

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL072225\
 Data File : VL042736.D
 Acq On : 22 Jul 2025 18:17
 Operator : SY/MD
 Sample : Q2617-02 10X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Jul 23 03:04:09 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL072225AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Wed Jul 23 02:51:39 2025
 Response via : Initial Calibration

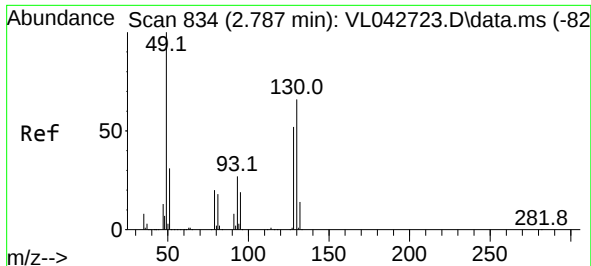
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.807	49	114461	10.000	ppbv	0.02
33) 1,4-Difluorobenzene	3.978	114	333140	10.000	ppbv	0.02
55) Chlorobenzene-d5	8.888	117	294031	10.000	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.380	95	242042	10.185	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.900%

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.489	85	1247	0.070	ppbv	98
3) Chlorodifluoromethane	1.467	51	1178	0.058	ppbv #	90
4) Chloromethane	1.554	50	1543	0.211	ppbv	92
9) Propene	1.554	41	49057	6.842	ppbv	86
13) Ethanol	1.722	45	7289	6.043	ppbv #	35
15) Acetone	1.839	43	126803	6.616	ppbv #	89
16) 1,3-Butadiene	1.616	39	16799	2.047	ppbv #	22
17) tert-Butyl alcohol	2.043	59	2148	0.118	ppbv #	70
18) 1,1-Dichloroethene	2.357	96	4476	0.732	ppbv	93
19) Isopropyl Alcohol	1.891	45	11492	1.131	ppbv #	1
20) Methylene Chloride	2.082	84	4772	0.792	ppbv #	94
21) Allyl Chloride	1.981	41	15954	1.299	ppbv #	87
22) trans-1,2-Dichloroethene	2.357	96	4476	0.638	ppbv	97
23) Vinyl Acetate	2.489	43	7817	0.358	ppbv #	54
24) 1,1-Dichloroethane	2.425	63	6014	0.428	ppbv #	94
25) Ethyl Acetate	2.855	43	10616	0.300	ppbv #	93
26) Hexane	2.845	57	7986	0.515	ppbv #	69
27) Carbon Disulfide	2.166	76	638	0.039	ppbv #	67
28) Methyl tert-Butyl Ether	2.457	73	649	0.072	ppbv #	50
30) Cyclohexane	3.881	84	654	0.048	ppbv #	1
34) 2-Butanone	2.574	43	10150	0.442	ppbv	99
36) Benzene	3.674	78	1651	0.053	ppbv #	83
39) 1,2-Dichloropropane	3.978	63	90240	7.830	ppbv #	22
40) 1,4-Dioxane	4.609	88	456	0.083	ppbv #	59
53) Toluene	6.956	91	6795	0.195	ppbv #	26
58) Ethyl Benzene	9.364	91	4329	0.088	ppbv	100
59) m/p-Xylene	9.542	91	5612	0.143	ppbv #	30
60) o-Xylene	9.973	91	6155	0.155	ppbv	95
73) 1,3,5-Trimethylbenzene	11.209	105	1570	0.040	ppbv #	71
74) 1,2,4-Trimethylbenzene	11.536	105	4168	0.097	ppbv #	55

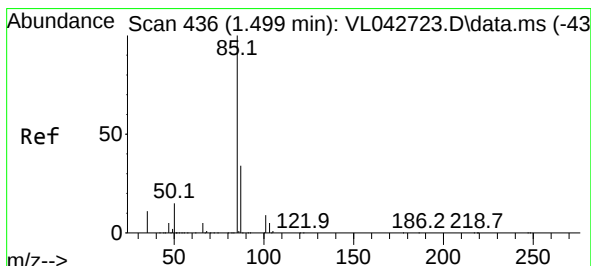
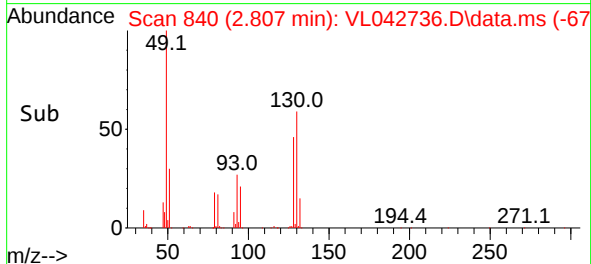
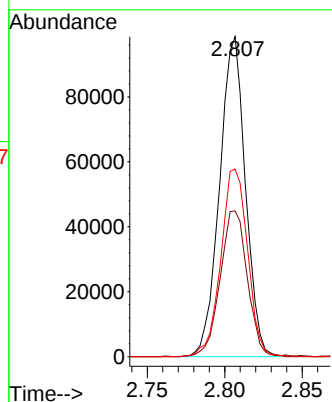
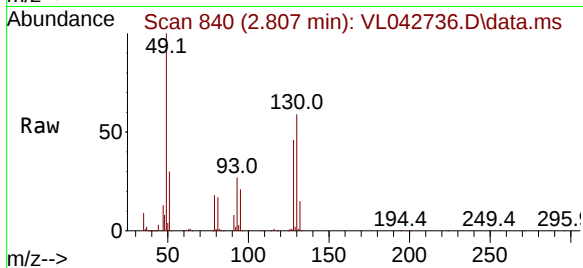
(#) = qualifier out of range (m) = manual integration (+) = signals summed



#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.807 min Scan# 84
Delta R.T. 0.020 min
Lab File: VL042736.D
Acq: 22 Jul 2025 18:17

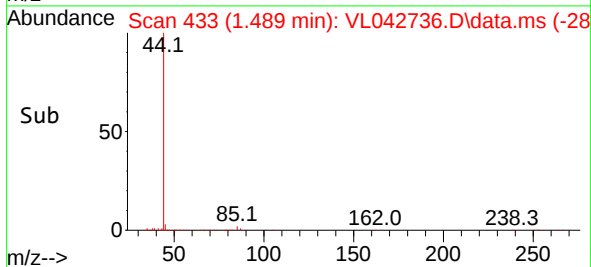
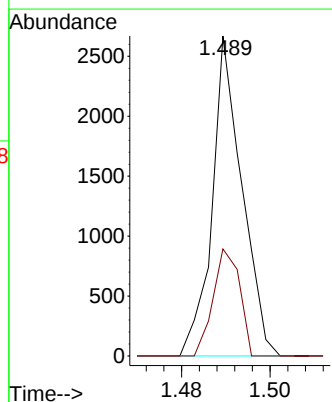
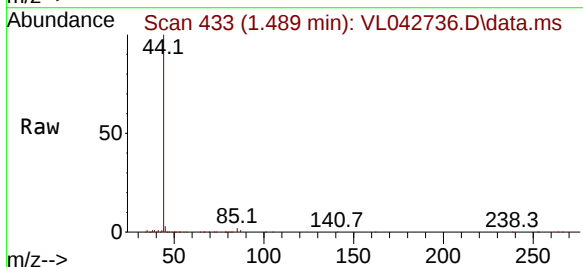
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MSVOA_L
ClientSampleId :

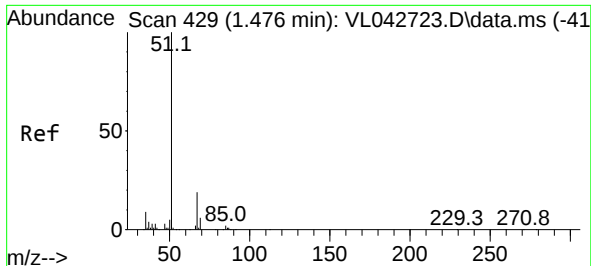
Tgt Ion: 49 Resp: 114461
Ion Ratio Lower Upper
49 100
128 47.7 24.5 73.5
130 61.0 31.7 95.1



#2
Dichlorodifluoromethane
Concen: 0.070 ppbv
RT: 1.489 min Scan# 433
Delta R.T. -0.009 min
Lab File: VL042736.D
Acq: 22 Jul 2025 18:17

Tgt Ion: 85 Resp: 1247
Ion Ratio Lower Upper
85 100
87 33.4 27.5 41.3

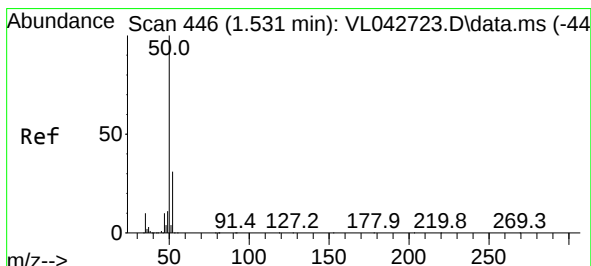
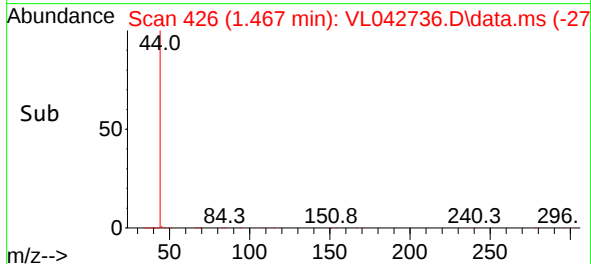
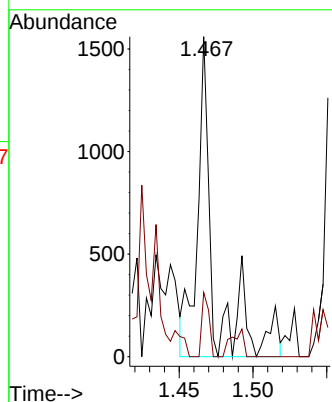
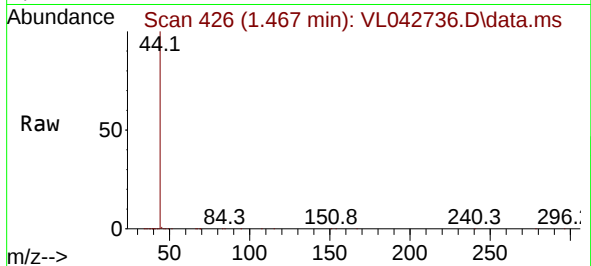




#3
Chlorodifluoromethane
Concen: 0.058 ppbv
RT: 1.467 min Scan# 41
Delta R.T. -0.009 min
Lab File: VL042736.D
Acq: 22 Jul 2025 18:17

