

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL061625\
 Data File : VL042631.D
 Acq On : 16 Jun 2025 16:20
 Operator : SY/MD
 Sample : Q2317-04DL 20X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 115-SG1

Quant Time: Jun 17 03:07:33 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL052925AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Fri May 30 02:01:56 2025
 Response via : Initial Calibration

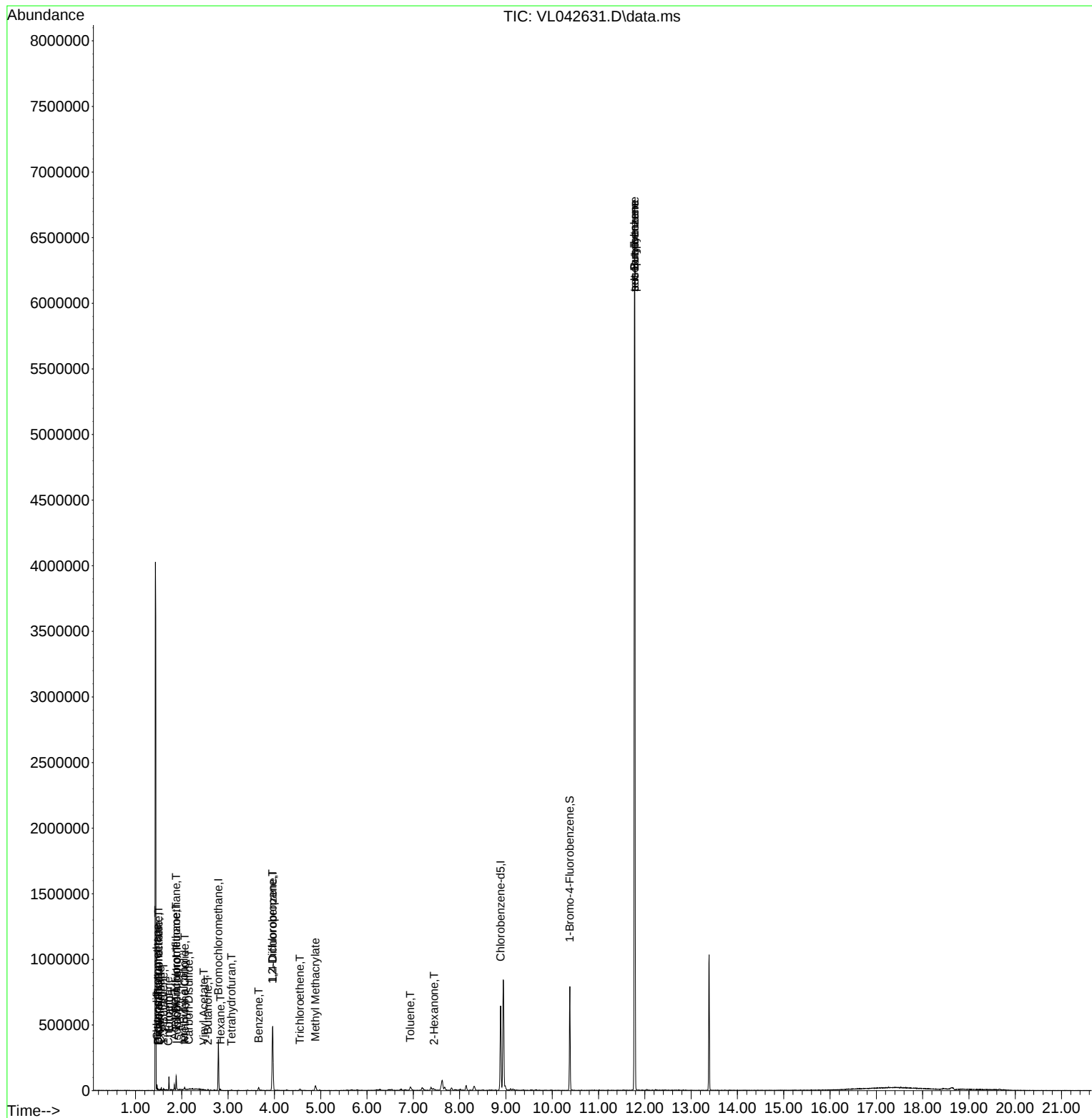
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	2.790	49	106783	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.962	114	296021	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.885	117	264603	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.380	95	195718	9.867	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	98.700%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.499	85	427	0.033	ppbv	91
3) Chlorodifluoromethane	1.466	51	9328	0.516	ppbv #	62
4) Chloromethane	1.534	50	2505	0.482	ppbv	90
7) Chloroethane	1.709	64	73	0.035	ppbv #	36
8) Dichlorotetrafluoroethane	1.499	85	427	0.039	ppbv #	26
9) Propene	1.486	41	1384	0.190	ppbv	91
11) Trichlorofluoromethane	1.877	101	28889	2.366	ppbv	99
12) 1,1,2-Trichlorotrifluo...	1.877	101	28889	3.013	ppbv #	15
13) Ethanol	1.722	45	33372	38.470	ppbv	94
15) Acetone	1.839	43	16529	1.285	ppbv	97
16) 1,3-Butadiene	1.602	39	1555	0.255	ppbv #	37
17) tert-Butyl alcohol	2.046	59	1732	0.129	ppbv	99
19) Isopropyl Alcohol	1.890	45	4698	0.611	ppbv #	1
20) Methylene Chloride	2.062	84	2723	0.642	ppbv #	82
23) Vinyl Acetate	2.476	43	689	0.040	ppbv #	68
26) Hexane	2.832	57	2656	0.166	ppbv #	45
27) Carbon Disulfide	2.153	76	1502	0.122	ppbv #	64
34) 2-Butanone	2.564	43	4501	0.213	ppbv	96
36) Benzene	3.661	78	12355	0.424	ppbv	98
38) Trichloroethene	4.548	130	1671	0.135	ppbv	92
39) 1,2-Dichloropropane	3.959	63	74329	6.895	ppbv #	22
41) Tetrahydrofuran	3.072	42	992	0.080	ppbv #	88
43) Methyl Methacrylate	4.884	69	7937	0.702	ppbv #	31
51) 2-Hexanone	7.448	43	769	0.033	ppbv #	84
53) Toluene	6.936	91	9780	0.290	ppbv #	20
65) tert-Butylbenzene	11.778	119	48621	1.029	ppbv #	24
67) sec-Butylbenzene	11.778	105	13515	0.204	ppbv #	63
69) p-Isopropyltoluene	11.778	119	48621	0.874	ppbv #	51

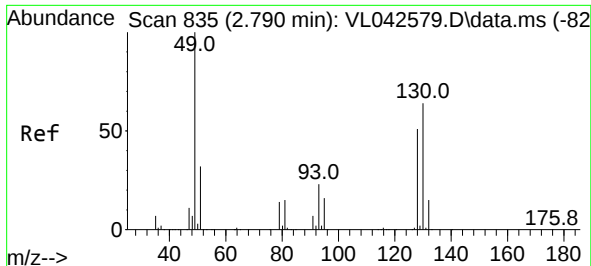
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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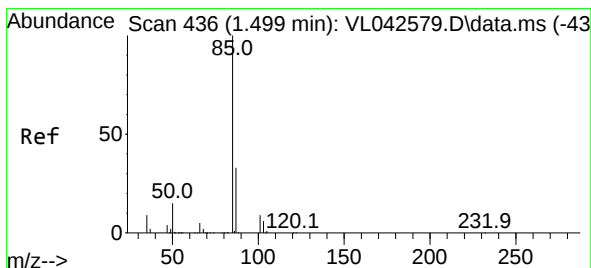
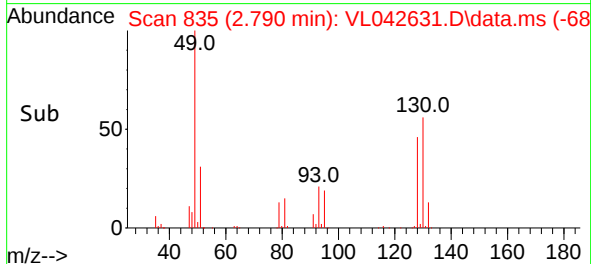
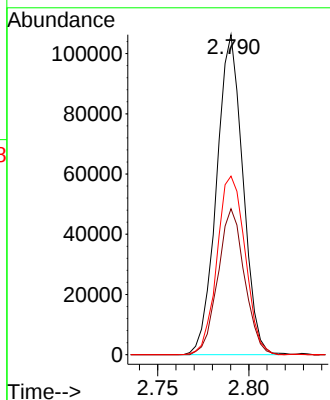
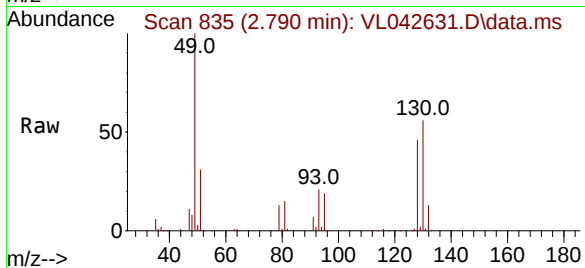




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.790 min Scan# 81
Delta R.T. 0.000 min
Lab File: VL042631.D
Acq: 16 Jun 2025 16:20

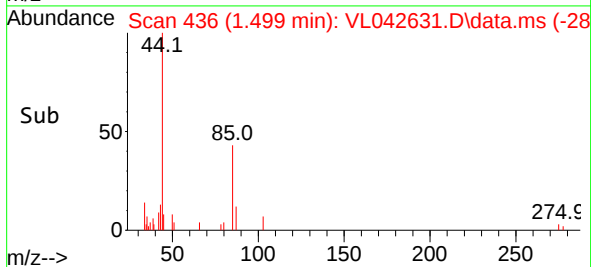
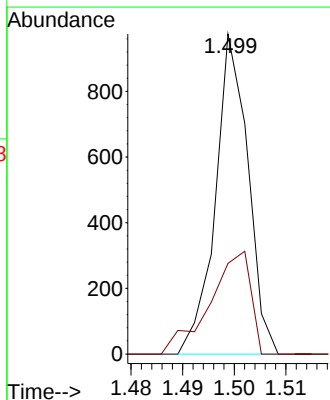
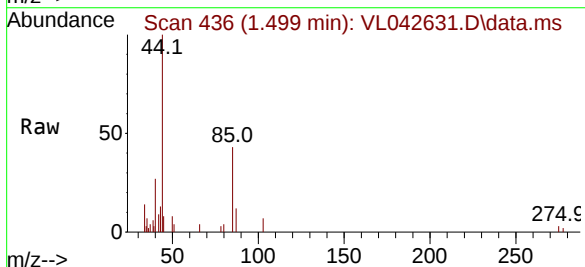
Instrument :
MSVOA_L
ClientSampleId :
115-SG1

