

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL100521\
 Data File : VL037778.D
 Acq On : 5 Oct 2021 17:57
 Operator : SY/AP
 Sample : M4012-06DUP
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 C0P28DUP

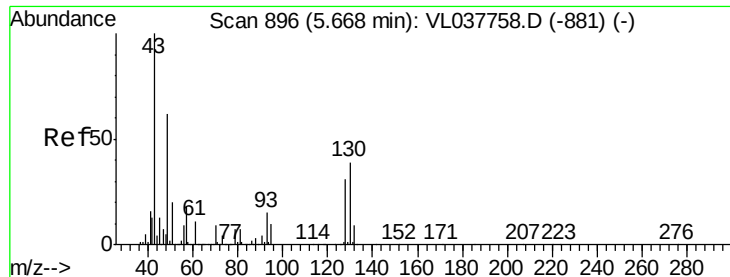
Quant Time: Oct 06 04:47:23 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL100421AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Oct 04 17:43:54 2021
 QLast Update : Mon Oct 04 17:43:54 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1287313	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.16	114	3707741	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.06	117	3180278	10.00	ppbv	-0.03

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.39	95	2157585	9.70	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	97.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.04	85	39908	0.194	ppbv #	88
3) Chlorodifluoromethane	2.98	51	57469	0.232	ppbv	94
4) Chloromethane	3.13	50	28977	0.320	ppbv	98
9) Propene	3.01	41	52031	0.572	ppbv	98
11) Trichlorofluoromethane	3.93	101	23098	0.126	ppbv	95
12) 1,1,2-Trichlorotrifluoroet	4.47	101	4938	0.036	ppbv #	32
13) Ethanol	3.59	45	237732	31.941	ppbv	93
15) Acetone	3.83	43	1576049	13.638	ppbv	98
16) 1,3-Butadiene	3.30	39	61476	0.731	ppbv #	25
17) tert-Butyl alcohol	4.28	59	21066	0.177	ppbv #	71
19) Isopropyl Alcohol	3.96	45	132534	1.843	ppbv #	70
20) Methylene Chloride	4.33	84	567417	9.718	ppbv	94
23) Vinyl Acetate	5.05	43	7371	0.043	ppbv #	20
25) Ethyl Acetate	5.67	43	206313	0.636	ppbv #	81
26) Hexane	5.67	57	249687	1.564	ppbv #	44
34) 2-Butanone	5.23	43	210078	1.403	ppbv #	89
35) Carbon Tetrachloride	6.99	117	8394	0.040	ppbv #	47
36) Benzene	6.87	78	60419	0.191	ppbv #	93
39) 1,2-Dichloropropane	7.16	63	886042	7.438	ppbv #	28
41) Tetrahydrofuran	6.04	42	5546	0.076	ppbv #	81
44) 2,2,4-Trimethylpentane	7.84	57	122396	0.230	ppbv #	84
52) Tetrachloroethene	11.20	164	42789	0.347	ppbv #	78
53) Toluene	9.78	91	194836	0.555	ppbv	100
58) Ethyl Benzene	12.68	91	90919	0.213	ppbv	92
59) m/p-Xylene	12.95	91	287329	0.784	ppbv #	30
60) o-Xylene	13.66	91	106482	0.303	ppbv	72
66) Benzyl Chloride	16.95	91	550	0.026	ppbv #	81
72) 4-Ethyltoluene	15.80	105	8738	0.022	ppbv #	44
74) 1,2,4-Trimethylbenzene	16.73	105	23704	0.062	ppbv #	65

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 890

Delta R.T. -0.02 min

Lab File: VL037778.D

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ClientSampleId :

C0P28DUP

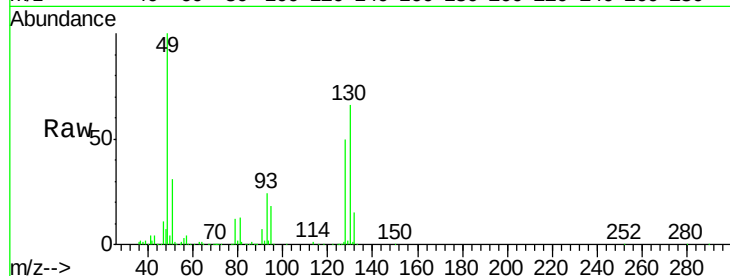
Tgt Ion: 49 Resp: 1287313

Ion Ratio Lower Upper

49 100

128 53.4 27.1 81.3

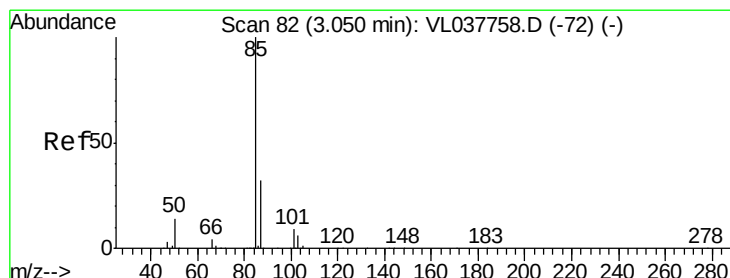
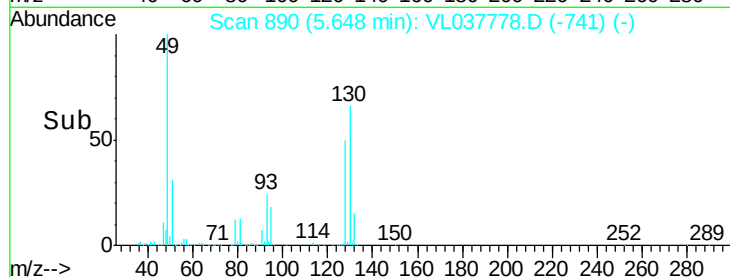
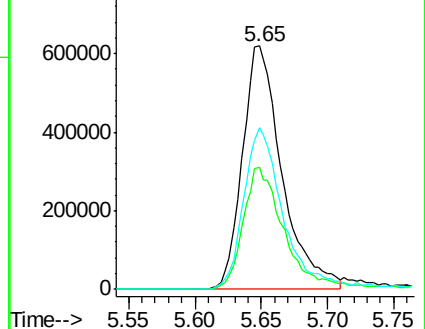
130 68.5 33.2 99.6



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: 0.194 ppbv

RT: 3.04 min Scan# 79

Delta R.T. -0.01 min

Lab File: VL037778.D

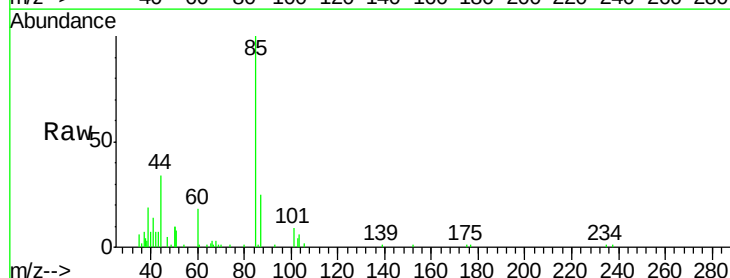
Acq: 5 Oct 2021 17:57

Tgt Ion: 85 Resp: 39908

Ion Ratio Lower Upper

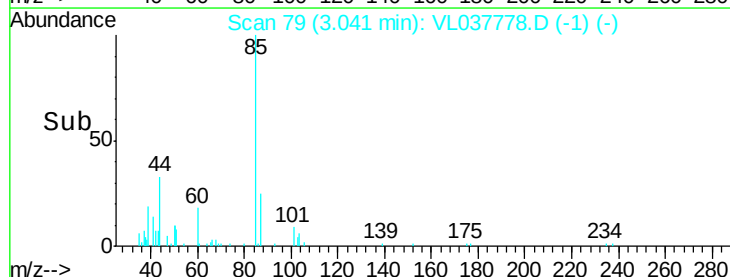
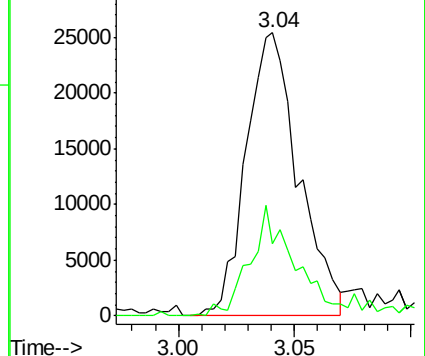
85 100

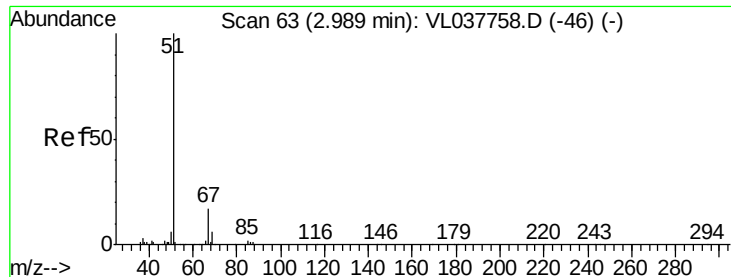
87 25.4 25.7 38.5#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.232 ppbv

RT: 2.98 min Scan# 60

Delta R.T. -0.01 min

Lab File: VL037778.D

Acq: 5 Oct 2021 17:57

Instrument :

MSVOA_L

ClientSampleId :

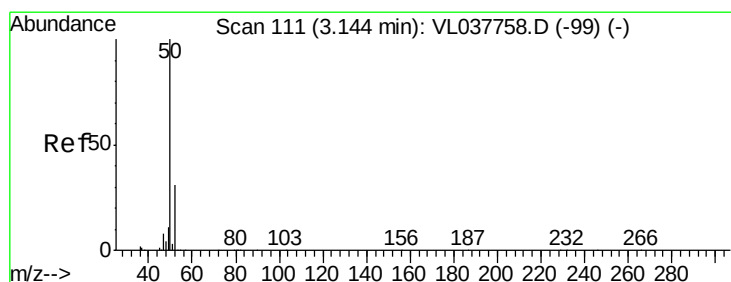
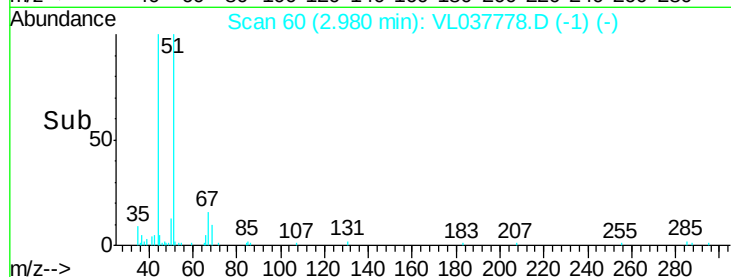
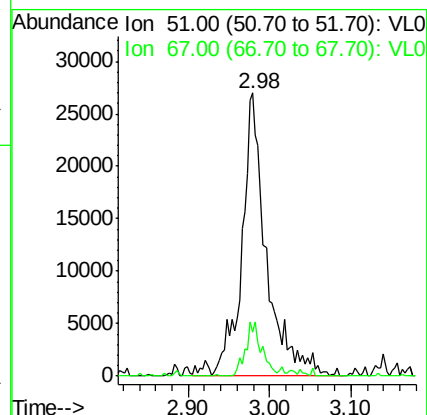
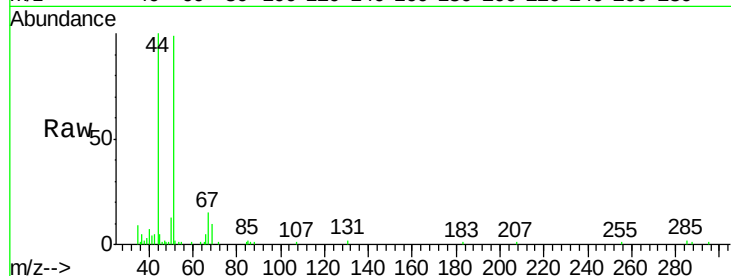
C0P28DUP

