

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL031620\  
 Data File : VL034903.D  
 Acq On : 16 Mar 2020 23:22  
 Operator : SY/AP  
 Sample : L1924-06  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 SV-02

Manual Integrations  
 APPROVED

MMDadoda  
 3/17/2020 12:16:13 PM

Quant Time: Mar 17 11:41:08 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL030920AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Mon Mar 0  
 QLast Update : Mon Mar 09 16:42:53 2020  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.66  | 49   | 934470   | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.19  | 114  | 1974001  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.11 | 117  | 1863321  | 10.00 | ppbv  | 0.00     |

System Monitoring Compounds

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| 68) 1-Bromo-4-Fluorobenzene | 14.44  | 95    | 1518292  | 10.45    | ppbv | 0.00    |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 104.50% |

| Target Compounds               | R.T.  | QIon | Response | Conc    | Units  | Ovalue |
|--------------------------------|-------|------|----------|---------|--------|--------|
| 2) Dichlorodifluoromethane     | 3.01  | 85   | 92999    | 0.727   | ppbv   | 92     |
| 4) Chloromethane               | 3.10  | 50   | 22142    | 0.375   | ppbv # | 86     |
| 9) Propene                     | 2.98  | 41   | 76678m   | 1.539   | ppbv   |        |
| 11) Trichlorofluoromethane     | 3.92  | 101  | 35174m   | 0.258   | ppbv   |        |
| 12) 1,1,2-Trichlorotrifluoroet | 4.47  | 101  | 18058742 | 189.535 | ppbv # | 80     |
| 13) Ethanol                    | 3.58  | 45   | 481063   | 31.749  | ppbv   | 95     |
| 15) Acetone                    | 3.83  | 43   | 3471152  | 28.660  | ppbv   | 98     |
| 18) 1,1-Dichloroethene         | 4.26  | 96   | 7523227  | 178.298 | ppbv # | 57     |
| 19) Isopropyl Alcohol          | 3.95  | 45   | 257156   | 3.362   | ppbv # | 1      |
| 20) Methylene Chloride         | 4.32  | 84   | 88775    | 2.318   | ppbv   | 97     |
| 22) trans-1,2-Dichloroethene   | 4.87  | 96   | 28714m   | 0.671   | ppbv   |        |
| 24) 1,1-Dichloroethane         | 5.00  | 63   | 1396481  | 11.644  | ppbv   | 99     |
| 29) Chloroform                 | 5.75  | 83   | 2501483  | 17.645  | ppbv   | 98     |
| 30) Cyclohexane                | 7.14  | 84   | 27850m   | 0.359   | ppbv   |        |
| 31) cis-1,2-Dichloroethene     | 5.55  | 61   | 4330691  | 45.575  | ppbv   | 92     |
| 32) 1,1,1-Trichloroethane      | 6.52  | 97   | 10327629 | 74.763  | ppbv # | 84     |
| 34) 2-Butanone                 | 5.25  | 43   | 42867    | 0.327   | ppbv   | 97     |
| 35) Carbon Tetrachloride       | 7.02  | 117  | 8675m    | 0.071   | ppbv   |        |
| 36) Benzene                    | 6.90  | 78   | 59911m   | 0.340   | ppbv   |        |
| 38) Trichloroethene            | 7.86  | 130  | 13239925 | 198.129 | ppbv   | 91     |
| 52) Tetrachloroethene          | 11.25 | 164  | 36936m   | 0.531   | ppbv   |        |
| 53) Toluene                    | 9.82  | 91   | 73265m   | 0.361   | ppbv   |        |
| 59) m/p-Xylene                 | 12.98 | 91   | 23120m   | 0.109   | ppbv   |        |

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

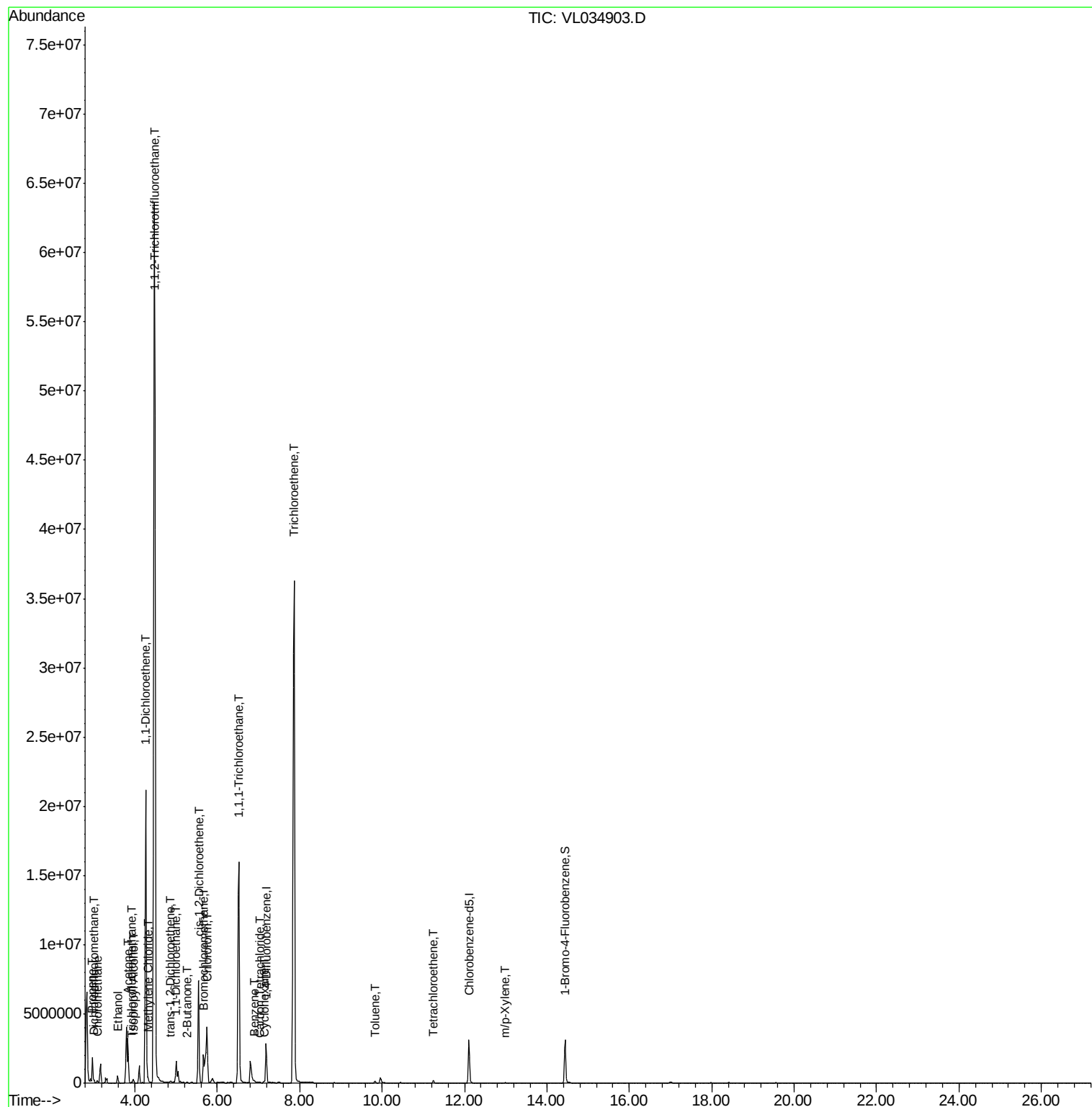
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL031620\  
Data File : VL034903.D  
Acq On : 16 Mar 2020 23:22  
Operator : SY/AP  
Sample : L1924-06  
Misc : 400ml/MSVOA L  
ALS Vial : 1 Sample Multiplier: 1

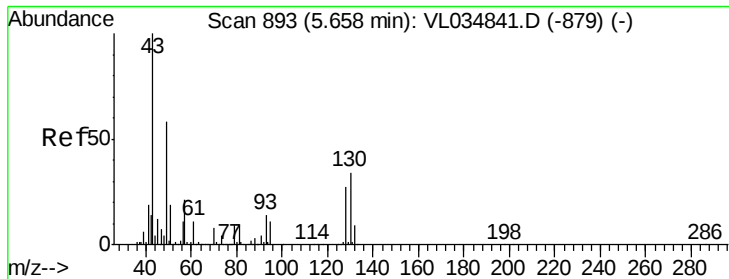
Instrument :  
MSVOA\_L  
ClientSampleId :  
SV-02

Manual Integrations  
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3/17/2020 12:16:13 PM

Quant Time: Mar 17 11:41:08 2020  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL030920AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Mon Mar  
QLast Update : Mon Mar 09 16:42:53 2020  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 min Scan# 895

Delta R.T. 0.01 min

Lab File: VL034903.D

Acq: 16 Mar 2020 23:22

Instrument :

MSVOA\_L

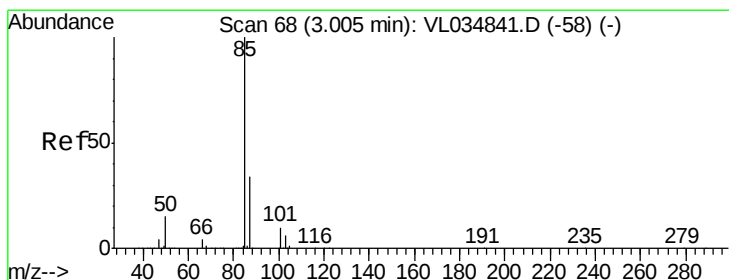
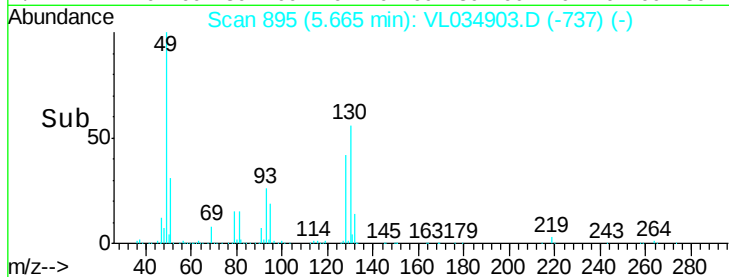
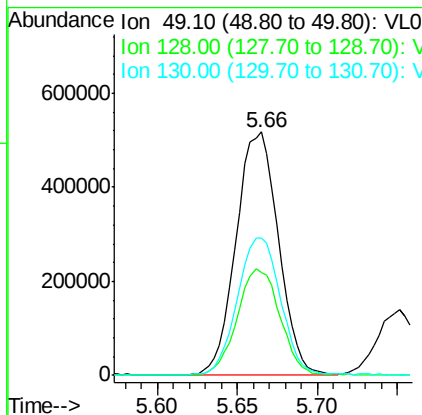
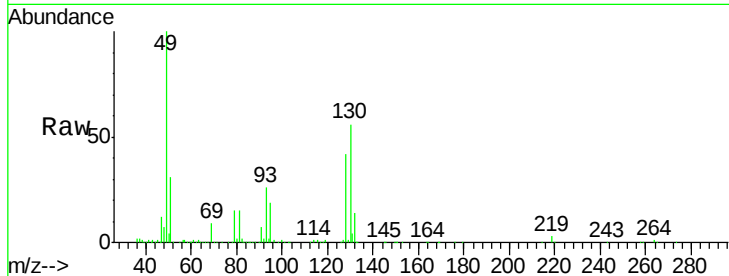
ClientSampled :

