

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\WX092818\  
 Data File : VX004851.D  
 Acq On : 29 Sep 2018 05:25  
 Operator : JC/MD  
 Sample : J5134-15  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 43 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 SA-TW503-3438

Quant Time: Sep 29 06:39:57 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_X\METHOD\82X092618W.M  
 Quant Title : SW846 8260  
 QLast Update : Wed Sep 26 14:17:02 2018  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 5.67  | 168  | 228427   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 6.86  | 114  | 372294   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 10.12 | 117  | 368631   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 12.08 | 152  | 205830   | 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   | 181506   | 55.62  | ug/l    | 0.00     |
| Spiked Amount               |       |      |          | 50.000 |         |          |
|                             |       |      | Recovery | =      | 111.24% |          |
| 35) Dibromofluoromethane    | 5.50  | 113  | 150619   | 47.74  | ug/l    | 0.00     |
| Spiked Amount               |       |      |          | 50.000 |         |          |
|                             |       |      | Recovery | =      | 95.48%  |          |
| 50) Toluene-d8              | 8.71  | 98   | 547061   | 52.15  | ug/l    | 0.00     |
| Spiked Amount               |       |      |          | 50.000 |         |          |
|                             |       |      | Recovery | =      | 104.30% |          |
| 62) 4-Bromofluorobenzene    | 11.14 | 95   | 196493   | 52.00  | ug/l    | 0.00     |
| Spiked Amount               |       |      |          | 50.000 |         |          |
|                             |       |      | Recovery | =      | 104.00% |          |

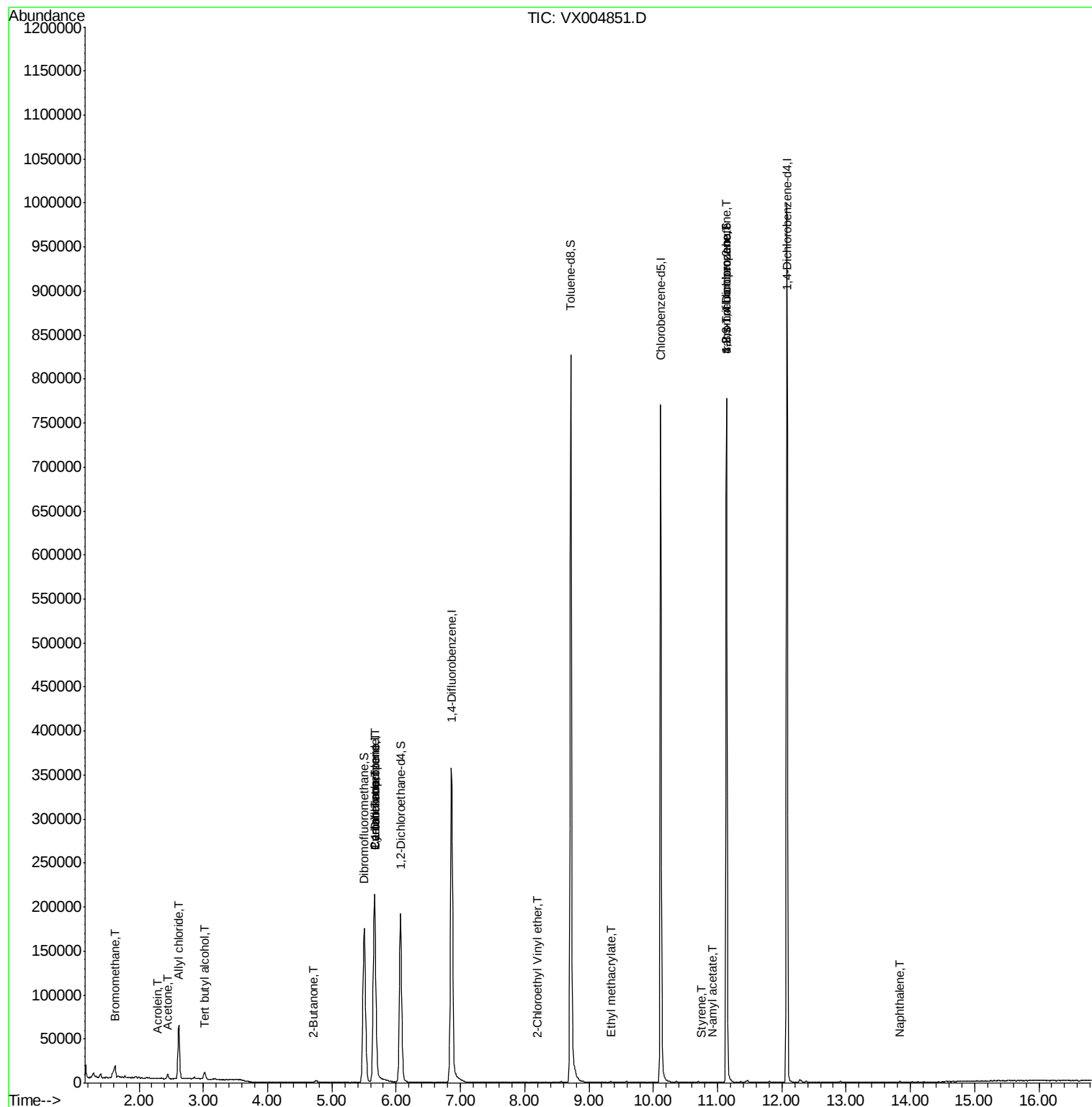
| Target Compounds               | R.T.  | QIon | Response | Conc      | Units  | Qvalue |
|--------------------------------|-------|------|----------|-----------|--------|--------|
| 5) Bromomethane                | 1.64  | 94   | 685      | 0.326     | ug/l   | 93     |
| 6) Chloroethane                | 1.66  | 64   | 3557     | Below Cal | #      | 56     |
| 11) Tert butyl alcohol         | 3.03  | 59   | 5218     | 5.719     | ug/l # | 75     |
| 13) Acrolein                   | 2.29  | 56   | 213      | 0.328     | ug/l   | 93     |
| 14) Allyl chloride             | 2.61  | 41   | 6086     | 1.127     | ug/l # | 59     |
| 16) Acetone                    | 2.45  | 43   | 5652     | 2.967     | ug/l   | 97     |
| 20) Methylene Chloride         | 2.85  | 84   | 937      | Below Cal |        | 92     |
| 25) 2-Butanone                 | 4.70  | 43   | 754      | 0.269     | ug/l   | 93     |
| 31) Cyclohexane                | 5.66  | 56   | 4394     | 1.058     | ug/l # | 1      |
| 36) 1,1-Dichloropropene        | 5.66  | 75   | 15594    | 3.622     | ug/l # | 46     |
| 38) Carbon Tetrachloride       | 5.66  | 117  | 20484    | 4.527     | ug/l # | 16     |
| 56) Ethyl methacrylate         | 9.35  | 69   | 49       | 2.871     | ug/l # | 24     |
| 58) 2-Chloroethyl Vinyl ether  | 8.20  | 63   | 19       | 14.249    | ug/l # | 45     |
| 70) Styrene                    | 10.74 | 104  | 27       | 2.143     | ug/l # | 27     |
| 74) N-amyl acetate             | 10.91 | 43   | 135      | 1.766     | ug/l # | 28     |
| 76) 1,2,3-Trichloropropane     | 11.14 | 75   | 98396    | 21.328    | ug/l # | 37     |
| 80) 1,3,5-Trimethylbenzene     | 11.51 | 105  | 270      | Below Cal |        | 84     |
| 81) trans-1,4-Dichloro-2-buten | 11.14 | 75   | 98396    | 57.846    | ug/l # | 10     |
| 84) 1,2,4-Trimethylbenzene     | 11.80 | 105  | 813      | Below Cal |        | 99     |
| 95) Naphthalene                | 13.83 | 128  | 433      | 0.744     | ug/l # | 77     |

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

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Response via : Initial Calibration

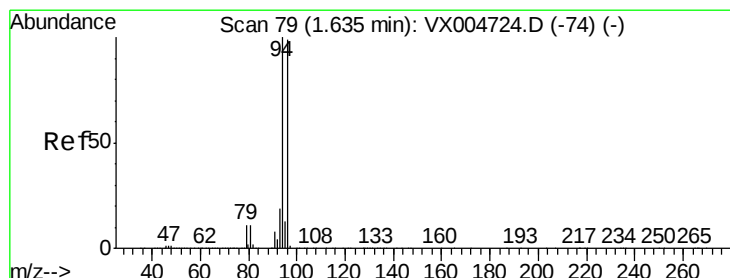
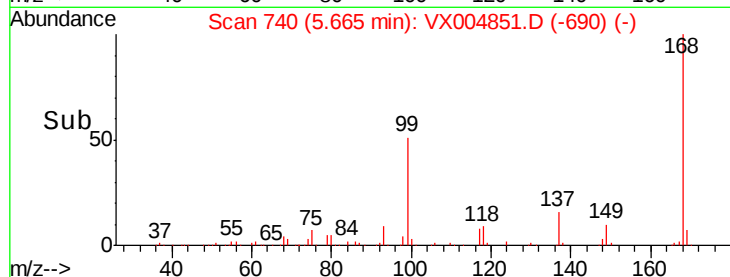
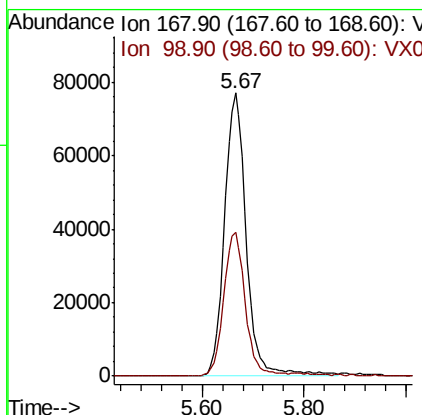
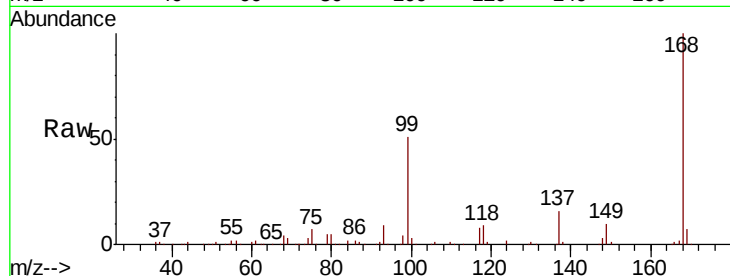




