

Data Path : Z:\VOASRV\HPCHEM1\MSVOA Y\DATA\VY020620\  
 Data File : VY001538.D  
 Acq On : 06 Feb 2020 18:03  
 Operator : SY/MD  
 Sample : L1408-13RE  
 Misc : 4.88G/5ML/MSVOA Y/SOIL  
 ALS Vial : 16 Sample Multiplier: 1

Instrument :  
 MSVOA\_Y  
 ClientSampleId :

Quant Time: Feb 07 04:09:17 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_Y\METHODS\82Y020420S.M  
 Quant Title : SW846 8260  
 QLast Update : Tue Feb 04 15:10:08 2020  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.81  | 168  | 6555     | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.71  | 114  | 12466    | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.49 | 117  | 11688    | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.43 | 152  | 4721     | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |         |      |
|---------------------------|--------|-----|----------|-------|---------|------|
| 33) 1,2-Dichloroethane-d4 | 8.16   | 65  | 4778     | 72.39 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 144.78% |      |
| 35) Dibromofluoromethane  | 7.74   | 113 | 3399     | 47.28 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 94.56%  |      |
| 50) Toluene-d8            | 10.19  | 98  | 14514    | 53.37 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 106.74% |      |
| 62) 4-Bromofluorobenzene  | 12.49  | 95  | 5448     | 50.85 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 101.70% |      |

## Target Compounds

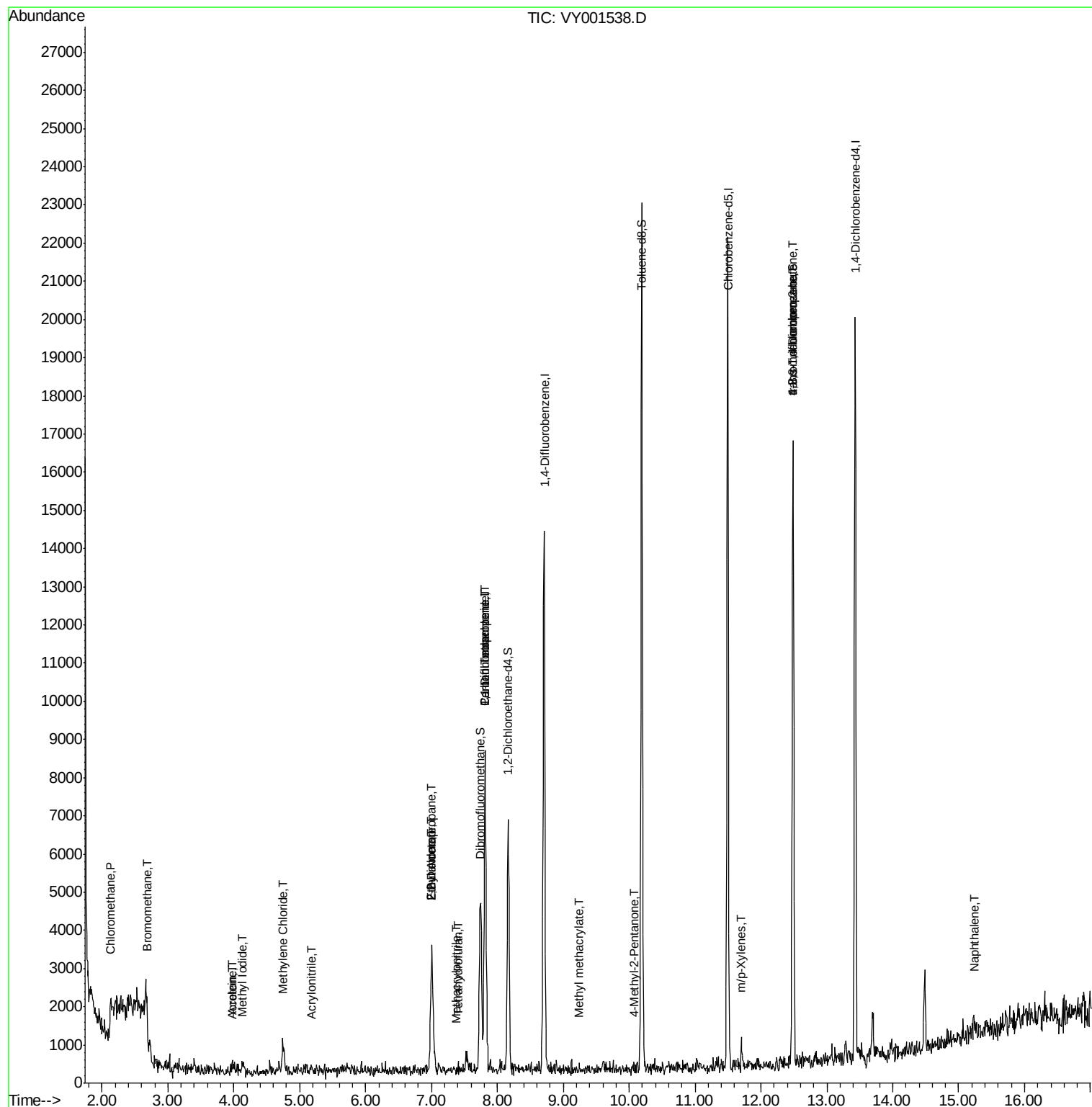
|                                |       |     |      |         |        | Qvalue |
|--------------------------------|-------|-----|------|---------|--------|--------|
| 3) Chloromethane               | 2.13  | 50  | 264  | 3.937   | ug/l # | 79     |
| 5) Bromomethane                | 2.68  | 94  | 237  | 5.412   | ug/l   | 91     |
| 10) Methyl Iodide              | 4.13  | 142 | 339  | 3.836   | ug/l # | 42     |
| 13) Acrolein                   | 3.96  | 56  | 22   | 3.520   | ug/l # | 15     |
| 15) Acrylonitrile              | 5.18  | 53  | 19   | 1.066   | ug/l # | 18     |
| 16) Acetone                    | 3.97  | 43  | 279  | 14.614  | ug/l # | 40     |
| 20) Methylene Chloride         | 4.74  | 84  | 609  | 3.778   | ug/l # | 79     |
| 25) 2-Butanone                 | 7.01  | 43  | 155  | 6.258   | ug/l # | 45     |
| 26) 2,2-Dichloropropane        | 7.00  | 77  | 162  | 1.347   | ug/l # | 52     |
| 29) Tetrahydrofuran            | 7.41  | 42  | 41   | 2.762   | ug/l # | 31     |
| 36) 1,1-Dichloropropene        | 7.82  | 75  | 594  | 5.209   | ug/l # | 41     |
| 37) Ethyl Acetate              | 7.01  | 43  | 155  | 2.808   | ug/l # | 23     |
| 38) Carbon Tetrachloride       | 7.82  | 117 | 725  | 6.571   | ug/l # | 12     |
| 41) Methacrylonitrile          | 7.38  | 41  | 26   | 1.016   | ug/l # | 1      |
| 48) Methyl methacrylate        | 9.24  | 41  | 71   | 1.431   | ug/l # | 10     |
| 51) 4-Methyl-2-Pentanone       | 10.07 | 43  | 57   | 1.059   | ug/l # | 33     |
| 68) m/p-Xylenes                | 11.70 | 106 | 215  | 1.350   | ug/l   | 88     |
| 76) 1,2,3-Trichloropropane     | 12.49 | 75  | 2671 | 52.610  | ug/l # | 100    |
| 81) trans-1,4-Dichloro-2-buten | 12.49 | 75  | 2671 | 101.798 | ug/l # | 16     |
| 95) Naphthalene                | 15.24 | 128 | 723  | 3.373   | ug/l # | 73     |

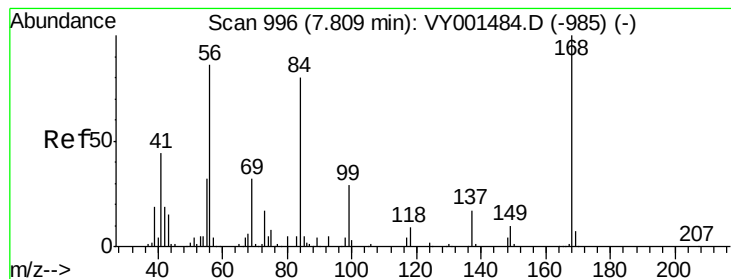
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Tue Feb 04 15:10:08 2020  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 7.81 min Scan# 996

Delta R.T. 0.00 min

Lab File: VY001538.D

Acq: 06 Feb 2020 18:03

Instrument :

MSVOA\_Y

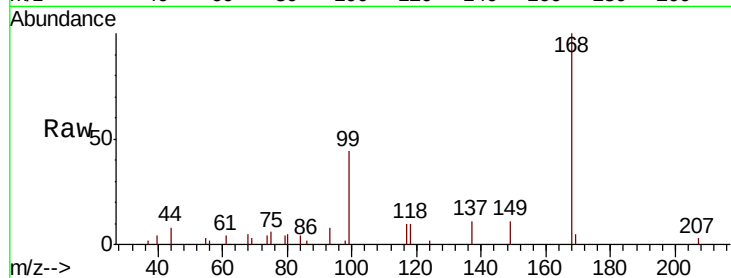
ClientSampleId :

Tot Ion:168 Resp: 6555

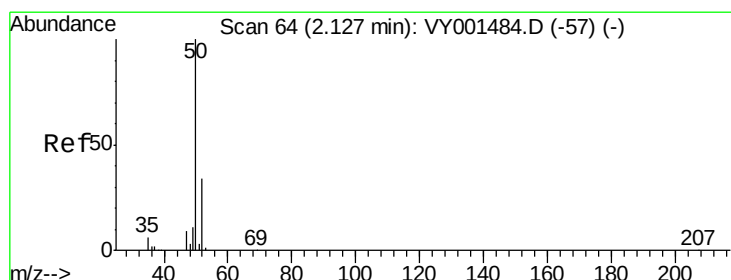
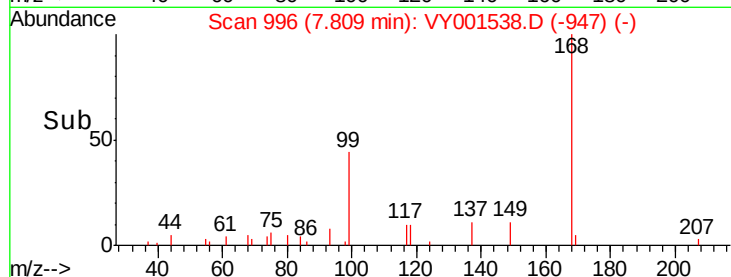
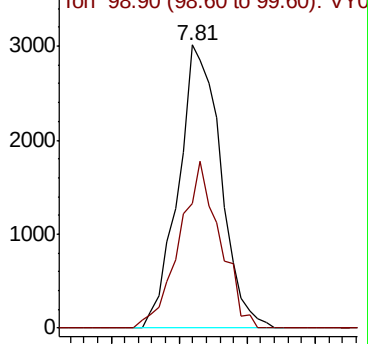
Ion Ratio Lower Upper