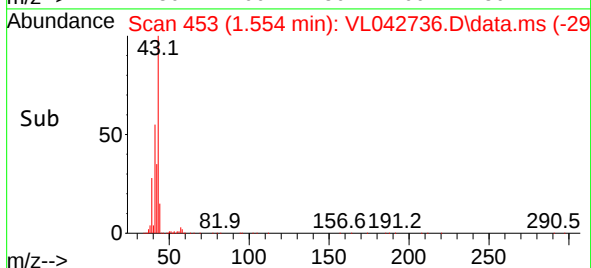
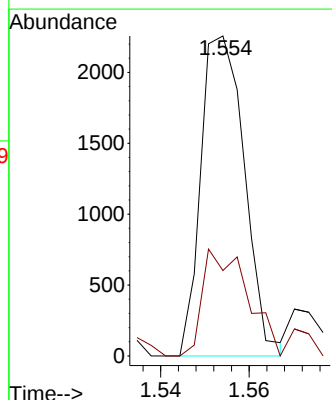
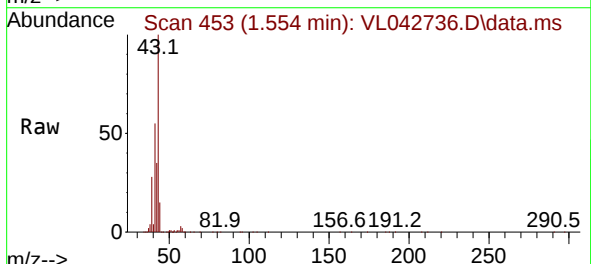
Instrument :
MSVOA_L
ClientSampleId :

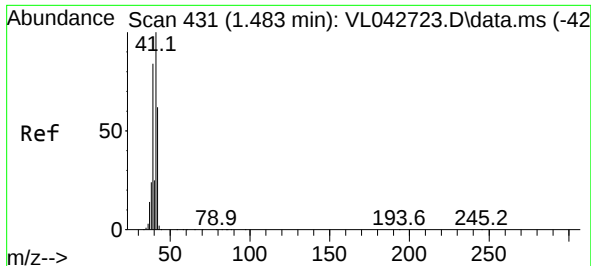
Tgt Ion: 51 Resp: 1178
Ion Ratio Lower Upper
51 100
67 15.5 16.0 24.0#



#4
Chloromethane
Concen: 0.211 ppbv
RT: 1.554 min Scan# 453
Delta R.T. 0.023 min
Lab File: VL042736.D
Acq: 22 Jul 2025 18:17

Tgt Ion: 50 Resp: 1543
Ion Ratio Lower Upper
50 100
52 26.7 24.9 37.3





#9

Propene

Concen: 6.842 ppbv

RT: 1.554 min Scan# 41

Delta R.T. 0.071 min

Lab File: VL042736.D

Acq: 22 Jul 2025 18:17

Instrument :

MSVOA_L

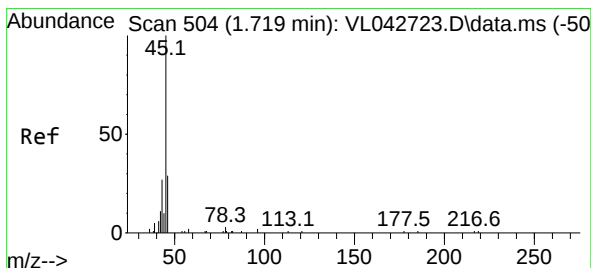
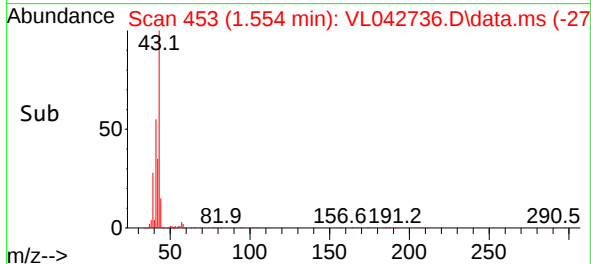
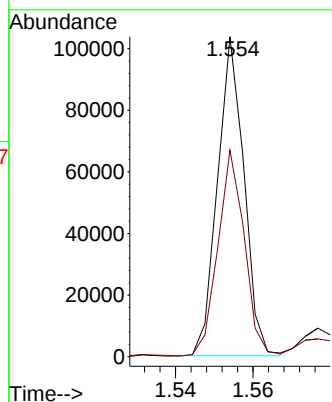
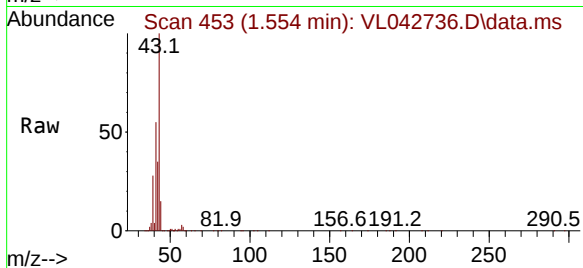
ClientSampleId :

Tgt Ion: 41 Resp: 49057

Ion Ratio Lower Upper

41 100

42 76.0 52.0 78.0



#13

Ethanol

Concen: 6.043 ppbv

RT: 1.722 min Scan# 505

Delta R.T. 0.004 min

Lab File: VL042736.D

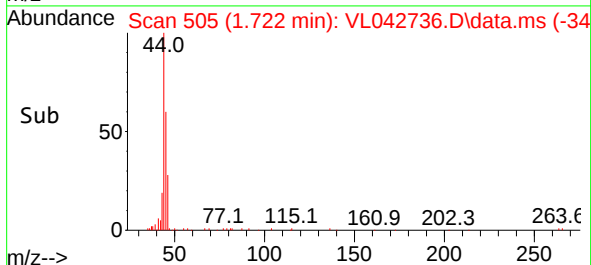
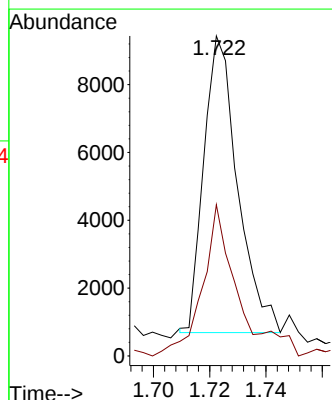
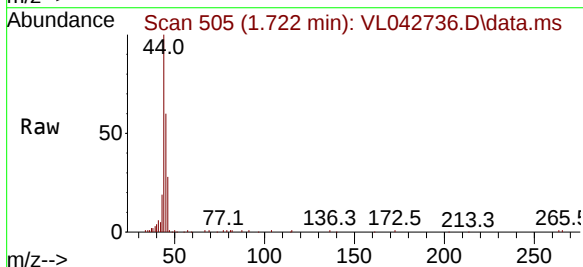
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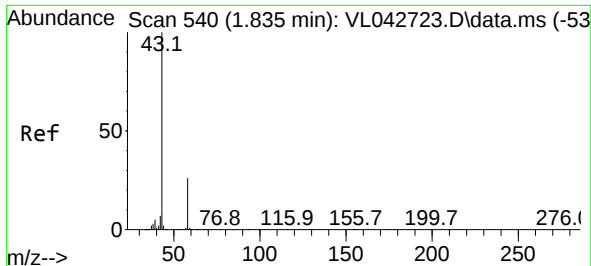
Tgt Ion: 45 Resp: 7289

Ion Ratio Lower Upper

45 100

46 0.0 16.3 65.1#

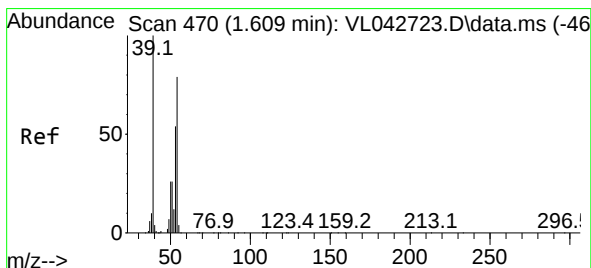
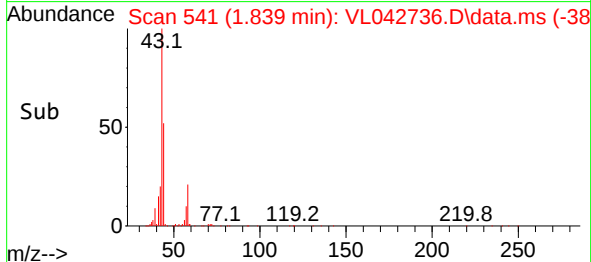
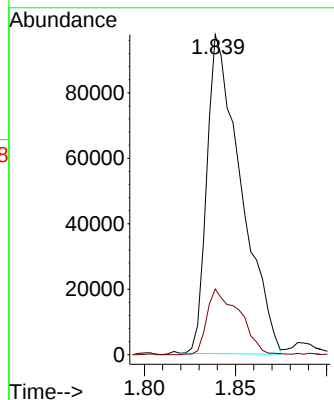
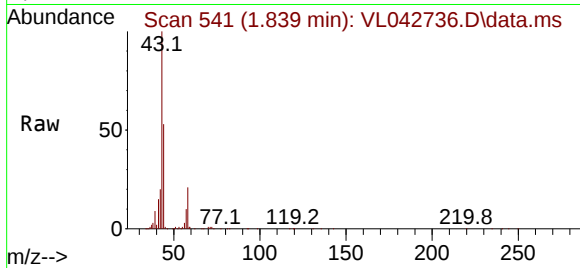




#15
Acetone
Concen: 6.616 ppbv
RT: 1.839 min Scan# 541
Delta R.T. 0.004 min
Lab File: VL042736.D
Acq: 22 Jul 2025 18:17

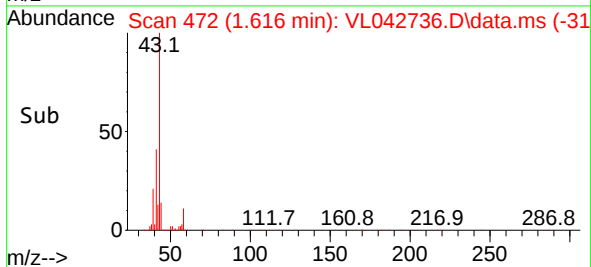
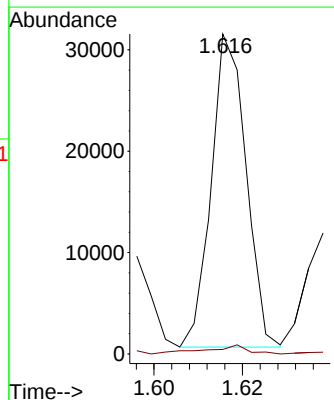
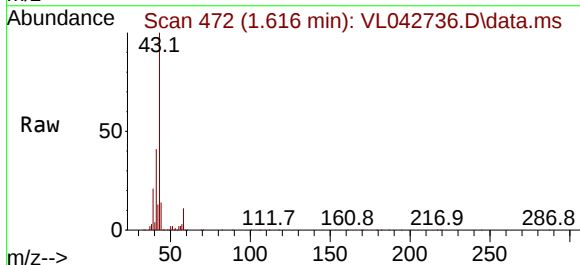
Instrument :
MSVOA_L
ClientSampleId :

