

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_N\Data\VN101725\  
 Data File : VN088065.D  
 Acq On : 17 Oct 2025 13:36  
 Operator : JC\MD  
 Sample : Q3362-01  
 Misc : 5.0mL/MSVOA\_N/WATER  
 ALS Vial : 12 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VOA 251015085-01

Quant Time: Oct 18 01:29:23 2025  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_N\methods\624N100825W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Thu Oct 09 02:36:32 2025  
 Response via : Initial Calibration

Manual Integrations  
 APPROVED

Reviewed By :John Carlone 10/20/2025  
 Supervised By :Mahesh Dadoda 10/20/2025

| Compound                    | R.T.           | QIon | Response            | Conc    | Units  | Dev(Min) |
|-----------------------------|----------------|------|---------------------|---------|--------|----------|
| -----                       |                |      |                     |         |        |          |
| Internal Standards          |                |      |                     |         |        |          |
| 1) Bromochloromethane       | 7.800          | 128  | 59993               | 30.000  | ug/l   | 0.00     |
| 28) 1,4-Difluorobenzene     | 9.082          | 114  | 311111              | 30.000  | ug/l   | 0.00     |
| 57) Chlorobenzene-d5        | 11.847         | 117  | 282237              | 30.000  | ug/l   | 0.00     |
|                             |                |      |                     |         |        |          |
| System Monitoring Compounds |                |      |                     |         |        |          |
| 27) 1,2-Dichloroethane-d4   | 8.559          | 65   | 146632              | 31.388  | ug/l   | 0.00     |
| Spiked Amount 30.000        | Range 91 - 110 |      | Recovery = 104.633% |         |        |          |
| 60) 4-Bromofluorobenzene    | 12.829         | 95   | 134961              | 29.006  | ug/l   | 0.00     |
| Spiked Amount 30.000        | Range 63 - 112 |      | Recovery = 96.700%  |         |        |          |
| 63) Toluene-d8              | 10.547         | 98   | 381294              | 30.322  | ug/l   | 0.00     |
| Spiked Amount 30.000        | Range 91 - 112 |      | Recovery = 101.067% |         |        |          |
|                             |                |      |                     |         |        |          |
| Target Compounds            |                |      |                     |         |        |          |
|                             |                |      |                     |         | Qvalue |          |
| 2) Dichlorodifluoromethane  | 2.148          | 85   | 1180m               | 0.343   | ug/l   |          |
| 6) Chloroethane             | 3.148          | 64   | 2599                | 0.970   | ug/l   | 91       |
| 8) Diethyl Ether            | 3.959          | 74   | 44491               | 17.826  | ug/l   | 93       |
| 23) tert-Butyl Alcohol      | 5.512          | 59   | 246221              | 248.079 | ug/l # | 100      |
| 24) Methyl tert-Butyl Ether | 5.800          | 73   | 8441m               | 0.620   | ug/l   |          |
| 34) Benzene                 | 8.583          | 78   | 32137               | 2.173   | ug/l # | 30       |
| 45) 1,4-Dioxane             | 9.682          | 88   | 15497               | 225.643 | ug/l # | 88       |
| 62) Toluene                 | 10.606         | 91   | 8529                | 0.533   | ug/l   | 98       |
| 64) Chlorobenzene           | 11.871         | 112  | 203043              | 19.856  | ug/l   | 98       |
| 66) Ethyl Benzene           | 11.941         | 91   | 12189               | 0.700   | ug/l   | 94       |
| 67) m/p-Xylenes             | 12.047         | 106  | 28348               | 4.224   | ug/l   | 96       |
| 68) o-Xylene                | 12.371         | 106  | 20472               | 3.064   | ug/l   | 92       |
| 70) Isopropylbenzene        | 12.670         | 105  | 17470               | 1.067   | ug/l   | 99       |
| 74) n-propylbenzene         | 13.023         | 91   | 5647                | 0.286   | ug/l   | 98       |
| 75) 2-Chlorotoluene         | 13.100         | 91   | 8603                | 0.712   | ug/l   | 99       |
| 76) 1,3,5-Trimethylbenzene  | 13.159         | 105  | 5140                | 0.370   | ug/l   | 51       |
| 80) 1,2,4-Trimethylbenzene  | 13.465         | 105  | 28157               | 2.022   | ug/l   | 96       |
| 84) 1,4-Dichlorobenzene     | 13.794         | 146  | 66054               | 8.506   | ug/l   | 99       |
| 87) 1,2-Dichlorobenzene     | 14.088         | 146  | 5312                | 0.717   | ug/l   | 95       |
| 91) Naphthalene             | 15.611         | 128  | 109504              | 6.780   | ug/l   | 99       |
| -----                       |                |      |                     |         |        |          |

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

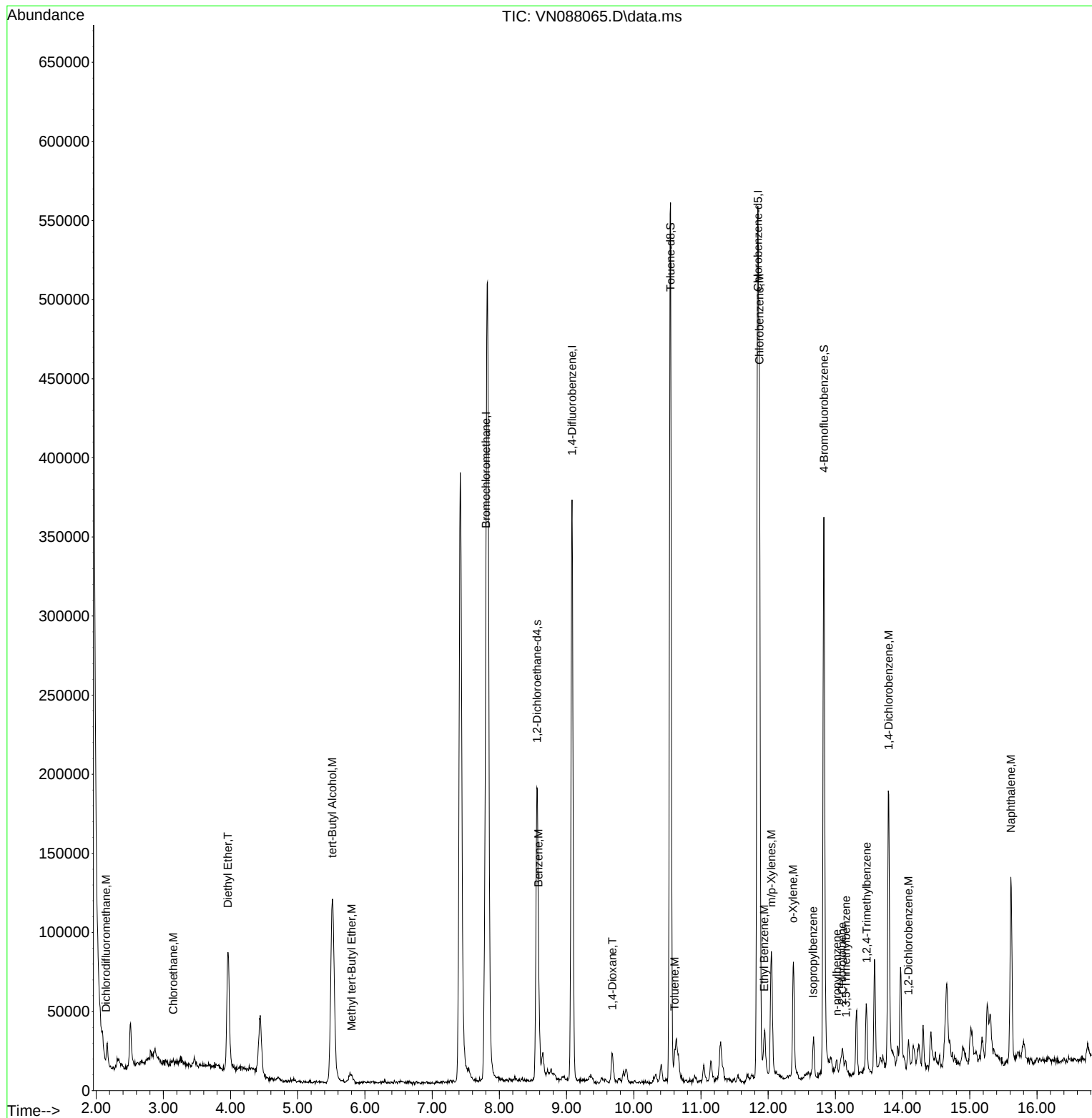
Data Path : Z:\voasrv\HPCHEM1\MSVOA\_N\Data\VN101725\  
Data File : VN088065.D  
Acq On : 17 Oct 2025 13:36  
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ALS Vial : 12 Sample Multiplier: 1

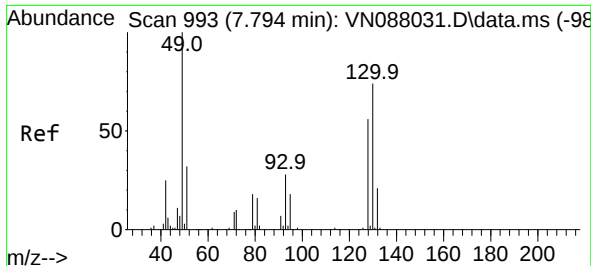
Instrument :  
MSVOA\_N  
ClientSampleId :  
VOA 251015085-01

