

Data File : VX001568.D

Acq On : 09 May 2018 21:07

Operator : JC/MD

Sample : J2732-02

Misc : 5.0mL/MSVOA\_X/WATER

ALS Vial : 17 Sample Multiplier: 1

Instrument :  
MSVOA\_X  
ClientSampleId :  
RAV-RMW-3

Quant Time: May 10 04:18:50 2018

Quant Method : W:\HPCHEM1\MSVOA\_X\METHOD\82X050518W.M

Quant Title : SW846 8260

QLast Update : Sun May 06 07:59:25 2018

Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 5.67  | 168  | 226269   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 6.87  | 114  | 310260   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 10.12 | 117  | 267592   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 12.09 | 152  | 134050   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |         |      |
|---------------------------|--------|-----|----------|-------|---------|------|
| 33) 1,2-Dichloroethane-d4 | 6.07   | 65  | 190336   | 58.53 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 117.06% |      |
| 35) Dibromofluoromethane  | 5.51   | 113 | 150281   | 54.46 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 108.92% |      |
| 50) Toluene-d8            | 8.72   | 98  | 513992   | 51.02 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 102.04% |      |
| 62) 4-Bromofluorobenzene  | 11.14  | 95  | 159746   | 41.31 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 82.62%  |      |

## Target Compounds

|                                |       |     |        |           |        | Qvalue |
|--------------------------------|-------|-----|--------|-----------|--------|--------|
| 5) Bromomethane                | 1.66  | 94  | 636    | Below Cal | #      | 69     |
| 6) Chloroethane                | 1.54  | 64  | 1121   | 0.55      | ug/l # | 68     |
| 10) Methyl Iodide              | 2.51  | 142 | 1094   | 0.28      | ug/l # | 93     |
| 11) Tert butyl alcohol         | 3.09  | 59  | 510    | 0.74      | ug/l # | 72     |
| 13) Acrolein                   | 2.29  | 56  | 19     | Below Cal | #      | 1      |
| 16) Acetone                    | 2.45  | 43  | 4114   | 2.79      | ug/l   | 96     |
| 20) Methylene Chloride         | 2.87  | 84  | 601    | 0.21      | ug/l # | 95     |
| 25) 2-Butanone                 | 4.73  | 43  | 1413   | 0.66      | ug/l   | 93     |
| 28) Bromochloromethane         | 5.02  | 49  | 736    | 0.35      | ug/l # | 41     |
| 29) Tetrahydrofuran            | 5.20  | 42  | 422    | 0.31      | ug/l # | 33     |
| 30) Chloroform                 | 5.23  | 83  | 115086 | 22.93     | ug/l   | 99     |
| 31) Cyclohexane                | 5.67  | 56  | 3946   | 0.94      | ug/l # | 27     |
| 36) 1,1-Dichloropropene        | 5.67  | 75  | 13892  | 3.52      | ug/l # | 49     |
| 38) Carbon Tetrachloride       | 5.79  | 117 | 25468  | 6.05      | ug/l   | 98     |
| 46) Dibromomethane             | 7.67  | 93  | 2736   | 1.34      | ug/l   | 95     |
| 47) Bromodichloromethane       | 7.91  | 83  | 23579  | 6.26      | ug/l   | 99     |
| 54) cis-1,3-Dichloropropene    | 9.06  | 75  | 85     | 2.28      | ug/l # | 12     |
| 60) Dibromochloromethane       | 9.59  | 129 | 14131  | 4.54      | ug/l   | 99     |
| 71) Bromoform                  | 10.86 | 173 | 7748   | 6.23      | ug/l # | 98     |
| 76) 1,2,3-Trichloropropane     | 11.14 | 75  | 81182  | 29.86     | ug/l # | 38     |
| 81) trans-1,4-Dichloro-2-buten | 11.14 | 75  | 81182  | 91.33     | ug/l # | 7      |

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

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ALS Vial : 17 Sample Multiplier: 1

Instrument :

MSVOA\_X

ClientSampleId :

RAV-RMW-3

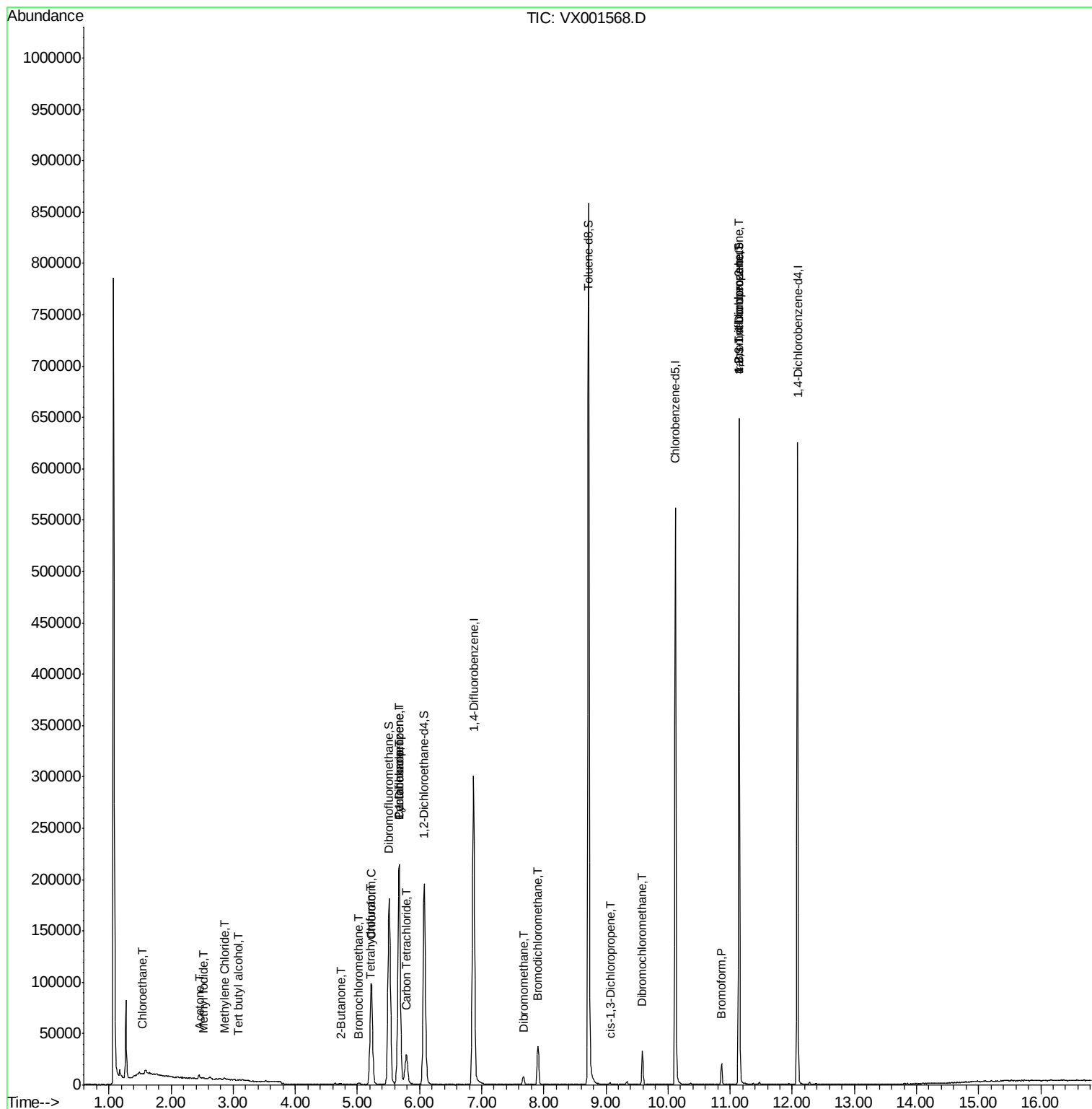
Quant Time: May 10 04:18:50 2018

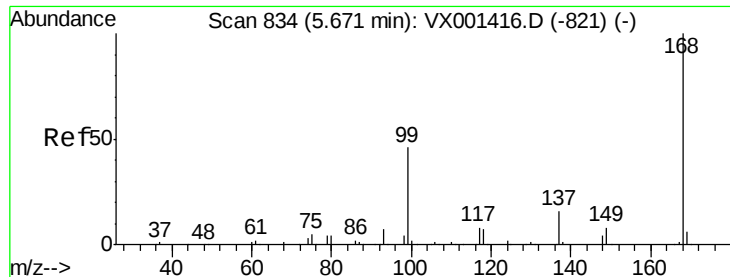
Quant Method : W:\HPCHEM1\MSVOA\_X\METHOD\82X050518W.M

Quant Title : SW846 8260

QLast Update : Sun May 06 07:59:25 2018

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#1

Pentafluorobenzene

Concen: 50.00 ug/l

RT: 5.67 min Scan# 834

Delta R.T. 0.00 min

Lab File: VX001568.D

Acq: 09 May 2018 21:07

Instrument :

MSVOA\_X

ClientSampled :

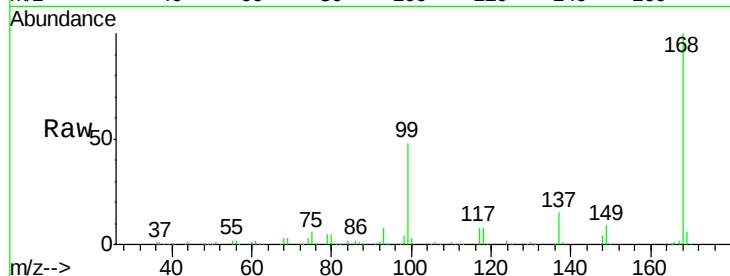
RAV-RMW-3

Tgt Ion:168 Resp: 226269

Ion Ratio Lower Upper

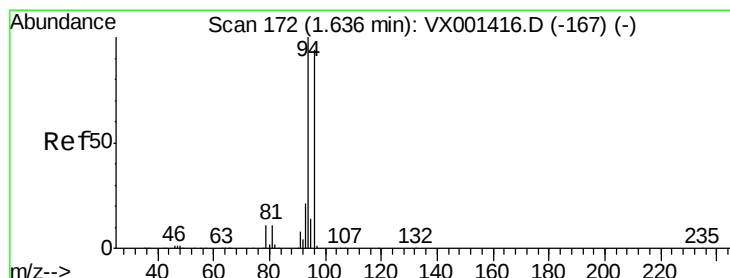
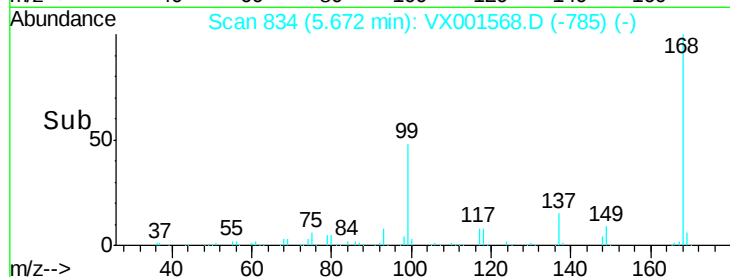
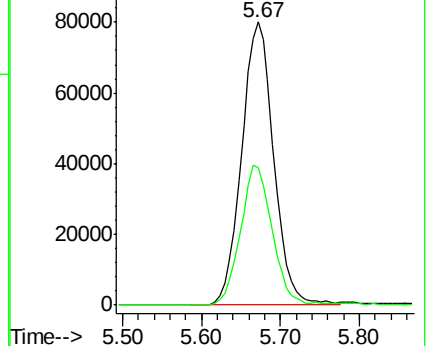
168 100

