

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL040721\
 Data File : VL036733.D
 Acq On : 7 Apr 2021 19:24
 Operator : SY/AP
 Sample : M1929-03
 Misc : 400mL/MSVOA L
 ALS Vial : 7 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 FS-SV-03-X

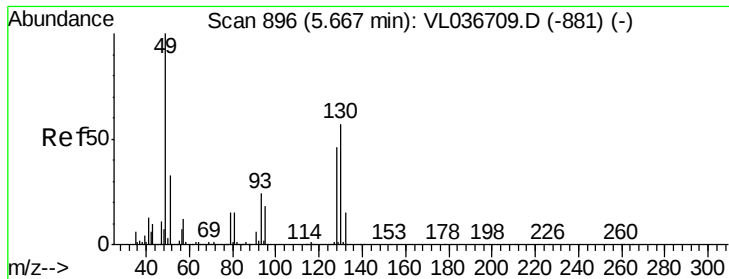
Quant Time: Apr 08 02:42:34 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032521AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Apr 08 01:58:43 2021
 QLast Update : Thu Apr 08 01:58:43 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	1245363	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.18	114	3161894	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	2664904	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.42	95	2050282	9.65	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	96.50%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.05	85	29007	0.143 ppbv	93
3) Chlorodifluoromethane	2.98	51	61673	0.265 ppbv #	81
4) Chloromethane	3.13	50	10970	0.133 ppbv #	86
7) Chloroethane	3.55	64	3498	0.120 ppbv #	62
9) Propene	3.01	41	42451	0.572 ppbv	84
10) Heptane	8.12	43	14244	0.075 ppbv #	28
11) Trichlorofluoromethane	3.95	101	72892	0.352 ppbv	98
12) 1,1,2-Trichlorotrifluoroet	4.48	101	5724	0.043 ppbv #	31
13) Ethanol	3.61	45	66950	7.579 ppbv	91
15) Acetone	3.85	43	1528799	12.473 ppbv	98
16) 1,3-Butadiene	3.33	39	3383	0.040 ppbv #	1
17) tert-Butyl alcohol	4.31	59	21841	0.205 ppbv #	85
19) Isopropyl Alcohol	3.99	45	63263	0.938 ppbv #	89
20) Methylene Chloride	4.34	84	42039	0.733 ppbv	94
23) Vinyl Acetate	5.07	43	14330	0.068 ppbv #	34
24) 1,1-Dichloroethane	5.01	63	34789	0.228 ppbv	98
25) Ethyl Acetate	5.69	43	89769	0.308 ppbv #	86
26) Hexane	5.69	57	117056	0.866 ppbv #	49
27) Carbon Disulfide	4.56	76	57710	0.433 ppbv #	65
29) Chloroform	5.75	83	20374	0.094 ppbv	93
30) Cyclohexane	7.13	84	28160	0.257 ppbv #	1
32) 1,1,1-Trichloroethane	6.51	97	12232	0.056 ppbv #	1
34) 2-Butanone	5.25	43	227010	1.471 ppbv #	90
36) Benzene	6.89	78	104713	0.359 ppbv #	78
37) 1,2-Dichloroethane	6.31	62	73757	0.430 ppbv	98
39) 1,2-Dichloropropane	7.18	63	821049	6.941 ppbv #	23
44) 2,2,4-Trimethylpentane	7.87	57	25313	0.049 ppbv #	10
50) 4-Methyl-2-Pentanone	8.75	43	19213	0.086 ppbv #	77
52) Tetrachloroethene	11.23	164	754893	7.030 ppbv	98
53) Toluene	9.81	91	837443	2.697 ppbv	100

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 min Scan# 896

Delta R.T. -0.00 min

Lab File: VL036733.D

Acq: 7 Apr 2021 19:24

Instrument :

MSVOA_L

ClientSampleId :

FS-SV-03-X

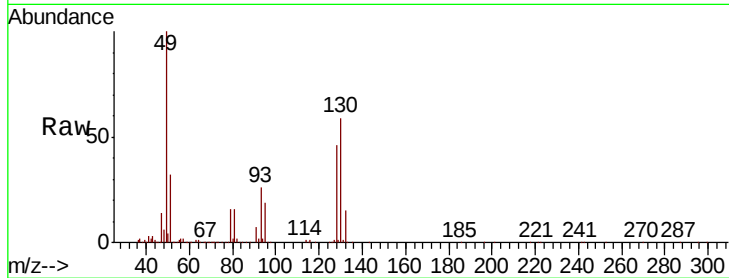
Tot Ion: 49 Resp: 1245363

Ion Ratio Lower Upper

49 100

128 46.7 23.5 70.6

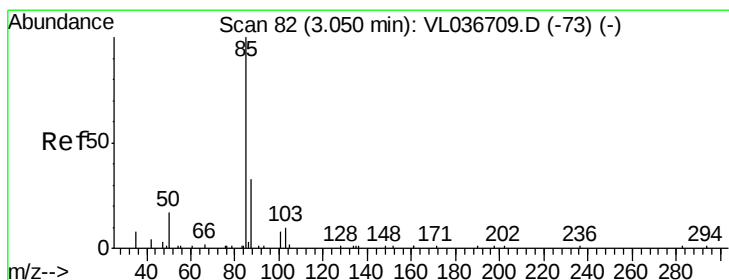
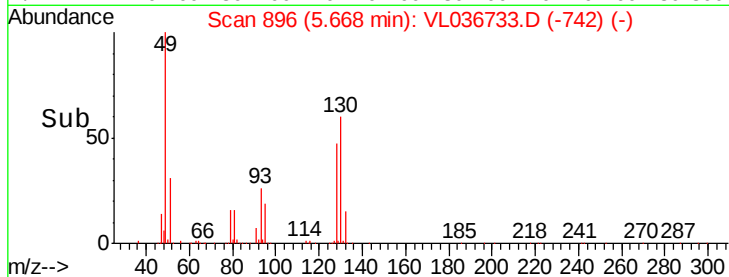
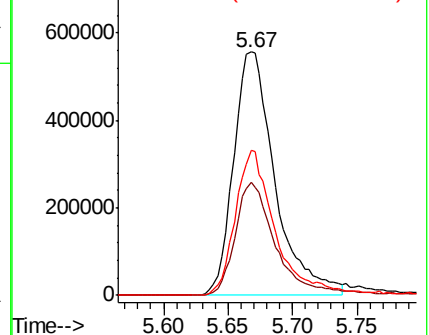
130 59.2 29.1 87.4



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: 0.143 ppbv

RT: 3.05 min Scan# 81

Delta R.T. -0.00 min

Lab File: VL036733.D

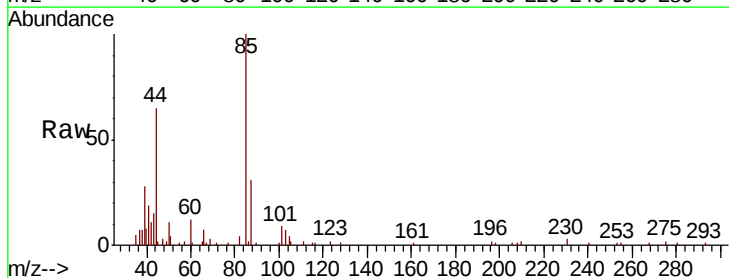
Acq: 7 Apr 2021 19:24

Tgt Ion: 85 Resp: 29007

Ion Ratio Lower Upper

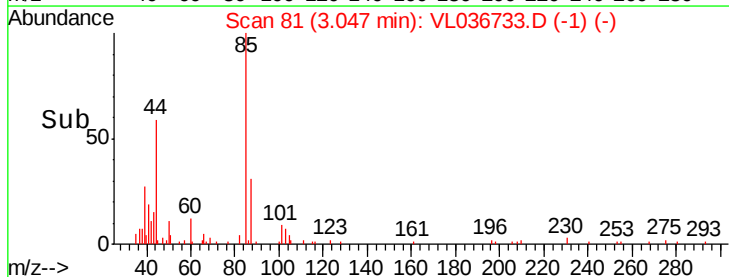
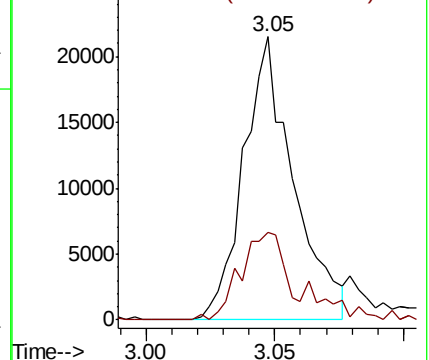
85 100

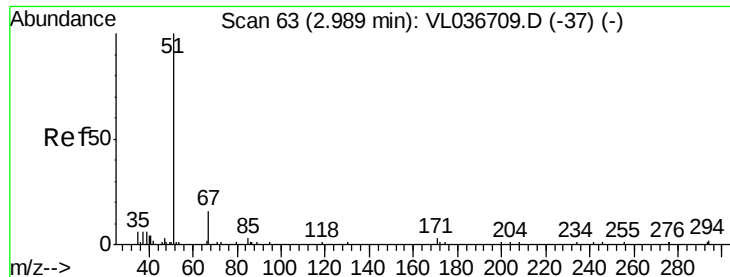
87 30.9 27.8 41.8



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.265 ppbv

RT: 2.98 min Scan# 61

Delta R.T. -0.00 min

Lab File: VL036733.D

Acq: 7 Apr 2021 19:24

Instrument :

MSVOA_L

ClientSampleId :

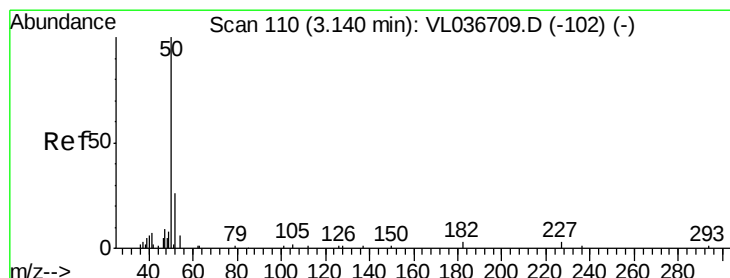
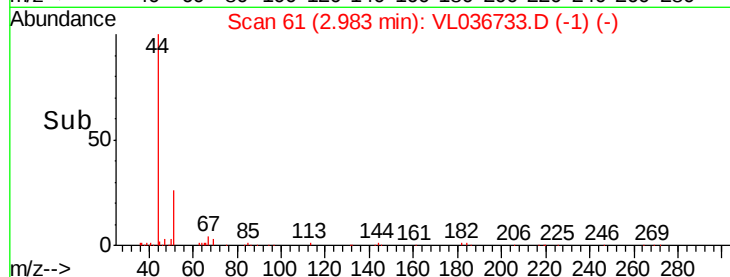
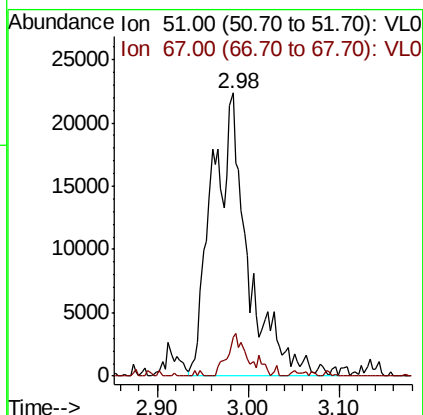
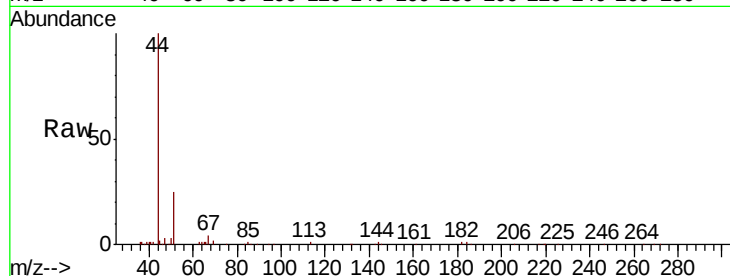
FS-SV-03-X

