

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL110420\
 Data File : VL035843.D
 Acq On : 4 Nov 2020 22:01
 Operator : SY/AP
 Sample : VIBLK
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Nov 05 02:58:09 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL110320AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Nov 04 02:40:06 2020
 QLast Update : Wed Nov 04 02:40:06 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.63	49	874975	10.00	ppbv	-0.04
33) 1,4-Difluorobenzene	7.14	114	3990328	10.00	ppbv	-0.04
55) Chlorobenzene-d5	12.05	117	3597065	10.00	ppbv	-0.05

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.38	95	2532173	9.91	ppbv	-0.05
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.10%

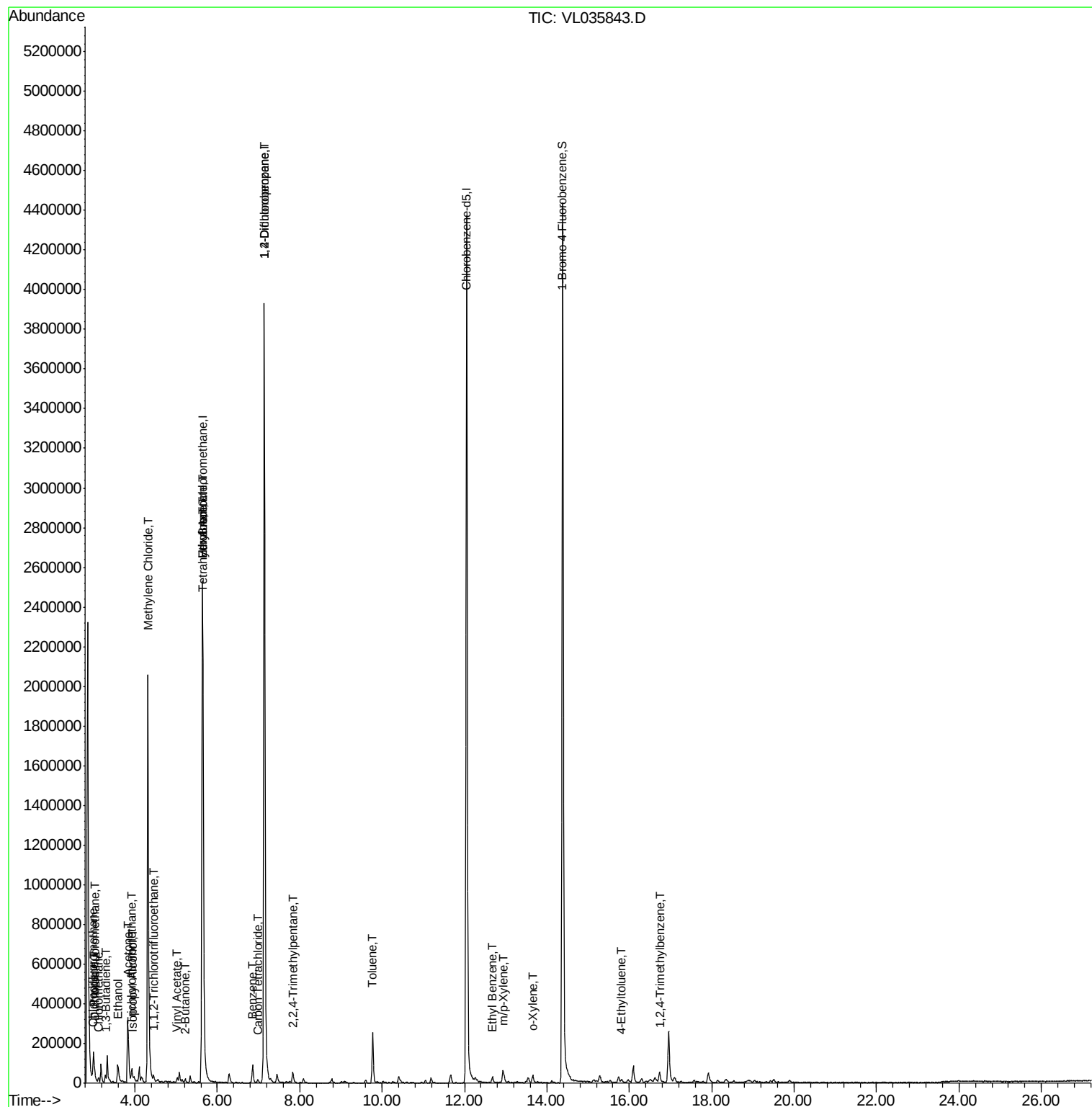
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.02	85	52635	0.320	ppbv	96
3) Chlorodifluoromethane	2.96	51	46057	0.440	ppbv #	90
4) Chloromethane	3.12	50	21456	0.422	ppbv	91
9) Propene	2.99	41	51870	1.353	ppbv	90
11) Trichlorofluoromethane	3.92	101	49595	0.240	ppbv	85
12) 1,1,2-Trichlorotrifluoroet	4.45	101	10012	0.065	ppbv	95
13) Ethanol	3.58	45	47274	5.682	ppbv #	35
15) Acetone	3.82	43	396412	4.238	ppbv	97
16) 1,3-Butadiene	3.30	39	2203	0.055	ppbv #	1
19) Isopropyl Alcohol	3.96	45	22844	0.397	ppbv #	1
20) Methylene Chloride	4.31	84	1166143	17.709	ppbv	98
23) Vinyl Acetate	5.03	43	13743	0.105	ppbv #	43
25) Ethyl Acetate	5.65	43	327836	1.779	ppbv #	73
26) Hexane	5.65	57	617364	6.075	ppbv #	44
34) 2-Butanone	5.22	43	20944	0.162	ppbv #	86
35) Carbon Tetrachloride	6.98	117	7409	0.035	ppbv #	89
36) Benzene	6.86	78	91269	0.308	ppbv	97
39) 1,2-Dichloropropane	7.14	63	713973	7.149	ppbv #	30
41) Tetrahydrofuran	5.66	42	169375	2.302	ppbv #	41
44) 2,2,4-Trimethylpentane	7.83	57	46870	0.119	ppbv #	82
53) Toluene	9.77	91	226226	0.632	ppbv	99
58) Ethyl Benzene	12.68	91	29330	0.067	ppbv	90
59) m/p-Xylene	12.93	91	56338	0.152	ppbv #	75
60) o-Xylene	13.66	91	30920	0.086	ppbv	99
72) 4-Ethyltoluene	15.81	105	13626	0.031	ppbv	96
74) 1,2,4-Trimethylbenzene	16.73	105	41098	0.096	ppbv #	67

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

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QLast Update : Wed Nov 04 02:40:06 2020
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.63 min Scan# 885

Delta R.T. -0.04 min

Lab File: VL035843.D

Acq: 4 Nov 2020 22:01

Instrument :
MSVOA_L
ClientSampleId :

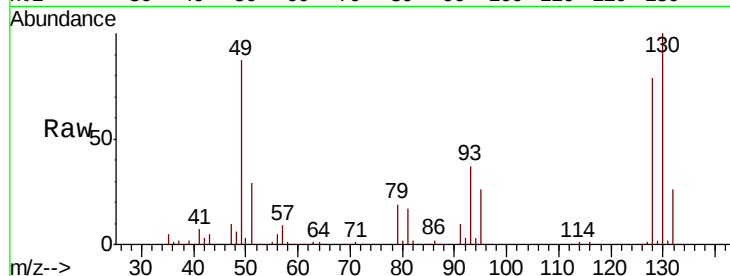
Tot Ion: 49 Resp: 874975

Ion Ratio Lower Upper

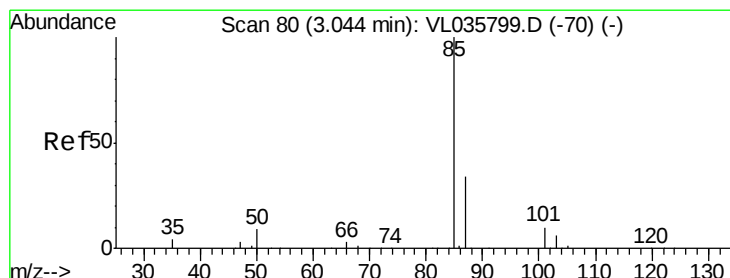
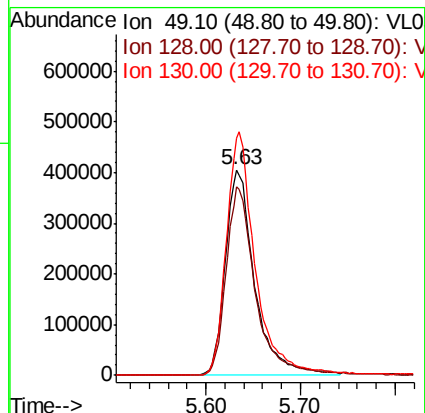
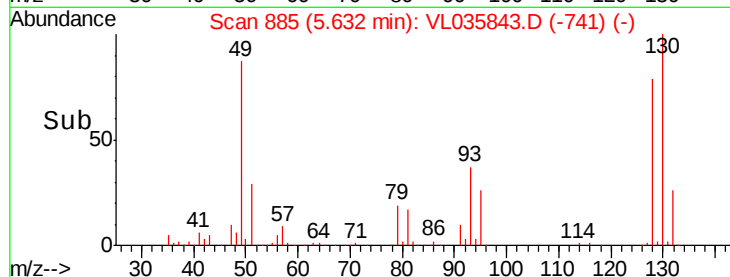
49 100

128 93.0 41.5 124.6

130 118.1 53.7 161.1



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



#2

Dichlorodifluoromethane

Concen: 0.320 ppbv

RT: 3.02 min Scan# 74

Delta R.T. -0.02 min

Lab File: VL035843.D

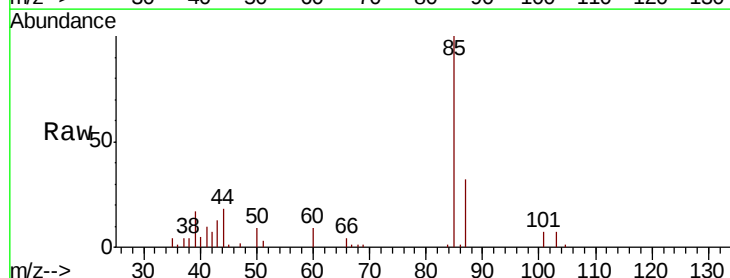
Acq: 4 Nov 2020 22:01

Tgt Ion: 85 Resp: 52635

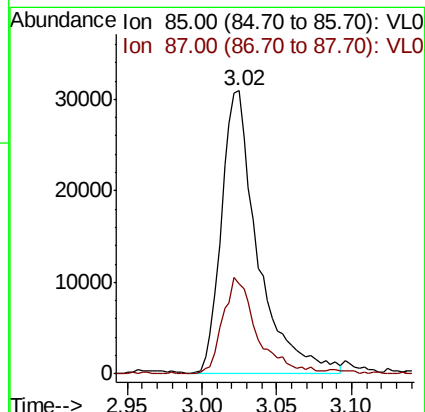
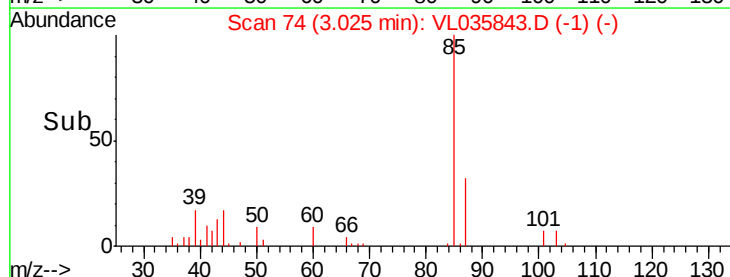
Ion Ratio Lower Upper

