

Data File : VW010640.D  
Acq On : 31 May 2019 16:51  
Operator : SY/VA  
Sample : K3097-17  
Misc : 5.03G/5ML/MSVOA\_W/SOIL  
ALS Vial : 13 Sample Multiplier: 1

Instrument :  
MSVOA\_W  
ClientSampleId :  
0437-HR-17(HACKENSACK)

Quant Time: Jun 01 04:51:40 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_W\METHOD\82W052019S.M  
Quant Title : SW846 8260  
QLast Update : Tue May 21 06:38:43 2019  
Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.95  | 168  | 156123   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.84  | 114  | 276938   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.63 | 117  | 247796   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.56 | 152  | 111990   | 50.00 | ug/l  | 0.00     |

#### System Monitoring Compounds

|                           |        |     |          |       |         |      |
|---------------------------|--------|-----|----------|-------|---------|------|
| 33) 1,2-Dichloroethane-d4 | 8.31   | 65  | 89379    | 55.46 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 110.92% |      |
| 35) Dibromofluoromethane  | 7.88   | 113 | 82367    | 49.02 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 98.04%  |      |
| 50) Toluene-d8            | 10.32  | 98  | 337693   | 52.60 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 105.20% |      |
| 62) 4-Bromofluorobenzene  | 12.62  | 95  | 127136   | 49.72 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 99.44%  |      |

#### Target Compounds

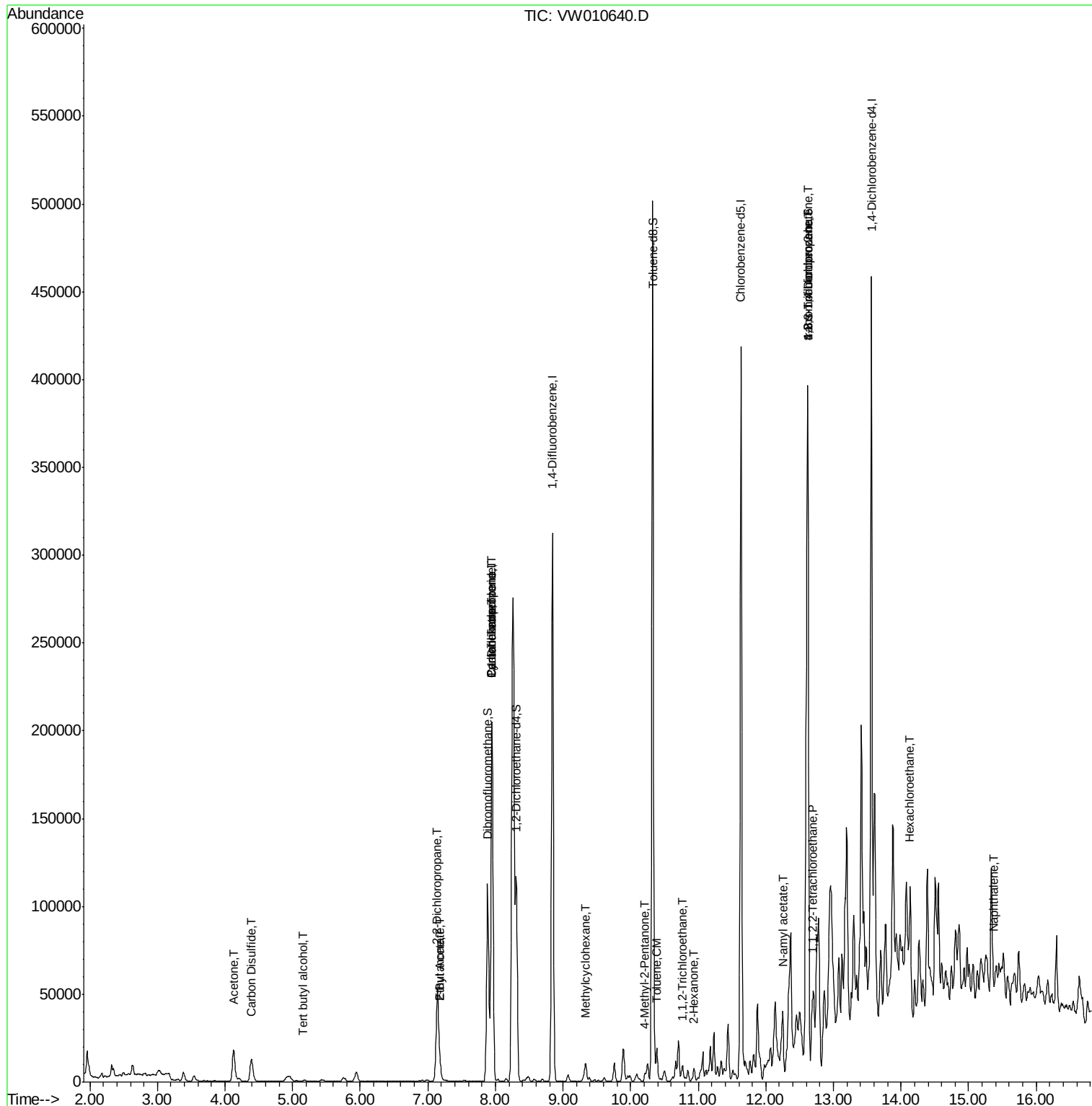
|                                |       |     |       |           |        | Qvalue |
|--------------------------------|-------|-----|-------|-----------|--------|--------|
| 2) Dichlorodifluoromethane     | 2.00  | 85  | 206   | Below Cal | #      | 42     |
| 11) Tert butyl alcohol         | 5.17  | 59  | 856   | 5.906     | ug/l   | 94     |
| 13) Acrolein                   | 3.90  | 56  | 168   | Below Cal | #      | 13     |
| 16) Acetone                    | 4.13  | 43  | 32343 | 98.327    | ug/l   | 97     |
| 17) Carbon Disulfide           | 4.38  | 76  | 7036  | 1.430     | ug/l   | 96     |
| 20) Methylene Chloride         | 4.92  | 84  | 1811  | Below Cal | #      | 90     |
| 25) 2-Butanone                 | 7.18  | 43  | 11920 | 25.322    | ug/l   | 90     |
| 26) 2,2-Dichloropropane        | 7.14  | 77  | 3476  | 1.249     | ug/l # | 52     |
| 31) Cyclohexane                | 7.94  | 56  | 3859  | 1.261     | ug/l # | 30     |
| 36) 1,1-Dichloropropene        | 7.95  | 75  | 11681 | 4.528     | ug/l # | 48     |
| 37) Ethyl Acetate              | 7.18  | 43  | 11920 | 10.865    | ug/l # | 67     |
| 38) Carbon Tetrachloride       | 7.95  | 117 | 16196 | 5.820     | ug/l # | 16     |
| 39) Methylcyclohexane          | 9.34  | 83  | 4055  | 1.173     | ug/l   | 93     |
| 51) 4-Methyl-2-Pentanone       | 10.21 | 43  | 2895  | 2.607     | ug/l   | 92     |
| 52) Toluene                    | 10.39 | 92  | 7882  | 1.637     | ug/l   | 97     |
| 55) 1,1,2-Trichloroethane      | 10.76 | 97  | 2853  | 1.992     | ug/l # | 27     |
| 59) 2-Hexanone                 | 10.94 | 43  | 3105  | 3.919     | ug/l # | 25     |
| 74) N-amyl acetate             | 12.25 | 43  | 9037  | 4.438     | ug/l # | 40     |
| 75) 1,1,2,2-Tetrachloroethane  | 12.69 | 83  | 2798  | 1.731     | ug/l # | 1      |
| 76) 1,2,3-Trichloropropane     | 12.62 | 75  | 58918 | 51.829    | ug/l # | 1      |
| 81) trans-1,4-Dichloro-2-buten | 12.62 | 75  | 58918 | 108.169   | ug/l # | 14     |
| 90) Hexachloroethane           | 14.14 | 117 | 2655  | 1.647     | ug/l # | 15     |
| 95) Naphthalene                | 15.37 | 128 | 7092  | 1.397     | ug/l # | 58     |

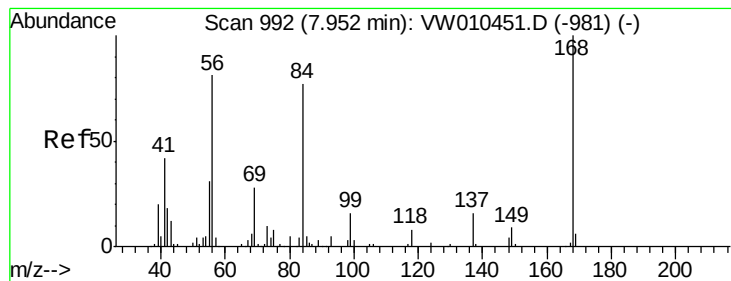
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 7.95 min Scan# 992

Delta R.T. -0.00 min

Lab File: VW010640.D

Acq: 31 May 2019 16:51

Instrument :

MSVOA\_W

ClientSampleId :

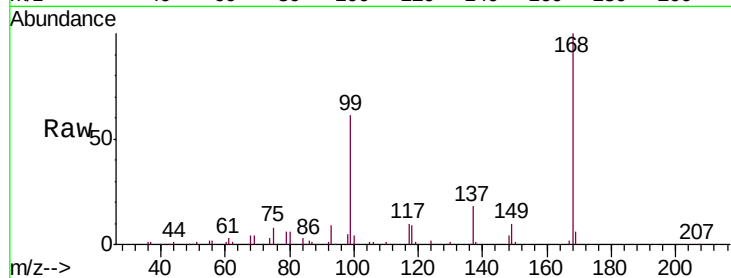
0437-HR-17(HACKENSACK)

Tgt Ion:168 Resp: 156123

Ion Ratio Lower Upper

168 100

99 61.1 46.1 69.1



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VW

7.95

80000

60000

40000

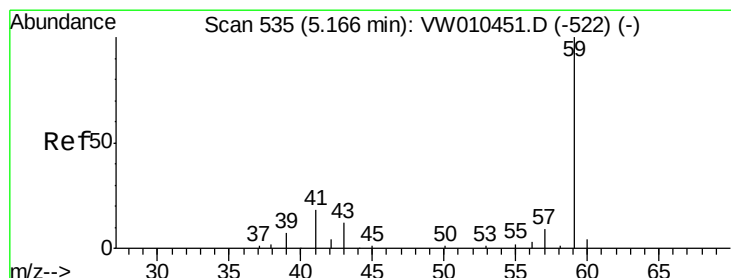
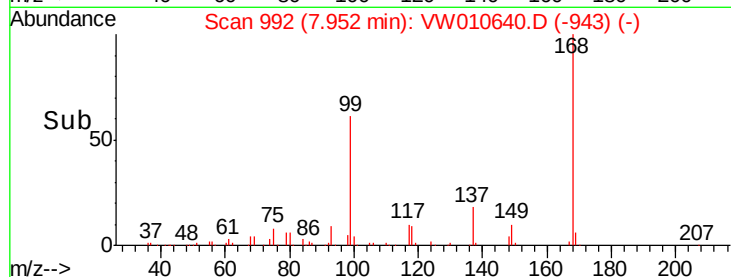
20000