#1  
Pentafluorobenzene  
Concen: 50.000 ug/l  
RT: 5.67 min Scan# 740  
Delta R.T. 0.01 min  
Lab File: VX004851.D  
Acq: 29 Sep 2018 05:25

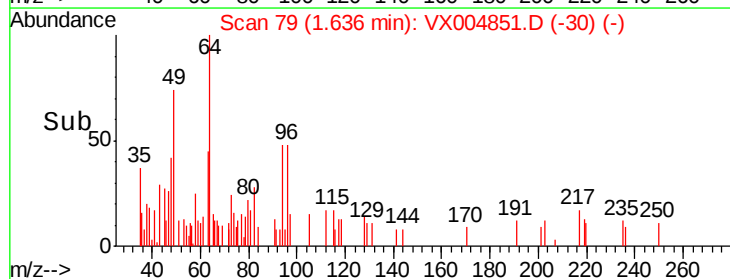
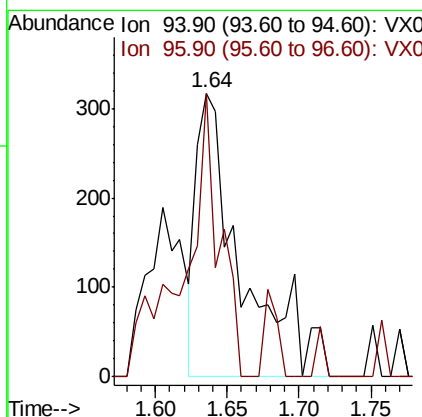
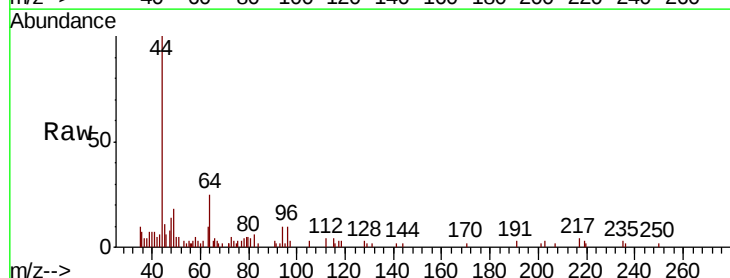
Instrument :  
MSVOA\_X  
ClientSampleId :  
SA-TW503-3438

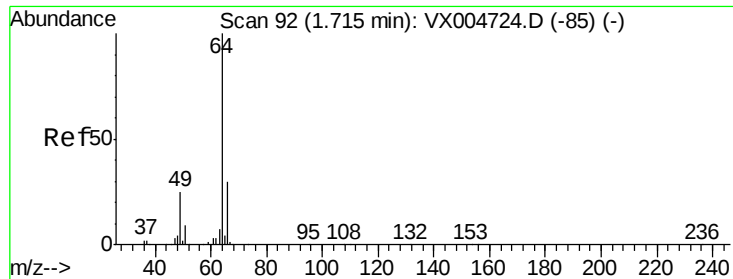
Tot Ion:168 Resp: 228427  
Ion Ratio Lower Upper  
168 100  
99 51.1 39.9 59.9



#5  
Bromomethane  
Concen: 0.326 ug/l  
RT: 1.64 min Scan# 79  
Delta R.T. 0.00 min  
Lab File: VX004851.D  
Acq: 29 Sep 2018 05:25

Tgt Ion: 94 Resp: 685  
Ion Ratio Lower Upper  
94 100  
96 100.0 74.5 111.7





#6

Chloroethane

Concen: Below Cal

RT: 1.66 min Scan# 83

Delta R.T. -0.05 min

Lab File: VX004851.D

Acq: 29 Sep 2018 05:25

Instrument :

MSVOA\_X

ClientSampleId :

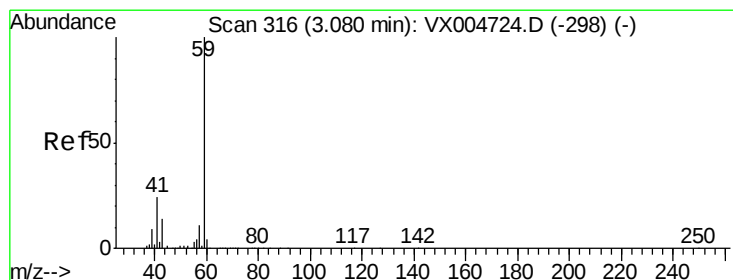
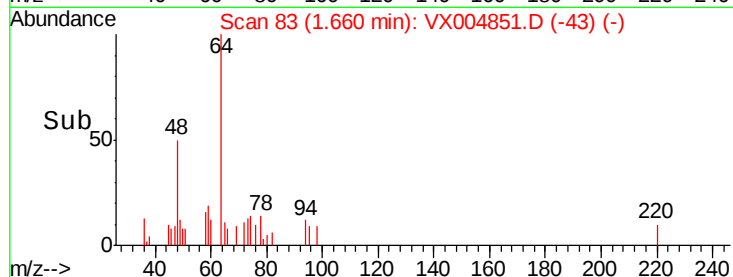
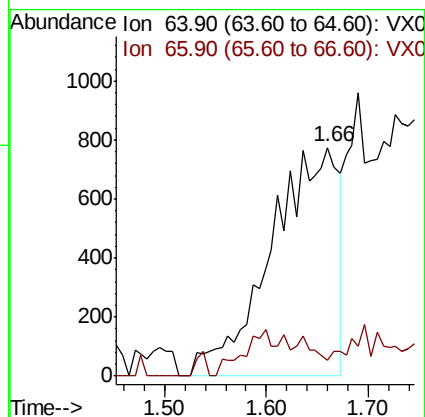
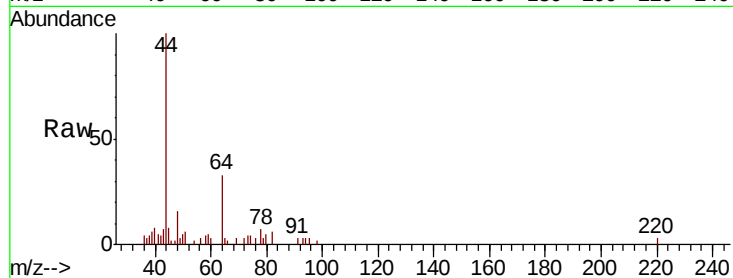
SA-TW503-3438

Tot Ion: 64 Resp: 3557

Ion Ratio Lower Upper

64 100

66 6.8 24.6 36.8#



#11

Tert butyl alcohol

Concen: 5.719 ug/l

RT: 3.03 min Scan# 307

Delta R.T. -0.05 min

Lab File: VX004851.D

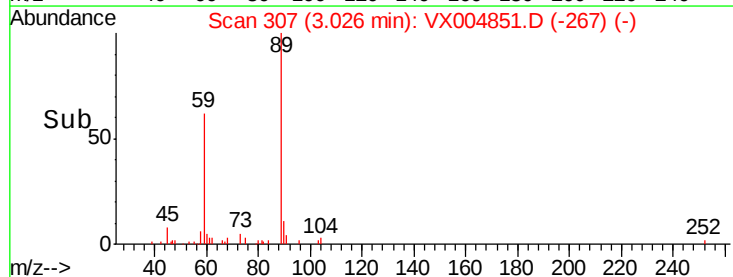
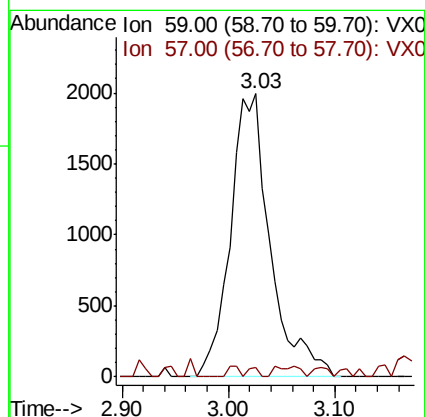
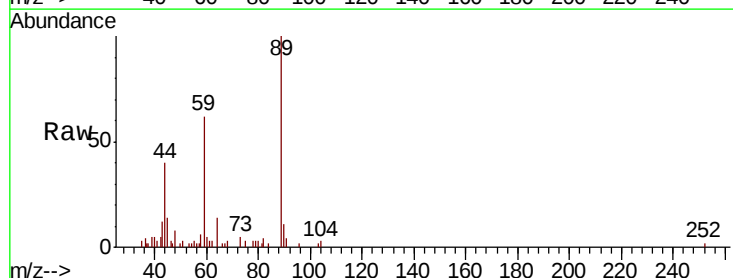
Acq: 29 Sep 2018 05:25

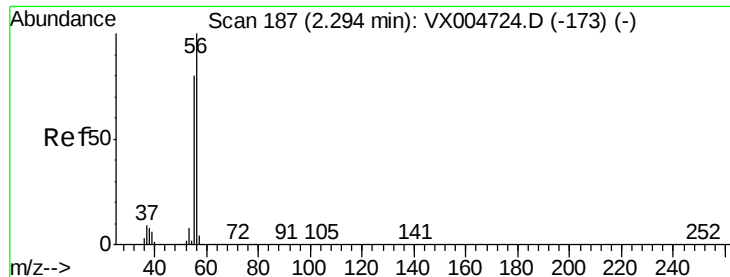
Tgt Ion: 59 Resp: 5218

Ion Ratio Lower Upper

59 100

57 0.9 8.2 12.4#





#13

Acrolein

Concen: 0.328 ug/l

RT: 2.29 min Scan# 186

Delta R.T. -0.01 min

Lab File: VX004851.D

Acq: 29 Sep 2018 05:25

Instrument :

MSVOA\_X

ClientSampleId :