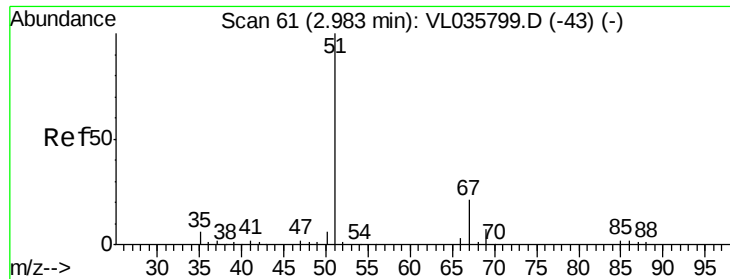
85 100

87 31.6 27.1 40.7



Abundance Ion 85.00 (84.70 to 85.70): VL0
Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.440 ppbv

RT: 2.96 min Scan# 55

Delta R.T. -0.02 min

Lab File: VL035843.D

Acq: 4 Nov 2020 22:01

Instrument :

MSVOA_L

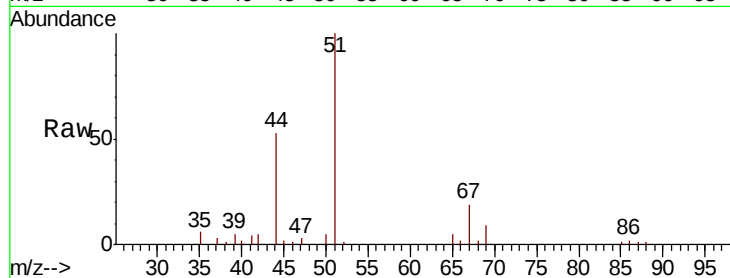
ClientSampled :

Tot Ion: 51 Resp: 46057

Ion Ratio Lower Upper

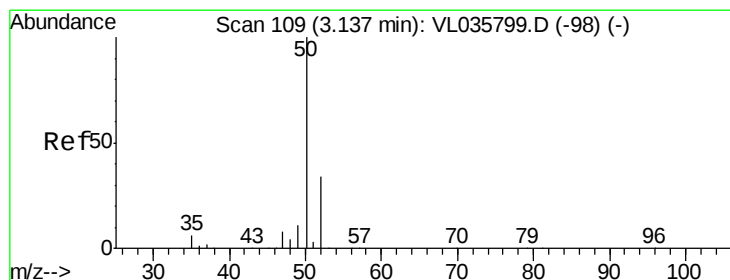
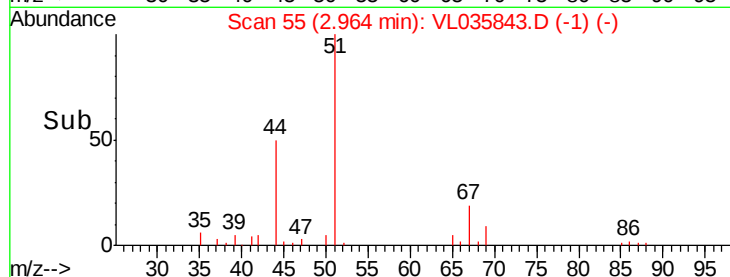
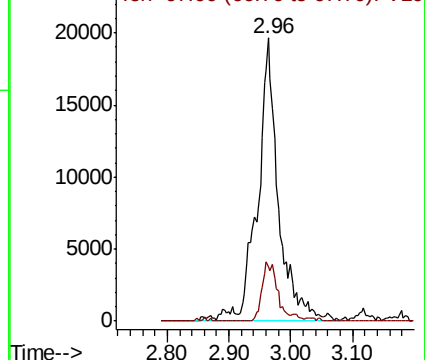
51 100

67 16.6 17.0 25.4#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.422 ppbv

RT: 3.12 min Scan# 103

Delta R.T. -0.02 min

Lab File: VL035843.D

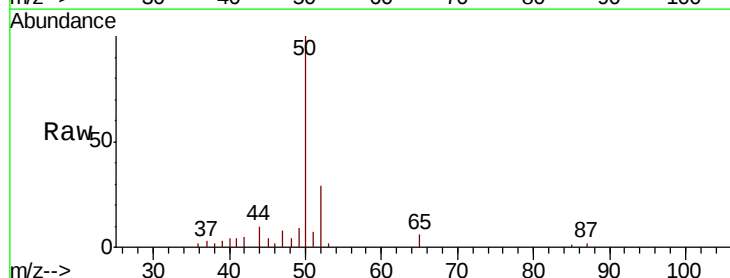
Acq: 4 Nov 2020 22:01

Tgt Ion: 50 Resp: 21456

Ion Ratio Lower Upper

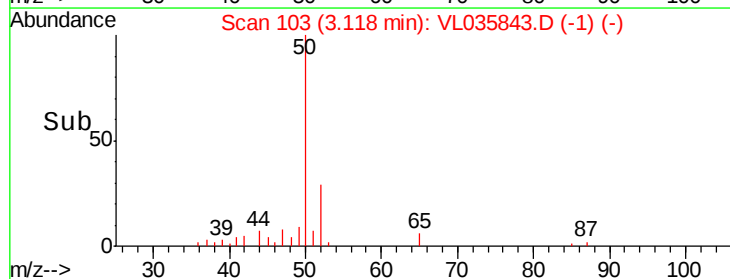
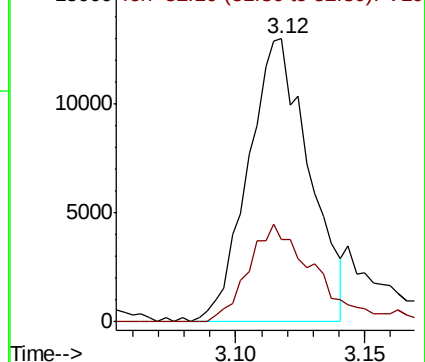
50 100

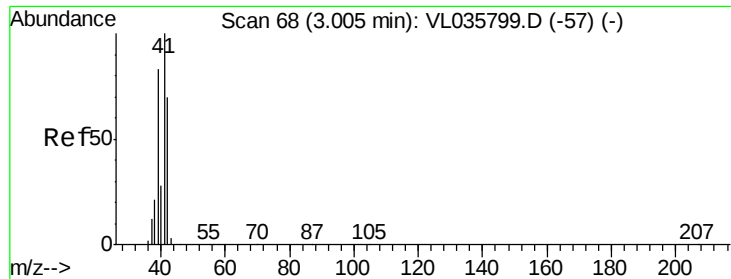
52 29.0 27.1 40.7



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 1.353 ppbv

RT: 2.99 min Scan# 64

Delta R.T. -0.01 min

Lab File: VL035843.D

Acq: 4 Nov 2020 22:01

Instrument :

MSVOA_L

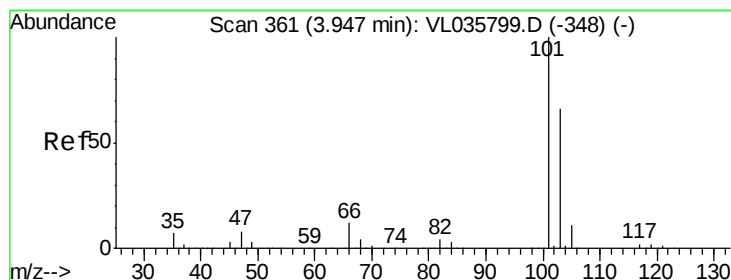
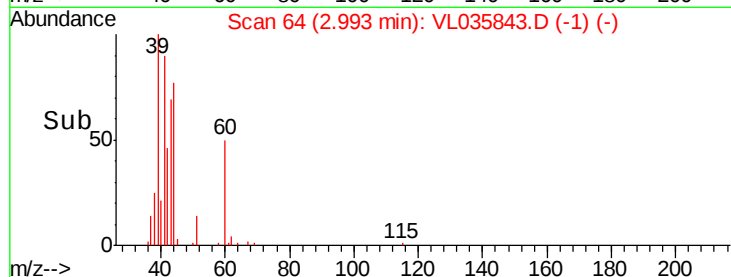
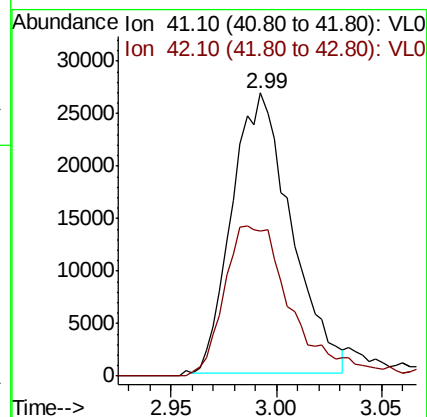
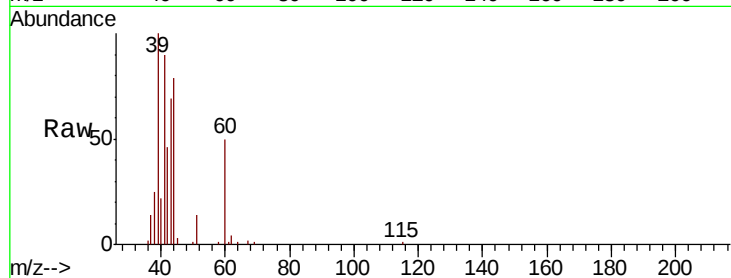
ClientSampleId :

Tot Ion: 41 Resp: 51870

Ion Ratio Lower Upper

41 100

42 62.2 56.2 84.4



#11

Trichlorofluoromethane

Concen: 0.240 ppbv

RT: 3.92 min Scan# 353

Delta R.T. -0.03 min

Lab File: VL035843.D

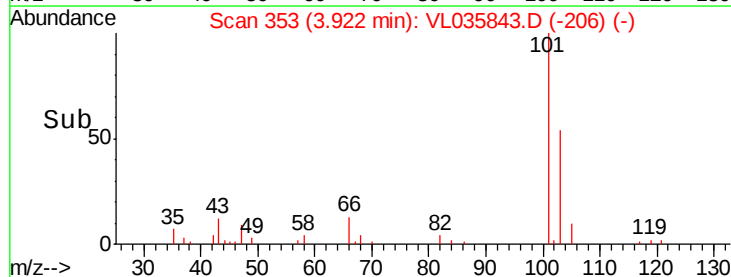
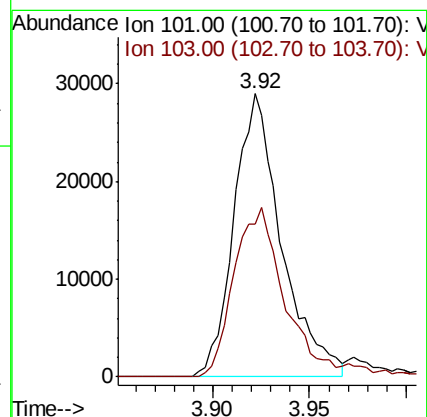
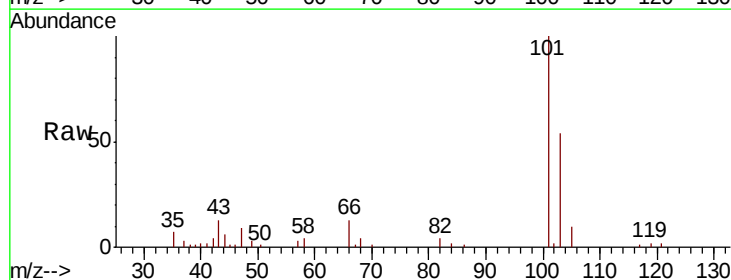
Acq: 4 Nov 2020 22:01