Tot Ion: 51 Resp: 61673

Ion Ratio Lower Upper

51 100

67 10.1 14.7 22.1#



#4

Chloromethane

Concen: 0.133 ppbv

RT: 3.13 min Scan# 108

Delta R.T. -0.01 min

Lab File: VL036733.D

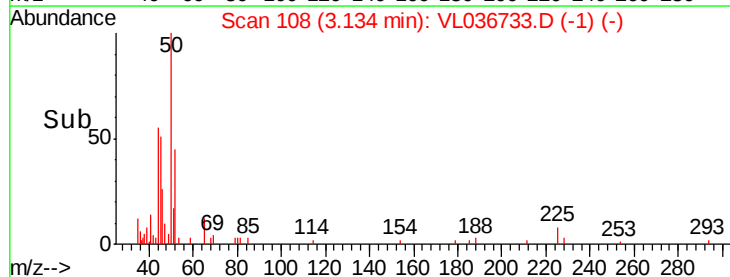
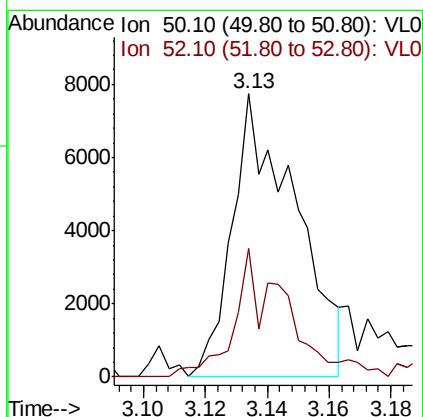
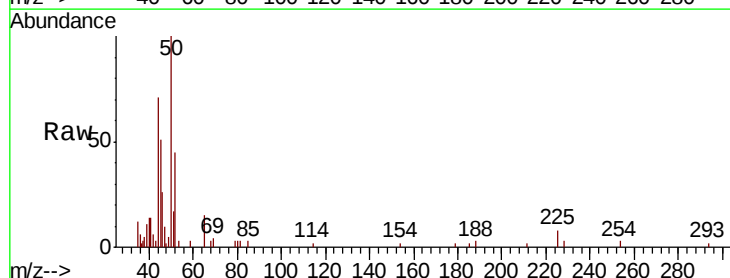
Acq: 7 Apr 2021 19:24

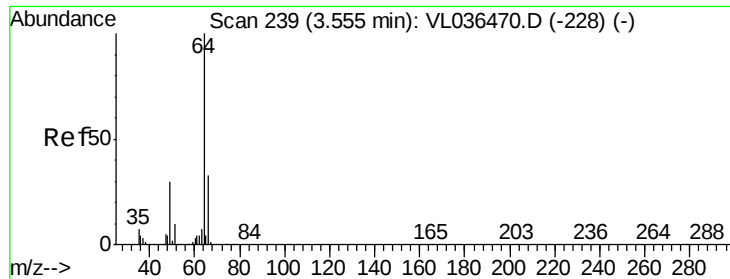
Tgt Ion: 50 Resp: 10970

Ion Ratio Lower Upper

50 100

52 41.8 27.0 40.6#





#7

Chloroethane

Concen: 0.120 ppbv

RT: 3.55 min Scan# 238

Delta R.T. -0.00 min

Lab File: VL036733.D

Acq: 7 Apr 2021 19:24

Instrument :

MSVOA_L

ClientSampleId :

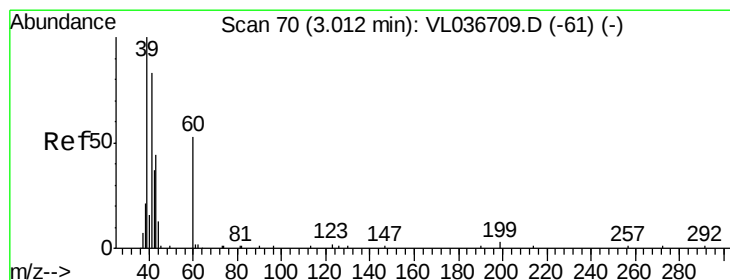
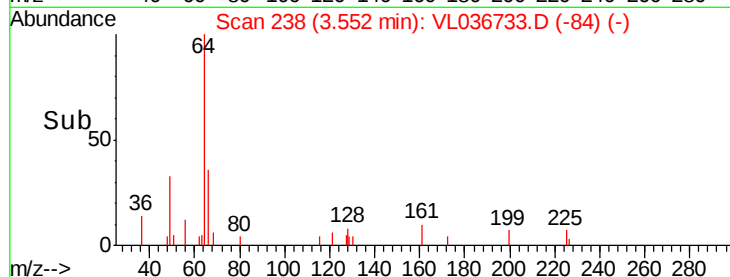
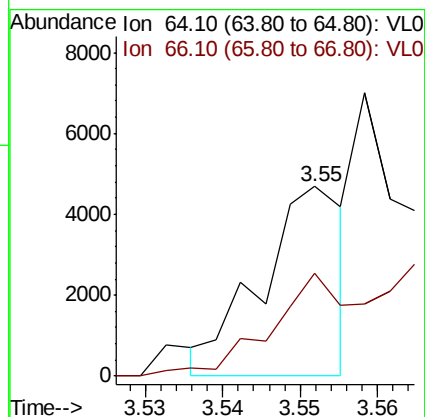
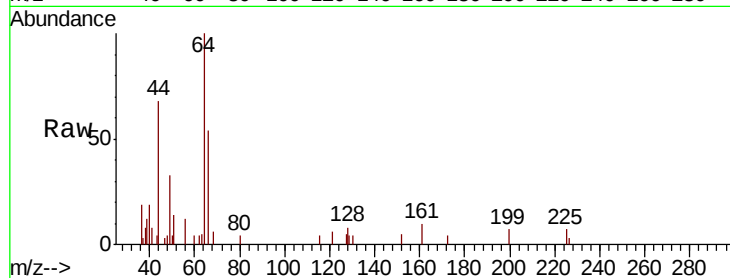
FS-SV-03-X

Tot Ion: 64 Resp: 3498

Ion Ratio Lower Upper

64 100

66 54.3 26.2 39.2#



#9

Propene

Concen: 0.572 ppbv

RT: 3.01 min Scan# 71

Delta R.T. 0.01 min

Lab File: VL036733.D

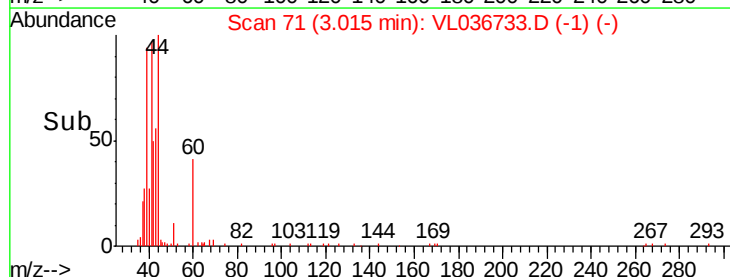
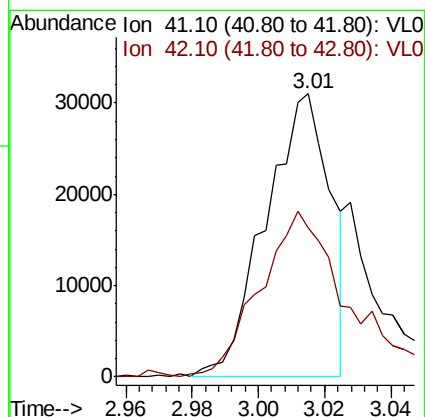
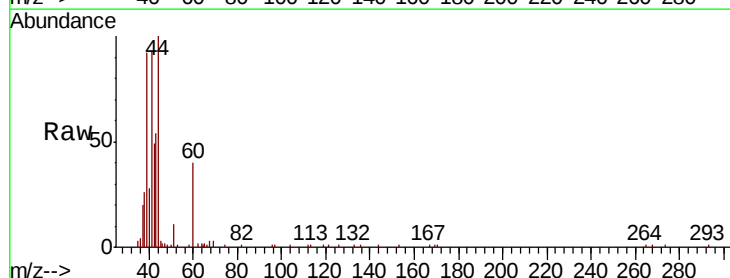
Acq: 7 Apr 2021 19:24

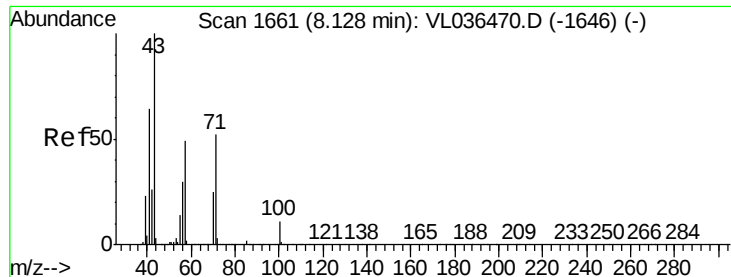
Tgt Ion: 41 Resp: 42451

Ion Ratio Lower Upper

41 100

42 84.3 57.0 85.4





#10

Heptane

Concen: 0.075 ppbv

RT: 8.12 min Scan# 1659

Delta R.T. -0.01 min

Lab File: VL036733.D

Acq: 7 Apr 2021 19:24

Instrument :

MSVOA_L

ClientSampleId :

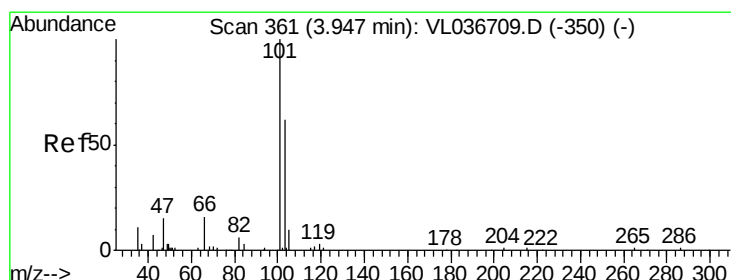
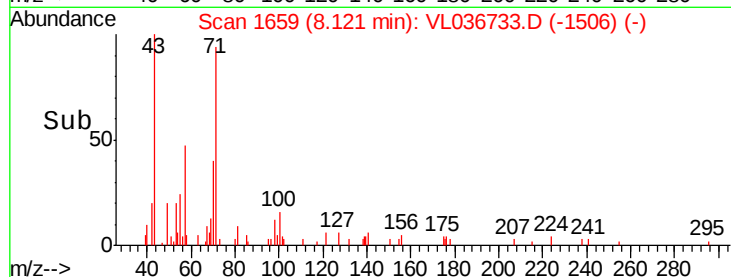
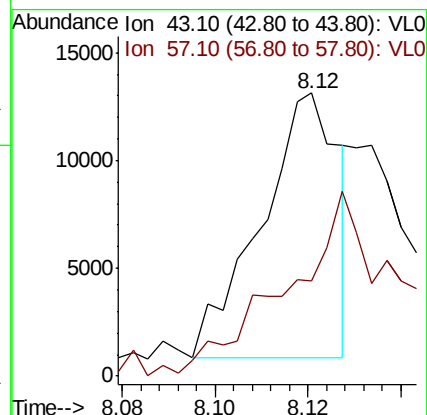
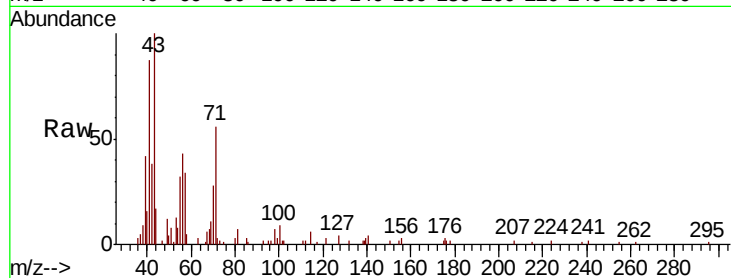
FS-SV-03-X

Tot Ion: 43 Resp: 14244

Ion Ratio Lower Upper

43 100

57 0.0 39.0 58.6#



#11

Trichlorofluoromethane

Concen: 0.352 ppbv

RT: 3.95 min Scan# 361

Delta R.T. -0.00 min

Lab File: VL036733.D

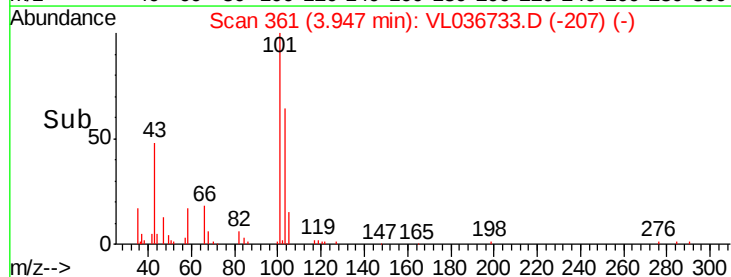
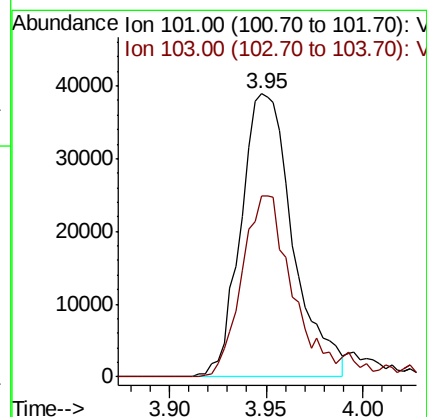
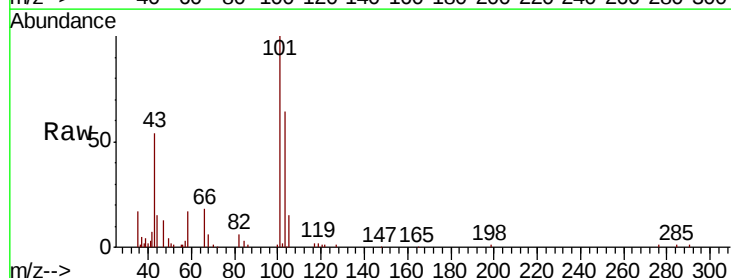
Acq: 7 Apr 2021 19:24

