

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX032719\  
 Data File : VX008491.D  
 Acq On : 27 Mar 2019 18:34  
 Operator : JC/SP  
 Sample : K2099-10  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 23 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 MH-C05-SETTLED-2H-B

Quant Time: Mar 28 02:09:25 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X032719W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Wed Mar 27 12:01:15 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.02  | 128  | 35150    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 6.86  | 114  | 201767   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 10.11 | 117  | 175119   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 6.06   | 65    | 89879    | 30.57    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 101.90% |
| 60) 4-Bromofluorobenzene  | 11.13  | 95    | 86372    | 28.31    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 94.37%  |
| 63) Toluene-d8            | 8.71   | 98    | 254723   | 30.64    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 102.13% |

## Target Compounds

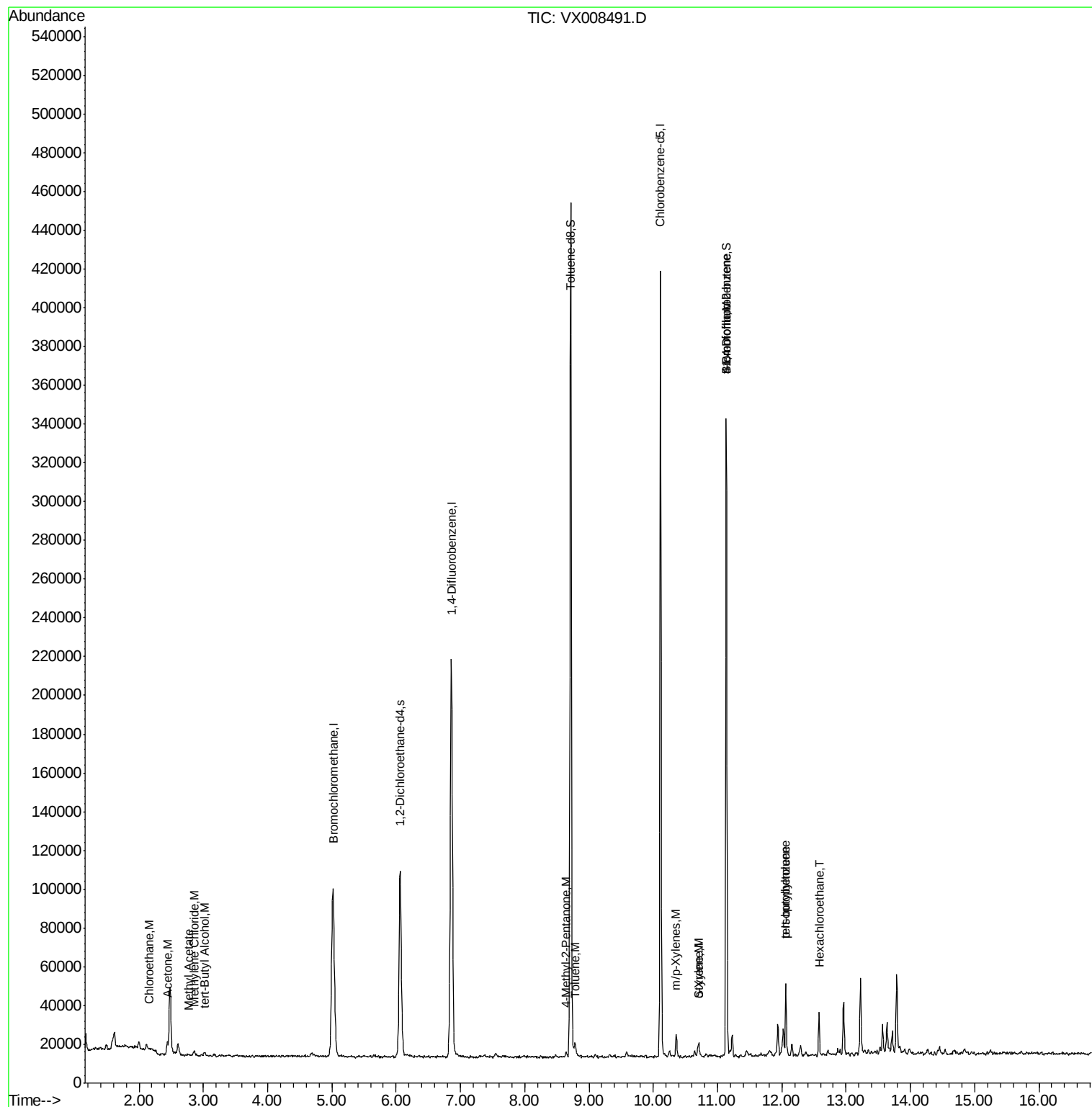
|                             |       |     |       |               | Ovalue |
|-----------------------------|-------|-----|-------|---------------|--------|
| 6) Chloroethane             | 2.16  | 64  | 634   | 0.305 ug/l    | 90     |
| 12) Methyl Acetate          | 2.78  | 43  | 658   | 0.365 ug/l    | 91     |
| 15) Acetone                 | 2.44  | 58  | 2809  | 5.461 ug/l    | 84     |
| 18) Methylene Chloride      | 2.85  | 84  | 1072  | 0.403 ug/l #  | 81     |
| 23) tert-Butyl Alcohol      | 3.01  | 59  | 1209  | 1.795 ug/l #  | 97     |
| 56) Bromoform               | 11.14 | 173 | 706   | 0.389 ug/l #  | 1      |
| 58) 4-Methyl-2-Pentanone    | 8.65  | 43  | 1781  | 0.386 ug/l    | 93     |
| 62) Toluene                 | 8.78  | 91  | 3268  | 0.308 ug/l    | 98     |
| 67) m/p-Xylenes             | 10.36 | 106 | 2648  | 0.617 ug/l    | 92     |
| 68) o-Xylene                | 10.70 | 106 | 1019  | 0.243 ug/l    | 90     |
| 69) Styrene                 | 10.71 | 104 | 1530  | 0.209 ug/l    | 97     |
| 77) t-1,4-Dichloro-2-butene | 11.13 | 75  | 44586 | 33.221 ug/l # | 6      |
| 79) tert-butylbenzene       | 12.06 | 119 | 15133 | 1.563 ug/l    | 95     |
| 82) p-Isopropyltoluene      | 12.06 | 119 | 15133 | 1.563 ug/l    | 95     |
| 86) Hexachloroethane        | 12.58 | 117 | 344   | 0.213 ug/l #  | 8      |

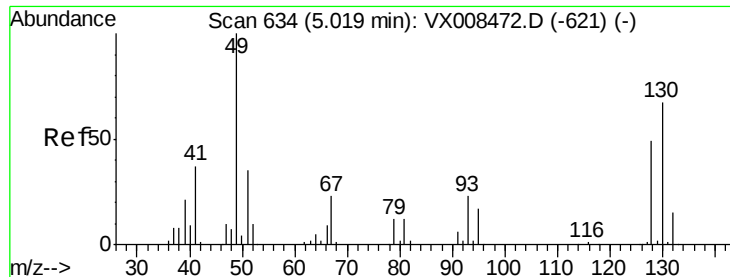
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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ClientSampleId :  
MH-C05-SETTLED-2H-B

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Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA X\METHOD\624X032719W.M  
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
QLast Update : Wed Mar 27 12:01:15 2019  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 30.000 ug/l

RT: 5.02 min Scan# 634

Delta R.T. 0.00 min

Lab File: VX008491.D

Acq: 27 Mar 2019 18:34

Instrument :

MSVOA\_X

ClientSampleId :