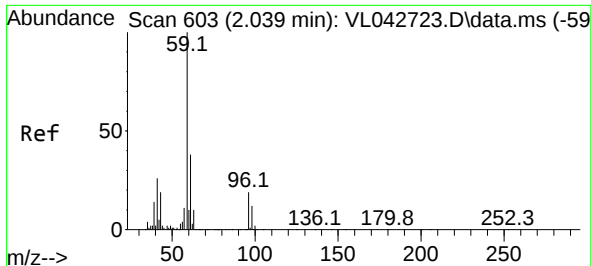
Tgt Ion: 43 Resp: 126803
Ion Ratio Lower Upper
43 100
58 20.1 20.5 30.7#



#16
1,3-Butadiene
Concen: 2.047 ppbv
RT: 1.616 min Scan# 472
Delta R.T. 0.007 min
Lab File: VL042736.D
Acq: 22 Jul 2025 18:17

Tgt Ion: 39 Resp: 16799
Ion Ratio Lower Upper
39 100
54 4.9 54.6 82.0#





#17

tert-Butyl alcohol

Concen: 0.118 ppbv

RT: 2.043 min Scan# 603

Delta R.T. 0.004 min

Lab File: VL042736.D

Acq: 22 Jul 2025 18:17

Instrument :

MSVOA_L

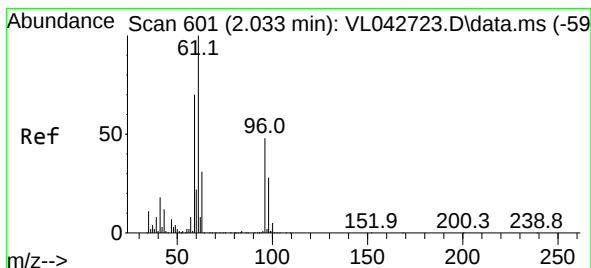
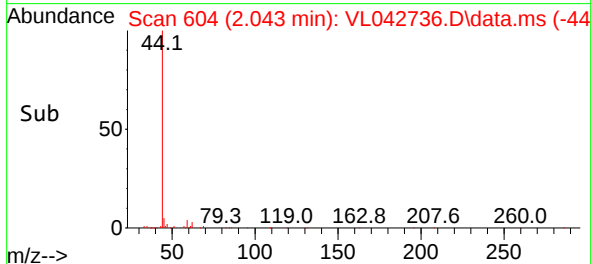
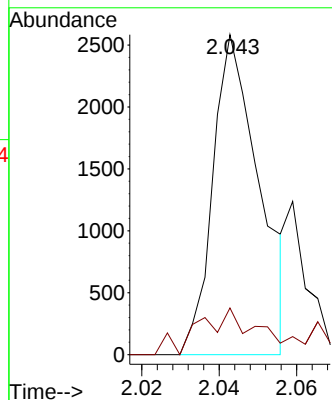
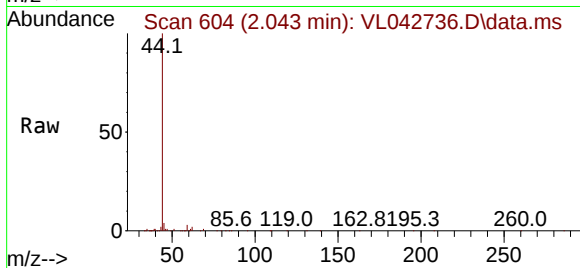
ClientSampleId :

Tgt Ion: 59 Resp: 2148

Ion Ratio Lower Upper

59 100

57 0.0 9.1 13.7#



#18

1,1-Dichloroethene

Concen: 0.732 ppbv

RT: 2.357 min Scan# 701

Delta R.T. 0.324 min

Lab File: VL042736.D

Acq: 22 Jul 2025 18:17

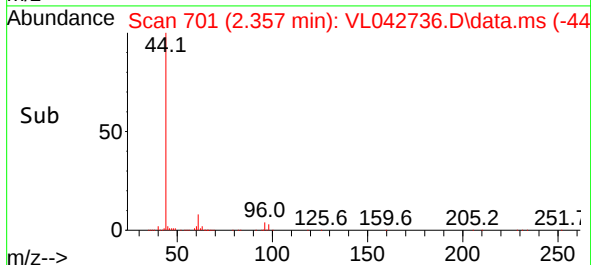
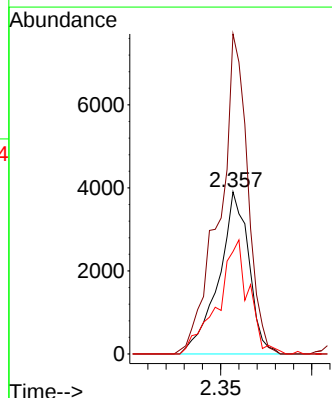
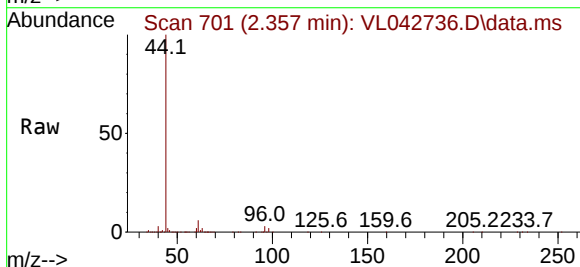
Tgt Ion: 96 Resp: 4476

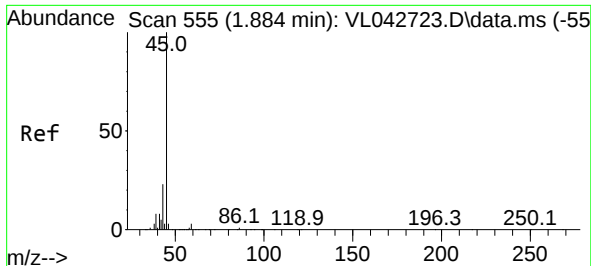
Ion Ratio Lower Upper

96 100

61 197.3 166.2 249.4

98 63.1 46.1 69.1

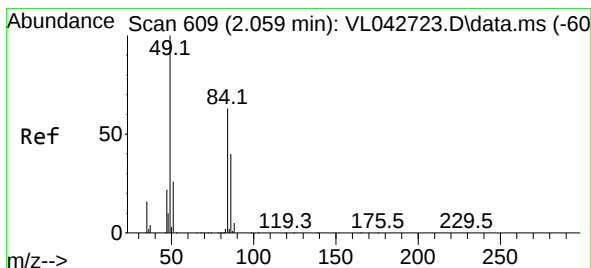
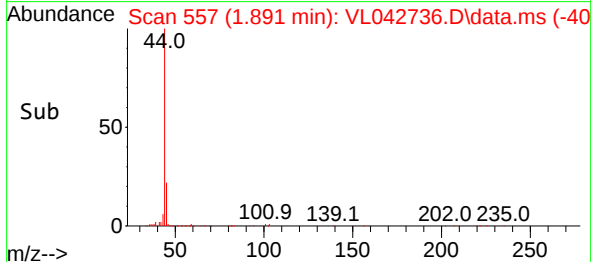
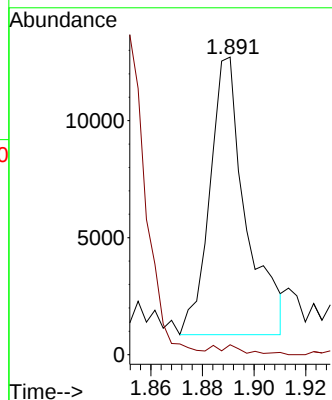
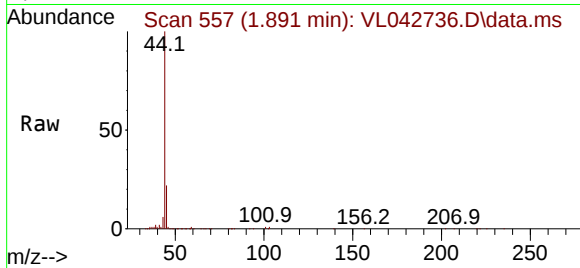




#19
Isopropyl Alcohol
Concen: 1.131 ppbv
RT: 1.891 min Scan# 511
Delta R.T. 0.007 min
Lab File: VL042736.D
Acq: 22 Jul 2025 18:17

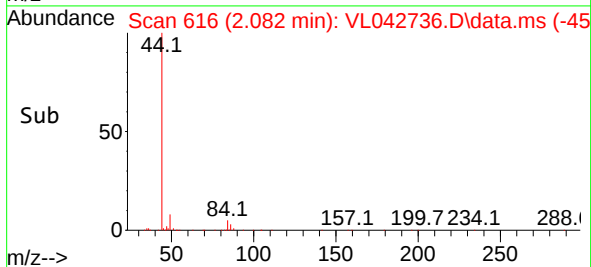
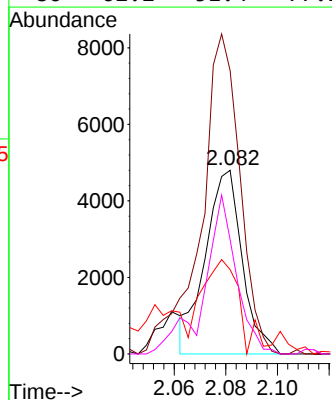
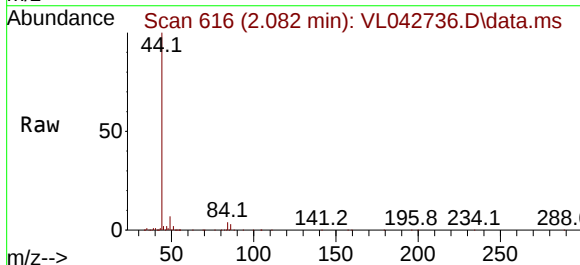
Instrument :
MSVOA_L
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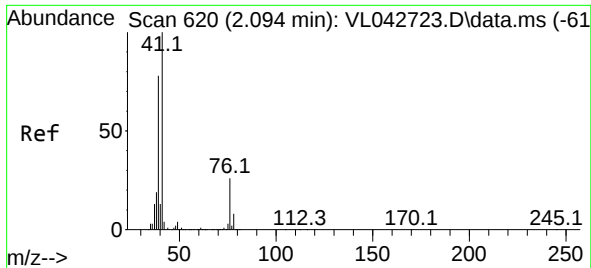
Tgt Ion: 45 Resp: 11492
Ion Ratio Lower Upper
45 100
58 221.2 30.6 46.0#



