

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL100521\
 Data File : VL037774.D
 Acq On : 5 Oct 2021 15:20
 Operator : SY/AP
 Sample : M4012-04 4X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 C0P21

Quant Time: Oct 06 04:46:33 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	1398611	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.16	114	3966061	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.06	117	3450105	10.00	ppbv	-0.03

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.39	95	2472736	10.25	ppbv	-0.03
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.50%

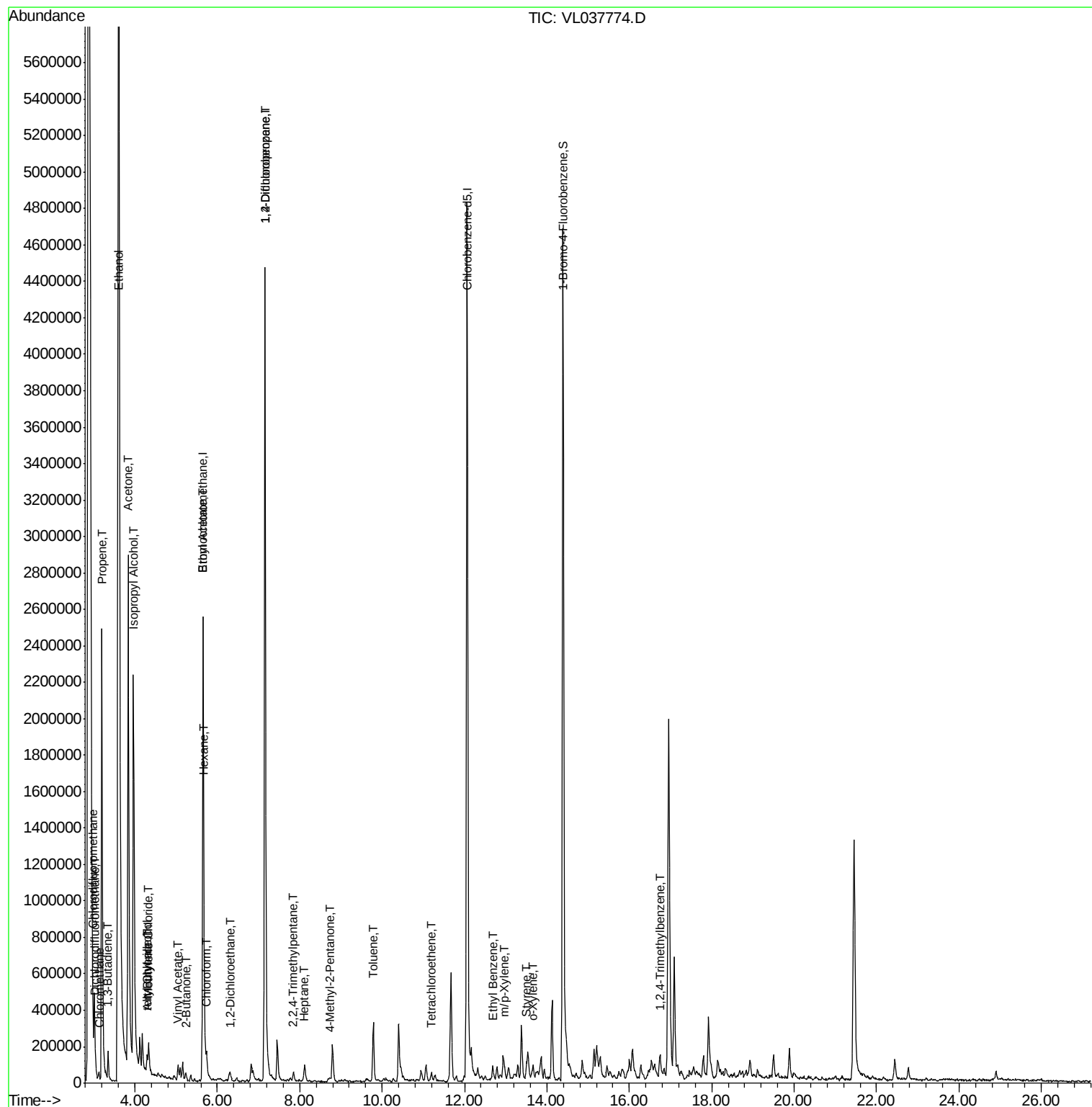
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.04	85	31091	0.139	ppbv	100
3) Chlorodifluoromethane	2.98	51	23165	0.086	ppbv #	87
4) Chloromethane	3.13	50	19319	0.196	ppbv	90
9) Propene	3.20	41	834816	8.443	ppbv	92
10) Heptane	8.10	43	8738	0.039	ppbv #	27
13) Ethanol	3.60	45	14172071	1752.574	ppbv	85
15) Acetone	3.84	43	3594844	28.632	ppbv	99
16) 1,3-Butadiene	3.35	39	15736	0.172	ppbv #	18
17) tert-Butyl alcohol	4.29	59	11566	0.089	ppbv #	1
19) Isopropyl Alcohol	3.96	45	3129805	40.069	ppbv #	99
20) Methylene Chloride	4.33	84	45597	0.719	ppbv	92
21) Allyl Chloride	4.29	41	7065	0.064	ppbv #	57
23) Vinyl Acetate	5.06	43	12767	0.068	ppbv #	46
25) Ethyl Acetate	5.66	43	114348	0.325	ppbv #	88
26) Hexane	5.68	57	20077	0.116	ppbv #	1
29) Chloroform	5.74	83	34929	0.141	ppbv	86
34) 2-Butanone	5.23	43	52459	0.328	ppbv	92
37) 1,2-Dichloroethane	6.29	62	5770	0.036	ppbv #	78
39) 1,2-Dichloropropane	7.16	63	916917	7.196	ppbv #	28
44) 2,2,4-Trimethylpentane	7.85	57	20648	0.036	ppbv #	6
50) 4-Methyl-2-Pentanone	8.73	43	5018	0.024	ppbv #	1
52) Tetrachloroethene	11.20	164	3698	0.028	ppbv #	52
53) Toluene	9.78	91	259525	0.691	ppbv	98
58) Ethyl Benzene	12.68	91	31473	0.068	ppbv	100
59) m/p-Xylene	12.97	91	29973	0.075	ppbv #	30
60) o-Xylene	13.66	91	26302	0.069	ppbv #	30
61) Styrene	13.50	104	15176	0.082	ppbv #	37
74) 1,2,4-Trimethylbenzene	16.73	105	21579	0.052	ppbv #	47

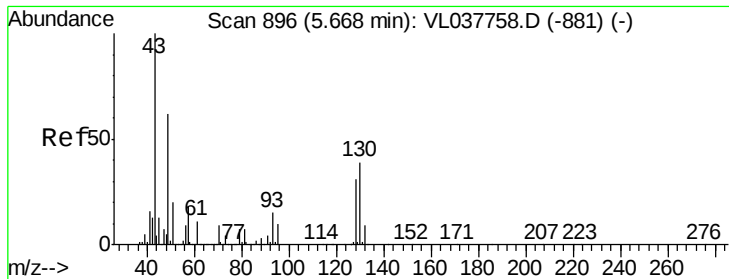
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Mon Oct 04 17:43:54 2021
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 891

Delta R.T. -0.02 min

Lab File: VL037774.D

Acq: 5 Oct 2021 15:20

Instrument :

MSVOA_L

ClientSampleId :

C0P21

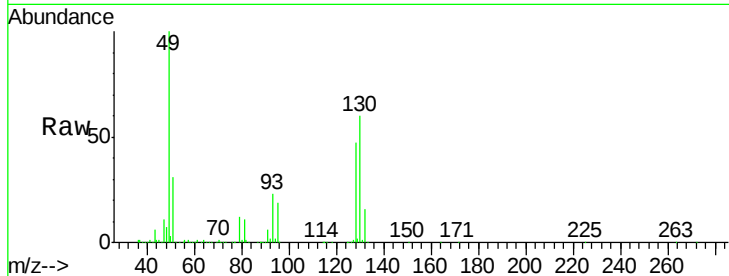
Tgt Ion: 49 Resp: 1398611

Ion Ratio Lower Upper

49 100

128 52.1 27.1 81.3

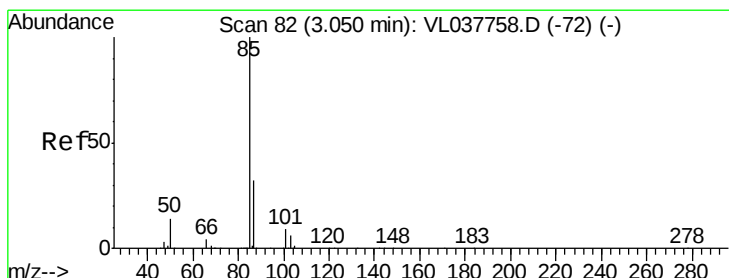
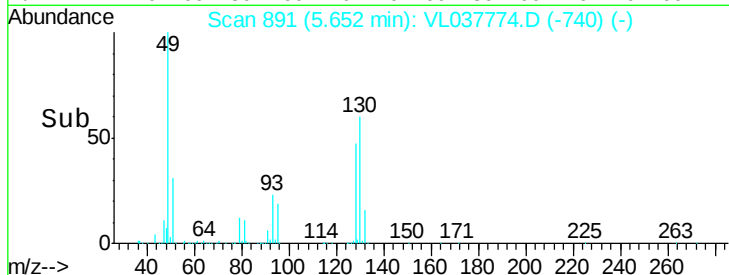
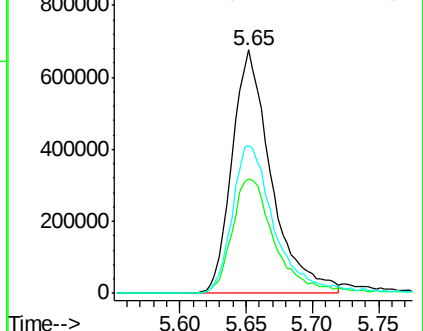
130 66.8 33.2 99.6



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



#2

Dichlorodifluoromethane

Concen: 0.139 ppbv

RT: 3.04 min Scan# 79

Delta R.T. -0.01 min

Lab File: VL037774.D

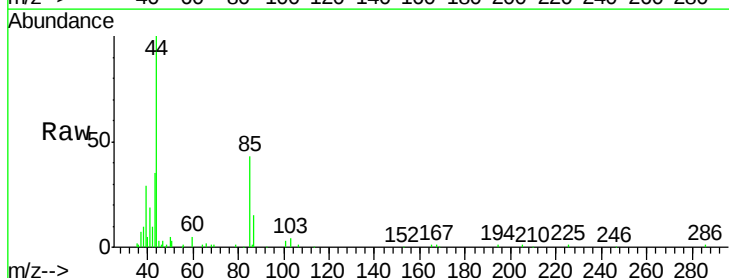
Acq: 5 Oct 2021 15:20

Tgt Ion: 85 Resp: 31091

Ion Ratio Lower Upper

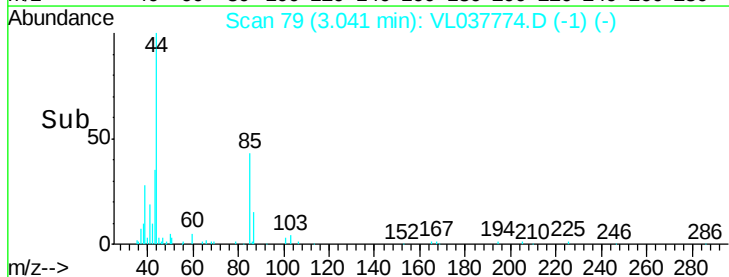
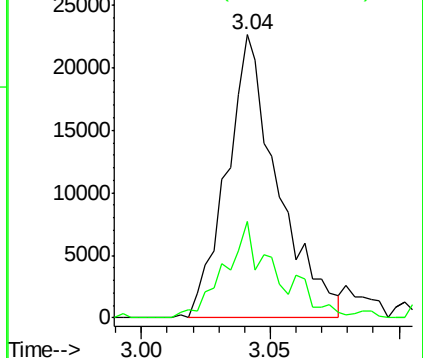
85 100

