

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032621\
 Data File : VL036513.D
 Acq On : 26 Mar 2021 14:15
 Operator : SY/AP
 Sample : M1760-03
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

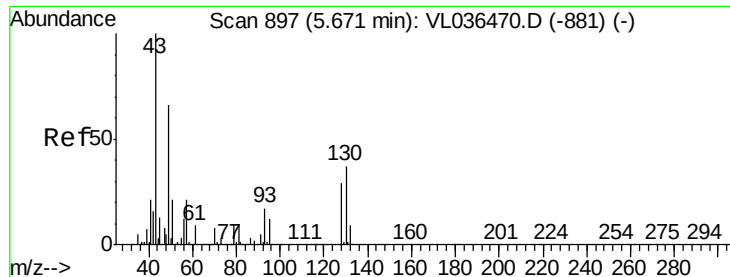
Quant Time: Mar 27 03:28:49 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032521AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Mar 25 09:42:40 2021
 QLast Update : Thu Mar 25 09:42:40 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.69	49	1561656	10.00	ppbv	0.02
33) 1,4-Difluorobenzene	7.20	114	3402386	10.00	ppbv	0.03
55) Chlorobenzene-d5	12.12	117	3135075	10.00	ppbv	0.03

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.45	95	2331144	9.33	ppbv	0.03
Spiked Amount	10.000	Range	65 - 135	Recovery	=	93.30%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.07	85	46204	0.181	ppbv #	84
3) Chlorodifluoromethane	3.01	51	79678	0.273	ppbv #	83
4) Chloromethane	3.16	50	72519	0.704	ppbv	96
9) Propene	3.03	41	51109	0.549	ppbv	88
10) Heptane	8.16	43	4856	0.020	ppbv #	28
11) Trichlorofluoromethane	3.97	101	26563	0.102	ppbv	92
12) 1,1,2-Trichlorotrifluoroet	4.50	101	6985	0.042	ppbv #	41
13) Ethanol	3.64	45	4118363	371.803	ppbv	95
15) Acetone	3.87	43	2230697	14.513	ppbv	99
16) 1,3-Butadiene	3.34	39	2303	0.022	ppbv #	1
17) tert-Butyl alcohol	4.00	59	194278	1.452	ppbv	96
19) Isopropyl Alcohol	4.00	45	5849429	69.182	ppbv #	94
20) Methylene Chloride	4.37	84	1207765	16.783	ppbv	95
21) Allyl Chloride	4.38	41	5758	0.047	ppbv #	29
23) Vinyl Acetate	5.09	43	42352	0.161	ppbv #	65
25) Ethyl Acetate	5.71	43	788225	2.157	ppbv #	79
26) Hexane	5.71	57	999464	5.894	ppbv #	48
27) Carbon Disulfide	4.99	76	57328	0.343	ppbv #	65
28) Methyl tert-Butyl Ether	5.07	73	4005	0.020	ppbv #	52
34) 2-Butanone	5.27	43	43931	0.265	ppbv #	55
36) Benzene	6.92	78	49796	0.159	ppbv #	90
39) 1,2-Dichloropropane	7.20	63	951536	7.475	ppbv #	23
40) 1,4-Dioxane	7.87	88	1452	0.049	ppbv #	1
41) Tetrahydrofuran	5.71	42	412615	5.388	ppbv #	54
44) 2,2,4-Trimethylpentane	7.91	57	61941	0.112	ppbv #	1
51) 2-Hexanone	10.18	43	2859	0.024	ppbv #	1
53) Toluene	9.84	91	42023	0.126	ppbv #	21
58) Ethyl Benzene	12.75	91	40565	0.089	ppbv	98
59) m/p-Xylene	13.03	91	37366	0.094	ppbv #	32
60) o-Xylene	13.73	91	18219	0.047	ppbv #	31

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.69 min Scan# 904

Delta R.T. 0.02 min

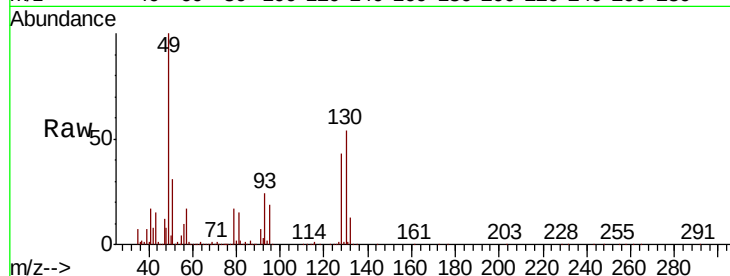
Lab File: VL036513.D

Acq: 26 Mar 2021 14:15

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 49 Resp: 1561656

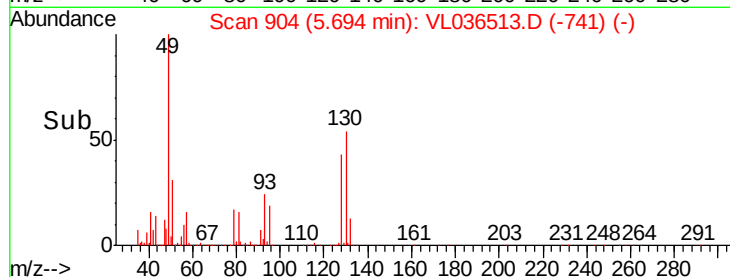
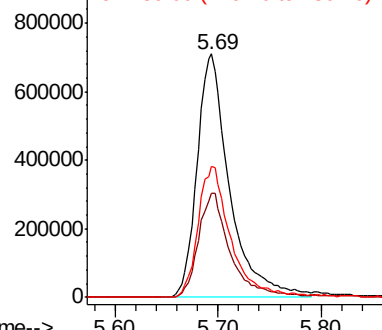
Ion	Ratio	Lower	Upper
49	100		
128	42.9	23.5	70.6
130	54.8	29.1	87.4



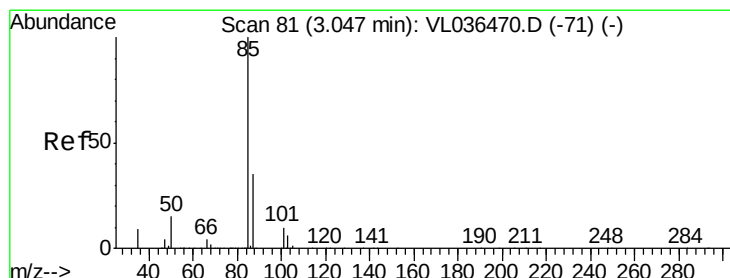
Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



Time-->



#2

Dichlorodifluoromethane

Concen: 0.181 ppbv

RT: 3.07 min Scan# 87

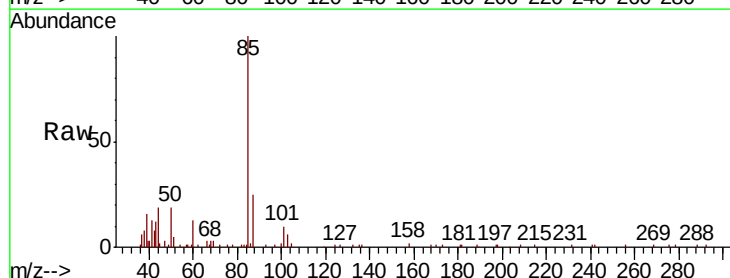
Delta R.T. 0.02 min

Lab File: VL036513.D

Acq: 26 Mar 2021 14:15

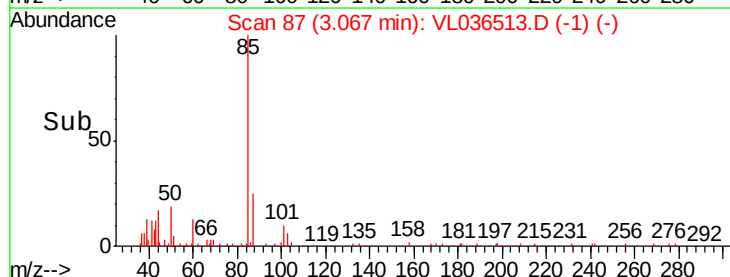
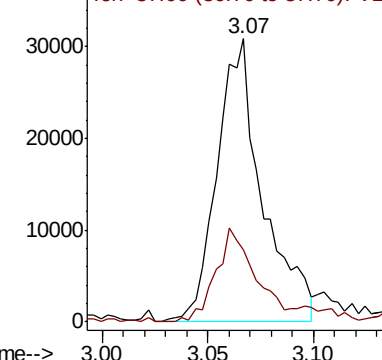
Tgt Ion: 85 Resp: 46204

Ion	Ratio	Lower	Upper
85	100		
87	25.4	27.8	41.8#

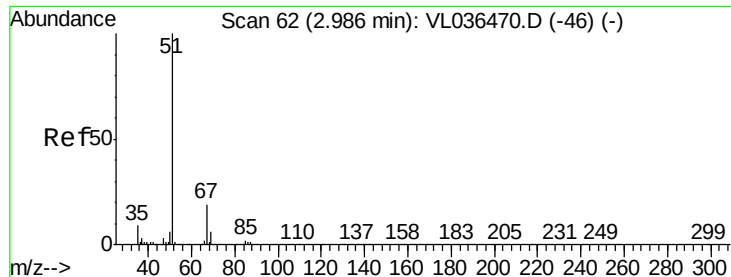


Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0



Time-->



#3

Chlorodifluoromethane

Concen: 0.273 ppbv

RT: 3.01 min Scan# 68

Delta R.T. 0.02 min

Lab File: VL036513.D

Acq: 26 Mar 2021 14:15

Instrument :

MSVOA_L

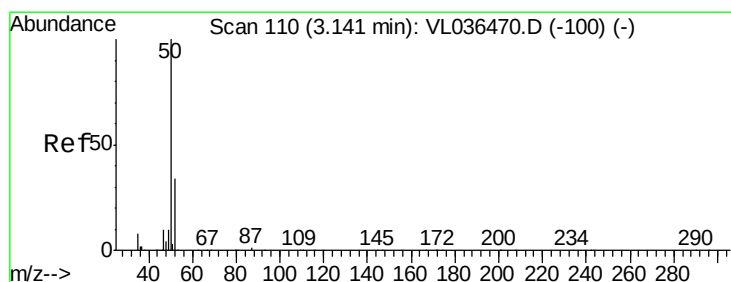
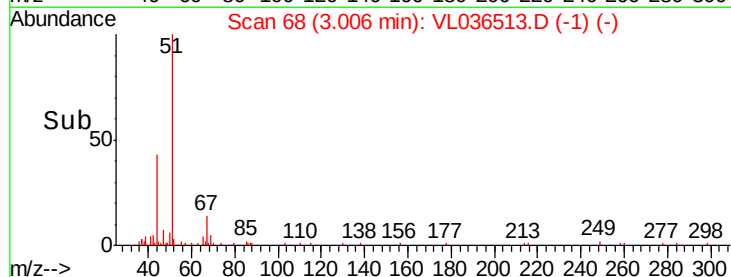
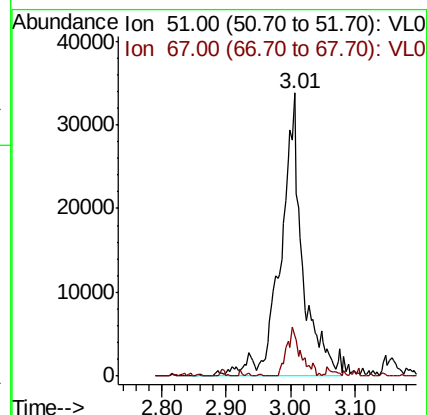
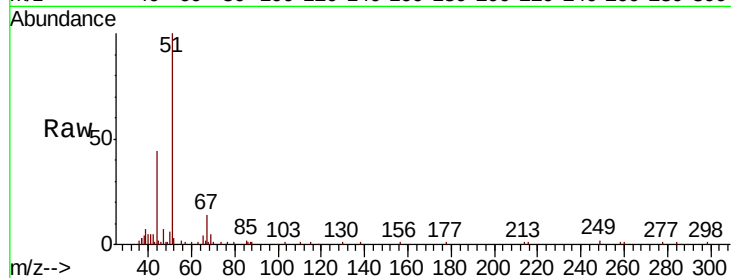
ClientSampleId :

