

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL072920\
 Data File : VL035255.D
 Acq On : 29 Jul 2020 20:49
 Operator : SY/AP
 Sample : L3463-02
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Jul 30 02:52:30 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL072920AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Jul 29 07:14:29 2020
 QLast Update : Wed Jul 29 07:14:29 2020
 Response via : Initial Calibration

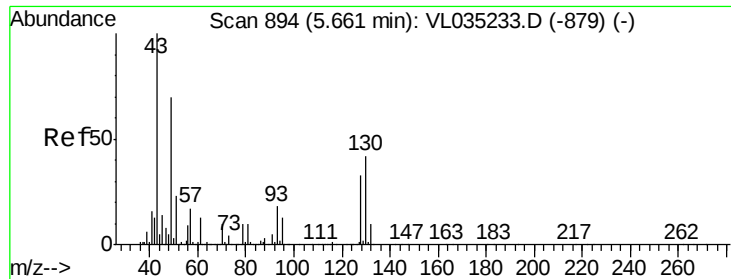
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1087123	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.19	114	2585183	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.12	117	2499366	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.46	95	2069094	10.36	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	103.60%

Target Compounds					Ovalue
4) Chloromethane	3.10	50	86340	1.275	ppbv 97
7) Chloroethane	3.52	64	783	0.031	ppbv # 43
9) Propene	2.98	41	51060	1.217	ppbv 84
11) Trichlorofluoromethane	3.92	101	51422	0.294	ppbv 98
12) 1,1,2-Trichlorotrifluoroet	4.46	101	4315	0.035	ppbv # 14
13) Ethanol	3.58	45	4455541	260.975	ppbv 97
15) Acetone	3.82	43	2157603	14.879	ppbv 100
16) 1,3-Butadiene	3.29	39	1855	0.033	ppbv # 1
17) tert-Butyl alcohol	4.29	59	63818	0.456	ppbv # 91
19) Isopropyl Alcohol	3.95	45	1345419	14.068	ppbv 99
20) Methylene Chloride	4.32	84	465072	7.046	ppbv 95
21) Allyl Chloride	4.32	41	17225	0.209	ppbv # 43
23) Vinyl Acetate	5.05	43	181428	1.245	ppbv # 86
25) Ethyl Acetate	5.68	43	218915	0.967	ppbv # 91
26) Hexane	5.68	57	190790	1.868	ppbv # 59
29) Chloroform	5.74	83	56437	0.329	ppbv 85
34) 2-Butanone	5.23	43	124441	0.946	ppbv 97
35) Carbon Tetrachloride	7.03	117	11707	0.068	ppbv # 82
36) Benzene	6.90	78	33504	0.186	ppbv # 85
39) 1,2-Dichloropropane	7.19	63	696218	9.712	ppbv # 22
44) 2,2,4-Trimethylpentane	7.88	57	18188	0.057	ppbv # 1
50) 4-Methyl-2-Pentanone	8.76	43	7518	0.039	ppbv # 37
52) Tetrachloroethene	11.25	164	891681	13.008	ppbv 95
53) Toluene	9.83	91	166826	0.874	ppbv 100
60) o-Xylene	13.73	91	8667	0.035	ppbv # 33
74) 1,2,4-Trimethylbenzene	16.81	105	23481	0.075	ppbv # 74
76) 1,4-Dichlorobenzene	17.19	146	13344	0.073	ppbv # 28
80) Naphthalene,2-methyl-	25.03	142	5706	0.071	ppbv # 89

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 min Scan# 894

Delta R.T. 0.00 min

Lab File: VL035255.D

Acq: 29 Jul 2020 20:49

Instrument :
MSVOA_L
ClientSampled :

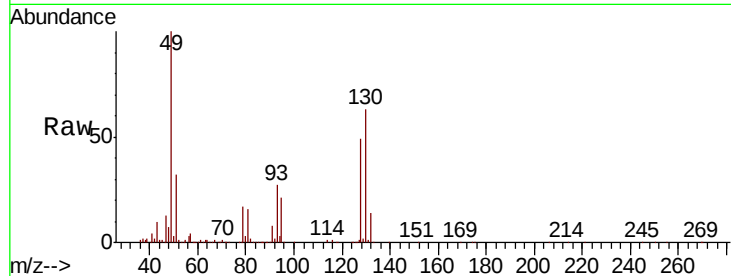
Tot Ion: 49 Resp: 1087123

Ion Ratio Lower Upper

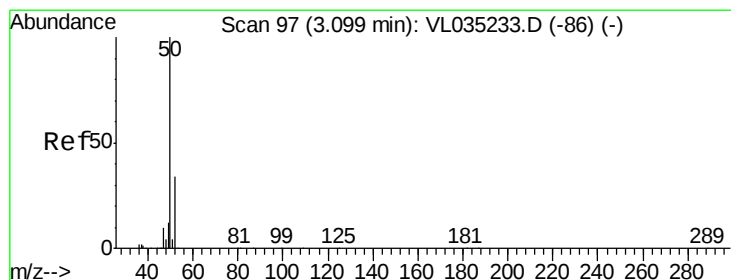
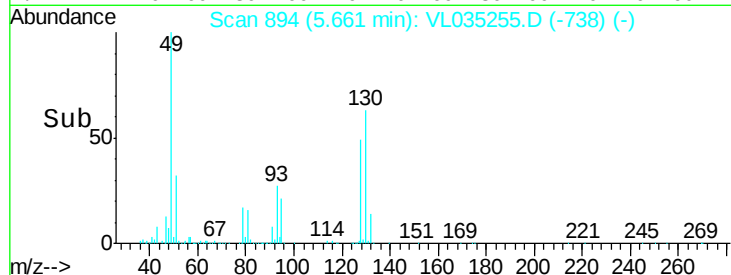
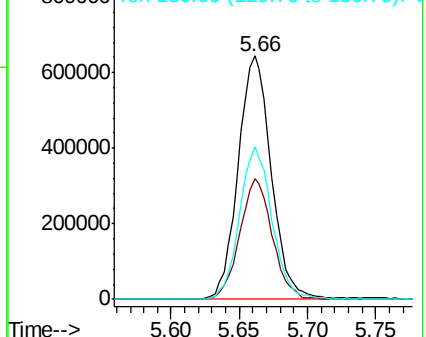
49 100

128 48.9 24.0 72.0

130 62.0 30.7 92.1



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



#4

Chloromethane

Concen: 1.275 ppbv

RT: 3.10 min Scan# 98

Delta R.T. 0.00 min

Lab File: VL035255.D

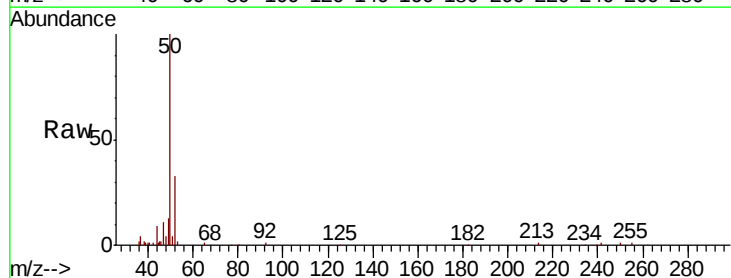
Acq: 29 Jul 2020 20:49

Tgt Ion: 50 Resp: 86340

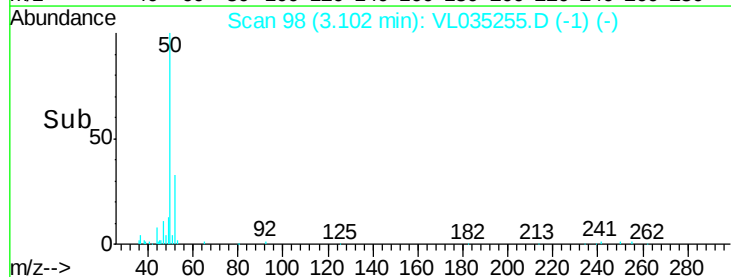
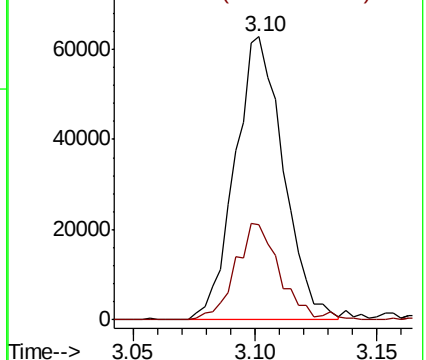
Ion Ratio Lower Upper

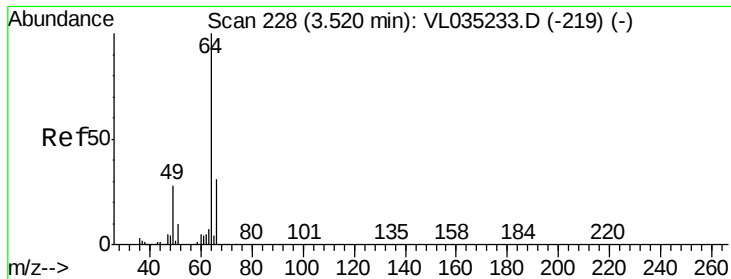
50 100

52 32.5 27.1 40.7



Abundance Ion 50.10 (49.80 to 50.80): VL0
Ion 52.10 (51.80 to 52.80): VL0





#7

Chloroethane

Concen: 0.031 ppbv

RT: 3.52 min Scan# 227

Delta R.T. -0.00 min

Lab File: VL035255.D

Acq: 29 Jul 2020 20:49

Instrument :

MSVOA_L

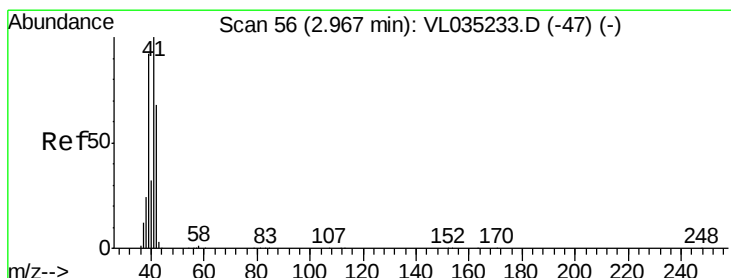
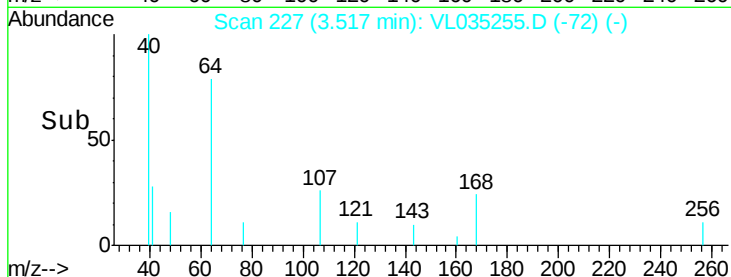
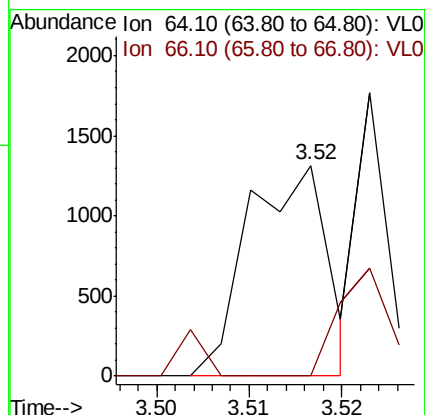
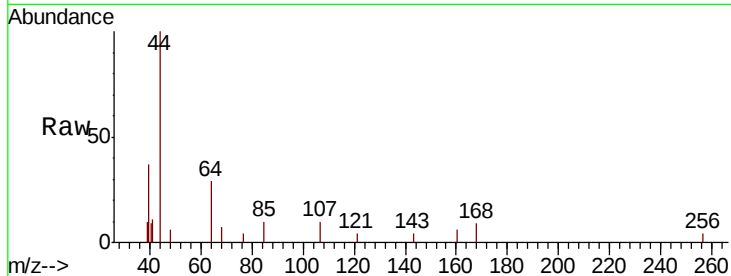
ClientSampleId :

