

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_W\DATA\VW091619\  
 Data File : VW013050.D  
 Acq On : 16 Sep 2019 18:59  
 Operator : SY/VA  
 Sample : K4819-10  
 Misc : 5.01G/5ML/MSVOA\_W/SOIL  
 ALS Vial : 21 Sample Multiplier: 1

Instrument :  
 MSVOA\_W  
 ClientSampleId :  
 TP-7-D2(9.5-10)

Quant Time: Sep 17 07:23:22 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_W\METHOD\82W091419S.M  
 Quant Title : SW846 8260  
 QLast Update : Fri Sep 13 17:26:01 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.95  | 168  | 320965   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.84  | 114  | 480035   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.63 | 117  | 400589   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.55 | 152  | 191920   | 50.00 | ug/l  | 0.00     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc  | Units   | Dev(Min) |
|-----------------------------|-------|------|----------|-------|---------|----------|
| 33) 1,2-Dichloroethane-d4   | 8.30  | 65   | 164460   | 55.48 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 110.96% |          |
| 35) Dibromofluoromethane    | 7.88  | 113  | 141125   | 54.18 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 108.36% |          |
| 50) Toluene-d8              | 10.32 | 98   | 578285   | 56.74 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 113.48% |          |
| 62) 4-Bromofluorobenzene    | 12.62 | 95   | 186823   | 50.97 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 101.94% |          |

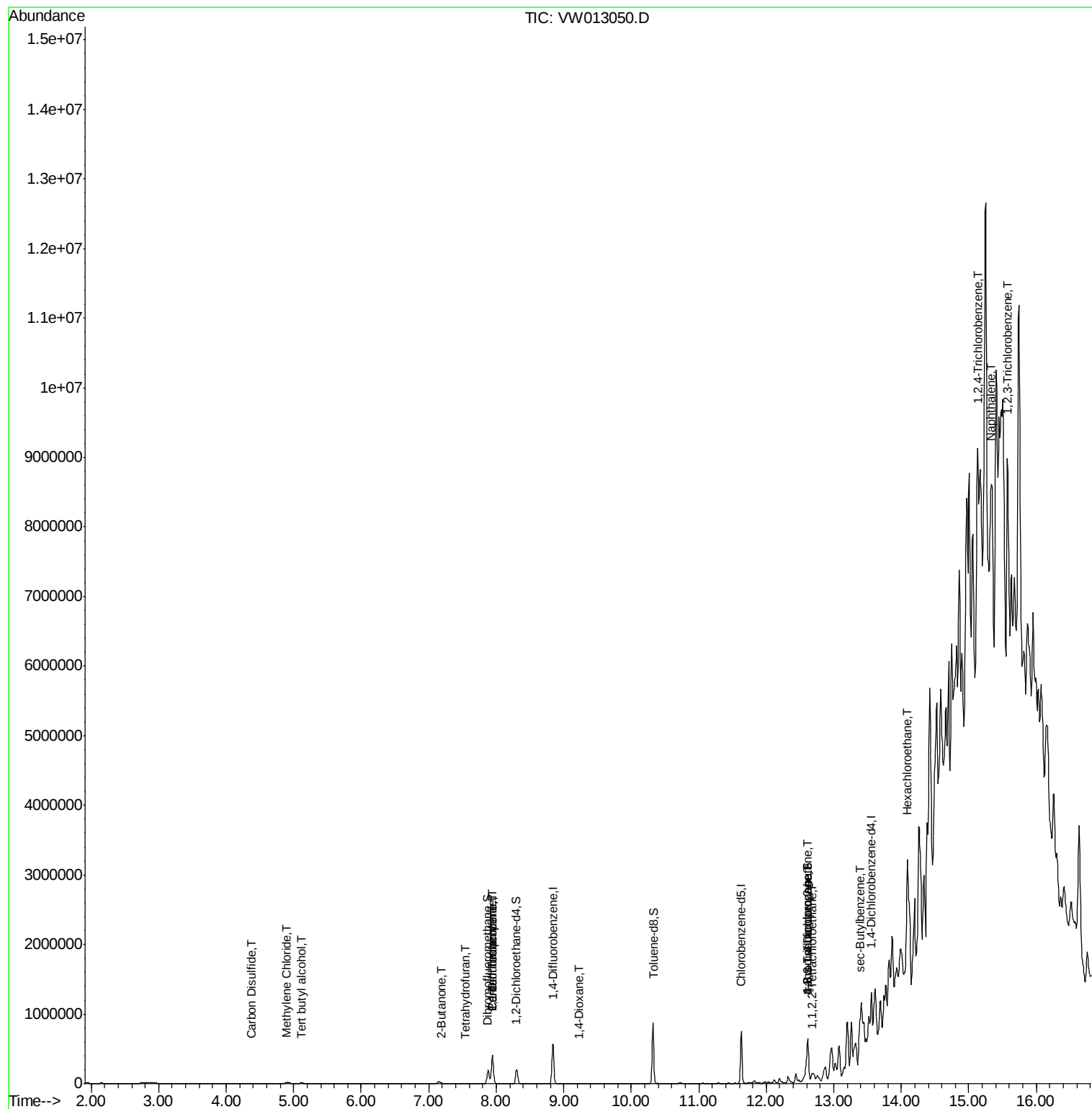
| Target Compounds               | R.T.  | QIon | Response | Conc      | Units  | Qvalue |
|--------------------------------|-------|------|----------|-----------|--------|--------|
| 2) Dichlorodifluoromethane     | 1.99  | 85   | 20       | Below Cal | #      | 44     |
| 3) Chloromethane               | 2.21  | 50   | 421      | Below Cal | #      | 41     |
| 11) Tert butyl alcohol         | 5.11  | 59   | 10550    | 34.236    | ug/l # | 74     |
| 13) Acrolein                   | 3.91  | 56   | 112      | Below Cal | #      | 15     |
| 16) Acetone                    | 4.15  | 43   | 9241     | Below Cal | #      | 85     |
| 17) Carbon Disulfide           | 4.37  | 76   | 14562    | 3.298     | ug/l # | 88     |
| 20) Methylene Chloride         | 4.90  | 84   | 16591    | 1.943     | ug/l   | 94     |
| 25) 2-Butanone                 | 7.19  | 43   | 3244     | 3.442     | ug/l   | 94     |
| 26) 2,2-Dichloropropane        | 7.14  | 77   | 2156     | Below Cal | #      | 55     |
| 29) Tetrahydrofuran            | 7.54  | 42   | 1163     | 2.165     | ug/l # | 72     |
| 31) Cyclohexane                | 7.93  | 56   | 6352     | Below Cal | #      | 1      |
| 36) 1,1-Dichloropropene        | 7.94  | 75   | 24129    | 6.290     | ug/l # | 50     |
| 38) Carbon Tetrachloride       | 7.95  | 117  | 31107    | 7.913     | ug/l # | 15     |
| 49) 1,4-Dioxane                | 9.22  | 88   | 42       | 1.839     | ug/l # | 20     |
| 75) 1,1,2,2-Tetrachloroethane  | 12.68 | 83   | 9716     | 4.349     | ug/l # | 41     |
| 76) 1,2,3-Trichloropropane     | 12.62 | 75   | 90268    | 53.697    | ug/l # | 100    |
| 81) trans-1,4-Dichloro-2-buten | 12.62 | 75   | 90268    | 121.810   | ug/l # | 7      |
| 85) sec-Butylbenzene           | 13.38 | 105  | 13512    | 1.030     | ug/l # | 36     |
| 90) Hexachloroethane           | 14.08 | 117  | 12679    | 5.876     | ug/l # | 4      |
| 93) 1,2,4-Trichlorobenzene     | 15.14 | 180  | 30273    | 8.320     | ug/l # | 1      |
| 95) Naphthalene                | 15.33 | 128  | 138139   | 22.723    | ug/l # | 1      |
| 96) 1,2,3-Trichlorobenzene     | 15.58 | 180  | 76697    | 23.847    | ug/l # | 1      |

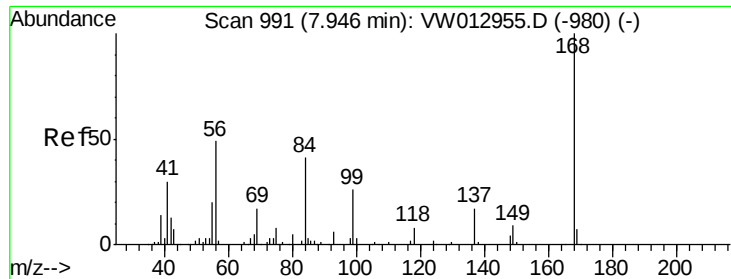
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Fri Sep 13 17:26:01 2019  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 7.95 min Scan# 991

Delta R.T. -0.00 min

Lab File: VW013050.D

Acq: 16 Sep 2019 18:59

Instrument :

MSVOA\_W

ClientSampleId :

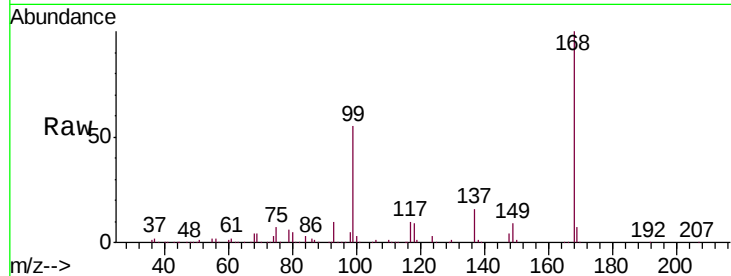
TP-7-D2(9.5-10)

Tgt Ion:168 Resp: 320965

Ion Ratio Lower Upper

168 100

99 54.6 46.2 69.2



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VW

7.95

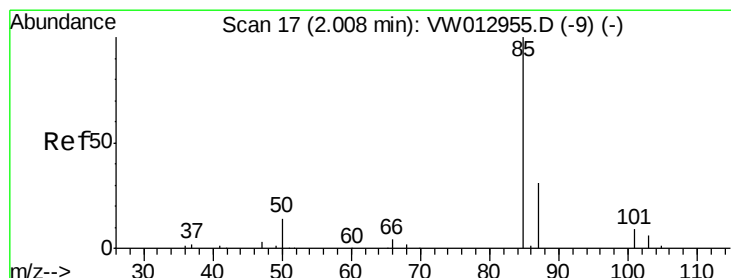
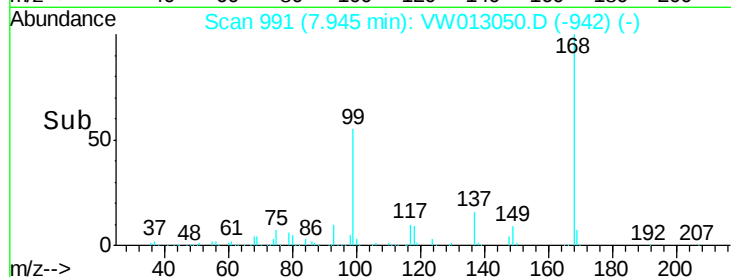
150000

