

Data Path : Z:\VOASRV\HPCHEM1\MSVOA F\DATA\VF110518\  
 Data File : VF060576.D  
 Acq On : 5 Nov 2018 16:52  
 Operator : VA/AP  
 Sample : J5724-01RE  
 Misc : 5.05/5mL/MSVOA-F/SOIL  
 ALS Vial : 12 Sample Multiplier: 1

Instrument :  
 MSVOA\_F  
 ClientSampleId :

Quant Time: Nov 05 17:15:59 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_F\METHODS\82F110218S.M  
 Quant Title : SW846 8260  
 QLast Update : Sat Nov 03 05:29:31 2018  
 Response via : Initial Calibration

| Internal Standards         | R.T. | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 4.86 | 168  | 1595     | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 5.59 | 114  | 1680     | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 9.78 | 117  | 521      | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 0.00 | 152  | 0        | 0.00  | ug/l  | -12.55   |

## System Monitoring Compounds

|                           |        |     |          |       |        |       |
|---------------------------|--------|-----|----------|-------|--------|-------|
| 33) 1,2-Dichloroethane-d4 | 4.86   | 65  | 60       | 3.72  | ug/l   | 0.01  |
| Spiked Amount             | 50.000 |     | Recovery | =     | 7.44%  |       |
| 35) Dibromofluoromethane  | 4.09   | 113 | 401      | 30.89 | ug/l   | -0.02 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 61.78% |       |
| 50) Toluene-d8            | 7.55   | 98  | 1194     | 31.05 | ug/l   | 0.00  |
| Spiked Amount             | 50.000 |     | Recovery | =     | 62.10% |       |
| 62) 4-Bromofluorobenzene  | 11.37  | 95  | 144      | 8.56  | ug/l   | -0.05 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 17.12% |       |

## Target Compounds

|                              |      |     |      |           |        | Qvalue |
|------------------------------|------|-----|------|-----------|--------|--------|
| 2) Dichlorodifluoromethane   | 0.96 | 85  | 378  | 20.302    | ug/l # | 41     |
| 3) Chloromethane             | 1.09 | 50  | 90   | 6.447     | ug/l # | 45     |
| 4) Vinyl Chloride            | 1.05 | 62  | 62   | 4.820     | ug/l # | 1      |
| 5) Bromomethane              | 1.33 | 94  | 312  | 43.211    | ug/l # | 74     |
| 6) Chloroethane              | 1.53 | 64  | 64   | 10.374    | ug/l # | 1      |
| 8) Diethyl Ether             | 1.52 | 74  | 90   | 20.170    | ug/l   | 87     |
| 11) Tert butyl alcohol       | 2.54 | 59  | 67   | 74.633    | ug/l # | 1      |
| 12) 1,1-Dichloroethene       | 1.80 | 96  | 60   | 5.178     | ug/l # | 1      |
| 13) Acrolein                 | 1.99 | 56  | 104  | 188.462   | ug/l # | 1      |
| 14) Allyl chloride           | 2.11 | 41  | 874  | 46.194    | ug/l # | 34     |
| 15) Acrylonitrile            | 2.94 | 53  | 69   | 35.926    | ug/l # | 15     |
| 16) Acetone                  | 2.35 | 43  | 603  | 158.792   | ug/l   | 99     |
| 17) Carbon Disulfide         | 1.77 | 76  | 793  | 24.296    | ug/l # | 38     |
| 18) Methyl Acetate           | 2.35 | 43  | 603  | 101.727   | ug/l # | 64     |
| 19) Methyl tert-butyl Ether  | 2.42 | 73  | 102  | 3.766     | ug/l # | 1      |
| 20) Methylene Chloride       | 2.21 | 84  | 1052 | 98.763    | ug/l # | 19     |
| 21) trans-1,2-Dichloroethene | 2.29 | 96  | 150  | 12.339    | ug/l # | 1      |
| 22) Diisopropyl ether        | 2.76 | 45  | 150  | 3.742     | ug/l # | 1      |
| 23) Vinyl Acetate            | 3.15 | 43  | 940  | 39.028    | ug/l # | 75     |
| 24) 1,1-Dichloroethane       | 2.84 | 63  | 80   | 3.448     | ug/l # | 89     |
| 25) 2-Butanone               | 4.34 | 43  | 217  | Below Cal | #      | 56     |
| 26) 2,2-Dichloropropane      | 3.61 | 77  | 197  | 11.349    | ug/l # | 57     |
| 27) cis-1,2-Dichloroethene   | 3.52 | 96  | 149  | 6.421     | ug/l   | 1      |
| 29) Tetrahydrofuran          | 4.04 | 42  | 968  | 348.898   | ug/l # | 63     |
| 30) Chloroform               | 3.92 | 83  | 83   | 2.261     | ug/l   | 84     |
| 31) Cyclohexane              | 3.68 | 56  | 349  | 10.901    | ug/l # | 23     |
| 32) 1,1,1-Trichloroethane    | 4.09 | 97  | 149  | 5.812     | ug/l # | 21     |
| 36) 1,1-Dichloropropene      | 4.24 | 75  | 67   | 3.622     | ug/l # | 1      |
| 37) Ethyl Acetate            | 4.09 | 43  | 826  | 93.021    | ug/l # | 12     |
| 38) Carbon Tetrachloride     | 4.00 | 117 | 63   | 3.986     | ug/l # | 11     |
| 39) Methylcyclohexane        | 5.44 | 83  | 427  | 18.916    | ug/l # | 30     |
| 40) Benzene                  | 4.69 | 78  | 73   | 1.626     | ug/l # | 1      |
| 41) Methacrylonitrile        | 4.79 | 41  | 852  | 169.429   | ug/l # | 65     |
| 42) 1,2-Dichloroethane       | 4.89 | 62  | 67   | 5.199     | ug/l   | 71     |

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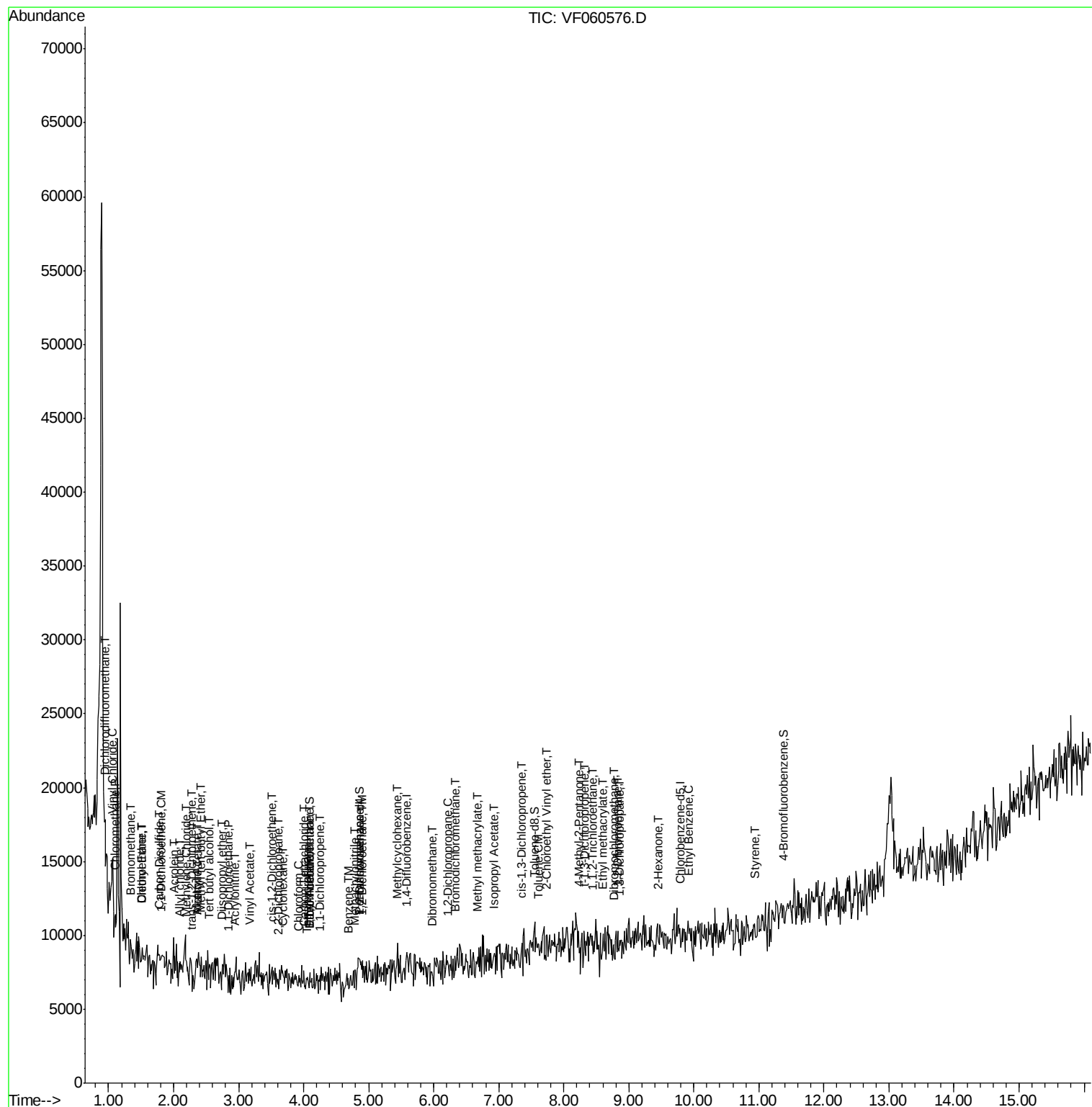
| Internal Standards            | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|-------------------------------|-------|------|----------|---------|--------|----------|
| -----                         |       |      |          |         |        |          |
| 43) Isopropyl Acetate         | 6.92  | 43   | 1344     | 119.657 | ug/l # | 45       |
| 45) 1,2-Dichloropropane       | 6.22  | 63   | 160      | 13.933  | ug/l # | 43       |
| 46) Dibromomethane            | 5.98  | 93   | 117      | 16.060  | ug/l # | 29       |
| 47) Bromodichloromethane      | 6.33  | 83   | 472      | 26.861  | ug/l # | 66       |
| 48) Methyl methacrylate       | 6.67  | 41   | 1022     | 144.775 | ug/l # | 56       |
| 51) 4-Methyl-2-Pentanone      | 8.23  | 43   | 692      | 91.617  | ug/l # | 37       |
| 52) Toluene                   | 7.59  | 92   | 70       | 2.393   | ug/l # | 58       |
| 53) t-1,3-Dichloropropene     | 8.32  | 75   | 65       | 4.256   | ug/l # | 1        |
| 54) cis-1,3-Dichloropropene   | 7.36  | 75   | 201      | 10.416  | ug/l # | 1        |
| 55) 1,1,2-Trichloroethane     | 8.45  | 97   | 150      | 17.623  | ug/l # | 43       |
| 56) Ethyl methacrylate        | 8.61  | 69   | 128      | 11.689  | ug/l # | 1        |
| 57) 1,3-Dichloropropane       | 8.87  | 76   | 61       | 4.085   | ug/l # | 44       |
| 58) 2-Chloroethyl Vinyl ether | 7.73  | 63   | 79       | 100.287 | ug/l   | 100      |
| 59) 2-Hexanone                | 9.46  | 43   | 712      | 130.080 | ug/l # | 43       |
| 60) Dibromochloromethane      | 8.76  | 129  | 66       | 5.545   | ug/l # | 12       |
| 61) 1,2-Dibromoethane         | 8.84  | 107  | 65       | 7.262   | ug/l # | 1        |
| 67) Ethyl Benzene             | 9.90  | 91   | 184      | 9.517   | ug/l # | 44       |
| 70) Styrene                   | 10.93 | 104  | 149      | 12.933  | ug/l # | 33       |
| -----                         |       |      |          |         |        |          |

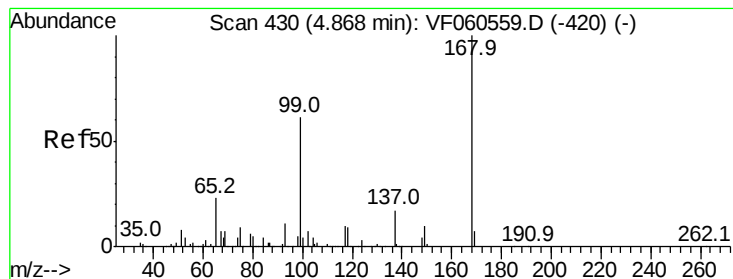
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#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 4.86 min Scan# 429

Delta R.T. -0.01 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

Instrument :

MSVOA\_F

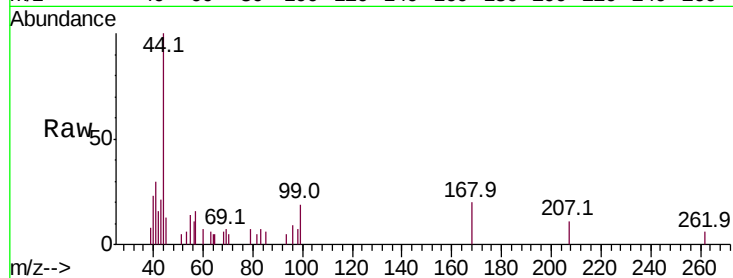
ClientSampled :

Tot Ion:168 Resp: 1595

Ion Ratio Lower Upper

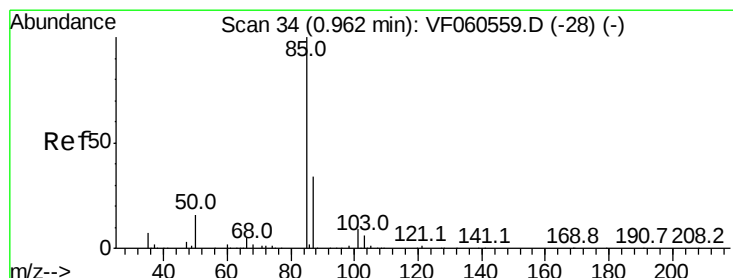
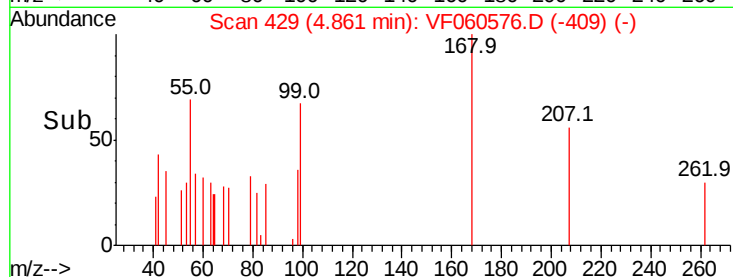
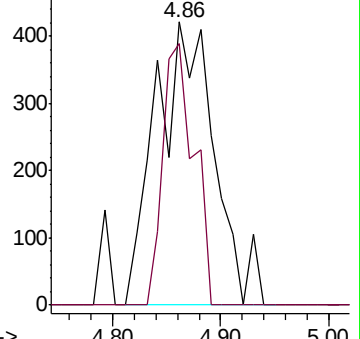
168 100

99 92.2 48.6 72.8#



Abundance Ion 168.00 (167.70 to 168.70): VF0

Ion 99.00 (98.70 to 99.70): VF0



#2

Dichlorodifluoromethane

Concen: 20.302 ug/l

RT: 0.96 min Scan# 33

Delta R.T. -0.01 min

Lab File: VF060576.D

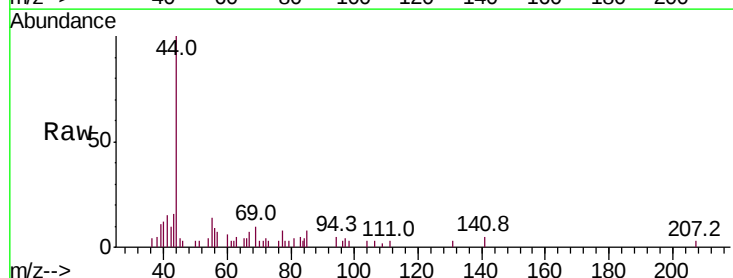
Acq: 5 Nov 2018 16:52

Tgt Ion: 85 Resp: 378

Ion Ratio Lower Upper

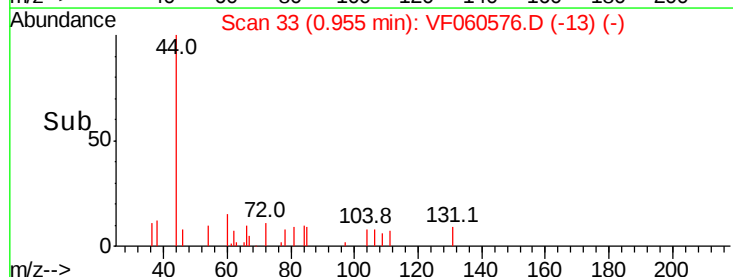
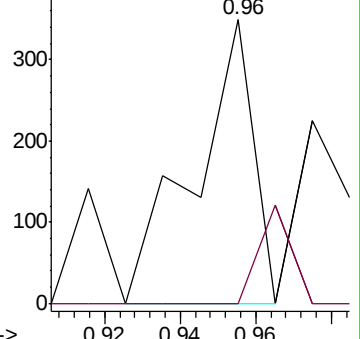
85 100

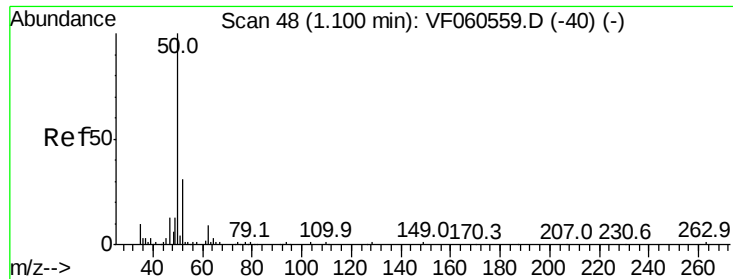
87 0.0 16.9 50.7#



Abundance Ion 85.00 (84.70 to 85.70): VF0

Ion 87.00 (86.70 to 87.70): VF0





#3

Chloromethane

Concen: 6.447 ug/l

RT: 1.09 min Scan# 47

Delta R.T. -0.01 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

Instrument :

MSVOA\_F

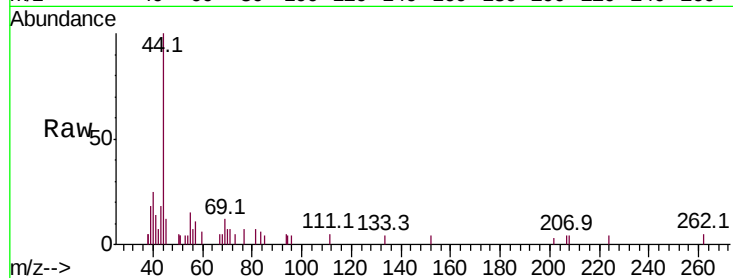
ClientSampleId :

Tot Ion: 50 Resp: 90

Ion Ratio Lower Upper

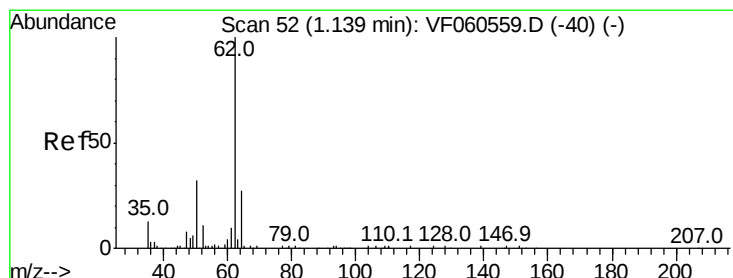
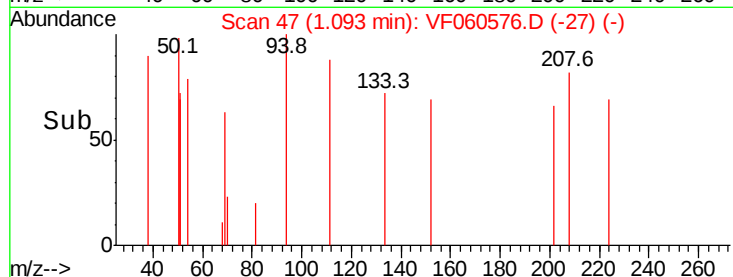
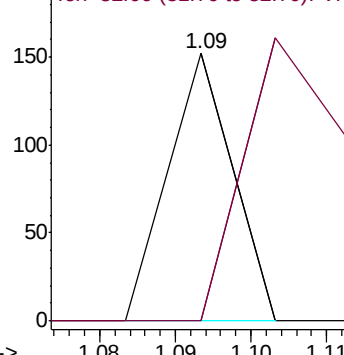
50 100

52 0.0 24.0 36.0#



Abundance Ion 50.00 (49.70 to 50.70): VF0

Ion 52.00 (51.70 to 52.70): VF0



#4

Vinyl Chloride

Concen: 4.820 ug/l

RT: 1.05 min Scan# 43

Delta R.T. -0.09 min

Lab File: VF060576.D

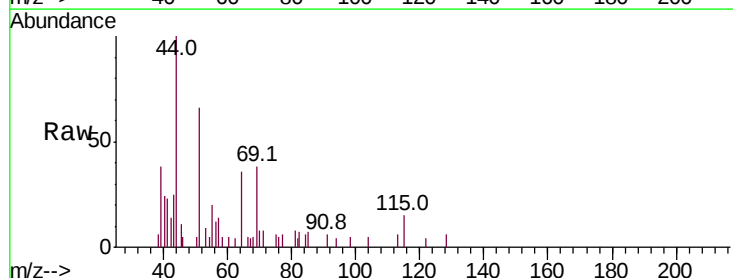
Acq: 5 Nov 2018 16:52

Tgt Ion: 62 Resp: 62

Ion Ratio Lower Upper

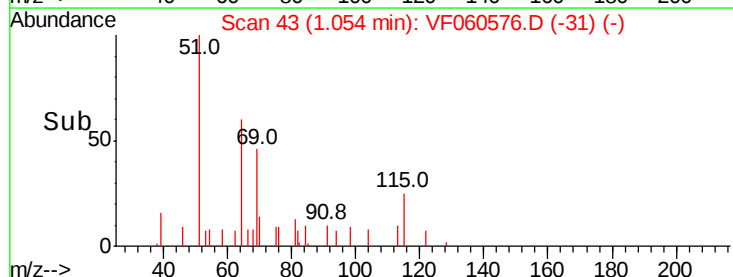
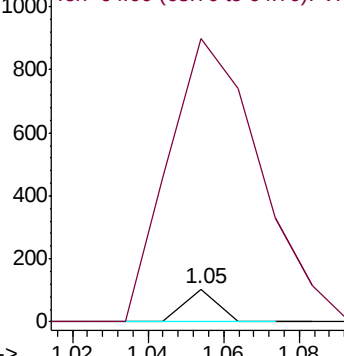
62 100

