

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL032725\
 Data File : VL042184.D
 Acq On : 27 Mar 2025 17:45
 Operator : SY/MD
 Sample : Q1649-02 10X
 Misc : 400mL/MSVOA_L
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV2

Quant Time: Mar 28 02:14:23 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL032725AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Fri Mar 28 02:00:52 2025
 Response via : Initial Calibration

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

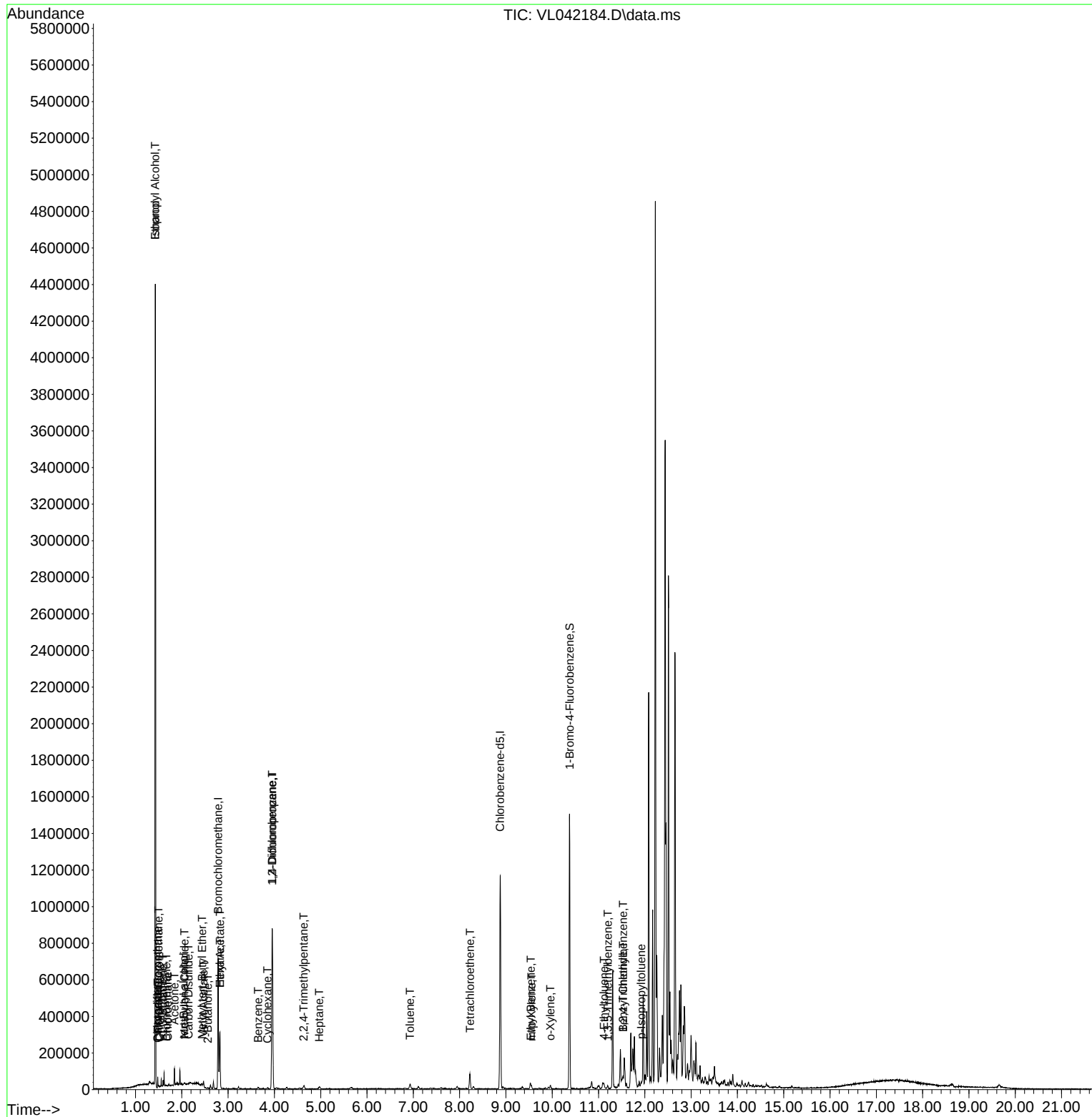
Internal Standards						
1) Bromochloromethane	2.784	49	189796	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.953	114	534770	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.875	117	486660	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.374	95	393734	9.852	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	98.500%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.496	85	1856	0.066	ppbv	94
3) Chlorodifluoromethane	1.473	51	2570	0.090	ppbv	96
4) Chloromethane	1.528	50	498	0.043	ppbv #	83
6) Bromomethane	1.664	94	197	0.038	ppbv #	21
7) Chloroethane	1.700	64	140	0.030	ppbv #	83
9) Propene	1.480	41	8849	0.674	ppbv	96
10) Heptane	4.969	43	1641	0.047	ppbv #	28
13) Ethanol	1.428	45	436993	352.293	ppbv	77
15) Acetone	1.839	43	23180	0.873	ppbv #	79
16) 1,3-Butadiene	1.596	39	3538	0.273	ppbv #	73
17) tert-Butyl alcohol	2.043	59	1265	0.038	ppbv #	1
19) Isopropyl Alcohol	1.428	45	436993	29.178	ppbv #	31
20) Methylene Chloride	2.059	84	2005	0.203	ppbv #	89
23) Vinyl Acetate	2.470	43	10613	0.924	ppbv #	54
25) Ethyl Acetate	2.823	43	54849	0.796	ppbv #	80
26) Hexane	2.823	57	75369	2.832	ppbv #	28
27) Carbon Disulfide	2.146	76	2037	0.071	ppbv #	1
28) Methyl tert-Butyl Ether	2.441	73	1027	0.062	ppbv #	1
30) Cyclohexane	3.852	84	1075	0.047	ppbv #	12
34) 2-Butanone	2.561	43	2714	0.070	ppbv	96
36) Benzene	3.651	78	4917	0.093	ppbv #	82
39) 1,2-Dichloropropane	3.956	63	139112	7.205	ppbv #	24
44) 2,2,4-Trimethylpentane	4.632	57	3450	0.039	ppbv #	1
52) Tetrachloroethene	8.228	164	4309	0.205	ppbv	88
53) Toluene	6.930	91	16009	0.255	ppbv	91
58) Ethyl Benzene	9.539	91	3512	0.041	ppbv	100
59) m/p-Xylene	9.552	91	3627	0.053	ppbv #	31
60) o-Xylene	9.963	91	8279	0.120	ppbv	97
66) Benzyl Chloride	11.533	91	2192	0.216	ppbv #	66
69) p-Isopropyltoluene	11.924	119	3874	0.034	ppbv #	90
72) 4-Ethyltoluene	11.122	105	4825	0.056	ppbv #	61
73) 1,3,5-Trimethylbenzene	11.203	105	3839	0.051	ppbv #	80
74) 1,2,4-Trimethylbenzene	11.533	105	17642	0.204	ppbv #	72

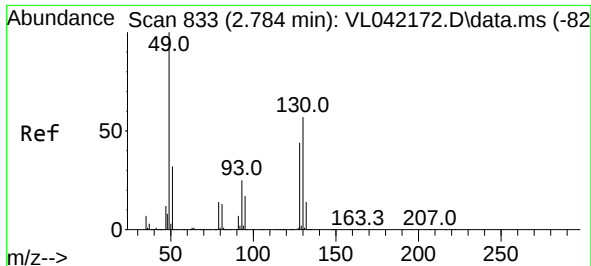
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL032725\
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Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL032725AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
QLast Update : Fri Mar 28 02:00:52 2025
Response via : Initial Calibration

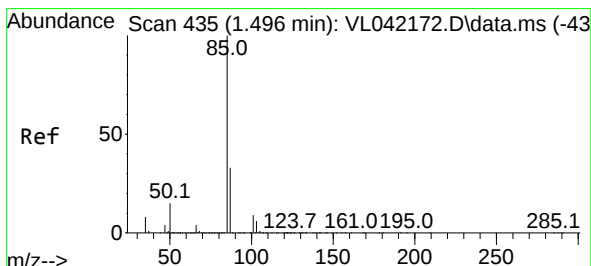
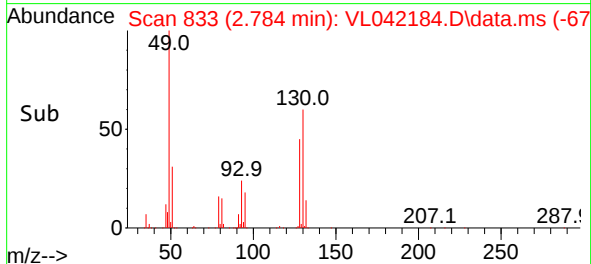
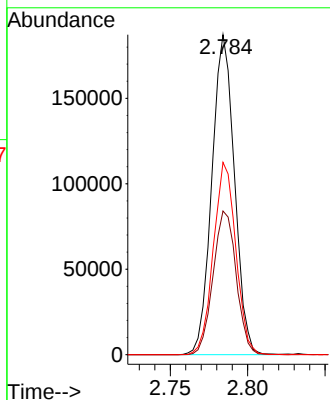
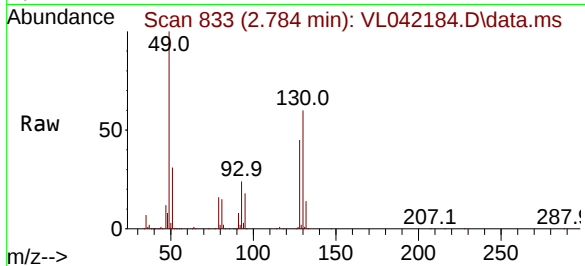




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.784 min Scan# 833
Delta R.T. 0.000 min
Lab File: VL042184.D
Acq: 27 Mar 2025 17:45

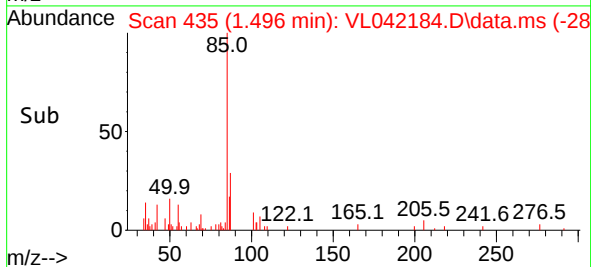
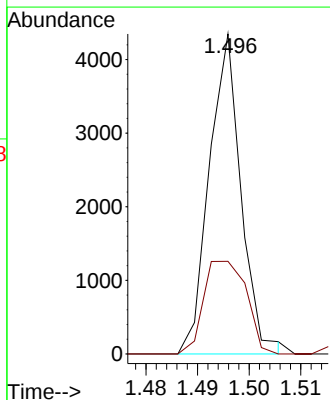
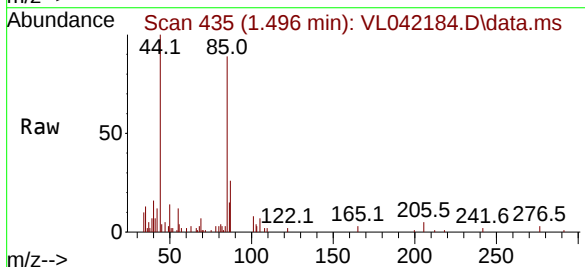
Instrument :
MSVOA_L
ClientSampleId :
SV2

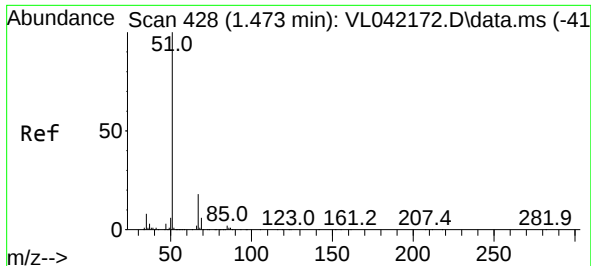
Tgt Ion: 49 Resp: 189796
Ion Ratio Lower Upper
49 100
128 46.0 22.9 68.5
130 59.8 28.8 86.4



