

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_L\DATA\VL050219\  
 Data File : VL033650.D  
 Acq On : 3 May 2019 5:42  
 Operator : SY/AP  
 Sample : K2628-13  
 Misc : 400ml/MSVOA\_L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 A-13

Quant Time: May 03 08:09:03 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_L\METHODS\VL050119AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu May 02 06:29:02 2019  
 QLast Update : Thu May 02 06:29:02 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.76  | 49   | 844184   | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.28  | 114  | 1992688  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.23 | 117  | 1983632  | 10.00 | ppbv  | 0.00     |

System Monitoring Compounds

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| 68) 1-Bromo-4-Fluorobenzene | 14.57  | 95    | 1667545  | 11.04    | ppbv | 0.00    |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 110.40% |

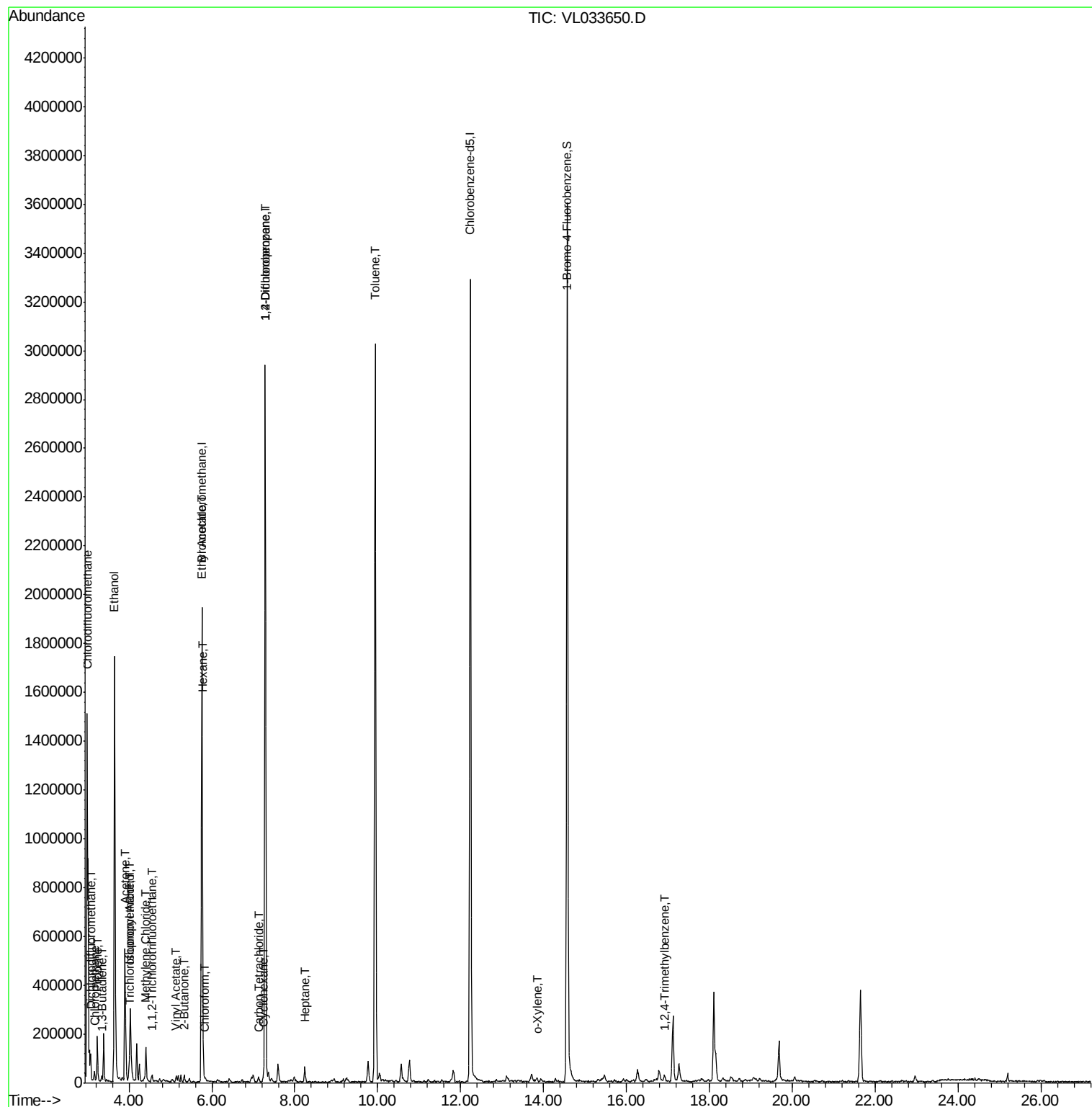
| Target Compounds               | R.T.  | QIon | Response | Conc    | Units  | Qvalue |
|--------------------------------|-------|------|----------|---------|--------|--------|
| 2) Dichlorodifluoromethane     | 3.08  | 85   | 65801    | 0.517   | ppbv   | 91     |
| 3) Chlorodifluoromethane       | 2.99  | 51   | 1622387  | 16.074  | ppbv # | 79     |
| 4) Chloromethane               | 3.17  | 50   | 30335    | 0.552   | ppbv   | 94     |
| 9) Propene                     | 3.24  | 41   | 32771    | 1.134   | ppbv   | 85     |
| 10) Heptane                    | 8.24  | 43   | 16314    | 0.153   | ppbv   | 95     |
| 11) Trichlorofluoromethane     | 4.00  | 101  | 45894    | 0.304   | ppbv   | 88     |
| 12) 1,1,2-Trichlorotrifluoroet | 4.55  | 101  | 9243     | 0.089   | ppbv   | 98     |
| 13) Ethanol                    | 3.65  | 45   | 1819081  | 138.822 | ppbv   | 99     |
| 15) Acetone                    | 3.90  | 43   | 554268   | 5.393   | ppbv   | 100    |
| 16) 1,3-Butadiene              | 3.35  | 39   | 1852     | 0.040   | ppbv # | 32     |
| 19) Isopropyl Alcohol          | 4.03  | 45   | 318432   | 4.514   | ppbv # | 95     |
| 20) Methylene Chloride         | 4.40  | 84   | 49160    | 1.227   | ppbv # | 82     |
| 23) Vinyl Acetate              | 5.14  | 43   | 14622    | 0.096   | ppbv # | 74     |
| 25) Ethyl Acetate              | 5.77  | 43   | 70340    | 0.361   | ppbv # | 92     |
| 26) Hexane                     | 5.78  | 57   | 59535    | 0.725   | ppbv # | 53     |
| 29) Chloroform                 | 5.84  | 83   | 5070     | 0.034   | ppbv   | 89     |
| 30) Cyclohexane                | 7.24  | 84   | 3799     | 0.055   | ppbv # | 1      |
| 34) 2-Butanone                 | 5.33  | 43   | 26653    | 0.218   | ppbv   | 97     |
| 35) Carbon Tetrachloride       | 7.13  | 117  | 7934     | 0.050   | ppbv # | 79     |
| 39) 1,2-Dichloropropane        | 7.28  | 63   | 539105   | 8.420   | ppbv # | 23     |
| 53) Toluene                    | 9.94  | 91   | 2259291  | 10.544  | ppbv   | 98     |
| 60) o-Xylene                   | 13.85 | 91   | 7089     | 0.036   | ppbv   | 70     |
| 74) 1,2,4-Trimethylbenzene     | 16.92 | 105  | 8617     | 0.035   | ppbv # | 77     |

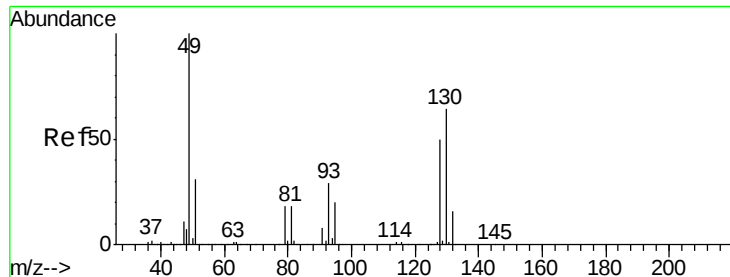
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\V0ASRV\HPCHEM1\MSVOA\_L\DATA\VL050219\  
Data File : VL033650.D  
Acq On : 3 May 2019 5:42  
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Sample : K2628-13  
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Instrument :  
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Quant Time: May 03 08:09:03 2019  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_L\METHODS\VL050119AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu May 02 06:29:02 2019  
QLast Update : Thu May 02 06:29:02 2019  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 877

Delta R.T. 0.00 min

Lab File: VL033650.D

Acq: 3 May 2019 5:42

Instrument :

MSVOA\_L

ClientSampleId :

A-13

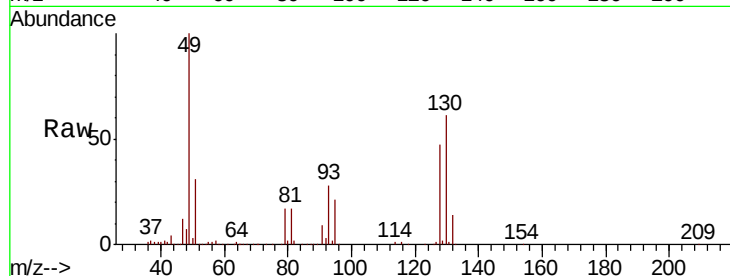
Tgt Ion: 49 Resp: 844184

Ion Ratio Lower Upper

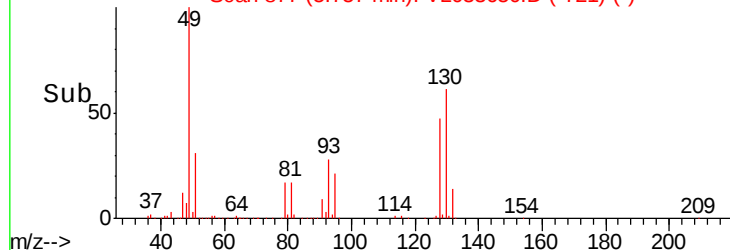
49 100

128 48.1 25.0 75.0

130 61.9 31.9 95.9



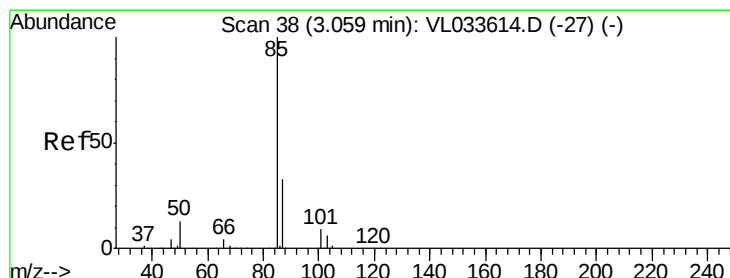
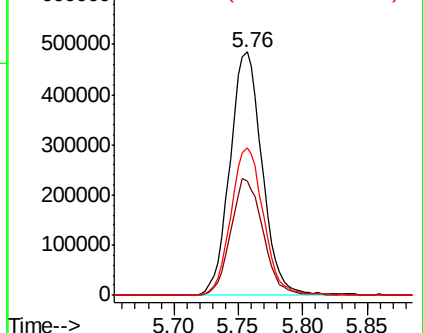
Scan 877 (5.757 min): VL033650.D (-721) (-)



