

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX111519\  
 Data File : VX013440.D  
 Acq On : 15 Nov 2019 12:43  
 Operator : JC/SP  
 Sample : K5884-01  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 8 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 S36-0162

Quant Time: Nov 15 23:00:36 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_X\METHOD\82X103119W.M  
 Quant Title : SW846 8260  
 QLast Update : Sat Nov 02 07:06:38 2019  
 Response via : Initial Calibration

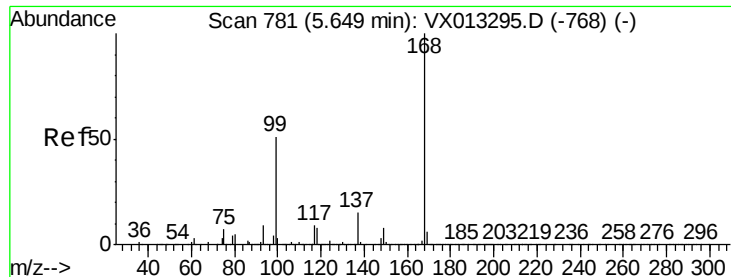
| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 5.65  | 168  | 707192   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 6.85  | 114  | 1136170  | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 10.11 | 117  | 1006602  | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 12.07 | 152  | 451229   | 50.00 | ug/l  | 0.00     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc  | Units   | Dev(Min) |
|-----------------------------|-------|------|----------|-------|---------|----------|
| 33) 1,2-Dichloroethane-d4   | 6.05  | 65   | 416799   | 49.75 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 99.50%  |          |
| 35) Dibromofluoromethane    | 5.48  | 113  | 342495   | 48.06 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 96.12%  |          |
| 50) Toluene-d8              | 8.71  | 98   | 1355619  | 50.46 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 100.92% |          |
| 62) 4-Bromofluorobenzene    | 11.14 | 95   | 450691   | 46.48 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 92.96%  |          |

| Target Compounds               | R.T.  | QIon | Response | Conc      | Units  | Qvalue |
|--------------------------------|-------|------|----------|-----------|--------|--------|
| 3) Chloromethane               | 1.32  | 50   | 2670     | 0.302     | ug/l # | 72     |
| 4) Vinyl Chloride              | 1.40  | 62   | 20860    | 2.074     | ug/l   | 99     |
| 5) Bromomethane                | 1.66  | 94   | 1854     | 0.264     | ug/l # | 44     |
| 6) Chloroethane                | 1.73  | 64   | 821      | Below Cal | #      | 67     |
| 11) Tert butyl alcohol         | 3.02  | 59   | 15005    | 6.795     | ug/l # | 93     |
| 13) Acrolein                   | 2.28  | 56   | 803      | 0.671     | ug/l # | 14     |
| 16) Acetone                    | 2.43  | 43   | 11083    | 2.652     | ug/l   | 93     |
| 18) Methyl Acetate             | 2.59  | 43   | 29583    | 2.564     | ug/l # | 55     |
| 20) Methylene Chloride         | 2.86  | 84   | 2799     | 0.363     | ug/l # | 66     |
| 21) trans-1,2-Dichloroethene   | 3.16  | 96   | 3980     | 0.563     | ug/l   | 98     |
| 27) cis-1,2-Dichloroethene     | 4.59  | 96   | 109677   | 13.862    | ug/l   | 90     |
| 28) Bromochloromethane         | 5.01  | 49   | 1191     | 0.330     | ug/l # | 29     |
| 31) Cyclohexane                | 5.65  | 56   | 12487    | 1.090     | ug/l # | 1      |
| 36) 1,1-Dichloropropene        | 5.65  | 75   | 47797    | 4.904     | ug/l # | 51     |
| 38) Carbon Tetrachloride       | 5.65  | 117  | 61617    | 6.465     | ug/l # | 18     |
| 44) Trichloroethene            | 7.22  | 130  | 1776     | 0.213     | ug/l   | 95     |
| 49) 1,4-Dioxane                | 7.75  | 88   | 295      | 1.376     | ug/l # | 22     |
| 56) Ethyl methacrylate         | 9.17  | 69   | 382      | 1.591     | ug/l # | 72     |
| 71) Bromoform                  | 10.85 | 173  | 327      | 3.247     | ug/l # | 28     |
| 76) 1,2,3-Trichloropropane     | 11.13 | 75   | 217691   | 23.752    | ug/l # | 34     |
| 81) trans-1,4-Dichloro-2-buten | 11.13 | 75   | 217691   | 61.138    | ug/l # | 9      |
| 92) 1,2-Dibromo-3-Chloropropan | 13.05 | 75   | 574      | 0.216     | ug/l   | 71     |

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





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 5.65 min Scan# 782

Delta R.T. 0.01 min

Lab File: VX013440.D

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Instrument :

MSVOA\_X

ClientSampleId :

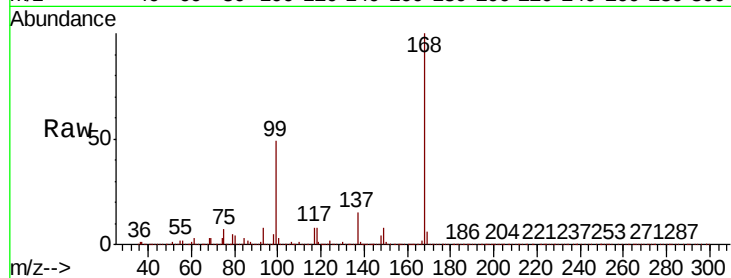
S36-0162

Tot Ion:168 Resp: 707192

Ion Ratio Lower Upper

168 100

99 49.3 40.8 61.2



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VX0

5.65

250000

200000

150000

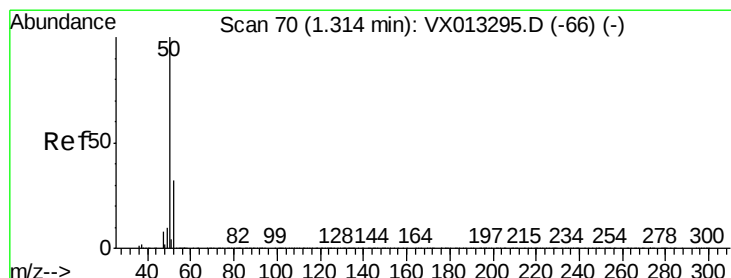
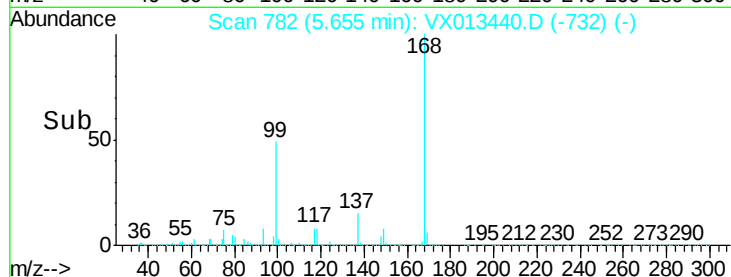
100000

50000

0

Time-->

5.50 5.60 5.70 5.80



#3

Chloromethane

Concen: 0.302 ug/l

RT: 1.32 min Scan# 71

Delta R.T. 0.01 min

Lab File: VX013440.D

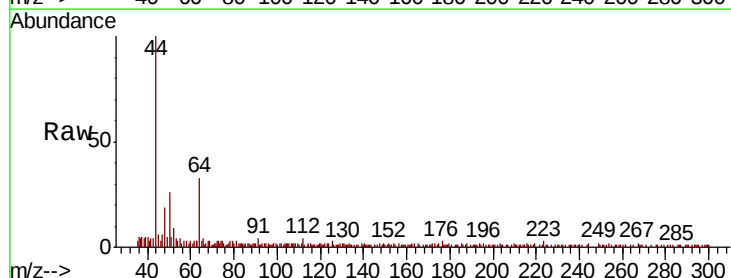
Acq: 15 Nov 2019 12:43

Tgt Ion: 50 Resp: 2670

Ion Ratio Lower Upper

50 100

52 16.1 25.5 38.3#



Abundance Ion 49.90 (49.60 to 50.60): VX0

Ion 51.90 (51.60 to 52.60): VX0

1.32

3000

2500

2000

1500

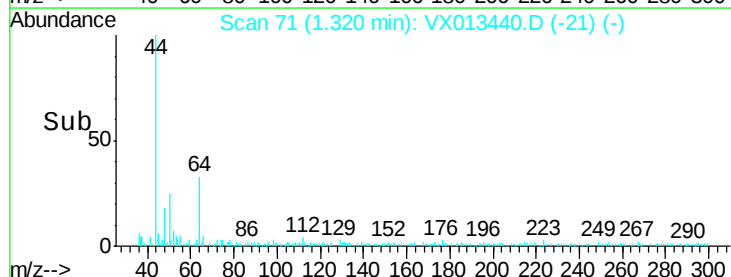
1000

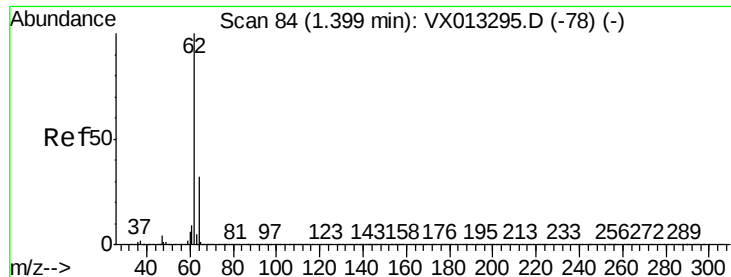
500

0

Time-->

1.28 1.30 1.32 1.34 1.36





#4

Vinyl Chloride

Concen: 2.074 ug/l

RT: 1.40 min Scan# 84

Delta R.T. 0.00 min

Lab File: VX013440.D

Acq: 15 Nov 2019 12:43

Instrument :

MSVOA\_X

ClientSampled :

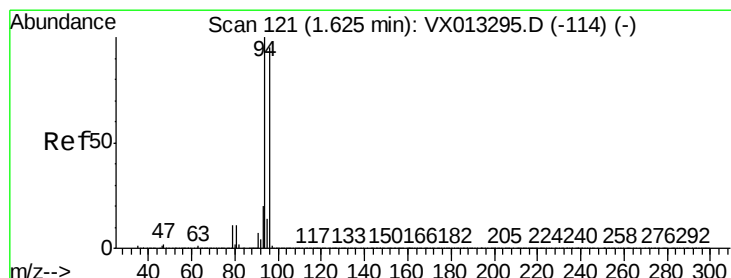
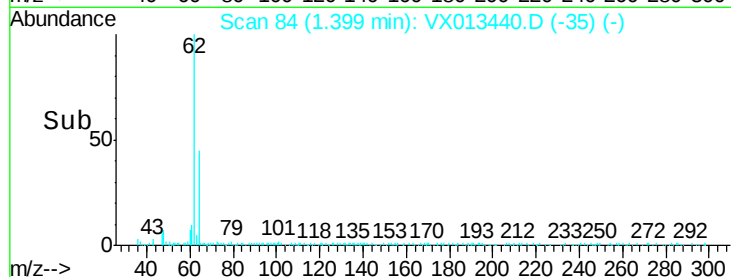
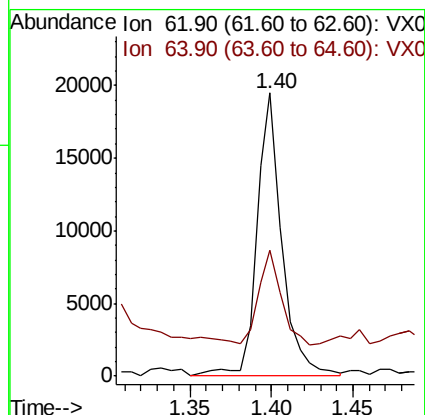
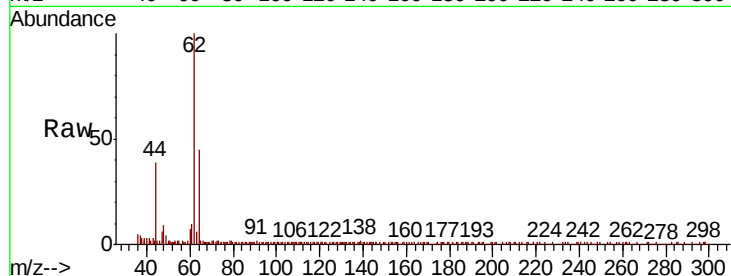
S36-0162