99 48.4 36.6 54.8



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VX0



#5

Bromomethane

Concen: Below Cal

RT: 1.66 min Scan# 176

Delta R.T. 0.03 min

Lab File: VX001568.D

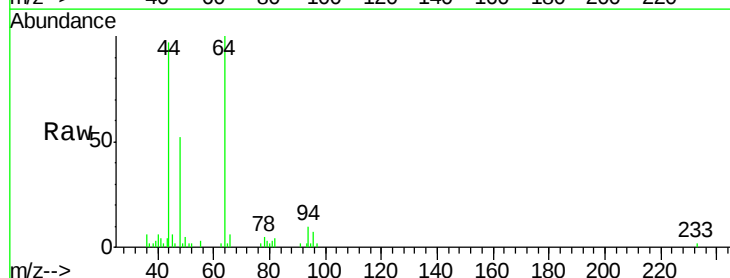
Acq: 09 May 2018 21:07

Tgt Ion: 94 Resp: 636

Ion Ratio Lower Upper

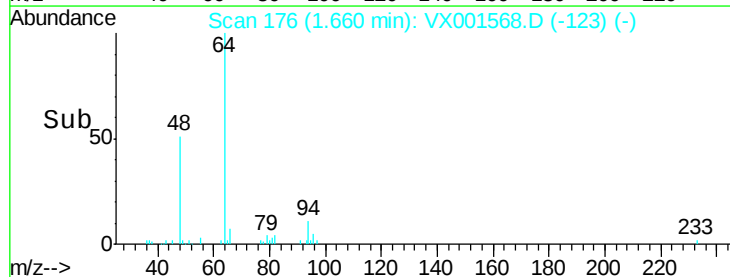
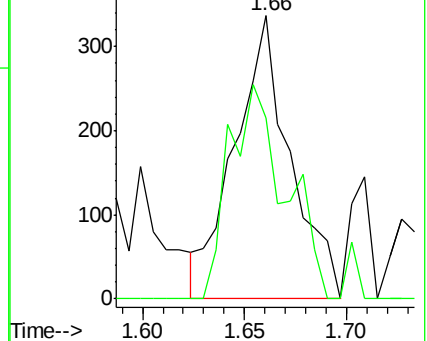
94 100

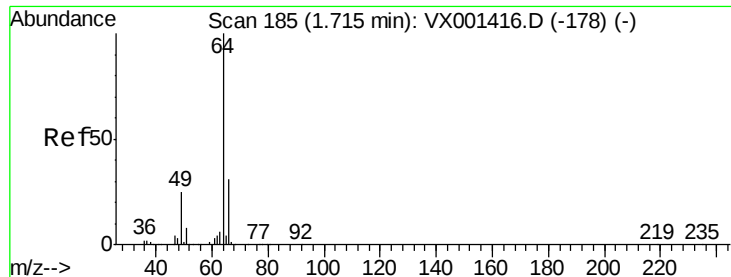
96 63.8 75.0 112.6#



Abundance Ion 93.90 (93.60 to 94.60): VX0

Ion 95.90 (95.60 to 96.60): VX0





#6

Chloroethane

Concen: 0.55 ug/l

RT: 1.54 min Scan# 156

Delta R.T. -0.18 min

Lab File: VX001568.D

Acq: 09 May 2018 21:07

Instrument :

MSVOA\_X

ClientSampleId :

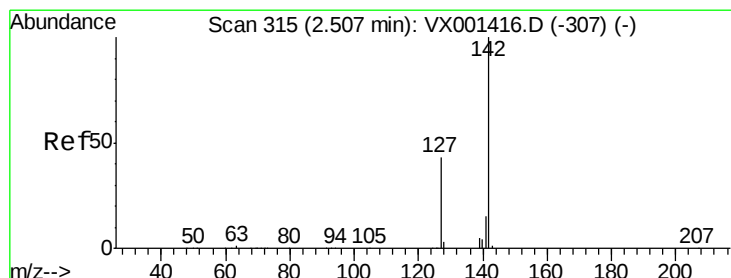
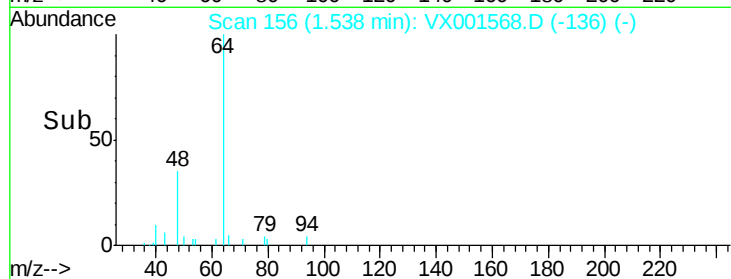
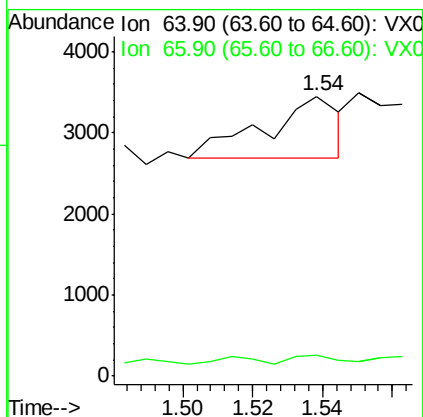
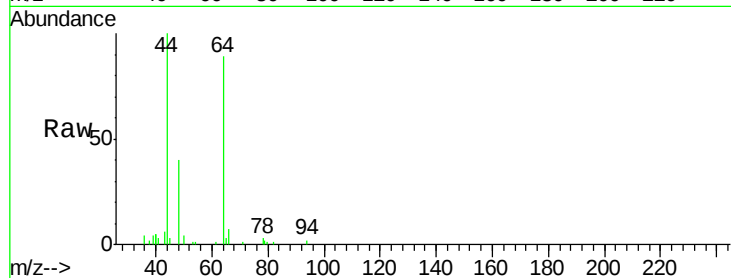
RAV-RMW-3

Tgt Ion: 64 Resp: 1121

Ion Ratio Lower Upper

64 100

66 13.8 25.1 37.7#



#10

Methyl Iodide

Concen: 0.28 ug/l

RT: 2.51 min Scan# 316

Delta R.T. 0.01 min

Lab File: VX001568.D

Acq: 09 May 2018 21:07

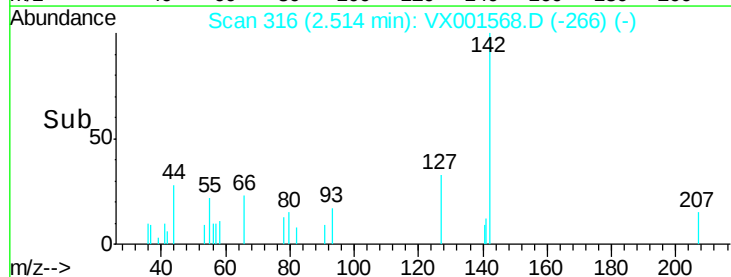
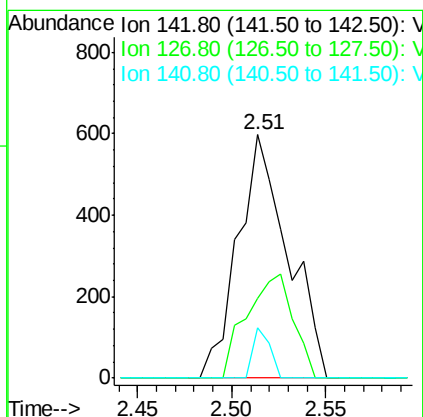
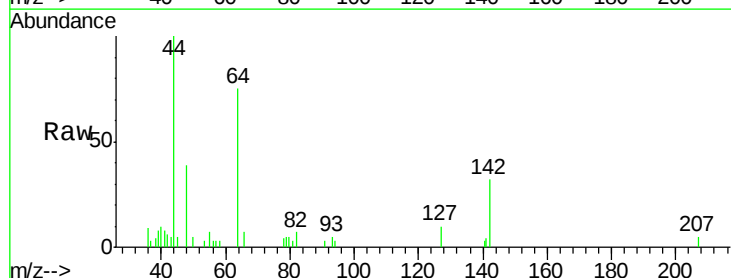
Tgt Ion: 142 Resp: 1094

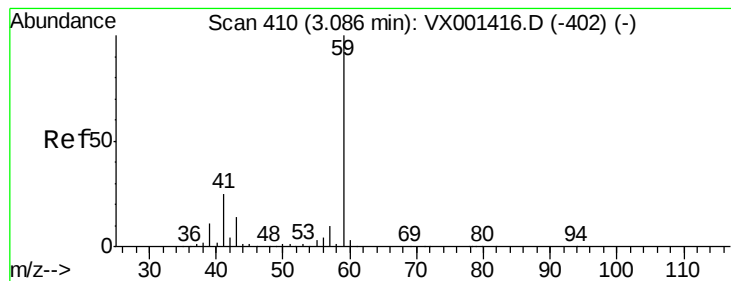
Ion Ratio Lower Upper

142 100

127 40.0 33.6 50.4

141 6.9 11.4 17.2#



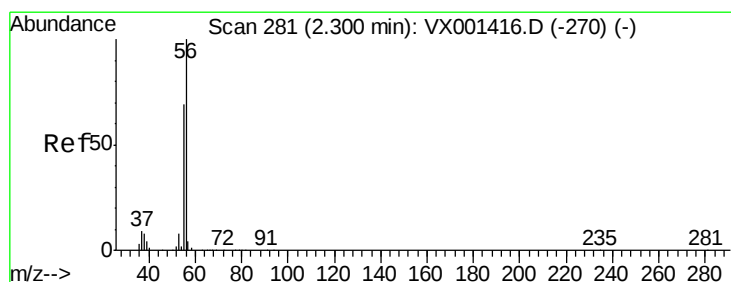
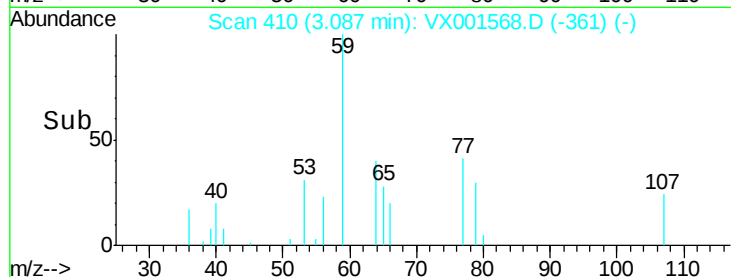
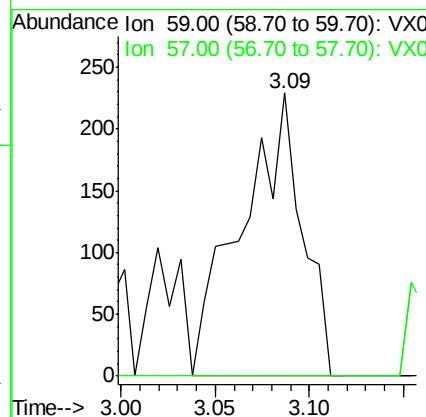
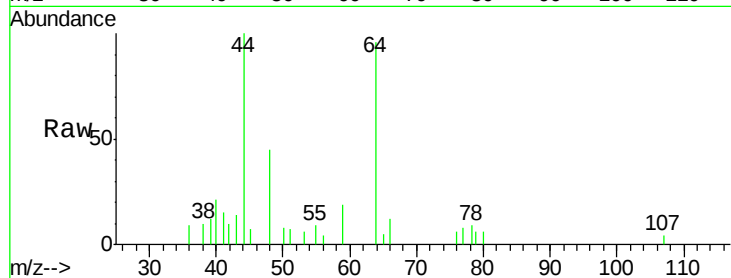


#11

Tert butyl alcohol  
 Concen: 0.74 ug/l  
 RT: 3.09 min Scan# 410  
 Delta R.T. 0.00 min  
 Lab File: VX001568.D  
 Acq: 09 May 2018 21:07