MH-C05-SETTLED-2H-B

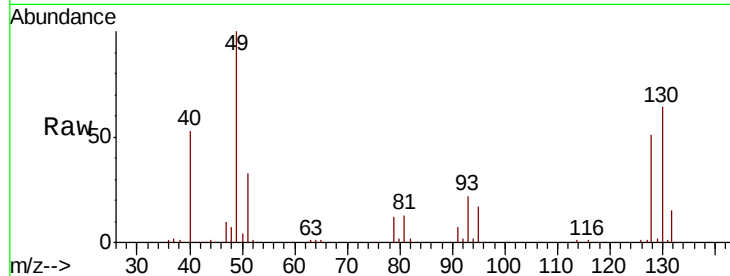
Tot Ion:128 Resp: 35150

Ion Ratio Lower Upper

128 100

49 207.8 0.0 350.8

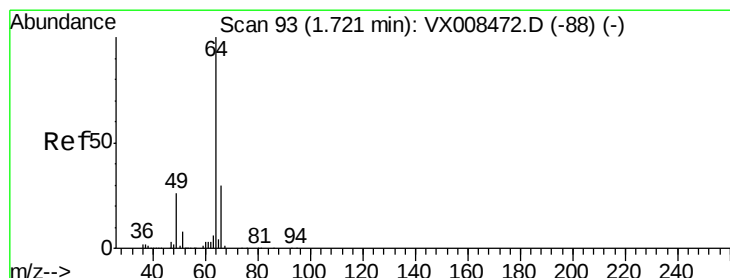
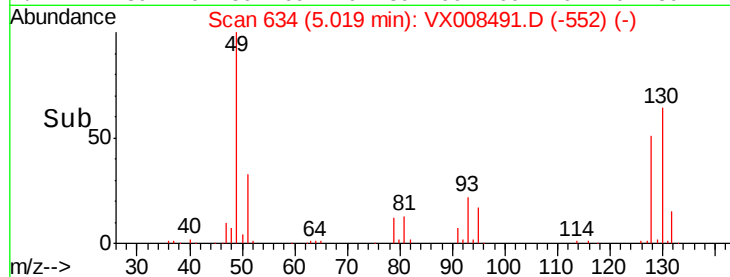
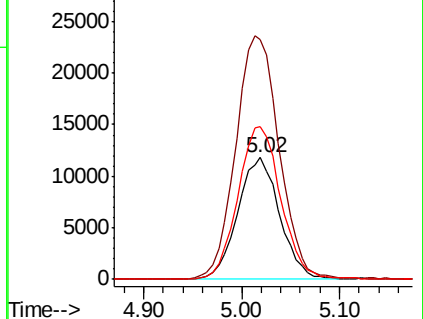
130 128.3 0.0 325.8



Abundance Ion 128.00 (127.70 to 128.70): V

Ion 49.00 (48.70 to 49.70): VX0

Ion 130.00 (129.70 to 130.70): V



#6

Chloroethane

Concen: 0.305 ug/l

RT: 2.16 min Scan# 165

Delta R.T. 0.44 min

Lab File: VX008491.D

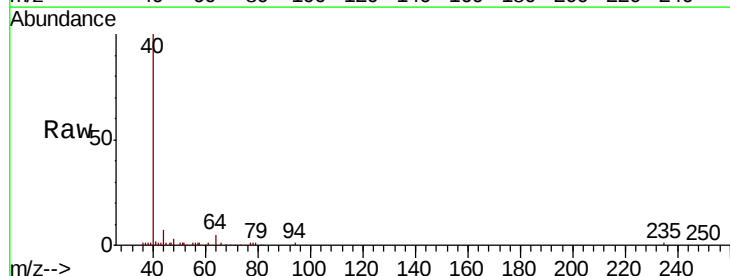
Acq: 27 Mar 2019 18:34

Tgt Ion: 64 Resp: 634

Ion Ratio Lower Upper

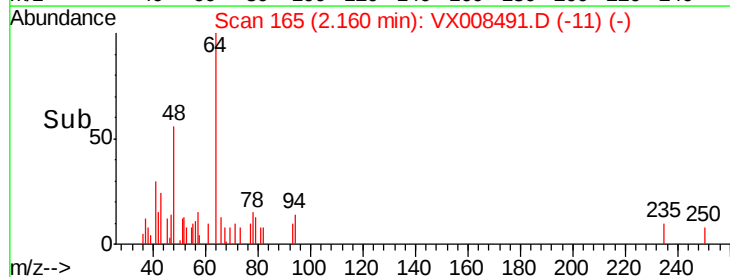
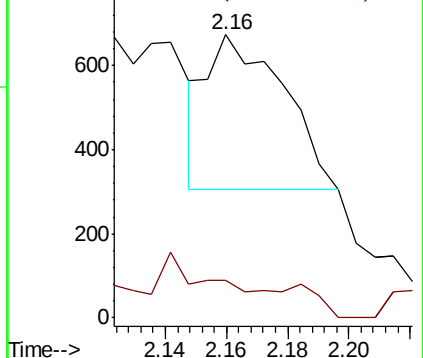
64 100

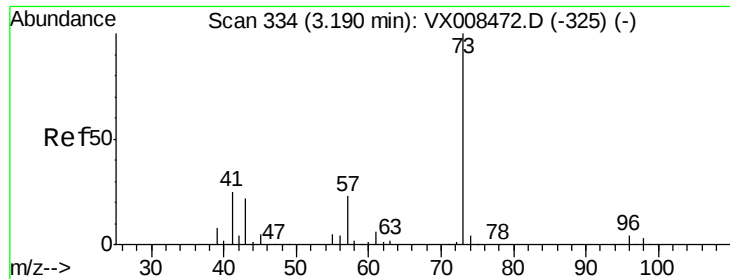
66 24.5 23.9 35.9



Abundance Ion 64.00 (63.70 to 64.70): VX0

Ion 66.00 (65.70 to 66.70): VX0

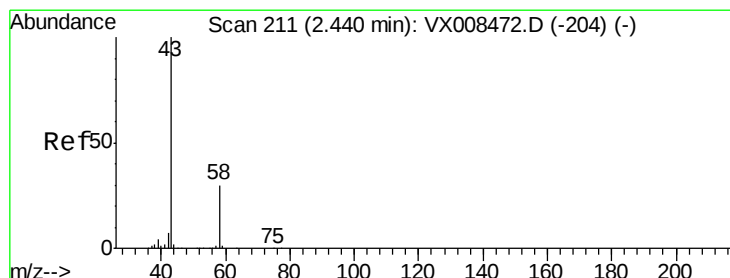
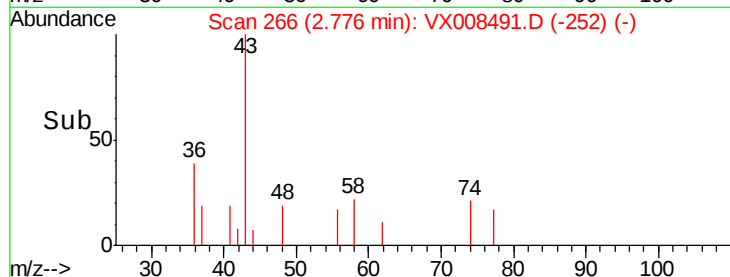
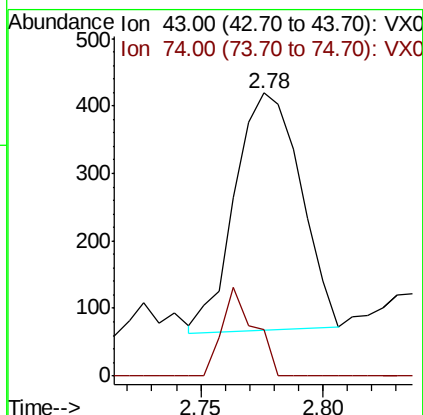
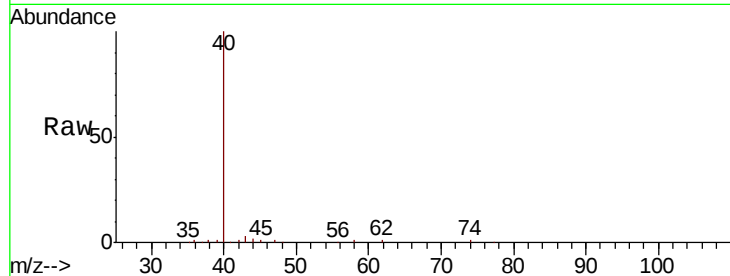




#12  
Methvl Acetate  
Concen: 0.365 ug/l  
RT: 2.78 min Scan# 266  
Delta R.T. -0.41 min  
Lab File: VX008491.D  
Acq: 27 Mar 2019 18:34

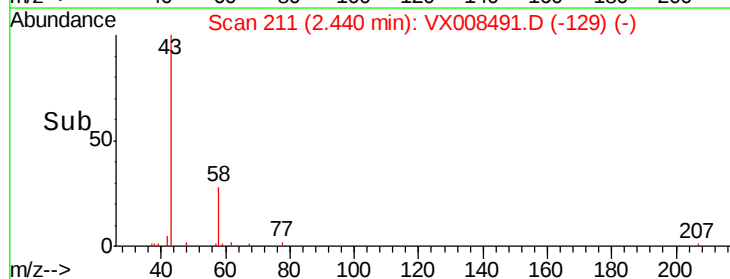
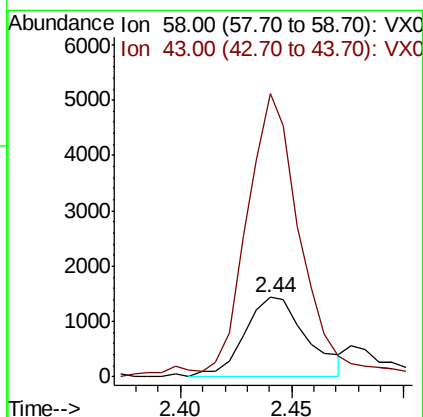
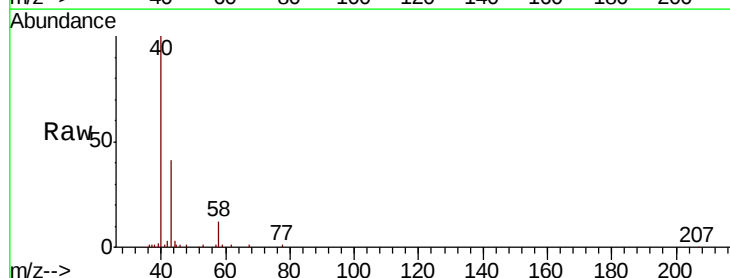
Instrument :  
MSVOA\_X  
ClientSampleId :  
MH-C05-SETTLED-2H-B