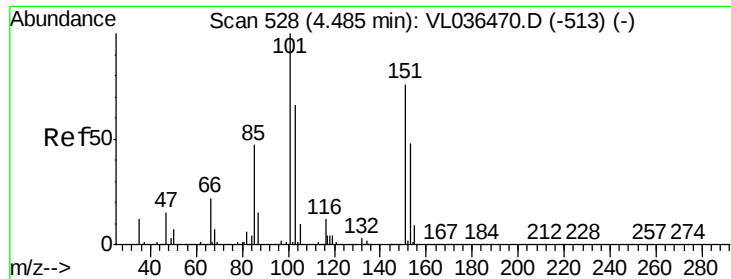
Tgt Ion:101 Resp: 72892

Ion Ratio Lower Upper

101 100

103 63.9 52.5 78.7





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.043 ppbv

RT: 4.48 min Scan# 528

Delta R.T. -0.00 min

Lab File: VL036733.D

Acq: 7 Apr 2021 19:24

Instrument :

MSVOA_L

ClientSampleId :

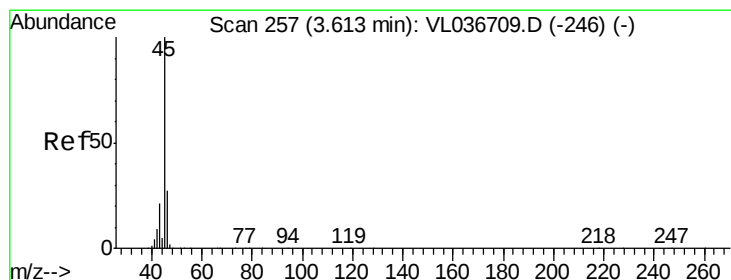
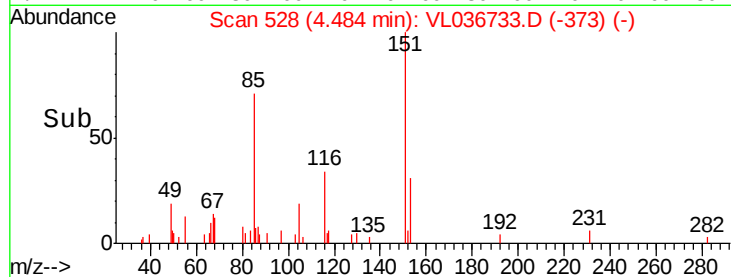
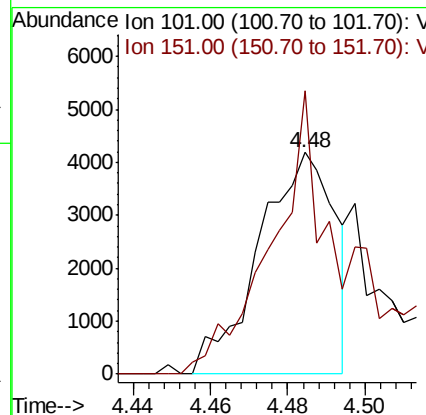
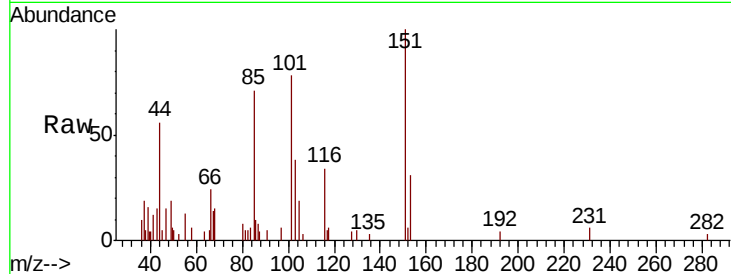
FS-SV-03-X

Tot Ion:101 Resp: 5724

Ion Ratio Lower Upper

101 100

151 135.3 60.9 91.3#



#13

Ethanol

Concen: 7.579 ppbv

RT: 3.61 min Scan# 257

Delta R.T. 0.01 min

Lab File: VL036733.D

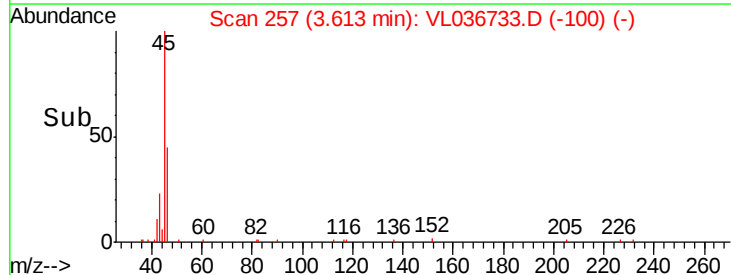
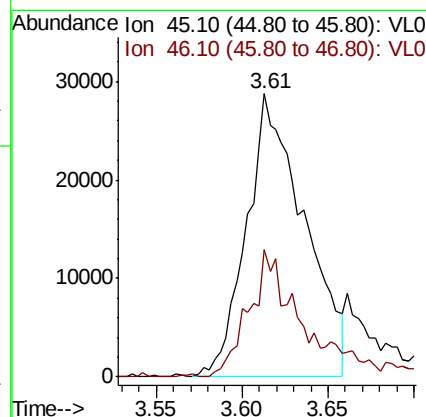
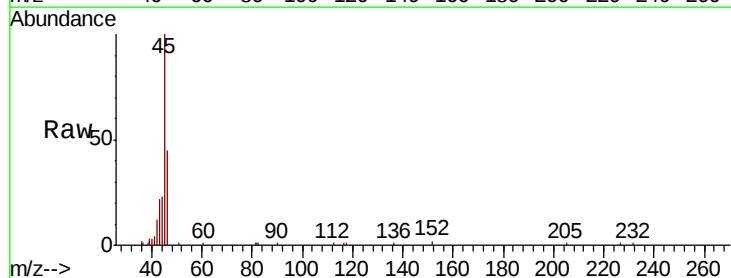
Acq: 7 Apr 2021 19:24

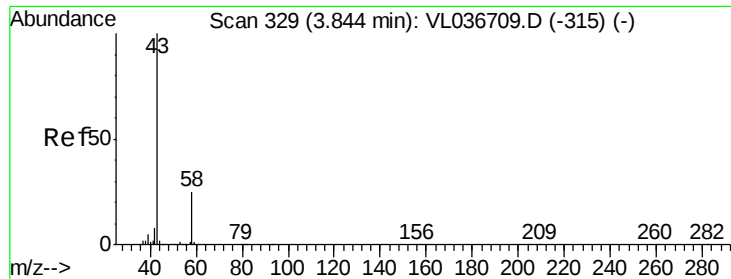
Tgt Ion: 45 Resp: 66950

Ion Ratio Lower Upper

45 100

46 47.0 16.6 66.2

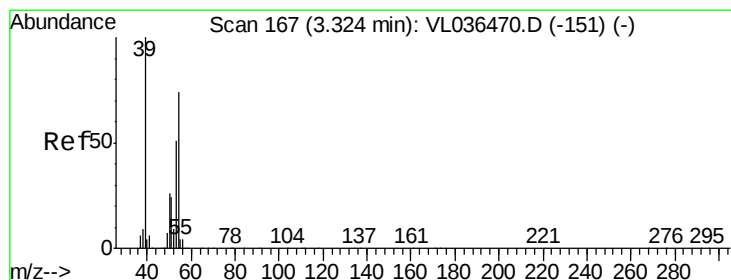
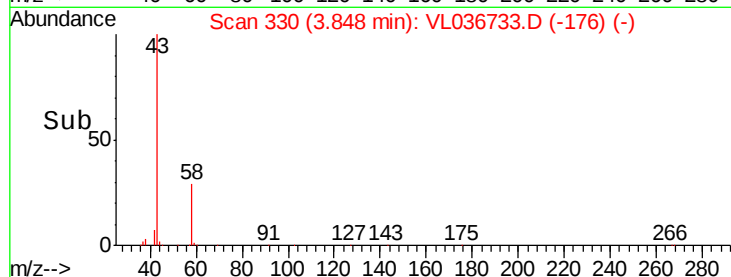
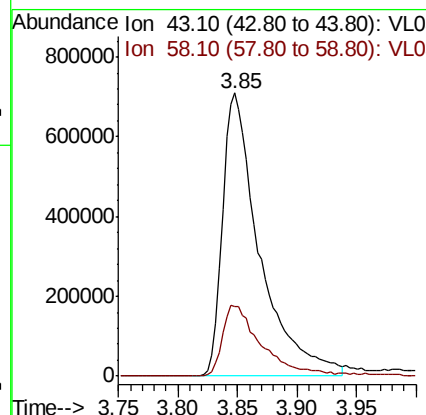
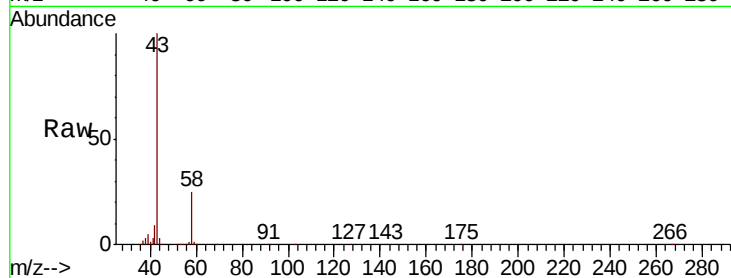




#15
Acetone
Concen: 12.473 ppbv
RT: 3.85 min Scan# 330
Delta R.T. -0.00 min
Lab File: VL036733.D
Acq: 7 Apr 2021 19:24

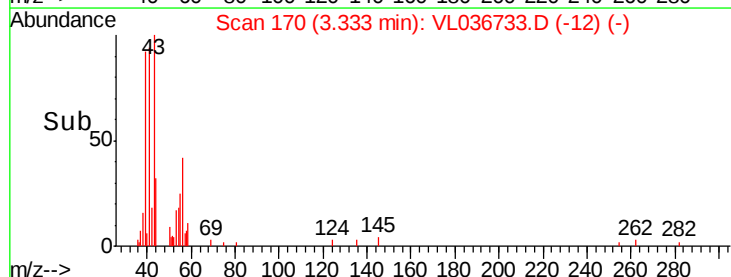
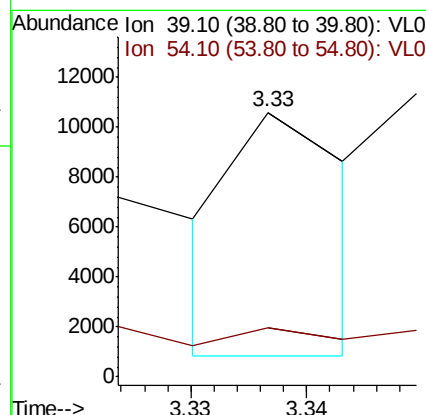
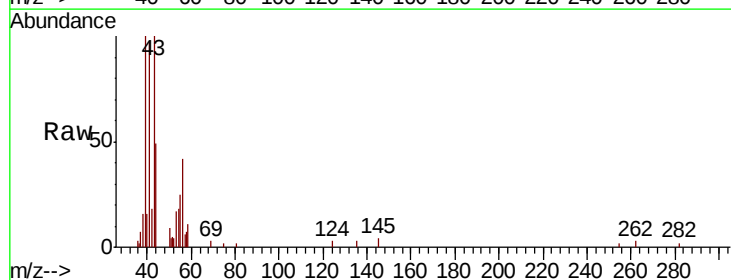
Instrument :
MSVOA_L
ClientSampleId :
FS-SV-03-X

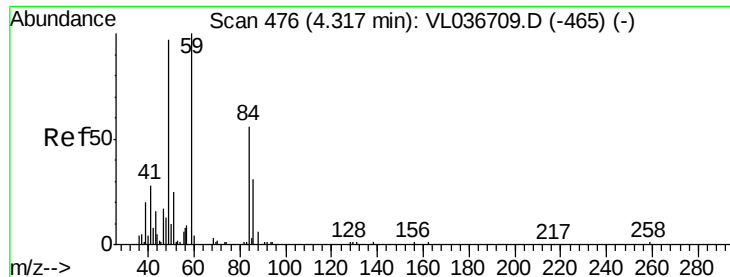
Tot Ion: 43 Resp: 1528799
Ion Ratio Lower Upper
43 100
58 27.4 21.2 31.8