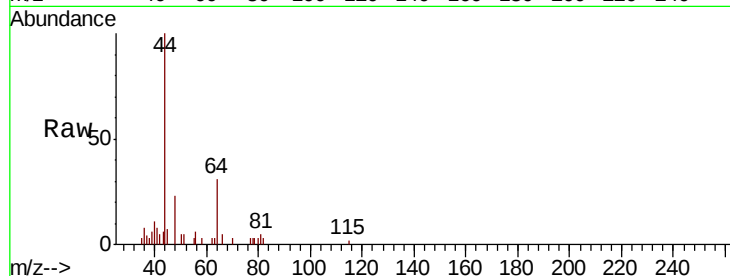
SA-TW503-3438

Tot Ion: 56 Resp: 213

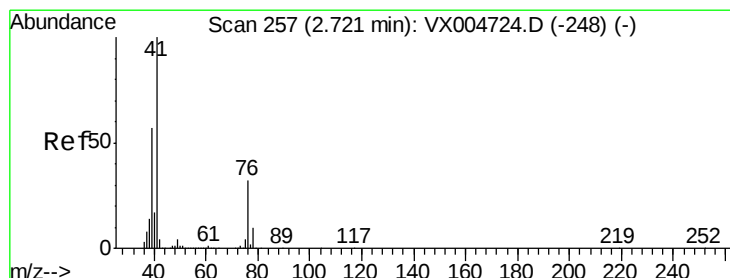
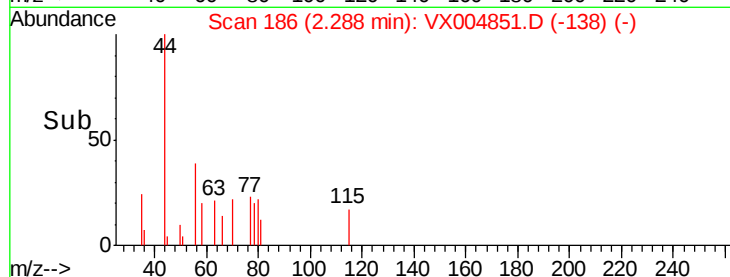
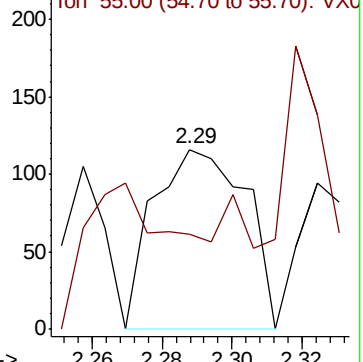
Ion Ratio Lower Upper

56 100

55 74.2 54.7 82.1



Abundance Ion 56.00 (55.70 to 56.70): VX0



#14

Allyl chloride

Concen: 1.127 ug/l

RT: 2.61 min Scan# 239

Delta R.T. -0.11 min

Lab File: VX004851.D

Acq: 29 Sep 2018 05:25

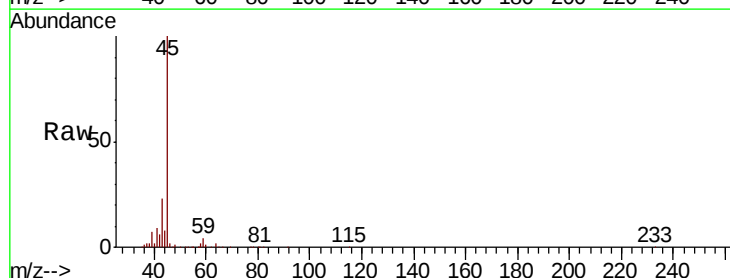
Tgt Ion: 41 Resp: 6086

Ion Ratio Lower Upper

41 100

39 84.9 48.9 73.3#

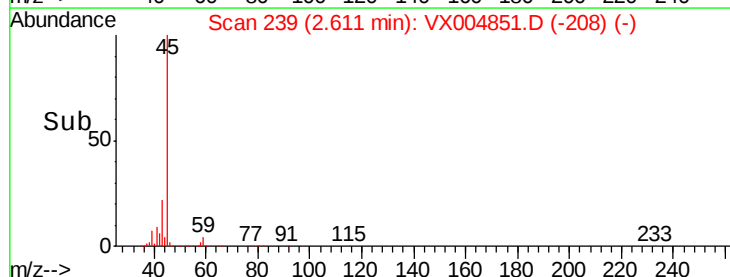
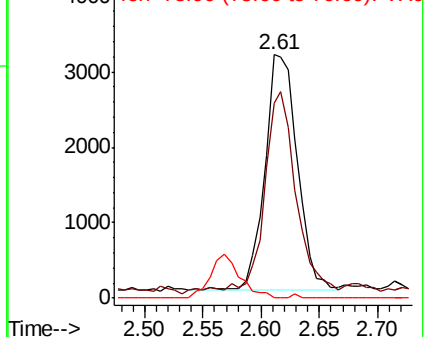
76 0.0 26.7 40.1#

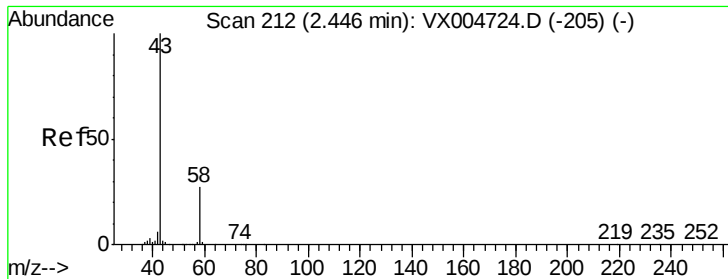


Abundance Ion 41.00 (40.70 to 41.70): VX0

Ion 39.00 (38.70 to 39.70): VX0

Ion 75.90 (75.60 to 76.60): VX0





#16

Acetone

Concen: 2.967 ug/l

RT: 2.45 min Scan# 212

Delta R.T. 0.00 min

Lab File: VX004851.D

Acq: 29 Sep 2018 05:25

Instrument :

MSVOA\_X

ClientSampleId :

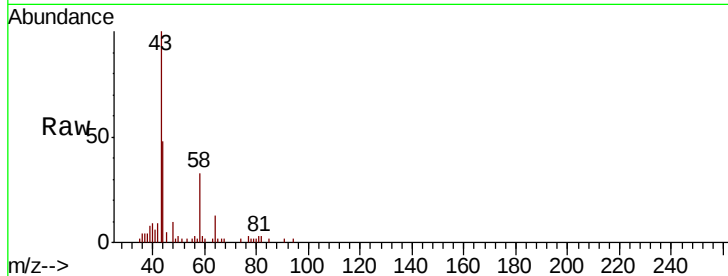
SA-TW503-3438

Tot Ion: 43 Resp: 5652

Ion Ratio Lower Upper

43 100

58 34.3 26.2 39.4



Abundance Ion 43.00 (42.70 to 43.70): VX004724.D (-205) (-)

Ion 58.00 (57.70 to 58.70): VX004724.D (-205) (-)

2.45

3000

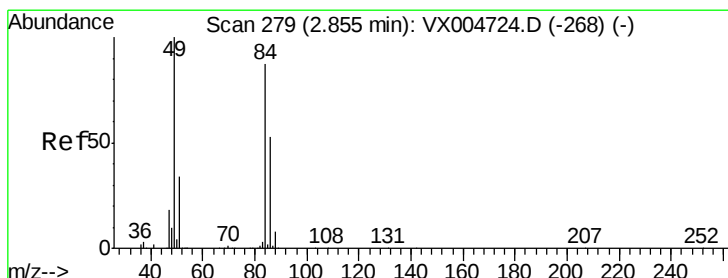
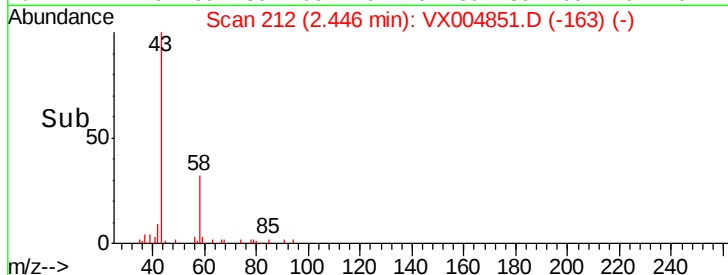
2000

1000

0

Time-->

2.40 2.45 2.50



#20

Methylene Chloride

Concen: Below Cal

RT: 2.85 min Scan# 279

Delta R.T. 0.00 min

Lab File: VX004851.D

Acq: 29 Sep 2018 05:25

Tgt Ion: 84 Resp: 937

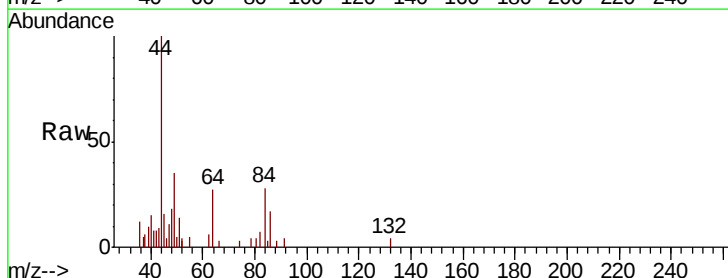
Ion Ratio Lower Upper

84 100

49 115.8 101.2 151.8

51 32.6 29.5 44.3

86 60.2 52.3 78.5



Abundance Ion 83.90 (83.60 to 84.60): VX004724.D (-268) (-)

Ion 48.90 (48.60 to 49.60): VX004724.D (-268) (-)

Ion 50.90 (50.60 to 51.60): VX004724.D (-268) (-)

Ion 85.90 (85.60 to 86.60): VX004724.D (-268) (-)

2.85

1000

800

600

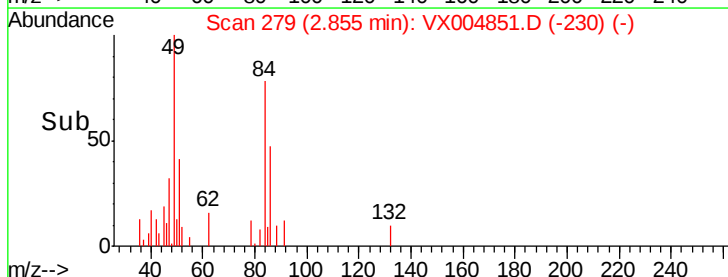
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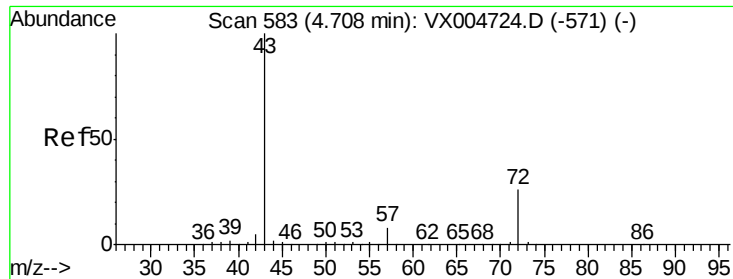
200

