

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_L\Data\VL022123\  
 Data File : VL040200.D  
 Acq On : 21 Feb 2023 18:30  
 Operator : SY/MD  
 Sample : 01626-03DL 4X  
 Misc : 400mL/MSVOA\_L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 IA-3DL

Quant Time: Feb 22 03:25:32 2023  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL021523AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022  
 QLast Update : Wed Feb 22 03:17:31 2023  
 Response via : Initial Calibration

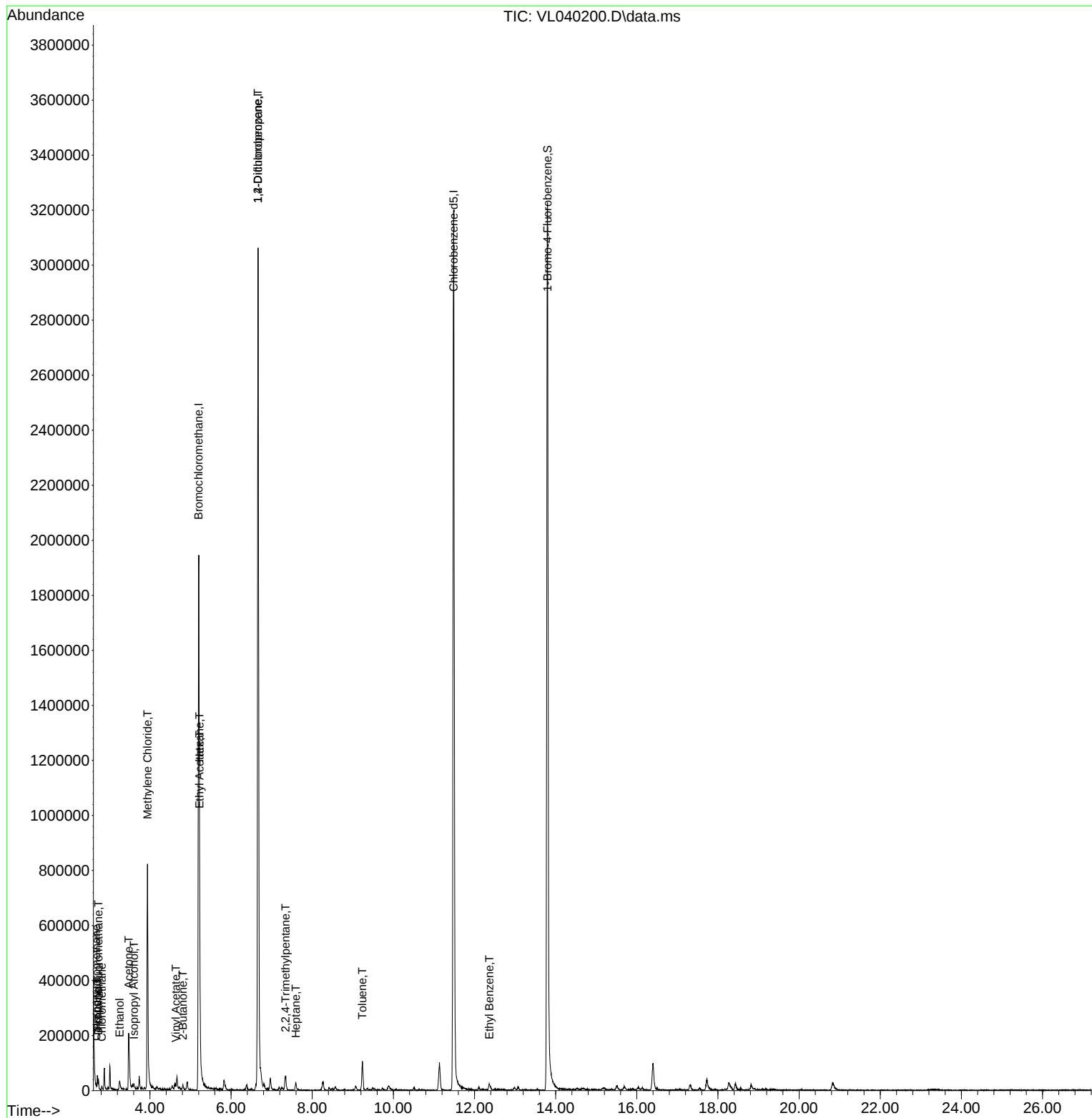
| Compound                    | R.T.   | QIon  | Response | Conc     | Units  | Dev(Min) |
|-----------------------------|--------|-------|----------|----------|--------|----------|
| -----                       |        |       |          |          |        |          |
| Internal Standards          |        |       |          |          |        |          |
| 1) Bromochloromethane       | 5.201  | 49    | 890093   | 10.000   | ppbv   | 0.00     |
| 33) 1,4-Difluorobenzene     | 6.664  | 114   | 2313648  | 10.000   | ppbv   | 0.00     |
| 55) Chlorobenzene-d5        | 11.484 | 117   | 2067682  | 10.000   | ppbv   | 0.00     |
| System Monitoring Compounds |        |       |          |          |        |          |
| 68) 1-Bromo-4-Fluorobenzene | 13.799 | 95    | 1699664  | 9.997    | ppbv   | 0.00     |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =      | 100.000% |
| Target Compounds            |        |       |          |          |        |          |
|                             |        |       |          |          | Qvalue |          |
| 2) Dichlorodifluoromethane  | 2.732  | 85    | 20488    | 0.124    | ppbv   | 91       |
| 3) Chlorodifluoromethane    | 2.677  | 51    | 10912    | 0.103    | ppbv # | 91       |
| 4) Chloromethane            | 2.816  | 50    | 10570    | 0.158    | ppbv   | 92       |
| 9) Propene                  | 2.703  | 41    | 10463    | 0.241    | ppbv # | 73       |
| 10) Heptane                 | 7.597  | 43    | 7380     | 0.072    | ppbv # | 68       |
| 13) Ethanol                 | 3.256  | 45    | 33940    | 8.506    | ppbv   | 78       |
| 15) Acetone                 | 3.475  | 43    | 226056   | 2.109    | ppbv   | 98       |
| 19) Isopropyl Alcohol       | 3.603  | 45    | 18107    | 0.355    | ppbv # | 75       |
| 20) Methylene Chloride      | 3.941  | 84    | 275887   | 4.945    | ppbv   | 96       |
| 23) Vinyl Acetate           | 4.642  | 43    | 2681     | 0.082    | ppbv # | 37       |
| 25) Ethyl Acetate           | 5.224  | 43    | 123441   | 0.620    | ppbv # | 76       |
| 26) Hexane                  | 5.221  | 57    | 174139   | 2.036    | ppbv # | 37       |
| 34) 2-Butanone              | 4.812  | 43    | 14874    | 0.130    | ppbv # | 74       |
| 39) 1,2-Dichloropropane     | 6.664  | 63    | 573071   | 8.182    | ppbv # | 25       |
| 44) 2,2,4-Trimethylpentane  | 7.343  | 57    | 25952    | 0.086    | ppbv # | 41       |
| 53) Toluene                 | 9.233  | 91    | 68624    | 0.356    | ppbv   | 100      |
| 58) Ethyl Benzene           | 12.362 | 91    | 12010    | 0.048    | ppbv   | 90       |
| -----                       |        |       |          |          |        |          |

