

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN101725\
 Data File : VN088061.D
 Acq On : 17 Oct 2025 12:14
 Operator : JC\MD
 Sample : Q3362-01
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VOA 251015085-01

Quant Time: Oct 18 01:27:52 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

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

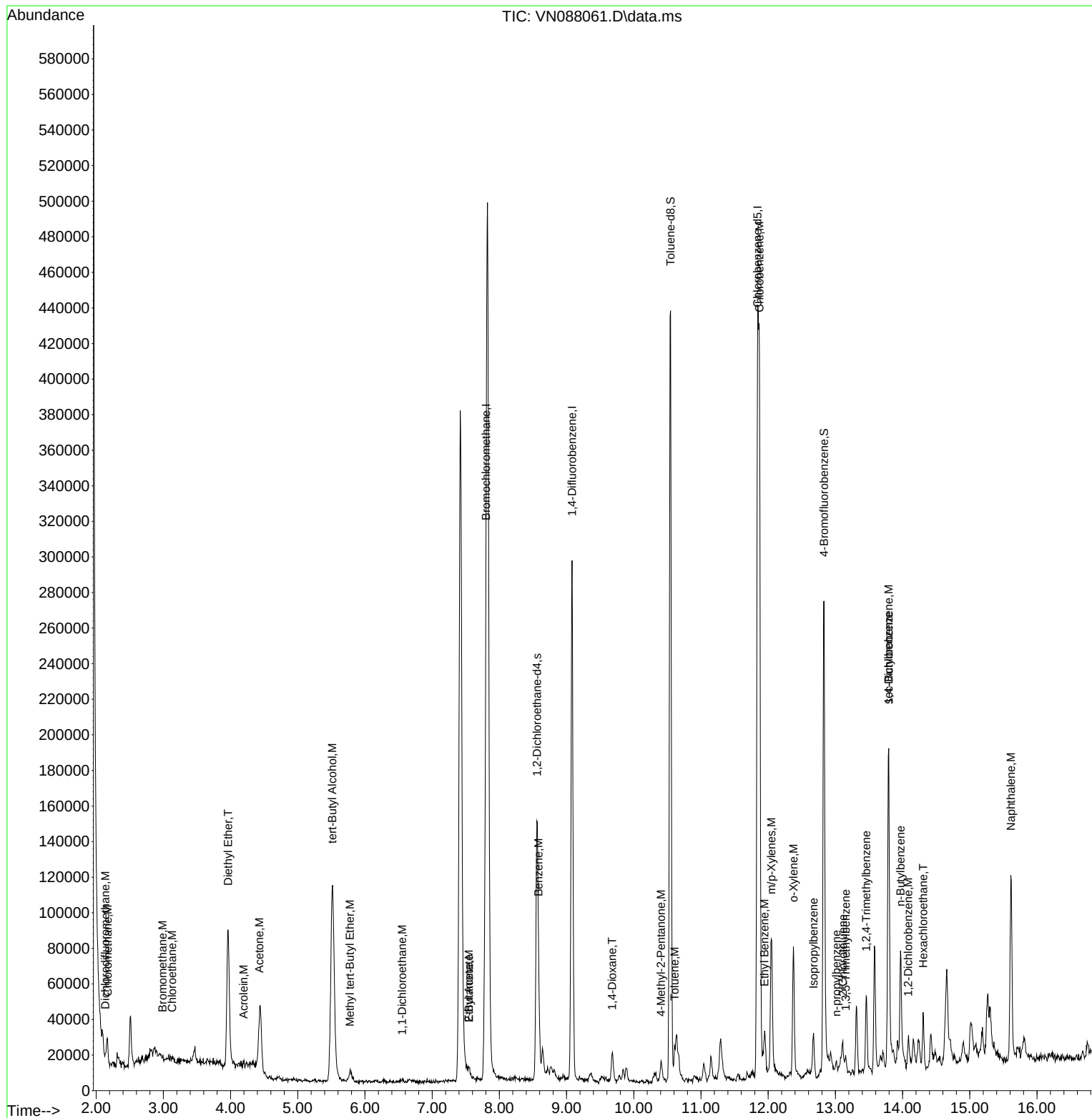
Internal Standards							
1) Bromochloromethane		7.800	128	44318	30.000	ug/l	0.00
28) 1,4-Difluorobenzene		9.083	114	244489	30.000	ug/l	0.00
57) Chlorobenzene-d5		11.841	117	216449	30.000	ug/l	0.00
System Monitoring Compounds							
27) 1,2-Dichloroethane-d4		8.559	65	116912	33.878	ug/l	0.00
Spiked Amount	30.000	Range	91 - 110	Recovery	=	112.933%	#
60) 4-Bromofluorobenzene		12.829	95	104169	29.193	ug/l	0.00
Spiked Amount	30.000	Range	63 - 112	Recovery	=	97.300%	
63) Toluene-d8		10.547	98	290824	30.157	ug/l	0.00
Spiked Amount	30.000	Range	91 - 112	Recovery	=	100.533%	
Target Compounds							Qvalue
2) Dichlorodifluoromethane		2.136	85	1285	0.506	ug/l	# 39
3) Chloromethane		2.171	50	1002	0.348	ug/l	94
5) Bromomethane		2.989	94	489	0.303	ug/l	# 78
6) Chloroethane		3.130	64	466	0.235	ug/l	# 81
8) Diethyl Ether		3.965	74	46382	25.156	ug/l	96
13) Acrolein		4.195	56	410	0.699	ug/l	# 1
15) Acetone		4.430	58	2144	4.005	ug/l	# 1
21) 1,1-Dichloroethane		6.553	63	1323	0.254	ug/l	# 79
23) tert-Butyl Alcohol		5.512	59	231942	316.348	ug/l	# 100
24) Methyl tert-Butyl Ether		5.777	73	6259	0.622	ug/l	# 77
30) 2-Butanone		7.547	43	1148	0.444	ug/l	# 47
34) Benzene		8.583	78	32057	2.758	ug/l	# 58
43) Ethyl Acetate		7.547	43	1148	0.231	ug/l	# 76
45) 1,4-Dioxane		9.677	88	12852	238.123	ug/l	# 59
58) 4-Methyl-2-Pentanone		10.406	43	5329	1.101	ug/l	# 55
62) Toluene		10.606	91	8780	0.715	ug/l	94
64) Chlorobenzene		11.871	112	201914	25.747	ug/l	97
66) Ethyl Benzene		11.947	91	9378	0.702	ug/l	90
67) m/p-Xylenes		12.047	106	27399	5.324	ug/l	95
68) o-Xylene		12.376	106	19980	3.900	ug/l	90
70) Isopropylbenzene		12.676	105	16411	1.307	ug/l	95
74) n-propylbenzene		13.018	91	4900	0.323	ug/l	72
75) 2-Chlorotoluene		13.112	91	7506	0.810	ug/l	81
76) 1,3,5-Trimethylbenzene		13.153	105	4866	0.456	ug/l	49
80) 1,2,4-Trimethylbenzene		13.459	105	27241	2.551	ug/l	95
81) sec-Butylbenzene		13.794	105	17364	1.336	ug/l	57
84) 1,4-Dichlorobenzene		13.794	146	65851	11.057	ug/l	96
85) n-Butylbenzene		13.970	91	5126	0.496	ug/l	45
86) Hexachloroethane		14.306	117	1506	0.677	ug/l	# 15
87) 1,2-Dichlorobenzene		14.082	146	5192	0.914	ug/l	95
91) Naphthalene		15.612	128	99009	7.993	ug/l	100

