

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_L\Data\VL031025\  
 Data File : VL042137.D  
 Acq On : 10 Mar 2025 21:38  
 Operator : SY/MD  
 Sample : Q1533-03 4X  
 Misc : 400mL/MSVOA\_L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 SV2

Quant Time: Mar 11 01:32:09 2025  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL022525AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022  
 QLast Update : Wed Feb 26 01:08:36 2025  
 Response via : Initial Calibration

| Compound                | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|-------------------------|-------|------|----------|--------|-------|----------|
| -----                   |       |      |          |        |       |          |
| Internal Standards      |       |      |          |        |       |          |
| 1) Bromochloromethane   | 2.800 | 49   | 157696   | 10.000 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 3.978 | 114  | 369982   | 10.000 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 8.898 | 117  | 340317   | 10.000 | ppbv  | 0.00     |

|                             |        |       |          |          |      |          |
|-----------------------------|--------|-------|----------|----------|------|----------|
| System Monitoring Compounds |        |       |          |          |      |          |
| 68) 1-Bromo-4-Fluorobenzene | 10.390 | 95    | 289970   | 11.075   | ppbv | 0.00     |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 110.800% |

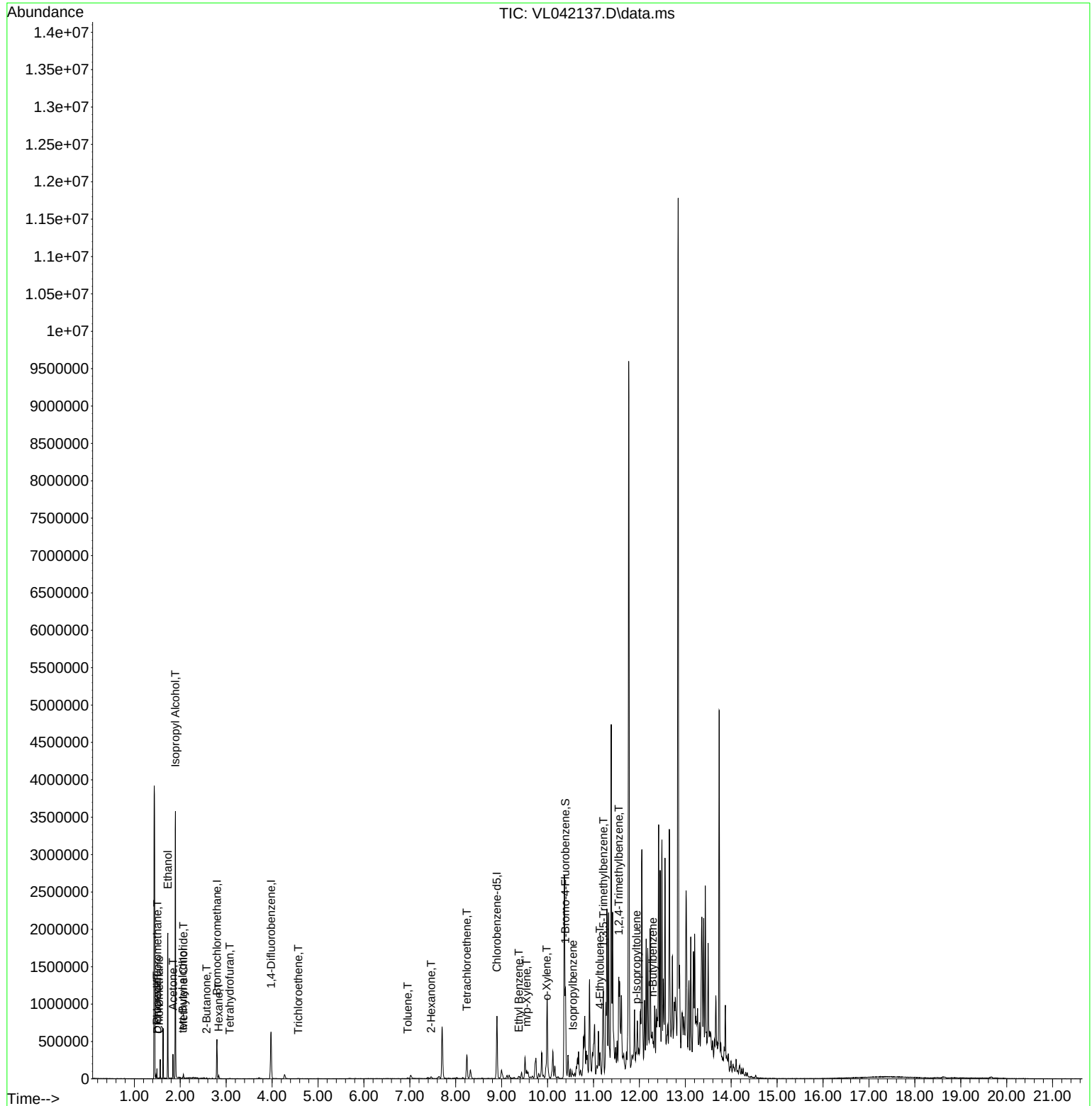
| Target Compounds           | R.T.   | QIon | Response | Conc     | Units  | Qvalue |
|----------------------------|--------|------|----------|----------|--------|--------|
| 2) Dichlorodifluoromethane | 1.502  | 85   | 2295     | 0.140    | ppbv   | 96     |
| 4) Chloromethane           | 1.538  | 50   | 2456     | 0.405    | ppbv   | 99     |
| 9) Propene                 | 1.493  | 41   | 9511m    | 1.019    | ppbv   |        |
| 13) Ethanol                | 1.729  | 45   | 716267   | 1208.441 | ppbv   | 93     |
| 15) Acetone                | 1.842  | 43   | 134002   | 9.622    | ppbv   | 99     |
| 17) tert-Butyl alcohol     | 2.053  | 59   | 3033     | 0.174    | ppbv # | 93     |
| 19) Isopropyl Alcohol      | 1.894  | 45   | 1548394  | 193.561  | ppbv # | 33     |
| 20) Methylene Chloride     | 2.069  | 84   | 7260     | 1.378    | ppbv   | 96     |
| 26) Hexane                 | 2.839  | 57   | 7486     | 0.332    | ppbv # | 38     |
| 34) 2-Butanone             | 2.570  | 43   | 7508     | 0.260    | ppbv   | 96     |
| 38) Trichloroethene        | 4.571  | 130  | 1260m    | 0.080    | ppbv   |        |
| 41) Tetrahydrofuran        | 3.079  | 42   | 1948     | 0.114    | ppbv # | 78     |
| 51) 2-Hexanone             | 7.461  | 43   | 16477m   | 0.642    | ppbv   |        |
| 52) Tetrachloroethene      | 8.241  | 164  | 58846    | 4.438    | ppbv   | 98     |
| 53) Toluene                | 6.953  | 91   | 7497m    | 0.173    | ppbv   |        |
| 58) Ethyl Benzene          | 9.371  | 91   | 14280    | 0.228    | ppbv   | 99     |
| 59) m/p-Xylene             | 9.542  | 91   | 50664    | 1.016    | ppbv # | 100    |
| 60) o-Xylene               | 9.979  | 91   | 34055    | 0.679    | ppbv   | 96     |
| 62) Isopropylbenzene       | 10.552 | 105  | 14518    | 0.193    | ppbv   | 95     |
| 69) p-Isopropyltoluene     | 11.940 | 119  | 43993    | 0.566    | ppbv   | 95     |
| 70) n-Butylbenzene         | 12.293 | 91   | 117905   | 1.485    | ppbv # | 68     |
| 72) 4-Ethyltoluene         | 11.138 | 105  | 93376m   | 1.525    | ppbv   |        |
| 73) 1,3,5-Trimethylbenzene | 11.215 | 105  | 106051   | 1.997    | ppbv   | 98     |
| 74) 1,2,4-Trimethylbenzene | 11.549 | 105  | 448244   | 7.496    | ppbv # | 62     |

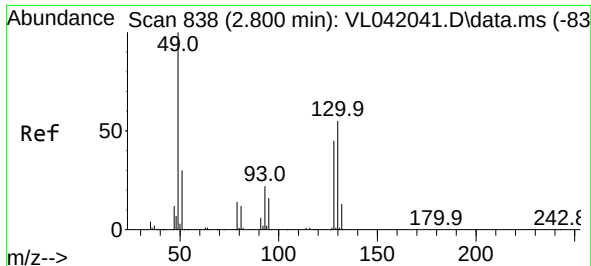
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_L\Data\VL031025\  
Data File : VL042137.D  
Acq On : 10 Mar 2025 21:38  
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Misc : 400mL/MSVOA\_L  
ALS Vial : 1 Sample Multiplier: 1

Instrument :  
MSVOA\_L  
ClientSampleId :  
SV2

Quant Time: Mar 11 01:32:09 2025  
Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL022525AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022  
QLast Update : Wed Feb 26 01:08:36 2025  
Response via : Initial Calibration