100000

50000

0

Time-->



#2

Dichlorodifluoromethane

Concen: Below Cal

RT: 1.99 min Scan# 14

Delta R.T. -0.02 min

Lab File: VW013050.D

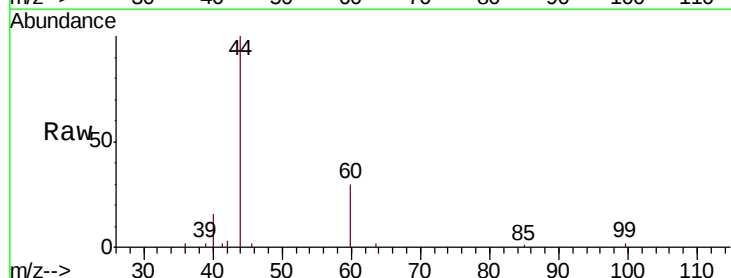
Acq: 16 Sep 2019 18:59

Tgt Ion: 85 Resp: 20

Ion Ratio Lower Upper

85 100

87 0.0 15.4 46.4#



Abundance Ion 84.90 (84.60 to 85.60): VW

Ion 86.90 (86.60 to 87.60): VW

1.99

60

50

40

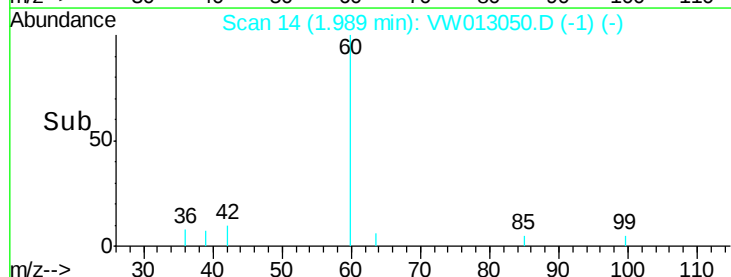
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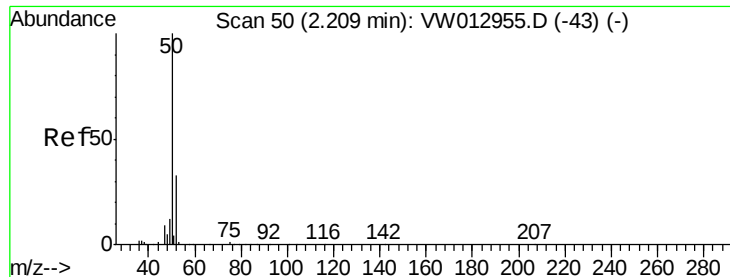
20

10

0

Time-->





#3

Chloromethane

Concen: Below Cal

RT: 2.21 min Scan# 51

Delta R.T. 0.01 min

Lab File: VW013050.D

Acq: 16 Sep 2019 18:59

Instrument :

MSVOA\_W

ClientSampleId :

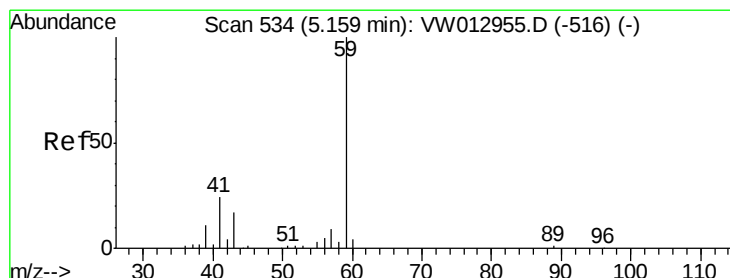
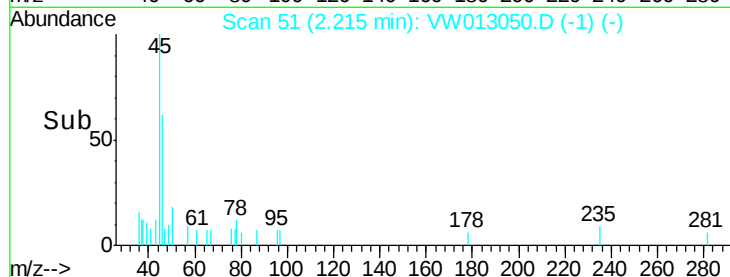
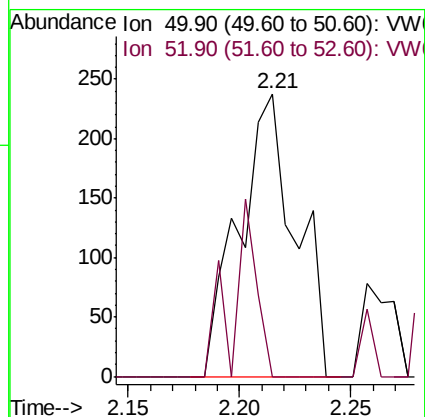
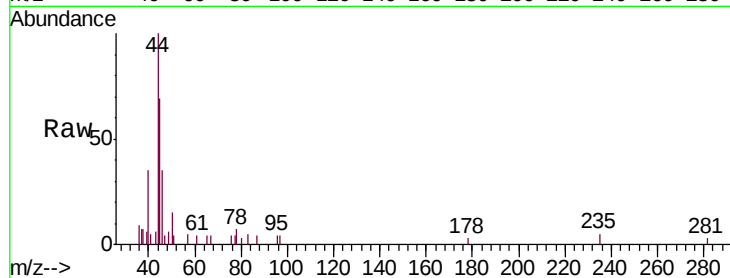
TP-7-D2(9.5-10)

Tgt Ion: 50 Resp: 421

Ion Ratio Lower Upper

50 100

52 0.0 26.6 39.8#



#11

Tert butyl alcohol

Concen: 34.236 ug/l

RT: 5.11 min Scan# 526

Delta R.T. -0.05 min

Lab File: VW013050.D

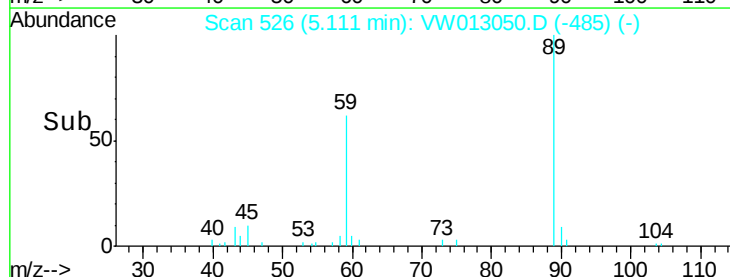
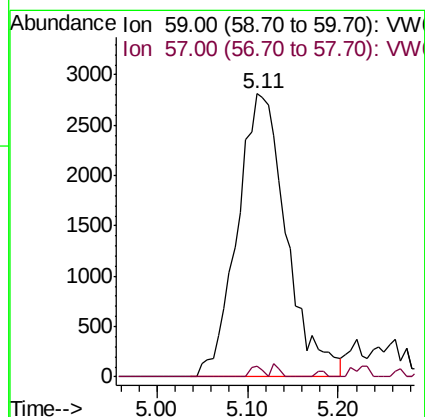
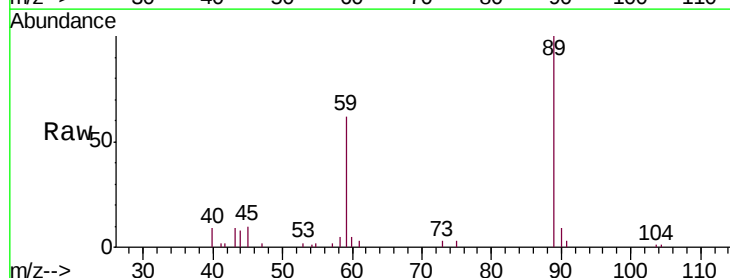
Acq: 16 Sep 2019 18:59

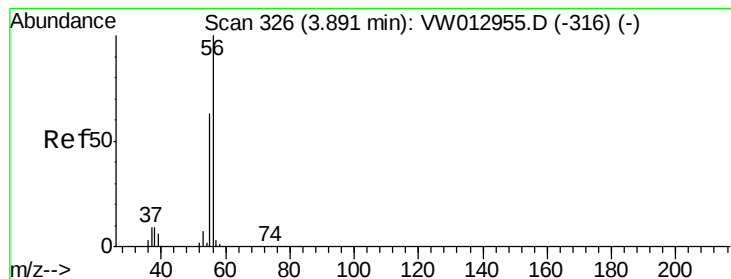
Tgt Ion: 59 Resp: 10550

Ion Ratio Lower Upper

59 100

57 1.0 8.5 12.7#





#13

Acrolein

Concen: Below Cal

RT: 3.91 min Scan# 329

Delta R.T. 0.02 min

Lab File: VW013050.D

Acq: 16 Sep 2019 18:59

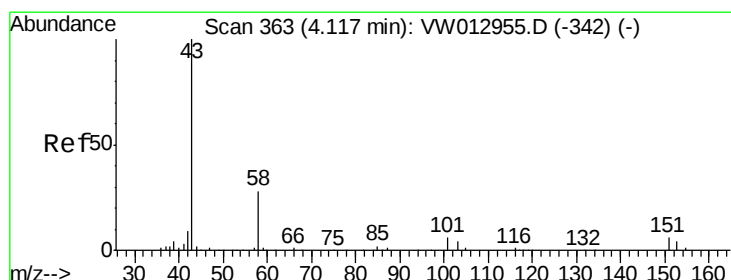
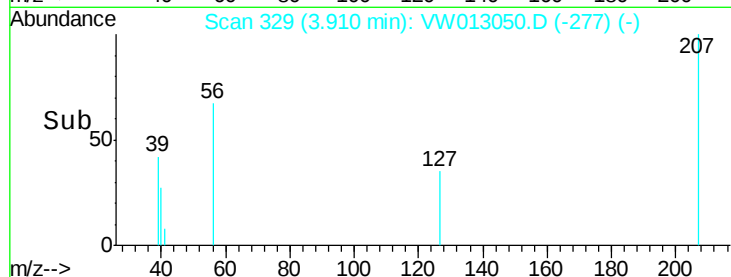
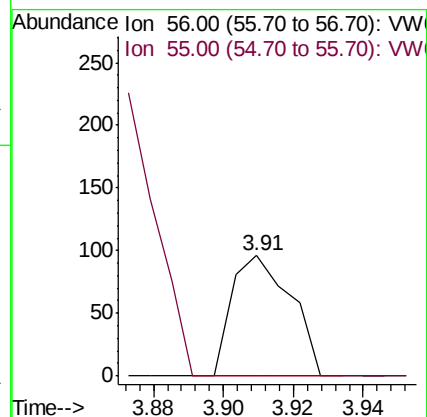
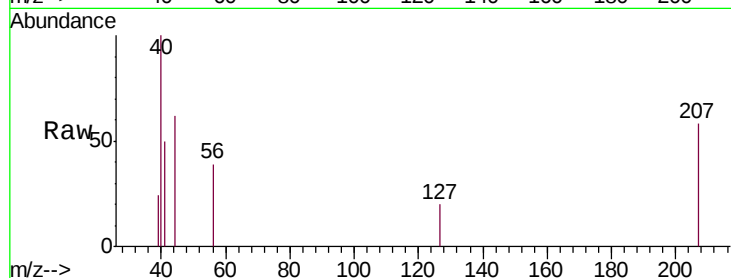
Instrument :  
MSVOA\_W  
ClientSampleId :  
TP-7-D2(9.5-10)

Tgt Ion: 56 Resp: 112

Ion Ratio Lower Upper

56 100

55 0.0 55.8 83.8#



#16

Acetone

Concen: Below Cal

RT: 4.15 min Scan# 368

Delta R.T. 0.03 min

Lab File: VW013050.D

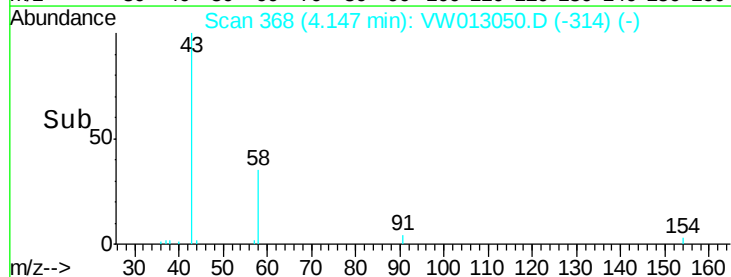
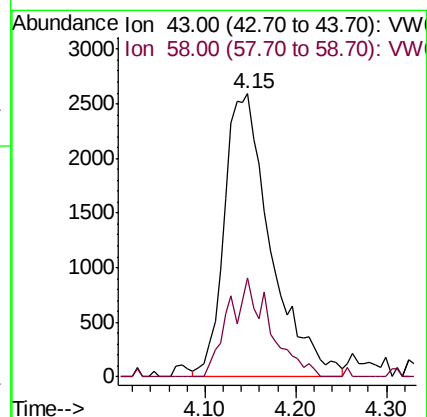
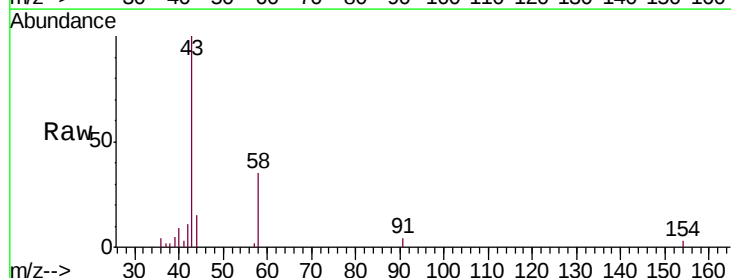
Acq: 16 Sep 2019 18:59