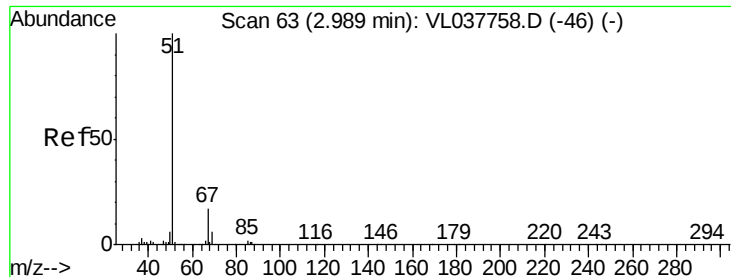
87 32.2 25.7 38.5



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

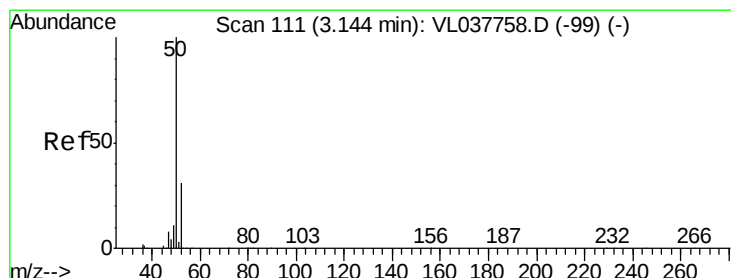
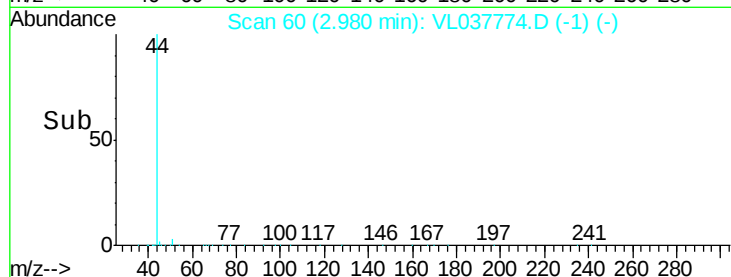
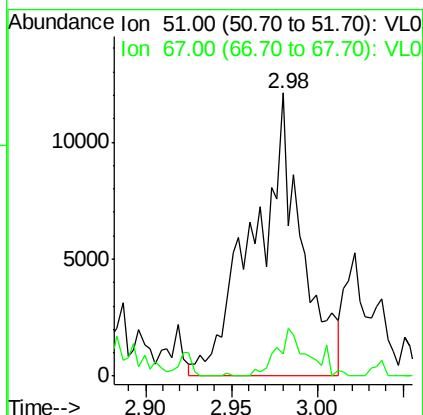
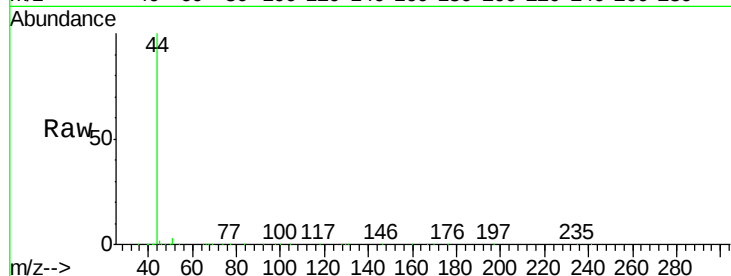




#3
 Chlorodifluoromethane
 Concen: 0.086 ppbv
 RT: 2.98 min Scan# 60
 Delta R.T. -0.01 min
 Lab File: VL037774.D
 Acq: 5 Oct 2021 15:20

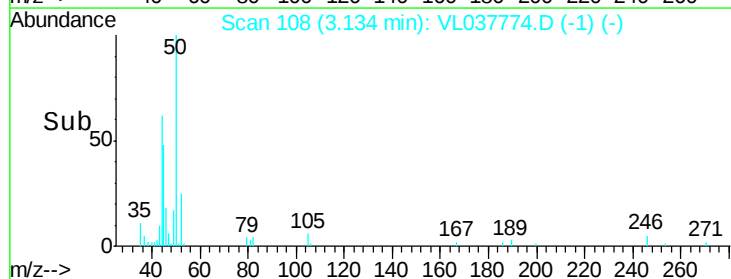
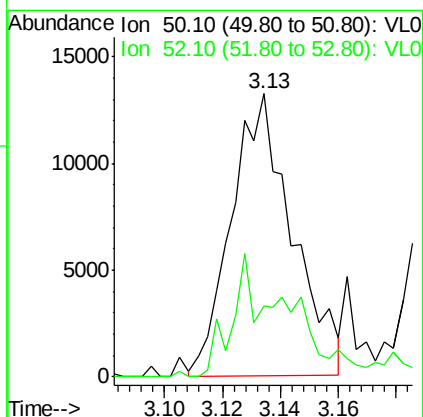
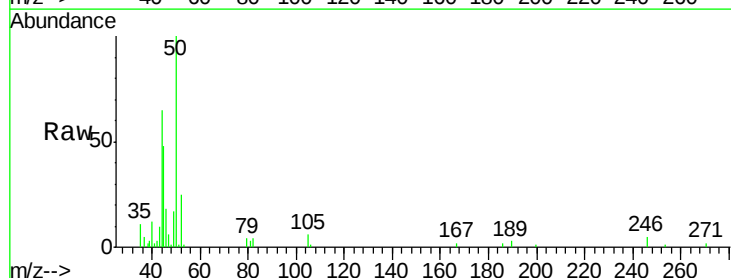
Instrument :
 MSVOA_L
 ClientSampleId :
 C0P21

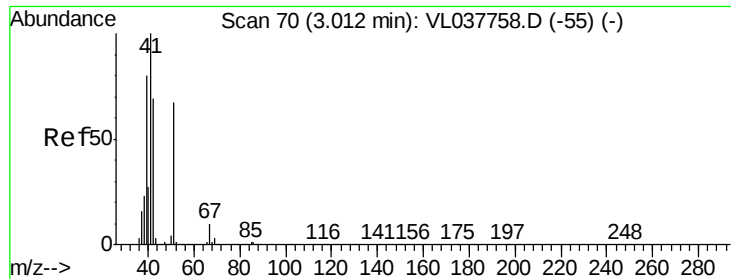
Tgt Ion: 51 Resp: 23165
 Ion Ratio Lower Upper
 51 100
 67 11.2 13.5 20.3#



#4
 Chloromethane
 Concen: 0.196 ppbv
 RT: 3.13 min Scan# 108
 Delta R.T. -0.01 min
 Lab File: VL037774.D
 Acq: 5 Oct 2021 15:20

Tgt Ion: 50 Resp: 19319
 Ion Ratio Lower Upper
 50 100
 52 25.3 24.4 36.6





#9

Propene

Concen: 8.443 ppbv

RT: 3.20 min Scan# 128

Delta R.T. 0.19 min

Lab File: VL037774.D

Acq: 5 Oct 2021 15:20

Instrument :

MSVOA_L

ClientSampled :

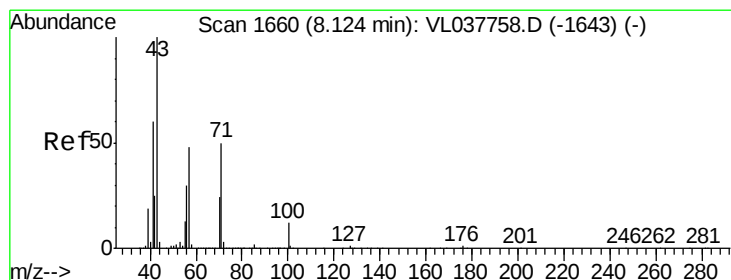
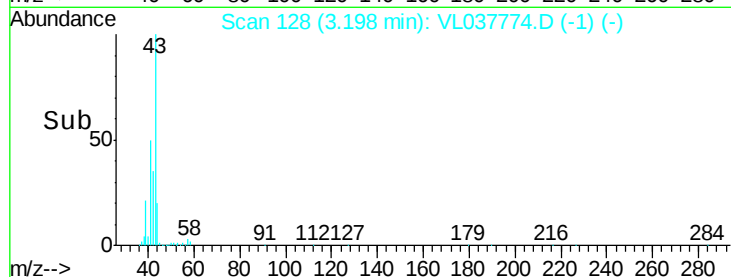
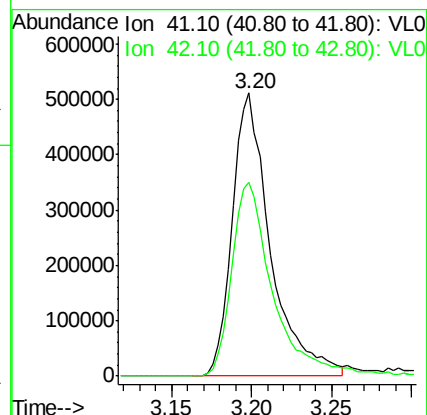
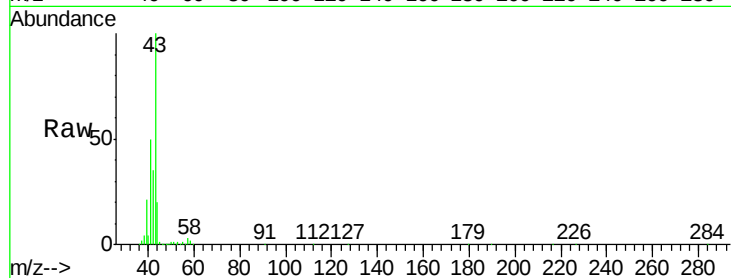
C0P21

Tgt Ion: 41 Resp: 834816

Ion Ratio Lower Upper

41 100

42 74.3 54.2 81.2



#10

Heptane

Concen: 0.039 ppbv

RT: 8.10 min Scan# 1653

Delta R.T. -0.02 min

Lab File: VL037774.D

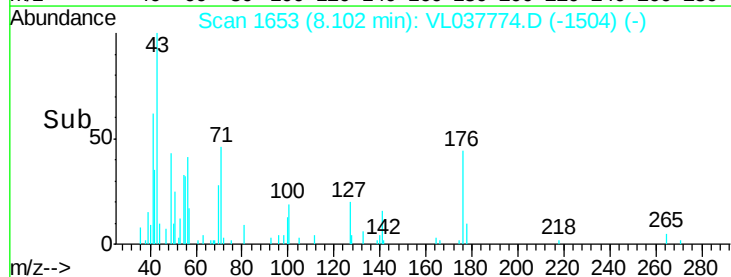
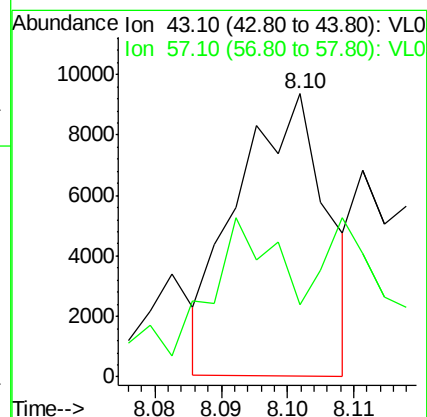
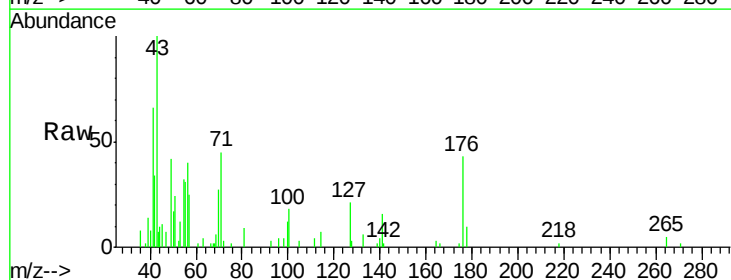
Acq: 5 Oct 2021 15:20

