

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL111825\
 Data File : VL043220.D
 Acq On : 18 Nov 2025 19:23
 Operator : SY/MD
 Sample : Q3650-05
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA3

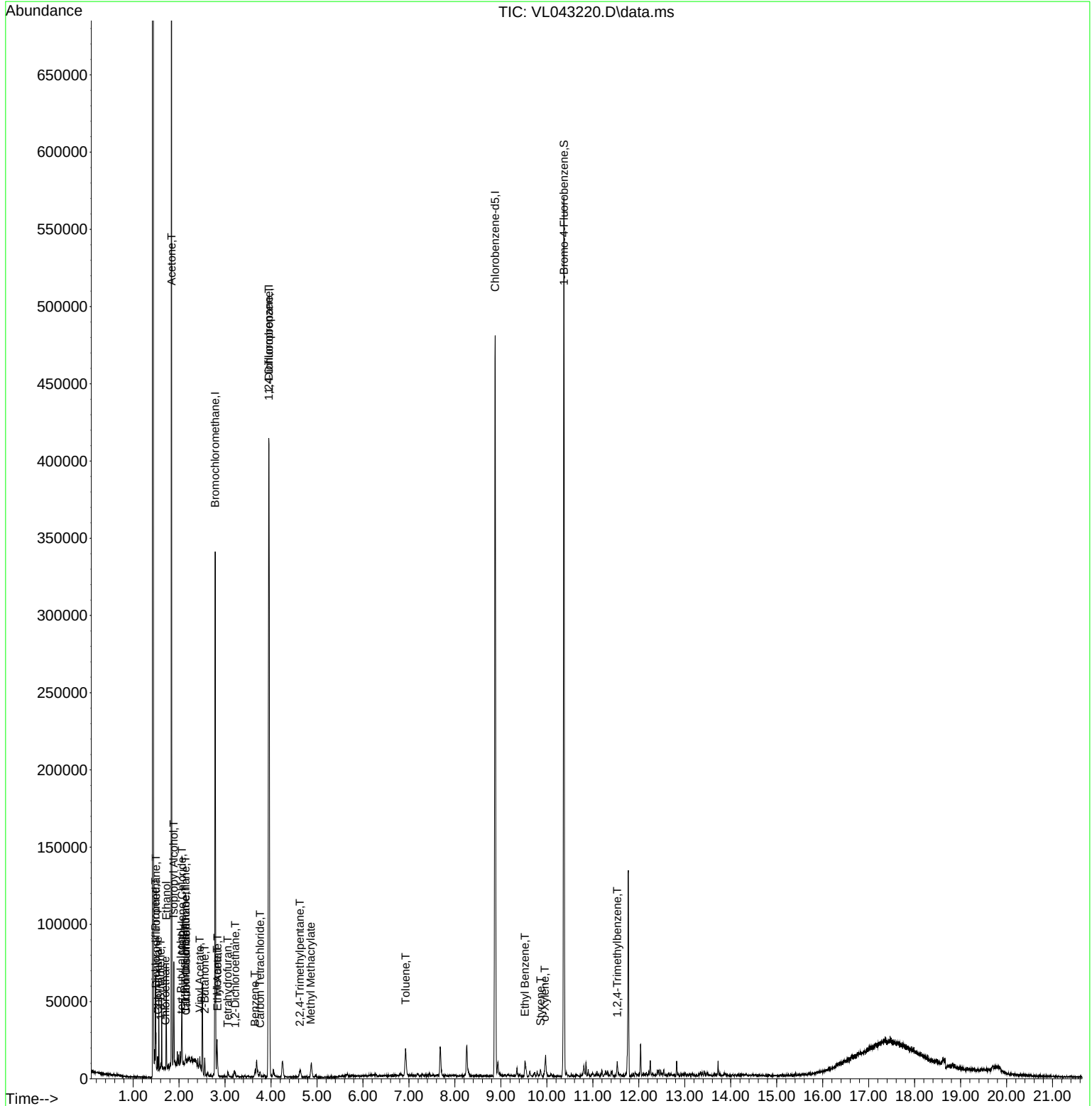
Quant Time: Nov 19 01:38:59 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL111825AIR.M
 Quant Title : AIR ANALYSIS BY METHOD T0-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Wed Nov 19 01:11:25 2025
 Response via : Initial Calibration

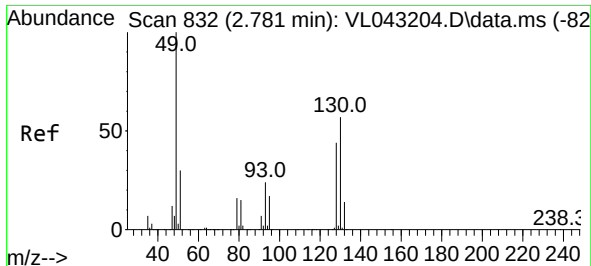
Compound	R.T. QIon		Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.784	49	91519	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.952	114	244106	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.875	117	189099	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.371	95	145646	10.508	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	= 105.100%	
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.499	85	5591	0.433	ppbv	94
4) Chloromethane	1.535	50	2234	0.463	ppbv	92
7) Chloroethane	1.703	64	66	0.032	ppbv #	1
9) Propene	1.489	41	4189	0.777	ppbv #	1
11) Trichlorofluoromethane	2.140	101	705	0.056	ppbv	93
12) 1,1,2-Trichlorotrifluo...	2.140	101	705	0.072	ppbv	85
13) Ethanol	1.722	45	24108	12.718	ppbv	97
15) Acetone	1.836	43	386426	30.391	ppbv	98
16) 1,3-Butadiene	1.599	39	374	0.066	ppbv #	12
17) tert-Butyl alcohol	2.043	59	2211	0.132	ppbv #	69
19) Isopropyl Alcohol	1.884	45	28082	3.908	ppbv #	1
20) Methylene Chloride	2.062	84	5011	0.600	ppbv	94
23) Vinyl Acetate	2.451	43	6164	0.402	ppbv #	79
25) Ethyl Acetate	2.836	43	2608	0.095	ppbv #	73
26) Hexane	2.826	57	4135	0.344	ppbv #	77
27) Carbon Disulfide	2.150	76	448	0.036	ppbv #	1
34) 2-Butanone	2.557	43	6841	0.397	ppbv	98
35) Carbon Tetrachloride	3.761	117	570	0.031	ppbv #	52
36) Benzene	3.651	78	1400	0.060	ppbv #	91
37) 1,2-Dichloroethane	3.221	62	488	0.036	ppbv #	80
39) 1,2-Dichloropropane	3.956	63	64282	7.513	ppbv #	24
41) Tetrahydrofuran	3.059	42	799	0.084	ppbv #	56
43) Methyl Methacrylate	4.865	69	623	0.050	ppbv #	1
44) 2,2,4-Trimethylpentane	4.629	57	2020	0.050	ppbv #	9
53) Toluene	6.927	91	11573	0.418	ppbv	96
58) Ethyl Benzene	9.523	91	5755	0.158	ppbv	89
60) o-Xylene	9.956	91	2313	0.079	ppbv	93
61) Styrene	9.862	104	632	0.050	ppbv #	50
74) 1,2,4-Trimethylbenzene	11.529	105	2898	0.089	ppbv #	49

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

Quant Time: Nov 19 01:38:59 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL111825AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
QLast Update : Wed Nov 19 01:11:25 2025
Response via : Initial Calibration

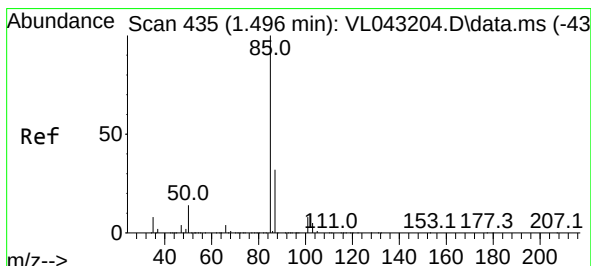
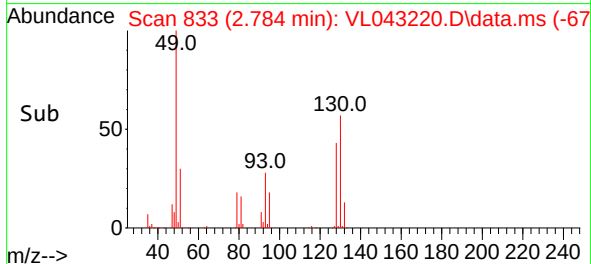
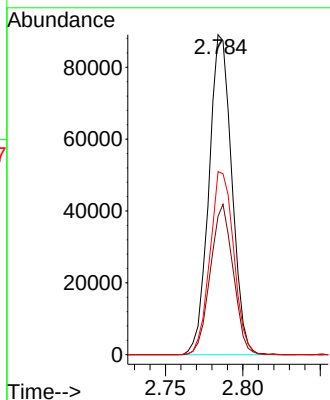
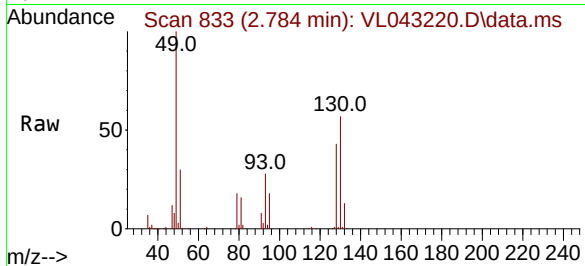




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.784 min Scan# 81
Delta R.T. 0.003 min
Lab File: VL043220.D
Acq: 18 Nov 2025 19:23

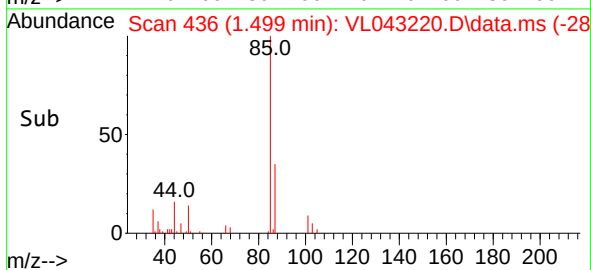
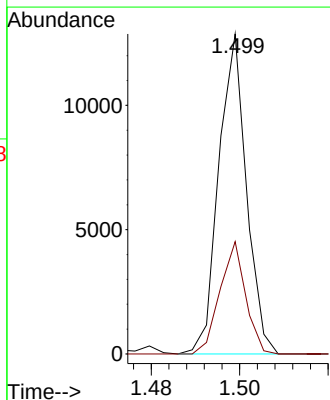
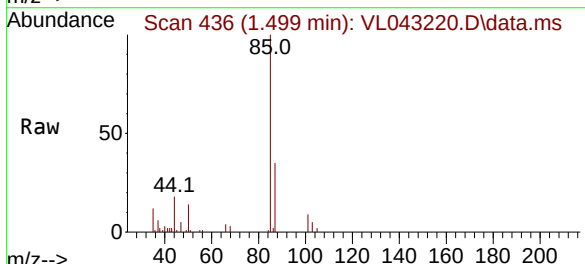
Instrument :
MSVOA_L
ClientSampleId :
IA3