#2
Dichlorodifluoromethane
Concen: 0.066 ppbv
RT: 1.496 min Scan# 435
Delta R.T. 0.000 min
Lab File: VL042184.D
Acq: 27 Mar 2025 17:45

Tgt Ion: 85 Resp: 1856
Ion Ratio Lower Upper
85 100
87 29.0 26.1 39.1

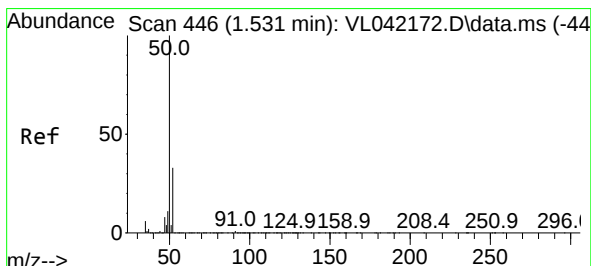
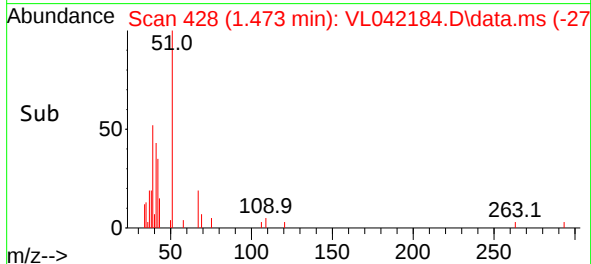
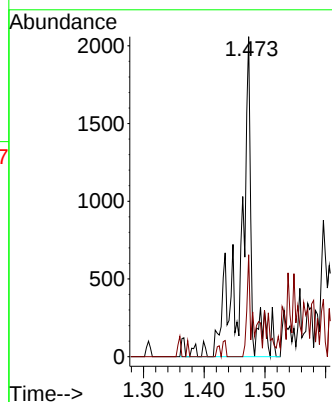
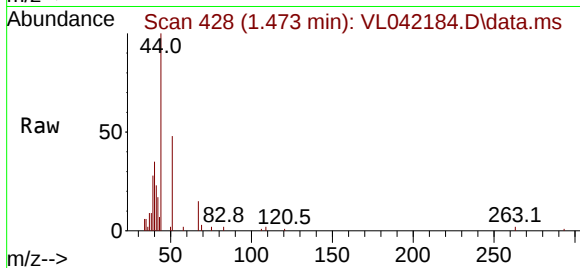




#3
Chlorodifluoromethane
Concen: 0.090 ppbv
RT: 1.473 min Scan# 41
Delta R.T. 0.000 min
Lab File: VL042184.D
Acq: 27 Mar 2025 17:45

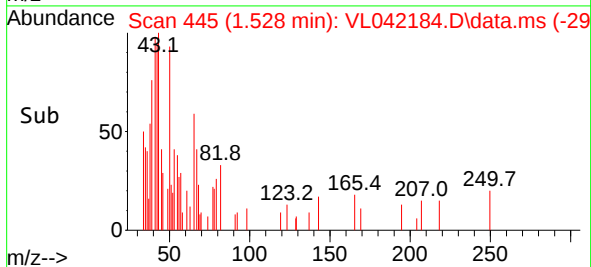
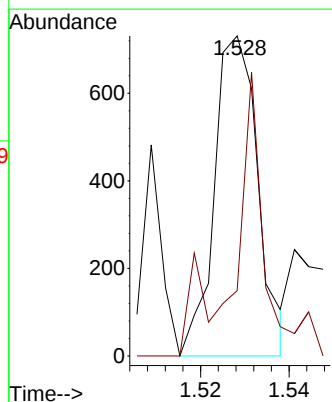
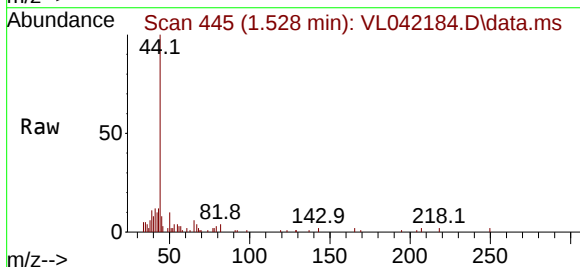
Instrument :
MSVOA_L
ClientSampleId :
SV2

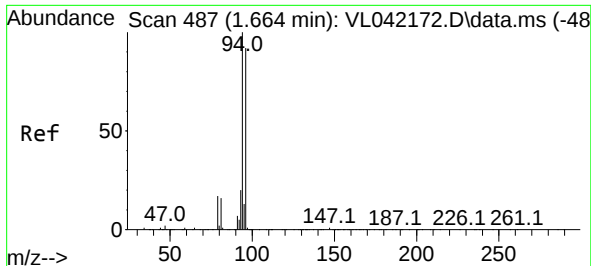
Tgt Ion: 51 Resp: 2570
Ion Ratio Lower Upper
51 100
67 17.0 15.0 22.6



#4
Chloromethane
Concen: 0.043 ppbv
RT: 1.528 min Scan# 445
Delta R.T. -0.003 min
Lab File: VL042184.D
Acq: 27 Mar 2025 17:45

Tgt Ion: 50 Resp: 498
Ion Ratio Lower Upper
50 100
52 23.0 26.1 39.1#

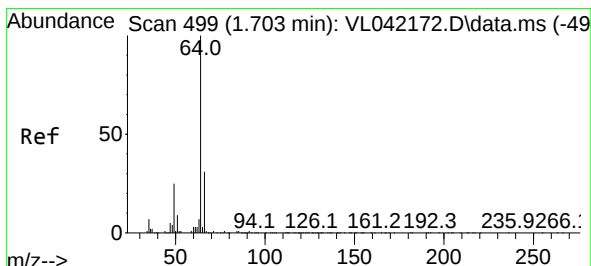
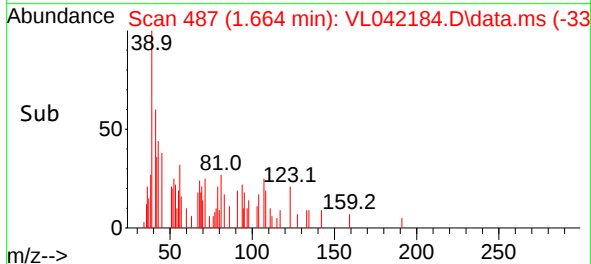
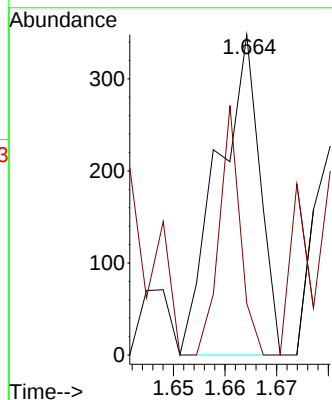
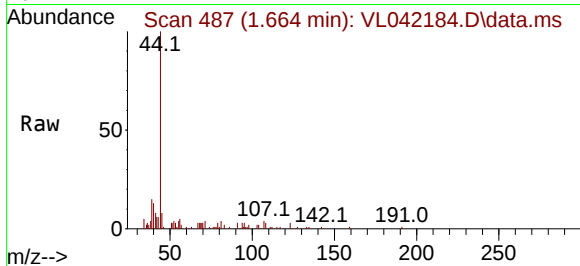




#6
Bromomethane
Concen: 0.038 ppbv
RT: 1.664 min Scan# 487
Delta R.T. 0.000 min
Lab File: VL042184.D
Acq: 27 Mar 2025 17:45

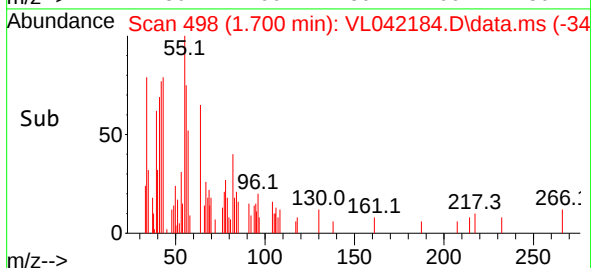
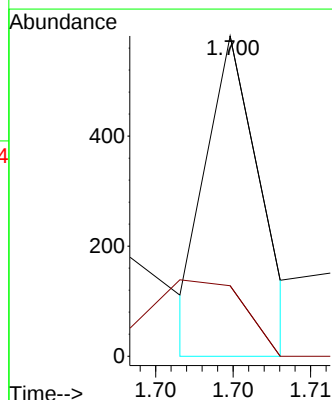
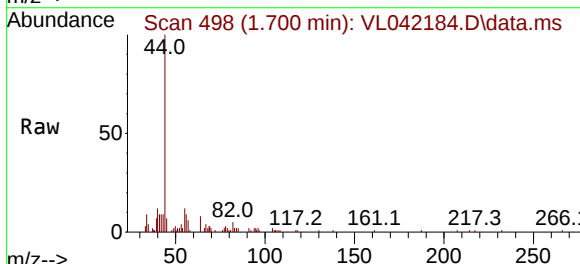
Instrument :
MSVOA_L
ClientSampleId :
SV2

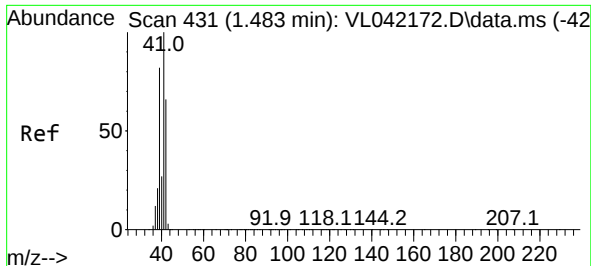
Tgt Ion: 94 Resp: 197
Ion Ratio Lower Upper
94 100
96 16.1 73.1 109.7#



#7
Chloroethane
Concen: 0.030 ppbv
RT: 1.700 min Scan# 498
Delta R.T. -0.003 min
Lab File: VL042184.D
Acq: 27 Mar 2025 17:45

Tgt Ion: 64 Resp: 140
Ion Ratio Lower Upper
64 100
66 22.0 25.2 37.8#

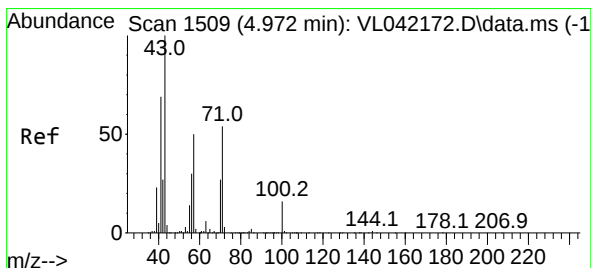
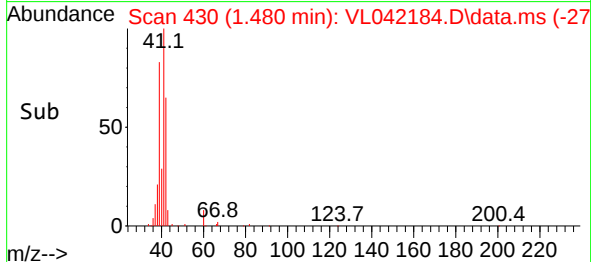
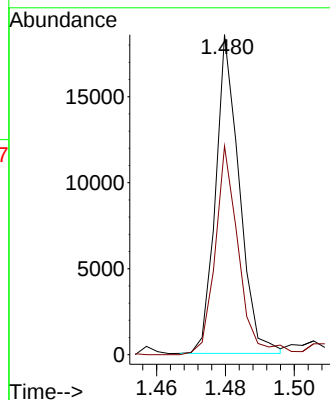
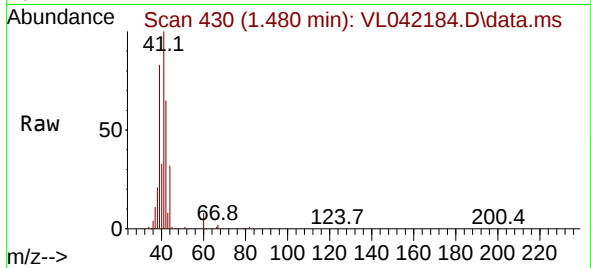