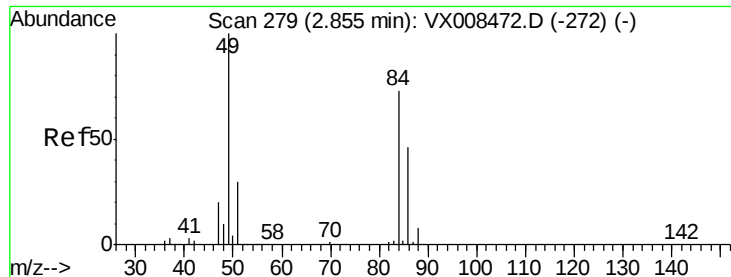
Tot Ion: 43 Resp: 658  
Ion Ratio Lower Upper  
43 100  
74 19.7 19.4 29.0



#15  
Acetone  
Concen: 5.461 ug/l  
RT: 2.44 min Scan# 211  
Delta R.T. 0.00 min  
Lab File: VX008491.D  
Acq: 27 Mar 2019 18:34

Tgt Ion: 58 Resp: 2809  
Ion Ratio Lower Upper  
58 100  
43 345.3 249.8 374.6

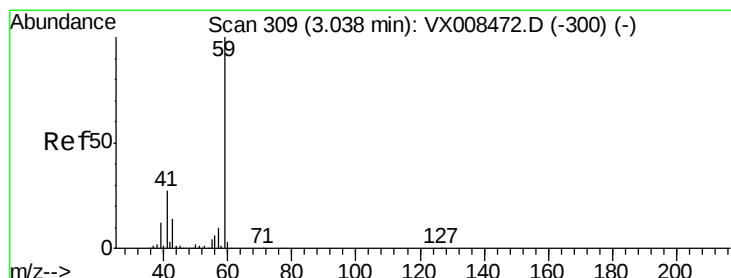
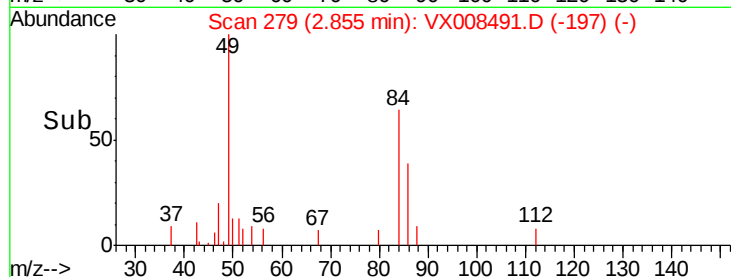
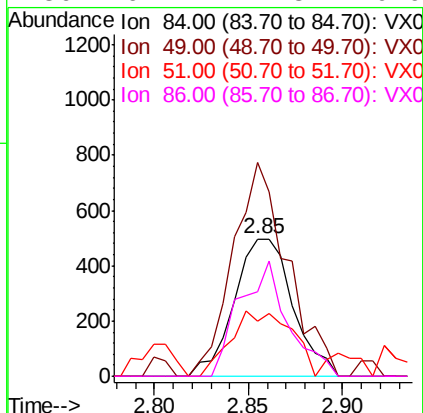
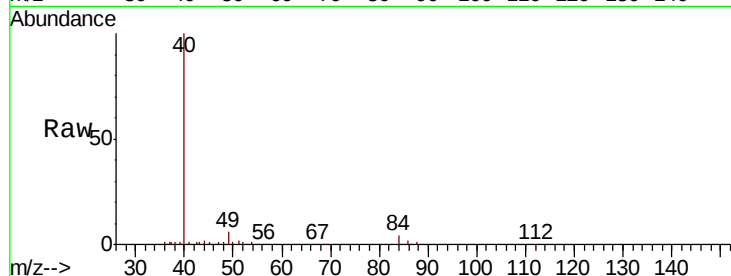




#18  
Methvlene Chloride  
Concen: 0.403 ug/l  
RT: 2.85 min Scan# 279  
Delta R.T. 0.00 min  
Lab File: VX008491.D  
Acq: 27 Mar 2019 18:34

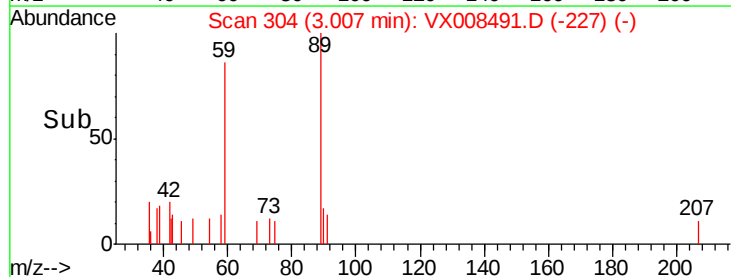
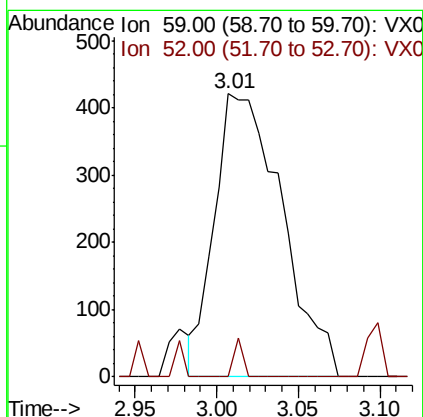
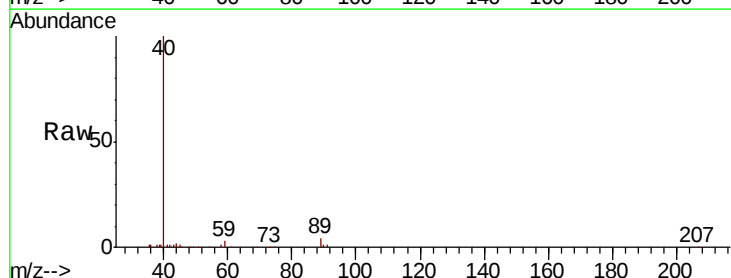
Instrument :  
MSVOA\_X  
ClientSampleId :  
MH-C05-SETTLED-2H-B

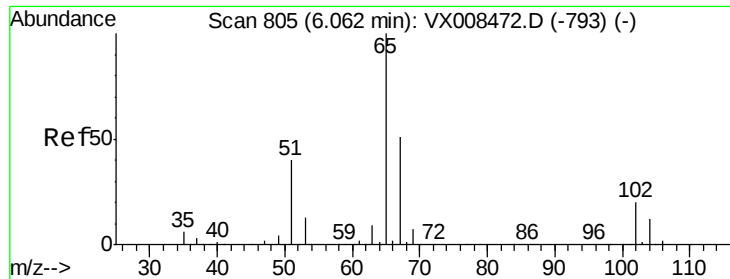
Tot Ion: 84 Resp: 1072  
Ion Ratio Lower Upper  
84 100  
49 155.2 96.1 144.1#  
51 40.2 29.1 43.7  
86 61.2 47.3 70.9



#23  
tert-Butyl Alcohol  
Concen: 1.795 ug/l  
RT: 3.01 min Scan# 304  
Delta R.T. -0.03 min  
Lab File: VX008491.D  
Acq: 27 Mar 2019 18:34

Tgt Ion: 59 Resp: 1209  
Ion Ratio Lower Upper  
59 100  
52 4.1 0.2 0.2#





#27

1,2-Dichloroethane-d4

Concen: 30.566 ug/l

RT: 6.06 min Scan# 805

Delta R.T. 0.00 min

Lab File: VX008491.D

Acq: 27 Mar 2019 18:34

Instrument :

MSVOA\_X

ClientSampleId :