Tot Ion: 62 Resp: 20860

Ion Ratio Lower Upper

62 100

64 31.3 25.6 38.4



#5

Bromomethane

Concen: 0.264 ug/l

RT: 1.66 min Scan# 127

Delta R.T. 0.04 min

Lab File: VX013440.D

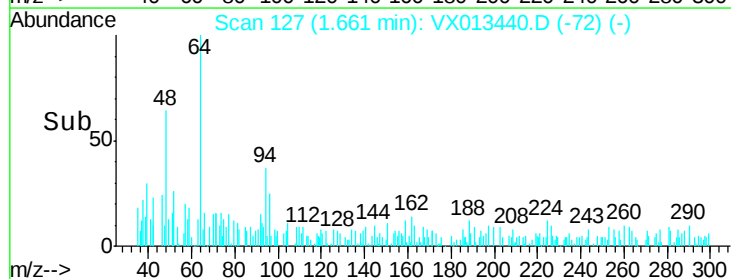
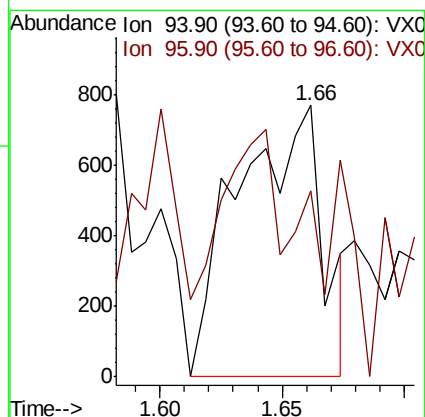
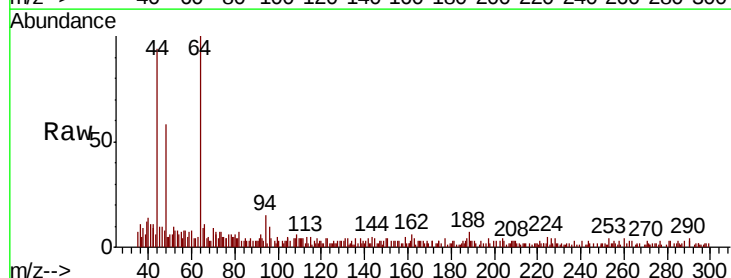
Acq: 15 Nov 2019 12:43

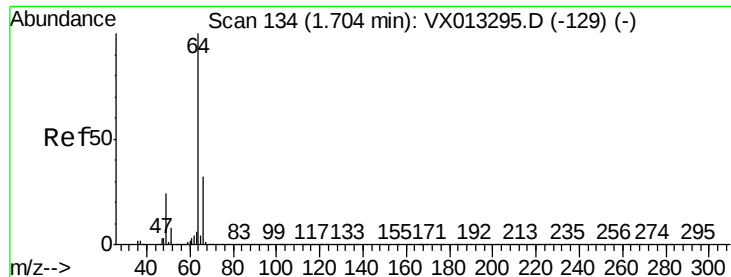
Tgt Ion: 94 Resp: 1854

Ion Ratio Lower Upper

94 100

96 40.1 75.8 113.8#





#6

Chloroethane

Concen: Below Cal

RT: 1.73 min Scan# 138

Delta R.T. 0.02 min

Lab File: VX013440.D

Acq: 15 Nov 2019 12:43

Instrument :

MSVOA\_X

ClientSampleId :

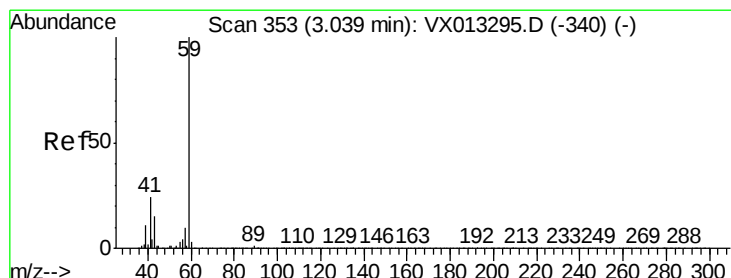
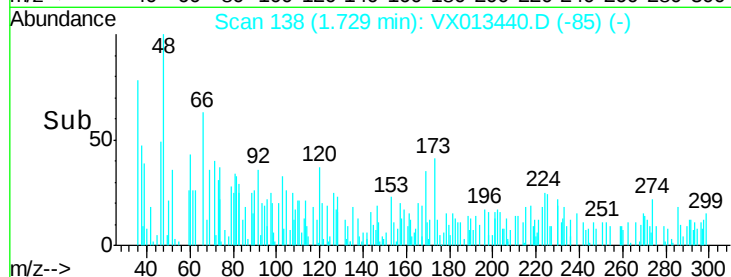
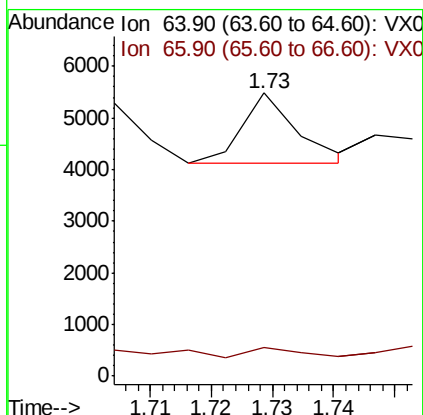
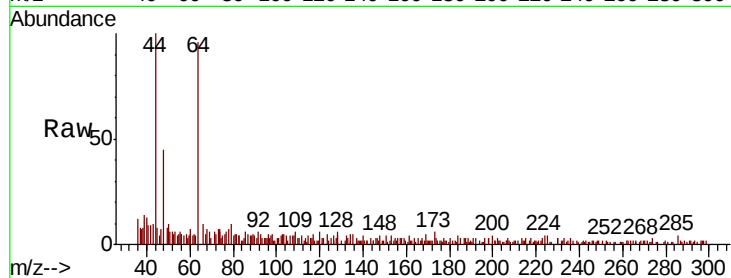
S36-0162

Tot Ion: 64 Resp: 821

Ion Ratio Lower Upper

64 100

66 13.5 25.6 38.4#



#11

Tert butyl alcohol

Concen: 6.795 ug/l

RT: 3.02 min Scan# 350

Delta R.T. -0.02 min

Lab File: VX013440.D

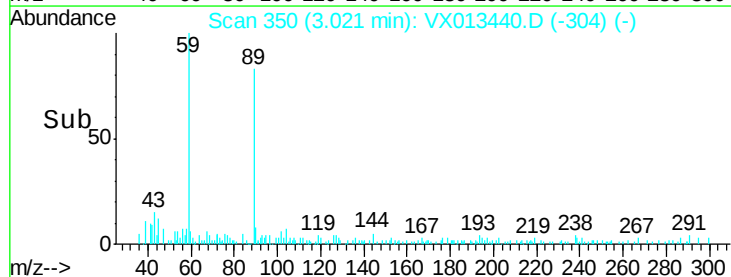
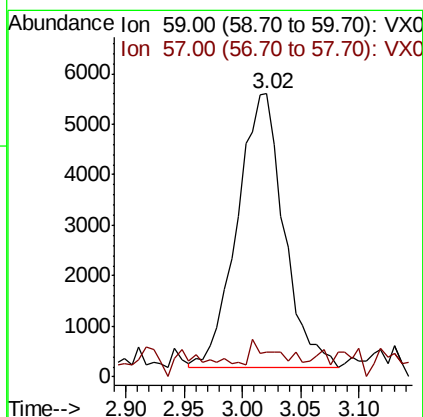
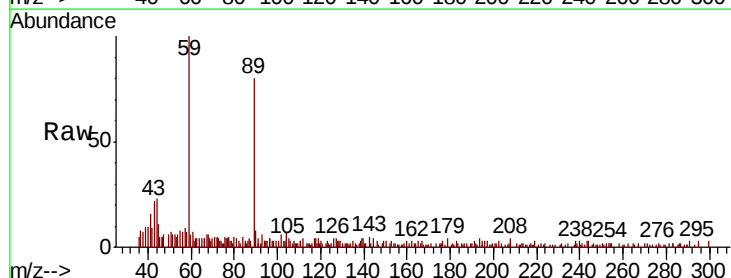
Acq: 15 Nov 2019 12:43

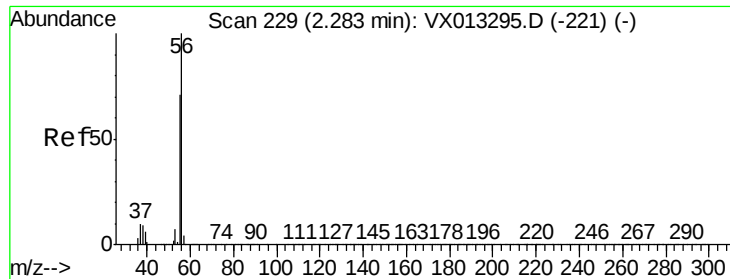
Tgt Ion: 59 Resp: 15005

Ion Ratio Lower Upper

59 100

57 7.2 8.0 12.0#





#13

Acrolein

Concen: 0.671 ug/l

RT: 2.28 min Scan# 229

Delta R.T. 0.00 min

Lab File: VX013440.D

Acq: 15 Nov 2019 12:43

Instrument :

MSVOA\_X

ClientSampled :