Tgt Ion: 51 Resp: 57469

Ion Ratio Lower Upper

51 100

67 14.1 13.5 20.3



#4

Chloromethane

Concen: 0.320 ppbv

RT: 3.13 min Scan# 107

Delta R.T. -0.01 min

Lab File: VL037778.D

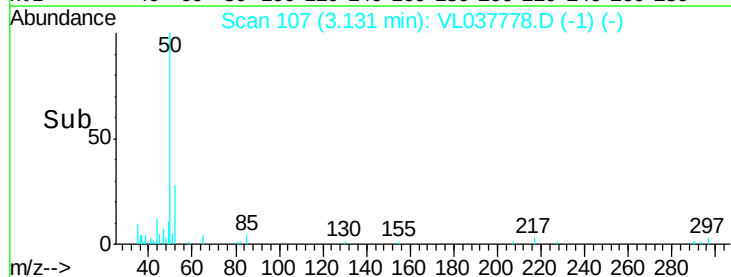
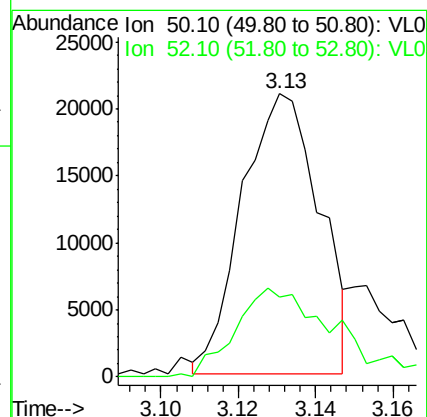
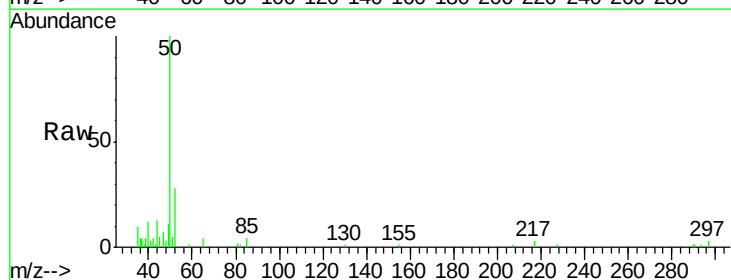
Acq: 5 Oct 2021 17:57

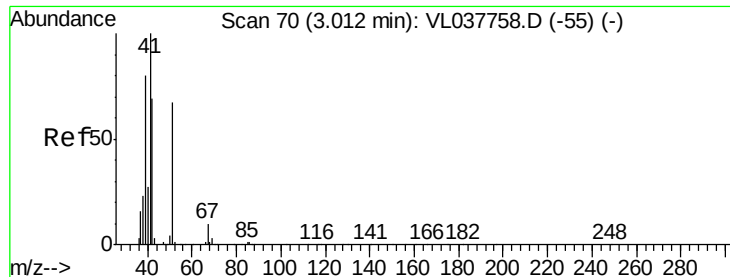
Tgt Ion: 50 Resp: 28977

Ion Ratio Lower Upper

50 100

52 29.5 24.4 36.6





#9

Propene

Concen: 0.572 ppbv

RT: 3.01 min Scan# 68

Delta R.T. -0.01 min

Lab File: VL037778.D

Acq: 5 Oct 2021 17:57

Instrument :

MSVOA_L

ClientSampleId :

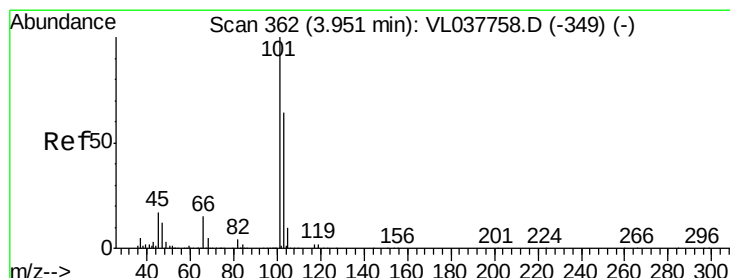
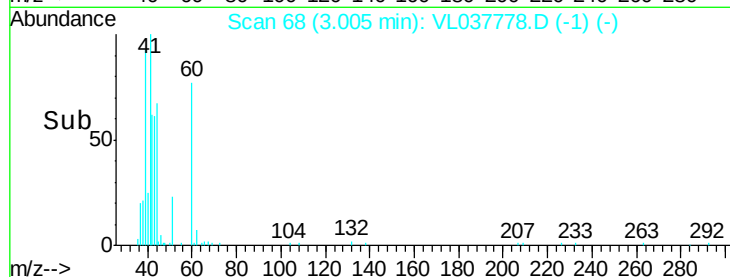
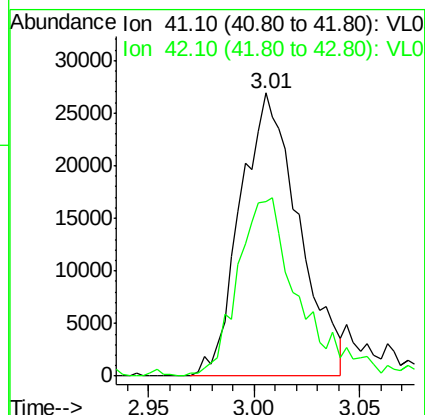
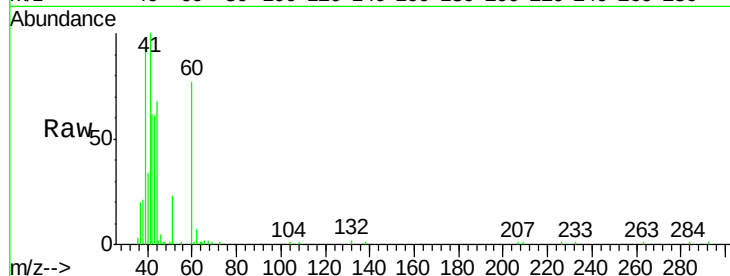
C0P28DUP

Tgt Ion: 41 Resp: 52031

Ion Ratio Lower Upper

41 100

42 66.3 54.2 81.2



#11

Trichlorofluoromethane

Concen: 0.126 ppbv

RT: 3.93 min Scan# 357

Delta R.T. -0.02 min

Lab File: VL037778.D

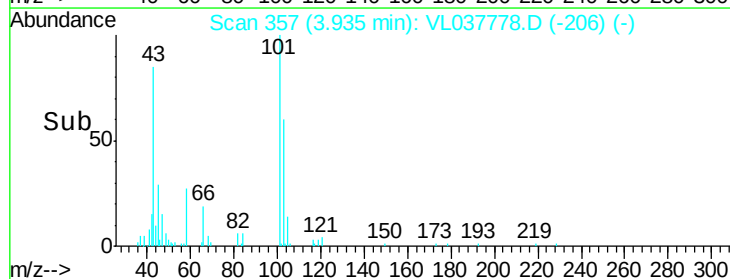
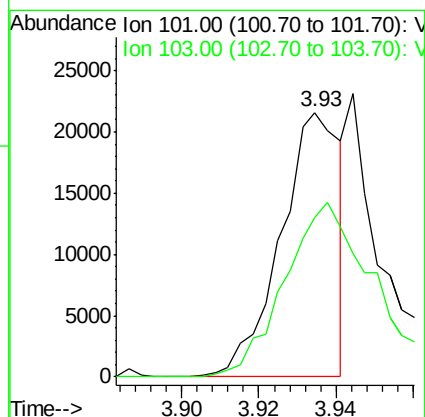
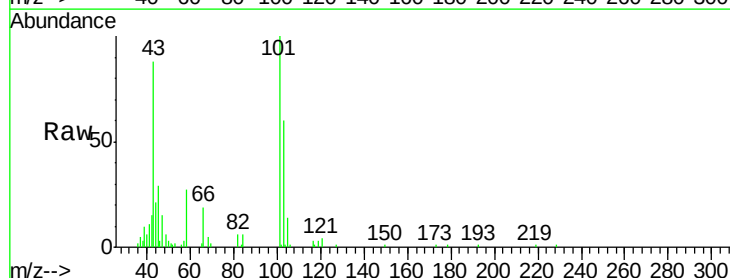
Acq: 5 Oct 2021 17:57

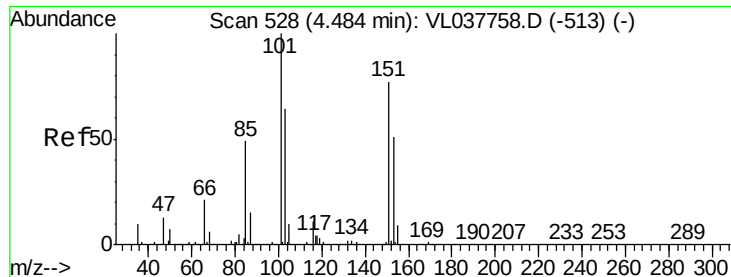
Tgt Ion: 101 Resp: 23098

Ion Ratio Lower Upper

101 100

103 60.5 51.5 77.3





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.036 ppbv

RT: 4.47 min Scan# 524

Delta R.T. -0.01 min

Lab File: VL037778.D

Acq: 5 Oct 2021 17:57

Instrument :

MSVOA_L

ClientSampleId :

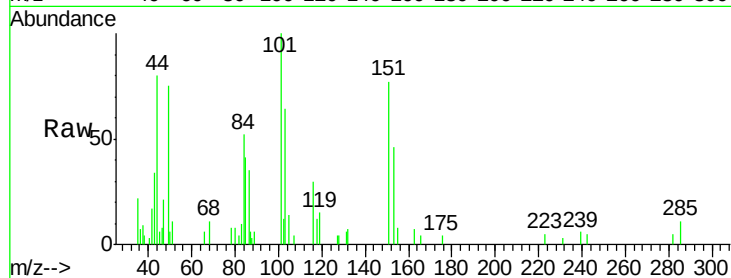
C0P28DUP

Tgt Ion:101 Resp: 4938

Ion Ratio Lower Upper

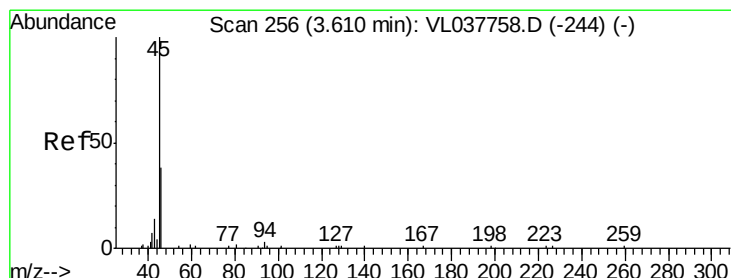
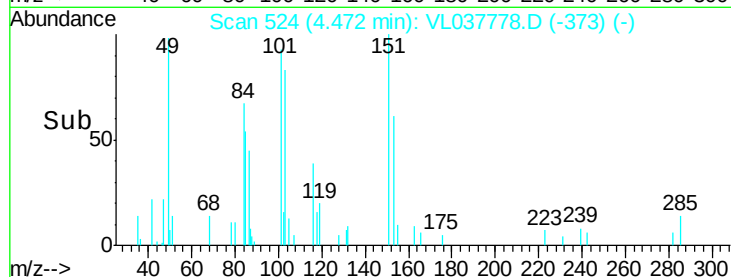
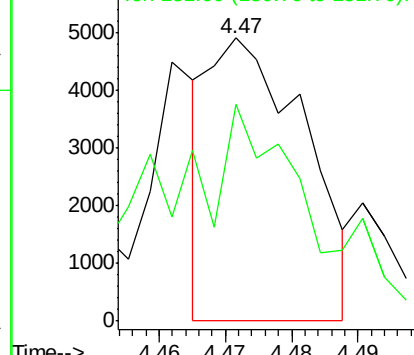
101 100

151 138.4 62.9 94.3#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 31.941 ppbv