SV-02

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 49      | 100   |       |       |
| 128     | 44.5  | 23.4  | 70.3  |
| 130     | 58.4  | 30.0  | 90.0  |

Manual Integrations  
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#2

Dichlorodifluoromethane

Concen: 0.727 ppbv

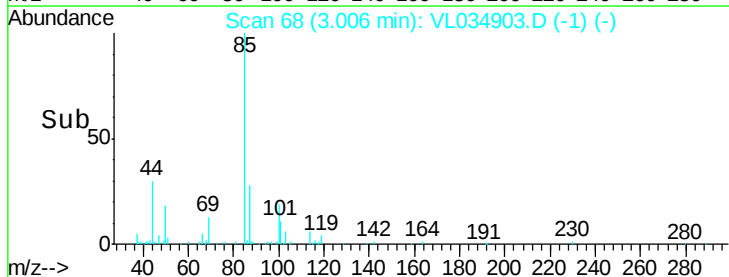
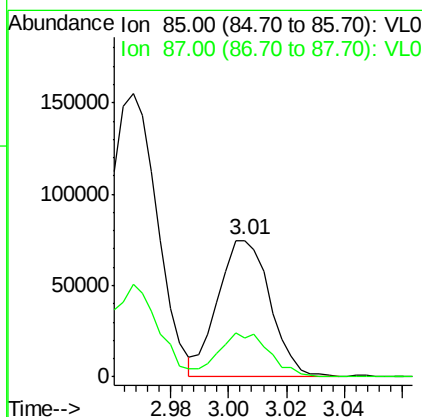
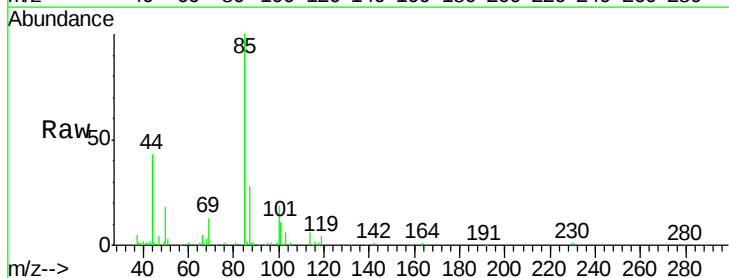
RT: 3.01 min Scan# 68

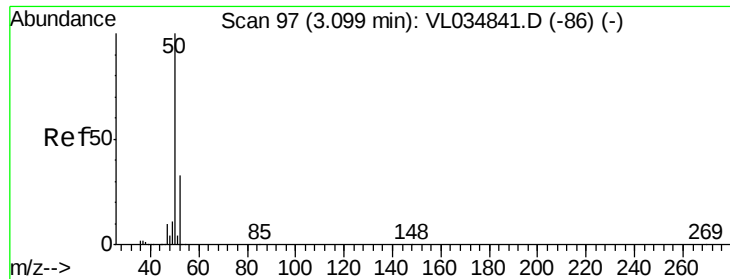
Delta R.T. 0.00 min

Lab File: VL034903.D

Acq: 16 Mar 2020 23:22

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 85      | 100   |       |       |
| 87      | 29.2  | 26.9  | 40.3  |





#4

Chloromethane

Concen: 0.375 ppbv

RT: 3.10 min Scan# 97

Delta R.T. 0.00 min

Lab File: VL034903.D

Acq: 16 Mar 2020 23:22

Instrument :

MSVOA\_L

ClientSampleId :

SV-02

Tot Ion: 50 Resp: 22142

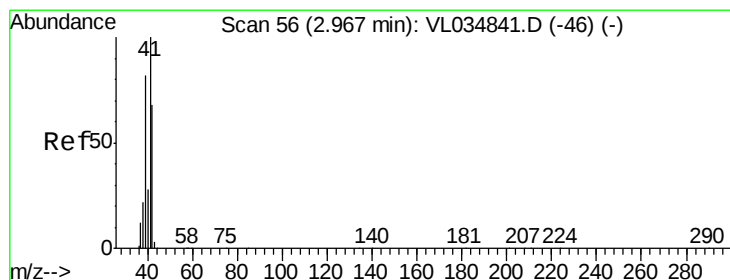
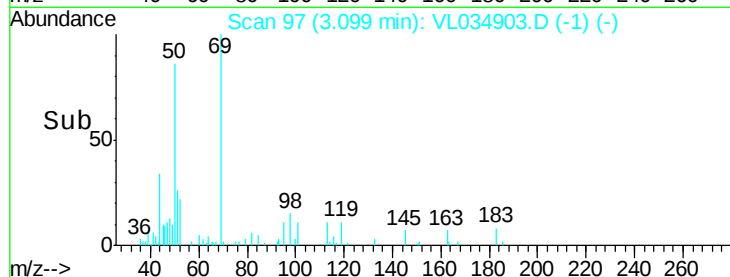
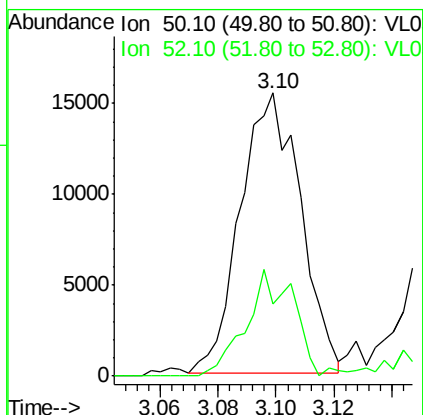
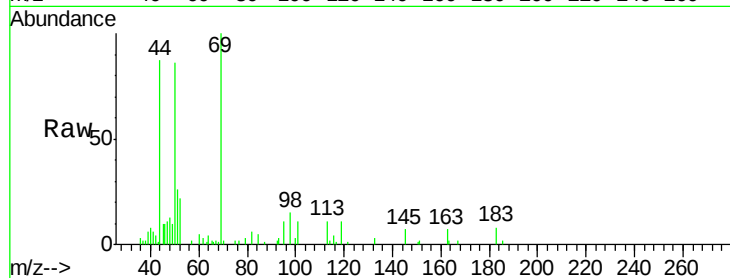
Ion Ratio Lower Upper

50 100

52 25.7 26.8 40.2#

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#9

Propene

Concen: 1.539 ppbv m

RT: 2.98 min Scan# 59

Delta R.T. 0.01 min

Lab File: VL034903.D

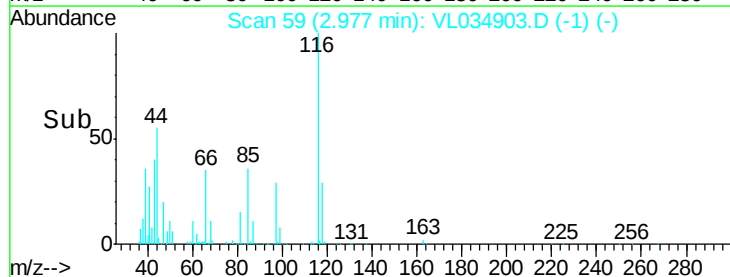
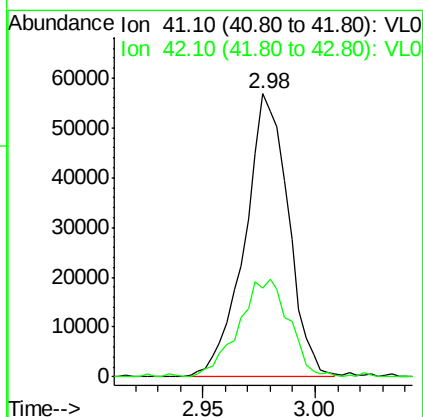
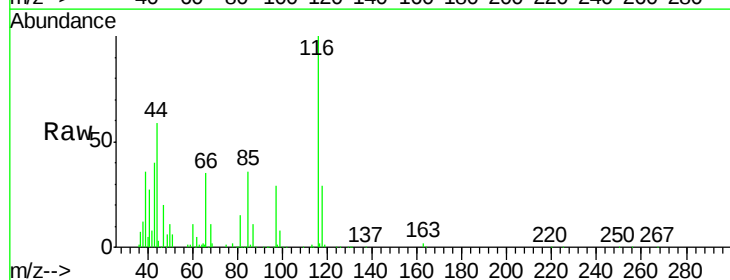
Acq: 16 Mar 2020 23:22

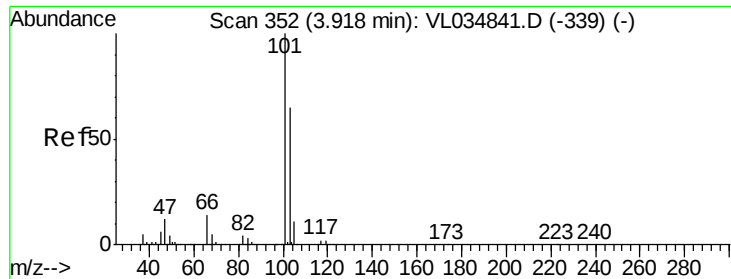
Tgt Ion: 41 Resp: 76678

Ion Ratio Lower Upper

41 100

42 68.4 55.2 82.8





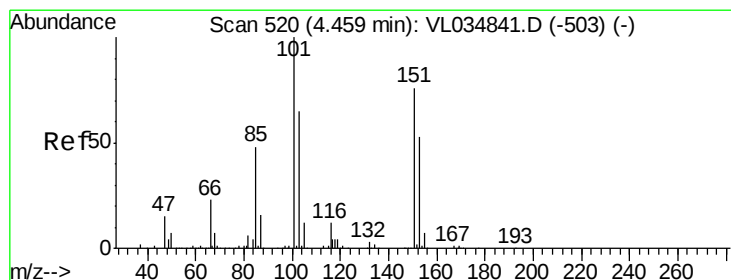
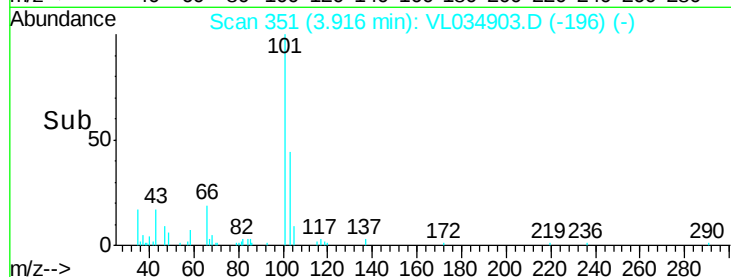
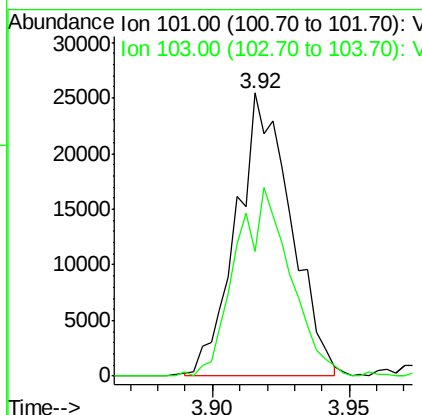
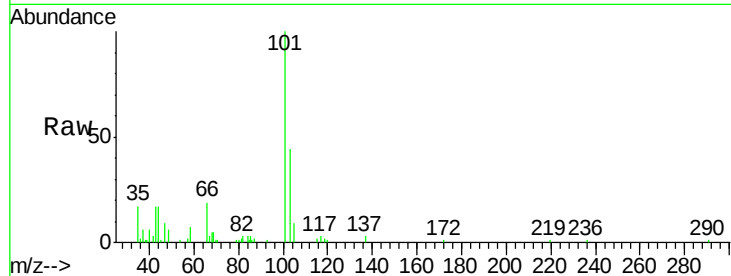
#11  
 Trichlorofluoromethane  
 Concen: 0.258 ppbv m  
 RT: 3.92 min Scan# 351  
 Delta R.T. -0.00 min  
 Lab File: VL034903.D  
 Acq: 16 Mar 2020 23:22

