

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX062018\  
 Data File : VX002752.D  
 Acq On : 20 Jun 2018 19:53  
 Operator : JC/MD  
 Sample : J3597-05  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 21 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :

Quant Time: Jun 21 04:01:25 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_X\METHOD\82X061518W.M  
 Quant Title : SW846 8260  
 QLast Update : Sat Jun 16 01:37:33 2018  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 5.67  | 168  | 220378   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 6.87  | 114  | 307930   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 10.12 | 117  | 284380   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 12.09 | 152  | 164881   | 50.00 | ug/l  | 0.00     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|-----------------------------|-------|------|----------|-------|--------|----------|
| 33) 1,2-Dichloroethane-d4   | 6.07  | 65   | 146278   | 43.68 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 87.36% |          |
| 35) Dibromofluoromethane    | 5.51  | 113  | 120171   | 48.90 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 97.80% |          |
| 50) Toluene-d8              | 8.72  | 98   | 430017   | 46.08 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 92.16% |          |
| 62) 4-Bromofluorobenzene    | 11.14 | 95   | 153197   | 43.33 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 86.66% |          |

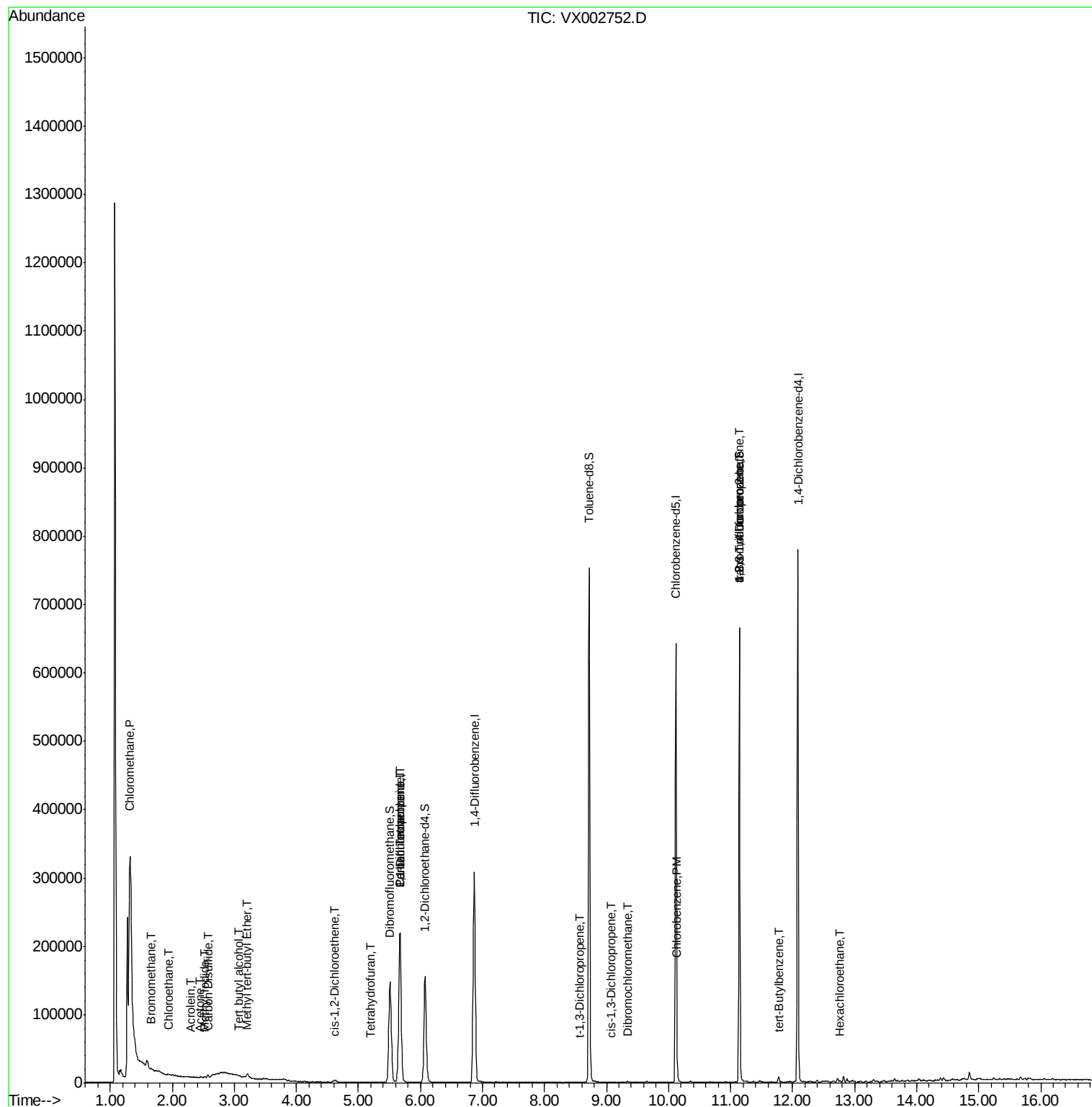
| Target Compounds               | R.T.  | QIon | Response | Conc  | Units  | Qvalue |
|--------------------------------|-------|------|----------|-------|--------|--------|
| 3) Chloromethane               | 1.32  | 50   | 16645    | 5.98  | ug/l # | 49     |
| 5) Bromomethane                | 1.65  | 94   | 1104     | 0.63  | ug/l   | 81     |
| 6) Chloroethane                | 1.93  | 64   | 1050     | 0.55  | ug/l # | 61     |
| 10) Methyl Iodide              | 2.51  | 142  | 1611     | 5.59  | ug/l # | 95     |
| 11) Tert butyl alcohol         | 3.07  | 59   | 895      | 1.29  | ug/l # | 71     |
| 13) Acrolein                   | 2.30  | 56   | 191      | 7.44  | ug/l # | 14     |
| 16) Acetone                    | 2.45  | 43   | 1176     | 0.80  | ug/l   | 91     |
| 17) Carbon Disulfide           | 2.57  | 76   | 6096     | 1.04  | ug/l # | 94     |
| 19) Methyl tert-butyl Ether    | 3.20  | 73   | 5455     | 0.59  | ug/l   | 98     |
| 27) cis-1,2-Dichloroethene     | 4.61  | 96   | 836      | 0.31  | ug/l # | 1      |
| 29) Tetrahydrofuran            | 5.19  | 42   | 297      | 0.23  | ug/l # | 71     |
| 36) 1,1-Dichloropropene        | 5.67  | 75   | 14971    | 4.58  | ug/l # | 51     |
| 38) Carbon Tetrachloride       | 5.67  | 117  | 19922    | 6.12  | ug/l # | 16     |
| 53) t-1,3-Dichloropropene      | 8.56  | 75   | 42       | 2.40  | ug/l # | 43     |
| 54) cis-1,3-Dichloropropene    | 9.07  | 75   | 22       | 3.22  | ug/l # | 1      |
| 60) Dibromochloromethane       | 9.34  | 129  | 172      | 3.82  | ug/l # | 11     |
| 65) Chlorobenzene              | 10.14 | 112  | 2958     | 0.42  | ug/l   | 93     |
| 76) 1,2,3-Trichloropropane     | 11.14 | 75   | 80709    | 25.94 | ug/l # | 33     |
| 81) trans-1,4-Dichloro-2-buten | 11.14 | 75   | 80709    | 80.24 | ug/l # | 7      |
| 83) tert-Butylbenzene          | 11.77 | 119  | 2496     | 0.28  | ug/l   | 93     |
| 90) Hexachloroethane           | 12.76 | 117  | 150      | 2.72  | ug/l # | 1      |

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

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Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_X\METHOD\82X061518W.M  
Quant Title : SW846 8260  
QLast Update : Sat Jun 16 01:37:33 2018  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.00 ug/l

RT: 5.67 min Scan# 834

Delta R.T. 0.00 min

Lab File: VX002752.D

Acq: 20 Jun 2018 19:53

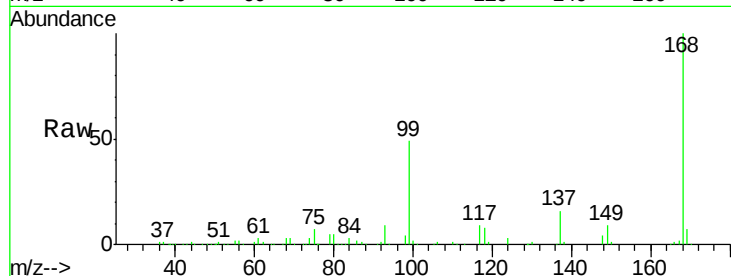
Instrument :  
MSVOA\_X  
ClientSampleId :

Tot Ion:168 Resp: 220378

Ion Ratio Lower Upper

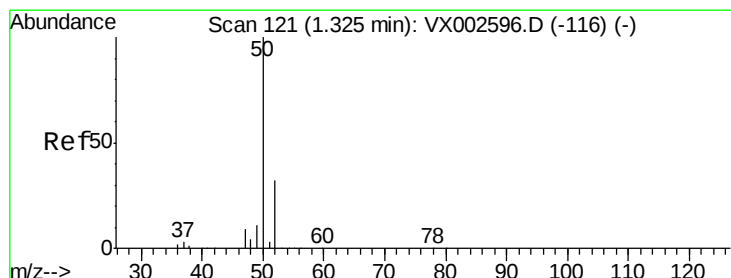
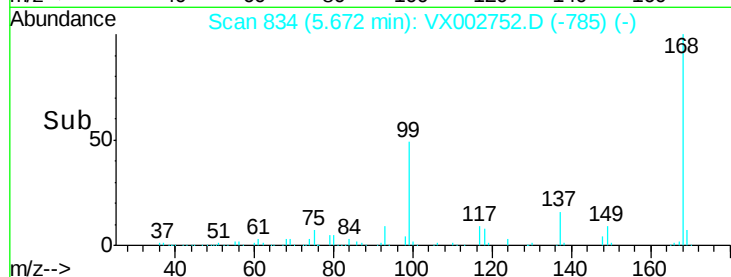
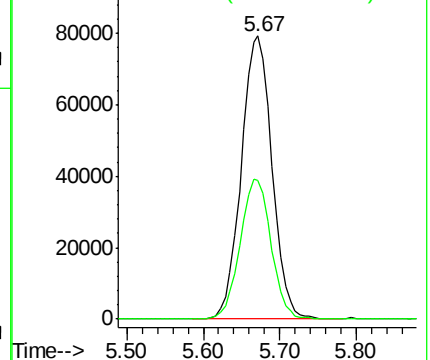
168 100