Tot Ion: 64 Resp: 783

Ion Ratio Lower Upper

64 100

66 0.0 25.6 38.4#



#9

Propene

Concen: 1.217 ppbv

RT: 2.98 min Scan# 60

Delta R.T. 0.01 min

Lab File: VL035255.D

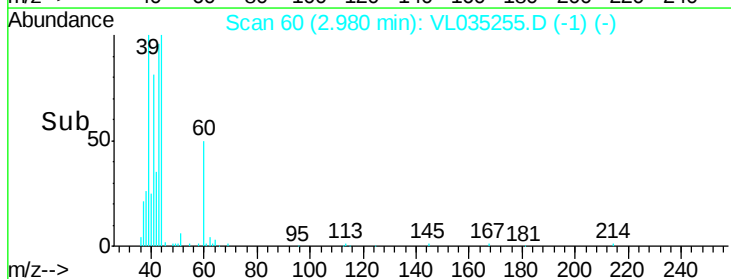
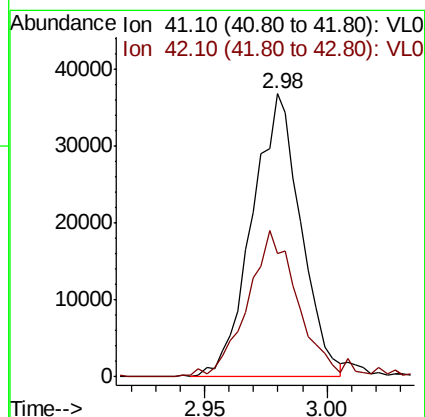
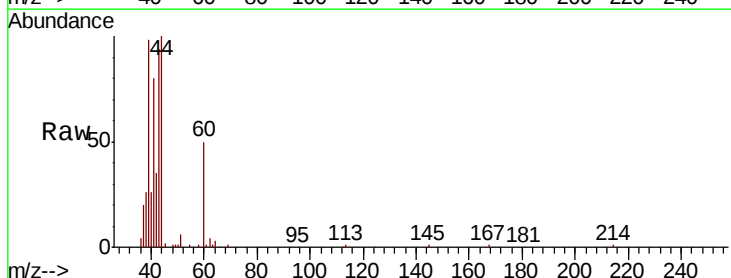
Acq: 29 Jul 2020 20:49

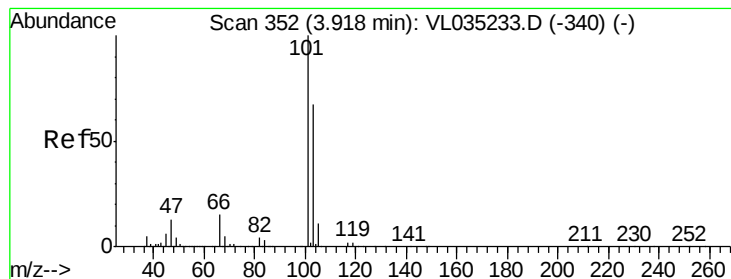
Tgt Ion: 41 Resp: 51060

Ion Ratio Lower Upper

41 100

42 56.1 55.0 82.6





#11

Trichlorofluoromethane

Concen: 0.294 ppbv

RT: 3.92 min Scan# 354

Delta R.T. 0.01 min

Lab File: VL035255.D

Acq: 29 Jul 2020 20:49

Instrument :

MSVOA_L

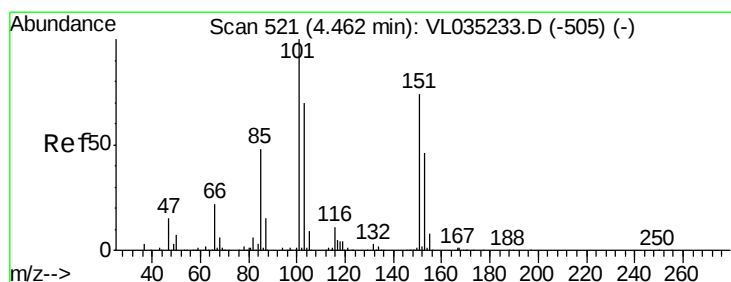
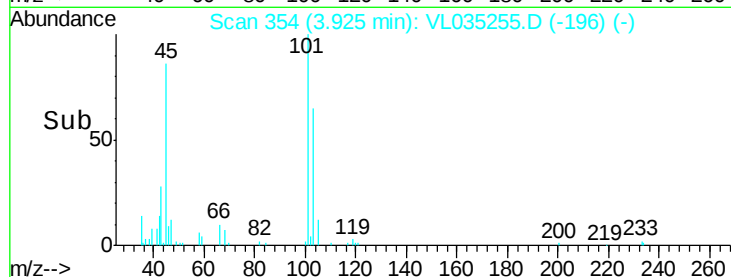
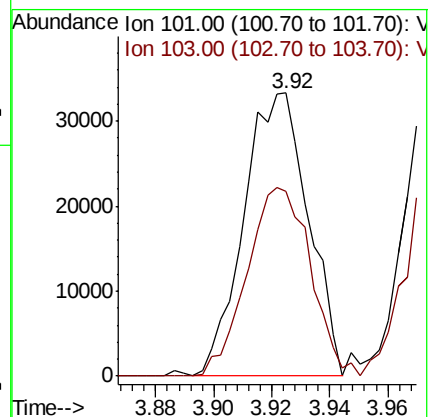
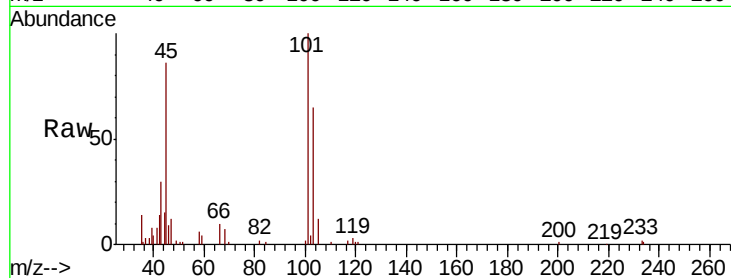
ClientSampleId :

Tot Ion:101 Resp: 51422

Ion Ratio Lower Upper

101 100

103 65.1 53.4 80.0



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.035 ppbv

RT: 4.46 min Scan# 520

Delta R.T. -0.00 min

Lab File: VL035255.D

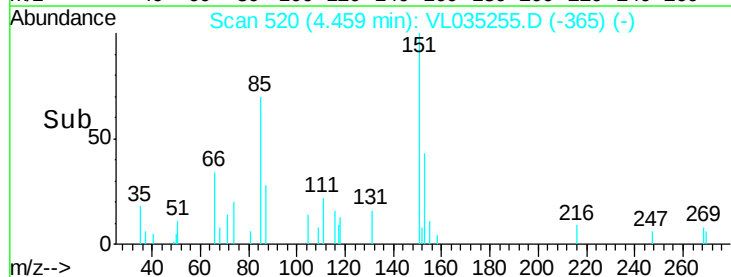
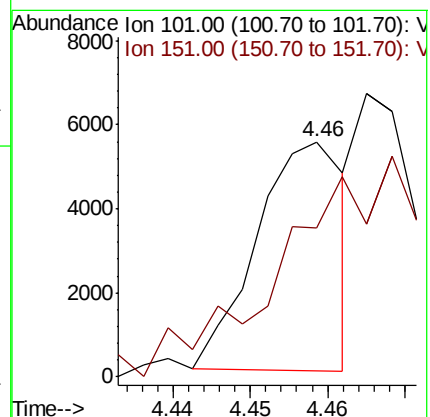
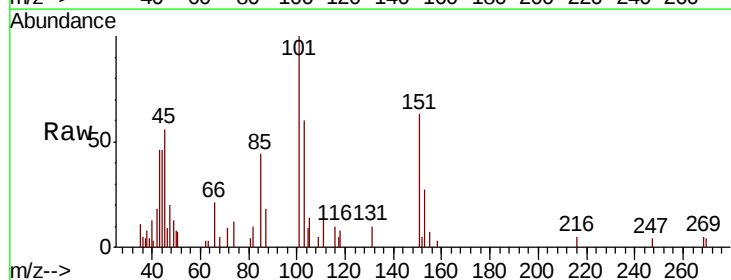
Acq: 29 Jul 2020 20:49

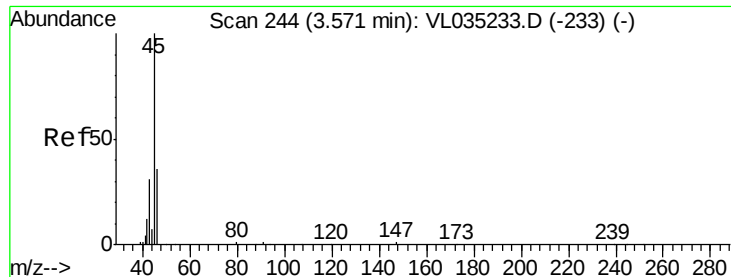
Tgt Ion:101 Resp: 4315

Ion Ratio Lower Upper

101 100

151 0.0 56.6 85.0#

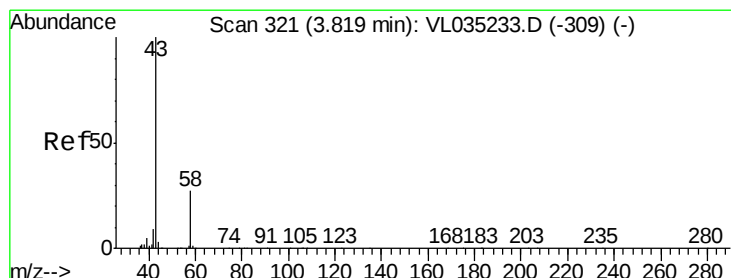
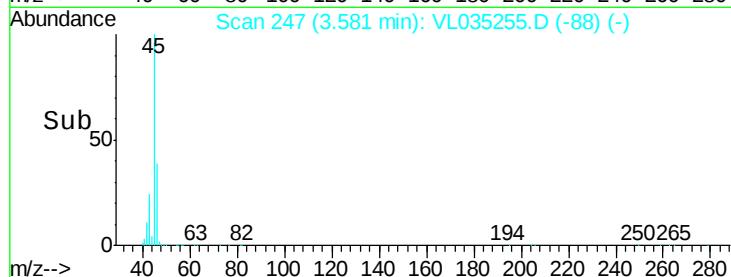
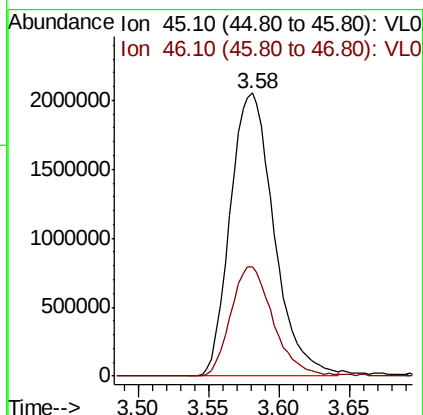
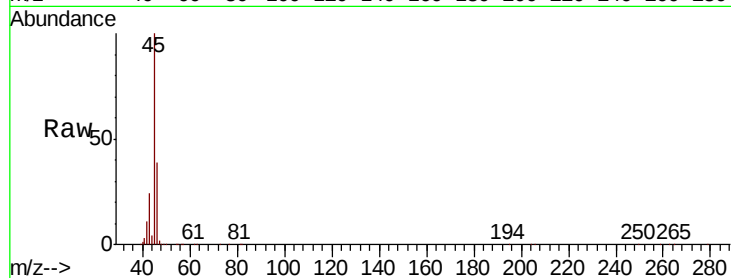