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.517 ppbv

RT: 3.08 min Scan# 43

Delta R.T. 0.02 min

Lab File: VL033650.D

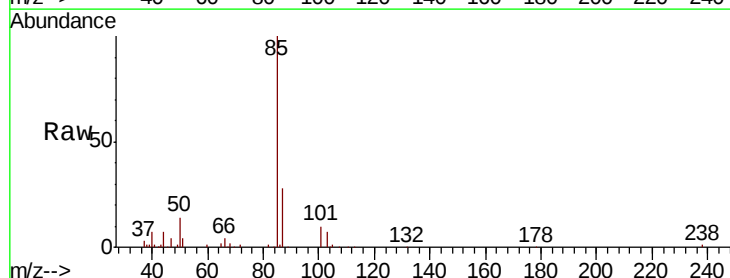
Acq: 3 May 2019 5:42

Tgt Ion: 85 Resp: 65801

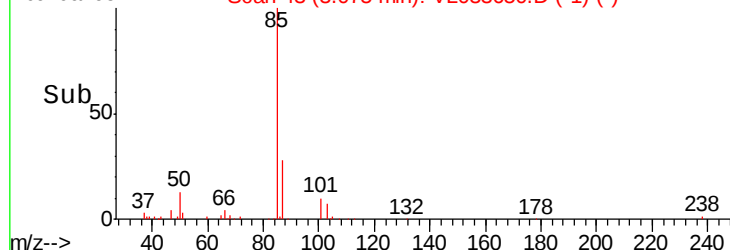
Ion Ratio Lower Upper

85 100

87 28.2 26.8 40.2

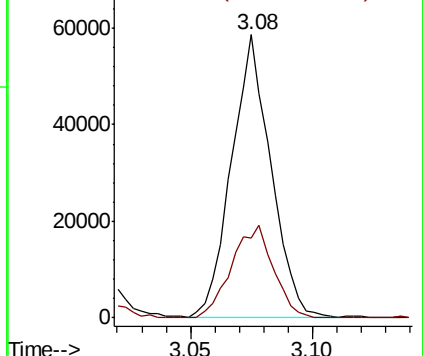


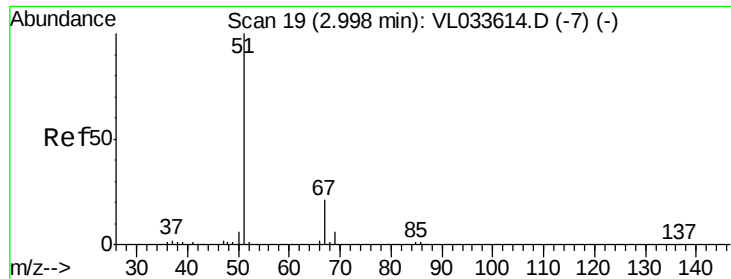
Scan 43 (3.075 min): VL033650.D (-1) (-)



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 16.074 ppbv

RT: 2.99 min Scan# 16

Delta R.T. -0.01 min

Lab File: VL033650.D

Acq: 3 May 2019 5:42

Instrument :

MSVOA\_L

ClientSampleId :

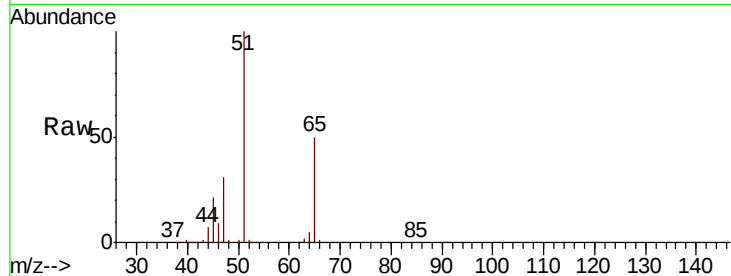
A-13

Tgt Ion: 51 Resp: 1622387

Ion Ratio Lower Upper

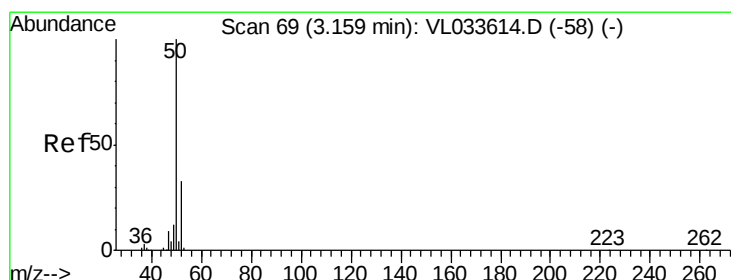
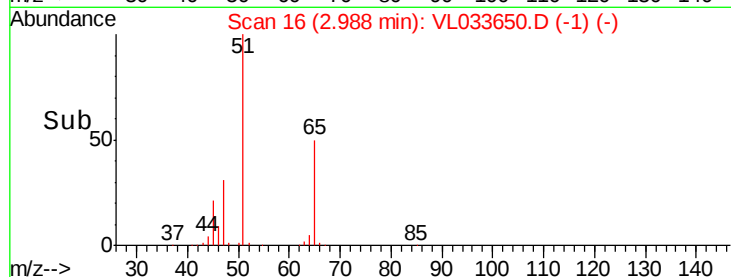
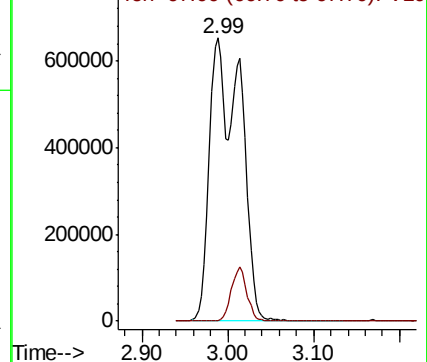
51 100

67 9.7 15.6 23.4#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.552 ppbv

RT: 3.17 min Scan# 73

Delta R.T. 0.01 min

Lab File: VL033650.D

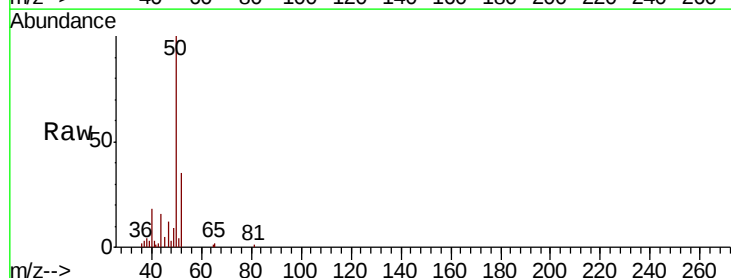
Acq: 3 May 2019 5:42

Tgt Ion: 50 Resp: 30335

Ion Ratio Lower Upper

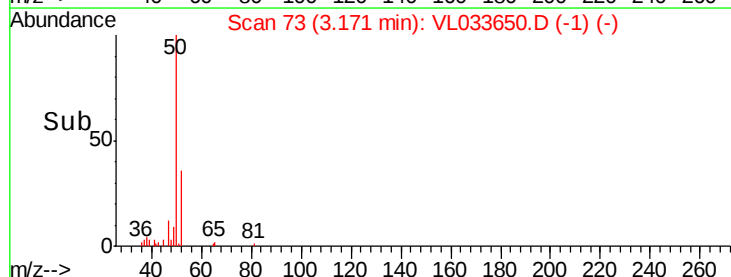
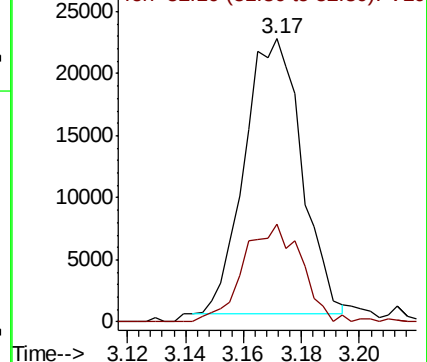
50 100

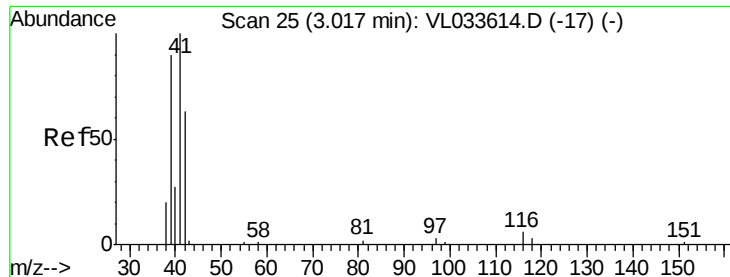
52 35.8 26.0 39.0



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 1.134 ppbv

RT: 3.24 min Scan# 93

Delta R.T. 0.22 min

Lab File: VL033650.D

Acq: 3 May 2019 5:42

Instrument :

MSVOA\_L

ClientSampleId :

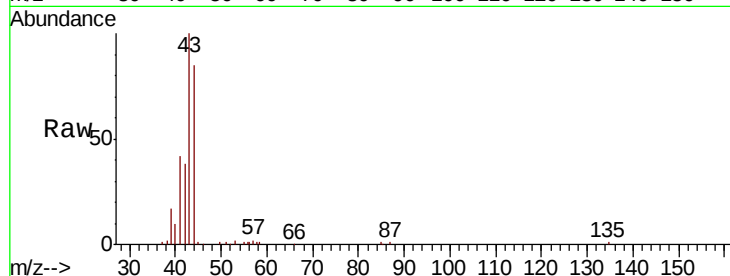
A-13

Tgt Ion: 41 Resp: 32771

Ion Ratio Lower Upper

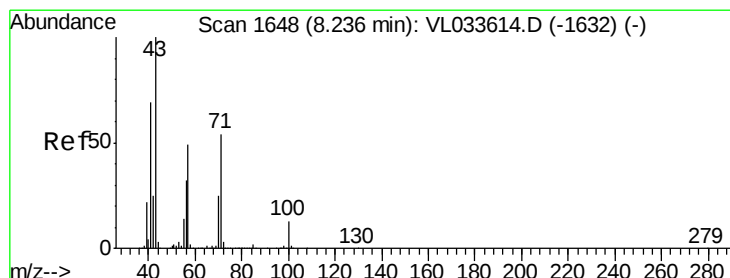
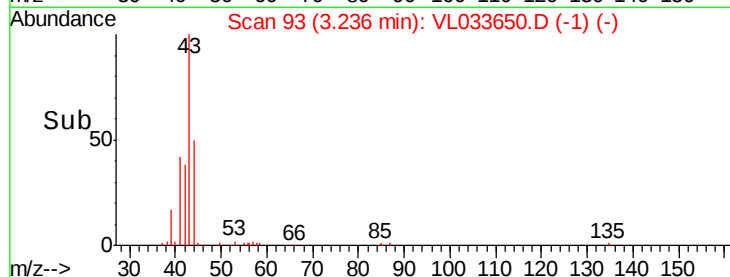
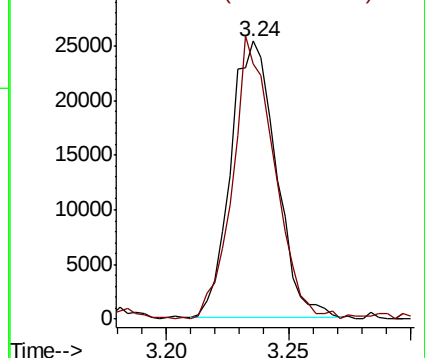
41 100