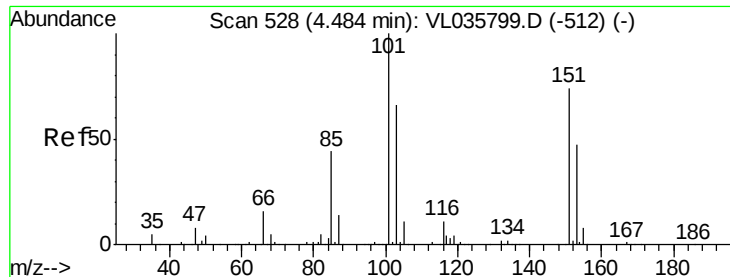
Tgt Ion: 101 Resp: 49595

Ion Ratio Lower Upper

101 100

103 54.2 53.0 79.4





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.065 ppbv

RT: 4.45 min Scan# 518

Delta R.T. -0.03 min

Lab File: VL035843.D

Acq: 4 Nov 2020 22:01

Instrument :

MSVOA_L

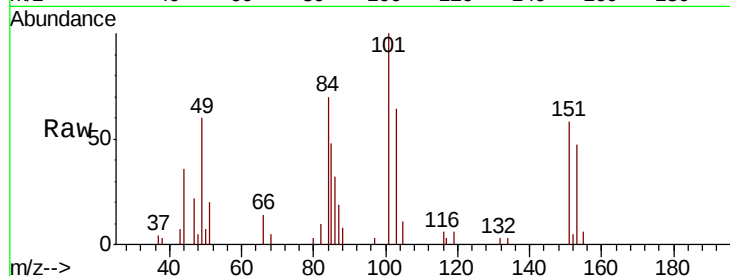
ClientSampled :

Tot Ion:101 Resp: 10012

Ion Ratio Lower Upper

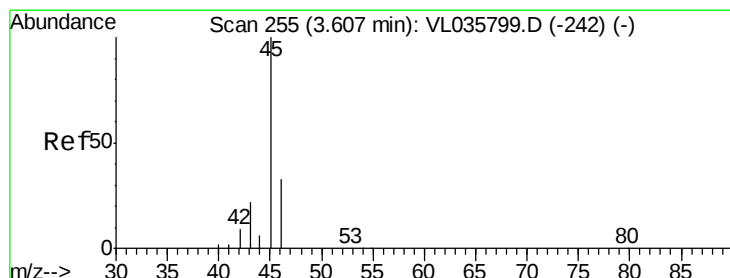
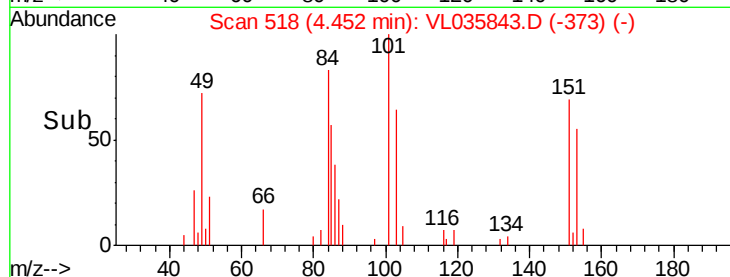
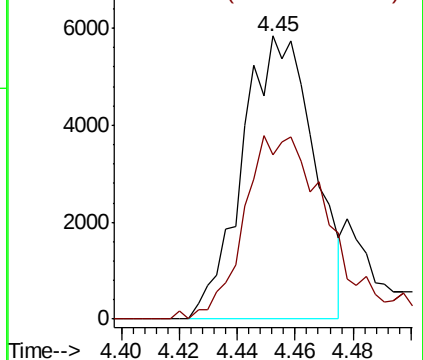
101 100

151 77.5 58.9 88.3



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 5.682 ppbv

RT: 3.58 min Scan# 247

Delta R.T. -0.03 min

Lab File: VL035843.D

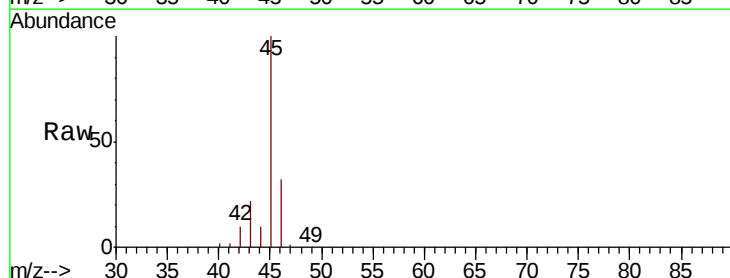
Acq: 4 Nov 2020 22:01

Tgt Ion: 45 Resp: 47274

Ion Ratio Lower Upper

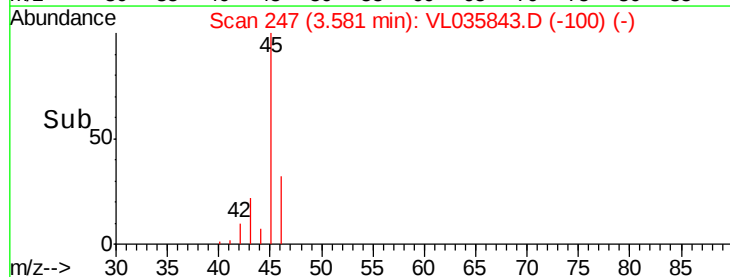
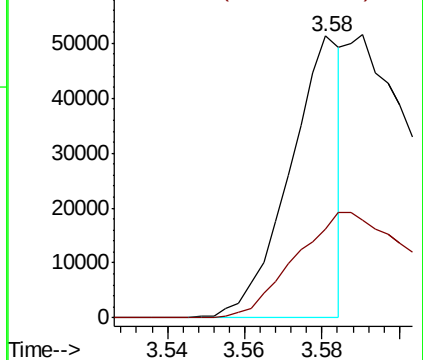
45 100

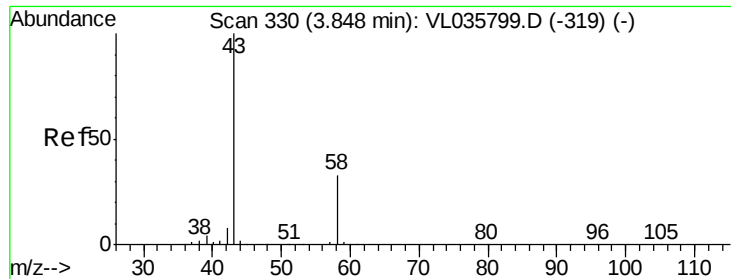
46 0.0 16.1 64.5#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 4.238 ppbv

RT: 3.82 min Scan# 322

Delta R.T. -0.03 min

Lab File: VL035843.D

Acq: 4 Nov 2020 22:01

Instrument :

MSVOA_L

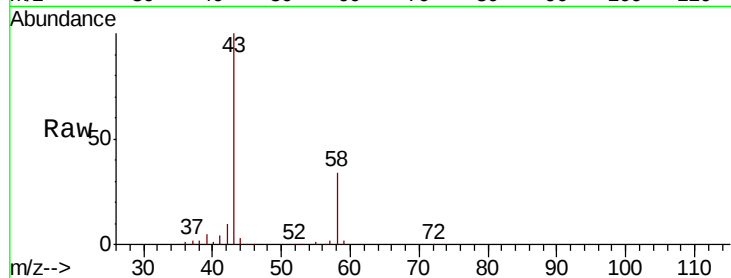
ClientSampleId :

Tot Ion: 43 Resp: 396412

Ion Ratio Lower Upper

43 100

58 32.6 27.5 41.3



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

3.82

200000

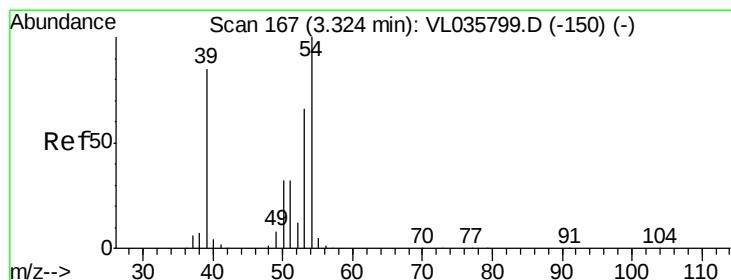
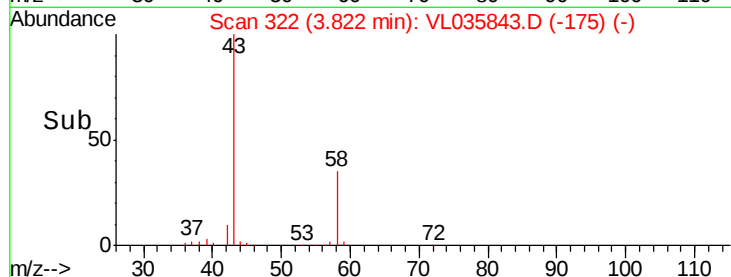
150000

100000

50000

0

Time-->



#16

1,3-Butadiene

Concen: 0.055 ppbv

RT: 3.30 min Scan# 159

Delta R.T. -0.03 min

Lab File: VL035843.D

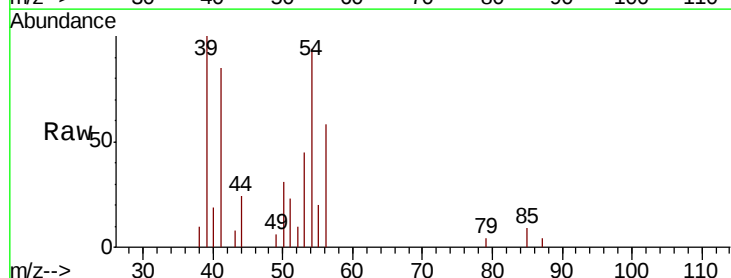
Acq: 4 Nov 2020 22:01

Tgt Ion: 39 Resp: 2203

Ion Ratio Lower Upper

39 100

54 336.3 87.1 130.7#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0

3.30

6000

5000

4000

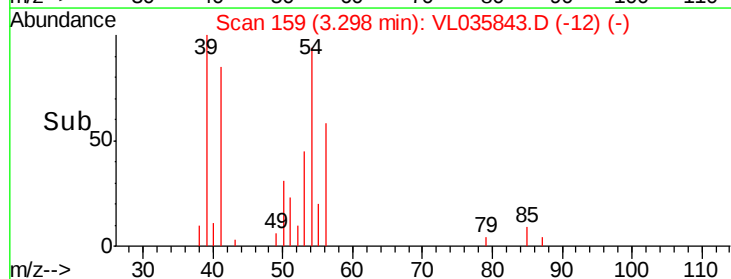
3000

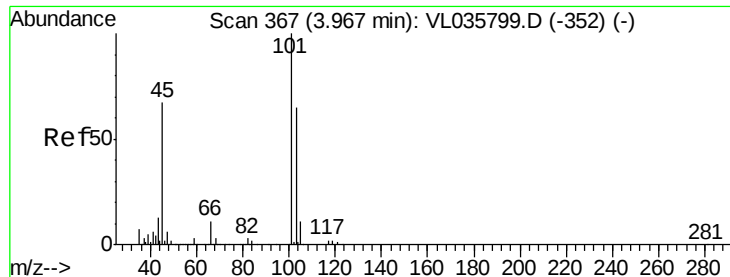
2000

1000

0

Time-->





#19

Isopropyl Alcohol

Concen: 0.397 ppbv

RT: 3.96 min Scan# 364

Delta R.T. -0.01 min

Lab File: VL035843.D

Acq: 4 Nov 2020 22:01

Instrument :