0

Time-->

7.90

8.00



#11

Tert butyl alcohol

Concen: 5.906 ug/l

RT: 5.17 min Scan# 535

Delta R.T. -0.00 min

Lab File: VW010640.D

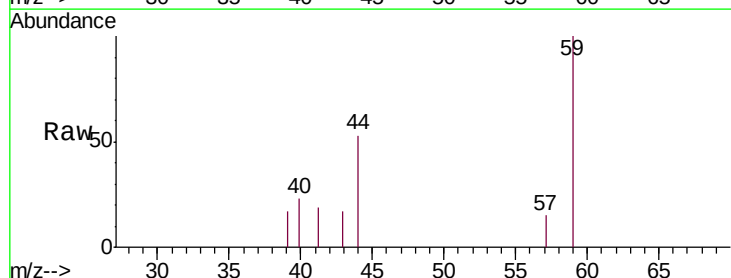
Acq: 31 May 2019 16:51

Tgt Ion: 59 Resp: 856

Ion Ratio Lower Upper

59 100

57 8.9 8.8 13.2



Abundance Ion 59.00 (58.70 to 59.70): VW

Ion 57.00 (56.70 to 57.70): VW

5.17

500

400

300

200

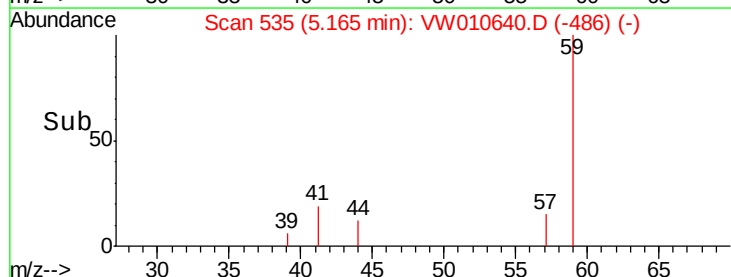
100

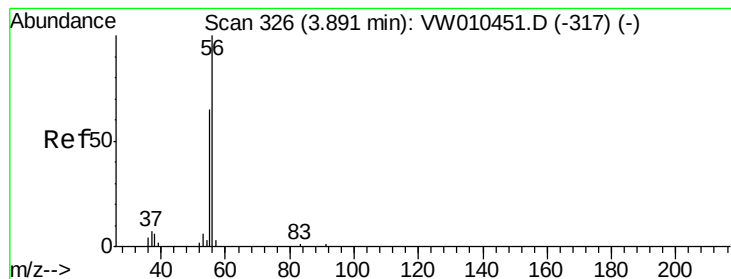
0

Time-->

5.10

5.15





#13

Acrolein

Concen: Below Cal

RT: 3.90 min Scan# 328

Delta R.T. 0.01 min

Lab File: VW010640.D

Acq: 31 May 2019 16:51

Instrument :

MSVOA\_W

ClientSampleId :

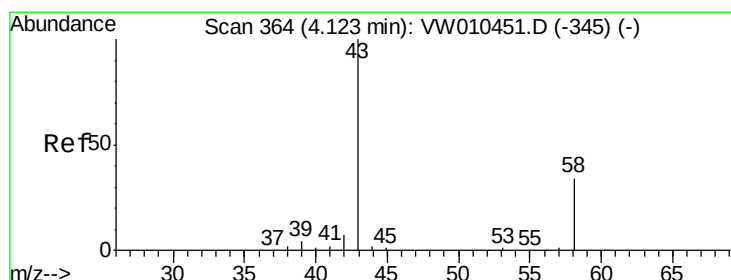
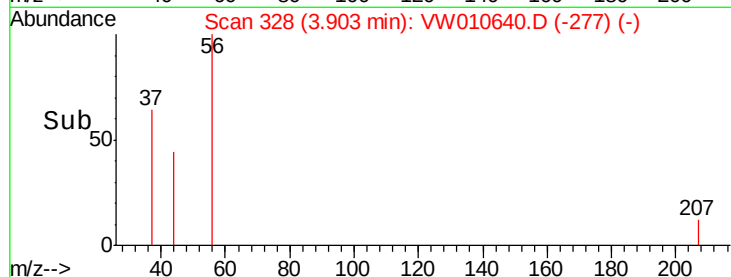
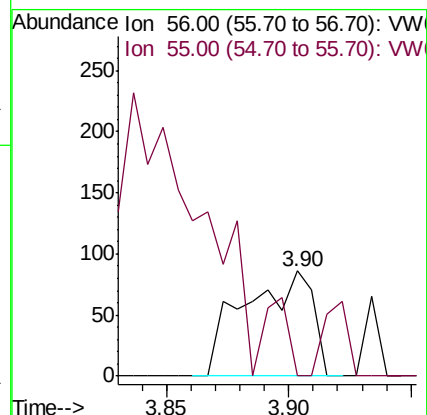
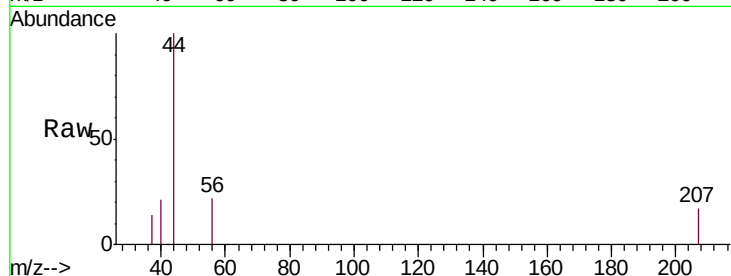
0437-HR-17(HACKENSACK)

Tgt Ion: 56 Resp: 168

Ion Ratio Lower Upper

56 100

55 0.0 57.9 86.9#



#16

Acetone

Concen: 98.327 ug/l

RT: 4.13 min Scan# 365

Delta R.T. 0.01 min

Lab File: VW010640.D

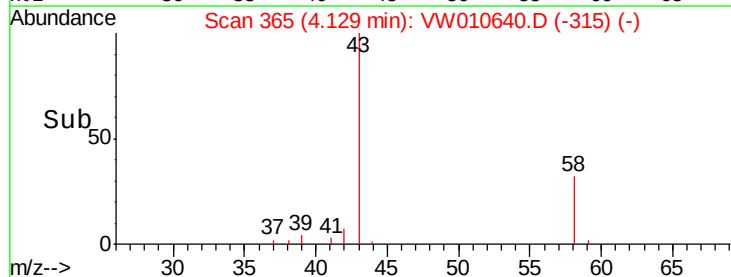
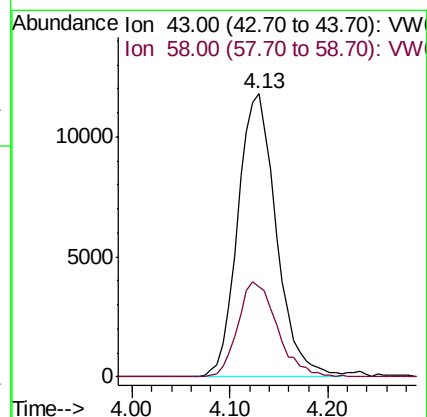
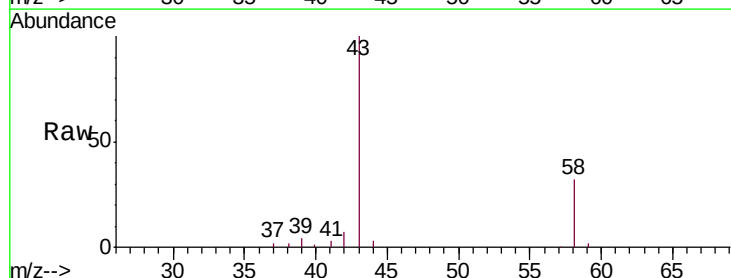
Acq: 31 May 2019 16:51

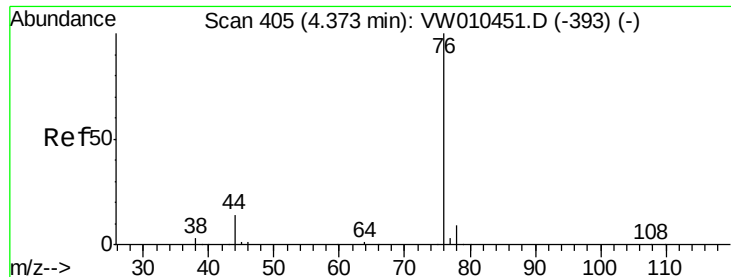
Tgt Ion: 43 Resp: 32343

Ion Ratio Lower Upper

43 100

58 31.8 27.0 40.4





#17

Carbon Disulfide

Concen: 1.430 ug/l

RT: 4.38 min Scan# 406

Delta R.T. 0.01 min

Lab File: VW010640.D

Acq: 31 May 2019 16:51

Instrument :

MSVOA\_W

ClientSampleId :

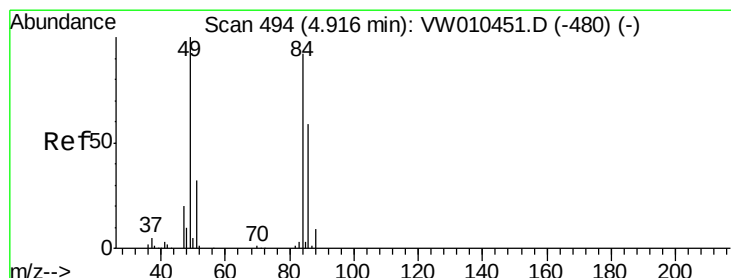
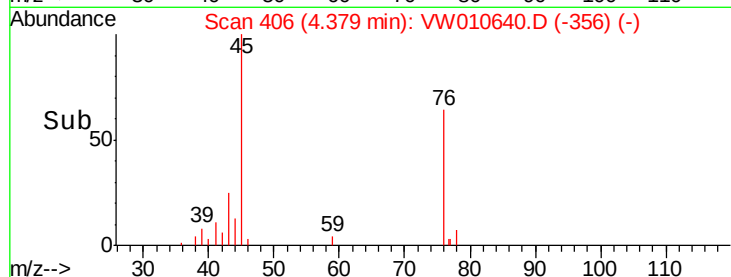
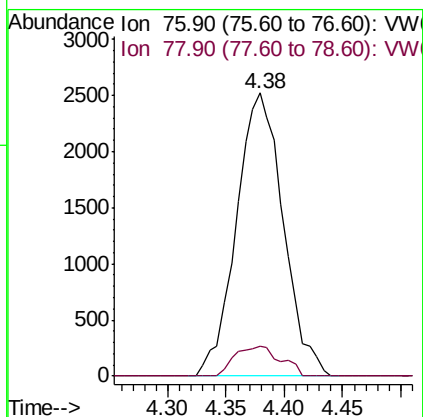
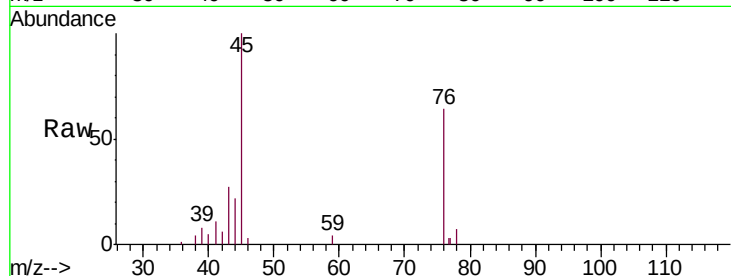
0437-HR-17(HACKENSACK)

Tgt Ion: 76 Resp: 7036

Ion Ratio Lower Upper

76 100

78 10.5 7.1 10.7



#20

Methylene Chloride

Concen: Below Cal

RT: 4.92 min Scan# 494

Delta R.T. 0.00 min

Lab File: VW010640.D

Acq: 31 May 2019 16:51

Tgt Ion: 84 Resp: 1811

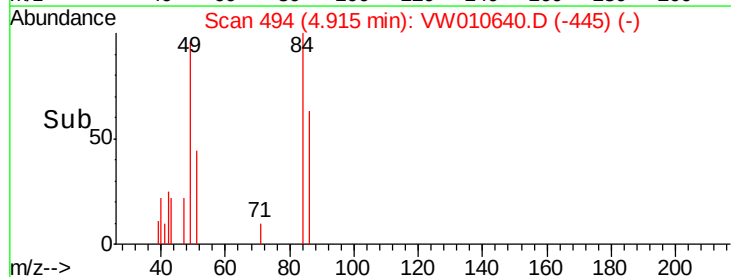
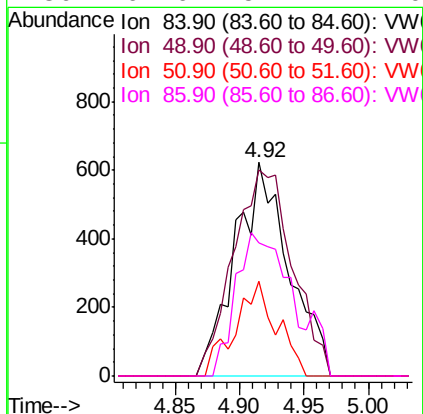
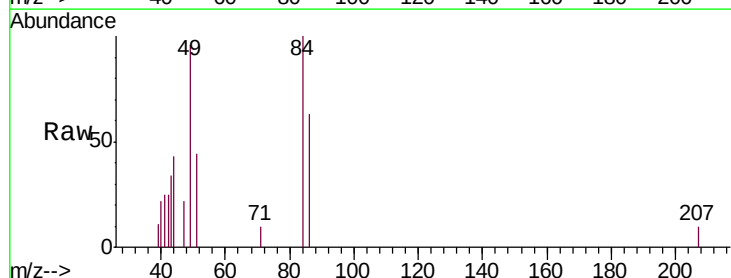
Ion Ratio Lower Upper

