

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL060121\
 Data File : VL037082.D
 Acq On : 1 Jun 2021 22:56
 Operator : SY/AP
 Sample : M2548-02
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Jun 02 03:03:40 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL051821AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue May 18 12:00:15 2021
 QLast Update : Tue May 18 12:00:15 2021
 Response via : Initial Calibration

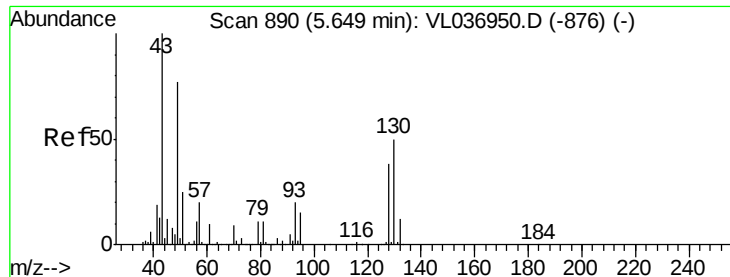
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1339250	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.16	114	3925341	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	3486294	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.39	95	2681036	10.24	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.40%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.03	85	59164	0.260	ppbv	98
3) Chlorodifluoromethane	2.98	51	92026	0.375	ppbv	97
4) Chloromethane	3.13	50	47195	0.565	ppbv	98
7) Chloroethane	3.55	64	1278	0.043	ppbv #	79
9) Propene	3.01	41	36209	0.412	ppbv	95
10) Heptane	8.10	43	7453	0.034	ppbv #	1
11) Trichlorofluoromethane	3.94	101	54038	0.257	ppbv	97
12) 1,1,2-Trichlorotrifluoroet	4.47	101	9160	0.061	ppbv #	67
13) Ethanol	3.60	45	409541	34.937	ppbv	99
15) Acetone	3.84	43	2369719	17.275	ppbv	97
16) 1,3-Butadiene	3.29	39	11623	0.136	ppbv #	33
17) tert-Butyl alcohol	4.29	59	10139	0.081	ppbv #	33
19) Isopropyl Alcohol	3.97	45	61218	0.830	ppbv #	1
20) Methylene Chloride	4.33	84	907906	12.347	ppbv	96
23) Vinyl Acetate	5.05	43	133479	0.613	ppbv #	87
25) Ethyl Acetate	5.67	43	642632	1.950	ppbv #	79
26) Hexane	5.67	57	910543	5.407	ppbv #	47
29) Chloroform	5.74	83	9754	0.041	ppbv	97
30) Cyclohexane	7.11	84	4924	0.034	ppbv #	1
34) 2-Butanone	5.23	43	155077	1.085	ppbv #	87
35) Carbon Tetrachloride	7.00	117	12187	0.047	ppbv	96
36) Benzene	6.87	78	41063	0.121	ppbv #	82
39) 1,2-Dichloropropane	7.16	63	919011	7.056	ppbv #	26
41) Tetrahydrofuran	6.29	42	3437	0.042	ppbv #	49
44) 2,2,4-Trimethylpentane	7.86	57	21247	0.037	ppbv #	1
50) 4-Methyl-2-Pentanone	8.74	43	61371	0.260	ppbv #	63
51) 2-Hexanone	10.14	43	12504	0.100	ppbv #	1
53) Toluene	9.78	91	889754	2.212	ppbv	98
59) m/p-Xylene	12.97	91	19719	0.048	ppbv #	30
60) o-Xylene	13.67	91	21195	0.055	ppbv #	60
74) 1,2,4-Trimethylbenzene	16.74	105	55763	0.125	ppbv #	71

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 890

Delta R.T. -0.00 min

Lab File: VL037082.D

Acq: 1 Jun 2021 22:56

Instrument :

MSVOA_L

ClientSampleId :

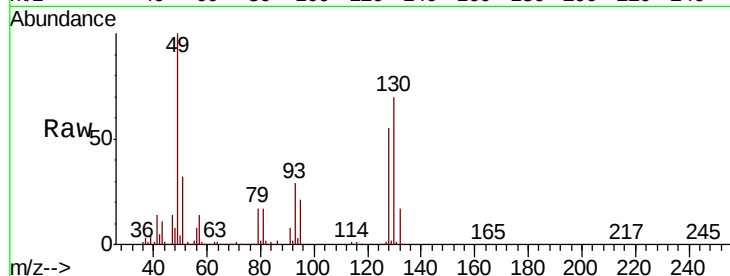
Tot Ion: 49 Resp: 1339250

Ion Ratio Lower Upper

49 100

128 57.6 26.9 80.7

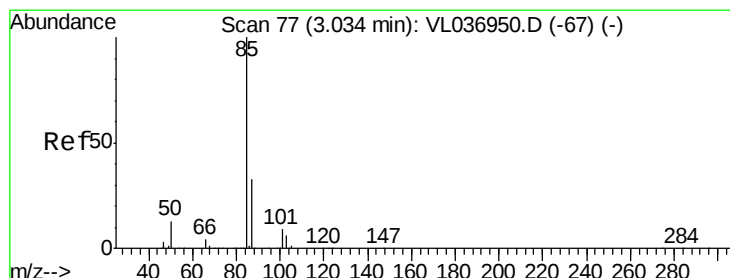
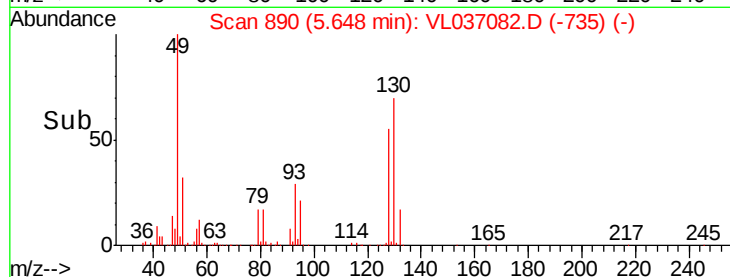
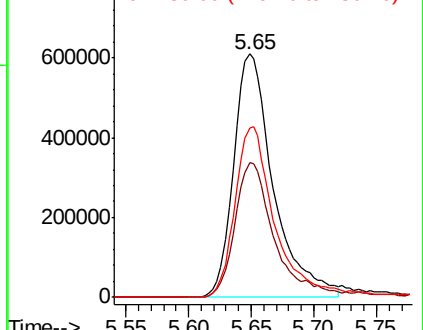
130 73.3 33.8 101.4



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: 0.260 ppbv

RT: 3.03 min Scan# 77

Delta R.T. -0.00 min

Lab File: VL037082.D

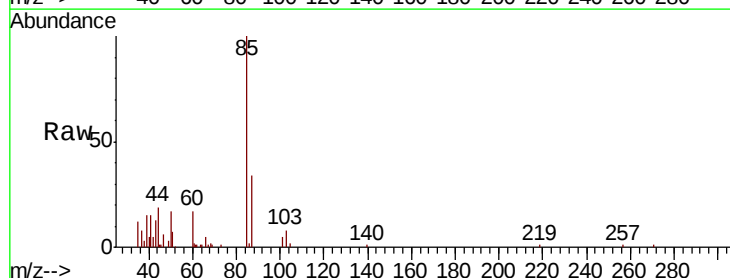
Acq: 1 Jun 2021 22:56

Tgt Ion: 85 Resp: 59164

Ion Ratio Lower Upper

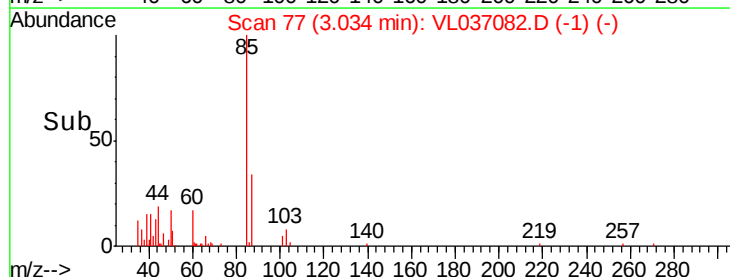
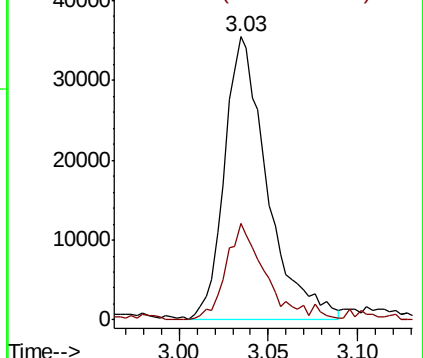
85 100

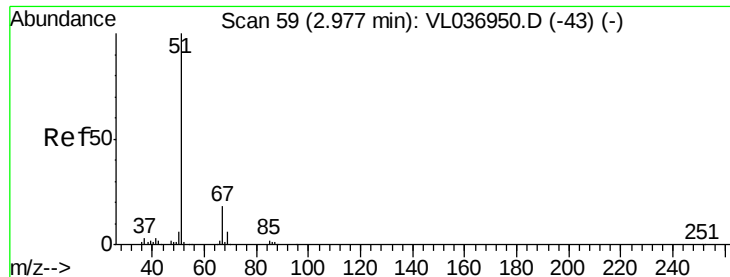
87 34.2 26.6 39.8



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

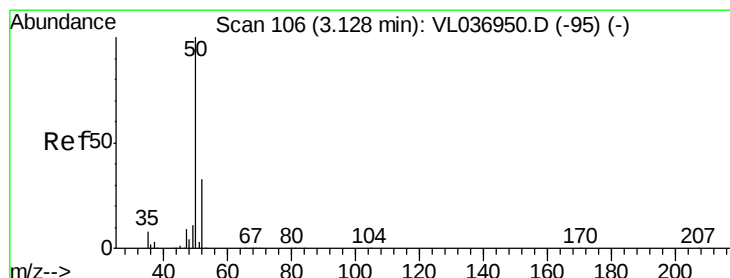
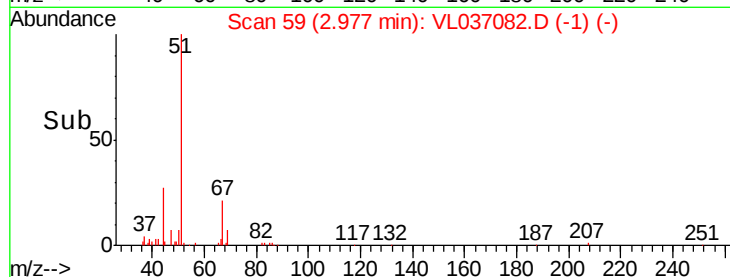
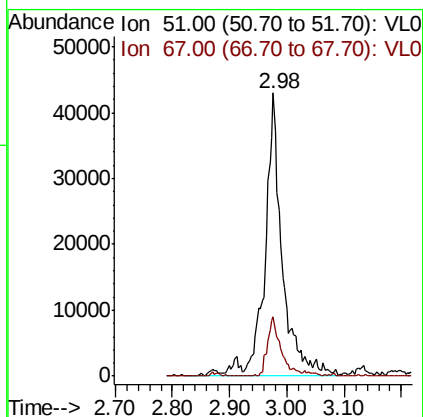
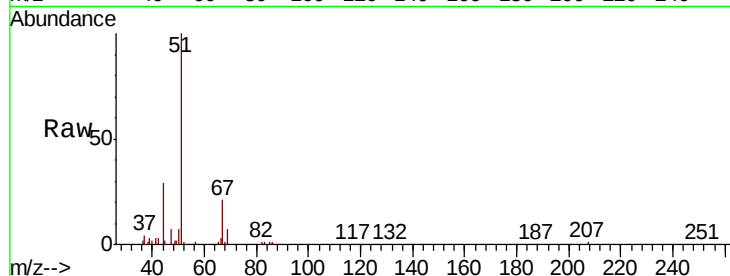




#3
 Chlorodifluoromethane
 Concen: 0.375 ppbv
 RT: 2.98 min Scan# 59
 Delta R.T. -0.00 min
 Lab File: VL037082.D
 Acq: 1 Jun 2021 22:56

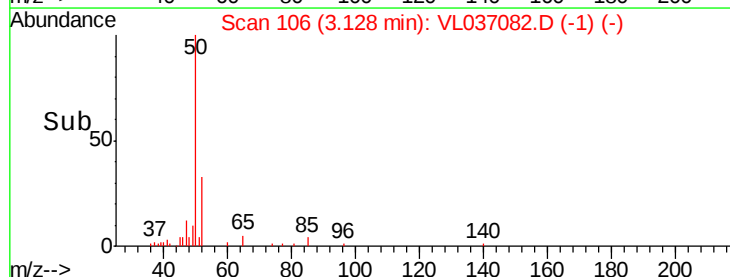
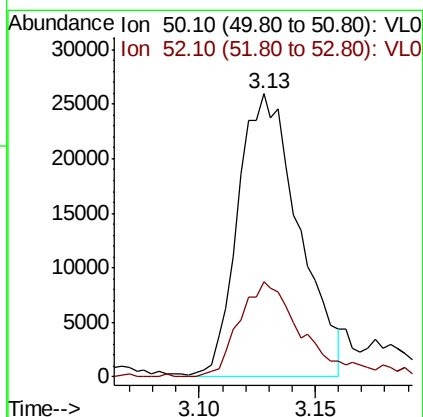
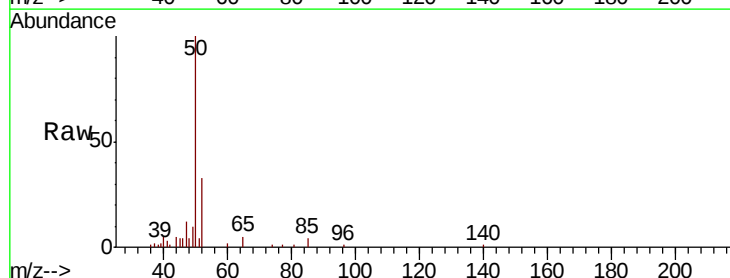
Instrument :
 MSVOA_L
 ClientSampleId :

