

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032322\  
 Data File : VL038735.D  
 Acq On : 24 Mar 2022 3:48  
 Operator : SY/AP  
 Sample : N2050-01DL 5X  
 Misc : 400mL/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :

Quant Time: Mar 24 04:37:19 2022  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032122AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Mon Mar 21 17:09:26 2022  
 QLast Update : Mon Mar 21 17:09:26 2022  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.66  | 49   | 817005   | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.17  | 114  | 2212732  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.08 | 117  | 1872754  | 10.00 | ppbv  | 0.00     |

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| System Monitoring Compounds |        |       |          |          |      |        |
| 68) 1-Bromo-4-Fluorobenzene | 14.41  | 95    | 1359303  | 9.47     | ppbv | 0.00   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 94.70% |

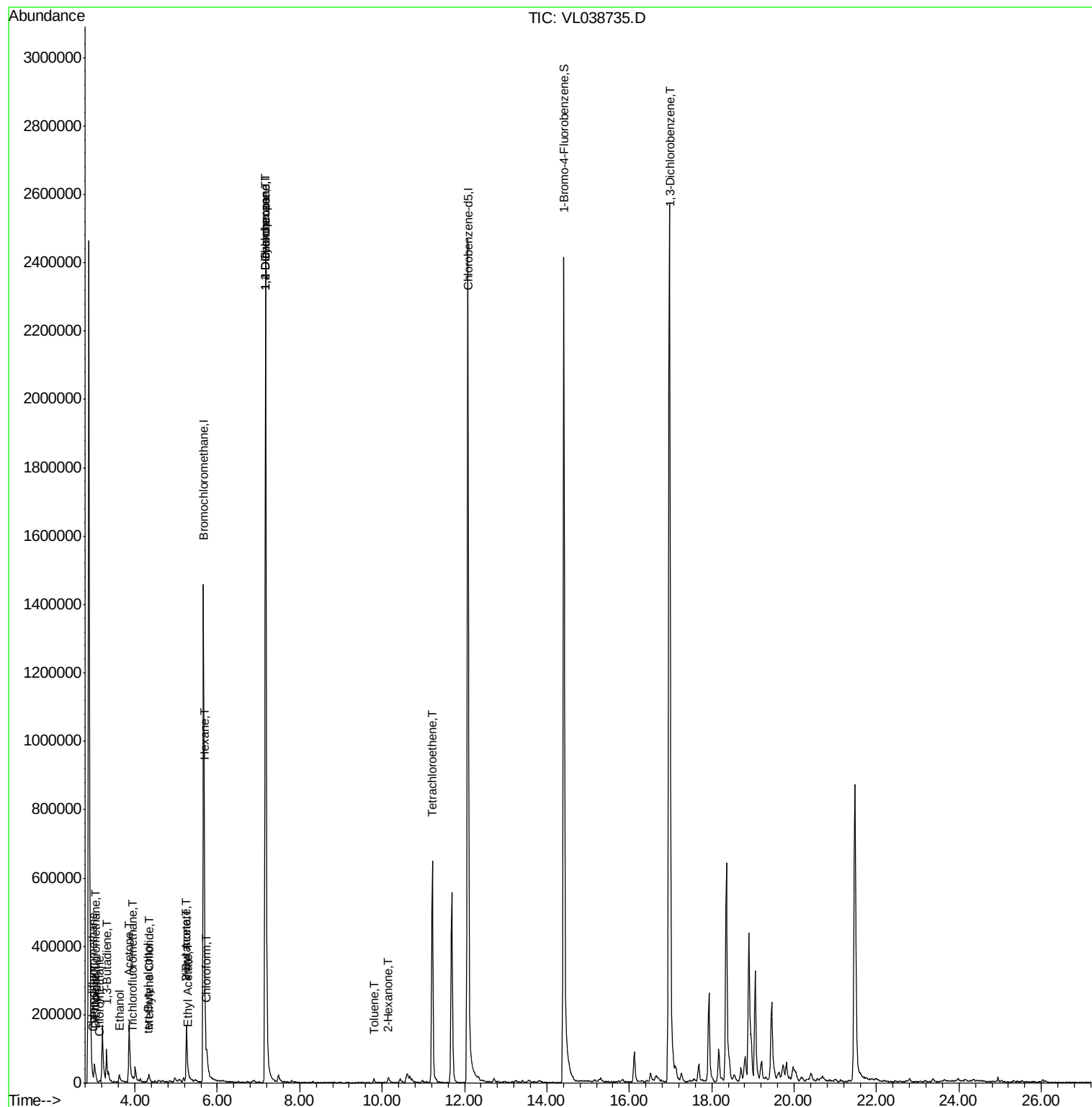
| Target Compounds           |       |     |        |              | Ovalue |
|----------------------------|-------|-----|--------|--------------|--------|
| 2) Dichlorodifluoromethane | 3.05  | 85  | 11333  | 0.103 ppbv   | 98     |
| 3) Chlorodifluoromethane   | 2.99  | 51  | 8758   | 0.101 ppbv # | 83     |
| 4) Chloromethane           | 3.14  | 50  | 3354   | 0.071 ppbv # | 82     |
| 9) Propene                 | 3.02  | 41  | 21228  | 0.510 ppbv   | 96     |
| 11) Trichlorofluoromethane | 3.95  | 101 | 4160   | 0.043 ppbv   | 95     |
| 13) Ethanol                | 3.62  | 45  | 19083  | 4.153 ppbv # | 44     |
| 15) Acetone                | 3.86  | 43  | 248899 | 3.531 ppbv # | 87     |
| 16) 1,3-Butadiene          | 3.31  | 39  | 26299  | 0.657 ppbv # | 14     |
| 17) tert-Butyl alcohol     | 4.31  | 59  | 10257  | 0.167 ppbv # | 90     |
| 20) Methylene Chloride     | 4.34  | 84  | 6255   | 0.211 ppbv # | 80     |
| 23) Vinyl Acetate          | 5.25  | 43  | 233288 | 3.417 ppbv # | 88     |
| 25) Ethyl Acetate          | 5.30  | 43  | 10772  | 0.061 ppbv # | 75     |
| 26) Hexane                 | 5.69  | 57  | 2855   | 0.036 ppbv # | 1      |
| 29) Chloroform             | 5.75  | 83  | 34182  | 0.269 ppbv   | 91     |
| 30) Cyclohexane            | 7.16  | 84  | 2866   | 0.041 ppbv # | 23     |
| 34) 2-Butanone             | 5.25  | 43  | 233288 | 2.664 ppbv # | 90     |
| 39) 1,2-Dichloropropane    | 7.17  | 63  | 505344 | 7.569 ppbv # | 29     |
| 51) 2-Hexanone             | 10.15 | 43  | 14411  | 0.123 ppbv # | 91     |
| 52) Tetrachloroethene      | 11.22 | 164 | 178515 | 2.856 ppbv   | 96     |
| 53) Toluene                | 9.80  | 91  | 7203   | 0.039 ppbv # | 77     |
| 75) 1,3-Dichlorobenzene    | 16.99 | 146 | 5166   | 0.038 ppbv # | 1      |

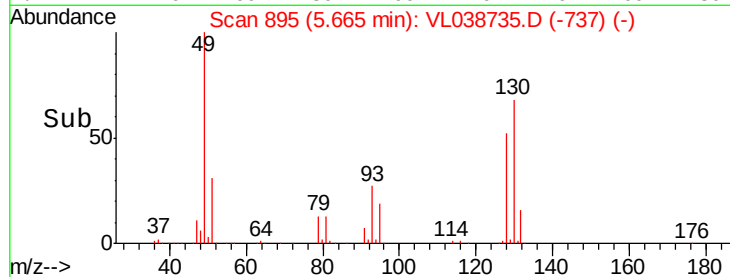
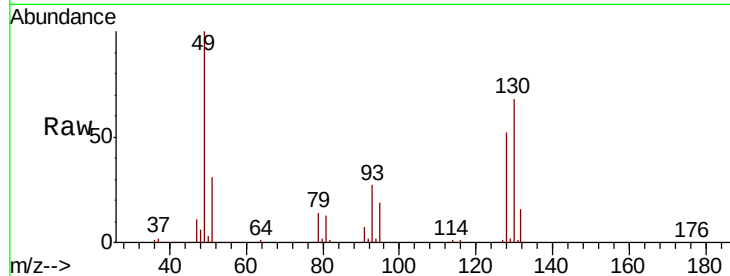
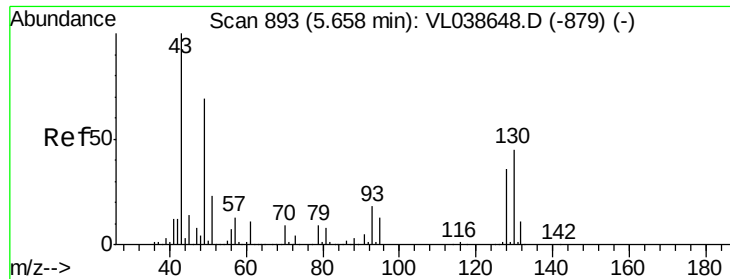
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL032122AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Mon Mar 21 17:09:26 2022  
QLast Update : Mon Mar 21 17:09:26 2022  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 Instrument:

Delta R.T. MSVOA\_L

Lab File: ClientSampleId:

Acq: 24 Mar 2022 3:48

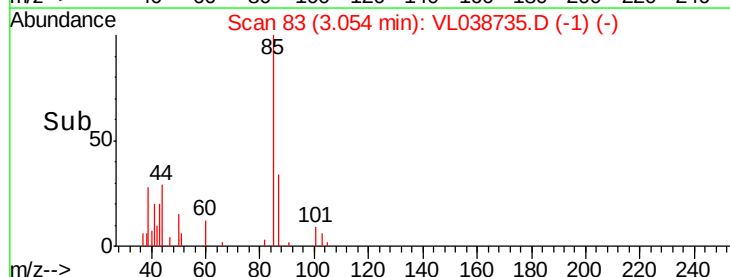
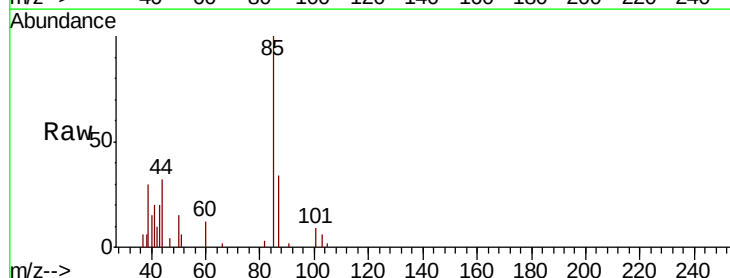
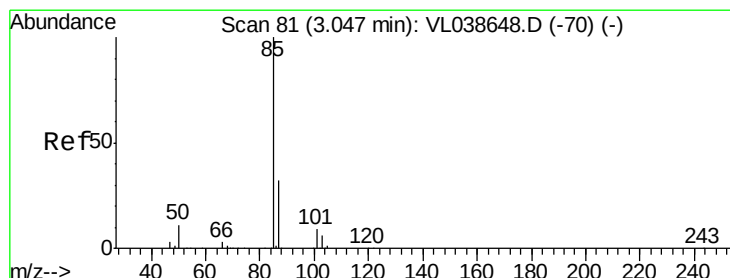
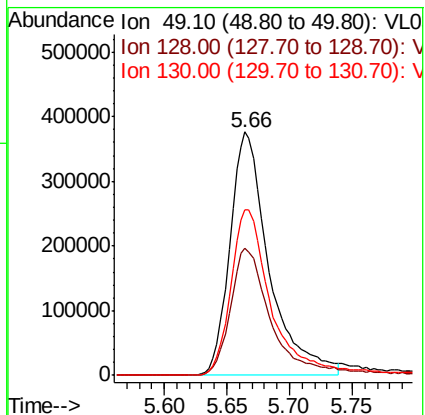
Tot Ion: 49 Resp: 817005

Ion Ratio Lower Upper

49 100

128 55.9 26.2 78.6

130 71.8 33.7 101.1



#2

Dichlorodifluoromethane

Concen: 0.103 ppbv

RT: 3.05 min Scan# 83

Delta R.T. 0.01 min

Lab File: VL038735.D

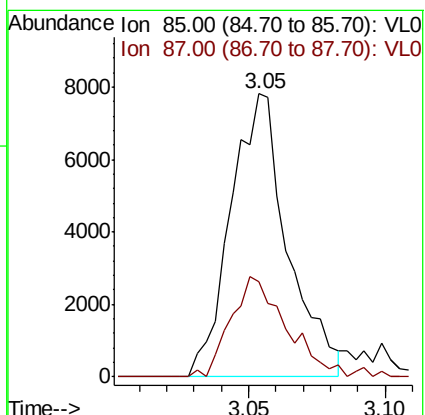
Acq: 24 Mar 2022 3:48

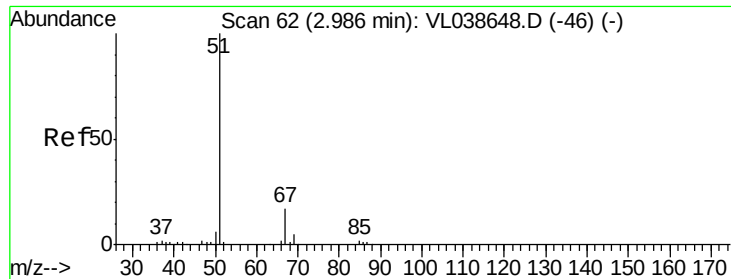
Tgt Ion: 85 Resp: 11333

Ion Ratio Lower Upper

85 100

87 33.8 26.0 39.0





#3

Chlorodifluoromethane

Concen: 0.101 ppbv

RT: 2.99 Instrument:

Delta R.T. MSVOA\_L

Lab File: ClientSampleId:

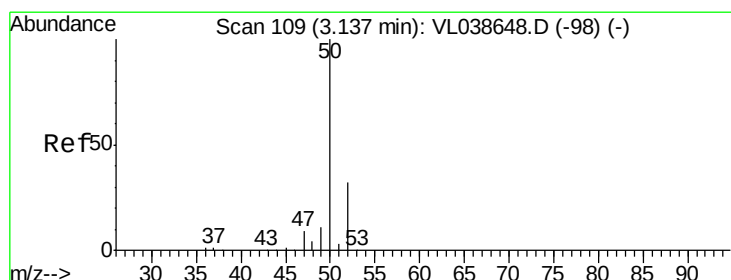
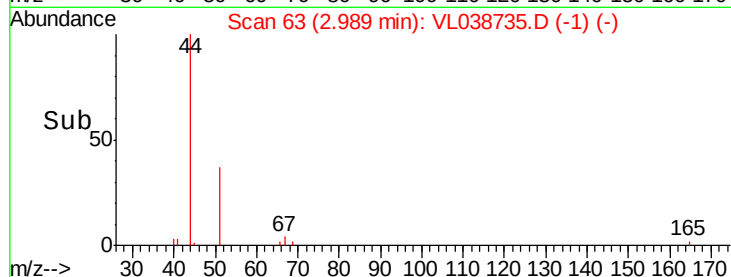
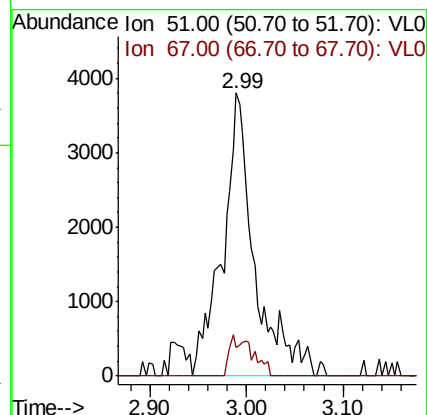
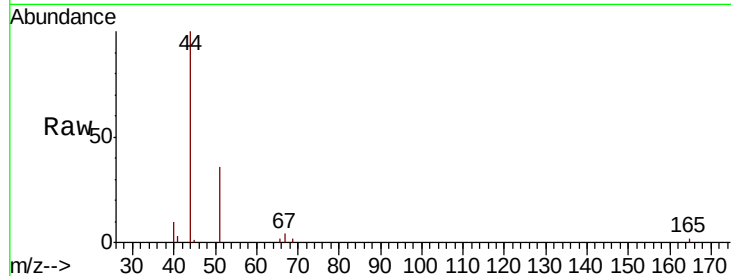
Acq: 24 Mar 2022 3:48

Tot Ion: 51 Resp: 8758

Ion Ratio Lower Upper

51 100

67 10.2 14.1 21.1#



#4

Chloromethane

Concen: 0.071 ppbv

RT: 3.14 min Scan# 110

Delta R.T. 0.00 min

Lab File: VL038735.D

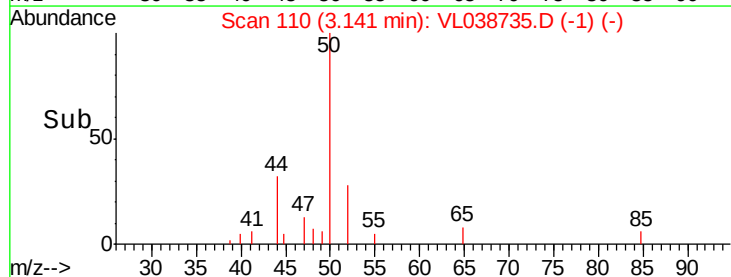
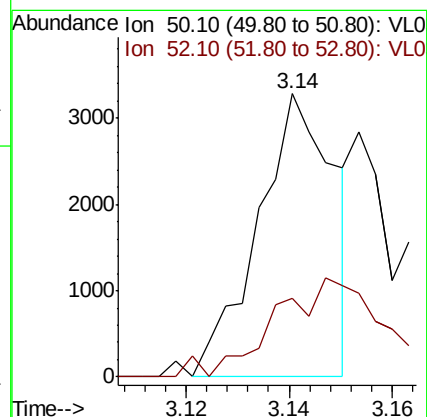
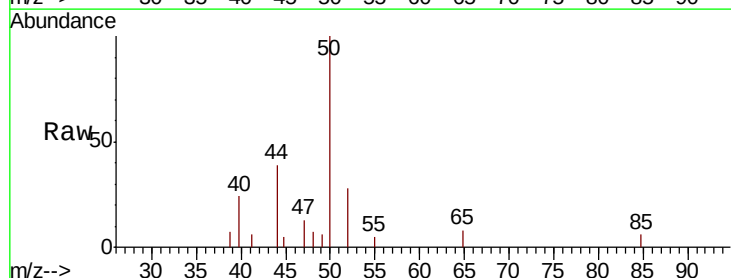
Acq: 24 Mar 2022 3:48

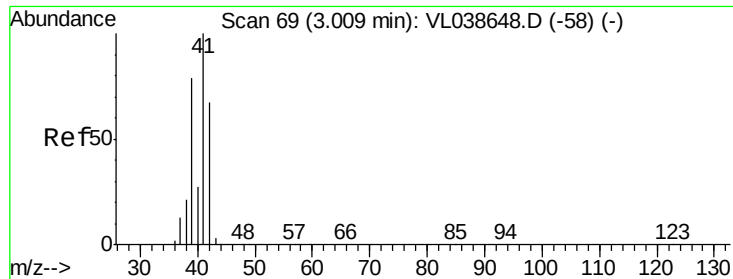
Tgt Ion: 50 Resp: 3354

Ion Ratio Lower Upper

50 100

52 21.8 25.5 38.3#





#9

Propene

Concen: 0.510 ppbv

RT: 3.02 Instrument:

Delta R.T. MSVOA\_L

Lab File: ClientSampleId:

