

Data Path : Z:\VOASRV\HPCHEM1\MSVOA W\DATA\VW091719\  
 Data File : VW013088.D  
 Acq On : 17 Sep 2019 14:21  
 Operator : SY/VA  
 Sample : K4873-05  
 Misc : 4.74G/5ML/MSVOA W/SOIL  
 ALS Vial : 12 Sample Multiplier: 1

Instrument :  
 MSVOA\_W  
 ClientSampleId :

Quant Time: Sep 18 05:32:53 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  | 299751   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.84  | 114  | 462551   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.63 | 117  | 360949   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.55 | 152  | 131472   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |         |      |
|---------------------------|--------|-----|----------|-------|---------|------|
| 33) 1,2-Dichloroethane-d4 | 8.31   | 65  | 154838   | 55.93 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 111.86% |      |
| 35) Dibromofluoromethane  | 7.88   | 113 | 131792   | 52.51 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 105.02% |      |
| 50) Toluene-d8            | 10.32  | 98  | 528356   | 53.80 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 107.60% |      |
| 62) 4-Bromofluorobenzene  | 12.62  | 95  | 149872   | 42.44 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 84.88%  |      |

## Target Compounds

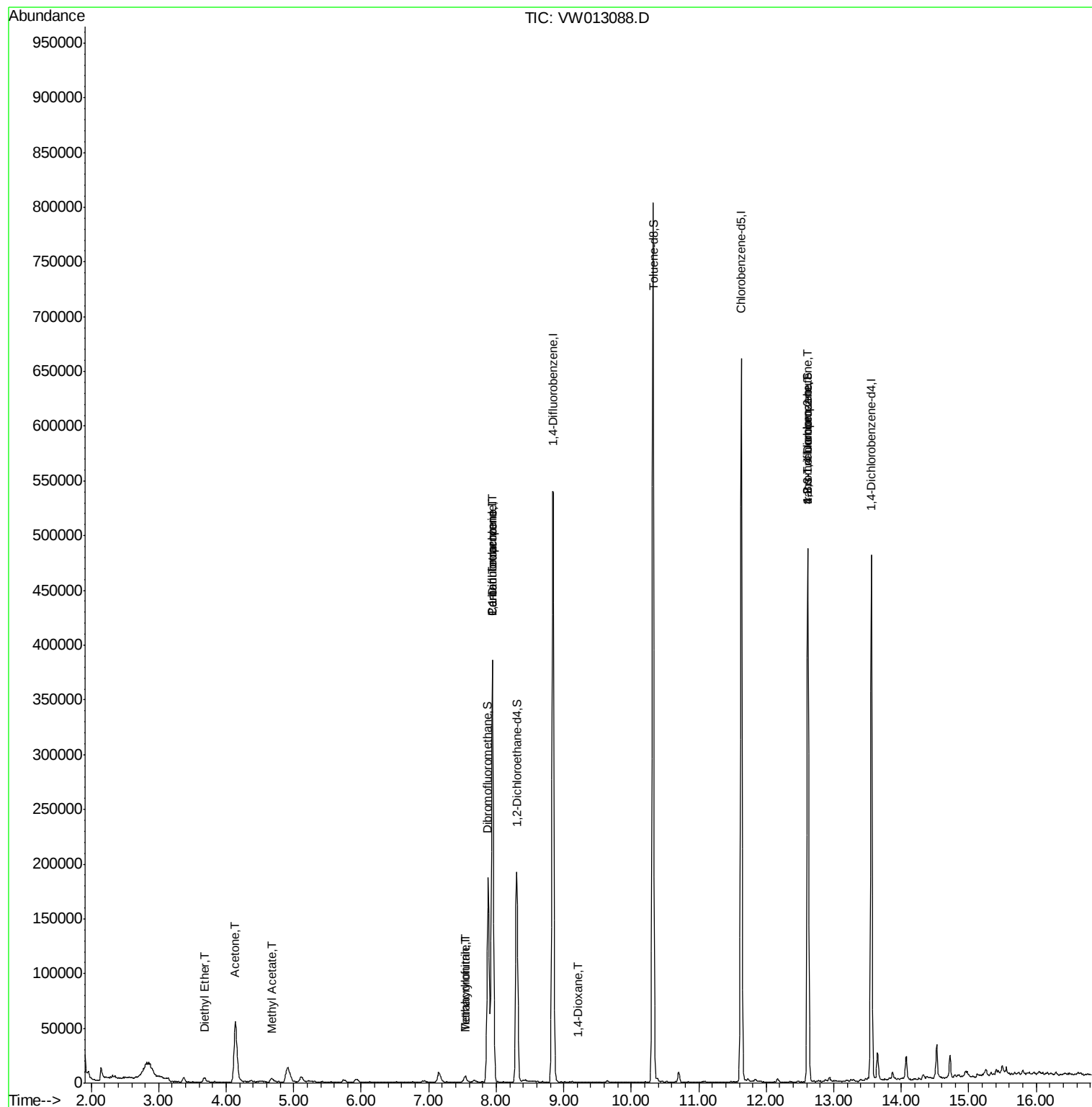
|                                |       |     |        |           | Qvalue |     |
|--------------------------------|-------|-----|--------|-----------|--------|-----|
| 2) Dichlorodifluoromethane     | 2.02  | 85  | 21     | Below Cal | #      | 44  |
| 3) Chloromethane               | 2.21  | 50  | 296    | Below Cal |        | 96  |
| 8) Diethyl Ether               | 3.68  | 74  | 2284   | 1.950     | ug/l   | 69  |
| 11) Tert butyl alcohol         | 5.20  | 59  | 260    | Below Cal | #      | 72  |
| 13) Acrolein                   | 3.92  | 56  | 19     | Below Cal | #      | 15  |
| 16) Acetone                    | 4.14  | 43  | 116930 | 189.957   | ug/l   | 99  |
| 18) Methyl Acetate             | 4.67  | 43  | 6554   | 4.155     | ug/l   | 94  |
| 20) Methylene Chloride         | 4.92  | 84  | 10510  | Below Cal | #      | 85  |
| 26) 2,2-Dichloropropane        | 7.15  | 77  | 470    | Below Cal | #      | 55  |
| 29) Tetrahydrofuran            | 7.54  | 42  | 5078   | 10.124    | ug/l   | 95  |
| 31) Cyclohexane                | 7.95  | 56  | 5911   | Below Cal | #      | 1   |
| 36) 1,1-Dichloropropene        | 7.95  | 75  | 21775  | 5.891     | ug/l # | 51  |
| 38) Carbon Tetrachloride       | 7.95  | 117 | 28878  | 7.624     | ug/l # | 14  |
| 41) Methacrylonitrile          | 7.53  | 41  | 2860   | 2.214     | ug/l # | 58  |
| 49) 1,4-Dioxane                | 9.20  | 88  | 27     | 1.227     | ug/l # | 1   |
| 76) 1,2,3-Trichloropropane     | 12.62 | 75  | 78083  | 67.804    | ug/l # | 100 |
| 81) trans-1,4-Dichloro-2-buten | 12.62 | 75  | 78083  | 153.813   | ug/l # | 7   |

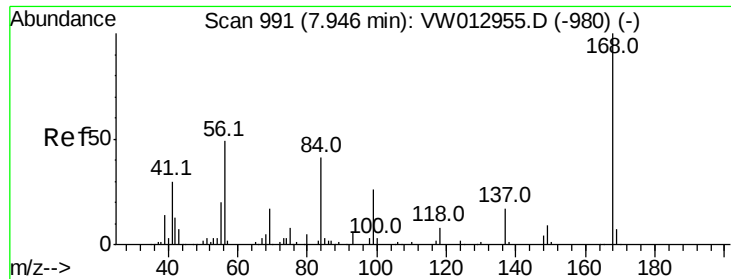
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Title : SW846 8260  
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: VW013088.D

Acq: 17 Sep 2019 14:21

Instrument :

MSVOA\_W

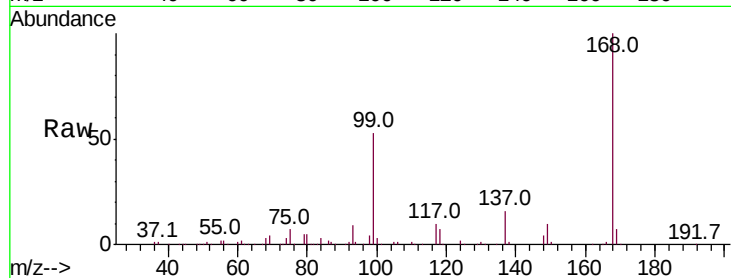
ClientSampleId :

Tot Ion:168 Resp: 299751

Ion Ratio Lower Upper

168 100

99 53.4 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

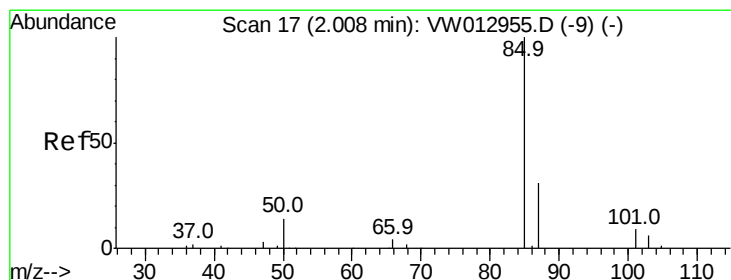
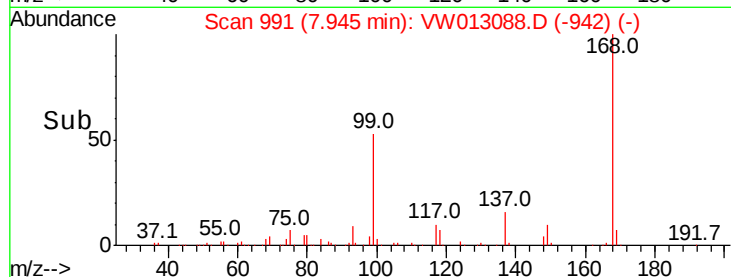
150000

