

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX050919\  
 Data File : VX009432.D  
 Acq On : 09 May 2019 16:58  
 Operator : JC/SP  
 Sample : K2786-01  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 18 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :

Quant Time: May 10 07:08:08 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_X\METHOD\82X042919W.M  
 Quant Title : SW846 8260  
 QLast Update : Thu May 09 07:31:15 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 5.67  | 168  | 184559   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 6.86  | 114  | 293156   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 10.11 | 117  | 253268   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 12.08 | 152  | 106055   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |        |      |
|---------------------------|--------|-----|----------|-------|--------|------|
| 33) 1,2-Dichloroethane-d4 | 6.06   | 65  | 118779   | 47.14 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 94.28% |      |
| 35) Dibromofluoromethane  | 5.49   | 113 | 89765    | 48.71 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 97.42% |      |
| 50) Toluene-d8            | 8.71   | 98  | 364871   | 49.04 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 98.08% |      |
| 62) 4-Bromofluorobenzene  | 11.13  | 95  | 119127   | 44.06 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 88.12% |      |

## Target Compounds

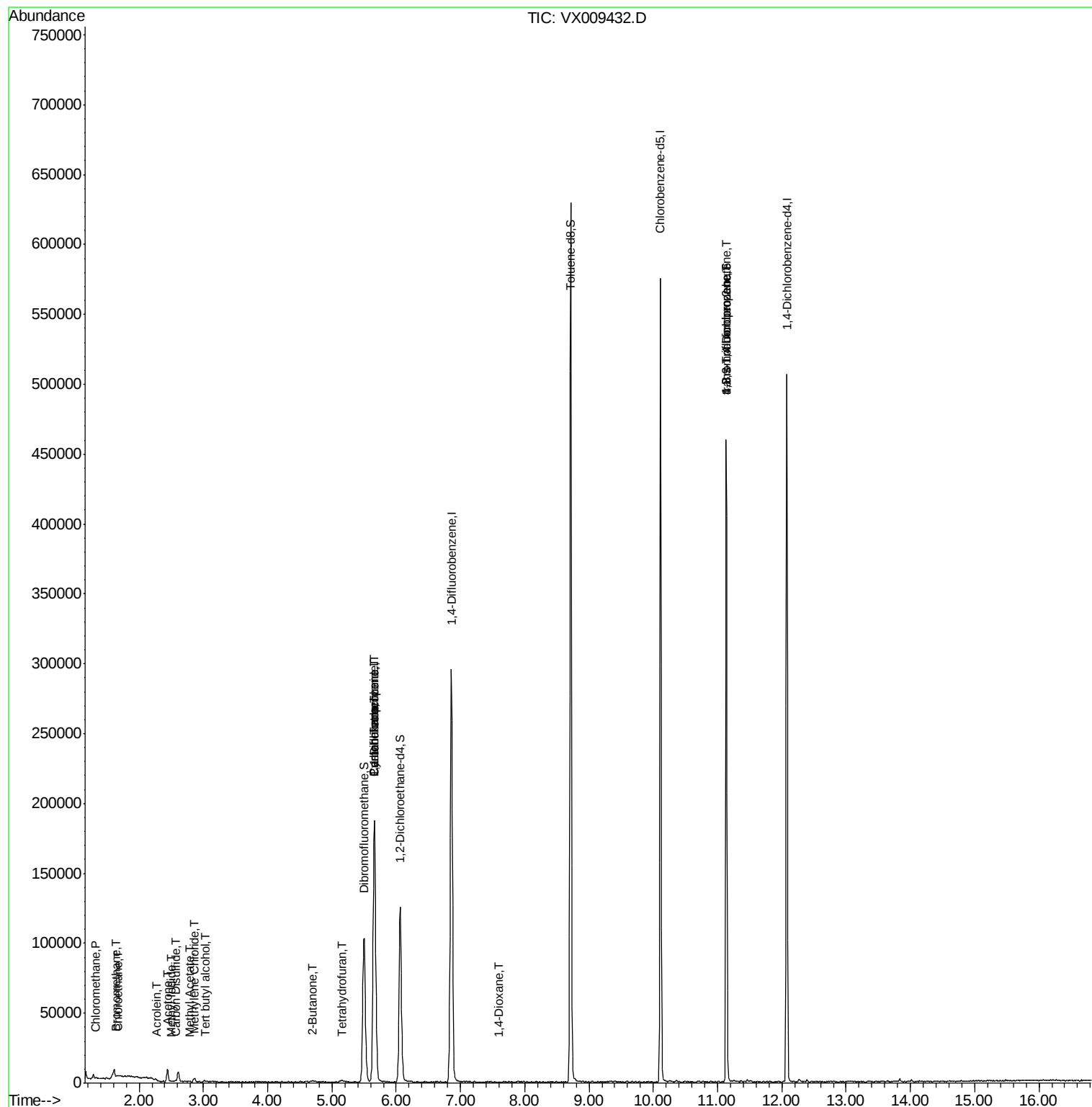
|                                |       |     |       |           |        | Qvalue |
|--------------------------------|-------|-----|-------|-----------|--------|--------|
| 3) Chloromethane               | 1.32  | 50  | 501   | 0.216     | ug/l # | 88     |
| 5) Bromomethane                | 1.64  | 94  | 282   | 0.208     | ug/l   | 91     |
| 6) Chloroethane                | 1.67  | 64  | 2954  | 2.032     | ug/l # | 58     |
| 10) Methyl Iodide              | 2.51  | 142 | 239   | 4.702     | ug/l # | 70     |
| 11) Tert butyl alcohol         | 3.03  | 59  | 861   | 1.476     | ug/l # | 73     |
| 13) Acrolein                   | 2.28  | 56  | 139   | 0.263     | ug/l # | 53     |
| 16) Acetone                    | 2.44  | 43  | 9253  | 6.840     | ug/l   | 96     |
| 17) Carbon Disulfide           | 2.57  | 76  | 1172  | 0.241     | ug/l # | 92     |
| 18) Methyl Acetate             | 2.78  | 43  | 700   | 0.218     | ug/l # | 62     |
| 20) Methylene Chloride         | 2.85  | 84  | 1328  | 0.606     | ug/l # | 78     |
| 25) 2-Butanone                 | 4.70  | 43  | 1246  | 0.593     | ug/l   | 100    |
| 28) Bromochloromethane         | 5.00  | 49  | 68    | Below Cal | #      | 20     |
| 29) Tetrahydrofuran            | 5.15  | 42  | 1509  | 1.115     | ug/l   | 93     |
| 31) Cyclohexane                | 5.66  | 56  | 4115  | 1.105     | ug/l # | 1      |
| 36) 1,1-Dichloropropene        | 5.66  | 75  | 14179 | 5.205     | ug/l # | 50     |
| 38) Carbon Tetrachloride       | 5.67  | 117 | 17109 | 6.912     | ug/l # | 16     |
| 49) 1,4-Dioxane                | 7.59  | 88  | 19    | 0.311     | ug/l # | 1      |
| 76) 1,2,3-Trichloropropane     | 11.13 | 75  | 61087 | 24.831    | ug/l # | 34     |
| 81) trans-1,4-Dichloro-2-buten | 11.13 | 75  | 61087 | 63.534    | ug/l # | 10     |

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

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Sample : K2786-01  
Misc : 5.0mL/MSVOA X/WATER  
ALS Vial : 18 Sample Multiplier: 1

Instrument :  
MSVOA\_X  
ClientSampleId :

Quant Time: May 10 07:08:08 2019  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_X\METHOD\82X042919W.M  
Quant Title : SW846 8260  
QLast Update : Thu May 09 07:31:15 2019  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 5.67 min Scan# 740

Delta R.T. -0.00 min

Lab File: VX009432.D

Acq: 09 May 2019 16:58

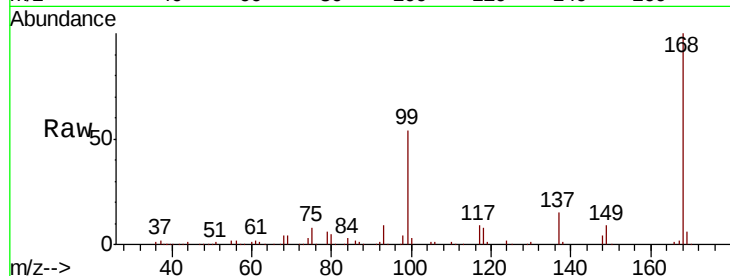
Instrument :  
MSVOA\_X  
ClientSampled :

Tot Ion:168 Resp: 184559

Ion Ratio Lower Upper

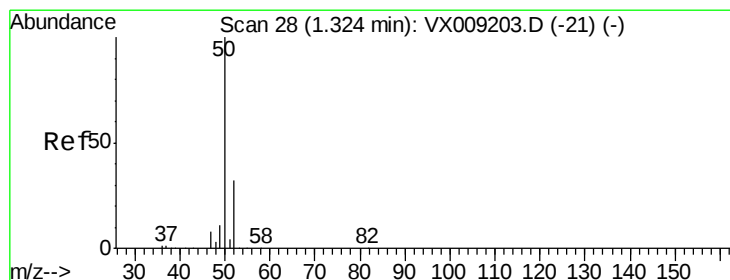
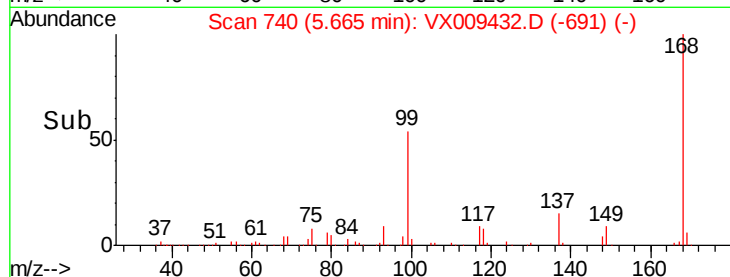
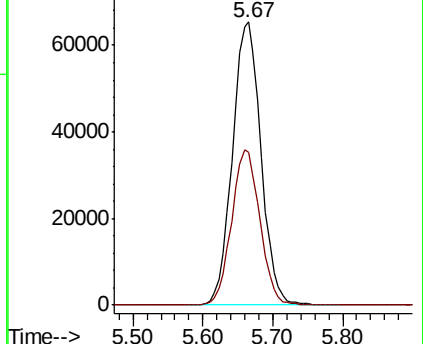
168 100

