

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_L\Data\VL092723\  
 Data File : VL040726.D  
 Acq On : 27 Sep 2023 14:07  
 Operator : SY/MD  
 Sample : 04616-02 4X  
 Misc : 400mL/MSVOA\_L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :

Quant Time: Sep 28 01:44:15 2023  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL091423AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022  
 QLast Update : Tue Sep 19 05:12:43 2023  
 Response via : Initial Calibration

| Compound                | R.T.   | QIon | Response | Conc   | Units | Dev(Min) |
|-------------------------|--------|------|----------|--------|-------|----------|
| -----                   |        |      |          |        |       |          |
| Internal Standards      |        |      |          |        |       |          |
| 1) Bromochloromethane   | 5.179  | 49   | 1263312  | 10.000 | ppbv  | -0.02    |
| 33) 1,4-Difluorobenzene | 6.635  | 114  | 3505081  | 10.000 | ppbv  | -0.03    |
| 55) Chlorobenzene-d5    | 11.442 | 117  | 3038179  | 10.000 | ppbv  | -0.04    |

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| System Monitoring Compounds |        |       |          |          |      |         |
| 68) 1-Bromo-4-Fluorobenzene | 13.751 | 95    | 2297650  | 9.788    | ppbv | -0.04   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 97.900% |

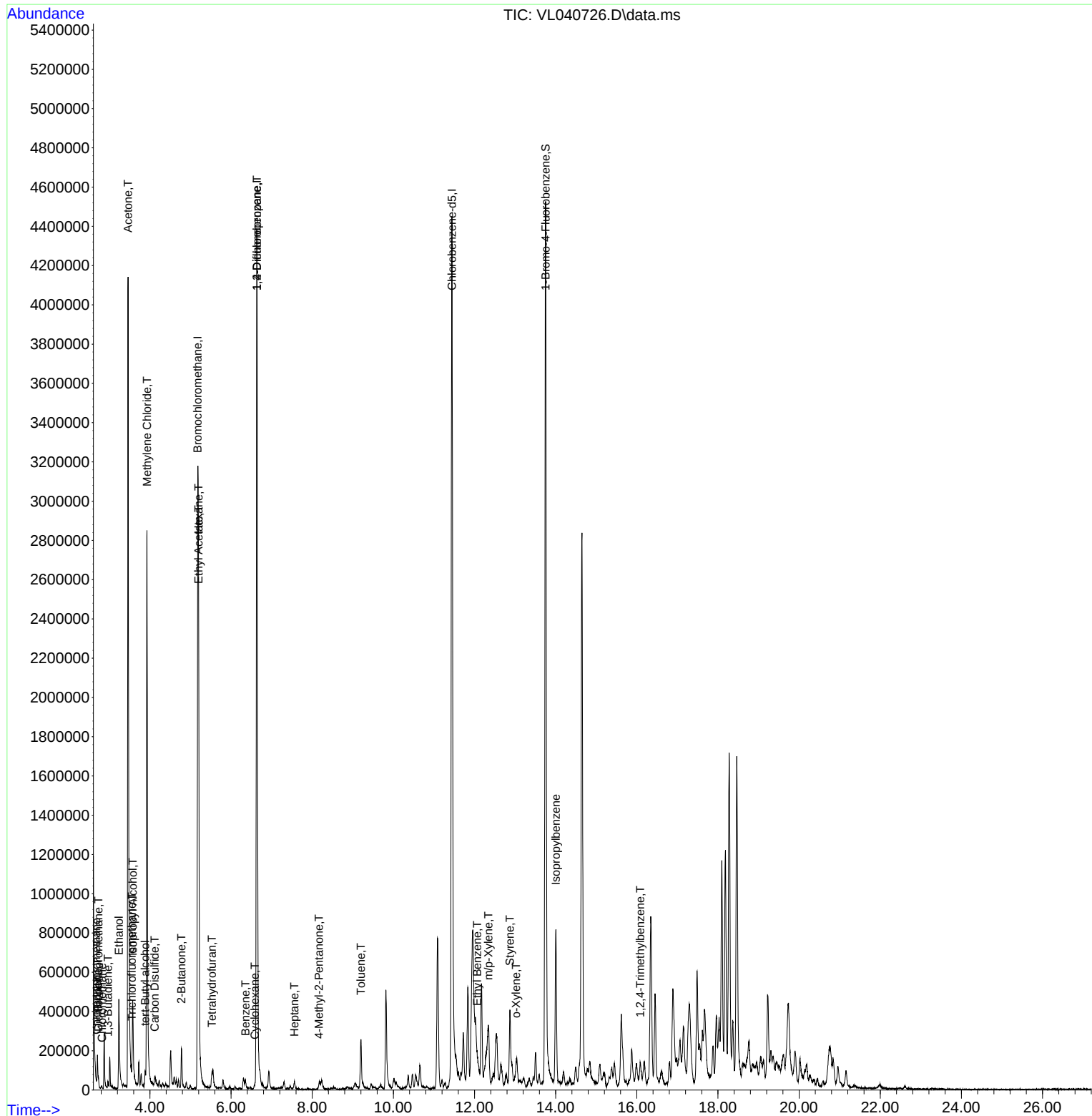
| Target Compounds           |        |     |         |        |        | Qvalue |
|----------------------------|--------|-----|---------|--------|--------|--------|
| 2) Dichlorodifluoromethane | 2.729  | 85  | 27968   | 0.100  | ppbv   | 92     |
| 3) Chlorodifluoromethane   | 2.677  | 51  | 36970   | 0.180  | ppbv # | 76     |
| 4) Chloromethane           | 2.819  | 50  | 9407    | 0.119  | ppbv # | 85     |
| 9) Propene                 | 2.710  | 41  | 37754   | 0.637  | ppbv # | 76     |
| 10) Heptane                | 7.561  | 43  | 11895   | 0.089  | ppbv # | 72     |
| 11) Trichlorofluoromethane | 3.555  | 101 | 15765   | 0.064  | ppbv   | 85     |
| 13) Ethanol                | 3.234  | 45  | 492627  | 28.072 | ppbv   | 99     |
| 15) Acetone                | 3.462  | 43  | 4211041 | 25.271 | ppbv   | 95     |
| 16) 1,3-Butadiene          | 2.964  | 39  | 5148    | 0.071  | ppbv # | 52     |
| 17) tert-Butyl alcohol     | 3.883  | 59  | 69856   | 0.409  | ppbv   | 100    |
| 19) Isopropyl Alcohol      | 3.574  | 45  | 452160  | 4.503  | ppbv # | 1      |
| 20) Methylene Chloride     | 3.928  | 84  | 982129  | 10.950 | ppbv   | 97     |
| 25) Ethyl Acetate          | 5.201  | 43  | 516724  | 1.923  | ppbv # | 78     |
| 26) Hexane                 | 5.198  | 57  | 766580  | 6.032  | ppbv # | 37     |
| 27) Carbon Disulfide       | 4.118  | 76  | 50732   | 0.286  | ppbv # | 91     |
| 30) Cyclohexane            | 6.584  | 84  | 5880    | 0.061  | ppbv # | 1      |
| 34) 2-Butanone             | 4.777  | 43  | 222744  | 1.264  | ppbv   | 93     |
| 36) Benzene                | 6.356  | 78  | 30778   | 0.119  | ppbv   | 97     |
| 39) 1,2-Dichloropropane    | 6.635  | 63  | 811552  | 8.123  | ppbv # | 23     |
| 41) Tetrahydrofuran        | 5.529  | 42  | 15242   | 0.169  | ppbv # | 33     |
| 50) 4-Methyl-2-Pentanone   | 8.166  | 43  | 9984    | 0.042  | ppbv # | 39     |
| 53) Toluene                | 9.201  | 91  | 184132  | 0.672  | ppbv   | 99     |
| 58) Ethyl Benzene          | 12.063 | 91  | 64253   | 0.185  | ppbv   | 94     |
| 59) m/p-Xylene             | 12.339 | 91  | 68687   | 0.211  | ppbv # | 32     |
| 60) o-Xylene               | 13.024 | 91  | 20590   | 0.066  | ppbv # | 31     |
| 61) Styrene                | 12.873 | 104 | 231426  | 1.780  | ppbv   | 94     |
| 62) Isopropylbenzene       | 14.005 | 105 | 707563  | 1.511  | ppbv   | 100    |
| 74) 1,2,4-Trimethylbenzene | 16.082 | 105 | 54768   | 0.143  | ppbv # | 59     |

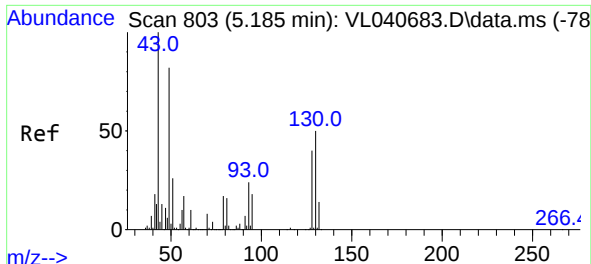
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_L\Data\VL092723\  
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Sample : 04616-02 4X  
Misc : 400mL/MSVOA\_L  
ALS Vial : 1 Sample Multiplier: 1

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MSVOA\_L  
ClientSampleId :

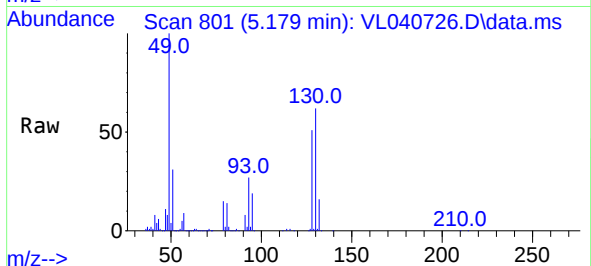
Quant Time: Sep 28 01:44:15 2023  
Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL091423AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022  
QLast Update : Tue Sep 19 05:12:43 2023  
Response via : Initial Calibration



