

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL100721\
 Data File : VL037818.D
 Acq On : 8 Oct 2021 5:35
 Operator : SY/AP
 Sample : M4079-03
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 C0P13

Quant Time: Oct 08 10:10:17 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL100421AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Oct 04 17:43:54 2021
 QLast Update : Mon Oct 04 17:43:54 2021
 Response via : Initial Calibration

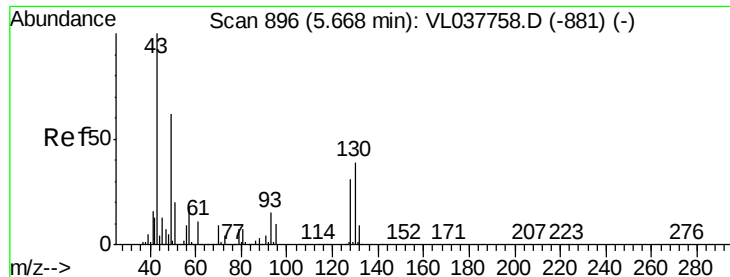
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1179892	10.00	ppbv	-0.01
33) 1,4-Difluorobenzene	7.17	114	3557292	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	3118520	10.00	ppbv	-0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.40	95	2181851	10.00	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.00%

Target Compounds						Qvalue
3) Chlorodifluoromethane	2.98	51	48603	0.214	ppbv	99
4) Chloromethane	3.13	50	25024	0.301	ppbv #	86
7) Chloroethane	3.55	64	627	0.022	ppbv #	40
9) Propene	3.00	41	20835	0.250	ppbv #	1
11) Trichlorofluoromethane	3.94	101	40096	0.238	ppbv #	72
12) 1,1,2-Trichlorotrifluoroet	4.48	101	5519	0.043	ppbv #	50
13) Ethanol	3.60	45	59748	8.758	ppbv	80
15) Acetone	3.84	43	768548	7.256	ppbv #	88
16) 1,3-Butadiene	3.30	39	57389	0.745	ppbv #	23
17) tert-Butyl alcohol	4.29	59	5983	0.055	ppbv #	71
19) Isopropyl Alcohol	3.96	45	11108	0.169	ppbv #	96
20) Methylene Chloride	4.34	84	209894	3.922	ppbv	98
23) Vinyl Acetate	5.05	43	68264	0.430	ppbv #	80
25) Ethyl Acetate	5.68	43	115796	0.390	ppbv #	82
26) Hexane	5.68	57	141702	0.968	ppbv #	45
27) Carbon Disulfide	4.55	76	2841	0.022	ppbv #	1
29) Chloroform	5.74	83	133491	0.638	ppbv	89
34) 2-Butanone	5.24	43	152874	1.065	ppbv #	89
36) Benzene	6.89	78	13604	0.045	ppbv #	88
39) 1,2-Dichloropropane	7.16	63	827760	7.243	ppbv #	28
51) 2-Hexanone	10.12	43	3126	0.037	ppbv #	29
52) Tetrachloroethene	11.21	164	1367697	11.570	ppbv	98
53) Toluene	9.79	91	36668	0.109	ppbv #	79
58) Ethyl Benzene	12.71	91	10580	0.025	ppbv	90
59) m/p-Xylene	12.98	91	15555	0.043	ppbv #	30
60) o-Xylene	13.67	91	27656	0.080	ppbv #	4
66) Benzyl Chloride	16.96	91	827	0.040	ppbv #	81
74) 1,2,4-Trimethylbenzene	16.75	105	38682	0.104	ppbv #	70
79) Naphthalene	22.16	128	10527	0.046	ppbv #	94
80) Naphthalene,2-methyl-	24.97	142	9834	0.160	ppbv #	36

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 892

Delta R.T. -0.01 min

Lab File: VL037818.D

Acq: 8 Oct 2021 5:35

Instrument :

MSVOA_L

ClientSampleId :

C0P13

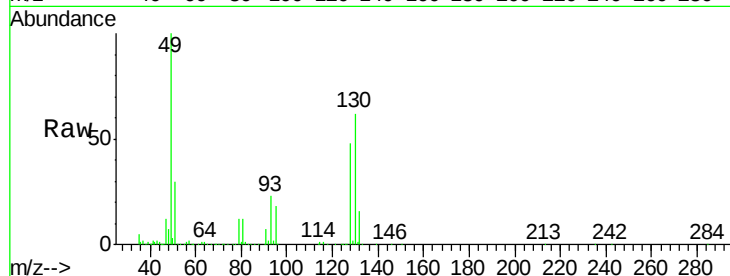
Tgt Ion: 49 Resp: 1179892

Ion Ratio Lower Upper

49 100

128 54.5 27.1 81.3

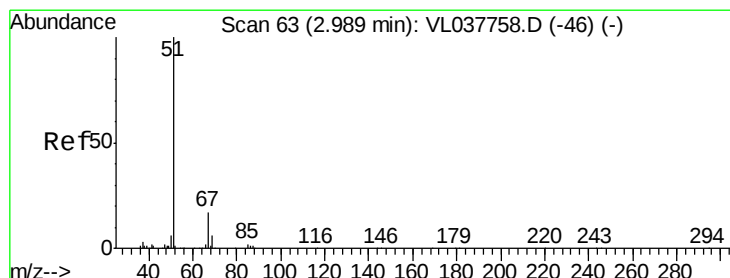
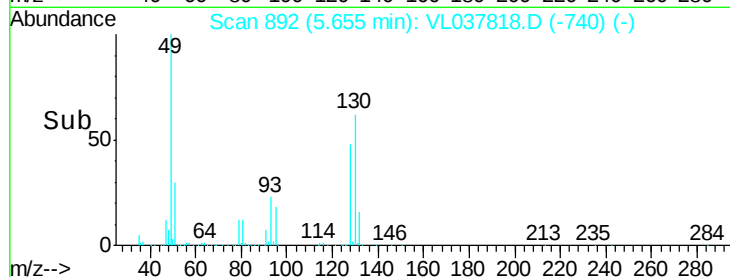
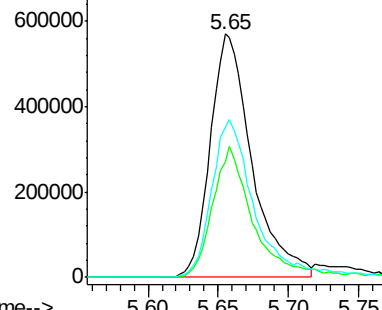
130 67.8 33.2 99.6



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#3

Chlorodifluoromethane

Concen: 0.214 ppbv

RT: 2.98 min Scan# 61

Delta R.T. -0.01 min

Lab File: VL037818.D

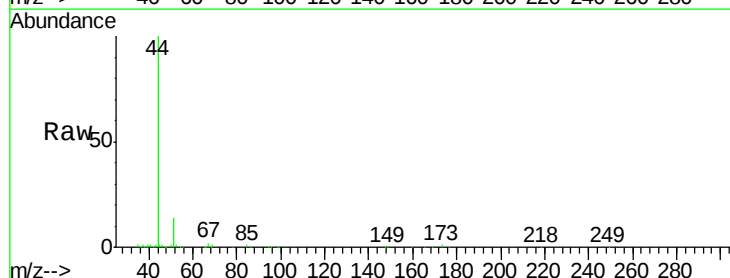
Acq: 8 Oct 2021 5:35

Tgt Ion: 51 Resp: 48603

Ion Ratio Lower Upper

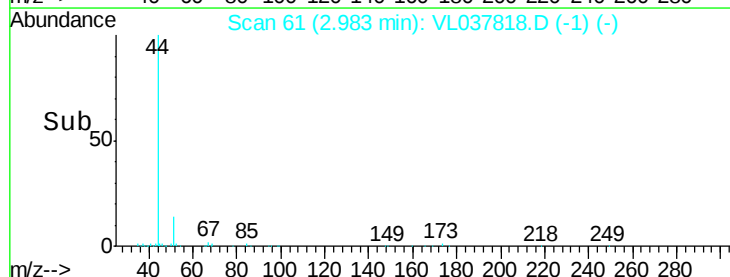
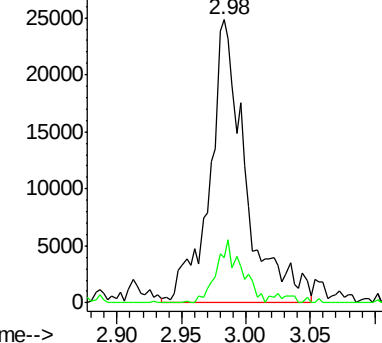
51 100

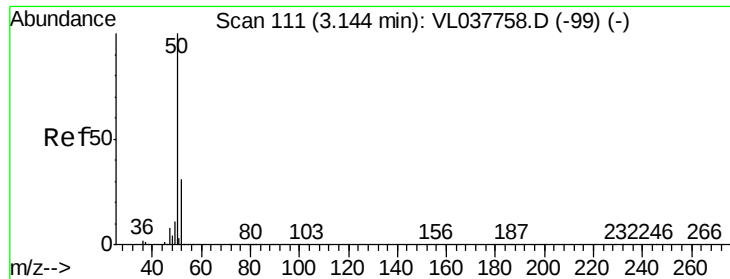
67 17.2 13.5 20.3



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0





#4

Chloromethane

Concen: 0.301 ppbv

RT: 3.13 min Scan# 108

Delta R.T. -0.01 min

Lab File: VL037818.D

Acq: 8 Oct 2021 5:35

Instrument :

MSVOA_L

ClientSampled :

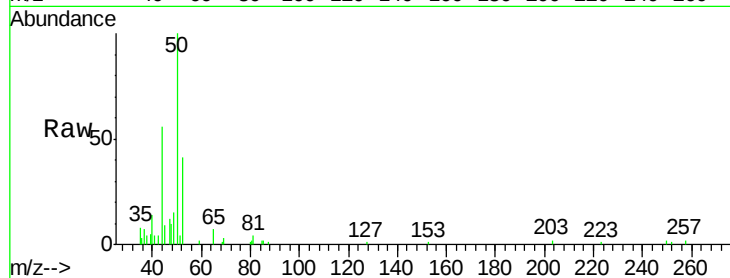
C0P13

Tgt Ion: 50 Resp: 25024

Ion Ratio Lower Upper

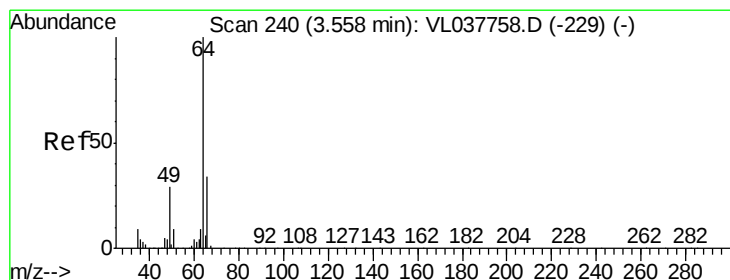
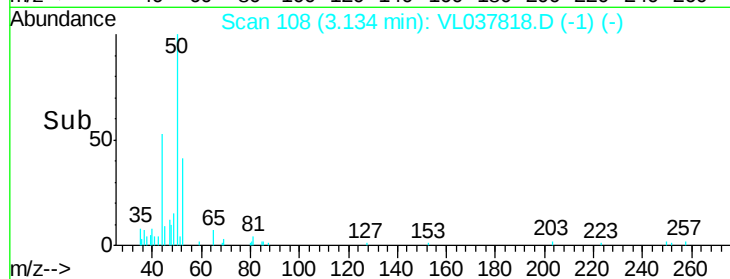
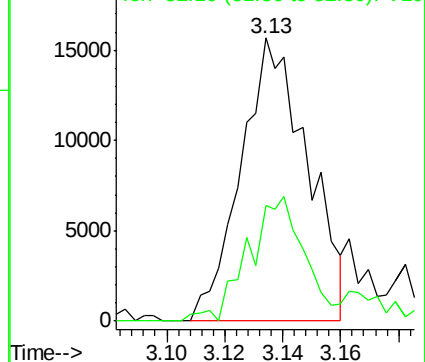
50 100