100000

50000

0

Time-->



#2

Dichlorodifluoromethane

Concen: Below Cal

RT: 2.02 min Scan# 19

Delta R.T. 0.01 min

Lab File: VW013088.D

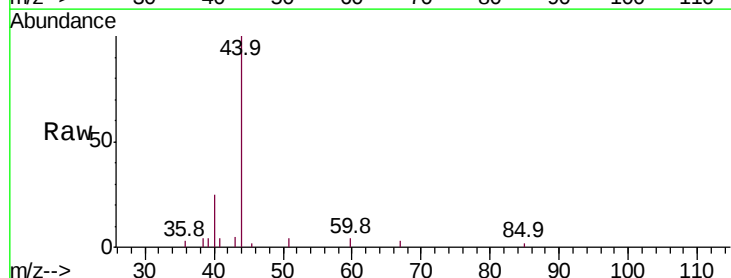
Acq: 17 Sep 2019 14:21

Tgt Ion: 85 Resp: 21

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

2.02

80

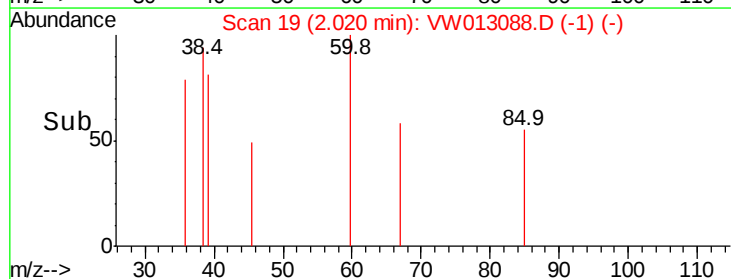
60

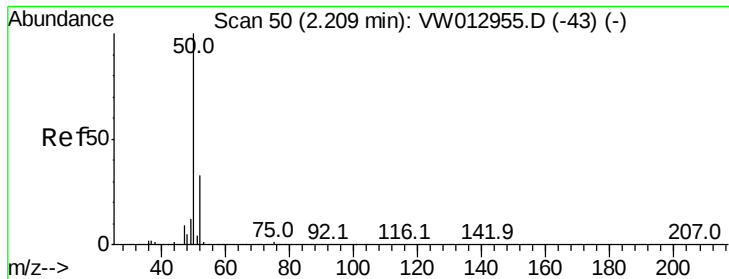
40

20

0

Time-->





#3

Chloromethane

Concen: Below Cal

RT: 2.21 min Scan# 51

Delta R.T. 0.01 min

Lab File: VW013088.D

Acq: 17 Sep 2019 14:21

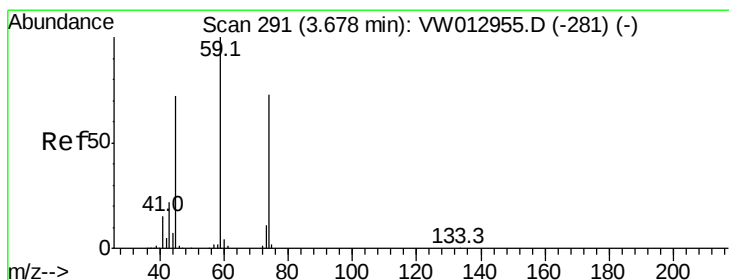
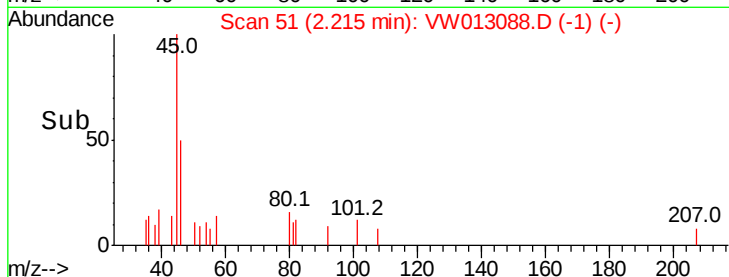
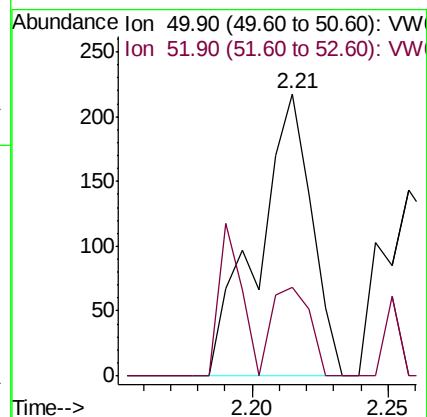
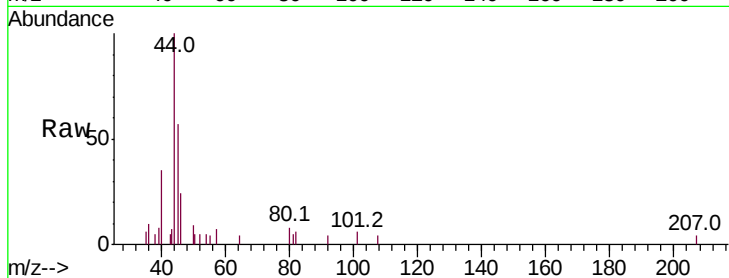
Instrument :  
MSVOA\_W  
ClientSampleId :

Tot Ion: 50 Resp: 296

Ion Ratio Lower Upper

50 100

52 31.2 26.6 39.8



#8

Diethyl Ether

Concen: 1.950 ug/l

RT: 3.68 min Scan# 291

Delta R.T. -0.00 min

Lab File: VW013088.D

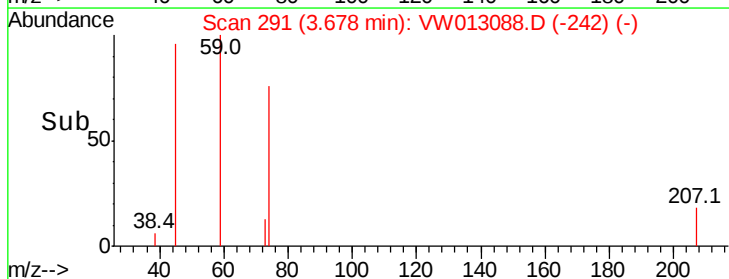
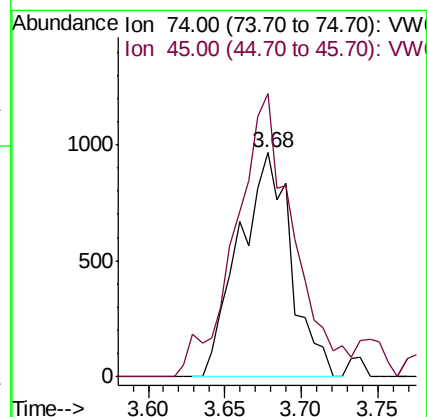
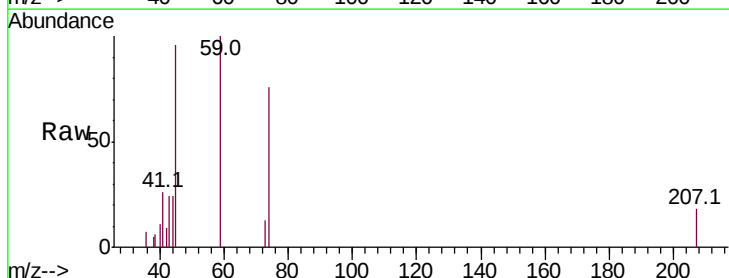
Acq: 17 Sep 2019 14:21