Quant Time: Oct 18 01:29:23 2025  
Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_N\methods\624N100825W.M  
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
QLast Update : Thu Oct 09 02:36:32 2025  
Response via : Initial Calibration

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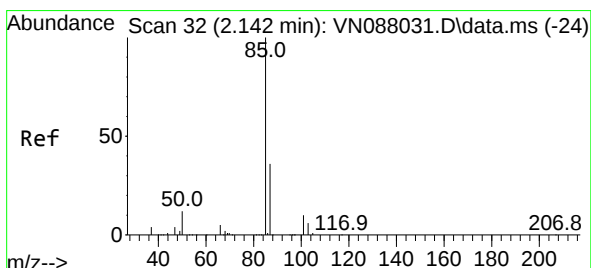
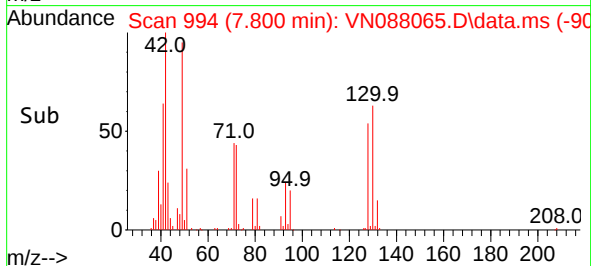
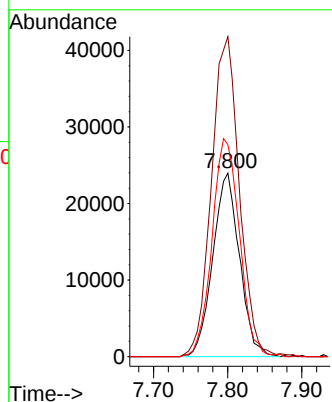
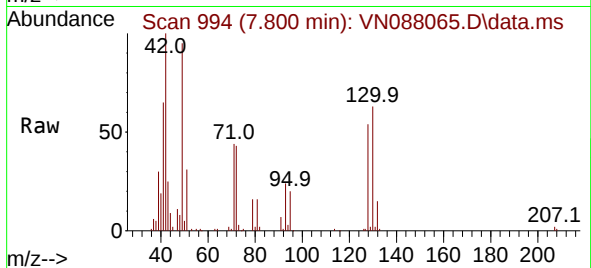
#1  
Bromochloromethane  
Concen: 30.000 ug/l  
RT: 7.800 min Scan# 993  
Delta R.T. 0.006 min  
Lab File: VN088065.D  
Acq: 17 Oct 2025 13:36

Instrument :  
MSVOA\_N  
ClientSampleId :  
VOA 251015085-01

Tgt Ion:128 Resp: 5999  
Ion Ratio Lower Upper  
128 100  
49 181.9 0.0 439.8  
130 121.8 0.0 325.8

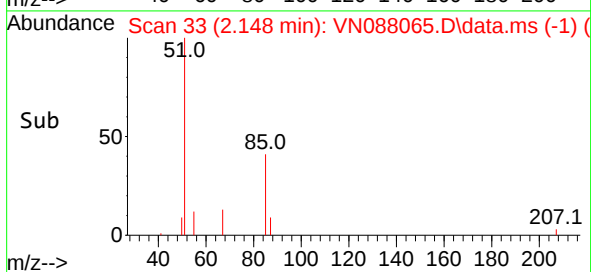
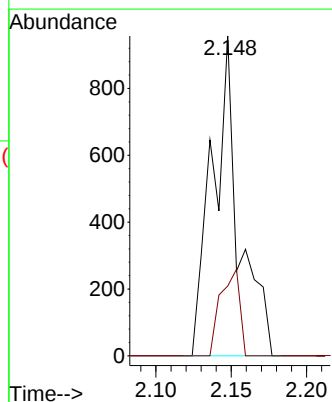
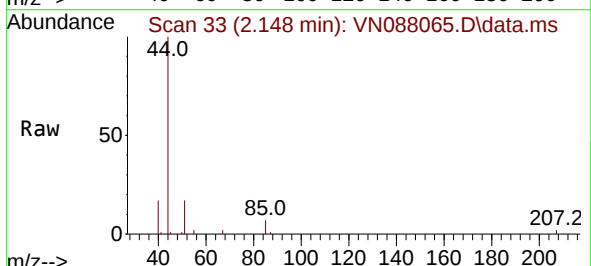
Manual Integrations  
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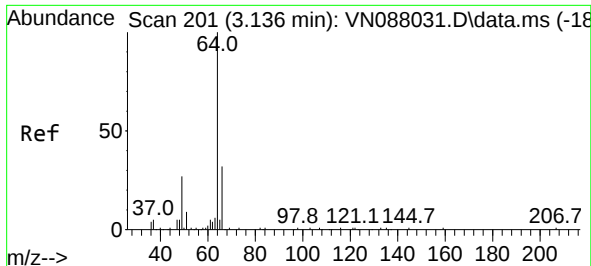
Reviewed By :John Carlone 10/20/2025  
Supervised By :Mahesh Dadoda 10/20/2025



#2  
Dichlorodifluoromethane  
Concen: 0.343 ug/l m  
RT: 2.148 min Scan# 33  
Delta R.T. 0.006 min  
Lab File: VN088065.D  
Acq: 17 Oct 2025 13:36

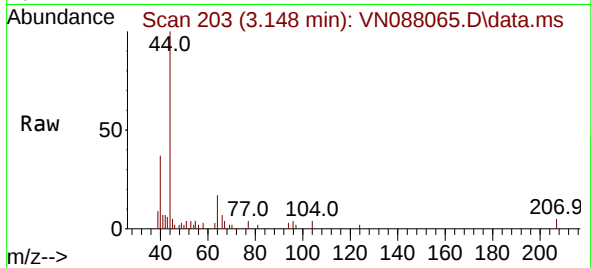
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Ion Ratio Lower Upper  
85 100  
87 21.8 17.9 53.8





#6  
Chloroethane  
Concen: 0.970 ug/l  
RT: 3.148 min Scan# 201  
Delta R.T. 0.012 min  
Lab File: VN088065.D  
Acq: 17 Oct 2025 13:36

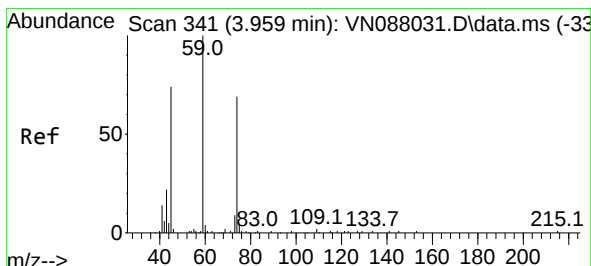
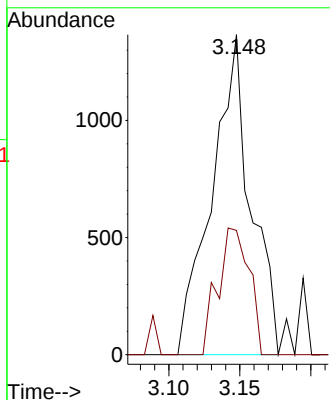
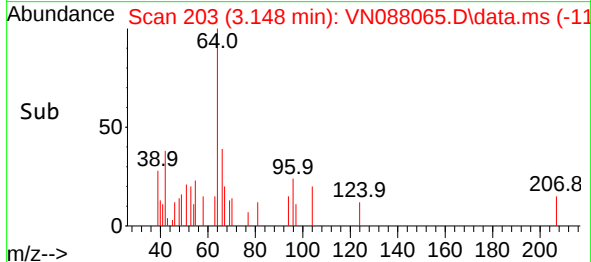
Instrument :  
MSVOA\_N  
ClientSampleId :  
VOA 251015085-01



Tgt Ion: 64 Resp: 2599  
Ion Ratio Lower Upper  
64 100  
66 38.9 26.8 40.2

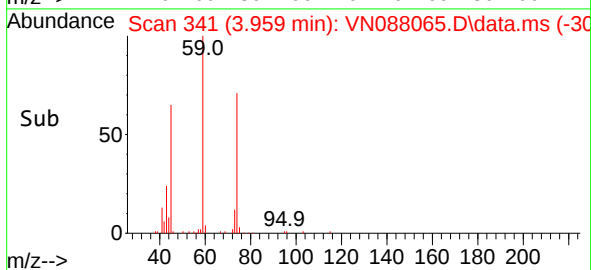
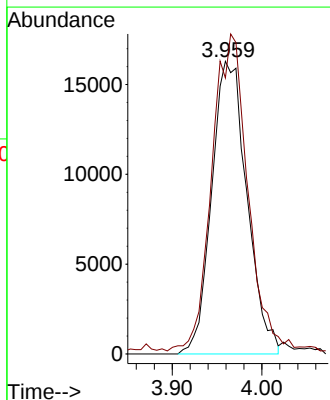
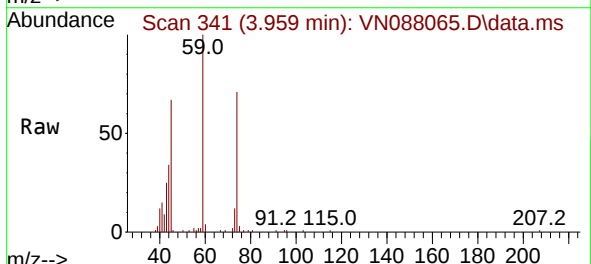
Manual Integrations  
APPROVED

