

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL040621\
 Data File : VL036717.D
 Acq On : 7 Apr 2021 3:43
 Operator : SY/AP
 Sample : M1929-05DUP
 Misc : 400mL/MSVOA L
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 FS-OA-04DUP

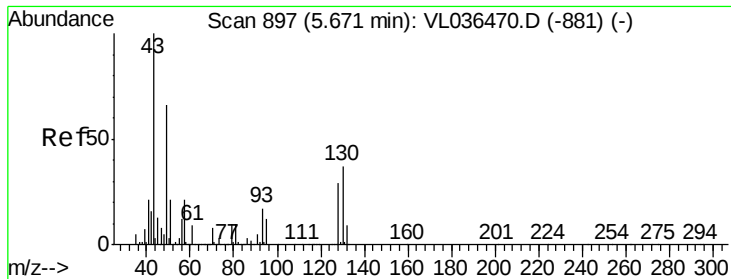
Quant Time: Apr 07 04:31:08 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032521AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Mar 25 09:42:40 2021
 QLast Update : Thu Mar 25 09:42:40 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1288811	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.18	114	2985277	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	2667283	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.42	95	2027529	9.54	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	95.40%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.05	85	42926	0.204	ppbv 90
3) Chlorodifluoromethane	2.99	51	84565	0.351	ppbv # 91
4) Chloromethane	3.13	50	21442	0.252	ppbv 95
9) Propene	3.02	41	30328	0.395	ppbv # 47
10) Heptane	8.12	43	6409	0.033	ppbv # 1
11) Trichlorofluoromethane	3.95	101	39574	0.185	ppbv 84
13) Ethanol	3.62	45	295959	32.375	ppbv 91
15) Acetone	3.85	43	1097222	8.650	ppbv 98
16) 1,3-Butadiene	3.32	39	3069	0.035	ppbv # 5
19) Isopropyl Alcohol	3.99	45	131836	1.889	ppbv # 82
20) Methylene Chloride	4.34	84	1010762	17.019	ppbv 90
23) Vinyl Acetate	5.06	43	93603	0.431	ppbv # 78
25) Ethyl Acetate	5.69	43	818509	2.714	ppbv # 78
26) Hexane	5.69	57	1112456	7.949	ppbv # 47
30) Cyclohexane	7.13	84	3461	0.030	ppbv # 1
34) 2-Butanone	5.25	43	108302	0.743	ppbv 98
36) Benzene	6.90	78	30237	0.110	ppbv 97
39) 1,2-Dichloropropane	7.18	63	806676	7.223	ppbv # 23
41) Tetrahydrofuran	5.73	42	12949	0.193	ppbv # 42
44) 2,2,4-Trimethylpentane	7.88	57	47088	0.097	ppbv # 57
52) Tetrachloroethene	11.22	164	4453	0.044	ppbv # 35
53) Toluene	9.81	91	452414	1.543	ppbv 99
58) Ethyl Benzene	12.72	91	13523	0.035	ppbv 100
59) m/p-Xylene	13.00	91	15314	0.045	ppbv # 32
60) o-Xylene	13.70	91	21508	0.066	ppbv # 50
74) 1,2,4-Trimethylbenzene	16.76	105	12316	0.034	ppbv # 71

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 min Scan# 895

Delta R.T. -0.01 min

Lab File: VL036717.D

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Instrument :
MSVOA_L
ClientSampleId :
FS-OA-04DUP

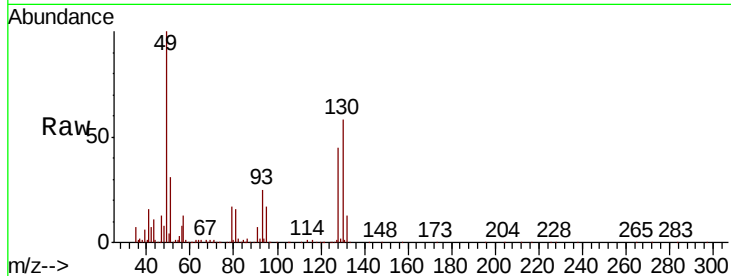
Tot Ion: 49 Resp: 1288811

Ion Ratio Lower Upper

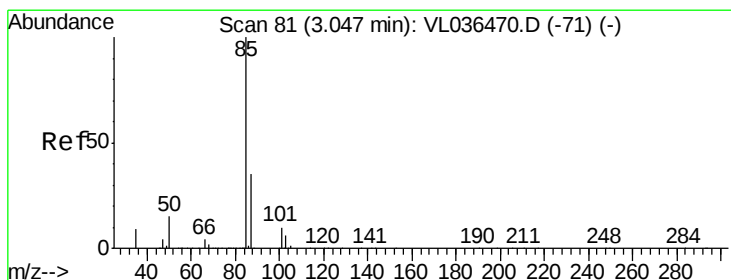
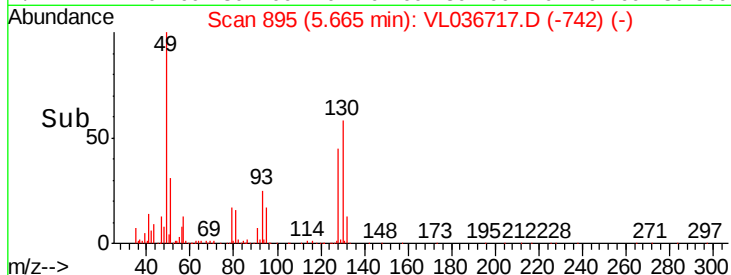
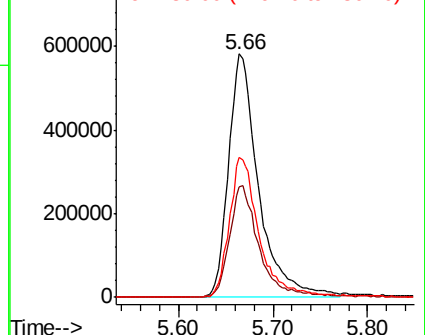
49 100

128 45.1 23.5 70.6

130 58.1 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



#2

Dichlorodifluoromethane

Concen: 0.204 ppbv

RT: 3.05 min Scan# 81

Delta R.T. -0.00 min

Lab File: VL036717.D

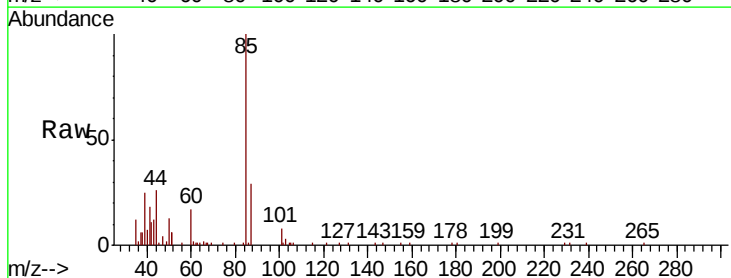
Acq: 7 Apr 2021 3:43

Tgt Ion: 85 Resp: 42926

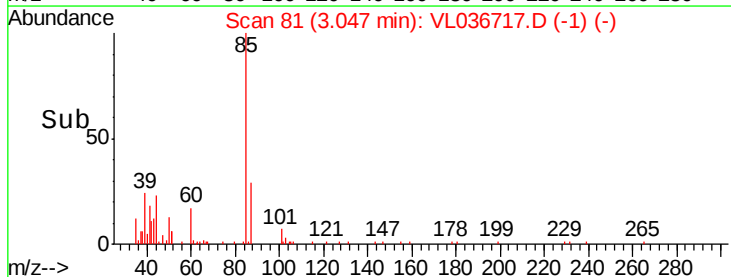
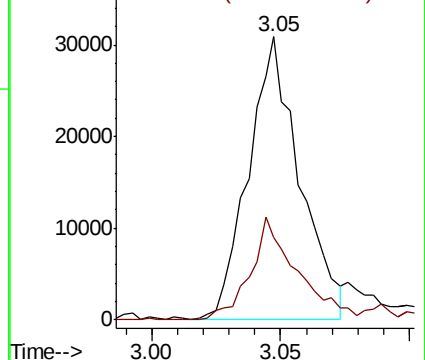
Ion Ratio Lower Upper

85 100

87 29.1 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: 0.351 ppbv

RT: 2.99 min Scan# 62

Delta R.T. -0.00 min

Lab File: VL036717.D

Acq: 7 Apr 2021 3:43

Instrument :

MSVOA_L

ClientSampleId :

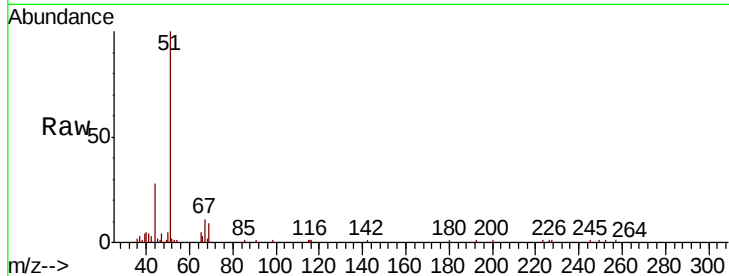
FS-OA-04DUP

Tot Ion: 51 Resp: 84565

Ion Ratio Lower Upper

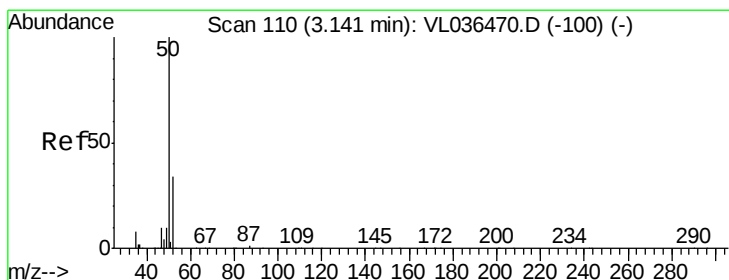
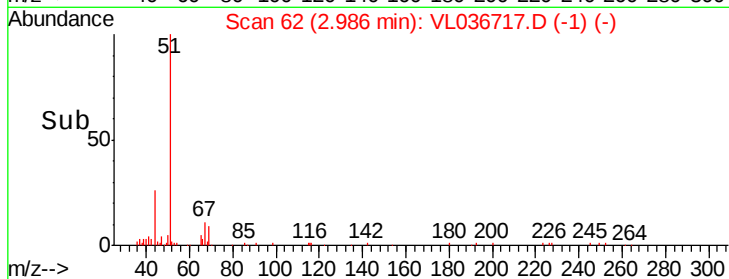
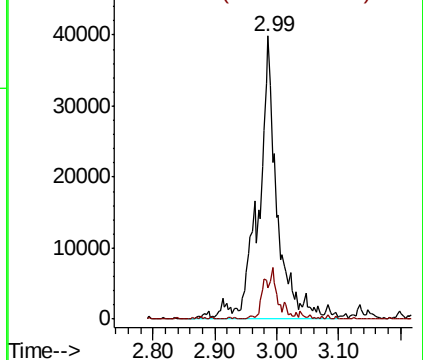
51 100