168 100

99 44.2 48.2 72.4#



Abundance Ion 167.90 (167.60 to 168.60): VY001538.D (-947) (-)



#3

Chloromethane

Concen: 3.937 ug/l

RT: 2.13 min Scan# 65

Delta R.T. 0.01 min

Lab File: VY001538.D

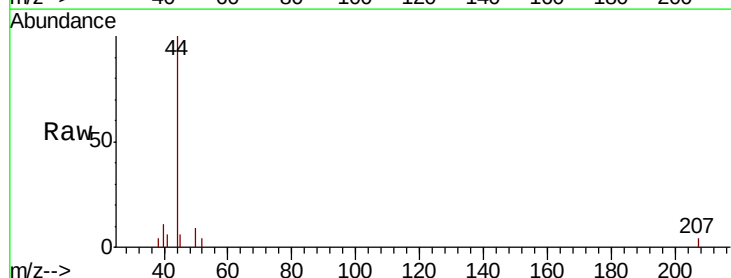
Acq: 06 Feb 2020 18:03

Tgt Ion: 50 Resp: 264

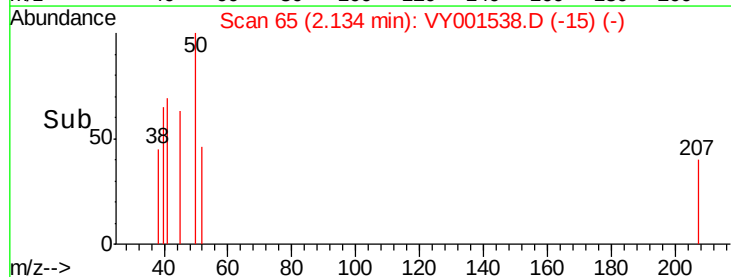
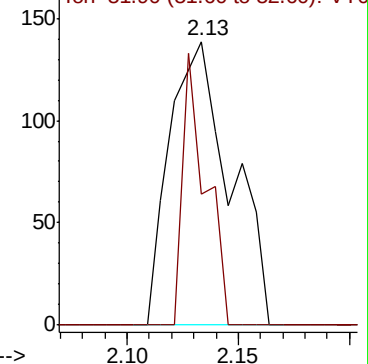
Ion Ratio Lower Upper

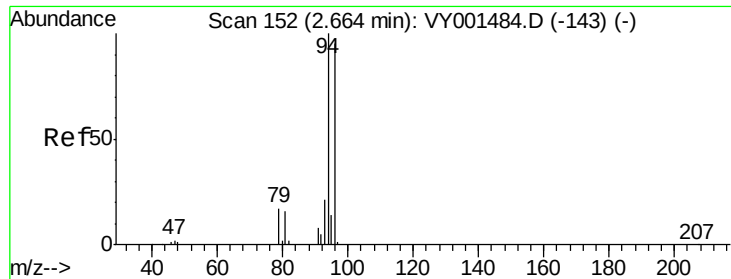
50 100

52 46.0 27.3 40.9#



Abundance Ion 49.90 (49.60 to 50.60): VY001538.D (-15) (-)





#5

Bromomethane

Concen: 5.412 ug/l

RT: 2.68 min Scan# 155

Delta R.T. 0.02 min

Lab File: VY001538.D

Acq: 06 Feb 2020 18:03

Instrument :

MSVOA\_Y

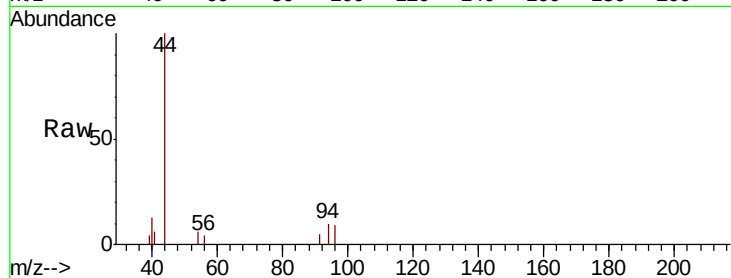
ClientSampleId :

Tot Ion: 94 Resp: 237

Ion Ratio Lower Upper

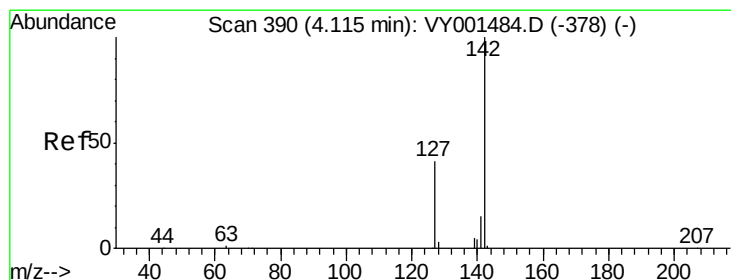
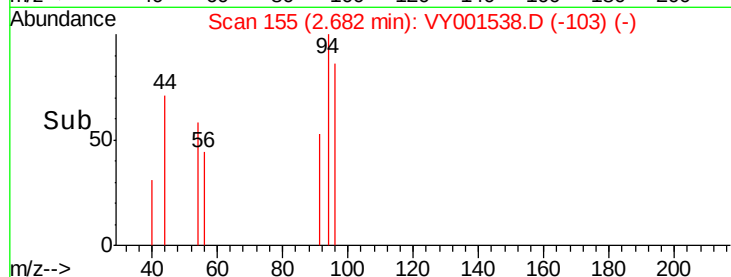
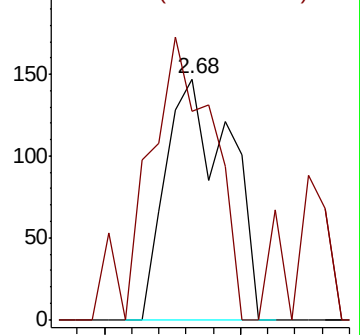
94 100

96 86.4 76.2 114.2



Abundance Ion 93.90 (93.60 to 94.60): VY0

Ion 95.90 (95.60 to 96.60): VY0



#10

Methyl Iodide

Concen: 3.836 ug/l

RT: 4.13 min Scan# 392

Delta R.T. 0.01 min

Lab File: VY001538.D

Acq: 06 Feb 2020 18:03

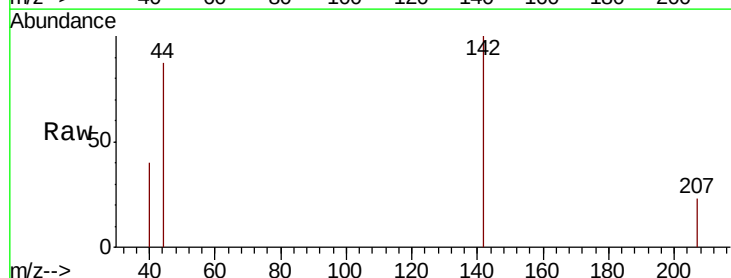
Tgt Ion: 142 Resp: 339

Ion Ratio Lower Upper

142 100

127 0.0 33.3 49.9#

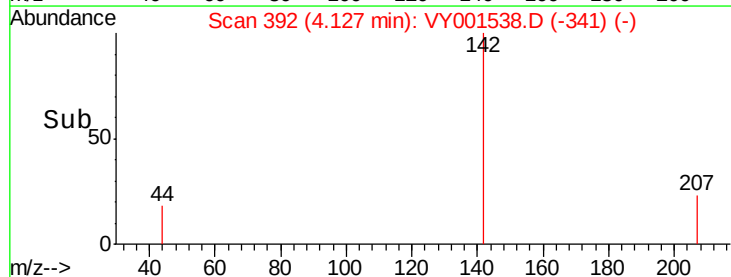
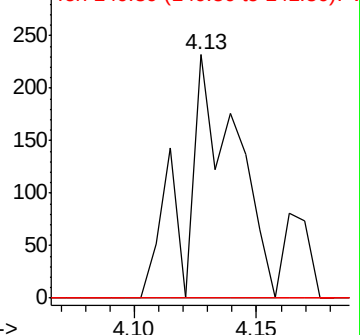
141 0.0 11.5 17.3#

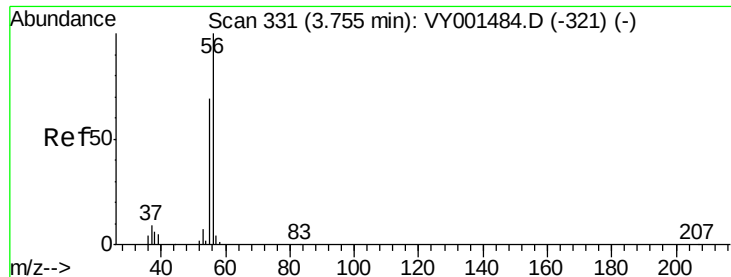


Abundance Ion 141.80 (141.50 to 142.50): V

Ion 126.80 (126.50 to 127.50): V

Ion 140.80 (140.50 to 141.50): V





#13

Acrolein

Concen: 3.520 ug/l

RT: 3.96 min Scan# 365

Delta R.T. 0.21 min

Lab File: VY001538.D

Acq: 06 Feb 2020 18:03

Instrument :

MSVOA\_Y

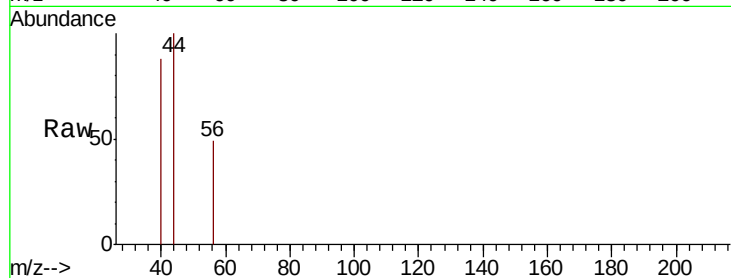
ClientSampleId :

Tot Ion: 56 Resp: 22

Ion Ratio Lower Upper

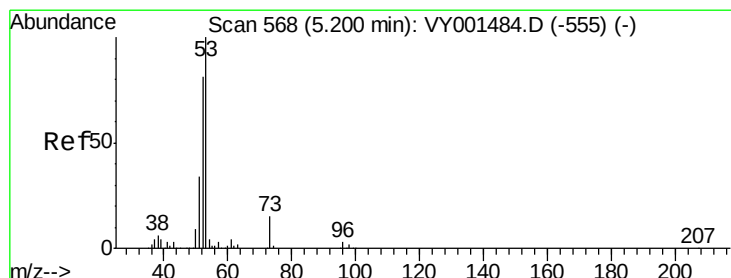
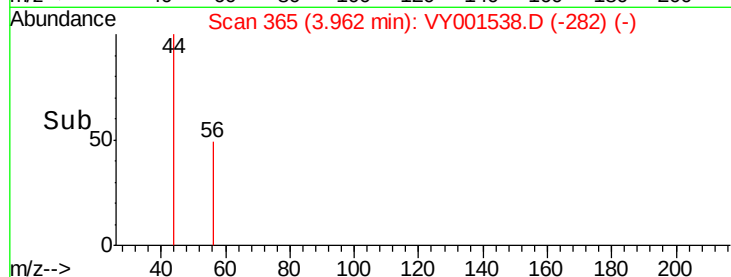
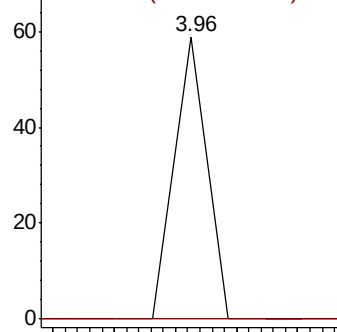
56 100