RT: 3.59 min Scan# 249

Delta R.T. -0.02 min

Lab File: VL037778.D

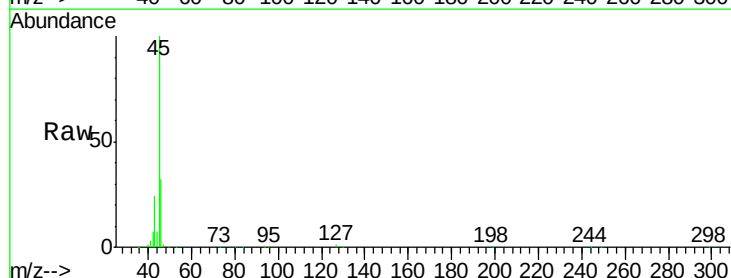
Acq: 5 Oct 2021 17:57

Tgt Ion: 45 Resp: 237732

Ion Ratio Lower Upper

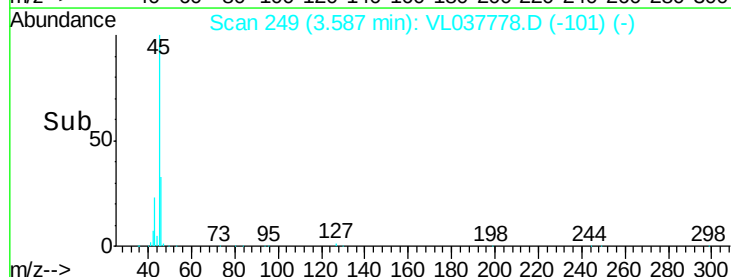
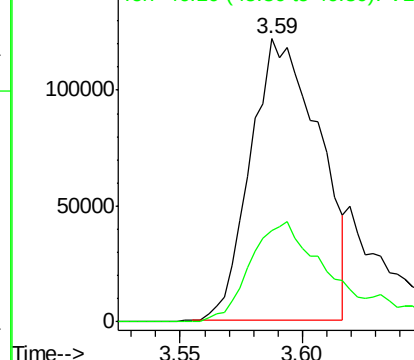
45 100

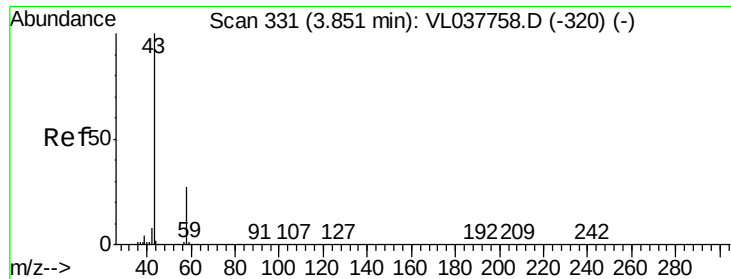
46 45.5 20.2 81.0



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 13.638 ppbv

RT: 3.83 min Scan# 326

Delta R.T. -0.02 min

Lab File: VL037778.D

Acq: 5 Oct 2021 17:57

Instrument :

MSVOA_L

ClientSampleId :

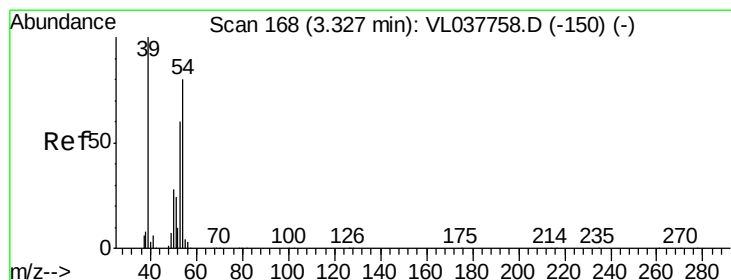
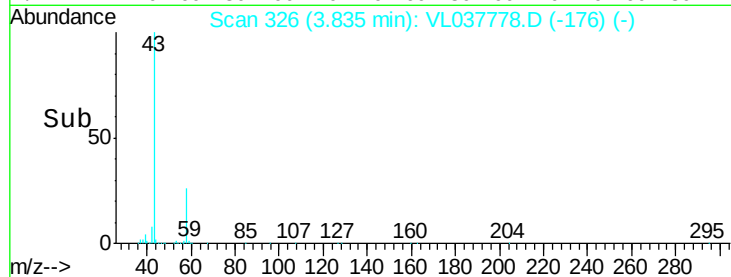
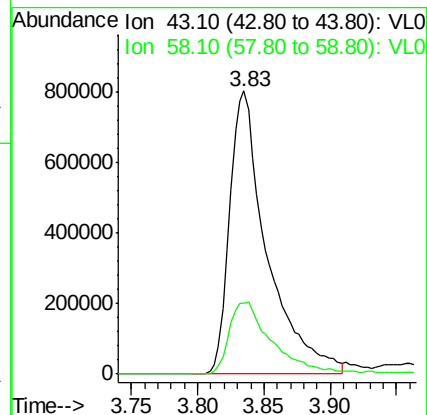
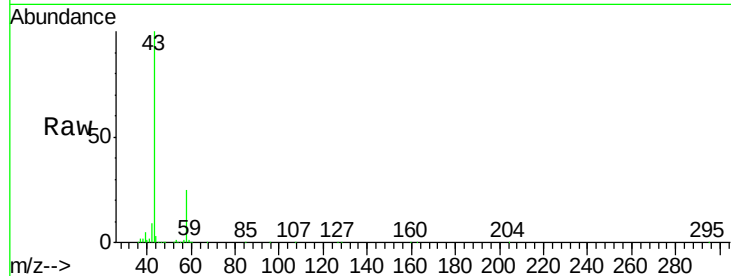
C0P28DUP

Tgt Ion: 43 Resp: 1576049

Ion Ratio Lower Upper

43 100

58 29.8 23.0 34.6



#16

1,3-Butadiene

Concen: 0.731 ppbv

RT: 3.30 min Scan# 159

Delta R.T. -0.03 min

Lab File: VL037778.D

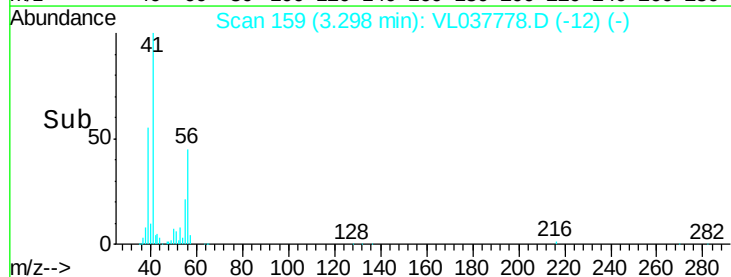
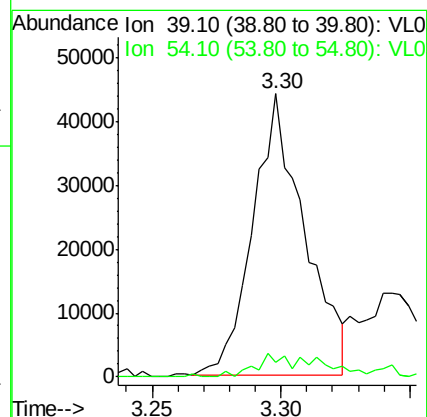
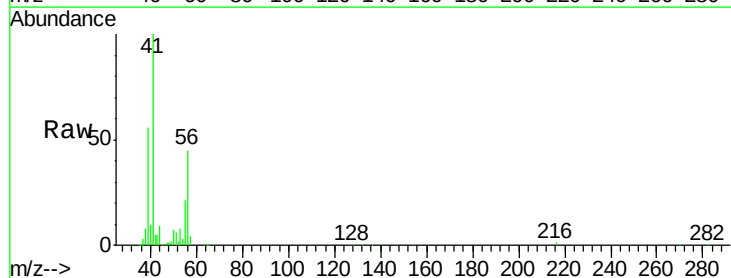
Acq: 5 Oct 2021 17:57

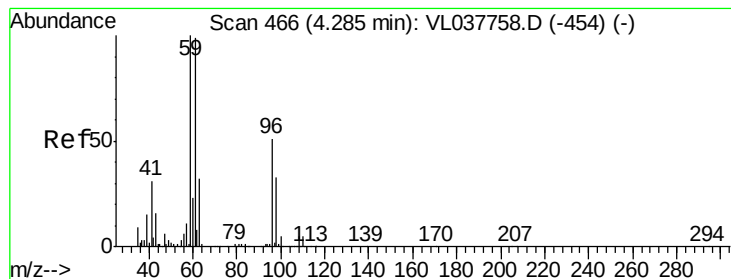
Tgt Ion: 39 Resp: 61476

Ion Ratio Lower Upper

39 100

54 12.0 61.7 92.5#





#17

tert-Butyl alcohol

Concen: 0.177 ppbv

RT: 4.28 min Scan# 465

Delta R.T. -0.00 min

Lab File: VL037778.D

Acq: 5 Oct 2021 17:57

Instrument :

MSVOA_L

ClientSampleId :

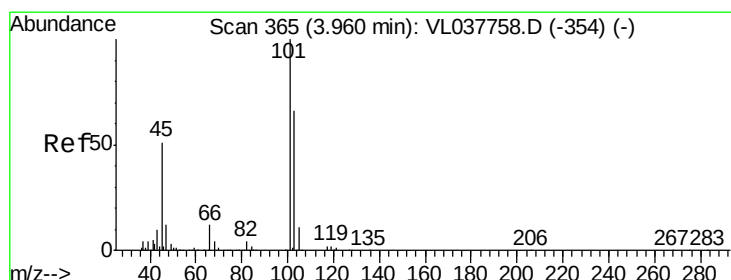
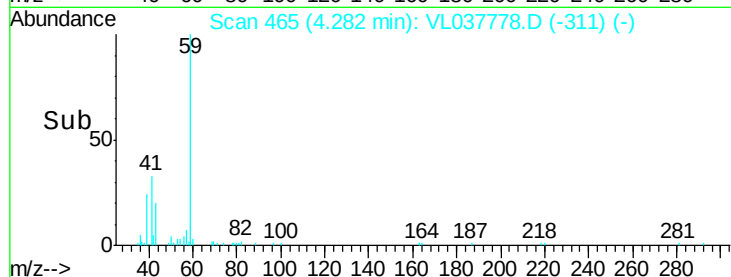
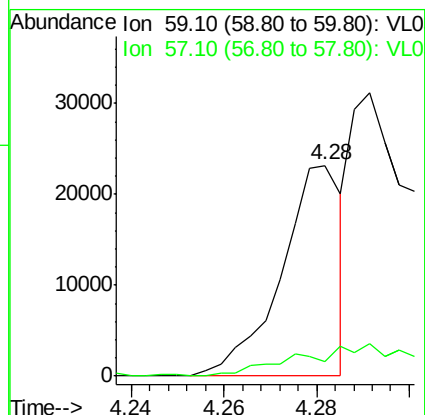
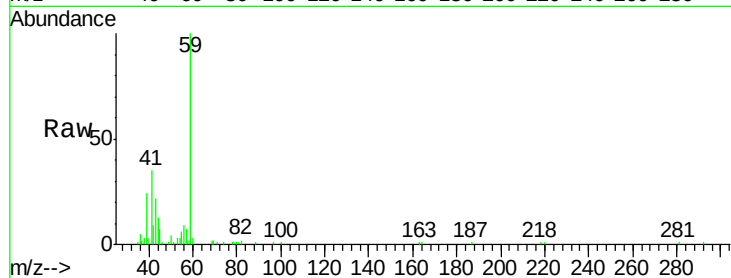
C0P28DUP

Tgt Ion: 59 Resp: 21066

Ion Ratio Lower Upper

59 100

57 0.0 8.6 13.0#



#19

Isopropyl Alcohol

Concen: 1.843 ppbv

RT: 3.96 min Scan# 364

Delta R.T. -0.00 min

Lab File: VL037778.D

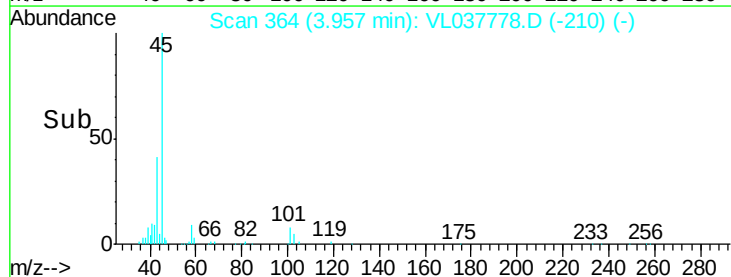
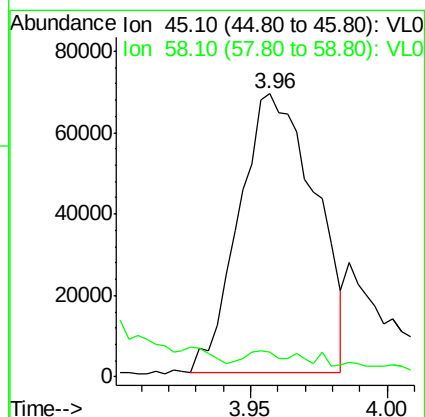
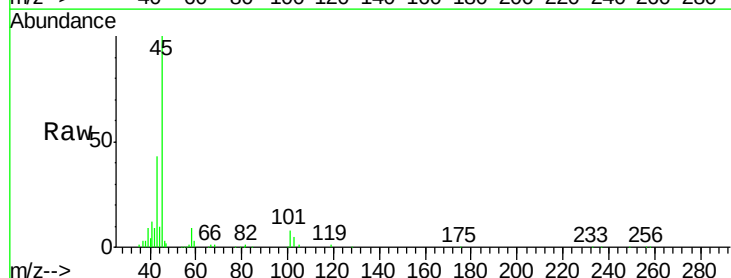
Acq: 5 Oct 2021 17:57

