

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX062920\  
 Data File : VX017019.D  
 Acq On : 29 Jun 2020 20:03  
 Operator : JC/SP  
 Sample : L3112-02  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 19 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 16BR-20200624

Quant Time: Jun 30 05:32:15 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_X\METHOD\82X062920W.M  
 Quant Title : SW846 8260  
 QLast Update : Mon Jun 29 17:10:38 2020  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc      | Units   | Dev(Min) |
|--------------------------------|-------|------|----------|-----------|---------|----------|
| 1) Pentafluorobenzene          | 5.64  | 168  | 256759   | 50.00     | ug/l    | 0.00     |
| 34) 1,4-Difluorobenzene        | 6.83  | 114  | 449478   | 50.00     | ug/l    | 0.00     |
| 63) Chlorobenzene-d5           | 10.10 | 117  | 455161   | 50.00     | ug/l    | 0.00     |
| 72) 1,4-Dichlorobenzene-d4     | 12.06 | 152  | 242544   | 50.00     | ug/l    | 0.00     |
| System Monitoring Compounds    |       |      |          |           |         |          |
| 33) 1,2-Dichloroethane-d4      | 6.03  | 65   | 167489   | 52.91     | ug/l    | 0.00     |
| Spiked Amount 50.000           |       |      | Recovery | =         | 105.82% |          |
| 35) Dibromofluoromethane       | 5.47  | 113  | 142932   | 50.27     | ug/l    | 0.00     |
| Spiked Amount 50.000           |       |      | Recovery | =         | 100.54% |          |
| 50) Toluene-d8                 | 8.70  | 98   | 546286   | 51.96     | ug/l    | 0.00     |
| Spiked Amount 50.000           |       |      | Recovery | =         | 103.92% |          |
| 62) 4-Bromofluorobenzene       | 11.12 | 95   | 228829   | 55.68     | ug/l    | 0.00     |
| Spiked Amount 50.000           |       |      | Recovery | =         | 111.36% |          |
| Target Compounds               |       |      |          |           |         |          |
|                                |       |      |          |           | Qvalue  |          |
| 2) Dichlorodifluoromethane     | 1.18  | 85   | 502      | 0.202     | ug/l    | 79       |
| 3) Chloromethane               | 1.32  | 50   | 1290     | 0.429     | ug/l    | 89       |
| 4) Vinyl Chloride              | 1.39  | 62   | 6693     | 2.399     | ug/l    | 95       |
| 5) Bromomethane                | 1.64  | 94   | 567      | 0.385     | ug/l #  | 43       |
| 8) Diethyl Ether               | 2.17  | 74   | 148      | 0.471     | ug/l    | 94       |
| 11) Tert butyl alcohol         | 3.01  | 59   | 155      | 0.257     | ug/l #  | 73       |
| 12) 1,1-Dichloroethene         | 2.35  | 96   | 620      | 0.244     | ug/l #  | 12       |
| 13) Acrolein                   | 2.26  | 56   | 495      | 1.371     | ug/l #  | 79       |
| 15) Acrylonitrile              | 3.11  | 53   | 347      | 0.239     | ug/l    | 98       |
| 16) Acetone                    | 2.42  | 43   | 5701     | 4.815     | ug/l    | 95       |
| 17) Carbon Disulfide           | 2.55  | 76   | 2050     | 0.312     | ug/l    | 98       |
| 18) Methyl Acetate             | 2.76  | 43   | 703      | 0.227     | ug/l #  | 62       |
| 20) Methylene Chloride         | 2.84  | 84   | 820      | Below Cal | #       | 75       |
| 27) cis-1,2-Dichloroethene     | 4.56  | 96   | 19240    | 6.023     | ug/l    | 88       |
| 29) Tetrahydrofuran            | 5.09  | 42   | 288      | 0.221     | ug/l #  | 46       |
| 36) 1,1-Dichloropropene        | 5.64  | 75   | 19327    | 4.550     | ug/l #  | 50       |
| 38) Carbon Tetrachloride       | 5.64  | 117  | 25941    | 5.544     | ug/l #  | 18       |
| 76) 1,2,3-Trichloropropane     | 11.12 | 75   | 113872   | 23.875    | ug/l #  | 37       |
| 81) trans-1,4-Dichloro-2-buten | 11.12 | 75   | 113872   | 61.828    | ug/l #  | 13       |
| 88) 1,4-Dichlorobenzene        | 12.01 | 146  | 855      | Below Cal |         | 97       |
| 94) Hexachlorobutadiene        | 13.76 | 225  | 246      | 0.970     | ug/l    | 95       |

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





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 5.64 min Scan# 746

Delta R.T. -0.00 min

Lab File: VX017019.D

Acq: 29 Jun 2020 20:03

Instrument :

MSVOA\_X

ClientSampleId :

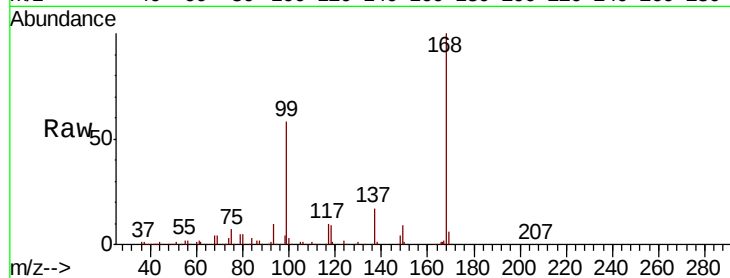
16BR-20200624

Tot Ion:168 Resp: 256759

Ion Ratio Lower Upper

168 100

99 58.0 42.6 64.0



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VX0

5.64

100000

80000

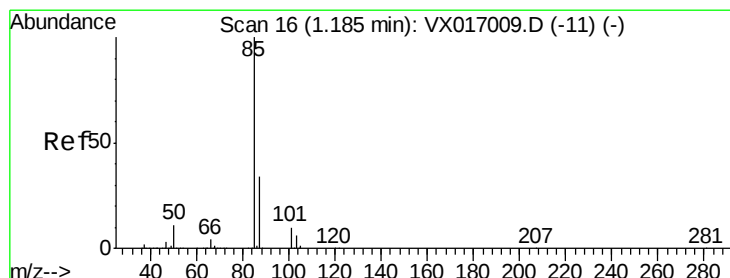
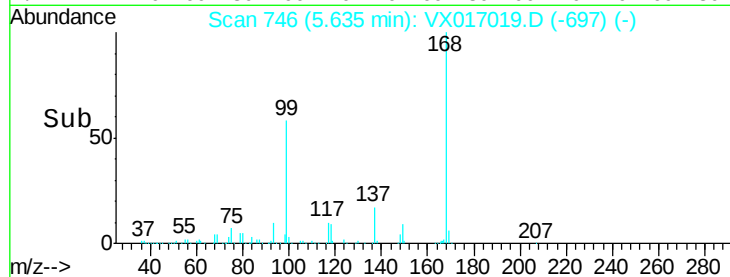
60000

40000

20000

0

Time-->



#2

Dichlorodifluoromethane

Concen: 0.202 ug/l

RT: 1.18 min Scan# 16

Delta R.T. -0.00 min

Lab File: VX017019.D

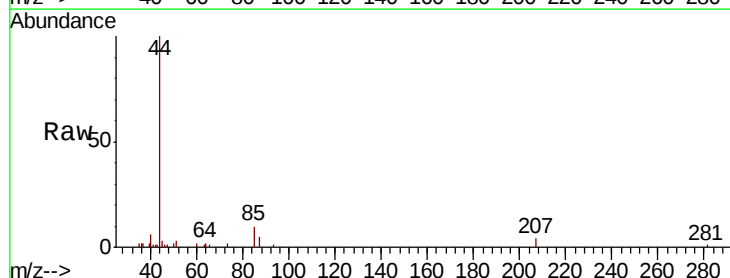
Acq: 29 Jun 2020 20:03

Tgt Ion: 85 Resp: 502

Ion Ratio Lower Upper

85 100

87 45.4 16.8 50.4



Abundance Ion 84.90 (84.60 to 85.60): VX0

Ion 86.90 (86.60 to 87.60): VX0

1.18

600

500

400

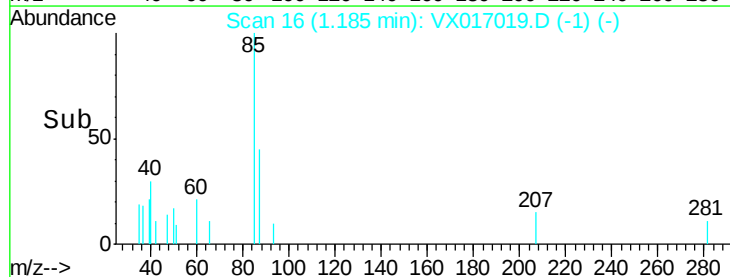
300

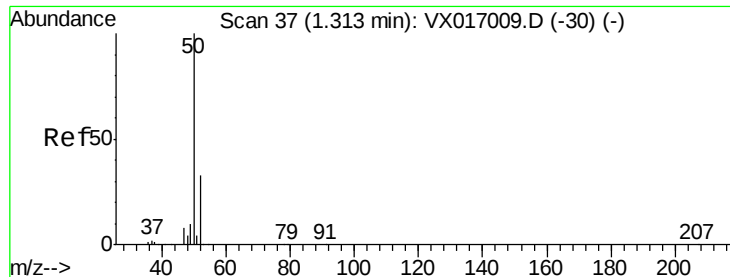
200

100

0

Time-->





#3

Chloromethane

Concen: 0.429 ug/l

RT: 1.32 min Scan# 38

Delta R.T. 0.01 min

Lab File: VX017019.D

Acq: 29 Jun 2020 20:03

Instrument :

MSVOA\_X

ClientSampleId :