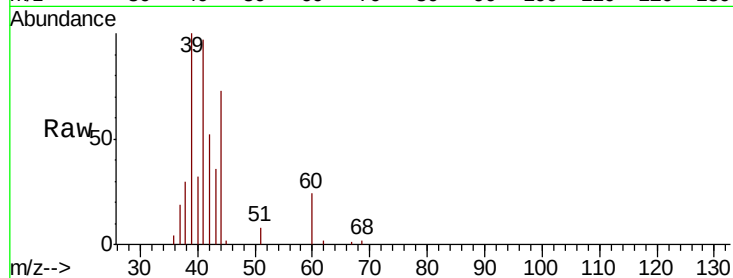
Acq: 24 Mar 2022 3:48

Tot Ion: 41 Resp: 21228

Ion Ratio Lower Upper

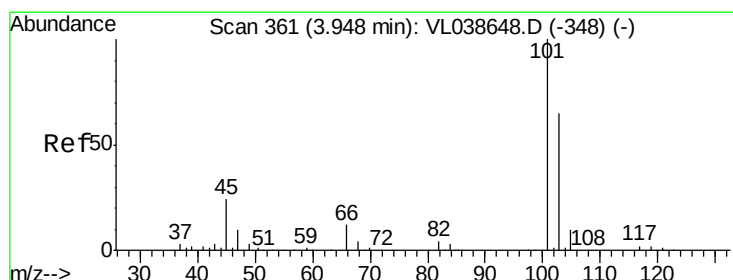
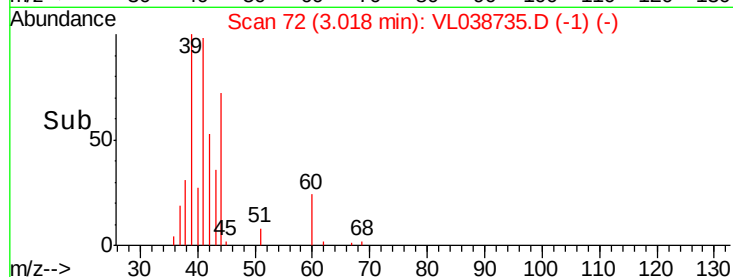
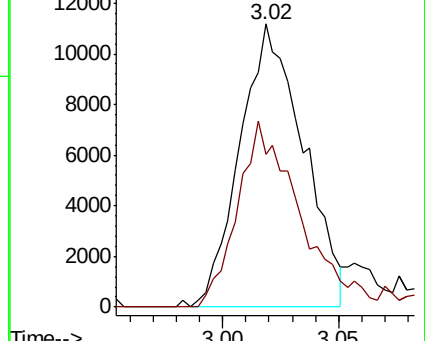
41 100

42 66.7 56.2 84.4



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0



#11

Trichlorofluoromethane

Concen: 0.043 ppbv

RT: 3.95 min Scan# 363

Delta R.T. 0.01 min

Lab File: VL038735.D

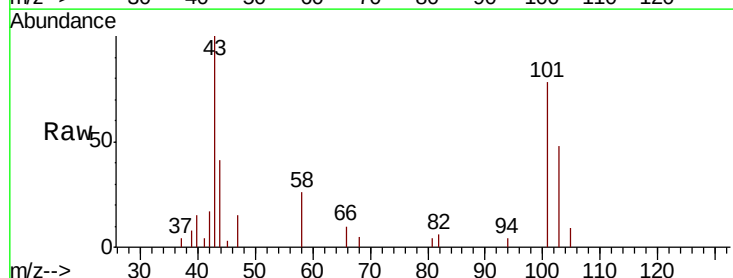
Acq: 24 Mar 2022 3:48

Tgt Ion: 101 Resp: 4160

Ion Ratio Lower Upper

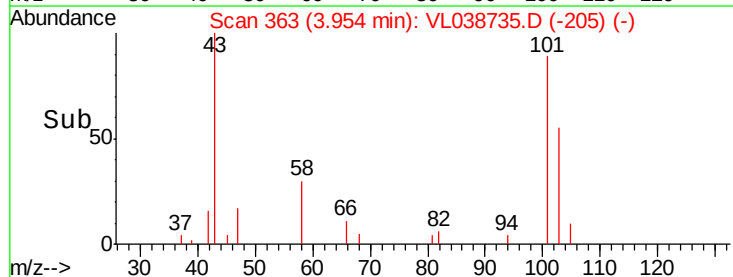
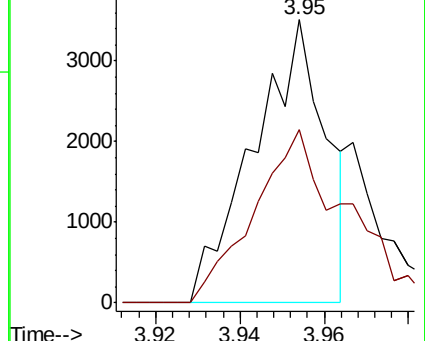
101 100

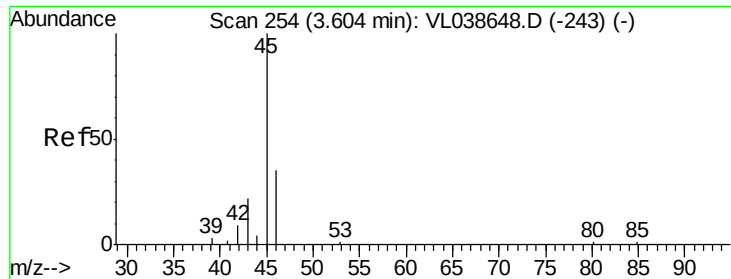
103 61.2 51.9 77.9



Abundance Ion 101.00 (100.70 to 101.70): V

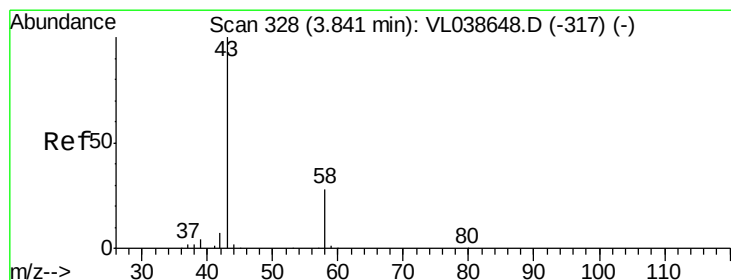
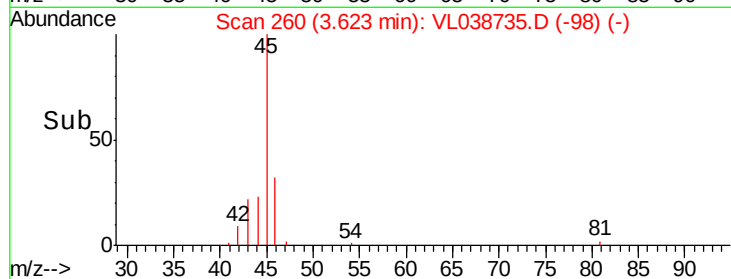
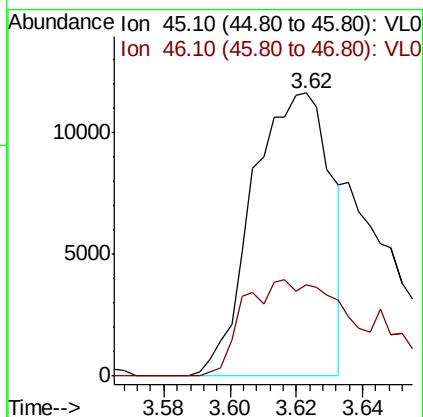
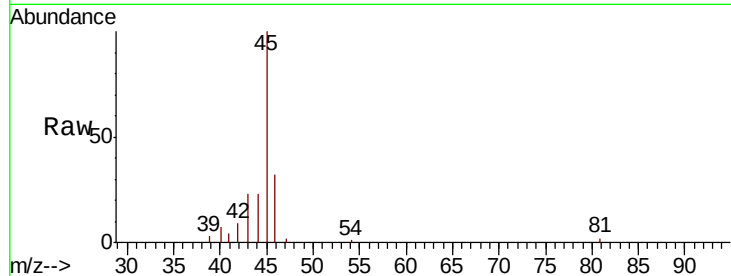
Ion 103.00 (102.70 to 103.70): V





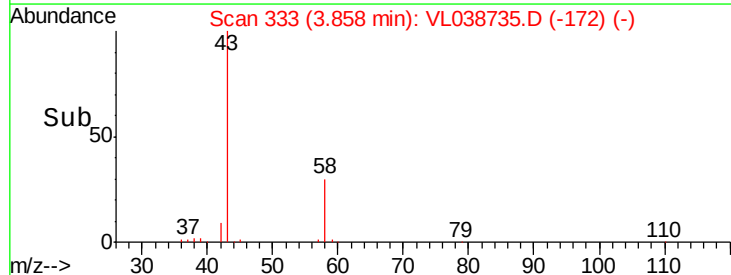
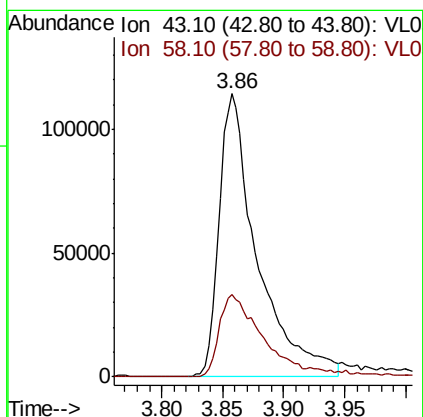
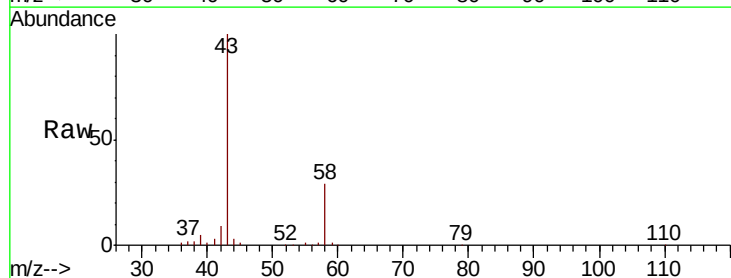
#13  
 Ethanol  
 Concen: 4.153 ppbv  
 RT: 3.62  
 Delta R.T. MSVOA\_L  
 Lab File: ClientSampleId :  
 Acq: 24 Mar 2022 3:48