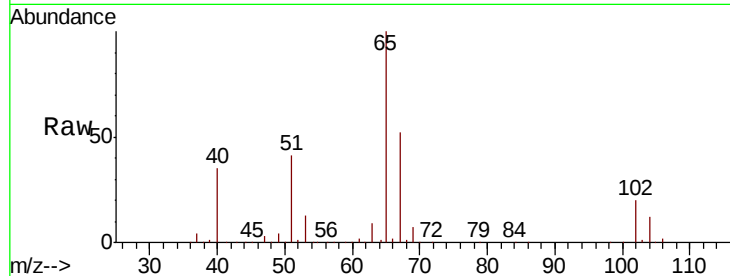
MH-C05-SETTLED-2H-B

Tot Ion: 65 Resp: 89879

Ion Ratio Lower Upper

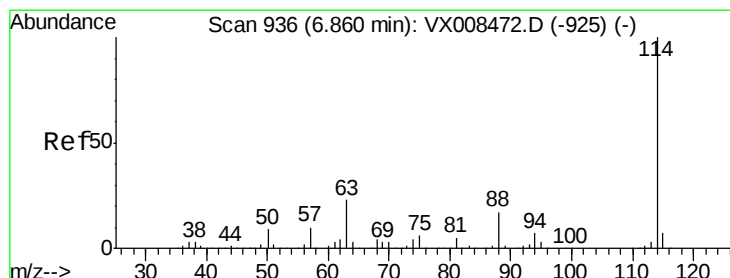
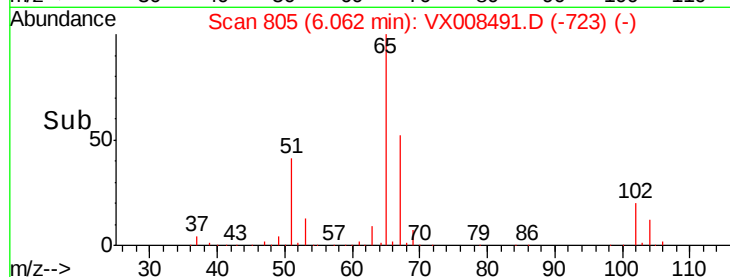
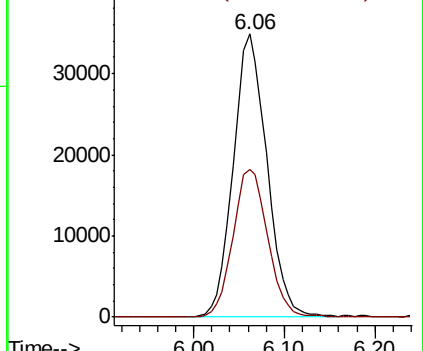
65 100

67 53.5 42.9 64.3



Abundance Ion 65.00 (64.70 to 65.70): VX0

Ion 67.00 (66.70 to 67.70): VX0



#28

1,4-Difluorobenzene

Concen: 30.000 ug/l

RT: 6.86 min Scan# 936

Delta R.T. 0.00 min

Lab File: VX008491.D

Acq: 27 Mar 2019 18:34

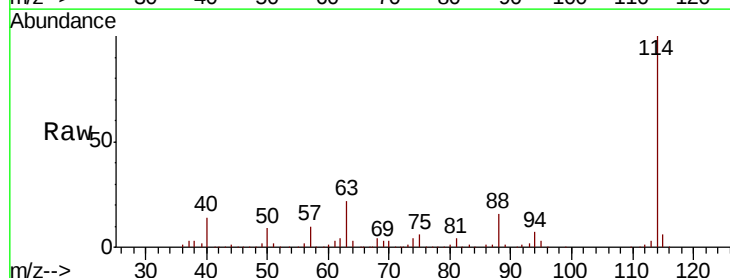
Tgt Ion: 114 Resp: 201767

Ion Ratio Lower Upper

114 100

63 23.8 14.2 21.4#

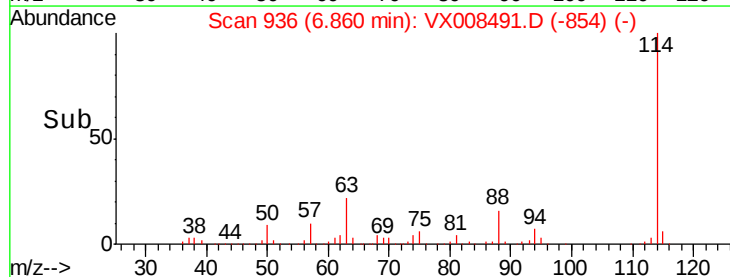
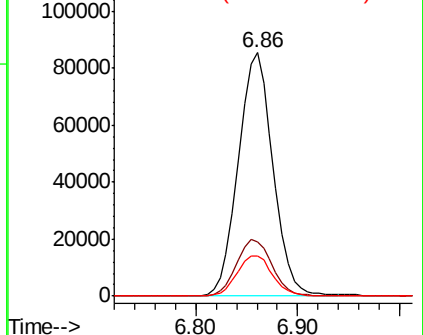
88 17.0 11.9 17.9

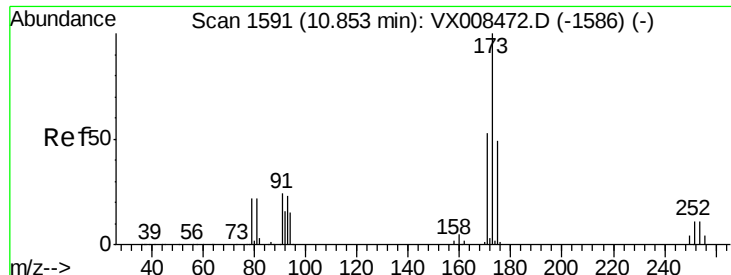


Abundance Ion 114.00 (113.70 to 114.70): V

Ion 63.00 (62.70 to 63.70): VX0

Ion 88.00 (87.70 to 88.70): VX0

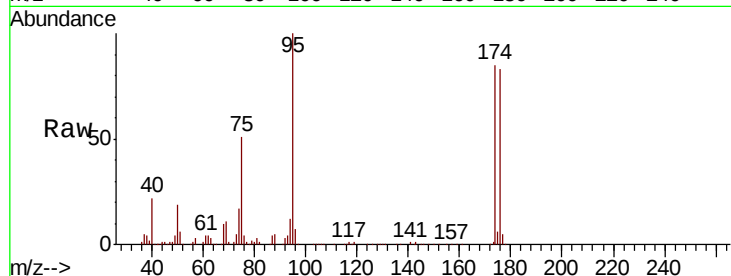




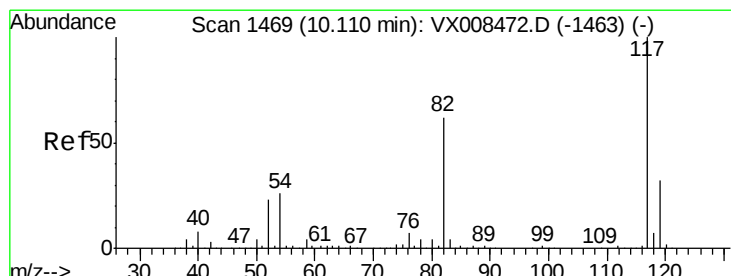
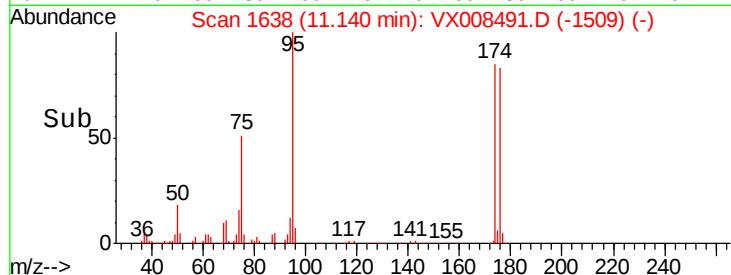
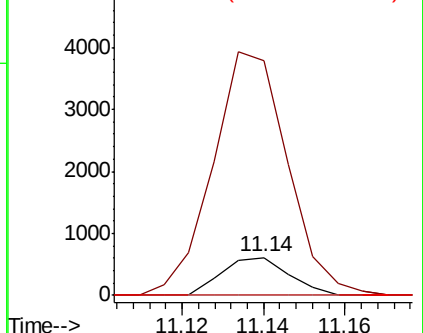
#56  
Bromoform  
Concen: 0.389 ug/l  
RT: 11.14 min Scan# 1638  
Delta R.T. 0.29 min  
Lab File: VX008491.D  
Acq: 27 Mar 2019 18:34