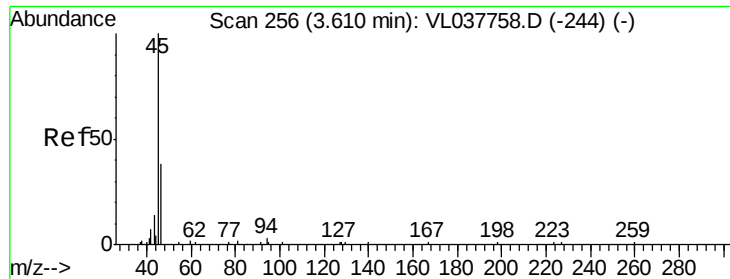
Tgt Ion: 43 Resp: 8738

Ion Ratio Lower Upper

43 100

57 0.0 40.0 60.0#

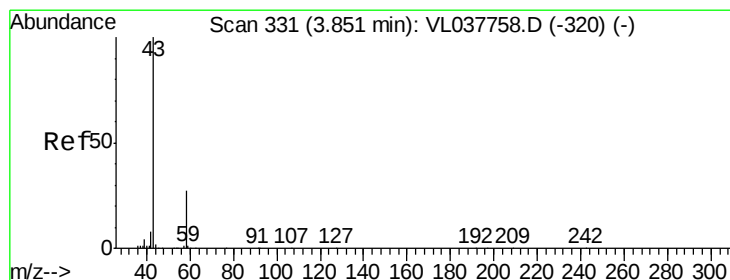
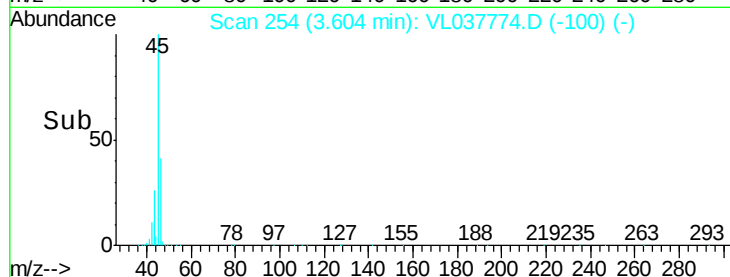
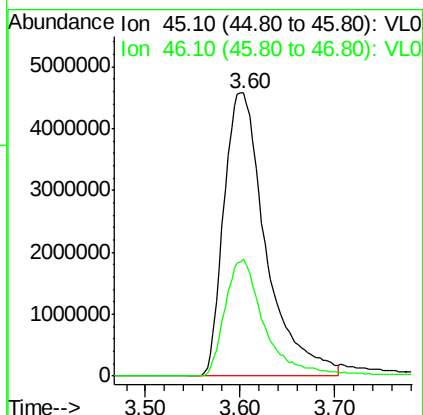
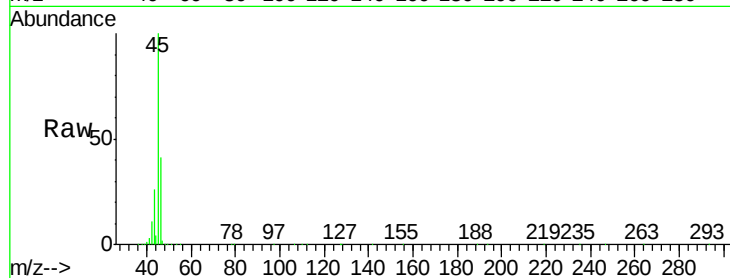




#13
Ethanol
Concen: 1752.574 ppbv
RT: 3.60 min Scan# 254
Delta R.T. -0.01 min
Lab File: VL037774.D
Acq: 5 Oct 2021 15:20

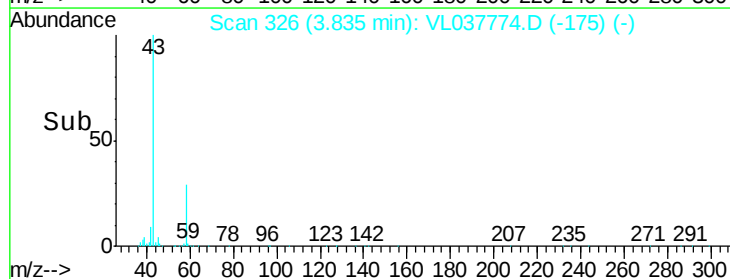
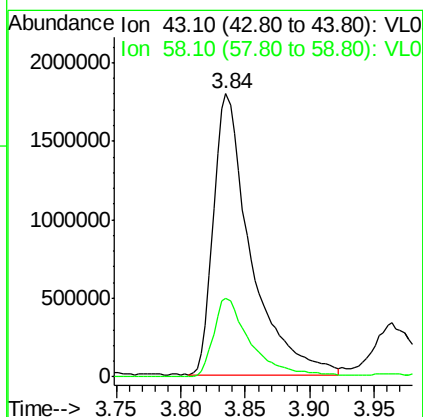
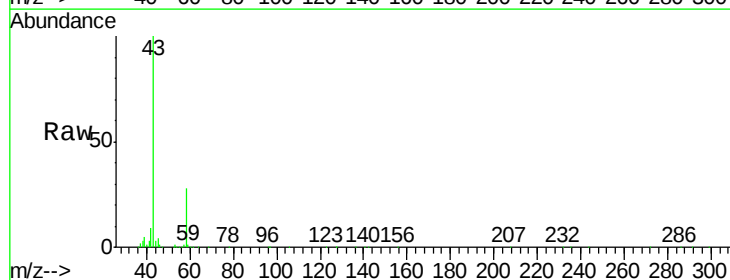
Instrument :
MSVOA_L
ClientSampleId :
C0P21

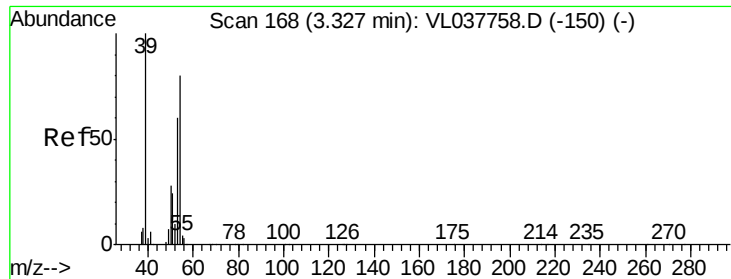
Tgt Ion: 45 Resp:14172071
Ion Ratio Lower Upper
45 100
46 40.0 20.2 81.0



#15
Acetone
Concen: 28.632 ppbv
RT: 3.84 min Scan# 326
Delta R.T. -0.02 min
Lab File: VL037774.D
Acq: 5 Oct 2021 15:20

Tgt Ion: 43 Resp: 3594844
Ion Ratio Lower Upper
43 100
58 28.4 23.0 34.6

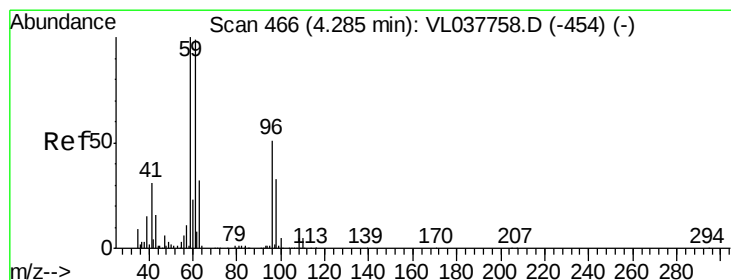
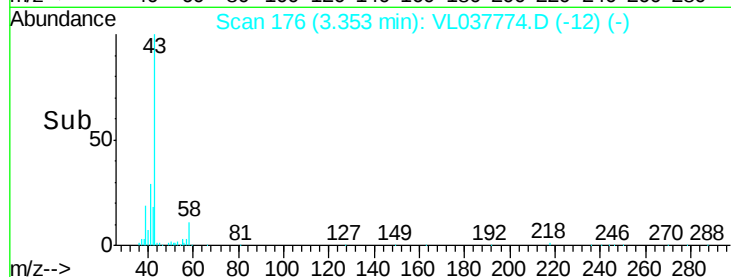
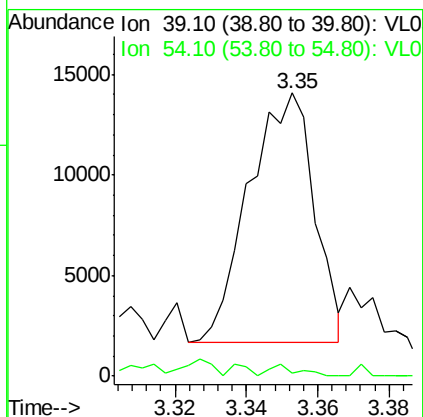
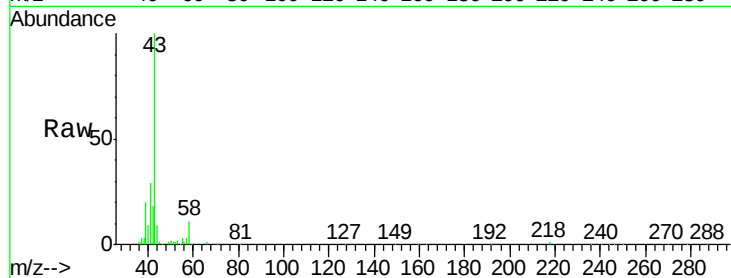




#16
1,3-Butadiene
Concen: 0.172 ppbv
RT: 3.35 min Scan# 176
Delta R.T. 0.03 min
Lab File: VL037774.D
Acq: 5 Oct 2021 15:20

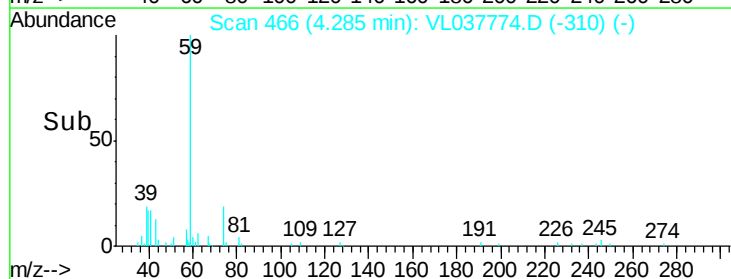
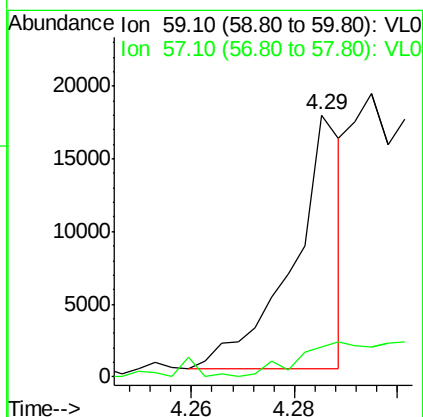
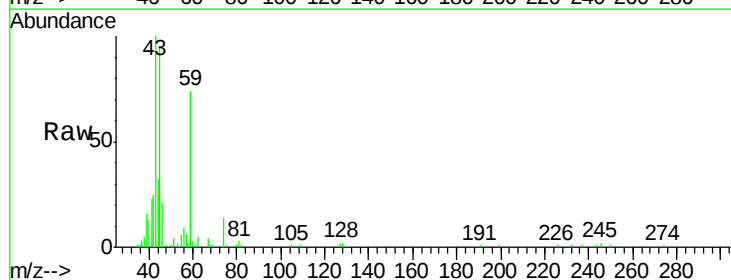
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MSVOA_L
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C0P21

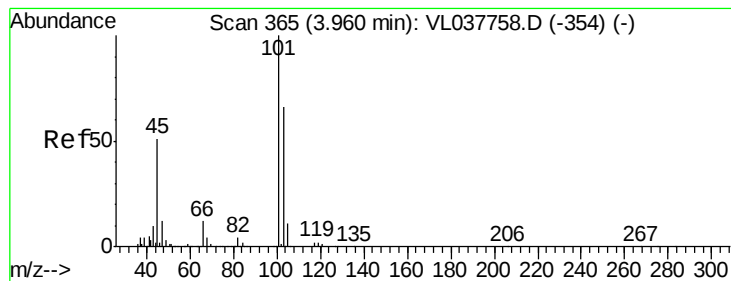
Tgt Ion: 39 Resp: 15736
Ion Ratio Lower Upper
39 100
54 6.5 61.7 92.5#



#17
tert-Butyl alcohol
Concen: 0.089 ppbv
RT: 4.29 min Scan# 466
Delta R.T. 0.00 min
Lab File: VL037774.D
Acq: 5 Oct 2021 15:20

Tgt Ion: 59 Resp: 11566
Ion Ratio Lower Upper
59 100
57 51.1 8.6 13.0#





#19

Isopropyl Alcohol

Concen: 40.069 ppbv

RT: 3.96 min Scan# 366

Delta R.T. 0.00 min

Lab File: VL037774.D

Acq: 5 Oct 2021 15:20

Instrument :

MSVOA_L

ClientSampled :