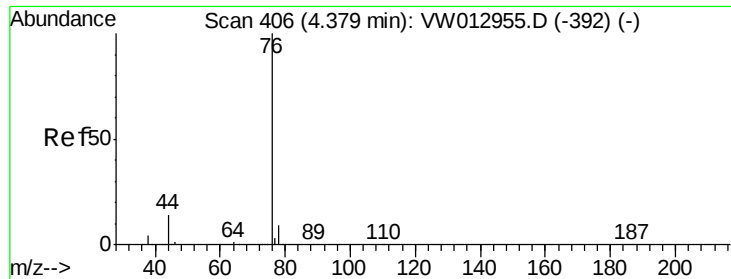
Tgt Ion: 43 Resp: 9241

Ion Ratio Lower Upper

43 100

58 35.8 22.3 33.5#





#17

Carbon Disulfide

Concen: 3.298 ug/l

RT: 4.37 min Scan# 405

Delta R.T. -0.01 min

Lab File: VW013050.D

Acq: 16 Sep 2019 18:59

Instrument :

MSVOA\_W

ClientSampleId :

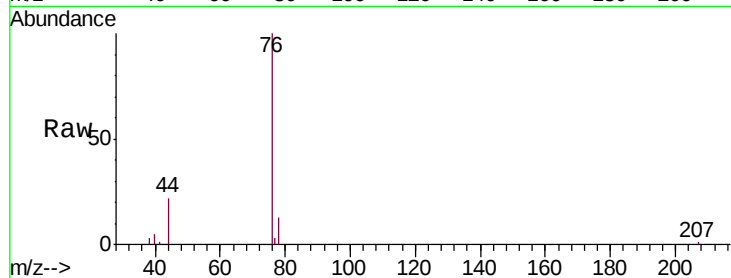
TP-7-D2(9.5-10)

Tgt Ion: 76 Resp: 14562

Ion Ratio Lower Upper

76 100

78 13.1 7.0 10.4#

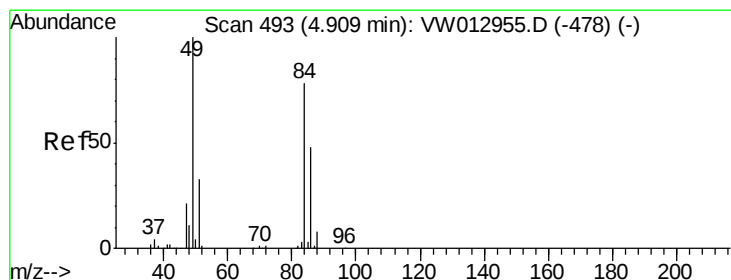
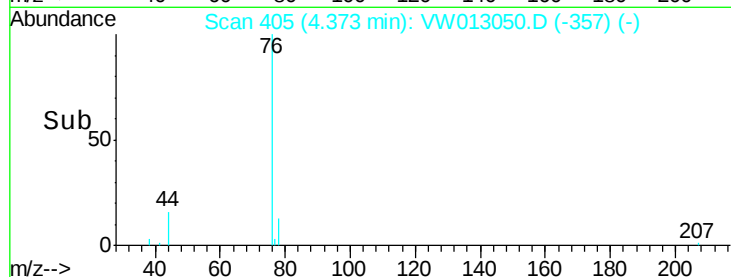


Abundance Ion 75.90 (75.60 to 76.60): VW

Ion 77.90 (77.60 to 78.60): VW

4.37

Time-->



#20

Methylene Chloride

Concen: 1.943 ug/l

RT: 4.90 min Scan# 491

Delta R.T. -0.01 min

Lab File: VW013050.D

Acq: 16 Sep 2019 18:59

Tgt Ion: 84 Resp: 16591

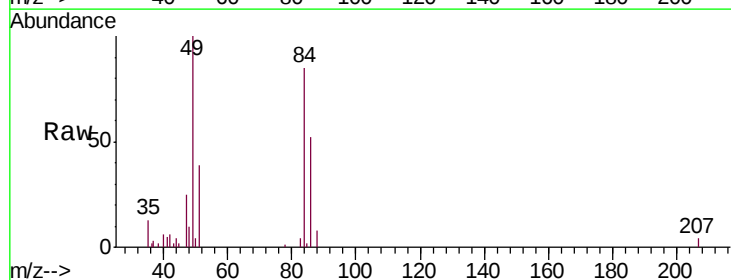
Ion Ratio Lower Upper

84 100

49 117.7 102.0 153.0

51 45.9 34.0 51.0

86 61.7 48.5 72.7



Abundance Ion 83.90 (83.60 to 84.60): VW

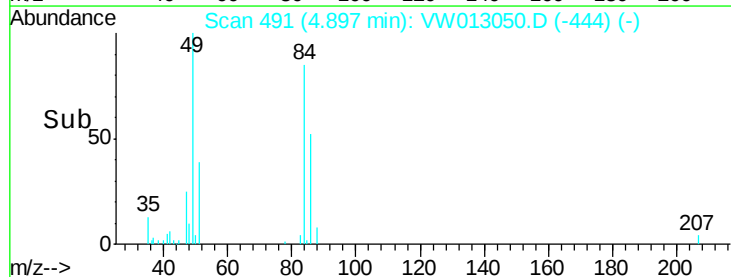
Ion 48.90 (48.60 to 49.60): VW

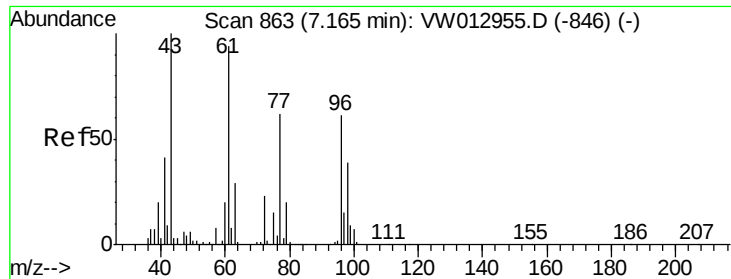
Ion 50.90 (50.60 to 51.60): VW

Ion 85.90 (85.60 to 86.60): VW

4.90

Time-->





#25

2-Butanone

Concen: 3.442 ug/l

RT: 7.19 min Scan# 867

Delta R.T. 0.02 min

Lab File: VW013050.D

Acq: 16 Sep 2019 18:59

Instrument :

MSVOA\_W

ClientSampleId :

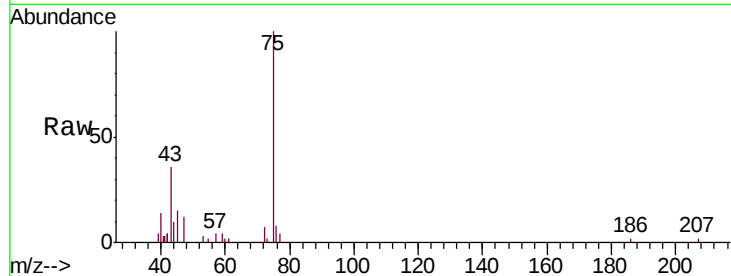
TP-7-D2(9.5-10)

Tgt Ion: 43 Resp: 3244

Ion Ratio Lower Upper

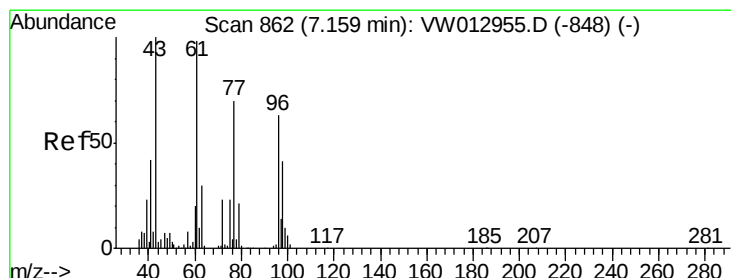
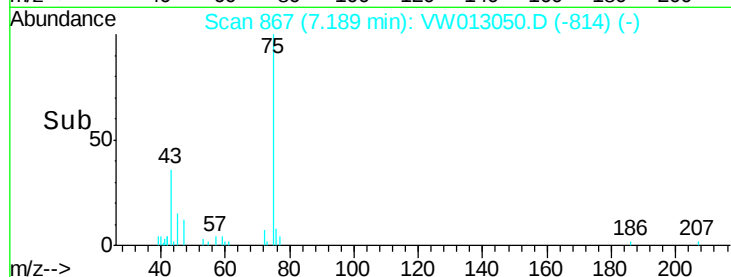
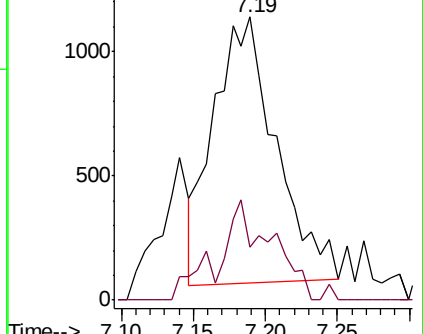
43 100

72 20.1 18.2 27.4



Abundance Ion 43.00 (42.70 to 43.70): VW

Ion 72.00 (71.70 to 72.70): VW



#26

2,2-Dichloropropane

Concen: Below Cal

RT: 7.14 min Scan# 859

Delta R.T. -0.02 min

Lab File: VW013050.D

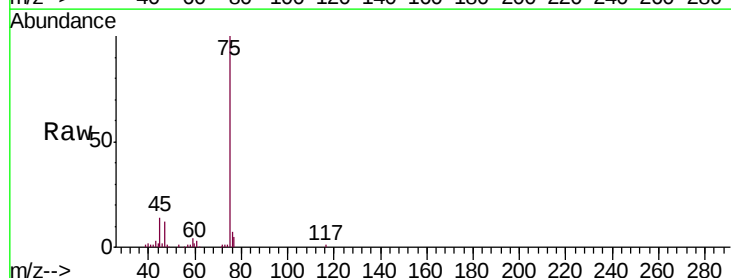
Acq: 16 Sep 2019 18:59

Tgt Ion: 77 Resp: 2156

Ion Ratio Lower Upper

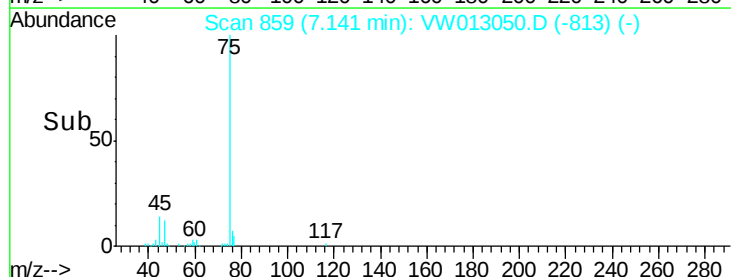
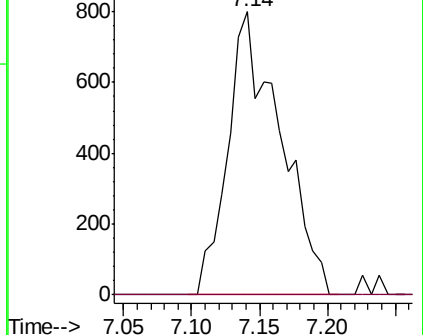
77 100

