

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_X\DATA\WX042919\  
 Data File : VX009221.D  
 Acq On : 29 Apr 2019 20:39  
 Operator : JC/SP  
 Sample : K2594-17 20X  
 Misc : 5.0mL/MSVOA\_X/WATER  
 ALS Vial : 25 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 WP021MW346-190425

Quant Time: Apr 30 07:20:14 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_X\METHOD\82X042919W.M  
 Quant Title : SW846 8260  
 QLast Update : Tue Apr 30 07:03:50 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 5.67  | 168  | 209451   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 6.86  | 114  | 338548   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 10.11 | 117  | 290429   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 12.08 | 152  | 117335   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |        |      |
|---------------------------|--------|-----|----------|-------|--------|------|
| 33) 1,2-Dichloroethane-d4 | 6.06   | 65  | 136346   | 47.69 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 95.38% |      |
| 35) Dibromofluoromethane  | 5.50   | 113 | 102590   | 48.20 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 96.40% |      |
| 50) Toluene-d8            | 8.71   | 98  | 418410   | 48.70 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 97.40% |      |
| 62) 4-Bromofluorobenzene  | 11.13  | 95  | 135658   | 43.45 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 86.90% |      |

## Target Compounds

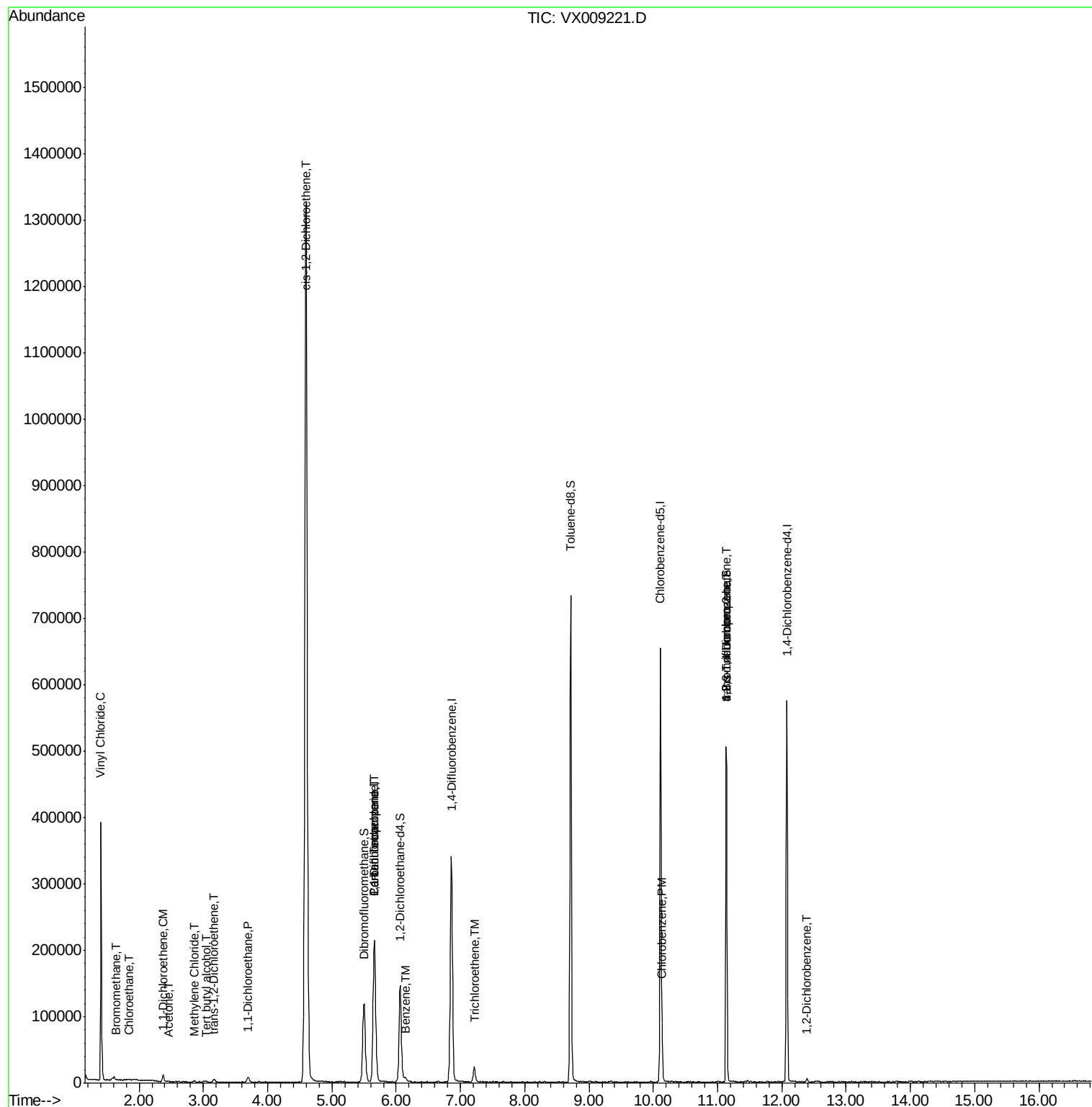
|                                |       |     |        |           |        | Qvalue |
|--------------------------------|-------|-----|--------|-----------|--------|--------|
| 4) Vinyl Chloride              | 1.40  | 62  | 269826 | 105.008   | ug/l   | 99     |
| 5) Bromomethane                | 1.64  | 94  | 460    | 0.298     | ug/l # | 81     |
| 6) Chloroethane                | 1.84  | 64  | 1997   | 1.210     | ug/l # | 43     |
| 11) Tert butyl alcohol         | 3.04  | 59  | 981    | 1.482     | ug/l # | 89     |
| 12) 1,1-Dichloroethene         | 2.37  | 96  | 3586   | 1.825     | ug/l   | 92     |
| 16) Acetone                    | 2.45  | 43  | 406    | 0.264     | ug/l # | 75     |
| 20) Methylene Chloride         | 2.86  | 84  | 700    | 0.282     | ug/l # | 82     |
| 21) trans-1,2-Dichloroethene   | 3.17  | 96  | 1636   | 0.768     | ug/l   | 89     |
| 24) 1,1-Dichloroethane         | 3.70  | 63  | 8544   | 1.880     | ug/l   | 96     |
| 27) cis-1,2-Dichloroethene     | 4.60  | 96  | 831288 | 326.767   | ug/l   | 89     |
| 28) Bromochloromethane         | 5.00  | 49  | 81     | Below Cal | #      | 20     |
| 36) 1,1-Dichloropropene        | 5.67  | 75  | 16410  | 5.216     | ug/l # | 51     |
| 38) Carbon Tetrachloride       | 5.66  | 117 | 20247  | 7.083     | ug/l # | 16     |
| 40) Benzene                    | 6.15  | 78  | 7132   | 0.732     | ug/l   | 96     |
| 44) Trichloroethene            | 7.21  | 130 | 8419   | 3.577     | ug/l   | 99     |
| 65) Chlorobenzene              | 10.14 | 112 | 23824  | 4.101     | ug/l   | 99     |
| 76) 1,2,3-Trichloropropane     | 11.13 | 75  | 68408  | 25.134    | ug/l # | 34     |
| 81) trans-1,4-Dichloro-2-buten | 11.13 | 75  | 68408  | 64.308    | ug/l # | 10     |
| 91) 1,2-Dichlorobenzene        | 12.39 | 146 | 1319   | 0.343     | ug/l   | 91     |

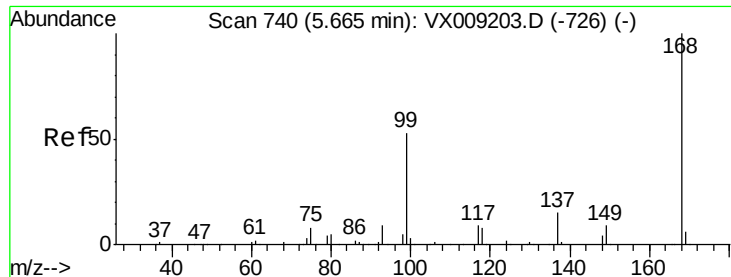
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Tue Apr 30 07:03:50 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: VX009221.D

Acq: 29 Apr 2019 20:39

Instrument :

MSVOA\_X

ClientSampleId :

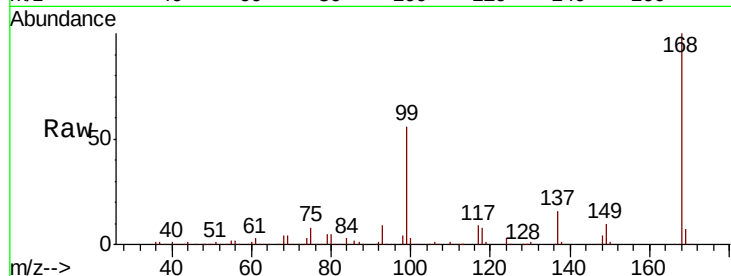
WP021MW346-190425

Tgt Ion: 168 Resp: 209451

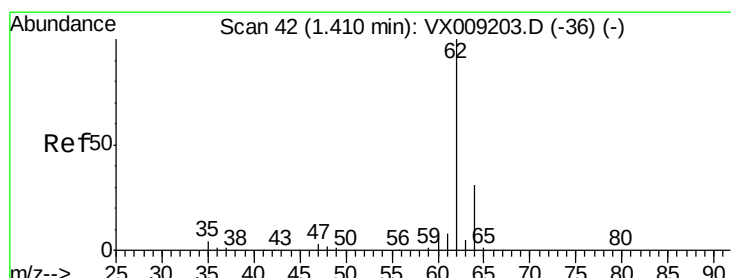
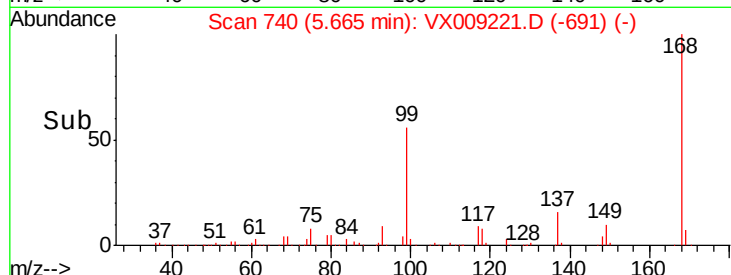
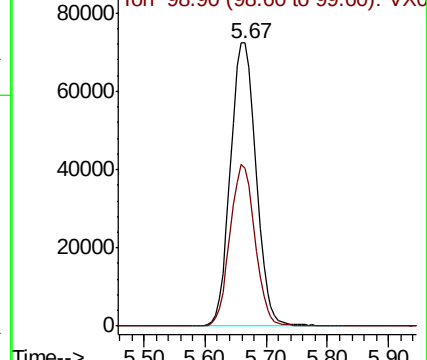
Ion Ratio Lower Upper