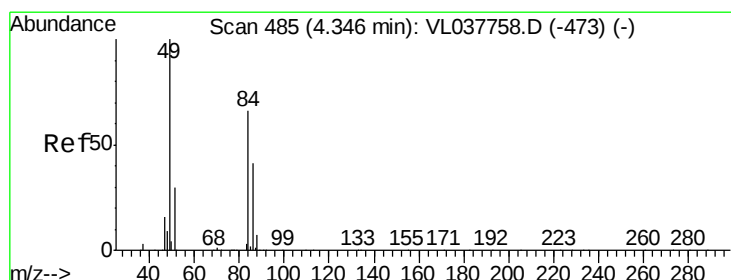
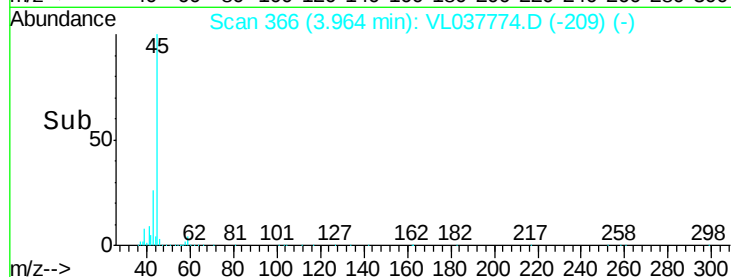
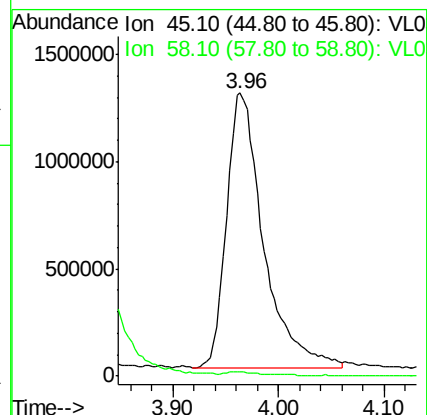
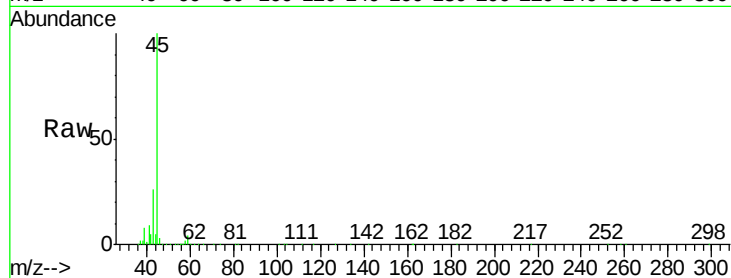
C0P21

Tgt Ion: 45 Resp: 3129805

Ion Ratio Lower Upper

45 100

58 1.7 1.1 1.7#



#20

Methylene Chloride

Concen: 0.719 ppbv

RT: 4.33 min Scan# 481

Delta R.T. -0.01 min

Lab File: VL037774.D

Acq: 5 Oct 2021 15:20

Tgt Ion: 84 Resp: 45597

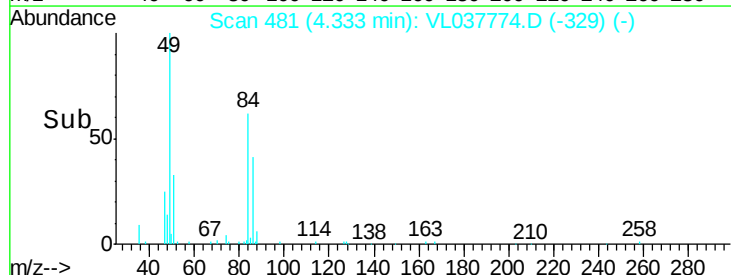
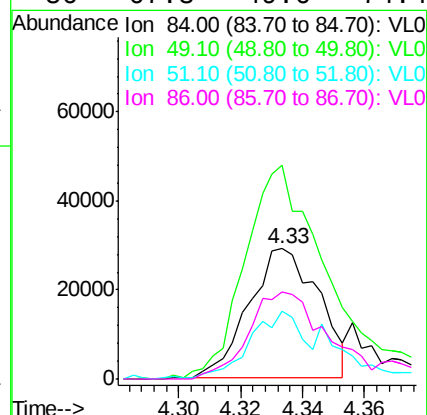
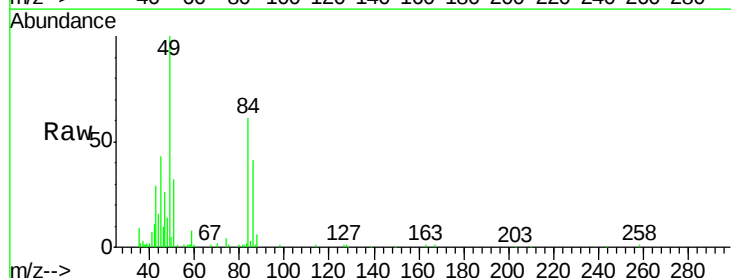
Ion Ratio Lower Upper

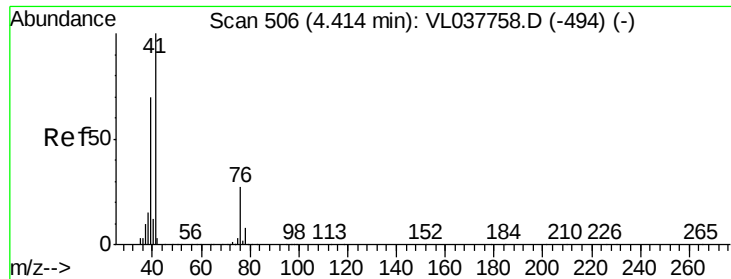
84 100

49 160.1 120.7 181.1

51 52.4 36.2 54.4

86 67.3 49.6 74.4





#21

Allyl Chloride

Concen: 0.064 ppbv

RT: 4.29 min Scan# 467

Delta R.T. -0.13 min

Lab File: VL037774.D

Acq: 5 Oct 2021 15:20

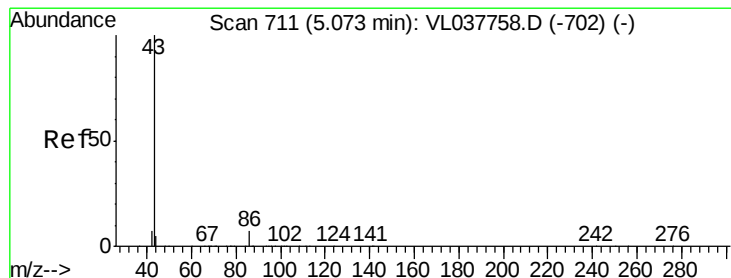
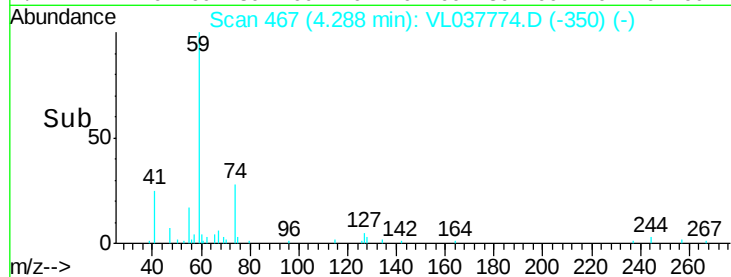
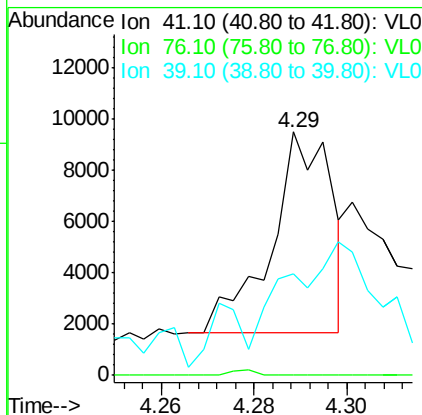
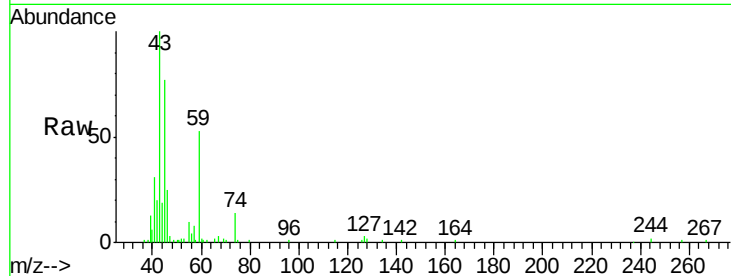
Instrument :

MSVOA_L

ClientSampleId :

C0P21

Tgt Ion:	41	Resp:	7065
Ion	Ratio	Lower	Upper
41	100		
76	0.0	22.4	33.6#
39	105.7	58.0	87.0#



#23

Vinyl Acetate

Concen: 0.068 ppbv

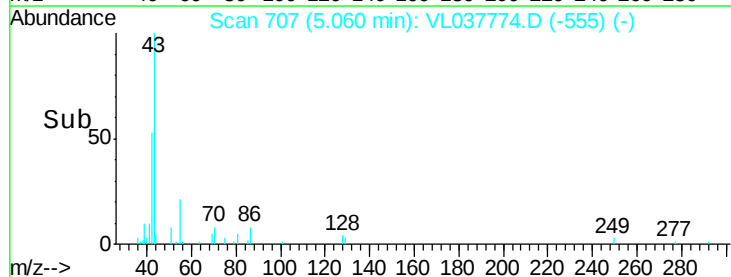
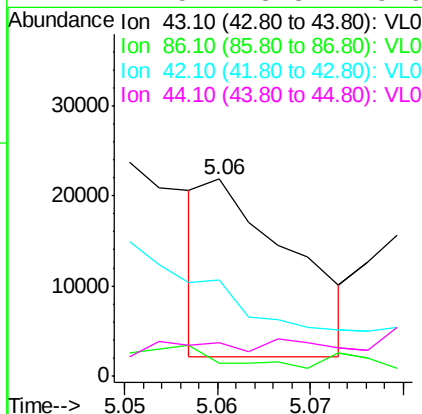
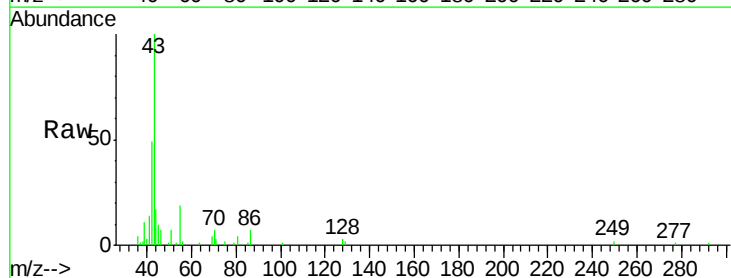
RT: 5.06 min Scan# 707

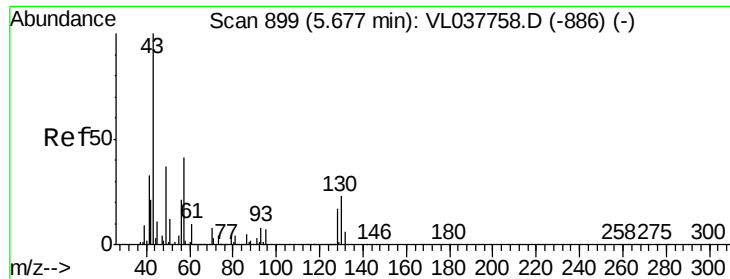
Delta R.T. -0.01 min

Lab File: VL037774.D

Acq: 5 Oct 2021 15:20

Tgt Ion:	43	Resp:	12767
Ion	Ratio	Lower	Upper
43	100		
86	0.0	5.0	7.4#
42	47.3	7.4	11.0#
44	4.5	3.8	5.6

