

Data Path : W:\HPCHEM1\MSVOA X\DATA\VX052618\  
 Data File : VX002021.D  
 Acq On : 26 May 2018 16:19  
 Operator : JC/MD  
 Sample : J3118-14  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 8 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :

Quant Time: May 28 00:32:40 2018  
 Quant Method : W:\HPCHEM1\MSVOA\_X\METHOD\82X052418W.M  
 Quant Title : SW846 8260  
 QLast Update : Thu May 24 13:09:03 2018  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 5.67  | 168  | 331606   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 6.87  | 114  | 464278   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 10.12 | 117  | 416514   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 12.09 | 152  | 232317   | 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   | 281487   | 47.49 | ug/l    | 0.00     |
| Spiked Amount               |       |      |          |       |         |          |
|                             |       |      | Recovery | =     | 94.98%  |          |
| 35) Dibromofluoromethane    | 5.51  | 113  | 219201   | 47.21 | ug/l    | 0.00     |
| Spiked Amount               |       |      |          |       |         |          |
|                             |       |      | Recovery | =     | 94.42%  |          |
| 50) Toluene-d8              | 8.72  | 98   | 855775   | 50.91 | ug/l    | 0.00     |
| Spiked Amount               |       |      |          |       |         |          |
|                             |       |      | Recovery | =     | 101.82% |          |
| 62) 4-Bromofluorobenzene    | 11.14 | 95   | 306135   | 46.55 | ug/l    | 0.00     |
| Spiked Amount               |       |      |          |       |         |          |
|                             |       |      | Recovery | =     | 93.10%  |          |

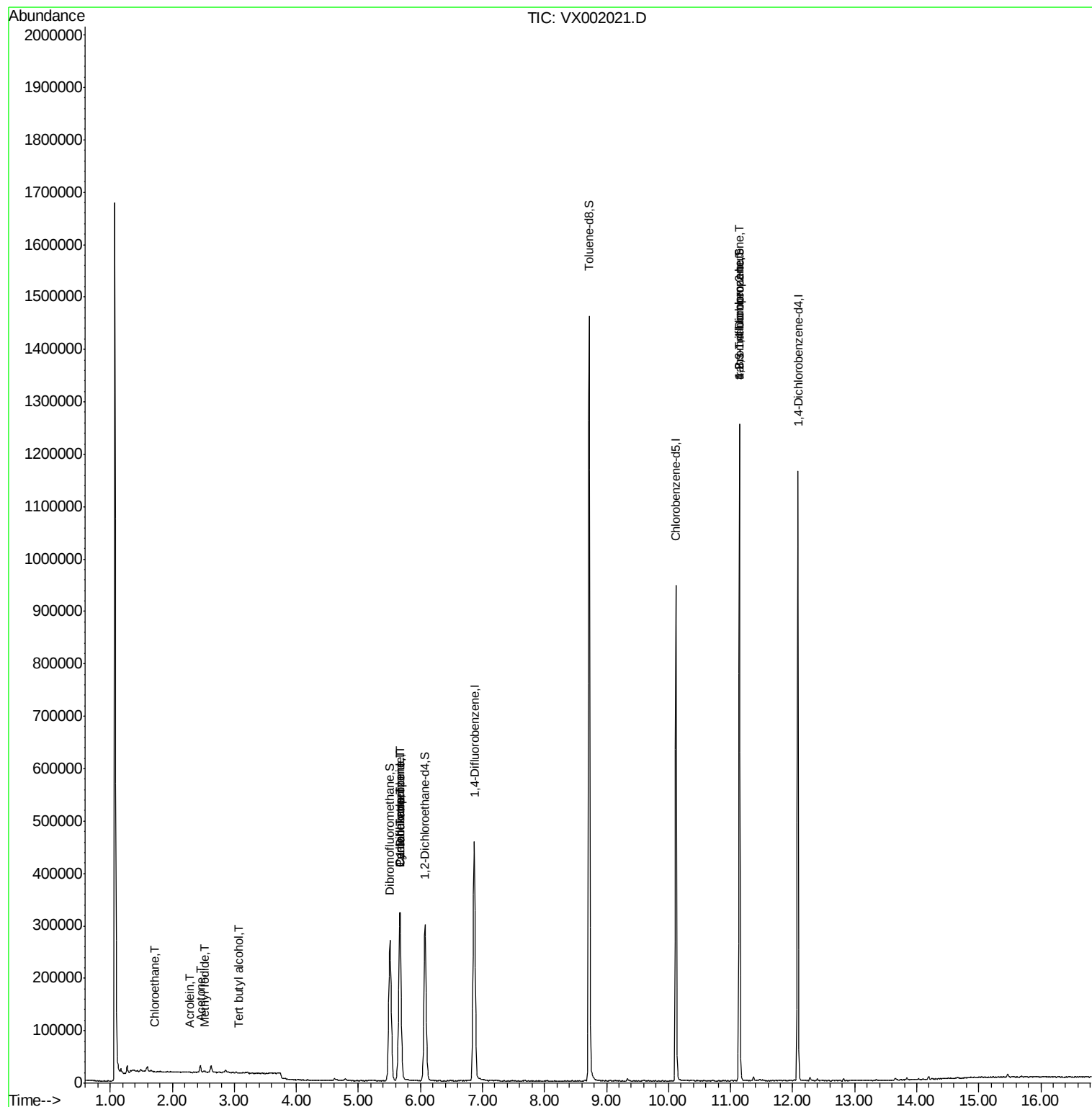
| Target Compounds               | R.T.  | QIon | Response | Conc      | Units  | Qvalue |
|--------------------------------|-------|------|----------|-----------|--------|--------|
| 2) Dichlorodifluoromethane     | 1.20  | 85   | 208      | Below Cal | #      | 41     |
| 5) Bromomethane                | 1.66  | 94   | 1234     | Below Cal | #      | 94     |
| 6) Chloroethane                | 1.73  | 64   | 1307     | 0.45      | ug/l # | 57     |
| 10) Methyl Iodide              | 2.51  | 142  | 3406     | 0.61      | ug/l # | 87     |
| 11) Tert butyl alcohol         | 3.07  | 59   | 359      | 0.31      | ug/l # | 5      |
| 13) Acrolein                   | 2.29  | 56   | 174      | 0.35      | ug/l # | 1      |
| 16) Acetone                    | 2.45  | 43   | 13891    | 6.07      | ug/l   | 90     |
| 18) Methyl Acetate             | 2.79  | 43   | 895      | Below Cal | #      | 90     |
| 20) Methylene Chloride         | 2.86  | 84   | 1957     | Below Cal | #      | 88     |
| 21) trans-1,2-Dichloroethene   | 3.16  | 96   | 174      | Below Cal | #      | 81     |
| 28) Bromochloromethane         | 5.04  | 49   | 60       | Below Cal | #      | 14     |
| 31) Cyclohexane                | 5.67  | 56   | 6713     | 0.82      | ug/l # | 1      |
| 36) 1,1-Dichloropropene        | 5.67  | 75   | 23385    | 3.62      | ug/l # | 52     |
| 38) Carbon Tetrachloride       | 5.67  | 117  | 30276    | 4.02      | ug/l # | 15     |
| 41) Methacrylonitrile          | 5.07  | 41   | 117      | Below Cal | #      | 1      |
| 74) N-amyl acetate             | 6.49  | 43   | 118      | Below Cal | #      | 59     |
| 75) 1,1,2,2-Tetrachloroethane  | 11.26 | 83   | 73       | Below Cal | #      | 53     |
| 76) 1,2,3-Trichloropropane     | 11.14 | 75   | 160668   | 28.79     | ug/l # | 33     |
| 79) 2-Chlorotoluene            | 11.43 | 91   | 611      | Below Cal | #      | 81     |
| 81) trans-1,4-Dichloro-2-buten | 11.14 | 75   | 160668   | 69.20     | ug/l # | 10     |

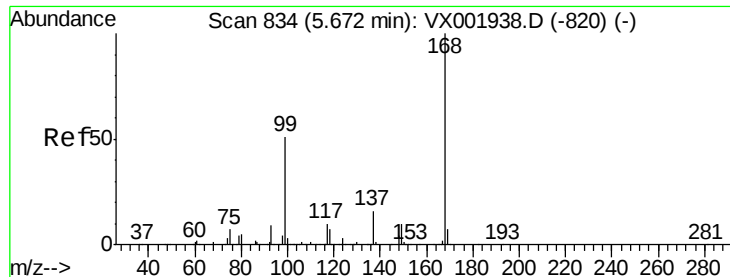
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Time: May 28 00:32:40 2018  
Quant Method : W:\HPCHEM1\MSVOA\_X\METHOD\82X052418W.M  
Quant Title : SW846 8260  
QLast Update : Thu May 24 13:09:03 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: VX002021.D

Acq: 26 May 2018 16:19

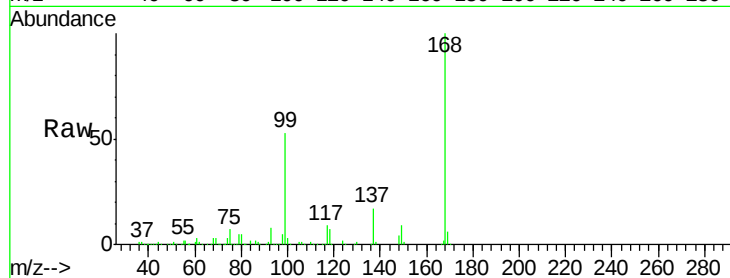
Instrument :  
MSVOA\_X  
ClientSampleId :

Tot Ion:168 Resp: 331606

Ion Ratio Lower Upper

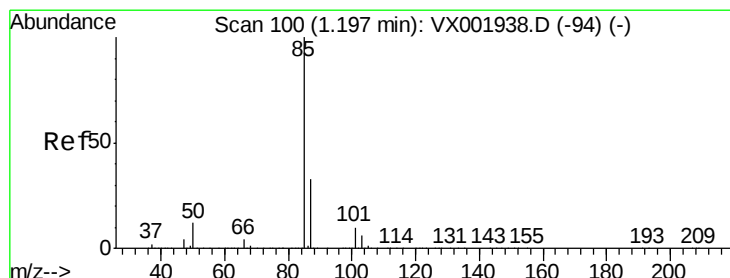
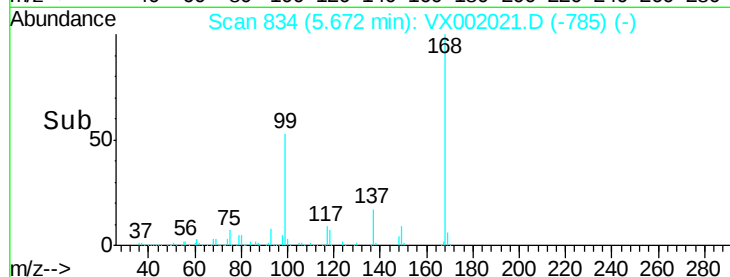
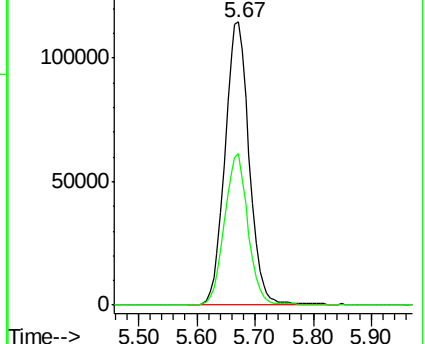
168 100