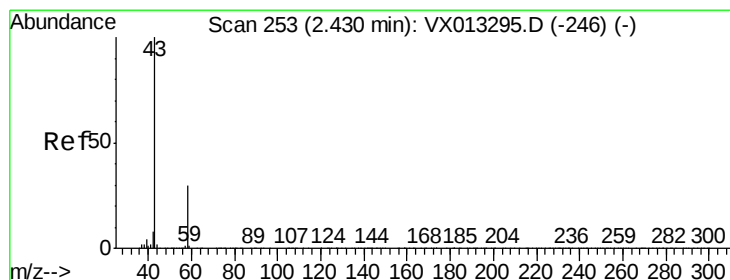
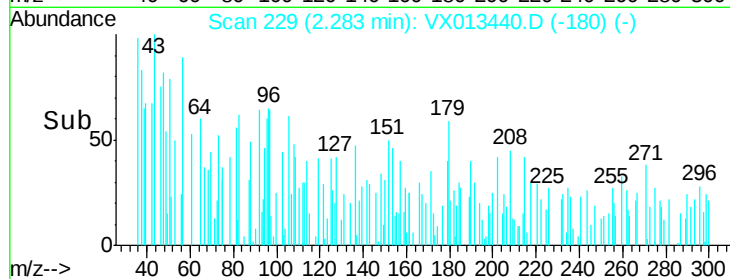
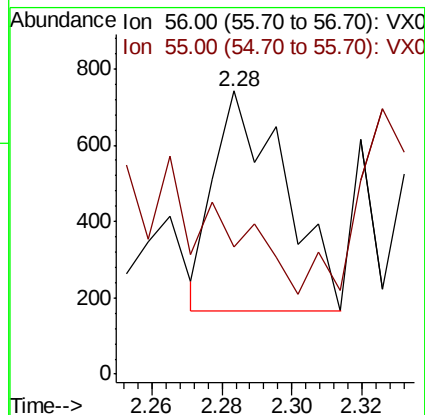
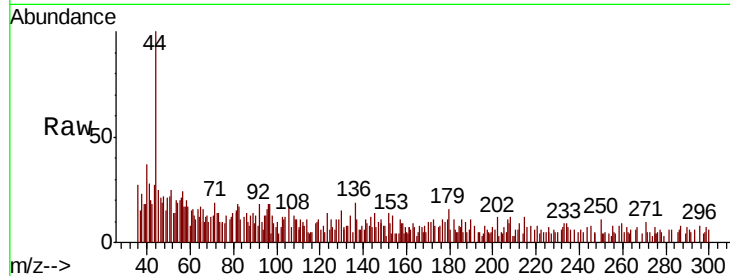
S36-0162

Tot Ion: 56 Resp: 803

Ion Ratio Lower Upper

56 100

55 0.0 57.4 86.0#



#16

Acetone

Concen: 2.652 ug/l

RT: 2.43 min Scan# 253

Delta R.T. 0.00 min

Lab File: VX013440.D

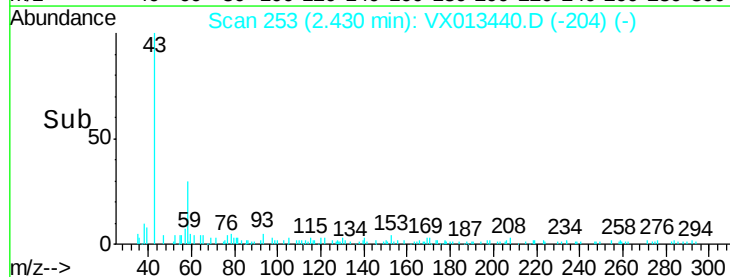
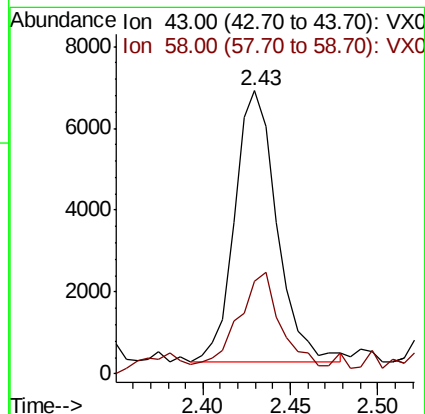
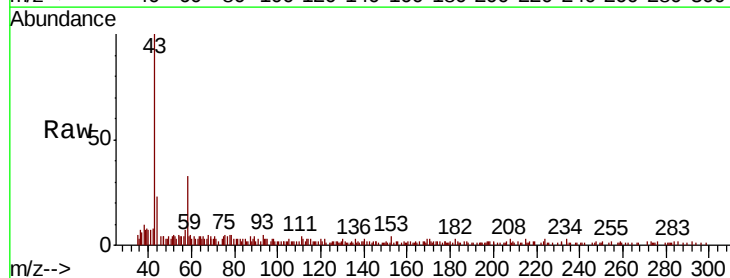
Acq: 15 Nov 2019 12:43

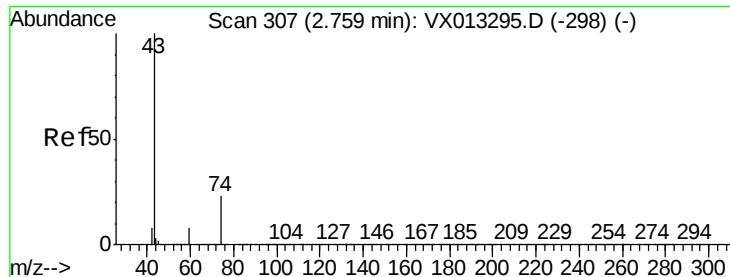
Tgt Ion: 43 Resp: 11083

Ion Ratio Lower Upper

43 100

58 26.6 24.3 36.5

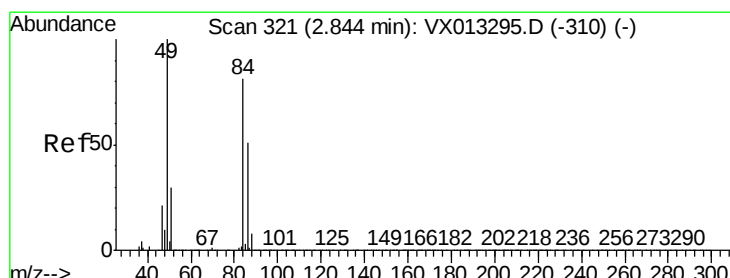
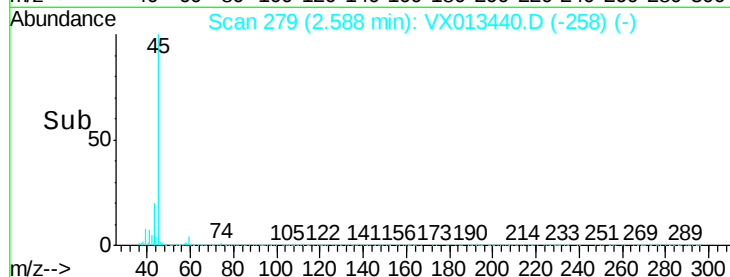
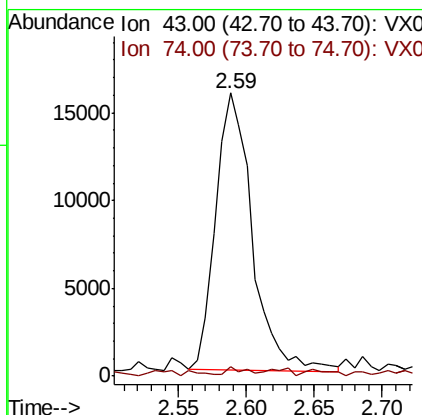
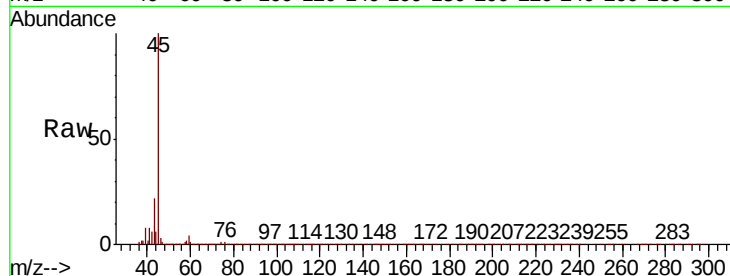




#18  
Methyl Acetate  
Concen: 2.564 ug/l  
RT: 2.59 min Scan# 279  
Delta R.T. -0.17 min  
Lab File: VX013440.D  
Acq: 15 Nov 2019 12:43

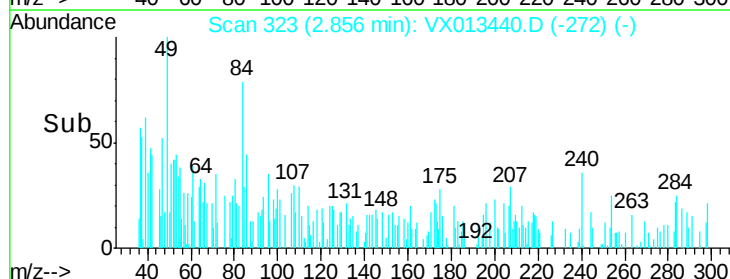
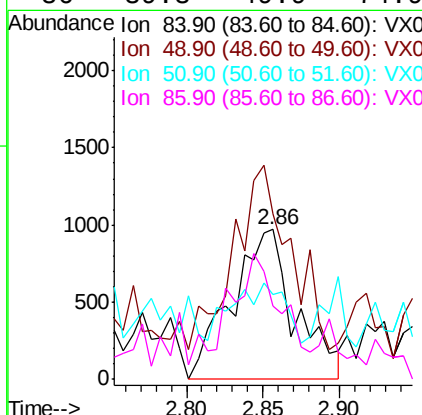
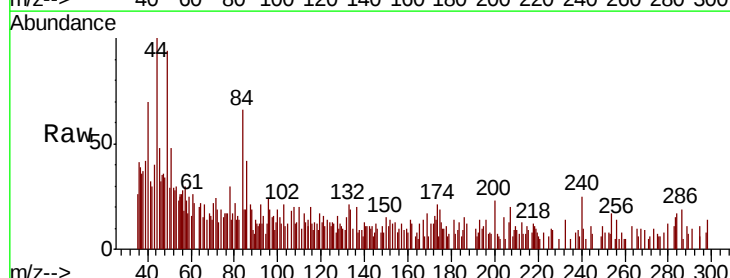
Instrument :  
MSVOA\_X  
ClientSampled :  
S36-0162

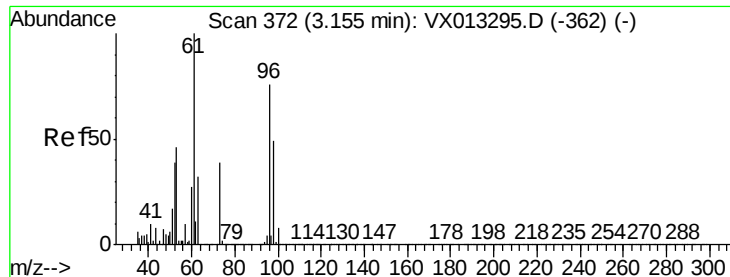
Tot Ion: 43 Resp: 29583  
Ion Ratio Lower Upper  
43 100  
74 1.7 19.0 28.6#



#20  
Methylene Chloride  
Concen: 0.363 ug/l  
RT: 2.86 min Scan# 323  
Delta R.T. 0.01 min  
Lab File: VX013440.D  
Acq: 15 Nov 2019 12:43

Tgt Ion: 84 Resp: 2799  
Ion Ratio Lower Upper  
84 100  
49 90.9 98.2 147.4#  
51 0.2 29.9 44.9#  
86 39.3 49.9 74.9#





#21

trans-1,2-Dichloroethene

Concen: 0.563 ug/l

RT: 3.16 min Scan# 372

Delta R.T. 0.00 min

Lab File: VX013440.D

Acq: 15 Nov 2019 12:43

Instrument :

MSVOA\_X

ClientSampleId :

