

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL061625\
 Data File : VL042633.D
 Acq On : 16 Jun 2025 17:27
 Operator : SY/MD
 Sample : Q2317-05DL 20
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 115-SG2

Quant Time: Jun 17 03:08:34 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)

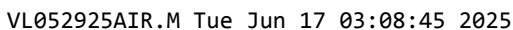
Internal Standards						
1) Bromochloromethane	2.790	49	104262	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.959	114	275428	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.885	117	241418	10.000	ppbv	0.00

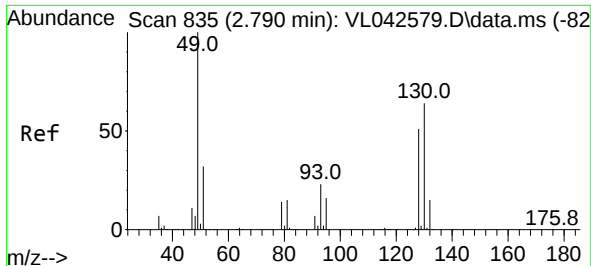
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.377	95	182729	10.097	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.000%

Target Compounds						Qvalue
3) Chlorodifluoromethane	1.467	51	13904	0.788	ppbv #	62
4) Chloromethane	1.531	50	2415	0.476	ppbv	97
7) Chloroethane	1.706	64	425	0.212	ppbv #	76
9) Propene	1.483	41	1262	0.178	ppbv	94
11) Trichlorofluoromethane	1.881	101	8677	0.728	ppbv	95
12) 1,1,2-Trichlorotrifluo...	1.881	101	8677	0.927	ppbv #	15
13) Ethanol	1.722	45	26503	31.291	ppbv	97
15) Acetone	1.839	43	35697	2.842	ppbv	95
16) 1,3-Butadiene	1.602	39	1078	0.181	ppbv #	13
17) tert-Butyl alcohol	2.043	59	1042	0.080	ppbv #	81
19) Isopropyl Alcohol	1.887	45	5425	0.723	ppbv #	1
20) Methylene Chloride	2.062	84	1643	0.396	ppbv	97
26) Hexane	2.829	57	1359	0.087	ppbv #	58
27) Carbon Disulfide	2.153	76	1035	0.086	ppbv #	1
29) Chloroform	2.849	83	9275	0.457	ppbv	84
34) 2-Butanone	2.564	43	4064	0.207	ppbv	96
36) Benzene	3.654	78	5035	0.186	ppbv #	79
38) Trichloroethene	4.551	130	8278	0.718	ppbv #	84
39) 1,2-Dichloropropane	3.959	63	69037	6.883	ppbv #	24
41) Tetrahydrofuran	3.069	42	865	0.075	ppbv	92
43) Methyl Methacrylate	4.884	69	8142	0.773	ppbv	96
52) Tetrachloroethene	8.228	164	6303	0.622	ppbv #	83
56) 1,1,1,2-Tetrachloroethane	8.940	131	1100	0.091	ppbv #	1
65) tert-Butylbenzene	11.775	119	45976	1.067	ppbv #	25
67) sec-Butylbenzene	11.778	105	12028	0.199	ppbv #	74
69) p-Isopropyltoluene	11.775	119	45889	0.905	ppbv #	53
76) 1,4-Dichlorobenzene	11.672	146	4346	0.189	ppbv	97
77) 1,2-Dichlorobenzene	11.672	146	4346	0.194	ppbv	99
81) 1,2,4-Trichlorobenzene	13.384	180	1966	0.102	ppbv #	20

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

Quant Time: Jun 17 03:08:34 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL052925AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
QLast Update : Fri May 30 02:01:56 2025
Response via : Initial Calibration

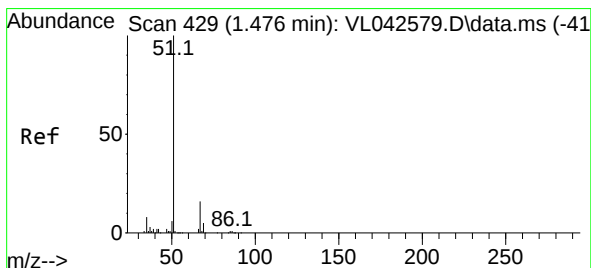
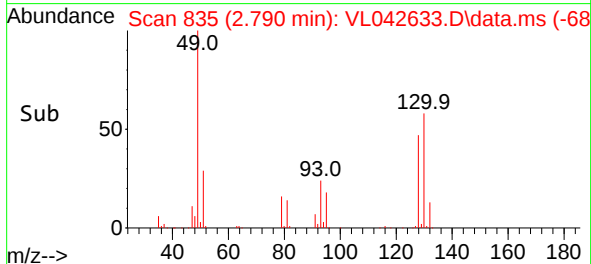
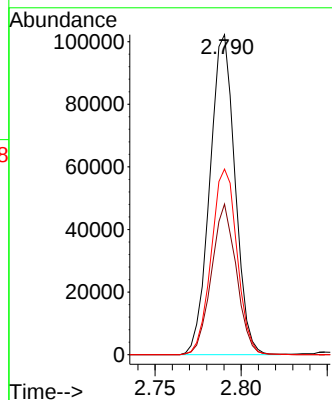
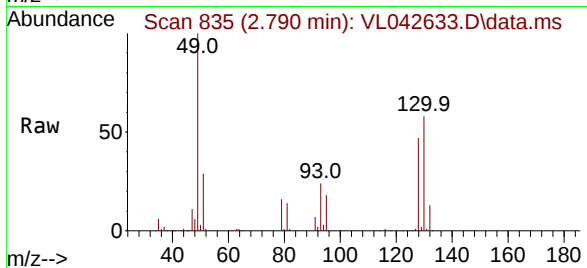




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.790 min Scan# 81
Delta R.T. 0.000 min
Lab File: VL042633.D
Acq: 16 Jun 2025 17:27

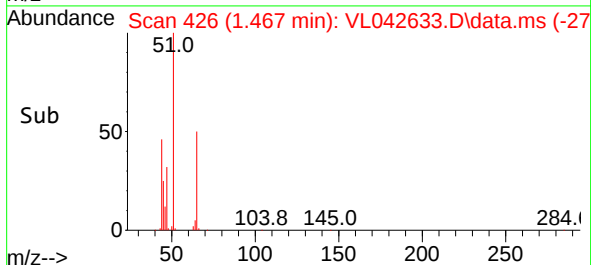
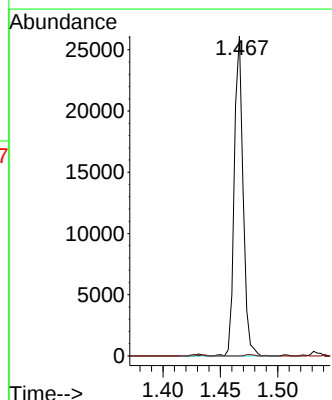
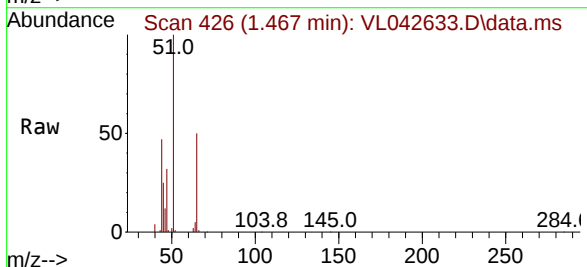
Instrument :
MSVOA_L
ClientSampleId :
115-SG2

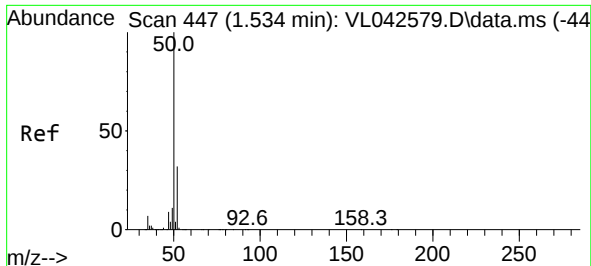
Tgt Ion: 49 Resp: 104262
Ion Ratio Lower Upper
49 100
128 46.3 24.2 72.6
130 59.2 30.4 91.2



#3
Chlorodifluoromethane
Concen: 0.788 ppbv
RT: 1.467 min Scan# 426
Delta R.T. -0.010 min
Lab File: VL042633.D
Acq: 16 Jun 2025 17:27

Tgt Ion: 51 Resp: 13904
Ion Ratio Lower Upper
51 100
67 0.4 13.4 20.2#

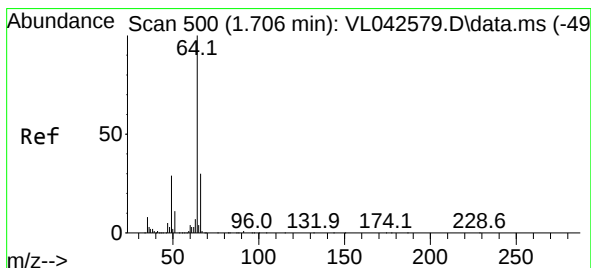
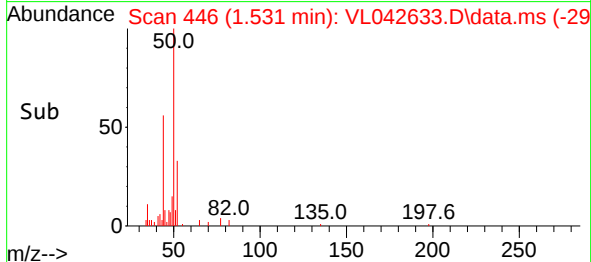
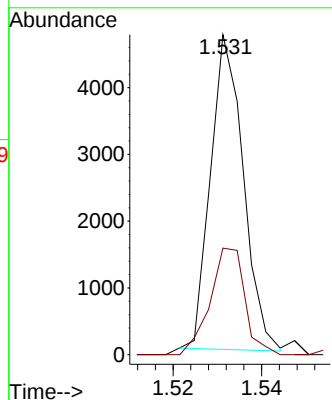
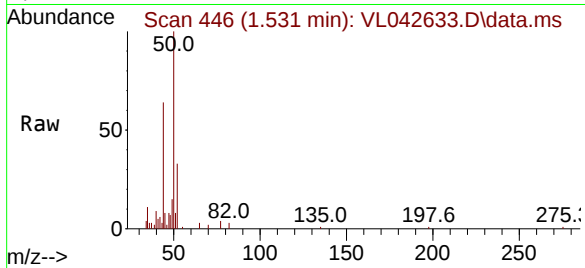