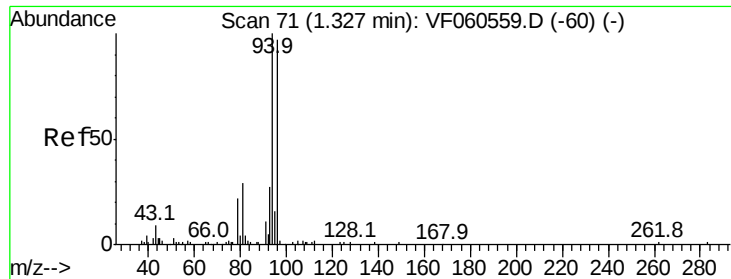
64 855.2 21.8 32.6#



Abundance Ion 62.00 (61.70 to 62.70): VF0

Ion 64.00 (63.70 to 64.70): VF0





#5

Bromomethane

Concen: 43.211 ug/l

RT: 1.33 min Scan# 71

Delta R.T. 0.00 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

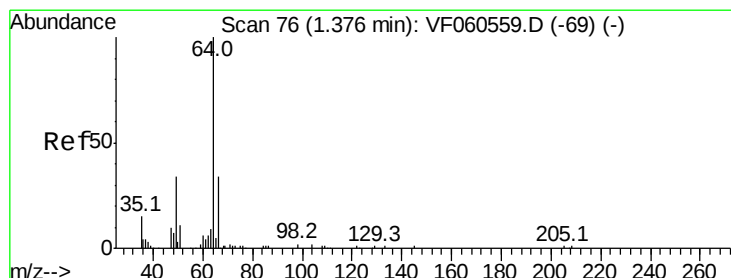
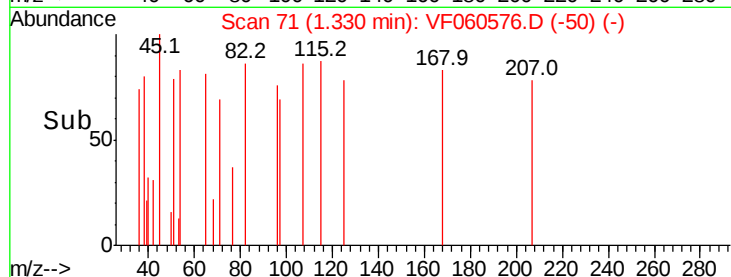
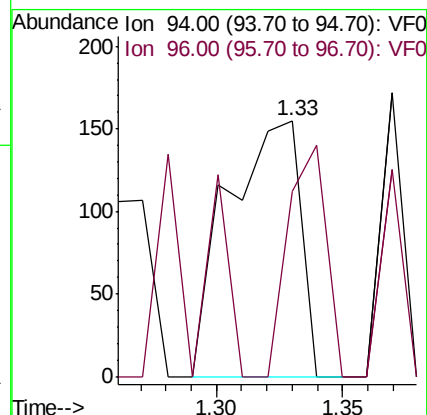
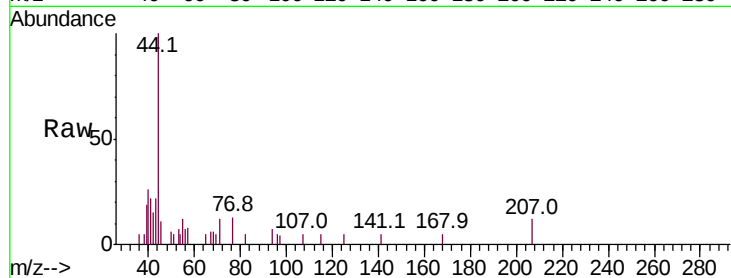
Instrument :  
MSVOA\_F  
ClientSampleId :

Tot Ion: 94 Resp: 312

Ion Ratio Lower Upper

94 100

96 72.3 77.9 116.9#



#6

Chloroethane

Concen: 10.374 ug/l

RT: 1.53 min Scan# 91

Delta R.T. 0.15 min

Lab File: VF060576.D

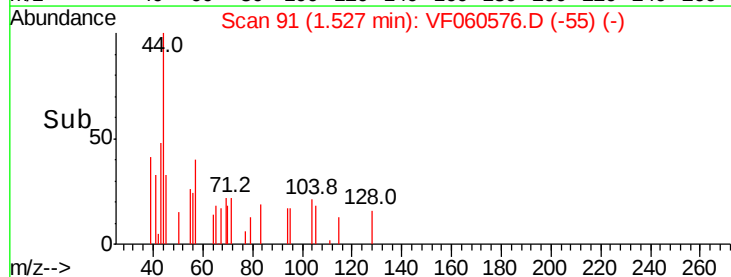
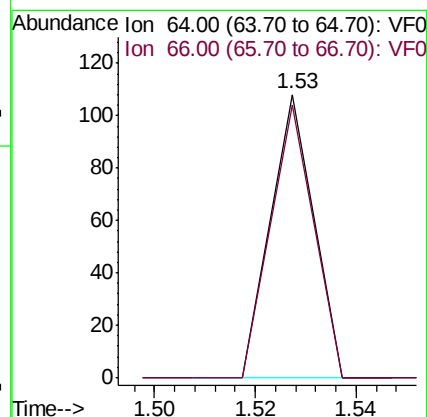
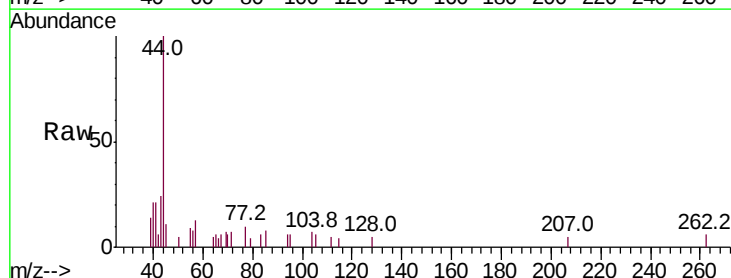
Acq: 5 Nov 2018 16:52

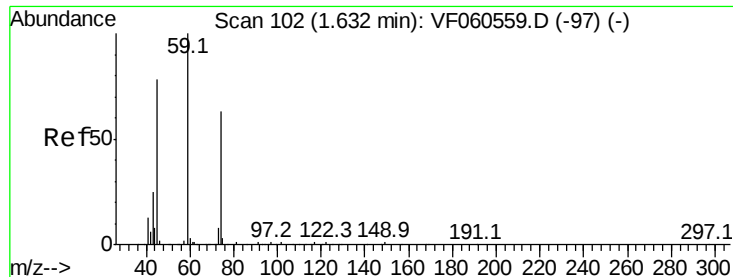
Tgt Ion: 64 Resp: 64

Ion Ratio Lower Upper

64 100

66 96.3 27.8 41.8#

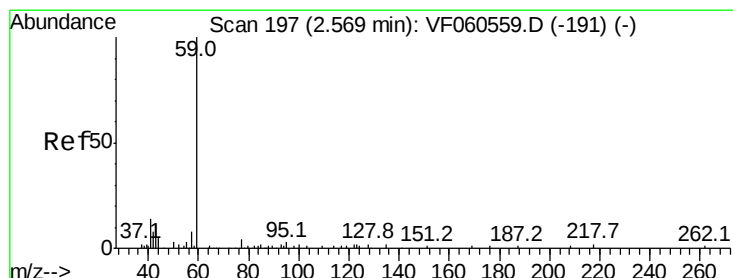
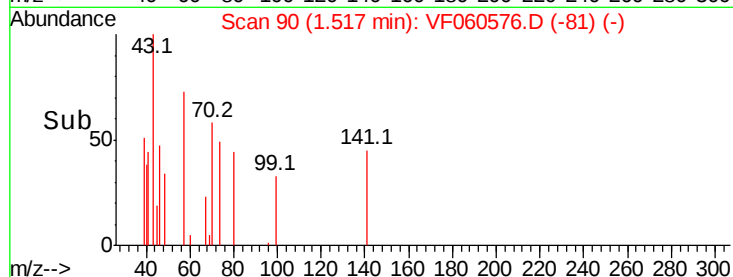
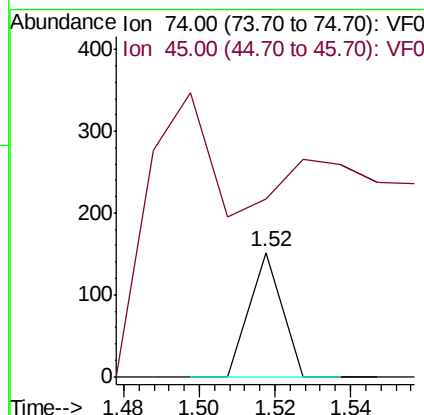
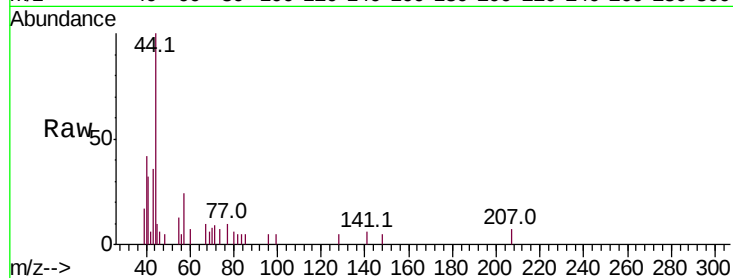




#8  
Diethyl Ether  
Concen: 20.170 ug/l  
RT: 1.52 min Scan# 90  
Delta R.T. -0.11 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

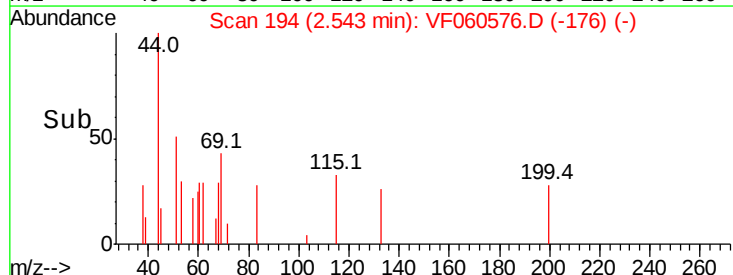
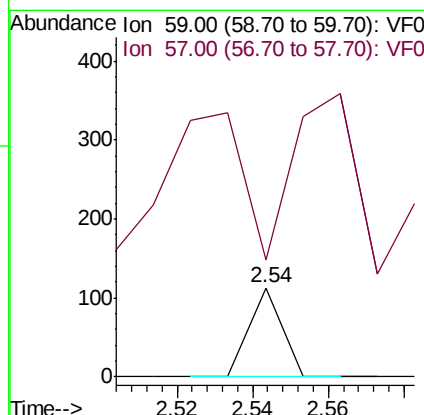
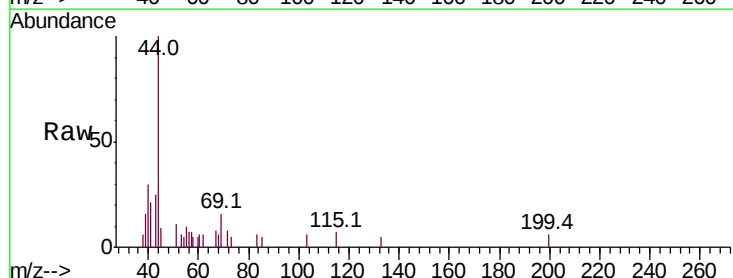
Instrument :  
MSVOA\_F  
ClientSampleId :

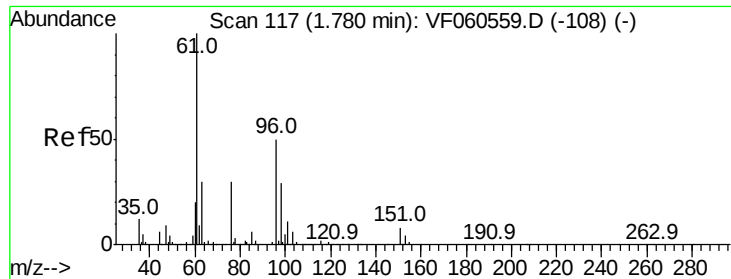
Tot Ion: 74 Resp: 90  
Ion Ratio Lower Upper  
74 100  
45 142.8 63.8 191.5



#11  
Tert butyl alcohol  
Concen: 74.633 ug/l  
RT: 2.54 min Scan# 194  
Delta R.T. -0.03 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

Tgt Ion: 59 Resp: 67  
Ion Ratio Lower Upper  
59 100  
57 131.0 19.0 28.4#





#12

1,1-Dichloroethene

Concen: 5.178 ug/l

RT: 1.80 min Scan# 119

Delta R.T. 0.02 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

Instrument :

MSVOA\_F

ClientSampled :

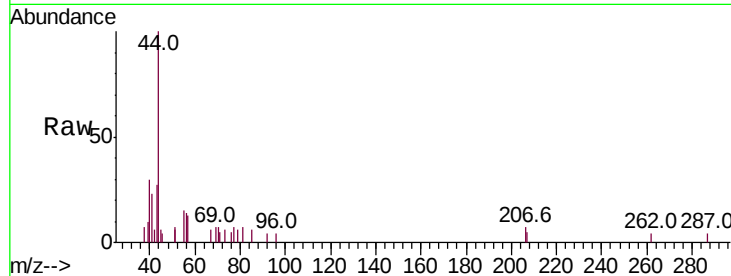
Tot Ion: 96 Resp: 60

Ion Ratio Lower Upper

96 100

61 0.0 158.1 237.1#

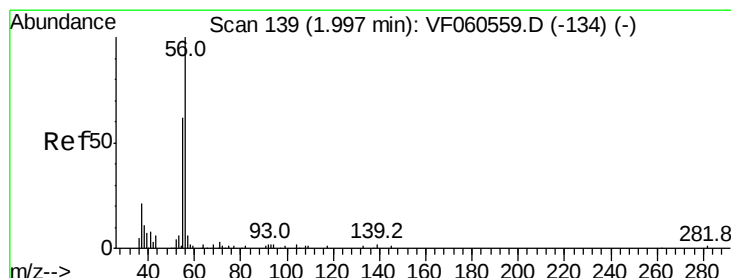
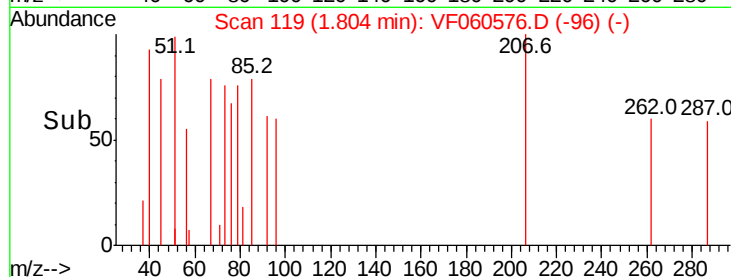
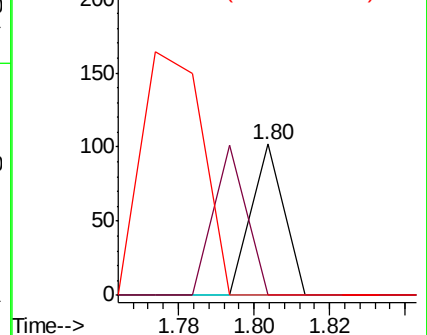
98 0.0 47.0 70.6#



Abundance Ion 96.00 (95.70 to 96.70): VF0

Ion 61.00 (60.70 to 61.70): VF0

Ion 98.00 (97.70 to 98.70): VF0



#13

Acrolein

Concen: 188.462 ug/l

RT: 1.99 min Scan# 138

Delta R.T. -0.01 min

Lab File: VF060576.D

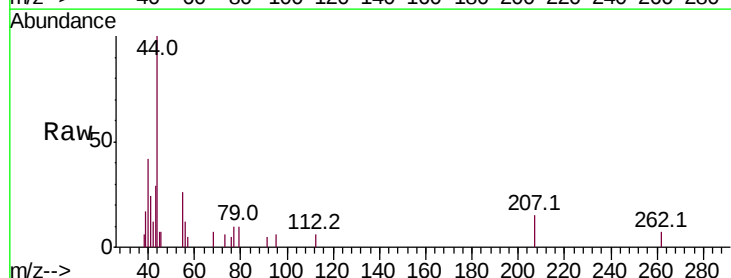
Acq: 5 Nov 2018 16:52

Tgt Ion: 56 Resp: 104

Ion Ratio Lower Upper

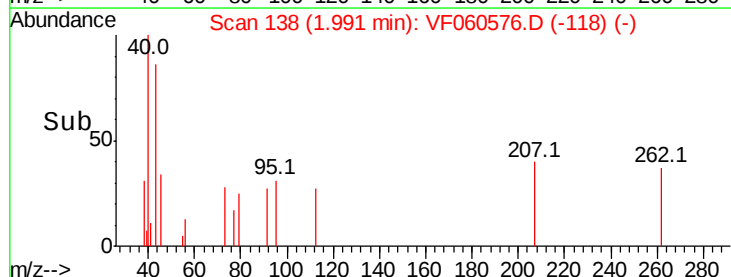
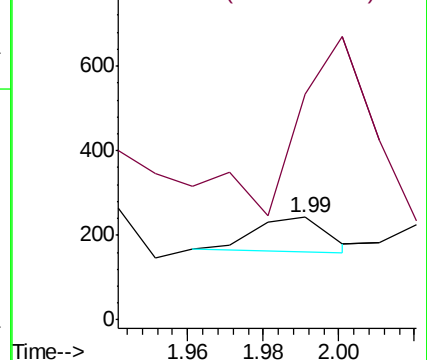
56 100

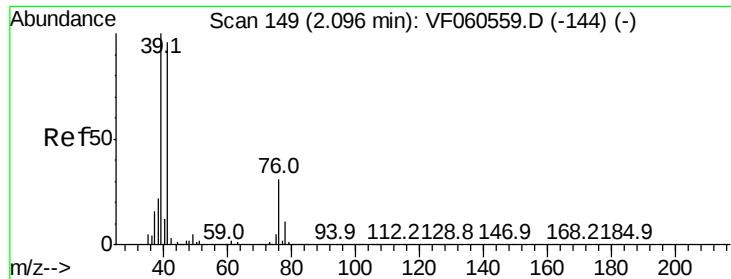
55 219.3 61.8 92.6#



Abundance Ion 56.00 (55.70 to 56.70): VF0

Ion 55.00 (54.70 to 55.70): VF0

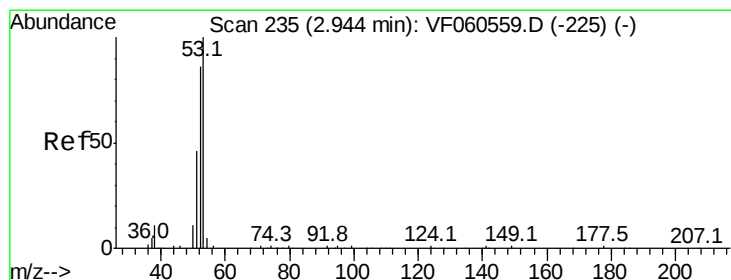
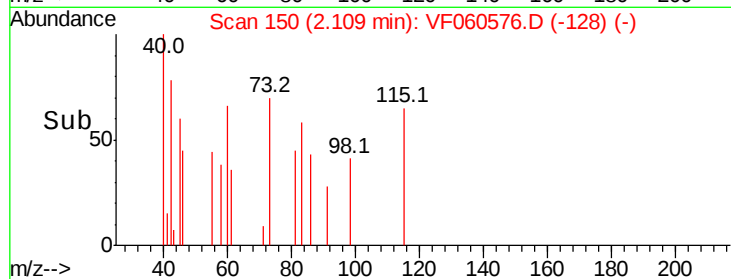
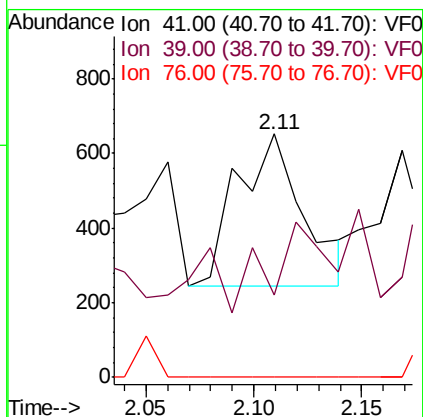
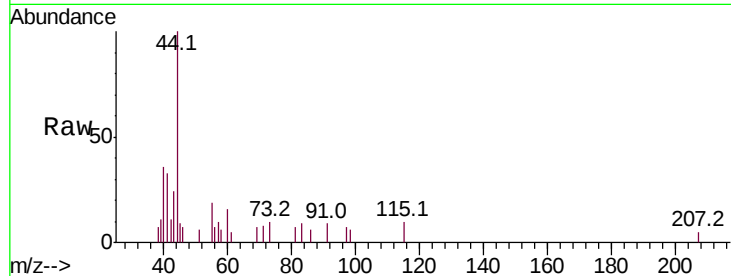




#14  
Allvl chloride  
Concen: 46.194 ug/l  
RT: 2.11 min Scan# 150  
Delta R.T. 0.01 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

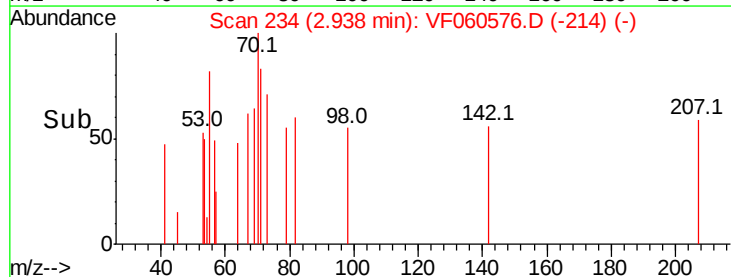
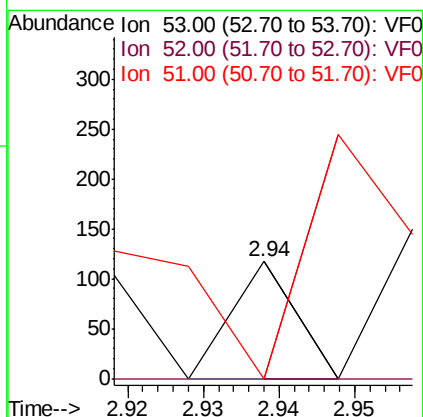
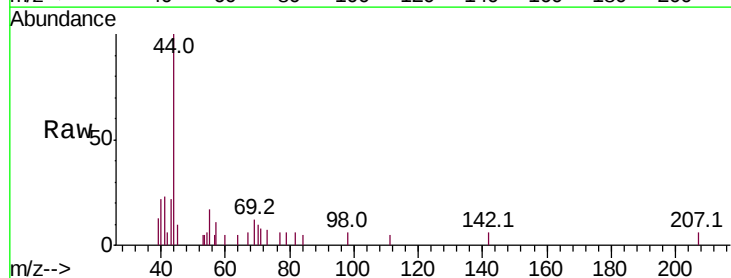
Instrument :  
MSVOA\_F  
ClientSampled :