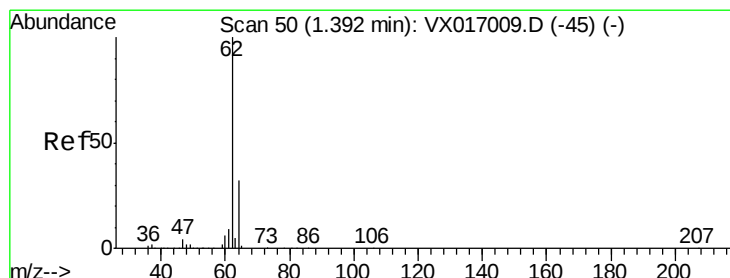
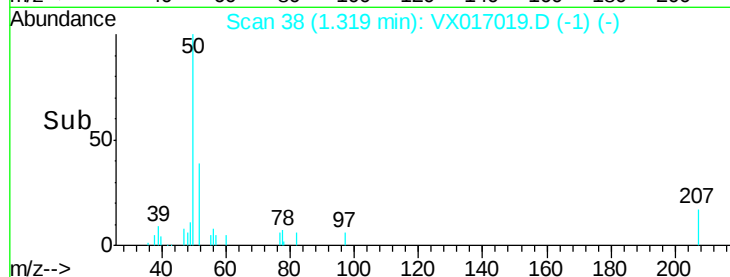
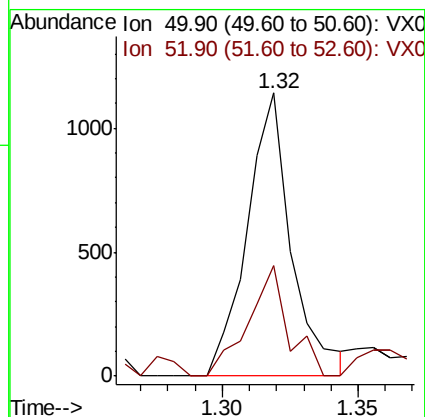
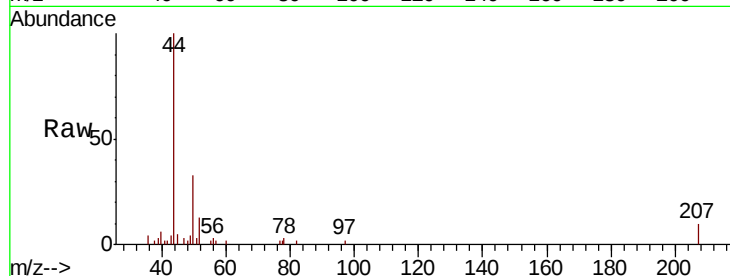
16BR-20200624

Tot Ion: 50 Resp: 1290

Ion Ratio Lower Upper

50 100

52 39.0 26.1 39.1



#4

Vinyl Chloride

Concen: 2.399 ug/l

RT: 1.39 min Scan# 50

Delta R.T. -0.00 min

Lab File: VX017019.D

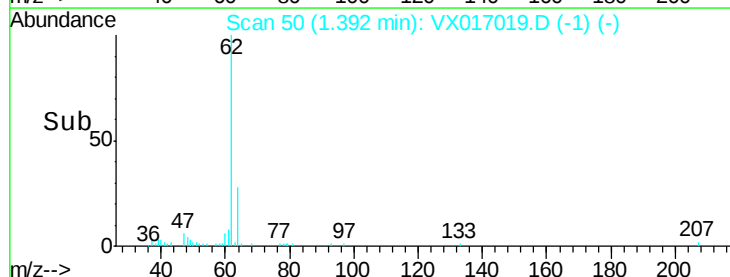
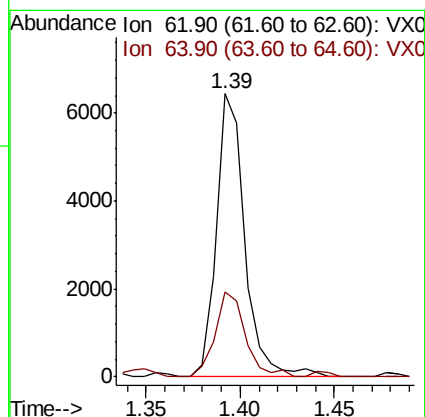
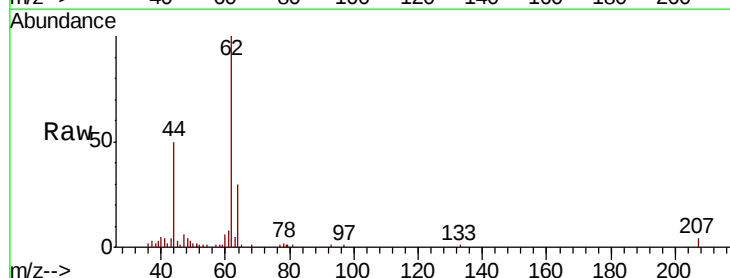
Acq: 29 Jun 2020 20:03

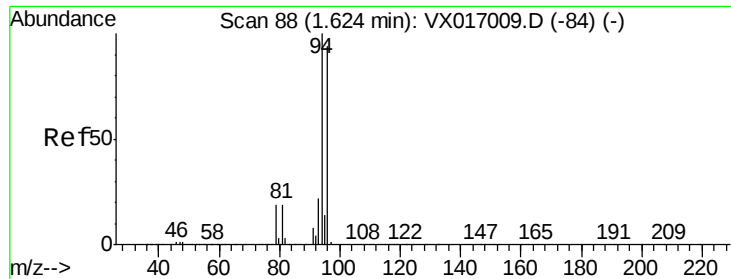
Tgt Ion: 62 Resp: 6693

Ion Ratio Lower Upper

62 100

64 29.8 25.9 38.9





#5

Bromomethane

Concen: 0.385 ug/l

RT: 1.64 min Scan# 91

Delta R.T. 0.02 min

Lab File: VX017019.D

Acq: 29 Jun 2020 20:03

Instrument :

MSVOA\_X

ClientSampleId :

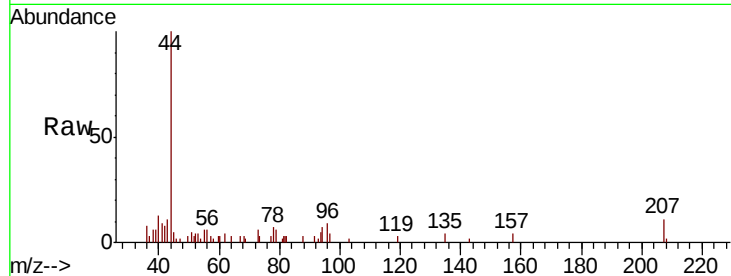
16BR-20200624

Tot Ion: 94 Resp: 567

Ion Ratio Lower Upper

94 100

96 39.2 75.0 112.4#



Abundance Ion 93.90 (93.60 to 94.60): VX0

Ion 95.90 (95.60 to 96.60): VX0

1.64

300

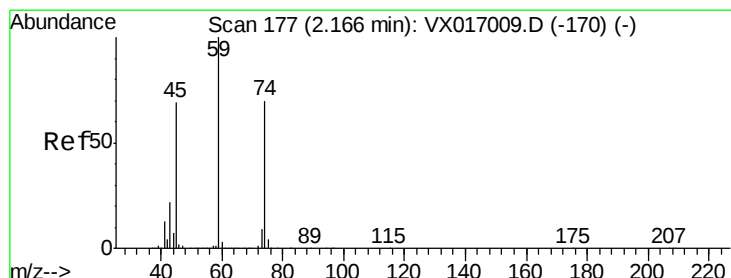
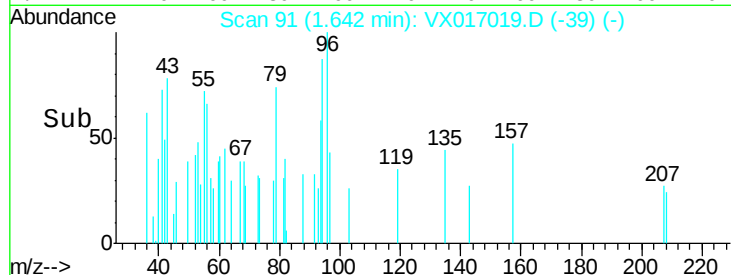
200

