

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_L\Data\VL081325\  
 Data File : VL042850.D  
 Acq On : 13 Aug 2025 13:46  
 Operator : SY/MD  
 Sample : VL0813ABL01  
 Misc : 400mL/MSVOA\_L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :

Quant Time: Aug 14 02:17:01 2025  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL081325AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022  
 QLast Update : Thu Aug 14 02:12:54 2025  
 Response via : Initial Calibration

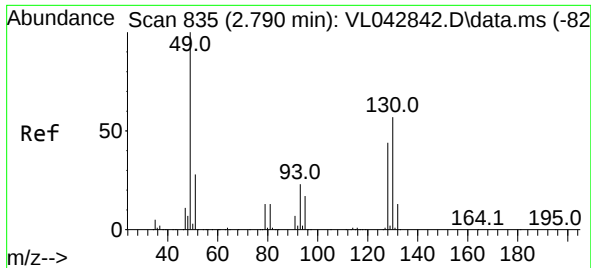
| Compound                | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|-------------------------|-------|------|----------|--------|-------|----------|
| -----                   |       |      |          |        |       |          |
| Internal Standards      |       |      |          |        |       |          |
| 1) Bromochloromethane   | 2.793 | 49   | 119946   | 10.000 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 3.968 | 114  | 373094   | 10.000 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 8.891 | 117  | 324853   | 10.000 | ppbv  | 0.00     |

|                             |        |       |          |          |      |          |
|-----------------------------|--------|-------|----------|----------|------|----------|
| System Monitoring Compounds |        |       |          |          |      |          |
| 68) 1-Bromo-4-Fluorobenzene | 10.387 | 95    | 243776   | 10.006   | ppbv | 0.00     |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 100.100% |

| Target Compounds           |        |     |       |       | Qvalue |    |
|----------------------------|--------|-----|-------|-------|--------|----|
| 6) Bromomethane            | 1.670  | 94  | 73    | 0.026 | ppbv # | 8  |
| 13) Ethanol                | 1.729  | 45  | 431   | 0.562 | ppbv # | 32 |
| 15) Acetone                | 1.839  | 43  | 3942  | 0.248 | ppbv # | 71 |
| 16) 1,3-Butadiene          | 1.602  | 39  | 848   | 0.118 | ppbv # | 10 |
| 17) tert-Butyl alcohol     | 2.046  | 59  | 609   | 0.032 | ppbv # | 1  |
| 18) 1,1-Dichloroethene     | 2.039  | 96  | 159   | 0.026 | ppbv # | 1  |
| 19) Isopropyl Alcohol      | 1.890  | 45  | 803   | 0.085 | ppbv # | 63 |
| 20) Methylene Chloride     | 2.065  | 84  | 1660  | 0.250 | ppbv # | 84 |
| 21) Allyl Chloride         | 2.104  | 41  | 243   | 0.022 | ppbv # | 23 |
| 34) 2-Butanone             | 2.567  | 43  | 1123  | 0.045 | ppbv # | 68 |
| 39) 1,2-Dichloropropane    | 3.965  | 63  | 93820 | 7.190 | ppbv # | 27 |
| 74) 1,2,4-Trimethylbenzene | 11.545 | 105 | 1284  | 0.025 | ppbv # | 67 |
| 79) Naphthalene            | 13.520 | 128 | 2297  | 0.050 | ppbv # | 95 |
| 80) Naphthalene,2-methyl-  | 14.471 | 142 | 1226  | 0.071 | ppbv   | 94 |
| 81) 1,2,4-Trichlorobenzene | 13.448 | 180 | 894   | 0.038 | ppbv # | 91 |

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





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 2.793 min Scan# 81

Delta R.T. 0.003 min

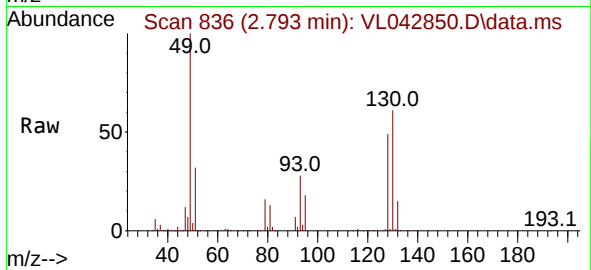
Lab File: VL042850.D

Acq: 13 Aug 2025 13:46

Instrument :

MSVOA\_L

ClientSampleId :



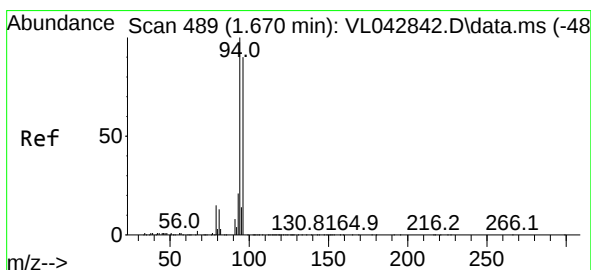
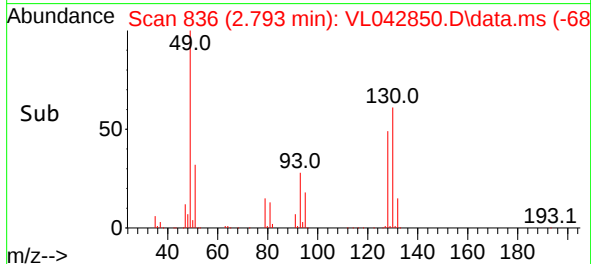
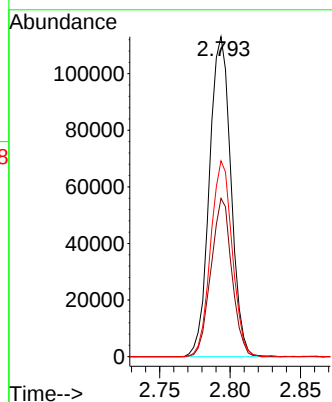
Tgt Ion: 49 Resp: 119946