Instrument :  
 MSVOA\_L  
 ClientSampled :  
 SV-02

Tot Ion:101 Resp: 35174  
 Ion Ratio Lower Upper  
 101 100  
 103 44.1 51.8 77.8#

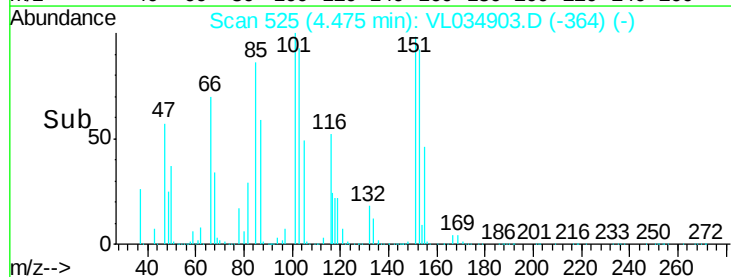
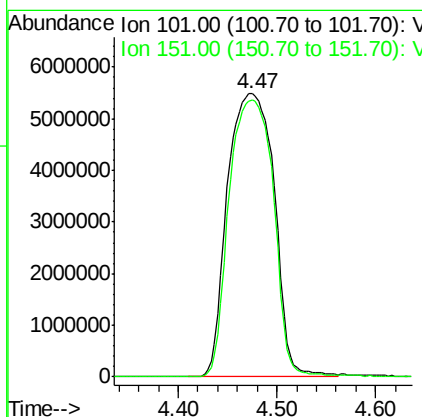
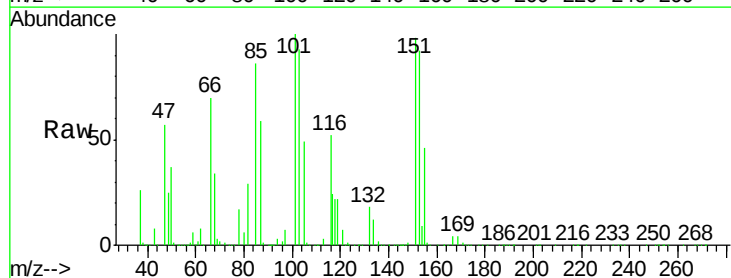
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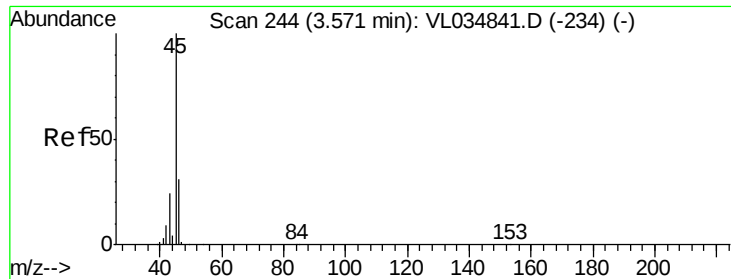
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#12  
 1,1,2-Trichlorotrifluoroethane  
 Concen: 189.535 ppbv  
 RT: 4.47 min Scan# 525  
 Delta R.T. 0.02 min  
 Lab File: VL034903.D  
 Acq: 16 Mar 2020 23:22

Tgt Ion:101 Resp:18058742  
 Ion Ratio Lower Upper  
 101 100  
 151 93.1 60.8 91.2#





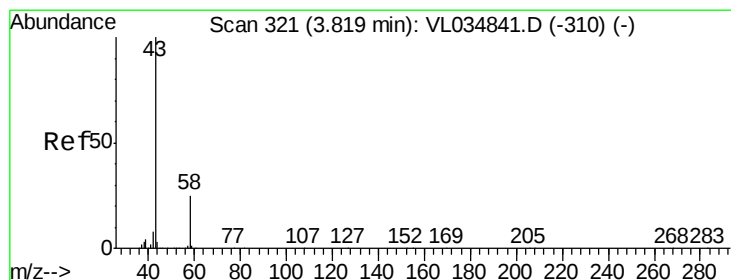
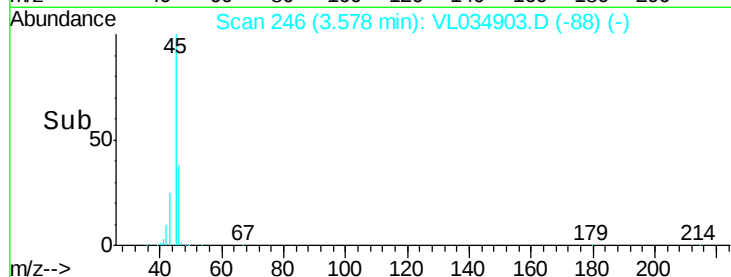
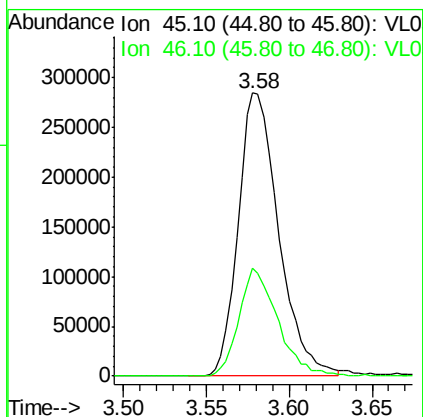
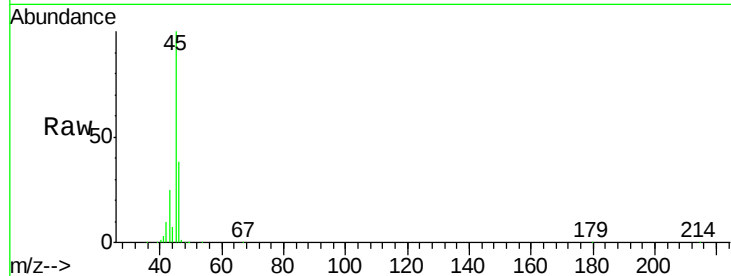
#13  
Ethanol  
Concen: 31.749 ppbv  
RT: 3.58 min Scan# 246  
Delta R.T. 0.01 min  
Lab File: VL034903.D  
Acq: 16 Mar 2020 23:22

Instrument :  
MSVOA\_L  
ClientSampleId :  
SV-02

Tot Ion: 45 Resp: 481063  
Ion Ratio Lower Upper  
45 100  
46 37.1 16.0 64.0

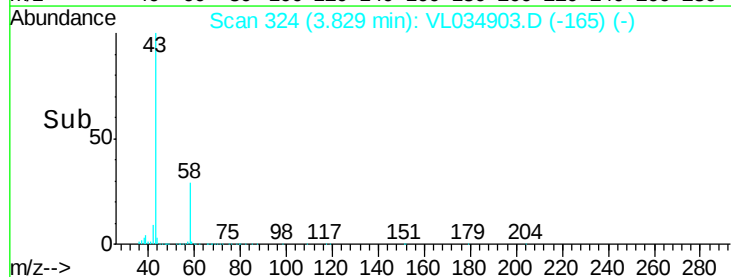
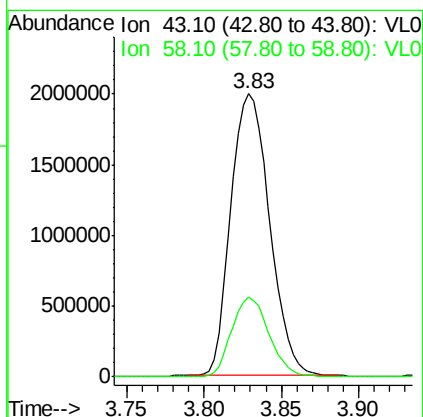
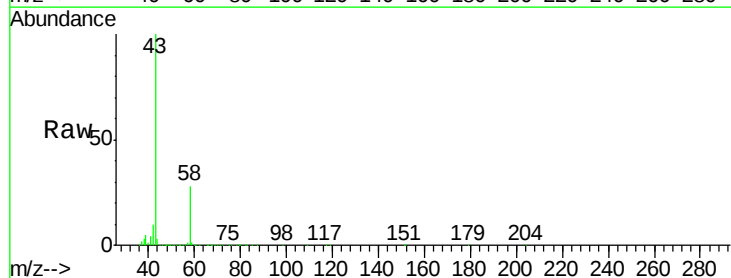
Manual Integrations  
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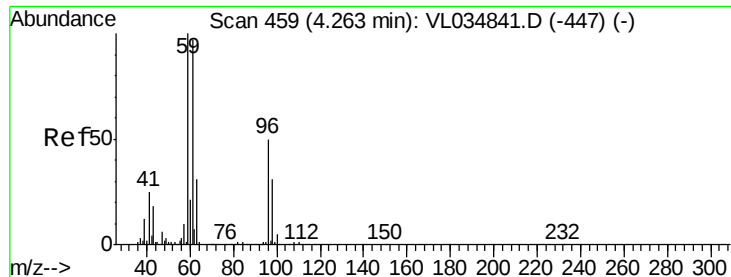
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#15  
Acetone  
Concen: 28.660 ppbv  
RT: 3.83 min Scan# 324  
Delta R.T. 0.01 min  
Lab File: VL034903.D  
Acq: 16 Mar 2020 23:22