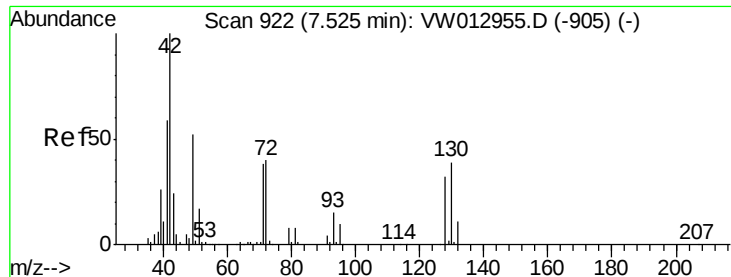
97 0.0 10.7 32.1#



Abundance Ion 76.90 (76.60 to 77.60): VW

Ion 96.90 (96.60 to 97.60): VW

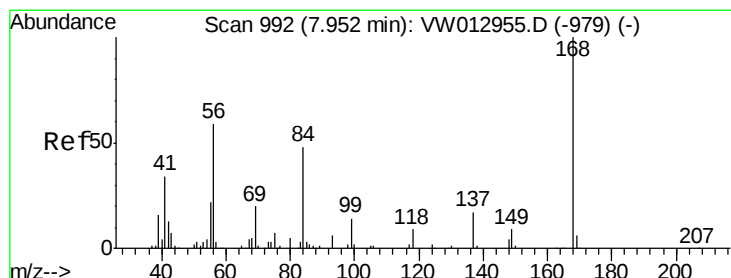
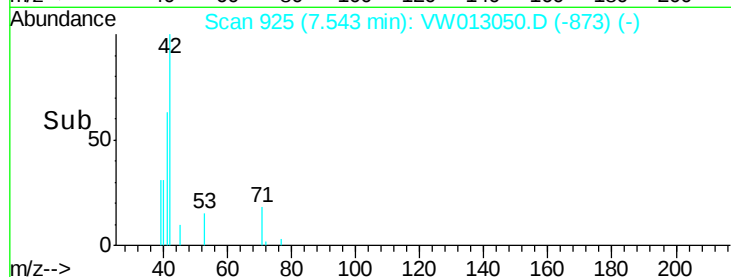
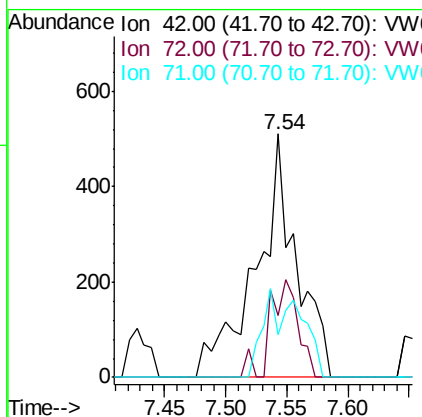
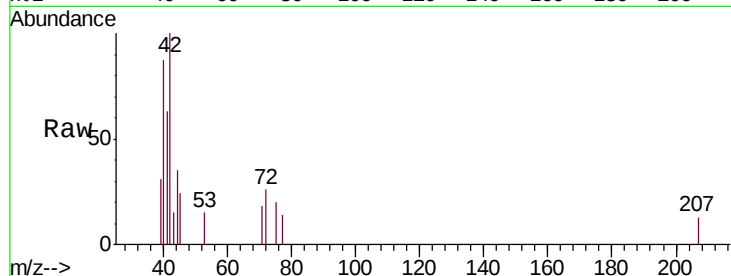




#29  
Tetrahydrofuran  
Concen: 2.165 ug/l  
RT: 7.54 min Scan# 925  
Delta R.T. 0.02 min  
Lab File: VW013050.D  
Acq: 16 Sep 2019 18:59

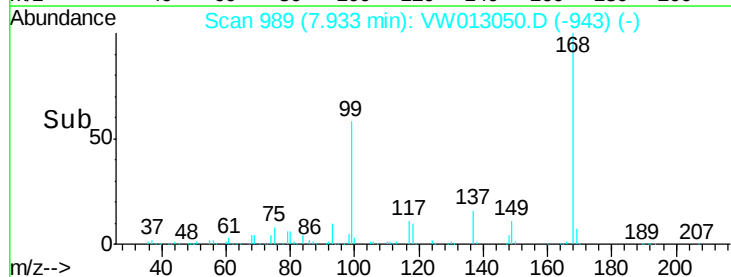
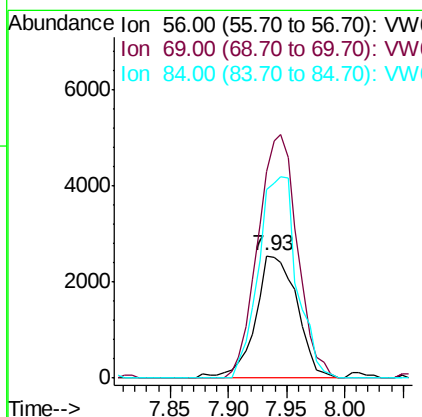
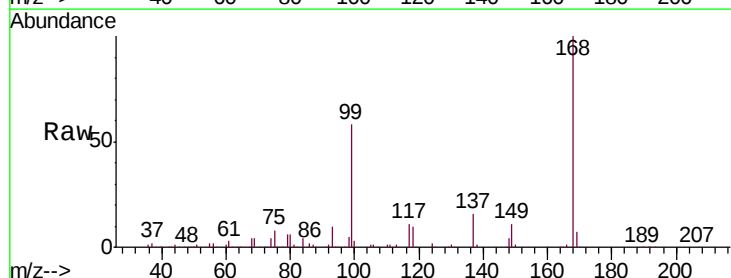
Instrument :  
MSVOA\_W  
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TP-7-D2(9.5-10)

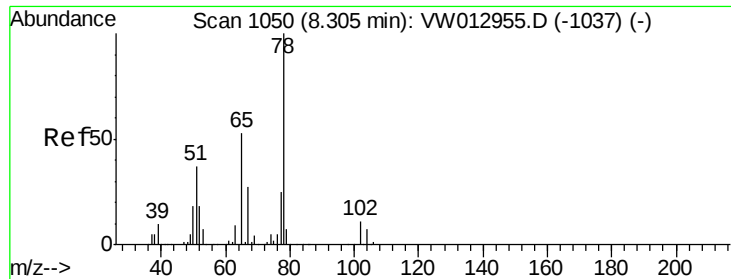
Tgt Ion: 42 Resp: 1163  
Ion Ratio Lower Upper  
42 100  
72 27.8 31.4 47.0#  
71 14.4 29.8 44.8#



#31  
Cyclohexane  
Concen: Below Cal  
RT: 7.93 min Scan# 989  
Delta R.T. -0.02 min  
Lab File: VW013050.D  
Acq: 16 Sep 2019 18:59

Tgt Ion: 56 Resp: 6352  
Ion Ratio Lower Upper  
56 100  
69 168.9 27.0 40.6#  
84 153.6 66.2 99.2#

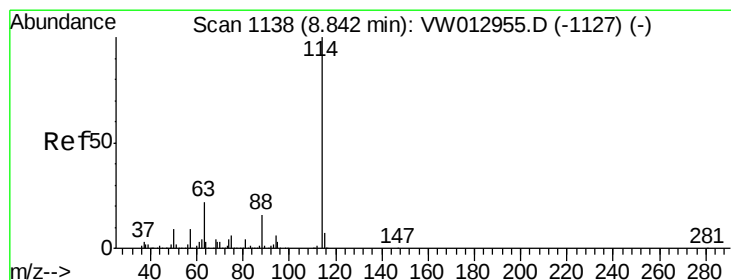
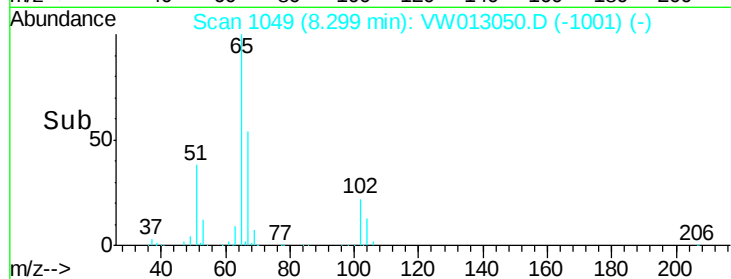
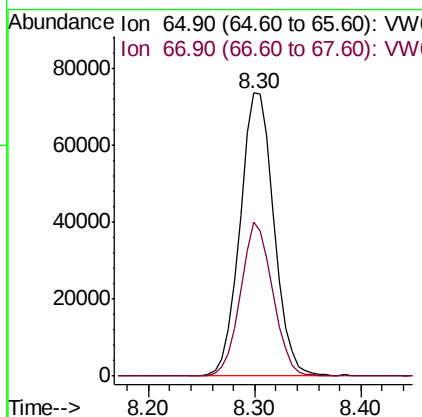
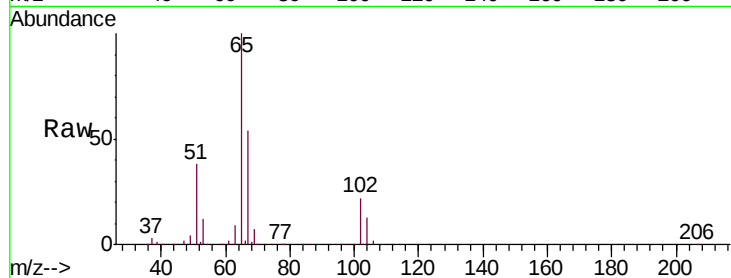




#33  
 1,2-Dichloroethane-d4  
 Concen: 55.479 ug/l  
 RT: 8.30 min Scan# 1049  
 Delta R.T. -0.01 min  
 Lab File: VW013050.D  
 Acq: 16 Sep 2019 18:59

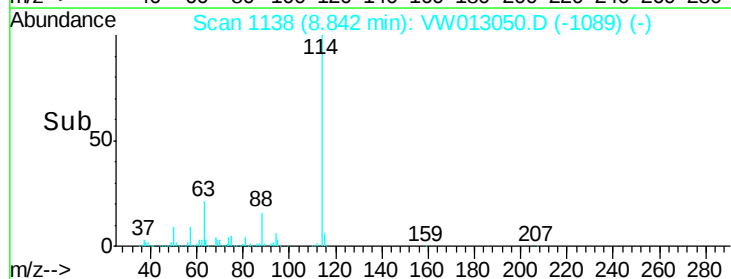
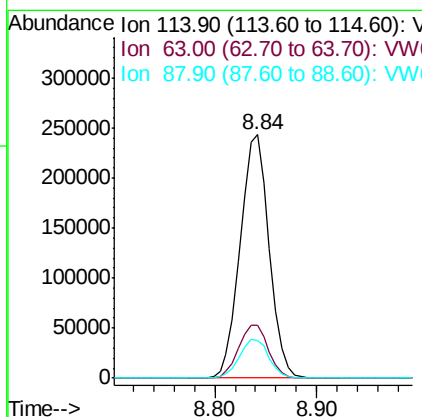
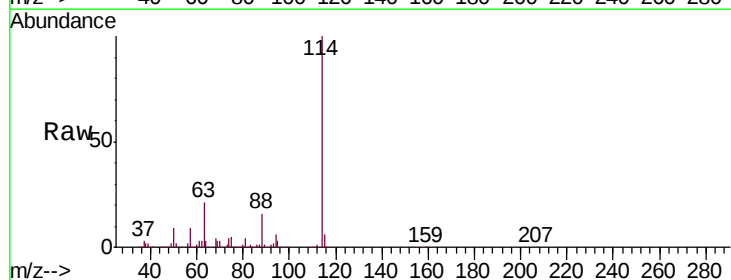
Instrument :  
 MSVOA\_W  
 ClientSampleId :  
 TP-7-D2(9.5-10)