MSVOA_L

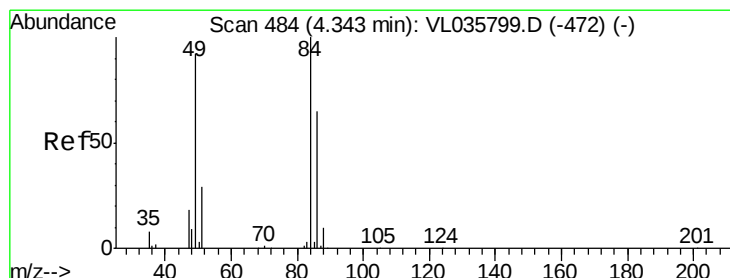
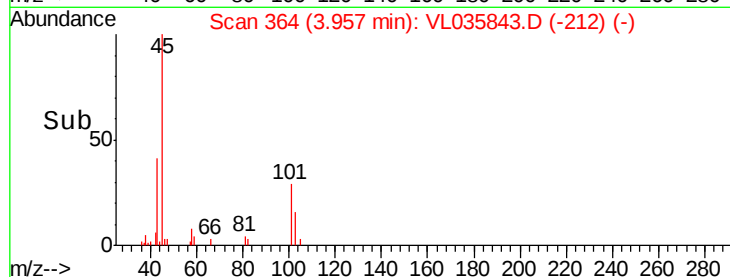
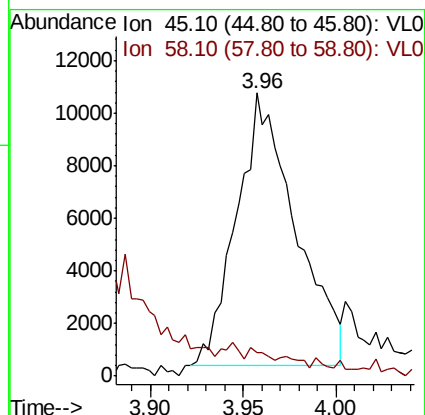
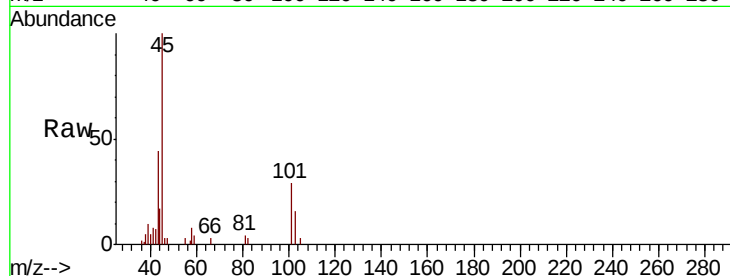
ClientSampled :

Tot Ion: 45 Resp: 22844

Ion Ratio Lower Upper

45 100

58 581.7 2.6 3.8#



#20

Methylene Chloride

Concen: 17.709 ppbv

RT: 4.31 min Scan# 475

Delta R.T. -0.03 min

Lab File: VL035843.D

Acq: 4 Nov 2020 22:01

Tgt Ion: 84 Resp: 1166143

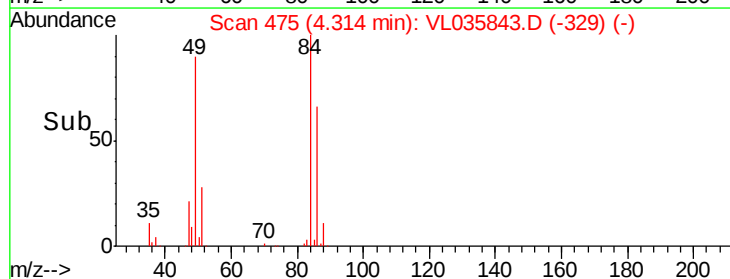
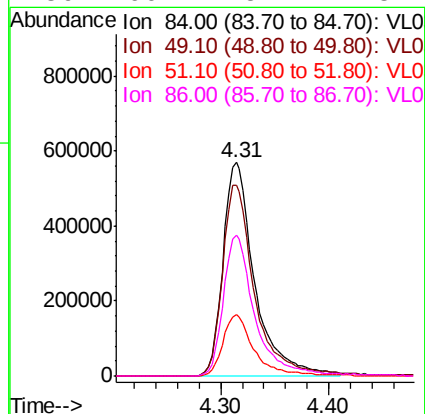
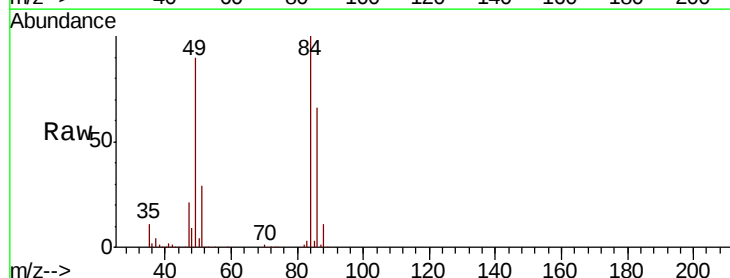
Ion Ratio Lower Upper

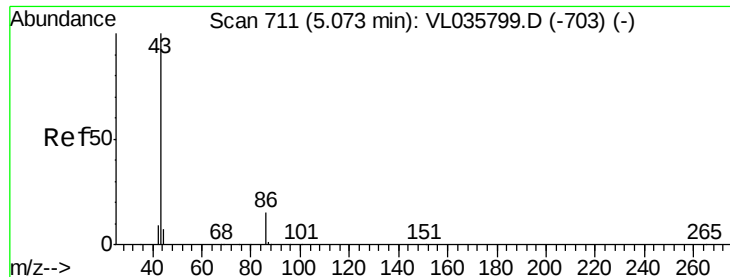
84 100

49 89.5 73.8 110.8

51 28.5 23.0 34.4

86 66.2 52.1 78.1





#23

Vinyl Acetate

Concen: 0.105 ppbv

RT: 5.03 min Scan# 698

Delta R.T. -0.04 min

Lab File: VL035843.D

Acq: 4 Nov 2020 22:01

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion: 43 Resp: 13743

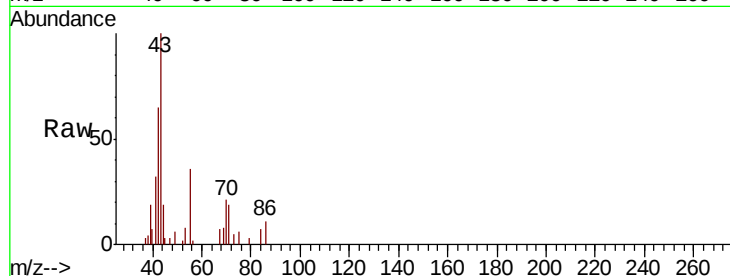
Ion Ratio Lower Upper

43 100

86 8.5 9.8 14.6#

42 60.9 8.1 12.1#

44 1.2 4.2 6.4#

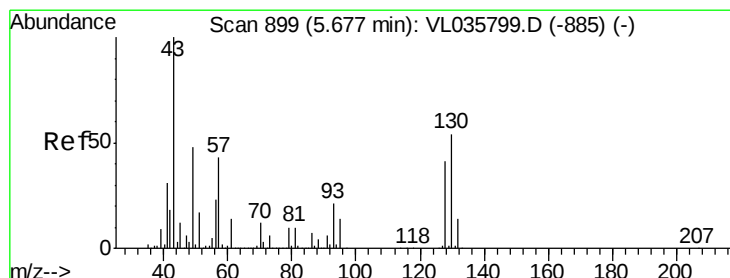
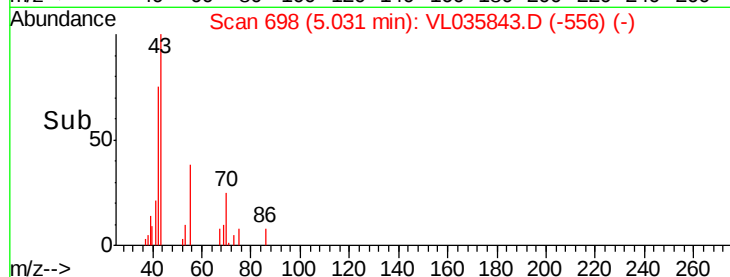
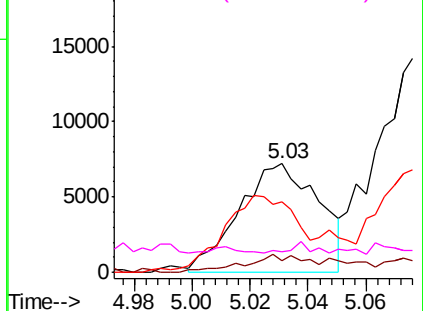


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 1.779 ppbv

RT: 5.65 min Scan# 892

Delta R.T. -0.02 min

Lab File: VL035843.D

Acq: 4 Nov 2020 22:01

Tgt Ion: 43 Resp: 327836

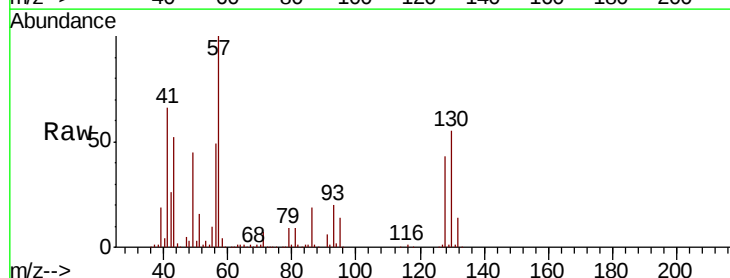
Ion Ratio Lower Upper

43 100

45 0.6 8.5 12.7#

61 0.5 10.7 16.1#

70 2.4 8.6 12.8#

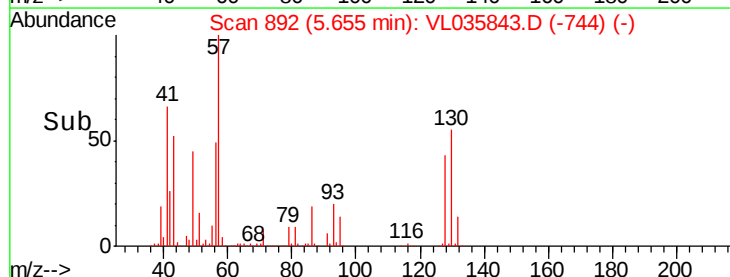
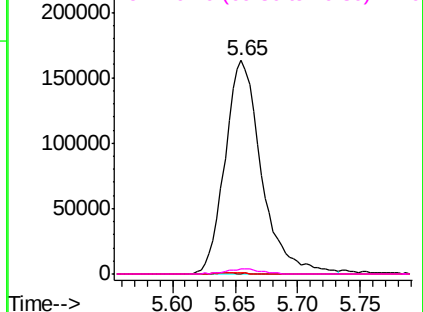