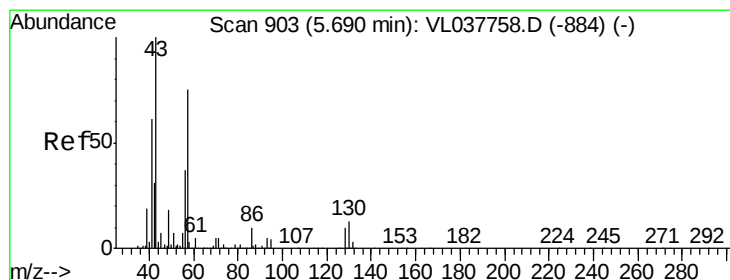
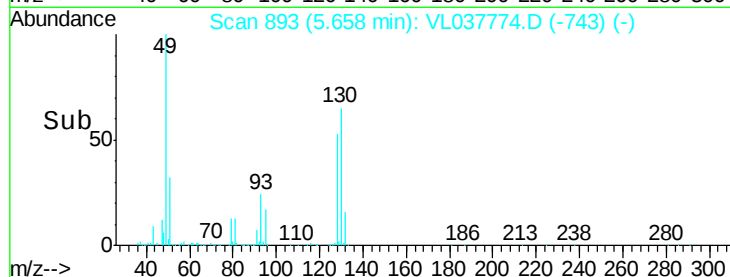
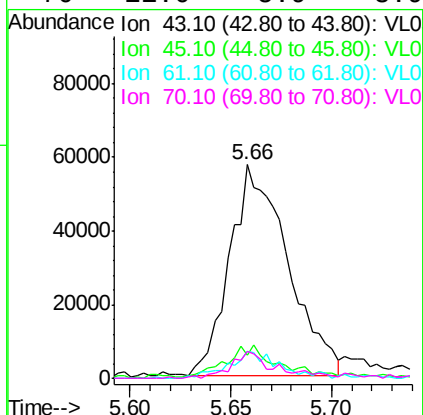
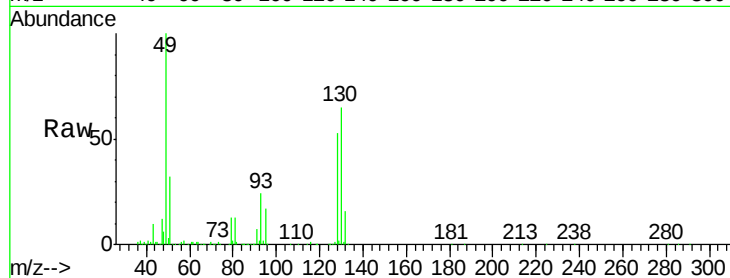




#25
Ethyl Acetate
Concen: 0.325 ppbv
RT: 5.66 min Scan# 893
Delta R.T. -0.02 min
Lab File: VL037774.D
Acq: 5 Oct 2021 15:20

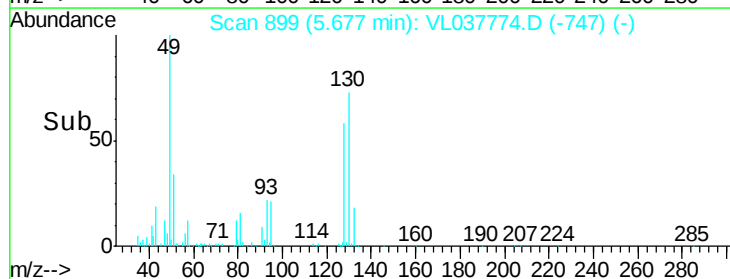
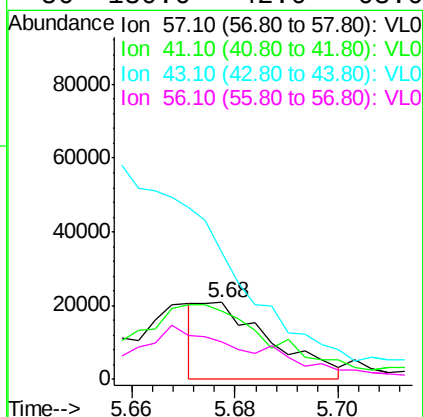
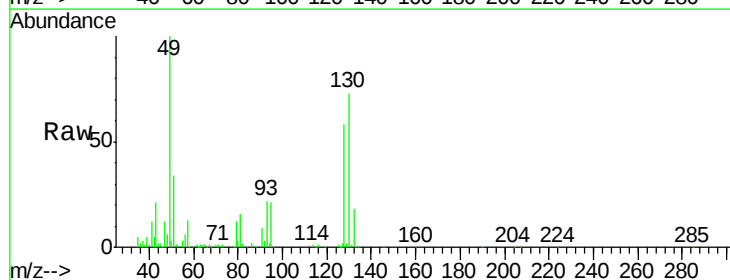
Instrument :
MSVOA_L
ClientSampleId :
C0P21

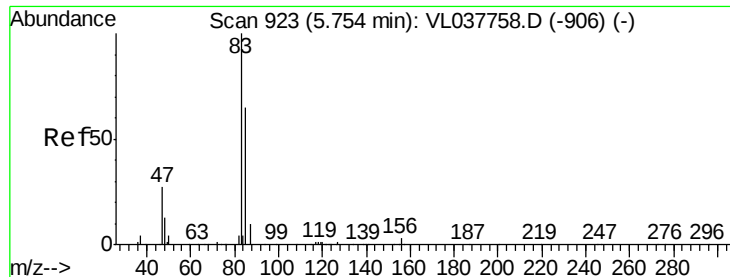
Tgt Ion:	43	Resp:	114348
Ion	Ratio	Lower	Upper
43	100		
45	16.3	8.1	12.1#
61	12.1	7.5	11.3#
70	11.0	5.9	8.9#



#26
Hexane
Concen: 0.116 ppbv
RT: 5.68 min Scan# 899
Delta R.T. -0.01 min
Lab File: VL037774.D
Acq: 5 Oct 2021 15:20

Tgt Ion:	57	Resp:	20077
Ion	Ratio	Lower	Upper
57	100		
41	219.3	69.6	104.4#
43	0.0	171.4	257.0#
56	130.6	42.0	63.0#





#29

Chloroform

Concen: 0.141 ppbv

RT: 5.74 min Scan# 918

Delta R.T. -0.02 min

Lab File: VL037774.D

Acq: 5 Oct 2021 15:20

Instrument :

MSVOA_L

ClientSampleId :

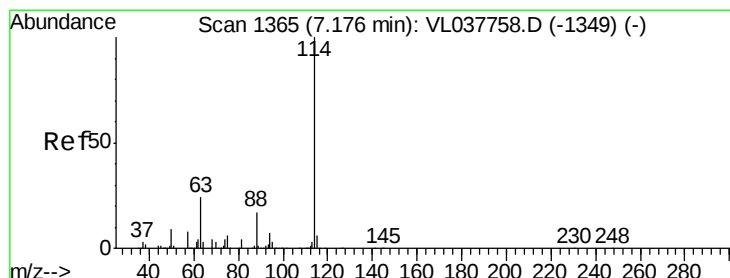
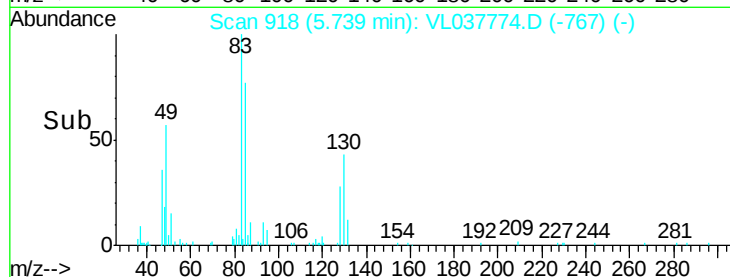
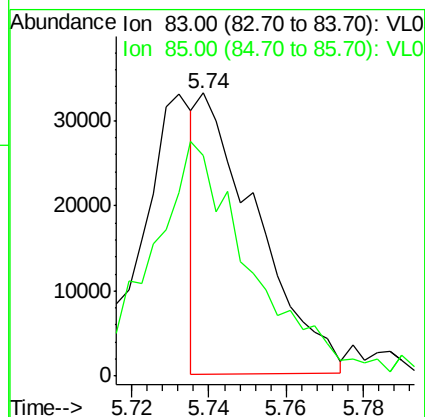
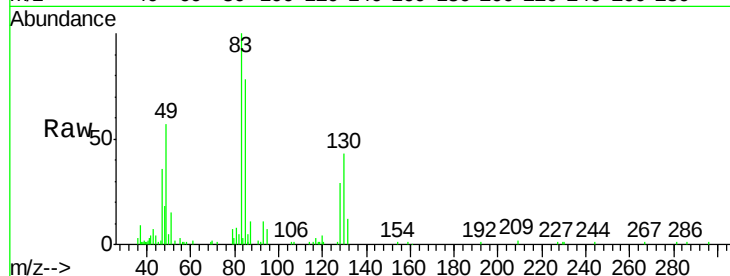
C0P21

Tgt Ion: 83 Resp: 34929

Ion Ratio Lower Upper

83 100

85 76.2 51.8 77.8



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.16 min Scan# 1360

Delta R.T. -0.02 min

Lab File: VL037774.D

Acq: 5 Oct 2021 15:20

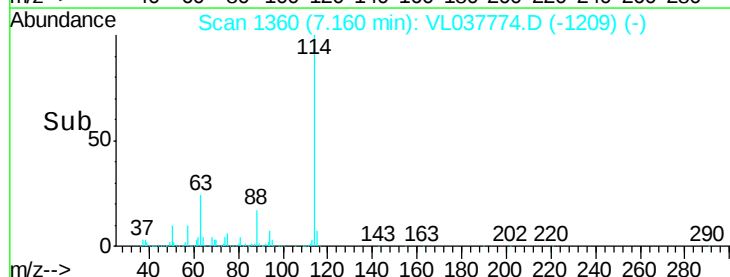
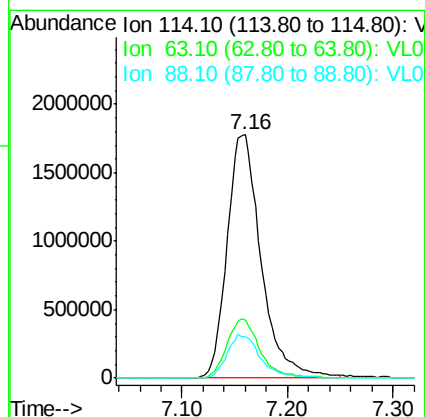
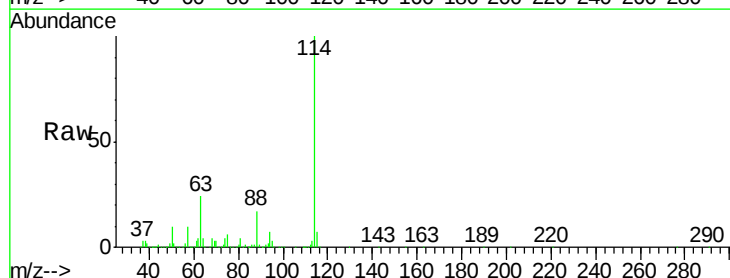
Tgt Ion: 114 Resp: 3966061

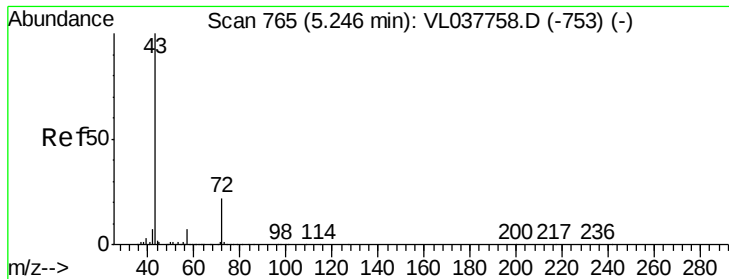
Ion Ratio Lower Upper

114 100

63 24.1 19.4 29.2

88 17.7 14.4 21.6





#34

2-Butanone

Concen: 0.328 ppbv

RT: 5.23 min Scan# 761

Delta R.T. -0.01 min

Lab File: VL037774.D

Acq: 5 Oct 2021 15:20

Instrument :

MSVOA_L

ClientSampleId :

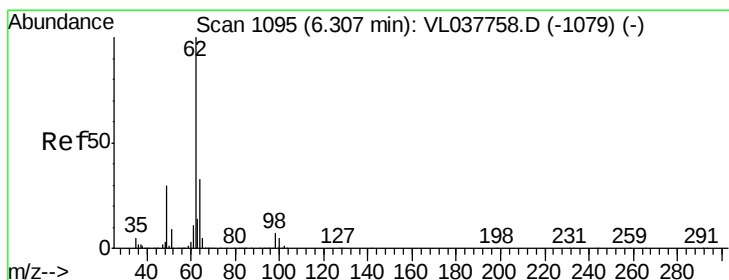
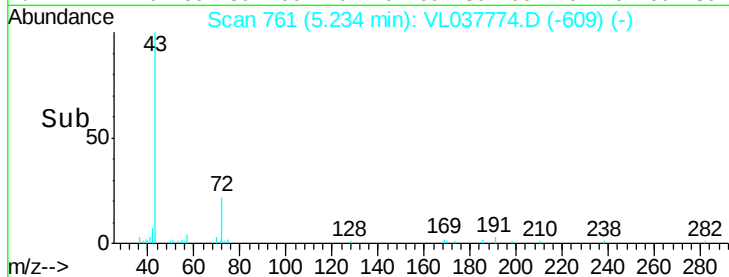
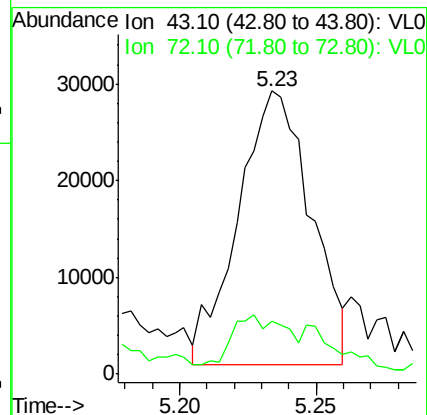
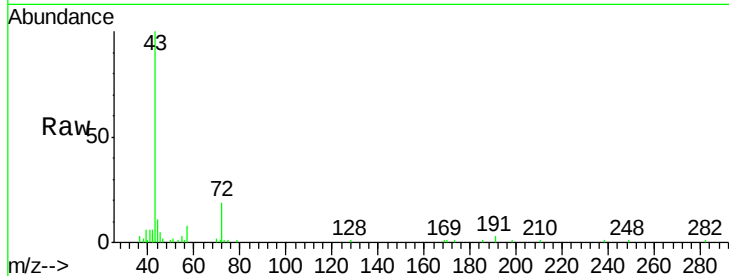
C0P21

