

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN071025\
 Data File : VN087322.D
 Acq On : 10 Jul 2025 13:48
 Operator : JC\MD
 Sample : Q2554-03
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :

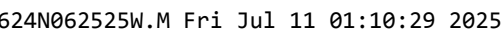
Quant Time: Jul 11 01:10:18 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jun 25 10:49:56 2025
 Response via : Initial Calibration

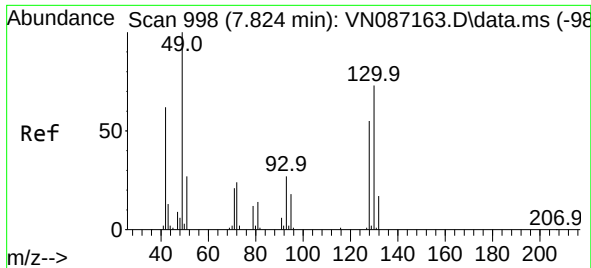
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	7.824	128	39044	30.000	ug/l	0.00
28) 1,4-Difluorobenzene	9.106	114	187799	30.000	ug/l	0.00
57) Chlorobenzene-d5	11.865	117	178818	30.000	ug/l	0.00
System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	8.582	65	85531	29.075	ug/l	0.00
Spiked Amount 30.000	Range 91 - 110		Recovery =	96.900%		
60) 4-Bromofluorobenzene	12.847	95	79207	28.705	ug/l	0.00
Spiked Amount 30.000	Range 63 - 112		Recovery =	95.667%		
63) Toluene-d8	10.565	98	224485	27.960	ug/l	0.00
Spiked Amount 30.000	Range 91 - 112		Recovery =	93.200%		
Target Compounds						
					Qvalue	
3) Chloromethane	2.171	50	487	0.203	ug/l #	42
6) Chloroethane	3.165	64	1693	1.210	ug/l #	87
8) Diethyl Ether	3.983	74	18130	11.531	ug/l	85
14) Acrylonitrile	5.542	53	558	0.322	ug/l #	25
15) Acetone	3.989	58	192	0.380	ug/l	82
23) tert-Butyl Alcohol	5.542	59	137232	210.873	ug/l #	100
24) Methyl tert-Butyl Ether	5.806	73	2483	0.299	ug/l #	86
34) Benzene	8.612	78	18871	2.035	ug/l #	73
35) Methacrylonitrile	7.847	41	107893	54.221	ug/l #	50
45) 1,4-Dioxane	9.694	88	3155	80.311	ug/l #	28
55) 2-Chloroethyl vinyl ether	10.624	63	511	0.261	ug/l #	1
59) 2-Hexanone	11.171	43	7418	3.196	ug/l #	29
62) Toluene	10.629	91	8304	0.822	ug/l	95
64) Chlorobenzene	11.894	112	134181	20.828	ug/l	100
66) Ethyl Benzene	11.965	91	37027	3.350	ug/l	97
67) m/p-Xylenes	12.070	106	15310	3.614	ug/l	86
68) o-Xylene	12.400	106	11085	2.743	ug/l	94
70) Isopropylbenzene	12.694	105	13780	1.369	ug/l	94
74) n-propylbenzene	13.035	91	8697	0.707	ug/l	93
75) 2-Chlorotoluene	13.123	91	5573	0.750	ug/l	97
76) 1,3,5-Trimethylbenzene	13.165	105	2679	0.327	ug/l	85
78) 4-Chlorotoluene	13.123	91	5573	0.732	ug/l	99
80) 1,2,4-Trimethylbenzene	13.476	105	14906	1.812	ug/l	92
81) sec-Butylbenzene	13.612	105	2133	0.213	ug/l	97
82) p-Isopropyltoluene	13.723	119	2743	0.329	ug/l	78
83) 1,3-Dichlorobenzene	13.812	146	45370	9.650	ug/l	98
84) 1,4-Dichlorobenzene	13.812	146	45370	9.588	ug/l	97
85) n-Butylbenzene	14.059	91	1852	0.244	ug/l	86
86) Hexachloroethane	14.323	117	867	0.550	ug/l #	20
87) 1,2-Dichlorobenzene	14.106	146	3635	0.820	ug/l	95
91) Naphthalene	15.635	128	127556	12.922	ug/l	99

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

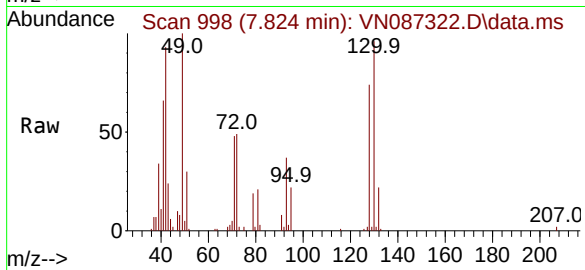
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Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\624N062525W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Wed Jun 25 10:49:56 2025
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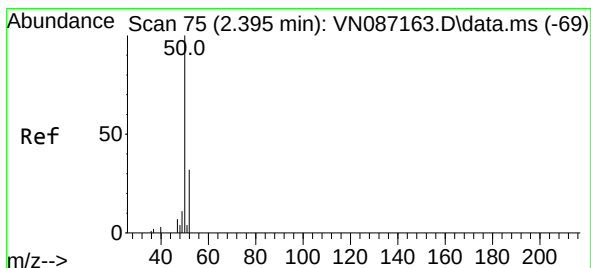
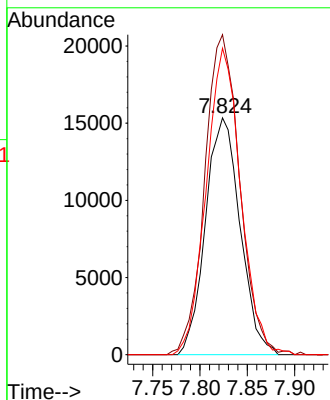
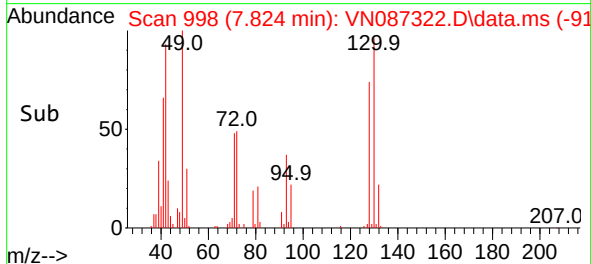


#1
Bromochloromethane
Concen: 30.000 ug/l
RT: 7.824 min Scan# 91
Delta R.T. -0.000 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

Instrument :
MSVOA_N
ClientSampleId :

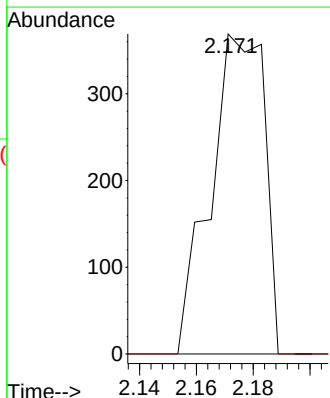
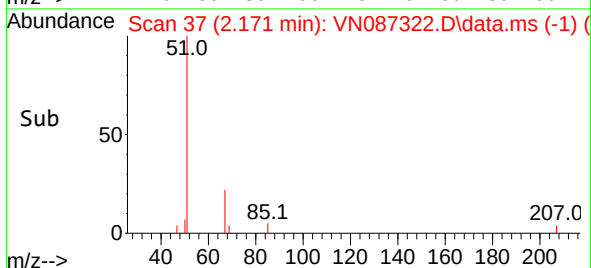
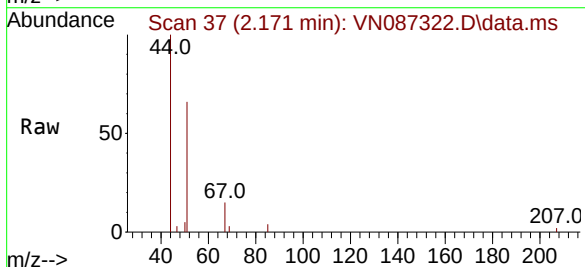


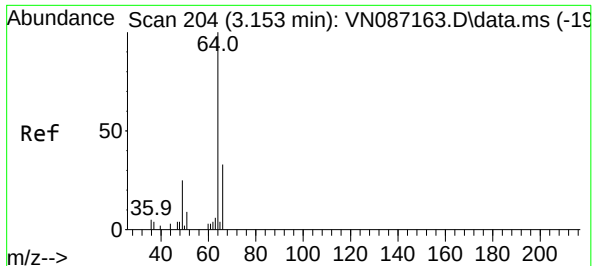
Tgt Ion:	128	Resp:	39044
Ion Ratio	Lower	Upper	
128	100		
49	136.4	0.0	450.5
130	128.9	0.0	320.7



#3
Chloromethane
Concen: 0.203 ug/l
RT: 2.171 min Scan# 37
Delta R.T. -0.224 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

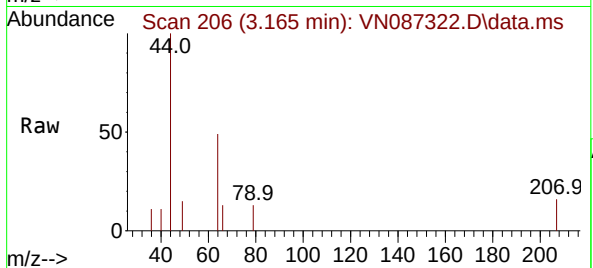
Tgt Ion:	50	Resp:	487
Ion Ratio	Lower	Upper	
50	100		
52	0.0	25.9	38.9



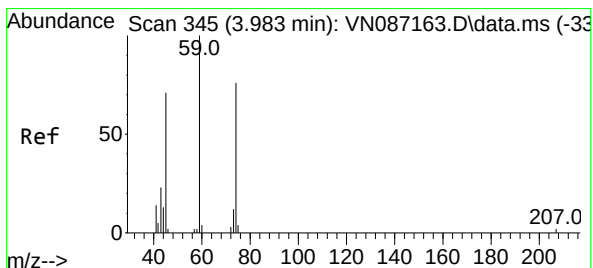
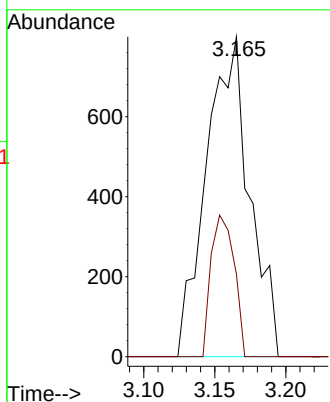
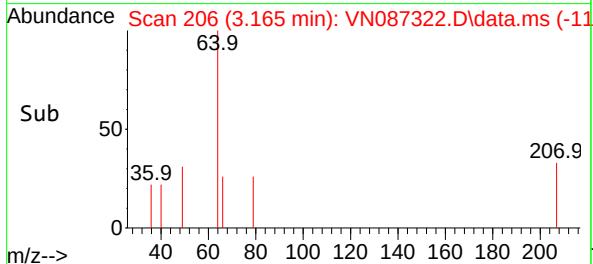


#6
Chloroethane
Concen: 1.210 ug/l
RT: 3.165 min Scan# 204
Delta R.T. 0.012 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

Instrument :
MSVOA_N
ClientSampleId :