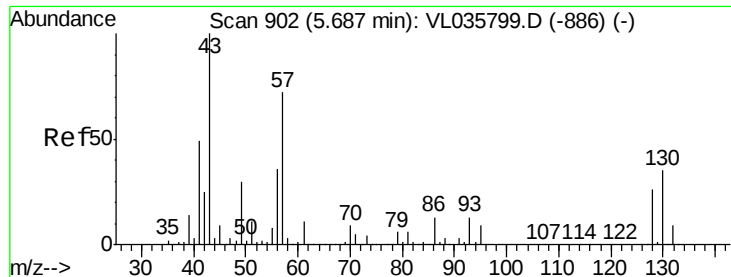
Abundance Ion 43.10 (42.80 to 43.80): VL0

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

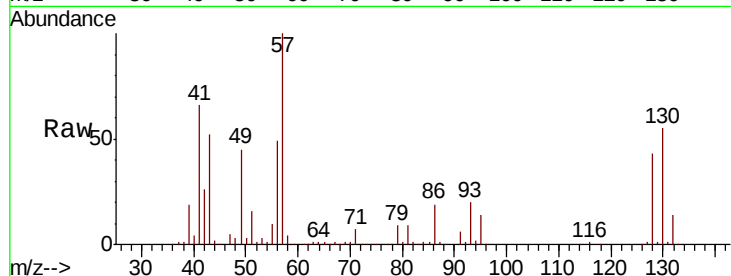




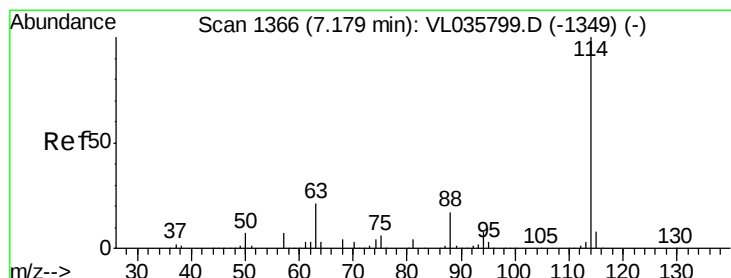
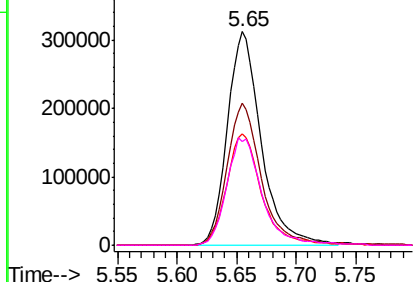
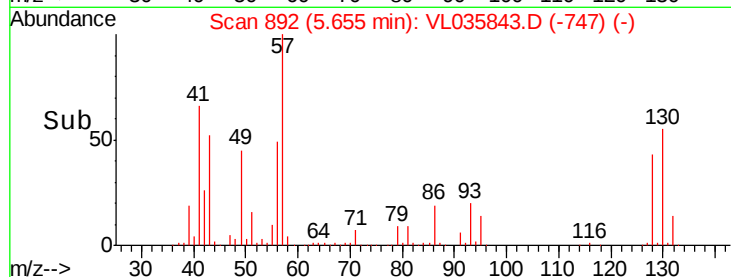
#26
Hexane
Concen: 6.075 ppbv
RT: 5.65 min Scan# 892
Delta R.T. -0.03 min
Lab File: VL035843.D
Acq: 4 Nov 2020 22:01

Instrument :
MSVOA_L
ClientSampled :

Tot Ion: 57 Resp: 617364
Ion Ratio Lower Upper
57 100
41 67.9 58.9 88.3
43 54.4 150.2 225.2#
56 52.9 42.4 63.6

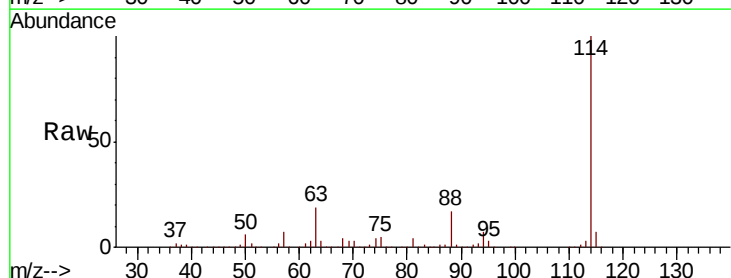


Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

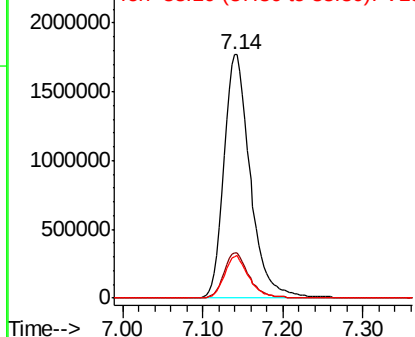
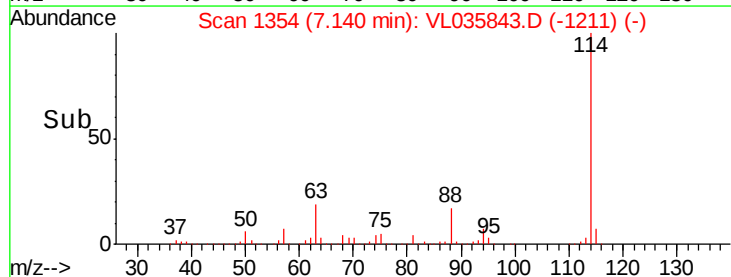


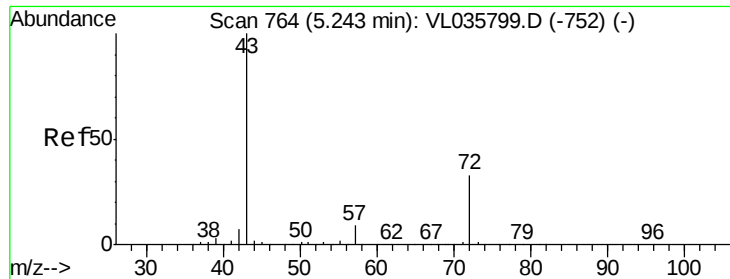
#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.14 min Scan# 1354
Delta R.T. -0.04 min
Lab File: VL035843.D
Acq: 4 Nov 2020 22:01

Tgt Ion: 114 Resp: 3990328
Ion Ratio Lower Upper
114 100
63 18.1 16.1 24.1
88 16.4 13.7 20.5



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

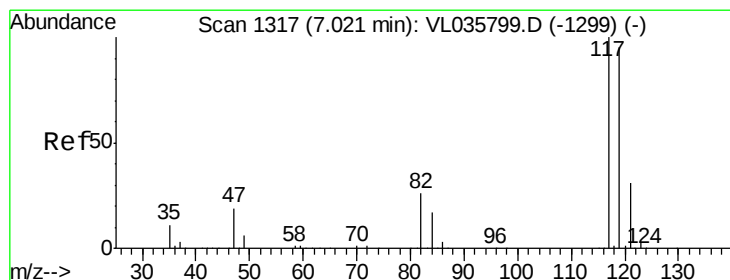
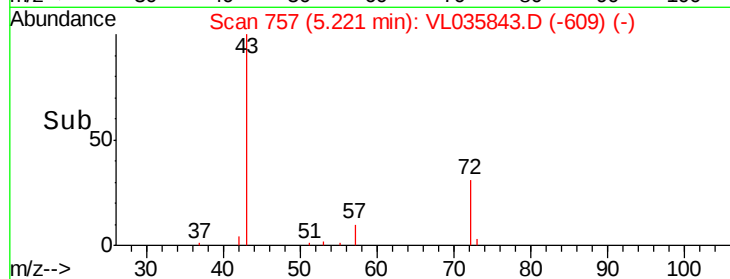
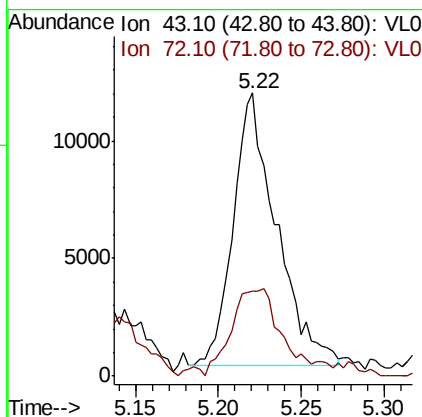
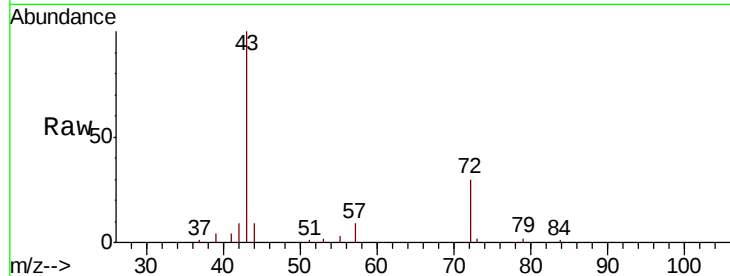




#34
 2-Butanone
 Concen: 0.162 ppbv
 RT: 5.22 min Scan# 757
 Delta R.T. -0.02 min
 Lab File: VL035843.D
 Acq: 4 Nov 2020 22:01

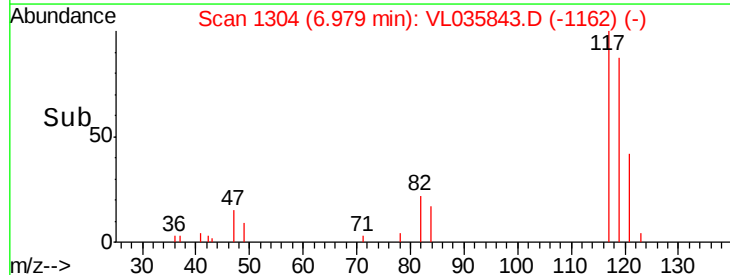
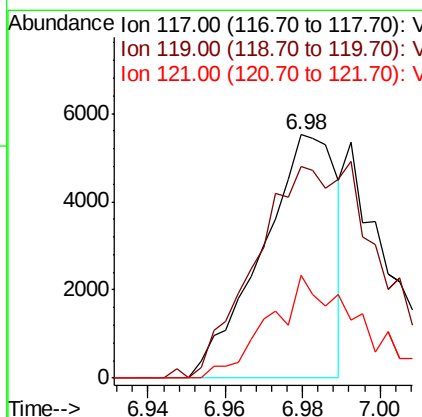
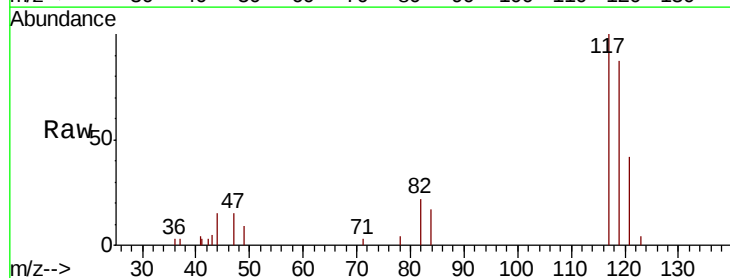
Instrument :
 MSVOA_L
 ClientSampled :