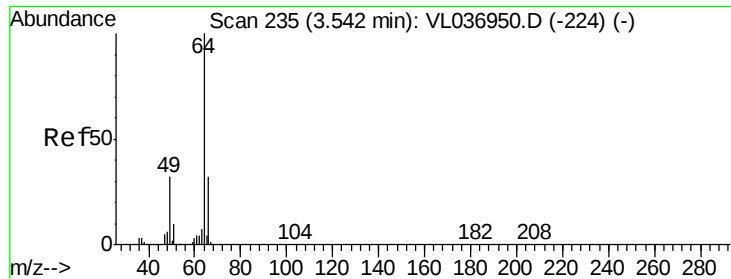
Tot Ion: 51 Resp: 92026
 Ion Ratio Lower Upper
 51 100
 67 16.9 14.6 21.8



#4
 Chloromethane
 Concen: 0.565 ppbv
 RT: 3.13 min Scan# 106
 Delta R.T. -0.00 min
 Lab File: VL037082.D
 Acq: 1 Jun 2021 22:56

Tgt Ion: 50 Resp: 47195
 Ion Ratio Lower Upper
 50 100
 52 33.7 26.1 39.1





#7

Chloroethane

Concen: 0.043 ppbv

RT: 3.55 min Scan# 236

Delta R.T. 0.00 min

Lab File: VL037082.D

Acq: 1 Jun 2021 22:56

Instrument :

MSVOA_L

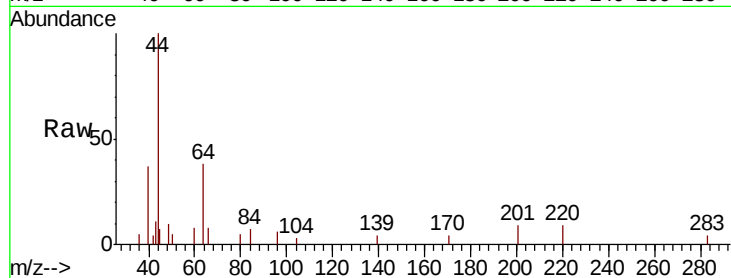
ClientSampleId :

Tot Ion: 64 Resp: 1278

Ion Ratio Lower Upper

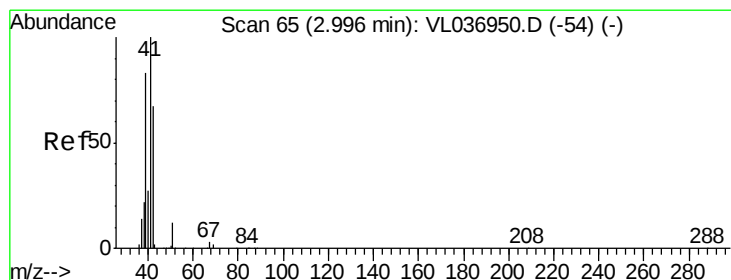
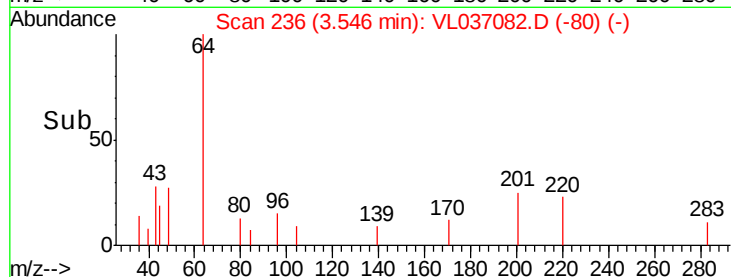
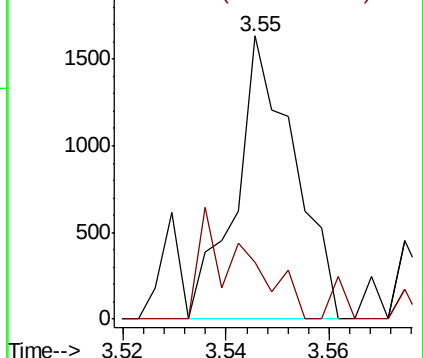
64 100

66 20.1 25.4 38.2#



Abundance Ion 64.10 (63.80 to 64.80): VL0

Ion 66.10 (65.80 to 66.80): VL0



#9

Propene

Concen: 0.412 ppbv

RT: 3.01 min Scan# 69

Delta R.T. 0.01 min

Lab File: VL037082.D

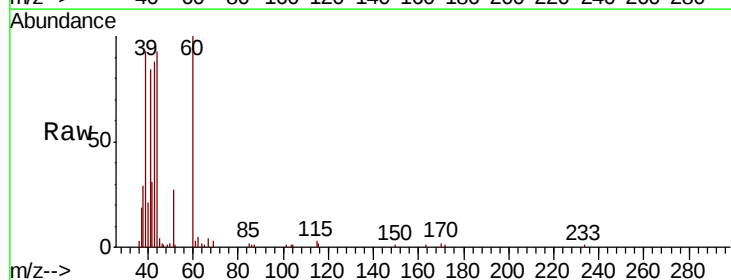
Acq: 1 Jun 2021 22:56

Tgt Ion: 41 Resp: 36209

Ion Ratio Lower Upper

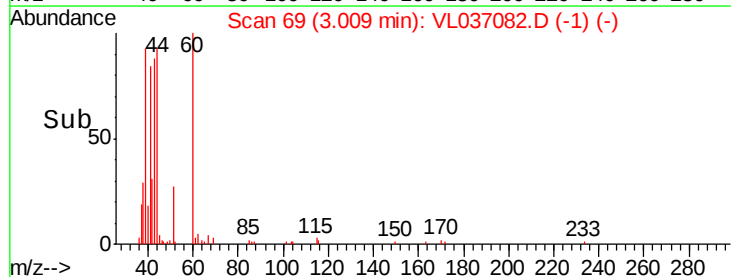
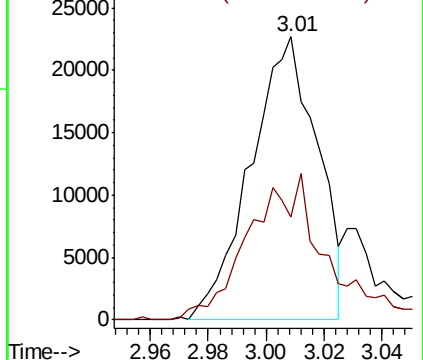
41 100

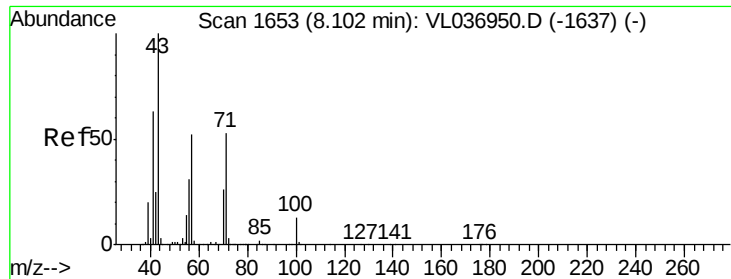
42 63.0 53.9 80.9



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

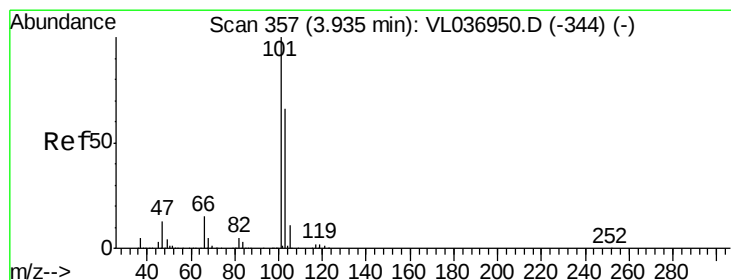
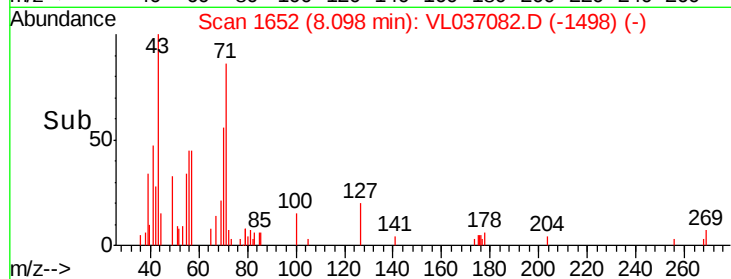
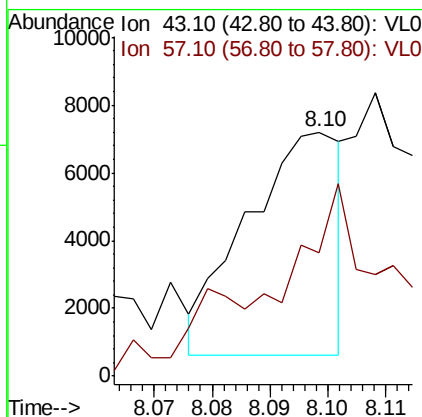
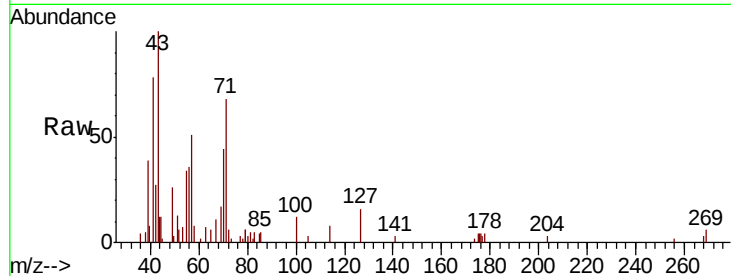




#10
Heptane
Concen: 0.034 ppbv
RT: 8.10 min Scan# 1652
Delta R.T. -0.00 min
Lab File: VL037082.D
Acq: 1 Jun 2021 22:56

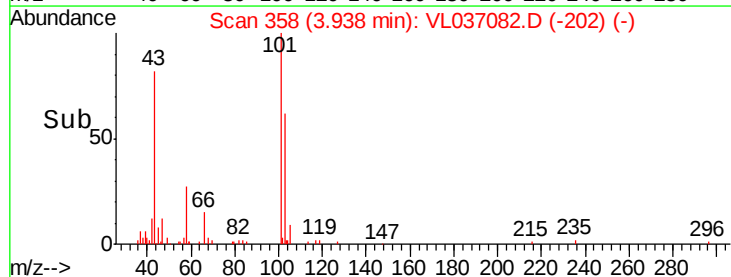
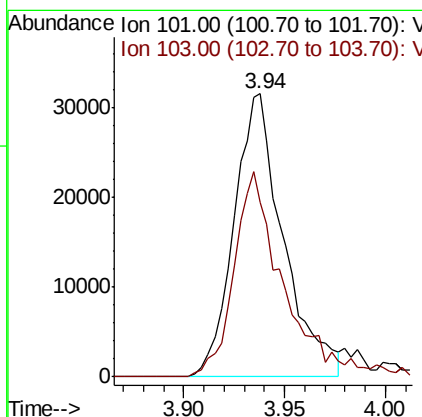
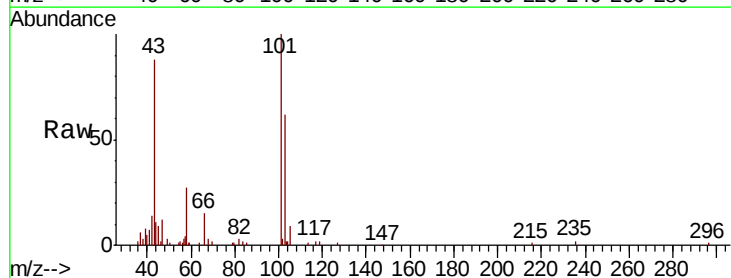
Instrument :
MSVOA_L
ClientSampled :