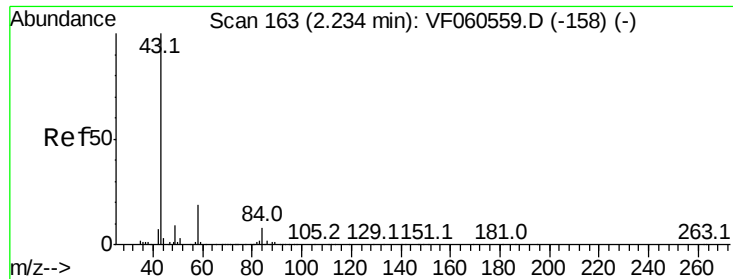
Tot Ion: 41 Resp: 874  
Ion Ratio Lower Upper  
41 100  
39 33.8 82.6 124.0#  
76 0.0 26.7 40.1#



#15  
Acrylonitrile  
Concen: 35.926 ug/l  
RT: 2.94 min Scan# 234  
Delta R.T. -0.01 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

Tgt Ion: 53 Resp: 69  
Ion Ratio Lower Upper  
53 100  
52 0.0 68.5 102.7#  
51 0.0 38.2 57.2#





#16

Acetone

Concen: 158.792 ug/l

RT: 2.35 min Scan# 174

Delta R.T. 0.11 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

Instrument :

MSVOA\_F

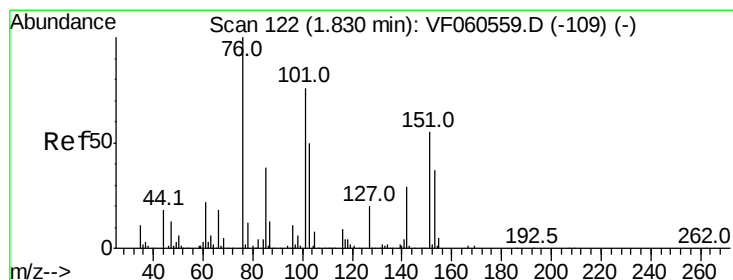
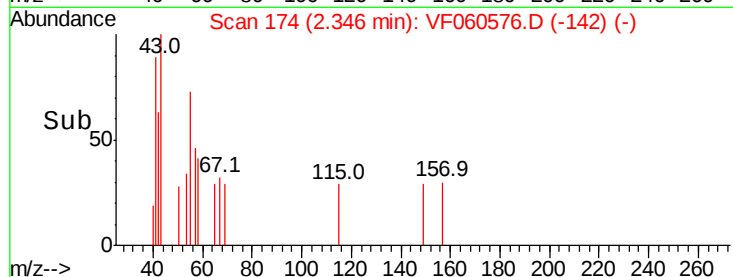
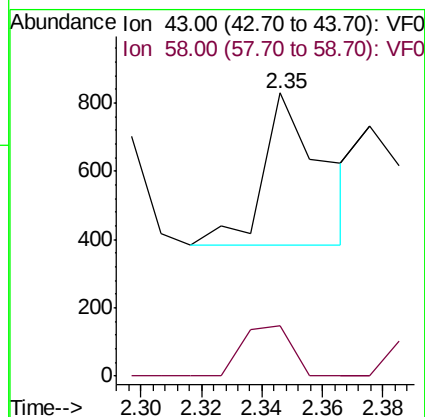
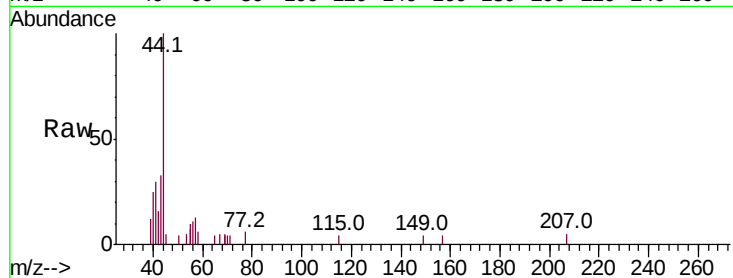
ClientSampleId :

Tot Ion: 43 Resp: 603

Ion Ratio Lower Upper

43 100

58 17.9 14.6 22.0



#17

Carbon Disulfide

Concen: 24.296 ug/l

RT: 1.77 min Scan# 116

Delta R.T. -0.06 min

Lab File: VF060576.D

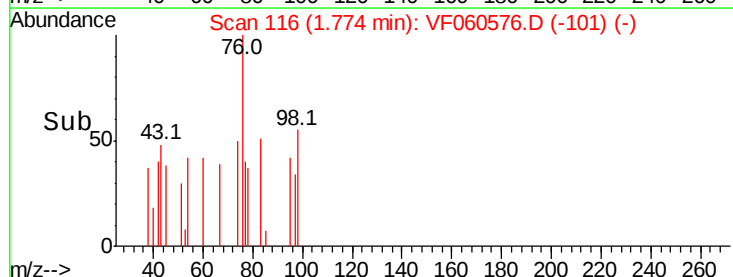
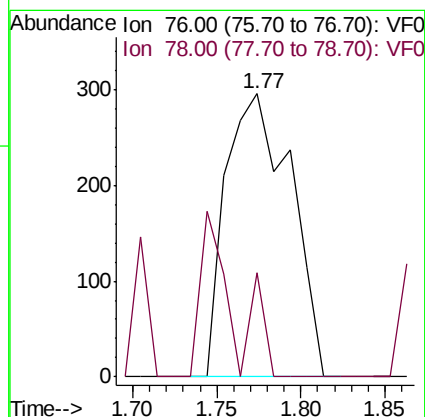
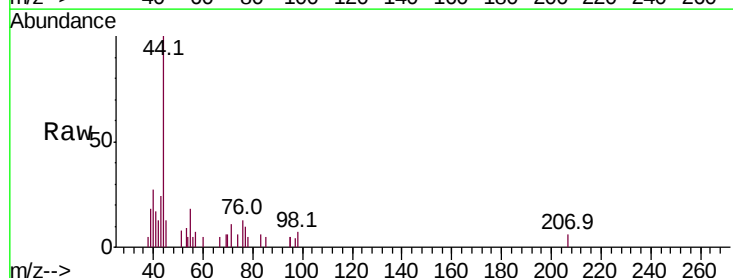
Acq: 5 Nov 2018 16:52

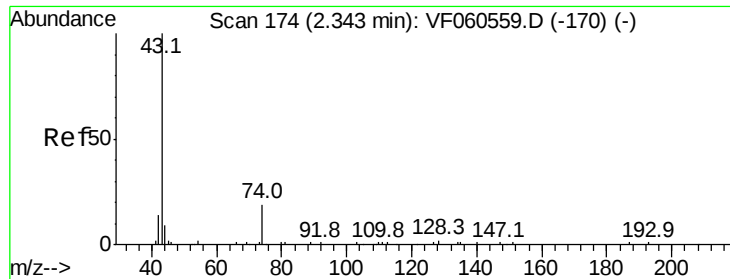
Tgt Ion: 76 Resp: 793

Ion Ratio Lower Upper

76 100

78 36.8 9.9 14.9#

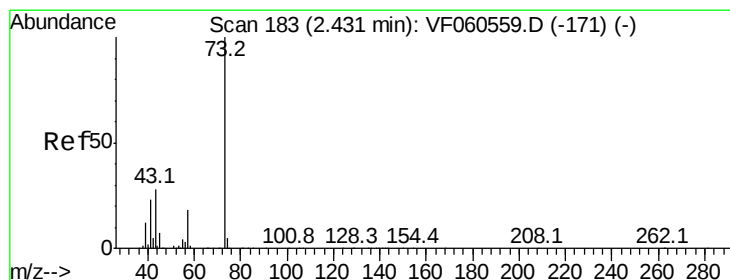
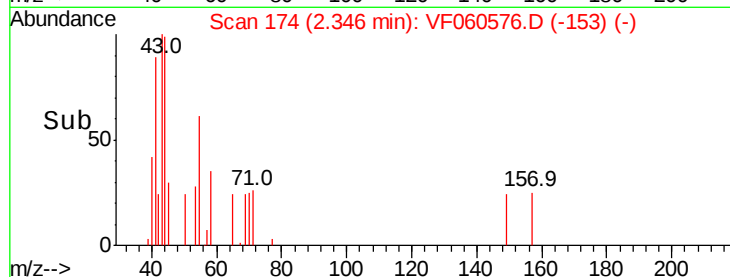
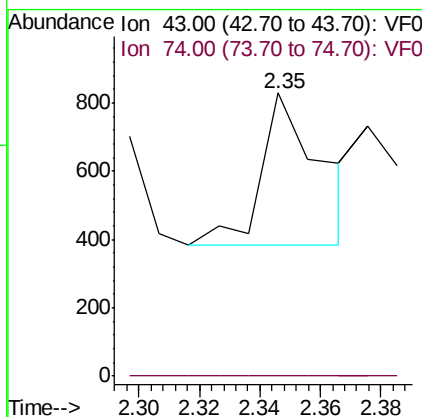
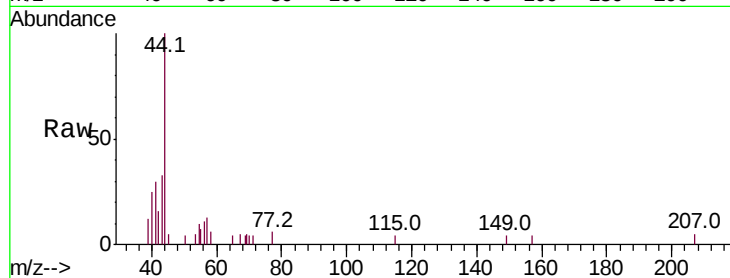




#18  
Methyl Acetate  
Concen: 101.727 ug/l  
RT: 2.35 min Scan# 174  
Delta R.T. 0.00 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

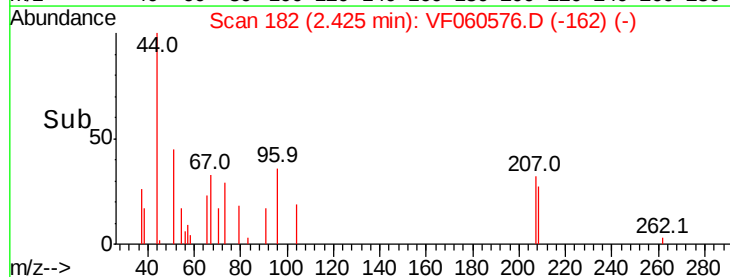
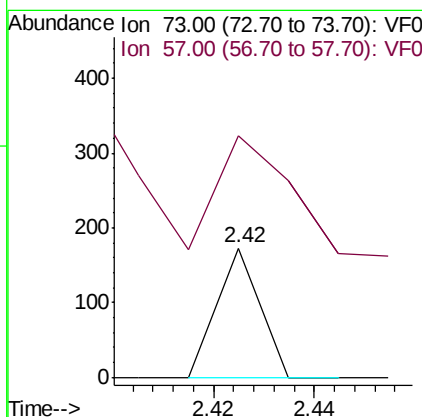
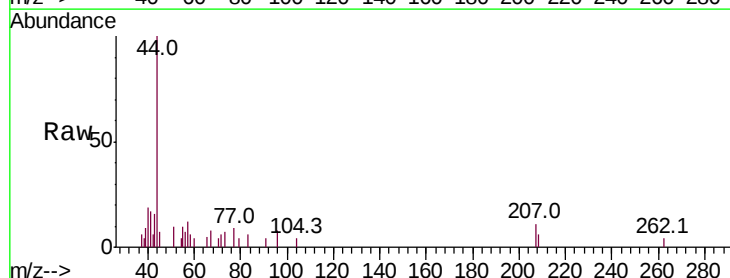
Instrument :  
MSVOA\_F  
ClientSampleId :

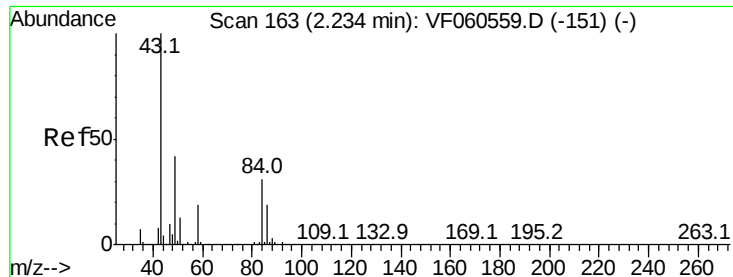
Tot Ion: 43 Resp: 603  
Ion Ratio Lower Upper  
43 100  
74 0.0 12.1 18.1#



#19  
Methyl tert-butyl Ether  
Concen: 3.766 ug/l  
RT: 2.42 min Scan# 182  
Delta R.T. -0.01 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

Tgt Ion: 73 Resp: 102  
Ion Ratio Lower Upper  
73 100  
57 186.7 15.4 23.0#

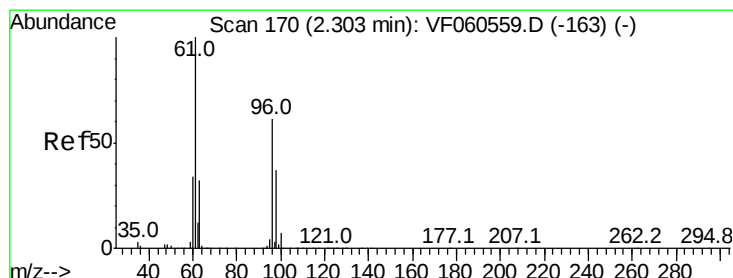
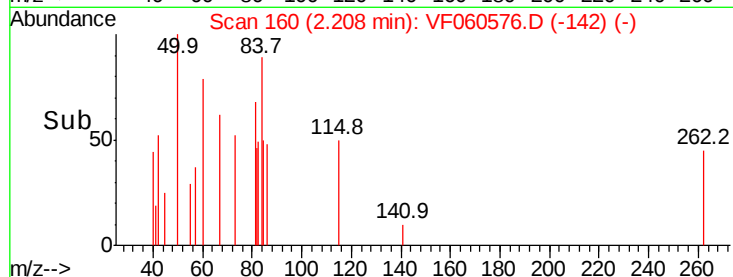
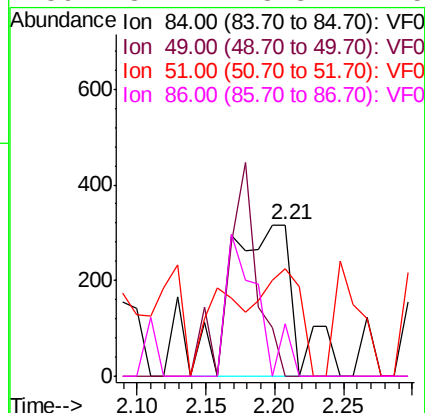
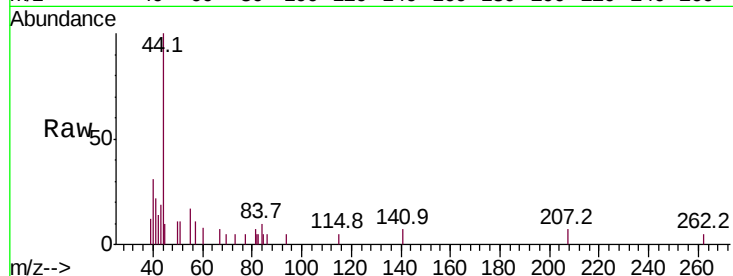




#20  
Methvlene Chloride  
Concen: 98.763 ug/l  
RT: 2.21 min Scan# 160  
Delta R.T. -0.03 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

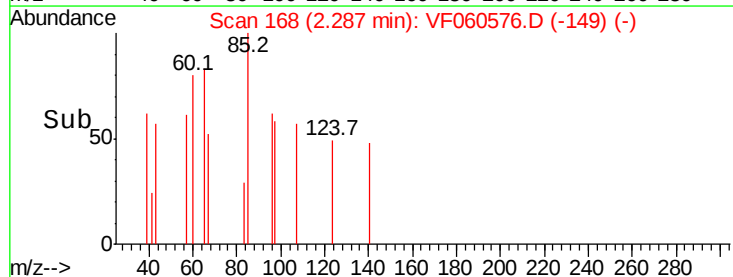
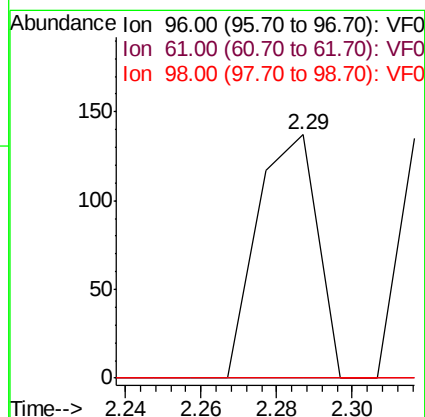
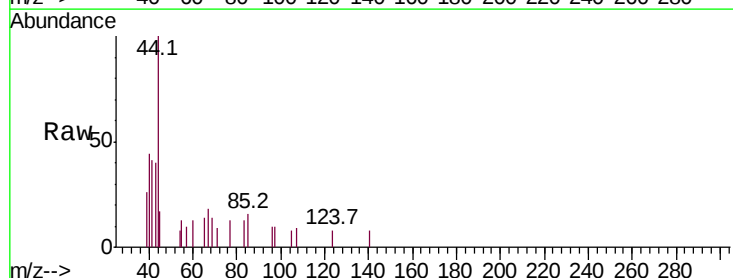
Instrument :  
MSVOA\_F  
ClientSampled :

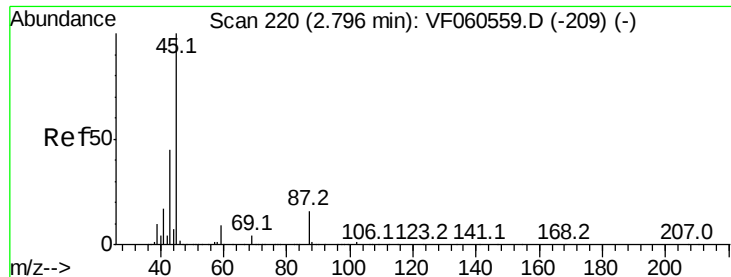
Tot Ion: 84 Resp: 1052  
Ion Ratio Lower Upper  
84 100  
49 0.0 109.9 164.9#  
51 71.3 35.8 53.8#  
86 34.7 48.3 72.5#



#21  
trans-1,2-Dichloroethene  
Concen: 12.339 ug/l  
RT: 2.29 min Scan# 168  
Delta R.T. -0.02 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

Tgt Ion: 96 Resp: 150  
Ion Ratio Lower Upper  
96 100  
61 0.0 131.3 196.9#  
98 0.0 48.6 73.0#

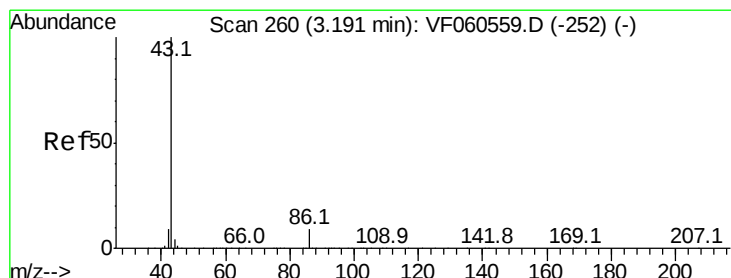
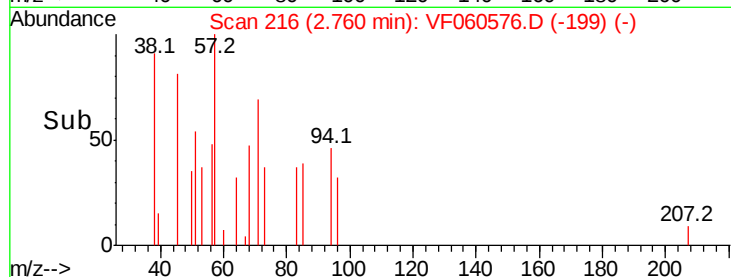
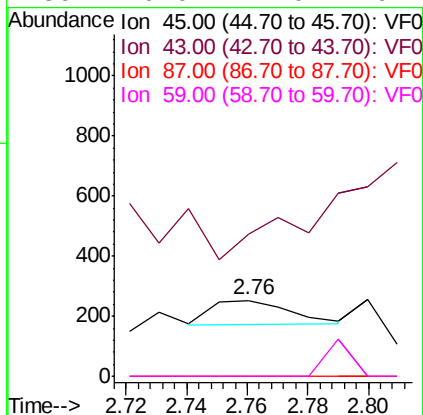
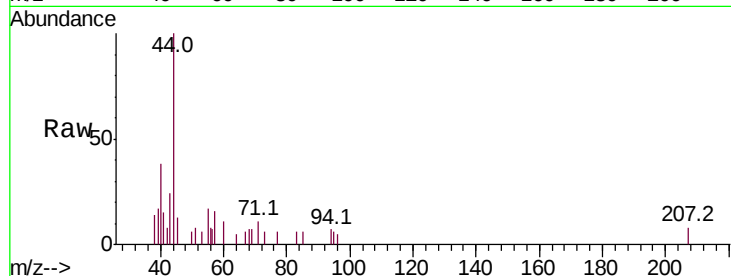




#22  
Diisopropyl ether  
Concen: 3.742 ug/l  
RT: 2.76 min Scan# 216  
Delta R.T. -0.04 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

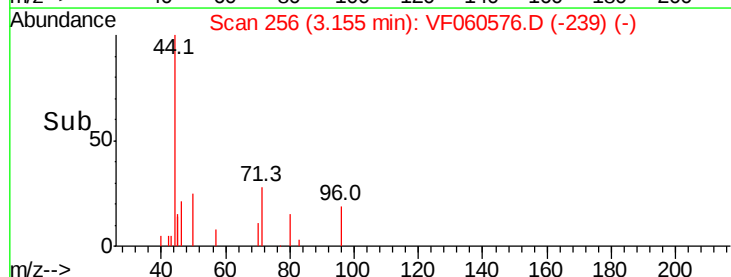
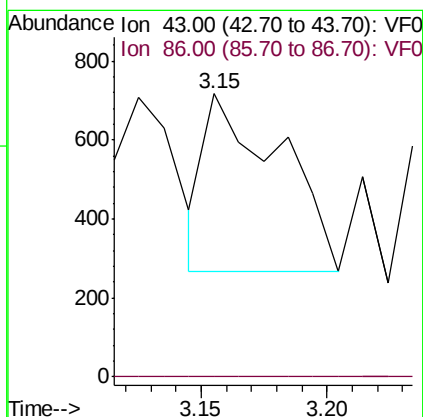
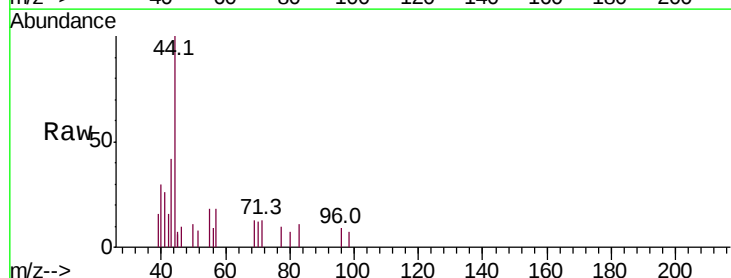
Instrument :  
MSVOA\_F  
ClientSampleId :