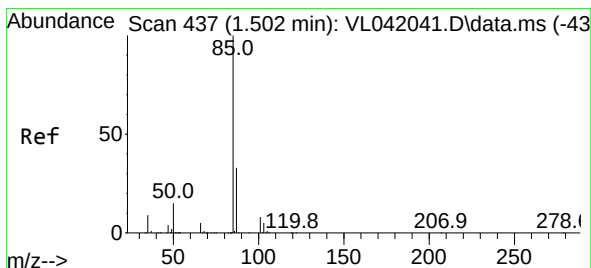
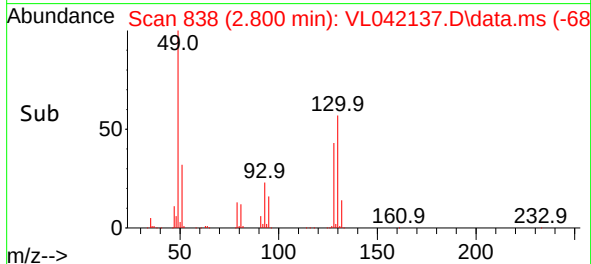
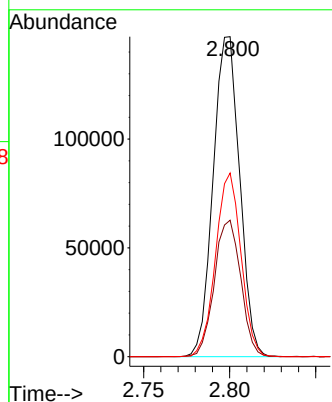
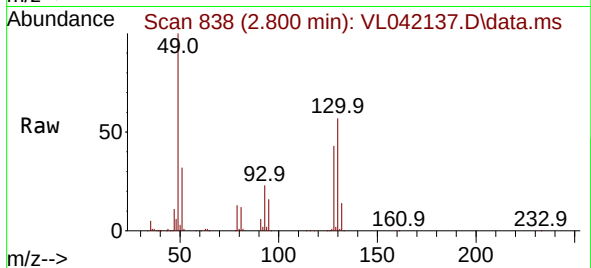




#1  
Bromochloromethane  
Concen: 10.000 ppbv  
RT: 2.800 min Scan# 838  
Delta R.T. 0.000 min  
Lab File: VL042137.D  
Acq: 10 Mar 2025 21:38

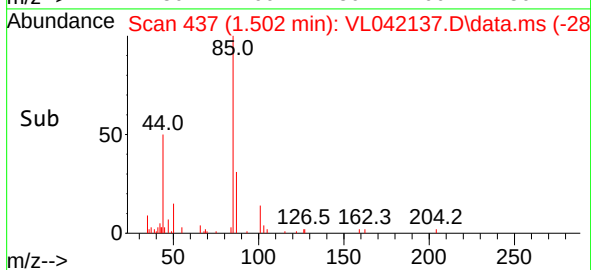
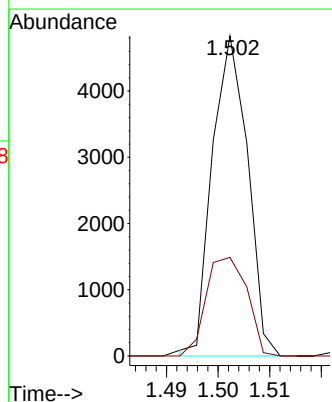
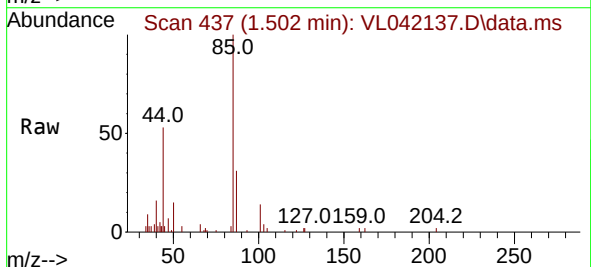
Instrument :  
MSVOA\_L  
ClientSampleId :  
SV2

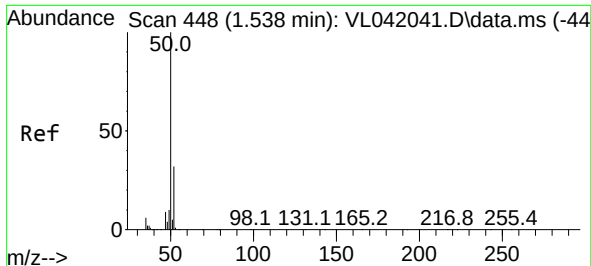
Tgt Ion: 49 Resp: 157696  
Ion Ratio Lower Upper  
49 100  
128 42.5 21.6 64.8  
130 55.0 27.8 83.4



#2  
Dichlorodifluoromethane  
Concen: 0.140 ppbv  
RT: 1.502 min Scan# 437  
Delta R.T. 0.000 min  
Lab File: VL042137.D  
Acq: 10 Mar 2025 21:38

Tgt Ion: 85 Resp: 2295  
Ion Ratio Lower Upper  
85 100  
87 30.8 26.4 39.6

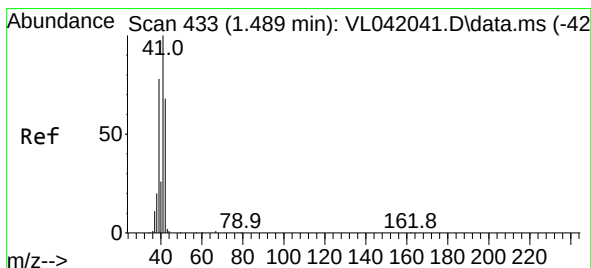
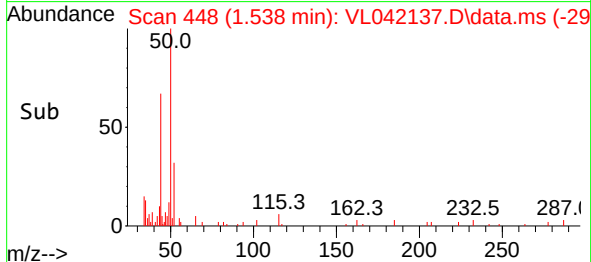
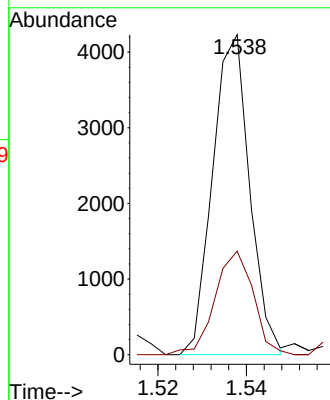
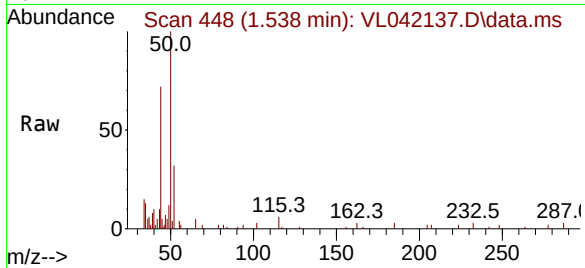




#4  
Chloromethane  
Concen: 0.405 ppbv  
RT: 1.538 min Scan# 44  
Delta R.T. 0.000 min  
Lab File: VL042137.D  
Acq: 10 Mar 2025 21:38

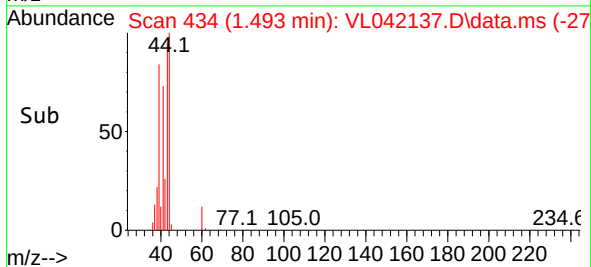
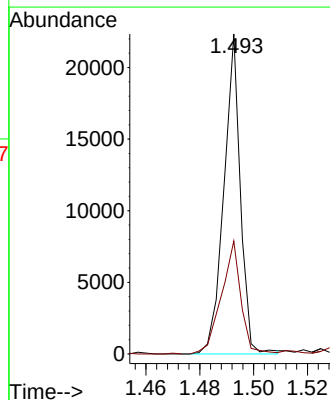
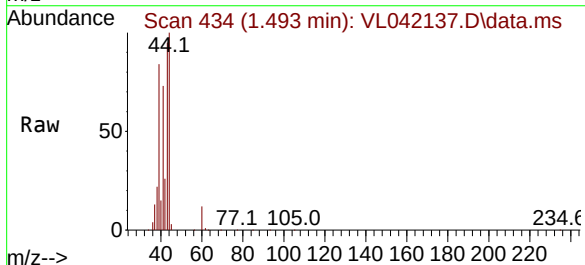
Instrument :  
MSVOA\_L  
ClientSampleId :  
SV2

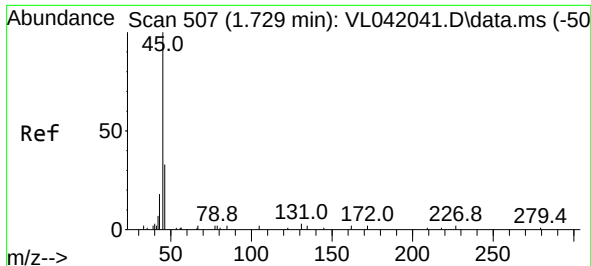
Tgt Ion: 50 Resp: 2456  
Ion Ratio Lower Upper  
50 100  
52 31.1 25.4 38.0



#9  
Propene  
Concen: 1.019 ppbv m  
RT: 1.493 min Scan# 434  
Delta R.T. 0.003 min  
Lab File: VL042137.D  
Acq: 10 Mar 2025 21:38

