

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL040925\
 Data File : VL042295.D
 Acq On : 09 Apr 2025 16:23
 Operator : SY/MD
 Sample : Q1665-09
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-B9-2-3242025

Quant Time: Apr 10 01:46:13 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

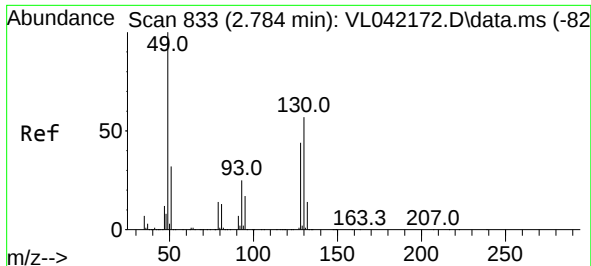
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.787	49	157163	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.959	114	385586	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.882	117	326865	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.377	95	260627	9.709	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	97.100%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.499	85	9767	0.421	ppbv	99
3) Chlorodifluoromethane	1.476	51	25214	1.064	ppbv #	89
4) Chloromethane	1.531	50	5476	0.577	ppbv	100
7) Chloroethane	1.703	64	148	0.039	ppbv #	70
9) Propene	1.560	41	18149	1.670	ppbv	84
11) Trichlorofluoromethane	1.877	101	5036	0.223	ppbv	91
12) 1,1,2-Trichlorotrifluo...	2.140	101	1123	0.061	ppbv	94
13) Ethanol	1.722	45	26305	25.610	ppbv	83
15) Acetone	1.835	43	140811	6.406	ppbv	91
16) 1,3-Butadiene	1.599	39	2235	0.208	ppbv #	52
17) tert-Butyl alcohol	1.884	59	9877	0.361	ppbv	99
19) Isopropyl Alcohol	1.887	45	262397	21.158	ppbv #	33
20) Methylene Chloride	2.062	84	9600	1.173	ppbv	93
21) Allyl Chloride	2.039	41	725	0.047	ppbv #	24
23) Vinyl Acetate	2.470	43	9581	1.007	ppbv #	49
25) Ethyl Acetate	2.826	43	39156	0.686	ppbv #	83
26) Hexane	2.826	57	42387	1.924	ppbv #	35
29) Chloroform	2.845	83	1821	0.056	ppbv #	82
34) 2-Butanone	2.560	43	89072	3.186	ppbv	97
35) Carbon Tetrachloride	3.758	117	1368	0.045	ppbv #	92
36) Benzene	3.654	78	11286	0.295	ppbv	92
39) 1,2-Dichloropropane	3.959	63	97589	7.010	ppbv #	22
41) Tetrahydrofuran	3.065	42	2040	0.127	ppbv #	88
44) 2,2,4-Trimethylpentane	4.645	57	2338	0.036	ppbv #	1
53) Toluene	6.933	91	17473	0.386	ppbv	97
57) Chlorobenzene	8.924	112	6308	0.203	ppbv #	76
58) Ethyl Benzene	9.354	91	3072	0.053	ppbv #	82
59) m/p-Xylene	9.552	91	1588	0.034	ppbv #	31
60) o-Xylene	9.963	91	4768	0.103	ppbv	97
62) Isopropylbenzene	10.807	105	46203	0.665	ppbv #	50
71) 2-Chlorotoluene	10.856	91	13101	0.243	ppbv #	48
74) 1,2,4-Trimethylbenzene	11.536	105	3557	0.061	ppbv #	67

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

Quant Time: Apr 10 01:46:13 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL032725AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
QLast Update : Fri Mar 28 02:00:52 2025
Response via : Initial Calibration

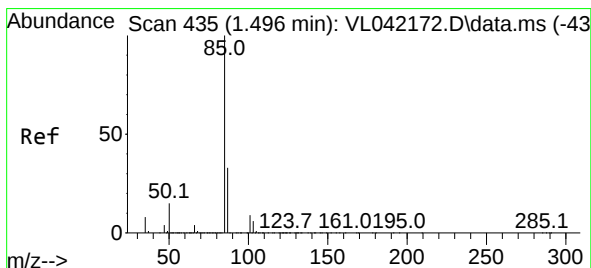
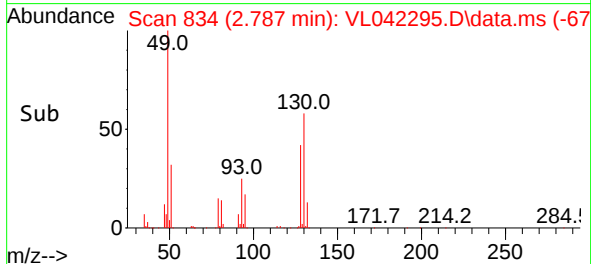
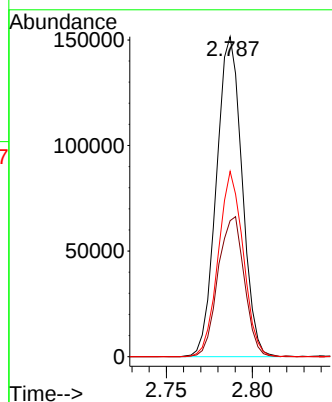
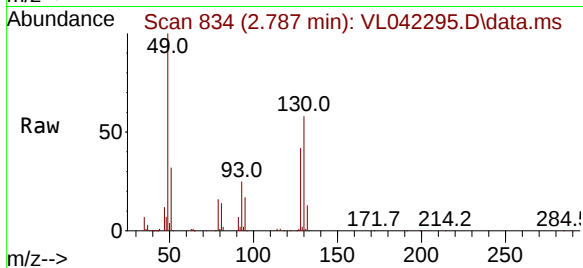




#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 2.787 min Scan# 81
 Delta R.T. 0.003 min
 Lab File: VL042295.D
 Acq: 09 Apr 2025 16:23

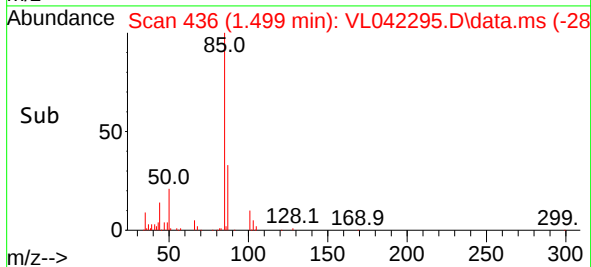
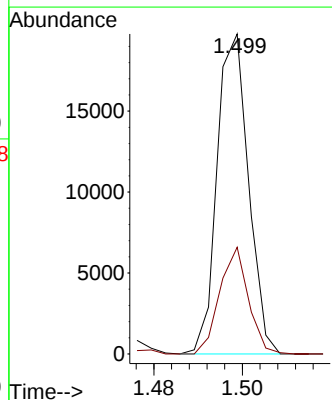
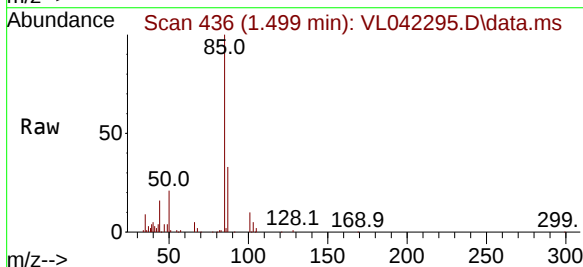
Instrument :
 MSVOA_L
 ClientSampleId :
 IA-B9-2-3242025

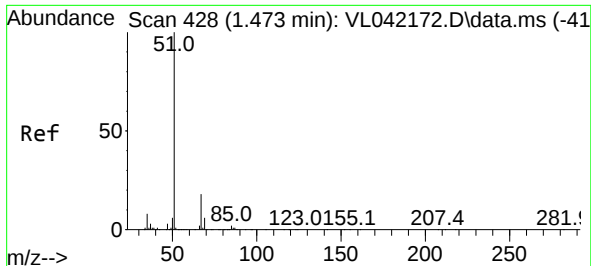
Tgt Ion: 49 Resp: 157163
 Ion Ratio Lower Upper
 49 100
 128 44.9 22.9 68.5
 130 56.4 28.8 86.4



#2
 Dichlorodifluoromethane
 Concen: 0.421 ppbv
 RT: 1.499 min Scan# 436
 Delta R.T. 0.003 min
 Lab File: VL042295.D
 Acq: 09 Apr 2025 16:23

Tgt Ion: 85 Resp: 9767
 Ion Ratio Lower Upper
 85 100
 87 33.4 26.1 39.1

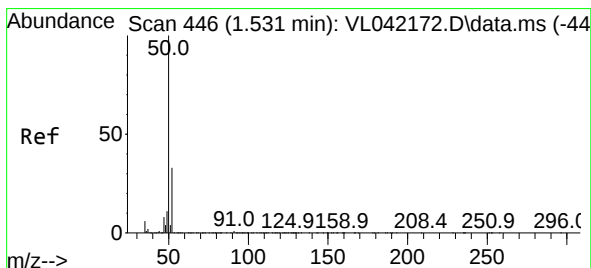
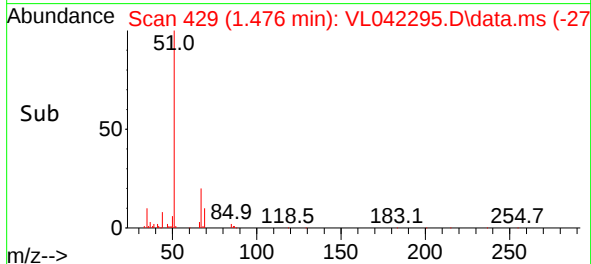
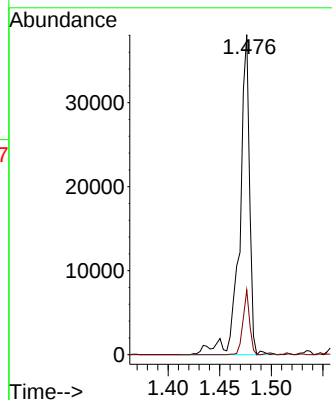
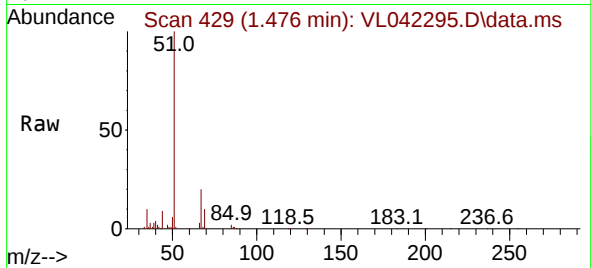




#3
Chlorodifluoromethane
Concen: 1.064 ppbv
RT: 1.476 min Scan# 41
Delta R.T. 0.003 min
Lab File: VL042295.D
Acq: 09 Apr 2025 16:23