52 38.4 24.4 36.6#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0



#7

Chloroethane

Concen: 0.022 ppbv

RT: 3.55 min Scan# 238

Delta R.T. -0.01 min

Lab File: VL037818.D

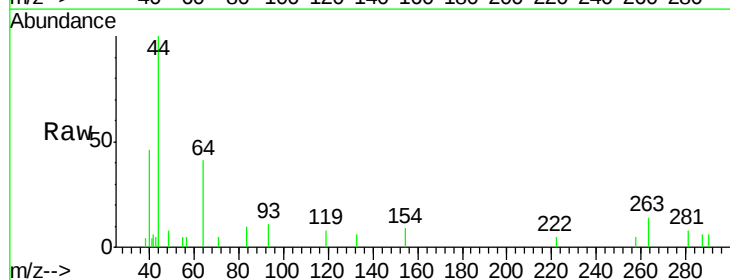
Acq: 8 Oct 2021 5:35

Tgt Ion: 64 Resp: 627

Ion Ratio Lower Upper

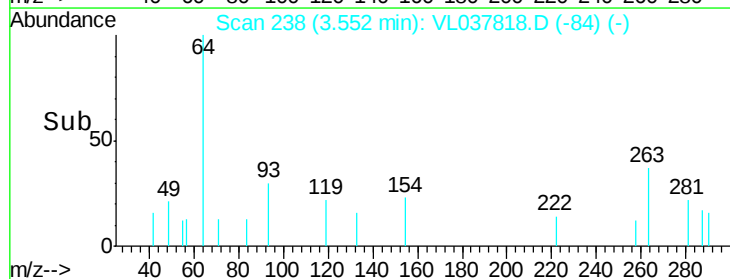
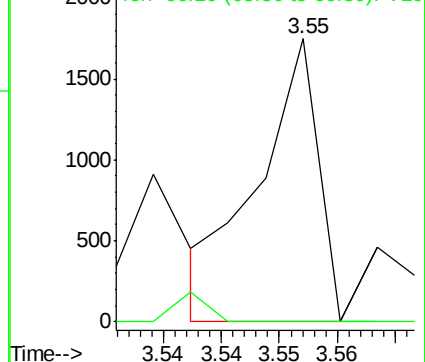
64 100

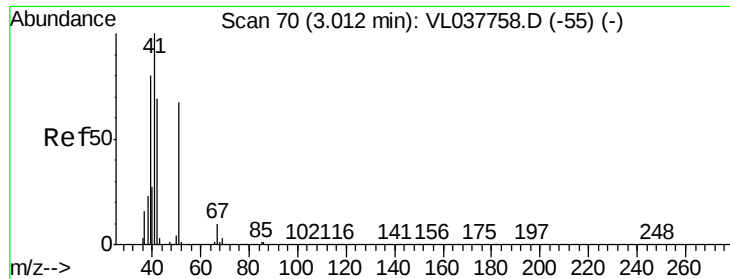
66 0.0 27.5 41.3#



Abundance Ion 64.10 (63.80 to 64.80): VL0

Ion 66.10 (65.80 to 66.80): VL0





#9

Propene

Concen: 0.250 ppbv

RT: 3.00 min Scan# 67

Delta R.T. -0.01 min

Lab File: VL037818.D

Acq: 8 Oct 2021 5:35

Instrument :

MSVOA_L

ClientSampleId :

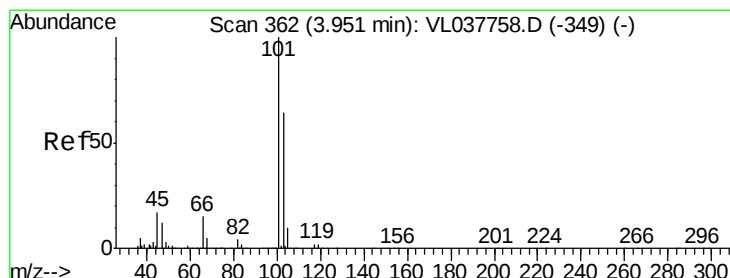
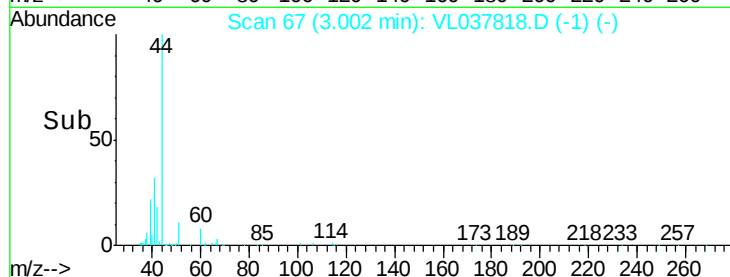
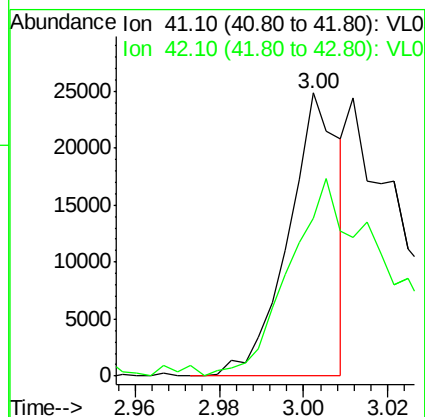
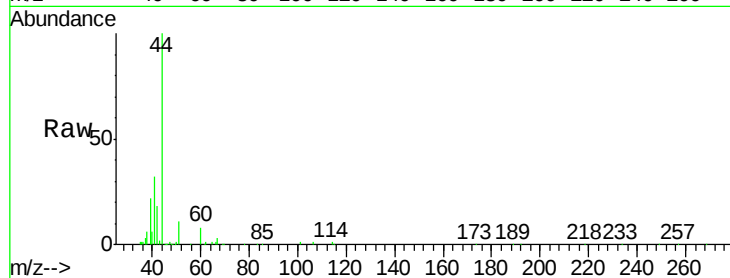
C0P13

Tgt Ion: 41 Resp: 20835

Ion Ratio Lower Upper

41 100

42 157.2 54.2 81.2#



#11

Trichlorofluoromethane

Concen: 0.238 ppbv

RT: 3.94 min Scan# 358

Delta R.T. -0.01 min

Lab File: VL037818.D

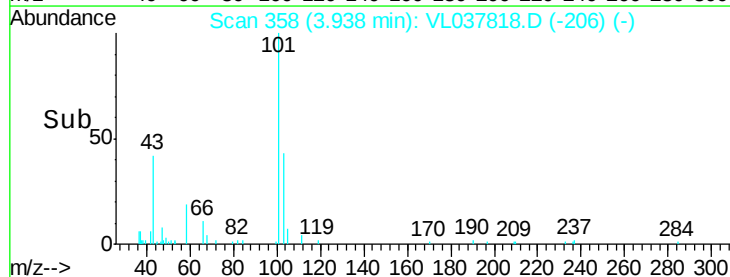
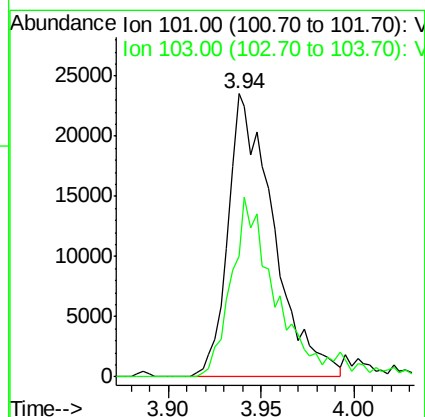
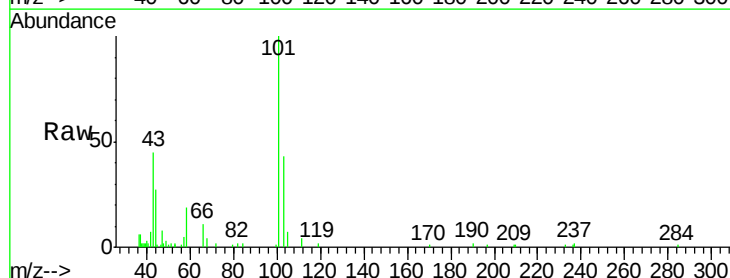
Acq: 8 Oct 2021 5:35

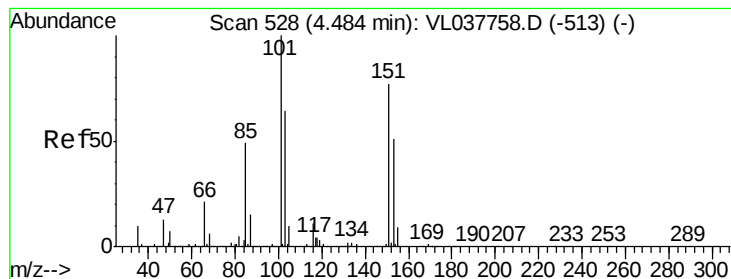
Tgt Ion: 101 Resp: 40096

Ion Ratio Lower Upper

101 100

103 42.8 51.5 77.3#





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.043 ppbv

RT: 4.48 min Scan# 527

Delta R.T. -0.00 min

Lab File: VL037818.D

Acq: 8 Oct 2021 5:35

Instrument :

MSVOA_L

ClientSampleId :

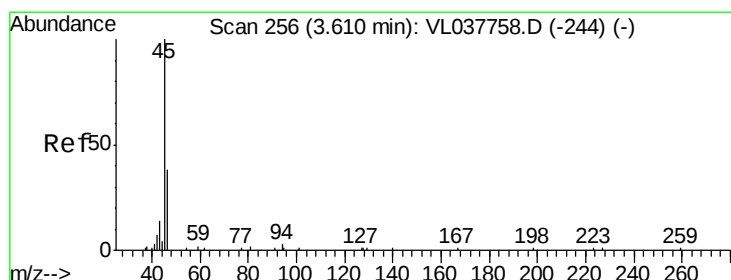
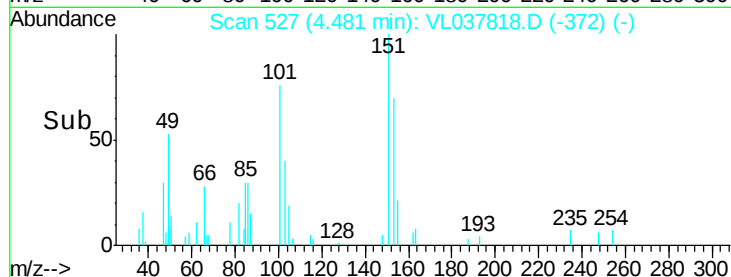
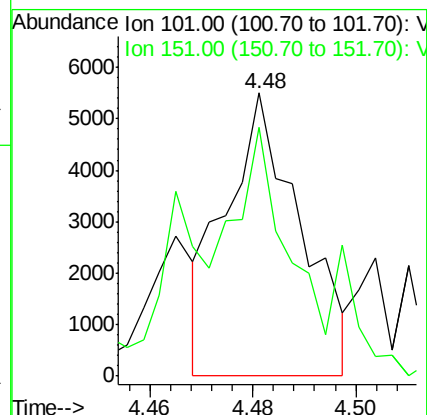
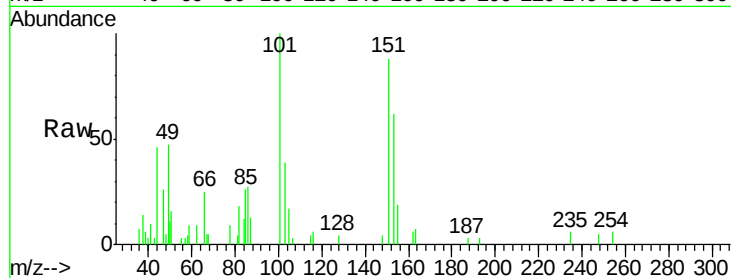
C0P13

Tgt Ion:101 Resp: 5519

Ion Ratio Lower Upper

101 100

151 122.3 62.9 94.3#



#13

Ethanol

Concen: 8.758 ppbv

RT: 3.60 min Scan# 254

Delta R.T. -0.01 min

Lab File: VL037818.D

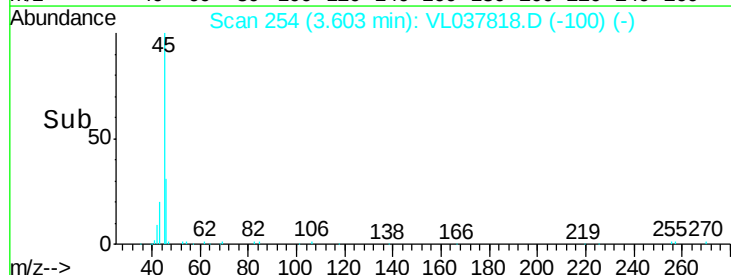
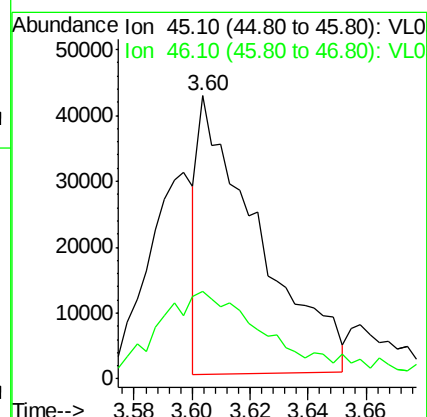
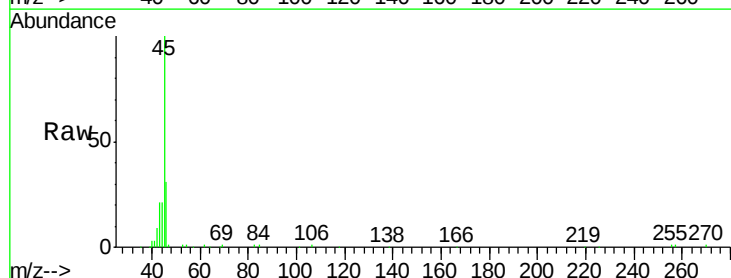
Acq: 8 Oct 2021 5:35