0

Time-->

2.80 2.85 2.90





#25

2-Butanone

Concen: 0.269 ug/l

RT: 4.70 min Scan# 582

Delta R.T. -0.01 min

Lab File: VX004851.D

Acq: 29 Sep 2018 05:25

Instrument :

MSVOA\_X

ClientSampleId :

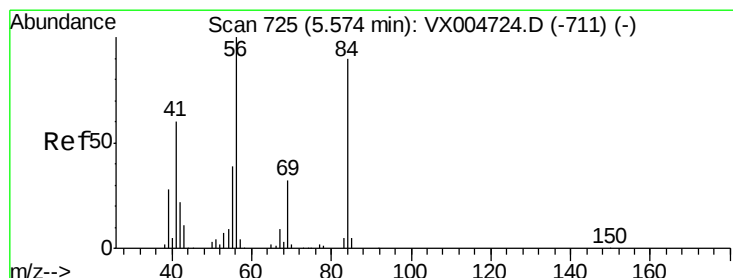
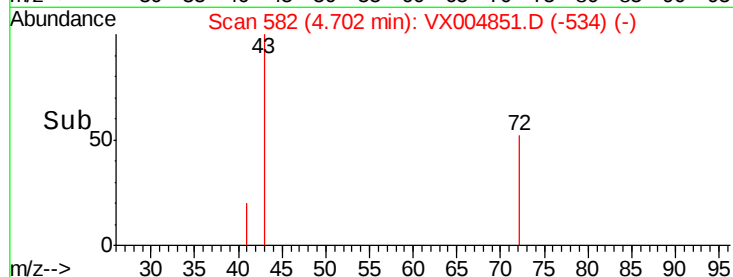
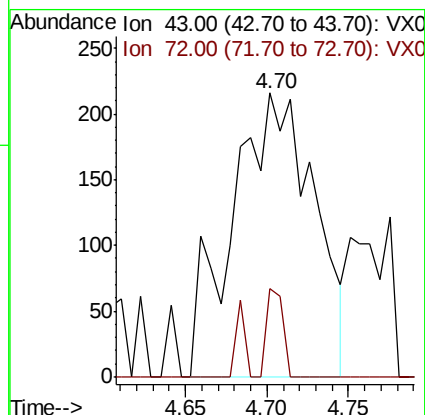
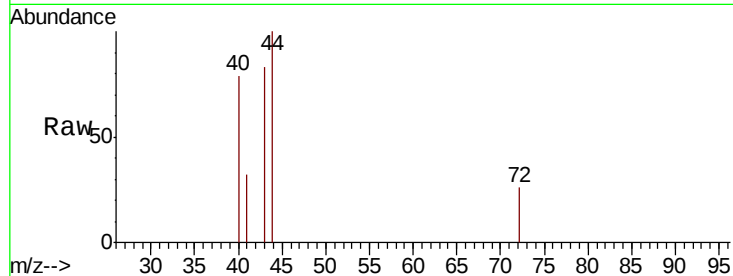
SA-TW503-3438

Tot Ion: 43 Resp: 754

Ion Ratio Lower Upper

43 100

72 31.0 22.0 33.0



#31

Cyclohexane

Concen: 1.058 ug/l

RT: 5.66 min Scan# 739

Delta R.T. 0.09 min

Lab File: VX004851.D

Acq: 29 Sep 2018 05:25

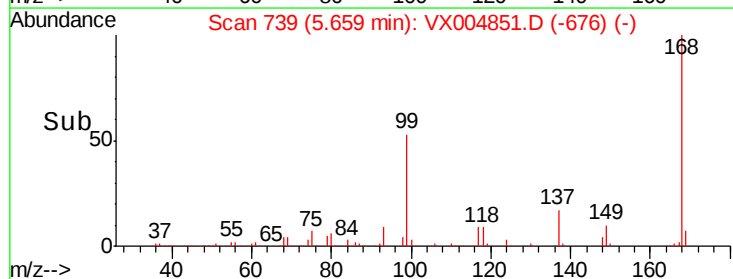
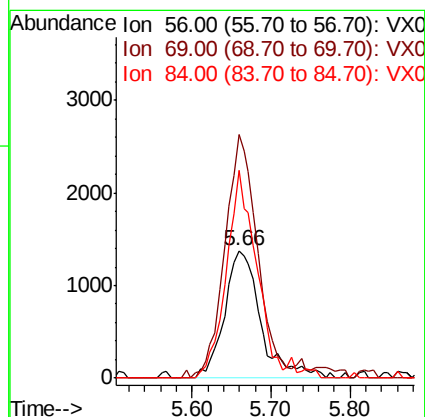
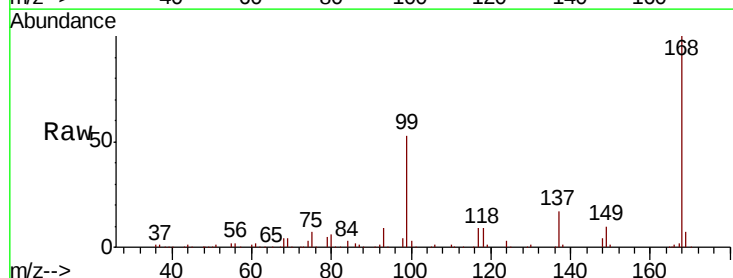
Tgt Ion: 56 Resp: 4394

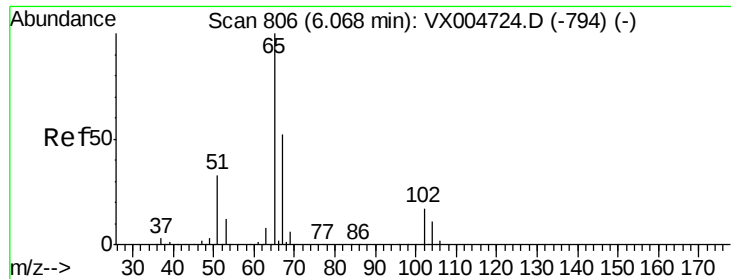
Ion Ratio Lower Upper

56 100

69 191.1 25.4 38.2#

84 162.8 71.4 107.2#





#33

1,2-Dichloroethane-d4

Concen: 55.624 ug/l

RT: 6.07 min Scan# 806

Delta R.T. 0.00 min

Lab File: VX004851.D

Acq: 29 Sep 2018 05:25

Instrument :

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ClientSampleId :

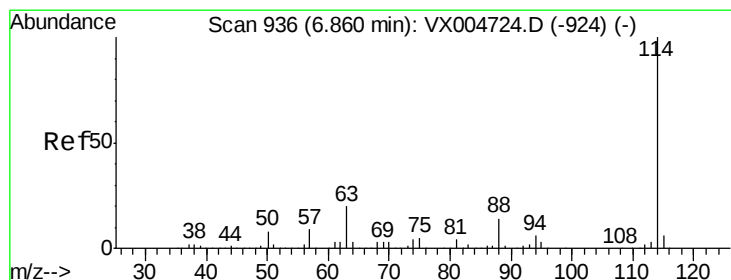
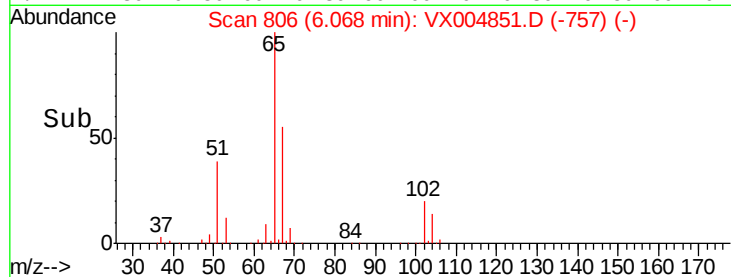
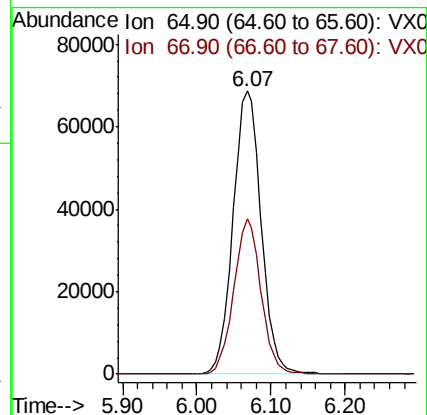
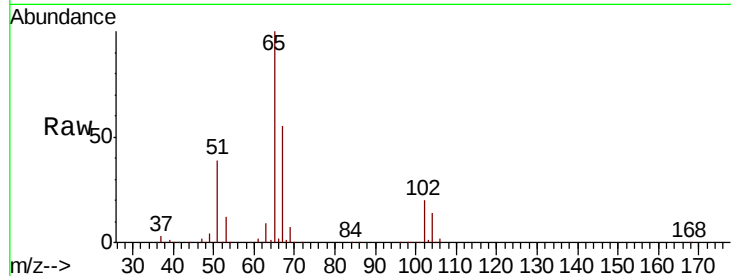
SA-TW503-3438