55 0.0 56.2 84.4#



Abundance Ion 56.00 (55.70 to 56.70): VY0

Ion 55.00 (54.70 to 55.70): VY0



#15

Acrylonitrile

Concen: 1.066 ug/l

RT: 5.18 min Scan# 565

Delta R.T. -0.02 min

Lab File: VY001538.D

Acq: 06 Feb 2020 18:03

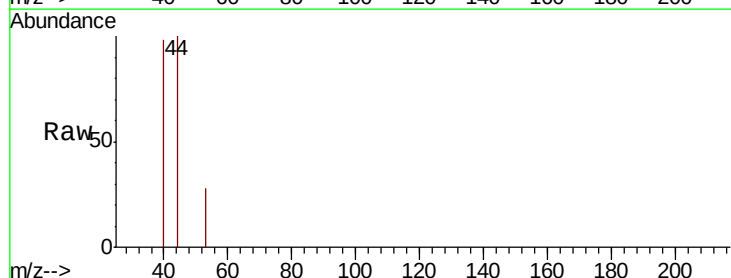
Tgt Ion: 53 Resp: 19

Ion Ratio Lower Upper

53 100

52 0.0 65.4 98.2#

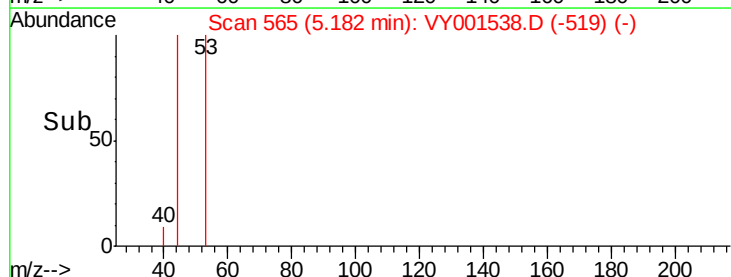
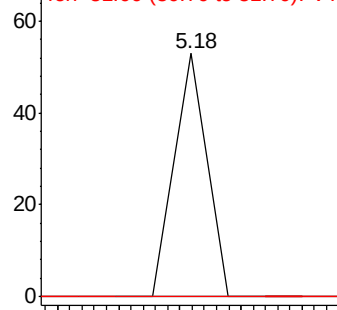
51 0.0 29.0 43.4#

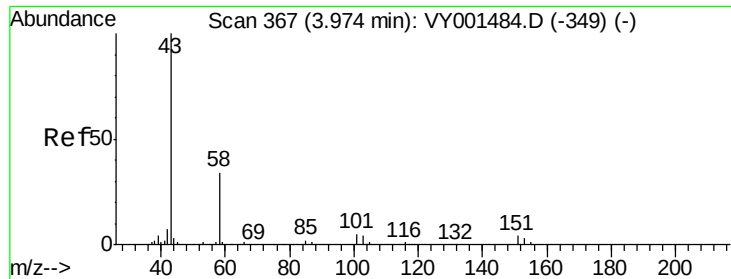


Abundance Ion 53.00 (52.70 to 53.70): VY0

Ion 52.00 (51.70 to 52.70): VY0

Ion 51.00 (50.70 to 51.70): VY0





#16

Acetone

Concen: 14.614 ug/l

RT: 3.97 min Scan# 367

Delta R.T. 0.00 min

Lab File: VY001538.D

Acq: 06 Feb 2020 18:03

Instrument :

MSVOA\_Y

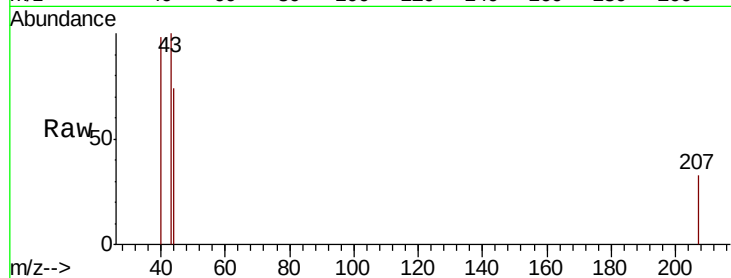
ClientSampleId :

Tot Ion: 43 Resp: 279

Ion Ratio Lower Upper

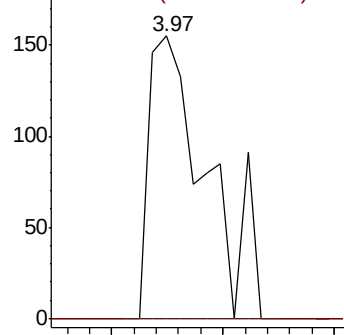
43 100

58 0.0 27.5 41.3#

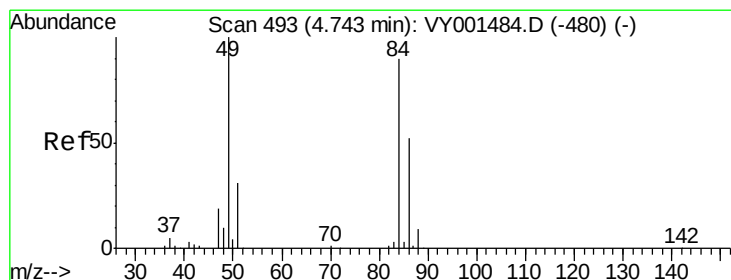
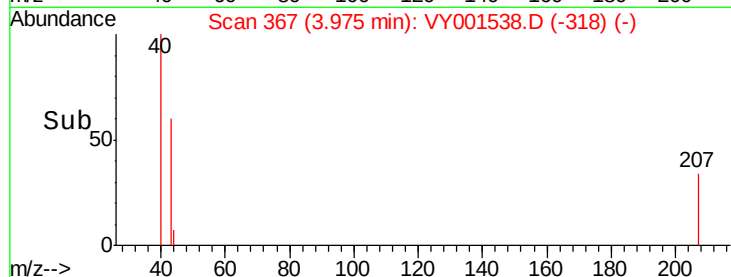


Abundance Ion 43.00 (42.70 to 43.70): VY0

Ion 58.00 (57.70 to 58.70): VY0



Time-->



#20

Methylene Chloride

Concen: 3.778 ug/l

RT: 4.74 min Scan# 493

Delta R.T. 0.00 min

Lab File: VY001538.D

Acq: 06 Feb 2020 18:03

Tgt Ion: 84 Resp: 609

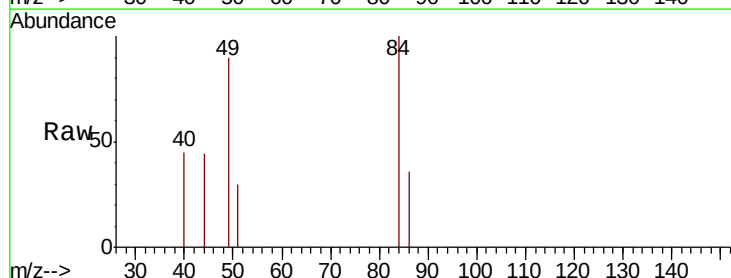
Ion Ratio Lower Upper

84 100

49 89.7 89.0 133.6

51 29.6 27.4 41.2

86 35.8 46.6 70.0#

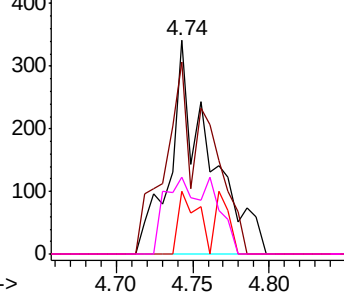


Abundance Ion 83.90 (83.60 to 84.60): VY0

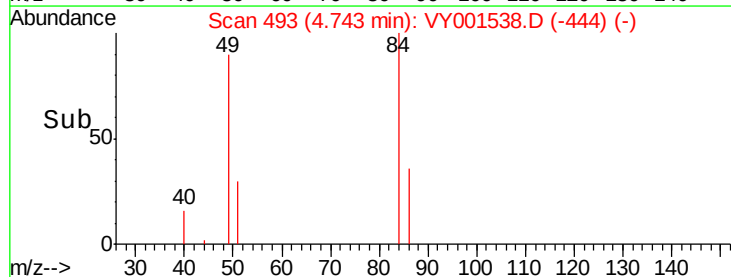
Ion 48.90 (48.60 to 49.60): VY0

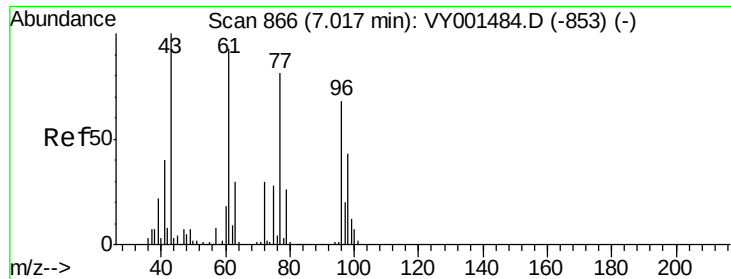
Ion 50.90 (50.60 to 51.60): VY0

Ion 85.90 (85.60 to 86.60): VY0



Time-->

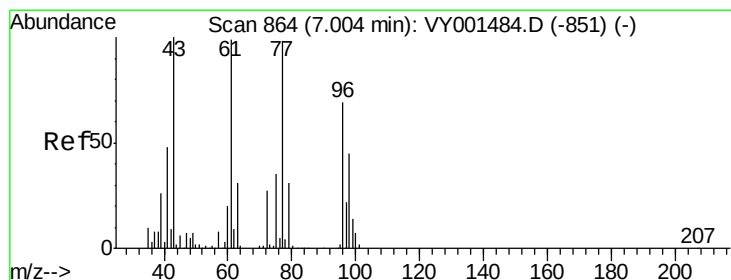
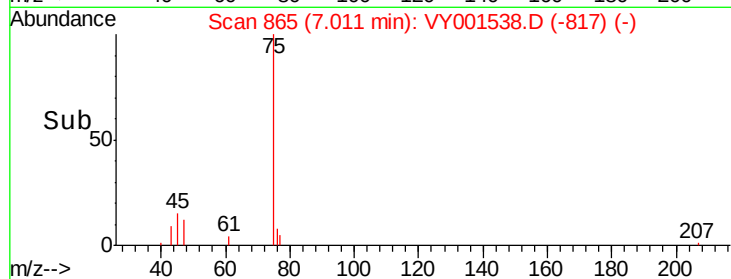
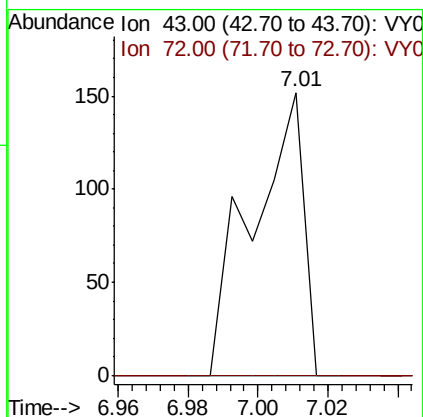
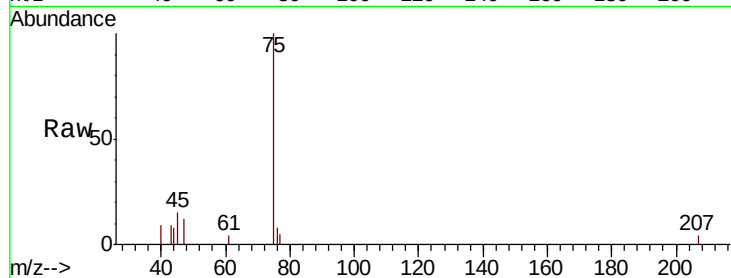