#4
Chloromethane
Concen: 0.476 ppbv
RT: 1.531 min Scan# 447
Delta R.T. -0.003 min
Lab File: VL042633.D
Acq: 16 Jun 2025 17:27

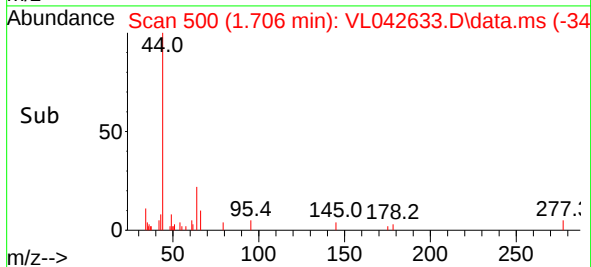
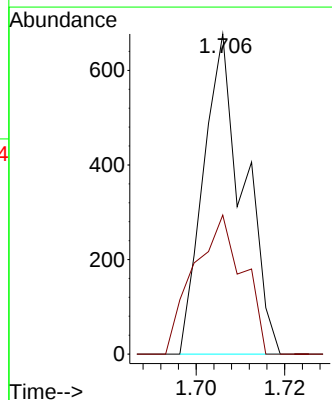
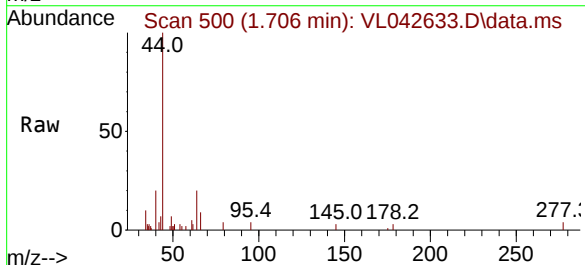
Instrument :
MSVOA_L
ClientSampleId :
115-SG2

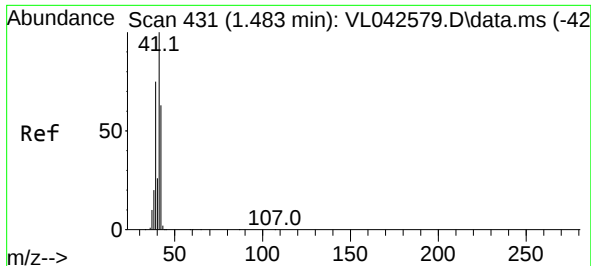
Tgt Ion: 50 Resp: 2415
Ion Ratio Lower Upper
50 100
52 34.0 25.8 38.6



#7
Chloroethane
Concen: 0.212 ppbv
RT: 1.706 min Scan# 500
Delta R.T. 0.000 min
Lab File: VL042633.D
Acq: 16 Jun 2025 17:27

Tgt Ion: 64 Resp: 425
Ion Ratio Lower Upper
64 100
66 43.4 24.3 36.5#





#9

Propene

Concen: 0.178 ppbv

RT: 1.483 min Scan# 41

Delta R.T. 0.000 min

Lab File: VL042633.D

Acq: 16 Jun 2025 17:27

Instrument :

MSVOA_L

ClientSampleId :

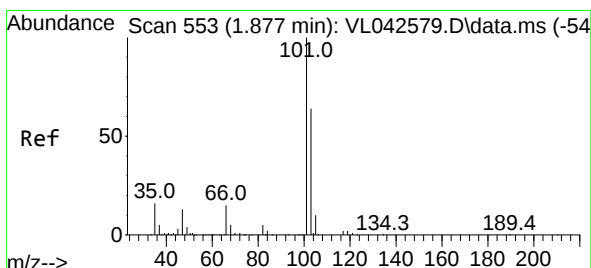
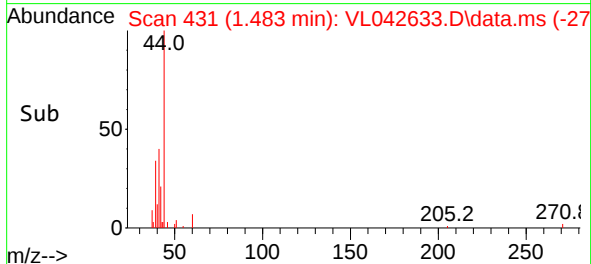
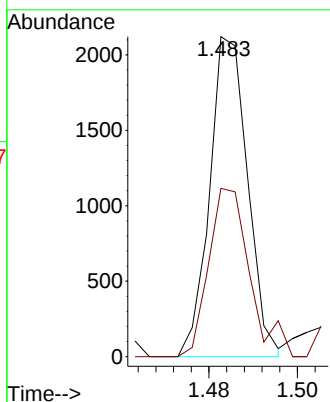
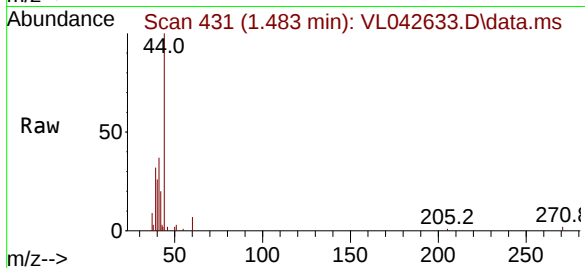
115-SG2

Tgt Ion: 41 Resp: 1262

Ion Ratio Lower Upper

41 100

42 61.5 53.3 79.9



#11

Trichlorofluoromethane

Concen: 0.728 ppbv

RT: 1.881 min Scan# 554

Delta R.T. 0.003 min

Lab File: VL042633.D

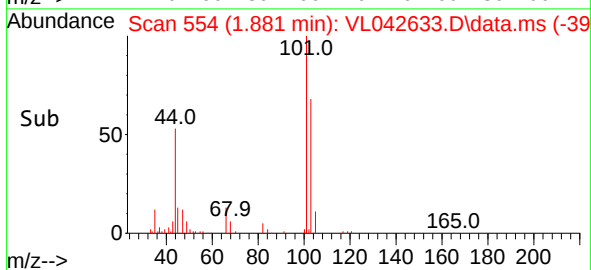
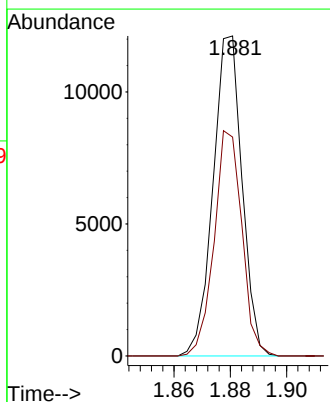
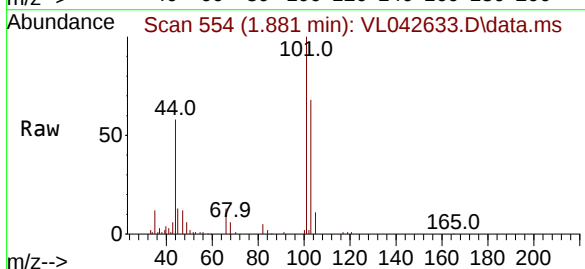
Acq: 16 Jun 2025 17:27

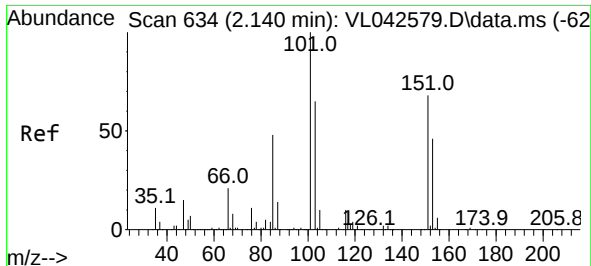
Tgt Ion: 101 Resp: 8677

Ion Ratio Lower Upper

101 100

103 68.4 51.5 77.3





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.927 ppbv

RT: 1.881 min Scan# 51

Delta R.T. -0.259 min

Lab File: VL042633.D

Acq: 16 Jun 2025 17:27

Instrument :

MSVOA_L

ClientSampleId :

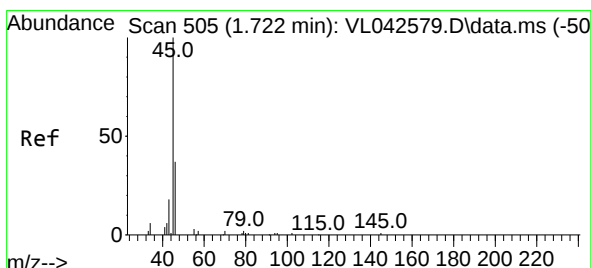
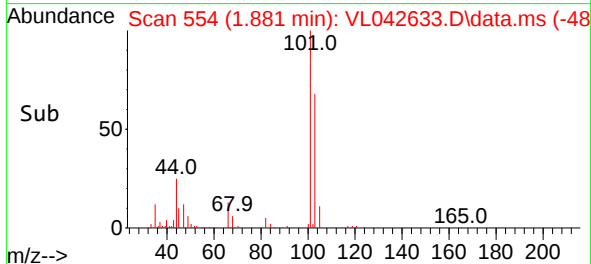
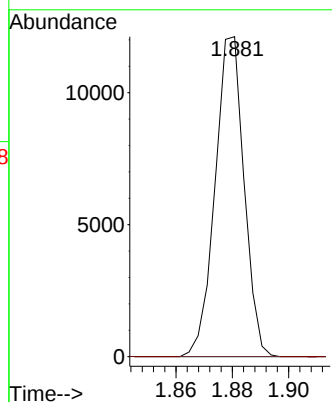
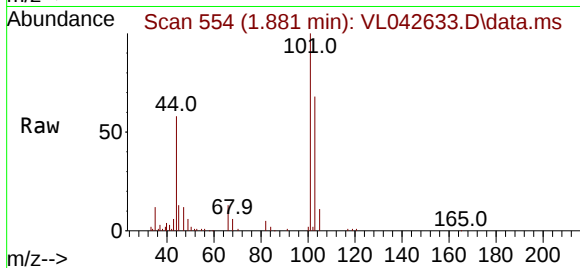
115-SG2