99 53.4 41.0 61.4



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VX0



#2

Dichlorodifluoromethane

Concen: Below Cal

RT: 1.20 min Scan# 100

Delta R.T. 0.00 min

Lab File: VX002021.D

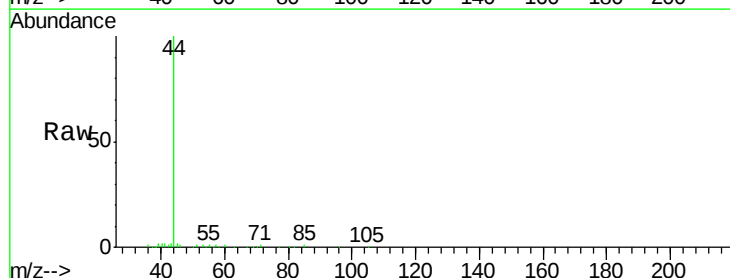
Acq: 26 May 2018 16:19

Tgt Ion: 85 Resp: 208

Ion Ratio Lower Upper

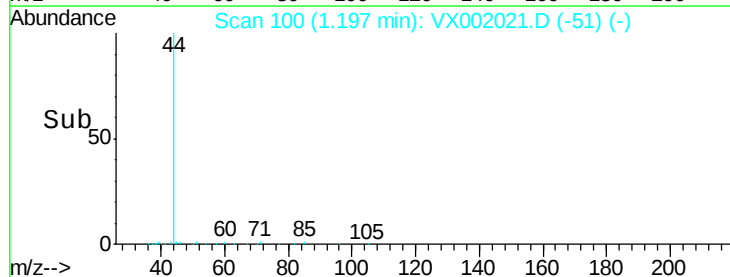
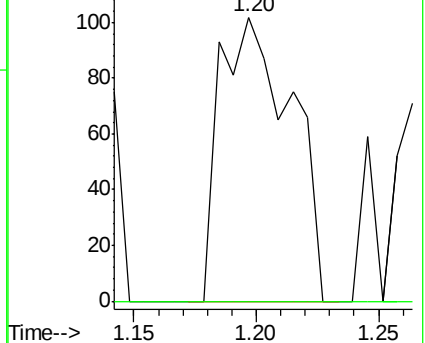
85 100

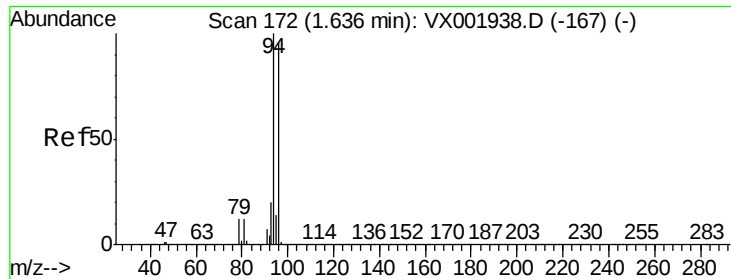
87 0.0 16.7 50.0#



Abundance Ion 84.90 (84.60 to 85.60): VX0

Ion 86.90 (86.60 to 87.60): VX0





#5

Bromomethane

Concen: Below Cal

RT: 1.66 min Scan# 176

Delta R.T. 0.03 min

Lab File: VX002021.D

Acq: 26 May 2018 16:19

Instrument :

MSVOA\_X

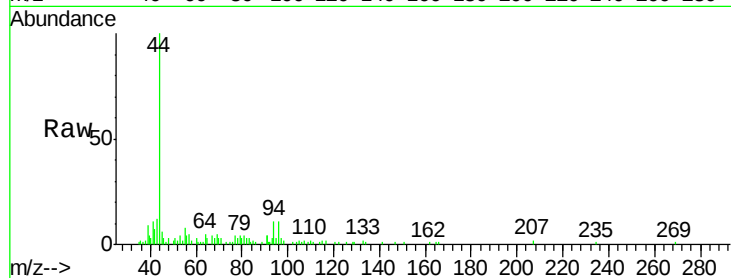
ClientSampled :

Tot Ion: 94 Resp: 1234

Ion Ratio Lower Upper

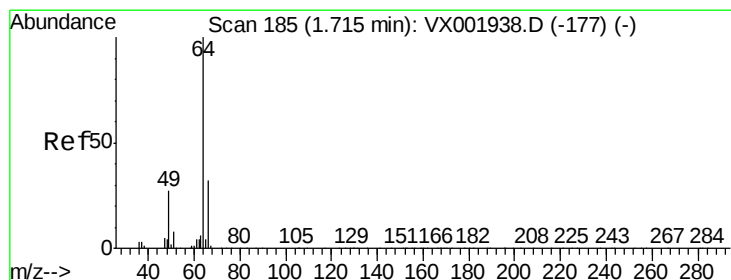
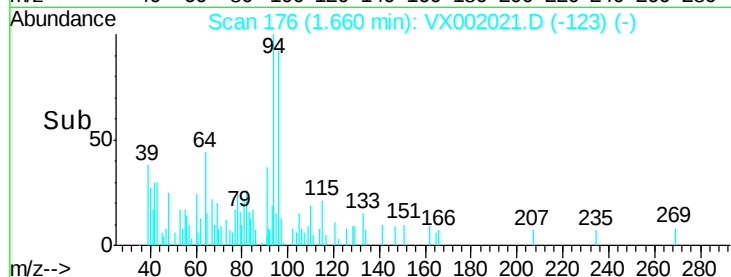
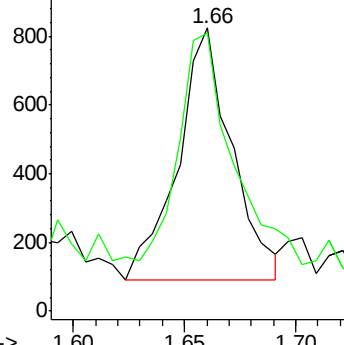
94 100

96 89.3 75.9 113.9



Abundance Ion 93.90 (93.60 to 94.60): VX0

Ion 95.90 (95.60 to 96.60): VX0



#6

Chloroethane

Concen: 0.45 ug/l

RT: 1.73 min Scan# 187

Delta R.T. 0.01 min

Lab File: VX002021.D

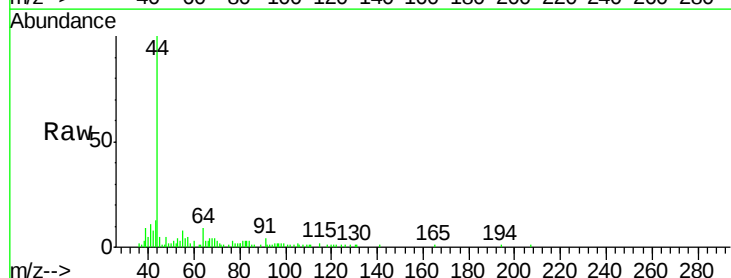
Acq: 26 May 2018 16:19

Tgt Ion: 64 Resp: 1307

Ion Ratio Lower Upper

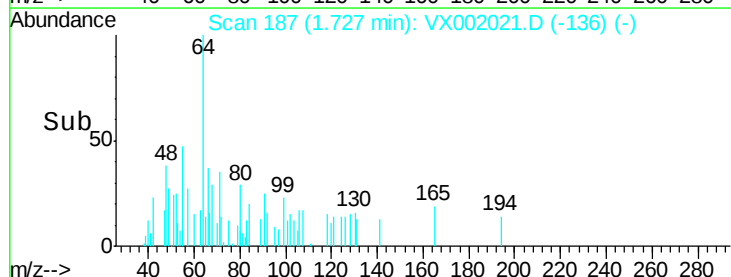
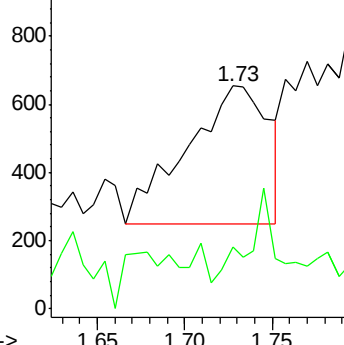
64 100

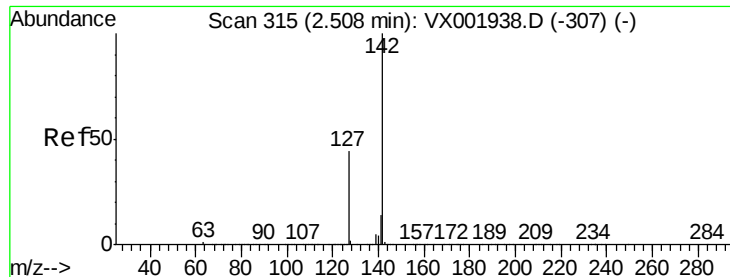
66 8.2 25.6 38.4#



Abundance Ion 63.90 (63.60 to 64.60): VX0

Ion 65.90 (65.60 to 66.60): VX0

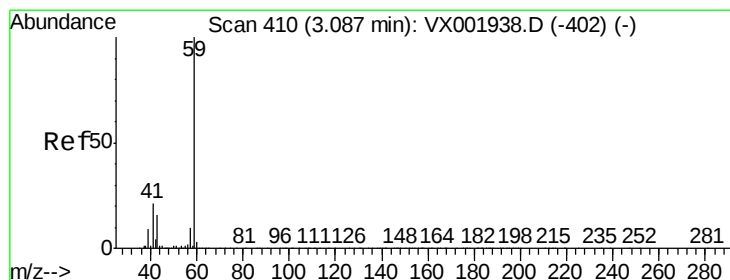
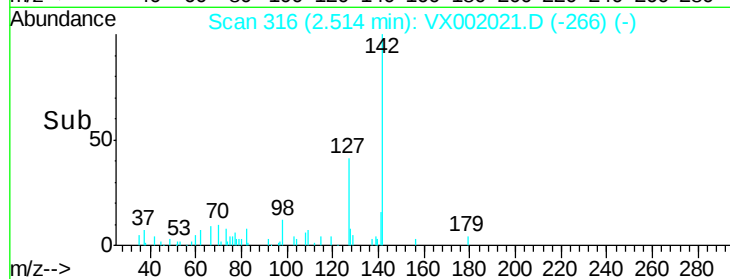
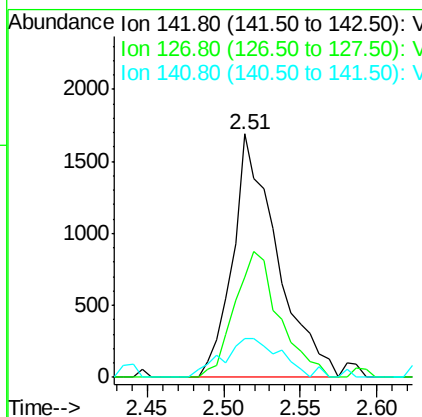
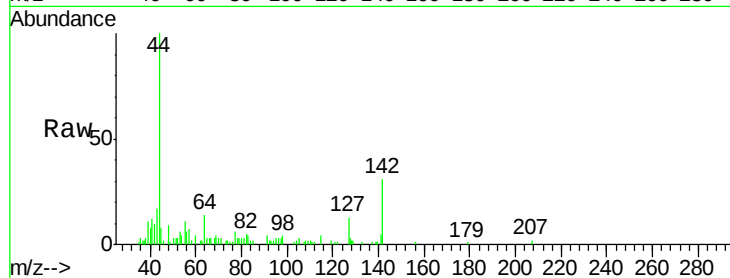