#9
 Propene
 Concen: 0.674 ppbv
 RT: 1.480 min Scan# 41
 Delta R.T. -0.003 min
 Lab File: VL042184.D
 Acq: 27 Mar 2025 17:45

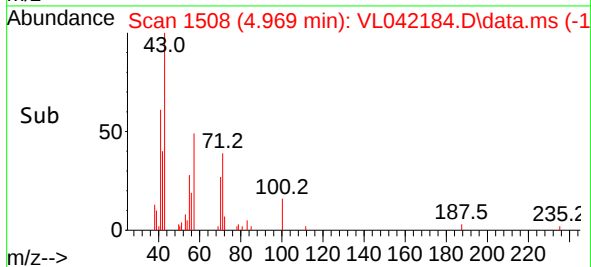
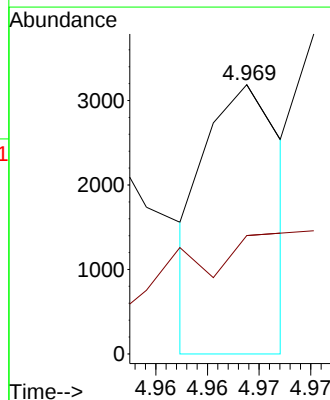
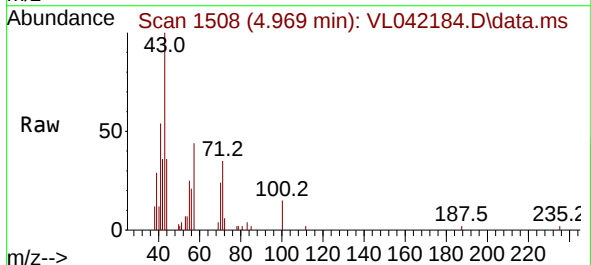
Instrument :
 MSVOA_L
 ClientSampleId :
 SV2

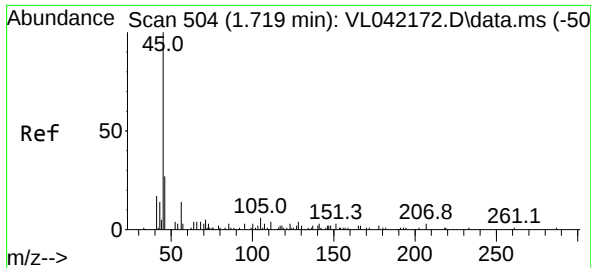
Tgt Ion: 41 Resp: 8849
 Ion Ratio Lower Upper
 41 100
 42 72.4 55.4 83.2



#10
 Heptane
 Concen: 0.047 ppbv
 RT: 4.969 min Scan# 1508
 Delta R.T. -0.003 min
 Lab File: VL042184.D
 Acq: 27 Mar 2025 17:45

Tgt Ion: 43 Resp: 1641
 Ion Ratio Lower Upper
 43 100
 57 0.0 39.4 59.2#

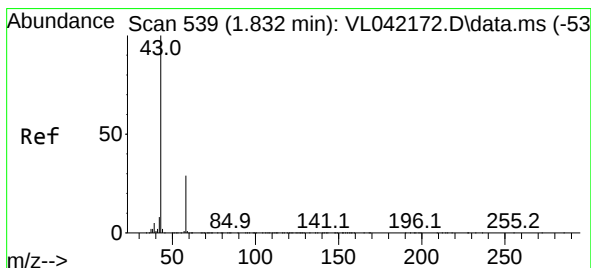
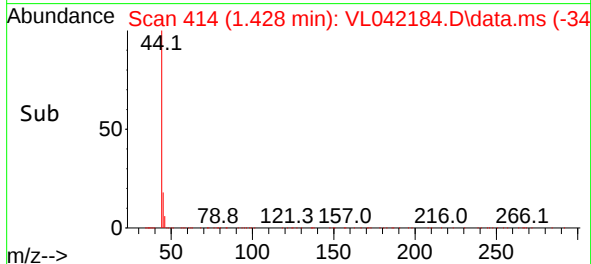
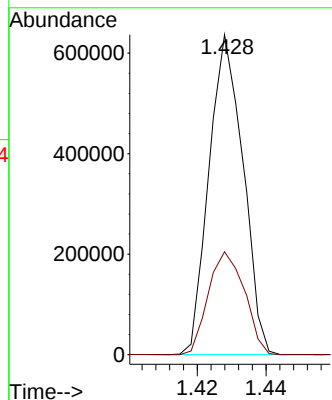
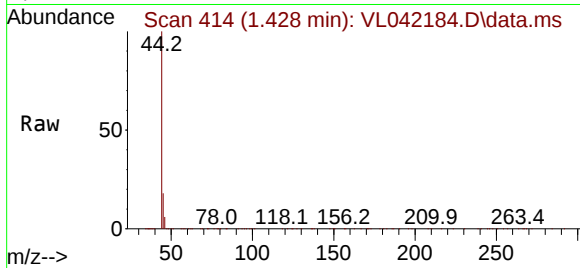




#13
Ethanol
Concen: 352.293 ppbv
RT: 1.428 min Scan# 41
Delta R.T. -0.291 min
Lab File: VL042184.D
Acq: 27 Mar 2025 17:45

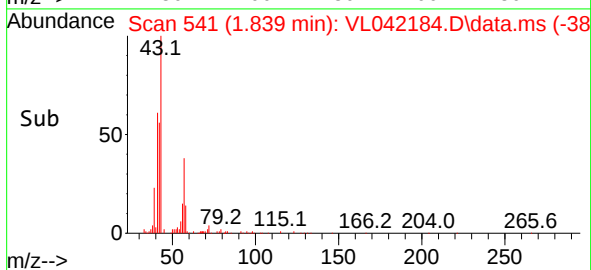
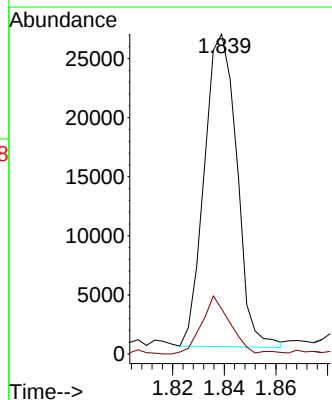
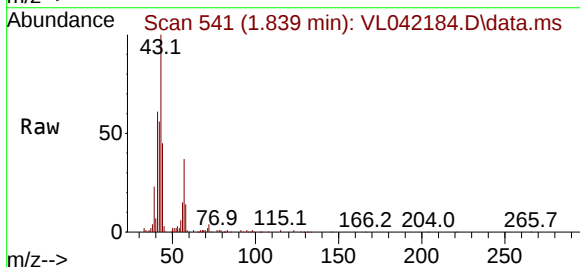
Instrument :
MSVOA_L
ClientSampleId :
SV2

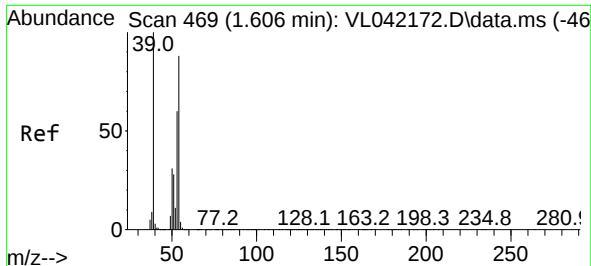
Tgt Ion: 45 Resp: 436993
Ion Ratio Lower Upper
45 100
46 34.4 20.2 80.8



#15
Acetone
Concen: 0.873 ppbv
RT: 1.839 min Scan# 541
Delta R.T. 0.007 min
Lab File: VL042184.D
Acq: 27 Mar 2025 17:45

Tgt Ion: 43 Resp: 23180
Ion Ratio Lower Upper
43 100
58 17.7 23.2 34.8#





#16

1,3-Butadiene

Concen: 0.273 ppbv

RT: 1.596 min Scan# 4

Delta R.T. -0.010 min

Lab File: VL042184.D

Acq: 27 Mar 2025 17:45

Instrument :

MSVOA_L

ClientSampleId :

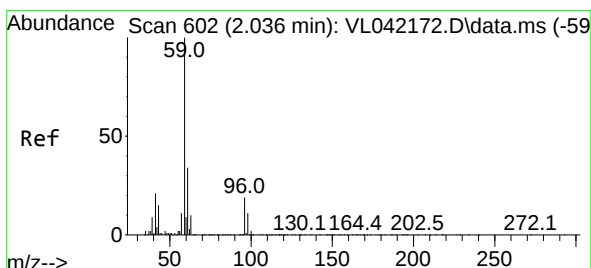
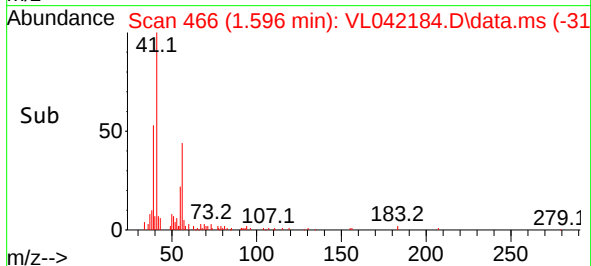
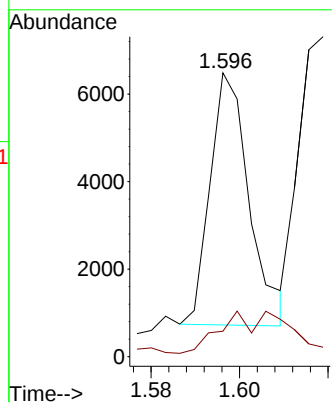
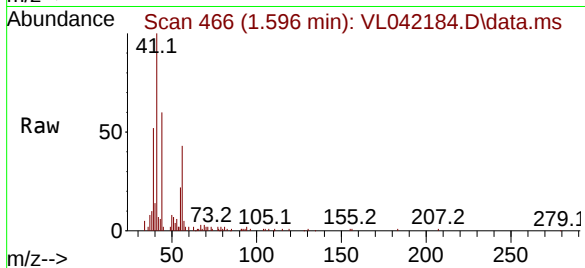
SV2

Tgt Ion: 39 Resp: 3538

Ion Ratio Lower Upper

39 100

54 52.3 60.7 91.1#



#17

tert-Butyl alcohol

Concen: 0.038 ppbv

RT: 2.043 min Scan# 604

Delta R.T. 0.007 min

Lab File: VL042184.D

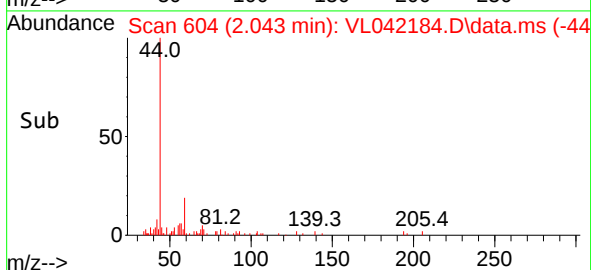
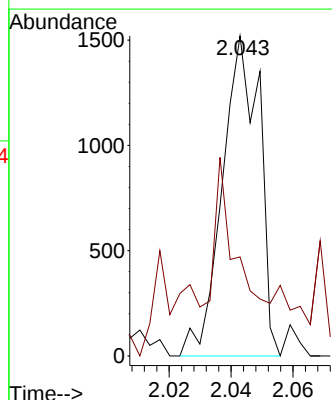
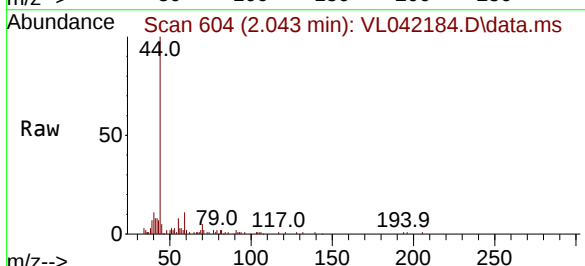
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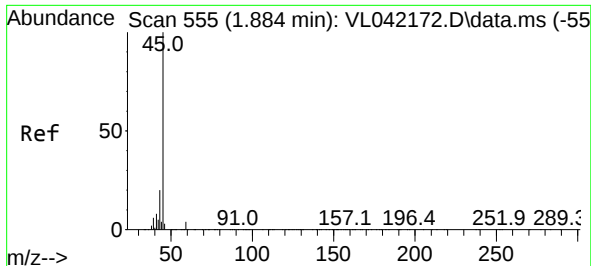
Tgt Ion: 59 Resp: 1265