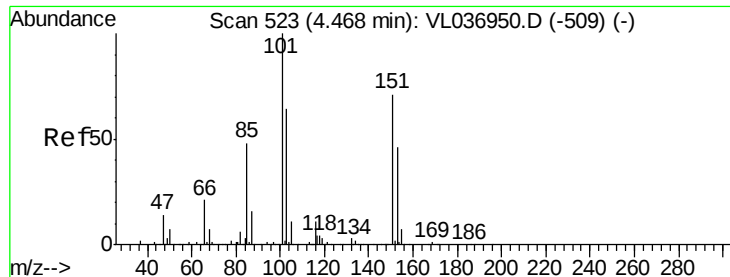
Tot Ion: 43 Resp: 7453
Ion Ratio Lower Upper
43 100
57 163.9 41.0 61.6#



#11
Trichlorofluoromethane
Concen: 0.257 ppbv
RT: 3.94 min Scan# 358
Delta R.T. 0.00 min
Lab File: VL037082.D
Acq: 1 Jun 2021 22:56

Tgt Ion: 101 Resp: 54038
Ion Ratio Lower Upper
101 100
103 63.3 52.6 79.0





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.061 ppbv

RT: 4.47 min Scan# 523

Delta R.T. -0.00 min

Lab File: VL037082.D

Acq: 1 Jun 2021 22:56

Instrument :

MSVOA_L

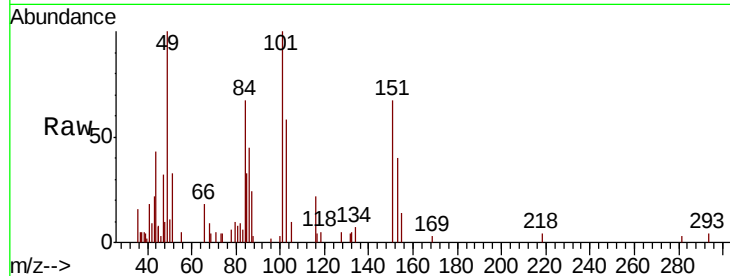
ClientSampleId :

Tot Ion:101 Resp: 9160

Ion Ratio Lower Upper

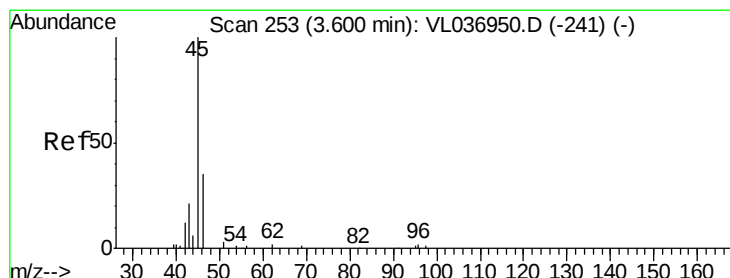
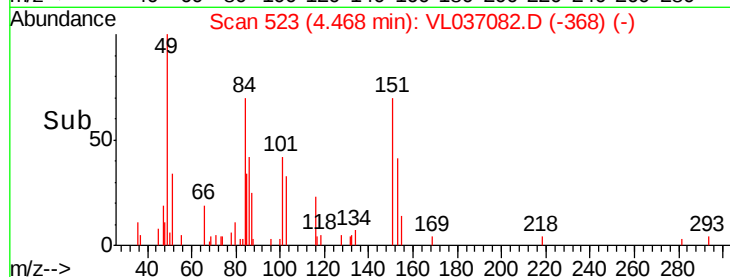
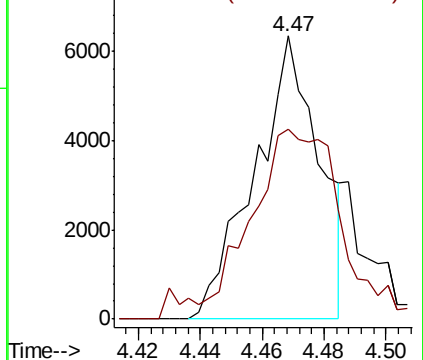
101 100

151 99.5 57.7 86.5#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 34.937 ppbv

RT: 3.60 min Scan# 252

Delta R.T. -0.00 min

Lab File: VL037082.D

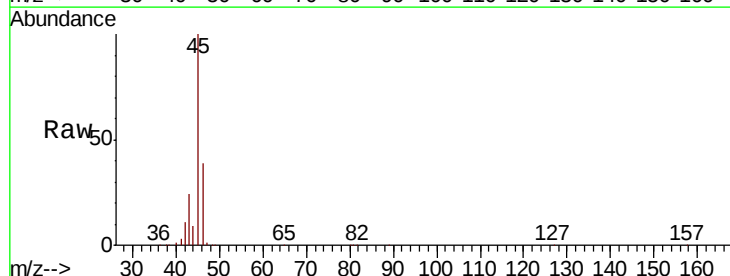
Acq: 1 Jun 2021 22:56

Tgt Ion: 45 Resp: 409541

Ion Ratio Lower Upper

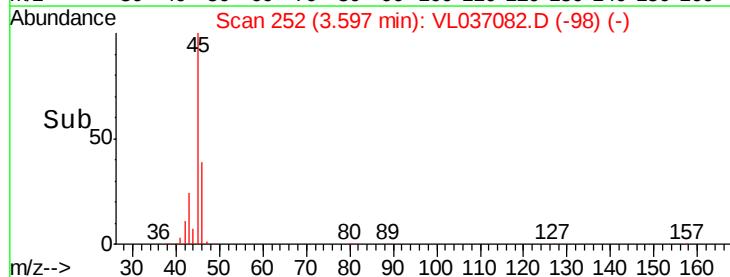
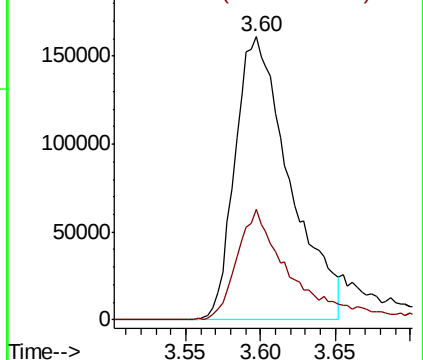
45 100

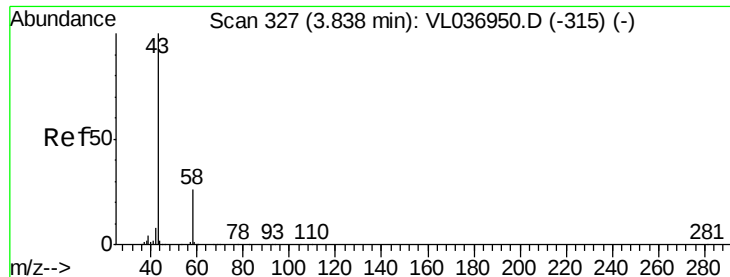
46 40.5 16.3 65.3



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 17.275 ppbv

RT: 3.84 min Scan# 326

Delta R.T. -0.00 min

Lab File: VL037082.D

Acq: 1 Jun 2021 22:56

Instrument :

MSVOA_L

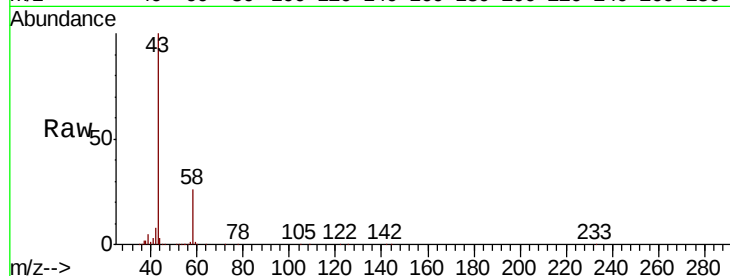
ClientSampleId :

Tot Ion: 43 Resp: 2369719

Ion Ratio Lower Upper

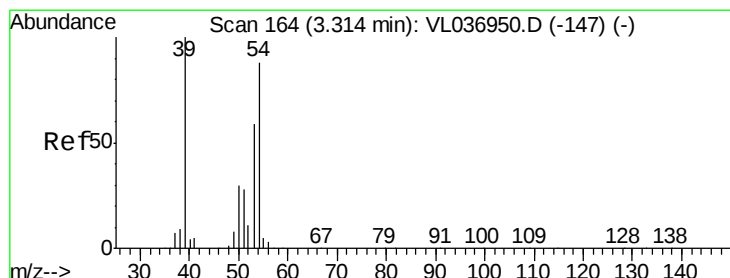
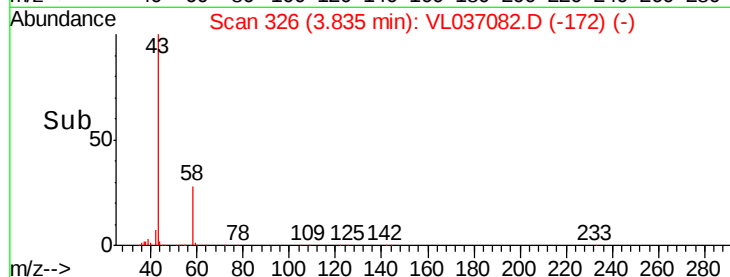
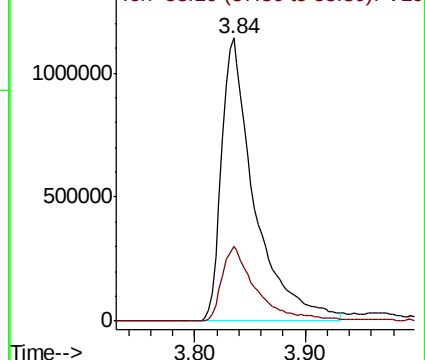
43 100

58 28.5 24.0 36.0



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#16

1,3-Butadiene

Concen: 0.136 ppbv

RT: 3.29 min Scan# 156

Delta R.T. -0.03 min

Lab File: VL037082.D

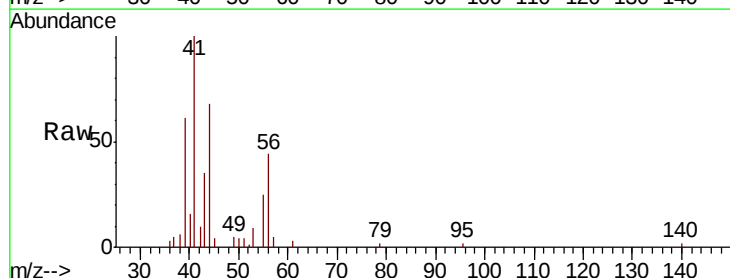
Acq: 1 Jun 2021 22:56

Tgt Ion: 39 Resp: 11623

Ion Ratio Lower Upper

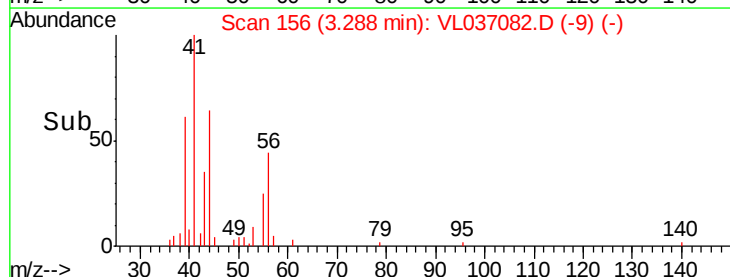
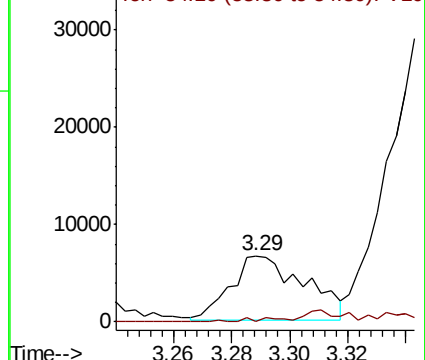
39 100

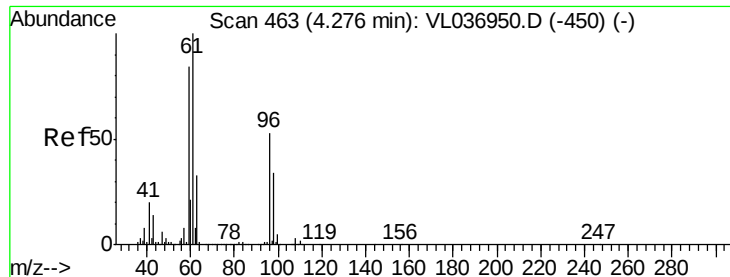
54 20.3 63.2 94.8#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0