Tot Ion: 65 Resp: 181506

Ion Ratio Lower Upper

65 100

67 53.3 0.0 106.8



#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 6.86 min Scan# 936

Delta R.T. 0.00 min

Lab File: VX004851.D

Acq: 29 Sep 2018 05:25

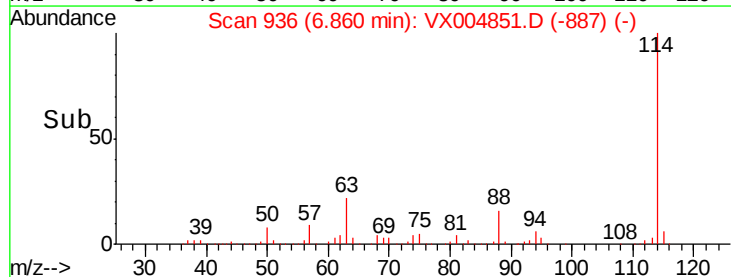
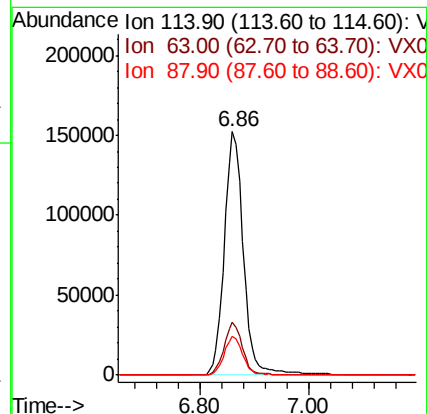
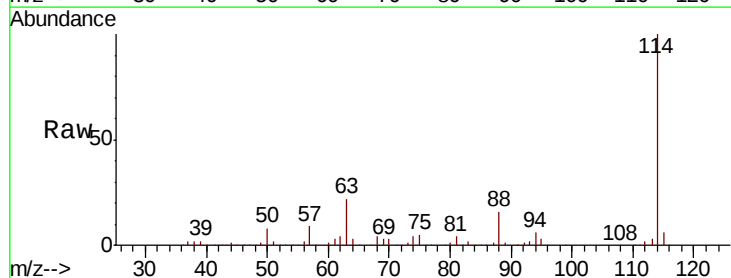
Tgt Ion: 114 Resp: 372294

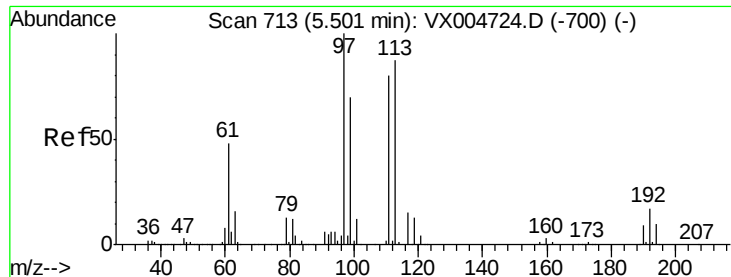
Ion Ratio Lower Upper

114 100

63 21.6 0.0 39.0

88 15.7 0.0 30.4

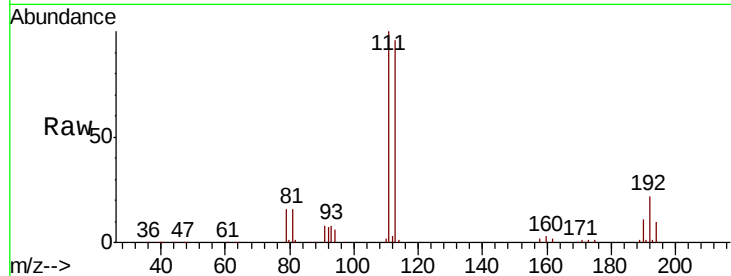




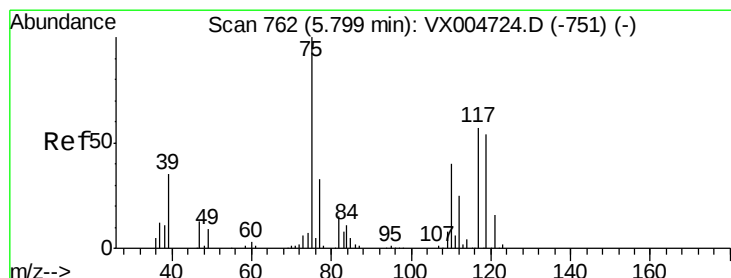
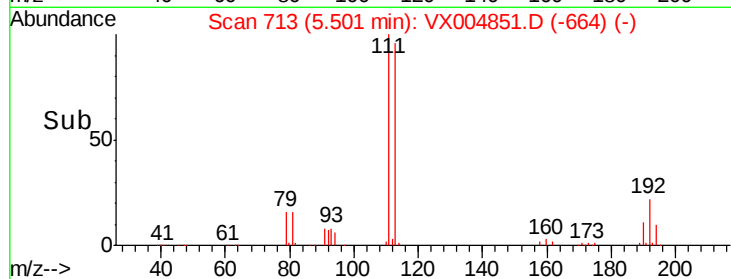
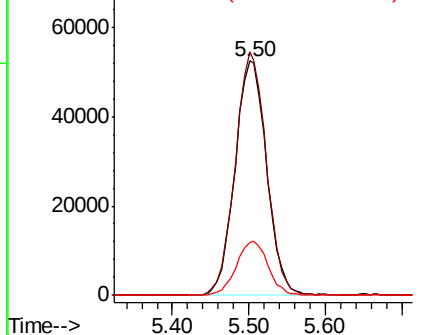
#35  
 Dibromofluoromethane  
 Concen: 47.736 ug/l  
 RT: 5.50 min Scan# 713  
 Delta R.T. 0.00 min  
 Lab File: VX004851.D  
 Acq: 29 Sep 2018 05:25

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 SA-TW503-3438

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 113     | 100   |       |       |
| 111     | 102.0 | 82.4  | 123.6 |
| 192     | 23.2  | 19.4  | 29.2  |

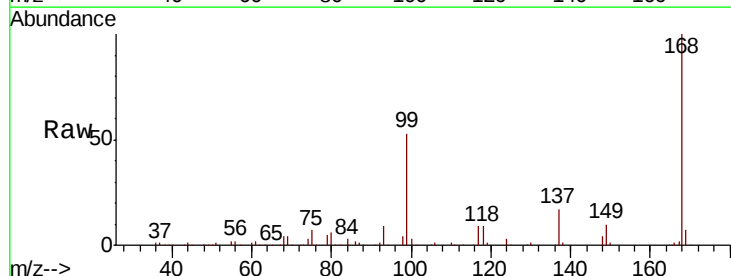


Abundance Ion 112.80 (112.50 to 113.50): V  
 Ion 110.80 (110.50 to 111.50): V  
 Ion 191.70 (191.40 to 192.40): V

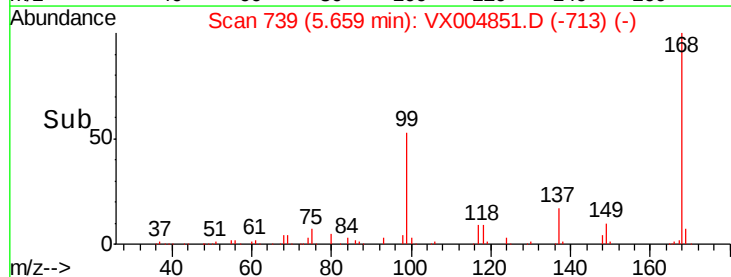
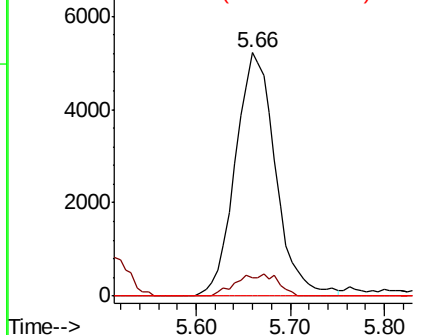


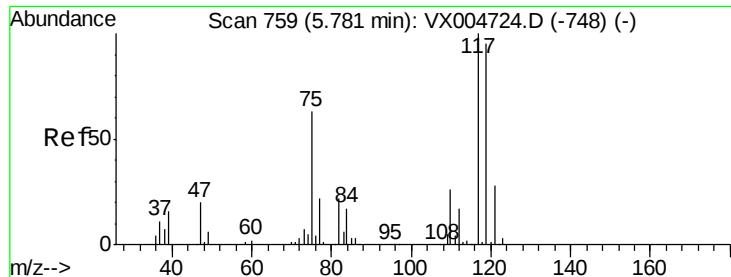
#36  
 1,1-Dichloropropene  
 Concen: 3.622 ug/l  
 RT: 5.66 min Scan# 739  
 Delta R.T. -0.14 min  
 Lab File: VX004851.D  
 Acq: 29 Sep 2018 05:25

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 75      | 100   |       |       |
| 110     | 5.3   | 18.0  | 54.0# |
| 77      | 0.0   | 24.6  | 36.8# |



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

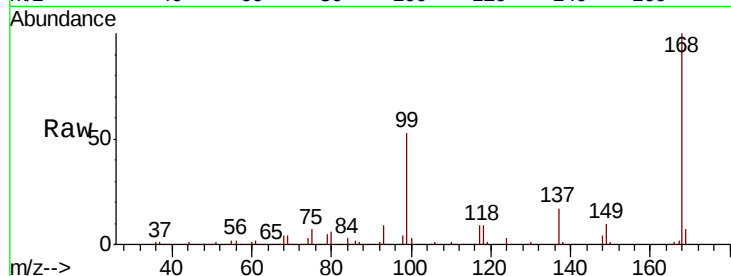




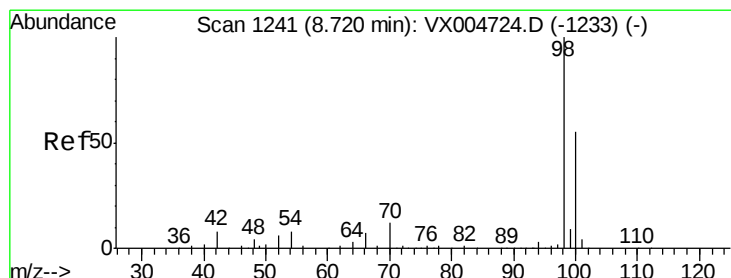
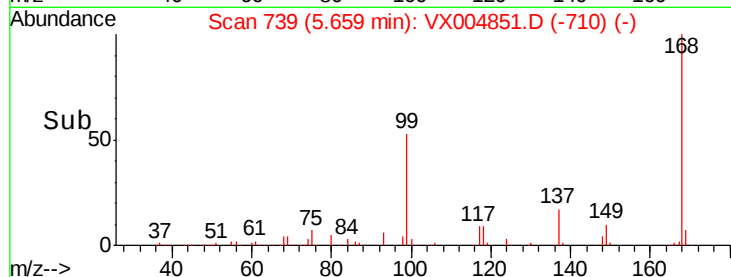
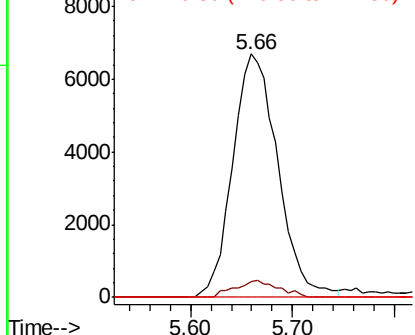
#38  
Carbon Tetrachloride  
Concen: 4.527 ug/l  
RT: 5.66 min Scan# 739  
Delta R.T. -0.12 min  
Lab File: VX004851.D  
Acq: 29 Sep 2018 05:25