Ion Ratio Lower Upper

59 100

57 80.2 8.9 13.3#





#19

Isopropyl Alcohol

Concen: 29.178 ppbv

RT: 1.428 min Scan# 41

Delta R.T. -0.456 min

Lab File: VL042184.D

Acq: 27 Mar 2025 17:45

Instrument :

MSVOA_L

ClientSampleId :

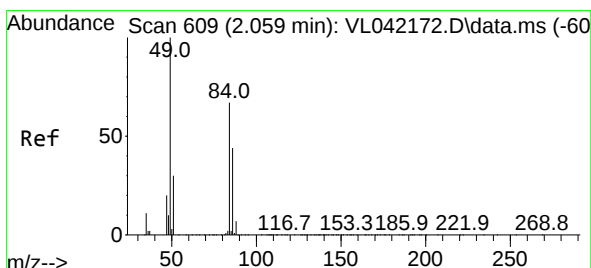
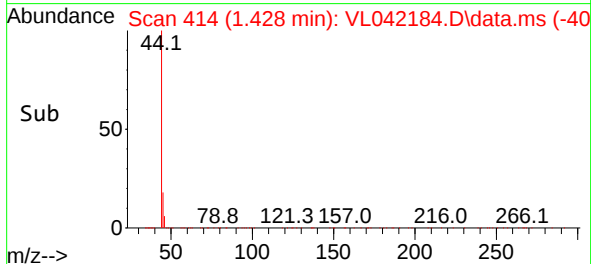
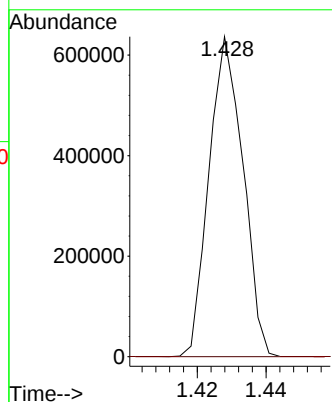
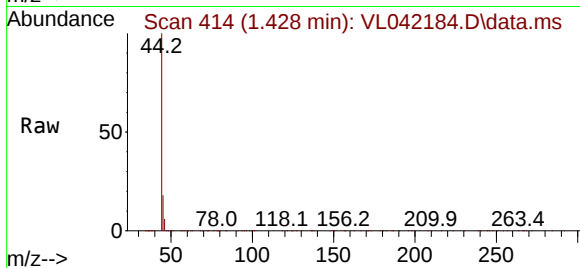
SV2

Tgt Ion: 45 Resp: 436993

Ion Ratio Lower Upper

45 100

58 0.1 36.9 55.3#



#20

Methylene Chloride

Concen: 0.203 ppbv

RT: 2.059 min Scan# 609

Delta R.T. 0.000 min

Lab File: VL042184.D

Acq: 27 Mar 2025 17:45

Tgt Ion: 84 Resp: 2005

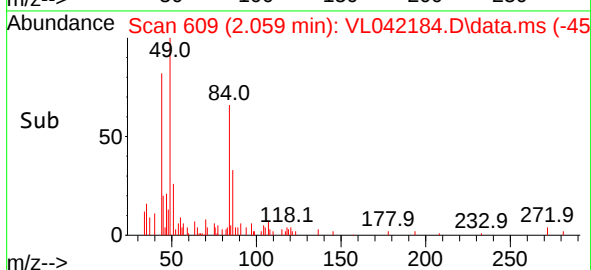
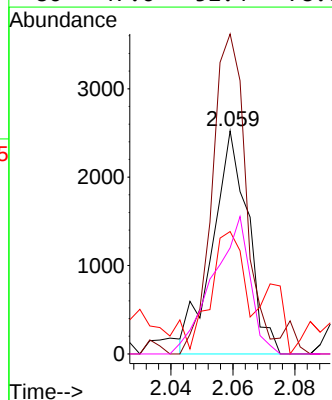
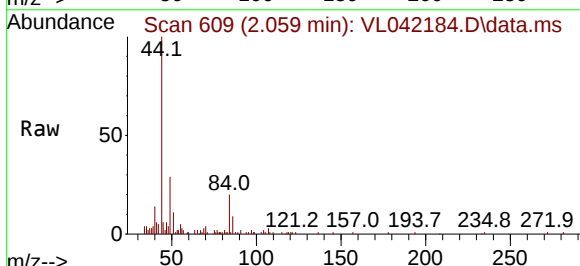
Ion Ratio Lower Upper

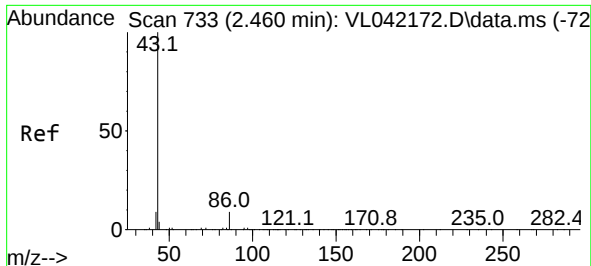
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49 143.5 120.2 180.4

51 39.6 37.4 56.0

86 47.6 52.4 78.6#

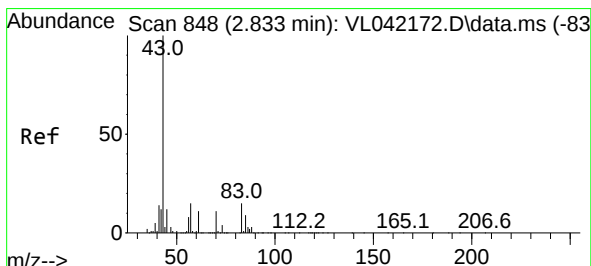
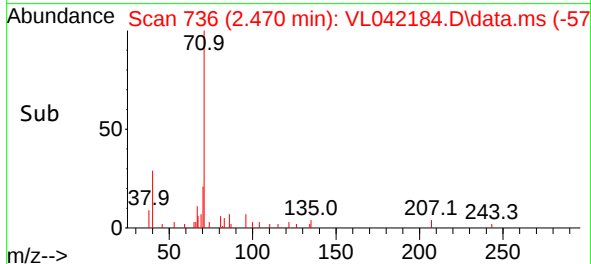
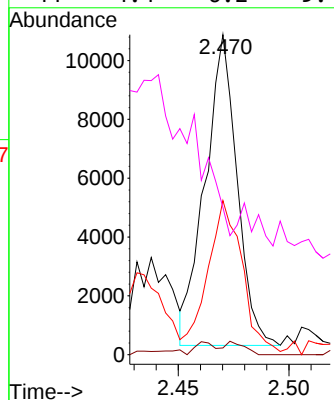
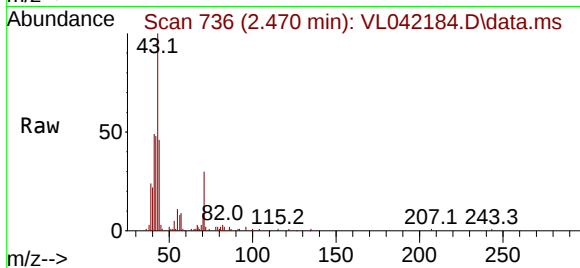




#23
 Vinyl Acetate
 Concen: 0.924 ppbv
 RT: 2.470 min Scan# 71
 Delta R.T. 0.010 min
 Lab File: VL042184.D
 Acq: 27 Mar 2025 17:45

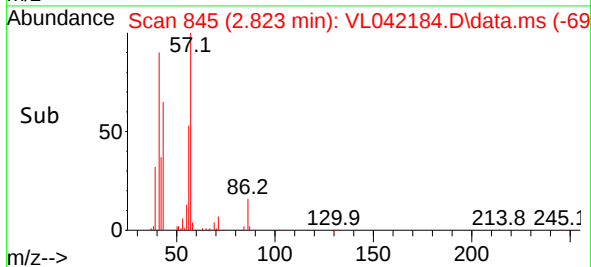
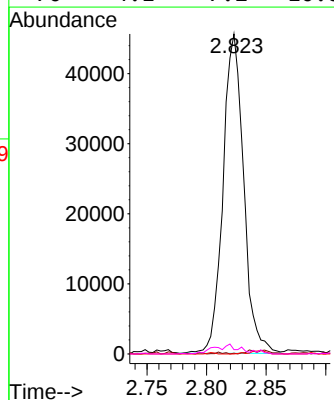
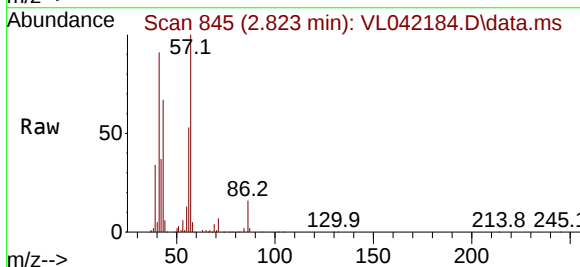
Instrument :
 MSVOA_L
 ClientSampleId :
 SV2

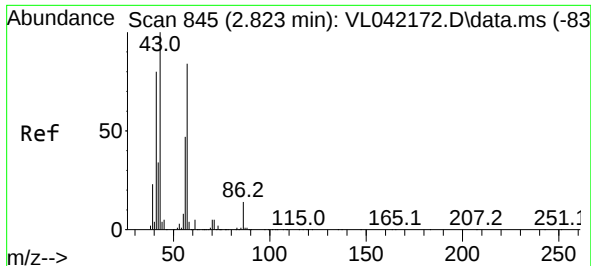
Tgt Ion:	43	Resp:	10613
Ion	Ratio	Lower	Upper
43	100		
86	2.2	5.5	8.3#
42	45.5	8.6	13.0#
44	4.4	6.2	9.4#



#25
 Ethyl Acetate
 Concen: 0.796 ppbv
 RT: 2.823 min Scan# 845
 Delta R.T. -0.010 min
 Lab File: VL042184.D
 Acq: 27 Mar 2025 17:45

Tgt Ion:	43	Resp:	54849
Ion	Ratio	Lower	Upper
43	100		
45	1.4	8.2	12.2#
61	0.8	7.3	10.9#
70	4.1	7.2	10.8#

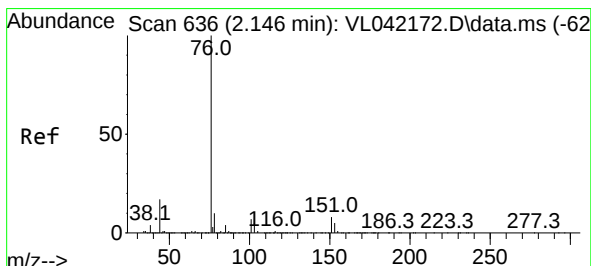
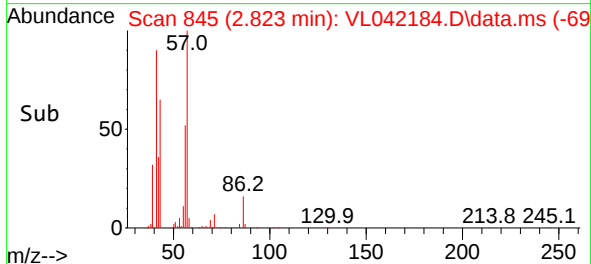
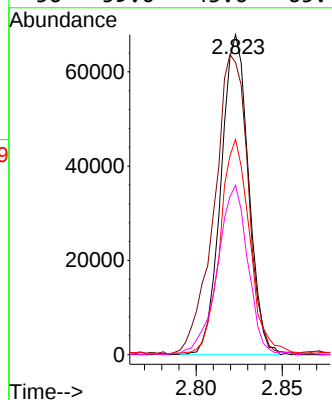
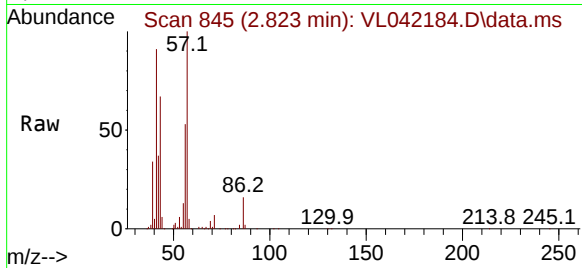