Tgt Ion: 43 Resp: 52459

Ion Ratio Lower Upper

43 100

72 26.7 18.2 27.2



#37

1,2-Dichloroethane

Concen: 0.036 ppbv

RT: 6.29 min Scan# 1091

Delta R.T. -0.01 min

Lab File: VL037774.D

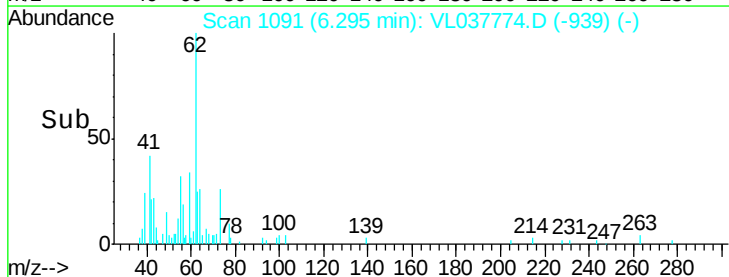
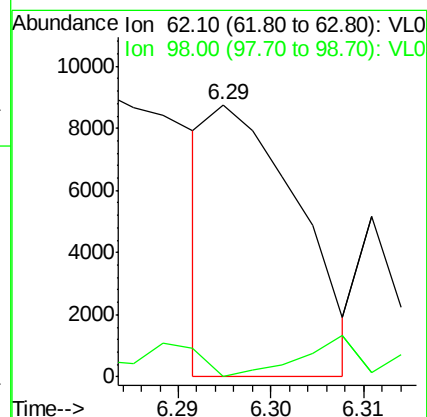
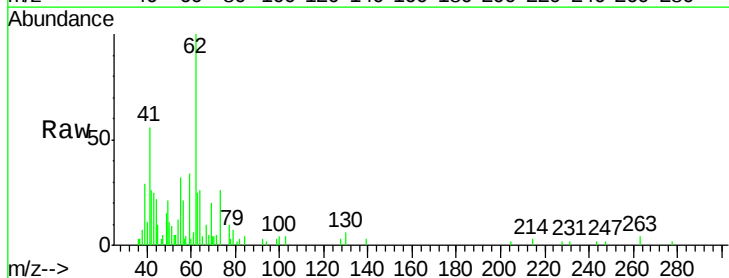
Acq: 5 Oct 2021 15:20

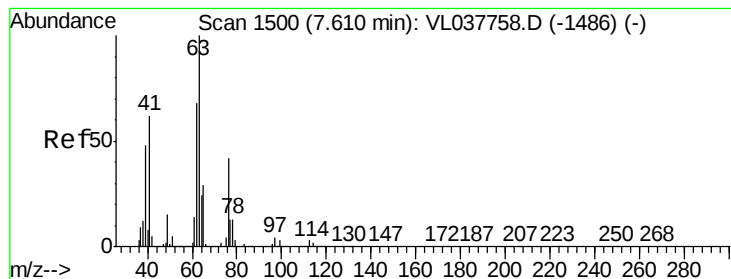
Tgt Ion: 62 Resp: 5770

Ion Ratio Lower Upper

62 100

98 0.0 6.1 9.1#





#39

1,2-Dichloropropane

Concen: 7.196 ppbv

RT: 7.16 min Scan# 1359

Delta R.T. -0.45 min

Lab File: VL037774.D

Acq: 5 Oct 2021 15:20

Instrument :

MSVOA_L

ClientSampleId :

C0P21

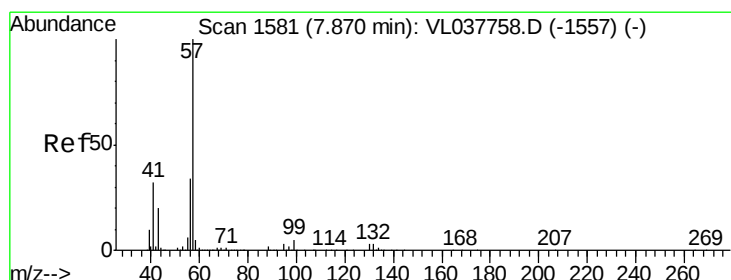
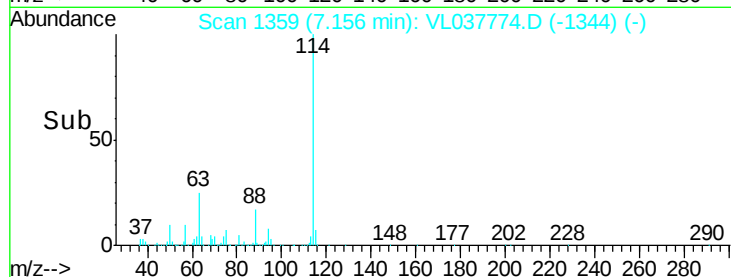
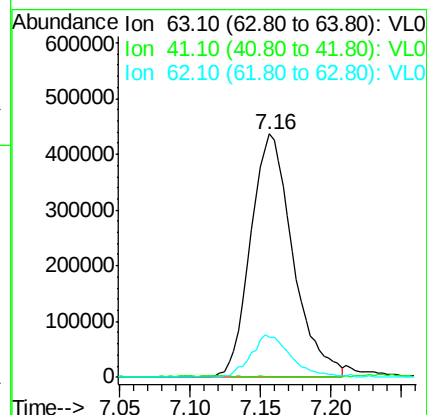
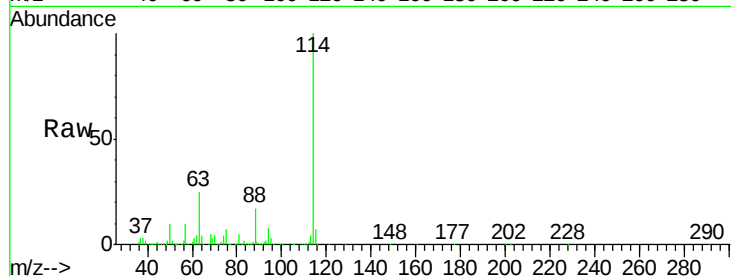
Tgt Ion: 63 Resp: 916917

Ion Ratio Lower Upper

63 100

41 0.0 49.8 74.6#

62 16.2 54.6 82.0#



#44

2,2,4-Trimethylpentane

Concen: 0.036 ppbv

RT: 7.85 min Scan# 1576

Delta R.T. -0.02 min

Lab File: VL037774.D

Acq: 5 Oct 2021 15:20

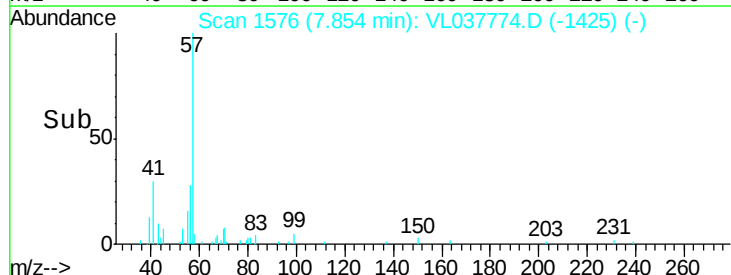
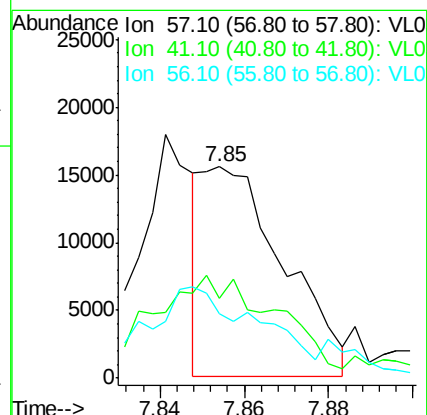
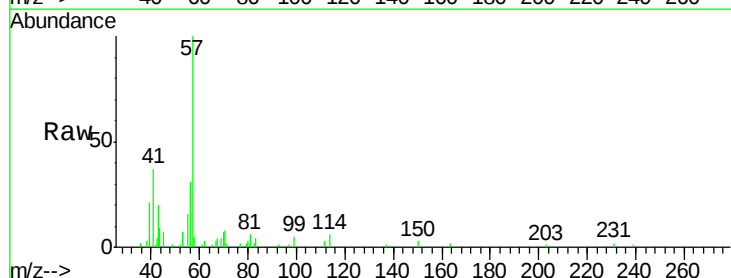
Tgt Ion: 57 Resp: 20648

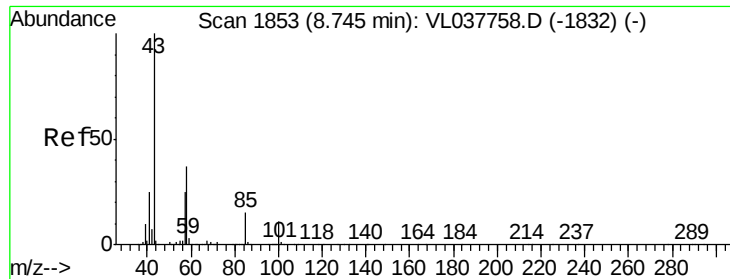
Ion Ratio Lower Upper

57 100

41 89.7 25.6 38.4#

56 79.4 25.5 38.3#

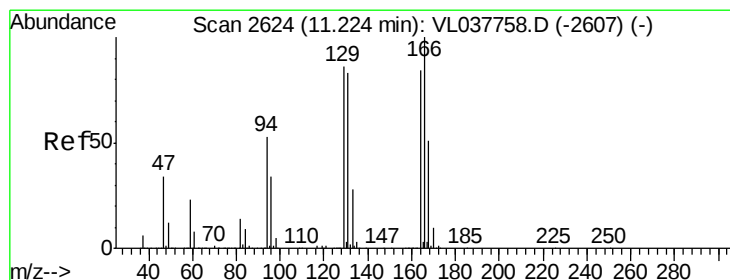
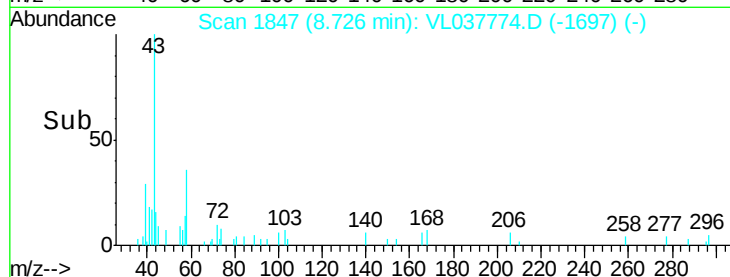
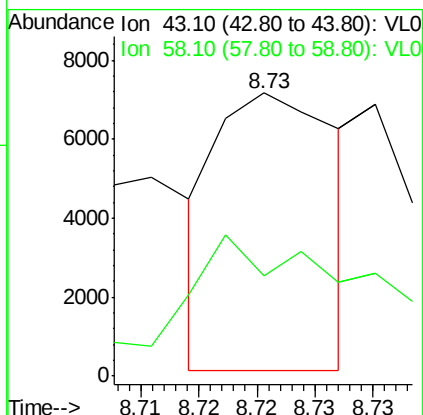
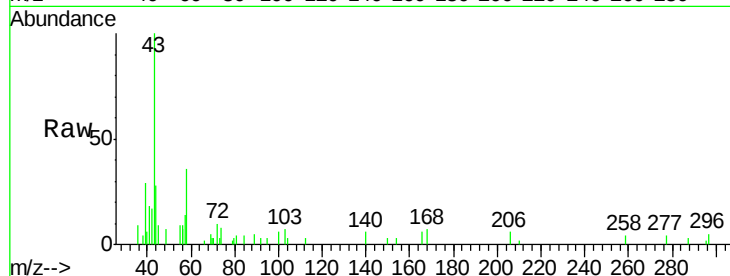




