

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL110520\
 Data File : VL035886.D
 Acq On : 6 Nov 2020 8:47
 Operator : SY/AP
 Sample : VIBLK
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 VIBLK

Quant Time: Nov 06 23:43:56 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	5.64	49	933276	10.00	ppbv	-0.03
33) 1,4-Difluorobenzene	7.15	114	3516915	10.00	ppbv	-0.03
55) Chlorobenzene-d5	12.06	117	3194497	10.00	ppbv	-0.04

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.39	95	2288177	10.08	ppbv	-0.03
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.80%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.17	85	10481	0.060 ppbv	91
3) Chlorodifluoromethane	2.97	51	8127	0.073 ppbv	96
4) Chloromethane	3.12	50	2412	0.044 ppbv #	60
5) Vinyl Chloride	3.24	62	3498	0.051 ppbv #	76
7) Chloroethane	3.54	64	1126	0.046 ppbv #	84
8) Dichlorotetrafluoroethane	3.17	85	10481	0.052 ppbv	89
9) Propene	3.00	41	6002	0.147 ppbv	93
11) Trichlorofluoromethane	3.93	101	6857	0.031 ppbv	86
12) 1,1,2-Trichlorotrifluoroet	4.47	101	5601	0.034 ppbv #	13
13) Ethanol	3.60	45	894	0.101 ppbv #	35
14) Bromoethene	3.72	108	3602	0.048 ppbv #	85
15) Acetone	3.85	43	35255	0.353 ppbv #	54
16) 1,3-Butadiene	3.31	39	1370	0.032 ppbv #	57
18) 1,1-Dichloroethene	4.26	96	2741	0.036 ppbv	86
20) Methylene Chloride	4.32	84	12481	0.178 ppbv	93
21) Allyl Chloride	4.39	41	2741	0.051 ppbv	87
22) trans-1,2-Dichloroethene	4.86	96	4497	0.059 ppbv #	78
24) 1,1-Dichloroethane	4.99	63	4037	0.030 ppbv #	95
25) Ethyl Acetate	5.66	43	7620	0.039 ppbv #	87
26) Hexane	5.66	57	5919	0.055 ppbv #	57
31) cis-1,2-Dichloroethene	5.53	61	3962	0.036 ppbv	95
37) 1,2-Dichloroethane	6.28	62	6883	0.058 ppbv	96
39) 1,2-Dichloropropane	7.15	63	690437	7.844 ppbv #	31
52) Tetrachloroethene	11.20	164	4049	0.033 ppbv #	68
56) 1,1,1,2-Tetrachloroethane	12.10	131	6163	0.043 ppbv #	63
57) Chlorobenzene	12.12	112	16062	0.063 ppbv #	90
63) 1,1,2,2-Tetrachloroethane	13.66	83	13287	0.054 ppbv	97

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

```
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL110520\  
Data File : VL035886.D  
Acq On    : 6 Nov 2020 8:47  
Operator  : SY/AP  
Sample    : VIBLK  
Misc      : 400ml/MSVOA L  
ALS Vial  : 1 Sample Multiplier: 1
```



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.64 min Scan# 888

Delta R.T. -0.03 min

Lab File: VL035886.D

Acq: 6 Nov 2020 8:47

Instrument :

MSVOA_L

ClientSampleId :

VIBLK

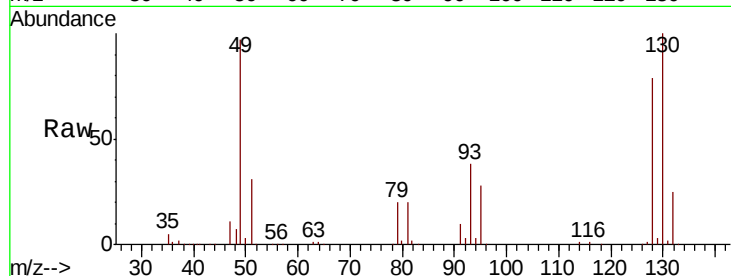
Tot Ion: 49 Resp: 933276

Ion Ratio Lower Upper

49 100

128 80.7 41.5 124.6

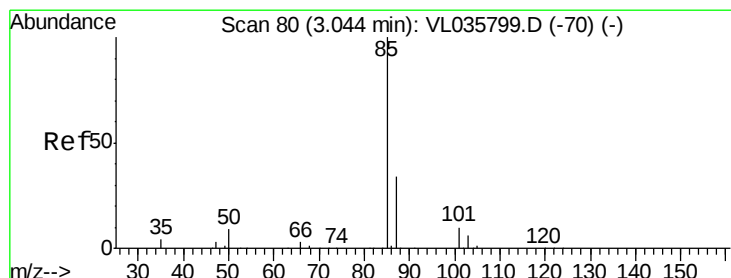
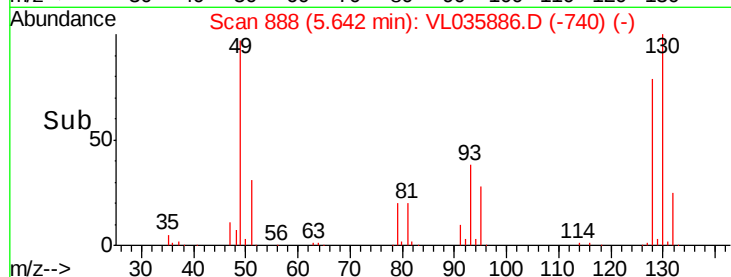
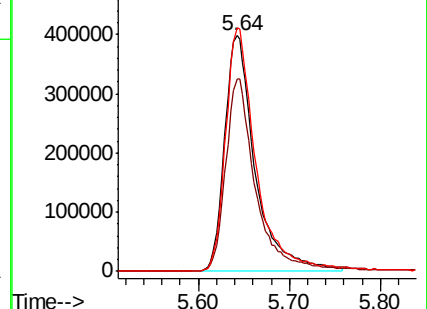
130 104.1 53.7 161.1



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.060 ppbv

RT: 3.17 min Scan# 118

Delta R.T. 0.12 min

Lab File: VL035886.D

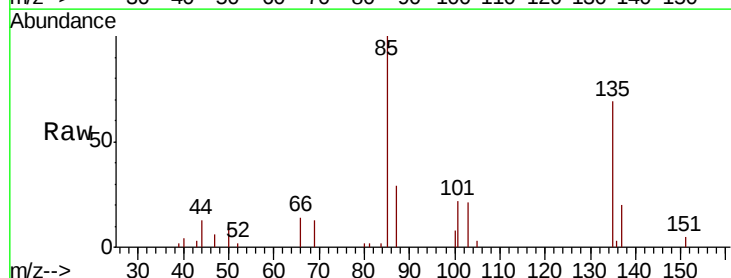
Acq: 6 Nov 2020 8:47

Tgt Ion: 85 Resp: 10481

Ion Ratio Lower Upper

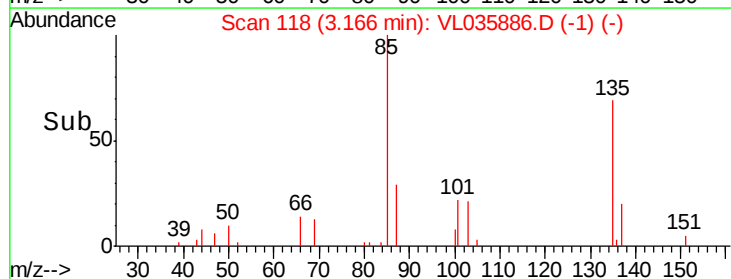
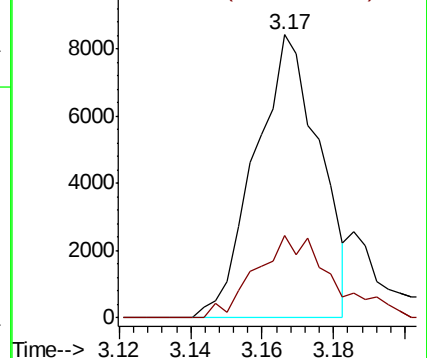
85 100

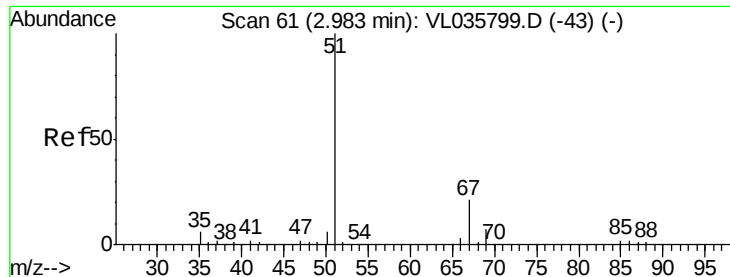
87 29.0 27.1 40.7



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.073 ppbv

RT: 2.97 min Scan# 58

Delta R.T. -0.01 min

Lab File: VL035886.D

Acq: 6 Nov 2020 8:47

Instrument :

MSVOA_L

ClientSampleId :

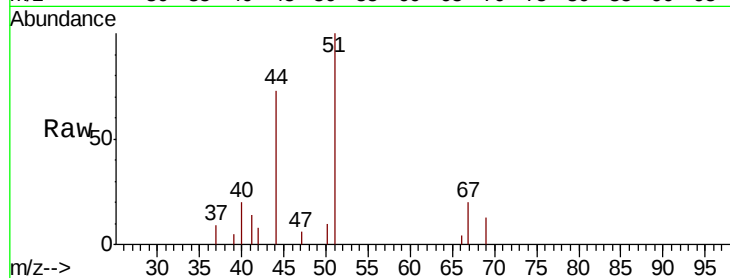
VIBLK

Tot Ion: 51 Resp: 8127

Ion Ratio Lower Upper

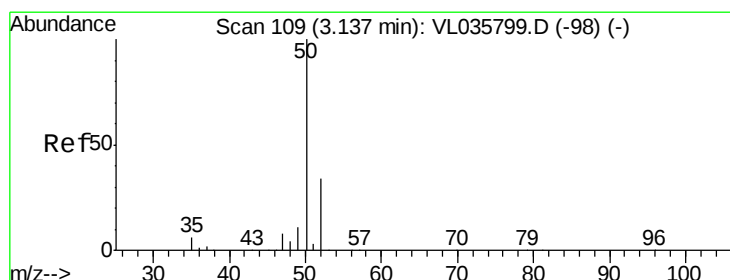
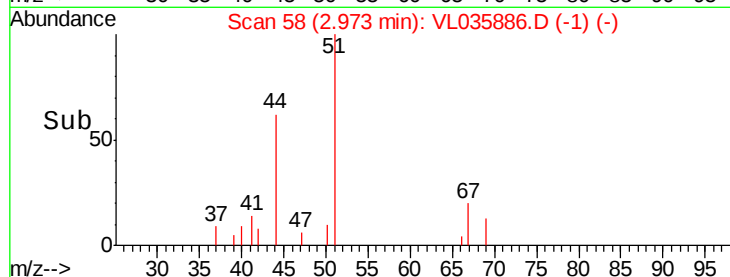
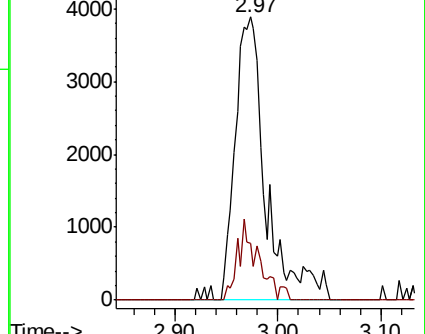
51 100