#10  
Methvl Iodide  
Concen: 0.61 ug/l  
RT: 2.51 min Scan# 316  
Delta R.T. 0.01 min  
Lab File: VX002021.D  
Acq: 26 May 2018 16:19

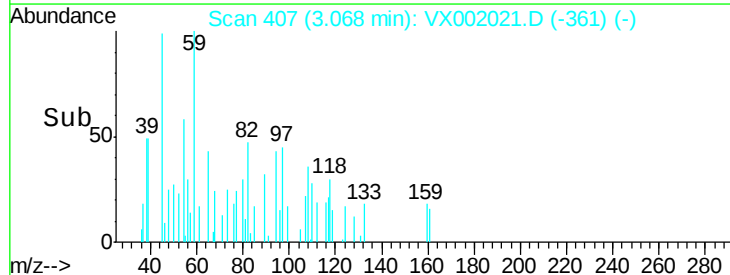
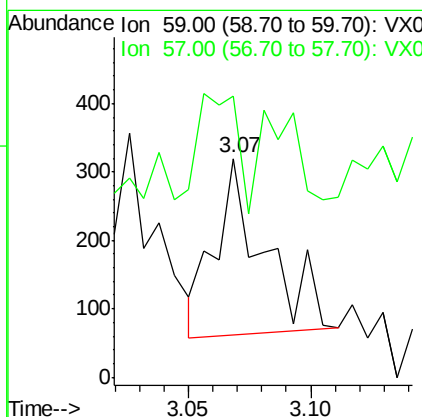
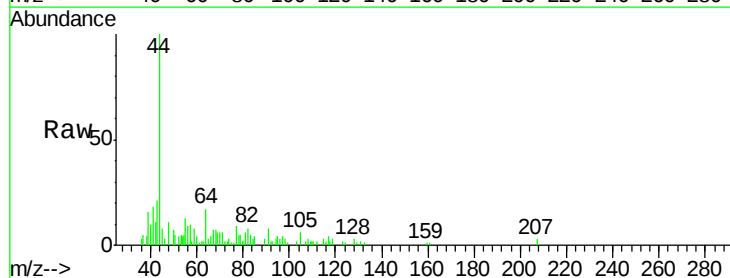
Instrument :  
MSVOA\_X  
ClientSampleId :

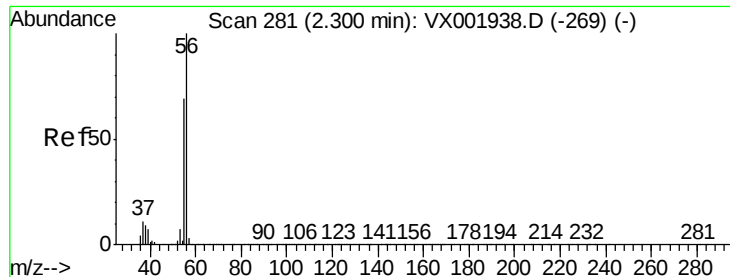
Tot Ion:142 Resp: 3406  
Ion Ratio Lower Upper  
142 100  
127 52.1 35.5 53.3  
141 20.3 11.3 16.9#



#11  
Tert butyl alcohol  
Concen: 0.31 ug/l  
RT: 3.07 min Scan# 407  
Delta R.T. -0.02 min  
Lab File: VX002021.D  
Acq: 26 May 2018 16:19

Tgt Ion: 59 Resp: 359  
Ion Ratio Lower Upper  
59 100  
57 47.1 8.9 13.3#





#13

Acrolein

Concen: 0.35 ug/l

RT: 2.29 min Scan# 279

Delta R.T. -0.01 min

Lab File: VX002021.D

Acq: 26 May 2018 16:19

Instrument :

MSVOA\_X

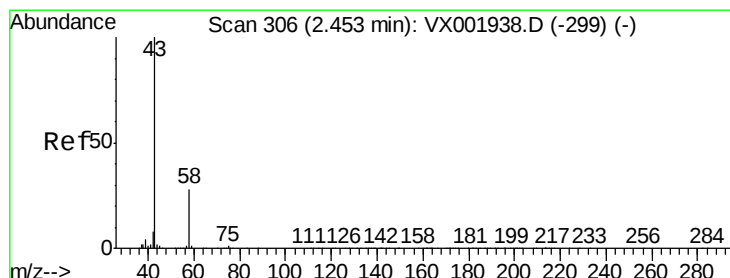
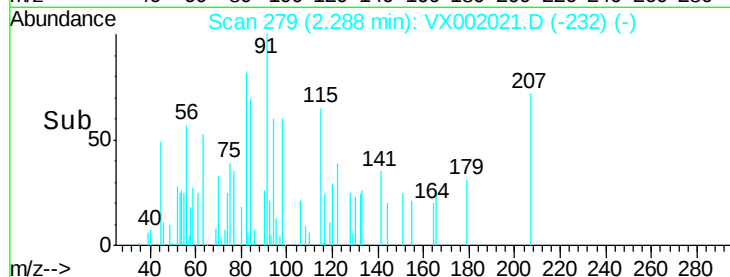
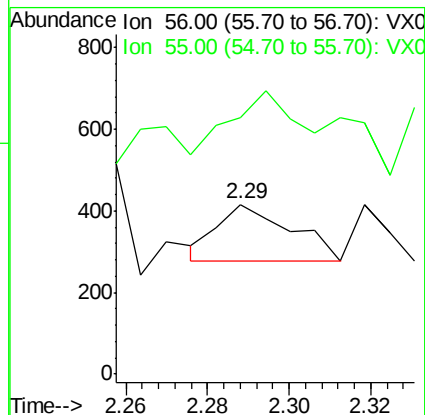
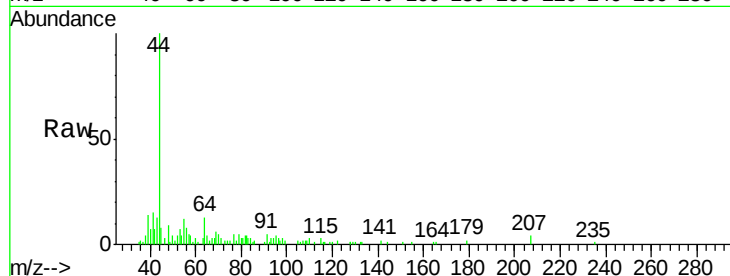
ClientSampled :

Tot Ion: 56 Resp: 174

Ion Ratio Lower Upper

56 100

55 206.9 56.8 85.2#



#16

Acetone

Concen: 6.07 ug/l

RT: 2.45 min Scan# 306

Delta R.T. -0.00 min

Lab File: VX002021.D

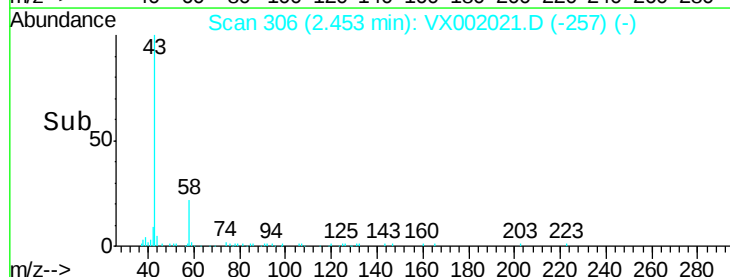
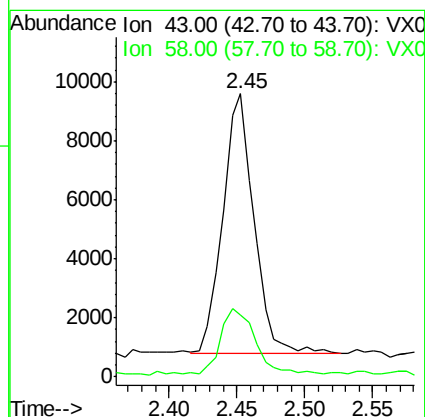
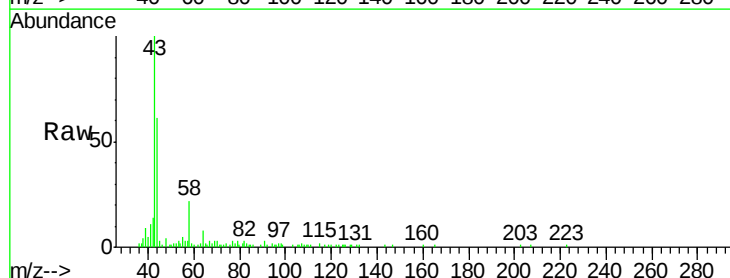
Acq: 26 May 2018 16:19

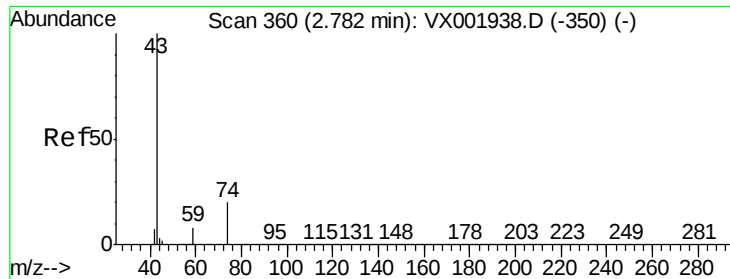
Tgt Ion: 43 Resp: 13891

Ion Ratio Lower Upper

43 100

58 22.5 22.3 33.5

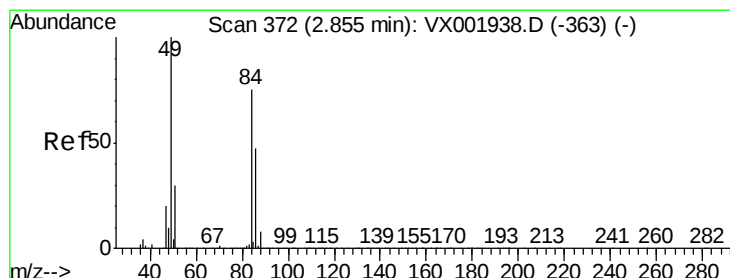
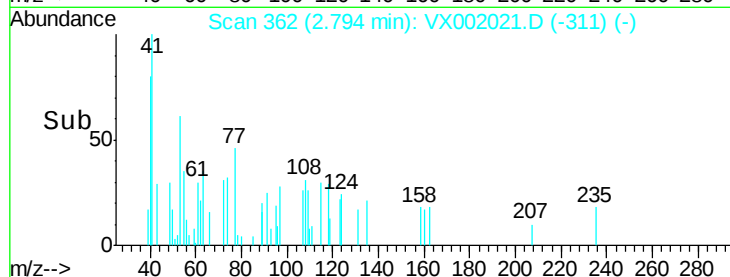
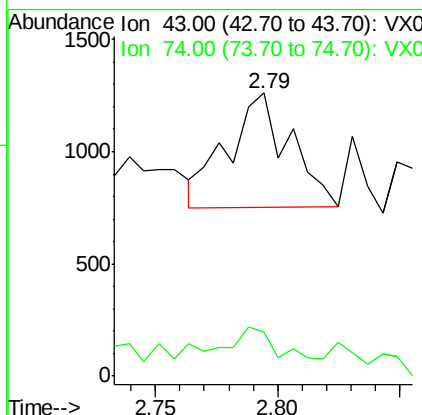
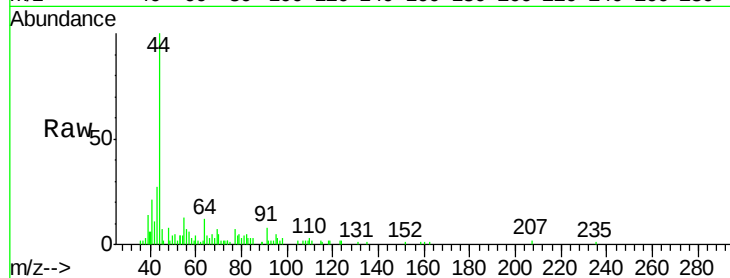