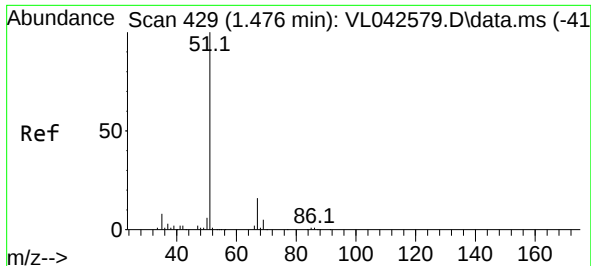
Tgt Ion: 49 Resp: 106783
Ion Ratio Lower Upper
49 100
128 46.0 24.2 72.6
130 59.6 30.4 91.2



#2
Dichlorodifluoromethane
Concen: 0.033 ppbv
RT: 1.499 min Scan# 436
Delta R.T. -0.000 min
Lab File: VL042631.D
Acq: 16 Jun 2025 16:20

Tgt Ion: 85 Resp: 427
Ion Ratio Lower Upper
85 100
87 28.3 26.6 39.8

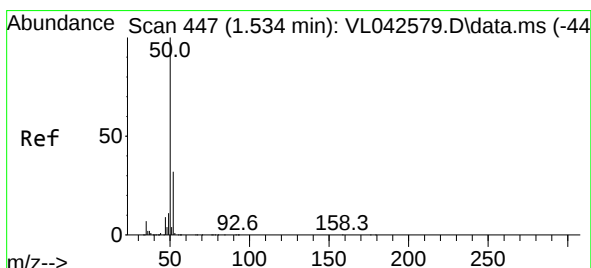
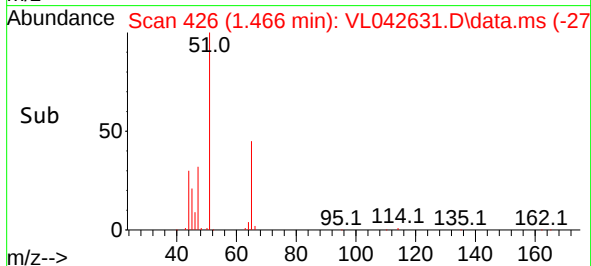
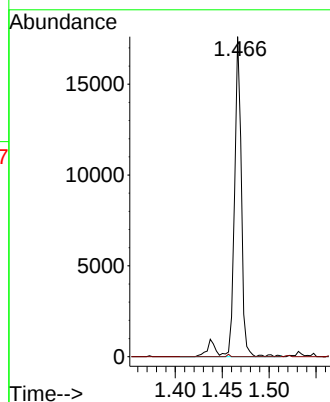
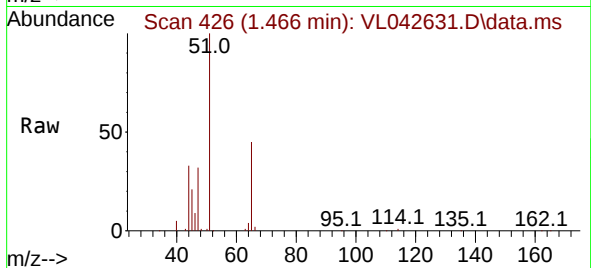




#3
Chlorodifluoromethane
Concen: 0.516 ppbv
RT: 1.466 min Scan# 41
Delta R.T. -0.010 min
Lab File: VL042631.D
Acq: 16 Jun 2025 16:20

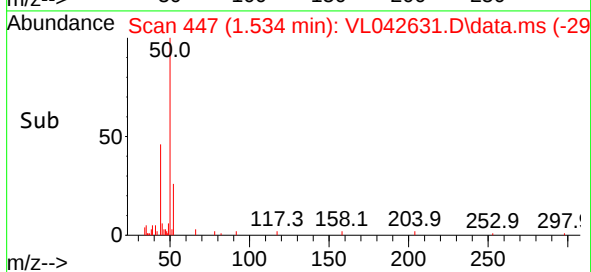
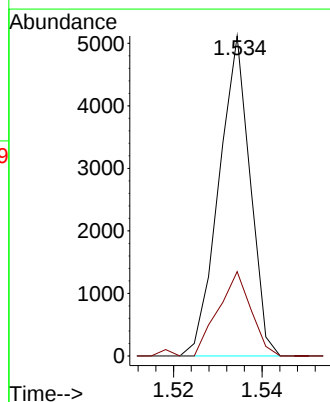
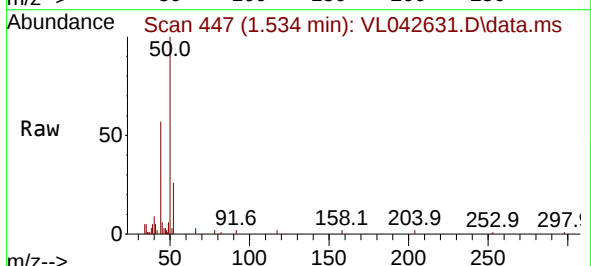
Instrument :
MSVOA_L
ClientSampleId :
115-SG1

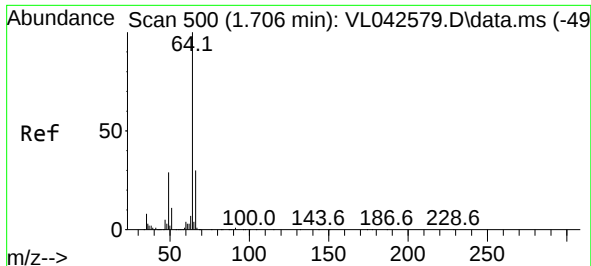
Tgt Ion: 51 Resp: 9328
Ion Ratio Lower Upper
51 100
67 0.2 13.4 20.2#



#4
Chloromethane
Concen: 0.482 ppbv
RT: 1.534 min Scan# 447
Delta R.T. -0.000 min
Lab File: VL042631.D
Acq: 16 Jun 2025 16:20

Tgt Ion: 50 Resp: 2505
Ion Ratio Lower Upper
50 100
52 26.4 25.8 38.6

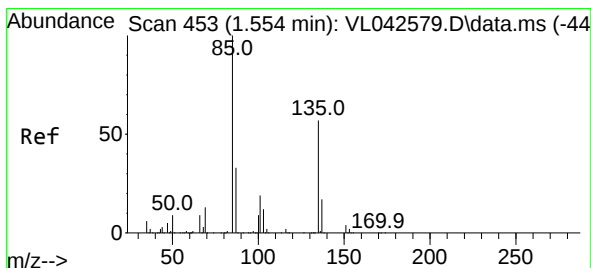
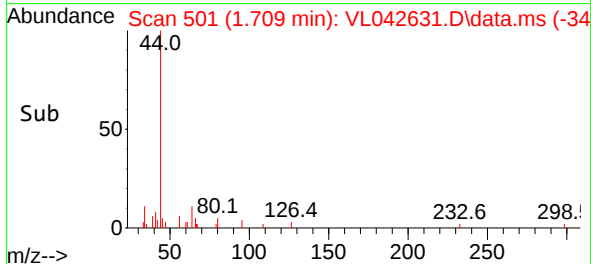
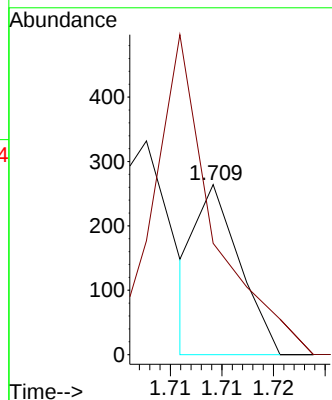
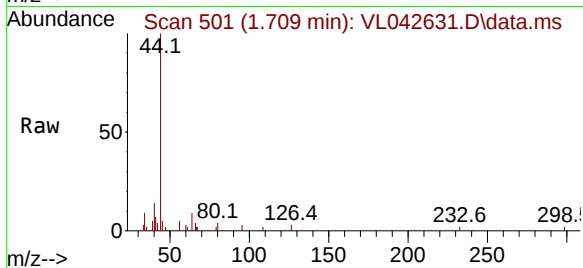




#7
Chloroethane
Concen: 0.035 ppbv
RT: 1.709 min Scan# 500
Delta R.T. 0.003 min
Lab File: VL042631.D
Acq: 16 Jun 2025 16:20

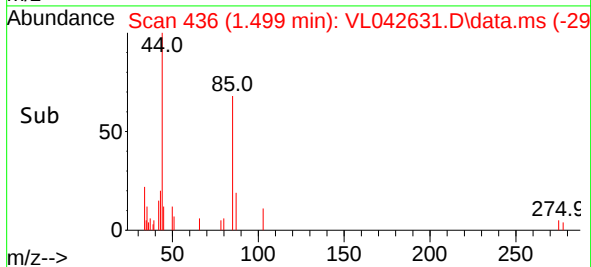
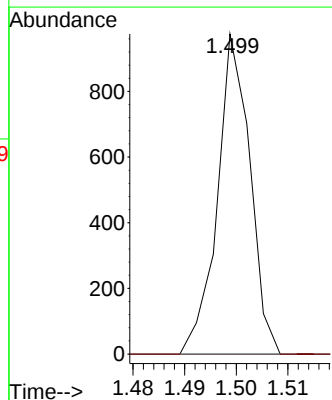
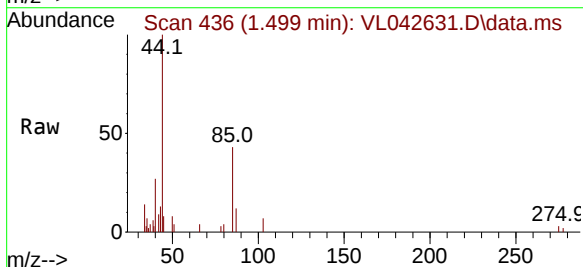
Instrument :
MSVOA_L
ClientSampleId :
115-SG1