Tot Ion: 51 Resp: 79678

Ion Ratio Lower Upper

51 100

67 11.0 14.7 22.1#



#4

Chloromethane

Concen: 0.704 ppbv

RT: 3.16 min Scan# 115

Delta R.T. 0.02 min

Lab File: VL036513.D

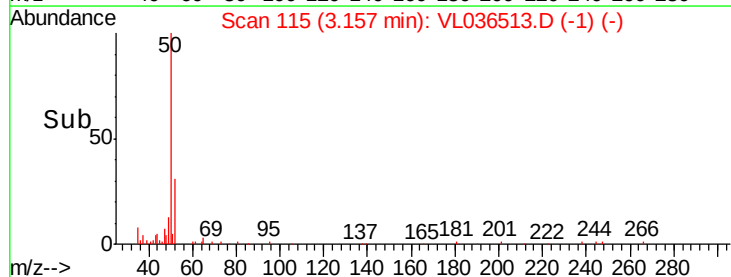
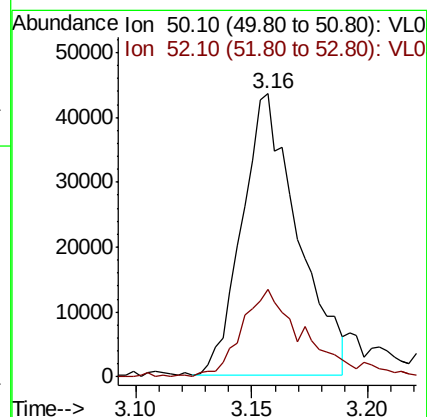
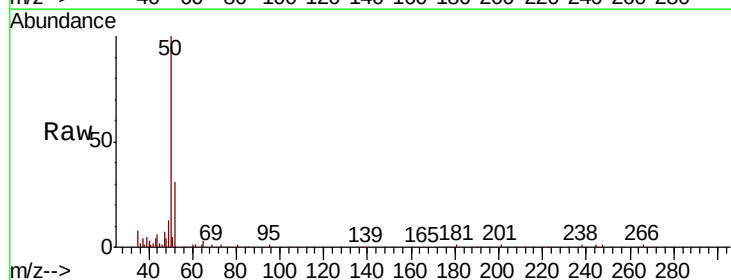
Acq: 26 Mar 2021 14:15

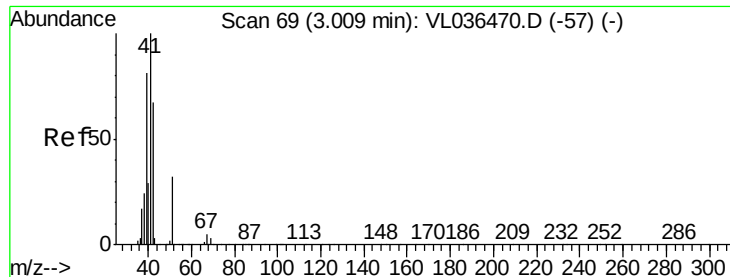
Tgt Ion: 50 Resp: 72519

Ion Ratio Lower Upper

50 100

52 31.4 27.0 40.6





#9

Propene

Concen: 0.549 ppbv

RT: 3.03 min Scan# 76

Delta R.T. 0.02 min

Lab File: VL036513.D

Acq: 26 Mar 2021 14:15

Instrument :

MSVOA_L

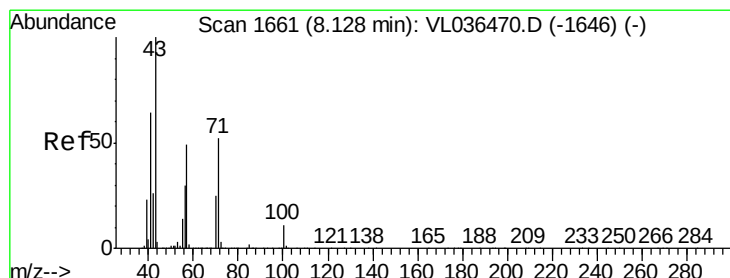
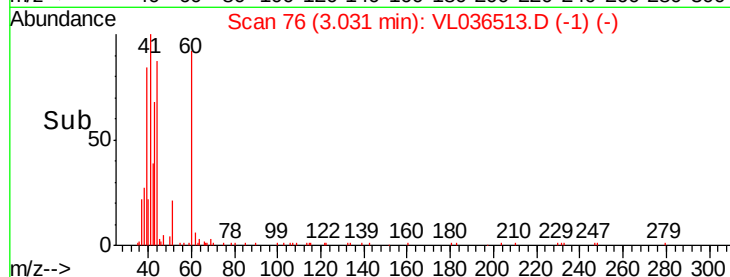
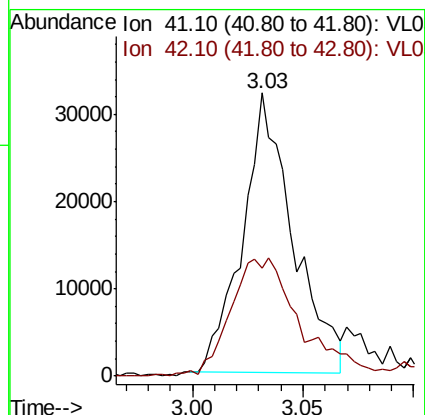
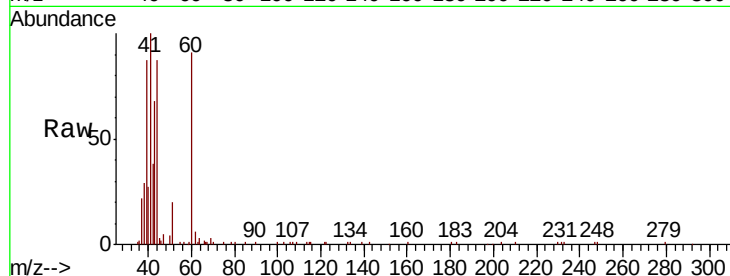
ClientSampleId :

Tot Ion: 41 Resp: 51109

Ion Ratio Lower Upper

41 100

42 61.4 57.0 85.4



#10

Heptane

Concen: 0.020 ppbv

RT: 8.16 min Scan# 1671

Delta R.T. 0.03 min

Lab File: VL036513.D

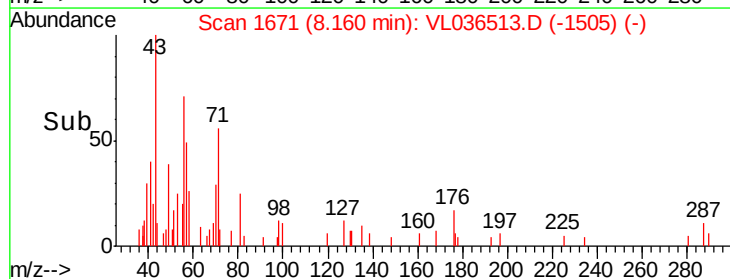
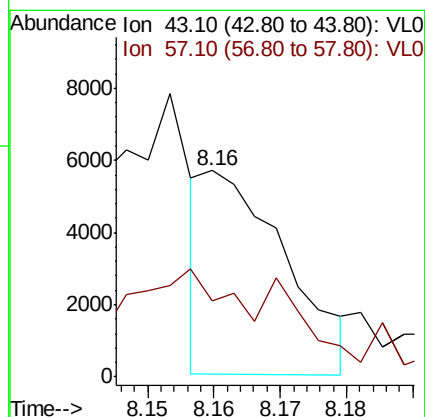
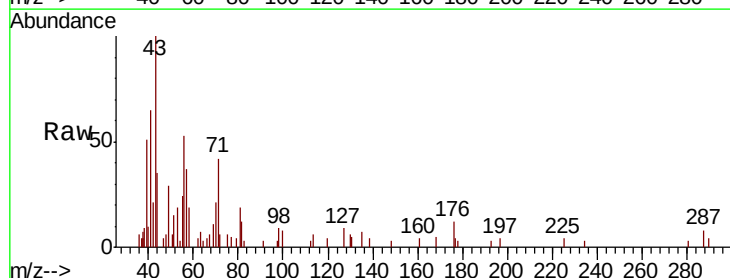
Acq: 26 Mar 2021 14:15

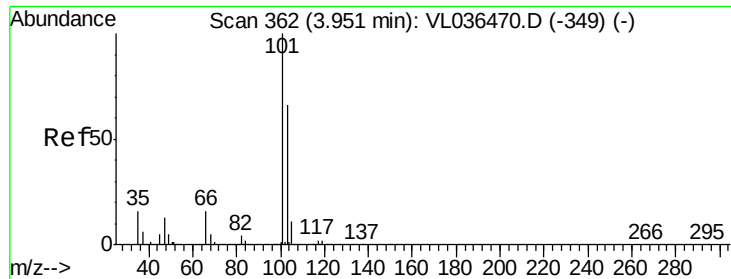
Tgt Ion: 43 Resp: 4856

Ion Ratio Lower Upper

43 100

57 0.0 39.0 58.6#





#11

Trichlorofluoromethane

Concen: 0.102 ppbv

RT: 3.97 min Scan# 367

Delta R.T. 0.02 min

Lab File: VL036513.D

Acq: 26 Mar 2021 14:15

Instrument :

MSVOA_L

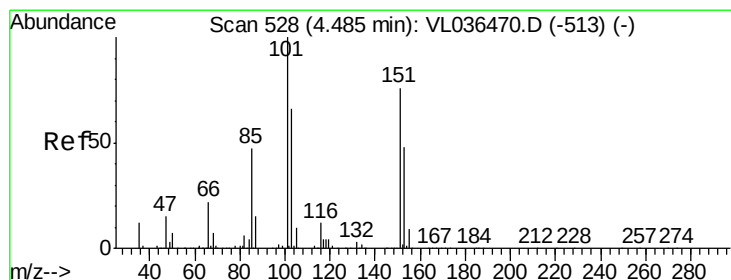
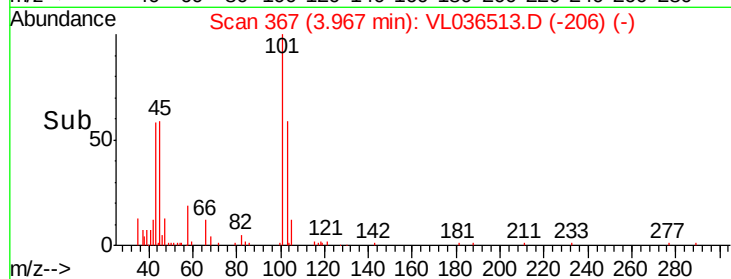
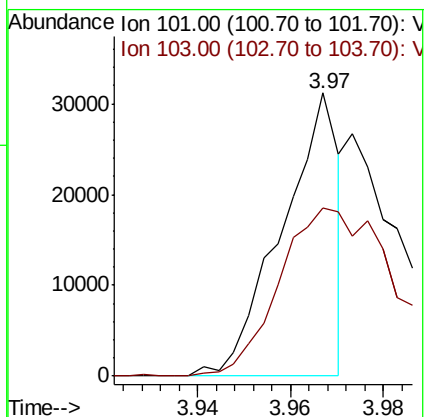
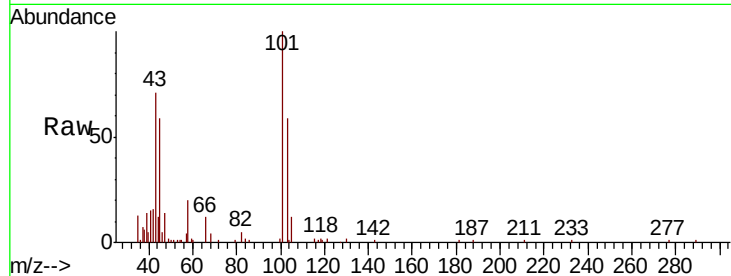
ClientSampleId :

Tot Ion:101 Resp: 26563

Ion Ratio Lower Upper

101 100

103 59.3 52.5 78.7



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.042 ppbv

RT: 4.50 min Scan# 534

Delta R.T. 0.02 min

Lab File: VL036513.D

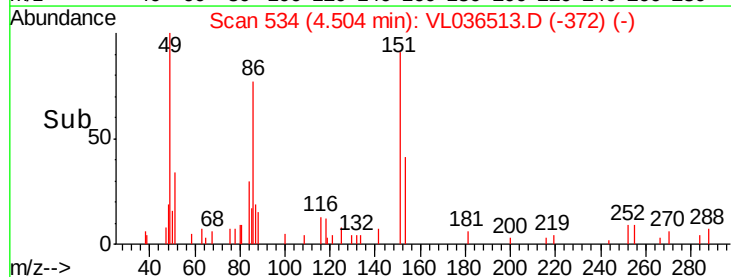
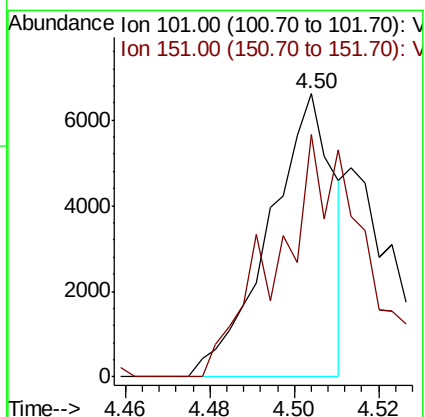
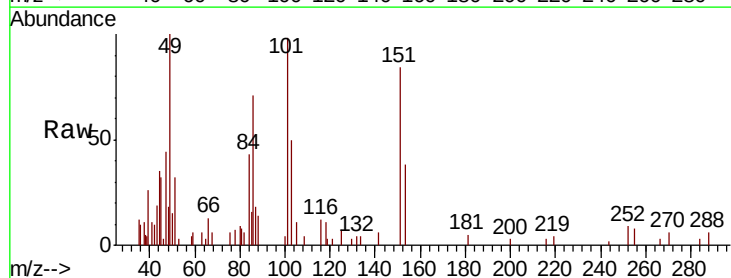
Acq: 26 Mar 2021 14:15