#26
Hexane
Concen: 2.832 ppbv
RT: 2.823 min Scan# 845
Delta R.T. 0.000 min
Lab File: VL042184.D
Acq: 27 Mar 2025 17:45

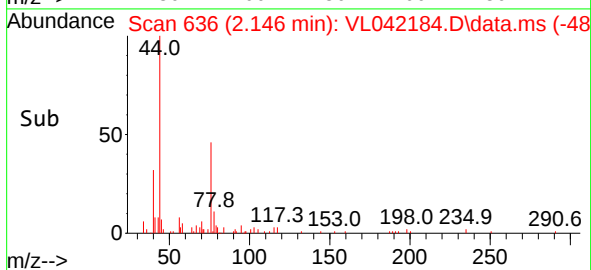
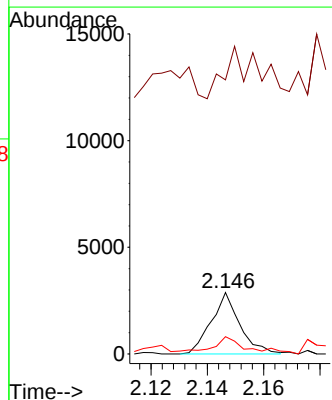
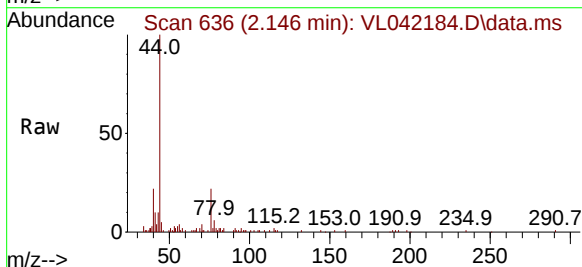
Instrument :
MSVOA_L
ClientSampleId :
SV2

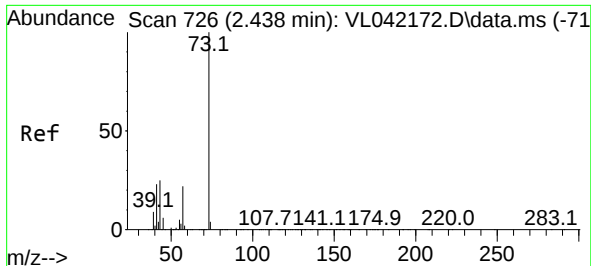
Tgt Ion: 57 Resp: 75369
Ion Ratio Lower Upper
57 100
41 118.0 76.6 114.8#
43 72.8 207.8 311.8#
56 59.0 43.6 65.4



#27
Carbon Disulfide
Concen: 0.071 ppbv
RT: 2.146 min Scan# 636
Delta R.T. 0.000 min
Lab File: VL042184.D
Acq: 27 Mar 2025 17:45

Tgt Ion: 76 Resp: 2037
Ion Ratio Lower Upper
76 100
44 1433.5 14.7 22.1#
78 50.6 9.3 13.9#

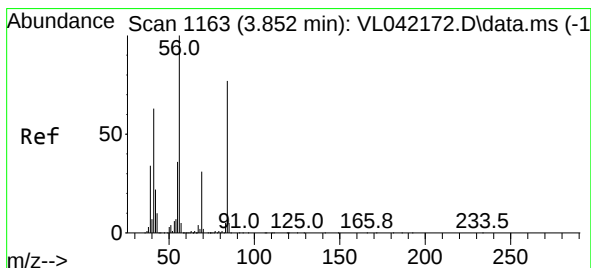
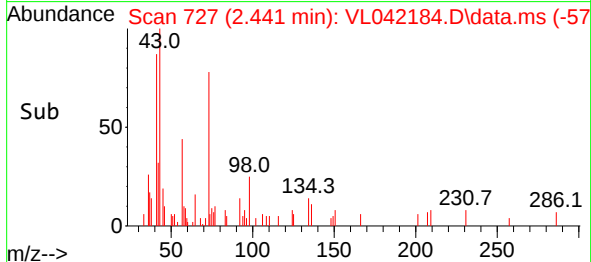
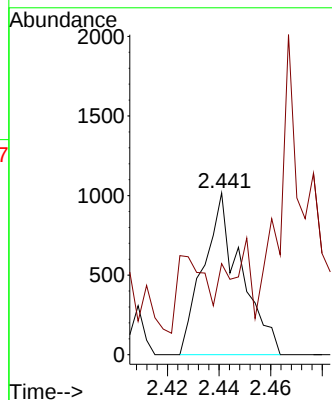
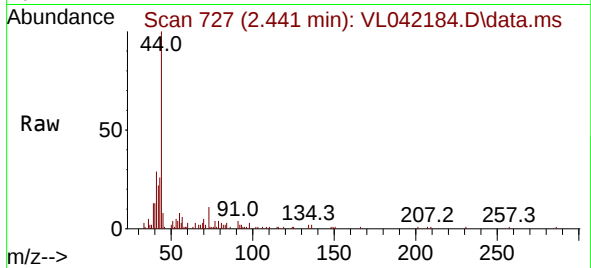




#28
Methyl tert-Butyl Ether
Concen: 0.062 ppbv
RT: 2.441 min Scan# 71
Delta R.T. 0.003 min
Lab File: VL042184.D
Acq: 27 Mar 2025 17:45

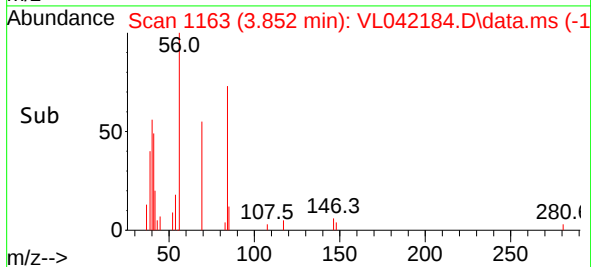
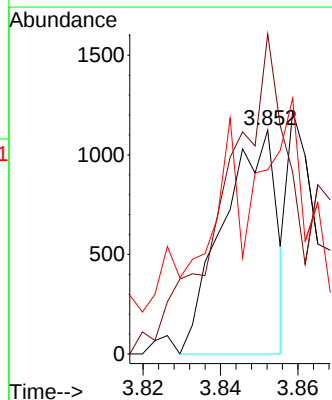
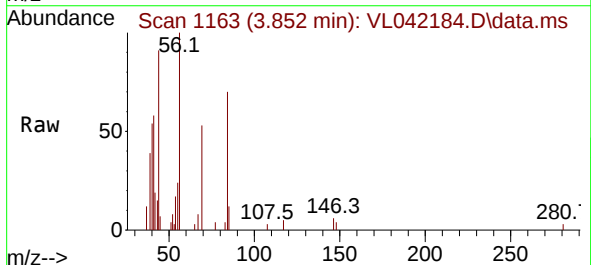
Instrument :
MSVOA_L
ClientSampleId :
SV2

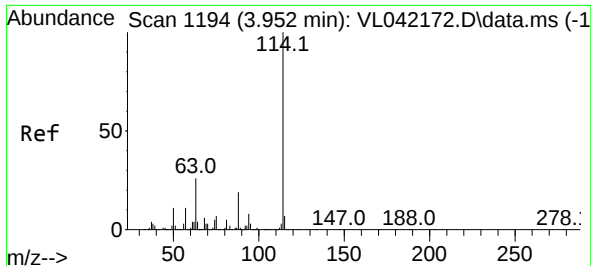
Tgt Ion: 73 Resp: 1027
Ion Ratio Lower Upper
73 100
57 248.3 20.5 30.7#



#30
Cyclohexane
Concen: 0.047 ppbv
RT: 3.852 min Scan# 1163
Delta R.T. 0.000 min
Lab File: VL042184.D
Acq: 27 Mar 2025 17:45

Tgt Ion: 84 Resp: 1075
Ion Ratio Lower Upper
84 100
56 228.1 102.8 154.2#
41 0.0 66.5 99.7#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.953 min Scan# 1194

Delta R.T. 0.000 min

Lab File: VL042184.D

Acq: 27 Mar 2025 17:45

Instrument :

MSVOA_L

ClientSampleId :

SV2

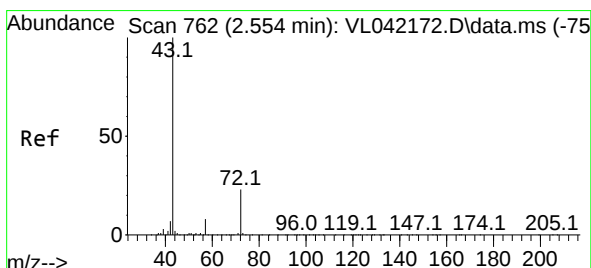
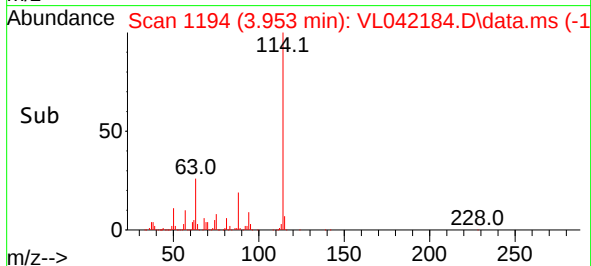
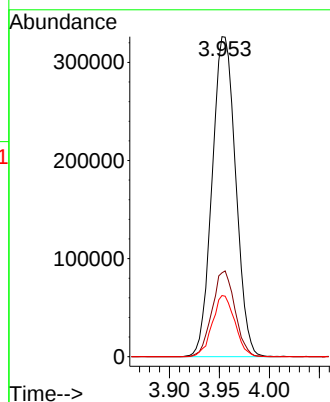
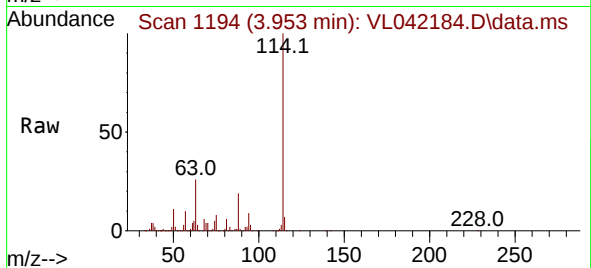
Tgt Ion:114 Resp: 534770

Ion Ratio Lower Upper

114 100

63 26.0 20.7 31.1

88 18.3 15.0 22.4



#34

2-Butanone

Concen: 0.070 ppbv

RT: 2.561 min Scan# 764

Delta R.T. 0.007 min

Lab File: VL042184.D

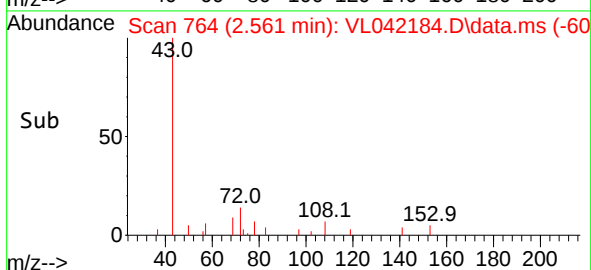
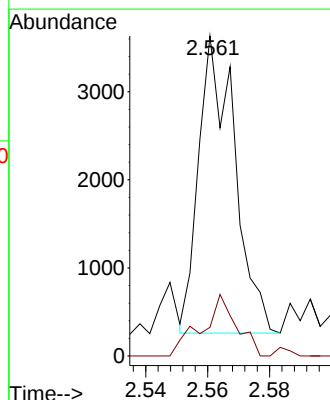
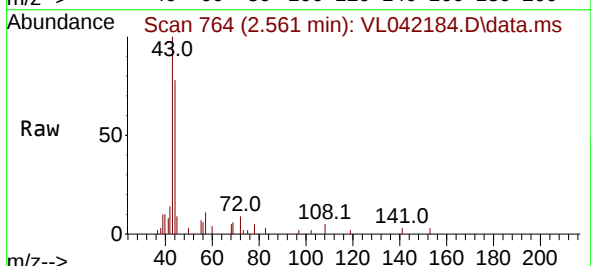
Acq: 27 Mar 2025 17:45