42 95.8 66.0 99.0



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0



#10

Heptane

Concen: 0.153 ppbv

RT: 8.24 min Scan# 1649

Delta R.T. 0.00 min

Lab File: VL033650.D

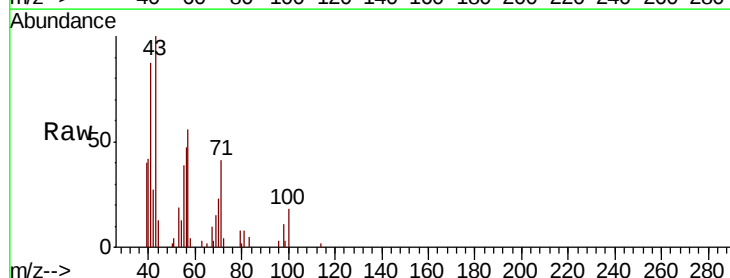
Acq: 3 May 2019 5:42

Tgt Ion: 43 Resp: 16314

Ion Ratio Lower Upper

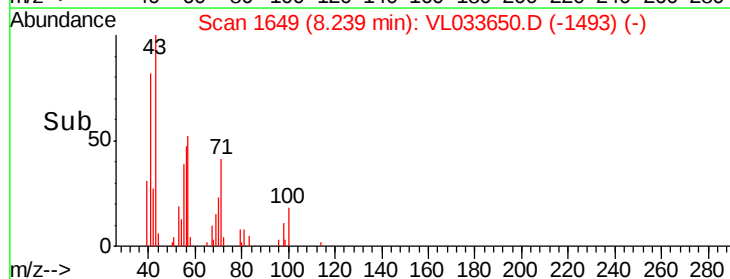
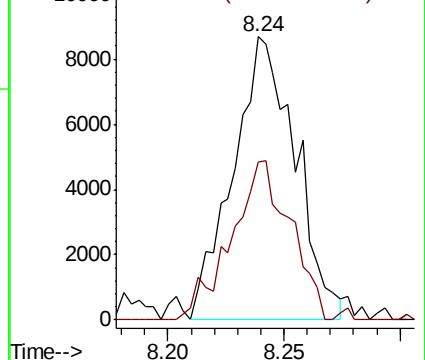
43 100

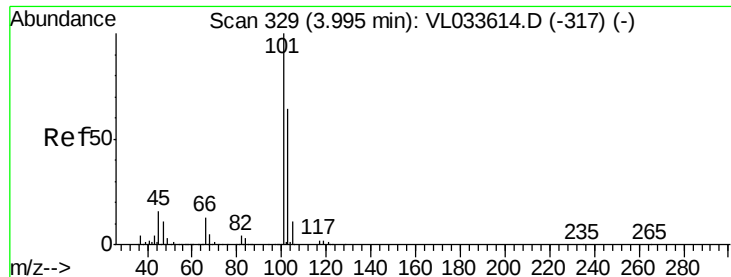
57 53.7 40.3 60.5



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0





#11

Trichlorofluoromethane

Concen: 0.304 ppbv

RT: 4.00 min Scan# 332

Delta R.T. 0.01 min

Lab File: VL033650.D

Acq: 3 May 2019 5:42

Instrument :

MSVOA\_L

ClientSampleId :

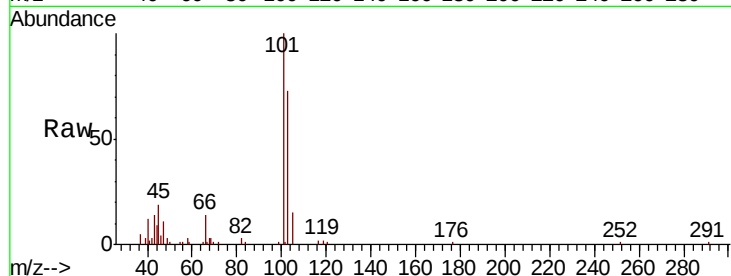
A-13

Tgt Ion:101 Resp: 45894

Ion Ratio Lower Upper

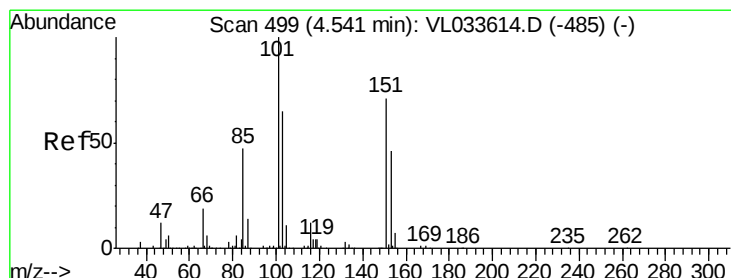
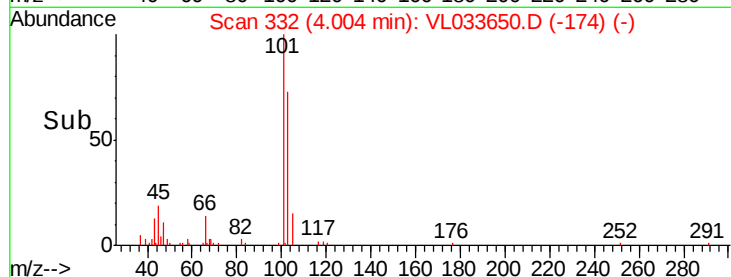
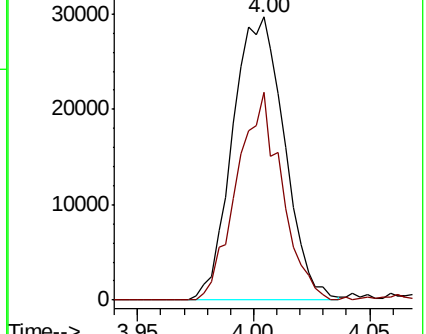
101 100

103 73.3 51.2 76.8



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.089 ppbv

RT: 4.55 min Scan# 501

Delta R.T. 0.01 min

Lab File: VL033650.D

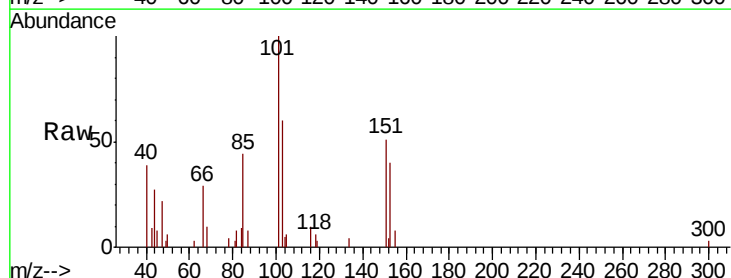
Acq: 3 May 2019 5:42

Tgt Ion:101 Resp: 9243

Ion Ratio Lower Upper

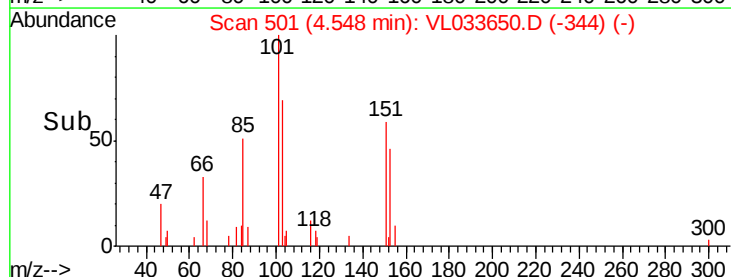
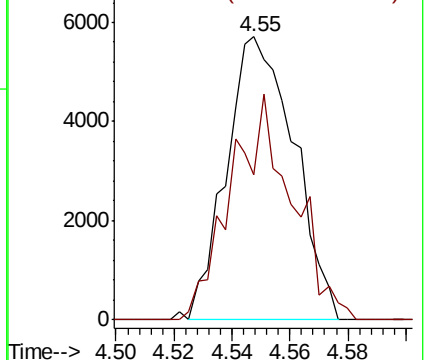
101 100

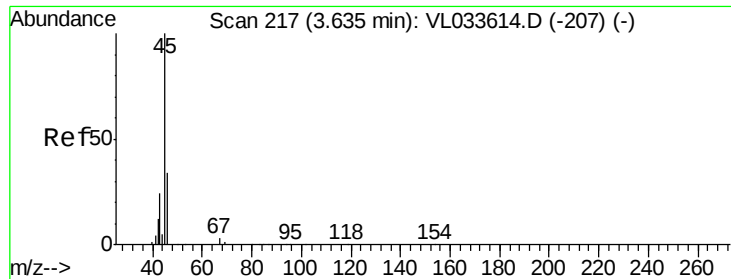
151 72.7 59.2 88.8



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V





#13

Ethanol

Concen: 138.822 ppbv

RT: 3.65 min Scan# 222

Delta R.T. 0.02 min

Lab File: VL033650.D

Acq: 3 May 2019 5:42

Instrument :

MSVOA\_L

ClientSampleId :