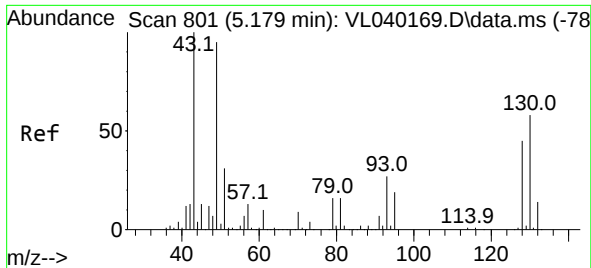
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Instrument :  
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ClientSampleId :  
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Quant Time: Feb 22 03:25:32 2023  
Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL021523AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022  
QLast Update : Wed Feb 22 03:17:31 2023  
Response via : Initial Calibration

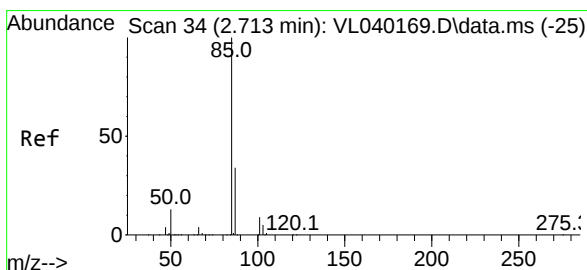
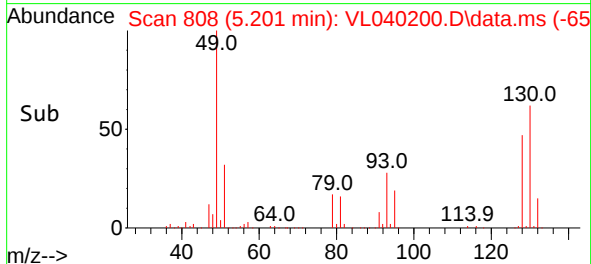
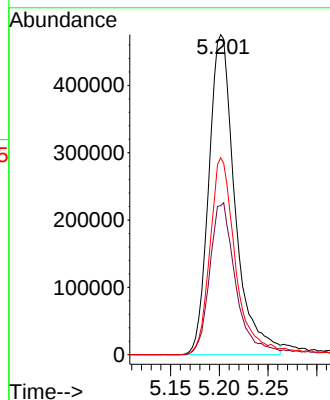
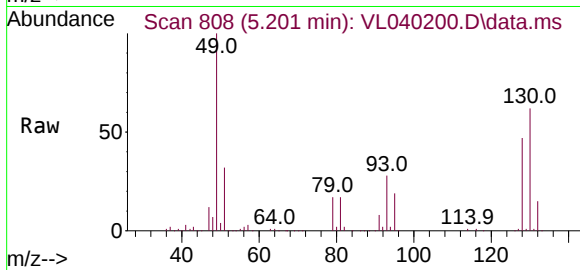




#1  
 Bromochloromethane  
 Concen: 10.000 ppbv  
 RT: 5.201 min Scan# 80  
 Delta R.T. -0.004 min  
 Lab File: VL040200.D  
 Acq: 21 Feb 2023 18:30

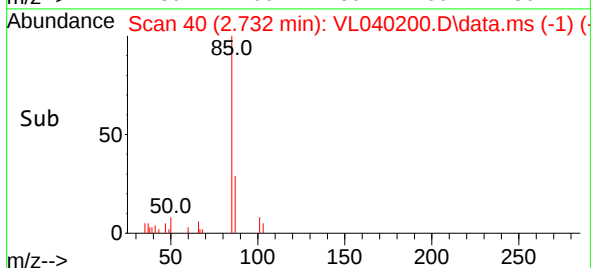
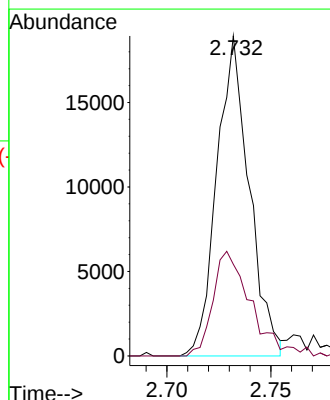
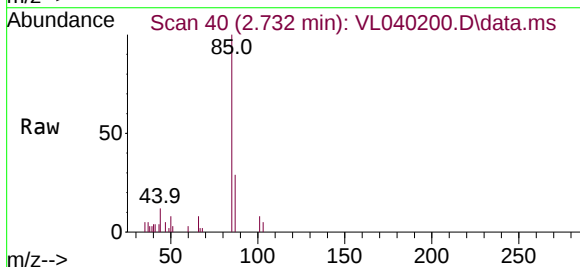
Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 IA-3DL

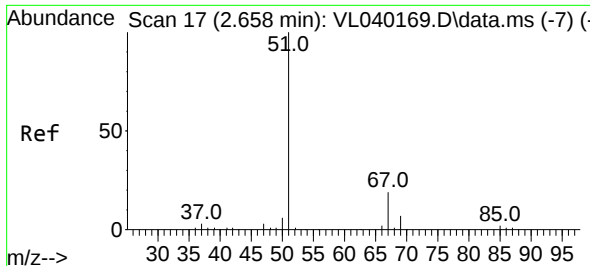
Tgt Ion: 49 Resp: 890093  
 Ion Ratio Lower Upper  
 49 100  
 128 49.3 24.1 72.3  
 130 62.0 30.9 92.8



#2  
 Dichlorodifluoromethane  
 Concen: 0.124 ppbv  
 RT: 2.732 min Scan# 40  
 Delta R.T. 0.003 min  
 Lab File: VL040200.D  
 Acq: 21 Feb 2023 18:30

Tgt Ion: 85 Resp: 20488  
 Ion Ratio Lower Upper  
 85 100  
 87 28.7 27.0 40.6

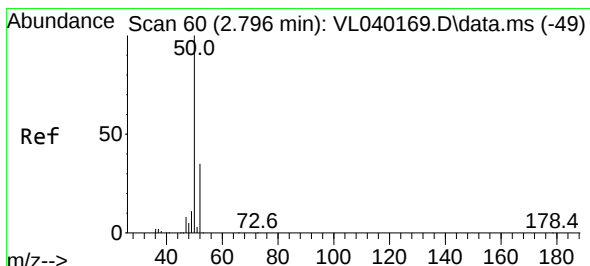
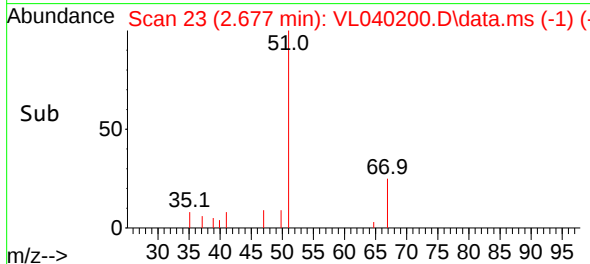
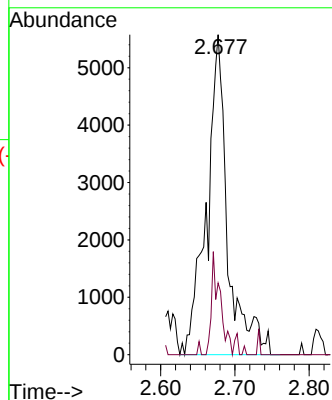
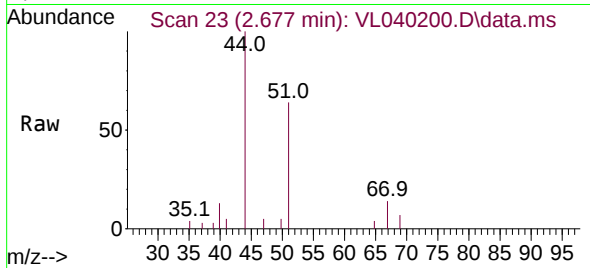