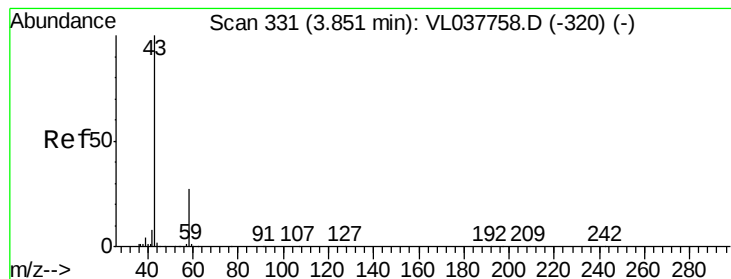
Tgt Ion: 45 Resp: 59748

Ion Ratio Lower Upper

45 100

46 64.2 20.2 81.0





#15

Acetone

Concen: 7.256 ppbv

RT: 3.84 min Scan# 328

Delta R.T. -0.01 min

Lab File: VL037818.D

Acq: 8 Oct 2021 5:35

Instrument :

MSVOA_L

ClientSampleId :

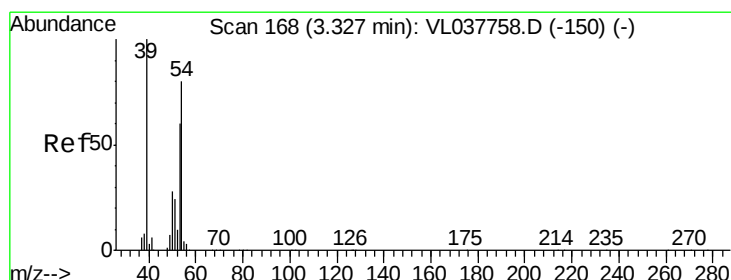
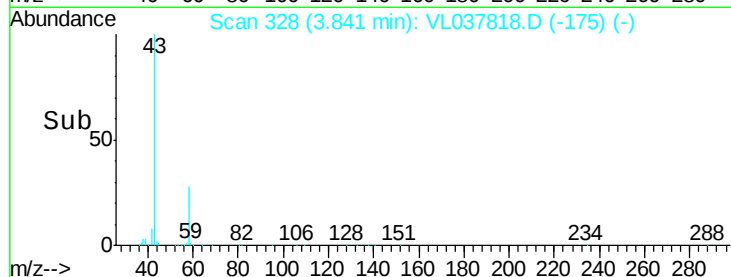
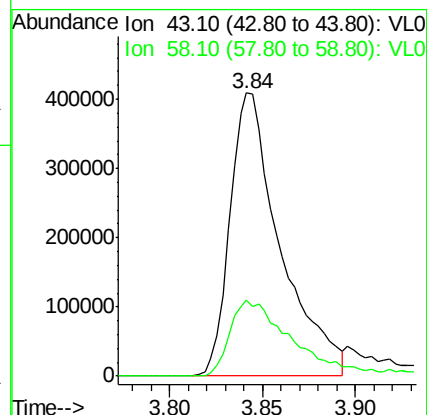
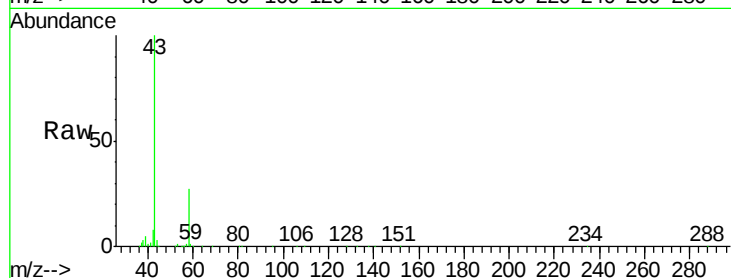
C0P13

Tgt Ion: 43 Resp: 768548

Ion Ratio Lower Upper

43 100

58 34.9 23.0 34.6#



#16

1,3-Butadiene

Concen: 0.745 ppbv

RT: 3.30 min Scan# 161

Delta R.T. -0.02 min

Lab File: VL037818.D

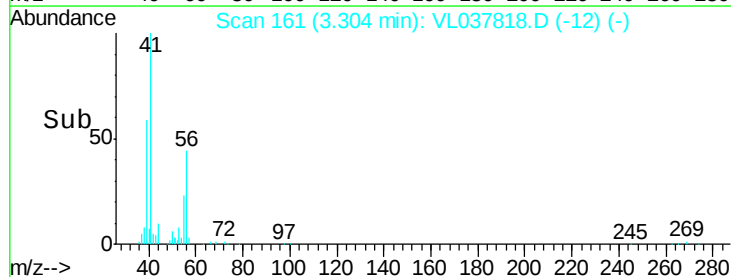
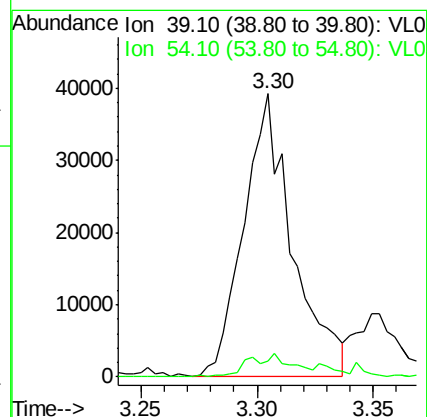
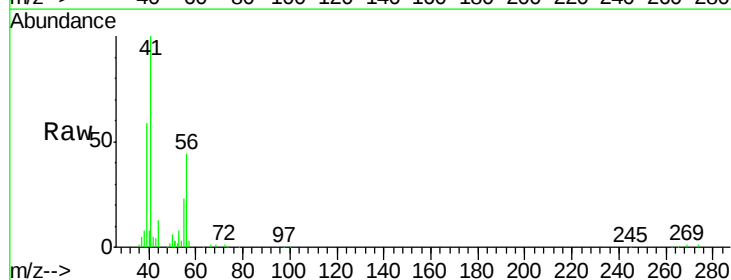
Acq: 8 Oct 2021 5:35

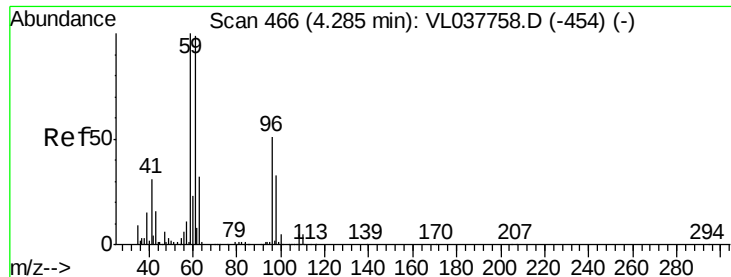
Tgt Ion: 39 Resp: 57389

Ion Ratio Lower Upper

39 100

54 10.8 61.7 92.5#

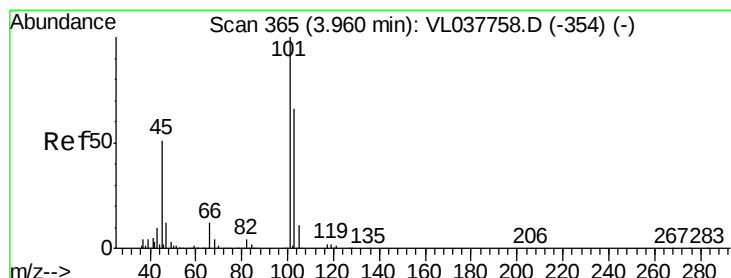
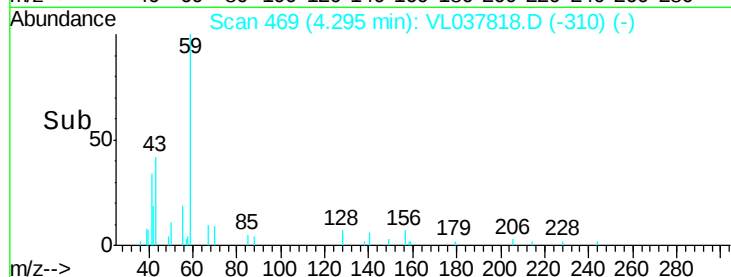
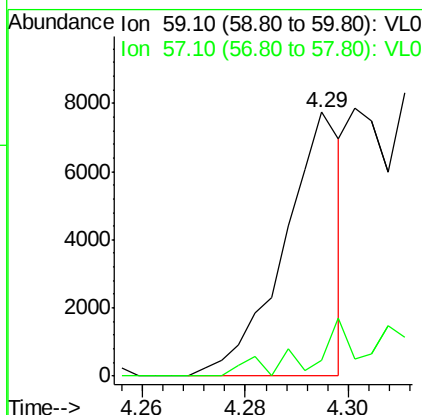
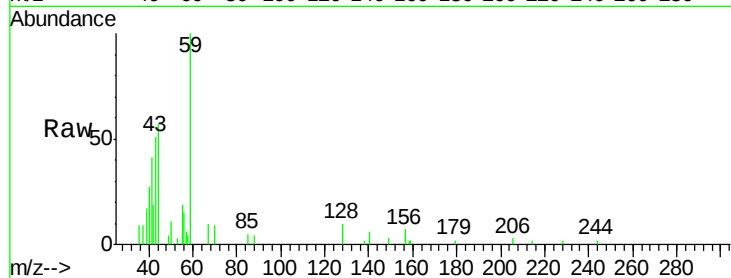




#17
 tert-Butyl alcohol
 Concen: 0.055 ppbv
 RT: 4.29 min Scan# 469
 Delta R.T. 0.01 min
 Lab File: VL037818.D
 Acq: 8 Oct 2021 5:35

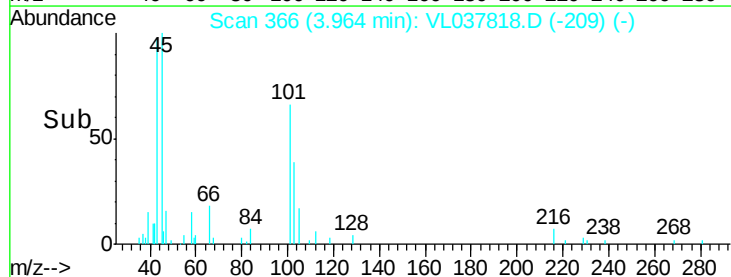
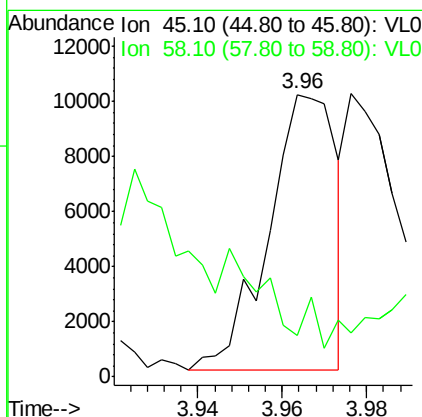
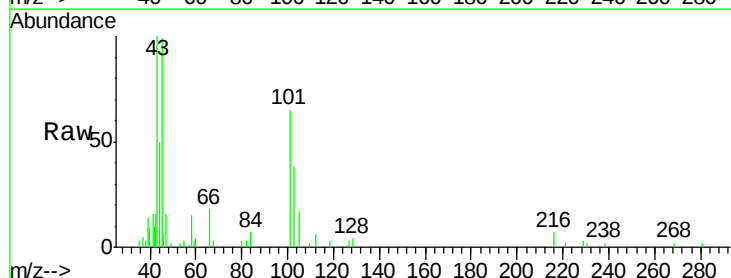
Instrument :
 MSVOA_L
 ClientSampleId :
 C0P13

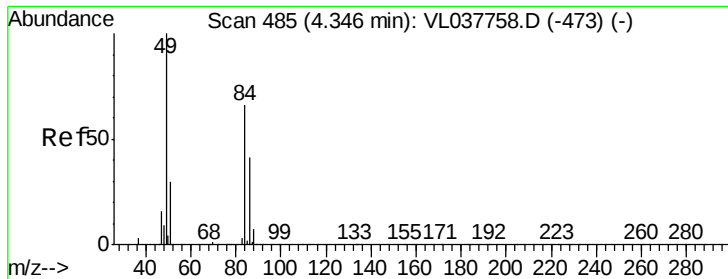
Tgt Ion: 59 Resp: 5983
 Ion Ratio Lower Upper
 59 100
 57 0.0 8.6 13.0#



