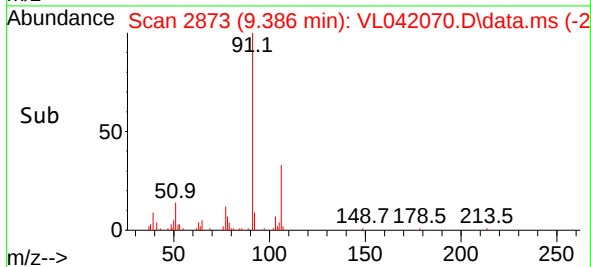
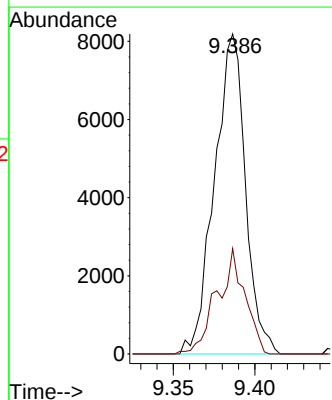
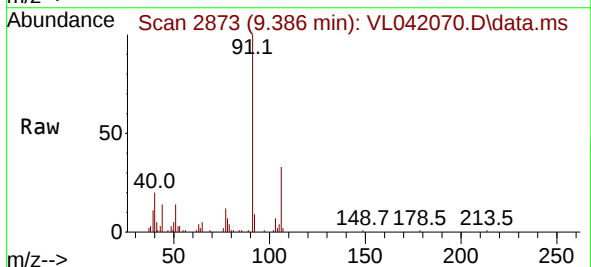
Instrument :
MSVOA_L
ClientSampleId :
IA1DUP

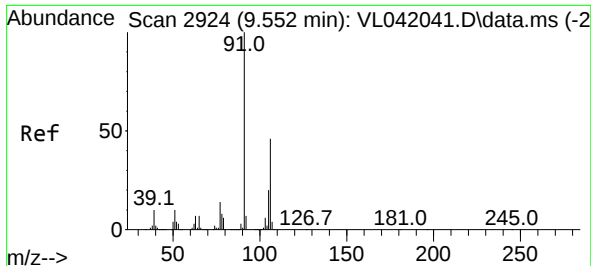
Tgt Ion:117 Resp: 332650
Ion Ratio Lower Upper
117 100
82 67.8 55.0 82.6
119 32.2 25.9 38.9



#58
Ethyl Benzene
Concen: 0.176 ppbv
RT: 9.386 min Scan# 2873
Delta R.T. 0.013 min
Lab File: VL042070.D
Acq: 27 Feb 2025 12:57

Tgt Ion: 91 Resp: 10801
Ion Ratio Lower Upper
91 100
106 32.9 24.2 36.2





#59

m/p-Xylene

Concen: 0.469 ppbv

RT: 9.558 min Scan# 2924

Delta R.T. 0.006 min

Lab File: VL042070.D

Acq: 27 Feb 2025 12:57

Instrument :

MSVOA_L

ClientSampleId :