#25  
 2-Butanone  
 Concen: 6.258 ug/l  
 RT: 7.01 min Scan# 865  
 Delta R.T. -0.01 min  
 Lab File: VY001538.D  
 Acq: 06 Feb 2020 18:03

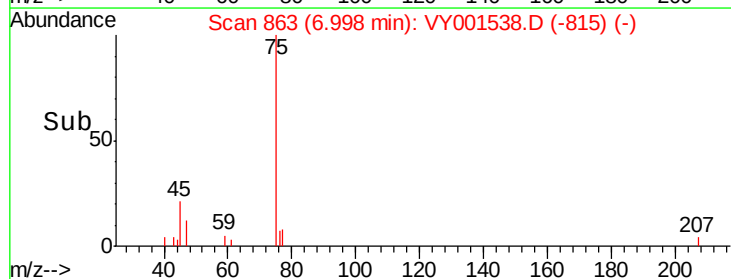
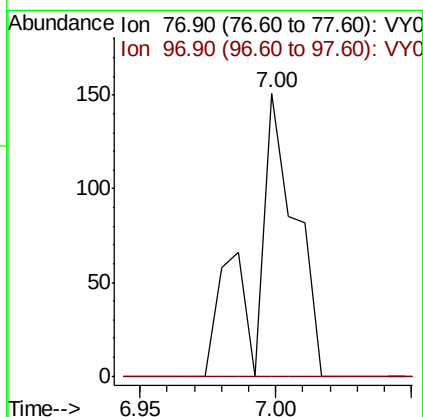
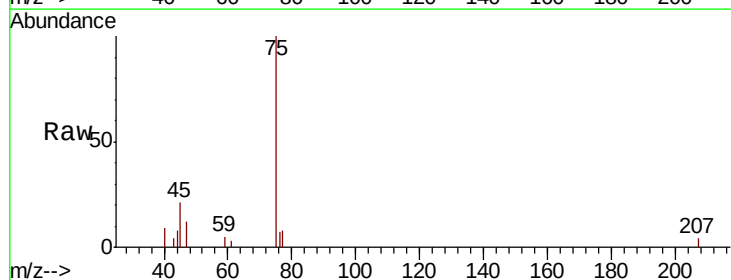
Instrument :  
 MSVOA\_Y  
 ClientSampled :

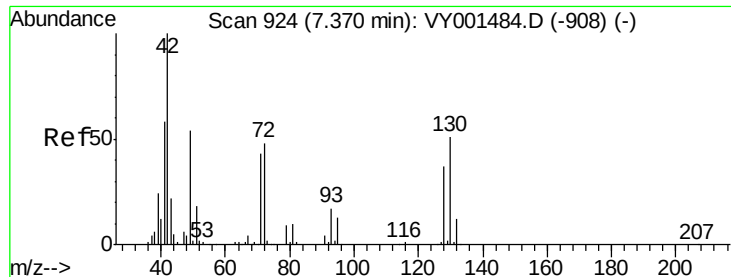
Tot Ion: 43 Resp: 155  
 Ion Ratio Lower Upper  
 43 100  
 72 0.0 23.8 35.8#



#26  
 2,2-Dichloropropane  
 Concen: 1.347 ug/l  
 RT: 7.00 min Scan# 863  
 Delta R.T. -0.01 min  
 Lab File: VY001538.D  
 Acq: 06 Feb 2020 18:03

Tgt Ion: 77 Resp: 162  
 Ion Ratio Lower Upper  
 77 100  
 97 0.0 11.7 35.0#

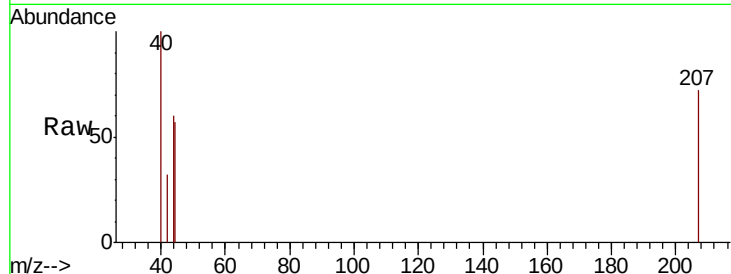




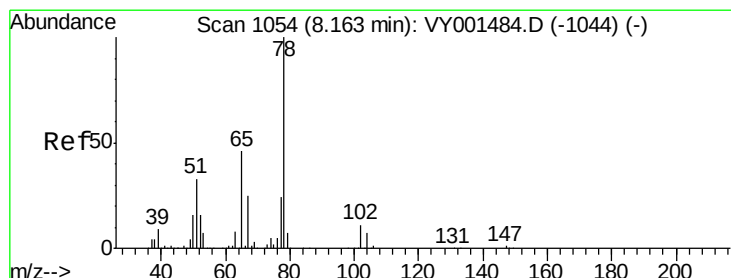
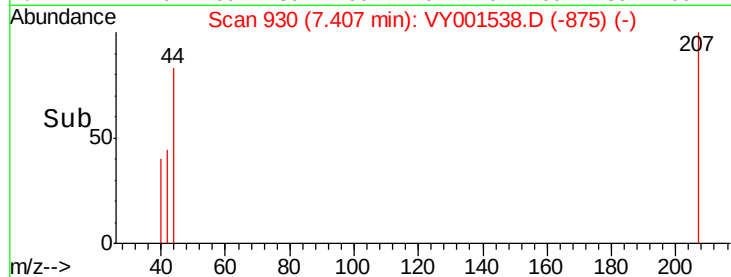
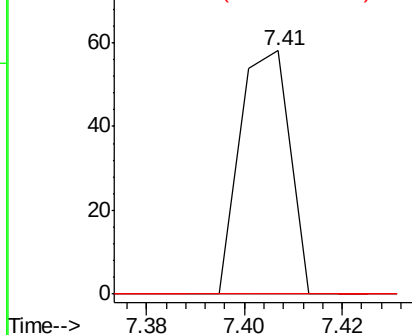
#29  
Tetrahydrofuran  
Concen: 2.762 ug/l  
RT: 7.41 min Scan# 930  
Delta R.T. 0.04 min  
Lab File: VY001538.D  
Acq: 06 Feb 2020 18:03

Instrument :  
MSVOA\_Y  
ClientSampleId :

Tot Ion: 42 Resp: 41  
Ion Ratio Lower Upper  
42 100  
72 0.0 37.8 56.6#  
71 0.0 34.8 52.2#

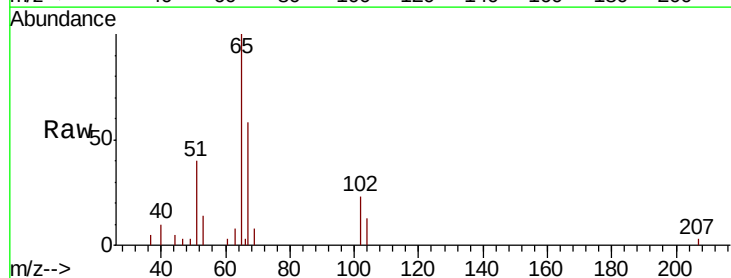


Abundance Ion 42.00 (41.70 to 42.70): VY0  
Ion 72.00 (71.70 to 72.70): VY0  
Ion 71.00 (70.70 to 71.70): VY0

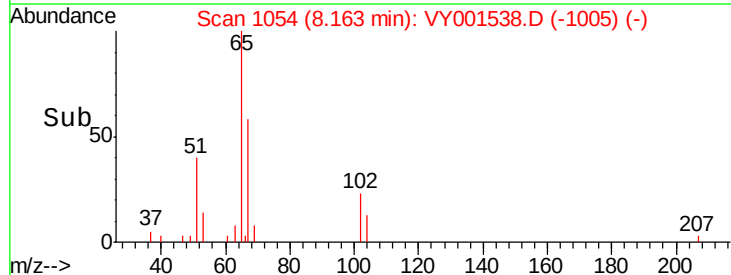
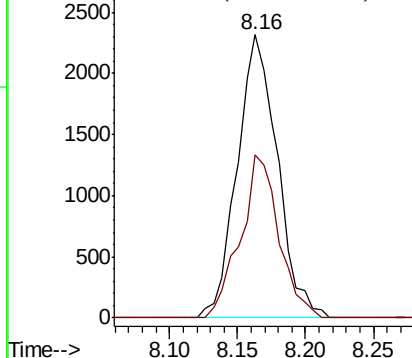


#33  
1,2-Dichloroethane-d4  
Concen: 72.395 ug/l  
RT: 8.16 min Scan# 1054  
Delta R.T. 0.00 min  
Lab File: VY001538.D  
Acq: 06 Feb 2020 18:03

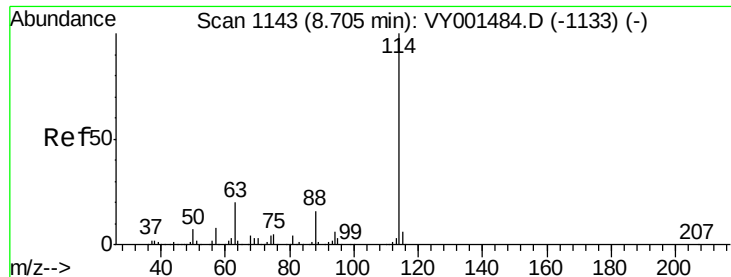
Tgt Ion: 65 Resp: 4778  
Ion Ratio Lower Upper  
65 100  
67 55.2 0.0 108.6



Abundance Ion 64.90 (64.60 to 65.60): VY0  
Ion 66.90 (66.60 to 67.60): VY0







#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 8.71 min Scan# 1143

Delta R.T. 0.00 min

Lab File: VY001538.D

Acq: 06 Feb 2020 18:03

Instrument :

MSVOA\_Y

ClientSampleId :

