

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL073021\
 Data File : VL037299.D
 Acq On : 31 Jul 2021 1:59
 Operator : SY/AP
 Sample : M3121-01DUP
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

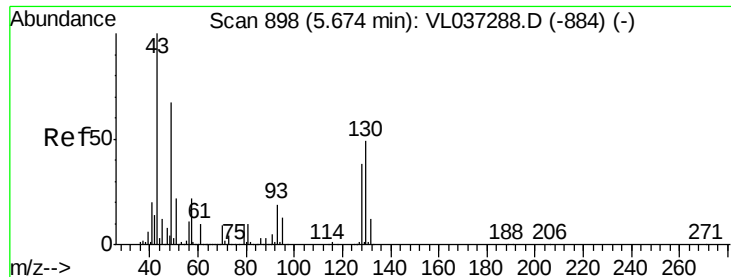
Quant Time: Jul 31 02:32:53 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL073021AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Jul 30 23:19:30 2021
 QLast Update : Fri Jul 30 23:19:30 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1197823	10.00	ppbv	-0.01
33) 1,4-Difluorobenzene	7.17	114	3673202	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.09	117	3315842	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.42	95	2254390	9.35	ppbv	-0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	93.50%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.04	85	43117	0.250	ppbv 93
3) Chlorodifluoromethane	2.98	51	402428	1.677	ppbv 95
4) Chloromethane	3.13	50	43960	0.525	ppbv 97
6) Bromomethane	3.47	94	1849	0.036	ppbv 96
7) Chloroethane	3.55	64	1395	0.044	ppbv # 63
9) Propene	3.00	41	13181	0.163	ppbv # 1
10) Heptane	8.12	43	8669	0.045	ppbv # 27
11) Trichlorofluoromethane	3.94	101	50428	0.235	ppbv 99
12) 1,1,2-Trichlorotrifluoroet	4.48	101	12389	0.078	ppbv # 65
13) Ethanol	3.60	45	106260	5.988	ppbv # 11
15) Acetone	3.84	43	681056	3.157	ppbv 100
19) Isopropyl Alcohol	3.97	45	89171	1.068	ppbv # 49
20) Methylene Chloride	4.34	84	450705	5.398	ppbv 98
23) Vinyl Acetate	5.07	43	15475	0.085	ppbv # 79
25) Ethyl Acetate	5.68	43	310444	0.992	ppbv # 82
26) Hexane	5.68	57	415773	2.485	ppbv # 53
29) Chloroform	5.74	83	10311	0.043	ppbv 99
30) Cyclohexane	7.12	84	5254	0.040	ppbv # 1
34) 2-Butanone	5.25	43	29474	0.187	ppbv # 8
35) Carbon Tetrachloride	7.02	117	20722	0.089	ppbv # 78
36) Benzene	6.89	78	52117	0.168	ppbv 97
39) 1,2-Dichloropropane	7.17	63	830466	7.101	ppbv # 25
44) 2,2,4-Trimethylpentane	7.87	57	45341	0.089	ppbv # 30
52) Tetrachloroethene	11.22	164	4280	0.031	ppbv # 37
53) Toluene	9.80	91	800868	2.190	ppbv 99
59) m/p-Xylene	13.00	91	19539	0.050	ppbv # 30
60) o-Xylene	13.70	91	12373	0.033	ppbv # 6
74) 1,2,4-Trimethylbenzene	16.77	105	26563	0.059	ppbv # 72

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 min Scan# 894

Delta R.T. -0.01 min

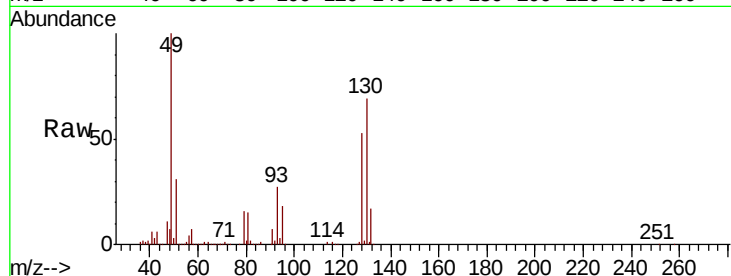
Lab File: VL037299.D

Acq: 31 Jul 2021 1:59

Instrument :
MSVOA_L
ClientSampled :

Tot Ion: 49 Resp: 1197823

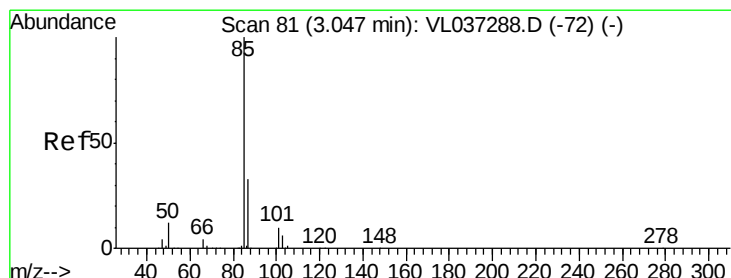
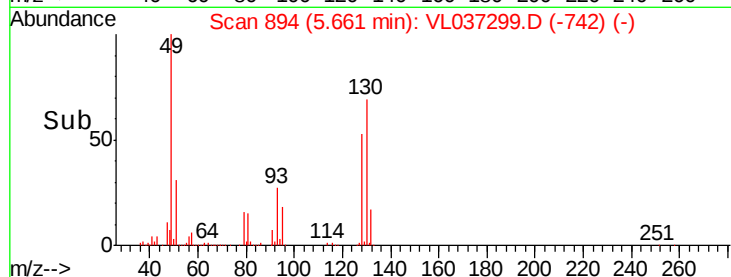
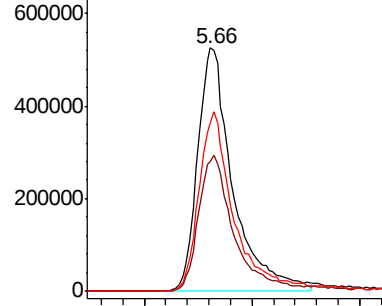
Ion	Ratio	Lower	Upper
49	100		
128	57.4	30.6	92.0
130	75.5	37.8	113.4



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: 0.250 ppbv

RT: 3.04 min Scan# 79

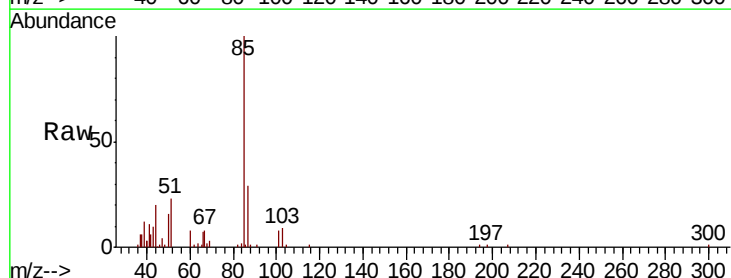
Delta R.T. -0.01 min

Lab File: VL037299.D

Acq: 31 Jul 2021 1:59

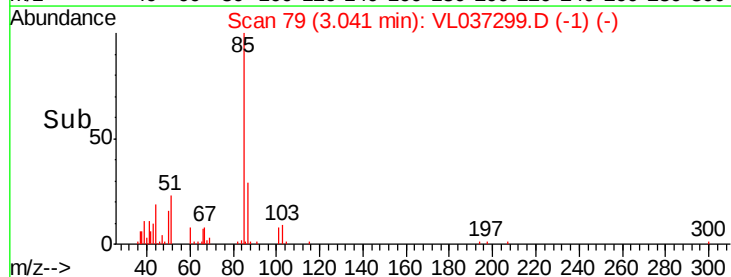
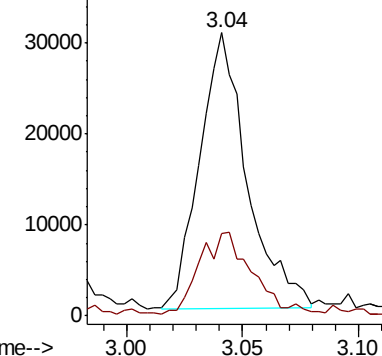
Tgt Ion: 85 Resp: 43117

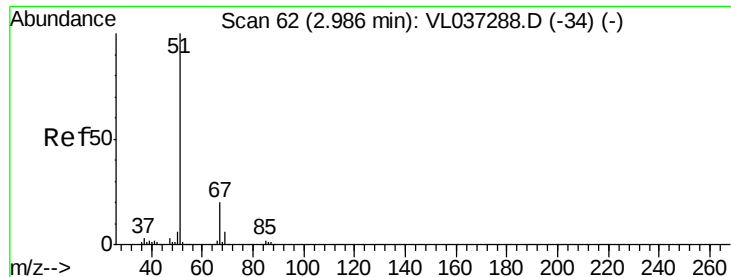
Ion	Ratio	Lower	Upper
85	100		
87	29.2	26.6	40.0



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 1.677 ppbv

RT: 2.98 min Scan# 60

Delta R.T. -0.01 min

Lab File: VL037299.D

Acq: 31 Jul 2021 1:59

Instrument :

MSVOA_L

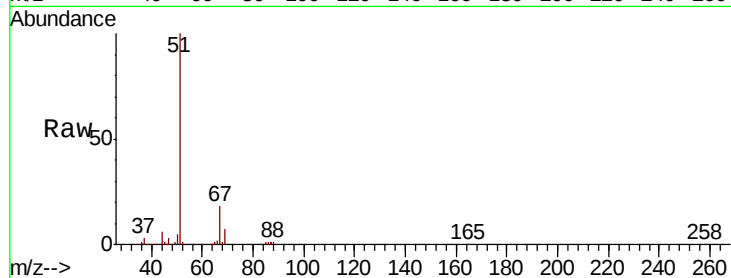
ClientSampleId :