Ion Ratio Lower Upper

49 100

128 48.0 23.7 71.1

130 61.5 30.6 91.6



#6

Bromomethane

Concen: 0.026 ppbv

RT: 1.670 min Scan# 489

Delta R.T. -0.000 min

Lab File: VL042850.D

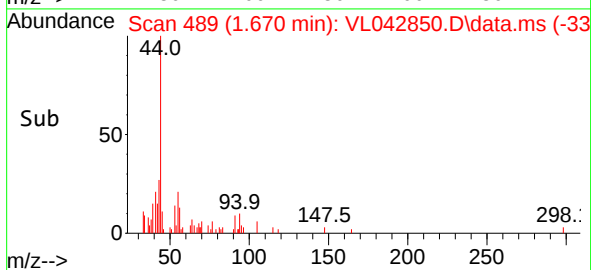
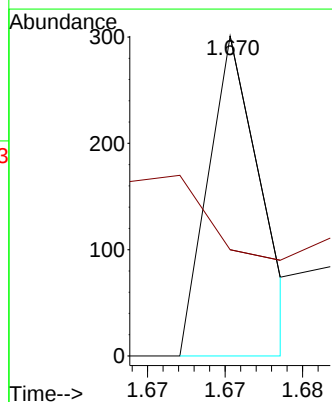
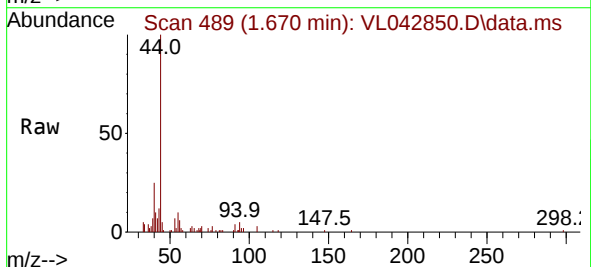
Acq: 13 Aug 2025 13:46

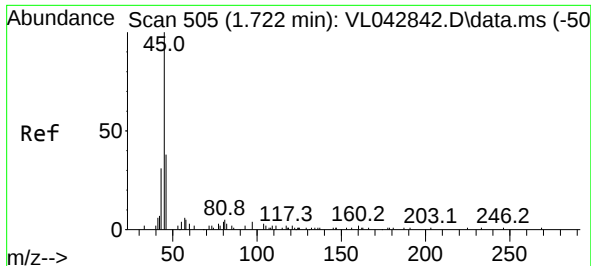
Tgt Ion: 94 Resp: 73

Ion Ratio Lower Upper

94 100

96 3.3 72.1 108.1#

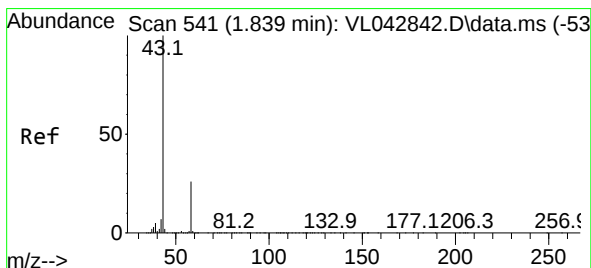
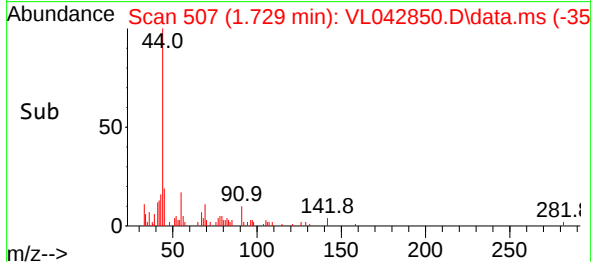
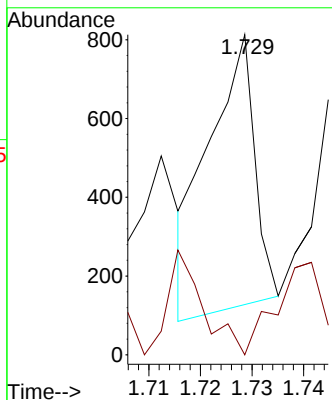
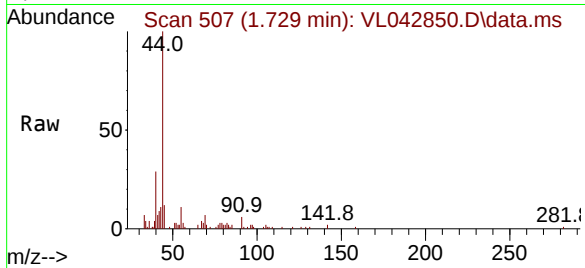




#13  
Ethanol  
Concen: 0.562 ppbv  
RT: 1.729 min Scan# 505  
Delta R.T. 0.006 min  
Lab File: VL042850.D  
Acq: 13 Aug 2025 13:46

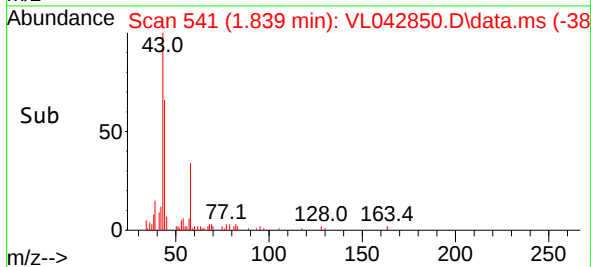
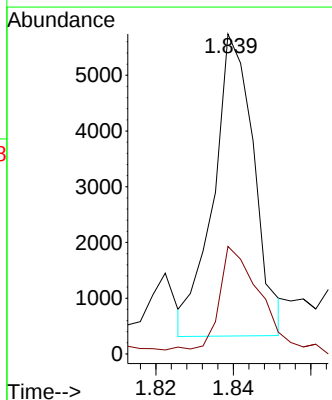
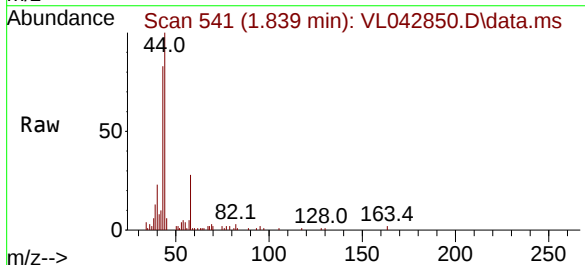
Instrument :  
MSVOA\_L  
ClientSampleId :