Tgt Ion: 41 Resp: 9511  
Ion Ratio Lower Upper  
41 100  
42 189.6 55.8 83.6#

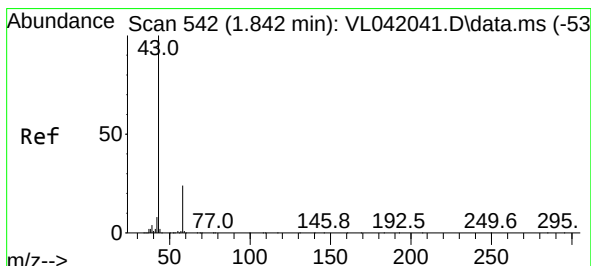
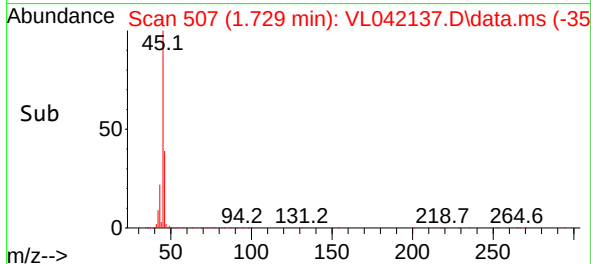
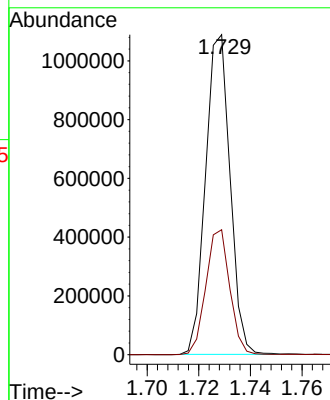
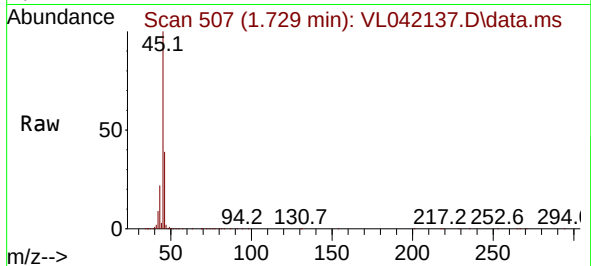




#13  
Ethanol  
Concen: 1208.441 ppbv  
RT: 1.729 min Scan# 507  
Delta R.T. 0.000 min  
Lab File: VL042137.D  
Acq: 10 Mar 2025 21:38

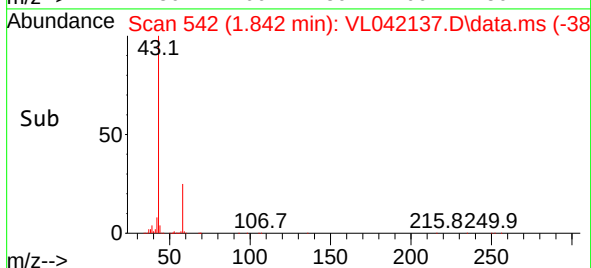
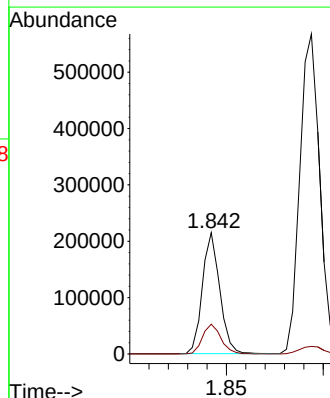
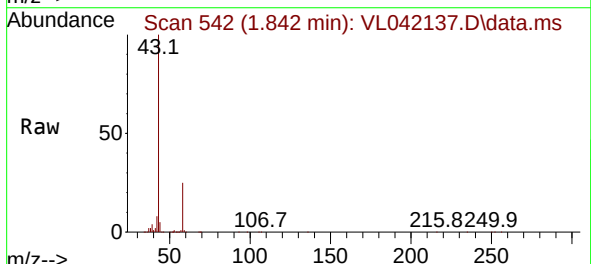
Instrument :  
MSVOA\_L  
ClientSampleId :  
SV2

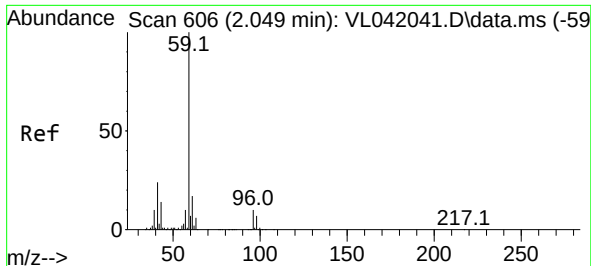
Tgt Ion: 45 Resp: 716267  
Ion Ratio Lower Upper  
45 100  
46 38.4 17.1 68.3



#15  
Acetone  
Concen: 9.622 ppbv  
RT: 1.842 min Scan# 542  
Delta R.T. 0.000 min  
Lab File: VL042137.D  
Acq: 10 Mar 2025 21:38

Tgt Ion: 43 Resp: 134002  
Ion Ratio Lower Upper  
43 100  
58 26.2 20.7 31.1





#17

tert-Butyl alcohol

Concen: 0.174 ppbv

RT: 2.053 min Scan# 606

Delta R.T. 0.003 min

Lab File: VL042137.D

Acq: 10 Mar 2025 21:38

Instrument :

MSVOA\_L

ClientSampleId :

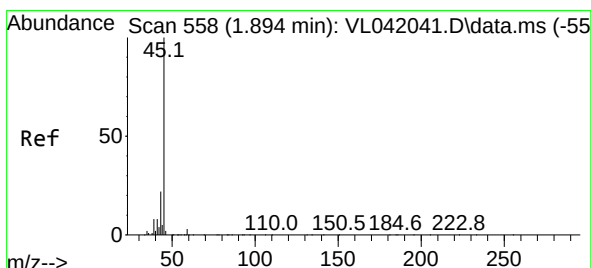
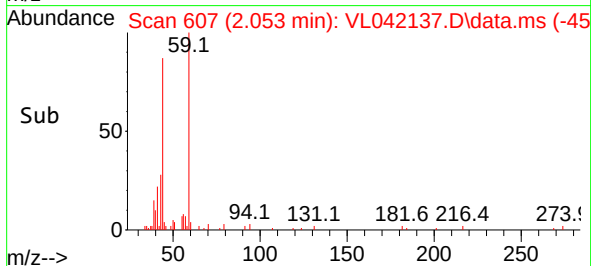
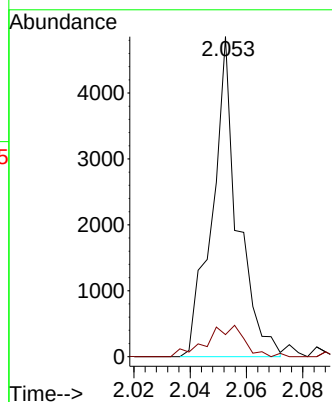
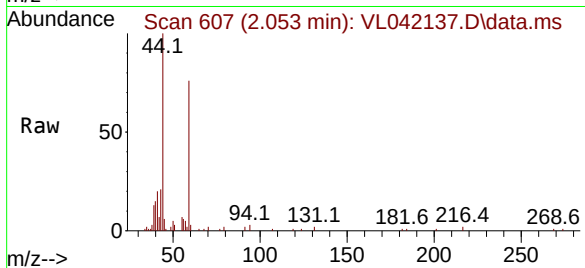
SV2

Tgt Ion: 59 Resp: 3033

Ion Ratio Lower Upper

59 100

57 14.4 9.3 13.9#



#19

Isopropyl Alcohol

Concen: 193.561 ppbv

RT: 1.894 min Scan# 558

Delta R.T. 0.000 min

Lab File: VL042137.D

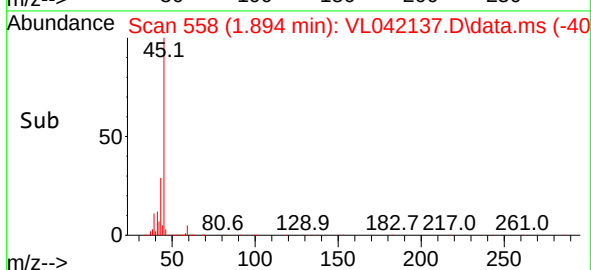
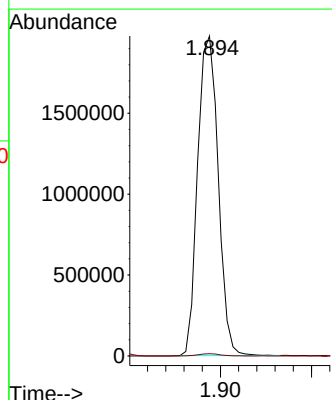
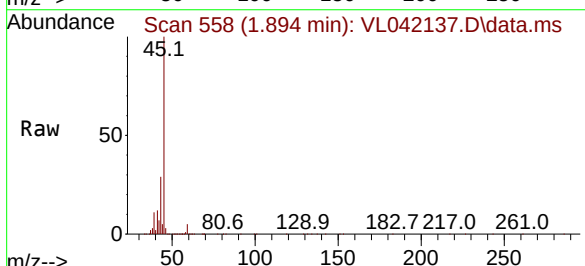
Acq: 10 Mar 2025 21:38