#19
 Isopropyl Alcohol
 Concen: 0.169 ppbv
 RT: 3.96 min Scan# 366
 Delta R.T. 0.00 min
 Lab File: VL037818.D
 Acq: 8 Oct 2021 5:35

Tgt Ion: 45 Resp: 11108
 Ion Ratio Lower Upper
 45 100
 58 0.0 1.1 1.7#

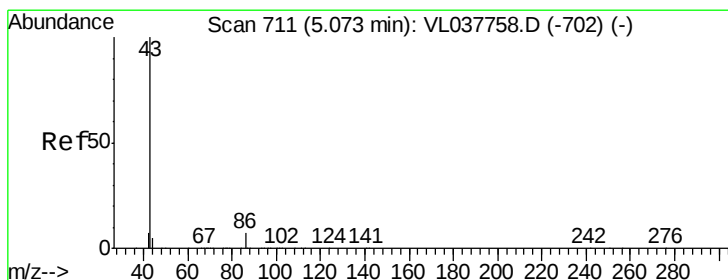
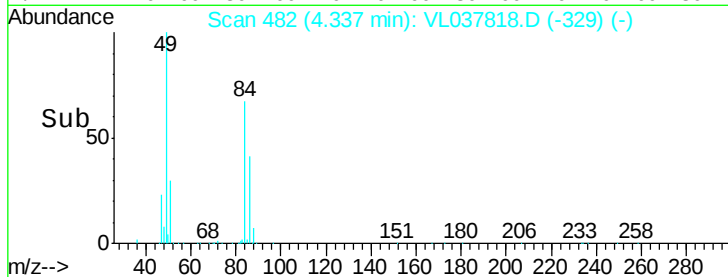
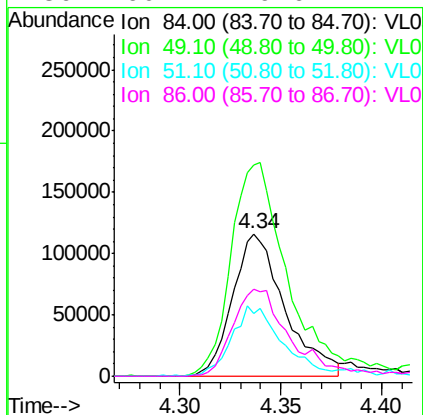
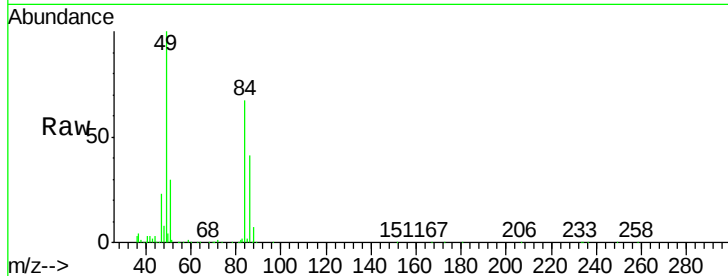




#20
Methylene Chloride
Concen: 3.922 ppbv
RT: 4.34 min Scan# 482
Delta R.T. -0.01 min
Lab File: VL037818.D
Acq: 8 Oct 2021 5:35

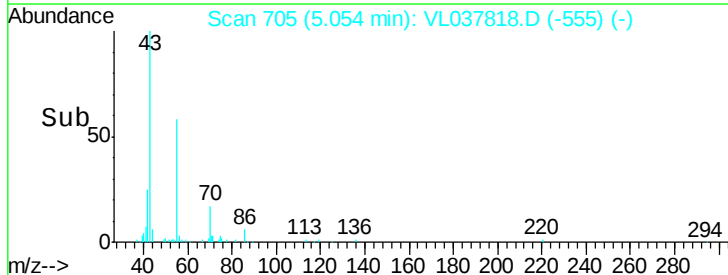
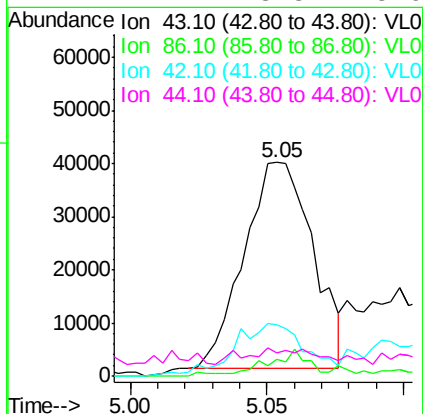
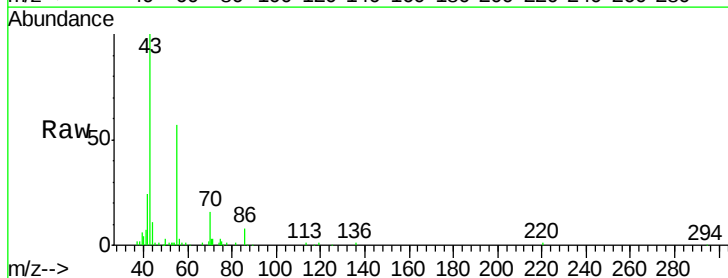
Instrument :
MSVOA_L
ClientSampleId :
C0P13

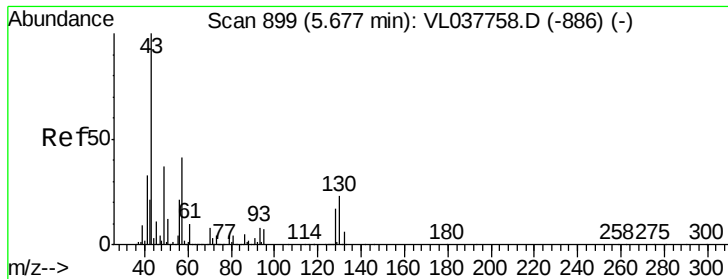
Tgt Ion:	84	Resp:	209894
Ion	Ratio	Lower	Upper
84	100		
49	147.8	120.7	181.1
51	44.5	36.2	54.4
86	60.7	49.6	74.4



#23
Vinyl Acetate
Concen: 0.430 ppbv
RT: 5.05 min Scan# 705
Delta R.T. -0.02 min
Lab File: VL037818.D
Acq: 8 Oct 2021 5:35

Tgt Ion:	43	Resp:	68264
Ion	Ratio	Lower	Upper
43	100		
86	8.2	5.0	7.4#
42	23.3	7.4	11.0#
44	4.2	3.8	5.6





#25

Ethyl Acetate

Concen: 0.390 ppbv

RT: 5.68 min Scan# 899

Delta R.T. 0.00 min

Lab File: VL037818.D

Acq: 8 Oct 2021 5:35

Instrument :

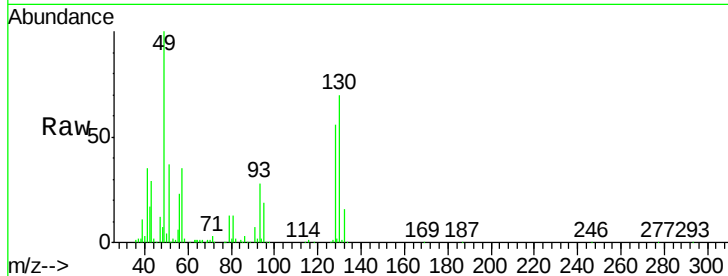
MSVOA_L

ClientSampleId :

C0P13

Tgt Ion: 43 Resp: 115796

Ion	Ratio	Lower	Upper
43	100		
45	3.9	8.1	12.1#
61	1.7	7.5	11.3#
70	2.4	5.9	8.9#

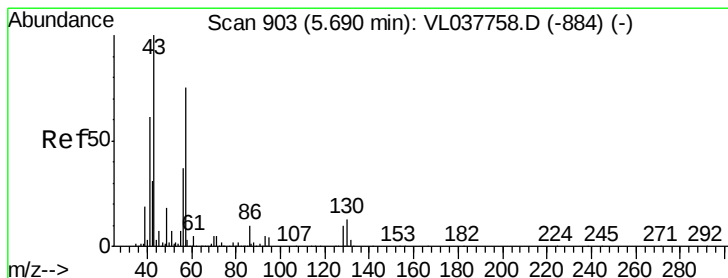
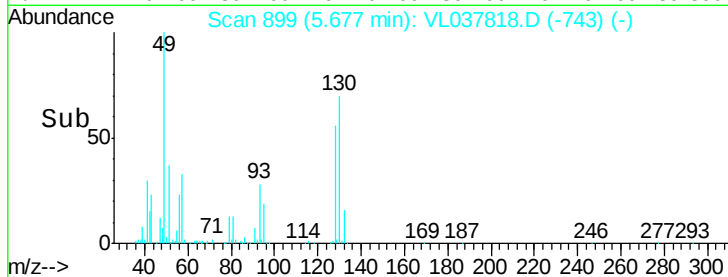
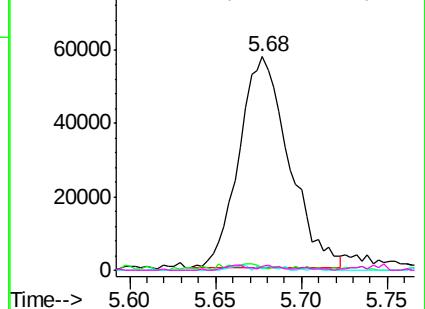


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 70.10 (69.80 to 70.80): VL0



#26

Hexane

Concen: 0.968 ppbv

RT: 5.68 min Scan# 900

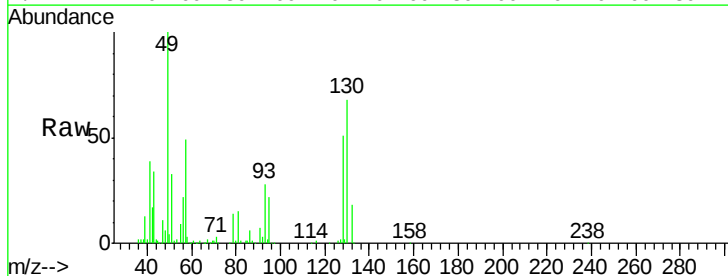
Delta R.T. -0.01 min

Lab File: VL037818.D

Acq: 8 Oct 2021 5:35

Tgt Ion: 57 Resp: 141702

Ion	Ratio	Lower	Upper
57	100		
41	102.5	69.6	104.4
43	85.8	171.4	257.0#
56	59.1	42.0	63.0

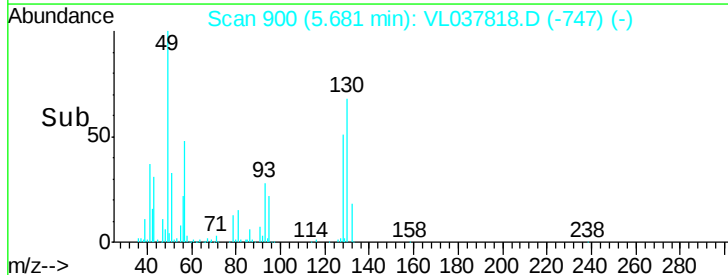
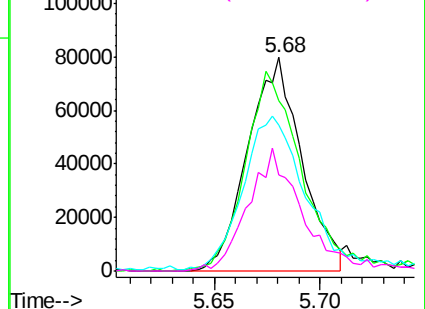


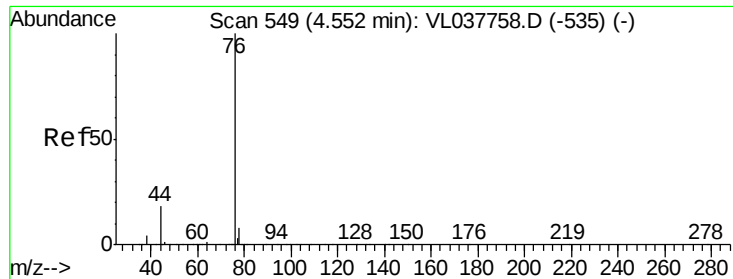
Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