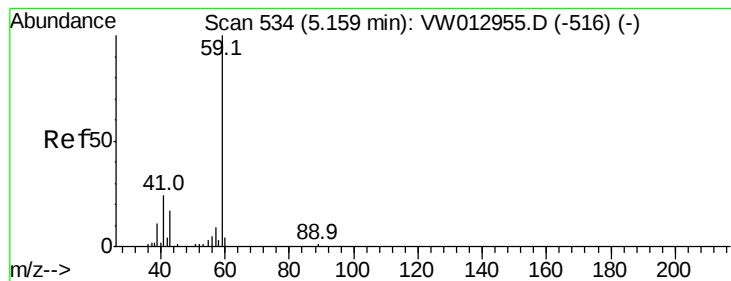
Tgt Ion: 74 Resp: 2284

Ion Ratio Lower Upper

74 100

45 140.1 53.8 161.4



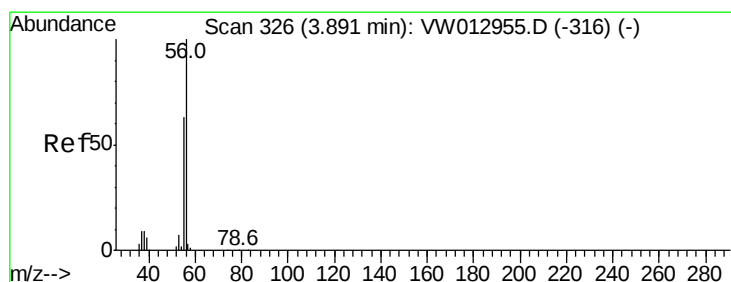
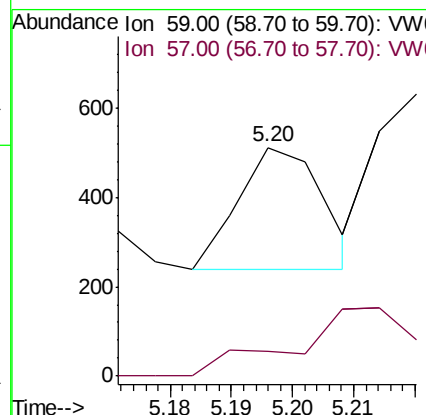
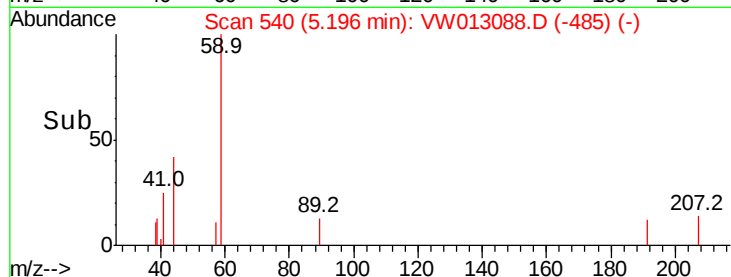
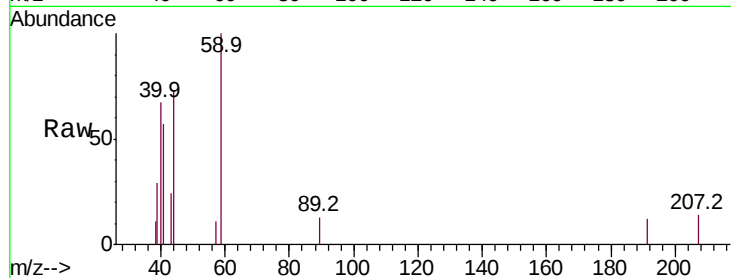


#11

Tert butyl alcohol  
Concen: Below Cal  
RT: 5.20 min Scan# 540  
Delta R.T. 0.04 min  
Lab File: VW013088.D  
Acq: 17 Sep 2019 14:21

Instrument :  
MSVOA\_W  
ClientSampled :

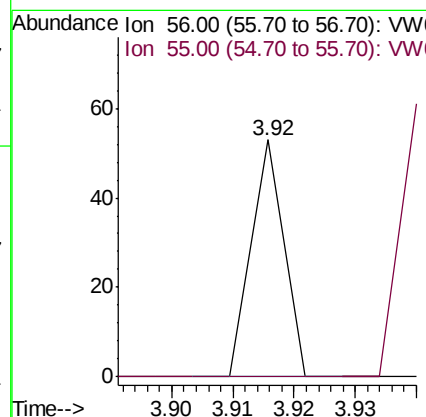
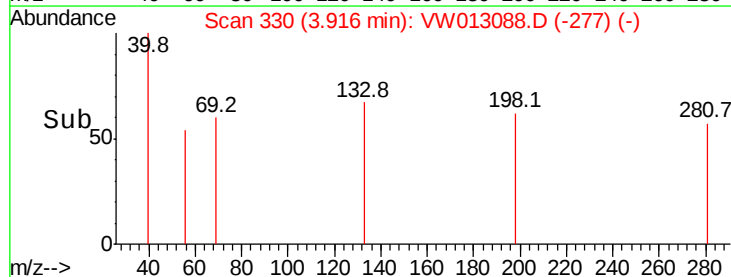
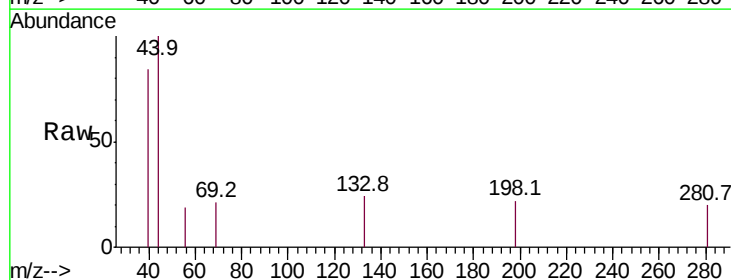
Tot Ion: 59 Resp: 260  
Ion Ratio Lower Upper  
59 100  
57 0.0 8.5 12.7#

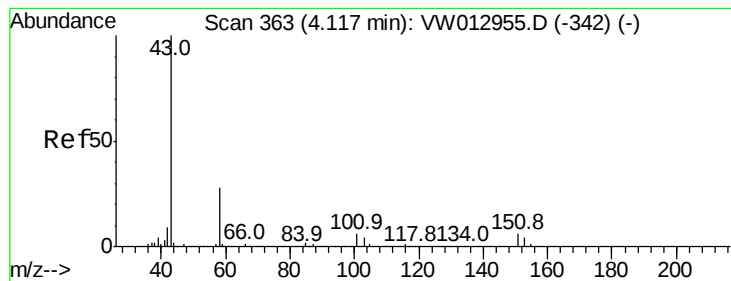


#13

Acrolein  
Concen: Below Cal  
RT: 3.92 min Scan# 330  
Delta R.T. 0.02 min  
Lab File: VW013088.D  
Acq: 17 Sep 2019 14:21

Tgt Ion: 56 Resp: 19  
Ion Ratio Lower Upper  
56 100  
55 0.0 55.8 83.8#





#16

Acetone

Concen: 189.957 ug/l

RT: 4.14 min Scan# 366

Delta R.T. 0.02 min

Lab File: VW013088.D

Acq: 17 Sep 2019 14:21

Instrument :

MSVOA\_W

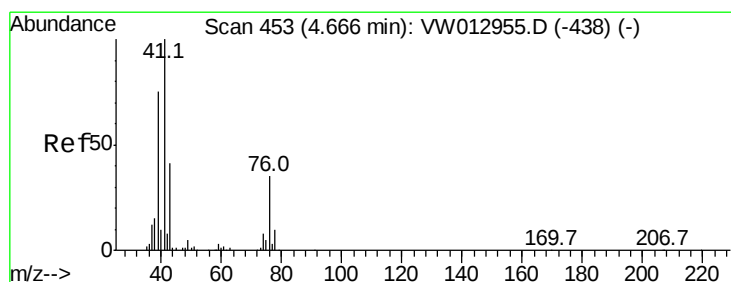
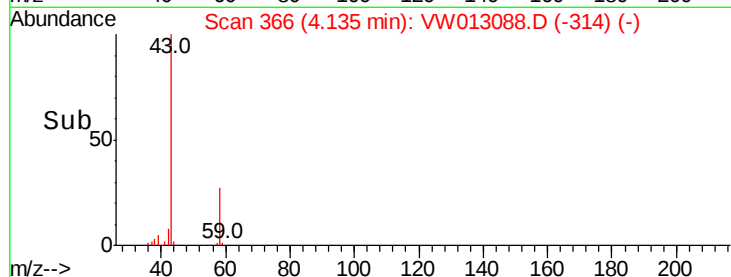
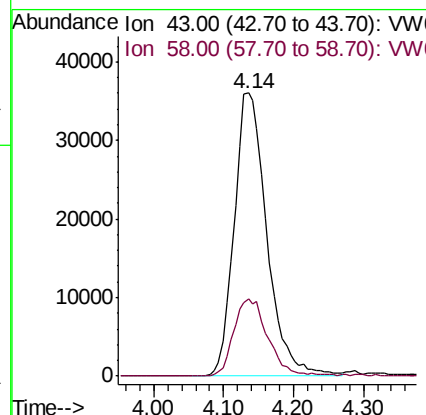
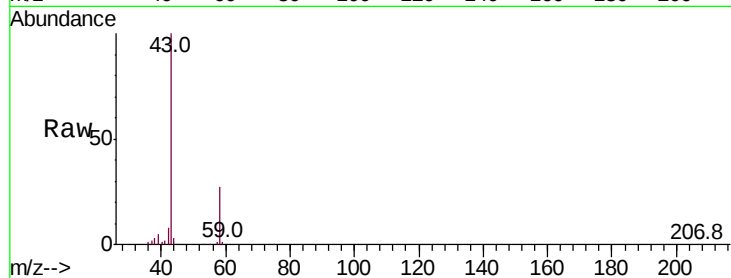
ClientSampled :