Tot Ion: 51 Resp: 402428

Ion Ratio Lower Upper

51 100

67 17.0 15.2 22.8



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0

250000

200000

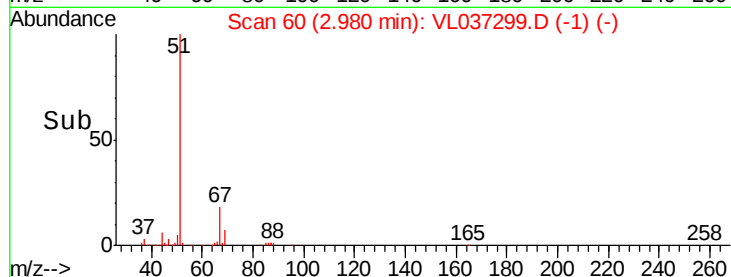
150000

100000

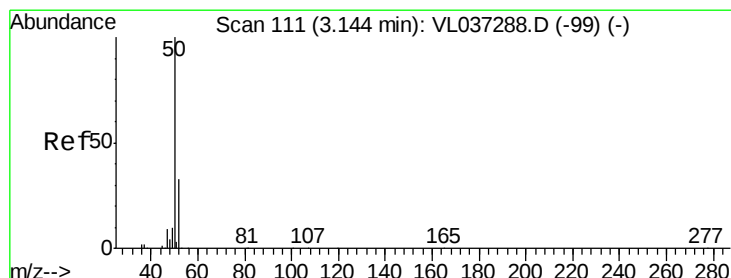
50000

0

Time-->



Time-->



#4

Chloromethane

Concen: 0.525 ppbv

RT: 3.13 min Scan# 108

Delta R.T. -0.01 min

Lab File: VL037299.D

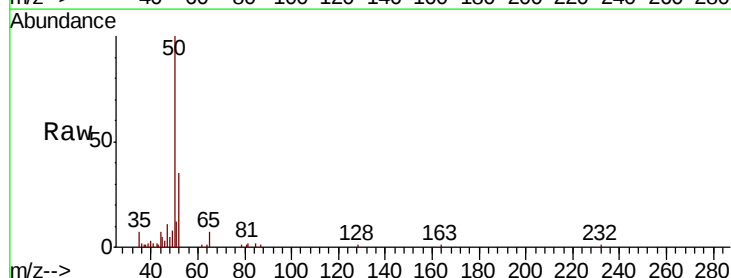
Acq: 31 Jul 2021 1:59

Tgt Ion: 50 Resp: 43960

Ion Ratio Lower Upper

50 100

52 34.5 26.2 39.4



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0

25000

20000

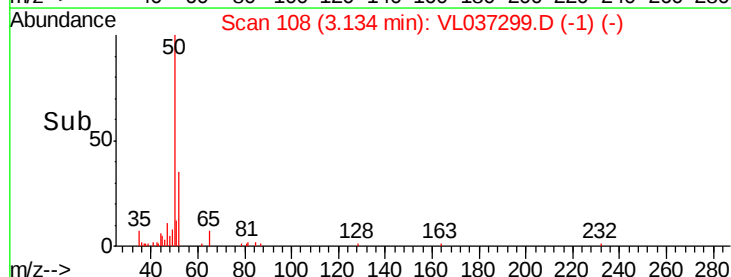
15000

10000

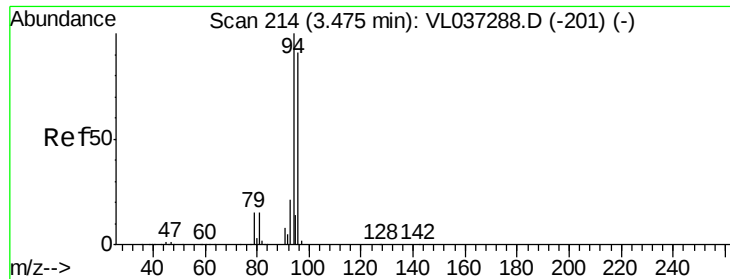
5000

0

Time-->



Time-->



#6

Bromomethane

Concen: 0.036 ppbv

RT: 3.47 min Scan# 212

Delta R.T. -0.01 min

Lab File: VL037299.D

Acq: 31 Jul 2021 1:59

Instrument :

MSVOA_L

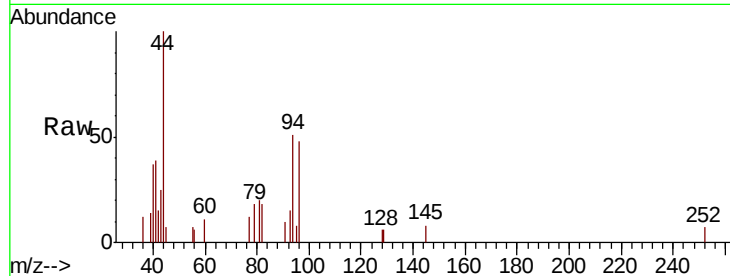
ClientSampleId :

Tot Ion: 94 Resp: 1849

Ion Ratio Lower Upper

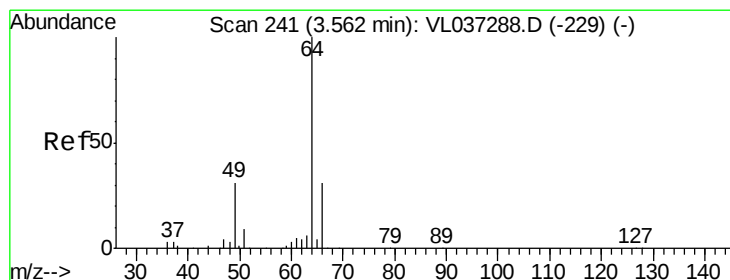
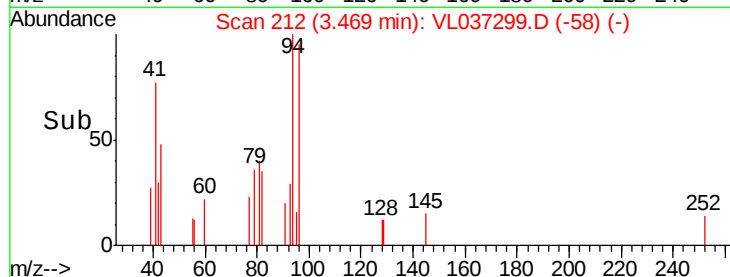
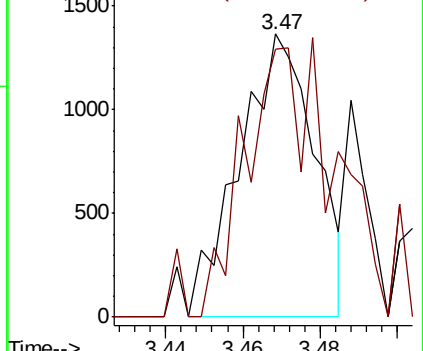
94 100

96 94.7 72.7 109.1



Abundance Ion 94.00 (93.70 to 94.70): VL0

Ion 96.00 (95.70 to 96.70): VL0



#7

Chloroethane

Concen: 0.044 ppbv

RT: 3.55 min Scan# 236

Delta R.T. -0.02 min

Lab File: VL037299.D

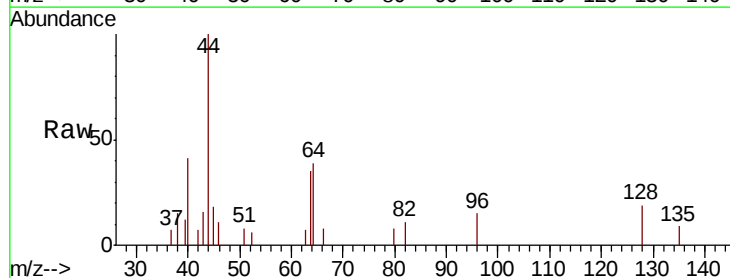
Acq: 31 Jul 2021 1:59

Tgt Ion: 64 Resp: 1395

Ion Ratio Lower Upper

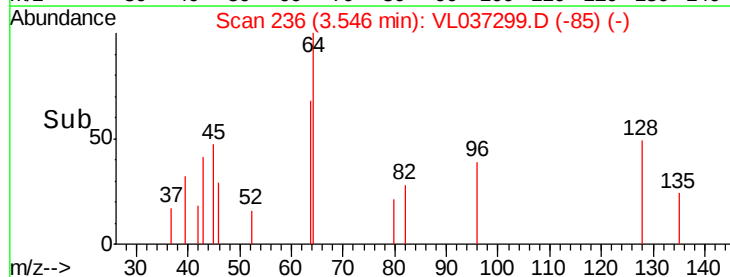
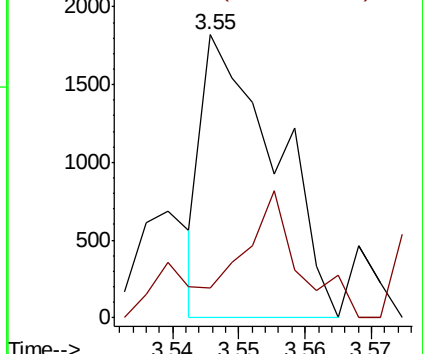
64 100

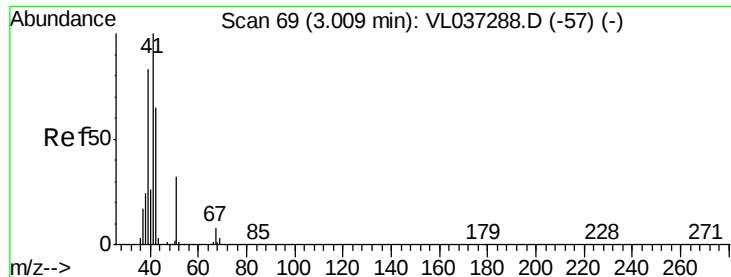
66 10.7 24.9 37.3#



Abundance Ion 64.10 (63.80 to 64.80): VL0

Ion 66.10 (65.80 to 66.80): VL0





#9

Propene

Concen: 0.163 ppbv

RT: 3.00 min Scan# 67

Delta R.T. -0.01 min

Lab File: VL037299.D

Acq: 31 Jul 2021 1:59

Instrument :

MSVOA_L

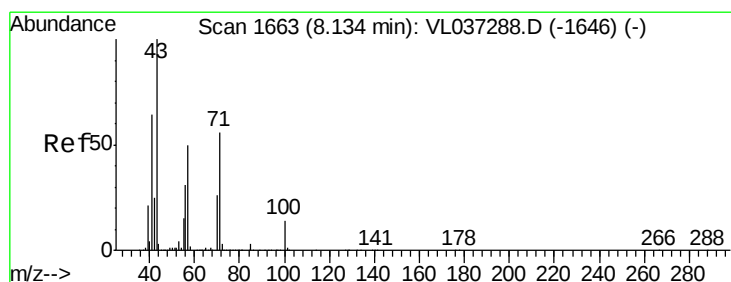
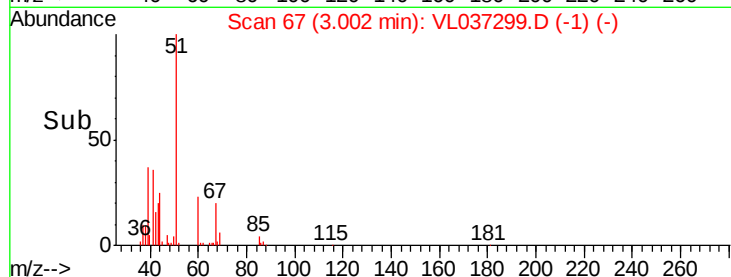
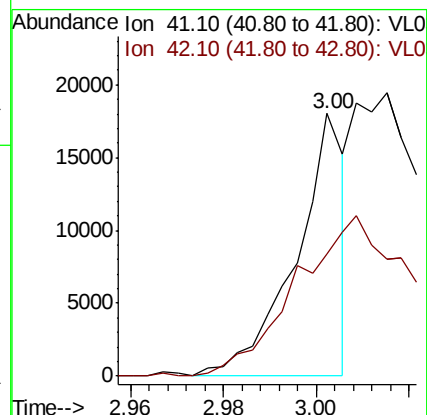
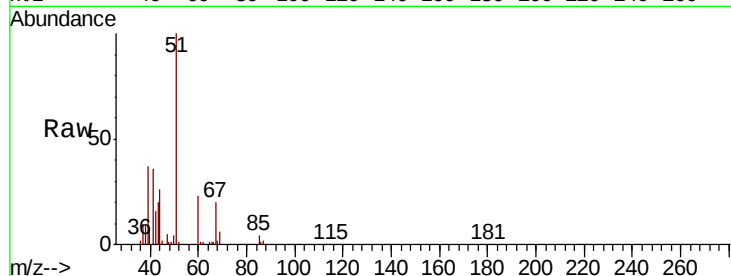
ClientSampleId :

Tot Ion: 41 Resp: 13181

Ion Ratio Lower Upper

41 100

42 171.6 54.0 81.0#



#10

Heptane

Concen: 0.045 ppbv

RT: 8.12 min Scan# 1658

Delta R.T. -0.02 min

Lab File: VL037299.D

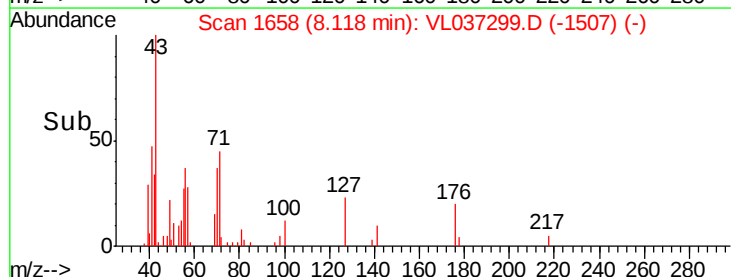
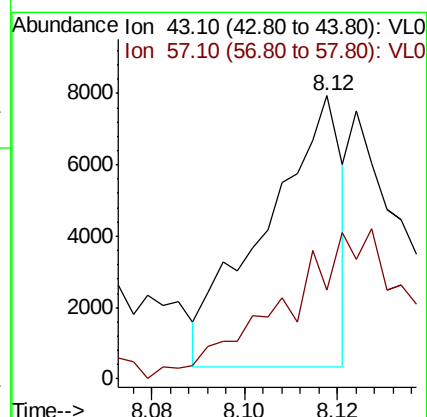
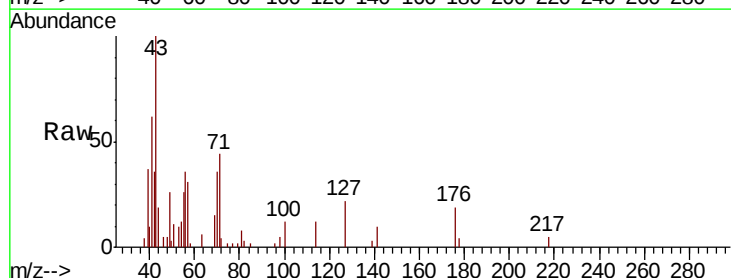
Acq: 31 Jul 2021 1:59