Instrument :  
 MSVOA\_X  
 ClientSampled :  
 RAV-RMW-3

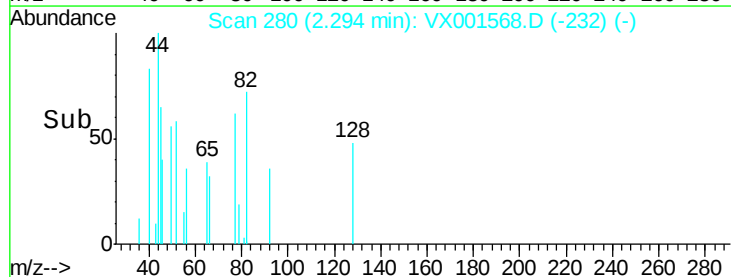
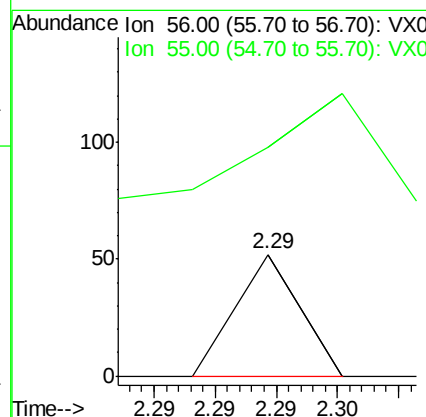
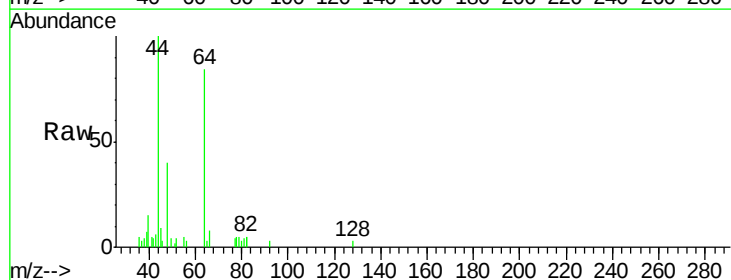
Tgt Ion: 59 Resp: 510  
 Ion Ratio Lower Upper  
 59 100  
 57 0.0 8.2 12.4#

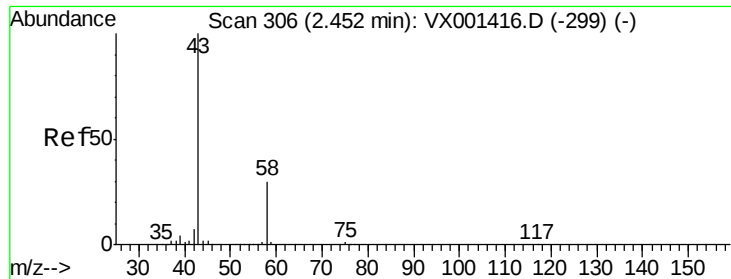


#13

Acrolein  
 Concen: Below Cal  
 RT: 2.29 min Scan# 280  
 Delta R.T. -0.01 min  
 Lab File: VX001568.D  
 Acq: 09 May 2018 21:07

Tgt Ion: 56 Resp: 19  
 Ion Ratio Lower Upper  
 56 100  
 55 568.4 54.5 81.7#





#16

Acetone

Concen: 2.79 ug/l

RT: 2.45 min Scan# 306

Delta R.T. 0.00 min

Lab File: VX001568.D

Acq: 09 May 2018 21:07

Instrument :

MSVOA\_X

ClientSampleId :

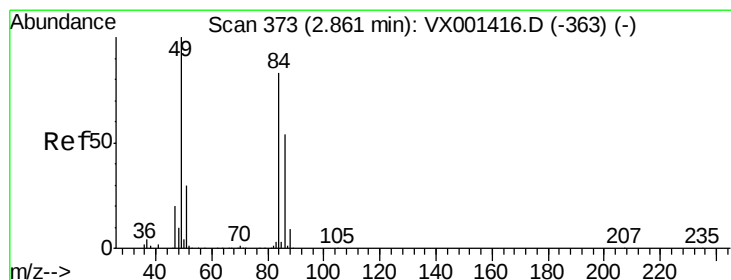
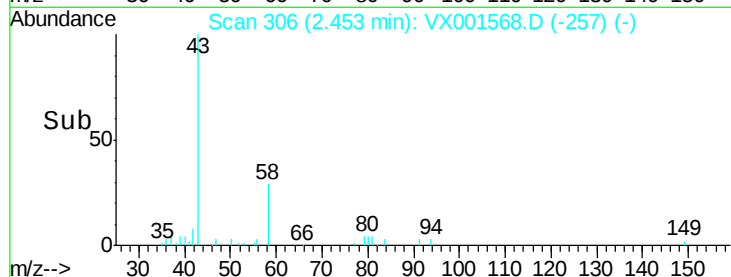
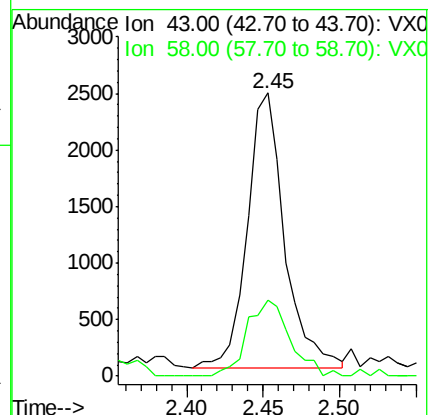
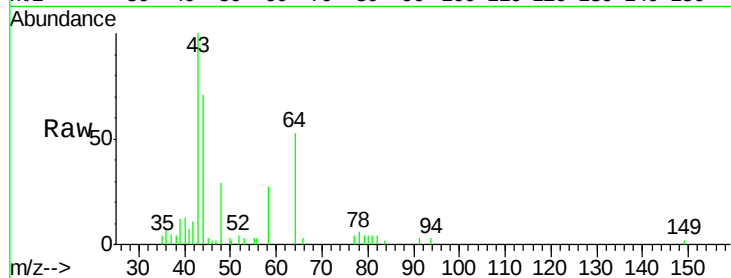
RAV-RMW-3

Tgt Ion: 43 Resp: 4114

Ion Ratio Lower Upper

43 100

58 27.9 23.8 35.8



#20

Methylene Chloride

Concen: 0.21 ug/l

RT: 2.87 min Scan# 374

Delta R.T. 0.01 min

Lab File: VX001568.D

Acq: 09 May 2018 21:07

Tgt Ion: 84 Resp: 601

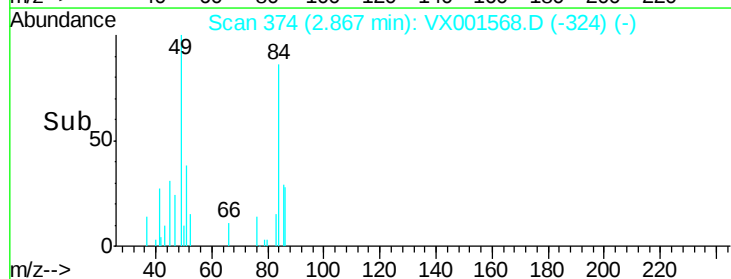
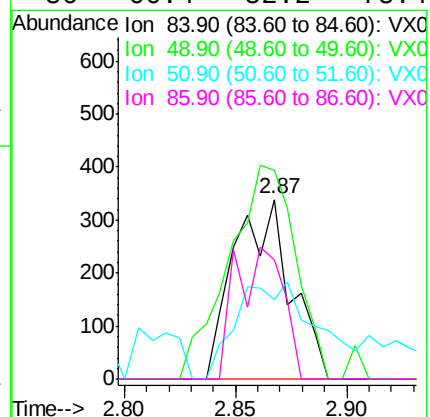
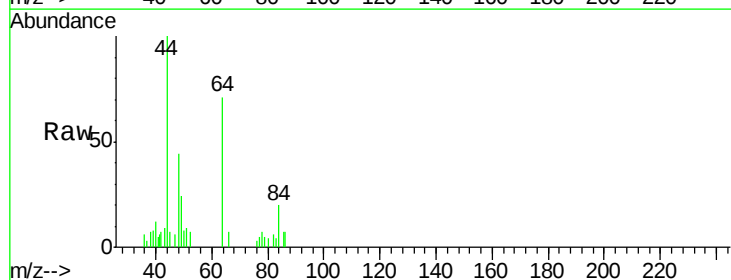
Ion Ratio Lower Upper

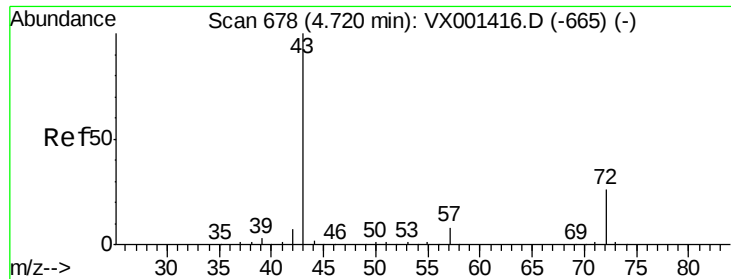
84 100

49 116.5 96.6 144.8

51 44.0 29.0 43.4#

86 66.4 52.2 78.4





#25

2-Butanone

Concen: 0.66 ug/l

RT: 4.73 min Scan# 680

Delta R.T. 0.01 min

Lab File: VX001568.D

Acq: 09 May 2018 21:07

Instrument :

MSVOA\_X

ClientSampled :

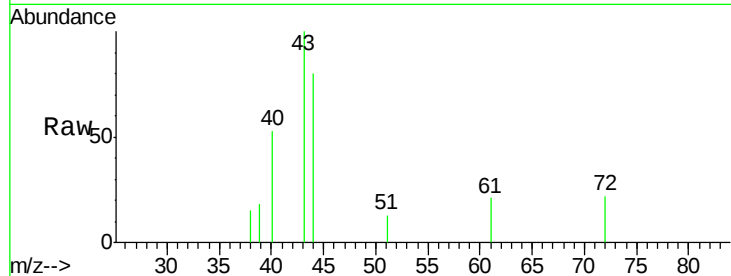
RAV-RMW-3

Tgt Ion: 43 Resp: 1413

Ion Ratio Lower Upper

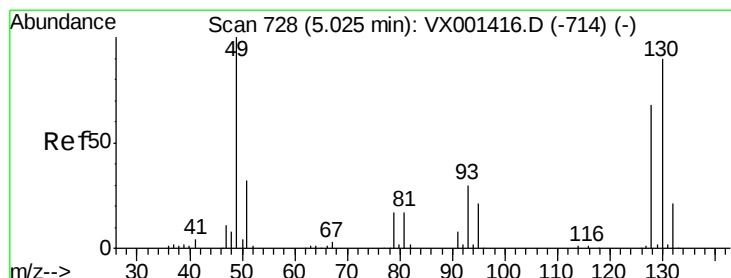
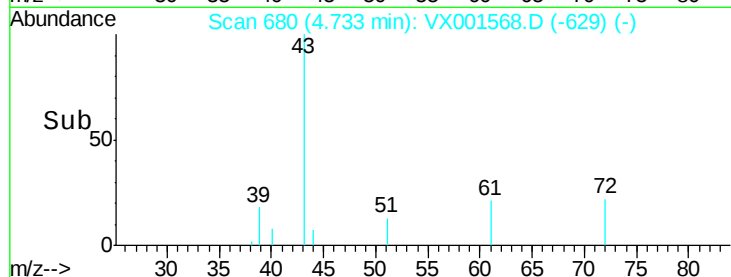
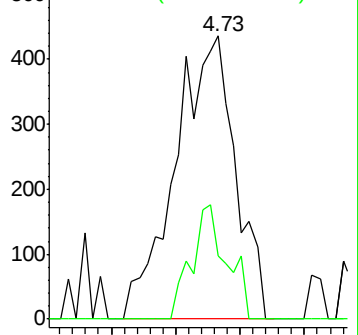
43 100