168 100

99 55.7 42.3 63.5



Abundance Ion 167.90 (167.60 to 168.60): VX009221.D (-691) (-)



#4

Vinyl Chloride

Concen: 105.008 ug/l

RT: 1.40 min Scan# 41

Delta R.T. -0.01 min

Lab File: VX009221.D

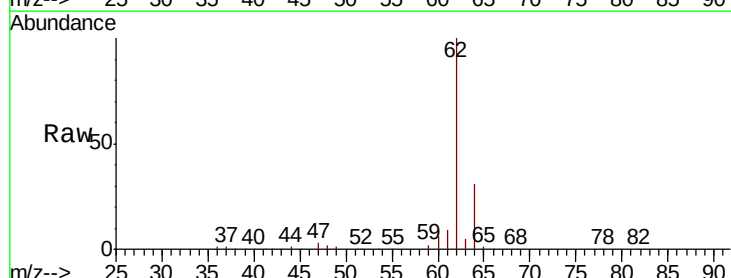
Acq: 29 Apr 2019 20:39

Tgt Ion: 62 Resp: 269826

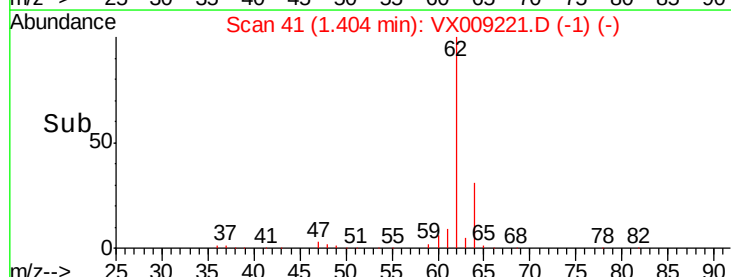
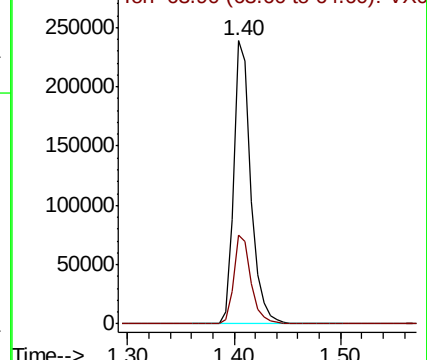
Ion Ratio Lower Upper

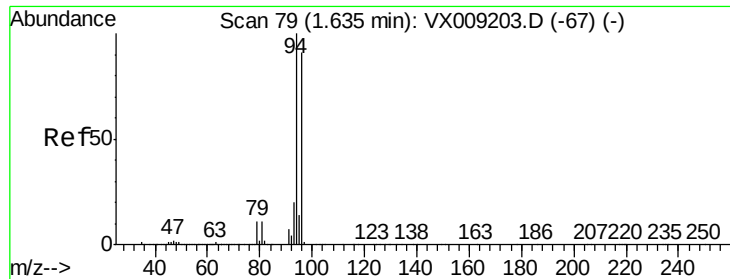
62 100

64 31.3 24.6 36.8



Abundance Ion 61.90 (61.60 to 62.60): VX009221.D (-1) (-)





#5

Bromomethane

Concen: 0.298 ug/l

RT: 1.64 min Scan# 80

Delta R.T. 0.01 min

Lab File: VX009221.D

Acq: 29 Apr 2019 20:39

Instrument :

MSVOA\_X

ClientSampleId :

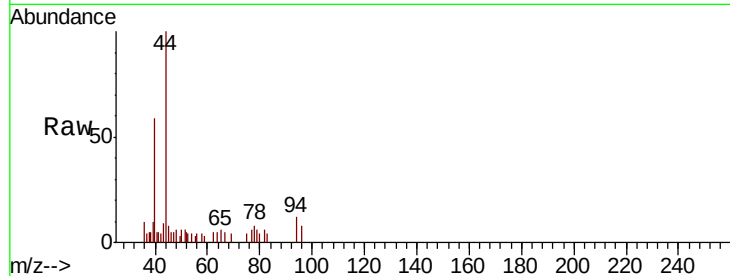
WP021MW346-190425

Tgt Ion: 94 Resp: 460

Ion Ratio Lower Upper

94 100

96 73.0 73.0 109.6#



Abundance Ion 93.90 (93.60 to 94.60): VX0

Ion 95.90 (95.60 to 96.60): VX0

1.64

150

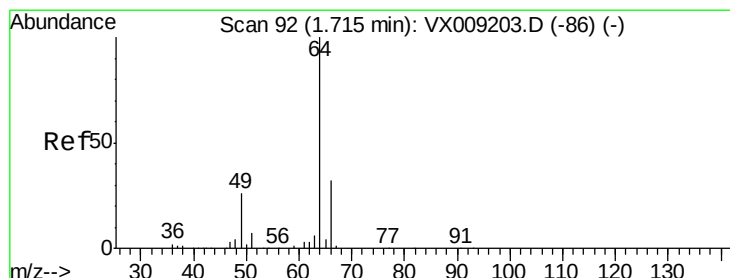
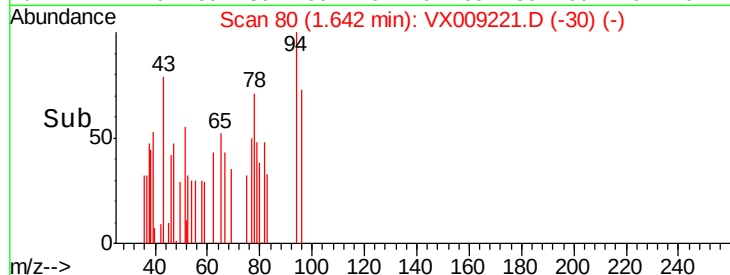
100

50

0

1.55 1.60 1.65 1.70

Time-->



#6

Chloroethane

Concen: 1.210 ug/l

RT: 1.84 min Scan# 113

Delta R.T. 0.13 min

Lab File: VX009221.D

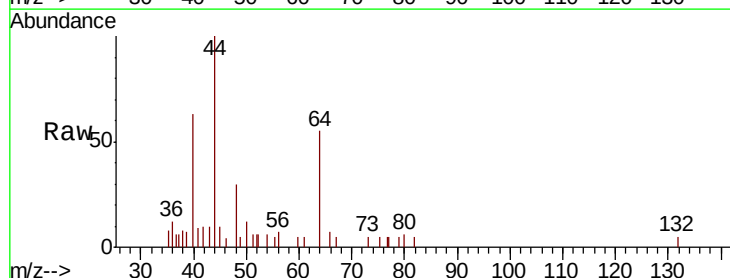
Acq: 29 Apr 2019 20:39

Tgt Ion: 64 Resp: 1997

Ion Ratio Lower Upper

64 100

66 0.0 25.3 37.9#



Abundance Ion 63.90 (63.60 to 64.60): VX0

Ion 65.90 (65.60 to 66.60): VX0

1.84

800

600

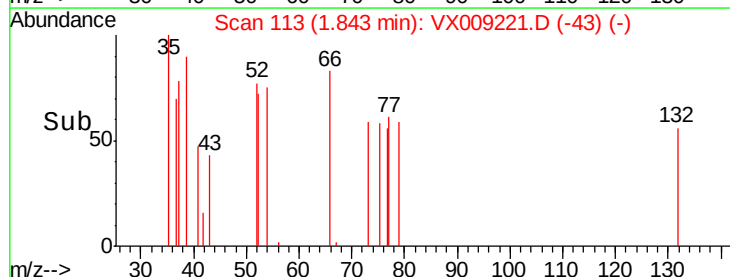
400

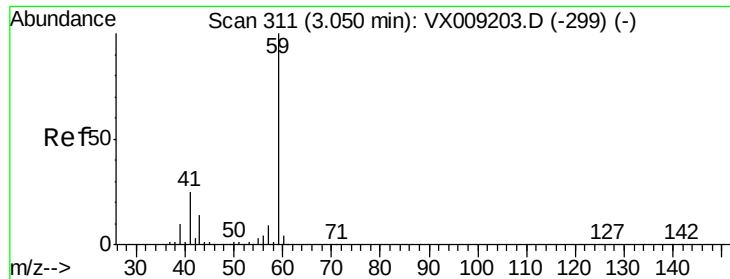
200

0

1.70 1.75 1.80 1.85

Time-->

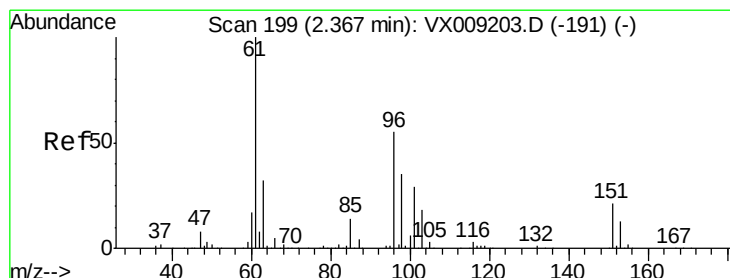
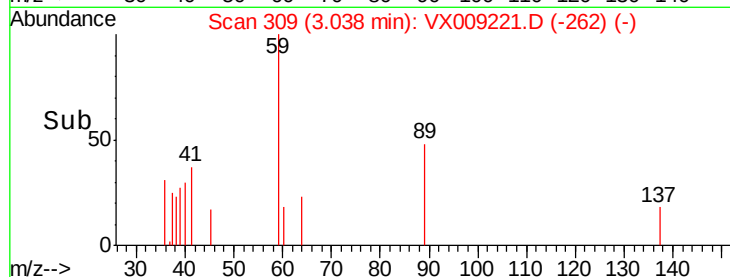
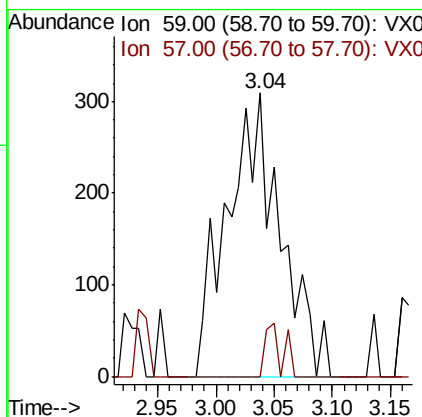
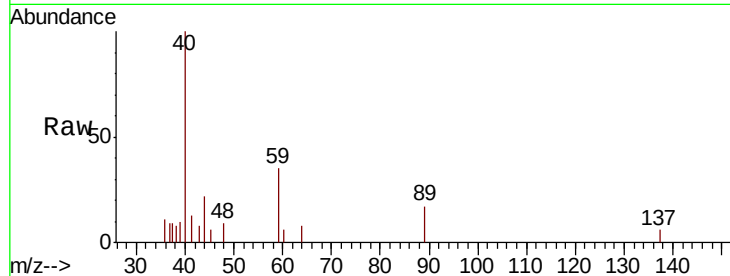