99 53.8 42.3 63.5



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VX0



#3

Chloromethane

Concen: 0.216 ug/l

RT: 1.32 min Scan# 28

Delta R.T. -0.00 min

Lab File: VX009432.D

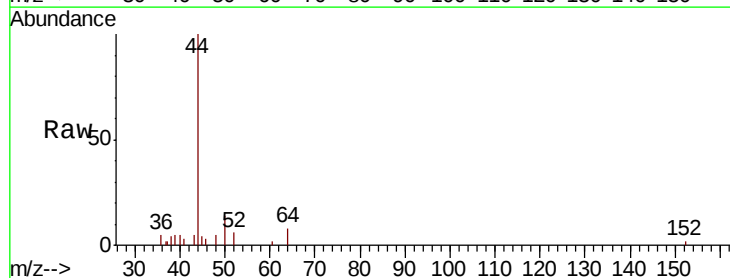
Acq: 09 May 2019 16:58

Tgt Ion: 50 Resp: 501

Ion Ratio Lower Upper

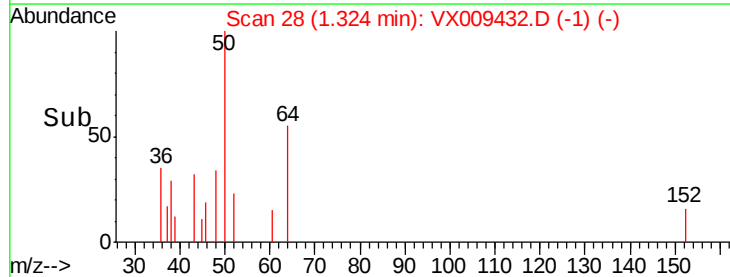
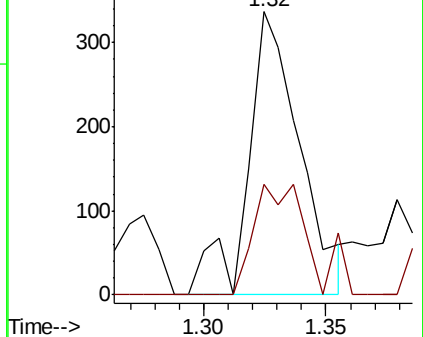
50 100

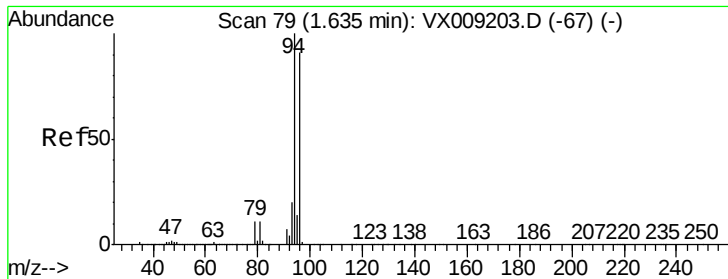
52 39.2 25.9 38.9#



Abundance Ion 49.90 (49.60 to 50.60): VX0

Ion 51.90 (51.60 to 52.60): VX0





#5

Bromomethane

Concen: 0.208 ug/l

RT: 1.64 min Scan# 80

Delta R.T. 0.01 min

Lab File: VX009432.D

Acq: 09 May 2019 16:58

Instrument :

MSVOA\_X

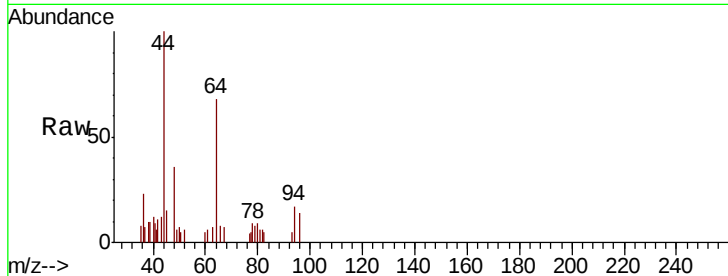
ClientSampled :

Tot Ion: 94 Resp: 282

Ion Ratio Lower Upper

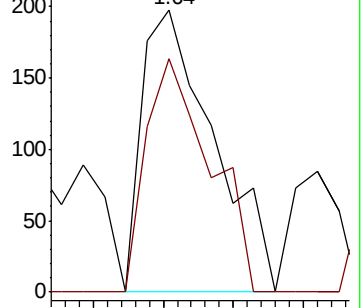
94 100

96 82.8 73.0 109.6

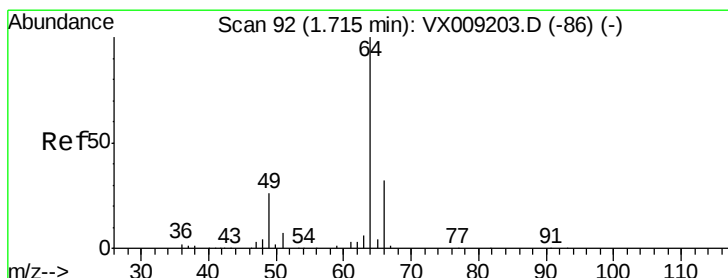
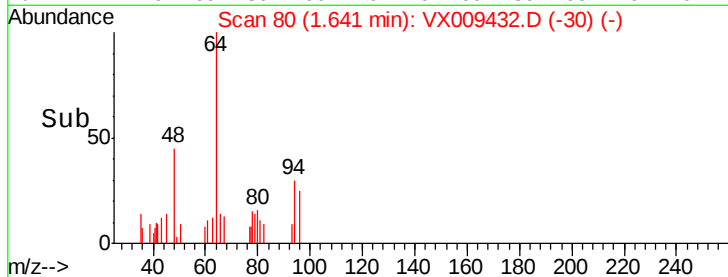


Abundance Ion 93.90 (93.60 to 94.60): VX0

Ion 95.90 (95.60 to 96.60): VX0



Time-->



#6

Chloroethane

Concen: 2.032 ug/l

RT: 1.67 min Scan# 84

Delta R.T. -0.05 min

Lab File: VX009432.D

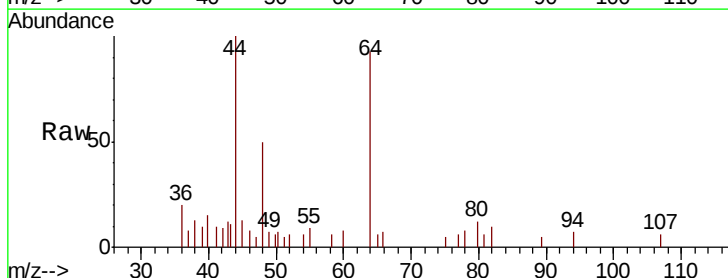
Acq: 09 May 2019 16:58

Tgt Ion: 64 Resp: 2954

Ion Ratio Lower Upper

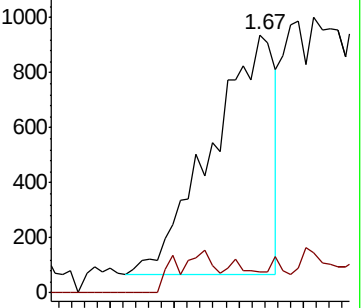
64 100

66 8.5 25.3 37.9#

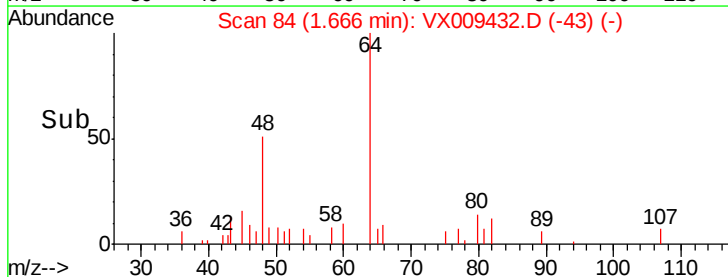


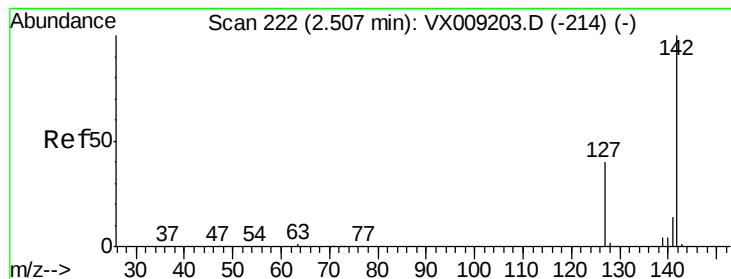
Abundance Ion 63.90 (63.60 to 64.60): VX0

Ion 65.90 (65.60 to 66.60): VX0



Time-->





#10

Methvl Iodide

Concen: 4.702 ug/l

RT: 2.51 min Scan# 222

Delta R.T. 0.00 min

Lab File: VX009432.D

Acq: 09 May 2019 16:58

Instrument :

MSVOA\_X

ClientSampled :

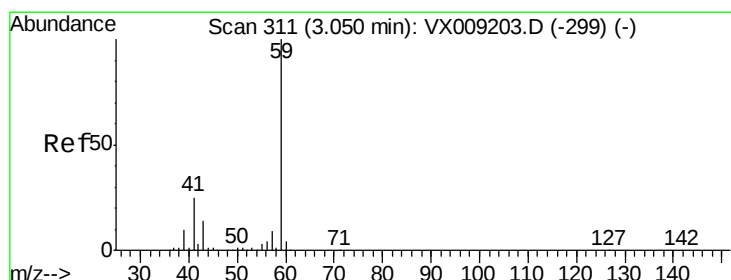
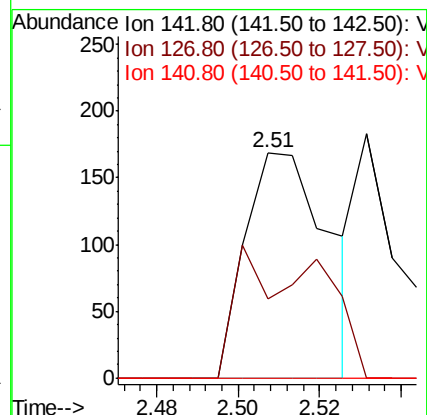
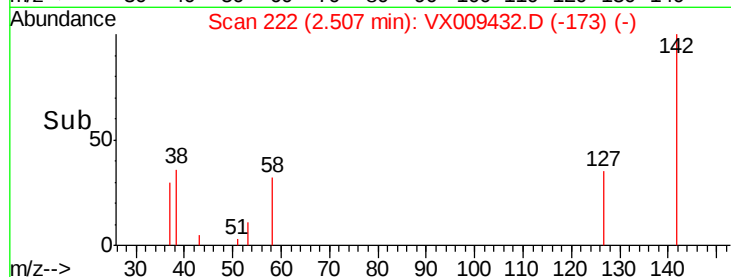
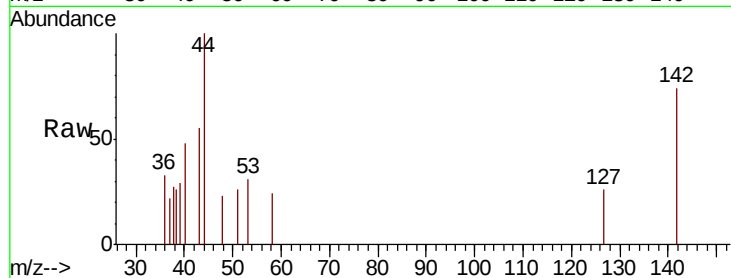
Tot Ion:142 Resp: 239