#13
Ethanol
Concen: 260.975 ppbv
RT: 3.58 min Scan# 247
Delta R.T. 0.01 min
Lab File: VL035255.D
Acq: 29 Jul 2020 20:49

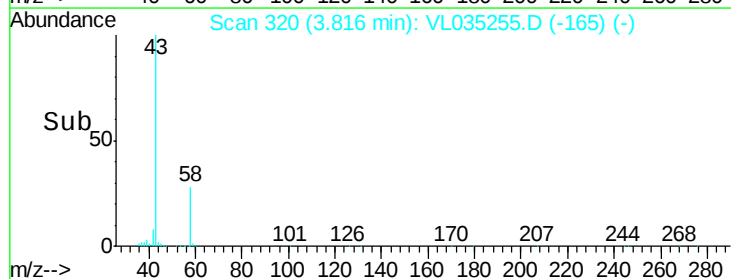
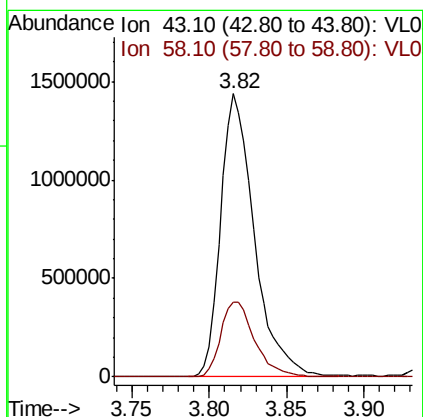
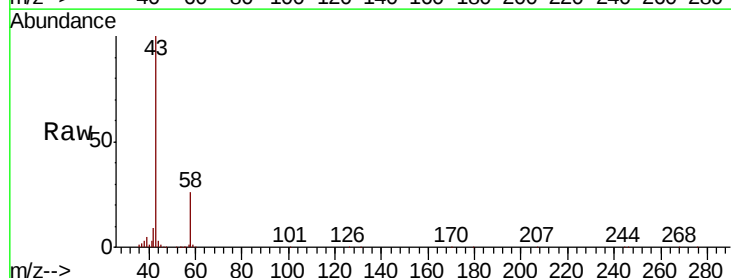
Instrument :
MSVOA_L
ClientSampleId :

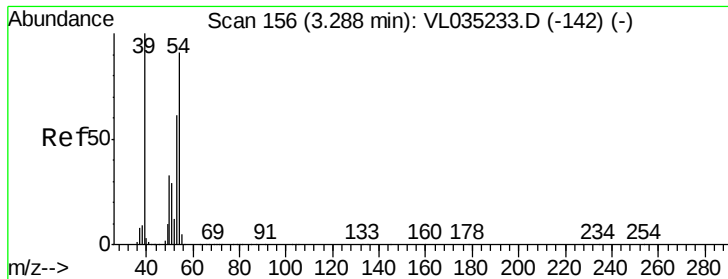
Tot Ion: 45 Resp: 4455541
Ion Ratio Lower Upper
45 100
46 38.1 15.8 63.4



#15
Acetone
Concen: 14.879 ppbv
RT: 3.82 min Scan# 320
Delta R.T. -0.00 min
Lab File: VL035255.D
Acq: 29 Jul 2020 20:49

Tgt Ion: 43 Resp: 2157603
Ion Ratio Lower Upper
43 100
58 27.0 21.8 32.6

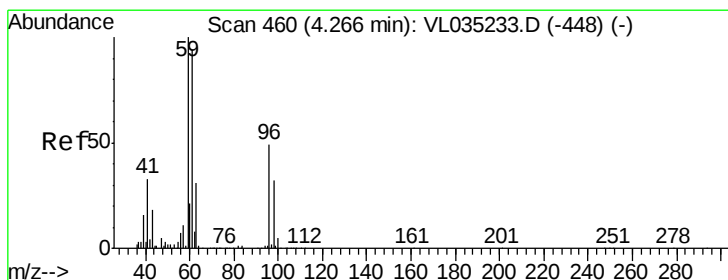
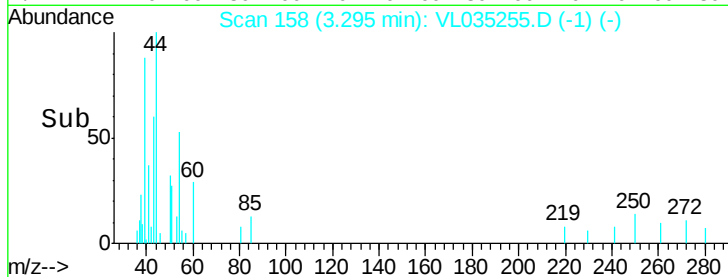
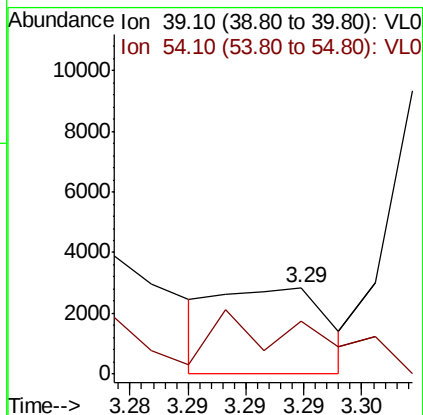
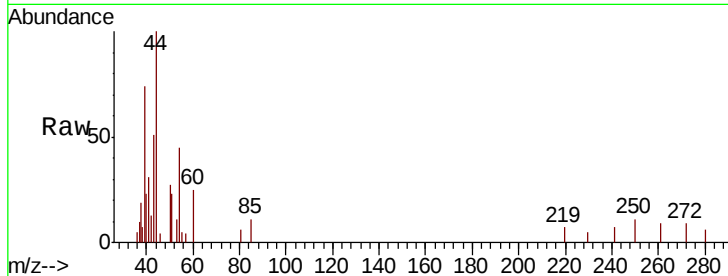




#16
1,3-Butadiene
Concen: 0.033 ppbv
RT: 3.29 min Scan# 158
Delta R.T. 0.01 min
Lab File: VL035255.D
Acq: 29 Jul 2020 20:49

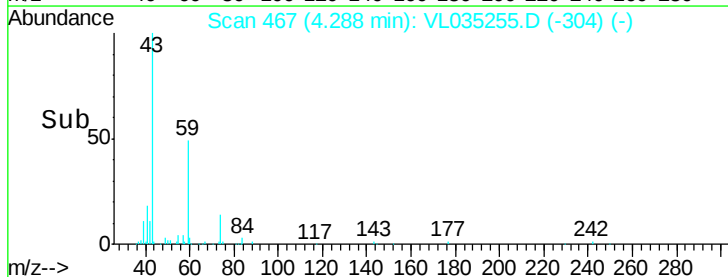
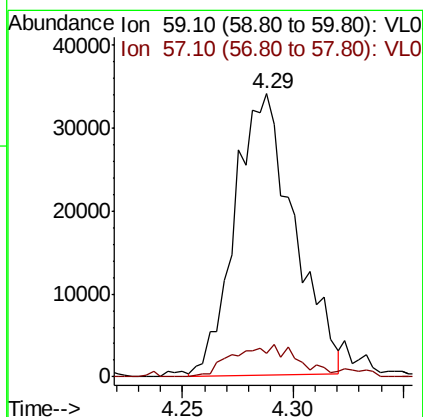
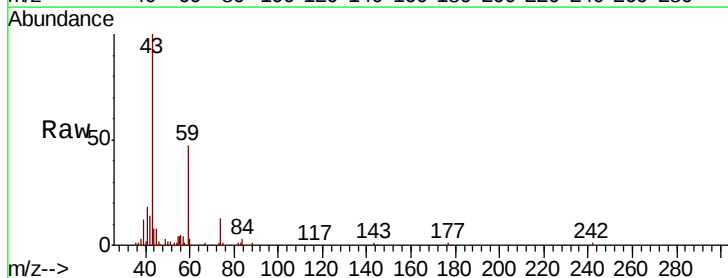
Instrument :
MSVOA_L
ClientSampleId :

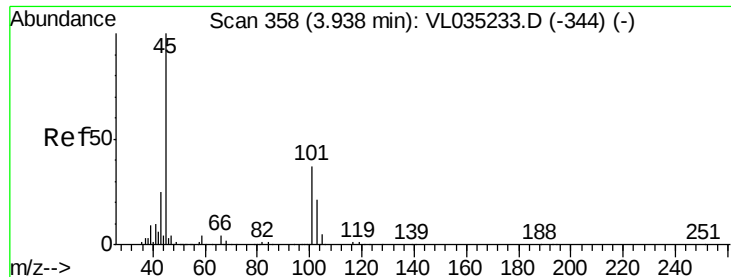
Tot Ion: 39 Resp: 1855
Ion Ratio Lower Upper
39 100
54 216.9 68.2 102.2#



#17
tert-Butyl alcohol
Concen: 0.456 ppbv
RT: 4.29 min Scan# 467
Delta R.T. 0.02 min
Lab File: VL035255.D
Acq: 29 Jul 2020 20:49

Tgt Ion: 59 Resp: 63818
Ion Ratio Lower Upper
59 100
57 14.2 8.6 12.8#



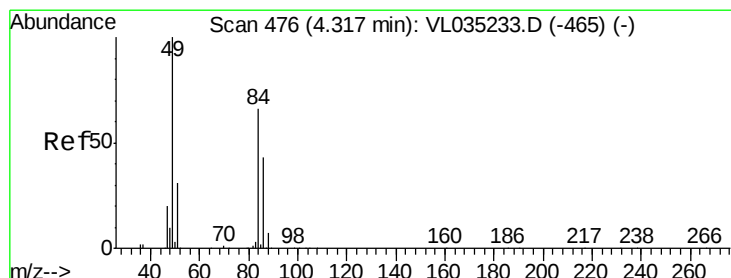
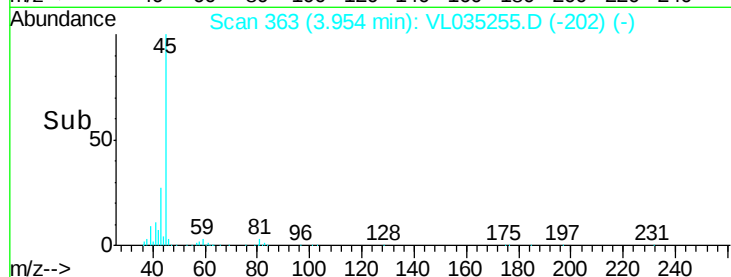
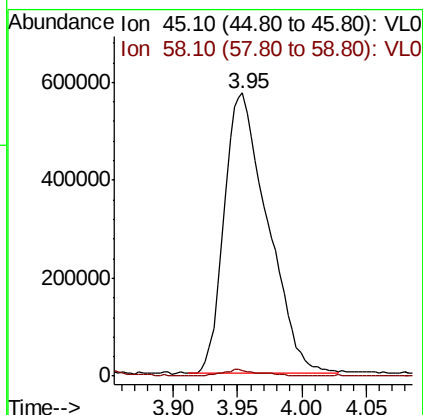
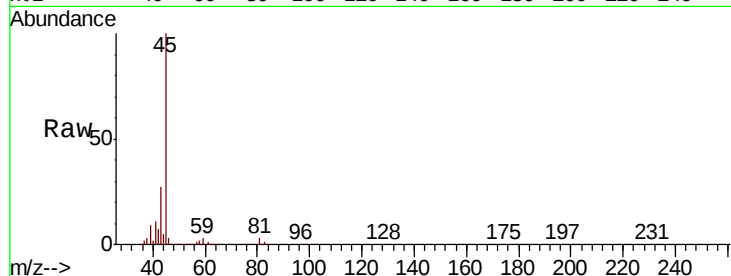


#19

Isopropyl Alcohol
 Concen: 14.068 ppbv
 RT: 3.95 min Scan# 363
 Delta R.T. 0.02 min
 Lab File: VL035255.D
 Acq: 29 Jul 2020 20:49

Instrument :
 MSVOA_L
 ClientSampleId :