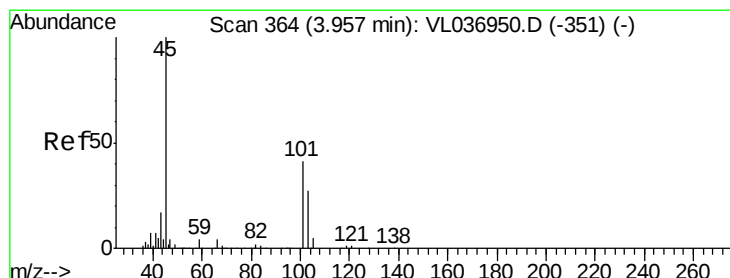
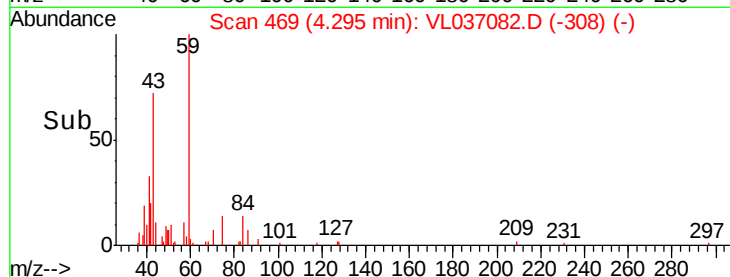
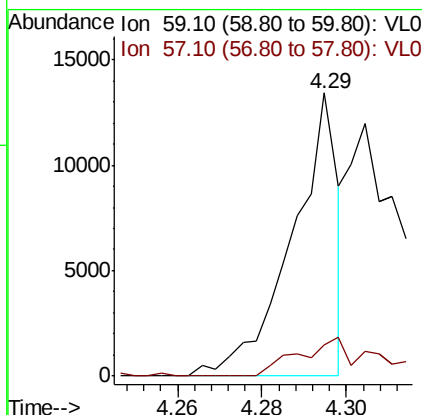
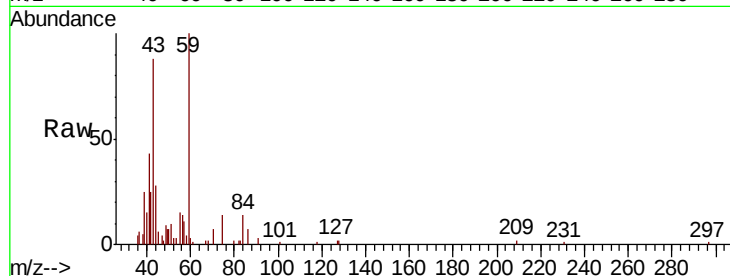


#17

tert-Butyl alcohol
 Concen: 0.081 ppbv
 RT: 4.29 min Scan# 469
 Delta R.T. 0.02 min
 Lab File: VL037082.D
 Acq: 1 Jun 2021 22:56

Instrument :
 MSVOA_L
 ClientSampleId :

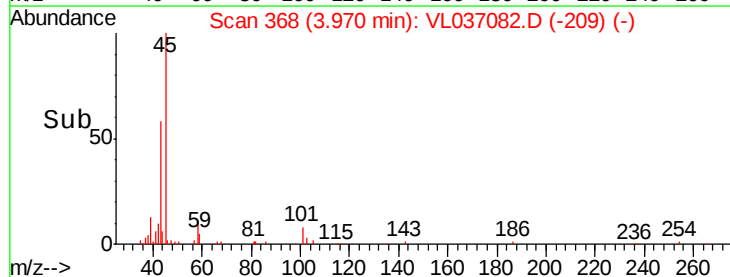
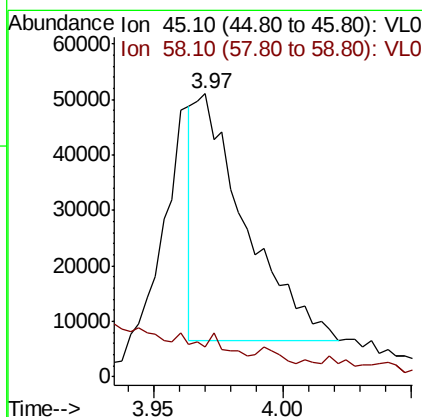
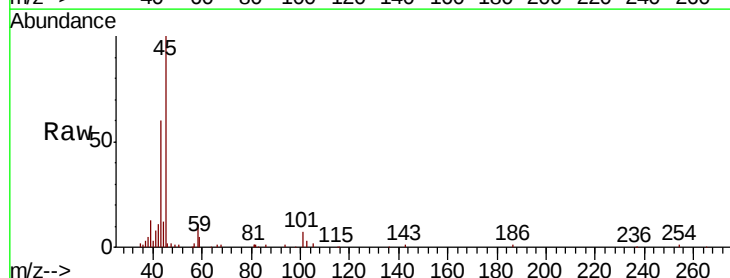
Tot Ion: 59 Resp: 10139
 Ion Ratio Lower Upper
 59 100
 57 35.4 8.3 12.5#

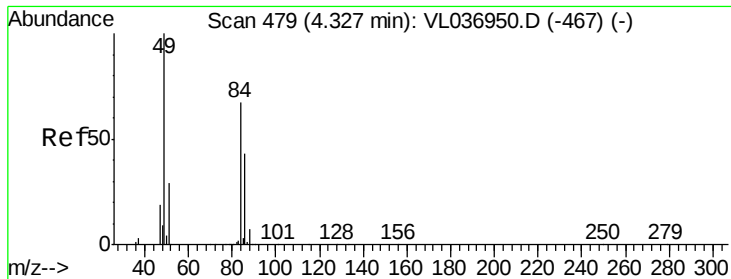


#19

Isopropyl Alcohol
 Concen: 0.830 ppbv
 RT: 3.97 min Scan# 368
 Delta R.T. 0.01 min
 Lab File: VL037082.D
 Acq: 1 Jun 2021 22:56

Tgt Ion: 45 Resp: 61218
 Ion Ratio Lower Upper
 45 100
 58 1111.4 37.2 55.8#

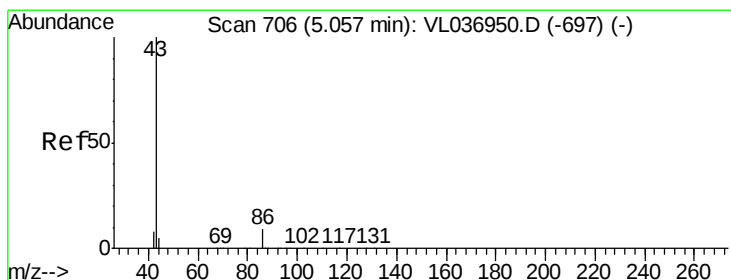
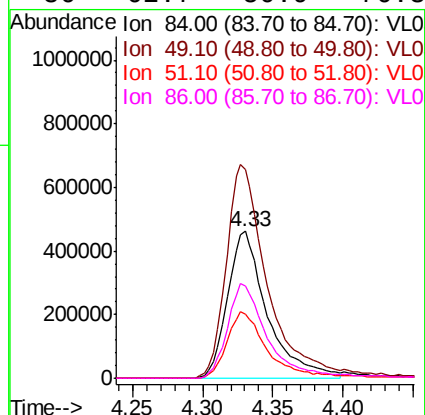
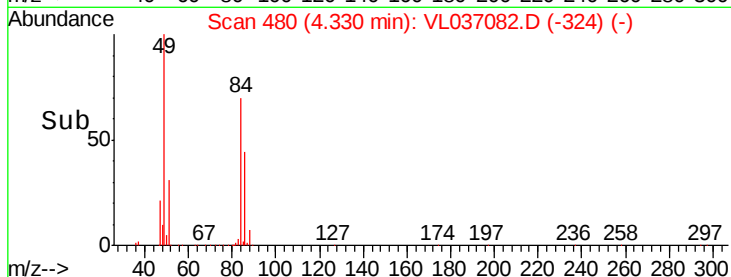
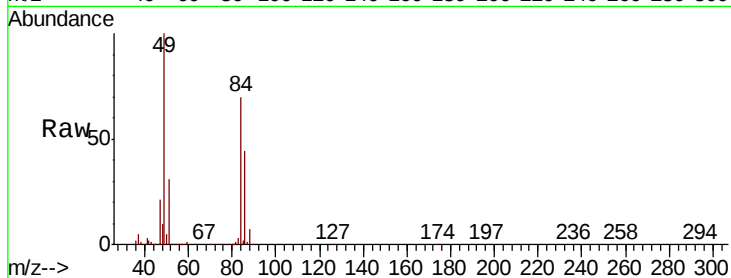




#20
Methvlene Chloride
Concen: 12.347 ppbv
RT: 4.33 min Scan# 480
Delta R.T. 0.00 min
Lab File: VL037082.D
Acq: 1 Jun 2021 22:56

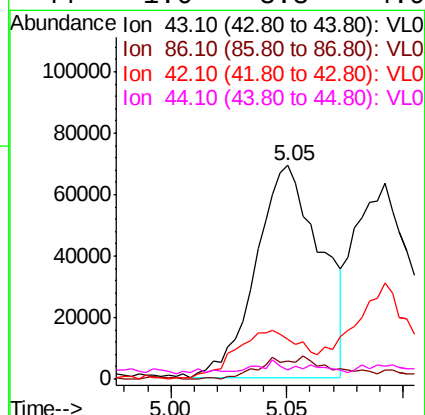
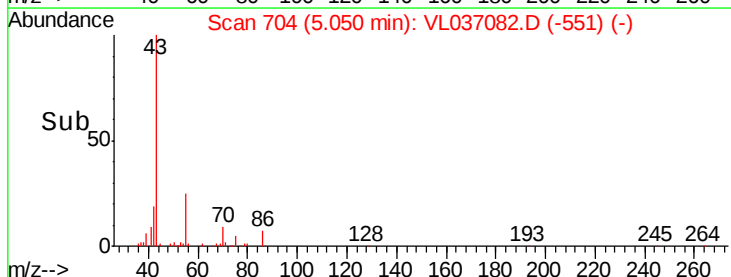
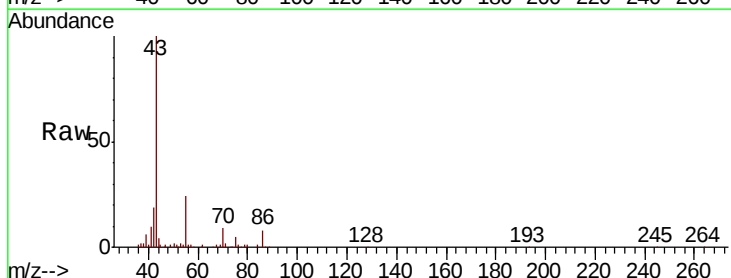
Instrument :
MSVOA_L
ClientSampled :

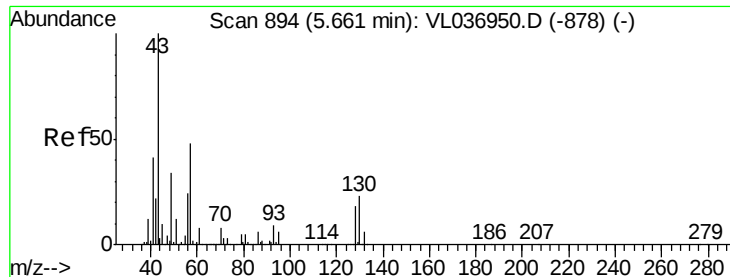
Tot Ion: 84 Resp: 907906
Ion Ratio Lower Upper
84 100
49 142.2 119.8 179.6
51 43.8 35.1 52.7
86 62.7 50.9 76.3



#23
Vinyl Acetate
Concen: 0.613 ppbv
RT: 5.05 min Scan# 704
Delta R.T. -0.01 min
Lab File: VL037082.D
Acq: 1 Jun 2021 22:56

Tgt Ion: 43 Resp: 133479
Ion Ratio Lower Upper
43 100
86 8.3 5.8 8.8
42 18.1 7.4 11.2#
44 1.6 3.3 4.9#





#25

Ethyl Acetate

Concen: 1.950 ppbv

RT: 5.67 min Scan# 896

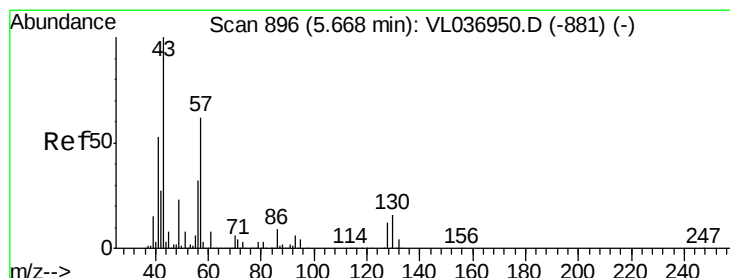
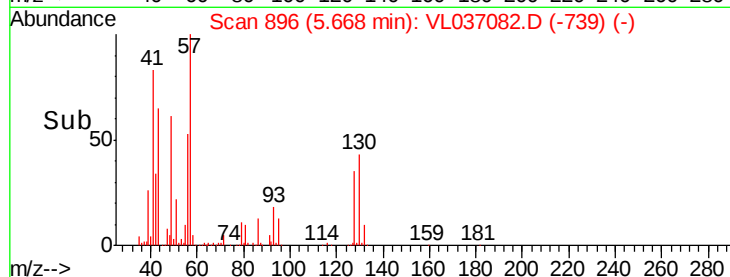
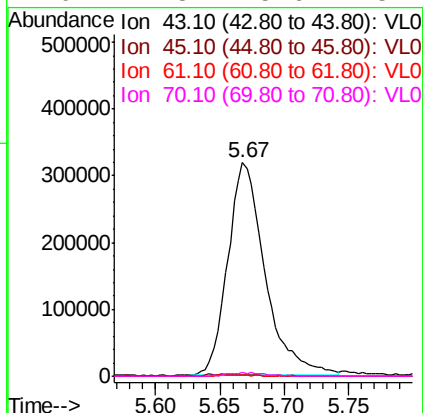
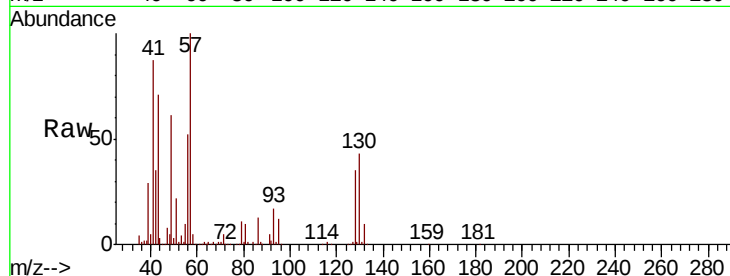
Delta R.T. 0.01 min