72 22.5 20.7 31.1



Abundance Ion 43.00 (42.70 to 43.70): VX0

Ion 72.00 (71.70 to 72.70): VX0



#28

Bromochloromethane

Concen: 0.35 ug/l

RT: 5.02 min Scan# 727

Delta R.T. -0.01 min

Lab File: VX001568.D

Acq: 09 May 2018 21:07

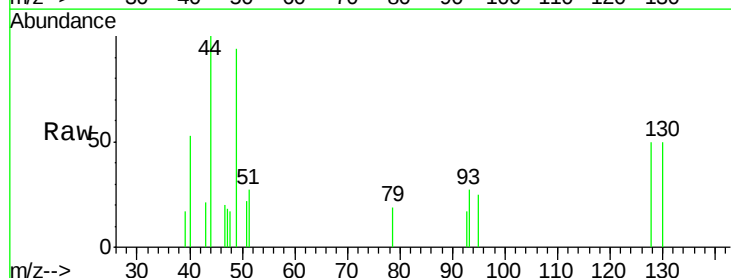
Tgt Ion: 49 Resp: 736

Ion Ratio Lower Upper

49 100

129 0.0 0.0 4.8

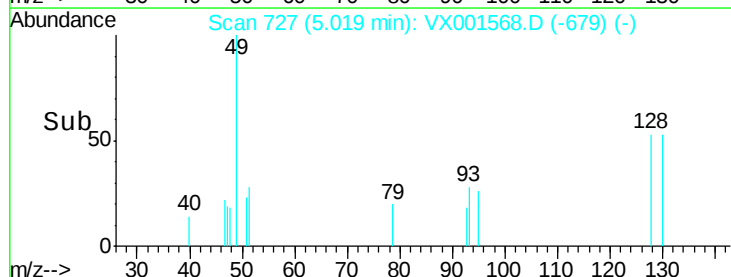
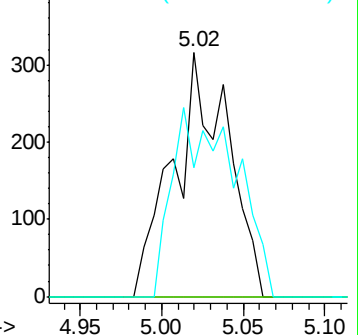
130 33.2 71.9 107.9#

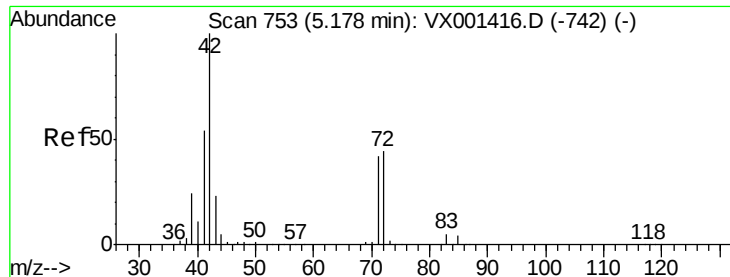


Abundance Ion 48.90 (48.60 to 49.60): VX0

Ion 128.80 (128.50 to 129.50): V

Ion 129.80 (129.50 to 130.50): V





#29

Tetrahydrofuran

Concen: 0.31 ug/l

RT: 5.20 min Scan# 756

Delta R.T. 0.02 min

Lab File: VX001568.D

Acq: 09 May 2018 21:07

Instrument :

MSVOA\_X

ClientSampled :

RAV-RMW-3

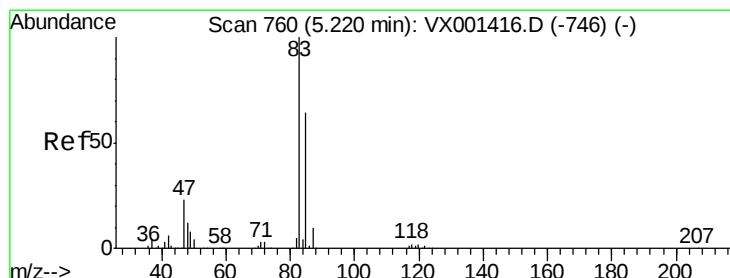
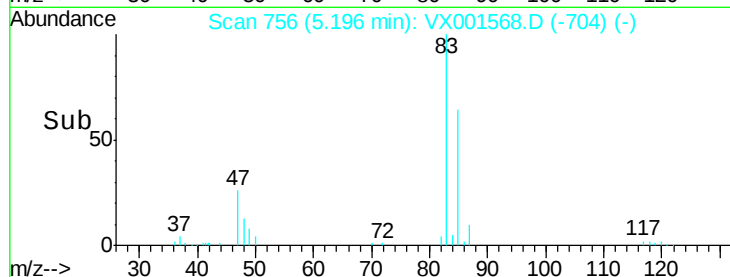
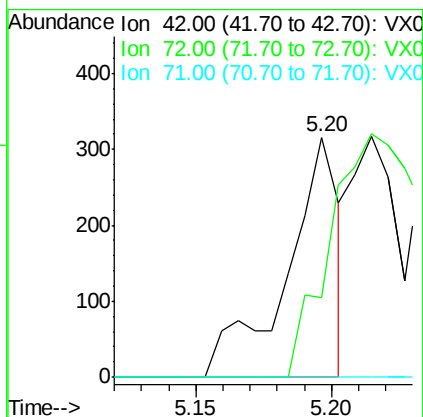
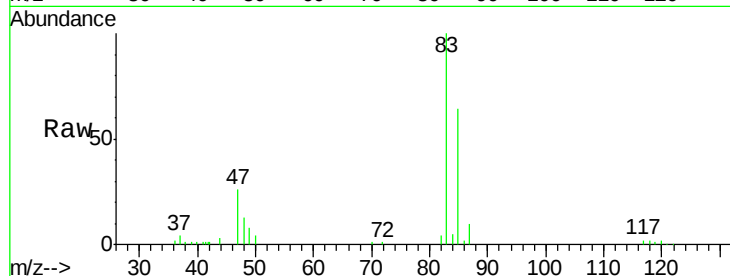
Tgt Ion: 42 Resp: 422

Ion Ratio Lower Upper

42 100

72 0.0 35.4 53.2#

71 0.0 33.0 49.4#



#30

Chloroform

Concen: 22.93 ug/l

RT: 5.23 min Scan# 761

Delta R.T. 0.01 min

Lab File: VX001568.D

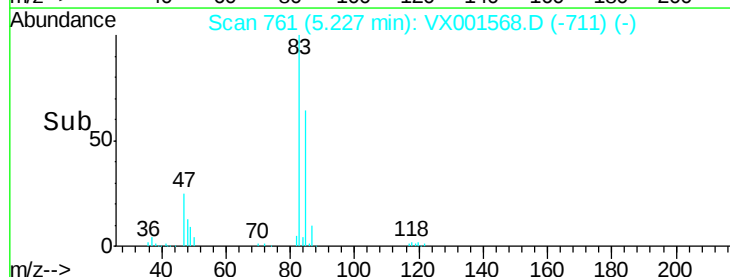
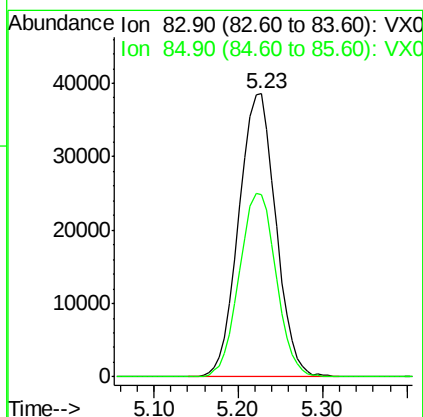
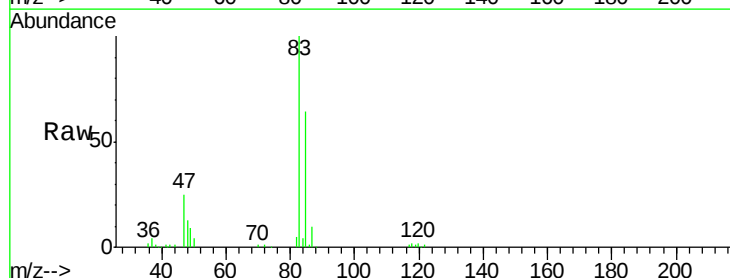
Acq: 09 May 2018 21:07

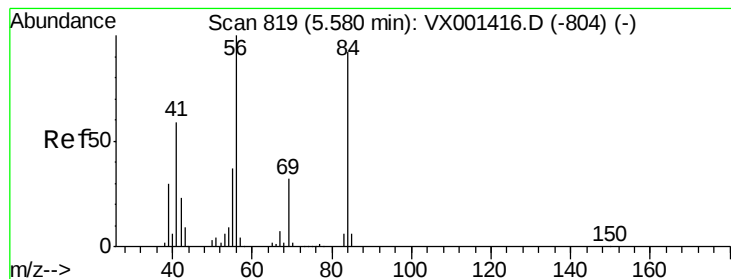
Tgt Ion: 83 Resp: 115086

Ion Ratio Lower Upper

83 100

85 64.3 51.0 76.4





#31

Cyclohexane

Concen: 0.94 ug/l

RT: 5.67 min Scan# 833

Delta R.T. 0.09 min

Lab File: VX001568.D

Acq: 09 May 2018 21:07

Instrument :

MSVOA\_X

ClientSampleId :

RAV-RMW-3

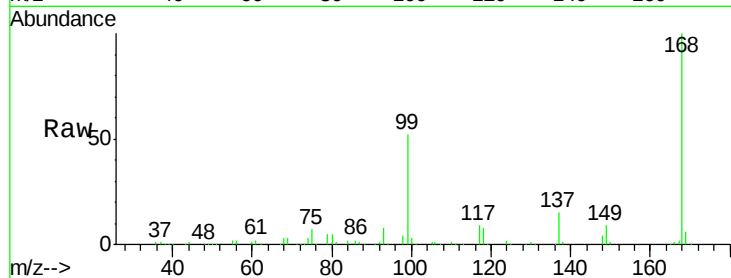
Tgt Ion: 56 Resp: 3946

Ion Ratio Lower Upper

56 100

69 150.1 25.4 38.0#

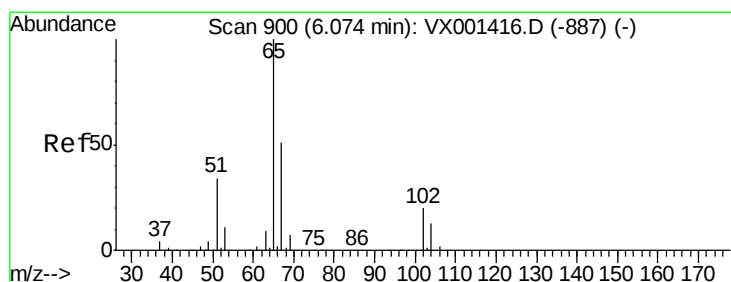
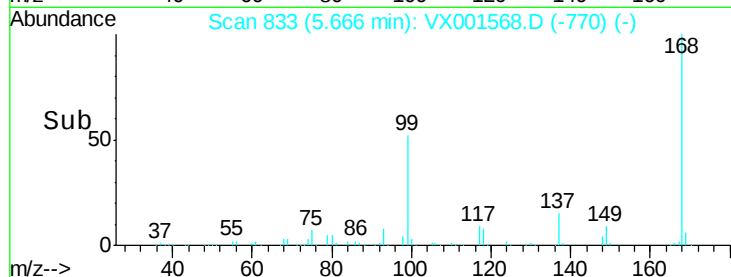
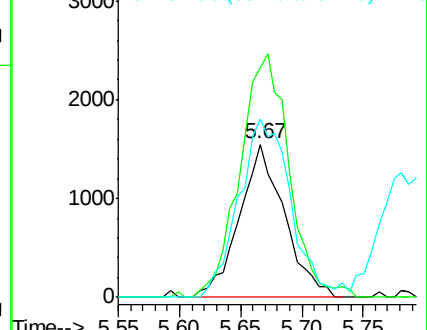
84 116.5 73.8 110.8#