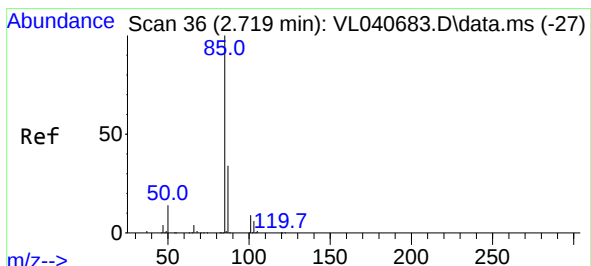
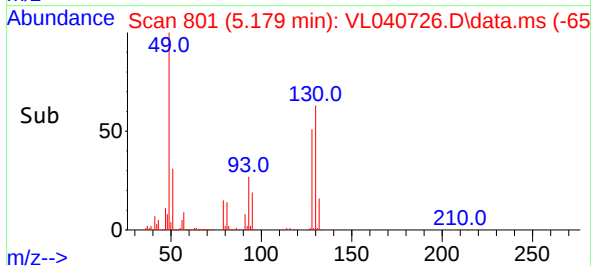
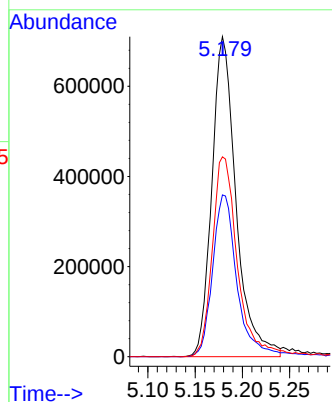


#1  
Bromochloromethane  
Concen: 10.000 ppbv  
RT: 5.179 min Scan# 80  
Delta R.T. -0.019 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

Instrument :  
MSVOA\_L  
ClientSampleId :

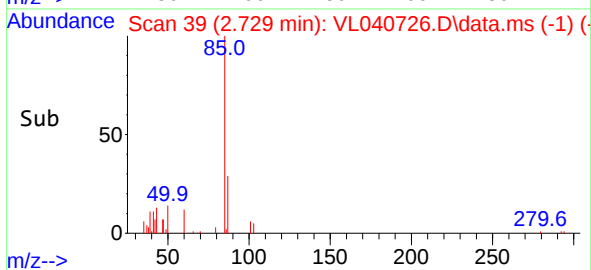
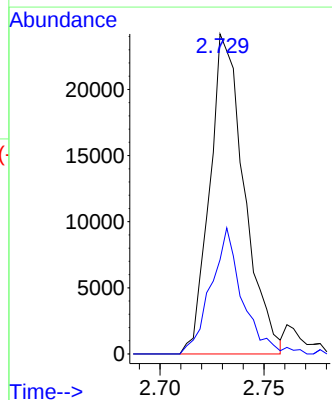
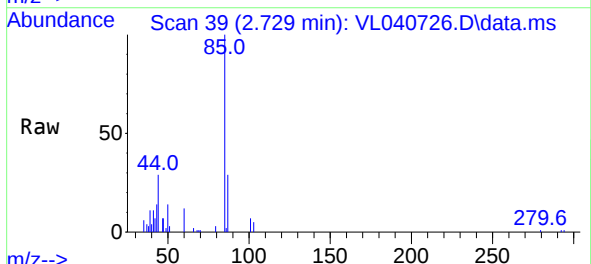


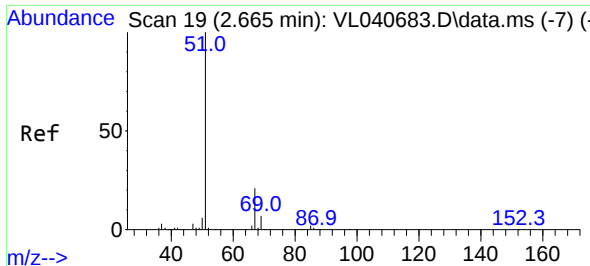
Tgt Ion: 49 Resp: 1263312  
Ion Ratio Lower Upper  
49 100  
128 52.1 25.4 76.0  
130 66.7 32.3 96.8



#2  
Dichlorodifluoromethane  
Concen: 0.100 ppbv  
RT: 2.729 min Scan# 39  
Delta R.T. -0.003 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

Tgt Ion: 85 Resp: 27968  
Ion Ratio Lower Upper  
85 100  
87 29.4 27.2 40.8

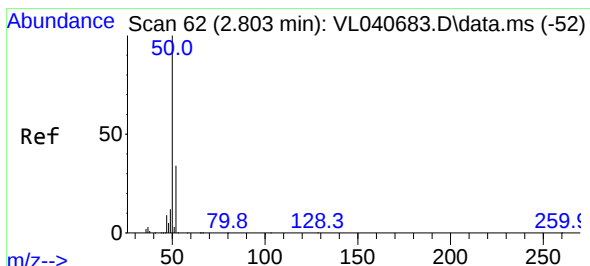
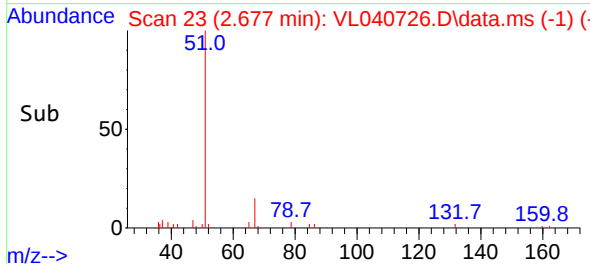
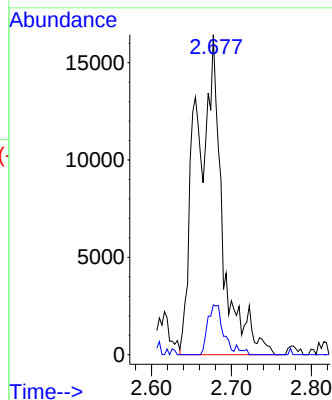
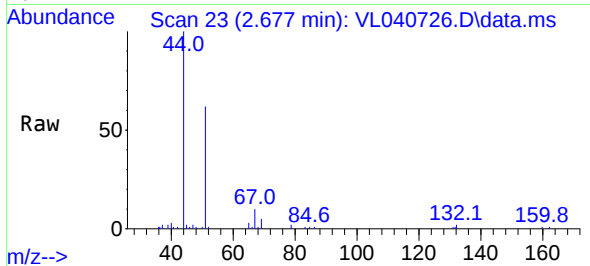




#3  
Chlorodifluoromethane  
Concen: 0.180 ppbv  
RT: 2.677 min Scan# 21  
Delta R.T. 0.000 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

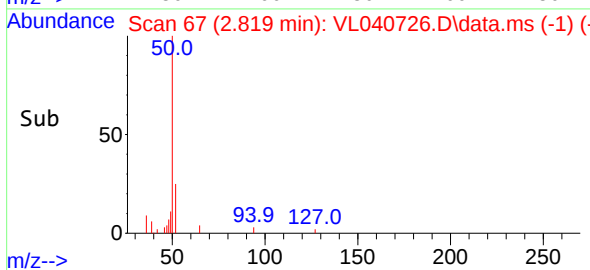
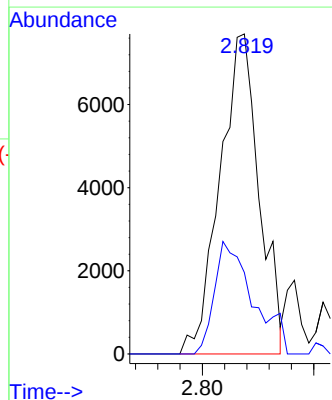
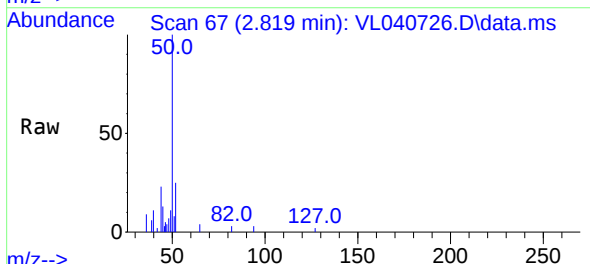
Instrument :  
MSVOA\_L  
ClientSampleId :

Tgt Ion: 51 Resp: 36970  
Ion Ratio Lower Upper  
51 100  
67 9.8 16.7 25.1#

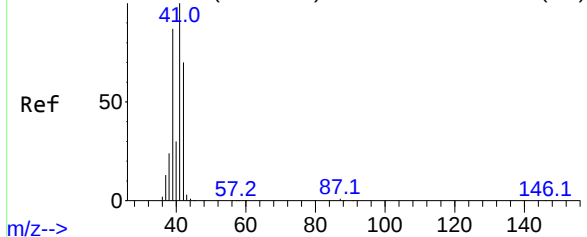


#4  
Chloromethane  
Concen: 0.119 ppbv  
RT: 2.819 min Scan# 67  
Delta R.T. 0.003 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

Tgt Ion: 50 Resp: 9407  
Ion Ratio Lower Upper  
50 100  
52 25.5 27.1 40.7#



Abundance Scan 25 (2.684 min): VL040683.D\data.ms (-16)



#9

Propene

Concen: 0.637 ppbv

RT: 2.710 min Scan# 31

Delta R.T. 0.013 min

Lab File: VL040726.D

Acq: 27 Sep 2023 14:07

Instrument :

MSVOA\_L

ClientSampleId :

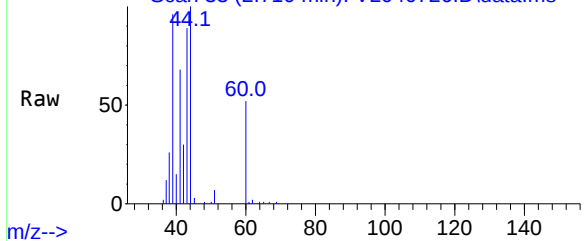
Tgt Ion: 41 Resp: 37754

Ion Ratio Lower Upper

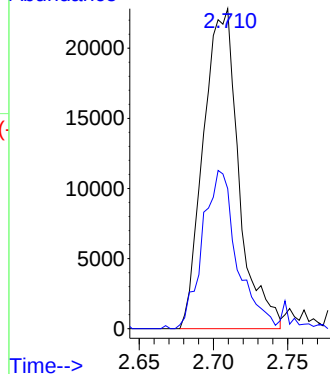
41 100

42 50.8 56.7 85.1#

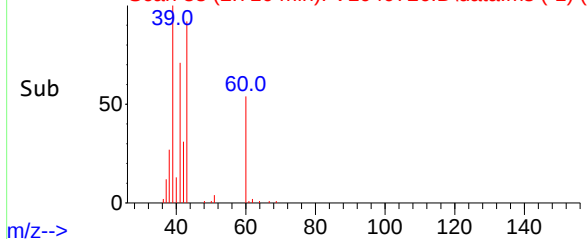
Abundance Scan 33 (2.710 min): VL040726.D\data.ms



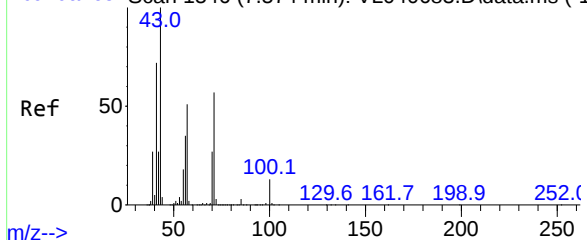
Abundance



Abundance Scan 33 (2.710 min): VL040726.D\data.ms (-1)