#11  
Tert butyl alcohol  
Concen: 1.482 ug/l  
RT: 3.04 min Scan# 309  
Delta R.T. -0.01 min  
Lab File: VX009221.D  
Acq: 29 Apr 2019 20:39

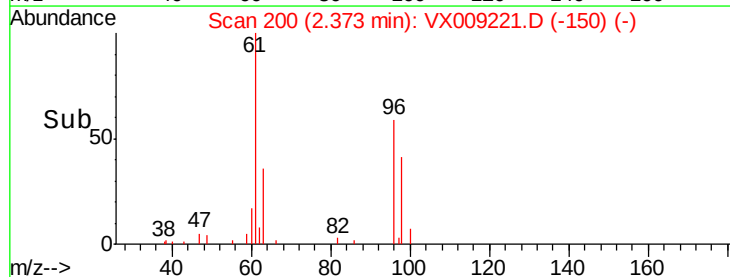
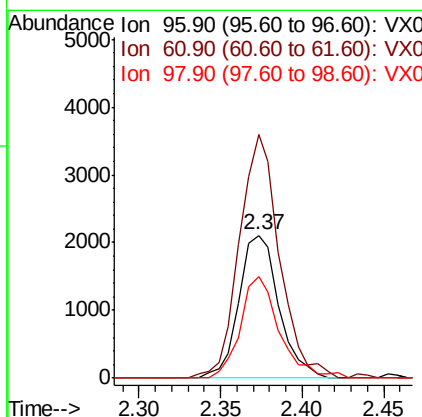
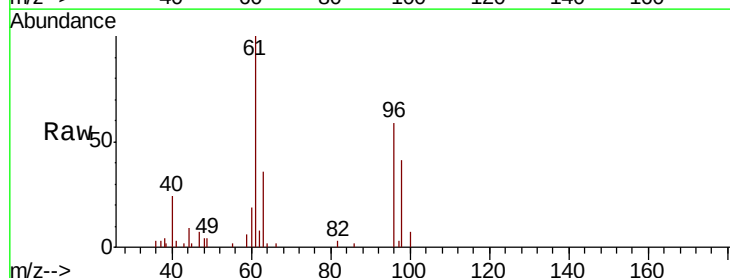
Instrument :  
MSVOA\_X  
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WP021MW346-190425

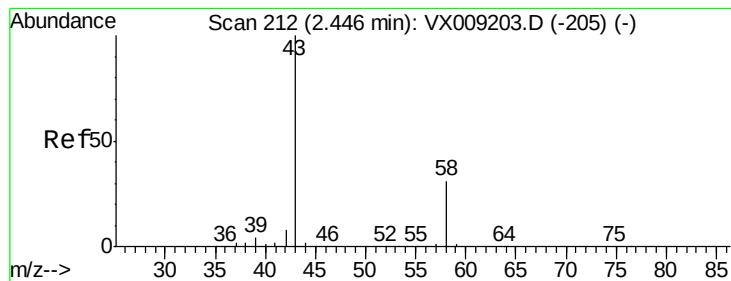
Tgt Ion: 59 Resp: 981  
Ion Ratio Lower Upper  
59 100  
57 6.0 8.2 12.2#



#12  
1,1-Dichloroethene  
Concen: 1.825 ug/l  
RT: 2.37 min Scan# 200  
Delta R.T. 0.01 min  
Lab File: VX009221.D  
Acq: 29 Apr 2019 20:39

Tgt Ion: 96 Resp: 3586  
Ion Ratio Lower Upper  
96 100  
61 170.3 144.3 216.5  
98 70.7 50.3 75.5





#16

Acetone

Concen: 0.264 ug/l

RT: 2.45 min Scan# 212

Delta R.T. 0.00 min

Lab File: VX009221.D

Acq: 29 Apr 2019 20:39

Instrument :

MSVOA\_X

ClientSampleId :

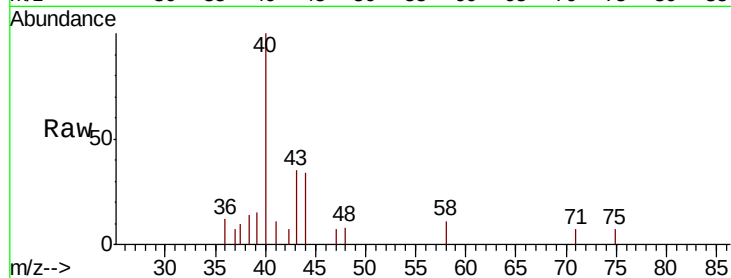
WP021MW346-190425

Tgt Ion: 43 Resp: 406

Ion Ratio Lower Upper

43 100

58 44.6 24.9 37.3#



Abundance Ion 43.00 (42.70 to 43.70): VX0

Ion 58.00 (57.70 to 58.70): VX0

2.45

300

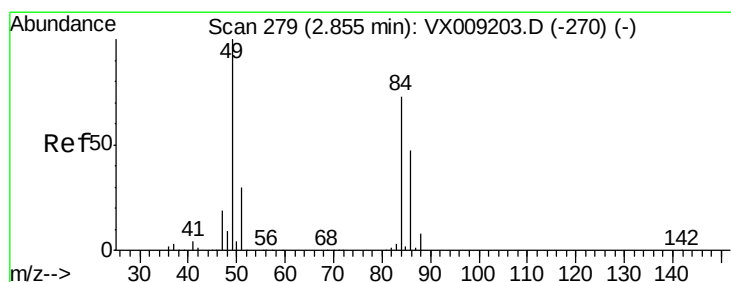
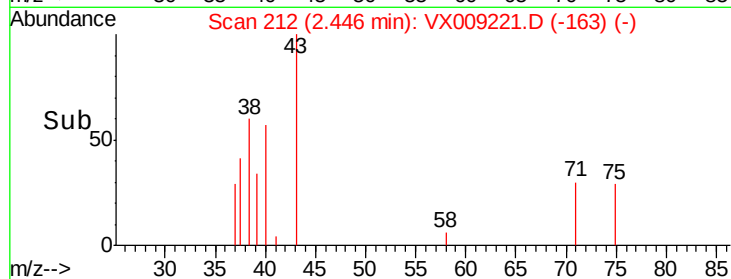
200

100

0

2.40 2.42 2.44 2.46 2.48

Time-->



#20

Methylene Chloride

Concen: 0.282 ug/l

RT: 2.86 min Scan# 280

Delta R.T. 0.01 min

Lab File: VX009221.D

Acq: 29 Apr 2019 20:39

Tgt Ion: 84 Resp: 700

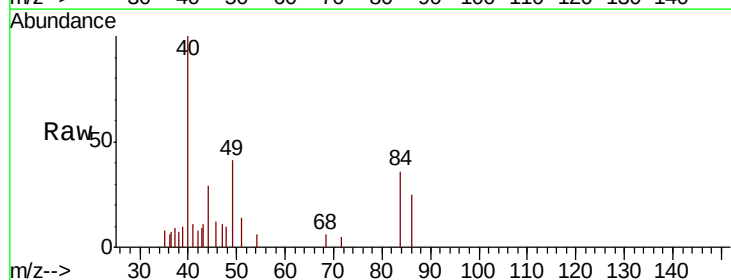
Ion Ratio Lower Upper

84 100

49 114.1 109.9 164.9

51 21.0 32.7 49.1#

86 69.5 52.0 78.0



Abundance Ion 83.90 (83.60 to 84.60): VX0

Ion 48.90 (48.60 to 49.60): VX0

Ion 50.90 (50.60 to 51.60): VX0

Ion 85.90 (85.60 to 86.60): VX0

800

600

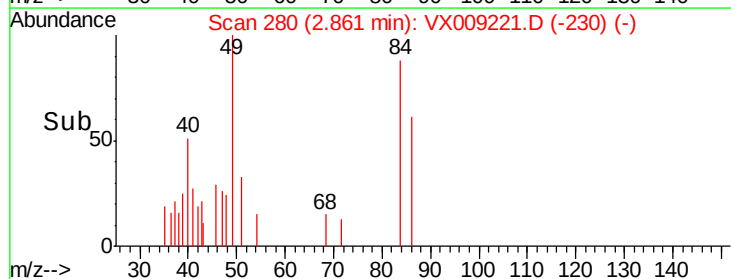
400

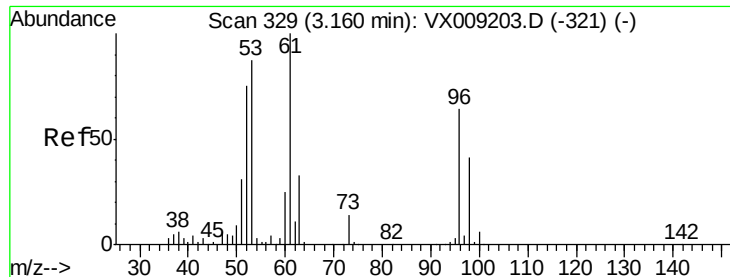
200

0

2.80 2.85 2.90

Time-->





#21

trans-1,2-Dichloroethene

Concen: 0.768 ug/l

RT: 3.17 min Scan# 330

Delta R.T. 0.01 min

Lab File: VX009221.D

Acq: 29 Apr 2019 20:39

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MSVOA\_X

ClientSampleId :

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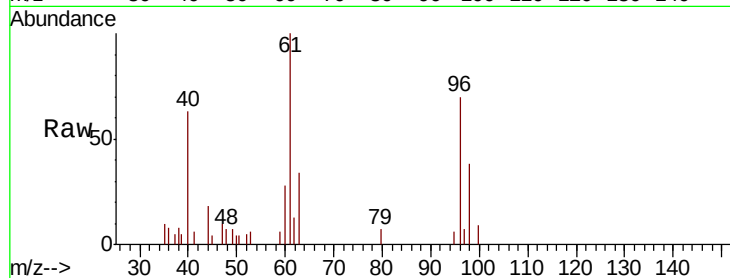
Tgt Ion: 96 Resp: 1636