Tot Ion: 43 Resp: 116930

Ion Ratio Lower Upper

43 100

58 27.4 22.3 33.5



#18

Methyl Acetate

Concen: 4.155 ug/l

RT: 4.67 min Scan# 454

Delta R.T. 0.01 min

Lab File: VW013088.D

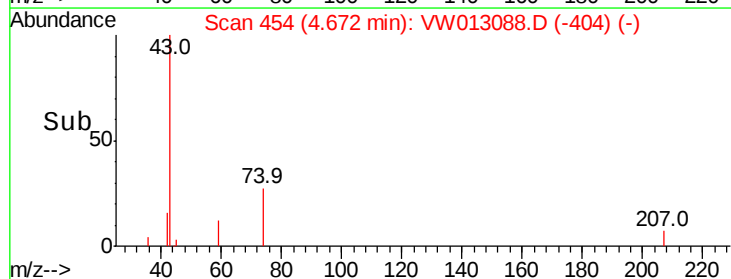
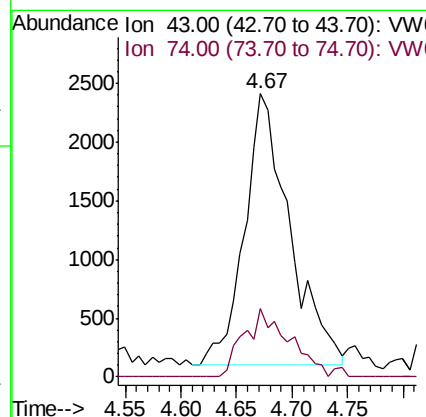
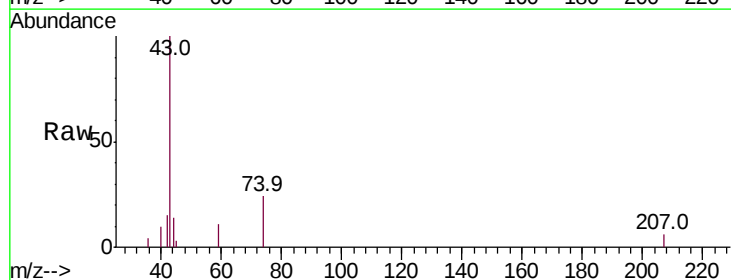
Acq: 17 Sep 2019 14:21

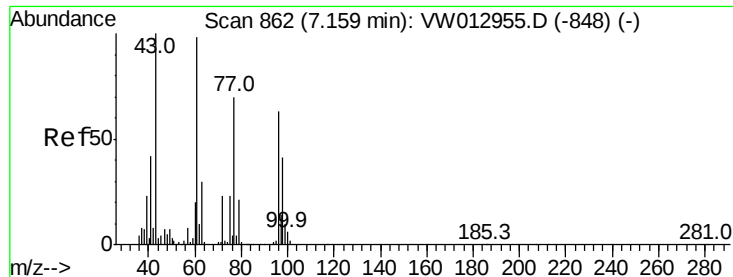
Tgt Ion: 43 Resp: 6554

Ion Ratio Lower Upper

43 100

74 25.0 17.8 26.8

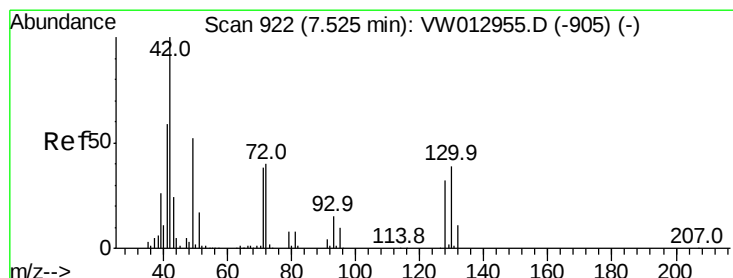
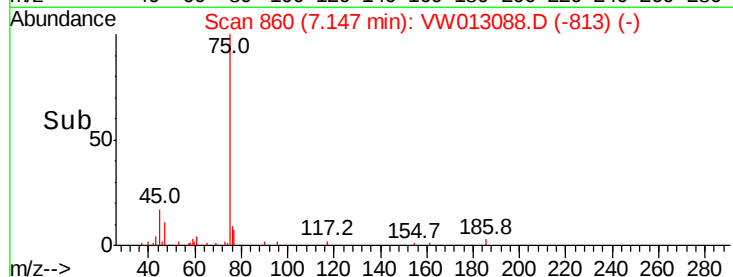
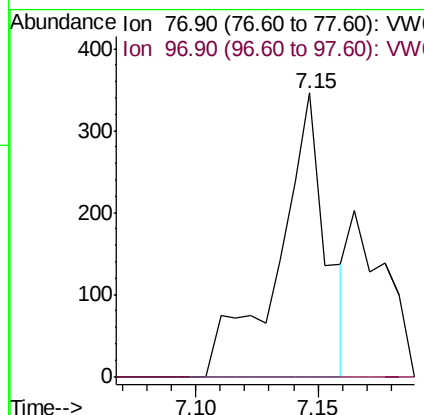
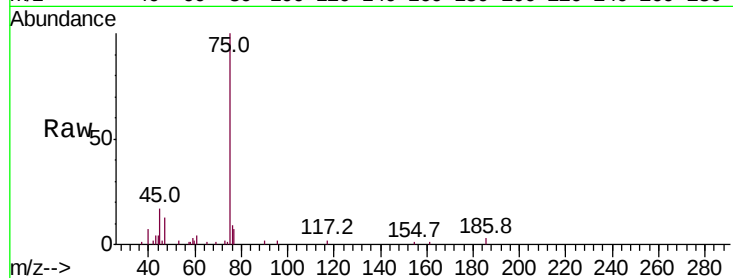




#26  
 2,2-Dichloropropane  
 Concen: Below Cal  
 RT: 7.15 min Scan# 860  
 Delta R.T. -0.01 min  
 Lab File: VW013088.D  
 Acq: 17 Sep 2019 14:21

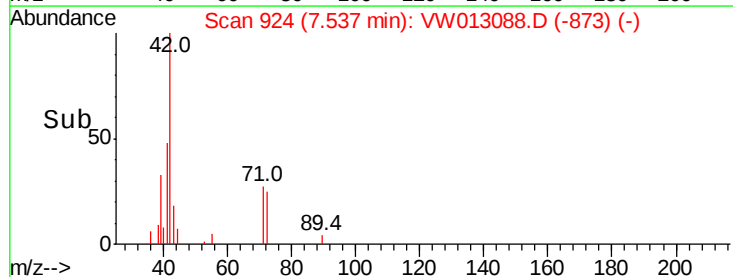
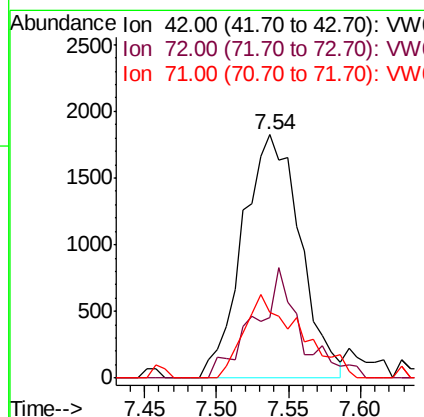
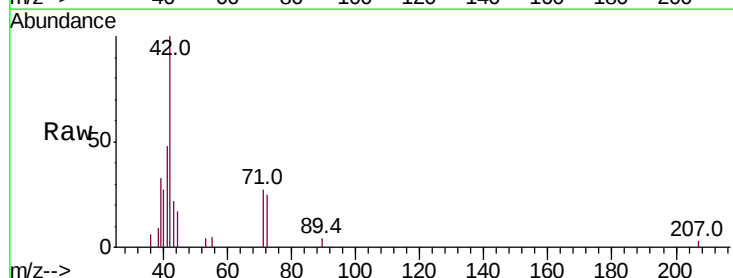
Instrument :  
 MSVOA\_W  
 ClientSampleId :

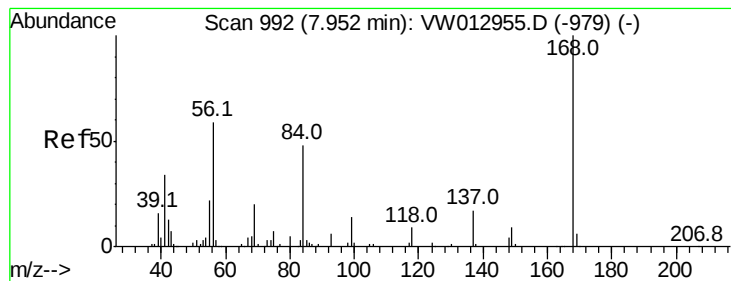
Tot Ion: 77 Resp: 470  
 Ion Ratio Lower Upper  
 77 100  
 97 0.0 10.7 32.1#



#29  
 Tetrahydrofuran  
 Concen: 10.124 ug/l  
 RT: 7.54 min Scan# 924  
 Delta R.T. 0.01 min  
 Lab File: VW013088.D  
 Acq: 17 Sep 2019 14:21

Tgt Ion: 42 Resp: 5078  
 Ion Ratio Lower Upper  
 42 100  
 72 36.2 31.4 47.0  
 71 33.6 29.8 44.8