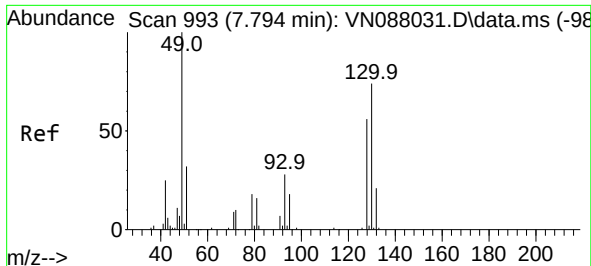
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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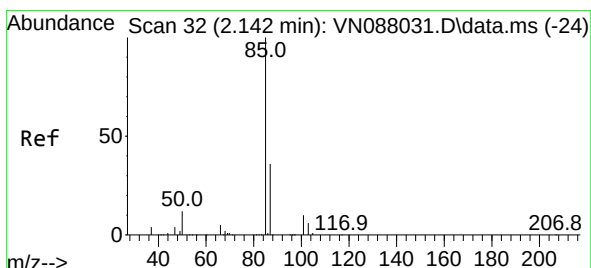
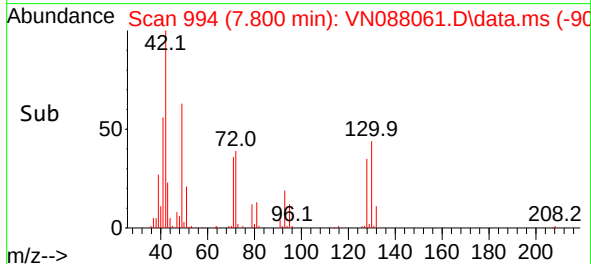
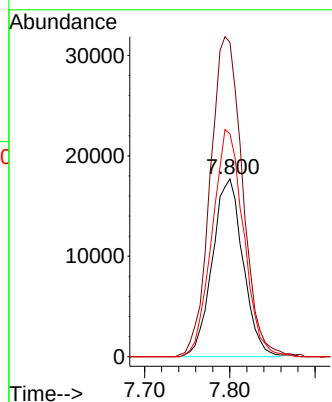
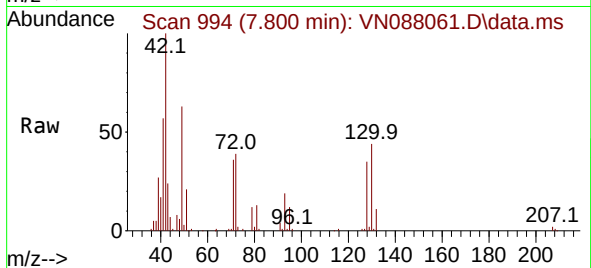