67 14.5 14.7 22.1#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.252 ppbv

RT: 3.13 min Scan# 108

Delta R.T. -0.01 min

Lab File: VL036717.D

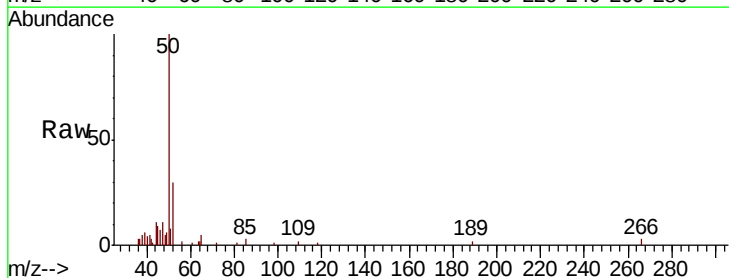
Acq: 7 Apr 2021 3:43

Tgt Ion: 50 Resp: 21442

Ion Ratio Lower Upper

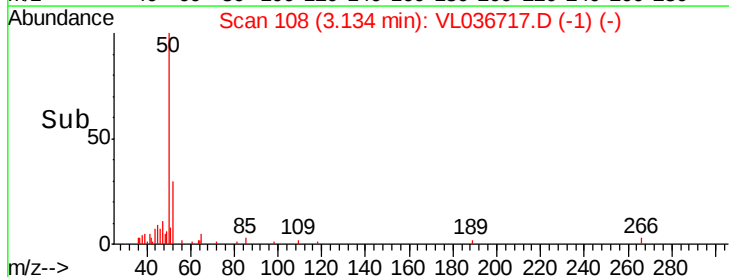
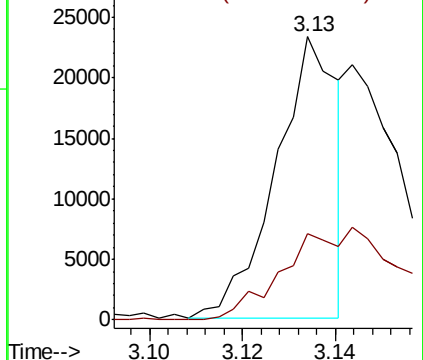
50 100

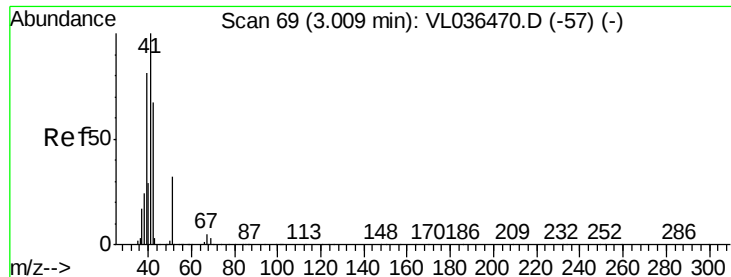
52 30.7 27.0 40.6



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.395 ppbv

RT: 3.02 min Scan# 72

Delta R.T. 0.01 min

Lab File: VL036717.D

Acq: 7 Apr 2021 3:43

Instrument :

MSVOA_L

ClientSampleId :

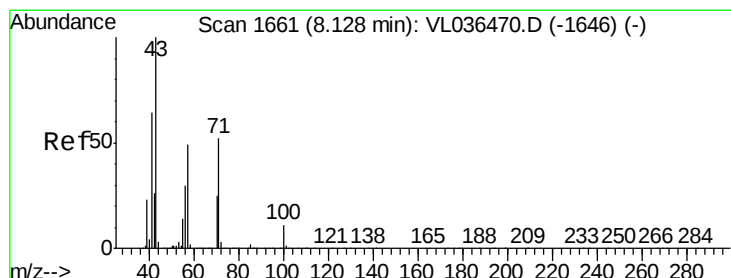
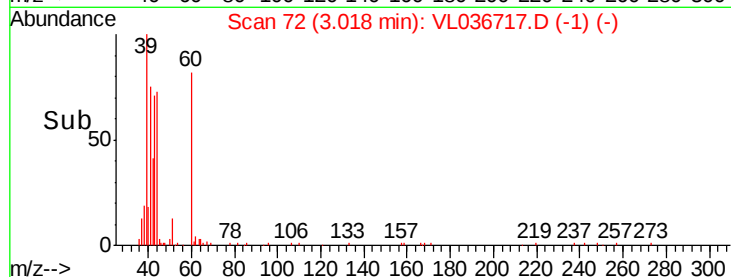
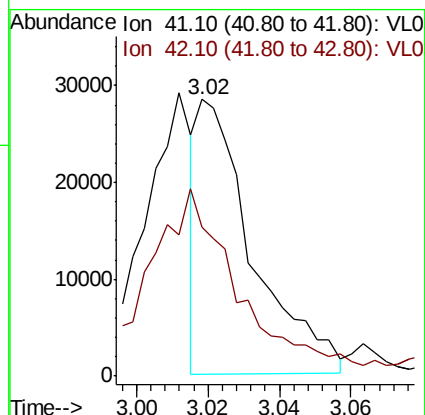
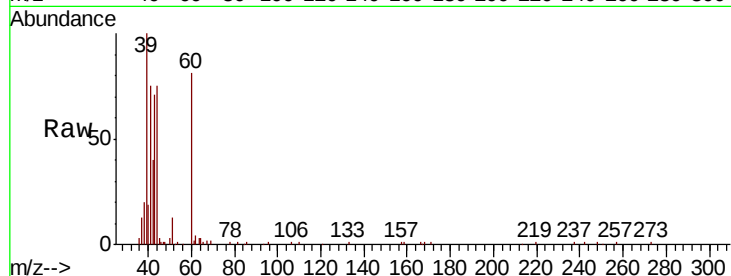
FS-OA-04DUP

Tot Ion: 41 Resp: 30328

Ion Ratio Lower Upper

41 100

42 115.4 57.0 85.4#



#10

Heptane

Concen: 0.033 ppbv

RT: 8.12 min Scan# 1660

Delta R.T. -0.00 min

Lab File: VL036717.D

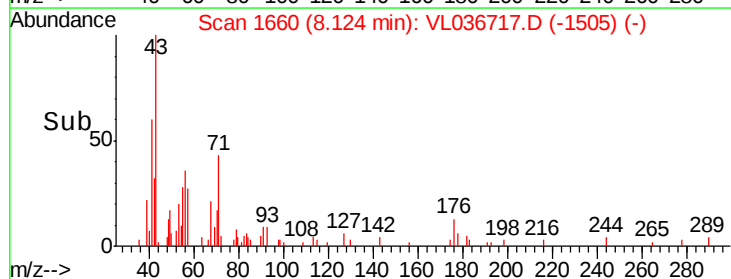
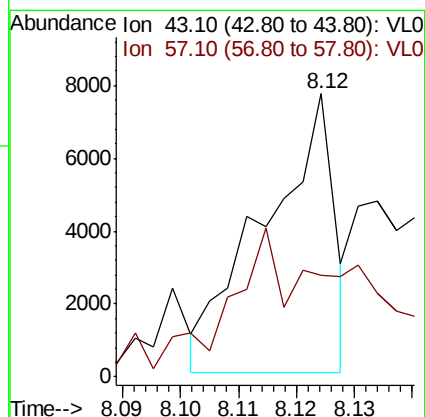
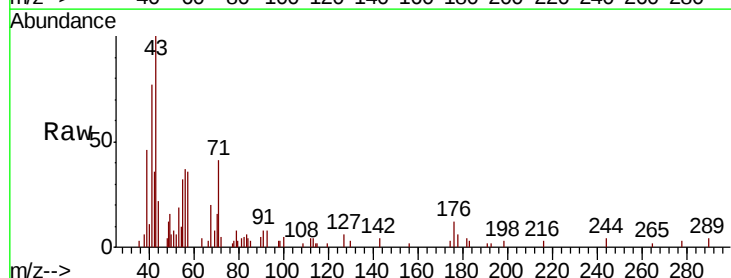
Acq: 7 Apr 2021 3:43

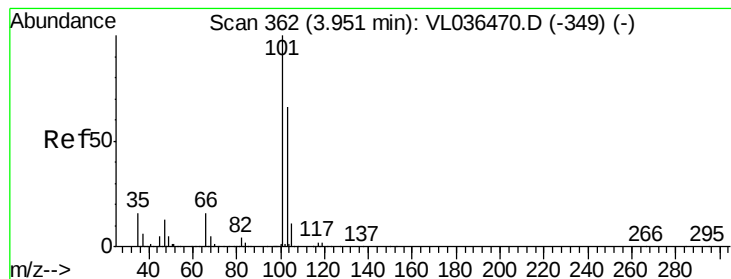
Tgt Ion: 43 Resp: 6409

Ion Ratio Lower Upper

43 100

57 121.0 39.0 58.6#





#11

Trichlorofluoromethane

Concen: 0.185 ppbv

RT: 3.95 min Scan# 361

Delta R.T. -0.00 min

Lab File: VL036717.D

Acq: 7 Apr 2021 3:43

Instrument :

MSVOA_L

ClientSampleId :

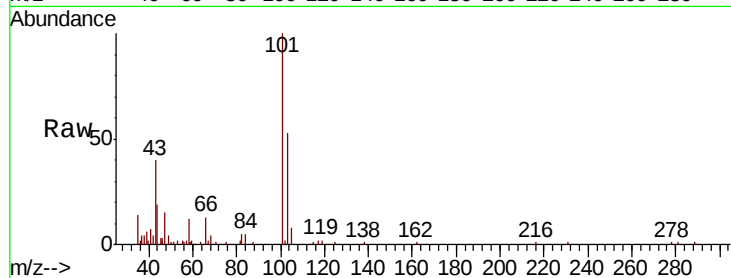
FS-OA-04DUP

Tot Ion:101 Resp: 39574

Ion Ratio Lower Upper

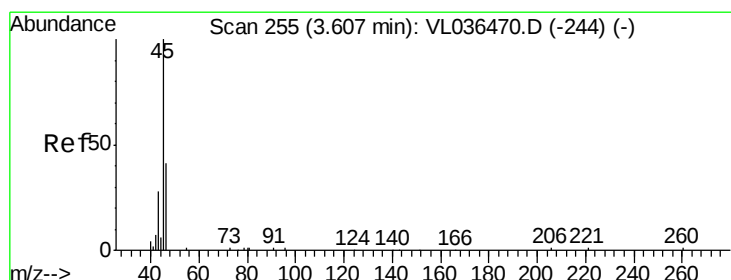
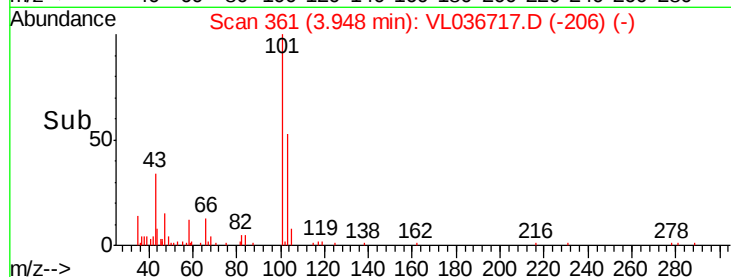
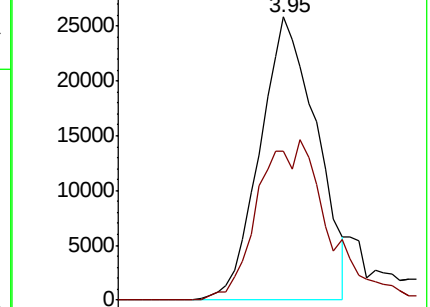
101 100

