

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_D\DATA\VD080219\  
 Data File : VD063315.D  
 Acq On : 2 Aug 2019 14:34  
 Operator : VA/AP  
 Sample : K4120-07RE  
 Misc : 4.58g/5ml/MSVOA\_D/SOIL  
 ALS Vial : 10 Sample Multiplier: 1

Instrument :  
 MSVOA\_D  
 ClientSampleId :  
 T3-1

Quant Time: Aug 04 03:38:11 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_D\METHOD\82D072919S.M  
 Quant Title : SW846 8260  
 QLast Update : Tue Jul 30 03:04:50 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.02  | 168  | 977008   | 50.00 | ug/l  | -0.01    |
| 34) 1,4-Difluorobenzene    | 8.19  | 114  | 1348551  | 50.00 | ug/l  | -0.01    |
| 63) Chlorobenzene-d5       | 12.36 | 117  | 1005909  | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 14.51 | 152  | 436937   | 50.00 | ug/l  | 0.00     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc  | Units   | Dev(Min) |
|-----------------------------|-------|------|----------|-------|---------|----------|
| 33) 1,2-Dichloroethane-d4   | 7.43  | 65   | 478710   | 44.16 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 88.32%  |          |
| 35) Dibromofluoromethane    | 6.90  | 113  | 594341   | 51.62 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 103.24% |          |
| 50) Toluene-d8              | 10.40 | 98   | 1171195  | 45.45 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 90.90%  |          |
| 62) 4-Bromofluorobenzene    | 13.55 | 95   | 458520   | 39.05 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 78.10%  |          |

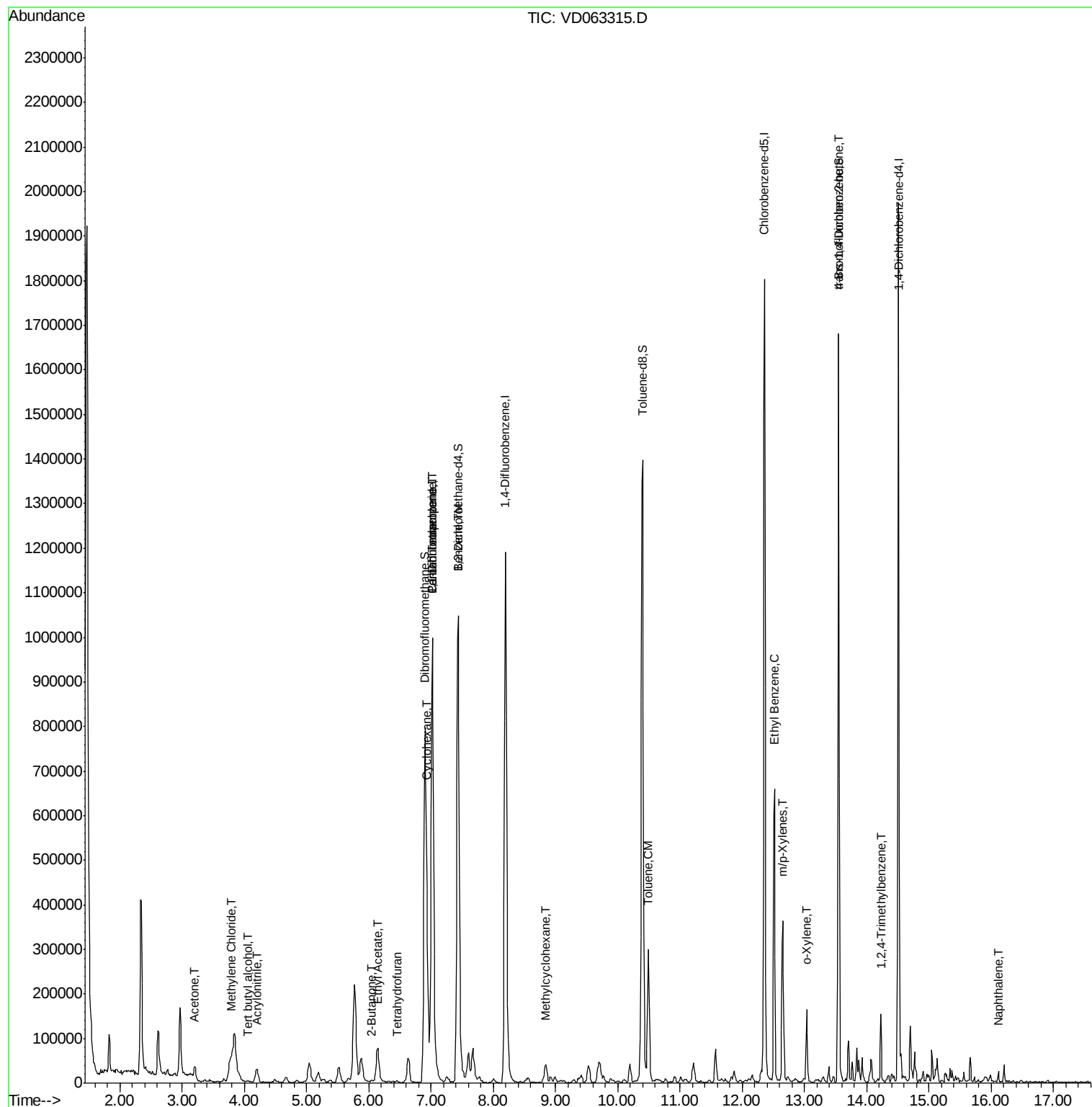
| Target Compounds               | R.T.  | QIon | Response | Conc    | Units  | Qvalue |
|--------------------------------|-------|------|----------|---------|--------|--------|
| 11) Tert butyl alcohol         | 4.05  | 59   | 2786     | 5.856   | ug/l # | 69     |
| 15) Acrylonitrile              | 4.19  | 53   | 1501     | 1.217   | ug/l # | 14     |
| 16) Acetone                    | 3.20  | 43   | 69336    | 32.826  | ug/l   | 97     |
| 20) Methylene Chloride         | 3.78  | 84   | 20705    | 2.425   | ug/l # | 88     |
| 25) 2-Butanone                 | 6.06  | 43   | 8822     | 4.162   | ug/l # | 77     |
| 29) Tetrahydrofuran            | 6.45  | 42   | 1752     | 1.746   | ug/l # | 58     |
| 31) Cyclohexane                | 6.93  | 56   | 168787   | 17.479  | ug/l   | 90     |
| 36) 1,1-Dichloropropene        | 7.01  | 75   | 73123    | 5.941   | ug/l # | 51     |
| 37) Ethyl Acetate              | 6.14  | 43   | 7053     | 1.276   | ug/l # | 1      |
| 38) Carbon Tetrachloride       | 7.02  | 117  | 91821    | 4.956   | ug/l # | 15     |
| 39) Methylcyclohexane          | 8.84  | 83   | 20652    | 2.014   | ug/l # | 93     |
| 40) Benzene                    | 7.43  | 78   | 737507   | 28.593  | ug/l   | 94     |
| 52) Toluene                    | 10.50 | 92   | 148428   | 8.652   | ug/l   | 89     |
| 67) Ethyl Benzene              | 12.51 | 91   | 461999   | 14.056  | ug/l   | 97     |
| 68) m/p-Xylenes                | 12.65 | 106  | 102917   | 8.538   | ug/l   | 92     |
| 69) o-Xylene                   | 13.04 | 106  | 32817    | 2.965   | ug/l   | 89     |
| 81) trans-1,4-Dichloro-2-buten | 13.55 | 75   | 209166   | 143.529 | ug/l # | 3      |
| 84) 1,2,4-Trimethylbenzene     | 14.23 | 105  | 59595    | 2.436   | ug/l   | 98     |
| 95) Naphthalene                | 16.12 | 128  | 14243    | 1.054   | ug/l # | 95     |

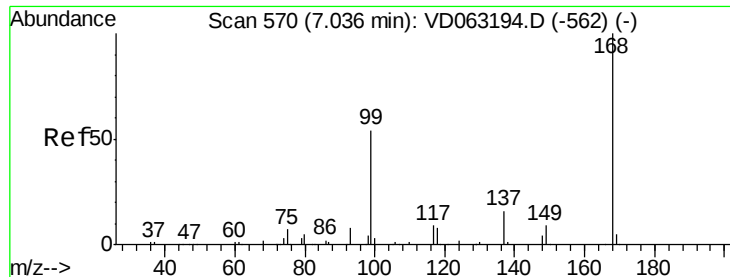
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Time: Aug 04 03:38:11 2019  
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Quant Title : SW846 8260  
QLast Update : Tue Jul 30 03:04:50 2019  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 7.02 min Scan# 568

Delta R.T. -0.01 min

Lab File: VD063315.D

Acq: 2 Aug 2019 14:34

Instrument :

MSVOA\_D

ClientSampleId :

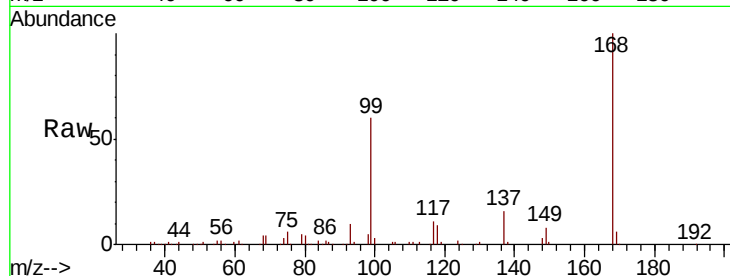
T3-1

Tgt Ion:168 Resp: 977008

Ion Ratio Lower Upper

168 100

99 59.9 43.7 65.5



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.95 (98.65 to 99.65): VDC

7.02

400000

300000

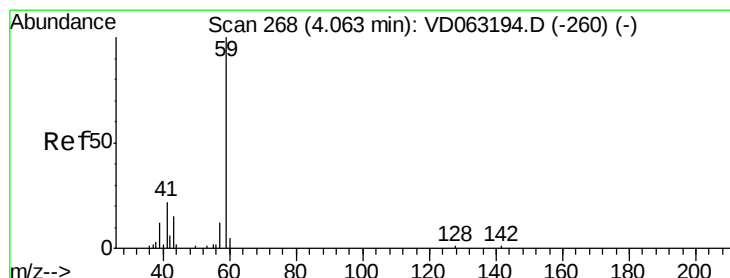
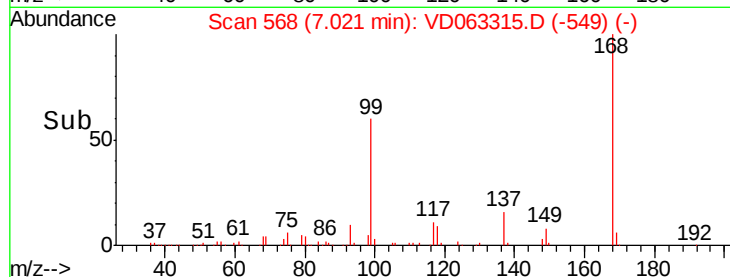
200000