#3  
Chlorodifluoromethane  
Concen: 0.103 ppbv  
RT: 2.677 min Scan# 21  
Delta R.T. 0.003 min  
Lab File: VL040200.D  
Acq: 21 Feb 2023 18:30

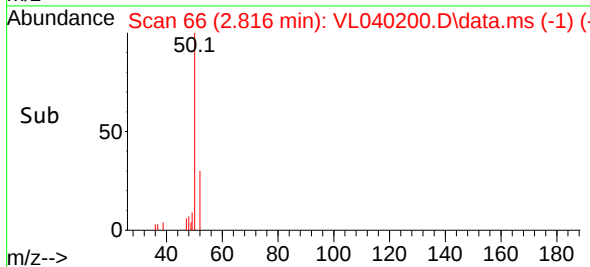
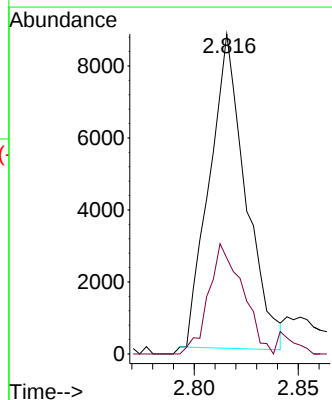
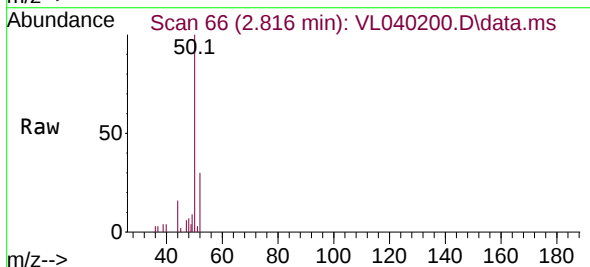
Instrument :  
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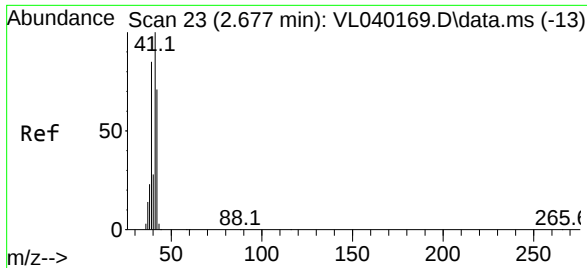
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Ion Ratio Lower Upper  
51 100  
67 15.0 15.4 23.2#



#4  
Chloromethane  
Concen: 0.158 ppbv  
RT: 2.816 min Scan# 66  
Delta R.T. 0.003 min  
Lab File: VL040200.D  
Acq: 21 Feb 2023 18:30

Tgt Ion: 50 Resp: 10570  
Ion Ratio Lower Upper  
50 100  
52 30.6 28.3 42.5





#9

Propene

Concen: 0.241 ppbv

RT: 2.703 min Scan# 31

Delta R.T. 0.010 min

Lab File: VL040200.D

Acq: 21 Feb 2023 18:30

Instrument :

MSVOA\_L

ClientSampleId :

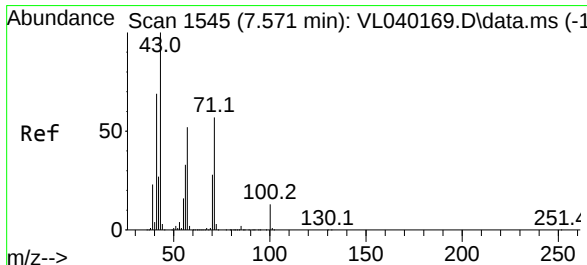
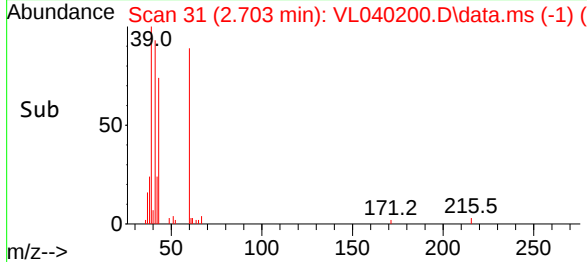
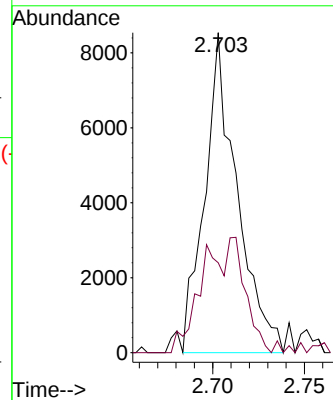
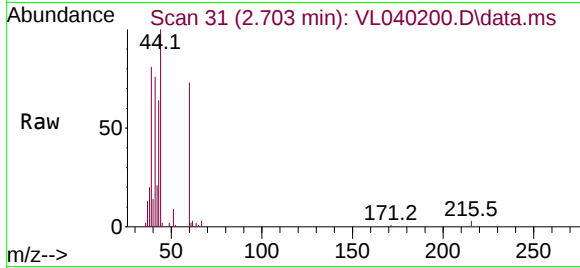
IA-3DL

Tgt Ion: 41 Resp: 10463

Ion Ratio Lower Upper

41 100

42 48.5 56.9 85.3#



#10

Heptane

Concen: 0.072 ppbv

RT: 7.597 min Scan# 1553

Delta R.T. -0.007 min

Lab File: VL040200.D

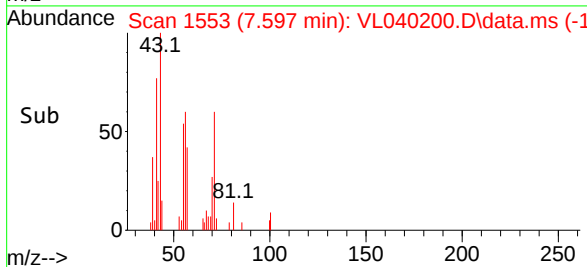
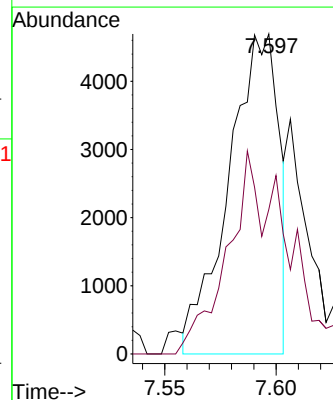
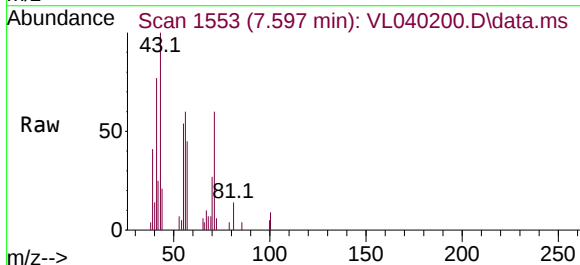
Acq: 21 Feb 2023 18:30