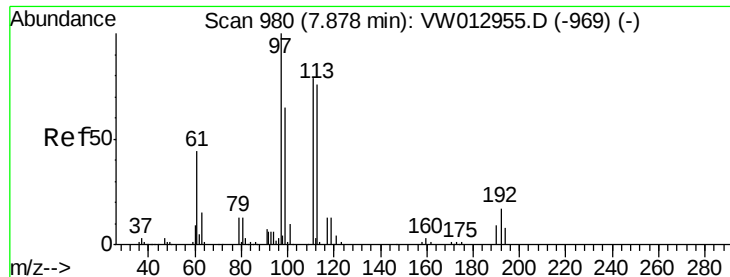
Tgt Ion: 65 Resp: 164460  
 Ion Ratio Lower Upper  
 65 100  
 67 51.8 0.0 101.2



#34  
 1,4-Difluorobenzene  
 Concen: 50.000 ug/l  
 RT: 8.84 min Scan# 1138  
 Delta R.T. -0.00 min  
 Lab File: VW013050.D  
 Acq: 16 Sep 2019 18:59

Tgt Ion: 114 Resp: 480035  
 Ion Ratio Lower Upper  
 114 100  
 63 21.5 0.0 43.4  
 88 15.7 0.0 31.6





#35

Dibromofluoromethane

Concen: 54.180 ug/l

RT: 7.88 min Scan# 980

Delta R.T. -0.00 min

Lab File: VW013050.D

Acq: 16 Sep 2019 18:59

Instrument :

MSVOA\_W

ClientSampleId :

TP-7-D2(9.5-10)

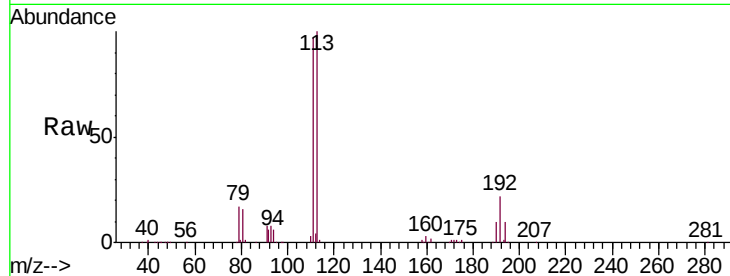
Tgt Ion:113 Resp: 141125

Ion Ratio Lower Upper

113 100

111 101.5 82.8 124.2

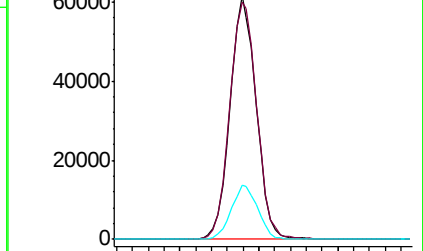
192 22.6 17.8 26.8



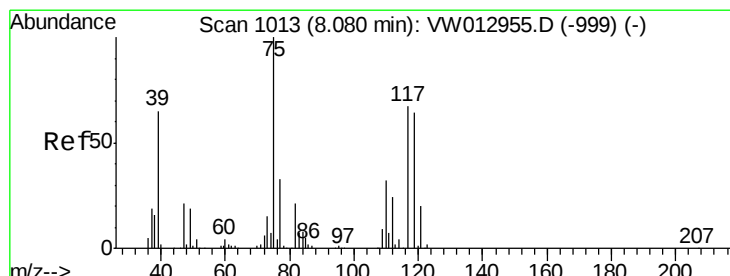
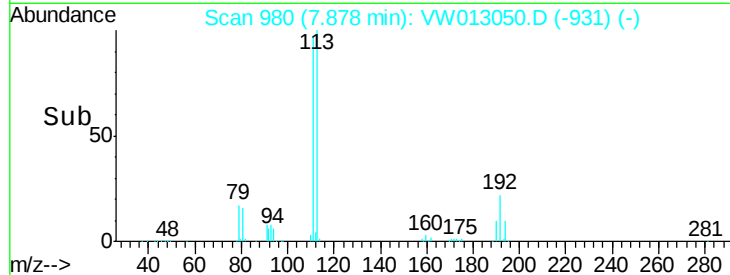
Abundance Ion 112.80 (112.50 to 113.50): V

Ion 110.80 (110.50 to 111.50): V

Ion 191.70 (191.40 to 192.40): V



Time-->



#36

1,1-Dichloropropene

Concen: 6.290 ug/l

RT: 7.94 min Scan# 990

Delta R.T. -0.14 min

Lab File: VW013050.D

Acq: 16 Sep 2019 18:59

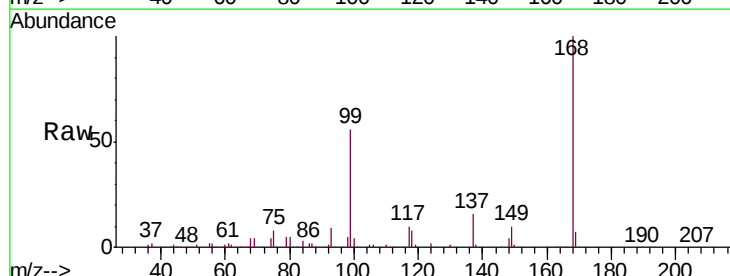
Tgt Ion: 75 Resp: 24129

Ion Ratio Lower Upper

75 100

110 7.8 16.4 49.1#

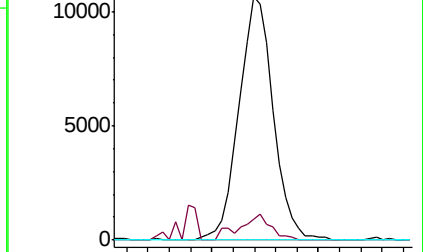
77 0.0 25.1 37.7#



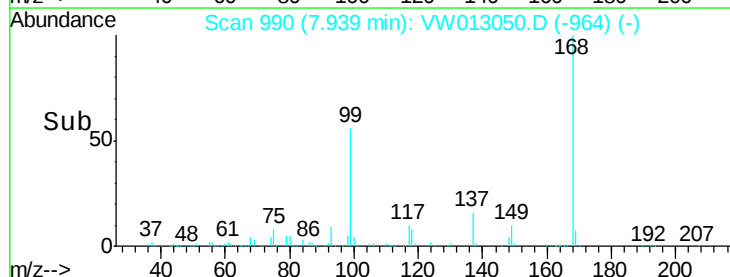
Abundance Ion 74.90 (74.60 to 75.60): VW

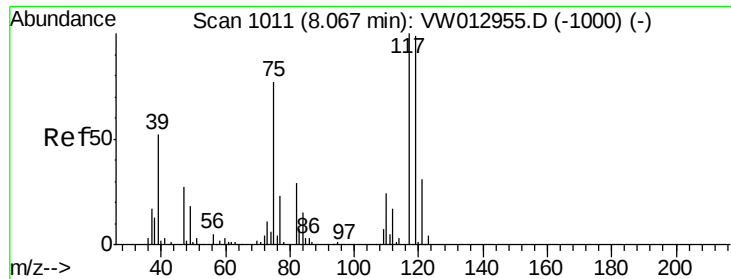
Ion 109.90 (109.60 to 110.60): V

Ion 76.90 (76.60 to 77.60): VW



Time-->





#38

Carbon Tetrachloride

Concen: 7.913 ug/l

RT: 7.95 min Scan# 991

Delta R.T. -0.12 min

Lab File: VW013050.D

Acq: 16 Sep 2019 18:59

Instrument :

MSVOA\_W

ClientSampleId :

TP-7-D2(9.5-10)

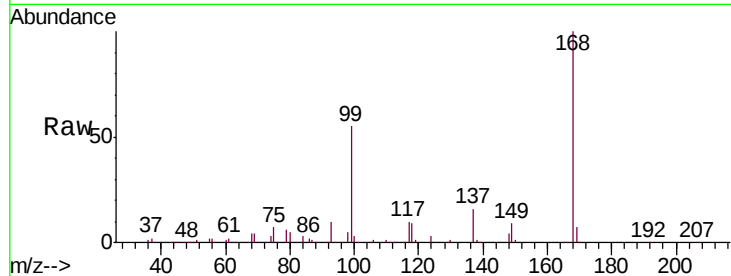
Tgt Ion:117 Resp: 31107

Ion Ratio Lower Upper

117 100

119 5.3 79.4 119.0#

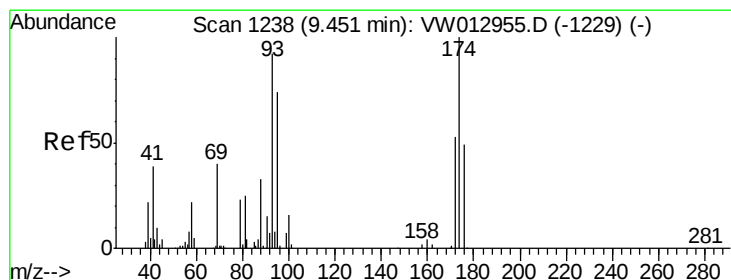
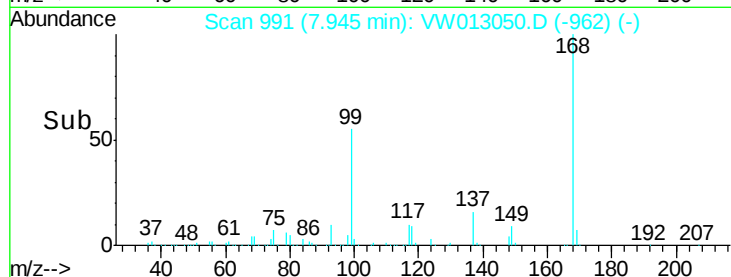
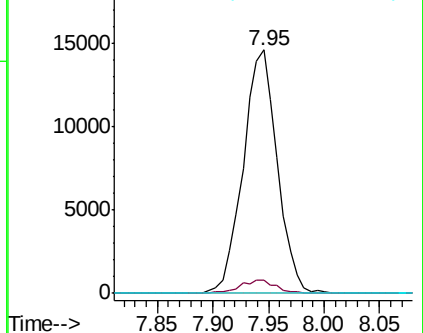
121 0.0 24.6 36.8#



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



#49

1,4-Dioxane

Concen: 1.839 ug/l

RT: 9.22 min Scan# 1200

Delta R.T. -0.23 min

Lab File: VW013050.D

Acq: 16 Sep 2019 18:59

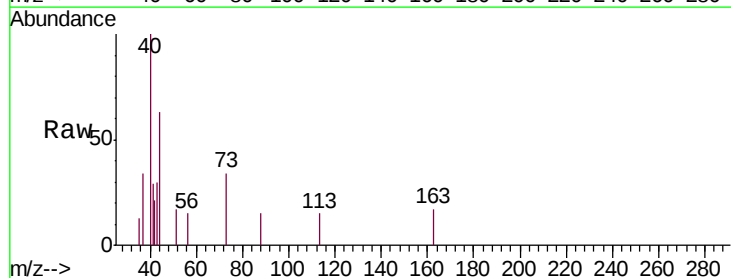
Tgt Ion: 88 Resp: 42

Ion Ratio Lower Upper

88 100

43 0.0 31.3 46.9#

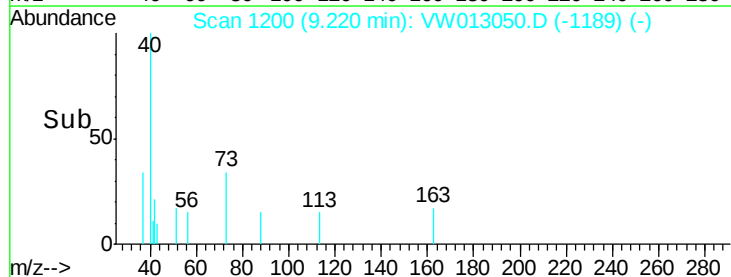
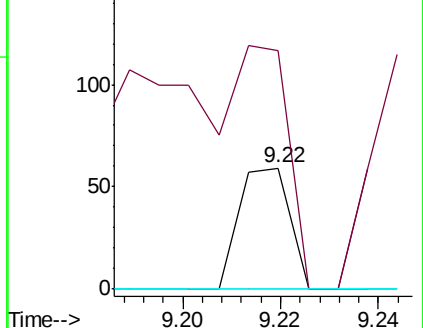
58 0.0 60.2 90.2#