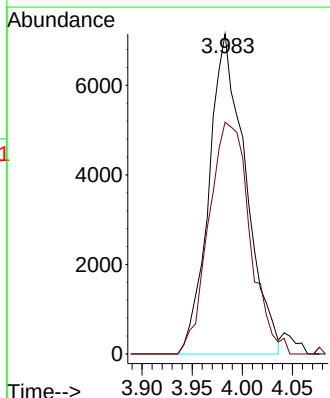
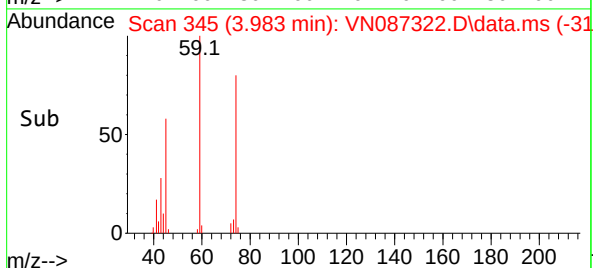
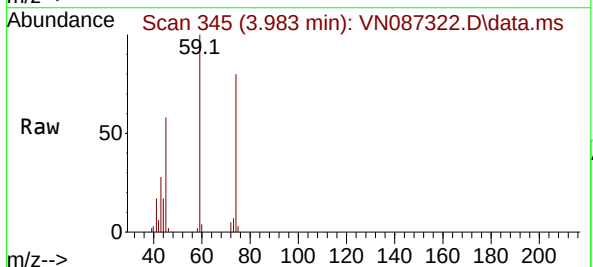


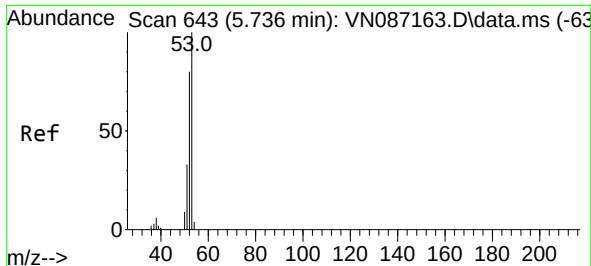
Tgt Ion: 64 Resp: 1693
Ion Ratio Lower Upper
64 100
66 25.8 26.4 39.6#



#8
Diethyl Ether
Concen: 11.531 ug/l
RT: 3.983 min Scan# 345
Delta R.T. 0.000 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

Tgt Ion: 74 Resp: 18130
Ion Ratio Lower Upper
74 100
45 80.6 19.0 171.0





#14

Acrylonitrile

Concen: 0.322 ug/l

RT: 5.542 min Scan# 61

Delta R.T. -0.194 min

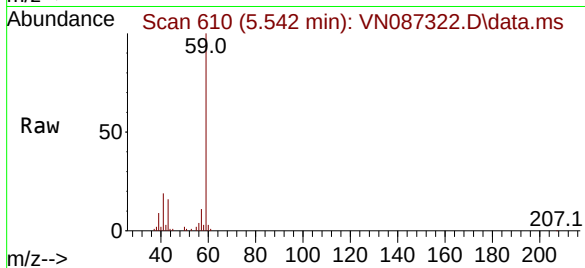
Lab File: VN087322.D

Acq: 10 Jul 2025 13:48

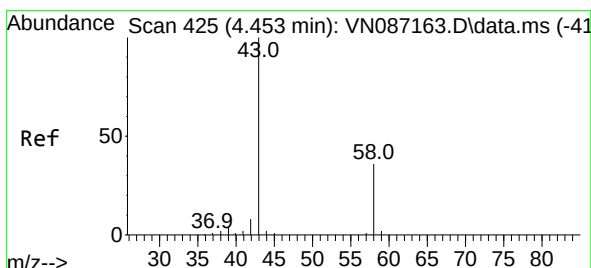
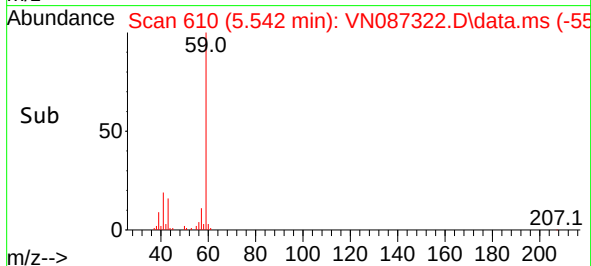
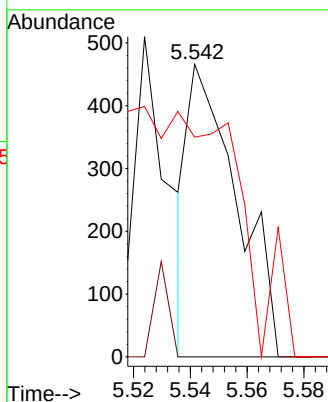
Instrument :

MSVOA_N

ClientSampleId :



Tgt Ion: 53	Resp: 558
Ion Ratio	Lower Upper
53 100	
52 0.0	40.5 121.5#
51 13.1	16.9 50.7#



#15

Acetone

Concen: 0.380 ug/l

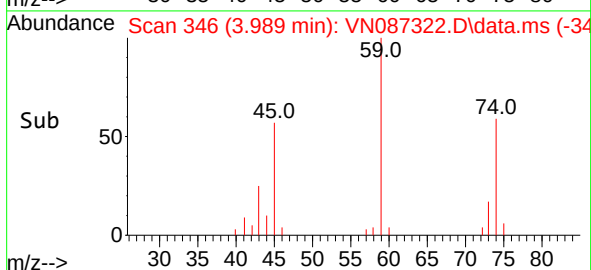
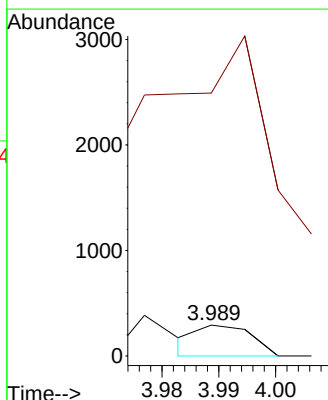
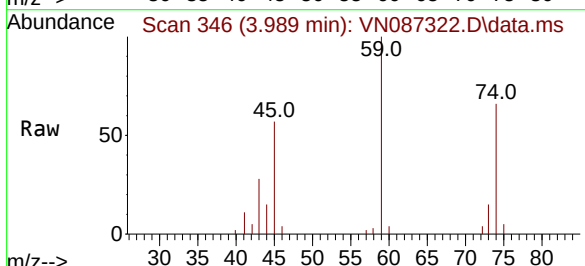
RT: 3.989 min Scan# 346

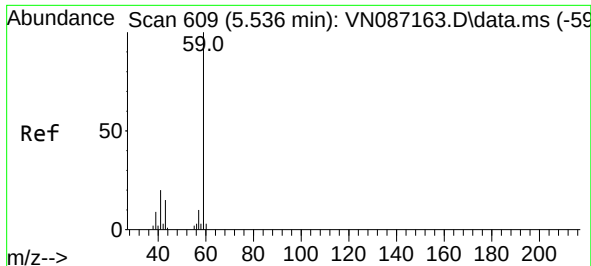
Delta R.T. -0.465 min

Lab File: VN087322.D

Acq: 10 Jul 2025 13:48

Tgt Ion: 58	Resp: 192
Ion Ratio	Lower Upper
58 100	
43 315.1	224.3 336.5

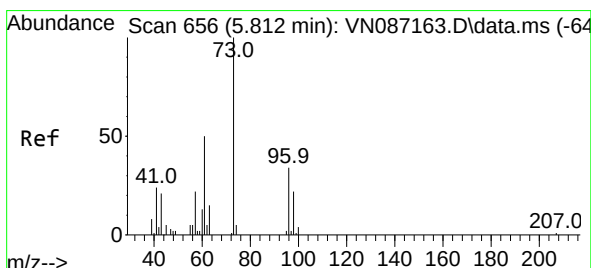
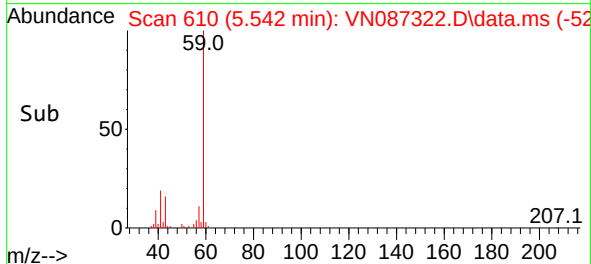
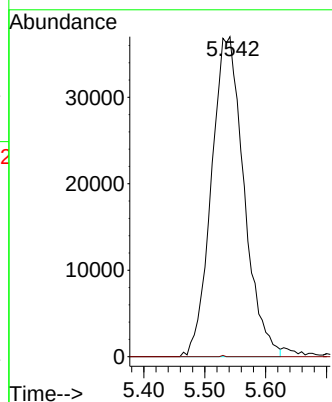
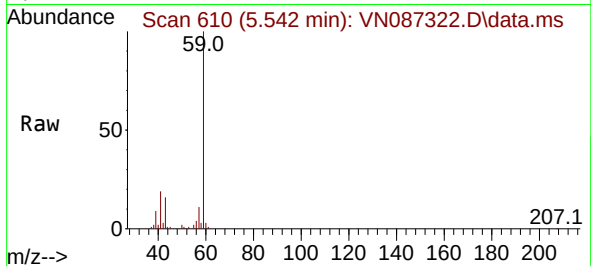




#23
tert-Butyl Alcohol
Concen: 210.873 ug/l
RT: 5.542 min Scan# 610
Delta R.T. 0.006 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

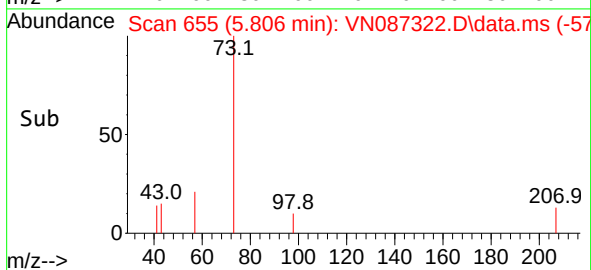
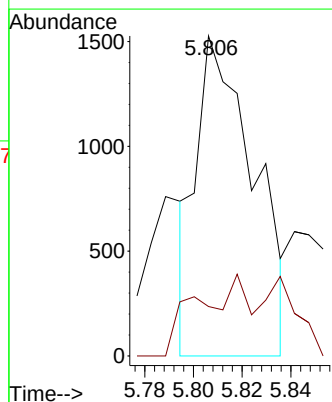
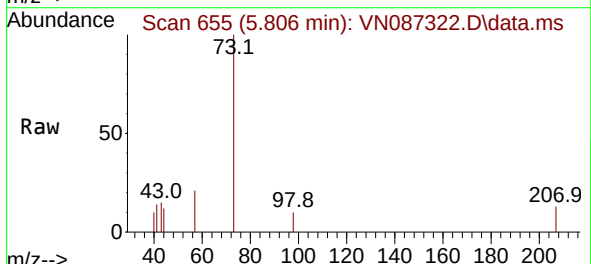
Instrument :
MSVOA_N
ClientSampleId :

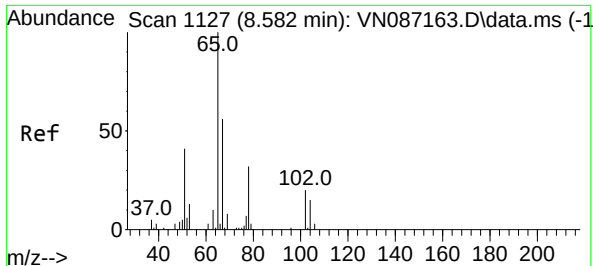
Tgt Ion: 59 Resp: 137232
Ion Ratio Lower Upper
59 100
52 0.0 0.0 0.0