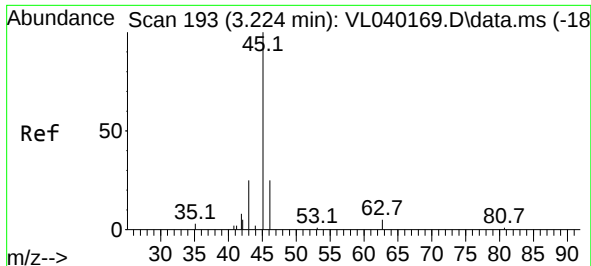
Tgt Ion: 43 Resp: 7380

Ion Ratio Lower Upper

43 100

57 74.5 41.4 62.2#

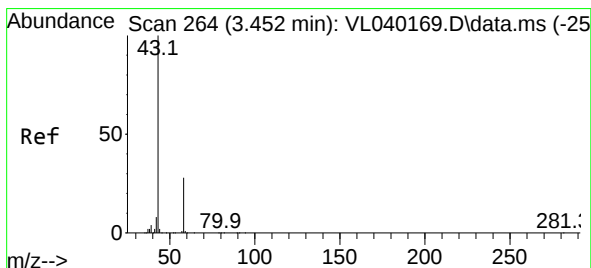
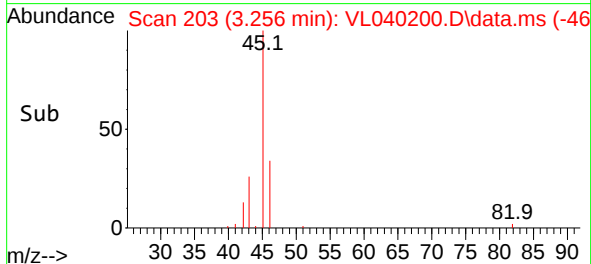
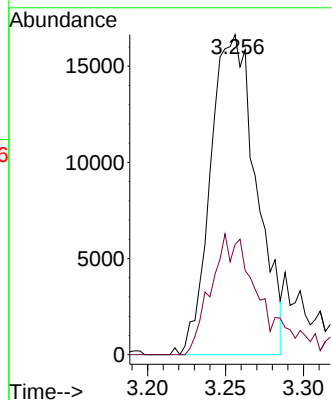
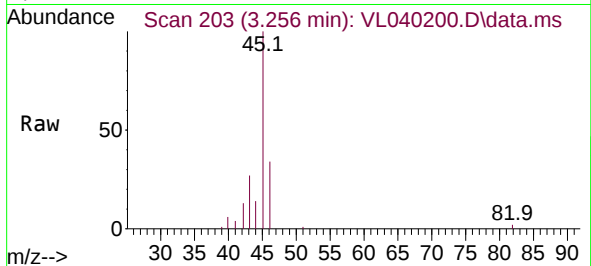




#13  
Ethanol  
Concen: 8.506 ppbv  
RT: 3.256 min Scan# 203  
Delta R.T. 0.006 min  
Lab File: VL040200.D  
Acq: 21 Feb 2023 18:30

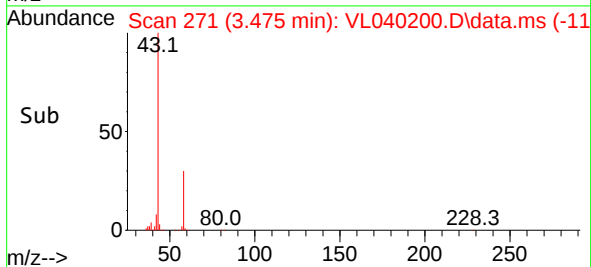
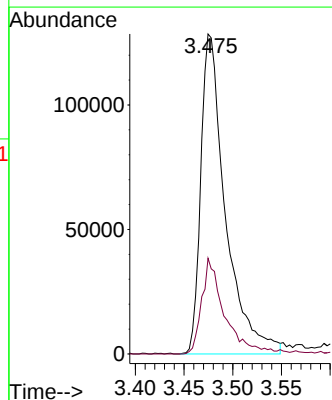
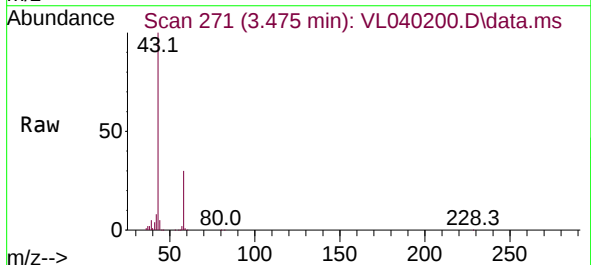
Instrument :  
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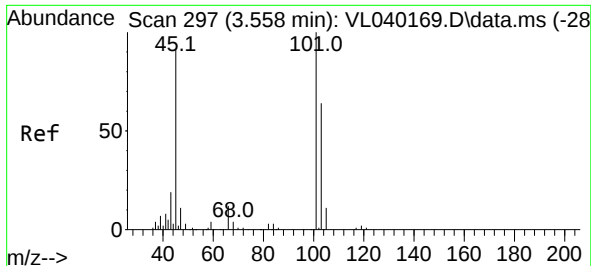
Tgt Ion: 45 Resp: 33940  
Ion Ratio Lower Upper  
45 100  
46 45.6 13.3 53.1



#15  
Acetone  
Concen: 2.109 ppbv  
RT: 3.475 min Scan# 271  
Delta R.T. 0.003 min  
Lab File: VL040200.D  
Acq: 21 Feb 2023 18:30

Tgt Ion: 43 Resp: 226056  
Ion Ratio Lower Upper  
43 100  
58 29.1 22.4 33.6





#19

Isopropyl Alcohol

Concen: 0.355 ppbv

RT: 3.603 min Scan# 311

Delta R.T. 0.022 min

Lab File: VL040200.D

Acq: 21 Feb 2023 18:30

Instrument :

MSVOA\_L

ClientSampleId :

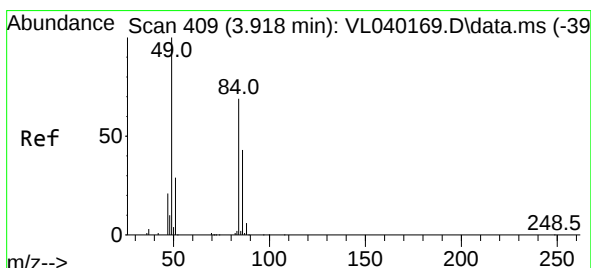
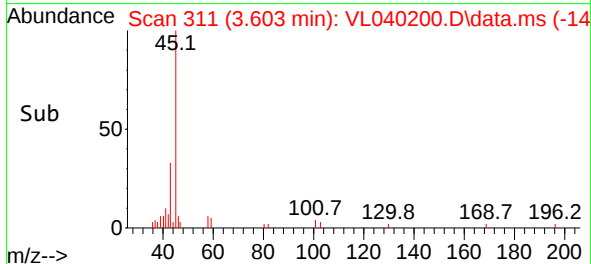
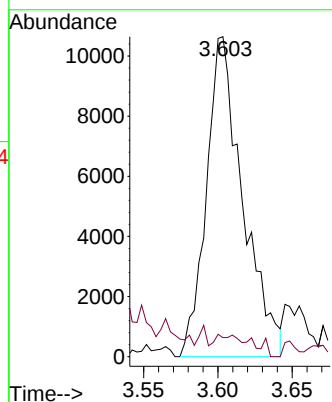
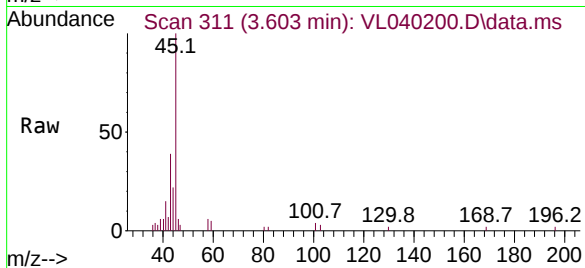
IA-3DL