99 49.2 39.3 58.9



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VX0



#3

Chloromethane

Concen: 5.98 ug/l

RT: 1.32 min Scan# 121

Delta R.T. 0.00 min

Lab File: VX002752.D

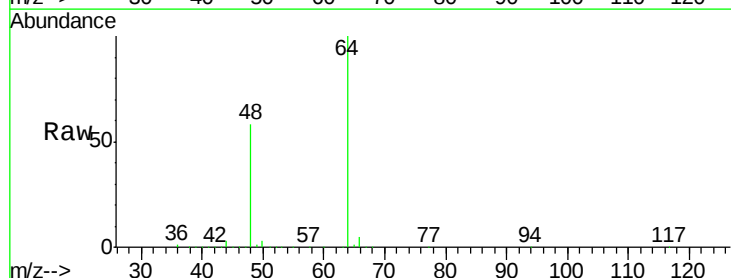
Acq: 20 Jun 2018 19:53

Tgt Ion: 50 Resp: 16645

Ion Ratio Lower Upper

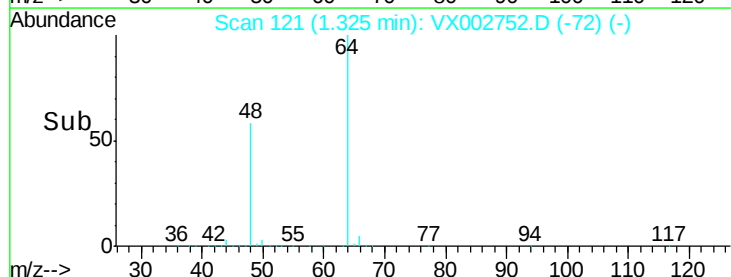
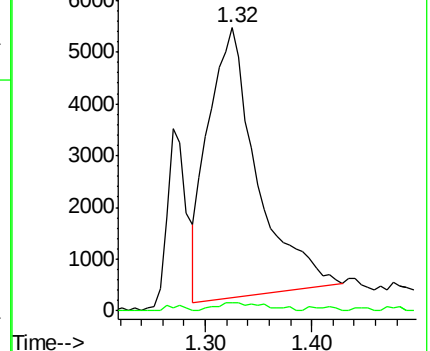
50 100

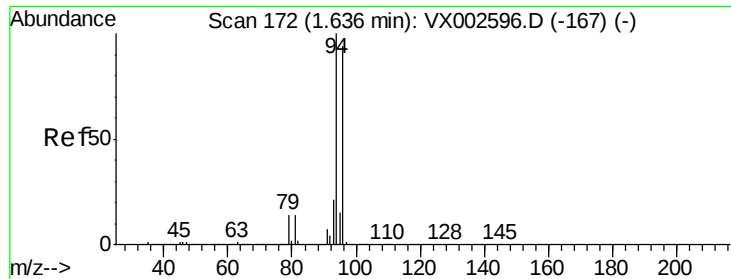
52 3.4 25.7 38.5#



Abundance Ion 49.90 (49.60 to 50.60): VX0

Ion 51.90 (51.60 to 52.60): VX0





#5

Bromomethane

Concen: 0.63 ug/l

RT: 1.65 min Scan# 174

Delta R.T. 0.01 min

Lab File: VX002752.D

Acq: 20 Jun 2018 19:53

Instrument :

MSVOA\_X

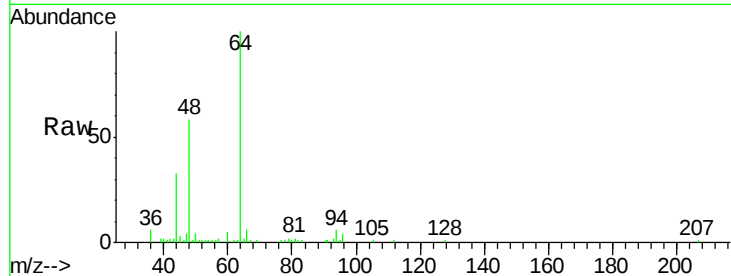
ClientSampleId :

Tot Ion: 94 Resp: 1104

Ion Ratio Lower Upper

94 100

96 74.9 74.9 112.3



Abundance Ion 93.90 (93.60 to 94.60): VX0

Ion 95.90 (95.60 to 96.60): VX0

1.65

400

300

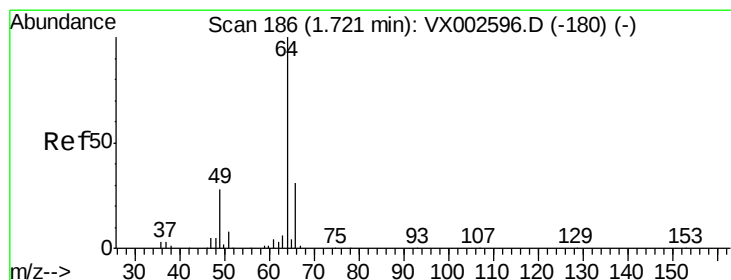
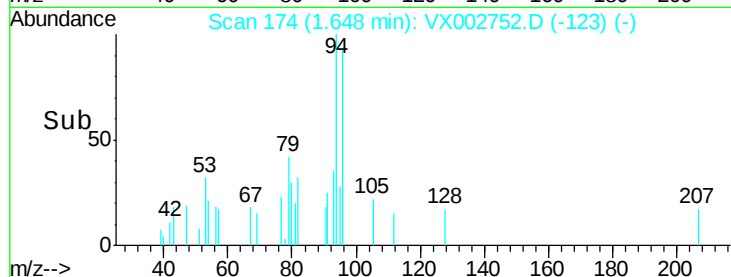
200

100

0

1.60 1.65 1.70 1.75

Time-->



#6

Chloroethane

Concen: 0.55 ug/l

RT: 1.93 min Scan# 221

Delta R.T. 0.21 min

Lab File: VX002752.D

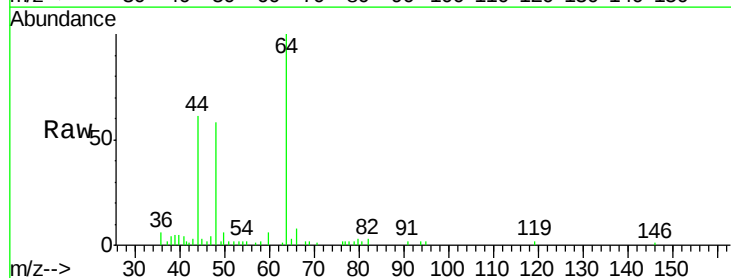
Acq: 20 Jun 2018 19:53

Tgt Ion: 64 Resp: 1050

Ion Ratio Lower Upper

64 100

66 10.4 25.5 38.3#



Abundance Ion 63.90 (63.60 to 64.60): VX0

Ion 65.90 (65.60 to 66.60): VX0

1.93

4000

3000

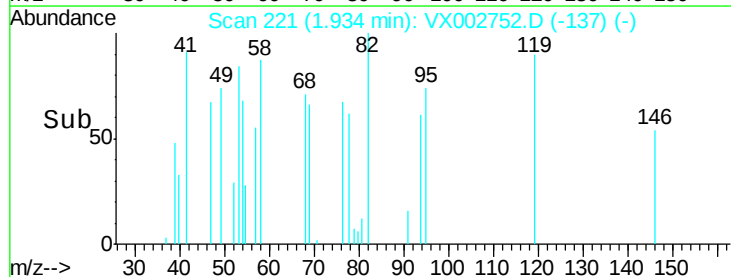
2000

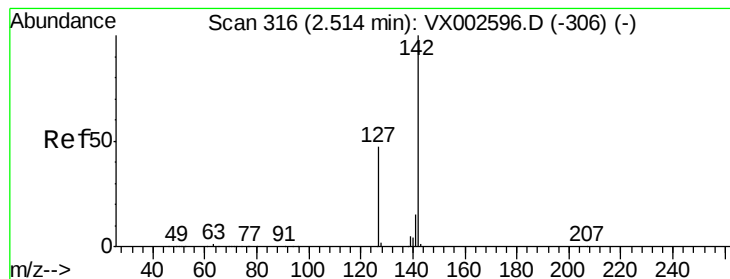
1000

0

1.90 1.92 1.94 1.96 1.98

Time-->





#10

Methvl Iodide

Concen: 5.59 ug/l

RT: 2.51 min Scan# 316

Delta R.T. 0.00 min

Lab File: VX002752.D

Acq: 20 Jun 2018 19:53

Instrument :

MSVOA\_X

ClientSampled :

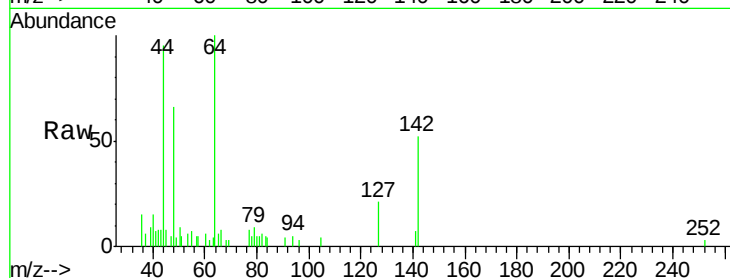
Tot Ion:142 Resp: 1611

Ion Ratio Lower Upper

142 100

127 47.0 36.6 55.0

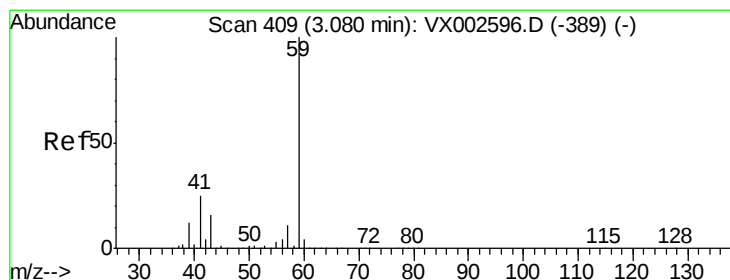
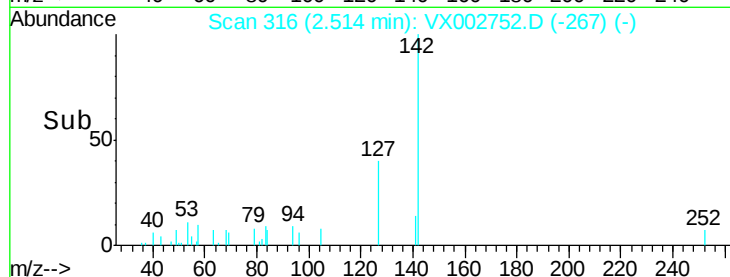
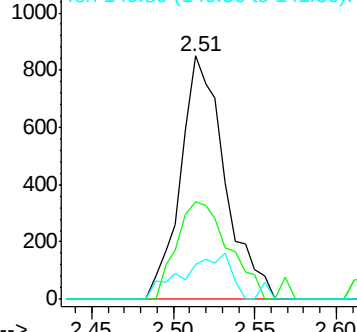
141 20.2 11.3 16.9#



Abundance Ion 141.80 (141.50 to 142.50): V

Ion 126.80 (126.50 to 127.50): V

Ion 140.80 (140.50 to 141.50): V



#11

Tert butyl alcohol

Concen: 1.29 ug/l

RT: 3.07 min Scan# 407

Delta R.T. -0.01 min

Lab File: VX002752.D

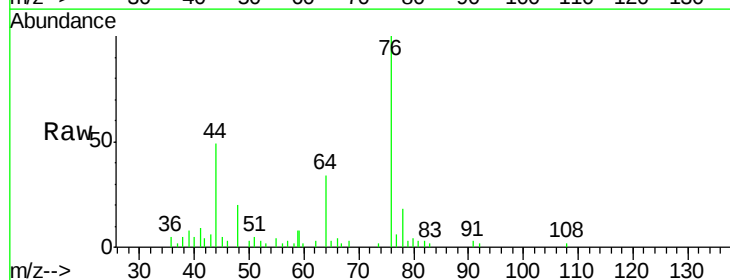
Acq: 20 Jun 2018 19:53

Tgt Ion: 59 Resp: 895

Ion Ratio Lower Upper

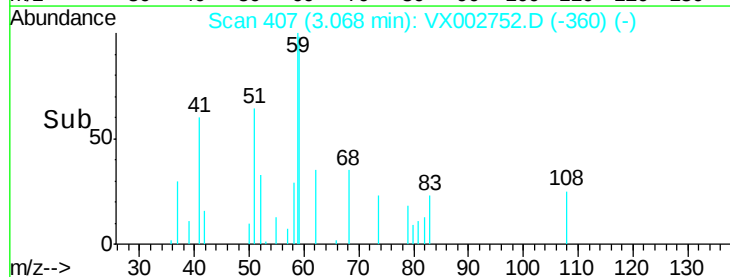
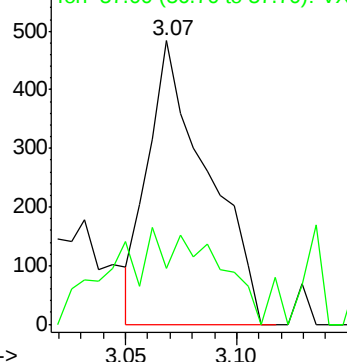
59 100