#18  
Methyl Acetate  
Concen: Below Cal  
RT: 2.79 min Scan# 362  
Delta R.T. 0.01 min  
Lab File: VX002021.D  
Acq: 26 May 2018 16:19

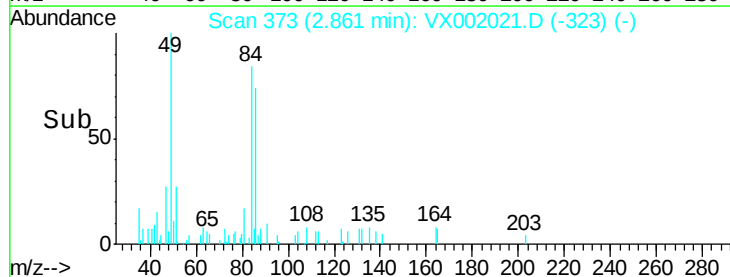
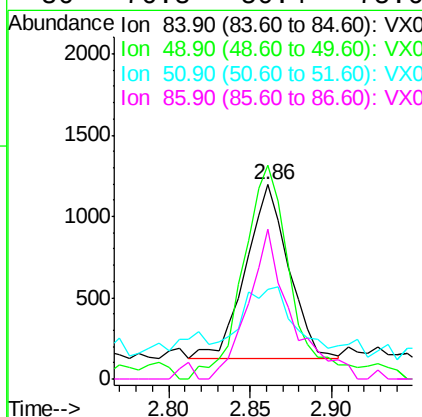
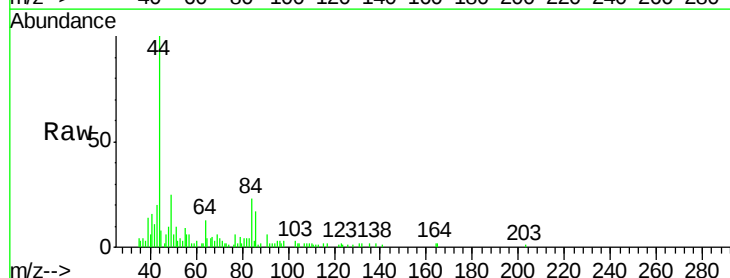
Instrument :  
MSVOA\_X  
ClientSampled :

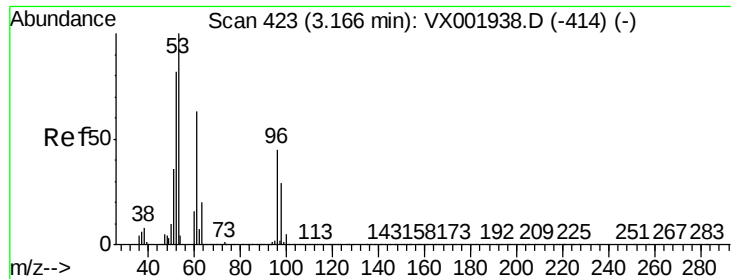
Tot Ion: 43 Resp: 895  
Ion Ratio Lower Upper  
43 100  
74 25.6 16.8 25.2#



#20  
Methylene Chloride  
Concen: Below Cal  
RT: 2.86 min Scan# 373  
Delta R.T. 0.01 min  
Lab File: VX002021.D  
Acq: 26 May 2018 16:19

Tgt Ion: 84 Resp: 1957  
Ion Ratio Lower Upper  
84 100  
49 123.1 107.2 160.8  
51 32.1 32.4 48.6#  
86 76.8 50.4 75.6#





#21

trans-1,2-Dichloroethene

Concen: Below Cal

RT: 3.16 min Scan# 422

Delta R.T. -0.01 min

Lab File: VX002021.D

Acq: 26 May 2018 16:19

Instrument :

MSVOA\_X

ClientSampled :

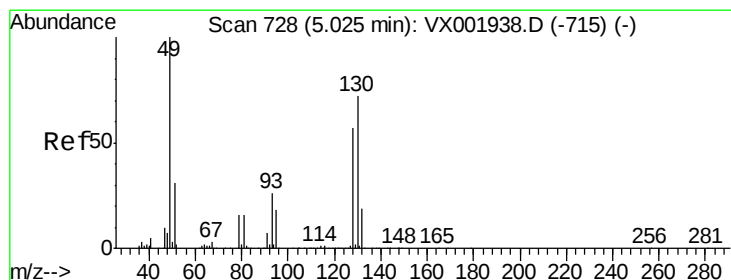
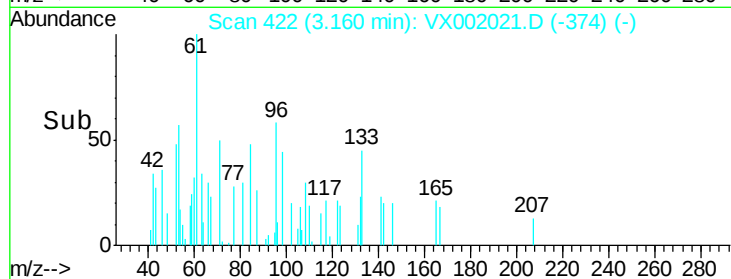
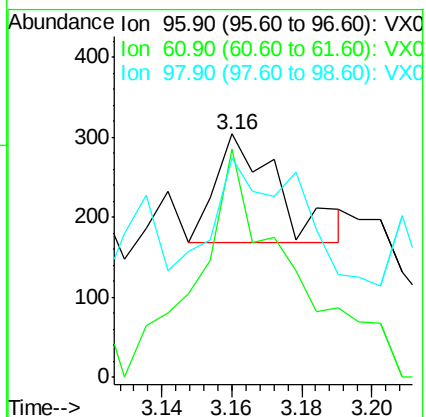
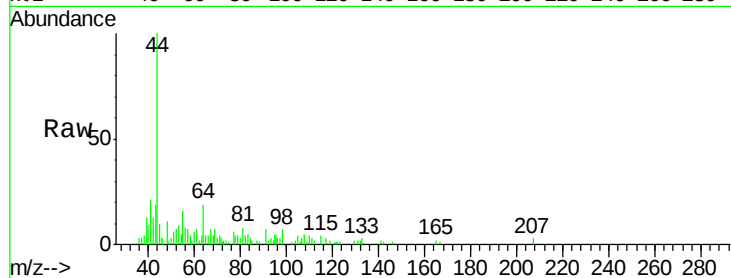
Tot Ion: 96 Resp: 174

Ion Ratio Lower Upper

96 100

61 146.3 113.3 169.9

98 106.6 51.7 77.5#



#28

Bromochloromethane

Concen: Below Cal

RT: 5.04 min Scan# 730

Delta R.T. 0.01 min

Lab File: VX002021.D

Acq: 26 May 2018 16:19

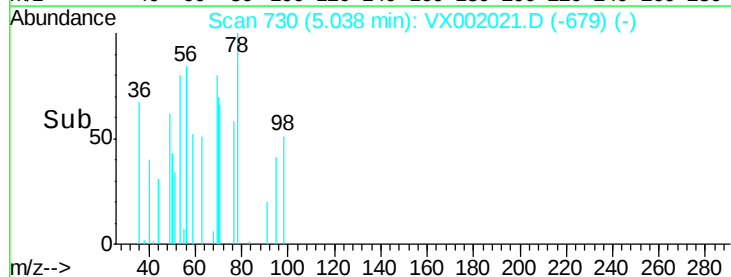
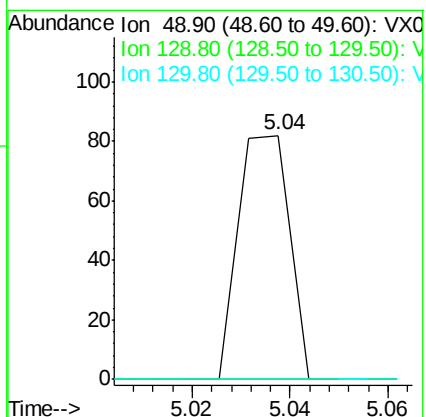
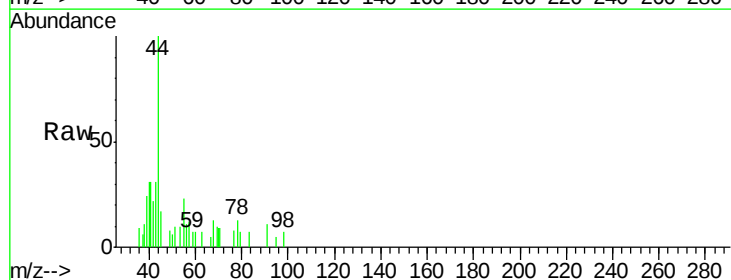
Tgt Ion: 49 Resp: 60

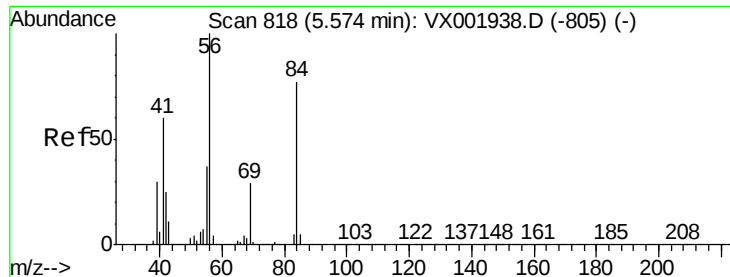
Ion Ratio Lower Upper

49 100

129 0.0 0.0 3.8

130 0.0 59.4 89.2#

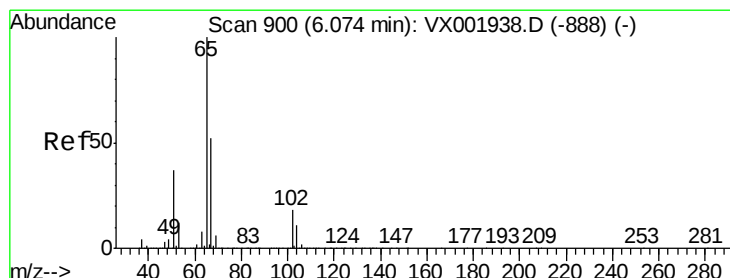
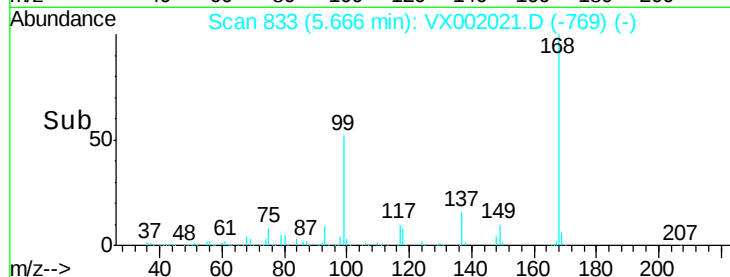
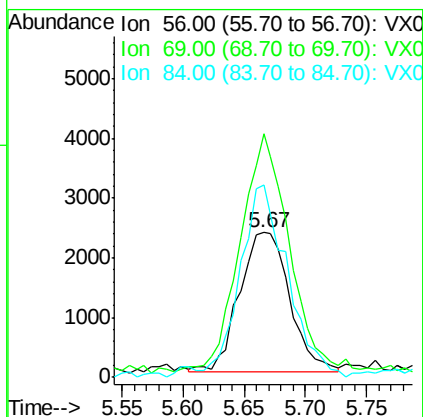
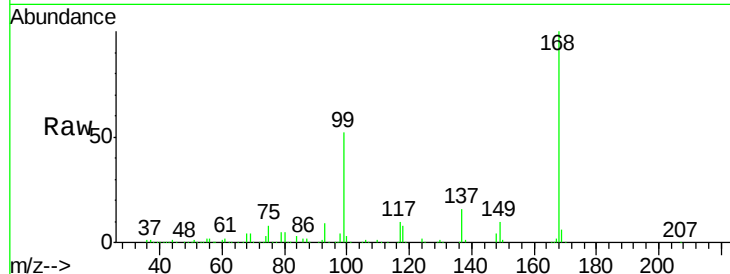