Tgt Ion: 45 Resp: 18107

Ion Ratio Lower Upper

45 100

58 11.6 2.6 3.8#



#20

Methylene Chloride

Concen: 4.945 ppbv

RT: 3.941 min Scan# 416

Delta R.T. 0.003 min

Lab File: VL040200.D

Acq: 21 Feb 2023 18:30

Tgt Ion: 84 Resp: 275887

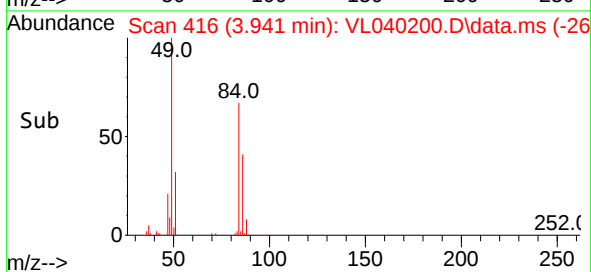
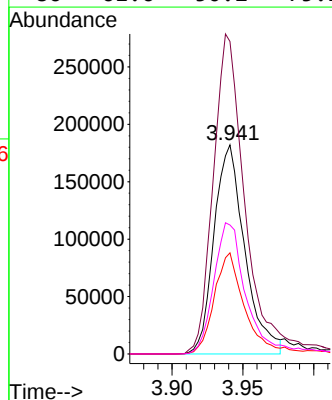
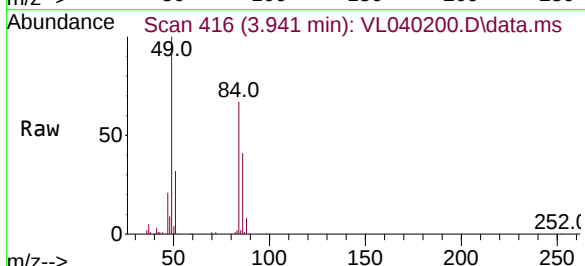
Ion Ratio Lower Upper

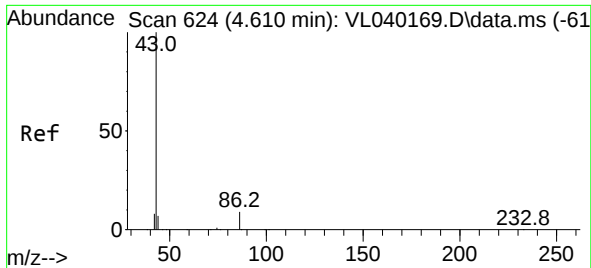
84 100

49 149.3 115.5 173.3

51 48.3 33.1 49.7

86 61.6 50.2 75.2

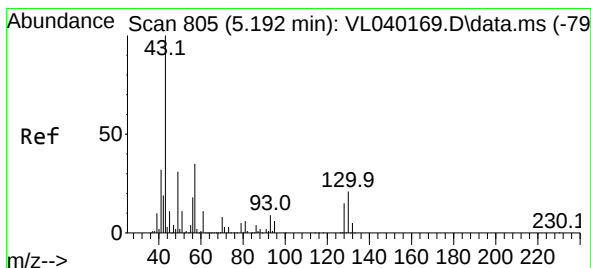
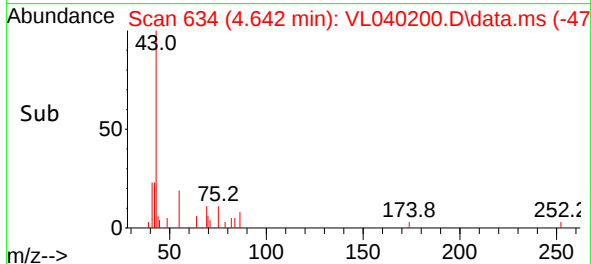
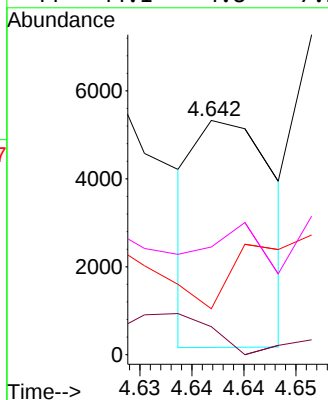
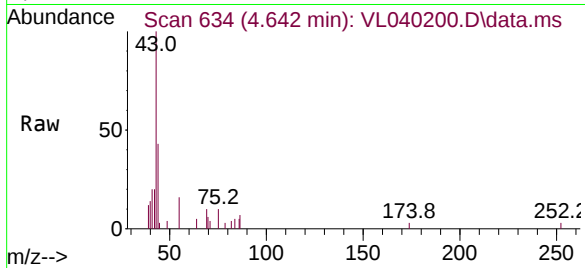




#23  
 Vinyl Acetate  
 Concen: 0.082 ppbv  
 RT: 4.642 min Scan# 61  
 Delta R.T. 0.003 min  
 Lab File: VL040200.D  
 Acq: 21 Feb 2023 18:30

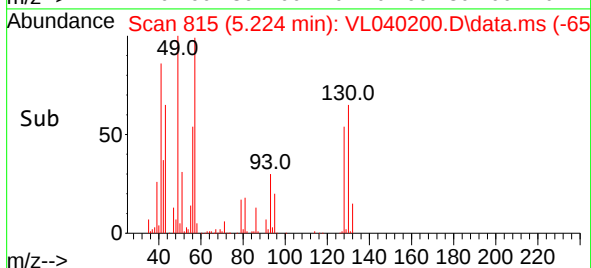
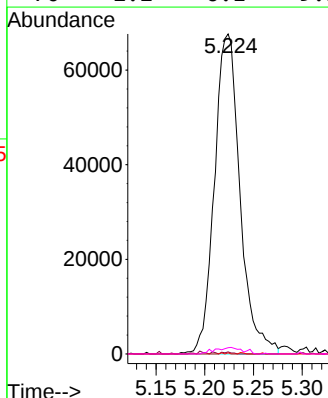
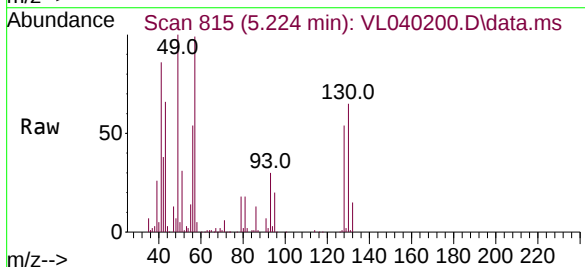
Instrument :  
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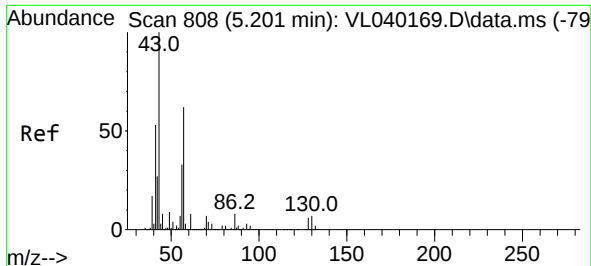
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|----------|-------|-------|-------|
| Tgt Ion: | 43    | Resp: | 2681  |
| Ion      | Ratio | Lower | Upper |
| 43       | 100   |       |       |
| 86       | 30.8  | 5.6   | 8.4#  |
| 42       | 0.0   | 7.6   | 11.4# |
| 44       | 44.1  | 4.8   | 7.2#  |