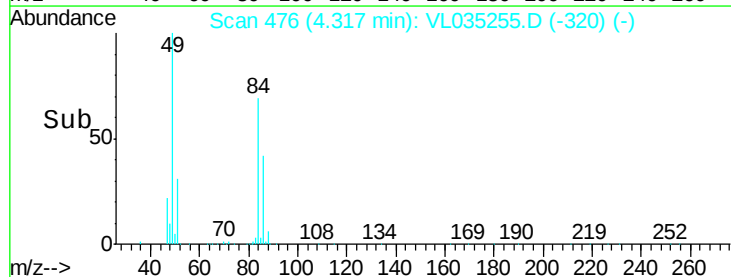
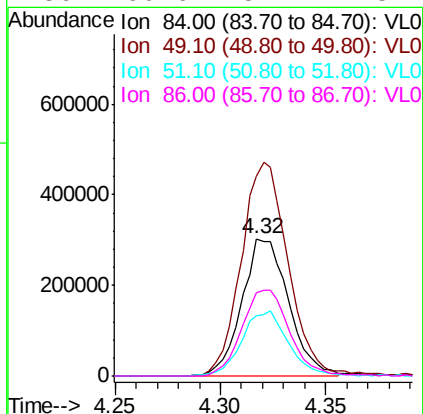
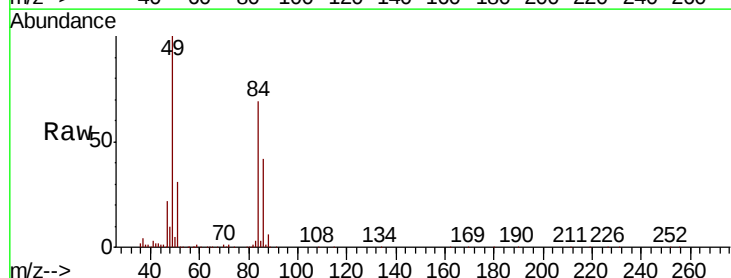
Tot Ion: 45 Resp: 1345419
 Ion Ratio Lower Upper
 45 100
 58 2.1 1.9 2.9

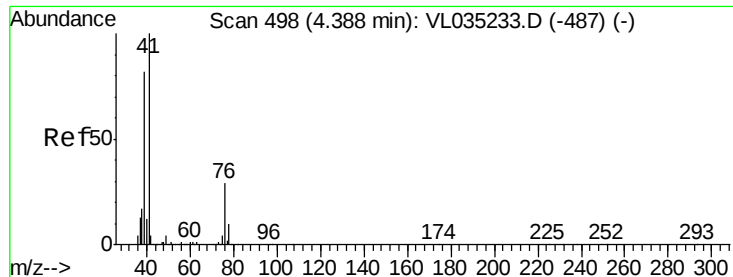


#20

Methylene Chloride
 Concen: 7.046 ppbv
 RT: 4.32 min Scan# 476
 Delta R.T. 0.00 min
 Lab File: VL035255.D
 Acq: 29 Jul 2020 20:49

Tgt Ion: 84 Resp: 465072
 Ion Ratio Lower Upper
 84 100
 49 145.1 121.0 181.4
 51 43.9 37.7 56.5
 86 60.6 52.2 78.4





#21

Allvl Chloride

Concen: 0.209 ppbv

RT: 4.32 min Scan# 477

Delta R.T. -0.07 min

Lab File: VL035255.D

Acq: 29 Jul 2020 20:49

Instrument :

MSVOA_L

ClientSampleId :

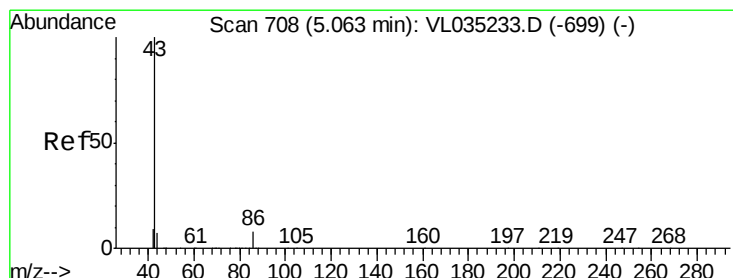
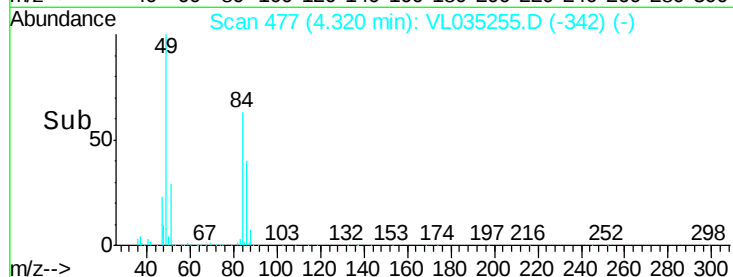
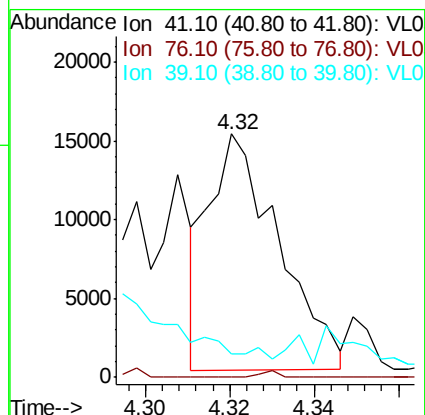
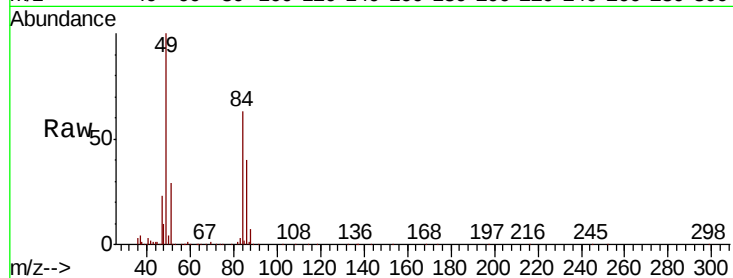
Tot Ion: 41 Resp: 17225

Ion Ratio Lower Upper

41 100

76 1.5 24.4 36.6#

39 28.6 63.8 95.8#



#23

Vinyl Acetate

Concen: 1.245 ppbv

RT: 5.05 min Scan# 704

Delta R.T. -0.01 min

Lab File: VL035255.D

Acq: 29 Jul 2020 20:49

Tgt Ion: 43 Resp: 181428

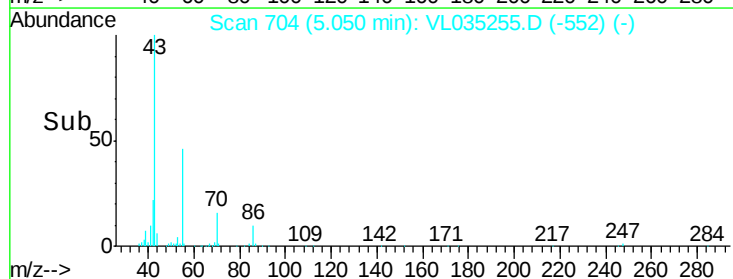
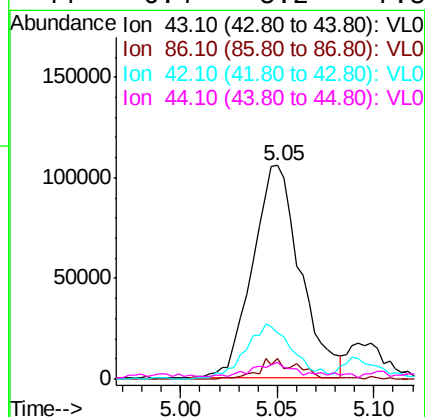
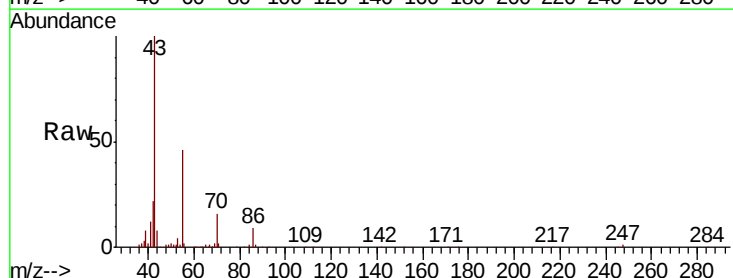
Ion Ratio Lower Upper

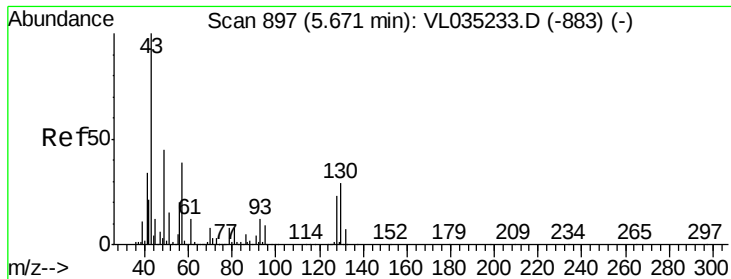
43 100

86 9.5 6.2 9.2#

42 21.3 8.0 12.0#

44 6.4 5.2 7.8





#25

Ethyl Acetate

Concen: 0.967 ppbv

RT: 5.68 min Scan# 899

Delta R.T. 0.01 min

Lab File: VL035255.D

Acq: 29 Jul 2020 20:49

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion: 43 Resp: 218915

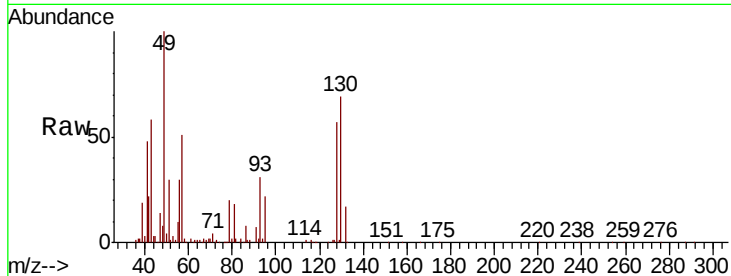
Ion Ratio Lower Upper

43 100

45 7.5 8.5 12.7#

61 5.5 8.1 12.1#

70 5.4 6.2 9.4#



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

200000

150000

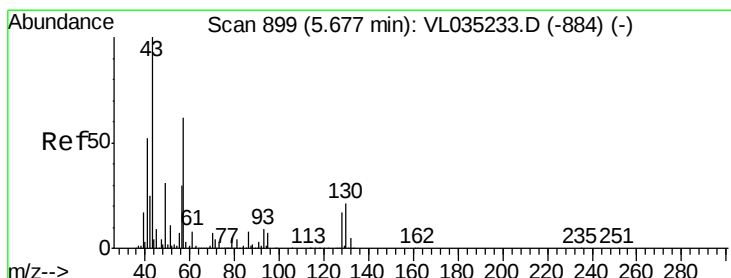
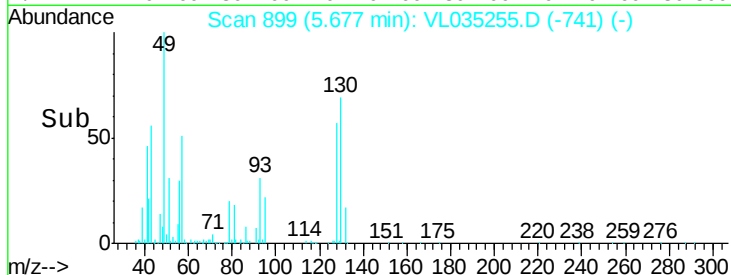
100000