100000

0

Time-->

6.90 7.00 7.10 7.20



#11

Tert butyl alcohol

Concen: 5.856 ug/l

RT: 4.05 min Scan# 266

Delta R.T. -0.01 min

Lab File: VD063315.D

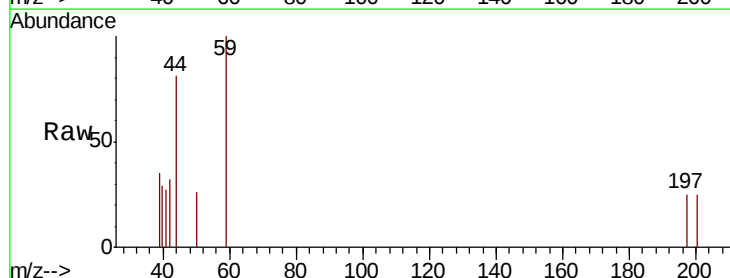
Acq: 2 Aug 2019 14:34

Tgt Ion: 59 Resp: 2786

Ion Ratio Lower Upper

59 100

57 0.0 9.6 14.4#



Abundance Ion 58.95 (58.65 to 59.65): VDC

Ion 56.95 (56.65 to 57.65): VDC

4.05

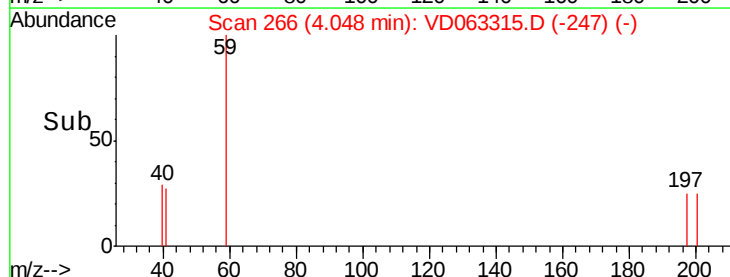
1000

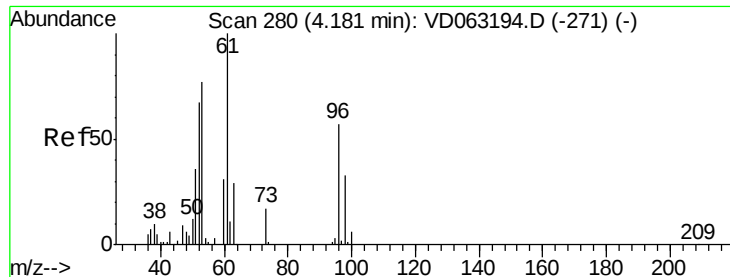
500

0

Time-->

4.00 4.05 4.10





#15

Acrylonitrile

Concen: 1.217 ug/l

RT: 4.19 min Scan# 280

Delta R.T. 0.00 min

Lab File: VD063315.D

Acq: 2 Aug 2019 14:34

Instrument :

MSVOA\_D

ClientSampleId :

T3-1

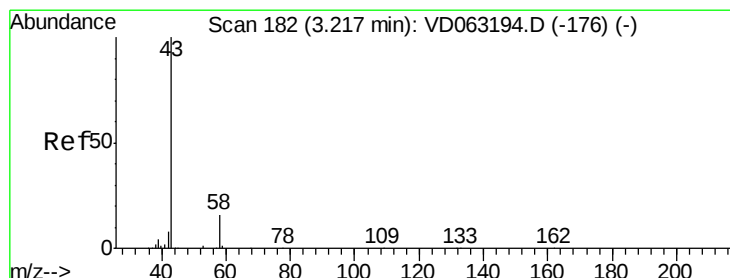
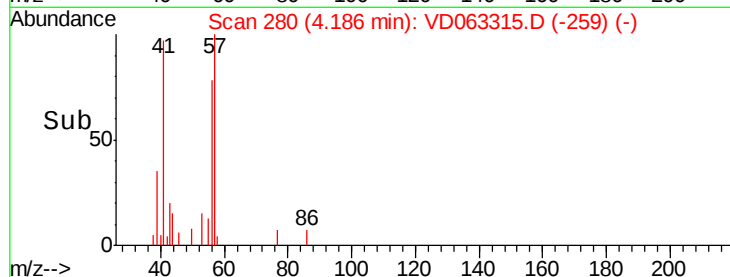
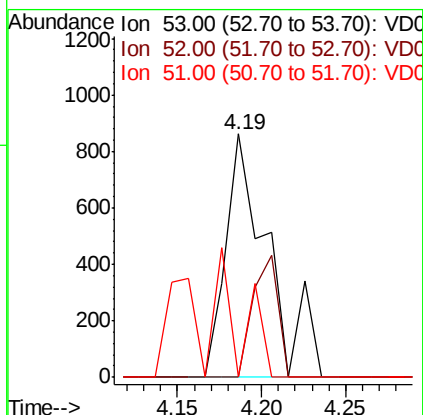
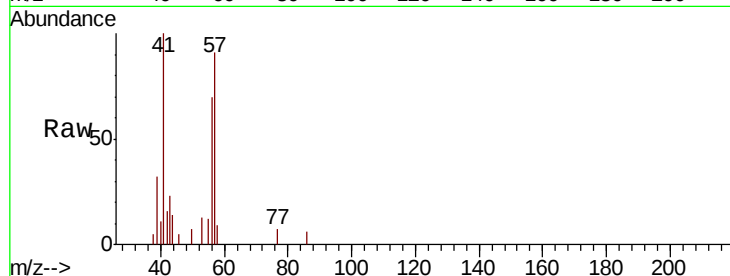
Tgt Ion: 53 Resp: 1501

Ion Ratio Lower Upper

53 100

52 0.0 69.7 104.5#

51 0.0 37.4 56.0#



#16

Acetone

Concen: 32.826 ug/l

RT: 3.20 min Scan# 180

Delta R.T. -0.01 min

Lab File: VD063315.D

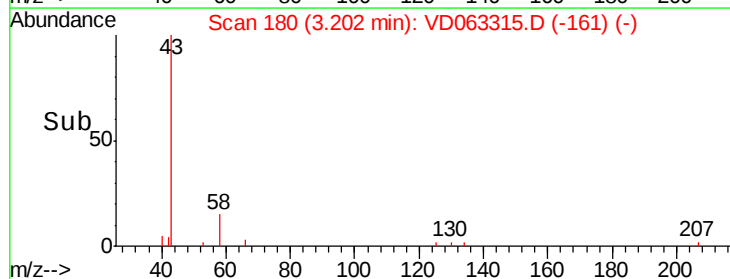
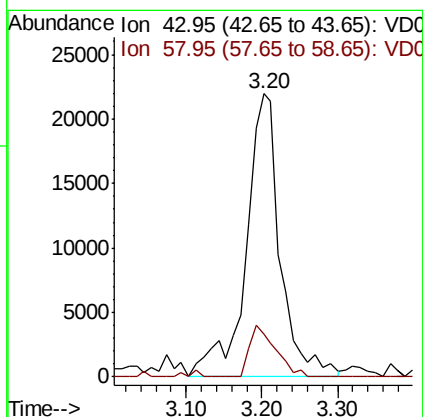
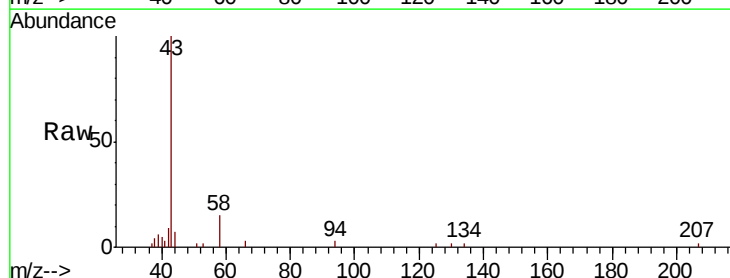
Acq: 2 Aug 2019 14:34

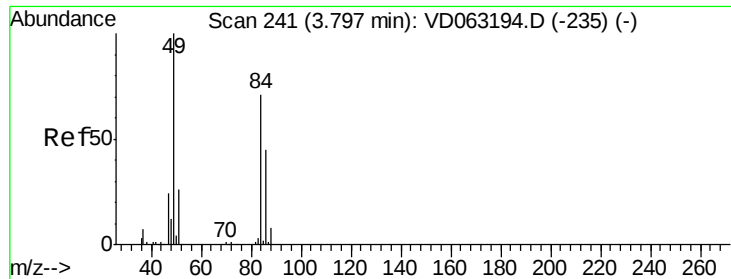
Tgt Ion: 43 Resp: 69336

Ion Ratio Lower Upper

43 100

58 14.9 13.0 19.4





#20

Methylene Chloride

Concen: 2.425 ug/l

RT: 3.78 min Scan# 239

Delta R.T. -0.01 min

Lab File: VD063315.D

Acq: 2 Aug 2019 14:34

Instrument :  
MSVOA\_D  
ClientSampleId :  
T3-1

Tgt Ion: 84 Resp: 20705

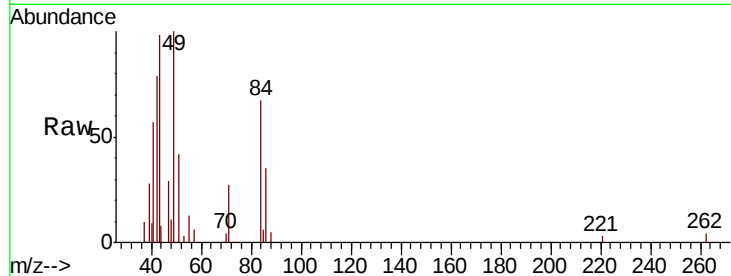
Ion Ratio Lower Upper

84 100

49 137.3 112.5 168.7

51 57.0 29.6 44.4#

86 48.6 50.4 75.6#

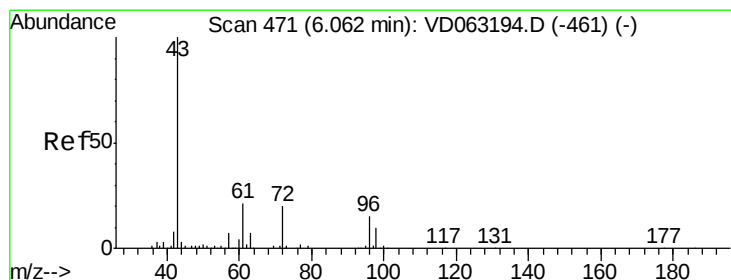
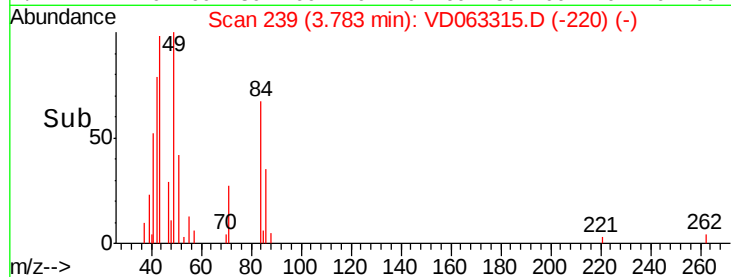
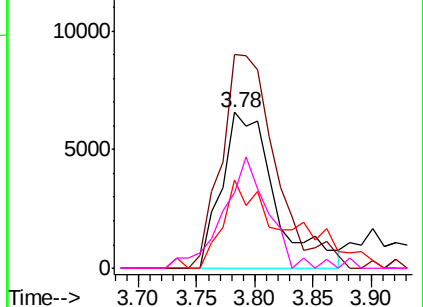