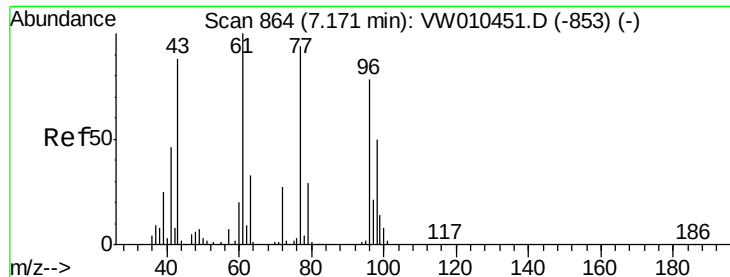
84 100

49 96.3 87.2 130.8

51 44.5 27.7 41.5#

86 62.6 51.4 77.0





#25

2-Butanone

Concen: 25.322 ug/l

RT: 7.18 min Scan# 865

Delta R.T. 0.01 min

Lab File: VW010640.D

Acq: 31 May 2019 16:51

Instrument :

MSVOA\_W

ClientSampleId :

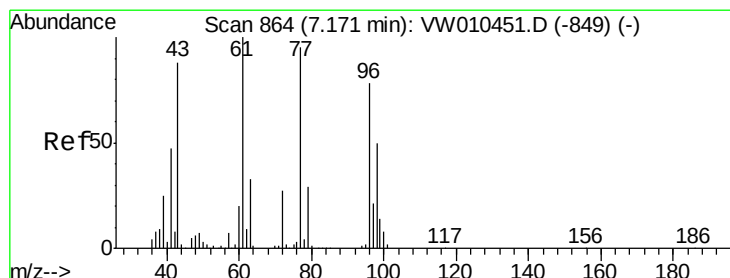
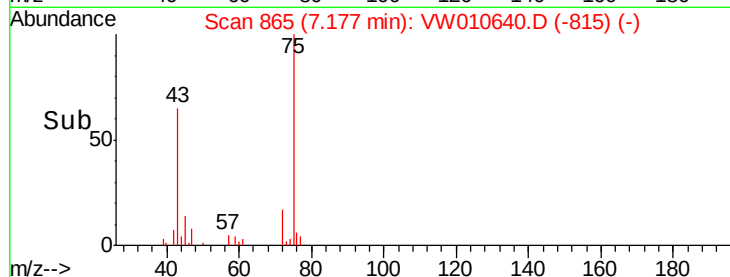
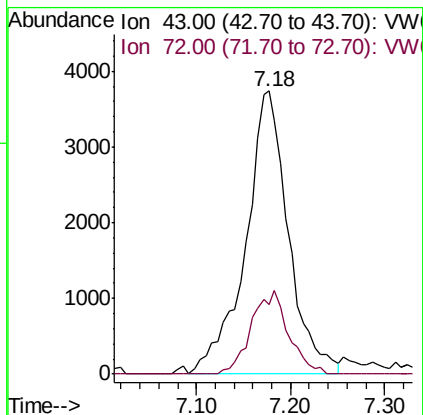
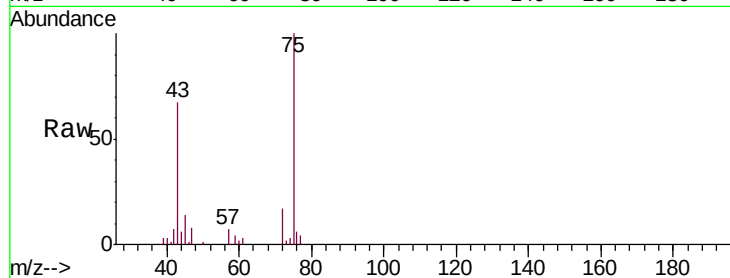
0437-HR-17(HACKENSACK)

Tgt Ion: 43 Resp: 11920

Ion Ratio Lower Upper

43 100

72 24.8 24.1 36.1



#26

2,2-Dichloropropane

Concen: 1.249 ug/l

RT: 7.14 min Scan# 859

Delta R.T. -0.03 min

Lab File: VW010640.D

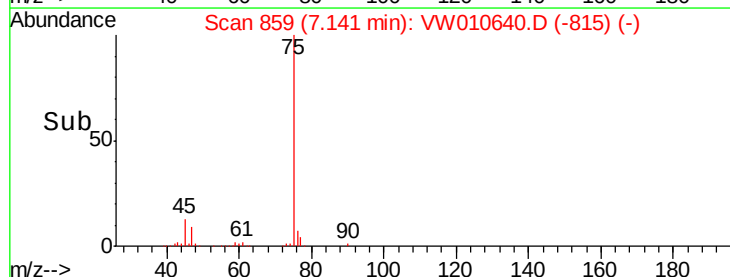
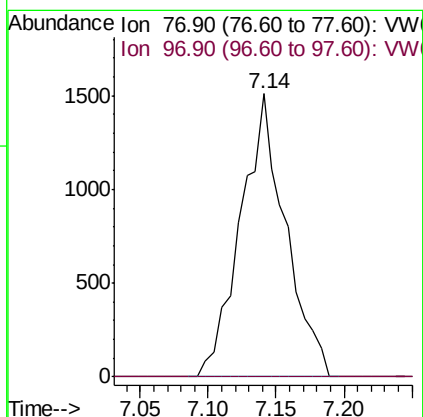
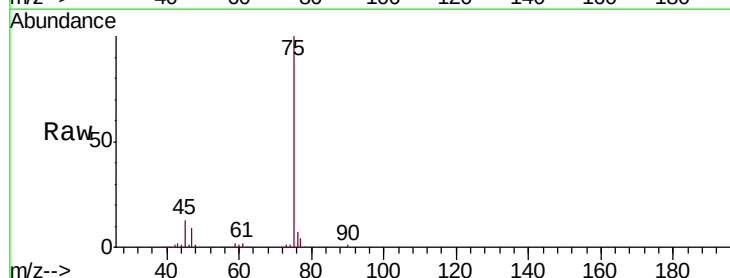
Acq: 31 May 2019 16:51

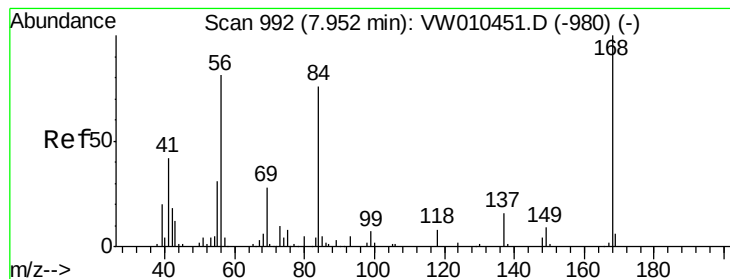
Tgt Ion: 77 Resp: 3476

Ion Ratio Lower Upper

77 100

97 0.0 11.7 35.0#





#31

Cyclohexane

Concen: 1.261 ug/l

RT: 7.94 min Scan# 990

Delta R.T. -0.01 min

Lab File: VW010640.D

Acq: 31 May 2019 16:51

Instrument :

MSVOA\_W

ClientSampleId :

0437-HR-17(HACKENSACK)

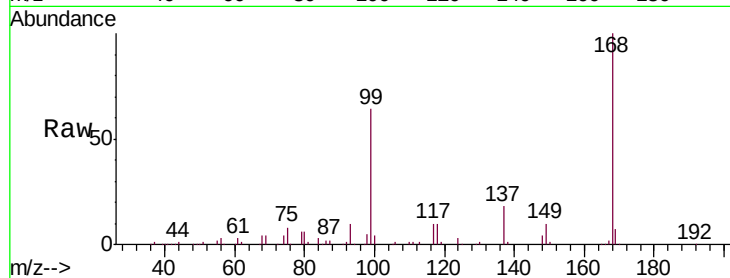
Tgt Ion: 56 Resp: 3859

Ion Ratio Lower Upper

56 100

69 146.0 28.2 42.2#

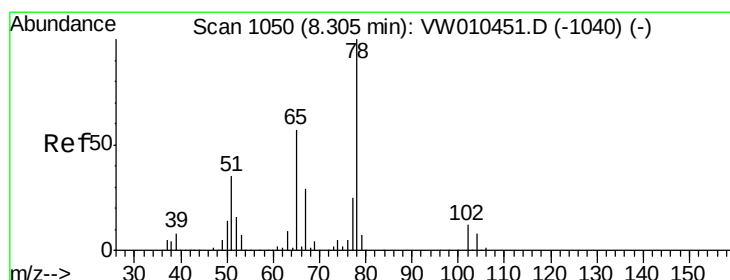
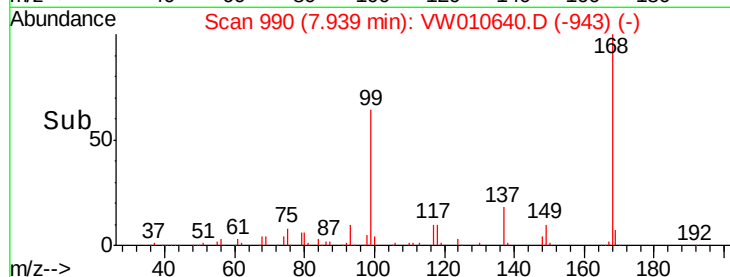
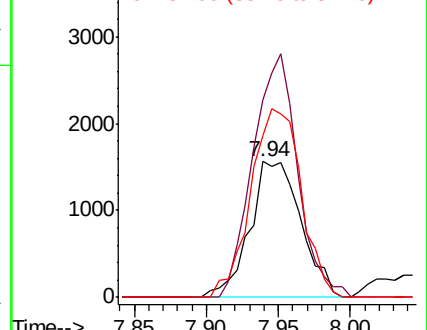
84 119.6 75.8 113.8#



Abundance Ion 56.00 (55.70 to 56.70): VW

Ion 69.00 (68.70 to 69.70): VW

Ion 84.00 (83.70 to 84.70): VW



#33

1,2-Dichloroethane-d4

Concen: 55.465 ug/l

RT: 8.31 min Scan# 1050

Delta R.T. -0.00 min

Lab File: VW010640.D

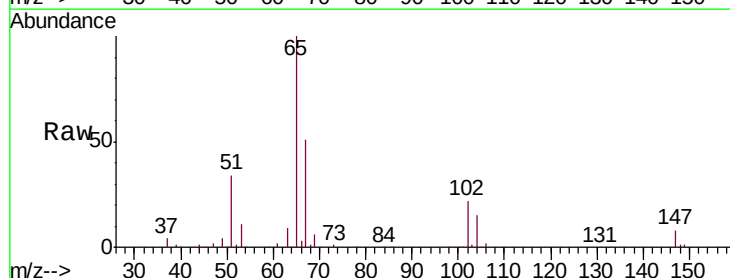
Acq: 31 May 2019 16:51

Tgt Ion: 65 Resp: 89379

Ion Ratio Lower Upper

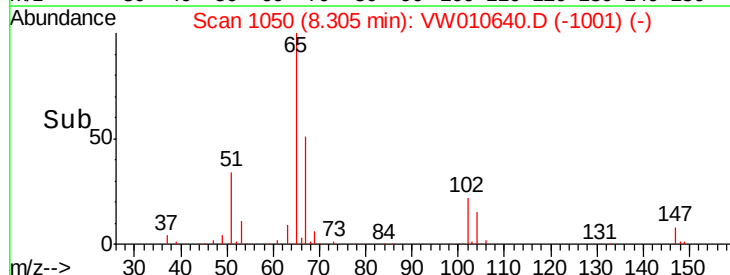
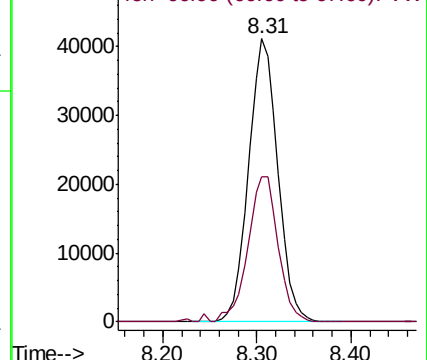
65 100