Tgt Ion:101 Resp: 8677

Ion Ratio Lower Upper

101 100

151 0.0 55.3 82.9#



#13

Ethanol

Concen: 31.291 ppbv

RT: 1.722 min Scan# 505

Delta R.T. 0.000 min

Lab File: VL042633.D

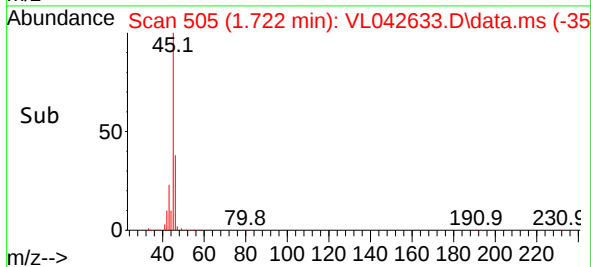
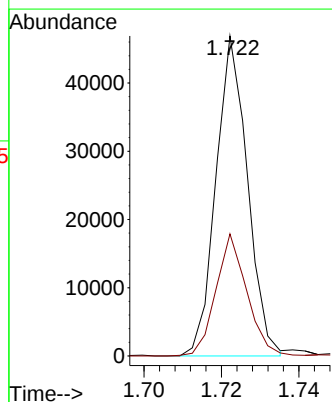
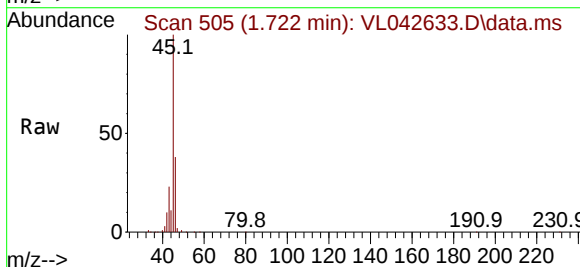
Acq: 16 Jun 2025 17:27

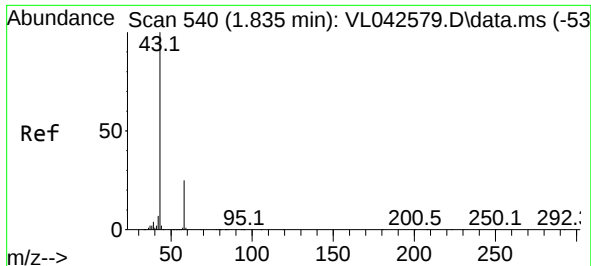
Tgt Ion: 45 Resp: 26503

Ion Ratio Lower Upper

45 100

46 38.1 14.5 58.1





#15

Acetone

Concen: 2.842 ppbv

RT: 1.839 min Scan# 54

Delta R.T. 0.003 min

Lab File: VL042633.D

Acq: 16 Jun 2025 17:27

Instrument :

MSVOA_L

ClientSampleId :

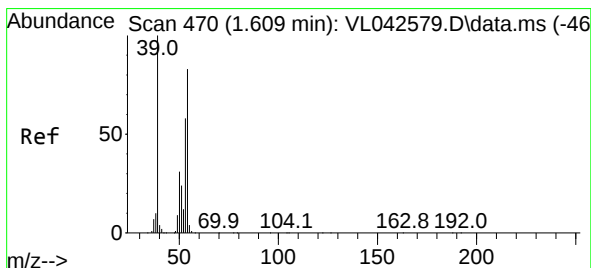
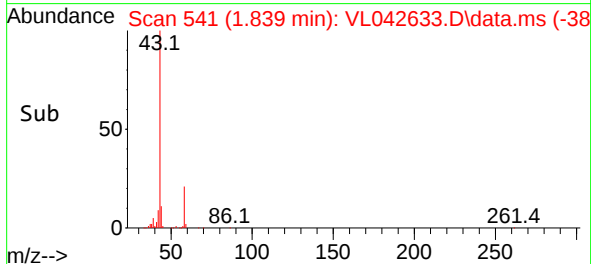
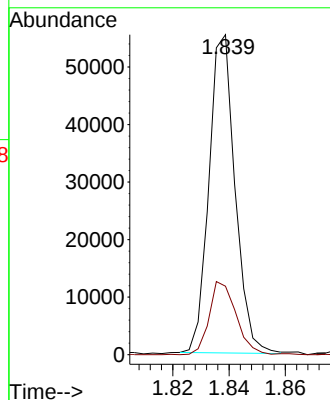
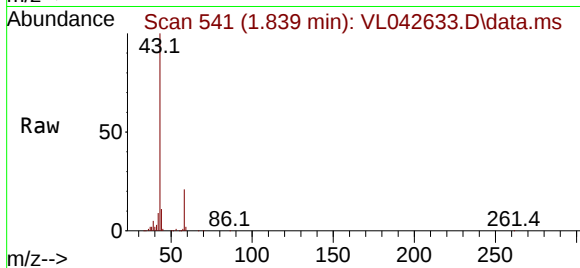
115-SG2

Tgt Ion: 43 Resp: 35697

Ion Ratio Lower Upper

43 100

58 23.8 21.0 31.4



#16

1,3-Butadiene

Concen: 0.181 ppbv

RT: 1.602 min Scan# 468

Delta R.T. -0.006 min

Lab File: VL042633.D

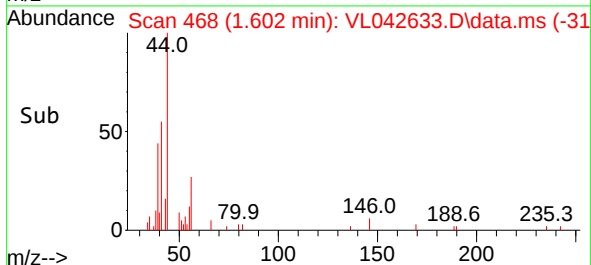
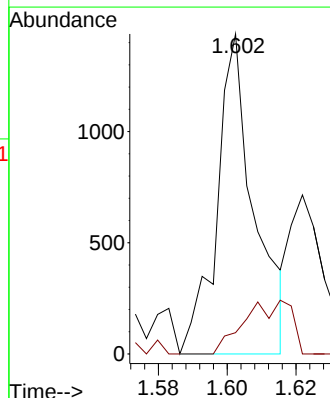
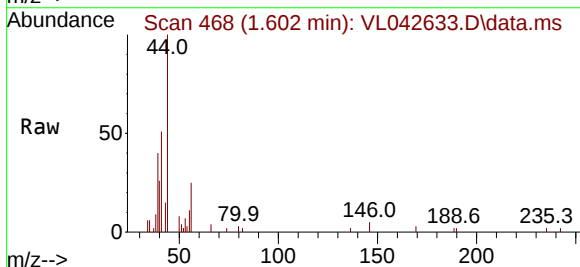
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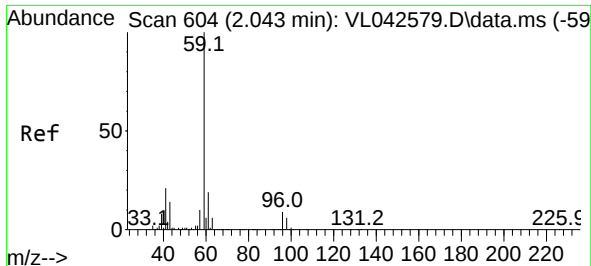
Tgt Ion: 39 Resp: 1078

Ion Ratio Lower Upper

39 100

54 0.0 57.9 86.9#





#17

tert-Butyl alcohol

Concen: 0.080 ppbv

RT: 2.043 min Scan# 604

Delta R.T. 0.000 min

Lab File: VL042633.D

Acq: 16 Jun 2025 17:27

Instrument :

MSVOA_L

ClientSampleId :

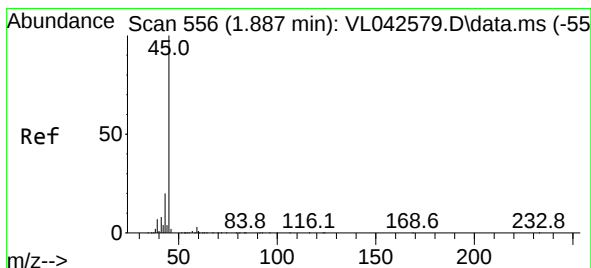
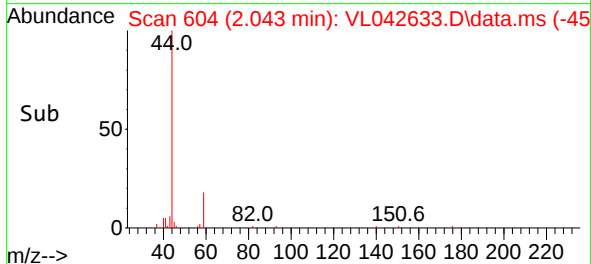
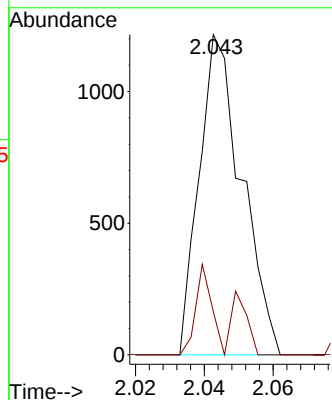
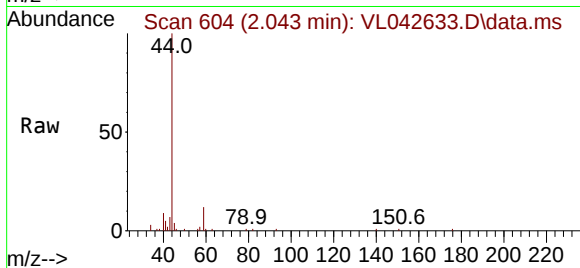
115-SG2