Lab File: VL037082.D

Acq: 1 Jun 2021 22:56

Instrument :
MSVOA_L
ClientSampled :

Tot Ion:	43	Resp:	642632
Ion	Ratio	Lower	Upper
43	100		
45	1.4	7.8	11.8#
61	0.7	7.8	11.8#
70	1.8	5.6	8.4#



#26

Hexane

Concen: 5.407 ppbv

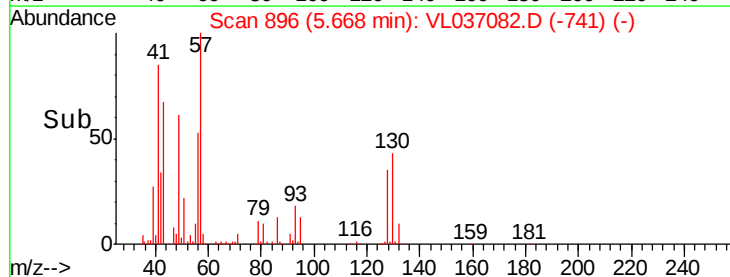
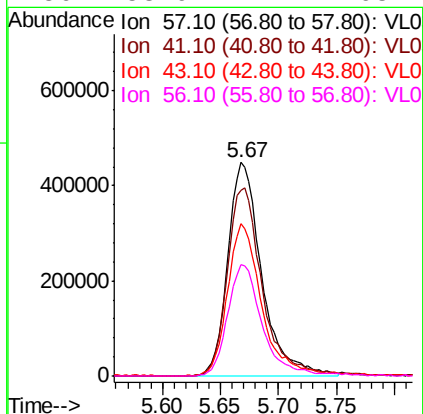
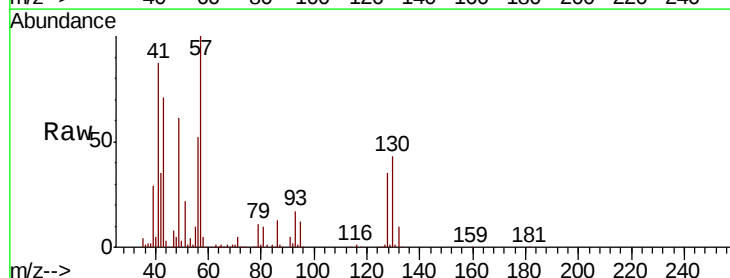
RT: 5.67 min Scan# 896

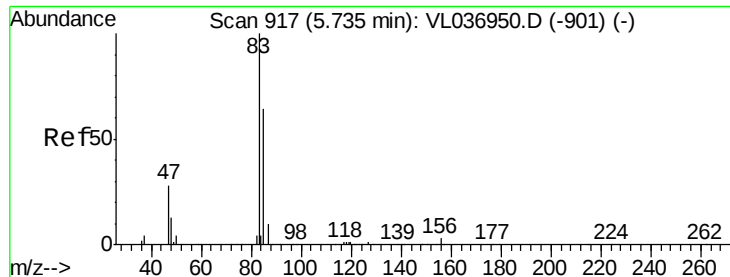
Delta R.T. -0.00 min

Lab File: VL037082.D

Acq: 1 Jun 2021 22:56

Tgt Ion:	57	Resp:	910543
Ion	Ratio	Lower	Upper
57	100		
41	92.5	70.5	105.7
43	72.4	165.8	248.8#
56	53.9	42.2	63.4

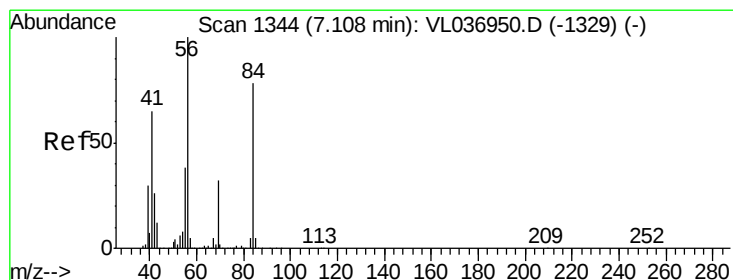
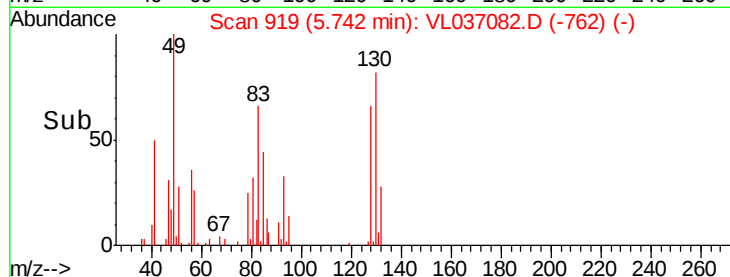
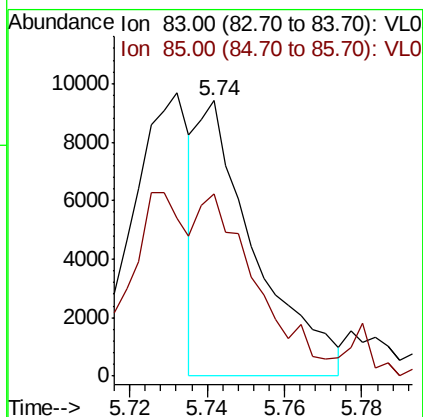
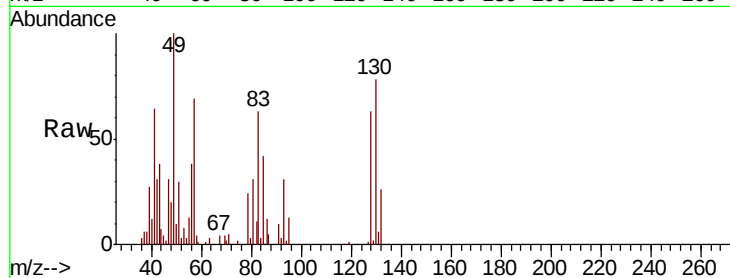




#29
Chloroform
Concen: 0.041 ppbv
RT: 5.74 min Scan# 919
Delta R.T. 0.01 min
Lab File: VL037082.D
Acq: 1 Jun 2021 22:56

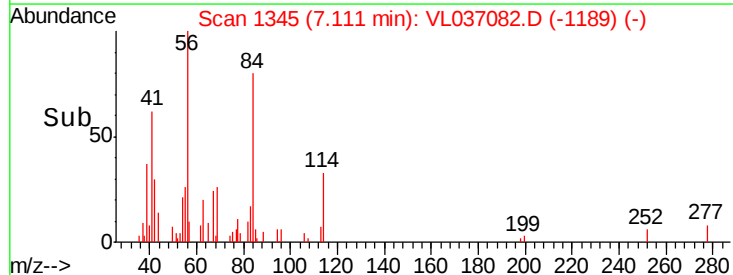
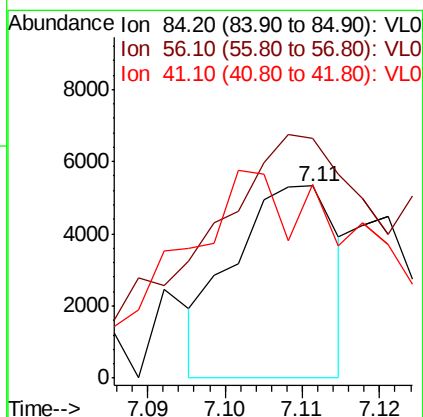
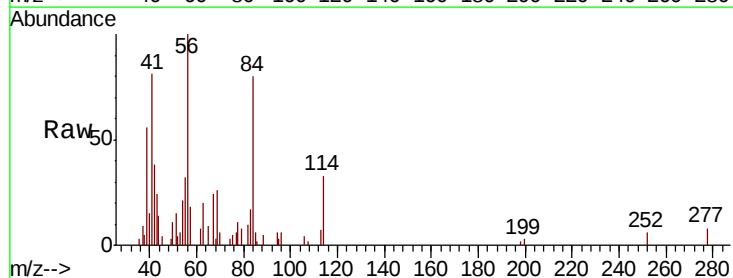
Instrument :
MSVOA_L
ClientSampleId :

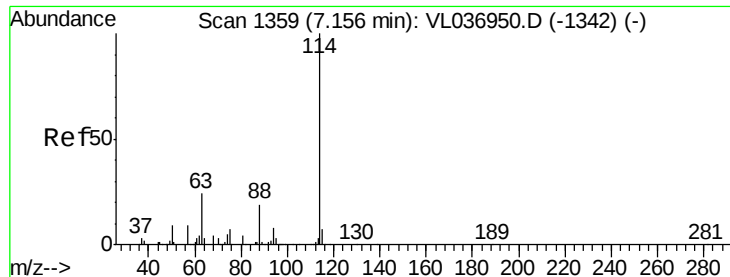
Tot Ion: 83 Resp: 9754
Ion Ratio Lower Upper
83 100
85 66.6 51.1 76.7



#30
Cyclohexane
Concen: 0.034 ppbv
RT: 7.11 min Scan# 1345
Delta R.T. 0.00 min
Lab File: VL037082.D
Acq: 1 Jun 2021 22:56

Tgt Ion: 84 Resp: 4924
Ion Ratio Lower Upper
84 100
56 0.0 107.9 161.9#
41 248.1 65.5 98.3#

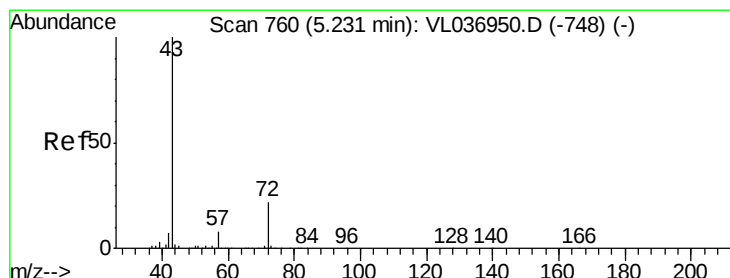
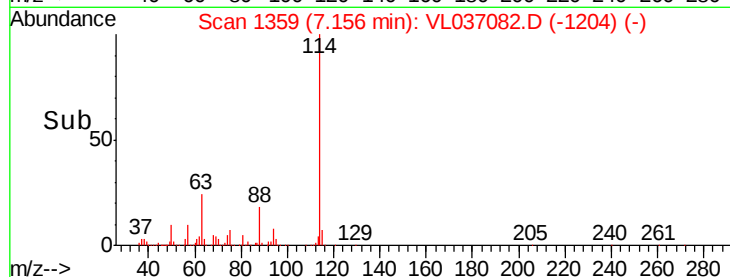
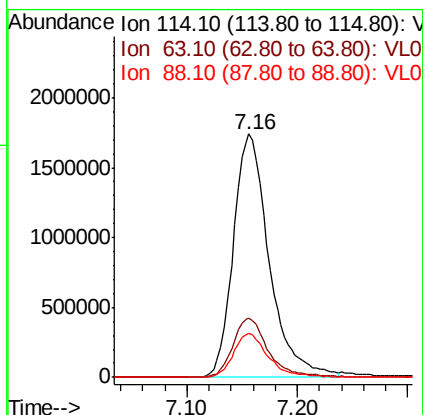
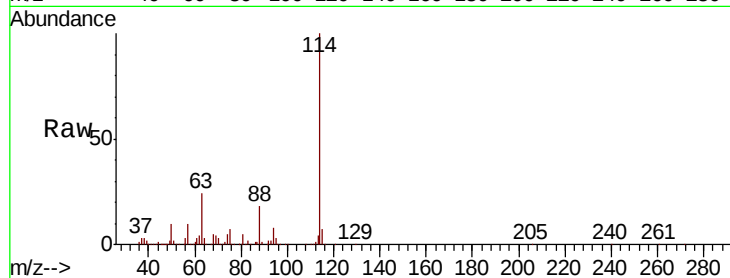




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.16 min Scan# 1359
 Delta R.T. -0.00 min
 Lab File: VL037082.D
 Acq: 1 Jun 2021 22:56