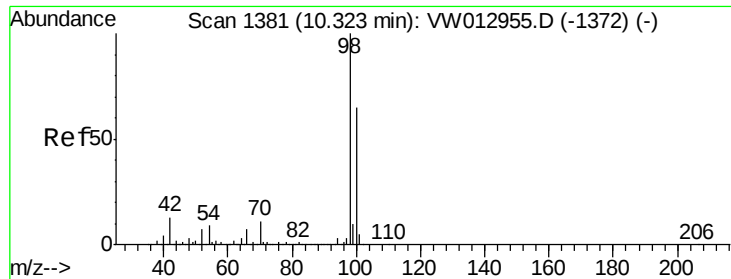


Abundance Ion 88.00 (87.70 to 88.70): VW

Ion 43.00 (42.70 to 43.70): VW

Ion 58.00 (57.70 to 58.70): VW

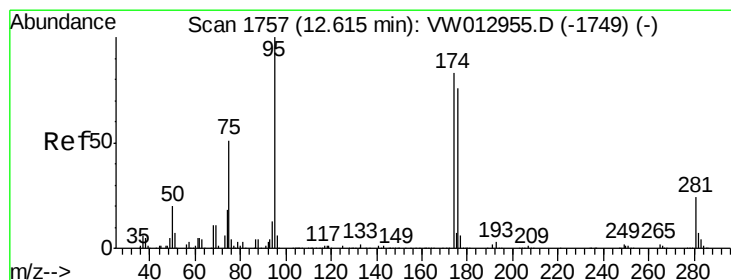
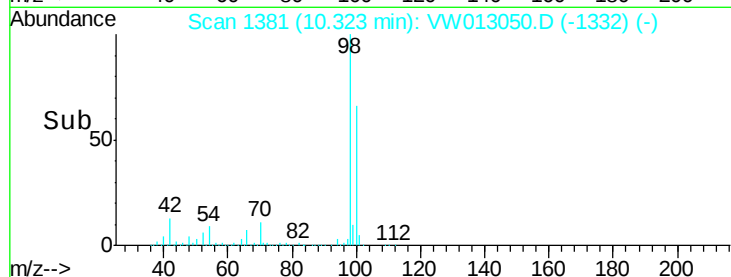
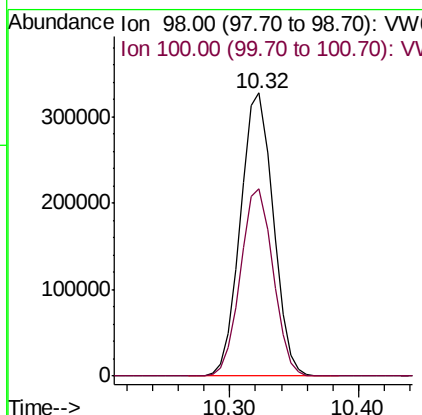
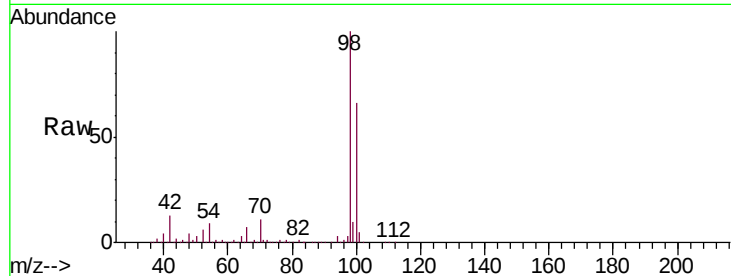




#50  
Toluene-d8  
Concen: 56.736 ug/l  
RT: 10.32 min Scan# 1381  
Delta R.T. -0.00 min  
Lab File: VW013050.D  
Acq: 16 Sep 2019 18:59

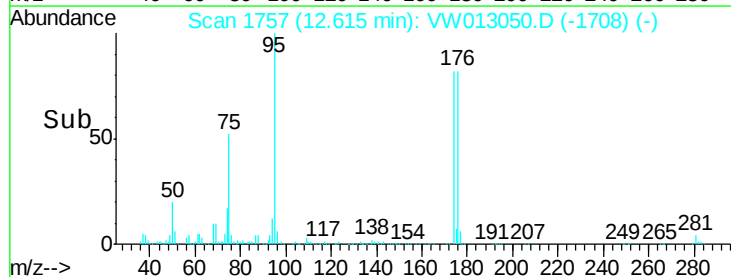
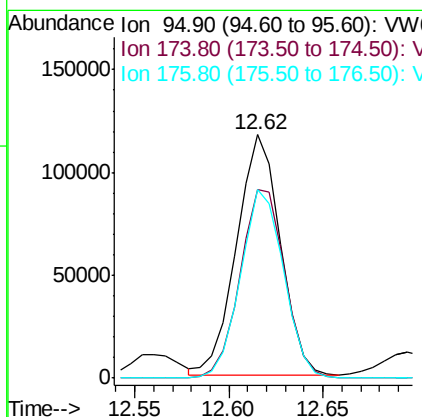
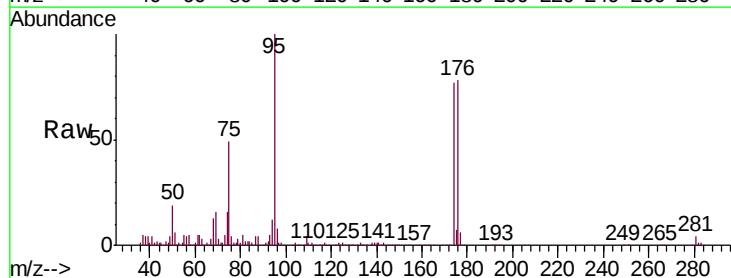
Instrument :  
MSVOA\_W  
ClientSampleId :  
TP-7-D2(9.5-10)

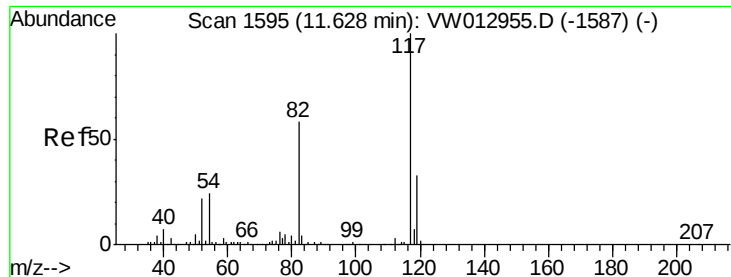
Tgt Ion: 98 Resp: 578285  
Ion Ratio Lower Upper  
98 100  
100 65.7 52.1 78.1



#62  
4-Bromofluorobenzene  
Concen: 50.974 ug/l  
RT: 12.62 min Scan# 1757  
Delta R.T. -0.00 min  
Lab File: VW013050.D  
Acq: 16 Sep 2019 18:59

Tgt Ion: 95 Resp: 186823  
Ion Ratio Lower Upper  
95 100  
174 80.5 0.0 170.4  
176 78.1 0.0 164.6

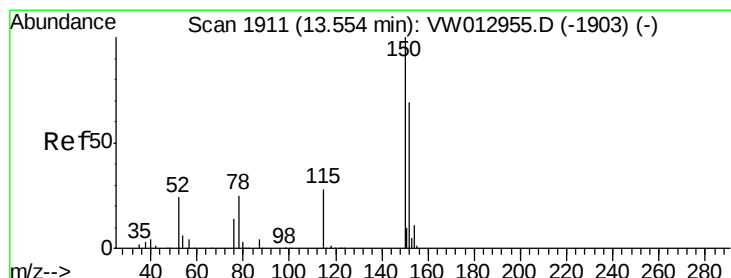
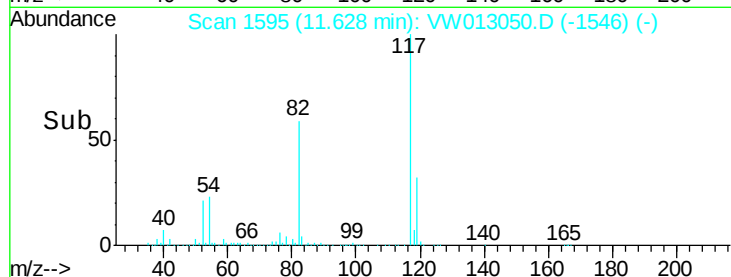
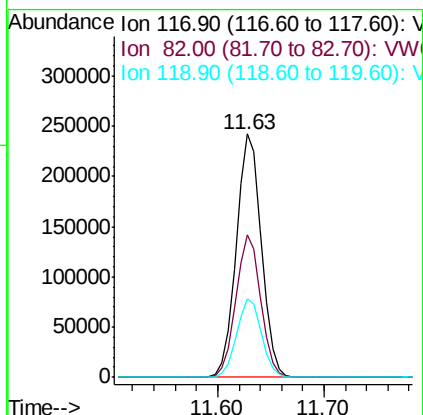
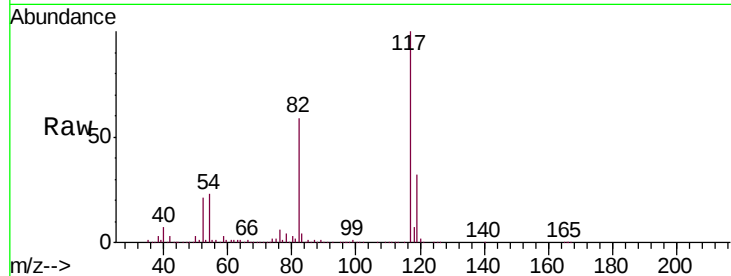




#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 11.63 min Scan# 1595  
Delta R.T. -0.00 min  
Lab File: VW013050.D  
Acq: 16 Sep 2019 18:59

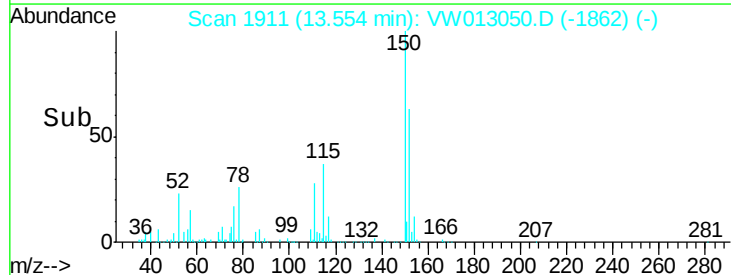
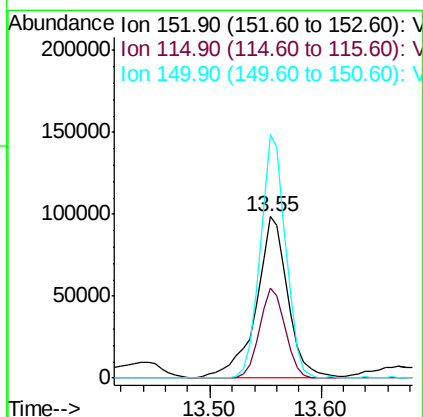
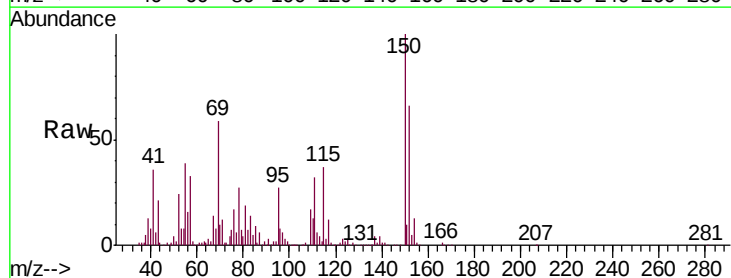
Instrument :  
MSVOA\_W  
ClientSampleId :  
TP-7-D2(9.5-10)