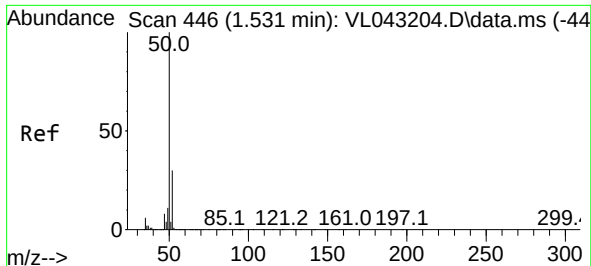
Tgt Ion: 49 Resp: 91519
Ion Ratio Lower Upper
49 100
128 46.7 23.0 69.0
130 59.4 29.9 89.7



#2
Dichlorodifluoromethane
Concen: 0.433 ppbv
RT: 1.499 min Scan# 436
Delta R.T. 0.003 min
Lab File: VL043220.D
Acq: 18 Nov 2025 19:23

Tgt Ion: 85 Resp: 5591
Ion Ratio Lower Upper
85 100
87 35.1 25.4 38.2

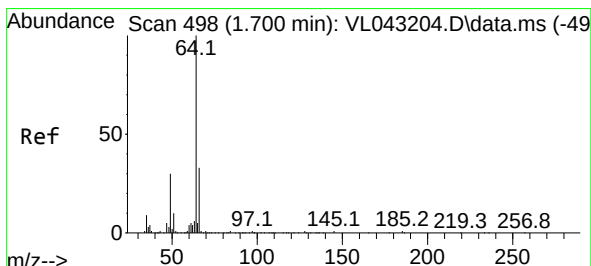
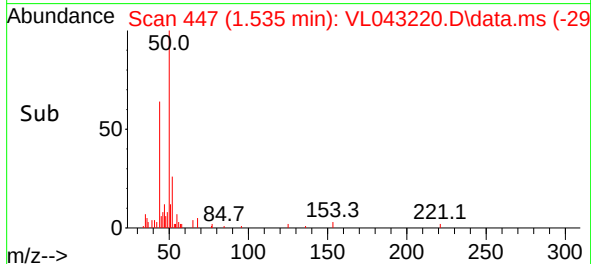
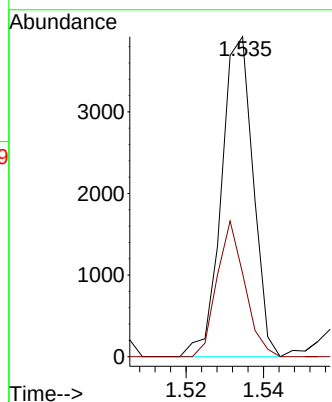
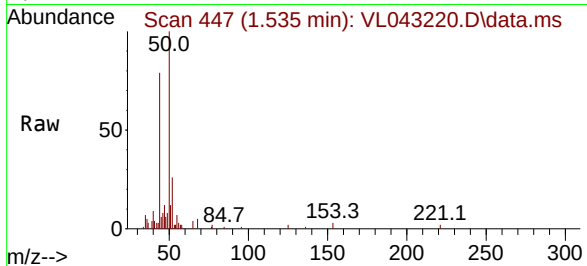




#4
Chloromethane
Concen: 0.463 ppbv
RT: 1.535 min Scan# 446
Delta R.T. 0.003 min
Lab File: VL043220.D
Acq: 18 Nov 2025 19:23

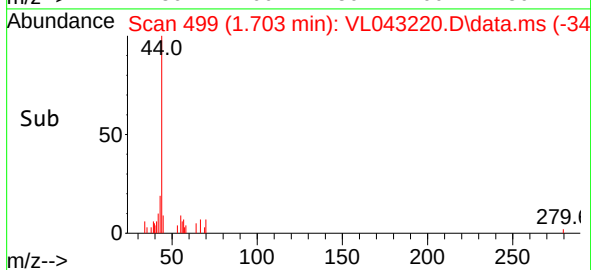
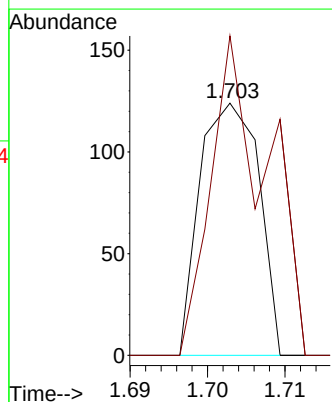
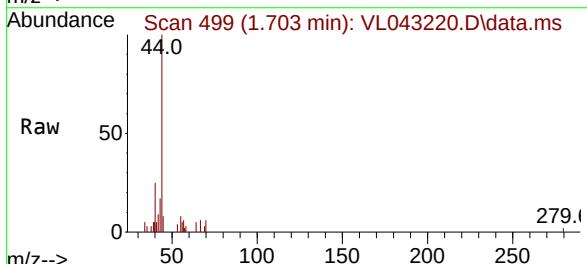
Instrument :
MSVOA_1
ClientSampleId :
IA3

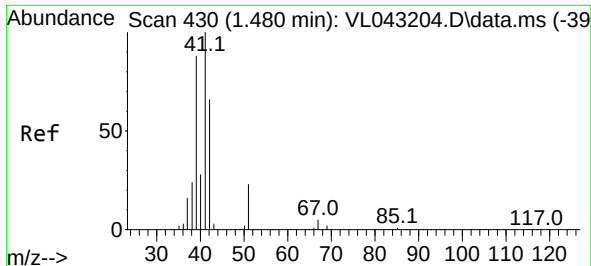
Tgt Ion: 50 Resp: 2234
Ion Ratio Lower Upper
50 100
52 26.0 24.1 36.1



#7
Chloroethane
Concen: 0.032 ppbv
RT: 1.703 min Scan# 499
Delta R.T. 0.003 min
Lab File: VL043220.D
Acq: 18 Nov 2025 19:23

Tgt Ion: 64 Resp: 66
Ion Ratio Lower Upper
64 100
66 126.6 26.8 40.2#





#9

Propene

Concen: 0.777 ppbv

RT: 1.489 min Scan# 41

Delta R.T. 0.010 min

Lab File: VL043220.D

Acq: 18 Nov 2025 19:23

Instrument :

MSVOA_L

ClientSampleId :

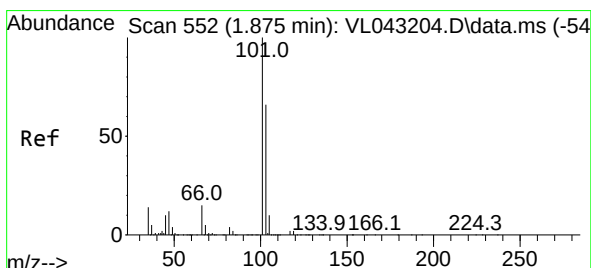
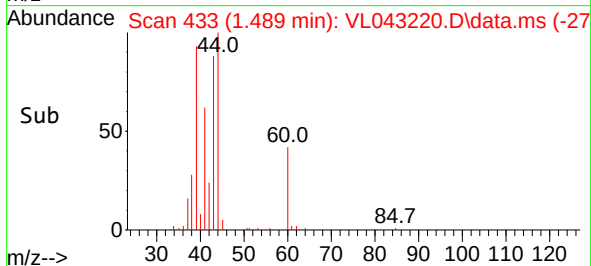
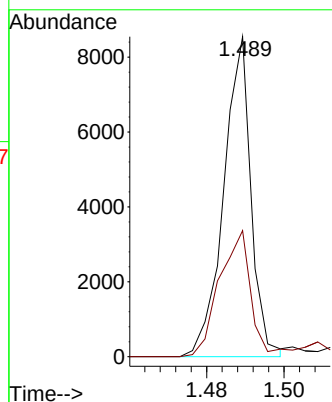
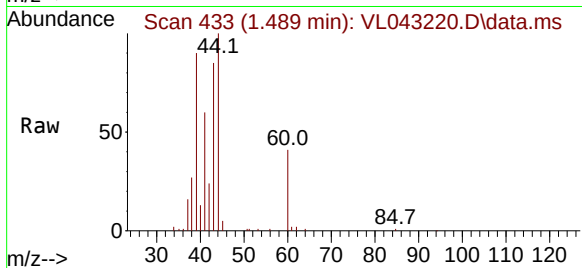
IA3

Tgt Ion: 41 Resp: 4189

Ion Ratio Lower Upper

41 100

42 56.3 3.7 5.5#



#11

Trichlorofluoromethane

Concen: 0.056 ppbv

RT: 2.140 min Scan# 634

Delta R.T. 0.265 min

Lab File: VL043220.D

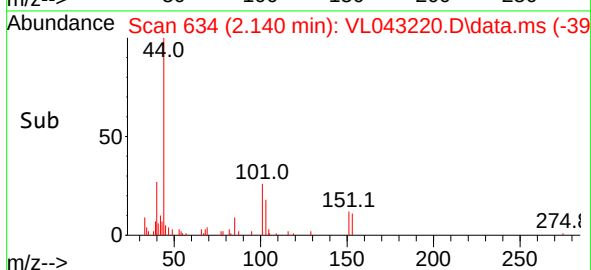
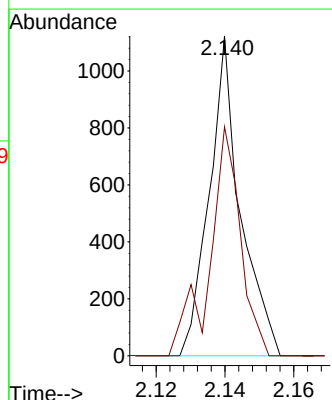
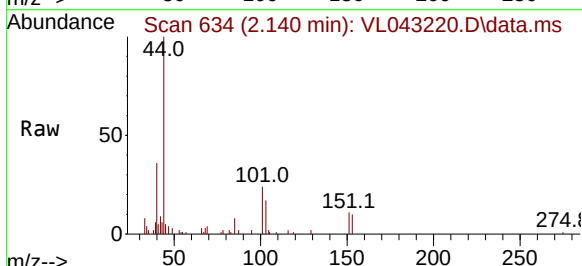
Acq: 18 Nov 2025 19:23