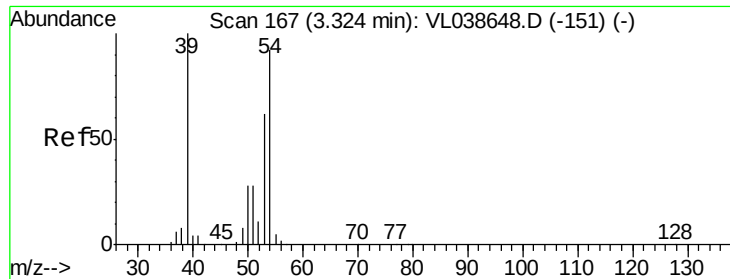
Tot Ion: 45 Resp: 19083  
 Ion Ratio Lower Upper  
 45 100  
 46 71.2 15.1 60.5#



#15  
 Acetone  
 Concen: 3.531 ppbv  
 RT: 3.86 min Scan# 333  
 Delta R.T. 0.02 min  
 Lab File: VL038735.D  
 Acq: 24 Mar 2022 3:48

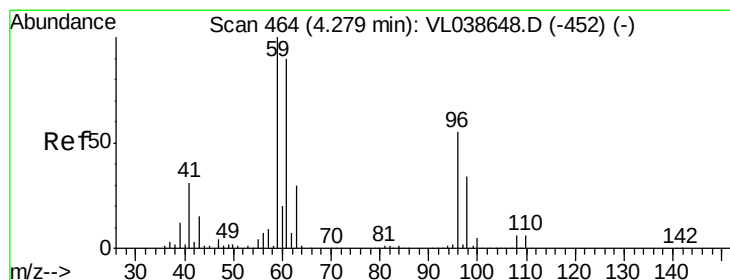
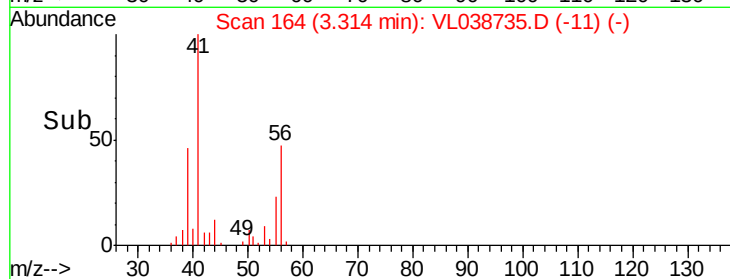
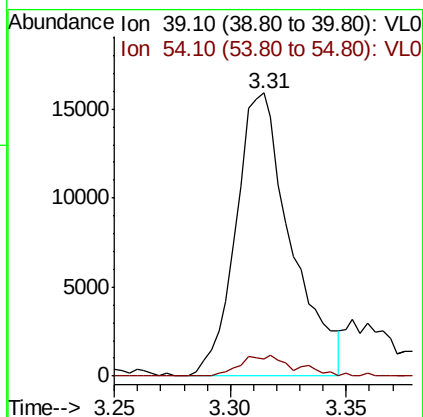
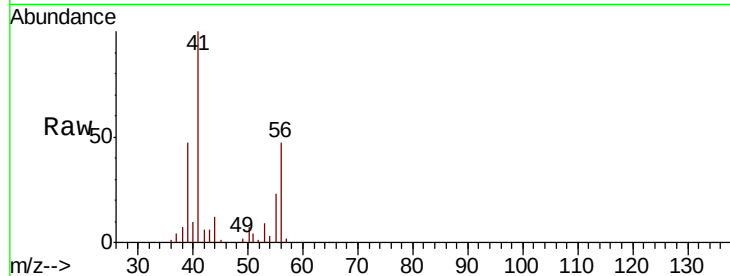
Tgt Ion: 43 Resp: 248899  
 Ion Ratio Lower Upper  
 43 100  
 58 36.1 23.3 34.9#





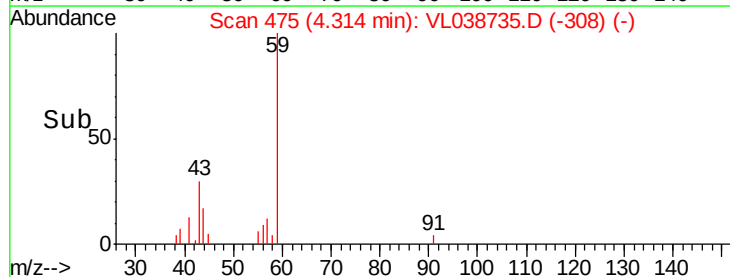
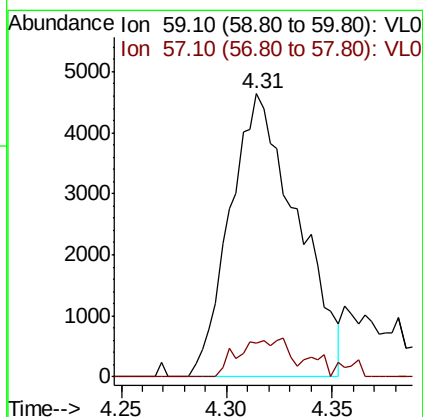
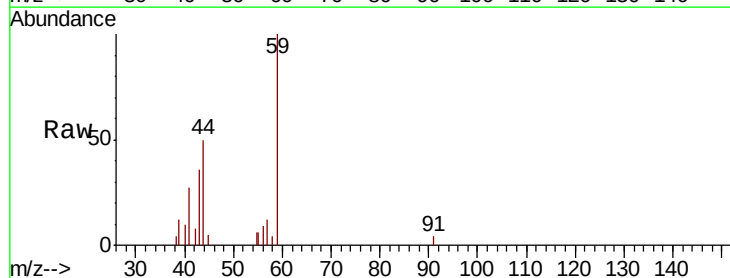
#16  
 1,3-Butadiene  
 Concen: 0.657 ppbv  
 RT: 3.31 min  
 Delta R.T. MSVOA\_L  
 Lab File: ClientSampleId :  
 Acq: 24 Mar 2022 3:48

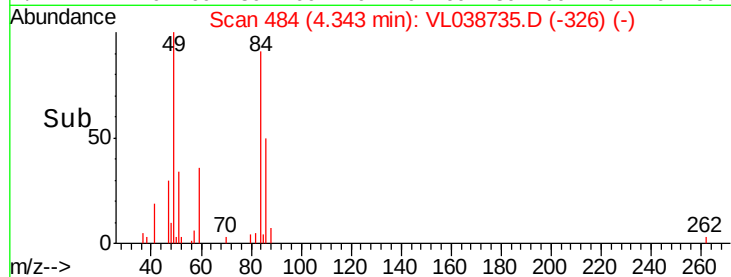
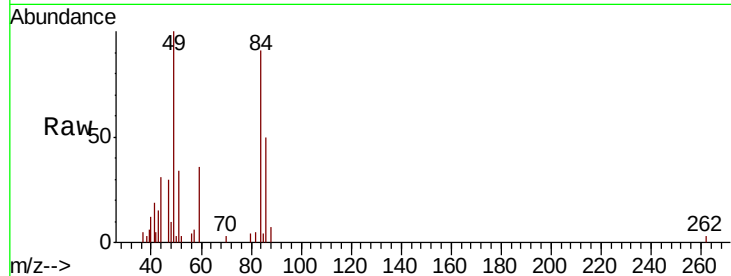
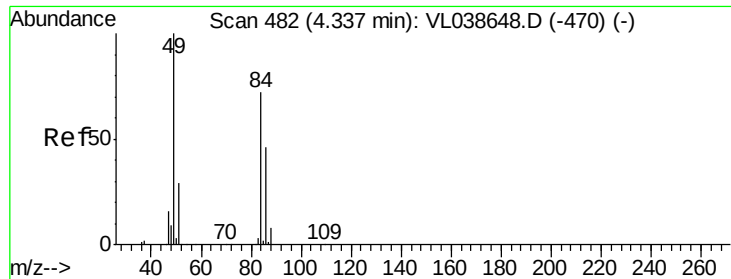
Tot Ion: 39 Resp: 26299  
 Ion Ratio Lower Upper  
 39 100  
 54 7.3 69.1 103.7#



#17  
 tert-Butyl alcohol  
 Concen: 0.167 ppbv  
 RT: 4.31 min Scan# 475  
 Delta R.T. 0.04 min  
 Lab File: VL038735.D  
 Acq: 24 Mar 2022 3:48

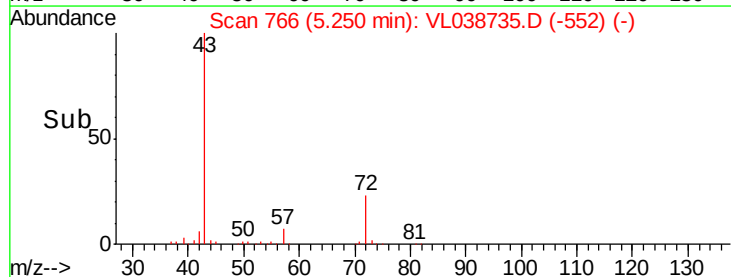
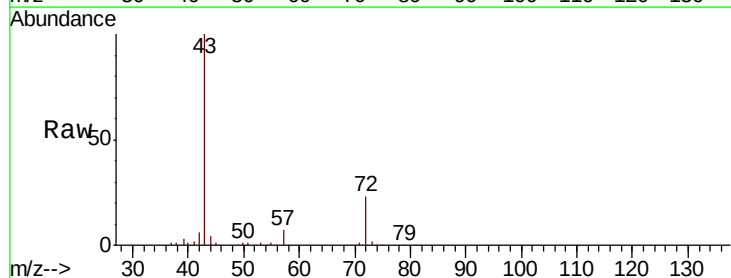
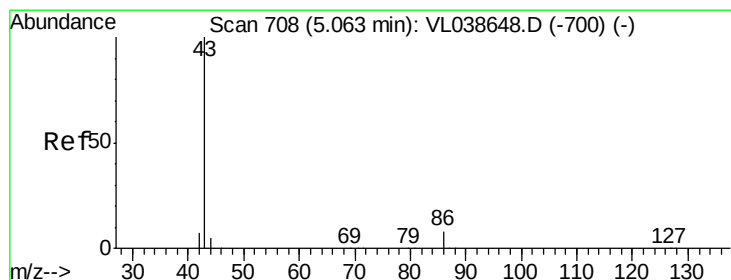
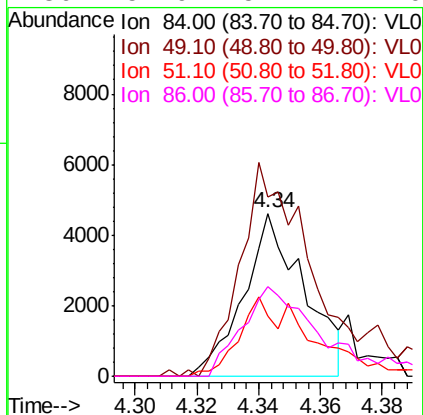
Tgt Ion: 59 Resp: 10257  
 Ion Ratio Lower Upper  
 59 100  
 57 13.9 8.2 12.2#