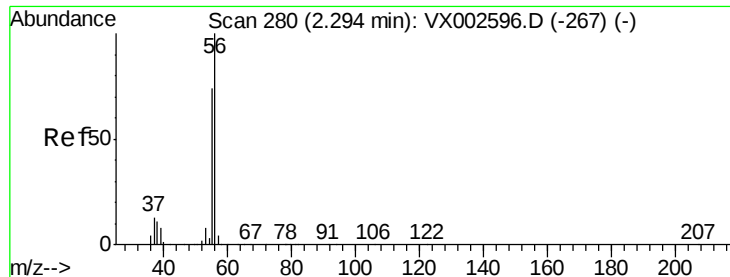
57 20.9 8.2 12.2#



Abundance Ion 59.00 (58.70 to 59.70): VX0

Ion 57.00 (56.70 to 57.70): VX0





#13

Acrolein

Concen: 7.44 ug/l

RT: 2.30 min Scan# 281

Delta R.T. 0.01 min

Lab File: VX002752.D

Acq: 20 Jun 2018 19:53

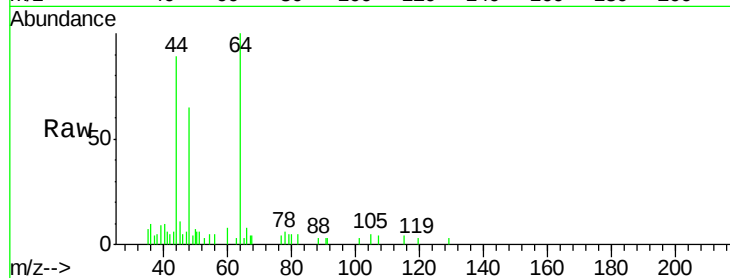
Instrument :  
MSVOA\_X  
ClientSampled :

Tot Ion: 56 Resp: 191

Ion Ratio Lower Upper

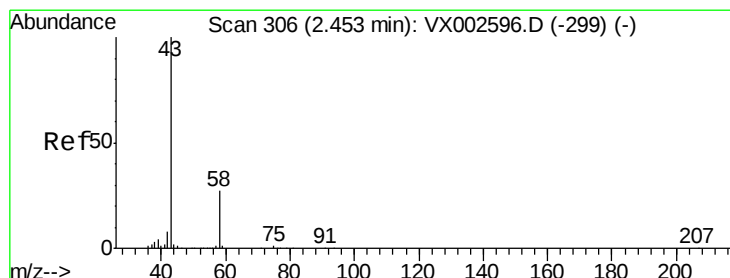
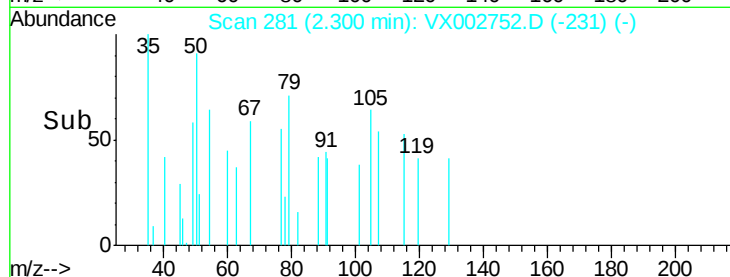
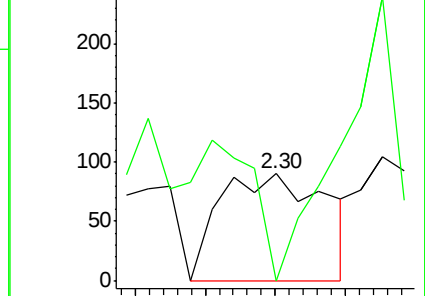
56 100

55 0.0 57.0 85.4#



Abundance Ion 56.00 (55.70 to 56.70): VX0

Ion 55.00 (54.70 to 55.70): VX0



#16

Acetone

Concen: 0.80 ug/l

RT: 2.45 min Scan# 305

Delta R.T. -0.01 min

Lab File: VX002752.D

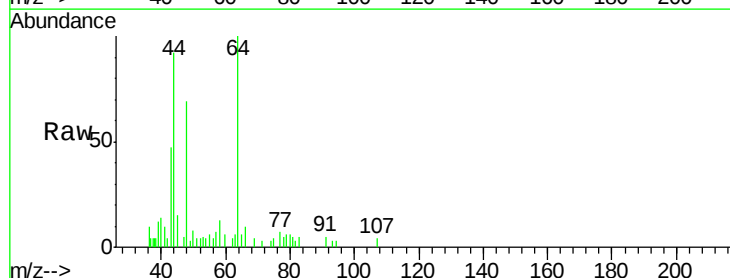
Acq: 20 Jun 2018 19:53

Tgt Ion: 43 Resp: 1176

Ion Ratio Lower Upper

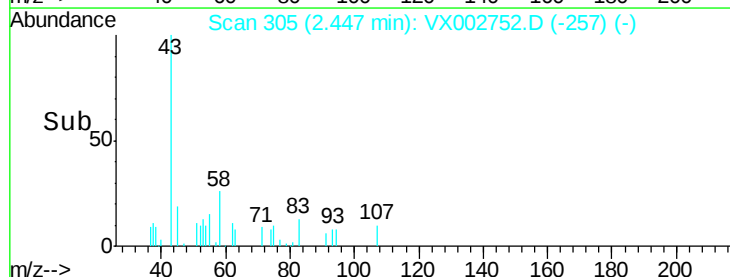
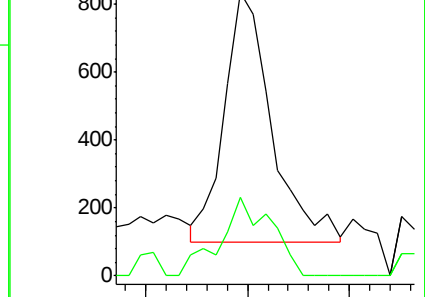
43 100

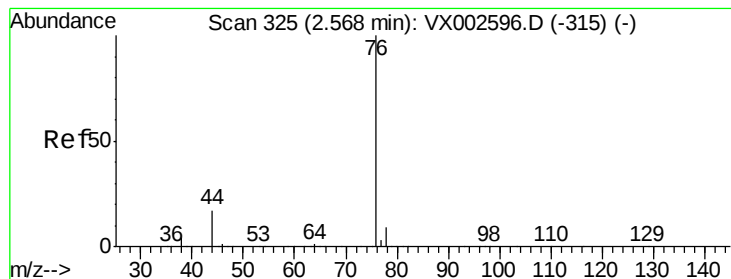
58 32.1 22.1 33.1



Abundance Ion 43.00 (42.70 to 43.70): VX0

Ion 58.00 (57.70 to 58.70): VX0





#17

Carbon Disulfide

Concen: 1.04 ug/l

RT: 2.57 min Scan# 326

Delta R.T. 0.01 min

Lab File: VX002752.D

Acq: 20 Jun 2018 19:53

Instrument :

MSVOA\_X

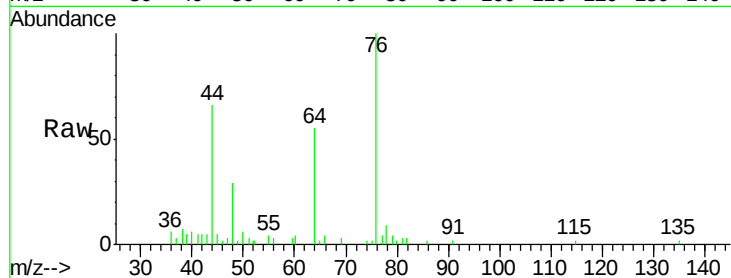
ClientSampleId :

Tot Ion: 76 Resp: 6096

Ion Ratio Lower Upper

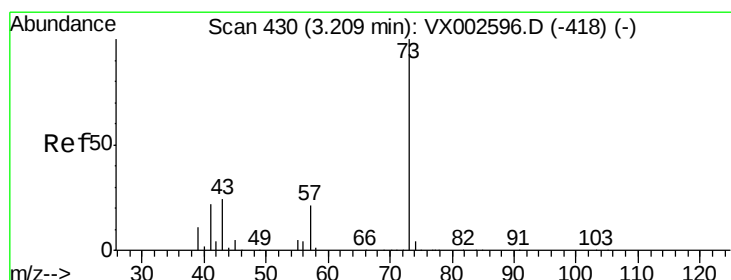
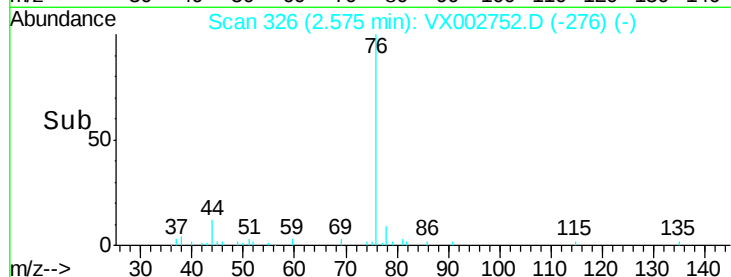
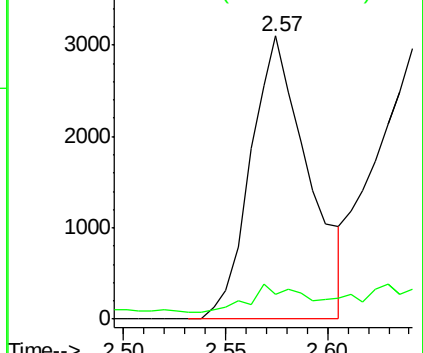
76 100

78 6.5 6.9 10.3#



Abundance Ion 75.90 (75.60 to 76.60): VX0

Ion 77.90 (77.60 to 78.60): VX0



#19

Methyl tert-butyl Ether

Concen: 0.59 ug/l

RT: 3.20 min Scan# 429

Delta R.T. -0.01 min

Lab File: VX002752.D

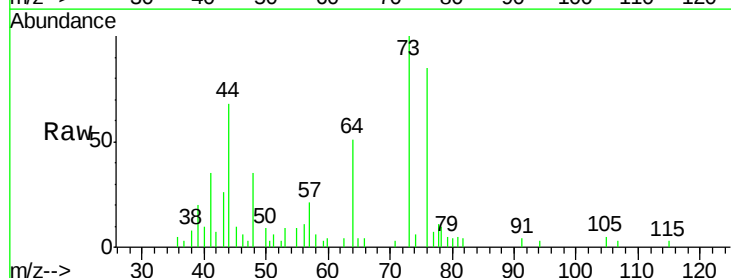
Acq: 20 Jun 2018 19:53

Tgt Ion: 73 Resp: 5455

Ion Ratio Lower Upper

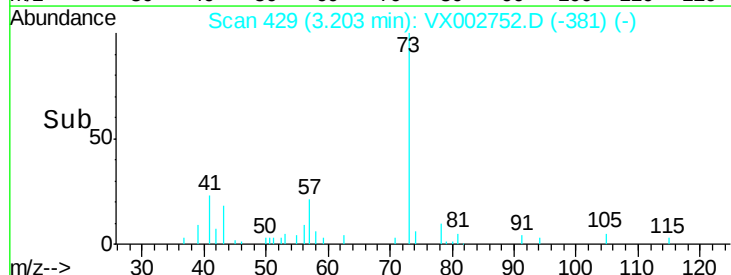
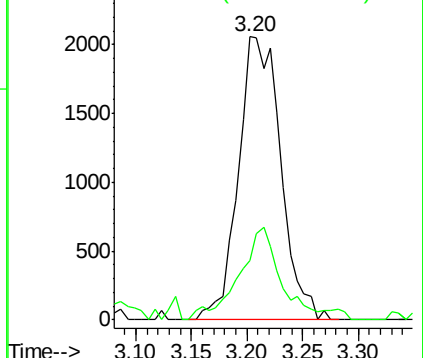
73 100