67 19.4 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: 0.044 ppbv

RT: 3.12 min Scan# 105

Delta R.T. -0.01 min

Lab File: VL035886.D

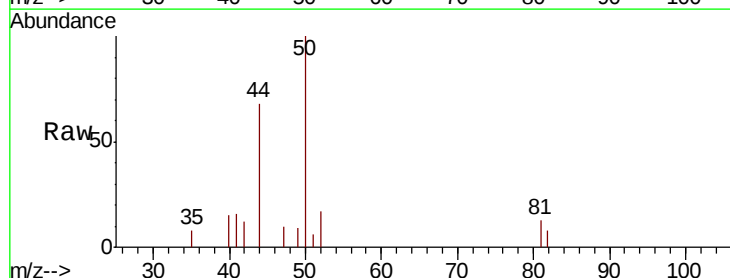
Acq: 6 Nov 2020 8:47

Tgt Ion: 50 Resp: 2412

Ion Ratio Lower Upper

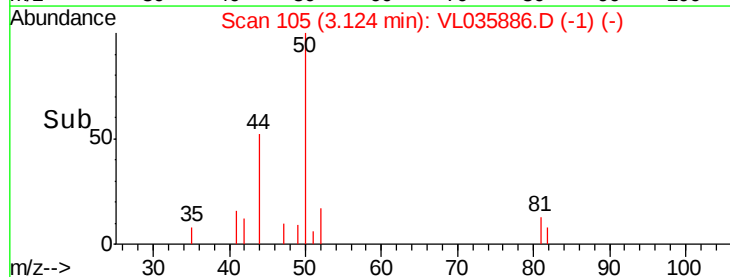
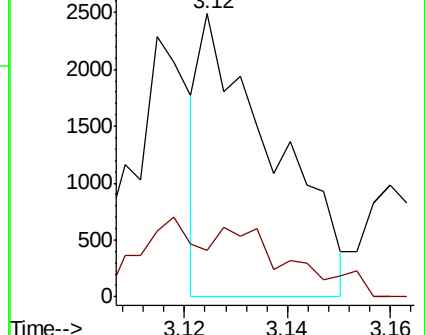
50 100

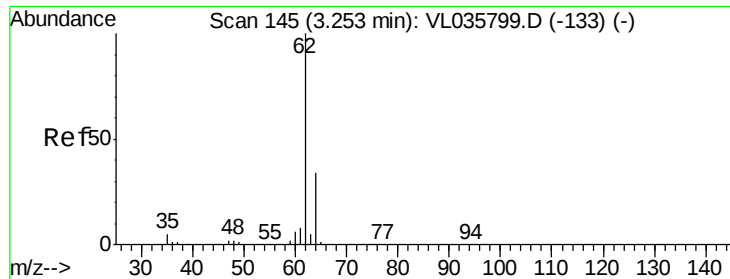
52 11.1 27.1 40.7#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#5

Vinyl Chloride

Concen: 0.051 ppbv

RT: 3.24 min Scan# 141

Delta R.T. -0.01 min

Lab File: VL035886.D

Acq: 6 Nov 2020 8:47

Instrument :

MSVOA_L

ClientSampleId :

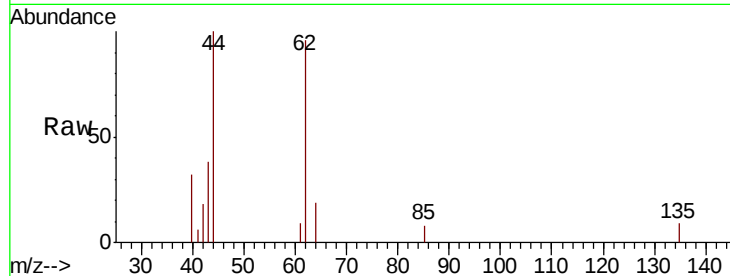
VIBLK

Tot Ion: 62 Resp: 3498

Ion Ratio Lower Upper

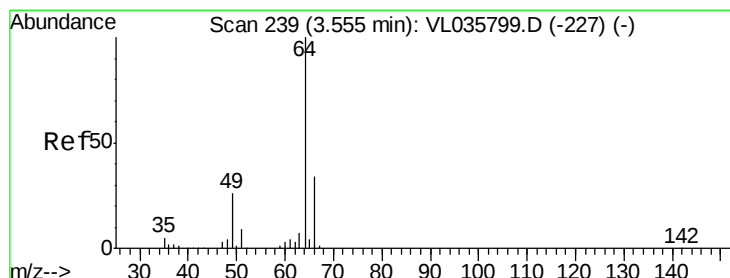
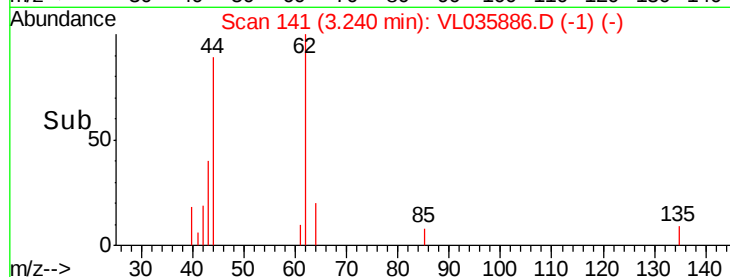
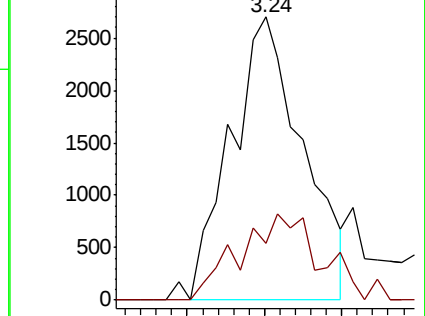
62 100

64 20.2 26.9 40.3#



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 64.10 (63.80 to 64.80): VL0



#7

Chloroethane

Concen: 0.046 ppbv

RT: 3.54 min Scan# 233

Delta R.T. -0.02 min

Lab File: VL035886.D

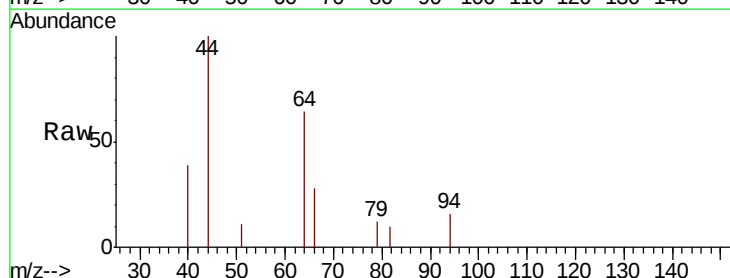
Acq: 6 Nov 2020 8:47

Tgt Ion: 64 Resp: 1126

Ion Ratio Lower Upper

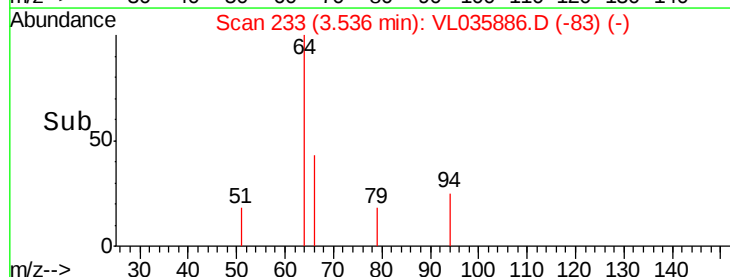
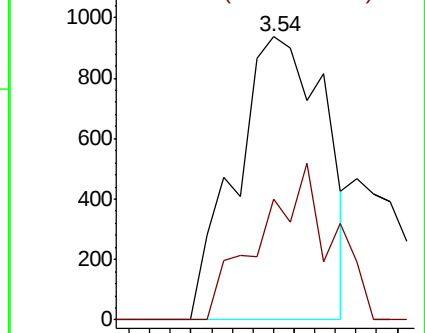
64 100

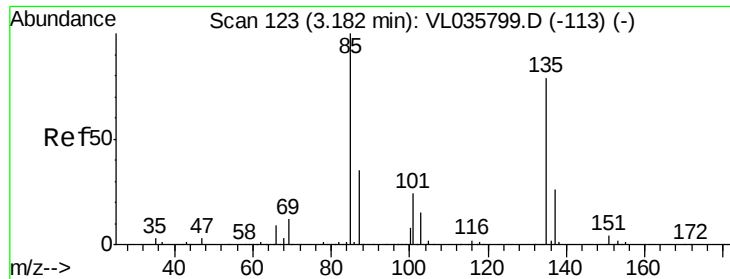
66 42.7 27.0 40.6#



Abundance Ion 64.10 (63.80 to 64.80): VL0

Ion 66.10 (65.80 to 66.80): VL0

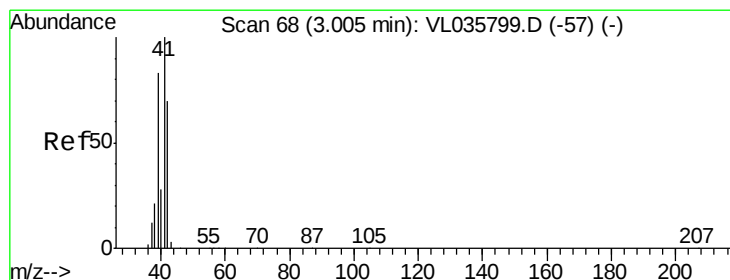
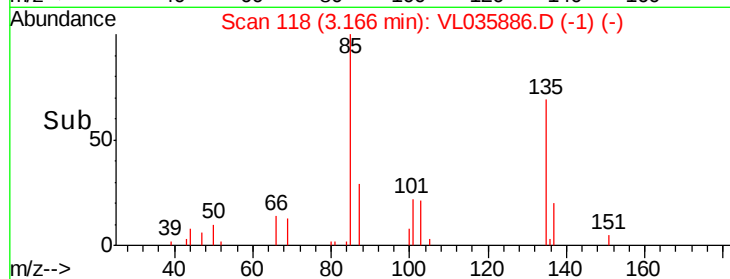
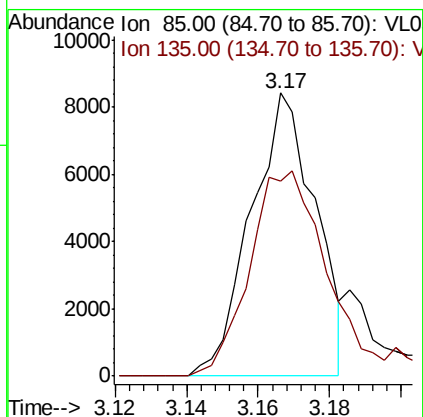
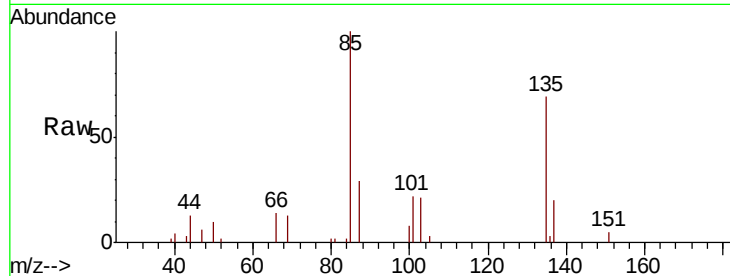