Instrument :  
MSVOA\_X  
ClientSampleId :  
SA-TW503-3438

Tot Ion:117 Resp: 20484  
Ion Ratio Lower Upper  
117 100  
119 6.5 78.8 118.2#  
121 0.0 24.9 37.3#

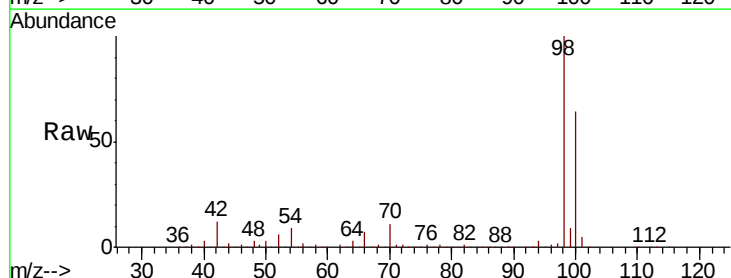


Abundance Ion 116.80 (116.50 to 117.50): V  
Ion 118.80 (118.50 to 119.50): V  
Ion 120.80 (120.50 to 121.50): V

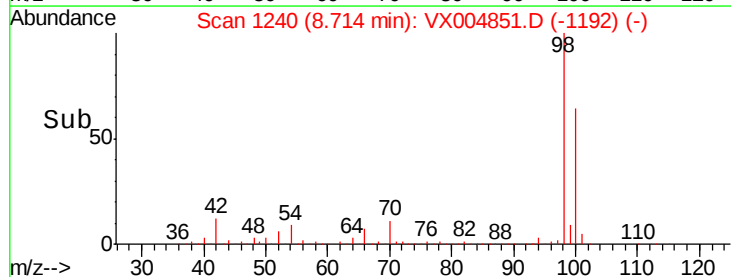
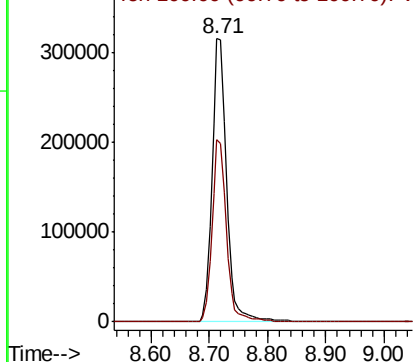


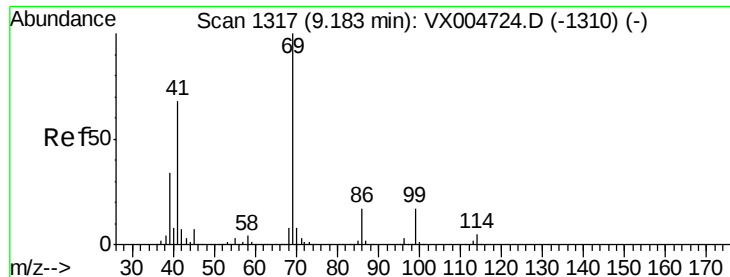
#50  
Toluene-d8  
Concen: 52.153 ug/l  
RT: 8.71 min Scan# 1240  
Delta R.T. -0.01 min  
Lab File: VX004851.D  
Acq: 29 Sep 2018 05:25

Tgt Ion: 98 Resp: 547061  
Ion Ratio Lower Upper  
98 100  
100 63.8 52.9 79.3



Abundance Ion 98.00 (97.70 to 98.70): VX0  
Ion 100.00 (99.70 to 100.70): V





#56

Ethyl methacrylate

Concen: 2.871 ug/l

RT: 9.35 min Scan# 1345

Delta R.T. 0.17 min

Lab File: VX004851.D

Acq: 29 Sep 2018 05:25

Instrument :

MSVOA\_X

ClientSampleId :

SA-TW503-3438

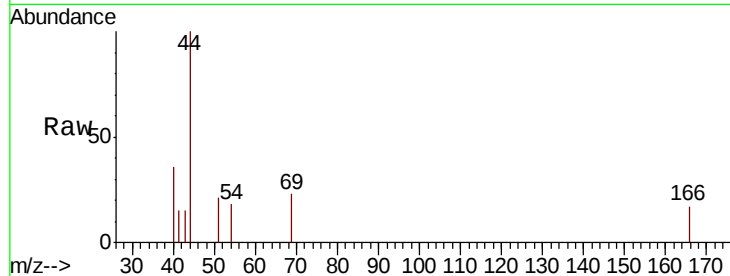
Tot Ion: 69 Resp: 49

Ion Ratio Lower Upper

69 100

41 130.6 51.0 76.4#

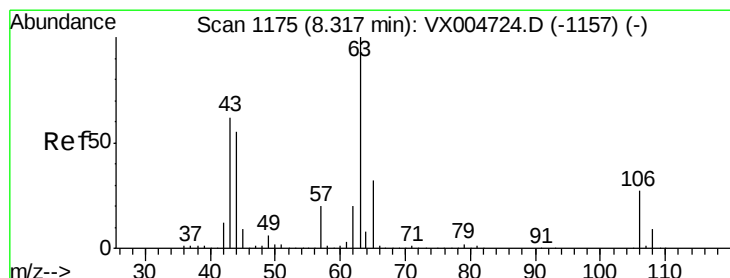
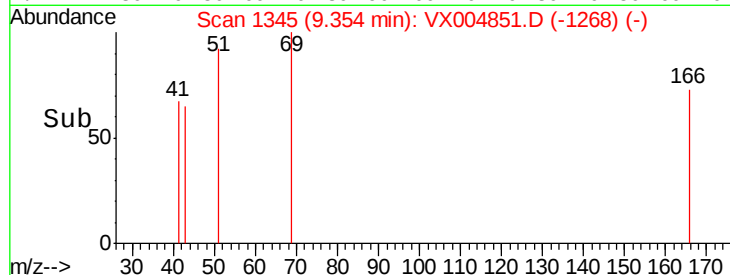
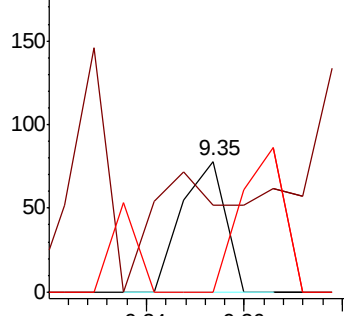
39 0.0 26.1 39.1#



Abundance Ion 69.00 (68.70 to 69.70): VX0

Ion 41.00 (40.70 to 41.70): VX0

Ion 39.00 (38.70 to 39.70): VX0



#58

2-Chloroethyl Vinyl ether

Concen: 14.249 ug/l

RT: 8.20 min Scan# 1155

Delta R.T. -0.12 min

Lab File: VX004851.D

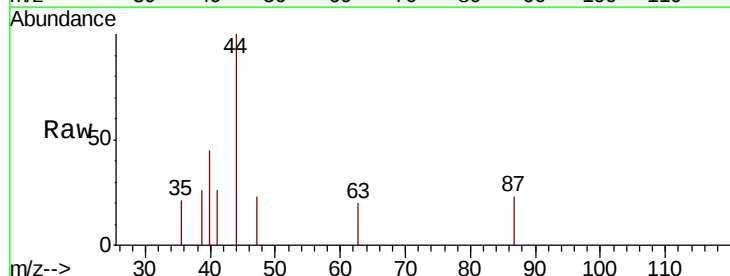
Acq: 29 Sep 2018 05:25

Tgt Ion: 63 Resp: 19

Ion Ratio Lower Upper

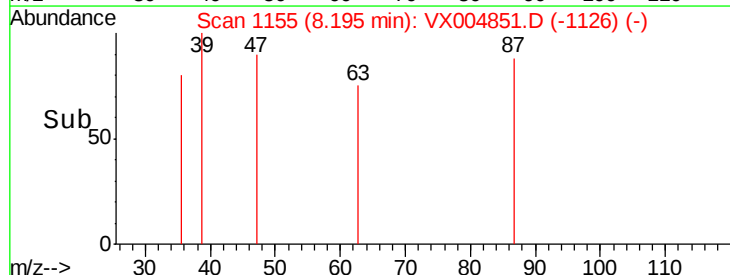
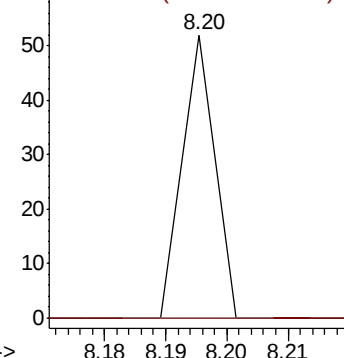
63 100