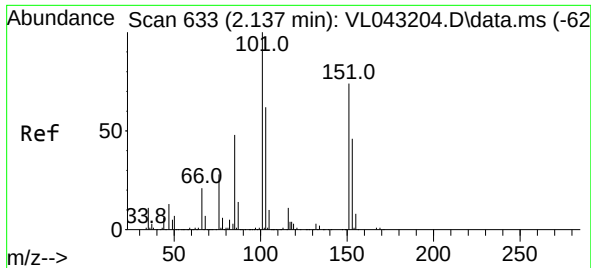
Tgt Ion: 101 Resp: 705

Ion Ratio Lower Upper

101 100

103 71.6 52.6 79.0

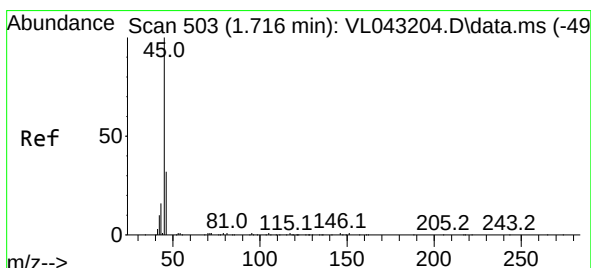
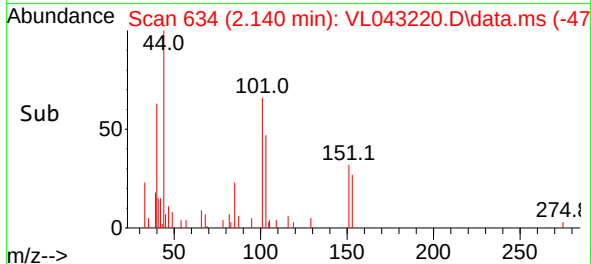
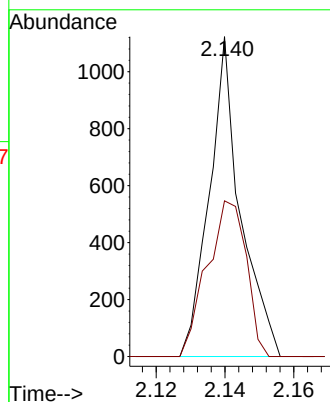
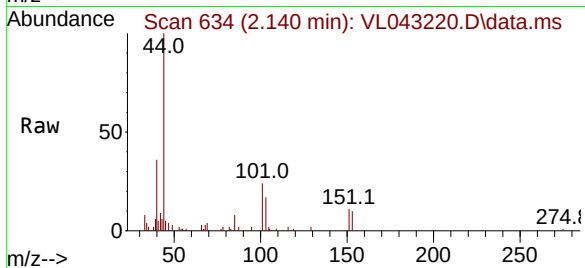




#12
1,1,2-Trichlorotrifluoroethane
Concen: 0.072 ppbv
RT: 2.140 min Scan# 61
Delta R.T. 0.003 min
Lab File: VL043220.D
Acq: 18 Nov 2025 19:23

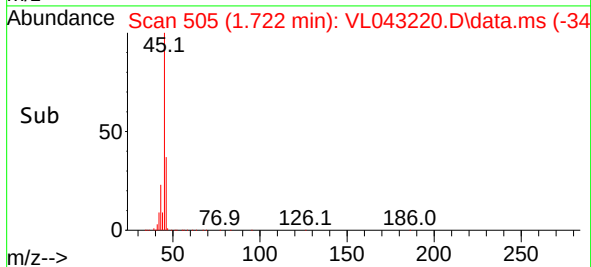
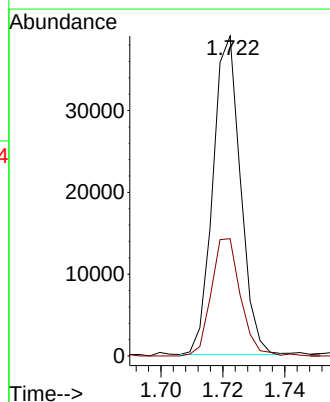
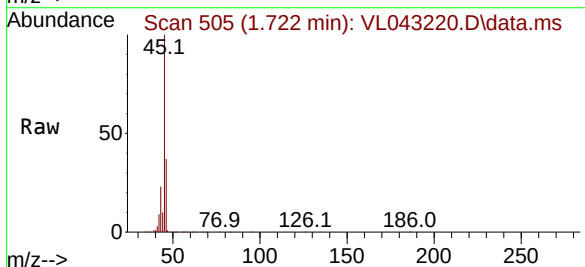
Instrument :
MSVOA_L
ClientSampleId :
IA3

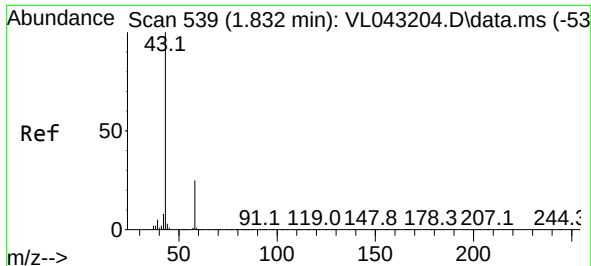
Tgt Ion:101 Resp: 705
Ion Ratio Lower Upper
101 100
151 61.3 59.2 88.8



#13
Ethanol
Concen: 12.718 ppbv
RT: 1.722 min Scan# 505
Delta R.T. 0.006 min
Lab File: VL043220.D
Acq: 18 Nov 2025 19:23

Tgt Ion: 45 Resp: 24108
Ion Ratio Lower Upper
45 100
46 39.2 15.0 59.8





#15

Acetone

Concen: 30.391 ppbv

RT: 1.836 min Scan# 54

Delta R.T. 0.003 min

Lab File: VL043220.D

Acq: 18 Nov 2025 19:23

Instrument :

MSVOA_L

ClientSampleId :

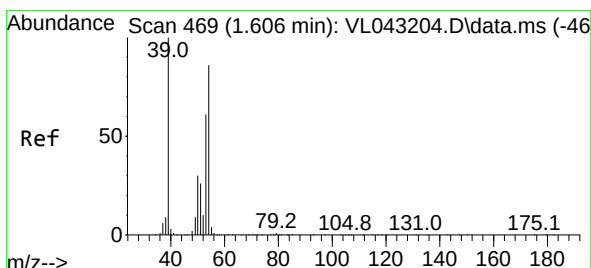
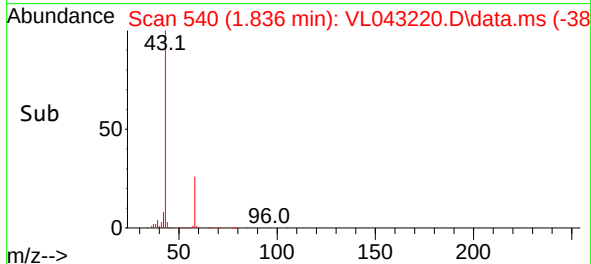
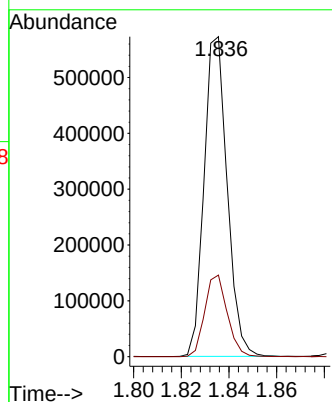
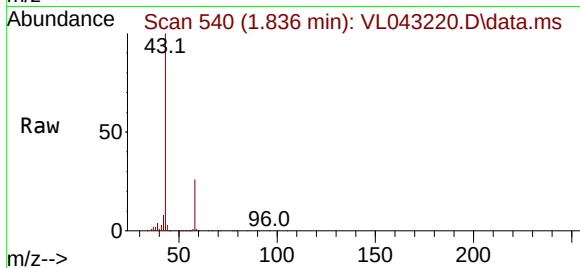
IA3

Tgt Ion: 43 Resp: 386426

Ion Ratio Lower Upper

43 100

58 25.0 20.7 31.1



#16

1,3-Butadiene

Concen: 0.066 ppbv

RT: 1.599 min Scan# 467

Delta R.T. -0.007 min

Lab File: VL043220.D

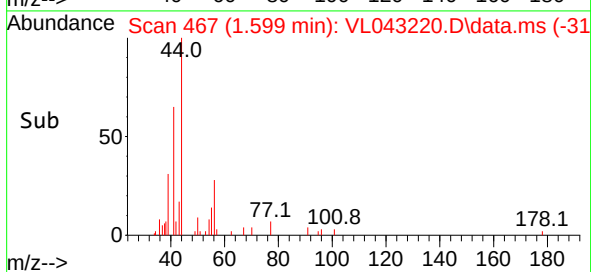
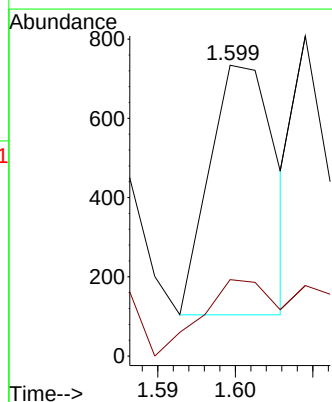
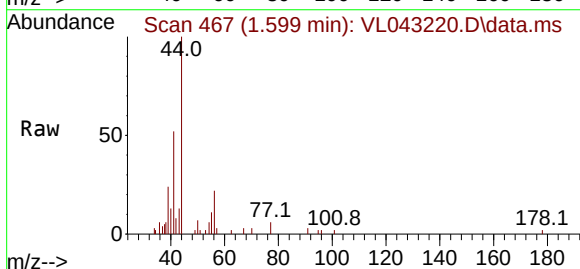
Acq: 18 Nov 2025 19:23

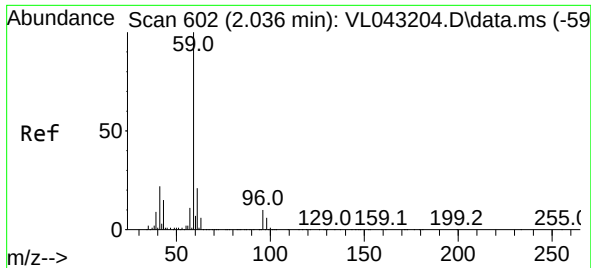
Tgt Ion: 39 Resp: 374

Ion Ratio Lower Upper

39 100

54 0.0 59.4 89.2#





#17

tert-Butyl alcohol

Concen: 0.132 ppbv

RT: 2.043 min Scan# 602

Delta R.T. 0.006 min

Lab File: VL043220.D

Acq: 18 Nov 2025 19:23

Instrument :

MSVOA_L

ClientSampleId :