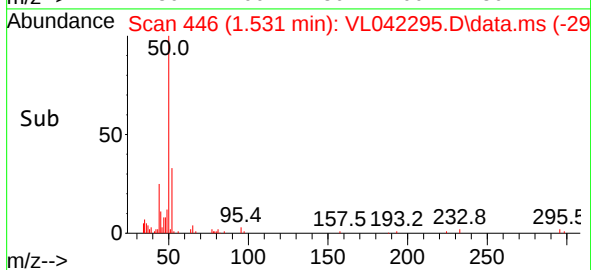
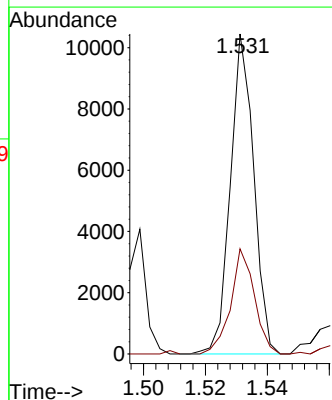
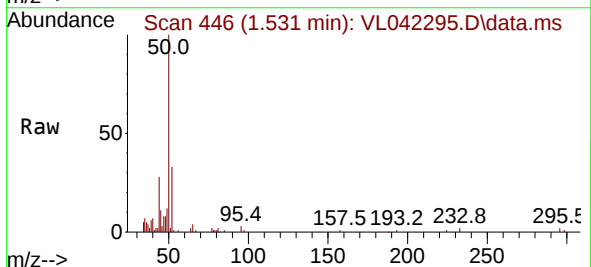
Instrument :
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ClientSampleId :
IA-B9-2-3242025

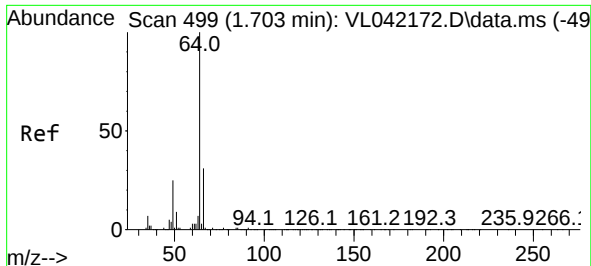
Tgt Ion: 51 Resp: 25214
Ion Ratio Lower Upper
51 100
67 13.7 15.0 22.6#



#4
Chloromethane
Concen: 0.577 ppbv
RT: 1.531 min Scan# 446
Delta R.T. -0.000 min
Lab File: VL042295.D
Acq: 09 Apr 2025 16:23

Tgt Ion: 50 Resp: 5476
Ion Ratio Lower Upper
50 100
52 32.9 26.1 39.1

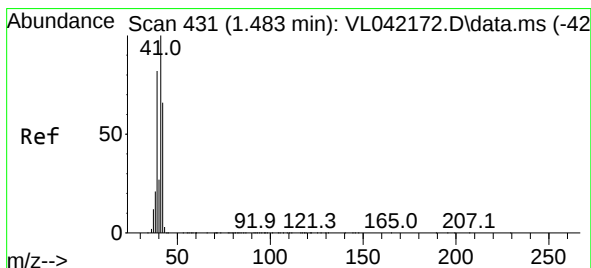
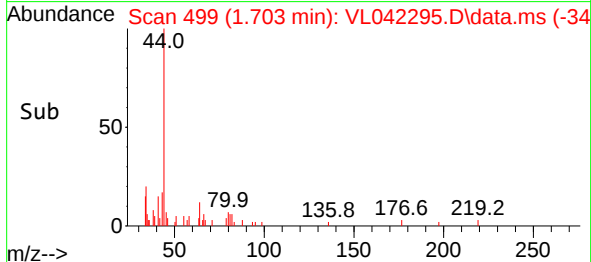
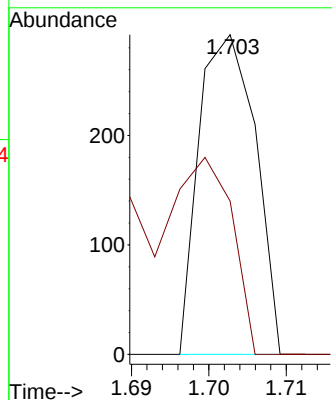
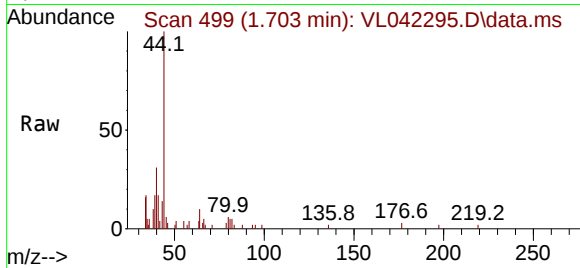




#7
Chloroethane
Concen: 0.039 ppbv
RT: 1.703 min Scan# 499
Delta R.T. -0.000 min
Lab File: VL042295.D
Acq: 09 Apr 2025 16:23

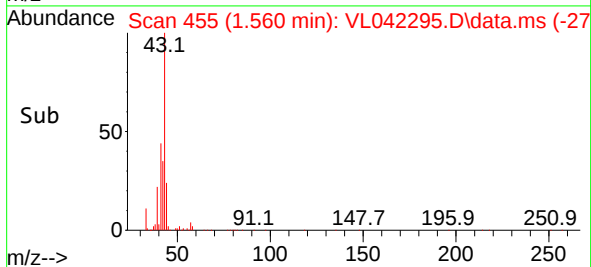
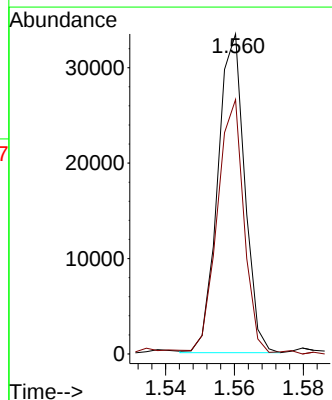
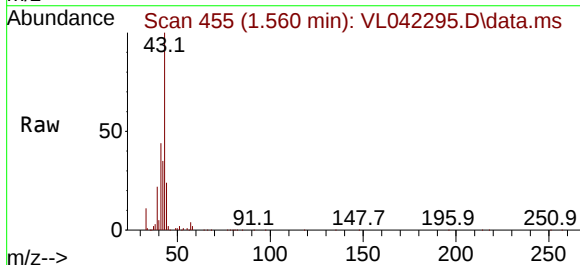
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MSVOA_L
ClientSampleId :
IA-B9-2-3242025

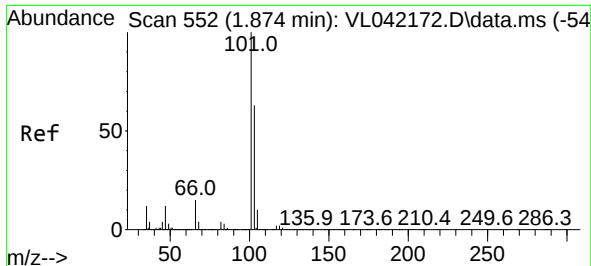
Tgt Ion: 64 Resp: 148
Ion Ratio Lower Upper
64 100
66 47.9 25.2 37.8#



#9
Propene
Concen: 1.670 ppbv
RT: 1.560 min Scan# 455
Delta R.T. 0.077 min
Lab File: VL042295.D
Acq: 09 Apr 2025 16:23

Tgt Ion: 41 Resp: 18149
Ion Ratio Lower Upper
41 100
42 82.3 55.4 83.2

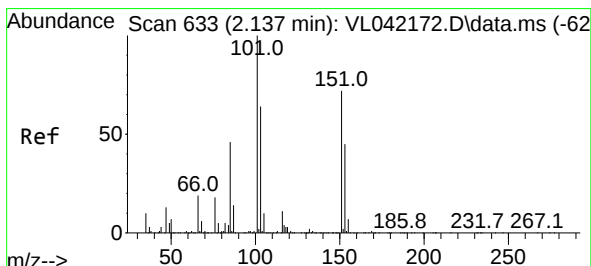
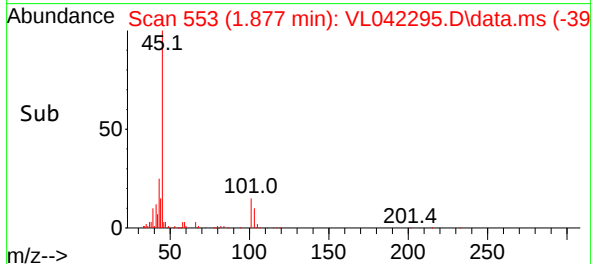
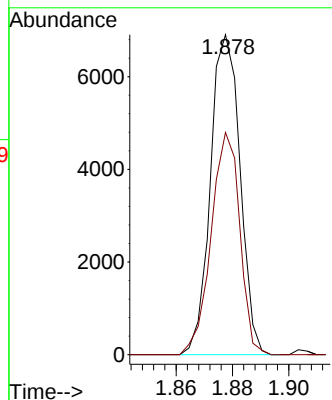
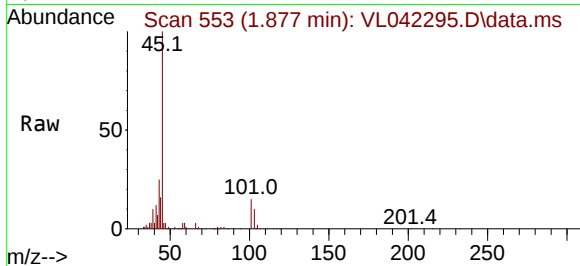




#11
Trichlorofluoromethane
Concen: 0.223 ppbv
RT: 1.877 min Scan# 51
Delta R.T. 0.003 min
Lab File: VL042295.D
Acq: 09 Apr 2025 16:23

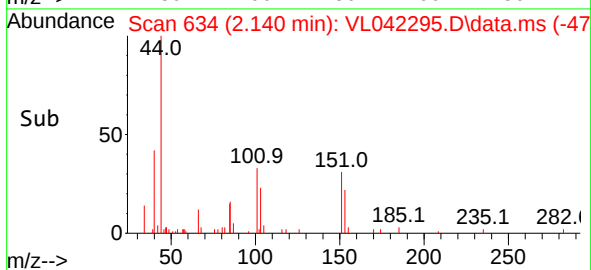
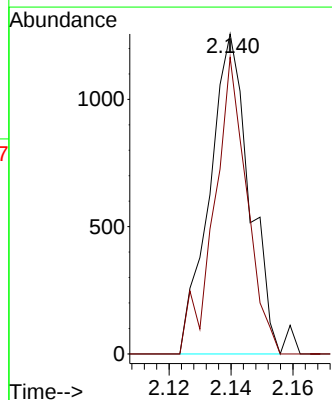
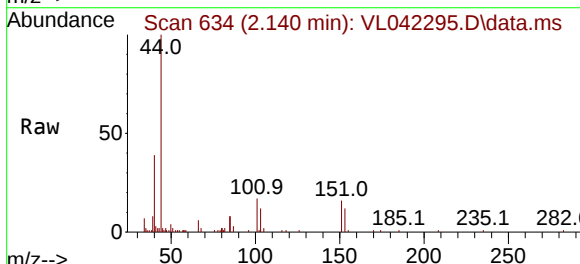
Instrument :
MSVOA_L
ClientSampleId :
IA-B9-2-3242025

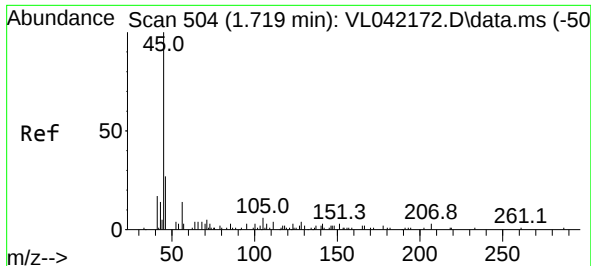
Tgt Ion:101 Resp: 5036
Ion Ratio Lower Upper
101 100
103 69.5 50.2 75.2