Abundance Ion 56.00 (55.70 to 56.70): VX0

Ion 69.00 (68.70 to 69.70): VX0

Ion 84.00 (83.70 to 84.70): VX0



#33

1,2-Dichloroethane-d4

Concen: 58.53 ug/l

RT: 6.07 min Scan# 900

Delta R.T. 0.00 min

Lab File: VX001568.D

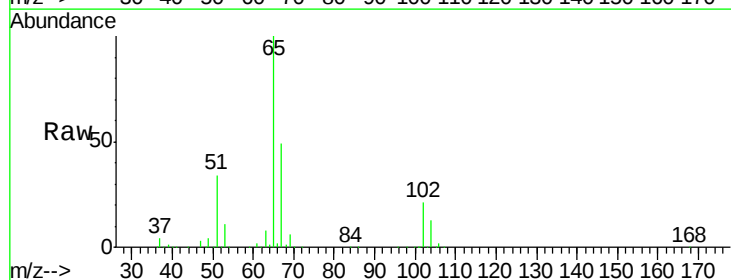
Acq: 09 May 2018 21:07

Tgt Ion: 65 Resp: 190336

Ion Ratio Lower Upper

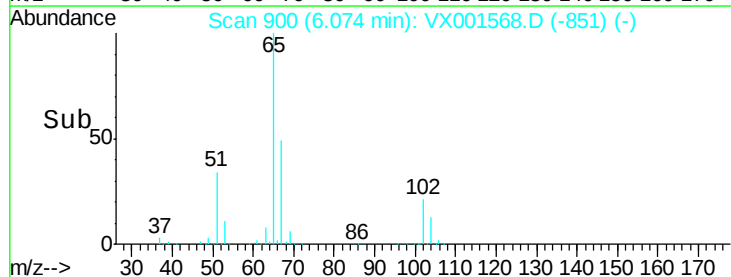
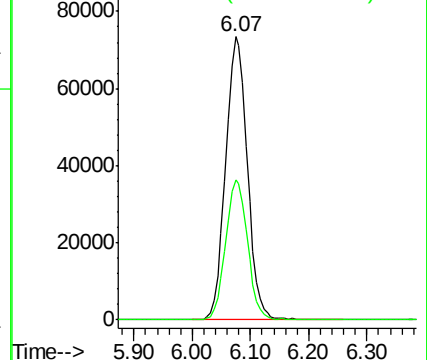
65 100

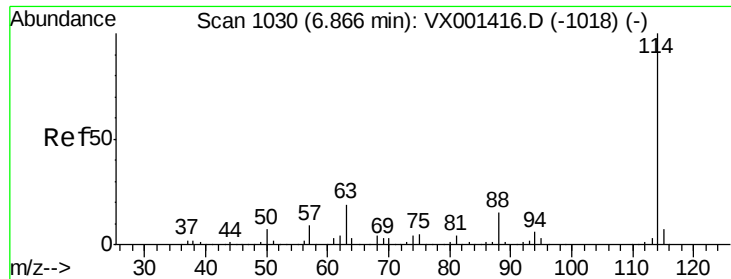
67 50.0 0.0 101.8



Abundance Ion 64.90 (64.60 to 65.60): VX0

Ion 66.90 (66.60 to 67.60): VX0





#34

1,4-Difluorobenzene

Concen: 50.00 ug/l

RT: 6.87 min Scan# 1030

Delta R.T. 0.00 min

Lab File: VX001568.D

Acq: 09 May 2018 21:07

Instrument :

MSVOA\_X

ClientSampleId :

RAV-RMW-3

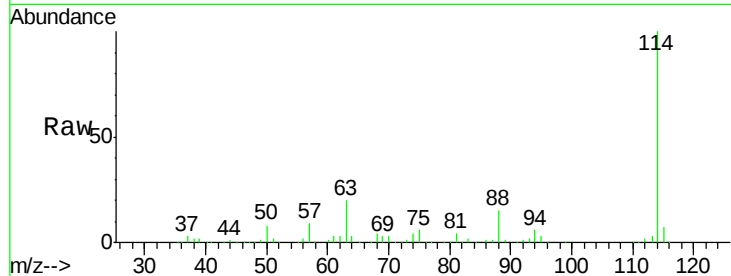
Tgt Ion:114 Resp: 310260

Ion Ratio Lower Upper

114 100

63 20.3 0.0 38.6

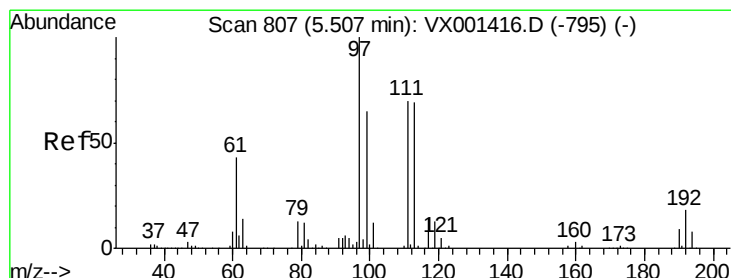
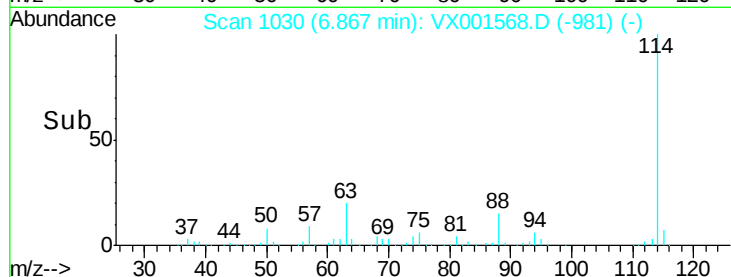
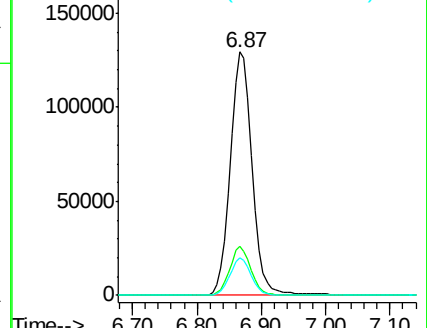
88 15.2 0.0 30.8



Abundance Ion 113.90 (113.60 to 114.60): V

Ion 63.00 (62.70 to 63.70): VX0

Ion 87.90 (87.60 to 88.60): VX0



#35

Dibromofluoromethane

Concen: 54.46 ug/l

RT: 5.51 min Scan# 808

Delta R.T. 0.01 min

Lab File: VX001568.D

Acq: 09 May 2018 21:07

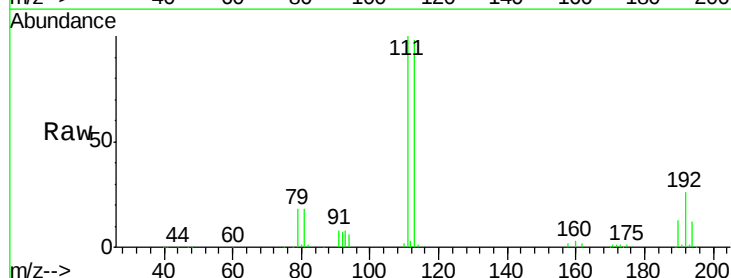
Tgt Ion:113 Resp: 150281

Ion Ratio Lower Upper

113 100

111 102.3 82.2 123.2

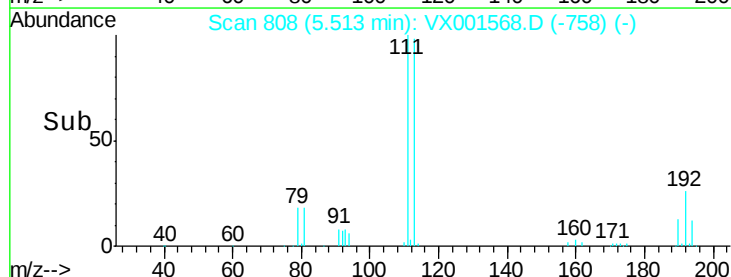
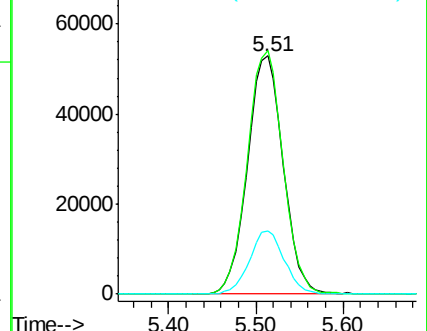
192 26.0 21.4 32.0

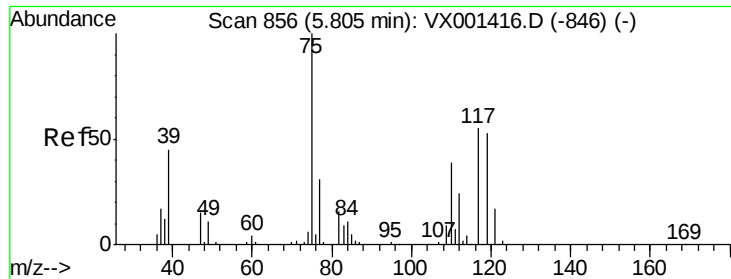


Abundance Ion 112.80 (112.50 to 113.50): V

Ion 110.80 (110.50 to 111.50): V

Ion 191.70 (191.40 to 192.40): V

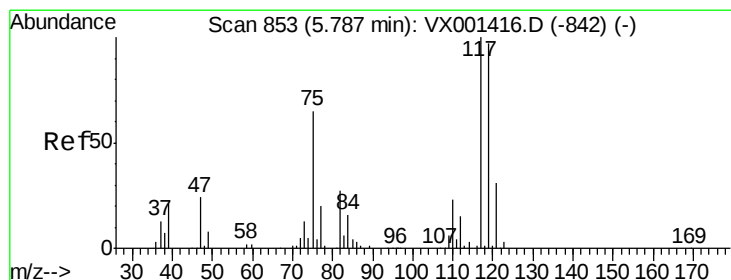
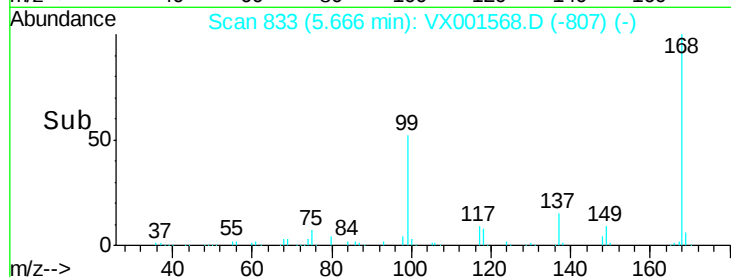
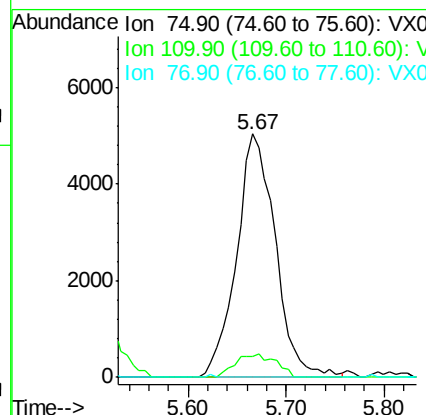
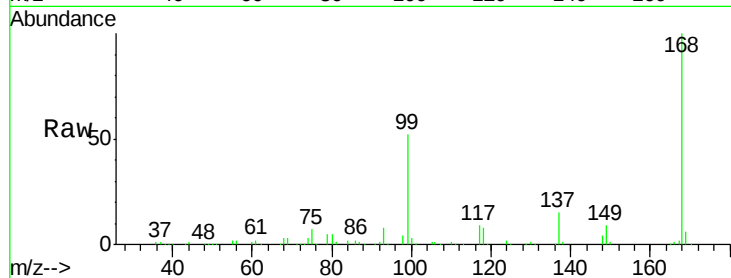