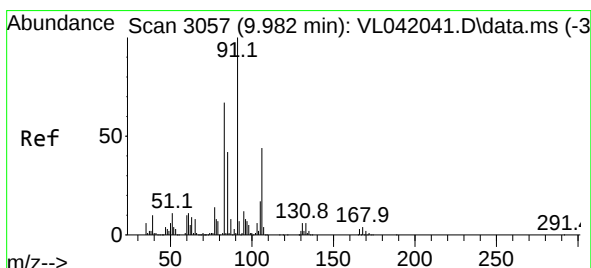
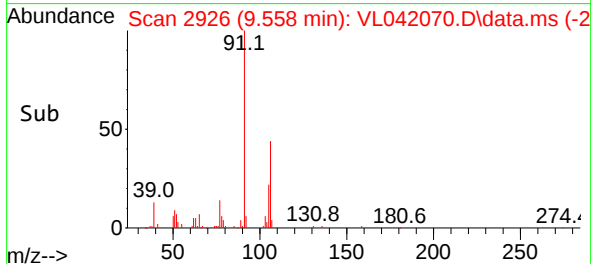
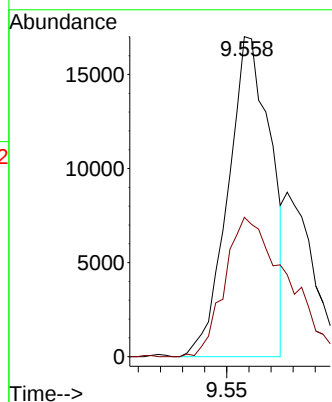
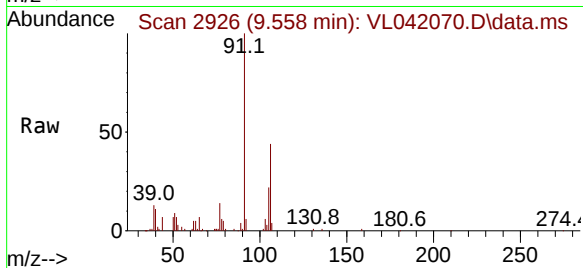
IA1DUP

Tgt Ion: 91 Resp: 22859

Ion Ratio Lower Upper

91 100

106 63.3 0.0 0.0#



#60

o-Xylene

Concen: 0.278 ppbv

RT: 9.992 min Scan# 3060

Delta R.T. 0.009 min

Lab File: VL042070.D

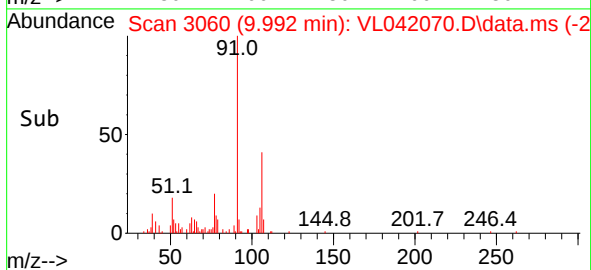
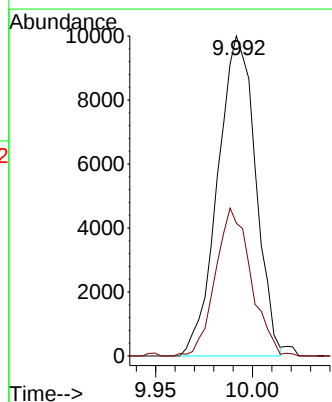
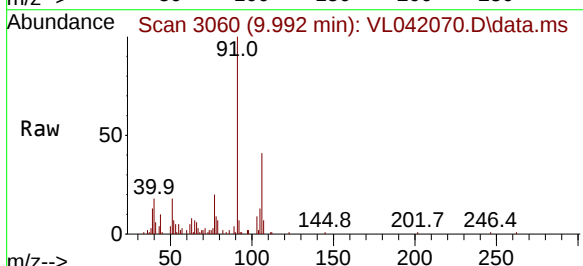
Acq: 27 Feb 2025 12:57