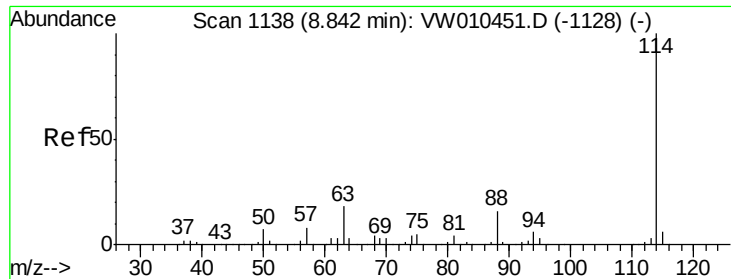
67 53.2 0.0 103.6



Abundance Ion 64.90 (64.60 to 65.60): VW

Ion 66.90 (66.60 to 67.60): VW

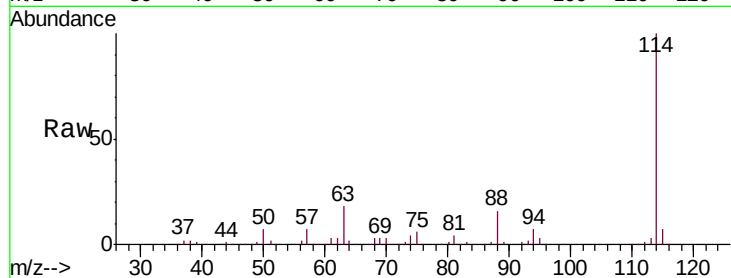




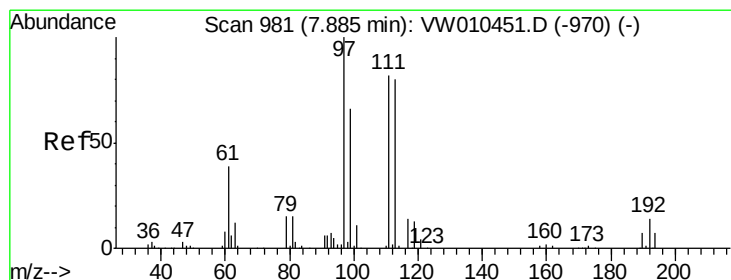
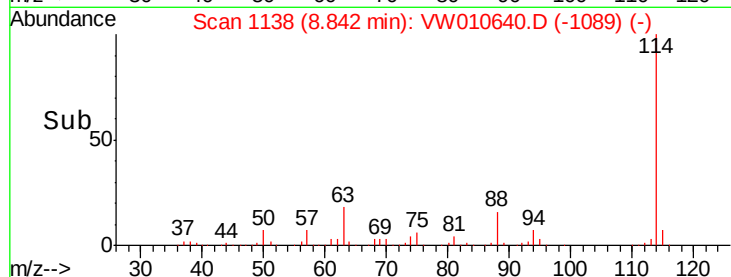
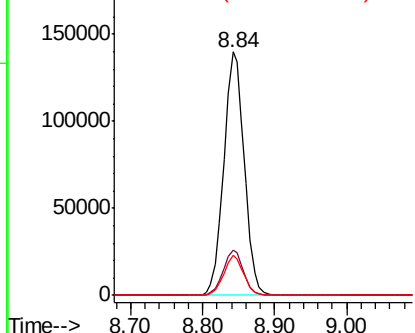
#34  
 1,4-Difluorobenzene  
 Concen: 50.000 ug/l  
 RT: 8.84 min Scan# 1138  
 Delta R.T. -0.00 min  
 Lab File: VW010640.D  
 Acq: 31 May 2019 16:51

Instrument :  
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Tgt Ion:114 Resp: 276938  
 Ion Ratio Lower Upper  
 114 100  
 63 18.3 0.0 36.0  
 88 16.3 0.0 32.0

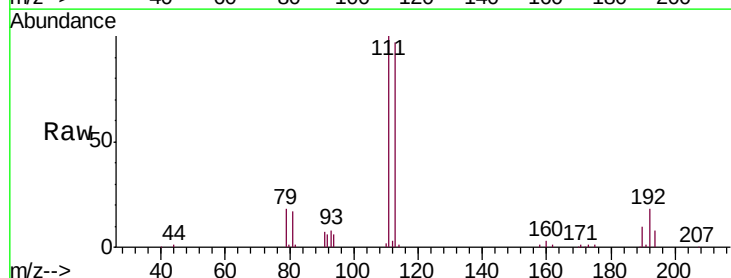


Abundance Ion 113.90 (113.60 to 114.60): V  
 Ion 63.00 (62.70 to 63.70): VW  
 Ion 87.90 (87.60 to 88.60): VW

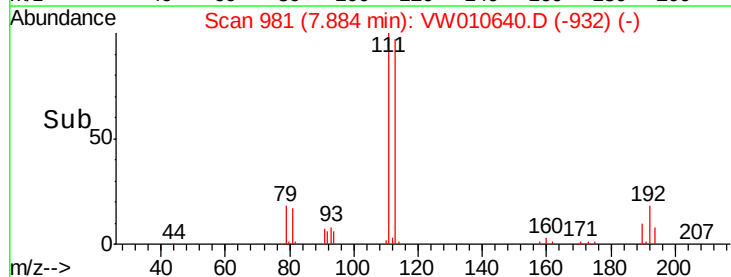
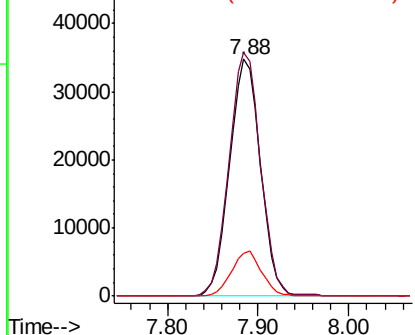


#35  
 Dibromofluoromethane  
 Concen: 49.016 ug/l  
 RT: 7.88 min Scan# 981  
 Delta R.T. -0.00 min  
 Lab File: VW010640.D  
 Acq: 31 May 2019 16:51

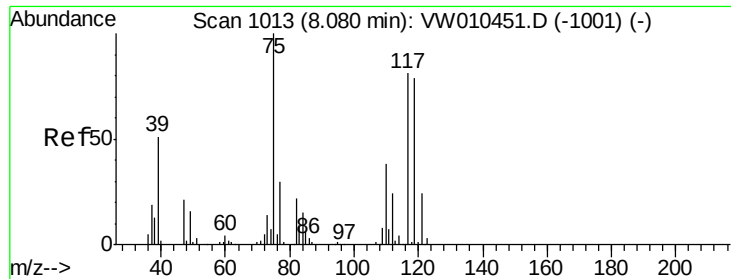
Tgt Ion:113 Resp: 82367  
 Ion Ratio Lower Upper  
 113 100  
 111 104.7 82.2 123.4  
 192 18.4 14.3 21.5



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



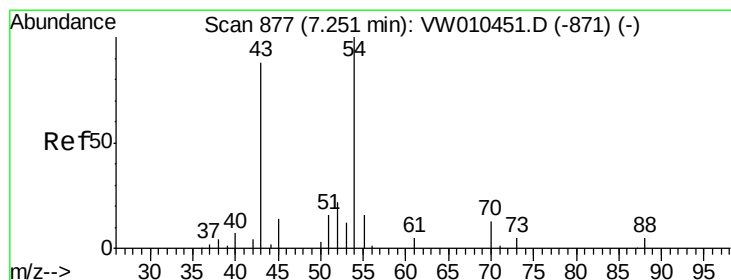
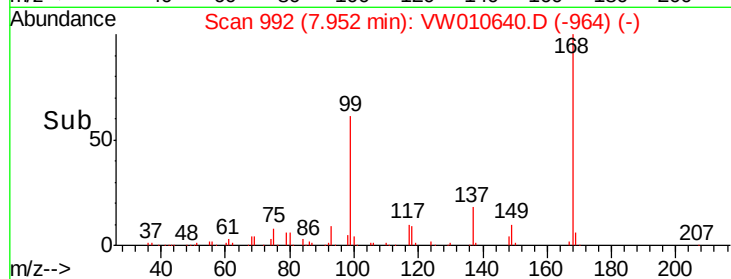
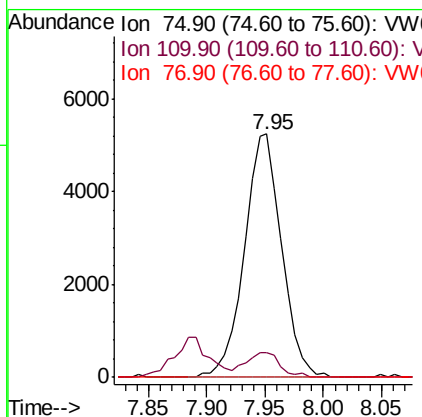
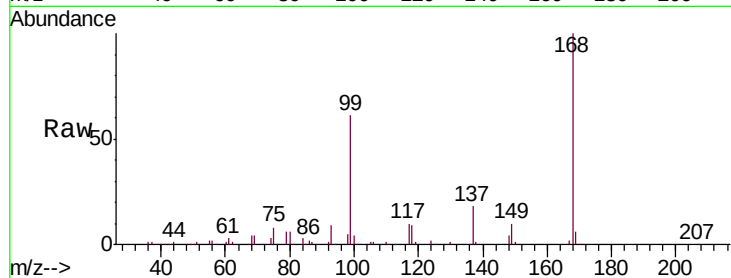




#36  
 1,1-Dichloropropene  
 Concen: 4.528 ug/l  
 RT: 7.95 min Scan# 992  
 Delta R.T. -0.13 min  
 Lab File: VW010640.D  
 Acq: 31 May 2019 16:51

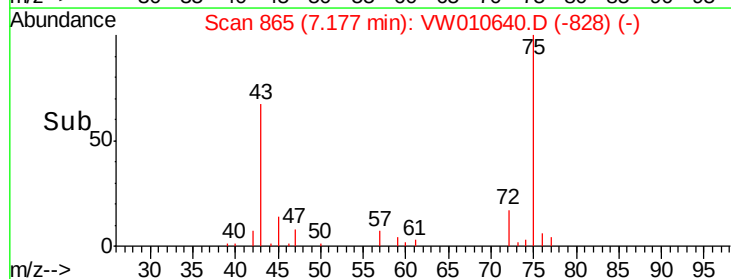
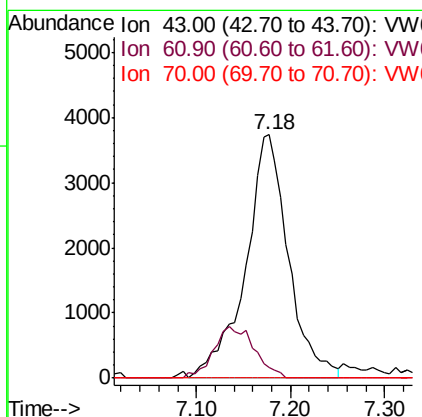
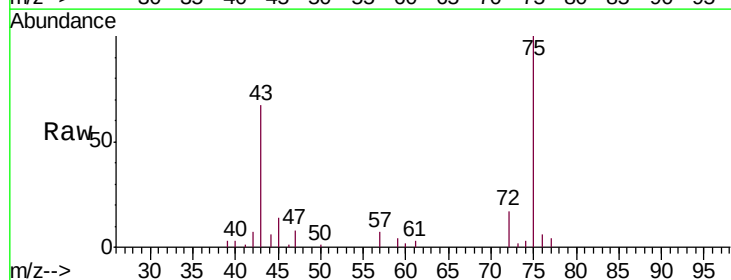
Instrument :  
 MSVOA\_W  
 ClientSampleId :  
 0437-HR-17(HACKENSACK)