Abundance Scan 1546 (7.574 min): VL040683.D\data.ms (-1)



#10

Heptane

Concen: 0.089 ppbv

RT: 7.561 min Scan# 1542

Delta R.T. -0.026 min

Lab File: VL040726.D

Acq: 27 Sep 2023 14:07

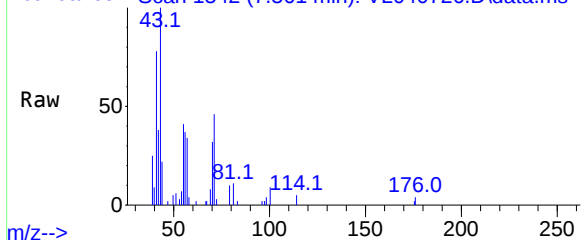
Tgt Ion: 43 Resp: 11895

Ion Ratio Lower Upper

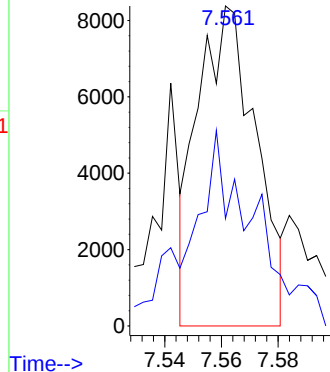
43 100

57 71.6 41.8 62.6#

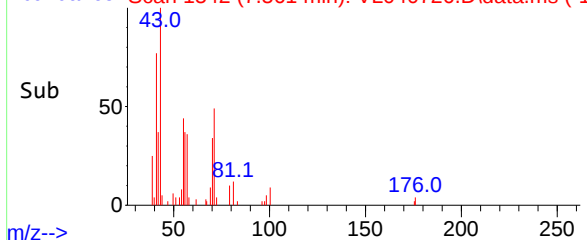
Abundance Scan 1542 (7.561 min): VL040726.D\data.ms

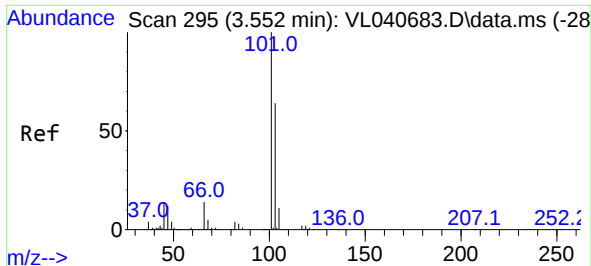


Abundance



Abundance Scan 1542 (7.561 min): VL040726.D\data.ms (-1)

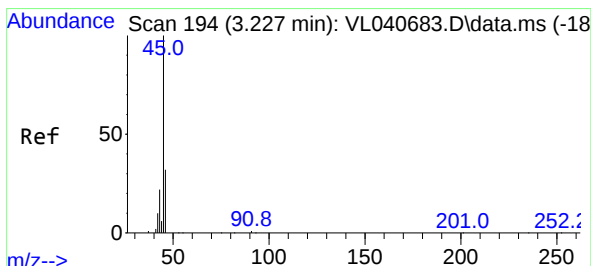
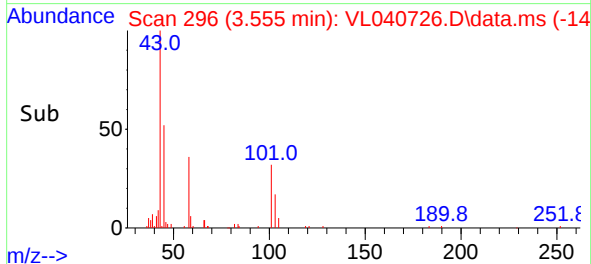
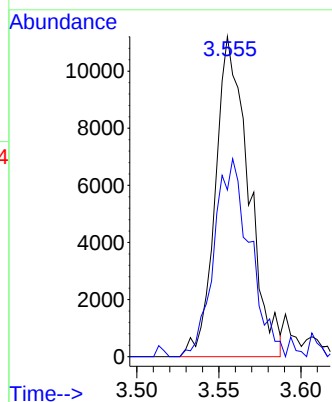
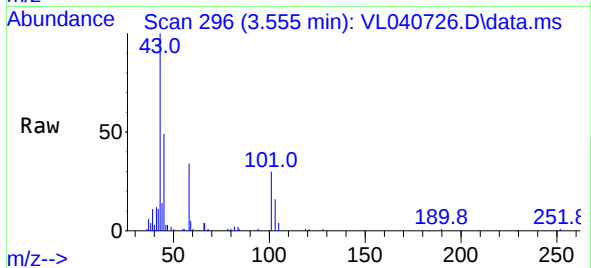




#11  
Trichlorofluoromethane  
Concen: 0.064 ppbv  
RT: 3.555 min Scan# 295  
Delta R.T. -0.013 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

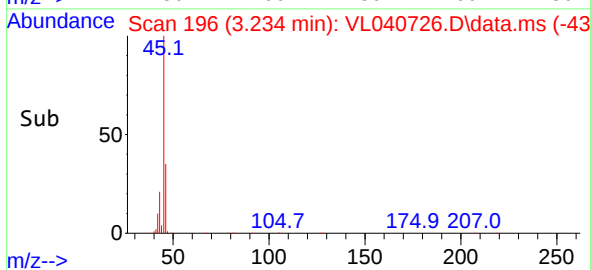
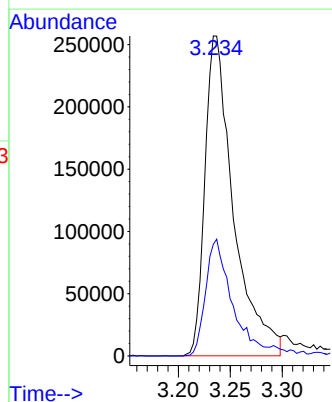
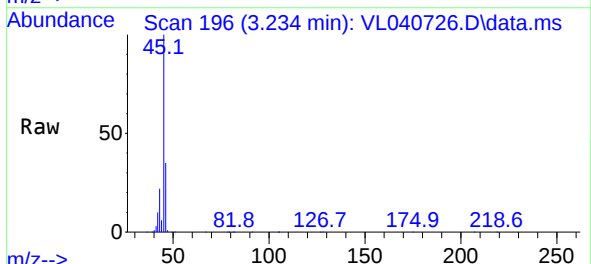
Instrument :  
MSVOA\_L  
ClientSampleId :

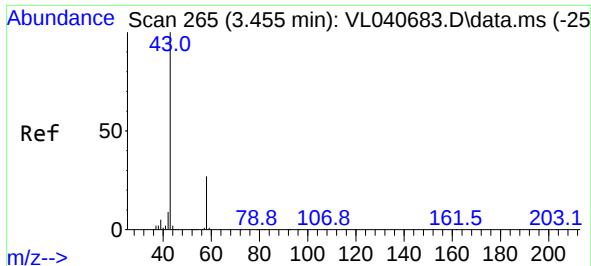
Tgt Ion:101 Resp: 15765  
Ion Ratio Lower Upper  
101 100  
103 52.1 51.3 76.9



#13  
Ethanol  
Concen: 28.072 ppbv  
RT: 3.234 min Scan# 196  
Delta R.T. -0.010 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

Tgt Ion: 45 Resp: 492627  
Ion Ratio Lower Upper  
45 100  
46 37.3 15.2 61.0

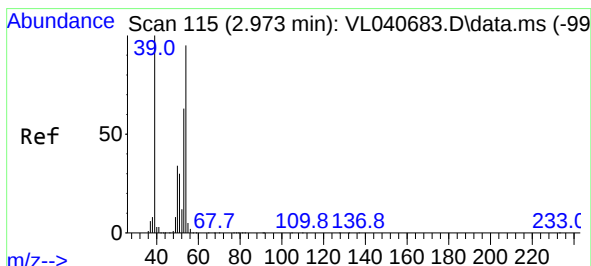
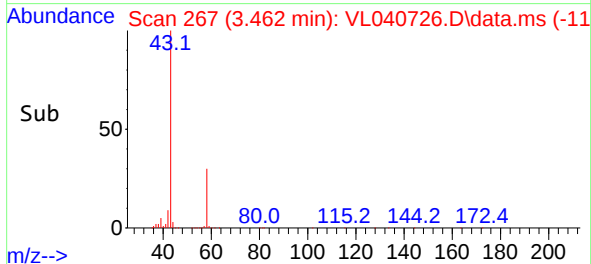
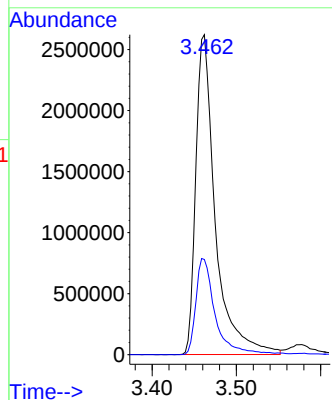
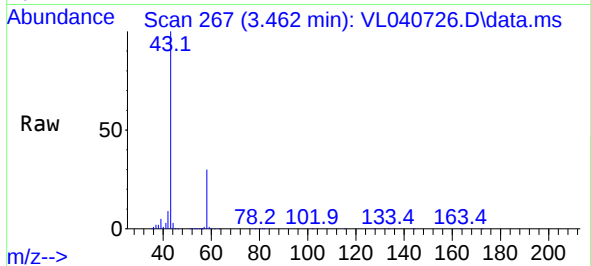




#15  
Acetone  
Concen: 25.271 ppbv  
RT: 3.462 min Scan# 20  
Delta R.T. -0.010 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