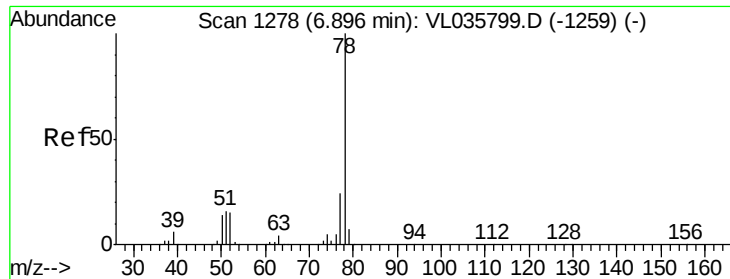
Tot Ion: 43 Resp: 20944
 Ion Ratio Lower Upper
 43 100
 72 41.2 26.5 39.7#



#35
 Carbon Tetrachloride
 Concen: 0.035 ppbv
 RT: 6.98 min Scan# 1304
 Delta R.T. -0.04 min
 Lab File: VL035843.D
 Acq: 4 Nov 2020 22:01

Tgt Ion: 117 Resp: 7409
 Ion Ratio Lower Upper
 117 100
 119 86.7 75.6 113.4
 121 42.2 25.1 37.7#

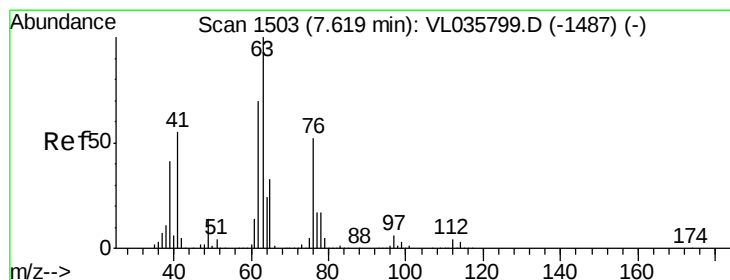
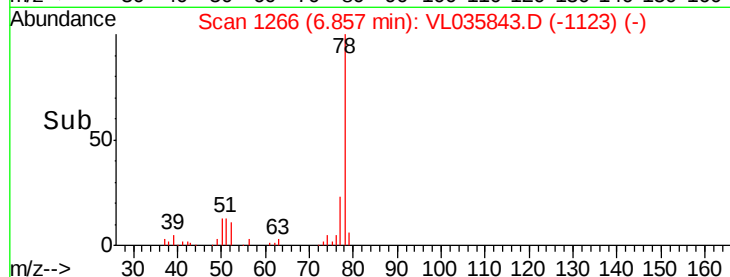
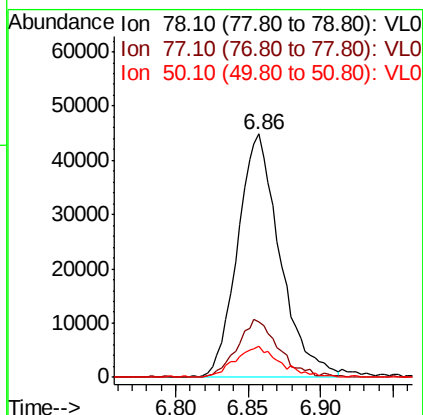
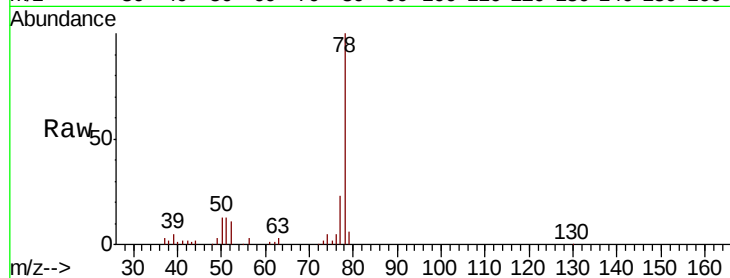




#36
Benzene
Concen: 0.308 ppbv
RT: 6.86 min Scan# 1266
Delta R.T. -0.04 min
Lab File: VL035843.D
Acq: 4 Nov 2020 22:01

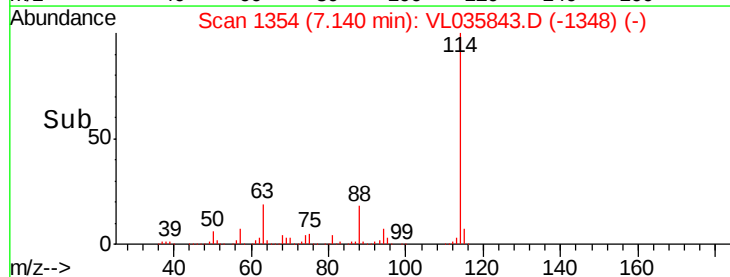
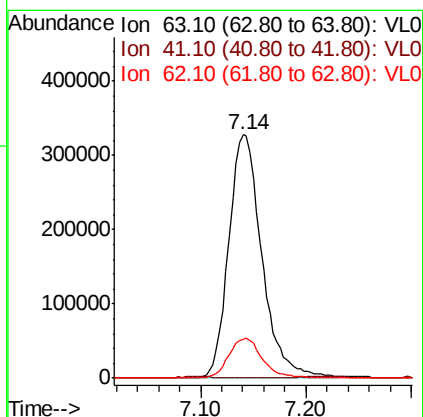
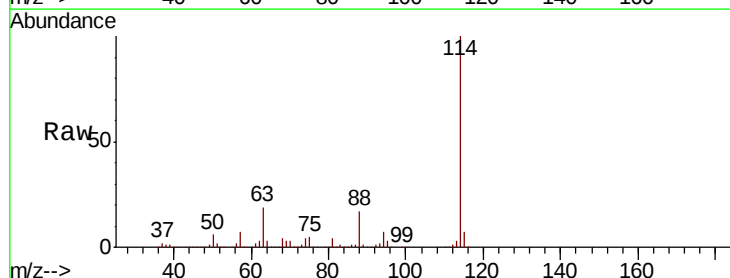
Instrument :
MSVOA_L
ClientSampleId :

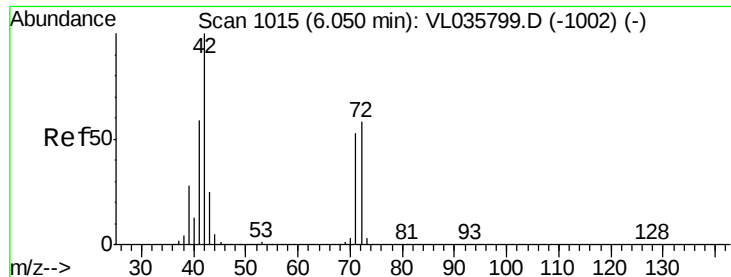
Tot Ion: 78 Resp: 91269
Ion Ratio Lower Upper
78 100
77 22.9 19.3 28.9
50 13.0 11.4 17.2



#39
1,2-Dichloropropane
Concen: 7.149 ppbv
RT: 7.14 min Scan# 1354
Delta R.T. -0.48 min
Lab File: VL035843.D
Acq: 4 Nov 2020 22:01

Tgt Ion: 63 Resp: 713973
Ion Ratio Lower Upper
63 100
41 0.0 43.8 65.6#
62 16.2 56.2 84.2#





#41

Tetrahydrofuran

Concen: 2.302 ppbv

RT: 5.66 min Scan# 893

Delta R.T. -0.39 min

Lab File: VL035843.D

Acq: 4 Nov 2020 22:01

Instrument :

MSVOA_L

ClientSampled :

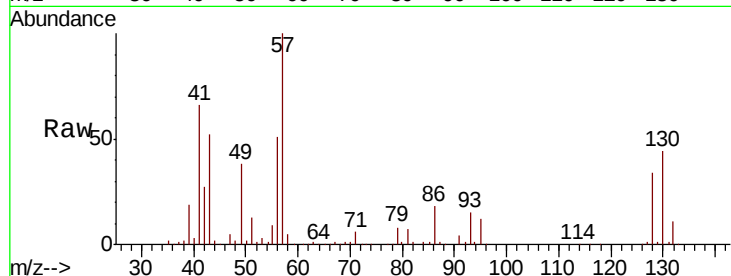
Tot Ion: 42 Resp: 169375

Ion Ratio Lower Upper

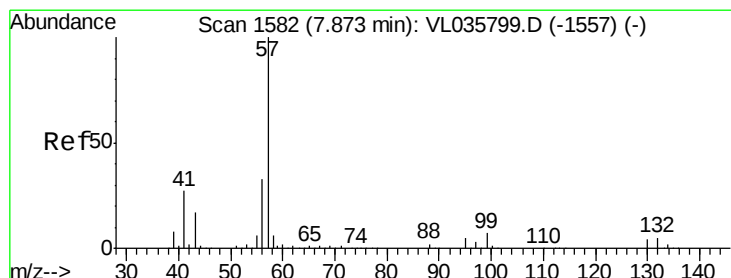
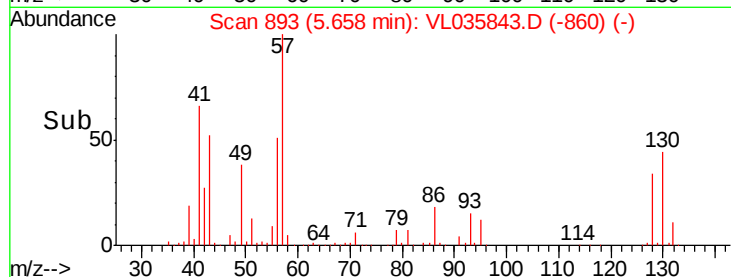
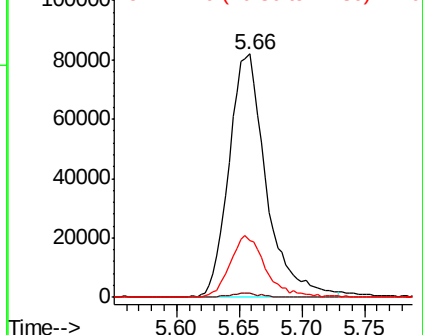
42 100