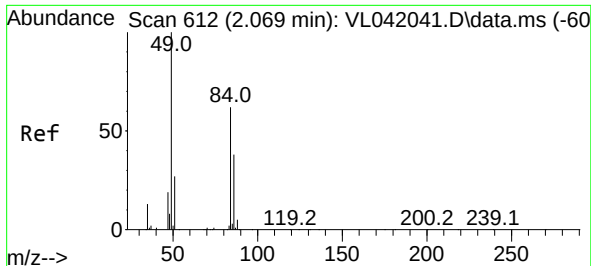
Tgt Ion: 45 Resp: 1548394

Ion Ratio Lower Upper

45 100

58 0.8 35.3 52.9#



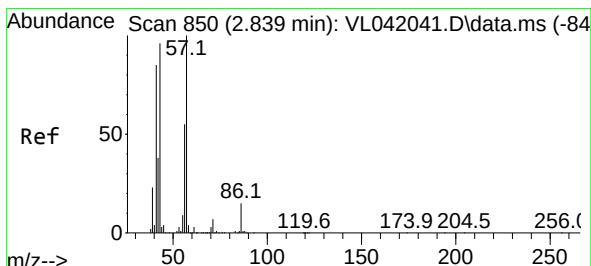
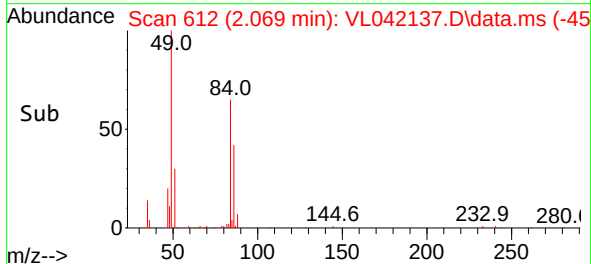
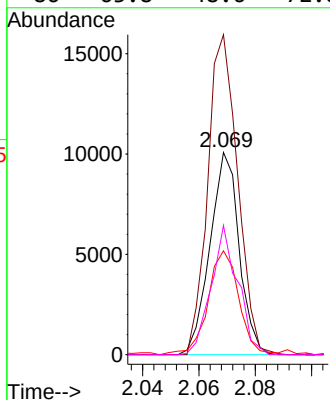
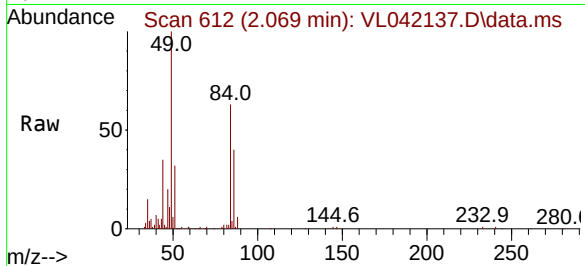


#20  
Methylene Chloride  
Concen: 1.378 ppbv  
RT: 2.069 min Scan# 612  
Delta R.T. 0.000 min  
Lab File: VL042137.D  
Acq: 10 Mar 2025 21:38

Instrument :  
MSVOA\_L  
ClientSampleId :  
SV2

Tgt Ion: 84 Resp: 7260

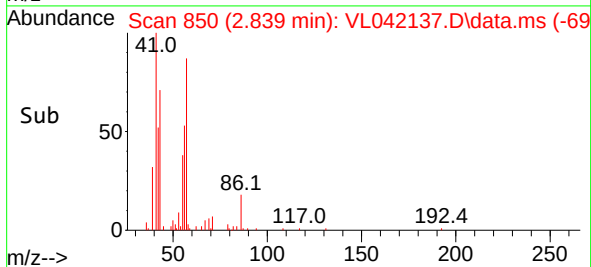
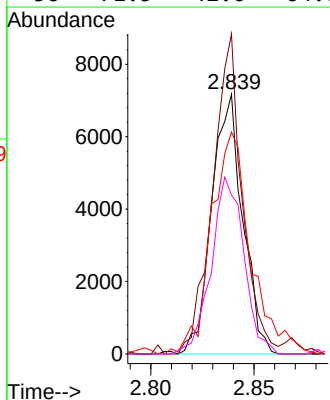
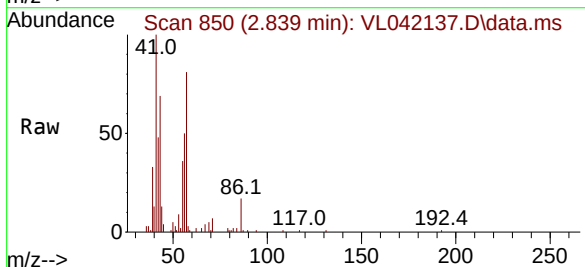
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 84  | 100   |       |       |
| 49  | 158.2 | 130.0 | 195.0 |
| 51  | 50.5  | 37.4  | 56.0  |
| 86  | 63.8  | 48.6  | 72.8  |

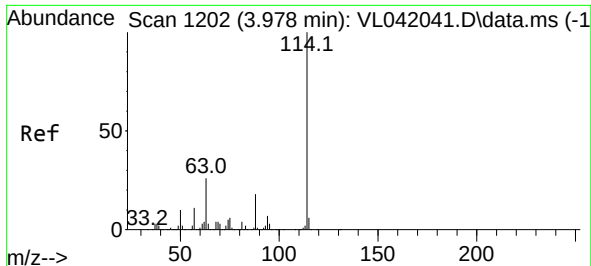


#26  
Hexane  
Concen: 0.332 ppbv  
RT: 2.839 min Scan# 850  
Delta R.T. 0.000 min  
Lab File: VL042137.D  
Acq: 10 Mar 2025 21:38

Tgt Ion: 57 Resp: 7486

| Ion | Ratio | Lower | Upper  |
|-----|-------|-------|--------|
| 57  | 100   |       |        |
| 41  | 121.1 | 70.6  | 106.0# |
| 43  | 112.1 | 199.4 | 299.0# |
| 56  | 71.5  | 42.6  | 64.0#  |





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.978 min Scan# 11

Delta R.T. 0.000 min

Lab File: VL042137.D

Acq: 10 Mar 2025 21:38

Instrument :

MSVOA\_L

ClientSampleId :

SV2

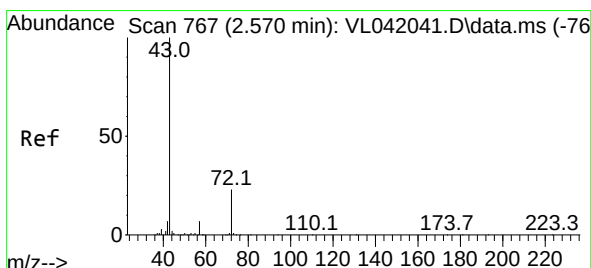
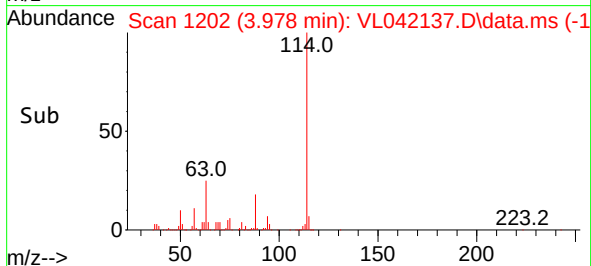
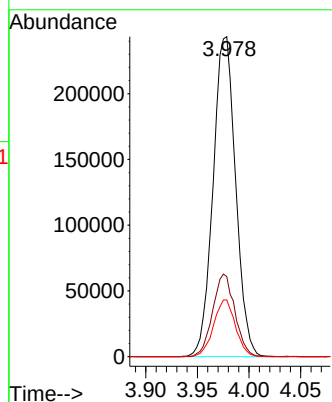
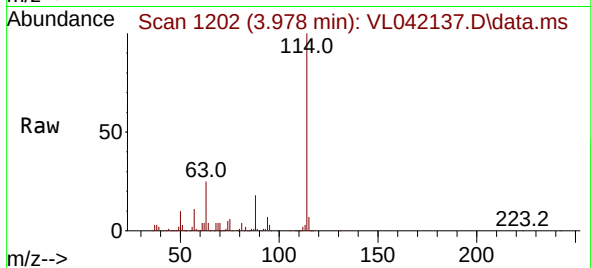
Tgt Ion:114 Resp: 369982

Ion Ratio Lower Upper

114 100

63 25.5 20.1 30.1

88 17.3 14.3 21.5



#34

2-Butanone

Concen: 0.260 ppbv

RT: 2.570 min Scan# 767

Delta R.T. 0.000 min

Lab File: VL042137.D

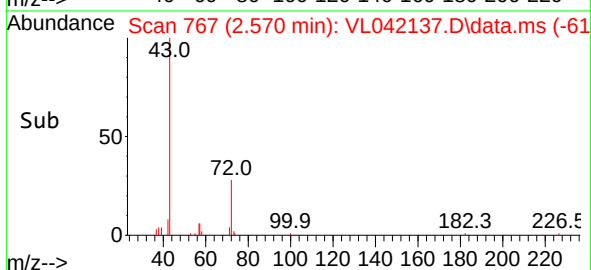
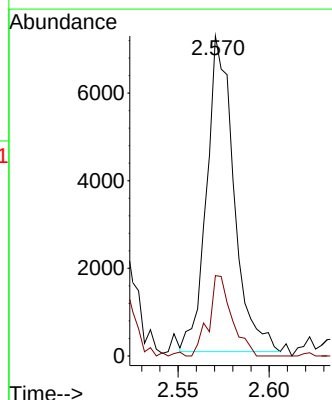
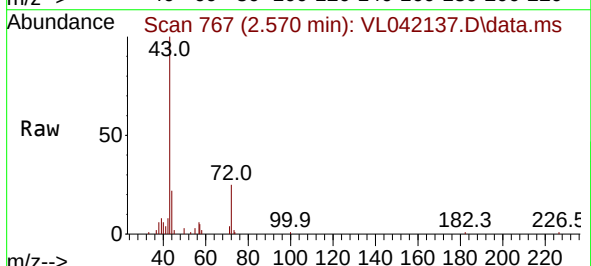
Acq: 10 Mar 2025 21:38