#31

Cyclohexane

Concen: Below Cal

RT: 7.95 min Scan# 991

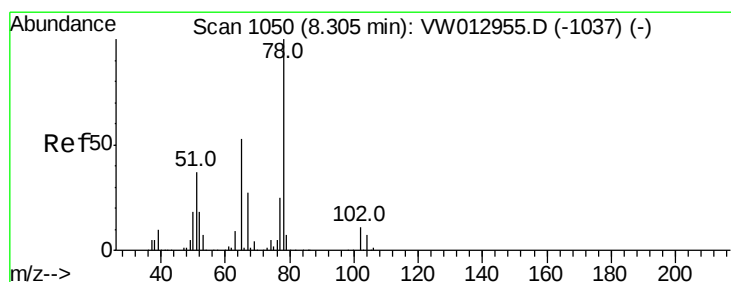
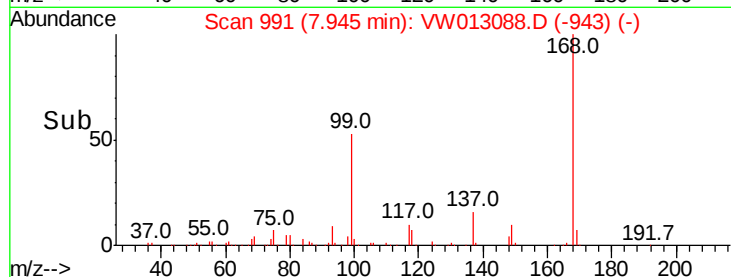
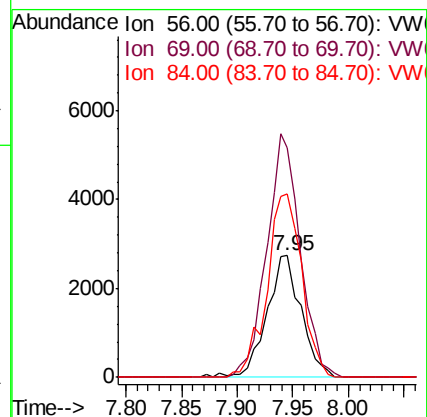
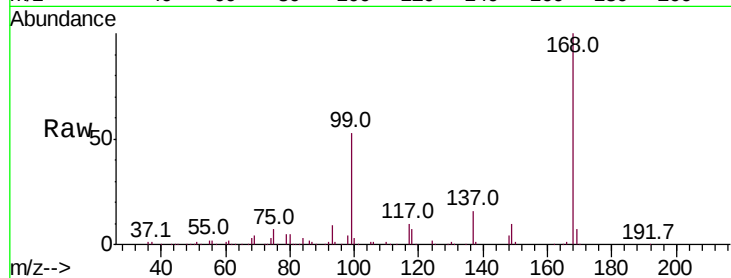
Delta R.T. -0.01 min

Lab File: VW013088.D

Acq: 17 Sep 2019 14:21

Instrument :  
MSVOA\_W  
ClientSampled :

|          |       |       |       |
|----------|-------|-------|-------|
| Tot Ion: | 56    | Resp: | 5911  |
| Ion      | Ratio | Lower | Upper |
| 56       | 100   |       |       |
| 69       | 188.1 | 27.0  | 40.6# |
| 84       | 150.8 | 66.2  | 99.2# |



#33

1,2-Dichloroethane-d4

Concen: 55.930 ug/l

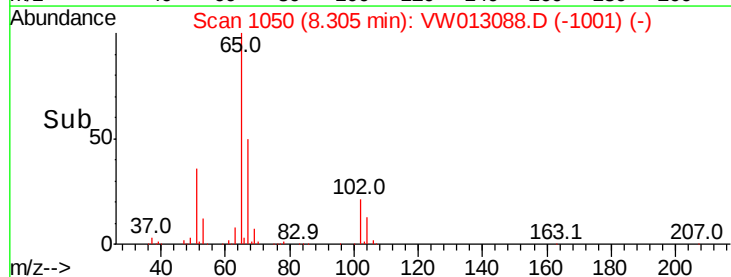
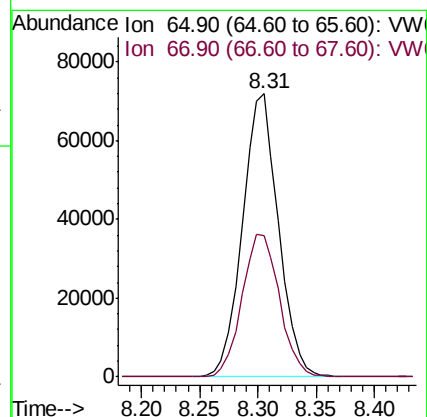
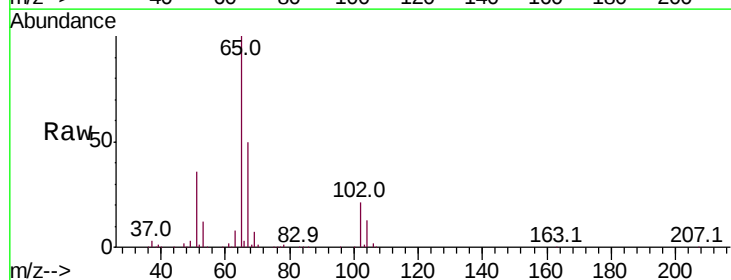
RT: 8.31 min Scan# 1050

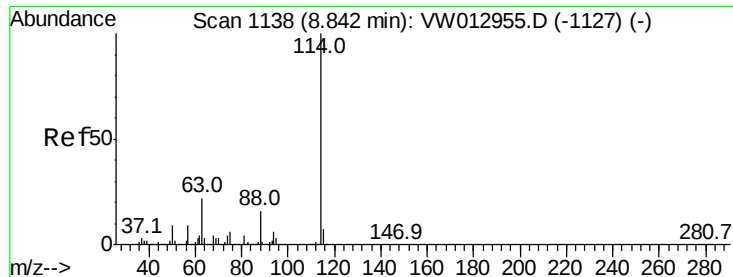
Delta R.T. -0.00 min

Lab File: VW013088.D

Acq: 17 Sep 2019 14:21

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 65    | Resp: | 154838 |
| Ion      | Ratio | Lower | Upper  |
| 65       | 100   |       |        |
| 67       | 52.4  | 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: VW013088.D

Acq: 17 Sep 2019 14:21

Instrument :

MSVOA\_W

ClientSampleId :

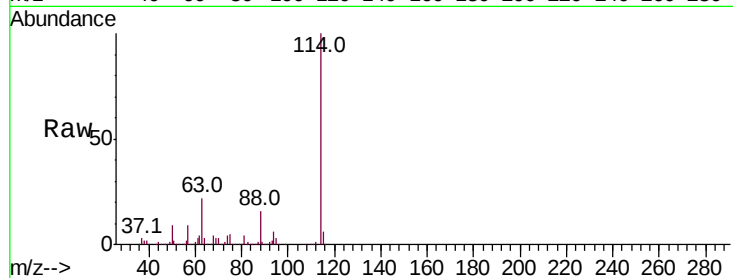
Tot Ion:114 Resp: 462551

Ion Ratio Lower Upper

114 100

63 22.1 0.0 43.4

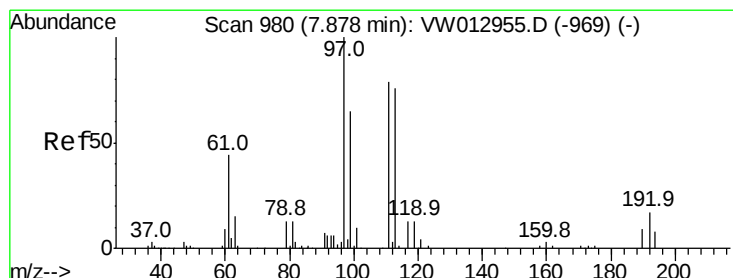
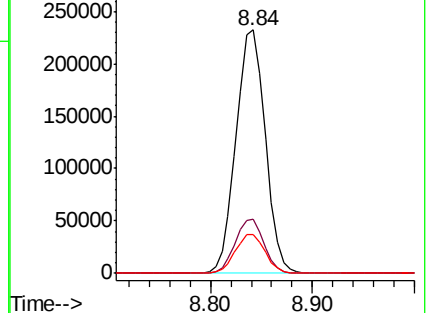
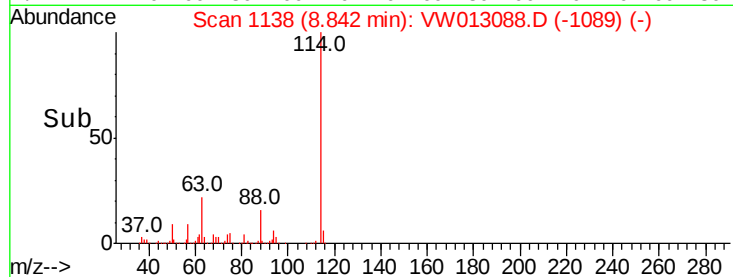
88 15.8 0.0 31.6



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: 52.510 ug/l

RT: 7.88 min Scan# 980

Delta R.T. -0.00 min

Lab File: VW013088.D

Acq: 17 Sep 2019 14:21

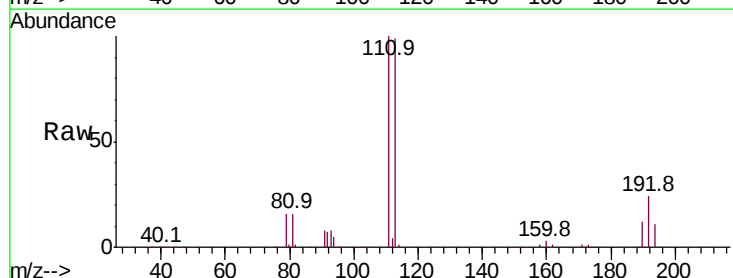
Tgt Ion:113 Resp: 131792

Ion Ratio Lower Upper

113 100

111 104.0 82.8 124.2

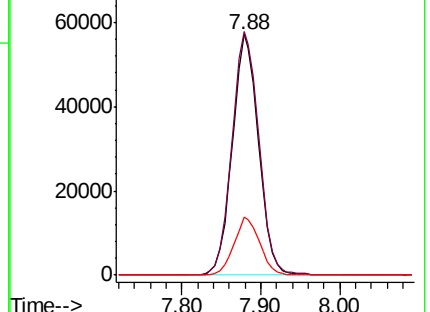
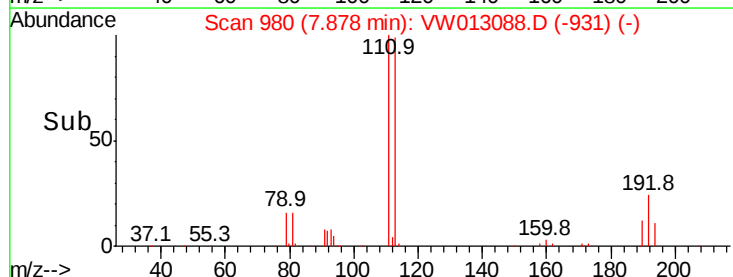
192 23.5 17.8 26.8