#25  
 Ethyl Acetate  
 Concen: 0.620 ppbv  
 RT: 5.224 min Scan# 815  
 Delta R.T. 0.006 min  
 Lab File: VL040200.D  
 Acq: 21 Feb 2023 18:30

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 43    | Resp: | 123441 |
| Ion      | Ratio | Lower | Upper  |
| 43       | 100   |       |        |
| 45       | 0.2   | 8.3   | 12.5#  |
| 61       | 0.2   | 8.4   | 12.6#  |
| 70       | 2.2   | 6.1   | 9.1#   |

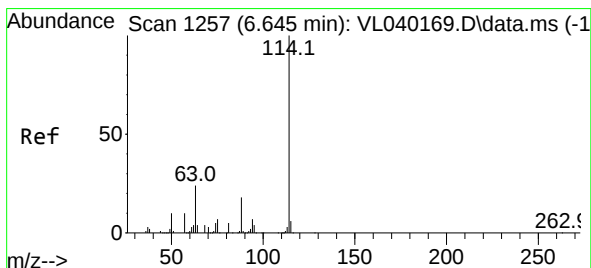
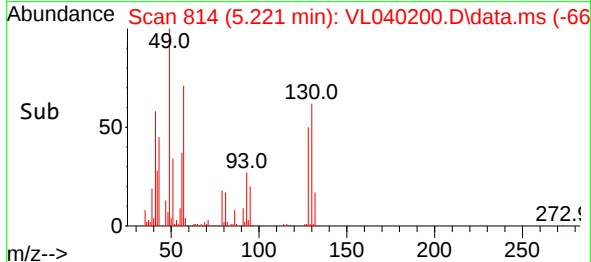
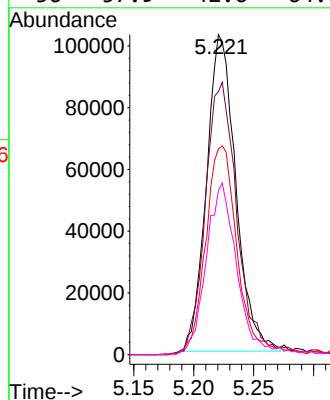
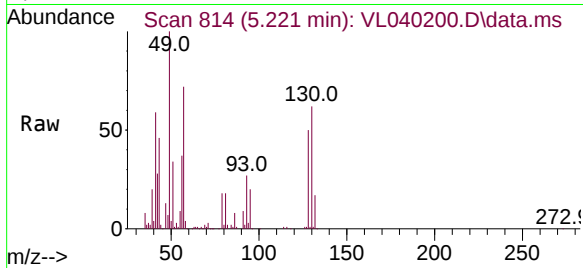




#26  
Hexane  
Concen: 2.036 ppbv  
RT: 5.221 min Scan# 814  
Delta R.T. -0.003 min  
Lab File: VL040200.D  
Acq: 21 Feb 2023 18:30

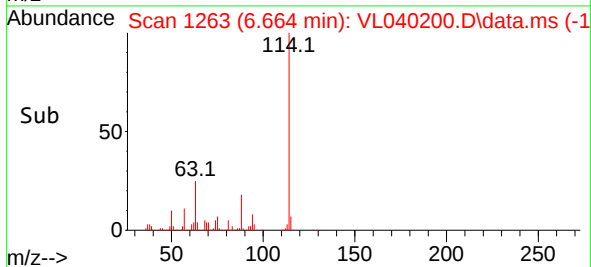
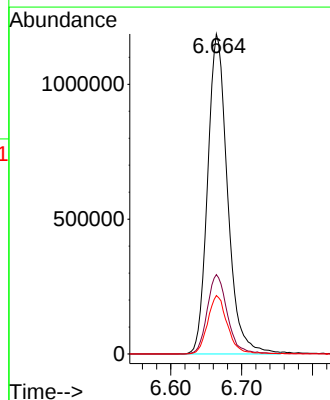
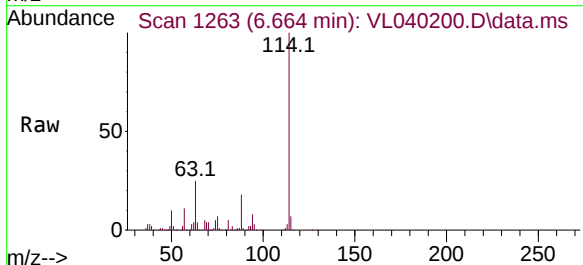
Instrument :  
MSVOA\_L  
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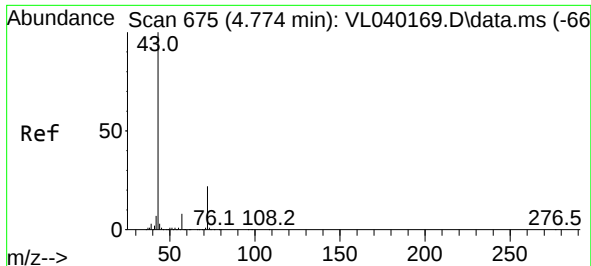
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Ion Ratio Lower Upper  
57 100  
41 94.7 74.3 111.5  
43 72.3 193.0 289.4#  
56 57.9 42.6 64.0



#33  
1,4-Difluorobenzene  
Concen: 10.000 ppbv  
RT: 6.664 min Scan# 1263  
Delta R.T. -0.010 min  
Lab File: VL040200.D  
Acq: 21 Feb 2023 18:30

Tgt Ion: 114 Resp: 2313648  
Ion Ratio Lower Upper  
114 100  
63 25.4 20.4 30.6  
88 18.2 14.3 21.5