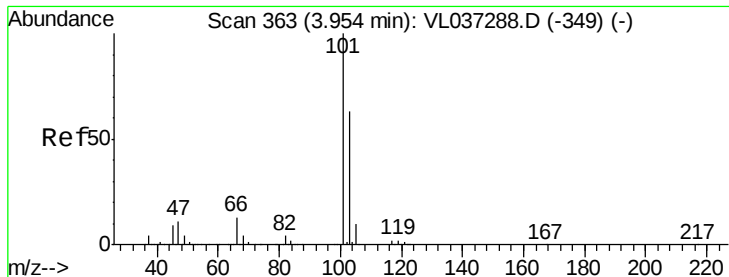
Tgt Ion: 43 Resp: 8669

Ion Ratio Lower Upper

43 100

57 0.0 40.9 61.3#

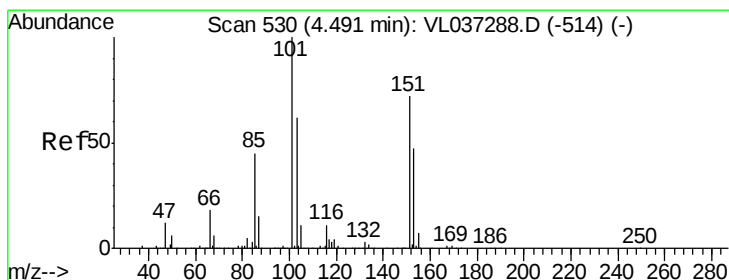
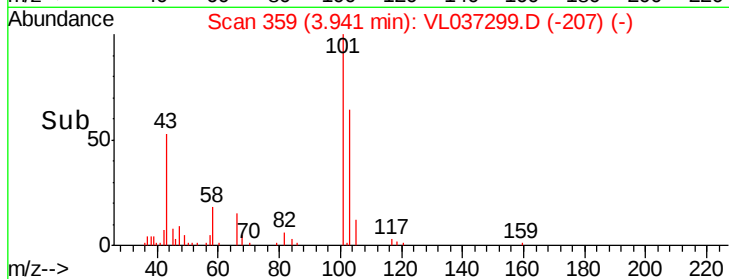
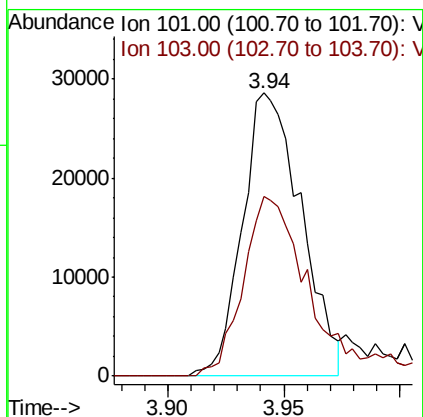
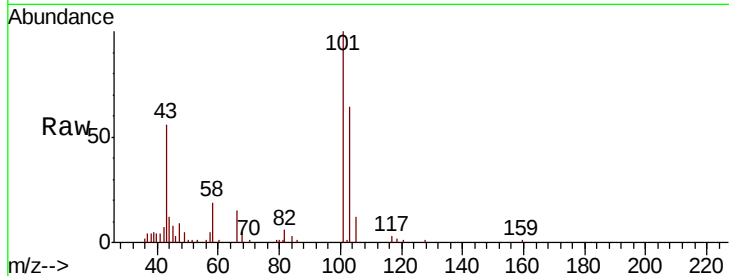




#11
 Trichlorofluoromethane
 Concen: 0.235 ppbv
 RT: 3.94 min Scan# 359
 Delta R.T. -0.01 min
 Lab File: VL037299.D
 Acq: 31 Jul 2021 1:59

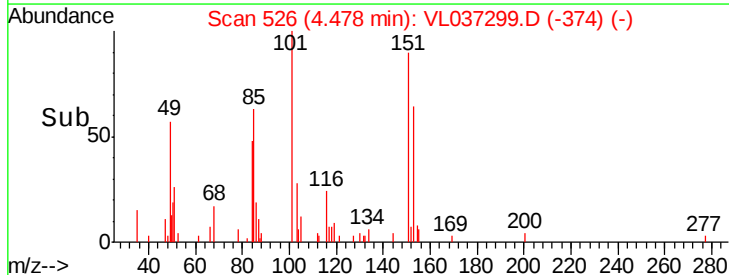
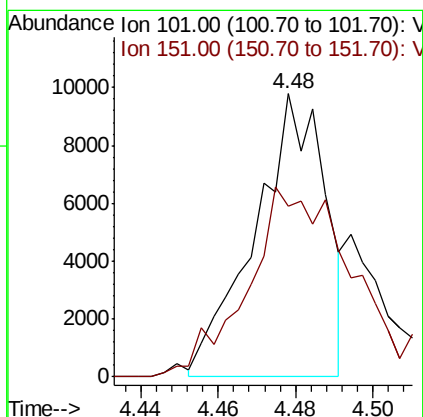
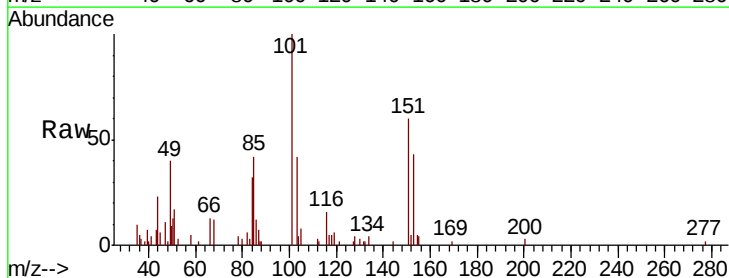
Instrument :
 MSVOA_L
 ClientSampleId :

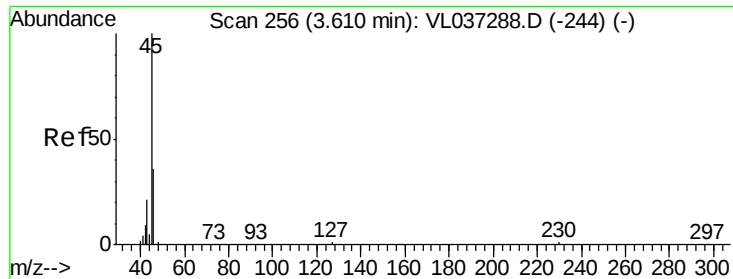
Tot Ion:101 Resp: 50428
 Ion Ratio Lower Upper
 101 100
 103 63.6 50.6 75.8



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.078 ppbv
 RT: 4.48 min Scan# 526
 Delta R.T. -0.01 min
 Lab File: VL037299.D
 Acq: 31 Jul 2021 1:59

Tgt Ion:101 Resp: 12389
 Ion Ratio Lower Upper
 101 100
 151 106.9 61.4 92.0#

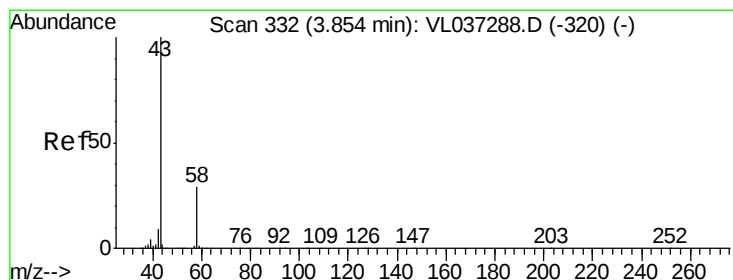
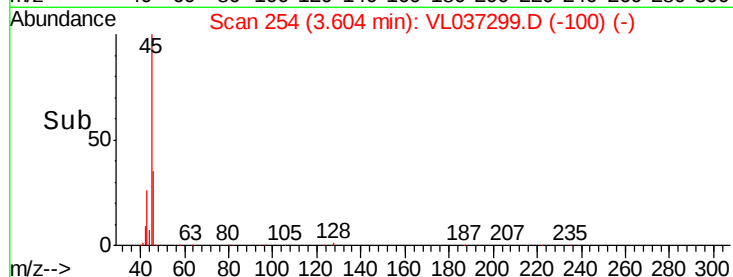
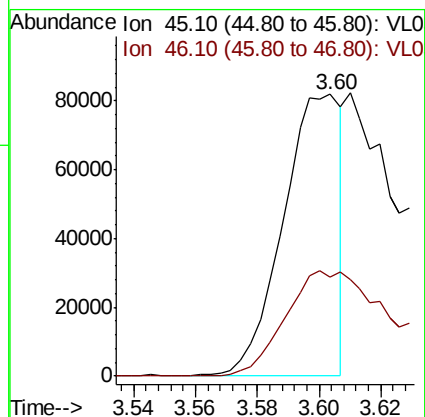
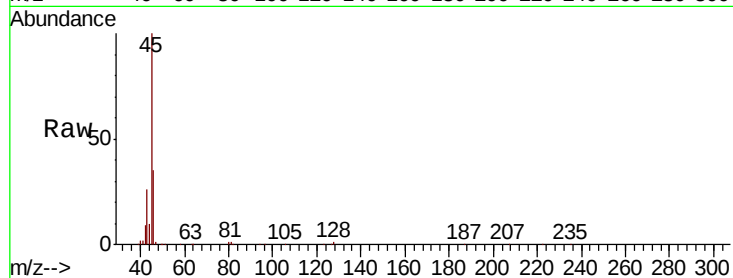




#13
Ethanol
Concen: 5.988 ppbv
RT: 3.60 min Scan# 254
Delta R.T. -0.01 min
Lab File: VL037299.D
Acq: 31 Jul 2021 1:59

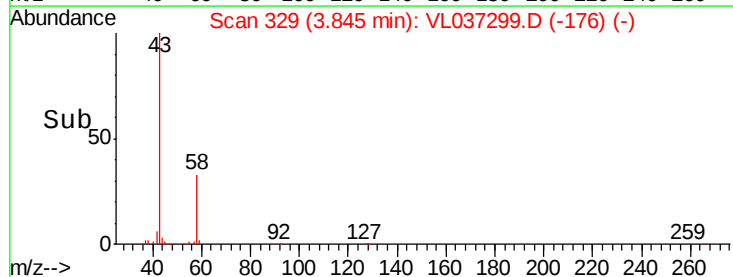
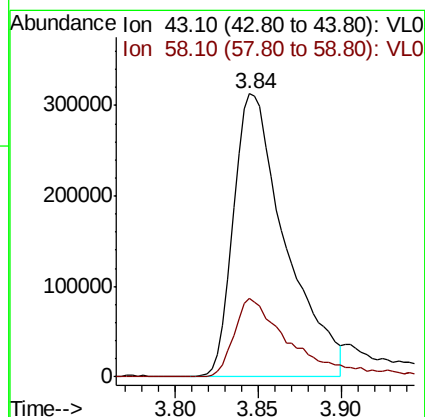
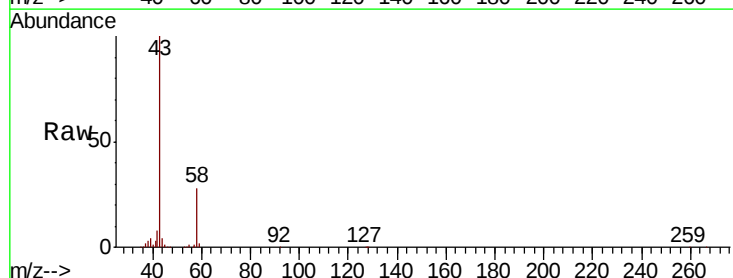
Instrument :
MSVOA_L
ClientSampleId :