#20
Methylene Chloride
Concen: 0.792 ppbv
RT: 2.082 min Scan# 616
Delta R.T. 0.023 min
Lab File: VL042736.D
Acq: 22 Jul 2025 18:17

Tgt Ion: 84 Resp: 4772
Ion Ratio Lower Upper
84 100
49 154.3 128.2 192.4
51 31.7 34.5 51.7#
86 62.2 51.4 77.2

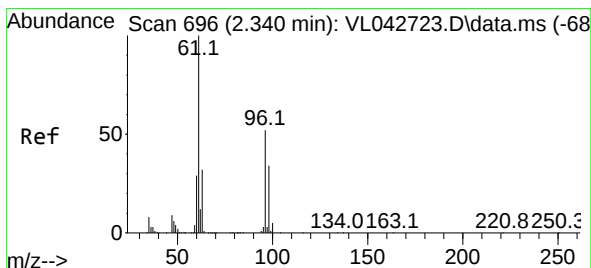
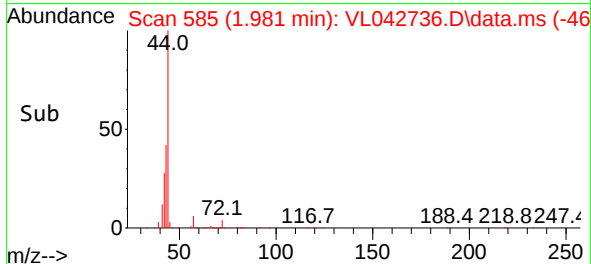
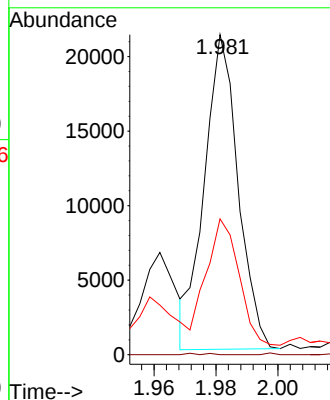
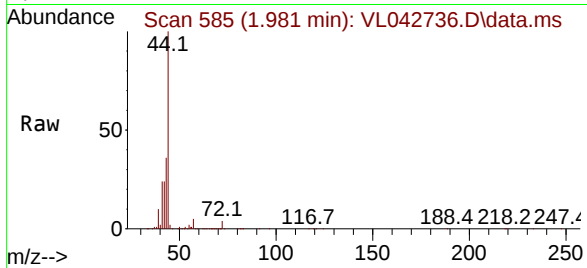




#21
 Allyl Chloride
 Concen: 1.299 ppbv
 RT: 1.981 min Scan# 51
 Delta R.T. -0.113 min
 Lab File: VL042736.D
 Acq: 22 Jul 2025 18:17

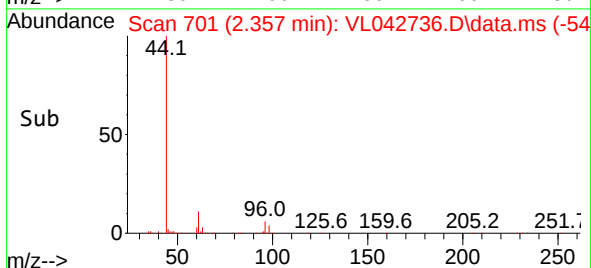
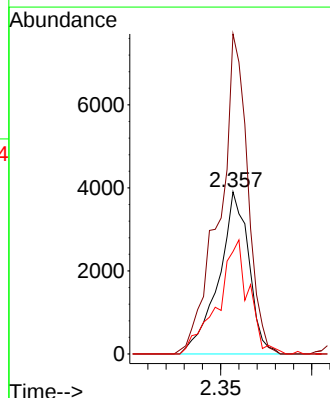
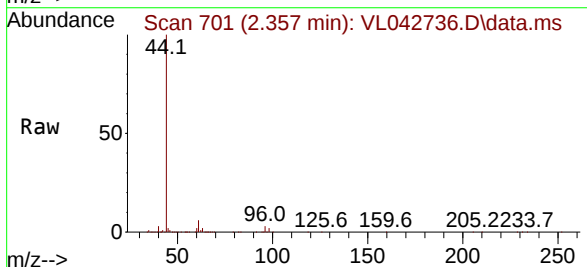
Instrument :
 MSVOA_L
 ClientSampleId :

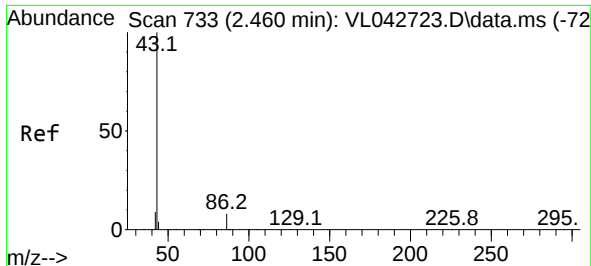
Tgt Ion: 41 Resp: 15954
 Ion Ratio Lower Upper
 41 100
 76 0.0 22.1 33.1#
 39 81.0 64.7 97.1



#22
 trans-1,2-Dichloroethene
 Concen: 0.638 ppbv
 RT: 2.357 min Scan# 701
 Delta R.T. 0.016 min
 Lab File: VL042736.D
 Acq: 22 Jul 2025 18:17

Tgt Ion: 96 Resp: 4476
 Ion Ratio Lower Upper
 96 100
 61 197.3 154.6 232.0
 98 63.1 53.1 79.7

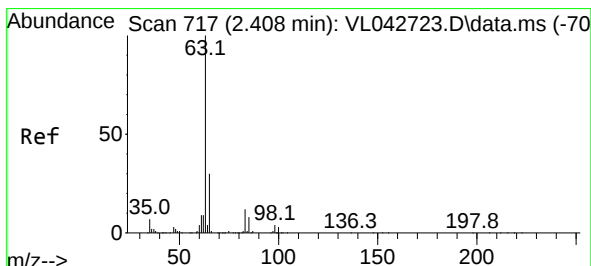
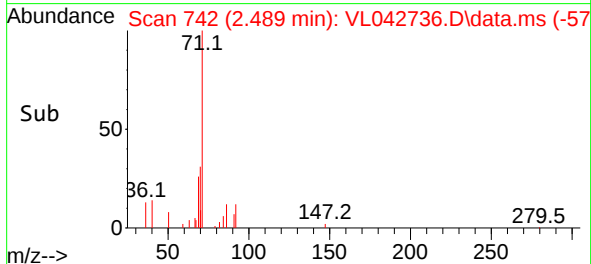
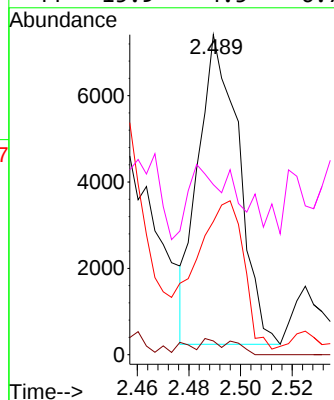
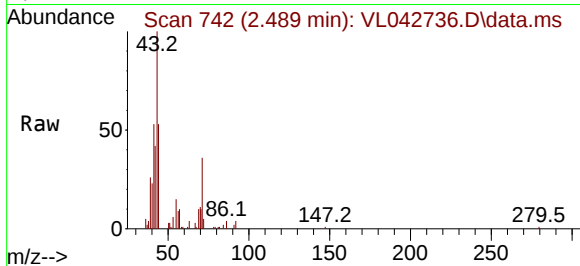




#23
 Vinyl Acetate
 Concen: 0.358 ppbv
 RT: 2.489 min Scan# 741
 Delta R.T. 0.029 min
 Lab File: VL042736.D
 Acq: 22 Jul 2025 18:17

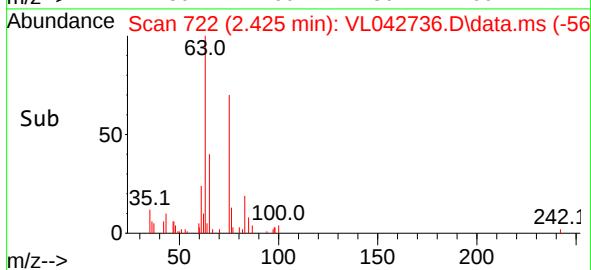
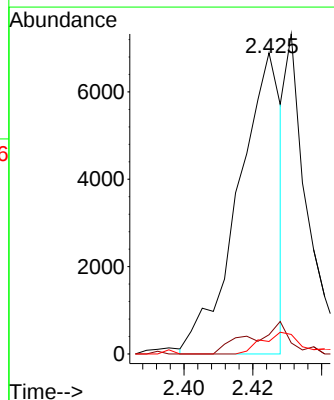
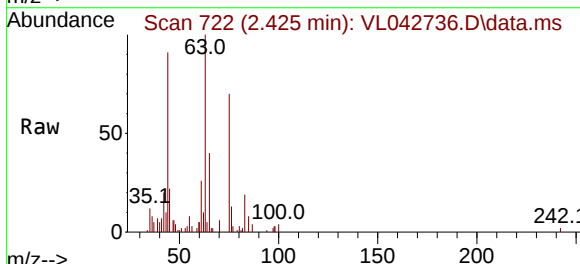
Instrument :
 MSVOA_L
 ClientSampleId :

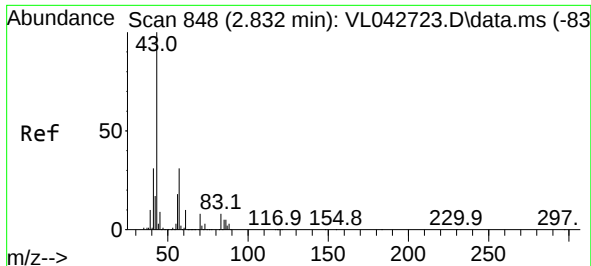
Tgt Ion: 43	Resp: 7817
Ion Ratio	Lower Upper
43 100	
86 4.5	5.7 8.5#
42 40.3	7.9 11.9#
44 15.9	4.5 6.7#



#24
 1,1-Dichloroethane
 Concen: 0.428 ppbv
 RT: 2.425 min Scan# 722
 Delta R.T. 0.016 min
 Lab File: VL042736.D
 Acq: 22 Jul 2025 18:17