#31  
Cyclohexane  
Concen: 0.82 ug/l  
RT: 5.67 min Scan# 833  
Delta R.T. 0.09 min  
Lab File: VX002021.D  
Acq: 26 May 2018 16:19

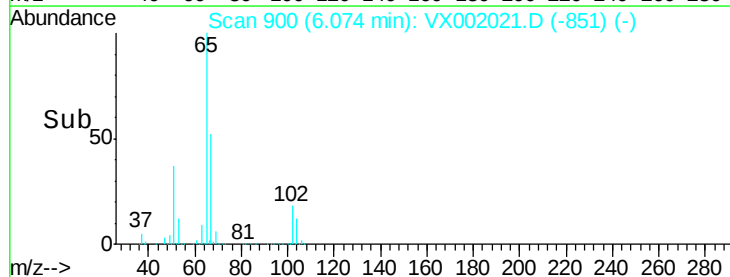
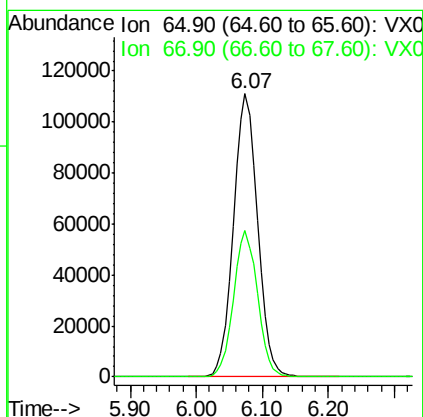
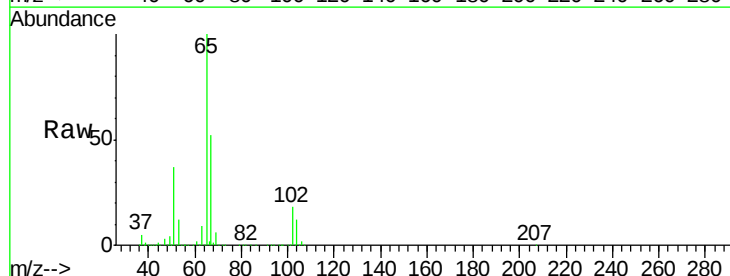
Instrument :  
MSVOA\_X  
ClientSampled :

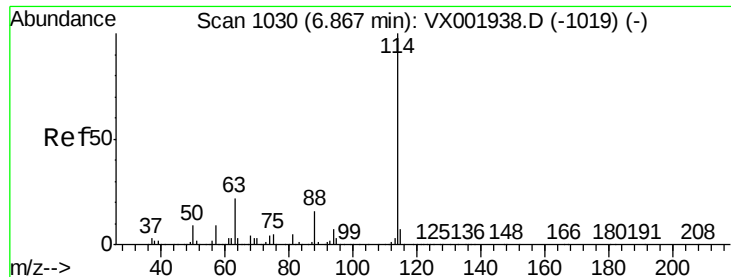
Tot Ion: 56 Resp: 6713  
Ion Ratio Lower Upper  
56 100  
69 171.4 23.1 34.7#  
84 136.9 62.0 93.0#



#33  
1,2-Dichloroethane-d4  
Concen: 47.49 ug/l  
RT: 6.07 min Scan# 900  
Delta R.T. 0.00 min  
Lab File: VX002021.D  
Acq: 26 May 2018 16:19

Tgt Ion: 65 Resp: 281487  
Ion Ratio Lower Upper  
65 100  
67 51.3 0.0 104.0





#34

1,4-Difluorobenzene

Concen: 50.00 ug/l

RT: 6.87 min Scan# 1030

Delta R.T. -0.00 min

Lab File: VX002021.D

Acq: 26 May 2018 16:19

Instrument :  
MSVOA\_X  
ClientSampled :

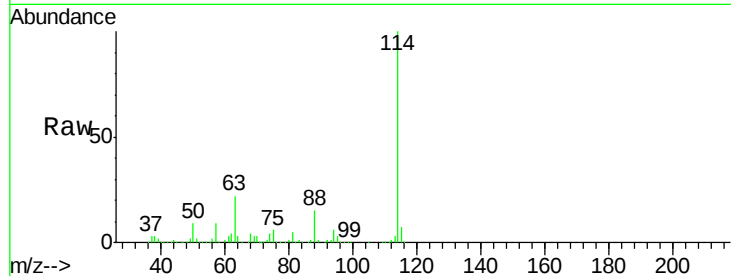
Tot Ion:114 Resp: 464278

Ion Ratio Lower Upper

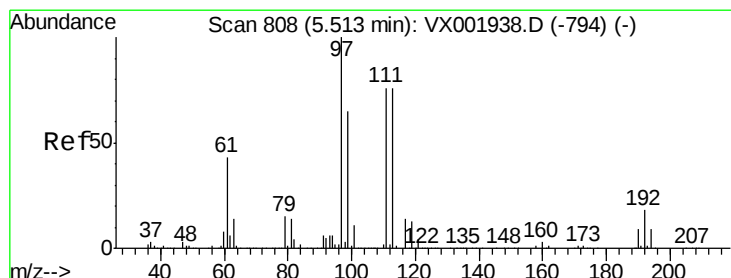
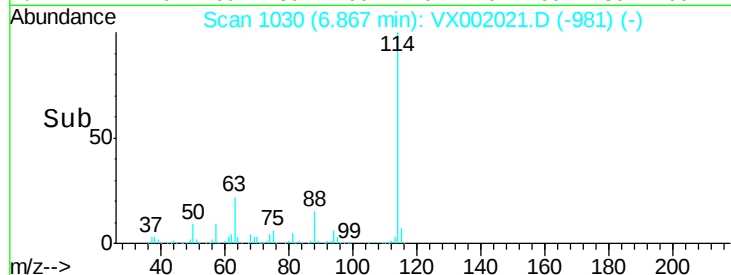
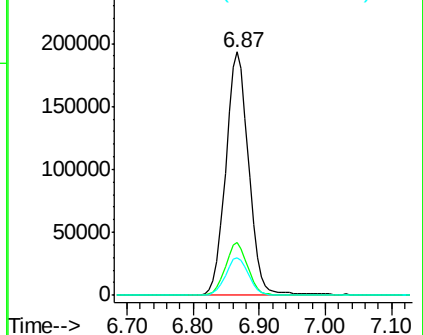
114 100

63 21.8 0.0 43.2

88 15.5 0.0 31.6



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: 47.21 ug/l

RT: 5.51 min Scan# 807

Delta R.T. -0.01 min

Lab File: VX002021.D

Acq: 26 May 2018 16:19

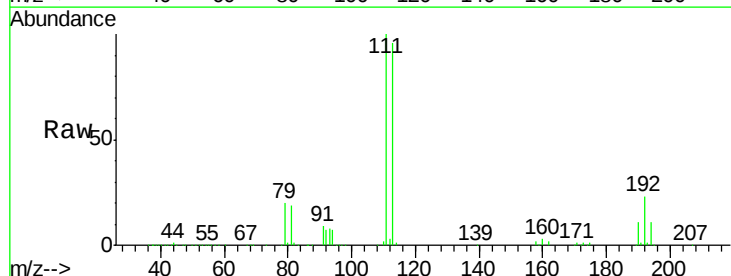
Tgt Ion:113 Resp: 219201

Ion Ratio Lower Upper

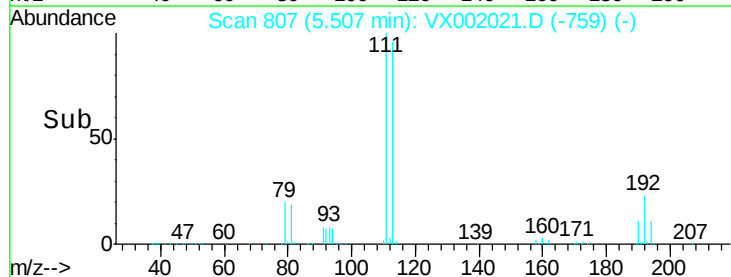
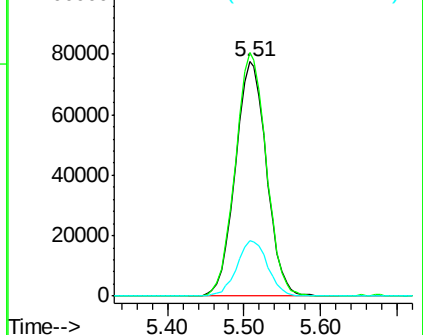
113 100

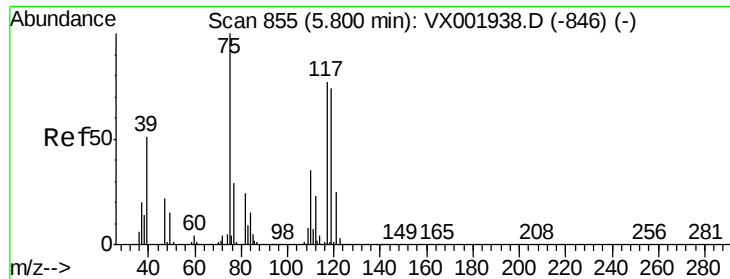
111 103.0 82.0 123.0

192 23.6 18.9 28.3



Abundance Ion 112.80 (112.50 to 113.50): V  
Ion 110.80 (110.50 to 111.50): V  
Ion 191.70 (191.40 to 192.40): V