103 52.7 52.5 78.7



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#13

Ethanol

Concen: 32.375 ppbv

RT: 3.62 min Scan# 259

Delta R.T. 0.01 min

Lab File: VL036717.D

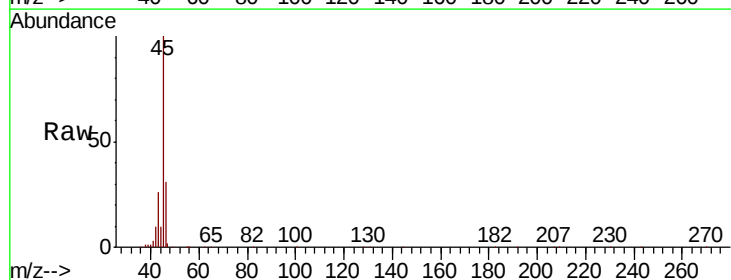
Acq: 7 Apr 2021 3:43

Tgt Ion: 45 Resp: 295959

Ion Ratio Lower Upper

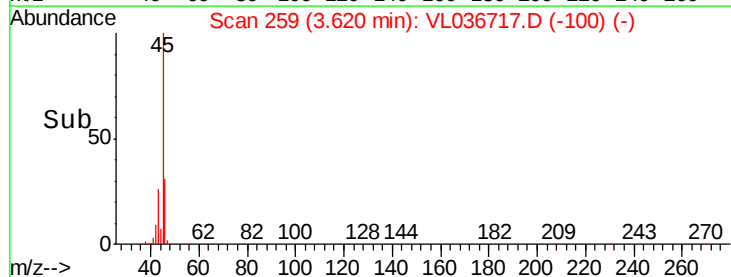
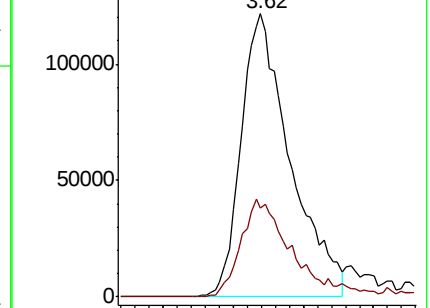
45 100

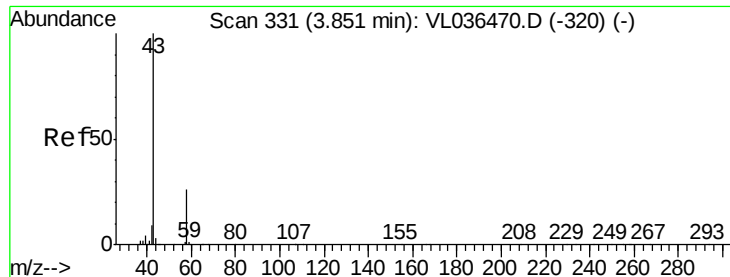
46 35.7 16.6 66.2



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 8.650 ppbv

RT: 3.85 min Scan# 330

Delta R.T. -0.00 min

Lab File: VL036717.D

Acq: 7 Apr 2021 3:43

Instrument :

MSVOA_L

ClientSampleId :

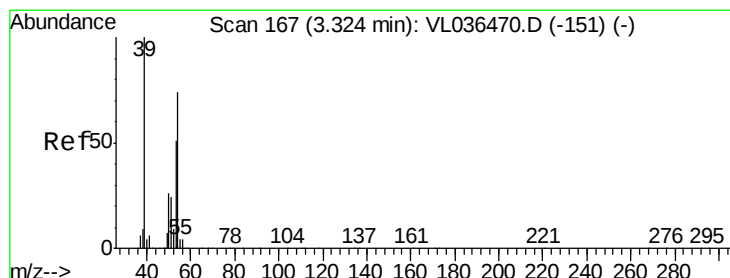
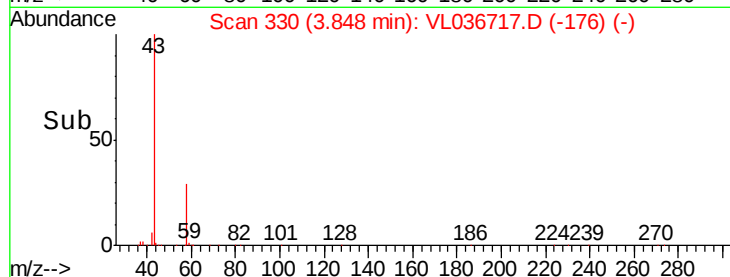
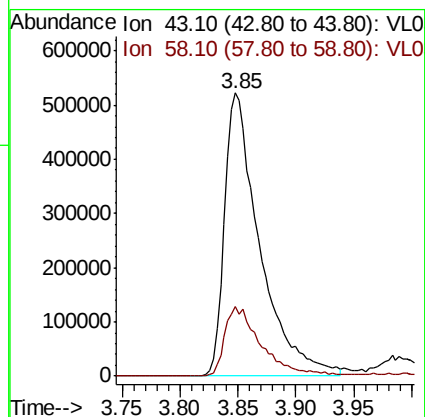
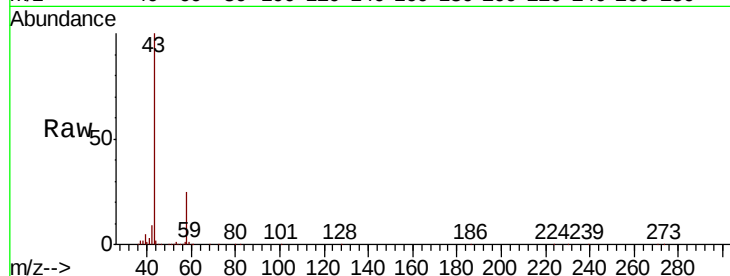
FS-OA-04DUP

Tot Ion: 43 Resp: 1097222

Ion Ratio Lower Upper

43 100

58 25.6 21.2 31.8



#16

1,3-Butadiene

Concen: 0.035 ppbv

RT: 3.32 min Scan# 165

Delta R.T. -0.01 min

Lab File: VL036717.D

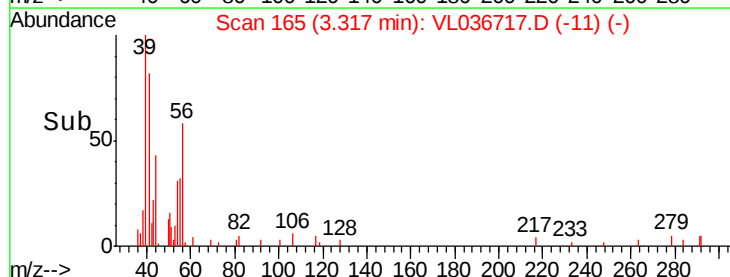
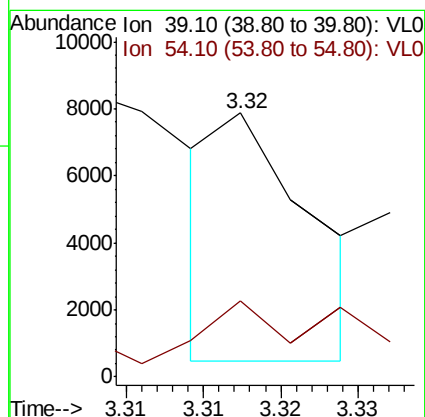
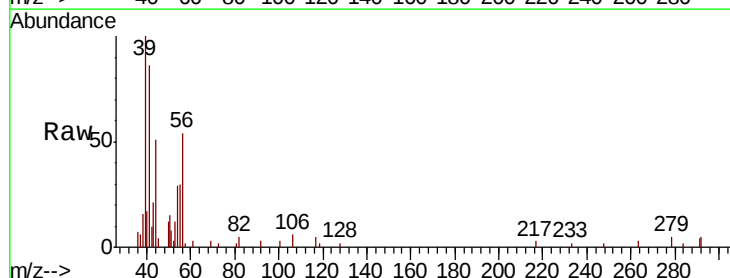
Acq: 7 Apr 2021 3:43

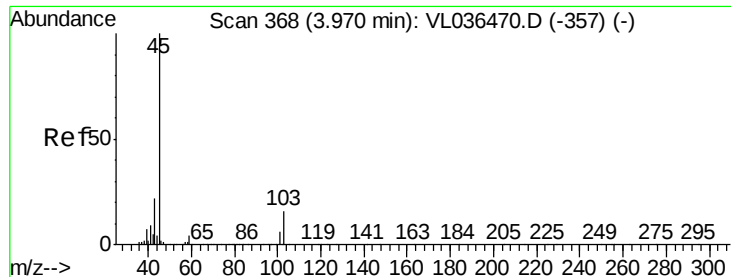
Tgt Ion: 39 Resp: 3069

Ion Ratio Lower Upper

39 100

54 153.6 58.8 88.2#





#19

Isopropyl Alcohol

Concen: 1.889 ppbv

RT: 3.99 min Scan# 374

Delta R.T. 0.02 min

Lab File: VL036717.D

Acq: 7 Apr 2021 3:43

Instrument :

MSVOA_L

ClientSampleId :

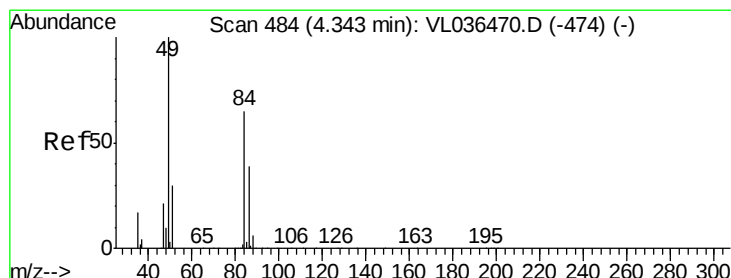
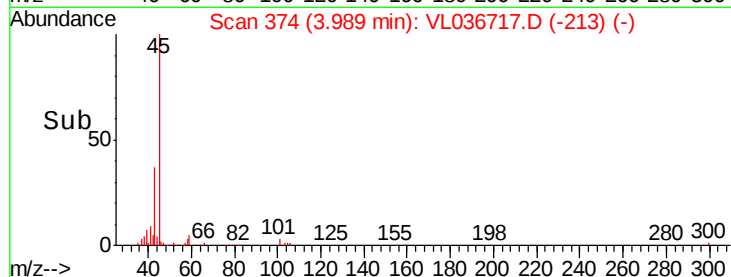
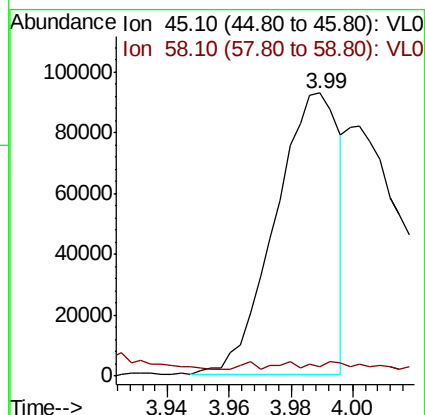
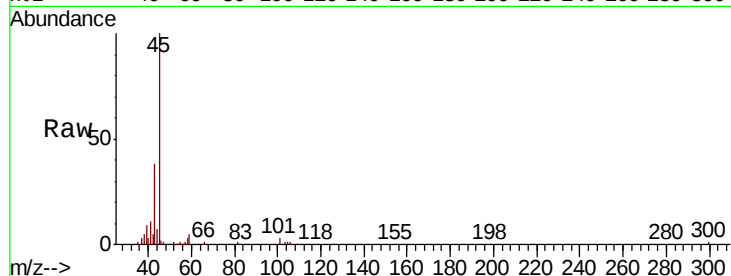
FS-OA-04DUP