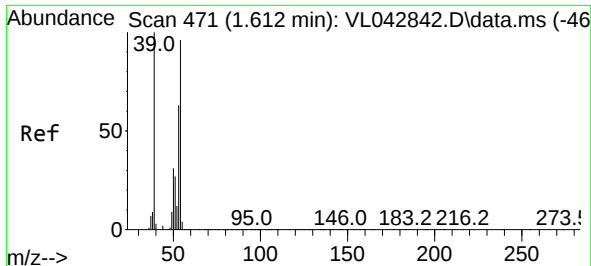
Tgt Ion: 45 Resp: 431  
Ion Ratio Lower Upper  
45 100  
46 0.0 17.5 69.9#



#15  
Acetone  
Concen: 0.248 ppbv  
RT: 1.839 min Scan# 541  
Delta R.T. -0.000 min  
Lab File: VL042850.D  
Acq: 13 Aug 2025 13:46

Tgt Ion: 43 Resp: 3942  
Ion Ratio Lower Upper  
43 100  
58 43.0 22.4 33.6#





#16

1,3-Butadiene

Concen: 0.118 ppbv

RT: 1.602 min Scan# 4

Delta R.T. -0.010 min

Lab File: VL042850.D

Acq: 13 Aug 2025 13:46

Instrument :

MSVOA\_L

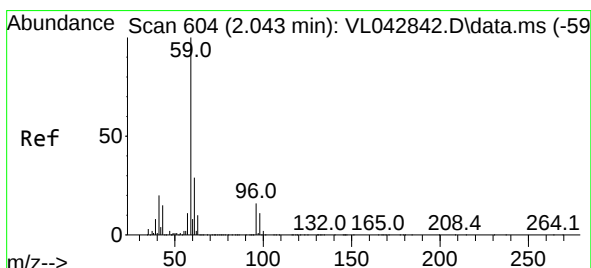
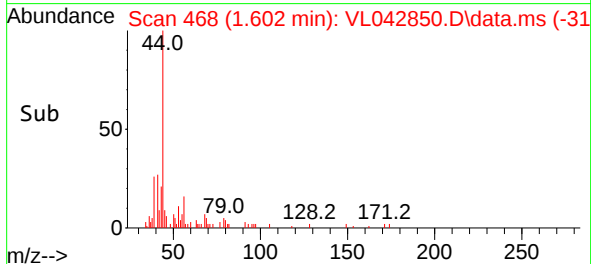
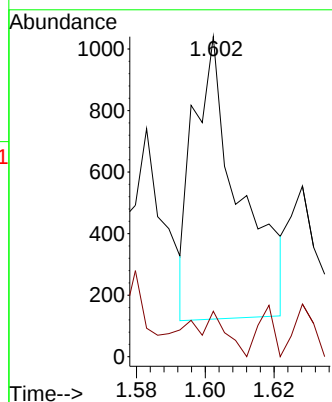
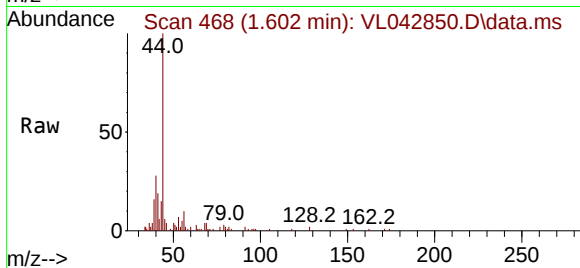
ClientSampleId :

Tgt Ion: 39 Resp: 848

Ion Ratio Lower Upper

39 100

54 0.0 63.6 95.4#



#17

tert-Butyl alcohol

Concen: 0.032 ppbv

RT: 2.046 min Scan# 605

Delta R.T. 0.003 min

Lab File: VL042850.D

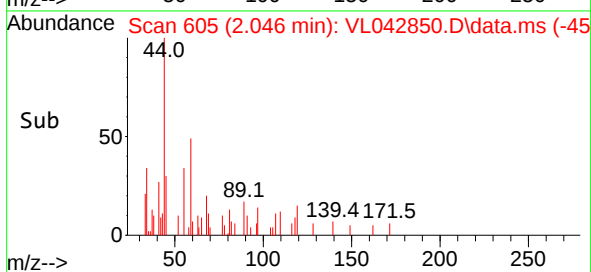
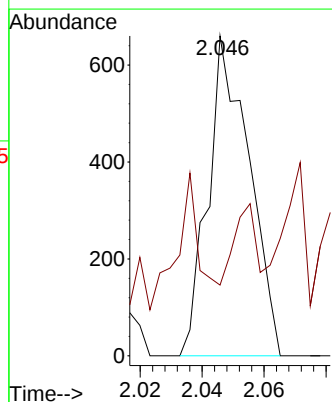
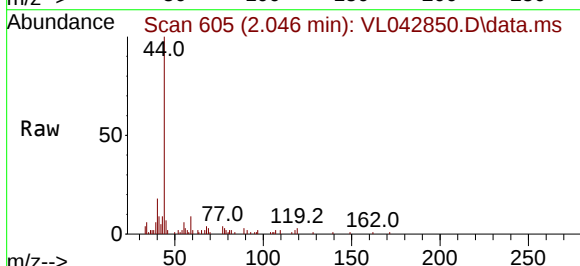
Acq: 13 Aug 2025 13:46