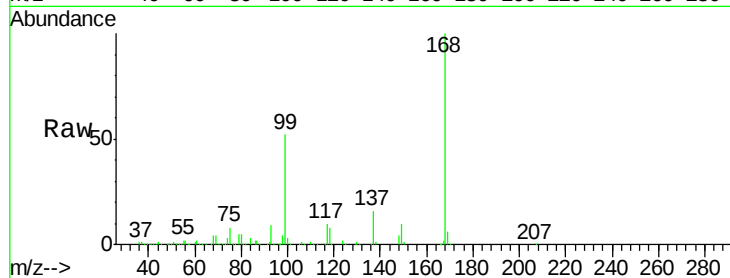




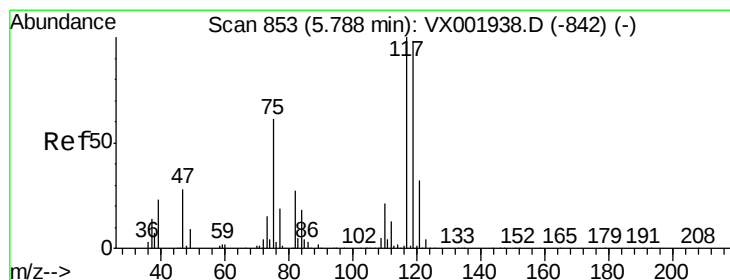
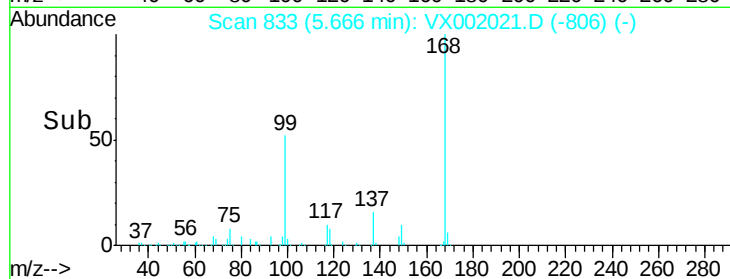
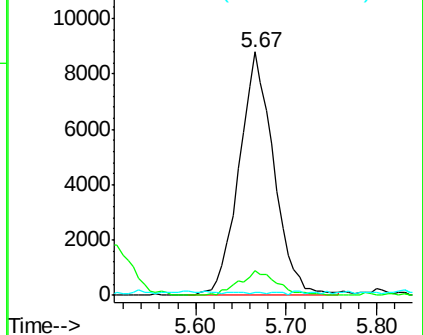
#36  
 1,1-Dichloropropene  
 Concen: 3.62 ug/l  
 RT: 5.67 min Scan# 833  
 Delta R.T. -0.13 min  
 Lab File: VX002021.D  
 Acq: 26 May 2018 16:19

Instrument :  
 MSVOA\_X  
 ClientSampleId :

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 75      | 100   |       |       |
| 110     | 11.0  | 17.4  | 52.2# |
| 77      | 0.5   | 24.4  | 36.6# |

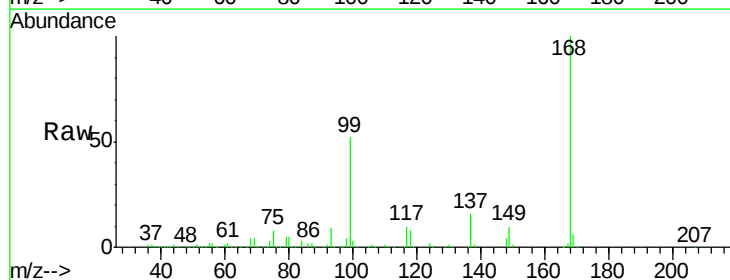


Abundance Ion 74.90 (74.60 to 75.60): VX0  
 Ion 109.90 (109.60 to 110.60): V  
 Ion 76.90 (76.60 to 77.60): VX0

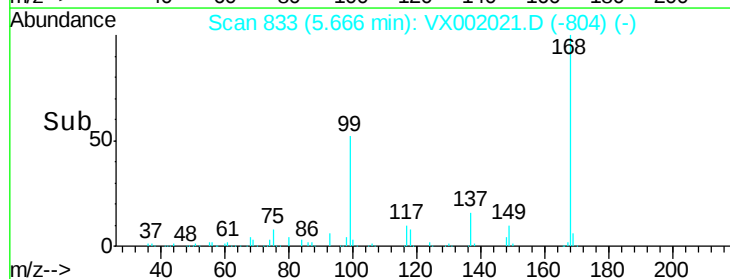
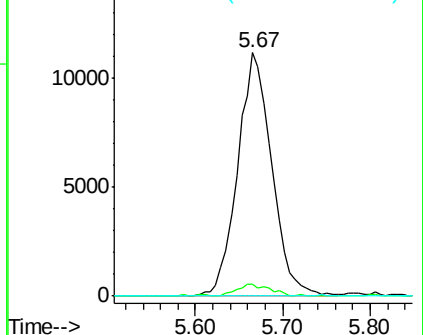


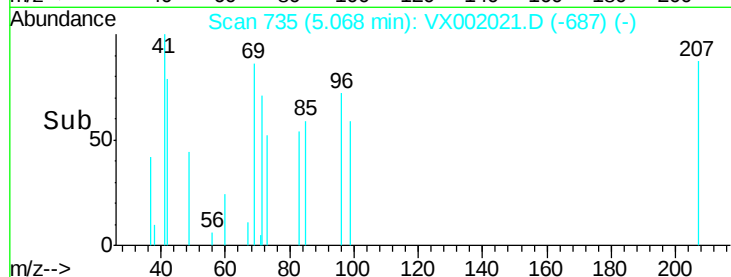
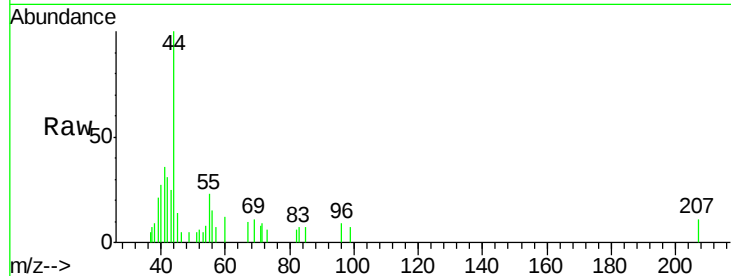
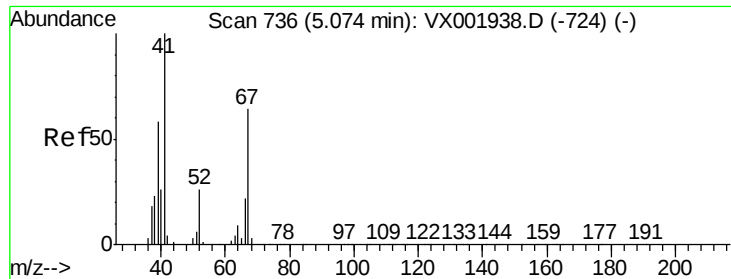
#38  
 Carbon Tetrachloride  
 Concen: 4.02 ug/l  
 RT: 5.67 min Scan# 833  
 Delta R.T. -0.12 min  
 Lab File: VX002021.D  
 Acq: 26 May 2018 16:19

| Tgt Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 117     | 100   |       |        |
| 119     | 5.0   | 78.5  | 117.7# |
| 121     | 0.0   | 25.5  | 38.3#  |



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

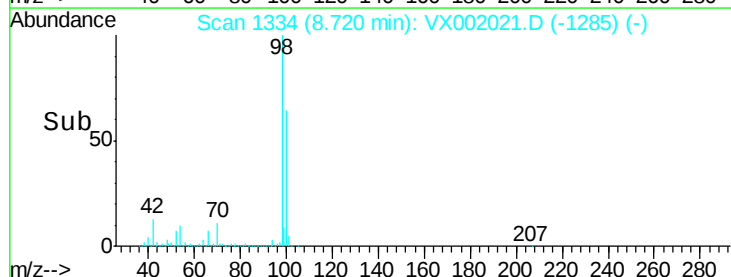
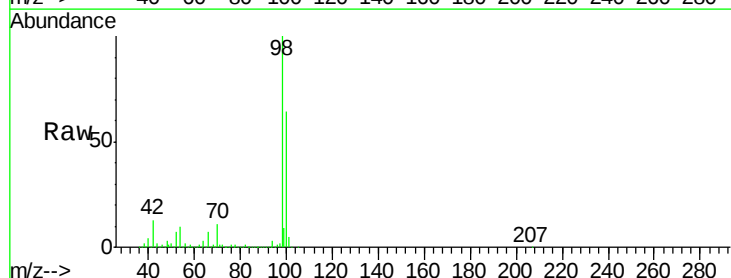
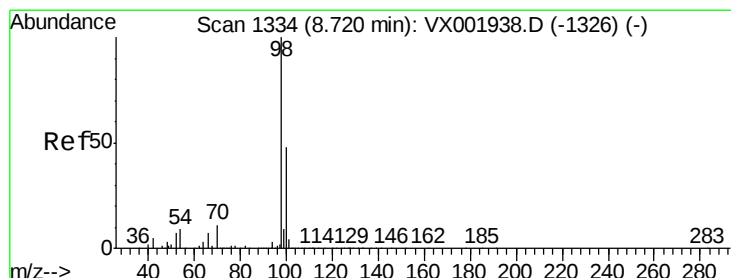
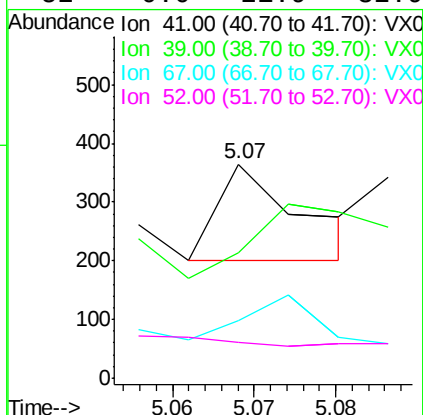




#41  
Methacrylonitrile  
Concen: Below Cal  
RT: 5.07 min Scan# 735  
Delta R.T. -0.01 min  
Lab File: VX002021.D  
Acq: 26 May 2018 16:19

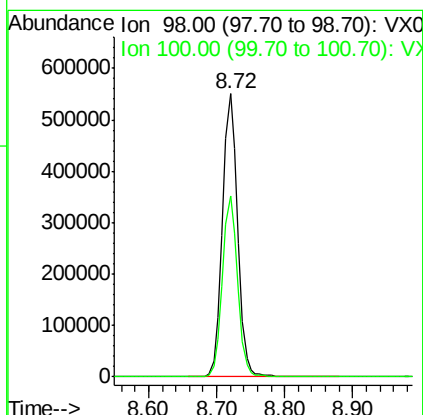
Instrument :  
MSVOA\_X  
ClientSampled :

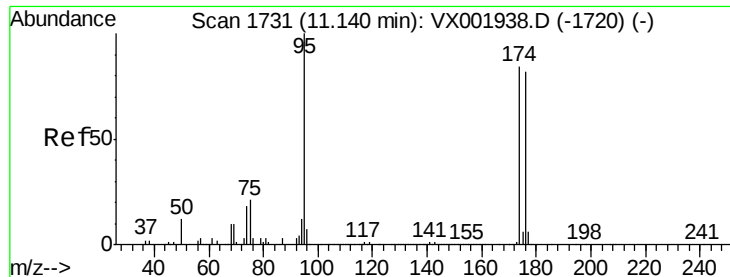
|          |       |       |       |
|----------|-------|-------|-------|
| Tot Ion: | 41    | Resp: | 117   |
| Ion      | Ratio | Lower | Upper |
| 41       | 100   |       |       |
| 39       | 127.4 | 46.0  | 69.0# |
| 67       | 227.4 | 50.6  | 75.8# |
| 52       | 0.0   | 21.9  | 32.9# |