Tot Ion: 45 Resp: 131836

Ion Ratio Lower Upper

45 100

58 9.6 2.9 4.3#



#20

Methylene Chloride

Concen: 17.019 ppbv

RT: 4.34 min Scan# 484

Delta R.T. -0.00 min

Lab File: VL036717.D

Acq: 7 Apr 2021 3:43

Tgt Ion: 84 Resp: 1010762

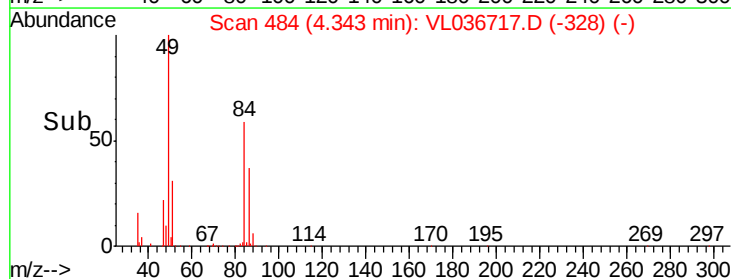
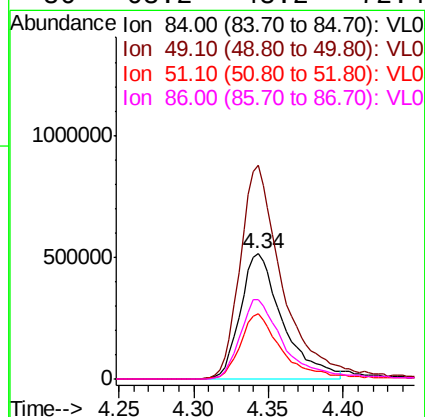
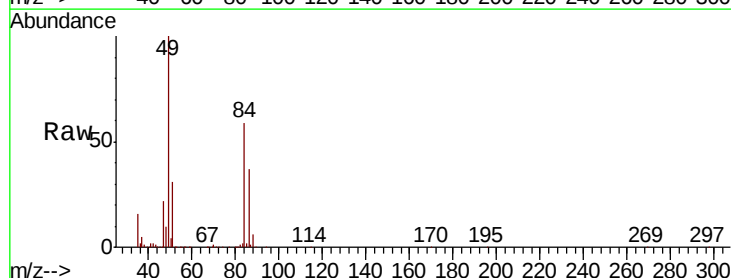
Ion Ratio Lower Upper

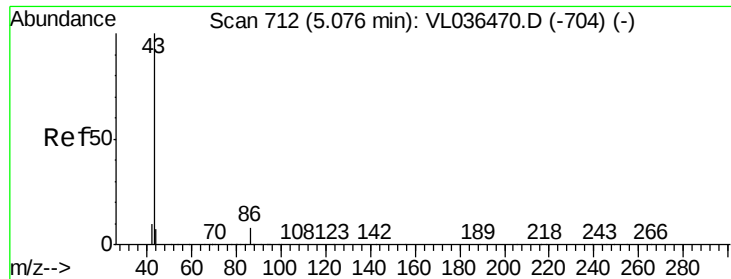
84 100

49 170.3 122.9 184.3

51 52.4 36.9 55.3

86 63.2 48.2 72.4





#23

Vinyl Acetate

Concen: 0.431 ppbv

RT: 5.06 min Scan# 708

Delta R.T. -0.01 min

Lab File: VL036717.D

Acq: 7 Apr 2021 3:43

Instrument :

MSVOA_L

ClientSampleId :

FS-OA-04DUP

Tot Ion: 43 Resp: 93603

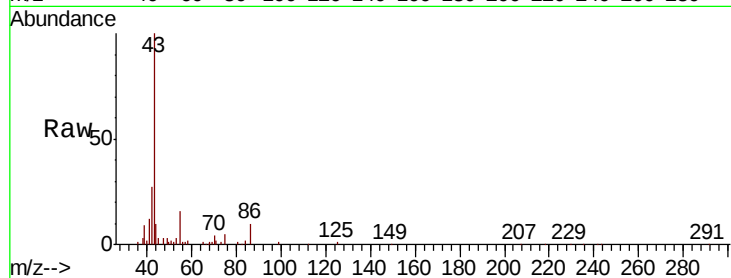
Ion Ratio Lower Upper

43 100

86 9.7 5.4 8.0#

42 25.3 8.5 12.7#

44 3.4 4.6 7.0#

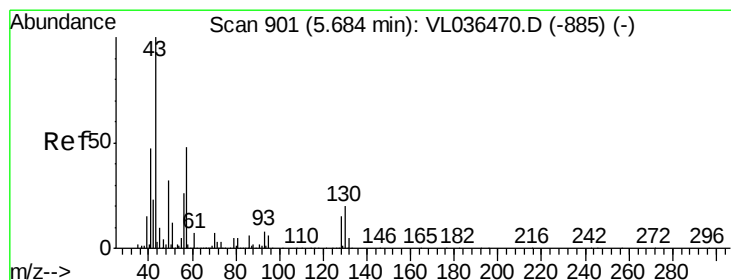
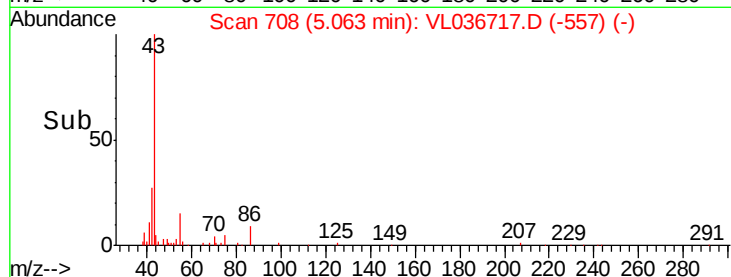
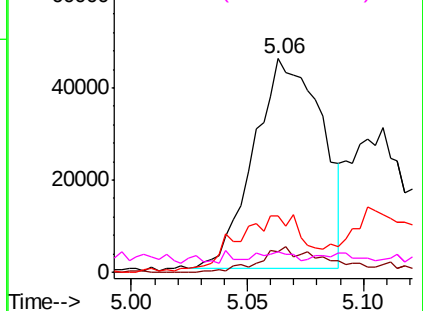


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 2.714 ppbv

RT: 5.69 min Scan# 902

Delta R.T. 0.00 min

Lab File: VL036717.D

Acq: 7 Apr 2021 3:43

Tgt Ion: 43 Resp: 818509

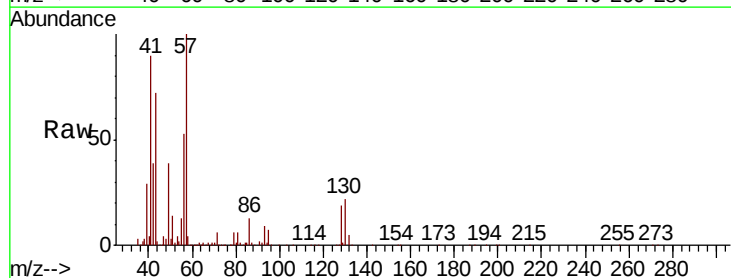
Ion Ratio Lower Upper

43 100

45 1.0 7.9 11.9#

61 0.5 7.4 11.2#

70 1.6 5.1 7.7#

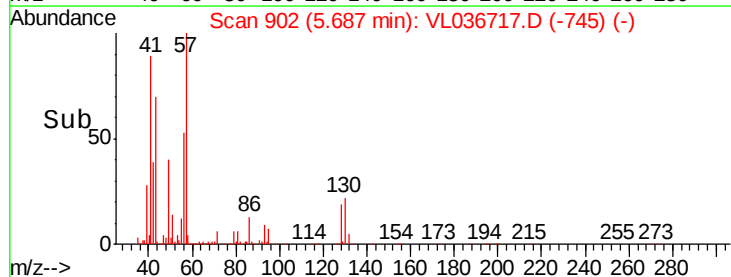
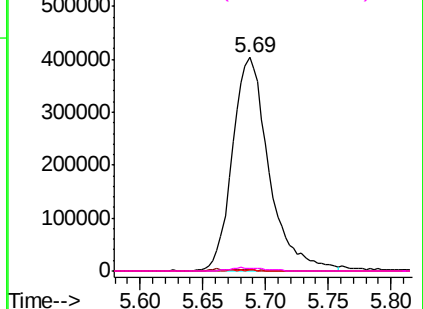


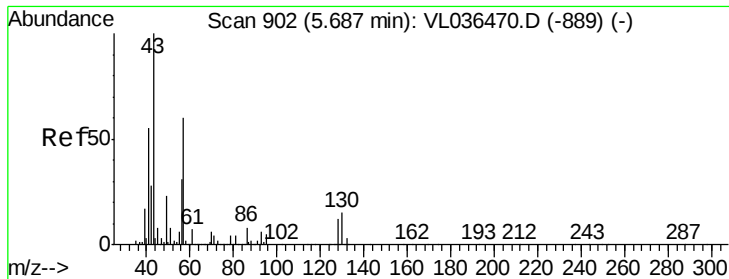
Abundance Ion 43.10 (42.80 to 43.80): VL0

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

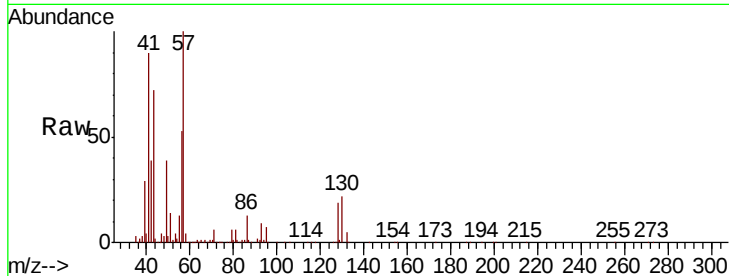




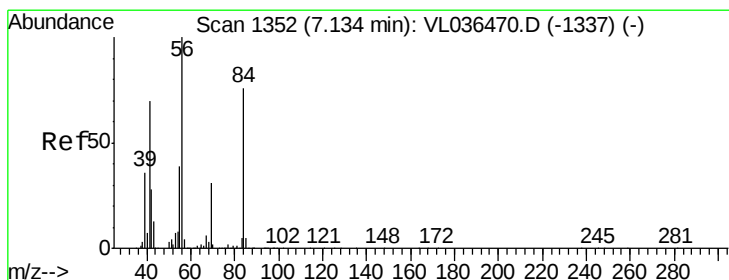
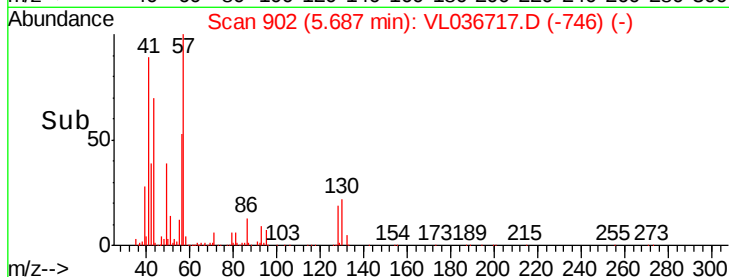
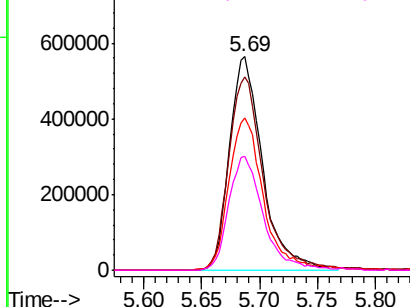
#26
Hexane
Concen: 7.949 ppbv
RT: 5.69 min Scan# 902
Delta R.T. -0.00 min
Lab File: VL036717.D
Acq: 7 Apr 2021 3:43