Ion Ratio Lower Upper

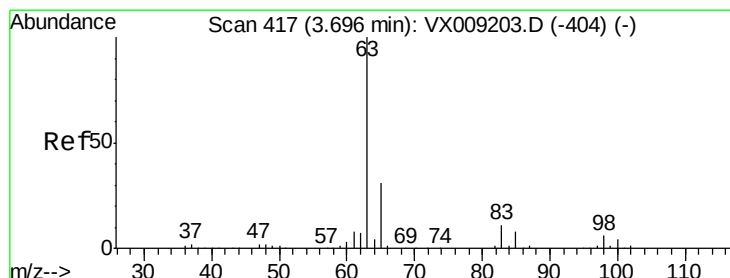
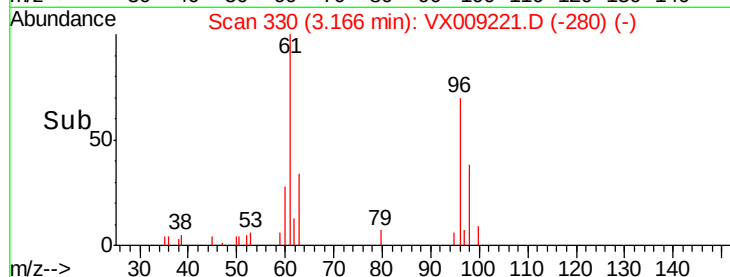
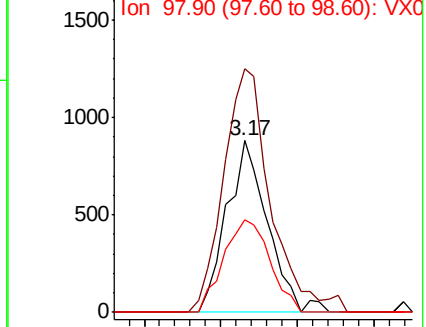
96 100

61 142.0 124.5 186.7

98 53.6 50.4 75.6



Abundance Ion 95.90 (95.60 to 96.60): VX0  
Ion 60.90 (60.60 to 61.60): VX0  
Ion 97.90 (97.60 to 98.60): VX0



#24

1,1-Dichloroethane

Concen: 1.880 ug/l

RT: 3.70 min Scan# 417

Delta R.T. 0.00 min

Lab File: VX009221.D

Acq: 29 Apr 2019 20:39

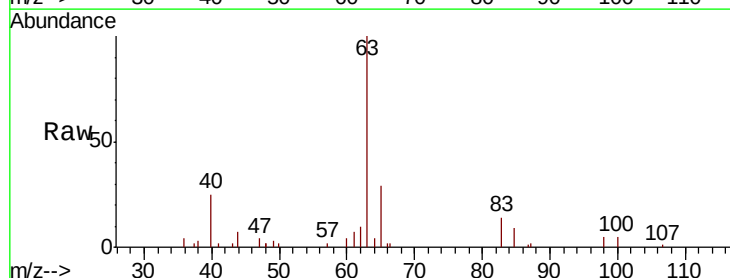
Tgt Ion: 63 Resp: 8544

Ion Ratio Lower Upper

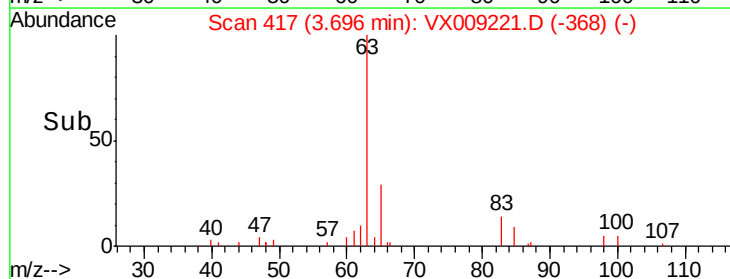
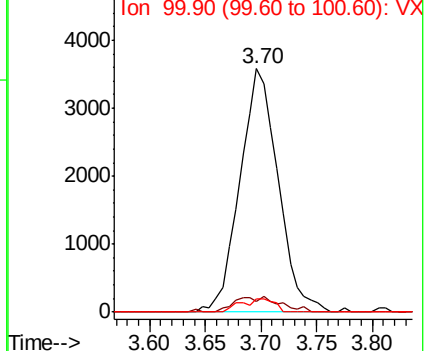
63 100

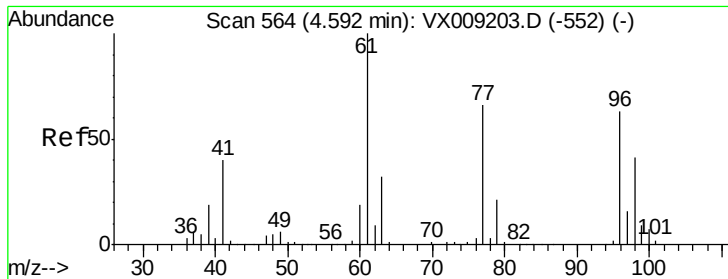
98 4.6 3.0 9.2

100 5.2 2.0 6.0



Abundance Ion 62.90 (62.60 to 63.60): VX0  
Ion 97.90 (97.60 to 98.60): VX0  
Ion 99.90 (99.60 to 100.60): VX0



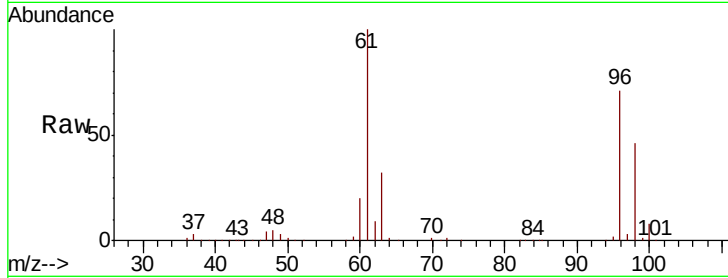


#27

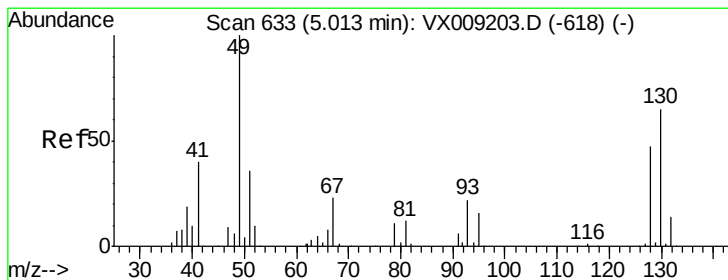
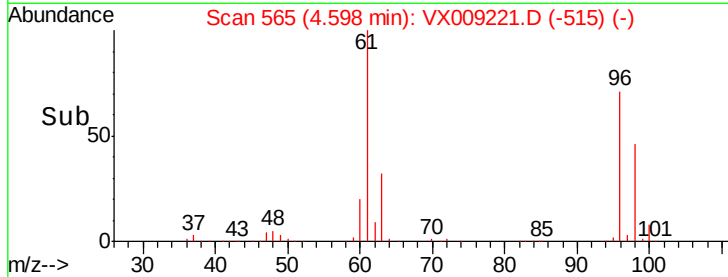
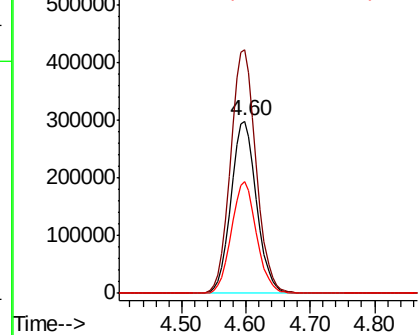
cis-1,2-Dichloroethene  
 Concen: 326.767 ug/l  
 RT: 4.60 min Scan# 565  
 Delta R.T. 0.01 min  
 Lab File: VX009221.D  
 Acq: 29 Apr 2019 20:39

Instrument :  
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Tgt Ion: 96 Resp: 831288  
 Ion Ratio Lower Upper  
 96 100  
 61 142.0 0.0 324.0  
 98 64.3 0.0 130.4



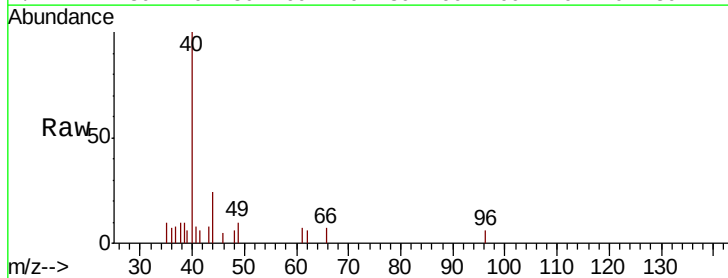
Abundance Ion 95.90 (95.60 to 96.60): VX0  
 Ion 60.90 (60.60 to 61.60): VX0  
 Ion 97.90 (97.60 to 98.60): VX0



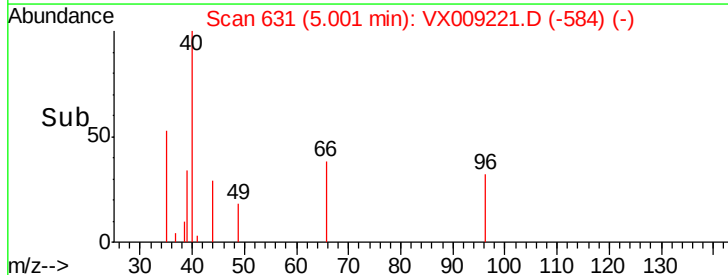
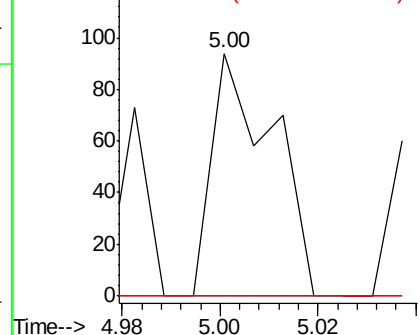
#28

Bromochloromethane  
 Concen: Below Cal  
 RT: 5.00 min Scan# 631  
 Delta R.T. -0.01 min  
 Lab File: VX009221.D  
 Acq: 29 Apr 2019 20:39

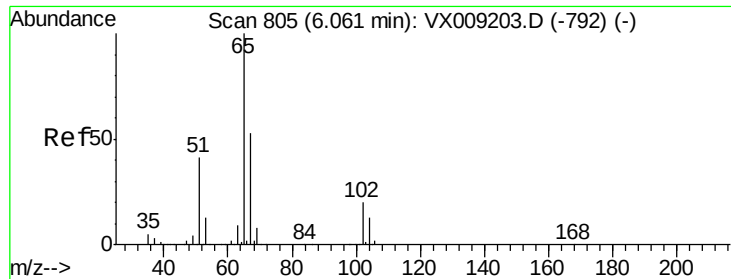
Tgt Ion: 49 Resp: 81  
 Ion Ratio Lower Upper  
 49 100  
 129 0.0 0.0 3.8  
 130 0.0 51.2 76.8#