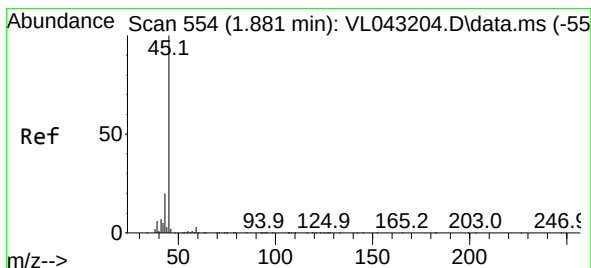
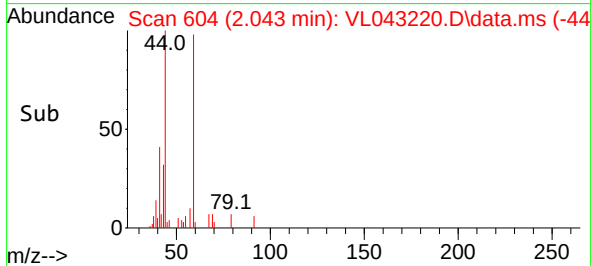
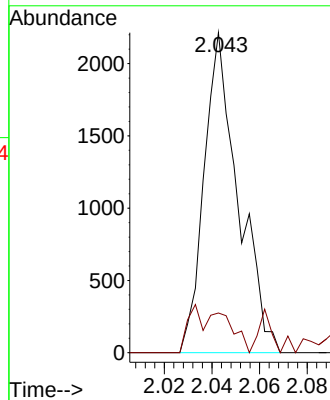
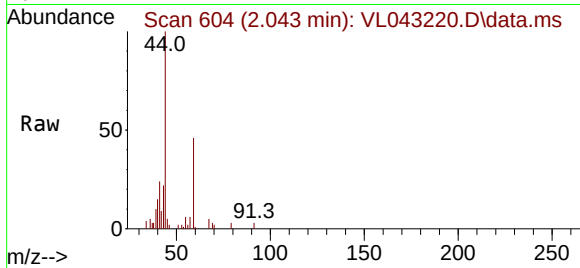
IA3

Tgt Ion: 59 Resp: 2211

Ion Ratio Lower Upper

59 100

57 23.0 9.0 13.4#



#19

Isopropyl Alcohol

Concen: 3.908 ppbv

RT: 1.884 min Scan# 555

Delta R.T. 0.003 min

Lab File: VL043220.D

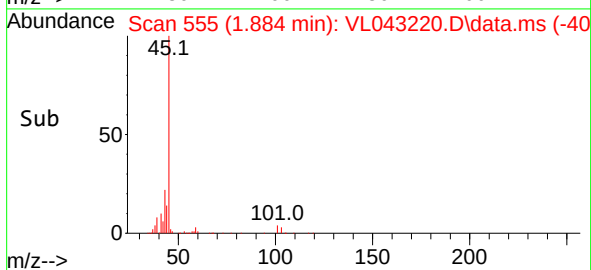
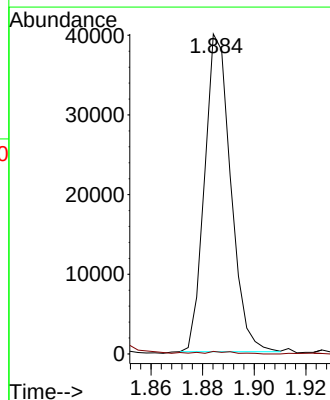
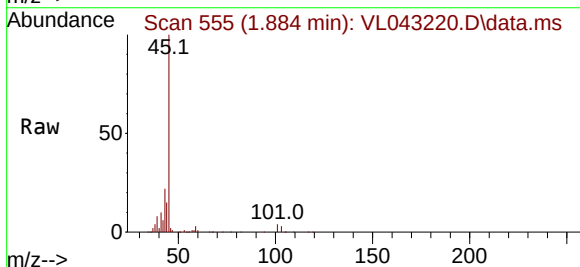
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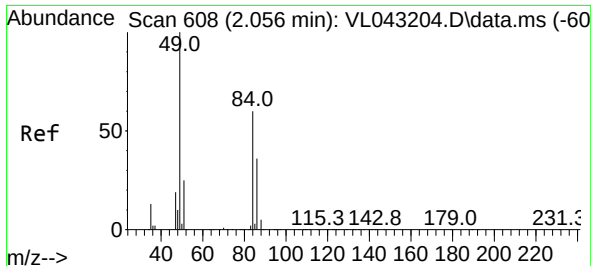
Tgt Ion: 45 Resp: 28082

Ion Ratio Lower Upper

45 100

58 344.5 31.3 46.9#





#20

Methylene Chloride

Concen: 0.600 ppbv

RT: 2.062 min Scan# 610

Delta R.T. 0.006 min

Lab File: VL043220.D

Acq: 18 Nov 2025 19:23

Instrument :

MSVOA_L

ClientSampleId :

IA3

Tgt Ion: 84 Resp: 5011

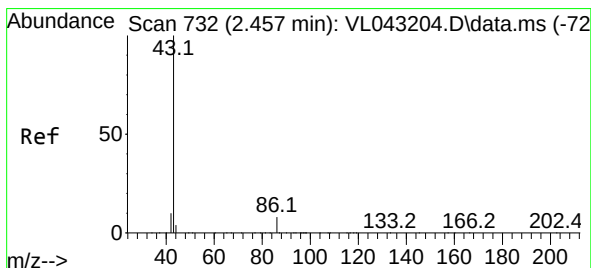
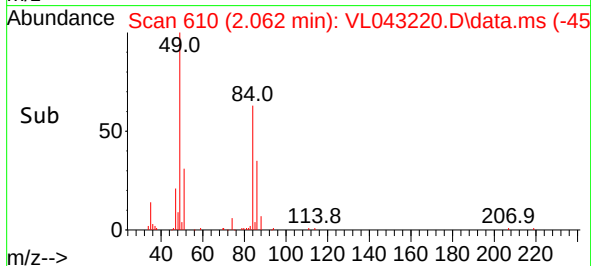
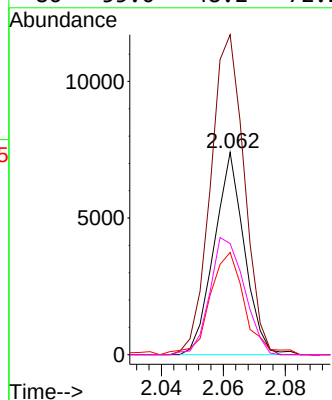
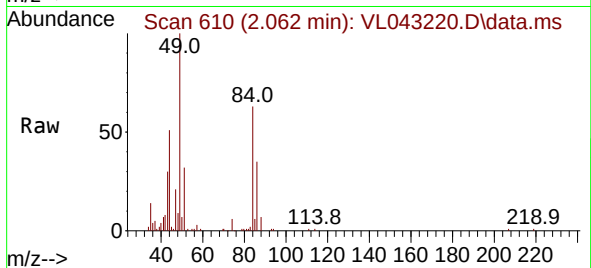
Ion Ratio Lower Upper

84 100

49 158.3 132.9 199.3

51 48.4 34.8 52.2

86 55.0 48.2 72.2



#23

Vinyl Acetate

Concen: 0.402 ppbv

RT: 2.451 min Scan# 730

Delta R.T. -0.007 min

Lab File: VL043220.D

Acq: 18 Nov 2025 19:23

Tgt Ion: 43 Resp: 6164

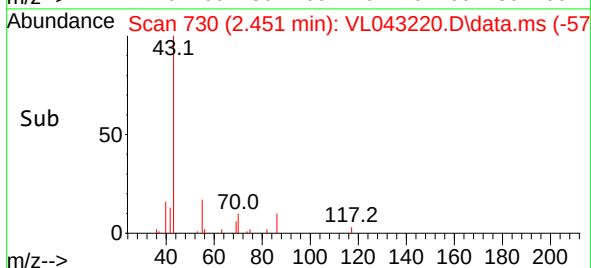
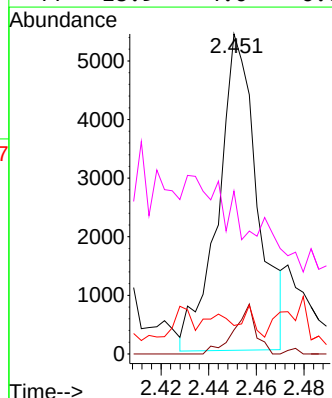
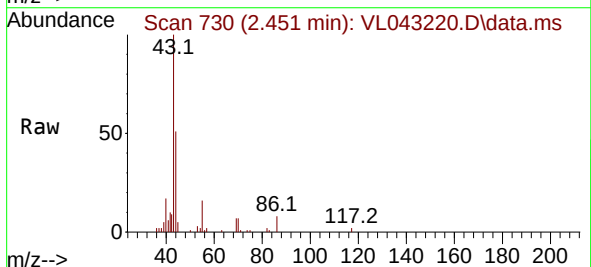
Ion Ratio Lower Upper

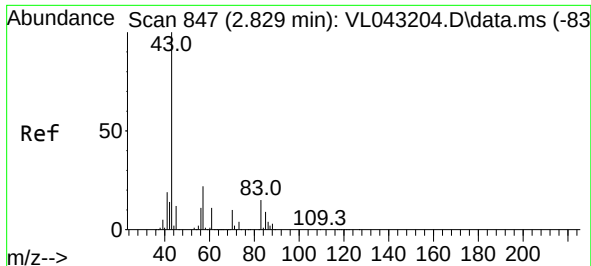
43 100

86 7.9 6.2 9.2

42 0.0 8.0 12.0#

44 18.9 4.0 6.0#

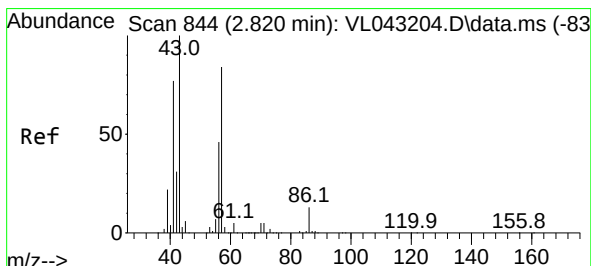
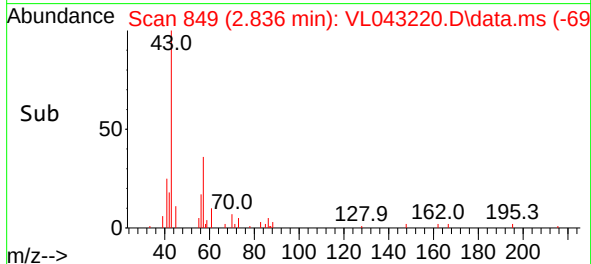
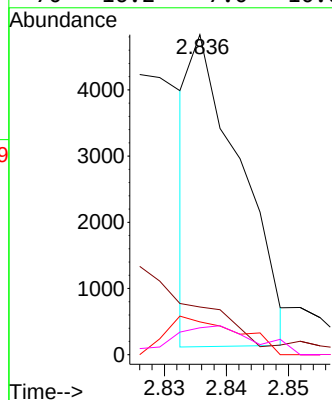
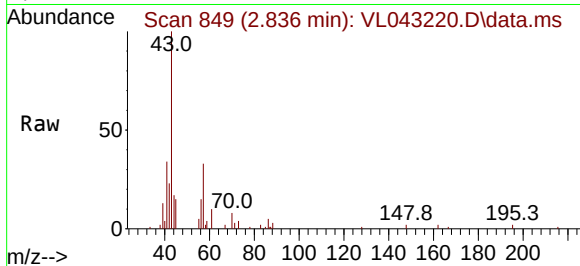