Tgt Ion: 63	Resp: 6014
Ion Ratio	Lower Upper
63 100	
98 6.5	2.0 5.8#
100 4.2	1.6 4.7

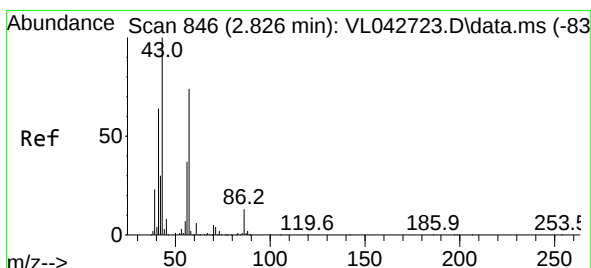
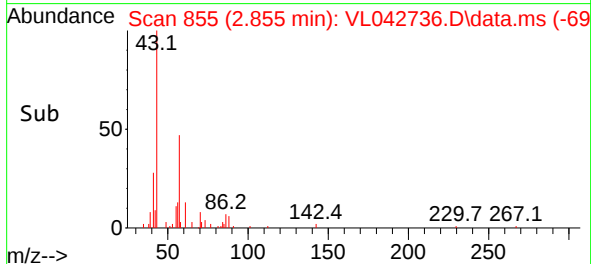
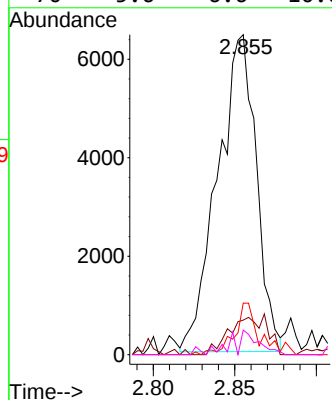
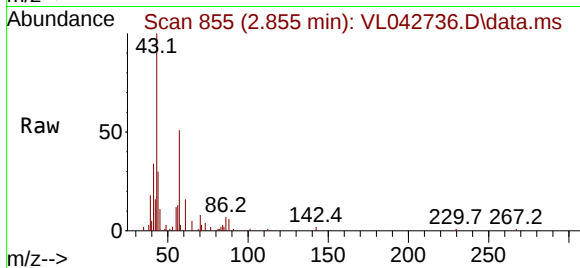




#25
Ethyl Acetate
Concen: 0.300 ppbv
RT: 2.855 min Scan# 81
Delta R.T. 0.023 min
Lab File: VL042736.D
Acq: 22 Jul 2025 18:17

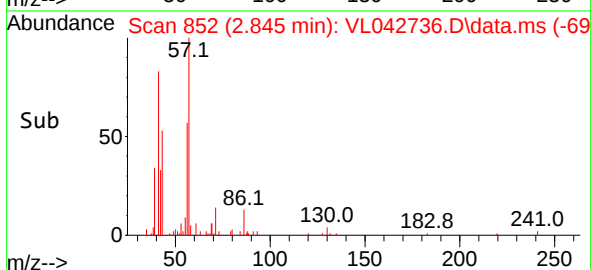
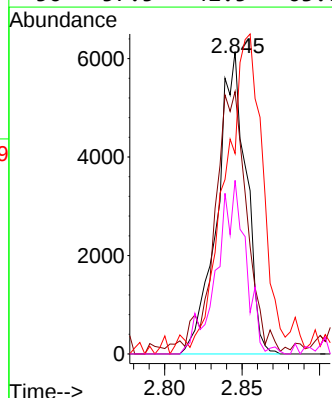
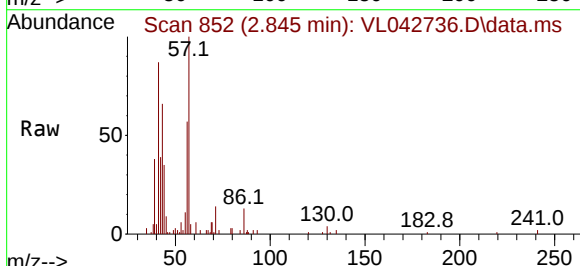
Instrument :
MSVOA_L
ClientSampleId :

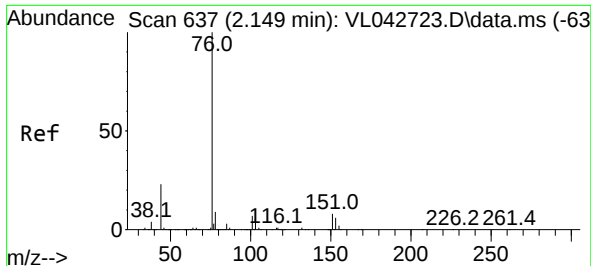
Tgt Ion: 43	Resp: 10616
Ion Ratio	Lower Upper
43 100	
45 13.0	7.8 11.6#
61 10.5	7.0 10.6
70 5.6	6.6 10.0#



#26
Hexane
Concen: 0.515 ppbv
RT: 2.845 min Scan# 852
Delta R.T. 0.020 min
Lab File: VL042736.D
Acq: 22 Jul 2025 18:17

Tgt Ion: 57	Resp: 7986
Ion Ratio	Lower Upper
57 100	
41 100.5	77.3 115.9
43 149.7	182.3 273.5#
56 57.5	42.5 63.7





#27

Carbon Disulfide

Concen: 0.039 ppbv

RT: 2.166 min Scan# 642

Delta R.T. 0.016 min

Lab File: VL042736.D

Acq: 22 Jul 2025 18:17

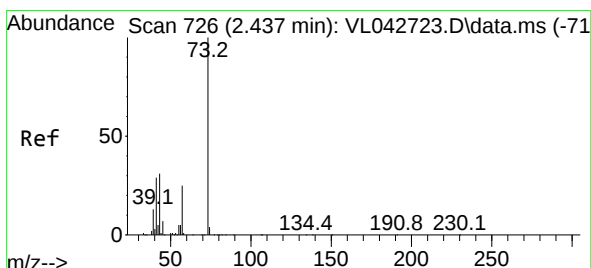
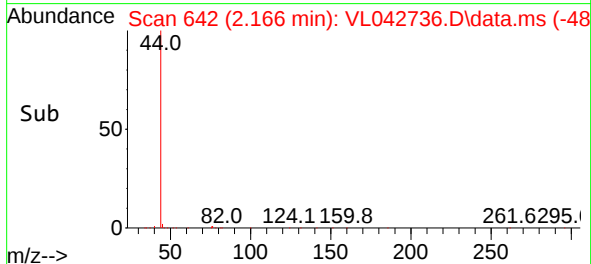
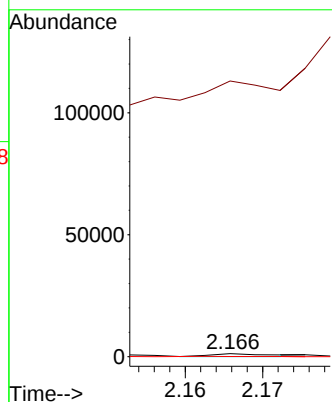
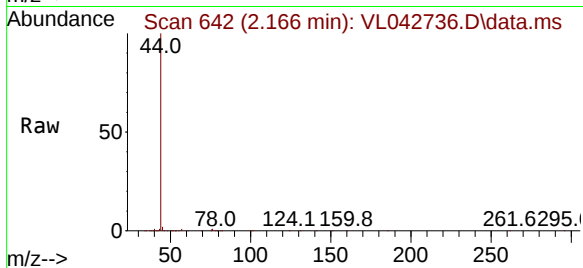
Instrument :

MSVOA_L

ClientSampleId :

Tgt Ion: 76 Resp: 638

Ion	Ratio	Lower	Upper
76	100		
44	0.0	18.8	28.2#
78	13.2	9.5	14.3



#28

Methyl tert-Butyl Ether

Concen: 0.072 ppbv

RT: 2.457 min Scan# 732

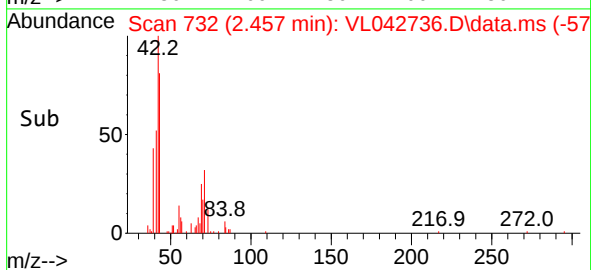
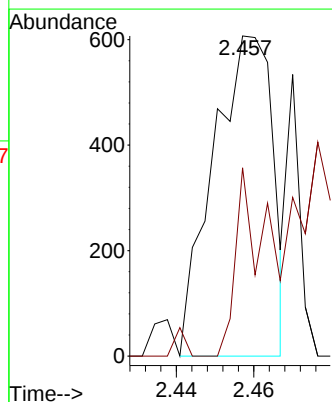
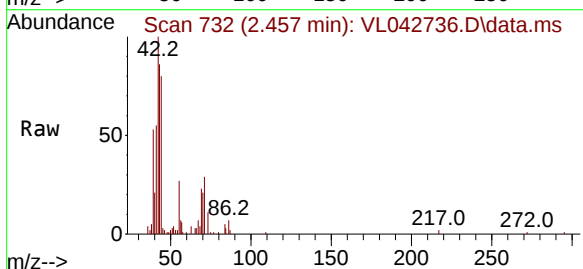
Delta R.T. 0.020 min