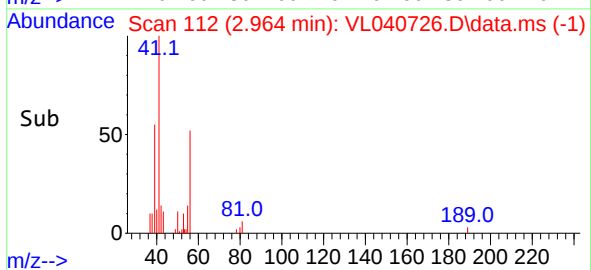
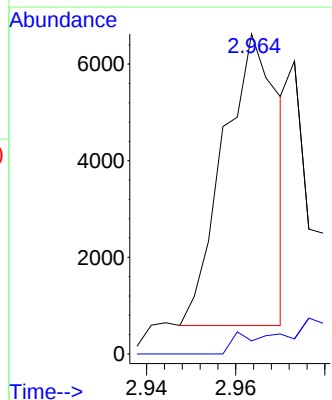
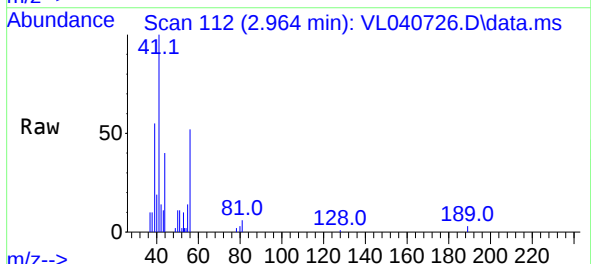
Instrument :  
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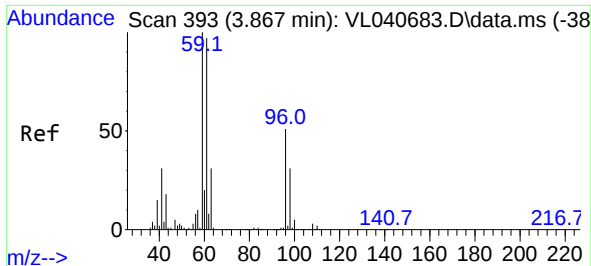
Tgt Ion: 43 Resp: 4211041  
Ion Ratio Lower Upper  
43 100  
58 30.7 22.6 34.0



#16  
1,3-Butadiene  
Concen: 0.071 ppbv  
RT: 2.964 min Scan# 112  
Delta R.T. -0.026 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

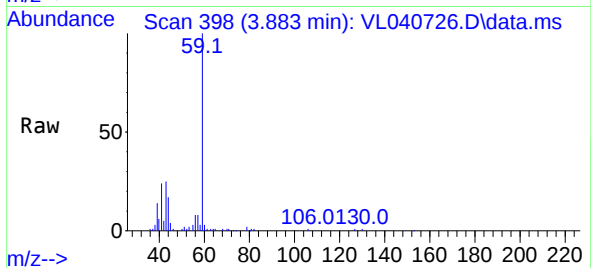
Tgt Ion: 39 Resp: 5148  
Ion Ratio Lower Upper  
39 100  
54 38.5 64.8 97.2#



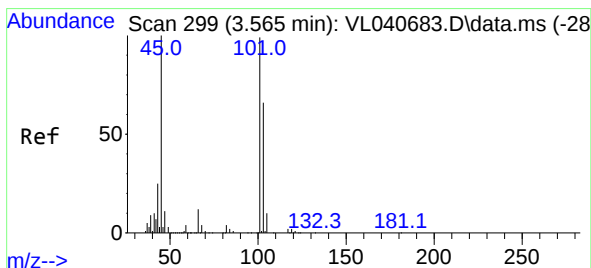
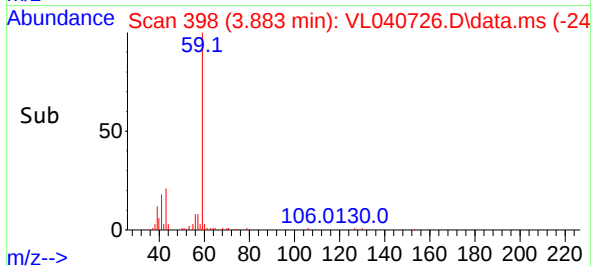
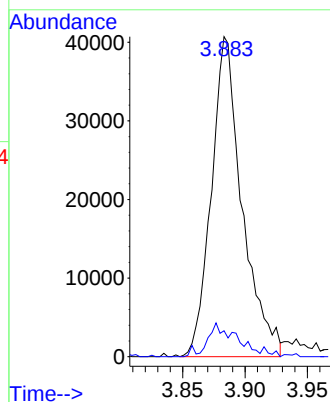


#17  
tert-Butyl alcohol  
Concen: 0.409 ppbv  
RT: 3.883 min Scan# 393  
Delta R.T. 0.000 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

Instrument :  
MSVOA\_L  
ClientSampleId :

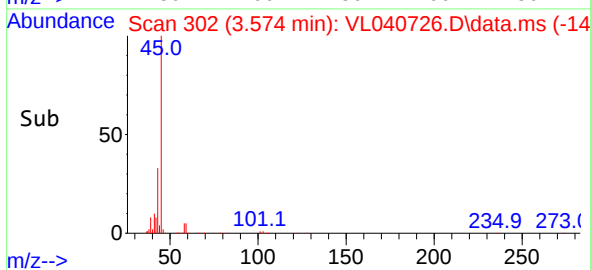
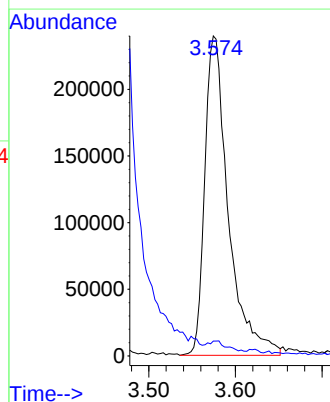
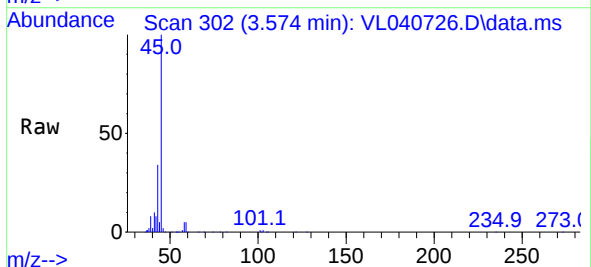


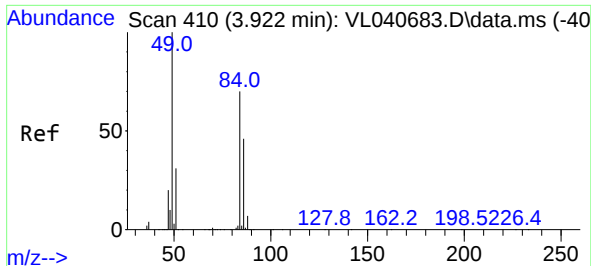
Tgt Ion: 59 Resp: 69856  
Ion Ratio Lower Upper  
59 100  
57 10.8 8.7 13.1



#19  
Isopropyl Alcohol  
Concen: 4.503 ppbv  
RT: 3.574 min Scan# 302  
Delta R.T. -0.003 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

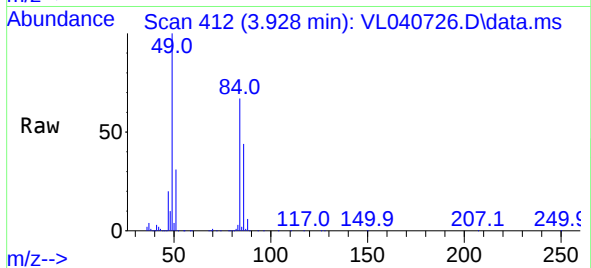
Tgt Ion: 45 Resp: 452160  
Ion Ratio Lower Upper  
45 100  
58 286.2 1.9 2.9#



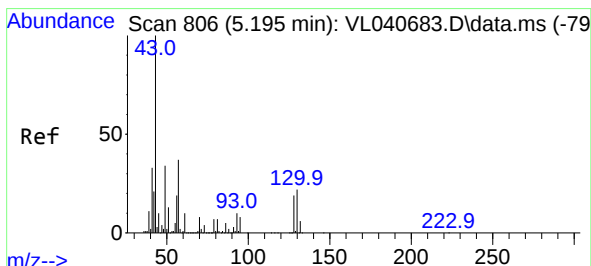
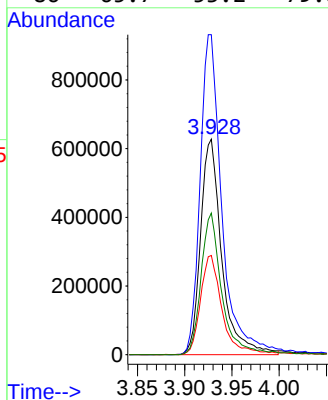
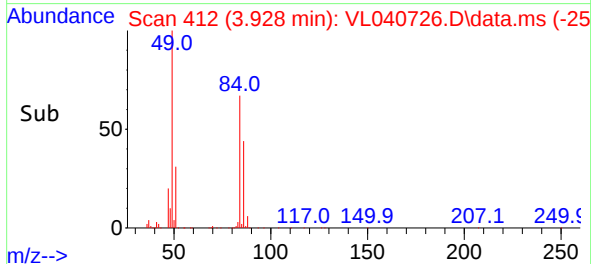


#20  
Methylene Chloride  
Concen: 10.950 ppbv  
RT: 3.928 min Scan# 410  
Delta R.T. -0.010 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

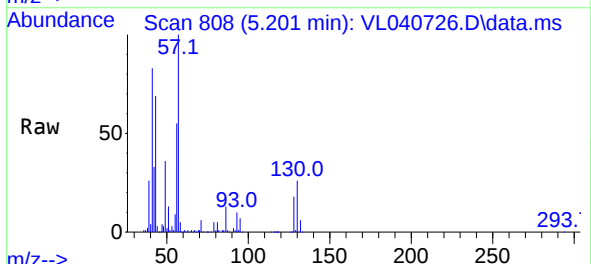
Instrument :  
MSVOA\_L  
ClientSampleId :



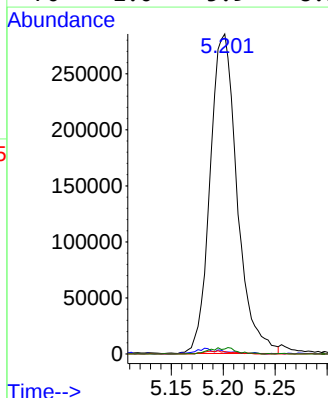
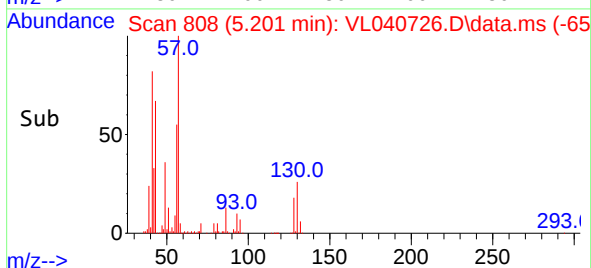
Tgt Ion: 84 Resp: 982129  
Ion Ratio Lower Upper  
84 100  
49 148.4 114.4 171.6  
51 45.9 35.5 53.3  
86 65.7 53.2 79.8