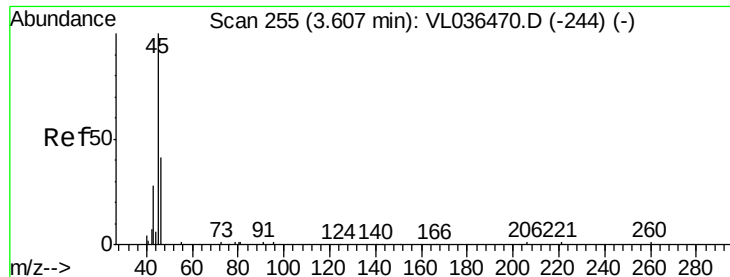
Tgt Ion:101 Resp: 6985

Ion Ratio Lower Upper

101 100

151 126.9 60.9 91.3#

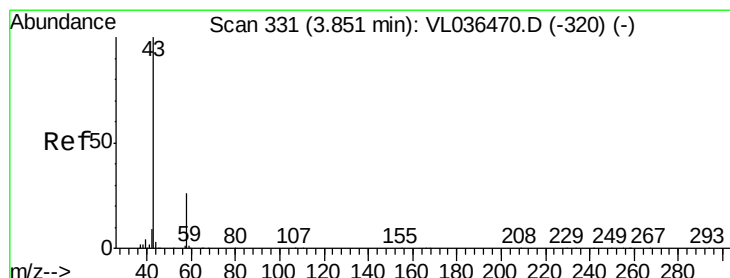
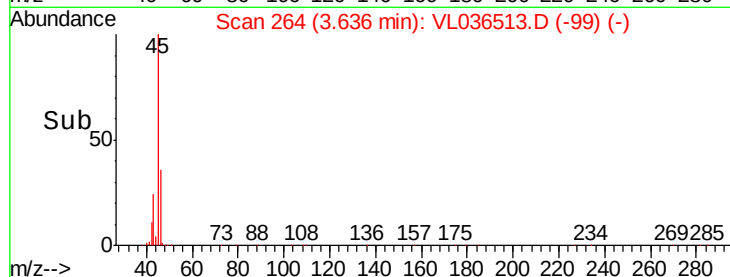
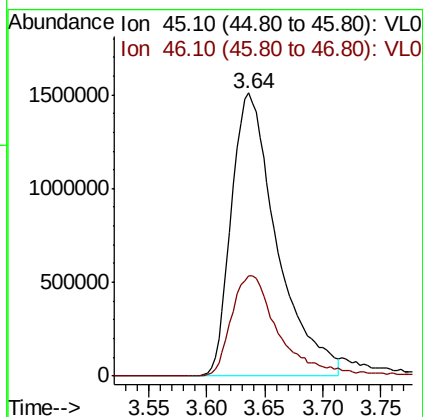
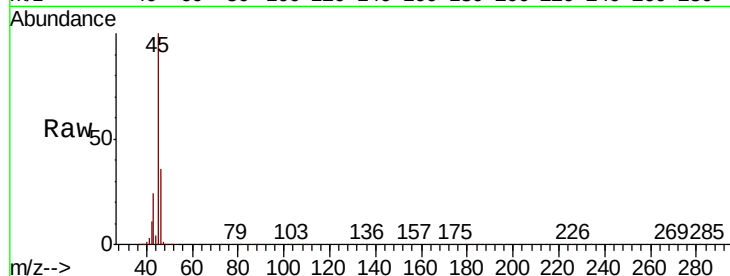




#13
Ethanol
Concen: 371.803 ppbv
RT: 3.64 min Scan# 264
Delta R.T. 0.03 min
Lab File: VL036513.D
Acq: 26 Mar 2021 14:15

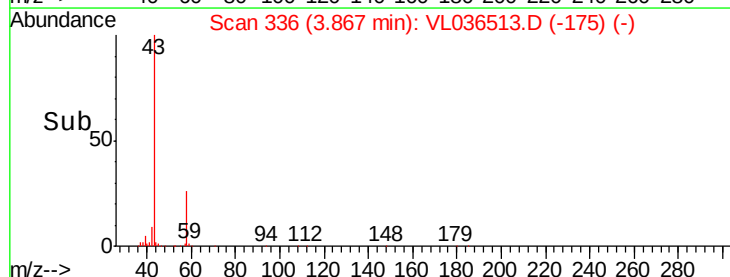
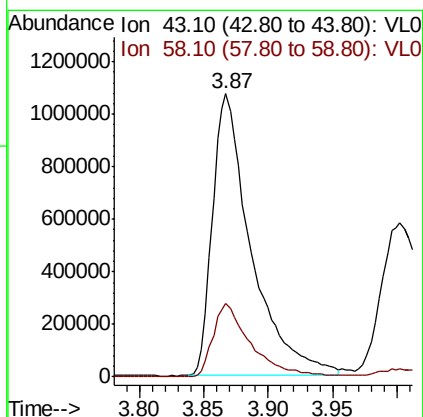
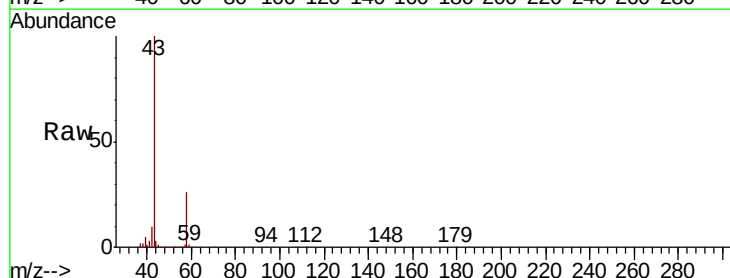
Instrument :
MSVOA_L
ClientSampleId :

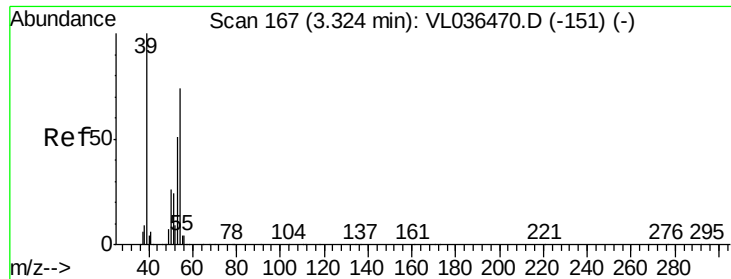
Tot Ion: 45 Resp: 4118363
Ion Ratio Lower Upper
45 100
46 38.4 16.6 66.2



#15
Acetone
Concen: 14.513 ppbv
RT: 3.87 min Scan# 336
Delta R.T. 0.02 min
Lab File: VL036513.D
Acq: 26 Mar 2021 14:15

Tgt Ion: 43 Resp: 2230697
Ion Ratio Lower Upper
43 100
58 25.9 21.2 31.8

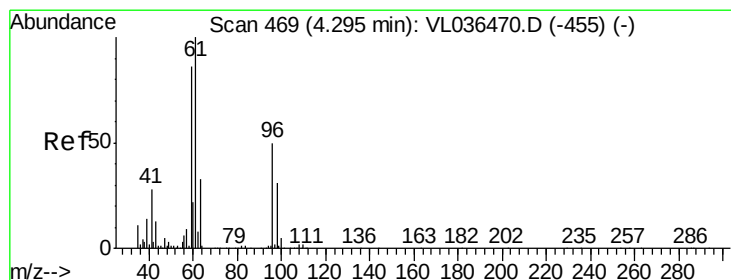
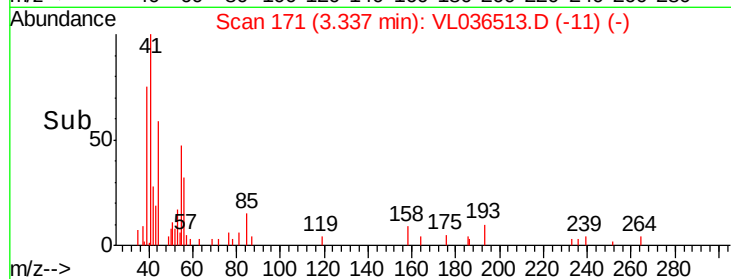
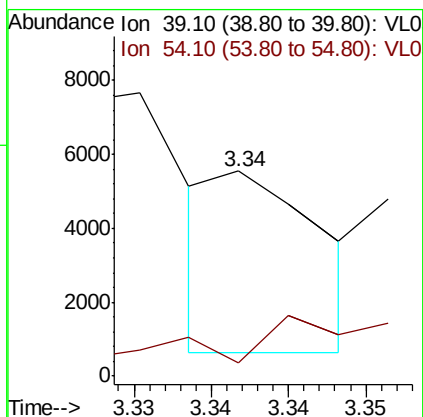
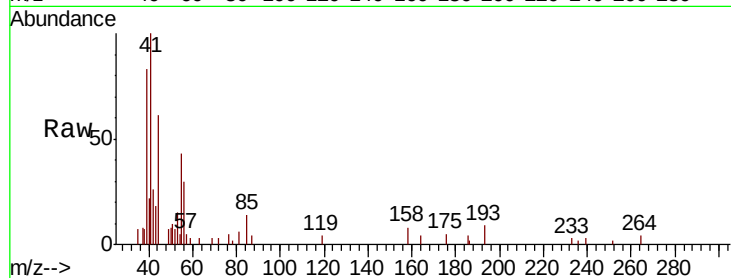




#16
1,3-Butadiene
Concen: 0.022 ppbv
RT: 3.34 min Scan# 171
Delta R.T. 0.01 min
Lab File: VL036513.D
Acq: 26 Mar 2021 14:15

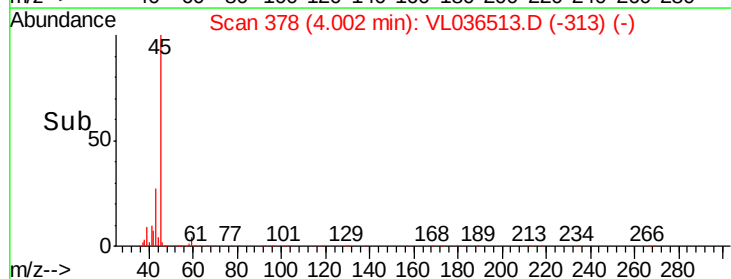
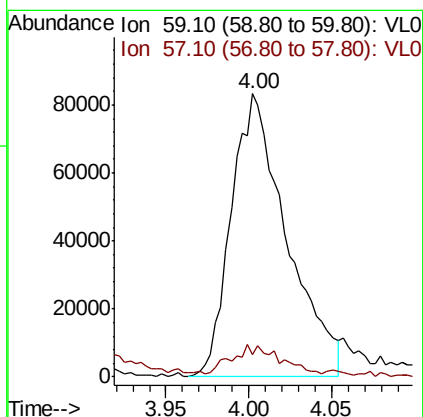
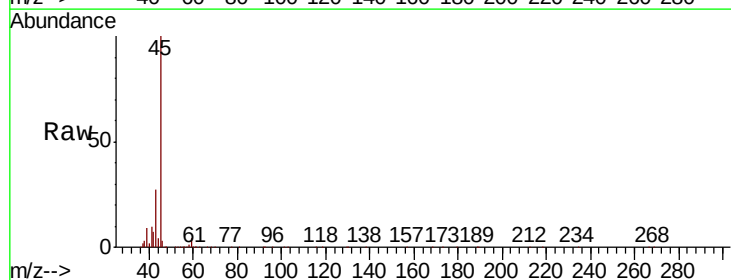
Instrument :
MSVOA_L
ClientSampled :

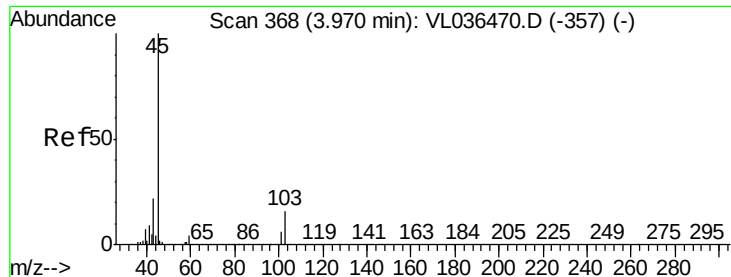
Tot Ion: 39 Resp: 2303
Ion Ratio Lower Upper
39 100
54 178.8 58.8 88.2#