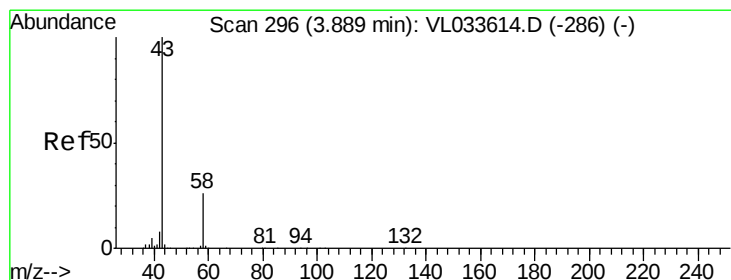
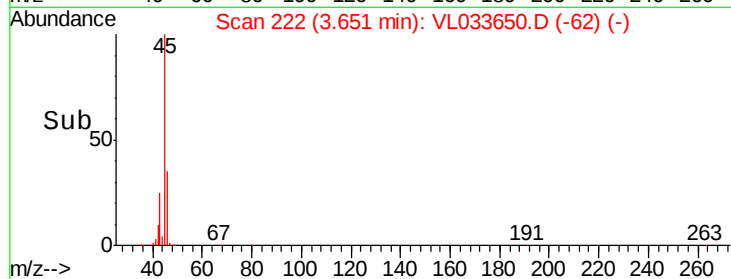
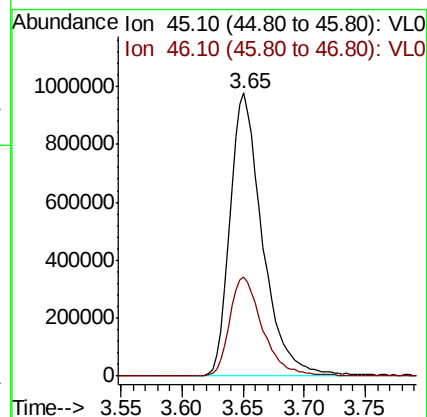
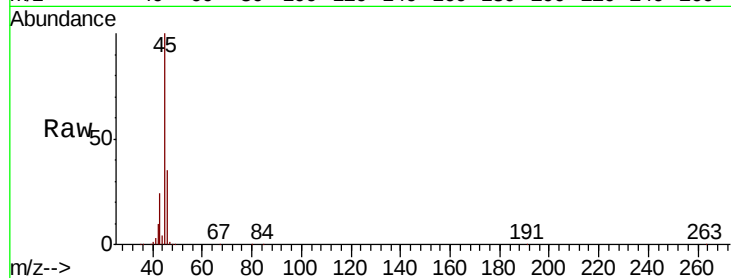
A-13

Tgt Ion: 45 Resp: 1819081

Ion Ratio Lower Upper

45 100

46 36.0 14.6 58.2



#15

Acetone

Concen: 5.393 ppbv

RT: 3.90 min Scan# 299

Delta R.T. 0.01 min

Lab File: VL033650.D

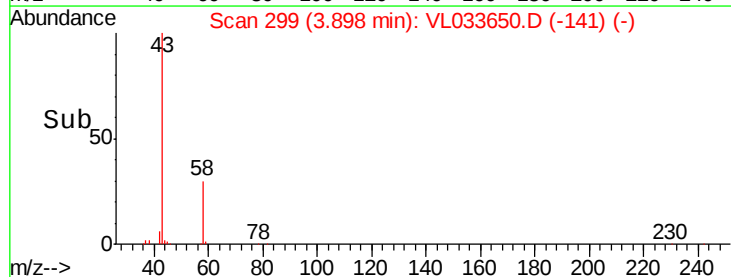
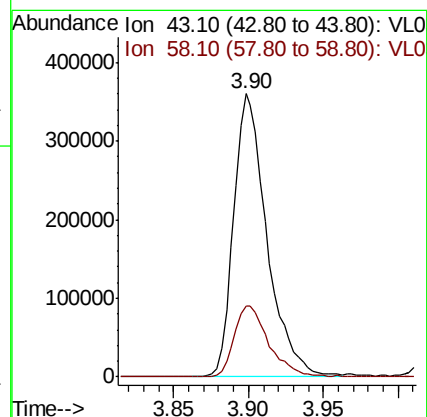
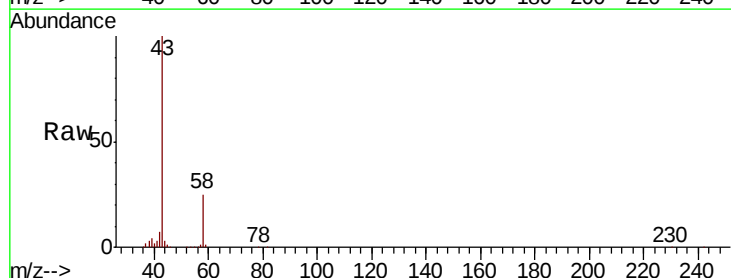
Acq: 3 May 2019 5:42

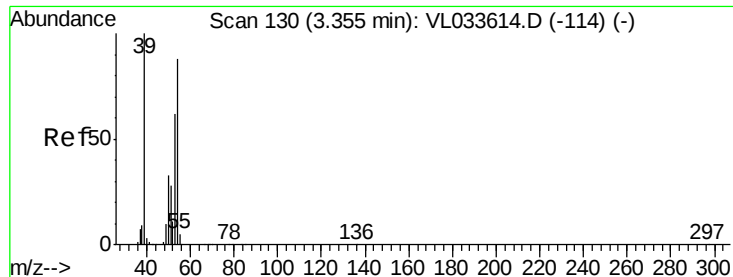
Tgt Ion: 43 Resp: 554268

Ion Ratio Lower Upper

43 100

58 26.5 21.2 31.8

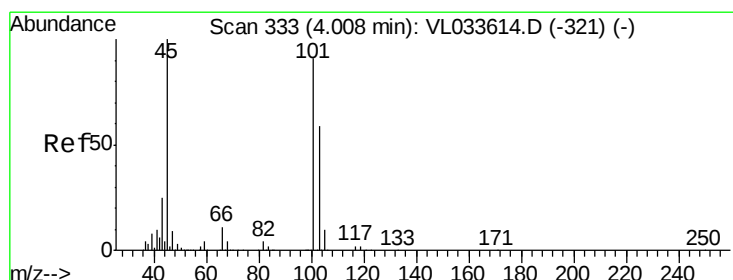
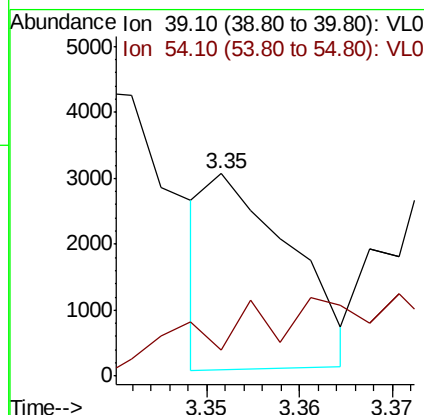
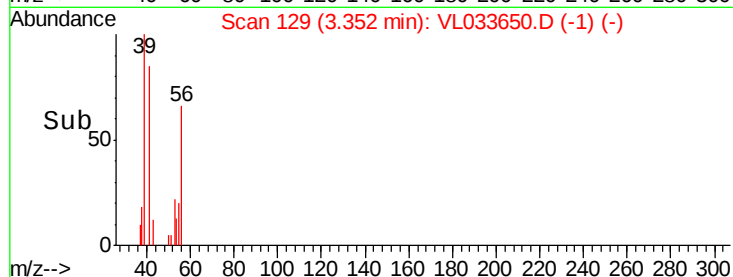
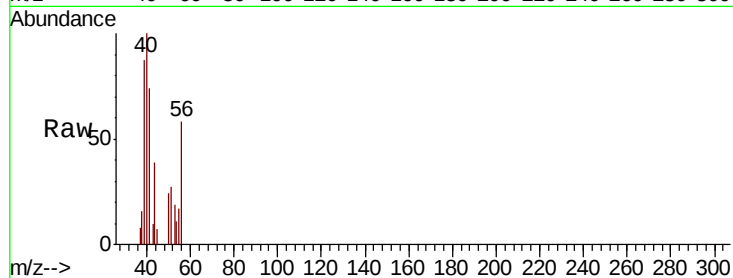




#16  
 1,3-Butadiene  
 Concen: 0.040 ppbv  
 RT: 3.35 min Scan# 129  
 Delta R.T. -0.00 min  
 Lab File: VL033650.D  
 Acq: 3 May 2019 5:42

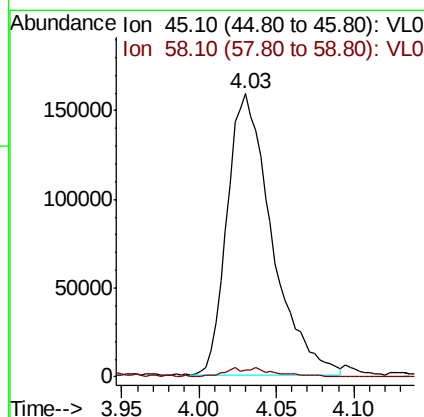
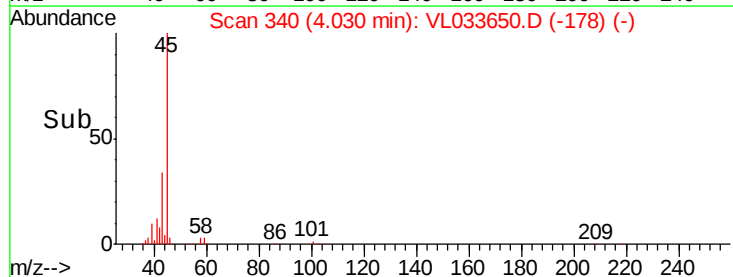
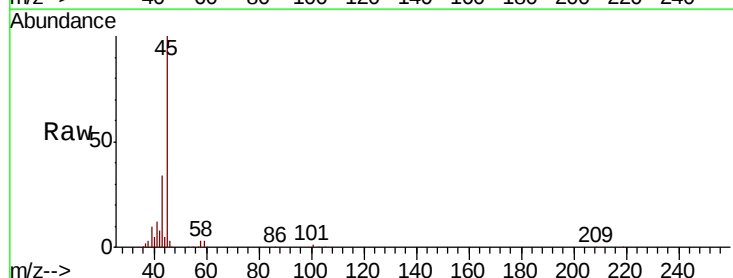
Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 A-13

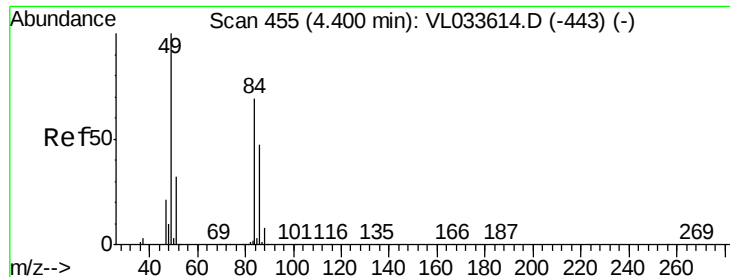
Tgt Ion: 39 Resp: 1852  
 Ion Ratio Lower Upper  
 39 100  
 54 147.9 68.4 102.6#



#19  
 Isopropyl Alcohol  
 Concen: 4.514 ppbv  
 RT: 4.03 min Scan# 340  
 Delta R.T. 0.02 min  
 Lab File: VL033650.D  
 Acq: 3 May 2019 5:42