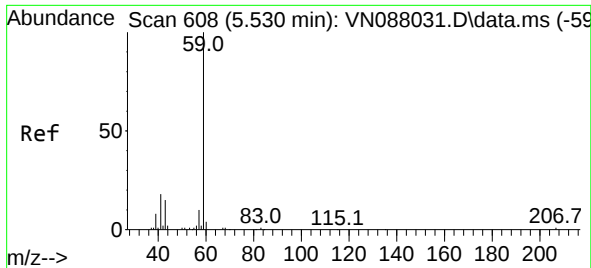
Reviewed By :John Carlone 10/20/2025  
Supervised By :Mahesh Dadoda 10/20/2025



#8  
Diethyl Ether  
Concen: 17.826 ug/l  
RT: 3.959 min Scan# 341  
Delta R.T. 0.000 min  
Lab File: VN088065.D  
Acq: 17 Oct 2025 13:36

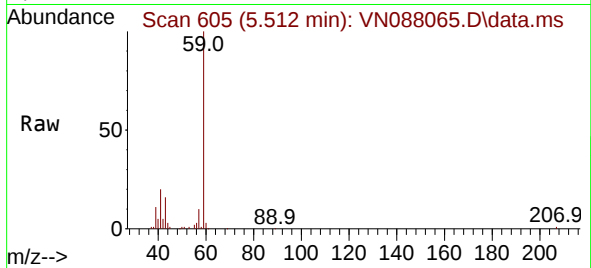
Tgt Ion: 74 Resp: 44491  
Ion Ratio Lower Upper  
74 100  
45 109.5 20.4 183.8





#23  
tert-Butyl Alcohol  
Concen: 248.079 ug/l  
RT: 5.512 min Scan# 608  
Delta R.T. -0.018 min  
Lab File: VN088065.D  
Acq: 17 Oct 2025 13:36

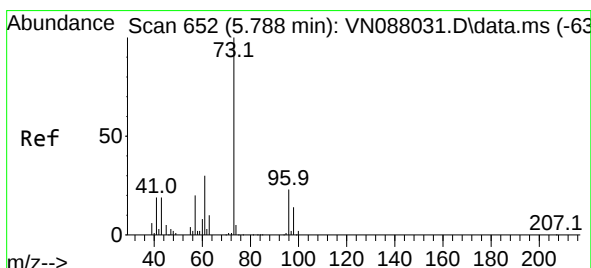
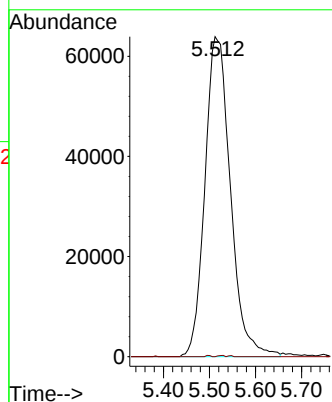
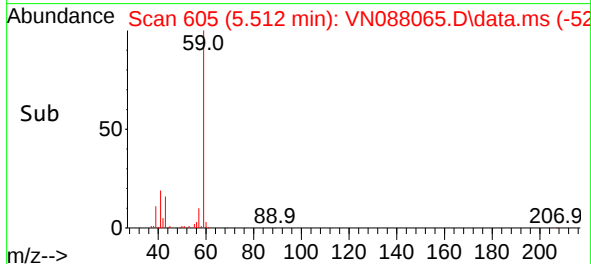
Instrument :  
MSVOA\_N  
ClientSampleId :  
VOA 251015085-01



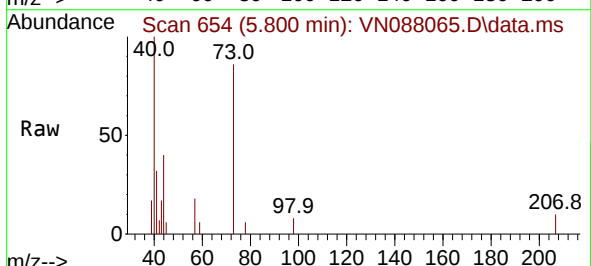
Tgt Ion: 59 Resp: 24622  
Ion Ratio Lower Upper  
59 100  
52 0.1 0.0 0.0

Manual Integrations  
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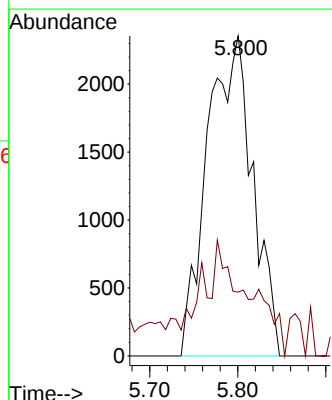
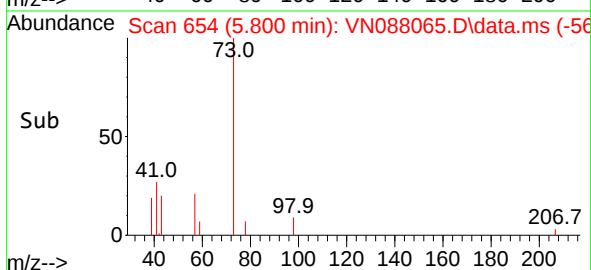
Reviewed By :John Carlone 10/20/2025  
Supervised By :Mahesh Dadoda 10/20/2025

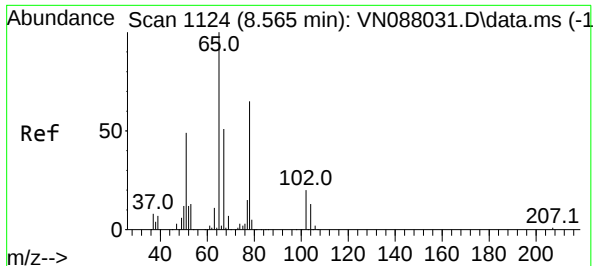


#24  
Methyl tert-Butyl Ether  
Concen: 0.620 ug/l m  
RT: 5.800 min Scan# 654  
Delta R.T. 0.012 min  
Lab File: VN088065.D  
Acq: 17 Oct 2025 13:36



Tgt Ion: 73 Resp: 8441  
Ion Ratio Lower Upper  
73 100  
43 11.4 17.0 25.4





#27

1,2-Dichloroethane-d4

Concen: 31.388 ug/l

RT: 8.559 min Scan# 1123

Delta R.T. -0.006 min

Lab File: VN088065.D

Acq: 17 Oct 2025 13:36

Instrument :

MSVOA\_N

ClientSampleId :

VOA 251015085-01

Tgt Ion: 65 Resp: 14663

Ion Ratio Lower Upper

65 100

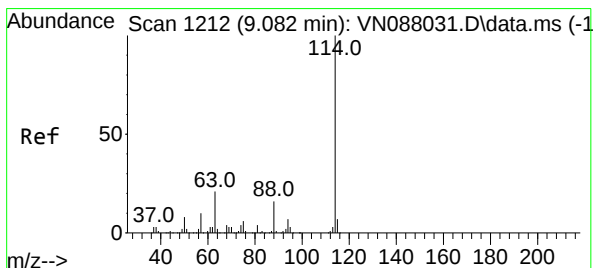
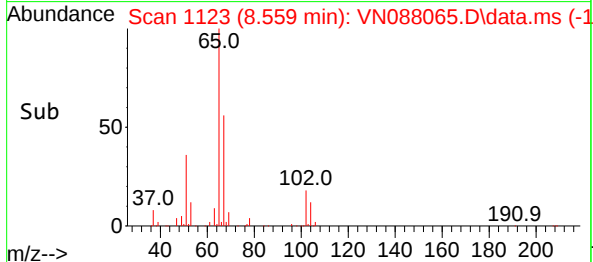
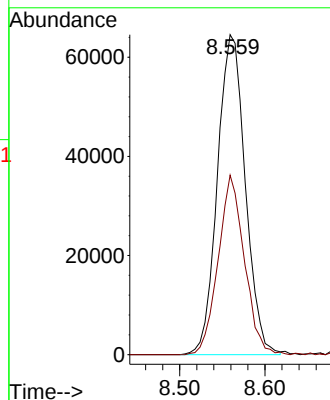
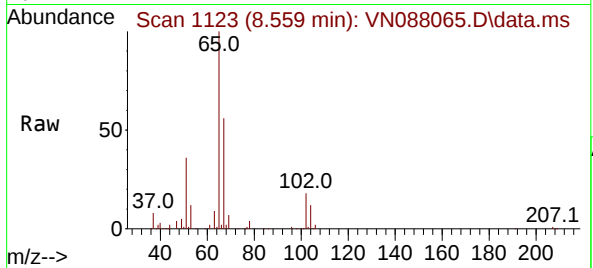
67 52.7 41.9 62.9