#36  
 1,1-Dichloropropene  
 Concen: 3.52 ug/l  
 RT: 5.67 min Scan# 833  
 Delta R.T. -0.14 min  
 Lab File: VX001568.D  
 Acq: 09 May 2018 21:07

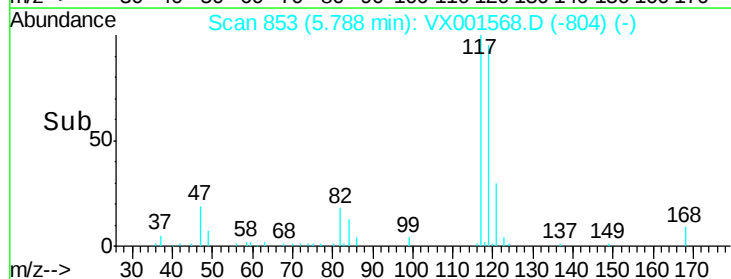
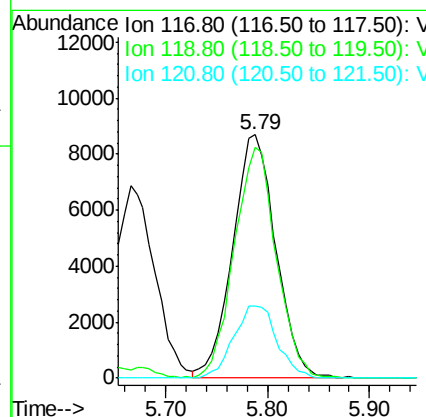
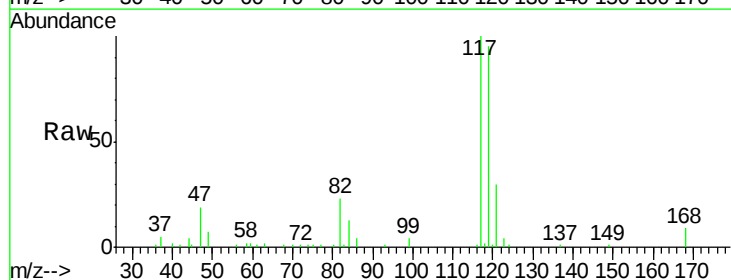
Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 RAV-RMW-3

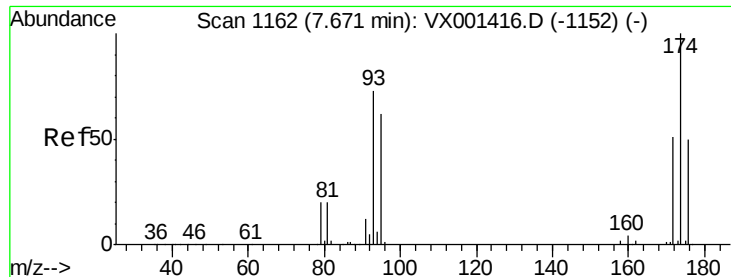
Tgt Ion: 75 Resp: 13892  
 Ion Ratio Lower Upper  
 75 100  
 110 9.9 18.9 56.7#  
 77 0.0 24.9 37.3#



#38  
 Carbon Tetrachloride  
 Concen: 6.05 ug/l  
 RT: 5.79 min Scan# 853  
 Delta R.T. 0.00 min  
 Lab File: VX001568.D  
 Acq: 09 May 2018 21:07

Tgt Ion: 117 Resp: 25468  
 Ion Ratio Lower Upper  
 117 100  
 119 94.7 77.0 115.6  
 121 29.5 25.1 37.7

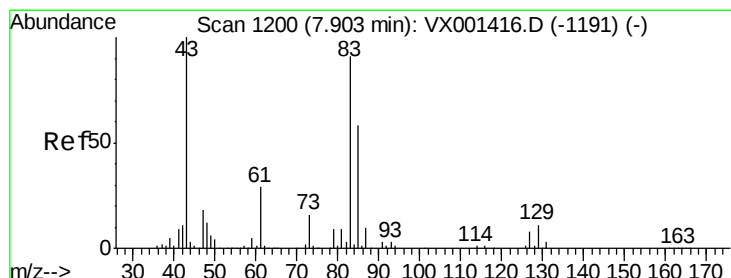
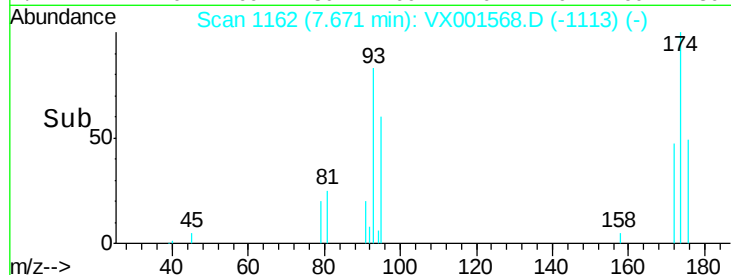
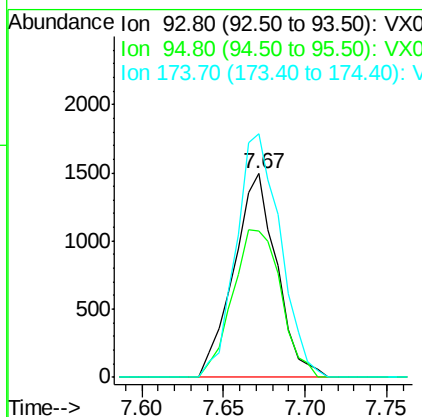
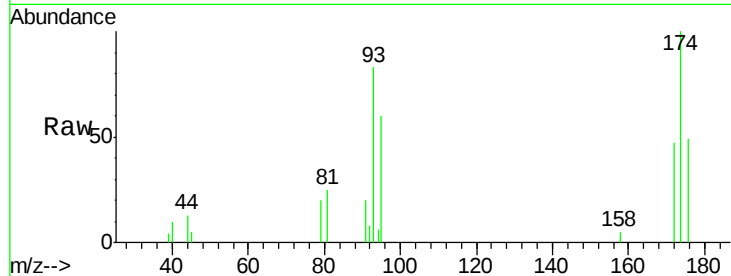




#46  
Dibromomethane  
Concen: 1.34 ug/l  
RT: 7.67 min Scan# 1162  
Delta R.T. 0.00 min  
Lab File: VX001568.D  
Acq: 09 May 2018 21:07

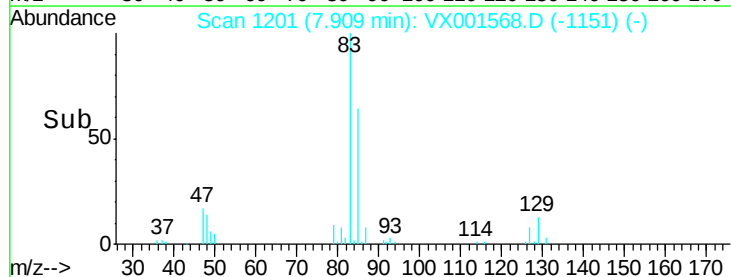
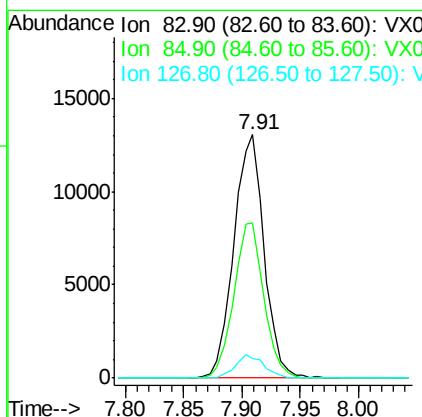
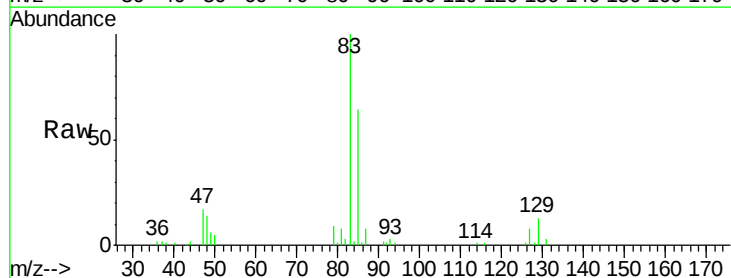
Instrument :  
MSVOA\_X  
ClientSampleId :  
RAV-RMW-3

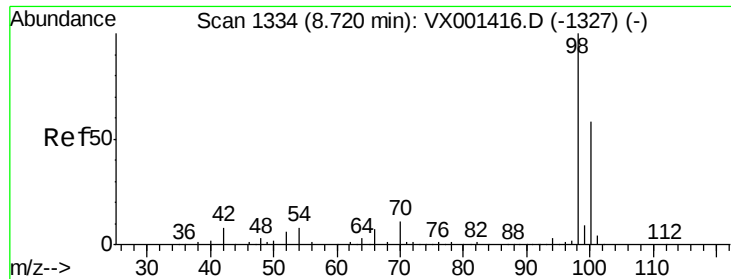
Tgt Ion: 93 Resp: 2736  
Ion Ratio Lower Upper  
93 100  
95 81.5 67.0 100.4  
174 123.4 104.5 156.7



#47  
Bromodichloromethane  
Concen: 6.26 ug/l  
RT: 7.91 min Scan# 1201  
Delta R.T. 0.01 min  
Lab File: VX001568.D  
Acq: 09 May 2018 21:07

Tgt Ion: 83 Resp: 23579  
Ion Ratio Lower Upper  
83 100  
85 63.7 51.0 76.6  
127 8.2 7.4 11.2





#50

Toluene-d8

Concen: 51.02 ug/l

RT: 8.72 min Scan# 1334

Delta R.T. 0.00 min

Lab File: VX001568.D

Acq: 09 May 2018 21:07

Instrument :

MSVOA\_X

ClientSampled :