Instrument :
MSVOA_L
ClientSampleId :
FS-OA-04DUP

Tot Ion: 57 Resp: 1112456
Ion Ratio Lower Upper
57 100
41 96.4 77.2 115.8
43 74.3 173.8 260.6#
56 56.0 43.8 65.6

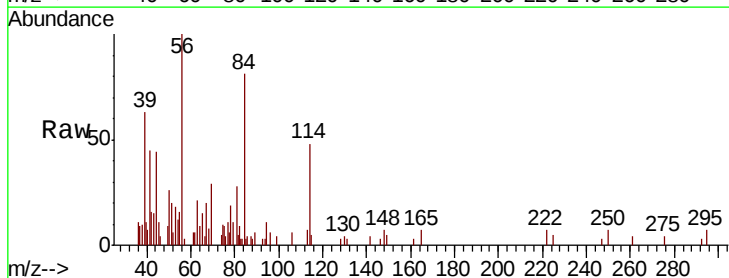


Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

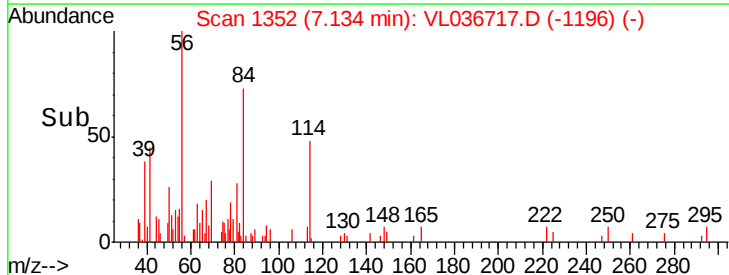
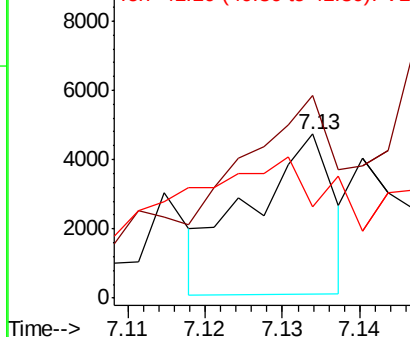


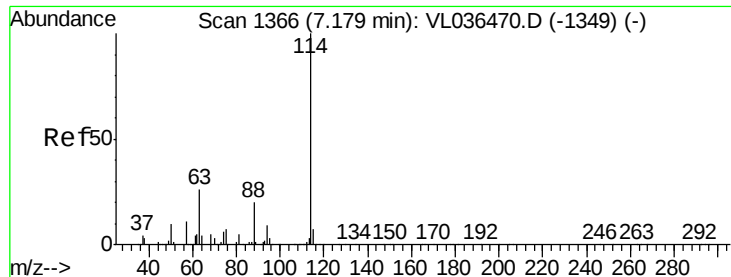
#30
Cyclohexane
Concen: 0.030 ppbv
RT: 7.13 min Scan# 1352
Delta R.T. -0.00 min
Lab File: VL036717.D
Acq: 7 Apr 2021 3:43

Tgt Ion: 84 Resp: 3461
Ion Ratio Lower Upper
84 100
56 0.0 114.6 171.8#
41 255.6 75.3 112.9#



Abundance Ion 84.20 (83.90 to 84.90): VL0
Ion 56.10 (55.80 to 56.80): VL0
Ion 41.10 (40.80 to 41.80): VL0

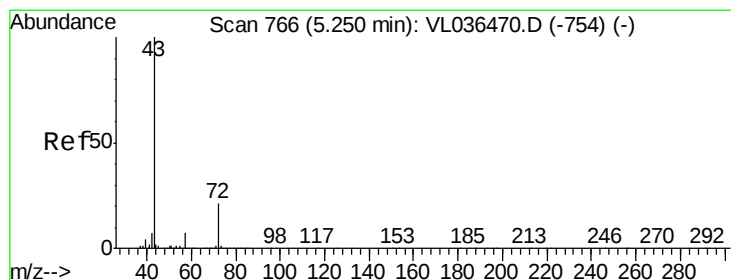
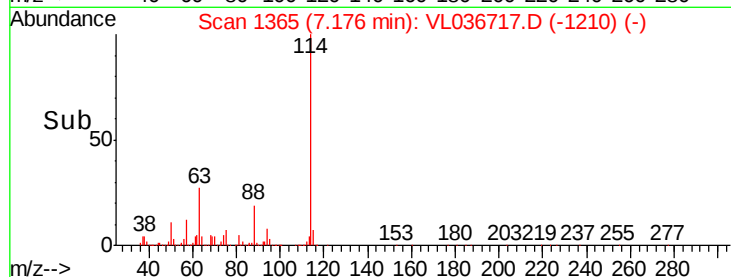
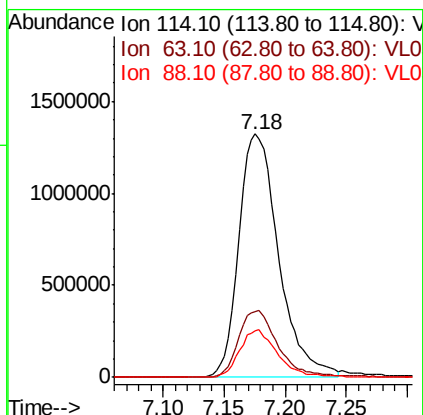
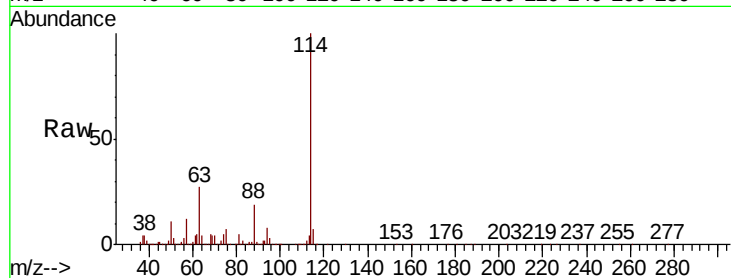




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.18 min Scan# 1365
 Delta R.T. -0.00 min
 Lab File: VL036717.D
 Acq: 7 Apr 2021 3:43

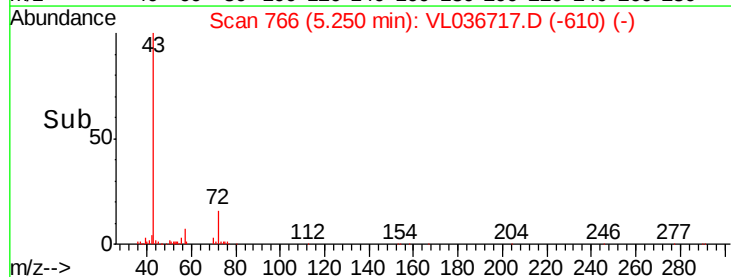
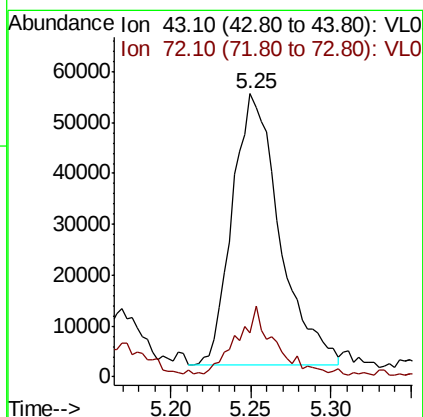
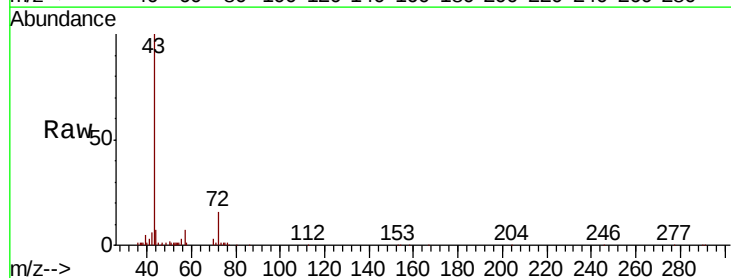
Instrument :
 MSVOA_L
 ClientSampleId :
 FS-OA-04DUP

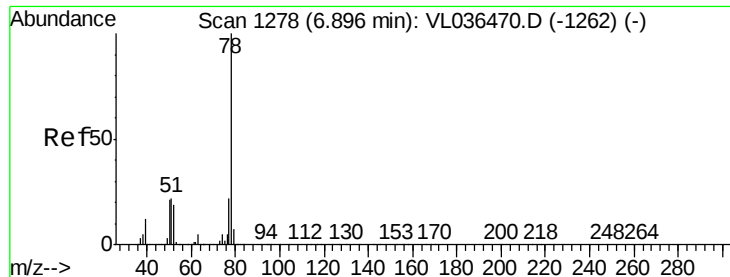
Tot Ion:114 Resp: 2985277
 Ion Ratio Lower Upper
 114 100
 63 27.5 22.4 33.6
 88 18.9 15.4 23.0



#34
 2-Butanone
 Concen: 0.743 ppbv
 RT: 5.25 min Scan# 766
 Delta R.T. -0.00 min
 Lab File: VL036717.D
 Acq: 7 Apr 2021 3:43

Tgt Ion: 43 Resp: 108302
 Ion Ratio Lower Upper
 43 100
 72 22.1 17.0 25.6





#36

Benzene

Concen: 0.110 ppbv

RT: 6.90 min Scan# 1280

Delta R.T. 0.01 min

Lab File: VL036717.D

Acq: 7 Apr 2021 3:43

Instrument :

MSVOA_L

ClientSampleId :