#16
1,3-Butadiene
Concen: 0.040 ppbv
RT: 3.33 min Scan# 170
Delta R.T. 0.01 min
Lab File: VL036733.D
Acq: 7 Apr 2021 19:24

Tgt Ion: 39 Resp: 3383
Ion Ratio Lower Upper
39 100
54 192.3 58.8 88.2#



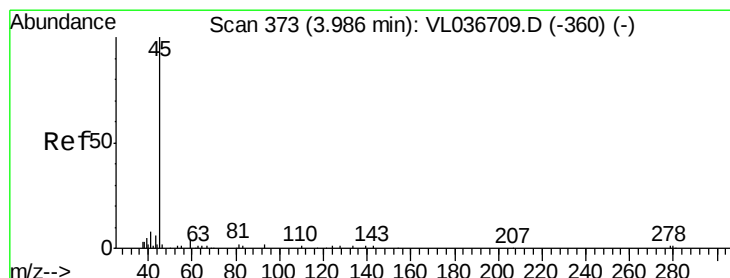
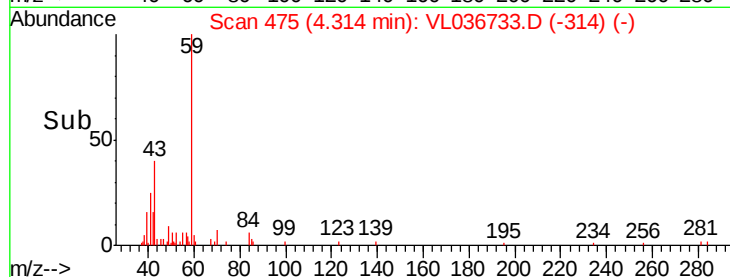
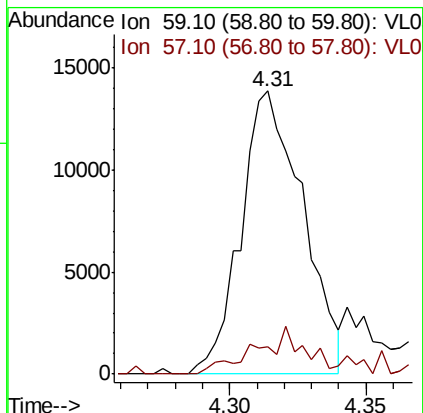
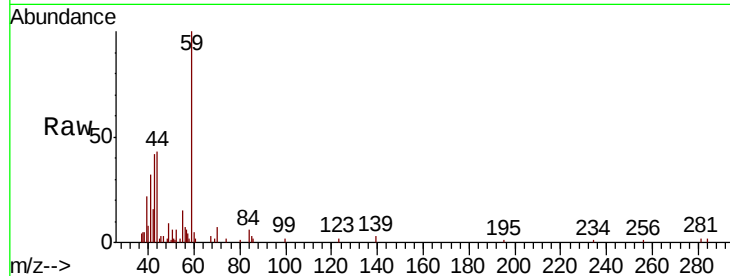


#17

tert-Butyl alcohol
Concen: 0.205 ppbv
RT: 4.31 min Scan# 475
Delta R.T. 0.02 min
Lab File: VL036733.D
Acq: 7 Apr 2021 19:24

Instrument :
MSVOA_L
ClientSampleId :
FS-SV-03-X

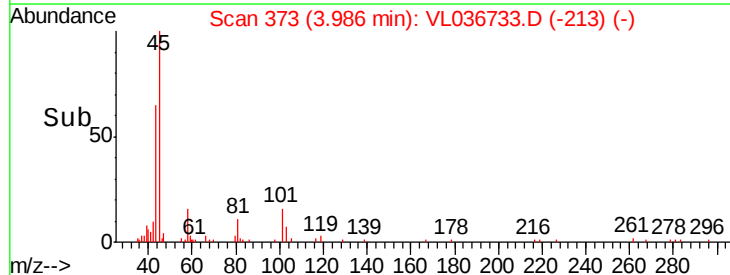
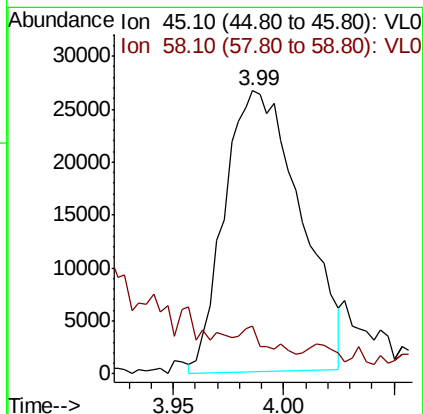
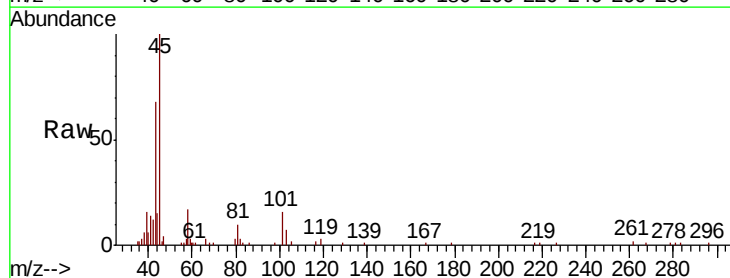
Tot Ion: 59 Resp: 21841
Ion Ratio Lower Upper
59 100
57 16.5 8.6 12.8#

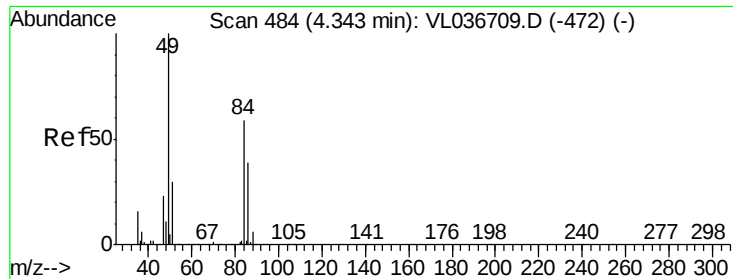


#19

Isopropyl Alcohol
Concen: 0.938 ppbv
RT: 3.99 min Scan# 373
Delta R.T. 0.02 min
Lab File: VL036733.D
Acq: 7 Apr 2021 19:24

Tgt Ion: 45 Resp: 63263
Ion Ratio Lower Upper
45 100
58 0.0 2.9 4.3#

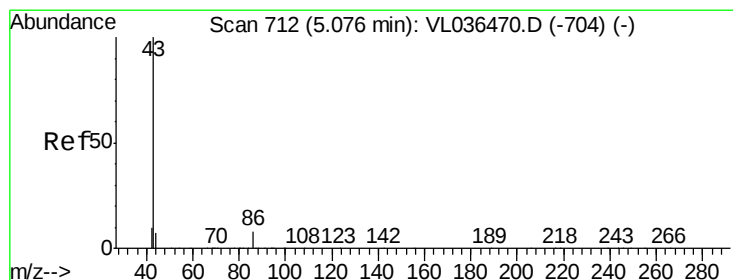
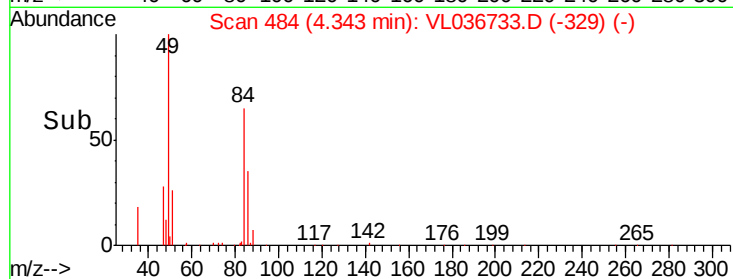
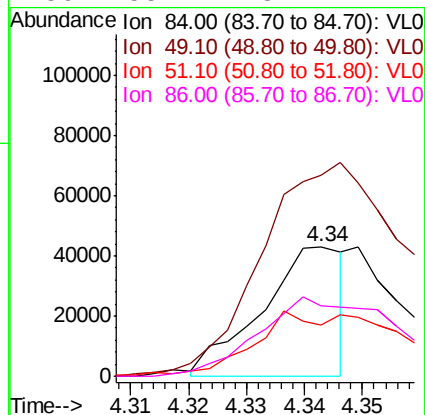
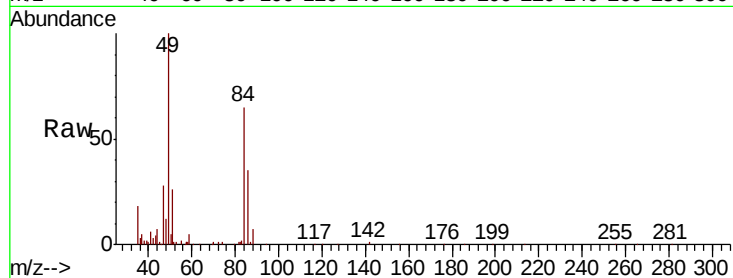




#20
Methylene Chloride
Concen: 0.733 ppbv
RT: 4.34 min Scan# 484
Delta R.T. -0.00 min
Lab File: VL036733.D
Acq: 7 Apr 2021 19:24

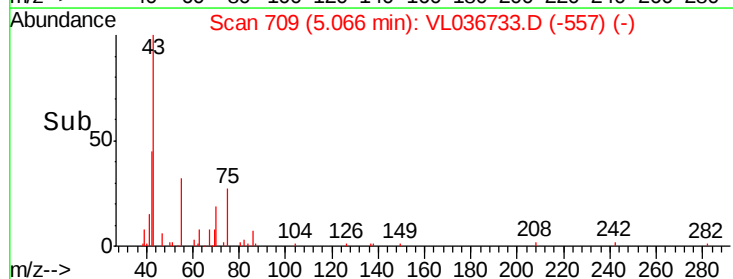
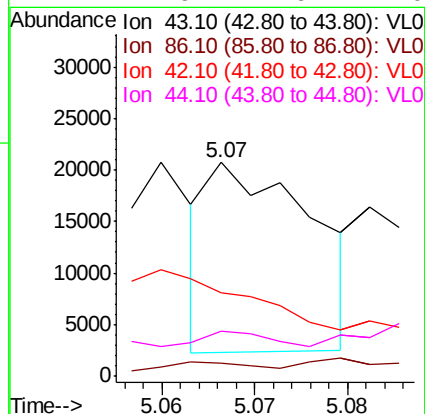
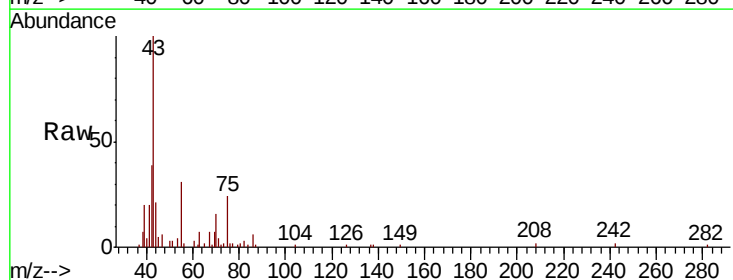
Instrument :
MSVOA_L
ClientSampleId :
FS-SV-03-X

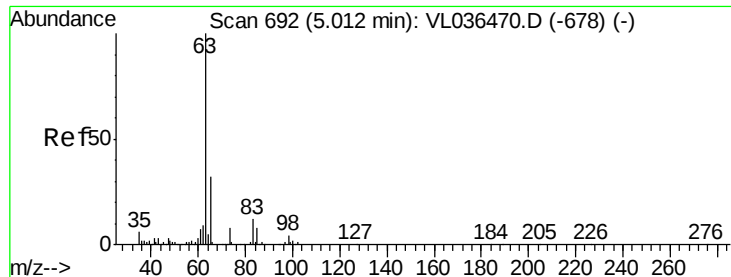
Tot Ion:	84	Resp:	42039
Ion	Ratio	Lower	Upper
84	100		
49	151.6	122.9	184.3
51	37.0	36.9	55.3
86	53.1	48.2	72.4



#23
Vinyl Acetate
Concen: 0.068 ppbv
RT: 5.07 min Scan# 709
Delta R.T. -0.01 min
Lab File: VL036733.D
Acq: 7 Apr 2021 19:24

Tgt Ion:	43	Resp:	14330
Ion	Ratio	Lower	Upper
43	100		
86	0.0	5.4	8.0#
42	52.9	8.5	12.7#
44	17.6	4.6	7.0#





#24

1,1-Dichloroethane

Concen: 0.228 ppbv

RT: 5.01 min Scan# 691

Delta R.T. -0.00 min

Lab File: VL036733.D

Acq: 7 Apr 2021 19:24

Instrument :