Ion Ratio Lower Upper

142 100

127 58.2 32.7 49.1#

141 0.0 11.5 17.3#



#11

Tert butyl alcohol

Concen: 1.476 ug/l

RT: 3.03 min Scan# 308

Delta R.T. -0.02 min

Lab File: VX009432.D

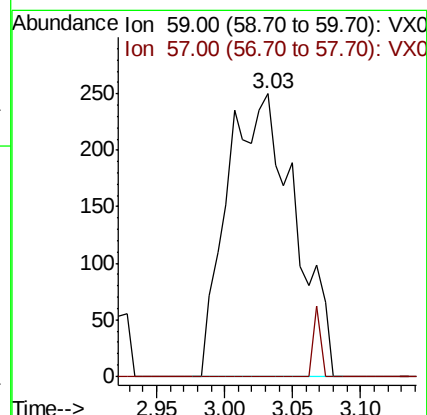
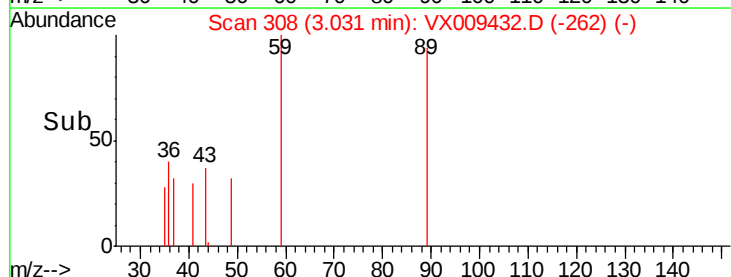
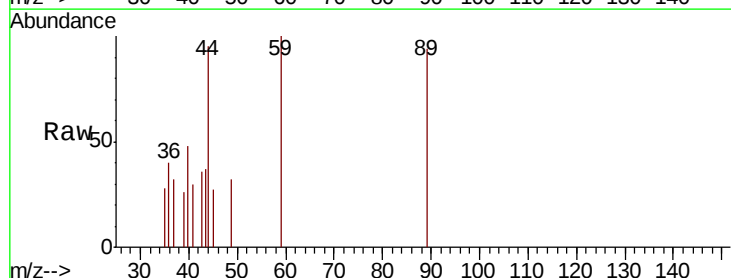
Acq: 09 May 2019 16:58

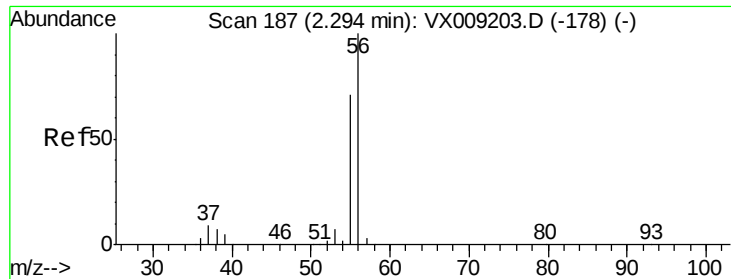
Tgt Ion: 59 Resp: 861

Ion Ratio Lower Upper

59 100

57 0.0 8.2 12.2#





#13

Acrolein

Concen: 0.263 ug/l

RT: 2.28 min Scan# 185

Delta R.T. -0.01 min

Lab File: VX009432.D

Acq: 09 May 2019 16:58

Instrument :

MSVOA\_X

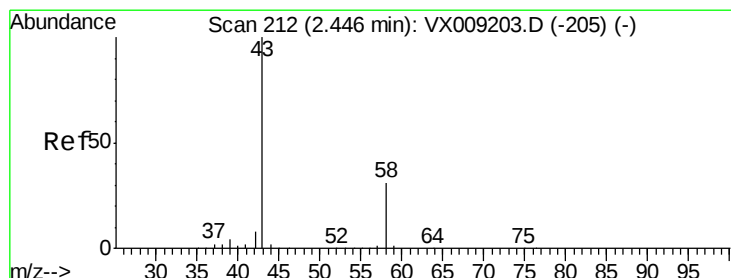
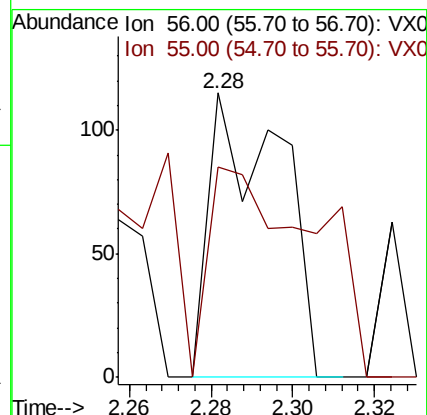
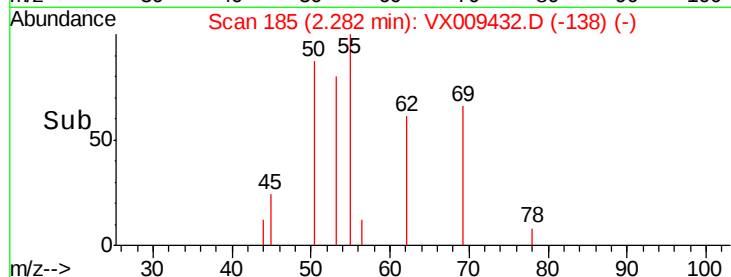
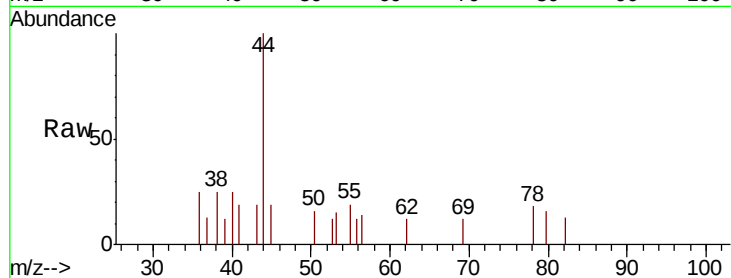
ClientSampled :

Tot Ion: 56 Resp: 139

Ion Ratio Lower Upper

56 100

55 109.4 56.6 85.0#



#16

Acetone

Concen: 6.840 ug/l

RT: 2.44 min Scan# 211

Delta R.T. -0.01 min

Lab File: VX009432.D

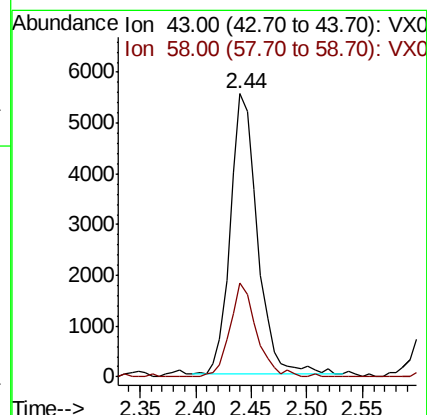
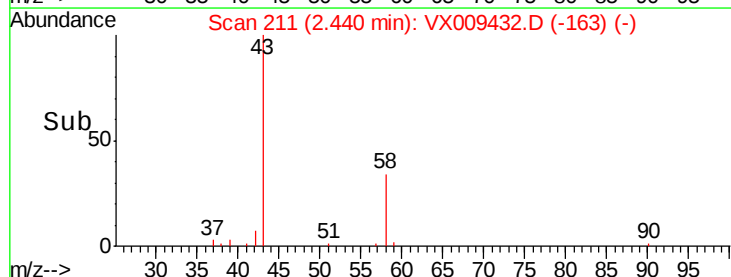
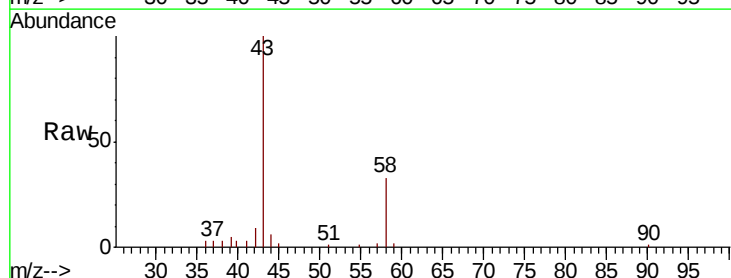
Acq: 09 May 2019 16:58

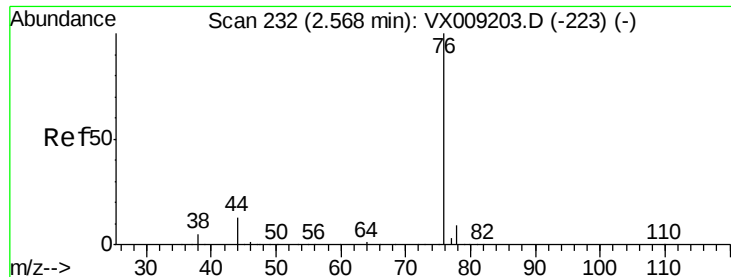
Tgt Ion: 43 Resp: 9253

Ion Ratio Lower Upper

43 100

58 33.5 24.9 37.3

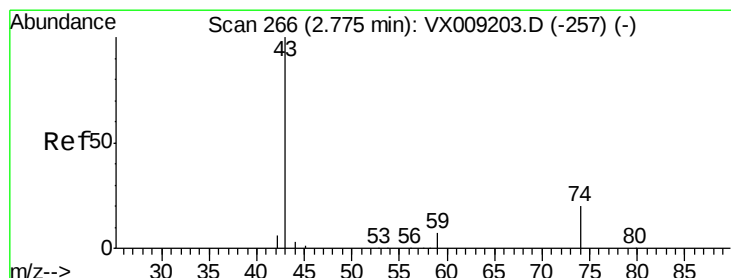
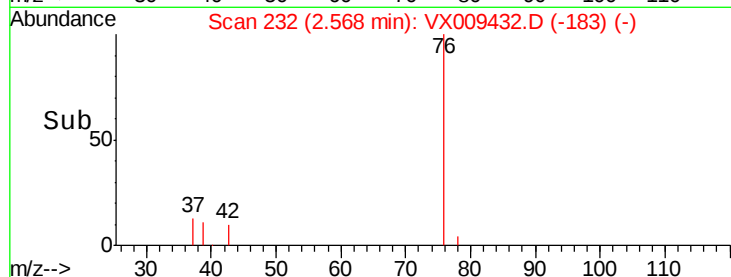
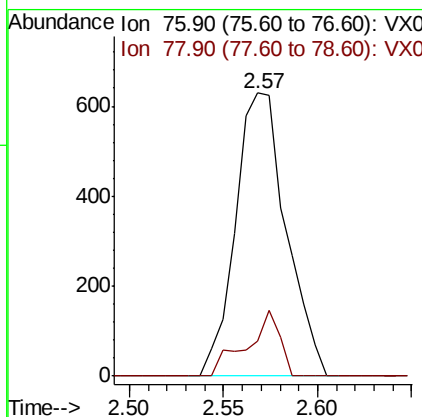
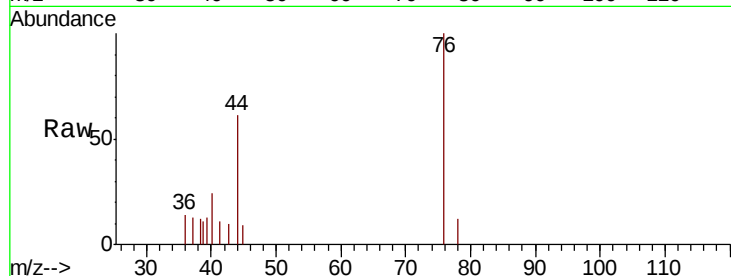