Manual Integrations

APPROVED

Reviewed By :John Carlone 10/20/2025

Supervised By :Mahesh Dadoda 10/20/2025



#28

1,4-Difluorobenzene

Concen: 30.000 ug/l

RT: 9.082 min Scan# 1212

Delta R.T. 0.000 min

Lab File: VN088065.D

Acq: 17 Oct 2025 13:36

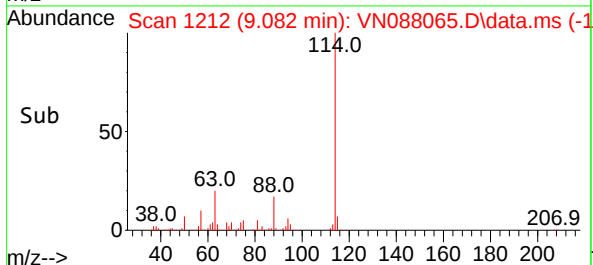
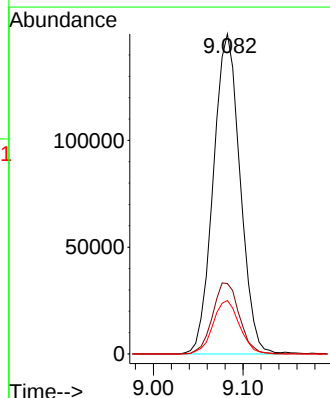
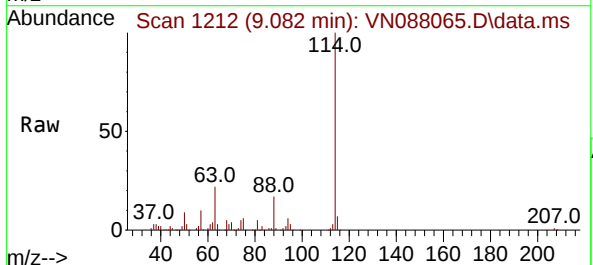
Tgt Ion:114 Resp: 311111

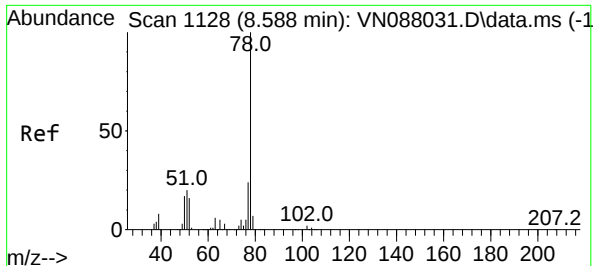
Ion Ratio Lower Upper

114 100

63 22.2 16.6 25.0

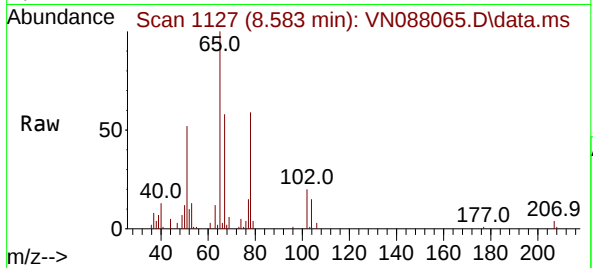
88 16.5 12.6 18.8





#34  
Benzene  
Concen: 2.173 ug/l  
RT: 8.583 min Scan# 1127  
Delta R.T. -0.006 min  
Lab File: VN088065.D  
Acq: 17 Oct 2025 13:36

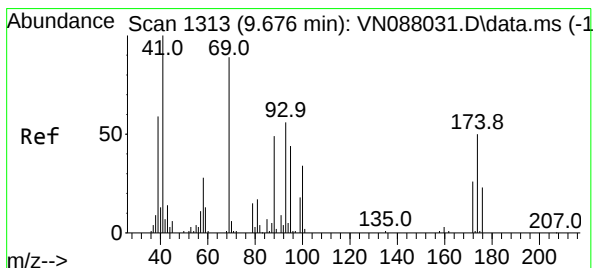
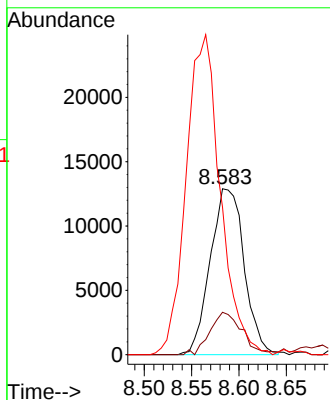
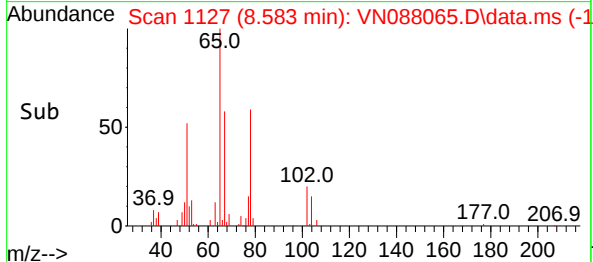
Instrument :  
MSVOA\_N  
ClientSampleId :  
VOA 251015085-01



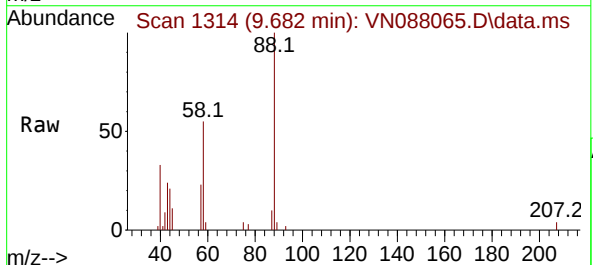
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Ion Ratio Lower Upper  
78 100  
77 25.5 18.9 28.3  
51 87.4 15.6 23.4

Manual Integrations  
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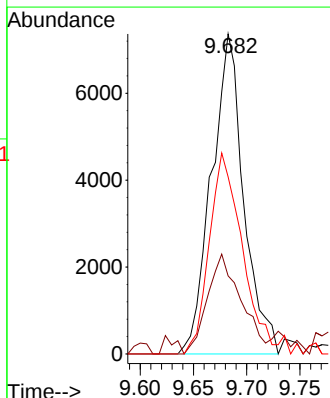
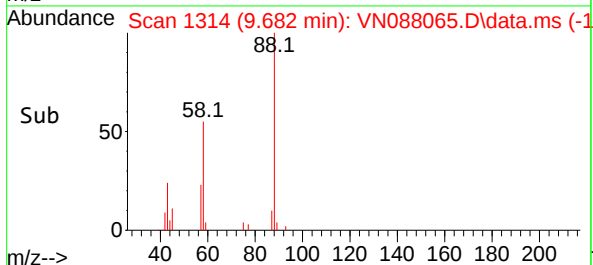
Reviewed By :John Carlone 10/20/2025  
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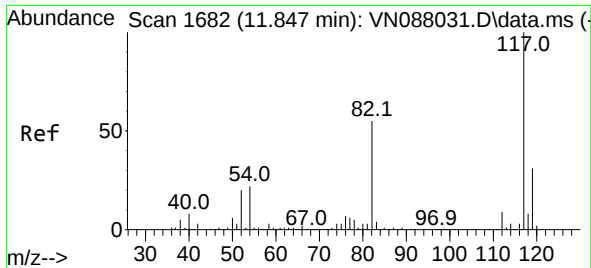


#45  
1,4-Dioxane  
Concen: 225.643 ug/l  
RT: 9.682 min Scan# 1314  
Delta R.T. 0.006 min  
Lab File: VN088065.D  
Acq: 17 Oct 2025 13:36



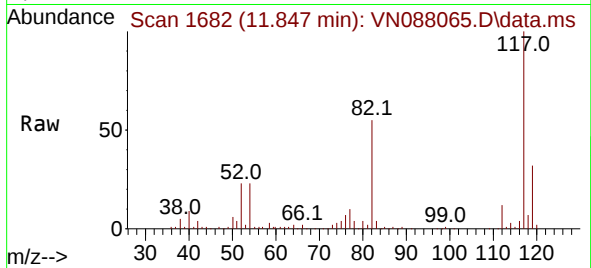
Tgt Ion: 88 Resp: 15497  
Ion Ratio Lower Upper  
88 100  
43 32.7 18.6 27.8  
58 63.5 57.4 86.2





#57  
Chlorobenzene-d5  
Concen: 30.000 ug/l  
RT: 11.847 min Scan# 1682  
Delta R.T. 0.000 min  
Lab File: VN088065.D  
Acq: 17 Oct 2025 13:36

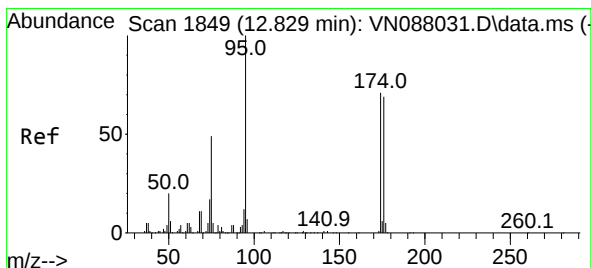
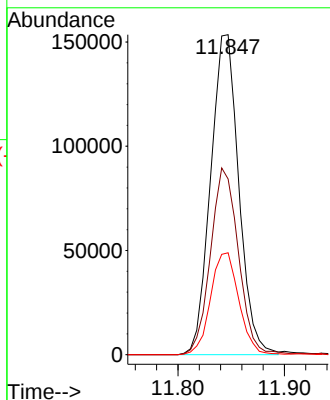
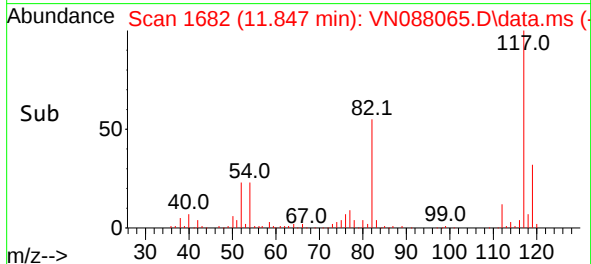
Instrument :  
MSVOA\_N  
ClientSampleId :  
VOA 251015085-01