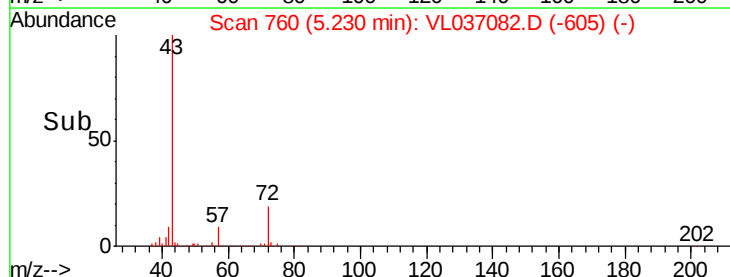
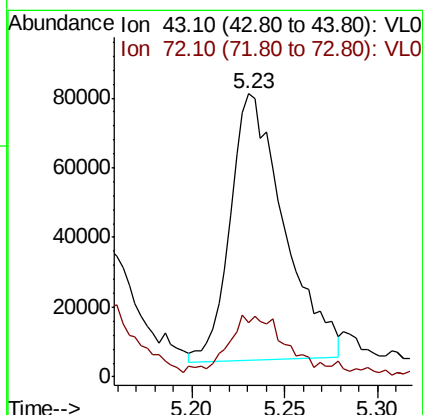
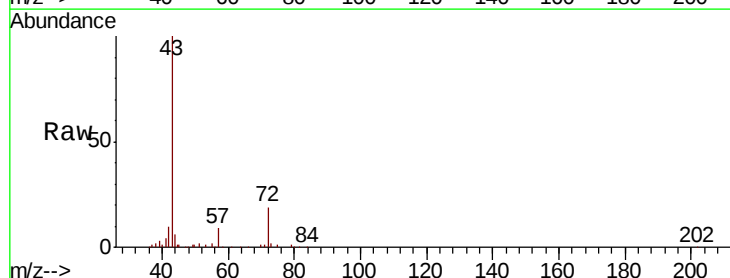
Instrument :
 MSVOA_L
 ClientSampleId :

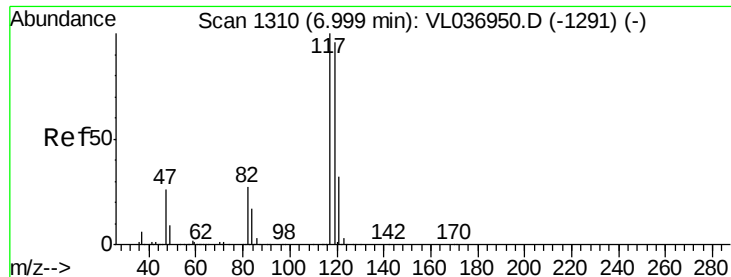
Tot Ion:114 Resp: 3925341
 Ion Ratio Lower Upper
 114 100
 63 24.2 19.6 29.4
 88 17.8 14.6 21.8



#34
 2-Butanone
 Concen: 1.085 ppbv
 RT: 5.23 min Scan# 760
 Delta R.T. -0.00 min
 Lab File: VL037082.D
 Acq: 1 Jun 2021 22:56

Tgt Ion: 43 Resp: 155077
 Ion Ratio Lower Upper
 43 100
 72 30.1 19.0 28.4#

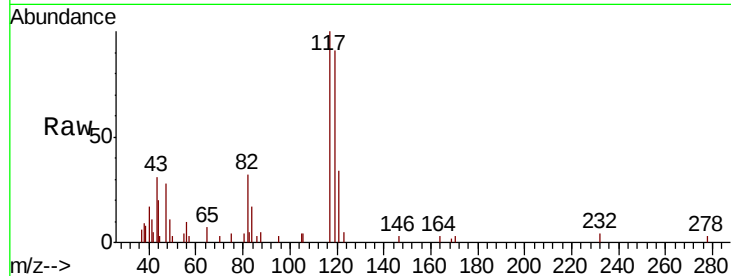




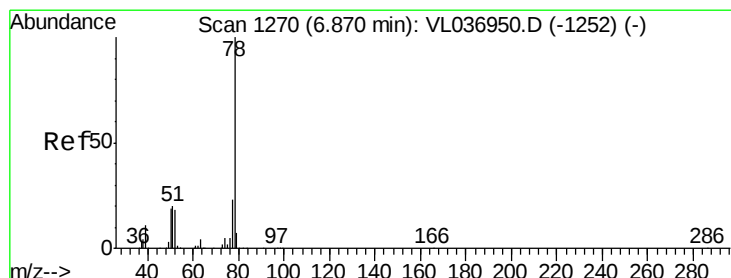
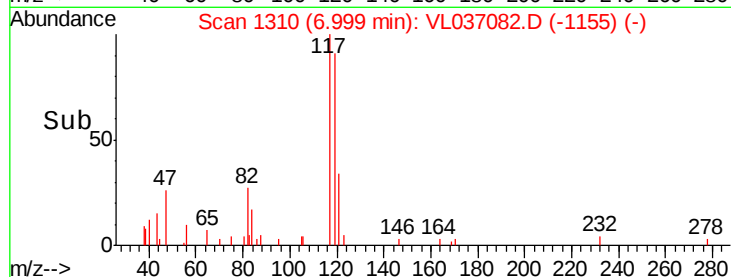
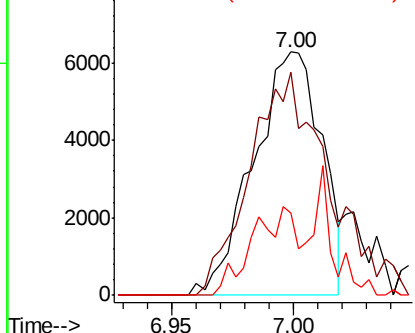
#35
Carbon Tetrachloride
Concen: 0.047 ppbv
RT: 7.00 min Scan# 1310
Delta R.T. -0.00 min
Lab File: VL037082.D
Acq: 1 Jun 2021 22:56

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion:117 Resp: 12187
Ion Ratio Lower Upper
117 100
119 91.5 76.6 114.8
121 33.9 25.8 38.6

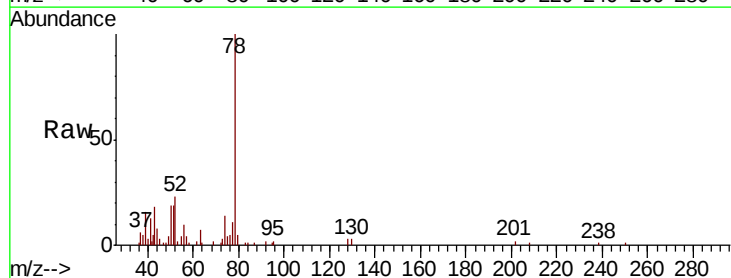


Abundance Ion 117.00 (116.70 to 117.70): V
Ion 119.00 (118.70 to 119.70): V
Ion 121.00 (120.70 to 121.70): V

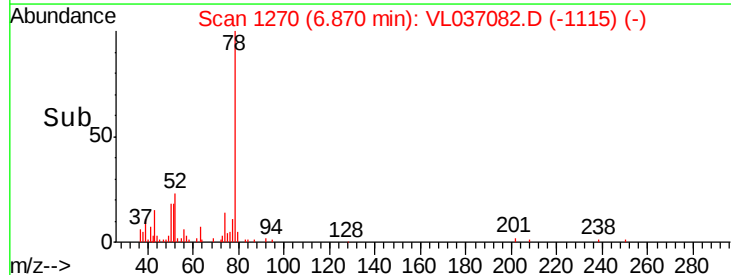
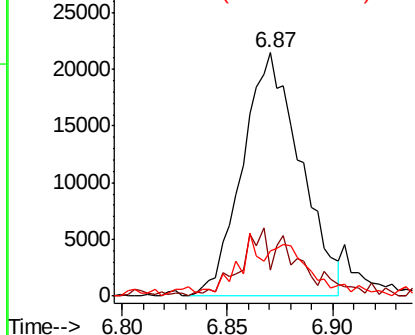


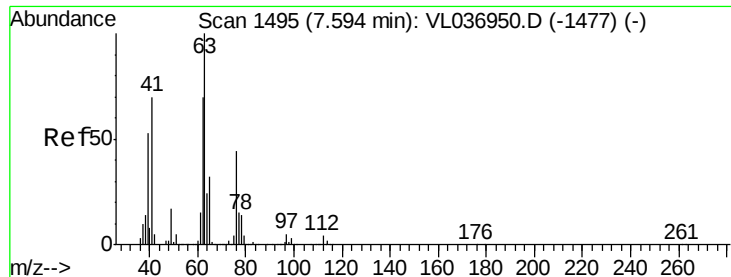
#36
Benzene
Concen: 0.121 ppbv
RT: 6.87 min Scan# 1270
Delta R.T. -0.00 min
Lab File: VL037082.D
Acq: 1 Jun 2021 22:56

Tgt Ion: 78 Resp: 41063
Ion Ratio Lower Upper
78 100
77 10.6 18.6 28.0#
50 14.9 15.0 22.4#



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

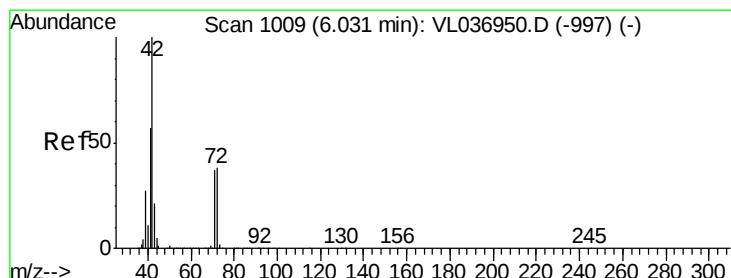
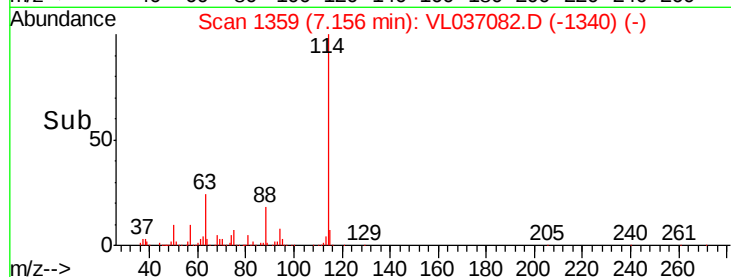
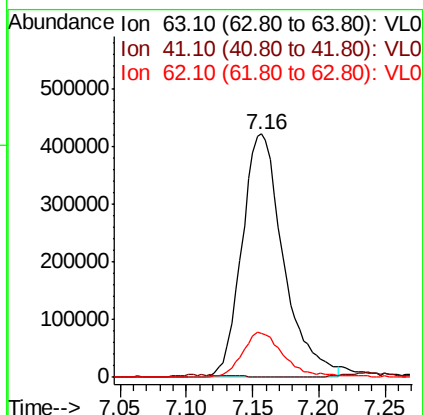
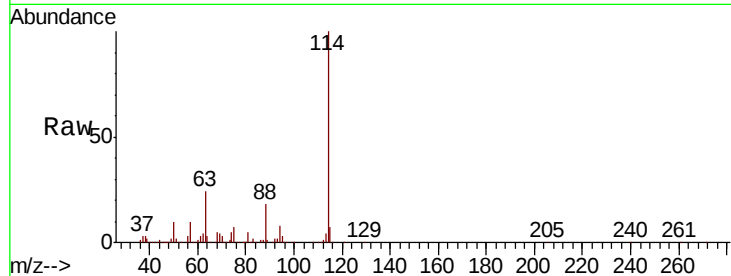




#39
 1,2-Dichloropropane
 Concen: 7.056 ppbv
 RT: 7.16 min Scan# 1359
 Delta R.T. -0.44 min
 Lab File: VL037082.D
 Acq: 1 Jun 2021 22:56

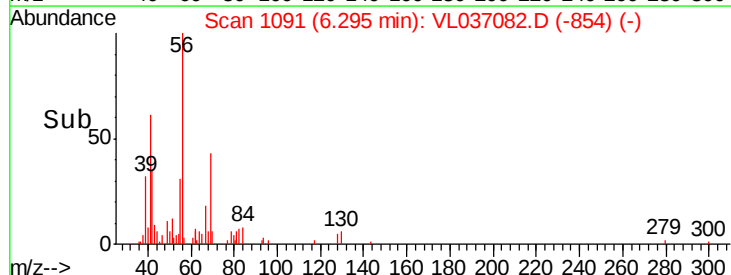
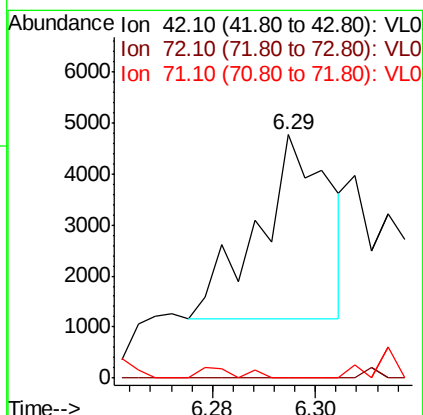
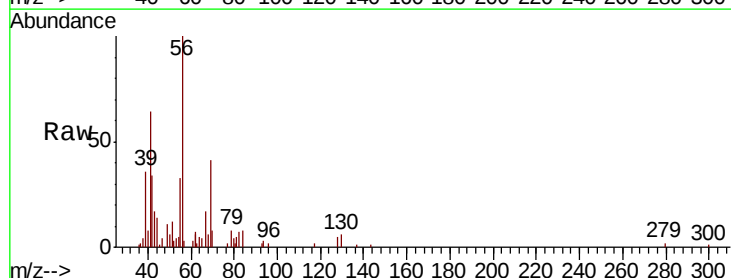
Instrument :
 MSVOA_L
 ClientSampled :