#24
Methyl tert-Butyl Ether
Concen: 0.299 ug/l
RT: 5.806 min Scan# 655
Delta R.T. -0.006 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

Tgt Ion: 73 Resp: 2483
Ion Ratio Lower Upper
73 100
43 14.2 16.4 24.6#

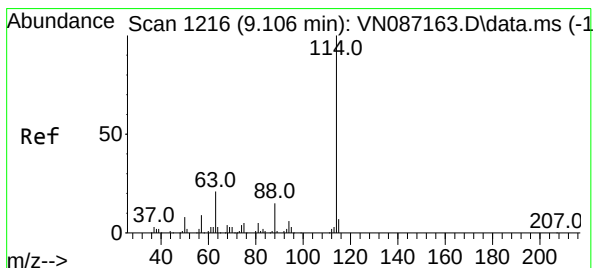
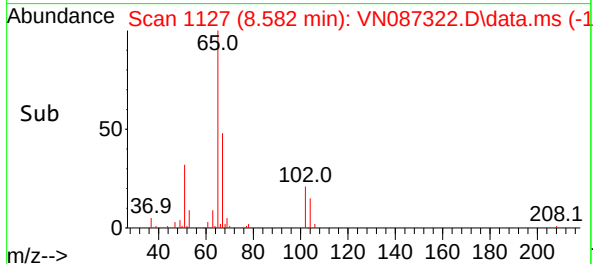
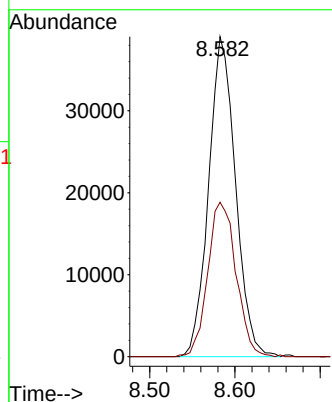
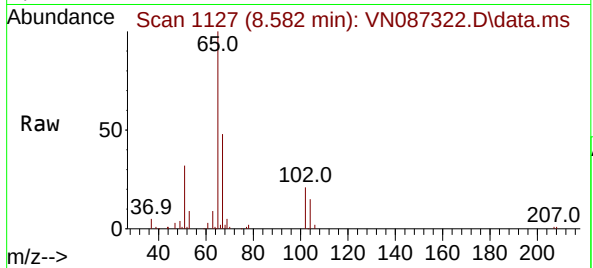




#27
 1,2-Dichloroethane-d4
 Concen: 29.075 ug/l
 RT: 8.582 min Scan# 1127
 Delta R.T. 0.000 min
 Lab File: VN087322.D
 Acq: 10 Jul 2025 13:48

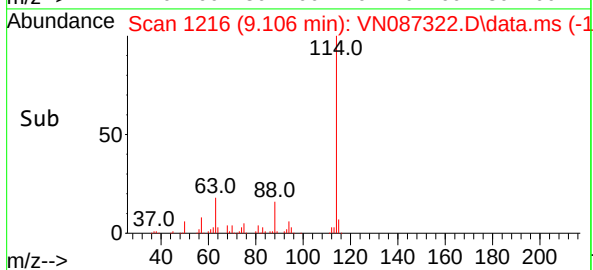
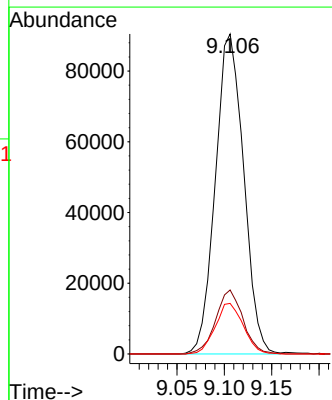
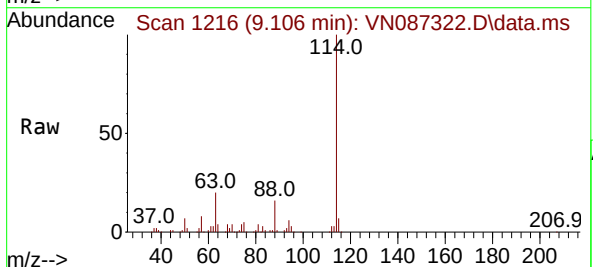
Instrument :
 MSVOA_N
 ClientSampleId :

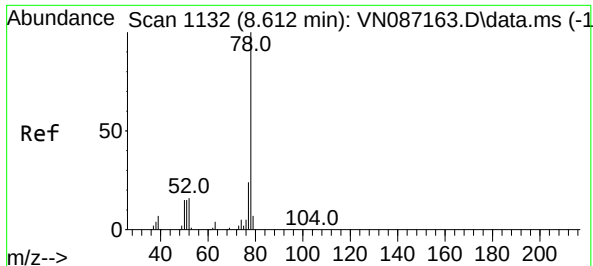
Tgt Ion: 65 Resp: 85531
 Ion Ratio Lower Upper
 65 100
 67 50.9 41.9 62.9



#28
 1,4-Difluorobenzene
 Concen: 30.000 ug/l
 RT: 9.106 min Scan# 1216
 Delta R.T. 0.000 min
 Lab File: VN087322.D
 Acq: 10 Jul 2025 13:48

Tgt Ion: 114 Resp: 187799
 Ion Ratio Lower Upper
 114 100
 63 19.3 17.0 25.4
 88 15.7 12.6 19.0

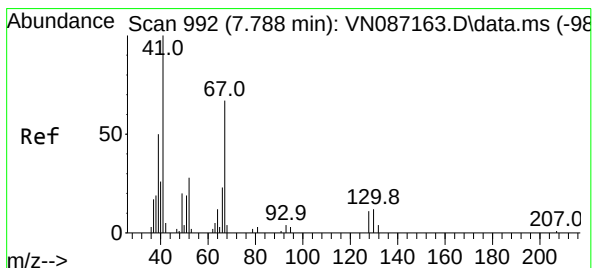
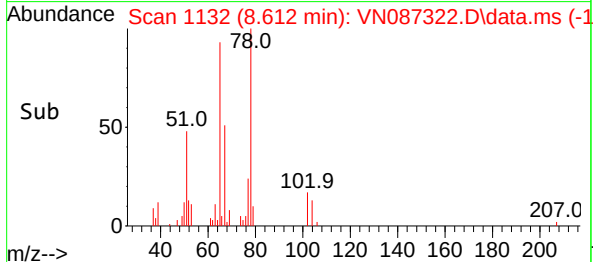
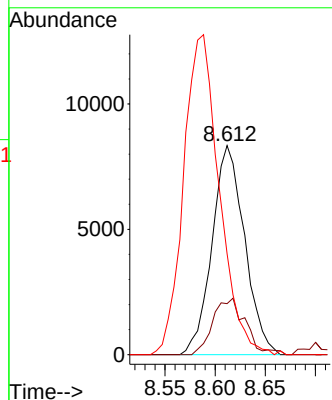
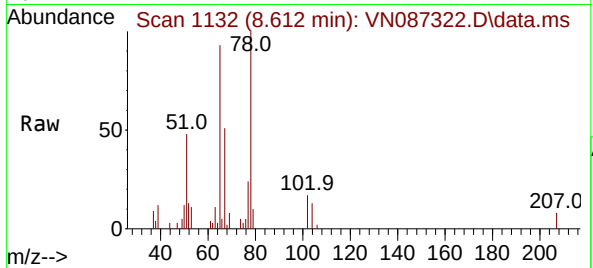




#34
Benzene
Concen: 2.035 ug/l
RT: 8.612 min Scan# 1132
Delta R.T. 0.000 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

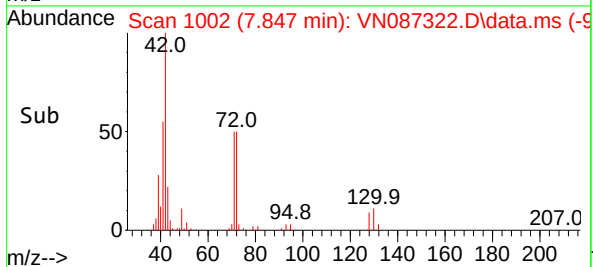
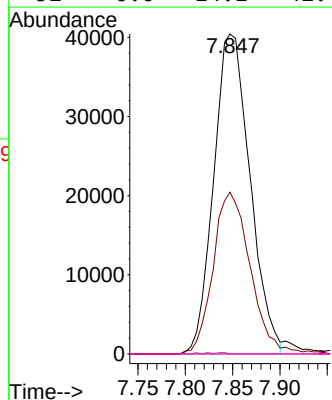
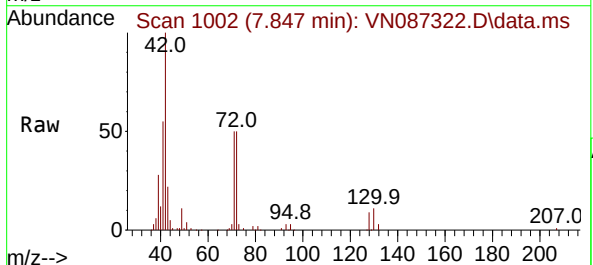
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MSVOA_N
ClientSampleId :

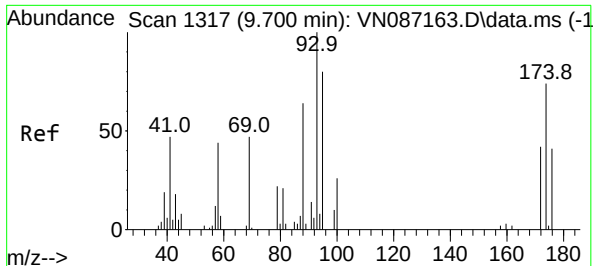
Tgt Ion: 78 Resp: 18871
Ion Ratio Lower Upper
78 100
77 24.4 19.5 29.3
51 46.4 14.8 22.2#



#35
Methacrylonitrile
Concen: 54.221 ug/l
RT: 7.847 min Scan# 1002
Delta R.T. 0.059 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

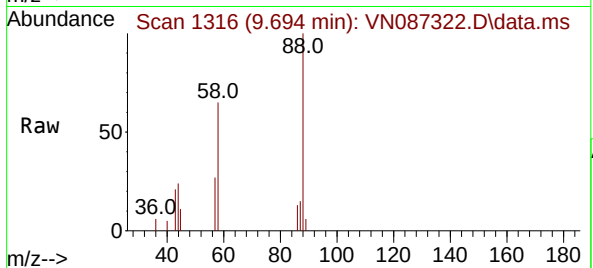
Tgt Ion: 41 Resp: 107893
Ion Ratio Lower Upper
41 100
39 50.6 24.4 73.2
67 0.0 33.3 99.8#
52 0.0 14.1 42.4#



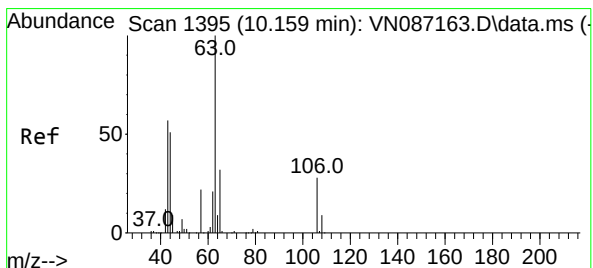
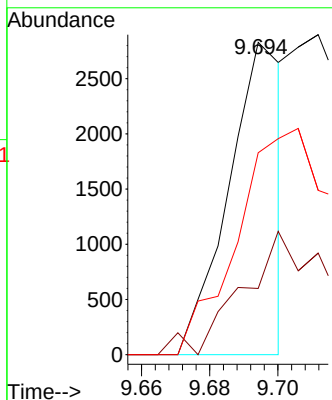
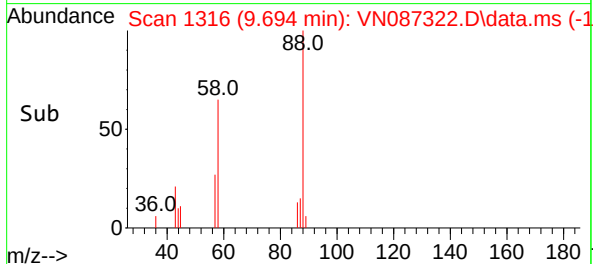