Tgt Ion: 117 Resp: 28223  
Ion Ratio Lower Upper  
117 100  
82 57.9 45.2 67.8  
119 32.0 25.9 38.9

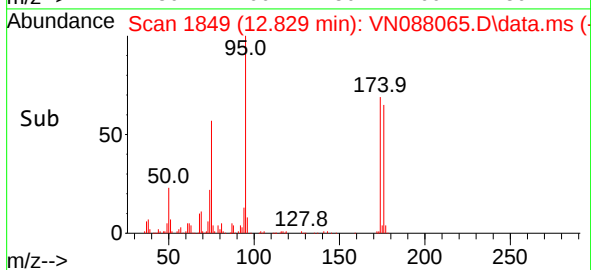
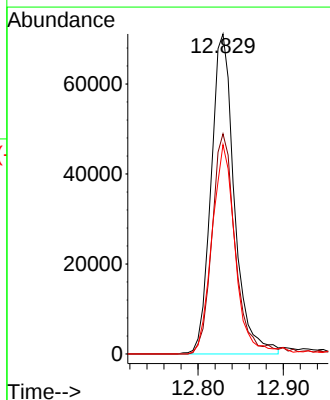
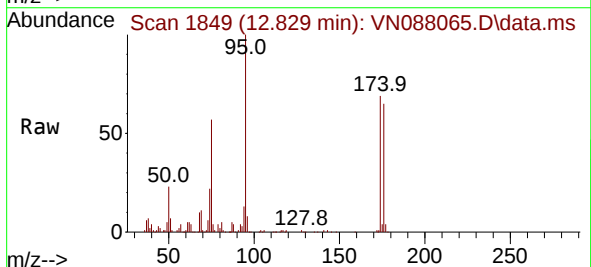
Manual Integrations  
APPROVED

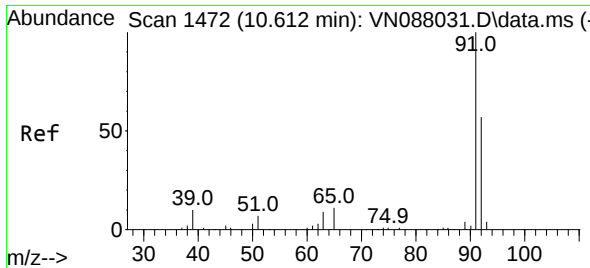
Reviewed By :John Carlone 10/20/2025  
Supervised By :Mahesh Dadoda 10/20/2025



#60  
4-Bromofluorobenzene  
Concen: 29.006 ug/l  
RT: 12.829 min Scan# 1849  
Delta R.T. 0.000 min  
Lab File: VN088065.D  
Acq: 17 Oct 2025 13:36

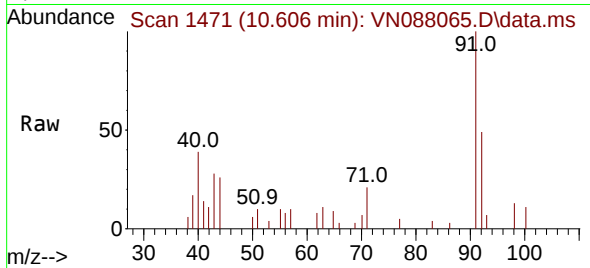
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Ion Ratio Lower Upper  
95 100  
174 67.3 57.4 86.0  
176 64.5 57.0 85.4





#62  
Toluene  
Concen: 0.533 ug/l  
RT: 10.606 min Scan# 1472  
Delta R.T. -0.006 min  
Lab File: VN088065.D  
Acq: 17 Oct 2025 13:36

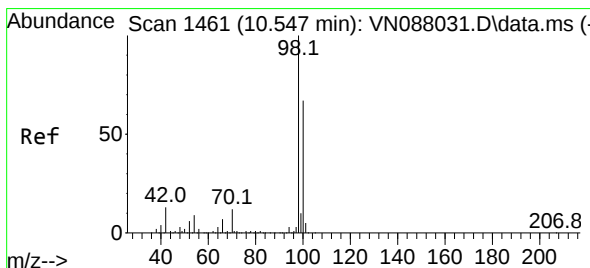
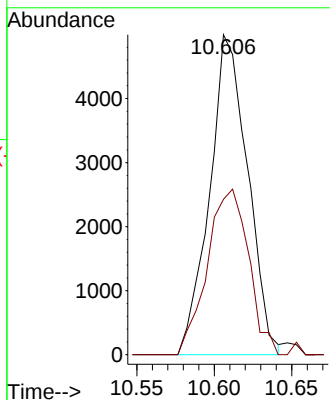
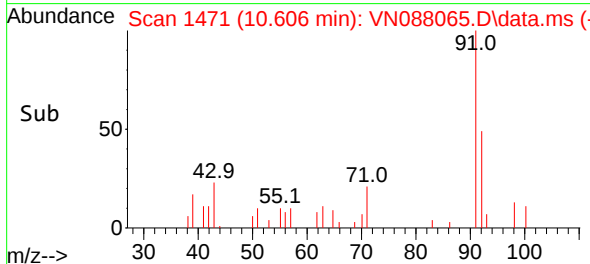
Instrument :  
MSVOA\_N  
ClientSampleId :  
VOA 251015085-01



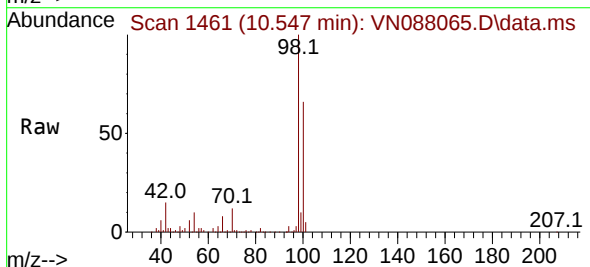
Tgt Ion: 91 Resp: 8529  
Ion Ratio Lower Upper  
91 100  
92 56.1 45.8 68.8

Manual Integrations  
APPROVED

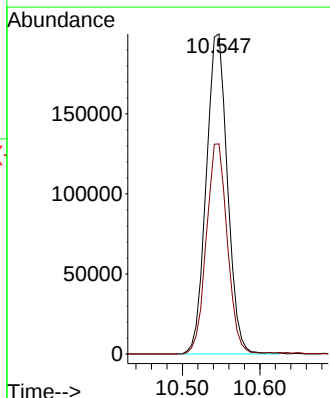
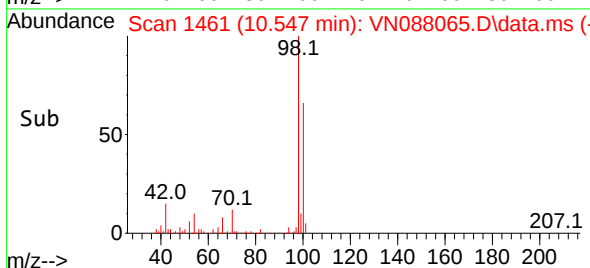
Reviewed By :John Carlone 10/20/2025  
Supervised By :Mahesh Dadoda 10/20/2025

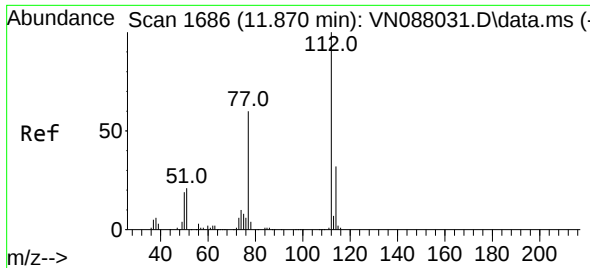


#63  
Toluene-d8  
Concen: 30.322 ug/l  
RT: 10.547 min Scan# 1461  
Delta R.T. 0.000 min  
Lab File: VN088065.D  
Acq: 17 Oct 2025 13:36