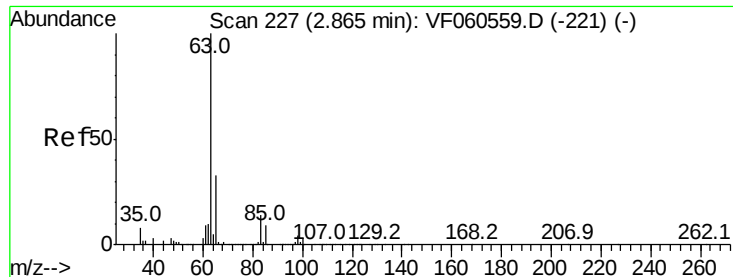
Tot Ion: 45 Resp: 150  
Ion Ratio Lower Upper  
45 100  
43 187.7 38.1 57.1#  
87 0.0 12.7 19.1#  
59 0.0 7.0 10.4#



#23  
Vinyl Acetate  
Concen: 39.028 ug/l  
RT: 3.15 min Scan# 256  
Delta R.T. -0.04 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

Tgt Ion: 43 Resp: 940  
Ion Ratio Lower Upper  
43 100  
86 0.0 7.1 10.7#





#24

1,1-Dichloroethane

Concen: 3.448 ug/l

RT: 2.84 min Scan# 224

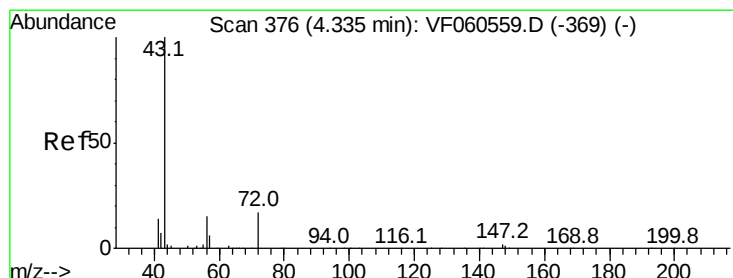
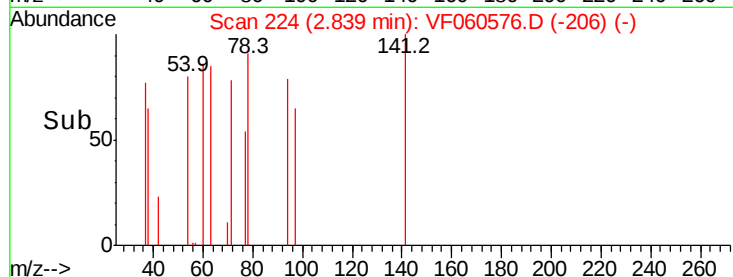
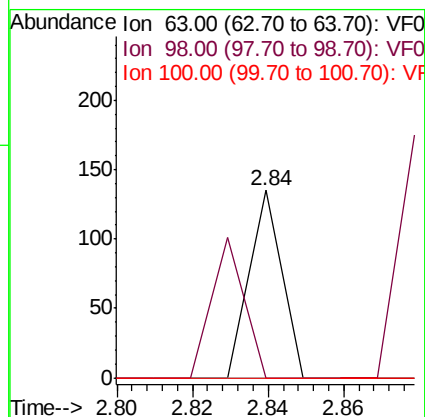
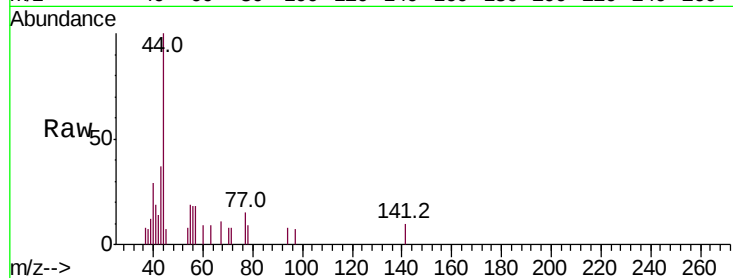
Delta R.T. -0.03 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

Instrument :  
MSVOA\_F  
ClientSampleId :

|          |       |       |       |
|----------|-------|-------|-------|
| Tot Ion: | 63    | Resp: | 80    |
| Ion      | Ratio | Lower | Upper |
| 63       | 100   |       |       |
| 98       | 0.0   | 2.2   | 6.6#  |
| 100      | 0.0   | 1.4   | 4.0#  |



#25

2-Butanone

Concen: Below Cal

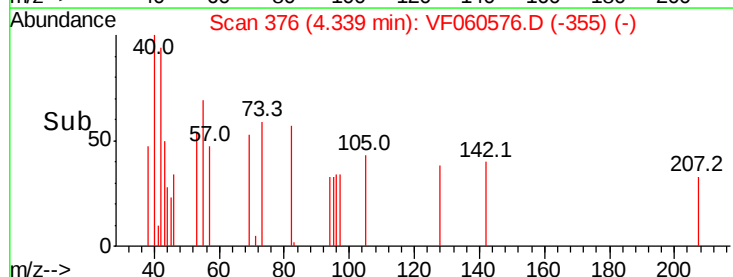
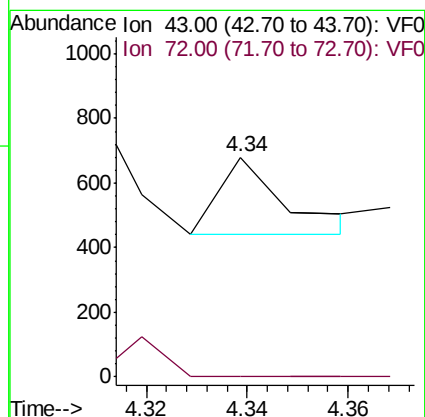
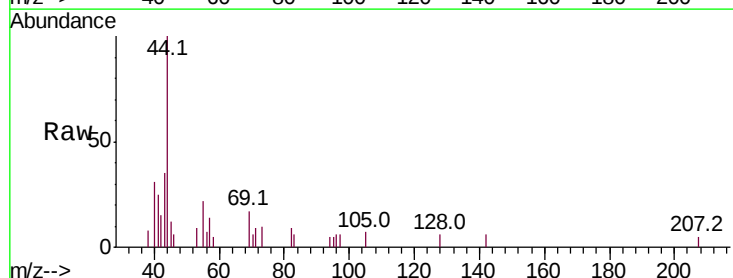
RT: 4.34 min Scan# 376

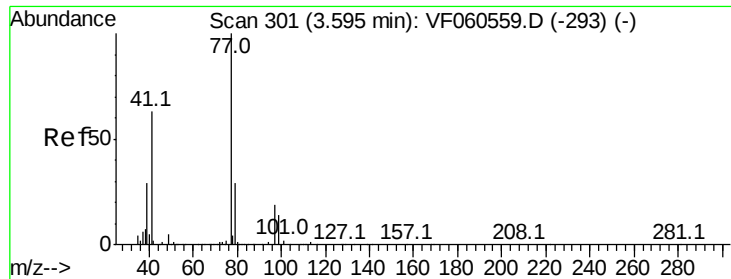
Delta R.T. 0.00 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 43    | Resp: | 217   |
| Ion      | Ratio | Lower | Upper |
| 43       | 100   |       |       |
| 72       | 0.0   | 16.2  | 24.2# |





#26

2,2-Dichloropropane

Concen: 11.349 ug/l

RT: 3.61 min Scan# 302

Delta R.T. 0.01 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

Instrument :

MSVOA\_F

ClientSampled :

Tot Ion: 77 Resp: 197

Ion Ratio Lower Upper

77 100

97 0.0 9.8 29.3#



Abundance Ion 77.00 (76.70 to 77.70): VF0

Ion 97.00 (96.70 to 97.70): VF0

3.61

150

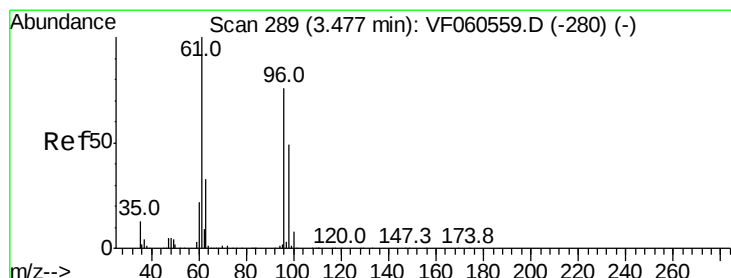
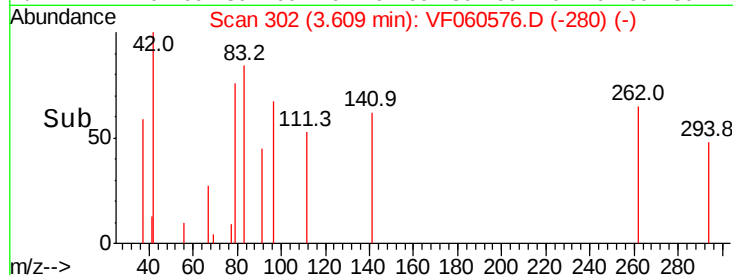
100

50

0

3.60 3.62

Time-->



#27

cis-1,2-Dichloroethene

Concen: 6.421 ug/l

RT: 3.52 min Scan# 293

Delta R.T. 0.04 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

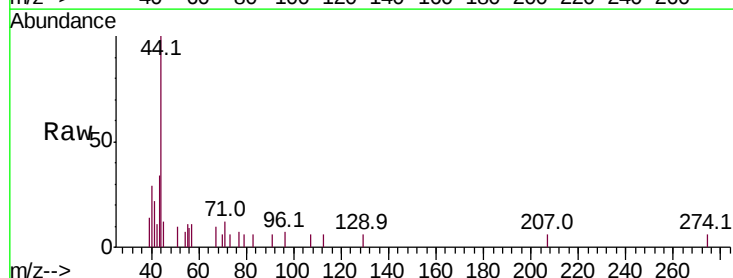
Tgt Ion: 96 Resp: 149

Ion Ratio Lower Upper

96 100

61 0.0 0.0 263.0

98 0.0 0.0 130.6



Abundance Ion 96.00 (95.70 to 96.70): VF0

Ion 61.00 (60.70 to 61.70): VF0

Ion 98.00 (97.70 to 98.70): VF0

150

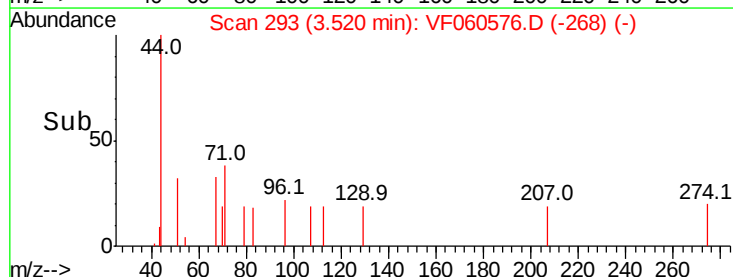
100

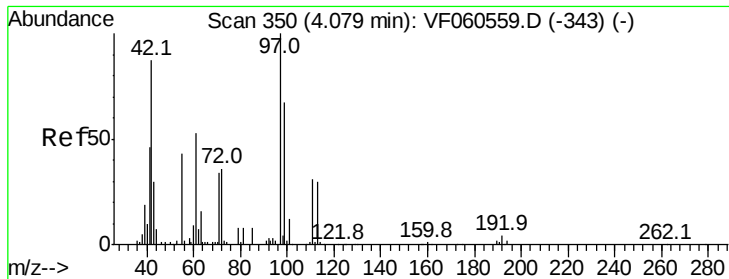
50

0

3.50 3.52 3.55

Time-->





#29

Tetrahydrofuran

Concen: 348.898 ug/l

RT: 4.04 min Scan# 346

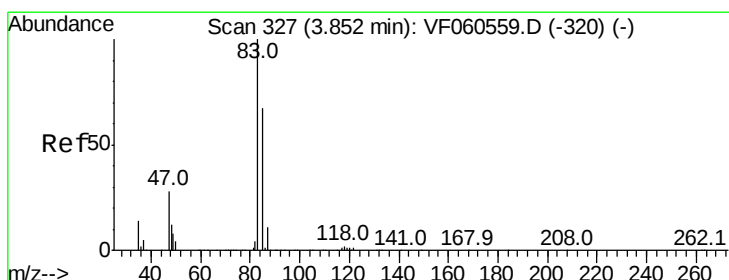
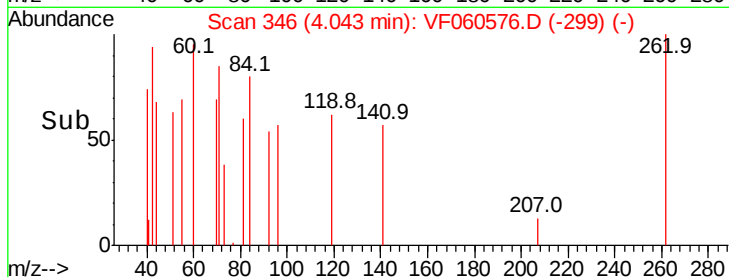
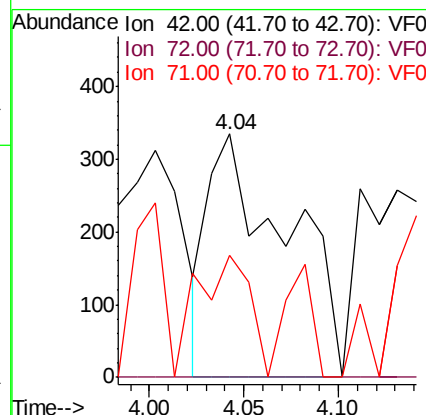
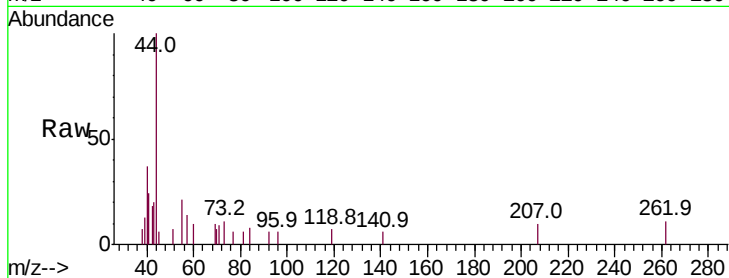
Delta R.T. -0.04 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

Instrument :  
MSVOA\_F  
ClientSampled :

Tot Ion: 42 Resp: 968  
Ion Ratio Lower Upper  
42 100  
72 0.0 31.4 47.0#  
71 33.6 31.8 47.6



#30

Chloroform

Concen: 2.261 ug/l

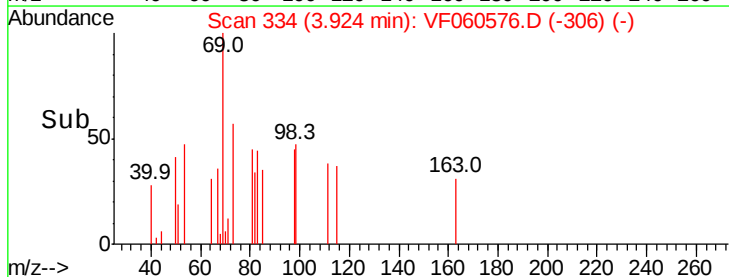
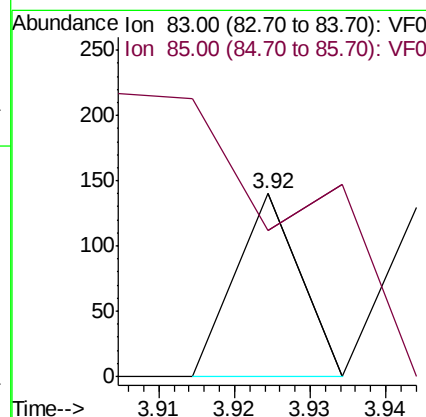
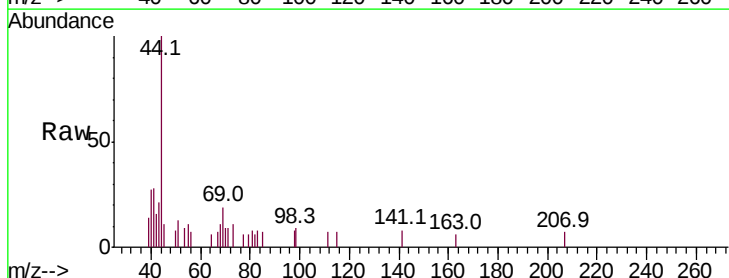
RT: 3.92 min Scan# 334

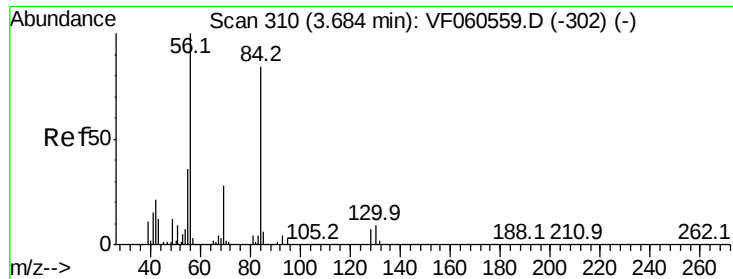
Delta R.T. 0.07 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

Tgt Ion: 83 Resp: 83  
Ion Ratio Lower Upper  
83 100  
85 80.0 53.7 80.5

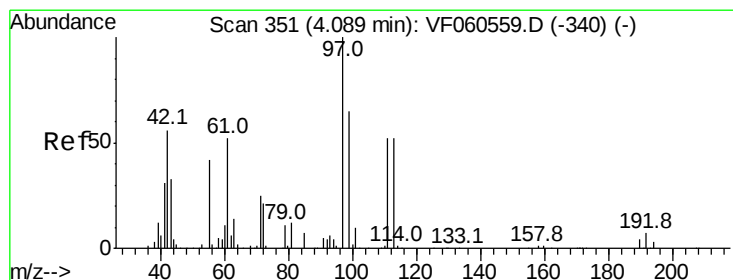
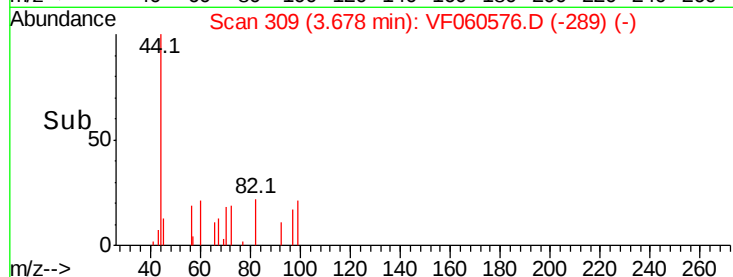
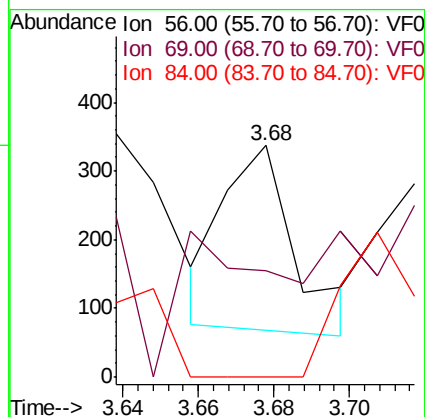
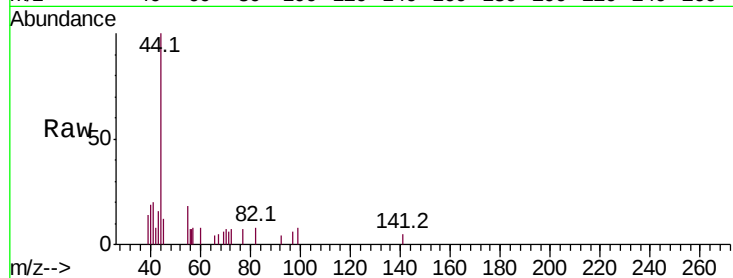




#31  
Cvclohexane  
Concen: 10.901 ug/l  
RT: 3.68 min Scan# 309  
Delta R.T. -0.01 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

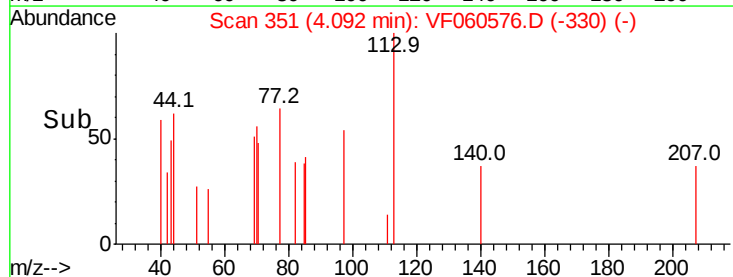
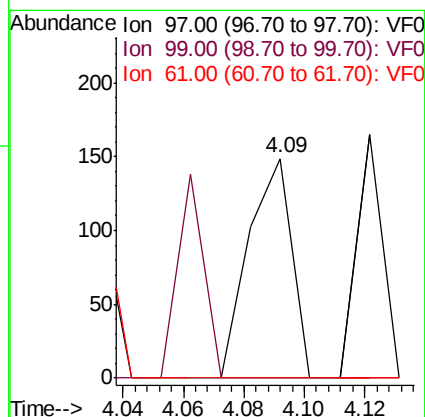
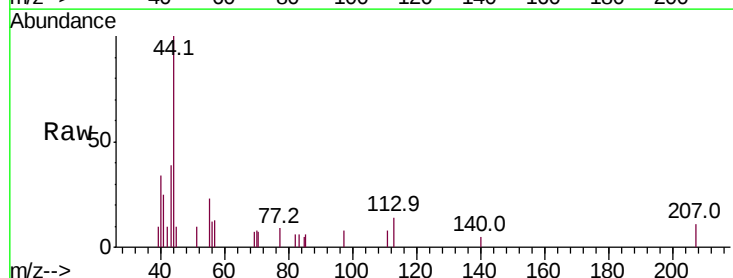
Instrument :  
MSVOA\_F  
ClientSampleId :