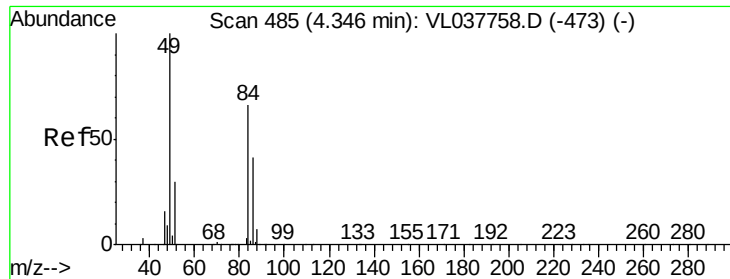
Tgt Ion: 45 Resp: 132534

Ion Ratio Lower Upper

45 100

58 13.3 1.1 1.7#

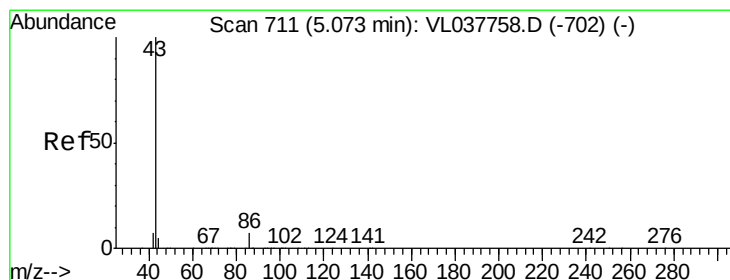
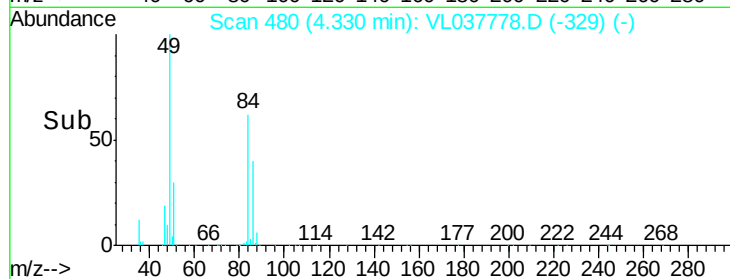
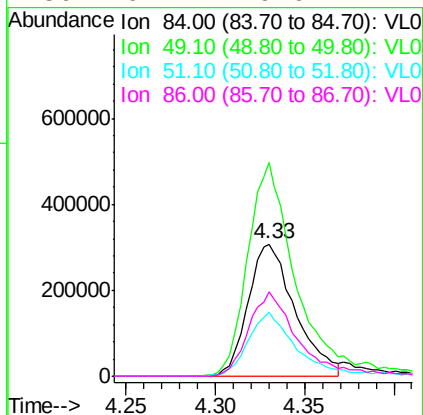
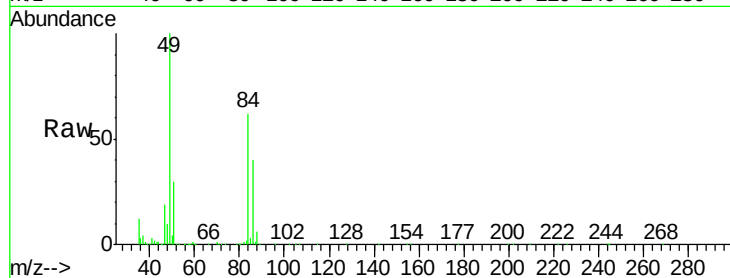




#20
Methylene Chloride
Concen: 9.718 ppbv
RT: 4.33 min Scan# 480
Delta R.T. -0.02 min
Lab File: VL037778.D
Acq: 5 Oct 2021 17:57

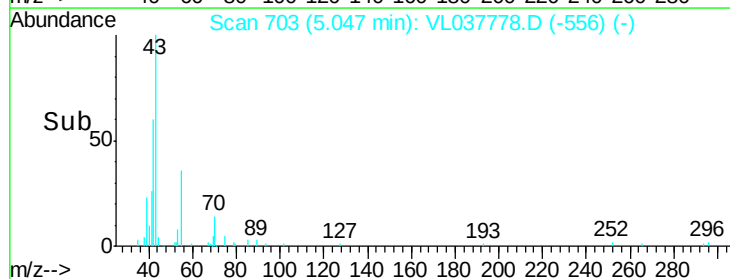
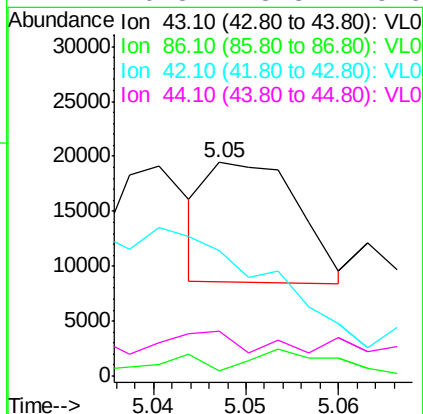
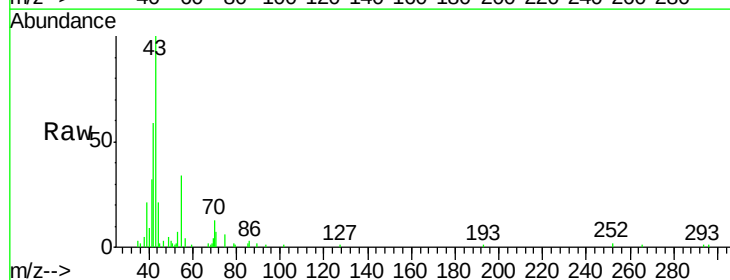
Instrument :
MSVOA_L
ClientSampleId :
C0P28DUP

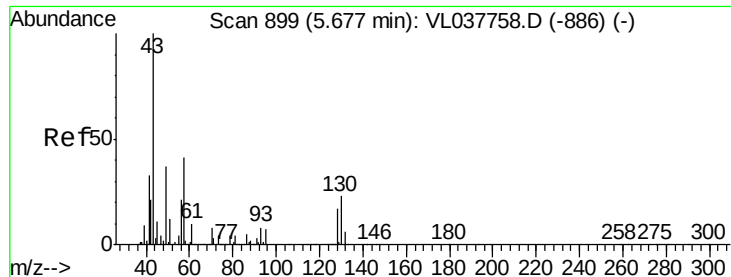
Tgt Ion:	84	Resp:	567417
Ion	Ratio	Lower	Upper
84	100		
49	161.2	120.7	181.1
51	48.4	36.2	54.4
86	64.2	49.6	74.4



#23
Vinyl Acetate
Concen: 0.043 ppbv
RT: 5.05 min Scan# 703
Delta R.T. -0.03 min
Lab File: VL037778.D
Acq: 5 Oct 2021 17:57

Tgt Ion:	43	Resp:	7371
Ion	Ratio	Lower	Upper
43	100		
86	0.0	5.0	7.4#
42	67.0	7.4	11.0#
44	6.3	3.8	5.6#





#25

Ethyl Acetate

Concen: 0.636 ppbv

RT: 5.67 min Scan# 896

Delta R.T. -0.01 min

Lab File: VL037778.D

Acq: 5 Oct 2021 17:57

Instrument :

MSVOA_L

ClientSampleId :

C0P28DUP

Tgt Ion: 43 Resp: 206313

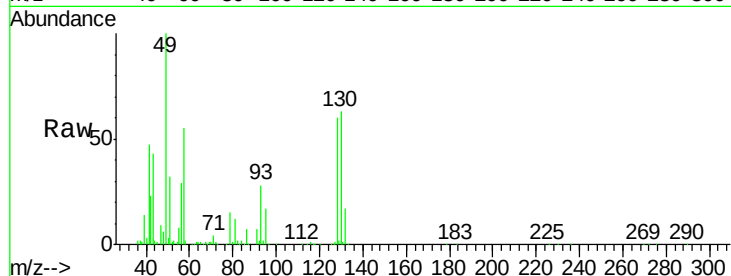
Ion Ratio Lower Upper

43 100

45 3.3 8.1 12.1#

61 0.8 7.5 11.3#

70 2.6 5.9 8.9#

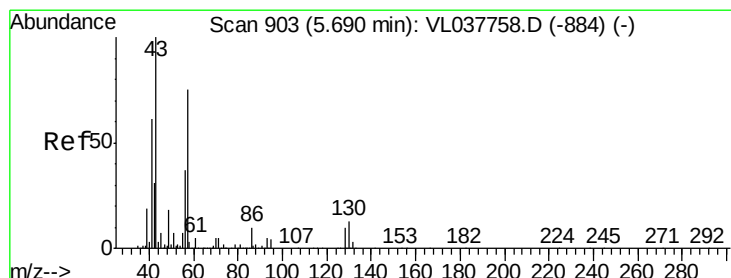
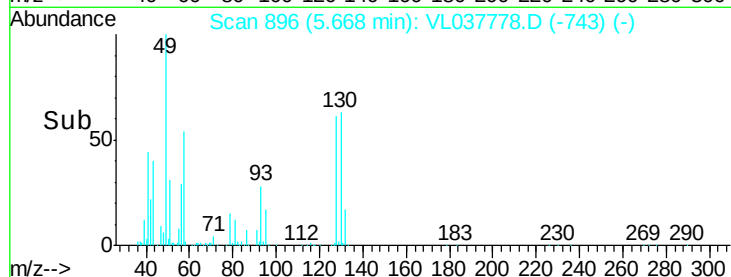
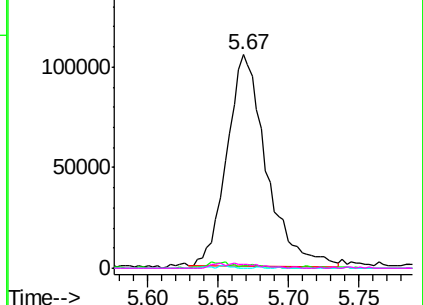


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 1.564 ppbv

RT: 5.67 min Scan# 896

Delta R.T. -0.02 min

Lab File: VL037778.D

Acq: 5 Oct 2021 17:57

Tgt Ion: 57 Resp: 249687

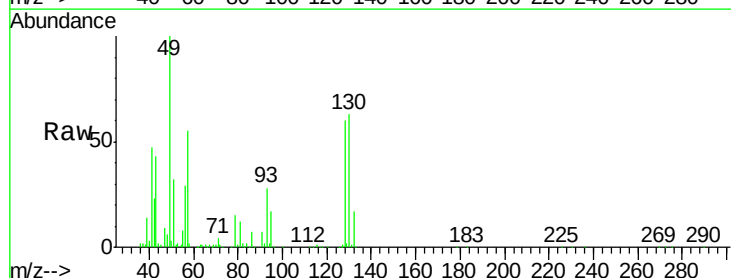
Ion Ratio Lower Upper

57 100

41 102.7 69.6 104.4

43 84.0 171.4 257.0#

56 62.5 42.0 63.0

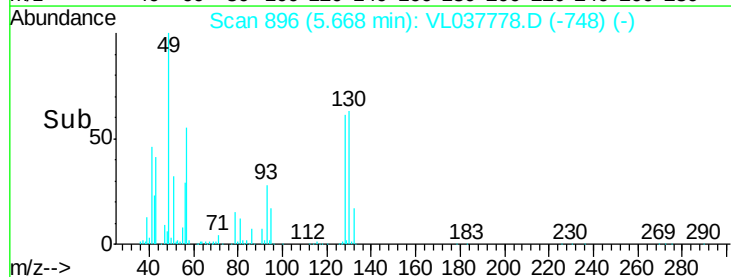
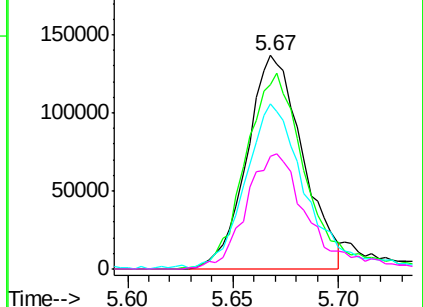