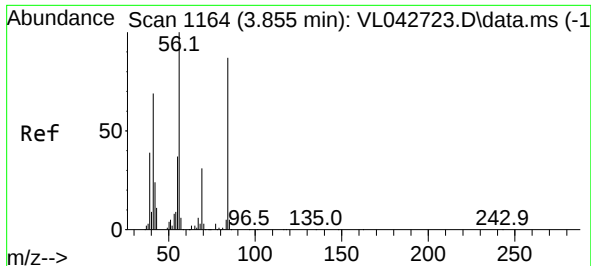
Lab File: VL042736.D

Acq: 22 Jul 2025 18:17

Tgt Ion: 73 Resp: 649

Ion	Ratio	Lower	Upper
73	100		
57	0.0	19.8	29.8#

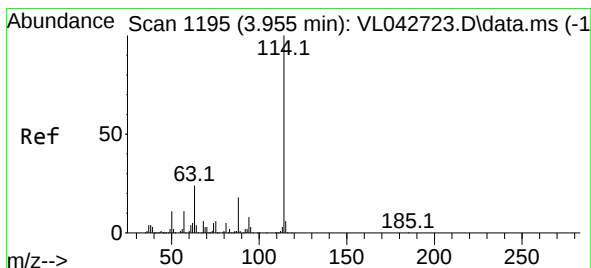
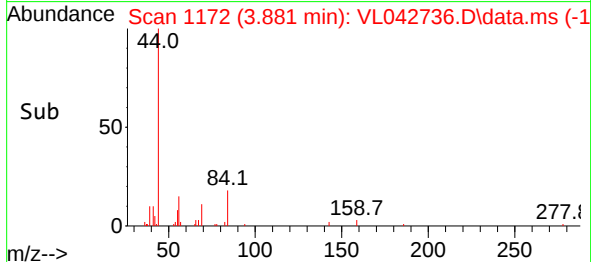
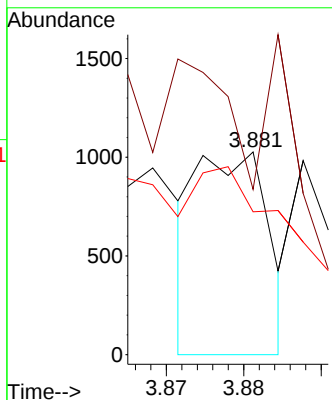
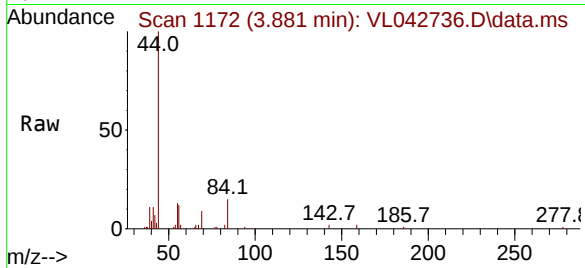




#30
Cyclohexane
Concen: 0.048 ppbv
RT: 3.881 min Scan# 1164
Delta R.T. 0.026 min
Lab File: VL042736.D
Acq: 22 Jul 2025 18:17

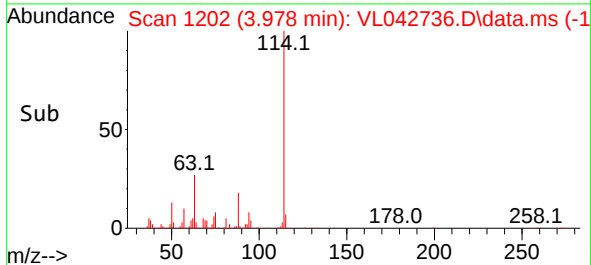
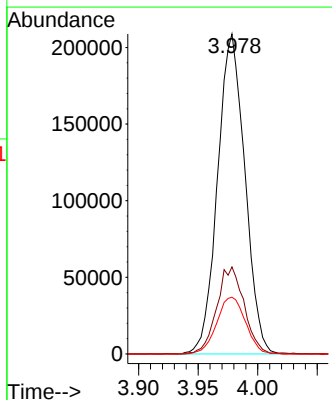
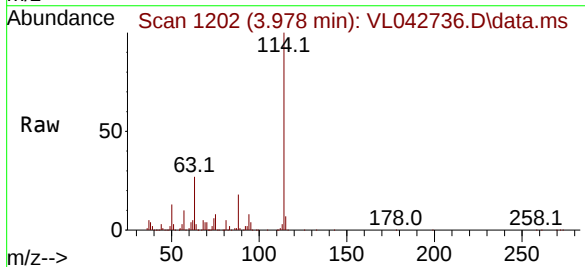
Instrument :
MSVOA_L
ClientSampleId :

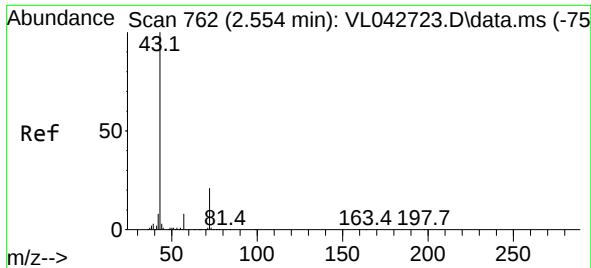
Tgt Ion: 84 Resp: 654
Ion Ratio Lower Upper
84 100
56 0.0 94.2 141.4#
41 405.0 66.4 99.6#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 3.978 min Scan# 1202
Delta R.T. 0.023 min
Lab File: VL042736.D
Acq: 22 Jul 2025 18:17

Tgt Ion: 114 Resp: 333140
Ion Ratio Lower Upper
114 100
63 27.3 20.4 30.6
88 18.7 14.5 21.7

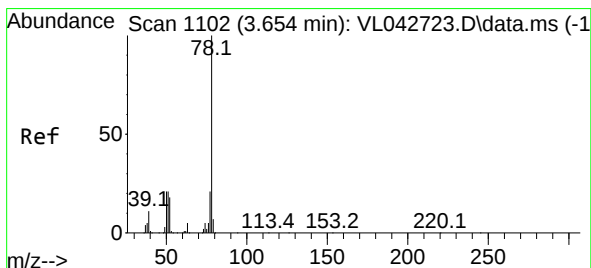
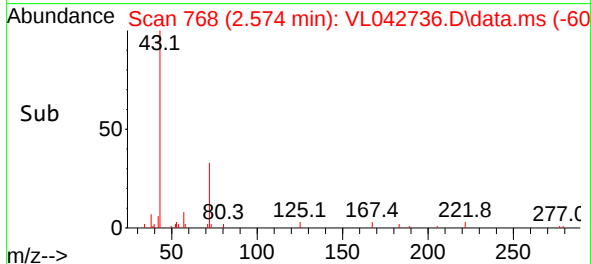
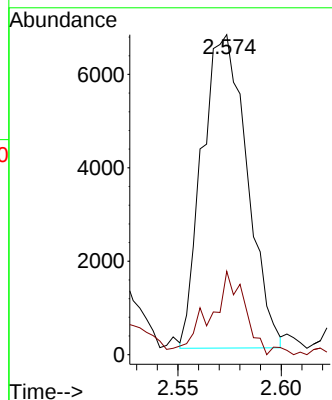
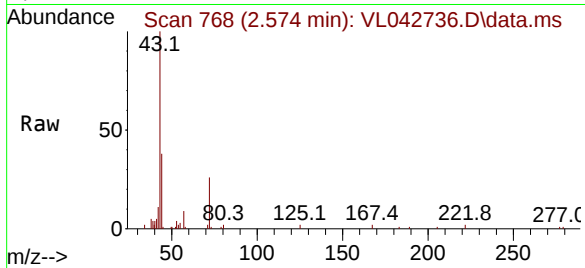




#34
2-Butanone
Concen: 0.442 ppbv
RT: 2.574 min Scan# 71
Delta R.T. 0.020 min
Lab File: VL042736.D
Acq: 22 Jul 2025 18:17

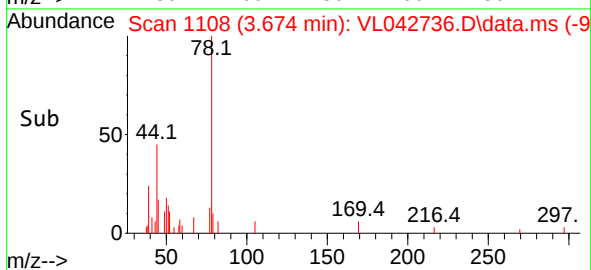
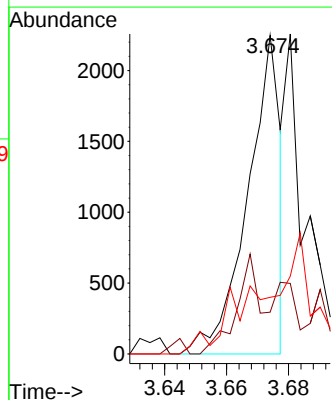
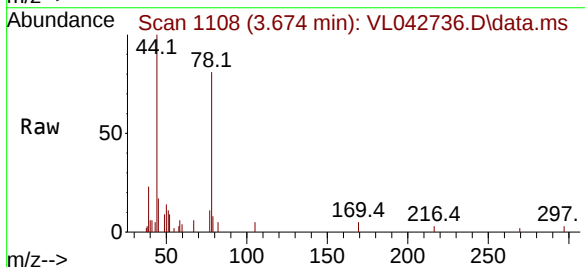
Instrument :
MSVOA_L
ClientSampleId :

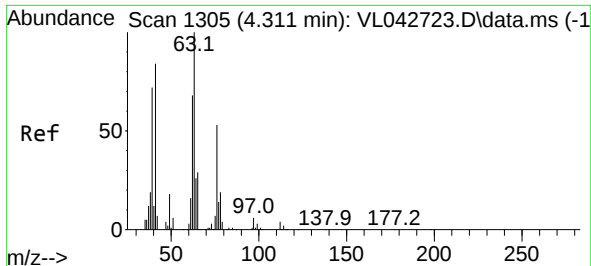
Tgt Ion: 43 Resp: 10150
Ion Ratio Lower Upper
43 100
72 21.6 17.0 25.6



#36
Benzene
Concen: 0.053 ppbv
RT: 3.674 min Scan# 1108
Delta R.T. 0.020 min
Lab File: VL042736.D
Acq: 22 Jul 2025 18:17

Tgt Ion: 78 Resp: 1651
Ion Ratio Lower Upper
78 100
77 8.2 17.0 25.4#
50 17.7 16.9 25.3





#39

1,2-Dichloropropane

Concen: 7.830 ppbv

RT: 3.978 min Scan# 1

Delta R.T. -0.333 min

Lab File: VL042736.D

Acq: 22 Jul 2025 18:17

Instrument :

MSVOA_L

ClientSampleId :

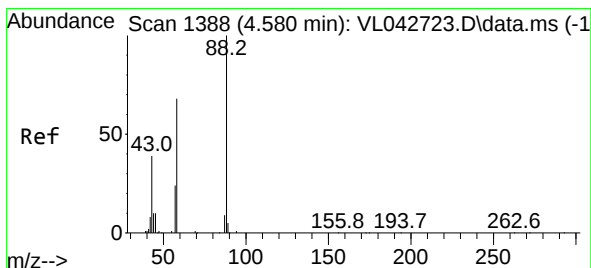
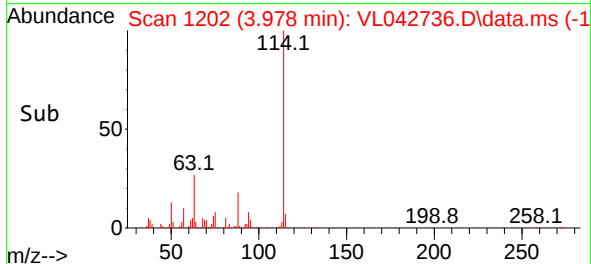
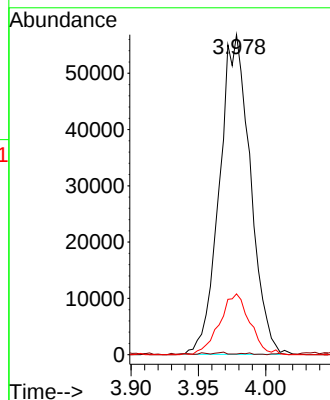
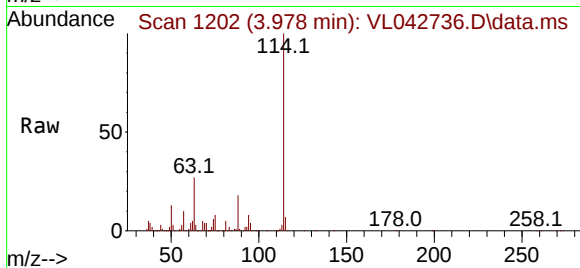
Tgt Ion: 63 Resp: 90240