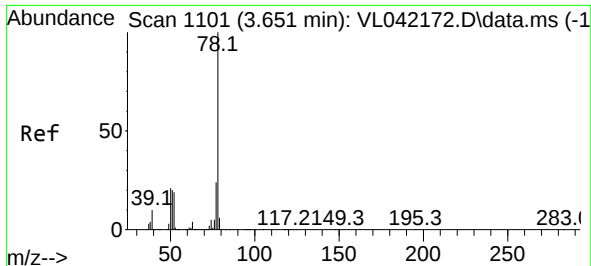
Tgt Ion: 43 Resp: 2714

Ion Ratio Lower Upper

43 100

72 21.0 18.2 27.2

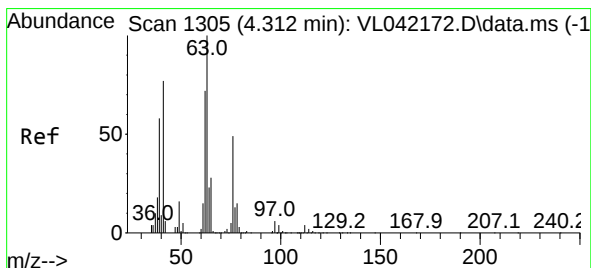
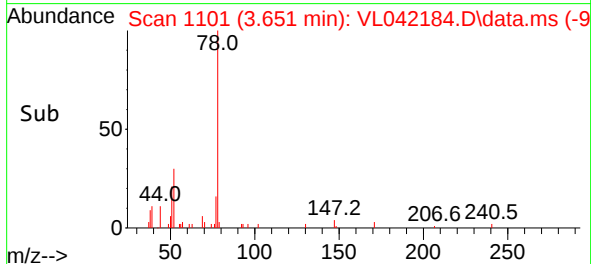
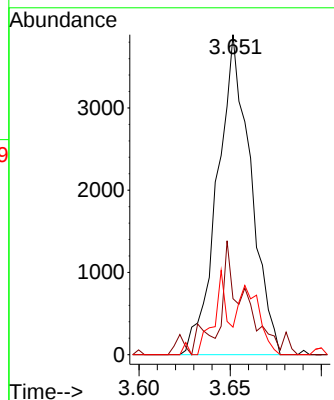
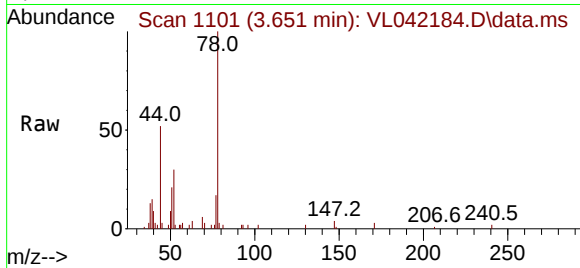




#36
Benzene
Concen: 0.093 ppbv
RT: 3.651 min Scan# 1101
Delta R.T. 0.000 min
Lab File: VL042184.D
Acq: 27 Mar 2025 17:45

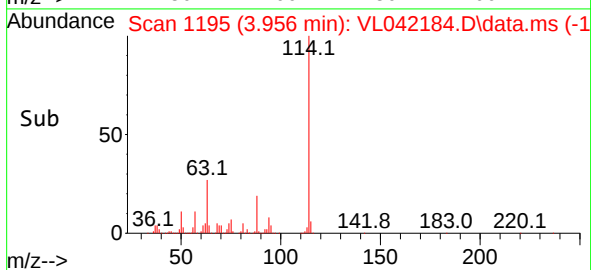
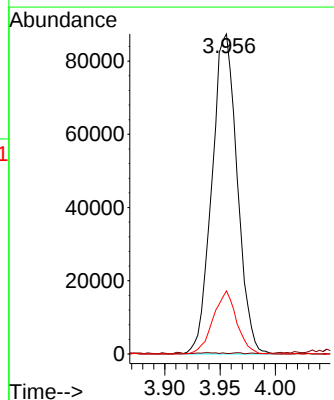
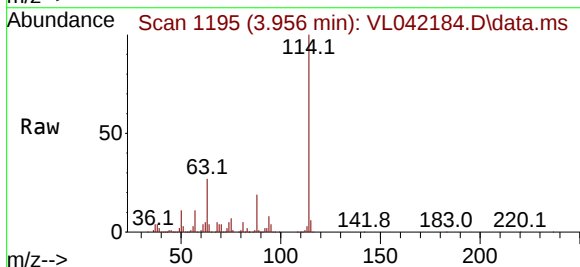
Instrument :
MSVOA_L
ClientSampleId :
SV2

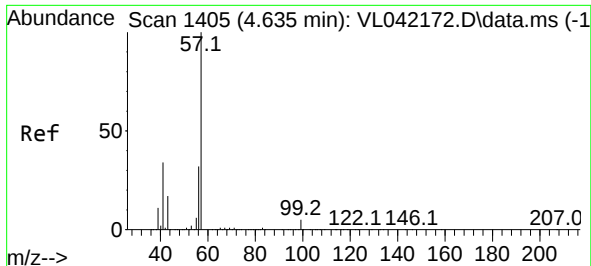
Tgt Ion: 78 Resp: 4917
Ion Ratio Lower Upper
78 100
77 16.0 19.1 28.7#
50 30.0 16.6 24.8#



#39
1,2-Dichloropropane
Concen: 7.205 ppbv
RT: 3.956 min Scan# 1195
Delta R.T. -0.356 min
Lab File: VL042184.D
Acq: 27 Mar 2025 17:45

Tgt Ion: 63 Resp: 139112
Ion Ratio Lower Upper
63 100
41 0.0 61.7 92.5#
62 19.7 57.6 86.4#

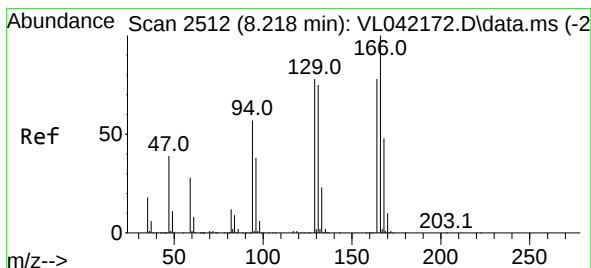
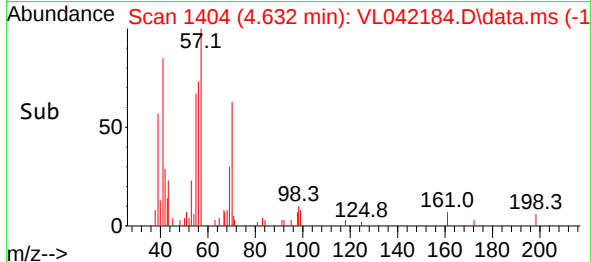
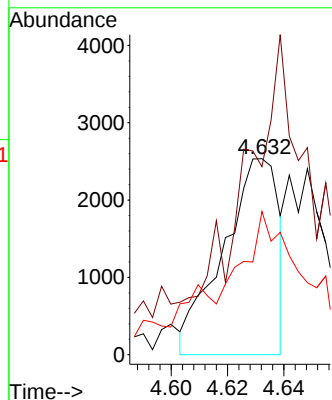
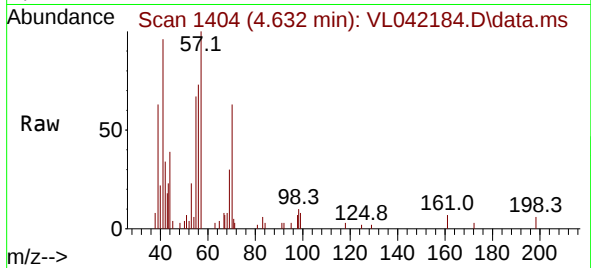




#44
 2,2,4-Trimethylpentane
 Concen: 0.039 ppbv
 RT: 4.632 min Scan# 1404
 Delta R.T. -0.003 min
 Lab File: VL042184.D
 Acq: 27 Mar 2025 17:45

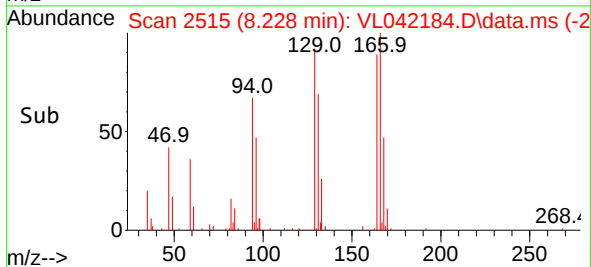
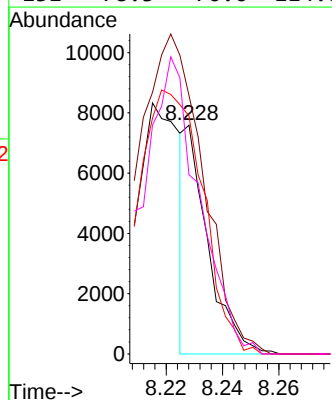
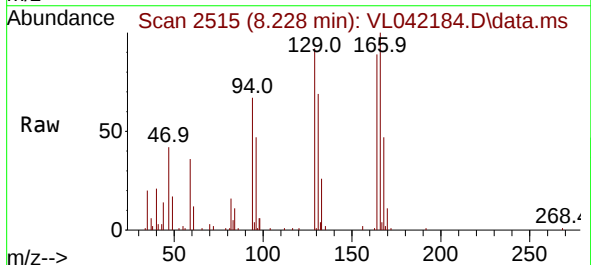
Instrument :
 MSVOA_L
 ClientSampleId :
 SV2

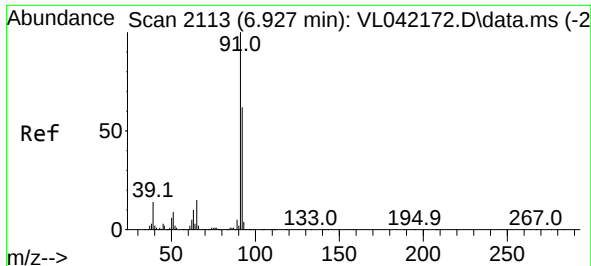
Tgt Ion: 57 Resp: 3450
 Ion Ratio Lower Upper
 57 100
 41 230.5 26.8 40.2#
 56 126.8 25.6 38.4#



#52
 Tetrachloroethene
 Concen: 0.205 ppbv
 RT: 8.228 min Scan# 2515
 Delta R.T. 0.010 min
 Lab File: VL042184.D
 Acq: 27 Mar 2025 17:45

Tgt Ion: 164 Resp: 4309
 Ion Ratio Lower Upper
 164 100
 166 112.9 102.5 153.7
 129 104.1 79.8 119.8
 131 78.3 76.6 114.8

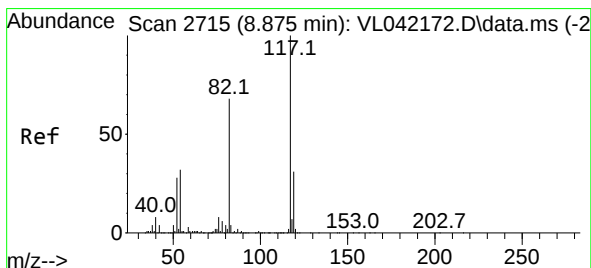
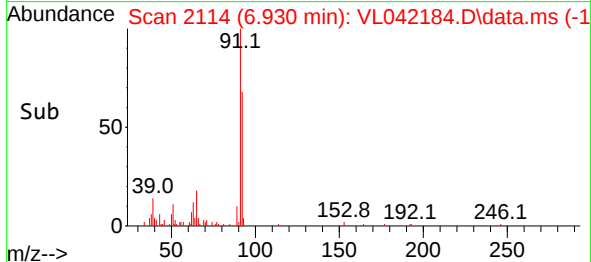
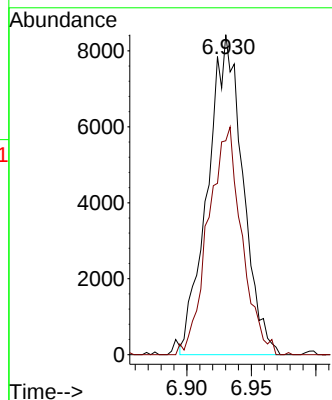
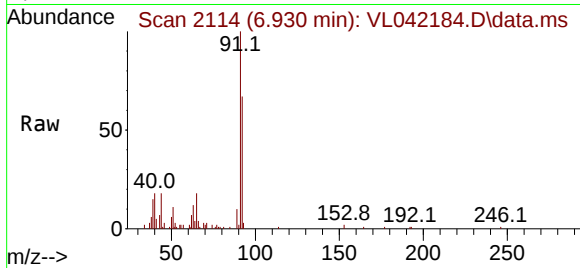