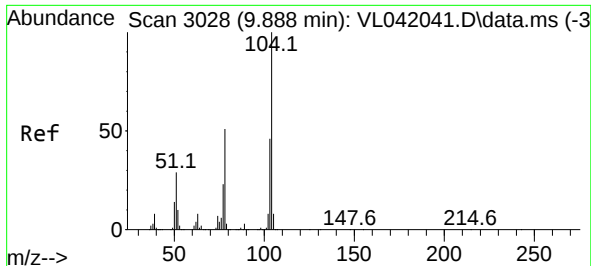
Tgt Ion: 91 Resp: 13620

Ion Ratio Lower Upper

91 100

106 43.7 22.3 66.8

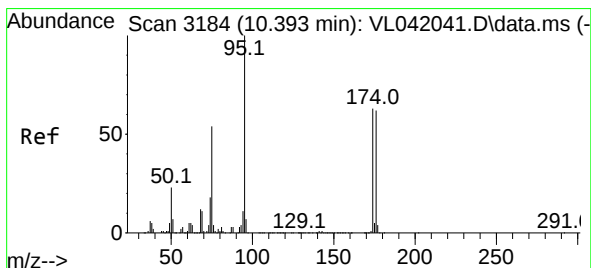
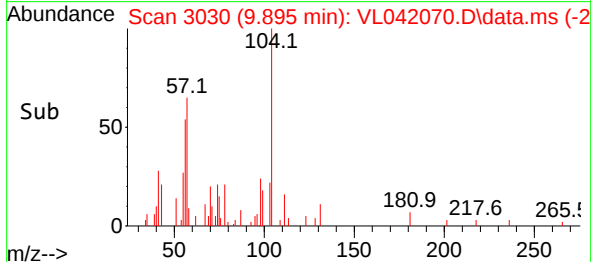
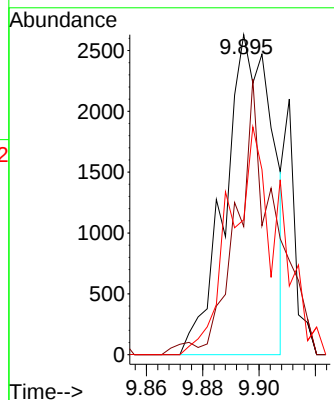
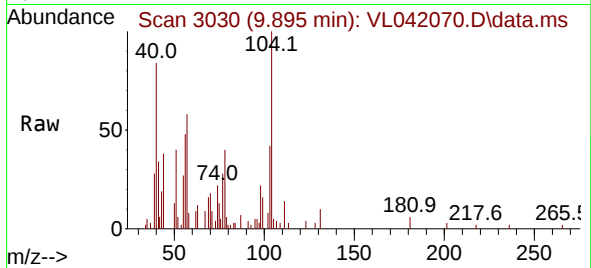




#61
Styrene
Concen: 0.134 ppbv
RT: 9.895 min Scan# 3028
Delta R.T. 0.006 min
Lab File: VL042070.D
Acq: 27 Feb 2025 12:57

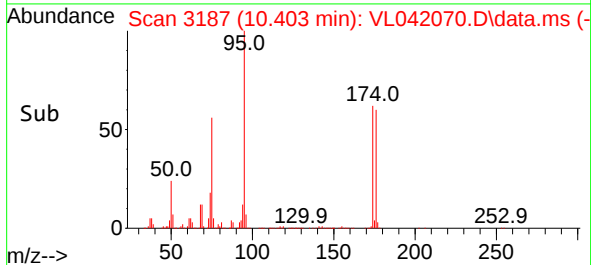
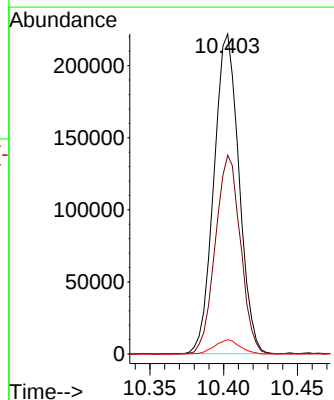
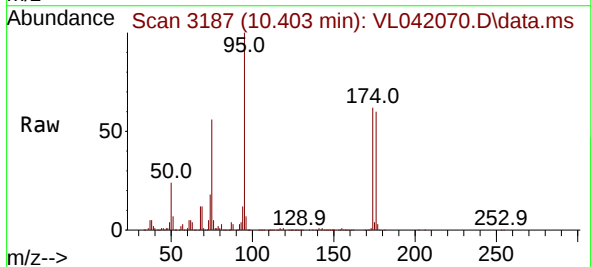
Instrument :
MSVOA_L
ClientSampleId :
IA1DUP