#8
Dichlorotetrafluoroethane
Concen: 0.052 ppbv
RT: 3.17 min Scan# 118
Delta R.T. -0.02 min
Lab File: VL035886.D
Acq: 6 Nov 2020 8:47

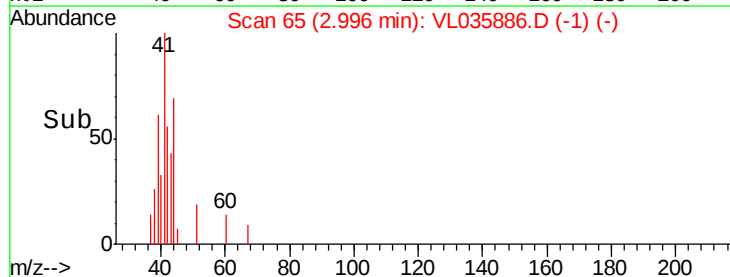
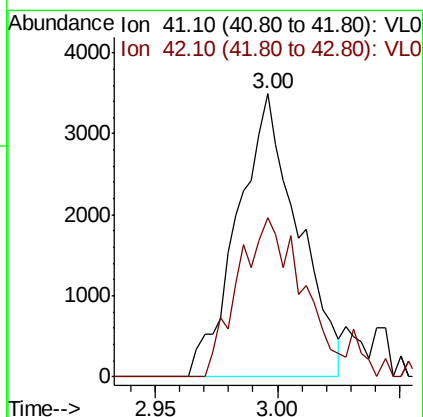
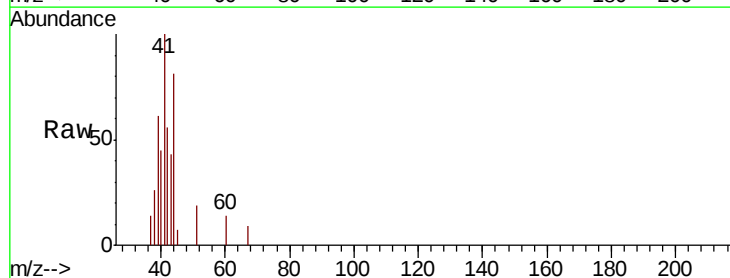
Instrument :
MSVOA_L
ClientSampleId :
VIBLK

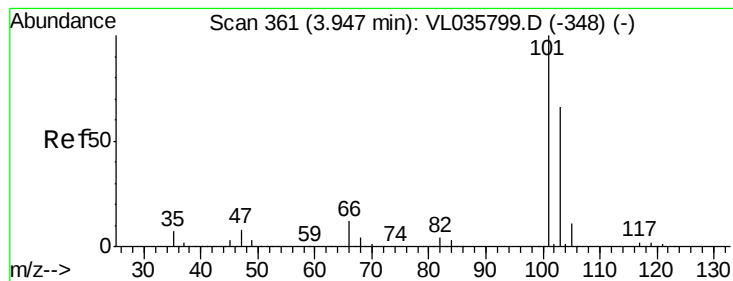
Tot Ion: 85 Resp: 10481
Ion Ratio Lower Upper
85 100
135 90.6 64.6 96.8



#9
Propene
Concen: 0.147 ppbv
RT: 3.00 min Scan# 65
Delta R.T. -0.01 min
Lab File: VL035886.D
Acq: 6 Nov 2020 8:47

Tgt Ion: 41 Resp: 6002
Ion Ratio Lower Upper
41 100
42 64.7 56.2 84.4





#11

Trichlorofluoromethane

Concen: 0.031 ppbv

RT: 3.93 min Scan# 356

Delta R.T. -0.02 min

Lab File: VL035886.D

Acq: 6 Nov 2020 8:47

Instrument :

MSVOA_L

ClientSampleId :

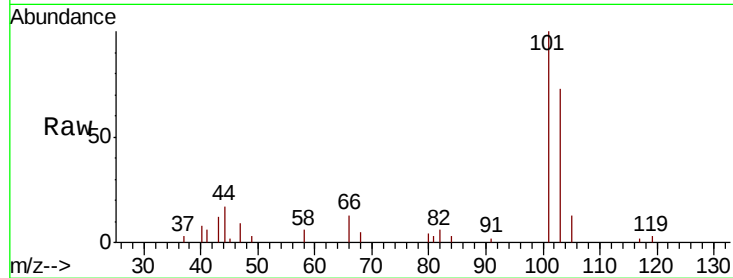
VIBLK

Tot Ion:101 Resp: 6857

Ion Ratio Lower Upper

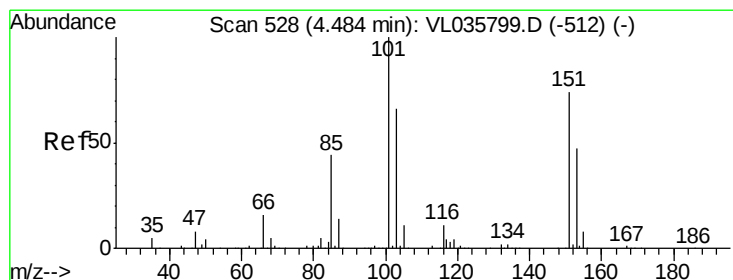
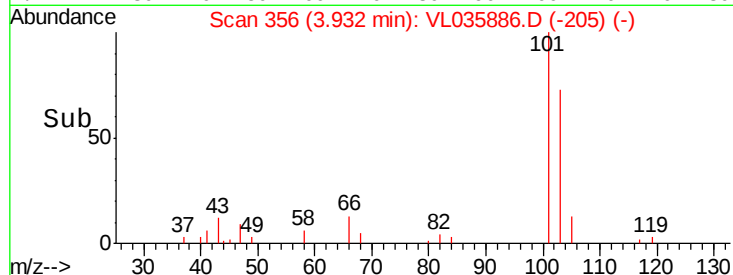
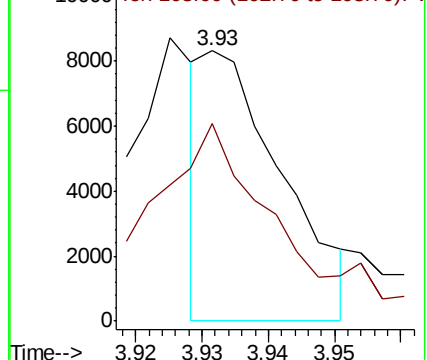
101 100

103 77.3 53.0 79.4



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.034 ppbv

RT: 4.47 min Scan# 523

Delta R.T. -0.02 min

Lab File: VL035886.D

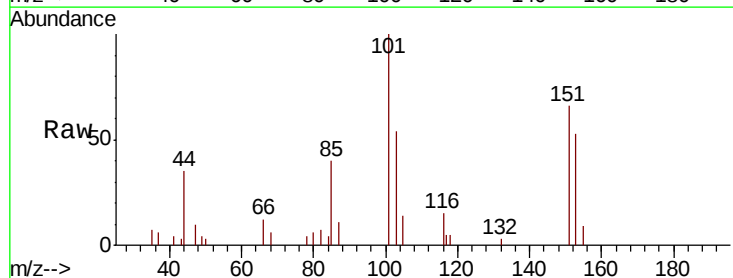
Acq: 6 Nov 2020 8:47

Tgt Ion:101 Resp: 5601

Ion Ratio Lower Upper

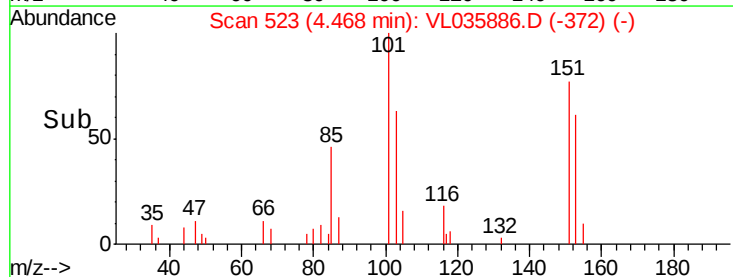
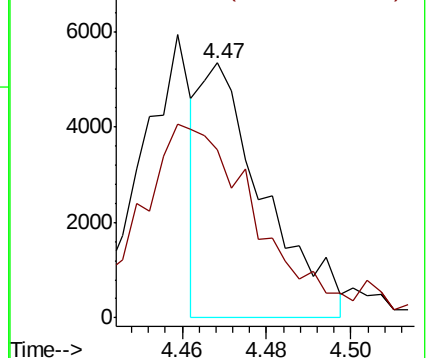
101 100

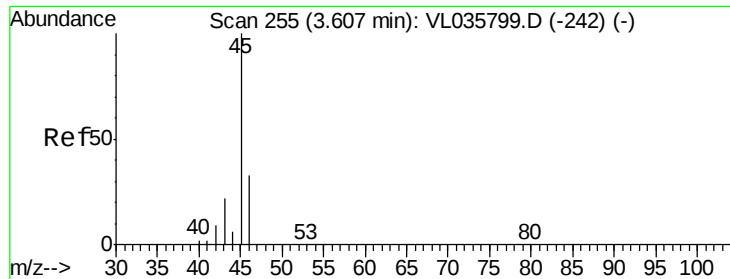
151 0.0 58.9 88.3#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V





#13

Ethanol

Concen: 0.101 ppbv

RT: 3.60 min Scan# 252

Delta R.T. -0.01 min

Lab File: VL035886.D

Acq: 6 Nov 2020 8:47

Instrument :

MSVOA_L

ClientSampleId :

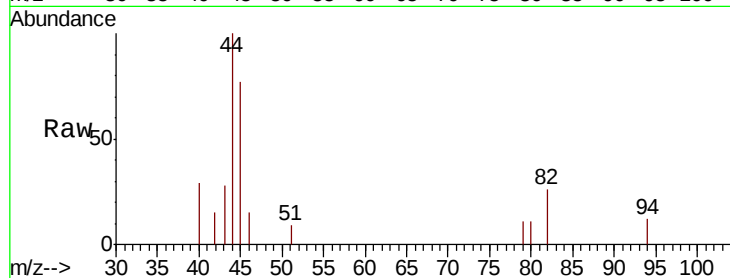
VIBLK

Tot Ion: 45 Resp: 894

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

3.60

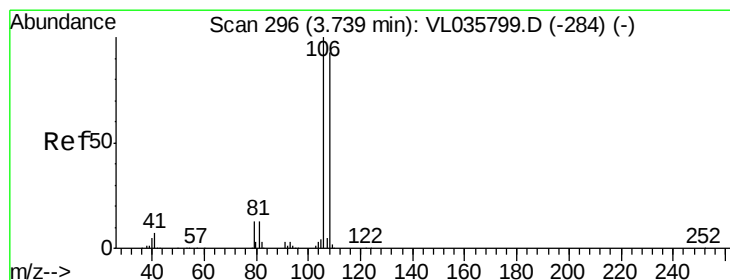
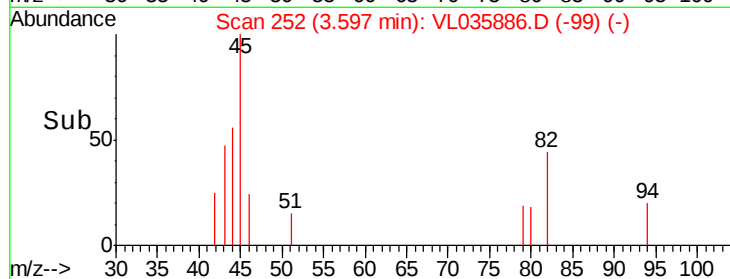
1500