#45
 1,4-Dioxane
 Concen: 80.311 ug/l
 RT: 9.694 min Scan# 11
 Delta R.T. -0.006 min
 Lab File: VN087322.D
 Acq: 10 Jul 2025 13:48

Instrument :
 MSVOA_N
 ClientSampleId :

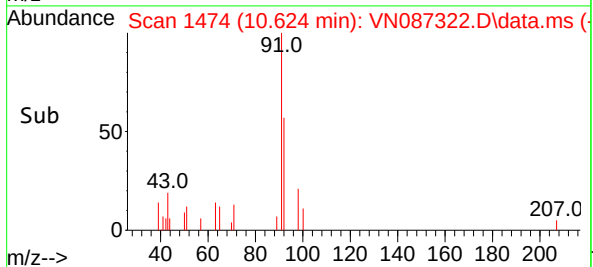
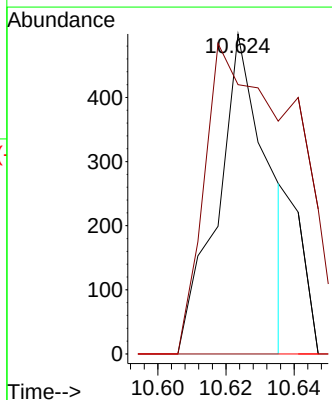
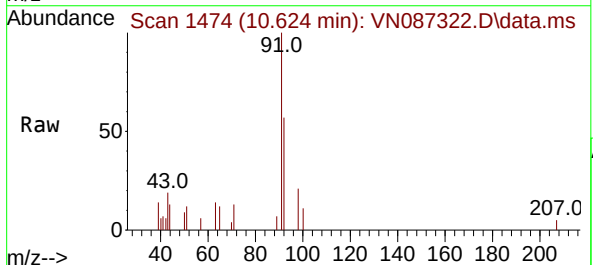


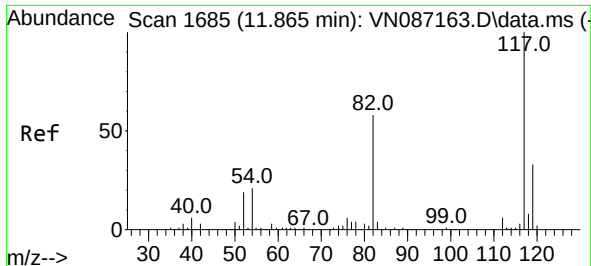
Tgt Ion: 88 Resp: 3155
 Ion Ratio Lower Upper
 88 100
 43 59.3 21.3 31.9#
 58 141.4 61.7 92.5#



#55
 2-Chloroethyl vinyl ether
 Concen: 0.261 ug/l
 RT: 10.624 min Scan# 1474
 Delta R.T. 0.465 min
 Lab File: VN087322.D
 Acq: 10 Jul 2025 13:48

Tgt Ion: 63 Resp: 511
 Ion Ratio Lower Upper
 63 100
 65 128.4 25.6 38.4#
 106 0.0 21.9 32.9#

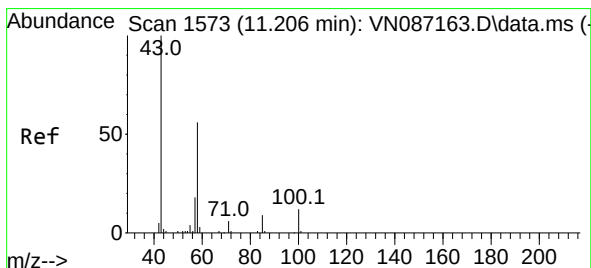
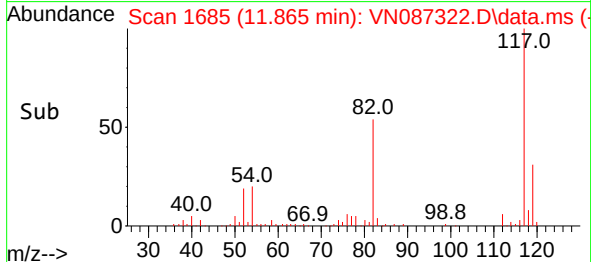
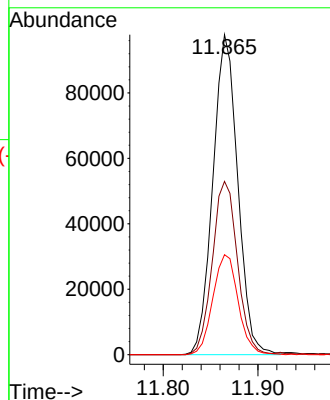
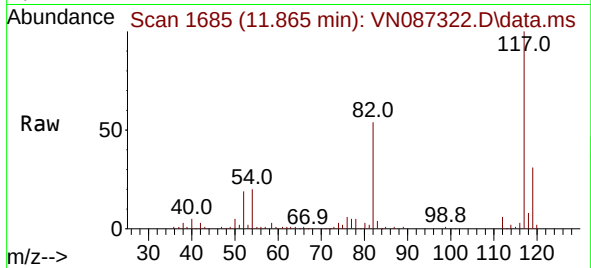




#57
Chlorobenzene-d5
Concen: 30.000 ug/l
RT: 11.865 min Scan# 117
Delta R.T. 0.000 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

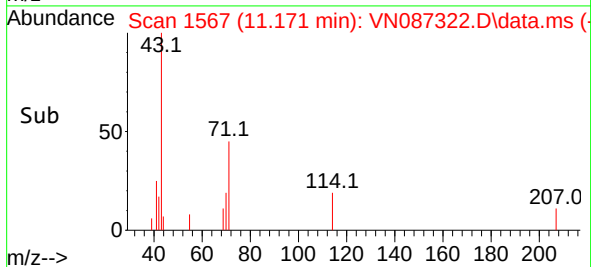
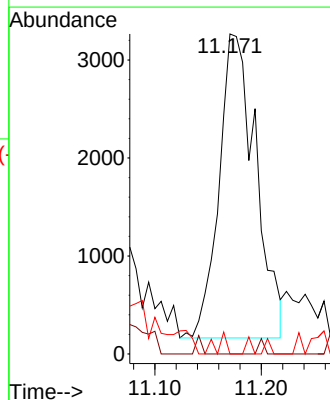
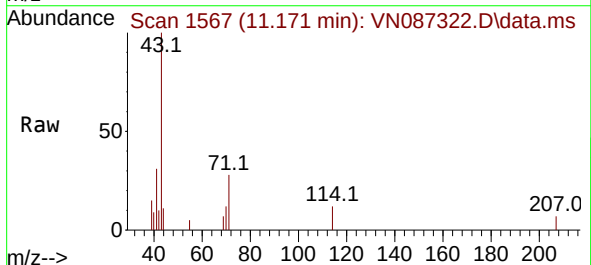
Instrument :
MSVOA_N
ClientSampleId :

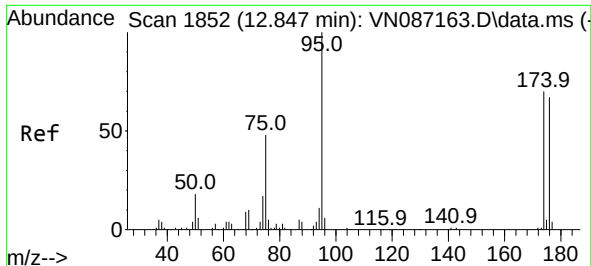
Tgt Ion:117 Resp: 178818
Ion Ratio Lower Upper
117 100
82 54.7 45.4 68.2
119 31.9 26.2 39.4



#59
2-Hexanone
Concen: 3.196 ug/l
RT: 11.171 min Scan# 1567
Delta R.T. -0.035 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

Tgt Ion: 43 Resp: 7418
Ion Ratio Lower Upper
43 100
58 0.0 49.2 73.8#
57 1.1 15.3 22.9#

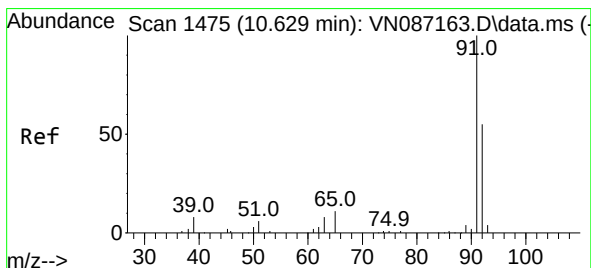
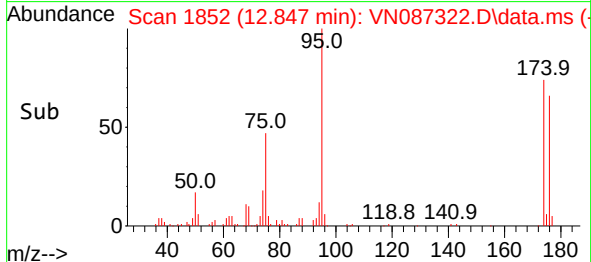
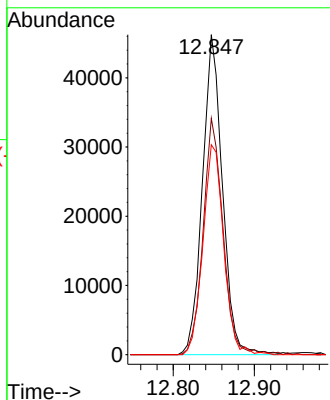
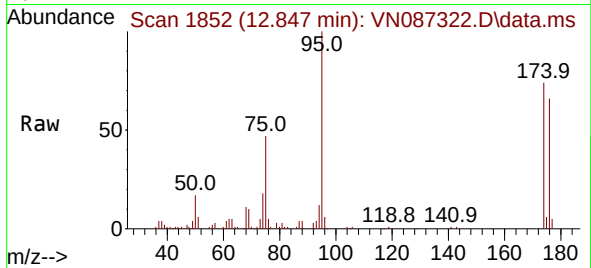




#60
4-Bromofluorobenzene
Concen: 28.705 ug/l
RT: 12.847 min Scan# 1852
Delta R.T. 0.000 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