#12
1,1,2-Trichlorotrifluoroethane
Concen: 0.061 ppbv
RT: 2.140 min Scan# 634
Delta R.T. 0.003 min
Lab File: VL042295.D
Acq: 09 Apr 2025 16:23

Tgt Ion:101 Resp: 1123
Ion Ratio Lower Upper
101 100
151 76.3 57.1 85.7

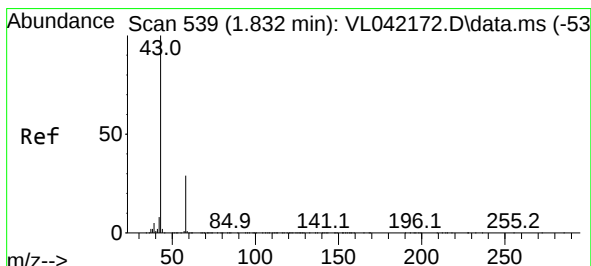
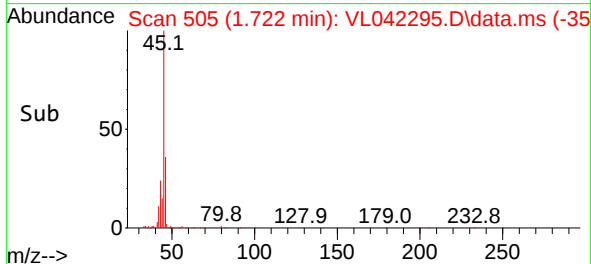
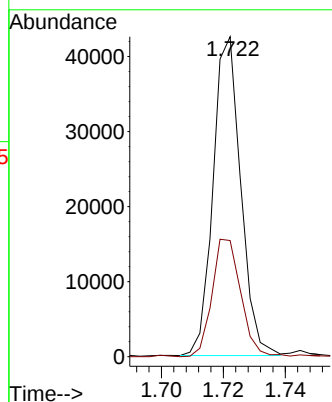
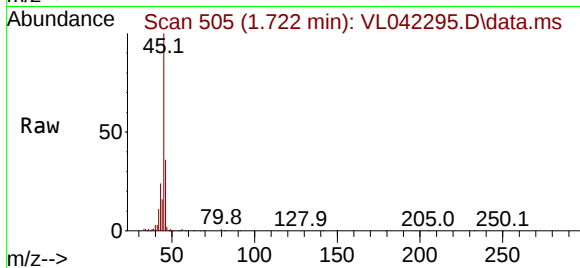




#13
Ethanol
Concen: 25.610 ppbv
RT: 1.722 min Scan# 50
Delta R.T. 0.003 min
Lab File: VL042295.D
Acq: 09 Apr 2025 16:23

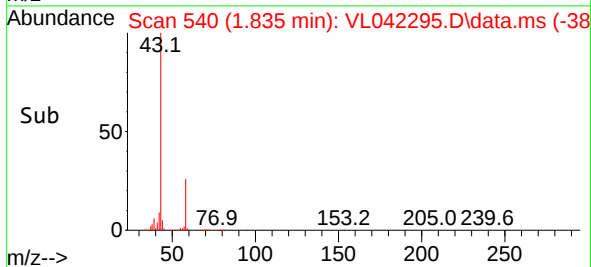
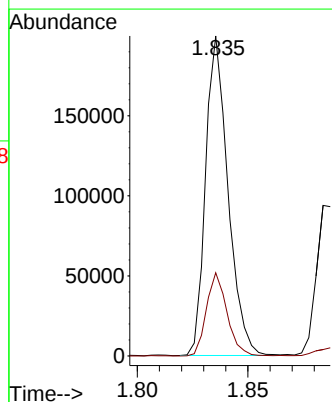
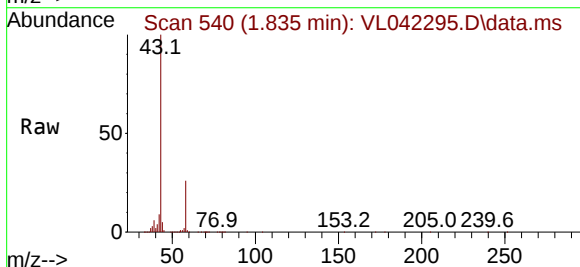
Instrument :
MSVOA_L
ClientSampleId :
IA-B9-2-3242025

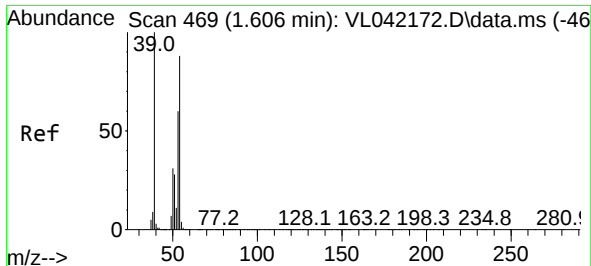
Tgt Ion: 45 Resp: 26305
Ion Ratio Lower Upper
45 100
46 39.0 20.2 80.8



#15
Acetone
Concen: 6.406 ppbv
RT: 1.835 min Scan# 540
Delta R.T. 0.003 min
Lab File: VL042295.D
Acq: 09 Apr 2025 16:23

Tgt Ion: 43 Resp: 140811
Ion Ratio Lower Upper
43 100
58 24.0 23.2 34.8





#16

1,3-Butadiene

Concen: 0.208 ppbv

RT: 1.599 min Scan# 4

Delta R.T. -0.007 min

Lab File: VL042295.D

Acq: 09 Apr 2025 16:23

Instrument :

MSVOA_L

ClientSampleId :

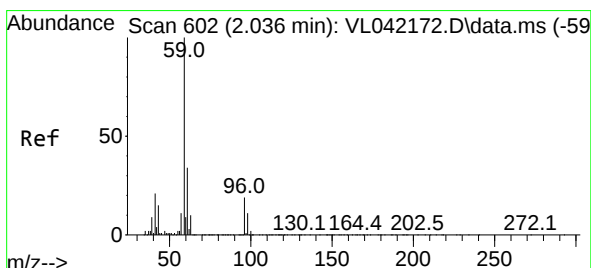
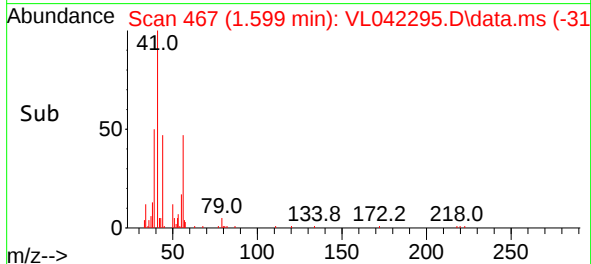
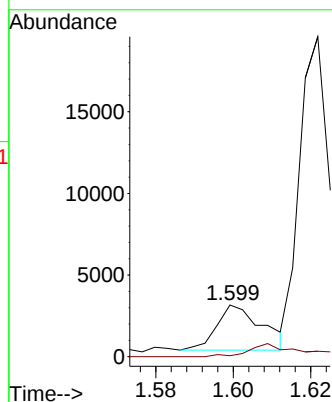
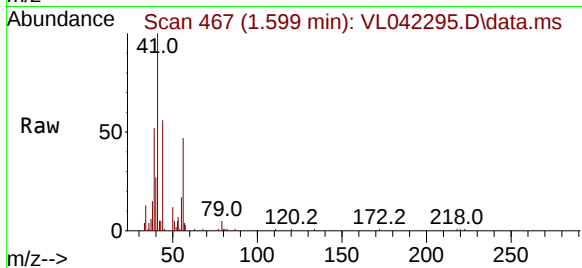
IA-B9-2-3242025

Tgt Ion: 39 Resp: 2235

Ion Ratio Lower Upper

39 100

54 35.0 60.7 91.1#



#17

tert-Butyl alcohol

Concen: 0.361 ppbv

RT: 1.884 min Scan# 555

Delta R.T. -0.152 min

Lab File: VL042295.D

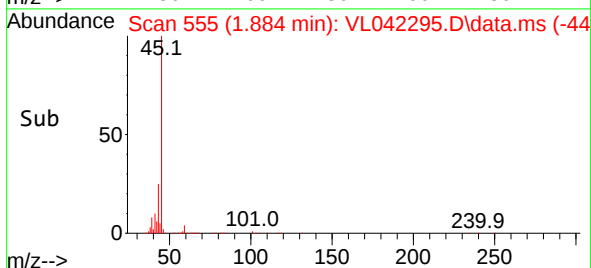
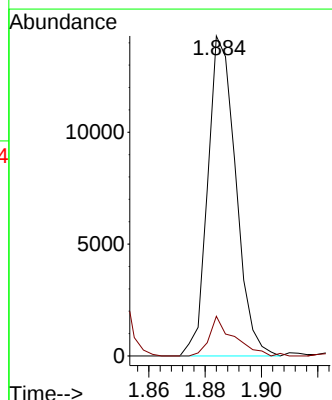
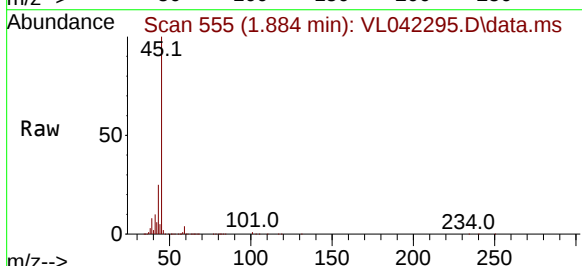
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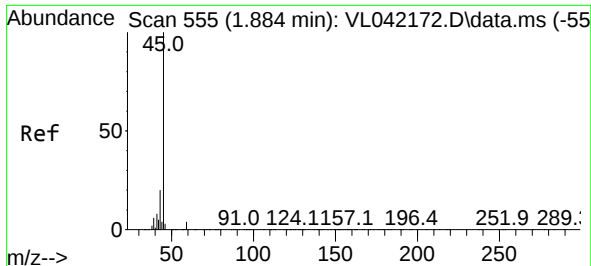
Tgt Ion: 59 Resp: 9877

Ion Ratio Lower Upper

59 100

57 10.9 8.9 13.3





#19

Isopropyl Alcohol

Concen: 21.158 ppbv

RT: 1.887 min Scan# 51

Delta R.T. 0.003 min

Lab File: VL042295.D

Acq: 09 Apr 2025 16:23

Instrument :

MSVOA_L

ClientSampleId :