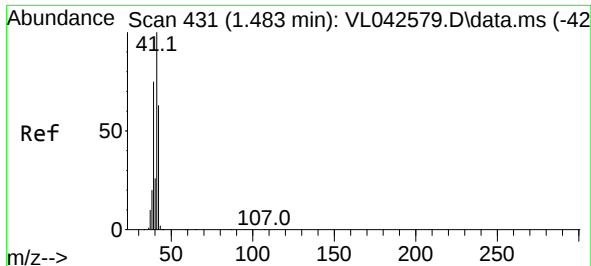
Tgt Ion: 64 Resp: 73
Ion Ratio Lower Upper
64 100
66 65.5 24.3 36.5#



#8
Dichlorotetrafluoroethane
Concen: 0.039 ppbv
RT: 1.499 min Scan# 436
Delta R.T. -0.055 min
Lab File: VL042631.D
Acq: 16 Jun 2025 16:20

Tgt Ion: 85 Resp: 427
Ion Ratio Lower Upper
85 100
135 5.6 50.2 75.4#





#9

Propene

Concen: 0.190 ppbv

RT: 1.486 min Scan# 41

Delta R.T. 0.003 min

Lab File: VL042631.D

Acq: 16 Jun 2025 16:20

Instrument :

MSVOA_L

ClientSampleId :

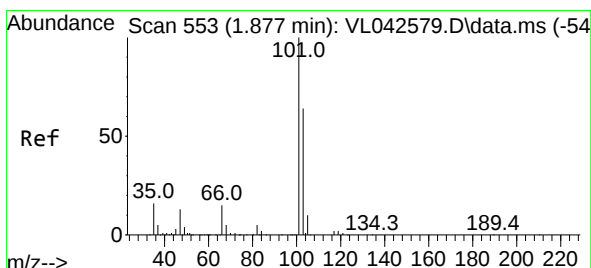
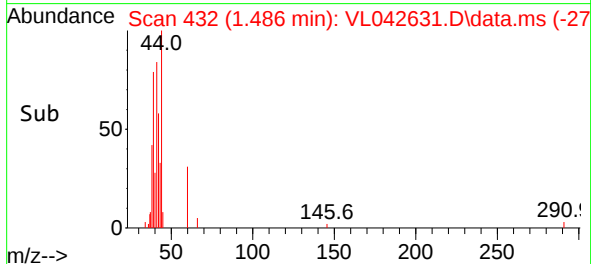
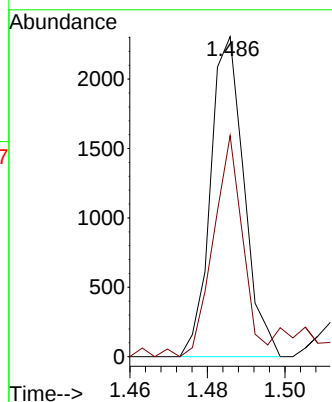
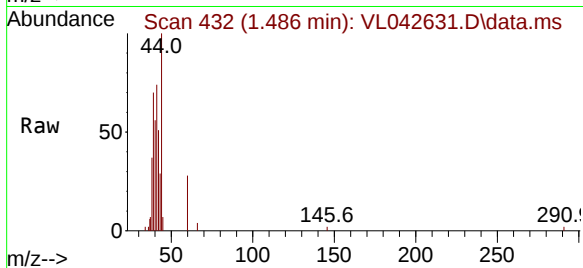
115-SG1

Tgt Ion: 41 Resp: 1384

Ion Ratio Lower Upper

41 100

42 73.5 53.3 79.9



#11

Trichlorofluoromethane

Concen: 2.366 ppbv

RT: 1.877 min Scan# 553

Delta R.T. -0.000 min

Lab File: VL042631.D

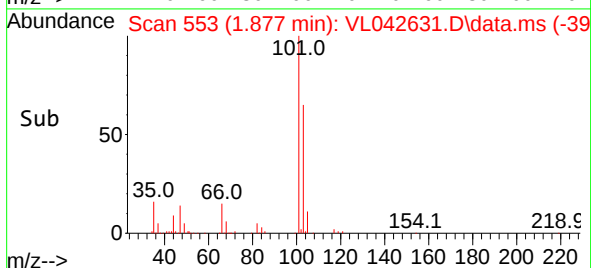
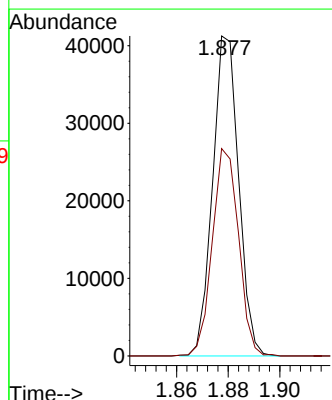
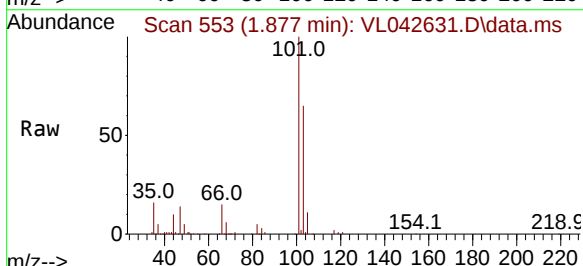
Acq: 16 Jun 2025 16:20

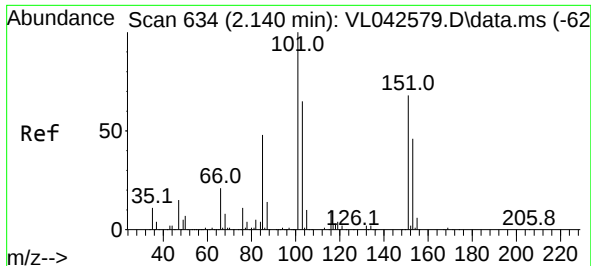
Tgt Ion:101 Resp: 28889

Ion Ratio Lower Upper

101 100

103 64.8 51.5 77.3

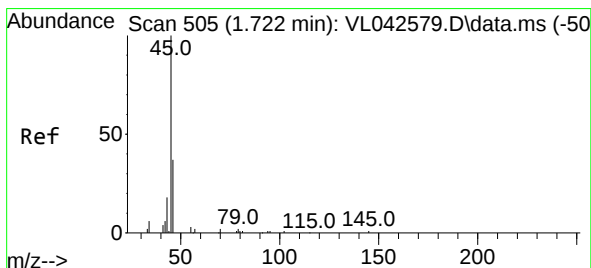
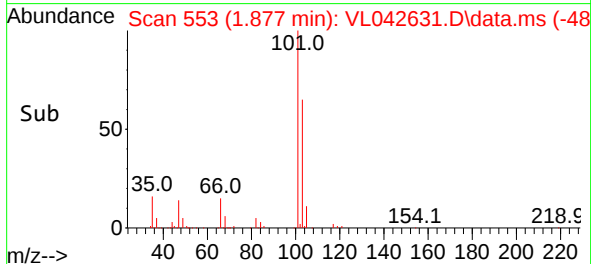
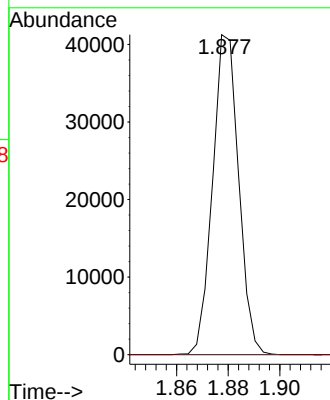
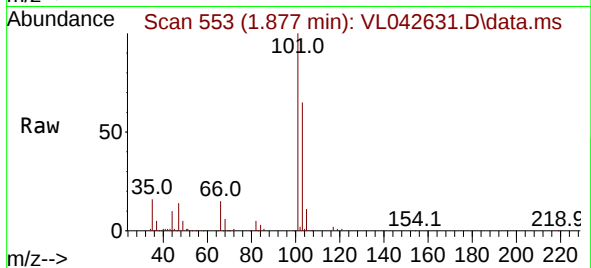




#12
1,1,2-Trichlorotrifluoroethane
Concen: 3.013 ppbv
RT: 1.877 min Scan# 511
Delta R.T. -0.262 min
Lab File: VL042631.D
Acq: 16 Jun 2025 16:20

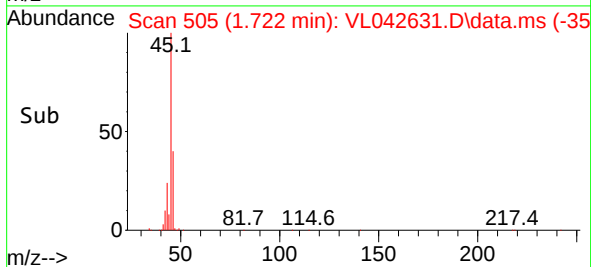
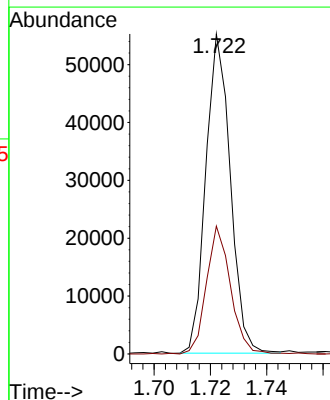
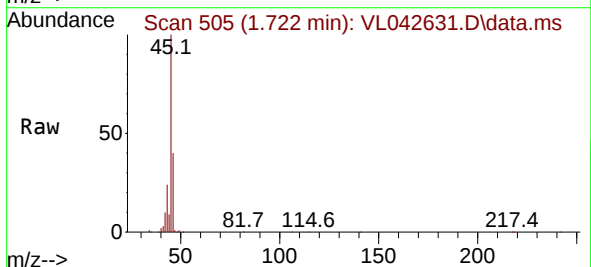
Instrument :
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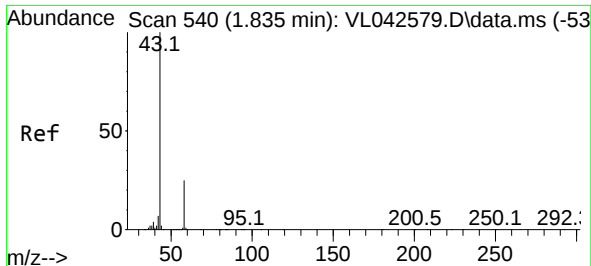
Tgt Ion:101 Resp: 28889
Ion Ratio Lower Upper
101 100
151 0.0 55.3 82.9#



#13
Ethanol
Concen: 38.470 ppbv
RT: 1.722 min Scan# 505
Delta R.T. -0.000 min
Lab File: VL042631.D
Acq: 16 Jun 2025 16:20