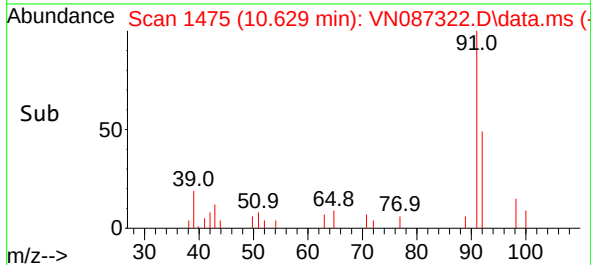
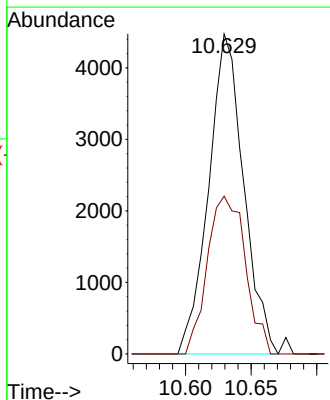
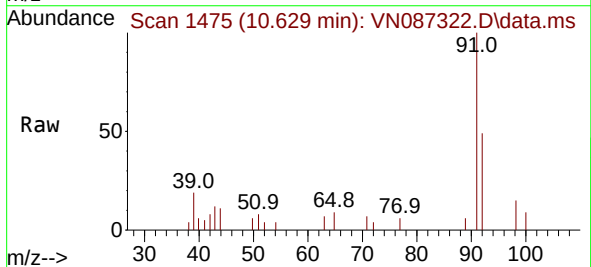
Instrument :
MSVOA_N
ClientSampleId :

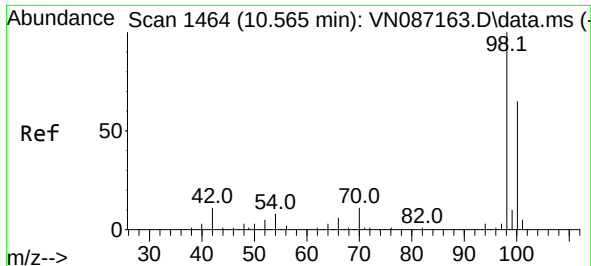
Tgt Ion: 95 Resp: 79207
Ion Ratio Lower Upper
95 100
174 72.1 54.5 81.7
176 66.8 51.9 77.9



#62
Toluene
Concen: 0.822 ug/l
RT: 10.629 min Scan# 1475
Delta R.T. 0.000 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

Tgt Ion: 91 Resp: 8304
Ion Ratio Lower Upper
91 100
92 53.5 45.8 68.8

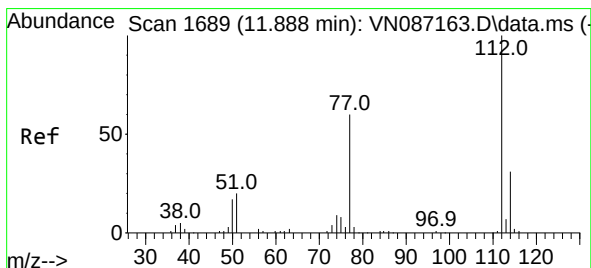
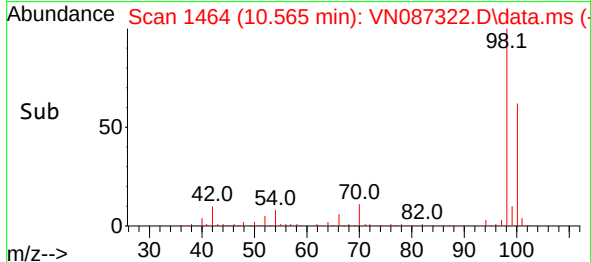
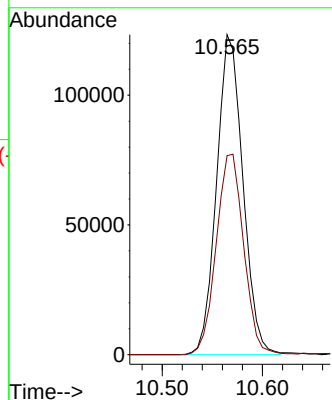
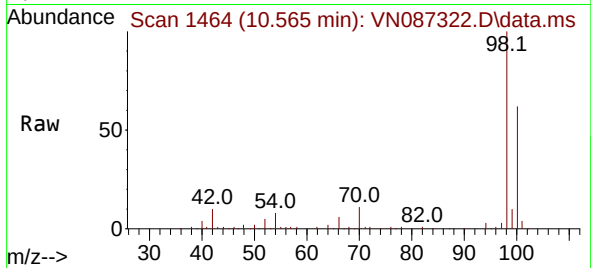




#63
Toluene-d8
Concen: 27.960 ug/l
RT: 10.565 min Scan# 1464
Delta R.T. 0.000 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

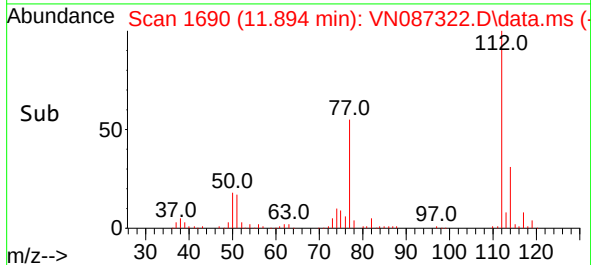
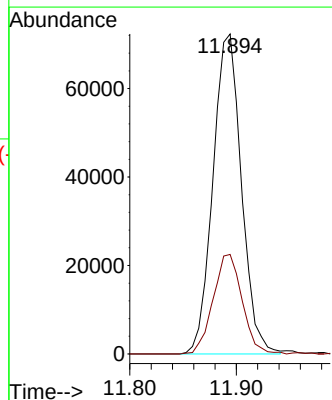
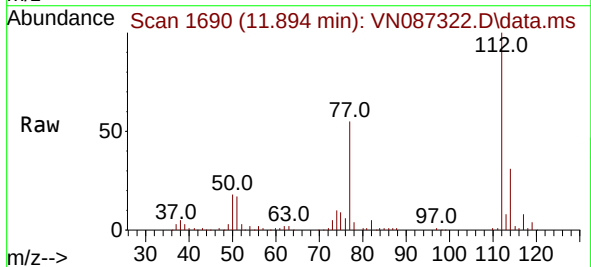
Instrument :
MSVOA_N
ClientSampleId :

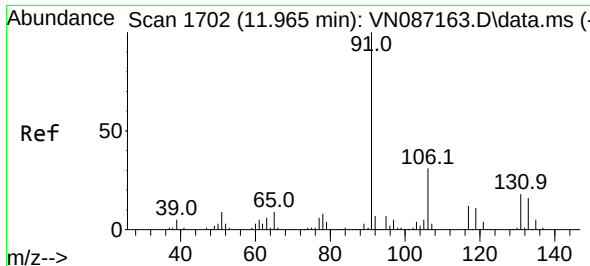
Tgt Ion: 98 Resp: 224485
Ion Ratio Lower Upper
98 100
100 65.6 52.5 78.7



#64
Chlorobenzene
Concen: 20.828 ug/l
RT: 11.894 min Scan# 1690
Delta R.T. 0.006 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

Tgt Ion: 112 Resp: 134181
Ion Ratio Lower Upper
112 100
114 31.1 25.0 37.4

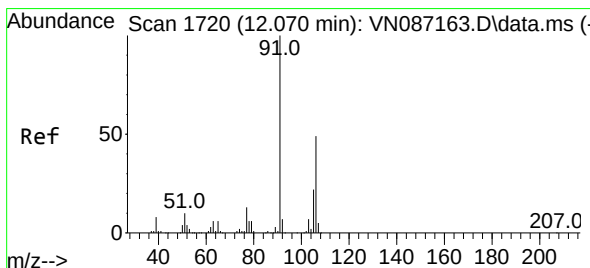
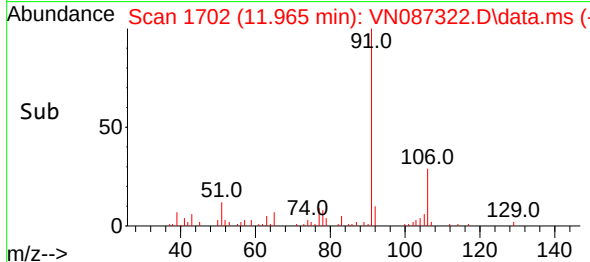
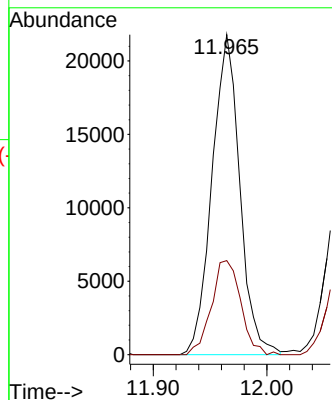
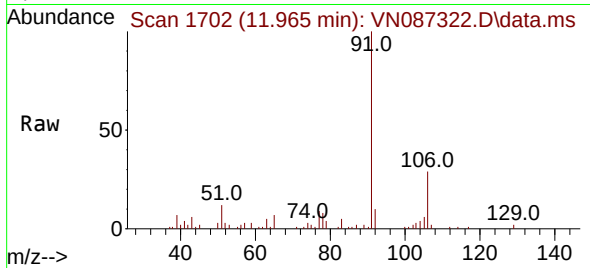




#66
Ethyl Benzene
Concen: 3.350 ug/l
RT: 11.965 min Scan# 1702
Delta R.T. 0.000 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

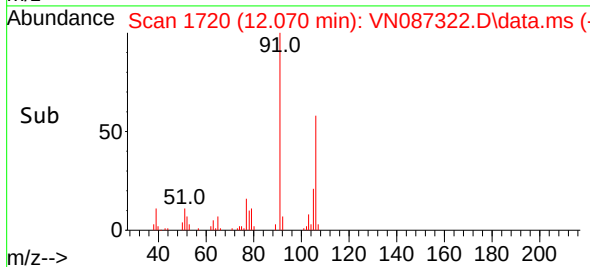
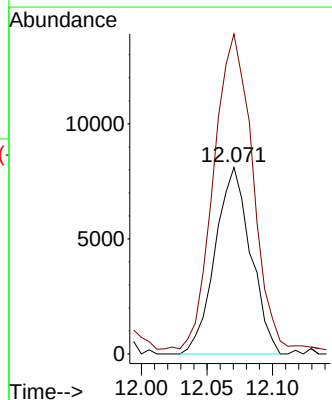
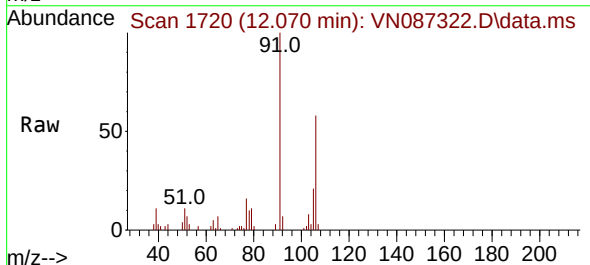
Instrument :
MSVOA_N
ClientSampleId :

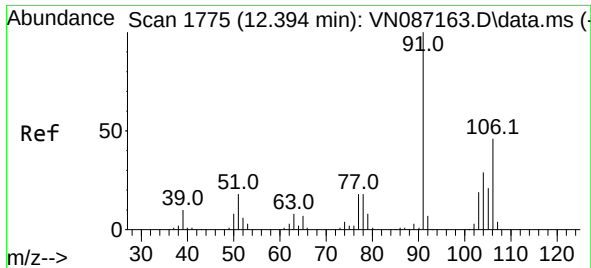
Tgt Ion: 91 Resp: 37027
Ion Ratio Lower Upper
91 100
106 29.4 24.8 37.2



#67
m/p-Xylenes
Concen: 3.614 ug/l
RT: 12.070 min Scan# 1720
Delta R.T. 0.000 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