Tgt Ion: 98 Resp: 381294  
Ion Ratio Lower Upper  
98 100  
100 65.0 53.1 79.7





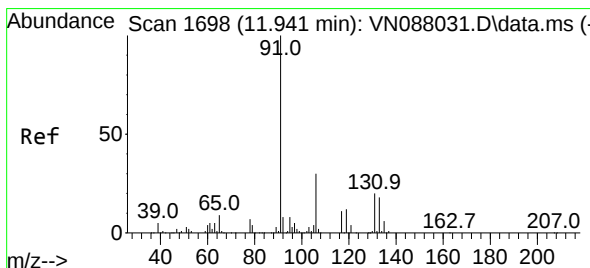
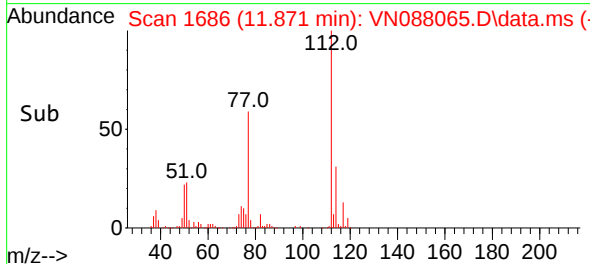
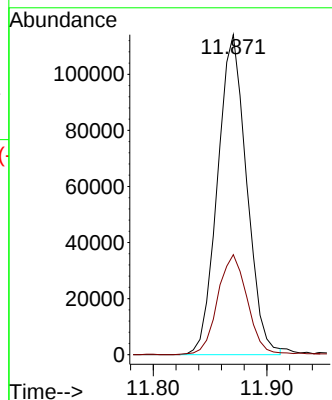
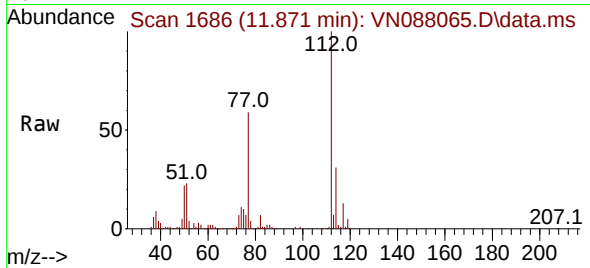
#64  
Chlorobenzene  
Concen: 19.856 ug/l  
RT: 11.871 min Scan# 1686  
Delta R.T. 0.000 min  
Lab File: VN088065.D  
Acq: 17 Oct 2025 13:36

Instrument :  
MSVOA\_N  
ClientSampleId :  
VOA 251015085-01

Tgt Ion:112 Resp: 20304  
Ion Ratio Lower Upper  
112 100  
114 31.1 25.7 38.5

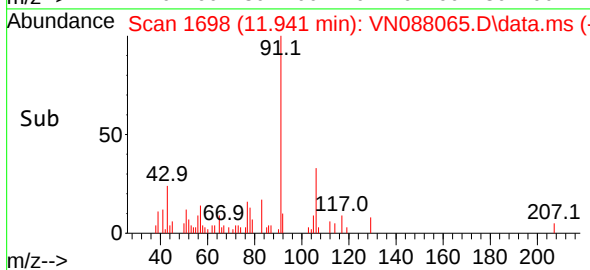
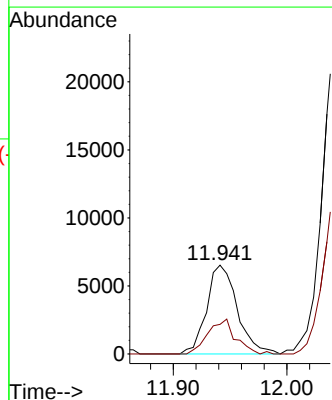
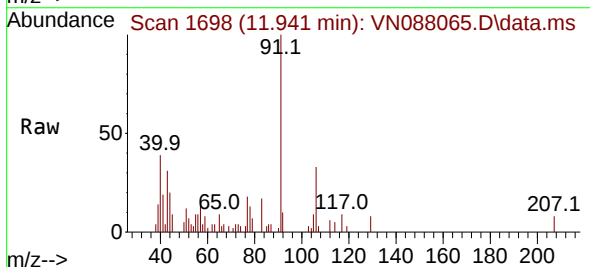
Manual Integrations  
APPROVED

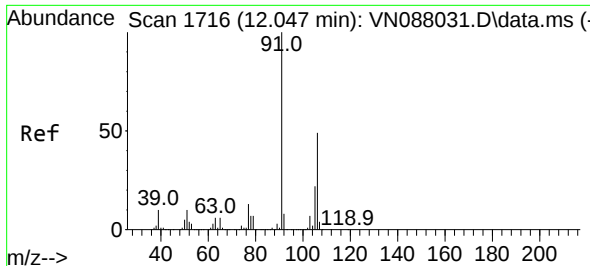
Reviewed By :John Carlone 10/20/2025  
Supervised By :Mahesh Dadoda 10/20/2025



#66  
Ethyl Benzene  
Concen: 0.700 ug/l  
RT: 11.941 min Scan# 1698  
Delta R.T. 0.000 min  
Lab File: VN088065.D  
Acq: 17 Oct 2025 13:36

Tgt Ion: 91 Resp: 12189  
Ion Ratio Lower Upper  
91 100  
106 33.3 24.0 36.0





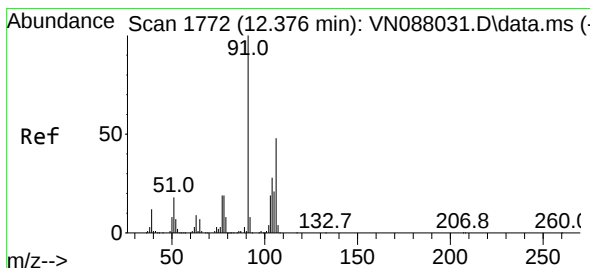
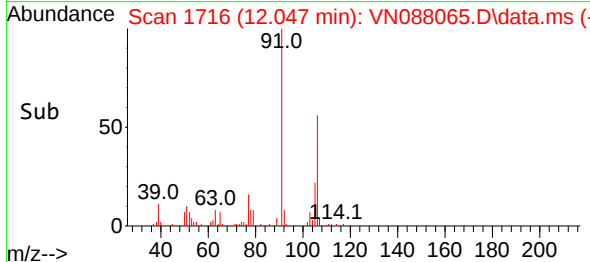
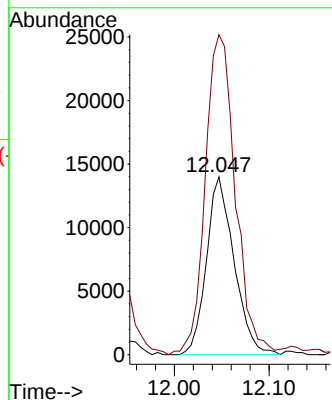
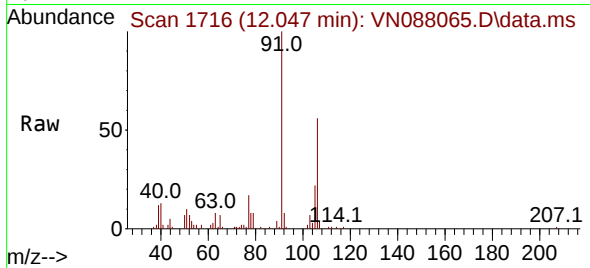
#67  
m/p-Xylenes  
Concen: 4.224 ug/l  
RT: 12.047 min Scan# 1716  
Delta R.T. 0.000 min  
Lab File: VN088065.D  
Acq: 17 Oct 2025 13:36

Instrument :  
MSVOA\_N  
ClientSampleId :  
VOA 251015085-01

Tgt Ion:106 Resp: 28348  
Ion Ratio Lower Upper  
106 100  
91 195.7 161.4 242.0

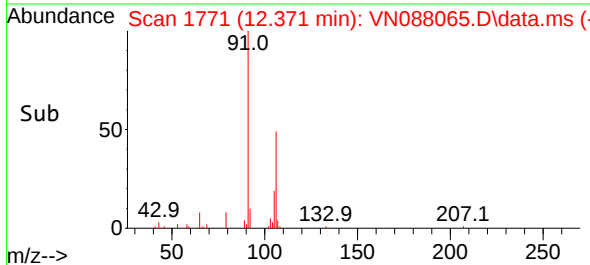
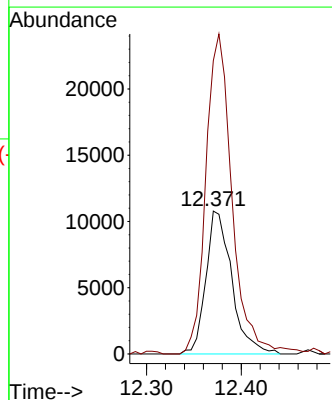
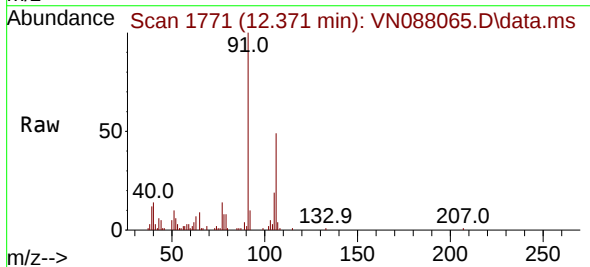
Manual Integrations  
APPROVED

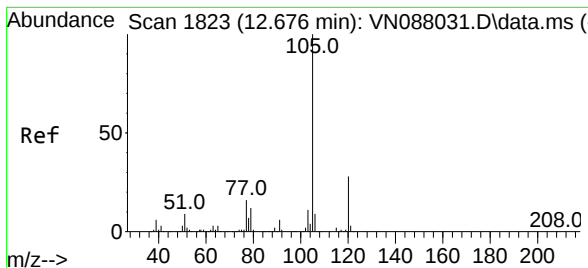
Reviewed By :John Carlone 10/20/2025  
Supervised By :Mahesh Dadoda 10/20/2025



#68  
o-Xylene  
Concen: 3.064 ug/l  
RT: 12.371 min Scan# 1771  
Delta R.T. -0.006 min  
Lab File: VN088065.D  
Acq: 17 Oct 2025 13:36