Abundance Ion 48.90 (48.60 to 49.60): VX0  
 Ion 128.80 (128.50 to 129.50): V  
 Ion 129.80 (129.50 to 130.50): V



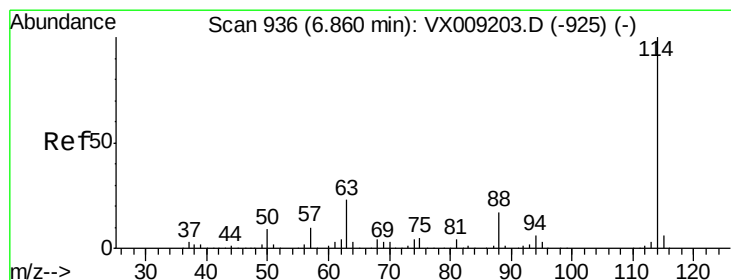
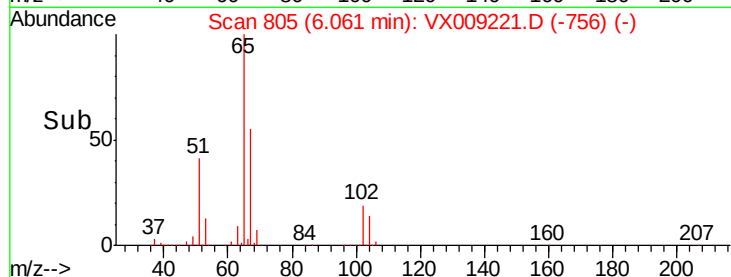
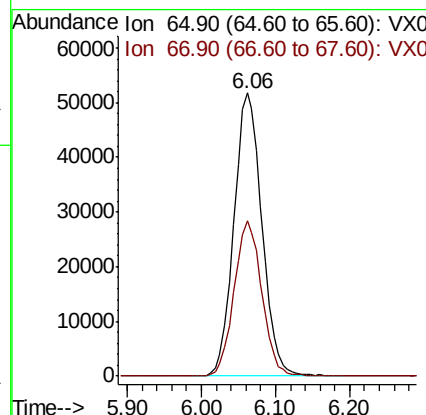
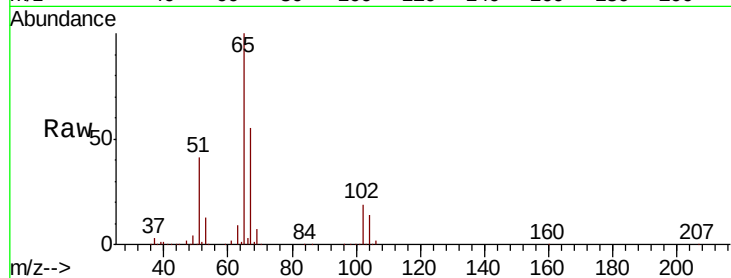




#33  
 1,2-Dichloroethane-d4  
 Concen: 47.686 ug/l  
 RT: 6.06 min Scan# 805  
 Delta R.T. 0.00 min  
 Lab File: VX009221.D  
 Acq: 29 Apr 2019 20:39

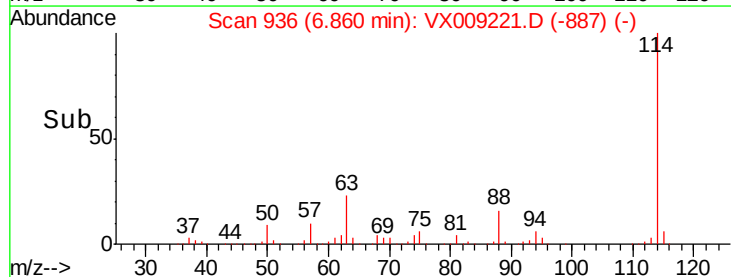
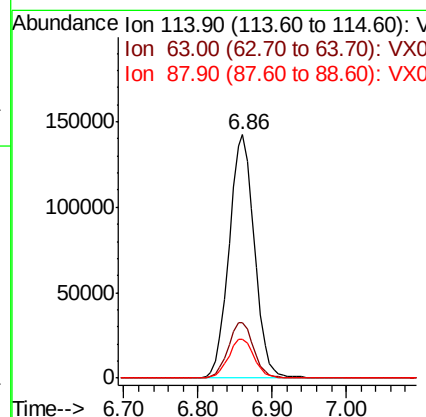
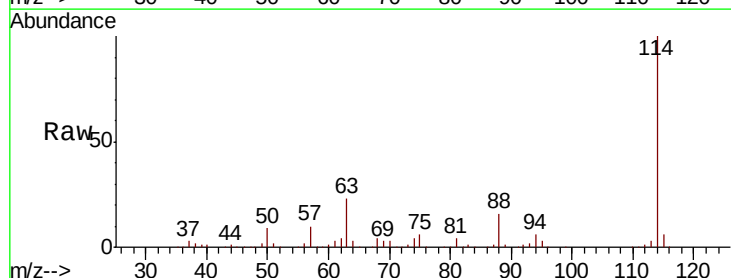
Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 WP021MW346-190425

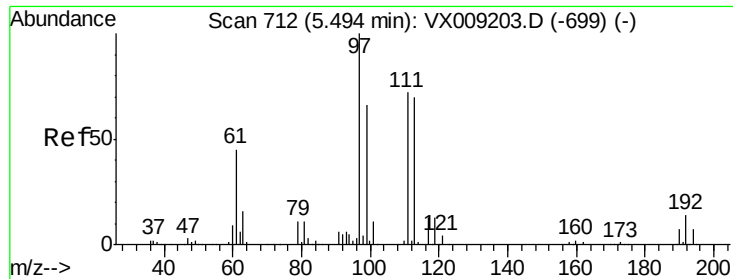
Tgt Ion: 65 Resp: 136346  
 Ion Ratio Lower Upper  
 65 100  
 67 54.3 0.0 106.6



#34  
 1,4-Difluorobenzene  
 Concen: 50.000 ug/l  
 RT: 6.86 min Scan# 936  
 Delta R.T. 0.00 min  
 Lab File: VX009221.D  
 Acq: 29 Apr 2019 20:39

Tgt Ion: 114 Resp: 338548  
 Ion Ratio Lower Upper  
 114 100  
 63 22.8 0.0 45.6  
 88 16.0 0.0 33.2

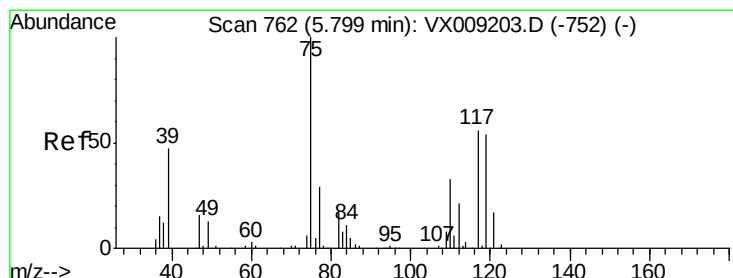
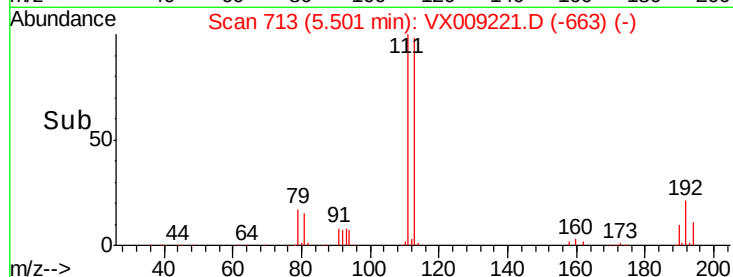
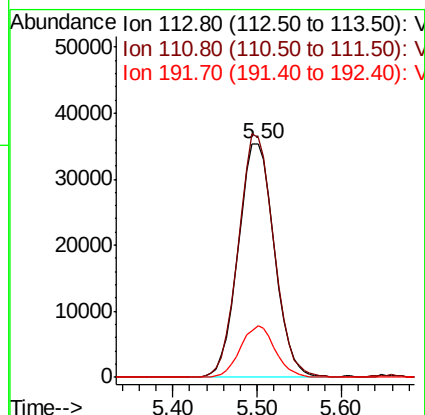
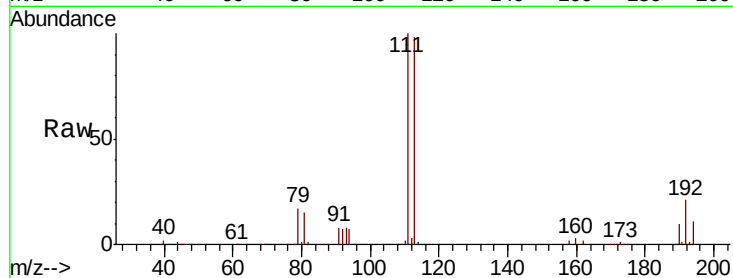




#35  
 Dibromofluoromethane  
 Concen: 48.204 ug/l  
 RT: 5.50 min Scan# 713  
 Delta R.T. 0.01 min  
 Lab File: VX009221.D  
 Acq: 29 Apr 2019 20:39

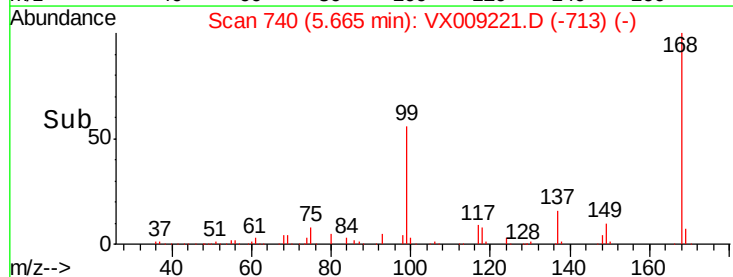
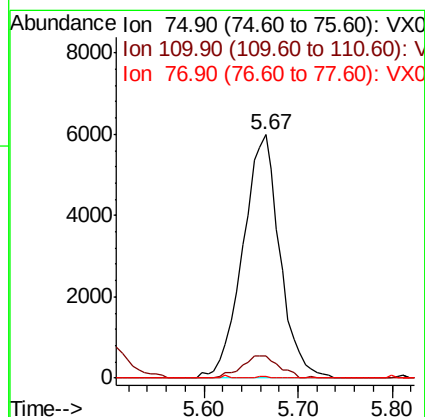
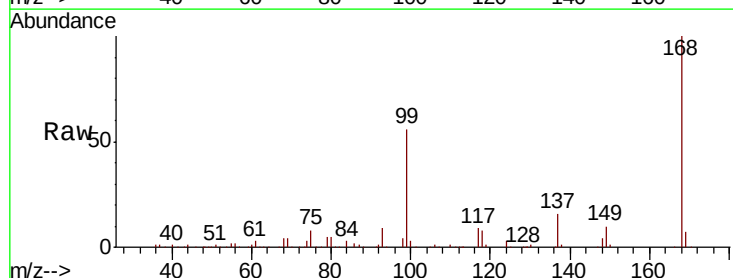
Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 WP021MW346-190425