Tgt Ion: 43 Resp: 7508

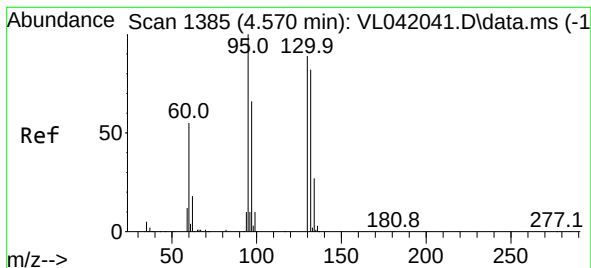
Ion Ratio Lower Upper

43 100

72 21.4 18.5 27.7







#38

Trichloroethene

Concen: 0.080 ppbv m

RT: 4.571 min Scan# 1

Delta R.T. 0.000 min

Lab File: VL042137.D

Acq: 10 Mar 2025 21:38

Instrument :

MSVOA\_L

ClientSampleId :

SV2

Tgt Ion:130 Resp: 1260

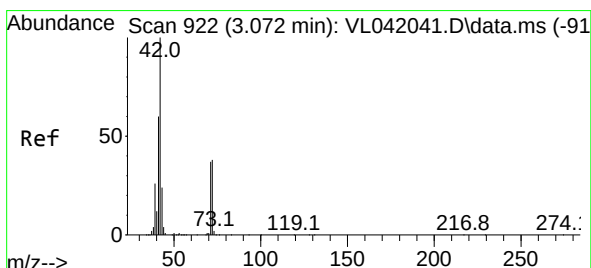
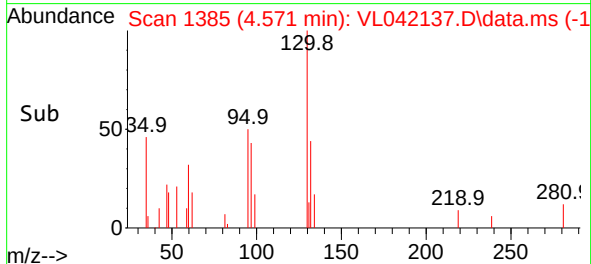
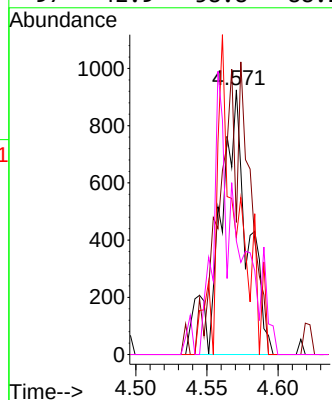
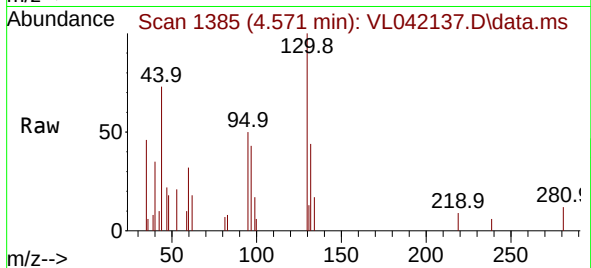
Ion Ratio Lower Upper

130 100

95 49.9 89.5 134.3#

132 44.3 73.8 110.6#

97 42.9 58.8 88.2#



#41

Tetrahydrofuran

Concen: 0.114 ppbv

RT: 3.079 min Scan# 924

Delta R.T. 0.007 min

Lab File: VL042137.D

Acq: 10 Mar 2025 21:38

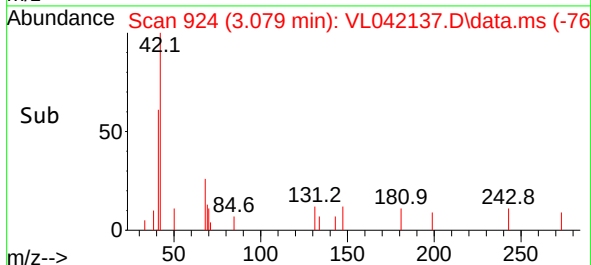
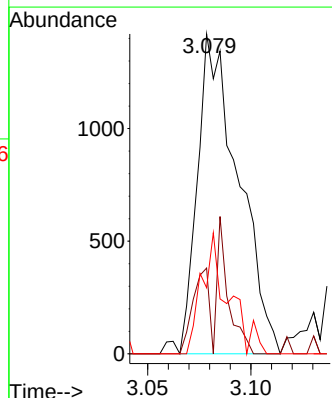
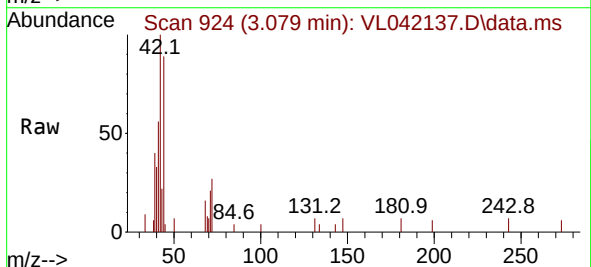
Tgt Ion: 42 Resp: 1948

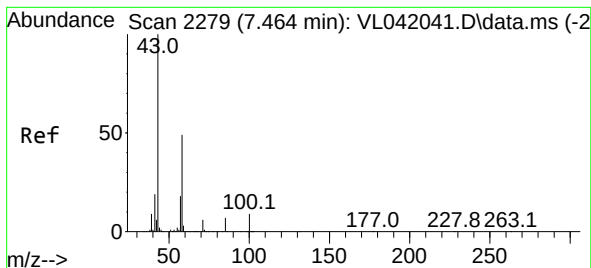
Ion Ratio Lower Upper

42 100

72 22.4 30.2 45.2#

71 24.7 28.2 42.4#





#51

2-Hexanone

Concen: 0.642 ppbv m

RT: 7.461 min Scan# 21

Delta R.T. -0.003 min

Lab File: VL042137.D

Acq: 10 Mar 2025 21:38

Instrument :

MSVOA\_L

ClientSampleId :

SV2

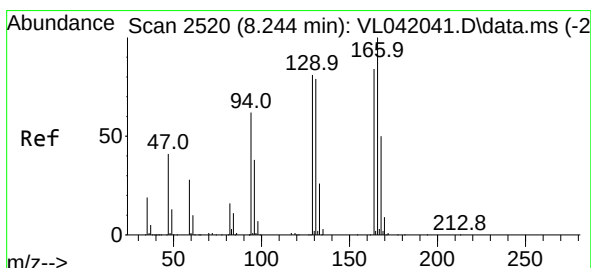
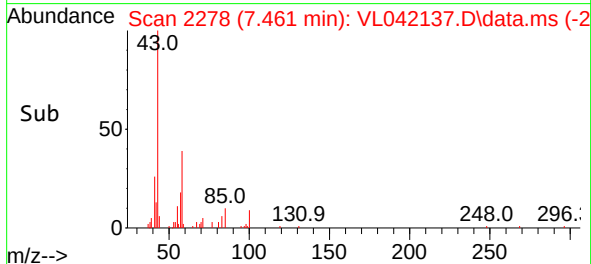
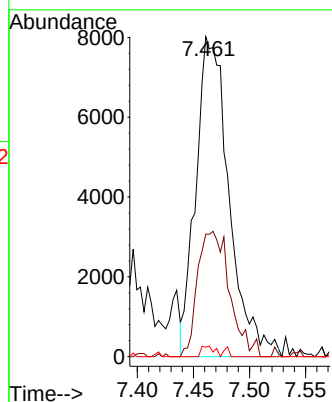
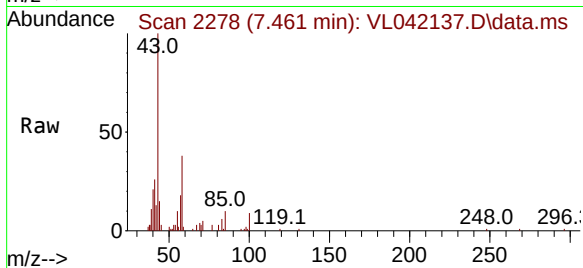
Tgt Ion: 43 Resp: 16477

Ion Ratio Lower Upper

43 100

58 38.1 39.0 58.6#

98 1.7 0.1 0.1#



#52

Tetrachloroethene

Concen: 4.438 ppbv

RT: 8.241 min Scan# 2519

Delta R.T. -0.003 min

Lab File: VL042137.D

Acq: 10 Mar 2025 21:38

Tgt Ion: 164 Resp: 58846

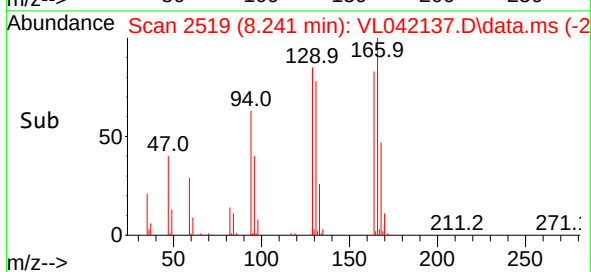
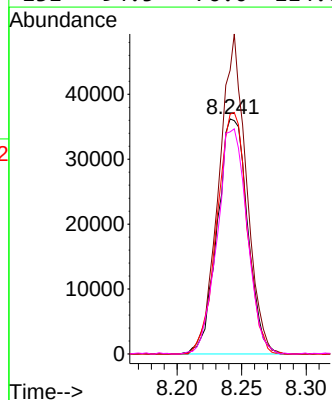
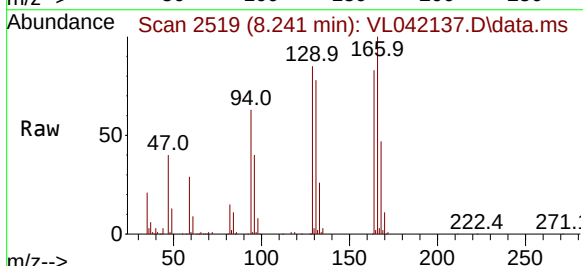
Ion Ratio Lower Upper