#17  
Carbon Disulfide  
Concen: 0.241 ug/l  
RT: 2.57 min Scan# 232  
Delta R.T. -0.00 min  
Lab File: VX009432.D  
Acq: 09 May 2019 16:58

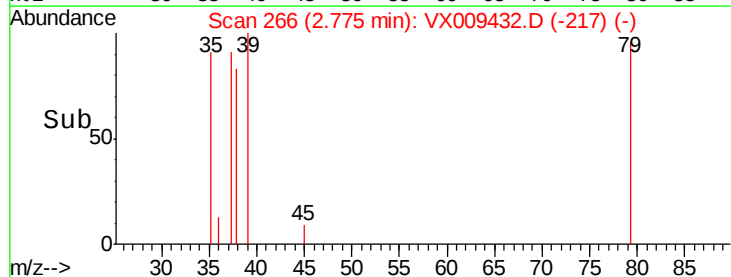
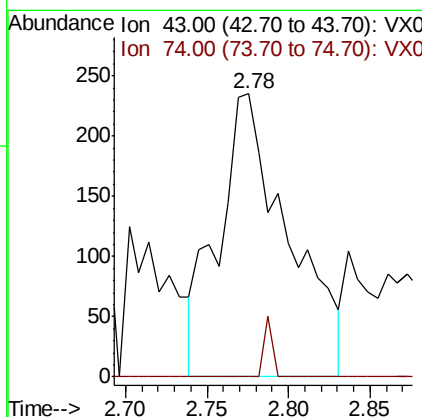
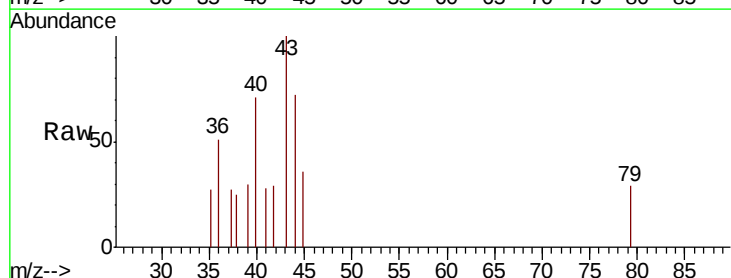
Instrument :  
MSVOA\_X  
ClientSampled :

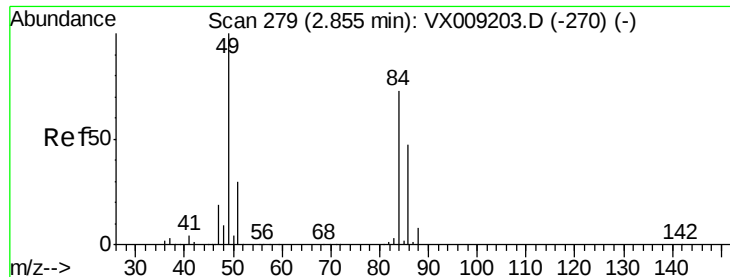
Tot Ion: 76 Resp: 1172  
Ion Ratio Lower Upper  
76 100  
78 12.2 7.4 11.0#



#18  
Methyl Acetate  
Concen: 0.218 ug/l  
RT: 2.78 min Scan# 266  
Delta R.T. -0.00 min  
Lab File: VX009432.D  
Acq: 09 May 2019 16:58

Tgt Ion: 43 Resp: 700  
Ion Ratio Lower Upper  
43 100  
74 2.6 16.2 24.4#

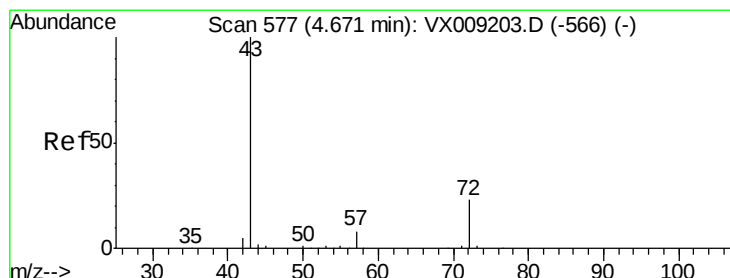
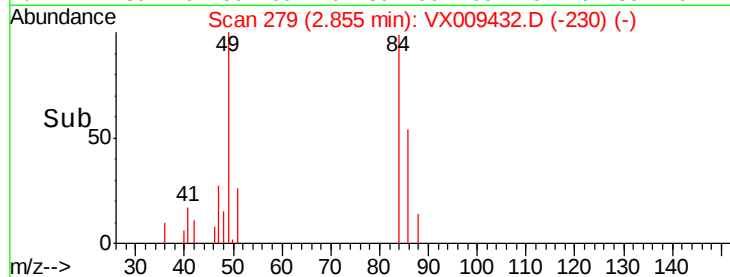
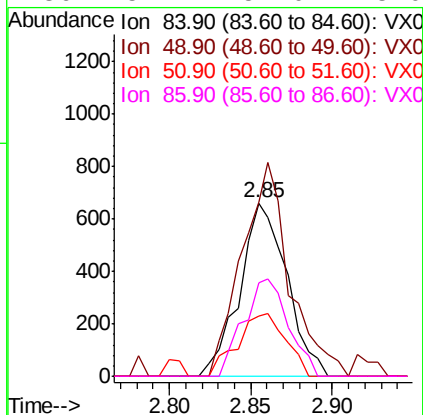
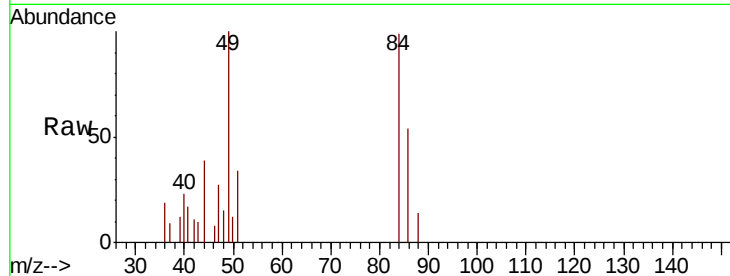




#20  
Methvlene Chloride  
Concen: 0.606 ug/l  
RT: 2.85 min Scan# 279  
Delta R.T. -0.00 min  
Lab File: VX009432.D  
Acq: 09 May 2019 16:58

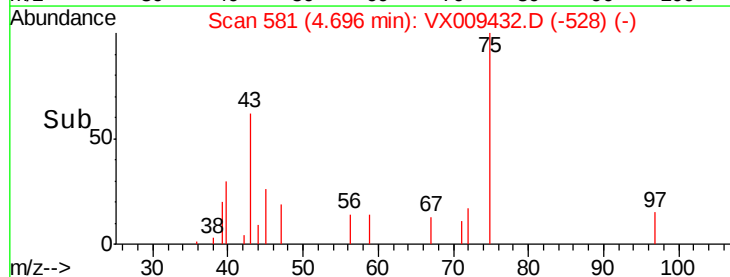
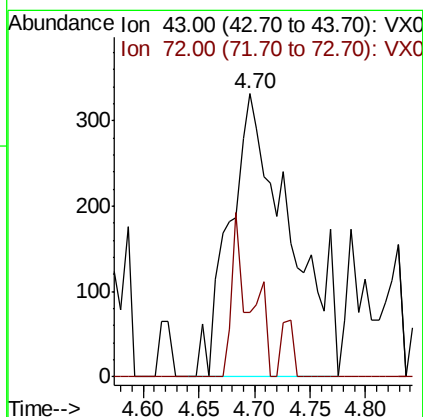
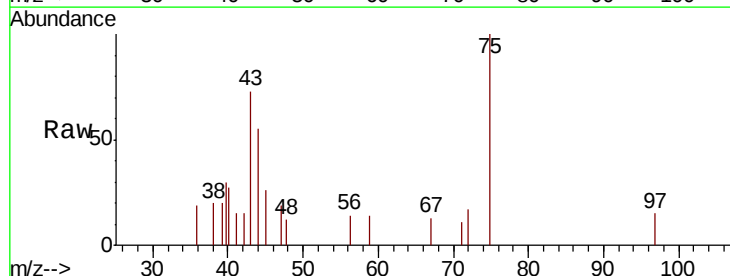
Instrument :  
MSVOA\_X  
ClientSampled :

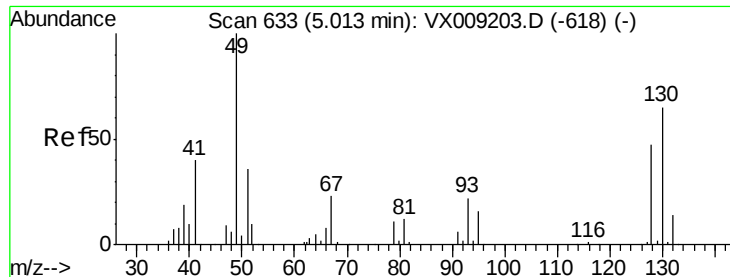
Tot Ion: 84 Resp: 1328  
Ion Ratio Lower Upper  
84 100  
49 100.9 109.9 164.9#  
51 34.7 32.7 49.1  
86 54.1 52.0 78.0



#25  
2-Butanone  
Concen: 0.593 ug/l  
RT: 4.70 min Scan# 581  
Delta R.T. 0.02 min  
Lab File: VX009432.D  
Acq: 09 May 2019 16:58