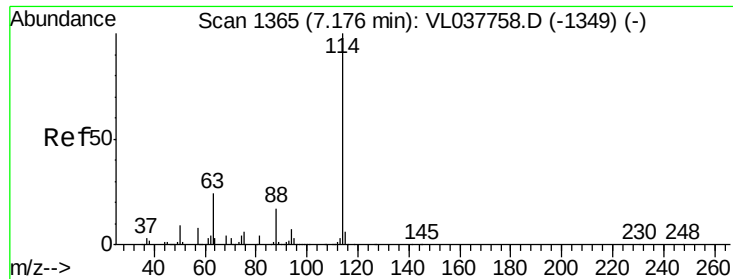
Abundance Ion 57.10 (56.80 to 57.80): VL0

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

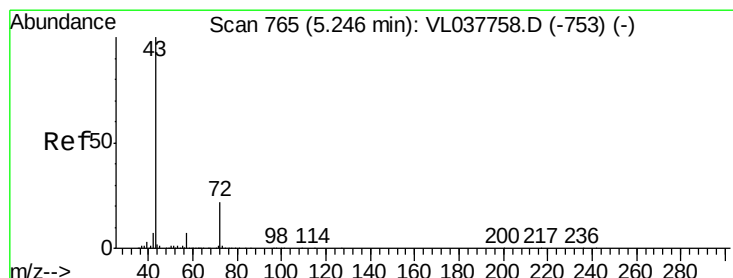
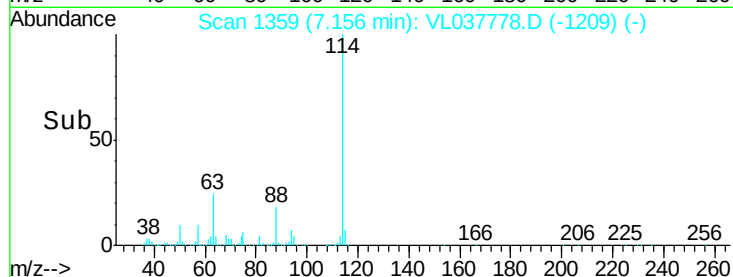
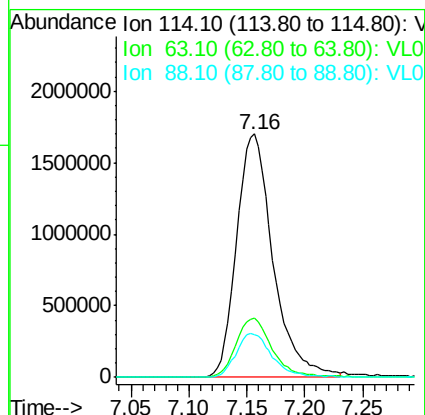
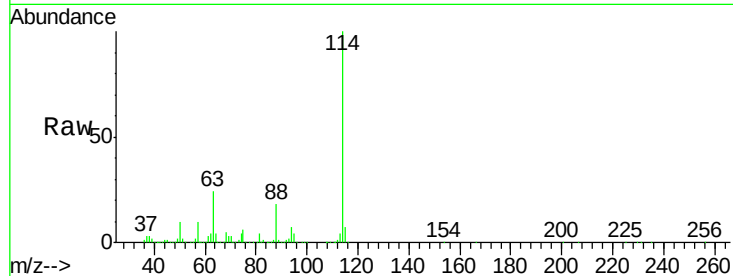




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.16 min Scan# 1359
 Delta R.T. -0.02 min
 Lab File: VL037778.D
 Acq: 5 Oct 2021 17:57

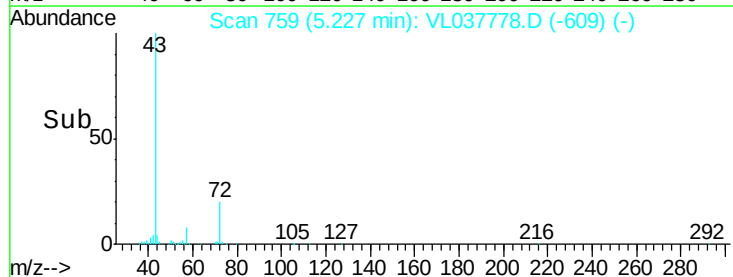
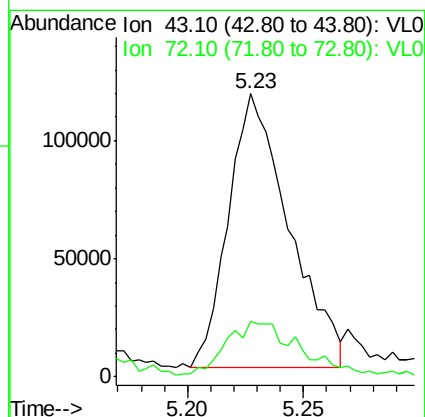
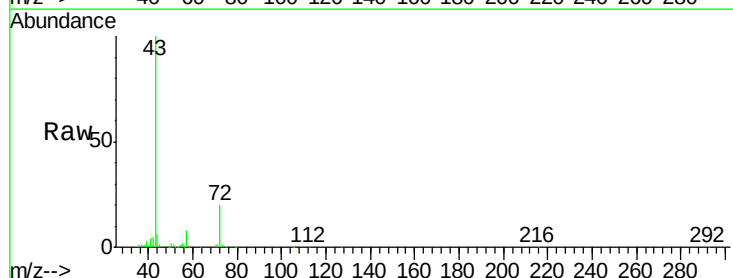
Instrument :
 MSVOA_L
 ClientSampleId :
 C0P28DUP

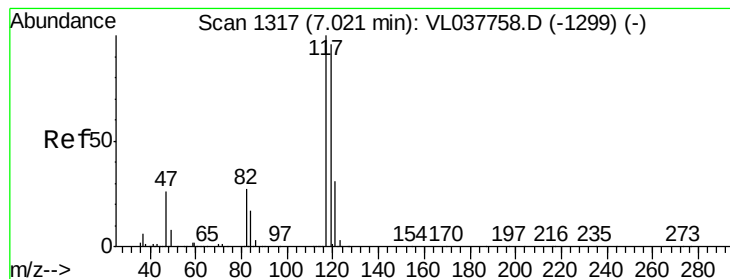
Tgt Ion: 114 Resp: 3707741
 Ion Ratio Lower Upper
 114 100
 63 24.5 19.4 29.2
 88 18.3 14.4 21.6



#34
 2-Butanone
 Concen: 1.403 ppbv
 RT: 5.23 min Scan# 759
 Delta R.T. -0.02 min
 Lab File: VL037778.D
 Acq: 5 Oct 2021 17:57

Tgt Ion: 43 Resp: 210078
 Ion Ratio Lower Upper
 43 100
 72 28.2 18.2 27.2#





#35

Carbon Tetrachloride

Concen: 0.040 ppbv

RT: 6.99 min Scan# 1308

Delta R.T. -0.03 min

Lab File: VL037778.D

Acq: 5 Oct 2021 17:57

Instrument :

MSVOA_L

ClientSampleId :

C0P28DUP

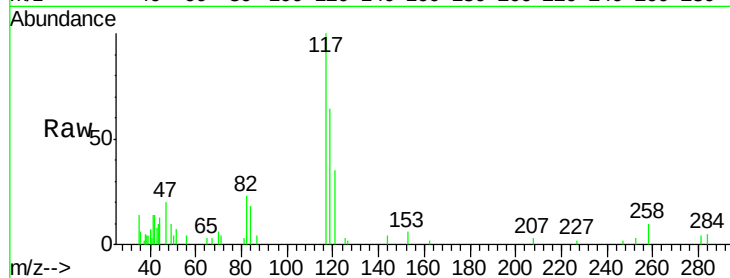
Tgt Ion: 117 Resp: 8394

Ion Ratio Lower Upper

117 100

119 28.9 76.5 114.7#

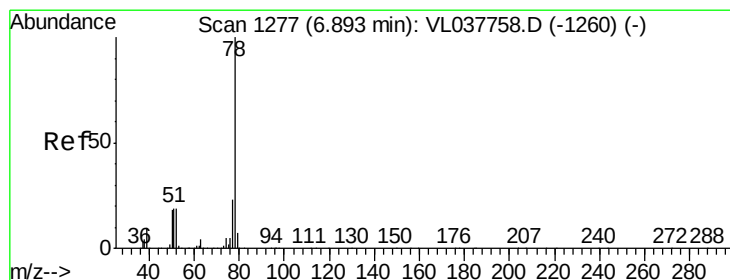
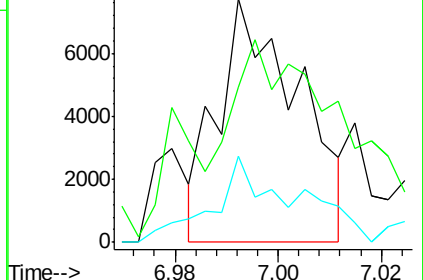
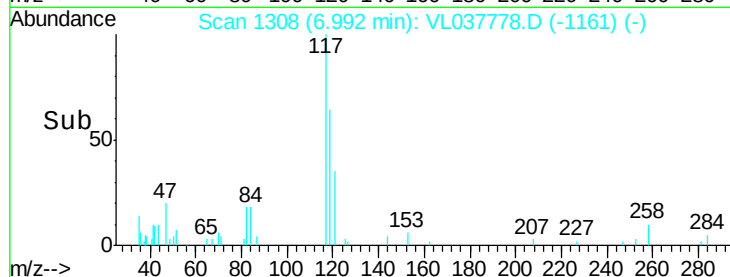
121 33.8 24.9 37.3



Abundance Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V

Ion 121.00 (120.70 to 121.70): V



#36

Benzene

Concen: 0.191 ppbv

RT: 6.87 min Scan# 1270

Delta R.T. -0.02 min

Lab File: VL037778.D

Acq: 5 Oct 2021 17:57

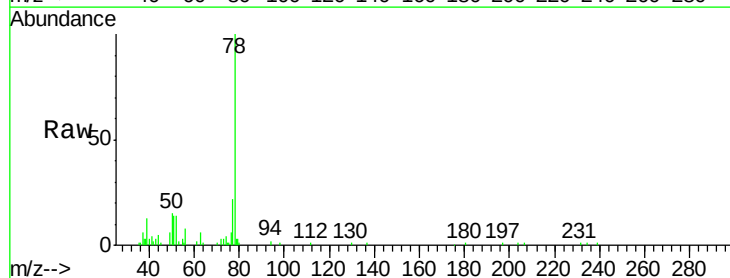
Tgt Ion: 78 Resp: 60419

Ion Ratio Lower Upper

78 100

77 21.6 18.8 28.2

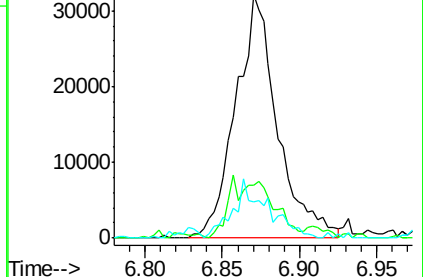
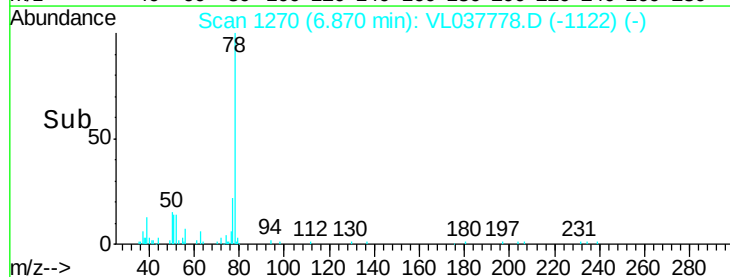
50 13.1 14.7 22.1#

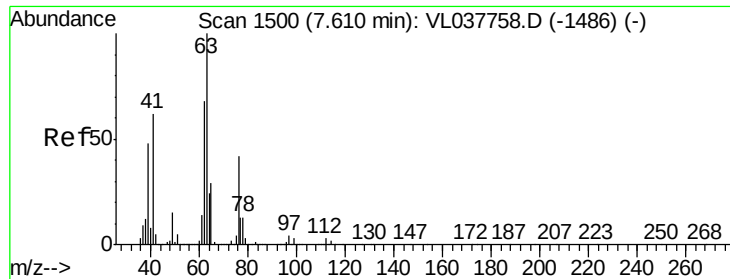


Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0





#39

1,2-Dichloropropane

Concen: 7.438 ppbv

RT: 7.16 min Scan# 1359

Delta R.T. -0.45 min

Lab File: VL037778.D

Acq: 5 Oct 2021 17:57

Instrument :