50000

0

5.60 5.65 5.70

Time-->



#26

Hexane

Concen: 1.868 ppbv

RT: 5.68 min Scan# 899

Delta R.T. 0.00 min

Lab File: VL035255.D

Acq: 29 Jul 2020 20:49

Tgt Ion: 57 Resp: 190790

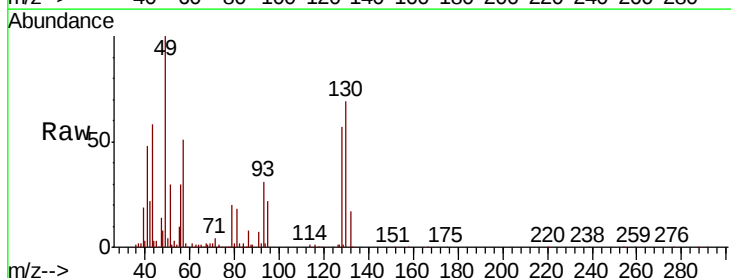
Ion Ratio Lower Upper

57 100

41 95.3 73.9 110.9

43 116.7 177.6 266.4#

56 58.4 43.0 64.4



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

200000

150000

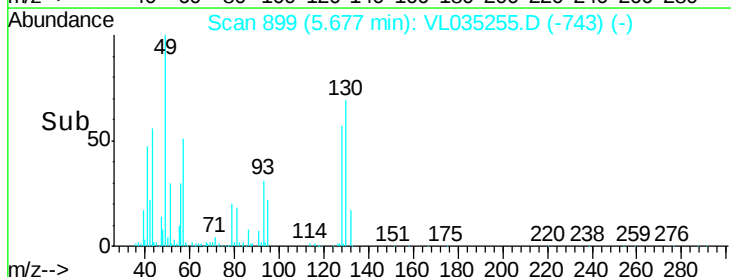
100000

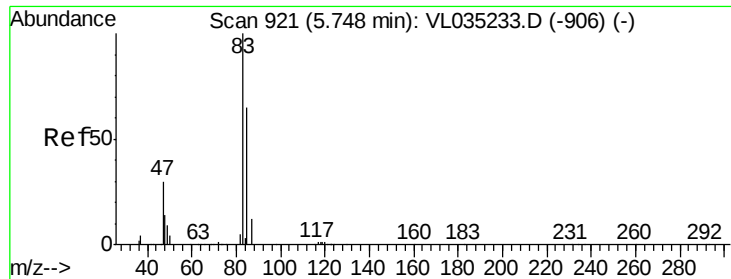
50000

0

5.65 5.70 5.75

Time-->





#29

Chloroform

Concen: 0.329 ppbv

RT: 5.74 min Scan# 919

Delta R.T. -0.01 min

Lab File: VL035255.D

Acq: 29 Jul 2020 20:49

Instrument :

MSVOA_L

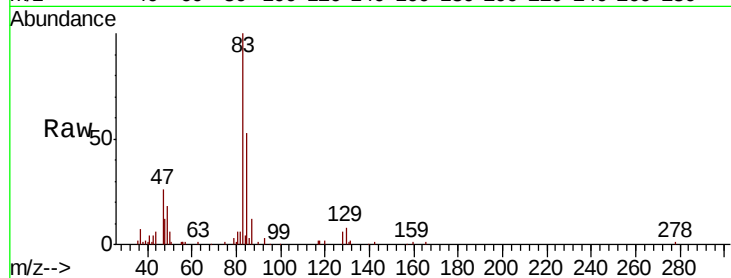
ClientSampleId :

Tot Ion: 83 Resp: 56437

Ion Ratio Lower Upper

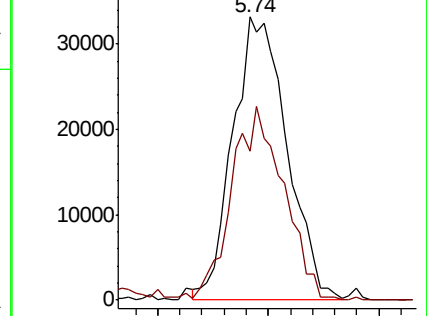
83 100

85 52.9 51.7 77.5

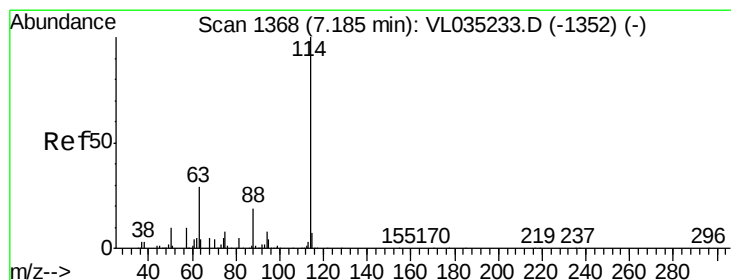
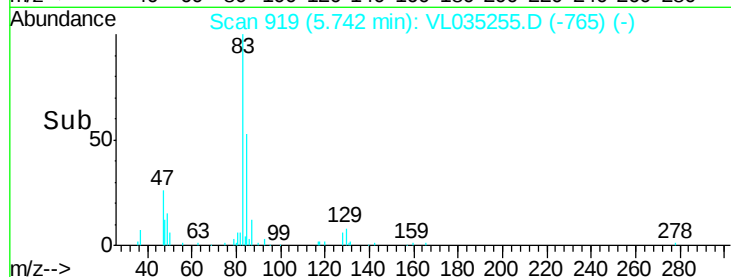


Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0



Time-->



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.19 min Scan# 1368

Delta R.T. 0.00 min

Lab File: VL035255.D

Acq: 29 Jul 2020 20:49

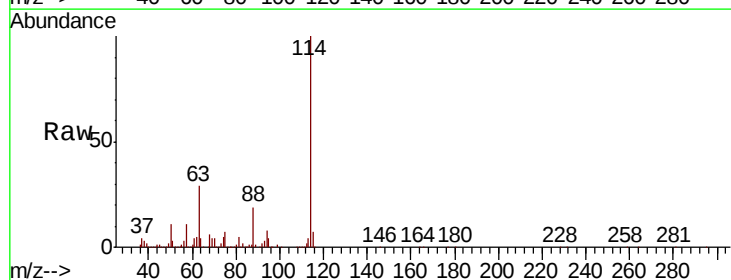
Tgt Ion: 114 Resp: 2585183

Ion Ratio Lower Upper

114 100

63 27.1 22.2 33.2

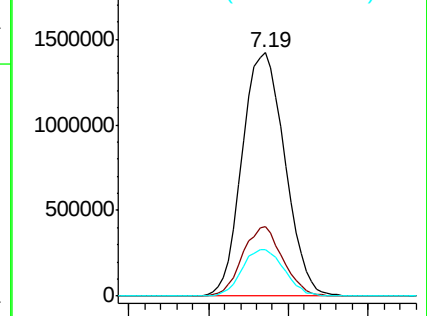
88 19.0 15.4 23.0



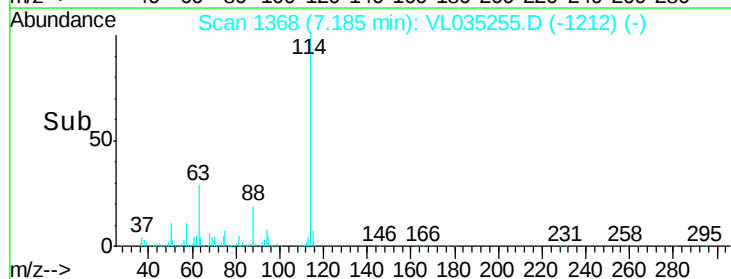
Abundance Ion 114.10 (113.80 to 114.80): V

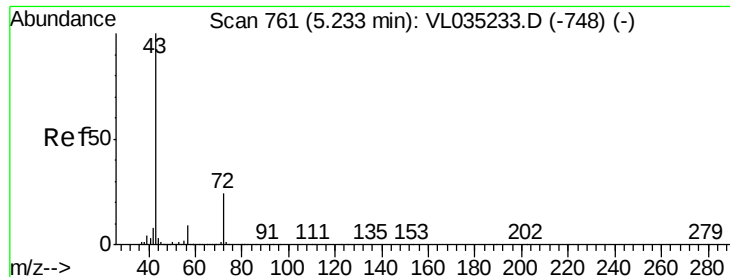
Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0



Time-->

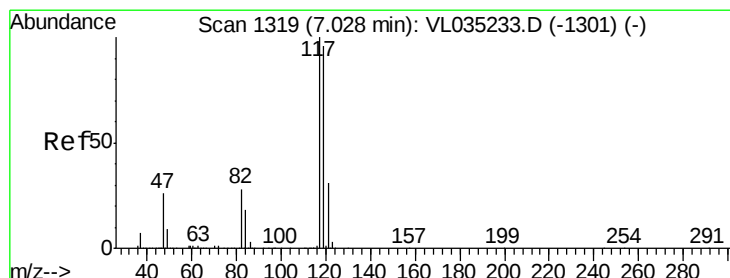
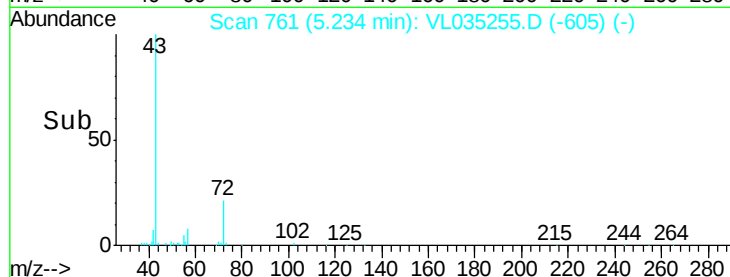
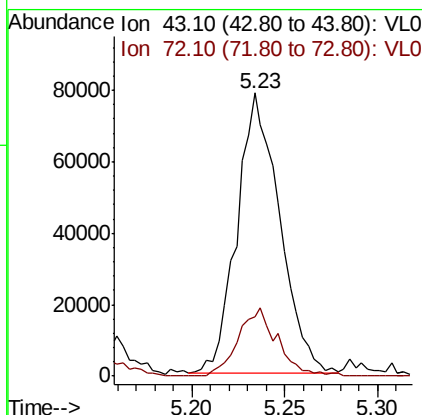
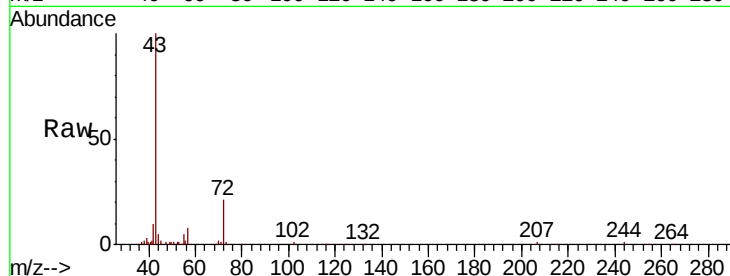




#34
2-Butanone
Concen: 0.946 ppbv
RT: 5.23 min Scan# 761
Delta R.T. 0.00 min
Lab File: VL035255.D
Acq: 29 Jul 2020 20:49

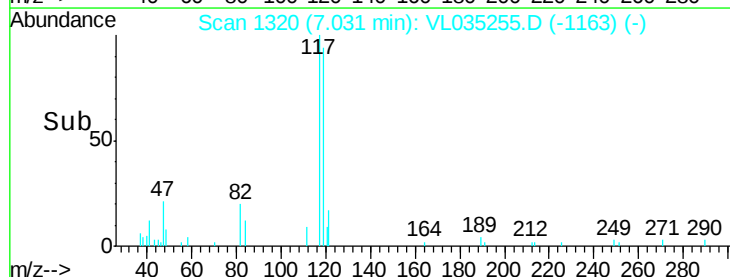
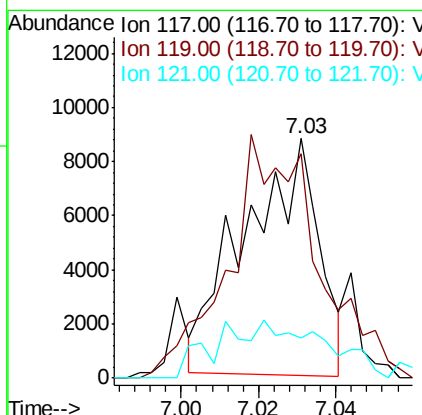
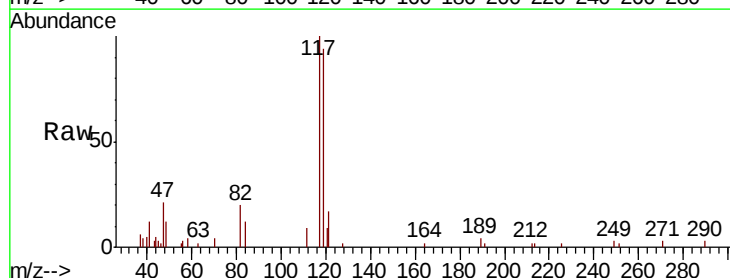
Instrument :
MSVOA_L
ClientSampleId :