100

0

1.60 1.65 1.70

Time-->



#8

Diethyl Ether

Concen: 0.471 ug/l

RT: 2.17 min Scan# 177

Delta R.T. 0.00 min

Lab File: VX017019.D

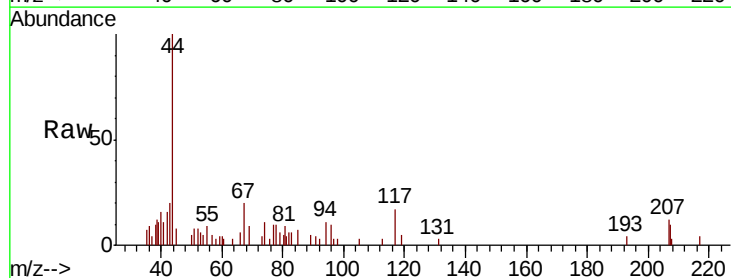
Acq: 29 Jun 2020 20:03

Tgt Ion: 74 Resp: 148

Ion Ratio Lower Upper

74 100

45 93.9 49.8 149.3



Abundance Ion 74.00 (73.70 to 74.70): VX0

Ion 45.00 (44.70 to 45.70): VX0

2.17

300

250

200

150

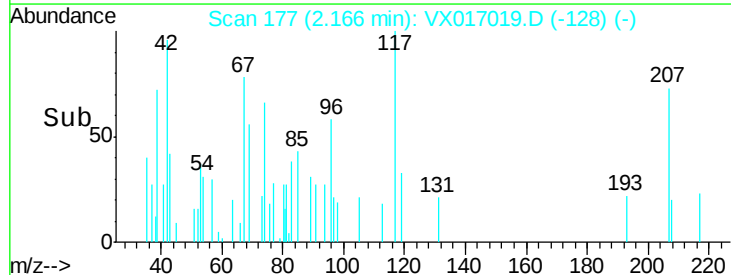
100

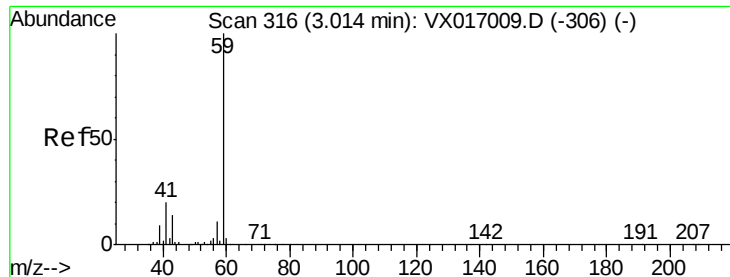
50

0

2.15 2.16 2.17 2.18

Time-->



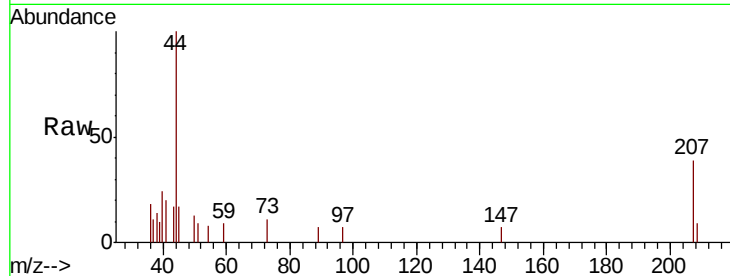


#11

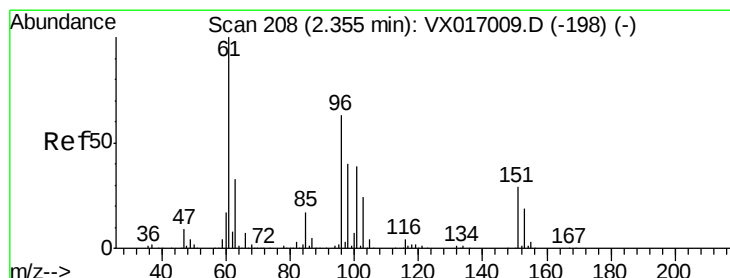
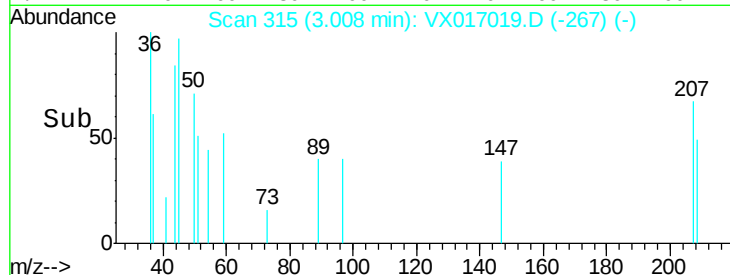
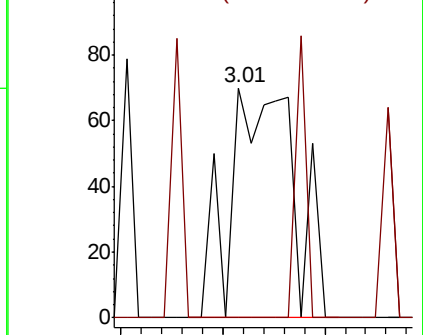
Tert butyl alcohol  
Concen: 0.257 ug/l  
RT: 3.01 min Scan# 315  
Delta R.T. -0.01 min  
Lab File: VX017019.D  
Acq: 29 Jun 2020 20:03

Instrument :  
MSVOA\_X  
ClientSampleId :  
16BR-20200624

Tot Ion: 59 Resp: 155  
Ion Ratio Lower Upper  
59 100  
57 0.0 8.2 12.2#



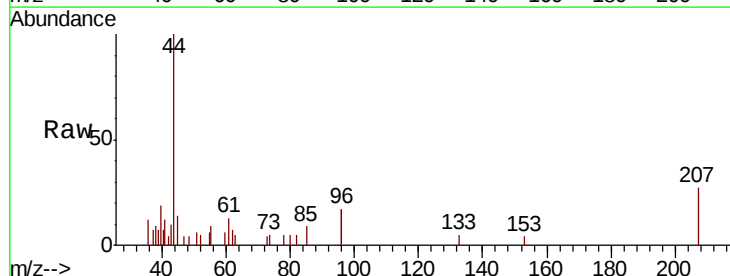
Abundance Ion 59.00 (58.70 to 59.70): VX0  
Ion 57.00 (56.70 to 57.70): VX0



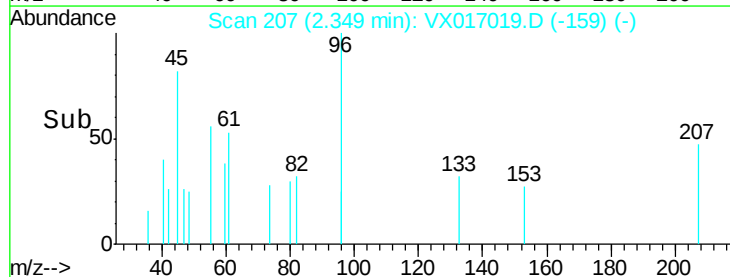
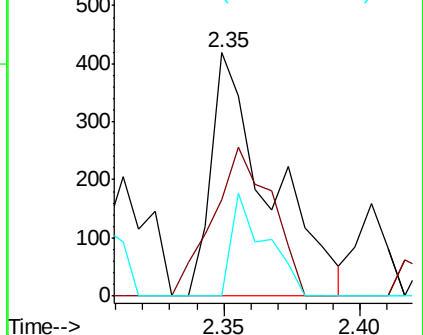
#12

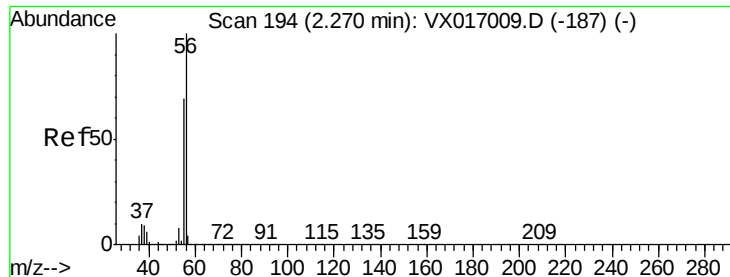
1,1-Dichloroethene  
Concen: 0.244 ug/l  
RT: 2.35 min Scan# 207  
Delta R.T. -0.01 min  
Lab File: VX017019.D  
Acq: 29 Jun 2020 20:03

Tgt Ion: 96 Resp: 620  
Ion Ratio Lower Upper  
96 100  
61 39.6 126.3 189.5#  
98 0.0 51.0 76.6#



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

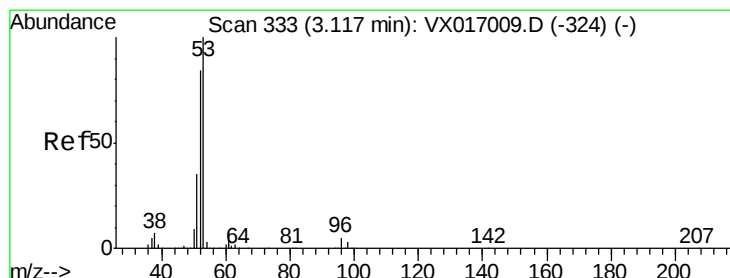
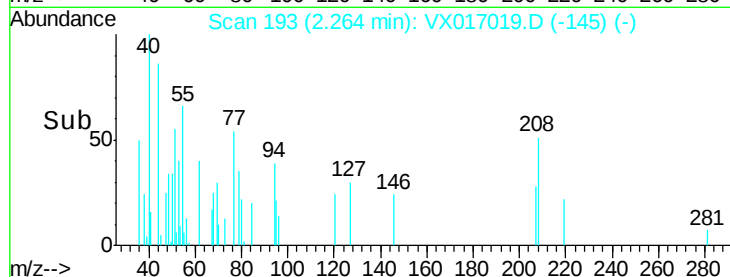
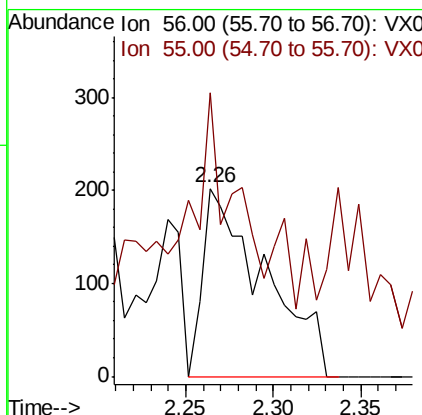
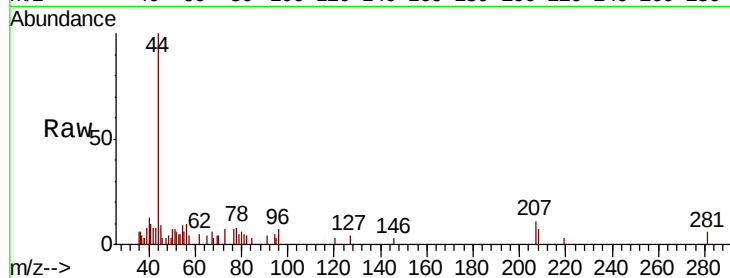




#13  
Acrolein  
Concen: 1.371 ug/l  
RT: 2.26 min Scan# 193  
Delta R.T. -0.01 min  
Lab File: VX017019.D  
Acq: 29 Jun 2020 20:03

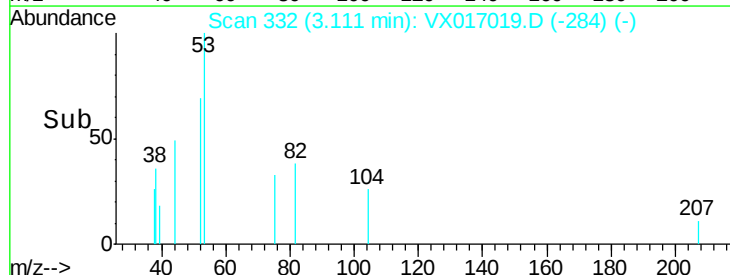
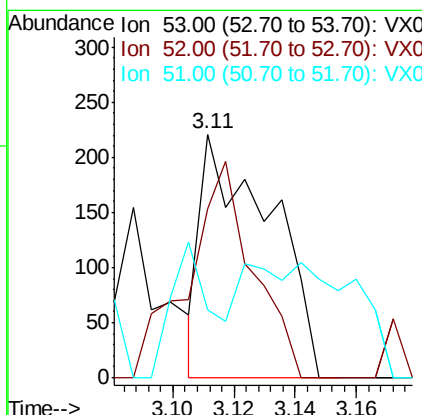
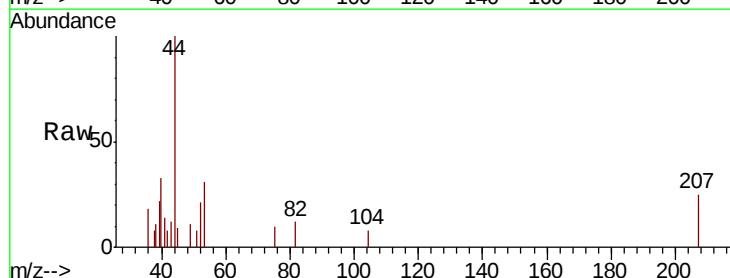
Instrument :  
MSVOA\_X  
ClientSampleId :  
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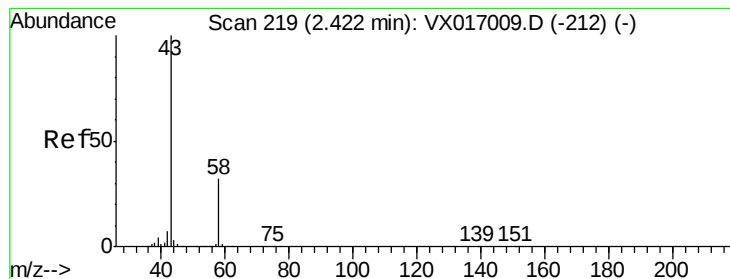
Tot Ion: 56 Resp: 495  
Ion Ratio Lower Upper  
56 100  
55 52.3 55.7 83.5#