#50
4-Methyl-2-Pentanone
Concen: 0.024 ppbv
RT: 8.73 min Scan# 1847
Delta R.T. -0.02 min
Lab File: VL037774.D
Acq: 5 Oct 2021 15:20

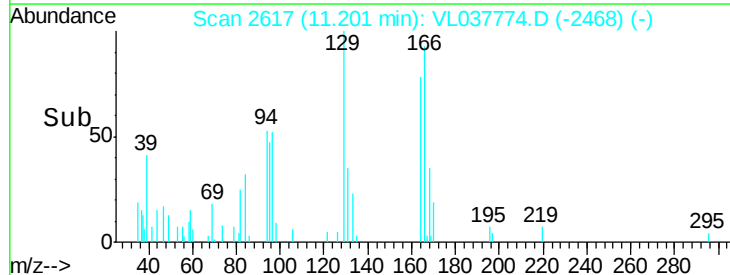
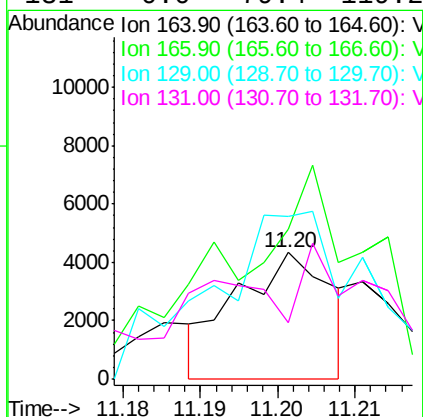
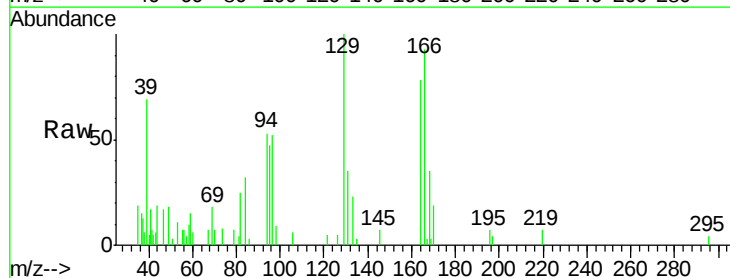
Instrument :
MSVOA_L
ClientSampled :
C0P21

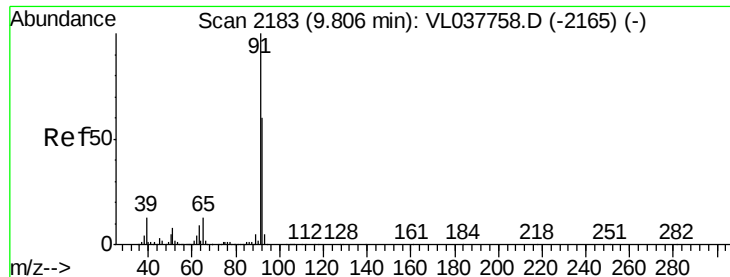
Tgt Ion: 43 Resp: 5018
Ion Ratio Lower Upper
43 100
58 132.5 29.4 44.0#



#52
Tetrachloroethene
Concen: 0.028 ppbv
RT: 11.20 min Scan# 2617
Delta R.T. -0.02 min
Lab File: VL037774.D
Acq: 5 Oct 2021 15:20

Tgt Ion: 164 Resp: 3698
Ion Ratio Lower Upper
164 100
166 77.9 95.4 143.2#
129 114.6 82.2 123.4
131 0.0 79.4 119.2#





#53

Toluene

Concen: 0.691 ppbv

RT: 9.78 min Scan# 2176

Delta R.T. -0.02 min

Lab File: VL037774.D

Acq: 5 Oct 2021 15:20

Instrument :

MSVOA_L

ClientSampleId :

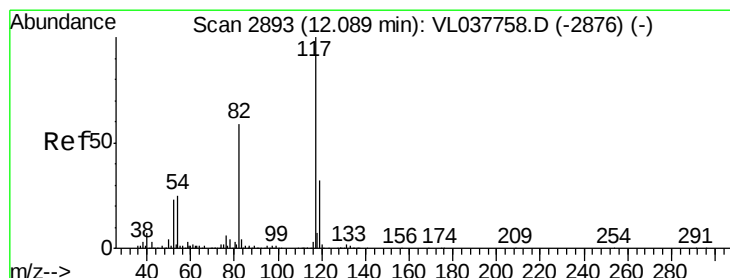
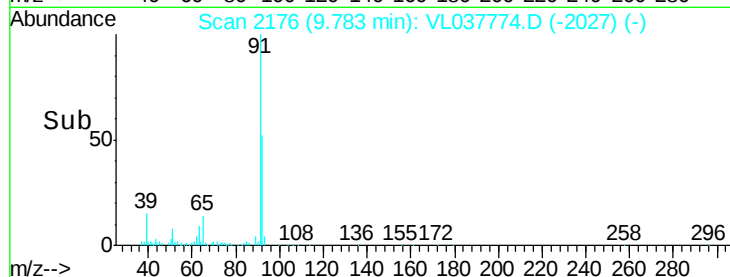
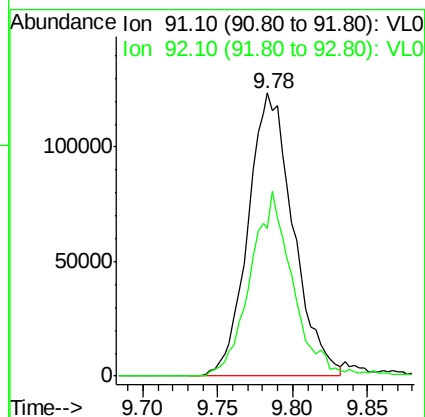
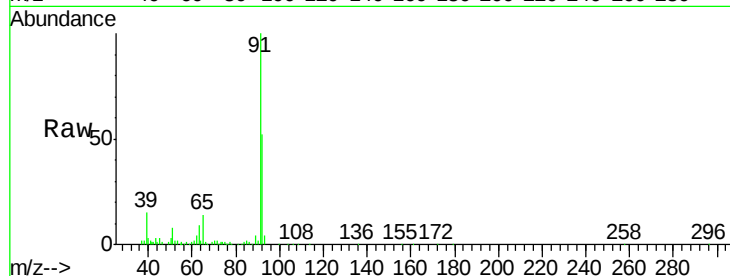
C0P21

Tgt Ion: 91 Resp: 259525

Ion Ratio Lower Upper

91 100

92 61.8 48.4 72.6



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.06 min Scan# 2885

Delta R.T. -0.03 min

Lab File: VL037774.D

Acq: 5 Oct 2021 15:20

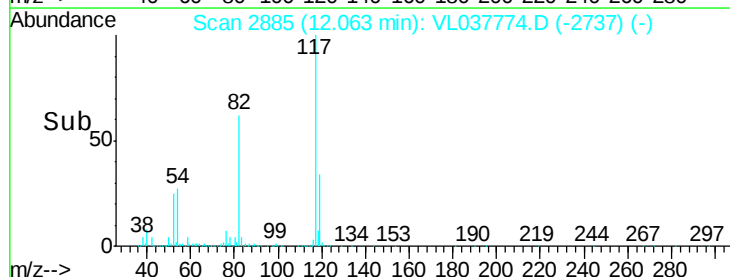
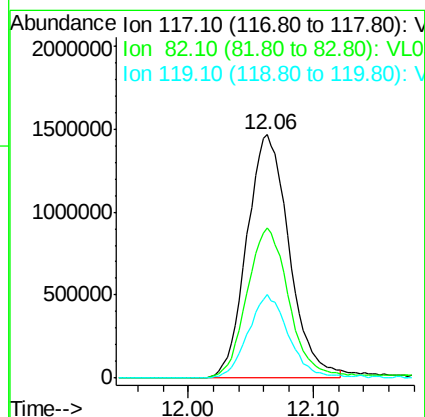
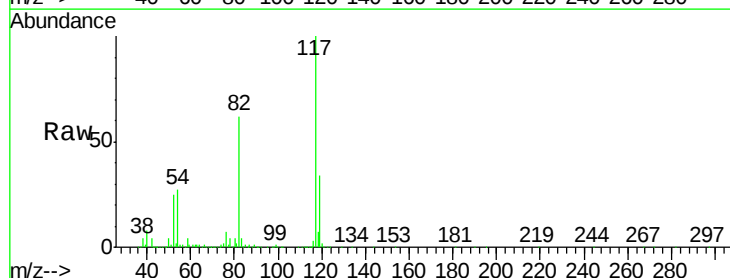
Tgt Ion: 117 Resp: 3450105

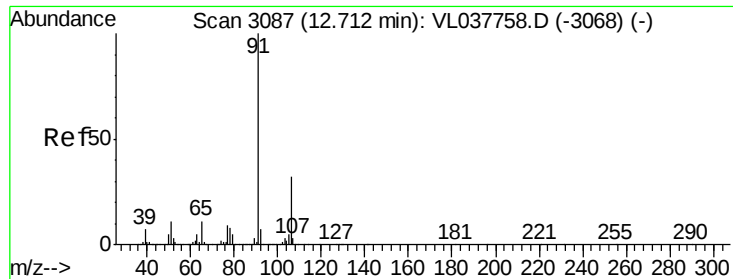
Ion Ratio Lower Upper

117 100

82 63.5 52.2 78.2

119 33.6 26.0 39.0





#58

Ethyl Benzene

Concen: 0.068 ppbv

RT: 12.68 min Scan# 3078

Delta R.T. -0.03 min

Lab File: VL037774.D

Acq: 5 Oct 2021 15:20

Instrument :

MSVOA_L

ClientSampleId :

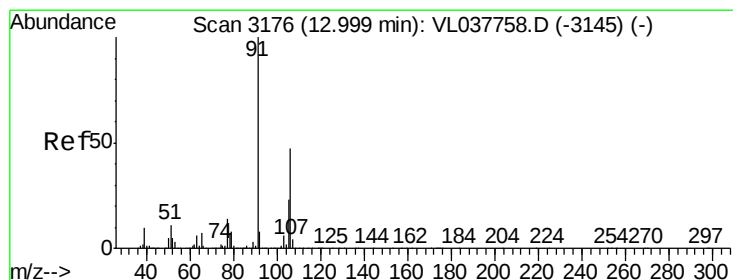
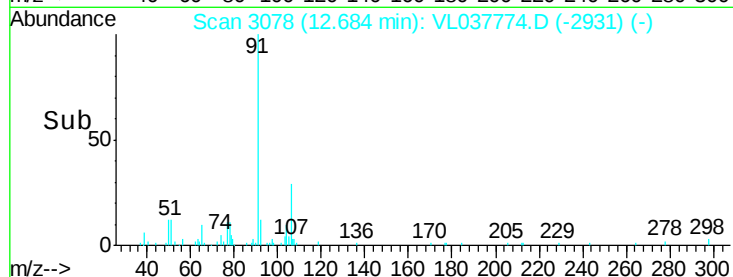
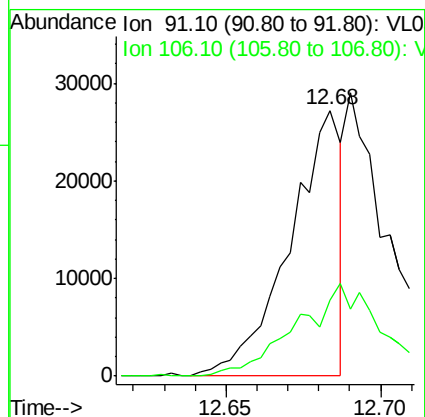
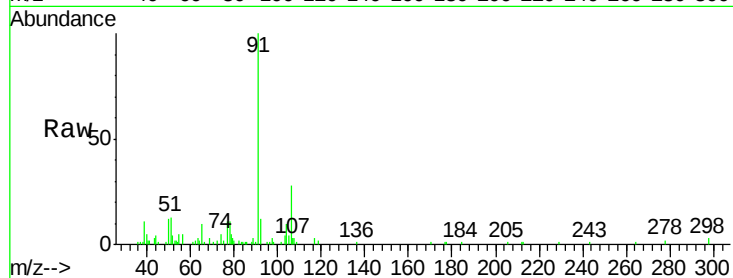
C0P21