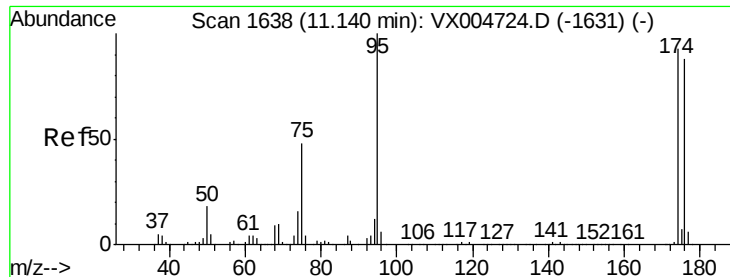
106 0.0 23.9 35.9#



Abundance Ion 62.90 (62.60 to 63.60): VX0

Ion 105.90 (105.60 to 106.60): V

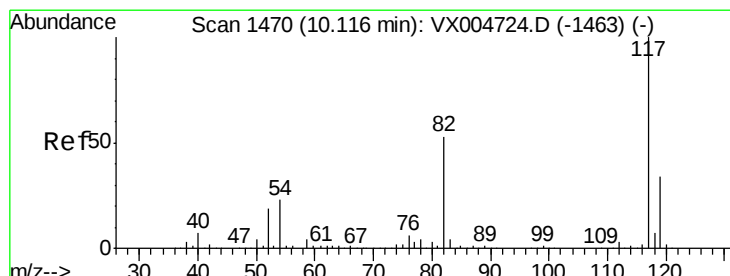
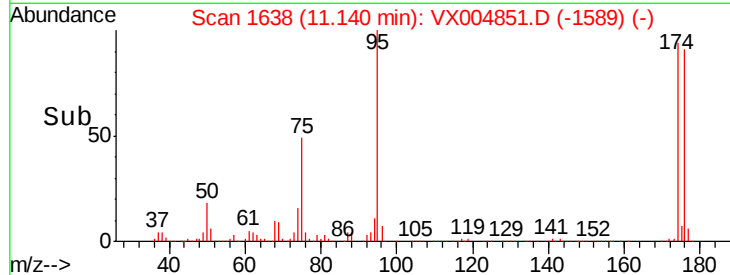
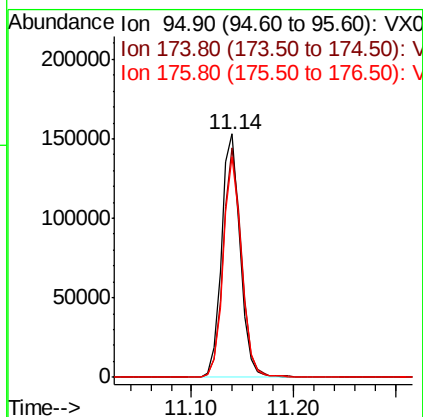
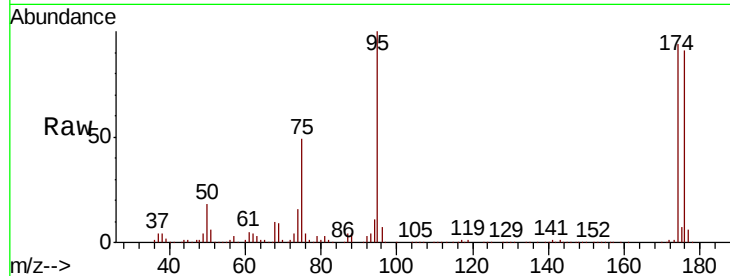




#62  
4-Bromofluorobenzene  
Concen: 51.997 ug/l  
RT: 11.14 min Scan# 1638  
Delta R.T. 0.00 min  
Lab File: VX004851.D  
Acq: 29 Sep 2018 05:25

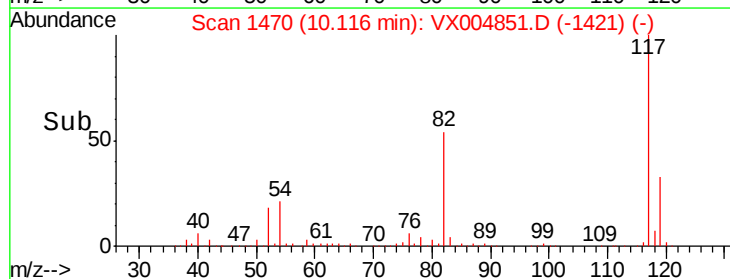
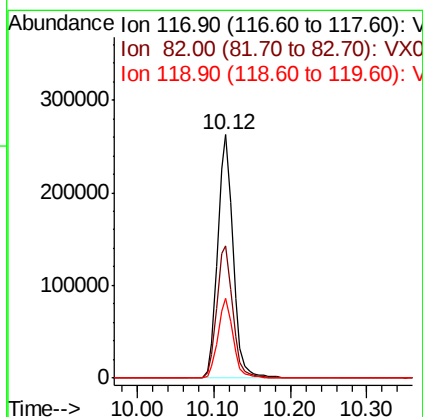
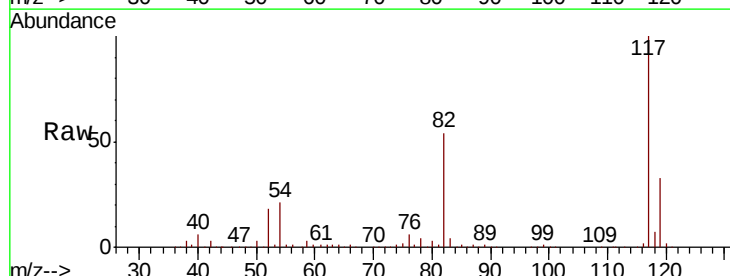
Instrument :  
MSVOA\_X  
ClientSampleId :  
SA-TW503-3438

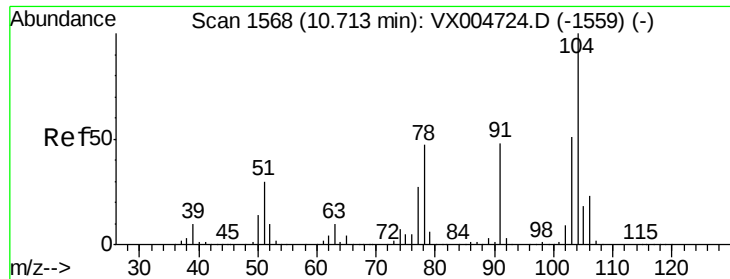
Tot Ion: 95 Resp: 196493  
Ion Ratio Lower Upper  
95 100  
174 92.2 0.0 185.2  
176 88.8 0.0 178.6



#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 10.12 min Scan# 1470  
Delta R.T. 0.00 min  
Lab File: VX004851.D  
Acq: 29 Sep 2018 05:25

Tgt Ion: 117 Resp: 368631  
Ion Ratio Lower Upper  
117 100  
82 54.4 47.8 71.6  
119 32.6 29.3 43.9





#70

Stvrene

Concen: 2.143 ug/l

RT: 10.74 min Scan# 1572

Delta R.T. 0.02 min

Lab File: VX004851.D

Acq: 29 Sep 2018 05:25

Instrument :

MSVOA\_X

ClientSampleId :

SA-TW503-3438

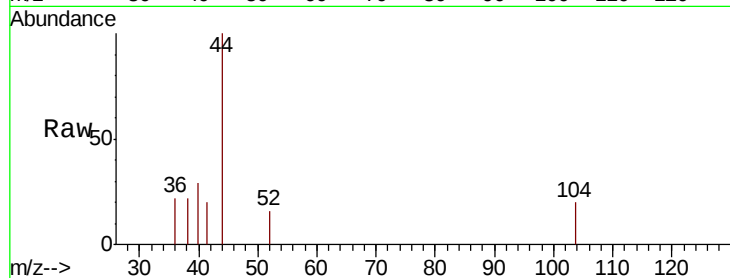
Tot Ion:104 Resp: 27

Ion Ratio Lower Upper

104 100

78 0.0 37.4 56.0#

103 0.0 43.8 65.6#



Abundance Ion 104.00 (103.70 to 104.70): V

Ion 78.00 (77.70 to 78.70): VX0

Ion 103.00 (102.70 to 103.70): V

100

80

60

40

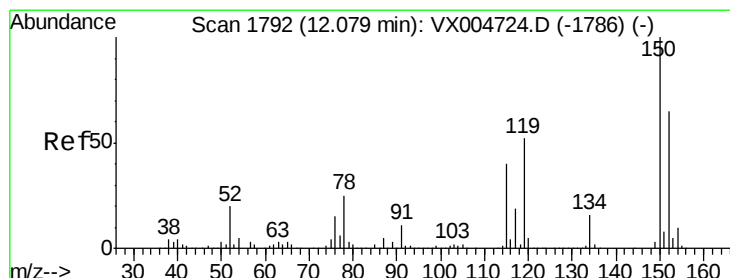
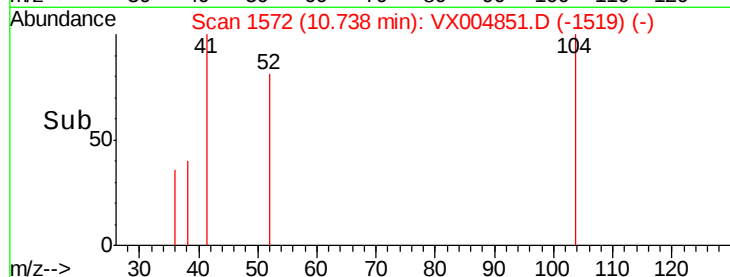
20

0

10.72

10.74

Time-->



#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 12.08 min Scan# 1792

Delta R.T. 0.00 min

Lab File: VX004851.D

Acq: 29 Sep 2018 05:25

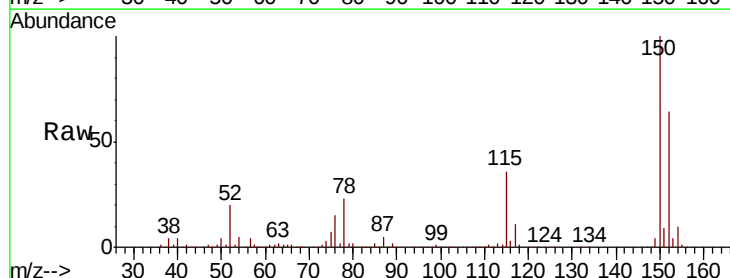
Tgt Ion:152 Resp: 205830

Ion Ratio Lower Upper

152 100

115 55.4 39.0 117.0

150 157.0 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

300000

200000

100000

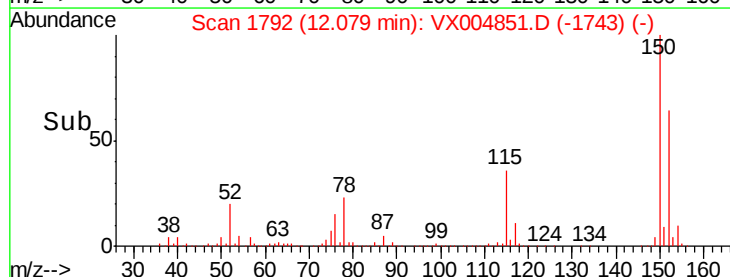
0

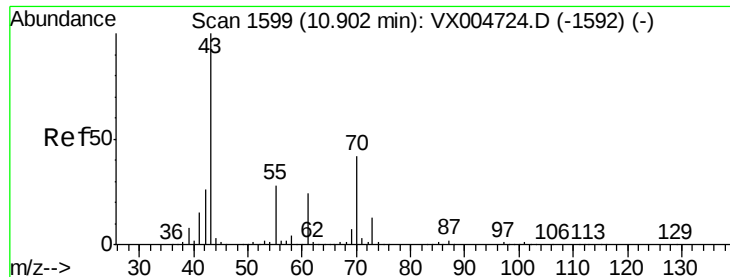
12.00

12.08

12.20

Time-->





#74

N-amvl acetate

Concen: 1.766 ug/l

RT: 10.91 min Scan# 1600

Delta R.T. 0.01 min

Lab File: VX004851.D

Acq: 29 Sep 2018 05:25

Instrument :