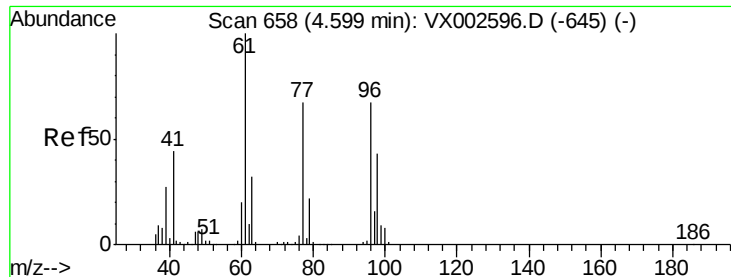
57 21.0 17.7 26.5



Abundance Ion 73.00 (72.70 to 73.70): VX0

Ion 57.00 (56.70 to 57.70): VX0





#27

cis-1,2-Dichloroethene

Concen: 0.31 ug/l

RT: 4.61 min Scan# 660

Delta R.T. 0.01 min

Lab File: VX002752.D

Acq: 20 Jun 2018 19:53

Instrument :  
MSVOA\_X  
ClientSampleId :

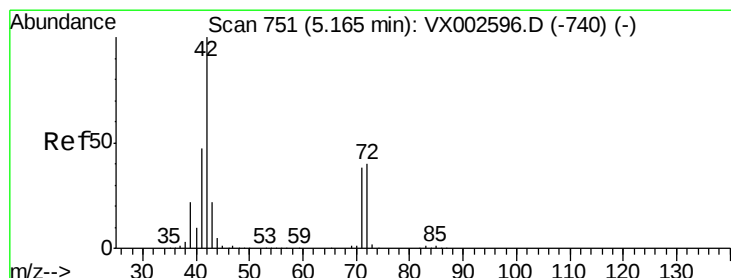
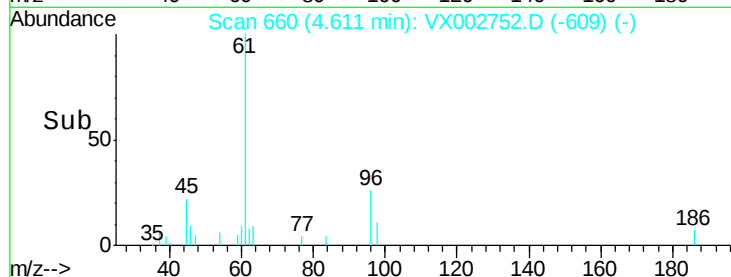
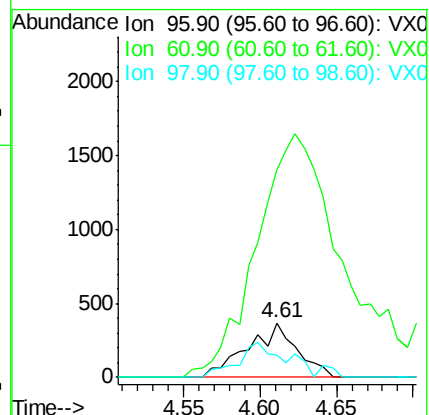
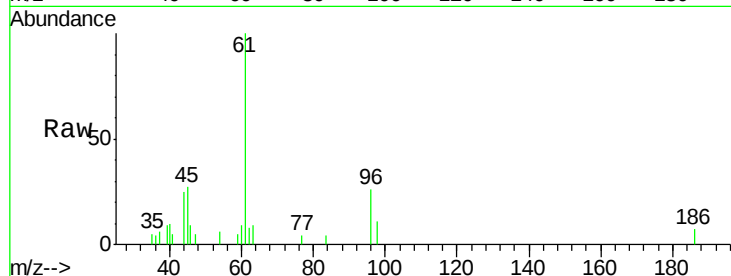
Tot Ion: 96 Resp: 836

Ion Ratio Lower Upper

96 100

61 762.4 0.0 330.2#

98 0.0 0.0 130.2



#29

Tetrahydrofuran

Concen: 0.23 ug/l

RT: 5.19 min Scan# 755

Delta R.T. 0.02 min

Lab File: VX002752.D

Acq: 20 Jun 2018 19:53

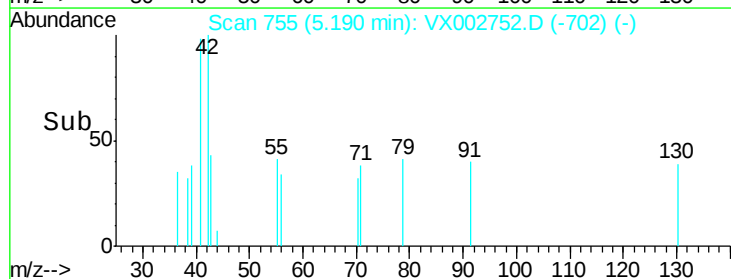
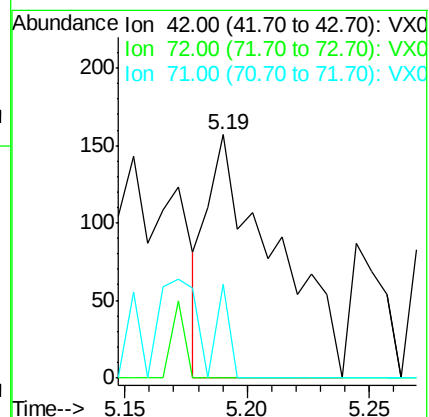
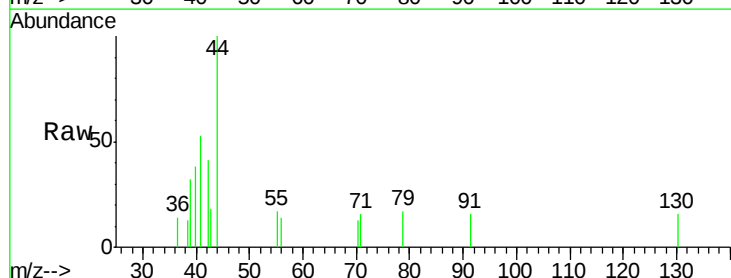
Tgt Ion: 42 Resp: 297

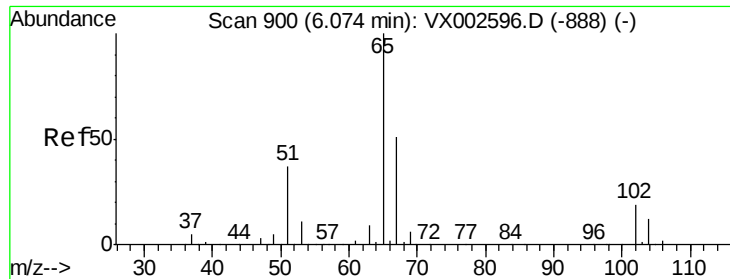
Ion Ratio Lower Upper

42 100

72 6.1 32.0 48.0#

71 36.4 30.1 45.1





#33

1,2-Dichloroethane-d4

Concen: 43.68 ug/l

RT: 6.07 min Scan# 900

Delta R.T. 0.00 min

Lab File: VX002752.D

Acq: 20 Jun 2018 19:53

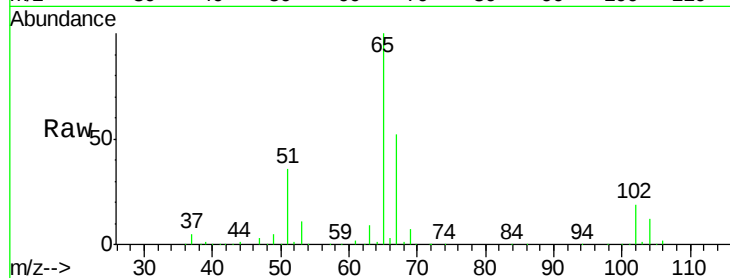
Instrument :  
MSVOA\_X  
ClientSampleId :

Tot Ion: 65 Resp: 146278

Ion Ratio Lower Upper

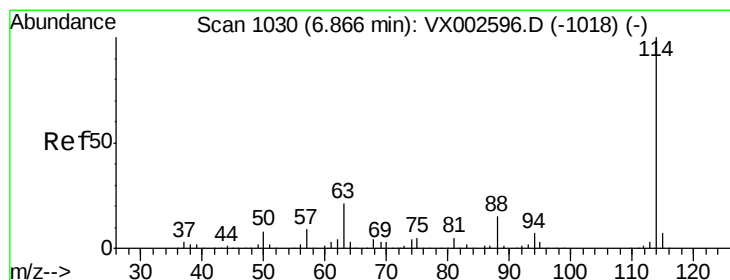
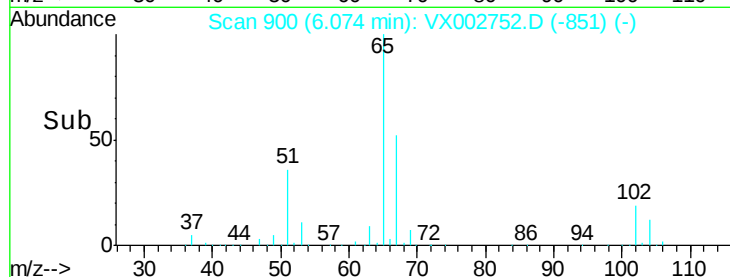
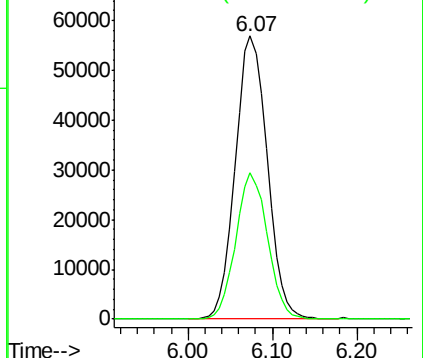
65 100