Tgt Ion: 45 Resp: 318432  
 Ion Ratio Lower Upper  
 45 100  
 58 3.8 1.8 2.6#

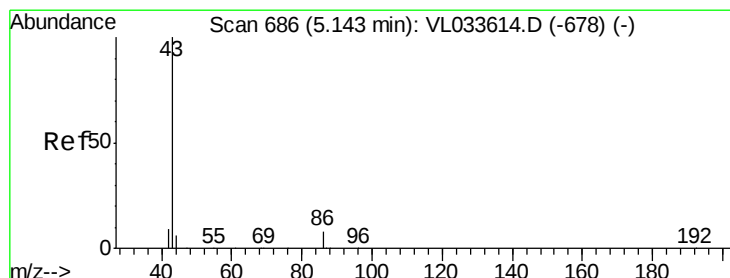
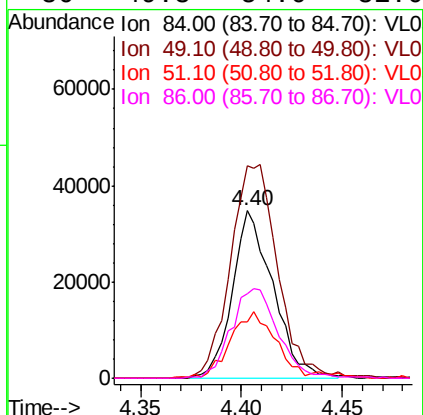
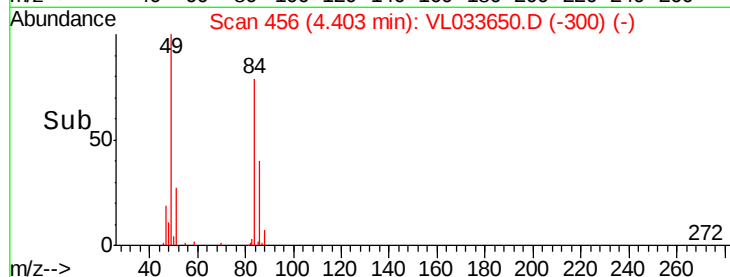
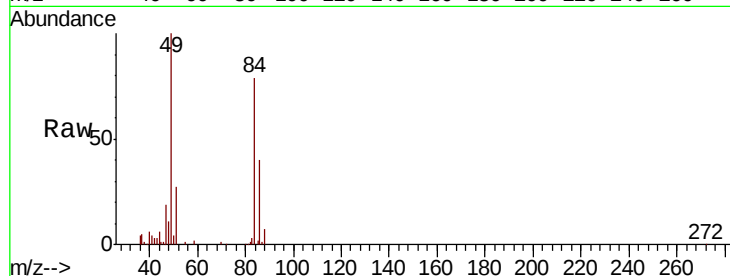




#20  
Methylene Chloride  
Concen: 1.227 ppbv  
RT: 4.40 min Scan# 456  
Delta R.T. 0.00 min  
Lab File: VL033650.D  
Acq: 3 May 2019 5:42

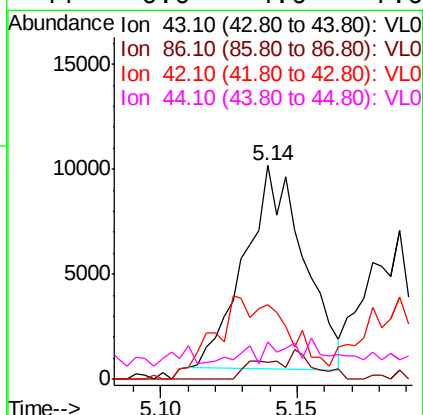
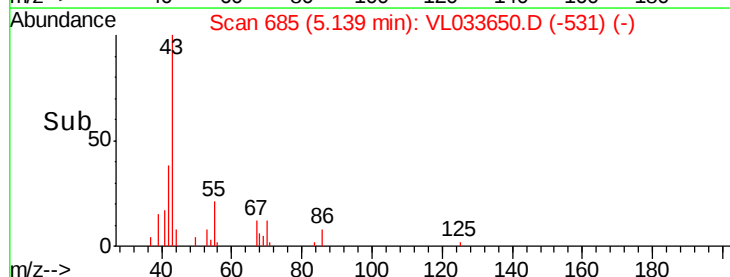
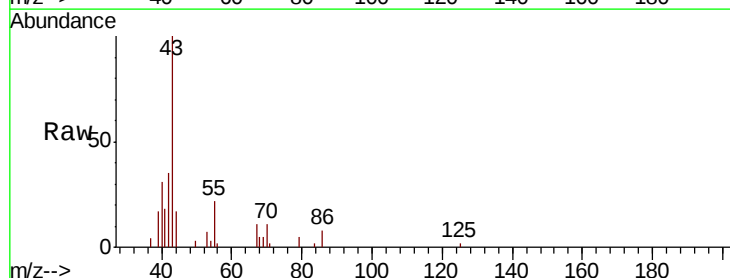
Instrument :  
MSVOA\_L  
ClientSampleId :  
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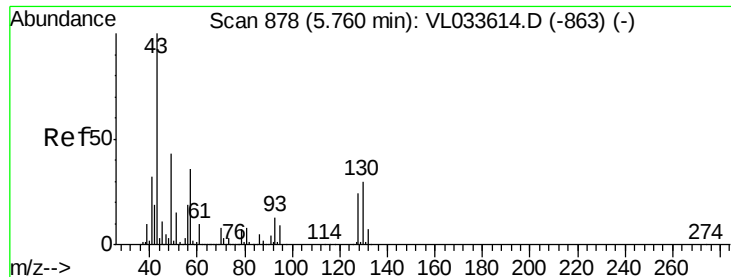
Tgt Ion: 84 Resp: 49160  
Ion Ratio Lower Upper  
84 100  
49 126.6 116.2 174.2  
51 32.7 37.0 55.6#  
86 49.8 54.0 81.0#



#23  
Vinyl Acetate  
Concen: 0.096 ppbv  
RT: 5.14 min Scan# 685  
Delta R.T. -0.00 min  
Lab File: VL033650.D  
Acq: 3 May 2019 5:42

Tgt Ion: 43 Resp: 14622  
Ion Ratio Lower Upper  
43 100  
86 8.1 5.8 8.8  
42 31.1 7.8 11.8#  
44 6.0 4.6 7.0

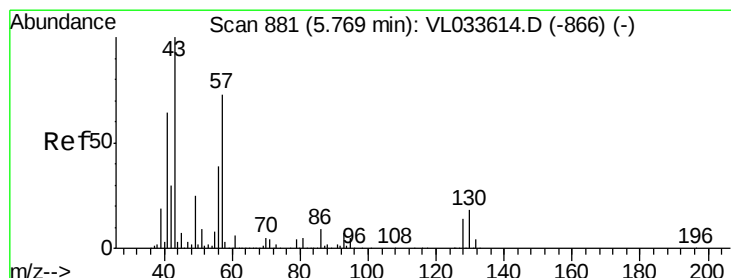
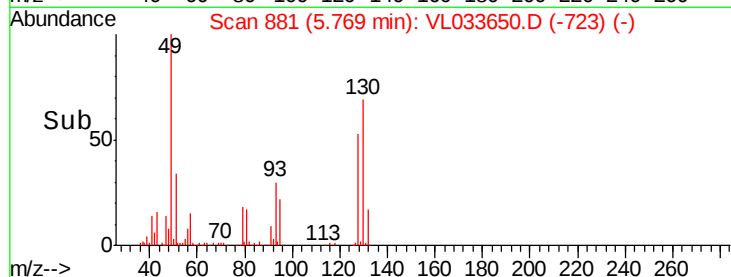
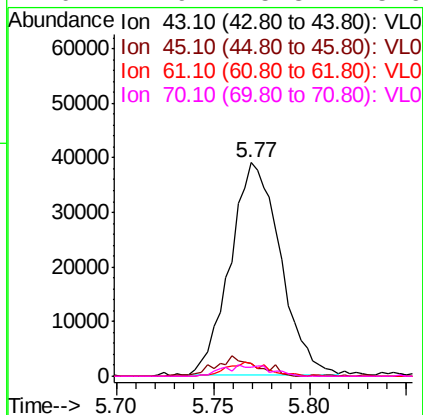
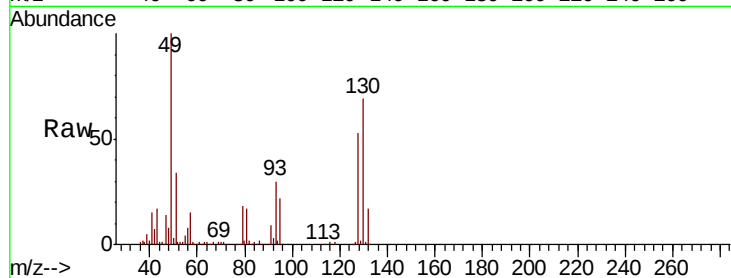




#25  
Ethyl Acetate  
Concen: 0.361 ppbv  
RT: 5.77 min Scan# 881  
Delta R.T. 0.01 min  
Lab File: VL033650.D  
Acq: 3 May 2019 5:42

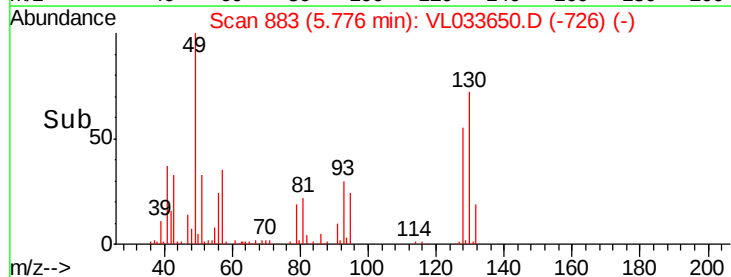
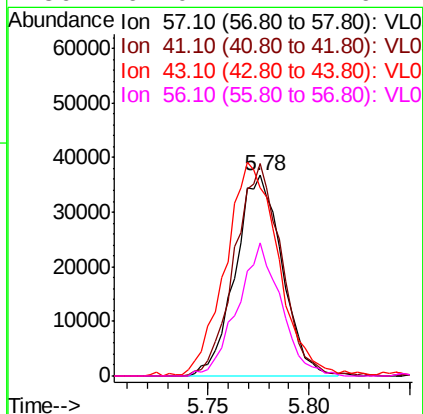
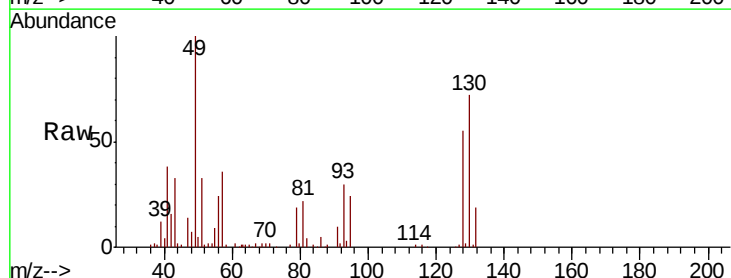
Instrument :  
MSVOA\_L  
ClientSampleId :  
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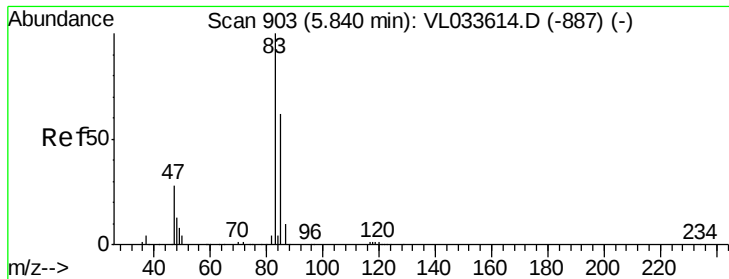
|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 43    | Resp: | 70340 |
| Ion      | Ratio | Lower | Upper |
| 43       | 100   |       |       |
| 45       | 8.3   | 8.1   | 12.1  |
| 61       | 5.2   | 7.5   | 11.3# |
| 70       | 4.9   | 5.8   | 8.6#  |