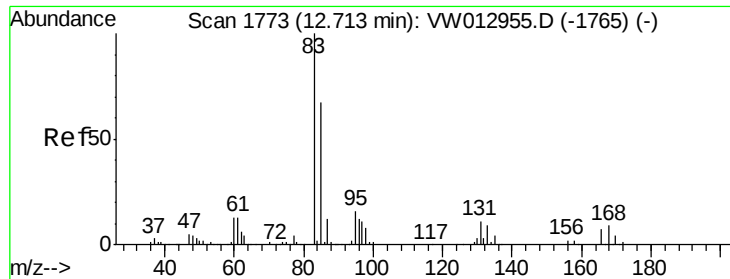
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 117     | 100   |       |       |
| 82      | 58.5  | 46.3  | 69.5  |
| 119     | 32.4  | 26.2  | 39.4  |



#72  
1,4-Dichlorobenzene-d4  
Concen: 50.000 ug/l  
RT: 13.55 min Scan# 1911  
Delta R.T. -0.00 min  
Lab File: VW013050.D  
Acq: 16 Sep 2019 18:59

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 152     | 100   |       |       |
| 115     | 46.1  | 28.8  | 86.4  |
| 150     | 122.7 | 0.0   | 340.2 |





#75

1,1,2,2-Tetrachloroethane

Concen: 4.349 ug/l

RT: 12.68 min Scan# 1767

Delta R.T. -0.04 min

Lab File: VW013050.D

Acq: 16 Sep 2019 18:59

Instrument :

MSVOA\_W

ClientSampleId :

TP-7-D2(9.5-10)

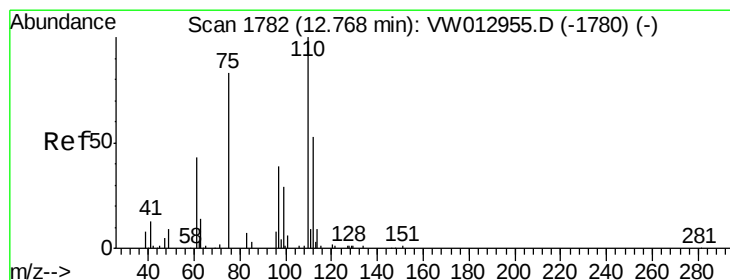
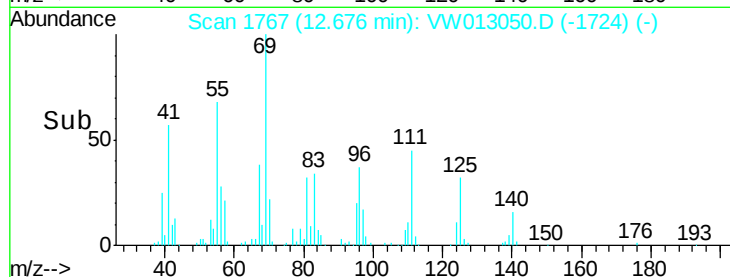
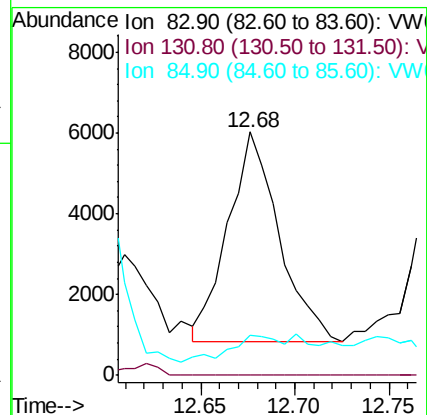
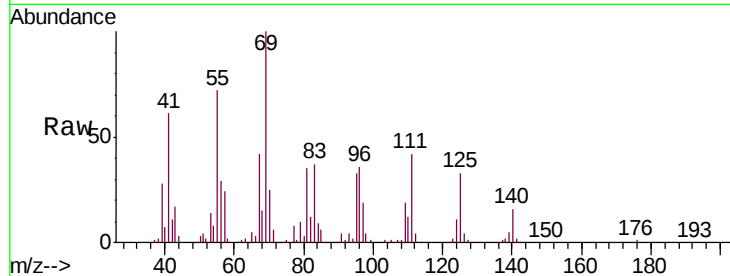
Tgt Ion: 83 Resp: 9716

Ion Ratio Lower Upper

83 100

131 0.0 5.7 17.1#

85 13.2 31.4 94.3#



#76

1,2,3-Trichloropropane

Concen: 53.697 ug/l

RT: 12.62 min Scan# 1757

Delta R.T. -0.15 min

Lab File: VW013050.D

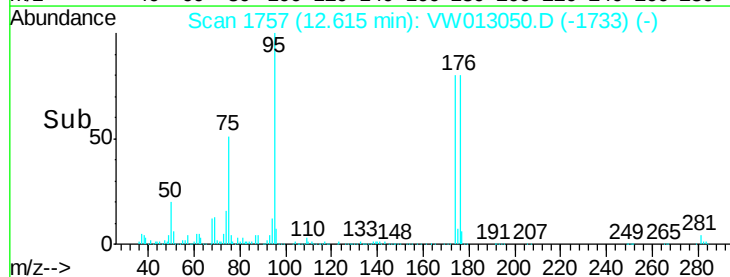
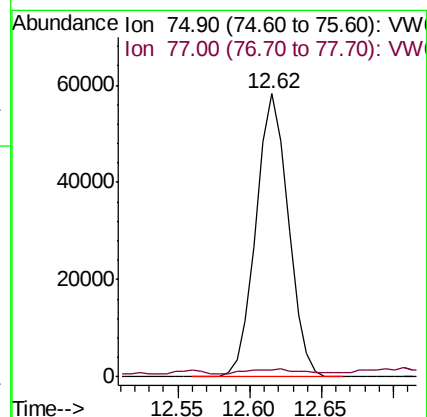
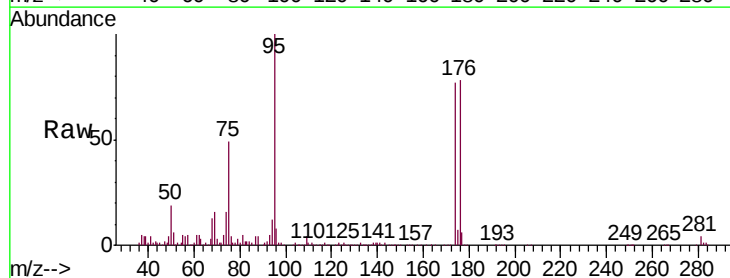
Acq: 16 Sep 2019 18:59

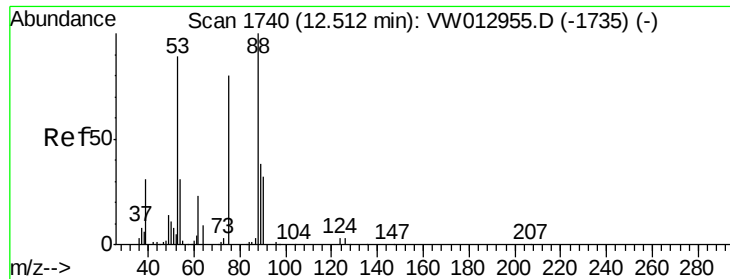
Tgt Ion: 75 Resp: 90268

Ion Ratio Lower Upper

75 100

77 2.3 0.0 0.0#

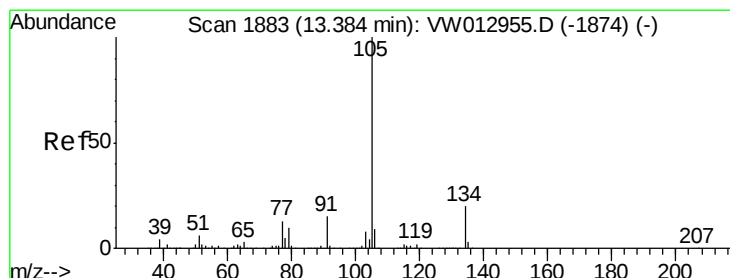
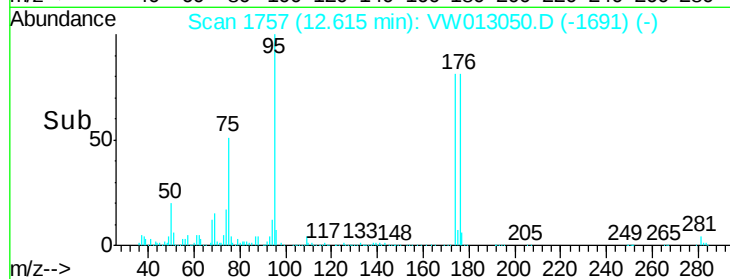
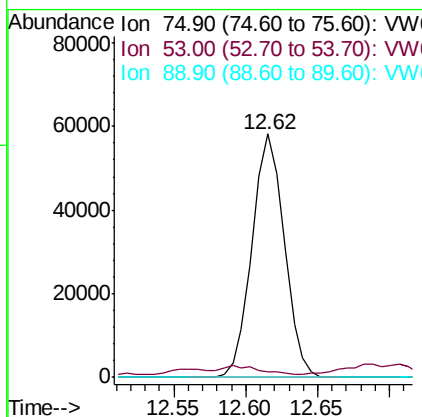
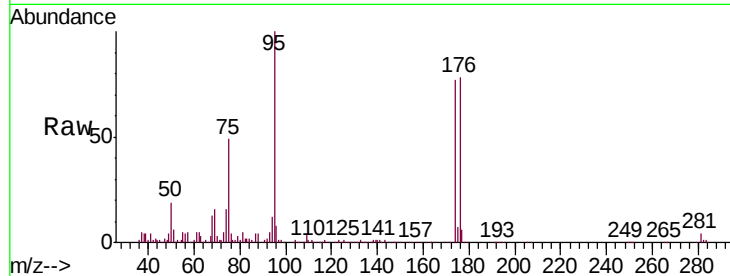




#81  
 trans-1,4-Dichloro-2-butene  
 Concen: 121.810 ug/l  
 RT: 12.62 min Scan# 1757  
 Delta R.T. 0.10 min  
 Lab File: VW013050.D  
 Acq: 16 Sep 2019 18:59

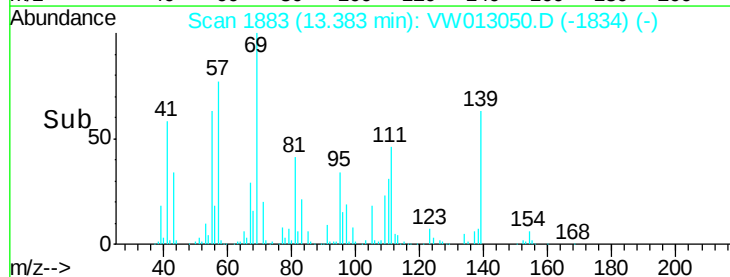
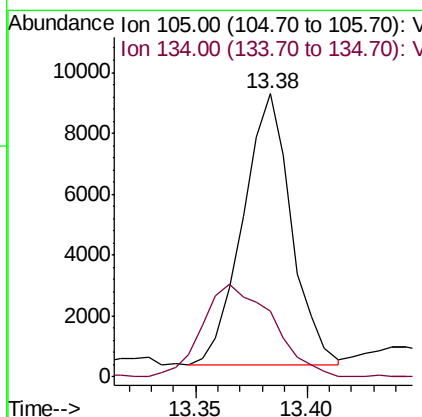
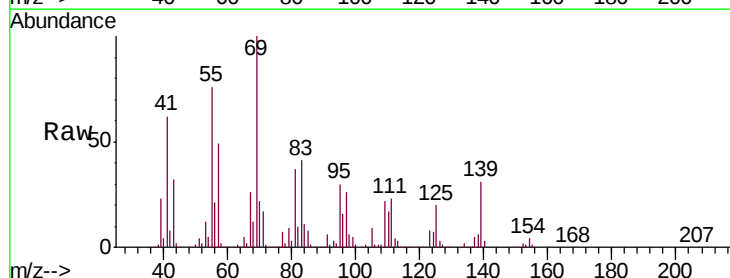
Instrument :  
 MSVOA\_W  
 ClientSampleId :  
 TP-7-D2(9.5-10)