1000

500

0

Time--> 3.57 3.58 3.59 3.60 3.61



#14

Bromoethene

Concen: 0.048 ppbv

RT: 3.72 min Scan# 291

Delta R.T. -0.02 min

Lab File: VL035886.D

Acq: 6 Nov 2020 8:47

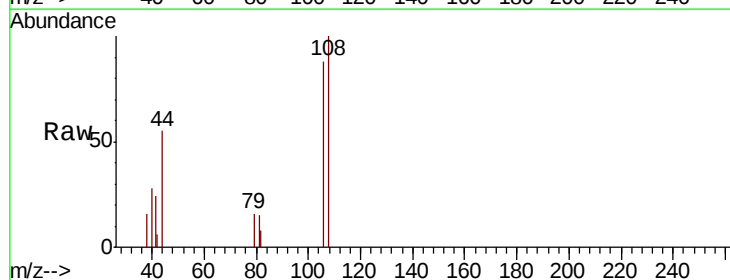
Tgt Ion: 108 Resp: 3602

Ion Ratio Lower Upper

108 100

106 122.2 85.3 127.9

79 20.3 11.6 17.4#



Abundance Ion 108.00 (107.70 to 108.70): V

Ion 106.00 (105.70 to 106.70): V

Ion 79.00 (78.70 to 79.70): VL0

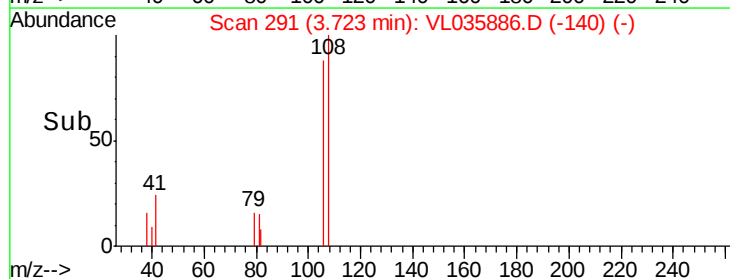
3000

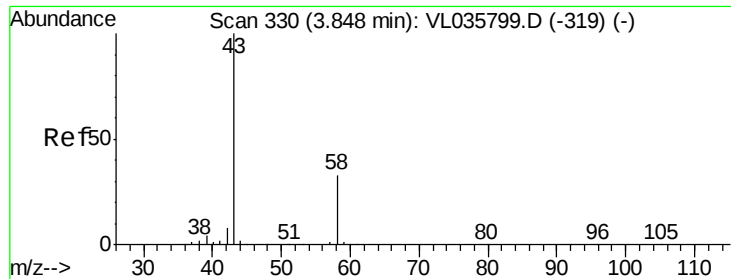
2000

1000

0

Time--> 3.70 3.75





#15

Acetone

Concen: 0.353 ppbv

RT: 3.85 min Scan# 331

Delta R.T. 0.00 min

Lab File: VL035886.D

Acq: 6 Nov 2020 8:47

Instrument :

MSVOA_L

ClientSampleId :

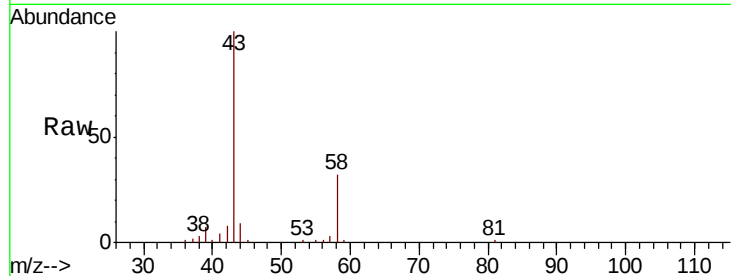
VIBLK

Tot Ion: 43 Resp: 35255

Ion Ratio Lower Upper

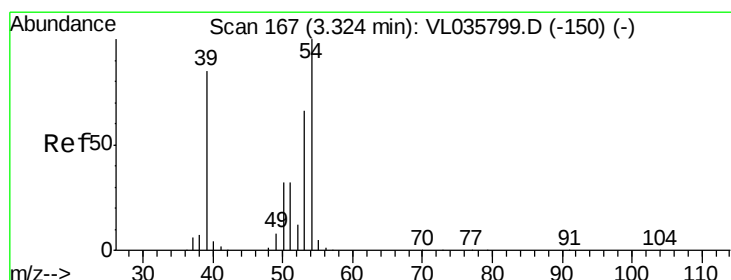
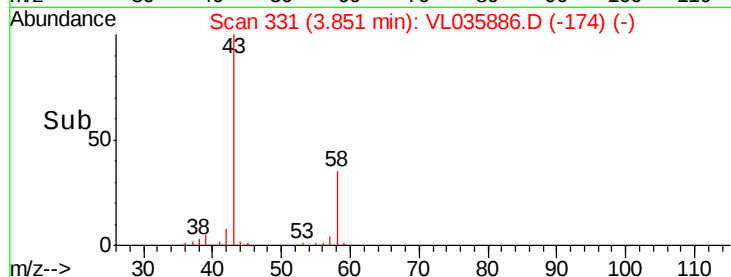
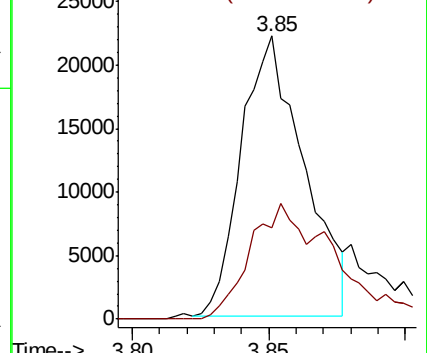
43 100

58 60.7 27.5 41.3#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#16

1,3-Butadiene

Concen: 0.032 ppbv

RT: 3.31 min Scan# 163

Delta R.T. -0.01 min

Lab File: VL035886.D

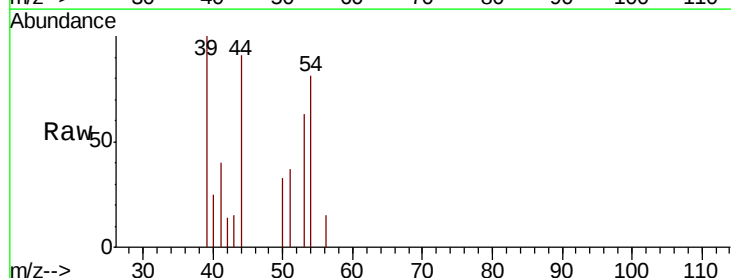
Acq: 6 Nov 2020 8:47

Tgt Ion: 39 Resp: 1370

Ion Ratio Lower Upper

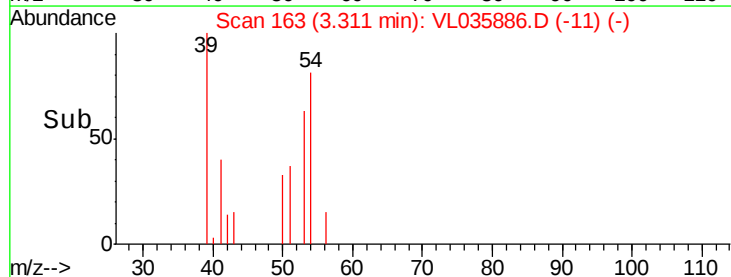
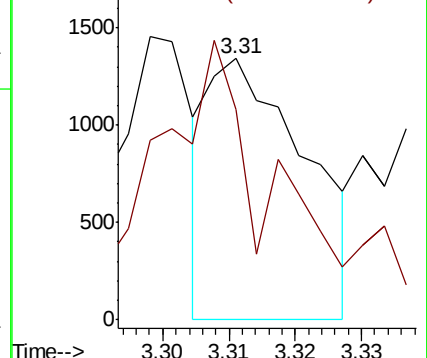
39 100

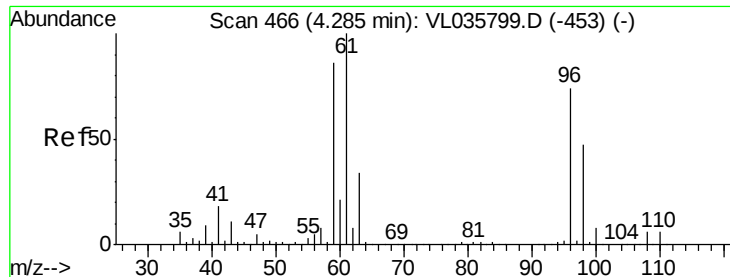
54 154.3 87.1 130.7#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0

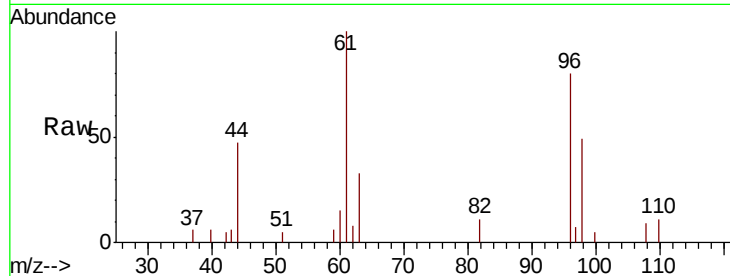




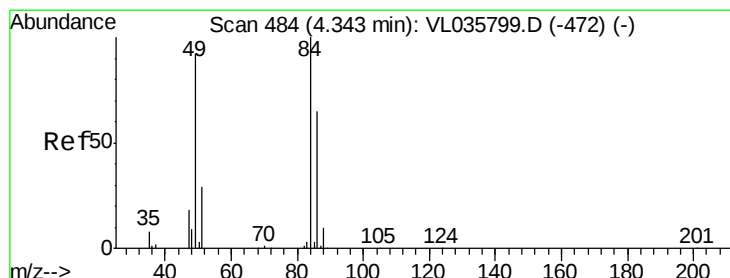
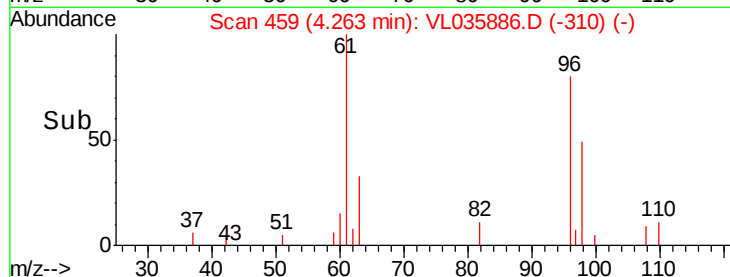
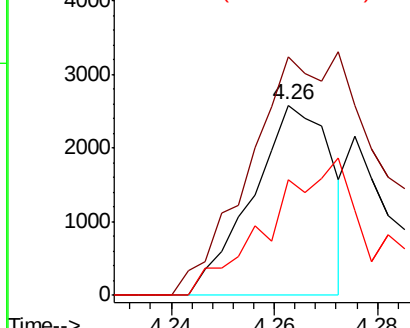
#18
 1,1-Dichloroethene
 Concen: 0.036 ppbv
 RT: 4.26 min Scan# 459
 Delta R.T. -0.02 min
 Lab File: VL035886.D
 Acq: 6 Nov 2020 8:47