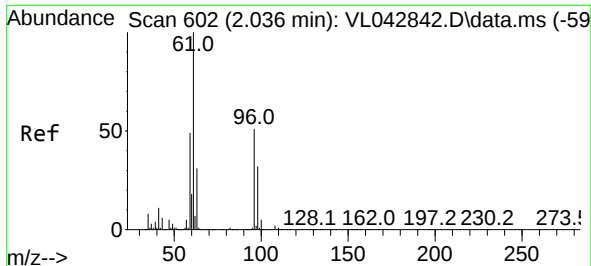
Tgt Ion: 59 Resp: 609

Ion Ratio Lower Upper

59 100

57 74.1 9.0 13.4#





#18

1,1-Dichloroethene

Concen: 0.026 ppbv

RT: 2.039 min Scan# 602

Delta R.T. 0.003 min

Lab File: VL042850.D

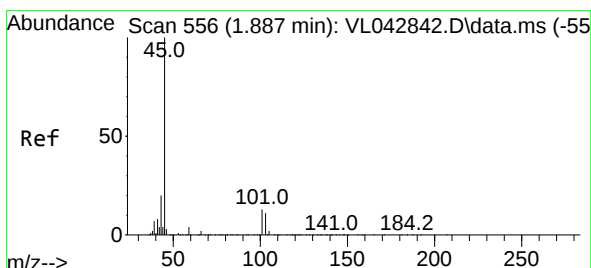
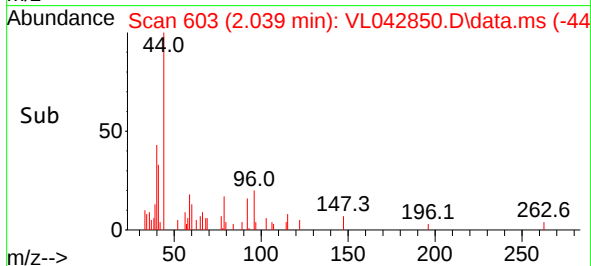
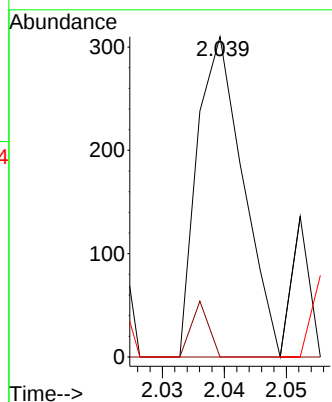
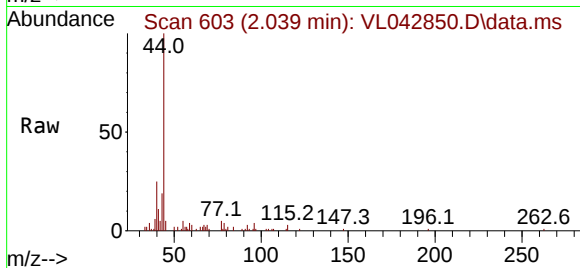
Acq: 13 Aug 2025 13:46

Instrument :

MSVOA\_L

ClientSampleId :

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 96    | Resp: | 159    |
| Ion      | Ratio | Lower | Upper  |
| 96       | 100   |       |        |
| 61       | 0.0   | 158.2 | 237.4# |
| 98       | 0.0   | 50.6  | 76.0#  |



#19

Isopropyl Alcohol

Concen: 0.085 ppbv

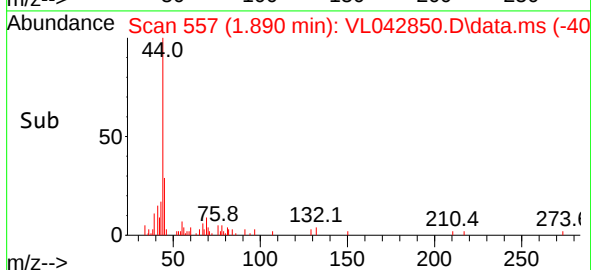
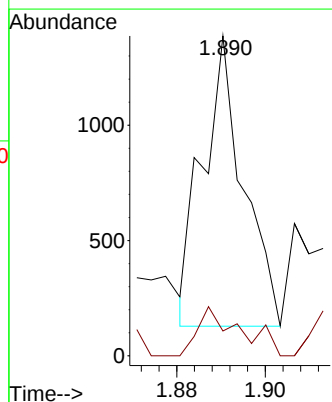
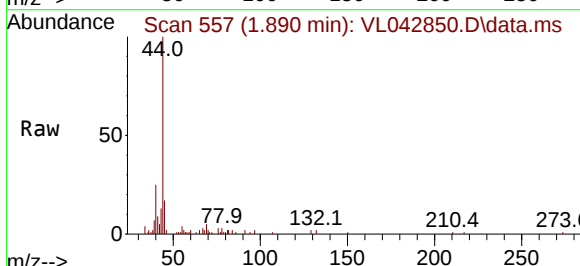
RT: 1.890 min Scan# 557

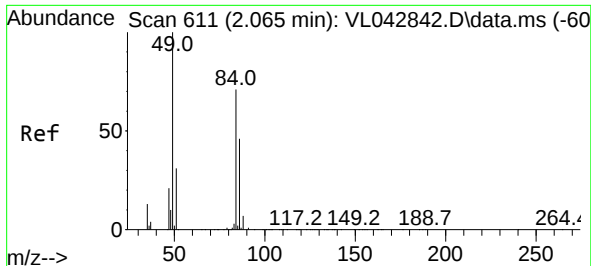
Delta R.T. 0.003 min

Lab File: VL042850.D

Acq: 13 Aug 2025 13:46

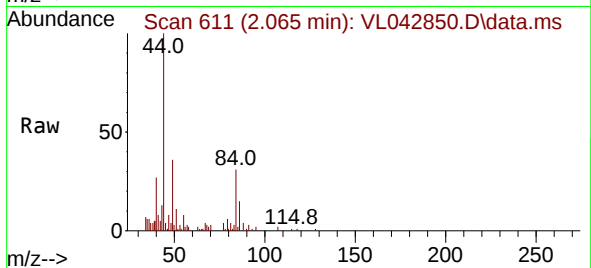
|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 45    | Resp: | 803   |
| Ion      | Ratio | Lower | Upper |
| 45       | 100   |       |       |
| 58       | 17.7  | 32.7  | 49.1# |



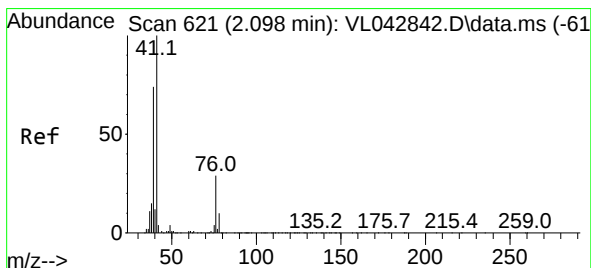
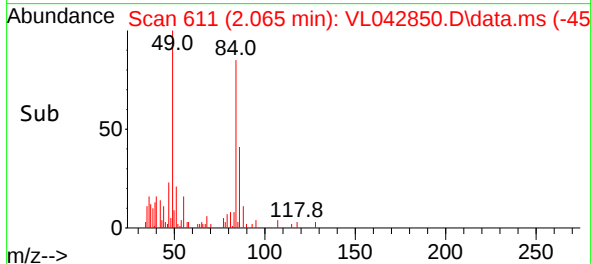
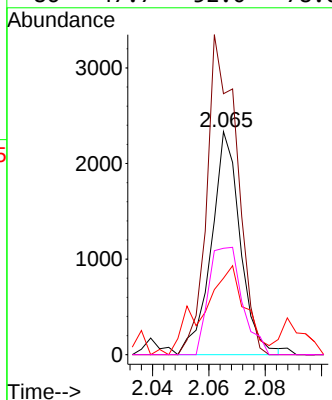