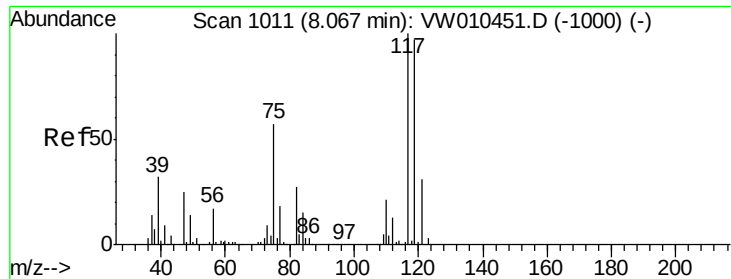
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 75      | 100   |       |       |
| 110     | 9.6   | 19.2  | 57.6# |
| 77      | 0.0   | 25.2  | 37.8# |



#37  
 Ethyl Acetate  
 Concen: 10.865 ug/l  
 RT: 7.18 min Scan# 865  
 Delta R.T. -0.07 min  
 Lab File: VW010640.D  
 Acq: 31 May 2019 16:51

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 61      | 0.0   | 11.2  | 16.8# |
| 70      | 0.0   | 9.9   | 14.9# |

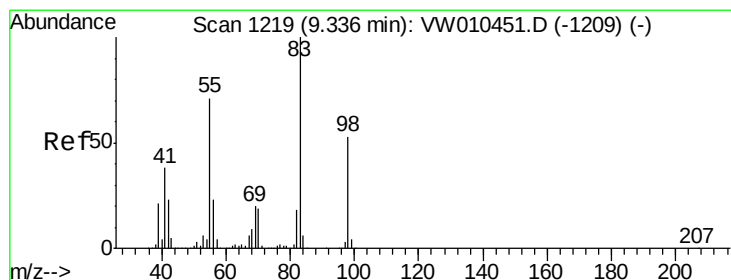
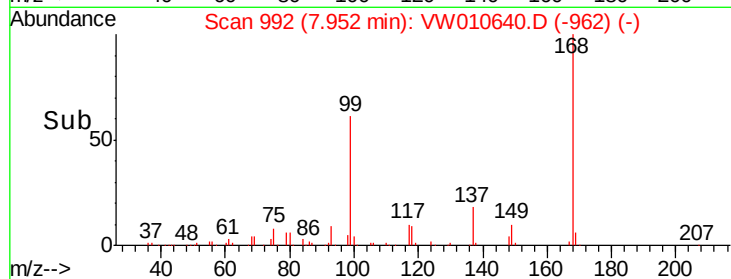
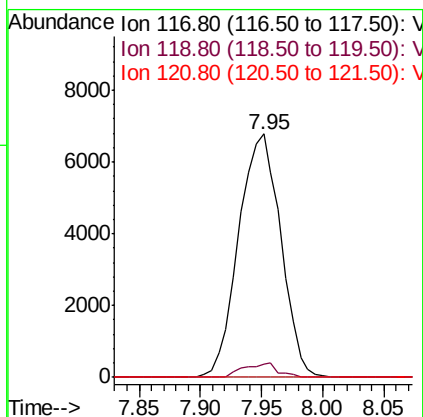
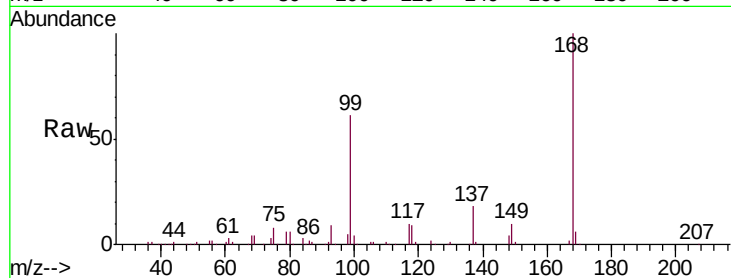




#38  
Carbon Tetrachloride  
Concen: 5.820 ug/l  
RT: 7.95 min Scan# 992  
Delta R.T. -0.12 min  
Lab File: VW010640.D  
Acq: 31 May 2019 16:51

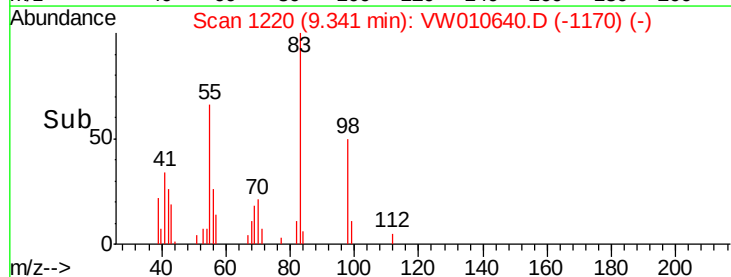
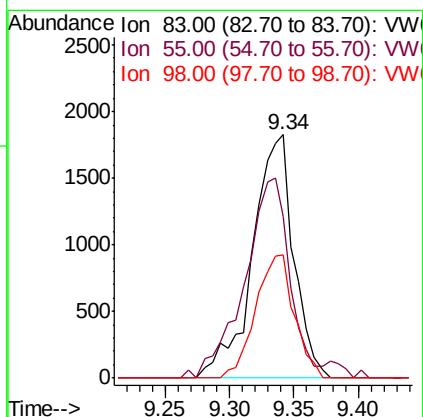
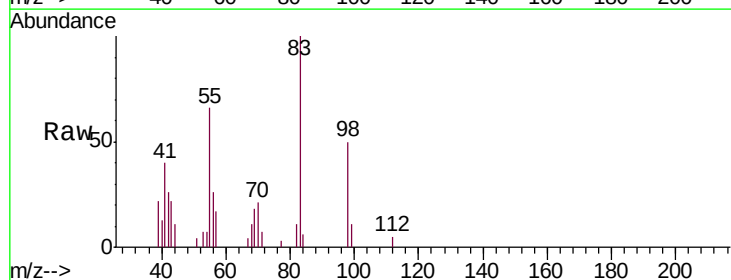
Instrument :  
MSVOA\_W  
ClientSampleId :  
0437-HR-17(HACKENSACK)

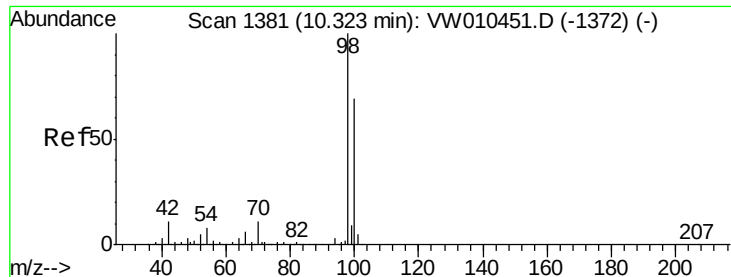
Tgt Ion: 117 Resp: 16196  
Ion Ratio Lower Upper  
117 100  
119 5.4 77.4 116.0#  
121 0.0 25.0 37.6#



#39  
Methylcyclohexane  
Concen: 1.173 ug/l  
RT: 9.34 min Scan# 1220  
Delta R.T. 0.01 min  
Lab File: VW010640.D  
Acq: 31 May 2019 16:51

Tgt Ion: 83 Resp: 4055  
Ion Ratio Lower Upper  
83 100  
55 62.8 57.0 85.6  
98 50.4 42.0 63.0

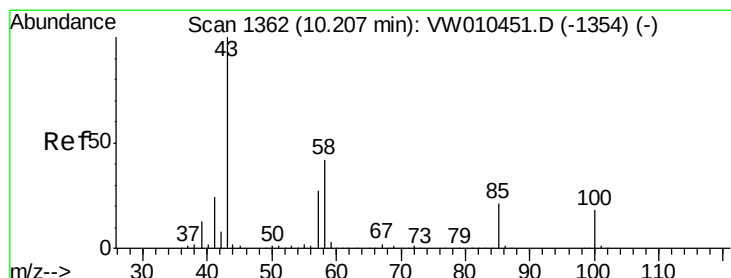
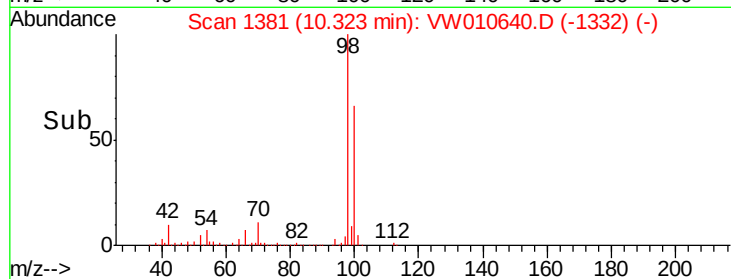
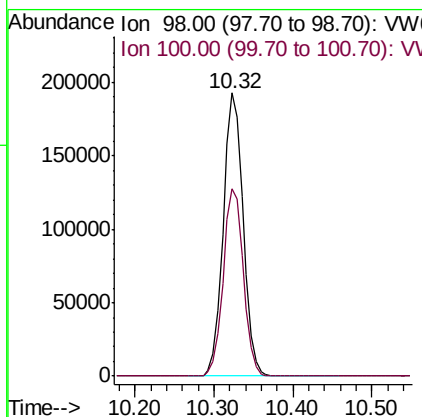
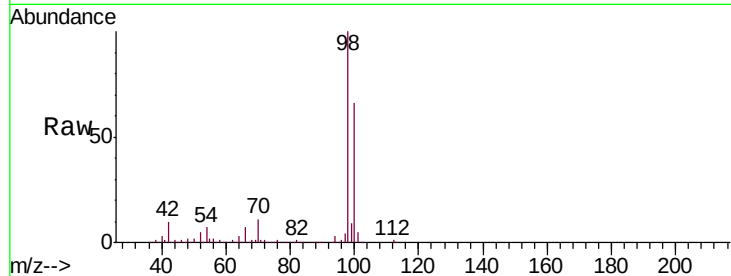




#50  
Toluene-d8  
Concen: 52.604 ug/l  
RT: 10.32 min Scan# 1381  
Delta R.T. -0.00 min  
Lab File: VW010640.D  
Acq: 31 May 2019 16:51

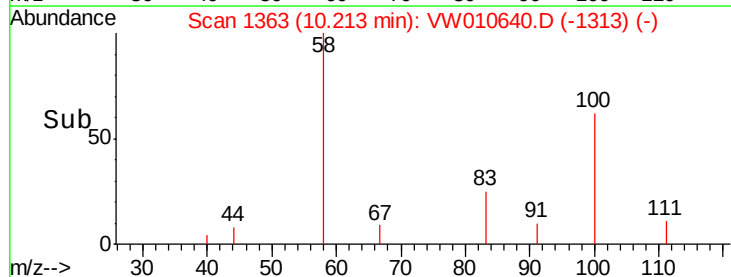
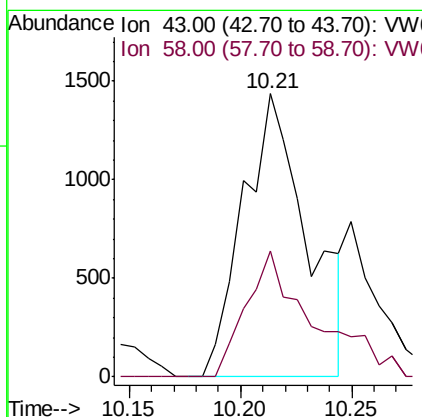
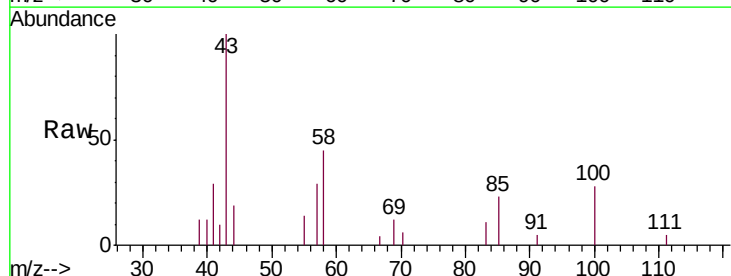
Instrument :  
MSVOA\_W  
ClientSampleId :  
0437-HR-17(HACKENSACK)