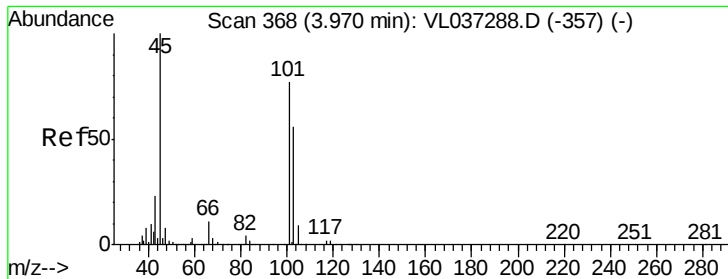
Tot Ion: 45 Resp: 106260
Ion Ratio Lower Upper
45 100
46 95.8 16.2 64.8#



#15
Acetone
Concen: 3.157 ppbv
RT: 3.84 min Scan# 329
Delta R.T. -0.01 min
Lab File: VL037299.D
Acq: 31 Jul 2021 1:59

Tgt Ion: 43 Resp: 681056
Ion Ratio Lower Upper
43 100
58 30.5 24.2 36.4





#19

Isopropyl Alcohol

Concen: 1.068 ppbv

RT: 3.97 min Scan# 368

Delta R.T. 0.00 min

Lab File: VL037299.D

Acq: 31 Jul 2021 1:59

Instrument :

MSVOA_L

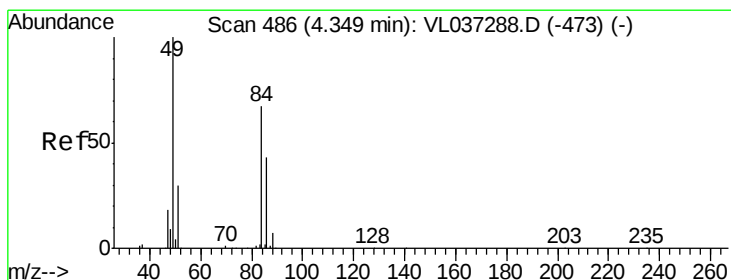
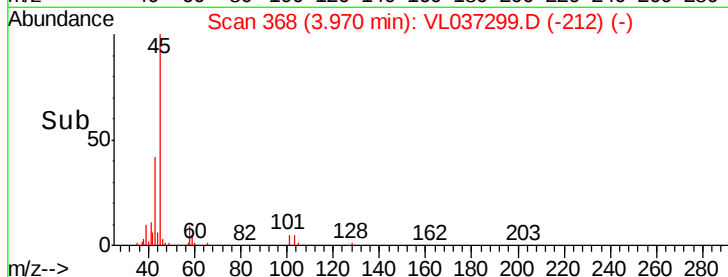
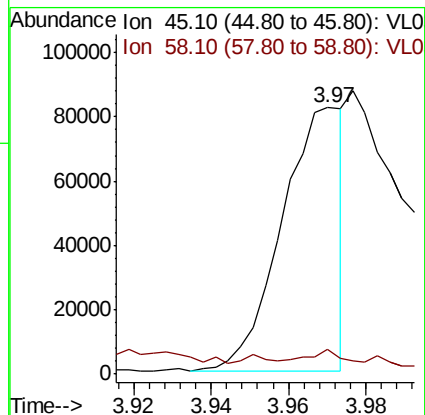
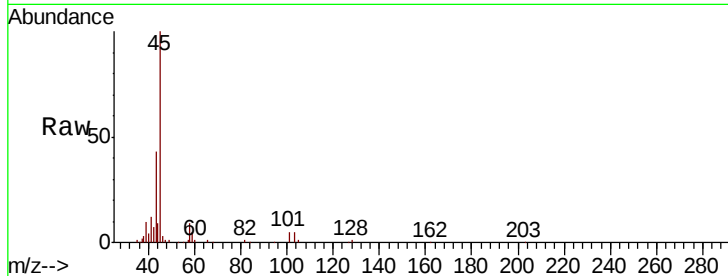
ClientSampleId :

Tot Ion: 45 Resp: 89171

Ion Ratio Lower Upper

45 100

58 19.9 2.2 3.2#



#20

Methylene Chloride

Concen: 5.398 ppbv

RT: 4.34 min Scan# 483

Delta R.T. -0.01 min

Lab File: VL037299.D

Acq: 31 Jul 2021 1:59

Tgt Ion: 84 Resp: 450705

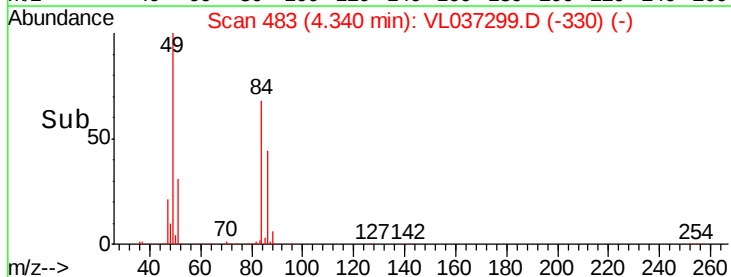
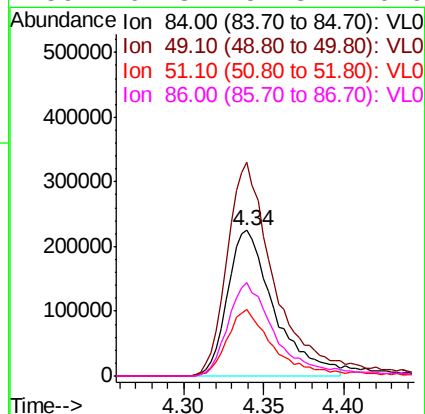
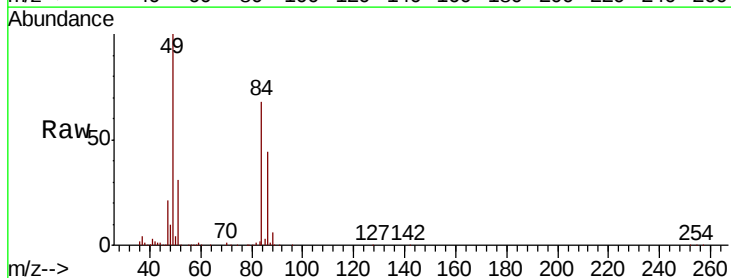
Ion Ratio Lower Upper

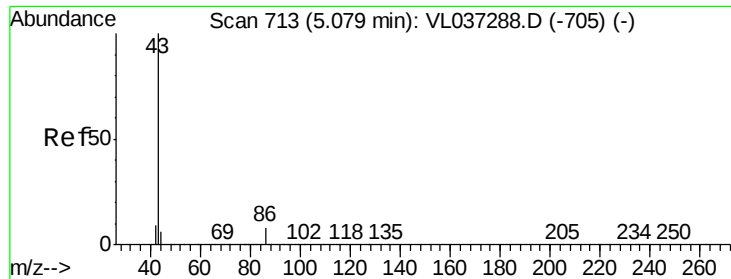
84 100

49 146.4 120.2 180.4

51 45.5 36.5 54.7

86 64.3 51.3 76.9

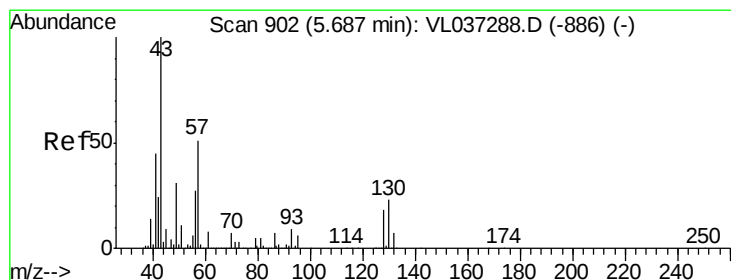
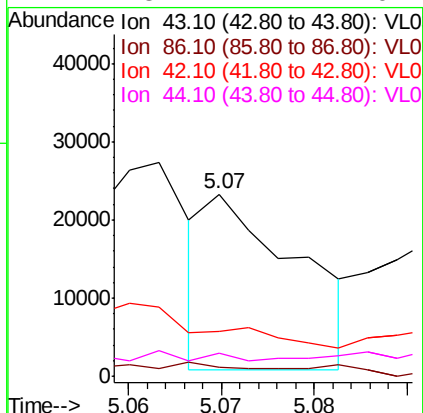
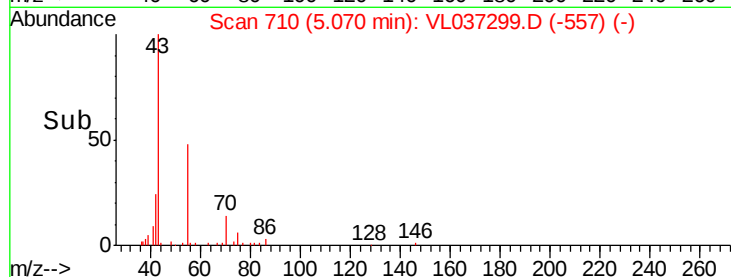
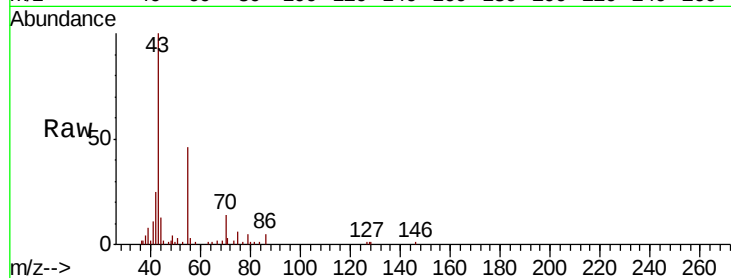




#23
 Vinyl Acetate
 Concen: 0.085 ppbv
 RT: 5.07 min Scan# 710
 Delta R.T. -0.01 min
 Lab File: VL037299.D
 Acq: 31 Jul 2021 1:59

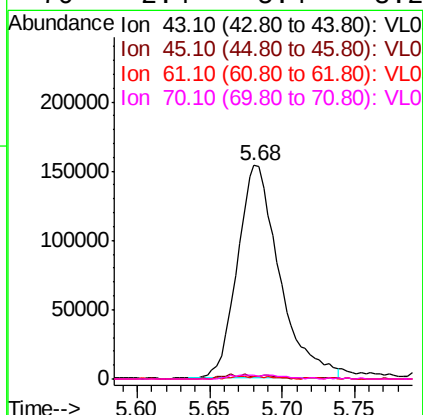
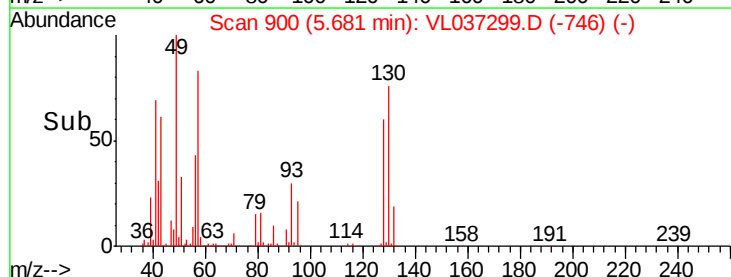
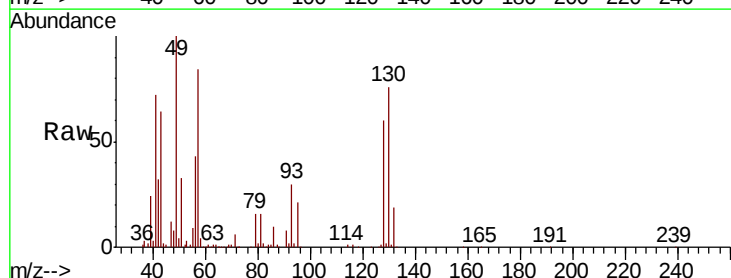
Instrument :
 MSVOA_L
 ClientSampleId :