#25
Ethyl Acetate
Concen: 0.095 ppbv
RT: 2.836 min Scan# 847
Delta R.T. 0.006 min
Lab File: VL043220.D
Acq: 18 Nov 2025 19:23

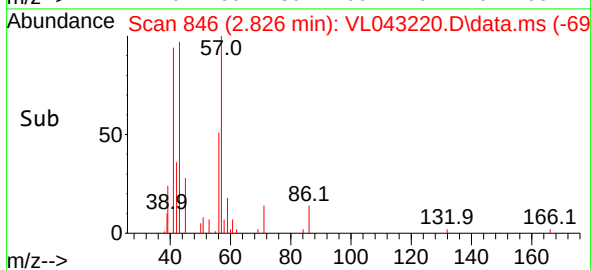
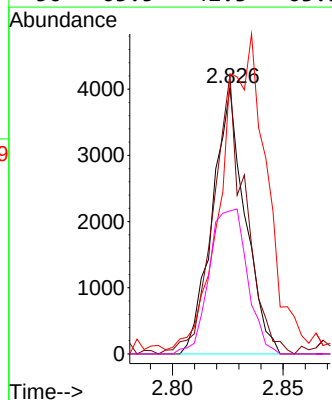
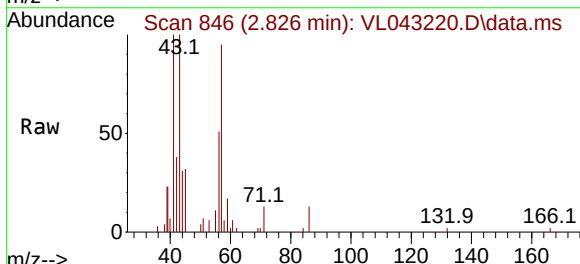
Instrument :
MSVOA_L
ClientSampleId :
IA3

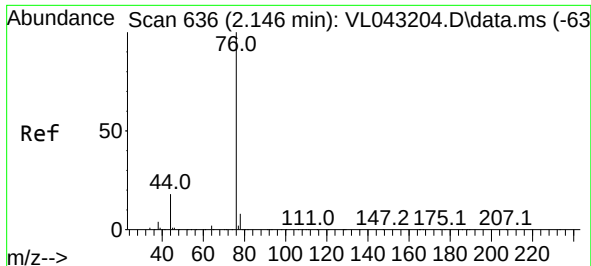
Tgt Ion: 43	Resp: 2608
Ion Ratio	Lower Upper
43 100	
45 0.0	8.1 12.1#
61 20.7	7.0 10.4#
70 16.2	7.0 10.6#



#26
Hexane
Concen: 0.344 ppbv
RT: 2.826 min Scan# 846
Delta R.T. 0.006 min
Lab File: VL043220.D
Acq: 18 Nov 2025 19:23

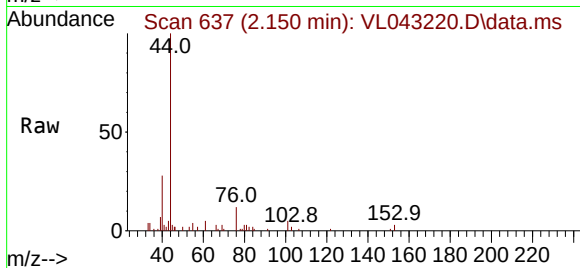
Tgt	Ion: 57	Resp:	4135
Ion	Ratio	Lower	Upper
57	100		
41	107.4	74.6	111.8
43	177.2	179.0	268.4#
56	63.5	42.3	63.5



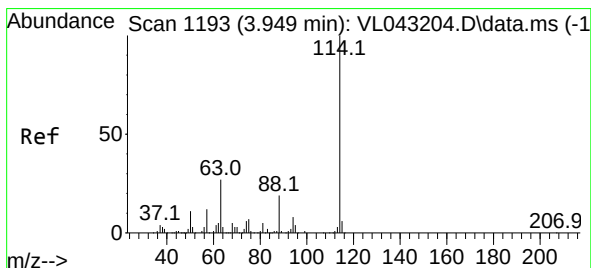
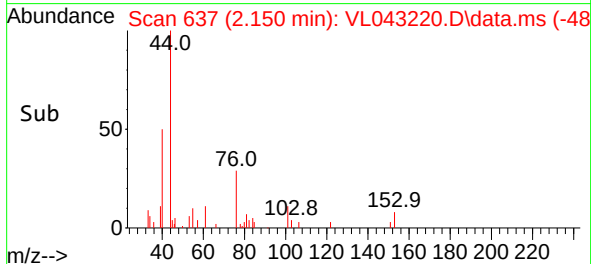
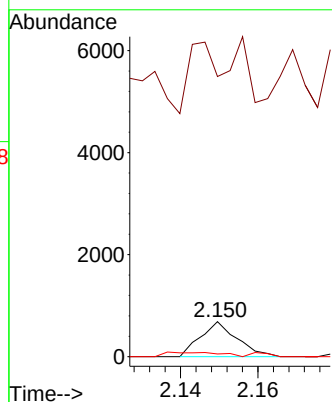


#27
Carbon Disulfide
Concen: 0.036 ppbv
RT: 2.150 min Scan# 61
Delta R.T. 0.003 min
Lab File: VL043220.D
Acq: 18 Nov 2025 19:23

Instrument :
MSVOA_L
ClientSampleId :
IA3

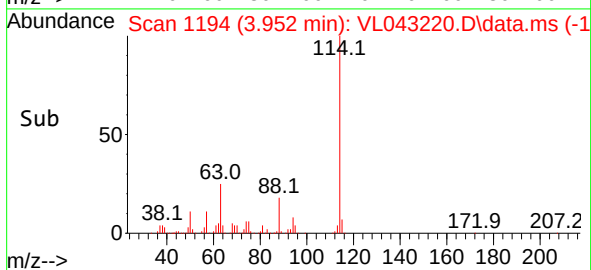
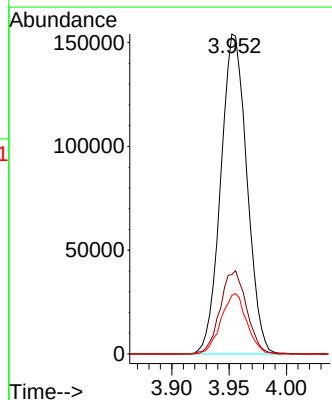
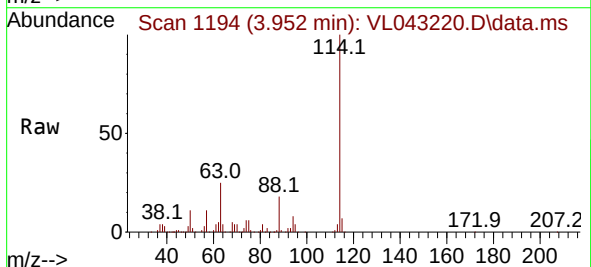


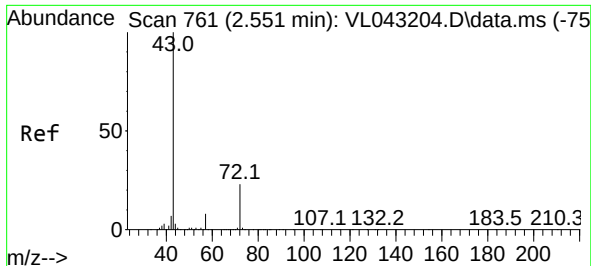
Tgt Ion: 76 Resp: 448
Ion Ratio Lower Upper
76 100
44 4471.0 16.1 24.1#
78 25.2 9.6 14.4#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 3.952 min Scan# 1194
Delta R.T. 0.003 min
Lab File: VL043220.D
Acq: 18 Nov 2025 19:23

Tgt Ion: 114 Resp: 244106
Ion Ratio Lower Upper
114 100
63 26.4 21.0 31.6
88 18.5 14.9 22.3

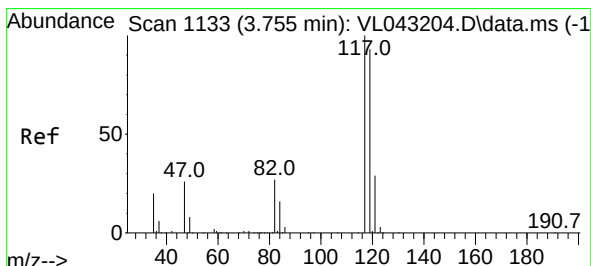
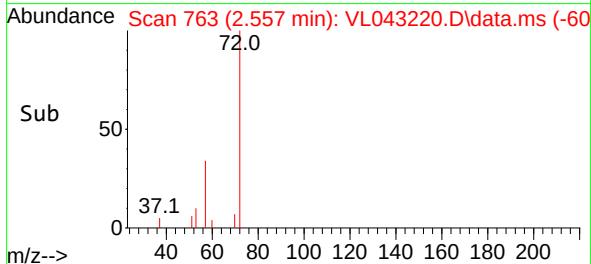
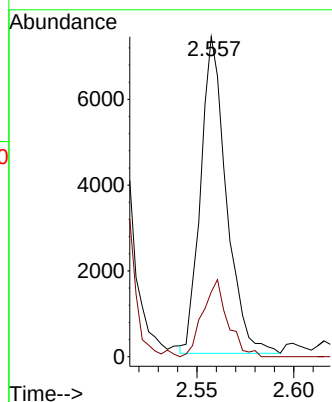
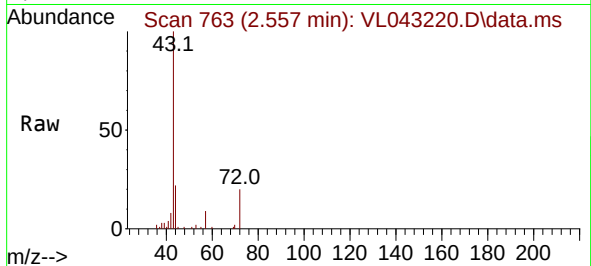




#34
2-Butanone
Concen: 0.397 ppbv
RT: 2.557 min Scan# 761
Delta R.T. 0.006 min
Lab File: VL043220.D
Acq: 18 Nov 2025 19:23