Tgt Ion: 43 Resp: 1246  
Ion Ratio Lower Upper  
43 100  
72 22.9 18.2 27.2





#28

Bromochloromethane

Concen: Below Cal

RT: 5.00 min Scan# 631

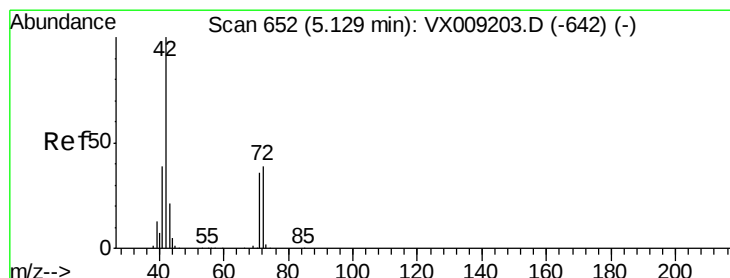
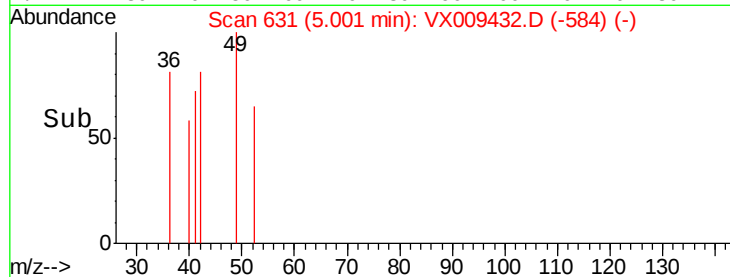
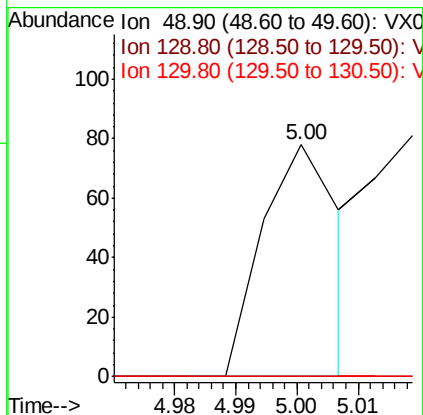
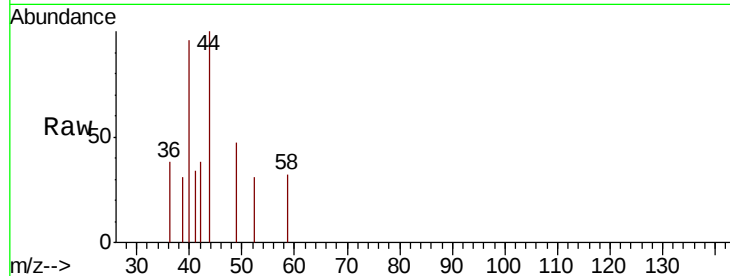
Delta R.T. -0.01 min

Lab File: VX009432.D

Acq: 09 May 2019 16:58

Instrument :  
MSVOA\_X  
ClientSampled :

Tot Ion: 49 Resp: 68  
Ion Ratio Lower Upper  
49 100  
129 0.0 0.0 3.8  
130 0.0 51.2 76.8#



#29

Tetrahydrofuran

Concen: 1.115 ug/l

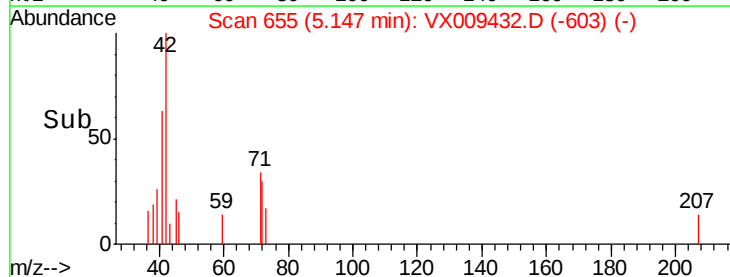
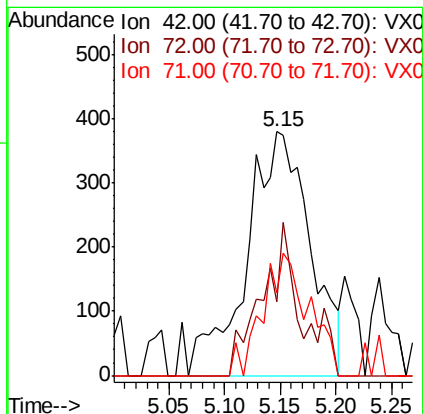
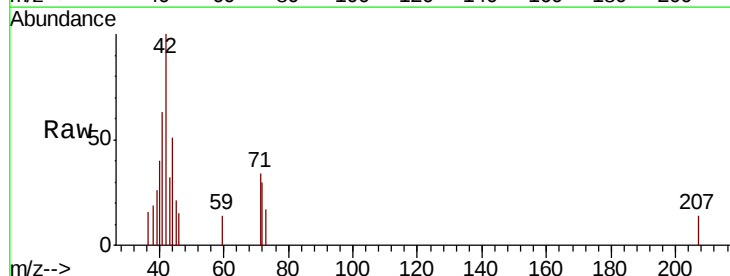
RT: 5.15 min Scan# 655

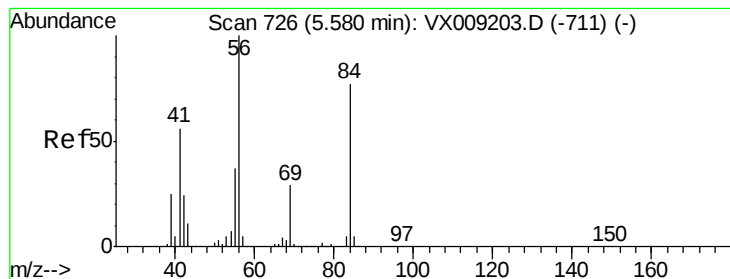
Delta R.T. 0.02 min

Lab File: VX009432.D

Acq: 09 May 2019 16:58

Tgt Ion: 42 Resp: 1509  
Ion Ratio Lower Upper  
42 100  
72 30.6 30.4 45.6  
71 36.4 28.6 43.0





#31

Cyclohexane

Concen: 1.105 ug/l

RT: 5.66 min Scan# 739

Delta R.T. 0.08 min

Lab File: VX009432.D

Acq: 09 May 2019 16:58

Instrument :  
MSVOA\_X  
ClientSampleId :

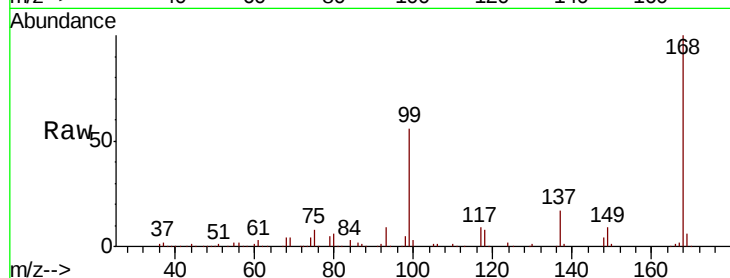
Tot Ion: 56 Resp: 4115

Ion Ratio Lower Upper

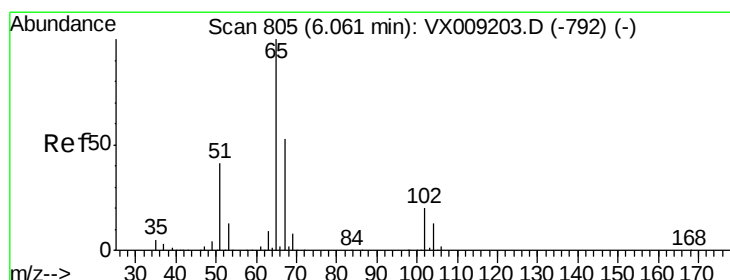
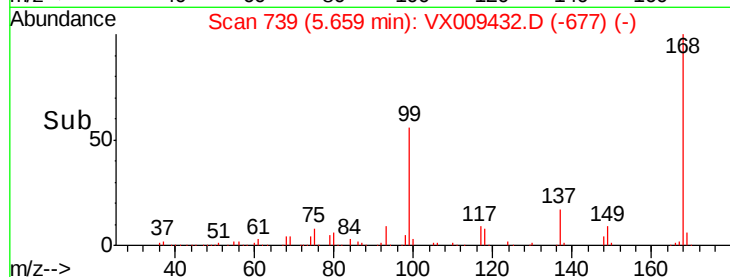
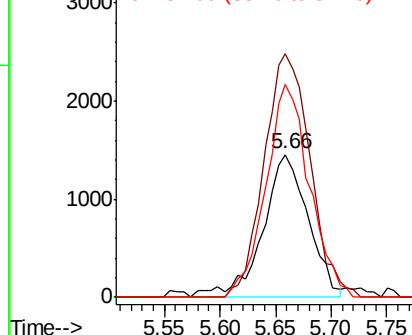
56 100

69 170.2 23.4 35.0#

84 149.1 61.9 92.9#



Abundance Ion 56.00 (55.70 to 56.70): VX0  
Ion 69.00 (68.70 to 69.70): VX0  
Ion 84.00 (83.70 to 84.70): VX0



#33

1,2-Dichloroethane-d4

Concen: 47.145 ug/l

RT: 6.06 min Scan# 805

Delta R.T. -0.00 min

Lab File: VX009432.D

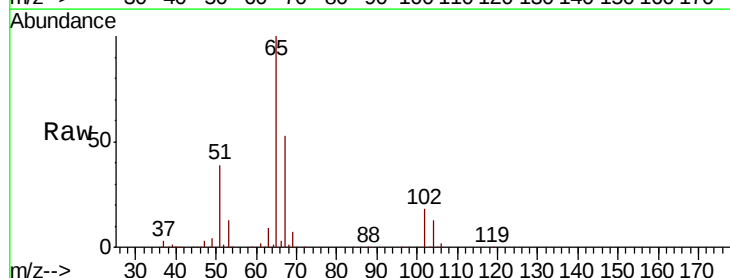
Acq: 09 May 2019 16:58

Tgt Ion: 65 Resp: 118779

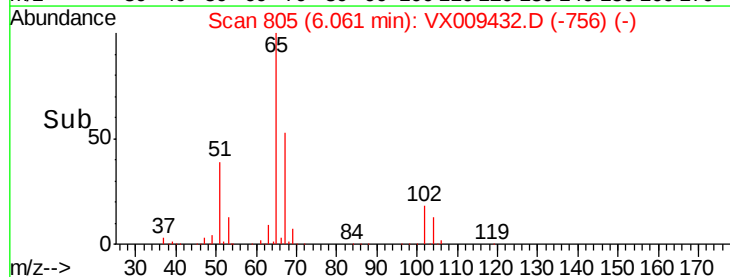
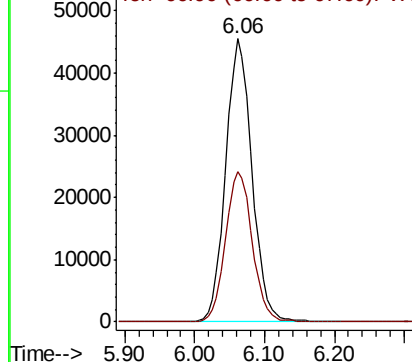
Ion Ratio Lower Upper