Instrument :
 MSVOA_L
 ClientSampleID :
 VIBLK

Tot Ion: 96 Resp: 2741
 Ion Ratio Lower Upper
 96 100
 61 112.1 108.5 162.7
 98 60.9 50.7 76.1

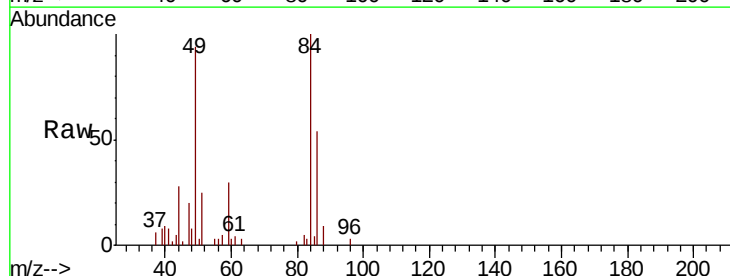


Abundance Ion 96.00 (95.70 to 96.70): VL0
 Ion 61.10 (60.80 to 61.80): VL0
 Ion 98.00 (97.70 to 98.70): VL0

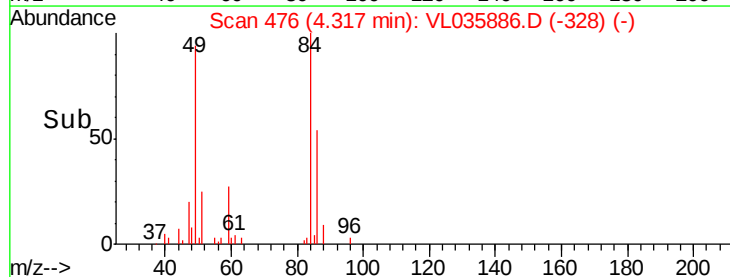
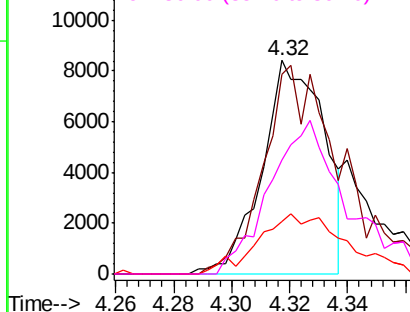


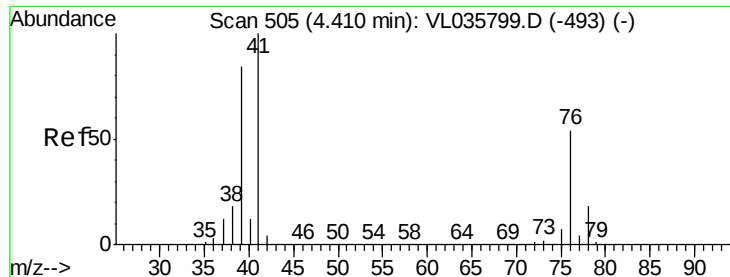
#20
 Methylene Chloride
 Concen: 0.178 ppbv
 RT: 4.32 min Scan# 476
 Delta R.T. -0.03 min
 Lab File: VL035886.D
 Acq: 6 Nov 2020 8:47

Tgt Ion: 84 Resp: 12481
 Ion Ratio Lower Upper
 84 100
 49 93.7 73.8 110.8
 51 24.5 23.0 34.4
 86 53.6 52.1 78.1



Abundance Ion 84.00 (83.70 to 84.70): VL0
 Ion 49.10 (48.80 to 49.80): VL0
 Ion 51.10 (50.80 to 51.80): VL0
 Ion 86.00 (85.70 to 86.70): VL0





#21

Allvl Chloride

Concen: 0.051 ppbv

RT: 4.39 min Scan# 498

Delta R.T. -0.02 min

Lab File: VL035886.D

Acq: 6 Nov 2020 8:47

Instrument :

MSVOA_L

ClientSampleId :

VIBLK

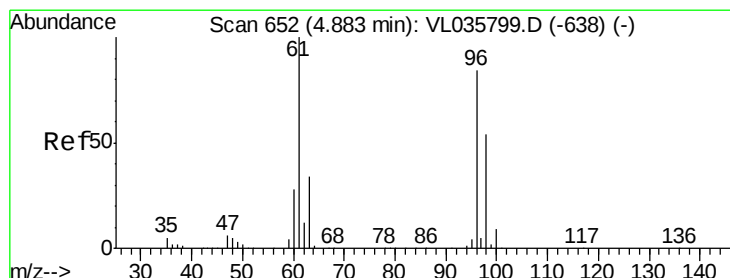
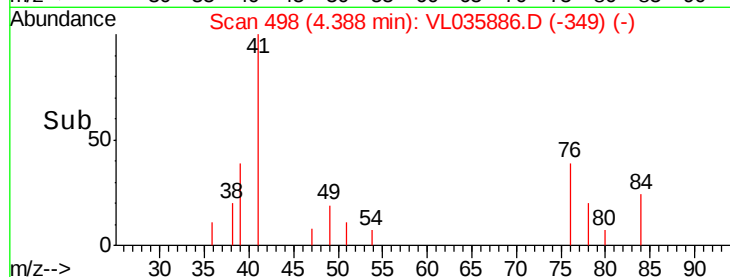
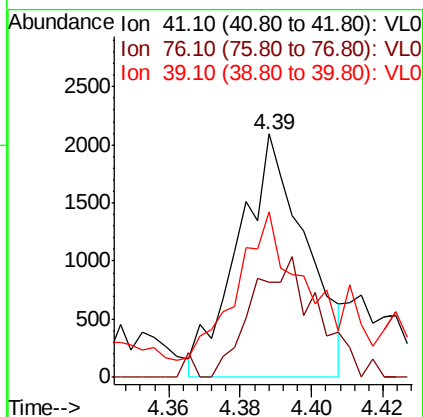
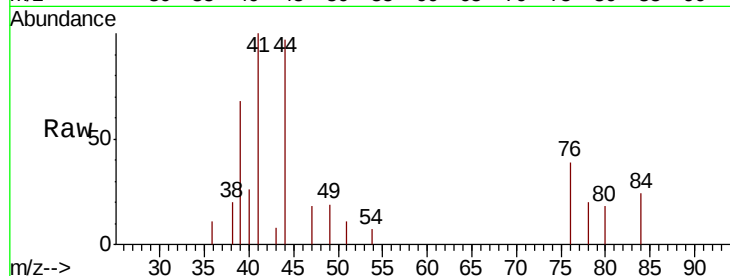
Tot Ion: 41 Resp: 2741

Ion Ratio Lower Upper

41 100

76 50.0 42.6 63.8

39 99.6 67.0 100.4



#22

trans-1,2-Dichloroethene

Concen: 0.059 ppbv

RT: 4.86 min Scan# 645

Delta R.T. -0.02 min

Lab File: VL035886.D

Acq: 6 Nov 2020 8:47

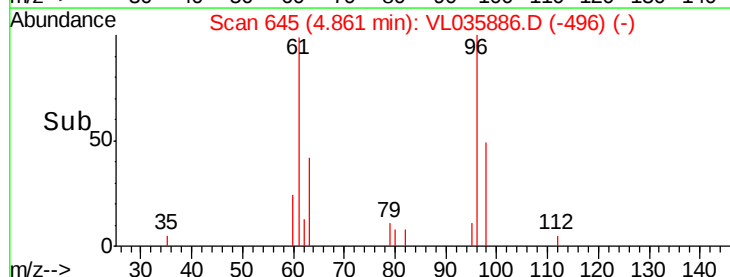
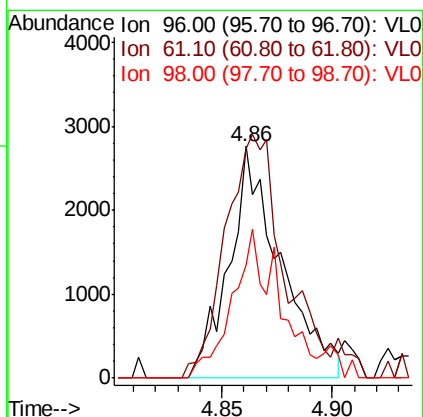
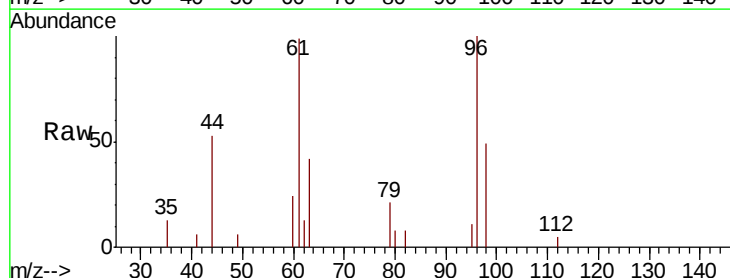
Tgt Ion: 96 Resp: 4497

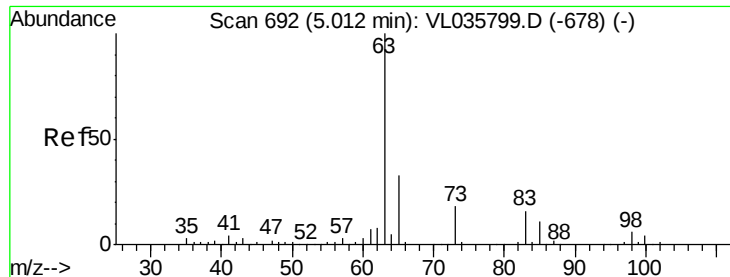
Ion Ratio Lower Upper

96 100

61 92.9 95.4 143.0#

98 49.0 51.8 77.6#





#24

1,1-Dichloroethane

Concen: 0.030 ppbv

RT: 4.99 min Scan# 684

Delta R.T. -0.03 min

Lab File: VL035886.D

Acq: 6 Nov 2020 8:47

Instrument :

MSVOA_L

ClientSampleId :

VIBLK

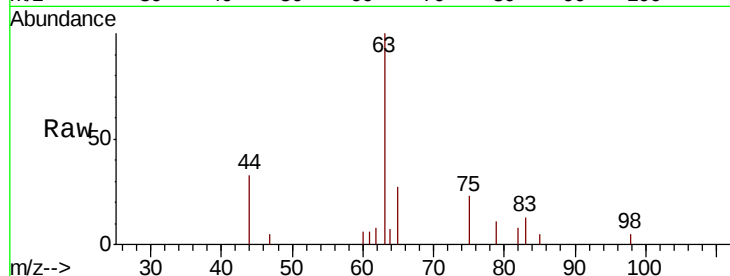
Tot Ion: 63 Resp: 4037

Ion Ratio Lower Upper

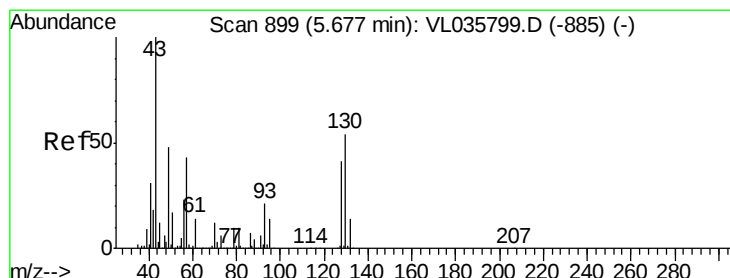
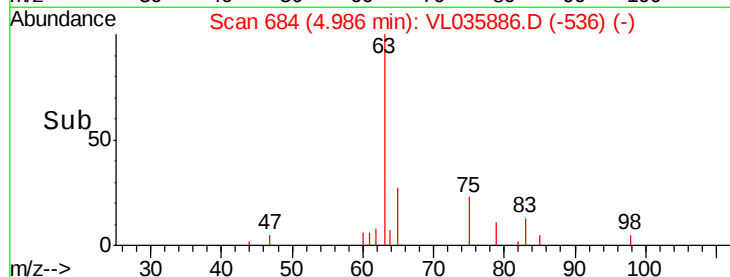
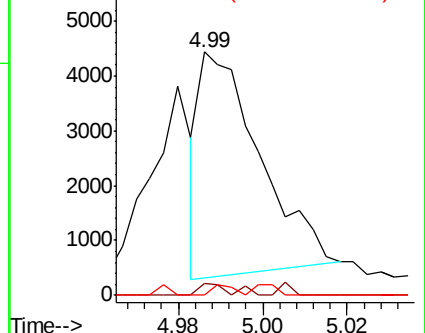
63 100