MSVOA_L

ClientSampleId :

FS-SV-03-X

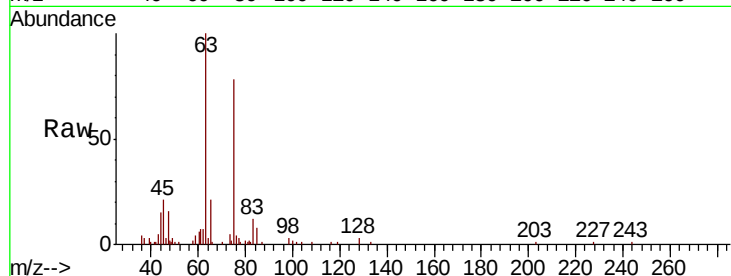
Tot Ion: 63 Resp: 34789

Ion Ratio Lower Upper

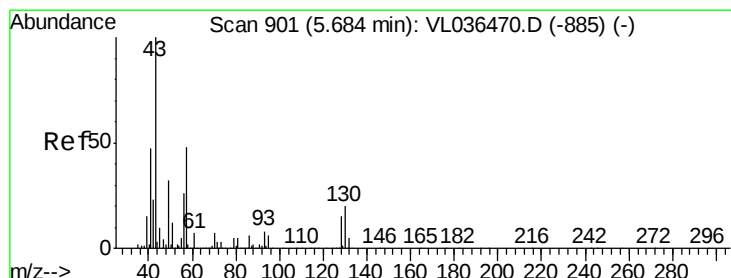
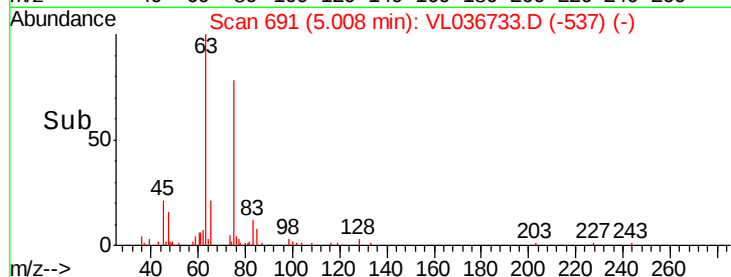
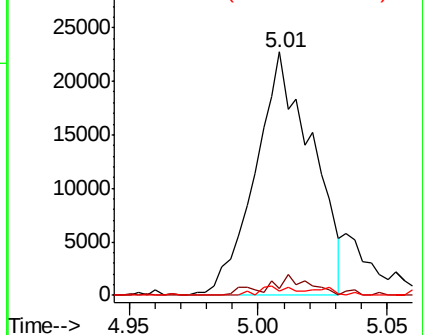
63 100

98 3.0 2.1 6.2

100 1.9 0.9 2.8



Abundance Ion 63.10 (62.80 to 63.80): VL0
Ion 98.00 (97.70 to 98.70): VL0
Ion 100.00 (99.70 to 100.70): VL0



#25

Ethyl Acetate

Concen: 0.308 ppbv

RT: 5.69 min Scan# 902

Delta R.T. 0.00 min

Lab File: VL036733.D

Acq: 7 Apr 2021 19:24

Tgt Ion: 43 Resp: 89769

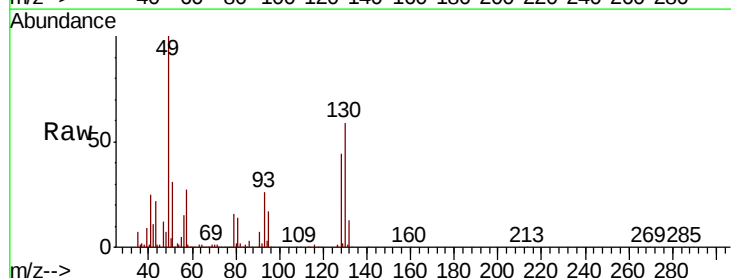
Ion Ratio Lower Upper

43 100

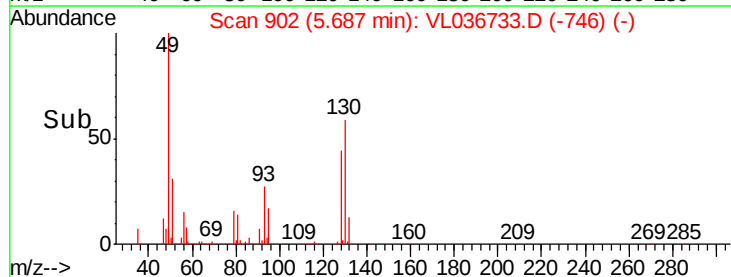
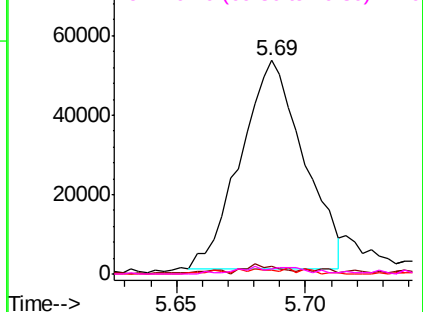
45 4.3 7.9 11.9#

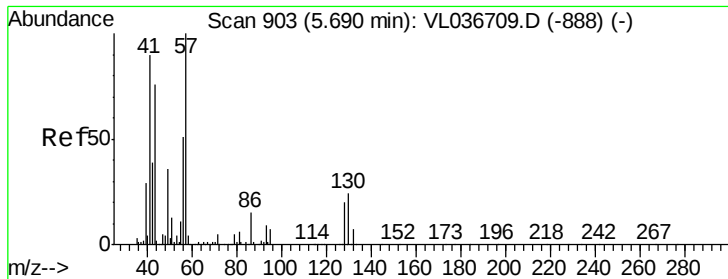
61 3.0 7.4 11.2#

70 3.9 5.1 7.7#



Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 45.10 (44.80 to 45.80): VL0
Ion 61.10 (60.80 to 61.80): VL0
Ion 70.10 (69.80 to 70.80): VL0

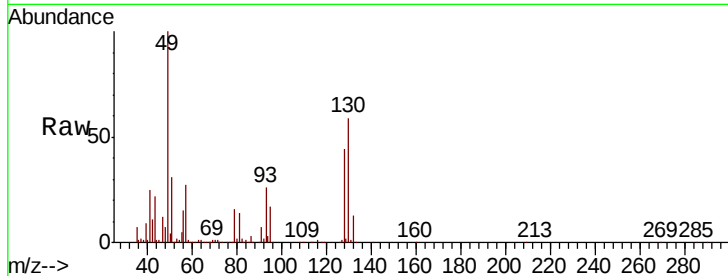




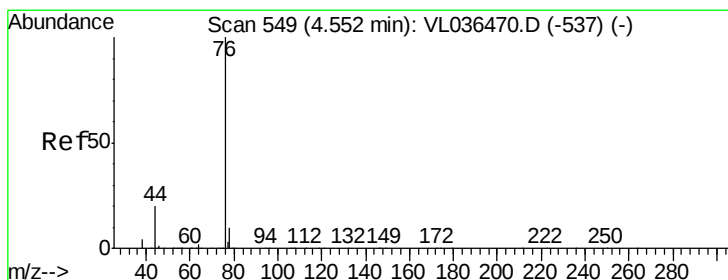
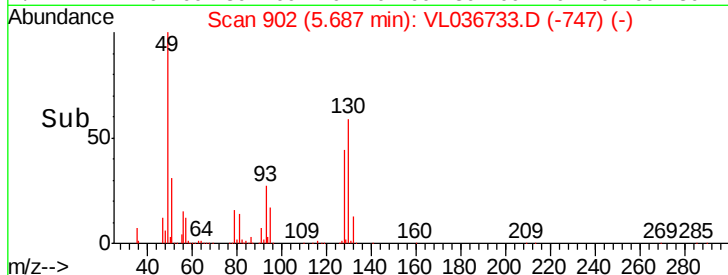
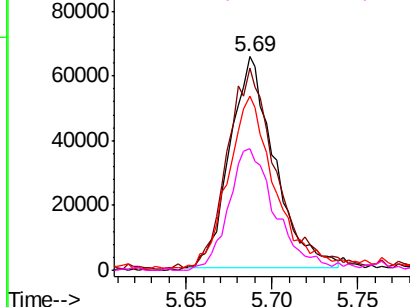
#26
Hexane
Concen: 0.866 ppbv
RT: 5.69 min Scan# 902
Delta R.T. -0.00 min
Lab File: VL036733.D
Acq: 7 Apr 2021 19:24

Instrument :
MSVOA_L
ClientSampleId :
FS-SV-03-X

Tot Ion: 57 Resp: 117056
Ion Ratio Lower Upper
57 100
41 104.6 77.2 115.8
43 88.0 173.8 260.6#
56 61.9 43.8 65.6

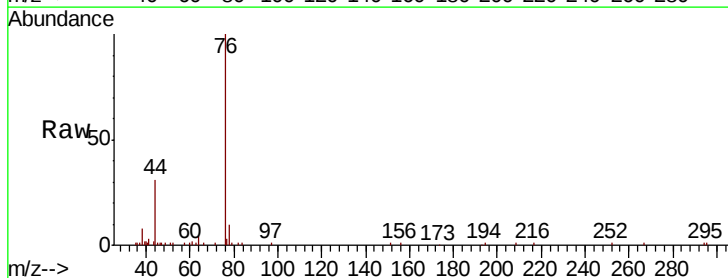


Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

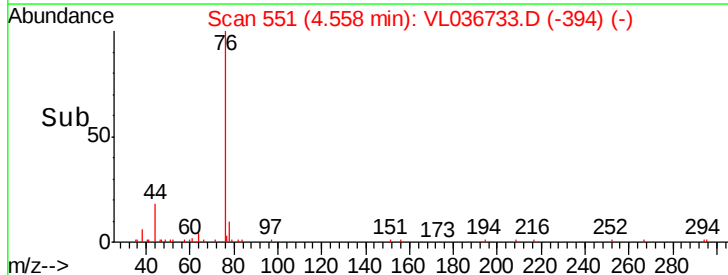
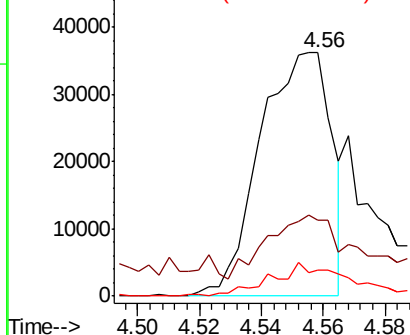


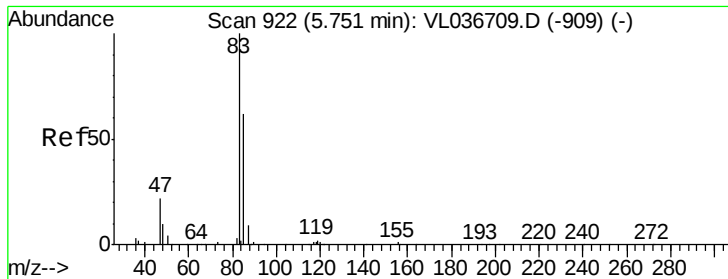
#27
Carbon Disulfide
Concen: 0.433 ppbv
RT: 4.56 min Scan# 551
Delta R.T. 0.01 min
Lab File: VL036733.D
Acq: 7 Apr 2021 19:24

Tgt Ion: 76 Resp: 57710
Ion Ratio Lower Upper
76 100
44 43.5 17.5 26.3#
78 16.3 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





#29

Chloroform

Concen: 0.094 ppbv

RT: 5.75 min Scan# 923

Delta R.T. -0.00 min

Lab File: VL036733.D

Acq: 7 Apr 2021 19:24

Instrument :

MSVOA_L

ClientSampleId :