S36-0162

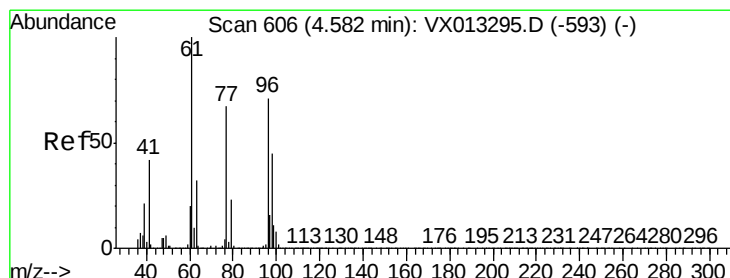
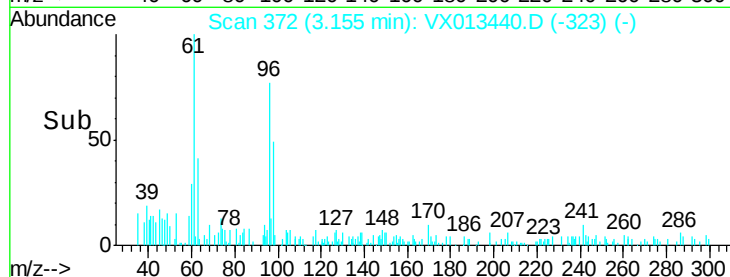
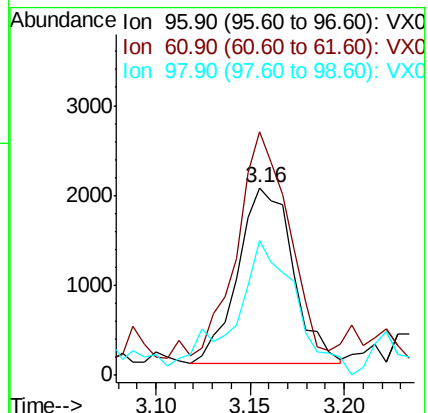
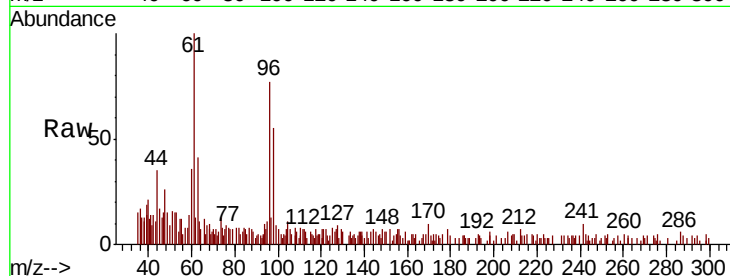
Tot Ion: 96 Resp: 3980

Ion Ratio Lower Upper

96 100

61 130.6 105.8 158.6

98 68.5 51.8 77.6



#27

cis-1,2-Dichloroethene

Concen: 13.862 ug/l

RT: 4.59 min Scan# 607

Delta R.T. 0.01 min

Lab File: VX013440.D

Acq: 15 Nov 2019 12:43

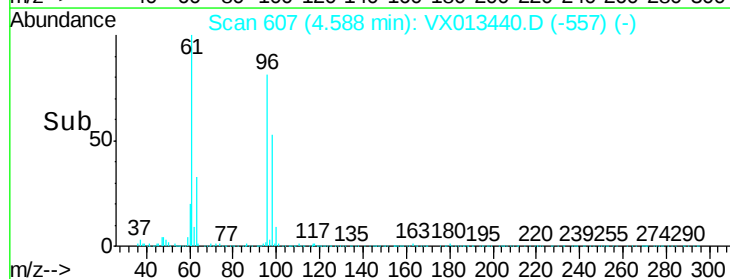
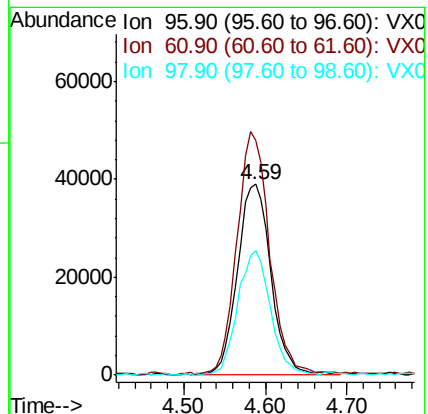
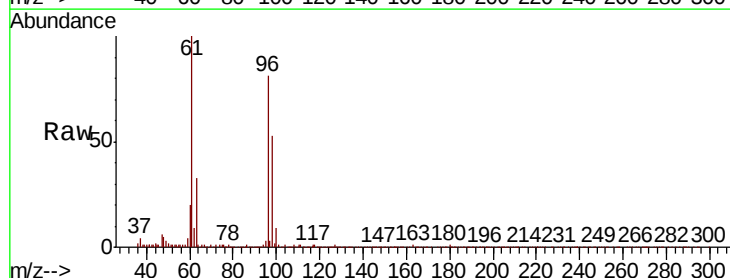
Tgt Ion: 96 Resp: 109677

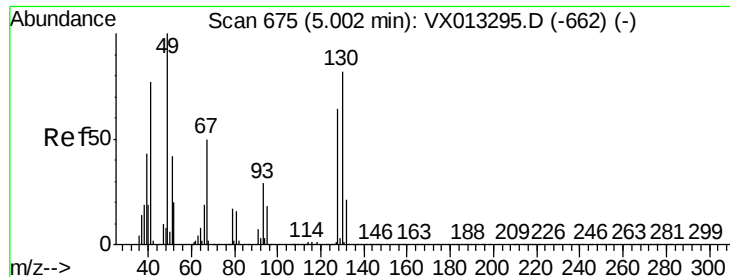
Ion Ratio Lower Upper

96 100

61 126.5 0.0 288.0

98 63.8 0.0 129.6





#28

Bromochloromethane

Concen: 0.330 ug/l

RT: 5.01 min Scan# 677

Delta R.T. 0.01 min

Lab File: VX013440.D

Acq: 15 Nov 2019 12:43

Instrument :

MSVOA\_X

ClientSampleId :

S36-0162

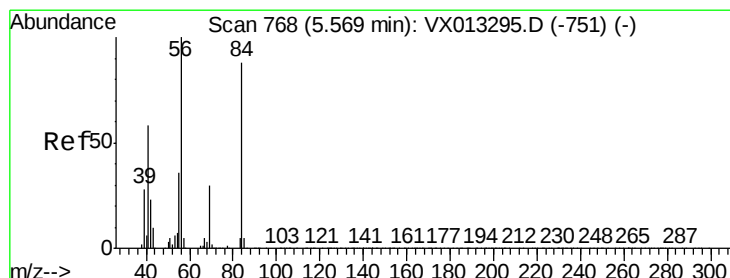
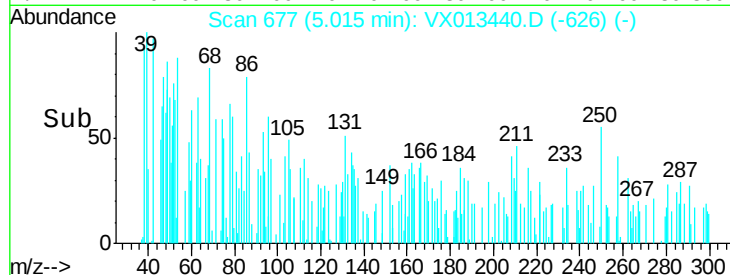
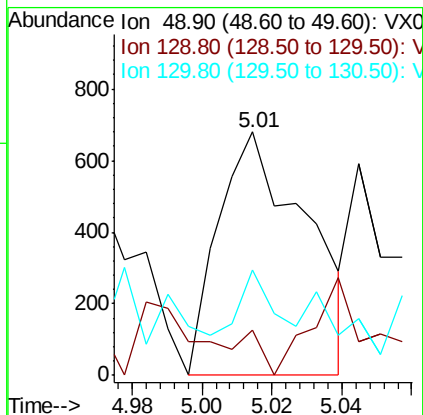
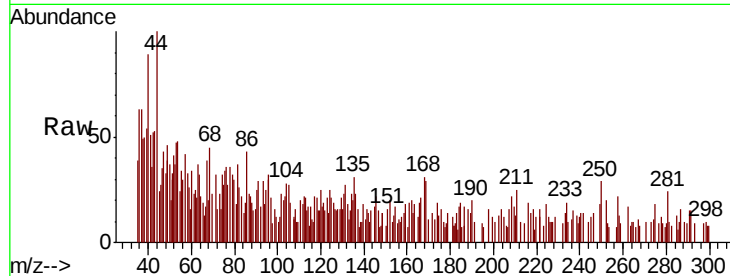
Tot Ion: 49 Resp: 1191

Ion Ratio Lower Upper

49 100

129 0.0 0.0 5.2

130 15.2 63.8 95.6#



#31

Cyclohexane

Concen: 1.090 ug/l

RT: 5.65 min Scan# 781

Delta R.T. 0.08 min

Lab File: VX013440.D

Acq: 15 Nov 2019 12:43

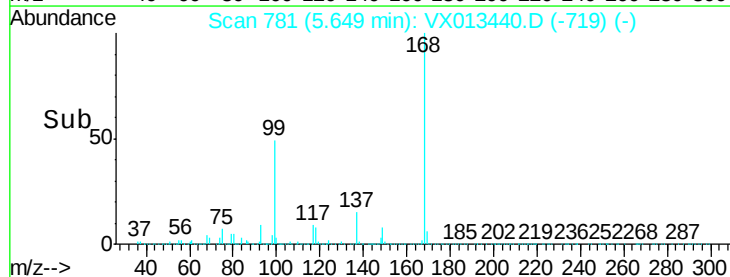
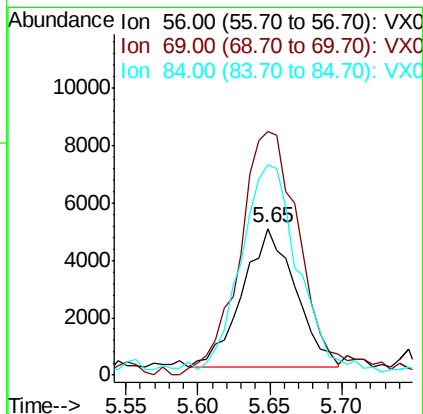
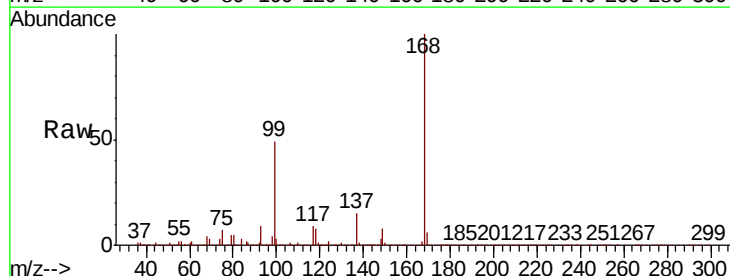
Tgt Ion: 56 Resp: 12487

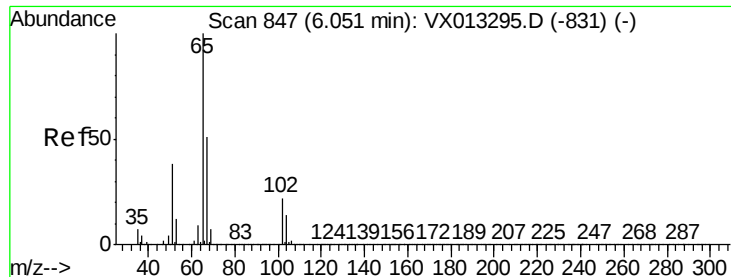
Ion Ratio Lower Upper

56 100

69 170.1 23.7 35.5#

84 141.1 70.6 105.8#





#33

1,2-Dichloroethane-d4

Concen: 49.748 ug/l

RT: 6.05 min Scan# 847

Delta R.T. 0.00 min

Lab File: VX013440.D

Acq: 15 Nov 2019 12:43

Instrument :