#15  
Acrylonitrile  
Concen: 0.239 ug/l  
RT: 3.11 min Scan# 332  
Delta R.T. -0.01 min  
Lab File: VX017019.D  
Acq: 29 Jun 2020 20:03

Tgt Ion: 53 Resp: 347  
Ion Ratio Lower Upper  
53 100  
52 83.3 65.6 98.4  
51 32.6 28.3 42.5





#16

Acetone

Concen: 4.815 ug/l

RT: 2.42 min Scan# 219

Delta R.T. -0.00 min

Lab File: VX017019.D

Acq: 29 Jun 2020 20:03

Instrument :

MSVOA\_X

ClientSampleId :

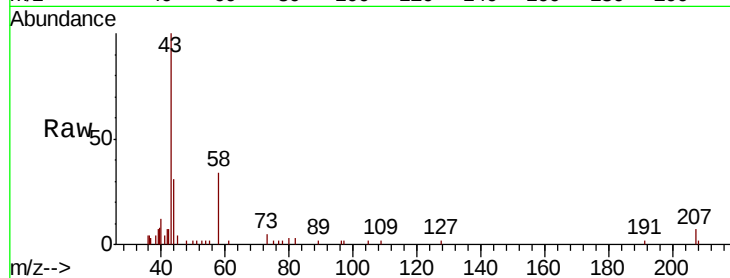
16BR-20200624

Tot Ion: 43 Resp: 5701

Ion Ratio Lower Upper

43 100

58 35.2 25.7 38.5



Abundance Ion 43.00 (42.70 to 43.70): VX0

Ion 58.00 (57.70 to 58.70): VX0

2.42

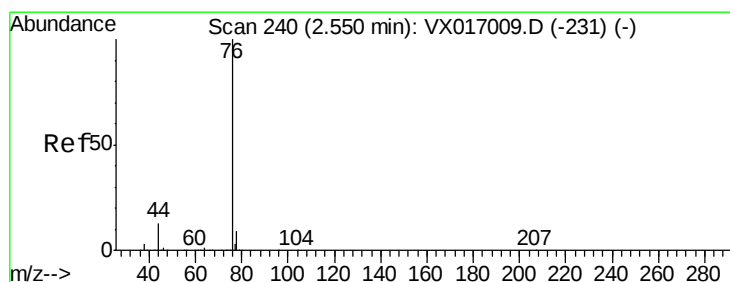
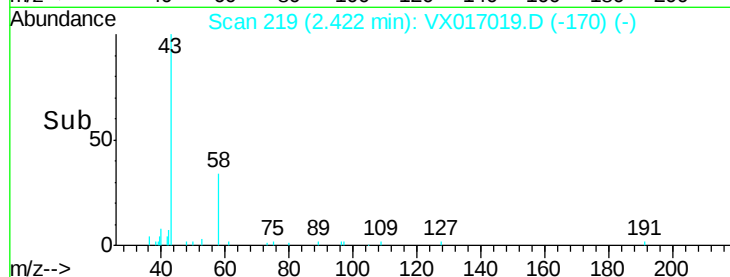
3000

2000

1000

0

Time--> 2.35 2.40 2.45



#17

Carbon Disulfide

Concen: 0.312 ug/l

RT: 2.55 min Scan# 240

Delta R.T. 0.00 min

Lab File: VX017019.D

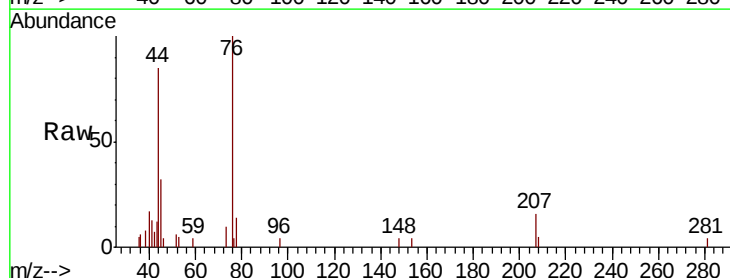
Acq: 29 Jun 2020 20:03

Tgt Ion: 76 Resp: 2050

Ion Ratio Lower Upper

76 100

78 9.6 7.2 10.8



Abundance Ion 75.90 (75.60 to 76.60): VX0

Ion 77.90 (77.60 to 78.60): VX0

2.55

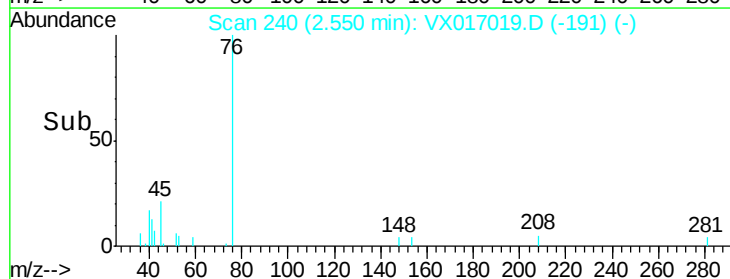
1500

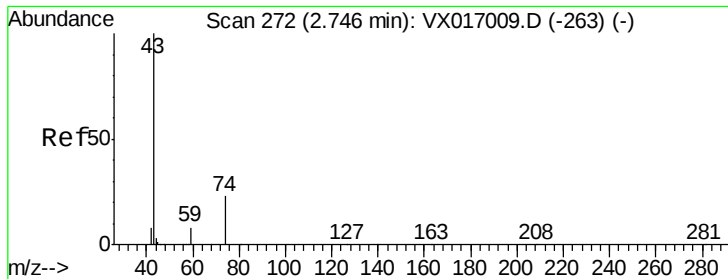
1000

500

0

Time--> 2.50 2.55 2.60

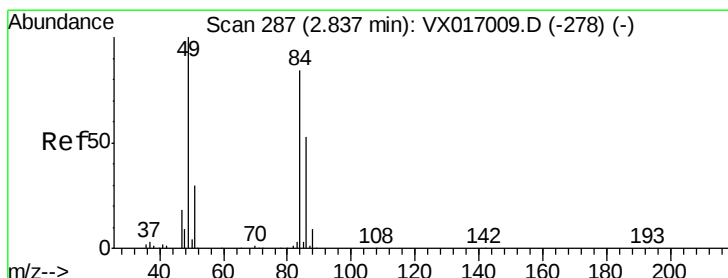
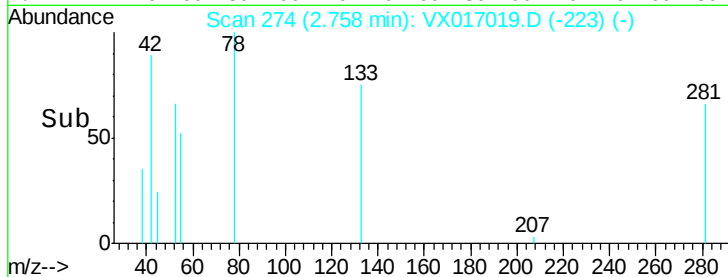
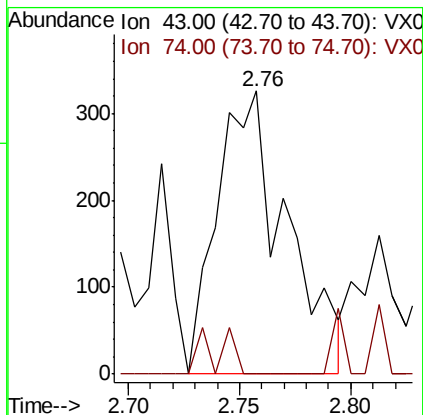
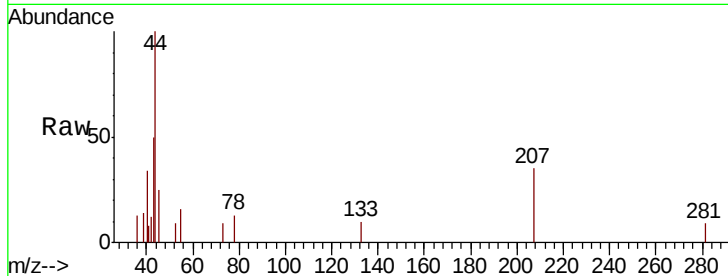




#18  
Methyl Acetate  
Concen: 0.227 ug/l  
RT: 2.76 min Scan# 274  
Delta R.T. 0.01 min  
Lab File: VX017019.D  
Acq: 29 Jun 2020 20:03

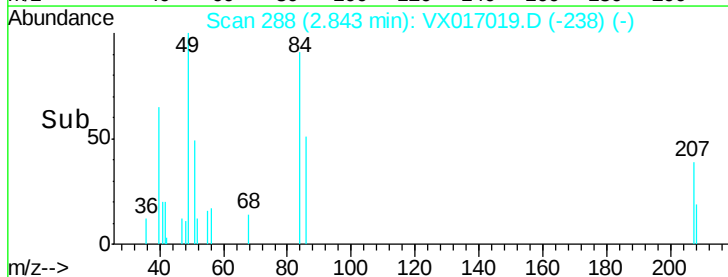
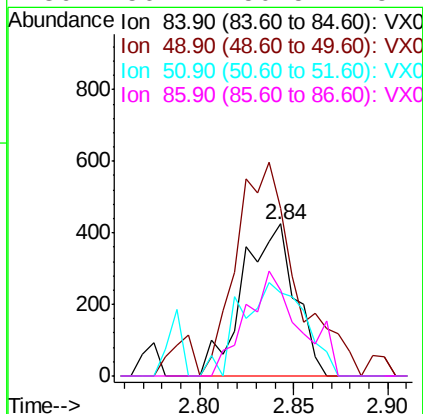
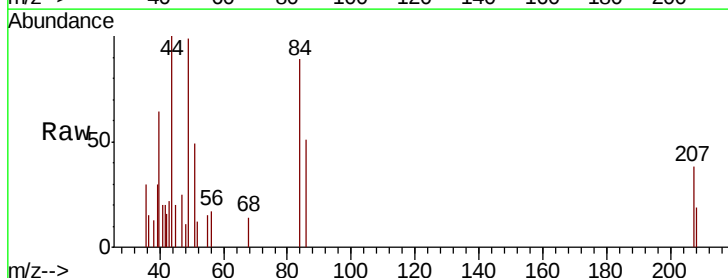
Instrument :  
MSVOA\_X  
ClientSampleId :  
16BR-20200624