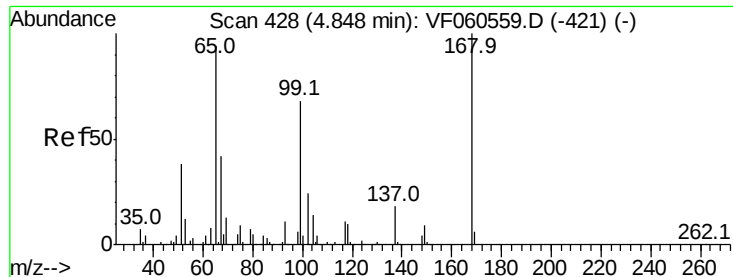
Tot Ion: 56 Resp: 349  
Ion Ratio Lower Upper  
56 100  
69 46.0 23.0 34.4#  
84 0.0 67.1 100.7#



#32  
1,1,1-Trichloroethane  
Concen: 5.812 ug/l  
RT: 4.09 min Scan# 351  
Delta R.T. 0.00 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

Tgt Ion: 97 Resp: 149  
Ion Ratio Lower Upper  
97 100  
99 0.0 52.4 78.6#  
61 0.0 41.5 62.3#





#33

1,2-Dichloroethane-d4

Concen: 3.723 ug/l

RT: 4.86 min Scan# 429

Delta R.T. 0.01 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

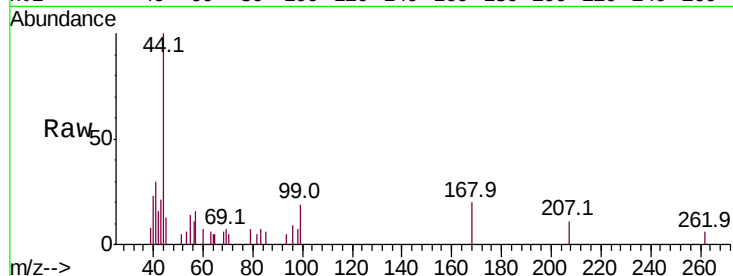
Instrument :  
MSVOA\_F  
ClientSampleId :

Tot Ion: 65 Resp: 60

Ion Ratio Lower Upper

65 100

67 0.0 0.0 101.8



Abundance Ion 65.00 (64.70 to 65.70): VF0

Ion 67.00 (66.70 to 67.70): VF0

150

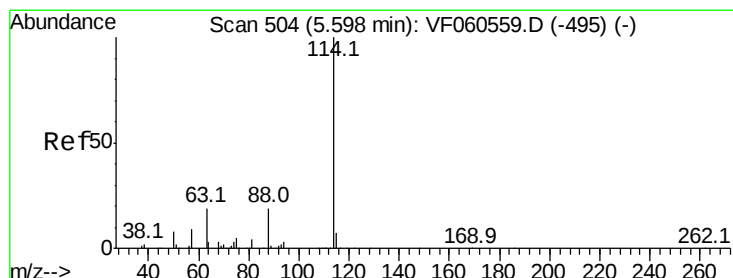
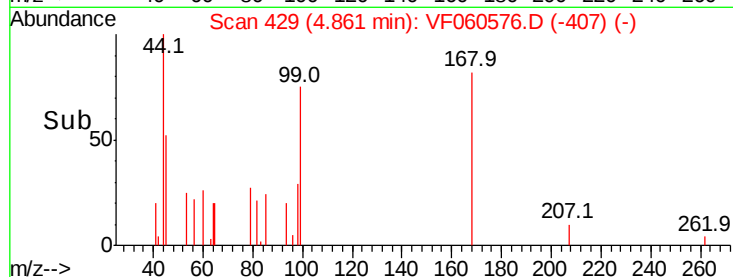
100

50

0

4.85 4.86 4.87

Time-->



#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 5.59 min Scan# 503

Delta R.T. -0.01 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

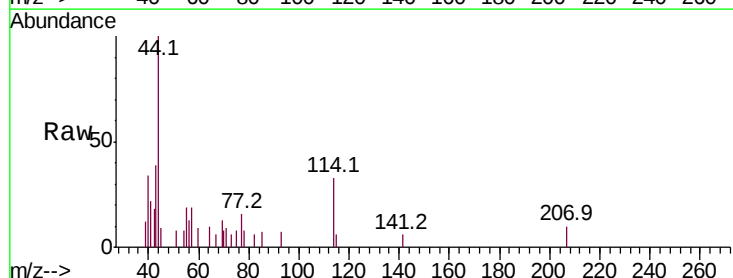
Tgt Ion: 114 Resp: 1680

Ion Ratio Lower Upper

114 100

63 0.0 0.0 39.0

88 0.0 0.0 38.2



Abundance Ion 114.00 (113.70 to 114.70): V

Ion 63.00 (62.70 to 63.70): VF0

Ion 88.00 (87.70 to 88.70): VF0

800

600

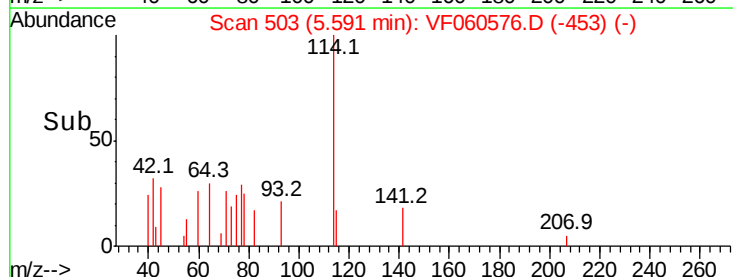
400

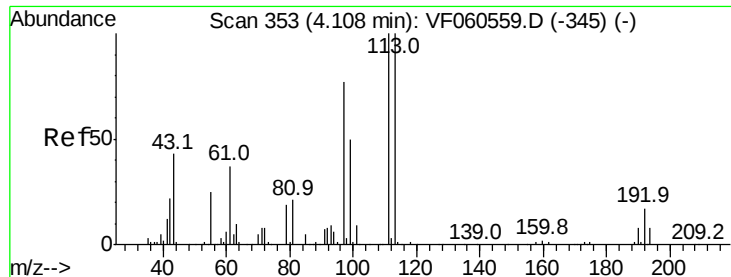
200

0

5.50 5.55 5.60 5.65 5.70

Time-->





#35

Dibromofluoromethane

Concen: 30.895 ug/l

RT: 4.09 min Scan# 351

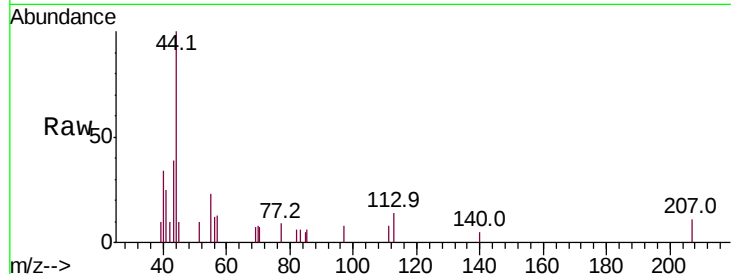
Delta R.T. -0.02 min

Lab File: VF060576.D

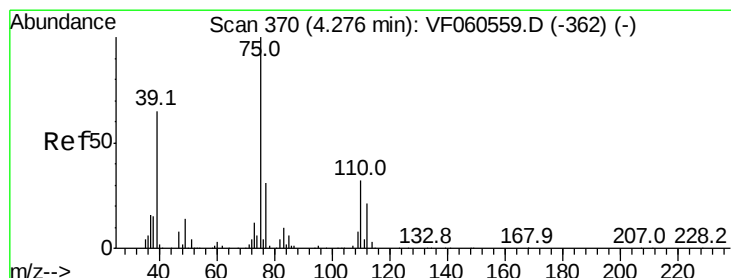
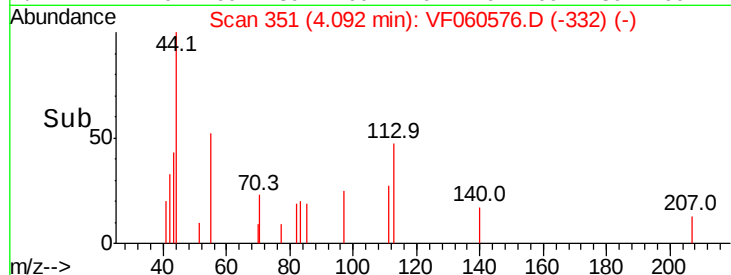
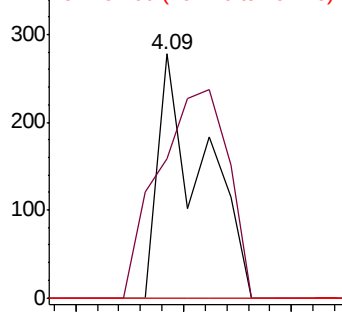
Acq: 5 Nov 2018 16:52

Instrument :  
MSVOA\_F  
ClientSampleId :

Tot Ion:113 Resp: 401  
Ion Ratio Lower Upper  
113 100  
111 56.8 79.9 119.9#  
192 0.0 13.3 19.9#



Abundance Ion 113.00 (112.70 to 113.70): V  
Ion 111.00 (110.70 to 111.70): V  
Ion 192.00 (191.70 to 192.70): V



#36

1,1-Dichloropropene

Concen: 3.622 ug/l

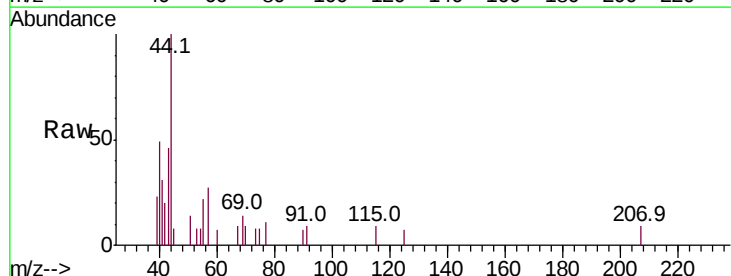
RT: 4.24 min Scan# 366

Delta R.T. -0.04 min

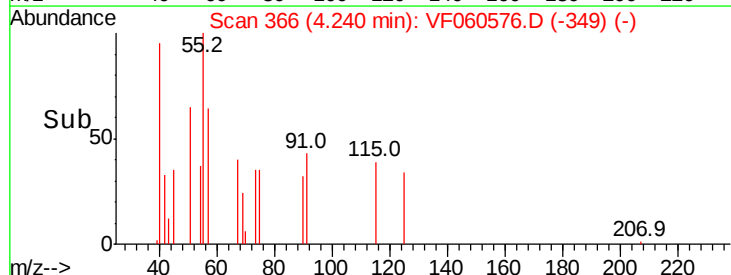
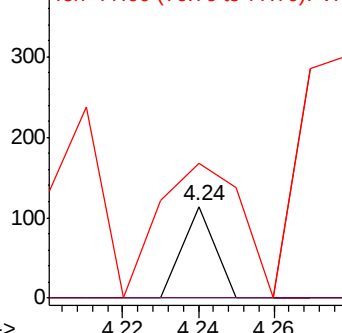
Lab File: VF060576.D

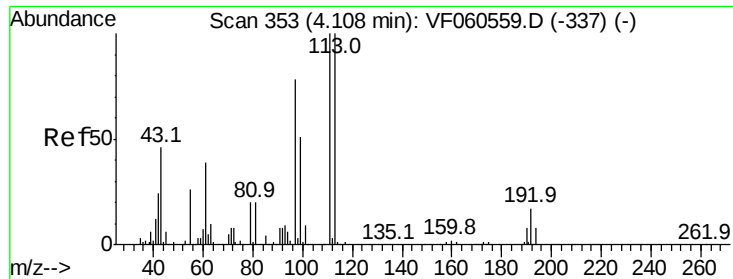
Acq: 5 Nov 2018 16:52

Tgt Ion: 75 Resp: 67  
Ion Ratio Lower Upper  
75 100  
110 0.0 16.2 48.6#  
77 147.4 25.0 37.6#



Abundance Ion 75.00 (74.70 to 75.70): VF0  
Ion 110.00 (109.70 to 110.70): V  
Ion 77.00 (76.70 to 77.70): VF0

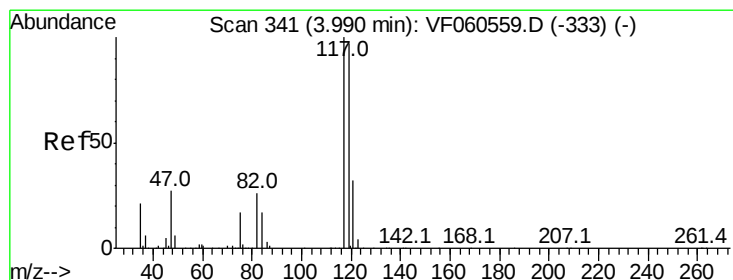
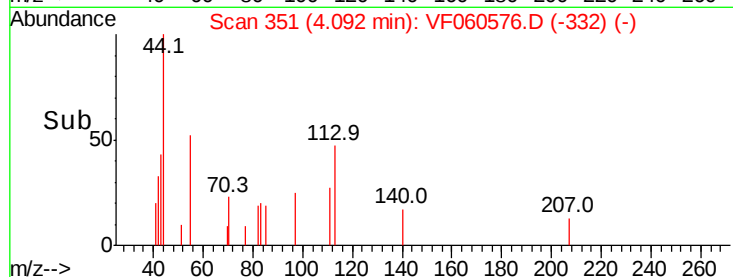
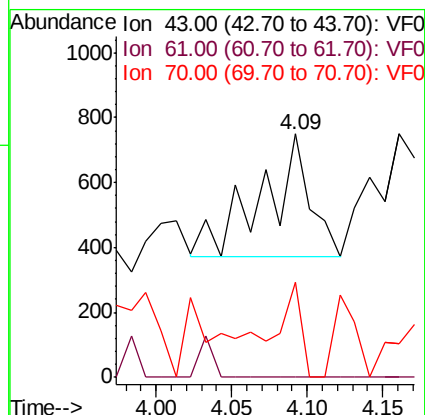
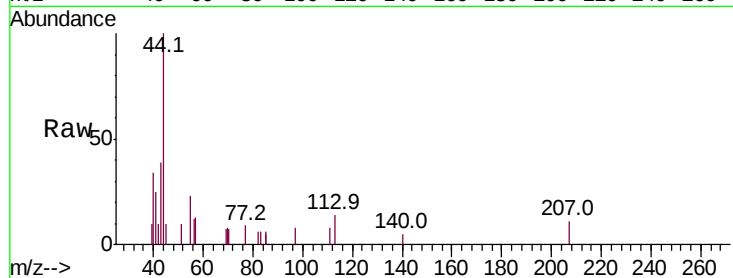




#37  
Ethyl Acetate  
Concen: 93.021 ug/l  
RT: 4.09 min Scan# 351  
Delta R.T. -0.02 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

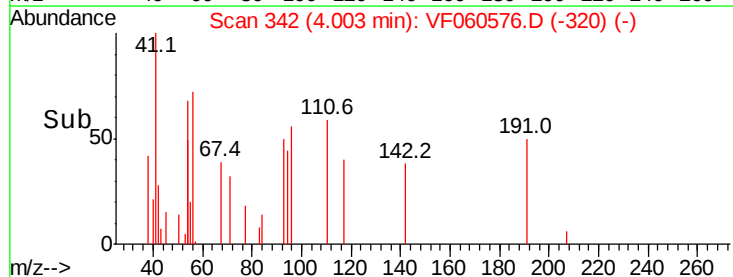
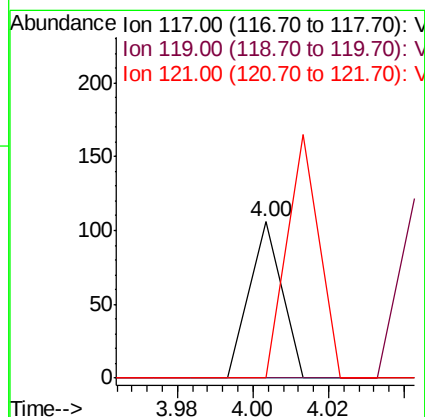
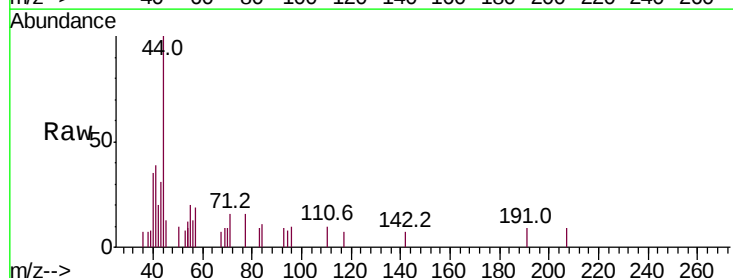
Instrument :  
MSVOA\_F  
ClientSampled :

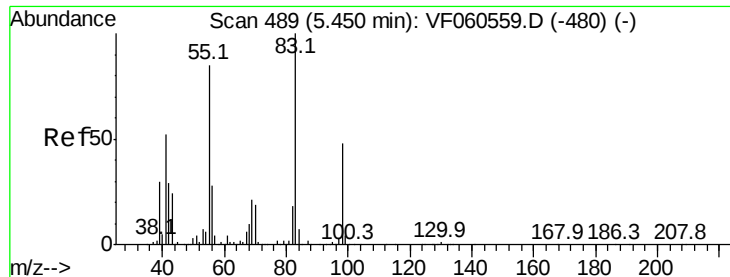
Tot Ion: 43 Resp: 826  
Ion Ratio Lower Upper  
43 100  
61 0.0 63.4 95.2#  
70 38.9 9.3 13.9#



#38  
Carbon Tetrachloride  
Concen: 3.986 ug/l  
RT: 4.00 min Scan# 342  
Delta R.T. 0.01 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

Tgt Ion: 117 Resp: 63  
Ion Ratio Lower Upper  
117 100  
119 0.0 77.8 116.6#  
121 0.0 25.6 38.4#

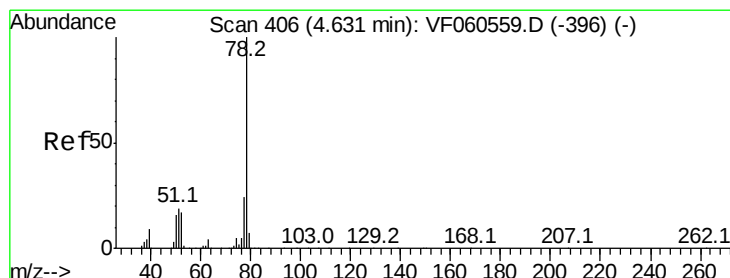
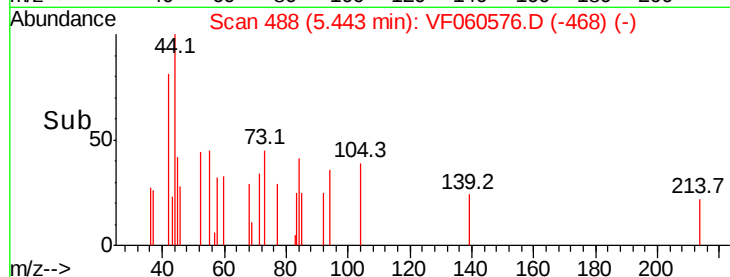
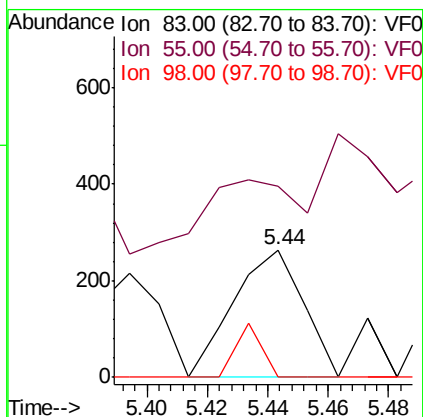
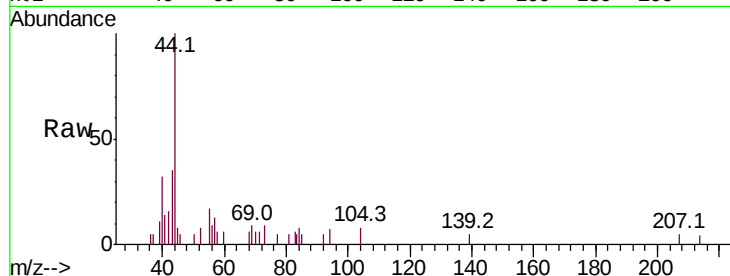




#39  
Methvlcvclohexane  
Concen: 18.916 ug/l  
RT: 5.44 min Scan# 488  
Delta R.T. -0.01 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

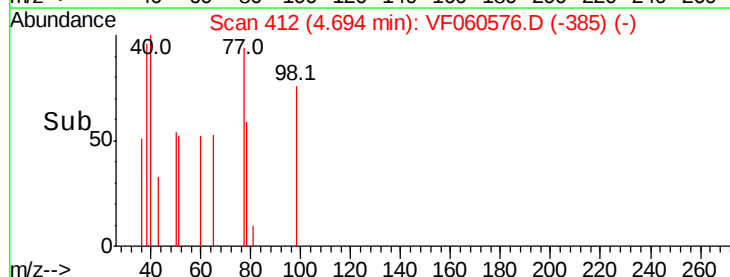
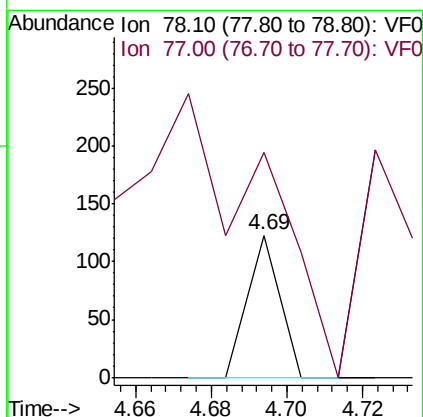
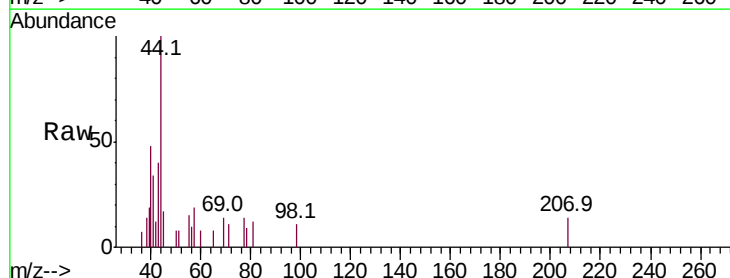
Instrument :  
MSVOA\_F  
ClientSampled :