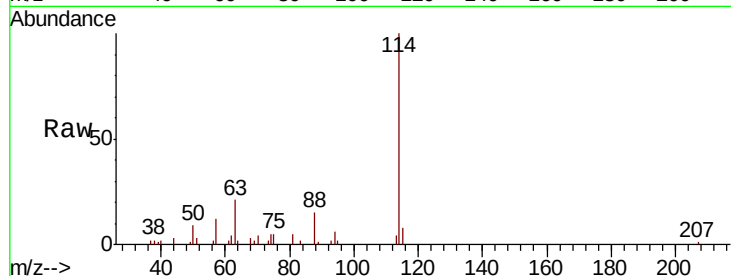
Tot Ion:114 Resp: 12466

Ion Ratio Lower Upper

114 100

63 21.3 0.0 39.8

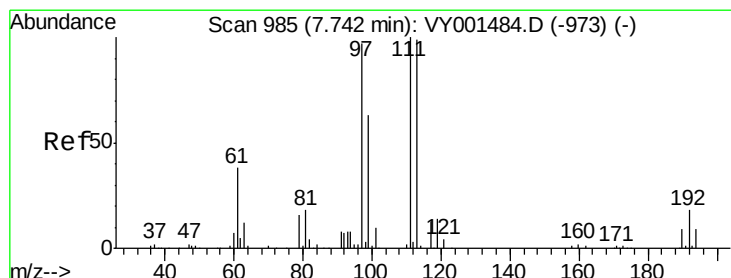
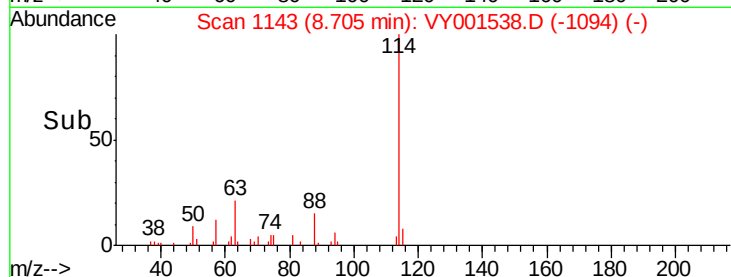
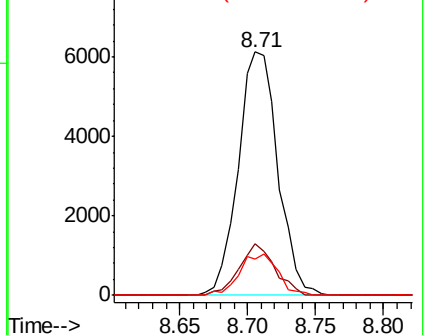
88 14.7 0.0 32.6



Abundance Ion 113.90 (113.60 to 114.60): V

Ion 63.00 (62.70 to 63.70): VY0

Ion 87.90 (87.60 to 88.60): VY0



#35

Dibromofluoromethane

Concen: 47.284 ug/l

RT: 7.74 min Scan# 985

Delta R.T. 0.00 min

Lab File: VY001538.D

Acq: 06 Feb 2020 18:03

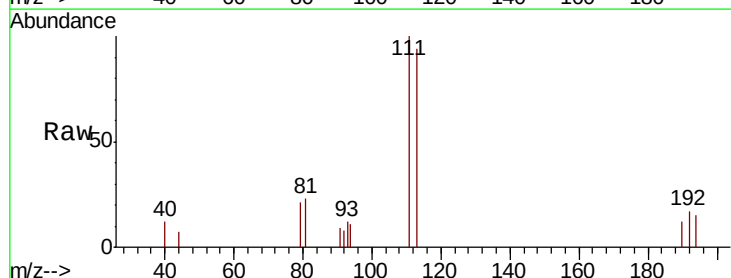
Tgt Ion:113 Resp: 3399

Ion Ratio Lower Upper

113 100

111 101.9 82.9 124.3

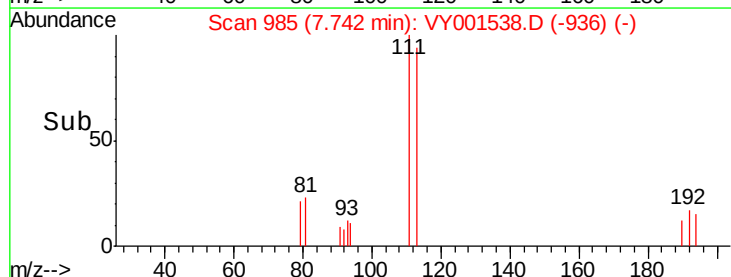
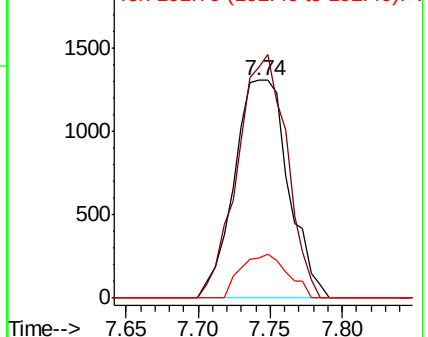
192 17.5 14.6 22.0

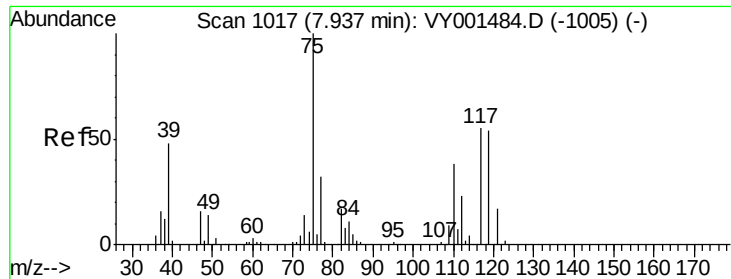


Abundance Ion 112.80 (112.50 to 113.50): V

Ion 110.80 (110.50 to 111.50): V

Ion 191.70 (191.40 to 192.40): V

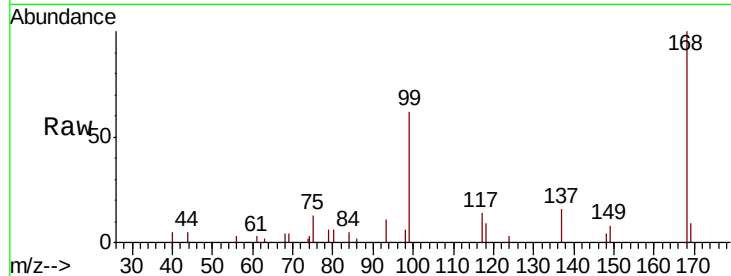




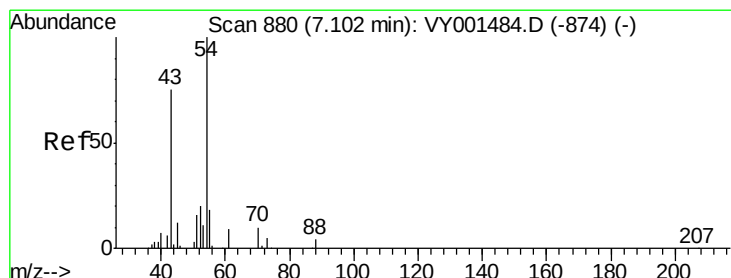
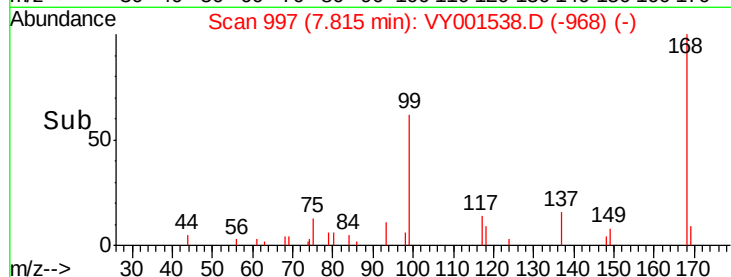
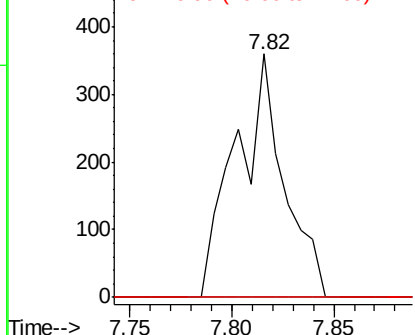
#36  
 1,1-Dichloropropene  
 Concen: 5.209 ug/l  
 RT: 7.82 min Scan# 997  
 Delta R.T. -0.12 min  
 Lab File: VY001538.D  
 Acq: 06 Feb 2020 18:03

Instrument :  
 MSVOA\_Y  
 ClientSampled :

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 75      | 100   |       |       |
| 110     | 0.0   | 18.2  | 54.6# |
| 77      | 0.0   | 25.0  | 37.4# |

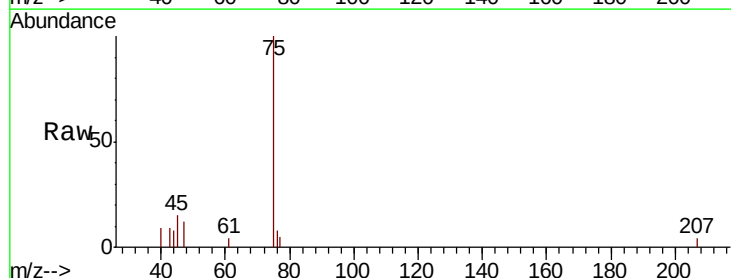


Abundance Ion 74.90 (74.60 to 75.60): VY0  
 Ion 109.90 (109.60 to 110.60): VY0  
 Ion 76.90 (76.60 to 77.60): VY0

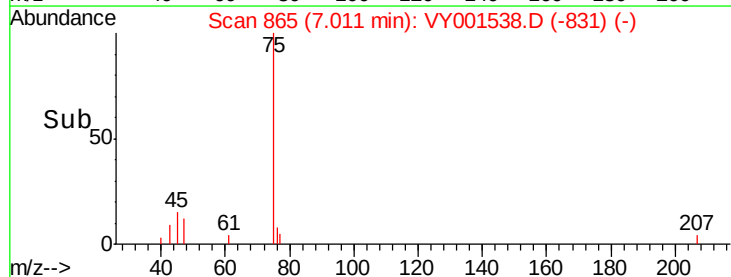
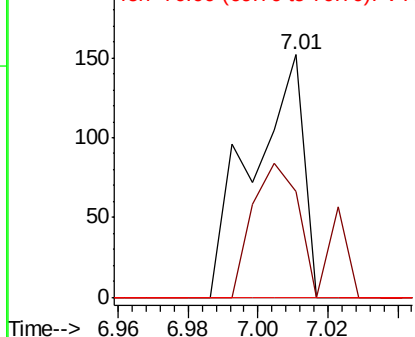


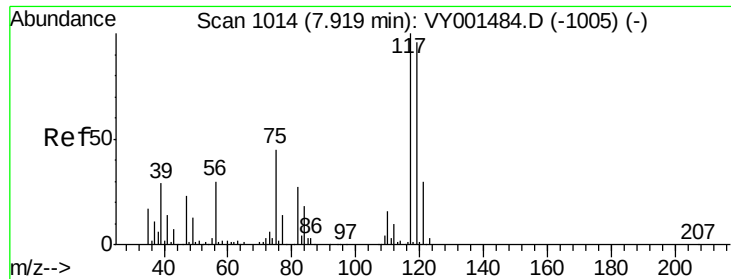
#37  
 Ethyl Acetate  
 Concen: 2.808 ug/l  
 RT: 7.01 min Scan# 865  
 Delta R.T. -0.09 min  
 Lab File: VY001538.D  
 Acq: 06 Feb 2020 18:03