Tgt Ion: 106 Resp: 15310
Ion Ratio Lower Upper
106 100
91 182.4 163.0 244.4

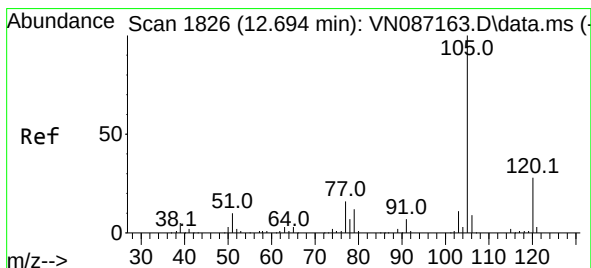
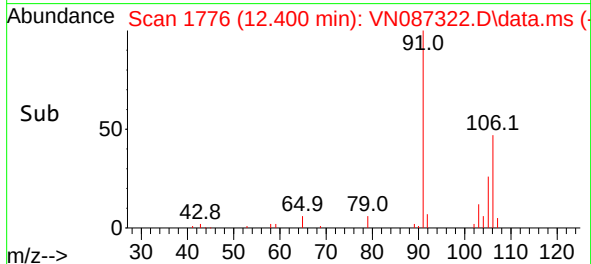
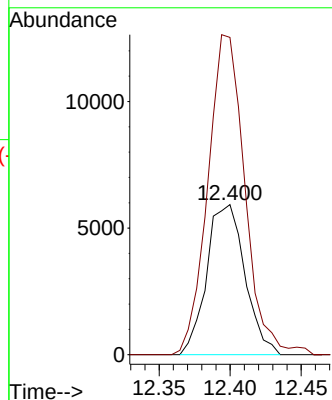
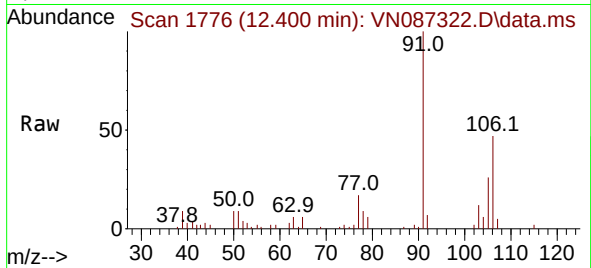




#68
o-Xylene
Concen: 2.743 ug/l
RT: 12.400 min Scan# 11
Delta R.T. 0.006 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

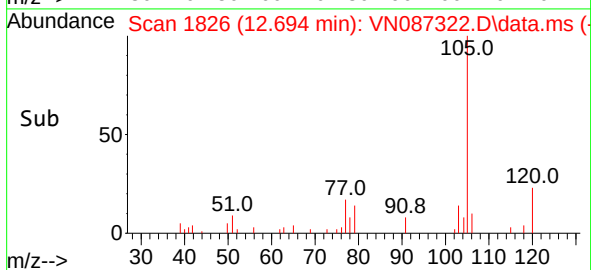
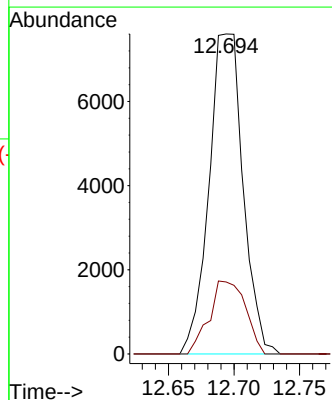
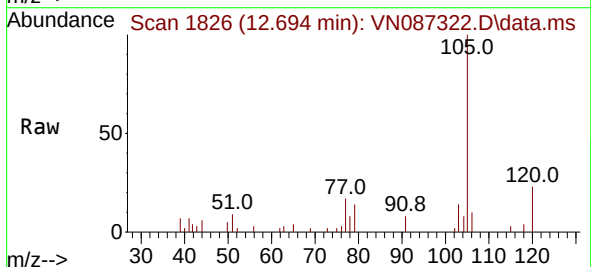
Instrument :
MSVOA_N
ClientSampleId :

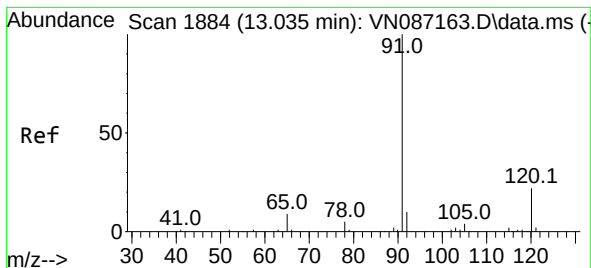
Tgt Ion:106 Resp: 11085
Ion Ratio Lower Upper
106 100
91 205.4 107.1 321.1



#70
Isopropylbenzene
Concen: 1.369 ug/l
RT: 12.694 min Scan# 1826
Delta R.T. 0.000 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

Tgt Ion:105 Resp: 13780
Ion Ratio Lower Upper
105 100
120 24.2 19.0 35.2





#74

n-propylbenzene

Concen: 0.707 ug/l

RT: 13.035 min Scan# 1884

Delta R.T. 0.000 min

Lab File: VN087322.D

Acq: 10 Jul 2025 13:48

Instrument :

MSVOA_N

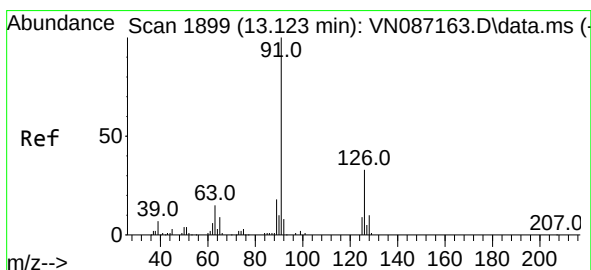
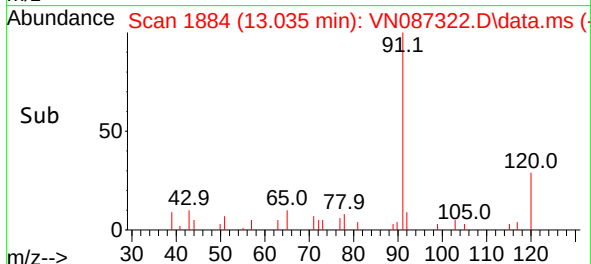
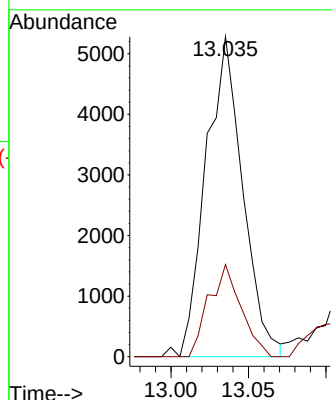
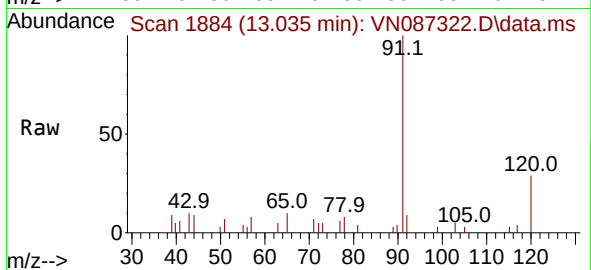
ClientSampleId :

Tgt Ion: 91 Resp: 8697

Ion Ratio Lower Upper

91 100

120 25.2 0.0 43.6



#75

2-Chlorotoluene

Concen: 0.750 ug/l

RT: 13.123 min Scan# 1899

Delta R.T. 0.000 min

Lab File: VN087322.D

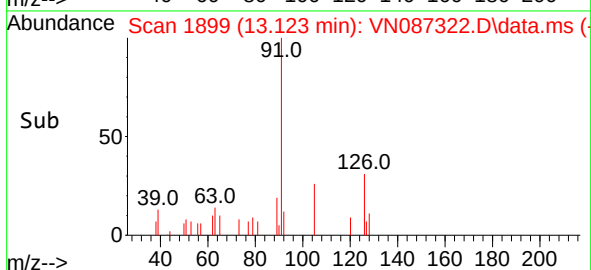
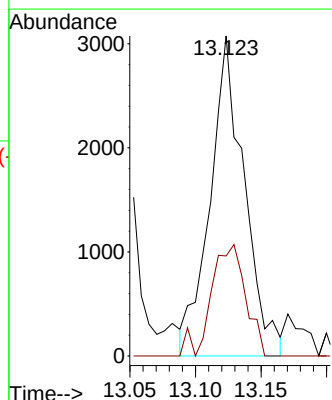
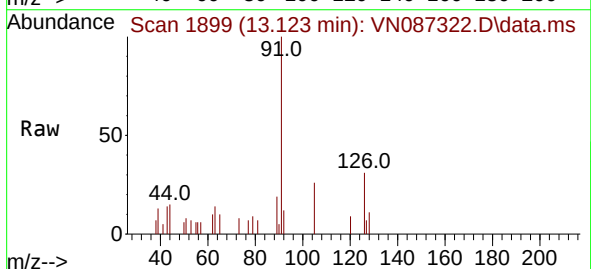
Acq: 10 Jul 2025 13:48

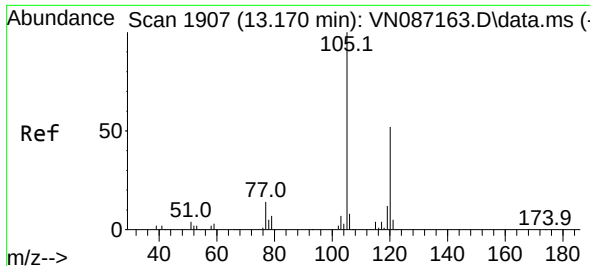
Tgt Ion: 91 Resp: 5573

Ion Ratio Lower Upper

91 100

126 33.3 0.0 63.8

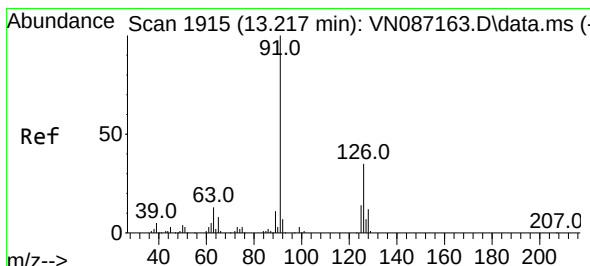
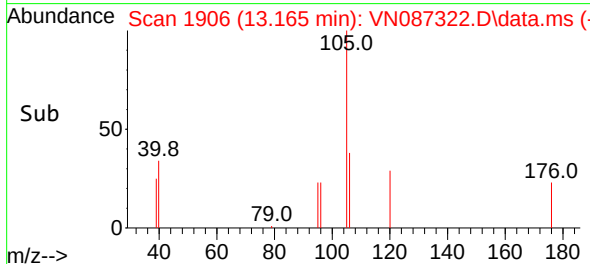
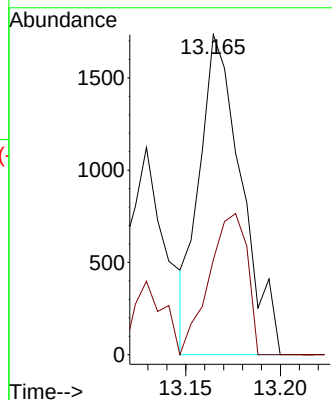
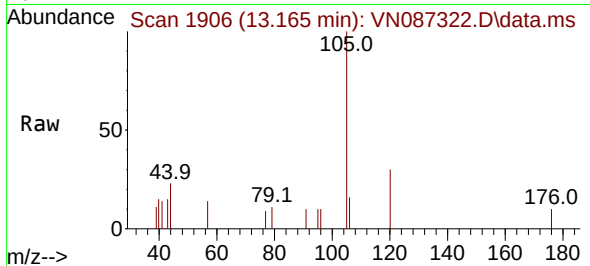