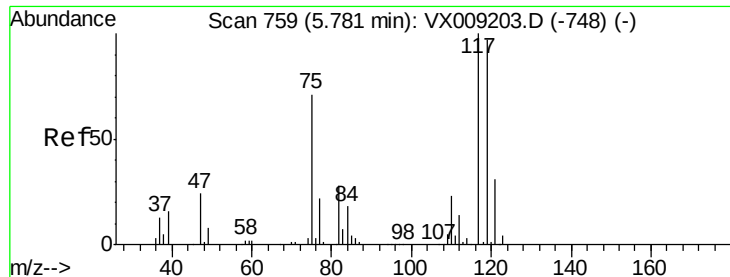
Tgt Ion:113 Resp: 102590  
 Ion Ratio Lower Upper  
 113 100  
 111 102.0 82.8 124.2  
 192 21.2 17.0 25.6



#36  
 1,1-Dichloropropene  
 Concen: 5.216 ug/l  
 RT: 5.67 min Scan# 740  
 Delta R.T. -0.13 min  
 Lab File: VX009221.D  
 Acq: 29 Apr 2019 20:39

Tgt Ion: 75 Resp: 16410  
 Ion Ratio Lower Upper  
 75 100  
 110 9.2 16.9 50.6#  
 77 0.2 24.8 37.2#

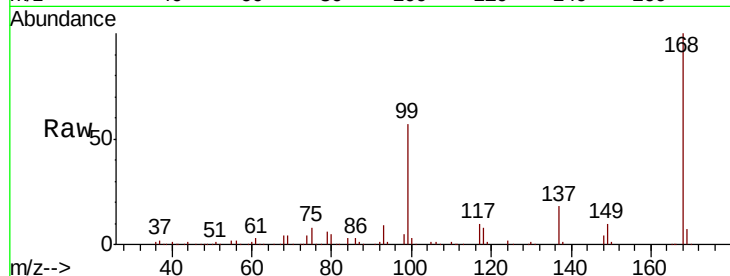




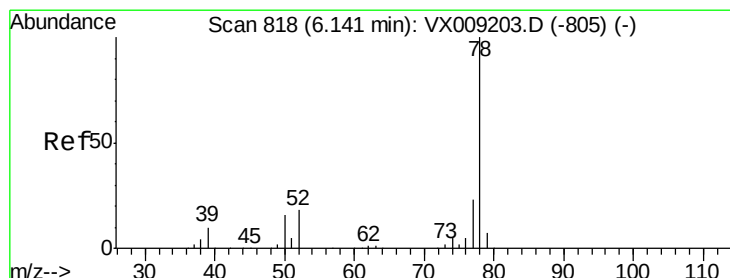
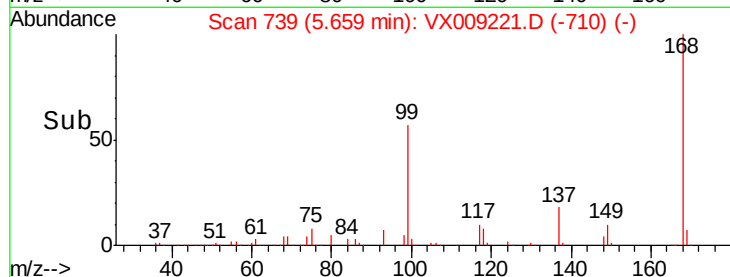
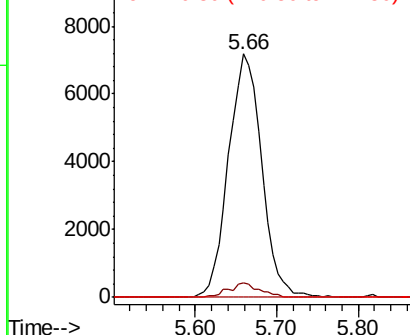
#38  
Carbon Tetrachloride  
Concen: 7.083 ug/l  
RT: 5.66 min Scan# 739  
Delta R.T. -0.12 min  
Lab File: VX009221.D  
Acq: 29 Apr 2019 20:39

Instrument :  
MSVOA\_X  
ClientSampleId :  
WP021MW346-190425

Tgt Ion:117 Resp: 20247  
Ion Ratio Lower Upper  
117 100  
119 5.8 77.5 116.3#  
121 0.0 24.7 37.1#

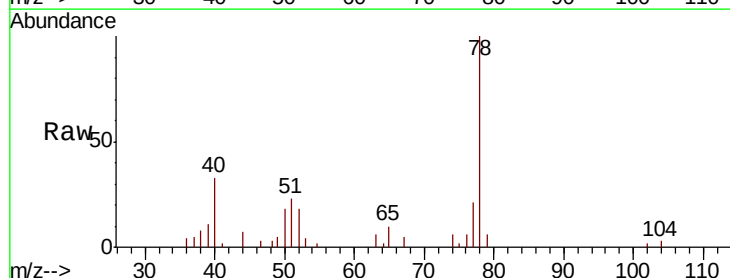


Abundance Ion 116.80 (116.50 to 117.50): V  
Ion 118.80 (118.50 to 119.50): V  
Ion 120.80 (120.50 to 121.50): V

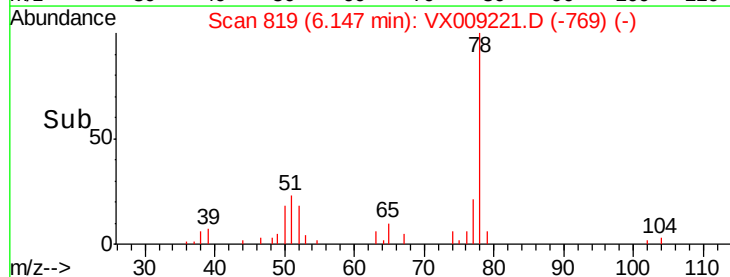
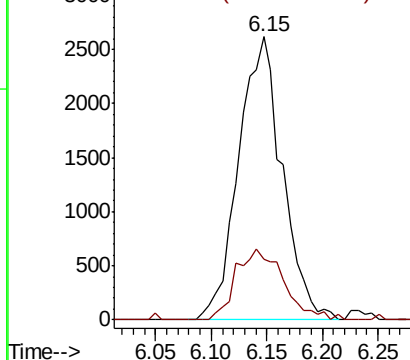


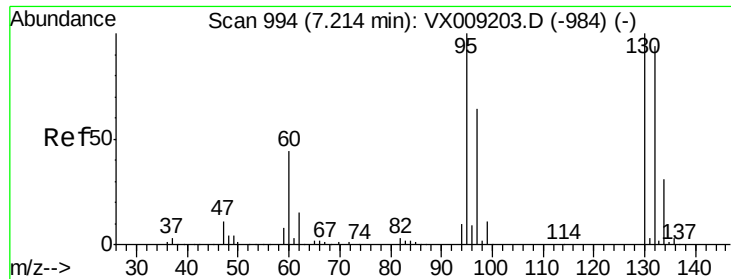
#40  
Benzene  
Concen: 0.732 ug/l  
RT: 6.15 min Scan# 819  
Delta R.T. 0.01 min  
Lab File: VX009221.D  
Acq: 29 Apr 2019 20:39

Tgt Ion: 78 Resp: 7132  
Ion Ratio Lower Upper  
78 100  
77 21.3 18.8 28.2



Abundance Ion 78.00 (77.70 to 78.70): VX0  
Ion 77.00 (76.70 to 77.70): VX0

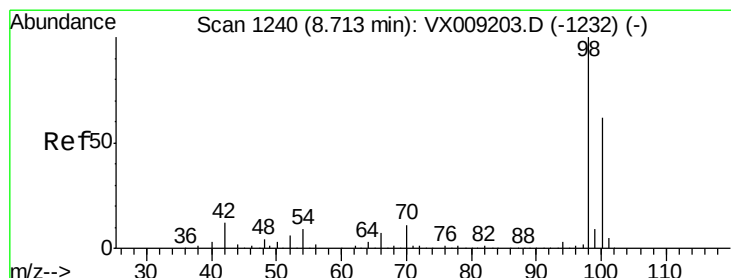
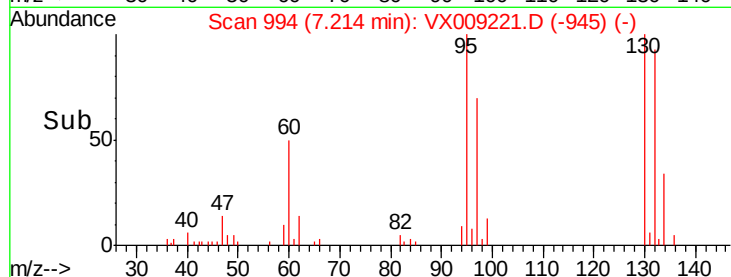
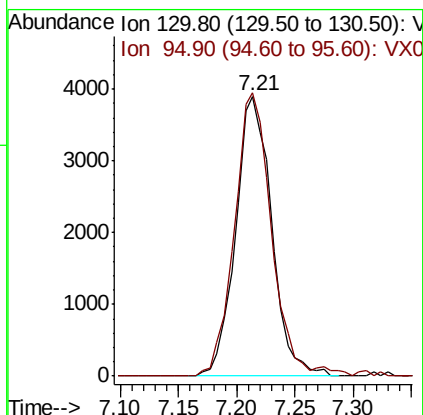
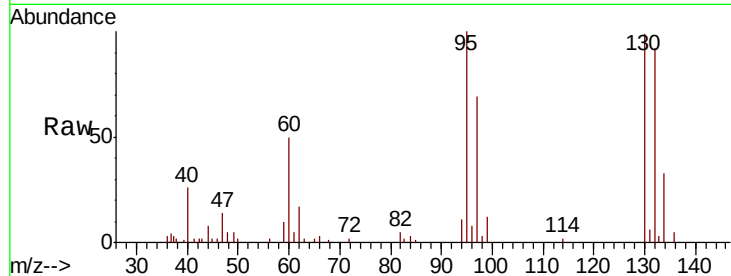




#44  
 Trichloroethene  
 Concen: 3.577 ug/l  
 RT: 7.21 min Scan# 994  
 Delta R.T. 0.00 min  
 Lab File: VX009221.D  
 Acq: 29 Apr 2019 20:39