FS-OA-04DUP

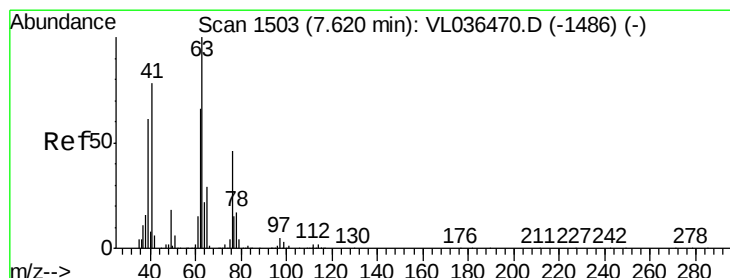
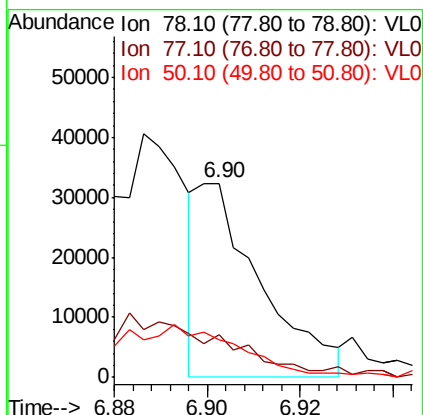
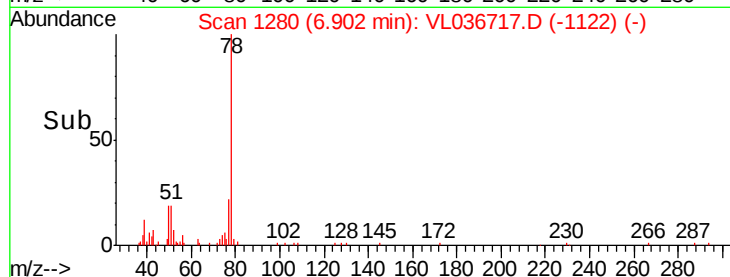
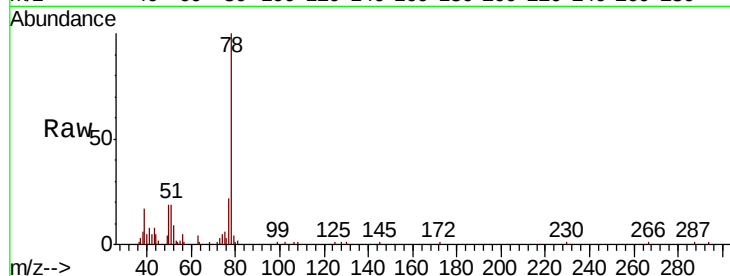
Tot Ion: 78 Resp: 30237

Ion Ratio Lower Upper

78 100

77 19.6 18.0 27.0

50 20.4 16.5 24.7



#39

1,2-Dichloropropane

Concen: 7.223 ppbv

RT: 7.18 min Scan# 1366

Delta R.T. -0.44 min

Lab File: VL036717.D

Acq: 7 Apr 2021 3:43

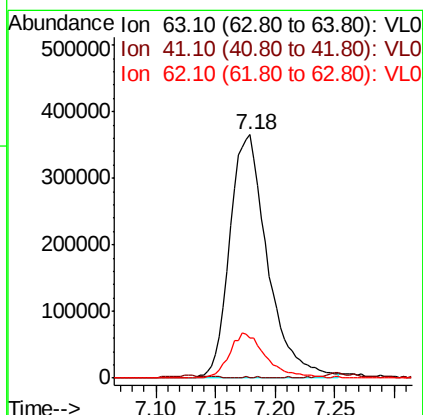
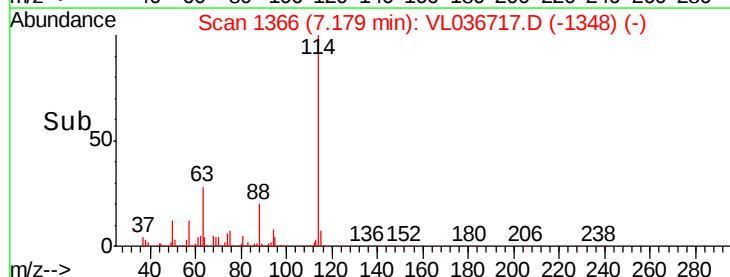
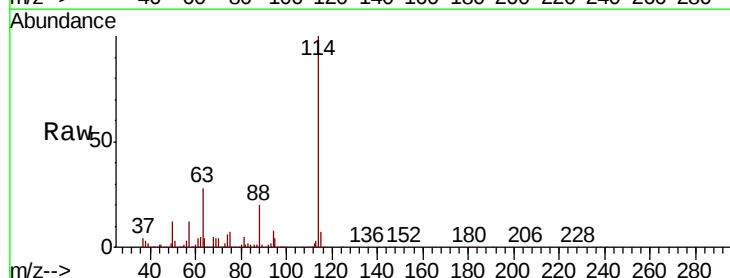
Tgt Ion: 63 Resp: 806676

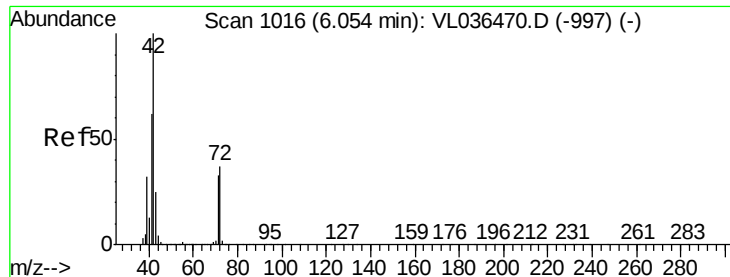
Ion Ratio Lower Upper

63 100

41 0.0 62.4 93.6#

62 16.5 52.8 79.2#





#41

Tetrahydrofuran

Concen: 0.193 ppbv

RT: 5.73 min Scan# 914

Delta R.T. -0.33 min

Lab File: VL036717.D

Acq: 7 Apr 2021 3:43

Instrument :

MSVOA_L

ClientSampleId :

FS-OA-04DUP

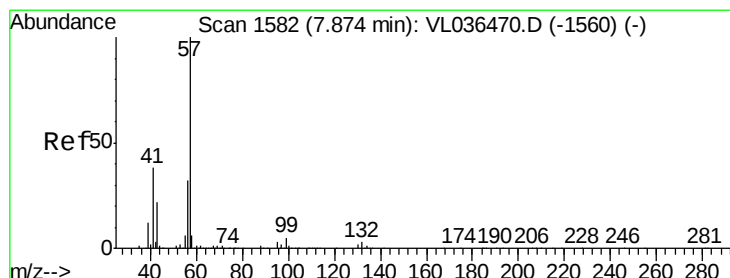
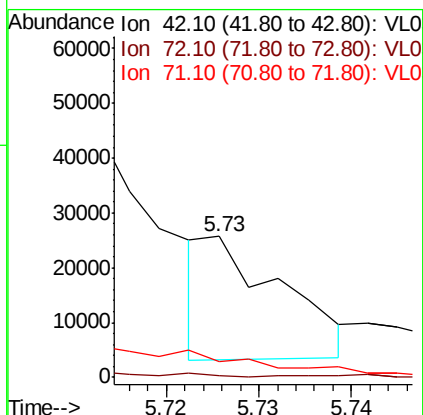
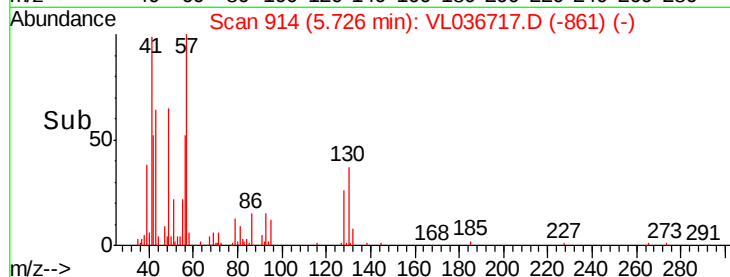
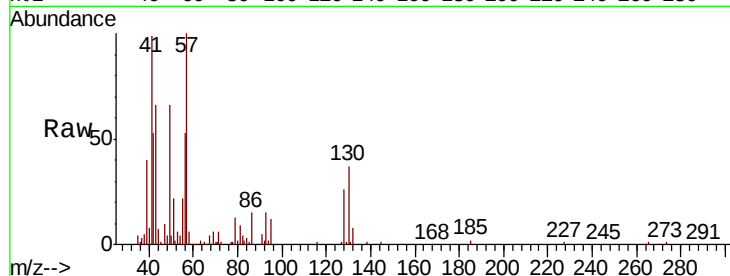
Tot Ion: 42 Resp: 12949

Ion Ratio Lower Upper

42 100

72 1.9 27.6 41.4#

71 0.0 27.0 40.4#



#44

2,2,4-Trimethylpentane

Concen: 0.097 ppbv

RT: 7.88 min Scan# 1583

Delta R.T. 0.00 min

Lab File: VL036717.D

Acq: 7 Apr 2021 3:43

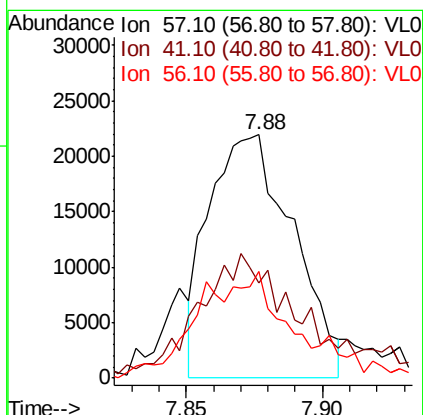
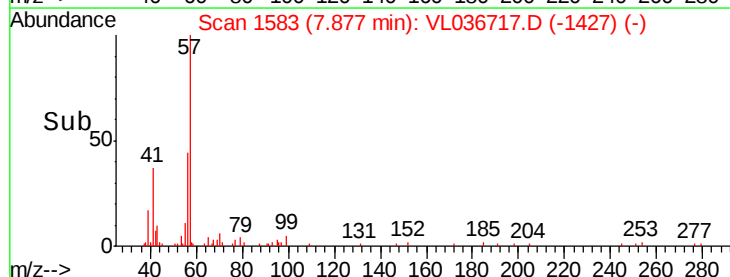
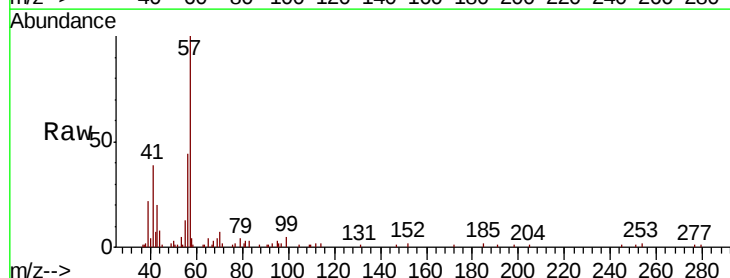
Tgt Ion: 57 Resp: 47088