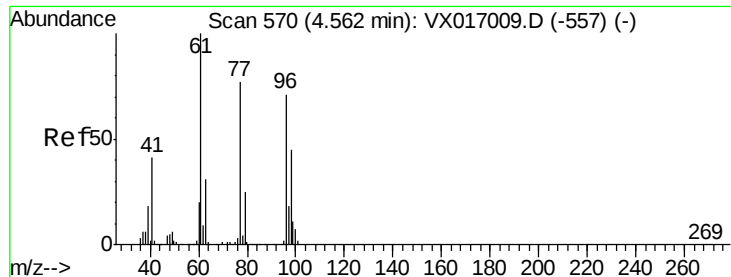
Tot Ion: 43 Resp: 703  
Ion Ratio Lower Upper  
43 100  
74 5.5 19.3 28.9#



#20  
Methylene Chloride  
Concen: Below Cal  
RT: 2.84 min Scan# 288  
Delta R.T. 0.01 min  
Lab File: VX017019.D  
Acq: 29 Jun 2020 20:03

Tgt Ion: 84 Resp: 820  
Ion Ratio Lower Upper  
84 100  
49 83.3 94.7 142.1#  
51 54.4 28.6 42.8#  
86 56.7 50.5 75.7





#27

cis-1,2-Dichloroethene

Concen: 6.023 ug/l

RT: 4.56 min Scan# 570

Delta R.T. -0.00 min

Lab File: VX017019.D

Acq: 29 Jun 2020 20:03

Instrument :

MSVOA\_X

ClientSampleId :

16BR-20200624

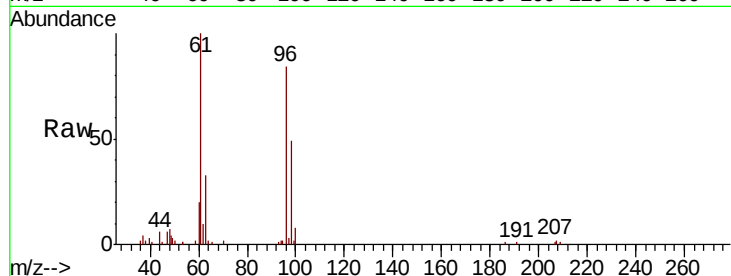
Tot Ion: 96 Resp: 19240

Ion Ratio Lower Upper

96 100

61 122.1 0.0 282.8

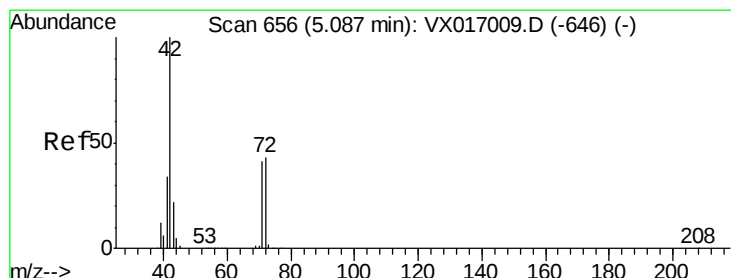
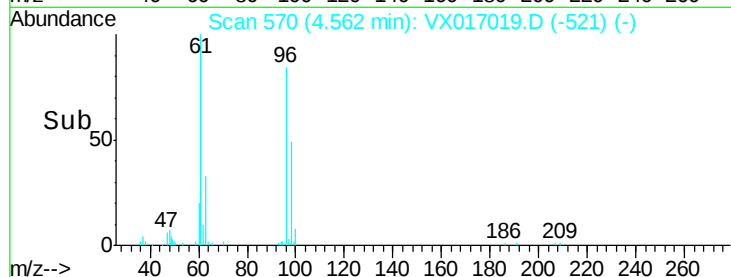
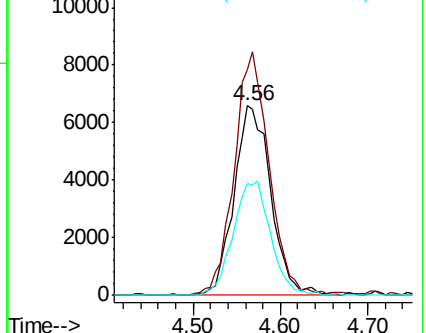
98 61.1 0.0 127.6



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



#29

Tetrahydrofuran

Concen: 0.221 ug/l

RT: 5.09 min Scan# 656

Delta R.T. -0.00 min

Lab File: VX017019.D

Acq: 29 Jun 2020 20:03

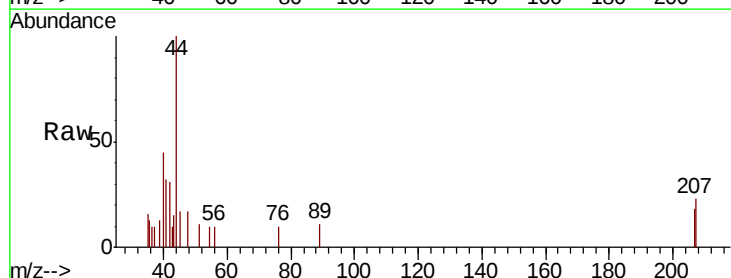
Tgt Ion: 42 Resp: 288

Ion Ratio Lower Upper

42 100

72 8.0 35.3 52.9#

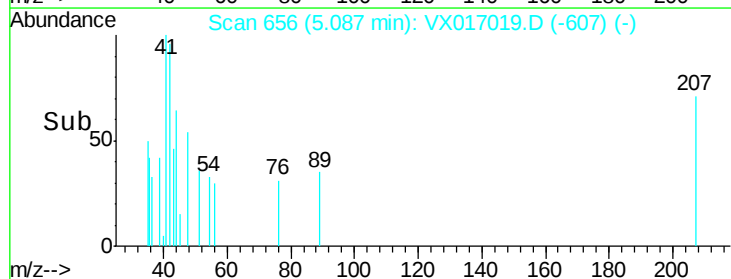
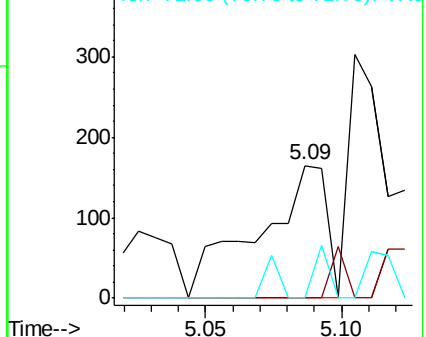
71 8.3 33.1 49.7#

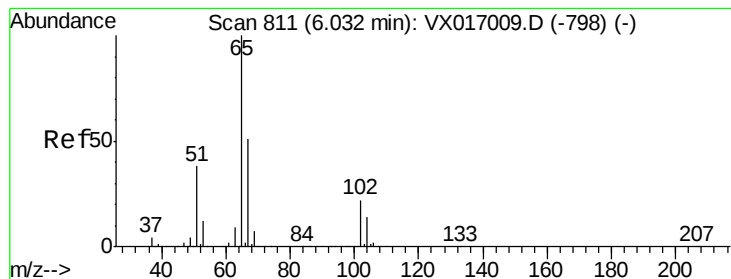


Abundance Ion 42.00 (41.70 to 42.70): VX0

Ion 72.00 (71.70 to 72.70): VX0

Ion 71.00 (70.70 to 71.70): VX0





#33

1,2-Dichloroethane-d4

Concen: 52.914 ug/l

RT: 6.03 min Scan# 811

Delta R.T. -0.00 min

Lab File: VX017019.D

Acq: 29 Jun 2020 20:03

Instrument :

MSVOA\_X

ClientSampleId :

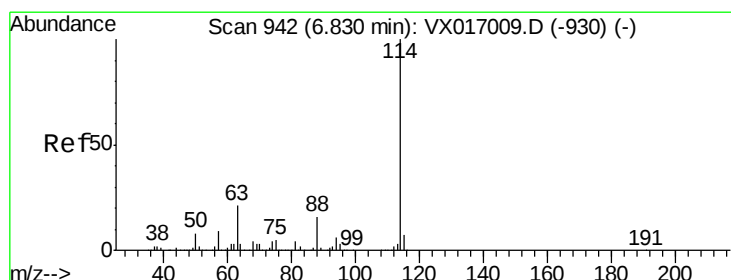
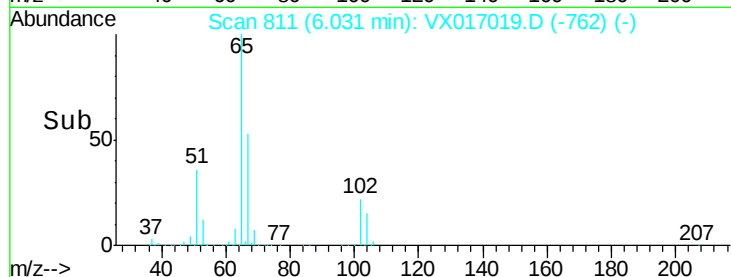
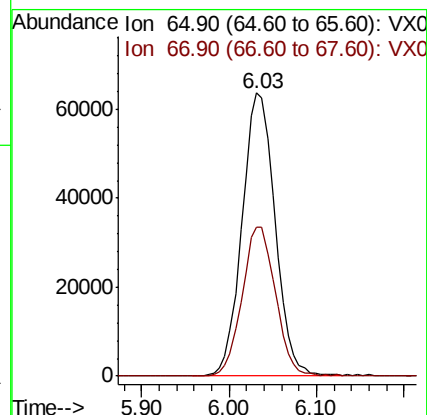
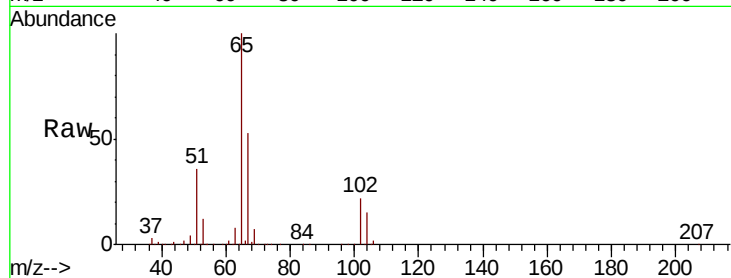
16BR-20200624