#20  
Methylene Chloride  
Concen: 0.250 ppbv  
RT: 2.065 min Scan# 611  
Delta R.T. -0.000 min  
Lab File: VL042850.D  
Acq: 13 Aug 2025 13:46

Instrument :  
MSVOA\_L  
ClientSampleId :

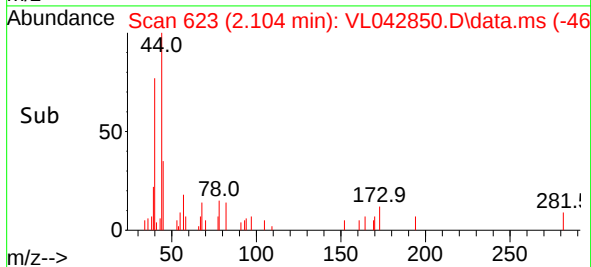
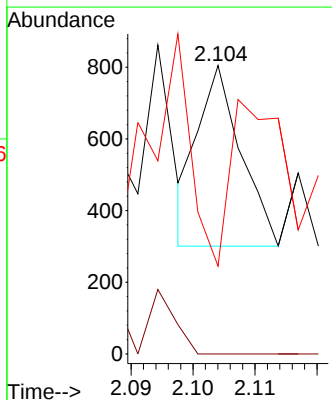
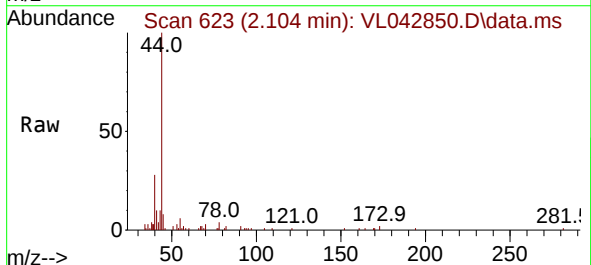


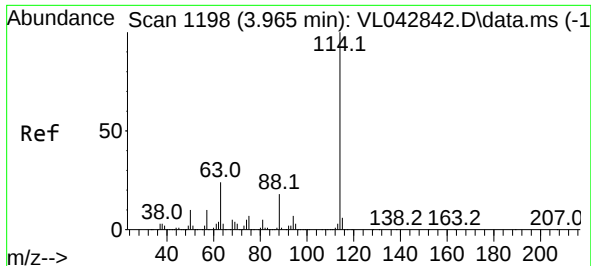
|             |             |
|-------------|-------------|
| Tgt Ion: 84 | Resp: 1660  |
| Ion Ratio   | Lower Upper |
| 84 100      |             |
| 49 127.9    | 112.3 168.5 |
| 51 27.5     | 36.0 54.0#  |
| 86 47.7     | 52.0 78.0#  |



#21  
Allyl Chloride  
Concen: 0.022 ppbv  
RT: 2.104 min Scan# 623  
Delta R.T. 0.006 min  
Lab File: VL042850.D  
Acq: 13 Aug 2025 13:46

|             |             |
|-------------|-------------|
| Tgt Ion: 41 | Resp: 243   |
| Ion Ratio   | Lower Upper |
| 41 100      |             |
| 76 0.0      | 23.9 35.9#  |
| 39 0.0      | 57.8 86.6#  |





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.968 min Scan# 1198

Delta R.T. 0.003 min

Lab File: VL042850.D

Acq: 13 Aug 2025 13:46

Instrument :

MSVOA\_L

ClientSampleId :

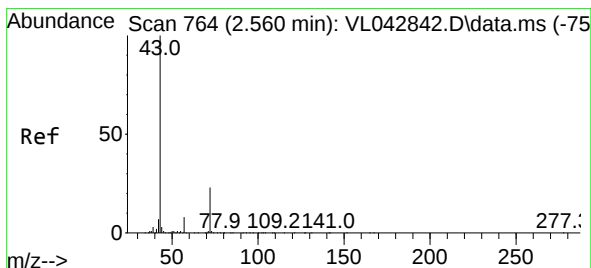
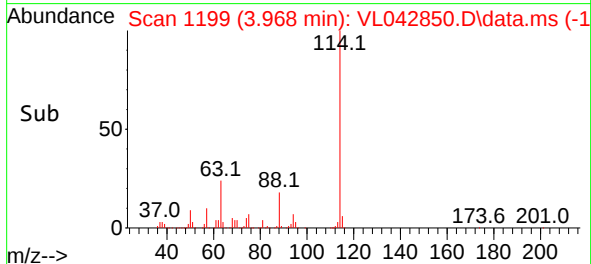
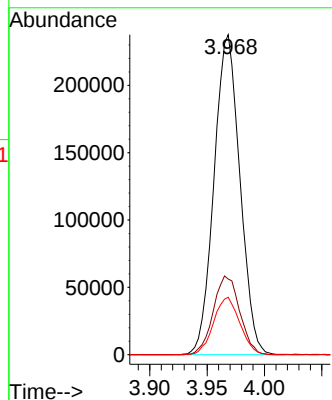
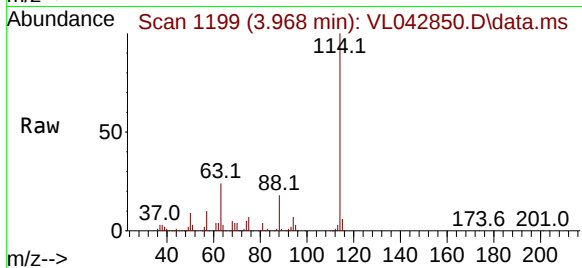
Tgt Ion:114 Resp: 373094