#17
tert-Butyl alcohol
Concen: 1.452 ppbv
RT: 4.00 min Scan# 378
Delta R.T. -0.29 min
Lab File: VL036513.D
Acq: 26 Mar 2021 14:15

Tgt Ion: 59 Resp: 194278
Ion Ratio Lower Upper
59 100
57 12.0 8.6 12.8





#19

Isopropyl Alcohol

Concen: 69.182 ppbv

RT: 4.00 min Scan# 378

Delta R.T. 0.03 min

Lab File: VL036513.D

Acq: 26 Mar 2021 14:15

Instrument :

MSVOA_L

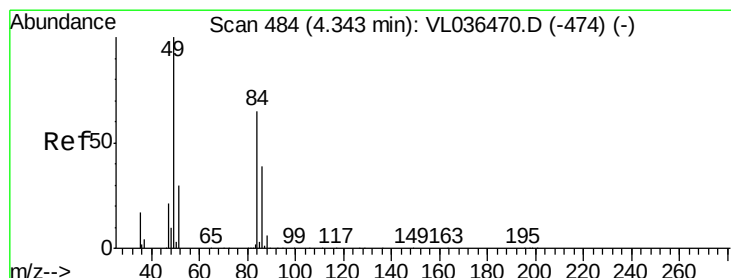
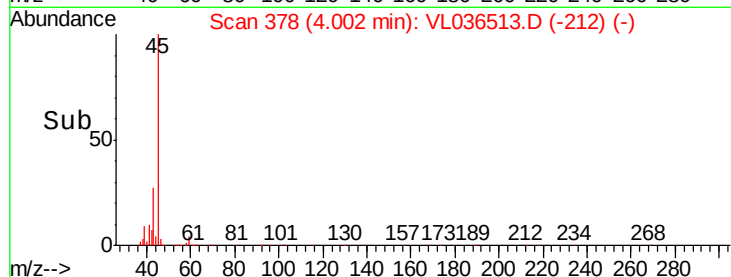
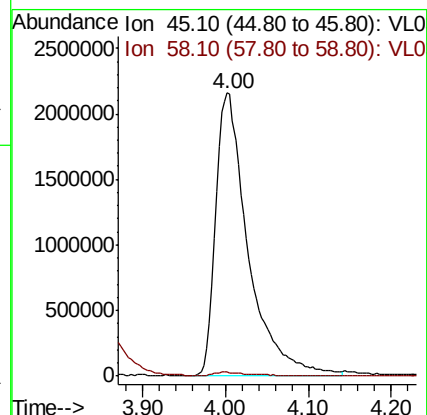
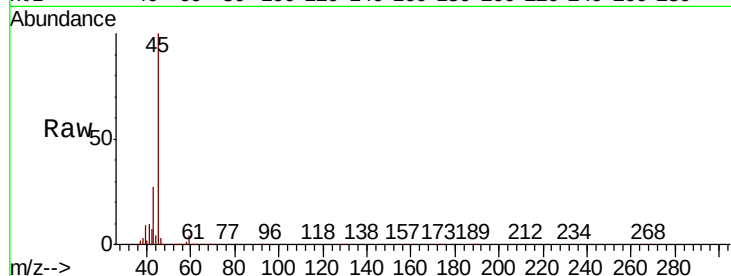
ClientSampled :

Tot Ion: 45 Resp: 5849429

Ion Ratio Lower Upper

45 100

58 1.7 2.9 4.3#



#20

Methylene Chloride

Concen: 16.783 ppbv

RT: 4.37 min Scan# 491

Delta R.T. 0.02 min

Lab File: VL036513.D

Acq: 26 Mar 2021 14:15

Tgt Ion: 84 Resp: 1207765

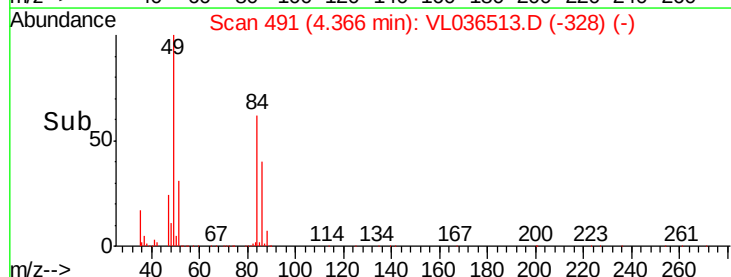
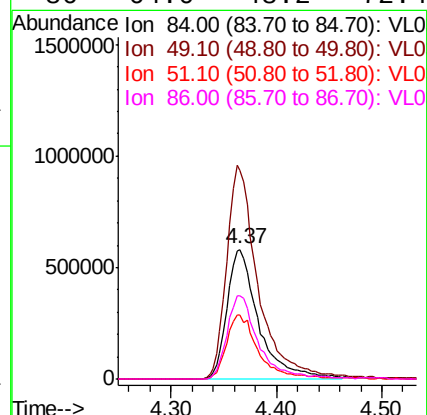
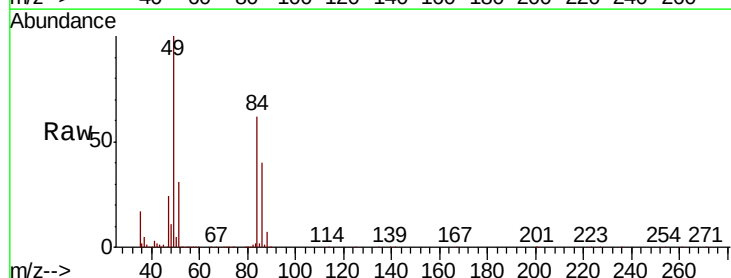
Ion Ratio Lower Upper

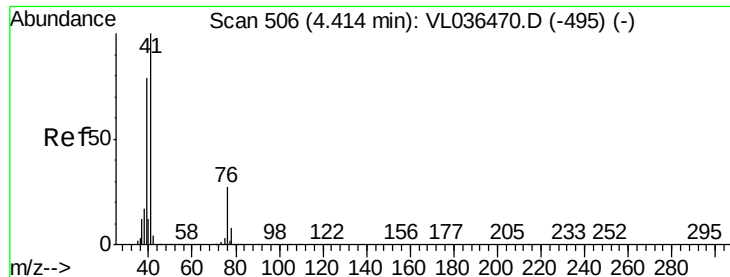
84 100

49 160.1 122.9 184.3

51 49.2 36.9 55.3

86 64.0 48.2 72.4





#21

Allvl Chloride

Concen: 0.047 ppbv

RT: 4.38 min Scan# 496

Delta R.T. -0.03 min

Lab File: VL036513.D

Acq: 26 Mar 2021 14:15

Instrument :

MSVOA_L

ClientSampleId :

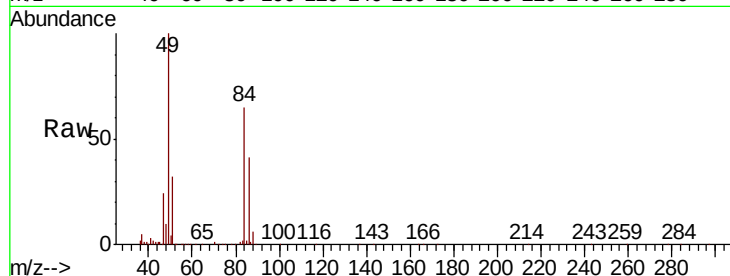
Tot Ion: 41 Resp: 5758

Ion Ratio Lower Upper

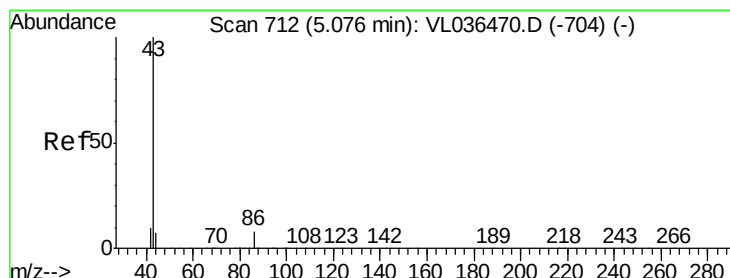
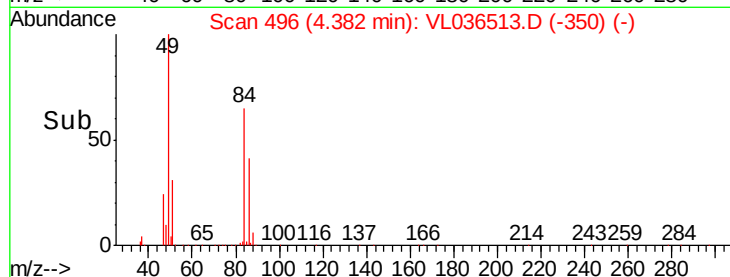
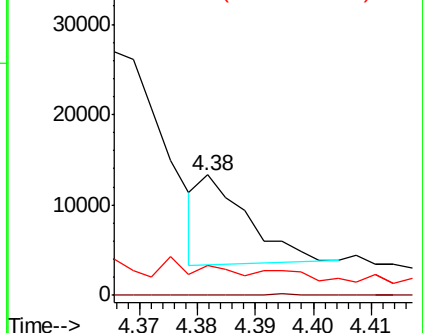
41 100

76 32.2 22.9 34.3

39 0.0 67.3 100.9#



Abundance Ion 41.10 (40.80 to 41.80): VL0
Ion 76.10 (75.80 to 76.80): VL0
Ion 39.10 (38.80 to 39.80): VL0



#23

Vinyl Acetate

Concen: 0.161 ppbv

RT: 5.09 min Scan# 717

Delta R.T. 0.02 min

Lab File: VL036513.D

Acq: 26 Mar 2021 14:15

Tgt Ion: 43 Resp: 42352

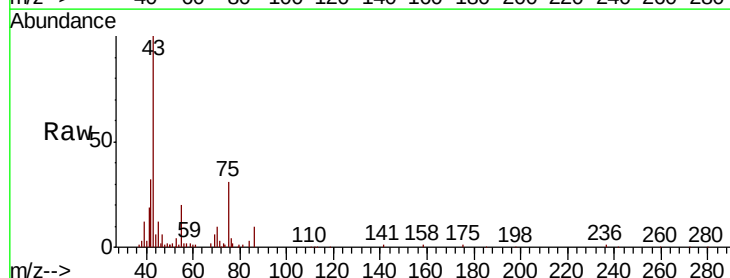
Ion Ratio Lower Upper

43 100

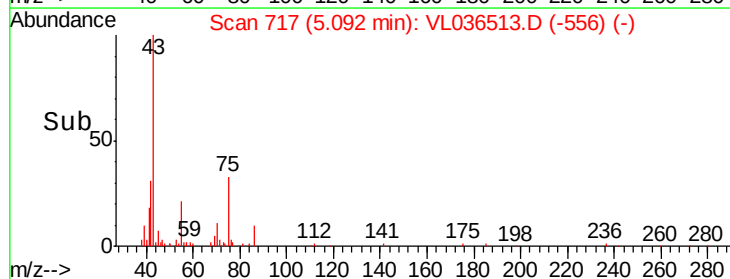
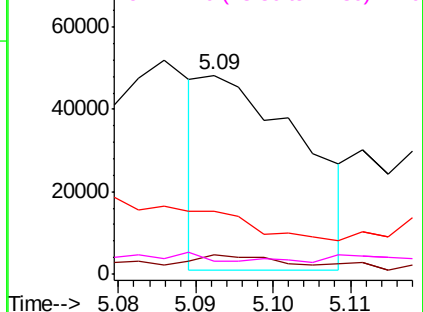
86 9.8 5.4 8.0#

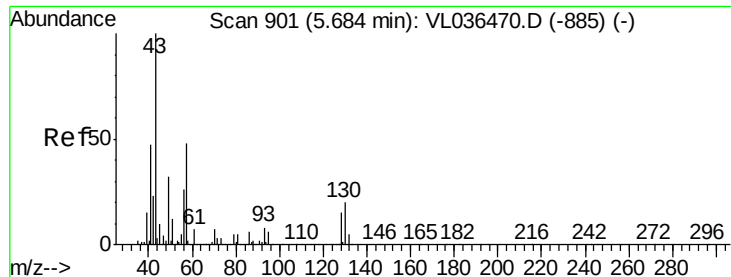
42 33.4 8.5 12.7#

44 0.0 4.6 7.0#



Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 86.10 (85.80 to 86.80): VL0
Ion 42.10 (41.80 to 42.80): VL0
Ion 44.10 (43.80 to 44.80): VL0