Tgt Ion:106 Resp: 20472  
Ion Ratio Lower Upper  
106 100  
91 223.5 105.2 315.6





#70

Isopropylbenzene

Concen: 1.067 ug/l

RT: 12.670 min Scan# 1823

Delta R.T. -0.006 min

Lab File: VN088065.D

Acq: 17 Oct 2025 13:36

Instrument :

MSVOA\_N

ClientSampleId :

VOA 251015085-01

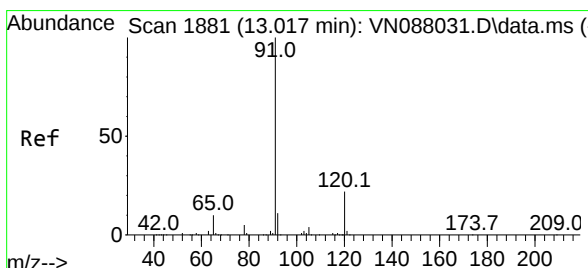
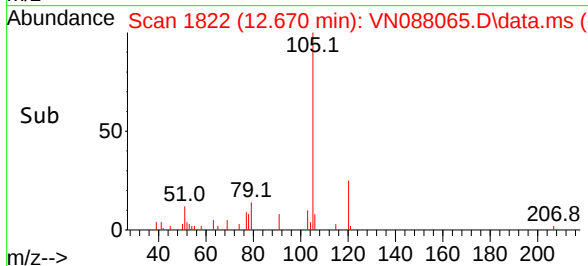
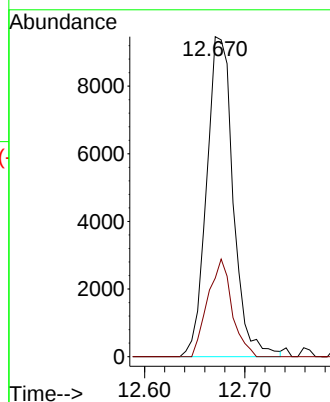
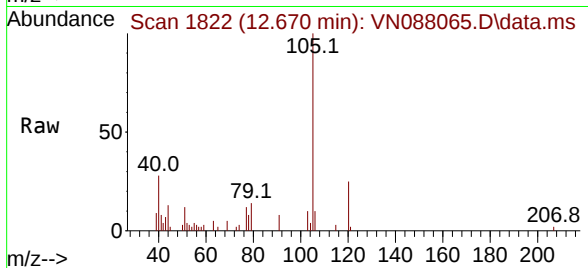
Tgt Ion:105 Resp: 17470  
 Ion Ratio Lower Upper  
 105 100  
 120 27.7 19.1 35.5

Manual Integrations

APPROVED

Reviewed By :John Carlone 10/20/2025

Supervised By :Mahesh Dadoda 10/20/2025



#74

n-propylbenzene

Concen: 0.286 ug/l

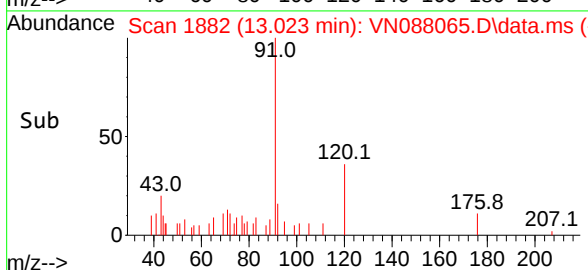
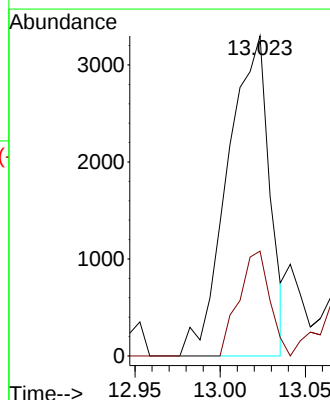
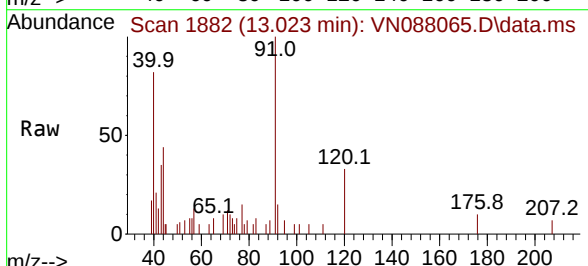
RT: 13.023 min Scan# 1882

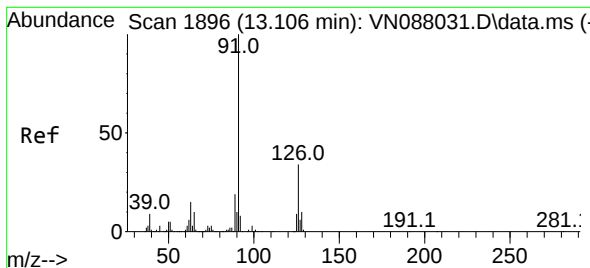
Delta R.T. 0.006 min

Lab File: VN088065.D

Acq: 17 Oct 2025 13:36

Tgt Ion: 91 Resp: 5647  
 Ion Ratio Lower Upper  
 91 100  
 120 24.1 0.0 46.2





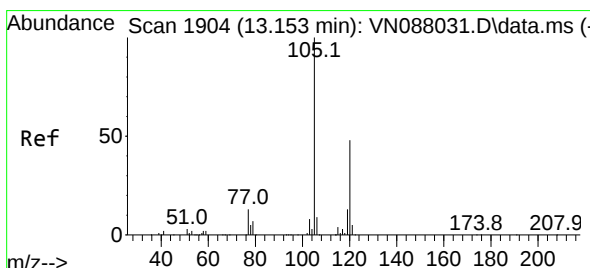
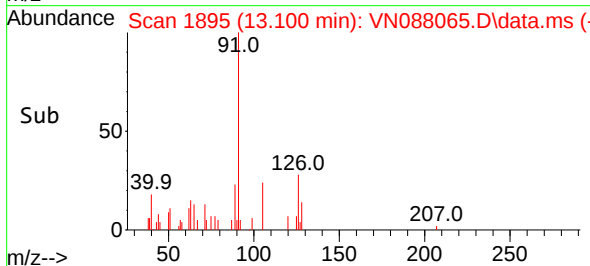
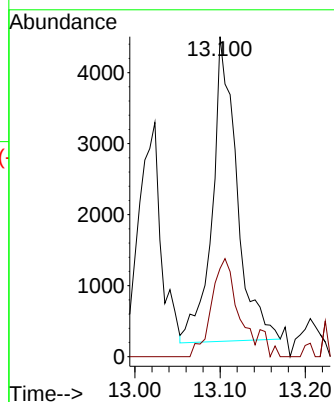
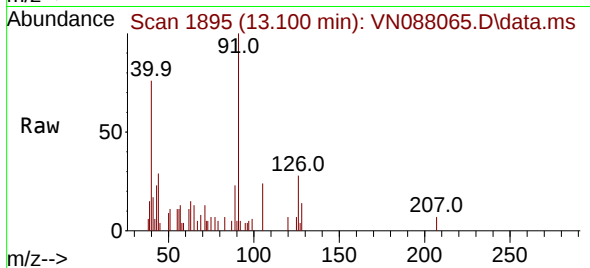
#75  
2-Chlorotoluene  
Concen: 0.712 ug/l  
RT: 13.100 min Scan# 11  
Delta R.T. -0.006 min  
Lab File: VN088065.D  
Acq: 17 Oct 2025 13:36

Instrument :  
MSVOA\_N  
ClientSampleId :  
VOA 251015085-01

Tgt Ion: 91 Resp: 860  
Ion Ratio Lower Upper  
91 100  
126 32.7 0.0 66.6

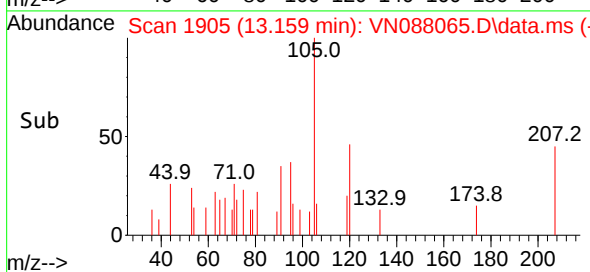
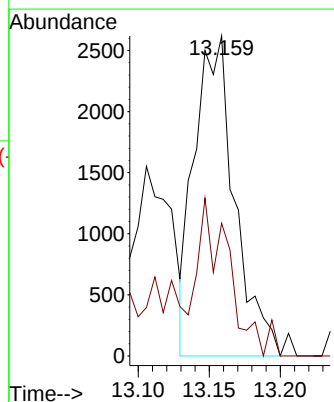
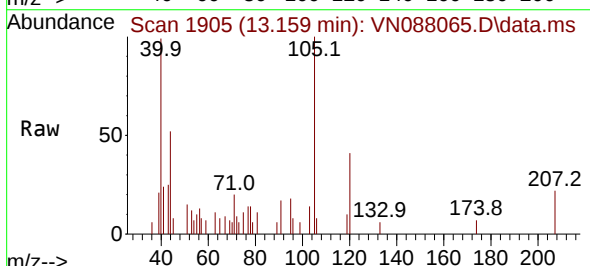
Manual Integrations  
APPROVED