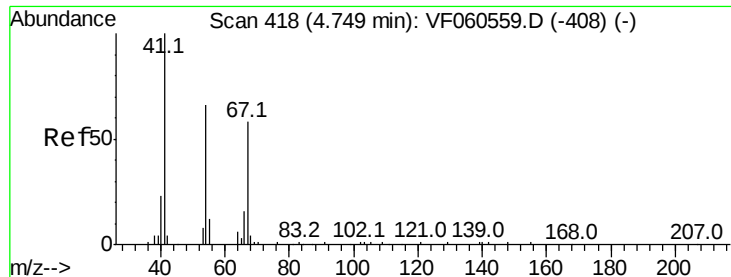
Tot Ion: 83 Resp: 427  
Ion Ratio Lower Upper  
83 100  
55 150.0 69.1 103.7#  
98 0.0 38.6 57.8#



#40  
Benzene  
Concen: 1.626 ug/l  
RT: 4.69 min Scan# 412  
Delta R.T. 0.06 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

Tgt Ion: 78 Resp: 73  
Ion Ratio Lower Upper  
78 100  
77 157.7 19.3 28.9#





#41

Methacrylonitrile

Concen: 169.429 ug/l

RT: 4.79 min Scan# 422

Delta R.T. 0.04 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

Instrument :

MSVOA\_F

ClientSampleId :

Tot Ion: 41 Resp: 852

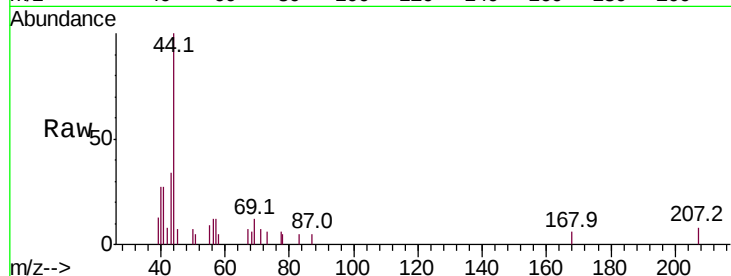
Ion Ratio Lower Upper

41 100

39 48.3 45.6 68.4

67 26.2 45.3 67.9#

52 0.0 29.6 44.4#

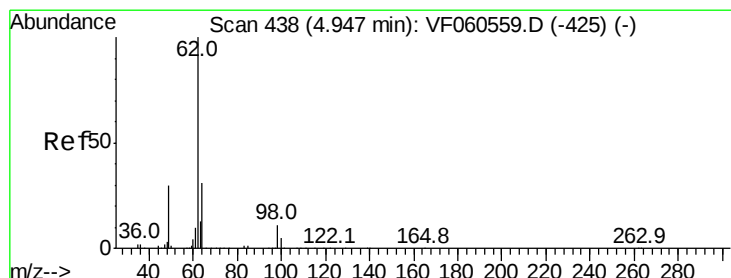
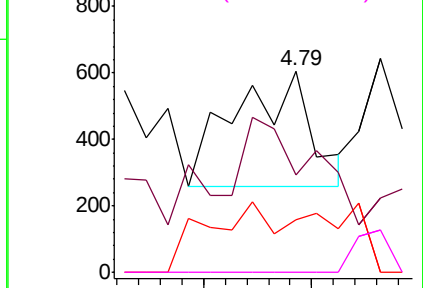
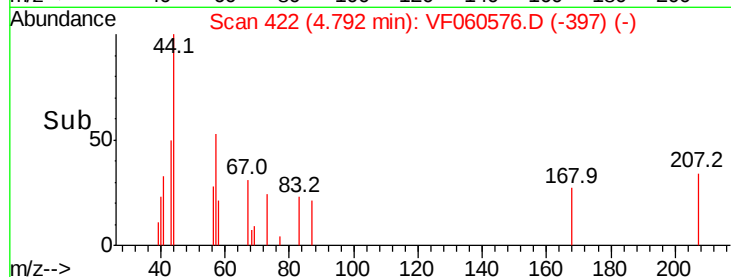


Abundance Ion 41.00 (40.70 to 41.70): VF0

Ion 39.00 (38.70 to 39.70): VF0

Ion 67.00 (66.70 to 67.70): VF0

Ion 52.00 (51.70 to 52.70): VF0



#42

1,2-Dichloroethane

Concen: 5.199 ug/l

RT: 4.89 min Scan# 432

Delta R.T. -0.06 min

Lab File: VF060576.D

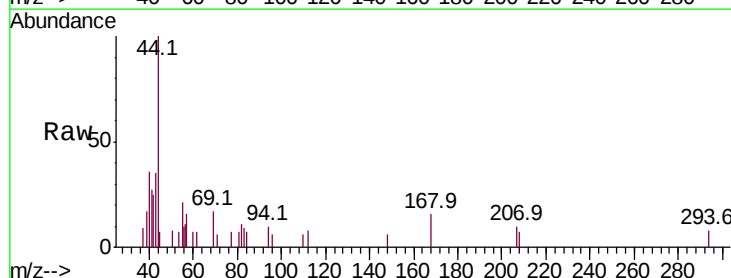
Acq: 5 Nov 2018 16:52

Tgt Ion: 62 Resp: 67

Ion Ratio Lower Upper

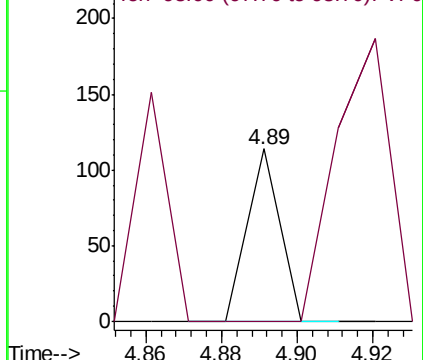
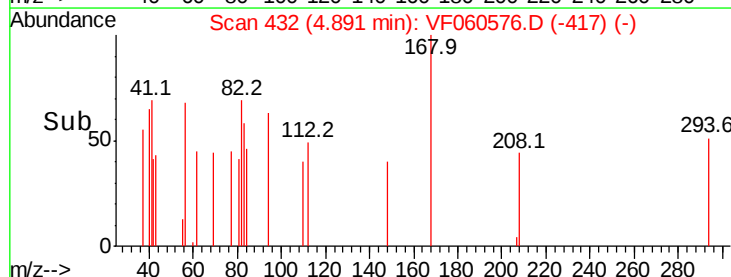
62 100

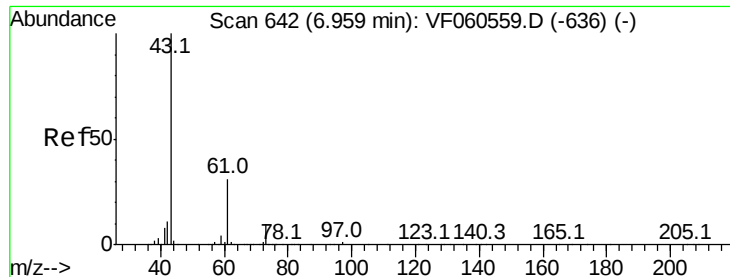
98 0.0 0.0 22.4



Abundance Ion 62.00 (61.70 to 62.70): VF0

Ion 98.00 (97.70 to 98.70): VF0





#43

Isopropyl Acetate

Concen: 119.657 ug/l

RT: 6.92 min Scan# 638

Delta R.T. -0.04 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

Instrument :

MSVOA\_F

ClientSampleId :

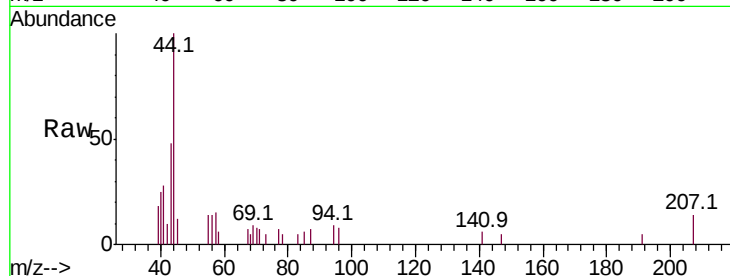
Tot Ion: 43 Resp: 1344

Ion Ratio Lower Upper

43 100

61 0.0 24.2 36.2#

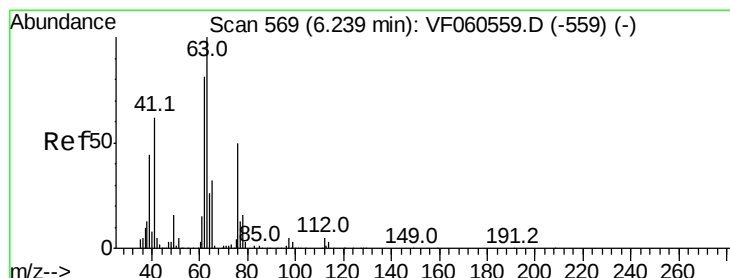
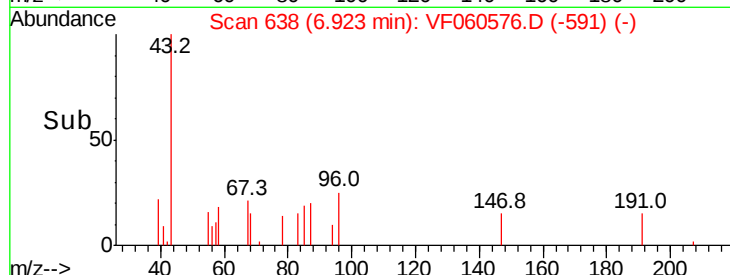
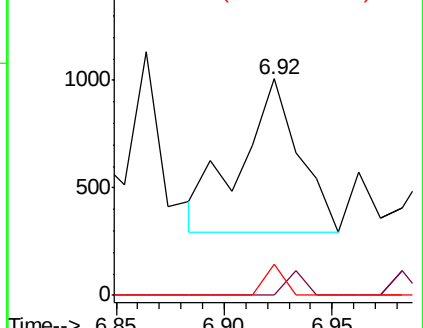
87 14.1 0.2 0.4#



Abundance Ion 43.00 (42.70 to 43.70): VF0

Ion 61.00 (60.70 to 61.70): VF0

Ion 87.00 (86.70 to 87.70): VF0



#45

1,2-Dichloropropane

Concen: 13.933 ug/l

RT: 6.22 min Scan# 567

Delta R.T. -0.02 min

Lab File: VF060576.D

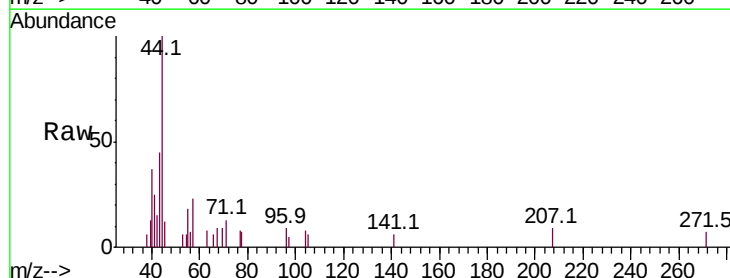
Acq: 5 Nov 2018 16:52

Tgt Ion: 63 Resp: 160

Ion Ratio Lower Upper

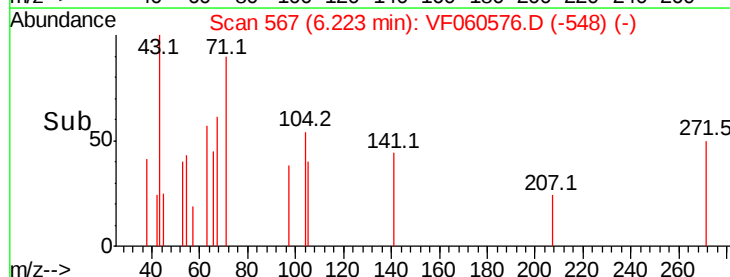
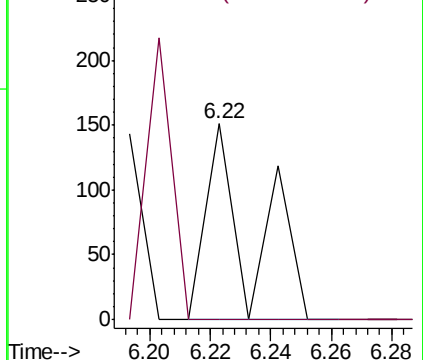
63 100

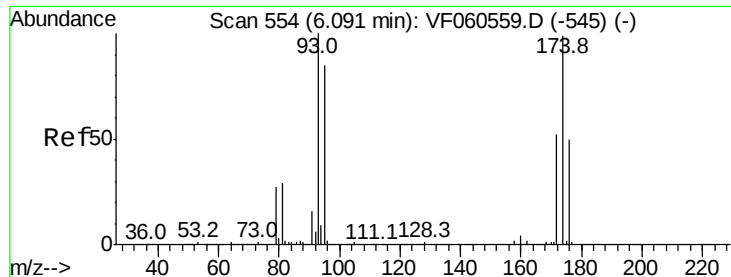
65 0.0 25.4 38.0#



Abundance Ion 63.00 (62.70 to 63.70): VF0

Ion 65.00 (64.70 to 65.70): VF0





#46

Dibromomethane

Concen: 16.060 ug/l

RT: 5.98 min Scan# 542

Delta R.T. -0.11 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

Instrument :

MSVOA\_F

ClientSampleId :

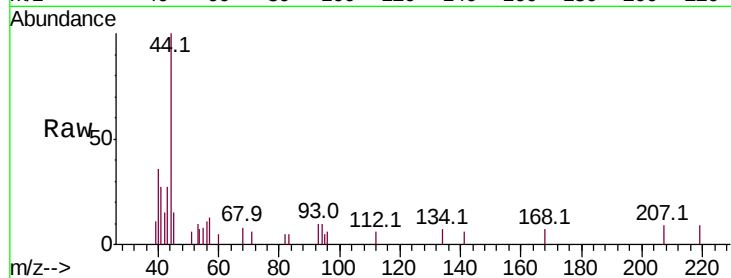
Tot Ion: 93 Resp: 117

Ion Ratio Lower Upper

93 100

95 51.0 68.6 102.8#

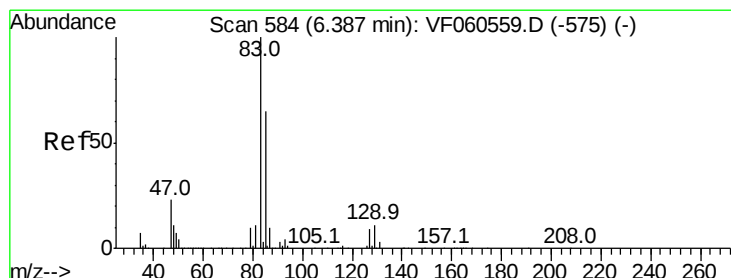
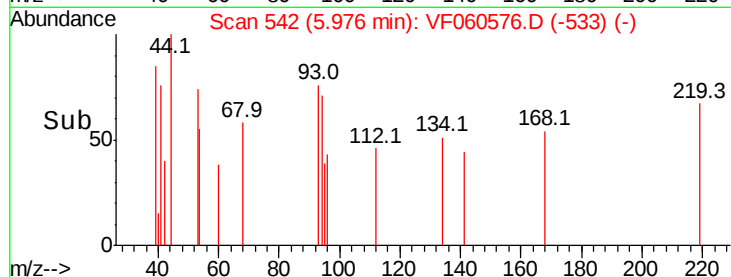
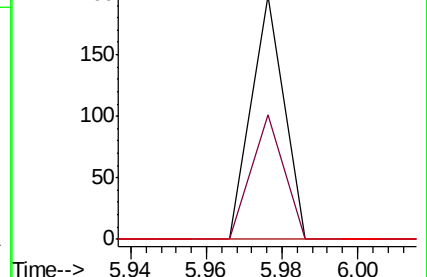
174 0.0 79.0 118.4#



Abundance Ion 93.00 (92.70 to 93.70): VF0

Ion 95.00 (94.70 to 95.70): VF0

Ion 174.00 (173.70 to 174.70): V



#47

Bromodichloromethane

Concen: 26.861 ug/l

RT: 6.33 min Scan# 578

Delta R.T. -0.06 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

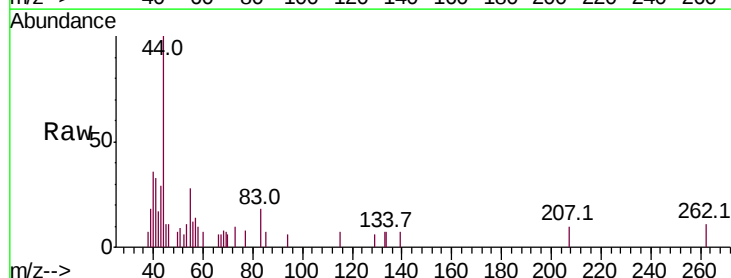
Tgt Ion: 83 Resp: 472

Ion Ratio Lower Upper

83 100

85 36.6 51.8 77.6#

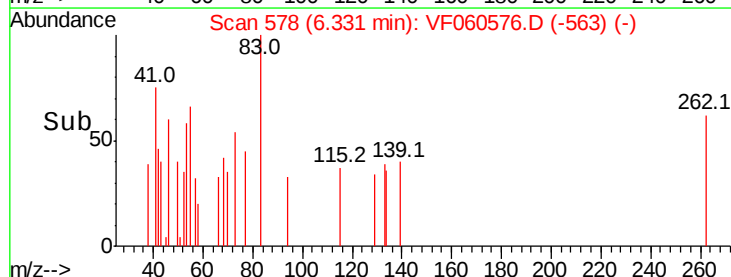
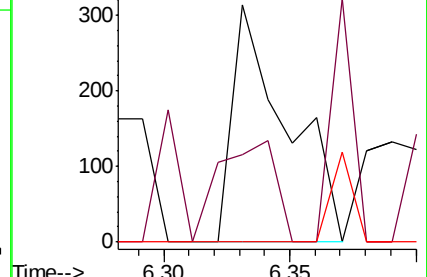
127 0.0 7.0 10.4#

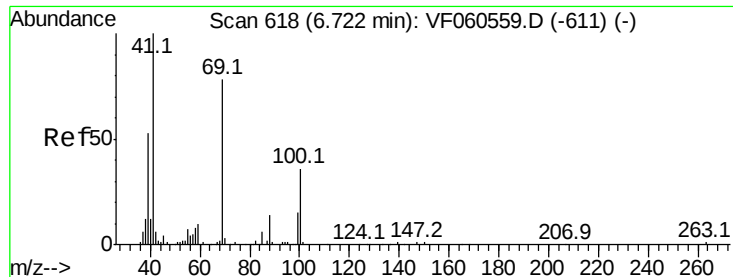


Abundance Ion 83.00 (82.70 to 83.70): VF0

Ion 85.00 (84.70 to 85.70): VF0

Ion 127.00 (126.70 to 127.70): V

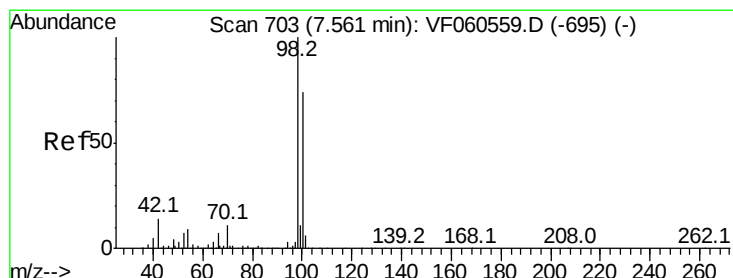
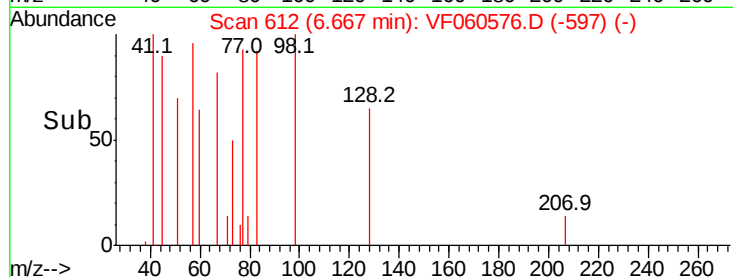
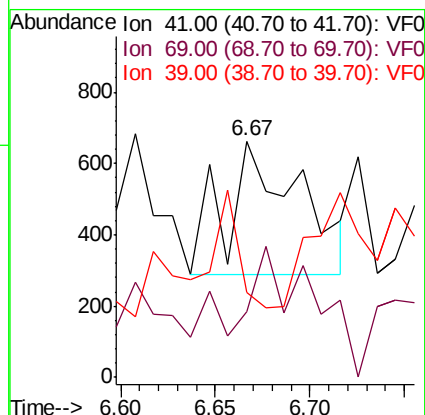
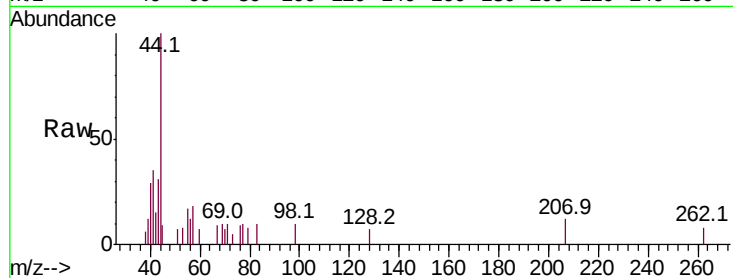




#48  
Methvl methacrylate  
Concen: 144.775 ug/l  
RT: 6.67 min Scan# 612  
Delta R.T. -0.06 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

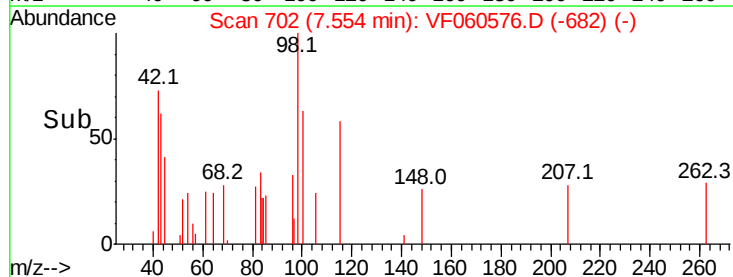
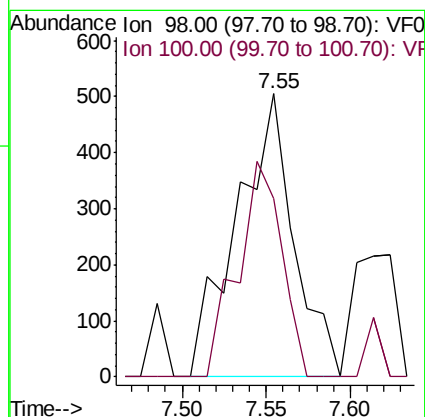
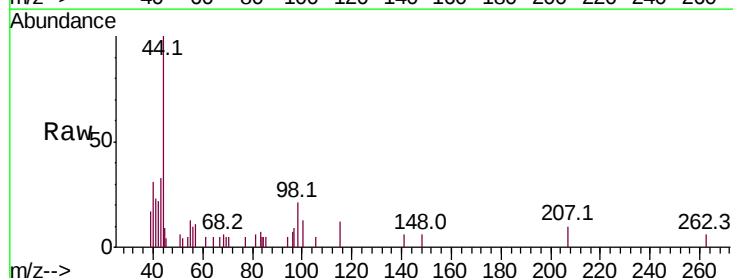
Instrument :  
MSVOA\_F  
ClientSampled :