98 5.7 3.0 9.2

100 0.0 1.8 5.4#



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



#25

Ethyl Acetate

Concen: 0.039 ppbv

RT: 5.66 min Scan# 895

Delta R.T. -0.01 min

Lab File: VL035886.D

Acq: 6 Nov 2020 8:47

Tgt Ion: 43 Resp: 7620

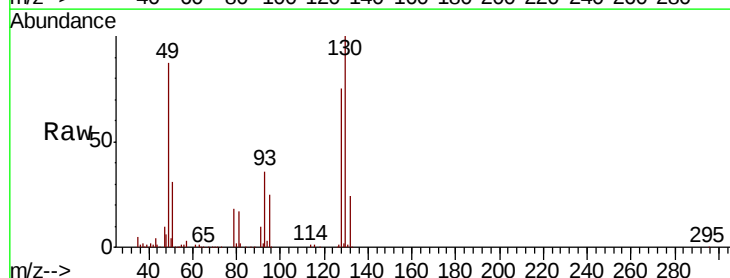
Ion Ratio Lower Upper

43 100

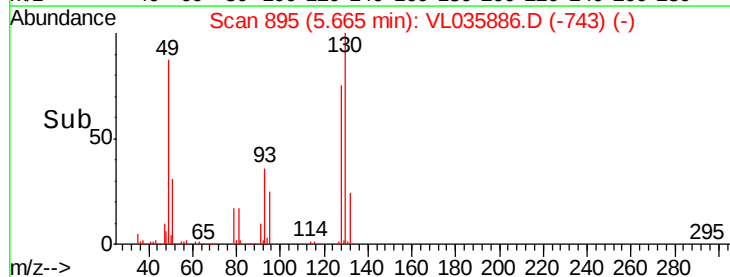
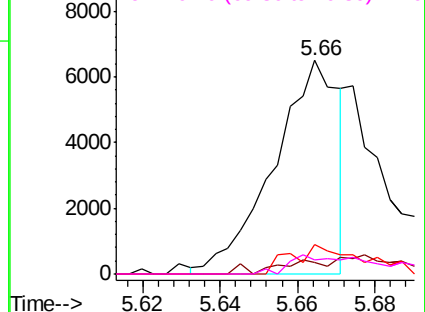
45 0.0 8.5 12.7#

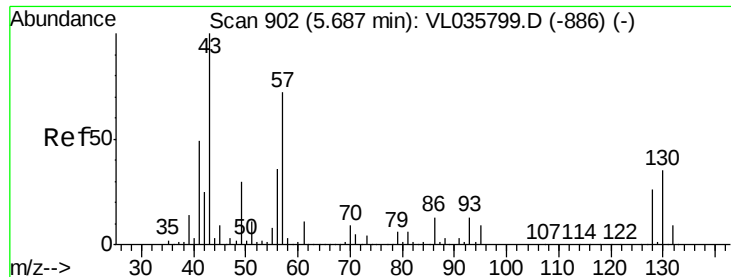
61 16.1 10.7 16.1#

70 13.1 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

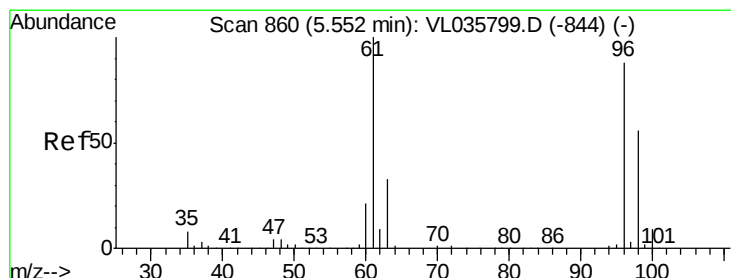
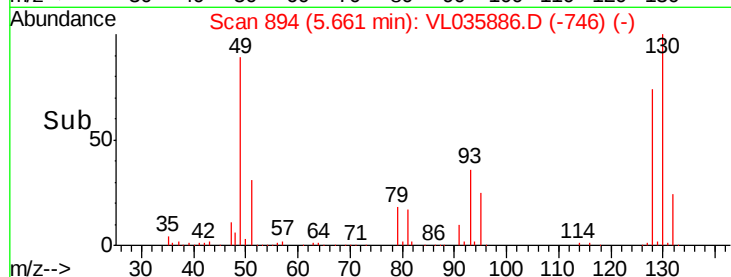
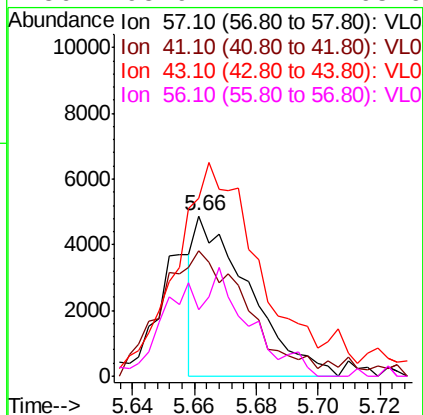
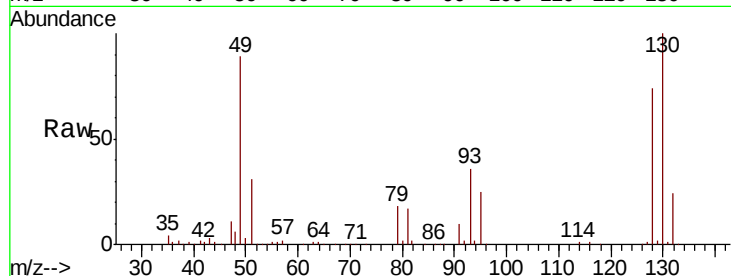




#26
Hexane
Concen: 0.055 ppbv
RT: 5.66 min Scan# 894
Delta R.T. -0.03 min
Lab File: VL035886.D
Acq: 6 Nov 2020 8:47

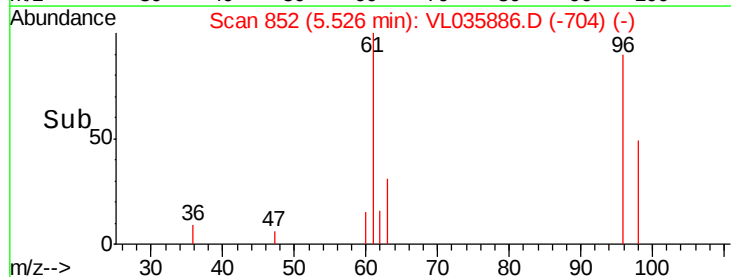
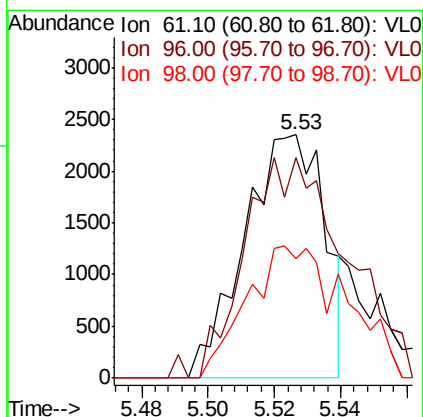
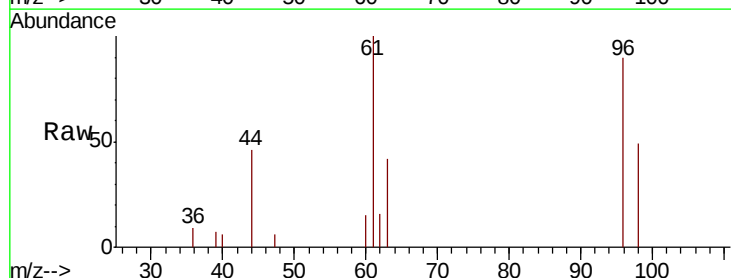
Instrument :
MSVOA_L
ClientSampled :
VIBLK

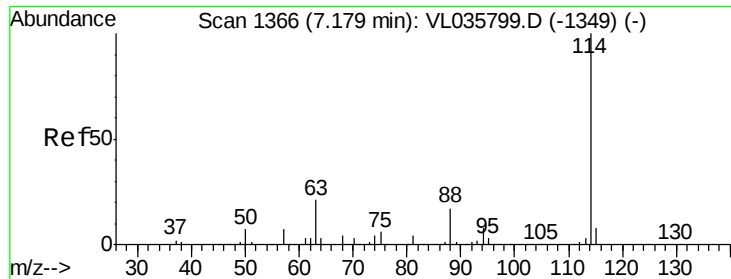
Tot Ion: 57 Resp: 5919
Ion Ratio Lower Upper
57 100
41 133.9 58.9 88.3#
43 227.4 150.2 225.2#
56 95.9 42.4 63.6#



#31
cis-1,2-Dichloroethene
Concen: 0.036 ppbv
RT: 5.53 min Scan# 852
Delta R.T. -0.03 min
Lab File: VL035886.D
Acq: 6 Nov 2020 8:47

Tgt Ion: 61 Resp: 3962
Ion Ratio Lower Upper
61 100
96 90.4 70.3 105.5
98 49.1 45.0 67.6

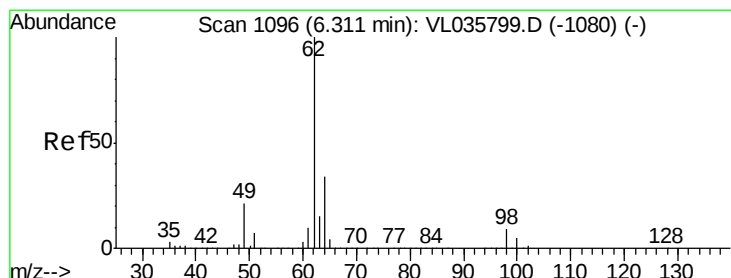
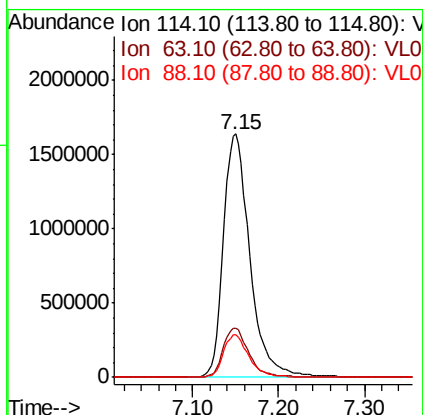
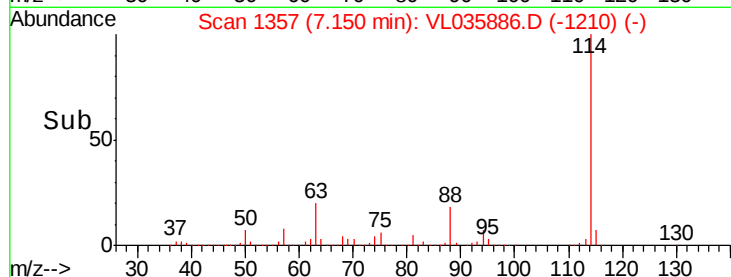
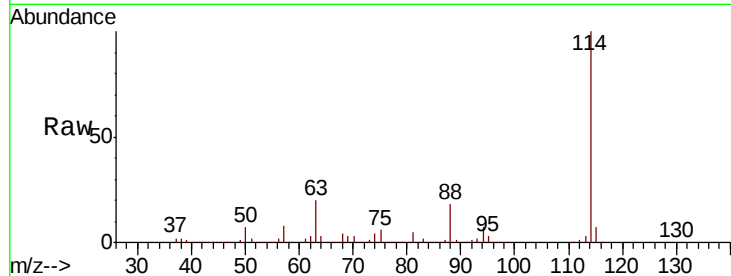