67 51.3 0.0 102.6



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: VX002752.D

Acq: 20 Jun 2018 19:53

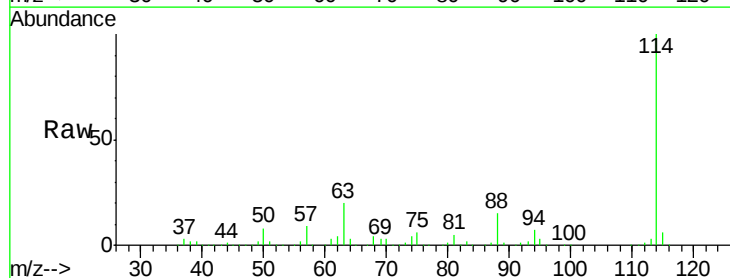
Tgt Ion: 114 Resp: 307930

Ion Ratio Lower Upper

114 100

63 19.7 0.0 41.4

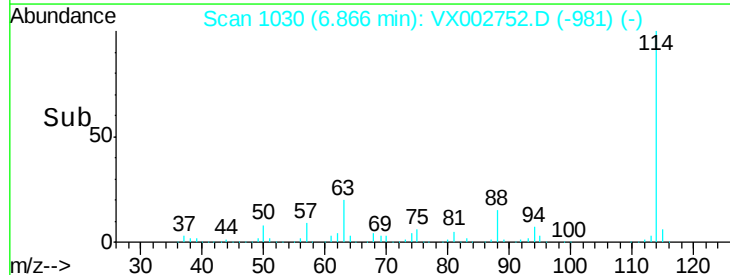
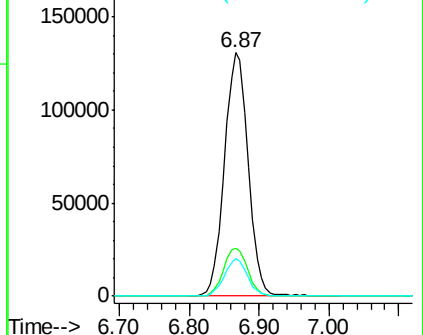
88 15.2 0.0 30.0

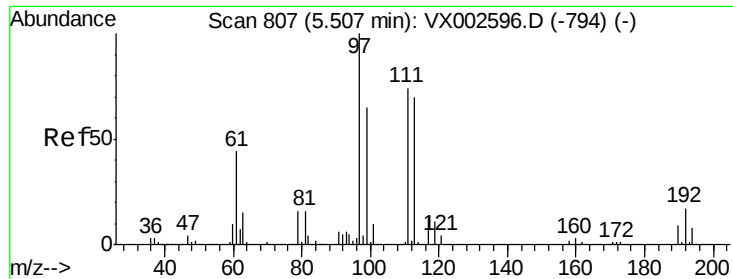


Abundance Ion 113.90 (113.60 to 114.60): V

Ion 63.00 (62.70 to 63.70): VX0

Ion 87.90 (87.60 to 88.60): VX0

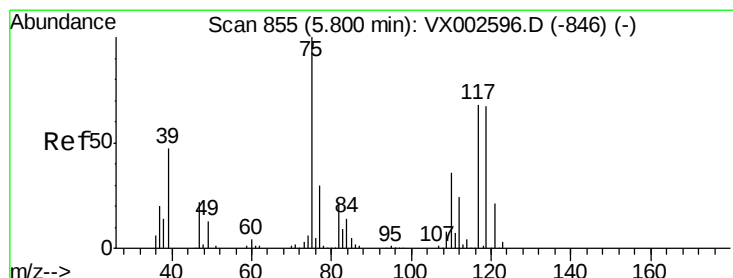
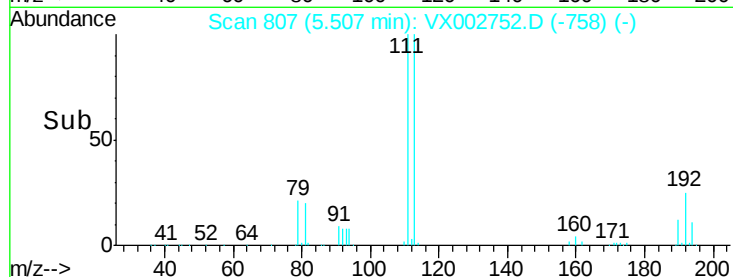
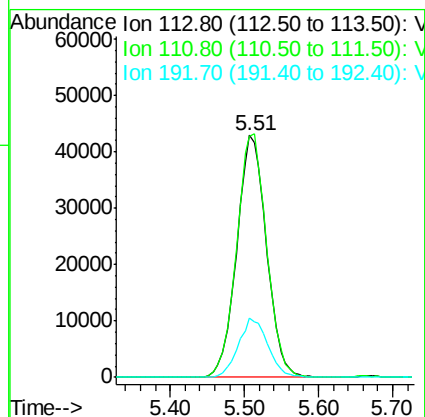
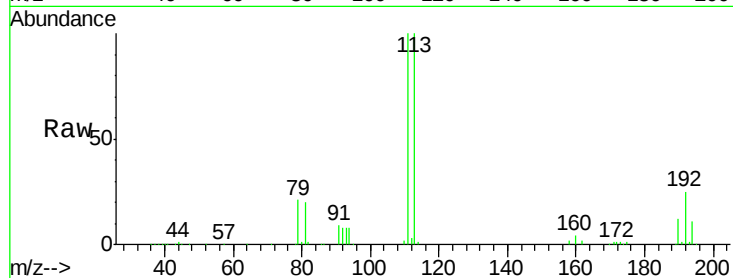




#35  
Dibromofluoromethane  
Concen: 48.90 ug/l  
RT: 5.51 min Scan# 807  
Delta R.T. 0.00 min  
Lab File: VX002752.D  
Acq: 20 Jun 2018 19:53

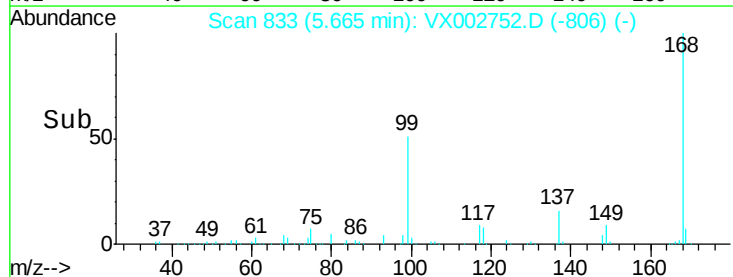
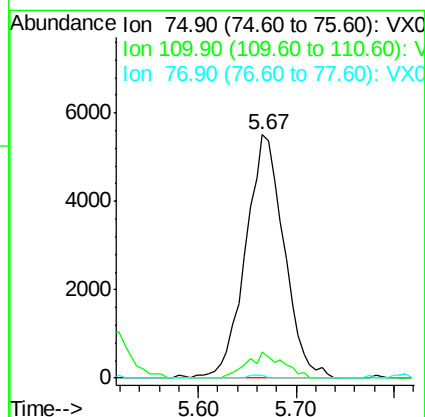
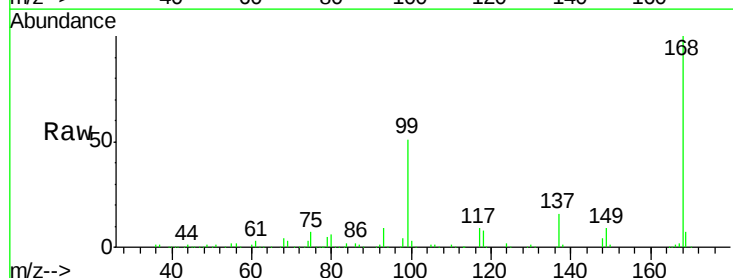
Instrument :  
MSVOA\_X  
ClientSampled :

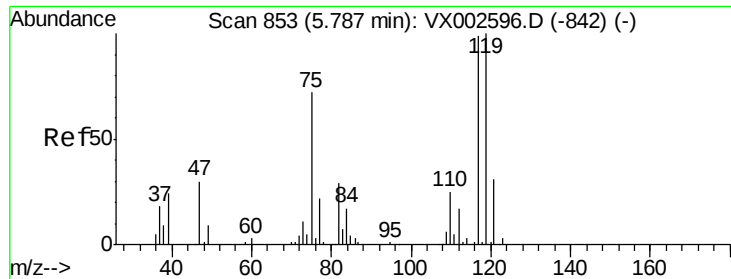
Tot Ion:113 Resp: 120171  
Ion Ratio Lower Upper  
113 100  
111 101.4 81.4 122.0  
192 24.3 19.1 28.7



#36  
1,1-Dichloropropene  
Concen: 4.58 ug/l  
RT: 5.67 min Scan# 833  
Delta R.T. -0.13 min  
Lab File: VX002752.D  
Acq: 20 Jun 2018 19:53

Tgt Ion: 75 Resp: 14971  
Ion Ratio Lower Upper  
75 100  
110 10.1 18.1 54.4#  
77 0.5 24.3 36.5#





#38

Carbon Tetrachloride

Concen: 6.12 ug/l

RT: 5.67 min Scan# 834

Delta R.T. -0.12 min

Lab File: VX002752.D

Acq: 20 Jun 2018 19:53

Instrument :

MSVOA\_X

ClientSampleId :

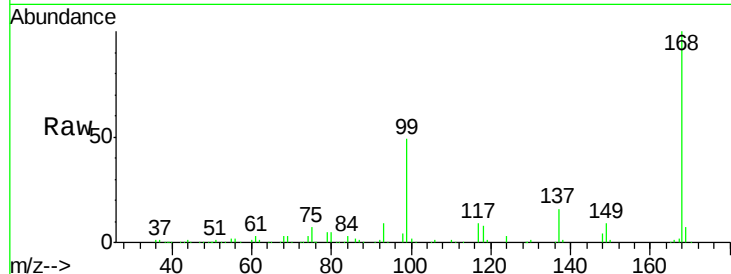
Tot Ion:117 Resp: 19922

Ion Ratio Lower Upper

117 100

119 6.0 77.4 116.0#

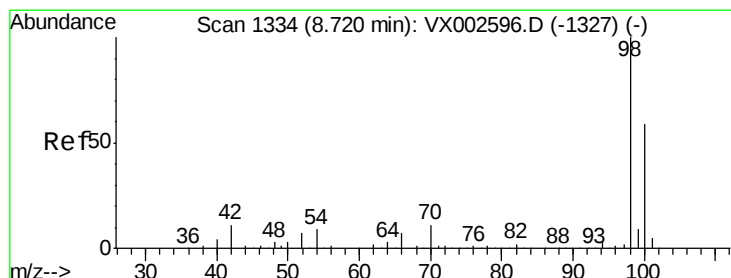
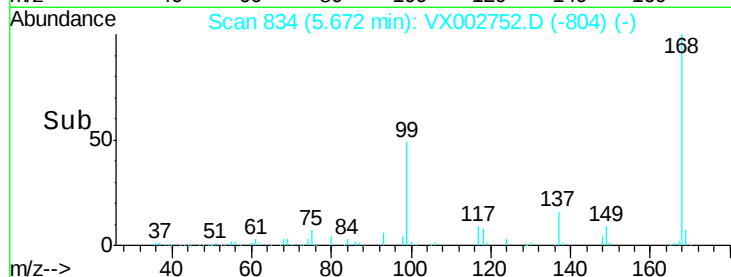
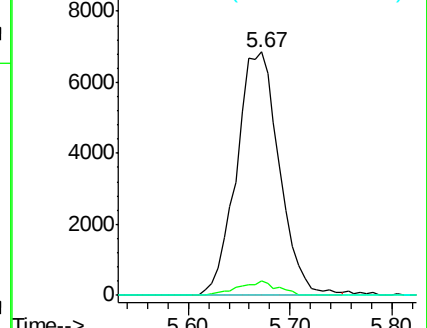
121 0.0 24.4 36.6#