Tgt Ion: 43 Resp: 3471152  
Ion Ratio Lower Upper  
43 100  
58 27.5 21.0 31.6





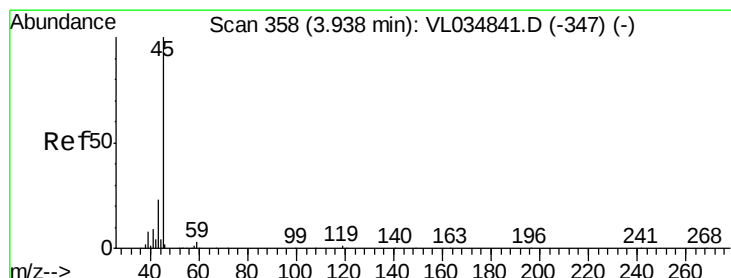
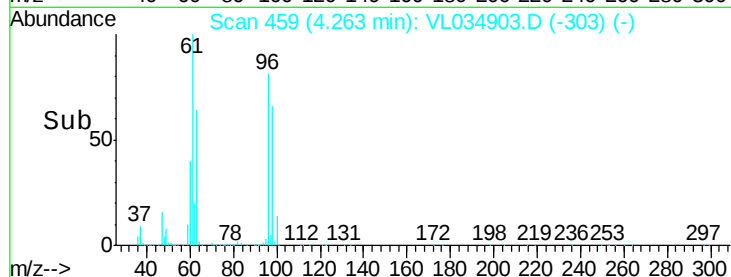
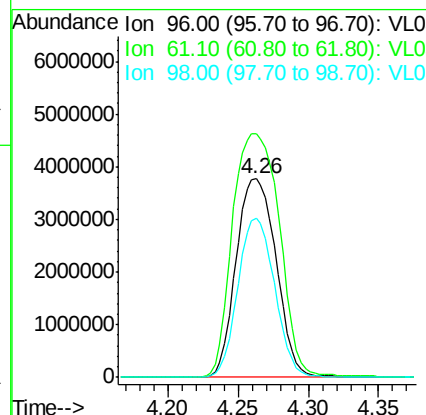
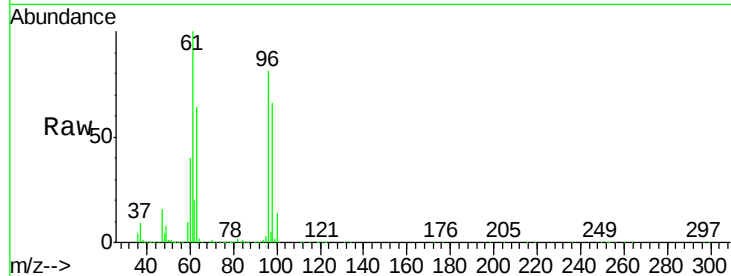
#18  
 1,1-Dichloroethene  
 Concen: 178.298 ppbv  
 RT: 4.26 min Scan# 459  
 Delta R.T. 0.00 min  
 Lab File: VL034903.D  
 Acq: 16 Mar 2020 23:22

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 SV-02

Tot Ion: 96 Resp: 7523227  
 Ion Ratio Lower Upper  
 96 100  
 61 122.7 157.3 235.9#  
 98 80.4 50.2 75.4#

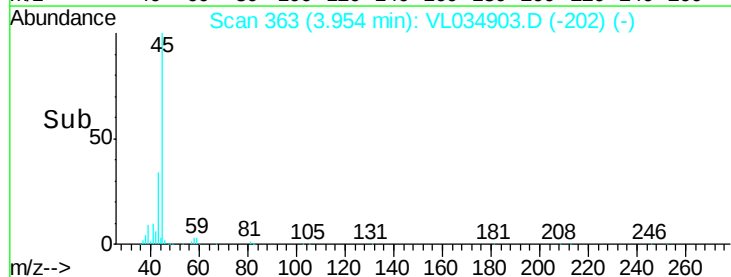
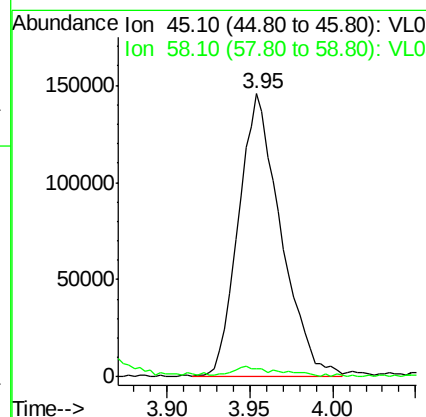
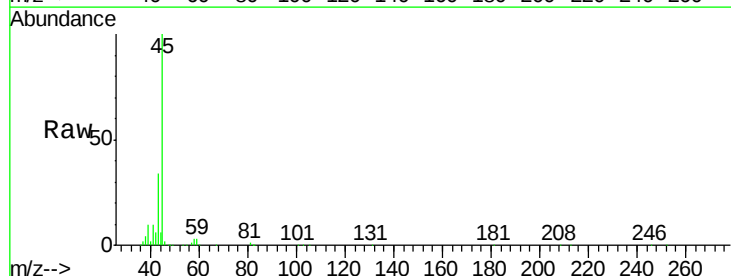
Manual Integrations  
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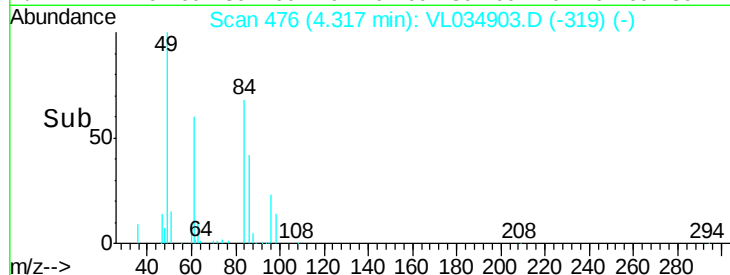
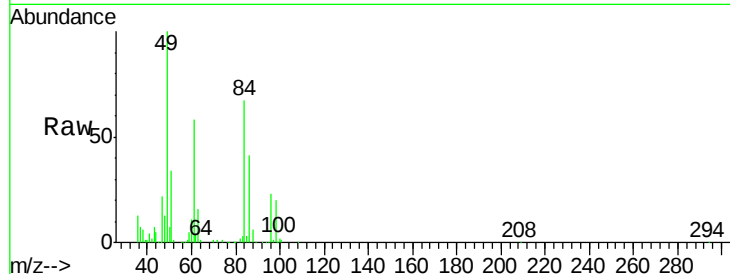
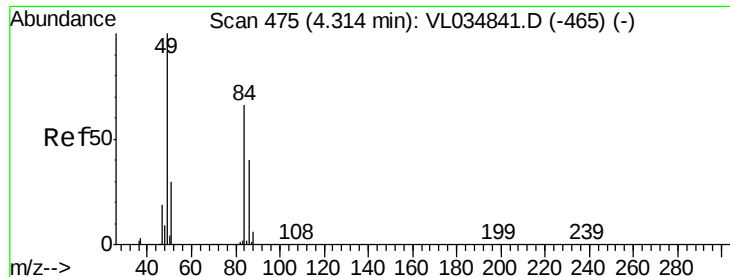
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#19  
 Isopropyl Alcohol  
 Concen: 3.362 ppbv  
 RT: 3.95 min Scan# 363  
 Delta R.T. 0.02 min  
 Lab File: VL034903.D  
 Acq: 16 Mar 2020 23:22

Tgt Ion: 45 Resp: 257156  
 Ion Ratio Lower Upper  
 45 100  
 58 371.4 30.5 45.7#





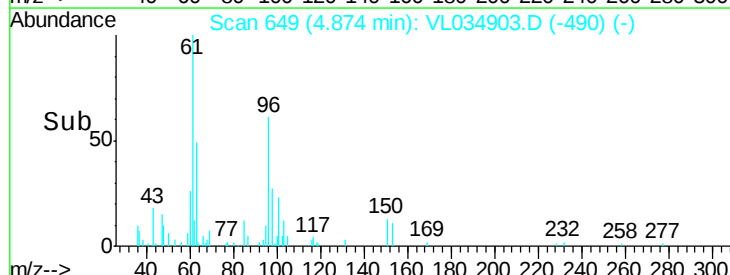
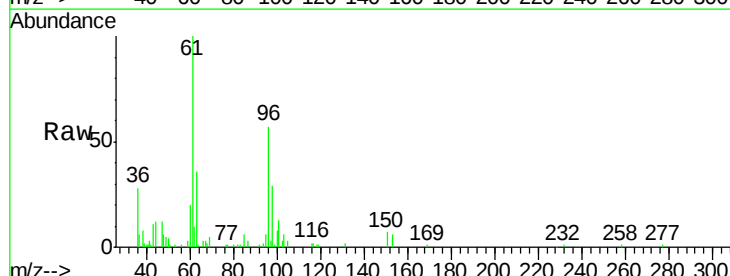
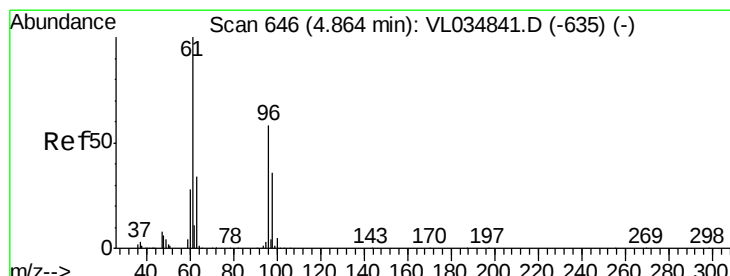
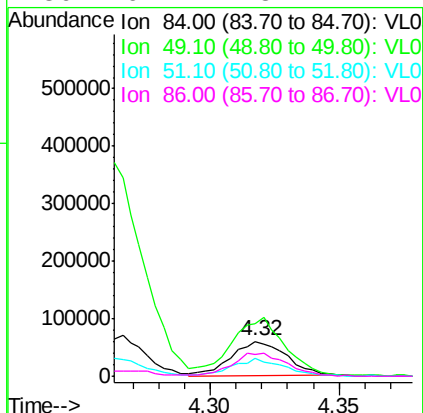
#20  
Methylene Chloride  
Concen: 2.318 ppbv  
RT: 4.32 min Scan# 476  
Delta R.T. 0.00 min  
Lab File: VL034903.D  
Acq: 16 Mar 2020 23:22

|          |       |       |       |
|----------|-------|-------|-------|
| Tot Ion: | 84    | Resp: | 88775 |
| Ion      | Ratio | Lower | Upper |
| 84       | 100   |       |       |
| 49       | 148.6 | 121.5 | 182.3 |
| 51       | 49.9  | 36.6  | 55.0  |
| 86       | 61.4  | 48.2  | 72.2  |