Ion Ratio Lower Upper

63 100

41 0.0 67.7 101.5#

62 19.1 54.1 81.1#



#40

1,4-Dioxane

Concen: 0.083 ppbv

RT: 4.609 min Scan# 1397

Delta R.T. 0.029 min

Lab File: VL042736.D

Acq: 22 Jul 2025 18:17

Tgt Ion: 88 Resp: 456

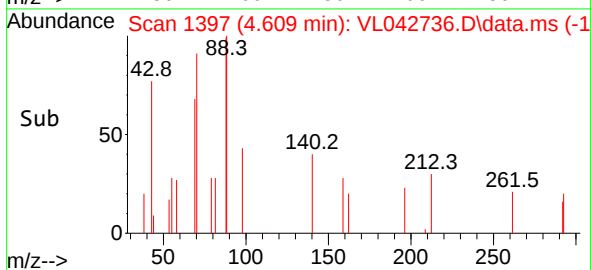
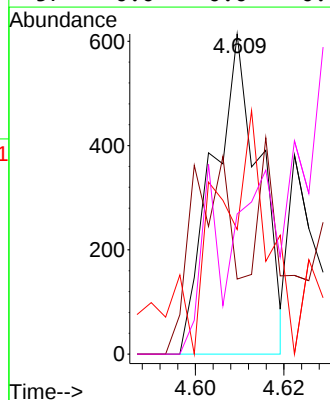
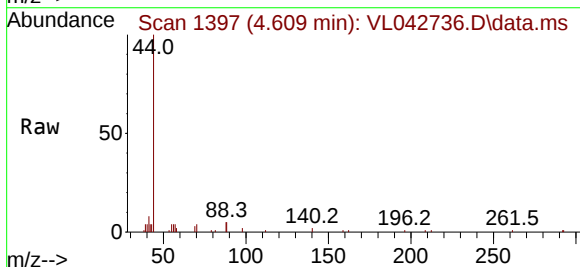
Ion Ratio Lower Upper

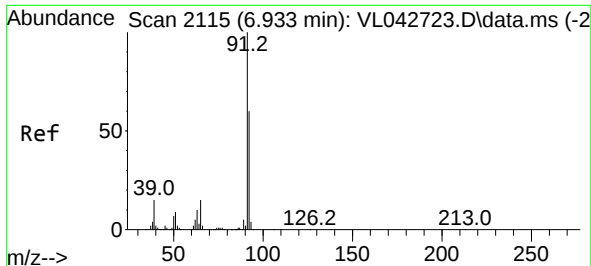
88 100

58 51.3 59.8 89.8#

43 0.0 32.6 48.8#

57 0.0 0.0 0.0

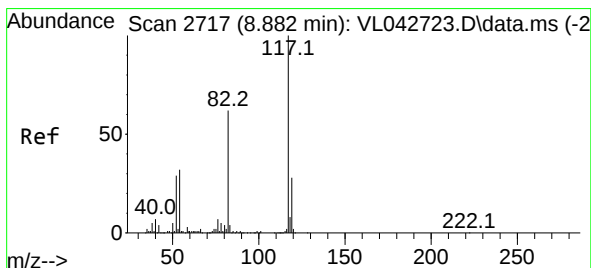
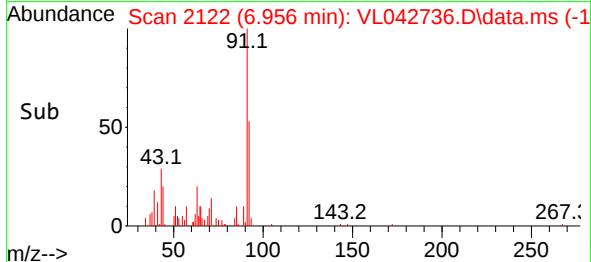
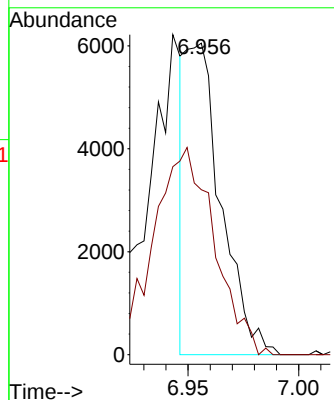
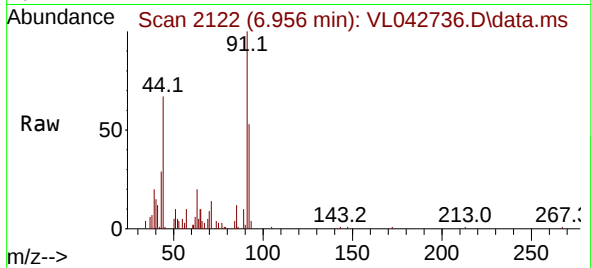




#53
Toluene
Concen: 0.195 ppbv
RT: 6.956 min Scan# 2115
Delta R.T. 0.023 min
Lab File: VL042736.D
Acq: 22 Jul 2025 18:17

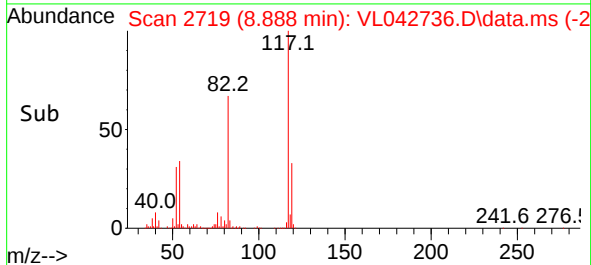
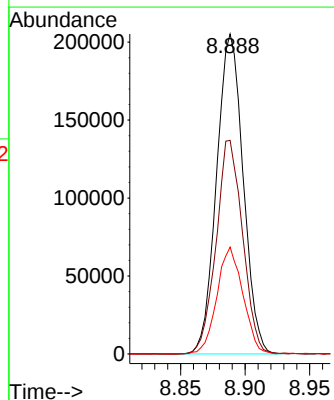
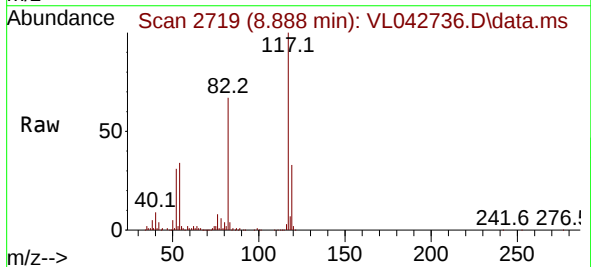
Instrument :
MSVOA_L
ClientSampleId :

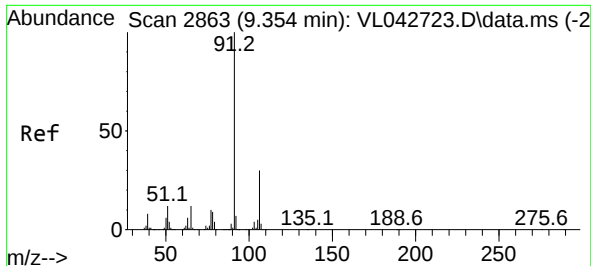
Tgt Ion: 91 Resp: 6795
Ion Ratio Lower Upper
91 100
92 116.1 48.2 72.4#



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.888 min Scan# 2719
Delta R.T. 0.007 min
Lab File: VL042736.D
Acq: 22 Jul 2025 18:17

Tgt Ion: 117 Resp: 294031
Ion Ratio Lower Upper
117 100
82 66.5 54.6 81.8
119 32.9 25.3 37.9

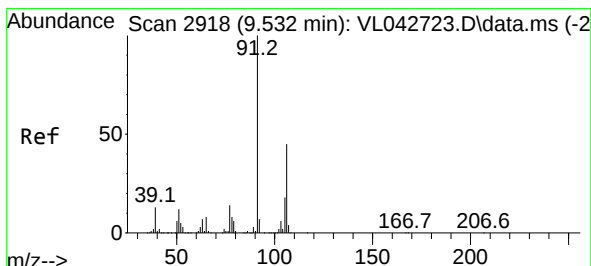
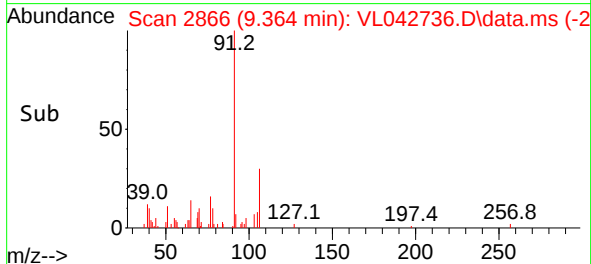
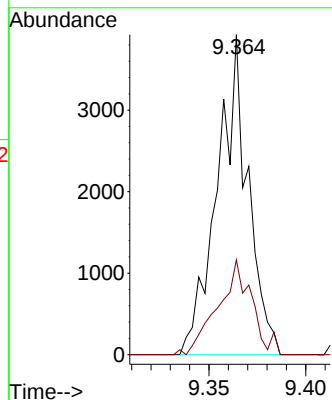
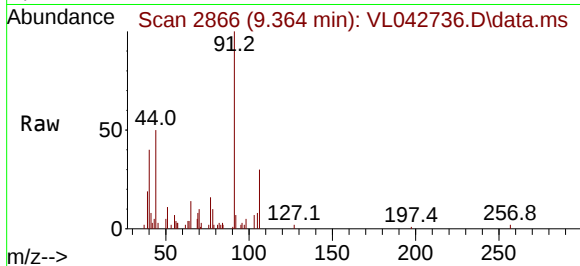