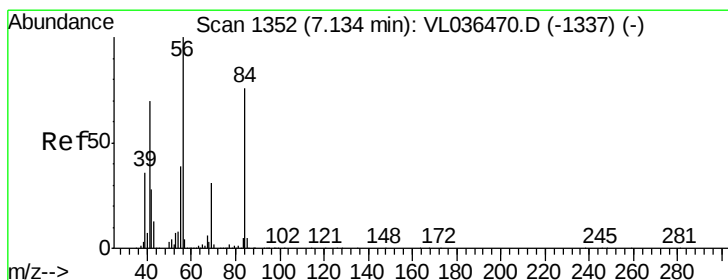
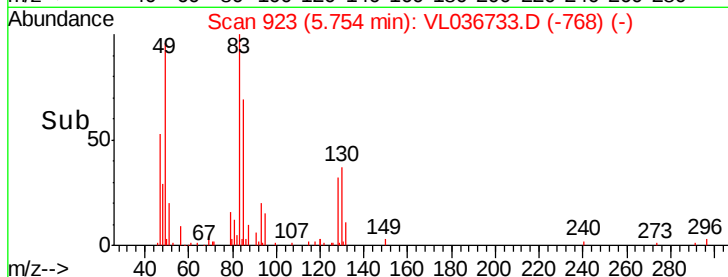
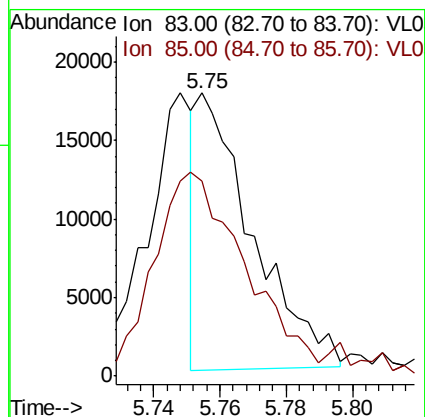
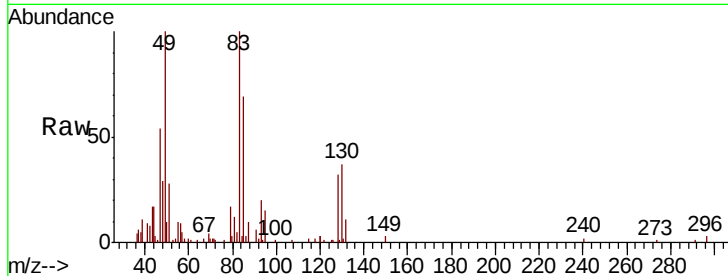
FS-SV-03-X

Tot Ion: 83 Resp: 20374

Ion Ratio Lower Upper

83 100

85 60.4 52.6 78.8



#30

Cyclohexane

Concen: 0.257 ppbv

RT: 7.13 min Scan# 1350

Delta R.T. -0.01 min

Lab File: VL036733.D

Acq: 7 Apr 2021 19:24

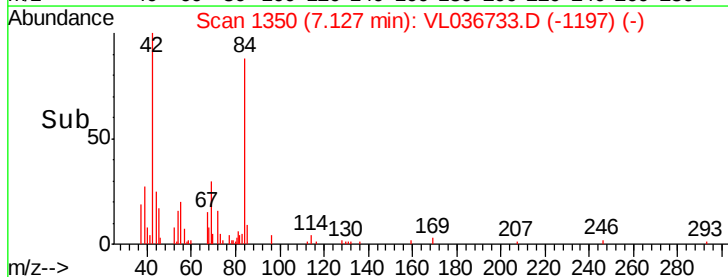
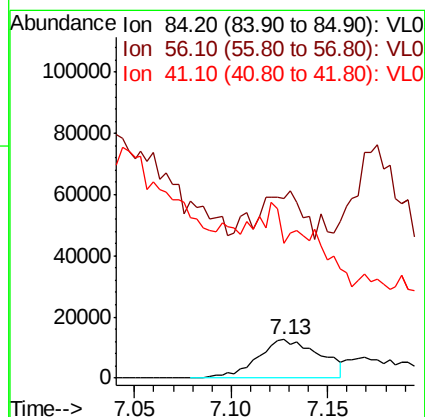
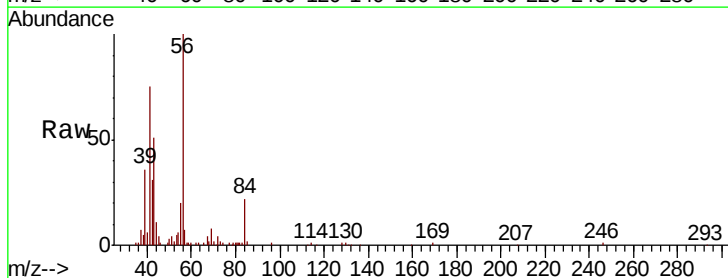
Tgt Ion: 84 Resp: 28160

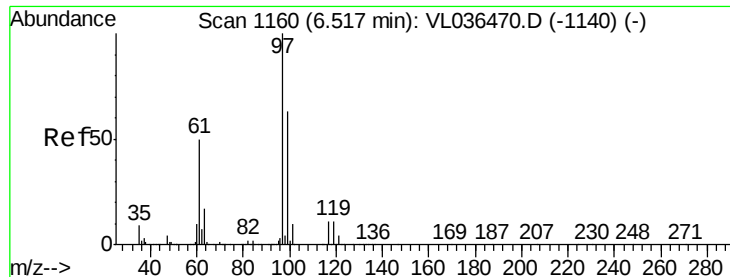
Ion Ratio Lower Upper

84 100

56 0.0 114.6 171.8#

41 0.0 75.3 112.9#





#32

1,1,1-Trichloroethane

Concen: 0.056 ppbv

RT: 6.51 min Scan# 1157

Delta R.T. -0.01 min

Lab File: VL036733.D

Acq: 7 Apr 2021 19:24

Instrument :

MSVOA_L

ClientSampleId :

FS-SV-03-X

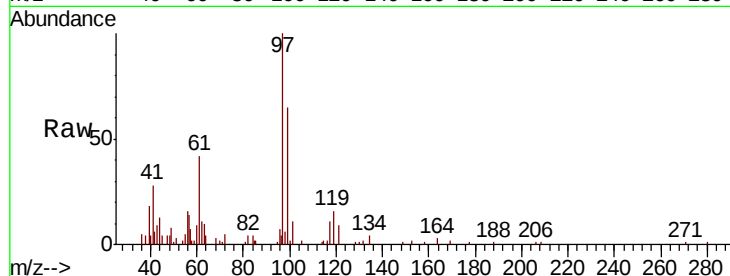
Tot Ion: 97 Resp: 12232

Ion Ratio Lower Upper

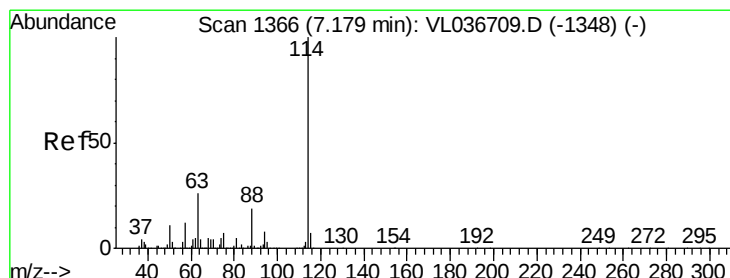
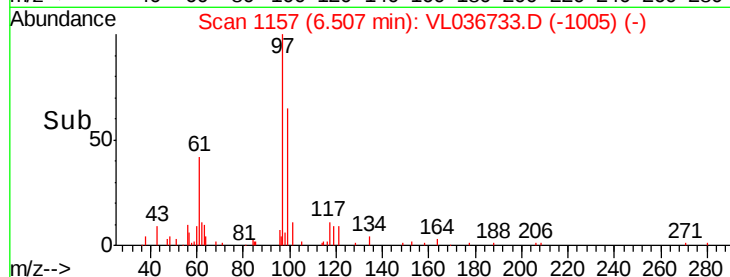
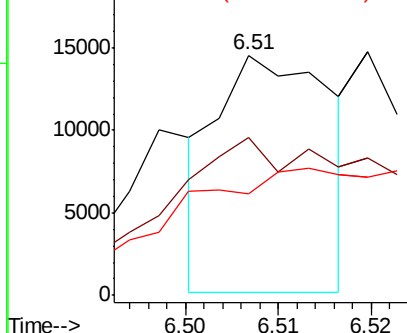
97 100

99 177.2 51.4 77.0#

61 0.0 40.6 60.8#



Abundance Ion 97.00 (96.70 to 97.70): VL0
Ion 99.00 (98.70 to 99.70): VL0
Ion 61.10 (60.80 to 61.80): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.18 min Scan# 1365

Delta R.T. -0.00 min

Lab File: VL036733.D

Acq: 7 Apr 2021 19:24

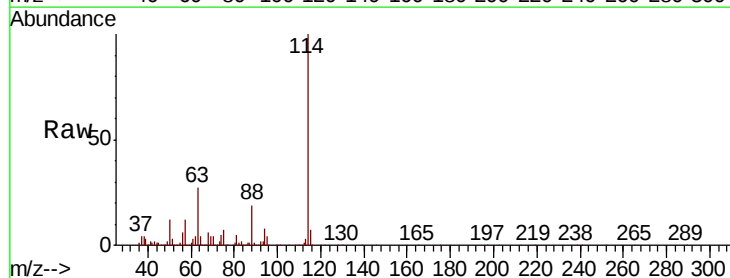
Tgt Ion: 114 Resp: 3161894

Ion Ratio Lower Upper

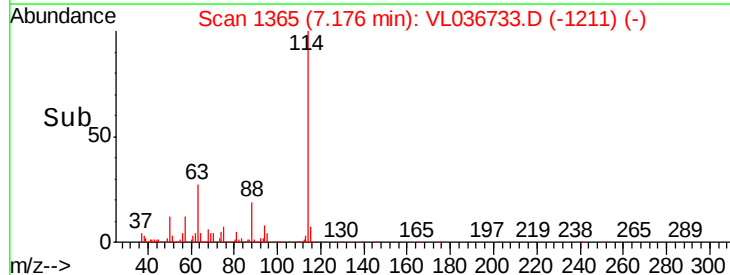
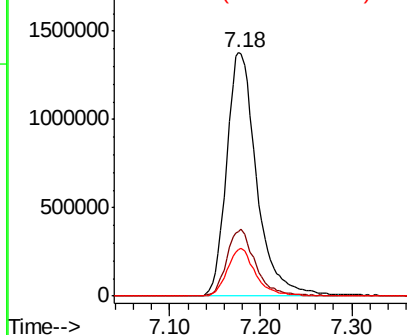
114 100

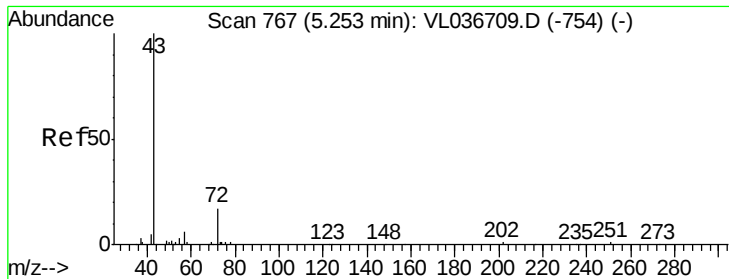
63 26.4 22.4 33.6

88 18.8 15.4 23.0



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

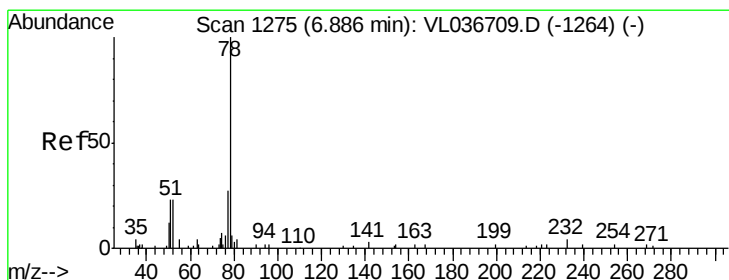
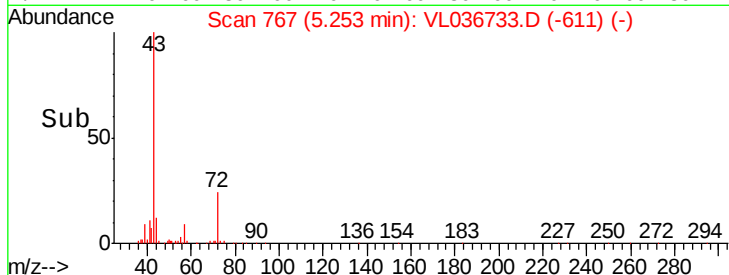
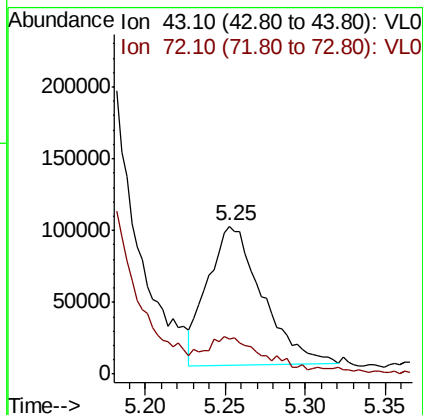
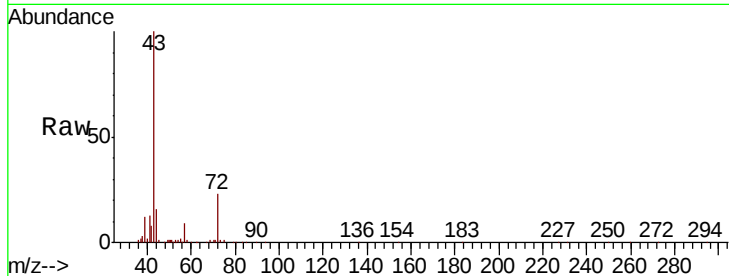