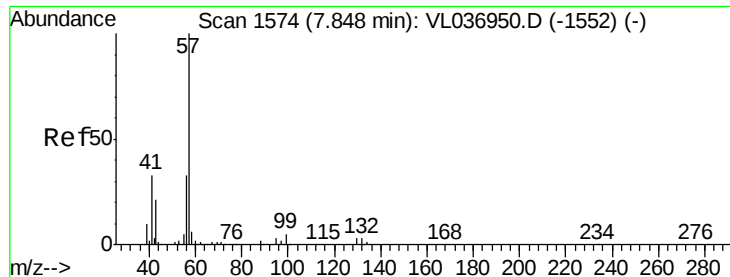
Tot Ion: 63 Resp: 919011
 Ion Ratio Lower Upper
 63 100
 41 0.0 55.7 83.5#
 62 18.1 56.2 84.4#



#41
 Tetrahydrofuran
 Concen: 0.042 ppbv
 RT: 6.29 min Scan# 1091
 Delta R.T. 0.26 min
 Lab File: VL037082.D
 Acq: 1 Jun 2021 22:56

Tgt Ion: 42 Resp: 3437
 Ion Ratio Lower Upper
 42 100
 72 9.3 31.4 47.2#
 71 70.3 30.4 45.6#

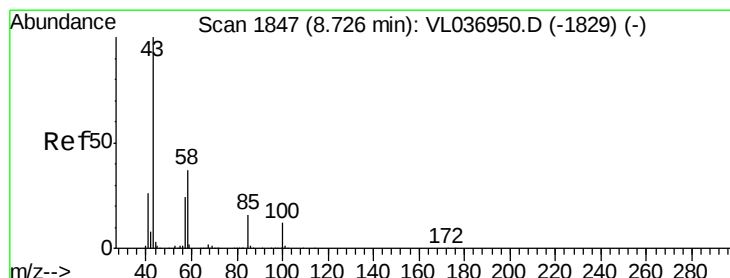
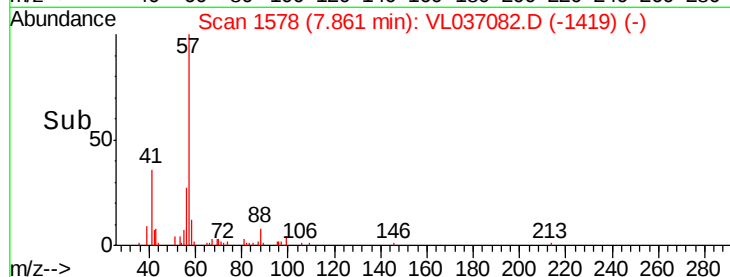
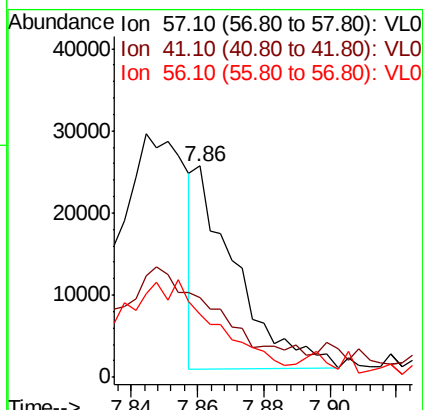
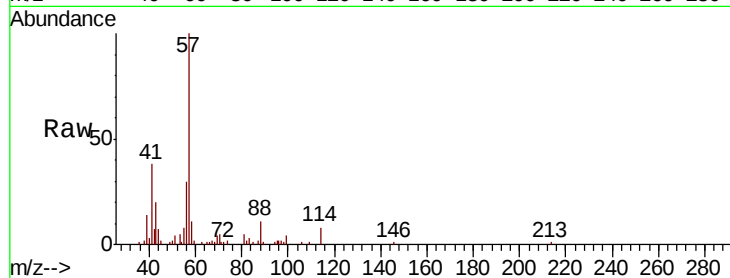




#44
 2,2,4-Trimethylpentane
 Concen: 0.037 ppbv
 RT: 7.86 min Scan# 1578
 Delta R.T. 0.01 min
 Lab File: VL037082.D
 Acq: 1 Jun 2021 22:56

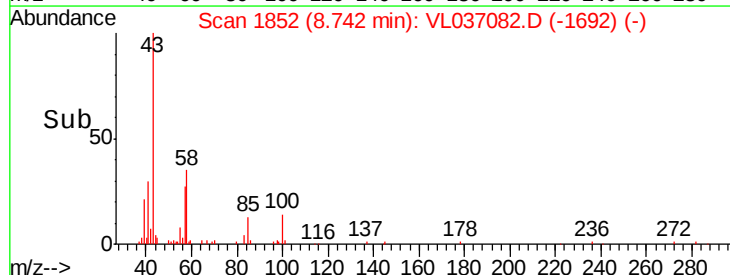
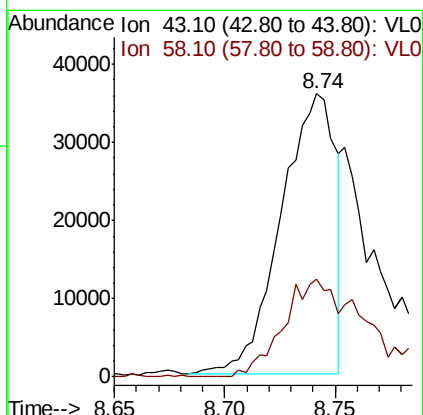
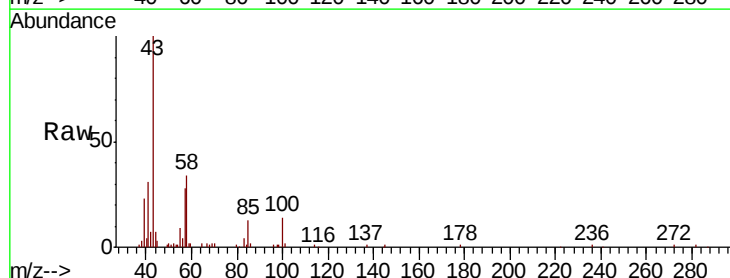
Instrument :
 MSVOA_L
 ClientSampleId :

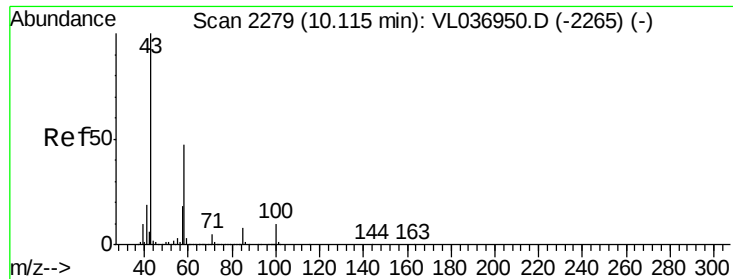
Tot Ion: 57 Resp: 21247
 Ion Ratio Lower Upper
 57 100
 41 0.0 27.0 40.4#
 56 123.8 25.4 38.2#



#50
 4-Methyl-2-Pentanone
 Concen: 0.260 ppbv
 RT: 8.74 min Scan# 1852
 Delta R.T. 0.02 min
 Lab File: VL037082.D
 Acq: 1 Jun 2021 22:56

Tgt Ion: 43 Resp: 61371
 Ion Ratio Lower Upper
 43 100
 58 58.5 29.4 44.2#

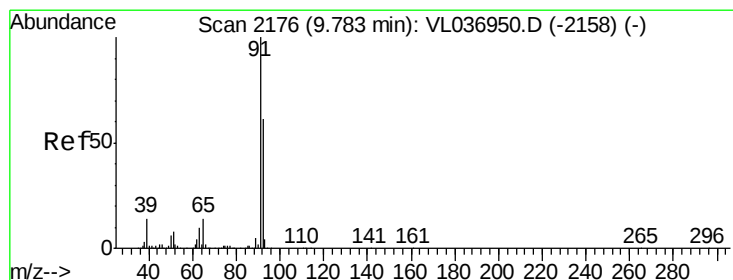
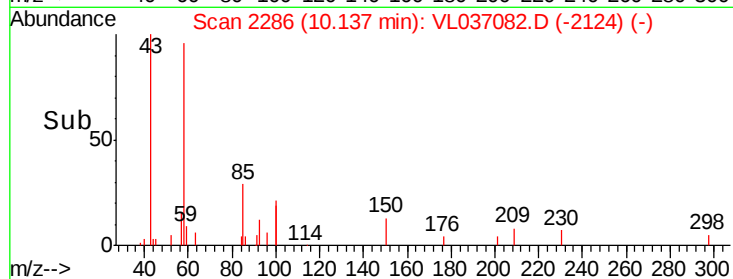
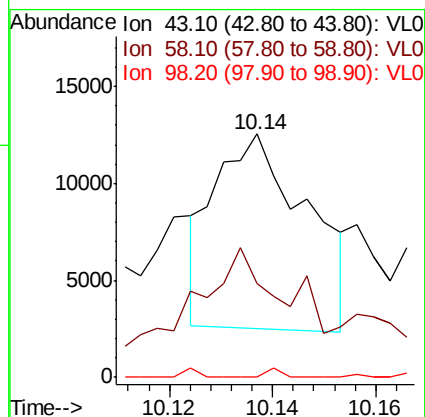
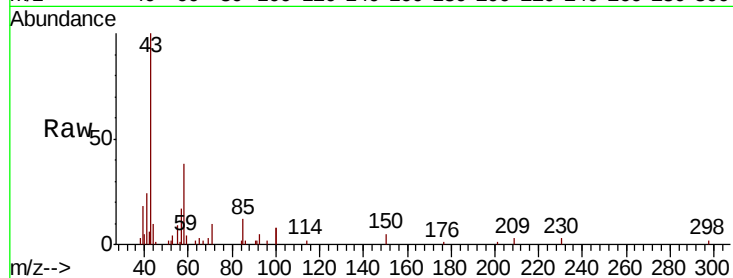




#51
2-Hexanone
Concen: 0.100 ppbv
RT: 10.14 min Scan# 2286
Delta R.T. 0.02 min
Lab File: VL037082.D
Acq: 1 Jun 2021 22:56

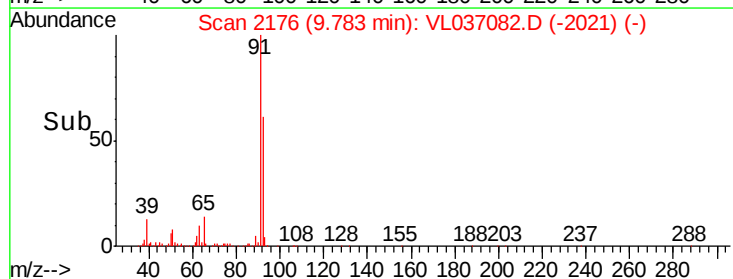
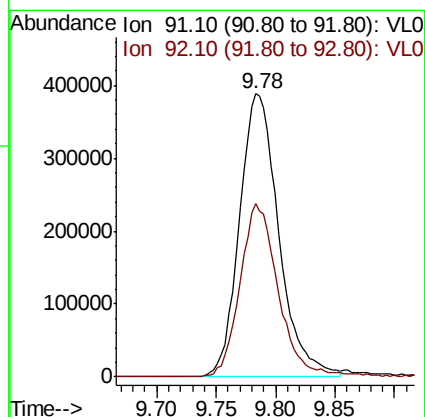
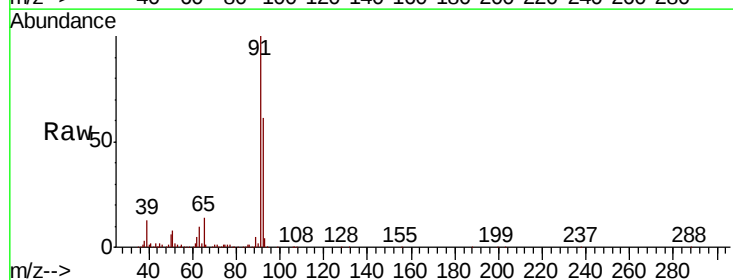
Instrument :
MSVOA_L
ClientSampleId :