Instrument :  
MSVOA\_X  
ClientSampleId :  
MH-C05-SETTLED-2H-B

Tot Ion:173 Resp: 706  
Ion Ratio Lower Upper  
173 100  
175 711.0 38.5 57.7#  
254 0.0 7.4 11.2#

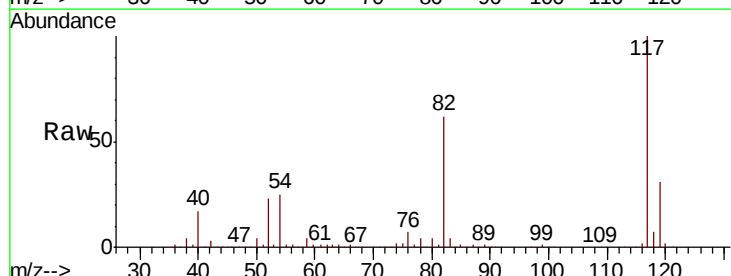


Abundance Ion 173.00 (172.70 to 173.70): V  
Ion 175.00 (174.70 to 175.70): V  
Ion 254.00 (253.70 to 254.70): V

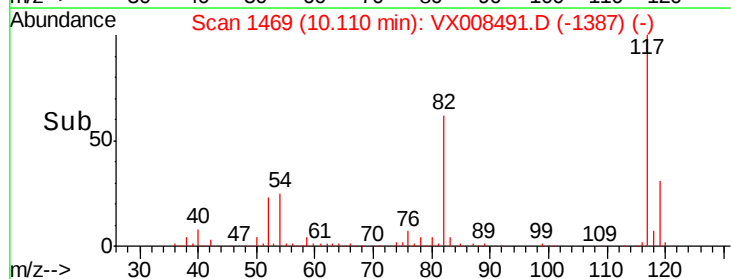
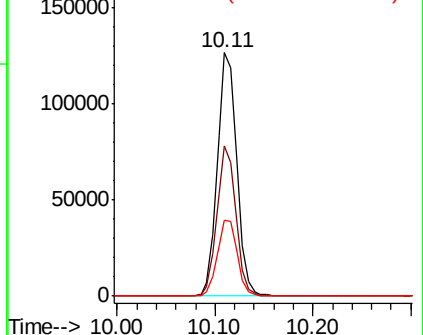


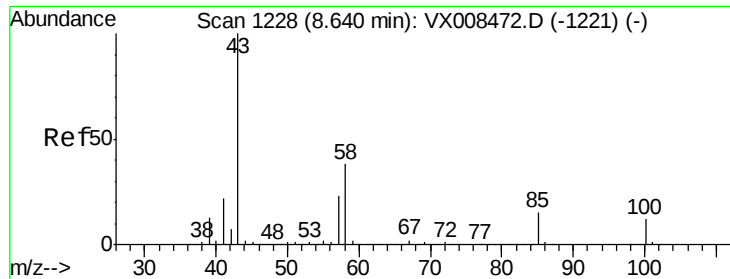
#57  
Chlorobenzene-d5  
Concen: 30.000 ug/l  
RT: 10.11 min Scan# 1469  
Delta R.T. 0.00 min  
Lab File: VX008491.D  
Acq: 27 Mar 2019 18:34

Tgt Ion:117 Resp: 175119  
Ion Ratio Lower Upper  
117 100  
82 60.2 40.4 60.6  
119 31.9 25.8 38.6



Abundance Ion 117.00 (116.70 to 117.70): V  
Ion 82.00 (81.70 to 82.70): V  
Ion 119.00 (118.70 to 119.70): V

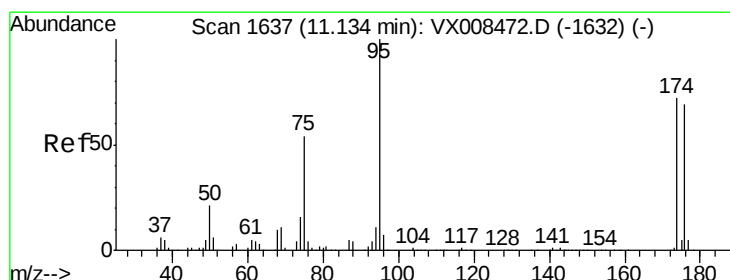
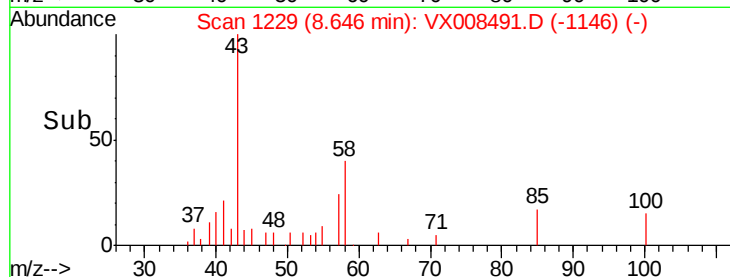
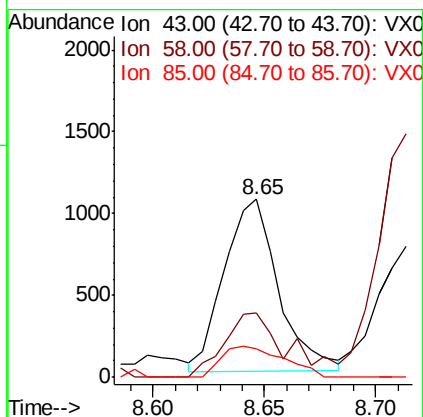
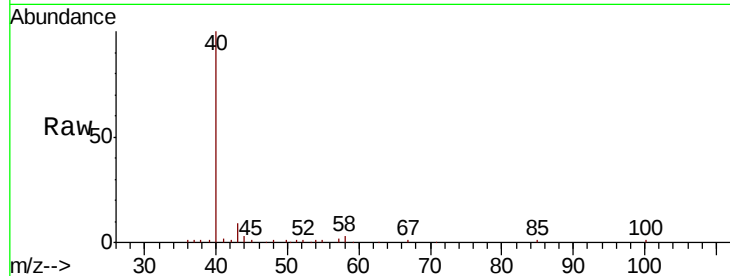




#58  
4-Methyl-2-Pentanone  
Concen: 0.386 ug/l  
RT: 8.65 min Scan# 1229  
Delta R.T. 0.01 min  
Lab File: VX008491.D  
Acq: 27 Mar 2019 18:34

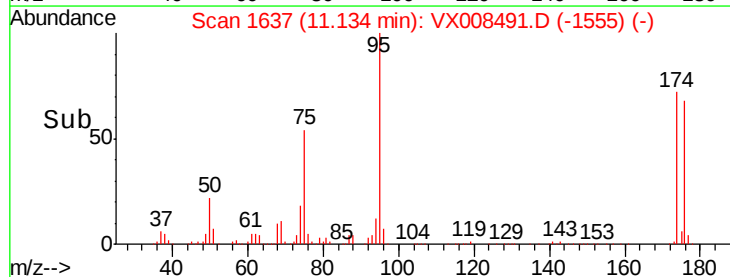
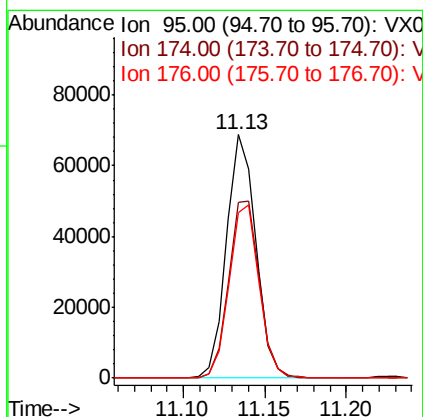
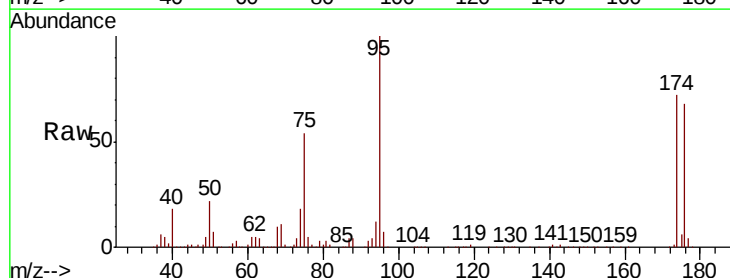
Instrument :  
MSVOA\_X  
ClientSampleId :  
MH-C05-SETTLED-2H-B