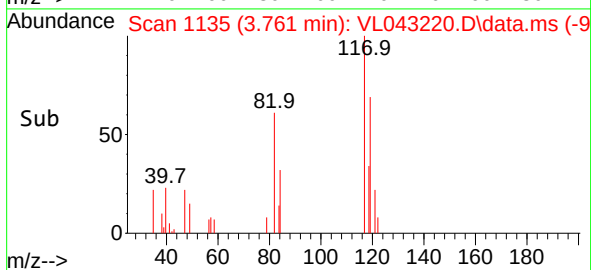
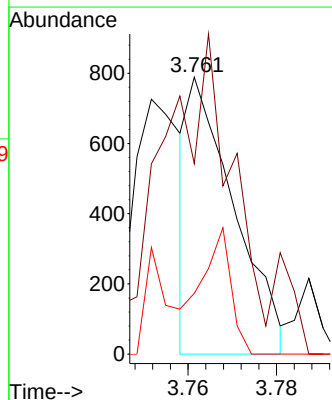
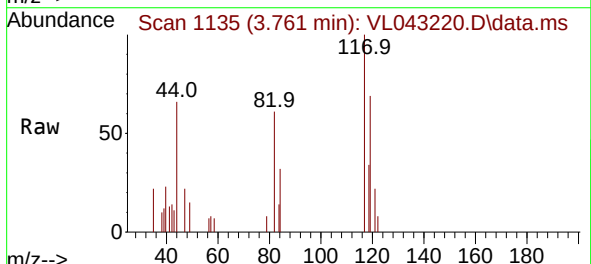
Instrument :
MSVOA_L
ClientSampleId :
IA3

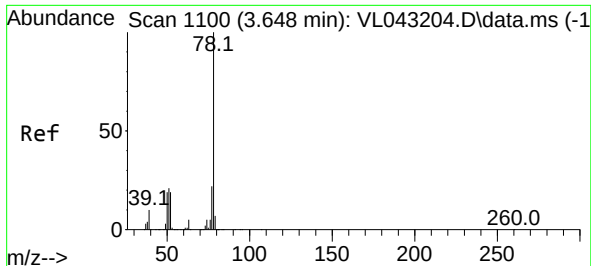
Tgt Ion: 43 Resp: 6841
Ion Ratio Lower Upper
43 100
72 23.6 18.1 27.1



#35
Carbon Tetrachloride
Concen: 0.031 ppbv
RT: 3.761 min Scan# 1135
Delta R.T. 0.006 min
Lab File: VL043220.D
Acq: 18 Nov 2025 19:23

Tgt Ion: 117 Resp: 570
Ion Ratio Lower Upper
117 100
119 35.8 74.6 112.0#
121 24.4 23.2 34.8

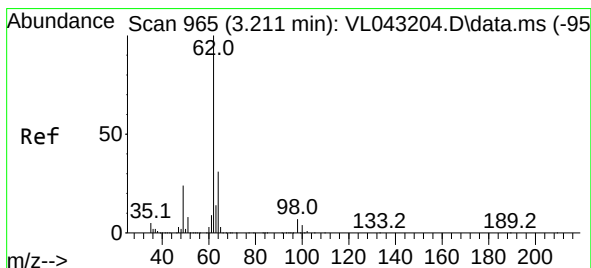
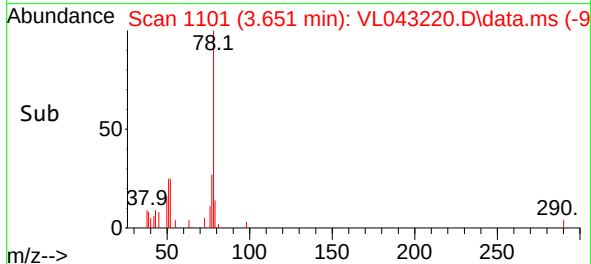
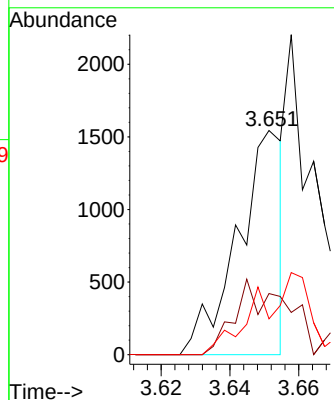
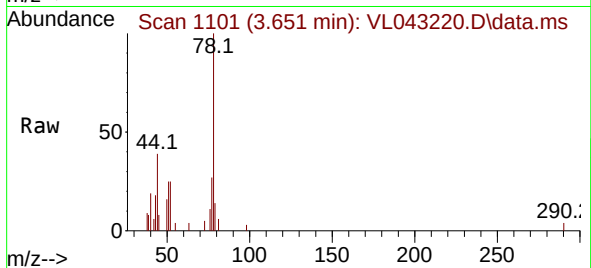




#36
Benzene
Concen: 0.060 ppbv
RT: 3.651 min Scan# 1101
Delta R.T. 0.003 min
Lab File: VL043220.D
Acq: 18 Nov 2025 19:23

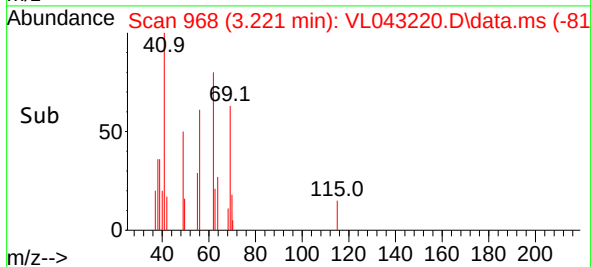
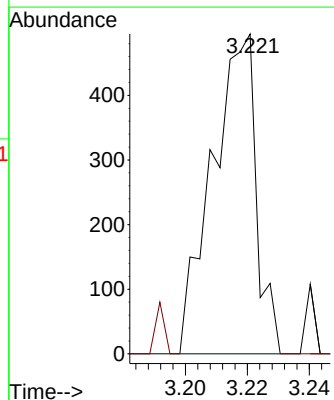
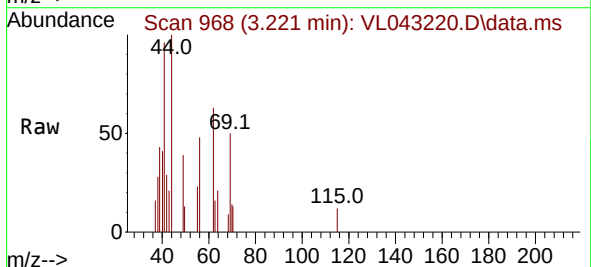
Instrument :
MSVOA_L
ClientSampleId :
IA3

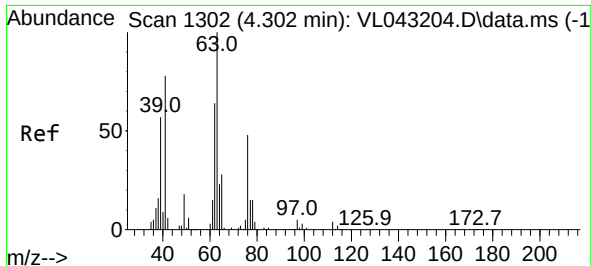
Tgt Ion: 78 Resp: 1400
Ion Ratio Lower Upper
78 100
77 27.3 17.5 26.3#
50 16.0 15.5 23.3



#37
1,2-Dichloroethane
Concen: 0.036 ppbv
RT: 3.221 min Scan# 968
Delta R.T. 0.010 min
Lab File: VL043220.D
Acq: 18 Nov 2025 19:23

Tgt Ion: 62 Resp: 488
Ion Ratio Lower Upper
62 100
98 0.0 5.5 8.3#





#39

1,2-Dichloropropane

Concen: 7.513 ppbv

RT: 3.956 min Scan# 1195

Delta R.T. -0.346 min

Lab File: VL043220.D

Acq: 18 Nov 2025 19:23

Instrument :

MSVOA_L

ClientSampleId :

IA3

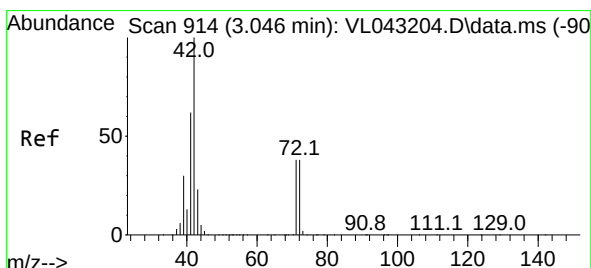
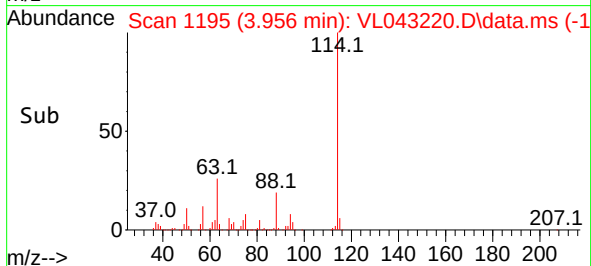
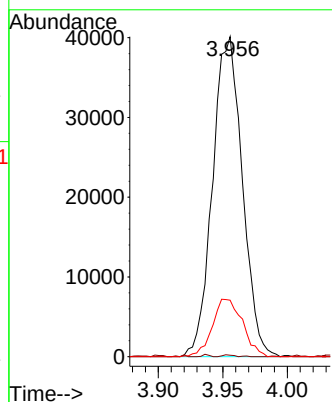
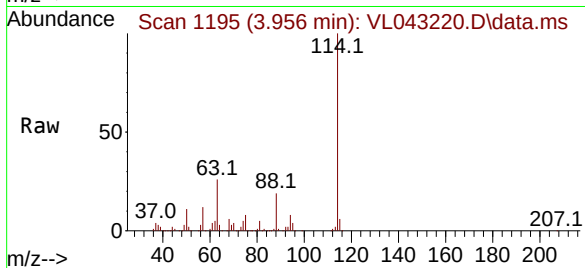
Tgt Ion: 63 Resp: 64282

Ion Ratio Lower Upper

63 100

41 0.5 62.6 93.8#

62 17.7 51.0 76.6#



#41

Tetrahydrofuran

Concen: 0.084 ppbv

RT: 3.059 min Scan# 918

Delta R.T. 0.013 min

Lab File: VL043220.D

Acq: 18 Nov 2025 19:23

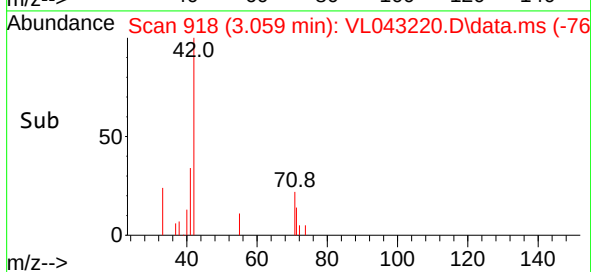
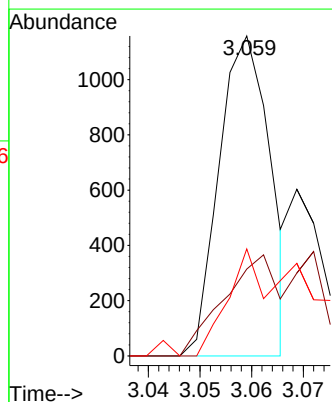
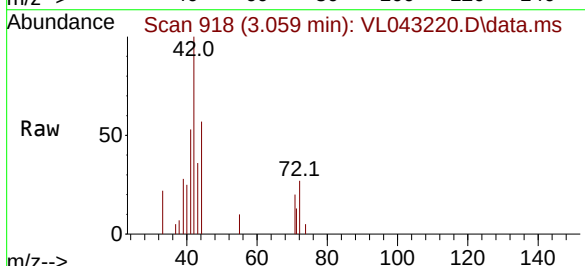
Tgt Ion: 42 Resp: 799