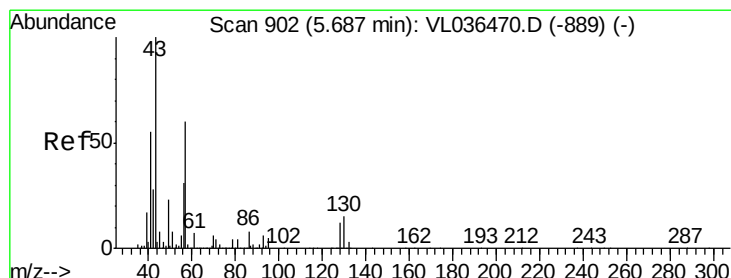
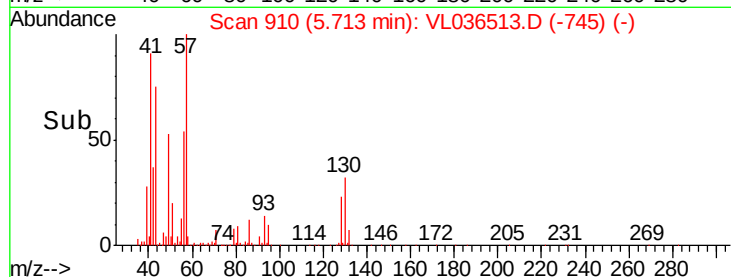
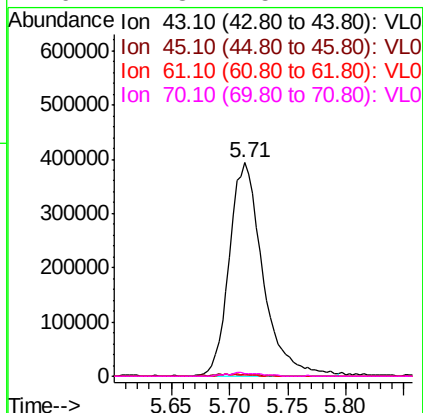
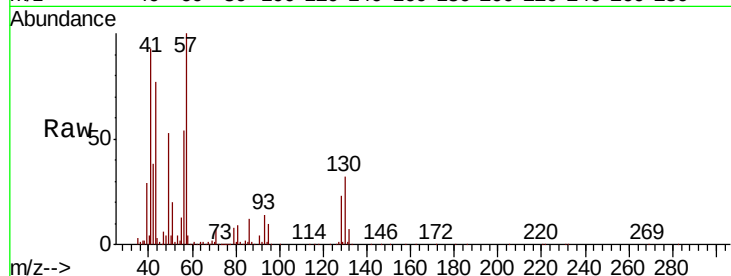




#25
Ethyl Acetate
Concen: 2.157 ppbv
RT: 5.71 min Scan# 910
Delta R.T. 0.03 min
Lab File: VL036513.D
Acq: 26 Mar 2021 14:15

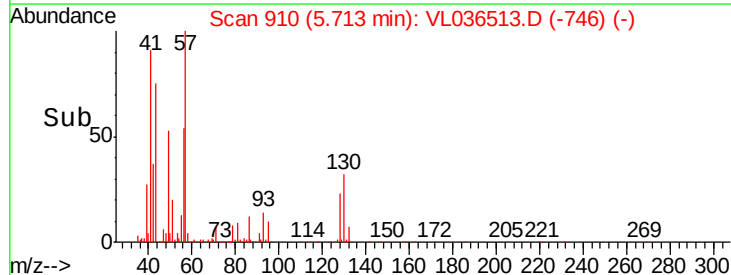
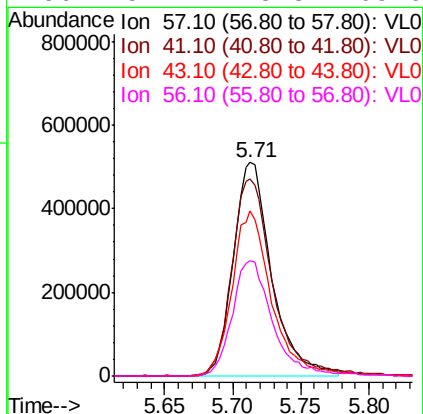
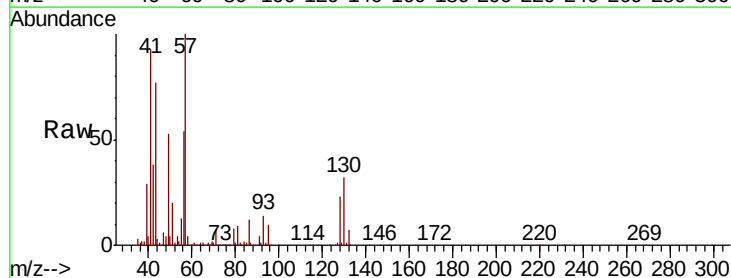
Instrument :
MSVOA_L
ClientSampleId :

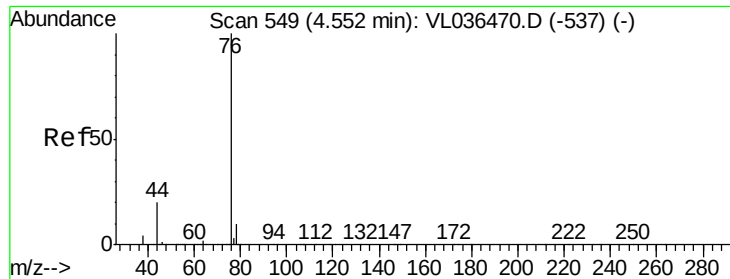
Tot Ion:	43	Resp:	788225
Ion	Ratio	Lower	Upper
43	100		
45	1.3	7.9	11.9#
61	1.1	7.4	11.2#
70	1.8	5.1	7.7#



#26
Hexane
Concen: 5.894 ppbv
RT: 5.71 min Scan# 910
Delta R.T. 0.03 min
Lab File: VL036513.D
Acq: 26 Mar 2021 14:15

Tgt Ion:	57	Resp:	999464
Ion	Ratio	Lower	Upper
57	100		
41	98.4	77.2	115.8
43	79.8	173.8	260.6#
56	57.2	43.8	65.6





#27

Carbon Disulfide

Concen: 0.343 ppbv

RT: 4.99 min Scan# 685

Delta R.T. 0.44 min

Lab File: VL036513.D

Acq: 26 Mar 2021 14:15

Instrument :
MSVOA_L
ClientSampleId :

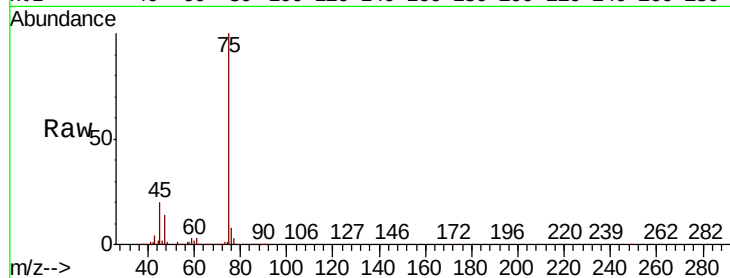
Tot Ion: 76 Resp: 57328

Ion Ratio Lower Upper

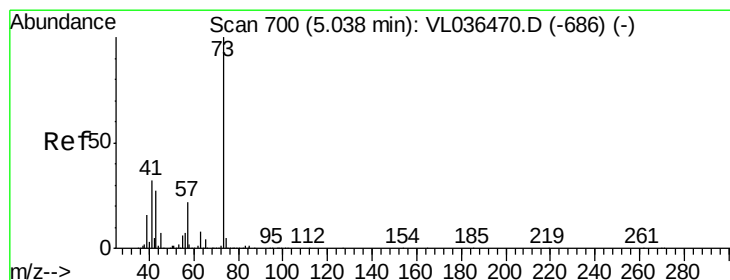
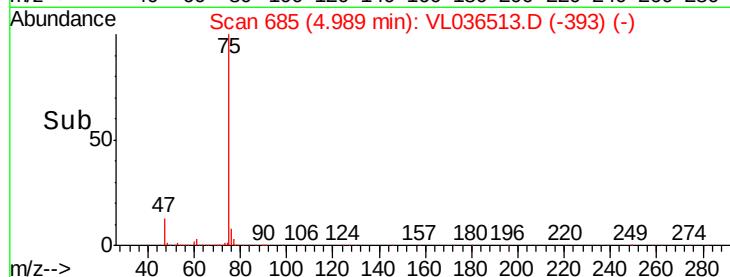
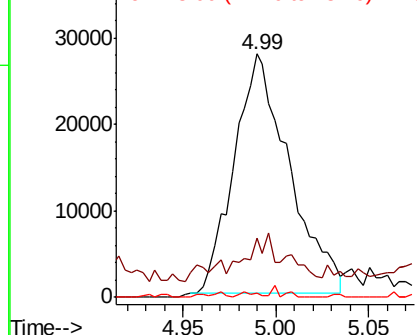
76 100

44 2.1 17.5 26.3#

78 2.3 8.6 13.0#



Abundance Ion 76.00 (75.70 to 76.70): VL0
Ion 44.10 (43.80 to 44.80): VL0
Ion 78.00 (77.70 to 78.70): VL0



#28

Methyl tert-Butyl Ether

Concen: 0.020 ppbv

RT: 5.07 min Scan# 709

Delta R.T. 0.03 min

Lab File: VL036513.D

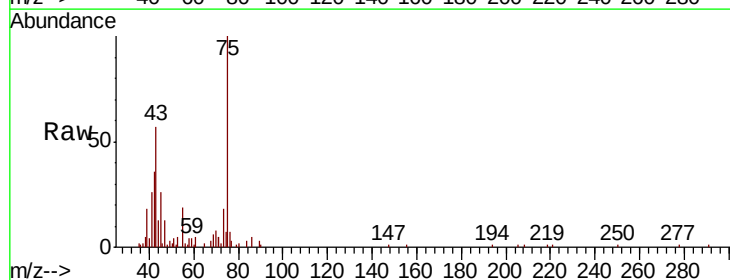
Acq: 26 Mar 2021 14:15

Tgt Ion: 73 Resp: 4005

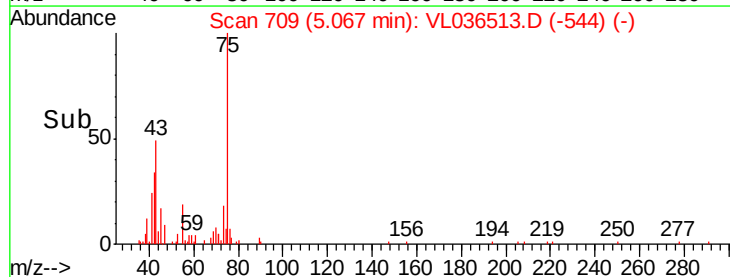
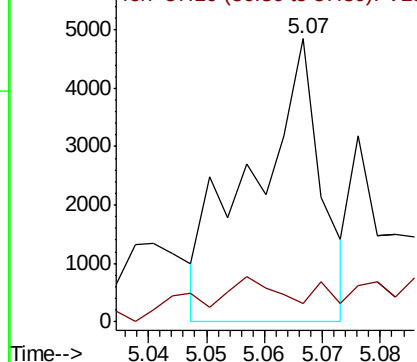
Ion Ratio Lower Upper