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.15 min Scan# 1357
 Delta R.T. -0.03 min
 Lab File: VL035886.D
 Acq: 6 Nov 2020 8:47

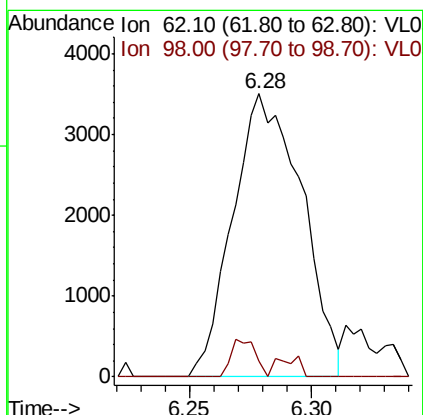
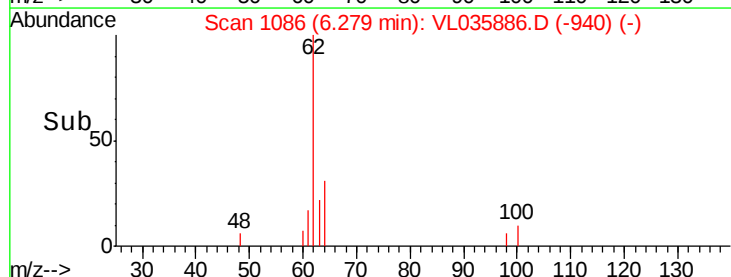
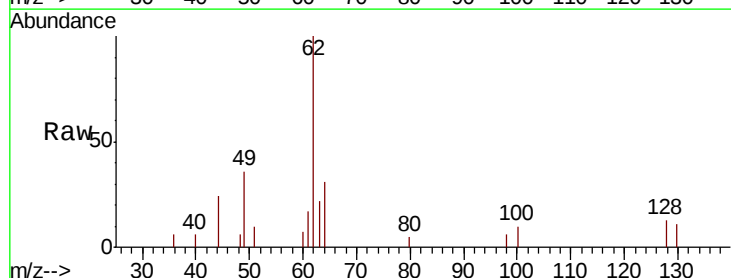
Instrument :
 MSVOA_L
 ClientSampleId :
 VIBLK

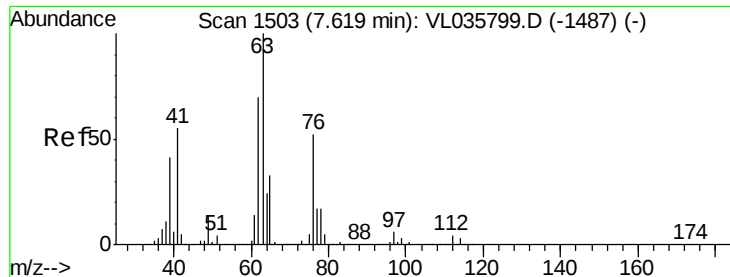
Tot Ion:114 Resp: 3516915
 Ion Ratio Lower Upper
 114 100
 63 19.9 16.1 24.1
 88 17.1 13.7 20.5



#37
 1,2-Dichloroethane
 Concen: 0.058 ppbv
 RT: 6.28 min Scan# 1086
 Delta R.T. -0.03 min
 Lab File: VL035886.D
 Acq: 6 Nov 2020 8:47

Tgt Ion: 62 Resp: 6883
 Ion Ratio Lower Upper
 62 100
 98 7.0 6.9 10.3





#39

1,2-Dichloropropane

Concen: 7.844 ppbv

RT: 7.15 min Scan# 1356

Delta R.T. -0.47 min

Lab File: VL035886.D

Acq: 6 Nov 2020 8:47

Instrument :

MSVOA_L

ClientSampleId :

VIBLK

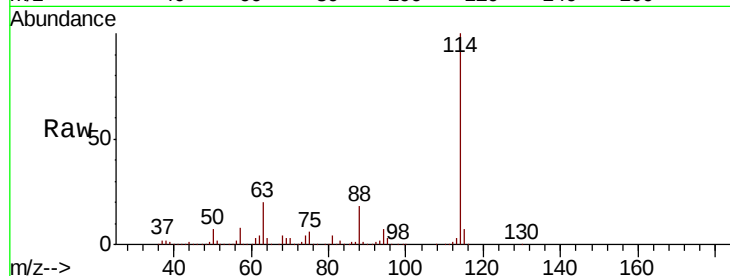
Tot Ion: 63 Resp: 690437

Ion Ratio Lower Upper

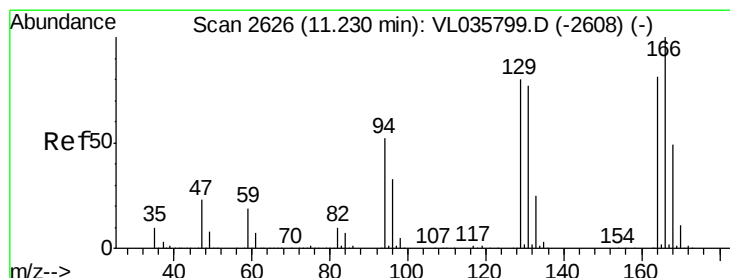
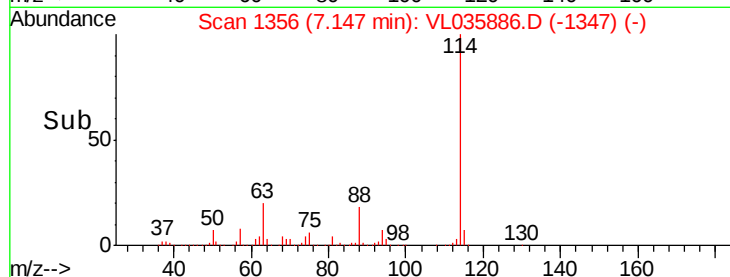
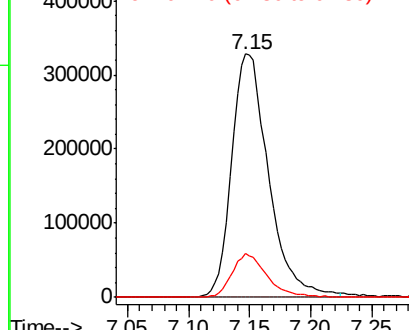
63 100

41 0.1 43.8 65.6#

62 18.0 56.2 84.2#



Abundance Ion 63.10 (62.80 to 63.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 62.10 (61.80 to 62.80): VL0



#52

Tetrachloroethene

Concen: 0.033 ppbv

RT: 11.20 min Scan# 2616

Delta R.T. -0.03 min

Lab File: VL035886.D

Acq: 6 Nov 2020 8:47

Tgt Ion:164 Resp: 4049

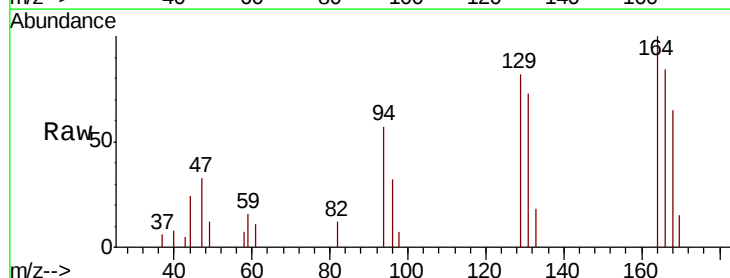
Ion Ratio Lower Upper

164 100

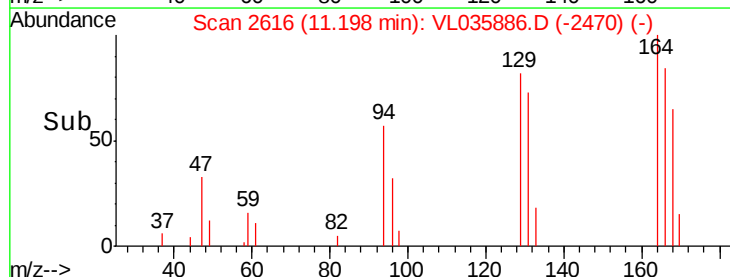
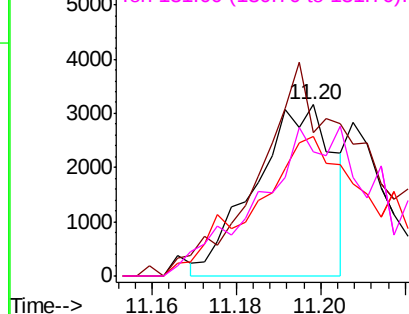
166 78.2 99.3 148.9#

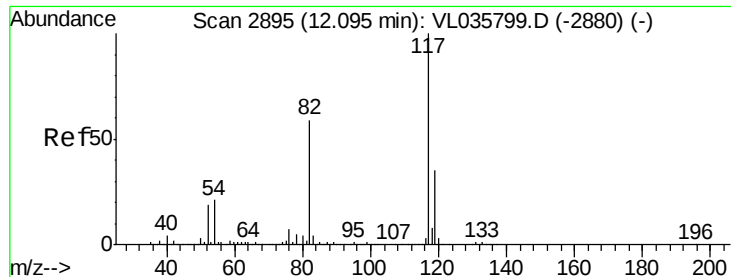
129 79.9 79.3 118.9

131 63.6 76.5 114.7#



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





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.06 min Scan# 2884

Delta R.T. -0.04 min

Lab File: VL035886.D

Acq: 6 Nov 2020 8:47

Instrument :

MSVOA_L

ClientSampleId :