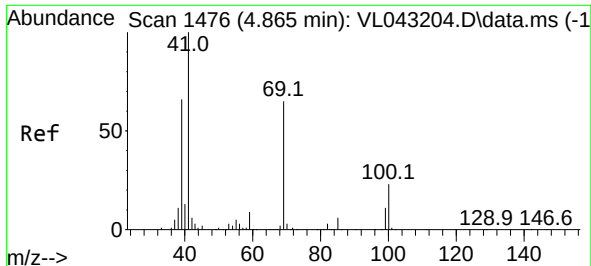
Ion Ratio Lower Upper

42 100

72 0.0 30.6 46.0#

71 52.9 30.5 45.7#

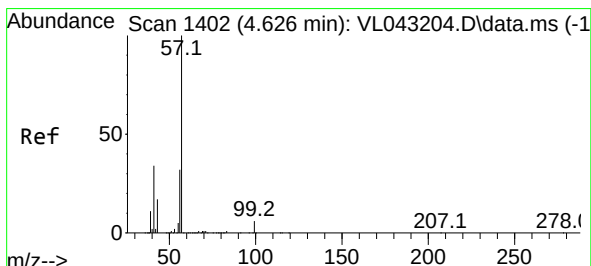
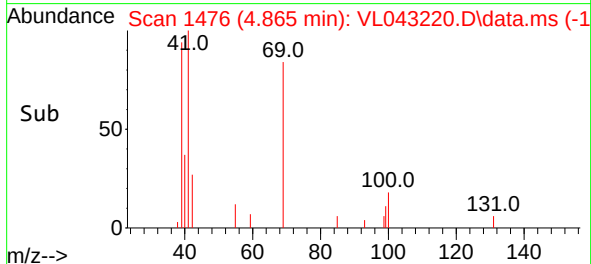
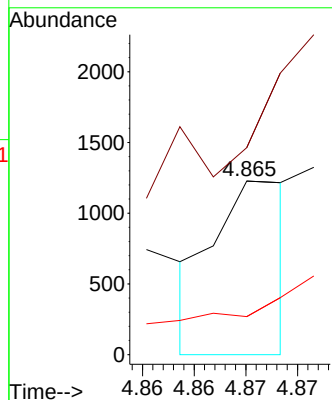
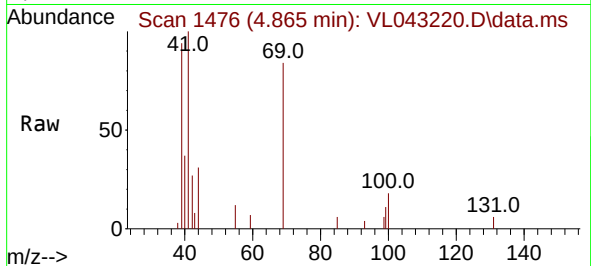




#43
Methyl Methacrylate
Concen: 0.050 ppbv
RT: 4.865 min Scan# 1476
Delta R.T. -0.000 min
Lab File: VL043220.D
Acq: 18 Nov 2025 19:23

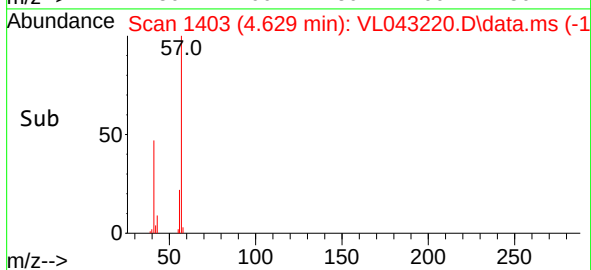
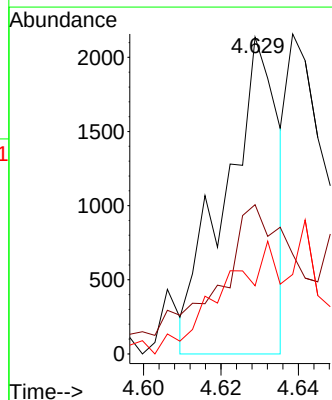
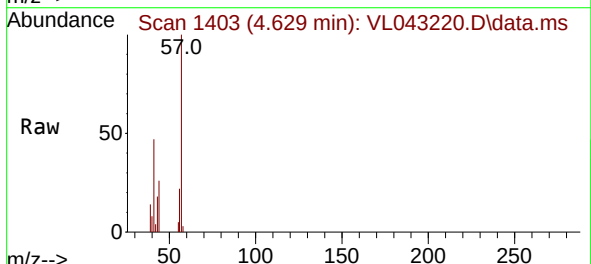
Instrument :
MSVOA_L
ClientSampleId :
IA3

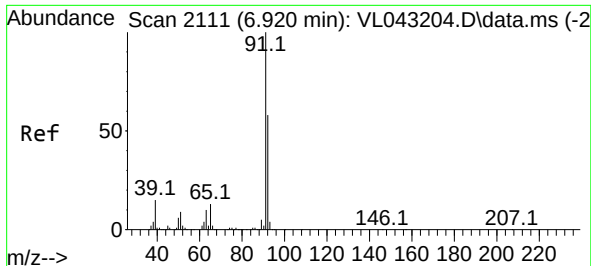
Tgt Ion: 69 Resp: 623
Ion Ratio Lower Upper
69 100
41 0.0 126.7 190.1#
100 0.0 28.6 43.0#



#44
2,2,4-Trimethylpentane
Concen: 0.050 ppbv
RT: 4.629 min Scan# 1403
Delta R.T. 0.003 min
Lab File: VL043220.D
Acq: 18 Nov 2025 19:23

Tgt Ion: 57 Resp: 2020
Ion Ratio Lower Upper
57 100
41 106.0 28.0 42.0#
56 0.0 25.6 38.4#

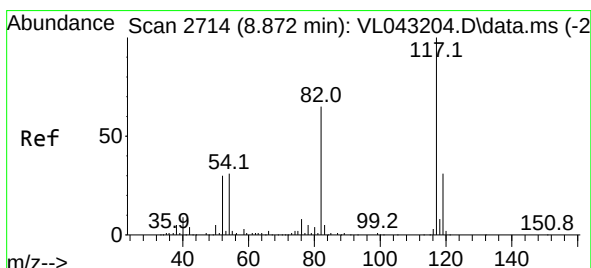
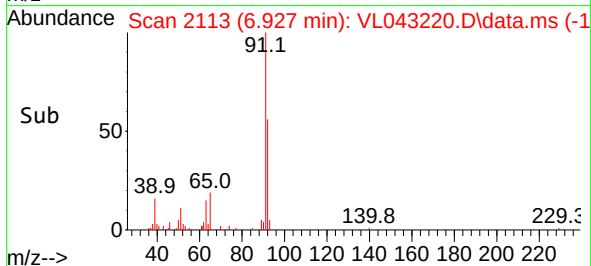
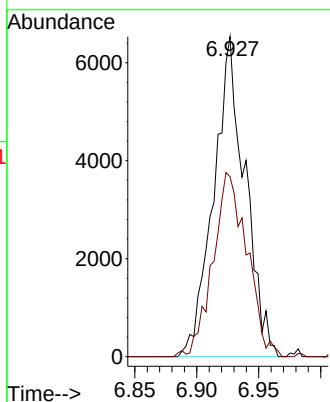
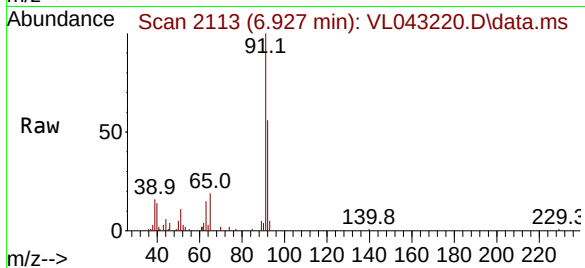




#53
Toluene
Concen: 0.418 ppbv
RT: 6.927 min Scan# 2111
Delta R.T. 0.006 min
Lab File: VL043220.D
Acq: 18 Nov 2025 19:23

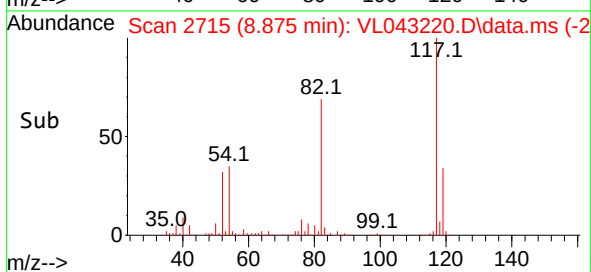
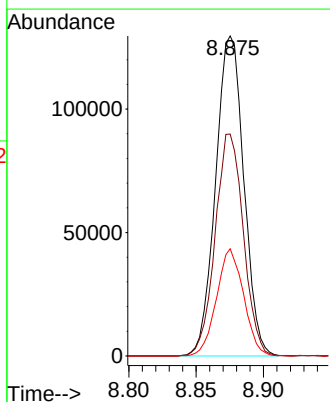
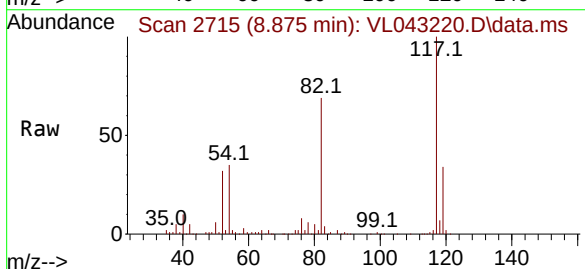
Instrument :
MSVOA_L
ClientSampleId :
IA3

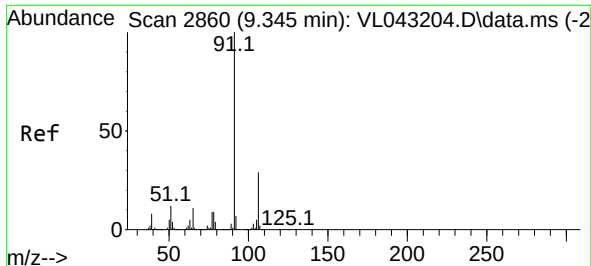
Tgt Ion: 91 Resp: 11573
Ion Ratio Lower Upper
91 100
92 62.2 47.4 71.0



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.875 min Scan# 2715
Delta R.T. 0.003 min
Lab File: VL043220.D
Acq: 18 Nov 2025 19:23

Tgt Ion: 117 Resp: 189099
Ion Ratio Lower Upper
117 100
82 69.2 56.1 84.1
119 32.2 25.0 37.6