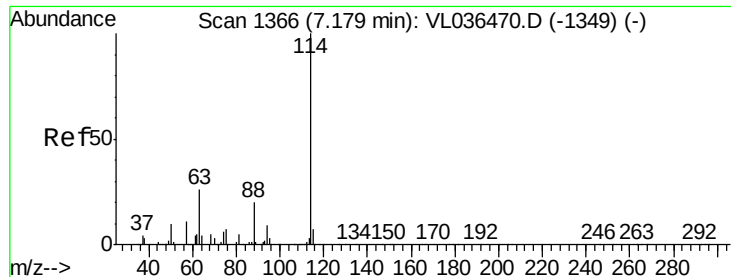
73 100

57 0.0 18.5 27.7#



Abundance Ion 73.10 (72.80 to 73.80): VL0
Ion 57.10 (56.80 to 57.80): VL0

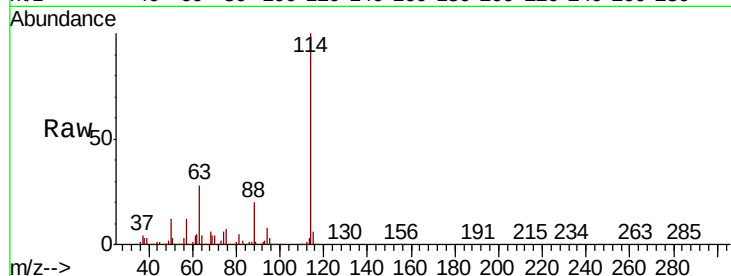




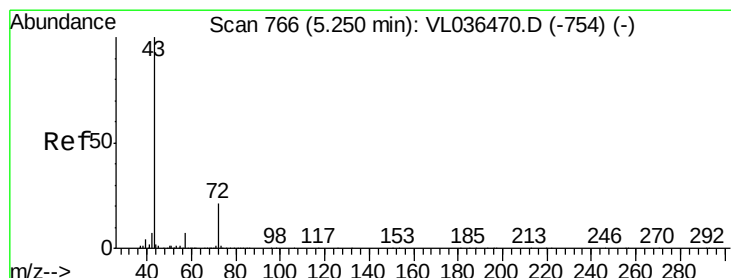
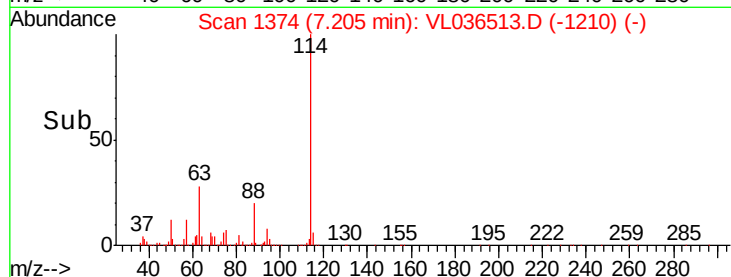
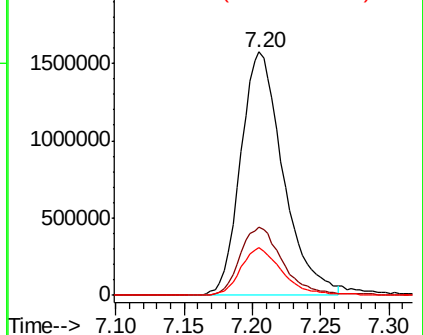
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.20 min Scan# 1374
 Delta R.T. 0.03 min
 Lab File: VL036513.D
 Acq: 26 Mar 2021 14:15

Instrument :
 MSVOA_L
 ClientSampleId :

Tot Ion:114 Resp: 3402386
 Ion Ratio Lower Upper
 114 100
 63 28.8 22.4 33.6
 88 19.5 15.4 23.0

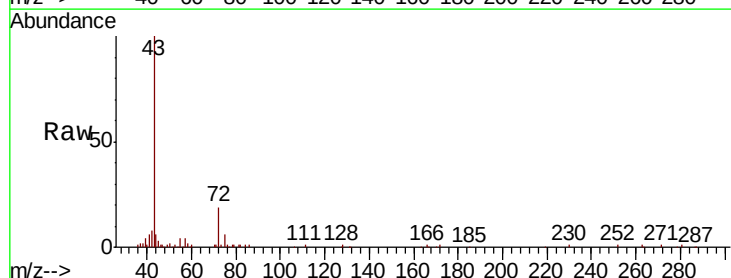


Abundance Ion 114.10 (113.80 to 114.80): VL0
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

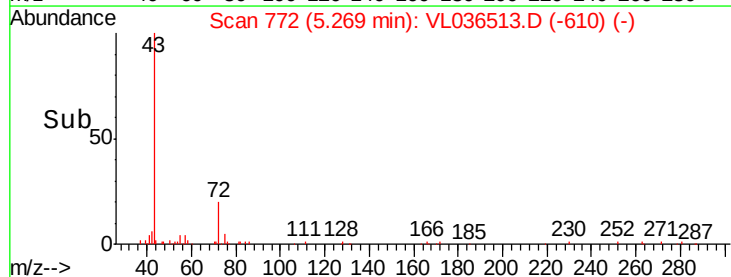
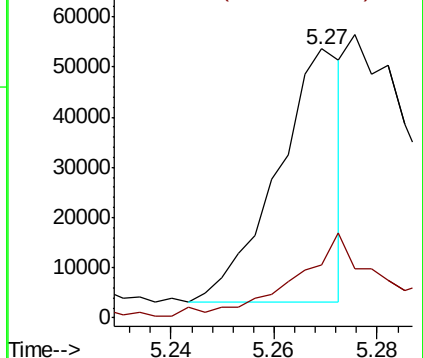


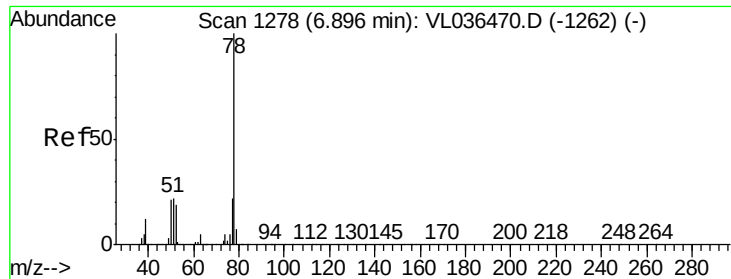
#34
 2-Butanone
 Concen: 0.265 ppbv
 RT: 5.27 min Scan# 772
 Delta R.T. 0.02 min
 Lab File: VL036513.D
 Acq: 26 Mar 2021 14:15

Tgt Ion: 43 Resp: 43931
 Ion Ratio Lower Upper
 43 100
 72 0.0 17.0 25.6#



Abundance Ion 43.10 (42.80 to 43.80): VL0
 Ion 72.10 (71.80 to 72.80): VL0

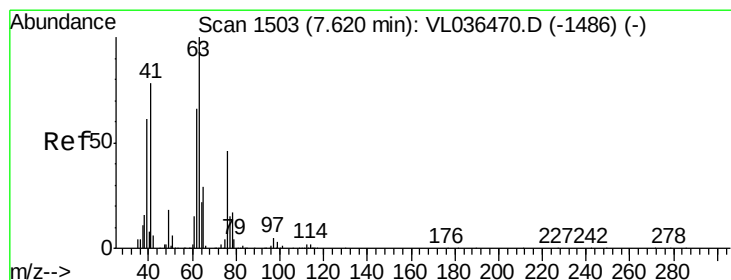
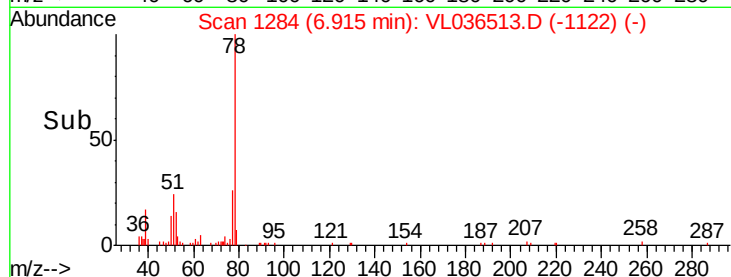
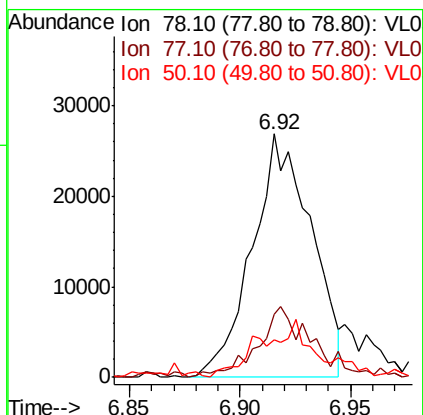
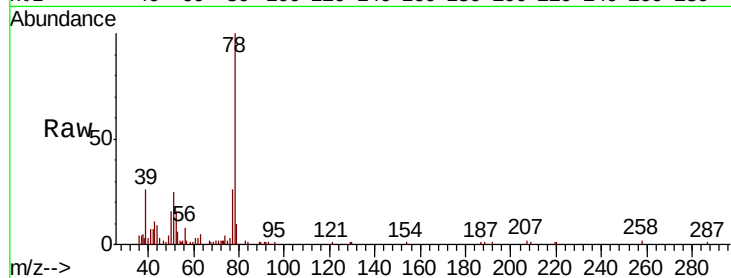




#36
Benzene
Concen: 0.159 ppbv
RT: 6.92 min Scan# 1284
Delta R.T. 0.02 min
Lab File: VL036513.D
Acq: 26 Mar 2021 14:15

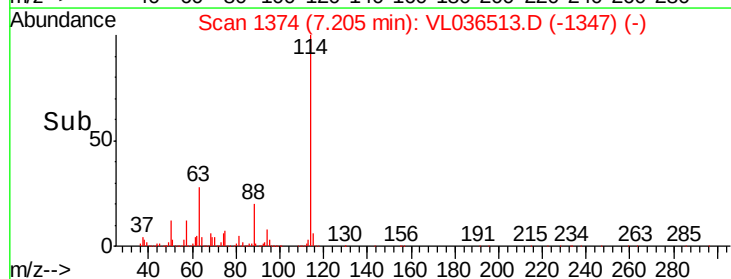
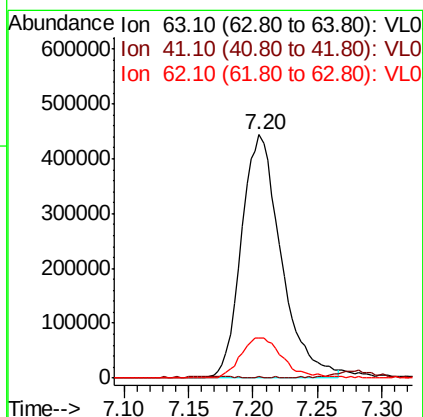
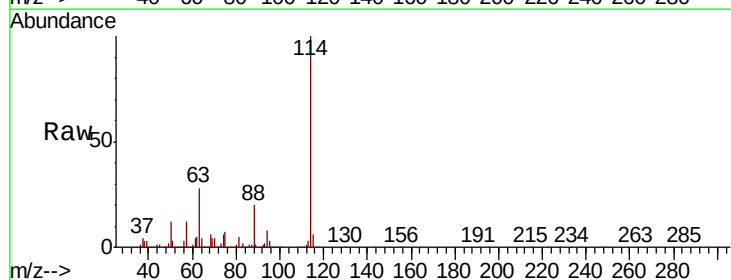
Instrument :
MSVOA_L
ClientSampleId :

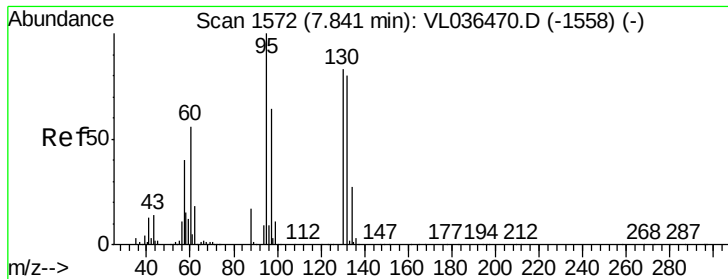
Tot Ion: 78 Resp: 49796
Ion Ratio Lower Upper
78 100
77 25.9 18.0 27.0
50 14.1 16.5 24.7#



#39
1,2-Dichloropropane
Concen: 7.475 ppbv
RT: 7.20 min Scan# 1374
Delta R.T. -0.41 min
Lab File: VL036513.D
Acq: 26 Mar 2021 14:15

Tgt Ion: 63 Resp: 951536
Ion Ratio Lower Upper
63 100
41 0.0 62.4 93.6#
62 16.5 52.8 79.2#





#40

1,4-Dioxane

Concen: 0.049 ppbv

RT: 7.87 min Scan# 1582

Delta R.T. 0.03 min

Lab File: VL036513.D

Acq: 26 Mar 2021 14:15

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 88 Resp: 1452

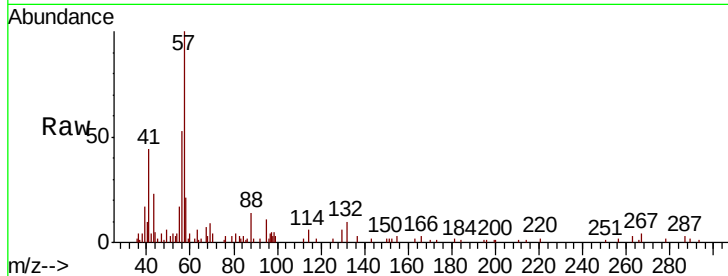
Ion Ratio Lower Upper

88 100

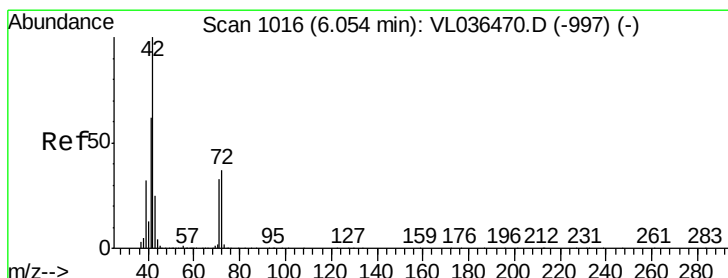
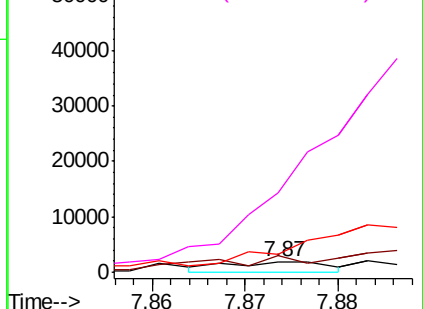
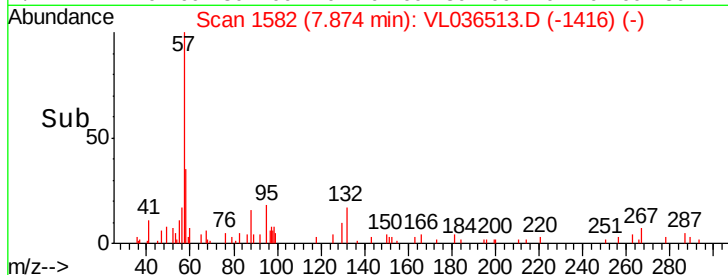
58 0.0 134.1 201.1#