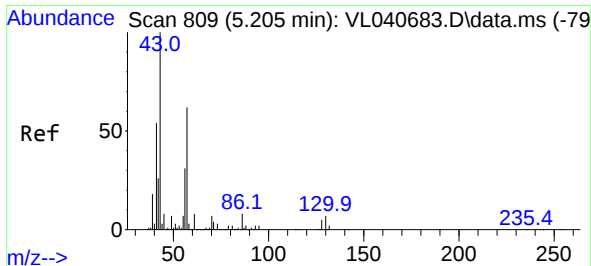


#25  
Ethyl Acetate  
Concen: 1.923 ppbv  
RT: 5.201 min Scan# 808  
Delta R.T. -0.010 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07



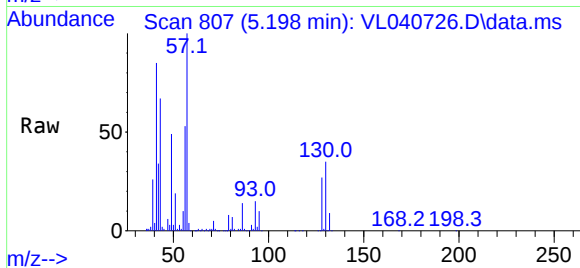
Tgt Ion: 43 Resp: 516724  
Ion Ratio Lower Upper  
43 100  
45 1.8 8.2 12.4#  
61 0.9 8.2 12.4#  
70 2.0 5.9 8.9#



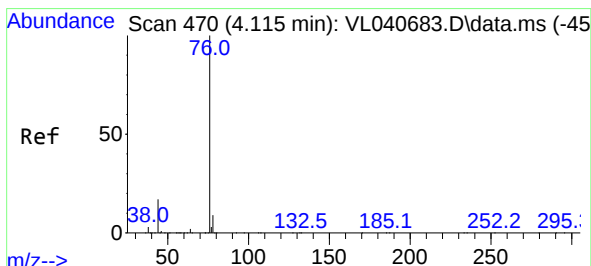
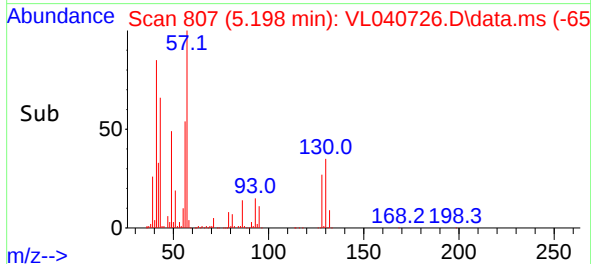
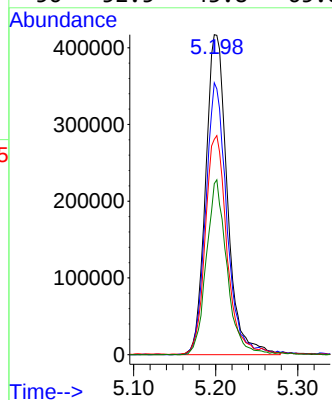


#26  
Hexane  
Concen: 6.032 ppbv  
RT: 5.198 min Scan# 80  
Delta R.T. -0.022 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

Instrument :  
MSVOA\_L  
ClientSampleId :

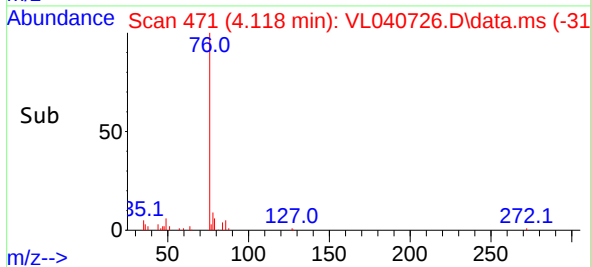
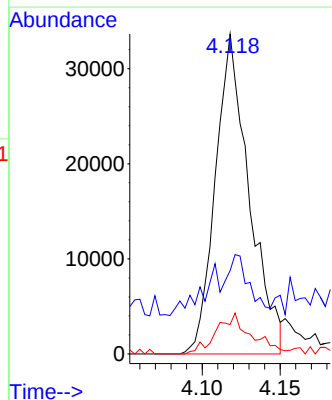
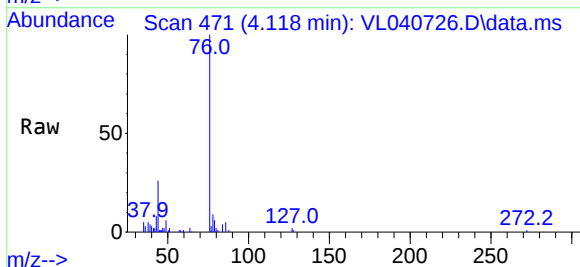


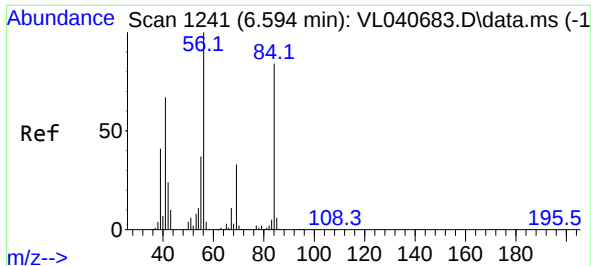
Tgt Ion: 57 Resp: 766580  
Ion Ratio Lower Upper  
57 100  
41 83.6 75.2 112.8  
43 69.1 185.6 278.4#  
56 52.5 43.8 65.8



#27  
Carbon Disulfide  
Concen: 0.286 ppbv  
RT: 4.118 min Scan# 471  
Delta R.T. -0.013 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

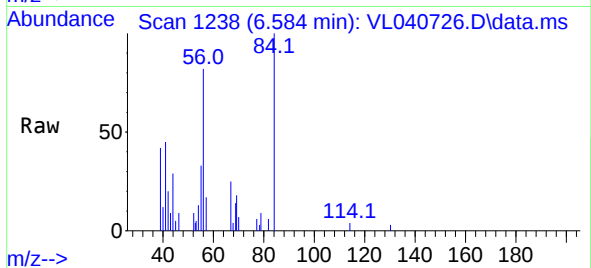
Tgt Ion: 76 Resp: 50732  
Ion Ratio Lower Upper  
76 100  
44 21.7 14.5 21.7  
78 13.6 7.7 11.5#



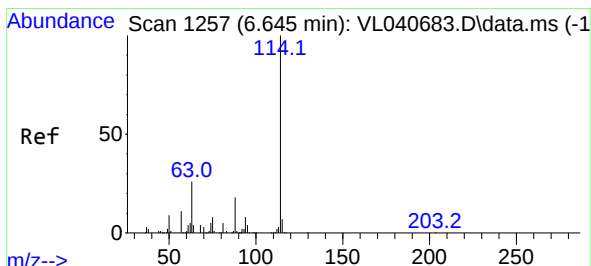
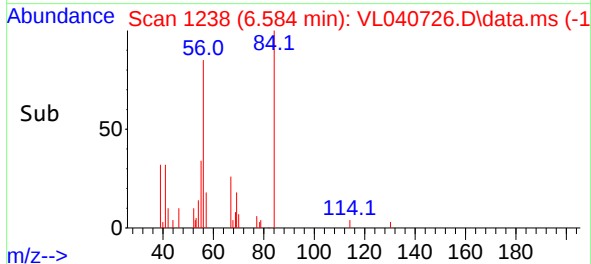
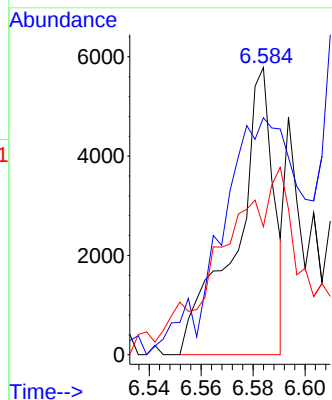


#30  
Cyclohexane  
Concen: 0.061 ppbv  
RT: 6.584 min Scan# 11  
Delta R.T. -0.026 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

Instrument :  
MSVOA\_L  
ClientSampleId :

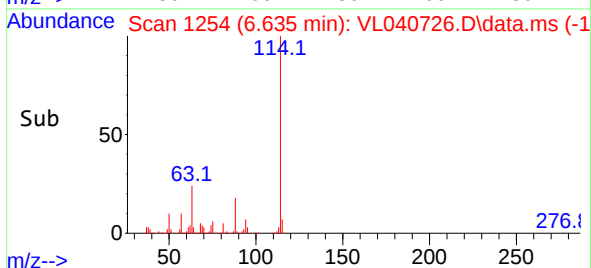
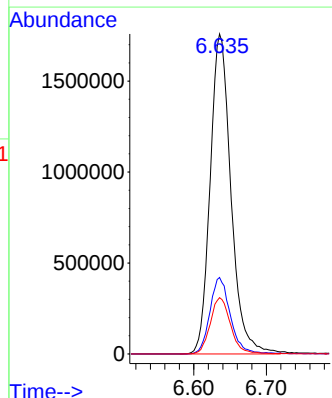
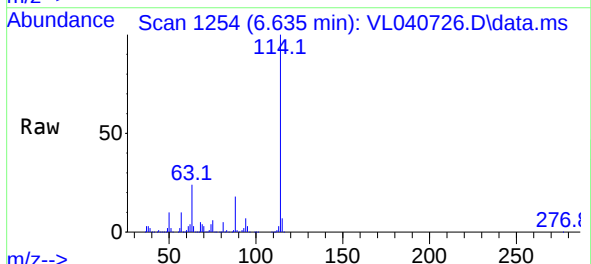


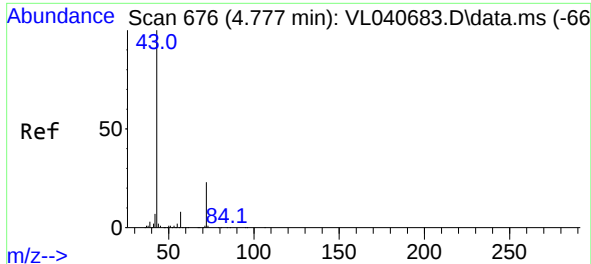
Tgt Ion: 84 Resp: 5880  
Ion Ratio Lower Upper  
84 100  
56 0.0 103.2 154.8#  
41 0.0 65.5 98.3#



#33  
1,4-Difluorobenzene  
Concen: 10.000 ppbv  
RT: 6.635 min Scan# 1254  
Delta R.T. -0.026 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

Tgt Ion: 114 Resp: 3505081  
Ion Ratio Lower Upper  
114 100  
63 23.8 21.1 31.7  
88 17.3 14.5 21.7