MSVOA\_X

ClientSampleId :

SA-TW503-3438

Tot Ion: 43 Resp: 135

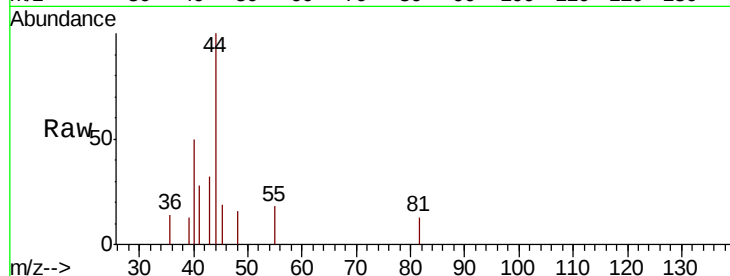
Ion Ratio Lower Upper

43 100

70 0.0 37.4 56.0#

55 77.8 21.8 32.8#

61 0.0 20.6 30.8#

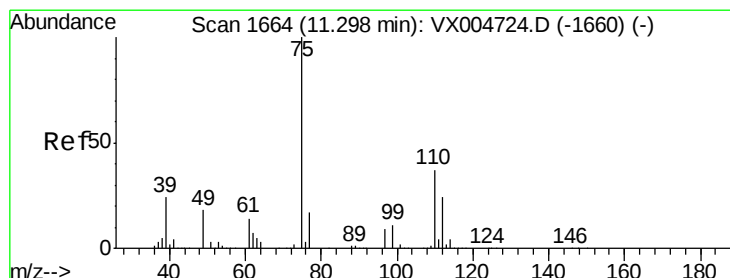
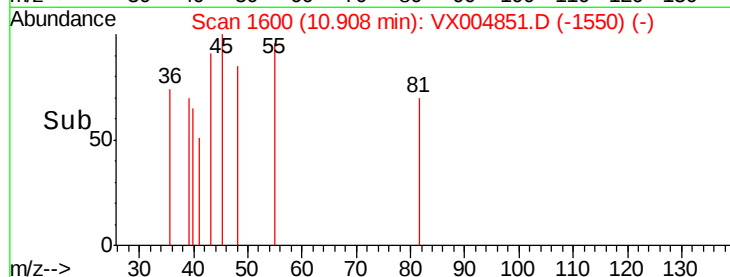
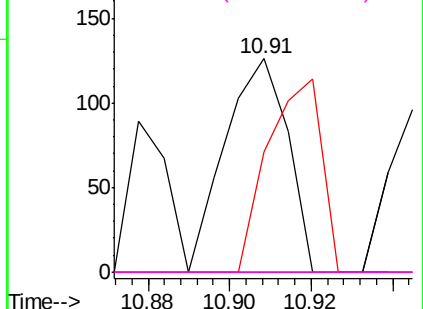


Abundance Ion 43.00 (42.70 to 43.70): VX0

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



#76

1,2,3-Trichloropropane

Concen: 21.328 ug/l

RT: 11.14 min Scan# 1638

Delta R.T. -0.16 min

Lab File: VX004851.D

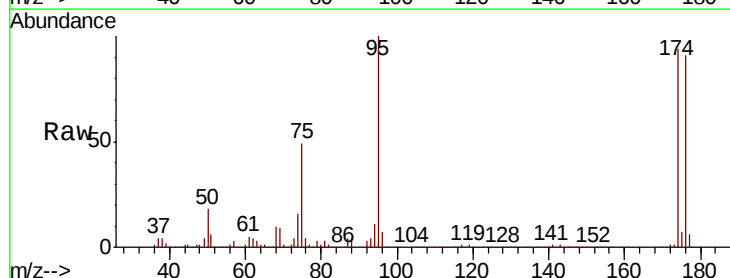
Acq: 29 Sep 2018 05:25

Tgt Ion: 75 Resp: 98396

Ion Ratio Lower Upper

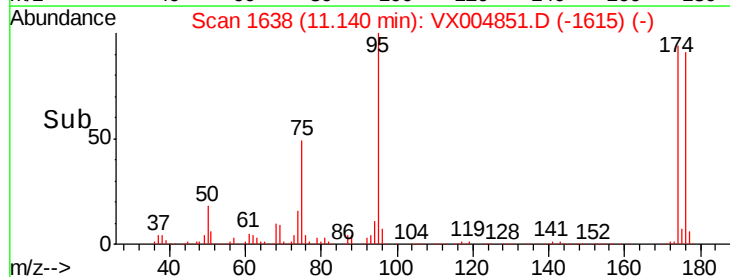
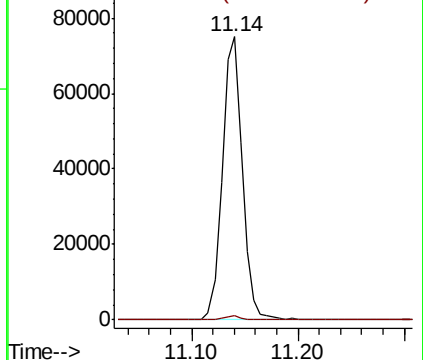
75 100

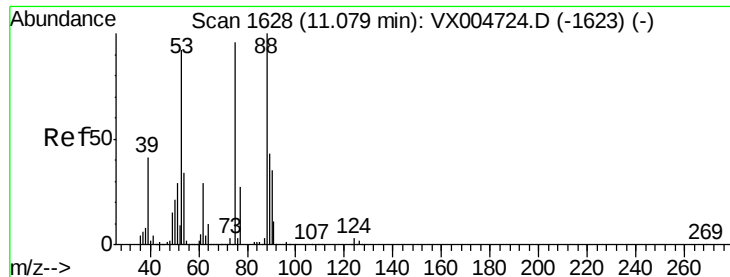
77 1.3 20.2 60.6#



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: 57.846 ug/l

RT: 11.14 min Scan# 1638

Delta R.T. 0.06 min

Lab File: VX004851.D

Acq: 29 Sep 2018 05:25

Instrument :

MSVOA\_X

ClientSampleId :

SA-TW503-3438

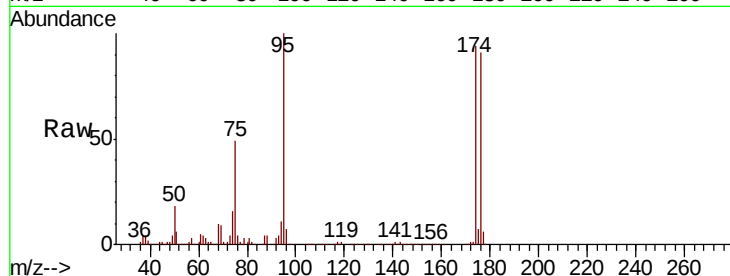
Tot Ion: 75 Resp: 98396

Ion Ratio Lower Upper

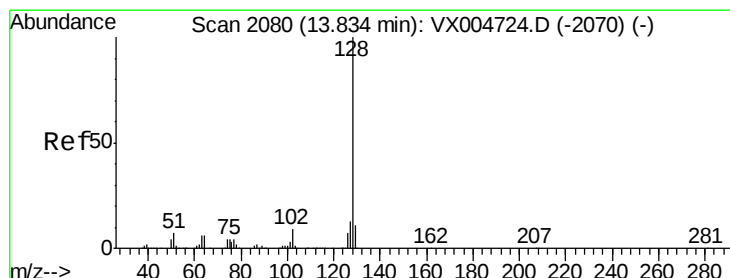
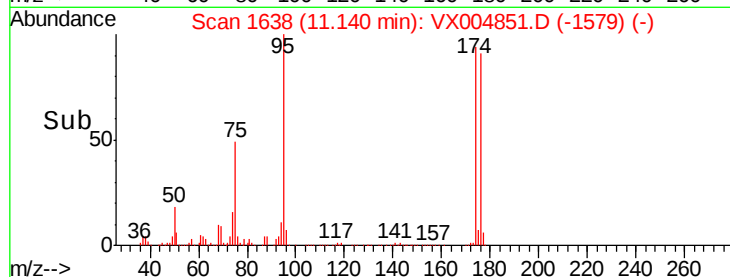
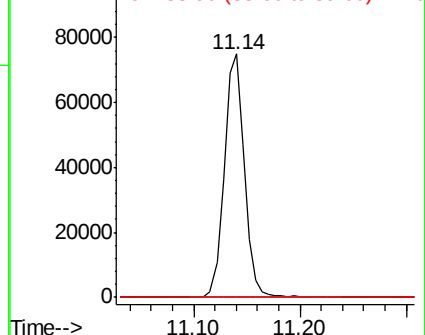
75 100

53 0.3 80.1 120.1#

89 0.0 37.2 55.8#



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



#95

Naphthalene

Concen: 0.744 ug/l

RT: 13.83 min Scan# 2080

Delta R.T. 0.00 min

Lab File: VX004851.D

Acq: 29 Sep 2018 05:25

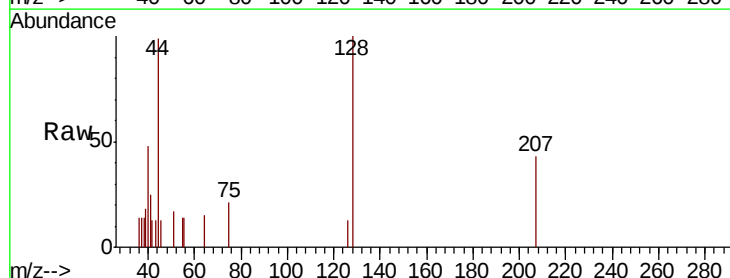
Tgt Ion:128 Resp: 433

Ion Ratio Lower Upper

128 100

127 5.8 10.2 15.2#

129 0.0 8.6 12.8#



Abundance Ion 128.00 (127.70 to 128.70): V  
Ion 127.00 (126.70 to 127.70): V  
Ion 129.00 (128.70 to 129.70): V