Instrument :  
MSVOA\_L  
ClientSampled :  
SV-02

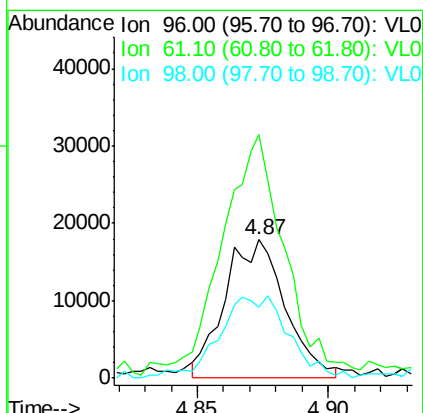
Manual Integrations  
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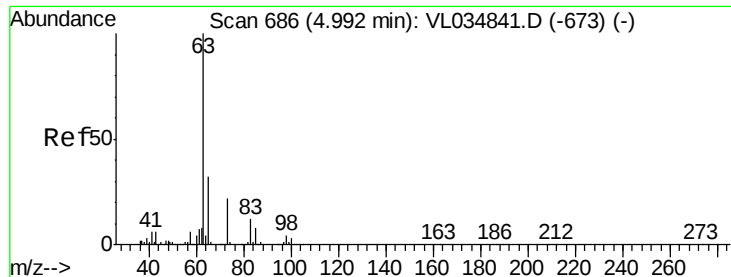
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#22  
trans-1,2-Dichloroethene  
Concen: 0.671 ppbv m  
RT: 4.87 min Scan# 649  
Delta R.T. 0.01 min  
Lab File: VL034903.D  
Acq: 16 Mar 2020 23:22

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 96    | Resp: | 28714 |
| Ion      | Ratio | Lower | Upper |
| 96       | 100   |       |       |
| 61       | 176.3 | 139.0 | 208.6 |
| 98       | 51.0  | 50.3  | 75.5  |





#24

1,1-Dichloroethane

Concen: 11.644 ppbv

RT: 5.00 min Scan# 688

Delta R.T. 0.01 min

Lab File: VL034903.D

Acq: 16 Mar 2020 23:22

Instrument :

MSVOA\_L

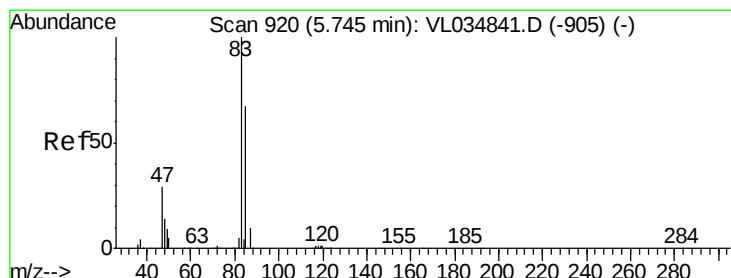
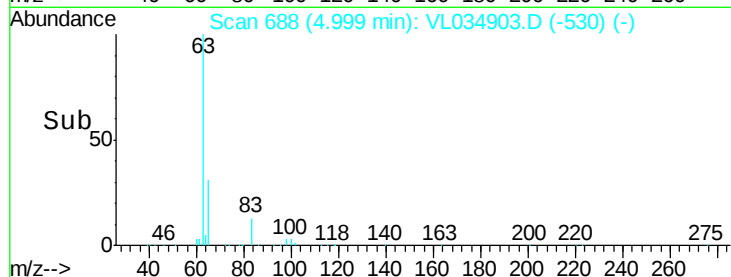
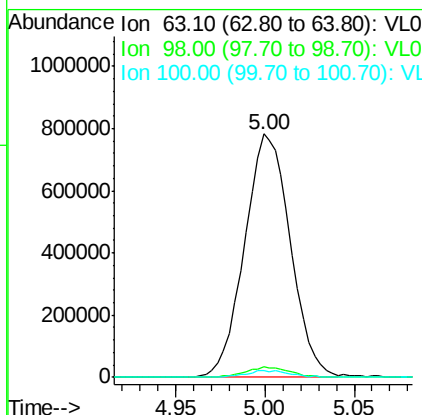
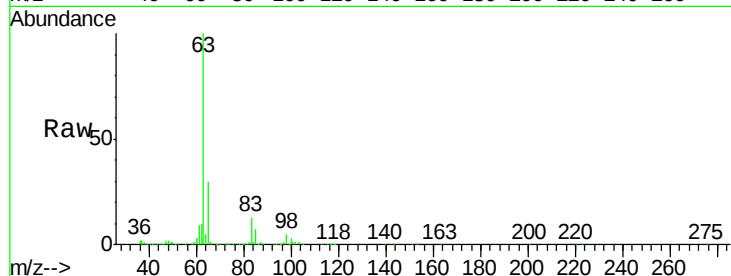
ClientSampleId :

SV-02

|          |       |       |         |
|----------|-------|-------|---------|
| Tot Ion: | 63    | Resp: | 1396481 |
| Ion      | Ratio | Lower | Upper   |
| 63       | 100   |       |         |
| 98       | 4.5   | 2.0   | 5.8     |
| 100      | 2.8   | 1.4   | 4.0     |

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#29

Chloroform

Concen: 17.645 ppbv

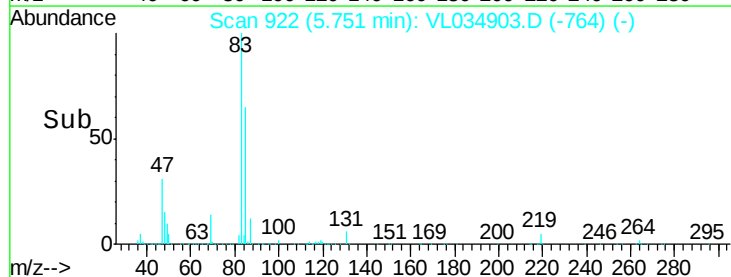
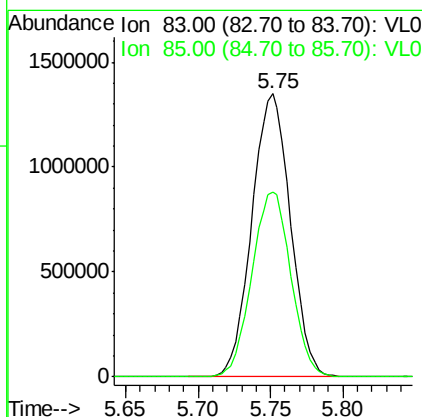
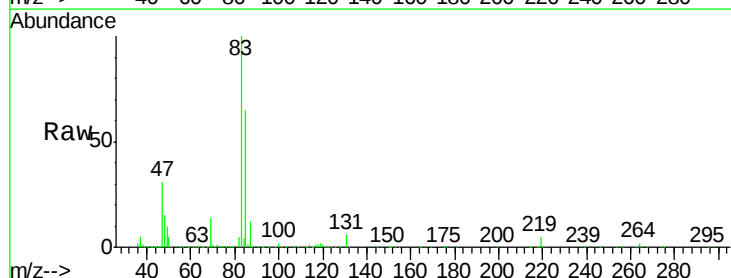
RT: 5.75 min Scan# 922

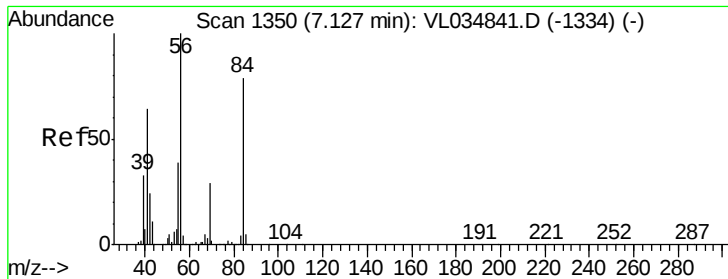
Delta R.T. 0.01 min

Lab File: VL034903.D

Acq: 16 Mar 2020 23:22

|          |       |       |         |
|----------|-------|-------|---------|
| Tgt Ion: | 83    | Resp: | 2501483 |
| Ion      | Ratio | Lower | Upper   |
| 83       | 100   |       |         |
| 85       | 65.3  | 53.8  | 80.6    |





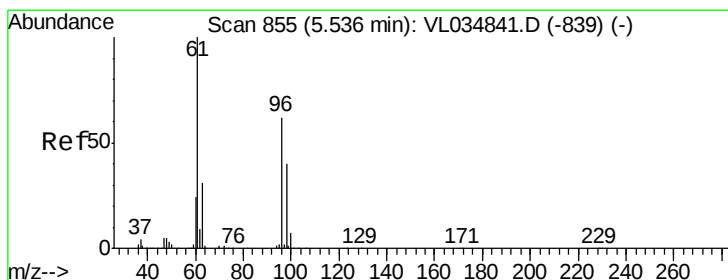
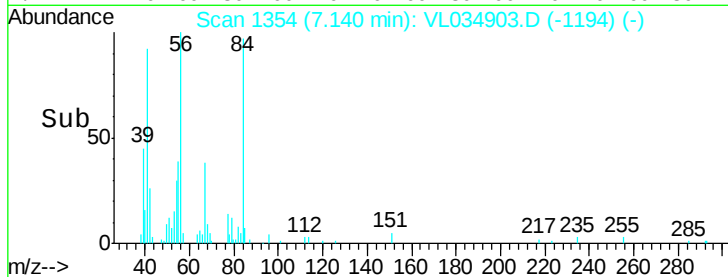
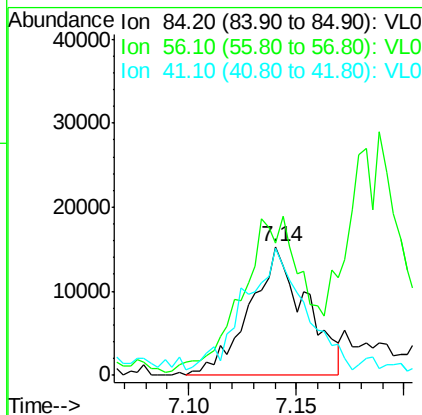
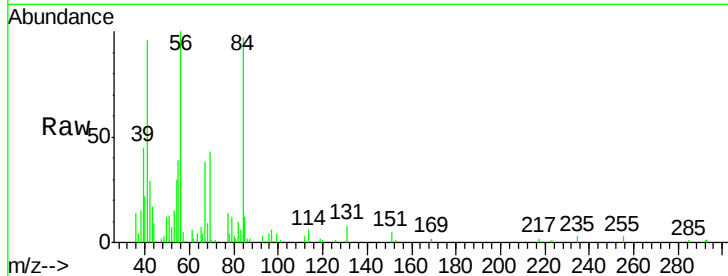
#30  
Cvclohexane  
Concen: 0.359 ppbv m  
RT: 7.14 min Scan# 1354  
Delta R.T. 0.01 min  
Lab File: VL034903.D  
Acq: 16 Mar 2020 23:22

Instrument :  
MSVOA\_L  
ClientSampled :  
SV-02

| Tot Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 84      | 100   |       |        |
| 56      | 121.4 | 110.5 | 165.7  |
| 41      | 0.0   | 68.2  | 102.4# |