#26  
Hexane  
Concen: 0.725 ppbv  
RT: 5.78 min Scan# 883  
Delta R.T. 0.01 min  
Lab File: VL033650.D  
Acq: 3 May 2019 5:42

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 57    | Resp: | 59535  |
| Ion      | Ratio | Lower | Upper  |
| 57       | 100   |       |        |
| 41       | 105.9 | 70.6  | 106.0  |
| 43       | 122.5 | 186.0 | 279.0# |
| 56       | 62.0  | 42.7  | 64.1   |

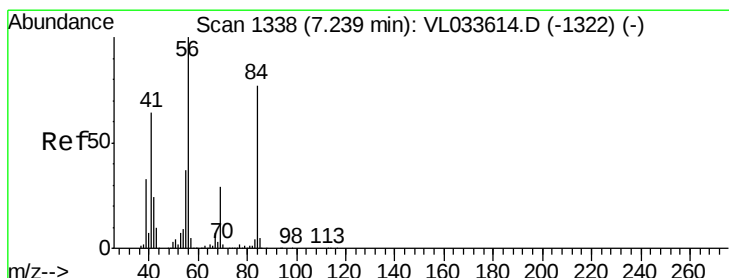
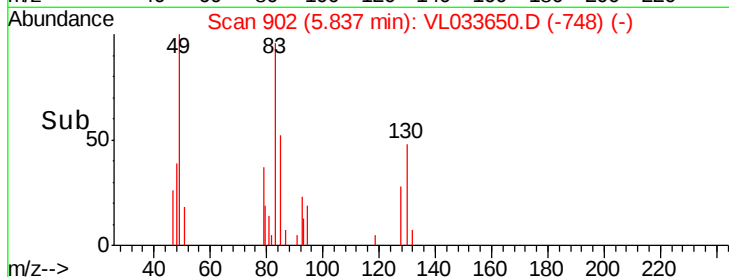
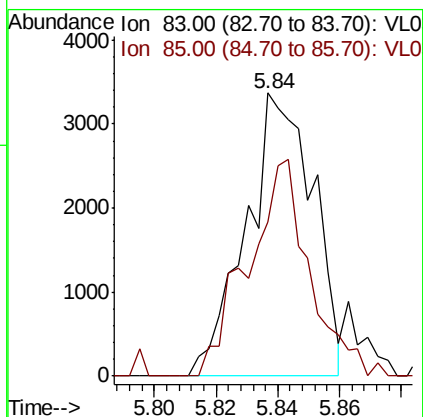
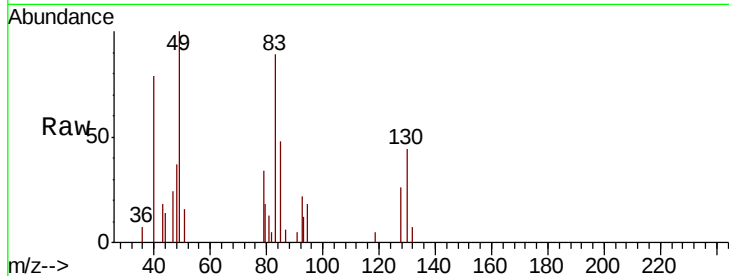




#29  
Chloroform  
Concen: 0.034 ppbv  
RT: 5.84 min Scan# 902  
Delta R.T. -0.00 min  
Lab File: VL033650.D  
Acq: 3 May 2019 5:42

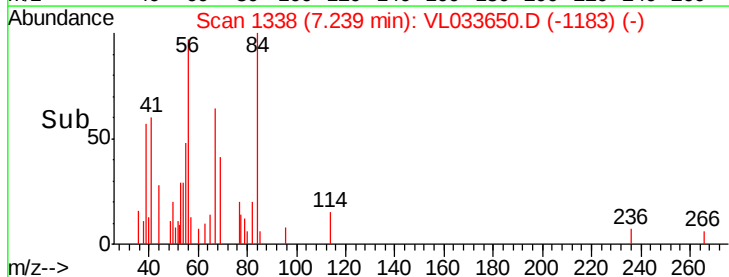
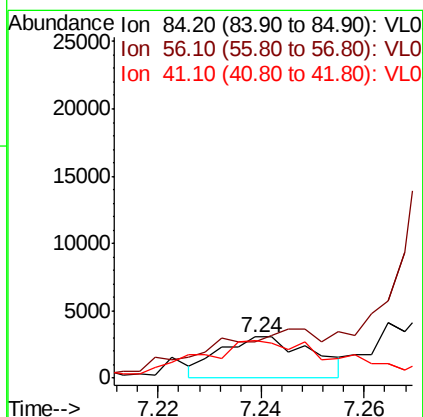
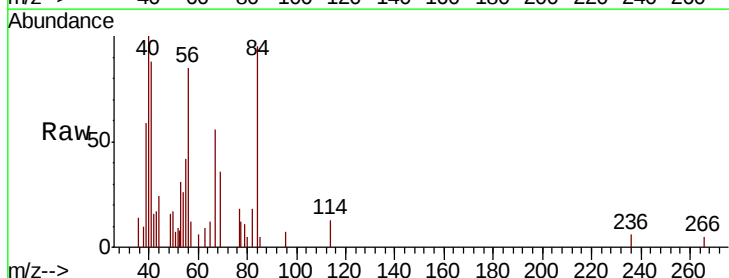
Instrument :  
MSVOA\_L  
ClientSampleId :  
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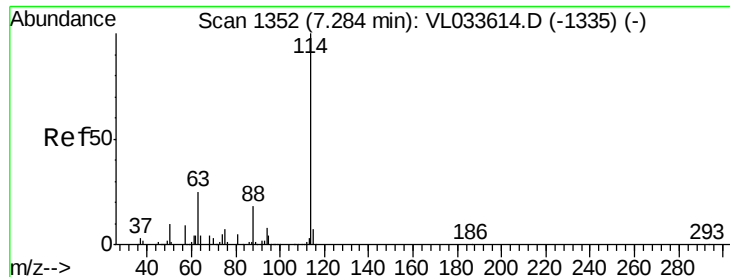
Tgt Ion: 83 Resp: 5070  
Ion Ratio Lower Upper  
83 100  
85 54.3 49.9 74.9



#30  
Cyclohexane  
Concen: 0.055 ppbv  
RT: 7.24 min Scan# 1338  
Delta R.T. -0.00 min  
Lab File: VL033650.D  
Acq: 3 May 2019 5:42

Tgt Ion: 84 Resp: 3799  
Ion Ratio Lower Upper  
84 100  
56 0.0 108.4 162.6#  
41 159.9 67.0 100.4#

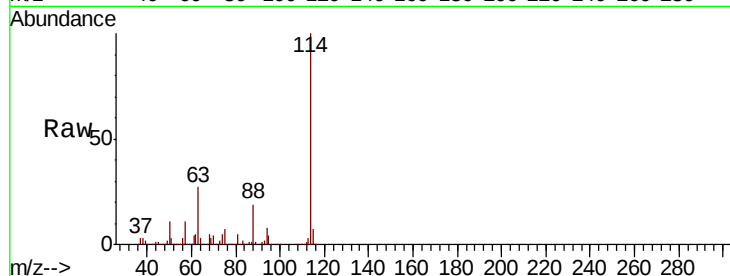




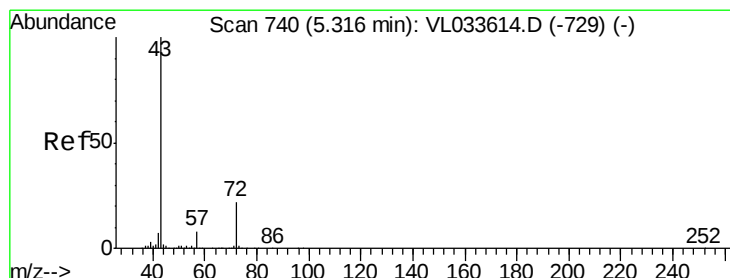
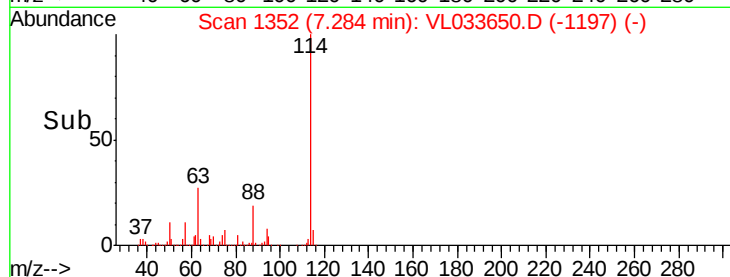
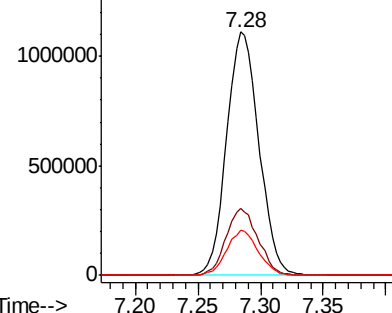
#33  
 1,4-Difluorobenzene  
 Concen: 10.000 ppbv  
 RT: 7.28 min Scan# 1352  
 Delta R.T. -0.00 min  
 Lab File: VL033650.D  
 Acq: 3 May 2019 5:42

Instrument :  
 MSVOA\_L  
 ClientSampleID :  
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Tgt Ion:114 Resp: 1992688  
 Ion Ratio Lower Upper  
 114 100  
 63 27.2 21.1 31.7  
 88 18.0 14.2 21.4