Tgt Ion: 91 Resp: 31473

Ion Ratio Lower Upper

91 100

106 31.7 25.3 37.9



#59

m/p-Xylene

Concen: 0.075 ppbv

RT: 12.97 min Scan# 3166

Delta R.T. -0.03 min

Lab File: VL037774.D

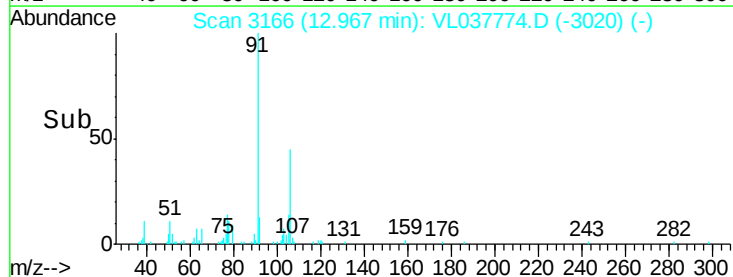
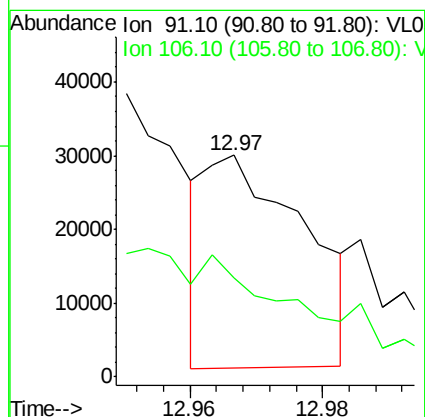
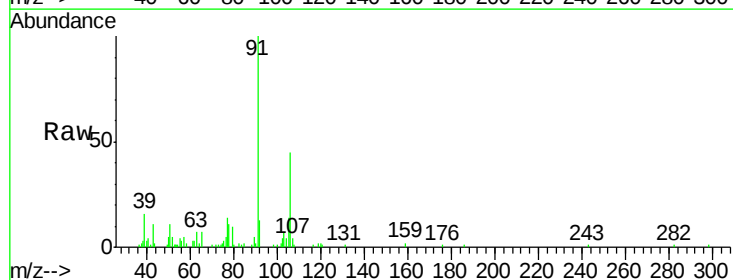
Acq: 5 Oct 2021 15:20

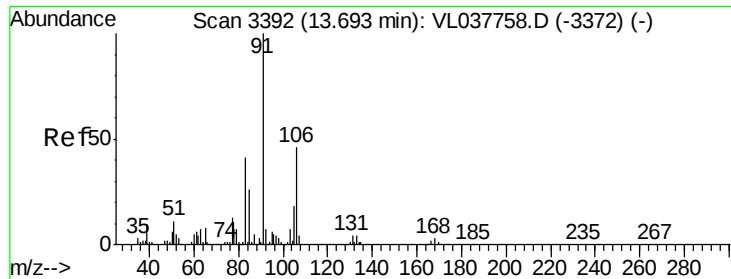
Tgt Ion: 91 Resp: 29973

Ion Ratio Lower Upper

91 100

106 0.0 36.7 55.1#

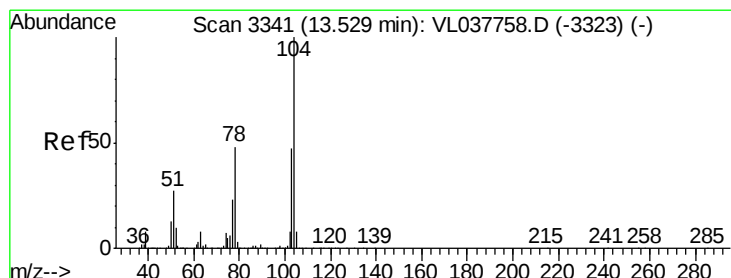
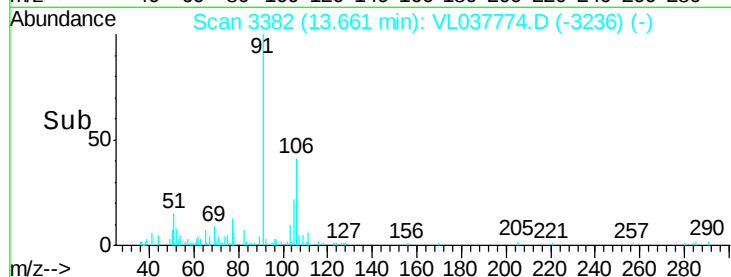
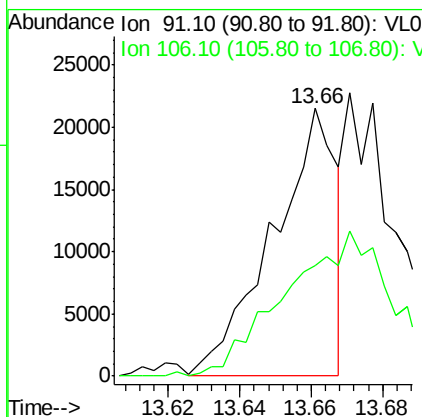
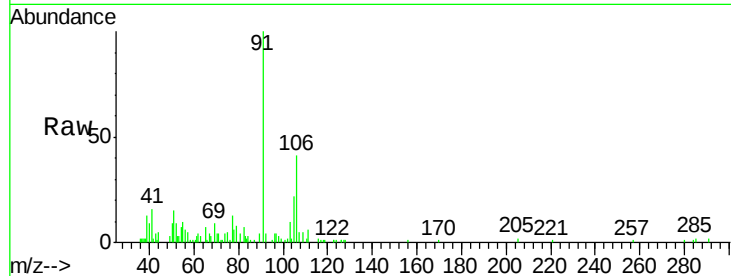




#60
o-Xylene
Concen: 0.069 ppbv
RT: 13.66 min Scan# 3382
Delta R.T. -0.03 min
Lab File: VL037774.D
Acq: 5 Oct 2021 15:20

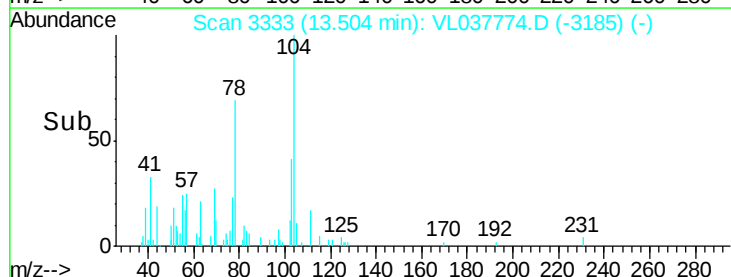
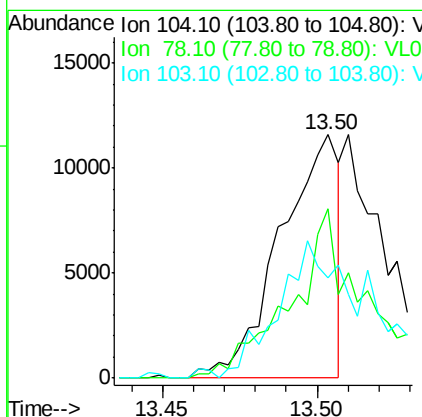
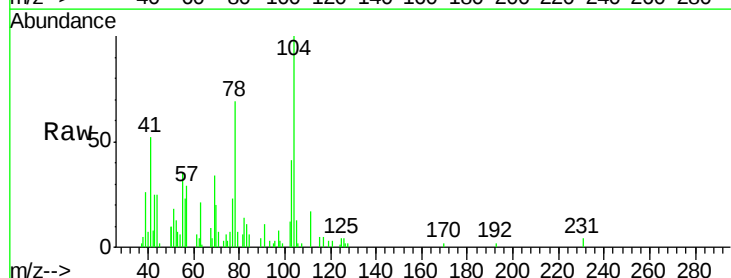
Instrument :
MSVOA_L
ClientSampled :
C0P21

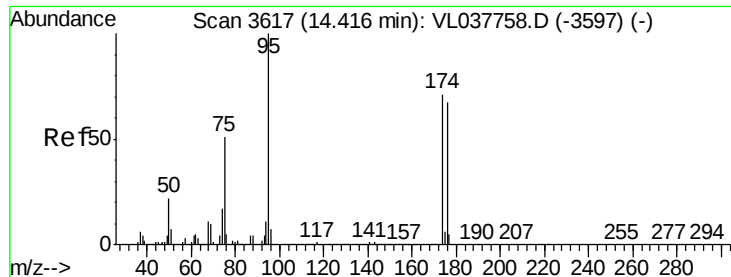
Tgt Ion: 91 Resp: 26302
Ion Ratio Lower Upper
91 100
106 0.0 23.5 70.5#



#61
Styrene
Concen: 0.082 ppbv
RT: 13.50 min Scan# 3333
Delta R.T. -0.03 min
Lab File: VL037774.D
Acq: 5 Oct 2021 15:20

Tgt Ion: 104 Resp: 15176
Ion Ratio Lower Upper
104 100
78 96.4 40.6 61.0#
103 90.6 39.6 59.4#

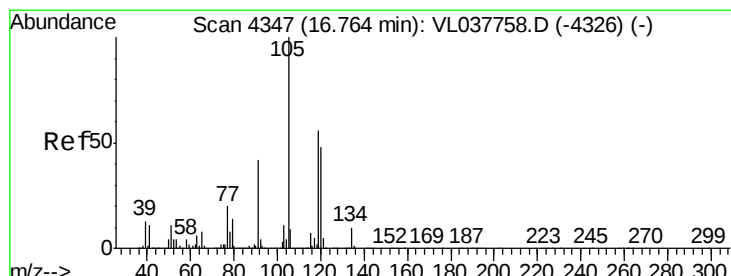
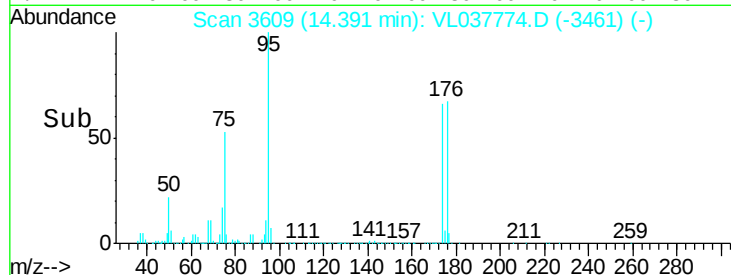
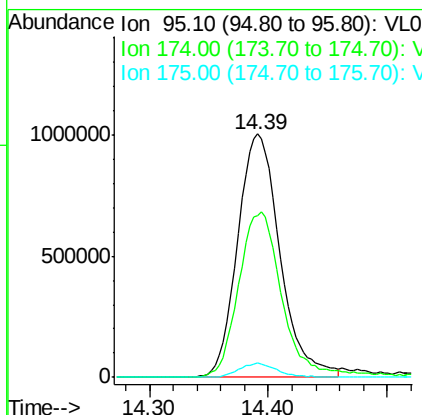
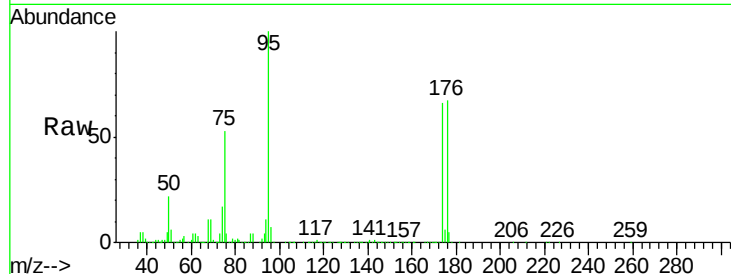




#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.249 ppbv
 RT: 14.39 min Scan# 3609
 Delta R.T. -0.03 min
 Lab File: VL037774.D
 Acq: 5 Oct 2021 15:20

Instrument :
 MSVOA_L
 ClientSampleId :
 C0P21

Tgt Ion: 95 Resp: 2472736
 Ion Ratio Lower Upper
 95 100
 174 72.3 57.8 86.6
 175 5.4 4.7 7.1



#74
 1,2,4-Trimethylbenzene
 Concen: 0.052 ppbv
 RT: 16.73 min Scan# 4337
 Delta R.T. -0.03 min
 Lab File: VL037774.D
 Acq: 5 Oct 2021 15:20

Tgt Ion: 105 Resp: 21579
 Ion Ratio Lower Upper
 105 100
 120 0.0 38.4 57.6#
 91 19.4 34.2 51.2#
 77 0.0 15.8 23.8#