MSVOA\_X

ClientSampleId :

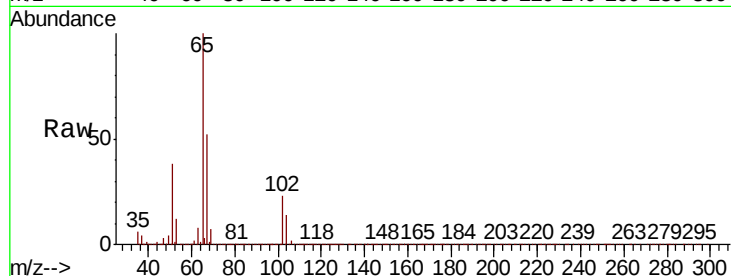
S36-0162

Tot Ion: 65 Resp: 416799

Ion Ratio Lower Upper

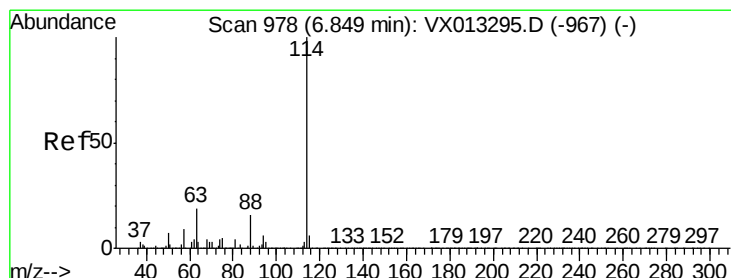
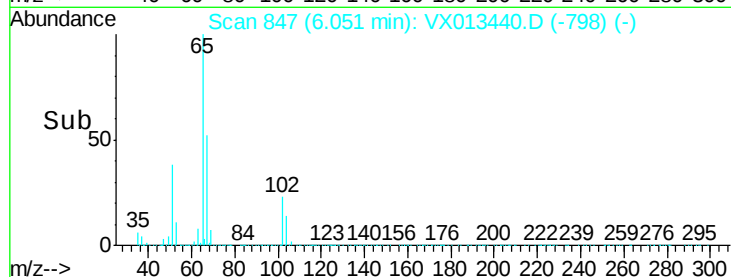
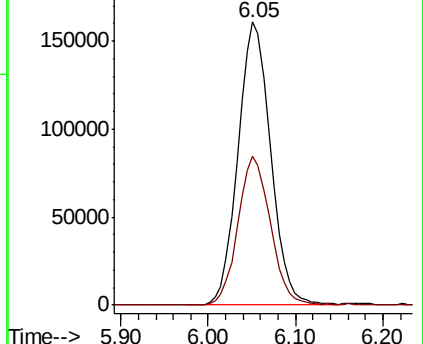
65 100

67 52.5 0.0 104.2



Abundance Ion 64.90 (64.60 to 65.60): VX0

Ion 66.90 (66.60 to 67.60): VX0



#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 6.85 min Scan# 978

Delta R.T. 0.00 min

Lab File: VX013440.D

Acq: 15 Nov 2019 12:43

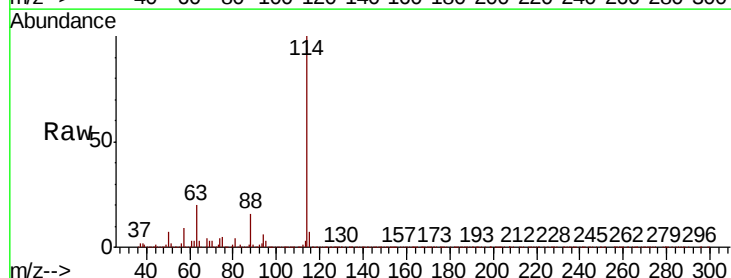
Tgt Ion: 114 Resp: 1136170

Ion Ratio Lower Upper

114 100

63 20.0 0.0 38.4

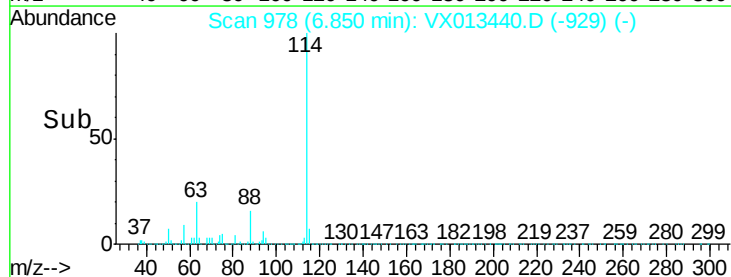
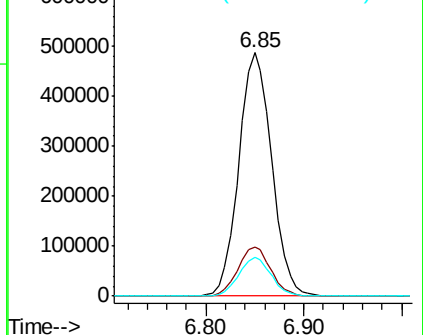
88 16.2 0.0 32.2

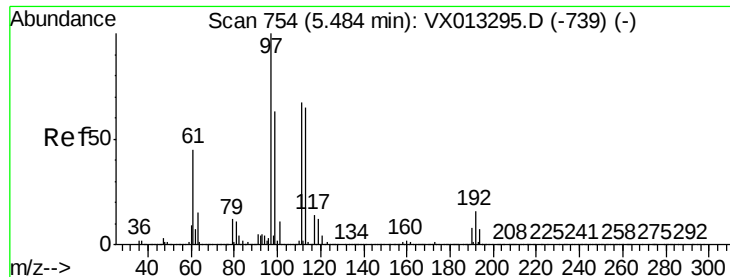


Abundance Ion 113.90 (113.60 to 114.60): V

Ion 63.00 (62.70 to 63.70): VX0

Ion 87.90 (87.60 to 88.60): VX0

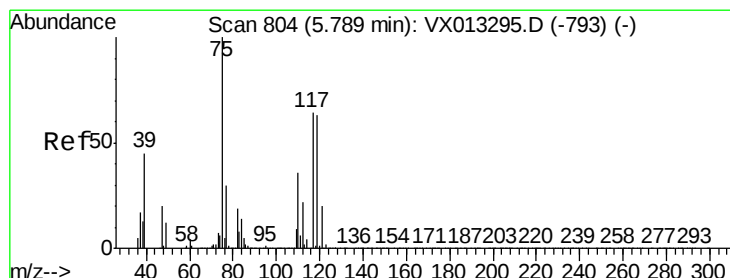
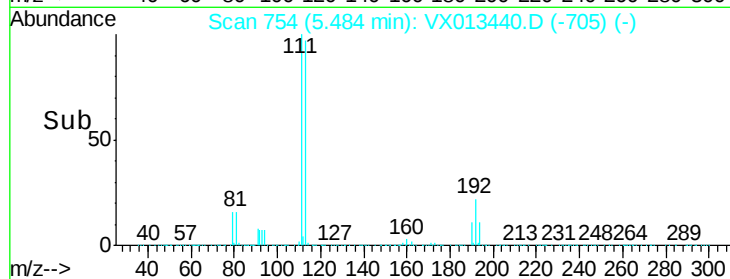
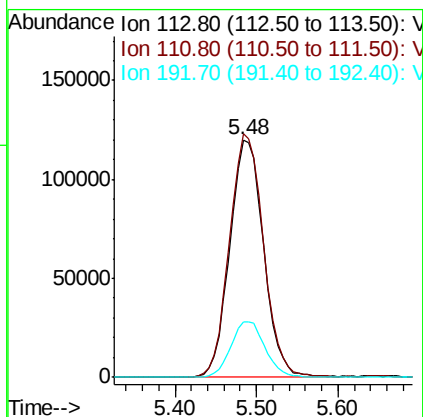
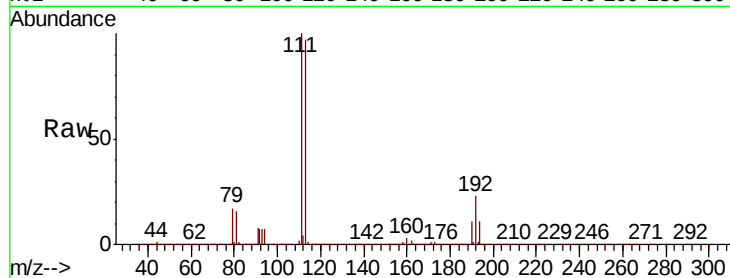




#35  
Dibromofluoromethane  
Concen: 48.061 ug/l  
RT: 5.48 min Scan# 754  
Delta R.T. 0.00 min  
Lab File: VX013440.D  
Acq: 15 Nov 2019 12:43

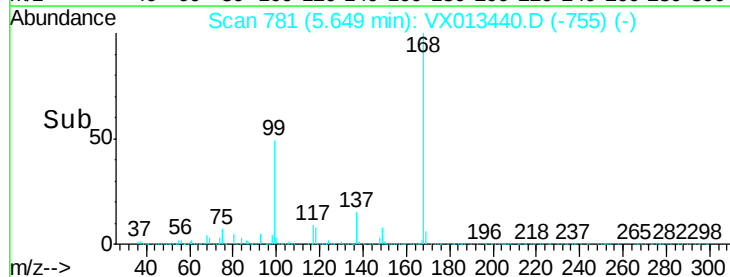
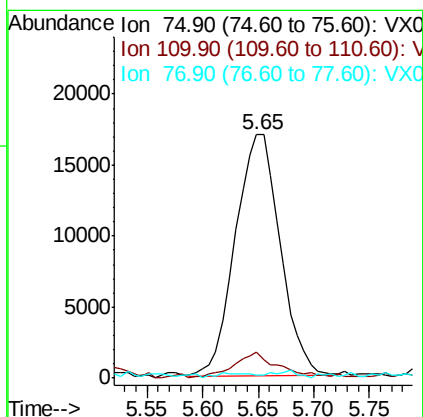
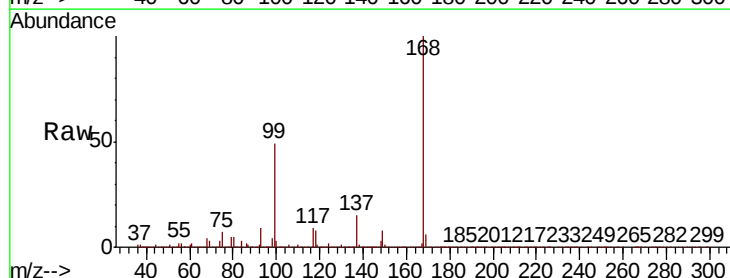
Instrument :  
MSVOA\_X  
ClientSampleId :  
S36-0162