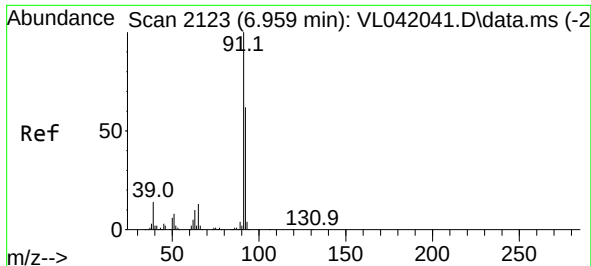
164 100

166 120.7 95.7 143.5

129 102.0 77.1 115.7

131 94.5 76.0 114.0

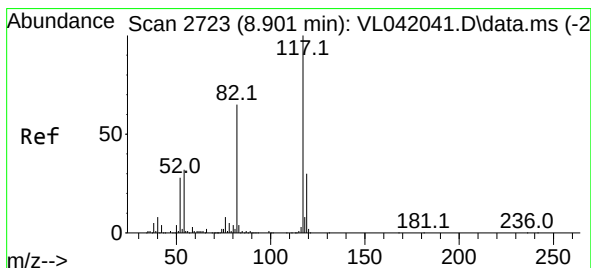
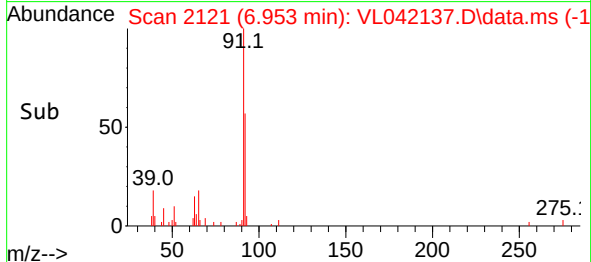
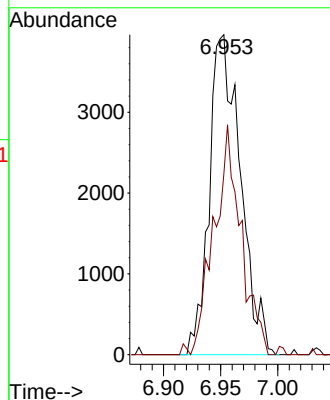
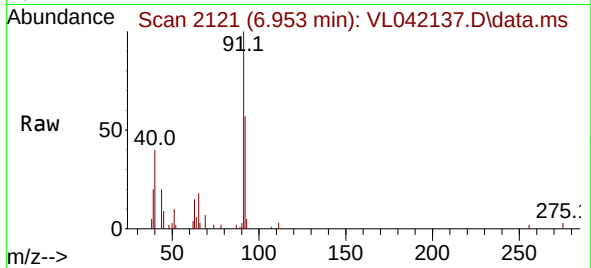




#53  
Toluene  
Concen: 0.173 ppbv m  
RT: 6.953 min Scan# 2121  
Delta R.T. -0.006 min  
Lab File: VL042137.D  
Acq: 10 Mar 2025 21:38

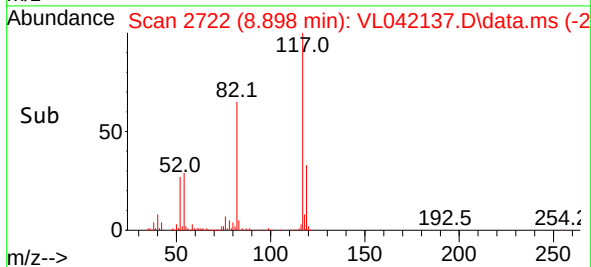
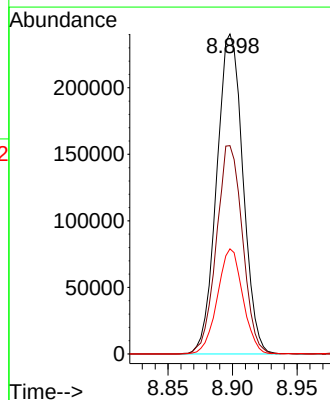
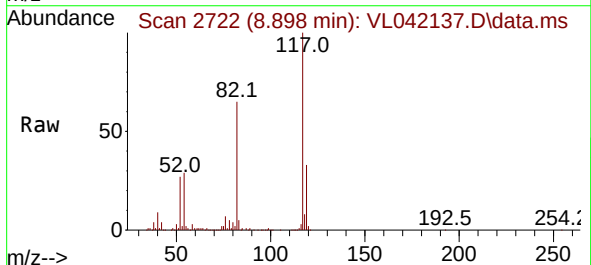
Instrument :  
MSVOA\_L  
ClientSampleId :  
SV2

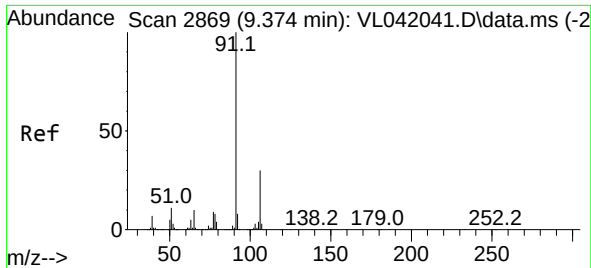
Tgt Ion: 91 Resp: 7497  
Ion Ratio Lower Upper  
91 100  
92 0.0 49.0 73.6#



#55  
Chlorobenzene-d5  
Concen: 10.000 ppbv  
RT: 8.898 min Scan# 2722  
Delta R.T. -0.003 min  
Lab File: VL042137.D  
Acq: 10 Mar 2025 21:38

Tgt Ion: 117 Resp: 340317  
Ion Ratio Lower Upper  
117 100  
82 64.8 55.0 82.6  
119 31.9 25.9 38.9

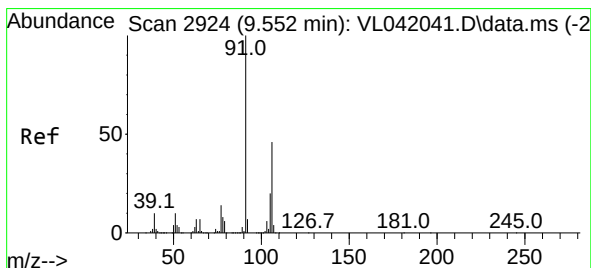
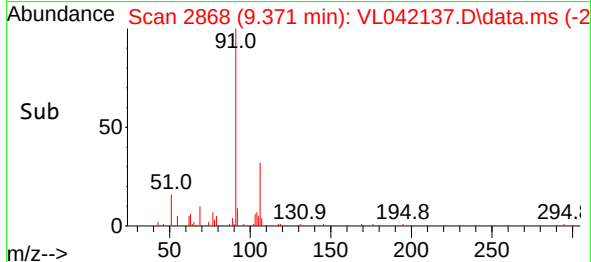
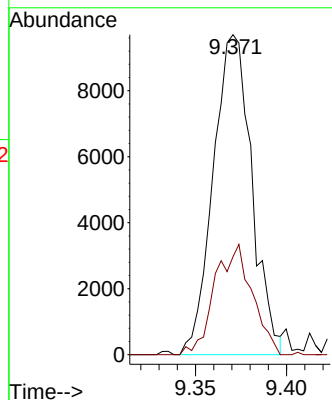
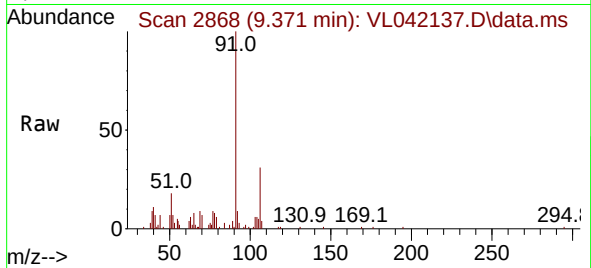




#58  
Ethyl Benzene  
Concen: 0.228 ppbv  
RT: 9.371 min Scan# 21  
Delta R.T. -0.003 min  
Lab File: VL042137.D  
Acq: 10 Mar 2025 21:38

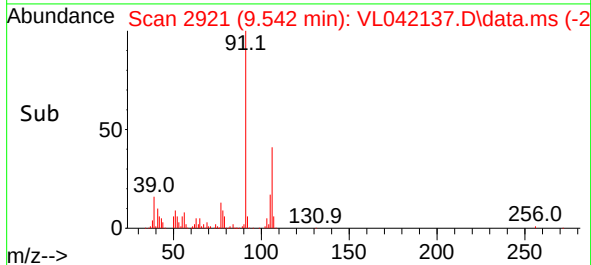
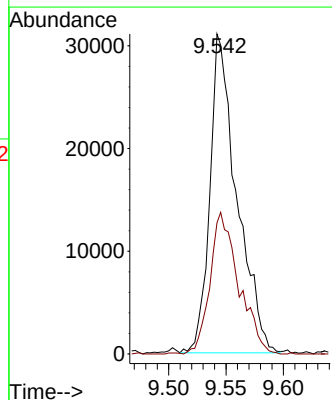
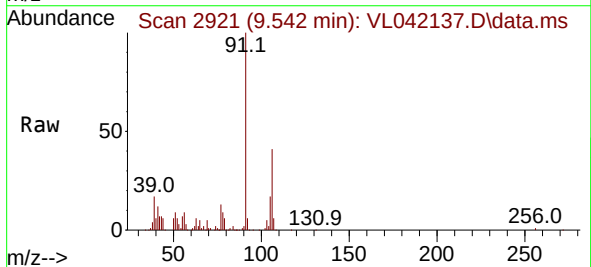
Instrument :  
MSVOA\_L  
ClientSampleId :  
SV2