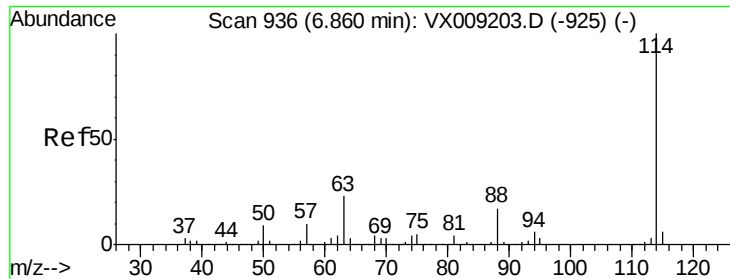
65 100

67 53.9 0.0 106.6



Abundance Ion 64.90 (64.60 to 65.60): VX0  
Ion 66.90 (66.60 to 67.60): VX0

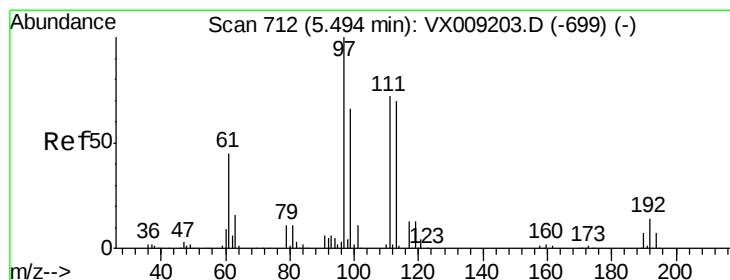
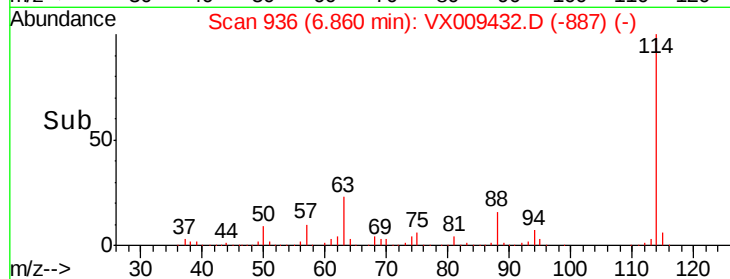
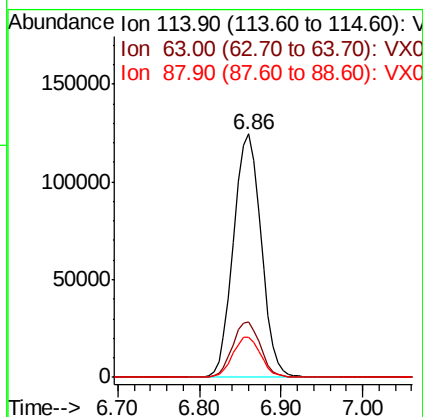
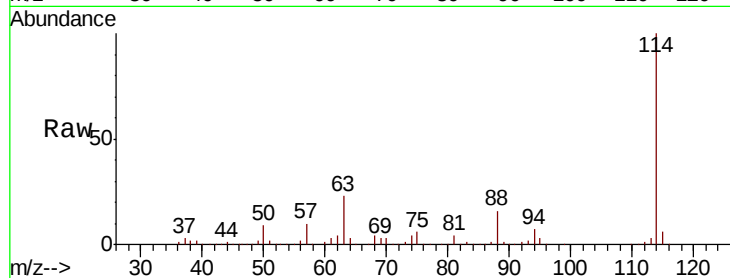




#34  
 1,4-Difluorobenzene  
 Concen: 50.000 ug/l  
 RT: 6.86 min Scan# 936  
 Delta R.T. -0.00 min  
 Lab File: VX009432.D  
 Acq: 09 May 2019 16:58

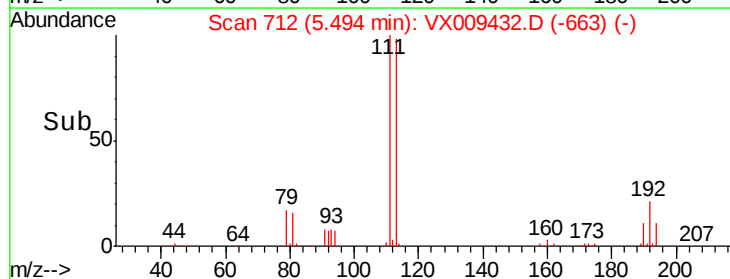
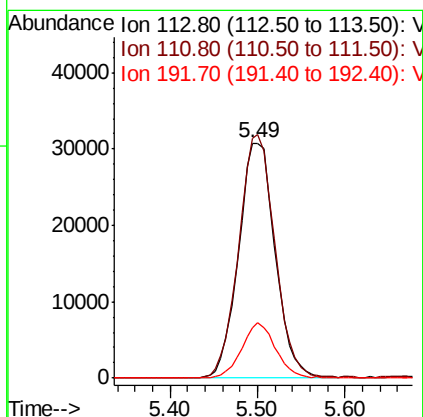
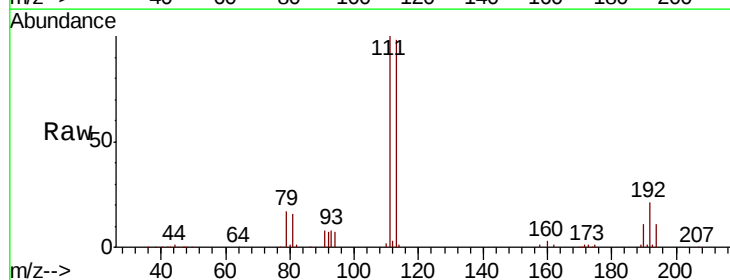
Instrument :  
 MSVOA\_X  
 ClientSampleId :

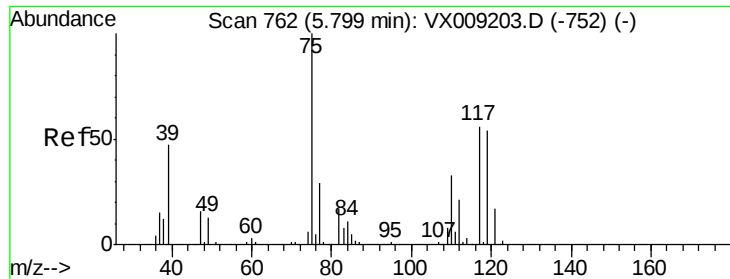
Tot Ion:114 Resp: 293156  
 Ion Ratio Lower Upper  
 114 100  
 63 22.7 0.0 45.6  
 88 16.4 0.0 33.2



#35  
 Dibromofluoromethane  
 Concen: 48.709 ug/l  
 RT: 5.49 min Scan# 712  
 Delta R.T. -0.00 min  
 Lab File: VX009432.D  
 Acq: 09 May 2019 16:58

Tgt Ion:113 Resp: 89765  
 Ion Ratio Lower Upper  
 113 100  
 111 102.2 82.8 124.2  
 192 21.9 17.0 25.6

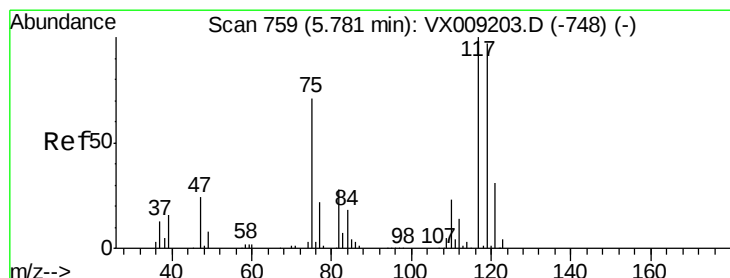
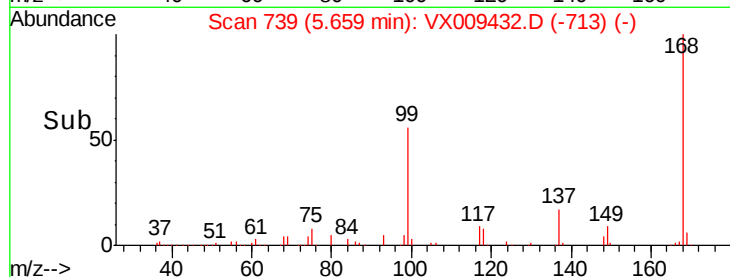
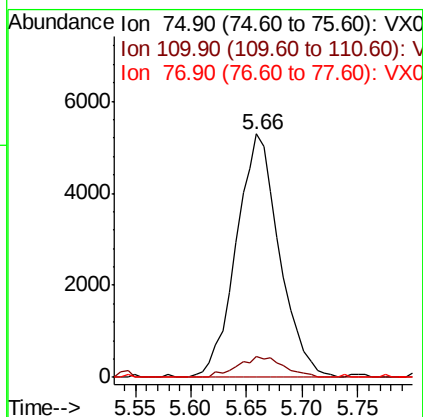
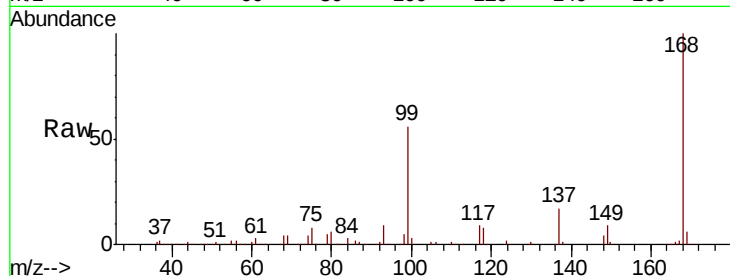




#36  
 1,1-Dichloropropene  
 Concen: 5.205 ug/l  
 RT: 5.66 min Scan# 739  
 Delta R.T. -0.14 min  
 Lab File: VX009432.D  
 Acq: 09 May 2019 16:58