Tot Ion: 65 Resp: 167489

Ion Ratio Lower Upper

65 100

67 52.9 0.0 103.8



#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 6.83 min Scan# 942

Delta R.T. -0.00 min

Lab File: VX017019.D

Acq: 29 Jun 2020 20:03

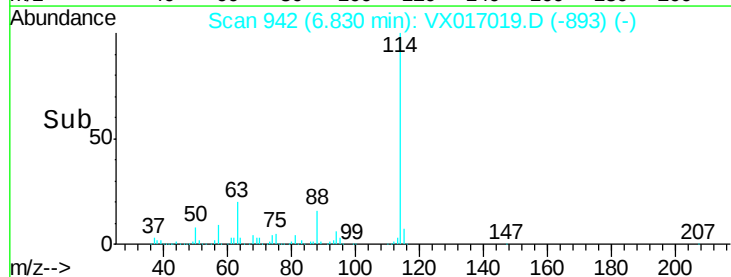
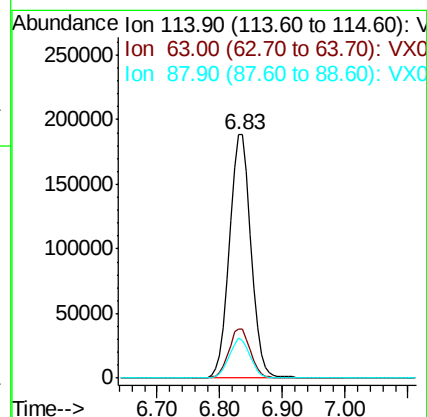
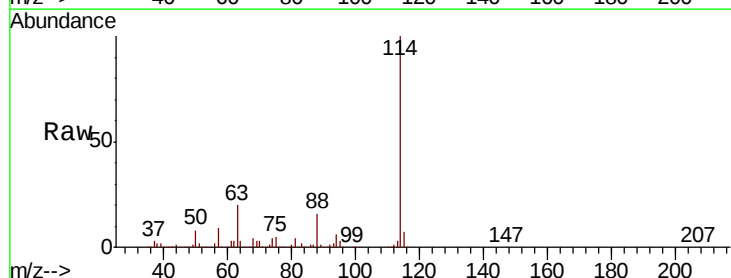
Tgt Ion: 114 Resp: 449478

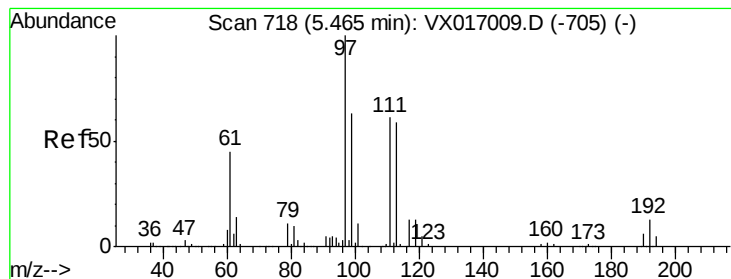
Ion Ratio Lower Upper

114 100

63 20.4 0.0 41.4

88 16.3 0.0 32.4





#35

Dibromofluoromethane

Concen: 50.270 ug/l

RT: 5.47 min Scan# 719

Delta R.T. 0.01 min

Lab File: VX017019.D

Acq: 29 Jun 2020 20:03

Instrument :

MSVOA\_X

ClientSampleId :

16BR-20200624

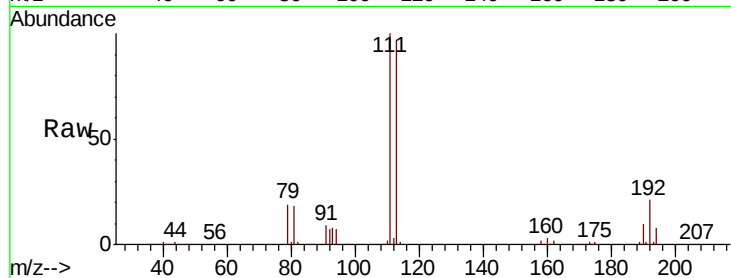
Tot Ion:113 Resp: 142932

Ion Ratio Lower Upper

113 100

111 103.4 81.9 122.9

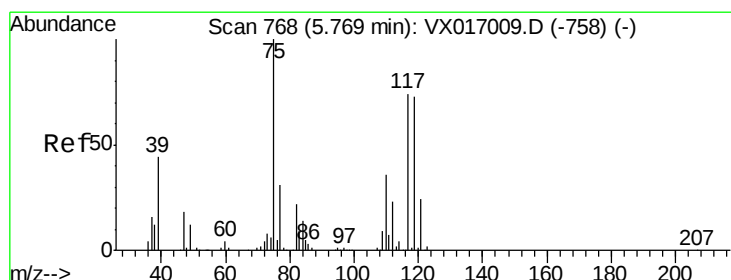
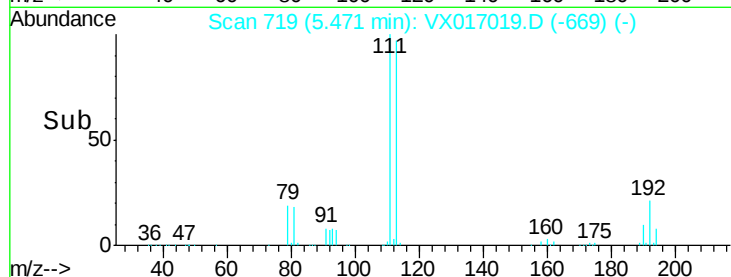
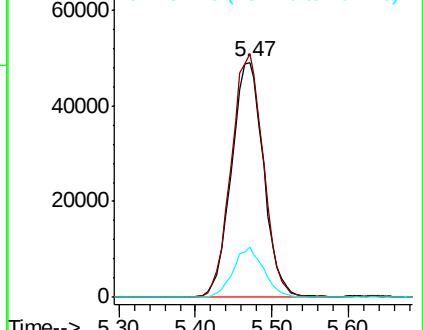
192 20.3 16.7 25.1



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: 4.550 ug/l

RT: 5.64 min Scan# 746

Delta R.T. -0.13 min

Lab File: VX017019.D

Acq: 29 Jun 2020 20:03

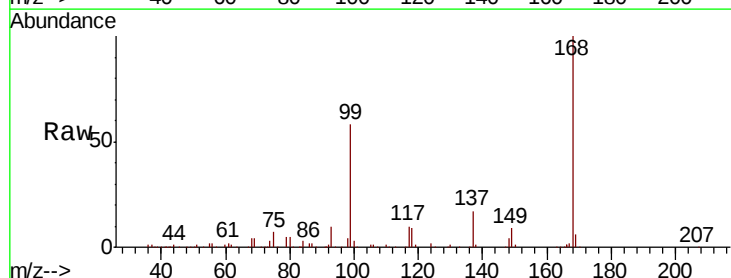
Tgt Ion: 75 Resp: 19327

Ion Ratio Lower Upper

75 100

110 9.6 18.1 54.1#

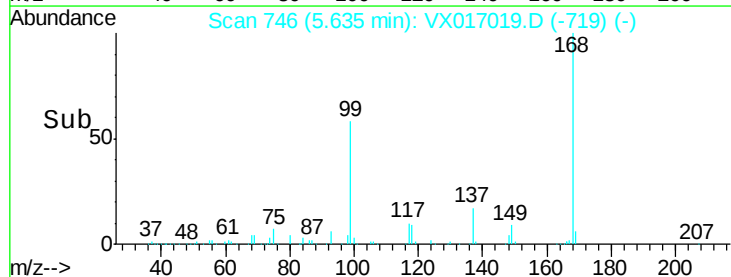
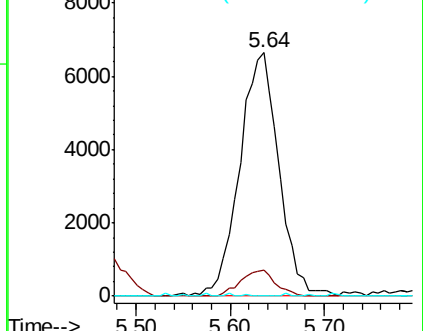
77 0.1 24.6 37.0#

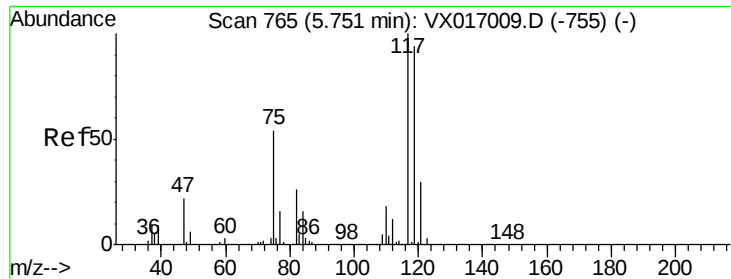


Abundance Ion 74.90 (74.60 to 75.60): VX0

Ion 109.90 (109.60 to 110.60): V

Ion 76.90 (76.60 to 77.60): VX0





#38

Carbon Tetrachloride

Concen: 5.544 ug/l

RT: 5.64 min Scan# 746

Delta R.T. -0.12 min

Lab File: VX017019.D

Acq: 29 Jun 2020 20:03

Instrument :

MSVOA\_X

ClientSampleId :