Tgt Ion: 59 Resp: 1042

Ion Ratio Lower Upper

59 100

57 18.0 8.6 12.8#



#19

Isopropyl Alcohol

Concen: 0.723 ppbv

RT: 1.887 min Scan# 556

Delta R.T. 0.000 min

Lab File: VL042633.D

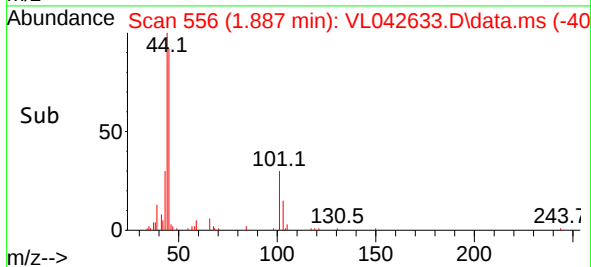
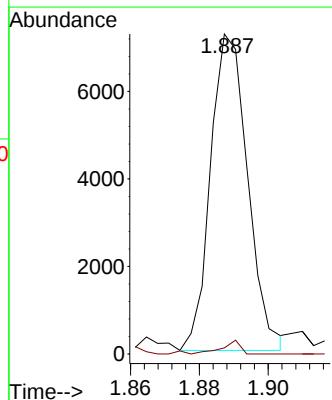
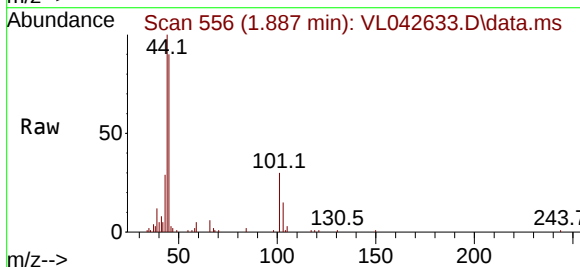
Acq: 16 Jun 2025 17:27

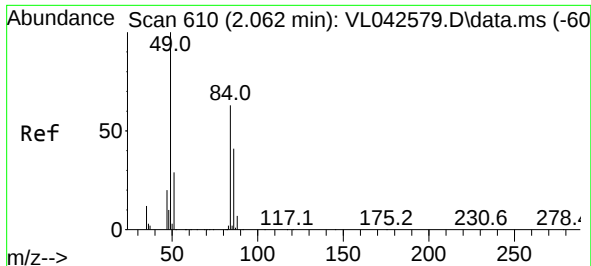
Tgt Ion: 45 Resp: 5425

Ion Ratio Lower Upper

45 100

58 159.1 29.4 44.2#

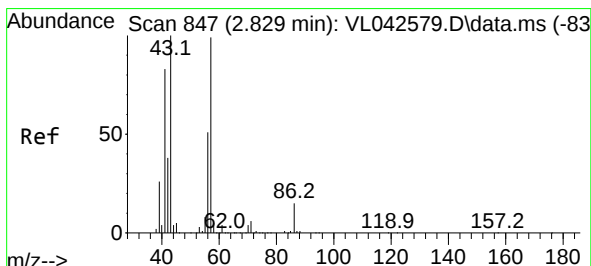
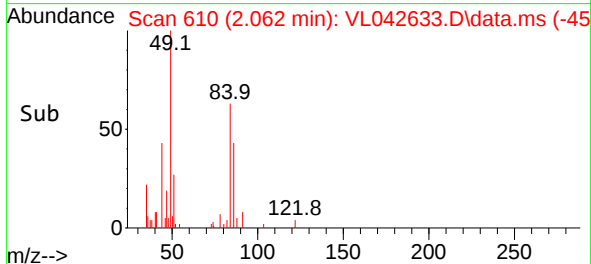
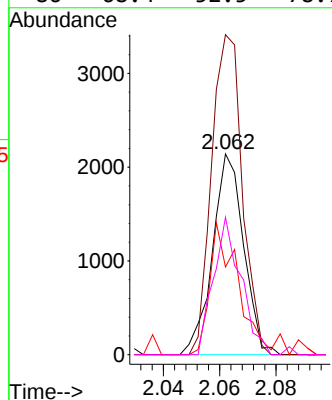
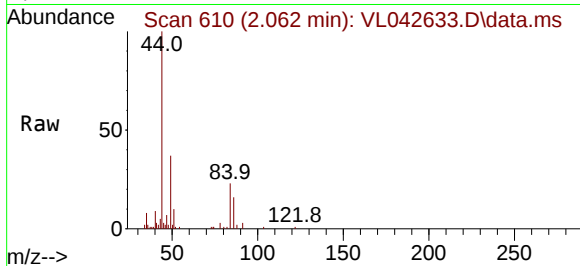




#20
Methylene Chloride
Concen: 0.396 ppbv
RT: 2.062 min Scan# 610
Delta R.T. 0.000 min
Lab File: VL042633.D
Acq: 16 Jun 2025 17:27

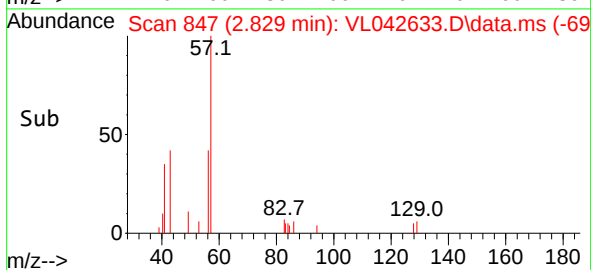
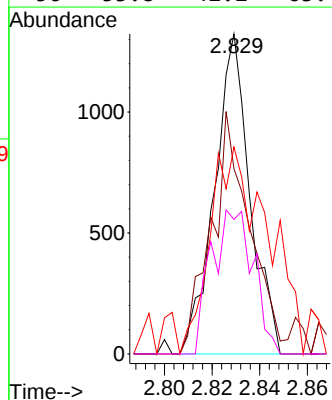
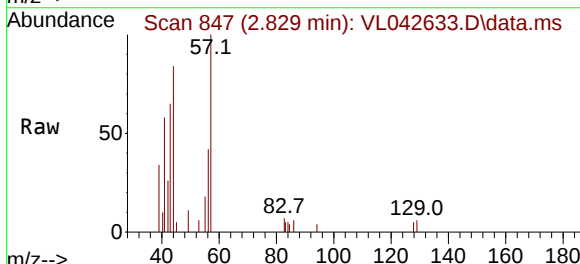
Instrument :
MSVOA_1
ClientSampleId :
115-SG2

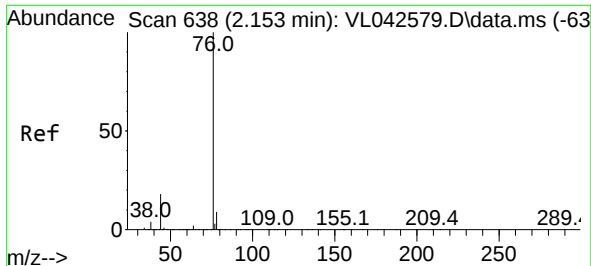
Tgt Ion:	84	Resp:	1643
Ion	Ratio	Lower	Upper
84	100		
49	159.3	128.8	193.2
51	43.7	38.6	57.8
86	68.4	52.5	78.7



#26
Hexane
Concen: 0.087 ppbv
RT: 2.829 min Scan# 847
Delta R.T. 0.000 min
Lab File: VL042633.D
Acq: 16 Jun 2025 17:27

Tgt Ion:	57	Resp:	1359
Ion	Ratio	Lower	Upper
57	100		
41	89.2	70.6	106.0
43	116.8	181.1	271.7#
56	53.8	42.2	63.4

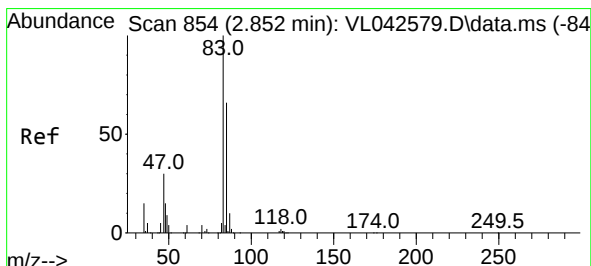
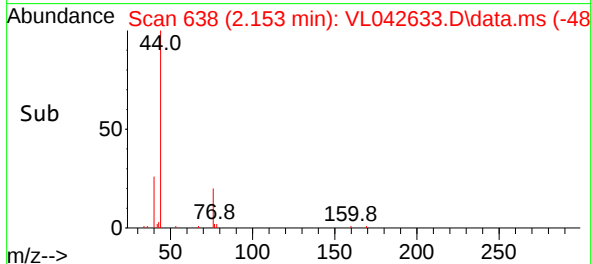
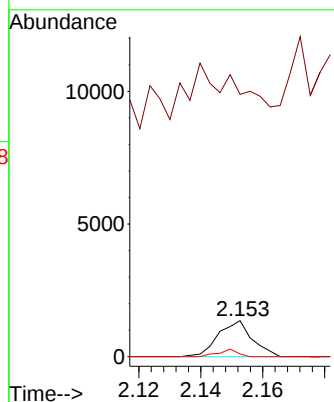
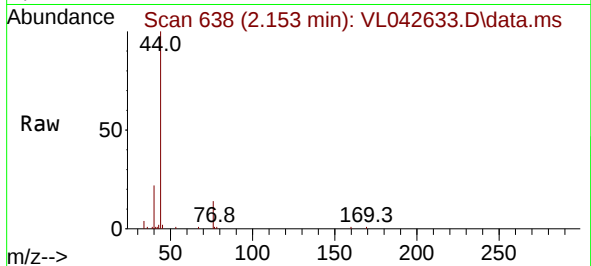




#27
Carbon Disulfide
Concen: 0.086 ppbv
RT: 2.153 min Scan# 611
Delta R.T. 0.000 min
Lab File: VL042633.D
Acq: 16 Jun 2025 17:27

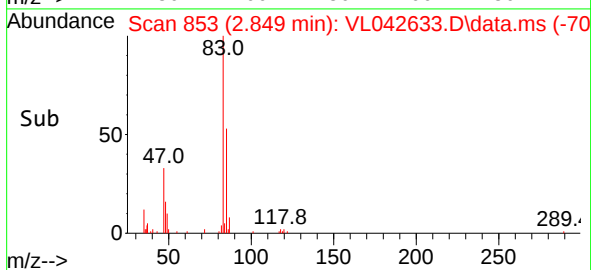
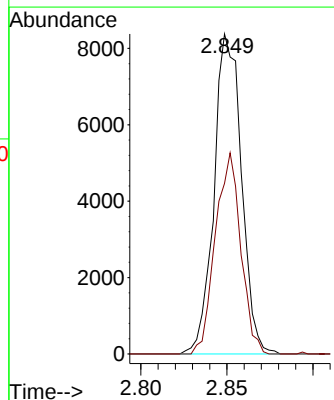
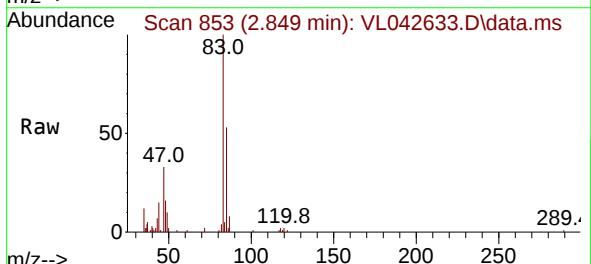
Instrument :
MSVOA_L
ClientSampleId :
115-SG2