Tgt Ion: 45 Resp: 33372
Ion Ratio Lower Upper
45 100
46 39.6 14.5 58.1

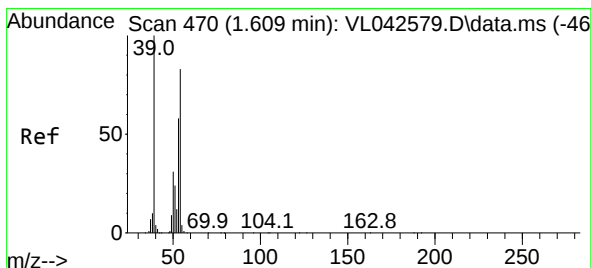
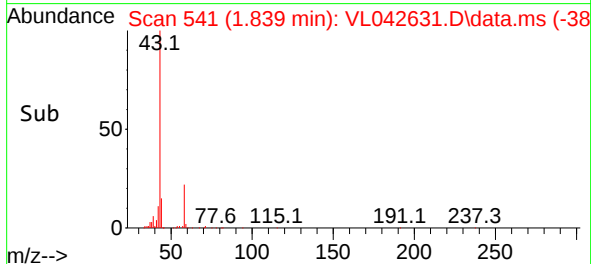
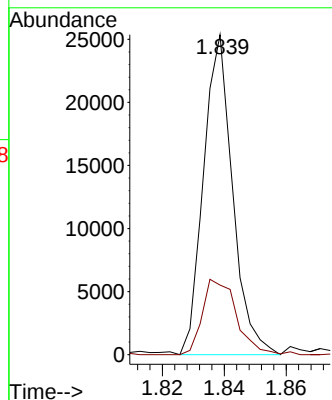
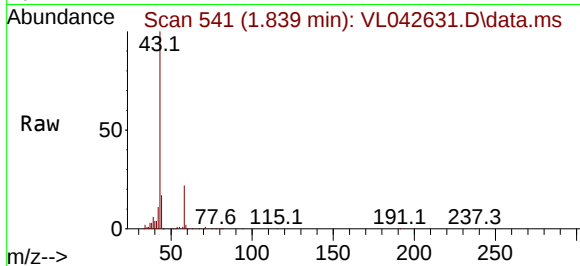




#15
Acetone
Concen: 1.285 ppbv
RT: 1.839 min Scan# 541
Delta R.T. 0.003 min
Lab File: VL042631.D
Acq: 16 Jun 2025 16:20

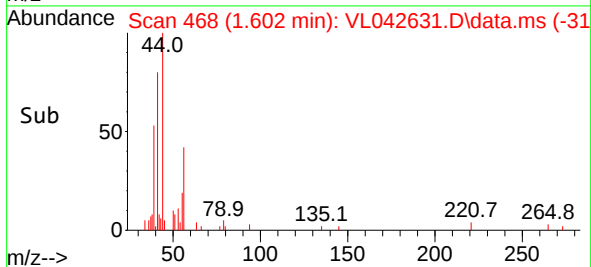
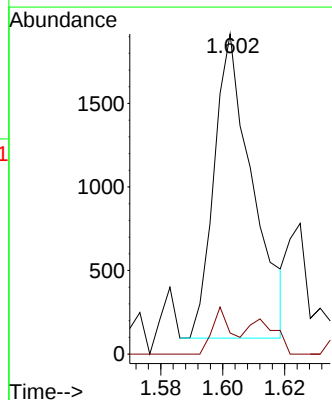
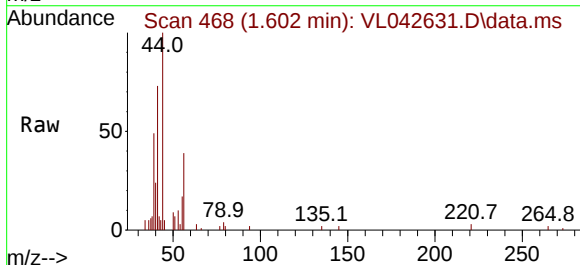
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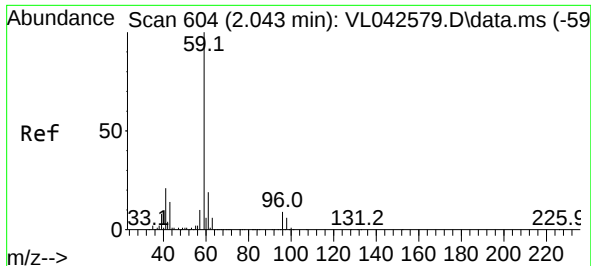
Tgt Ion: 43 Resp: 16529
Ion Ratio Lower Upper
43 100
58 27.8 21.0 31.4



#16
1,3-Butadiene
Concen: 0.255 ppbv
RT: 1.602 min Scan# 468
Delta R.T. -0.006 min
Lab File: VL042631.D
Acq: 16 Jun 2025 16:20

Tgt Ion: 39 Resp: 1555
Ion Ratio Lower Upper
39 100
54 19.7 57.9 86.9#





#17

tert-Butyl alcohol

Concen: 0.129 ppbv

RT: 2.046 min Scan# 604

Delta R.T. 0.003 min

Lab File: VL042631.D

Acq: 16 Jun 2025 16:20

Instrument :

MSVOA_L

ClientSampleId :

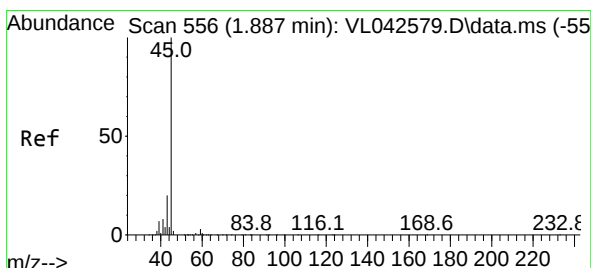
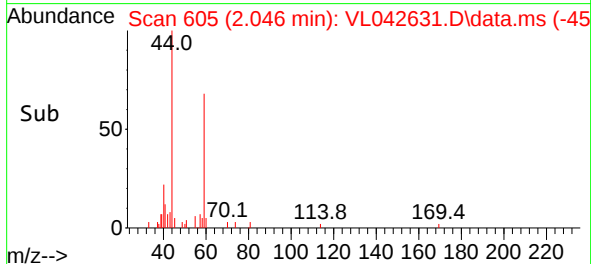
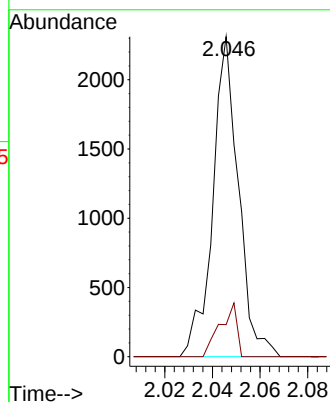
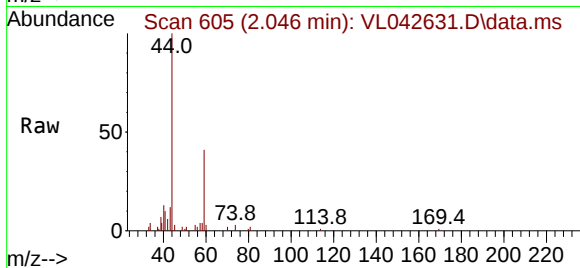
115-SG1

Tgt Ion: 59 Resp: 1732

Ion Ratio Lower Upper

59 100

57 11.0 8.6 12.8



#19

Isopropyl Alcohol

Concen: 0.611 ppbv

RT: 1.890 min Scan# 557

Delta R.T. 0.003 min

Lab File: VL042631.D

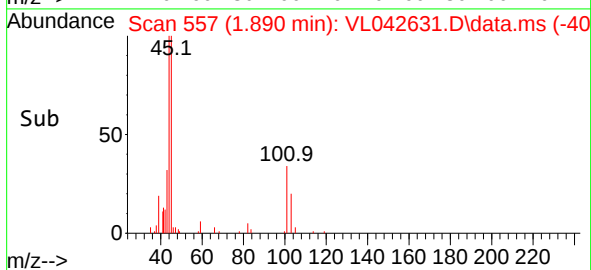
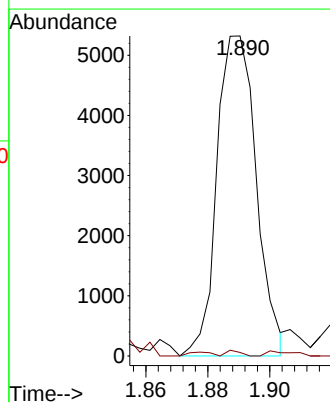
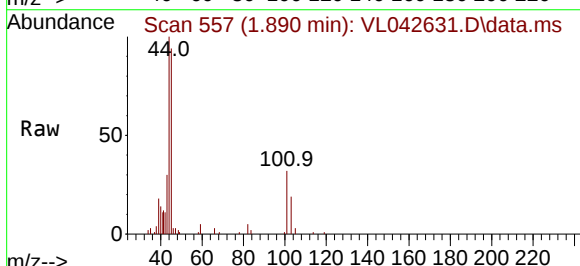
Acq: 16 Jun 2025 16:20

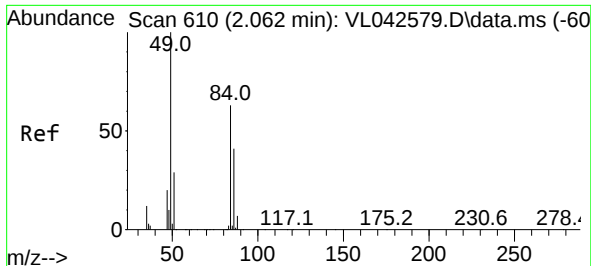
Tgt Ion: 45 Resp: 4698

Ion Ratio Lower Upper

45 100

58 98.5 29.4 44.2#

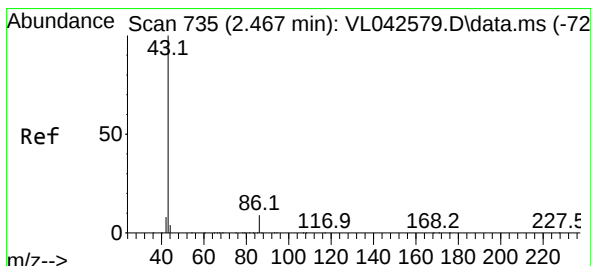
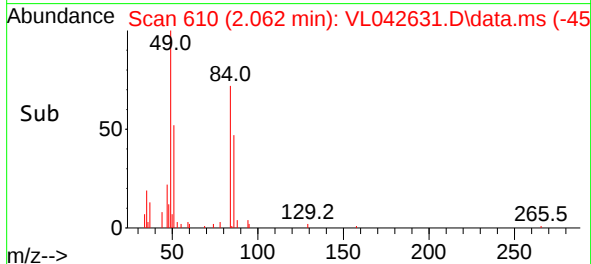
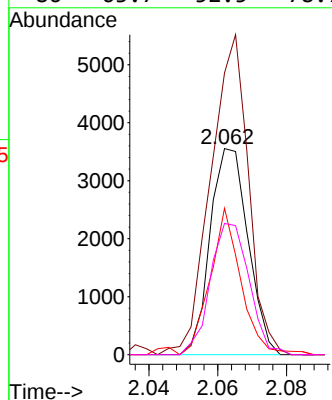
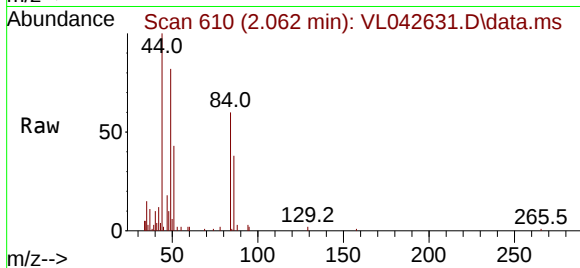