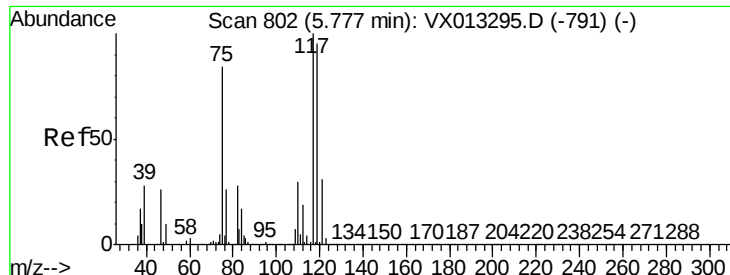
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 113     | 100   |       |       |
| 111     | 103.2 | 81.9  | 122.9 |
| 192     | 23.9  | 19.1  | 28.7  |



#36  
1,1-Dichloropropene  
Concen: 4.904 ug/l  
RT: 5.65 min Scan# 781  
Delta R.T. -0.14 min  
Lab File: VX013440.D  
Acq: 15 Nov 2019 12:43

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 75      | 100   |       |       |
| 110     | 10.7  | 18.1  | 54.1# |
| 77      | 0.0   | 25.0  | 37.4# |





#38

Carbon Tetrachloride

Concen: 6.465 ug/l

RT: 5.65 min Scan# 781

Delta R.T. -0.13 min

Lab File: VX013440.D

Acq: 15 Nov 2019 12:43

Instrument :

MSVOA\_X

ClientSampleId :

S36-0162

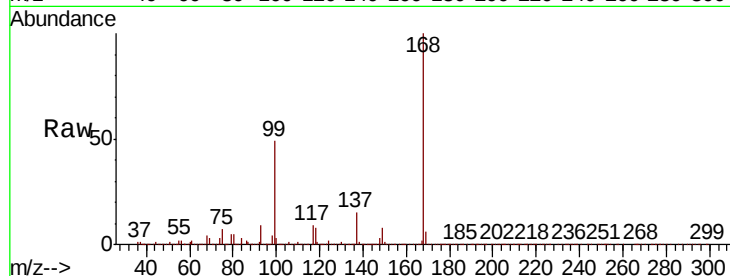
Tot Ion:117 Resp: 61617

Ion Ratio Lower Upper

117 100

119 6.4 76.1 114.1#

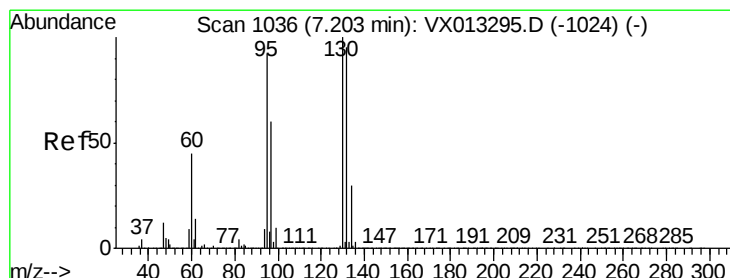
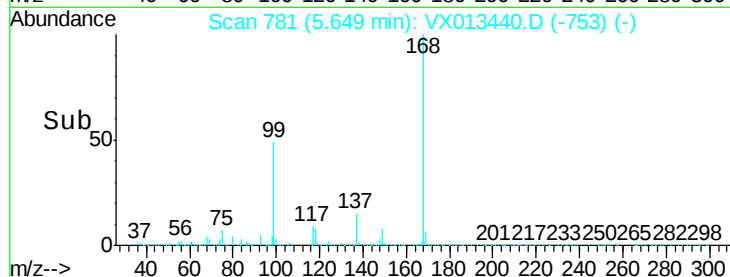
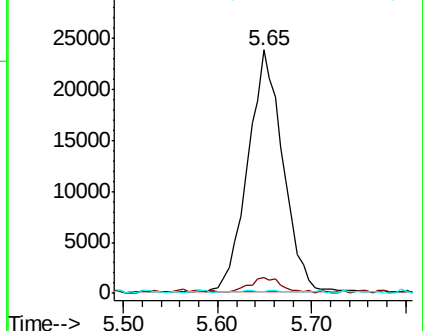
121 0.4 24.6 37.0#



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



#44

Trichloroethene

Concen: 0.213 ug/l

RT: 7.22 min Scan# 1039

Delta R.T. 0.02 min

Lab File: VX013440.D

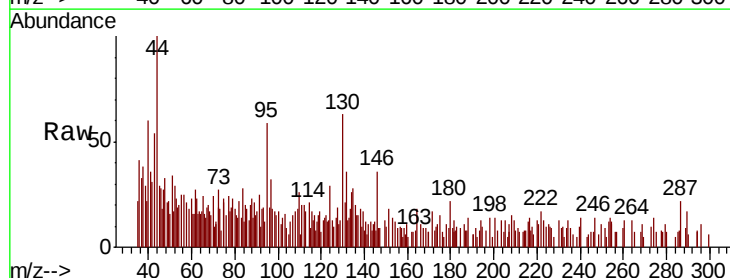
Acq: 15 Nov 2019 12:43

Tgt Ion:130 Resp: 1776

Ion Ratio Lower Upper

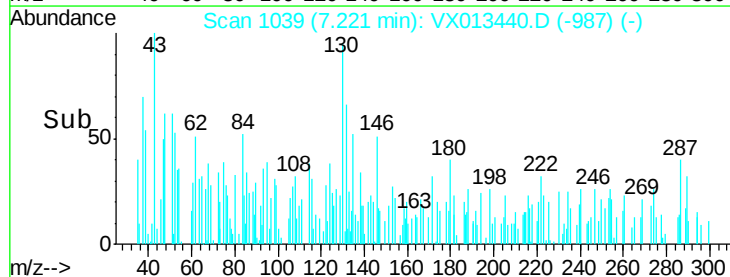
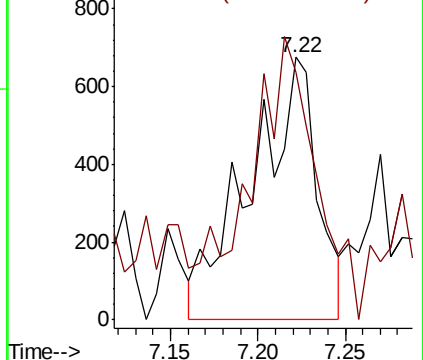
130 100

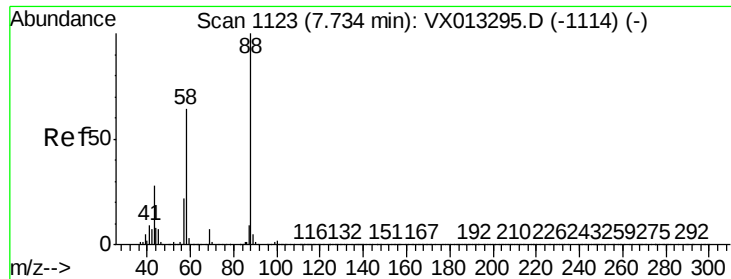
95 87.5 0.0 184.8



Abundance Ion 129.80 (129.50 to 130.50): V

Ion 94.90 (94.60 to 95.60): V





#49

1,4-Dioxane

Concen: 1.376 ug/l

RT: 7.75 min Scan# 1126

Delta R.T. 0.02 min

Lab File: VX013440.D

Acq: 15 Nov 2019 12:43

Instrument :

MSVOA\_X

ClientSampleId :

S36-0162

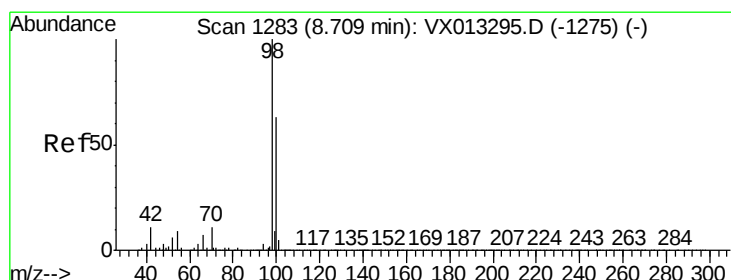
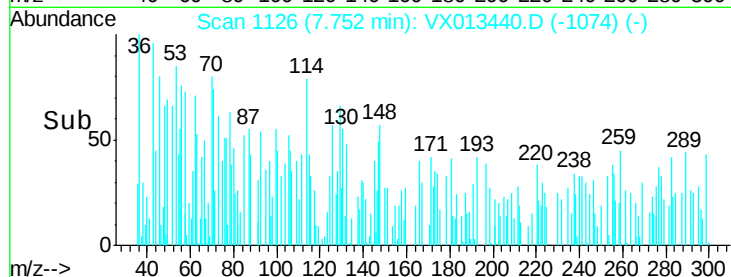
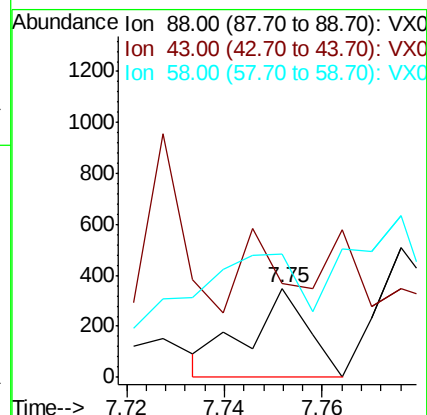
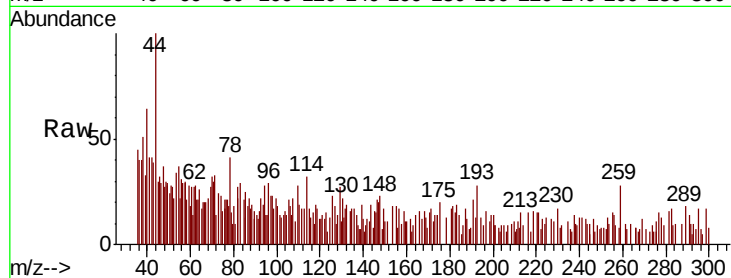
Tot Ion: 88 Resp: 295

Ion Ratio Lower Upper

88 100

43 67.1 26.6 39.8#

58 139.7 55.0 82.6#



#50

Toluene-d8

Concen: 50.460 ug/l

RT: 8.71 min Scan# 1283

Delta R.T. 0.00 min

Lab File: VX013440.D

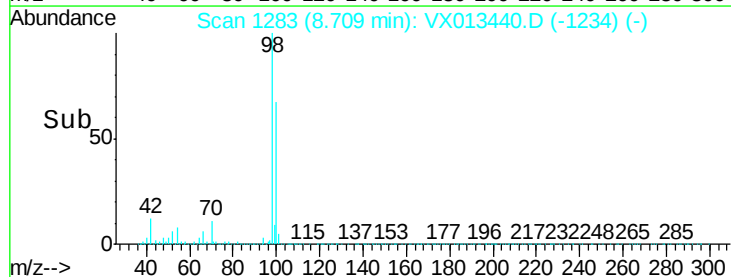
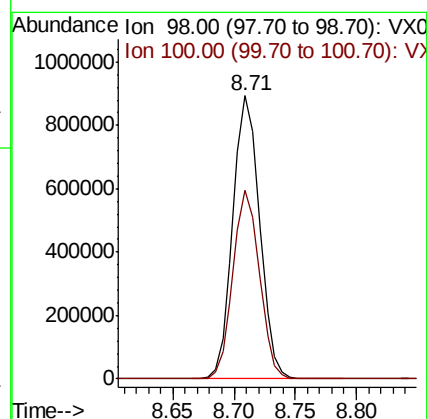
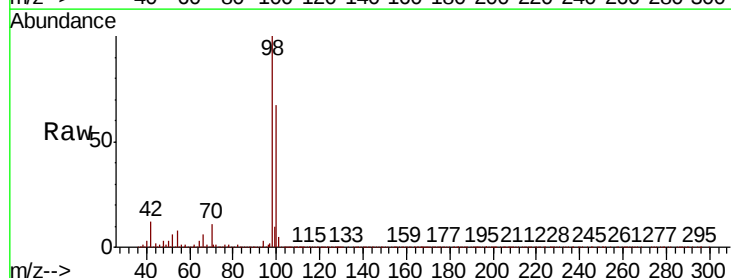
Acq: 15 Nov 2019 12:43