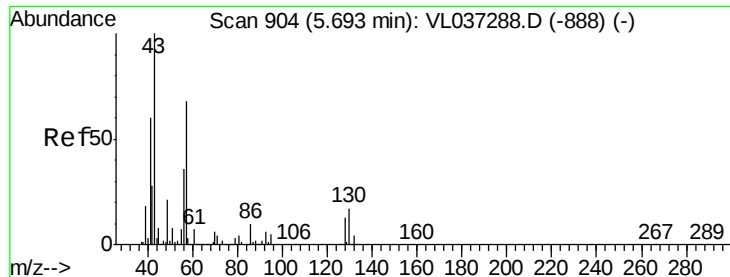
Tot Ion:	43	Resp:	15475
Ion	Ratio	Lower	Upper
43	100		
86	0.0	5.7	8.5#
42	20.3	8.1	12.1#
44	8.4	4.1	6.1#



#25
 Ethyl Acetate
 Concen: 0.992 ppbv
 RT: 5.68 min Scan# 900
 Delta R.T. -0.01 min
 Lab File: VL037299.D
 Acq: 31 Jul 2021 1:59

Tgt Ion:	43	Resp:	310444
Ion	Ratio	Lower	Upper
43	100		
45	2.3	7.4	11.2#
61	1.7	7.8	11.6#
70	2.4	5.4	8.2#

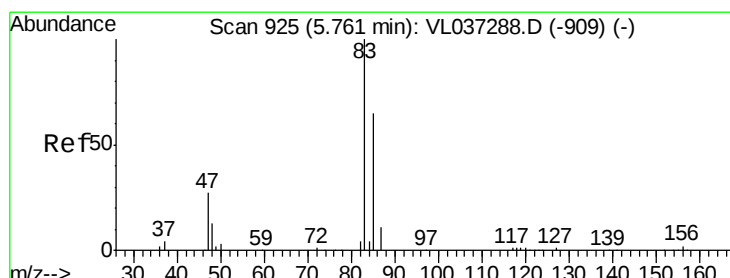
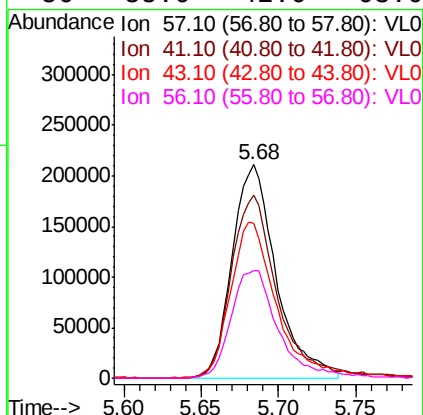
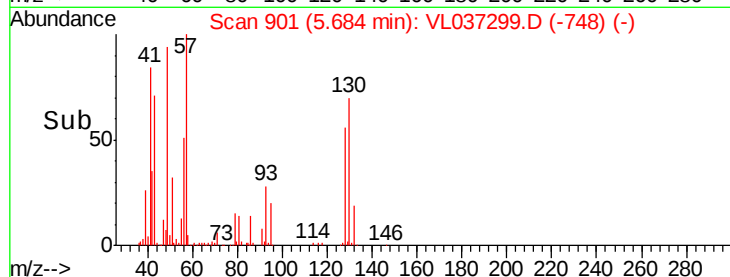
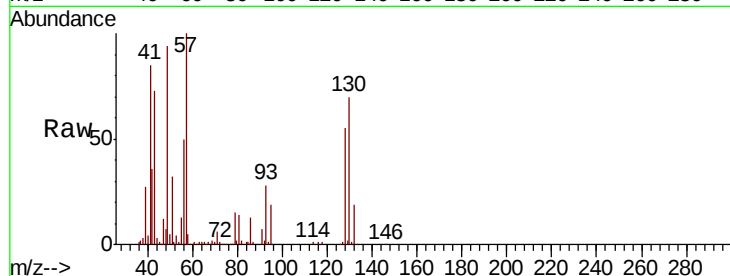




#26
Hexane
Concen: 2.485 ppbv
RT: 5.68 min Scan# 901
Delta R.T. -0.01 min
Lab File: VL037299.D
Acq: 31 Jul 2021 1:59

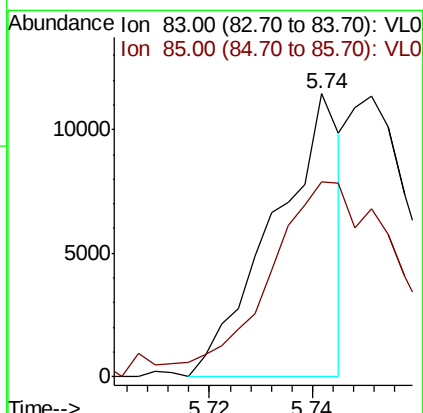
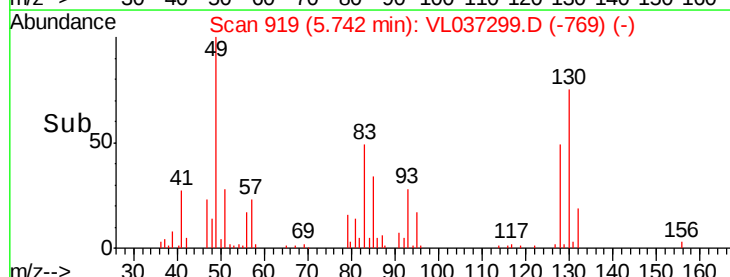
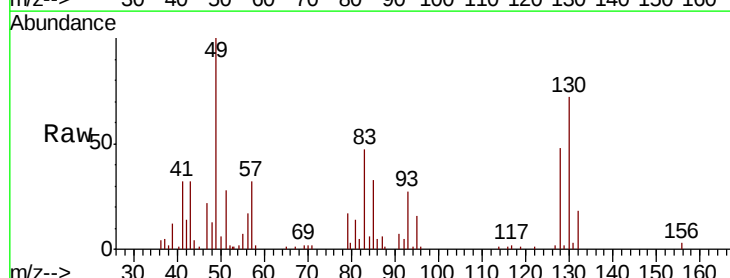
Instrument :
MSVOA_L
ClientSampled :

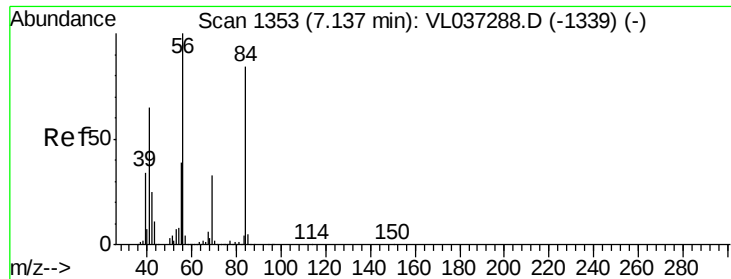
Tot Ion: 57 Resp: 415773
Ion Ratio Lower Upper
57 100
41 92.2 71.0 106.6
43 77.4 155.0 232.4#
56 55.0 42.0 63.0



#29
Chloroform
Concen: 0.043 ppbv
RT: 5.74 min Scan# 919
Delta R.T. -0.02 min
Lab File: VL037299.D
Acq: 31 Jul 2021 1:59

Tgt Ion: 83 Resp: 10311
Ion Ratio Lower Upper
83 100
85 64.0 51.9 77.9

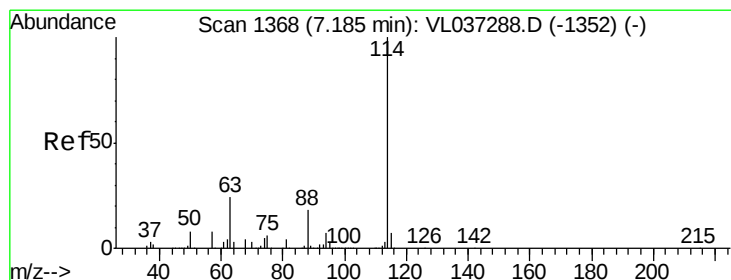
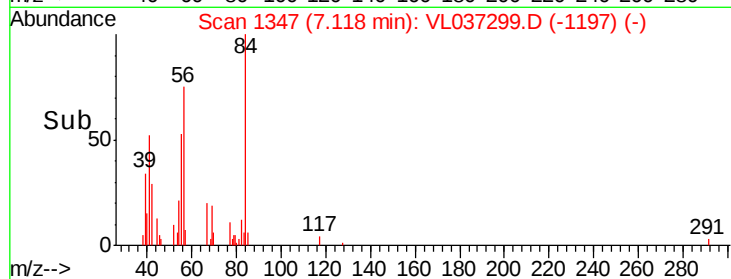
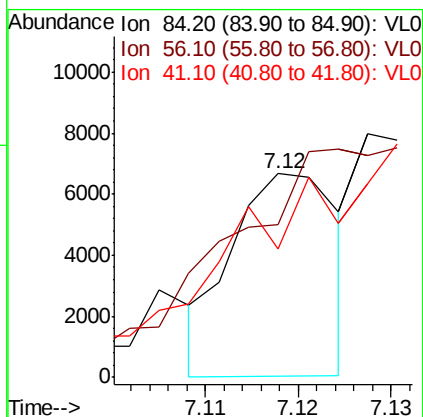
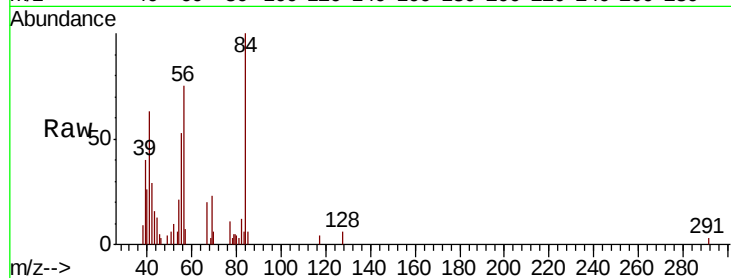




#30
Cvclohexane
Concen: 0.040 ppbv
RT: 7.12 min Scan# 1347
Delta R.T. -0.02 min
Lab File: VL037299.D
Acq: 31 Jul 2021 1:59

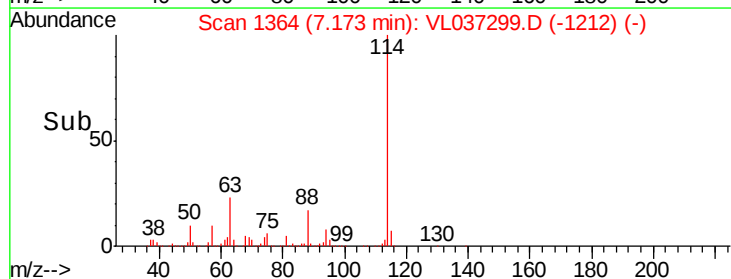
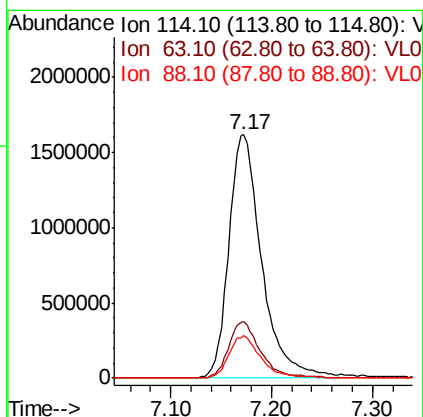
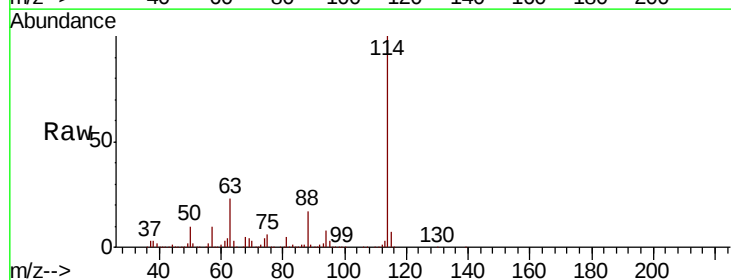
Instrument :
MSVOA_L
ClientSampled :