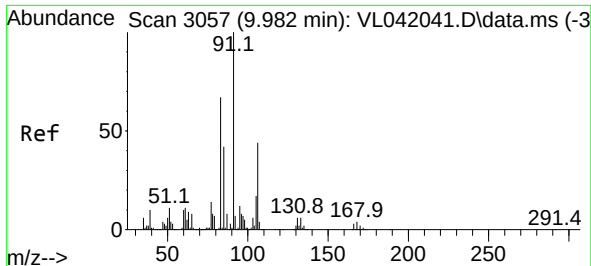
Tgt Ion: 91 Resp: 14280  
Ion Ratio Lower Upper  
91 100  
106 30.6 24.2 36.2



#59  
m/p-Xylene  
Concen: 1.016 ppbv  
RT: 9.542 min Scan# 2921  
Delta R.T. -0.010 min  
Lab File: VL042137.D  
Acq: 10 Mar 2025 21:38

Tgt Ion: 91 Resp: 50664  
Ion Ratio Lower Upper  
91 100  
106 47.6 0.0 0.0#

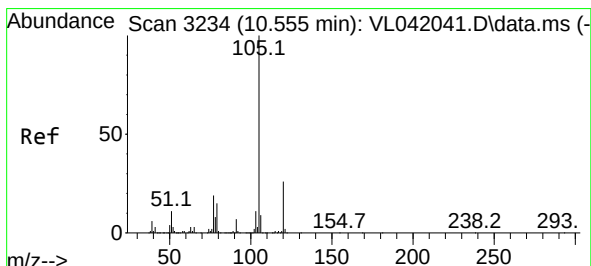
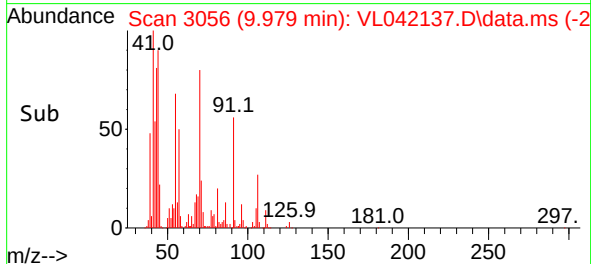
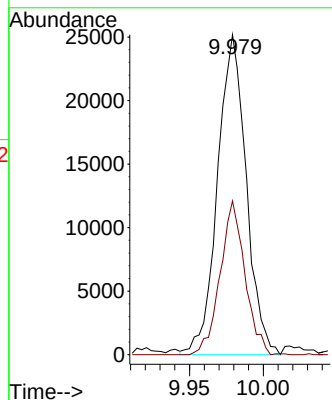
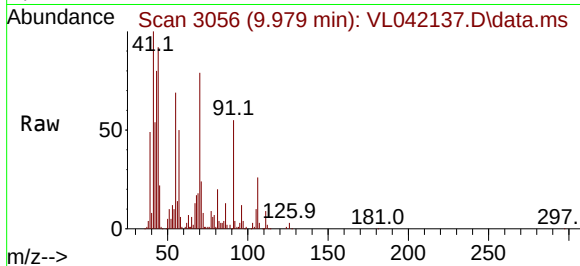




#60  
o-Xylene  
Concen: 0.679 ppbv  
RT: 9.979 min Scan# 3055  
Delta R.T. -0.003 min  
Lab File: VL042137.D  
Acq: 10 Mar 2025 21:38

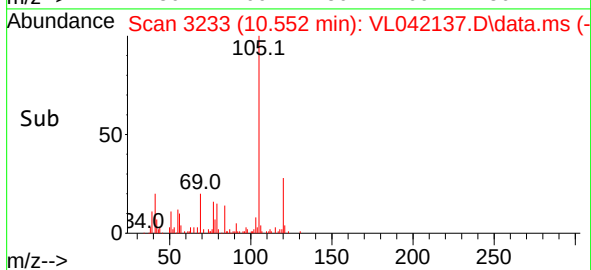
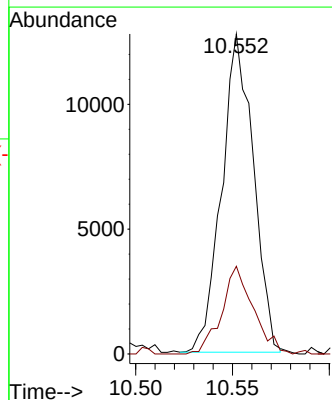
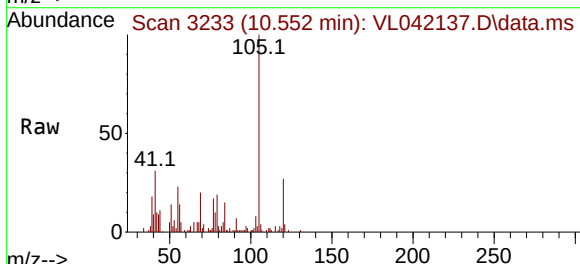
Instrument :  
MSVOA\_L  
ClientSampleId :  
SV2

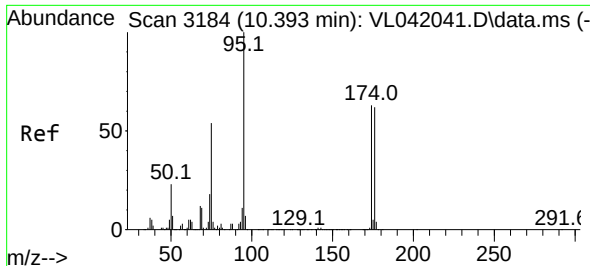
Tgt Ion: 91 Resp: 34055  
Ion Ratio Lower Upper  
91 100  
106 41.6 22.3 66.8



#62  
Isopropylbenzene  
Concen: 0.193 ppbv  
RT: 10.552 min Scan# 3233  
Delta R.T. -0.003 min  
Lab File: VL042137.D  
Acq: 10 Mar 2025 21:38

Tgt Ion: 105 Resp: 14518  
Ion Ratio Lower Upper  
105 100  
120 28.3 20.7 31.1

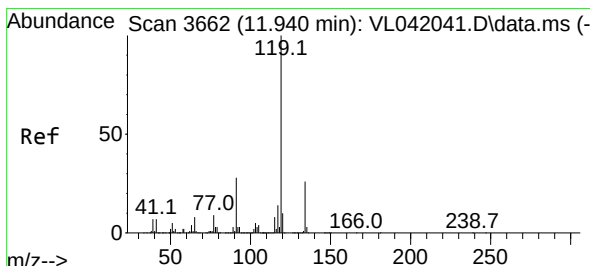
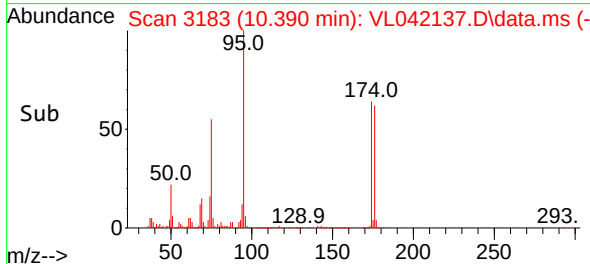
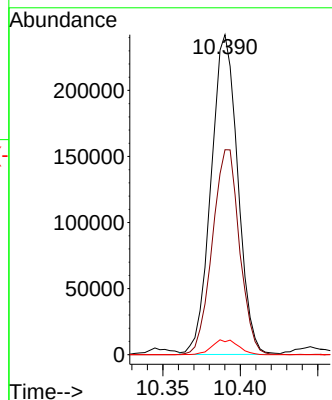
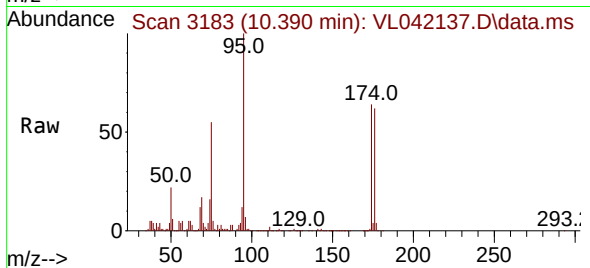




#68  
1-Bromo-4-Fluorobenzene  
Concen: 11.075 ppbv  
RT: 10.390 min Scan# 3184  
Delta R.T. -0.003 min  
Lab File: VL042137.D  
Acq: 10 Mar 2025 21:38

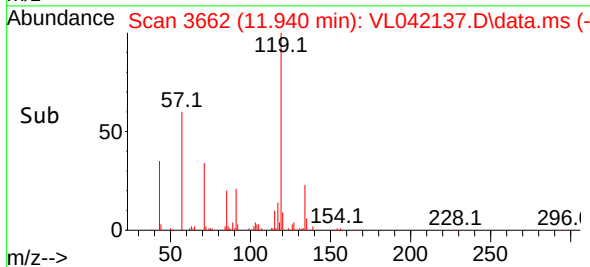
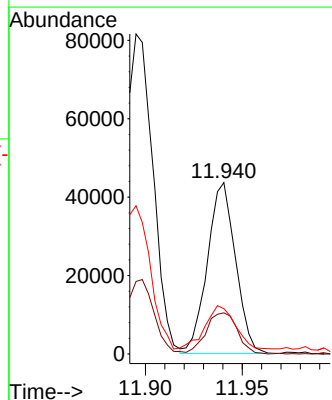
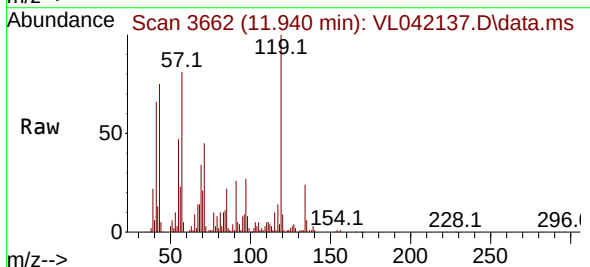
Instrument :  
MSVOA\_L  
ClientSampleId :  
SV2