#58

Ethyl Benzene

Concen: 0.158 ppbv

RT: 9.523 min Scan# 2915

Delta R.T. 0.178 min

Lab File: VL043220.D

Acq: 18 Nov 2025 19:23

Instrument :

MSVOA_L

ClientSampleId :

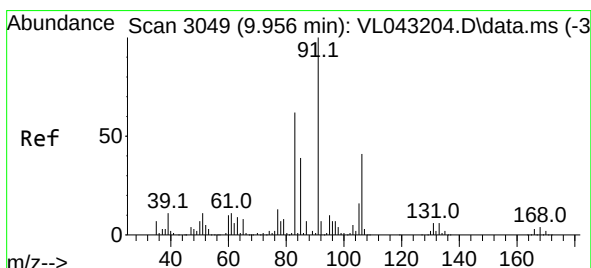
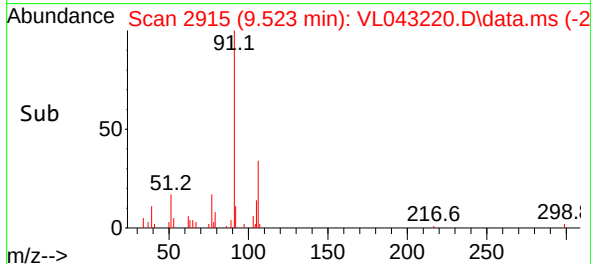
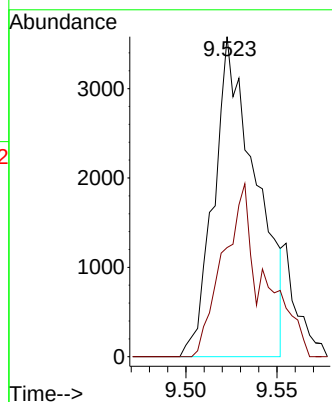
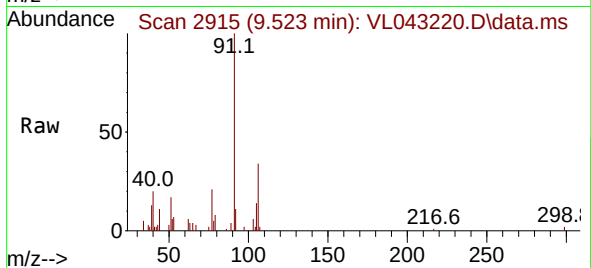
IA3

Tgt Ion: 91 Resp: 5755

Ion Ratio Lower Upper

91 100

106 34.1 22.8 34.2



#60

o-Xylene

Concen: 0.079 ppbv

RT: 9.956 min Scan# 3049

Delta R.T. -0.000 min

Lab File: VL043220.D

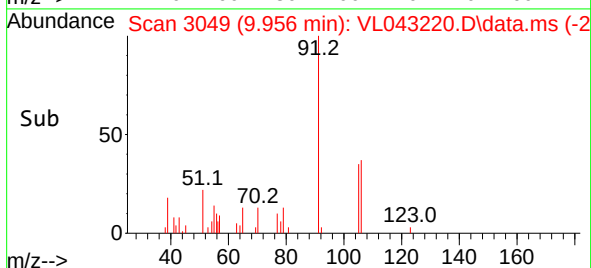
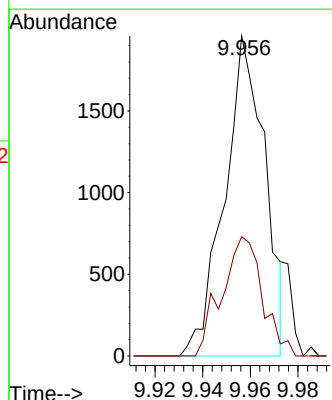
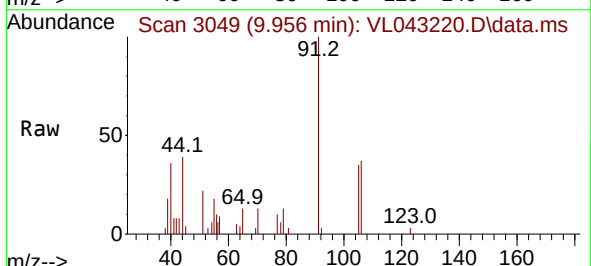
Acq: 18 Nov 2025 19:23

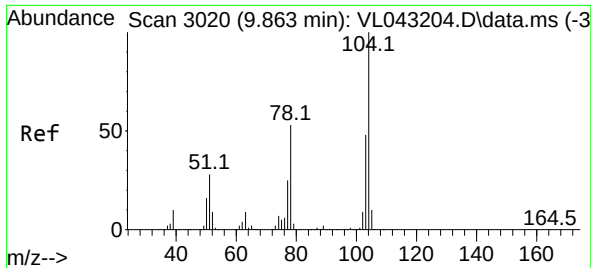
Tgt Ion: 91 Resp: 2313

Ion Ratio Lower Upper

91 100

106 37.4 20.9 62.8

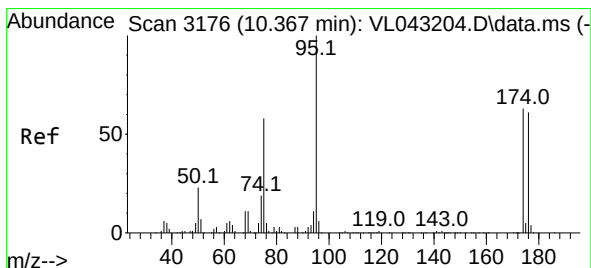
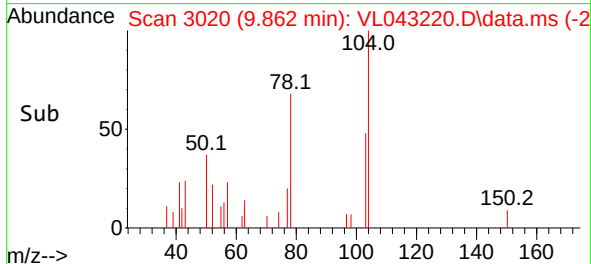
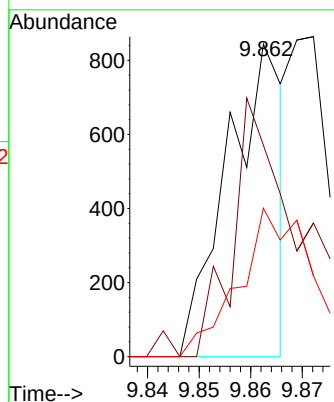
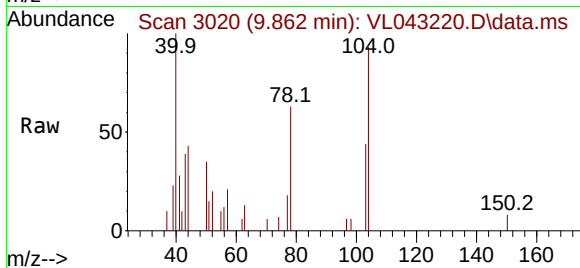




#61
Styrene
Concen: 0.050 ppbv
RT: 9.862 min Scan# 3020
Delta R.T. -0.000 min
Lab File: VL043220.D
Acq: 18 Nov 2025 19:23

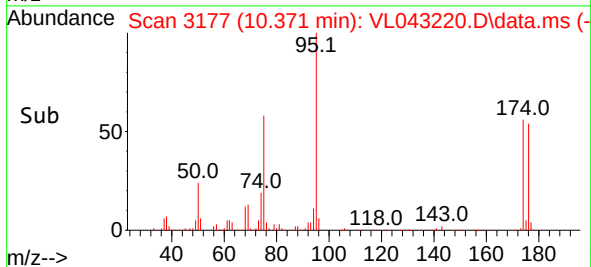
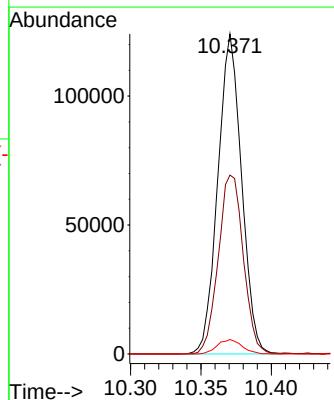
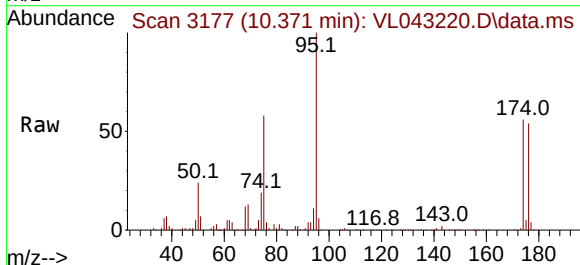
Instrument :
MSVOA_L
ClientSampleId :
IA3

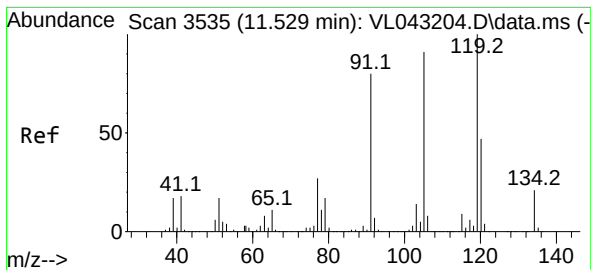
Tgt Ion:104 Resp: 632
Ion Ratio Lower Upper
104 100
78 100.6 42.1 63.1#
103 66.6 37.2 55.8#



#68
1-Bromo-4-Fluorobenzene
Concen: 10.508 ppbv
RT: 10.371 min Scan# 3177
Delta R.T. 0.003 min
Lab File: VL043220.D
Acq: 18 Nov 2025 19:23

Tgt Ion: 95 Resp: 145646
Ion Ratio Lower Upper
95 100
174 59.0 50.2 75.2
175 4.7 4.1 6.1





#74

1,2,4-Trimethylbenzene

Concen: 0.089 ppbv

RT: 11.529 min Scan# 31

Delta R.T. -0.000 min

Lab File: VL043220.D

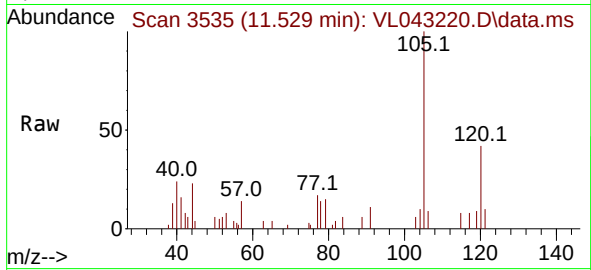
Acq: 18 Nov 2025 19:23

Instrument :

MSVOA_L

ClientSampleId :

IA3



Tgt Ion:105 Resp: 2898

Ion Ratio Lower Upper

105 100

120 42.3 41.7 62.5

91 11.1 70.0 105.0#

77 16.9 23.8 35.8#