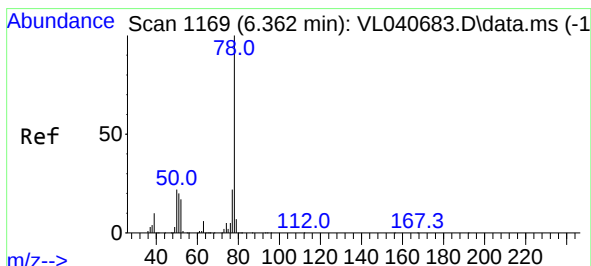
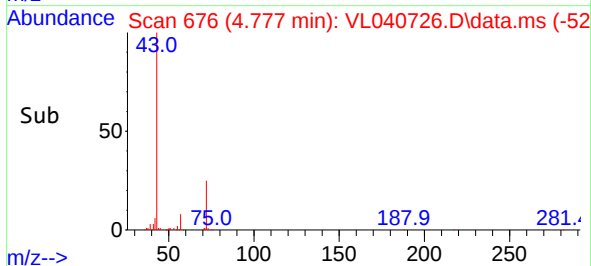
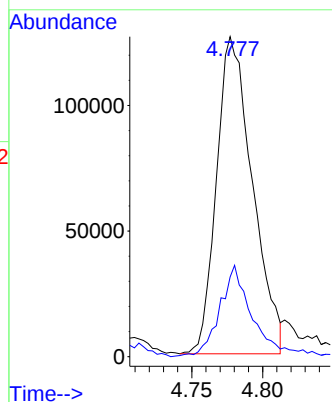
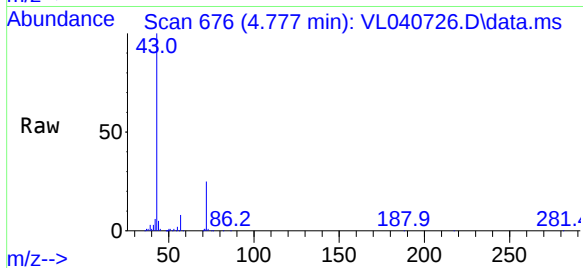




#34  
2-Butanone  
Concen: 1.264 ppbv  
RT: 4.777 min Scan# 61  
Delta R.T. -0.013 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

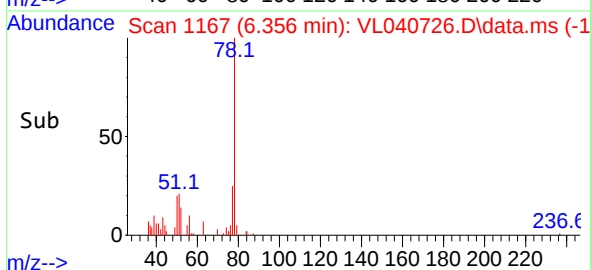
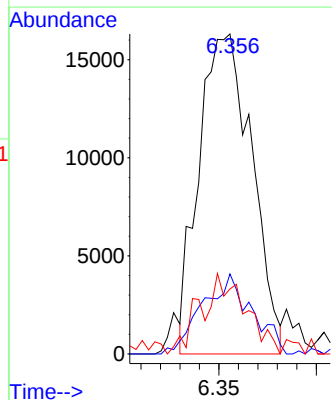
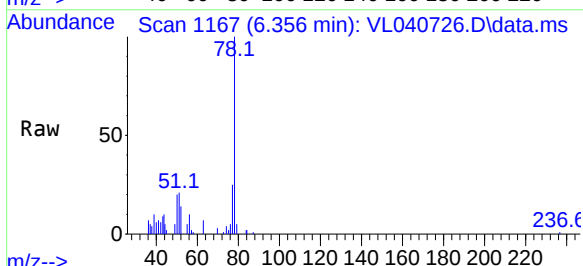
Instrument :  
MSVOA\_L  
ClientSampleId :

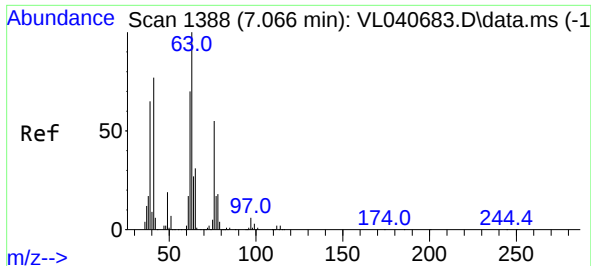
Tgt Ion: 43 Resp: 222744  
Ion Ratio Lower Upper  
43 100  
72 26.6 18.6 27.8



#36  
Benzene  
Concen: 0.119 ppbv  
RT: 6.356 min Scan# 1167  
Delta R.T. -0.026 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

Tgt Ion: 78 Resp: 30778  
Ion Ratio Lower Upper  
78 100  
77 24.1 17.9 26.9  
50 22.3 17.3 25.9





#39

1,2-Dichloropropane

Concen: 8.123 ppbv

RT: 6.635 min Scan# 11

Delta R.T. -0.447 min

Lab File: VL040726.D

Acq: 27 Sep 2023 14:07

Instrument :

MSVOA\_L

ClientSampleId :

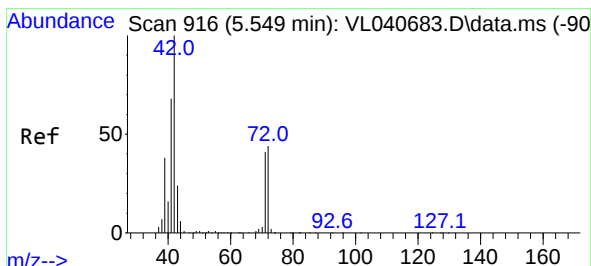
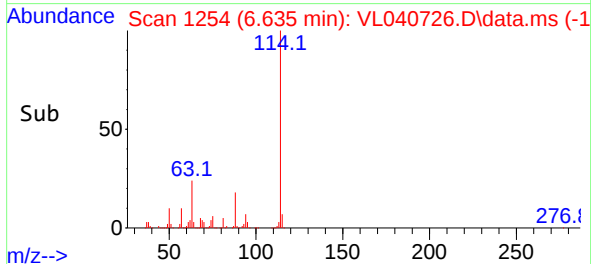
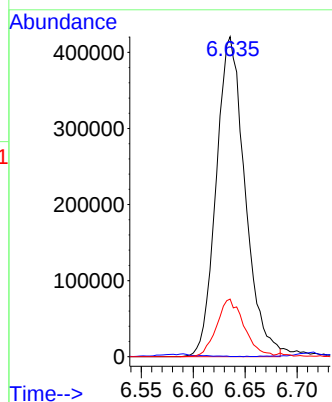
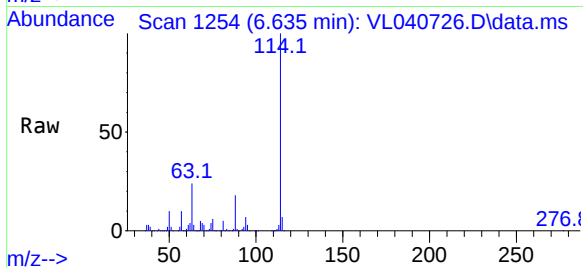
Tgt Ion: 63 Resp: 811552

Ion Ratio Lower Upper

63 100

41 0.0 61.6 92.4#

62 18.0 55.8 83.8#



#41

Tetrahydrofuran

Concen: 0.169 ppbv

RT: 5.529 min Scan# 910

Delta R.T. -0.032 min

Lab File: VL040726.D

Acq: 27 Sep 2023 14:07

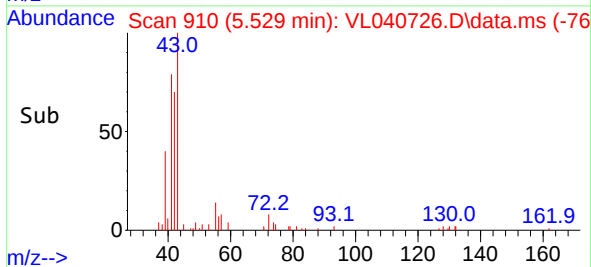
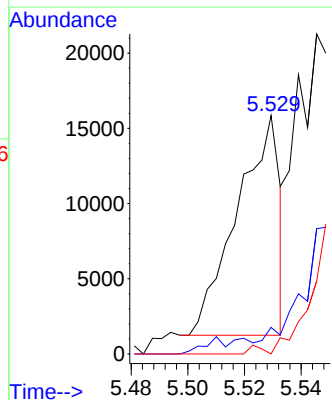
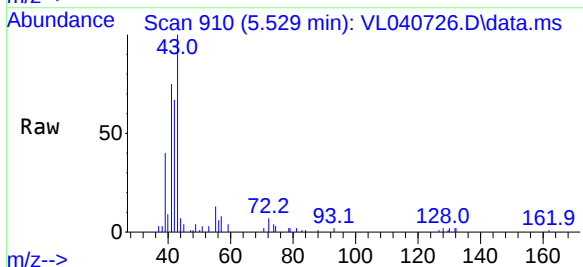
Tgt Ion: 42 Resp: 15242

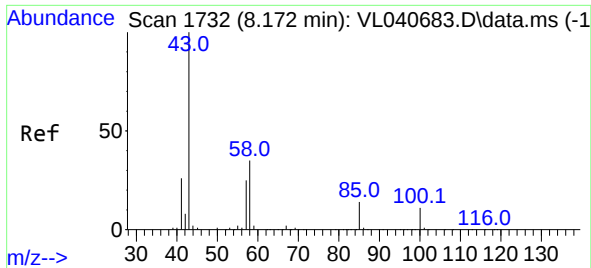
Ion Ratio Lower Upper

42 100

72 0.0 34.9 52.3#

71 0.0 33.8 50.8#

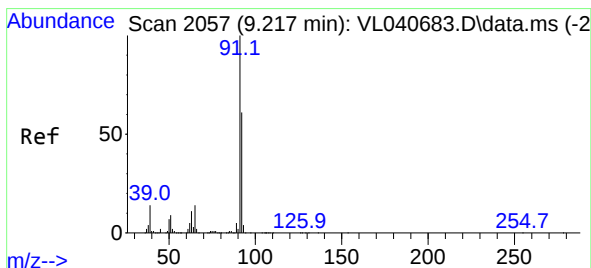
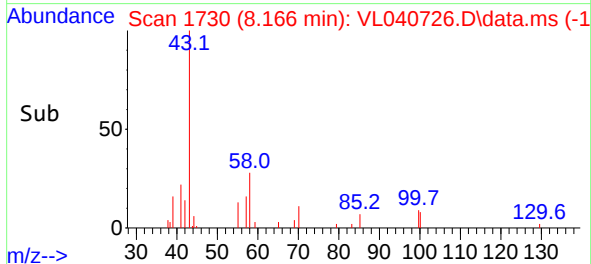
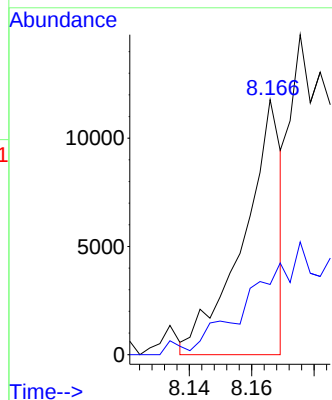
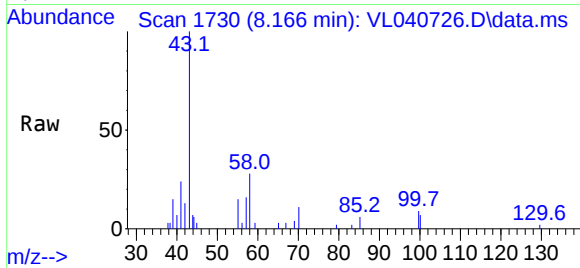