#76
1,3,5-Trimethylbenzene
Concen: 0.327 ug/l
RT: 13.165 min Scan# 1899
Delta R.T. -0.006 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

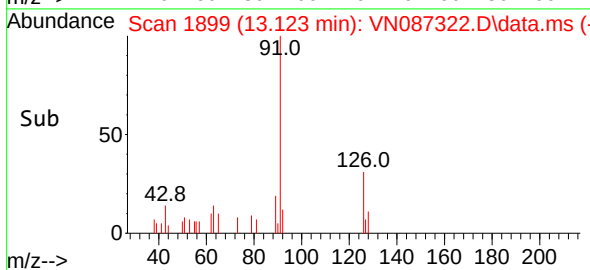
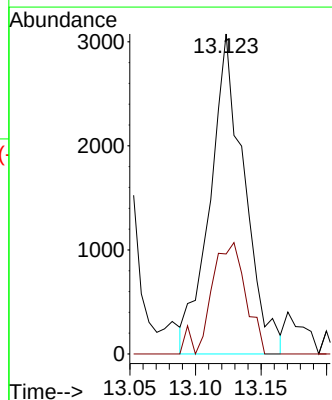
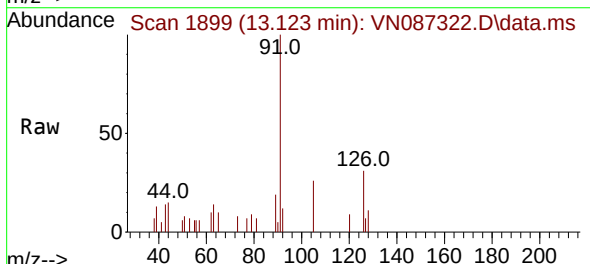
Instrument :
MSVOA_N
ClientSampleId :

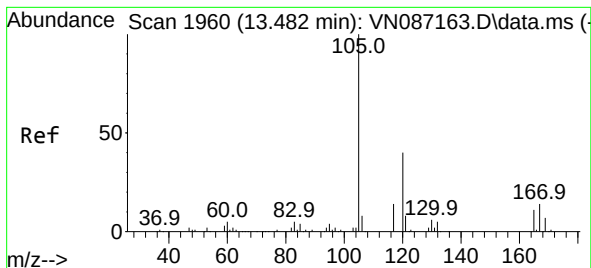
Tgt Ion:105 Resp: 2679
Ion Ratio Lower Upper
105 100
120 39.8 0.0 100.8



#78
4-Chlorotoluene
Concen: 0.732 ug/l
RT: 13.123 min Scan# 1899
Delta R.T. -0.094 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

Tgt Ion: 91 Resp: 5573
Ion Ratio Lower Upper
91 100
126 33.3 0.0 65.2





#80

1,2,4-Trimethylbenzene

Concen: 1.812 ug/l

RT: 13.476 min Scan# 1959

Delta R.T. -0.006 min

Lab File: VN087322.D

Acq: 10 Jul 2025 13:48

Instrument :

MSVOA_N

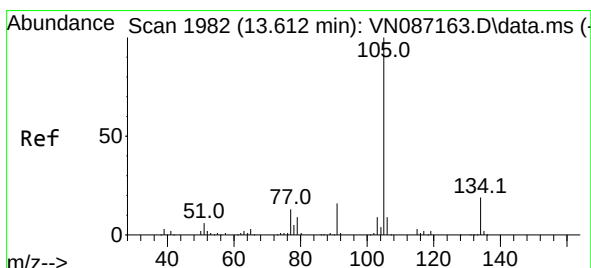
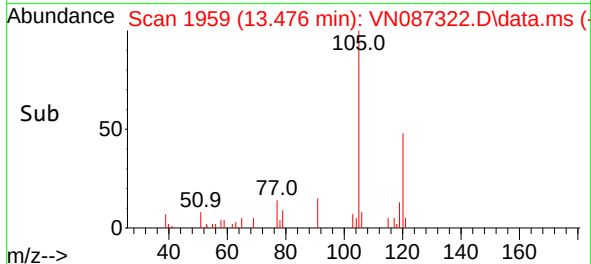
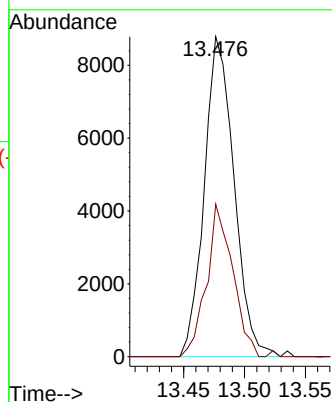
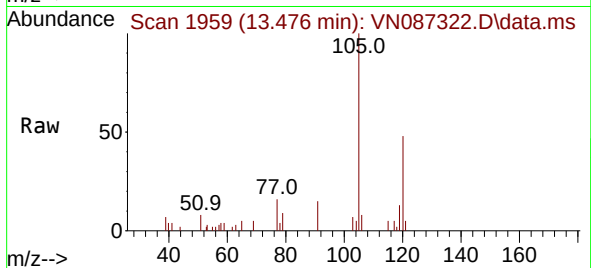
ClientSampleId :

Tgt Ion:105 Resp: 14906

Ion Ratio Lower Upper

105 100

120 41.9 0.0 94.0



#81

sec-Butylbenzene

Concen: 0.213 ug/l

RT: 13.612 min Scan# 1982

Delta R.T. 0.000 min

Lab File: VN087322.D

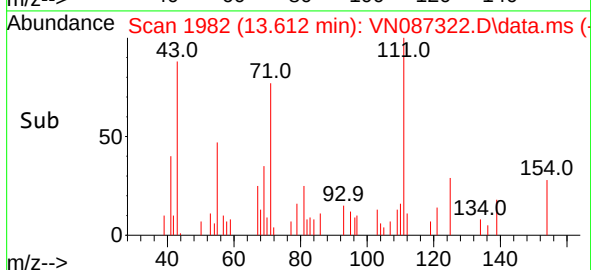
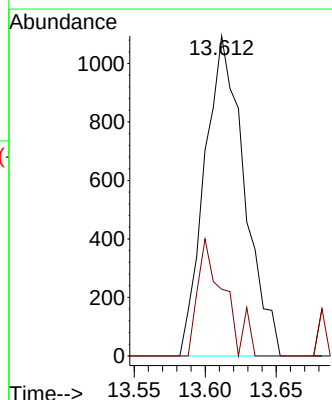
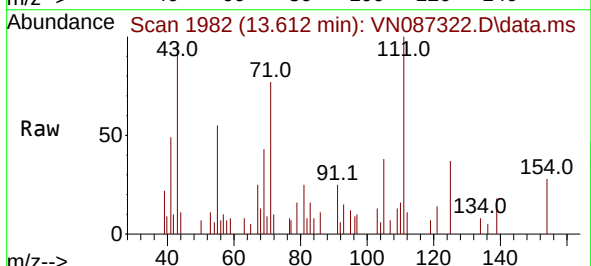
Acq: 10 Jul 2025 13:48

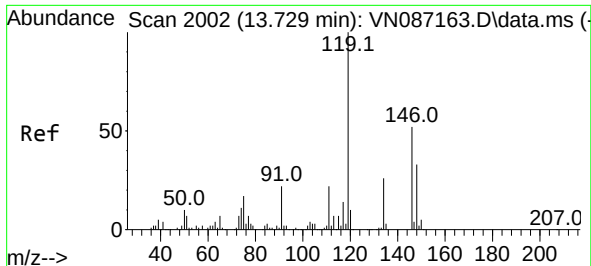
Tgt Ion:105 Resp: 2133

Ion Ratio Lower Upper

105 100

134 18.1 0.0 39.4

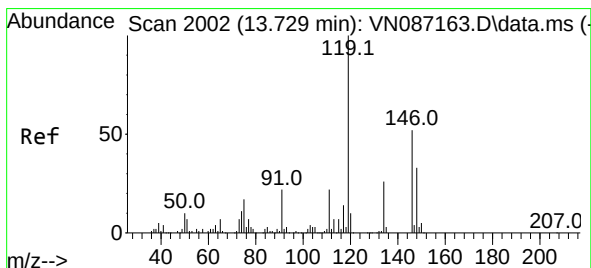
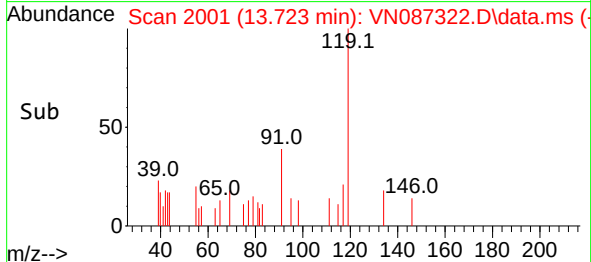
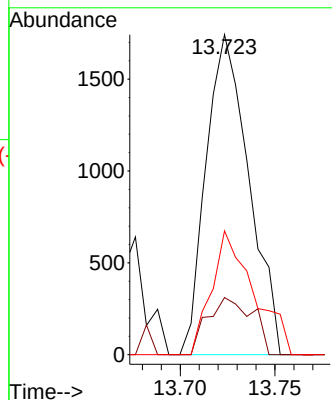
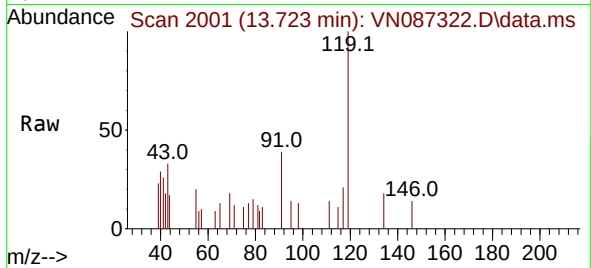




#82
p-Isopropyltoluene
Concen: 0.329 ug/l
RT: 13.723 min Scan# 2001
Delta R.T. -0.006 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

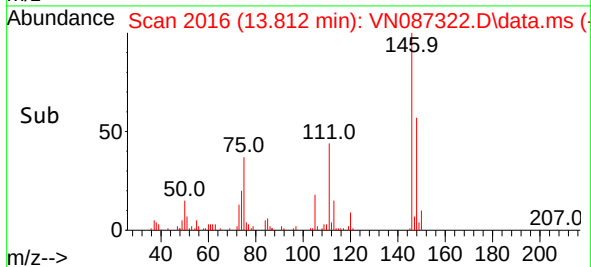
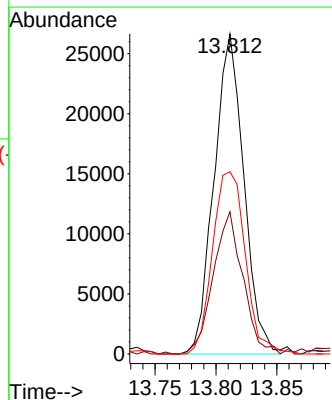
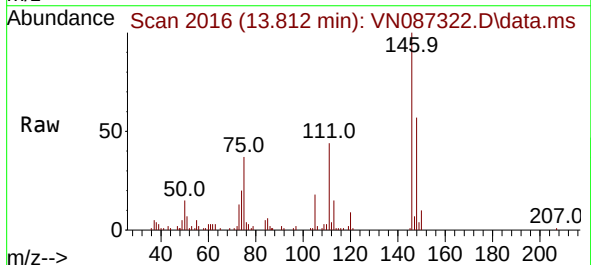
Instrument :
MSVOA_N
ClientSampleId :