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 61      | 62.6  | 12.0  | 18.0# |
| 70      | 0.0   | 10.2  | 15.4# |



Abundance Ion 43.00 (42.70 to 43.70): VY0  
 Ion 60.90 (60.60 to 61.60): VY0  
 Ion 70.00 (69.70 to 70.70): VY0

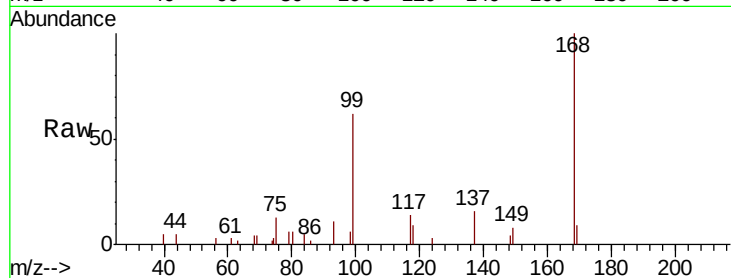




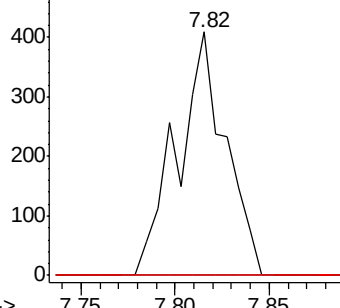
#38  
Carbon Tetrachloride  
Concen: 6.571 ug/l  
RT: 7.82 min Scan# 997  
Delta R.T. -0.10 min  
Lab File: VY001538.D  
Acq: 06 Feb 2020 18:03

Instrument :  
MSVOA\_Y  
ClientSampleId :

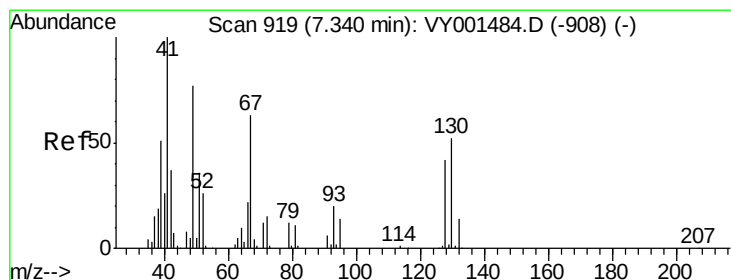
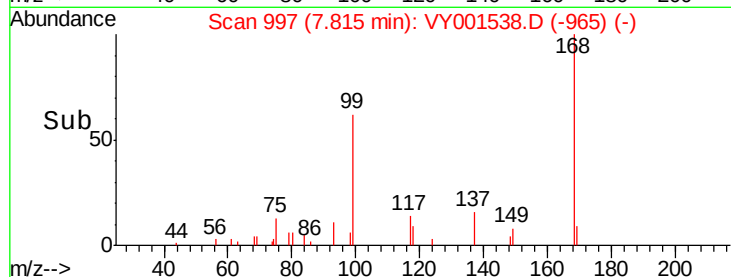
Tot Ion:117 Resp: 725  
Ion Ratio Lower Upper  
117 100  
119 0.0 76.4 114.6#  
121 0.0 24.2 36.4#



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



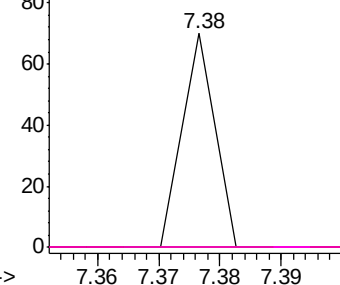
Time-->



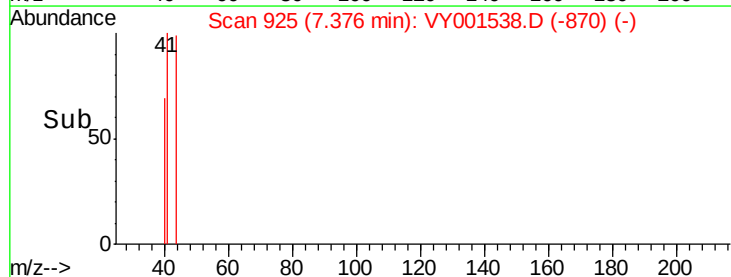
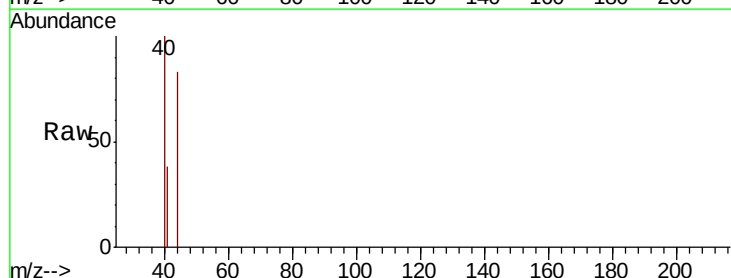
#41  
Methacrylonitrile  
Concen: 1.016 ug/l  
RT: 7.38 min Scan# 925  
Delta R.T. 0.04 min  
Lab File: VY001538.D  
Acq: 06 Feb 2020 18:03

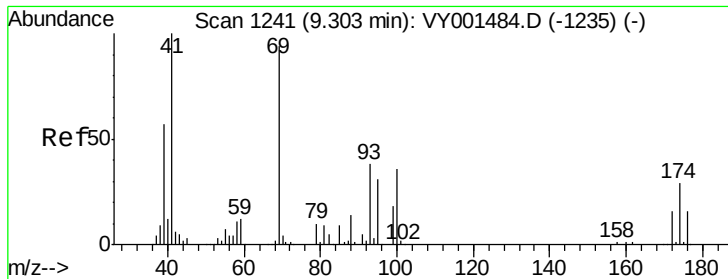
Tgt Ion: 41 Resp: 26  
Ion Ratio Lower Upper  
41 100  
39 0.0 116.8 175.2#  
67 0.0 0.0 0.0  
52 0.0 0.0 0.0

Abundance Ion 41.00 (40.70 to 41.70): VY0  
Ion 39.00 (38.70 to 39.70): VY0  
Ion 67.00 (66.70 to 67.70): VY0  
Ion 52.00 (51.70 to 52.70): VY0



Time-->

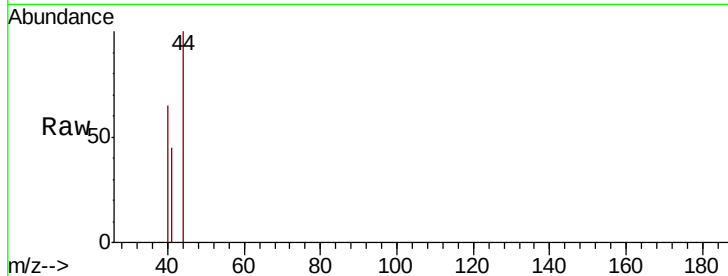




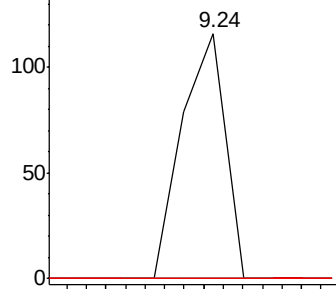
#48  
Methvl methacrylate  
Concen: 1.431 ug/l  
RT: 9.24 min Scan# 1231  
Delta R.T. -0.06 min  
Lab File: VY001538.D  
Acq: 06 Feb 2020 18:03

Instrument :  
MSVOA\_Y  
ClientSampleId :

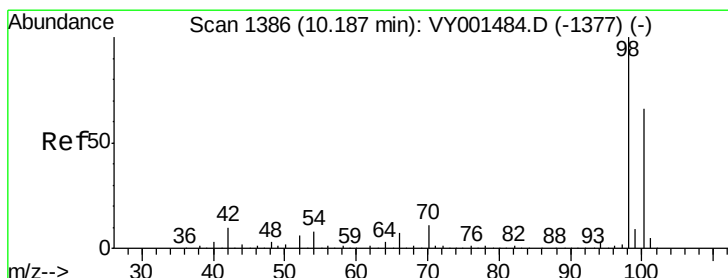
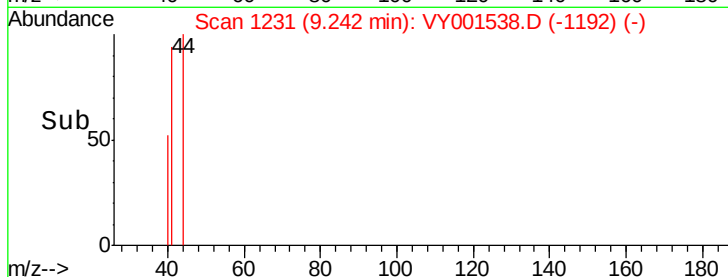
Tot Ion: 41 Resp: 71  
Ion Ratio Lower Upper  
41 100  
69 0.0 76.6 114.8#  
39 0.0 45.4 68.0#



Abundance Ion 41.00 (40.70 to 41.70): VY0  
Ion 69.00 (68.70 to 69.70): VY0  
Ion 39.00 (38.70 to 39.70): VY0

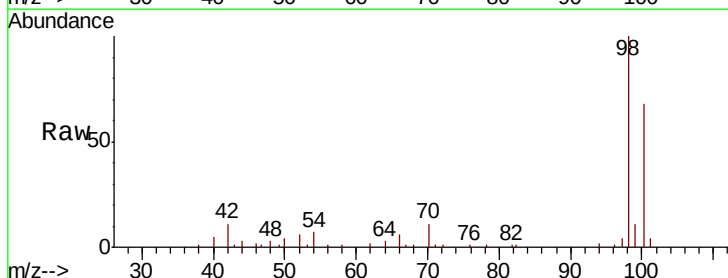


Time-->

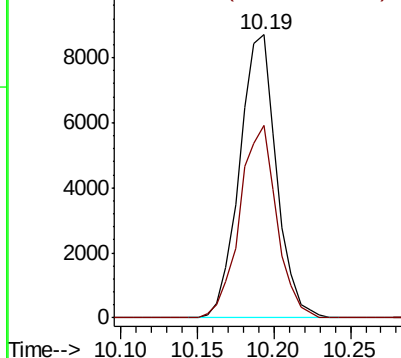


#50  
Toluene-d8  
Concen: 53.366 ug/l  
RT: 10.19 min Scan# 1387  
Delta R.T. 0.01 min  
Lab File: VY001538.D  
Acq: 06 Feb 2020 18:03