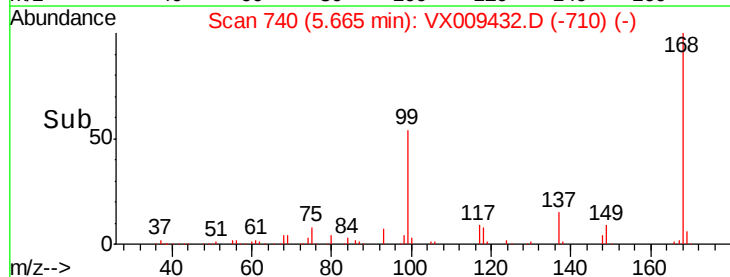
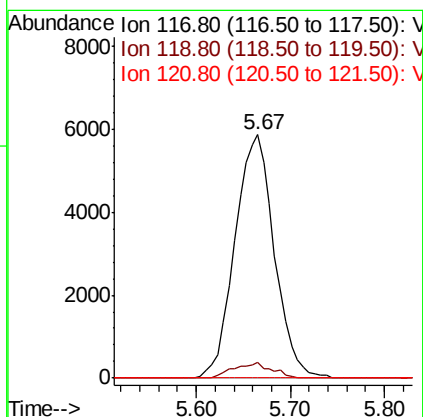
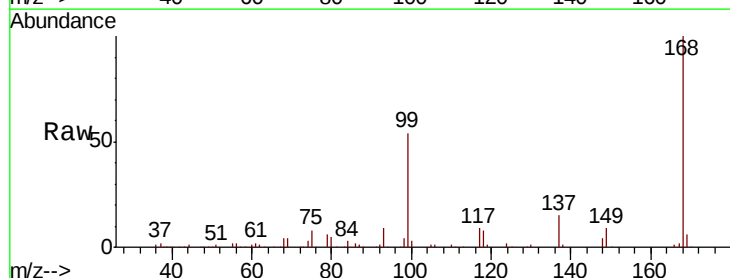
Instrument :  
 MSVOA\_X  
 ClientSampleId :

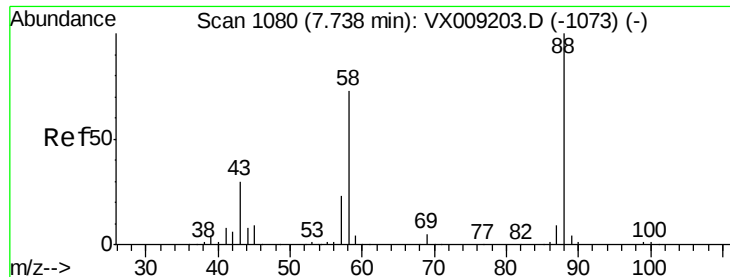
Tot Ion: 75 Resp: 14179  
 Ion Ratio Lower Upper  
 75 100  
 110 9.0 16.9 50.6#  
 77 0.0 24.8 37.2#



#38  
 Carbon Tetrachloride  
 Concen: 6.912 ug/l  
 RT: 5.67 min Scan# 740  
 Delta R.T. -0.12 min  
 Lab File: VX009432.D  
 Acq: 09 May 2019 16:58

Tgt Ion: 117 Resp: 17109  
 Ion Ratio Lower Upper  
 117 100  
 119 6.3 77.5 116.3#  
 121 0.0 24.7 37.1#

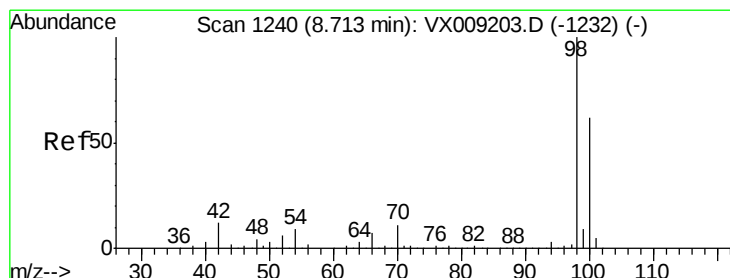
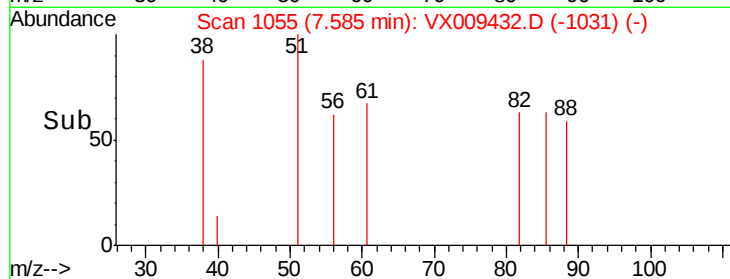
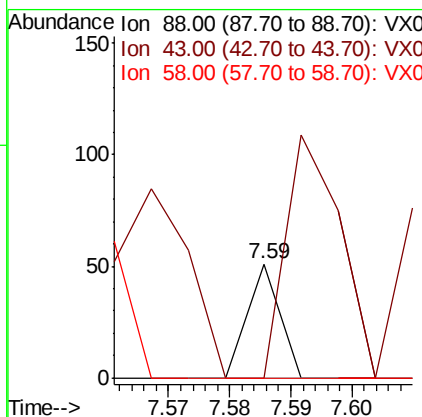
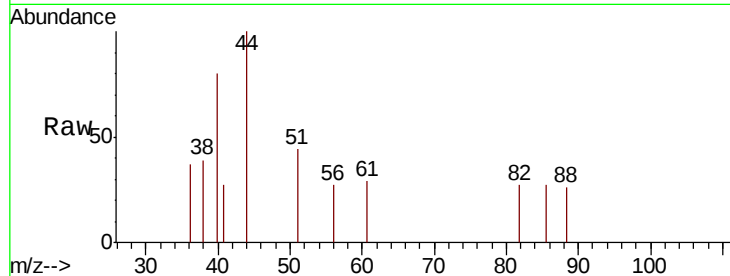




#49  
 1,4-Dioxane  
 Concen: 0.311 ug/l  
 RT: 7.59 min Scan# 1055  
 Delta R.T. -0.15 min  
 Lab File: VX009432.D  
 Acq: 09 May 2019 16:58

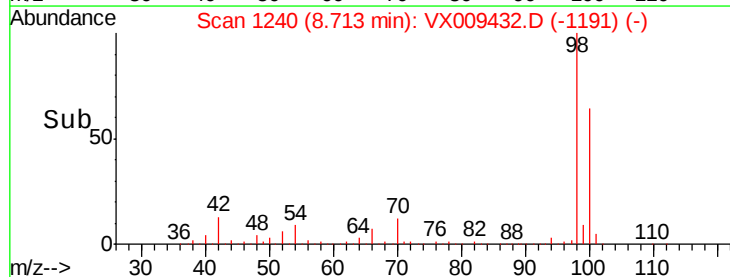
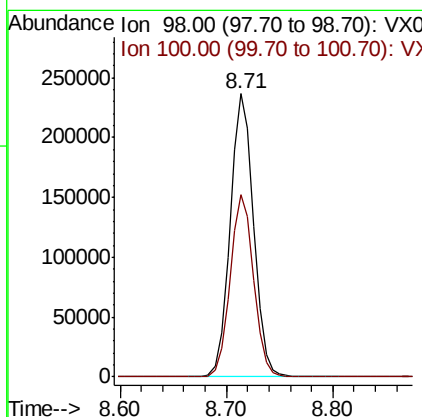
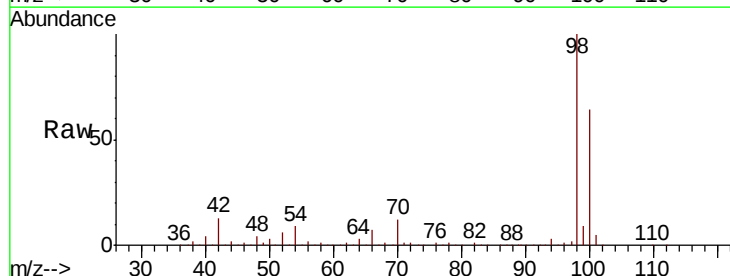
Instrument :  
 MSVOA\_X  
 ClientSampled :

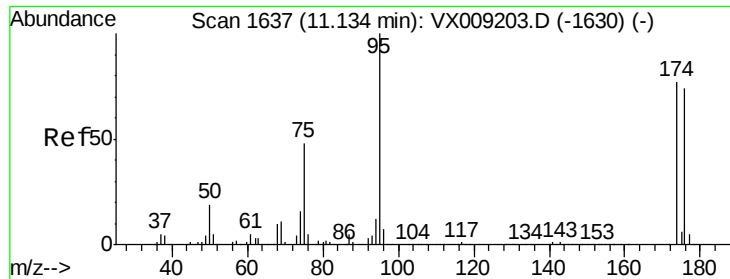
Tot Ion: 88 Resp: 19  
 Ion Ratio Lower Upper  
 88 100  
 43 500.0 28.6 42.8#  
 58 0.0 61.7 92.5#



#50  
 Toluene-d8  
 Concen: 49.040 ug/l  
 RT: 8.71 min Scan# 1240  
 Delta R.T. -0.00 min  
 Lab File: VX009432.D  
 Acq: 09 May 2019 16:58

Tgt Ion: 98 Resp: 364871  
 Ion Ratio Lower Upper  
 98 100  
 100 64.3 51.2 76.8

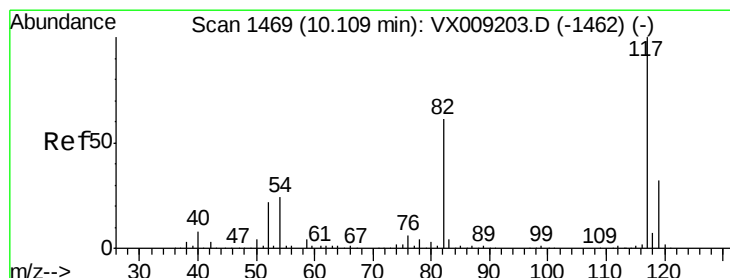
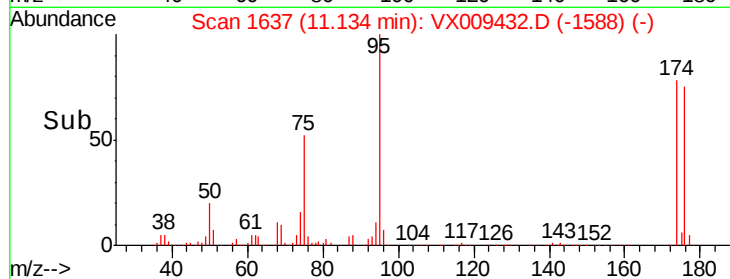
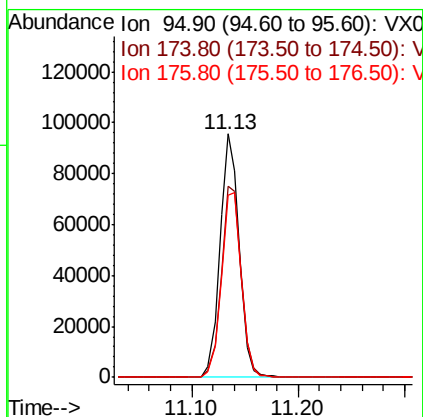
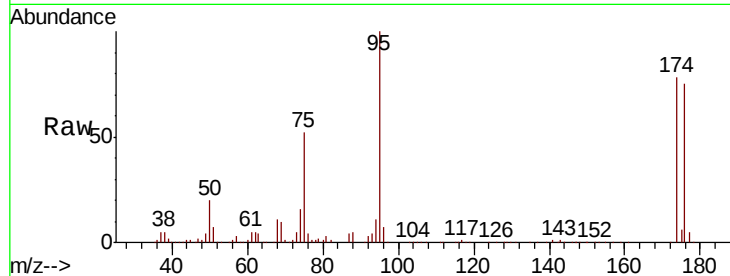