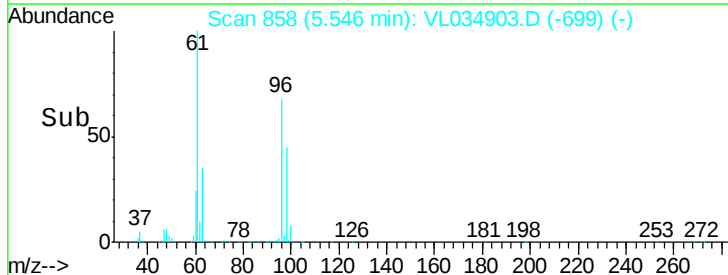
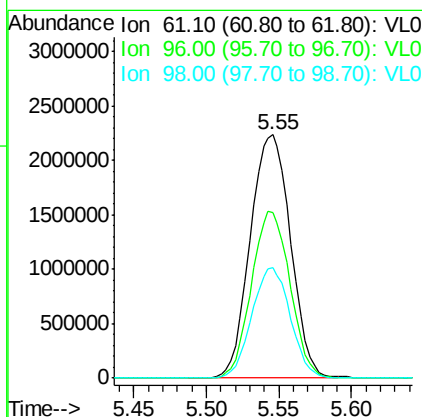
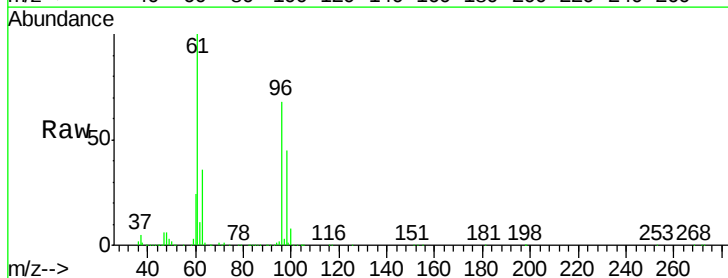
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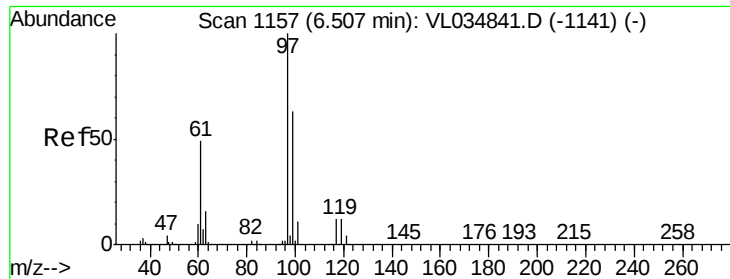
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#31  
cis-1,2-Dichloroethene  
Concen: 45.575 ppbv  
RT: 5.55 min Scan# 858  
Delta R.T. 0.01 min  
Lab File: VL034903.D  
Acq: 16 Mar 2020 23:22

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 61      | 100   |       |       |
| 96      | 68.1  | 49.8  | 74.8  |
| 98      | 45.1  | 32.2  | 48.4  |





#32

1,1,1-Trichloroethane

Concen: 74.763 ppbv

RT: 6.52 min Scan# 1160

Delta R.T. 0.01 min

Lab File: VL034903.D

Acq: 16 Mar 2020 23:22

Instrument :

MSVOA\_L

ClientSampled :

SV-02

Tot Ion: 97 Resp:10327629

Ion Ratio Lower Upper

97 100

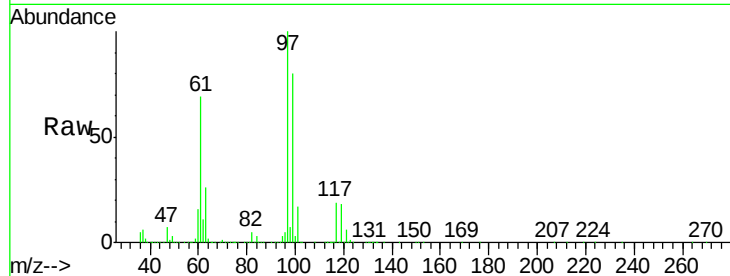
99 74.4 51.1 76.7

61 62.5 39.7 59.5#

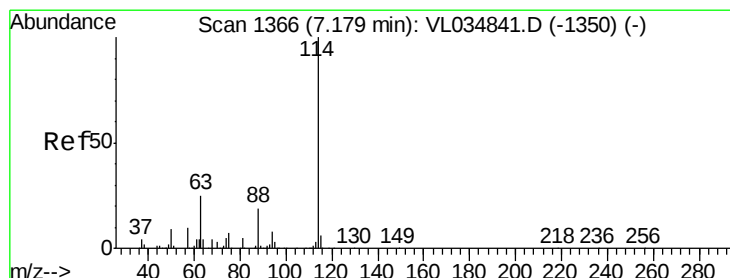
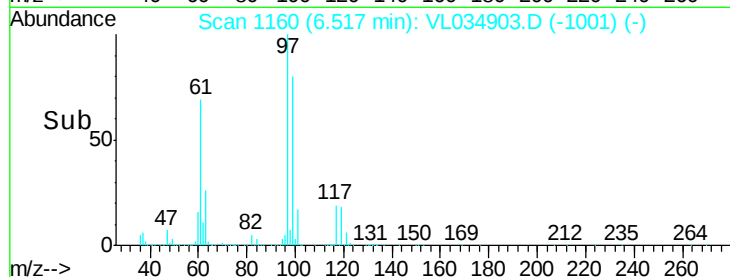
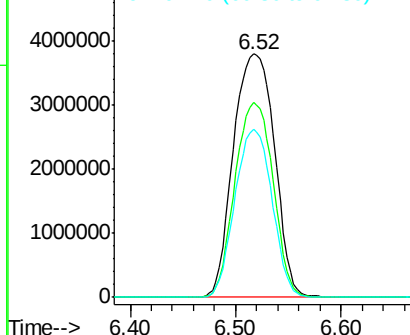
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Abundance Ion 97.00 (96.70 to 97.70): VL0  
Ion 99.00 (98.70 to 99.70): VL0  
Ion 61.10 (60.80 to 61.80): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.19 min Scan# 1368

Delta R.T. 0.01 min

Lab File: VL034903.D

Acq: 16 Mar 2020 23:22

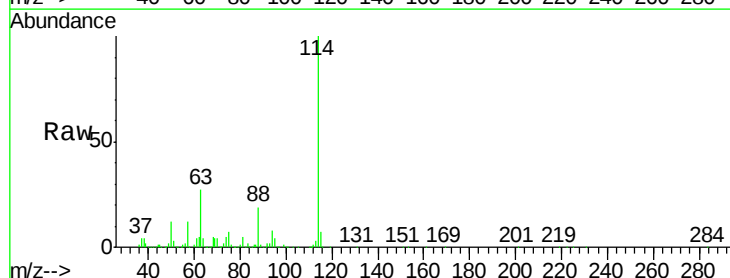
Tgt Ion:114 Resp: 1974001

Ion Ratio Lower Upper

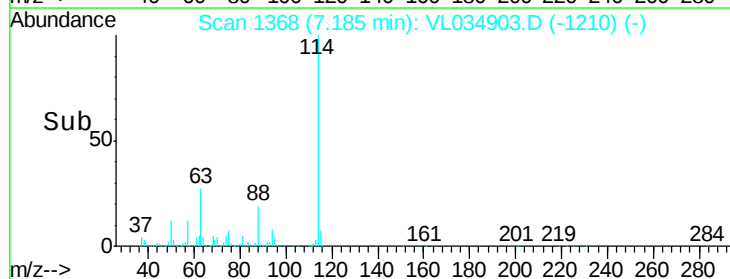
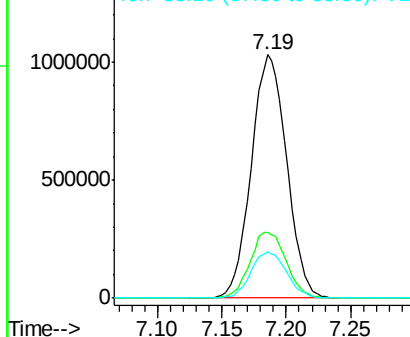
114 100

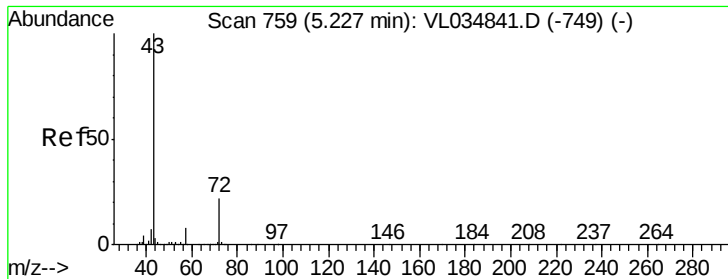
63 27.6 20.6 31.0

88 19.2 15.0 22.6



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





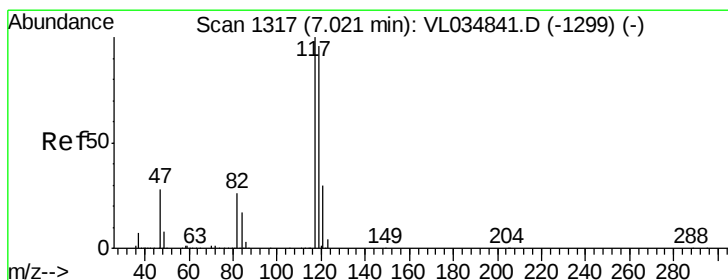
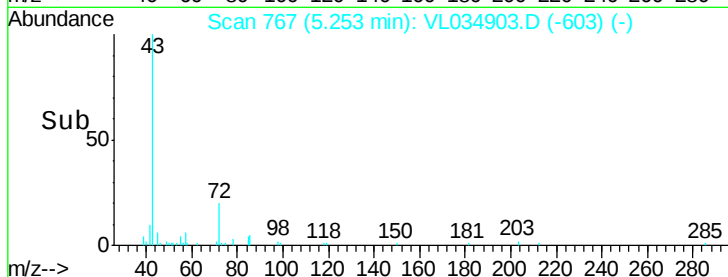
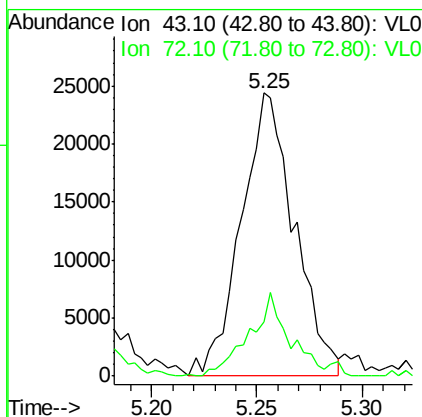
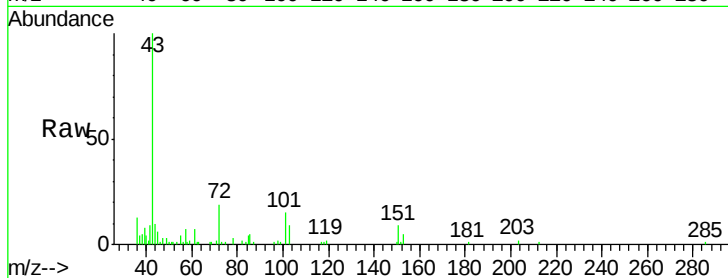
#34  
2-Butanone  
Concen: 0.327 ppbv  
RT: 5.25 min Scan# 767  
Delta R.T. 0.03 min  
Lab File: VL034903.D  
Acq: 16 Mar 2020 23:22