Ion 56.10 (55.80 to 56.80): VL0

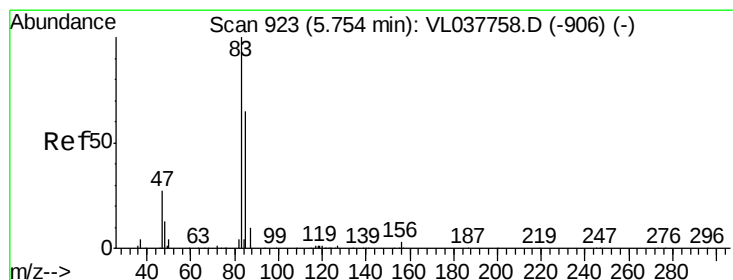
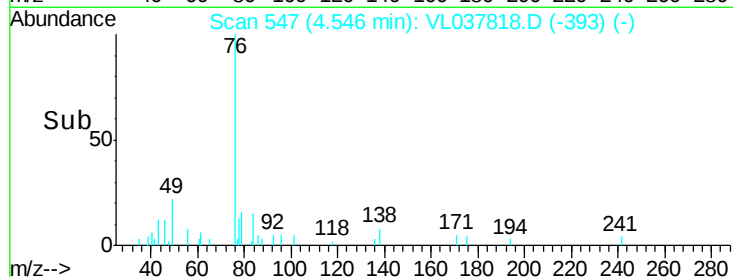
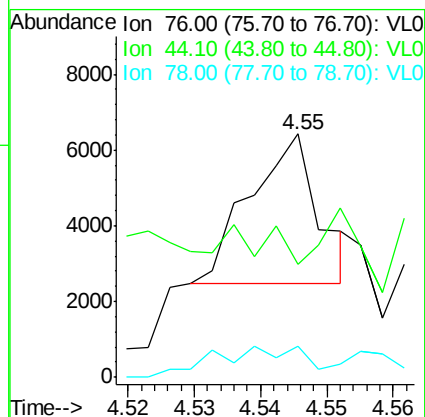
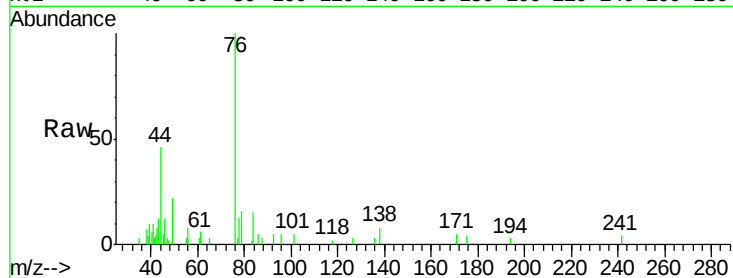




#27
Carbon Disulfide
Concen: 0.022 ppbv
RT: 4.55 min Scan# 547
Delta R.T. -0.01 min
Lab File: VL037818.D
Acq: 8 Oct 2021 5:35

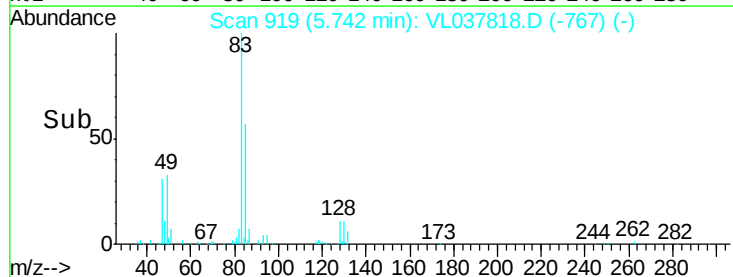
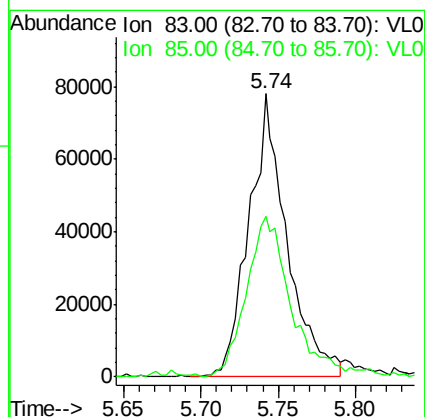
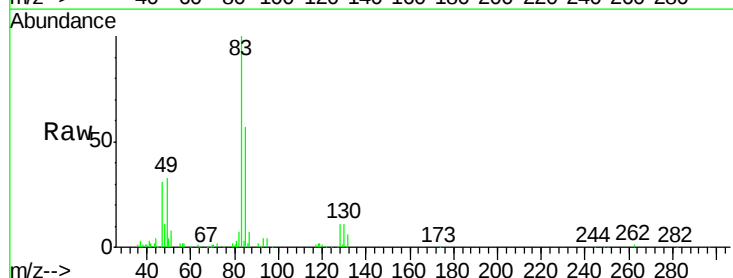
Instrument :
MSVOA_L
ClientSampled :
C0P13

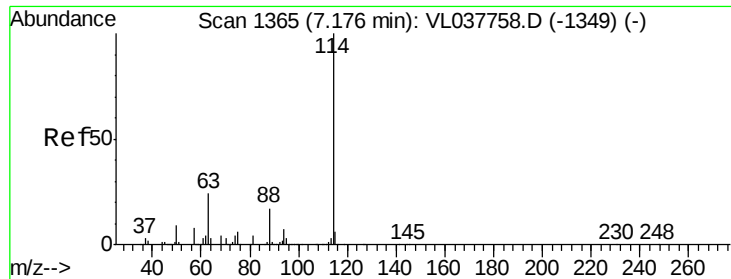
Tgt Ion: 76 Resp: 2841
Ion Ratio Lower Upper
76 100
44 148.6 14.3 21.5#
78 52.7 7.8 11.6#



#29
Chloroform
Concen: 0.638 ppbv
RT: 5.74 min Scan# 919
Delta R.T. -0.01 min
Lab File: VL037818.D
Acq: 8 Oct 2021 5:35

Tgt Ion: 83 Resp: 133491
Ion Ratio Lower Upper
83 100
85 56.1 51.8 77.8

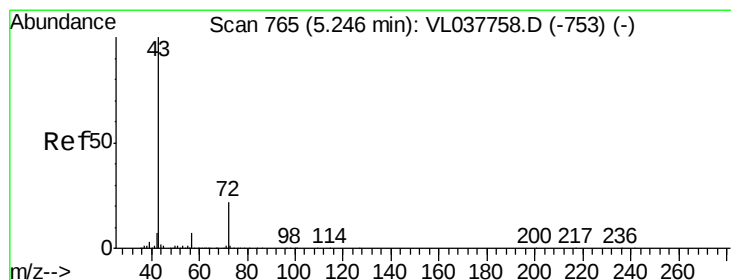
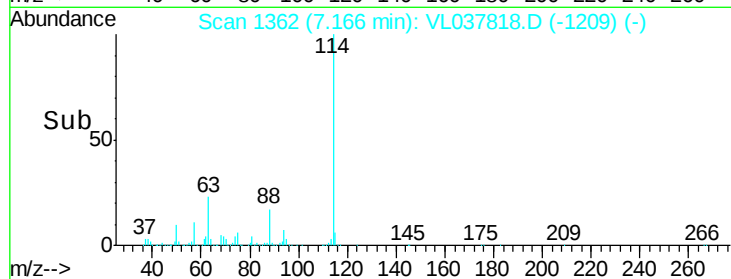
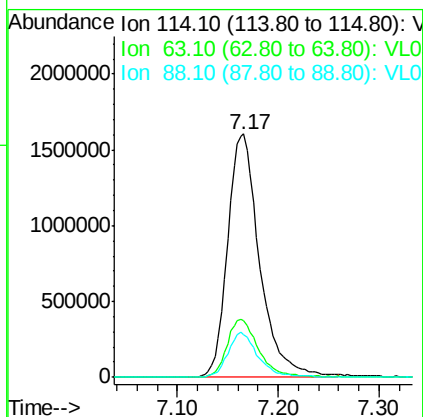
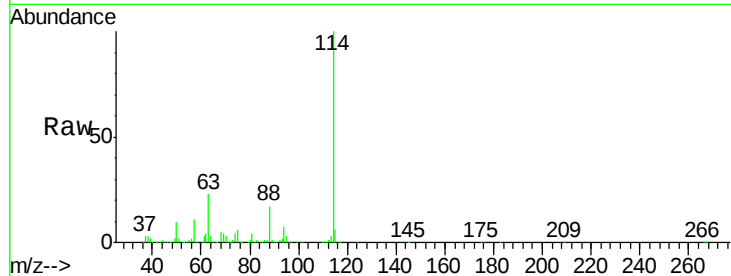




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.17 min Scan# 1362
 Delta R.T. -0.01 min
 Lab File: VL037818.D
 Acq: 8 Oct 2021 5:35

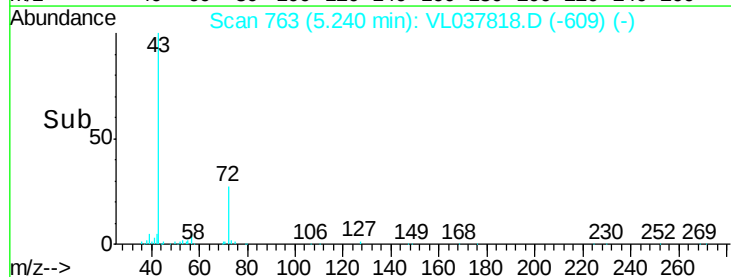
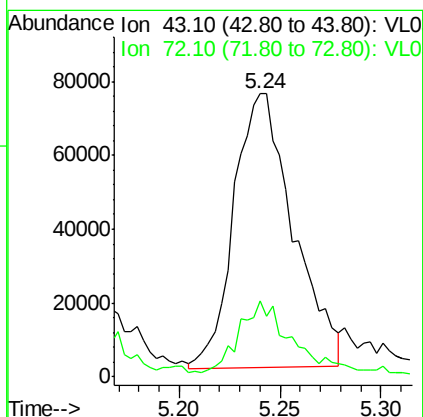
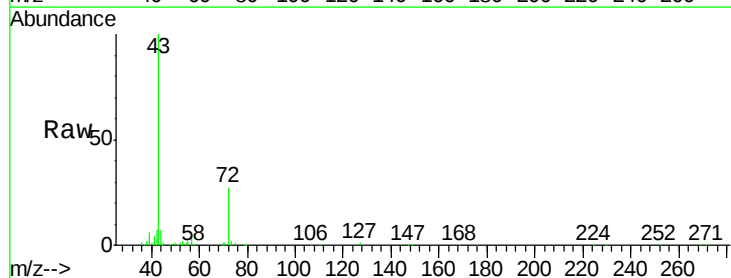
Instrument :
 MSVOA_L
 ClientSampleId :
 C0P13

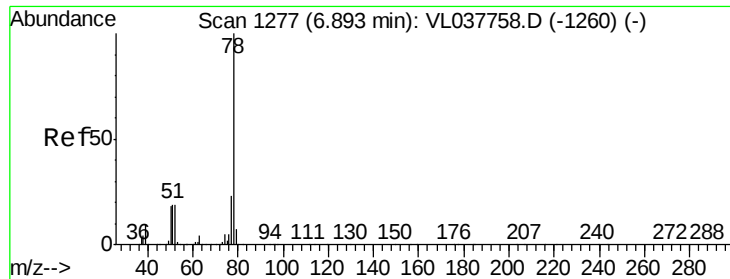
Tgt Ion: 114 Resp: 3557292
 Ion Ratio Lower Upper
 114 100
 63 23.8 19.4 29.2
 88 17.6 14.4 21.6



#34
 2-Butanone
 Concen: 1.065 ppbv
 RT: 5.24 min Scan# 763
 Delta R.T. -0.01 min
 Lab File: VL037818.D
 Acq: 8 Oct 2021 5:35

Tgt Ion: 43 Resp: 152874
 Ion Ratio Lower Upper
 43 100
 72 28.1 18.2 27.2#





#36

Benzene

Concen: 0.045 ppbv

RT: 6.89 min Scan# 1275

Delta R.T. -0.01 min

Lab File: VL037818.D

Acq: 8 Oct 2021 5:35

Instrument :

MSVOA_L

ClientSampleId :