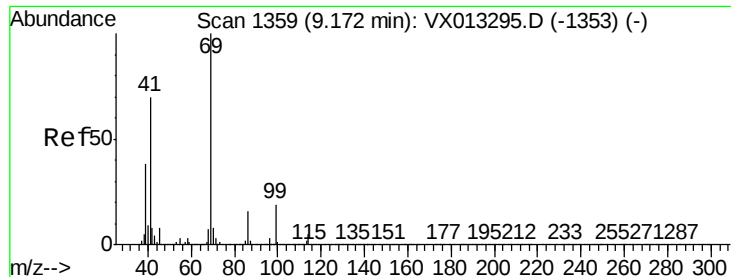
Tgt Ion: 98 Resp: 1355619

Ion Ratio Lower Upper

98 100

100 65.8 52.2 78.2





#56

Ethyl methacrylate

Concen: 1.591 ug/l

RT: 9.17 min Scan# 1358

Delta R.T. -0.01 min

Lab File: VX013440.D

Acq: 15 Nov 2019 12:43

Instrument :

MSVOA\_X

ClientSampled :

S36-0162

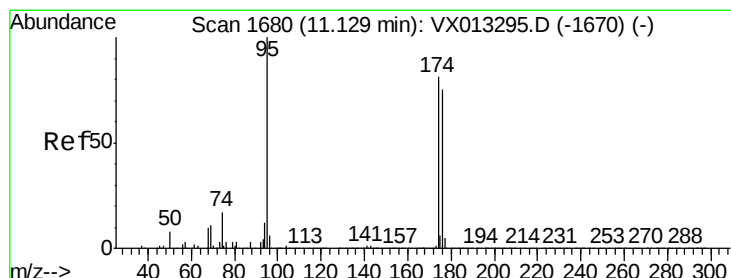
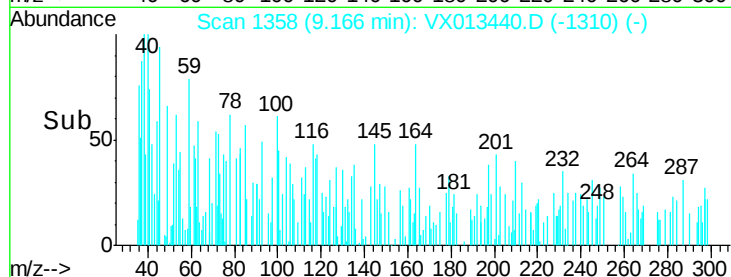
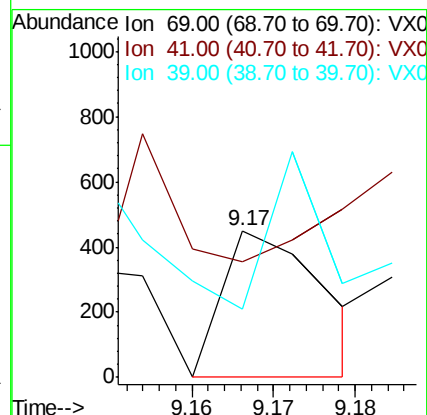
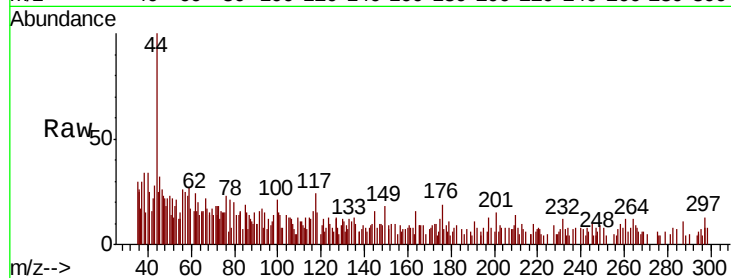
Tot Ion: 69 Resp: 382

Ion Ratio Lower Upper

69 100

41 78.8 56.2 84.2

39 75.7 31.1 46.7#



#62

4-Bromofluorobenzene

Concen: 46.483 ug/l

RT: 11.14 min Scan# 1681

Delta R.T. 0.01 min

Lab File: VX013440.D

Acq: 15 Nov 2019 12:43

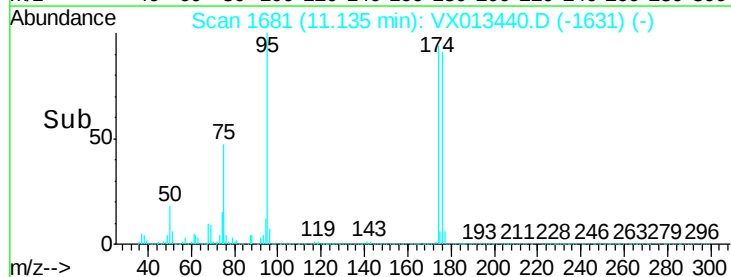
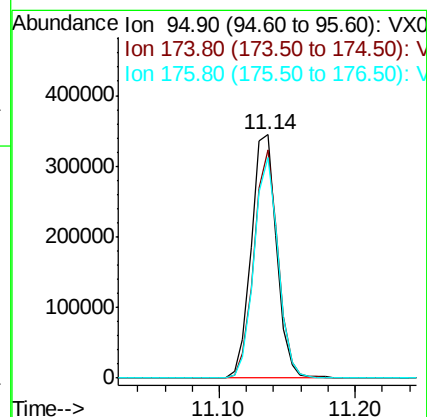
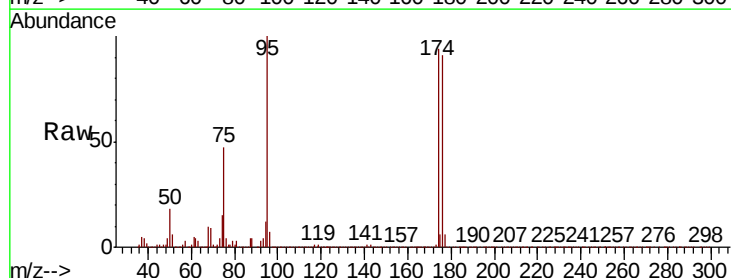
Tgt Ion: 95 Resp: 450691

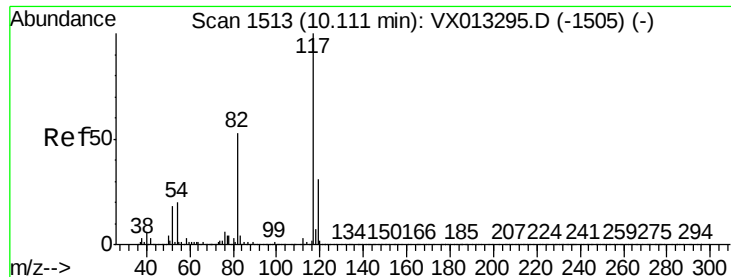
Ion Ratio Lower Upper

95 100

174 89.2 0.0 179.8

176 87.0 0.0 173.0

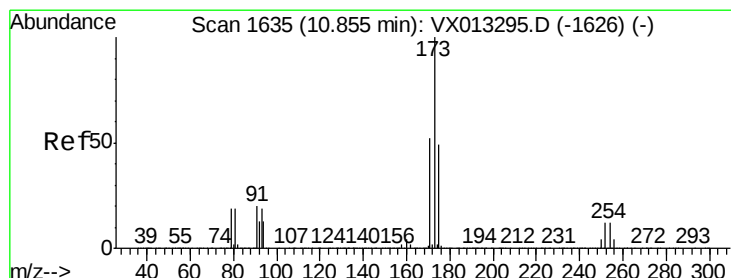
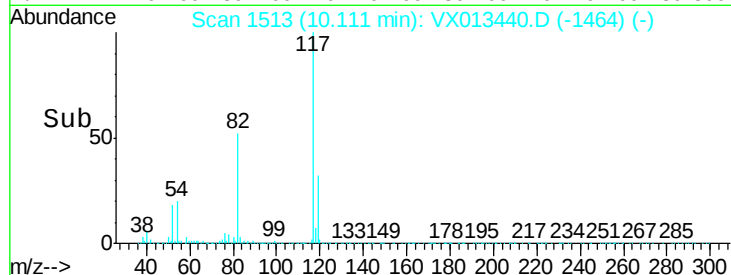
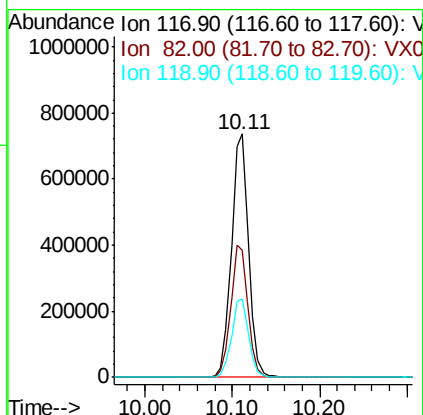
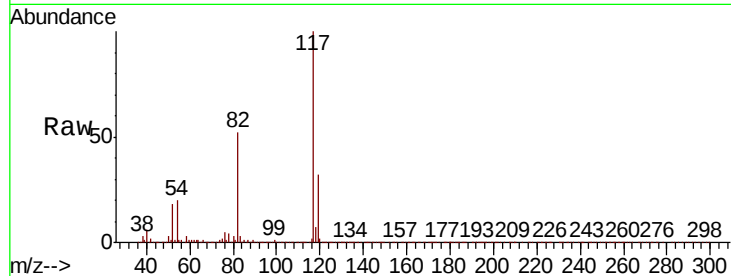




#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 10.11 min Scan# 1513  
Delta R.T. 0.00 min  
Lab File: VX013440.D  
Acq: 15 Nov 2019 12:43

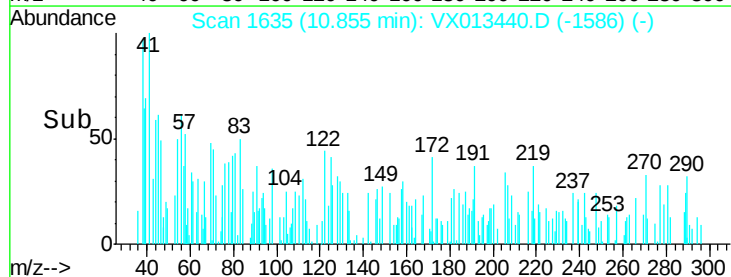
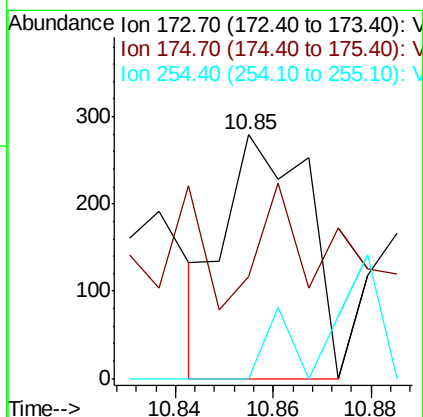
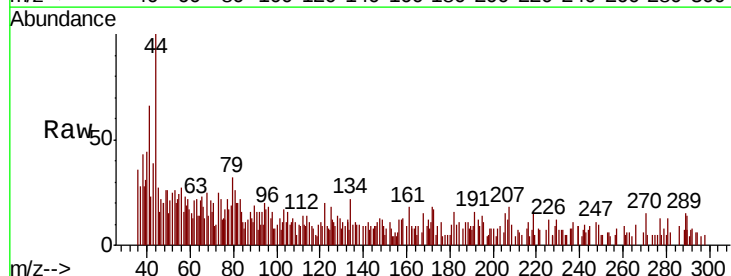
Instrument :  
MSVOA\_X  
ClientSampleId :  
S36-0162