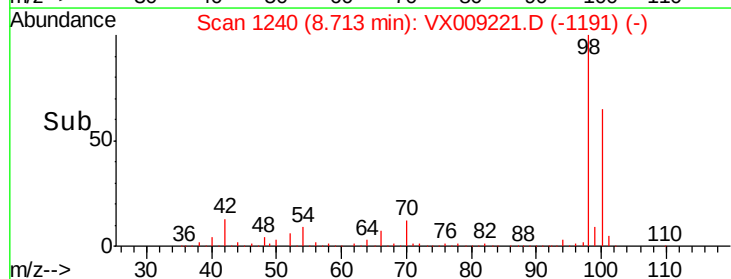
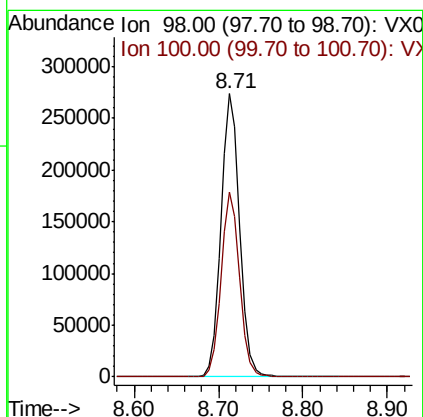
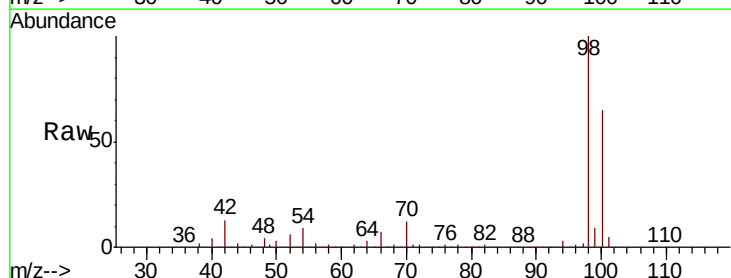
Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 WP021MW346-190425

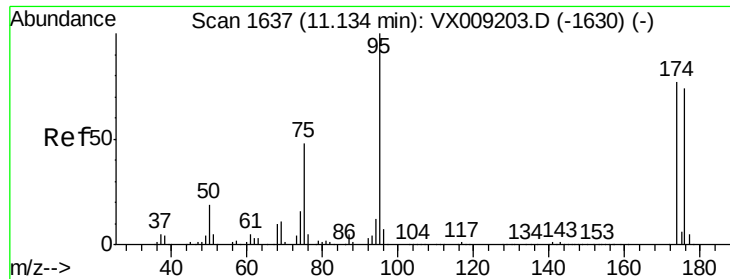
Tgt Ion:130 Resp: 8419  
 Ion Ratio Lower Upper  
 130 100  
 95 101.1 0.0 199.2



#50  
 Toluene-d8  
 Concen: 48.696 ug/l  
 RT: 8.71 min Scan# 1240  
 Delta R.T. 0.00 min  
 Lab File: VX009221.D  
 Acq: 29 Apr 2019 20:39

Tgt Ion: 98 Resp: 418410  
 Ion Ratio Lower Upper  
 98 100  
 100 64.7 51.2 76.8





#62

4-Bromofluorobenzene

Concen: 43.451 ug/l

RT: 11.13 min Scan# 1637

Delta R.T. 0.00 min

Lab File: VX009221.D

Acq: 29 Apr 2019 20:39

Instrument :

MSVOA\_X

ClientSampleId :

WP021MW346-190425

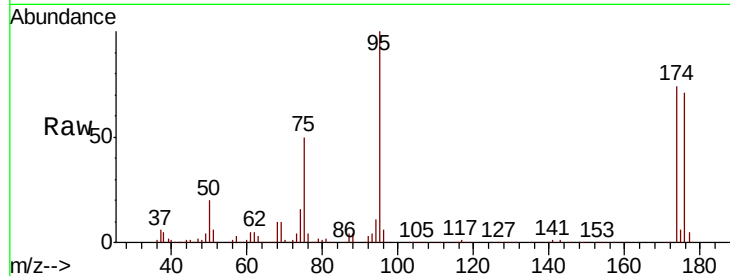
Tgt Ion: 95 Resp: 135658

Ion Ratio Lower Upper

95 100

174 81.3 0.0 161.6

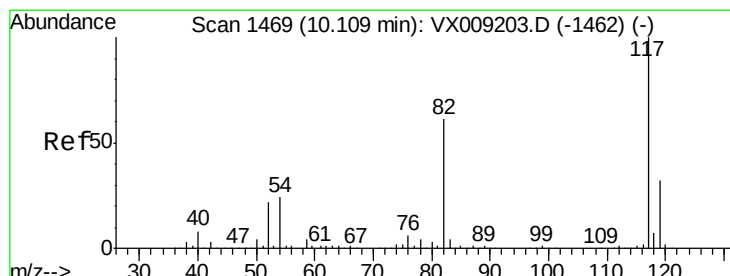
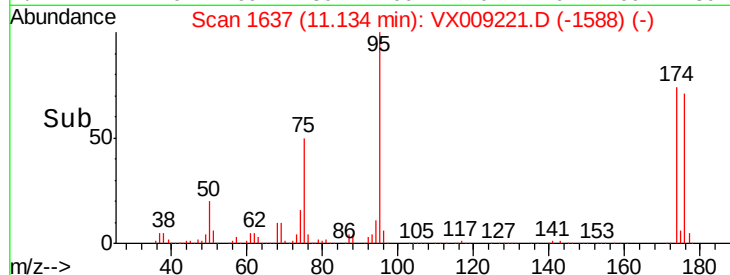
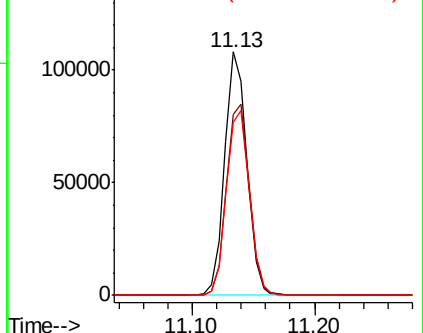
176 78.9 0.0 159.2



Abundance Ion 94.90 (94.60 to 95.60): VX009221.D (-1588) (-)

Ion 173.80 (173.50 to 174.50): VX009221.D (-1588) (-)

Ion 175.80 (175.50 to 176.50): VX009221.D (-1588) (-)



#63

Chlorobenzene-d5

Concen: 50.000 ug/l

RT: 10.11 min Scan# 1469

Delta R.T. 0.00 min

Lab File: VX009221.D

Acq: 29 Apr 2019 20:39

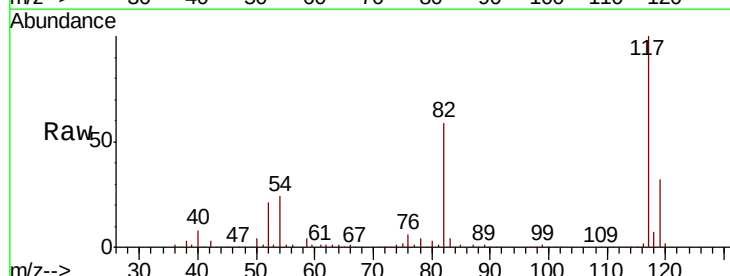
Tgt Ion: 117 Resp: 290429

Ion Ratio Lower Upper

117 100

82 59.3 48.8 73.2

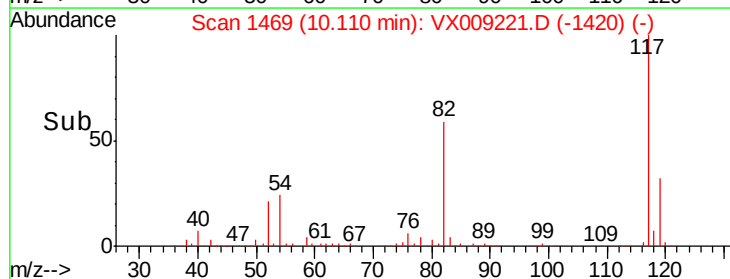
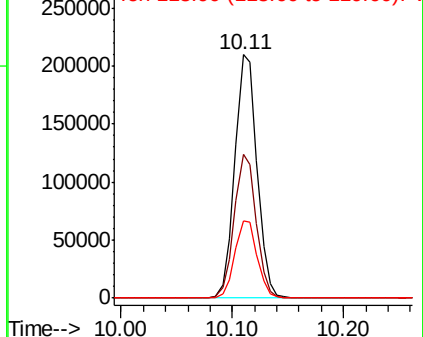
119 32.0 25.8 38.6

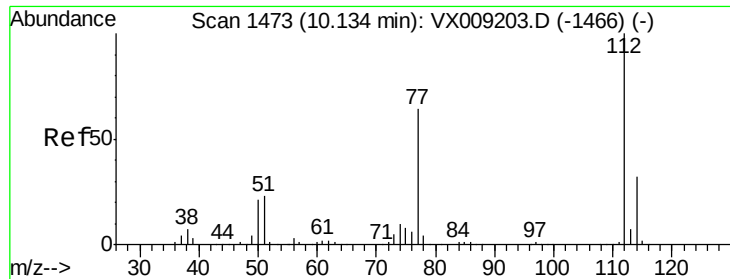


Abundance Ion 116.90 (116.60 to 117.60): VX009221.D (-1420) (-)

Ion 82.00 (81.70 to 82.70): VX009221.D (-1420) (-)

Ion 118.90 (118.60 to 119.60): VX009221.D (-1420) (-)