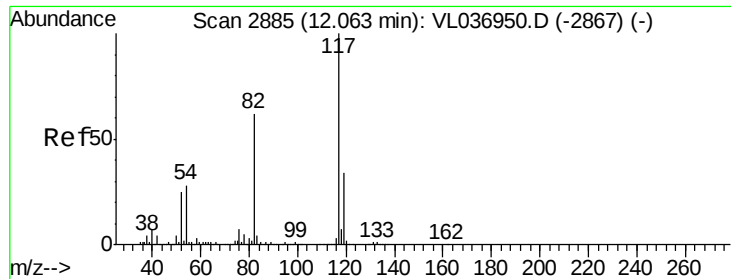
Tot Ion: 43 Resp: 12504
Ion Ratio Lower Upper
43 100
58 133.1 41.1 61.7#
98 0.0 0.1 0.1#



#53
Toluene
Concen: 2.212 ppbv
RT: 9.78 min Scan# 2176
Delta R.T. -0.00 min
Lab File: VL037082.D
Acq: 1 Jun 2021 22:56

Tgt Ion: 91 Resp: 889754
Ion Ratio Lower Upper
91 100
92 60.3 49.5 74.3

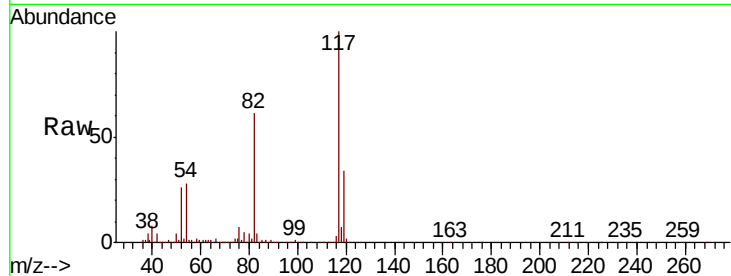




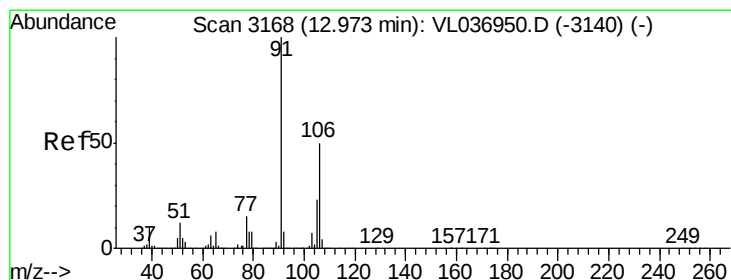
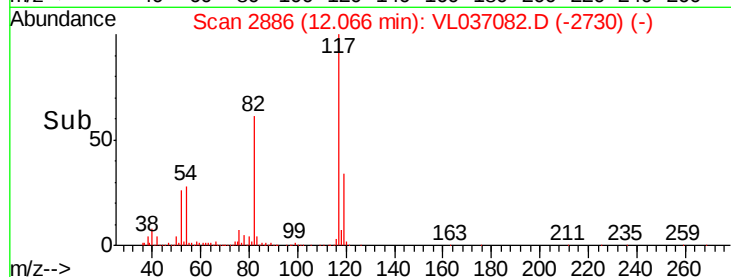
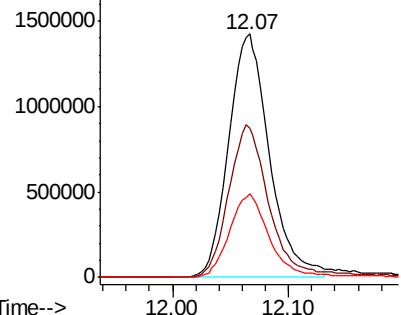
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.07 min Scan# 2886
Delta R.T. 0.00 min
Lab File: VL037082.D
Acq: 1 Jun 2021 22:56

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion:117 Resp: 3486294
Ion Ratio Lower Upper
117 100
82 64.0 52.6 79.0
119 35.0 46.6 70.0#

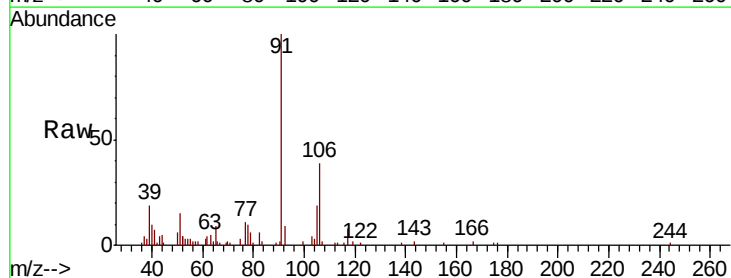


Abundance Ion 117.10 (116.80 to 117.80): V
Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V

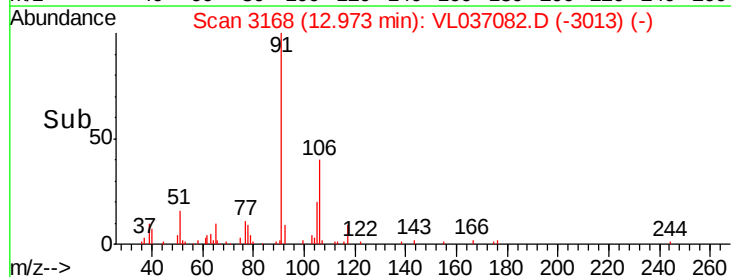
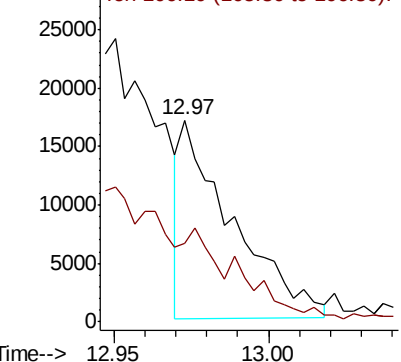


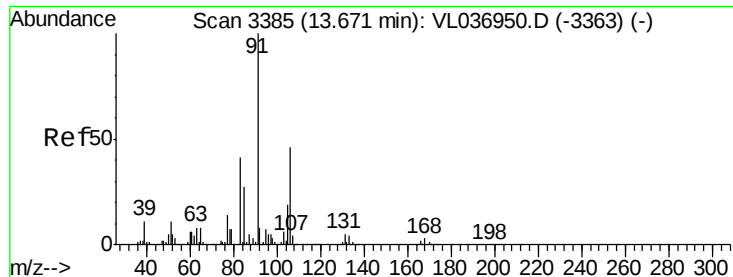
#59
m/p-Xylene
Concen: 0.048 ppbv
RT: 12.97 min Scan# 3168
Delta R.T. -0.00 min
Lab File: VL037082.D
Acq: 1 Jun 2021 22:56

Tgt Ion: 91 Resp: 19719
Ion Ratio Lower Upper
91 100
106 0.0 37.4 56.2#



Abundance Ion 91.10 (90.80 to 91.80): VL0
Ion 106.10 (105.80 to 106.80): V

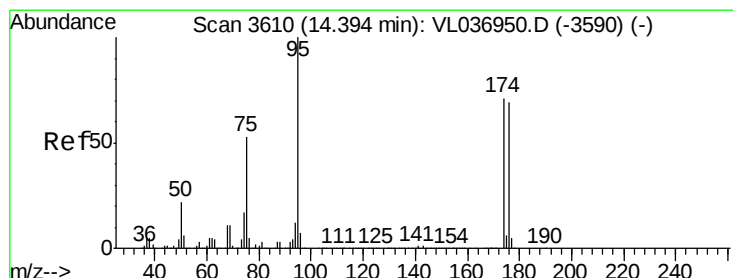
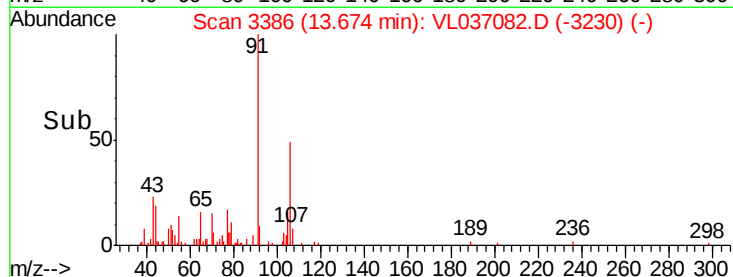
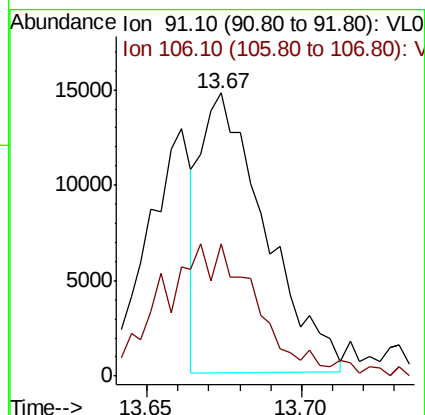
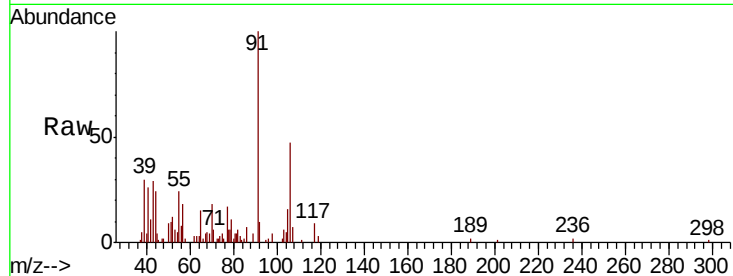




#60
o-Xylene
Concen: 0.055 ppbv
RT: 13.67 min Scan# 3386
Delta R.T. 0.00 min
Lab File: VL037082.D
Acq: 1 Jun 2021 22:56

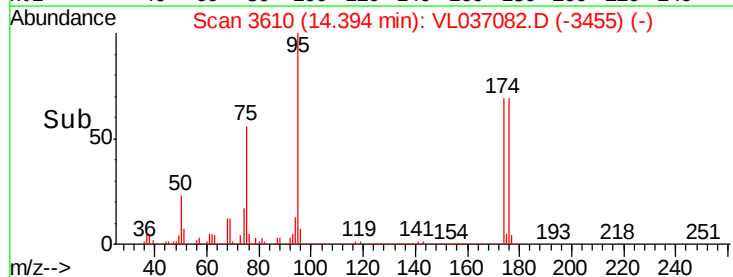
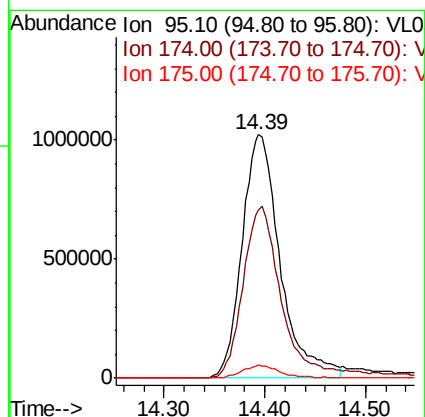
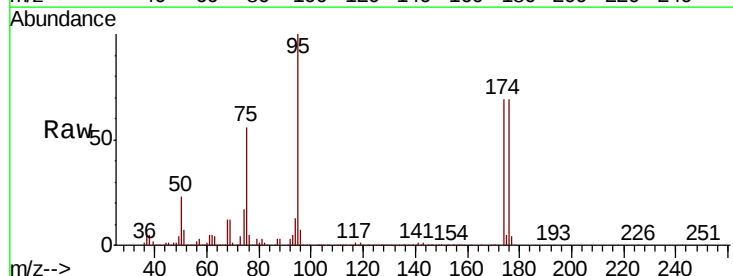
Instrument :
MSVOA_L
ClientSampled :

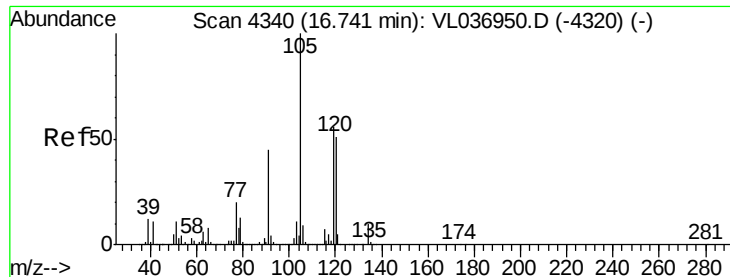
Tot Ion: 91 Resp: 21195
Ion Ratio Lower Upper
91 100
106 73.8 23.4 70.3#



#68
1-Bromo-4-Fluorobenzene
Concen: 10.237 ppbv
RT: 14.39 min Scan# 3610
Delta R.T. -0.00 min
Lab File: VL037082.D
Acq: 1 Jun 2021 22:56

Tgt Ion: 95 Resp: 2681036
Ion Ratio Lower Upper
95 100
174 74.5 58.4 87.6
175 5.3 4.4 6.6





#74
 1,2,4-Trimethylbenzene
 Concen: 0.125 ppbv
 RT: 16.74 min Scan# 4341
 Delta R.T. 0.00 min
 Lab File: VL037082.D
 Acq: 1 Jun 2021 22:56

Instrument :
 MSVOA_L
 ClientSampleId :

Tot Ion:	105	Resp:	55763
Ion	Ratio	Lower	Upper
105	100		
120	44.3	40.6	61.0
91	9.8	37.4	56.0#
77	12.1	16.2	24.4#