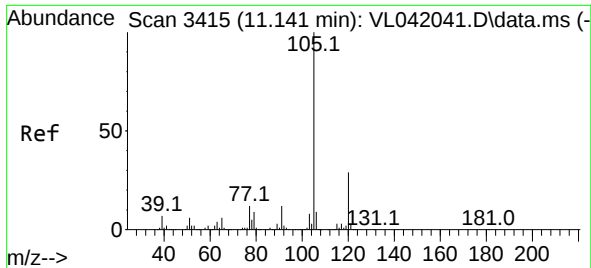
Tgt Ion:104 Resp: 3096
Ion Ratio Lower Upper
104 100
78 68.5 41.0 61.4#
103 71.8 37.0 55.6#



#68
1-Bromo-4-Fluorobenzene
Concen: 10.244 ppbv
RT: 10.403 min Scan# 3187
Delta R.T. 0.010 min
Lab File: VL042070.D
Acq: 27 Feb 2025 12:57

Tgt Ion: 95 Resp: 262162
Ion Ratio Lower Upper
95 100
174 62.4 51.8 77.6
175 4.5 3.9 5.9

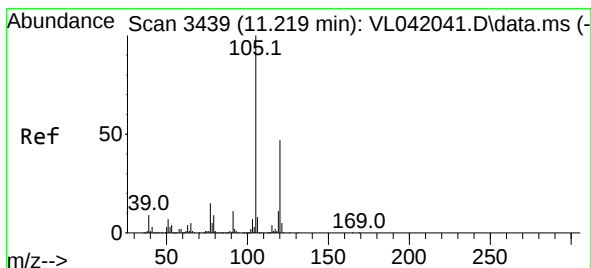
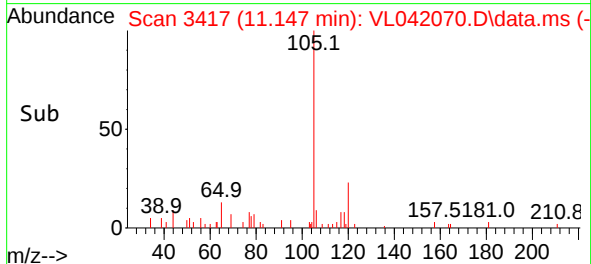
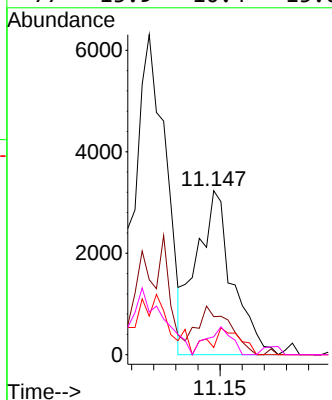
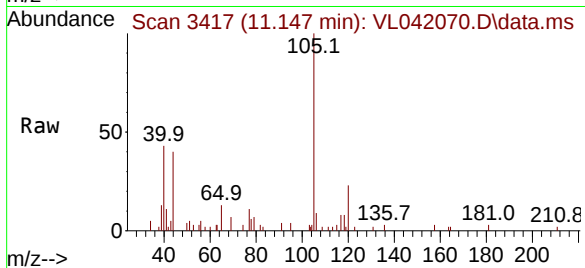




#72
4-Ethyltoluene
Concen: 0.061 ppbv
RT: 11.147 min Scan# 3415
Delta R.T. 0.006 min
Lab File: VL042070.D
Acq: 27 Feb 2025 12:57