16BR-20200624

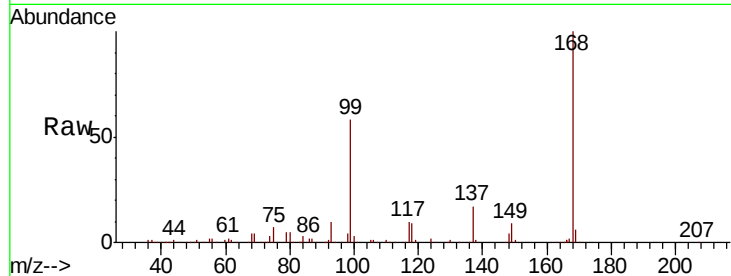
Tot Ion:117 Resp: 25941

Ion Ratio Lower Upper

117 100

119 6.5 75.4 113.0#

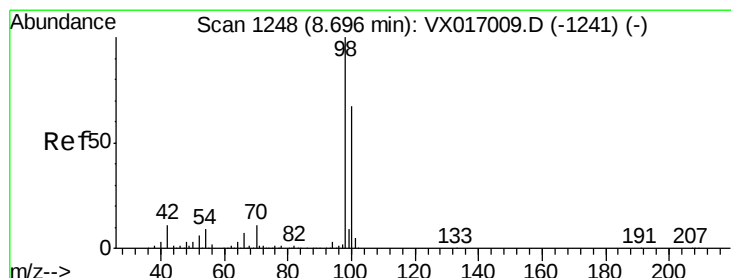
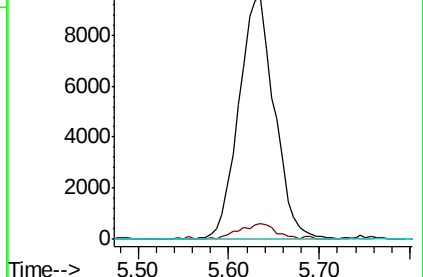
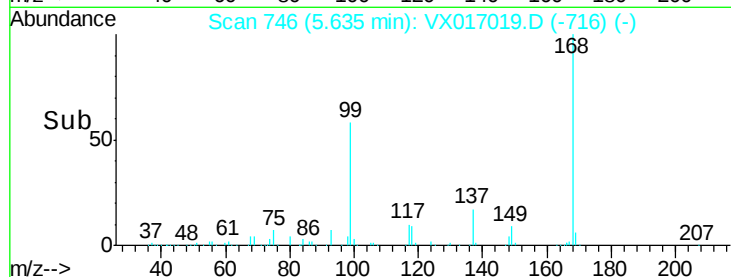
121 0.0 23.8 35.6#



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: 51.959 ug/l

RT: 8.70 min Scan# 1248

Delta R.T. -0.00 min

Lab File: VX017019.D

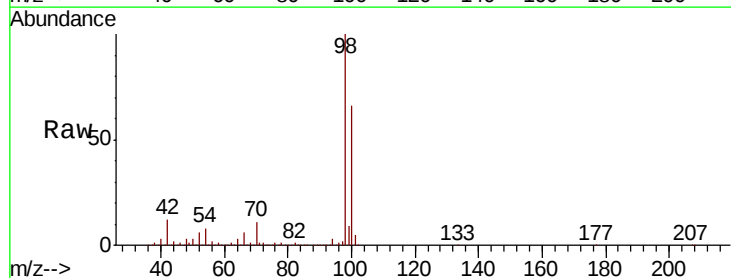
Acq: 29 Jun 2020 20:03

Tgt Ion: 98 Resp: 546286

Ion Ratio Lower Upper

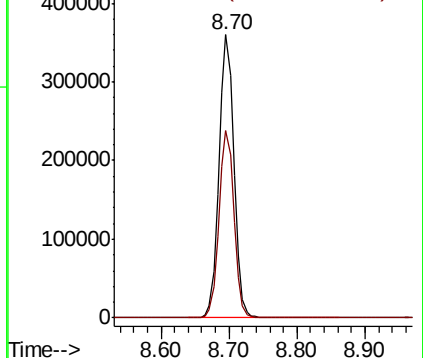
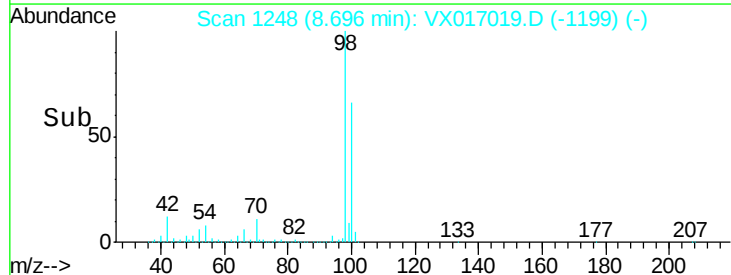
98 100

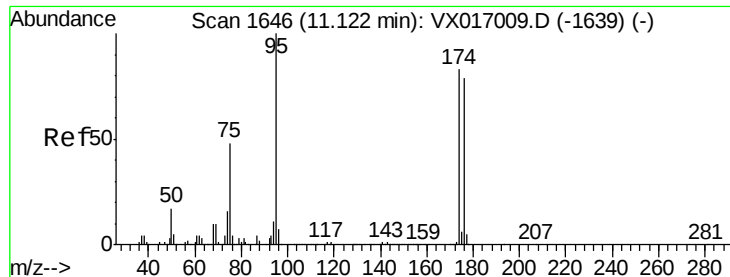
100 66.5 53.8 80.6



Abundance Ion 98.00 (97.70 to 98.70): VX0

Ion 100.00 (99.70 to 100.70): V





#62

4-Bromofluorobenzene

Concen: 55.676 ug/l

RT: 11.12 min Scan# 1646

Delta R.T. -0.00 min

Lab File: VX017019.D

Acq: 29 Jun 2020 20:03

Instrument :

MSVOA\_X

ClientSampleId :

16BR-20200624

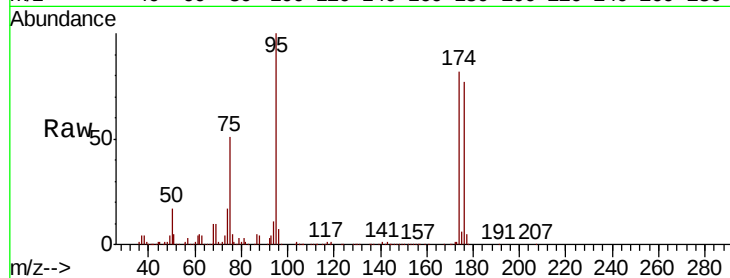
Tot Ion: 95 Resp: 228829

Ion Ratio Lower Upper

95 100

174 79.1 0.0 164.0

176 77.0 0.0 157.6

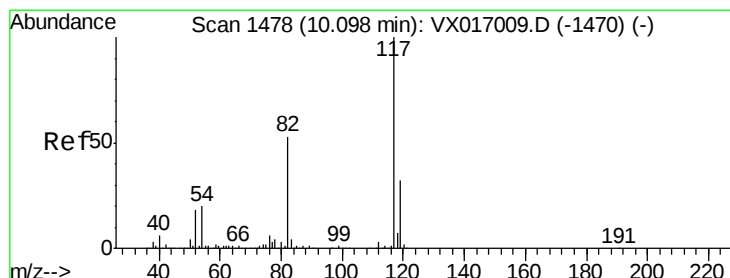
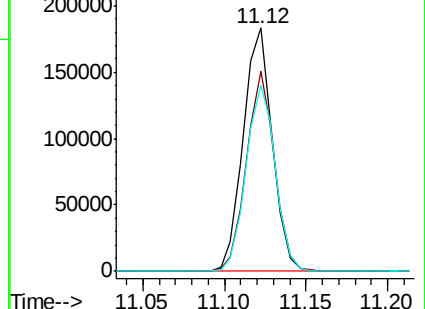
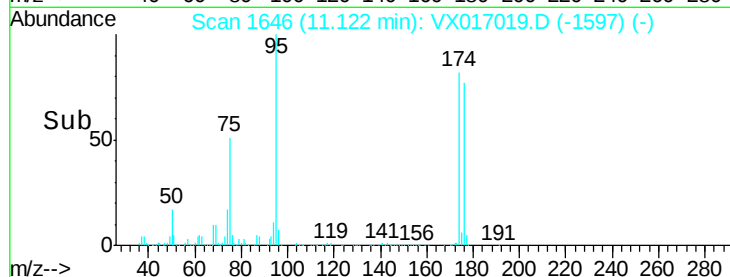


Abundance Ion 94.90 (94.60 to 95.60): VX017009.D (-1639) (-)

Ion 173.80 (173.50 to 174.50): VX017009.D (-1639) (-)

Ion 175.80 (175.50 to 176.50): VX017009.D (-1639) (-)

Time-->



#63

Chlorobenzene-d5

Concen: 50.000 ug/l

RT: 10.10 min Scan# 1478

Delta R.T. -0.00 min

Lab File: VX017019.D

Acq: 29 Jun 2020 20:03

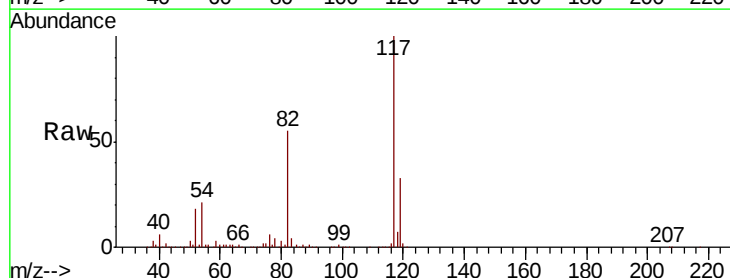
Tgt Ion: 117 Resp: 455161

Ion Ratio Lower Upper

117 100

82 54.7 42.6 63.8

119 33.0 25.4 38.2

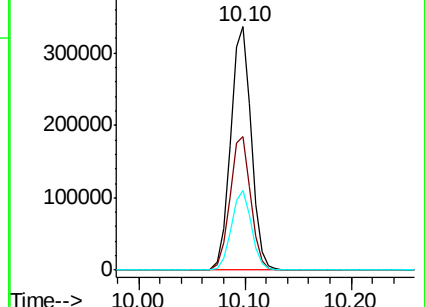
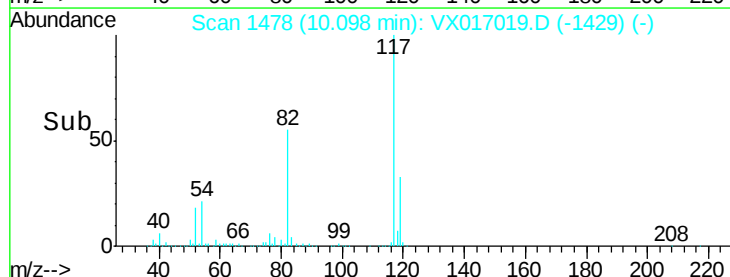