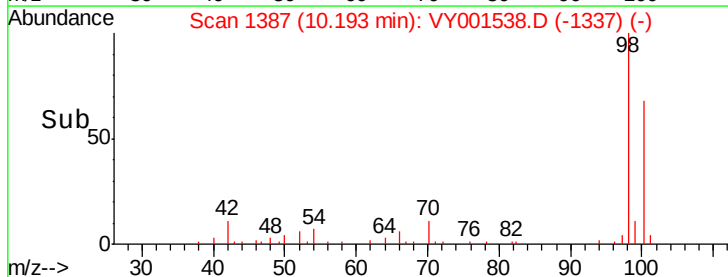
Tgt Ion: 98 Resp: 14514  
Ion Ratio Lower Upper  
98 100  
100 68.1 53.0 79.6

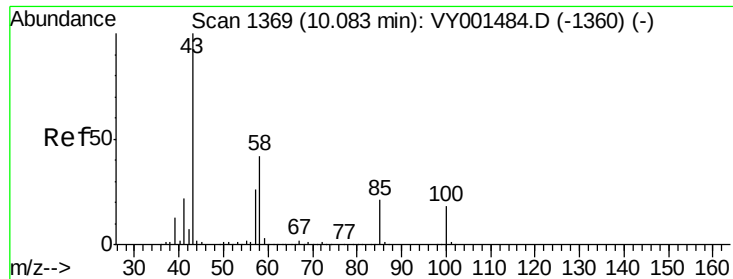


Abundance Ion 98.00 (97.70 to 98.70): VY0  
Ion 100.00 (99.70 to 100.70): VY0



Time-->





#51

4-Methyl-2-Pentanone

Concen: 1.059 ug/l

RT: 10.07 min Scan# 1367

Delta R.T. -0.01 min

Lab File: VY001538.D

Acq: 06 Feb 2020 18:03

Instrument :

MSVOA\_Y

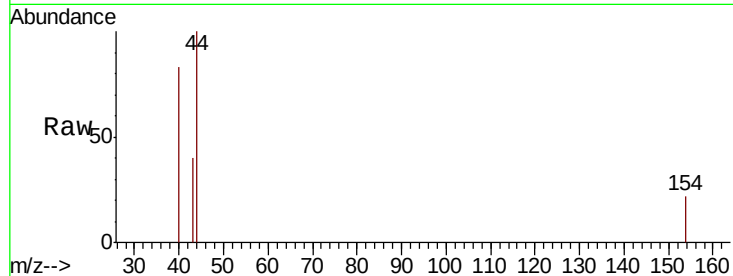
ClientSampled :

Tot Ion: 43 Resp: 57

Ion Ratio Lower Upper

43 100

58 0.0 33.9 50.9#



Abundance Ion 43.00 (42.70 to 43.70): VY0

Ion 58.00 (57.70 to 58.70): VY0

10.07

80

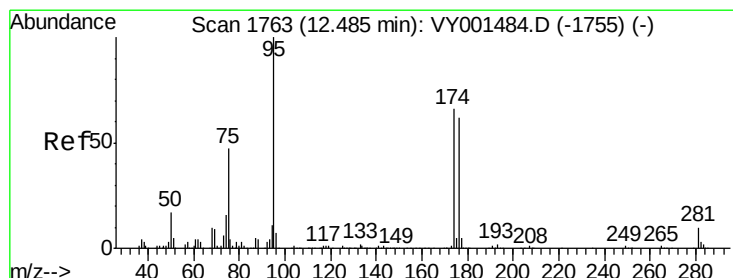
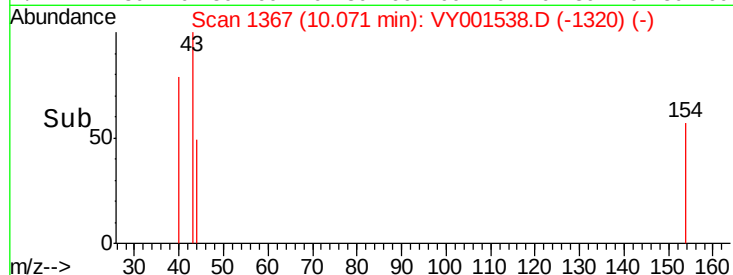
60

40

20

0

Time-->



#62

4-Bromofluorobenzene

Concen: 50.848 ug/l

RT: 12.49 min Scan# 1764

Delta R.T. 0.01 min

Lab File: VY001538.D

Acq: 06 Feb 2020 18:03

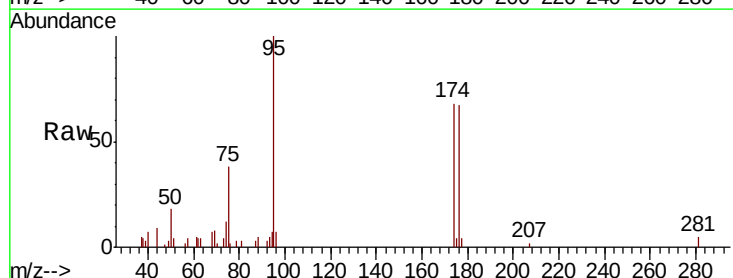
Tgt Ion: 95 Resp: 5448

Ion Ratio Lower Upper

95 100

174 72.9 0.0 141.4

176 70.0 0.0 135.4



Abundance Ion 94.90 (94.60 to 95.60): VY0

Ion 173.80 (173.50 to 174.50): V

Ion 175.80 (175.50 to 176.50): V

12.49

4000

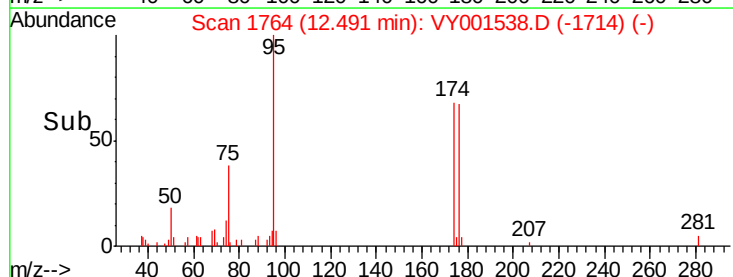
3000

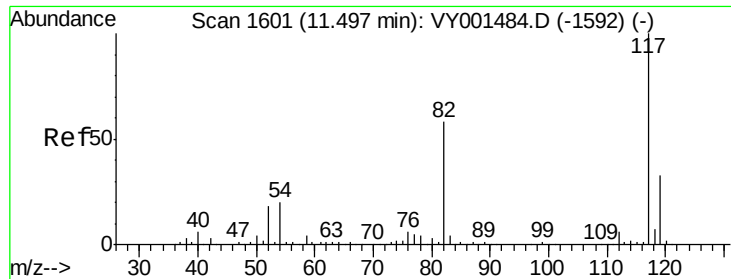
2000

1000

0

Time-->

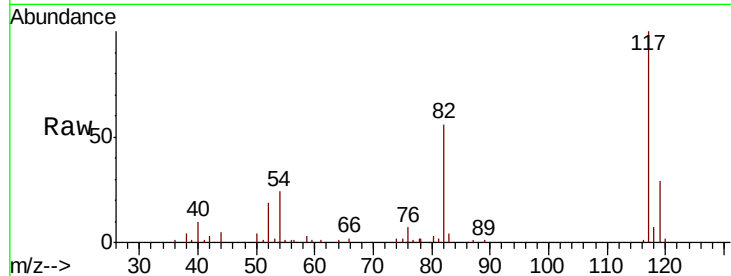




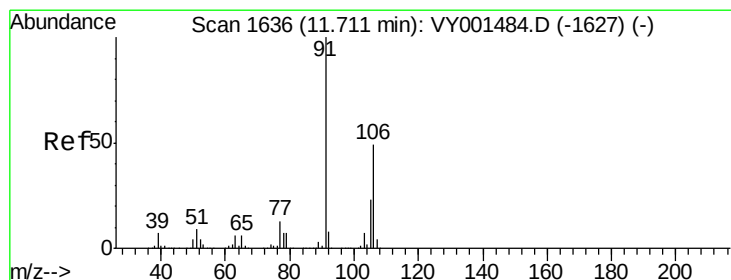
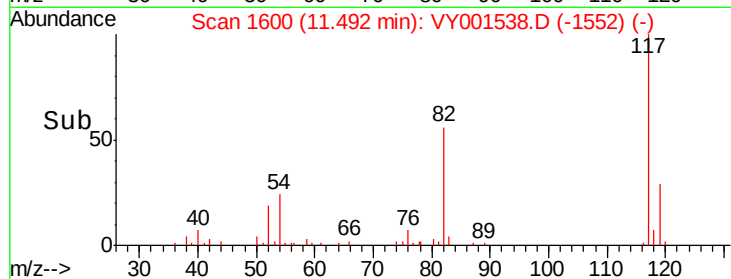
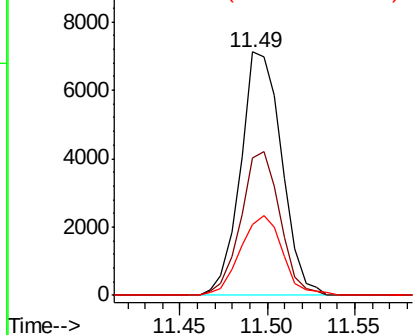
#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 11.49 min Scan# 1600  
Delta R.T. -0.01 min  
Lab File: VY001538.D  
Acq: 06 Feb 2020 18:03

Instrument :  
MSVOA\_Y  
ClientSampleId :

Tot Ion:117 Resp: 11688  
Ion Ratio Lower Upper  
117 100  
82 56.2 46.1 69.1  
119 29.0 26.1 39.1

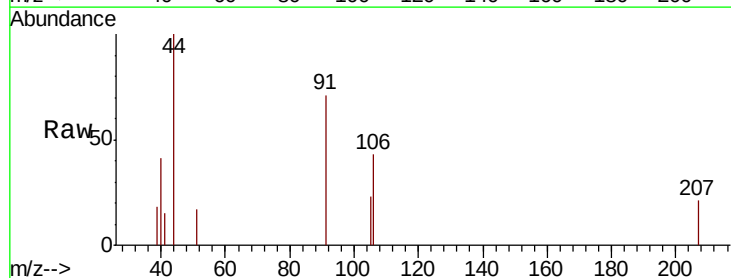


Abundance Ion 116.90 (116.60 to 117.60): V  
Ion 82.00 (81.70 to 82.70): VY0  
Ion 118.90 (118.60 to 119.60): V

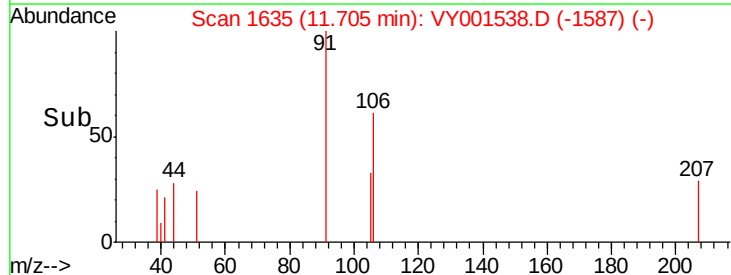
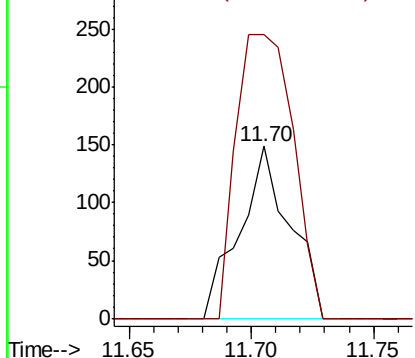