Ion Ratio Lower Upper

114 100

63 25.1 19.7 29.5

88 18.2 14.4 21.6



#34

2-Butanone

Concen: 0.045 ppbv

RT: 2.567 min Scan# 766

Delta R.T. 0.006 min

Lab File: VL042850.D

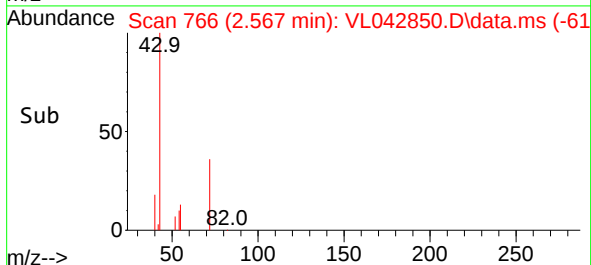
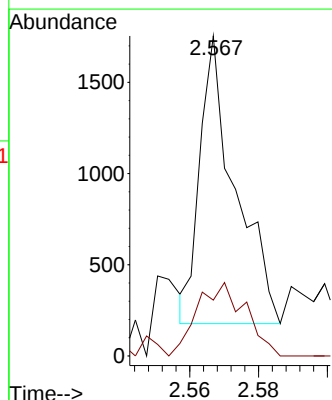
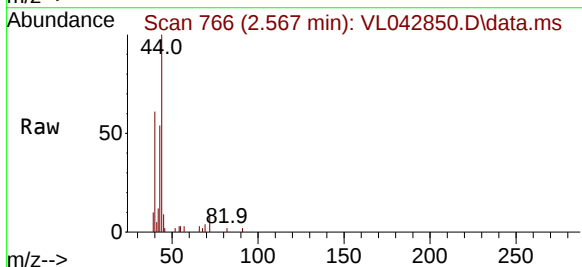
Acq: 13 Aug 2025 13:46

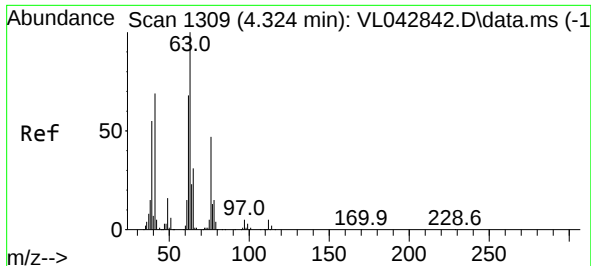
Tgt Ion: 43 Resp: 1123

Ion Ratio Lower Upper

43 100

72 38.8 18.6 28.0#





#39

1,2-Dichloropropane

Concen: 7.190 ppbv

RT: 3.965 min Scan# 1198

Delta R.T. -0.359 min

Lab File: VL042850.D

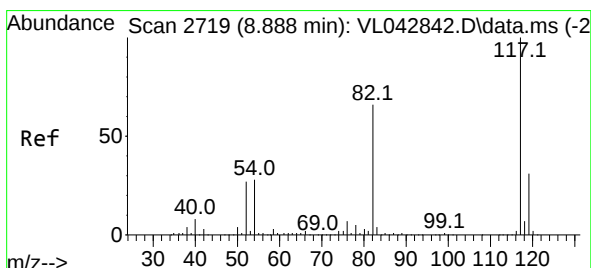
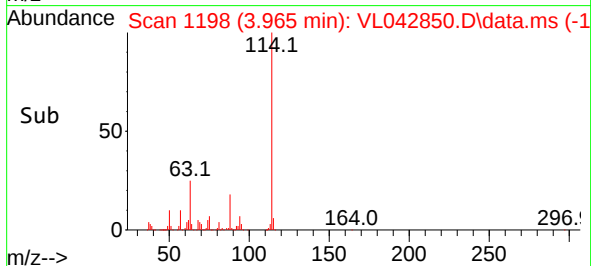
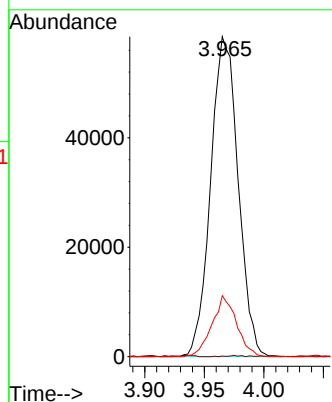
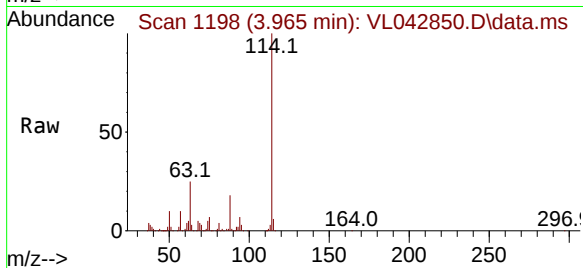
Acq: 13 Aug 2025 13:46

Instrument :

MSVOA\_L

ClientSampleId :

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 63    | Resp: | 93820 |
| Ion      | Ratio | Lower | Upper |
| 63       | 100   |       |       |
| 41       | 0.1   | 55.0  | 82.4# |
| 62       | 19.0  | 54.4  | 81.6# |



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

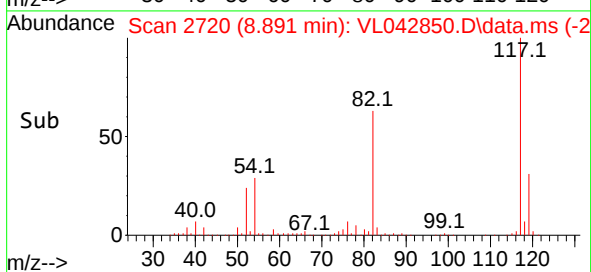
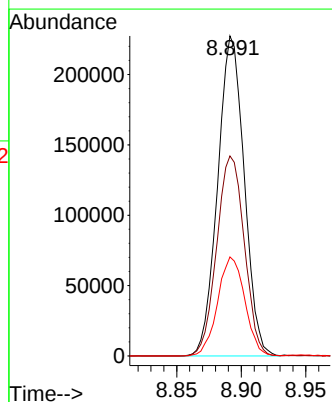
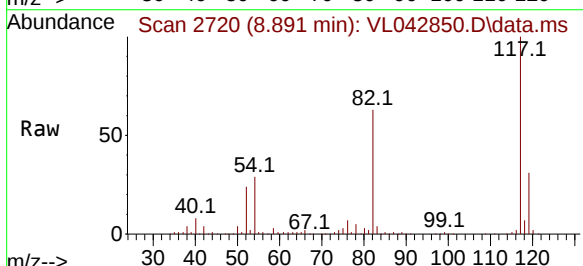
RT: 8.891 min Scan# 2720