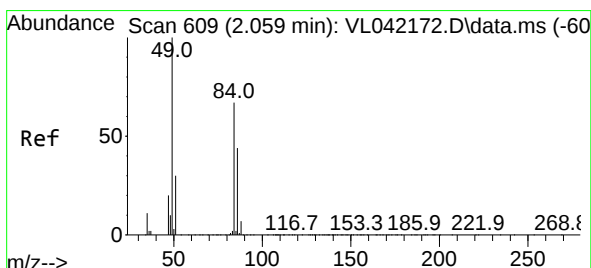
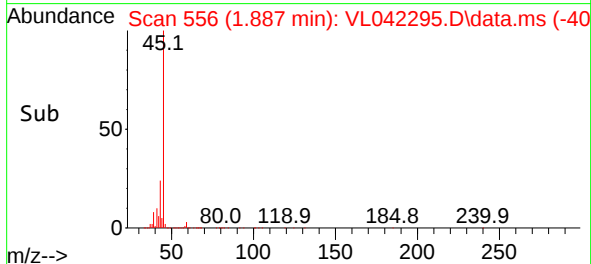
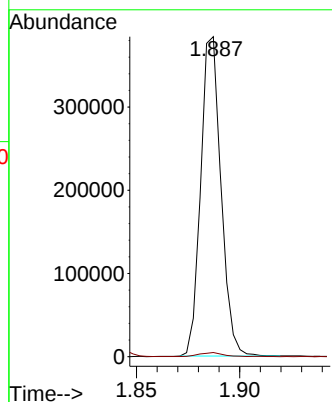
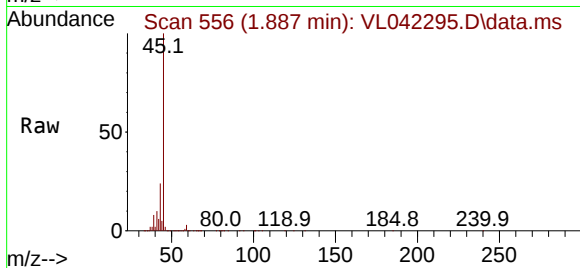
IA-B9-2-3242025

Tgt Ion: 45 Resp: 262397

Ion Ratio Lower Upper

45 100

58 1.6 36.9 55.3#



#20

Methylene Chloride

Concen: 1.173 ppbv

RT: 2.062 min Scan# 610

Delta R.T. 0.003 min

Lab File: VL042295.D

Acq: 09 Apr 2025 16:23

Tgt Ion: 84 Resp: 9600

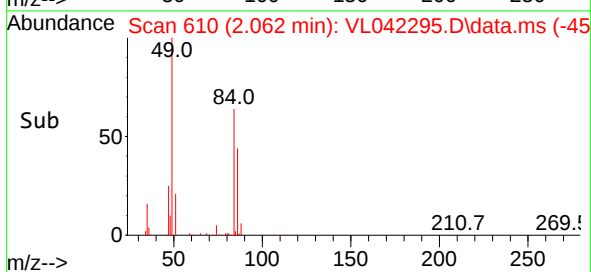
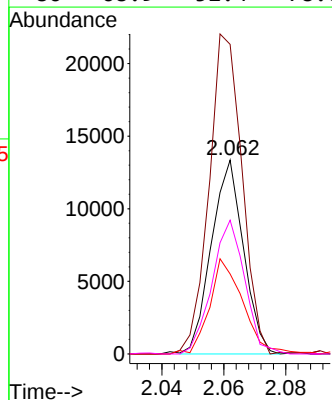
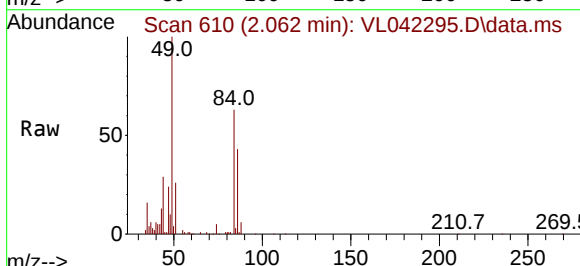
Ion Ratio Lower Upper

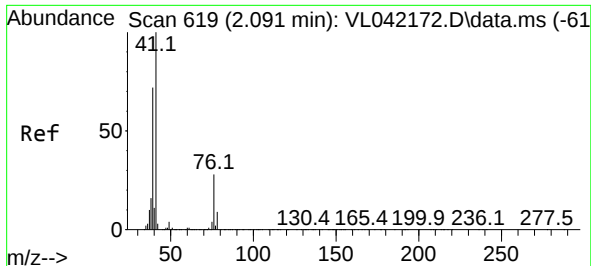
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49 158.7 120.2 180.4

51 39.5 37.4 56.0

86 68.9 52.4 78.6

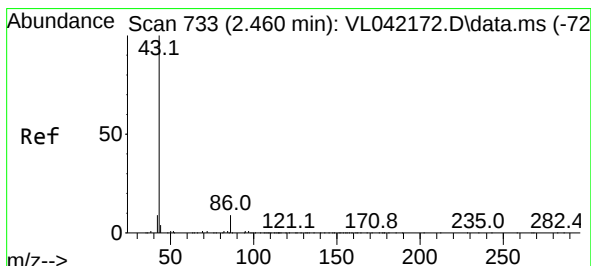
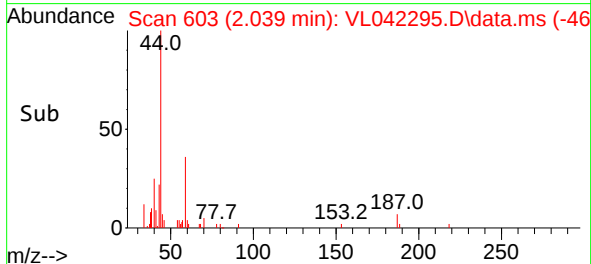
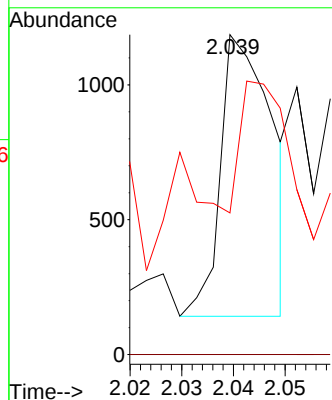
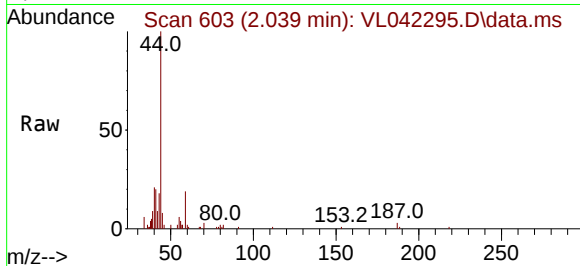




#21
 Allyl Chloride
 Concen: 0.047 ppbv
 RT: 2.039 min Scan# 603
 Delta R.T. -0.052 min
 Lab File: VL042295.D
 Acq: 09 Apr 2025 16:23

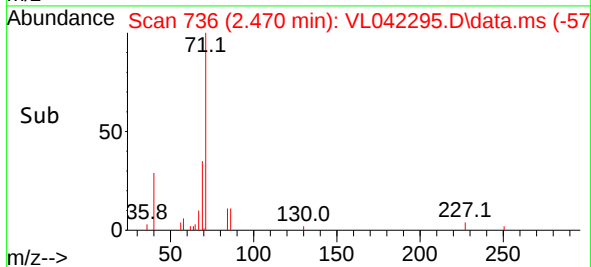
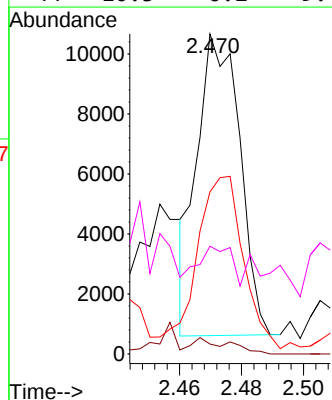
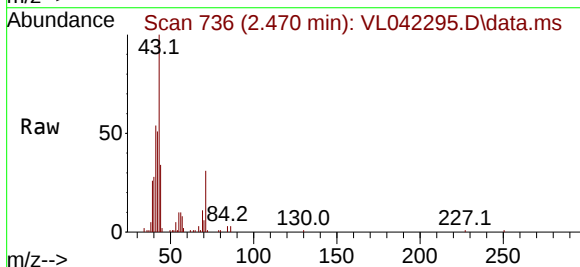
Instrument :
 MSVOA_1
 ClientSampleId :
 IA-B9-2-3242025

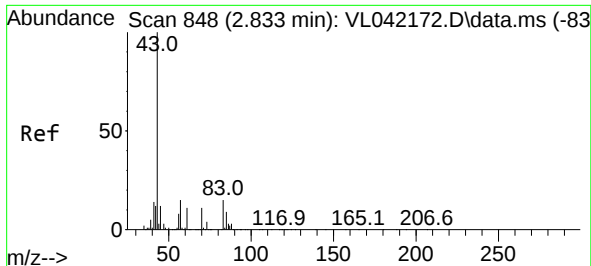
Tgt Ion: 41 Resp: 725
 Ion Ratio Lower Upper
 41 100
 76 6.1 24.1 36.1#
 39 0.0 61.1 91.7#



#23
 Vinyl Acetate
 Concen: 1.007 ppbv
 RT: 2.470 min Scan# 736
 Delta R.T. 0.010 min
 Lab File: VL042295.D
 Acq: 09 Apr 2025 16:23

Tgt Ion: 43 Resp: 9581
 Ion Ratio Lower Upper
 43 100
 86 3.3 5.5 8.3#
 42 52.1 8.6 13.0#
 44 10.3 6.2 9.4#





#25

Ethyl Acetate

Concen: 0.686 ppbv

RT: 2.826 min Scan# 846

Delta R.T. -0.007 min

Lab File: VL042295.D

Acq: 09 Apr 2025 16:23

Instrument :

MSVOA_L

ClientSampleId :

IA-B9-2-3242025

Tgt Ion: 43 Resp: 39156

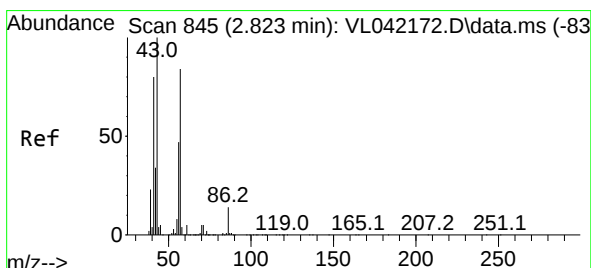
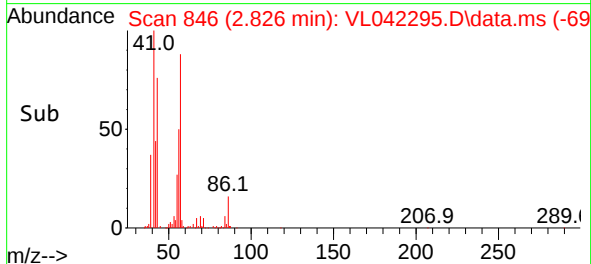
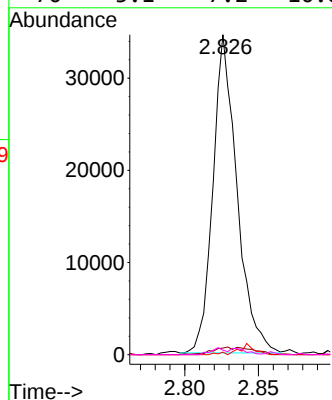
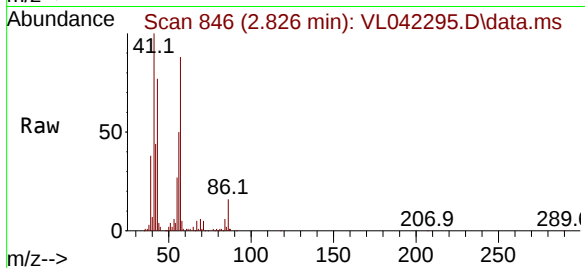
Ion Ratio Lower Upper