72 1.4 45.4 68.0#

71 24.4 43.4 65.2#



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



#44

2,2,4-Trimethylpentane

Concen: 0.119 ppbv

RT: 7.83 min Scan# 1570

Delta R.T. -0.04 min

Lab File: VL035843.D

Acq: 4 Nov 2020 22:01

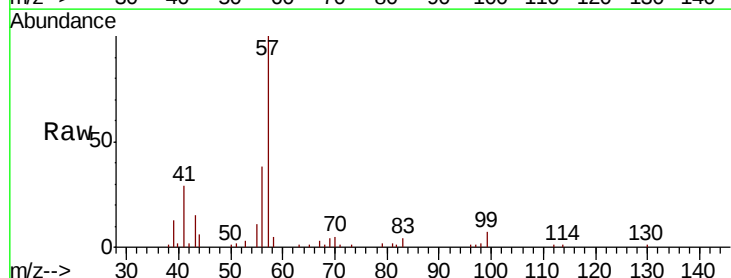
Tgt Ion: 57 Resp: 46870

Ion Ratio Lower Upper

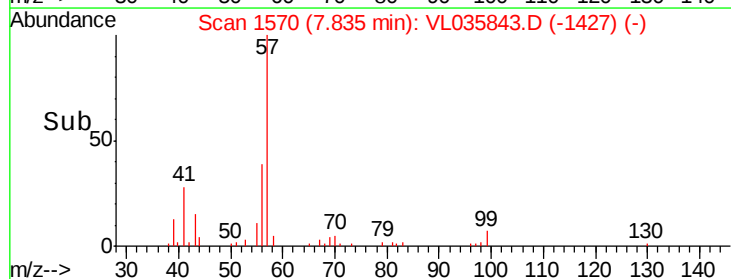
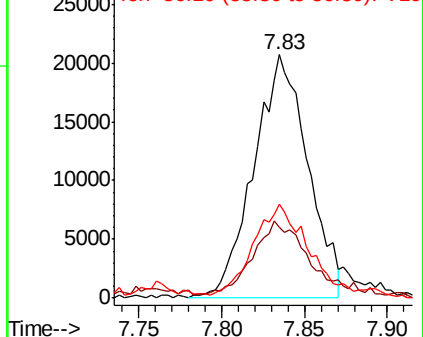
57 100

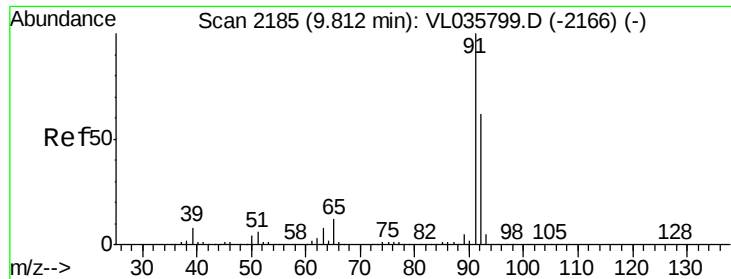
41 35.8 21.0 31.4#

56 41.5 25.4 38.0#



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





#53

Toluene

Concen: 0.632 ppbv

RT: 9.77 min Scan# 2172

Delta R.T. -0.04 min

Lab File: VL035843.D

Acq: 4 Nov 2020 22:01

Instrument :

MSVOA_L

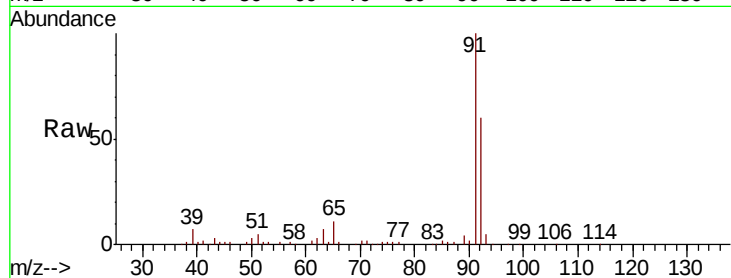
ClientSampleId :

Tot Ion: 91 Resp: 226226

Ion Ratio Lower Upper

91 100

92 61.4 49.8 74.6



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

9.77

120000

100000

80000

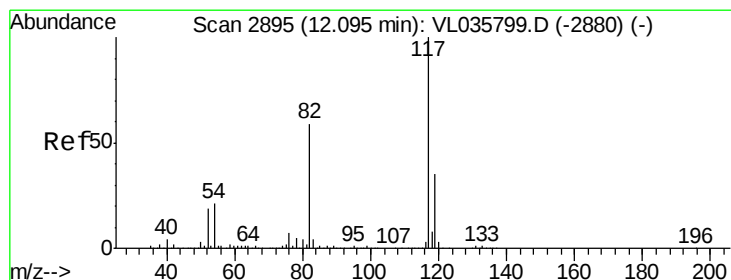
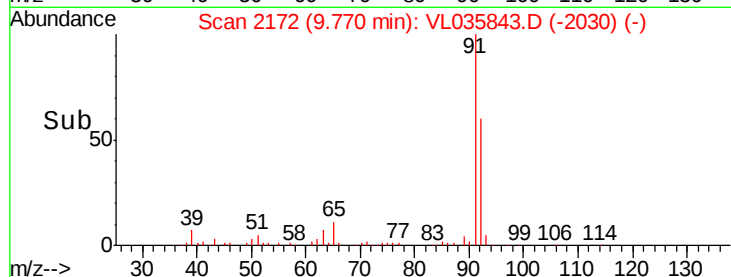
60000

40000

20000

0

Time-->



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.05 min Scan# 2881

Delta R.T. -0.05 min

Lab File: VL035843.D

Acq: 4 Nov 2020 22:01

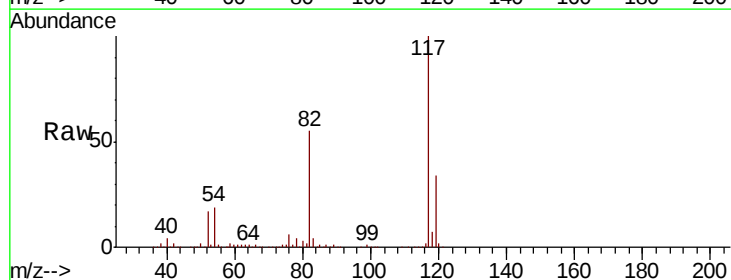
Tgt Ion: 117 Resp: 3597065

Ion Ratio Lower Upper

117 100

82 56.1 50.6 76.0

119 34.2 52.6 78.8#



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

12.05

2000000

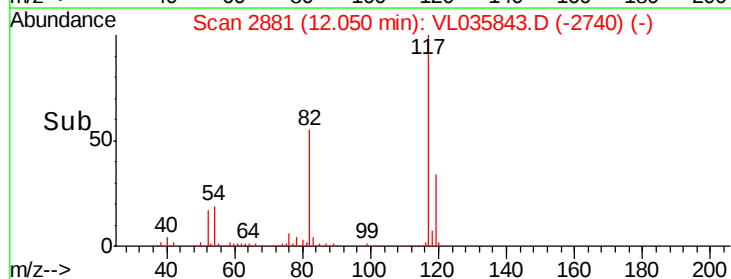
1500000

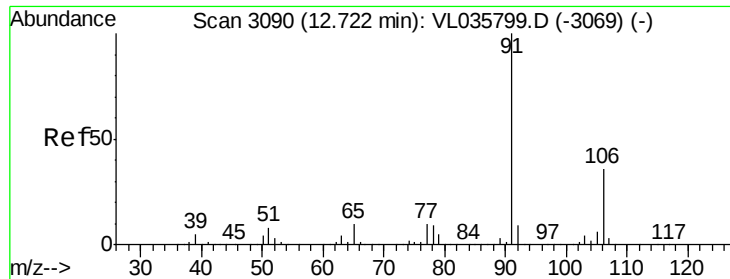
1000000

500000

0

Time-->





#58

Ethyl Benzene

Concen: 0.067 ppbv

RT: 12.68 min Scan# 3076

Delta R.T. -0.05 min

Lab File: VL035843.D

Acq: 4 Nov 2020 22:01

Instrument :

MSVOA_L

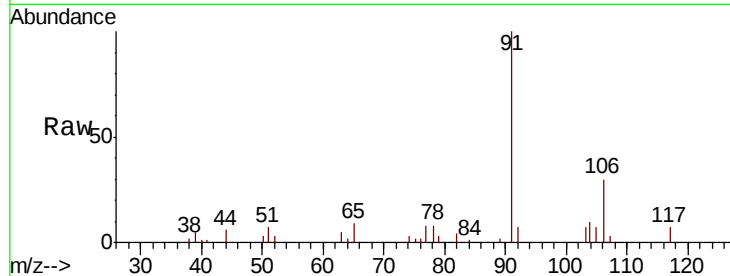
ClientSampleId :

Tot Ion: 91 Resp: 29330

Ion Ratio Lower Upper

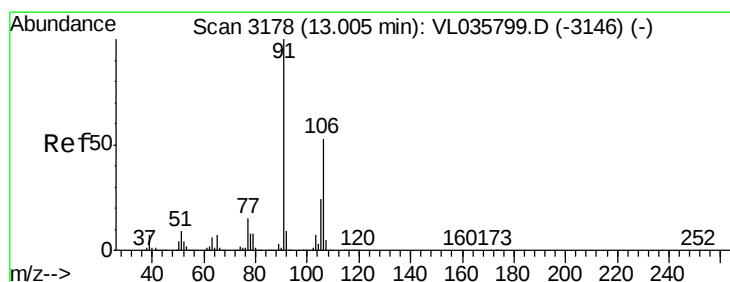
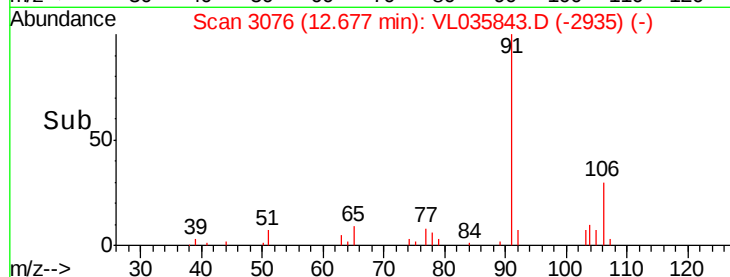
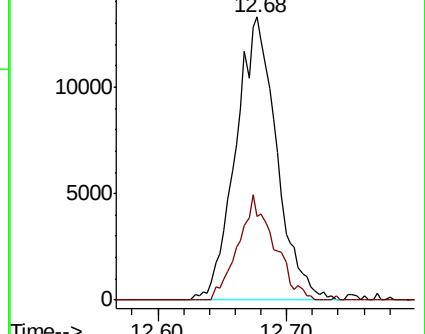
91 100

106 29.8 28.6 43.0



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#59

m/p-Xylene

Concen: 0.152 ppbv

RT: 12.93 min Scan# 3156

Delta R.T. -0.07 min

Lab File: VL035843.D

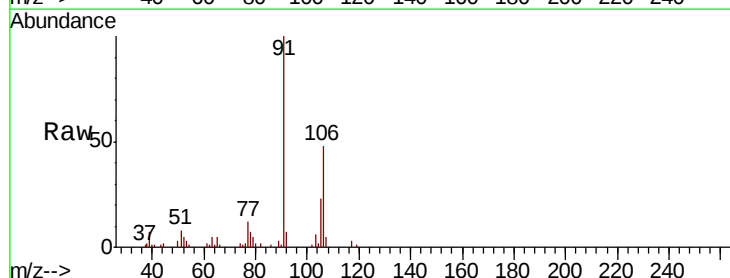
Acq: 4 Nov 2020 22:01

Tgt Ion: 91 Resp: 56338

Ion Ratio Lower Upper

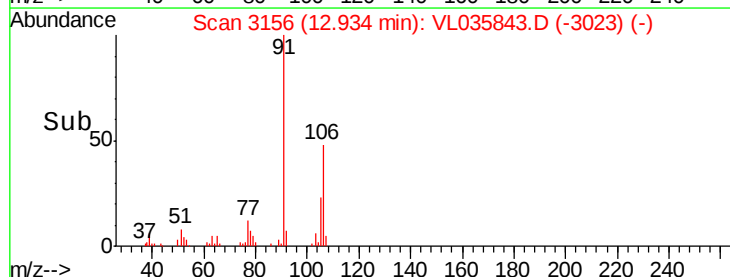
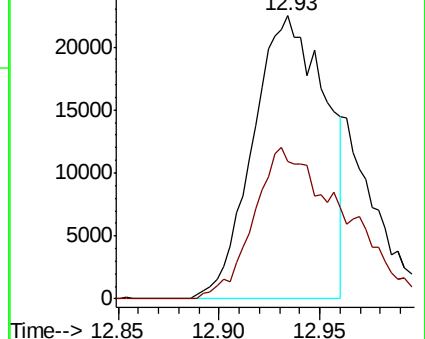
91 100