#20
Methylene Chloride
Concen: 0.642 ppbv
RT: 2.062 min Scan# 610
Delta R.T. -0.000 min
Lab File: VL042631.D
Acq: 16 Jun 2025 16:20

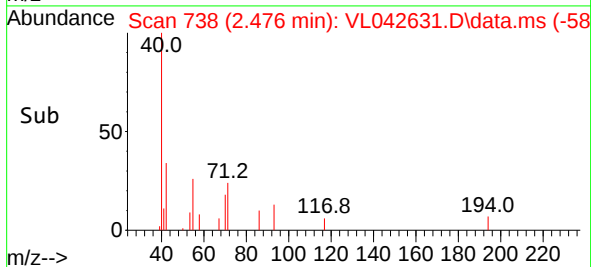
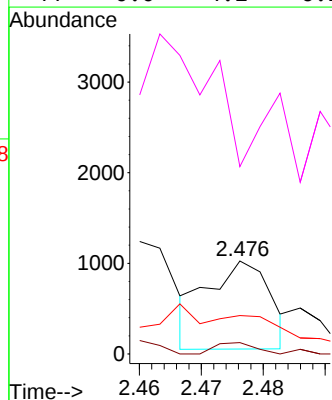
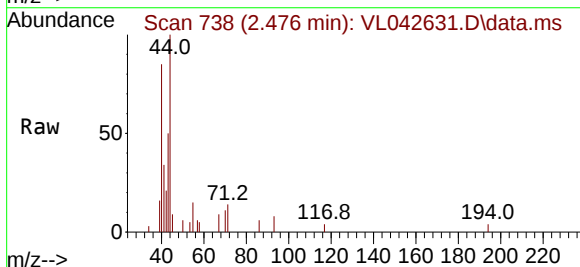
Instrument :
MSVOA_L
ClientSampleId :
115-SG1

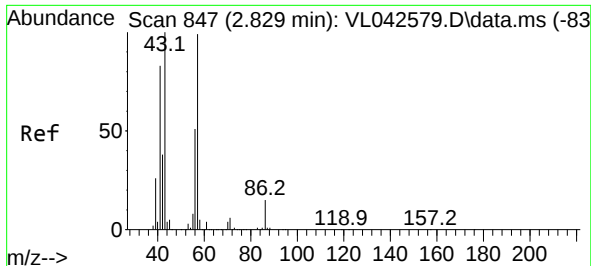
Tgt Ion:	84	Resp:	2723
Ion	Ratio	Lower	Upper
84	100		
49	134.4	128.8	193.2
51	71.1	38.6	57.8#
86	63.7	52.5	78.7



#23
Vinyl Acetate
Concen: 0.040 ppbv
RT: 2.476 min Scan# 738
Delta R.T. 0.010 min
Lab File: VL042631.D
Acq: 16 Jun 2025 16:20

Tgt Ion:	43	Resp:	689
Ion	Ratio	Lower	Upper
43	100		
86	21.5	6.6	9.8#
42	22.0	7.0	10.4#
44	0.0	4.2	6.2#





#26

Hexane

Concen: 0.166 ppbv

RT: 2.832 min Scan# 847

Delta R.T. 0.003 min

Lab File: VL042631.D

Acq: 16 Jun 2025 16:20

Instrument :

MSVOA_L

ClientSampleId :

115-SG1

Tgt Ion: 57 Resp: 2656

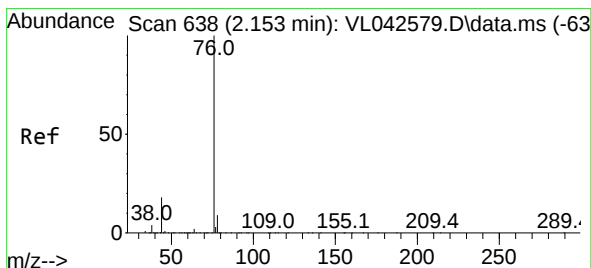
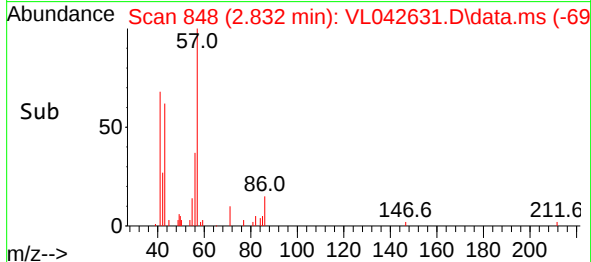
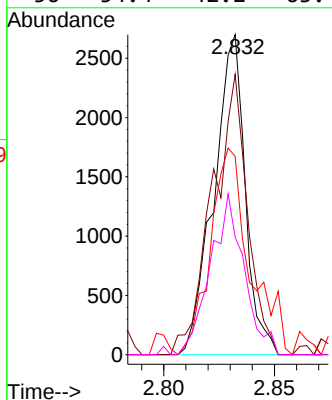
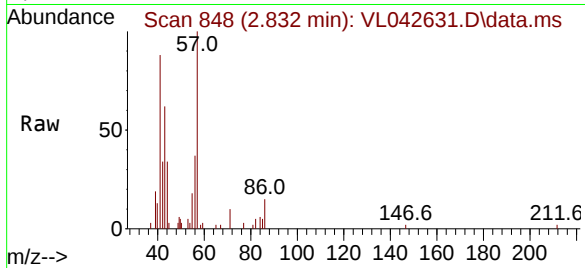
Ion Ratio Lower Upper

57 100

41 99.0 70.6 106.0

43 88.3 181.1 271.7#

56 54.4 42.2 63.4



#27

Carbon Disulfide

Concen: 0.122 ppbv

RT: 2.153 min Scan# 638

Delta R.T. -0.000 min

Lab File: VL042631.D

Acq: 16 Jun 2025 16:20

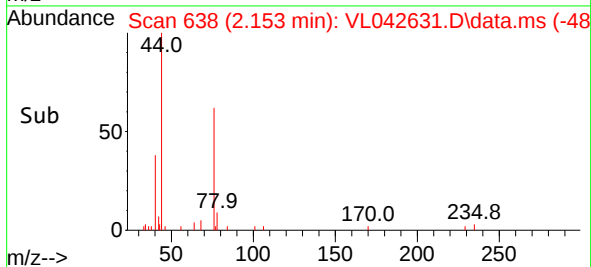
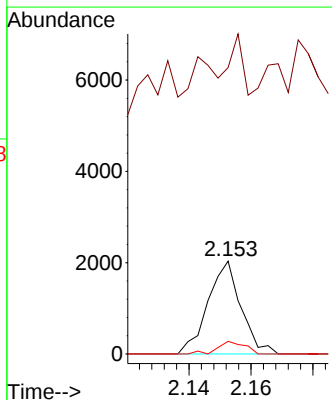
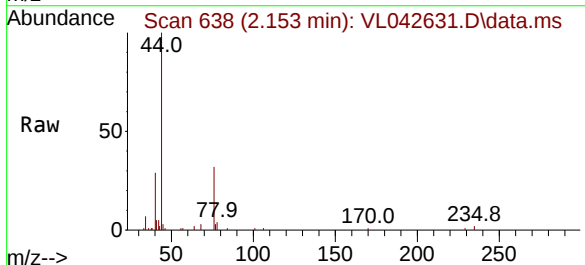
Tgt Ion: 76 Resp: 1502

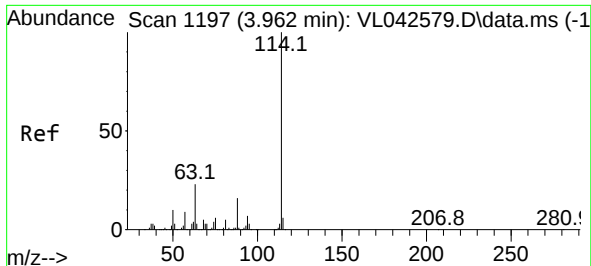
Ion Ratio Lower Upper

76 100

44 0.0 21.3 31.9#

78 11.2 9.4 14.0





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.962 min Scan# 1197

Delta R.T. -0.000 min

Lab File: VL042631.D

Acq: 16 Jun 2025 16:20

Instrument :

MSVOA_L

ClientSampleId :