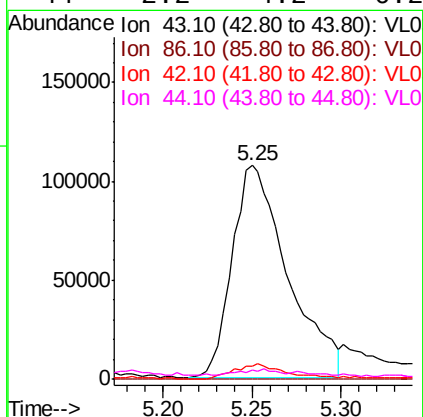
#20  
Methvlene Chloride  
Concen: 0.211 ppbv  
RT: 4.34 Instrument : MSVOA\_1  
Delta R.T. ClientSampleId :  
Lab File:  
Acq: 24 Mar 2022 3:48

| Tot Ion | 84    | Resp  | 6255   |
|---------|-------|-------|--------|
| Ion     | Ratio | Lower | Upper  |
| 84      | 100   |       |        |
| 49      | 105.6 | 111.2 | 166.8# |
| 51      | 37.0  | 32.8  | 49.2   |
| 86      | 54.9  | 51.4  | 77.0   |

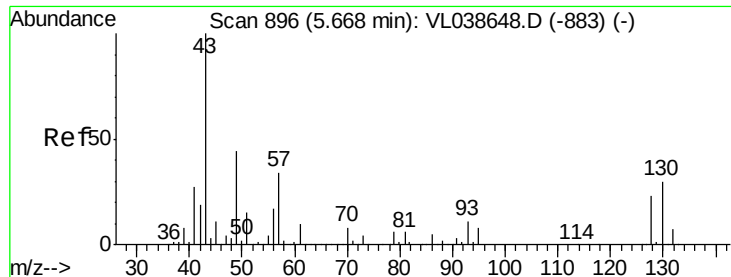


#23  
Vinyl Acetate  
Concen: 3.417 ppbv  
RT: 5.25 min Scan# 766  
Delta R.T. 0.19 min  
Lab File: VL038735.D  
Acq: 24 Mar 2022 3:48

| Tgt Ion | 43    | Resp  | 233288 |
|---------|-------|-------|--------|
| Ion     | Ratio | Lower | Upper  |
| 43      | 100   |       |        |
| 86      | 0.0   | 5.6   | 8.4#   |
| 42      | 5.8   | 6.8   | 10.2#  |
| 44      | 2.2   | 4.2   | 6.2#   |

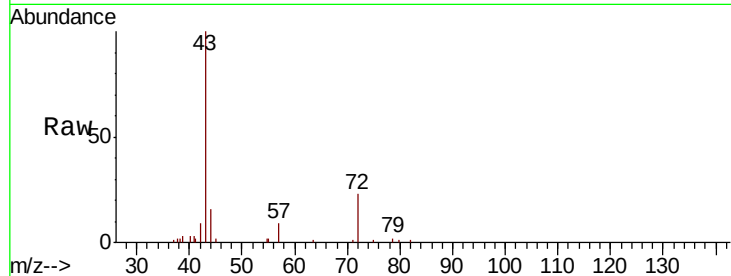






#25  
Ethyl Acetate  
Concen: 0.061 ppbv  
RT: 5.30  
Instrument: MSVOA\_1  
Delta R.T.:  
Lab File: ClientSampleId:  
Acq: 24 Mar 2022 3:48

|          |       |       |       |
|----------|-------|-------|-------|
| Tot Ion: | 43    | Resp: | 10772 |
| Ion      | Ratio | Lower | Upper |
| 43       | 100   |       |       |
| 45       | 0.0   | 8.2   | 12.4# |
| 61       | 0.0   | 8.3   | 12.5# |
| 70       | 1.3   | 5.6   | 8.4#  |



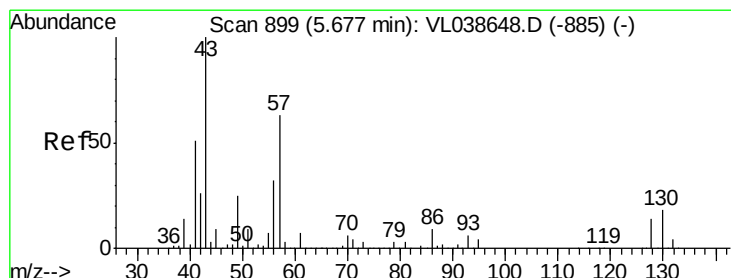
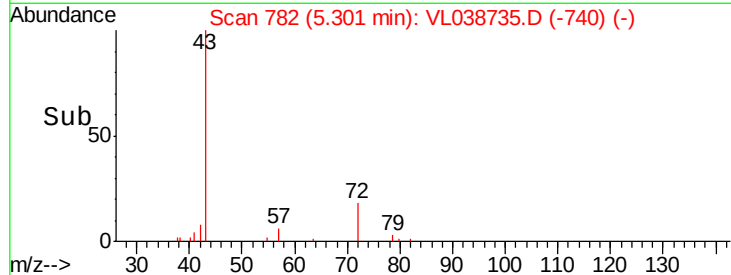
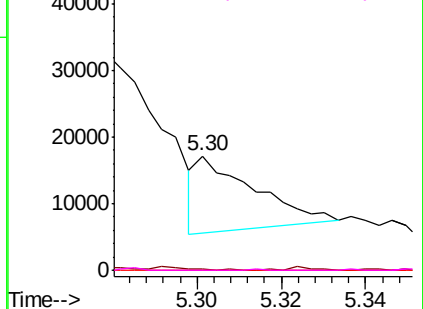
Abundance

Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

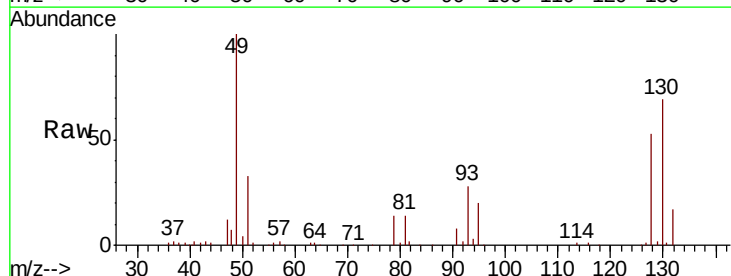
Ion 61.10 (60.80 to 61.80): VL0

Ion 70.10 (69.80 to 70.80): VL0



#26  
Hexane  
Concen: 0.036 ppbv  
RT: 5.69 min Scan# 903  
Delta R.T.: 0.01 min  
Lab File: VL038735.D  
Acq: 24 Mar 2022 3:48

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 57    | Resp: | 2855   |
| Ion      | Ratio | Lower | Upper  |
| 57       | 100   |       |        |
| 41       | 204.2 | 67.0  | 100.4# |
| 43       | 0.0   | 184.2 | 276.2# |
| 56       | 0.0   | 42.6  | 64.0#  |



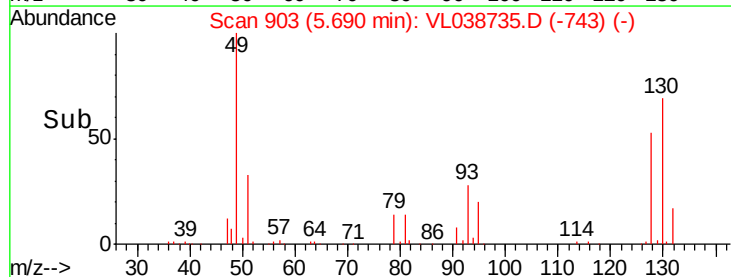
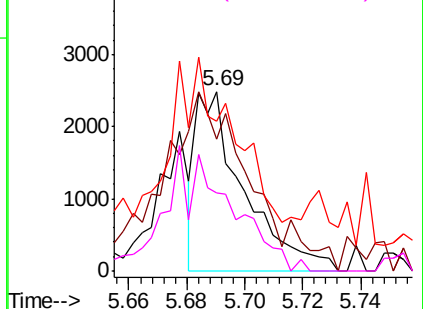
Abundance

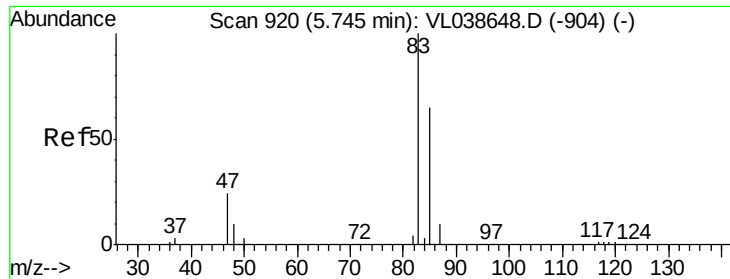
Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

Ion 56.10 (55.80 to 56.80): VL0





#29

Chloroform

Concen: 0.269 ppbv

RT: 5.75 Instrument:

Delta R.T. MSVOA\_L

Lab File: ClientSampleId:

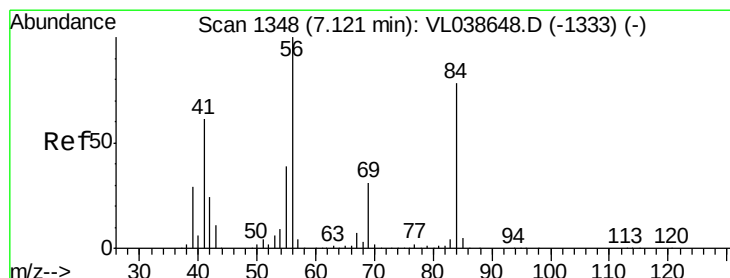
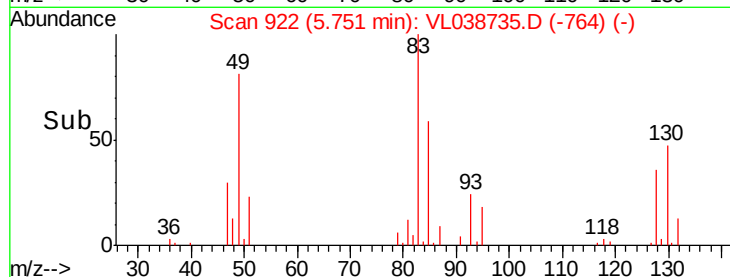
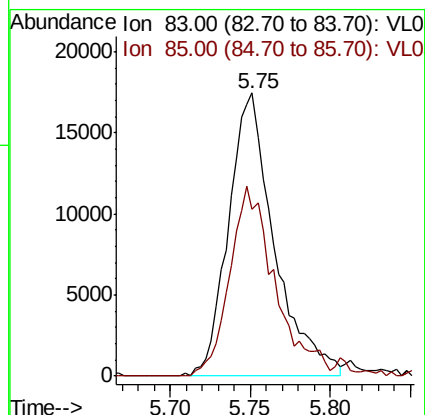
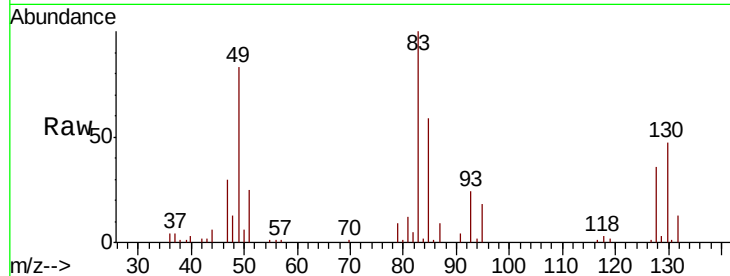
Acq: 24 Mar 2022 3:48

Tot Ion: 83 Resp: 34182

Ion Ratio Lower Upper

83 100

85 57.8 51.7 77.5



#30

Cyclohexane

Concen: 0.041 ppbv

RT: 7.16 min Scan# 1359

Delta R.T. 0.04 min

Lab File: VL038735.D

Acq: 24 Mar 2022 3:48

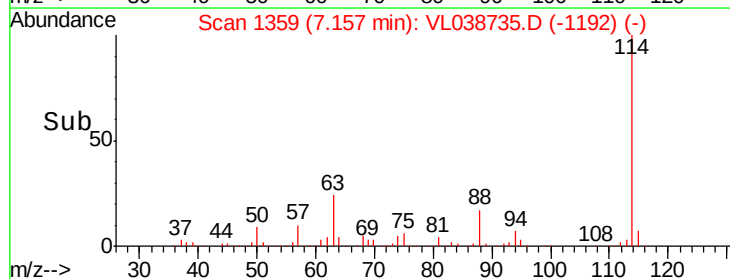
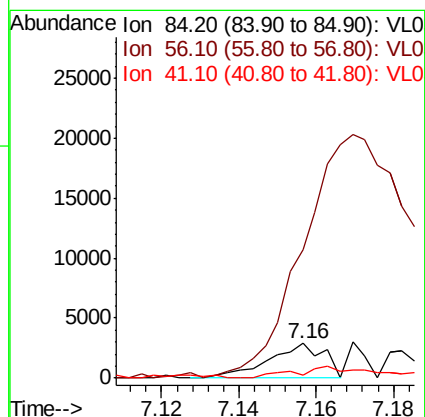
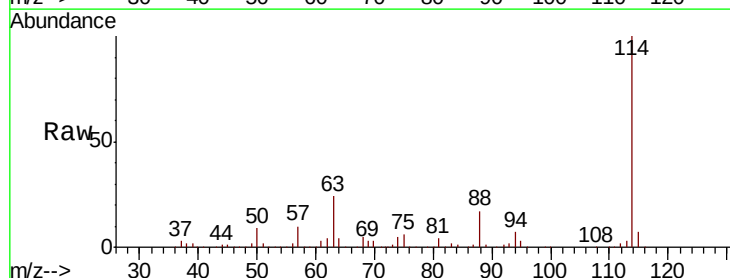
Tgt Ion: 84 Resp: 2866

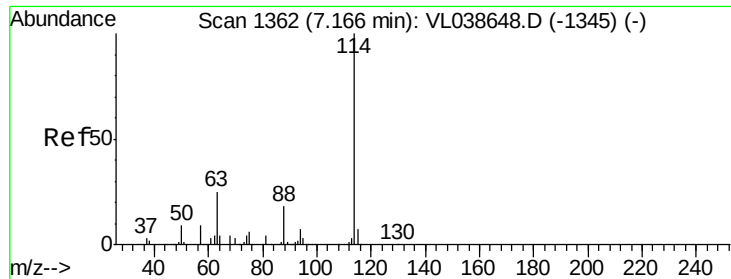
Ion Ratio Lower Upper

84 100

56 0.0 108.2 162.4#

41 65.0 61.8 92.6





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.17 Instrument:

Delta R.T. MSVOA\_L

Lab File: ClientSampleId:

Acq: 24 Mar 2022 3:48

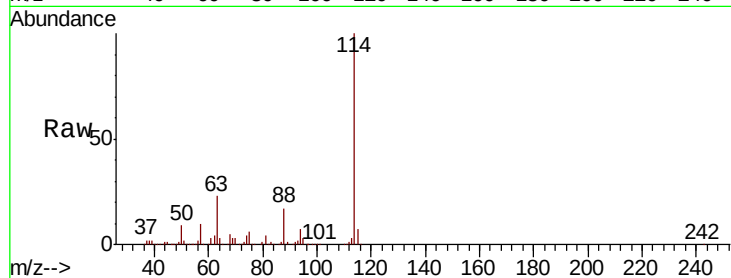
Tot Ion:114 Resp: 2212732

Ion Ratio Lower Upper

114 100

63 23.3 19.4 29.0

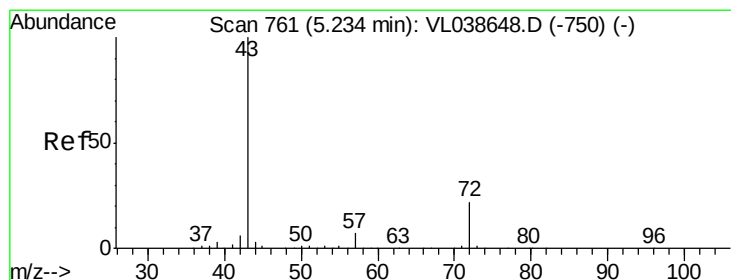
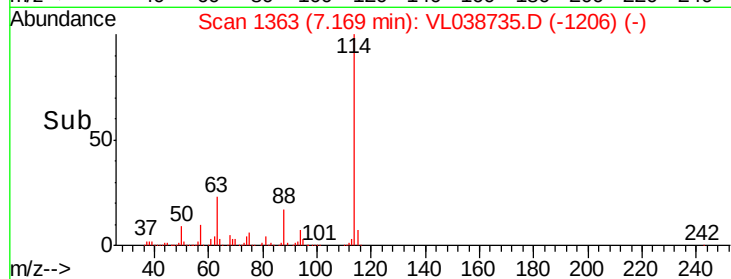
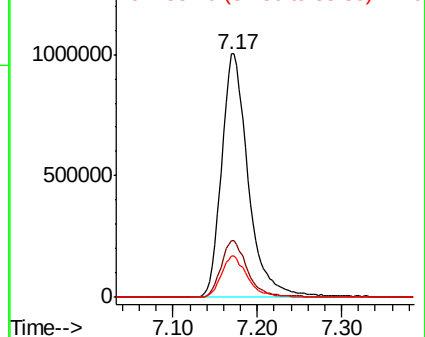
88 17.0 13.9 20.9



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: 2.664 ppbv

RT: 5.25 min Scan# 766

Delta R.T. 0.02 min

Lab File: VL038735.D

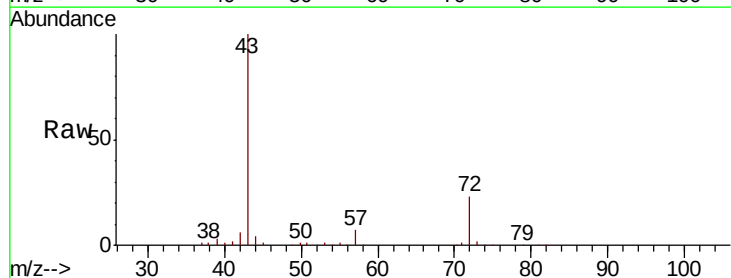
Acq: 24 Mar 2022 3:48

Tgt Ion: 43 Resp: 233288

Ion Ratio Lower Upper

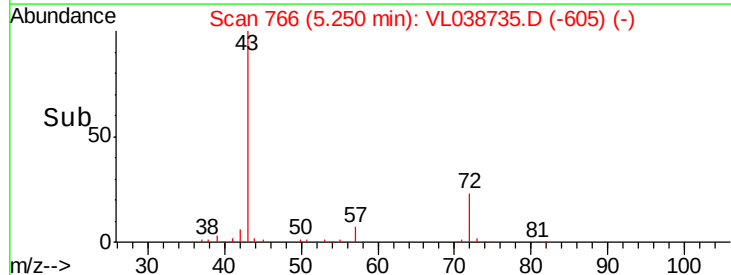
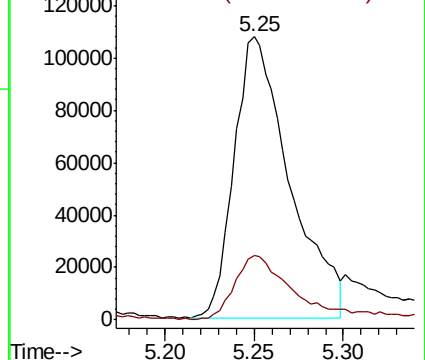
43 100