C0P13

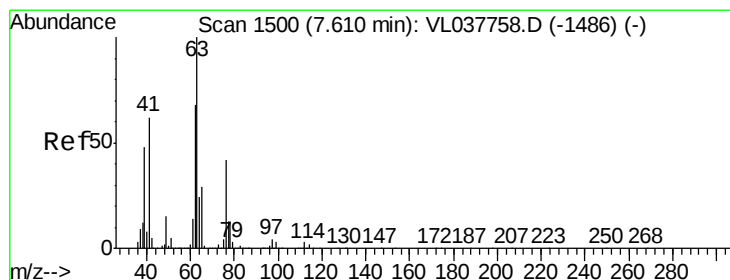
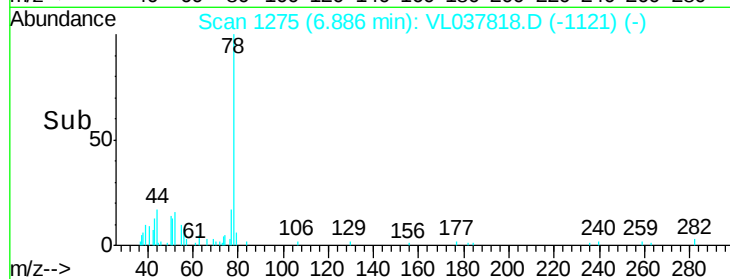
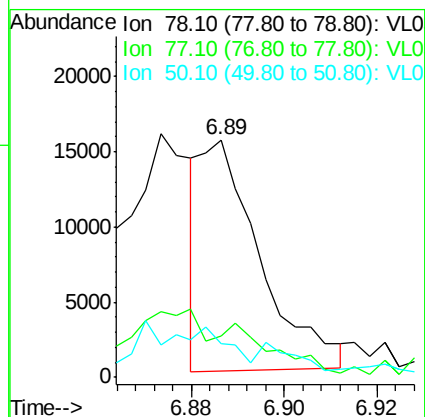
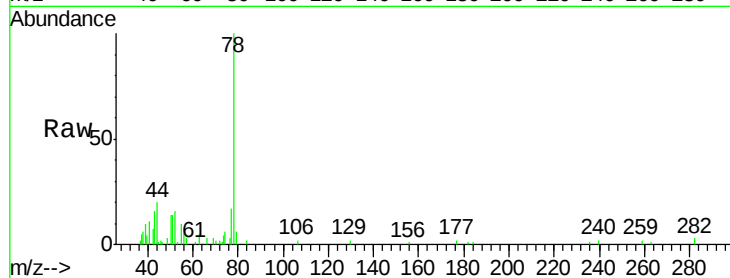
Tgt Ion: 78 Resp: 13604

Ion Ratio Lower Upper

78 100

77 17.7 18.8 28.2#

50 12.6 14.7 22.1#



#39

1,2-Dichloropropane

Concen: 7.243 ppbv

RT: 7.16 min Scan# 1361

Delta R.T. -0.45 min

Lab File: VL037818.D

Acq: 8 Oct 2021 5:35

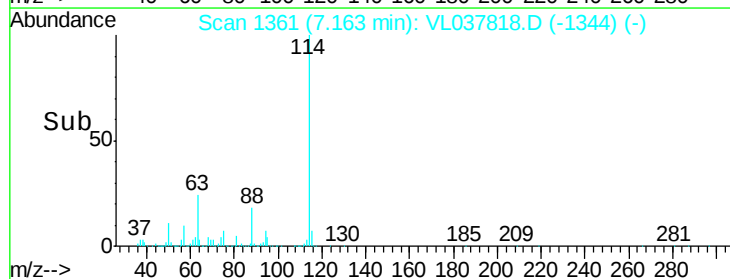
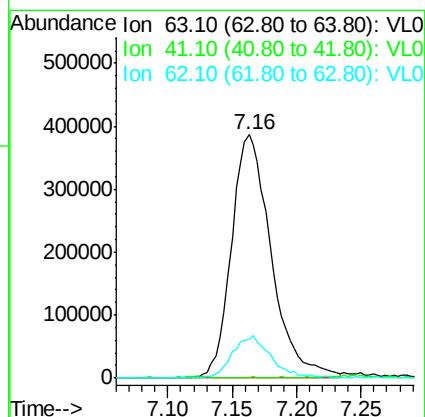
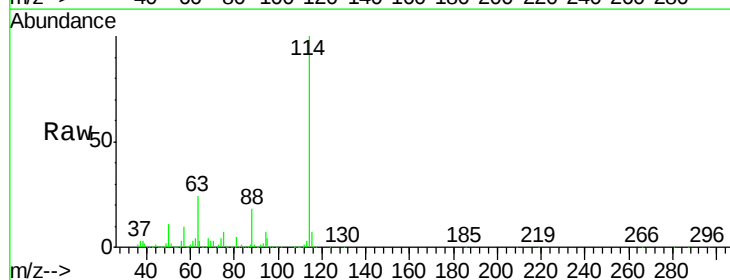
Tgt Ion: 63 Resp: 827760

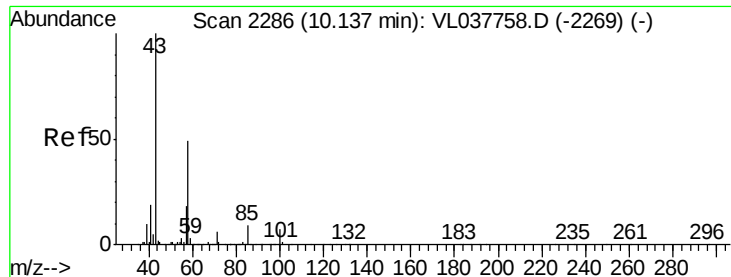
Ion Ratio Lower Upper

63 100

41 0.0 49.8 74.6#

62 16.1 54.6 82.0#

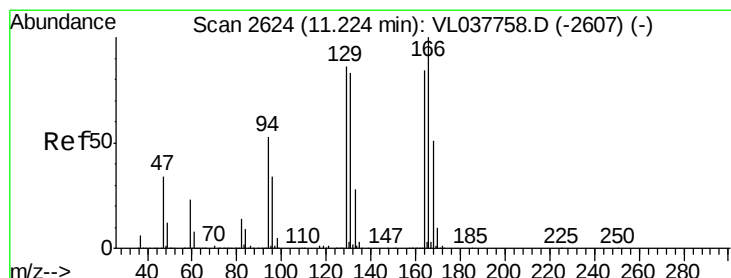
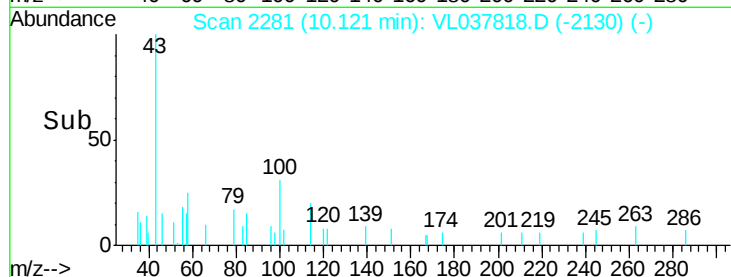
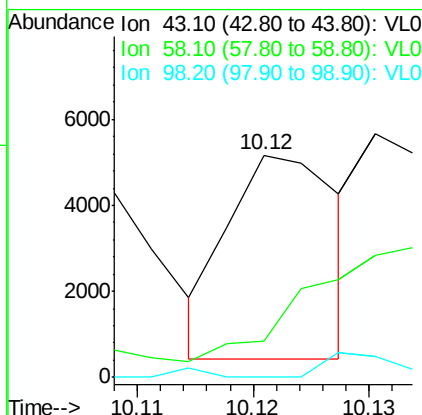
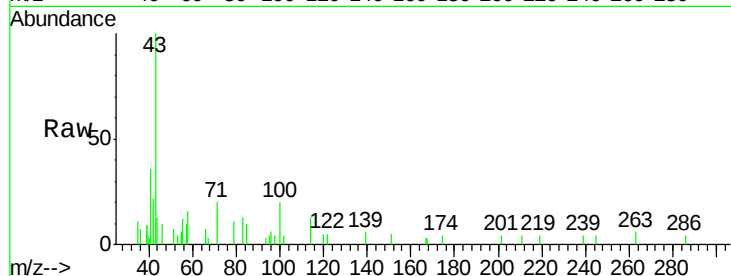




#51
2-Hexanone
Concen: 0.037 ppbv
RT: 10.12 min Scan# 2281
Delta R.T. -0.02 min
Lab File: VL037818.D
Acq: 8 Oct 2021 5:35

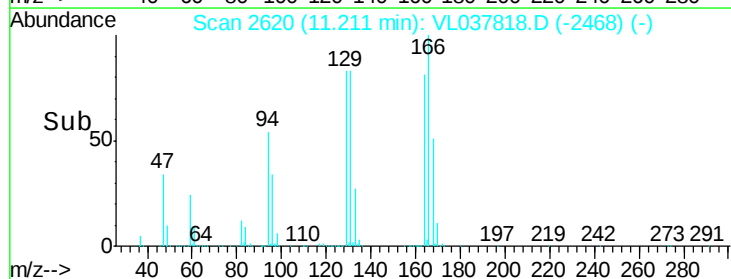
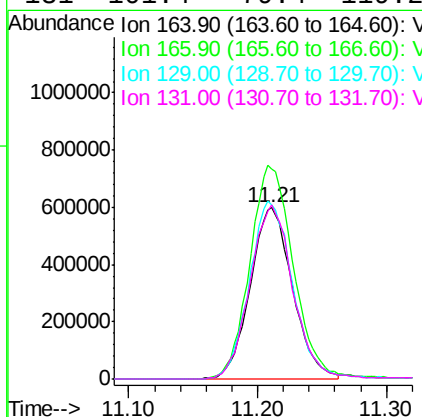
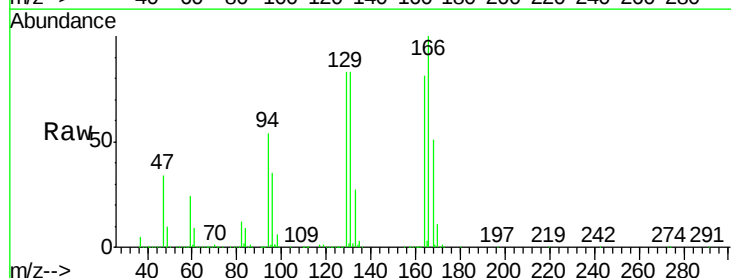
Instrument :
MSVOA_L
ClientSampleId :
C0P13

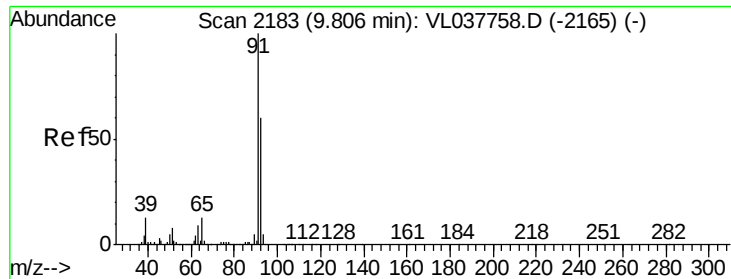
Tgt Ion: 43 Resp: 3126
Ion Ratio Lower Upper
43 100
58 0.0 39.4 59.0#
98 0.0 0.3 0.5#



#52
Tetrachloroethene
Concen: 11.570 ppbv
RT: 11.21 min Scan# 2620
Delta R.T. -0.01 min
Lab File: VL037818.D
Acq: 8 Oct 2021 5:35

Tgt Ion: 164 Resp: 1367697
Ion Ratio Lower Upper
164 100
166 122.8 95.4 143.2
129 101.9 82.2 123.4
131 101.4 79.4 119.2





#53

Toluene

Concen: 0.109 ppbv

RT: 9.79 min Scan# 2179

Delta R.T. -0.01 min

Lab File: VL037818.D

Acq: 8 Oct 2021 5:35

Instrument :

MSVOA_L

ClientSampleId :

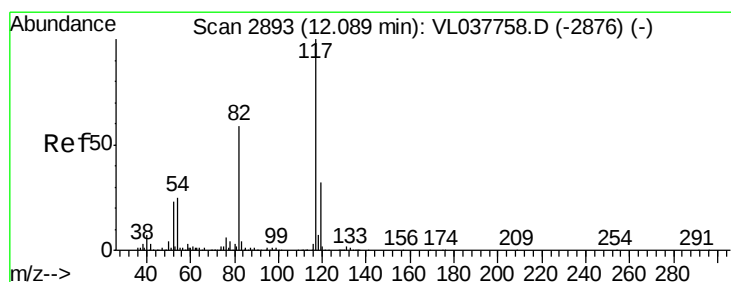
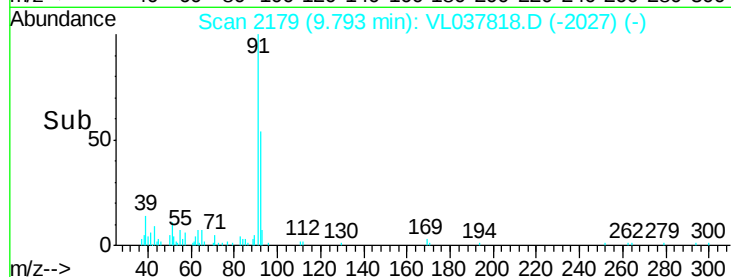
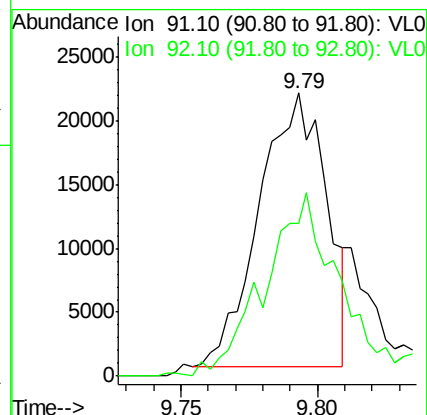
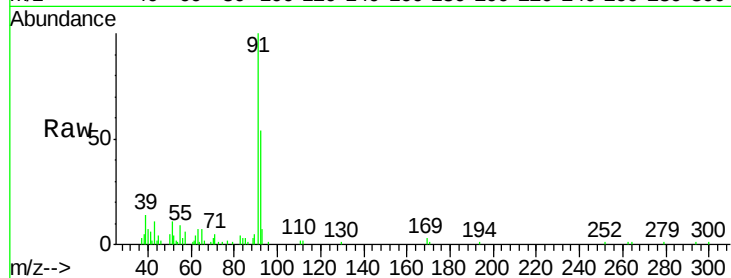
C0P13