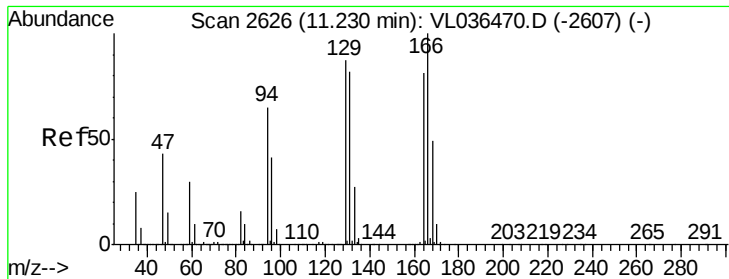
Ion Ratio Lower Upper

57 100

41 65.6 28.8 43.2#

56 51.8 26.1 39.1#





#52

Tetrachloroethene

Concen: 0.044 ppbv

RT: 11.22 min Scan# 2624

Delta R.T. -0.01 min

Lab File: VL036717.D

Acq: 7 Apr 2021 3:43

Instrument :

MSVOA_L

ClientSampleId :

FS-OA-04DUP

Tot Ion:164 Resp: 4453

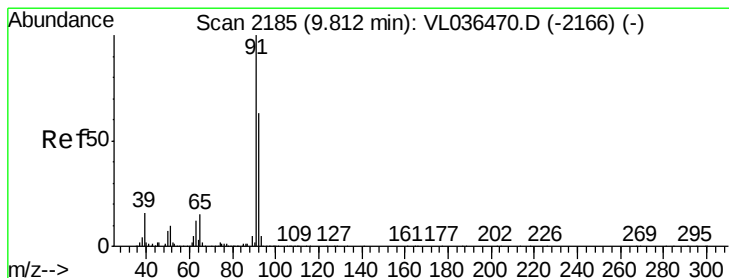
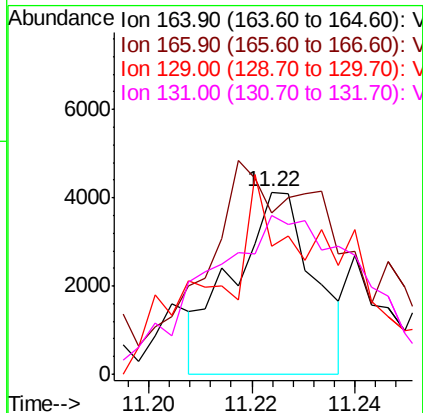
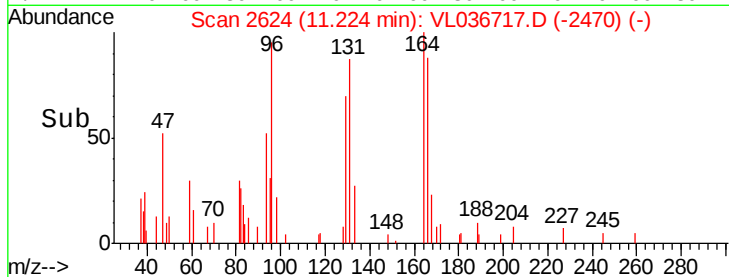
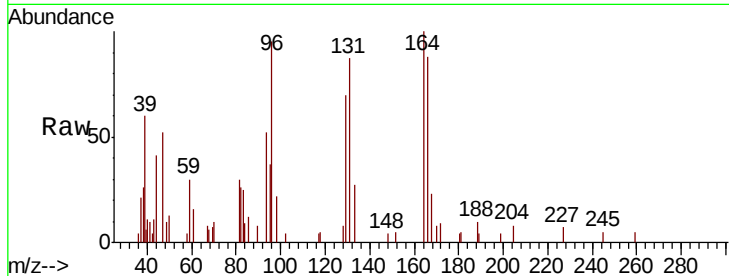
Ion Ratio Lower Upper

164 100

166 42.1 98.3 147.5#

129 29.2 85.8 128.8#

131 55.4 80.9 121.3#



#53

Toluene

Concen: 1.543 ppbv

RT: 9.81 min Scan# 2184

Delta R.T. -0.00 min

Lab File: VL036717.D

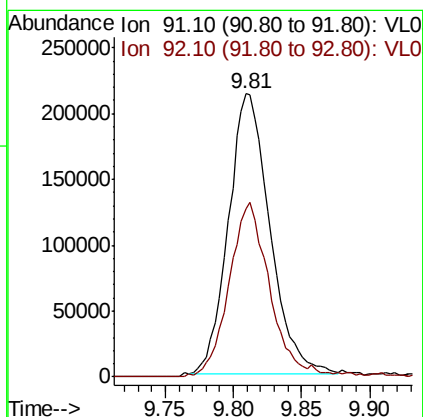
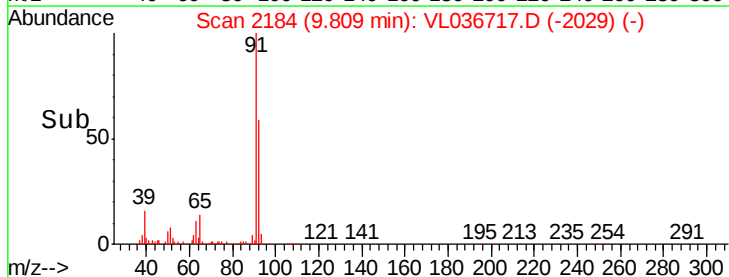
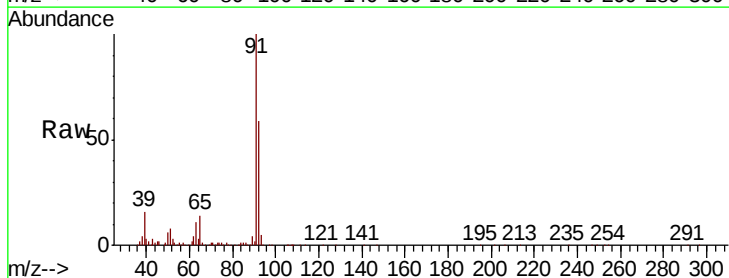
Acq: 7 Apr 2021 3:43

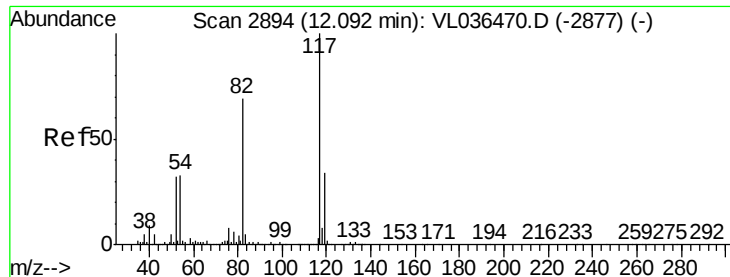
Tgt Ion: 91 Resp: 452414

Ion Ratio Lower Upper

91 100

92 62.0 48.8 73.2





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.09 min Scan# 2893

Delta R.T. -0.00 min

Lab File: VL036717.D

Acq: 7 Apr 2021 3:43

Instrument :

MSVOA_L

ClientSampleId :

FS-OA-04DUP

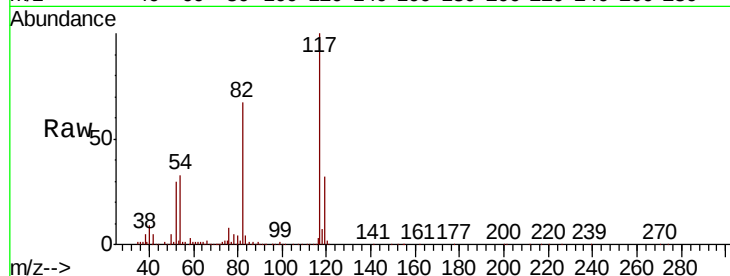
Tot Ion:117 Resp: 2667283

Ion Ratio Lower Upper

117 100

82 68.5 57.4 86.0

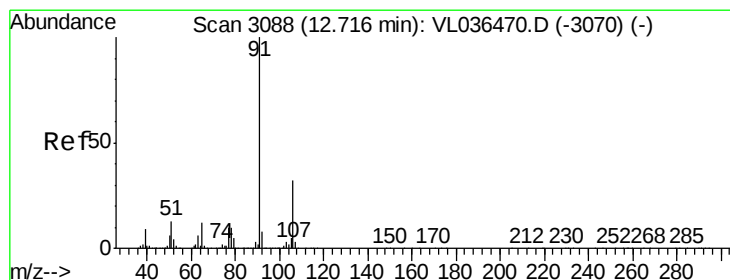
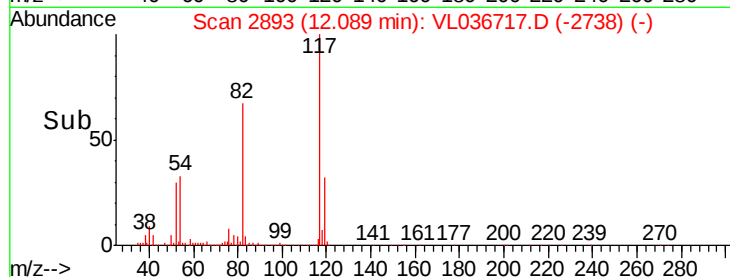
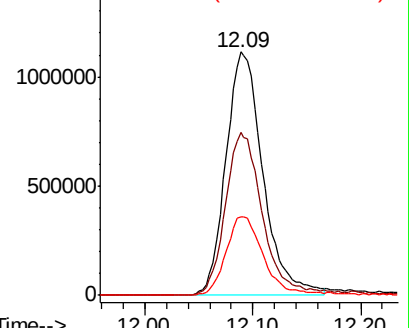
119 32.9 47.4 71.0#



Abundance Ion 117.10 (116.80 to 117.80): V

1500000 Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V



#58

Ethyl Benzene

Concen: 0.035 ppbv

RT: 12.72 min Scan# 3088

Delta R.T. -0.00 min

Lab File: VL036717.D

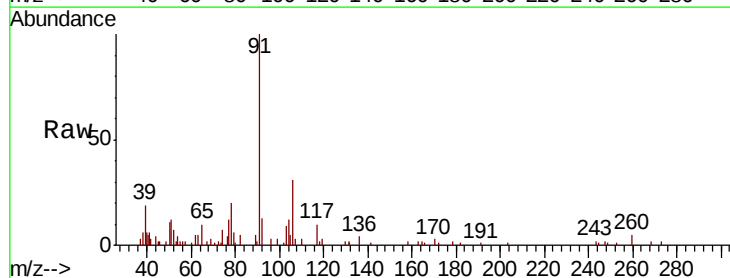
Acq: 7 Apr 2021 3:43

Tgt Ion: 91 Resp: 13523

Ion Ratio Lower Upper

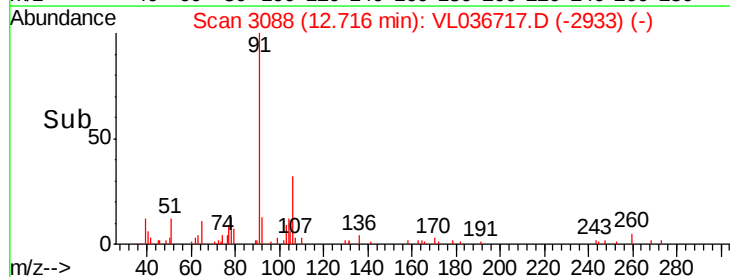
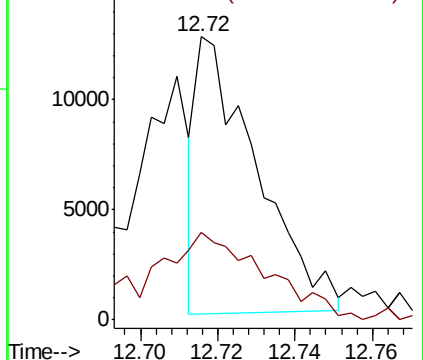
91 100