Abundance Ion 116.80 (116.50 to 117.50): V

Ion 118.80 (118.50 to 119.50): V

Ion 120.80 (120.50 to 121.50): V



#50

Toluene-d8

Concen: 46.08 ug/l

RT: 8.72 min Scan# 1334

Delta R.T. 0.00 min

Lab File: VX002752.D

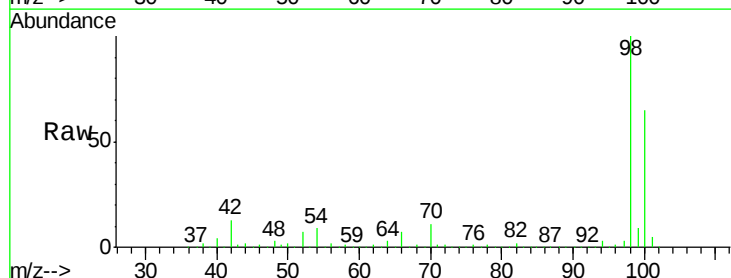
Acq: 20 Jun 2018 19:53

Tgt Ion: 98 Resp: 430017

Ion Ratio Lower Upper

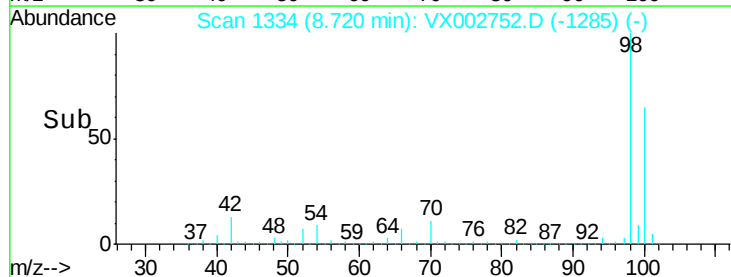
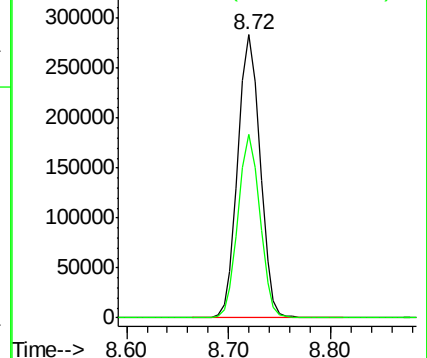
98 100

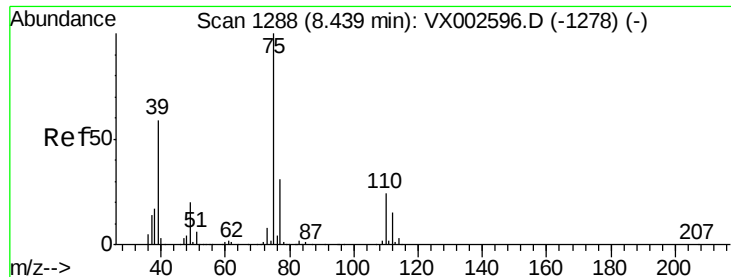
100 63.8 50.9 76.3



Abundance Ion 98.00 (97.70 to 98.70): VX0

Ion 100.00 (99.70 to 100.70): V





#53

t-1,3-Dichloropropene

Concen: 2.40 ug/l

RT: 8.56 min Scan# 1308

Delta R.T. 0.12 min

Lab File: VX002752.D

Acq: 20 Jun 2018 19:53

Instrument :

MSVOA\_X

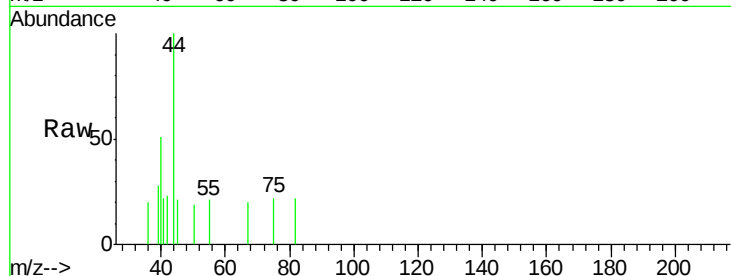
ClientSampleId :

Tot Ion: 75 Resp: 42

Ion Ratio Lower Upper

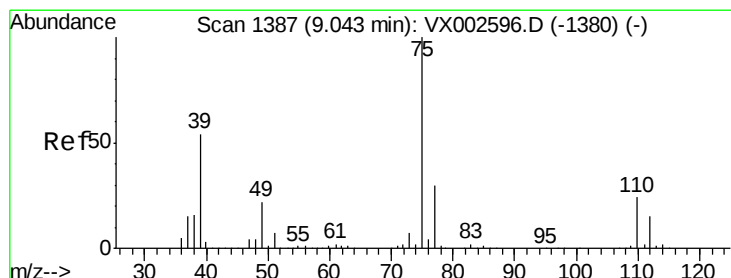
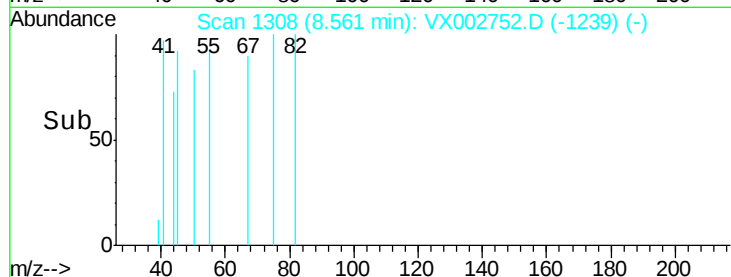
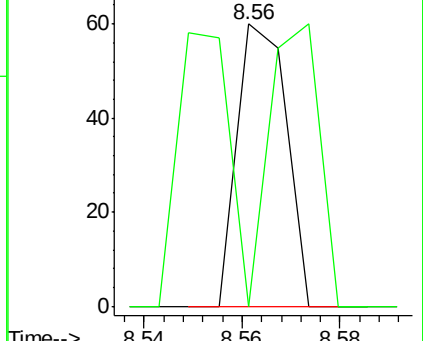
75 100

77 0.0 25.4 38.2#



Abundance Ion 74.90 (74.60 to 75.60): VX0

Ion 76.90 (76.60 to 77.60): VX0



#54

cis-1,3-Dichloropropene

Concen: 3.22 ug/l

RT: 9.07 min Scan# 1392

Delta R.T. 0.03 min

Lab File: VX002752.D

Acq: 20 Jun 2018 19:53

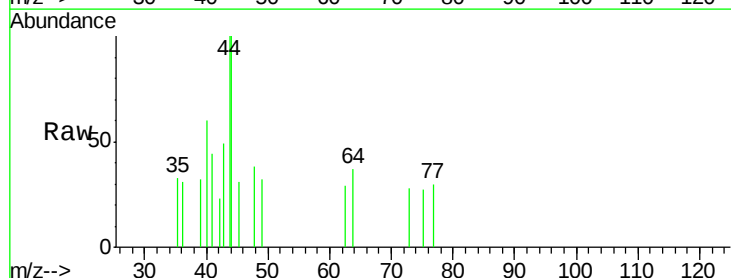
Tgt Ion: 75 Resp: 22

Ion Ratio Lower Upper

75 100

77 108.2 24.8 37.2#

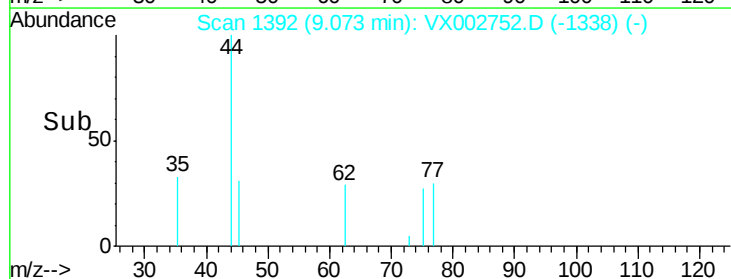
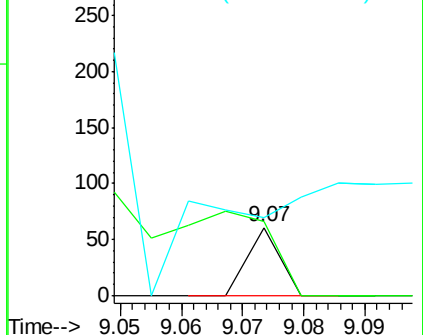
39 0.0 42.4 63.6#

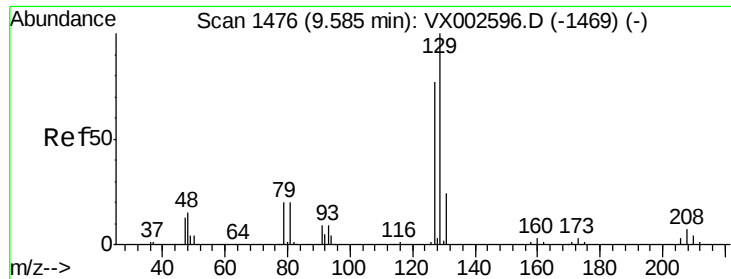


Abundance Ion 74.90 (74.60 to 75.60): VX0

Ion 76.90 (76.60 to 77.60): VX0

Ion 39.00 (38.70 to 39.70): VX0





#60

Dibromochloromethane

Concen: 3.82 ug/l

RT: 9.34 min Scan# 1435

Delta R.T. -0.25 min

Lab File: VX002752.D

Acq: 20 Jun 2018 19:53

Instrument :

MSVOA\_X

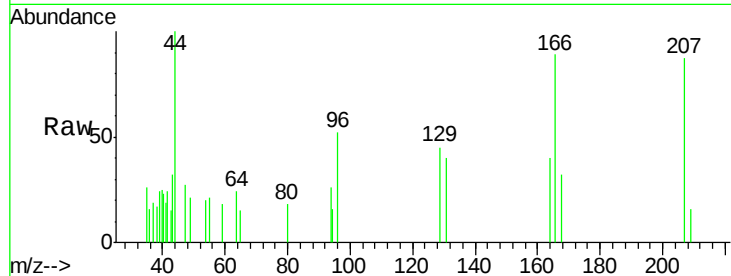
ClientSampleId :

Tot Ion:129 Resp: 172

Ion Ratio Lower Upper

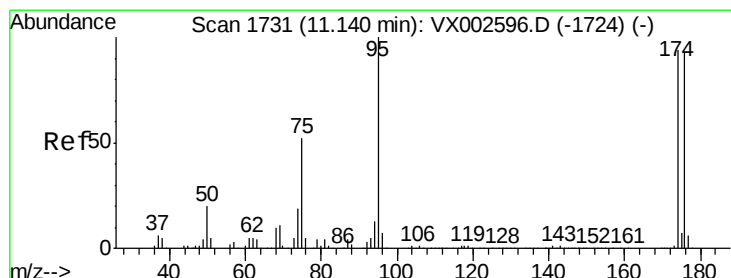
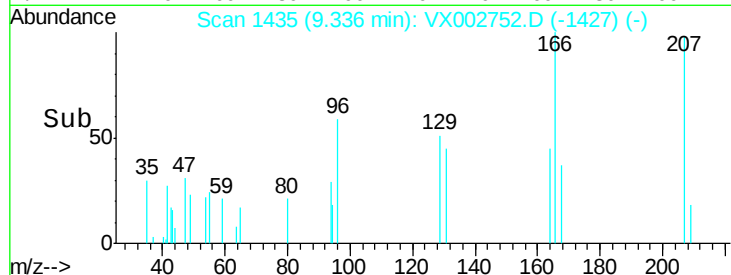
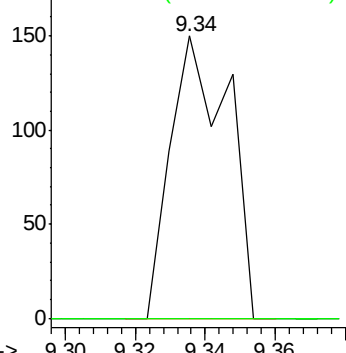
129 100