#58
Ethyl Benzene
Concen: 0.088 ppbv
RT: 9.364 min Scan# 21
Delta R.T. 0.010 min
Lab File: VL042736.D
Acq: 22 Jul 2025 18:17

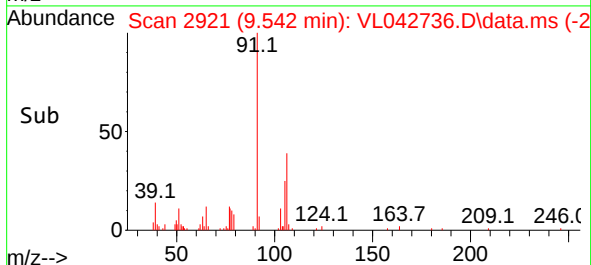
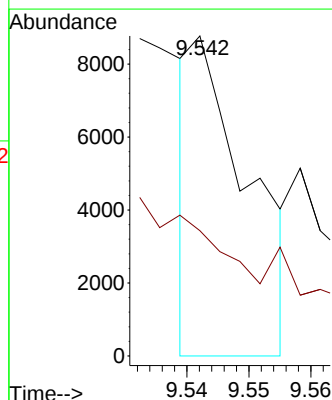
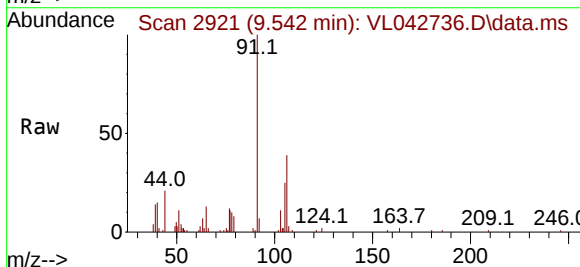
Instrument :
MSVOA_L
ClientSampleId :

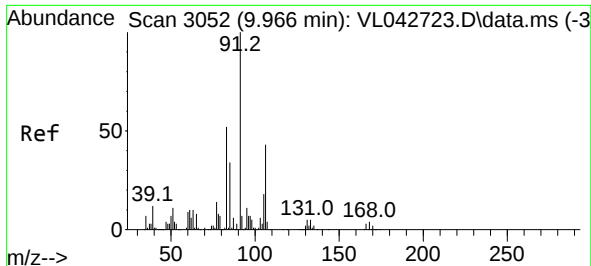
Tgt Ion: 91 Resp: 4329
Ion Ratio Lower Upper
91 100
106 29.6 23.7 35.5



#59
m/p-Xylene
Concen: 0.143 ppbv
RT: 9.542 min Scan# 2921
Delta R.T. 0.010 min
Lab File: VL042736.D
Acq: 22 Jul 2025 18:17

Tgt Ion: 91 Resp: 5612
Ion Ratio Lower Upper
91 100
106 0.0 37.3 55.9#

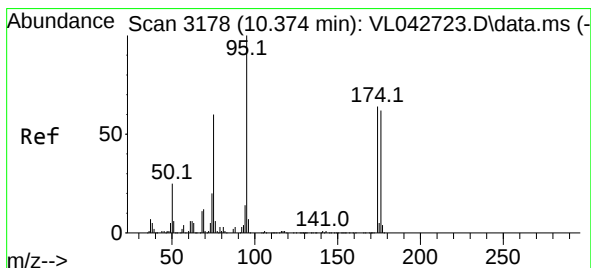
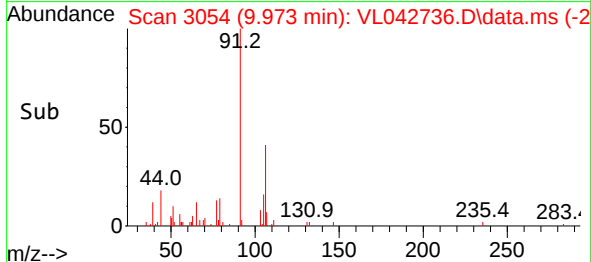
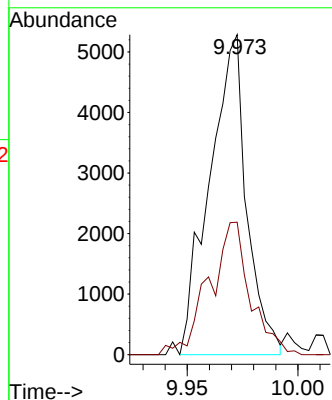
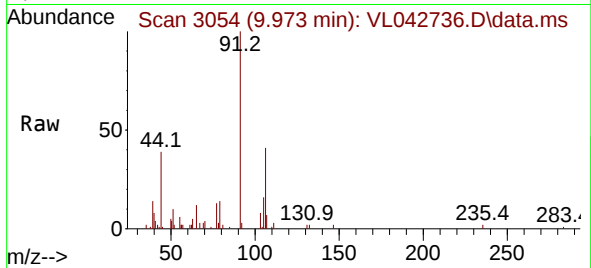




#60
o-Xylene
Concen: 0.155 ppbv
RT: 9.973 min Scan# 3052
Delta R.T. 0.007 min
Lab File: VL042736.D
Acq: 22 Jul 2025 18:17

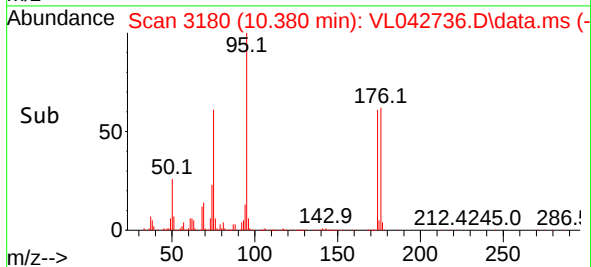
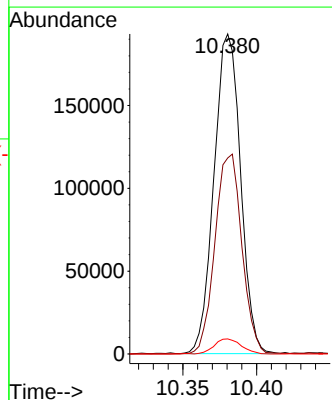
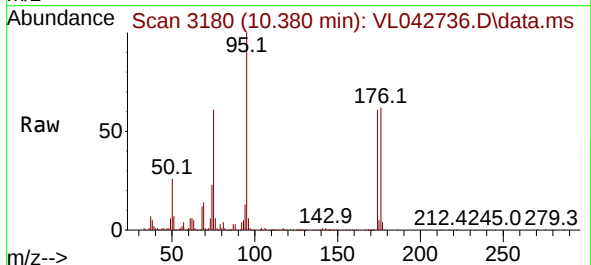
Instrument :
MSVOA_L
ClientSampleId :

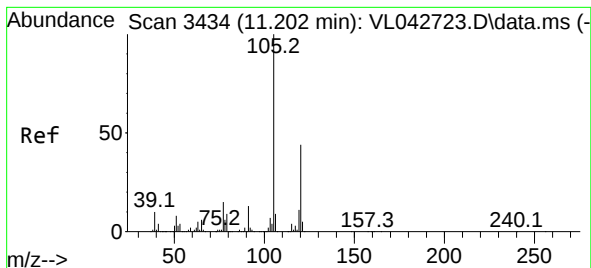
Tgt Ion: 91 Resp: 6155
Ion Ratio Lower Upper
91 100
106 46.0 21.4 64.3



#68
1-Bromo-4-Fluorobenzene
Concen: 10.185 ppbv
RT: 10.380 min Scan# 3180
Delta R.T. 0.007 min
Lab File: VL042736.D
Acq: 22 Jul 2025 18:17

Tgt Ion: 95 Resp: 242042
Ion Ratio Lower Upper
95 100
174 63.6 51.4 77.2
175 4.8 4.2 6.4





#73

1,3,5-Trimethylbenzene

Concen: 0.040 ppbv

RT: 11.209 min Scan# 3434

Delta R.T. 0.007 min

Lab File: VL042736.D

Acq: 22 Jul 2025 18:17

Instrument :

MSVOA_L

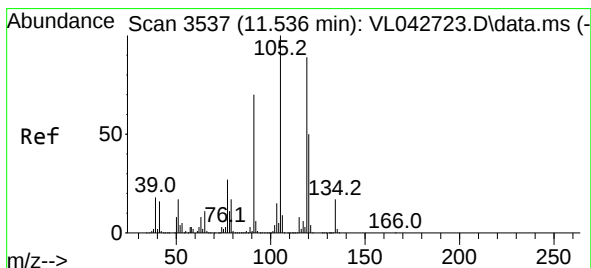
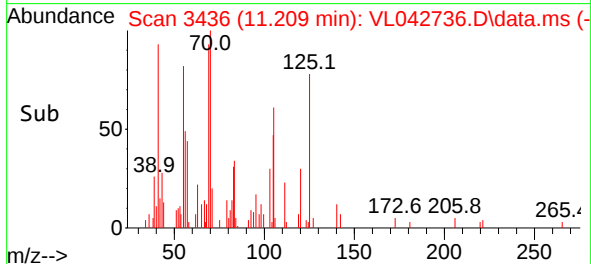
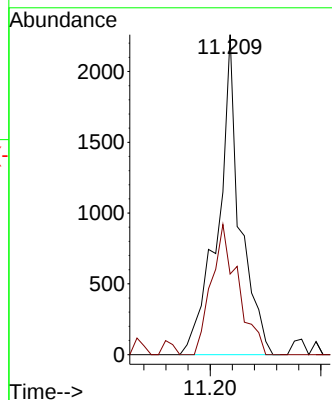
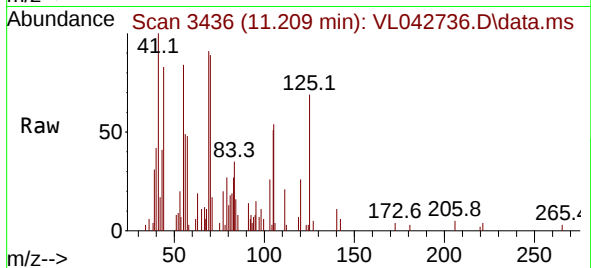
ClientSampleId :

Tgt Ion:105 Resp: 1570

Ion Ratio Lower Upper

105 100

120 25.2 35.2 52.8#



#74

1,2,4-Trimethylbenzene

Concen: 0.097 ppbv

RT: 11.536 min Scan# 3537

Delta R.T. 0.000 min

Lab File: VL042736.D

Acq: 22 Jul 2025 18:17

Tgt Ion:105 Resp: 4168

Ion Ratio Lower Upper

105 100

120 33.5 39.9 59.9#

91 14.1 56.5 84.7#

77 14.2 21.8 32.6#