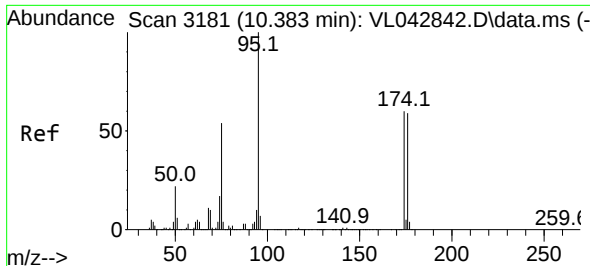
Delta R.T. 0.003 min

Lab File: VL042850.D

Acq: 13 Aug 2025 13:46

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 117   | Resp: | 324853 |
| Ion      | Ratio | Lower | Upper  |
| 117      | 100   |       |        |
| 82       | 64.9  | 54.6  | 81.8   |
| 119      | 31.9  | 25.9  | 38.9   |

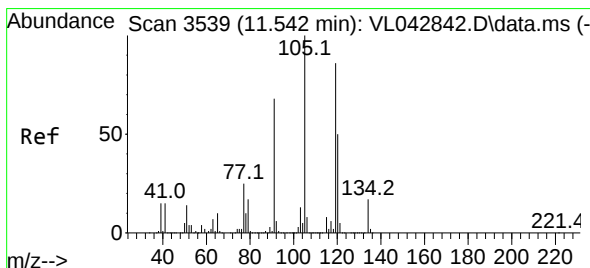
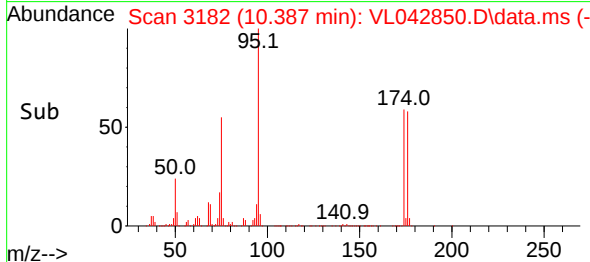
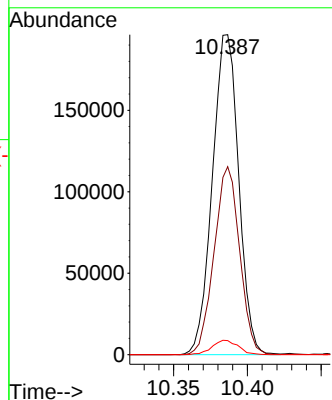
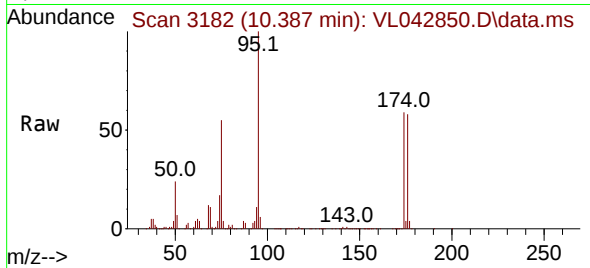




#68  
1-Bromo-4-Fluorobenzene  
Concen: 10.006 ppbv  
RT: 10.387 min Scan# 3181  
Delta R.T. 0.003 min  
Lab File: VL042850.D  
Acq: 13 Aug 2025 13:46

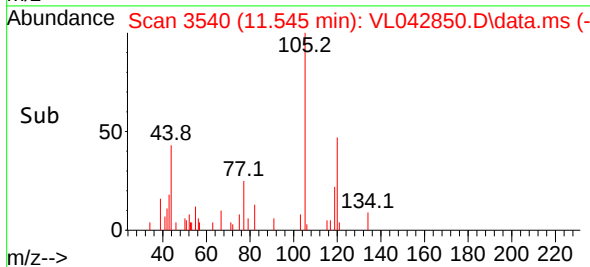
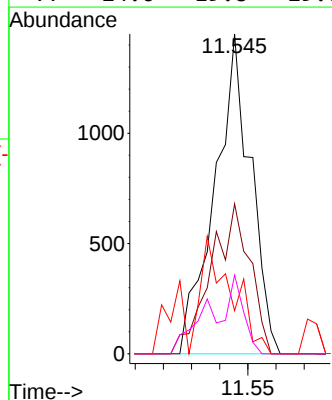
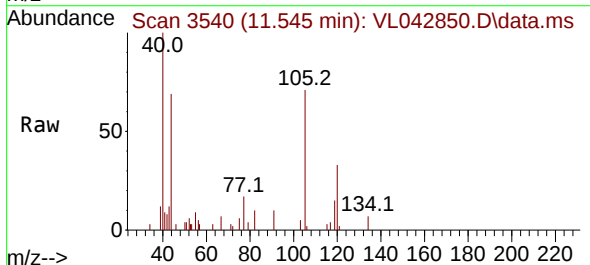
Instrument :  
MSVOA\_L  
ClientSampleId :

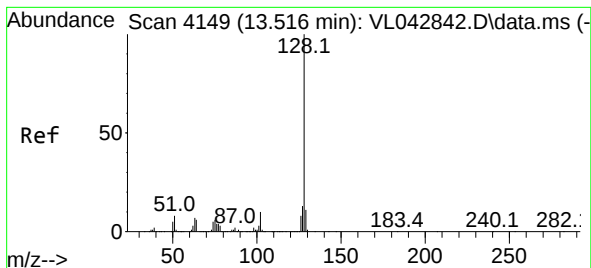
Tgt Ion: 95 Resp: 243776  
Ion Ratio Lower Upper  
95 100  
174 57.2 48.4 72.6  
175 4.5 3.8 5.8



#74  
1,2,4-Trimethylbenzene  
Concen: 0.025 ppbv  
RT: 11.545 min Scan# 3540  
Delta R.T. 0.003 min  
Lab File: VL042850.D  
Acq: 13 Aug 2025 13:46