Abundance Ion 83.95 (83.65 to 84.65): VDC

Ion 48.90 (48.60 to 49.60): VDC

Ion 50.90 (50.60 to 51.60): VDC

Ion 85.90 (85.60 to 86.60): VDC



#25

2-Butanone

Concen: 4.162 ug/l

RT: 6.06 min Scan# 470

Delta R.T. -0.00 min

Lab File: VD063315.D

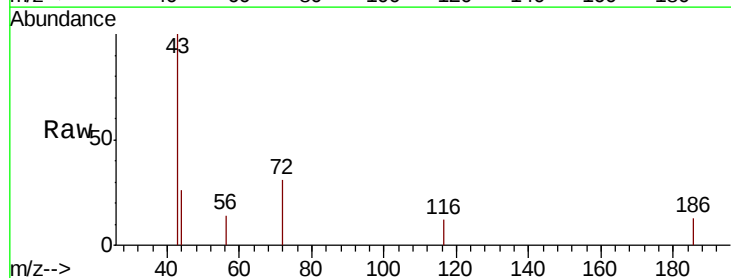
Acq: 2 Aug 2019 14:34

Tgt Ion: 43 Resp: 8822

Ion Ratio Lower Upper

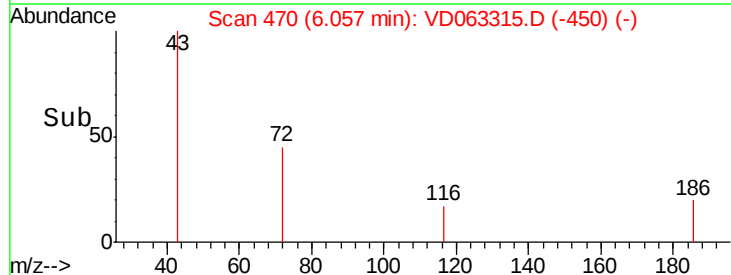
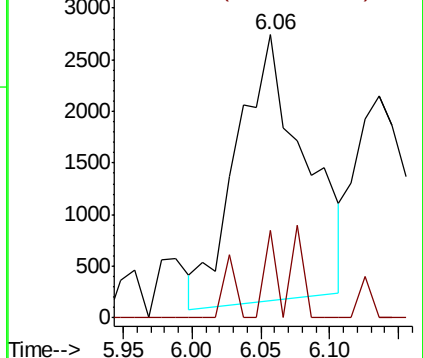
43 100

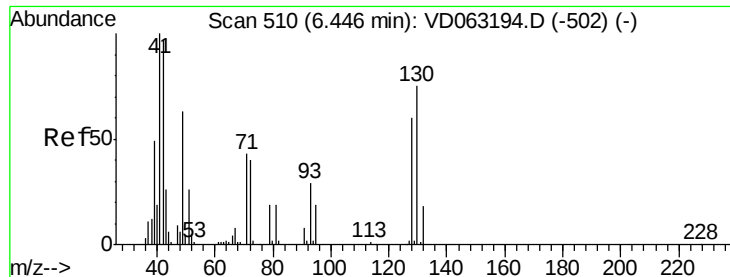
72 31.0 16.3 24.5#



Abundance Ion 42.95 (42.65 to 43.65): VDC

Ion 72.00 (71.70 to 72.70): VDC





#29

Tetrahydrofuran

Concen: 1.746 ug/l

RT: 6.45 min Scan# 510

Delta R.T. 0.00 min

Lab File: VD063315.D

Acq: 2 Aug 2019 14:34

Instrument :

MSVOA\_D

ClientSampled :

T3-1

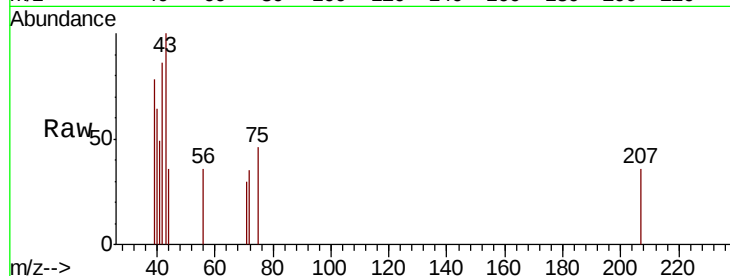
Tgt Ion: 42 Resp: 1752

Ion Ratio Lower Upper

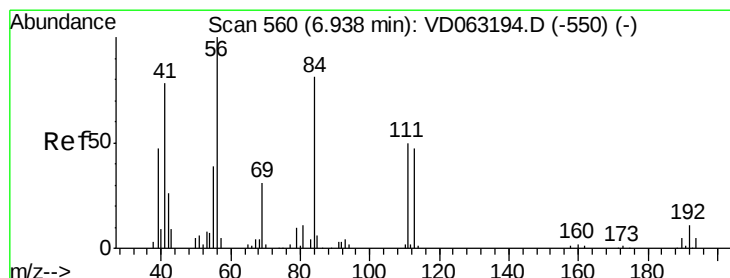
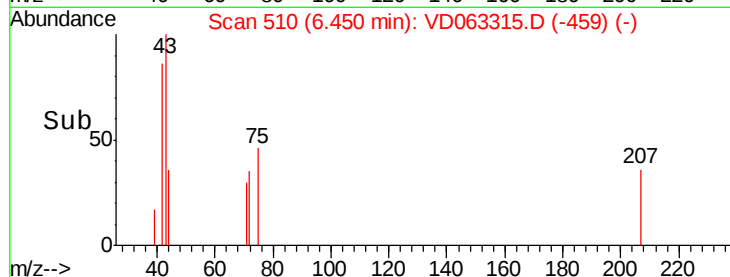
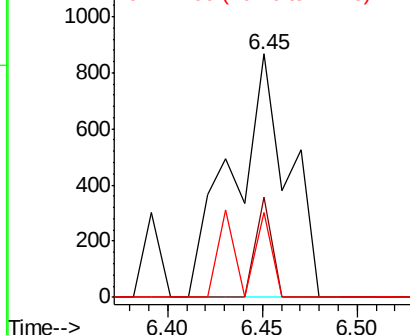
42 100

72 12.0 33.4 50.2#

71 20.6 35.7 53.5#



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



#31

Cyclohexane

Concen: 17.479 ug/l

RT: 6.93 min Scan# 559

Delta R.T. -0.00 min

Lab File: VD063315.D

Acq: 2 Aug 2019 14:34

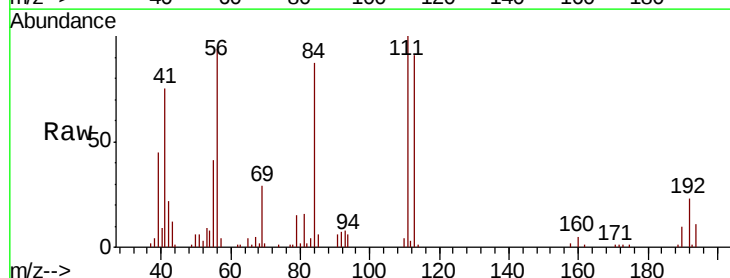
Tgt Ion: 56 Resp: 168787

Ion Ratio Lower Upper

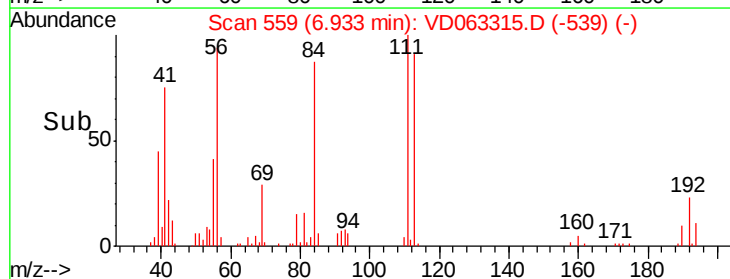
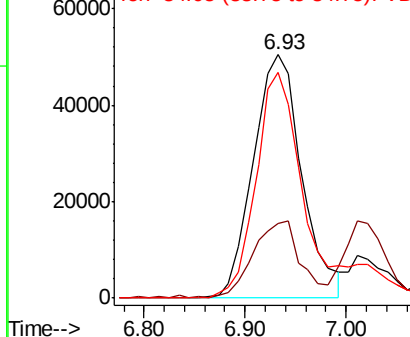
56 100

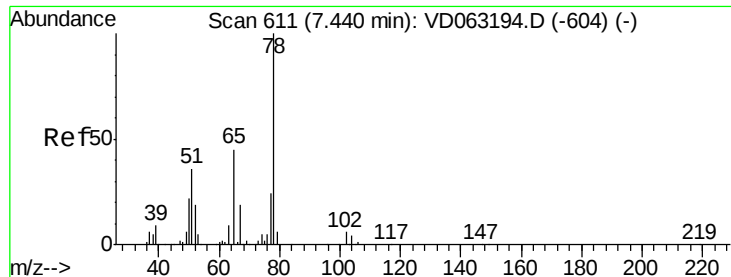
69 30.8 24.5 36.7

84 92.7 64.9 97.3



Abundance Ion 55.95 (55.65 to 56.65): VDC  
Ion 69.00 (68.70 to 69.70): VDC  
Ion 84.05 (83.75 to 84.75): VDC





#33

1,2-Dichloroethane-d4

Concen: 44.158 ug/l

RT: 7.43 min Scan# 610

Delta R.T. -0.00 min

Lab File: VD063315.D

Acq: 2 Aug 2019 14:34

Instrument :

MSVOA\_D

ClientSampled :