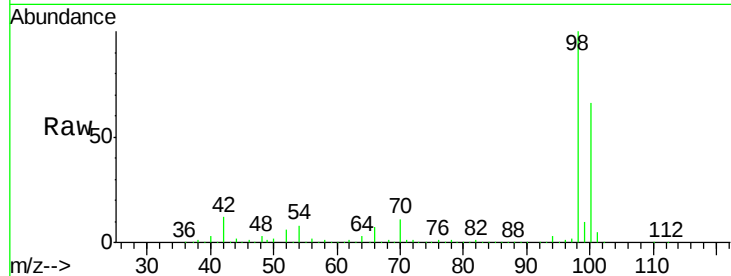
RAV-RMW-3

Tgt Ion: 98 Resp: 513992

Ion Ratio Lower Upper

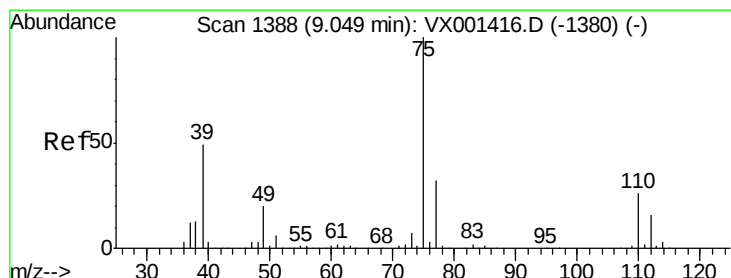
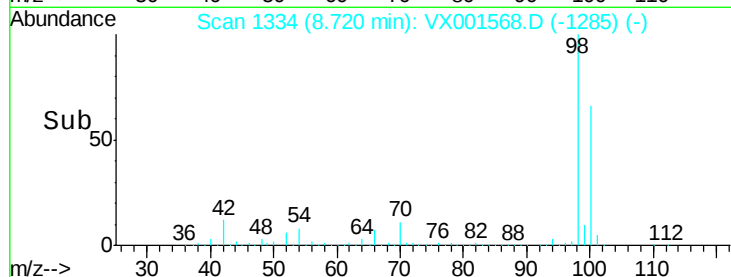
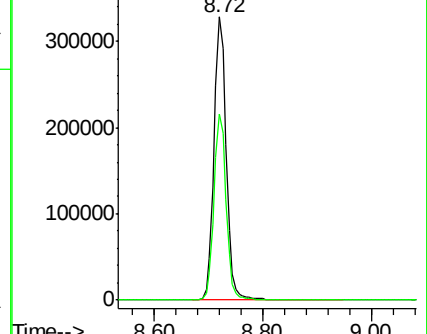
98 100

100 65.7 54.0 81.0



Abundance Ion 98.00 (97.70 to 98.70): VX0

Ion 100.00 (99.70 to 100.70): VX0



#54

cis-1,3-Dichloropropene

Concen: 2.28 ug/l

RT: 9.06 min Scan# 1390

Delta R.T. 0.01 min

Lab File: VX001568.D

Acq: 09 May 2018 21:07

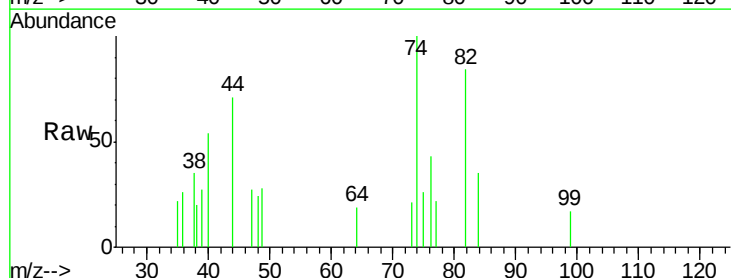
Tgt Ion: 75 Resp: 85

Ion Ratio Lower Upper

75 100

77 85.0 25.5 38.3#

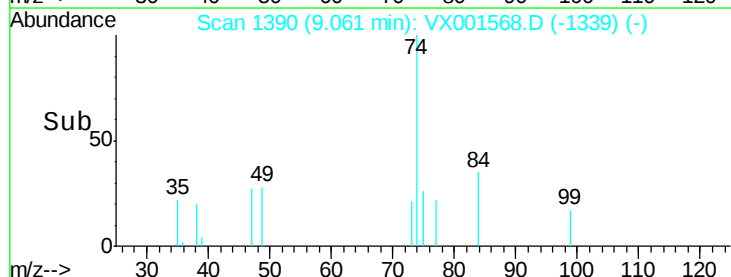
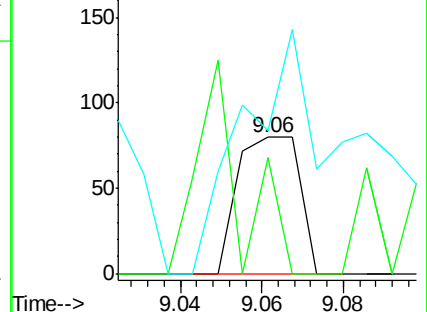
39 105.0 38.9 58.3#

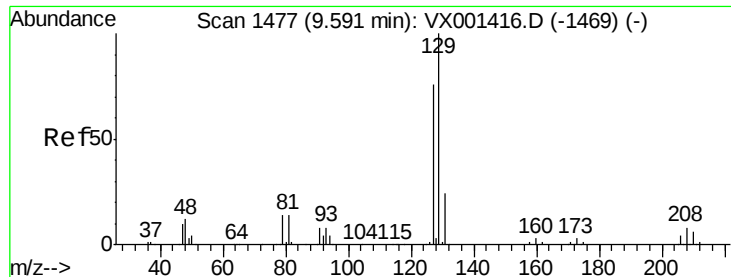


Abundance Ion 74.90 (74.60 to 75.60): VX0

Ion 76.90 (76.60 to 77.60): VX0

Ion 39.00 (38.70 to 39.70): VX0





#60

Dibromochloromethane

Concen: 4.54 ug/l

RT: 9.59 min Scan# 1476

Delta R.T. -0.01 min

Lab File: VX001568.D

Acq: 09 May 2018 21:07

Instrument :

MSVOA\_X

ClientSampleId :

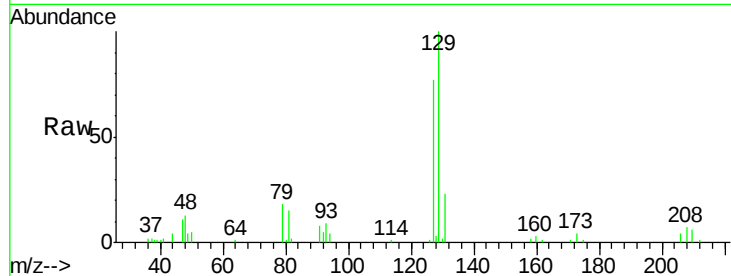
RAV-RMW-3

Tgt Ion:129 Resp: 14131

Ion Ratio Lower Upper

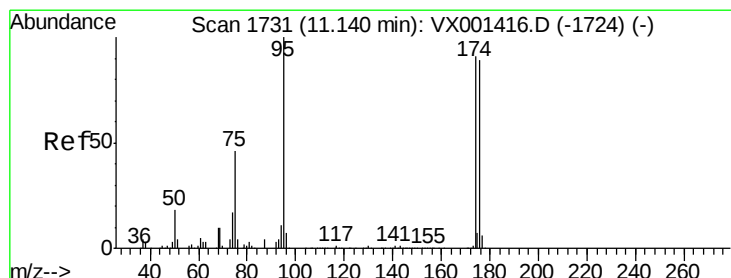
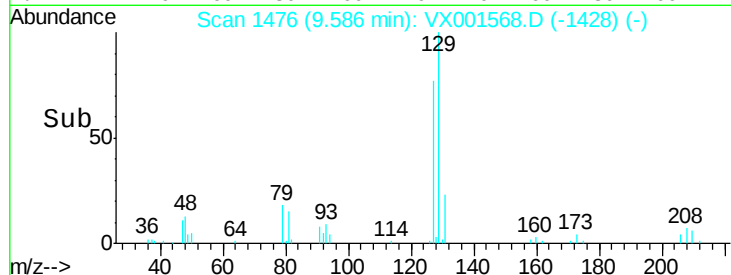
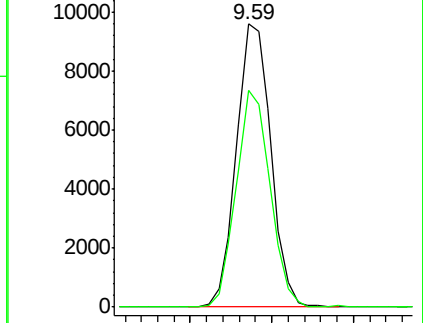
129 100

127 75.4 38.1 114.5



Abundance Ion 128.80 (128.50 to 129.50): V

Ion 126.80 (126.50 to 127.50): V



#62

4-Bromofluorobenzene

Concen: 41.31 ug/l

RT: 11.14 min Scan# 1731

Delta R.T. 0.00 min

Lab File: VX001568.D

Acq: 09 May 2018 21:07

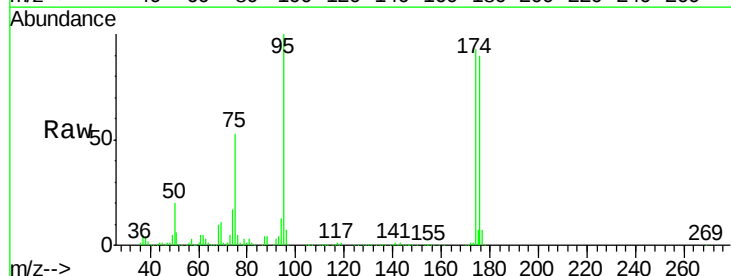
Tgt Ion: 95 Resp: 159746

Ion Ratio Lower Upper

95 100

174 102.0 0.0 202.0

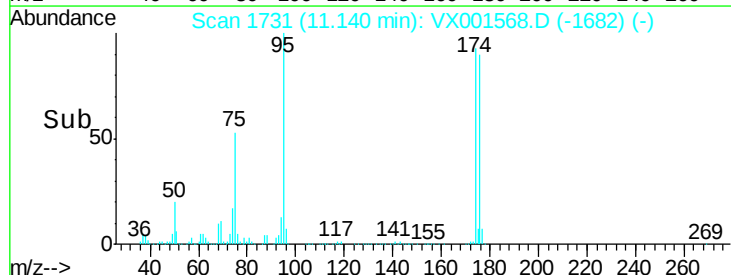
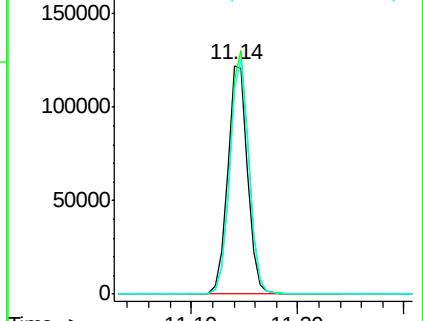
176 98.8 0.0 197.4

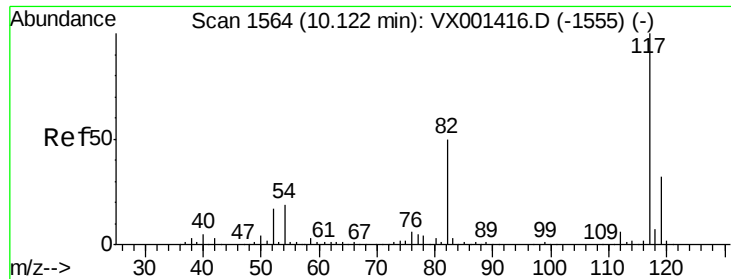


Abundance Ion 94.90 (94.60 to 95.60): VX0

Ion 173.80 (173.50 to 174.50): V

Ion 175.80 (175.50 to 176.50): V

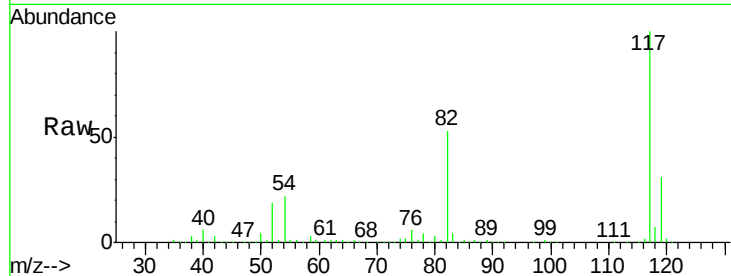




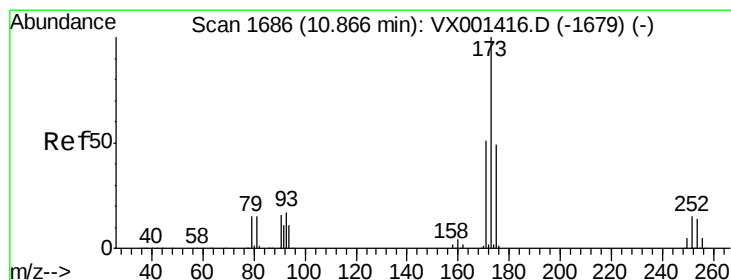
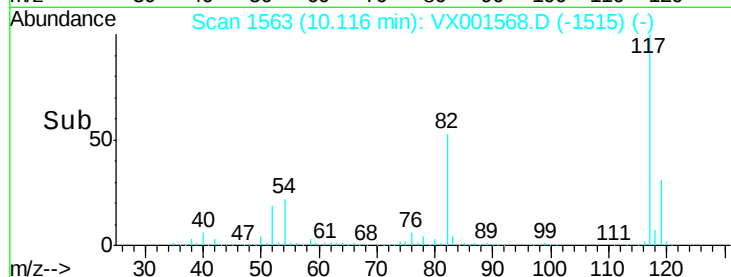
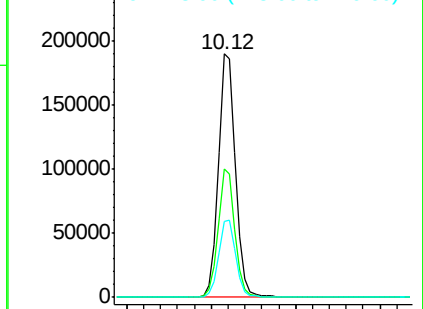
#63  
Chlorobenzene-d5  
Concen: 50.00 ug/l  
RT: 10.12 min Scan# 1563  
Delta R.T. -0.01 min  
Lab File: VX001568.D  
Acq: 09 May 2018 21:07