115-SG1

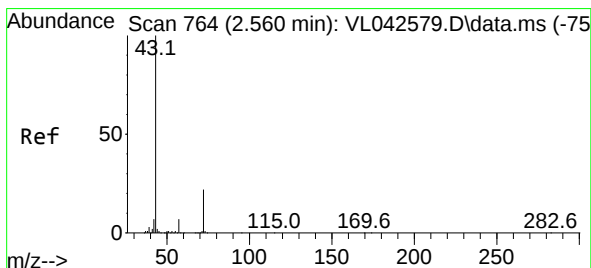
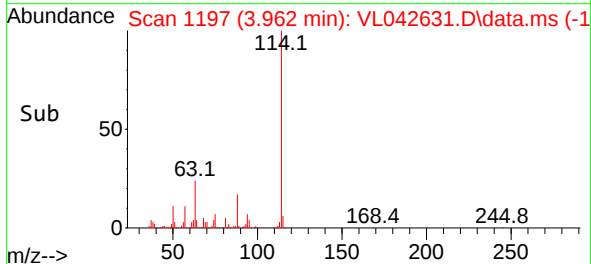
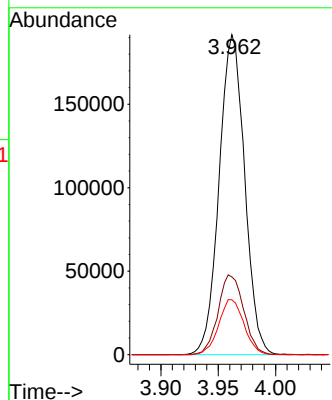
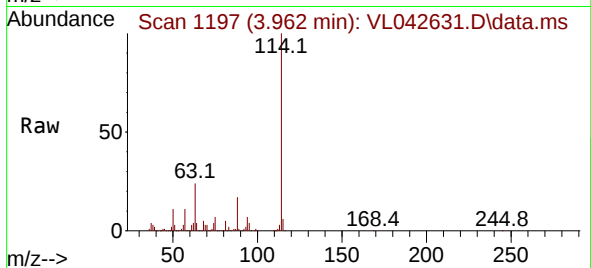
Tgt Ion:114 Resp: 296021

Ion Ratio Lower Upper

114 100

63 25.1 19.0 28.6

88 17.1 13.6 20.4



#34

2-Butanone

Concen: 0.213 ppbv

RT: 2.564 min Scan# 765

Delta R.T. 0.003 min

Lab File: VL042631.D

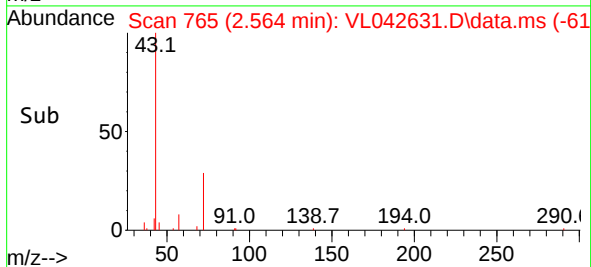
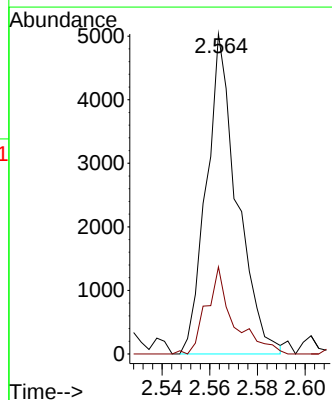
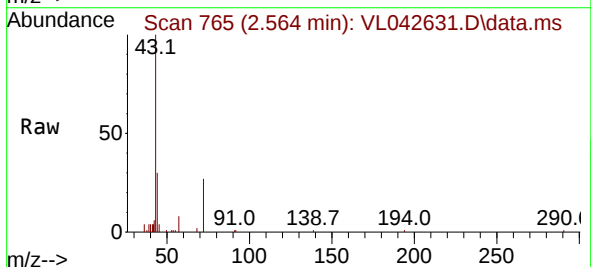
Acq: 16 Jun 2025 16:20

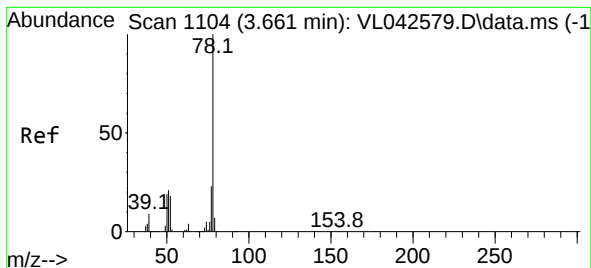
Tgt Ion: 43 Resp: 4501

Ion Ratio Lower Upper

43 100

72 24.0 17.7 26.5





#36

Benzene

Concen: 0.424 ppbv

RT: 3.661 min Scan# 1104

Delta R.T. -0.000 min

Lab File: VL042631.D

Acq: 16 Jun 2025 16:20

Instrument :

MSVOA_L

ClientSampleId :

115-SG1

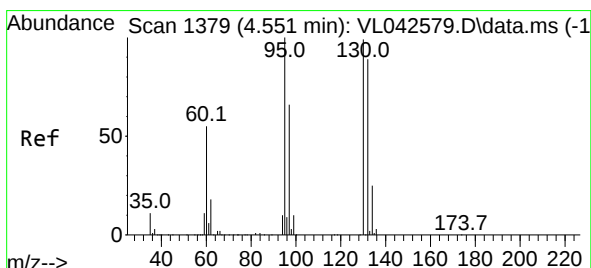
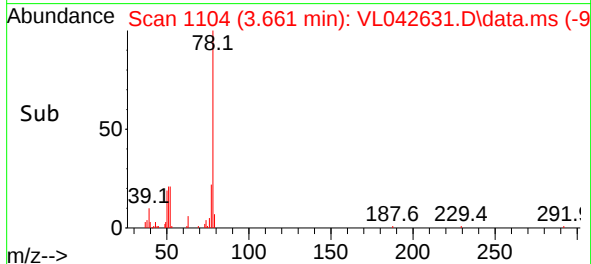
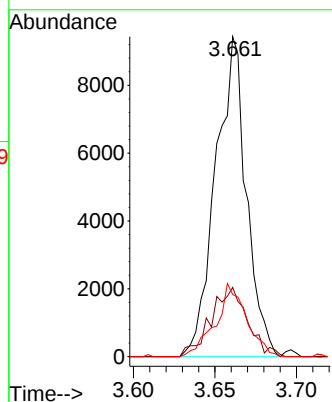
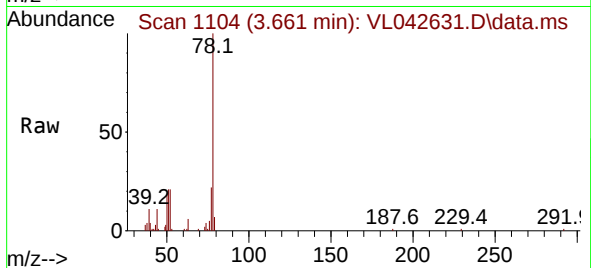
Tgt Ion: 78 Resp: 12355

Ion Ratio Lower Upper

78 100

77 21.6 18.2 27.2

50 19.4 15.2 22.8



#38

Trichloroethene

Concen: 0.135 ppbv

RT: 4.548 min Scan# 1378

Delta R.T. -0.003 min

Lab File: VL042631.D

Acq: 16 Jun 2025 16:20

Tgt Ion: 130 Resp: 1671

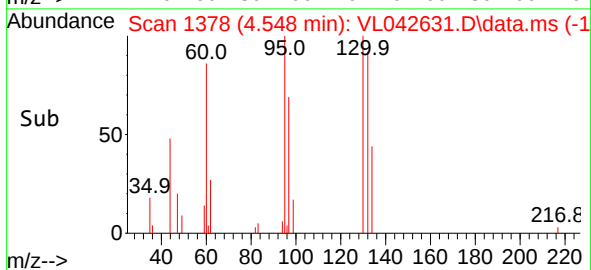
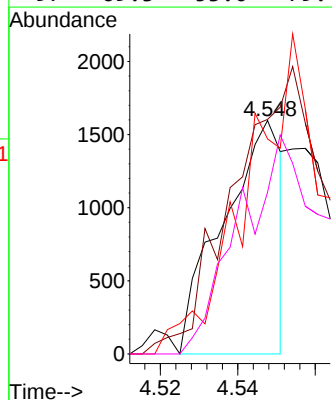
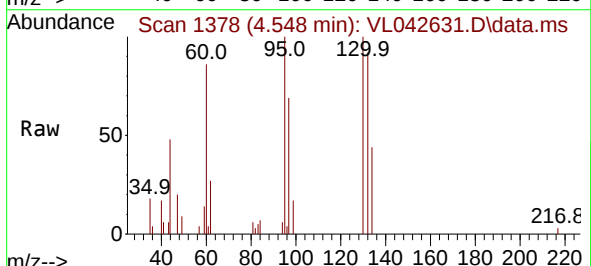
Ion Ratio Lower Upper

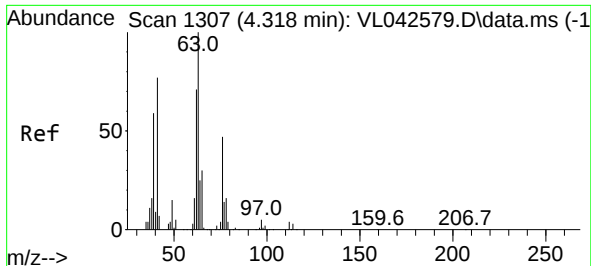
130 100

95 91.8 80.6 121.0

132 79.1 71.8 107.6

97 69.3 53.0 79.4





#39

1,2-Dichloropropane

Concen: 6.895 ppbv

RT: 3.959 min Scan# 1196

Delta R.T. -0.359 min

Lab File: VL042631.D

Acq: 16 Jun 2025 16:20

Instrument :

MSVOA_L

ClientSampleId :

115-SG1

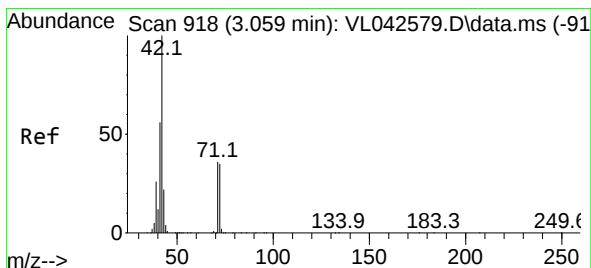
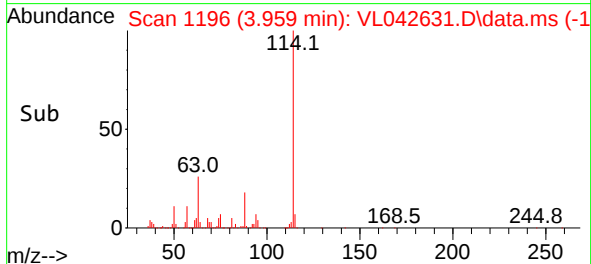
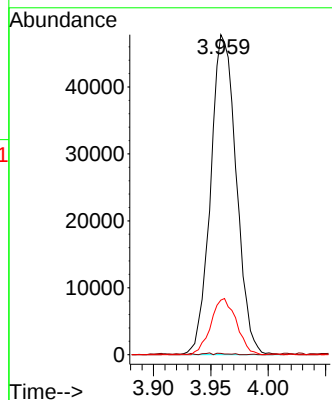
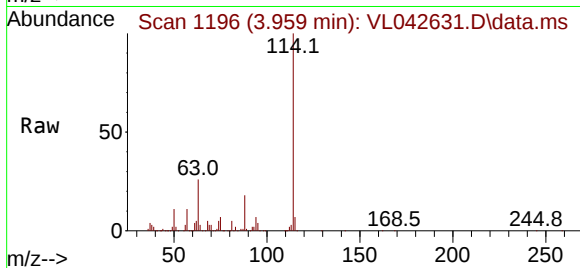
Tgt Ion: 63 Resp: 74329