43 100

45 4.0 8.2 12.2#

61 2.2 7.3 10.9#

70 3.1 7.2 10.8#



#26

Hexane

Concen: 1.924 ppbv

RT: 2.826 min Scan# 846

Delta R.T. 0.003 min

Lab File: VL042295.D

Acq: 09 Apr 2025 16:23

Tgt Ion: 57 Resp: 42387

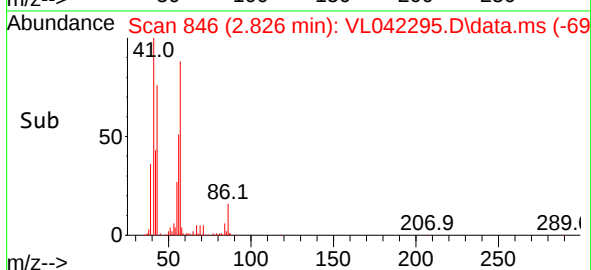
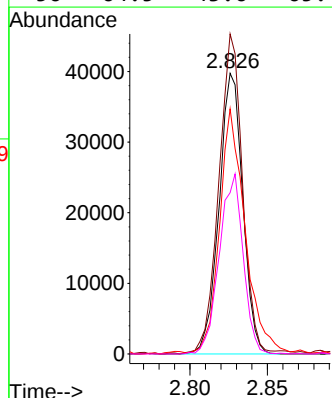
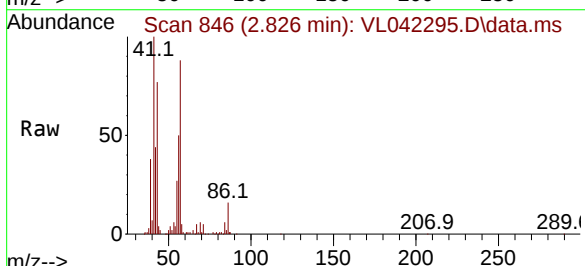
Ion Ratio Lower Upper

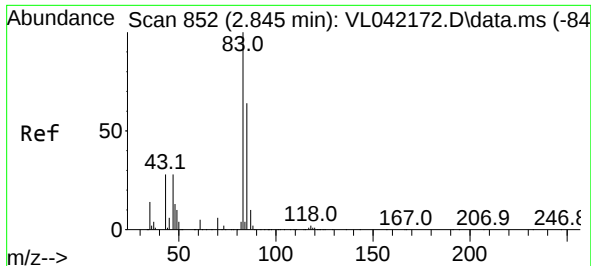
57 100

41 114.5 76.6 114.8

43 95.4 207.8 311.8#

56 64.5 43.6 65.4





#29

Chloroform

Concen: 0.056 ppbv

RT: 2.845 min Scan# 81

Delta R.T. -0.000 min

Lab File: VL042295.D

Acq: 09 Apr 2025 16:23

Instrument :

MSVOA_L

ClientSampleId :

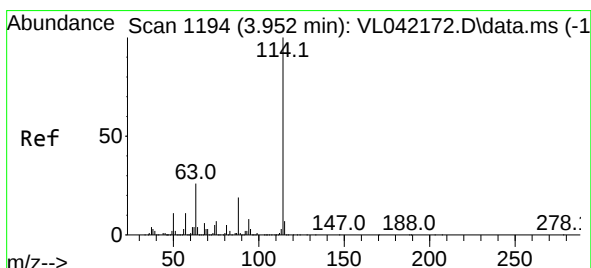
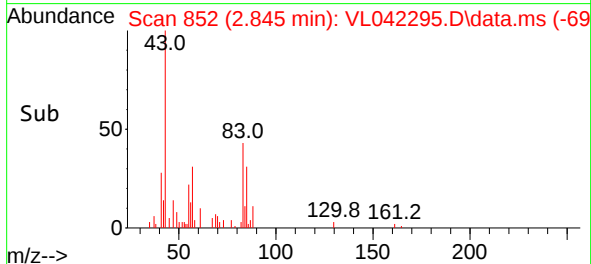
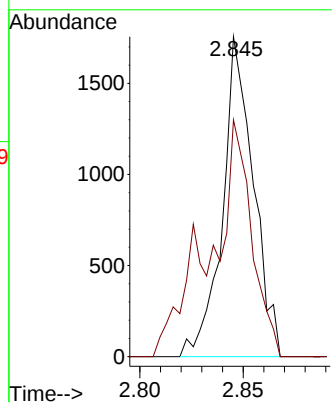
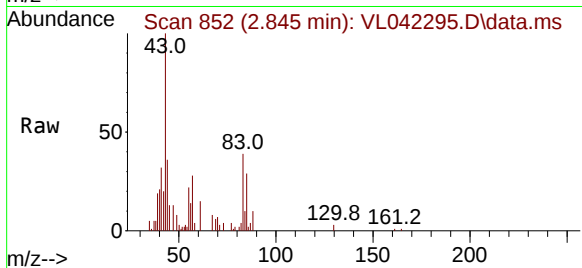
IA-B9-2-3242025

Tgt Ion: 83 Resp: 1821

Ion Ratio Lower Upper

83 100

85 78.2 51.4 77.2#



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.959 min Scan# 1196

Delta R.T. 0.006 min

Lab File: VL042295.D

Acq: 09 Apr 2025 16:23

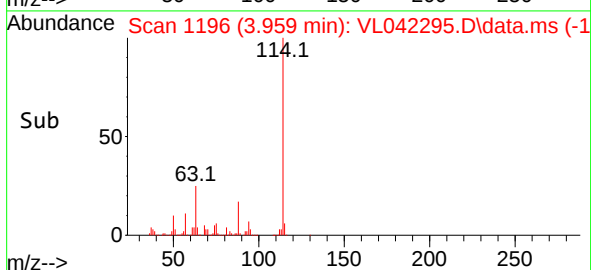
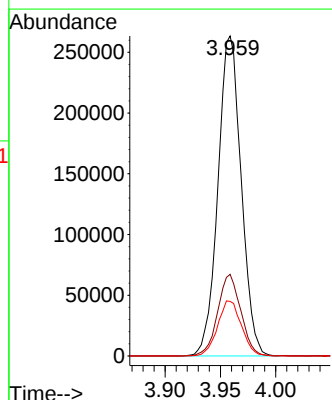
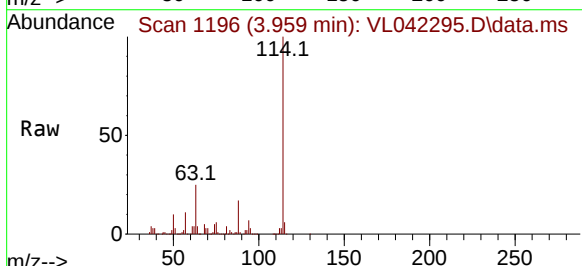
Tgt Ion:114 Resp: 385586

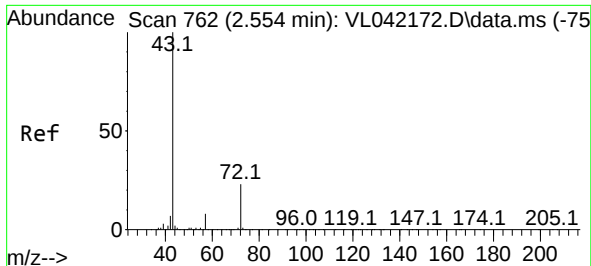
Ion Ratio Lower Upper

114 100

63 25.4 20.7 31.1

88 17.6 15.0 22.4

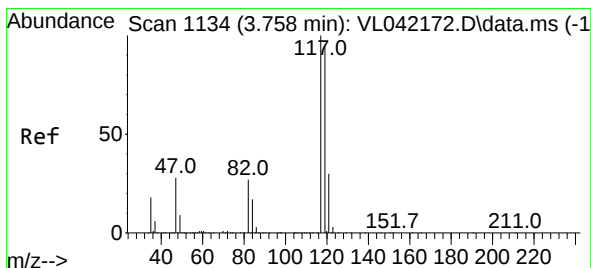
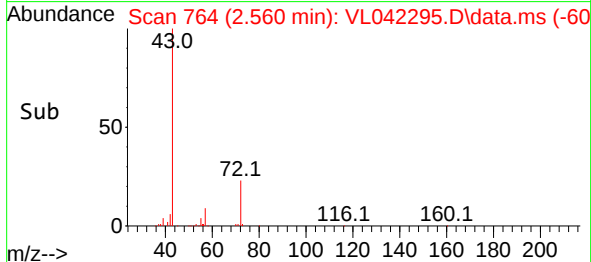
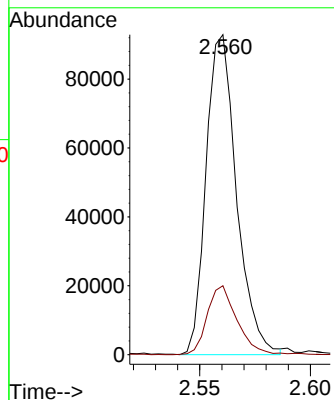
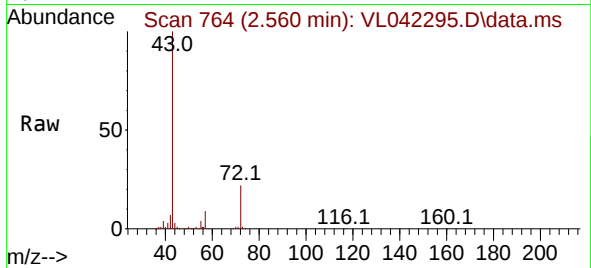




#34
2-Butanone
Concen: 3.186 ppbv
RT: 2.560 min Scan# 764
Delta R.T. 0.006 min
Lab File: VL042295.D
Acq: 09 Apr 2025 16:23

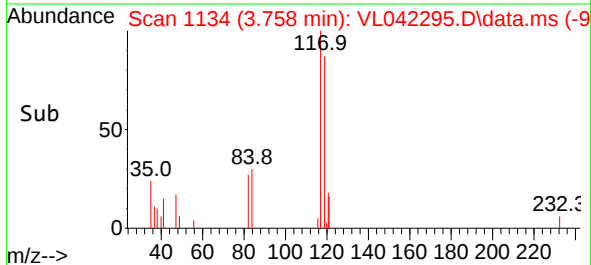
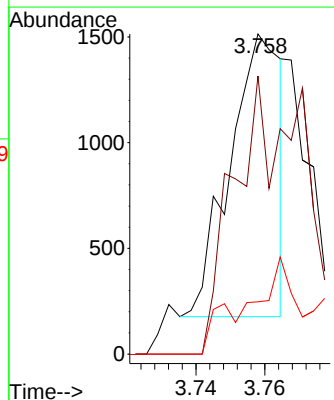
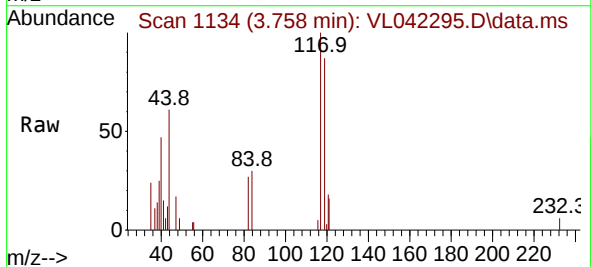
Instrument :
MSVOA_L
ClientSampleId :
IA-B9-2-3242025