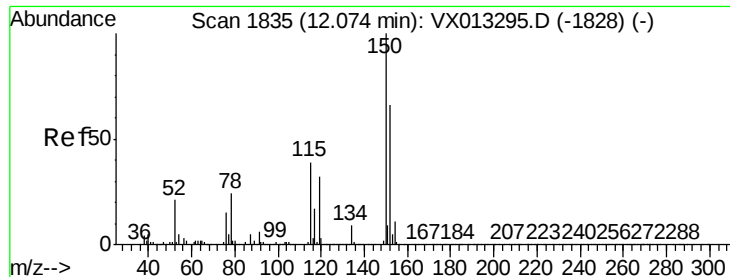
Tot Ion:117 Resp: 1006602  
Ion Ratio Lower Upper  
117 100  
82 52.4 42.6 64.0  
119 32.3 24.8 37.2



#71  
Bromoform  
Concen: 3.247 ug/l  
RT: 10.85 min Scan# 1635  
Delta R.T. 0.00 min  
Lab File: VX013440.D  
Acq: 15 Nov 2019 12:43

Tgt Ion:173 Resp: 327  
Ion Ratio Lower Upper  
173 100  
175 0.0 24.8 74.4#  
254 0.0 0.2 0.2#





#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 12.07 min Scan# 1835

Delta R.T. 0.00 min

Lab File: VX013440.D

Acq: 15 Nov 2019 12:43

Instrument :

MSVOA\_X

ClientSampleId :

S36-0162

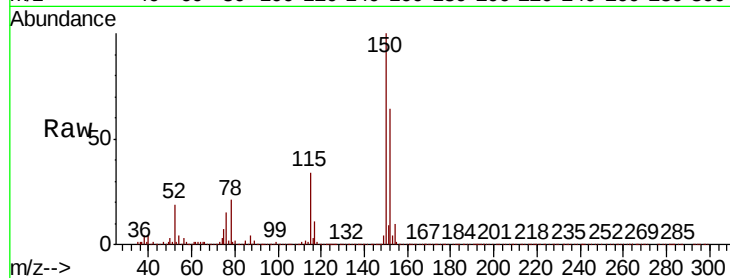
Tot Ion:152 Resp: 451229

Ion Ratio Lower Upper

152 100

115 55.9 39.5 118.3

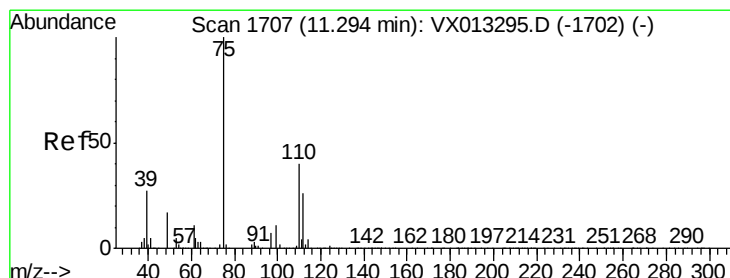
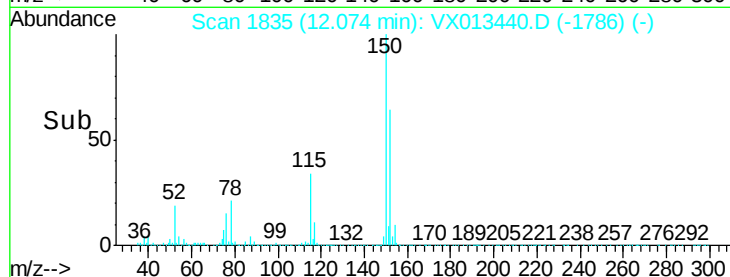
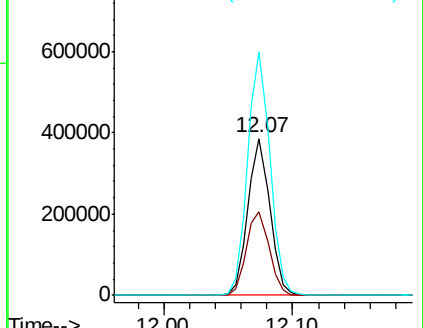
150 157.8 0.0 344.4



Abundance Ion 151.90 (151.60 to 152.60): V

Ion 114.90 (114.60 to 115.60): V

Ion 149.90 (149.60 to 150.60): V



#76

1,2,3-Trichloropropane

Concen: 23.752 ug/l

RT: 11.13 min Scan# 1680

Delta R.T. -0.16 min

Lab File: VX013440.D

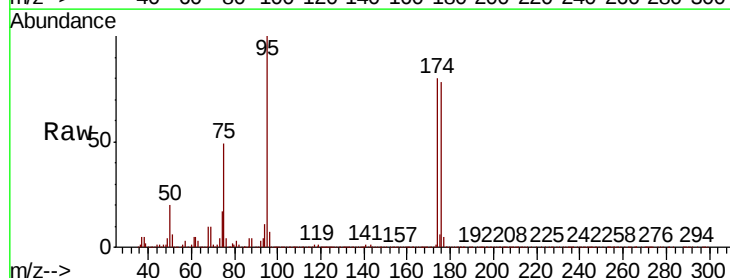
Acq: 15 Nov 2019 12:43

Tgt Ion: 75 Resp: 217691

Ion Ratio Lower Upper

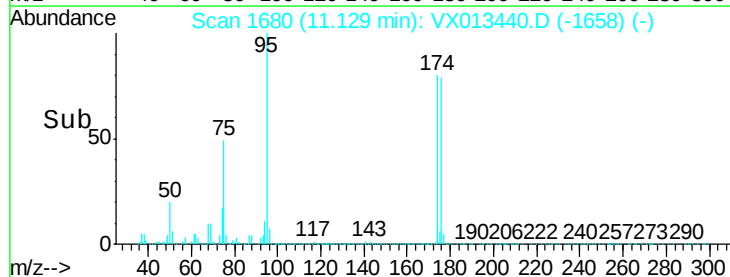
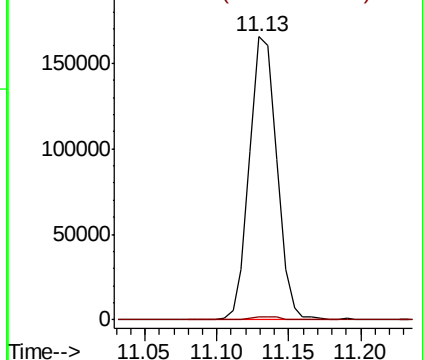
75 100

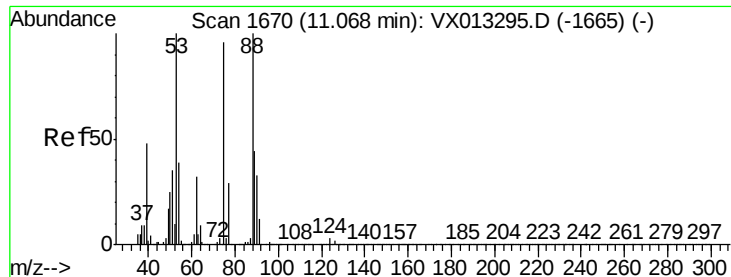
77 1.6 22.3 66.8#



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: 61.138 ug/l

RT: 11.13 min Scan# 1680

Delta R.T. 0.06 min

Lab File: VX013440.D

Acq: 15 Nov 2019 12:43

Instrument :

MSVOA\_X

ClientSampled :

S36-0162

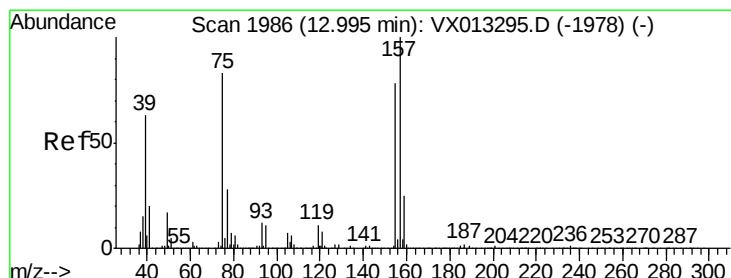
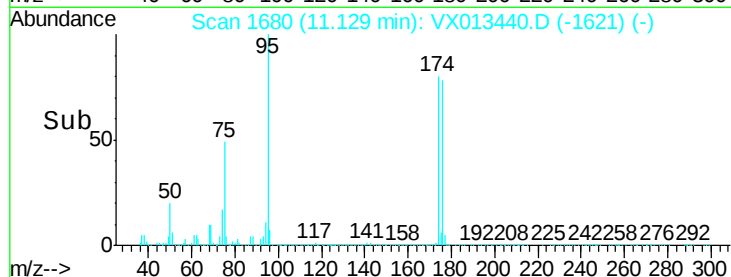
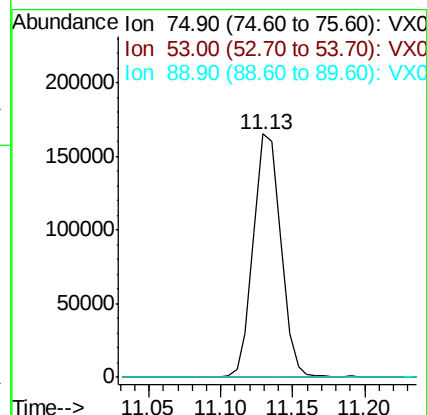
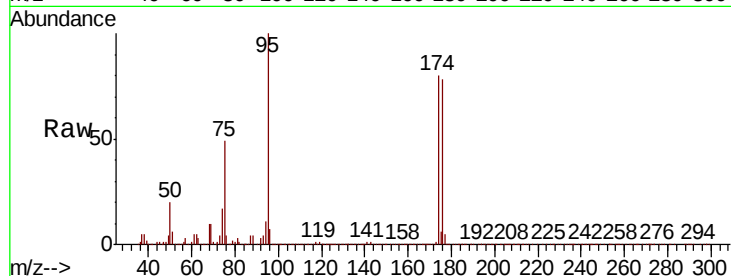
Tot Ion: 75 Resp: 217691

Ion Ratio Lower Upper

75 100

53 0.2 81.0 121.6#

89 0.0 36.0 54.0#



#92

1,2-Dibromo-3-Chloropropane

Concen: 0.216 ug/l

RT: 13.05 min Scan# 1995

Delta R.T. 0.05 min

Lab File: VX013440.D

Acq: 15 Nov 2019 12:43

Tgt Ion: 75 Resp: 574

Ion Ratio Lower Upper

75 100

155 83.1 47.1 141.4

157 74.0 61.3 183.8