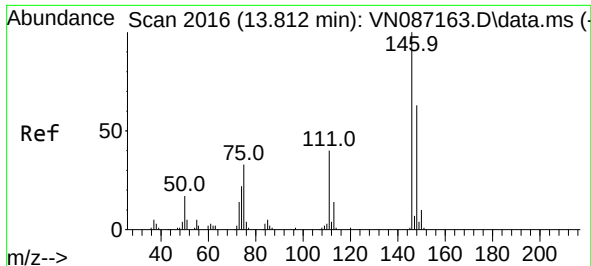
Tgt Ion:119 Resp: 2743
Ion Ratio Lower Upper
119 100
134 15.5 0.0 51.2
91 35.4 0.0 46.4



#83
1,3-Dichlorobenzene
Concen: 9.650 ug/l
RT: 13.812 min Scan# 2016
Delta R.T. 0.082 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

Tgt Ion:146 Resp: 45370
Ion Ratio Lower Upper
146 100
111 44.0 21.1 63.3
148 62.7 31.6 94.8

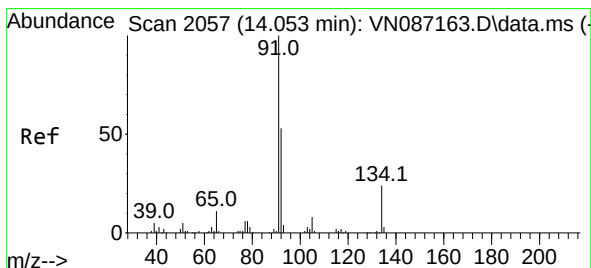
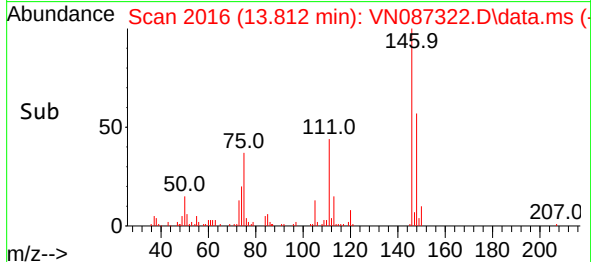
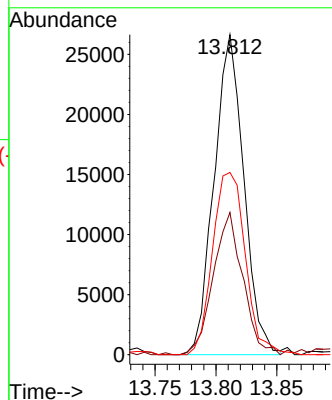
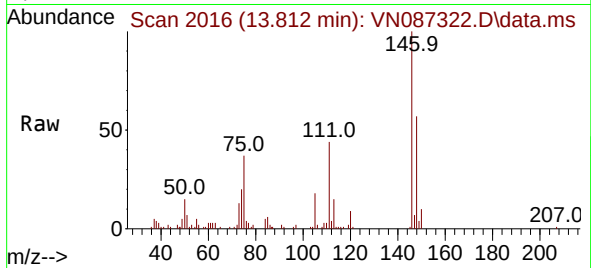




#84
1,4-Dichlorobenzene
Concen: 9.588 ug/l
RT: 13.812 min Scan# 2016
Delta R.T. -0.000 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

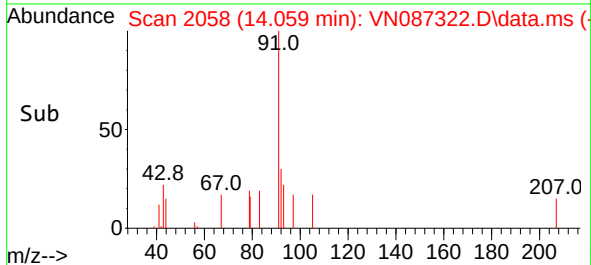
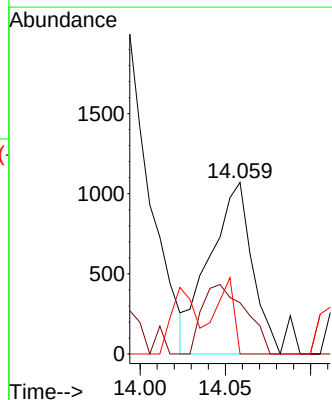
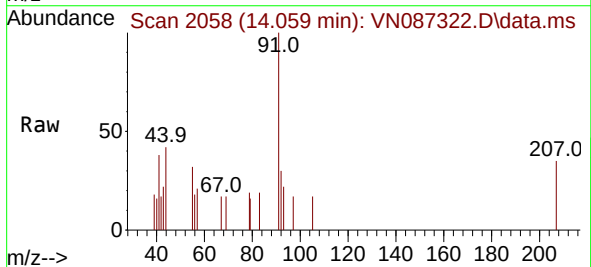
Instrument :
MSVOA_N
ClientSampleId :

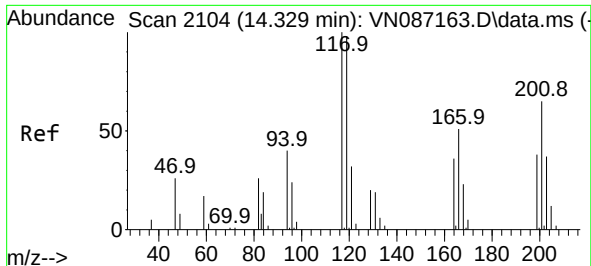
Tgt Ion:146 Resp: 45370
Ion Ratio Lower Upper
146 100
111 44.0 20.1 60.2
148 62.7 31.4 94.2



#85
n-Butylbenzene
Concen: 0.244 ug/l
RT: 14.059 min Scan# 2058
Delta R.T. 0.006 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

Tgt Ion: 91 Resp: 1852
Ion Ratio Lower Upper
91 100
92 41.7 0.0 106.4
134 19.2 0.0 48.8

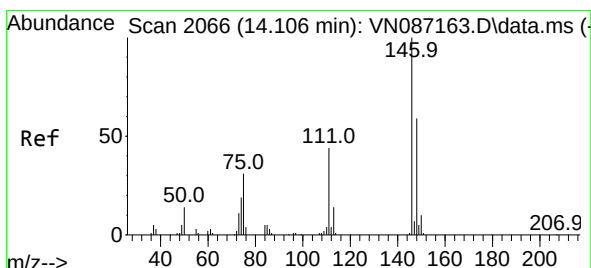
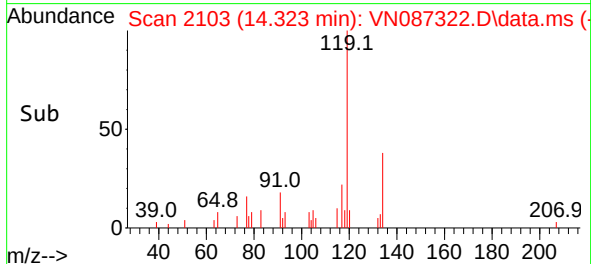
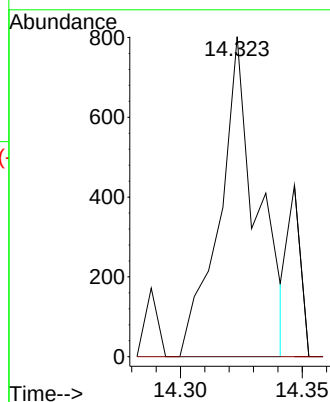
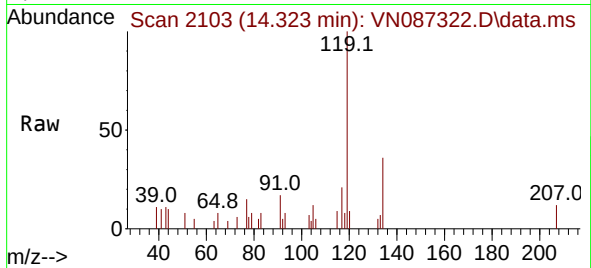




#86
Hexachloroethane
Concen: 0.550 ug/l
RT: 14.323 min Scan# 2103
Delta R.T. -0.006 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

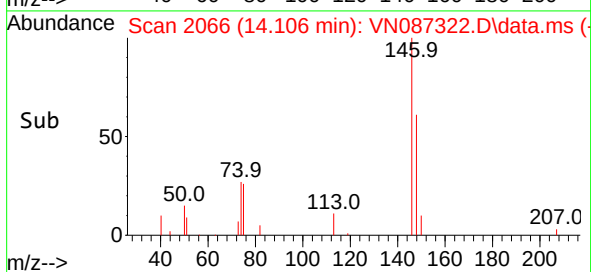
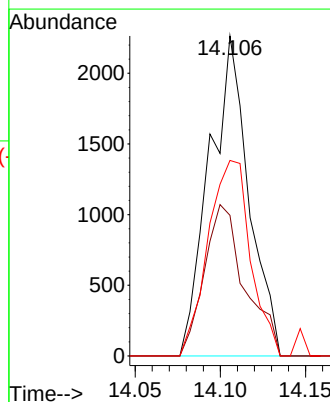
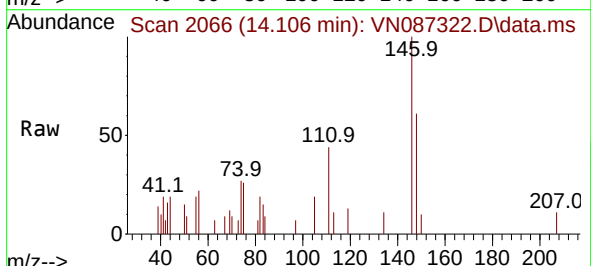
Instrument :
MSVOA_N
ClientSampleId :

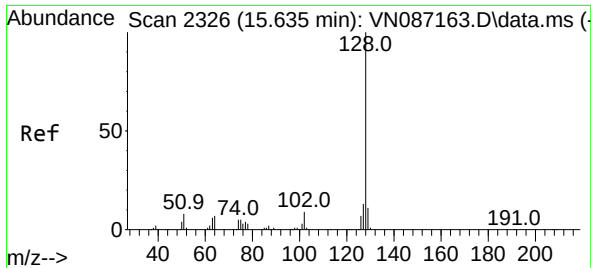
Tgt Ion:117 Resp: 867
Ion Ratio Lower Upper
117 100
201 0.0 30.8 92.3#



#87
1,2-Dichlorobenzene
Concen: 0.820 ug/l
RT: 14.106 min Scan# 2066
Delta R.T. -0.000 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

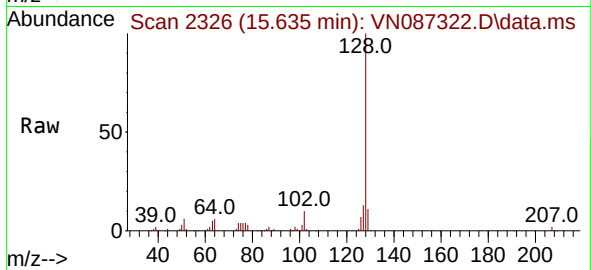
Tgt Ion:146 Resp: 3635
Ion Ratio Lower Upper
146 100
111 48.9 22.1 66.1
148 65.9 31.6 95.0





#91
Naphthalene
Concen: 12.922 ug/l
RT: 15.635 min Scan# 21
Delta R.T. 0.000 min
Lab File: VN087322.D
Acq: 10 Jul 2025 13:48

Instrument :
MSVOA_N
ClientSampleId :



Tgt Ion:128 Resp: 127556
Ion Ratio Lower Upper
128 100
127 13.8 10.6 15.8
129 11.2 8.8 13.2