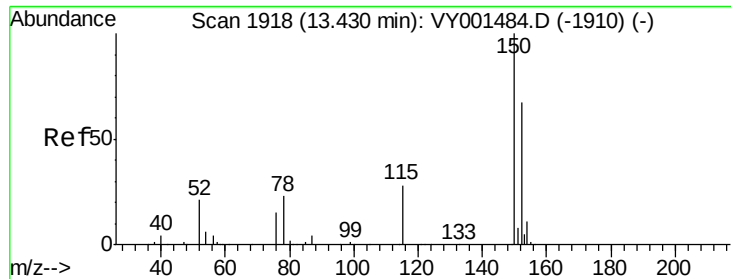
#68  
m/p-Xylenes  
Concen: 1.350 ug/l  
RT: 11.70 min Scan# 1635  
Delta R.T. -0.01 min  
Lab File: VY001538.D  
Acq: 06 Feb 2020 18:03

Tgt Ion:106 Resp: 215  
Ion Ratio Lower Upper  
106 100  
91 186.5 163.6 245.4



Abundance Ion 106.00 (105.70 to 106.70): V  
Ion 91.00 (90.70 to 91.70): VY0





#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 13.43 min Scan# 1918

Delta R.T. 0.00 min

Lab File: VY001538.D

Acq: 06 Feb 2020 18:03

Instrument :

MSVOA\_Y

ClientSampleId :

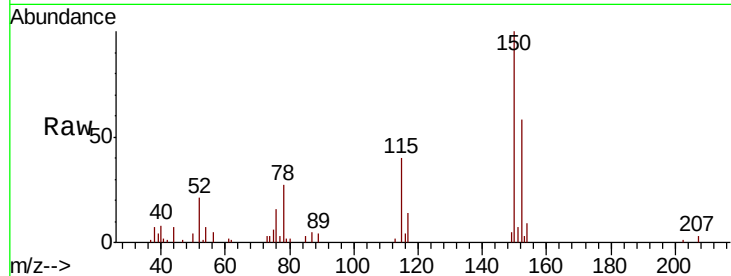
Tot Ion:152 Resp: 4721

Ion Ratio Lower Upper

152 100

115 63.3 31.4 94.3

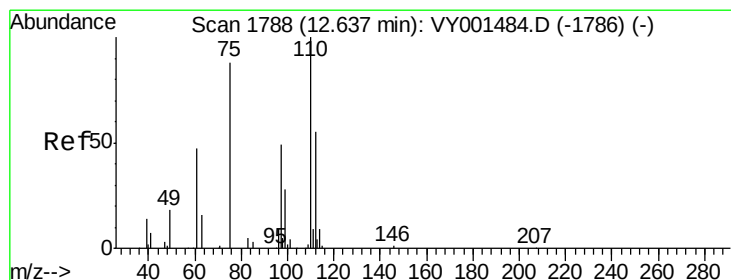
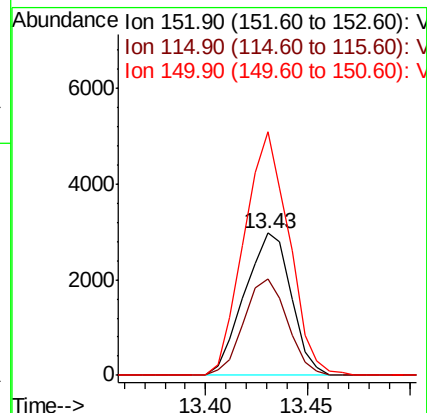
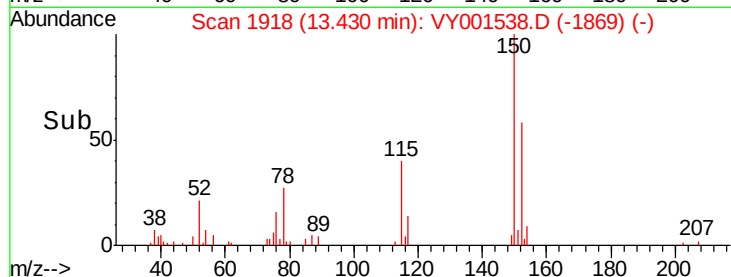
150 165.3 0.0 346.8



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: 52.610 ug/l

RT: 12.49 min Scan# 1763

Delta R.T. -0.15 min

Lab File: VY001538.D

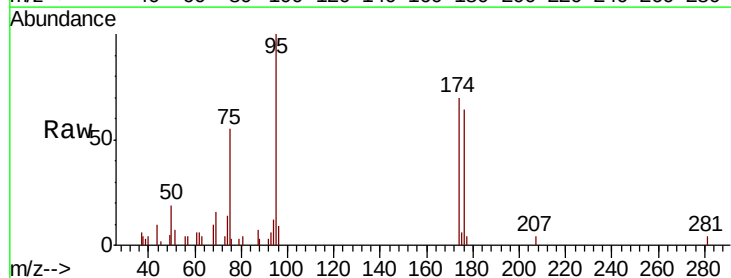
Acq: 06 Feb 2020 18:03

Tgt Ion: 75 Resp: 2671

Ion Ratio Lower Upper

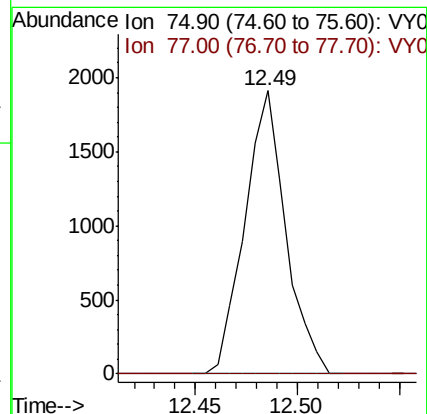
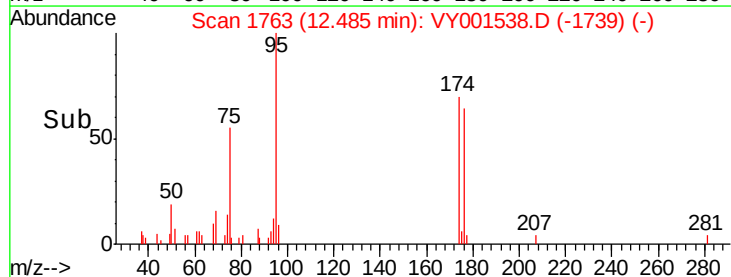
75 100

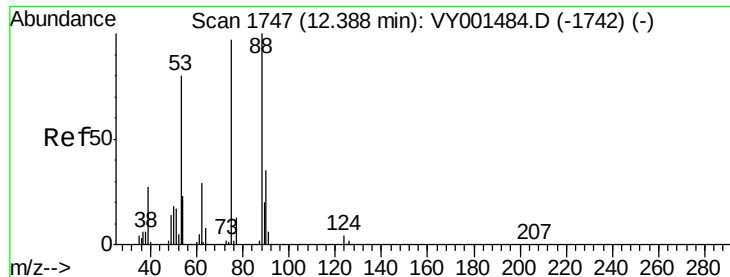
77 0.0 0.0 0.0



Abundance Ion 74.90 (74.60 to 75.60): VY0

Ion 77.00 (76.70 to 77.70): VY0

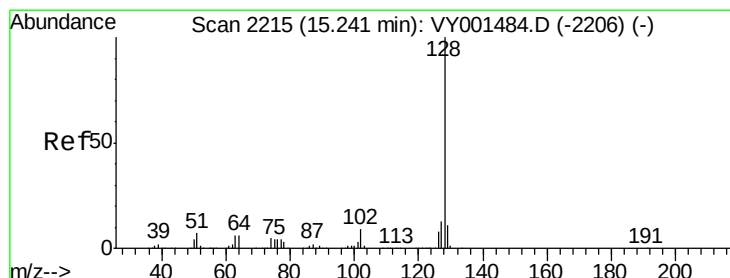
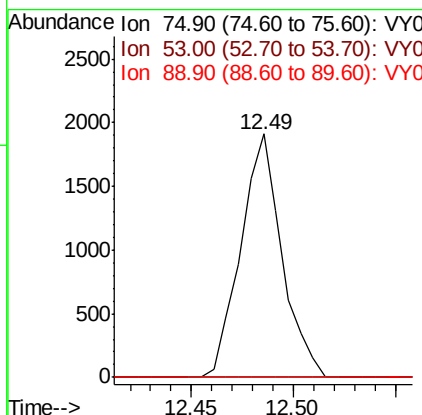
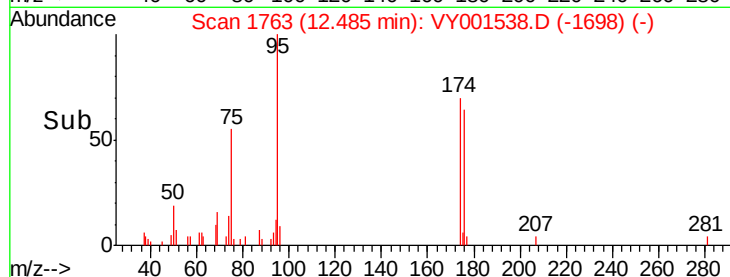
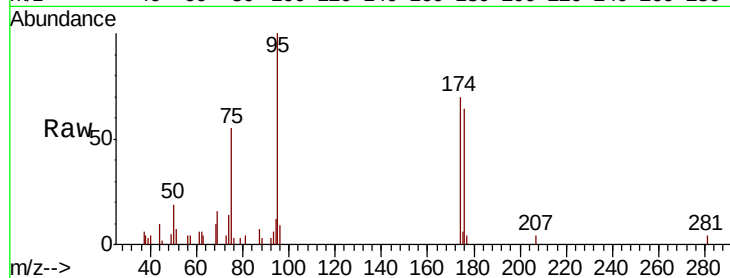




#81  
trans-1,4-Dichloro-2-butene  
Concen: 101.798 ug/l  
RT: 12.49 min Scan# 1763  
Delta R.T. 0.10 min  
Lab File: VY001538.D  
Acq: 06 Feb 2020 18:03

Instrument :  
MSVOA\_Y  
ClientSampled :

Tot Ion: 75 Resp: 2671  
Ion Ratio Lower Upper  
75 100  
53 0.0 67.7 101.5#  
89 0.0 34.6 52.0#



#95  
Naphthalene  
Concen: 3.373 ug/l  
RT: 15.24 min Scan# 2215  
Delta R.T. 0.00 min  
Lab File: VY001538.D  
Acq: 06 Feb 2020 18:03

Tgt Ion: 128 Resp: 723  
Ion Ratio Lower Upper  
128 100  
127 3.0 10.1 15.1#  
129 0.0 8.9 13.3#