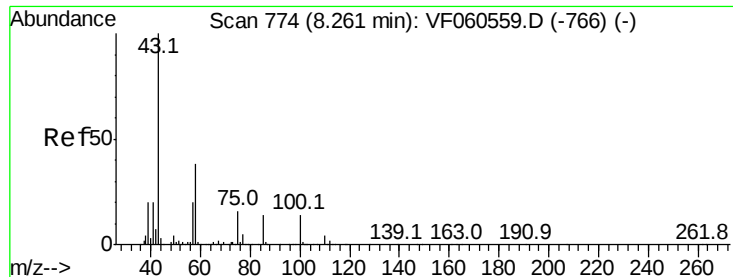
Tot Ion: 41 Resp: 1022  
Ion Ratio Lower Upper  
41 100  
69 27.8 61.1 91.7#  
39 35.7 43.0 64.6#



#50  
Toluene-d8  
Concen: 31.054 ug/l  
RT: 7.55 min Scan# 702  
Delta R.T. -0.01 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

Tgt Ion: 98 Resp: 1194  
Ion Ratio Lower Upper  
98 100  
100 63.0 59.4 89.2





#51

4-Methyl-2-Pentanone

Concen: 91.617 ug/l

RT: 8.23 min Scan# 770

Delta R.T. -0.04 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

Instrument :

MSVOA\_F

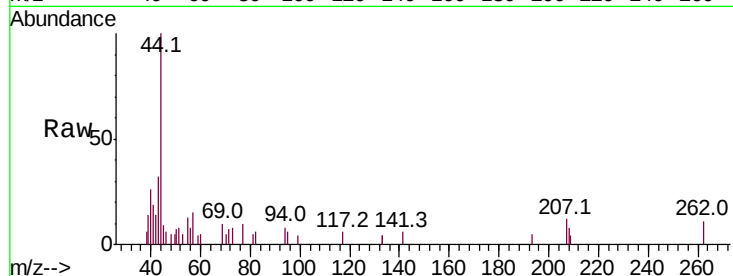
ClientSampled :

Tot Ion: 43 Resp: 692

Ion Ratio Lower Upper

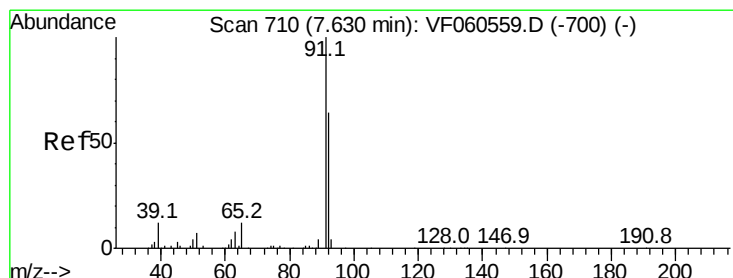
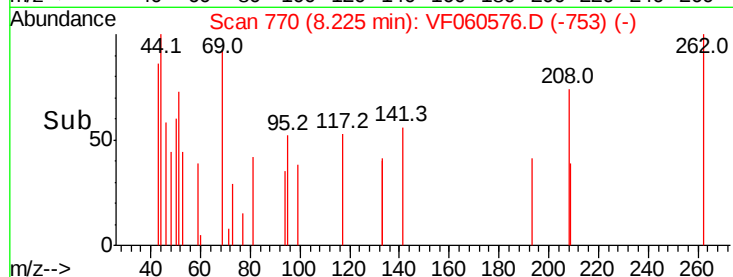
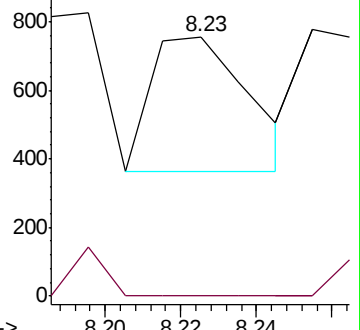
43 100

58 0.0 30.1 45.1#



Abundance Ion 43.00 (42.70 to 43.70): VF0

Ion 58.00 (57.70 to 58.70): VF0



#52

Toluene

Concen: 2.393 ug/l

RT: 7.59 min Scan# 706

Delta R.T. -0.04 min

Lab File: VF060576.D

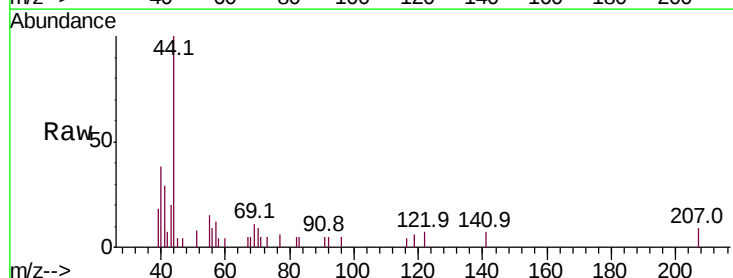
Acq: 5 Nov 2018 16:52

Tgt Ion: 92 Resp: 70

Ion Ratio Lower Upper

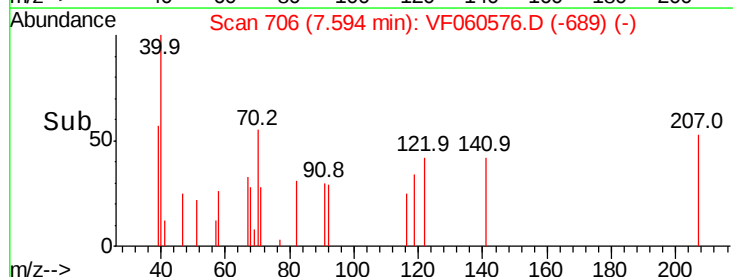
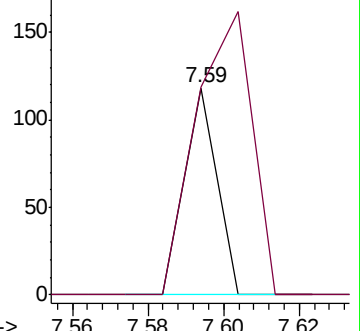
92 100

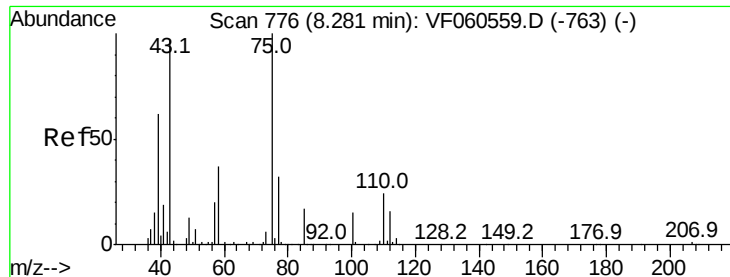
91 100.8 124.5 186.7#



Abundance Ion 92.00 (91.70 to 92.70): VF0

Ion 91.00 (90.70 to 91.70): VF0

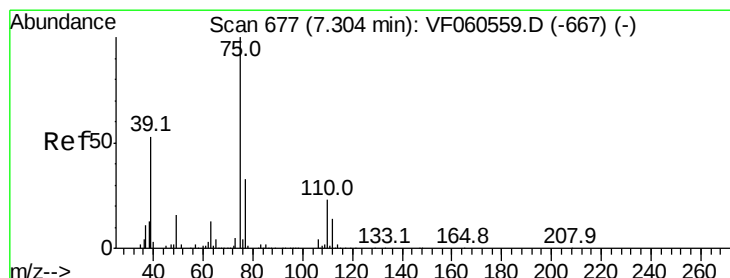
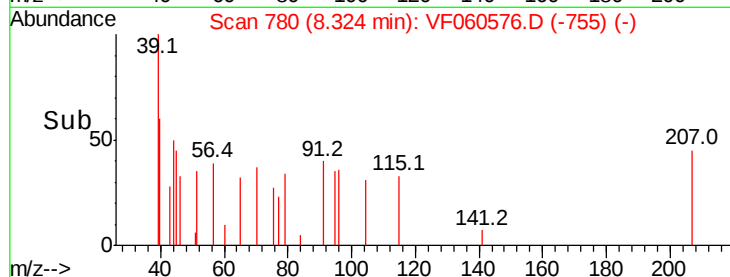
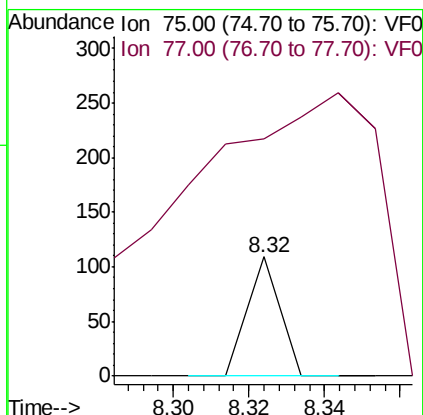
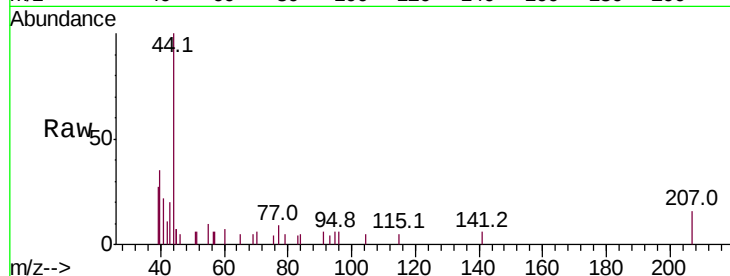




#53  
t-1,3-Dichloropropene  
Concen: 4.256 ug/l  
RT: 8.32 min Scan# 780  
Delta R.T. 0.04 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

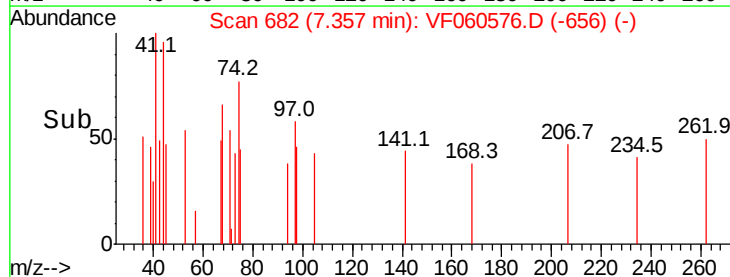
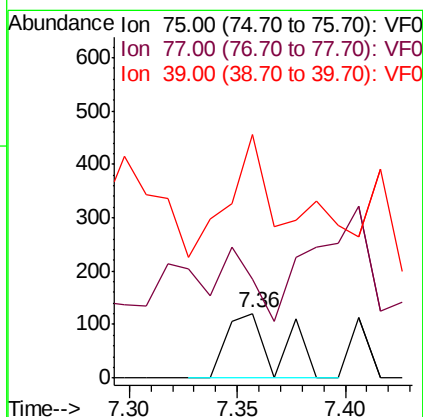
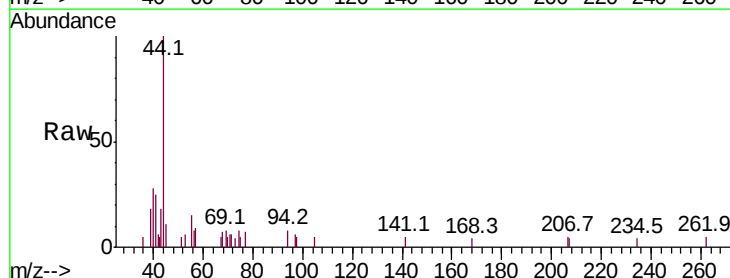
Instrument :  
MSVOA\_F  
ClientSampled :

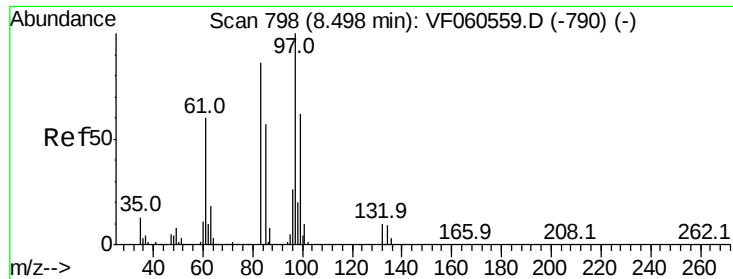
Tot Ion: 75 Resp: 65  
Ion Ratio Lower Upper  
75 100  
77 199.1 25.7 38.5#



#54  
cis-1,3-Dichloropropene  
Concen: 10.416 ug/l  
RT: 7.36 min Scan# 682  
Delta R.T. 0.05 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

Tgt Ion: 75 Resp: 201  
Ion Ratio Lower Upper  
75 100  
77 153.7 26.7 40.1#  
39 376.9 43.0 64.4#





#55

1,1,2-Trichloroethane

Concen: 17.623 ug/l

RT: 8.45 min Scan# 793

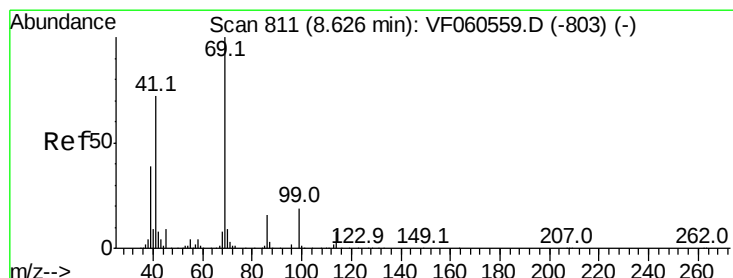
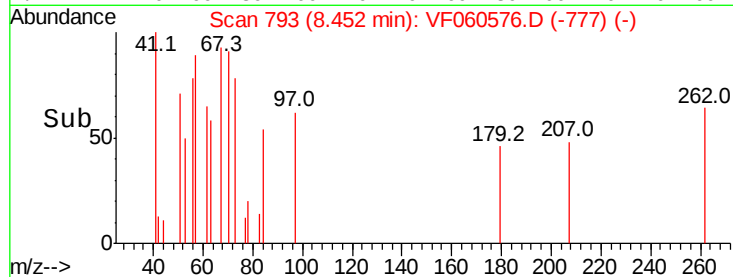
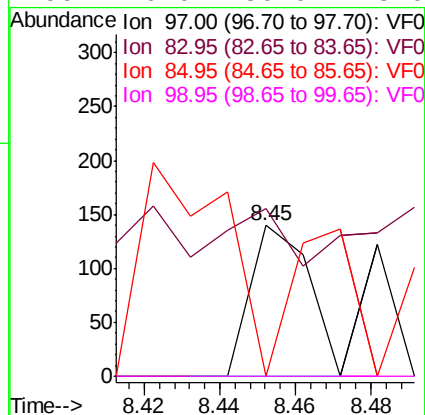
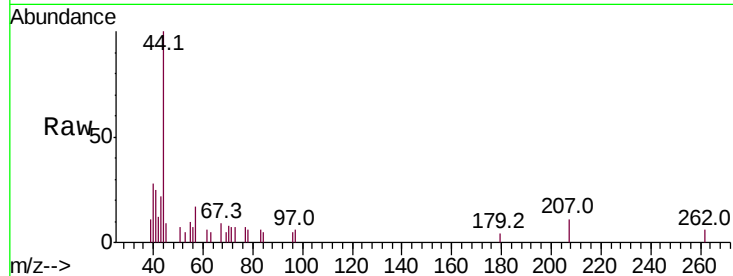
Delta R.T. -0.05 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

Instrument :  
MSVOA\_F  
ClientSampled :

|          |       |       |        |
|----------|-------|-------|--------|
| Tot Ion: | 97    | Resp: | 150    |
| Ion      | Ratio | Lower | Upper  |
| 97       | 100   |       |        |
| 83       | 110.7 | 69.4  | 104.0# |
| 85       | 0.0   | 46.6  | 69.8#  |
| 99       | 0.0   | 50.0  | 75.0#  |



#56

Ethyl methacrylate

Concen: 11.689 ug/l

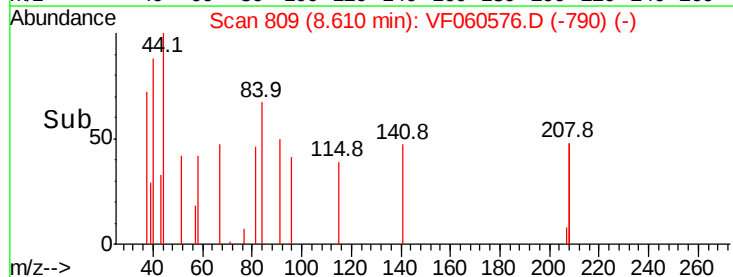
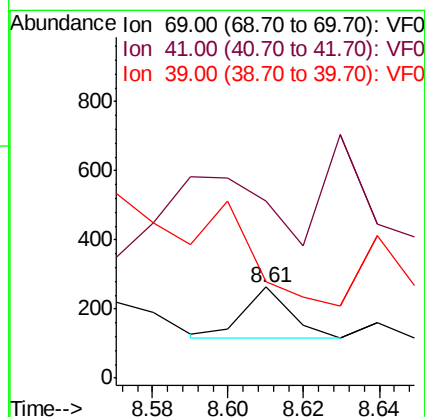
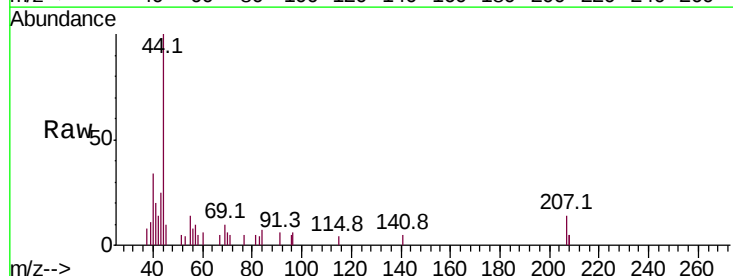
RT: 8.61 min Scan# 809

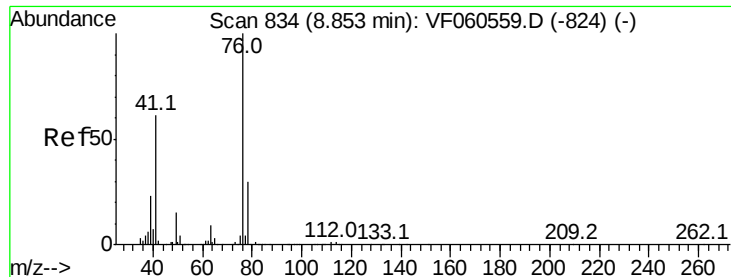
Delta R.T. -0.02 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 69    | Resp: | 128   |
| Ion      | Ratio | Lower | Upper |
| 69       | 100   |       |       |
| 41       | 194.7 | 59.2  | 88.8# |
| 39       | 106.5 | 32.3  | 48.5# |





#57

1,3-Dichloropropane

Concen: 4.085 ug/l

RT: 8.87 min Scan# 835

Delta R.T. 0.01 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

Instrument :

MSVOA\_F

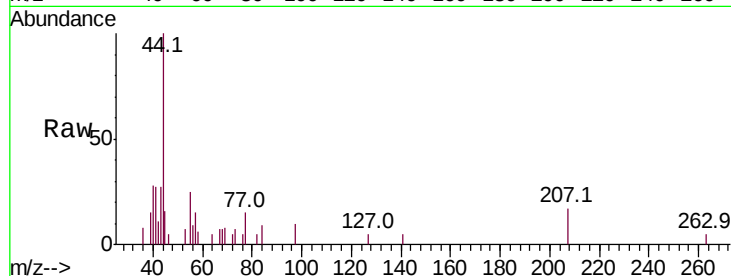
ClientSampleId :

Tot Ion: 76 Resp: 61

Ion Ratio Lower Upper

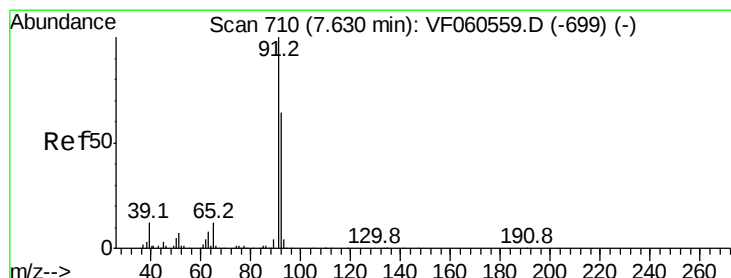
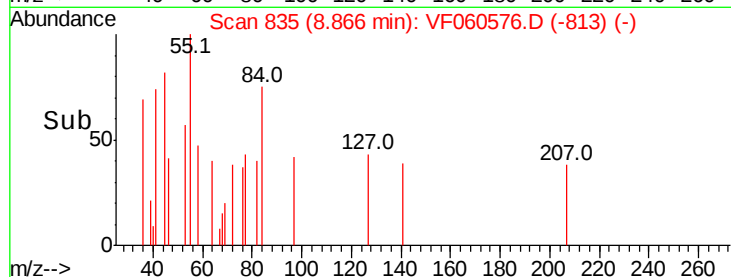
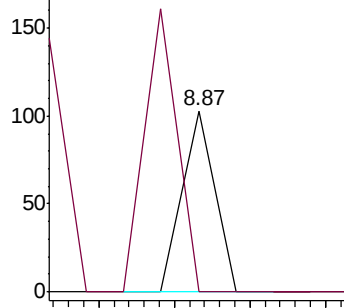
76 100

78 0.0 24.2 36.4#



Abundance Ion 76.00 (75.70 to 76.70): VF0

Ion 78.00 (77.70 to 78.70): VF0



#58

2-Chloroethyl Vinyl ether

Concen: 100.287 ug/l

RT: 7.73 min Scan# 720

Delta R.T. 0.10 min

Lab File: VF060576.D

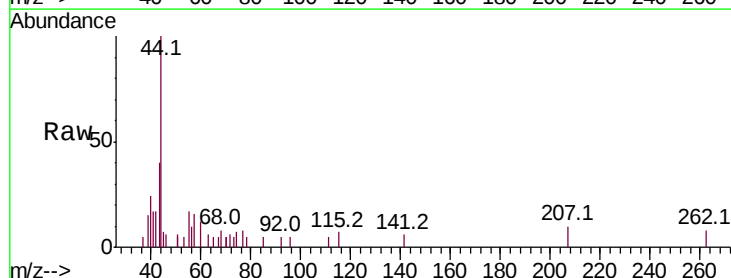
Acq: 5 Nov 2018 16:52

Tgt Ion: 63 Resp: 79

Ion Ratio Lower Upper

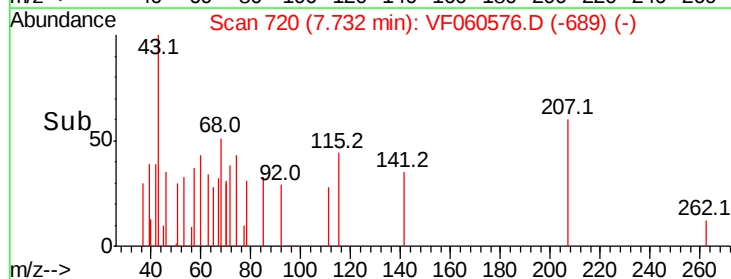
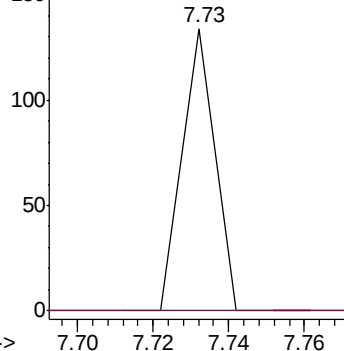
63 100