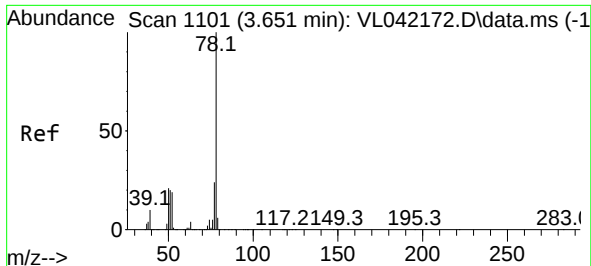
Tgt Ion: 43 Resp: 89072
Ion Ratio Lower Upper
43 100
72 21.3 18.2 27.2



#35
Carbon Tetrachloride
Concen: 0.045 ppbv
RT: 3.758 min Scan# 1134
Delta R.T. -0.000 min
Lab File: VL042295.D
Acq: 09 Apr 2025 16:23

Tgt Ion: 117 Resp: 1368
Ion Ratio Lower Upper
117 100
119 98.4 76.2 114.2
121 18.5 24.2 36.4#

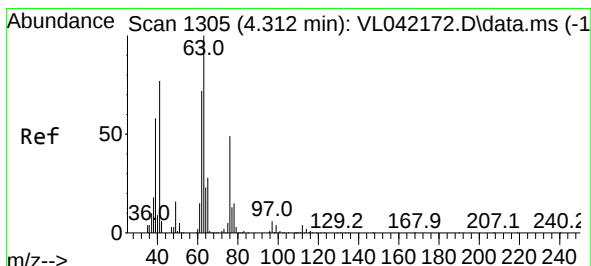
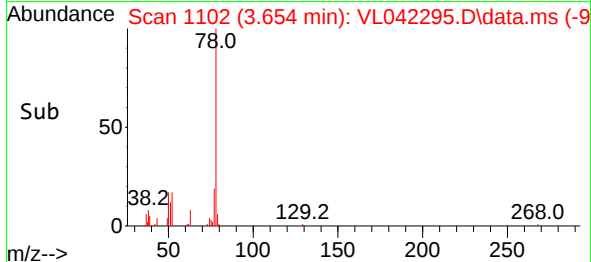
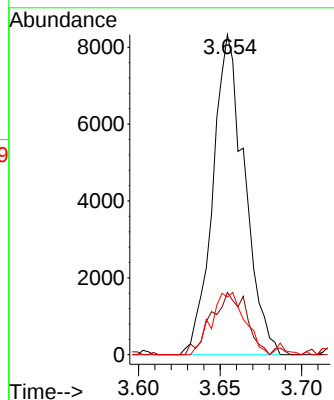
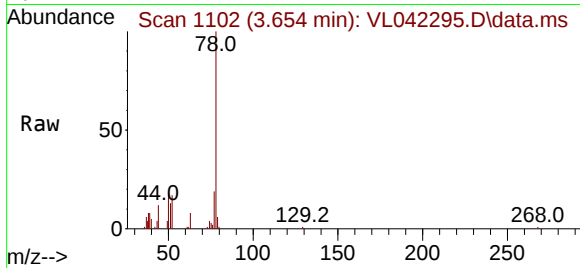




#36
Benzene
Concen: 0.295 ppbv
RT: 3.654 min Scan# 1101
Delta R.T. 0.003 min
Lab File: VL042295.D
Acq: 09 Apr 2025 16:23

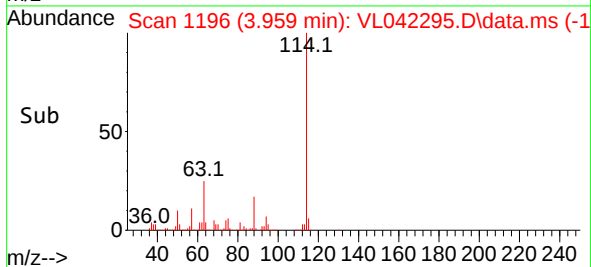
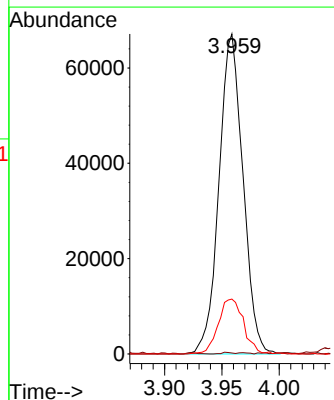
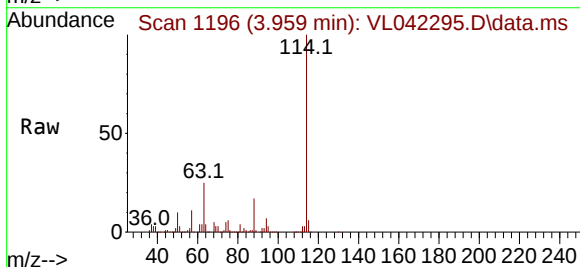
Instrument :
MSVOA_L
ClientSampleId :
IA-B9-2-3242025

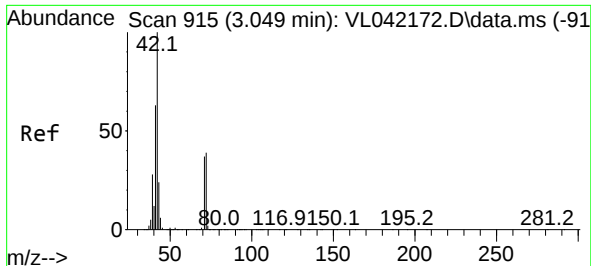
Tgt Ion:	78	Resp:	11286
Ion	Ratio	Lower	Upper
78	100		
77	19.4	19.1	28.7
50	18.0	16.6	24.8



#39
1,2-Dichloropropane
Concen: 7.010 ppbv
RT: 3.959 min Scan# 1196
Delta R.T. -0.353 min
Lab File: VL042295.D
Acq: 09 Apr 2025 16:23

Tgt Ion:	63	Resp:	97589
Ion	Ratio	Lower	Upper
63	100		
41	0.3	61.7	92.5#
62	17.1	57.6	86.4#

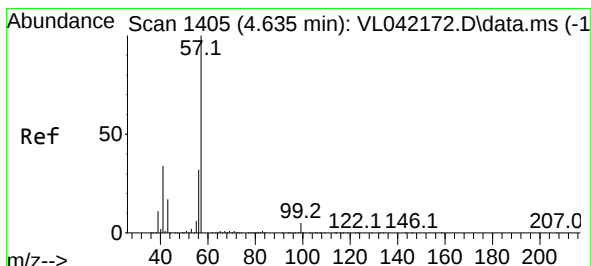
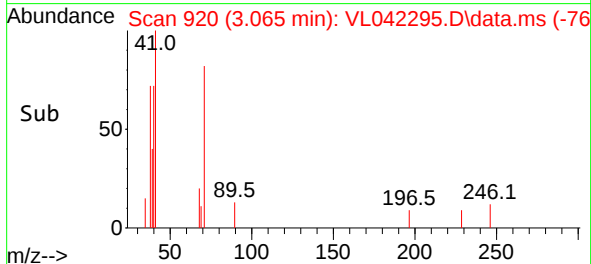
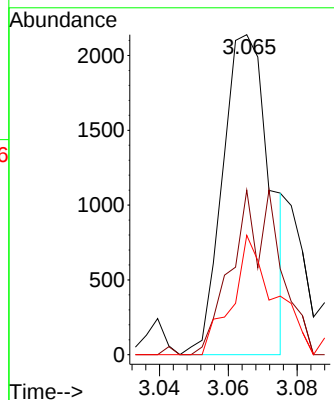
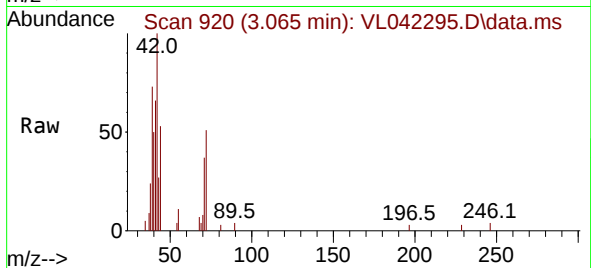




#41
Tetrahydrofuran
Concen: 0.127 ppbv
RT: 3.065 min Scan# 915
Delta R.T. 0.016 min
Lab File: VL042295.D
Acq: 09 Apr 2025 16:23

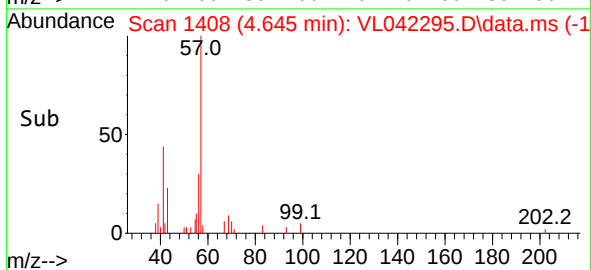
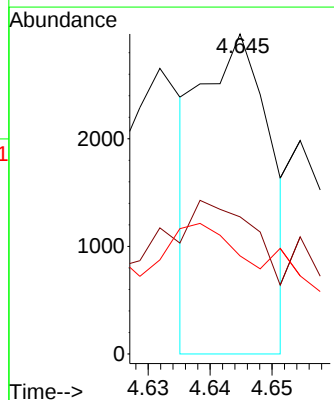
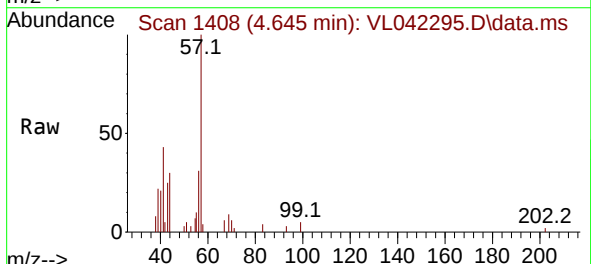
Instrument :
MSVOA_L
ClientSampleId :
IA-B9-2-3242025

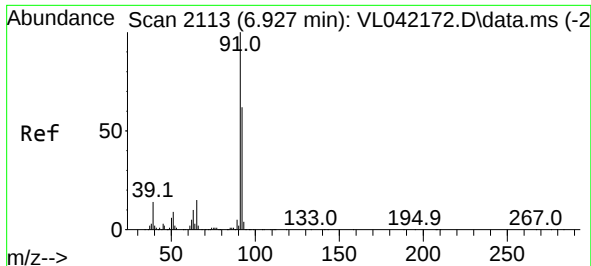
Tgt Ion: 42 Resp: 2040
Ion Ratio Lower Upper
42 100
72 51.7 31.4 47.0#
71 35.2 30.2 45.4



#44
2,2,4-Trimethylpentane
Concen: 0.036 ppbv
RT: 4.645 min Scan# 1408
Delta R.T. 0.010 min
Lab File: VL042295.D
Acq: 09 Apr 2025 16:23

Tgt Ion: 57 Resp: 2338
Ion Ratio Lower Upper
57 100
41 154.5 26.8 40.2#
56 123.6 25.6 38.4#