Tgt Ion: 91 Resp: 36668

Ion Ratio Lower Upper

91 100

92 76.4 48.4 72.6#



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.07 min Scan# 2888

Delta R.T. -0.02 min

Lab File: VL037818.D

Acq: 8 Oct 2021 5:35

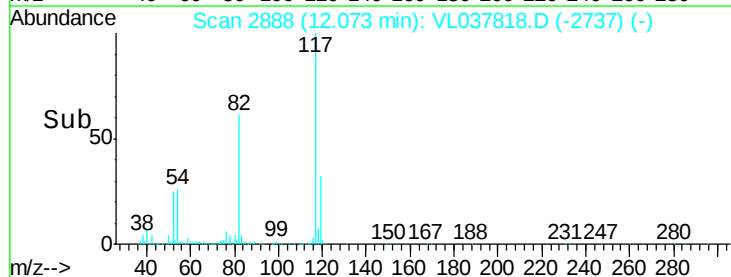
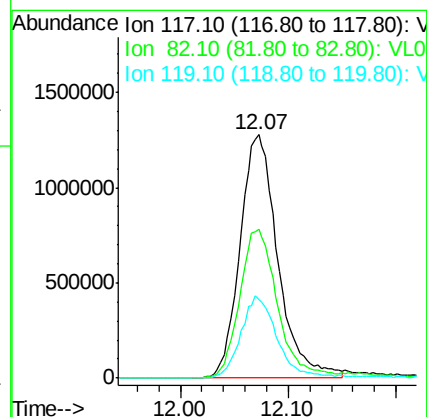
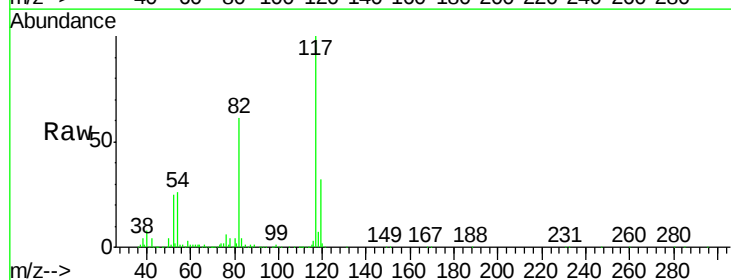
Tgt Ion: 117 Resp: 3118520

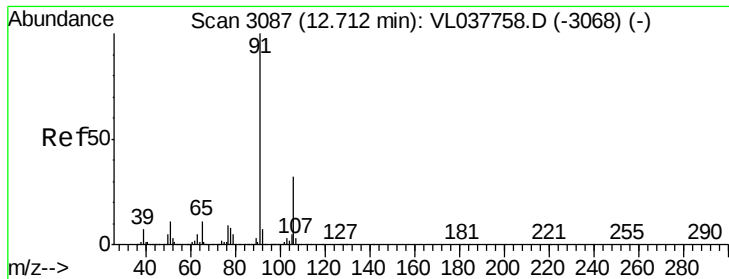
Ion Ratio Lower Upper

117 100

82 64.3 52.2 78.2

119 33.7 26.0 39.0





#58

Ethyl Benzene

Concen: 0.025 ppbv

RT: 12.71 min Scan# 3087

Delta R.T. 0.00 min

Lab File: VL037818.D

Acq: 8 Oct 2021 5:35

Instrument :

MSVOA_L

ClientSampleId :

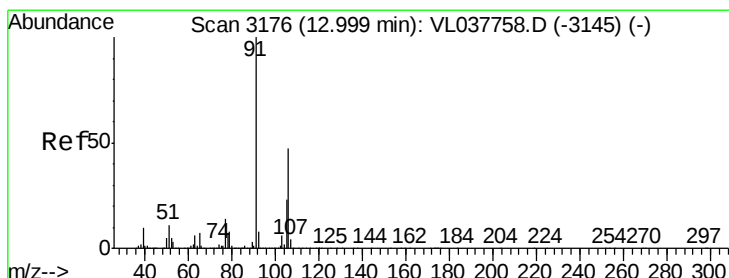
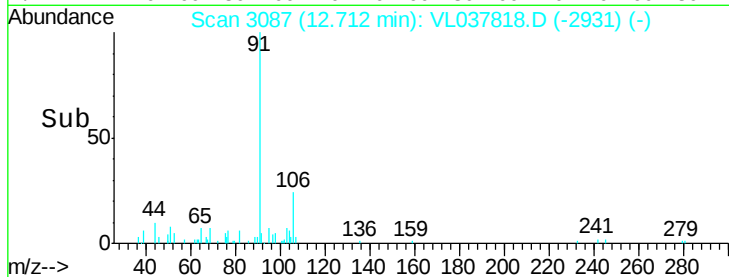
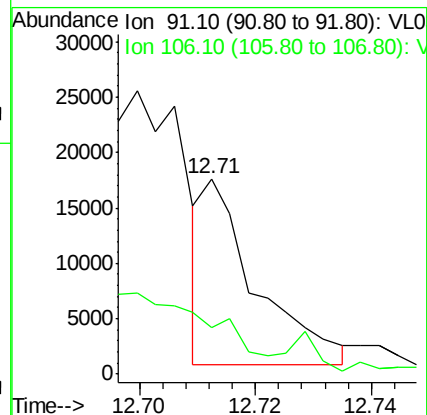
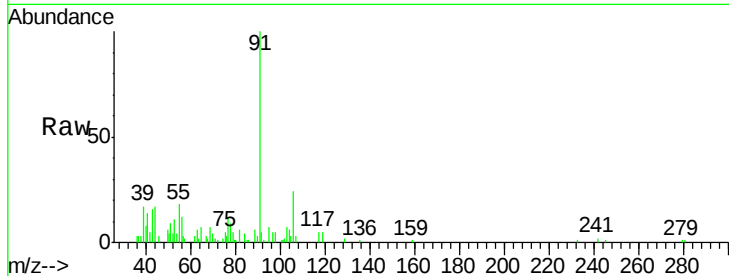
C0P13

Tgt Ion: 91 Resp: 10580

Ion Ratio Lower Upper

91 100

106 25.9 25.3 37.9



#59

m/p-Xylene

Concen: 0.043 ppbv

RT: 12.98 min Scan# 3171

Delta R.T. -0.02 min

Lab File: VL037818.D

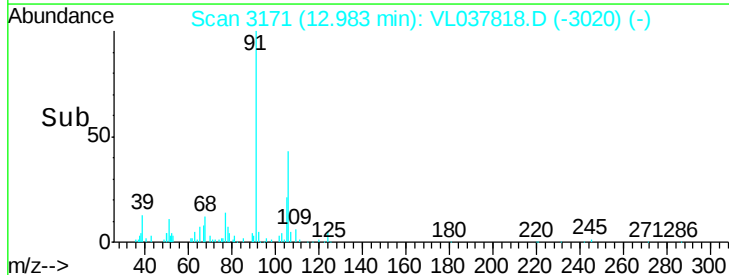
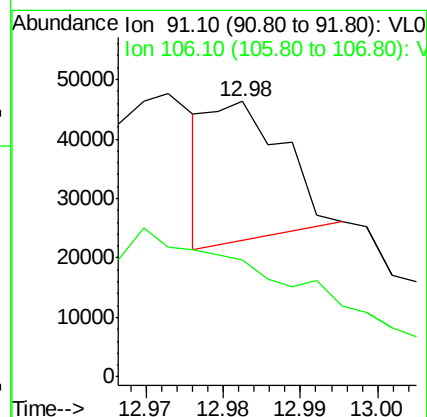
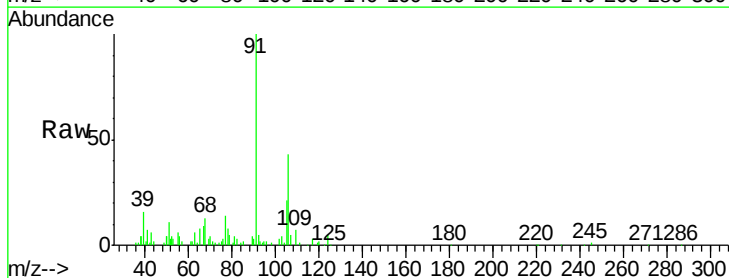
Acq: 8 Oct 2021 5:35

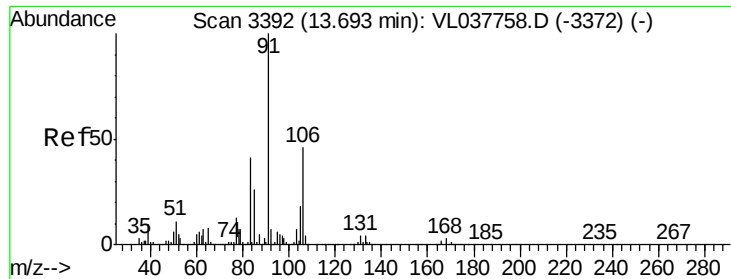
Tgt Ion: 91 Resp: 15555

Ion Ratio Lower Upper

91 100

106 0.0 36.7 55.1#

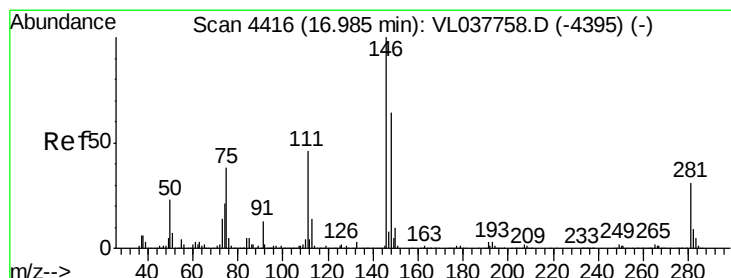
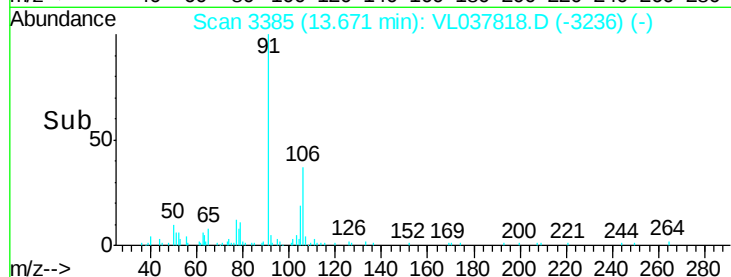
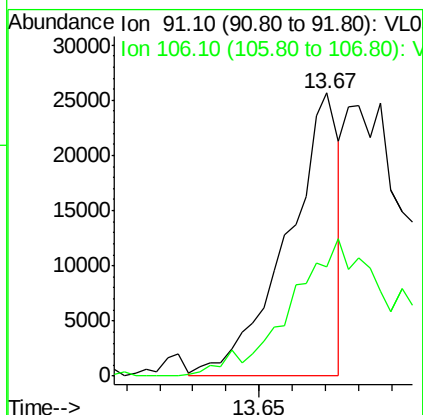
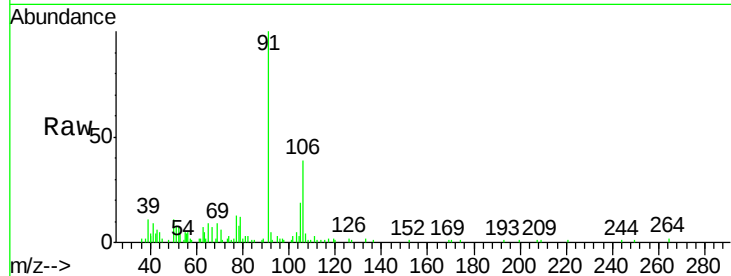




#60
o-Xylene
Concen: 0.080 ppbv
RT: 13.67 min Scan# 3385
Delta R.T. -0.02 min
Lab File: VL037818.D
Acq: 8 Oct 2021 5:35