#34
2-Butanone
Concen: 1.471 ppbv
RT: 5.25 min Scan# 767
Delta R.T. 0.00 min
Lab File: VL036733.D
Acq: 7 Apr 2021 19:24

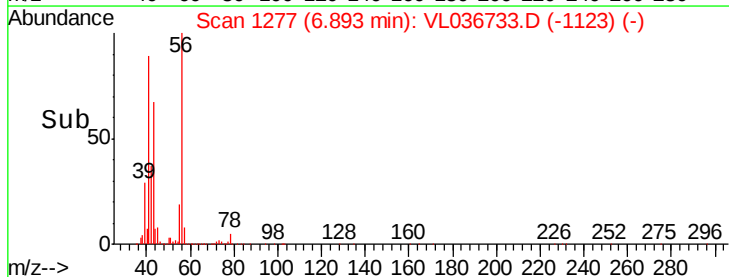
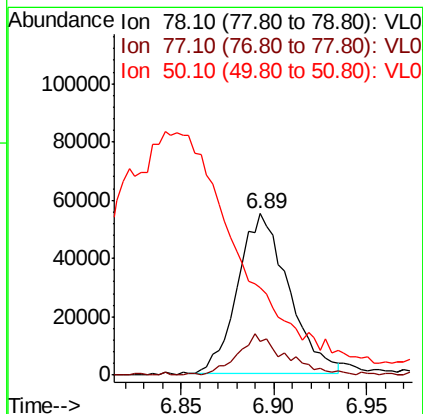
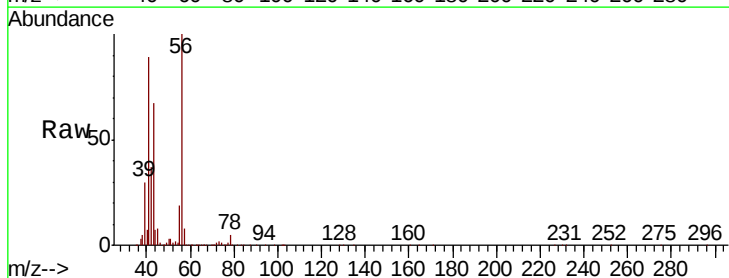
Instrument :
MSVOA_L
ClientSampleId :
FS-SV-03-X

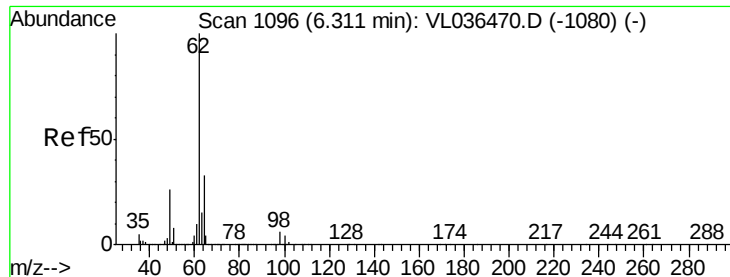
Tot Ion: 43 Resp: 227010
Ion Ratio Lower Upper
43 100
72 25.9 17.0 25.6#



#36
Benzene
Concen: 0.359 ppbv
RT: 6.89 min Scan# 1277
Delta R.T. -0.00 min
Lab File: VL036733.D
Acq: 7 Apr 2021 19:24

Tgt Ion: 78 Resp: 104713
Ion Ratio Lower Upper
78 100
77 20.1 18.0 27.0
50 39.0 16.5 24.7#

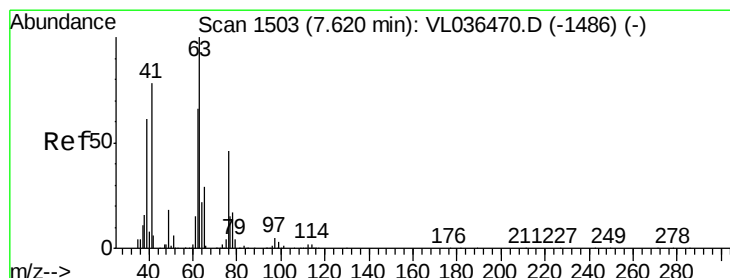
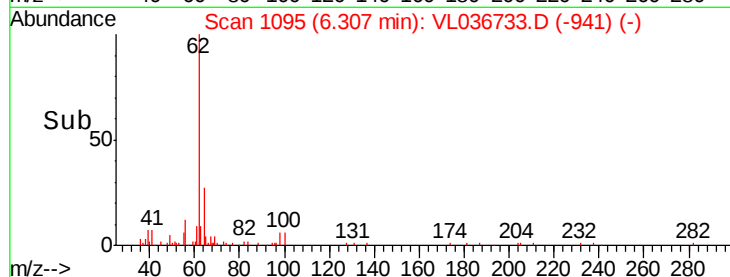
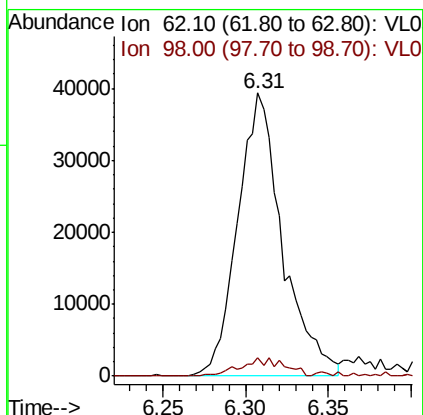
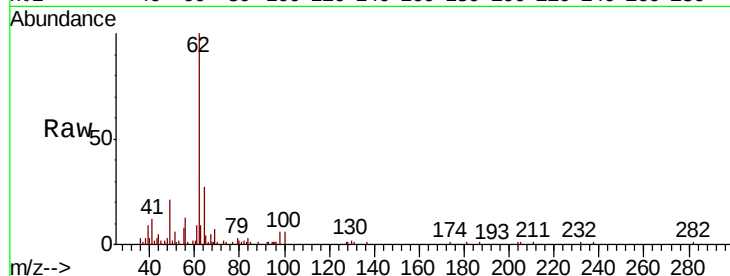




#37
 1,2-Dichloroethane
 Concen: 0.430 ppbv
 RT: 6.31 min Scan# 1095
 Delta R.T. -0.00 min
 Lab File: VL036733.D
 Acq: 7 Apr 2021 19:24

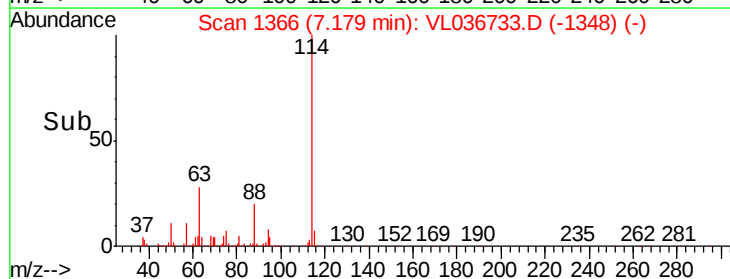
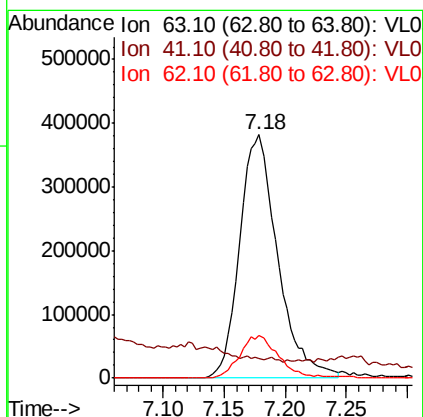
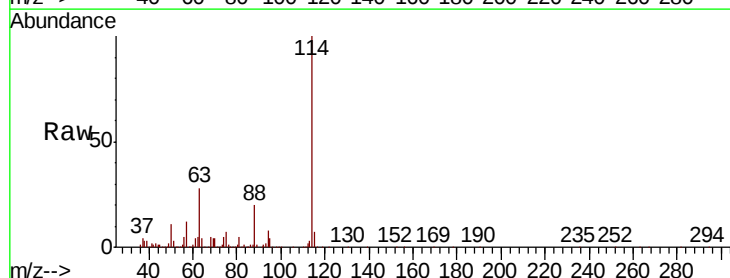
Instrument :
 MSVOA_L
 ClientSampleId :
 FS-SV-03-X

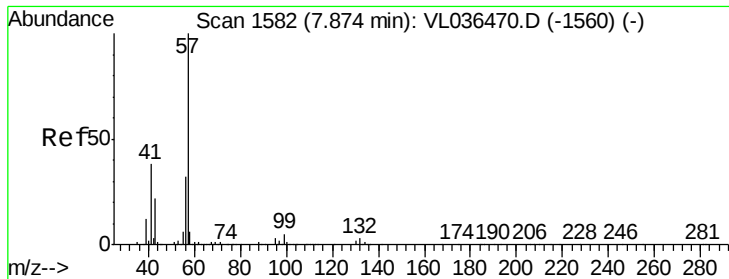
Tot Ion: 62 Resp: 73757
 Ion Ratio Lower Upper
 62 100
 98 6.8 4.9 7.3



#39
 1,2-Dichloropropane
 Concen: 6.941 ppbv
 RT: 7.18 min Scan# 1366
 Delta R.T. -0.44 min
 Lab File: VL036733.D
 Acq: 7 Apr 2021 19:24

Tgt Ion: 63 Resp: 821049
 Ion Ratio Lower Upper
 63 100
 41 0.0 62.4 93.6#
 62 17.4 52.8 79.2#





#44

2,2,4-Trimethylpentane

Concen: 0.049 ppbv

RT: 7.87 min Scan# 1581

Delta R.T. -0.00 min

Lab File: VL036733.D

Acq: 7 Apr 2021 19:24

Instrument :

MSVOA_L

ClientSampleId :

FS-SV-03-X

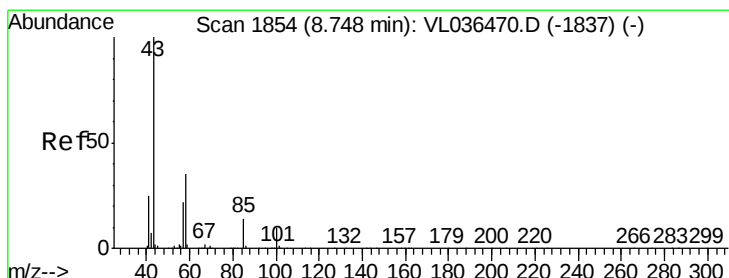
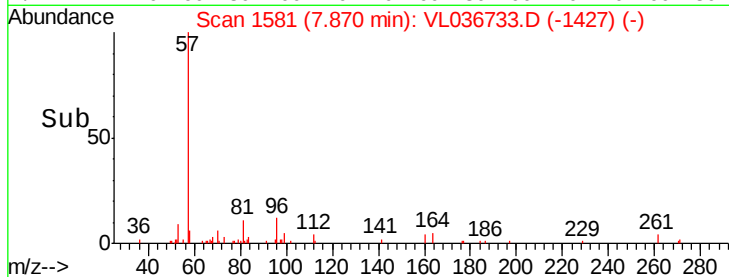
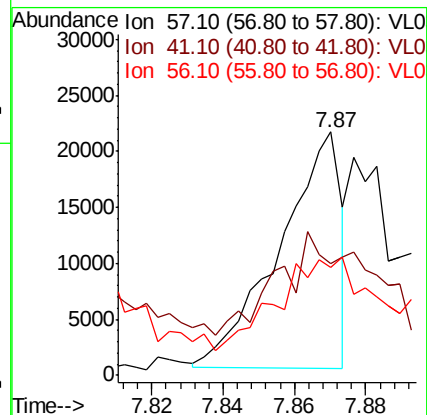
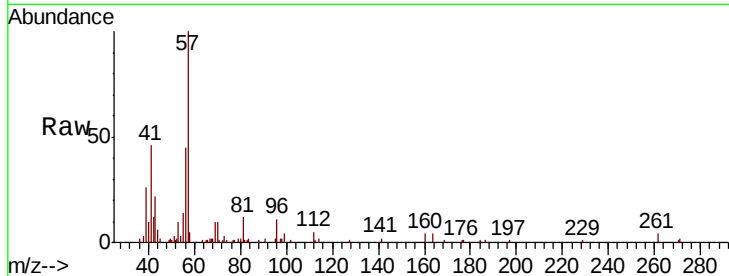
Tot Ion: 57 Resp: 25313