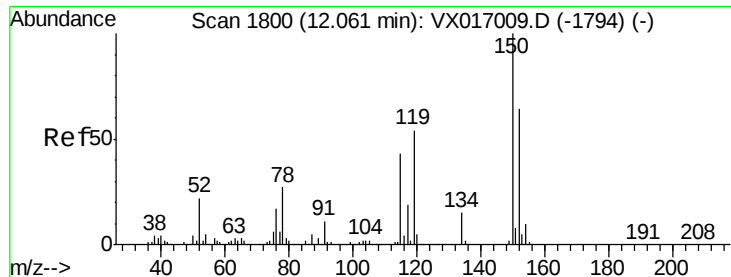
Abundance Ion 116.90 (116.60 to 117.60): VX017009.D (-1470) (-)

Ion 82.00 (81.70 to 82.70): VX017009.D (-1470) (-)

Ion 118.90 (118.60 to 119.60): VX017009.D (-1470) (-)

Time-->





#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 12.06 min Scan# 1800

Delta R.T. -0.00 min

Lab File: VX017019.D

Acq: 29 Jun 2020 20:03

Instrument :

MSVOA\_X

ClientSampleId :

16BR-20200624

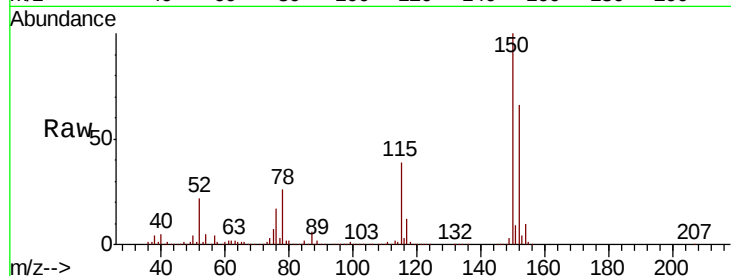
Tot Ion:152 Resp: 242544

Ion Ratio Lower Upper

152 100

115 58.3 40.9 122.7

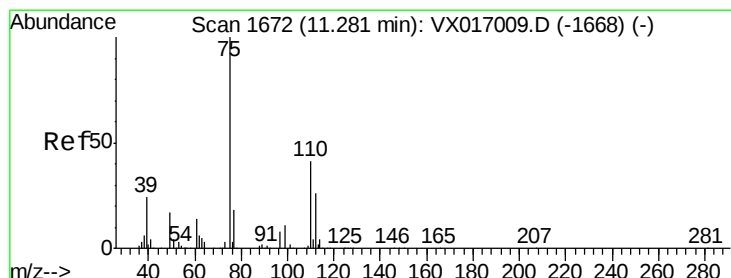
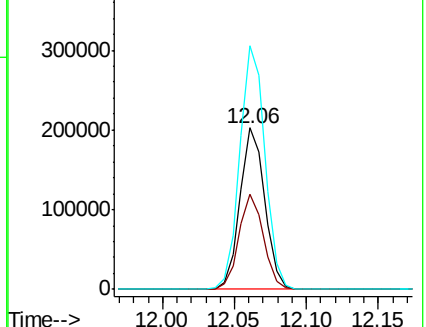
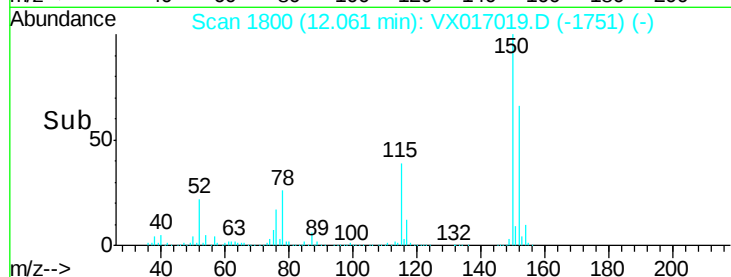
150 153.2 0.0 351.6



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: 23.875 ug/l

RT: 11.12 min Scan# 1646

Delta R.T. -0.16 min

Lab File: VX017019.D

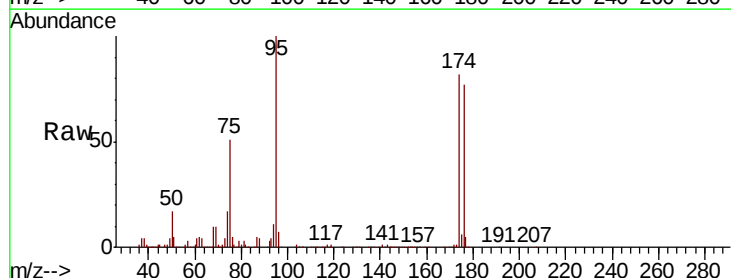
Acq: 29 Jun 2020 20:03

Tgt Ion: 75 Resp: 113872

Ion Ratio Lower Upper

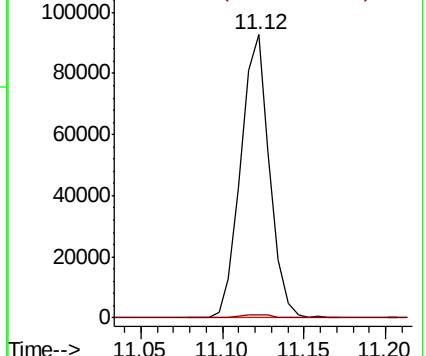
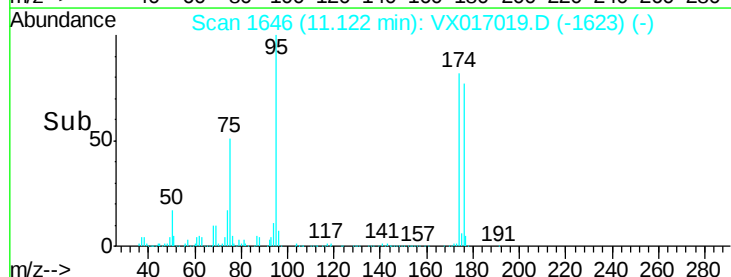
75 100

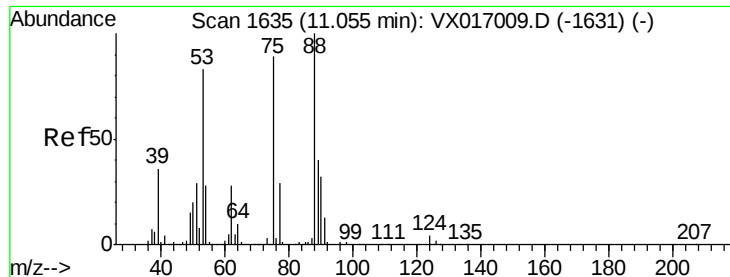
77 1.2 20.2 60.6#



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: 61.828 ug/l

RT: 11.12 min Scan# 1646

Delta R.T. 0.07 min

Lab File: VX017019.D

Acq: 29 Jun 2020 20:03

Instrument :

MSVOA\_X

ClientSampleId :

16BR-20200624

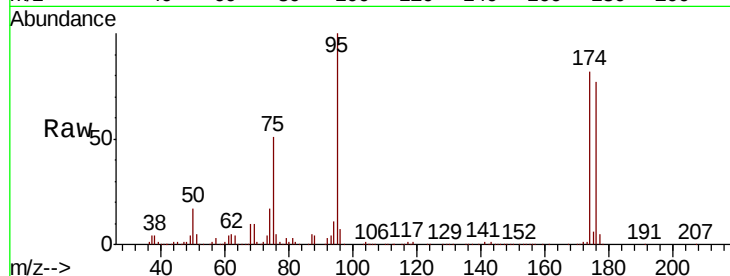
Tot Ion: 75 Resp: 113872

Ion Ratio Lower Upper

75 100

53 0.3 72.4 108.6#

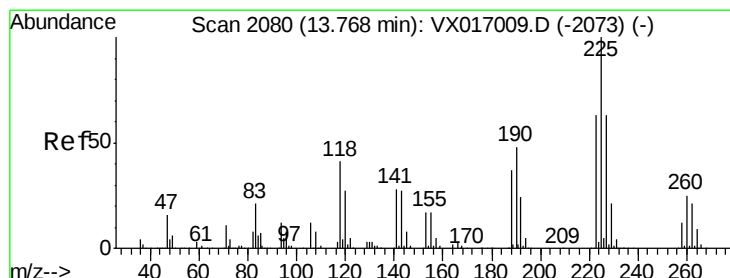
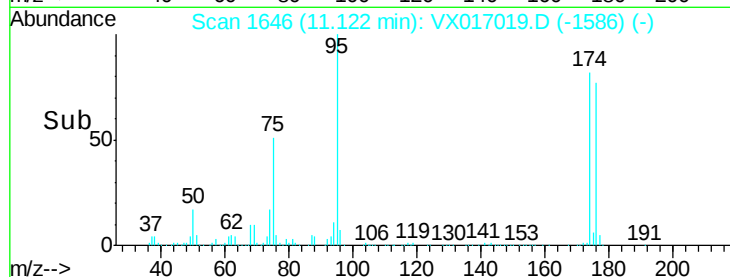
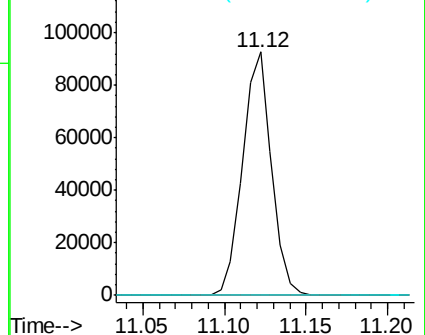
89 0.0 37.0 55.4#



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



#94

Hexachlorobutadiene

Concen: 0.970 ug/l

RT: 13.76 min Scan# 2079

Delta R.T. -0.01 min

Lab File: VX017019.D

Acq: 29 Jun 2020 20:03

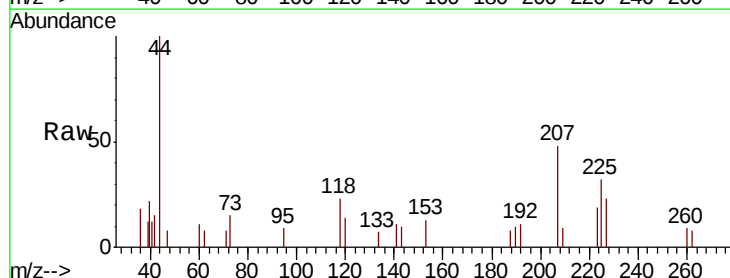
Tgt Ion: 225 Resp: 246

Ion Ratio Lower Upper

225 100

223 66.3 32.5 97.5

227 59.3 33.1 99.2



Abundance Ion 224.70 (224.40 to 225.40): V

Ion 222.70 (222.40 to 223.40): V

Ion 226.70 (226.40 to 227.40): V