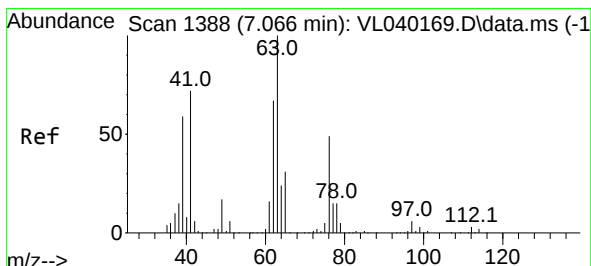
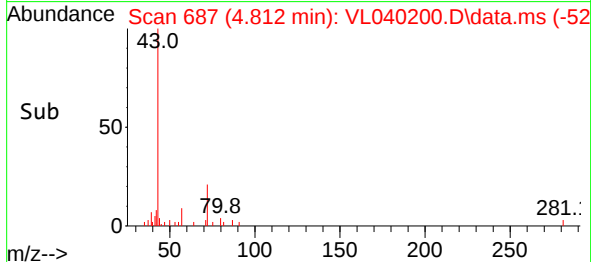
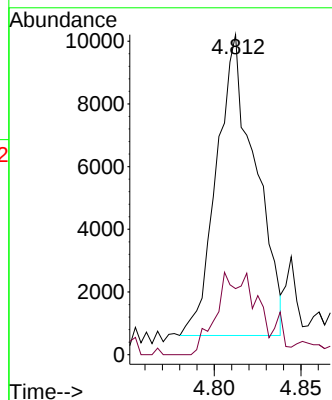
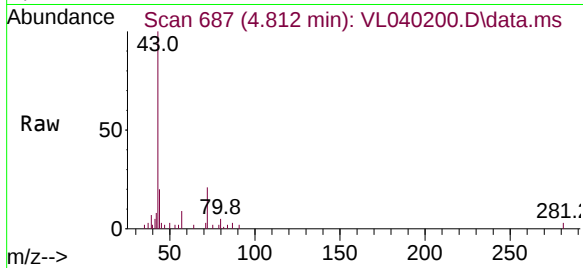




#34  
2-Butanone  
Concen: 0.130 ppbv  
RT: 4.812 min Scan# 61  
Delta R.T. 0.016 min  
Lab File: VL040200.D  
Acq: 21 Feb 2023 18:30

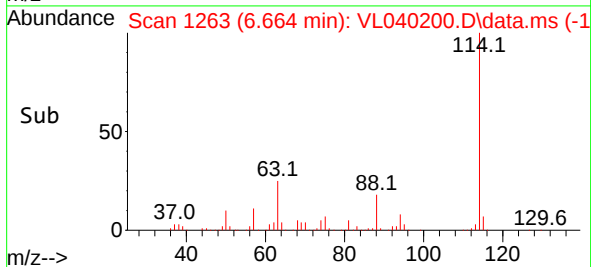
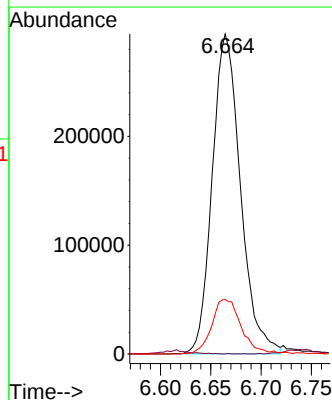
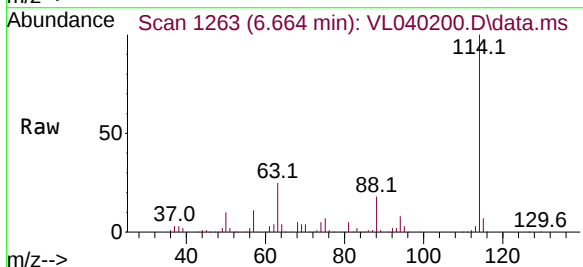
Instrument :  
MSVOA\_L  
ClientSampleId :  
IA-3DL

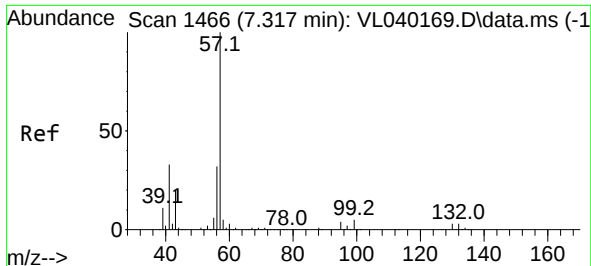
Tgt Ion: 43 Resp: 14874  
Ion Ratio Lower Upper  
43 100  
72 34.9 17.8 26.8#



#39  
1,2-Dichloropropane  
Concen: 8.182 ppbv  
RT: 6.664 min Scan# 1263  
Delta R.T. -0.431 min  
Lab File: VL040200.D  
Acq: 21 Feb 2023 18:30

Tgt Ion: 63 Resp: 573071  
Ion Ratio Lower Upper  
63 100  
41 0.0 57.6 86.4#  
62 17.1 54.0 81.0#

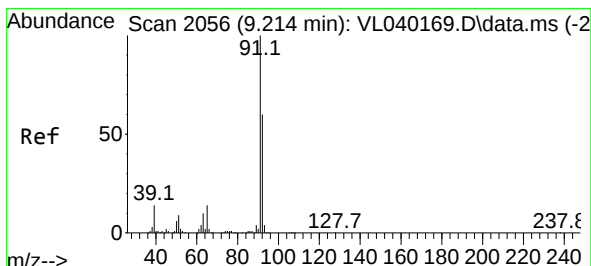
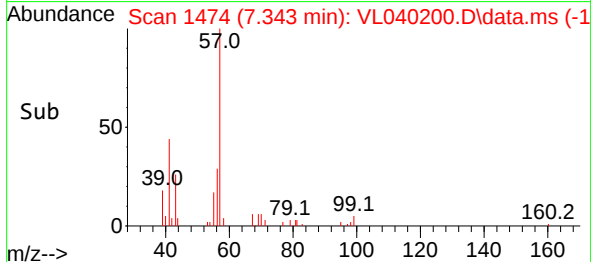
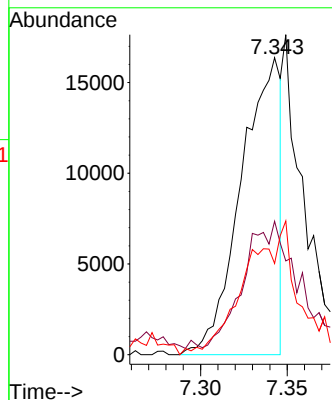
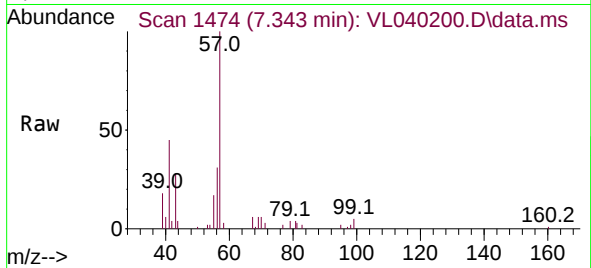




#44  
2,2,4-Trimethylpentane  
Concen: 0.086 ppbv  
RT: 7.343 min Scan# 1466  
Delta R.T. -0.003 min  
Lab File: VL040200.D  
Acq: 21 Feb 2023 18:30