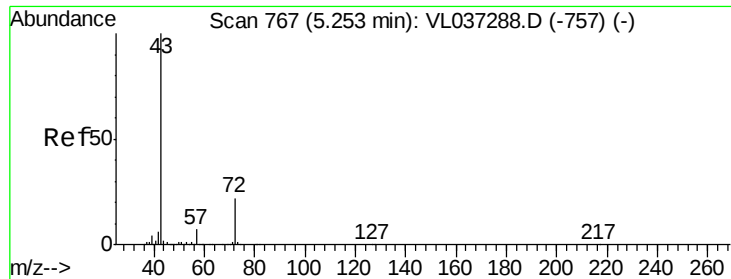
Tot Ion: 84 Resp: 5254
Ion Ratio Lower Upper
84 100
56 0.0 104.1 156.1#
41 0.0 64.7 97.1#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.17 min Scan# 1364
Delta R.T. -0.01 min
Lab File: VL037299.D
Acq: 31 Jul 2021 1:59

Tgt Ion: 114 Resp: 3673202
Ion Ratio Lower Upper
114 100
63 23.0 19.0 28.4
88 17.4 14.0 21.0

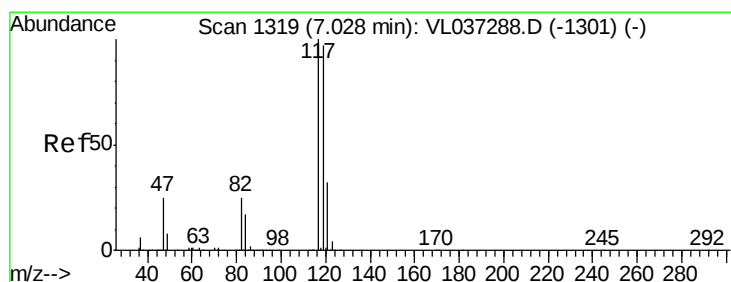
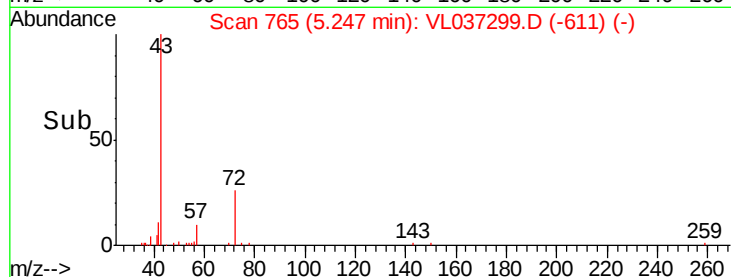
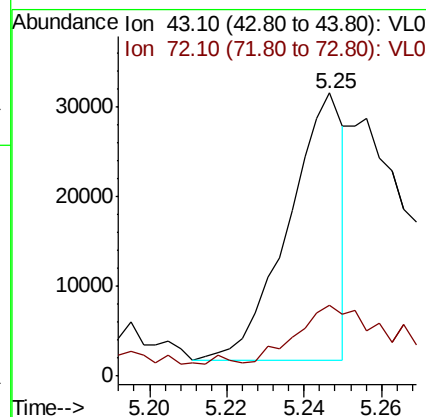
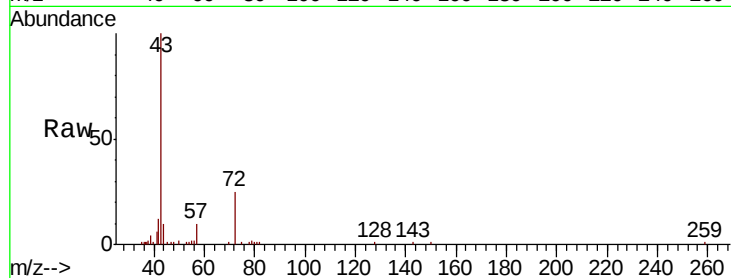




#34
2-Butanone
Concen: 0.187 ppbv
RT: 5.25 min Scan# 765
Delta R.T. -0.01 min
Lab File: VL037299.D
Acq: 31 Jul 2021 1:59

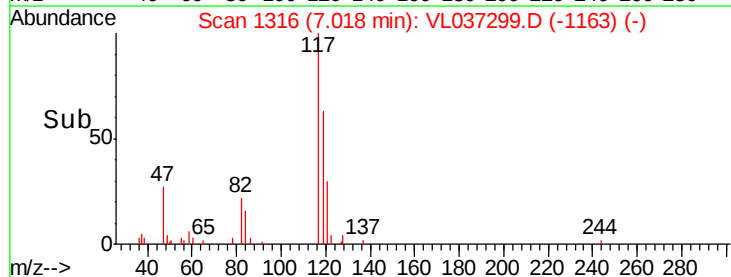
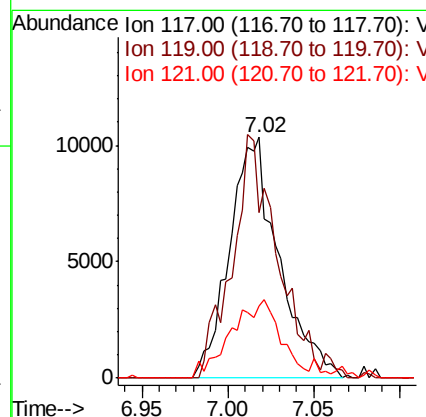
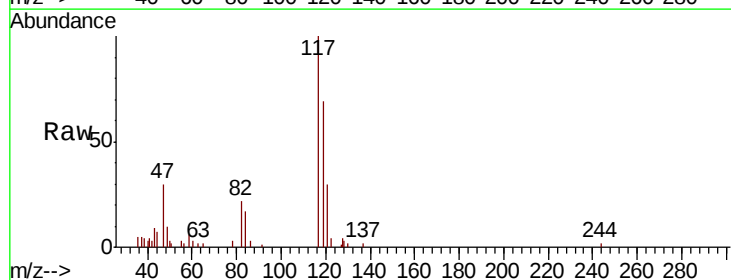
Instrument :
MSVOA_L
ClientSampleId :

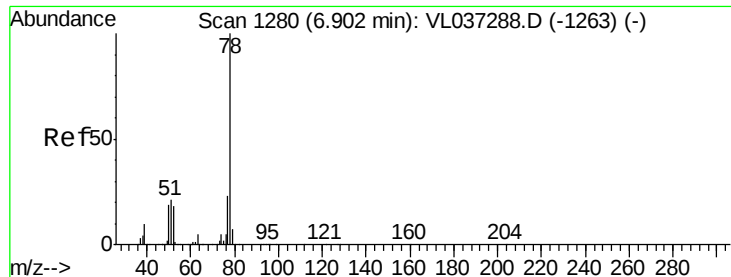
Tot Ion: 43 Resp: 29474
Ion Ratio Lower Upper
43 100
72 67.6 18.5 27.7#



#35
Carbon Tetrachloride
Concen: 0.089 ppbv
RT: 7.02 min Scan# 1316
Delta R.T. -0.01 min
Lab File: VL037299.D
Acq: 31 Jul 2021 1:59

Tgt Ion: 117 Resp: 20722
Ion Ratio Lower Upper
117 100
119 68.9 77.4 116.2#
121 29.7 25.8 38.8





#36

Benzene

Concen: 0.168 ppbv

RT: 6.89 min Scan# 1275

Delta R.T. -0.02 min

Lab File: VL037299.D

Acq: 31 Jul 2021 1:59

Instrument :

MSVOA_L

ClientSampleId :

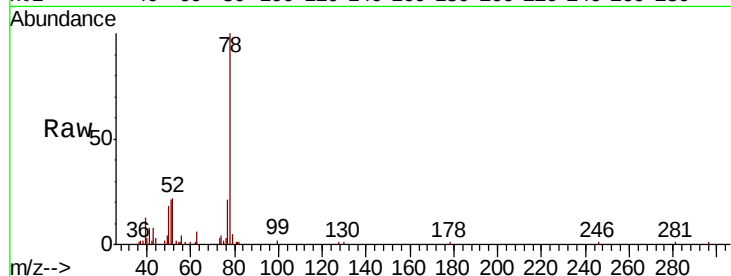
Tot Ion: 78 Resp: 52117

Ion Ratio Lower Upper

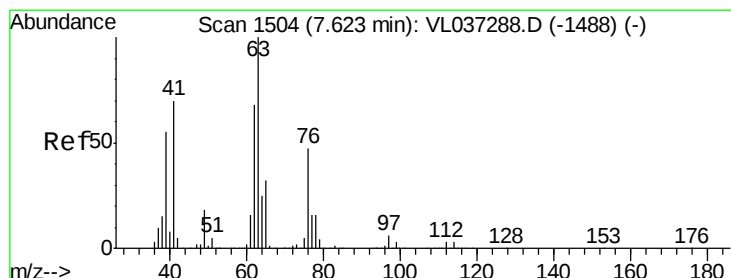
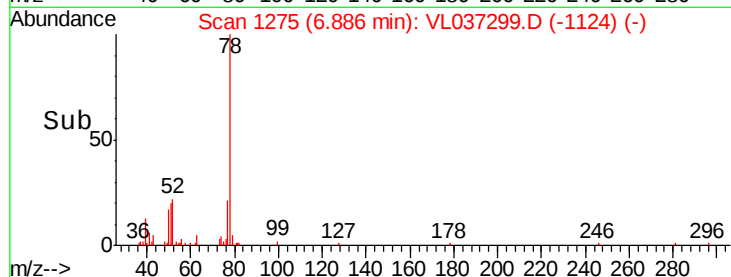
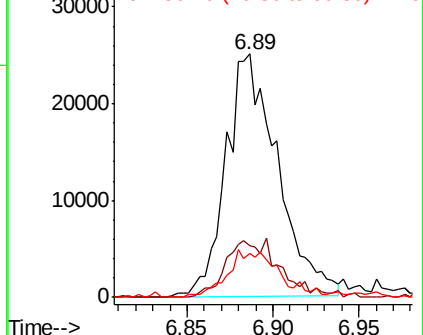
78 100

77 21.8 18.3 27.5

50 17.4 15.5 23.3



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: 7.101 ppbv

RT: 7.17 min Scan# 1364

Delta R.T. -0.45 min

Lab File: VL037299.D

Acq: 31 Jul 2021 1:59

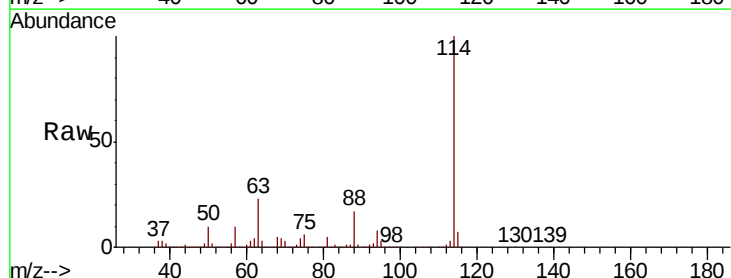
Tgt Ion: 63 Resp: 830466

Ion Ratio Lower Upper

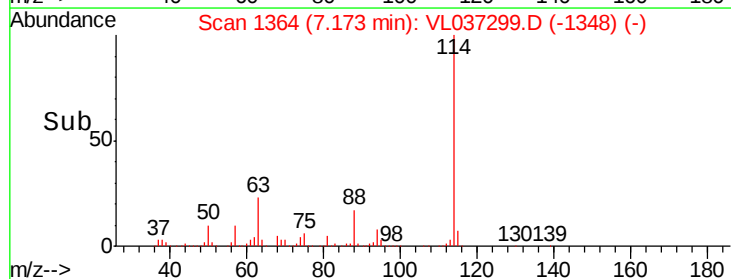
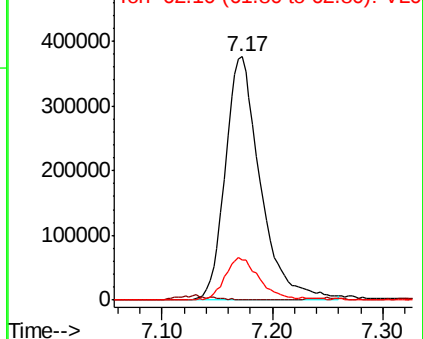
63 100