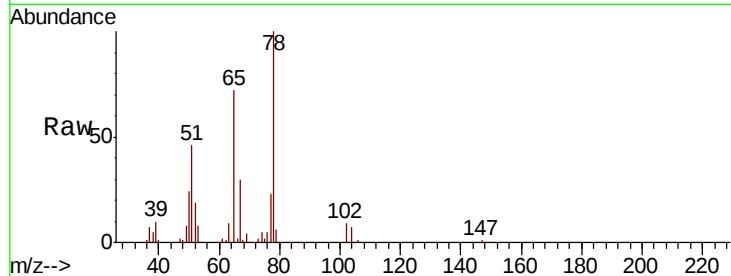
T3-1

Tgt Ion: 65 Resp: 478710

Ion Ratio Lower Upper

65 100

67 42.4 0.0 85.8



Abundance Ion 64.95 (64.65 to 65.65): VDC

Ion 66.90 (66.60 to 67.60): VDC

7.43

200000

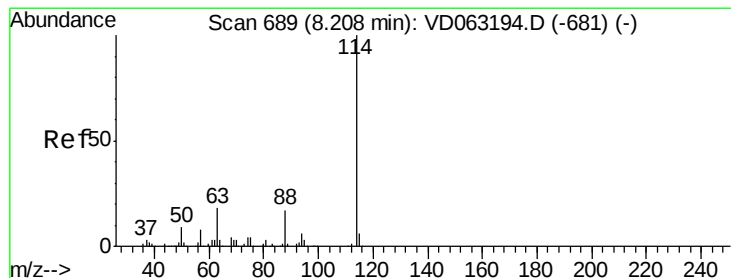
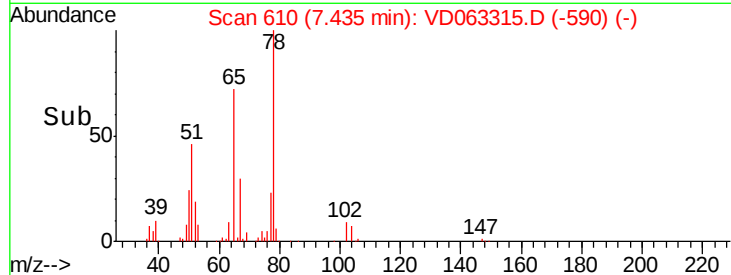
150000

100000

50000

0

Time-->



#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 8.19 min Scan# 687

Delta R.T. -0.01 min

Lab File: VD063315.D

Acq: 2 Aug 2019 14:34

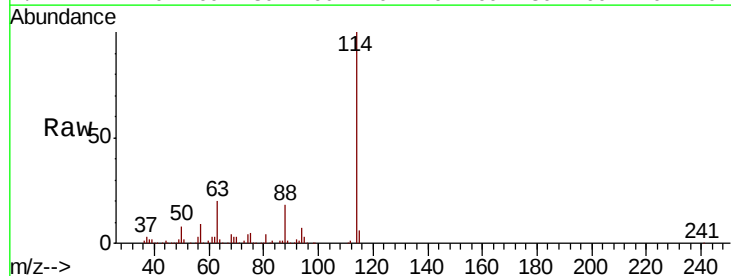
Tgt Ion: 114 Resp: 1348551

Ion Ratio Lower Upper

114 100

63 19.9 0.0 35.2

88 17.6 0.0 34.6



Abundance Ion 114.00 (113.70 to 114.70): V

Ion 62.95 (62.65 to 63.65): VDC

Ion 87.90 (87.60 to 88.60): VDC

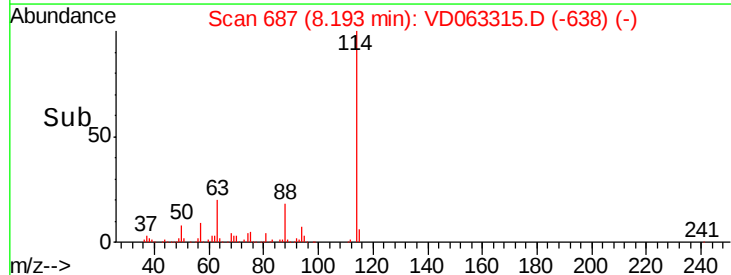
600000

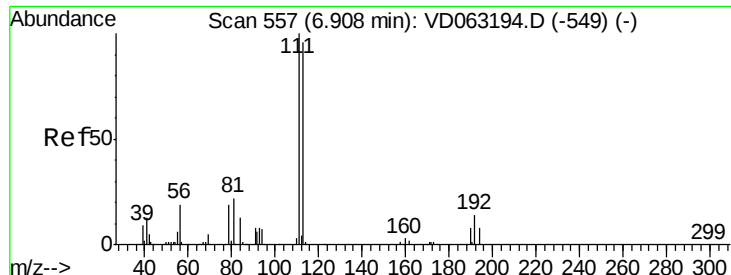
400000

200000

0

Time-->





#35

Dibromofluoromethane

Concen: 51.620 ug/l

RT: 6.90 min Scan# 556

Delta R.T. -0.00 min

Lab File: VD063315.D

Acq: 2 Aug 2019 14:34

Instrument :

MSVOA\_D

ClientSampleId :

T3-1

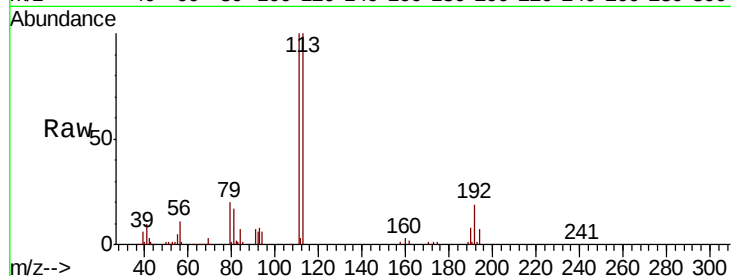
Tgt Ion:113 Resp: 594341

Ion Ratio Lower Upper

113 100

111 99.8 83.2 124.8

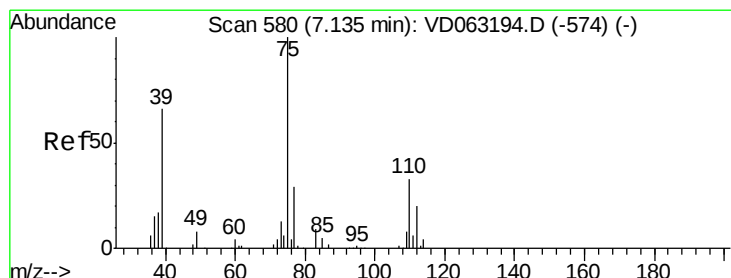
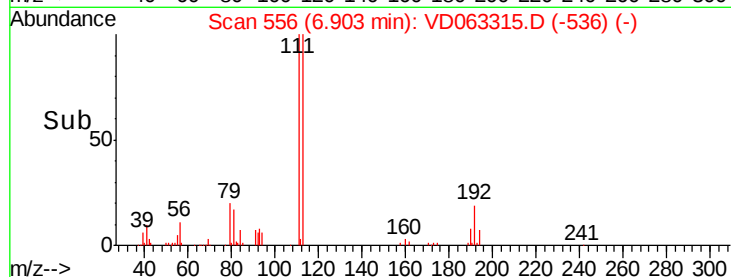
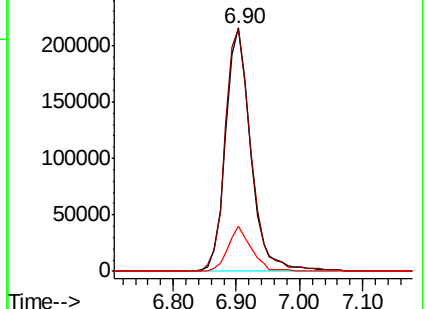
192 18.6 11.8 17.8#



Abundance Ion 112.90 (112.60 to 113.60): V

Ion 110.90 (110.60 to 111.60): V

Ion 191.80 (191.50 to 192.50): V



#36

1,1-Dichloropropene

Concen: 5.941 ug/l

RT: 7.01 min Scan# 567

Delta R.T. -0.12 min

Lab File: VD063315.D

Acq: 2 Aug 2019 14:34

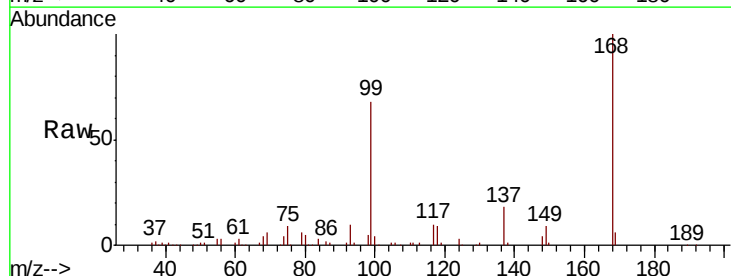
Tgt Ion: 75 Resp: 73123

Ion Ratio Lower Upper

75 100

110 6.9 16.1 48.2#

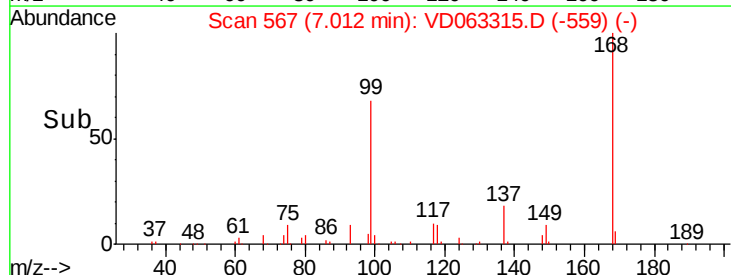
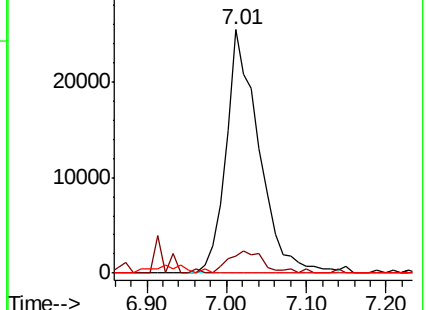
77 0.0 22.7 34.1#

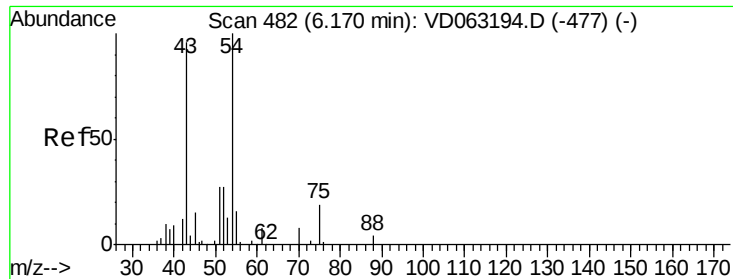


Abundance Ion 75.00 (74.70 to 75.70): V

Ion 109.90 (109.60 to 110.60): V

Ion 76.95 (76.65 to 77.65): V





#37

Ethyl Acetate

Concen: 1.276 ug/l

RT: 6.14 min Scan# 478

Delta R.T. -0.03 min

Lab File: VD063315.D

Acq: 2 Aug 2019 14:34

Instrument :

MSVOA\_D

ClientSampleId :