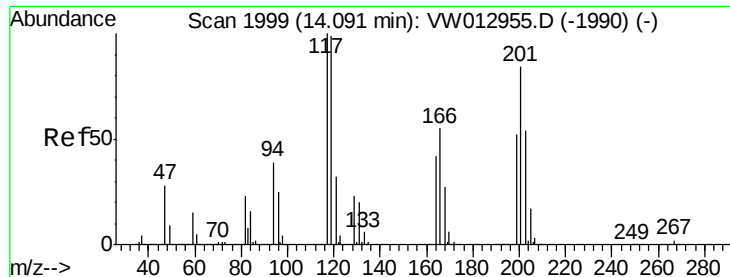
Tgt Ion: 75 Resp: 90268  
 Ion Ratio Lower Upper  
 75 100  
 53 0.0 85.6 128.4#  
 89 0.1 37.2 55.8#



#85  
 sec-Butylbenzene  
 Concen: 1.030 ug/l  
 RT: 13.38 min Scan# 1883  
 Delta R.T. -0.00 min  
 Lab File: VW013050.D  
 Acq: 16 Sep 2019 18:59

Tgt Ion: 105 Resp: 13512  
 Ion Ratio Lower Upper  
 105 100  
 134 49.7 10.2 30.4#





#90

Hexachloroethane

Concen: 5.876 ug/l

RT: 14.08 min Scan# 1998

Delta R.T. -0.01 min

Lab File: VW013050.D

Acq: 16 Sep 2019 18:59

Instrument :

MSVOA\_W

ClientSampleId :

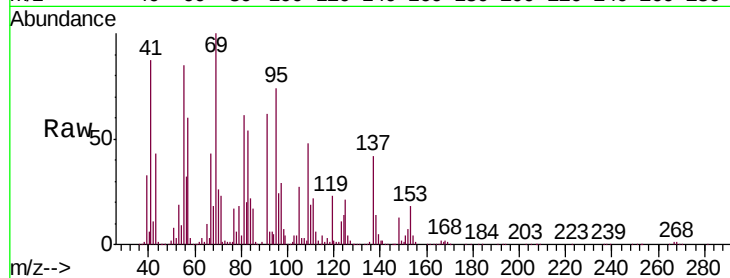
TP-7-D2(9.5-10)

Tgt Ion:117 Resp: 12679

Ion Ratio Lower Upper

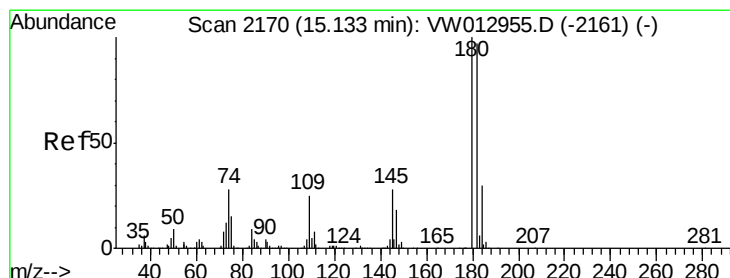
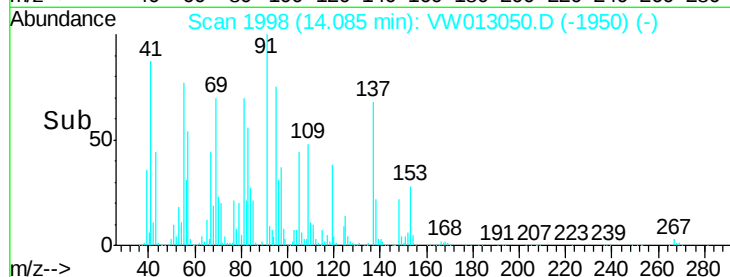
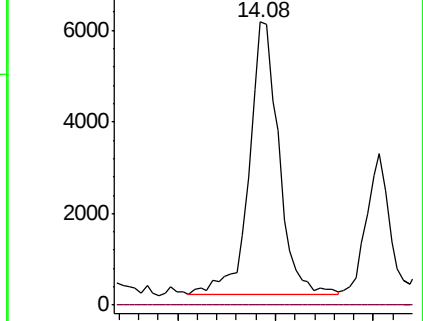
117 100

201 0.0 45.3 135.9#



Abundance Ion 116.80 (116.50 to 117.50): V

Ion 200.70 (200.40 to 201.40): V



#93

1,2,4-Trichlorobenzene

Concen: 8.320 ug/l

RT: 15.14 min Scan# 2171

Delta R.T. 0.01 min

Lab File: VW013050.D

Acq: 16 Sep 2019 18:59

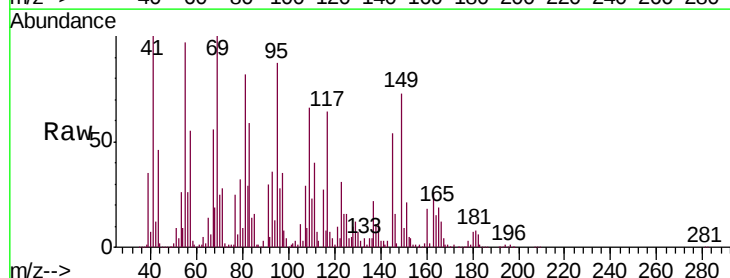
Tgt Ion:180 Resp: 30273

Ion Ratio Lower Upper

180 100

182 144.2 47.4 142.2#

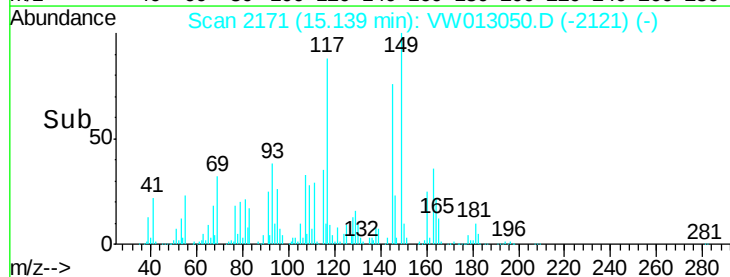
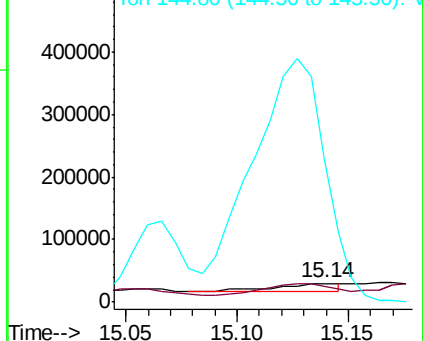
145 2930.4 14.9 44.7#

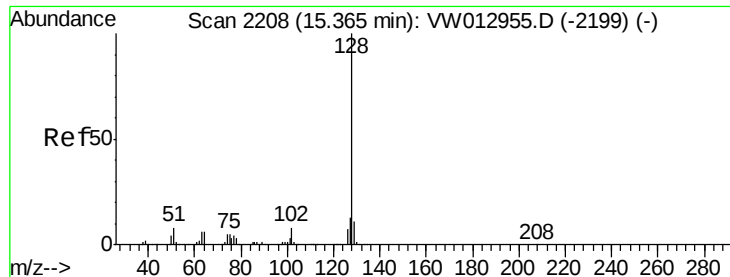


Abundance Ion 179.80 (179.50 to 180.50): V

Ion 181.80 (181.50 to 182.50): V

Ion 144.80 (144.50 to 145.50): V

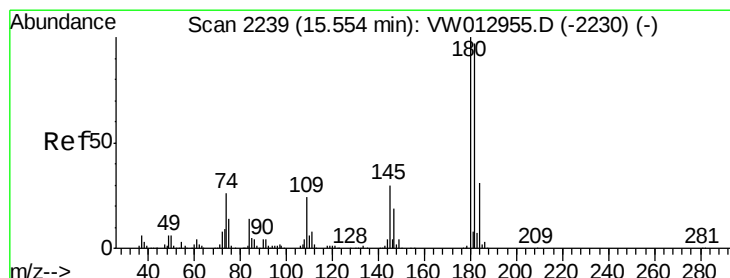
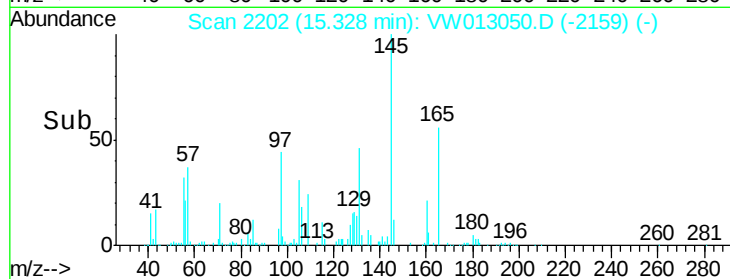
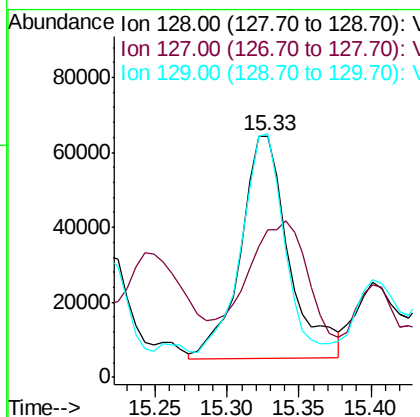
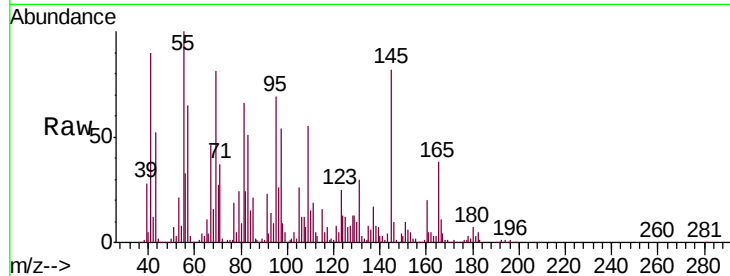




#95  
Naphthalene  
Concen: 22.723 ug/l  
RT: 15.33 min Scan# 2202  
Delta R.T. -0.04 min  
Lab File: VW013050.D  
Acq: 16 Sep 2019 18:59

Instrument :  
MSVOA\_W  
ClientSampleId :  
TP-7-D2(9.5-10)

Tgt Ion:128 Resp: 138139  
Ion Ratio Lower Upper  
128 100  
127 60.9 11.0 16.6#  
129 84.6 8.6 12.8#



#96  
1,2,3-Trichlorobenzene  
Concen: 23.847 ug/l  
RT: 15.58 min Scan# 2243  
Delta R.T. 0.02 min  
Lab File: VW013050.D  
Acq: 16 Sep 2019 18:59

Tgt Ion:180 Resp: 76697  
Ion Ratio Lower Upper  
180 100  
182 8.6 47.6 142.8#  
145 147.8 15.4 46.2#