43 0.0 346.6 520.0#

57 0.0 1481.8 2222.8#



Abundance Ion 88.10 (87.80 to 88.80): VL0
Ion 58.10 (57.80 to 58.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 57.10 (56.80 to 57.80): VL0



#41

Tetrahydrofuran

Concen: 5.388 ppbv

RT: 5.71 min Scan# 909

Delta R.T. -0.34 min

Lab File: VL036513.D

Acq: 26 Mar 2021 14:15

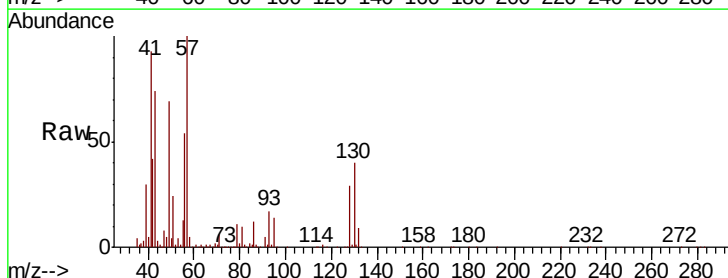
Tgt Ion: 42 Resp: 412615

Ion Ratio Lower Upper

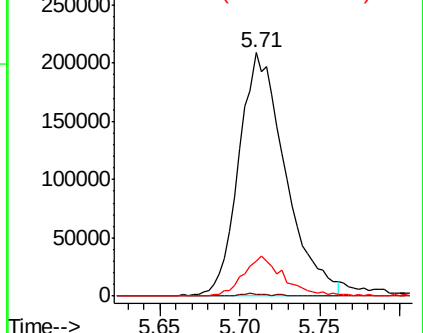
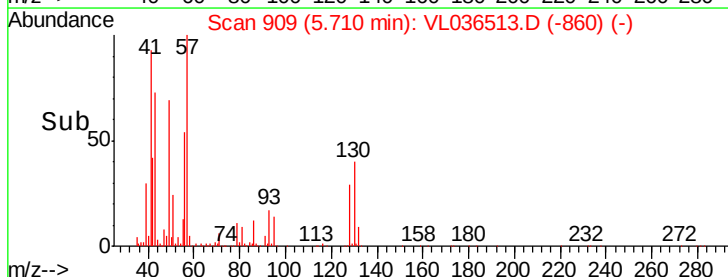
42 100

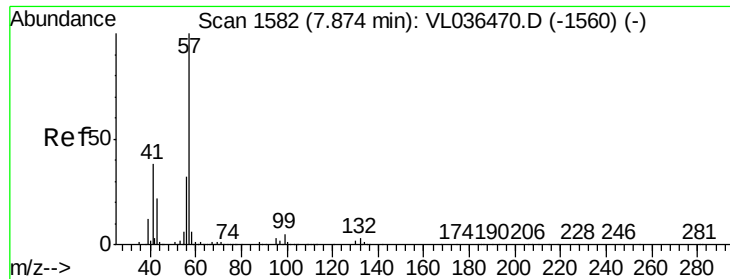
72 0.9 27.6 41.4#

71 14.4 27.0 40.4#



Abundance Ion 42.10 (41.80 to 42.80): VL0
Ion 72.10 (71.80 to 72.80): VL0
Ion 71.10 (70.80 to 71.80): VL0

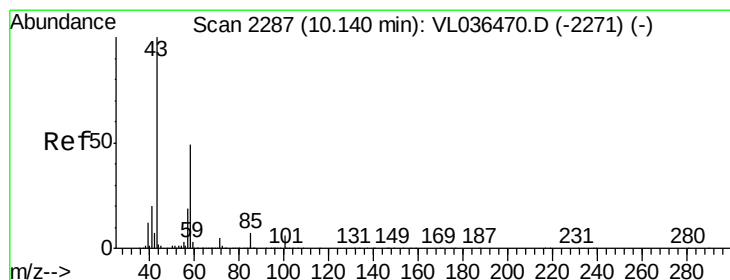
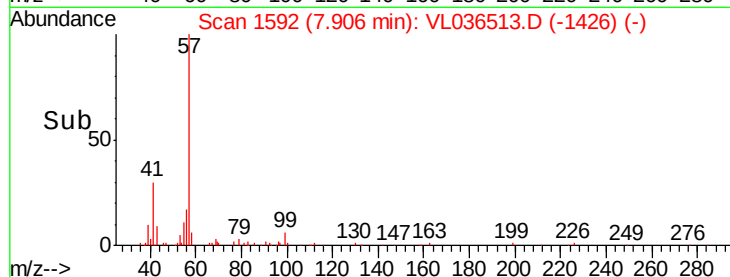
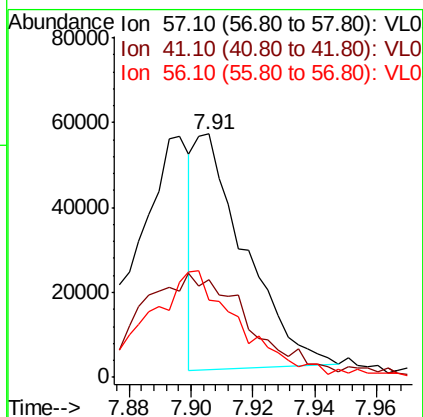
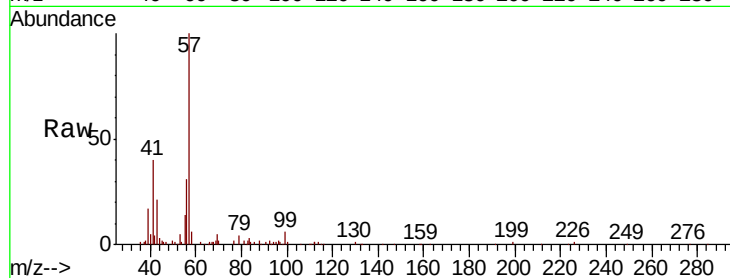




#44
2,2,4-Trimethylpentane
Concen: 0.112 ppbv
RT: 7.91 min Scan# 1592
Delta R.T. 0.03 min
Lab File: VL036513.D
Acq: 26 Mar 2021 14:15

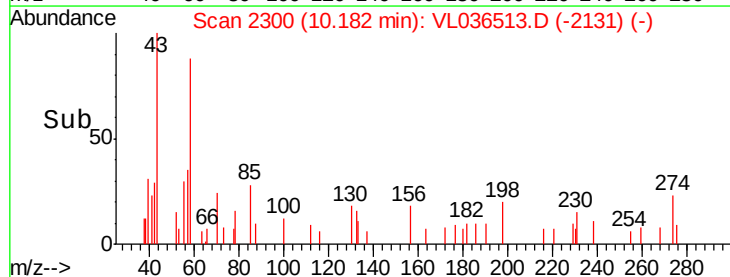
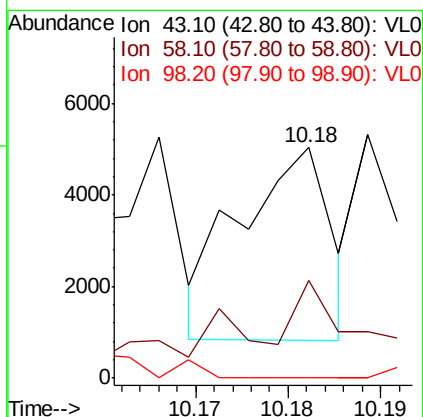
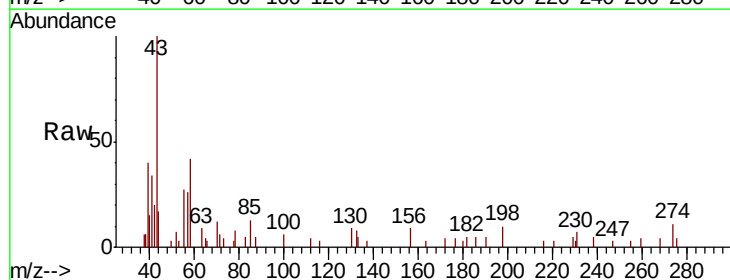
Instrument :
MSVOA_L
ClientSampleId :

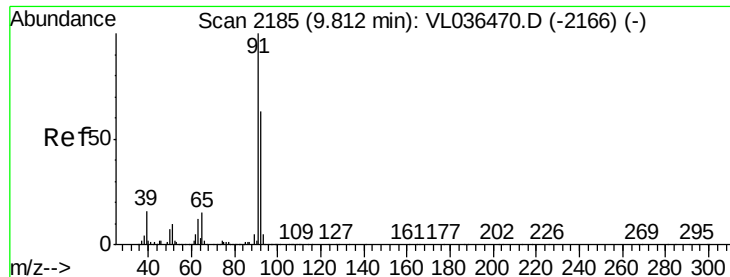
Tot Ion: 57 Resp: 61941
Ion Ratio Lower Upper
57 100
41 101.6 28.8 43.2#
56 97.4 26.1 39.1#



#51
2-Hexanone
Concen: 0.024 ppbv
RT: 10.18 min Scan# 2300
Delta R.T. 0.04 min
Lab File: VL036513.D
Acq: 26 Mar 2021 14:15

Tgt Ion: 43 Resp: 2859
Ion Ratio Lower Upper
43 100
58 132.1 37.7 56.5#
98 0.0 0.2 0.2#





#53

Toluene

Concen: 0.126 ppbv

RT: 9.84 min Scan# 2194

Delta R.T. 0.03 min

Lab File: VL036513.D

Acq: 26 Mar 2021 14:15

Instrument :

MSVOA_L

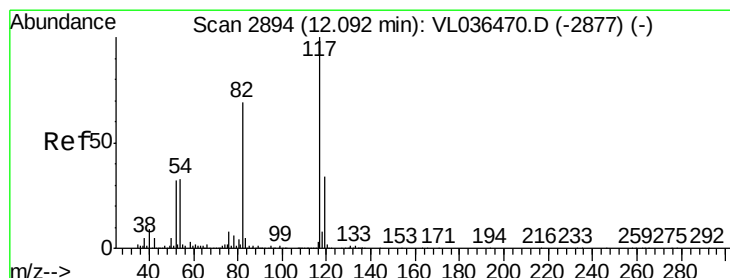
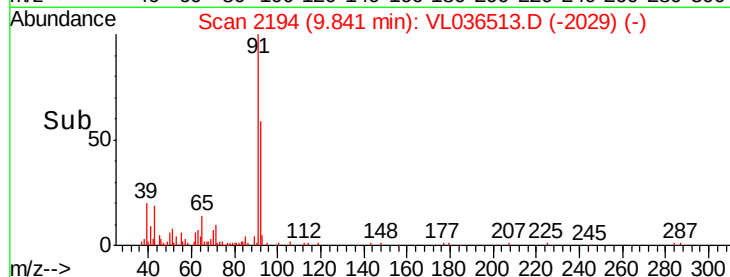
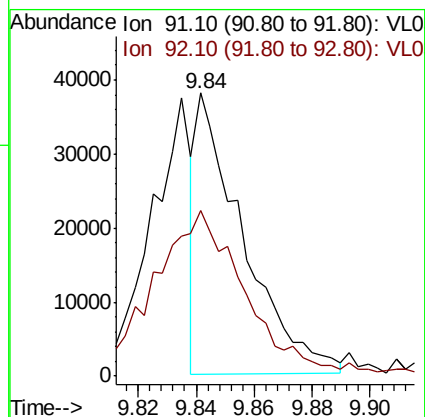
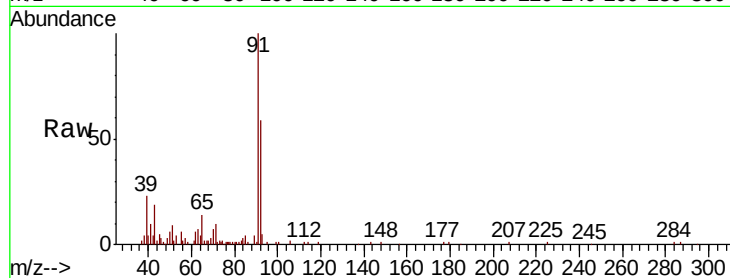
ClientSampleId :