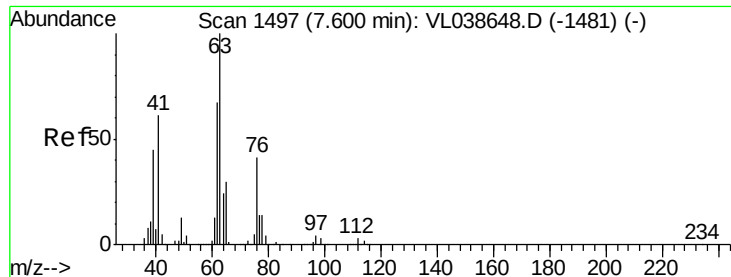
72 27.1 17.8 26.8#



Abundance Ion 43.10 (42.80 to 43.80): VL0

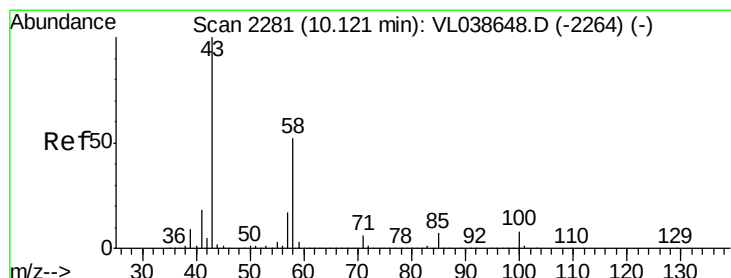
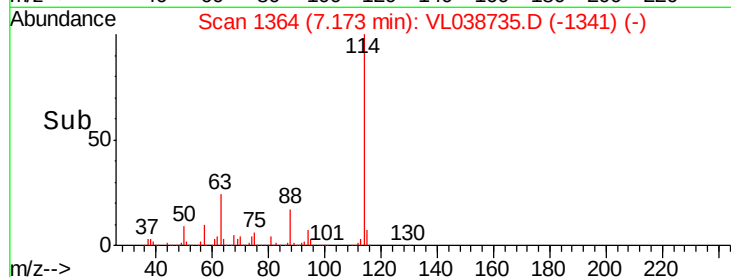
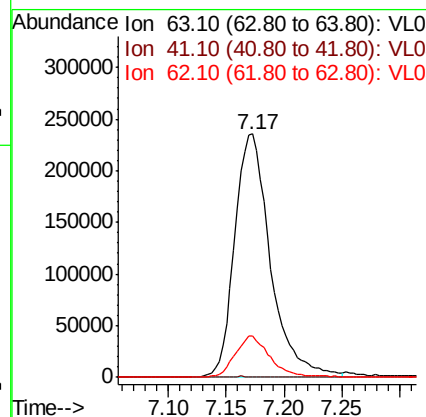
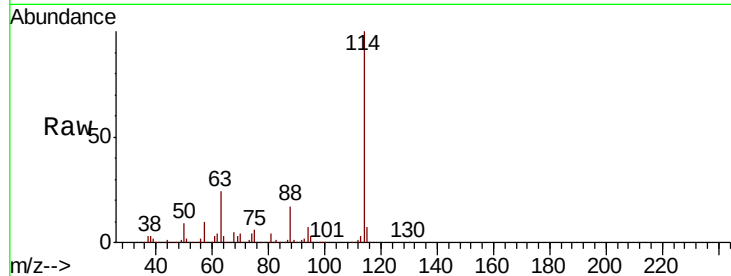
Ion 72.10 (71.80 to 72.80): VL0





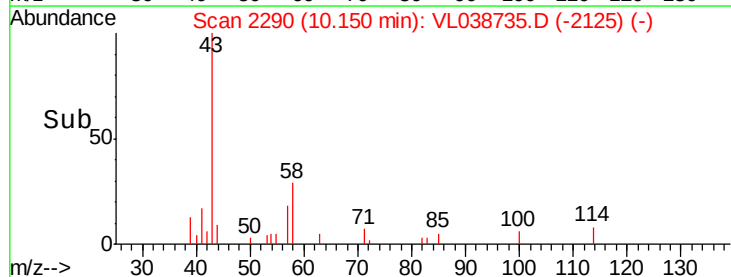
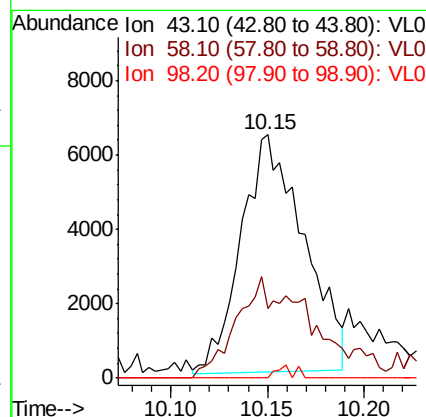
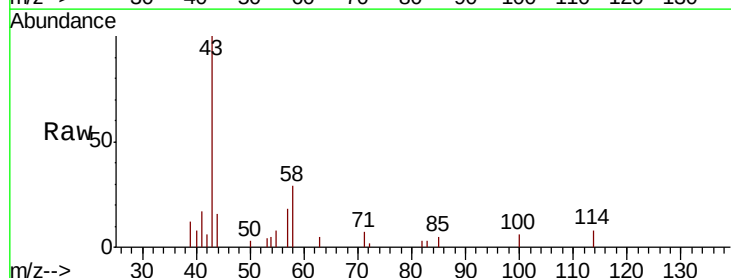
#39  
 1,2-Dichloropropane  
 Concen: 7.569 ppbv  
 RT: 7.17 min  
 Instrument: MSVOA\_L  
 Delta R.T.:  
 Lab File: ClientSampleId:  
 Acq: 24 Mar 2022 3:48

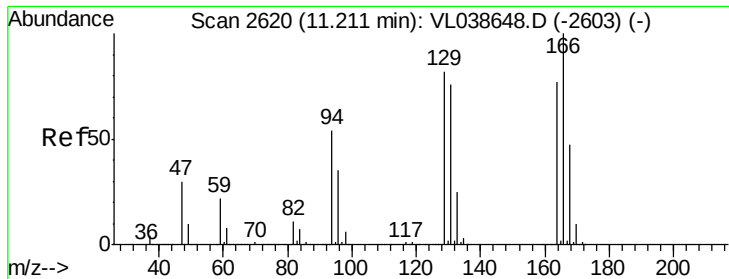
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 63      | 100   |       |       |
| 41      | 0.2   | 49.0  | 73.6# |
| 62      | 17.2  | 53.9  | 80.9# |



#51  
 2-Hexanone  
 Concen: 0.123 ppbv  
 RT: 10.15 min Scan# 2290  
 Delta R.T.: 0.03 min  
 Lab File: VL038735.D  
 Acq: 24 Mar 2022 3:48

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 58      | 57.9  | 41.2  | 61.8  |
| 98      | 1.5   | 0.2   | 0.4#  |





#52

Tetrachloroethene

Concen: 2.856 ppbv

RT: 11.22

Delta R.T. MSVOA\_L

Lab File: ClientSampleId :

Acq: 24 Mar 2022 3:48

Tot Ion:164 Resp: 178515

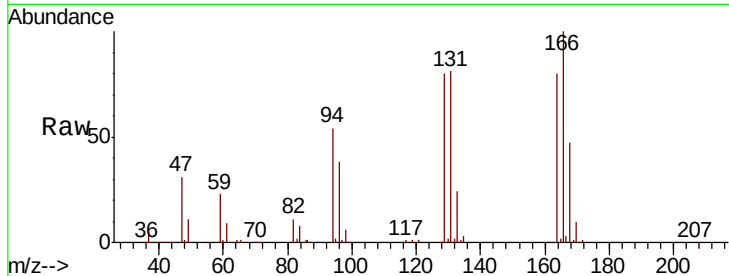
Ion Ratio Lower Upper

164 100

166 124.6 103.3 154.9

129 99.3 85.2 127.8

131 100.5 78.3 117.5



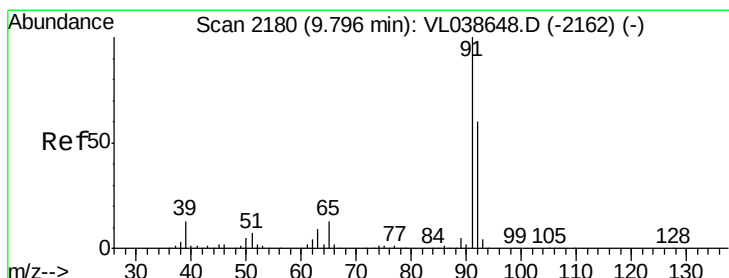
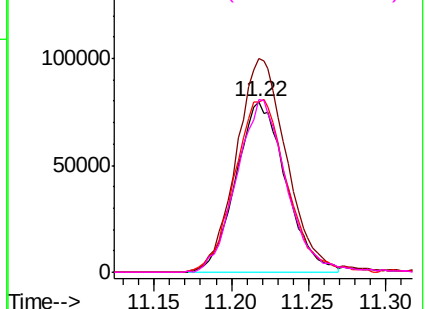
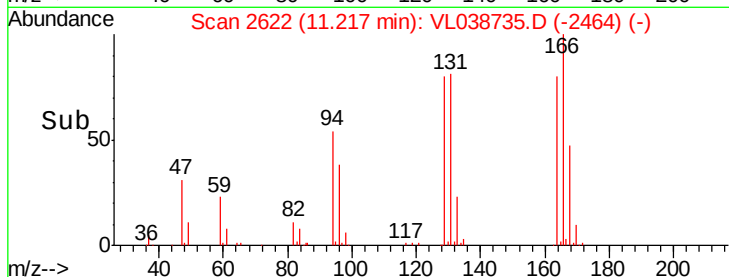
Abundance

Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#53

Toluene

Concen: 0.039 ppbv

RT: 9.80 min Scan# 2182

Delta R.T. 0.01 min

Lab File: VL038735.D

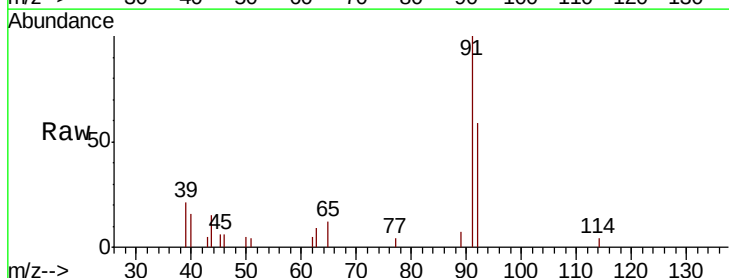
Acq: 24 Mar 2022 3:48

Tgt Ion: 91 Resp: 7203

Ion Ratio Lower Upper

91 100

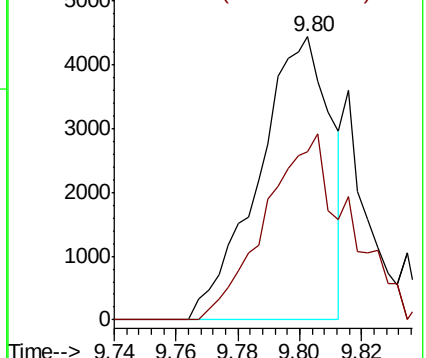
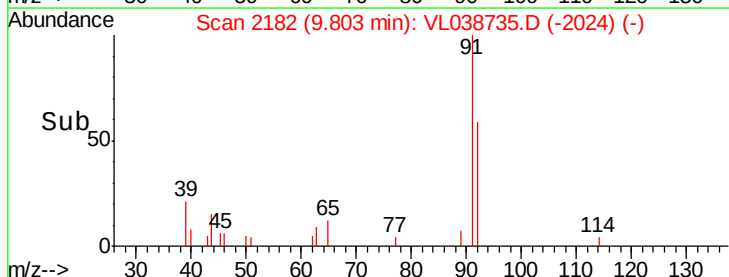
92 78.1 48.7 73.1#

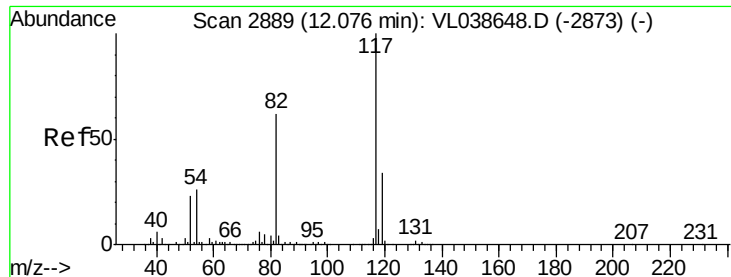


Abundance

Ion 91.10 (90.80 to 91.80): VL0

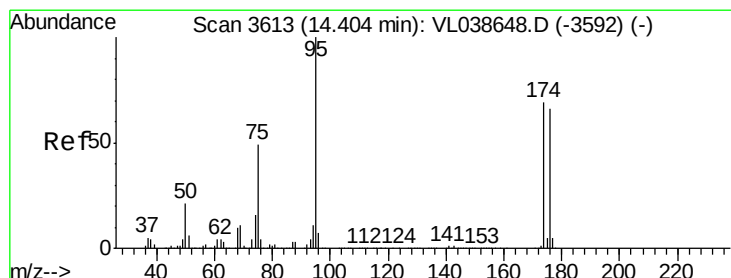
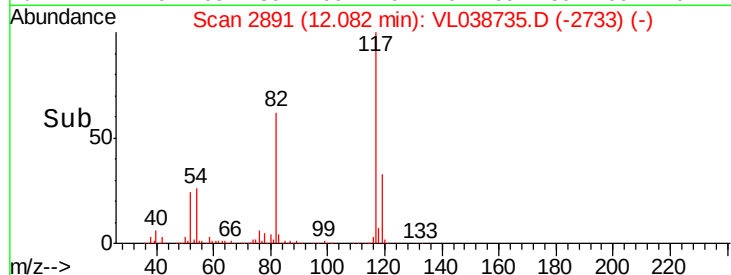
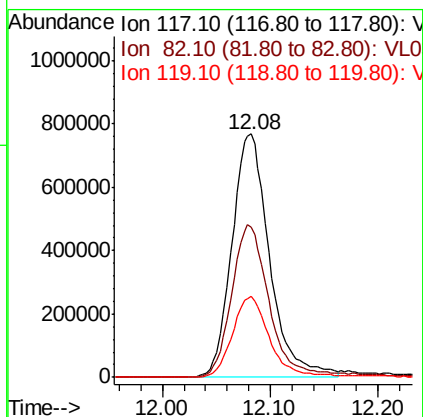
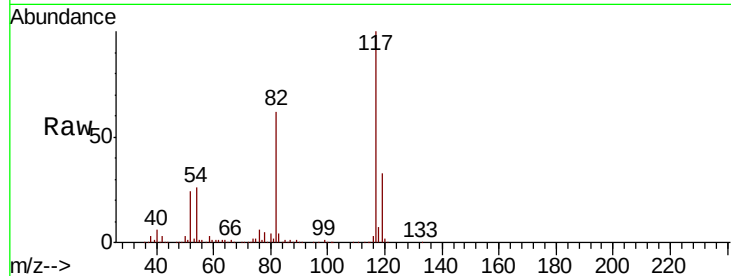
Ion 92.10 (91.80 to 92.80): VL0





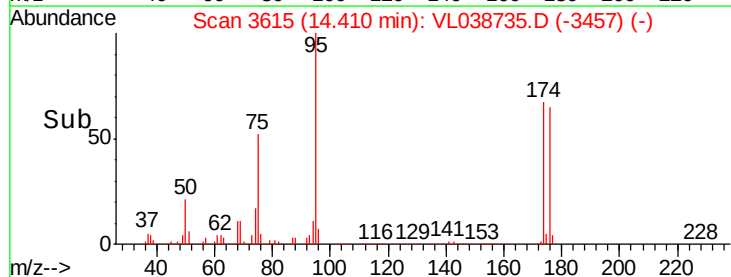
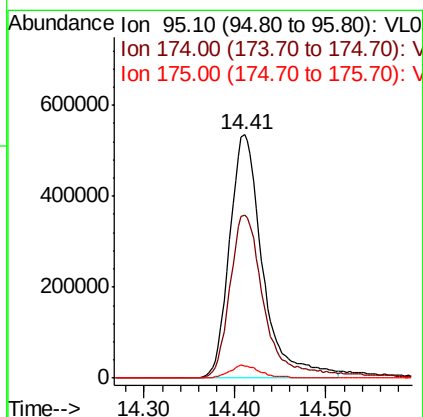
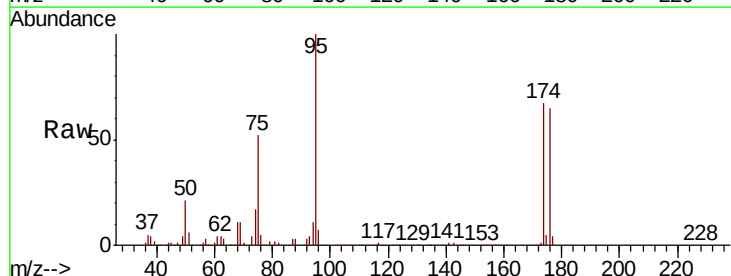
#55  
 Chlorobenzene-d5  
 Concen: 10.000 ppbv  
 RT: 12.08 min  
 Instrument: MSVOA\_1  
 Delta R.T.:  
 Lab File: ClientSampleId:  
 Acq: 24 Mar 2022 3:48

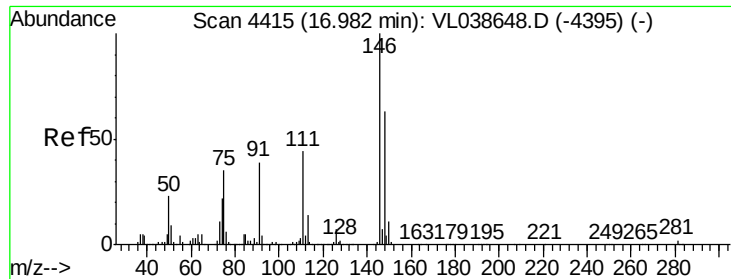
Tot Ion: 117 Resp: 1872754  
 Ion Ratio Lower Upper  
 117 100  
 82 65.5 51.6 77.4  
 119 33.9 26.9 40.3



#68  
 1-Bromo-4-Fluorobenzene  
 Concen: 9.467 ppbv  
 RT: 14.41 min Scan# 3615  
 Delta R.T.: 0.01 min  
 Lab File: VL038735.D  
 Acq: 24 Mar 2022 3:48

Tgt Ion: 95 Resp: 1359303  
 Ion Ratio Lower Upper  
 95 100  
 174 71.9 56.1 84.1  
 175 5.2 4.2 6.2





#75

1,3-Dichlorobenzene

Concen: 0.038 ppbv

RT: 16.99 Instrument :

Delta R.T. MSVOA\_L

Lab File: ClientSampleId :

Acq: 24 Mar 2022 3.48

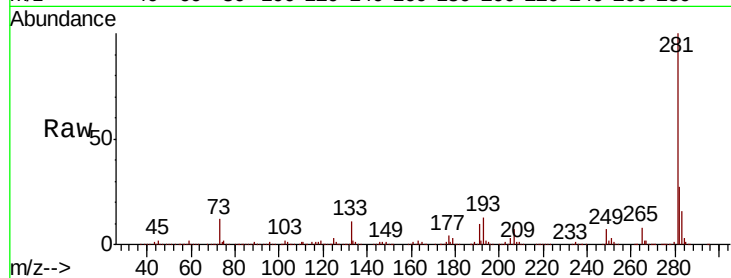
Tot Ion:146 Resp: 5166

Ion Ratio Lower Upper

146 100

111 0.0 22.2 66.6#

148 235.1 32.5 97.5#



Abundance Ion 146.00 (145.70 to 146.70): V

Ion 111.10 (110.80 to 111.80): V

Ion 148.00 (147.70 to 148.70): V