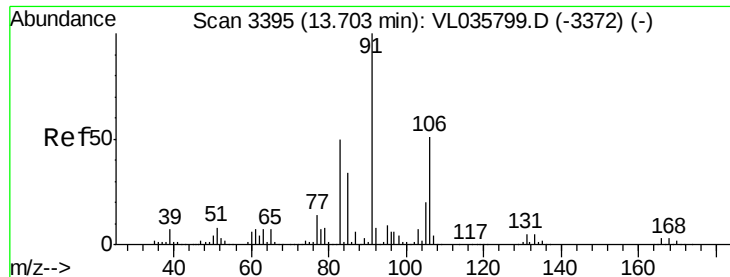
106 66.4 39.5 59.3#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

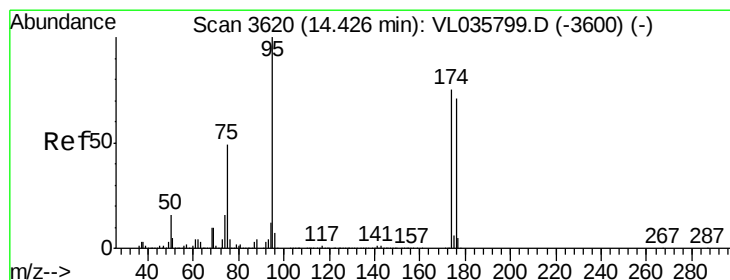
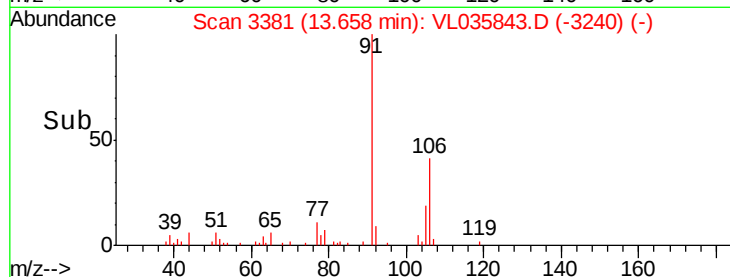
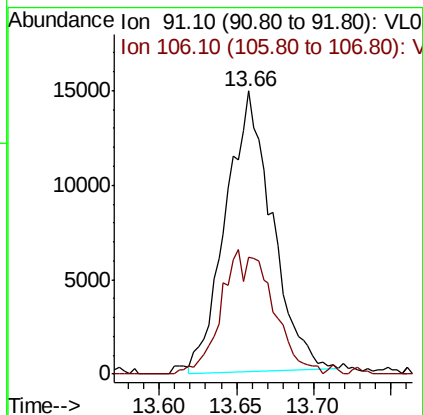
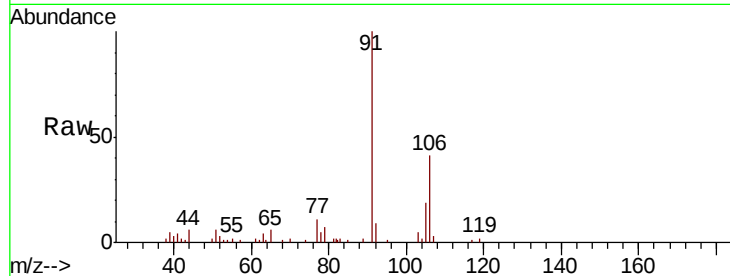




#60
o-Xylene
Concen: 0.086 ppbv
RT: 13.66 min Scan# 3381
Delta R.T. -0.05 min
Lab File: VL035843.D
Acq: 4 Nov 2020 22:01

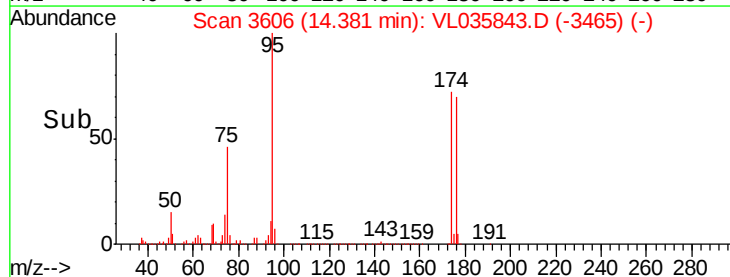
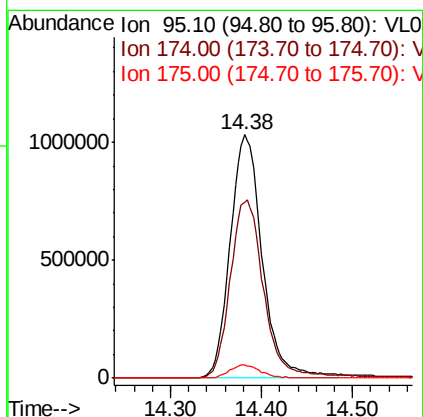
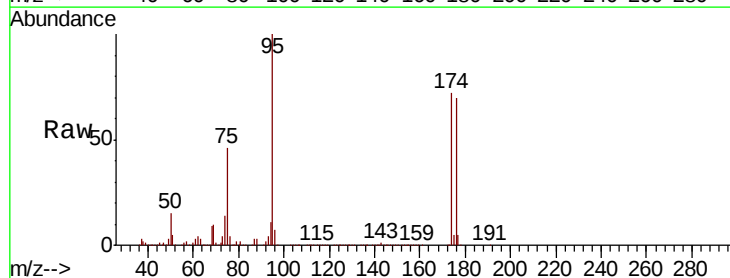
Instrument :
MSVOA_L
ClientSampled :

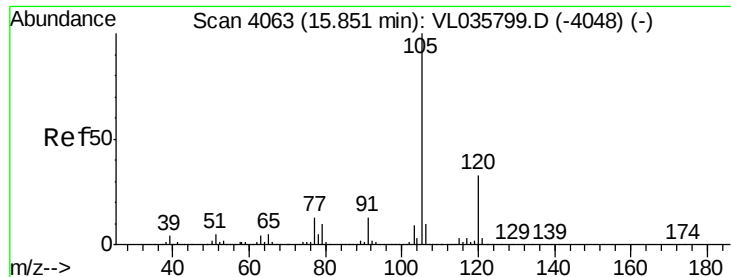
Tot Ion: 91 Resp: 30920
Ion Ratio Lower Upper
91 100
106 50.2 24.8 74.4



#68
1-Bromo-4-Fluorobenzene
Concen: 9.908 ppbv
RT: 14.38 min Scan# 3606
Delta R.T. -0.05 min
Lab File: VL035843.D
Acq: 4 Nov 2020 22:01

Tgt Ion: 95 Resp: 2532173
Ion Ratio Lower Upper
95 100
174 77.8 59.8 89.6
175 5.5 4.3 6.5





#72

4-Ethyltoluene

Concen: 0.031 ppbv

RT: 15.81 min Scan# 4050

Delta R.T. -0.04 min

Lab File: VL035843.D

Acq: 4 Nov 2020 22:01

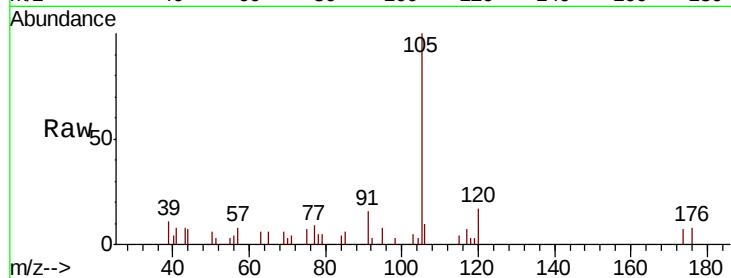
Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:105 Resp: 13626

Ion	Ratio	Lower	Upper
105	100		
120	35.0	25.9	38.9
91	14.2	9.9	14.9
77	12.9	10.2	15.2

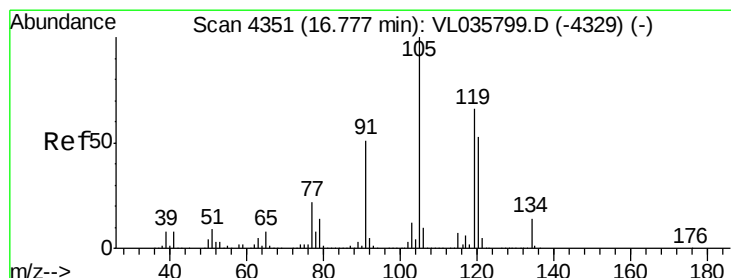
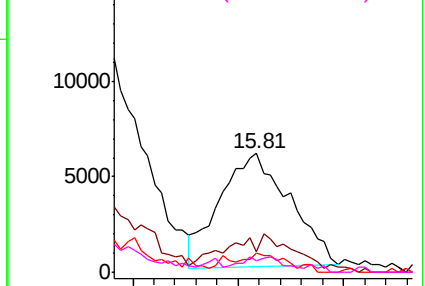
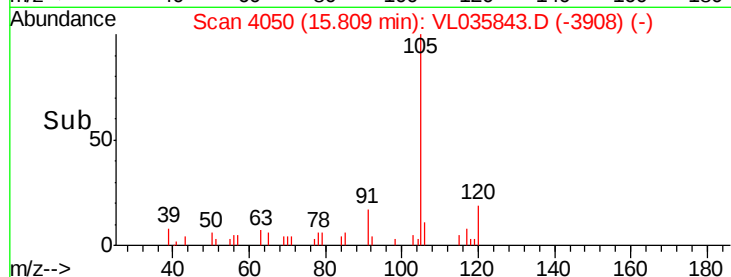


Abundance Ion 105.10 (104.80 to 105.80): V

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



#74

1,2,4-Trimethylbenzene

Concen: 0.096 ppbv

RT: 16.73 min Scan# 4336

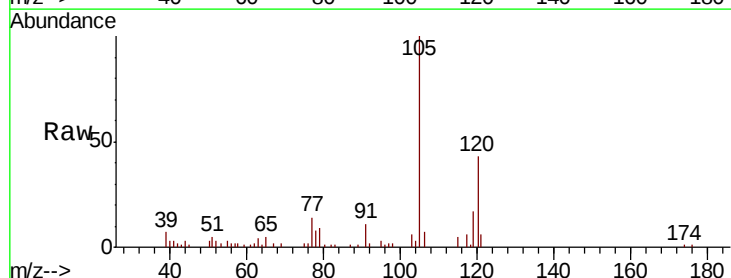
Delta R.T. -0.05 min

Lab File: VL035843.D

Acq: 4 Nov 2020 22:01

Tgt Ion:105 Resp: 41098

Ion	Ratio	Lower	Upper
105	100		
120	42.9	42.0	63.0
91	9.7	41.0	61.6#
77	14.6	17.3	25.9#



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