#53
Toluene
Concen: 0.255 ppbv
RT: 6.930 min Scan# 2113
Delta R.T. 0.003 min
Lab File: VL042184.D
Acq: 27 Mar 2025 17:45

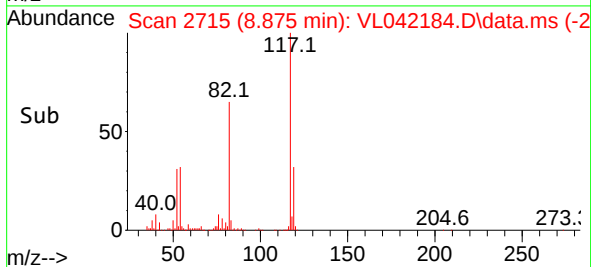
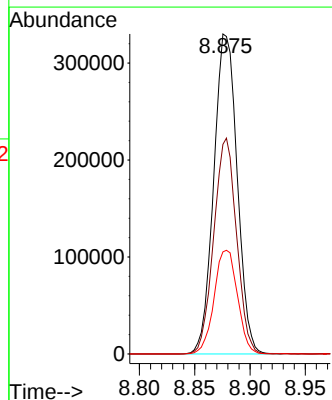
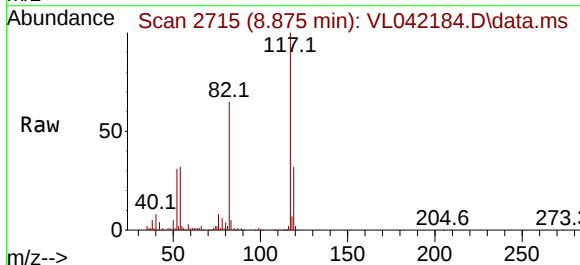
Instrument :
MSVOA_L
ClientSampleId :
SV2

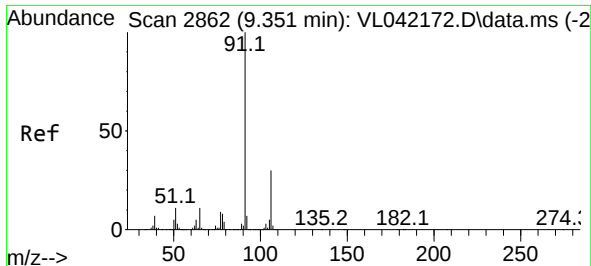
Tgt Ion: 91 Resp: 16009
Ion Ratio Lower Upper
91 100
92 67.7 48.4 72.6



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.875 min Scan# 2715
Delta R.T. 0.000 min
Lab File: VL042184.D
Acq: 27 Mar 2025 17:45

Tgt Ion: 117 Resp: 486660
Ion Ratio Lower Upper
117 100
82 65.5 55.8 83.6
119 32.3 25.5 38.3





#58

Ethyl Benzene

Concen: 0.041 ppbv

RT: 9.539 min Scan# 2920

Delta R.T. 0.188 min

Lab File: VL042184.D

Acq: 27 Mar 2025 17:45

Instrument :

MSVOA_L

ClientSampleId :

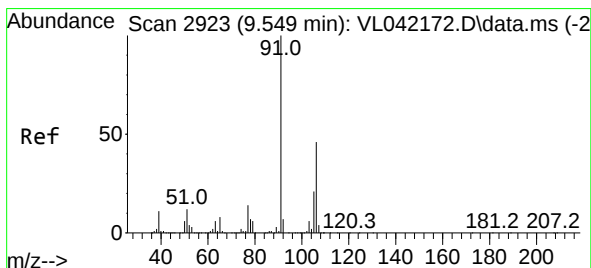
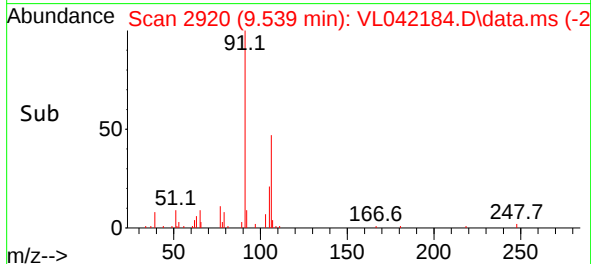
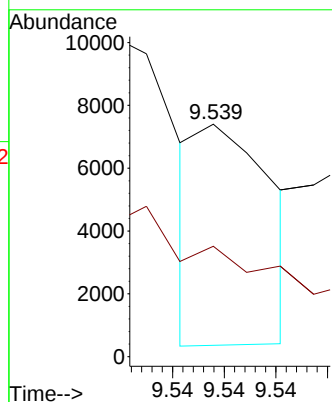
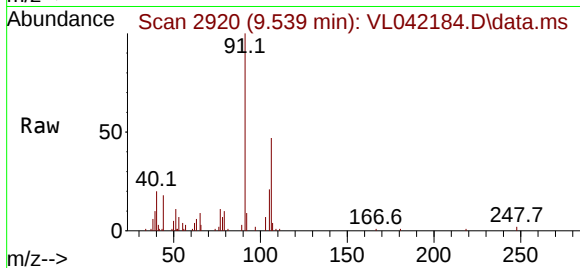
SV2

Tgt Ion: 91 Resp: 3512

Ion Ratio Lower Upper

91 100

106 30.2 24.2 36.2



#59

m/p-Xylene

Concen: 0.053 ppbv

RT: 9.552 min Scan# 2924

Delta R.T. 0.003 min

Lab File: VL042184.D

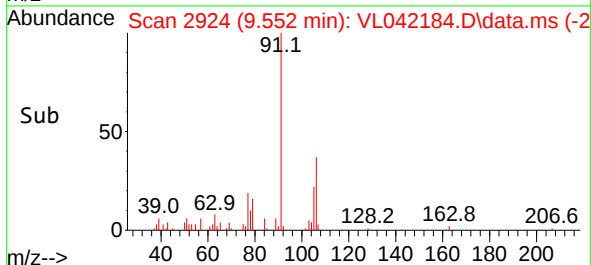
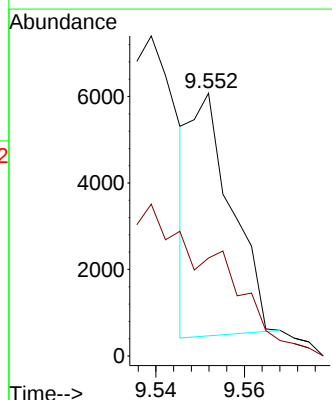
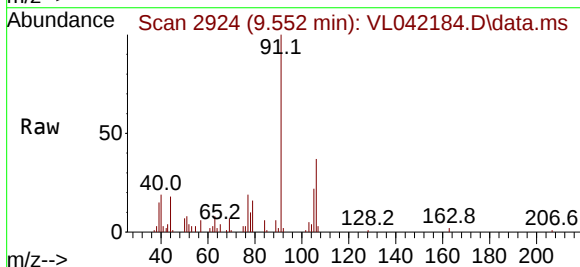
Acq: 27 Mar 2025 17:45

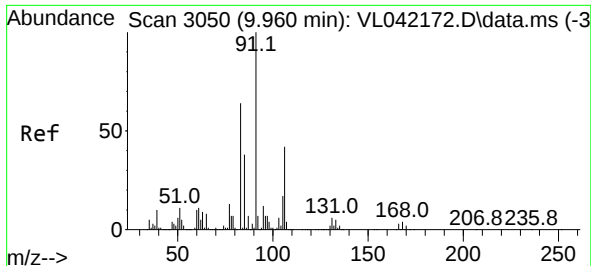
Tgt Ion: 91 Resp: 3627

Ion Ratio Lower Upper

91 100

106 0.0 36.4 54.6#

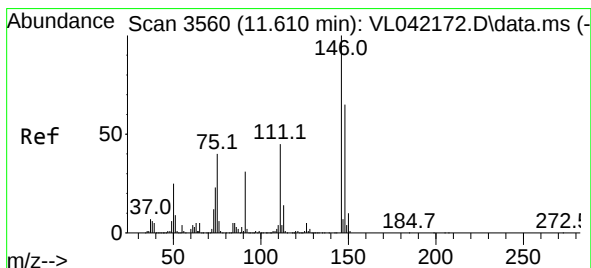
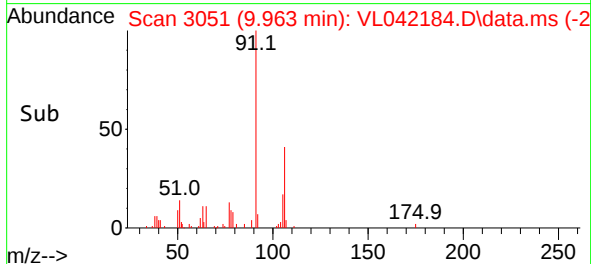
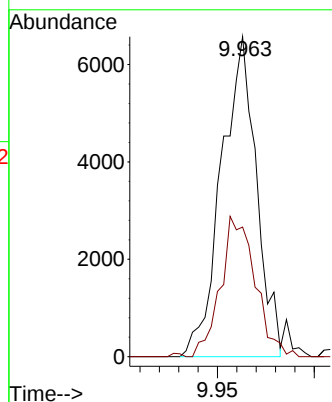
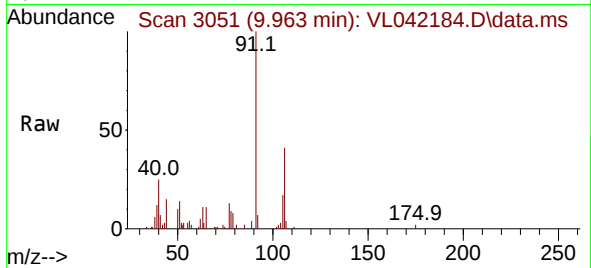




#60
o-Xylene
Concen: 0.120 ppbv
RT: 9.963 min Scan# 3051
Delta R.T. 0.003 min
Lab File: VL042184.D
Acq: 27 Mar 2025 17:45

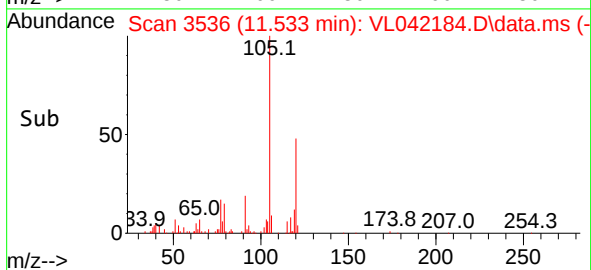
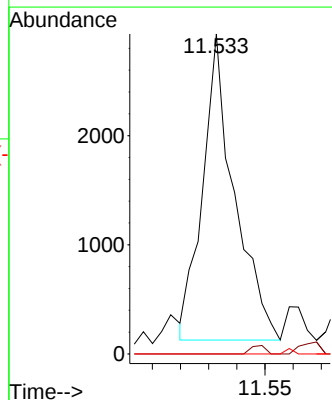
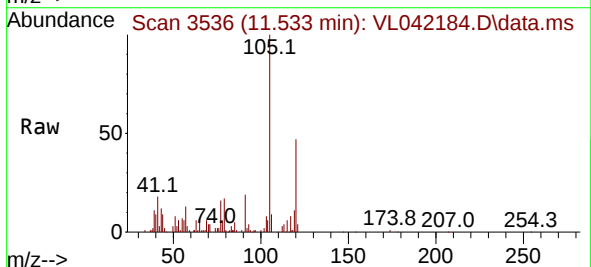
Instrument :
MSVOA_L
ClientSampleId :
SV2