T3-1

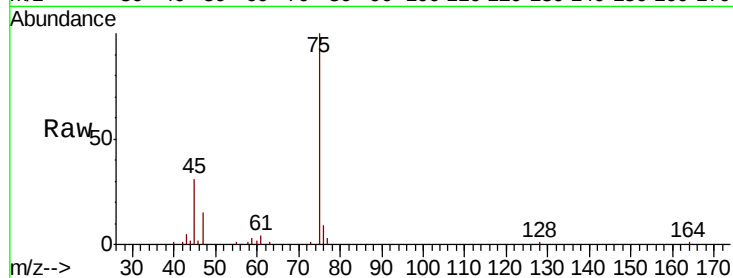
Tgt Ion: 43 Resp: 7053

Ion Ratio Lower Upper

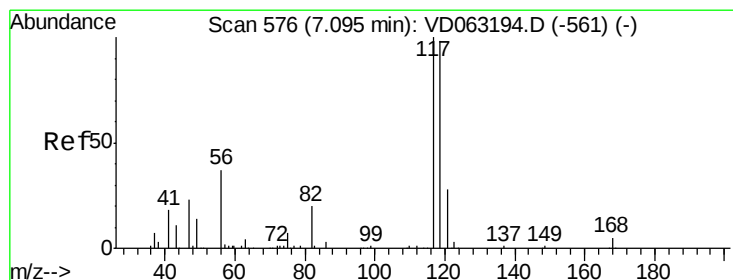
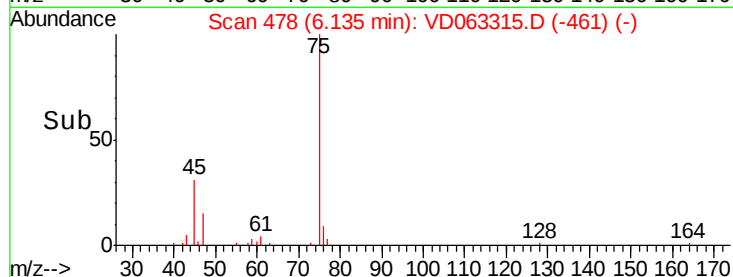
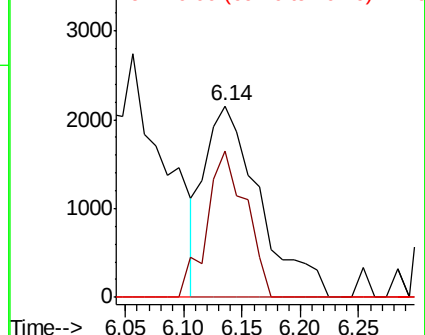
43 100

61 76.3 11.3 16.9#

70 0.0 5.1 7.7#



Abundance Ion 42.95 (42.65 to 43.65): VDC  
Ion 60.95 (60.65 to 61.65): VDC  
Ion 70.00 (69.70 to 70.70): VDC



#38

Carbon Tetrachloride

Concen: 4.956 ug/l

RT: 7.02 min Scan# 568

Delta R.T. -0.07 min

Lab File: VD063315.D

Acq: 2 Aug 2019 14:34

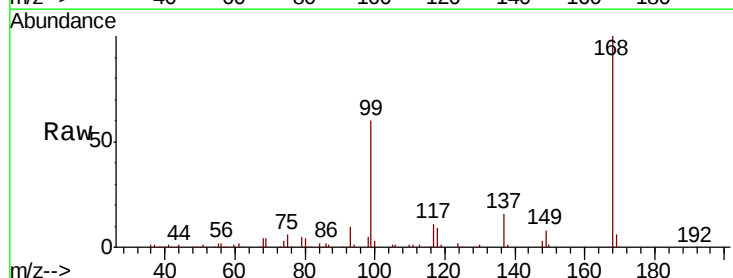
Tgt Ion: 117 Resp: 91821

Ion Ratio Lower Upper

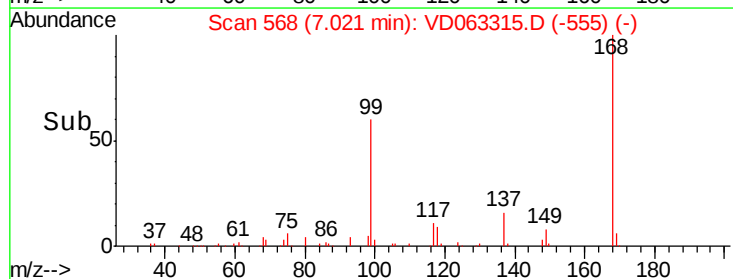
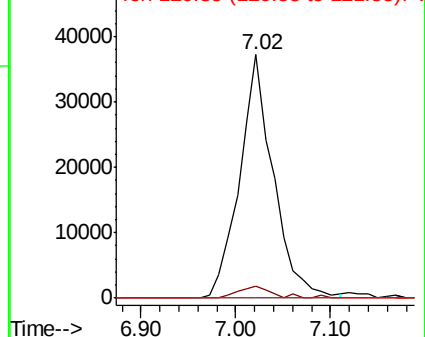
117 100

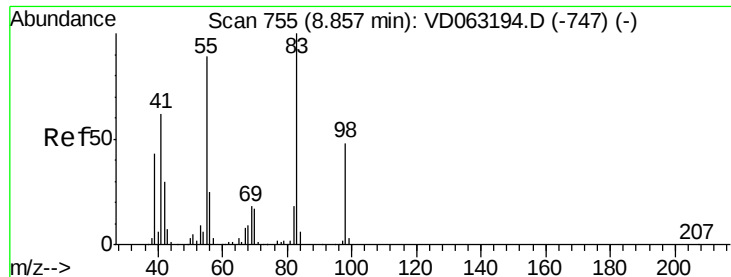
119 4.8 78.2 117.2#

121 0.0 22.1 33.1#



Abundance Ion 116.85 (116.55 to 117.55): V  
Ion 118.85 (118.55 to 119.55): V  
Ion 120.85 (120.55 to 121.55): V

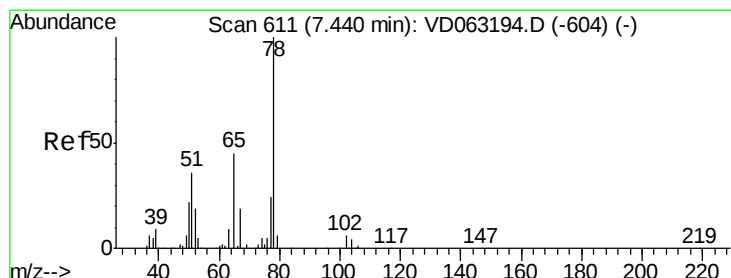
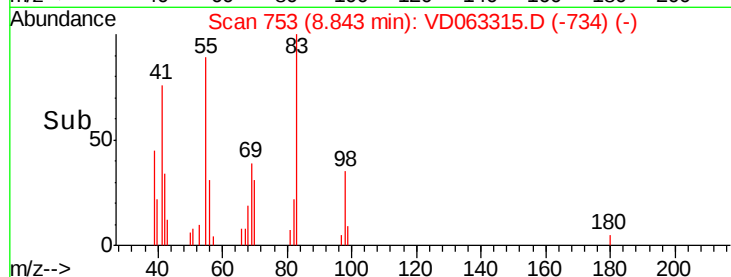
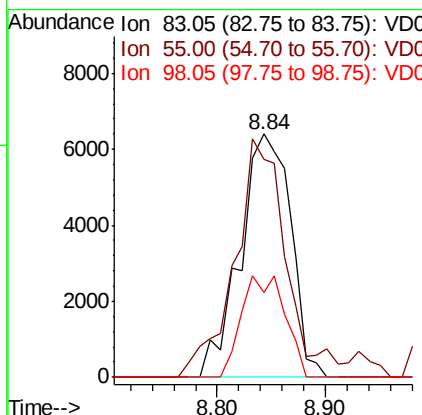
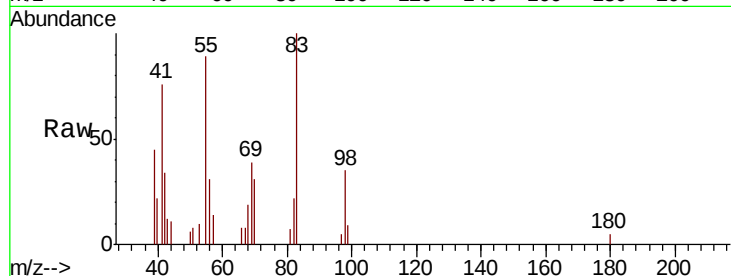




#39  
Methylcyclohexane  
Concen: 2.014 ug/l  
RT: 8.84 min Scan# 753  
Delta R.T. -0.01 min  
Lab File: VD063315.D  
Acq: 2 Aug 2019 14:34

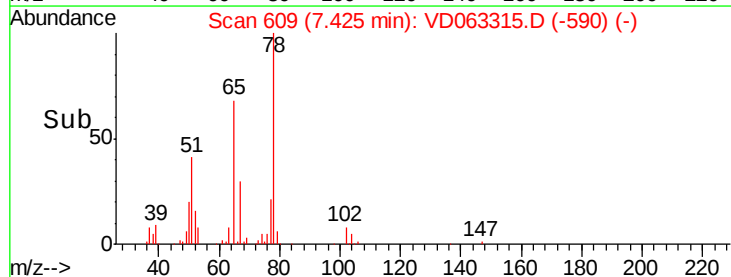
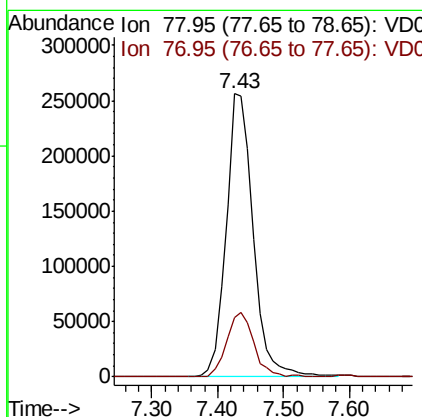
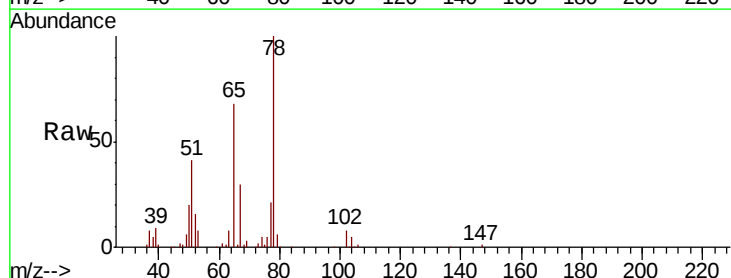
Instrument :  
MSVOA\_D  
ClientSampleId :  
T3-1