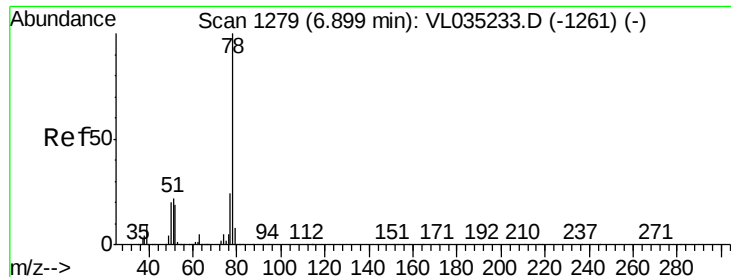
Tot Ion: 43 Resp: 124441
Ion Ratio Lower Upper
43 100
72 22.6 19.2 28.8



#35
Carbon Tetrachloride
Concen: 0.068 ppbv
RT: 7.03 min Scan# 1320
Delta R.T. 0.00 min
Lab File: VL035255.D
Acq: 29 Jul 2020 20:49

Tgt Ion: 117 Resp: 11707
Ion Ratio Lower Upper
117 100
119 84.5 76.8 115.2
121 9.4 24.5 36.7#

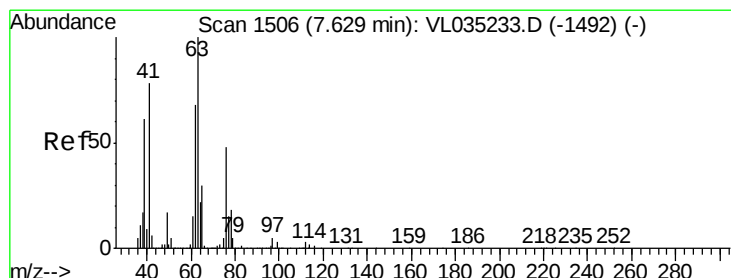
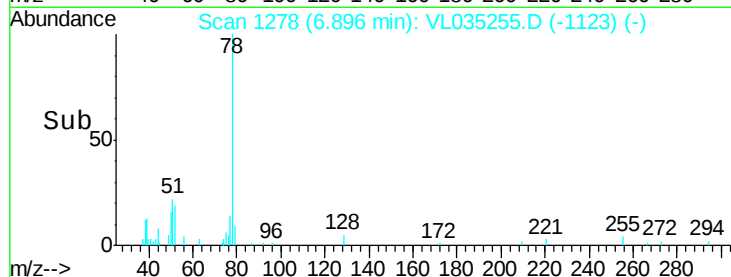
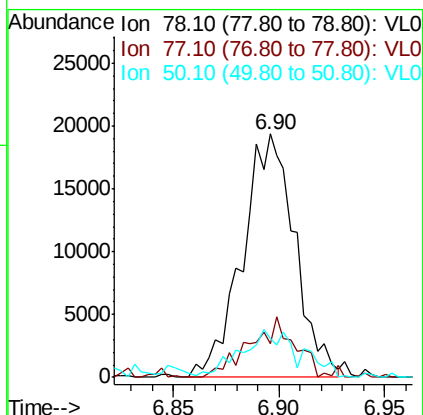
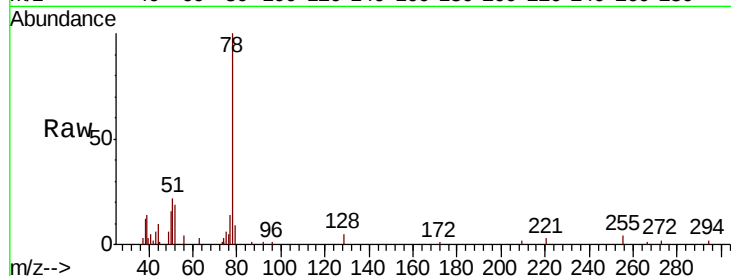




#36
Benzene
Concen: 0.186 ppbv
RT: 6.90 min Scan# 1278
Delta R.T. -0.00 min
Lab File: VL035255.D
Acq: 29 Jul 2020 20:49

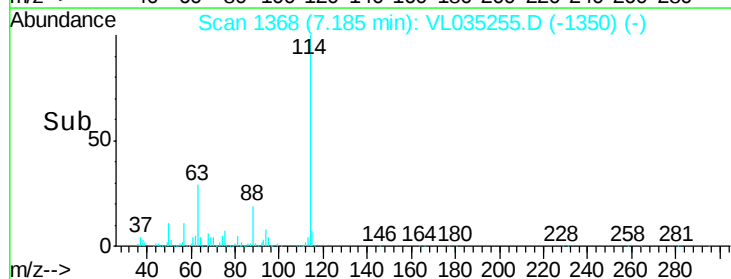
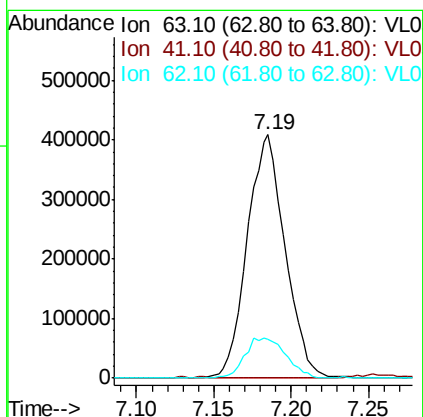
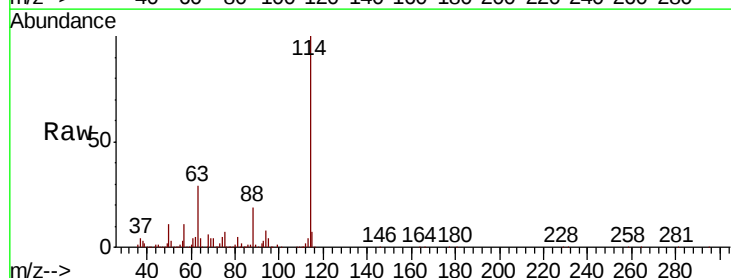
Instrument :
MSVOA_L
ClientSampled :

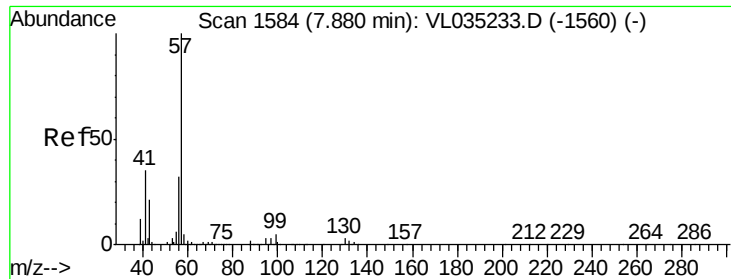
Tot Ion	Ratio	Lower	Upper
78	100		
77	14.0	18.9	28.3#
50	15.8	16.1	24.1#



#39
1,2-Dichloropropane
Concen: 9.712 ppbv
RT: 7.19 min Scan# 1368
Delta R.T. -0.44 min
Lab File: VL035255.D
Acq: 29 Jul 2020 20:49

Tgt Ion	Ratio	Lower	Upper
63	100		
41	0.0	62.2	93.4#
62	15.8	54.2	81.2#

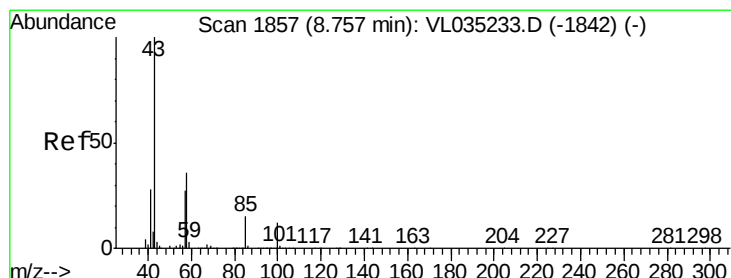
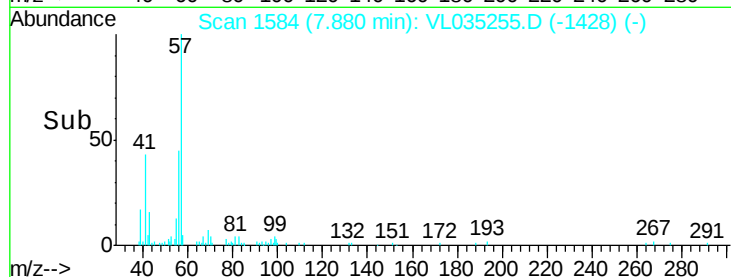
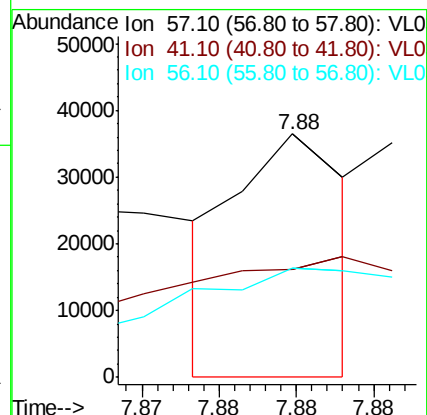
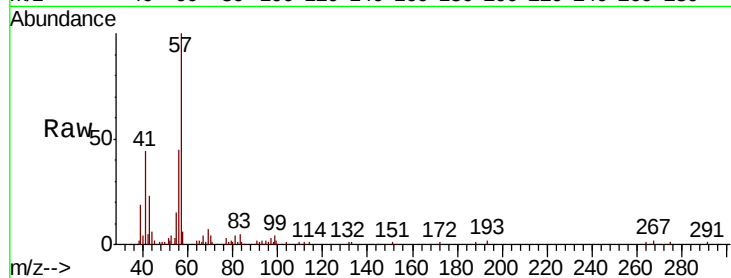




#44
 2,2,4-Trimethylpentane
 Concen: 0.057 ppbv
 RT: 7.88 min Scan# 1584
 Delta R.T. 0.00 min
 Lab File: VL035255.D
 Acq: 29 Jul 2020 20:49