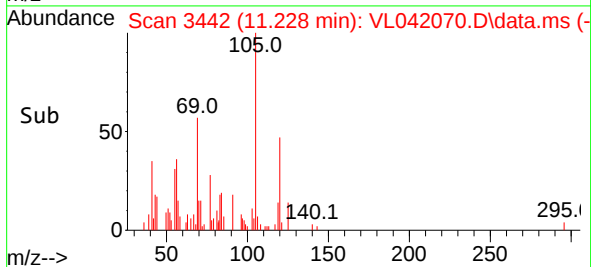
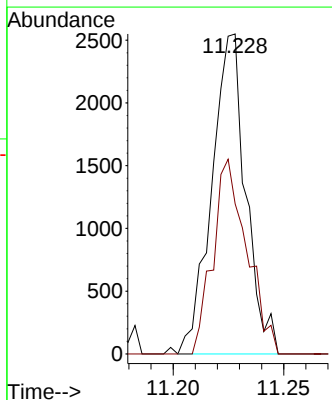
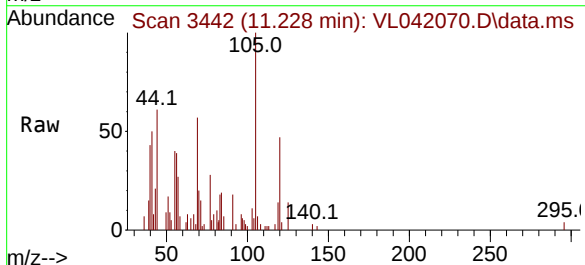
Instrument :
MSVOA_L
ClientSampleId :
IA1DUP

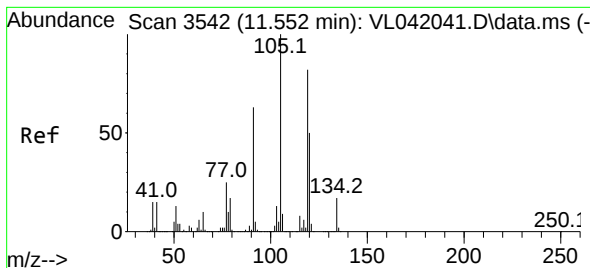
Tgt Ion:105 Resp: 3649
Ion Ratio Lower Upper
105 100
120 0.0 24.1 36.1#
91 13.8 10.2 15.4
77 13.9 10.4 15.6



#73
1,3,5-Trimethylbenzene
Concen: 0.053 ppbv
RT: 11.228 min Scan# 3442
Delta R.T. 0.010 min
Lab File: VL042070.D
Acq: 27 Feb 2025 12:57

Tgt Ion:105 Resp: 2739
Ion Ratio Lower Upper
105 100
120 46.9 37.4 56.0





#74

1,2,4-Trimethylbenzene

Concen: 0.173 ppbv

RT: 11.561 min Scan# 3545

Delta R.T. 0.010 min

Lab File: VL042070.D

Acq: 27 Feb 2025 12:57

Instrument :

MSVOA_L

ClientSampleId :

IA1DUP

Tgt Ion:105 Resp: 10119

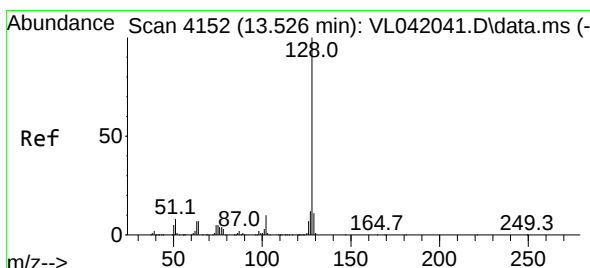
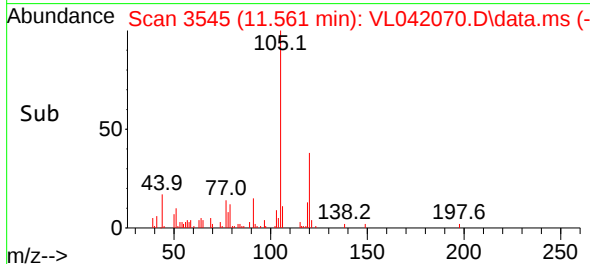
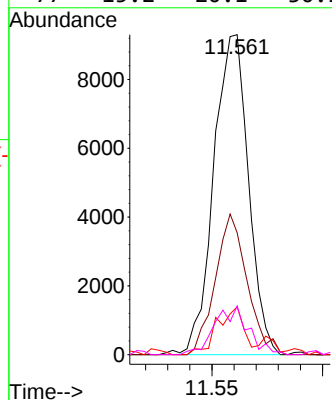
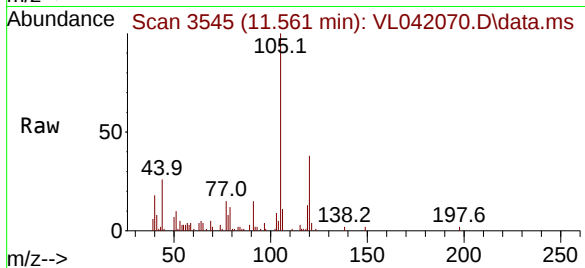
Ion Ratio Lower Upper