Ion Ratio Lower Upper

57 100

41 105.7 28.8 43.2#

56 0.0 26.1 39.1#



#50

4-Methyl-2-Pentanone

Concen: 0.086 ppbv

RT: 8.75 min Scan# 1855

Delta R.T. 0.00 min

Lab File: VL036733.D

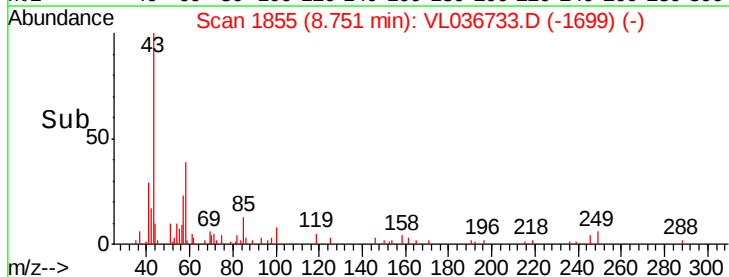
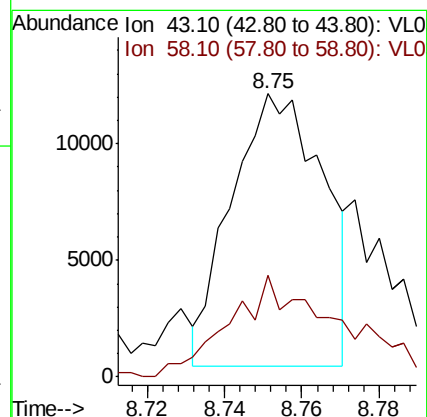
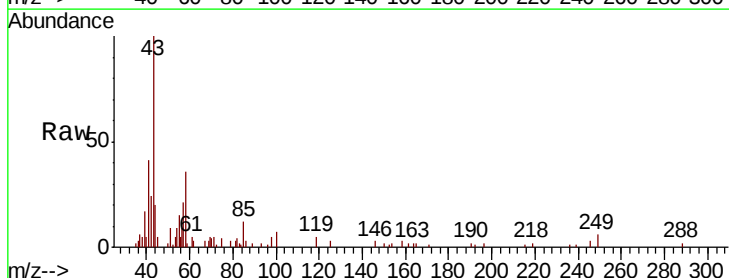
Acq: 7 Apr 2021 19:24

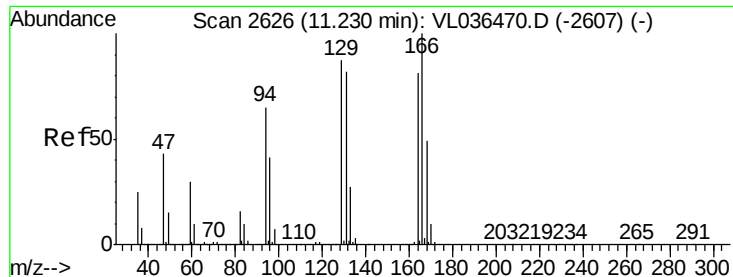
Tgt Ion: 43 Resp: 19213

Ion Ratio Lower Upper

43 100

58 48.4 28.2 42.2#





#52

Tetrachloroethene

Concen: 7.030 ppbv

RT: 11.23 min Scan# 2625

Delta R.T. -0.00 min

Lab File: VL036733.D

Acq: 7 Apr 2021 19:24

Instrument :

MSVOA_L

ClientSampleId :

FS-SV-03-X

Tot Ion:164 Resp: 754893

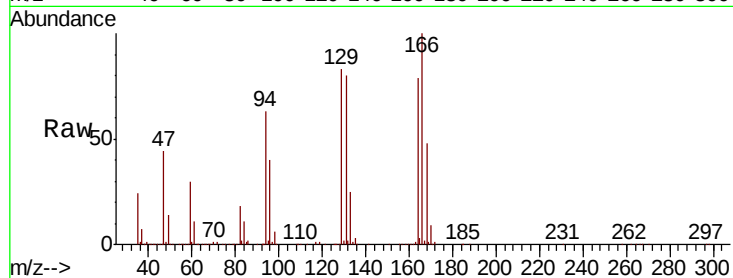
Ion Ratio Lower Upper

164 100

166 126.7 98.3 147.5

129 105.0 85.8 128.8

131 101.9 80.9 121.3



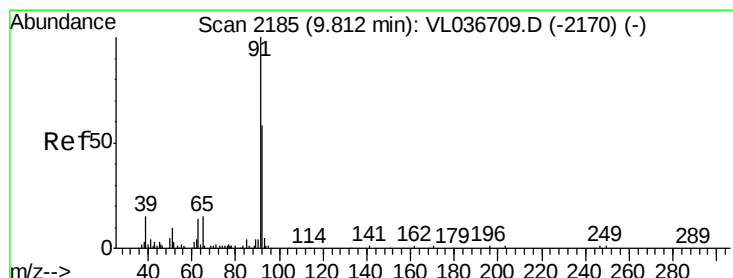
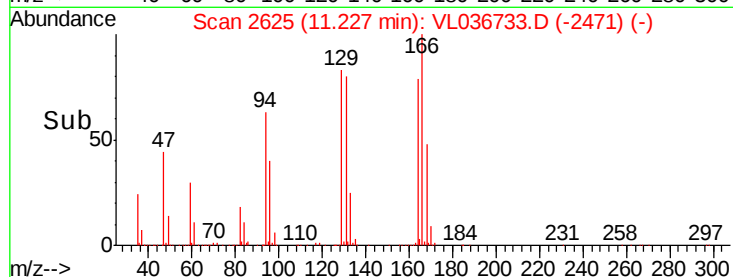
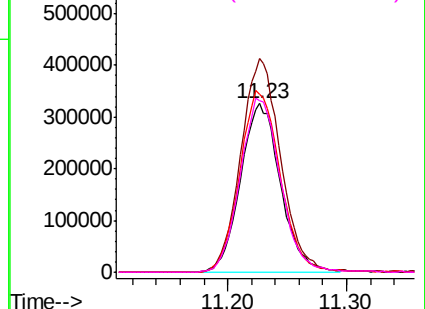
Abundance

Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#53

Toluene

Concen: 2.697 ppbv

RT: 9.81 min Scan# 2184

Delta R.T. -0.00 min

Lab File: VL036733.D

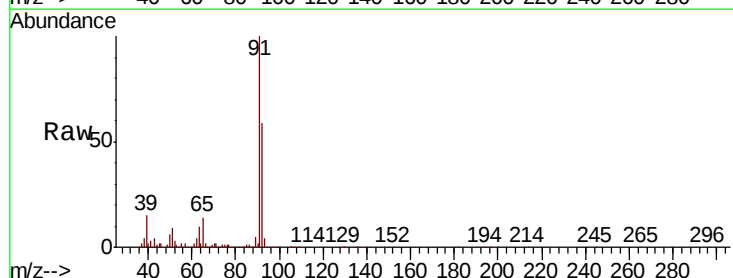
Acq: 7 Apr 2021 19:24

Tgt Ion: 91 Resp: 837443

Ion Ratio Lower Upper

91 100

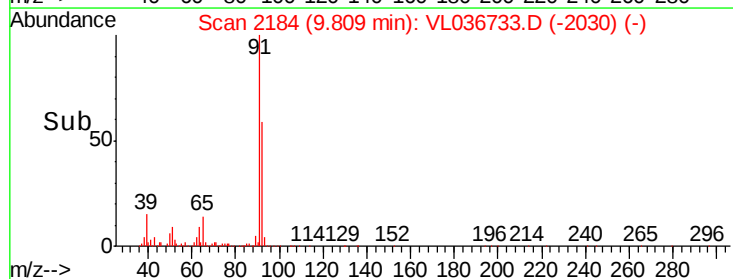
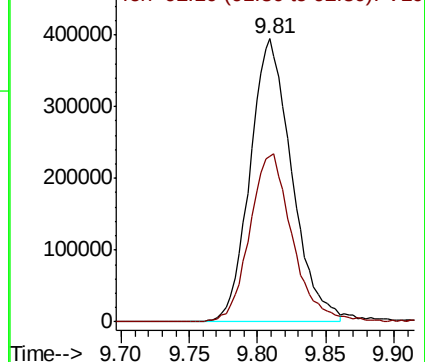
92 60.7 48.8 73.2

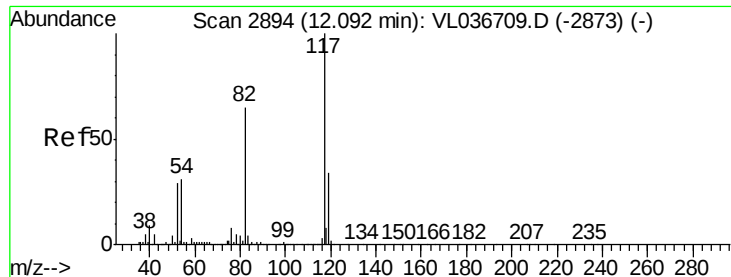


Abundance

Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.09 min Scan# 2893

Delta R.T. -0.00 min

Lab File: VL036733.D

Acq: 7 Apr 2021 19:24

Instrument :

MSVOA_L

ClientSampleId :

FS-SV-03-X

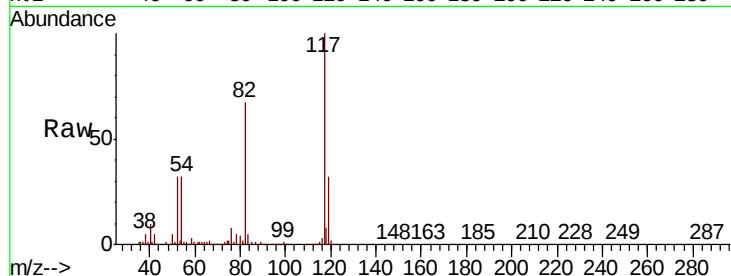
Tot Ion:117 Resp: 2664904

Ion Ratio Lower Upper

117 100

82 68.3 57.4 86.0

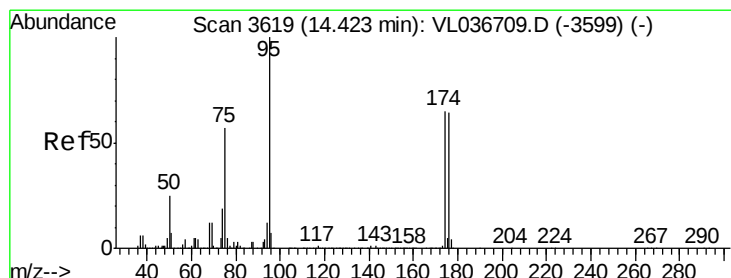
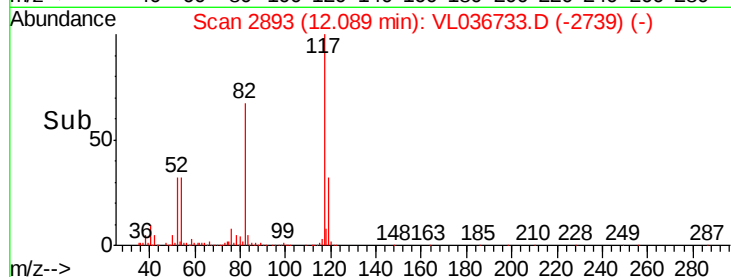
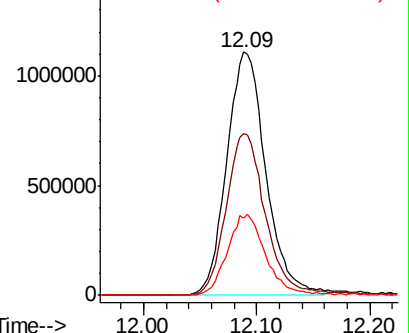
119 33.2 47.4 71.0#



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



#68

1-Bromo-4-Fluorobenzene

Concen: 9.653 ppbv

RT: 14.42 min Scan# 3618

Delta R.T. -0.00 min

Lab File: VL036733.D

Acq: 7 Apr 2021 19:24

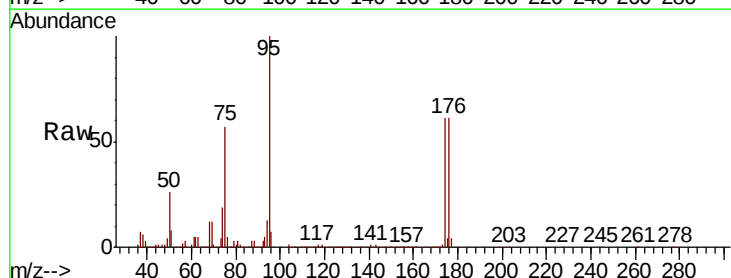
Tgt Ion: 95 Resp: 2050282

Ion Ratio Lower Upper

95 100

174 64.9 51.0 76.6

175 4.8 3.9 5.9



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