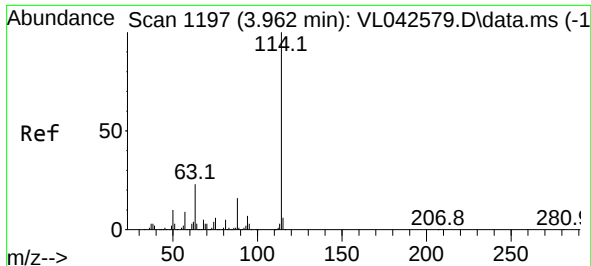
Tgt Ion: 76 Resp: 1035
Ion Ratio Lower Upper
76 100
44 1778.5 21.3 31.9#
78 11.7 9.4 14.0



#29
Chloroform
Concen: 0.457 ppbv
RT: 2.849 min Scan# 853
Delta R.T. -0.003 min
Lab File: VL042633.D
Acq: 16 Jun 2025 17:27

Tgt Ion: 83 Resp: 9275
Ion Ratio Lower Upper
83 100
85 53.3 52.8 79.2





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.959 min Scan# 1196

Delta R.T. -0.003 min

Lab File: VL042633.D

Acq: 16 Jun 2025 17:27

Instrument :

MSVOA_L

ClientSampleId :

115-SG2

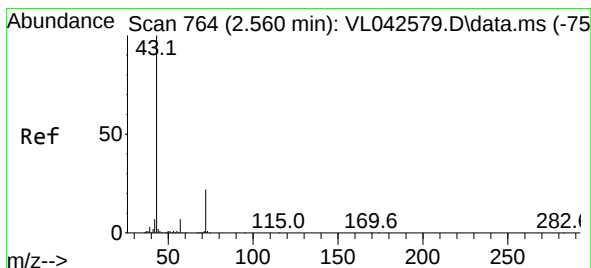
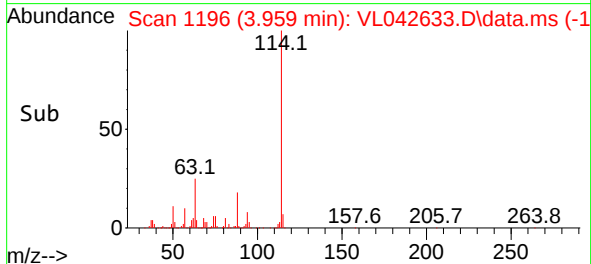
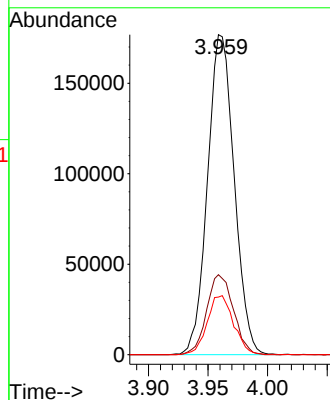
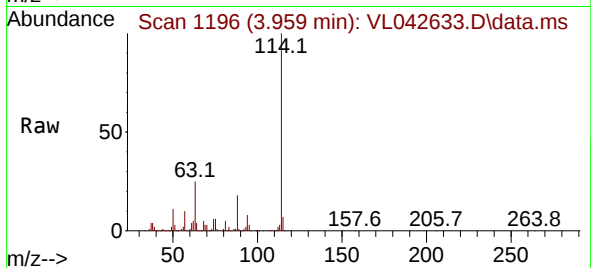
Tgt Ion:114 Resp: 275428

Ion Ratio Lower Upper

114 100

63 25.1 19.0 28.6

88 18.2 13.6 20.4



#34

2-Butanone

Concen: 0.207 ppbv

RT: 2.564 min Scan# 765

Delta R.T. 0.003 min

Lab File: VL042633.D

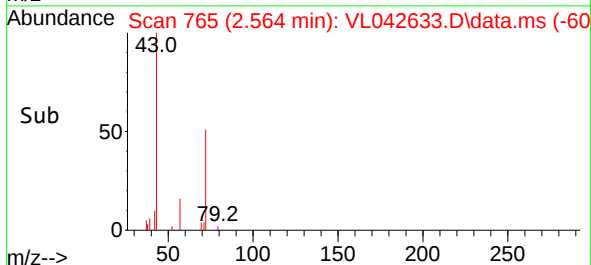
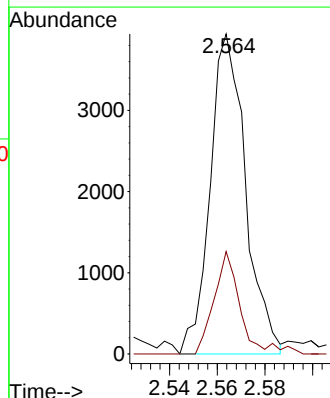
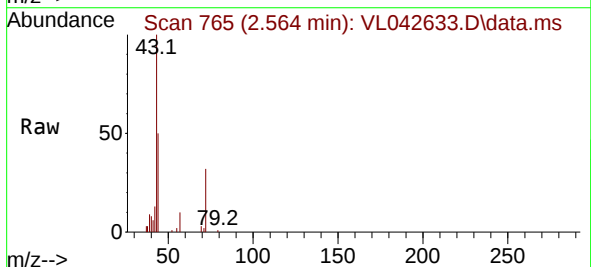
Acq: 16 Jun 2025 17:27

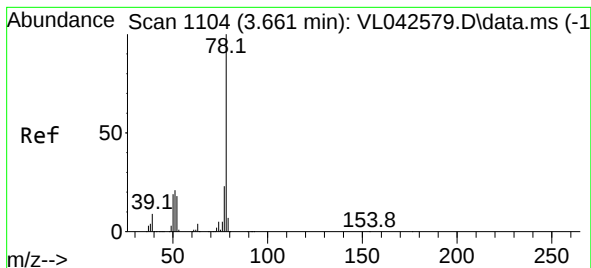
Tgt Ion: 43 Resp: 4064

Ion Ratio Lower Upper

43 100

72 23.8 17.7 26.5





#36

Benzene

Concen: 0.186 ppbv

RT: 3.654 min Scan# 1102

Delta R.T. -0.006 min

Lab File: VL042633.D

Acq: 16 Jun 2025 17:27

Instrument :

MSVOA_L

ClientSampleId :

115-SG2

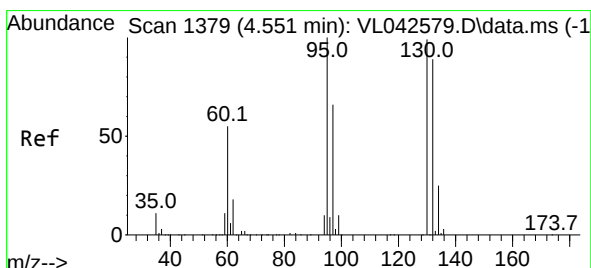
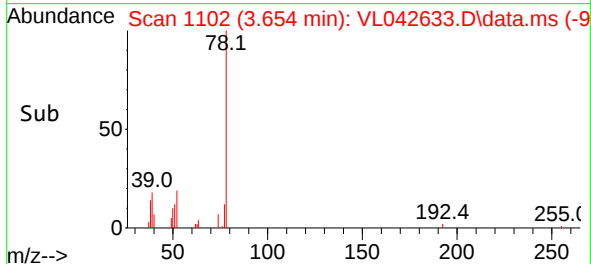
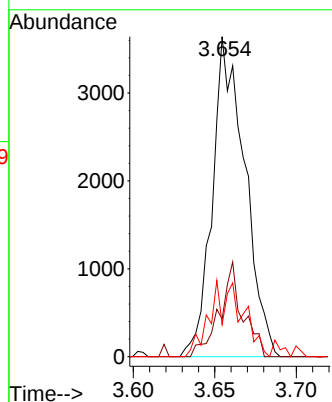
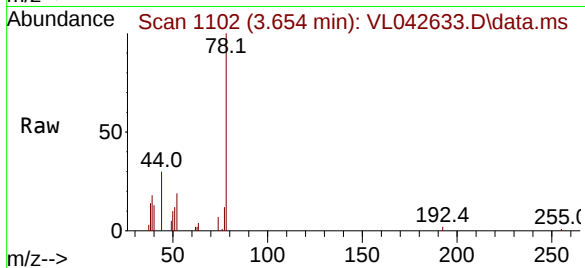
Tgt Ion: 78 Resp: 5035

Ion Ratio Lower Upper

78 100

77 11.8 18.2 27.2#

50 10.1 15.2 22.8#



#38

Trichloroethene

Concen: 0.718 ppbv

RT: 4.551 min Scan# 1379

Delta R.T. 0.000 min

Lab File: VL042633.D

Acq: 16 Jun 2025 17:27

Tgt Ion: 130 Resp: 8278

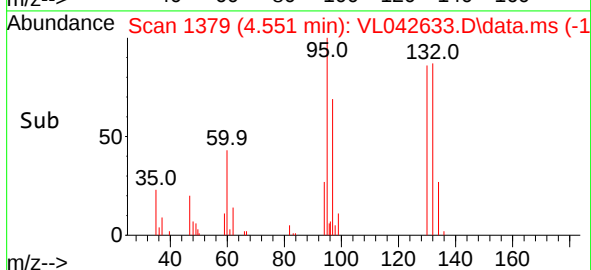
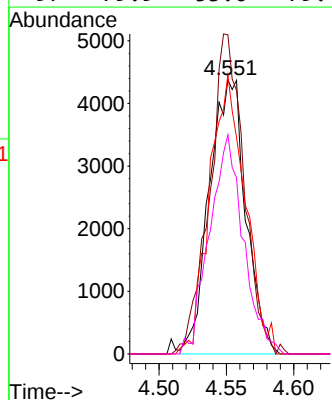
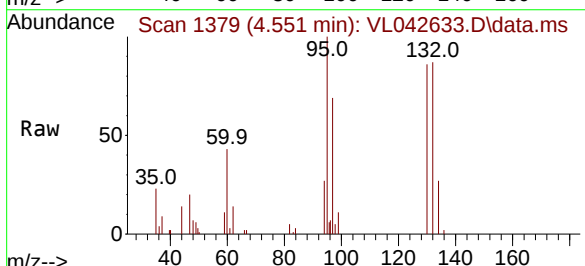
Ion Ratio Lower Upper