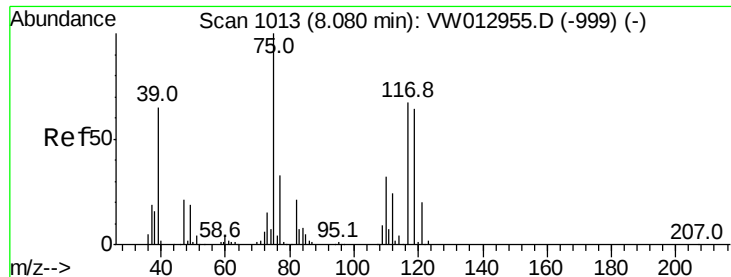


Abundance Ion 112.80 (112.50 to 113.50): V

Ion 110.80 (110.50 to 111.50): V

Ion 191.70 (191.40 to 192.40): V

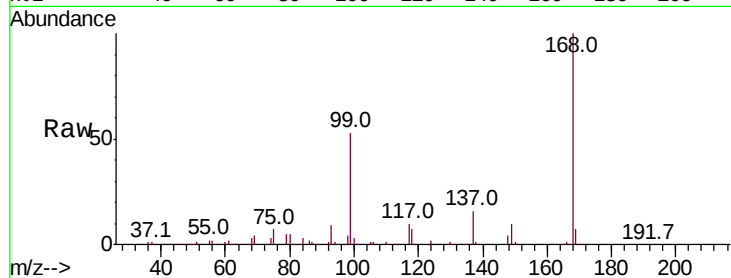




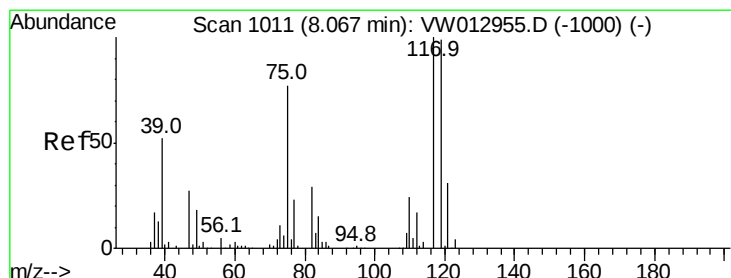
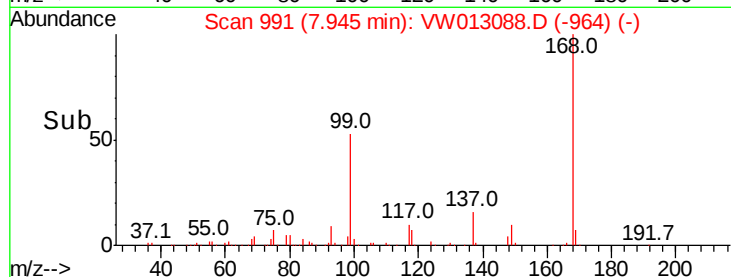
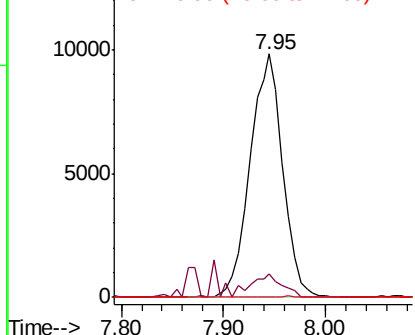
#36  
 1,1-Dichloropropene  
 Concen: 5.891 ug/l  
 RT: 7.95 min Scan# 991  
 Delta R.T. -0.13 min  
 Lab File: VW013088.D  
 Acq: 17 Sep 2019 14:21

Instrument :  
 MSVOA\_W  
 ClientSampled :

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 75      | 100   |       |       |
| 110     | 9.4   | 16.4  | 49.1# |
| 77      | 0.1   | 25.1  | 37.7# |

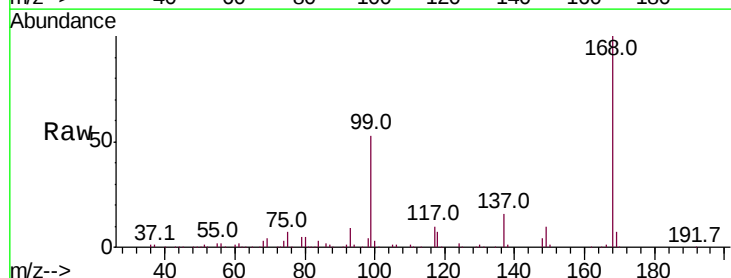


Abundance Ion 74.90 (74.60 to 75.60): VW  
 Ion 109.90 (109.60 to 110.60): V  
 Ion 76.90 (76.60 to 77.60): VW

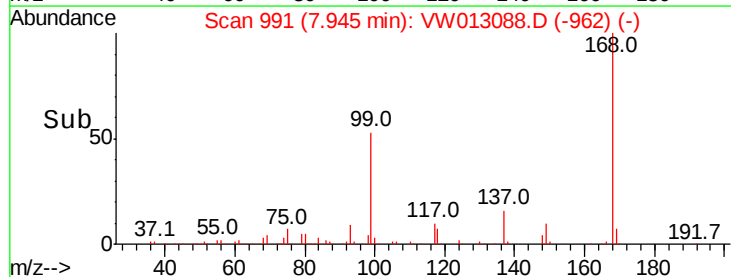
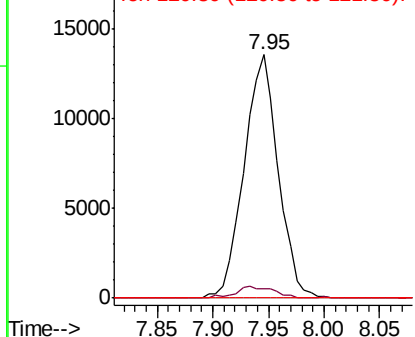


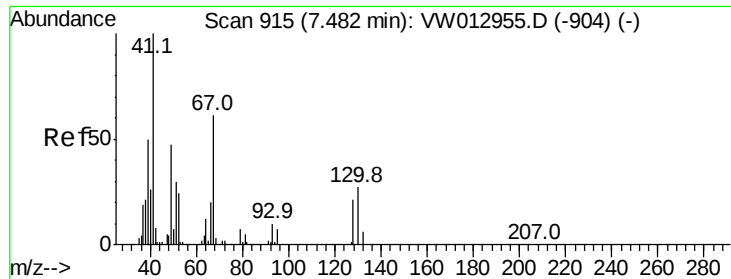
#38  
 Carbon Tetrachloride  
 Concen: 7.624 ug/l  
 RT: 7.95 min Scan# 991  
 Delta R.T. -0.12 min  
 Lab File: VW013088.D  
 Acq: 17 Sep 2019 14:21

| Tgt Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 117     | 100   |       |        |
| 119     | 4.1   | 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

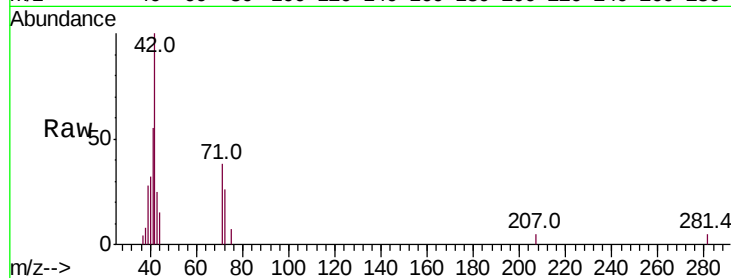




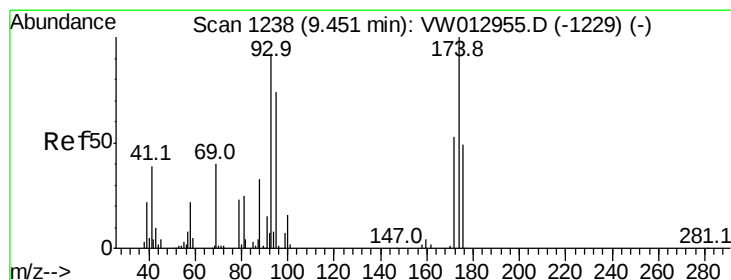
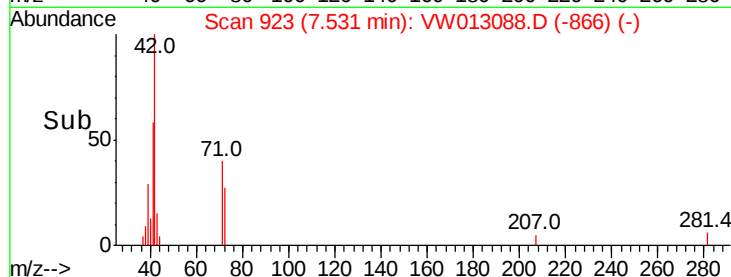
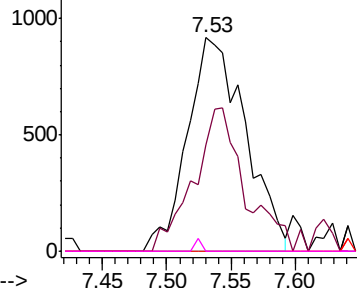
#41  
Methacrylonitrile  
Concen: 2.214 ug/l  
RT: 7.53 min Scan# 923  
Delta R.T. 0.05 min  
Lab File: VW013088.D  
Acq: 17 Sep 2019 14:21