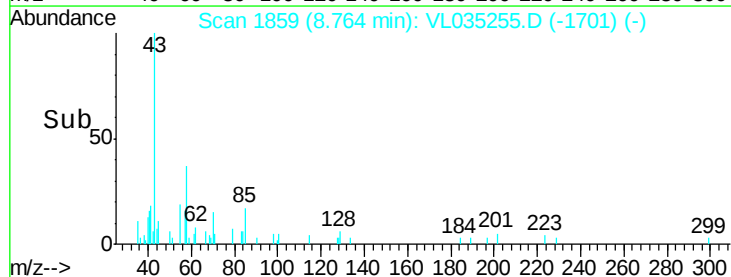
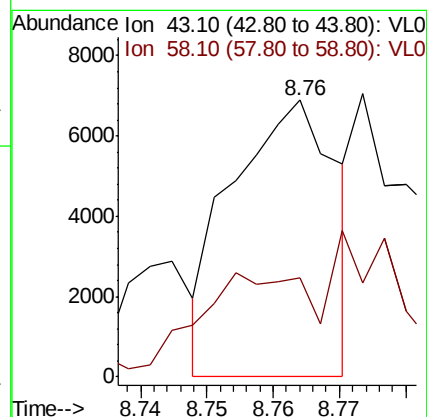
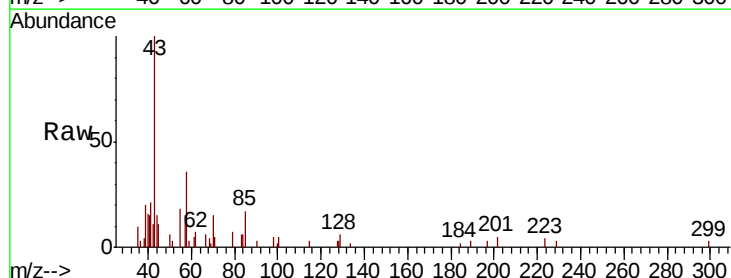
Instrument :
 MSVOA_L
 ClientSampled :

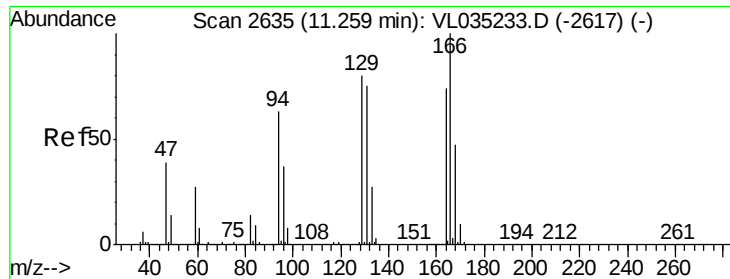
Tot Ion: 57 Resp: 18188
 Ion Ratio Lower Upper
 57 100
 41 0.0 27.0 40.4#
 56 189.6 25.6 38.4#



#50
 4-Methyl-2-Pentanone
 Concen: 0.039 ppbv
 RT: 8.76 min Scan# 1859
 Delta R.T. 0.01 min
 Lab File: VL035255.D
 Acq: 29 Jul 2020 20:49

Tgt Ion: 43 Resp: 7518
 Ion Ratio Lower Upper
 43 100
 58 0.0 30.0 45.0#





#52

Tetrachloroethene

Concen: 13.008 ppbv

RT: 11.25 min Scan# 2633

Delta R.T. -0.01 min

Lab File: VL035255.D

Acq: 29 Jul 2020 20:49

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:164 Resp: 891681

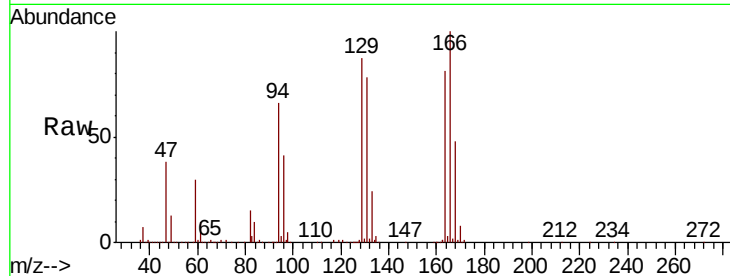
Ion Ratio Lower Upper

164 100

166 123.5 107.5 161.3

129 107.6 86.0 129.0

131 96.4 80.3 120.5

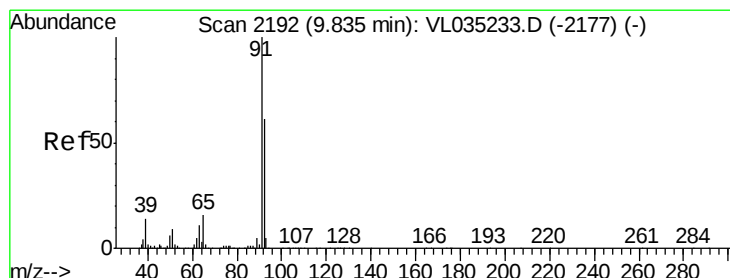
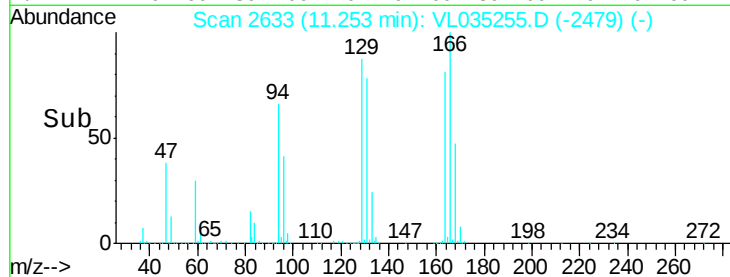
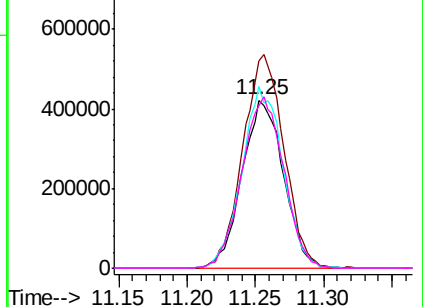


Abundance Ion 163.90 (163.60 to 164.60): V

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: 0.874 ppbv

RT: 9.83 min Scan# 2191

Delta R.T. -0.00 min

Lab File: VL035255.D

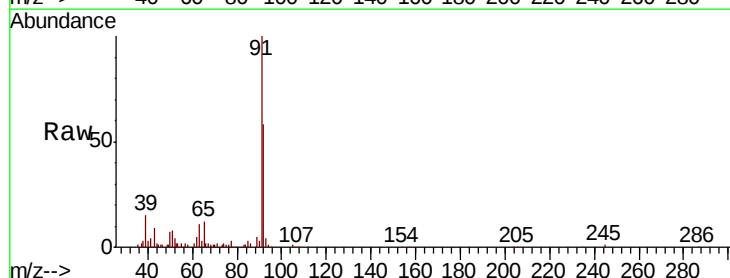
Acq: 29 Jul 2020 20:49

Tgt Ion: 91 Resp: 166826

Ion Ratio Lower Upper

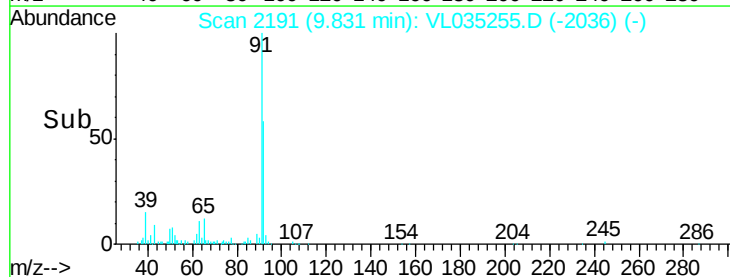
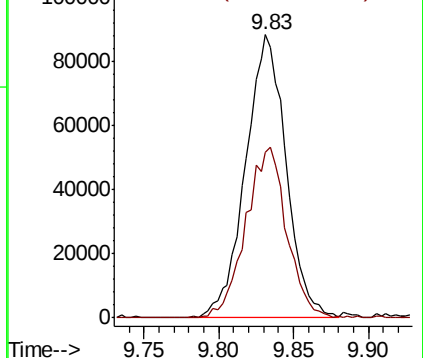
91 100

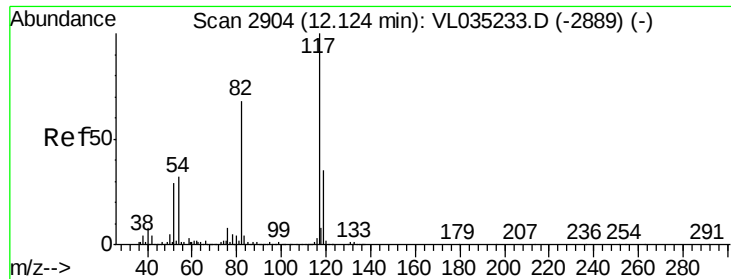
92 60.8 48.5 72.7



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

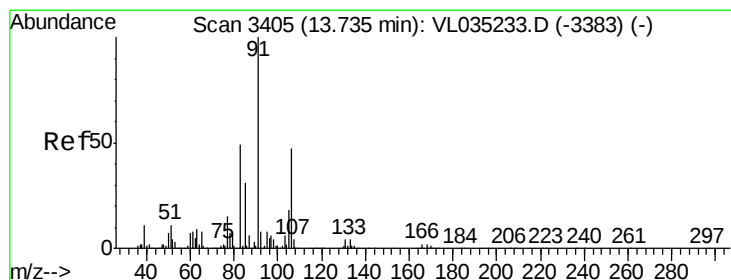
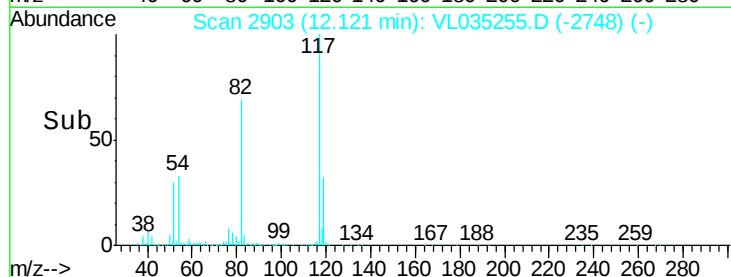
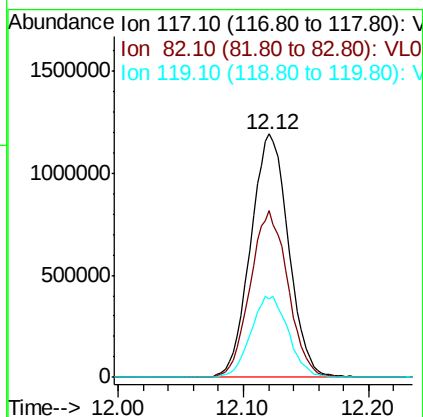
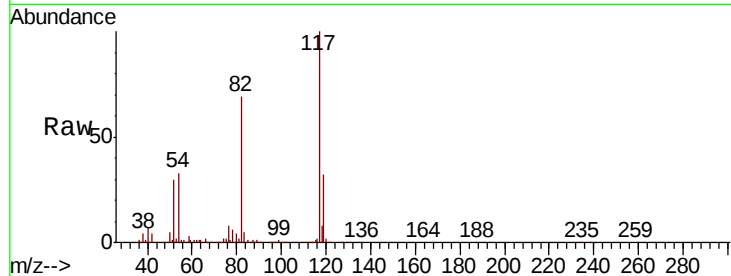




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.12 min Scan# 2903
Delta R.T. -0.00 min
Lab File: VL035255.D
Acq: 29 Jul 2020 20:49

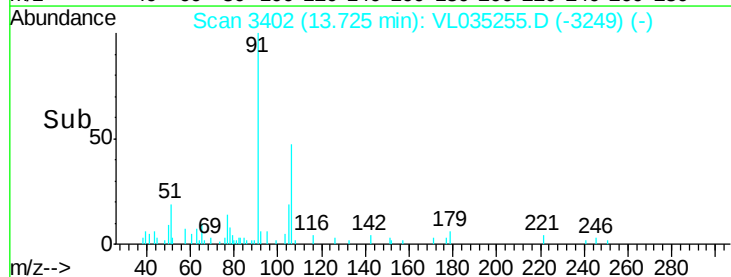
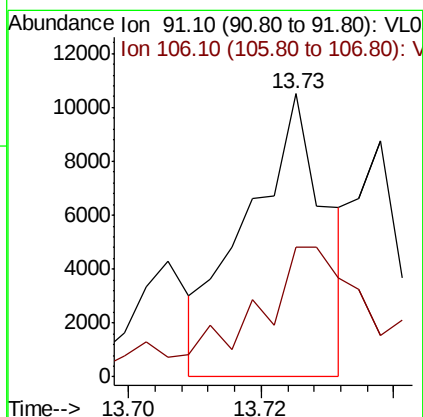
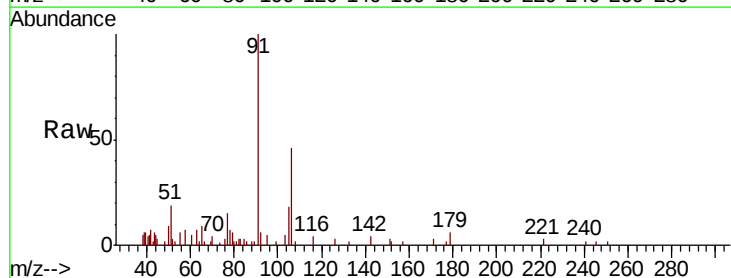
Instrument :
MSVOA_L
ClientSampleId :