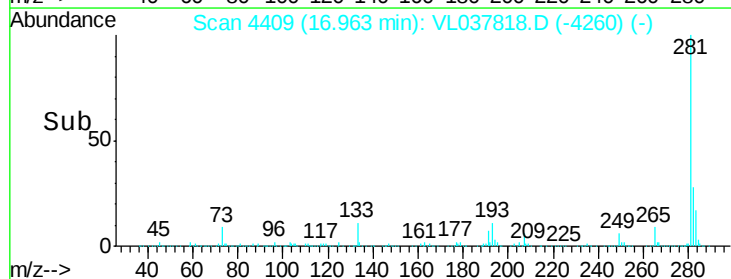
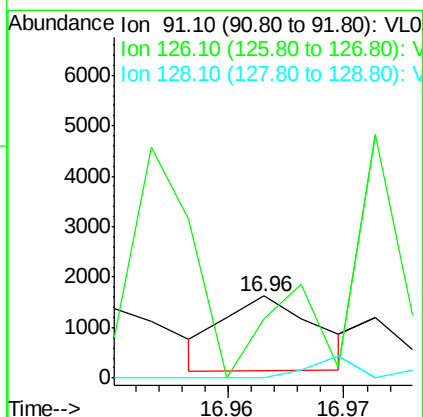
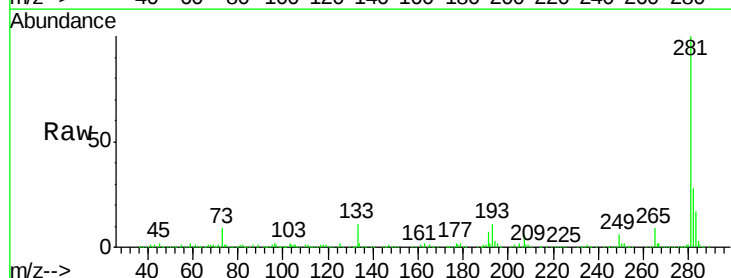
Instrument :
MSVOA_L
ClientSampled :
C0P13

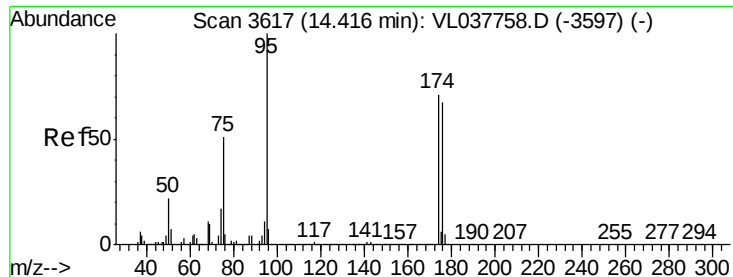
Tgt Ion: 91 Resp: 27656
Ion Ratio Lower Upper
91 100
106 110.8 23.5 70.5#



#66
Benzyl Chloride
Concen: 0.040 ppbv
RT: 16.96 min Scan# 4409
Delta R.T. -0.02 min
Lab File: VL037818.D
Acq: 8 Oct 2021 5:35

Tgt Ion: 91 Resp: 827
Ion Ratio Lower Upper
91 100
126 0.0 0.0 0.0
128 0.0 5.3 7.9#

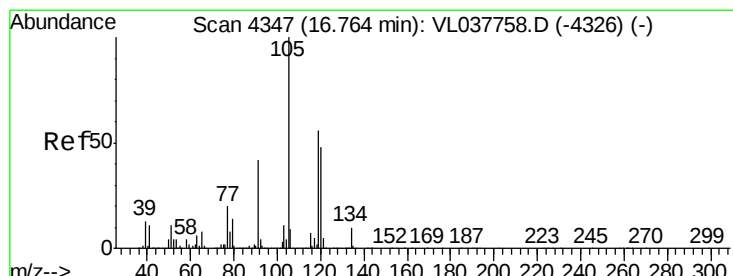
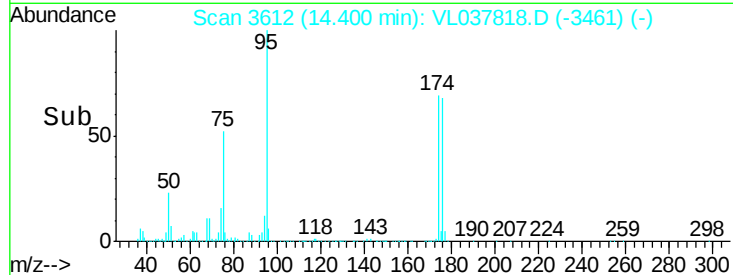
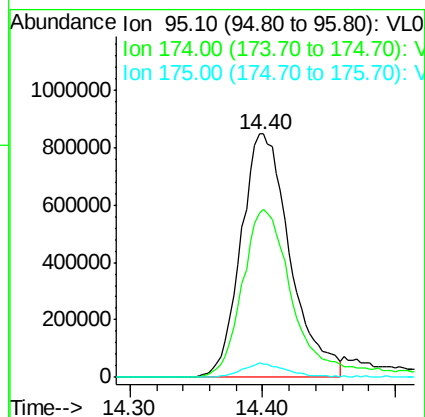
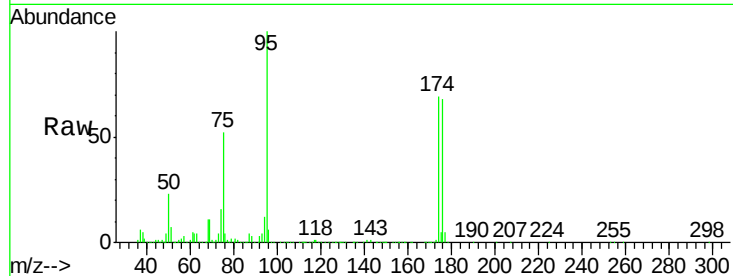




#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.005 ppbv
 RT: 14.40 min Scan# 3612
 Delta R.T. -0.02 min
 Lab File: VL037818.D
 Acq: 8 Oct 2021 5:35

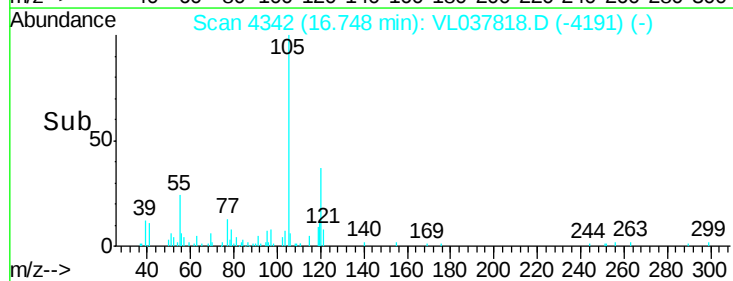
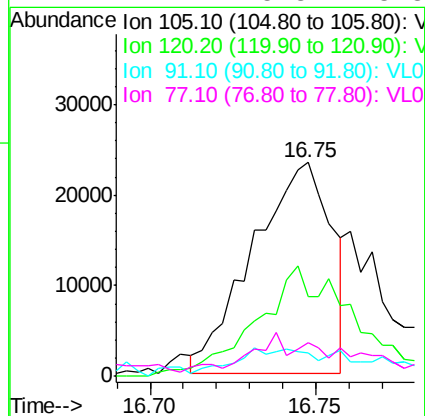
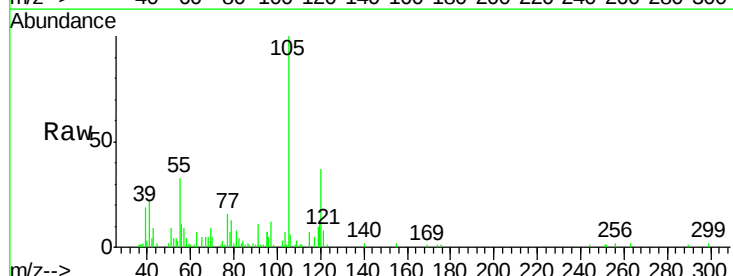
Instrument :
 MSVOA_L
 ClientSampleId :
 C0P13

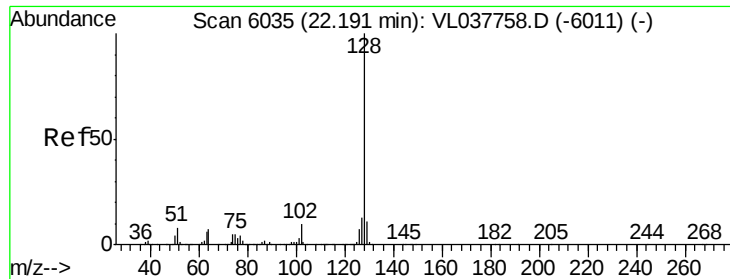
Tgt Ion: 95 Resp: 2181851
 Ion Ratio Lower Upper
 95 100
 174 75.2 57.8 86.6
 175 5.3 4.7 7.1



#74
 1,2,4-Trimethylbenzene
 Concen: 0.104 ppbv
 RT: 16.75 min Scan# 4342
 Delta R.T. -0.02 min
 Lab File: VL037818.D
 Acq: 8 Oct 2021 5:35

Tgt Ion: 105 Resp: 38682
 Ion Ratio Lower Upper
 105 100
 120 36.7 38.4 57.6#
 91 10.5 34.2 51.2#
 77 12.4 15.8 23.8#

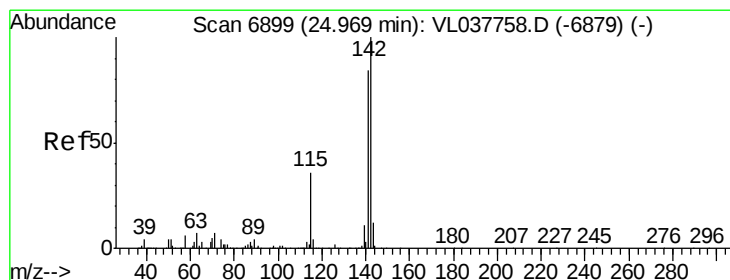
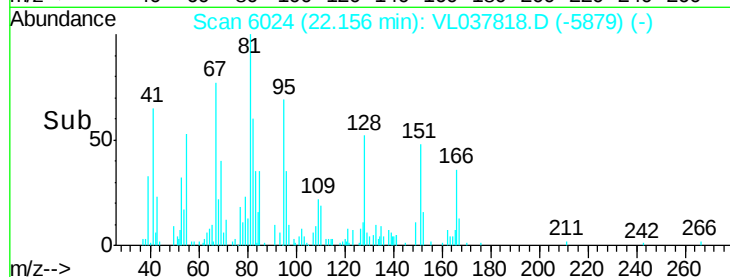
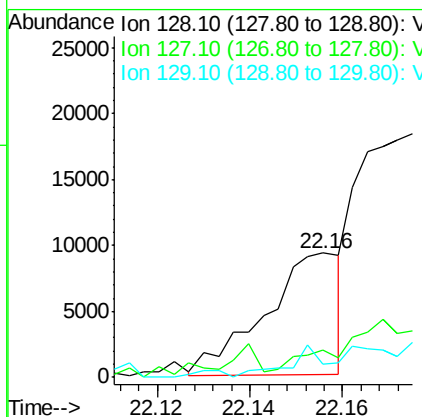
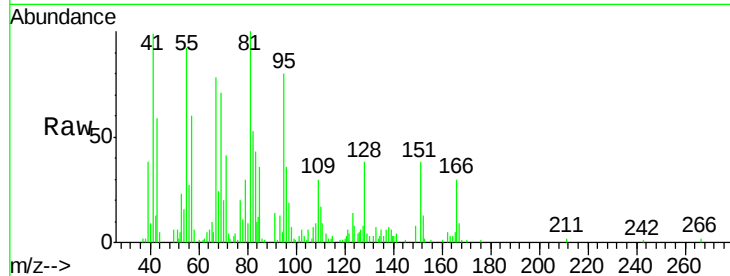




#79
Naphthalene
Concen: 0.046 ppbv
RT: 22.16 min Scan# 6024
Delta R.T. -0.04 min
Lab File: VL037818.D
Acq: 8 Oct 2021 5:35

Instrument :
MSVOA_L
ClientSampleId :
C0P13

Tgt Ion:128 Resp: 10527
Ion Ratio Lower Upper
128 100
127 10.9 10.1 15.1
129 8.7 9.1 13.7#



#80
Naphthalene, 2-methyl-
Concen: 0.160 ppbv
RT: 24.97 min Scan# 6898
Delta R.T. -0.00 min
Lab File: VL037818.D
Acq: 8 Oct 2021 5:35

Tgt Ion:142 Resp: 9834
Ion Ratio Lower Upper
142 100
141 82.9 68.6 102.8
115 158.8 29.0 43.6#