Instrument :  
MSVOA\_W  
ClientSampled :

|          |       |       |       |
|----------|-------|-------|-------|
| Tot Ion: | 41    | Resp: | 2860  |
| Ion      | Ratio | Lower | Upper |
| 41       | 100   |       |       |
| 39       | 59.2  | 48.2  | 72.4  |
| 67       | 0.0   | 47.5  | 71.3# |
| 52       | 0.7   | 21.0  | 31.4# |

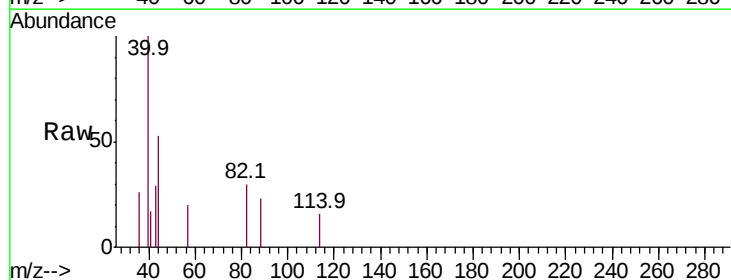


Abundance Ion 41.00 (40.70 to 41.70): VW  
Ion 39.00 (38.70 to 39.70): VW  
Ion 67.00 (66.70 to 67.70): VW  
Ion 52.00 (51.70 to 52.70): VW

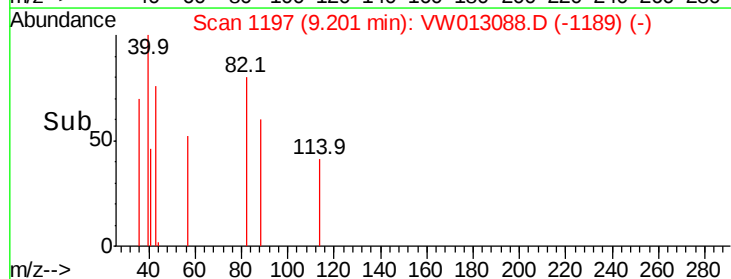
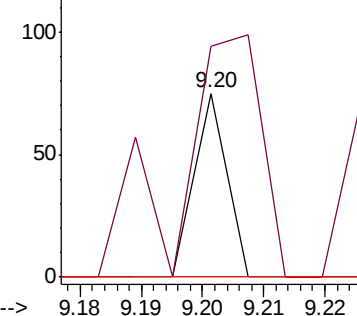


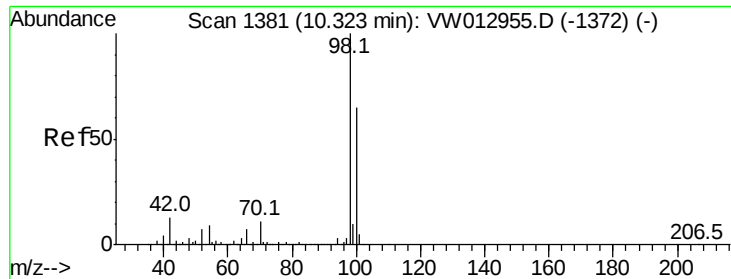
#49  
1,4-Dioxane  
Concen: 1.227 ug/l  
RT: 9.20 min Scan# 1197  
Delta R.T. -0.25 min  
Lab File: VW013088.D  
Acq: 17 Sep 2019 14:21

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 88    | Resp: | 27    |
| Ion      | Ratio | Lower | Upper |
| 88       | 100   |       |       |
| 43       | 337.0 | 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

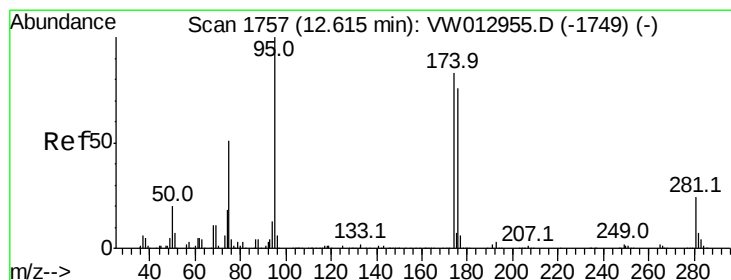
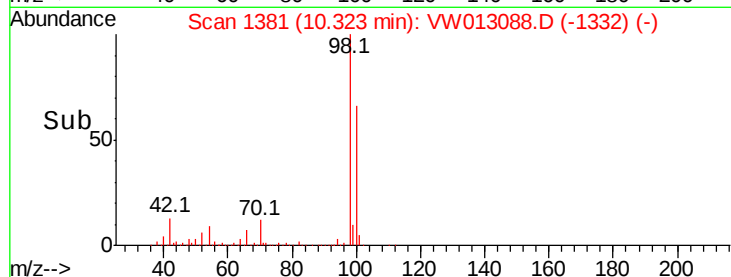
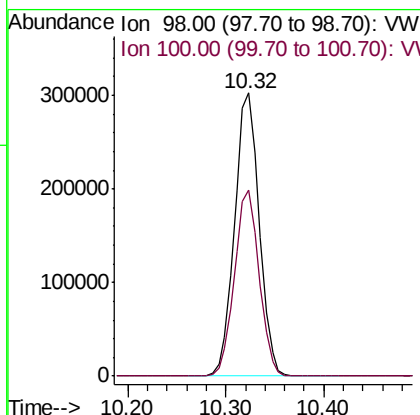
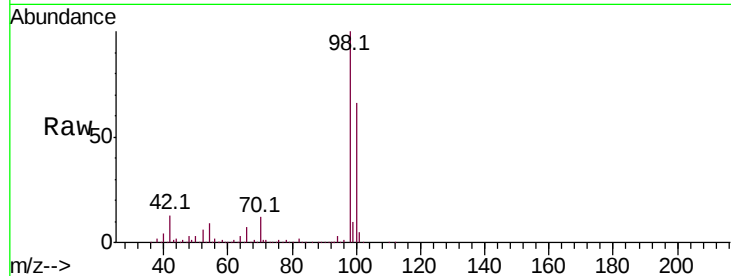




#50  
Toluene-d8  
Concen: 53.797 ug/l  
RT: 10.32 min Scan# 1381  
Delta R.T. -0.00 min  
Lab File: VW013088.D  
Acq: 17 Sep 2019 14:21

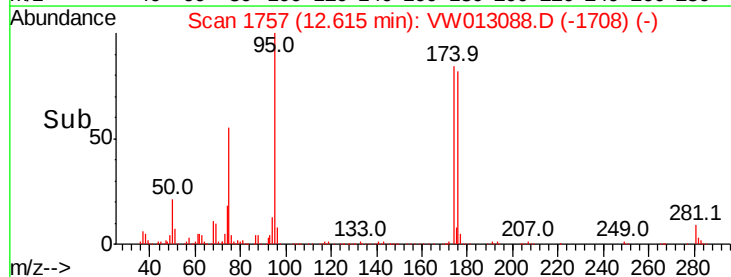
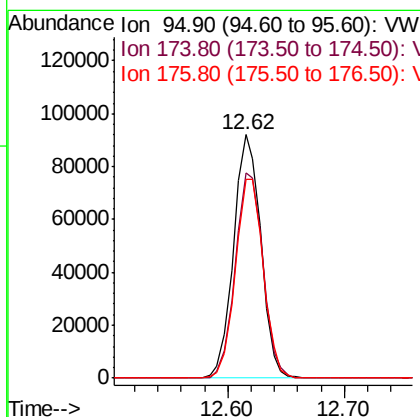
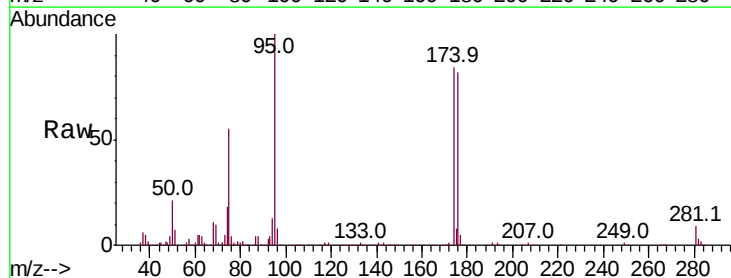
Instrument :  
MSVOA\_W  
ClientSampleId :

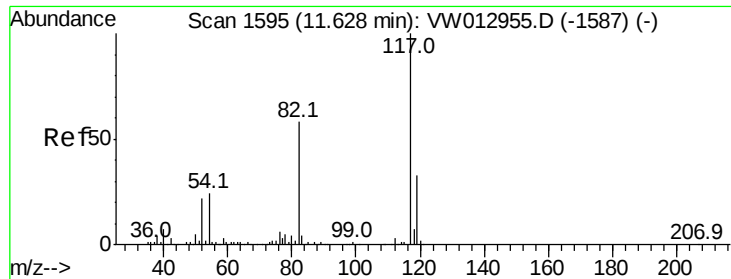
Tot Ion: 98 Resp: 528356  
Ion Ratio Lower Upper  
98 100  
100 65.7 52.1 78.1



#62  
4-Bromofluorobenzene  
Concen: 42.438 ug/l  
RT: 12.62 min Scan# 1757  
Delta R.T. -0.00 min  
Lab File: VW013088.D  
Acq: 17 Sep 2019 14:21