Tot Ion: 91 Resp: 42023

Ion Ratio Lower Upper

91 100

92 121.3 48.8 73.2#



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.12 min Scan# 2903

Delta R.T. 0.03 min

Lab File: VL036513.D

Acq: 26 Mar 2021 14:15

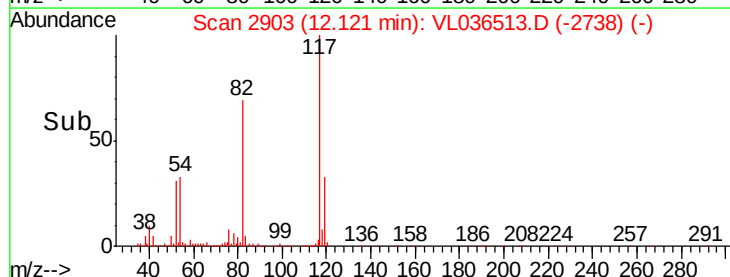
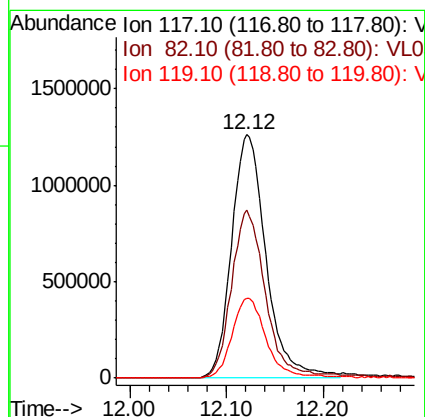
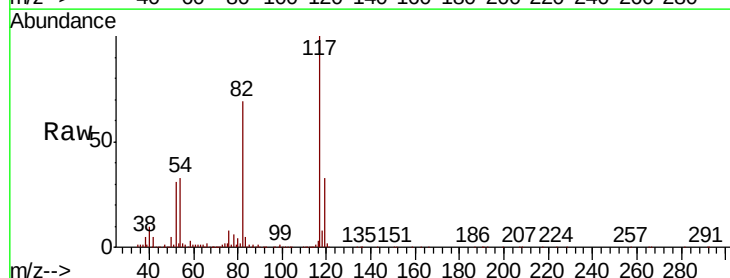
Tgt Ion: 117 Resp: 3135075

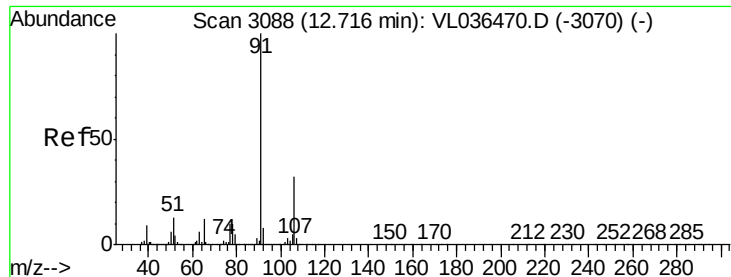
Ion Ratio Lower Upper

117 100

82 70.0 57.4 86.0

119 33.0 47.4 71.0#





#58

Ethyl Benzene

Concen: 0.089 ppbv

RT: 12.75 min Scan# 3098

Delta R.T. 0.03 min

Lab File: VL036513.D

Acq: 26 Mar 2021 14:15

Instrument :

MSVOA_L

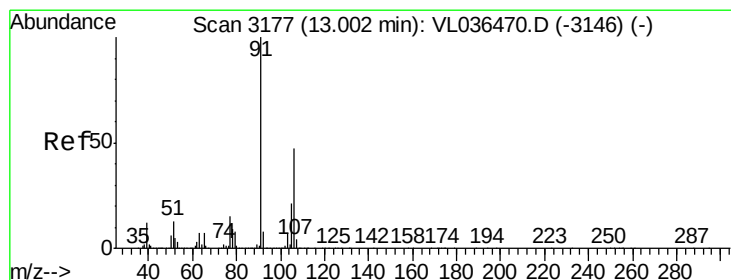
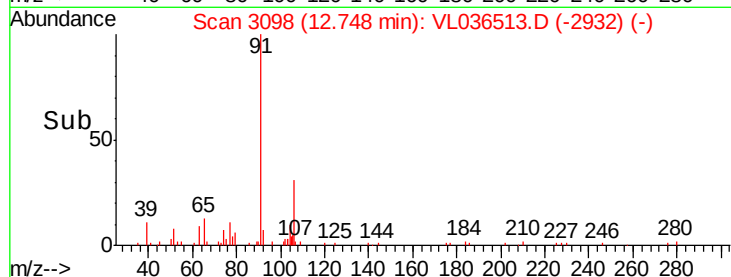
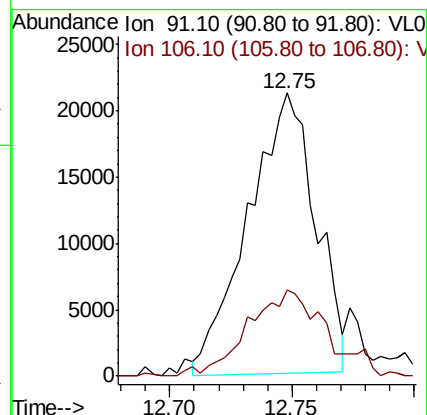
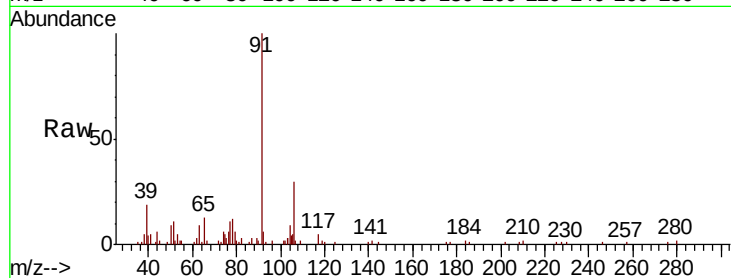
ClientSampled :

Tot Ion: 91 Resp: 40565

Ion Ratio Lower Upper

91 100

106 30.4 25.3 37.9



#59

m/p-Xylene

Concen: 0.094 ppbv

RT: 13.03 min Scan# 3186

Delta R.T. 0.03 min

Lab File: VL036513.D

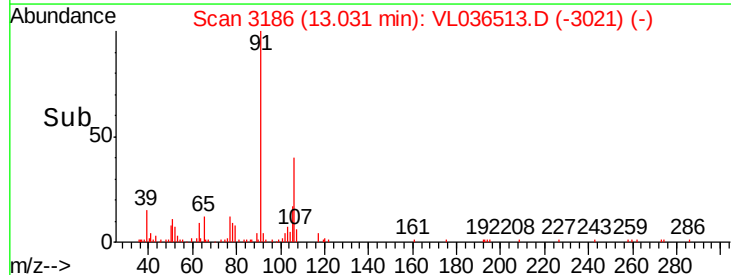
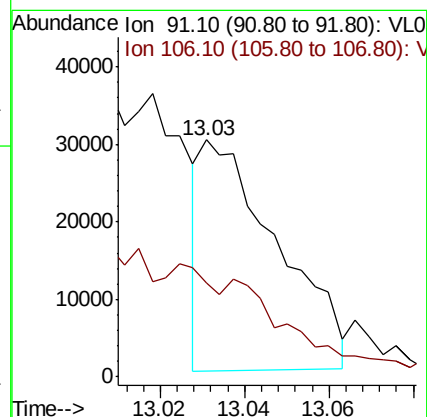
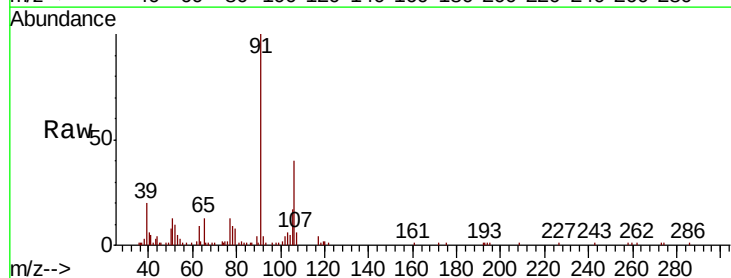
Acq: 26 Mar 2021 14:15

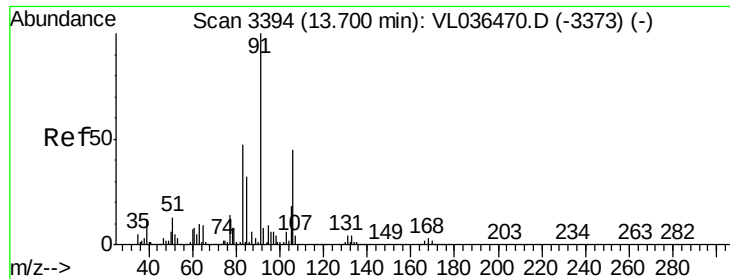
Tgt Ion: 91 Resp: 37366

Ion Ratio Lower Upper

91 100

106 0.0 35.3 52.9#

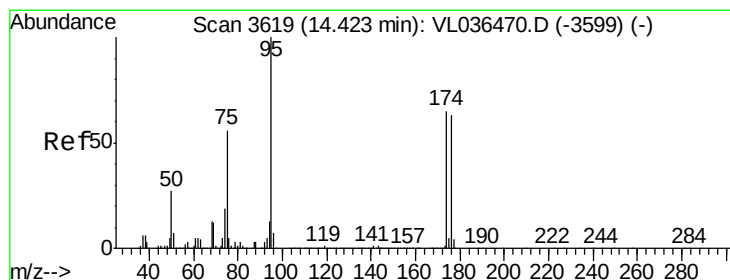
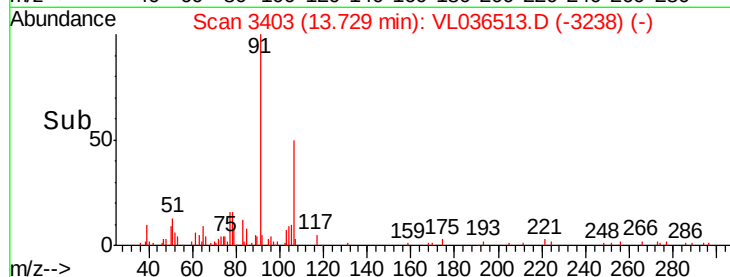
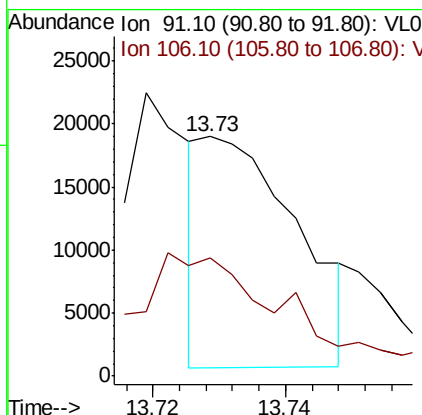
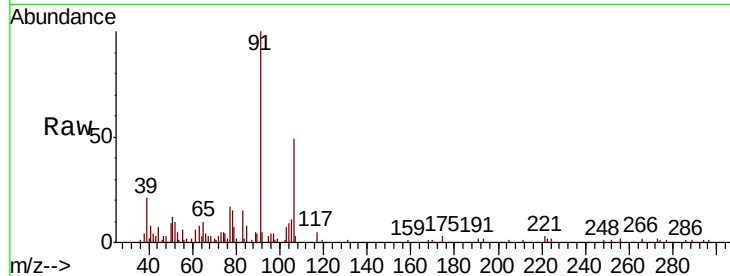




#60
o-Xylene
Concen: 0.047 ppbv
RT: 13.73 min Scan# 3403
Delta R.T. 0.03 min
Lab File: VL036513.D
Acq: 26 Mar 2021 14:15

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 91 Resp: 18219
Ion Ratio Lower Upper
91 100
106 0.0 22.3 66.9#



#68
1-Bromo-4-Fluorobenzene
Concen: 9.330 ppbv
RT: 14.45 min Scan# 3628
Delta R.T. 0.03 min
Lab File: VL036513.D
Acq: 26 Mar 2021 14:15

Tgt Ion: 95 Resp: 2331144
Ion Ratio Lower Upper
95 100
174 66.1 51.0 76.6
175 5.1 3.9 5.9