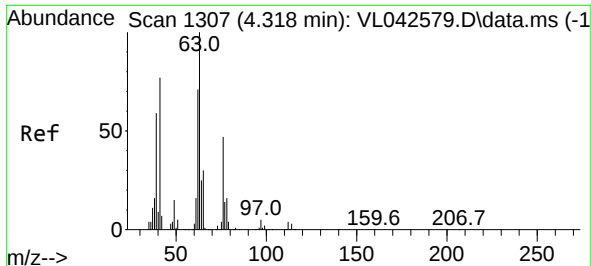
130 100

95 119.9 80.6 121.0

132 101.8 71.8 107.6

97 79.9 53.0 79.4#





#39

1,2-Dichloropropane

Concen: 6.883 ppbv

RT: 3.959 min Scan# 1196

Delta R.T. -0.359 min

Lab File: VL042633.D

Acq: 16 Jun 2025 17:27

Instrument :

MSVOA_L

ClientSampleId :

115-SG2

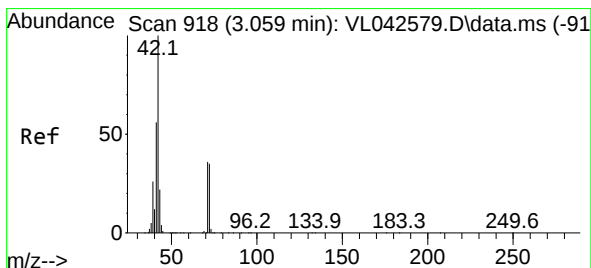
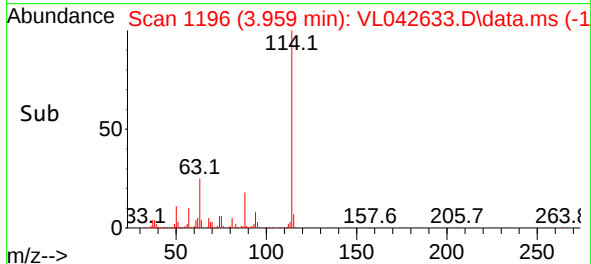
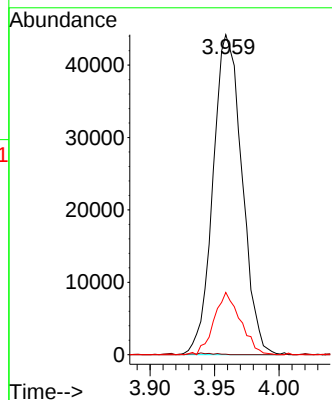
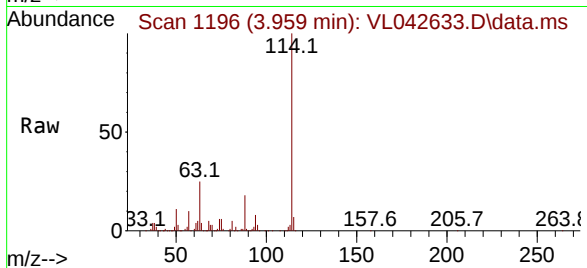
Tgt Ion: 63 Resp: 69037

Ion Ratio Lower Upper

63 100

41 0.2 61.8 92.6#

62 19.5 56.6 85.0#



#41

Tetrahydrofuran

Concen: 0.075 ppbv

RT: 3.069 min Scan# 921

Delta R.T. 0.010 min

Lab File: VL042633.D

Acq: 16 Jun 2025 17:27

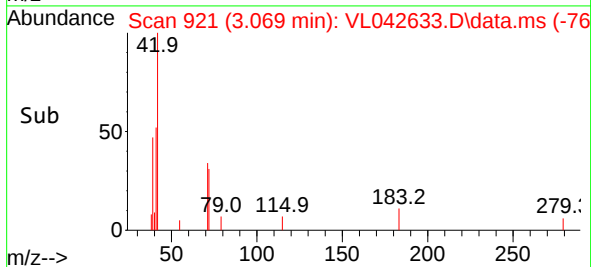
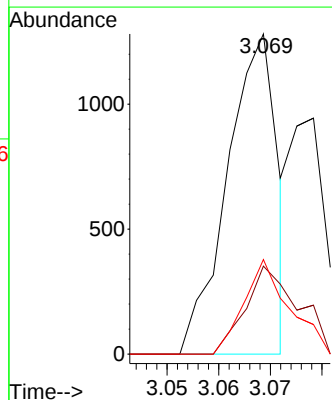
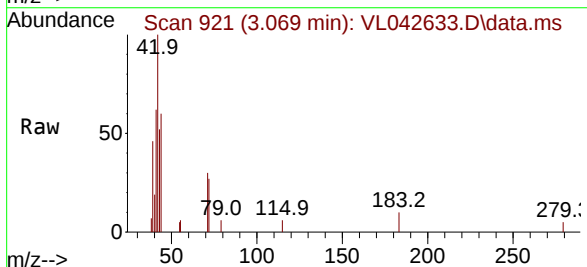
Tgt Ion: 42 Resp: 865

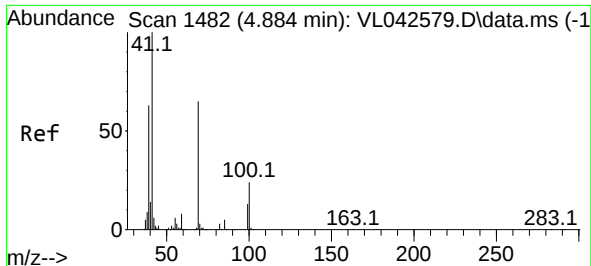
Ion Ratio Lower Upper

42 100

72 33.3 28.9 43.3

71 29.5 28.5 42.7

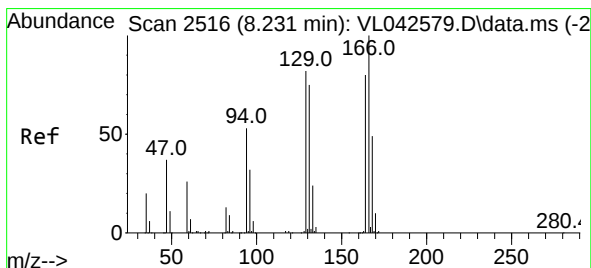
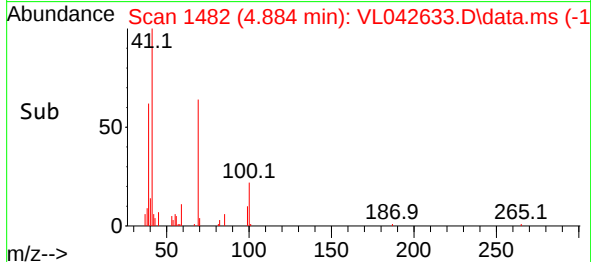
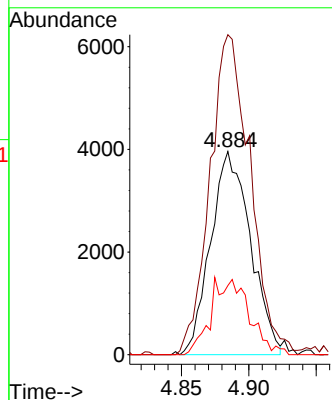
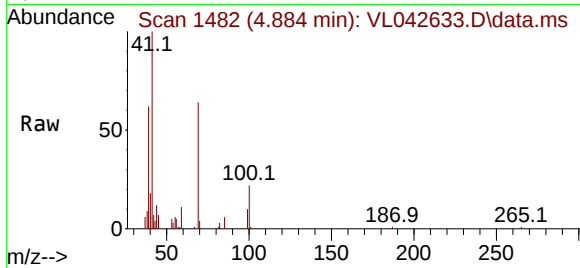




#43
Methyl Methacrylate
Concen: 0.773 ppbv
RT: 4.884 min Scan# 1482
Delta R.T. 0.000 min
Lab File: VL042633.D
Acq: 16 Jun 2025 17:27

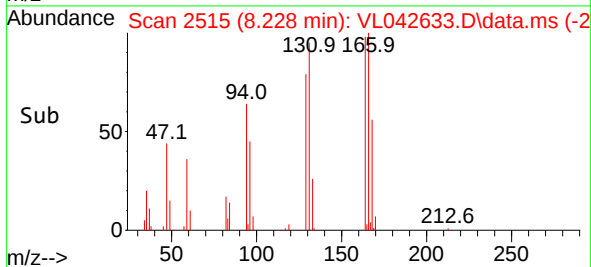
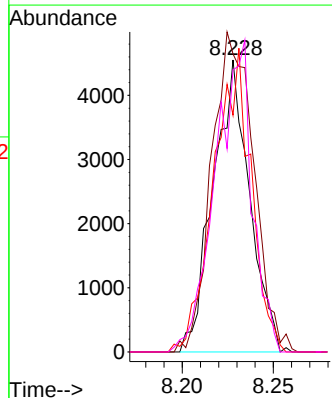
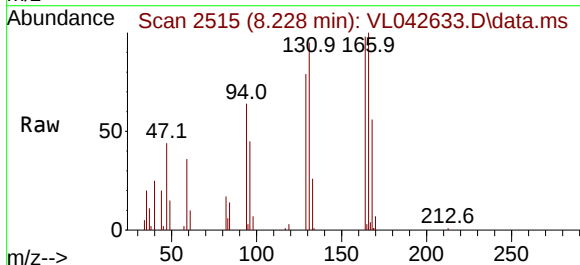
Instrument :
MSVOA_L
ClientSampleId :
115-SG2

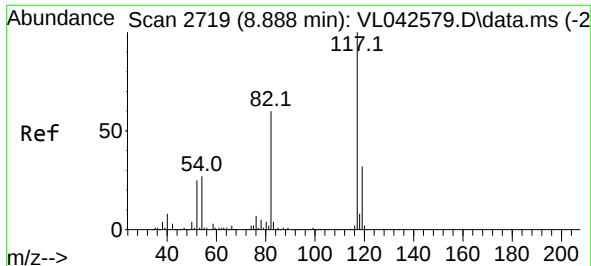
Tgt Ion: 69 Resp: 8142
Ion Ratio Lower Upper
69 100
41 161.0 124.6 187.0
100 36.2 29.9 44.9