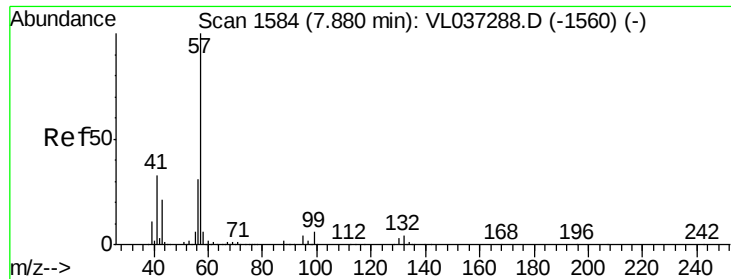
41 0.0 56.4 84.6#

62 16.7 54.6 82.0#



Abundance Ion 63.10 (62.80 to 63.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 62.10 (61.80 to 62.80): VL0

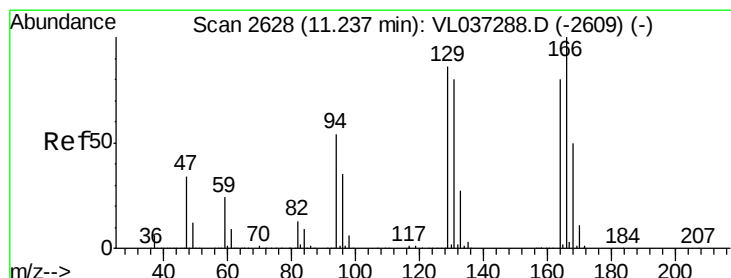
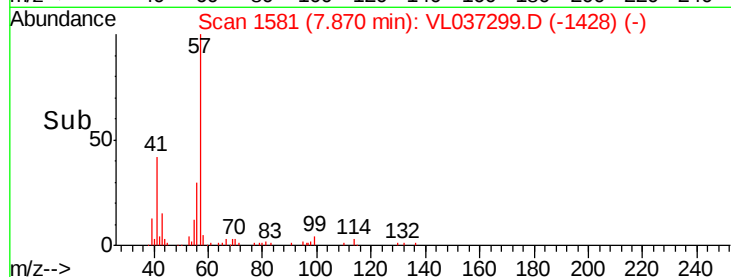
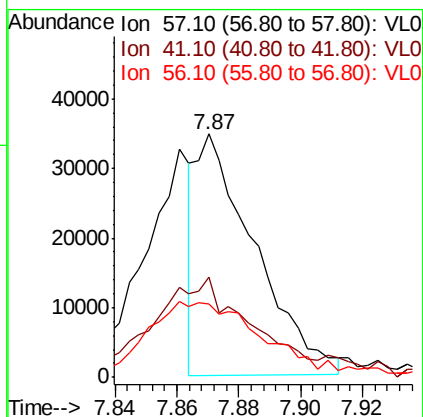
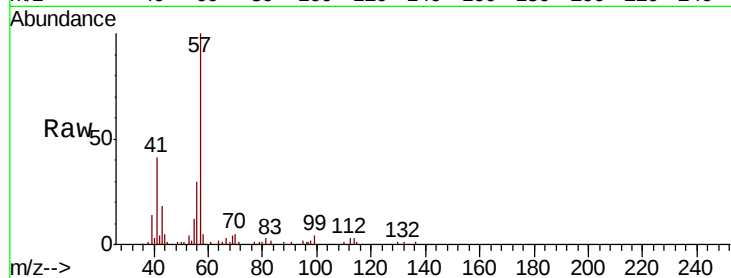




#44
 2,2,4-Trimethylpentane
 Concen: 0.089 ppbv
 RT: 7.87 min Scan# 1581
 Delta R.T. -0.01 min
 Lab File: VL037299.D
 Acq: 31 Jul 2021 1:59

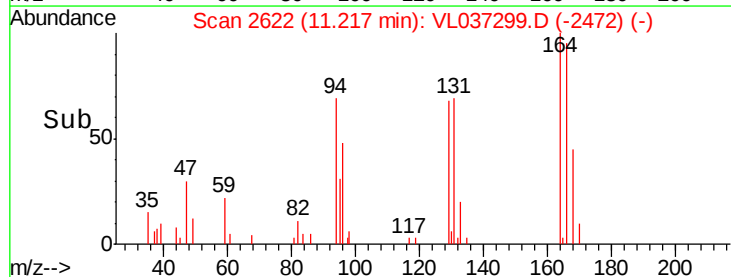
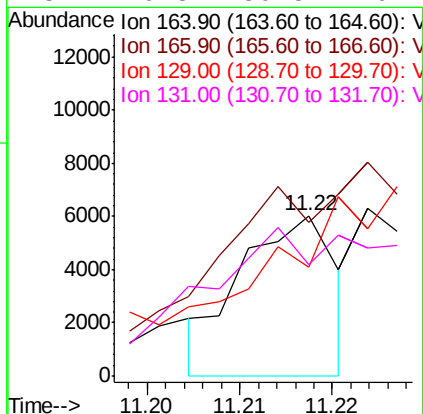
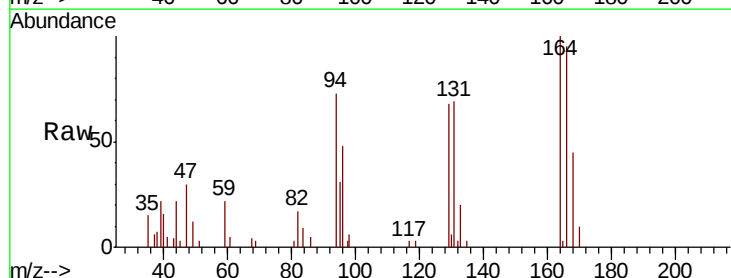
Instrument :
 MSVOA_L
 ClientSampleId :

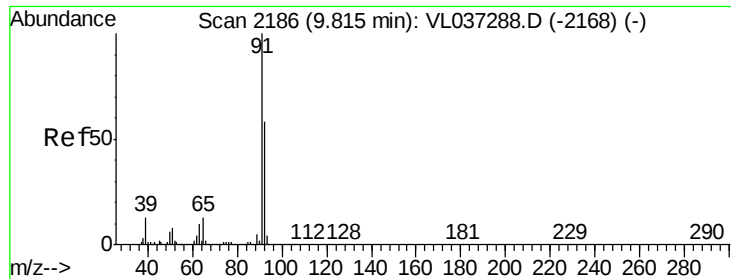
Tot Ion: 57 Resp: 45341
 Ion Ratio Lower Upper
 57 100
 41 80.4 26.6 40.0#
 56 0.0 25.3 37.9#



#52
 Tetrachloroethene
 Concen: 0.031 ppbv
 RT: 11.22 min Scan# 2622
 Delta R.T. -0.02 min
 Lab File: VL037299.D
 Acq: 31 Jul 2021 1:59

Tgt Ion:164 Resp: 4280
 Ion Ratio Lower Upper
 164 100
 166 71.2 100.4 150.6#
 129 37.9 86.2 129.4#
 131 20.8 80.5 120.7#





#53

Toluene

Concen: 2.190 ppbv

RT: 9.80 min Scan# 2182

Delta R.T. -0.01 min

Lab File: VL037299.D

Acq: 31 Jul 2021 1:59

Instrument :

MSVOA_L

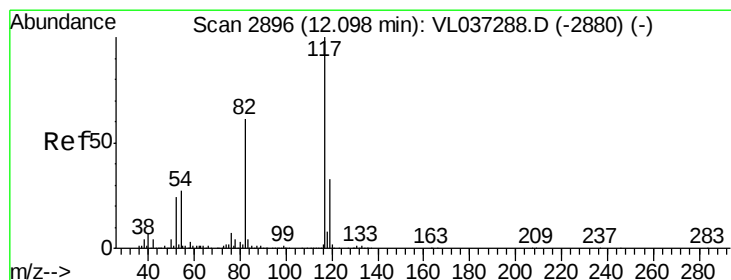
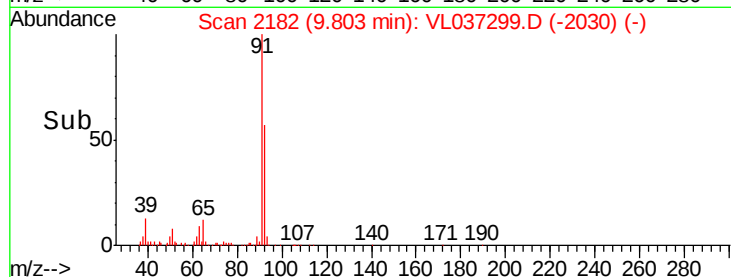
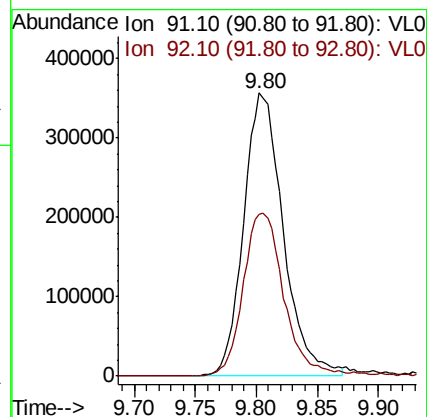
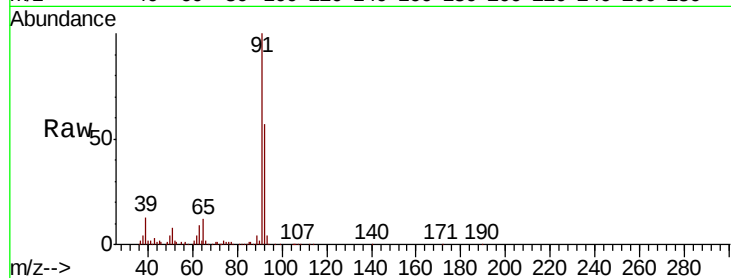
ClientSampleId :

Tot Ion: 91 Resp: 800868

Ion Ratio Lower Upper

91 100

92 59.7 48.2 72.2



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.09 min Scan# 2893

Delta R.T. -0.01 min

Lab File: VL037299.D

Acq: 31 Jul 2021 1:59

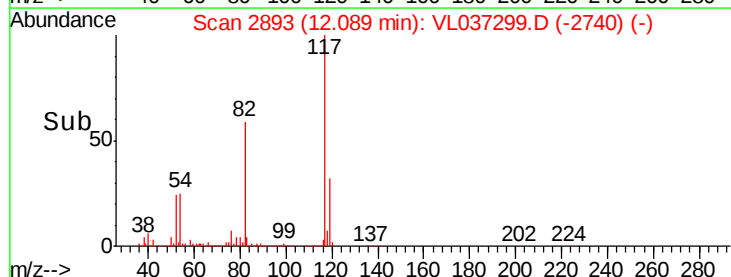
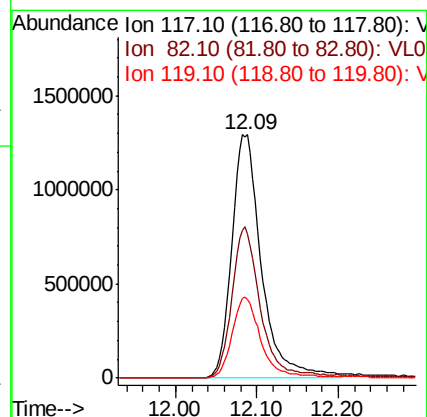
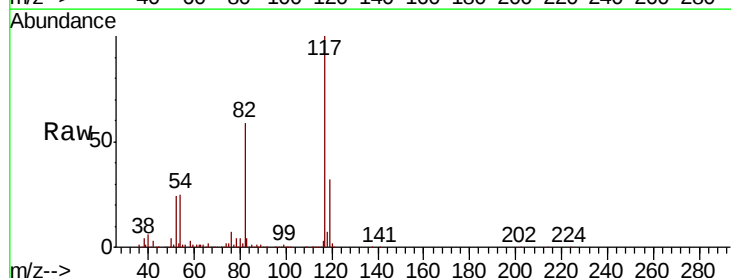
Tgt Ion: 117 Resp: 3315842