Tgt Ion: 95 Resp: 149872  
Ion Ratio Lower Upper  
95 100  
174 86.1 0.0 170.4  
176 83.7 0.0 164.6

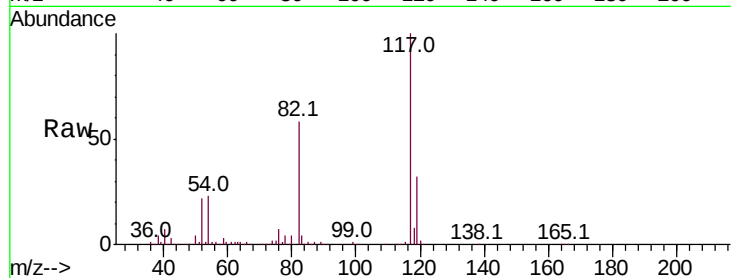




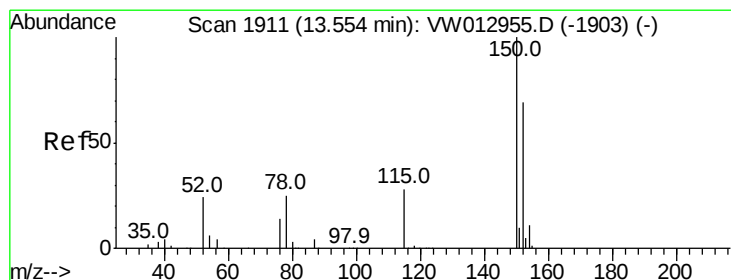
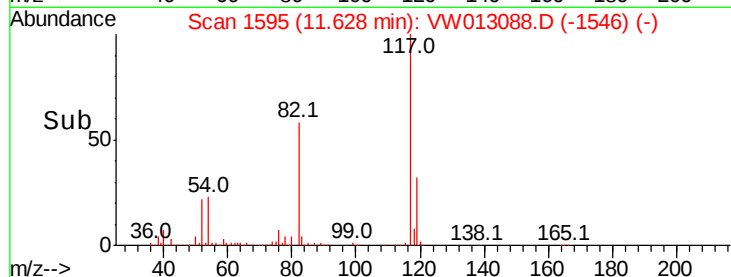
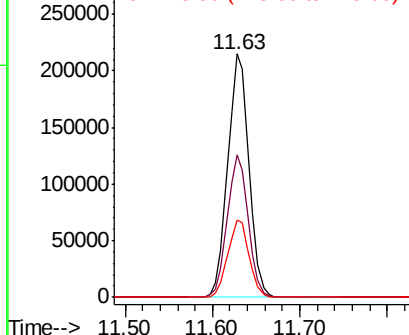
#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 11.63 min Scan# 1595  
Delta R.T. -0.00 min  
Lab File: VW013088.D  
Acq: 17 Sep 2019 14:21

Instrument :  
MSVOA\_W  
ClientSampled :

Tot Ion:117 Resp: 360949  
Ion Ratio Lower Upper  
117 100  
82 58.4 46.3 69.5  
119 31.9 26.2 39.4

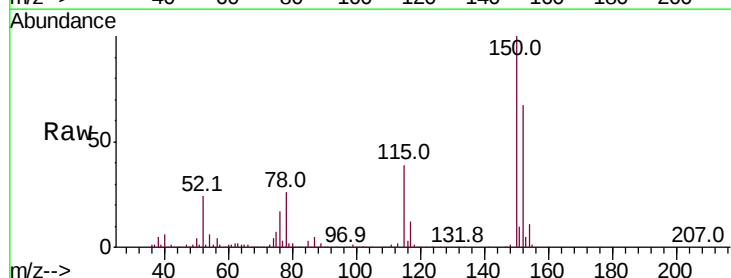


Abundance Ion 116.90 (116.60 to 117.60): V  
Ion 82.00 (81.70 to 82.70): V  
Ion 118.90 (118.60 to 119.60): V

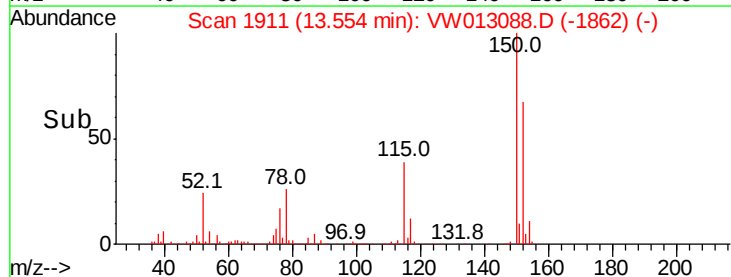
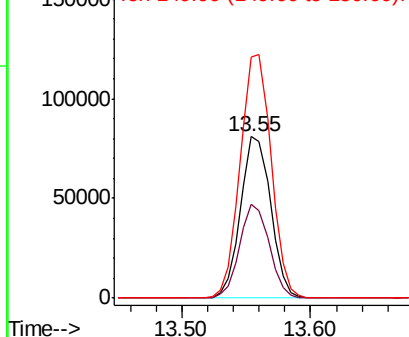


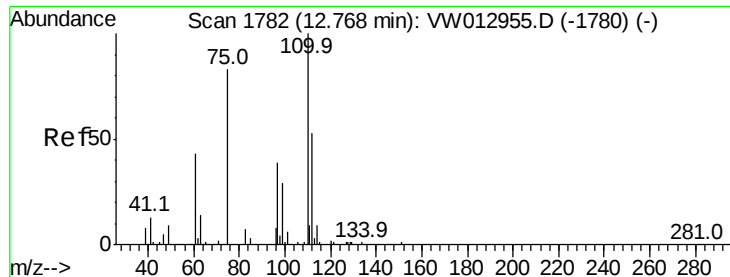
#72  
1,4-Dichlorobenzene-d4  
Concen: 50.000 ug/l  
RT: 13.55 min Scan# 1911  
Delta R.T. -0.00 min  
Lab File: VW013088.D  
Acq: 17 Sep 2019 14:21

Tgt Ion:152 Resp: 131472  
Ion Ratio Lower Upper  
152 100  
115 57.2 28.8 86.4  
150 154.4 0.0 340.2



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: 67.804 ug/l

RT: 12.62 min Scan# 1757

Delta R.T. -0.15 min

Lab File: VW013088.D

Acq: 17 Sep 2019 14:21

Instrument :

MSVOA\_W

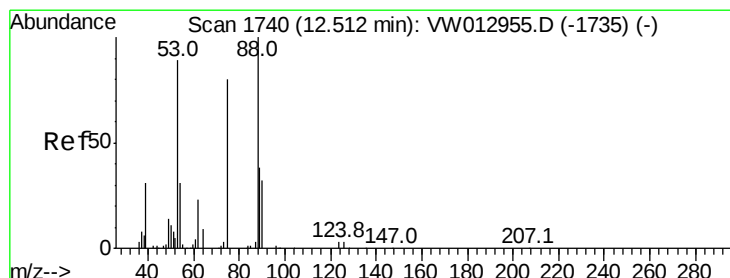
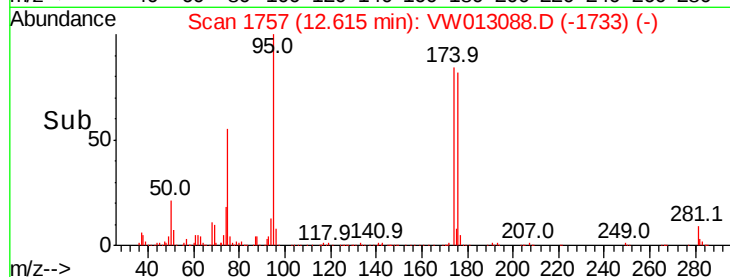
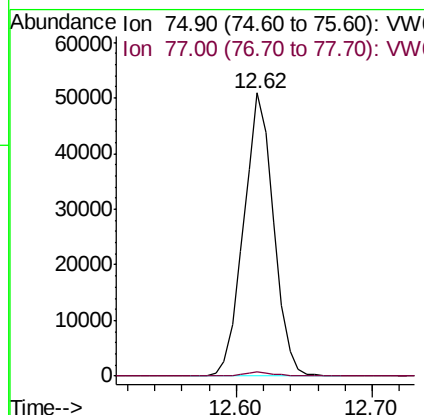
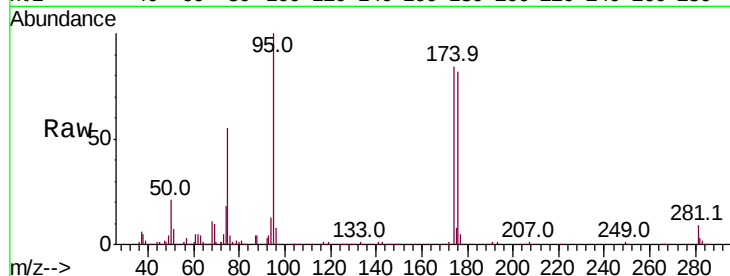
ClientSampleId :

Tot Ion: 75 Resp: 78083

Ion Ratio Lower Upper

75 100

77 1.4 0.0 0.0#



#81

trans-1,4-Dichloro-2-butene

Concen: 153.813 ug/l

RT: 12.62 min Scan# 1757

Delta R.T. 0.10 min

Lab File: VW013088.D

Acq: 17 Sep 2019 14:21

Tgt Ion: 75 Resp: 78083

Ion Ratio Lower Upper

75 100

53 0.1 85.6 128.4#

89 0.3 37.2 55.8#