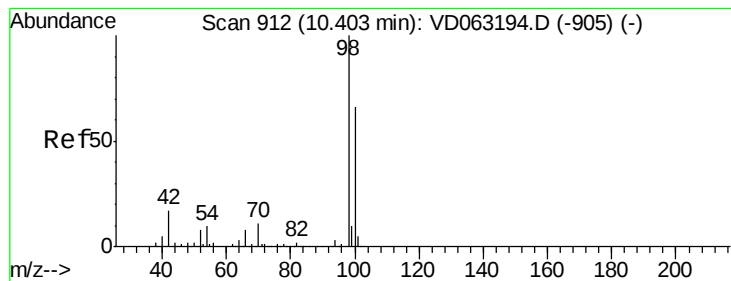
Tgt Ion: 83 Resp: 20652  
Ion Ratio Lower Upper  
83 100  
55 89.3 71.1 106.7  
98 34.7 38.5 57.7#



#40  
Benzene  
Concen: 28.593 ug/l  
RT: 7.43 min Scan# 609  
Delta R.T. -0.01 min  
Lab File: VD063315.D  
Acq: 2 Aug 2019 14:34

Tgt Ion: 78 Resp: 737507  
Ion Ratio Lower Upper  
78 100  
77 21.1 19.4 29.2





#50

Toluene-d8

Concen: 45.452 ug/l

RT: 10.40 min Scan# 911

Delta R.T. -0.00 min

Lab File: VD063315.D

Acq: 2 Aug 2019 14:34

Instrument :

MSVOA\_D

ClientSampled :

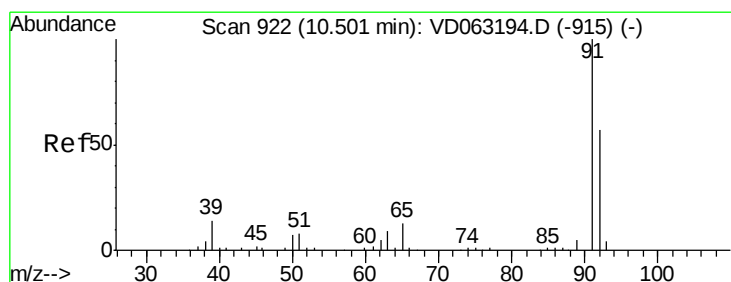
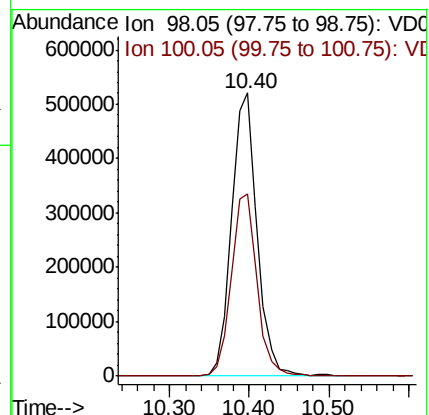
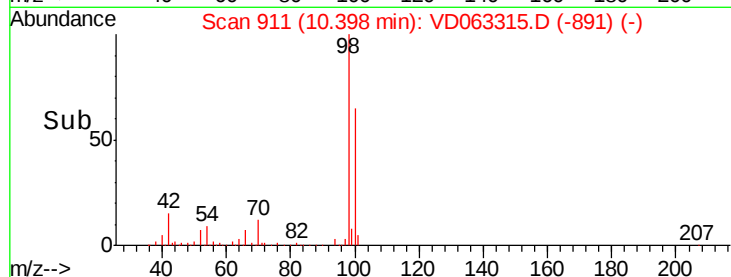
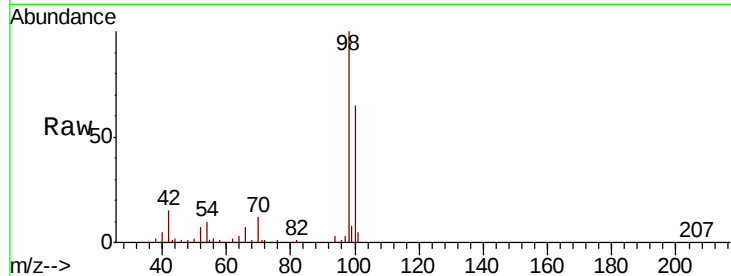
T3-1

Tgt Ion: 98 Resp: 1171195

Ion Ratio Lower Upper

98 100

100 64.5 53.2 79.8



#52

Toluene

Concen: 8.652 ug/l

RT: 10.50 min Scan# 921

Delta R.T. -0.00 min

Lab File: VD063315.D

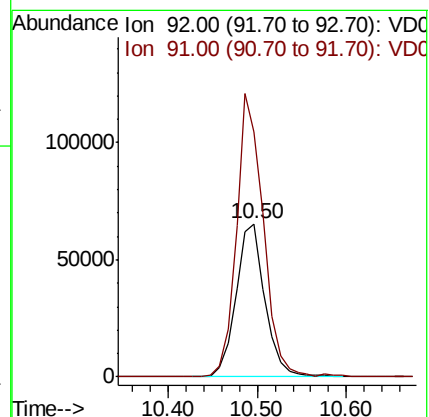
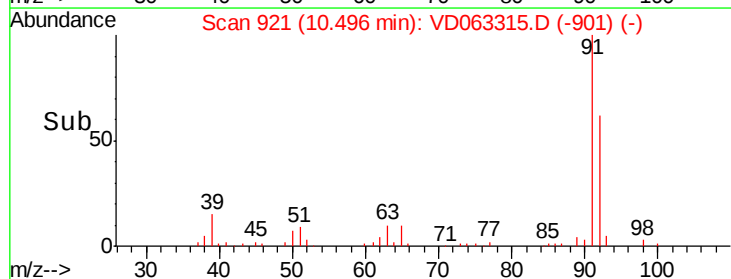
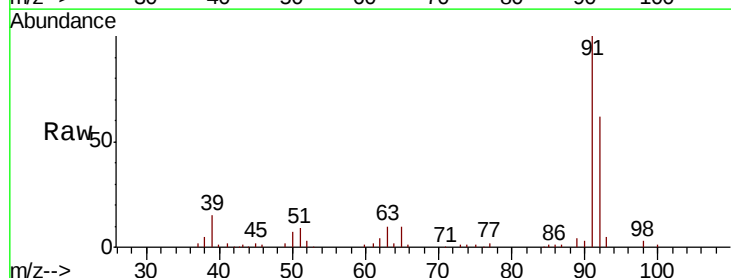
Acq: 2 Aug 2019 14:34

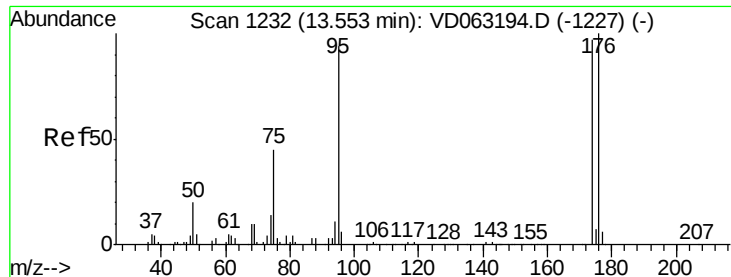
Tgt Ion: 92 Resp: 148428

Ion Ratio Lower Upper

92 100

91 160.0 140.8 211.2





#62

4-Bromofluorobenzene

Concen: 39.049 ug/l

RT: 13.55 min Scan# 1231

Delta R.T. -0.00 min

Lab File: VD063315.D

Acq: 2 Aug 2019 14:34

Instrument :

MSVOA\_D

ClientSampleId :

T3-1

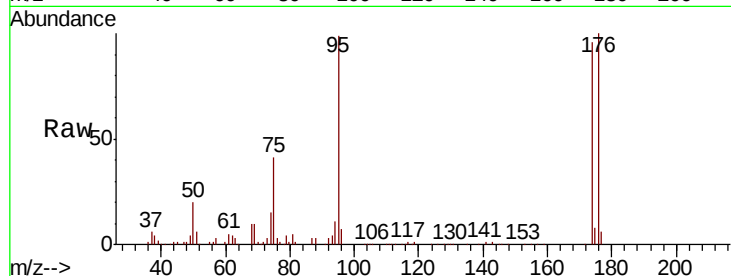
Tgt Ion: 95 Resp: 458520

Ion Ratio Lower Upper

95 100

174 97.3 0.0 205.4

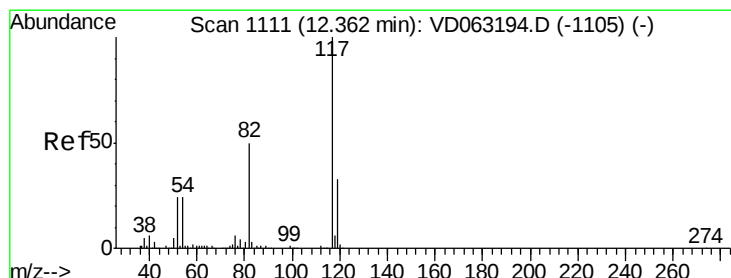
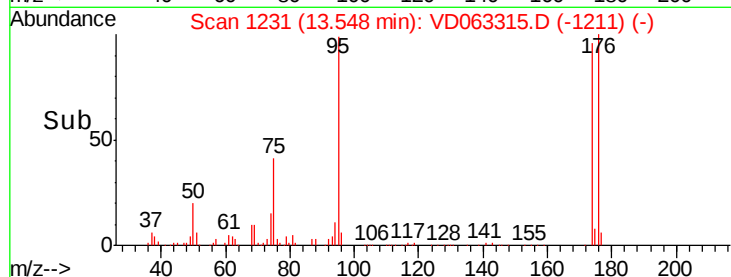
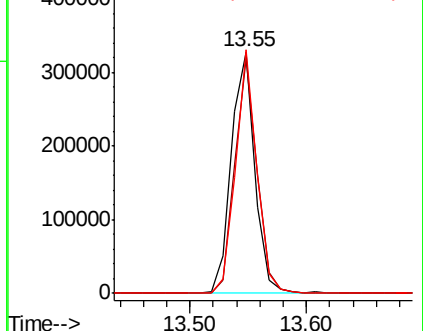
176 100.9 0.0 211.8