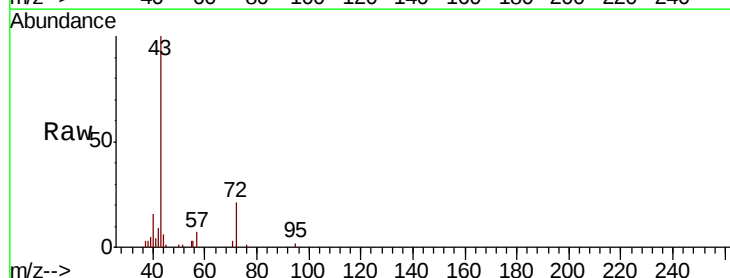


Abundance Ion 114.10 (113.80 to 114.80): VL0  
 Ion 63.10 (62.80 to 63.80): VL0  
 Ion 88.10 (87.80 to 88.80): VL0

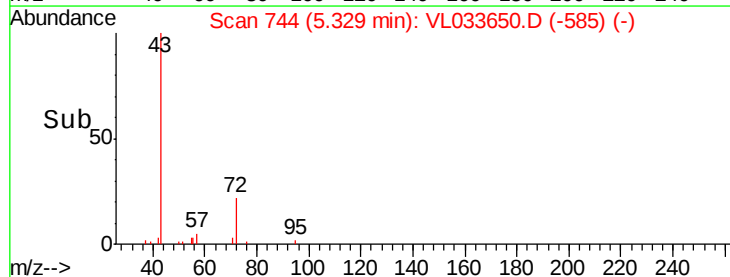
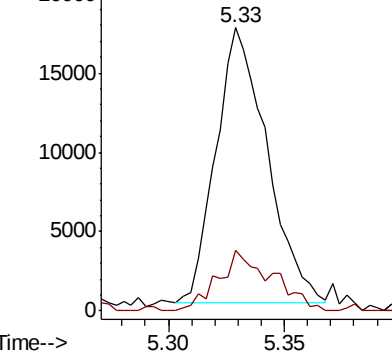


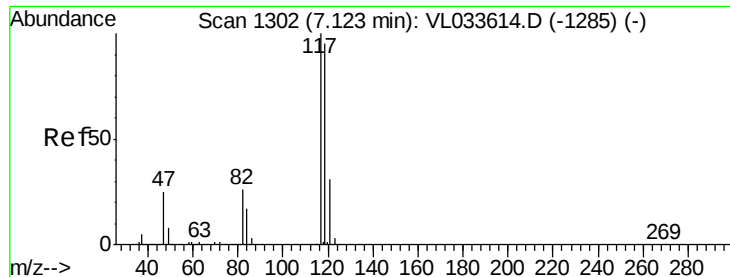
#34  
 2-Butanone  
 Concen: 0.218 ppbv  
 RT: 5.33 min Scan# 744  
 Delta R.T. 0.01 min  
 Lab File: VL033650.D  
 Acq: 3 May 2019 5:42

Tgt Ion: 43 Resp: 26653  
 Ion Ratio Lower Upper  
 43 100  
 72 23.6 17.8 26.8



Abundance Ion 43.10 (42.80 to 43.80): VL0  
 Ion 72.10 (71.80 to 72.80): VL0





#35

Carbon Tetrachloride

Concen: 0.050 ppbv

RT: 7.13 min Scan# 1304

Delta R.T. 0.01 min

Lab File: VL033650.D

Acq: 3 May 2019 5:42

Instrument :

MSVOA\_L

ClientSampleId :

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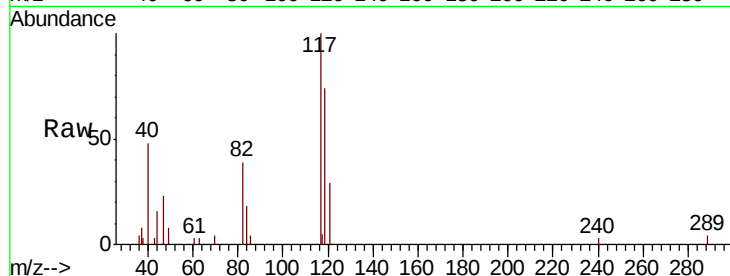
Tgt Ion:117 Resp: 7934

Ion Ratio Lower Upper

117 100

119 70.6 76.2 114.4#

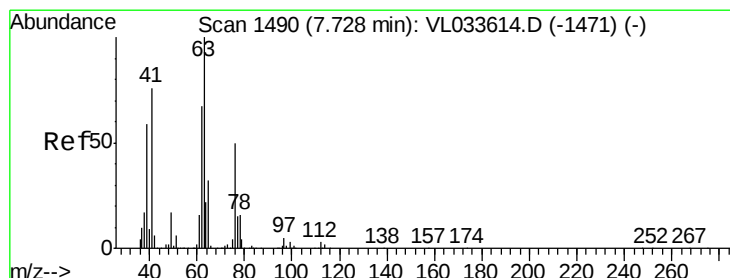
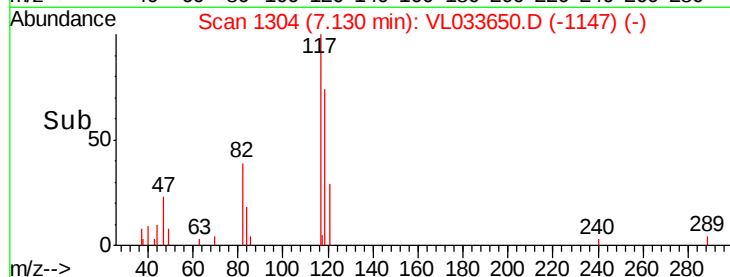
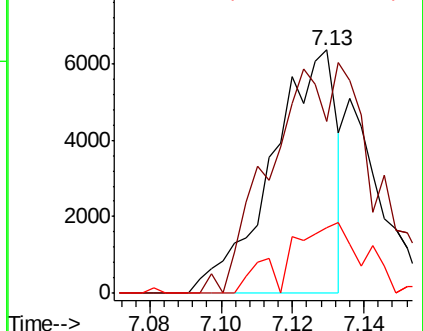
121 27.2 24.9 37.3



Abundance Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V

Ion 121.00 (120.70 to 121.70): V



#39

1,2-Dichloropropane

Concen: 8.420 ppbv

RT: 7.28 min Scan# 1352

Delta R.T. -0.44 min

Lab File: VL033650.D

Acq: 3 May 2019 5:42

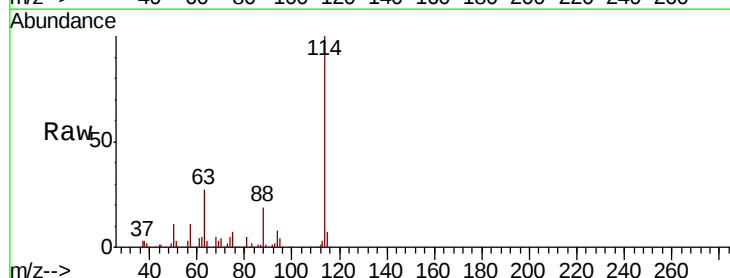
Tgt Ion: 63 Resp: 539105

Ion Ratio Lower Upper

63 100

41 0.0 60.9 91.3#

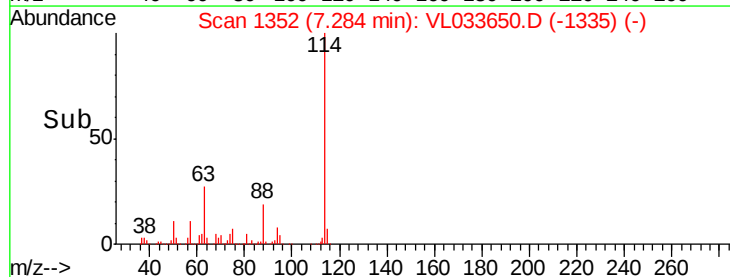
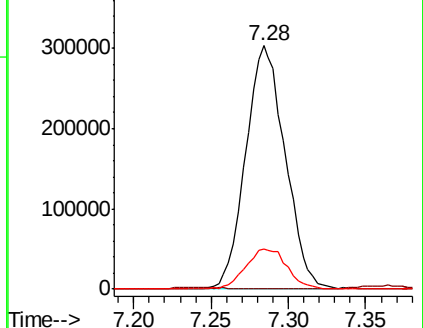
62 16.5 53.3 79.9#

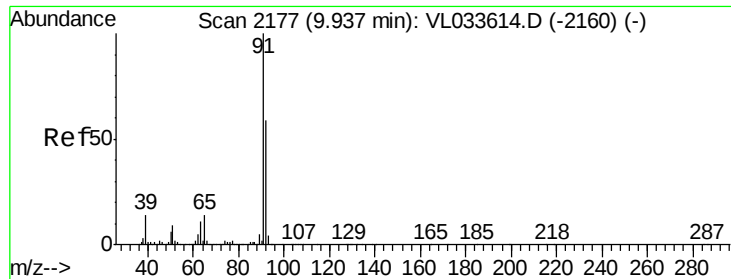


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0





#53

Toluene

Concen: 10.544 ppbv

RT: 9.94 min Scan# 2178

Delta R.T. 0.00 min

Lab File: VL033650.D

Acq: 3 May 2019 5:42

Instrument :

MSVOA\_L

ClientSampleId :

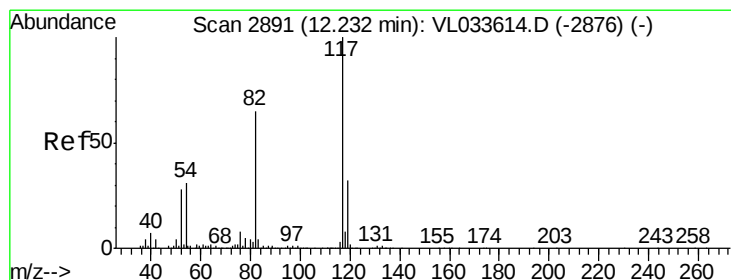
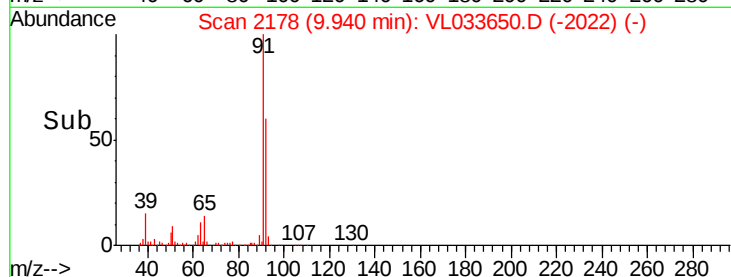
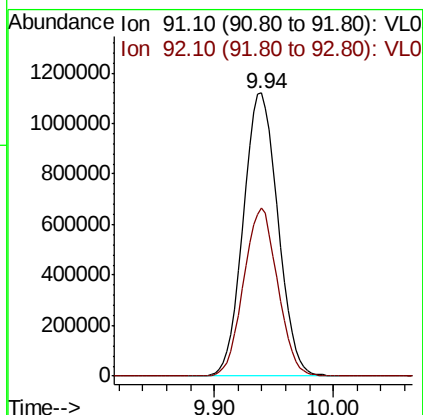
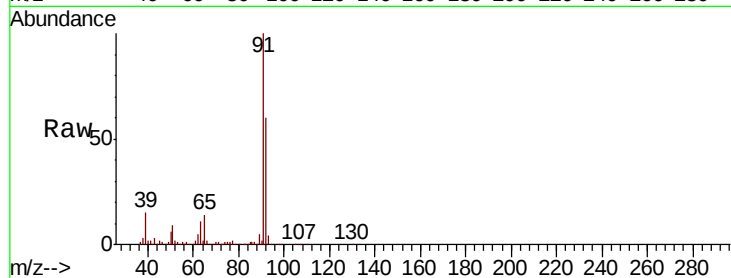
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Tgt Ion: 91 Resp: 2259291