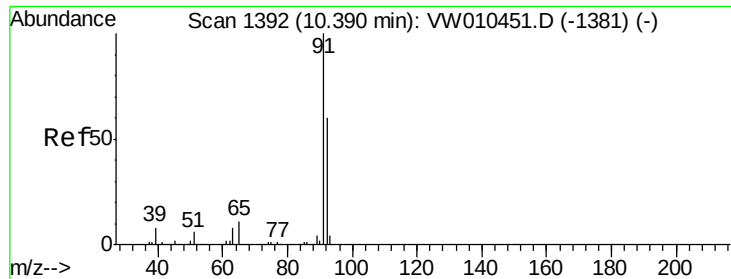
Tgt Ion: 98 Resp: 337693  
Ion Ratio Lower Upper  
98 100  
100 66.8 53.7 80.5



#51  
4-Methyl-2-Pentanone  
Concen: 2.607 ug/l  
RT: 10.21 min Scan# 1363  
Delta R.T. 0.01 min  
Lab File: VW010640.D  
Acq: 31 May 2019 16:51

Tgt Ion: 43 Resp: 2895  
Ion Ratio Lower Upper  
43 100  
58 46.8 33.2 49.8





#52

Toluene

Concen: 1.637 ug/l

RT: 10.39 min Scan# 1392

Delta R.T. -0.00 min

Lab File: VW010640.D

Acq: 31 May 2019 16:51

Instrument:

MSVOA\_W

ClientSampleId:

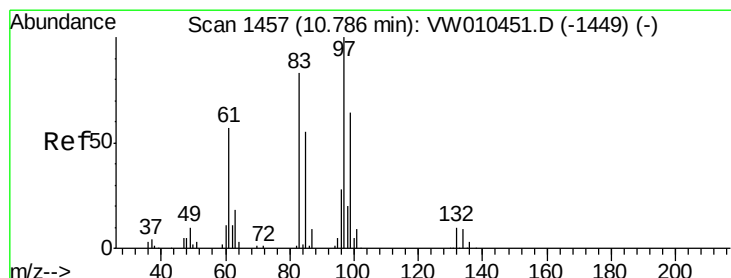
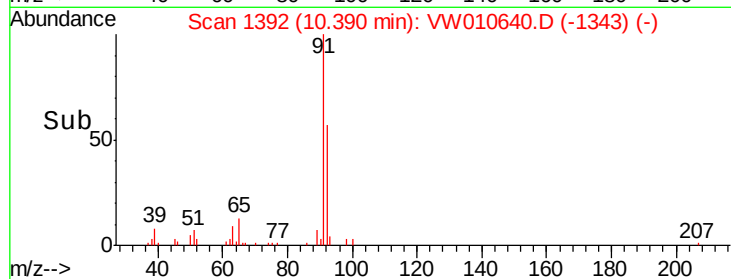
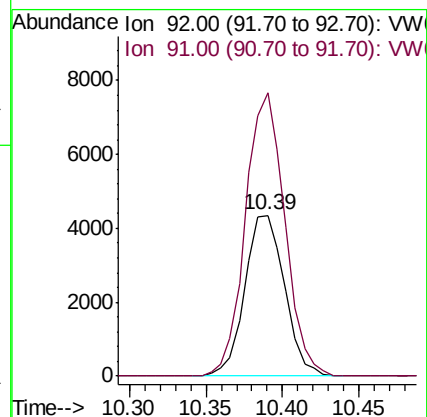
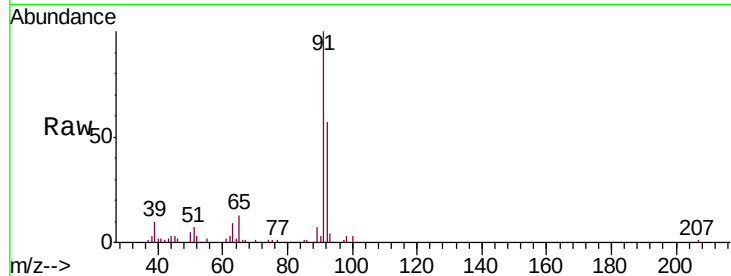
0437-HR-17(HACKENSACK)

Tgt Ion: 92 Resp: 7882

Ion Ratio Lower Upper

92 100

91 173.7 135.4 203.0



#55

1,1,2-Trichloroethane

Concen: 1.992 ug/l

RT: 10.76 min Scan# 1453

Delta R.T. -0.02 min

Lab File: VW010640.D

Acq: 31 May 2019 16:51

Tgt Ion: 97 Resp: 2853

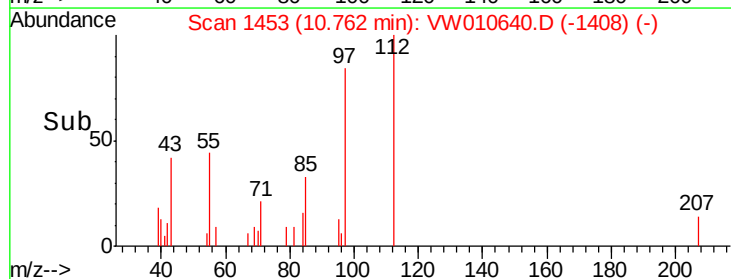
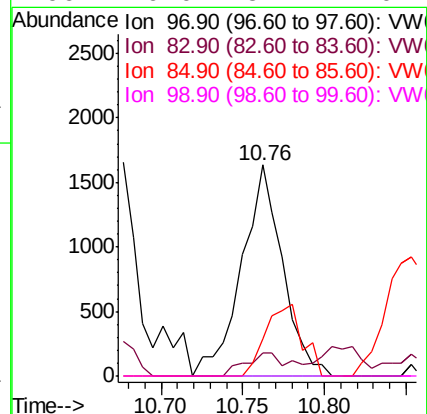
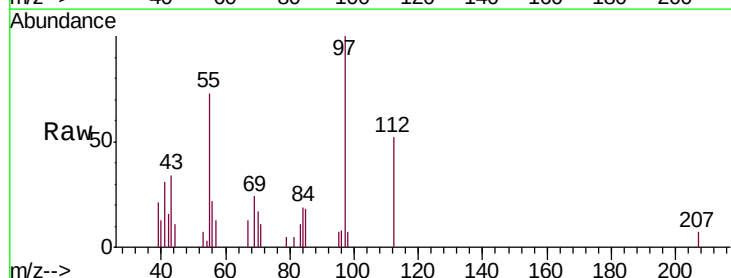
Ion Ratio Lower Upper

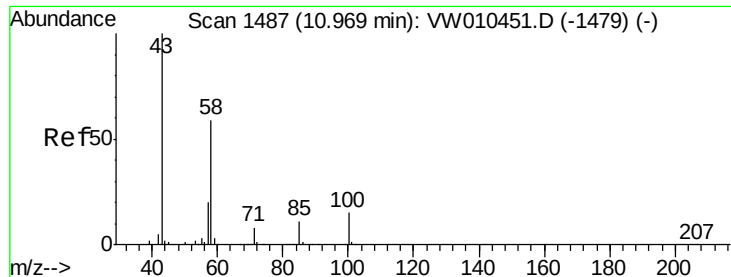
97 100

83 10.8 66.1 99.1#

85 17.5 44.2 66.4#

99 0.0 51.1 76.7#

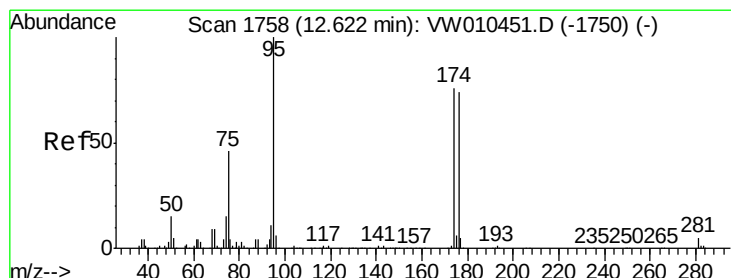
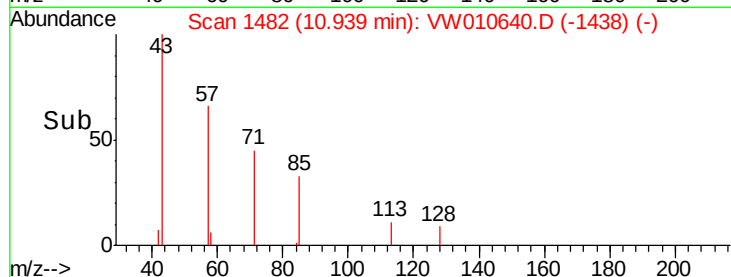
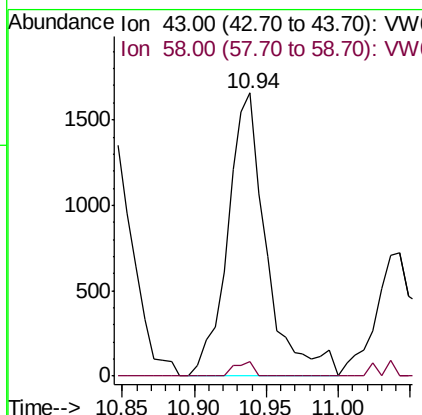
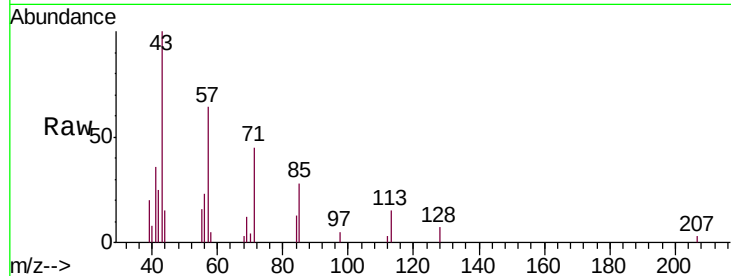




#59  
2-Hexanone  
Concen: 3.919 ug/l  
RT: 10.94 min Scan# 1482  
Delta R.T. -0.03 min  
Lab File: VW010640.D  
Acq: 31 May 2019 16:51

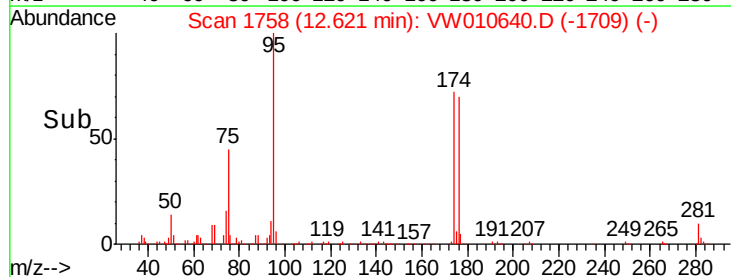
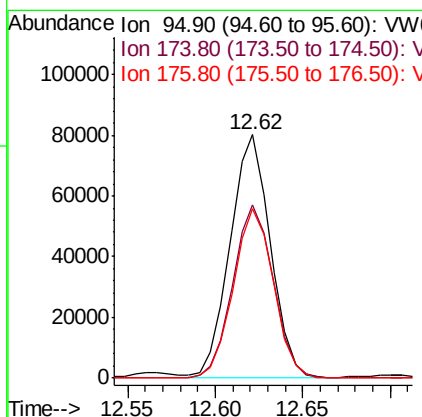
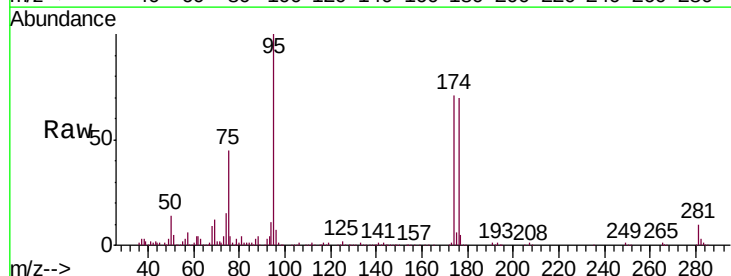
Instrument :  
MSVOA\_W  
ClientSampleId :  
0437-HR-17(HACKENSACK)