Abundance Ion 95.00 (94.70 to 95.70): V

Ion 173.90 (173.60 to 174.60): V

Ion 175.90 (175.60 to 176.60): V



#63

Chlorobenzene-d5

Concen: 50.000 ug/l

RT: 12.36 min Scan# 1110

Delta R.T. -0.00 min

Lab File: VD063315.D

Acq: 2 Aug 2019 14:34

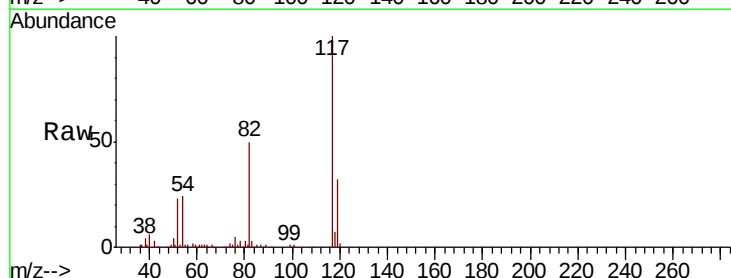
Tgt Ion: 117 Resp: 1005909

Ion Ratio Lower Upper

117 100

82 49.9 40.1 60.1

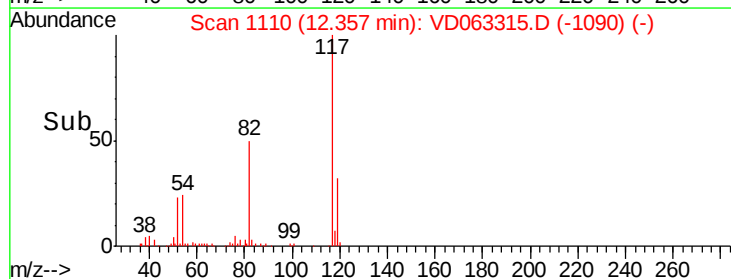
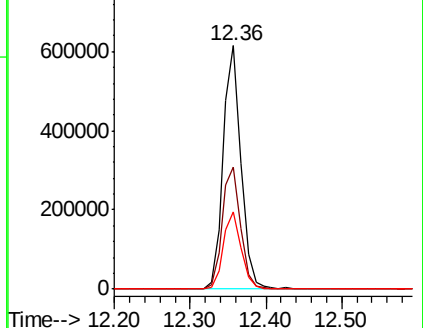
119 31.8 26.5 39.7

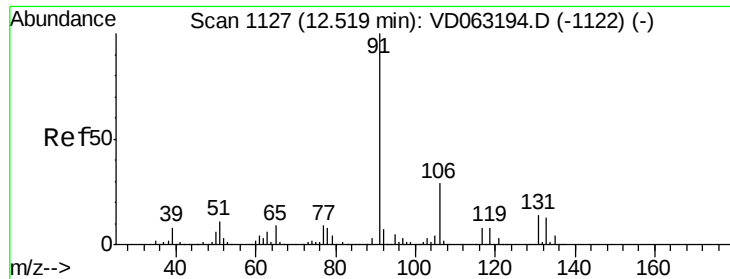


Abundance Ion 116.95 (116.65 to 117.65): V

Ion 82.05 (81.75 to 82.75): V

Ion 118.95 (118.65 to 119.65): V

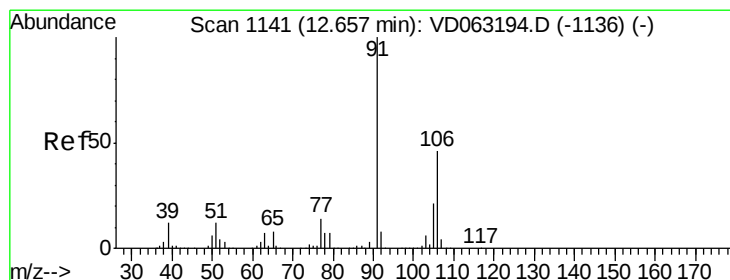
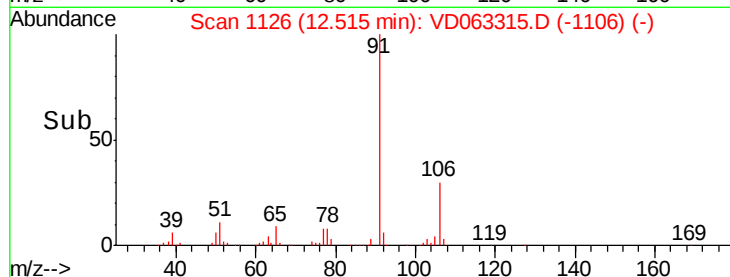
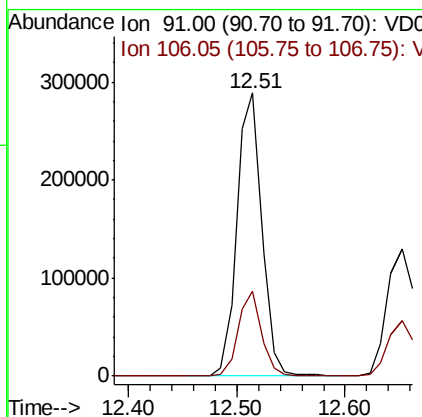
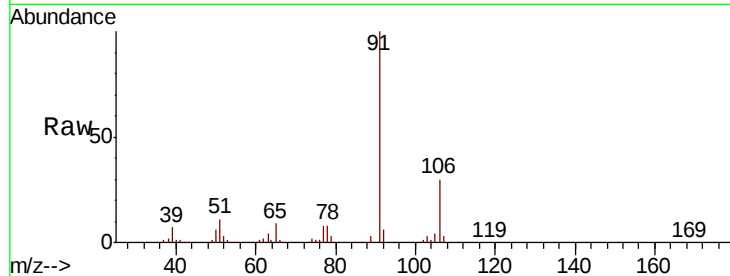




#67  
Ethyl Benzene  
Concen: 14.056 ug/l  
RT: 12.51 min Scan# 1126  
Delta R.T. -0.00 min  
Lab File: VD063315.D  
Acq: 2 Aug 2019 14:34

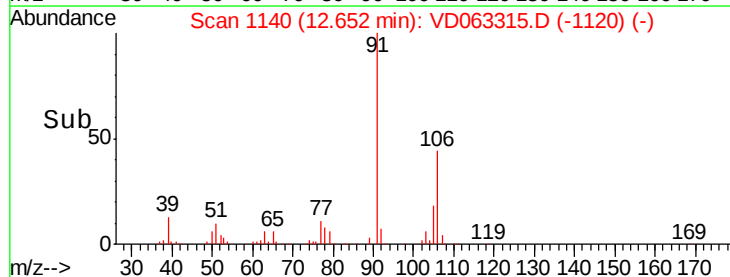
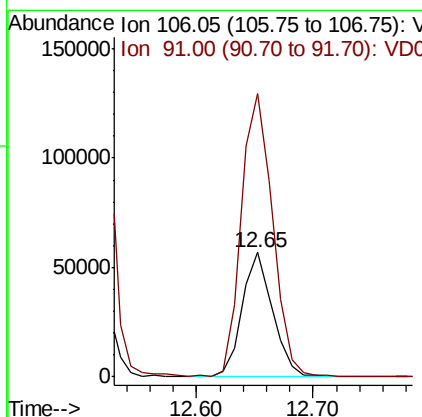
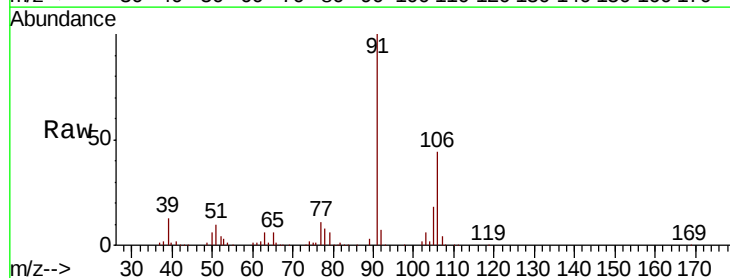
Instrument :  
MSVOA\_D  
ClientSampled :  
T3-1

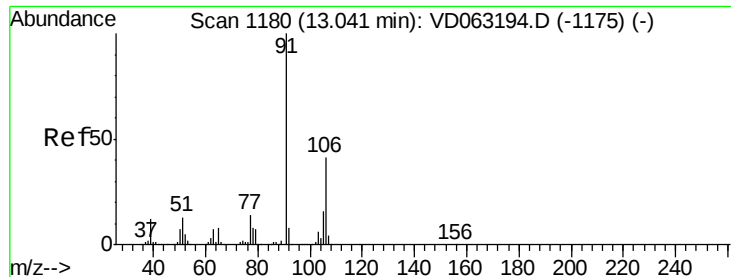
Tgt Ion: 91 Resp: 461999  
Ion Ratio Lower Upper  
91 100  
106 29.9 22.9 34.3



#68  
m/p-Xylenes  
Concen: 8.538 ug/l  
RT: 12.65 min Scan# 1140  
Delta R.T. -0.00 min  
Lab File: VD063315.D  
Acq: 2 Aug 2019 14:34

Tgt Ion: 106 Resp: 102917  
Ion Ratio Lower Upper  
106 100  
91 228.0 172.6 259.0

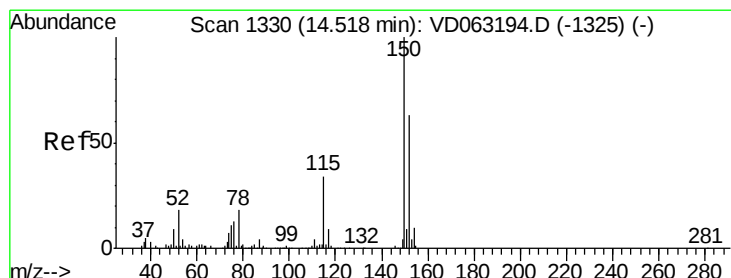
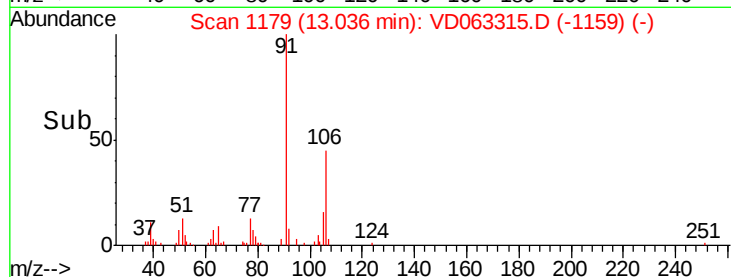
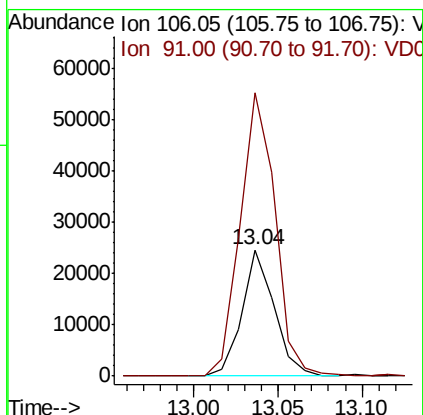
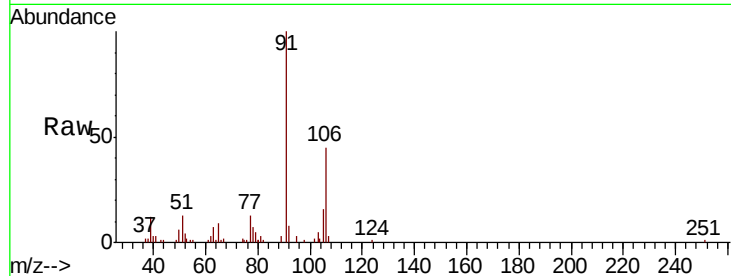