#52
Tetrachloroethene
Concen: 0.622 ppbv
RT: 8.228 min Scan# 2515
Delta R.T. -0.003 min
Lab File: VL042633.D
Acq: 16 Jun 2025 17:27

Tgt Ion: 164 Resp: 6303
Ion Ratio Lower Upper
164 100
166 98.9 100.0 150.0#
129 79.2 82.2 123.4#
131 96.6 75.2 112.8

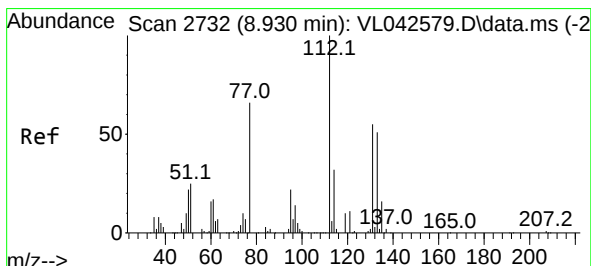
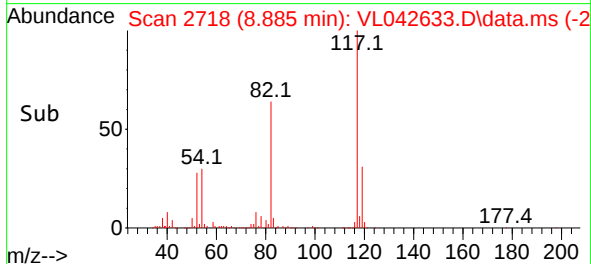
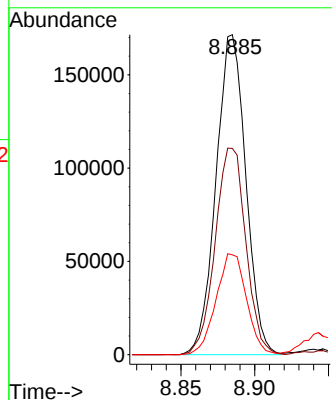
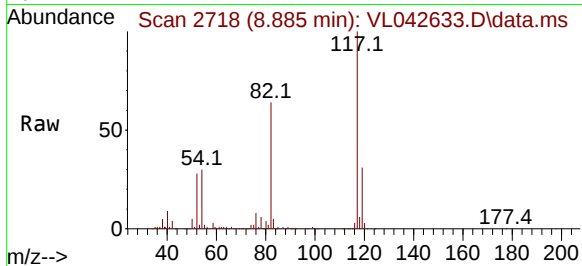




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.885 min Scan# 2115
Delta R.T. -0.003 min
Lab File: VL042633.D
Acq: 16 Jun 2025 17:27

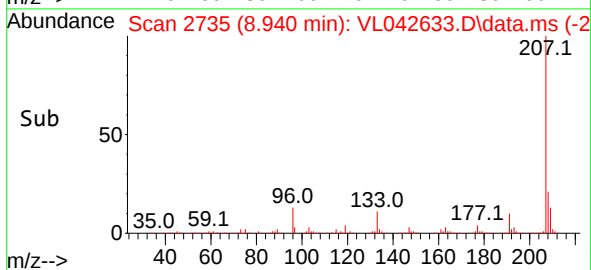
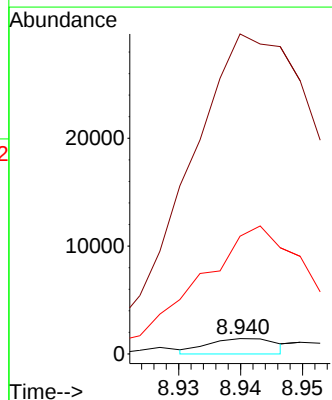
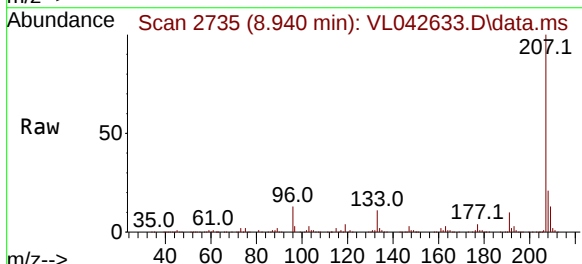
Instrument :
MSVOA_L
ClientSampleId :
115-SG2

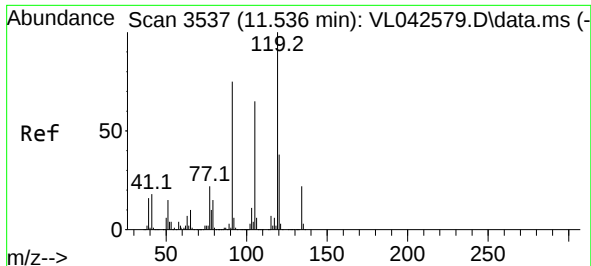
Tgt Ion:117 Resp: 241418
Ion Ratio Lower Upper
117 100
82 66.4 51.2 76.8
119 32.2 26.3 39.5



#56
1,1,1,2-Tetrachloroethane
Concen: 0.091 ppbv
RT: 8.940 min Scan# 2735
Delta R.T. 0.010 min
Lab File: VL042633.D
Acq: 16 Jun 2025 17:27

Tgt Ion:131 Resp: 1100
Ion Ratio Lower Upper
131 100
133 4326.9 75.0 112.6#
119 1518.9 50.8 76.2#

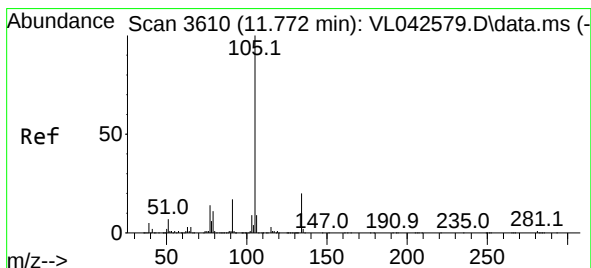
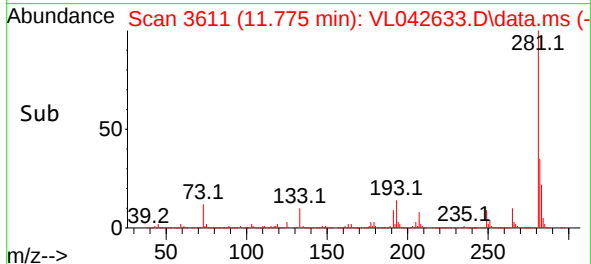
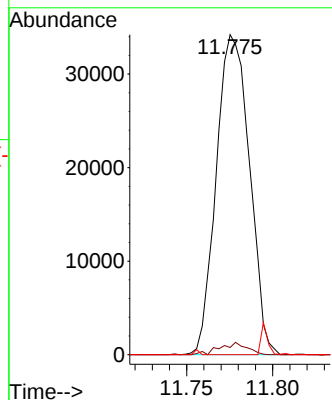
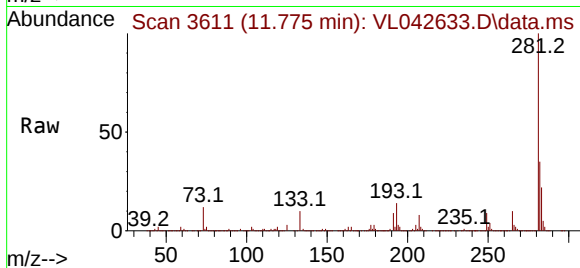




#65
tert-Butylbenzene
Concen: 1.067 ppbv
RT: 11.775 min Scan# 3011
Delta R.T. 0.240 min
Lab File: VL042633.D
Acq: 16 Jun 2025 17:27

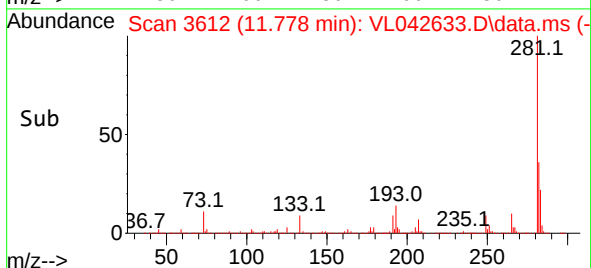
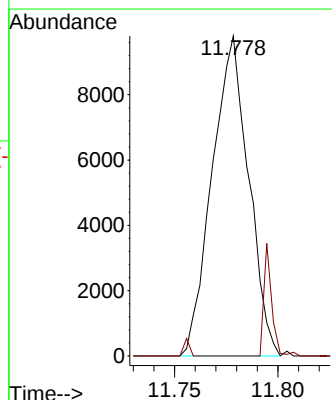
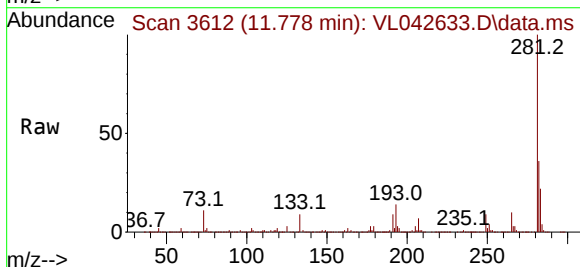
Instrument :
MSVOA_1
ClientSampleId :
115-SG2

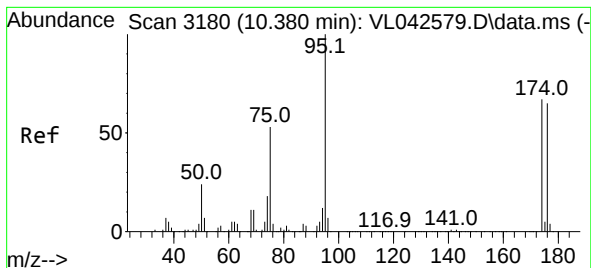
Tgt Ion:119 Resp: 45976
Ion Ratio Lower Upper
119 100
91 3.2 61.1 91.7#
134 2.0 17.4 26.2#



#67
sec-Butylbenzene
Concen: 0.199 ppbv
RT: 11.778 min Scan# 3612
Delta R.T. 0.007 min
Lab File: VL042633.D
Acq: 16 Jun 2025 17:27

Tgt Ion:105 Resp: 12028
Ion Ratio Lower Upper
105 100
134 7.6 15.8 23.6#





#68

1-Bromo-4-Fluorobenzene

Concen: 10.097 ppbv

RT: 10.377 min Scan# 3180

Delta R.T. -0.003 min

Lab File: VL042633.D

Acq: 16 Jun 2025 17:27

Instrument :