VIBLK

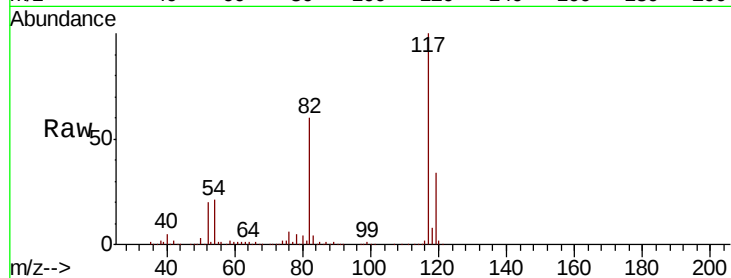
Tot Ion:117 Resp: 3194497

Ion Ratio Lower Upper

117 100

82 59.5 50.6 76.0

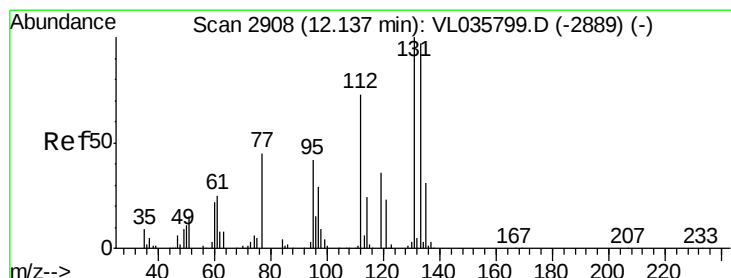
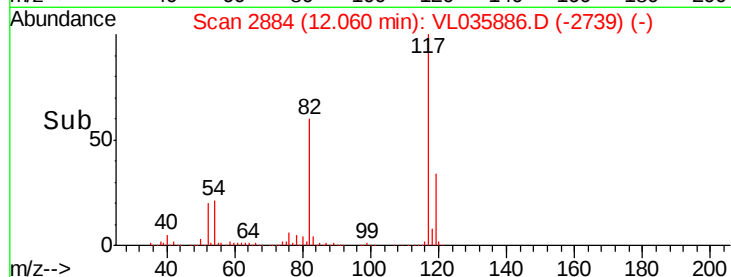
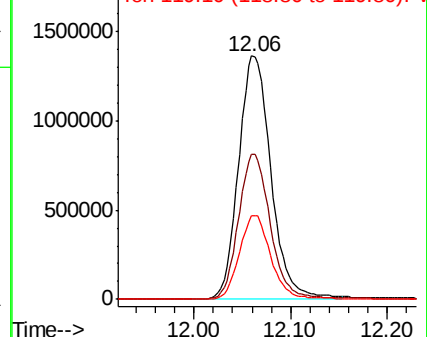
119 34.0 52.6 78.8#



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



#56

1,1,1,2-Tetrachloroethane

Concen: 0.043 ppbv

RT: 12.10 min Scan# 2896

Delta R.T. -0.04 min

Lab File: VL035886.D

Acq: 6 Nov 2020 8:47

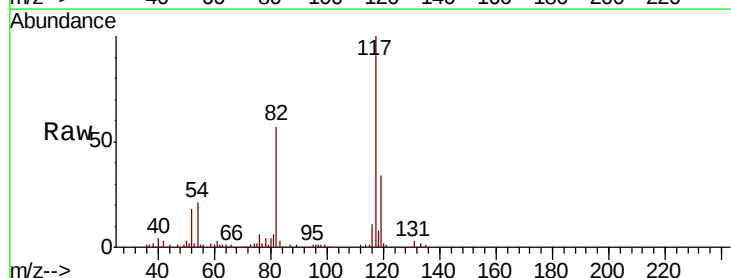
Tgt Ion:131 Resp: 6163

Ion Ratio Lower Upper

131 100

133 107.7 76.8 115.2

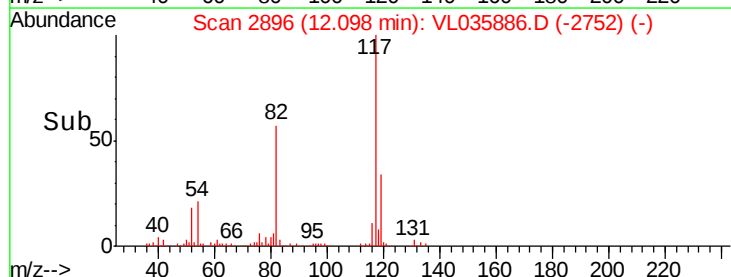
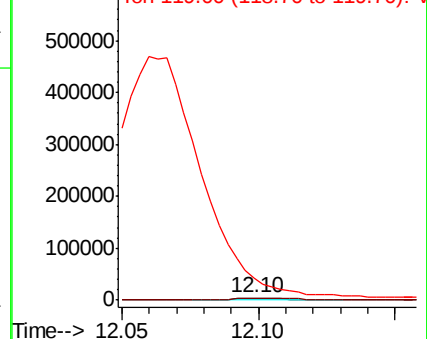
119 0.0 47.4 71.0#

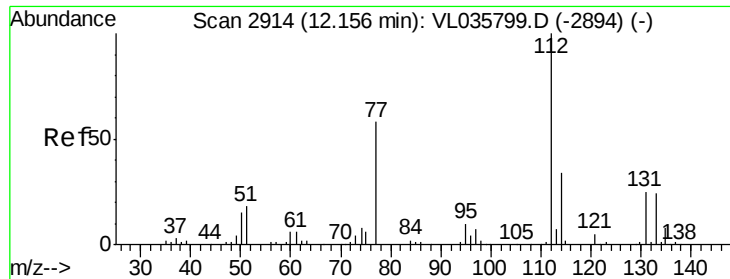


Abundance Ion 131.00 (130.70 to 131.70): V

Ion 133.00 (132.70 to 133.70): V

Ion 119.00 (118.70 to 119.70): V





#57

Chlorobenzene

Concen: 0.063 ppbv

RT: 12.12 min Scan# 2903

Delta R.T. -0.04 min

Lab File: VL035886.D

Acq: 6 Nov 2020 8:47

Instrument :

MSVOA_L

ClientSampleId :

VIBLK

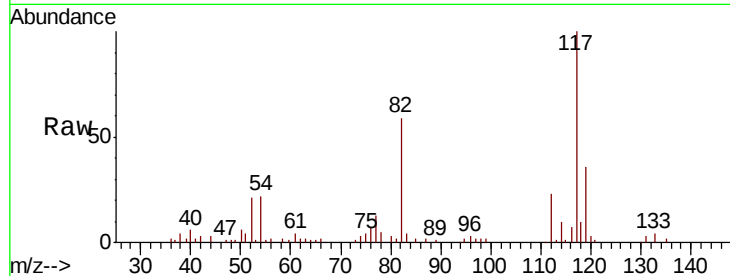
Tot Ion:112 Resp: 16062

Ion Ratio Lower Upper

112 100

77 53.5 47.5 71.3

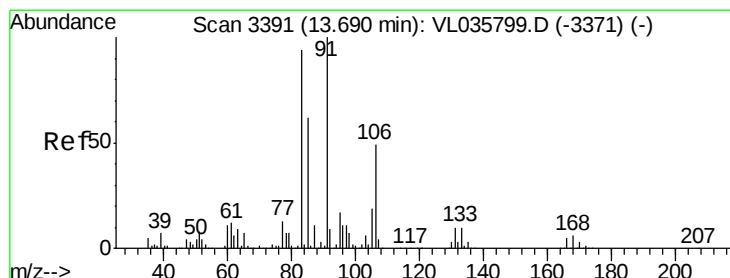
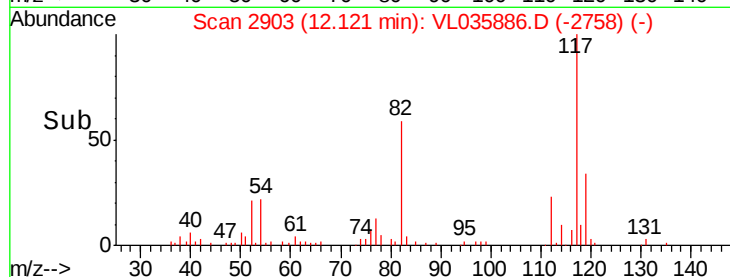
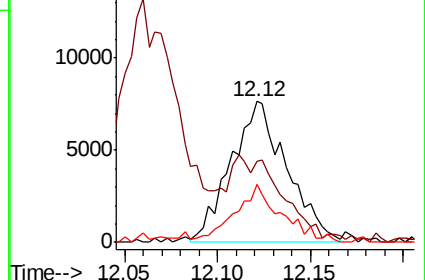
114 41.9 30.3 37.1#



Abundance Ion 112.10 (111.80 to 112.80): V

Ion 77.10 (76.80 to 77.80): VL0

Ion 114.10 (113.80 to 114.80): V



#63

1,1,2,2-Tetrachloroethane

Concen: 0.054 ppbv

RT: 13.66 min Scan# 3382

Delta R.T. -0.03 min

Lab File: VL035886.D

Acq: 6 Nov 2020 8:47

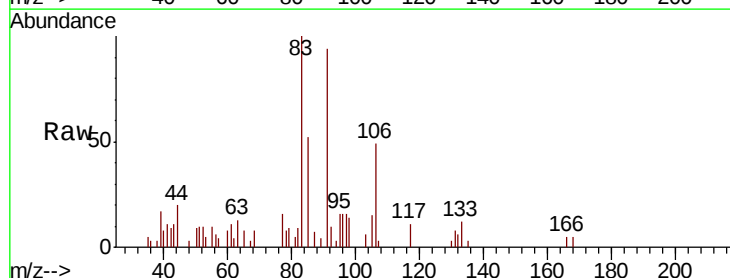
Tgt Ion: 83 Resp: 13287

Ion Ratio Lower Upper

83 100

131 11.3 5.3 15.8

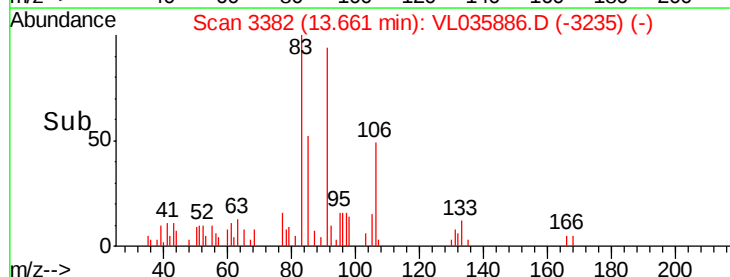
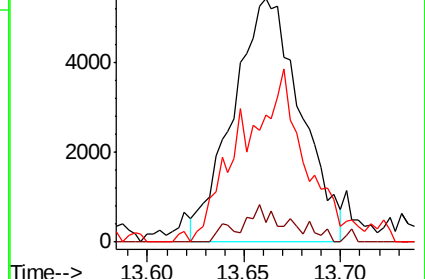
85 69.2 33.5 100.4

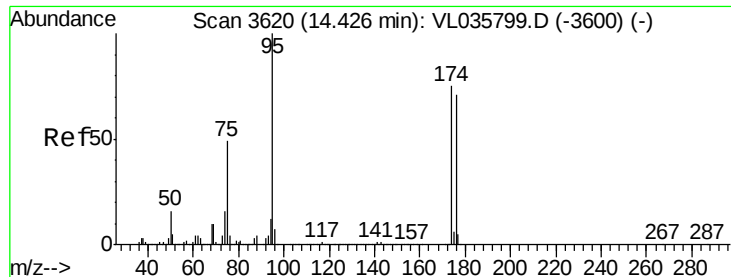


Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 131.00 (130.70 to 131.70): V

Ion 85.00 (84.70 to 85.70): VL0





#68

1-Bromo-4-Fluorobenzene

Concen: 10.082 ppbv

RT: 14.39 min Scan# 3610

Delta R.T. -0.03 min

Lab File: VL035886.D

Acq: 6 Nov 2020 8:47

Instrument :

MSVOA_L

ClientSampleId :

VIBLK

Tot Ion: 95 Resp: 2288177

Ion Ratio Lower Upper

95 100

174 76.7 59.8 89.6

175 5.4 4.3 6.5