Instrument :  
MSVOA\_L  
ClientSampled :  
SV-02

Tot Ion: 43 Resp: 42867  
Ion Ratio Lower Upper  
43 100  
72 23.3 17.6 26.4

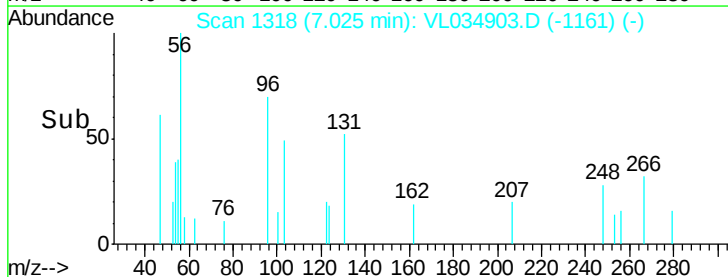
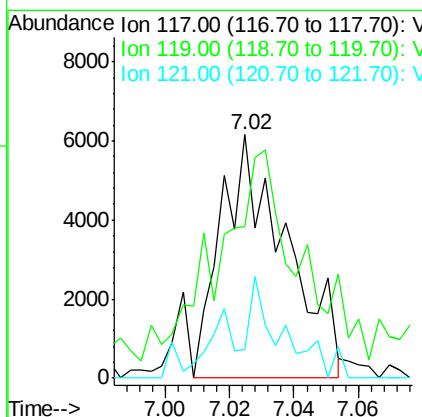
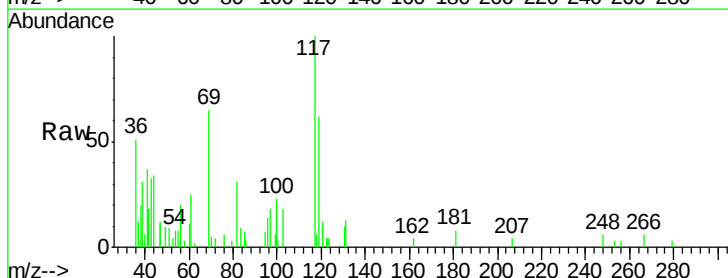
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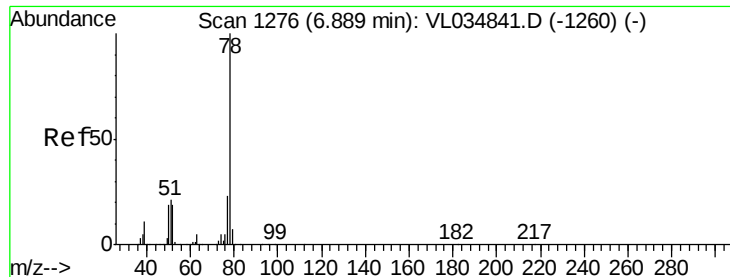
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#35  
Carbon Tetrachloride  
Concen: 0.071 ppbv m  
RT: 7.02 min Scan# 1318  
Delta R.T. 0.00 min  
Lab File: VL034903.D  
Acq: 16 Mar 2020 23:22

Tgt Ion: 117 Resp: 8675  
Ion Ratio Lower Upper  
117 100  
119 62.3 77.0 115.4#  
121 11.5 24.0 36.0#





#36

Benzene

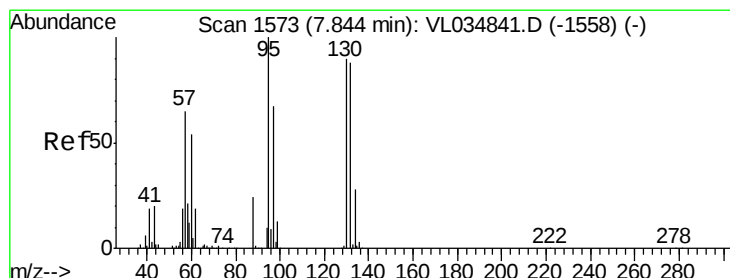
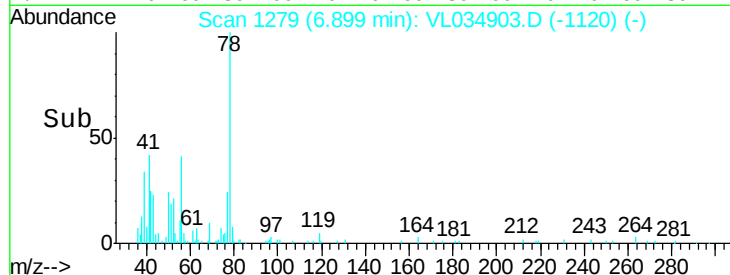
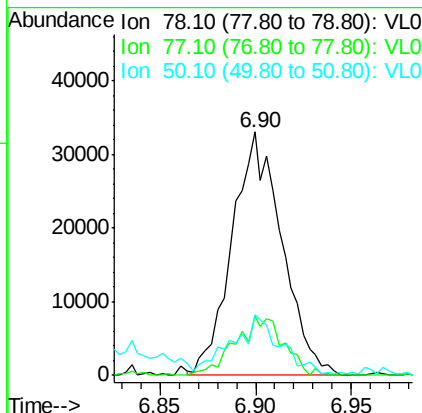
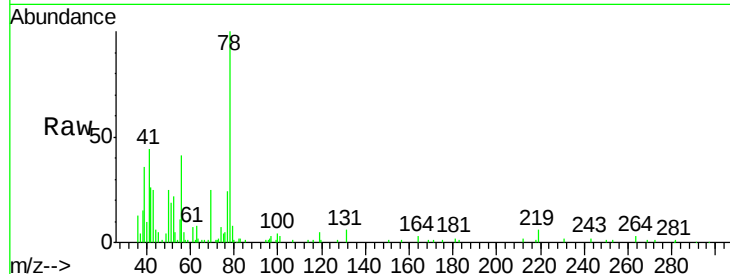
Concen: 0.340 ppbv m  
RT: 6.90 min Scan# 1279  
Delta R.T. 0.01 min  
Lab File: VL034903.D  
Acq: 16 Mar 2020 23:22

Instrument :  
MSVOA\_L  
ClientSampleId :  
SV-02

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 78      | 100   |       |       |
| 77      | 24.4  | 18.2  | 27.2  |
| 50      | 24.7  | 15.2  | 22.8  |

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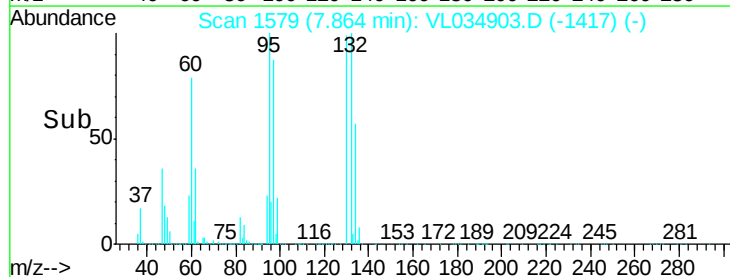
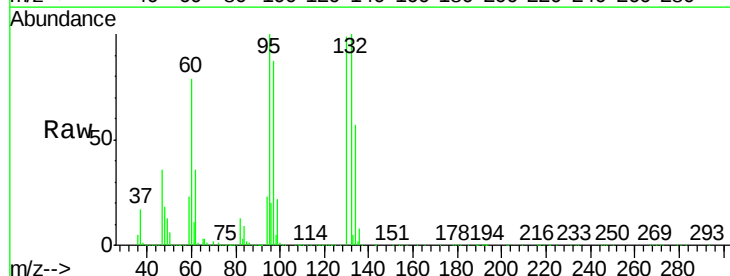
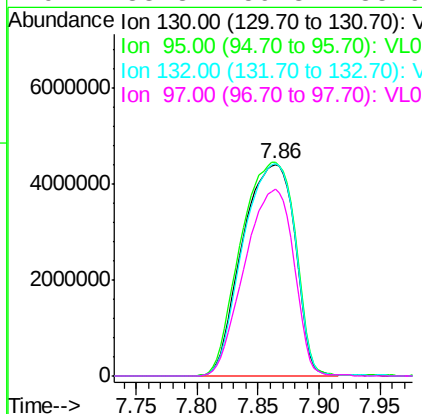


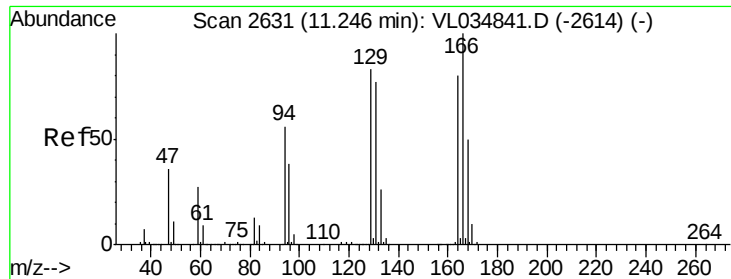
#38

Trichloroethene

Concen: 198.129 ppbv  
RT: 7.86 min Scan# 1579  
Delta R.T. 0.02 min  
Lab File: VL034903.D  
Acq: 16 Mar 2020 23:22

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 130     | 100   |       |       |
| 95      | 101.0 | 88.5  | 132.7 |
| 132     | 100.8 | 78.0  | 117.0 |
| 97      | 88.3  | 59.3  | 88.9  |





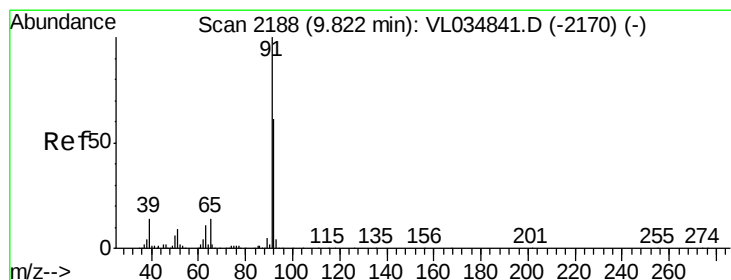
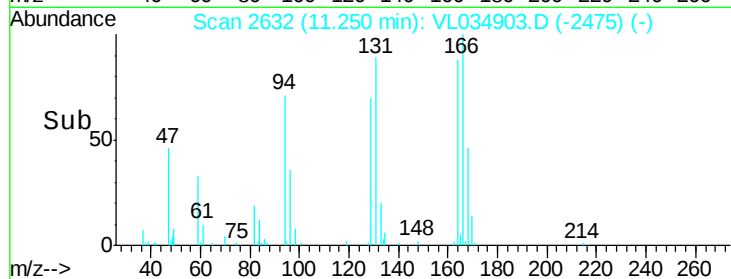
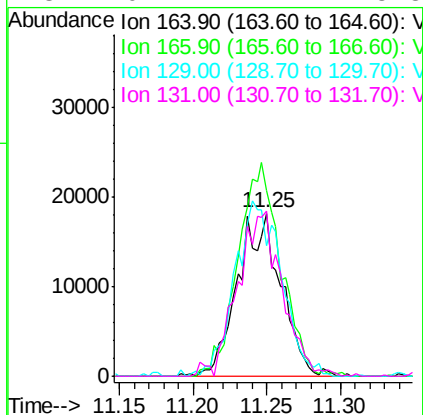
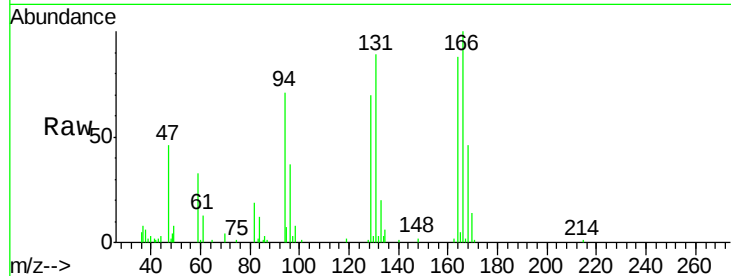
#52  
Tetrachloroethene  
Concen: 0.531 ppbv m  
RT: 11.25 min Scan# 2632  
Delta R.T. 0.00 min  
Lab File: VL034903.D  
Acq: 16 Mar 2020 23:22