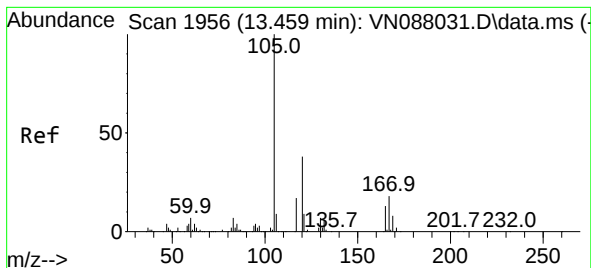
Reviewed By :John Carlone 10/20/2025  
Supervised By :Mahesh Dadoda 10/20/2025



#76  
1,3,5-Trimethylbenzene  
Concen: 0.370 ug/l  
RT: 13.159 min Scan# 1905  
Delta R.T. 0.006 min  
Lab File: VN088065.D  
Acq: 17 Oct 2025 13:36

Tgt Ion:105 Resp: 5140  
Ion Ratio Lower Upper  
105 100  
120 16.4 0.0 100.6





#80

1,2,4-Trimethylbenzene

Concen: 2.022 ug/l

RT: 13.465 min Scan# 1956

Delta R.T. 0.006 min

Lab File: VN088065.D

Acq: 17 Oct 2025 13:36

Instrument :

MSVOA\_N

ClientSampleId :

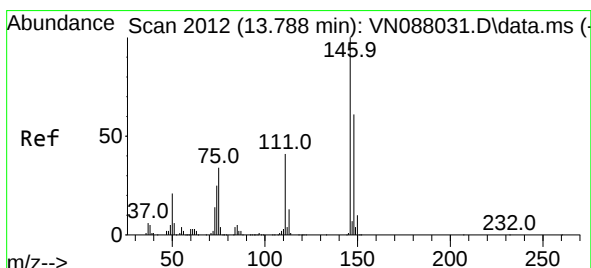
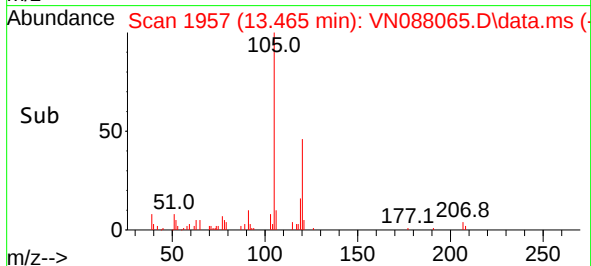
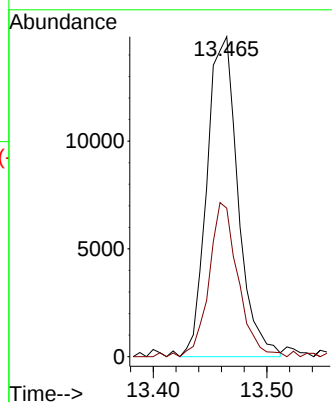
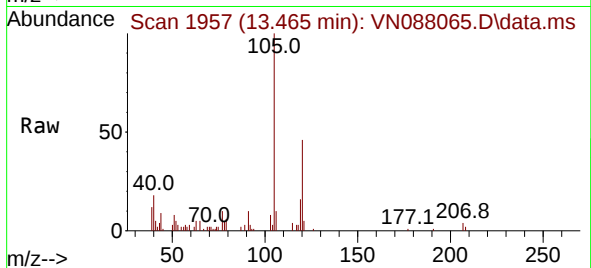
VOA 251015085-01

Tgt Ion:105 Resp: 2815  
 Ion Ratio Lower Upper  
 105 100  
 120 44.5 0.0 93.8

Manual Integrations

APPROVED

Reviewed By :John Carlone 10/20/2025  
 Supervised By :Mahesh Dadoda 10/20/2025



#84

1,4-Dichlorobenzene

Concen: 8.506 ug/l

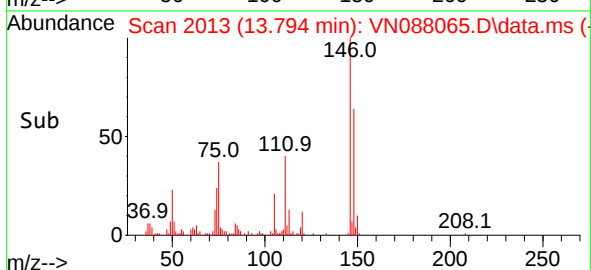
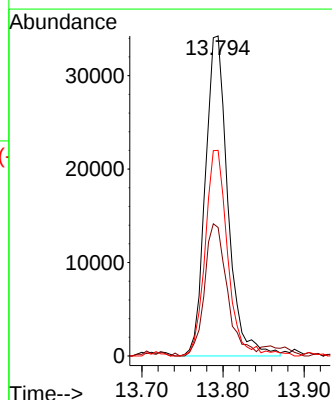
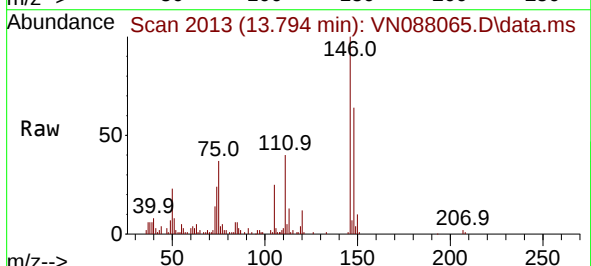
RT: 13.794 min Scan# 2013

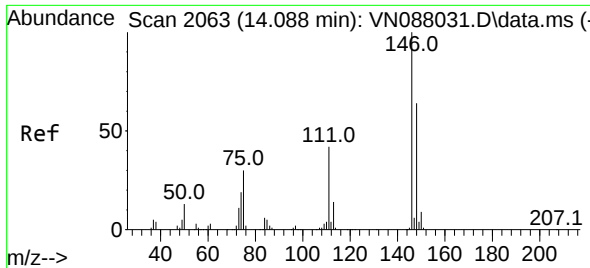
Delta R.T. 0.006 min

Lab File: VN088065.D

Acq: 17 Oct 2025 13:36

Tgt Ion:146 Resp: 66054  
 Ion Ratio Lower Upper  
 146 100  
 111 41.5 20.5 61.6  
 148 62.6 31.9 95.9





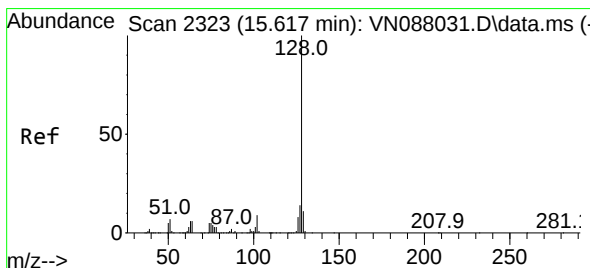
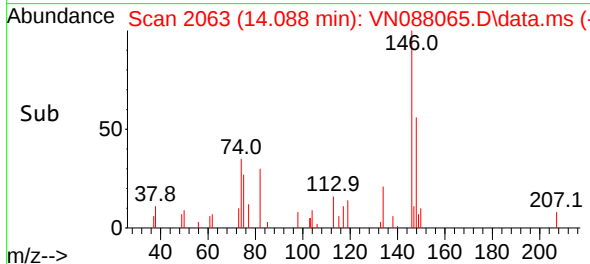
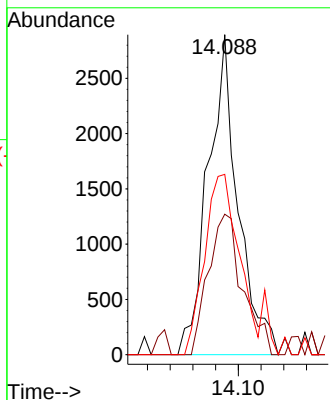
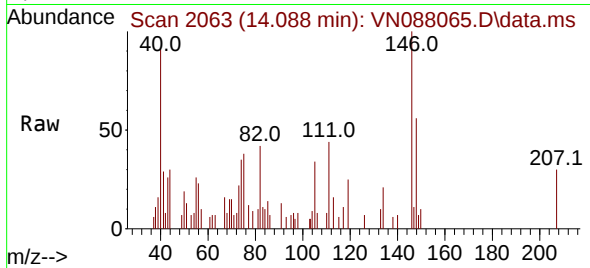
#87  
1,2-Dichlorobenzene  
Concen: 0.717 ug/l  
RT: 14.088 min Scan# 2063  
Delta R.T. 0.000 min  
Lab File: VN088065.D  
Acq: 17 Oct 2025 13:36

Instrument :  
MSVOA\_N  
ClientSampleId :  
VOA 251015085-01

Tgt Ion:146 Resp: 531.2  
Ion Ratio Lower Upper  
146 100  
111 50.3 22.3 66.8  
148 64.7 31.4 94.3

Manual Integrations  
APPROVED

Reviewed By :John Carlone 10/20/2025  
Supervised By :Mahesh Dadoda 10/20/2025



#91  
Naphthalene  
Concen: 6.780 ug/l  
RT: 15.611 min Scan# 2322  
Delta R.T. -0.006 min  
Lab File: VN088065.D  
Acq: 17 Oct 2025 13:36

Tgt Ion:128 Resp: 109504  
Ion Ratio Lower Upper  
128 100  
127 13.5 10.3 15.5  
129 10.9 8.6 13.0