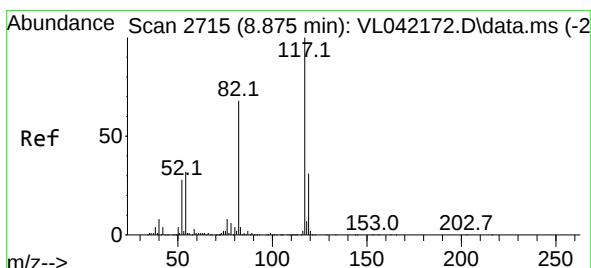
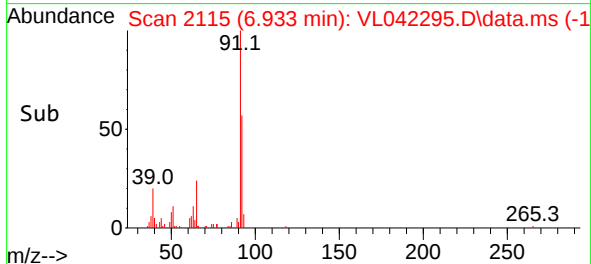
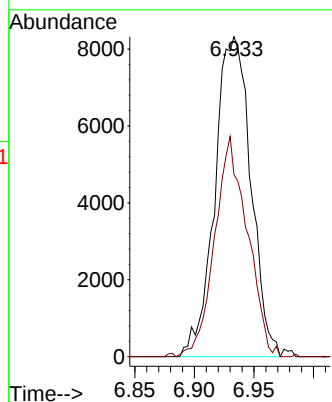
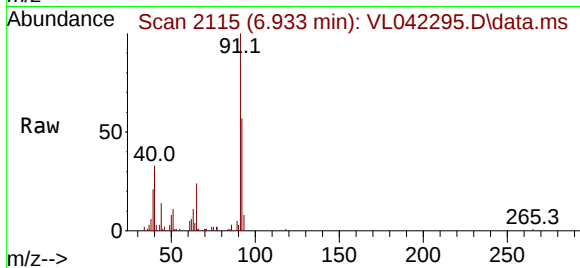




#53
Toluene
Concen: 0.386 ppbv
RT: 6.933 min Scan# 2115
Delta R.T. 0.006 min
Lab File: VL042295.D
Acq: 09 Apr 2025 16:23

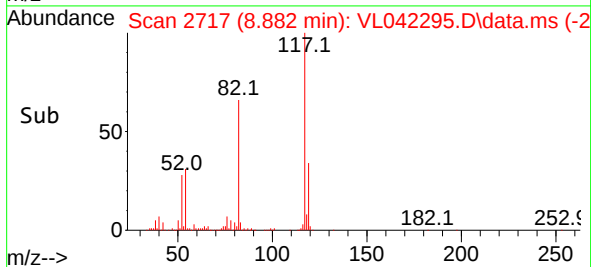
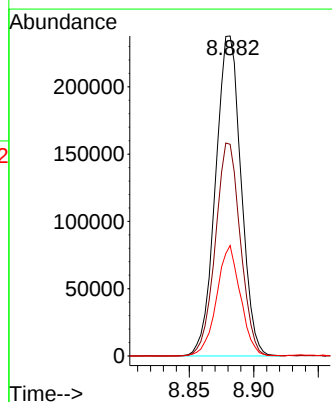
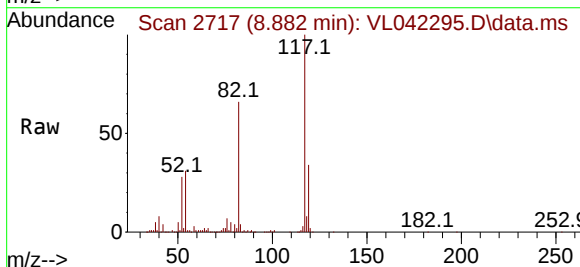
Instrument :
MSVOA_L
ClientSampleId :
IA-B9-2-3242025

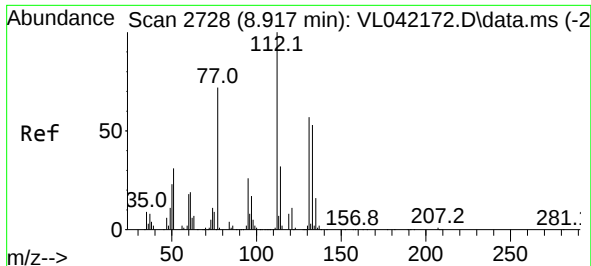
Tgt Ion: 91 Resp: 17473
Ion Ratio Lower Upper
91 100
92 62.6 48.4 72.6



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.882 min Scan# 2717
Delta R.T. 0.006 min
Lab File: VL042295.D
Acq: 09 Apr 2025 16:23

Tgt Ion: 117 Resp: 326865
Ion Ratio Lower Upper
117 100
82 65.3 55.8 83.6
119 32.2 25.5 38.3





#57

Chlorobenzene

Concen: 0.203 ppbv

RT: 8.924 min Scan# 21

Delta R.T. 0.006 min

Lab File: VL042295.D

Acq: 09 Apr 2025 16:23

Instrument :

MSVOA_L

ClientSampleId :

IA-B9-2-3242025

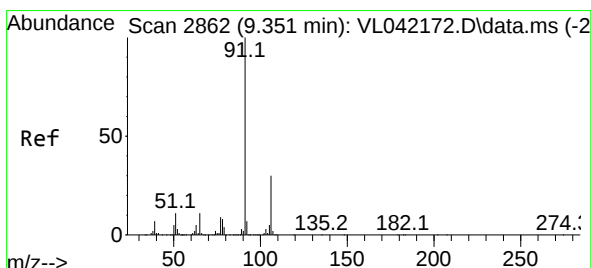
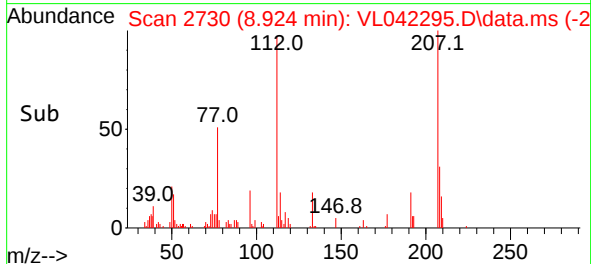
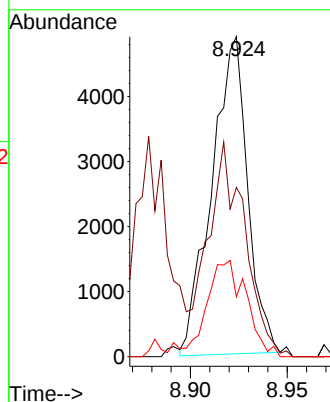
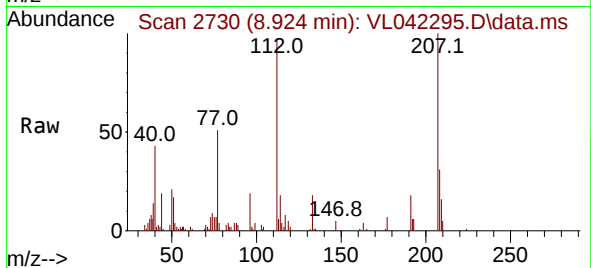
Tgt Ion:112 Resp: 6308

Ion Ratio Lower Upper

112 100

77 52.5 58.2 87.2#

114 18.9 29.1 35.5#



#58

Ethyl Benzene

Concen: 0.053 ppbv

RT: 9.354 min Scan# 2863

Delta R.T. 0.003 min

Lab File: VL042295.D

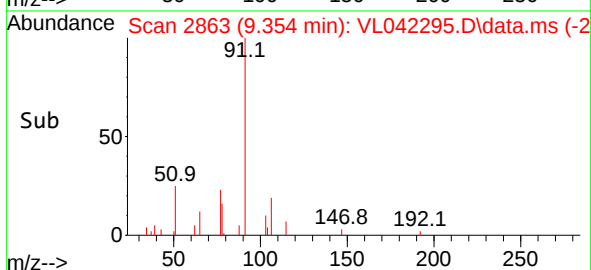
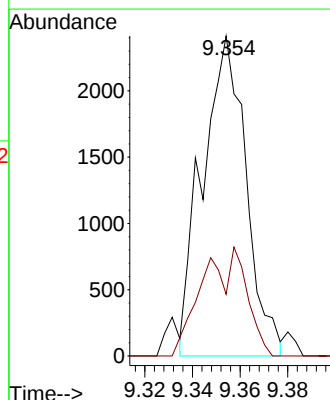
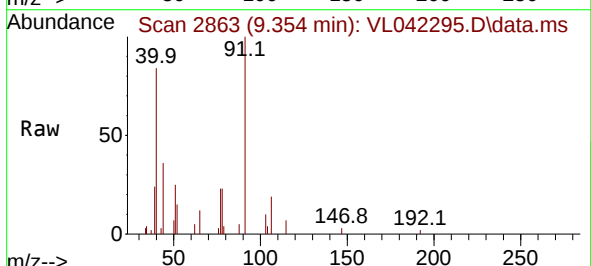
Acq: 09 Apr 2025 16:23

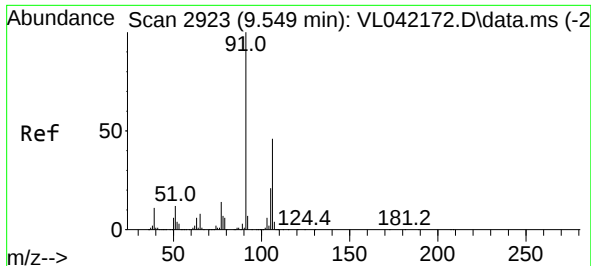
Tgt Ion: 91 Resp: 3072

Ion Ratio Lower Upper

91 100

106 20.2 24.2 36.2#





#59

m/p-Xylene

Concen: 0.034 ppbv

RT: 9.552 min Scan# 2923

Delta R.T. 0.003 min

Lab File: VL042295.D

Acq: 09 Apr 2025 16:23

Instrument :

MSVOA_L

ClientSampleId :

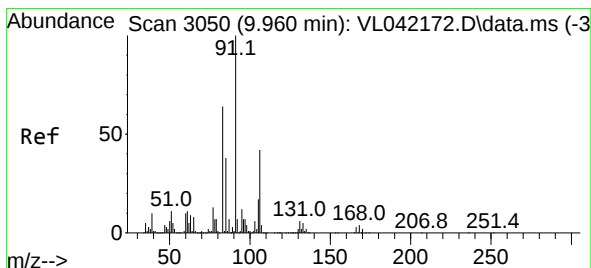
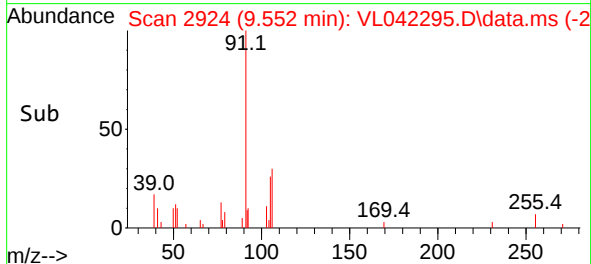
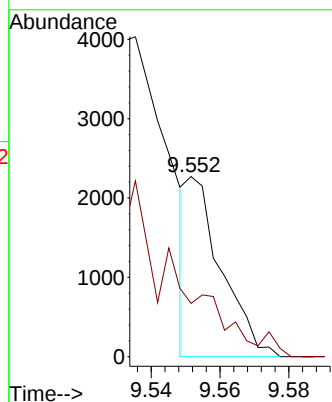
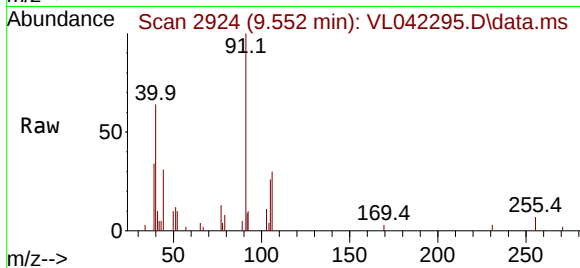
IA-B9-2-3242025