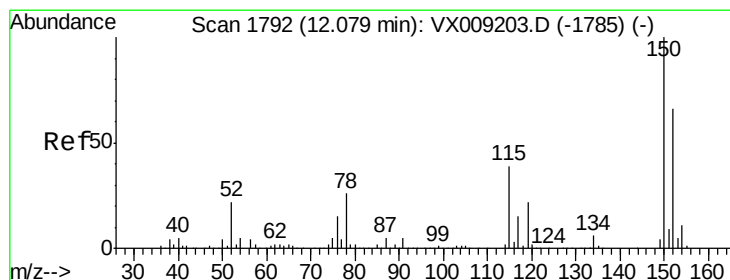
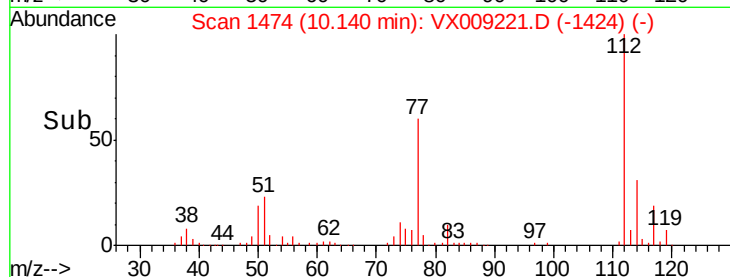
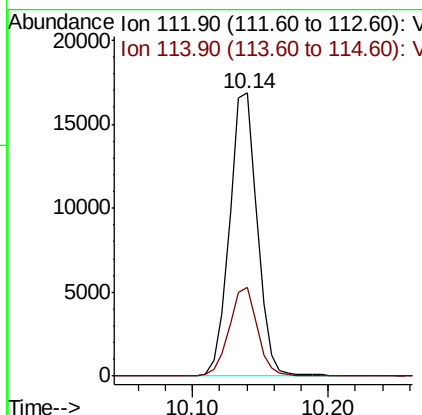
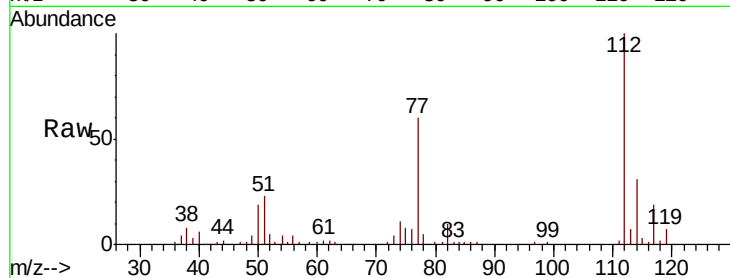




#65  
Chlorobenzene  
Concen: 4.101 ug/l  
RT: 10.14 min Scan# 1474  
Delta R.T. 0.01 min  
Lab File: VX009221.D  
Acq: 29 Apr 2019 20:39

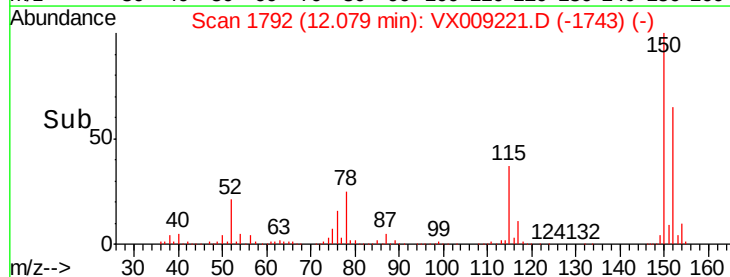
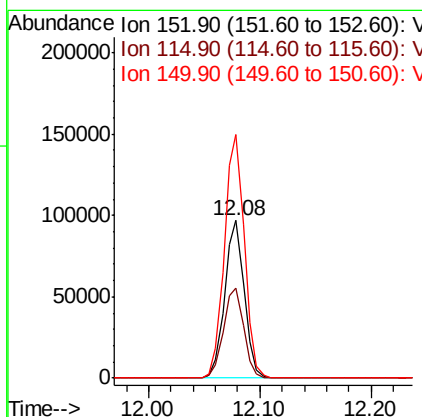
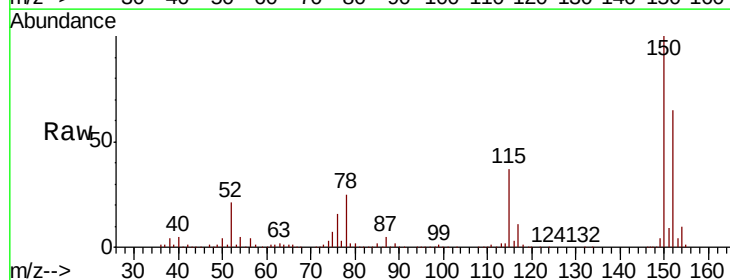
Instrument :  
MSVOA\_X  
ClientSampleId :  
WP021MW346-190425

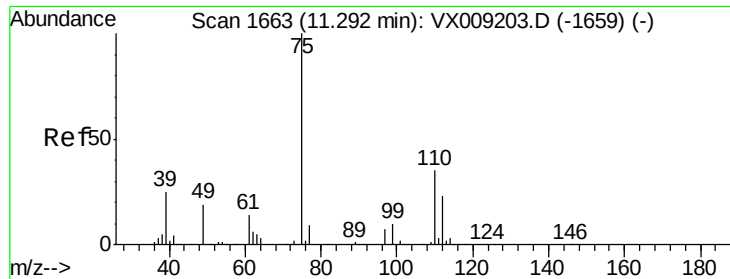
Tgt Ion:112 Resp: 23824  
Ion Ratio Lower Upper  
112 100  
114 31.4 25.5 38.3



#72  
1,4-Dichlorobenzene-d4  
Concen: 50.000 ug/l  
RT: 12.08 min Scan# 1792  
Delta R.T. 0.00 min  
Lab File: VX009221.D  
Acq: 29 Apr 2019 20:39

Tgt Ion:152 Resp: 117335  
Ion Ratio Lower Upper  
152 100  
115 59.4 41.2 123.6  
150 157.9 0.0 346.4





#76

1,2,3-Trichloropropane

Concen: 25.134 ug/l

RT: 11.13 min Scan# 1637

Delta R.T. -0.16 min

Lab File: VX009221.D

Acq: 29 Apr 2019 20:39

Instrument :

MSVOA\_X

ClientSampleId :

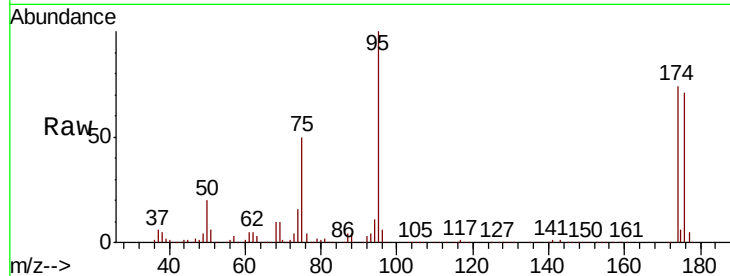
WP021MW346-190425

Tgt Ion: 75 Resp: 68408

Ion Ratio Lower Upper

75 100

77 1.3 22.1 66.1#



Abundance Ion 74.90 (74.60 to 75.60): VX0

Ion 77.00 (76.70 to 77.70): VX0

11.13

60000

50000

40000

30000

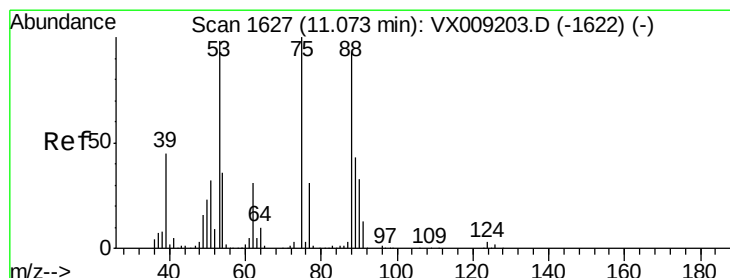
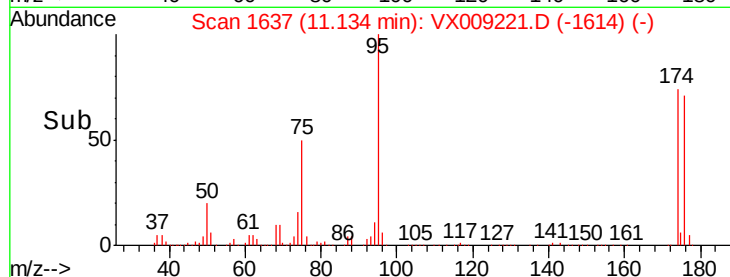
20000

10000

0

Time-->

11.10 11.20



#81

trans-1,4-Dichloro-2-butene

Concen: 64.308 ug/l

RT: 11.13 min Scan# 1637

Delta R.T. 0.06 min

Lab File: VX009221.D

Acq: 29 Apr 2019 20:39

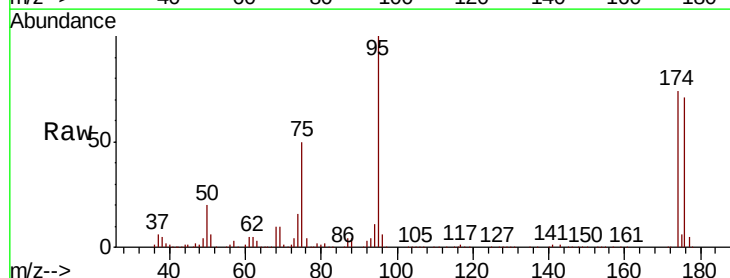
Tgt Ion: 75 Resp: 68408

Ion Ratio Lower Upper

75 100

53 0.0 79.0 118.6#

89 0.0 34.7 52.1#



Abundance Ion 74.90 (74.60 to 75.60): VX0

Ion 53.00 (52.70 to 53.70): VX0

Ion 88.90 (88.60 to 89.60): VX0

60000

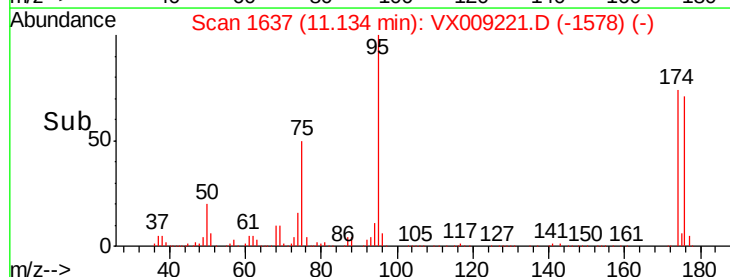
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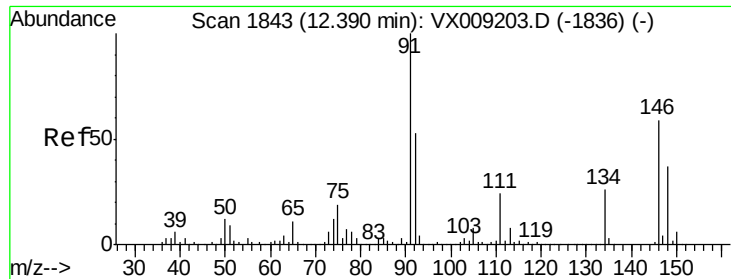
20000

0

Time-->

11.10 11.20





#91  
 1,2-Dichlorobenzene  
 Concen: 0.343 ug/l  
 RT: 12.39 min Scan# 1843  
 Delta R.T. 0.00 min  
 Lab File: VX009221.D  
 Acq: 29 Apr 2019 20:39

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 WP021MW346-190425

Tgt Ion:146 Resp: 1319  
 Ion Ratio Lower Upper  
 146 100  
 111 52.3 20.8 62.4  
 148 67.3 31.9 95.9