Instrument :  
MSVOA\_X  
ClientSampleId :  
RAV-RMW-3

Tgt Ion:117 Resp: 267592  
Ion Ratio Lower Upper  
117 100  
82 52.8 40.0 60.0  
119 31.4 25.8 38.8

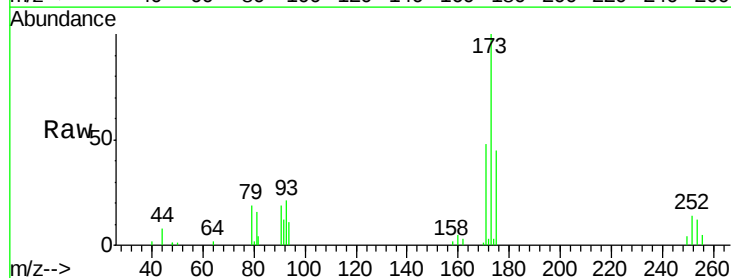


Abundance Ion 116.90 (116.60 to 117.60): V  
Ion 82.00 (81.70 to 82.70): VX0  
Ion 118.90 (118.60 to 119.60): V

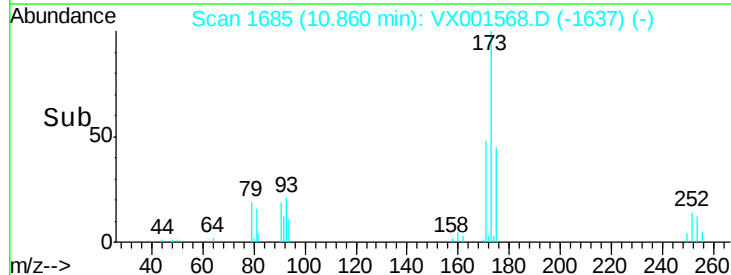
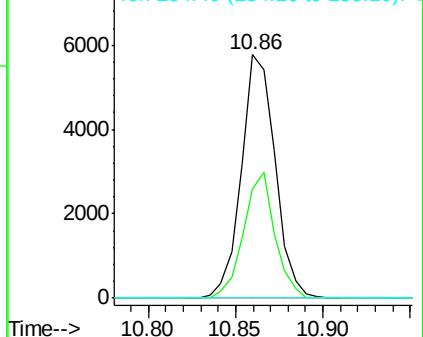


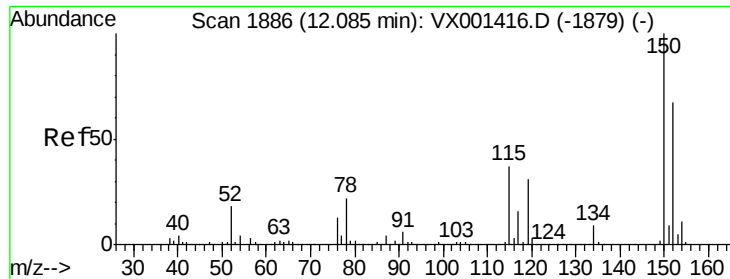
#71  
Bromoform  
Concen: 6.23 ug/l  
RT: 10.86 min Scan# 1685  
Delta R.T. -0.01 min  
Lab File: VX001568.D  
Acq: 09 May 2018 21:07

Tgt Ion:173 Resp: 7748  
Ion Ratio Lower Upper  
173 100  
175 47.8 24.5 73.5  
254 0.0 0.2 0.2#



Abundance Ion 172.70 (172.40 to 173.40): V  
Ion 174.70 (174.40 to 175.40): V  
Ion 254.40 (254.10 to 255.10): V





#72

1,4-Dichlorobenzene-d4

Concen: 50.00 ug/l

RT: 12.09 min Scan# 1886

Delta R.T. 0.00 min

Lab File: VX001568.D

Acq: 09 May 2018 21:07

Instrument :

MSVOA\_X

ClientSampled :

RAV-RMW-3

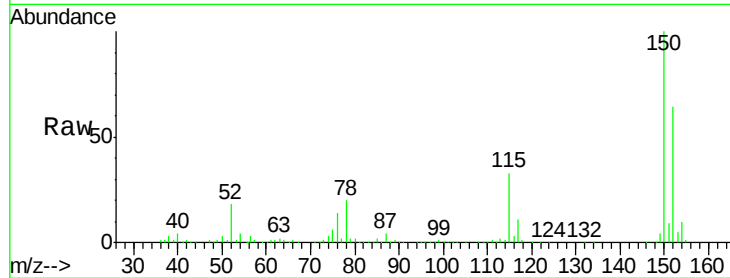
Tgt Ion:152 Resp: 134050

Ion Ratio Lower Upper

152 100

115 52.5 37.7 113.1

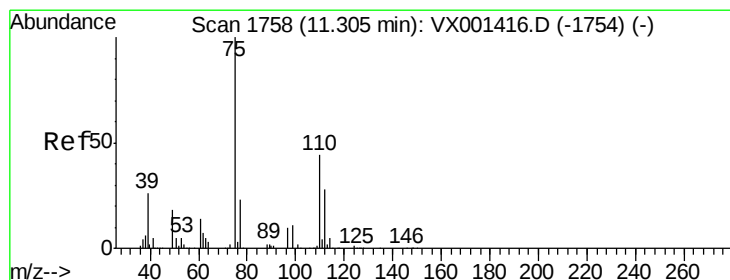
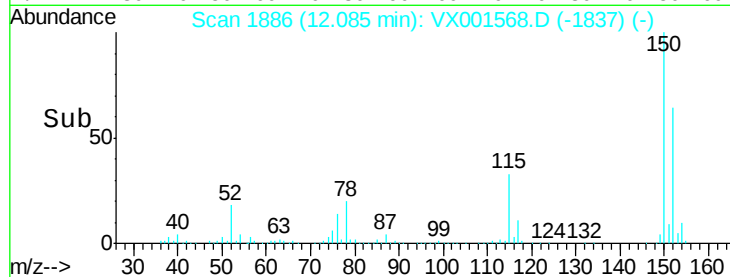
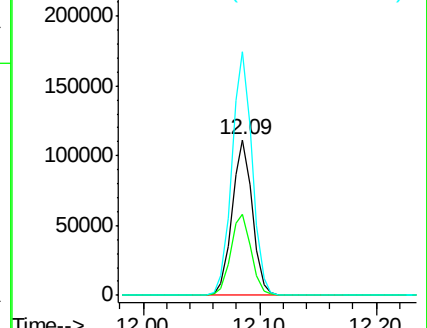
150 156.4 0.0 349.4



Abundance Ion 151.90 (151.60 to 152.60): V

Ion 114.90 (114.60 to 115.60): V

Ion 149.90 (149.60 to 150.60): V



#76

1,2,3-Trichloropropane

Concen: 29.86 ug/l

RT: 11.14 min Scan# 1731

Delta R.T. -0.16 min

Lab File: VX001568.D

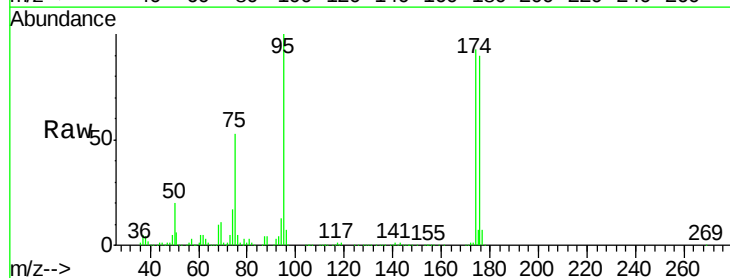
Acq: 09 May 2018 21:07

Tgt Ion: 75 Resp: 81182

Ion Ratio Lower Upper

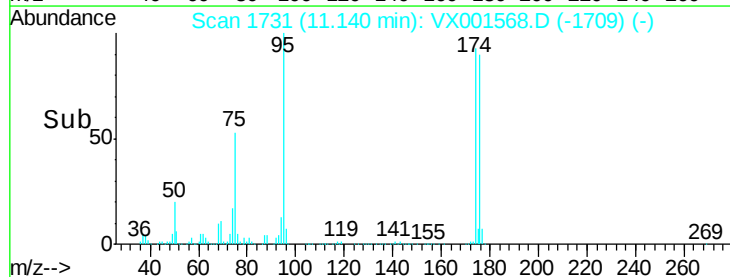
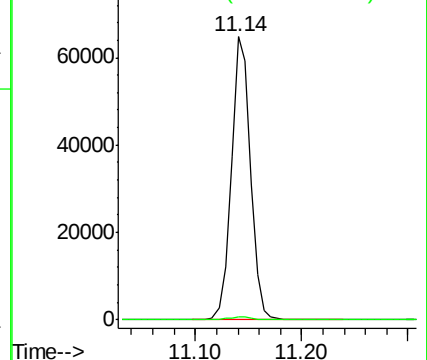
75 100

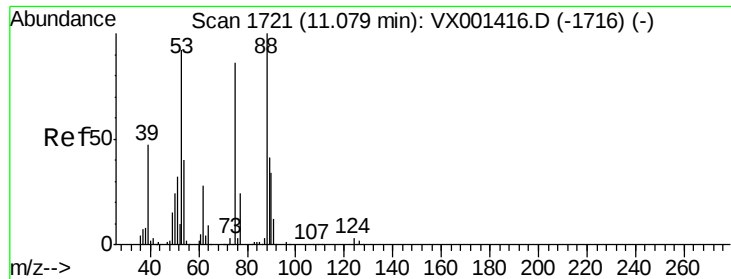
77 1.4 19.6 58.7#



Abundance Ion 74.90 (74.60 to 75.60): VX0

Ion 77.00 (76.70 to 77.70): VX0





#81

trans-1,4-Dichloro-2-butene

Concen: 91.33 ug/l

RT: 11.14 min Scan# 1731

Delta R.T. 0.06 min

Lab File: VX001568.D

Acq: 09 May 2018 21:07

Instrument :

MSVOA\_X

ClientSampleId :

RAV-RMW-3

Tgt Ion: 75 Resp: 81182

Ion Ratio Lower Upper

75 100

53 0.1 84.5 126.7#

89 0.0 39.5 59.3#