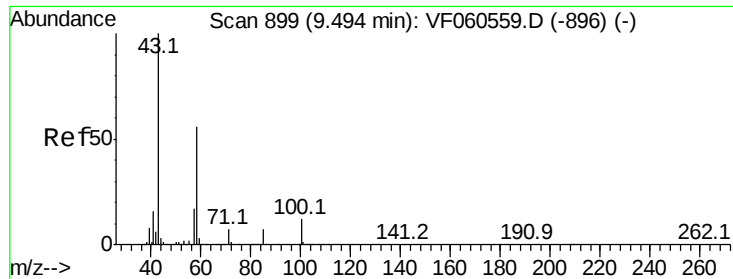
106 0.0 0.0 0.0



Abundance Ion 63.00 (62.70 to 63.70): VF0

Ion 106.00 (105.70 to 106.70): V

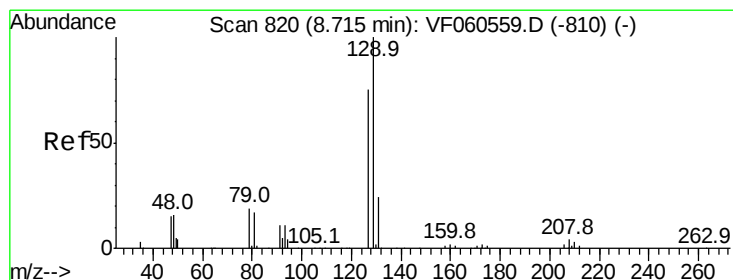
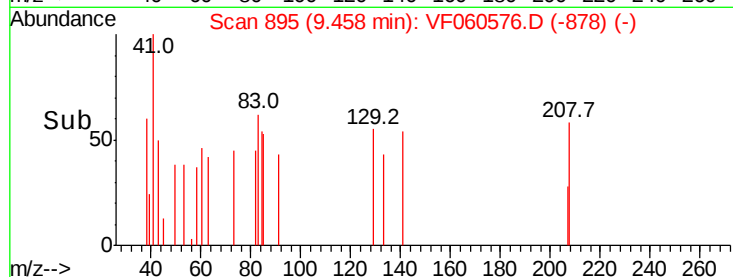
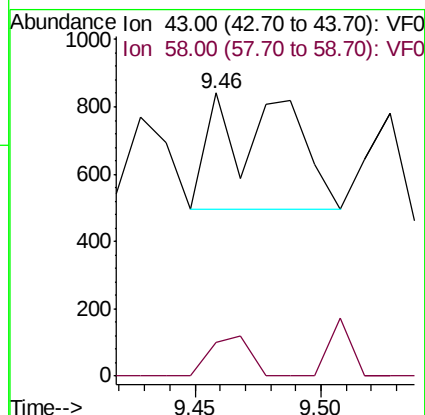
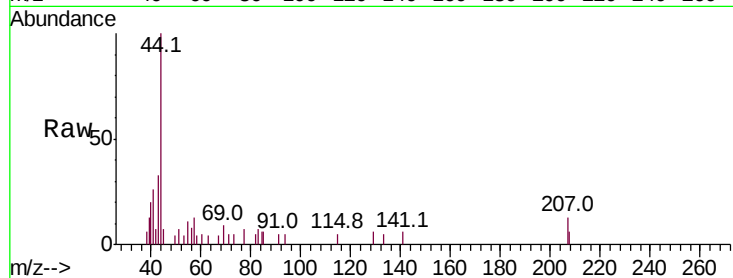




#59  
2-Hexanone  
Concen: 130.080 ug/l  
RT: 9.46 min Scan# 895  
Delta R.T. -0.04 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

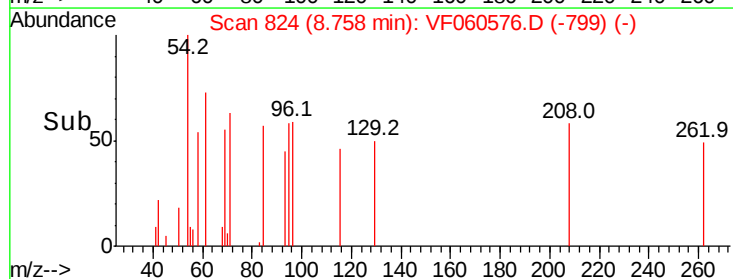
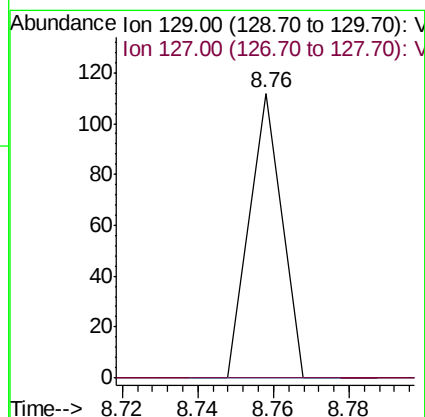
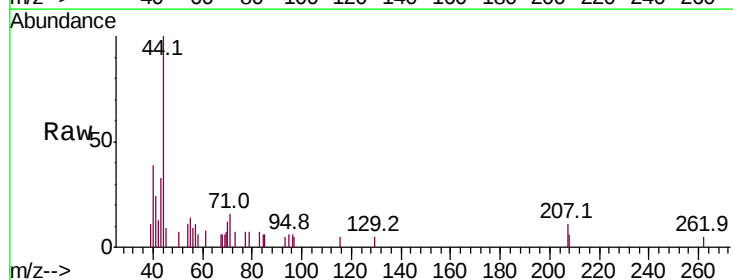
Instrument :  
MSVOA\_F  
ClientSampled :

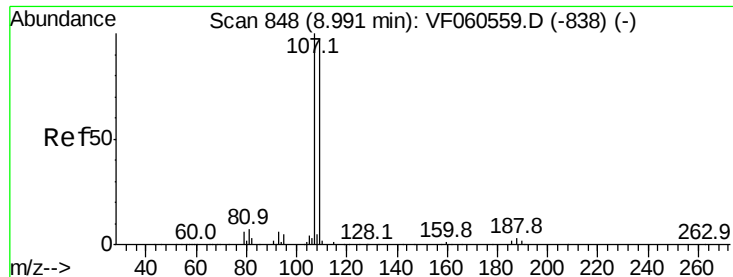
Tot Ion: 43 Resp: 712  
Ion Ratio Lower Upper  
43 100  
58 12.0 26.1 78.3#



#60  
Dibromochloromethane  
Concen: 5.545 ug/l  
RT: 8.76 min Scan# 824  
Delta R.T. 0.04 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

Tgt Ion:129 Resp: 66  
Ion Ratio Lower Upper  
129 100  
127 0.0 37.8 113.3#





#61

1,2-Dibromoethane

Concen: 7.262 ug/l

RT: 8.84 min Scan# 832

Delta R.T. -0.15 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

Instrument :

MSVOA\_F

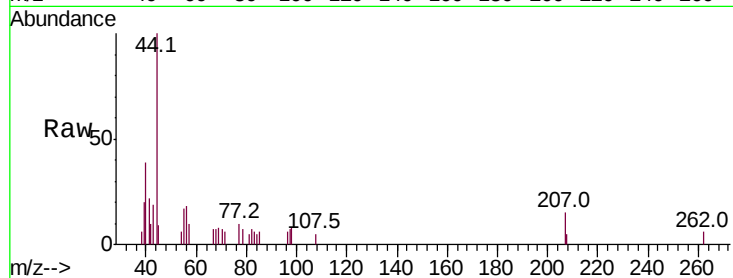
ClientSampled :

Tot Ion:107 Resp: 65

Ion Ratio Lower Upper

107 100

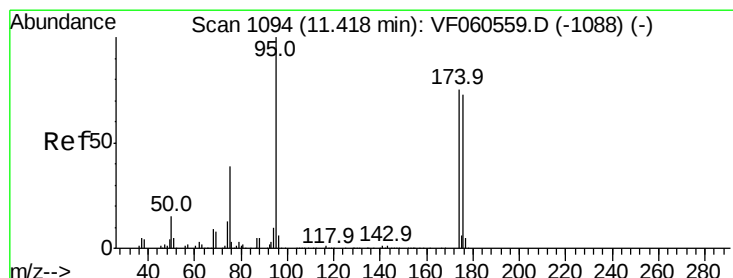
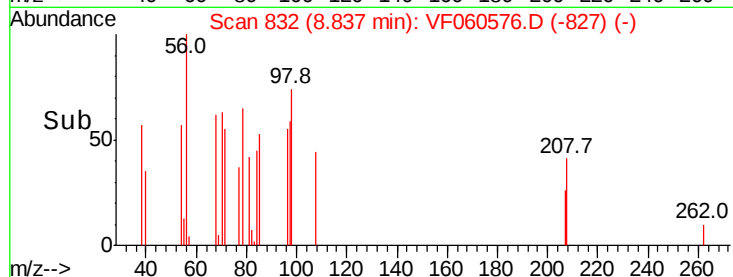
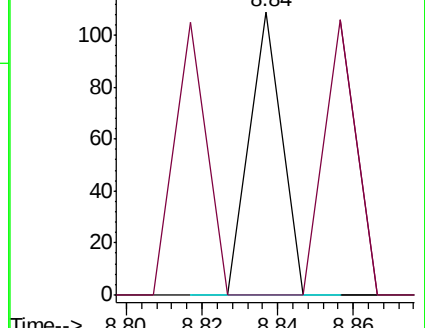
109 0.0 77.5 116.3#



Abundance Ion 107.00 (106.70 to 107.70): V

Ion 109.00 (108.70 to 109.70): V

8.84



#62

4-Bromofluorobenzene

Concen: 8.562 ug/l

RT: 11.37 min Scan# 1089

Delta R.T. -0.05 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

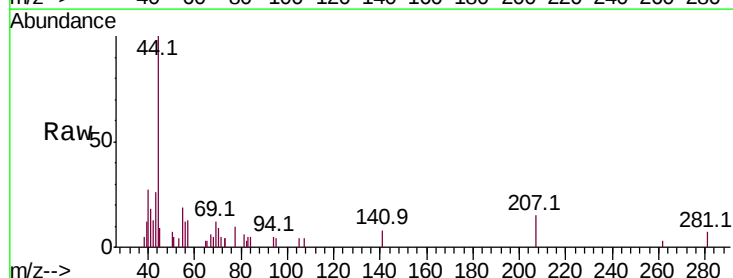
Tgt Ion: 95 Resp: 144

Ion Ratio Lower Upper

95 100

174 0.0 0.0 149.0

176 0.0 0.0 145.6

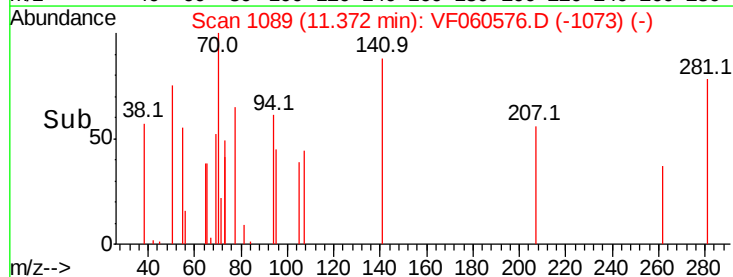
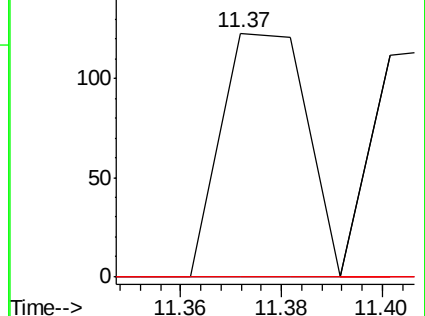


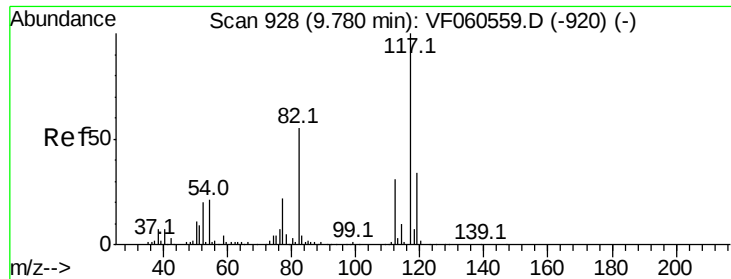
Abundance Ion 95.00 (94.70 to 95.70): VF0

Ion 174.00 (173.70 to 174.70): V

Ion 176.00 (175.70 to 176.70): V

11.37

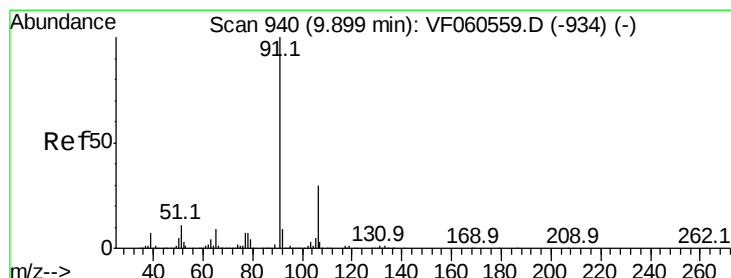
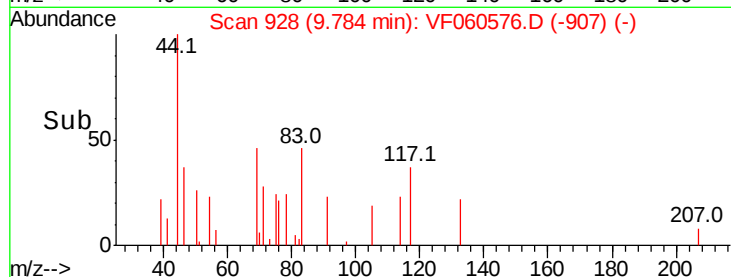
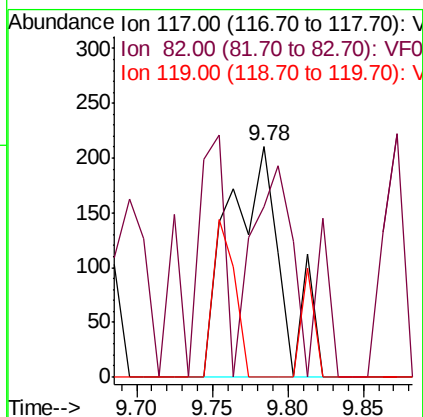
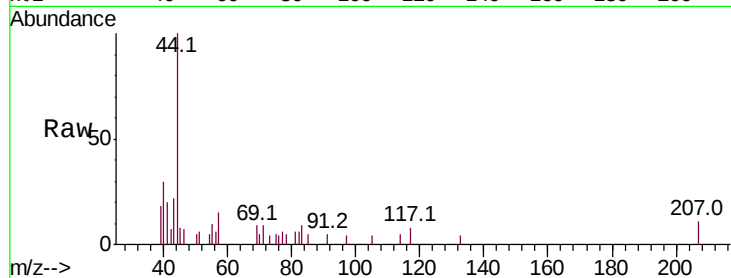




#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 9.78 min Scan# 928  
Delta R.T. 0.00 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

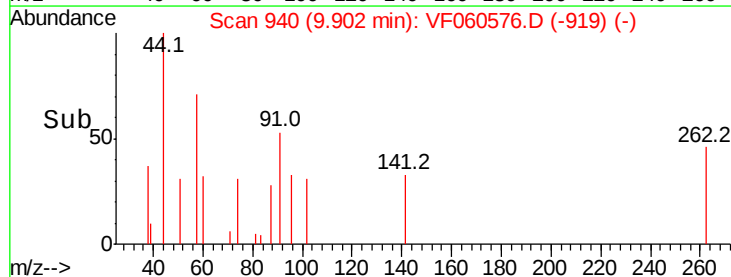
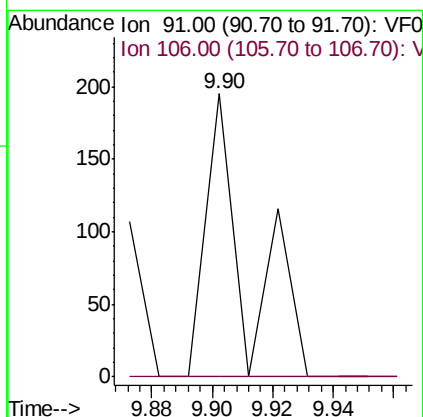
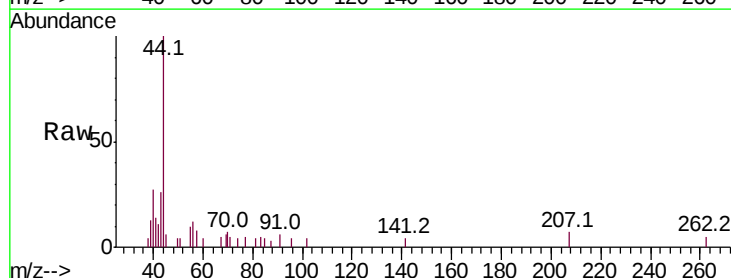
Instrument :  
MSVOA\_F  
ClientSampled :

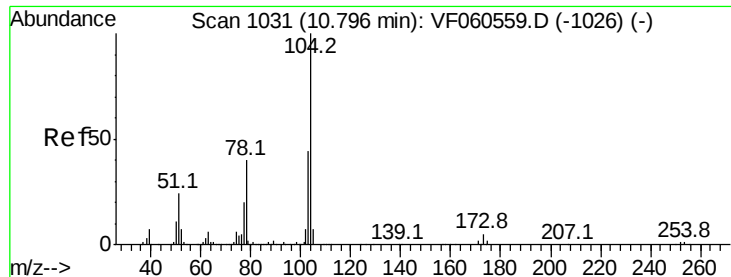
Tot Ion:117 Resp: 521  
Ion Ratio Lower Upper  
117 100  
82 73.9 43.9 65.9#  
119 0.0 27.4 41.0#



#67  
Ethyl Benzene  
Concen: 9.517 ug/l  
RT: 9.90 min Scan# 940  
Delta R.T. 0.00 min  
Lab File: VF060576.D  
Acq: 5 Nov 2018 16:52

Tgt Ion: 91 Resp: 184  
Ion Ratio Lower Upper  
91 100  
106 0.0 24.2 36.4#





#70

Stvrene

Concen: 12.933 ug/l

RT: 10.93 min Scan# 1044

Delta R.T. 0.13 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

Instrument :

MSVOA\_F

ClientSampleId :

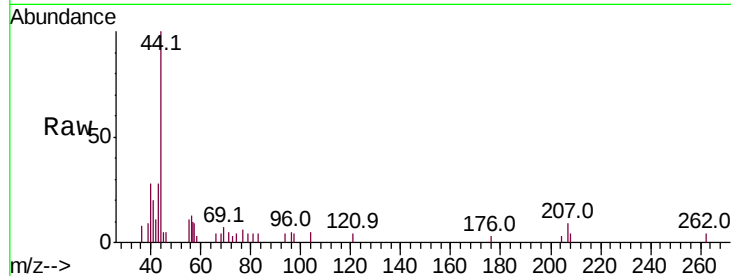
Tot Ion:104 Resp: 149

Ion Ratio Lower Upper

104 100

78 0.0 32.6 49.0#

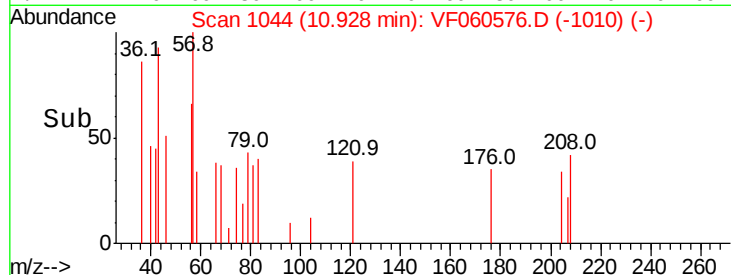
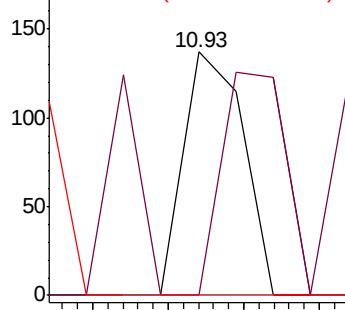
103 0.0 35.2 52.8#



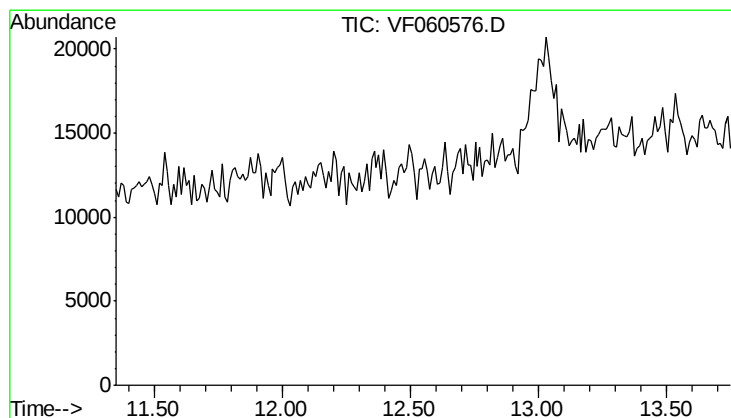
Abundance Ion 104.00 (103.70 to 104.70): V

Ion 78.00 (77.70 to 78.70): VF0

Ion 103.00 (102.70 to 103.70): V



Time-->



#72

1,4-Dichlorobenzene-d4

Concen: 0.000 ug/l

Expected RT: 12.55 min

Lab File: VF060576.D

Acq: 5 Nov 2018 16:52

Tgt Ion: 152

Sig Exp Ratio

152 100

115 59.2

150 157.8