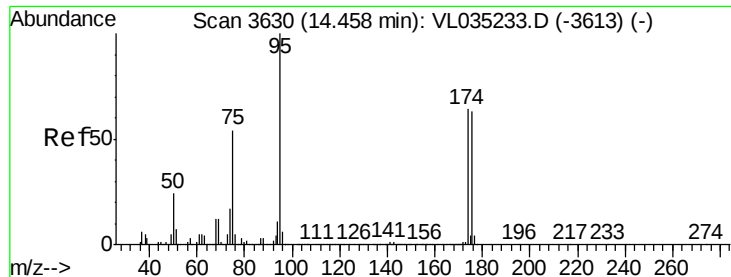
Tot Ion:117 Resp: 2499366
Ion Ratio Lower Upper
117 100
82 68.5 52.4 78.6
119 33.1 24.6 36.8



#60
o-Xylene
Concen: 0.035 ppbv
RT: 13.73 min Scan# 3402
Delta R.T. -0.01 min
Lab File: VL035255.D
Acq: 29 Jul 2020 20:49

Tgt Ion: 91 Resp: 8667
Ion Ratio Lower Upper
91 100
106 88.3 22.4 67.0#





#68

1-Bromo-4-Fluorobenzene

Concen: 10.360 ppbv

RT: 14.46 min Scan# 3629

Delta R.T. -0.00 min

Lab File: VL035255.D

Acq: 29 Jul 2020 20:49

Instrument :

MSVOA_L

ClientSampleId :

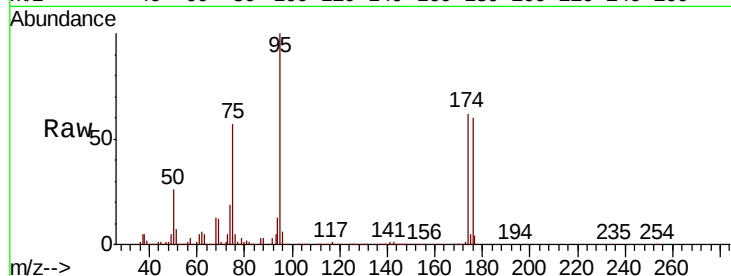
Tot Ion: 95 Resp: 2069094

Ion Ratio Lower Upper

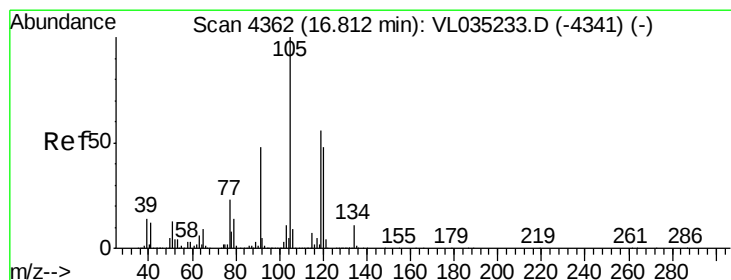
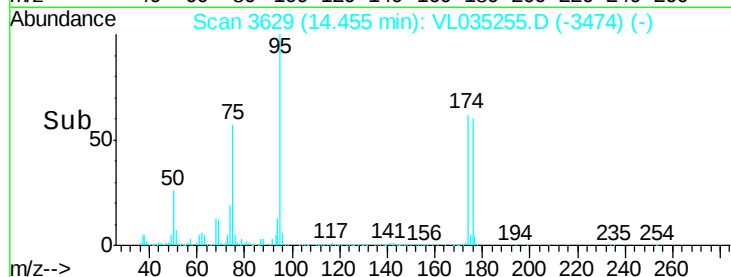
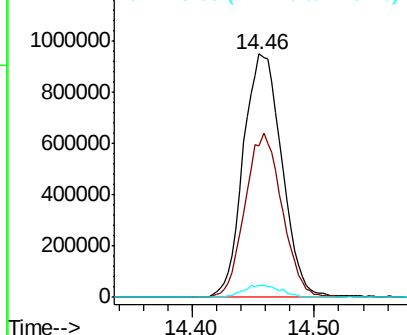
95 100

174 65.3 52.7 79.1

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: 0.075 ppbv

RT: 16.81 min Scan# 4361

Delta R.T. -0.00 min

Lab File: VL035255.D

Acq: 29 Jul 2020 20:49

Tgt Ion: 105 Resp: 23481

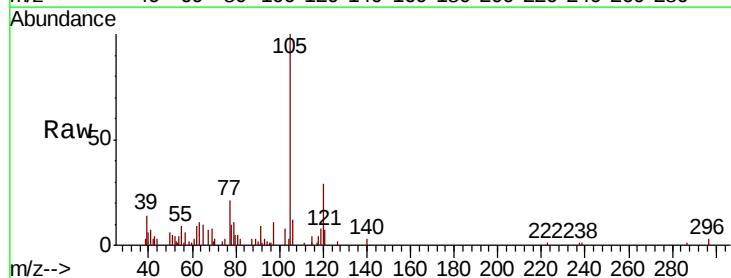
Ion Ratio Lower Upper

105 100

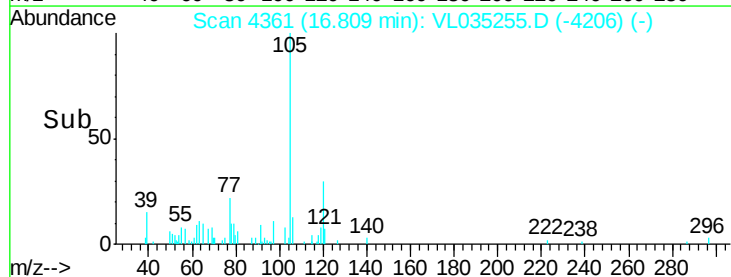
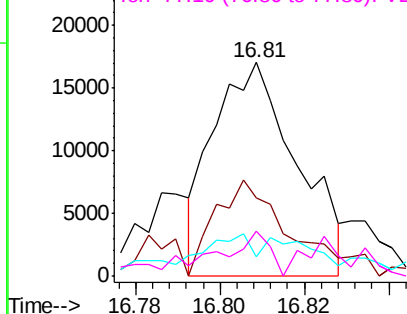
120 48.5 38.8 58.2

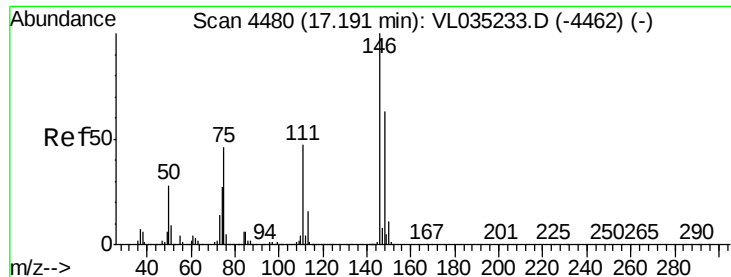
91 5.8 38.9 58.3#

77 21.6 18.4 27.6



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





#76

1,4-Dichlorobenzene

Concen: 0.073 ppbv

RT: 17.19 min Scan# 4479

Delta R.T. -0.00 min

Lab File: VL035255.D

Acq: 29 Jul 2020 20:49

Instrument :

MSVOA_L

ClientSampleId :

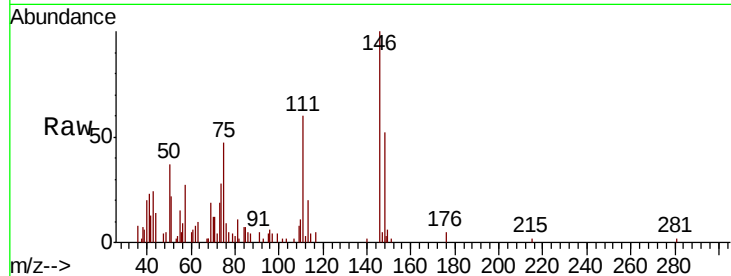
Tot Ion:146 Resp: 13344

Ion Ratio Lower Upper

146 100

111 0.0 23.4 70.2#

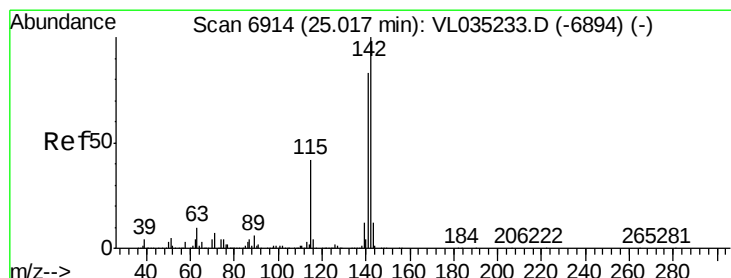
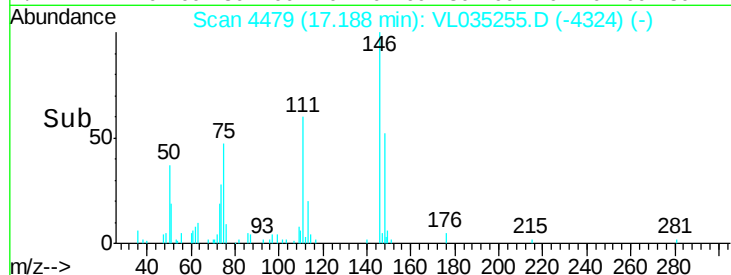
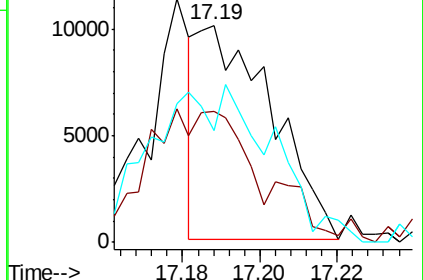
148 121.8 32.2 96.6#



Abundance Ion 146.00 (145.70 to 146.70): V

Ion 111.10 (110.80 to 111.80): V

Ion 148.00 (147.70 to 148.70): V



#80

Naphthalene, 2-methyl-

Concen: 0.071 ppbv

RT: 25.03 min Scan# 6917

Delta R.T. 0.01 min

Lab File: VL035255.D

Acq: 29 Jul 2020 20:49

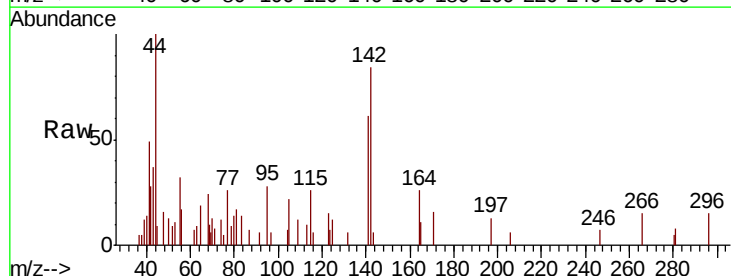
Tgt Ion:142 Resp: 5706

Ion Ratio Lower Upper

142 100

141 79.1 68.6 103.0

115 55.1 34.5 51.7#



Abundance Ion 142.00 (141.70 to 142.70): V

Ion 141.00 (140.70 to 141.70): V

Ion 115.00 (114.70 to 115.70): V