MSVOA_L

ClientSampleId :

C0P28DUP

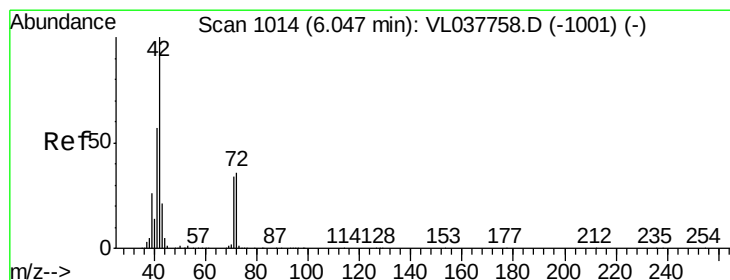
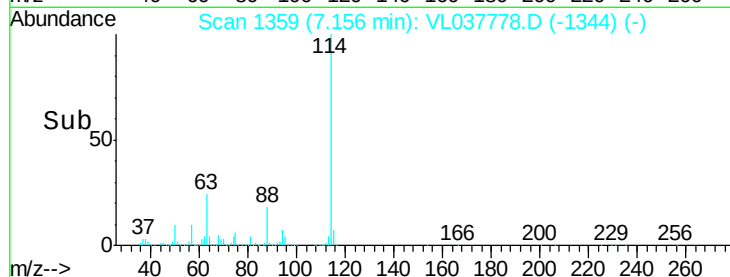
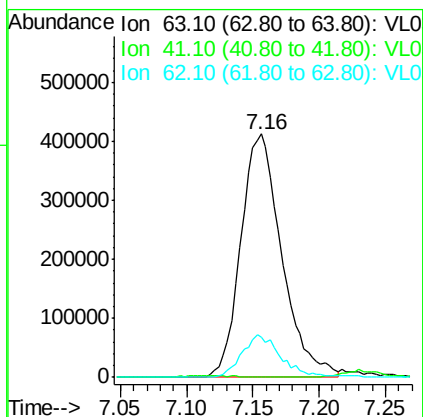
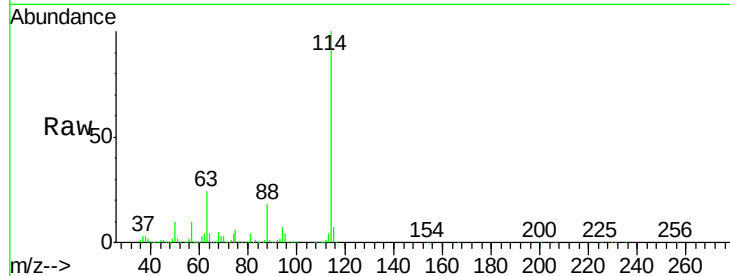
Tgt Ion: 63 Resp: 886042

Ion Ratio Lower Upper

63 100

41 0.0 49.8 74.6#

62 16.3 54.6 82.0#



#41

Tetrahydrofuran

Concen: 0.076 ppbv

RT: 6.04 min Scan# 1011

Delta R.T. -0.01 min

Lab File: VL037778.D

Acq: 5 Oct 2021 17:57

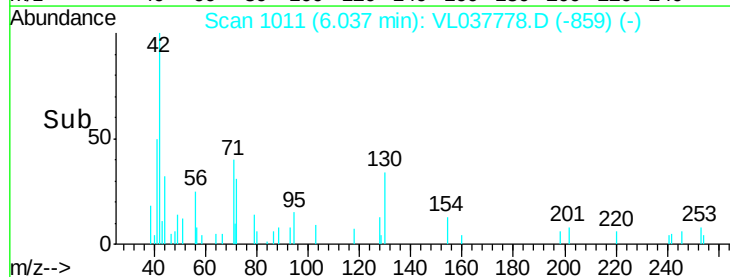
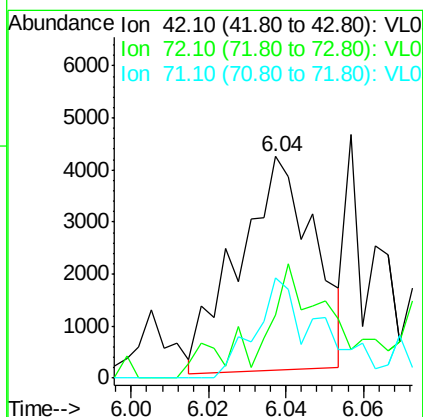
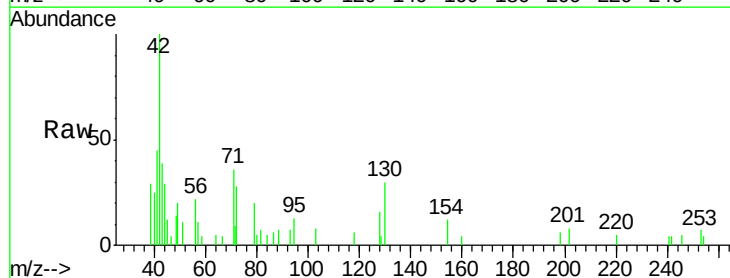
Tgt Ion: 42 Resp: 5546

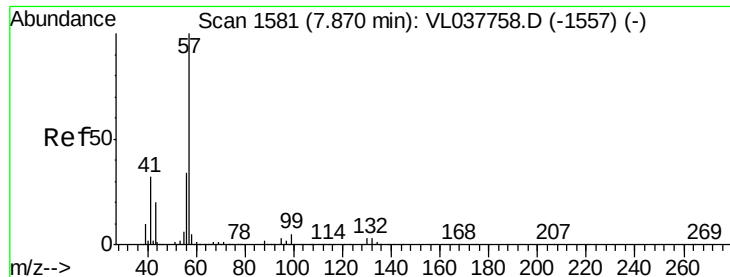
Ion Ratio Lower Upper

42 100

72 51.9 31.9 47.9#

71 49.4 30.3 45.5#

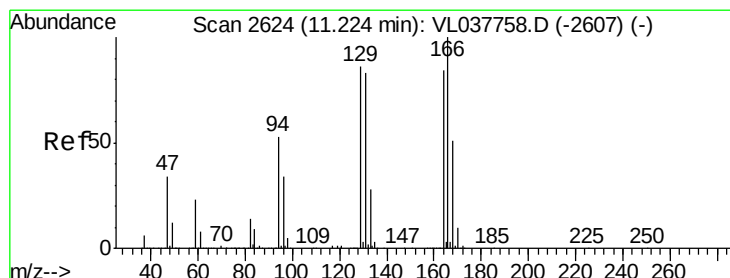
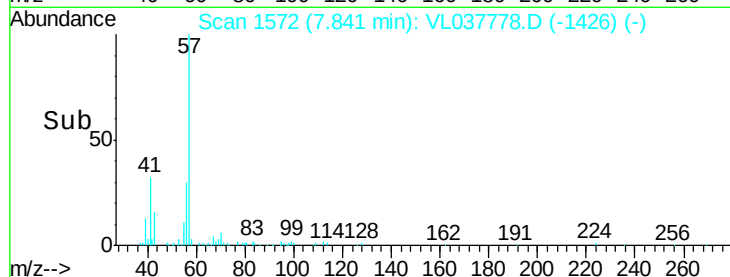
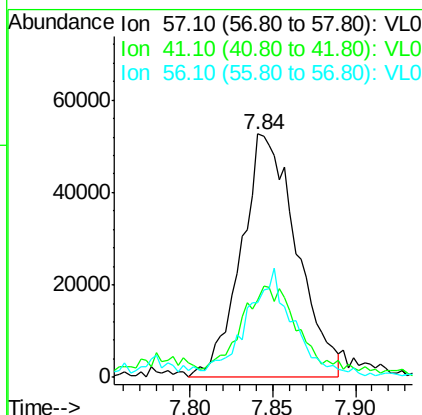
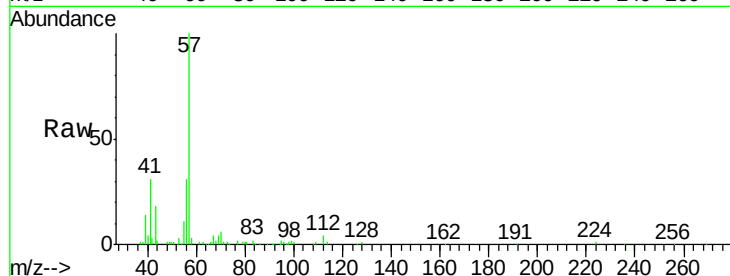




#44
 2,2,4-Trimethylpentane
 Concen: 0.230 ppbv
 RT: 7.84 min Scan# 1572
 Delta R.T. -0.03 min
 Lab File: VL037778.D
 Acq: 5 Oct 2021 17:57

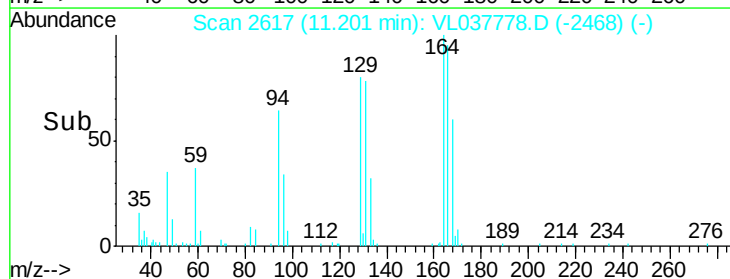
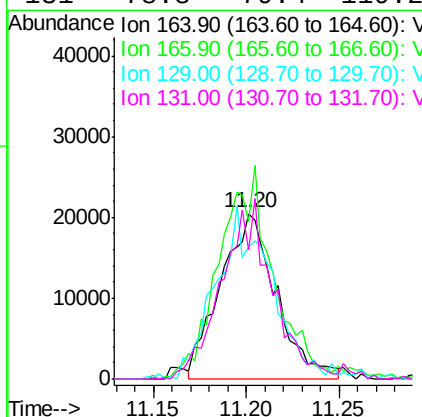
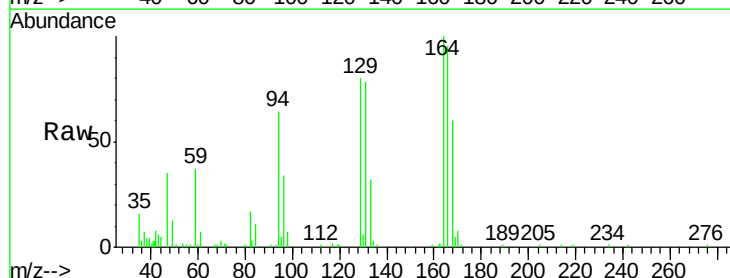
Instrument :
 MSVOA_L
 ClientSampleId :
 C0P28DUP

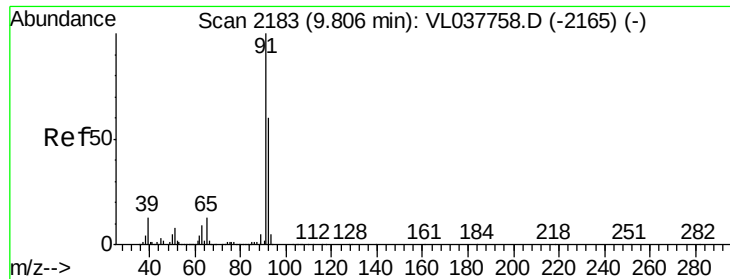
Tgt Ion: 57 Resp: 122396
 Ion Ratio Lower Upper
 57 100
 41 41.3 25.6 38.4#
 56 40.7 25.5 38.3#



#52
 Tetrachloroethene
 Concen: 0.347 ppbv
 RT: 11.20 min Scan# 2617
 Delta R.T. -0.02 min
 Lab File: VL037778.D
 Acq: 5 Oct 2021 17:57

Tgt Ion: 164 Resp: 42789
 Ion Ratio Lower Upper
 164 100
 166 92.0 95.4 143.2#
 129 81.8 82.2 123.4#
 131 78.8 79.4 119.2#