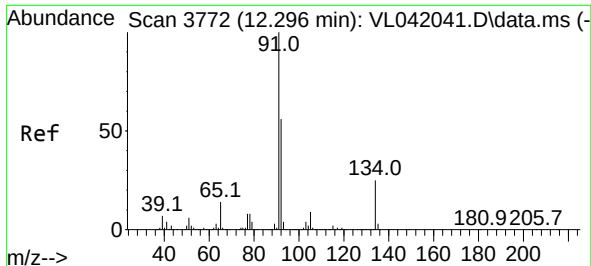
Tgt Ion: 95 Resp: 289970  
Ion Ratio Lower Upper  
95 100  
174 65.3 51.8 77.6  
175 4.6 3.9 5.9



#69  
p-Isopropyltoluene  
Concen: 0.566 ppbv  
RT: 11.940 min Scan# 3662  
Delta R.T. 0.000 min  
Lab File: VL042137.D  
Acq: 10 Mar 2025 21:38

Tgt Ion: 119 Resp: 43993  
Ion Ratio Lower Upper  
119 100  
134 27.0 20.9 31.3  
91 33.4 23.1 34.7

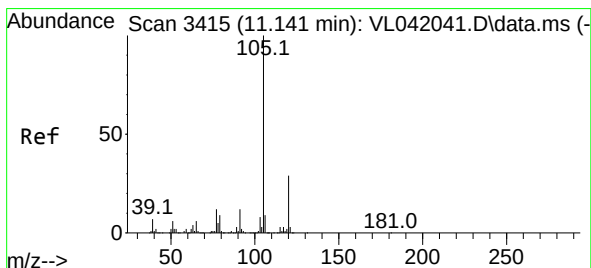
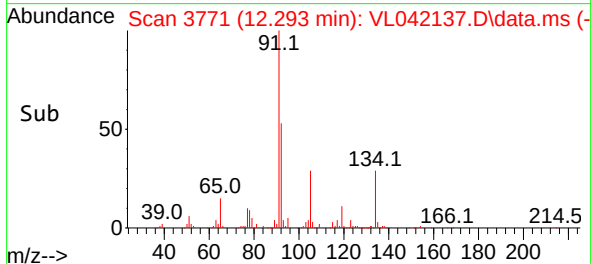
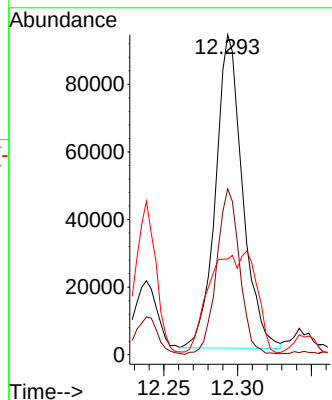
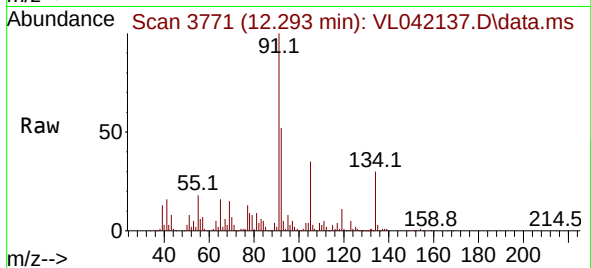




#70  
n-Butylbenzene  
Concen: 1.485 ppbv  
RT: 12.293 min Scan# 31  
Delta R.T. -0.003 min  
Lab File: VL042137.D  
Acq: 10 Mar 2025 21:38

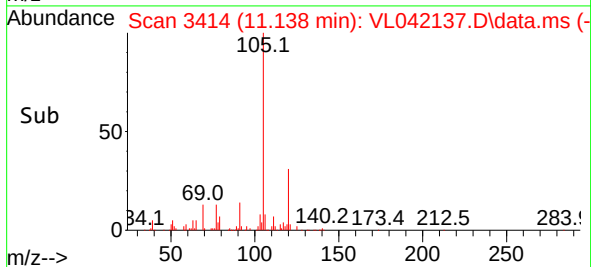
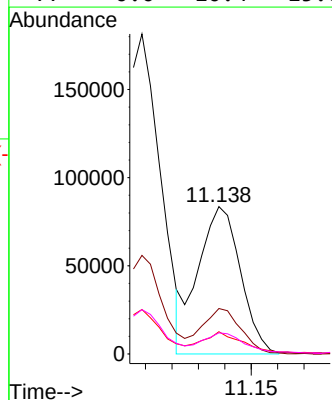
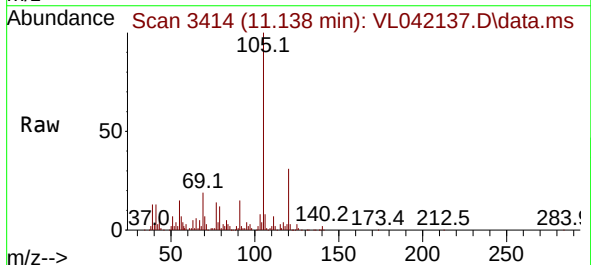
Instrument :  
MSVOA\_L  
ClientSampleId :  
SV2

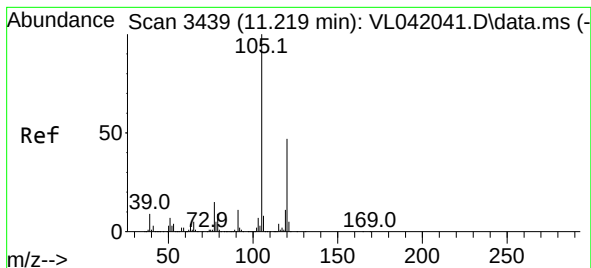
Tgt Ion: 91 Resp: 117905  
Ion Ratio Lower Upper  
91 100  
92 44.4 44.7 67.1#  
134 58.3 18.9 28.3#



#72  
4-Ethyltoluene  
Concen: 1.525 ppbv m  
RT: 11.138 min Scan# 3414  
Delta R.T. -0.003 min  
Lab File: VL042137.D  
Acq: 10 Mar 2025 21:38

Tgt Ion: 105 Resp: 93376  
Ion Ratio Lower Upper  
105 100  
120 0.0 24.1 36.1#  
91 0.0 10.2 15.4#  
77 0.0 10.4 15.6#





#73

1,3,5-Trimethylbenzene

Concen: 1.997 ppbv

RT: 11.215 min Scan# 3439

Delta R.T. -0.003 min

Lab File: VL042137.D

Acq: 10 Mar 2025 21:38

Instrument :

MSVOA\_L

ClientSampleId :

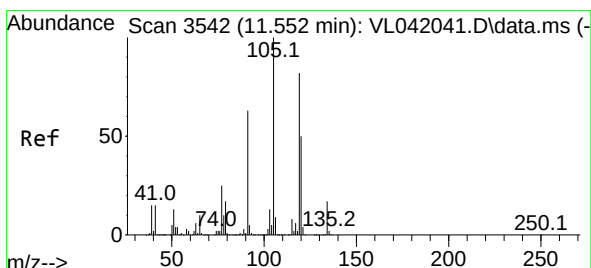
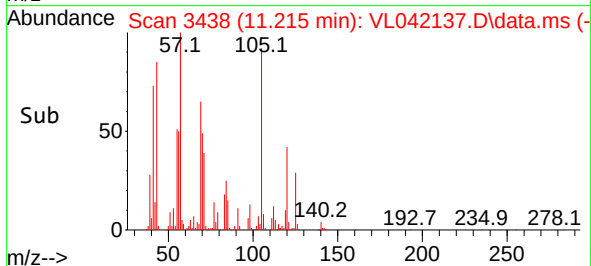
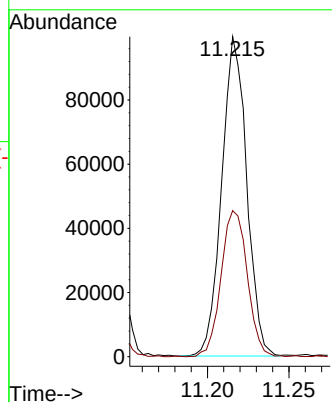
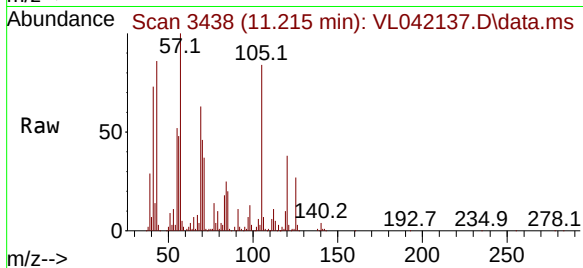
SV2

Tgt Ion:105 Resp: 106051

Ion Ratio Lower Upper

105 100

120 45.6 37.4 56.0



#74

1,2,4-Trimethylbenzene

Concen: 7.496 ppbv

RT: 11.549 min Scan# 3541

Delta R.T. -0.003 min

Lab File: VL042137.D

Acq: 10 Mar 2025 21:38

Tgt Ion:105 Resp: 448244

Ion Ratio Lower Upper

105 100

120 44.0 40.2 60.2

91 11.1 51.4 77.2#

77 14.1 20.1 30.1#