#62  
4-Bromofluorobenzene  
Concen: 44.064 ug/l  
RT: 11.13 min Scan# 1637  
Delta R.T. -0.00 min  
Lab File: VX009432.D  
Acq: 09 May 2019 16:58

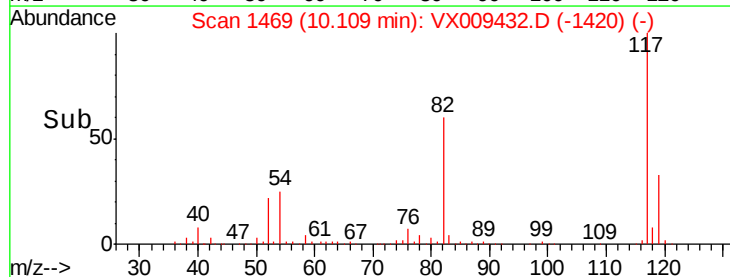
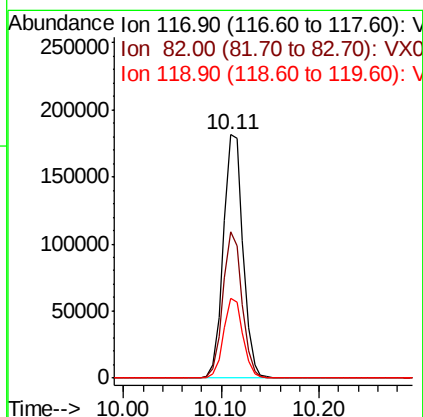
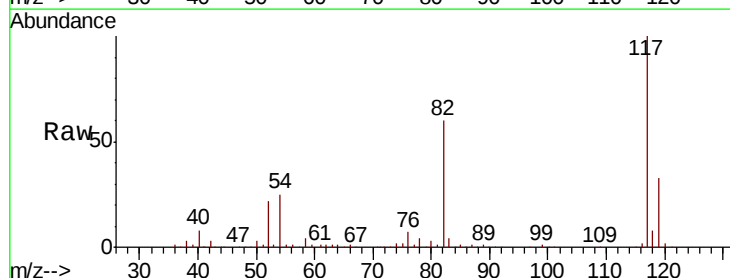
Instrument :  
MSVOA\_X  
ClientSampleId :

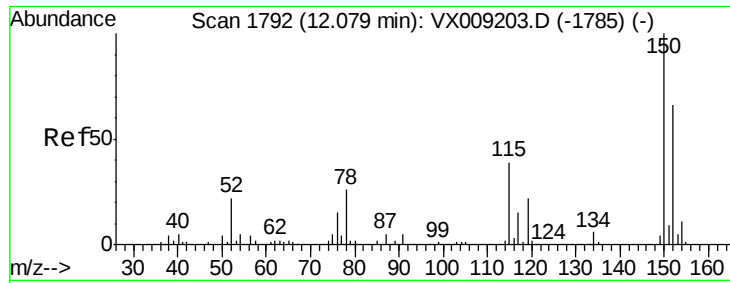
Tot Ion: 95 Resp: 119127  
Ion Ratio Lower Upper  
95 100  
174 81.8 0.0 161.6  
176 79.4 0.0 159.2



#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 10.11 min Scan# 1469  
Delta R.T. -0.00 min  
Lab File: VX009432.D  
Acq: 09 May 2019 16:58

Tgt Ion: 117 Resp: 253268  
Ion Ratio Lower Upper  
117 100  
82 60.3 48.8 73.2  
119 32.9 25.8 38.6



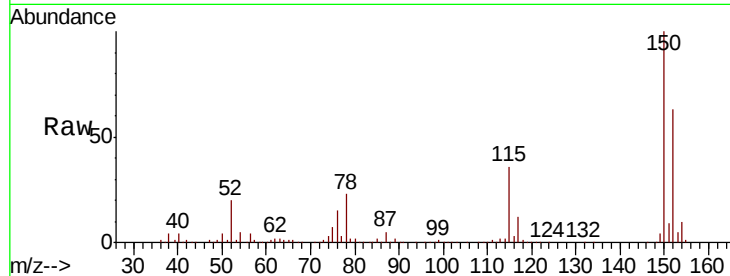


#72

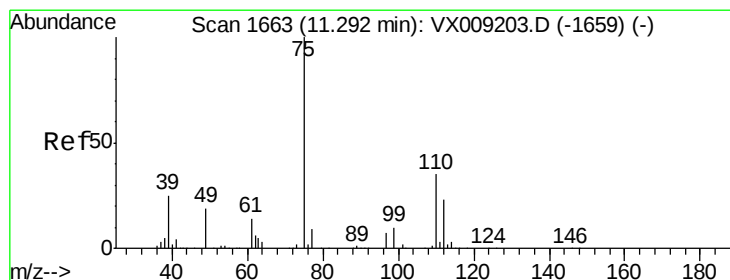
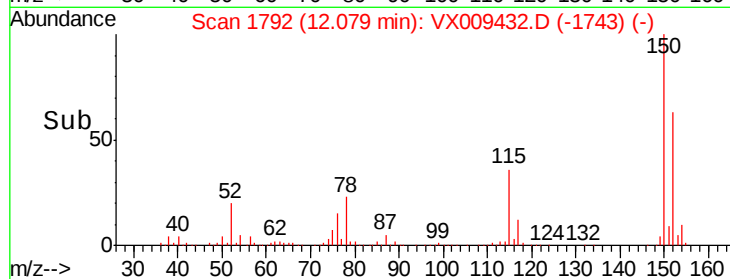
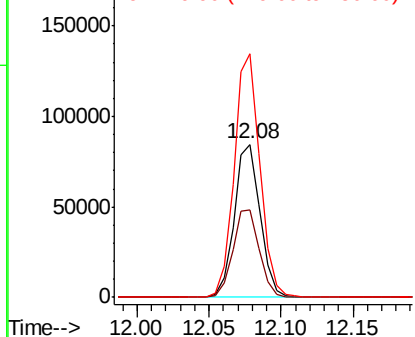
1,4-Dichlorobenzene-d4  
Concen: 50.000 ug/l  
RT: 12.08 min Scan# 1792  
Delta R.T. -0.00 min  
Lab File: VX009432.D  
Acq: 09 May 2019 16:58

Instrument :  
MSVOA\_X  
ClientSampleId :

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 152     | 100   |       |       |
| 115     | 58.7  | 41.2  | 123.6 |
| 150     | 158.2 | 0.0   | 346.4 |



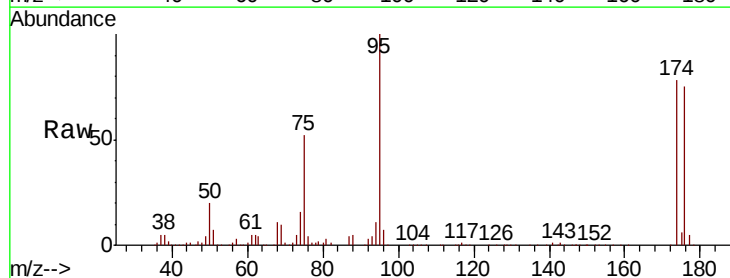
Abundance Ion 151.90 (151.60 to 152.60): V  
Ion 114.90 (114.60 to 115.60): V  
Ion 149.90 (149.60 to 150.60): V



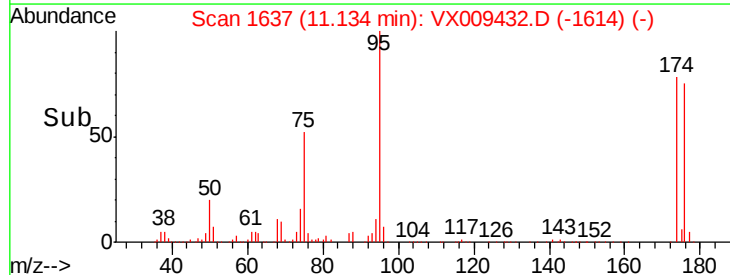
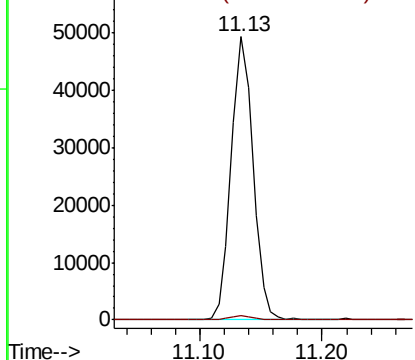
#76

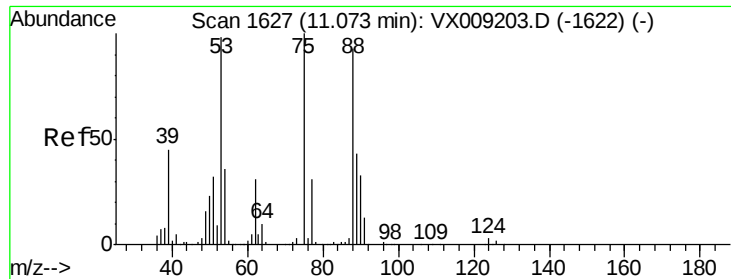
1,2,3-Trichloropropane  
Concen: 24.831 ug/l  
RT: 11.13 min Scan# 1637  
Delta R.T. -0.16 min  
Lab File: VX009432.D  
Acq: 09 May 2019 16:58

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 75      | 100   |       |       |
| 77      | 1.4   | 22.1  | 66.1  |



Abundance Ion 74.90 (74.60 to 75.60): VX0  
Ion 77.00 (76.70 to 77.70): VX0





#81

trans-1,4-Dichloro-2-butene

Concen: 63.534 ug/l

RT: 11.13 min Scan# 1637

Delta R.T. 0.06 min

Lab File: VX009432.D

Acq: 09 May 2019 16:58

Instrument :

MSVOA\_X

ClientSampleId :

Tot Ion: 75 Resp: 61087

Ion Ratio Lower Upper

75 100

53 0.2 79.0 118.6#

89 0.0 34.7 52.1#