Ion Ratio Lower Upper

63 100

41 0.2 61.8 92.6#

62 17.0 56.6 85.0#



#41

Tetrahydrofuran

Concen: 0.080 ppbv

RT: 3.072 min Scan# 922

Delta R.T. 0.013 min

Lab File: VL042631.D

Acq: 16 Jun 2025 16:20

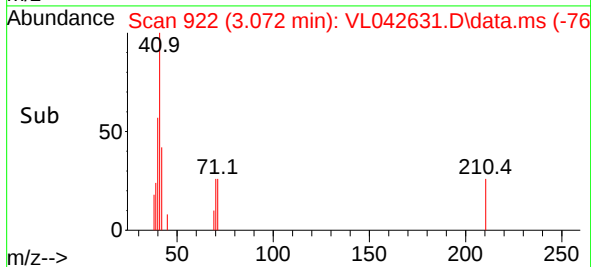
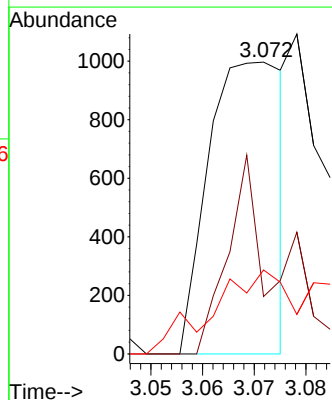
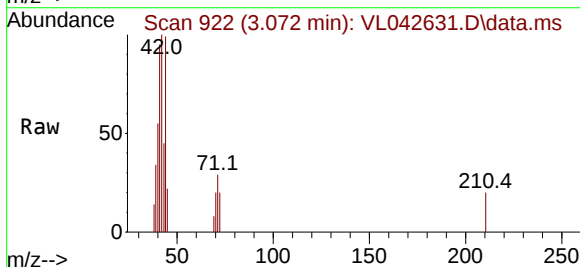
Tgt Ion: 42 Resp: 992

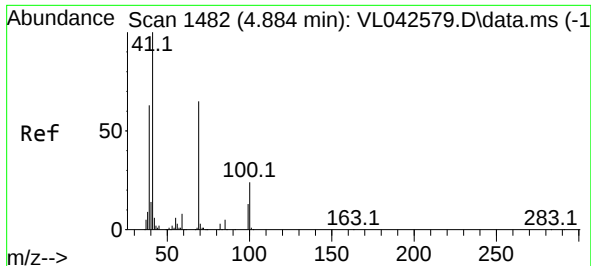
Ion Ratio Lower Upper

42 100

72 46.8 28.9 43.3#

71 39.3 28.5 42.7

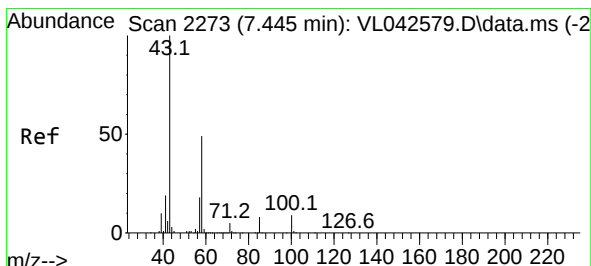
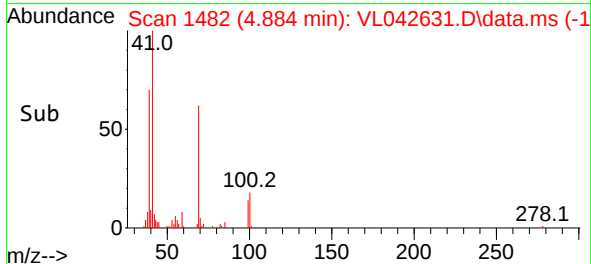
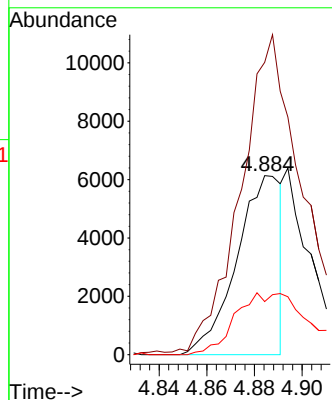
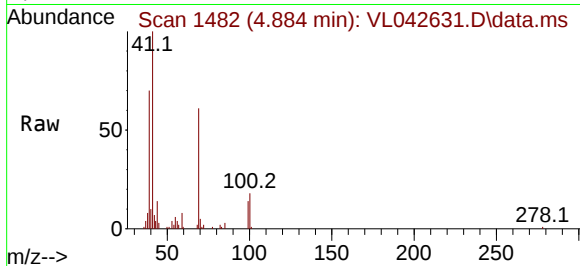




#43
Methyl Methacrylate
Concen: 0.702 ppbv
RT: 4.884 min Scan# 1482
Delta R.T. -0.000 min
Lab File: VL042631.D
Acq: 16 Jun 2025 16:20

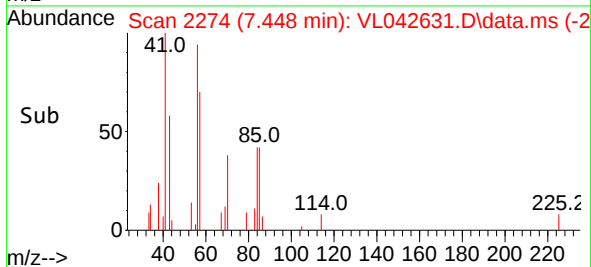
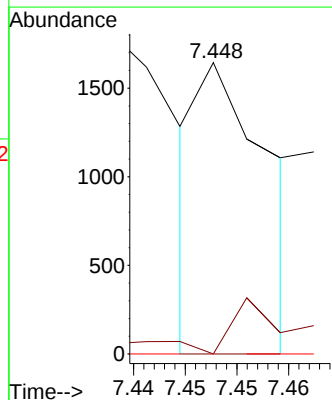
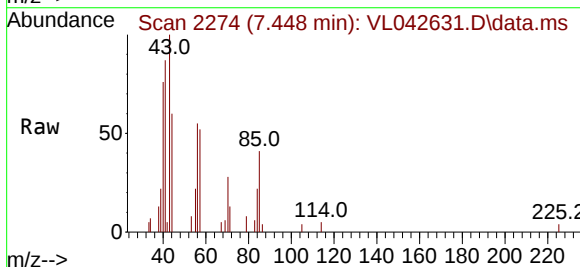
Instrument :
MSVOA_L
ClientSampleId :
115-SG1

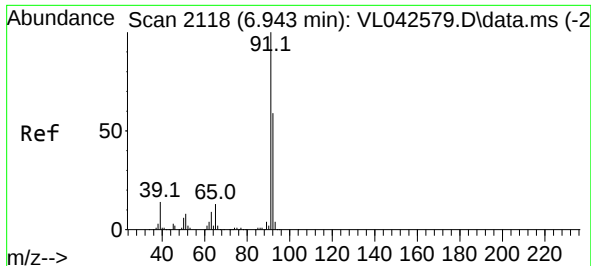
Tgt Ion: 69 Resp: 7937
Ion Ratio Lower Upper
69 100
41 256.7 124.6 187.0#
100 56.9 29.9 44.9#



#51
2-Hexanone
Concen: 0.033 ppbv
RT: 7.448 min Scan# 2274
Delta R.T. 0.003 min
Lab File: VL042631.D
Acq: 16 Jun 2025 16:20

Tgt Ion: 43 Resp: 769
Ion Ratio Lower Upper
43 100
58 38.9 39.9 59.9#
98 0.0 0.1 0.1#

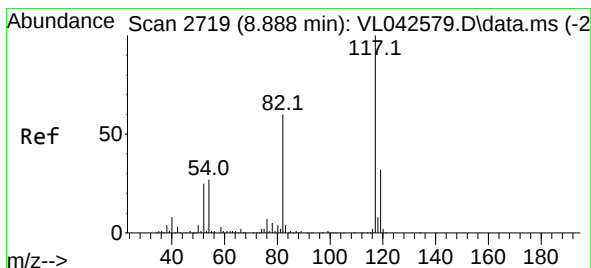
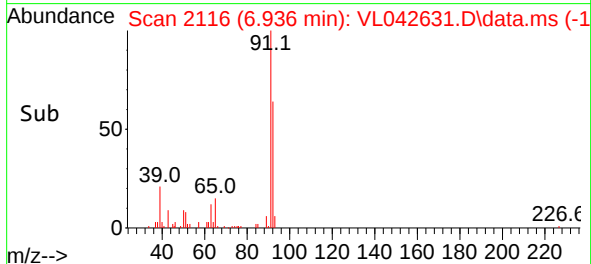
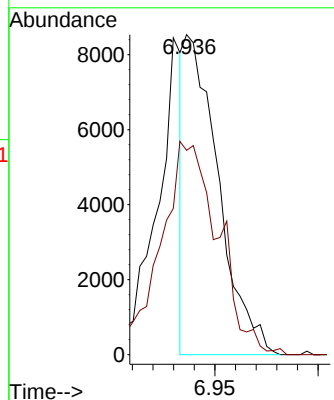
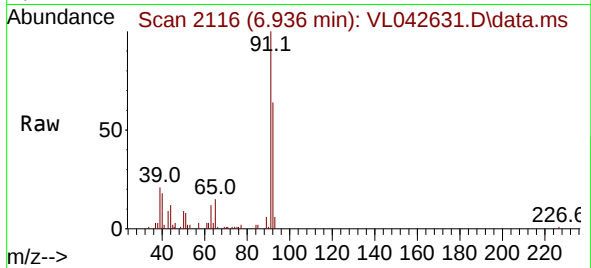




#53
Toluene
Concen: 0.290 ppbv
RT: 6.936 min Scan# 2116
Delta R.T. -0.006 min
Lab File: VL042631.D
Acq: 16 Jun 2025 16:20