#53

Toluene

Concen: 0.555 ppbv

RT: 9.78 min Scan# 2176

Delta R.T. -0.02 min

Lab File: VL037778.D

Acq: 5 Oct 2021 17:57

Instrument :

MSVOA_L

ClientSampleId :

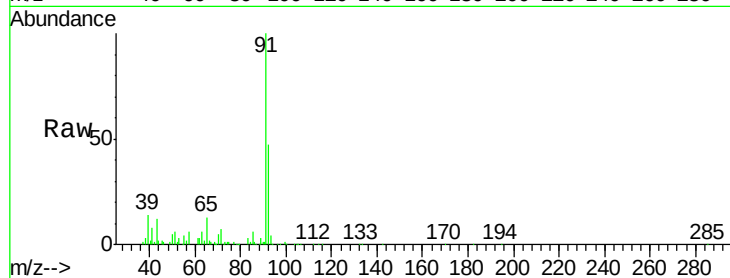
C0P28DUP

Tgt Ion: 91 Resp: 194836

Ion Ratio Lower Upper

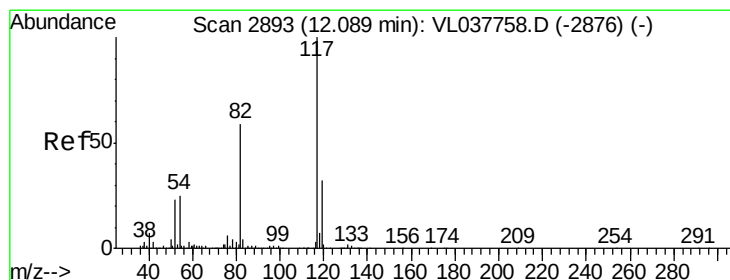
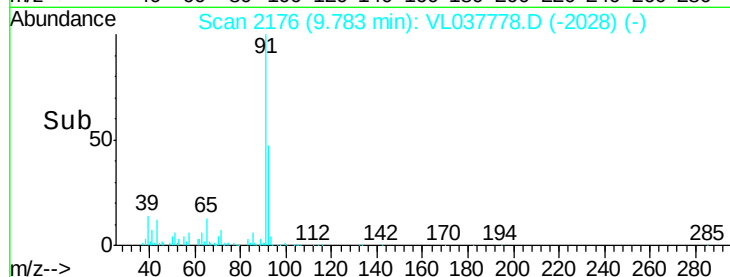
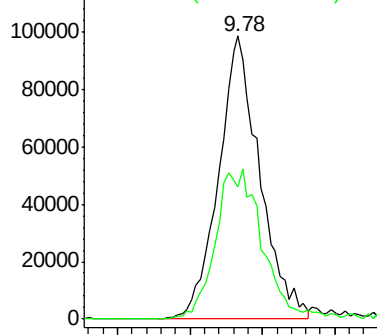
91 100

92 60.9 48.4 72.6



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.06 min Scan# 2884

Delta R.T. -0.03 min

Lab File: VL037778.D

Acq: 5 Oct 2021 17:57

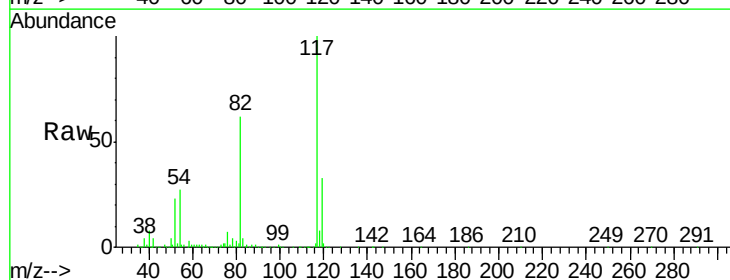
Tgt Ion: 117 Resp: 3180278

Ion Ratio Lower Upper

117 100

82 65.4 52.2 78.2

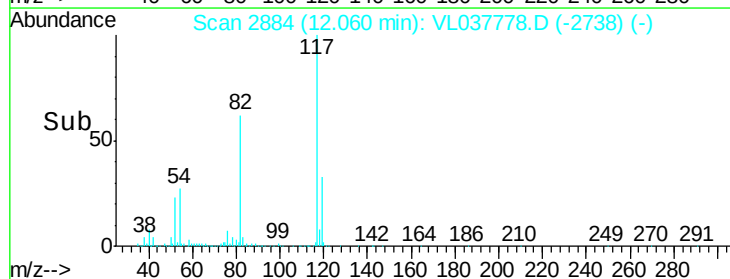
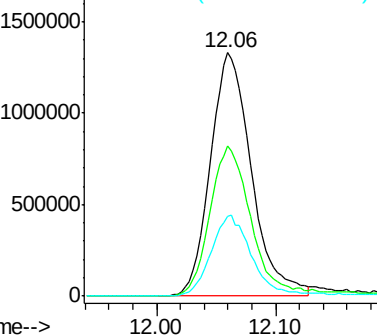
119 34.2 26.0 39.0

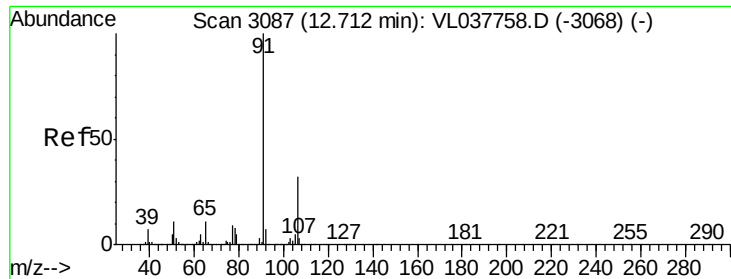


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V





#58

Ethyl Benzene

Concen: 0.213 ppbv

RT: 12.68 min Scan# 3078

Delta R.T. -0.03 min

Lab File: VL037778.D

Acq: 5 Oct 2021 17:57

Instrument :

MSVOA_L

ClientSampleId :

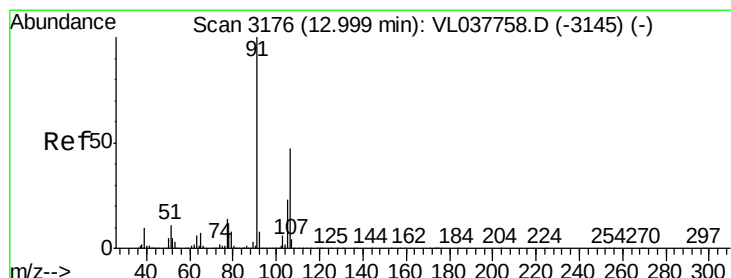
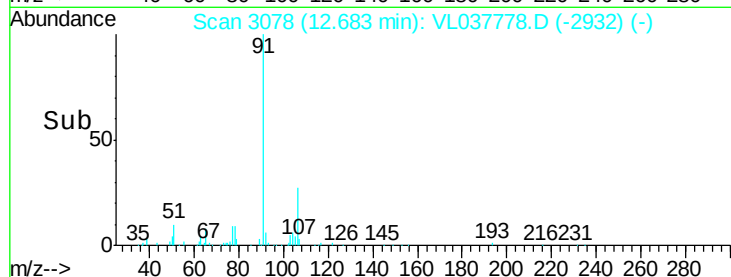
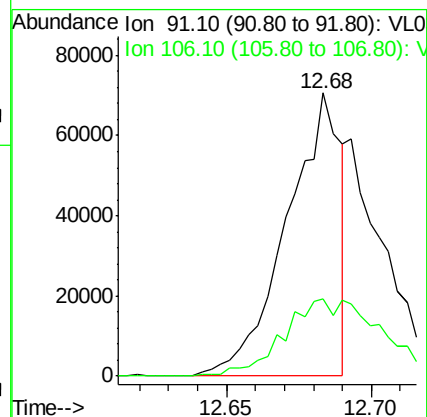
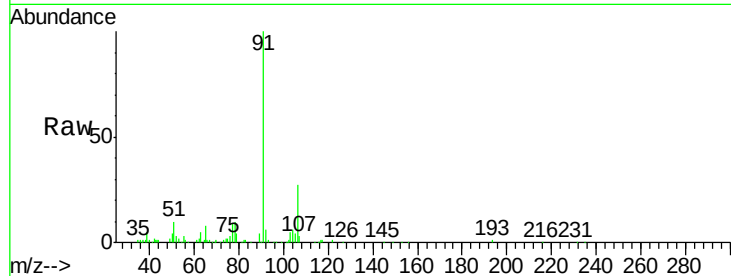
C0P28DUP

Tgt Ion: 91 Resp: 90919

Ion Ratio Lower Upper

91 100

106 27.1 25.3 37.9



#59

m/p-Xylene

Concen: 0.784 ppbv

RT: 12.95 min Scan# 3161

Delta R.T. -0.05 min

Lab File: VL037778.D

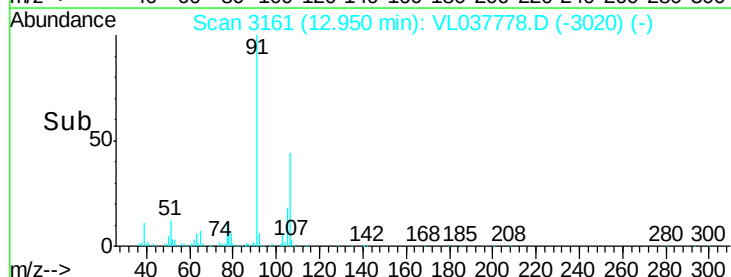
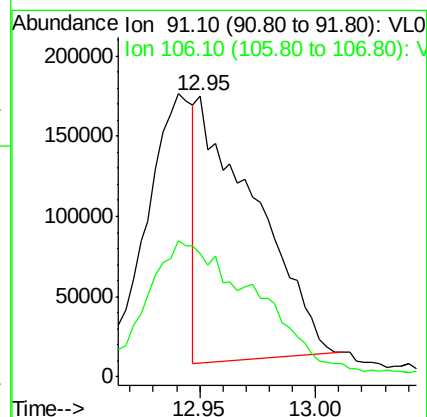
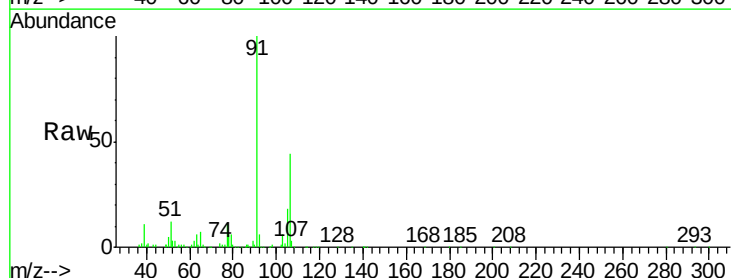
Acq: 5 Oct 2021 17:57