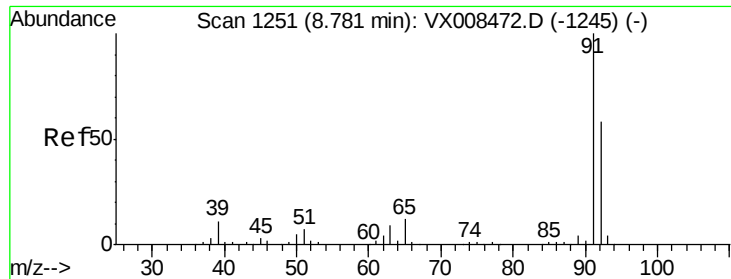
Tot Ion: 43 Resp: 1781  
Ion Ratio Lower Upper  
43 100  
58 33.5 31.4 47.0  
85 20.4 15.0 22.6



#60  
4-Bromofluorobenzene  
Concen: 28.308 ug/l  
RT: 11.13 min Scan# 1637  
Delta R.T. 0.00 min  
Lab File: VX008491.D  
Acq: 27 Mar 2019 18:34

Tgt Ion: 95 Resp: 86372  
Ion Ratio Lower Upper  
95 100  
174 75.9 74.9 112.3  
176 72.1 70.7 106.1

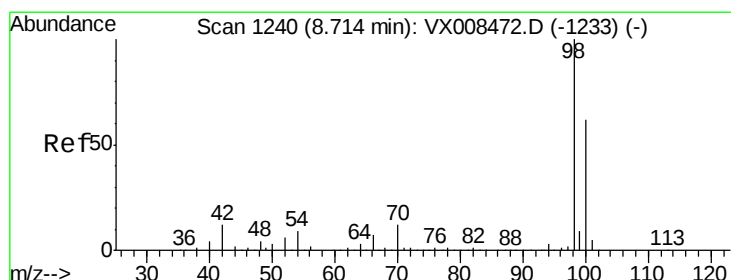
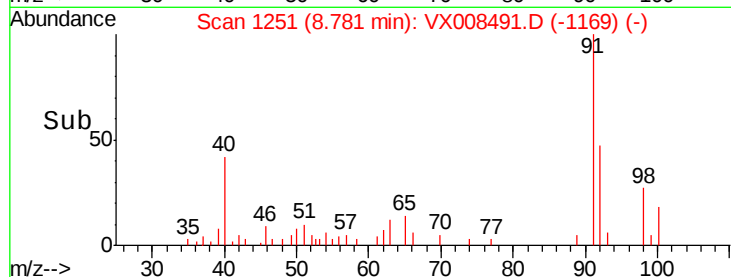
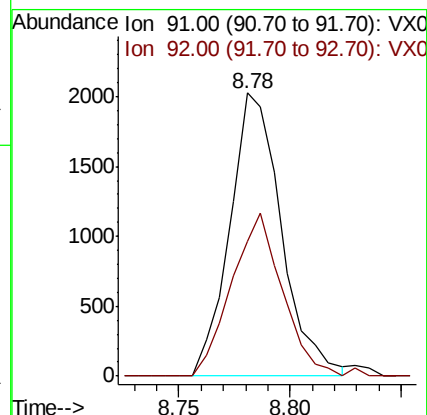
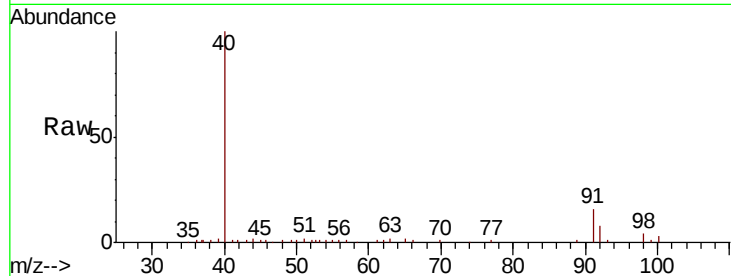




#62  
Toluene  
Concen: 0.308 ug/l  
RT: 8.78 min Scan# 1251  
Delta R.T. 0.00 min  
Lab File: VX008491.D  
Acq: 27 Mar 2019 18:34

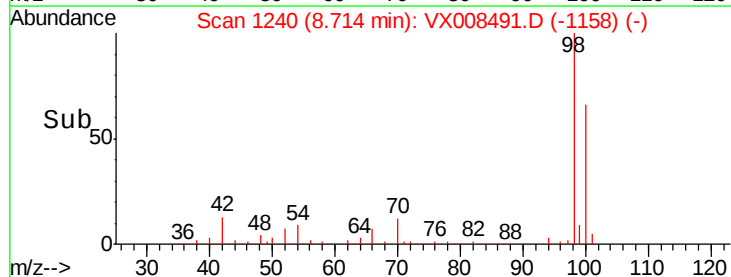
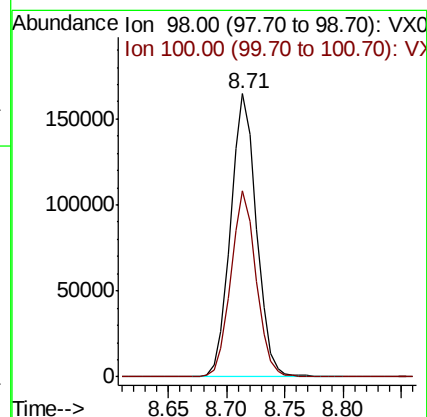
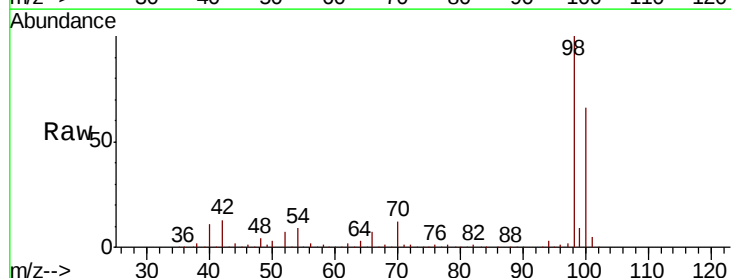
Instrument :  
MSVOA\_X  
ClientSampleId :  
MH-C05-SETTLED-2H-B

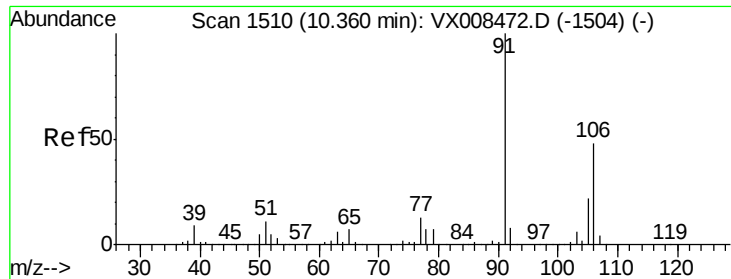
Tot Ion: 91 Resp: 3268  
Ion Ratio Lower Upper  
91 100  
92 56.5 46.4 69.6



#63  
Toluene-d8  
Concen: 30.643 ug/l  
RT: 8.71 min Scan# 1240  
Delta R.T. 0.00 min  
Lab File: VX008491.D  
Acq: 27 Mar 2019 18:34

Tgt Ion: 98 Resp: 254723  
Ion Ratio Lower Upper  
98 100  
100 64.4 50.9 76.3

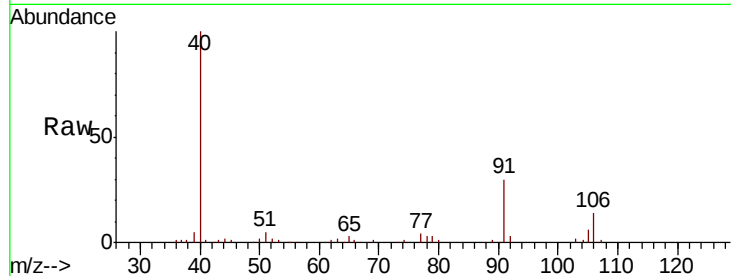




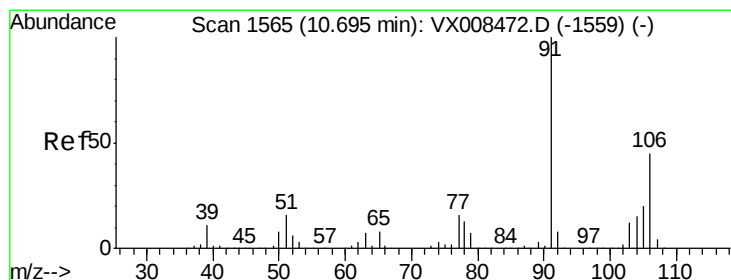
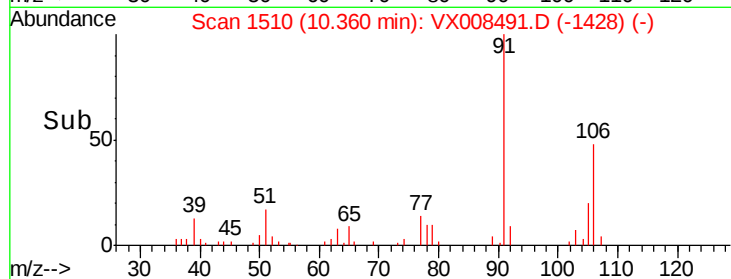
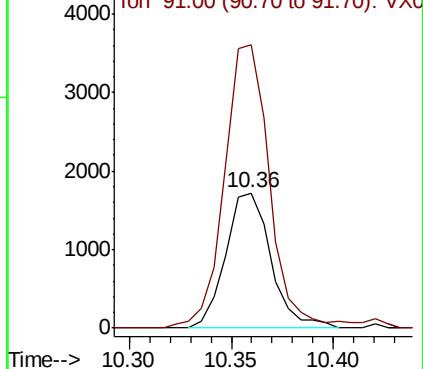
#67  
m/p-Xvlenes  
Concen: 0.617 ug/l  
RT: 10.36 min Scan# 1510  
Delta R.T. 0.00 min  
Lab File: VX008491.D  
Acq: 27 Mar 2019 18:34