#50  
Toluene-d8  
Concen: 50.91 ug/l  
RT: 8.72 min Scan# 1334  
Delta R.T. 0.00 min  
Lab File: VX002021.D  
Acq: 26 May 2018 16:19

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 98    | Resp: | 855775 |
| Ion      | Ratio | Lower | Upper  |
| 98       | 100   |       |        |
| 100      | 63.5  | 51.5  | 77.3   |

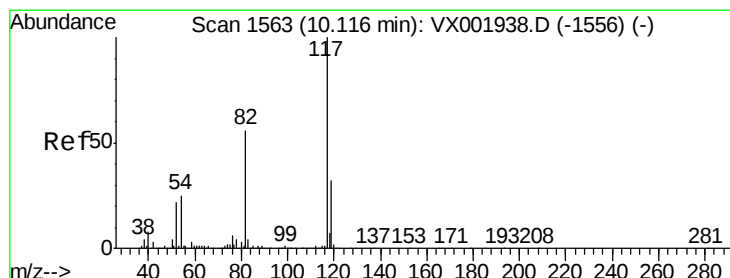
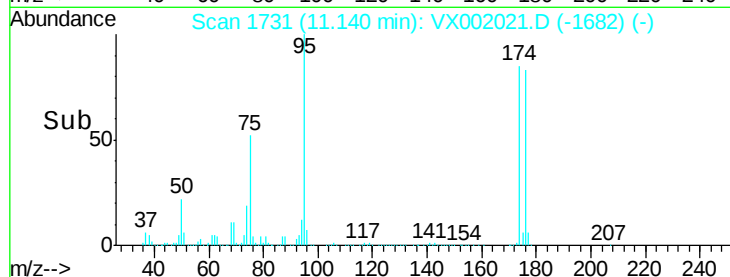
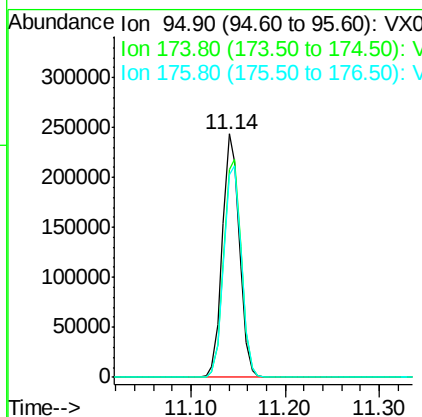
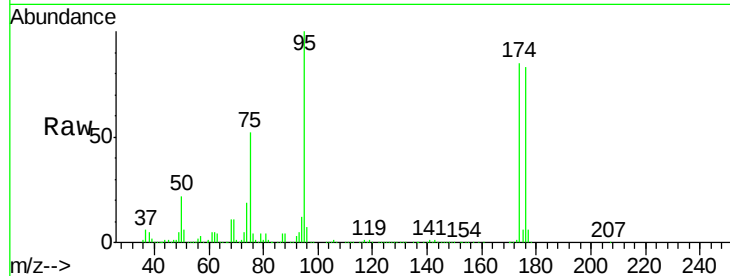




#62  
4-Bromofluorobenzene  
Concen: 46.55 ug/l  
RT: 11.14 min Scan# 1731  
Delta R.T. 0.00 min  
Lab File: VX002021.D  
Acq: 26 May 2018 16:19

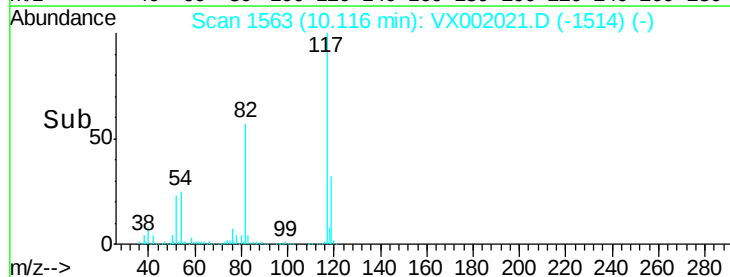
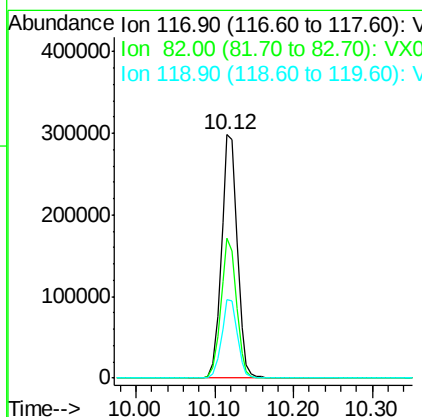
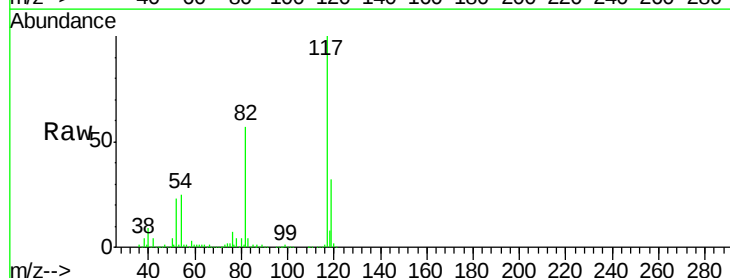
Instrument :  
MSVOA\_X  
ClientSampleId :

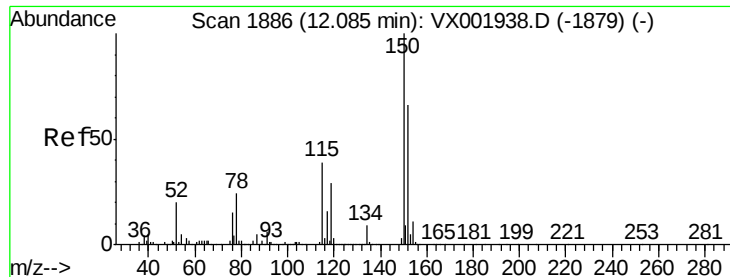
| Tot Ion   | 95    | Resp  | 306135 |
|-----------|-------|-------|--------|
| Ion Ratio | Lower | Upper |        |
| 95        | 100   |       |        |
| 174       | 91.8  | 0.0   | 178.8  |
| 176       | 89.8  | 0.0   | 175.6  |



#63  
Chlorobenzene-d5  
Concen: 50.00 ug/l  
RT: 10.12 min Scan# 1563  
Delta R.T. -0.00 min  
Lab File: VX002021.D  
Acq: 26 May 2018 16:19

| Tgt Ion   | 117   | Resp  | 416514 |
|-----------|-------|-------|--------|
| Ion Ratio | Lower | Upper |        |
| 117       | 100   |       |        |
| 82        | 57.3  | 44.8  | 67.2   |
| 119       | 32.5  | 25.5  | 38.3   |



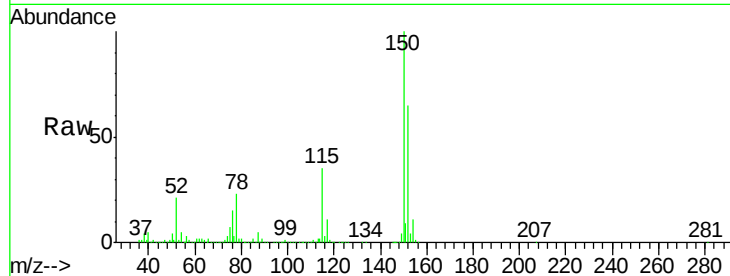


#72

1,4-Dichlorobenzene-d4  
Concen: 50.00 ug/l  
RT: 12.09 min Scan# 1886  
Delta R.T. -0.00 min  
Lab File: VX002021.D  
Acq: 26 May 2018 16:19

Instrument :  
MSVOA\_X  
ClientSampleId :

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 152     | 100   |       |       |
| 115     | 56.0  | 42.3  | 126.8 |
| 150     | 155.5 | 0.0   | 351.0 |

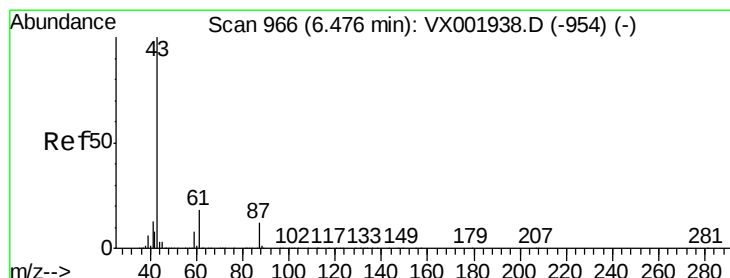
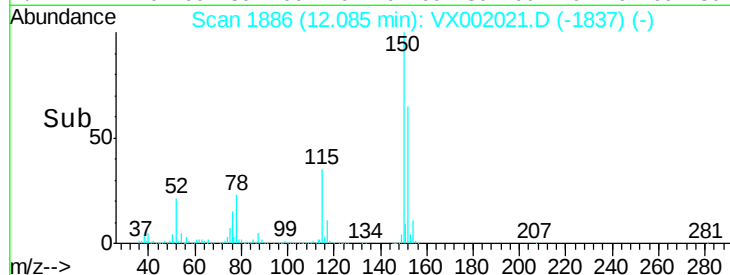
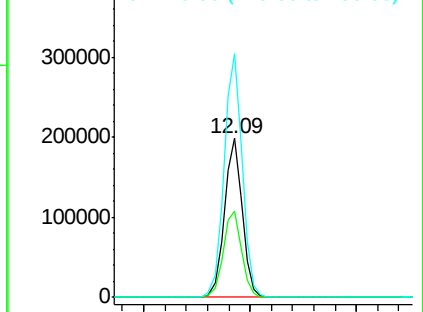


Abundance

Ion 151.90 (151.60 to 152.60): V

Ion 114.90 (114.60 to 115.60): V

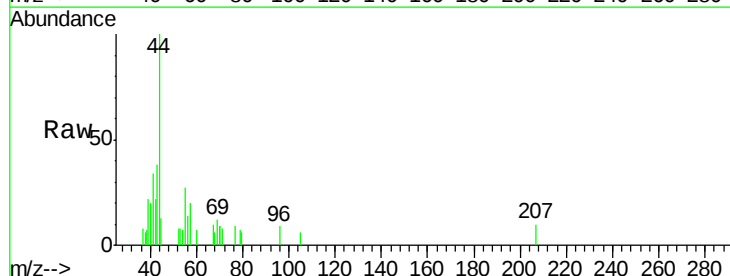
Ion 149.90 (149.60 to 150.60): V



#74

N-ethyl acetate  
Concen: Below Cal  
RT: 6.49 min Scan# 968  
Delta R.T. 0.01 min  
Lab File: VX002021.D  
Acq: 26 May 2018 16:19

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 70      | 112.7 | 0.1   | 0.1#  |
| 55      | 162.7 | 0.1   | 0.1#  |
| 61      | 0.0   | 14.5  | 21.7# |