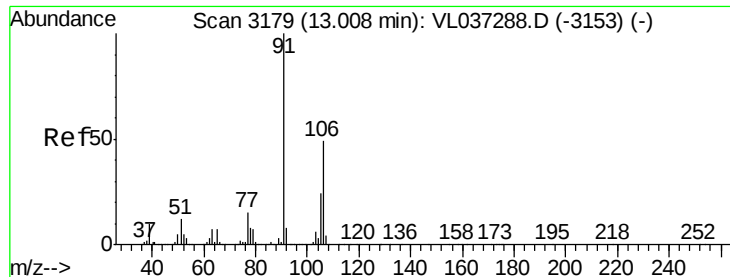
Ion Ratio Lower Upper

117 100

82 61.0 47.2 70.8

119 33.3 45.8 68.8#

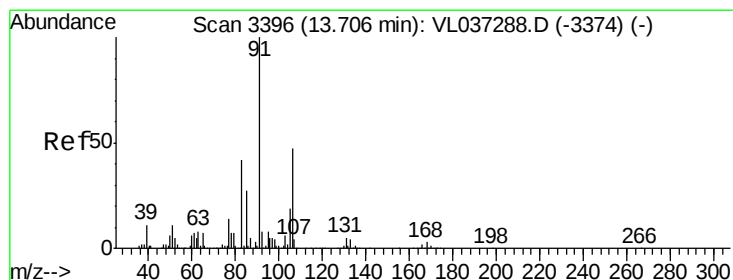
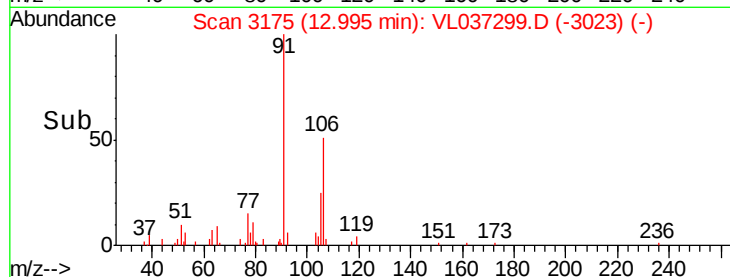
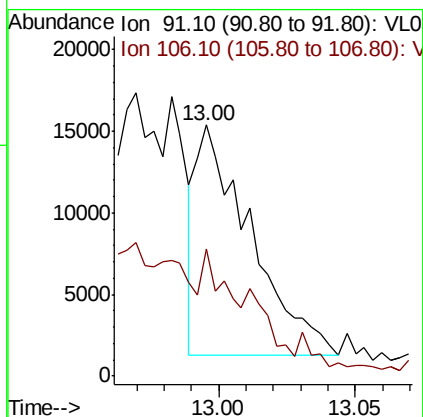
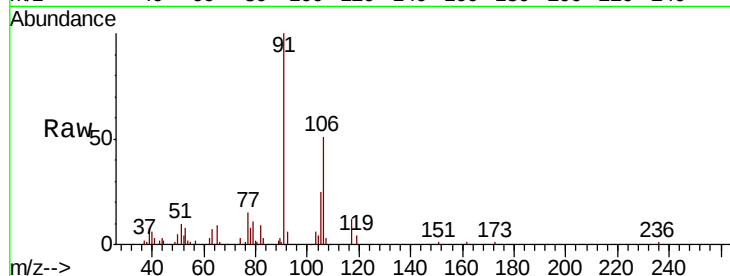




#59
m/p-Xylene
Concen: 0.050 ppbv
RT: 13.00 min Scan# 3175
Delta R.T. -0.01 min
Lab File: VL037299.D
Acq: 31 Jul 2021 1:59

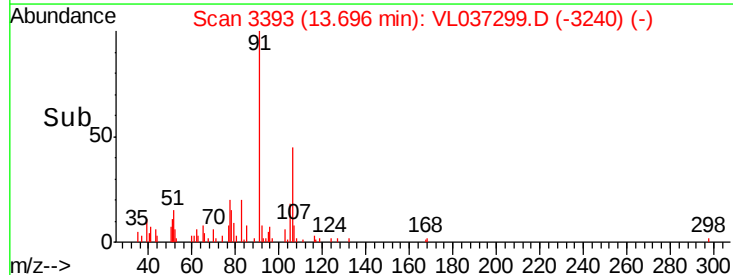
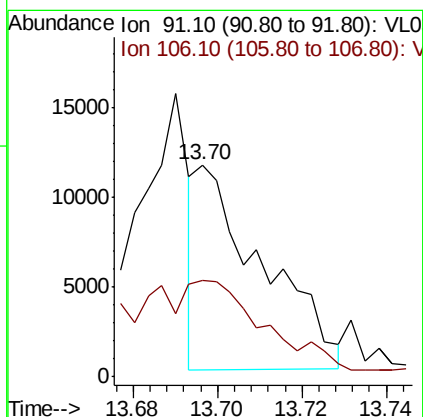
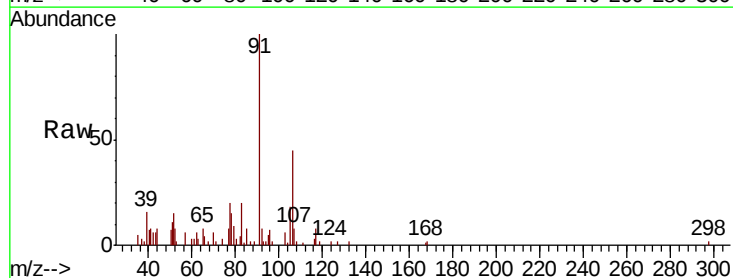
Instrument :
MSVOA_L
ClientSampled :

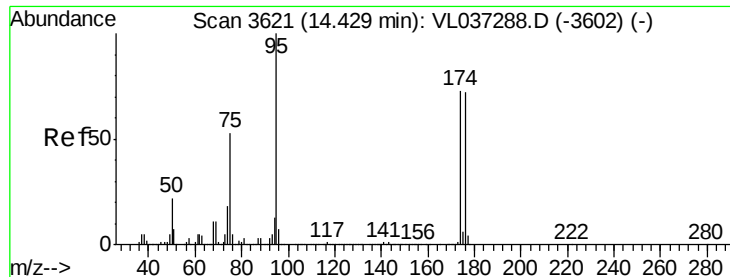
Tot Ion: 91 Resp: 19539
Ion Ratio Lower Upper
91 100
106 0.0 37.3 55.9#



#60
o-Xylene
Concen: 0.033 ppbv
RT: 13.70 min Scan# 3393
Delta R.T. -0.01 min
Lab File: VL037299.D
Acq: 31 Jul 2021 1:59

Tgt Ion: 91 Resp: 12373
Ion Ratio Lower Upper
91 100
106 109.5 23.4 70.0#





#68

1-Bromo-4-Fluorobenzene

Concen: 9.345 ppbv

RT: 14.42 min Scan# 3617

Delta R.T. -0.01 min

Lab File: VL037299.D

Acq: 31 Jul 2021 1:59

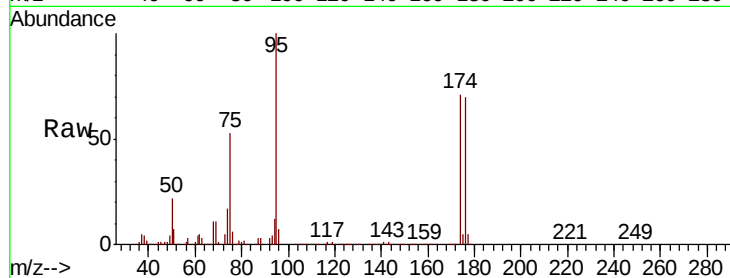
Instrument :

MSVOA_L

ClientSampleId :

Tot Ion: 95 Resp: 2254390

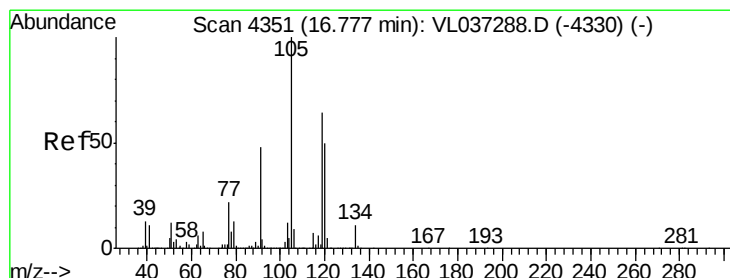
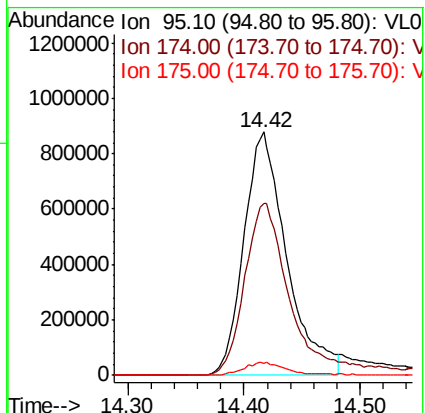
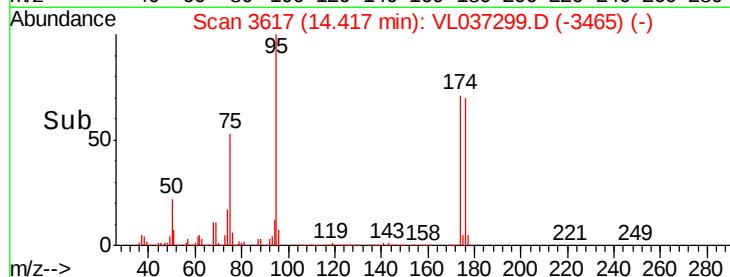
Ion	Ratio	Lower	Upper
95	100		
174	80.4	59.8	89.6
175	5.2	4.5	6.7



Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V



#74

1,2,4-Trimethylbenzene

Concen: 0.059 ppbv

RT: 16.77 min Scan# 4348

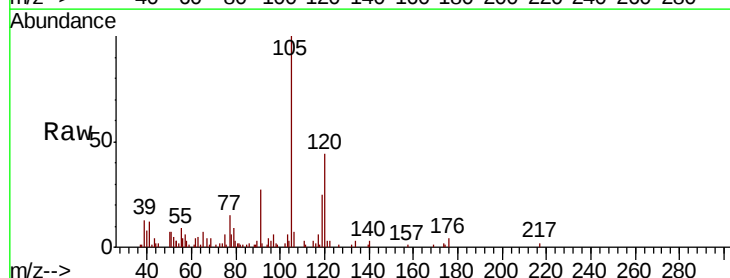
Delta R.T. -0.01 min

Lab File: VL037299.D

Acq: 31 Jul 2021 1:59

Tgt Ion: 105 Resp: 26563

Ion	Ratio	Lower	Upper
105	100		
120	36.0	40.2	60.4#
91	22.4	39.0	58.6#
77	13.2	17.4	26.0#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