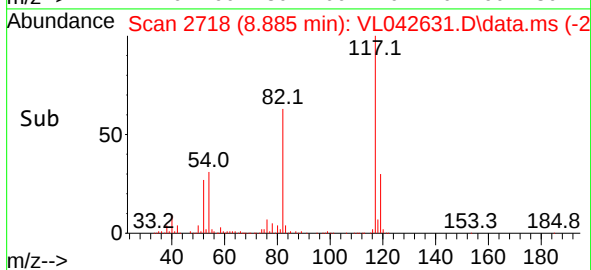
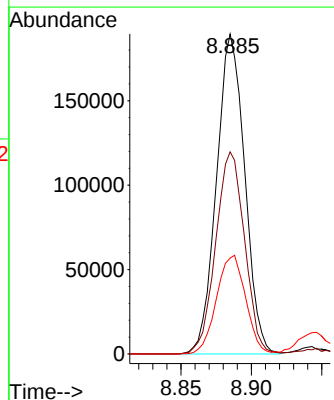
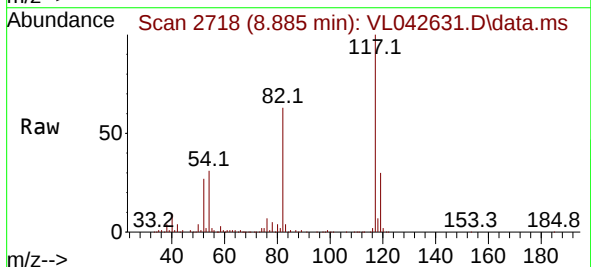
Instrument :
MSVOA_L
ClientSampleId :
115-SG1

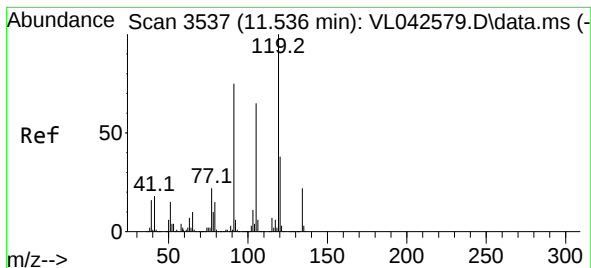
Tgt Ion: 91 Resp: 9780
Ion Ratio Lower Upper
91 100
92 0.0 48.2 72.4#



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.885 min Scan# 2718
Delta R.T. -0.003 min
Lab File: VL042631.D
Acq: 16 Jun 2025 16:20

Tgt Ion: 117 Resp: 264603
Ion Ratio Lower Upper
117 100
82 64.5 51.2 76.8
119 32.0 26.3 39.5





#65

tert-Butylbenzene

Concen: 1.029 ppbv

RT: 11.778 min Scan# 30

Delta R.T. 0.243 min

Lab File: VL042631.D

Acq: 16 Jun 2025 16:20

Instrument :

MSVOA_1

ClientSampleId :

115-SG1

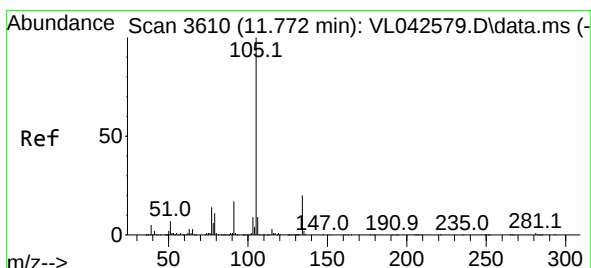
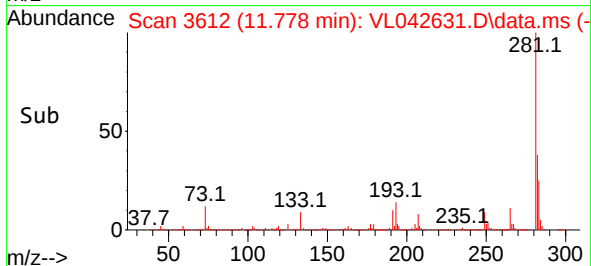
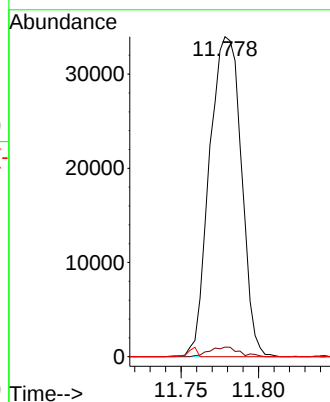
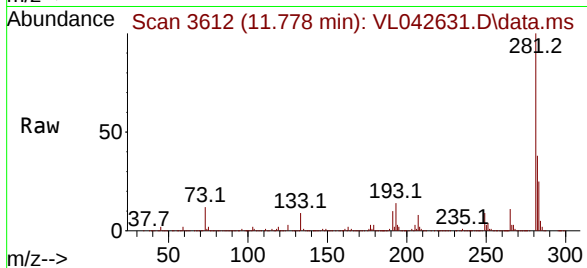
Tgt Ion:119 Resp: 48621

Ion Ratio Lower Upper

119 100

91 2.8 61.1 91.7#

134 0.7 17.4 26.2#



#67

sec-Butylbenzene

Concen: 0.204 ppbv

RT: 11.778 min Scan# 3612

Delta R.T. 0.006 min

Lab File: VL042631.D

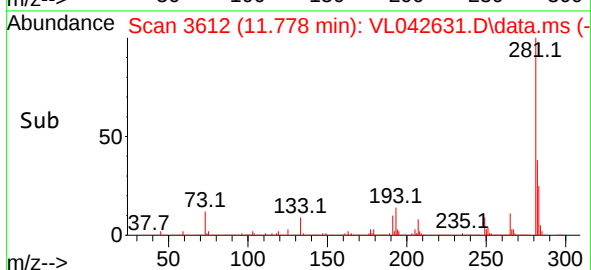
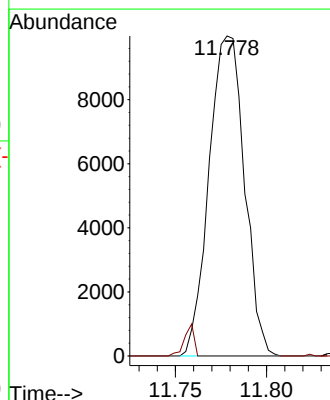
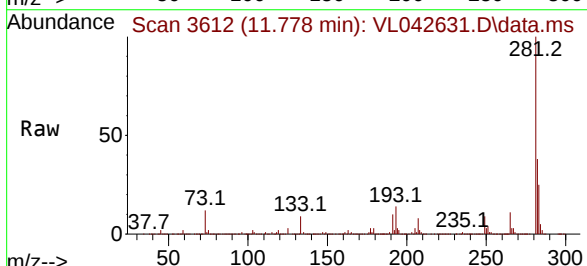
Acq: 16 Jun 2025 16:20

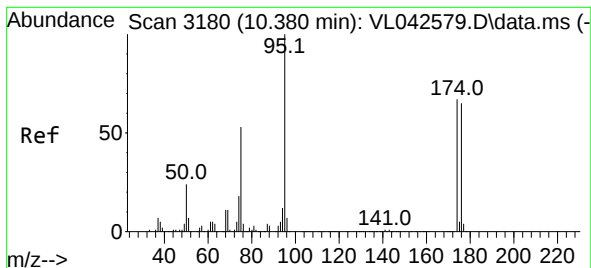
Tgt Ion:105 Resp: 13515

Ion Ratio Lower Upper

105 100

134 2.7 15.8 23.6#

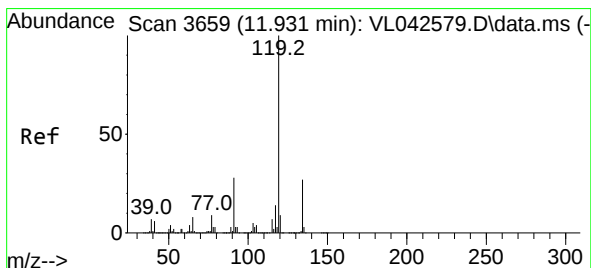
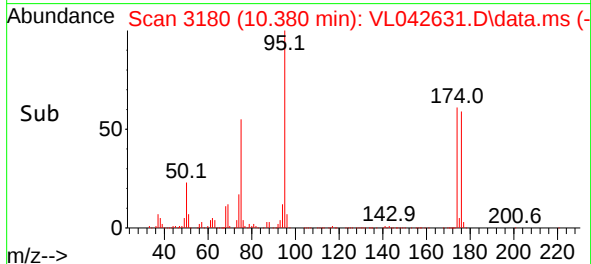
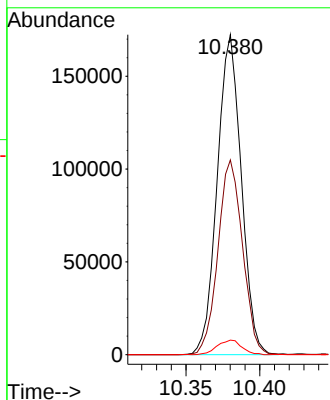
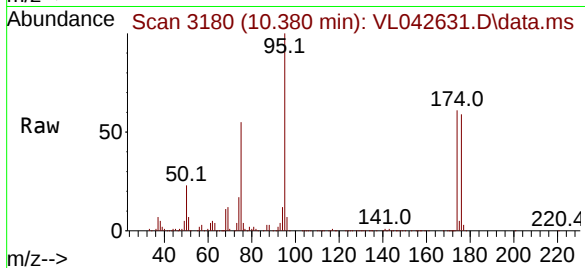




#68
1-Bromo-4-Fluorobenzene
Concen: 9.867 ppbv
RT: 10.380 min Scan# 3180
Delta R.T. -0.000 min
Lab File: VL042631.D
Acq: 16 Jun 2025 16:20

Instrument :
MSVOA_L
ClientSampleId :
115-SG1

Tgt Ion: 95 Resp: 195718
Ion Ratio Lower Upper
95 100
174 62.3 53.1 79.7
175 4.7 4.2 6.2



#69
p-Isopropyltoluene
Concen: 0.874 ppbv
RT: 11.778 min Scan# 3612
Delta R.T. -0.152 min
Lab File: VL042631.D
Acq: 16 Jun 2025 16:20

Tgt Ion: 119 Resp: 48621
Ion Ratio Lower Upper
119 100
134 0.7 21.1 31.7#
91 2.8 21.9 32.9#