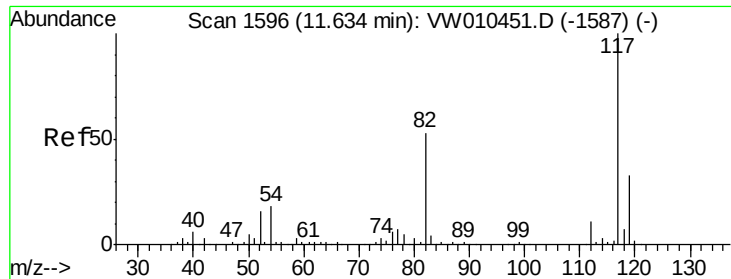
Tgt Ion: 43 Resp: 3105  
Ion Ratio Lower Upper  
43 100  
58 2.5 28.9 86.8#



#62  
4-Bromofluorobenzene  
Concen: 49.721 ug/l  
RT: 12.62 min Scan# 1758  
Delta R.T. -0.00 min  
Lab File: VW010640.D  
Acq: 31 May 2019 16:51

Tgt Ion: 95 Resp: 127136  
Ion Ratio Lower Upper  
95 100  
174 72.3 0.0 148.6  
176 69.9 0.0 144.2

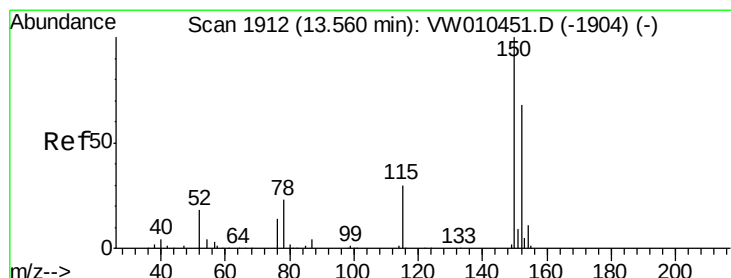
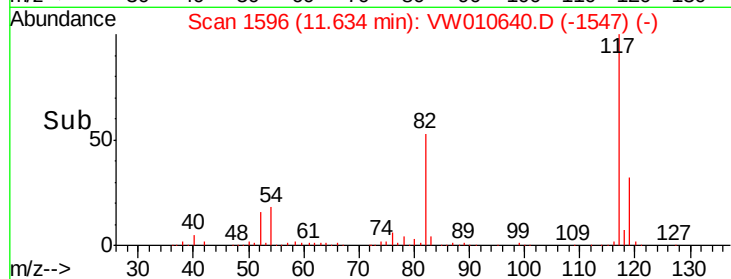
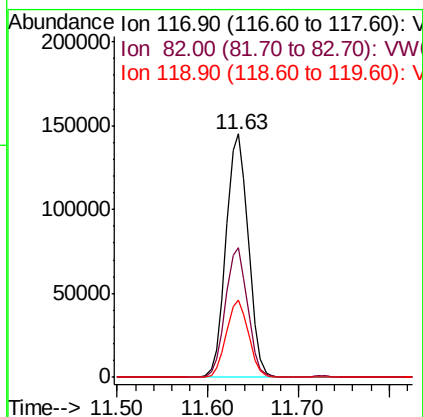
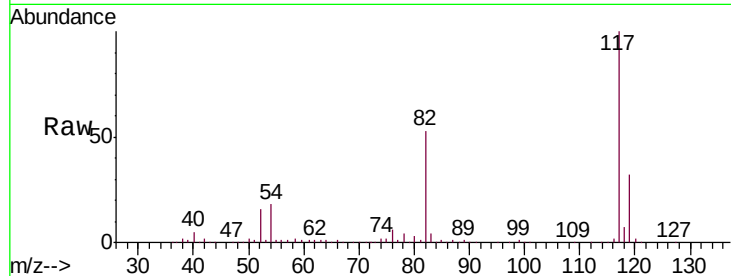




#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 11.63 min Scan# 1596  
Delta R.T. -0.00 min  
Lab File: VW010640.D  
Acq: 31 May 2019 16:51

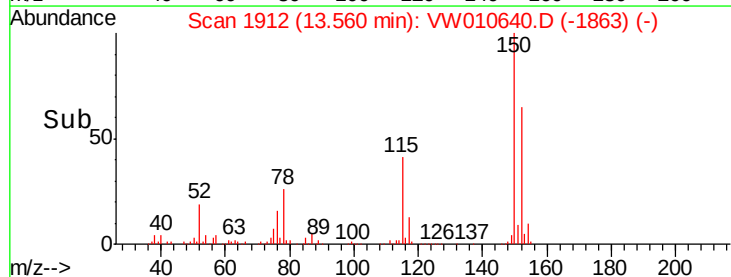
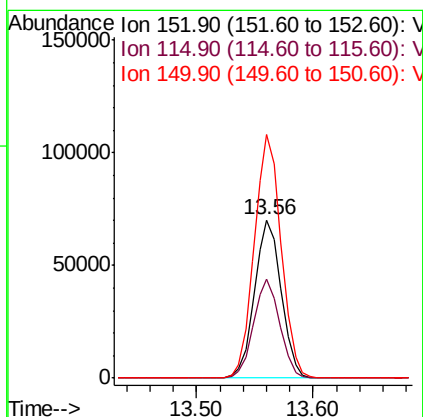
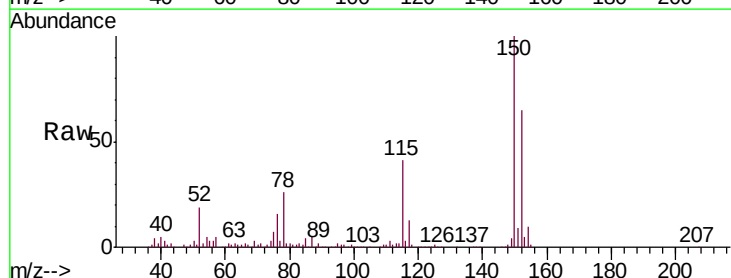
Instrument :  
MSVOA\_W  
ClientSampleId :  
0437-HR-17(HACKENSACK)

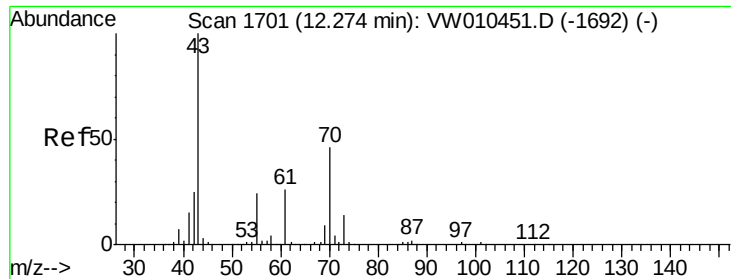
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 117     | 100   |       |       |
| 82      | 53.0  | 42.8  | 64.2  |
| 119     | 31.7  | 26.3  | 39.5  |



#72  
1,4-Dichlorobenzene-d4  
Concen: 50.000 ug/l  
RT: 13.56 min Scan# 1912  
Delta R.T. -0.00 min  
Lab File: VW010640.D  
Acq: 31 May 2019 16:51

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 152     | 100   |       |       |
| 115     | 61.0  | 30.3  | 91.0  |
| 150     | 154.7 | 0.0   | 349.8 |





#74

N-ethyl acetate

Concen: 4.438 ug/l

RT: 12.25 min Scan# 1697

Delta R.T. -0.02 min

Lab File: VW010640.D

Acq: 31 May 2019 16:51

Instrument :

MSVOA\_W

ClientSampleId :

0437-HR-17(HACKENSACK)

Tgt Ion: 43 Resp: 9037

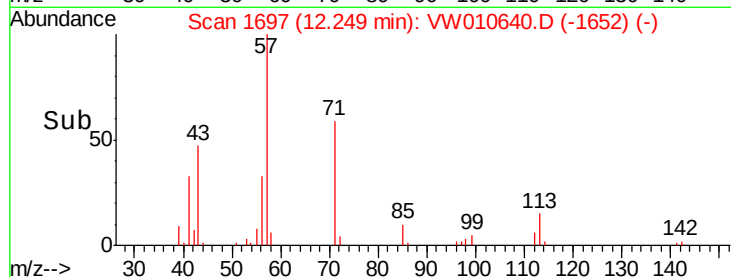
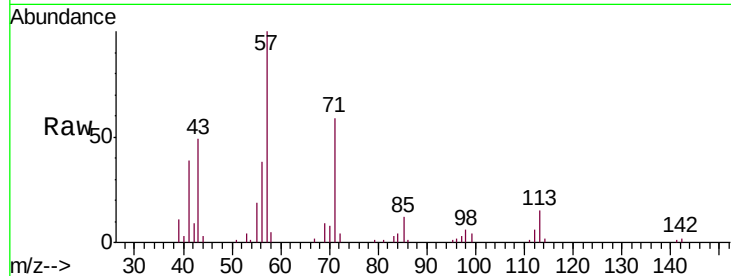
Ion Ratio Lower Upper

43 100

70 0.0 37.1 55.7#

55 0.0 19.6 29.4#

61 0.0 20.7 31.1#

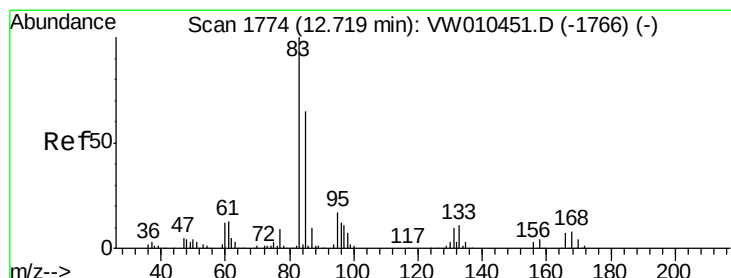
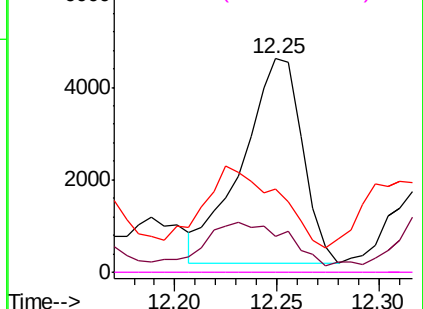


Abundance Ion 43.00 (42.70 to 43.70): VW

Ion 70.00 (69.70 to 70.70): VW

Ion 55.00 (54.70 to 55.70): VW

Ion 61.00 (60.70 to 61.70): VW



#75

1,1,2,2-Tetrachloroethane

Concen: 1.731 ug/l

RT: 12.69 min Scan# 1769

Delta R.T. -0.03 min

Lab File: VW010640.D

Acq: 31 May 2019 16:51

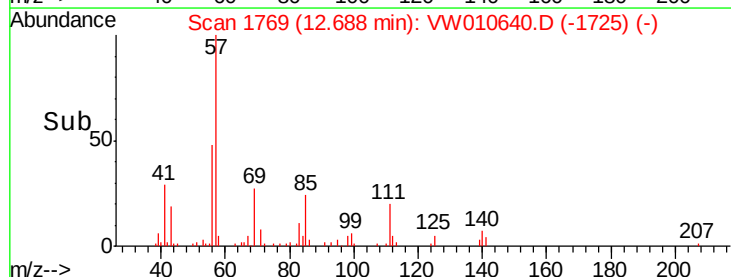
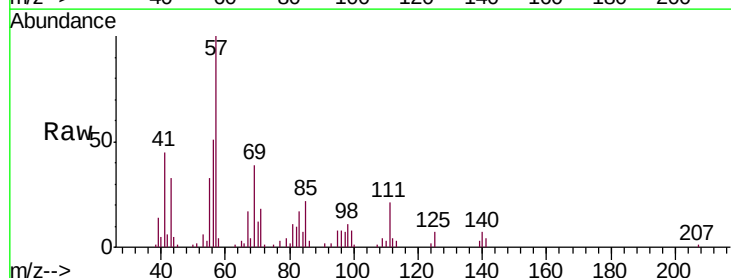
Tgt Ion: 83 Resp: 2798