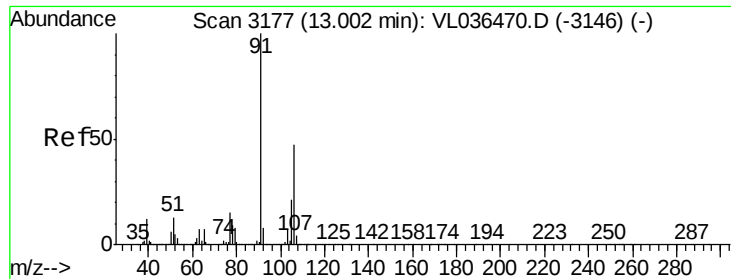
106 31.8 25.3 37.9



Abundance Ion 91.10 (90.80 to 91.80): VL0

15000 Ion 106.10 (105.80 to 106.80): V





#59

m/p-Xylene

Concen: 0.045 ppbv

RT: 13.00 min Scan# 3177

Delta R.T. -0.00 min

Lab File: VL036717.D

Acq: 7 Apr 2021 3:43

Instrument :

MSVOA_L

ClientSampleId :

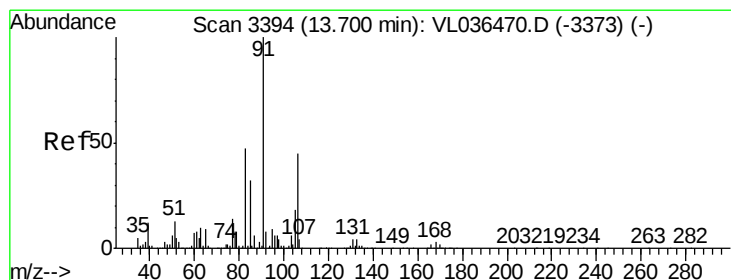
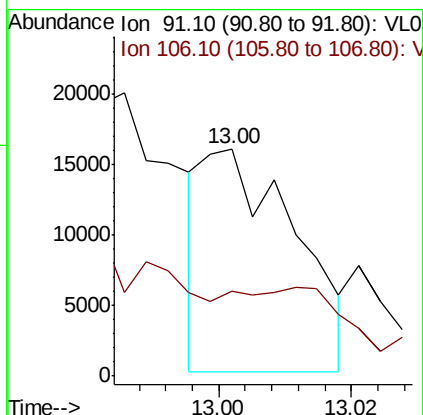
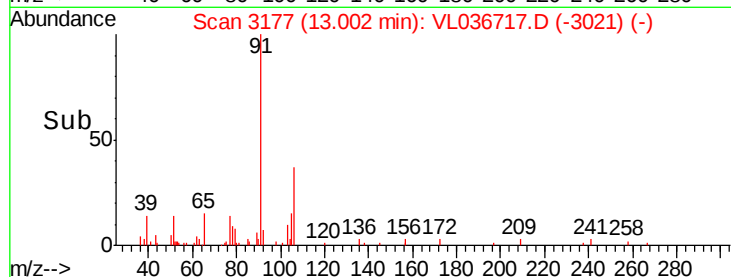
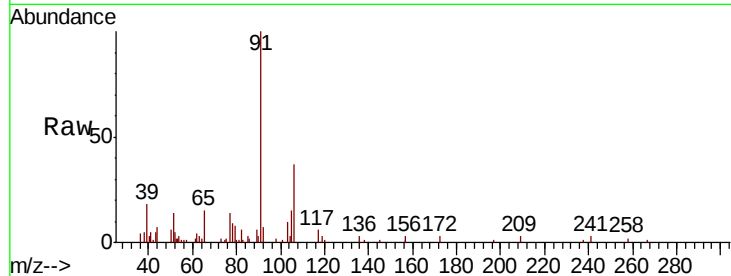
FS-OA-04DUP

Tot Ion: 91 Resp: 15314

Ion Ratio Lower Upper

91 100

106 0.0 35.3 52.9#



#60

o-Xylene

Concen: 0.066 ppbv

RT: 13.70 min Scan# 3394

Delta R.T. -0.00 min

Lab File: VL036717.D

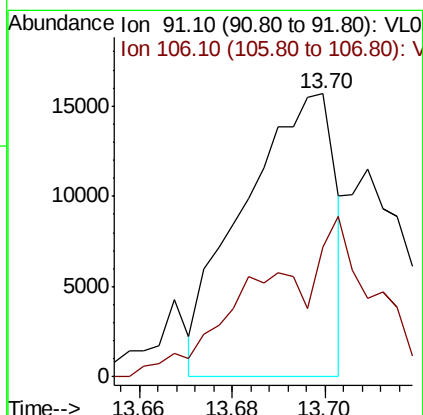
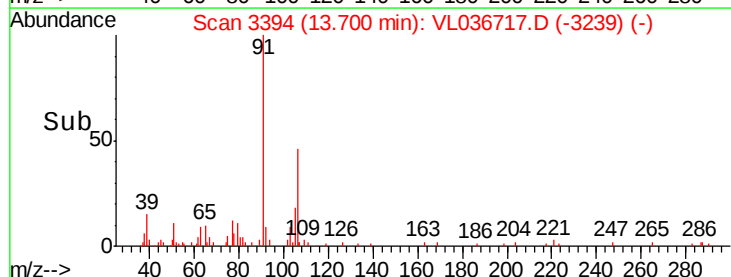
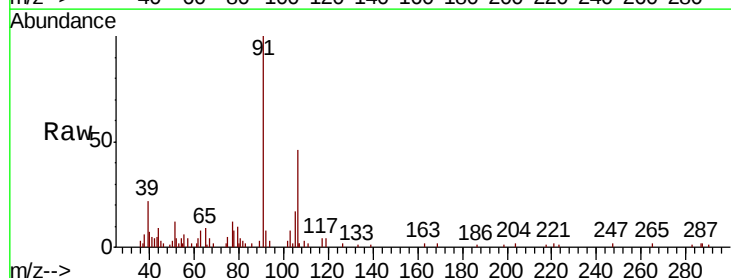
Acq: 7 Apr 2021 3:43

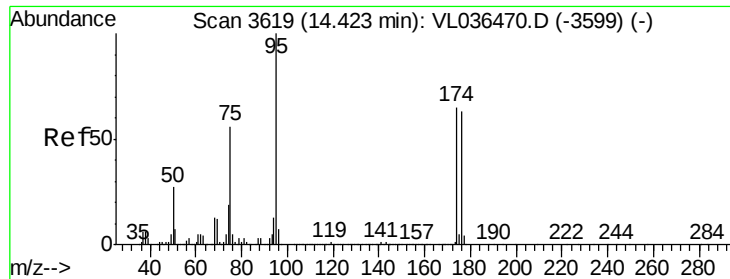
Tgt Ion: 91 Resp: 21508

Ion Ratio Lower Upper

91 100

106 77.0 22.3 66.9#





#68

1-Bromo-4-Fluorobenzene

Concen: 9.538 ppbv

RT: 14.42 min Scan# 3618

Delta R.T. -0.00 min

Lab File: VL036717.D

Acq: 7 Apr 2021 3:43

Instrument :

MSVOA_L

ClientSampled :

FS-OA-04DUP

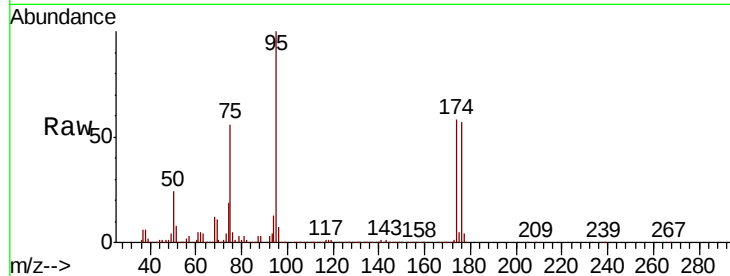
Tot Ion: 95 Resp: 2027529

Ion Ratio Lower Upper

95 100

174 69.0 51.0 76.6

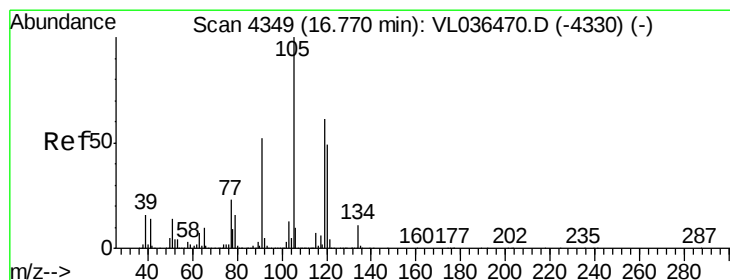
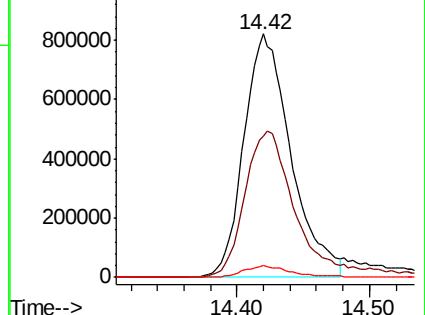
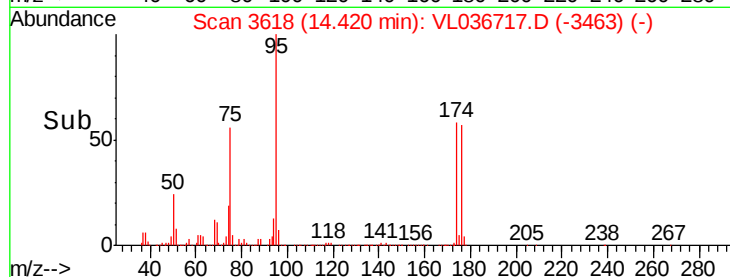
175 4.9 3.9 5.9



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



#74

1,2,4-Trimethylbenzene

Concen: 0.034 ppbv

RT: 16.76 min Scan# 4347

Delta R.T. -0.01 min

Lab File: VL036717.D

Acq: 7 Apr 2021 3:43

Tgt Ion:105 Resp: 12316

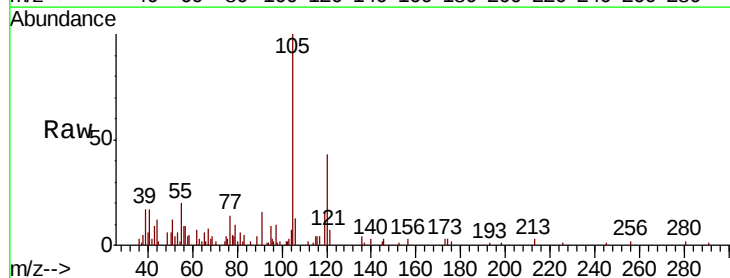
Ion Ratio Lower Upper

105 100

120 45.3 39.2 58.8

91 14.4 42.6 64.0#

77 13.2 18.6 28.0#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