105 100

120 38.1 40.2 60.2#

91 14.9 51.4 77.2#

77 15.2 20.1 30.1#



#79

Naphthalene

Concen: 0.121 ppbv

RT: 13.536 min Scan# 4155

Delta R.T. 0.010 min

Lab File: VL042070.D

Acq: 27 Feb 2025 12:57

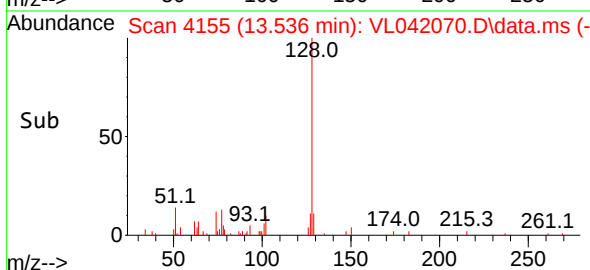
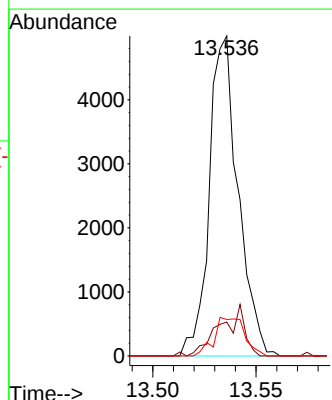
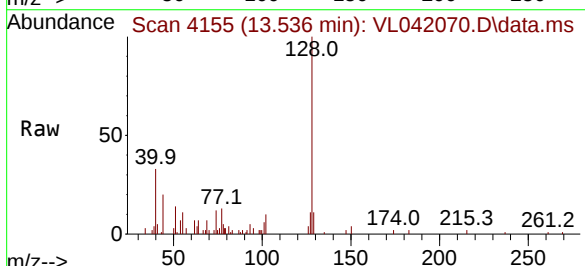
Tgt Ion:128 Resp: 4850

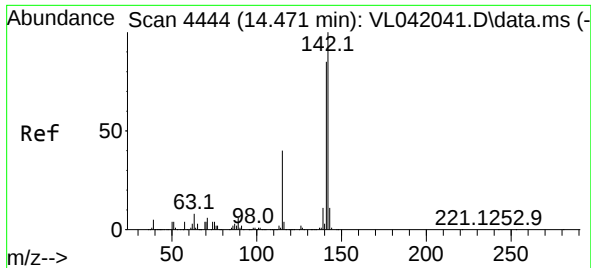
Ion Ratio Lower Upper

128 100

127 10.6 9.8 14.6

129 11.4 8.6 12.8





#80
Naphthalene, 2-methyl-
Concen: 0.043 ppbv
RT: 14.484 min Scan# 4448
Delta R.T. 0.013 min
Lab File: VL042070.D
Acq: 27 Feb 2025 12:57

Instrument :
MSVOA_L
ClientSampleId :
IA1DUP

Tgt Ion:	142	Resp:	467
Ion	Ratio	Lower	Upper
142	100		
141	125.5	65.8	98.6#
115	82.7	29.5	44.3#