MSVOA_L

ClientSampleId :

115-SG2

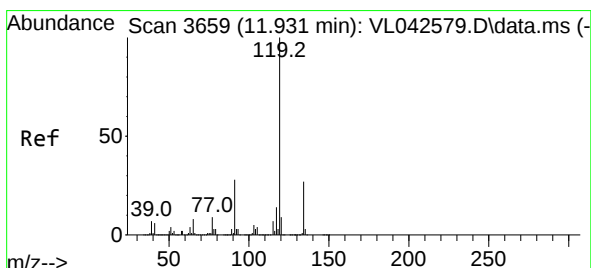
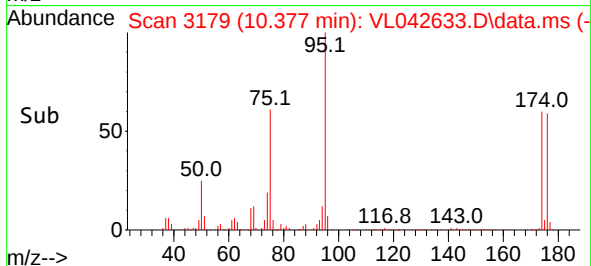
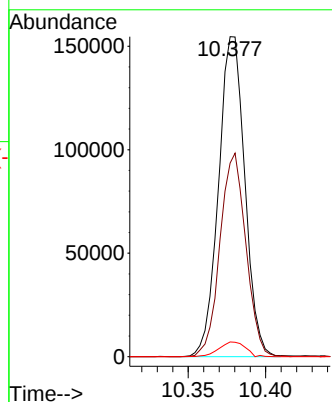
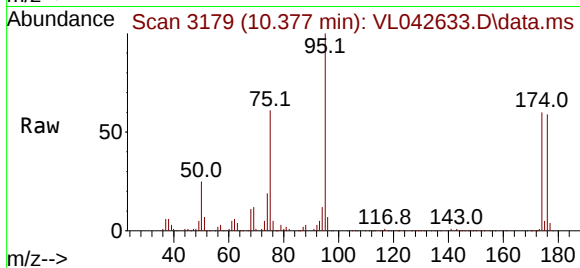
Tgt Ion: 95 Resp: 182729

Ion Ratio Lower Upper

95 100

174 62.8 53.1 79.7

175 4.7 4.2 6.2



#69

p-Isopropyltoluene

Concen: 0.905 ppbv

RT: 11.775 min Scan# 3611

Delta R.T. -0.155 min

Lab File: VL042633.D

Acq: 16 Jun 2025 17:27

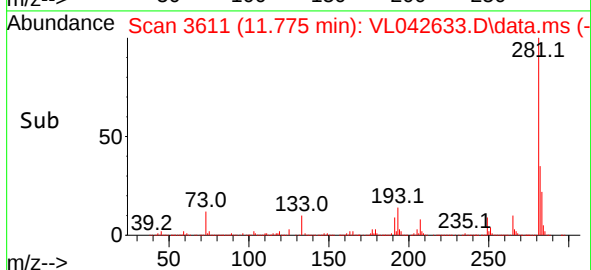
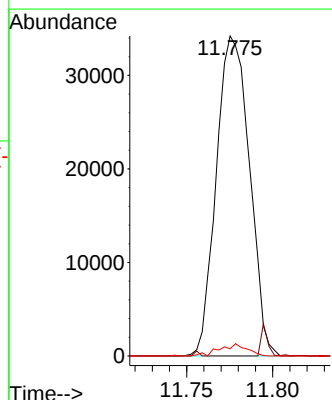
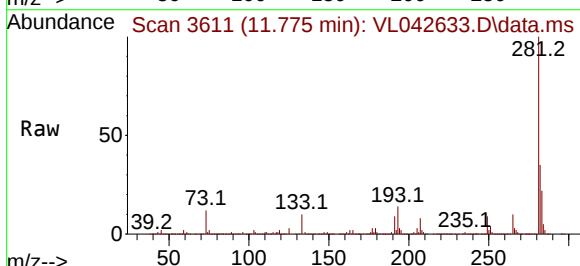
Tgt Ion: 119 Resp: 45889

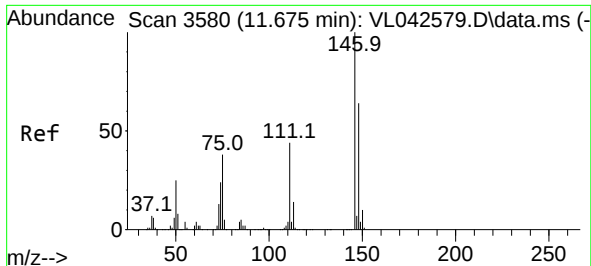
Ion Ratio Lower Upper

119 100

134 2.0 21.1 31.7#

91 3.2 21.9 32.9#

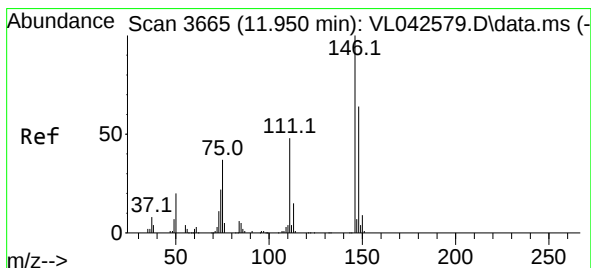
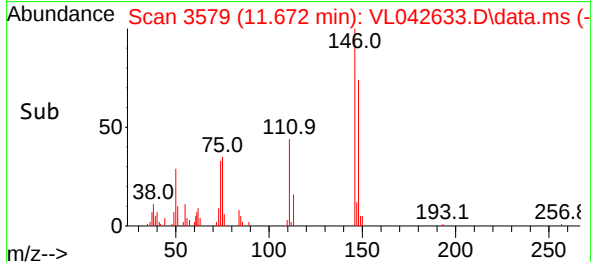
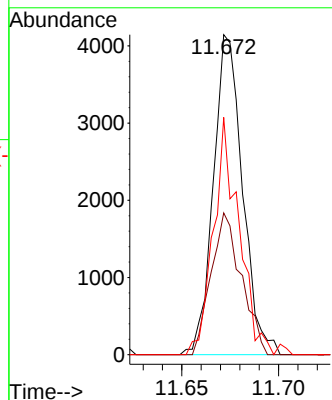
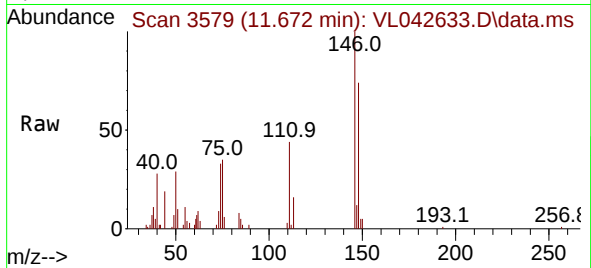




#76
1,4-Dichlorobenzene
Concen: 0.189 ppbv
RT: 11.672 min Scan# 3579
Delta R.T. -0.003 min
Lab File: VL042633.D
Acq: 16 Jun 2025 17:27

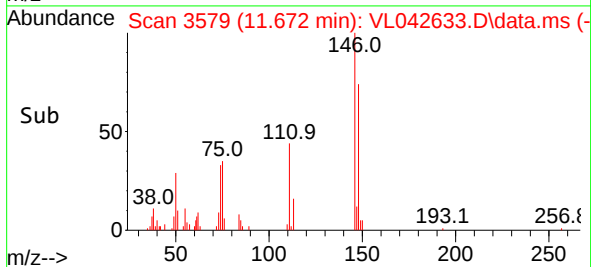
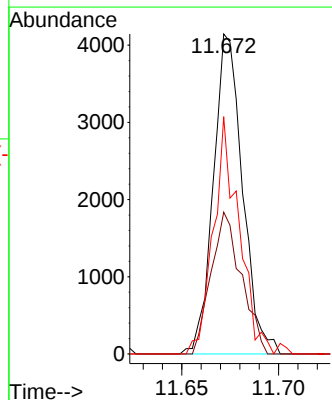
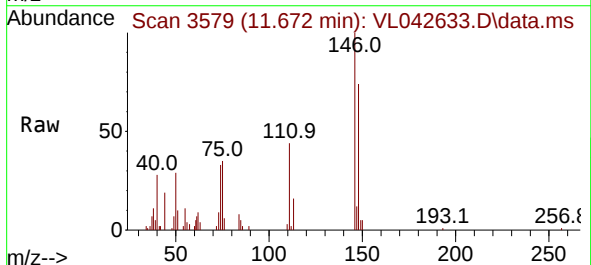
Instrument :
MSVOA_L
ClientSampleId :
115-SG2

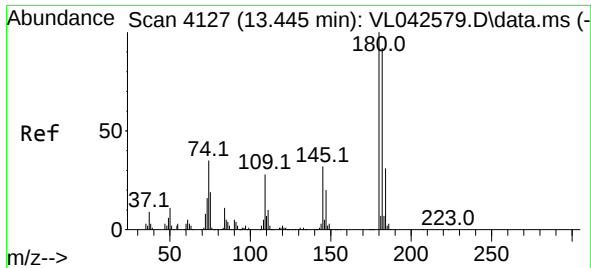
Tgt Ion:	146	Resp:	4346
Ion	Ratio	Lower	Upper
146	100		
111	46.1	21.6	64.8
148	65.8	32.1	96.5



#77
1,2-Dichlorobenzene
Concen: 0.194 ppbv
RT: 11.672 min Scan# 3579
Delta R.T. -0.278 min
Lab File: VL042633.D
Acq: 16 Jun 2025 17:27

Tgt Ion:	146	Resp:	4346
Ion	Ratio	Lower	Upper
146	100		
111	46.1	23.1	69.3
148	65.8	32.1	96.3





#81
 1,2,4-Trichlorobenzene
 Concen: 0.102 ppbv
 RT: 13.384 min Scan# 41
 Delta R.T. -0.061 min
 Lab File: VL042633.D
 Acq: 16 Jun 2025 17:27

Instrument :
 MSVOA_L
 ClientSampleId :
 115-SG2

Tgt Ion	Ratio	Lower	Upper
180	100		
182	9.1	75.0	112.4#
184	0.0	24.6	36.8#