#50  
4-Methyl-2-Pentanone  
Concen: 0.042 ppbv  
RT: 8.166 min Scan# 11  
Delta R.T. -0.026 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

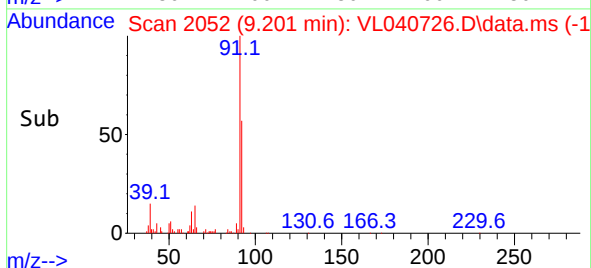
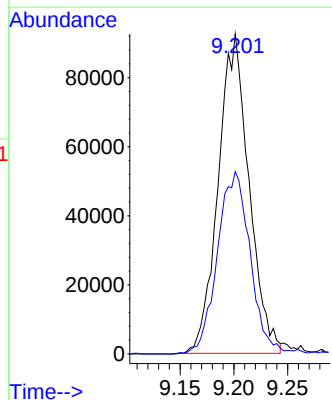
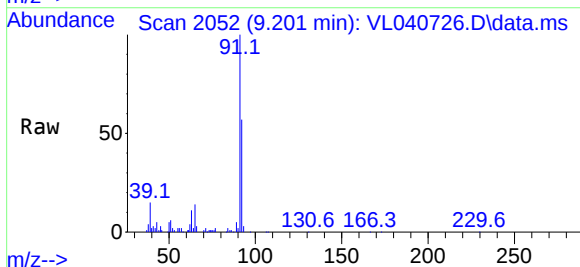
Instrument :  
MSVOA\_L  
ClientSampleId :

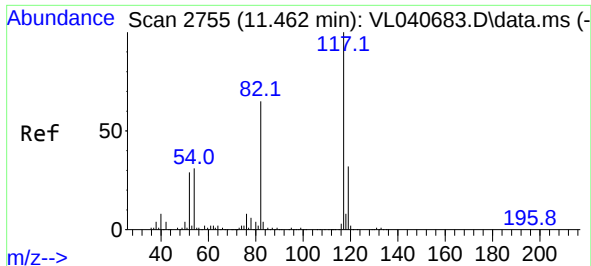
Tgt Ion: 43 Resp: 9984  
Ion Ratio Lower Upper  
43 100  
58 0.0 28.2 42.4#



#53  
Toluene  
Concen: 0.672 ppbv  
RT: 9.201 min Scan# 2052  
Delta R.T. -0.029 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

Tgt Ion: 91 Resp: 184132  
Ion Ratio Lower Upper  
91 100  
92 61.6 48.5 72.7

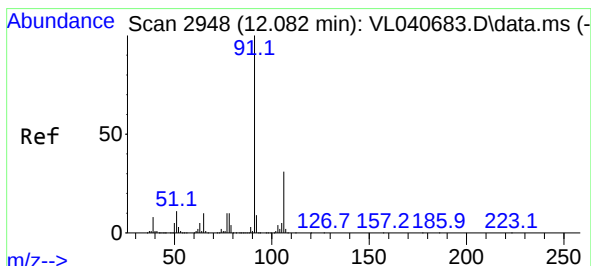
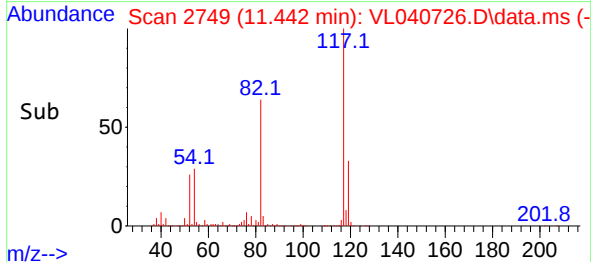
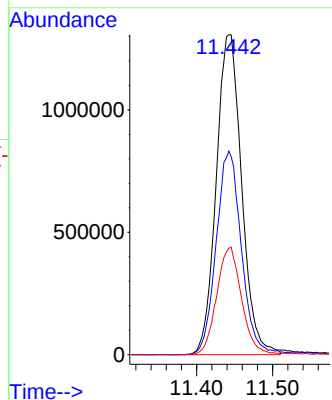
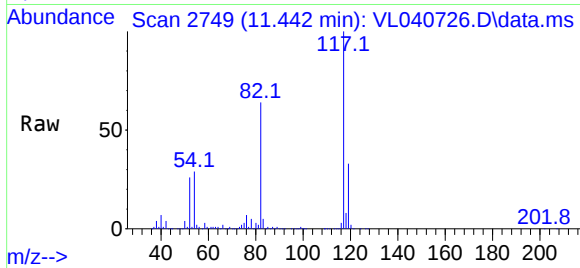




#55  
Chlorobenzene-d5  
Concen: 10.000 ppbv  
RT: 11.442 min Scan# 21  
Delta R.T. -0.035 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

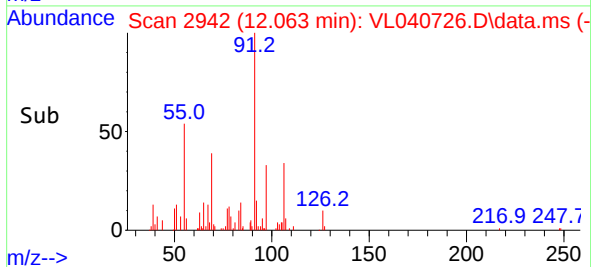
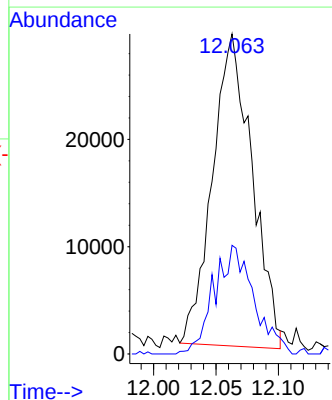
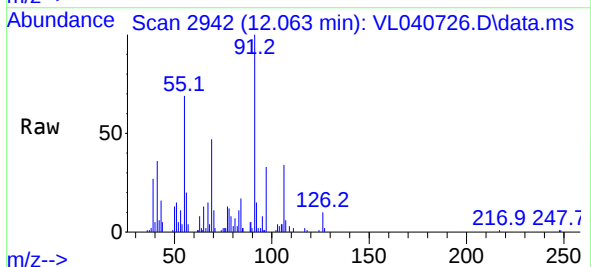
Instrument :  
MSVOA\_L  
ClientSampleId :

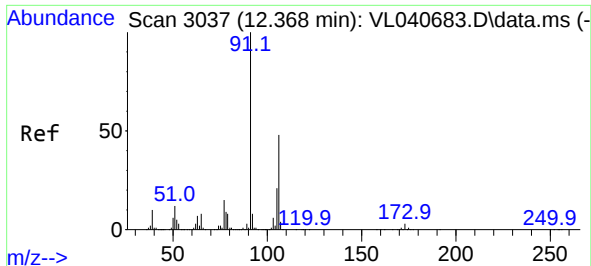
Tgt Ion:117 Resp: 3038179  
Ion Ratio Lower Upper  
117 100  
82 63.9 51.4 77.0  
119 33.5 24.7 37.1



#58  
Ethyl Benzene  
Concen: 0.185 ppbv  
RT: 12.063 min Scan# 2942  
Delta R.T. -0.039 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

Tgt Ion: 91 Resp: 64253  
Ion Ratio Lower Upper  
91 100  
106 34.3 24.7 37.1





#59

m/p-Xylene

Concen: 0.211 ppbv

RT: 12.339 min Scan# 3037

Delta R.T. -0.042 min

Lab File: VL040726.D

Acq: 27 Sep 2023 14:07

Instrument :

MSVOA\_L

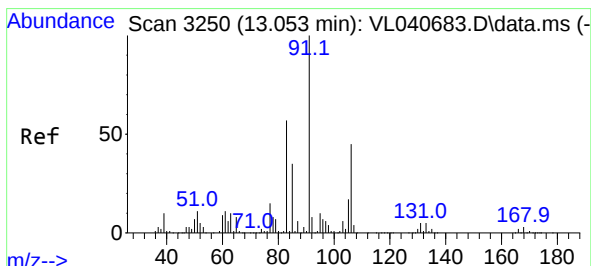
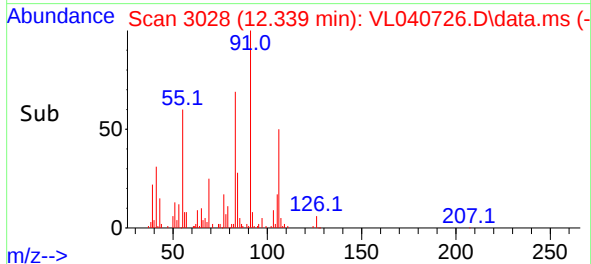
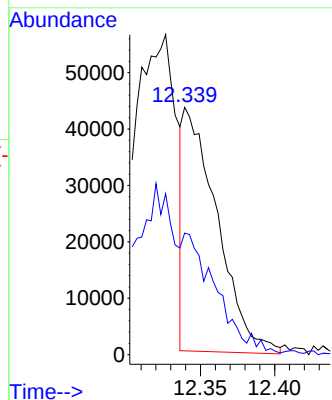
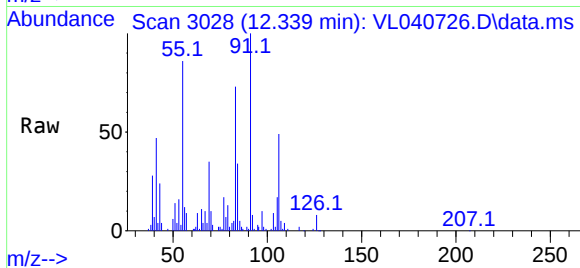
ClientSampleId :