127 0.0 38.5 115.3#



Abundance Ion 128.80 (128.50 to 129.50): V

Ion 126.80 (126.50 to 127.50): V



#62

4-Bromofluorobenzene

Concen: 43.33 ug/l

RT: 11.14 min Scan# 1731

Delta R.T. 0.00 min

Lab File: VX002752.D

Acq: 20 Jun 2018 19:53

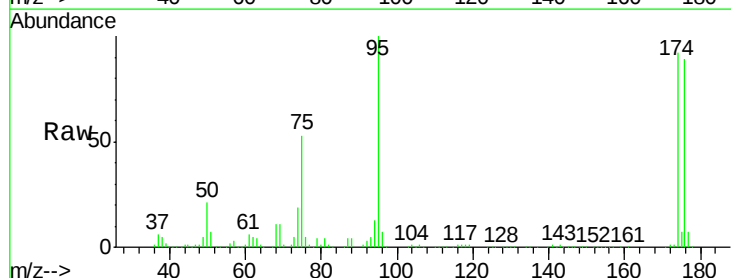
Tgt Ion: 95 Resp: 153197

Ion Ratio Lower Upper

95 100

174 97.1 0.0 187.4

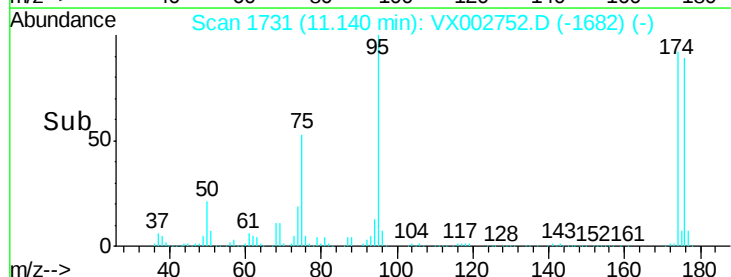
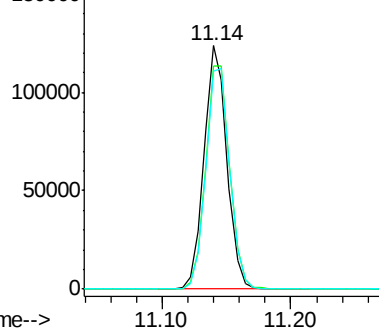
176 94.9 0.0 181.0

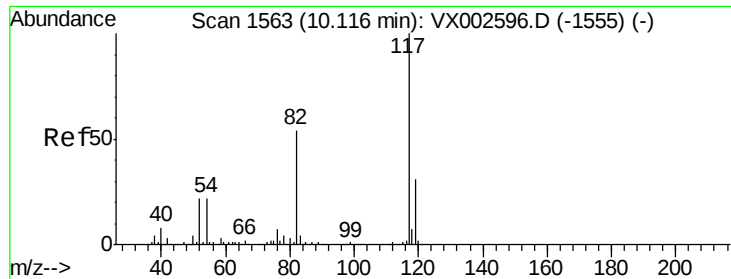


Abundance Ion 94.90 (94.60 to 95.60): VX0

Ion 173.80 (173.50 to 174.50): V

Ion 175.80 (175.50 to 176.50): V

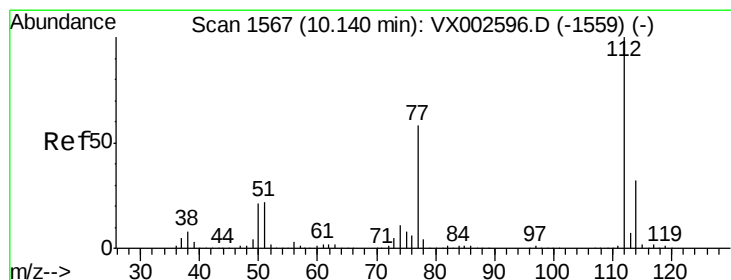
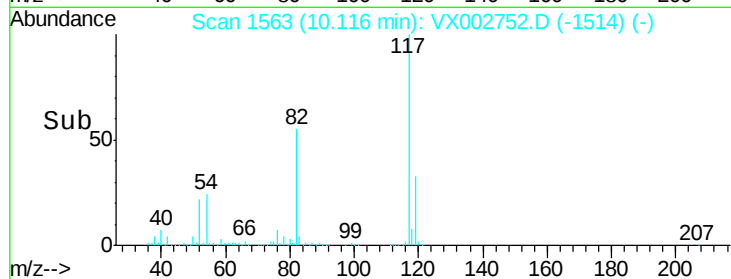
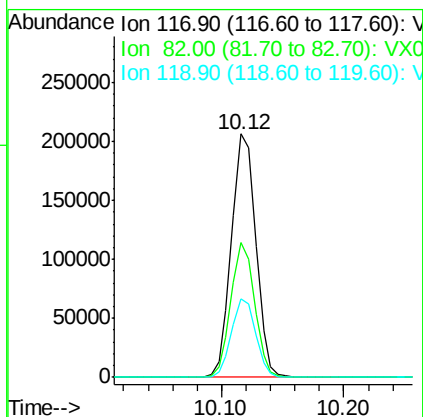
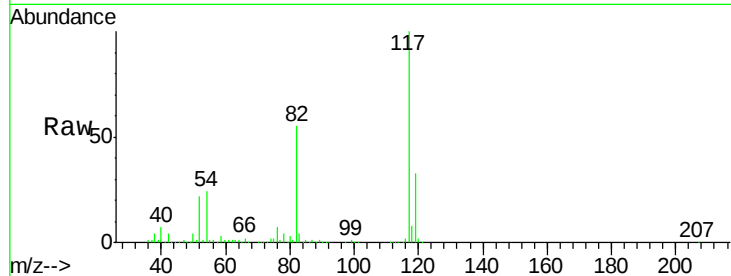




#63  
Chlorobenzene-d5  
Concen: 50.00 ug/l  
RT: 10.12 min Scan# 1563  
Delta R.T. 0.00 min  
Lab File: VX002752.D  
Acq: 20 Jun 2018 19:53

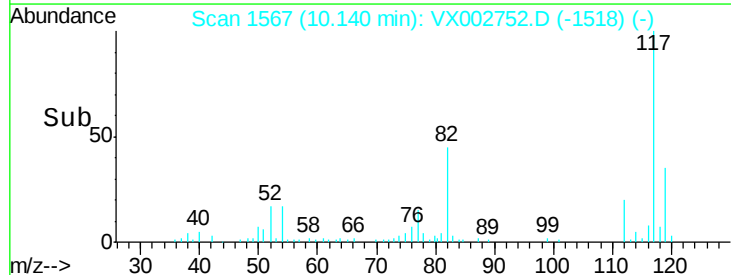
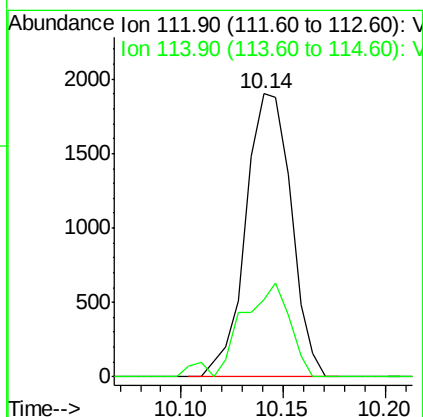
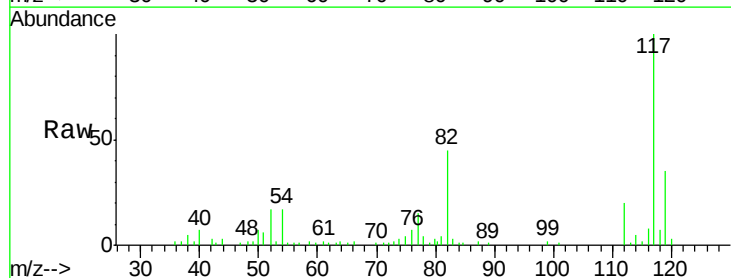
Instrument :  
MSVOA\_X  
ClientSampleId :

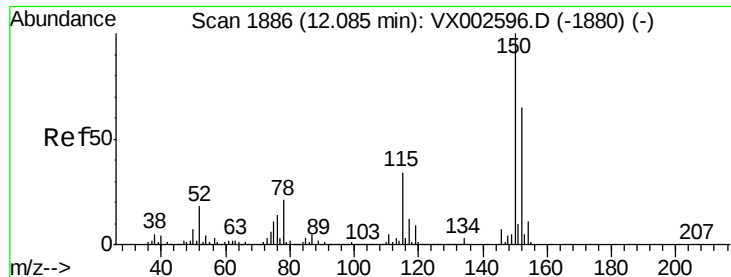
Tot Ion:117 Resp: 284380  
Ion Ratio Lower Upper  
117 100  
82 55.2 45.0 67.4  
119 32.5 25.8 38.6



#65  
Chlorobenzene  
Concen: 0.42 ug/l  
RT: 10.14 min Scan# 1567  
Delta R.T. 0.00 min  
Lab File: VX002752.D  
Acq: 20 Jun 2018 19:53

Tgt Ion:112 Resp: 2958  
Ion Ratio Lower Upper  
112 100  
114 27.5 25.3 37.9





#72

1,4-Dichlorobenzene-d4

Concen: 50.00 ug/l

RT: 12.09 min Scan# 1886

Delta R.T. 0.00 min

Lab File: VX002752.D

Acq: 20 Jun 2018 19:53

Instrument :

MSVOA\_X

ClientSampled :

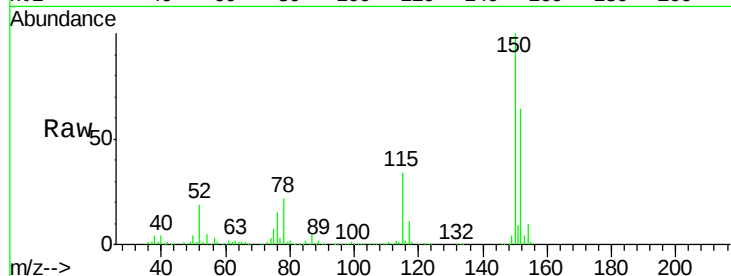
Tot Ion:152 Resp: 164881

Ion Ratio Lower Upper

152 100

115 54.9 40.1 120.2

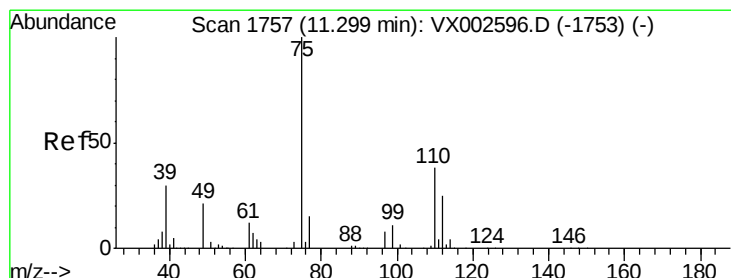
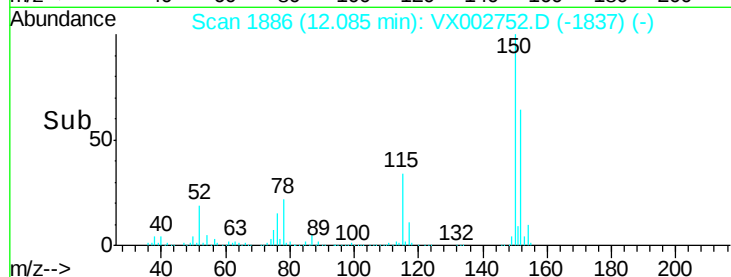
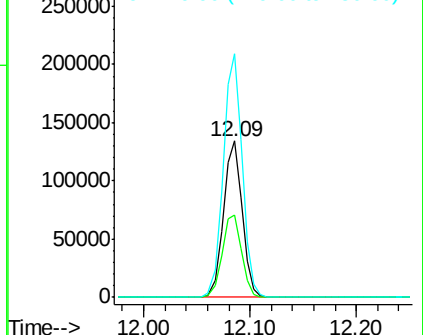
150 157.3 0.0 347.2