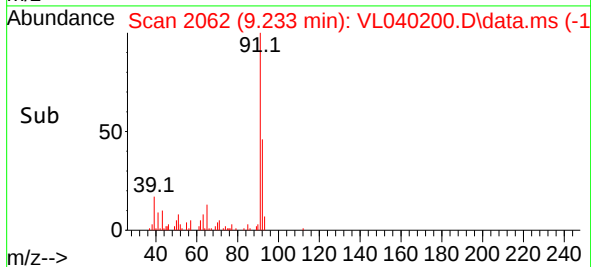
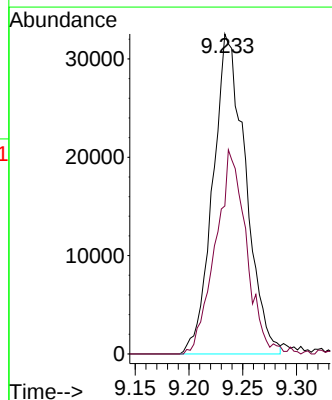
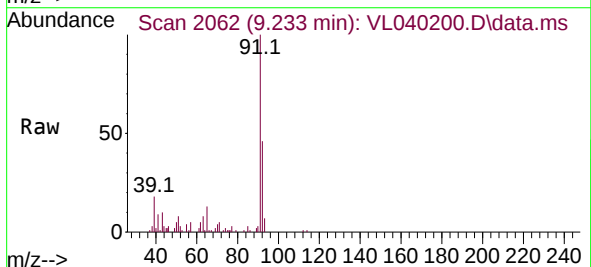
Instrument :  
MSVOA\_L  
ClientSampleId :  
IA-3DL

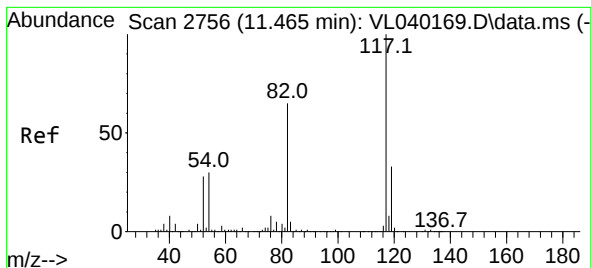
Tgt Ion: 57 Resp: 25952  
Ion Ratio Lower Upper  
57 100  
41 67.3 26.2 39.4#  
56 0.0 24.9 37.3#



#53  
Toluene  
Concen: 0.356 ppbv  
RT: 9.233 min Scan# 2062  
Delta R.T. -0.013 min  
Lab File: VL040200.D  
Acq: 21 Feb 2023 18:30

Tgt Ion: 91 Resp: 68624  
Ion Ratio Lower Upper  
91 100  
92 60.8 48.9 73.3





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 11.484 min Scan# 21

Delta R.T. -0.010 min

Lab File: VL040200.D

Acq: 21 Feb 2023 18:30

Instrument :

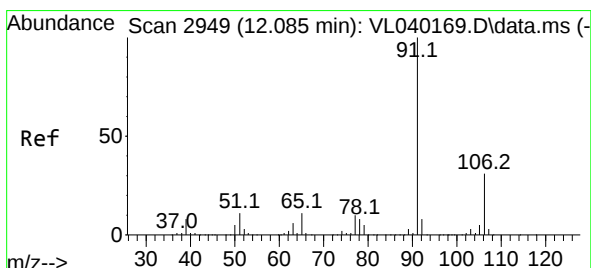
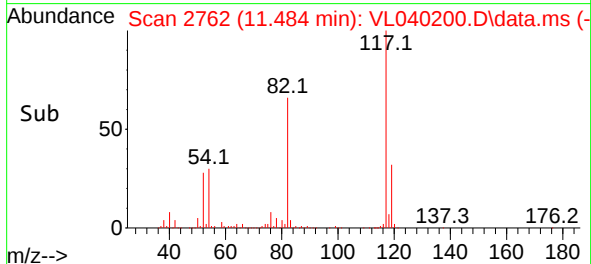
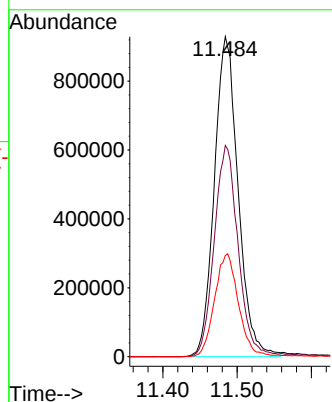
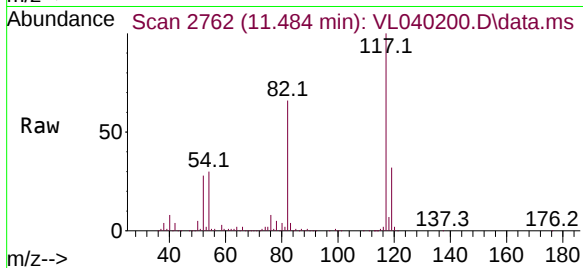
MSVOA\_L

ClientSampleId :

IA-3DL

Tgt Ion:117 Resp: 2067682

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 117 | 100   |       |       |
| 82  | 67.2  | 53.3  | 79.9  |
| 119 | 32.7  | 24.6  | 37.0  |



#58

Ethyl Benzene

Concen: 0.048 ppbv

RT: 12.362 min Scan# 3035

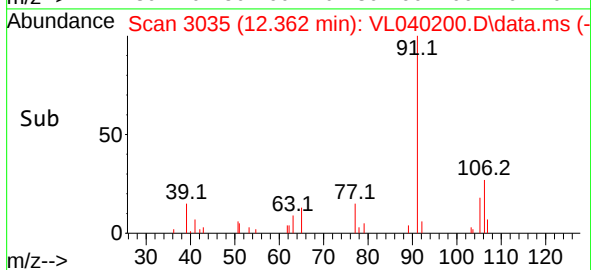
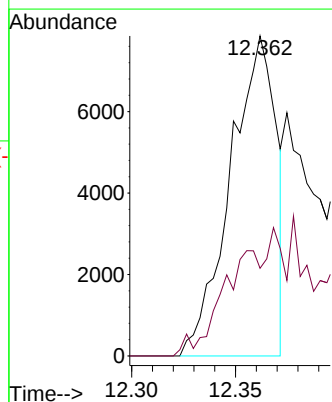
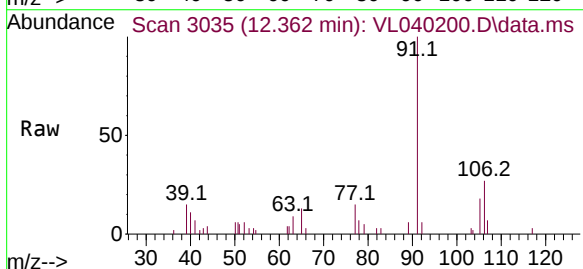
Delta R.T. 0.244 min

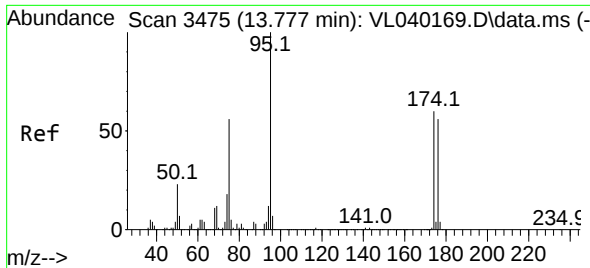
Lab File: VL040200.D

Acq: 21 Feb 2023 18:30

Tgt Ion: 91 Resp: 12010

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 91  | 100   |       |       |
| 106 | 25.4  | 24.9  | 37.3  |





#68  
 1-Bromo-4-Fluorobenzene  
 Concen: 9.997 ppbv  
 RT: 13.799 min Scan# 34  
 Delta R.T. -0.007 min  
 Lab File: VL040200.D  
 Acq: 21 Feb 2023 18:30

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 IA-3DL

Tgt Ion: 95 Resp: 1699664  
 Ion Ratio Lower Upper  
 95 100  
 174 59.6 48.2 72.2  
 175 4.2 3.4 5.2