Ion Ratio Lower Upper

91 100

92 58.3 47.8 71.6



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.23 min Scan# 2891

Delta R.T. -0.00 min

Lab File: VL033650.D

Acq: 3 May 2019 5:42

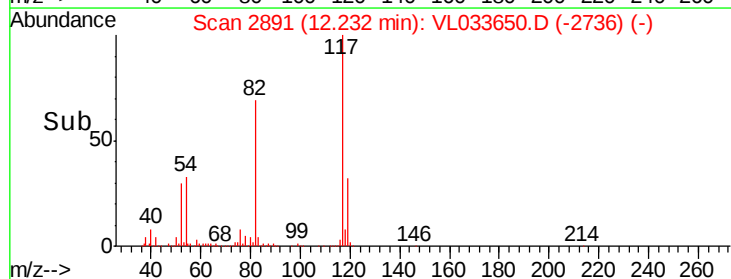
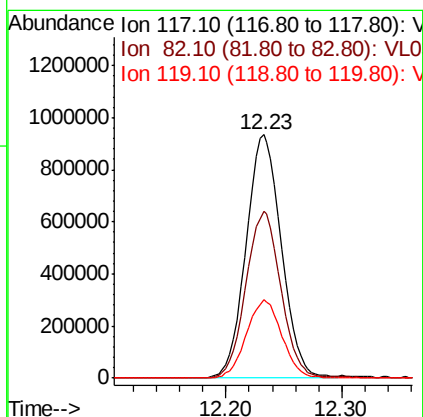
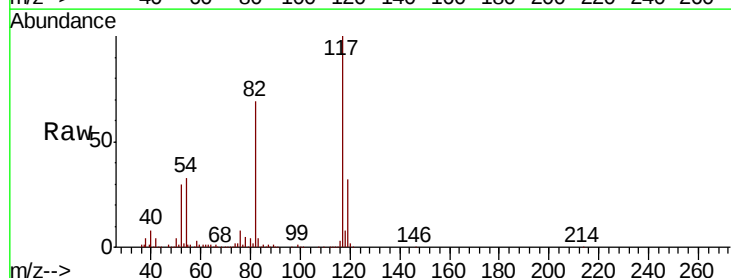
Tgt Ion: 117 Resp: 1983632

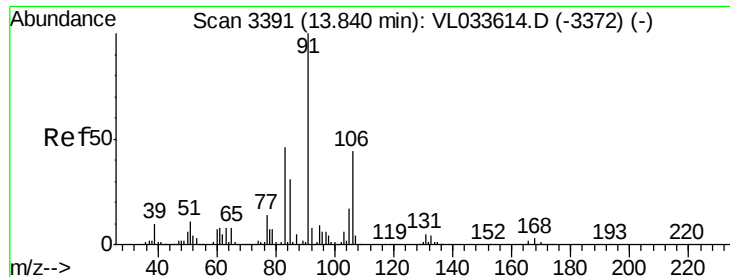
Ion Ratio Lower Upper

117 100

82 68.5 52.6 78.8

119 32.6 28.3 42.5

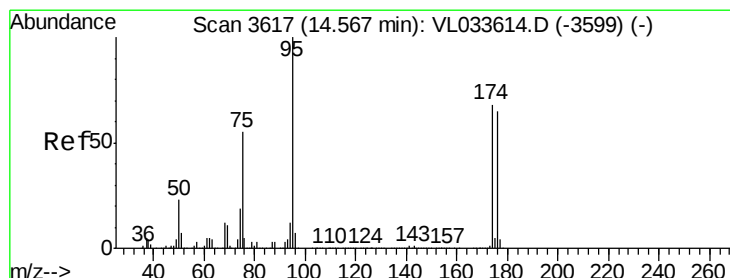
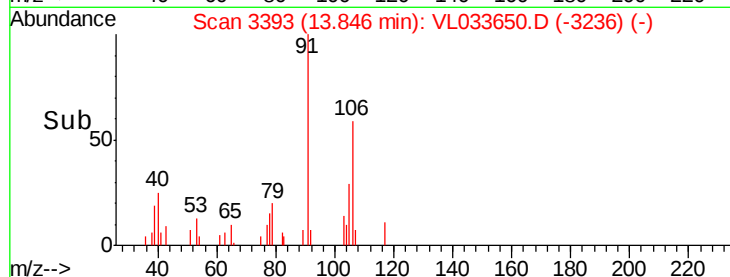
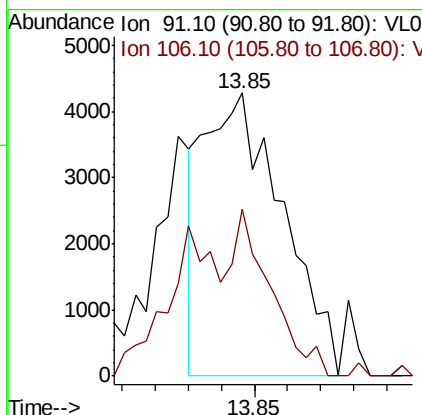
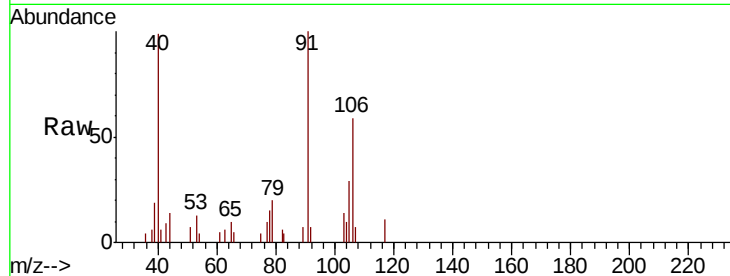




#60  
o-Xylene  
Concen: 0.036 ppbv  
RT: 13.85 min Scan# 3393  
Delta R.T. 0.01 min  
Lab File: VL033650.D  
Acq: 3 May 2019 5:42

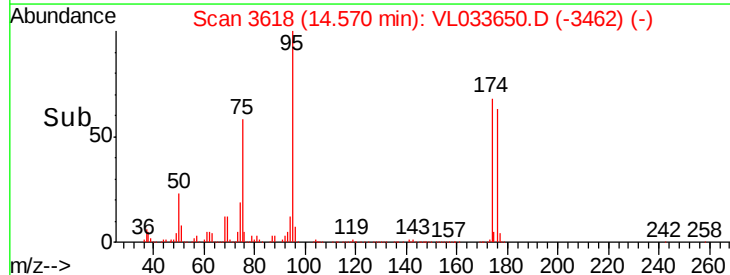
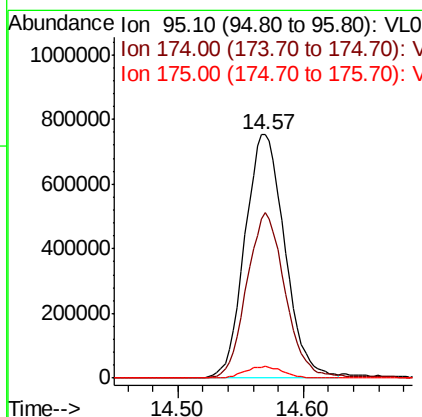
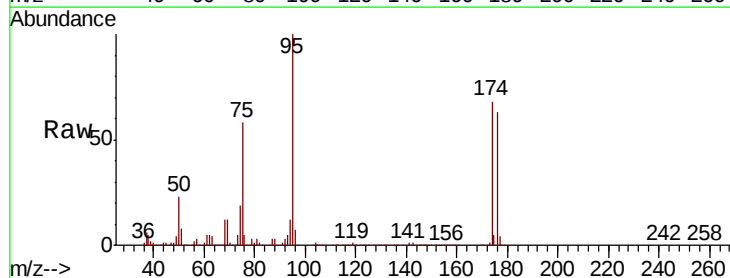
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ClientSampleId :  
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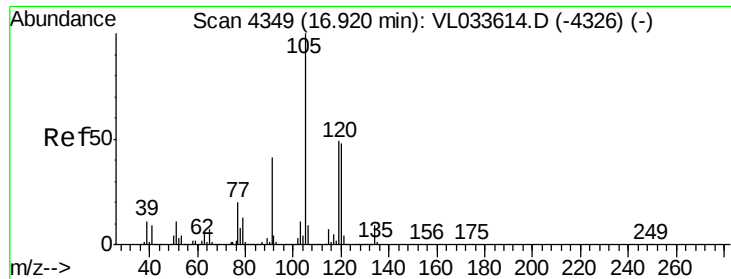
Tgt Ion: 91 Resp: 7089  
Ion Ratio Lower Upper  
91 100  
106 63.0 21.8 65.4



#68  
1-Bromo-4-Fluorobenzene  
Concen: 11.042 ppbv  
RT: 14.57 min Scan# 3618  
Delta R.T. 0.00 min  
Lab File: VL033650.D  
Acq: 3 May 2019 5:42

Tgt Ion: 95 Resp: 1667545  
Ion Ratio Lower Upper  
95 100  
174 66.4 53.9 80.9  
175 4.7 4.0 6.0





#74  
 1,2,4-Trimethylbenzene  
 Concen: 0.035 ppbv  
 RT: 16.92 min Scan# 4348  
 Delta R.T. -0.00 min  
 Lab File: VL033650.D  
 Acq: 3 May 2019 5:42

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
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|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 105   | Resp: | 8617  |
| Ion      | Ratio | Lower | Upper |
| 105      | 100   |       |       |
| 120      | 52.3  | 38.4  | 57.6  |
| 91       | 15.5  | 33.0  | 49.4# |
| 77       | 31.2  | 16.2  | 24.2# |