#69  
o-Xylene  
Concen: 2.965 ug/l  
RT: 13.04 min Scan# 1179  
Delta R.T. -0.00 min  
Lab File: VD063315.D  
Acq: 2 Aug 2019 14:34

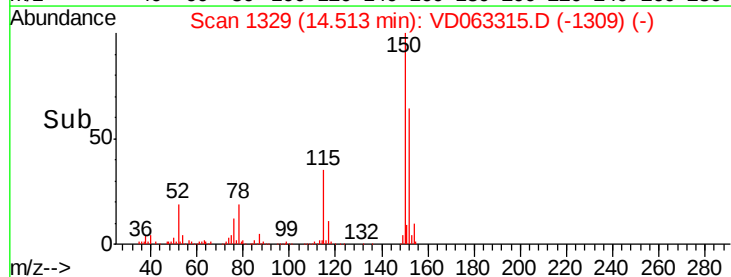
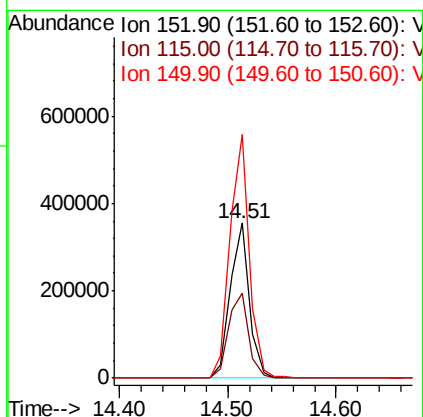
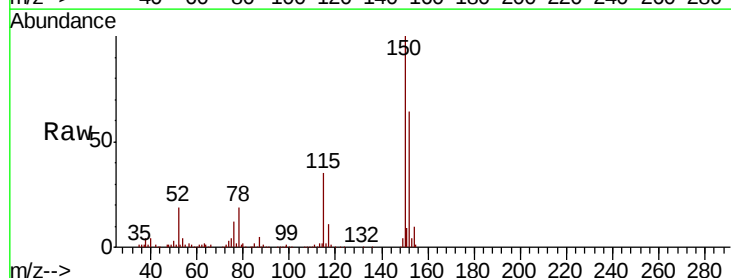
Instrument :  
MSVOA\_D  
ClientSampled :  
T3-1

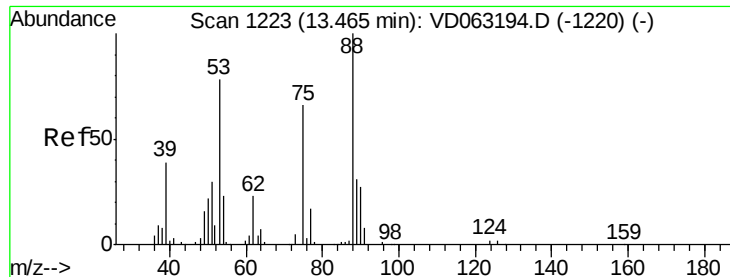
Tgt Ion:106 Resp: 32817  
Ion Ratio Lower Upper  
106 100  
91 223.6 121.3 363.9



#72  
1,4-Dichlorobenzene-d4  
Concen: 50.000 ug/l  
RT: 14.51 min Scan# 1329  
Delta R.T. -0.00 min  
Lab File: VD063315.D  
Acq: 2 Aug 2019 14:34

Tgt Ion:152 Resp: 436937  
Ion Ratio Lower Upper  
152 100  
115 54.5 27.5 82.4  
150 157.1 0.0 320.6





#81

trans-1,4-Dichloro-2-butene

Concen: 143.529 ug/l

RT: 13.55 min Scan# 1231

Delta R.T. 0.08 min

Lab File: VD063315.D

Acq: 2 Aug 2019 14:34

Instrument :

MSVOA\_D

ClientSampleId :

T3-1

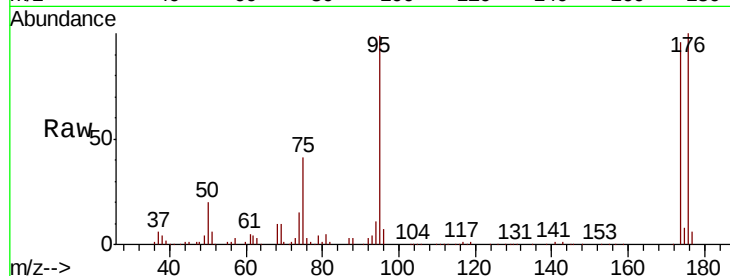
Tgt Ion: 75 Resp: 209166

Ion Ratio Lower Upper

75 100

53 0.0 94.9 142.3#

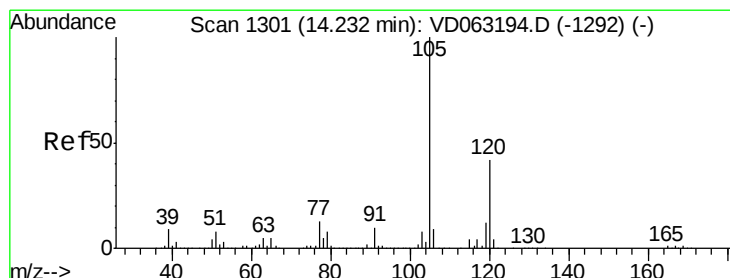
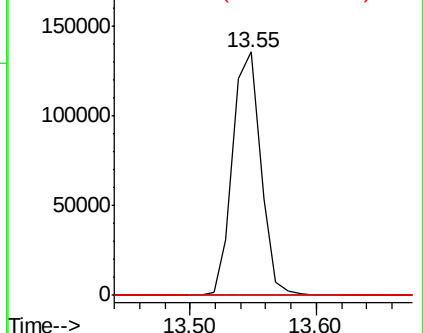
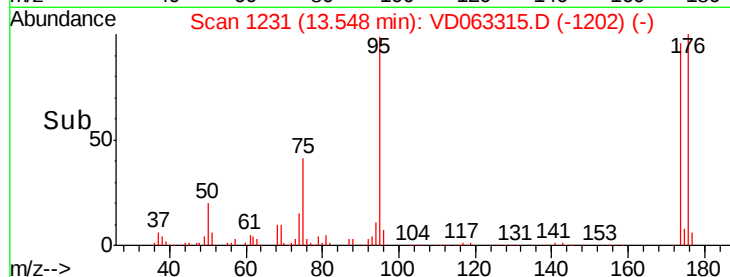
89 0.0 37.4 56.0#



Abundance Ion 75.00 (74.70 to 75.70): VDC

Ion 53.00 (52.70 to 53.70): VDC

Ion 89.00 (88.70 to 89.70): VDC



#84

1,2,4-Trimethylbenzene

Concen: 2.436 ug/l

RT: 14.23 min Scan# 1300

Delta R.T. -0.00 min

Lab File: VD063315.D

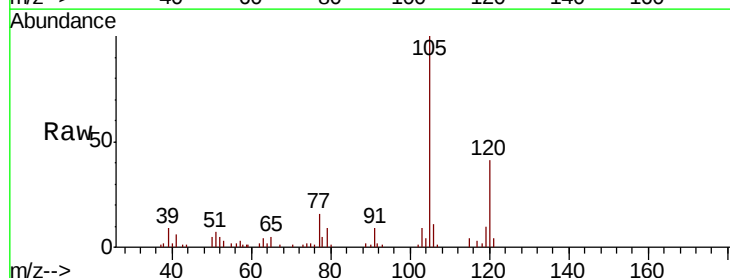
Acq: 2 Aug 2019 14:34

Tgt Ion: 105 Resp: 59595

Ion Ratio Lower Upper

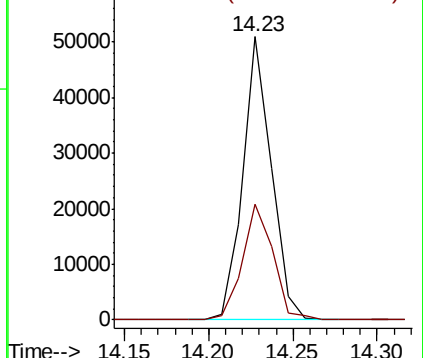
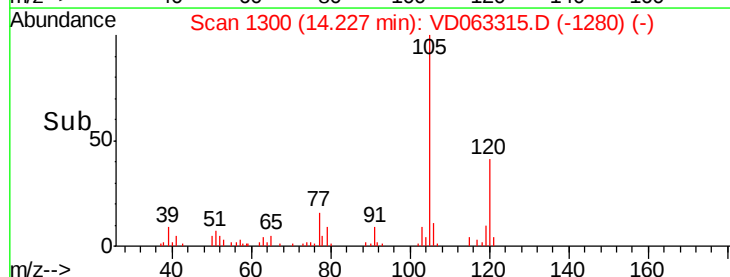
105 100

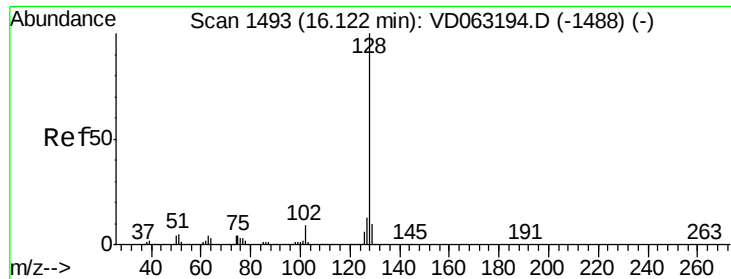
120 40.8 20.9 62.7



Abundance Ion 105.05 (104.75 to 105.75): V

Ion 120.05 (119.75 to 120.75): V

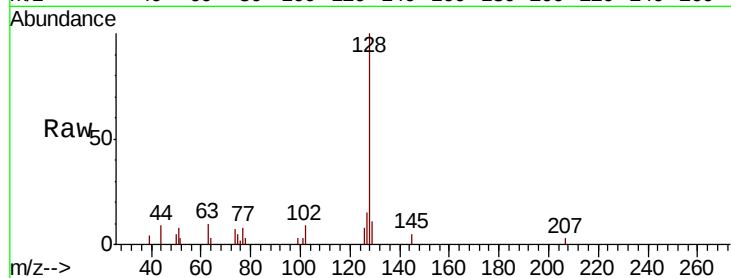




#95  
Naphthalene  
Concen: 1.054 ug/l  
RT: 16.12 min Scan# 1492  
Delta R.T. -0.00 min  
Lab File: VD063315.D  
Acq: 2 Aug 2019 14:34

Instrument :  
MSVOA\_D  
ClientSampleId :  
T3-1

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 128     | 100   |       |       |
| 127     | 15.4  | 10.2  | 15.4# |
| 129     | 10.7  | 7.8   | 11.8  |



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