Tgt Ion: 91 Resp: 1588

Ion Ratio Lower Upper

91 100

106 0.0 36.4 54.6#



#60

o-Xylene

Concen: 0.103 ppbv

RT: 9.963 min Scan# 3051

Delta R.T. 0.003 min

Lab File: VL042295.D

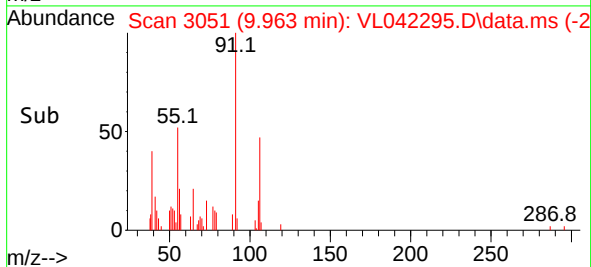
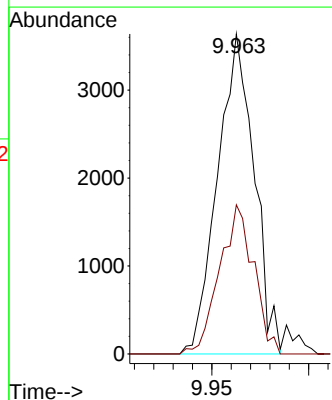
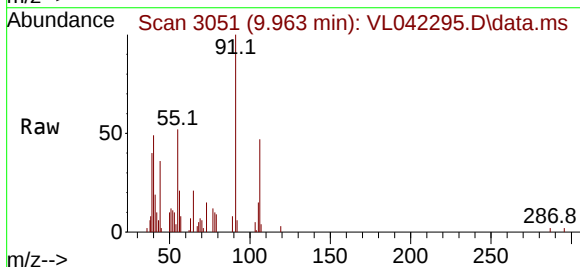
Acq: 09 Apr 2025 16:23

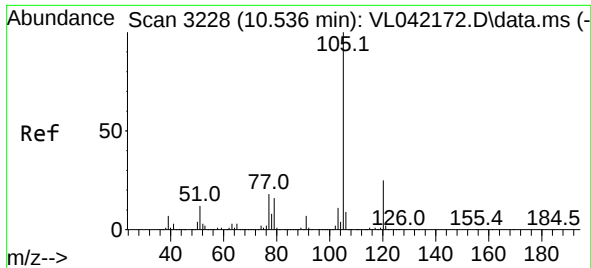
Tgt Ion: 91 Resp: 4768

Ion Ratio Lower Upper

91 100

106 43.4 20.8 62.5

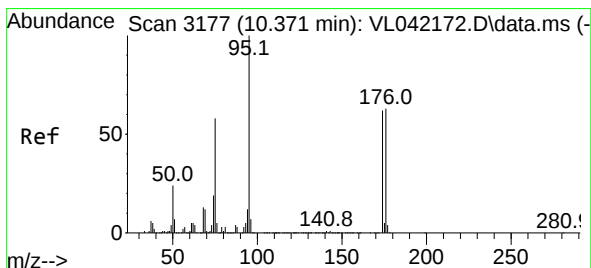
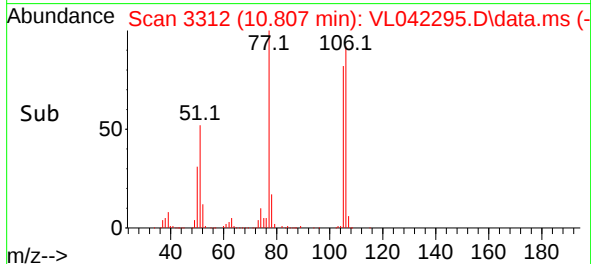
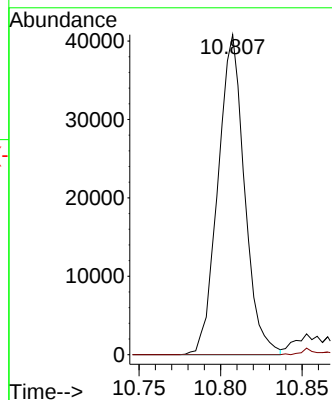
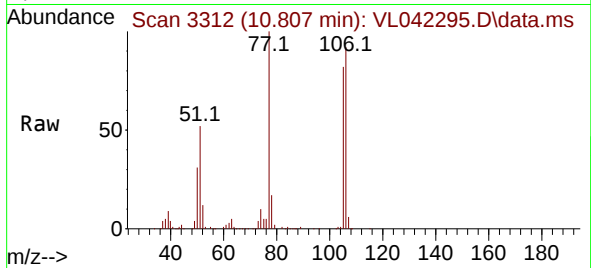




#62
Isopropylbenzene
Concen: 0.665 ppbv
RT: 10.807 min Scan# 3112
Delta R.T. 0.272 min
Lab File: VL042295.D
Acq: 09 Apr 2025 16:23

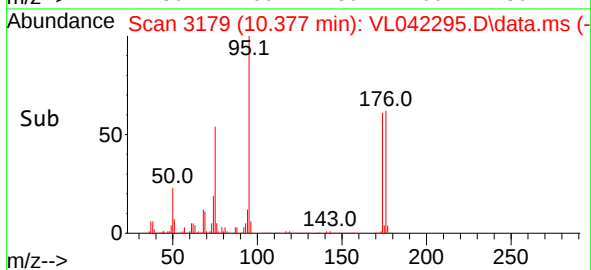
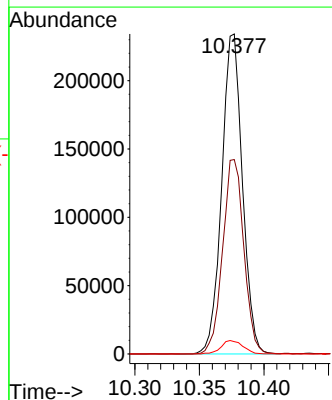
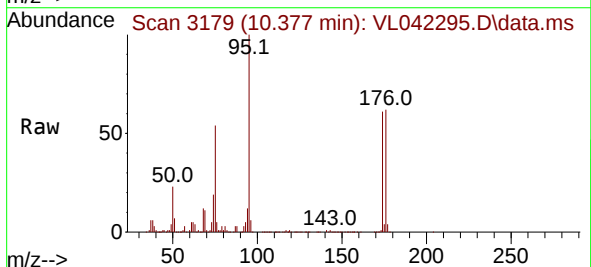
Instrument :
MSVOA_L
ClientSampleId :
IA-B9-2-3242025

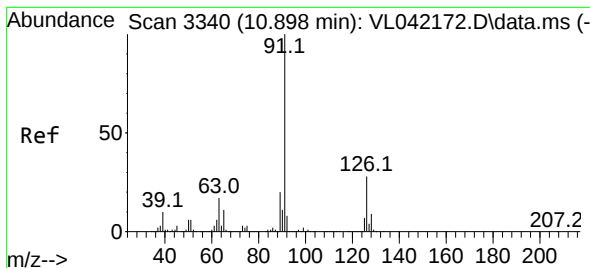
Tgt Ion:105 Resp: 46203
Ion Ratio Lower Upper
105 100
120 0.0 19.9 29.9#



#68
1-Bromo-4-Fluorobenzene
Concen: 9.709 ppbv
RT: 10.377 min Scan# 3179
Delta R.T. 0.006 min
Lab File: VL042295.D
Acq: 09 Apr 2025 16:23

Tgt Ion: 95 Resp: 260627
Ion Ratio Lower Upper
95 100
174 62.2 50.6 76.0
175 4.5 3.8 5.6





#71

2-Chlorotoluene

Concen: 0.243 ppbv

RT: 10.856 min Scan# 31

Delta R.T. -0.042 min

Lab File: VL042295.D

Acq: 09 Apr 2025 16:23

Instrument :

MSVOA_L

ClientSampleId :

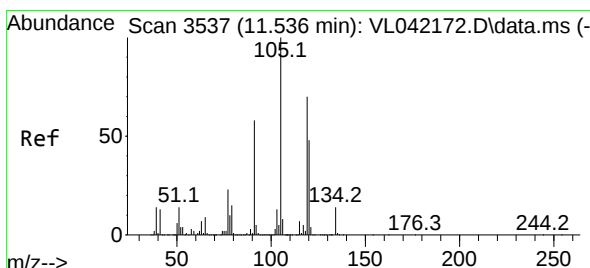
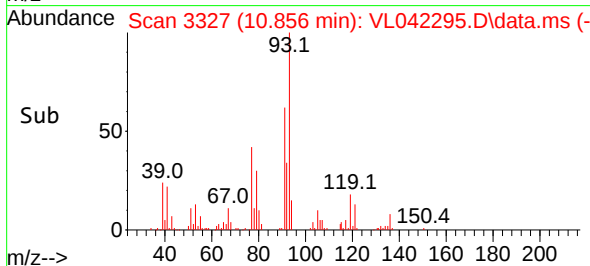
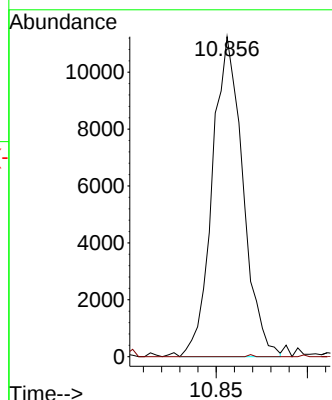
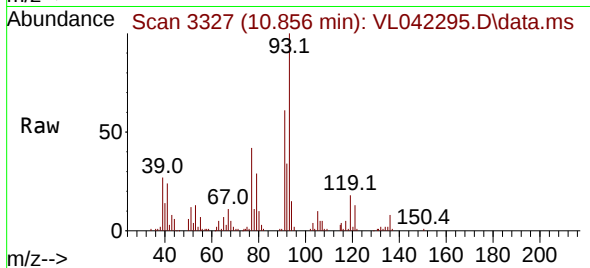
IA-B9-2-3242025

Tgt Ion: 91 Resp: 13101

Ion Ratio Lower Upper

91 100

126 1.2 11.6 46.4#



#74

1,2,4-Trimethylbenzene

Concen: 0.061 ppbv

RT: 11.536 min Scan# 3537

Delta R.T. -0.000 min

Lab File: VL042295.D

Acq: 09 Apr 2025 16:23

Tgt Ion: 105 Resp: 3557

Ion Ratio Lower Upper

105 100

120 39.1 38.6 58.0

91 13.9 46.2 69.2#

77 28.6 18.6 27.8#