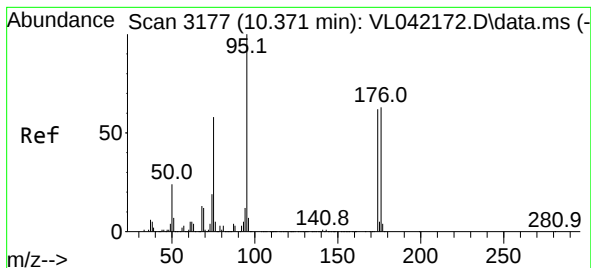
Tgt Ion: 91 Resp: 8279
Ion Ratio Lower Upper
91 100
106 43.6 20.8 62.5



#66
Benzyl Chloride
Concen: 0.216 ppbv
RT: 11.533 min Scan# 3536
Delta R.T. -0.078 min
Lab File: VL042184.D
Acq: 27 Mar 2025 17:45

Tgt Ion: 91 Resp: 2192
Ion Ratio Lower Upper
91 100
126 0.0 13.8 20.6#
128 0.0 4.5 6.7#

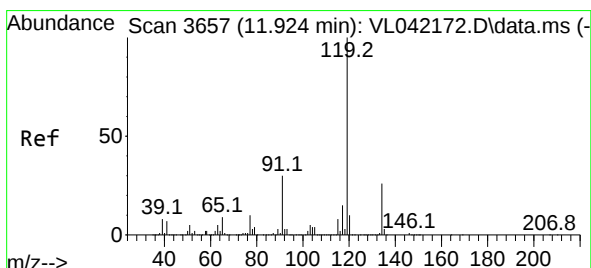
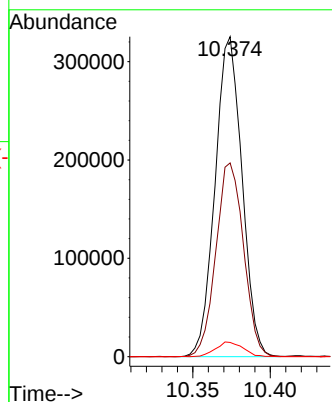
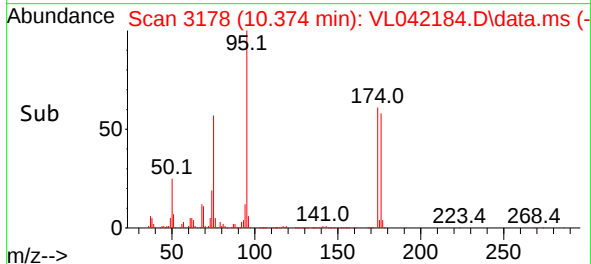
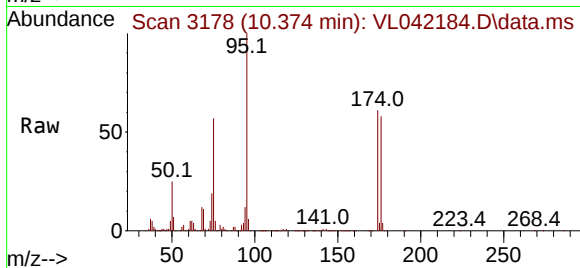




#68
1-Bromo-4-Fluorobenzene
Concen: 9.852 ppbv
RT: 10.374 min Scan# 3177
Delta R.T. 0.003 min
Lab File: VL042184.D
Acq: 27 Mar 2025 17:45

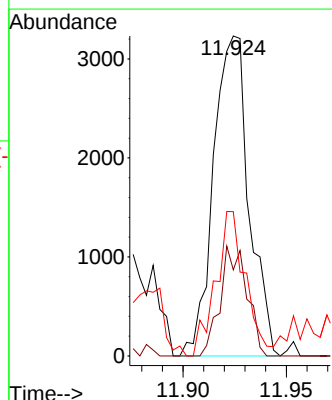
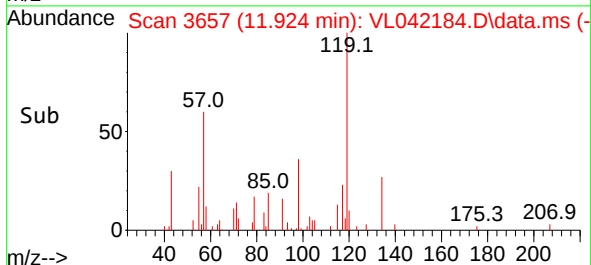
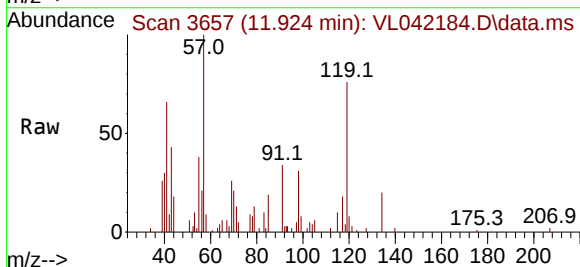
Instrument :
MSVOA_L
ClientSampleId :
SV2

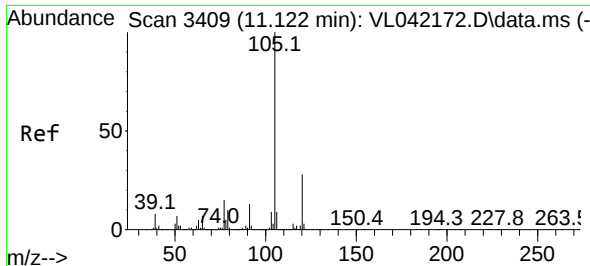
Tgt Ion: 95 Resp: 393734
Ion Ratio Lower Upper
95 100
174 62.2 50.6 76.0
175 4.7 3.8 5.6



#69
p-Isopropyltoluene
Concen: 0.034 ppbv
RT: 11.924 min Scan# 3657
Delta R.T. 0.000 min
Lab File: VL042184.D
Acq: 27 Mar 2025 17:45

Tgt Ion: 119 Resp: 3874
Ion Ratio Lower Upper
119 100
134 25.8 20.4 30.6
91 39.4 23.7 35.5#

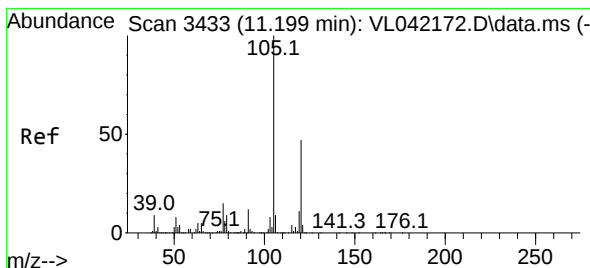
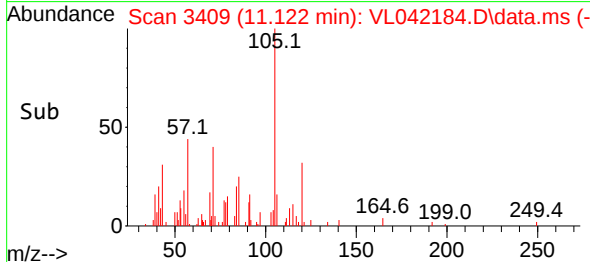
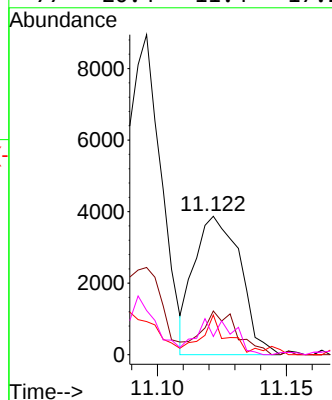
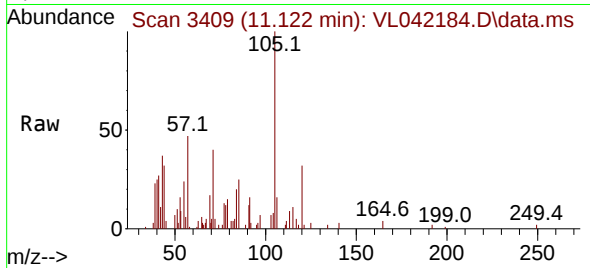




#72
4-Ethyltoluene
Concen: 0.056 ppbv
RT: 11.122 min Scan# 3409
Delta R.T. 0.000 min
Lab File: VL042184.D
Acq: 27 Mar 2025 17:45

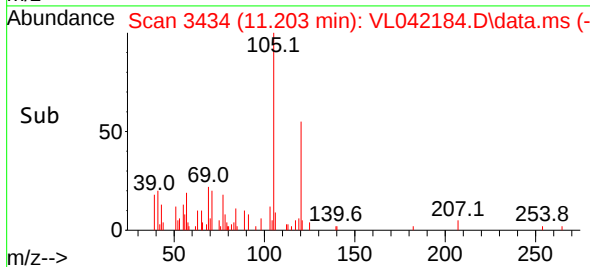
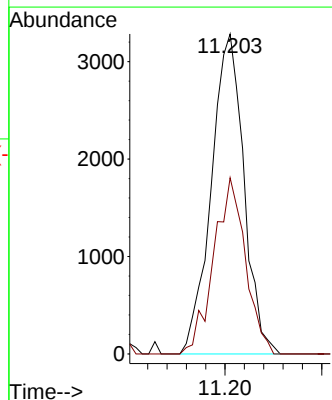
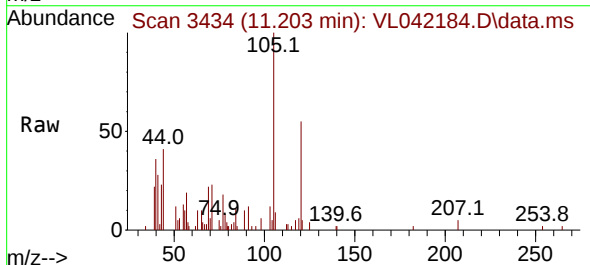
Instrument :
MSVOA_L
ClientSampleId :
SV2

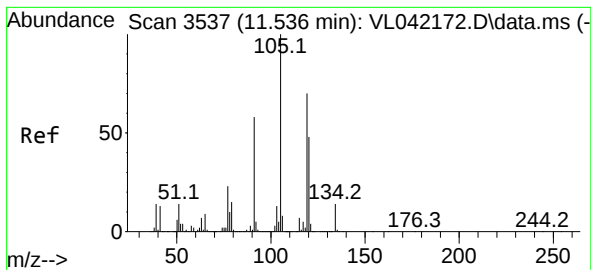
Tgt Ion:	105	Resp:	4825
Ion Ratio	Lower	Upper	
105	100		
120	0.0	23.4	35.0#
91	0.0	10.3	15.5#
77	20.4	11.4	17.2#



#73
1,3,5-Trimethylbenzene
Concen: 0.051 ppbv
RT: 11.203 min Scan# 3434
Delta R.T. 0.003 min
Lab File: VL042184.D
Acq: 27 Mar 2025 17:45

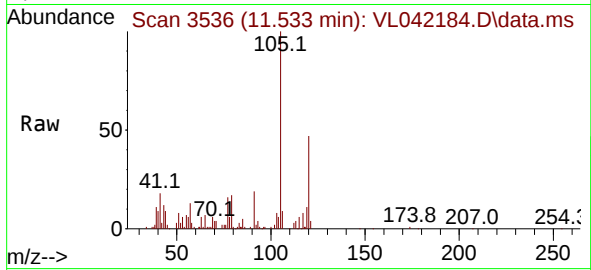
Tgt Ion:	105	Resp:	3839
Ion Ratio	Lower	Upper	
105	100		
120	60.3	37.4	56.0#





#74
 1,2,4-Trimethylbenzene
 Concen: 0.204 ppbv
 RT: 11.533 min Scan# 31
 Delta R.T. -0.003 min
 Lab File: VL042184.D
 Acq: 27 Mar 2025 17:45

Instrument :
 MSVOA_L
 ClientSampleId :
 SV2



Tgt Ion:	105	Resp:	17642
Ion	Ratio	Lower	Upper
105	100		
120	46.6	38.6	58.0
91	18.1	46.2	69.2#
77	15.6	18.6	27.8#