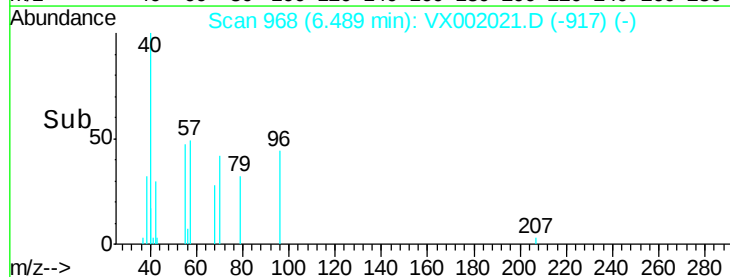
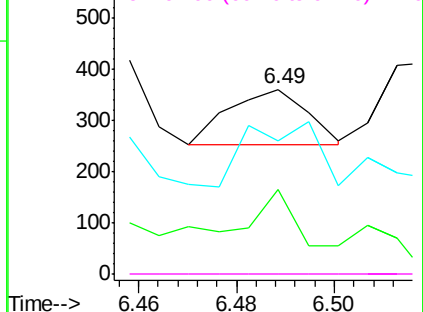
Abundance

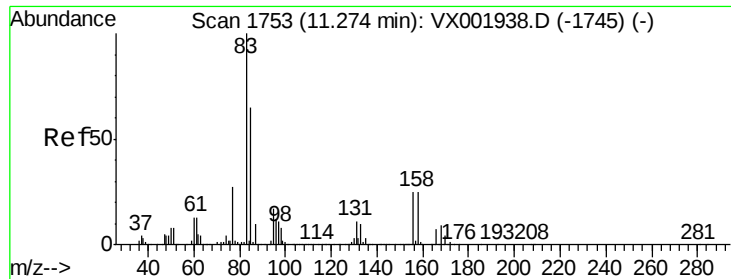
Ion 43.00 (42.70 to 43.70): VX0

Ion 70.00 (69.70 to 70.70): VX0

Ion 55.00 (54.70 to 55.70): VX0

Ion 61.00 (60.70 to 61.70): VX0





#75

1,1,2,2-Tetrachloroethane

Concen: Below Cal

RT: 11.26 min Scan# 1751

Delta R.T. -0.01 min

Lab File: VX002021.D

Acq: 26 May 2018 16:19

Instrument :

MSVOA\_X

ClientSampleId :

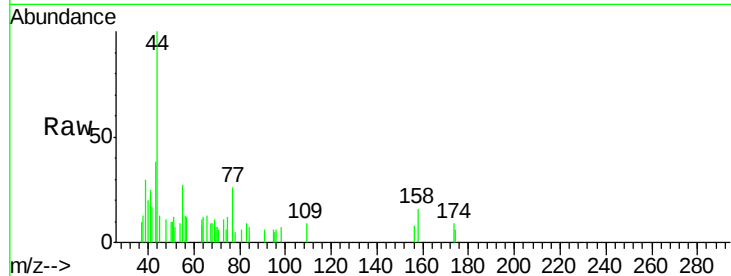
Tot Ion: 83 Resp: 73

Ion Ratio Lower Upper

83 100

131 0.0 5.7 17.0#

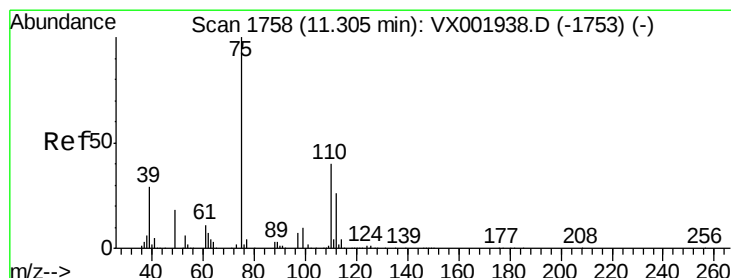
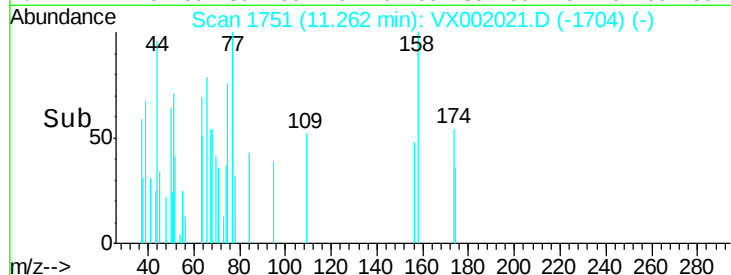
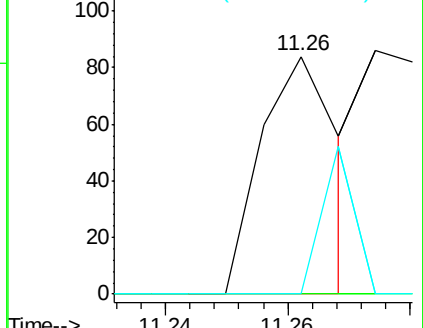
85 26.0 32.6 97.7#



Abundance Ion 82.90 (82.60 to 83.60): VX0

Ion 130.80 (130.50 to 131.50): VX0

Ion 84.90 (84.60 to 85.60): VX0



#76

1,2,3-Trichloropropane

Concen: 28.79 ug/l

RT: 11.14 min Scan# 1731

Delta R.T. -0.16 min

Lab File: VX002021.D

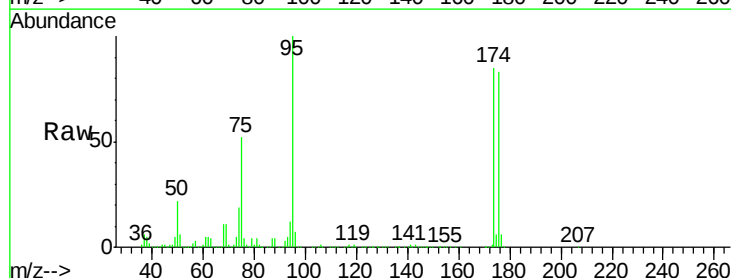
Acq: 26 May 2018 16:19

Tgt Ion: 75 Resp: 160668

Ion Ratio Lower Upper

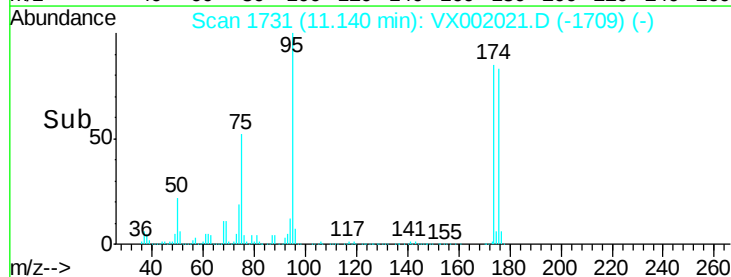
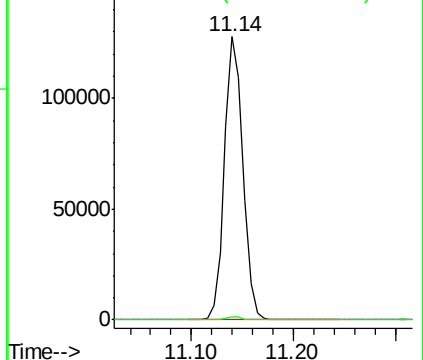
75 100

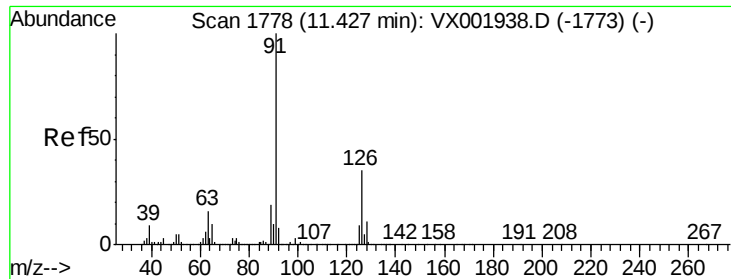
77 1.2 22.8 68.3#



Abundance Ion 74.90 (74.60 to 75.60): VX0

Ion 77.00 (76.70 to 77.70): VX0

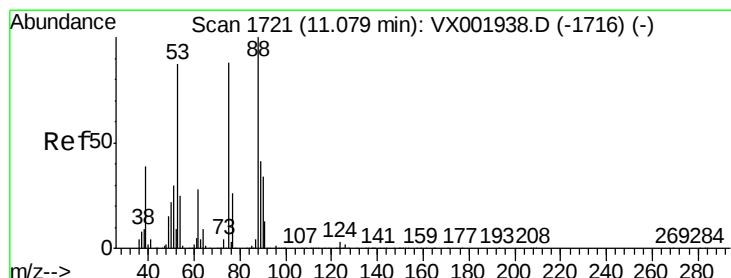
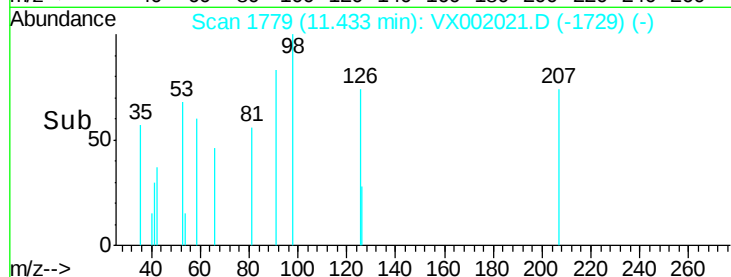
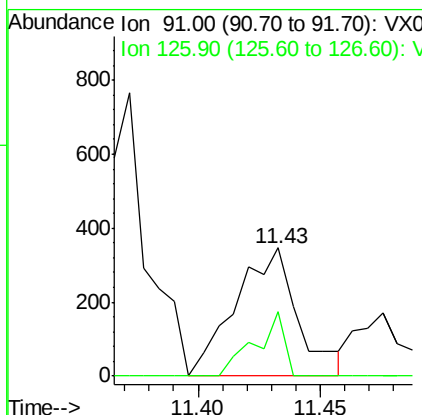
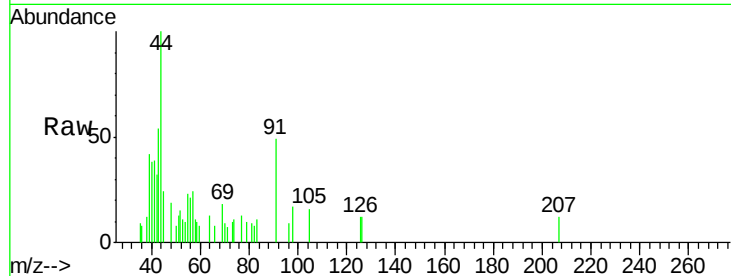




#79  
2-Chlorotoluene  
Concen: Below Cal  
RT: 11.43 min Scan# 1779  
Delta R.T. 0.01 min  
Lab File: VX002021.D  
Acq: 26 May 2018 16:19

Instrument :  
MSVOA\_X  
ClientSampleId :

Tot Ion: 91 Resp: 611  
Ion Ratio Lower Upper  
91 100  
126 23.6 17.4 52.2



#81  
trans-1,4-Dichloro-2-butene  
Concen: 69.20 ug/l  
RT: 11.14 min Scan# 1731  
Delta R.T. 0.06 min  
Lab File: VX002021.D  
Acq: 26 May 2018 16:19

Tgt Ion: 75 Resp: 160668  
Ion Ratio Lower Upper  
75 100  
53 0.2 78.0 117.0#  
89 0.0 39.4 59.2#