Ion Ratio Lower Upper

83 100

131 0.0 5.6 16.8#

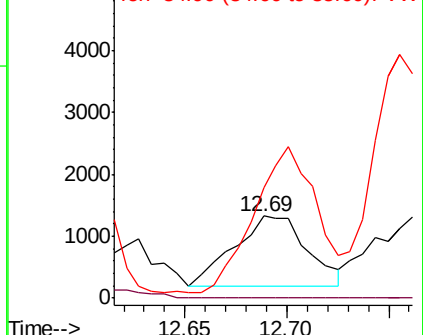
85 180.2 32.4 97.0#

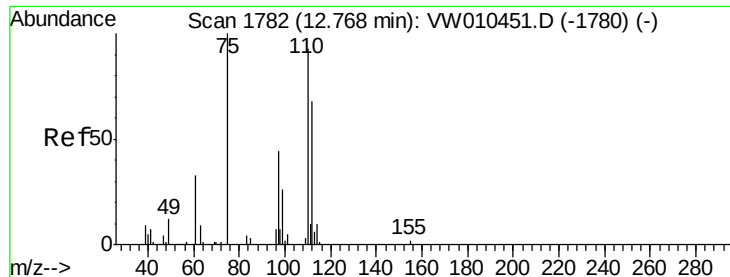


Abundance Ion 82.90 (82.60 to 83.60): VW

Ion 130.80 (130.50 to 131.50): V

Ion 84.90 (84.60 to 85.60): VW





#76

1,2,3-Trichloropropane

Concen: 51.829 ug/l

RT: 12.62 min Scan# 1758

Delta R.T. -0.15 min

Lab File: VW010640.D

Acq: 31 May 2019 16:51

Instrument :

MSVOA\_W

ClientSampleId :

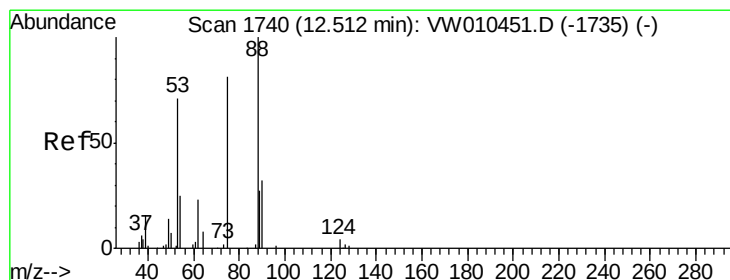
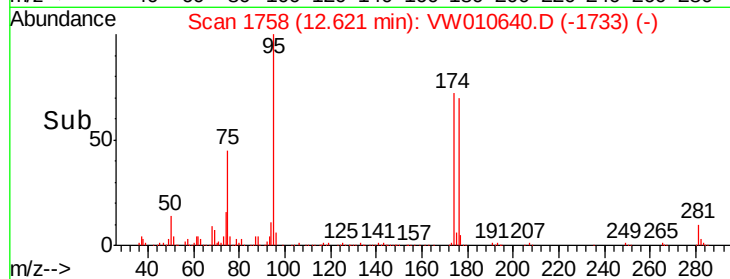
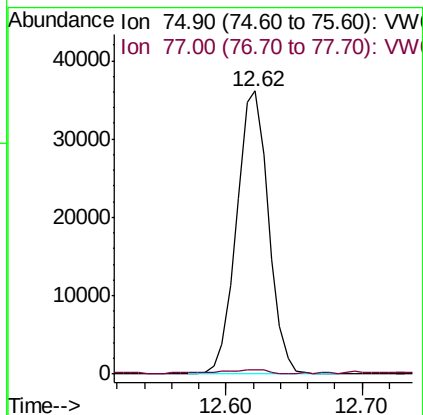
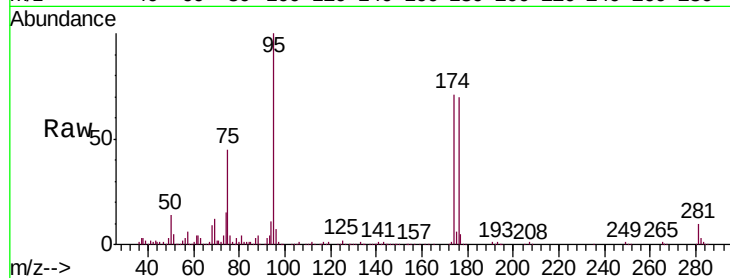
0437-HR-17(HACKENSACK)

Tgt Ion: 75 Resp: 58918

Ion Ratio Lower Upper

75 100

77 1.8 170.0 510.1#



#81

trans-1,4-Dichloro-2-butene

Concen: 108.169 ug/l

RT: 12.62 min Scan# 1758

Delta R.T. 0.11 min

Lab File: VW010640.D

Acq: 31 May 2019 16:51

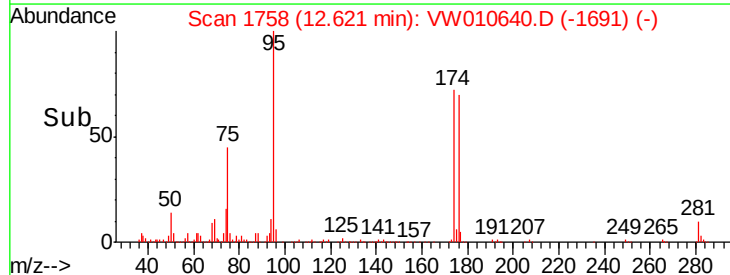
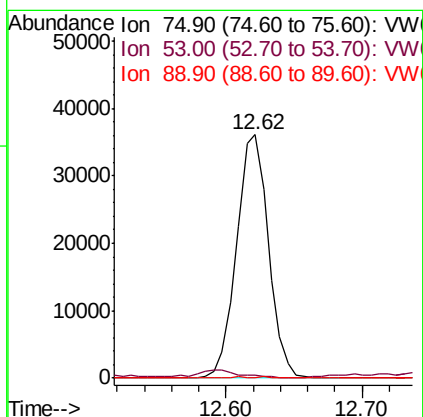
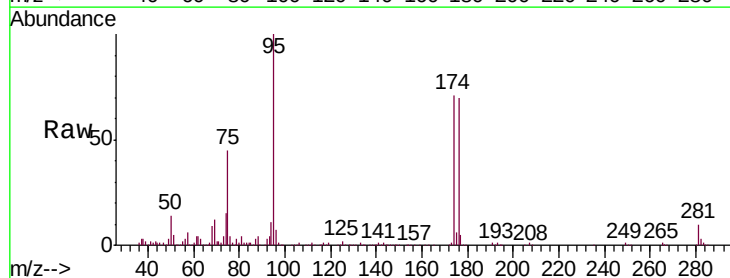
Tgt Ion: 75 Resp: 58918

Ion Ratio Lower Upper

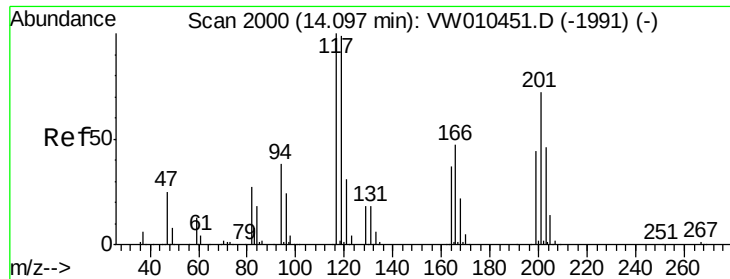
75 100

53 0.0 69.8 104.8#

89 0.1 39.5 59.3#







#90

Hexachloroethane

Concen: 1.647 ug/l

RT: 14.14 min Scan# 2007

Delta R.T. 0.04 min

Lab File: VW010640.D

Acq: 31 May 2019 16:51

Instrument :

MSVOA\_W

ClientSampleId :

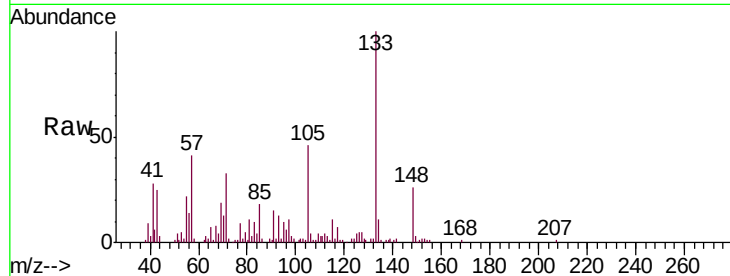
0437-HR-17(HACKENSACK)

Tgt Ion:117 Resp: 2655

Ion Ratio Lower Upper

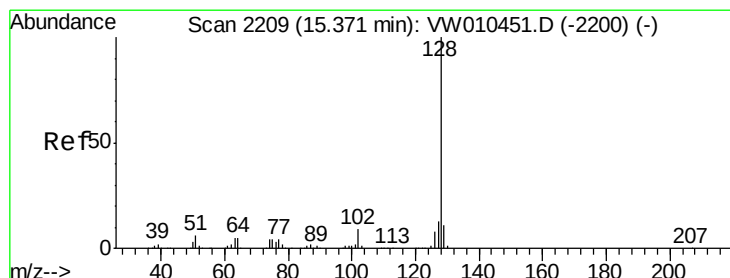
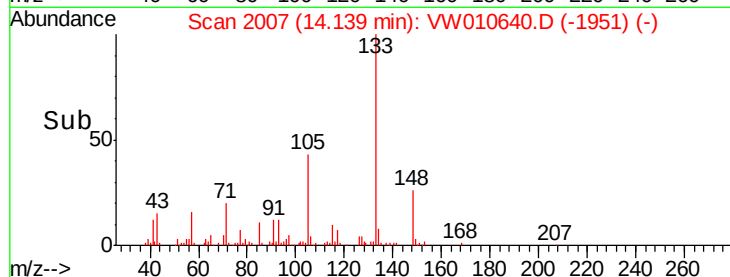
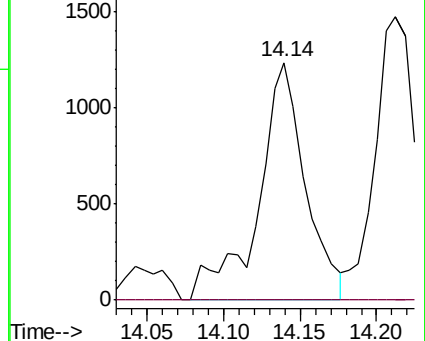
117 100

201 0.0 34.6 103.8#



Abundance Ion 116.80 (116.50 to 117.50): V

Ion 200.70 (200.40 to 201.40): V



#95

Naphthalene

Concen: 1.397 ug/l

RT: 15.37 min Scan# 2209

Delta R.T. -0.00 min

Lab File: VW010640.D

Acq: 31 May 2019 16:51

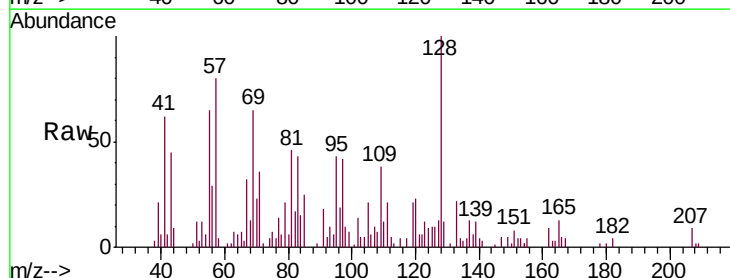
Tgt Ion:128 Resp: 7092

Ion Ratio Lower Upper

128 100

127 42.2 10.6 15.8#

129 8.6 8.9 13.3#



Abundance Ion 128.00 (127.70 to 128.70): V

Ion 127.00 (126.70 to 127.70): V

Ion 129.00 (128.70 to 129.70): V