Tgt Ion: 91 Resp: 68687

Ion Ratio Lower Upper

91 100

106 0.0 34.8 52.2#



#60

o-Xylene

Concen: 0.066 ppbv

RT: 13.024 min Scan# 3241

Delta R.T. -0.045 min

Lab File: VL040726.D

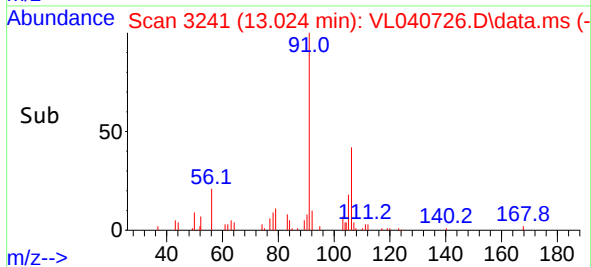
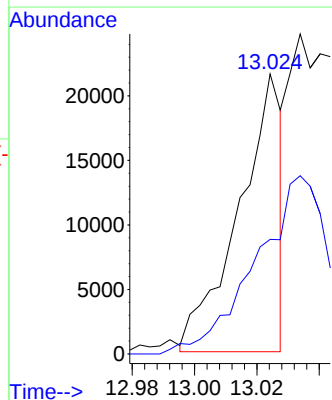
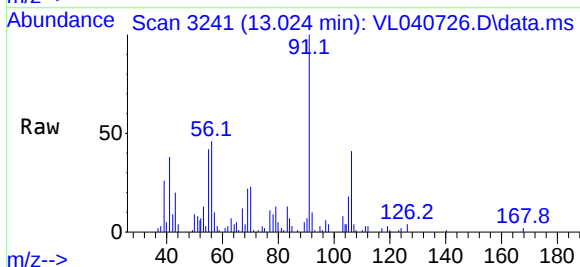
Acq: 27 Sep 2023 14:07

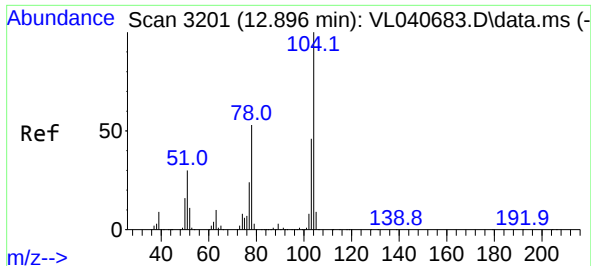
Tgt Ion: 91 Resp: 20590

Ion Ratio Lower Upper

91 100

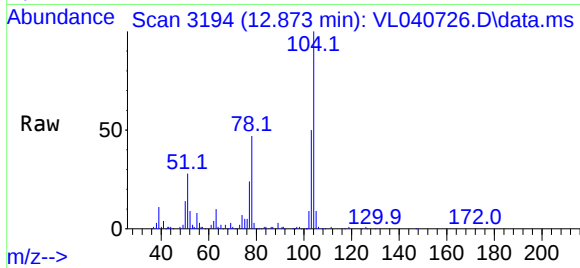
106 0.0 22.3 66.9#



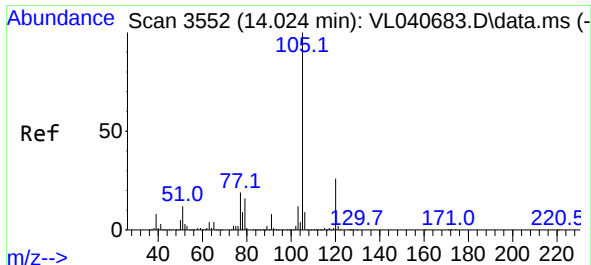
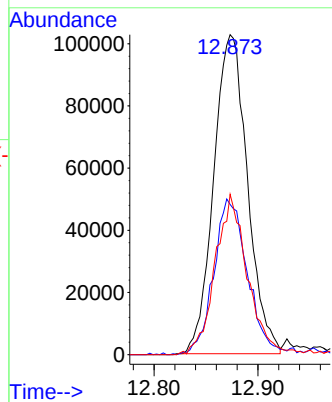
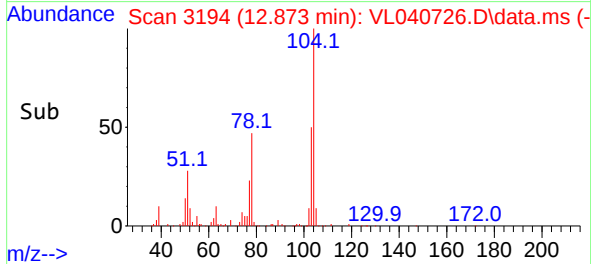


#61  
Styrene  
Concen: 1.780 ppbv  
RT: 12.873 min Scan# 3194  
Delta R.T. -0.032 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

Instrument :  
MSVOA\_L  
ClientSampleId :

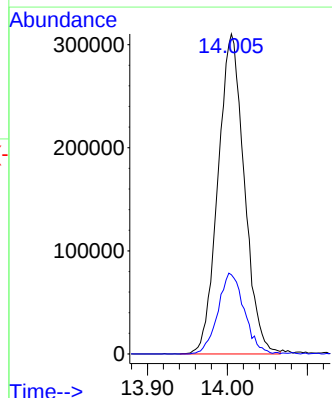
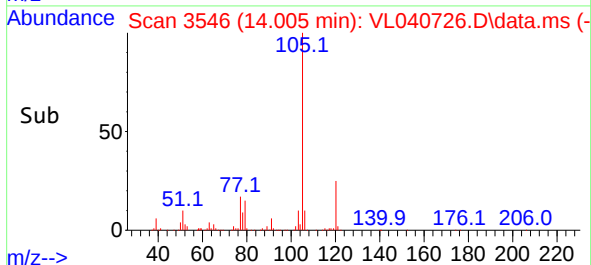
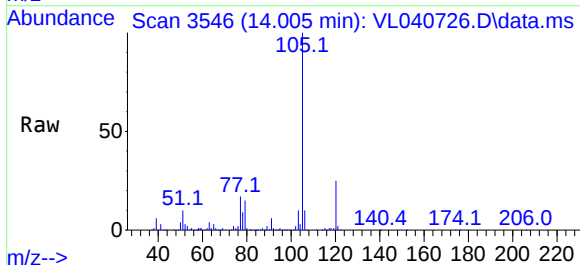


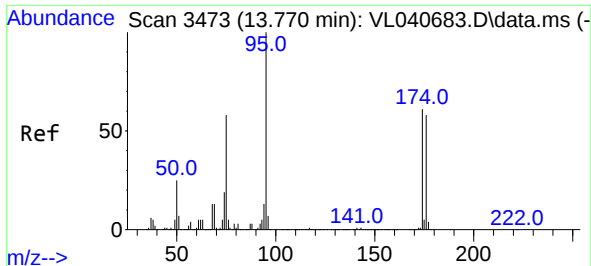
Tgt Ion:104 Resp: 231426  
Ion Ratio Lower Upper  
104 100  
78 49.2 43.4 65.0  
103 49.0 37.2 55.8



#62  
Isopropylbenzene  
Concen: 1.511 ppbv  
RT: 14.005 min Scan# 3546  
Delta R.T. -0.032 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

Tgt Ion:105 Resp: 707563  
Ion Ratio Lower Upper  
105 100  
120 25.4 20.2 30.4

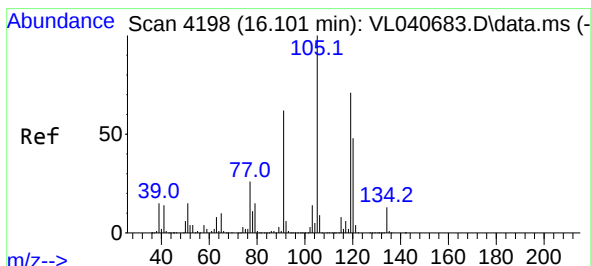
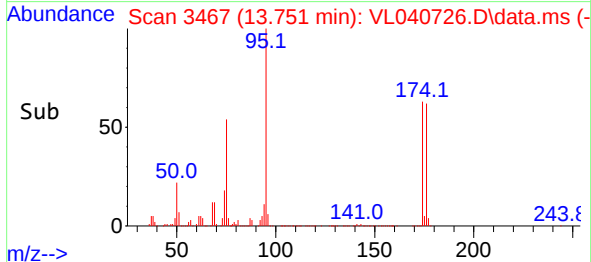
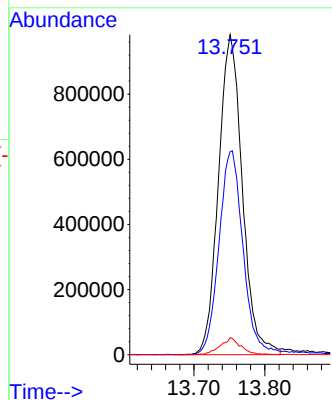
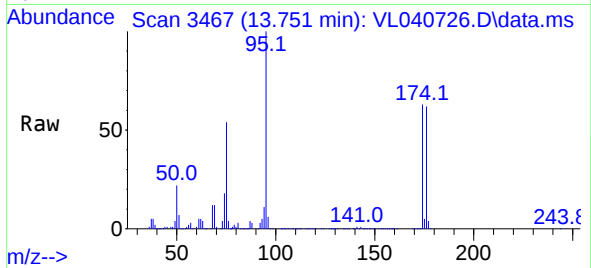




#68  
1-Bromo-4-Fluorobenzene  
Concen: 9.788 ppbv  
RT: 13.751 min Scan# 3473  
Delta R.T. -0.035 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

Instrument :  
MSVOA\_L  
ClientSampleId :

Tgt Ion: 95 Resp: 2297650  
Ion Ratio Lower Upper  
95 100  
174 65.8 48.9 73.3  
175 4.7 3.5 5.3



#74  
1,2,4-Trimethylbenzene  
Concen: 0.143 ppbv  
RT: 16.082 min Scan# 4192  
Delta R.T. -0.035 min  
Lab File: VL040726.D  
Acq: 27 Sep 2023 14:07

Tgt Ion:105 Resp: 54768  
Ion Ratio Lower Upper  
105 100  
120 34.3 38.6 57.8#  
91 10.8 50.0 75.0#  
77 17.9 20.6 31.0#