Instrument :  
MSVOA\_L  
ClientSampled :  
SV-02

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 164     | 100   |       |       |
| 166     | 113.8 | 100.0 | 150.0 |
| 129     | 80.1  | 83.1  | 124.7 |
| 131     | 101.1 | 77.2  | 115.8 |

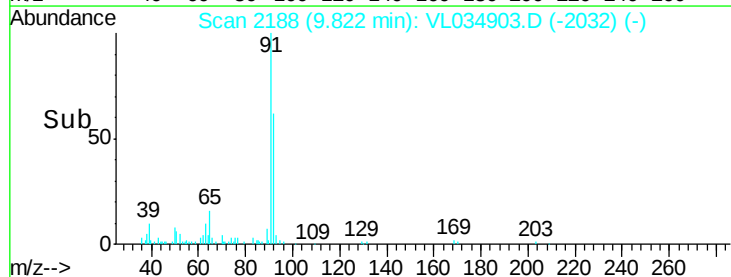
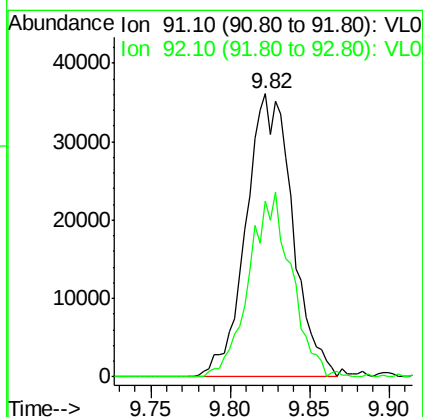
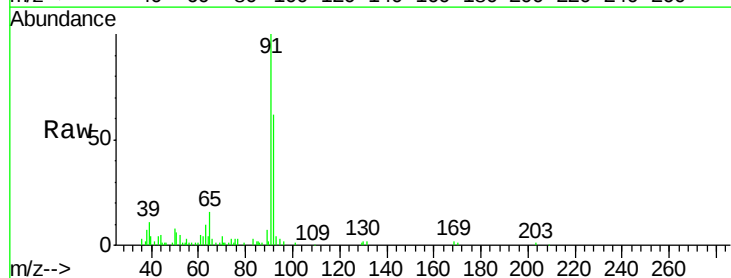
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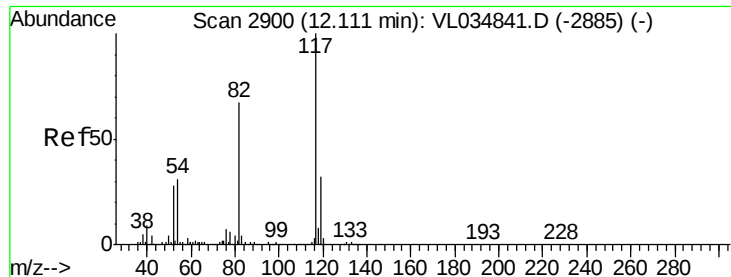
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#53  
Toluene  
Concen: 0.361 ppbv m  
RT: 9.82 min Scan# 2188  
Delta R.T. 0.00 min  
Lab File: VL034903.D  
Acq: 16 Mar 2020 23:22

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 91      | 100   |       |       |
| 92      | 59.5  | 48.6  | 72.8  |





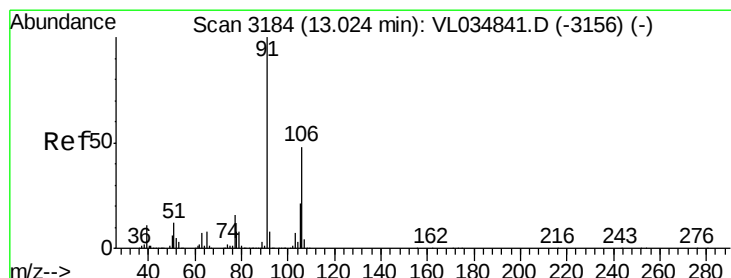
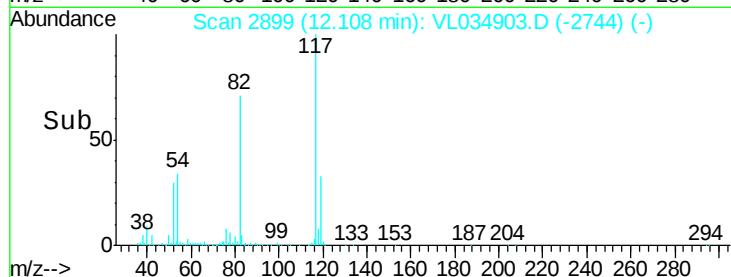
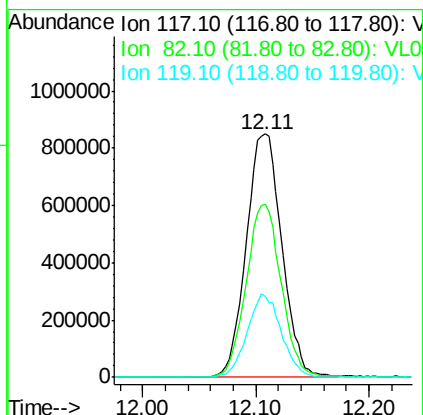
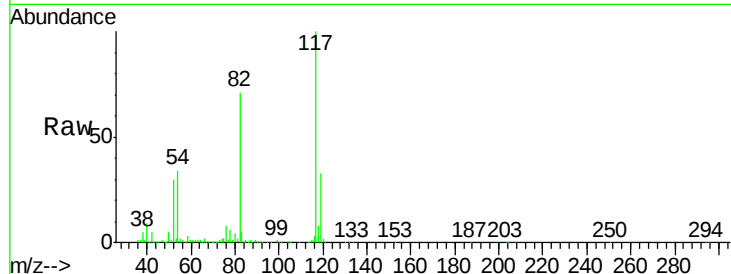
#55  
Chlorobenzene-d5  
Concen: 10.000 ppbv  
RT: 12.11 min Scan# 2899  
Delta R.T. -0.00 min  
Lab File: VL034903.D  
Acq: 16 Mar 2020 23:22

Instrument :  
MSVOA\_L  
ClientSampleId :  
SV-02

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 117     | 100   |       |       |
| 82      | 70.4  | 51.1  | 76.7  |
| 119     | 33.0  | 27.3  | 40.9  |

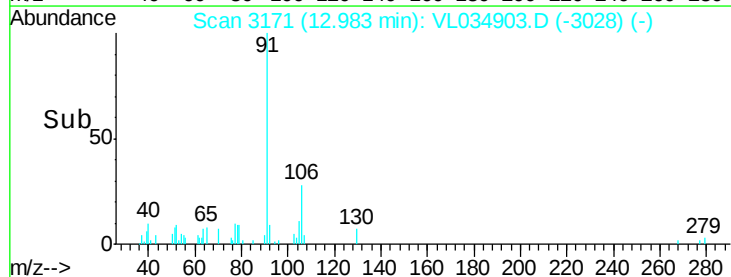
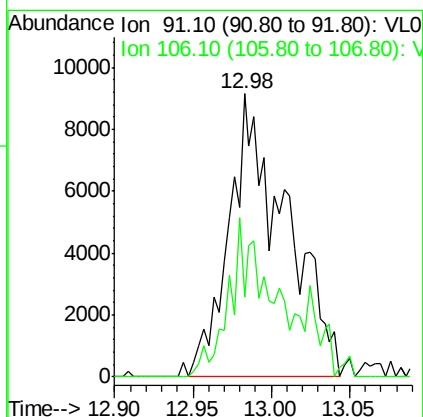
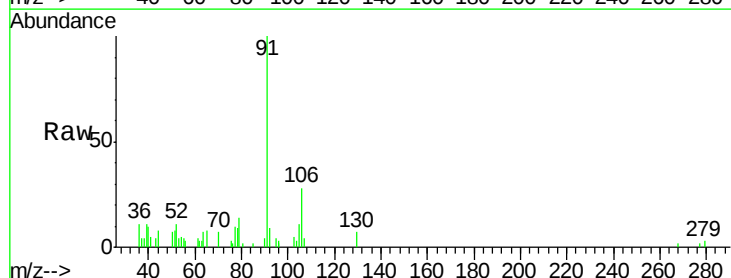
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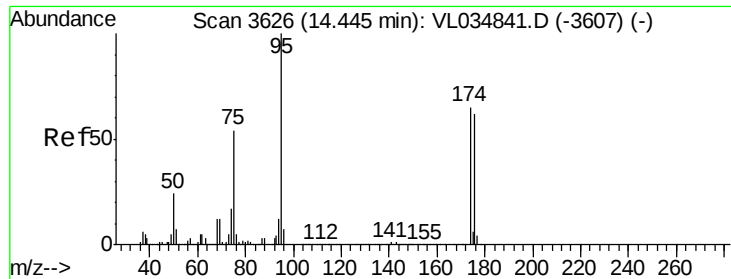
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#59  
m/p-Xylene  
Concen: 0.109 ppbv m  
RT: 12.98 min Scan# 3171  
Delta R.T. -0.04 min  
Lab File: VL034903.D  
Acq: 16 Mar 2020 23:22

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 91      | 100   |       |       |
| 106     | 0.0   | 37.1  | 55.7# |





#68  
 1-Bromo-4-Fluorobenzene  
 Concen: 10.448 ppbv  
 RT: 14.44 min Scan# 3624  
 Delta R.T. -0.01 min  
 Lab File: VL034903.D  
 Acq: 16 Mar 2020 23:22

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 SV-02

Tot Ion: 95 Resp: 1518292  
 Ion Ratio Lower Upper  
 95 100  
 174 63.9 55.2 82.8  
 175 4.7 4.3 6.5

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