Instrument :  
MSVOA\_X  
ClientSampleId :  
MH-C05-SETTLED-2H-B

Tot Ion:106 Resp: 2648  
Ion Ratio Lower Upper  
106 100  
91 208.7 157.0 235.4

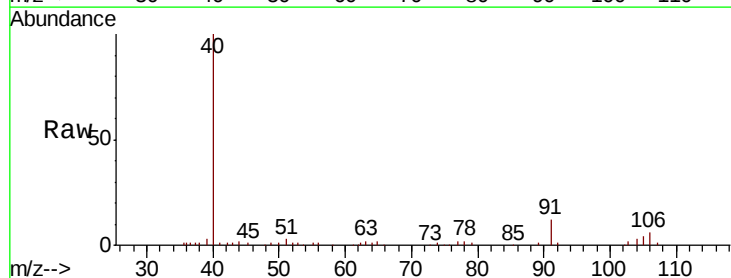


Abundance Ion 106.00 (105.70 to 106.70): V  
Ion 91.00 (90.70 to 91.70): VX0

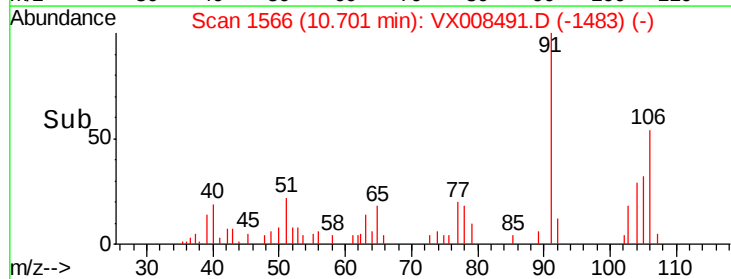
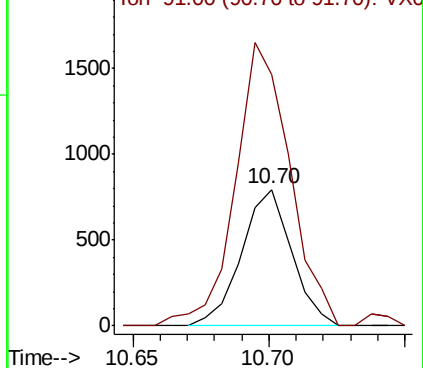


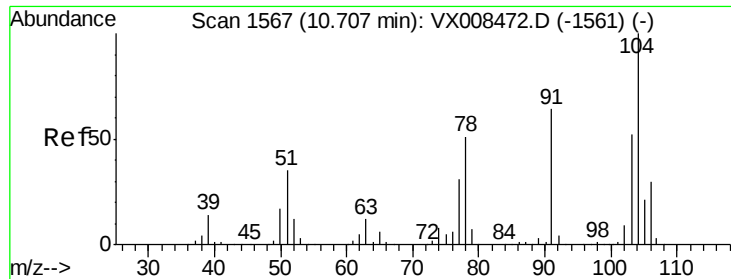
#68  
o-Xylene  
Concen: 0.243 ug/l  
RT: 10.70 min Scan# 1566  
Delta R.T. 0.01 min  
Lab File: VX008491.D  
Acq: 27 Mar 2019 18:34

Tgt Ion:106 Resp: 1019  
Ion Ratio Lower Upper  
106 100  
91 224.4 104.4 313.2



Abundance Ion 106.00 (105.70 to 106.70): V  
Ion 91.00 (90.70 to 91.70): VX0

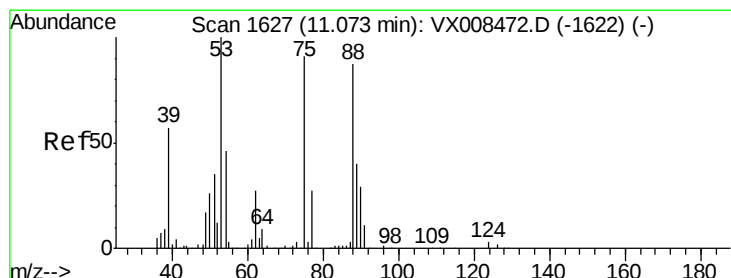
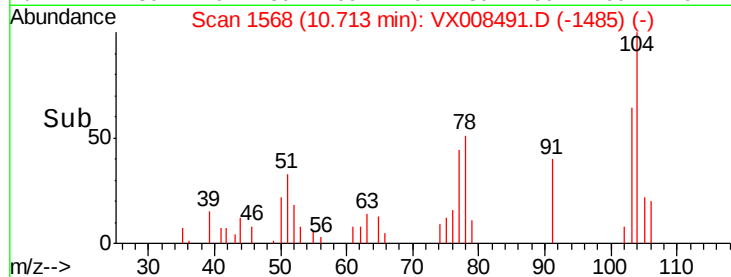
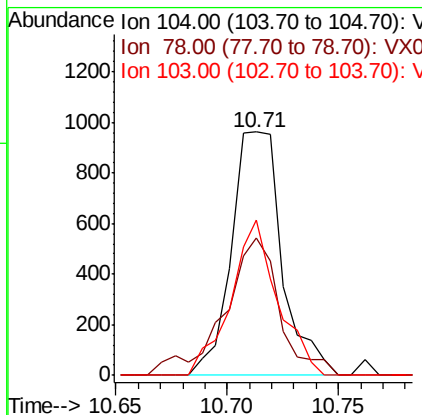
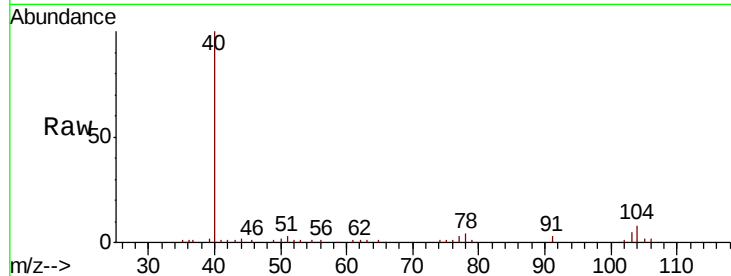




#69  
Stvrene  
Concen: 0.209 ug/l  
RT: 10.71 min Scan# 1568  
Delta R.T. 0.01 min  
Lab File: VX008491.D  
Acq: 27 Mar 2019 18:34

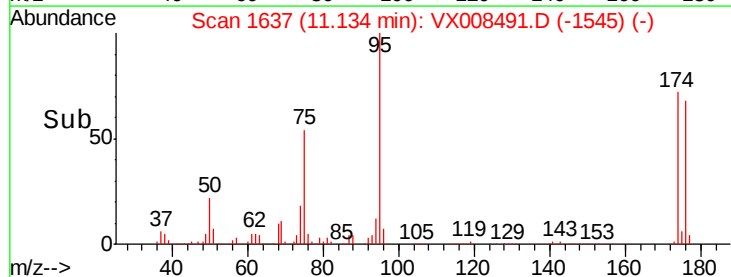
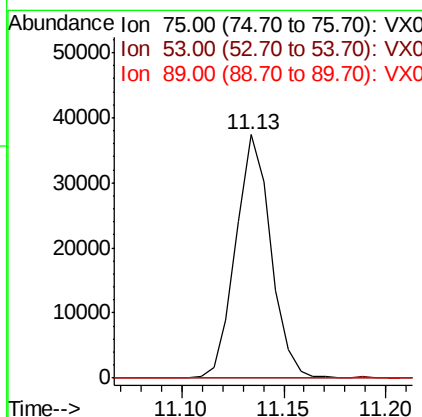
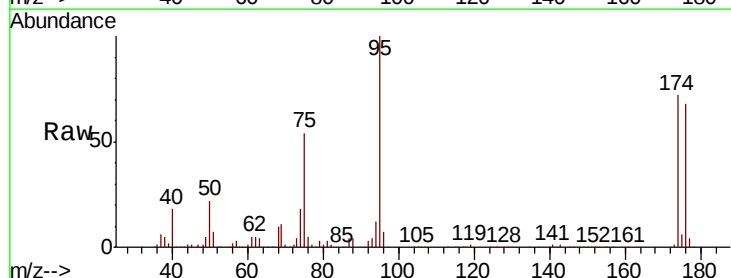
Instrument :  
MSVOA\_X  
ClientSampleId :  
MH-C05-SETTLED-2H-B