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: 25.94 ug/l

RT: 11.14 min Scan# 1731

Delta R.T. -0.16 min

Lab File: VX002752.D

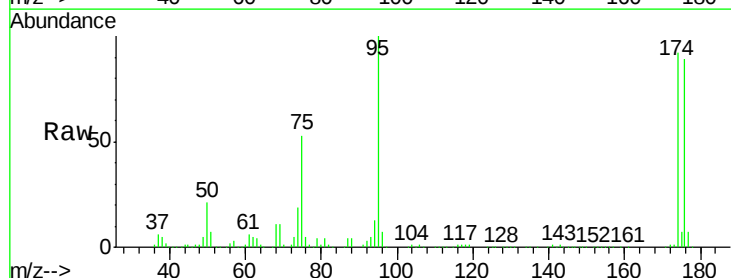
Acq: 20 Jun 2018 19:53

Tgt Ion: 75 Resp: 80709

Ion Ratio Lower Upper

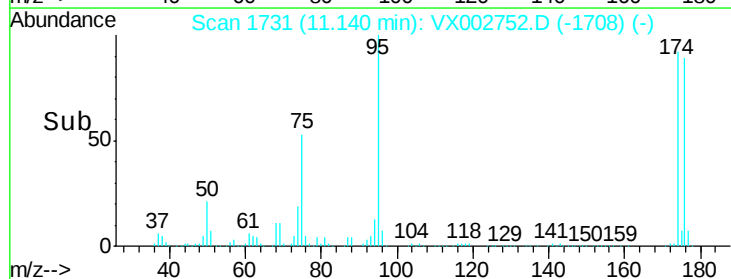
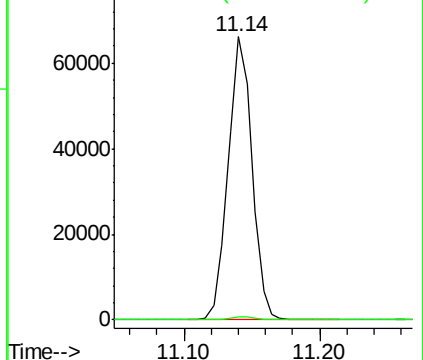
75 100

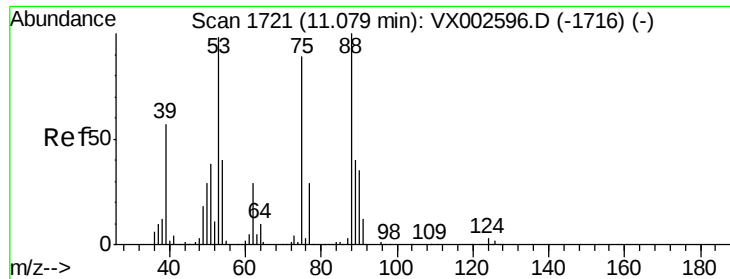
77 1.2 22.8 68.3#



Abundance Ion 74.90 (74.60 to 75.60): VX0

Ion 77.00 (76.70 to 77.70): VX0

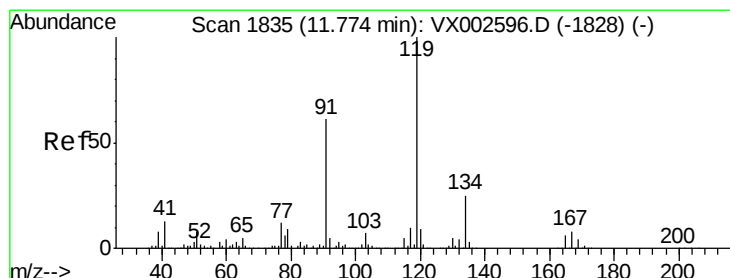
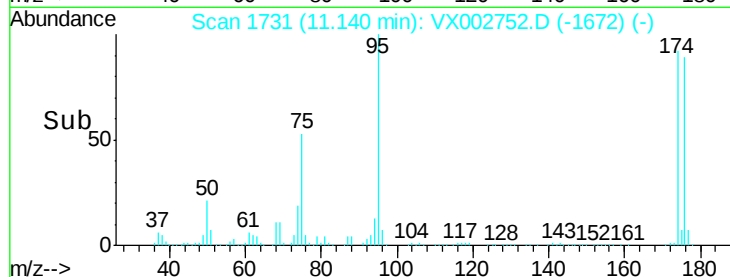
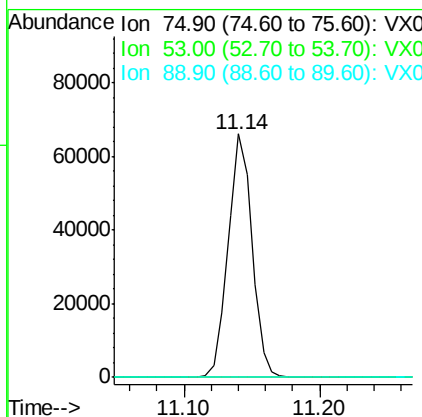
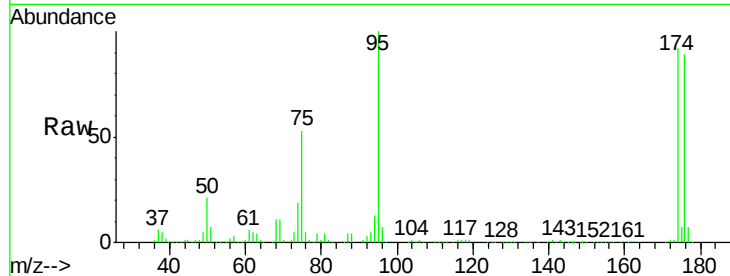




#81  
 trans-1,4-Dichloro-2-butene  
 Concen: 80.24 ug/l  
 RT: 11.14 min Scan# 1731  
 Delta R.T. 0.06 min  
 Lab File: VX002752.D  
 Acq: 20 Jun 2018 19:53

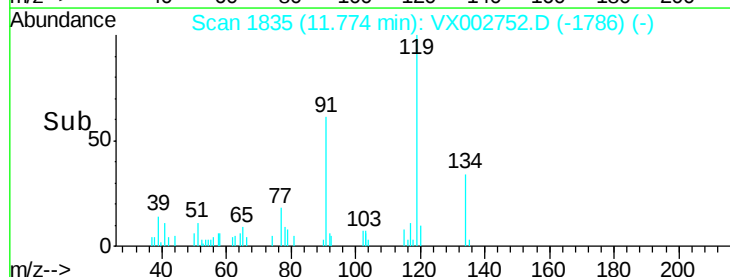
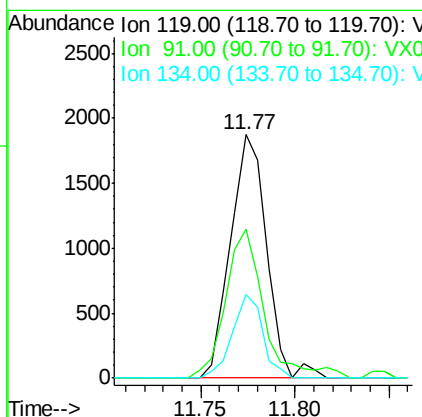
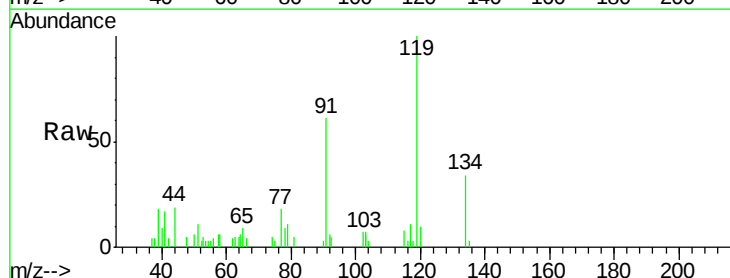
Instrument :  
 MSVOA\_X  
 ClientSampleId :

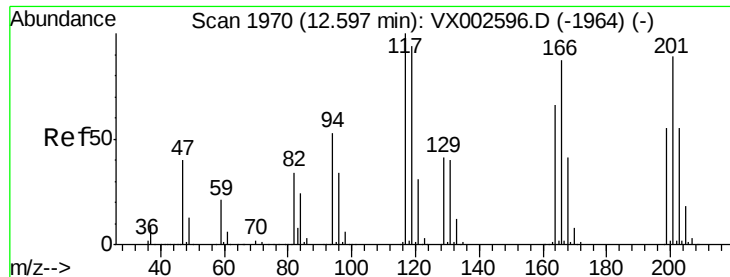
Tot Ion: 75 Resp: 80709  
 Ion Ratio Lower Upper  
 75 100  
 53 0.2 86.8 130.2#  
 89 0.0 38.2 57.2#



#83  
 tert-Butylbenzene  
 Concen: 0.28 ug/l  
 RT: 11.77 min Scan# 1835  
 Delta R.T. 0.00 min  
 Lab File: VX002752.D  
 Acq: 20 Jun 2018 19:53

Tgt Ion: 119 Resp: 2496  
 Ion Ratio Lower Upper  
 119 100  
 91 65.0 30.3 90.9  
 134 29.0 11.7 35.1





#90

Hexachloroethane

Concen: 2.72 ug/l

RT: 12.76 min Scan# 1997

Delta R.T. 0.16 min

Lab File: VX002752.D

Acq: 20 Jun 2018 19:53

Instrument :

MSVOA\_X

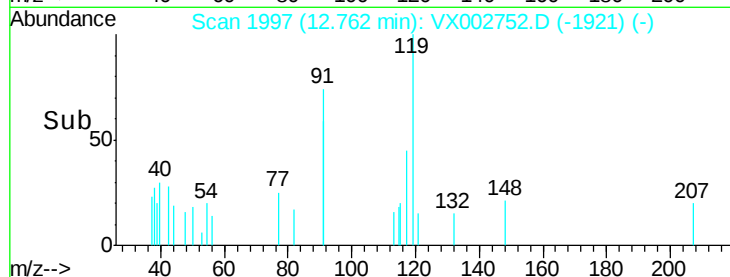
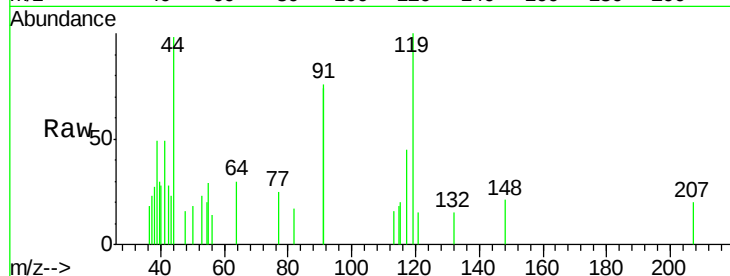
ClientSampleId :

Tot Ion:117 Resp: 150

Ion Ratio Lower Upper

117 100

201 0.0 49.0 147.0#



Abundance Ion 116.80 (116.50 to 117.50): V

Ion 200.70 (200.40 to 201.40): V