Tgt Ion: 105 Resp: 1284  
Ion Ratio Lower Upper  
105 100  
120 50.4 39.8 59.6  
91 13.4 54.2 81.4#  
77 24.6 19.8 29.6





#79

Naphthalene

Concen: 0.050 ppbv

RT: 13.520 min Scan# 4149

Delta R.T. 0.003 min

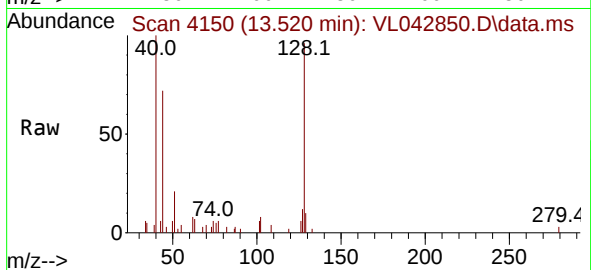
Lab File: VL042850.D

Acq: 13 Aug 2025 13:46

Instrument :

MSVOA\_L

ClientSampleId :



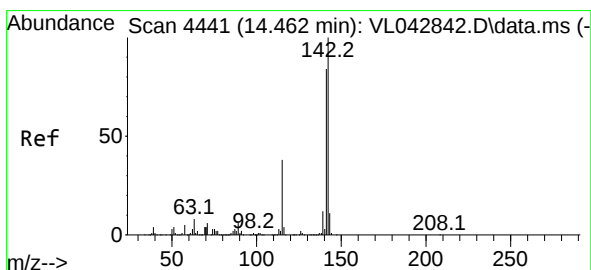
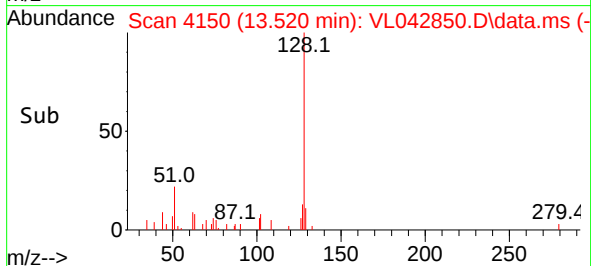
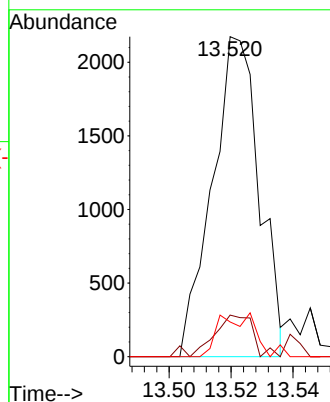
Tgt Ion:128 Resp: 2297

Ion Ratio Lower Upper

128 100

127 9.6 10.6 16.0#

129 10.9 8.9 13.3



#80

Naphthalene,2-methyl-

Concen: 0.071 ppbv

RT: 14.471 min Scan# 4444

Delta R.T. 0.010 min

Lab File: VL042850.D

Acq: 13 Aug 2025 13:46

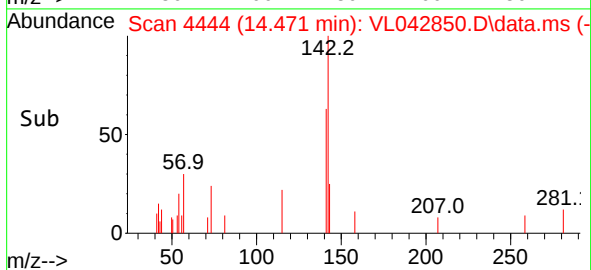
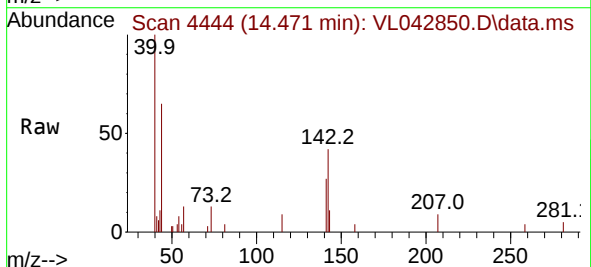
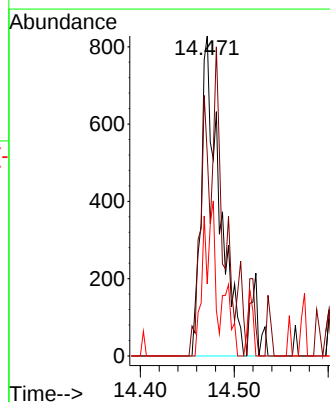
Tgt Ion:142 Resp: 1226

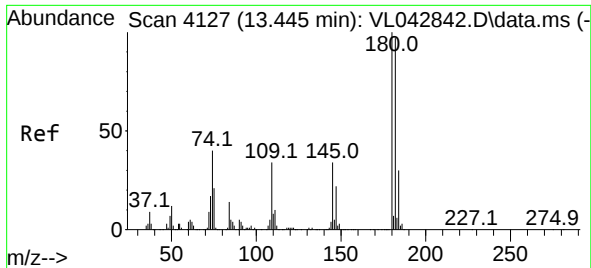
Ion Ratio Lower Upper

142 100

141 91.1 67.0 100.6

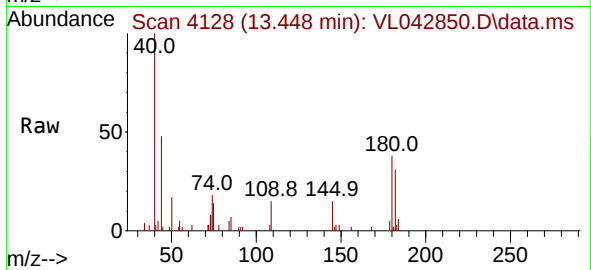
115 37.5 30.9 46.3





#81  
 1,2,4-Trichlorobenzene  
 Concen: 0.038 ppbv  
 RT: 13.448 min Scan# 41  
 Delta R.T. 0.003 min  
 Lab File: VL042850.D  
 Acq: 13 Aug 2025 13:46

Instrument :  
 MSVOA\_L  
 ClientSampleId :



Tgt Ion:180 Resp: 894  
 Ion Ratio Lower Upper  
 180 100  
 182 101.2 76.9 115.3  
 184 19.7 24.5 36.7#