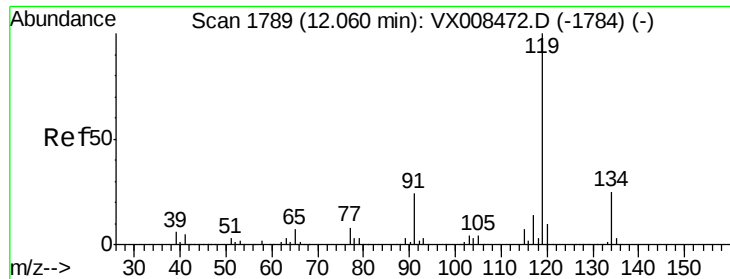
Tot Ion:104 Resp: 1530  
Ion Ratio Lower Upper  
104 100  
78 48.6 38.2 57.2  
103 58.9 45.0 67.4



#77  
t-1,4-Dichloro-2-butene  
Concen: 33.221 ug/l  
RT: 11.13 min Scan# 1637  
Delta R.T. 0.06 min  
Lab File: VX008491.D  
Acq: 27 Mar 2019 18:34

Tgt Ion: 75 Resp: 44586  
Ion Ratio Lower Upper  
75 100  
53 0.1 55.5 166.7#  
89 0.0 24.4 73.2#

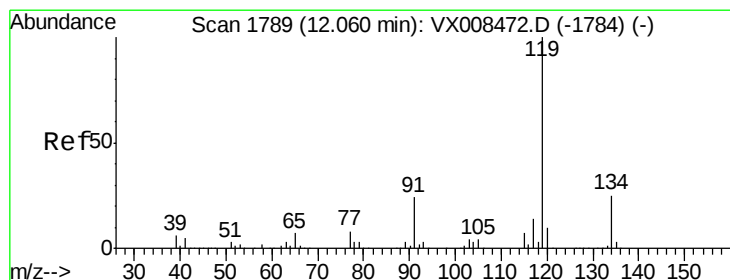
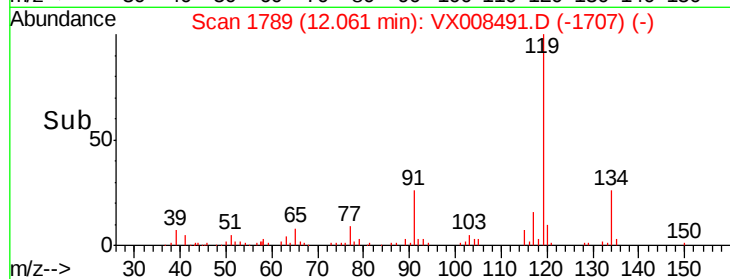
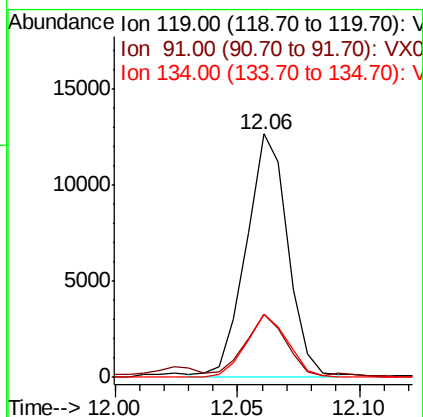
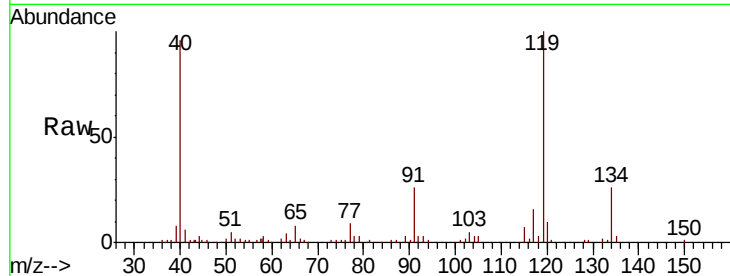




#79  
tert-butylbenzene  
Concen: 1.563 ug/l  
RT: 12.06 min Scan# 1789  
Delta R.T. 0.00 min  
Lab File: VX008491.D  
Acq: 27 Mar 2019 18:34

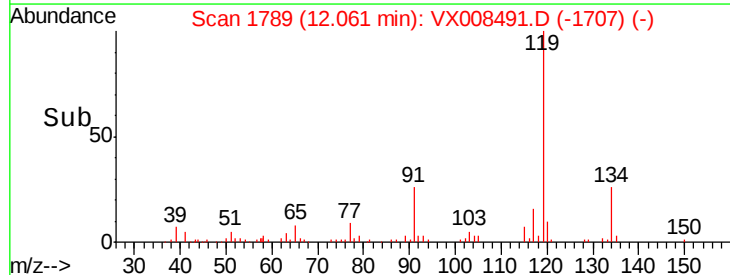
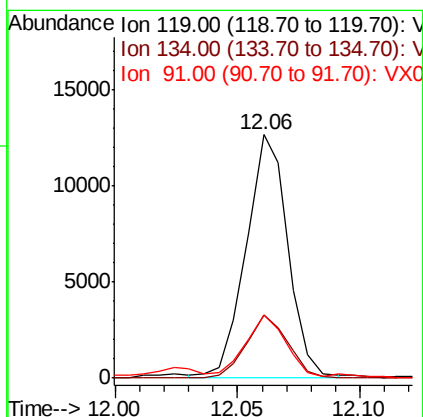
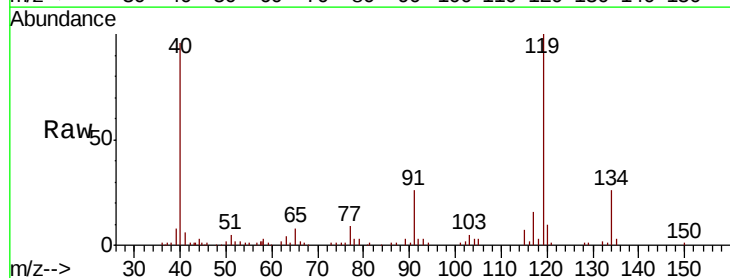
Instrument :  
MSVOA\_X  
ClientSampleId :  
MH-C05-SETTLED-2H-B

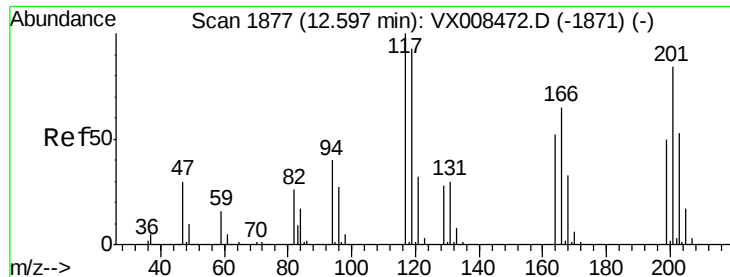
Tot Ion:119 Resp: 15133  
Ion Ratio Lower Upper  
119 100  
91 25.7 0.0 45.0  
134 25.8 0.0 55.4



#82  
p-Isopropyltoluene  
Concen: 1.563 ug/l  
RT: 12.06 min Scan# 1789  
Delta R.T. 0.00 min  
Lab File: VX008491.D  
Acq: 27 Mar 2019 18:34

Tgt Ion:119 Resp: 15133  
Ion Ratio Lower Upper  
119 100  
134 25.8 0.0 55.4  
91 25.7 0.0 45.0





#86

Hexachloroethane

Concen: 0.213 ug/l

RT: 12.58 min Scan# 1875

Delta R.T. -0.01 min

Lab File: VX008491.D

Acq: 27 Mar 2019 18:34

Instrument :

MSVOA\_X

ClientSampleId :

MH-C05-SETTLED-2H-B

Tot Ion:117 Resp: 344

Ion Ratio Lower Upper

117 100

201 0.0 41.1 123.3#