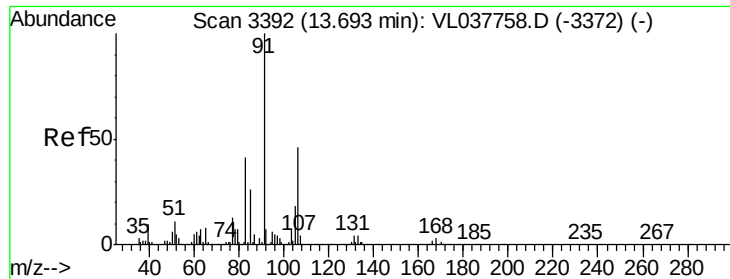
Tgt Ion: 91 Resp: 287329

Ion Ratio Lower Upper

91 100

106 0.0 36.7 55.1#

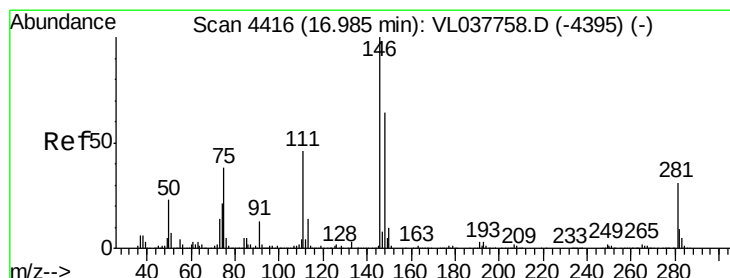
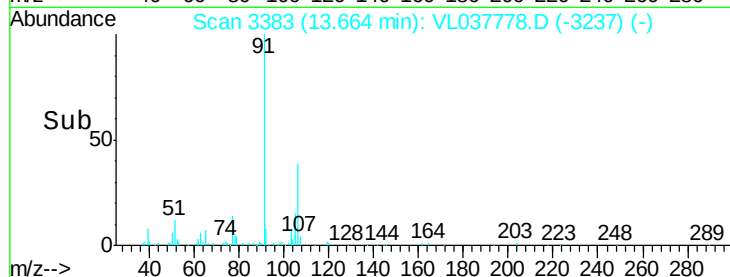
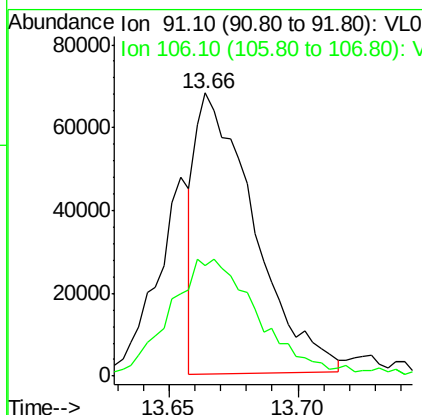
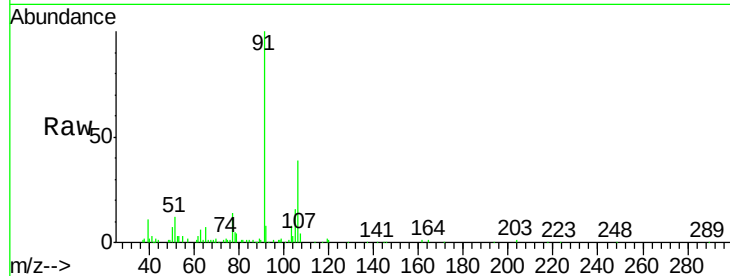




#60
o-Xylene
Concen: 0.303 ppbv
RT: 13.66 min Scan# 3383
Delta R.T. -0.03 min
Lab File: VL037778.D
Acq: 5 Oct 2021 17:57

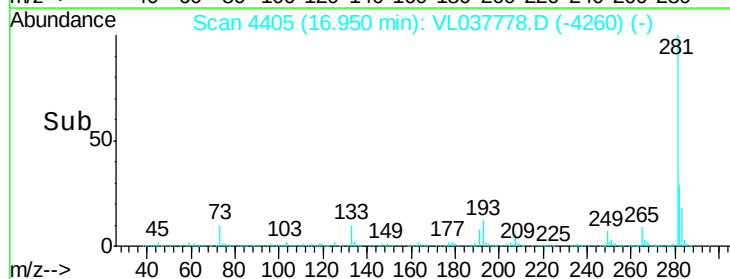
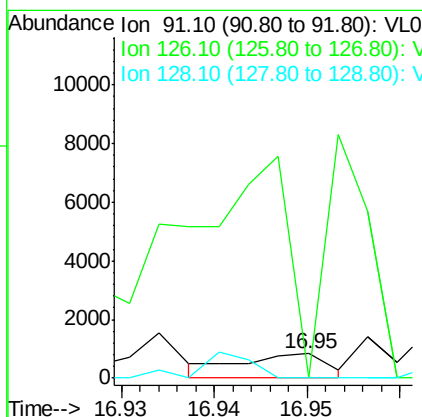
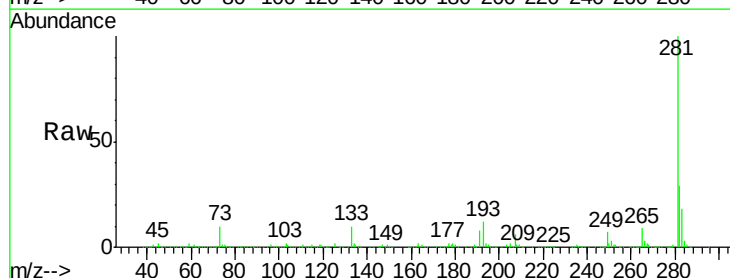
Instrument :
MSVOA_L
ClientSampleId :
C0P28DUP

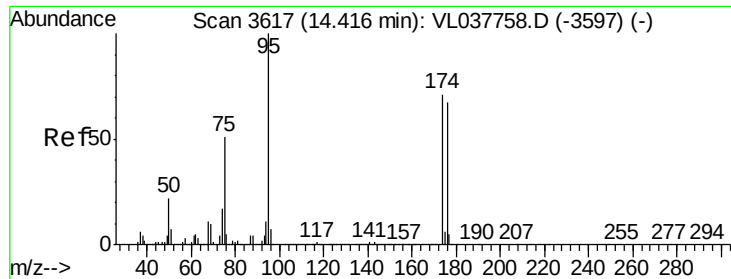
Tgt Ion: 91 Resp: 106482
Ion Ratio Lower Upper
91 100
106 65.5 23.5 70.5



#66
Benzyl Chloride
Concen: 0.026 ppbv
RT: 16.95 min Scan# 4405
Delta R.T. -0.04 min
Lab File: VL037778.D
Acq: 5 Oct 2021 17:57

Tgt Ion: 91 Resp: 550
Ion Ratio Lower Upper
91 100
126 2331.1 0.0 0.0#
128 0.0 5.3 7.9#

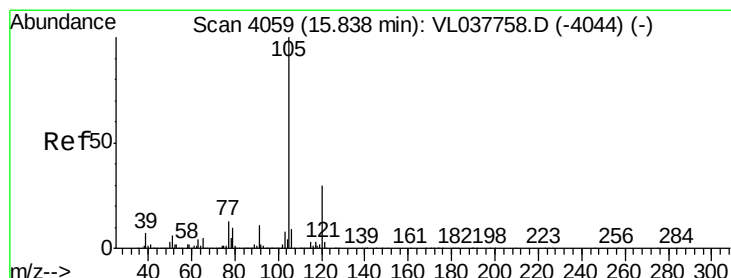
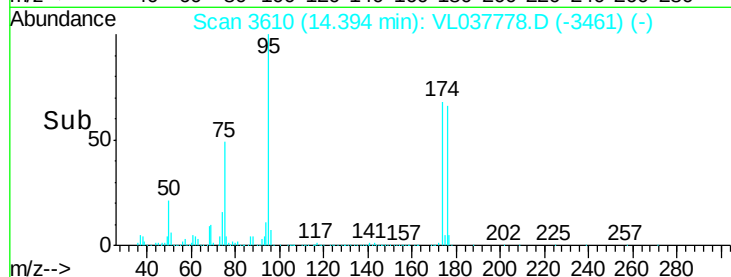
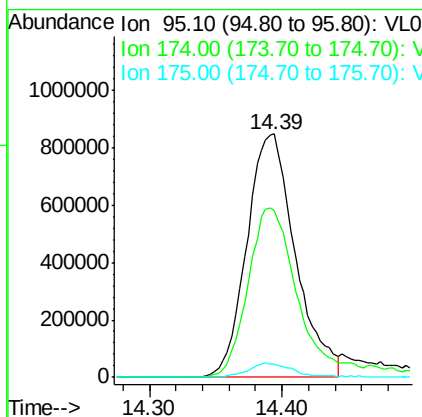
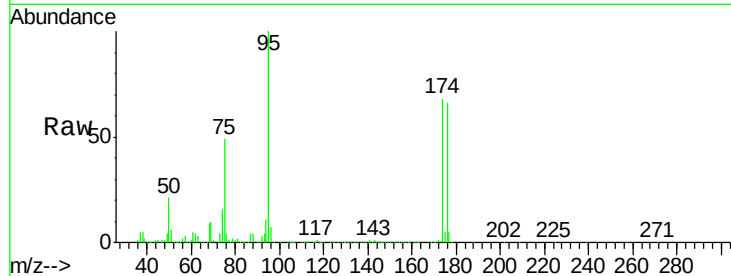




#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.701 ppbv
 RT: 14.39 min Scan# 3610
 Delta R.T. -0.02 min
 Lab File: VL037778.D
 Acq: 5 Oct 2021 17:57

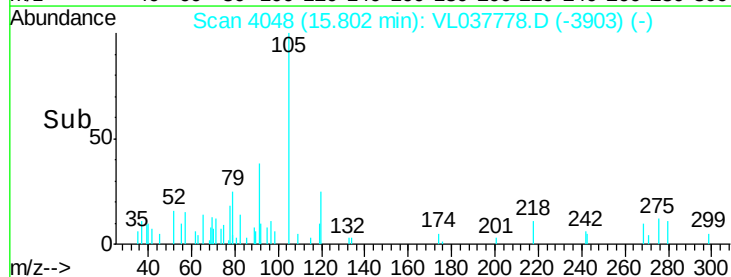
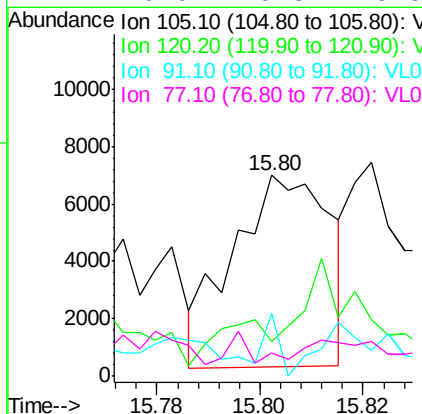
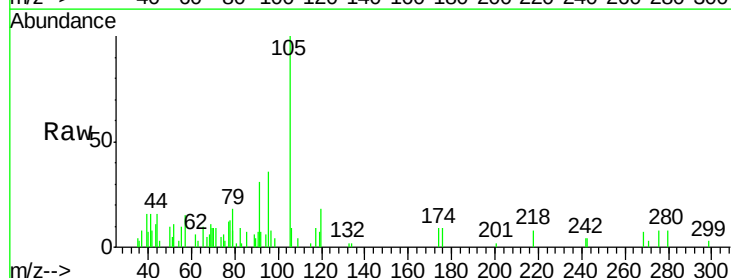
Instrument :
 MSVOA_L
 ClientSampleId :
 C0P28DUP

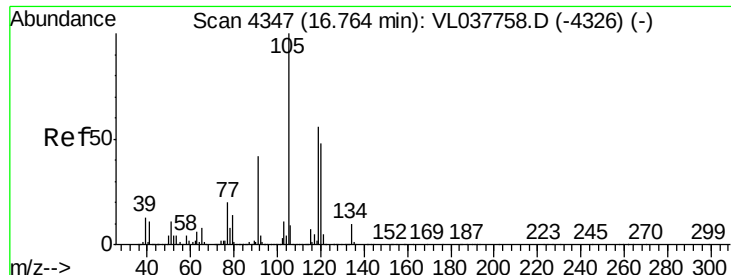
Tgt Ion: 95 Resp: 2157585
 Ion Ratio Lower Upper
 95 100
 174 78.0 57.8 86.6
 175 5.8 4.7 7.1



#72
 4-Ethyltoluene
 Concen: 0.022 ppbv
 RT: 15.80 min Scan# 4048
 Delta R.T. -0.04 min
 Lab File: VL037778.D
 Acq: 5 Oct 2021 17:57

Tgt Ion: 105 Resp: 8738
 Ion Ratio Lower Upper
 105 100
 120 0.0 24.2 36.2#
 91 45.0 10.4 15.6#
 77 0.0 10.3 15.5#





#74

1,2,4-Trimethylbenzene

Concen: 0.062 ppbv

RT: 16.73 min Scan# 4337

Delta R.T. -0.03 min

Lab File: VL037778.D

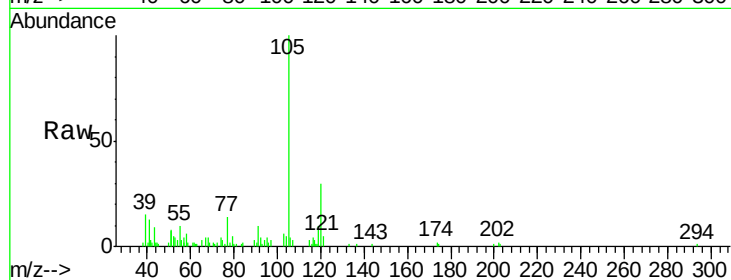
Acq: 5 Oct 2021 17:57

Instrument :

MSVOA_L

ClientSampleId :

C0P28DUP



Tgt Ion:105 Resp: 23704

Ion Ratio Lower Upper

105 100

120 30.7 38.4 57.6#

91 7.6 34.2 51.2#

77 12.4 15.8 23.8#