#1
Bromochloromethane
Concen: 30.000 ug/l
RT: 7.800 min Scan# 993
Delta R.T. 0.006 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

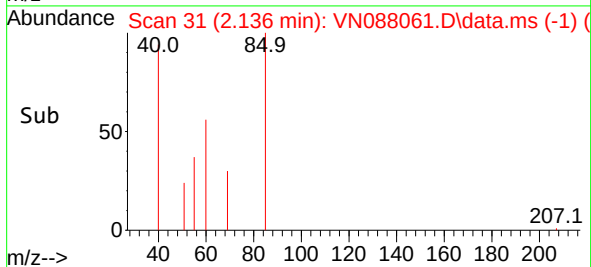
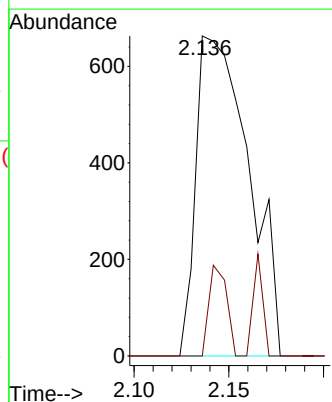
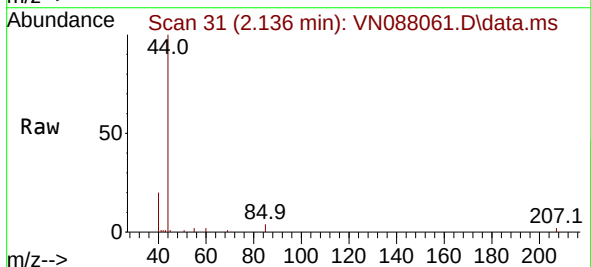
Instrument :
MSVOA_N
ClientSampleId :
VOA 251015085-01

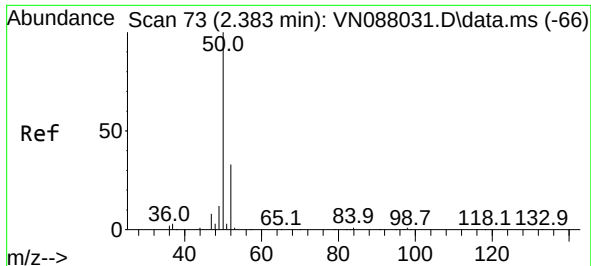
Tgt Ion:128 Resp: 44318
Ion Ratio Lower Upper
128 100
49 189.4 0.0 439.8
130 130.9 0.0 325.8



#2
Dichlorodifluoromethane
Concen: 0.506 ug/l
RT: 2.136 min Scan# 31
Delta R.T. -0.006 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

Tgt Ion: 85 Resp: 1285
Ion Ratio Lower Upper
85 100
87 0.0 17.9 53.8#

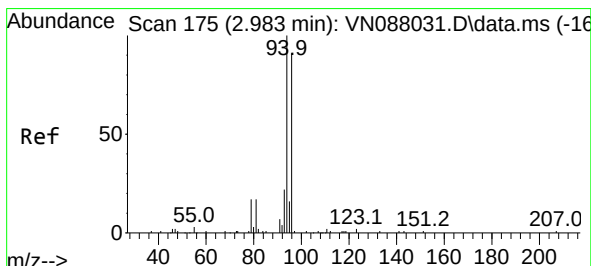
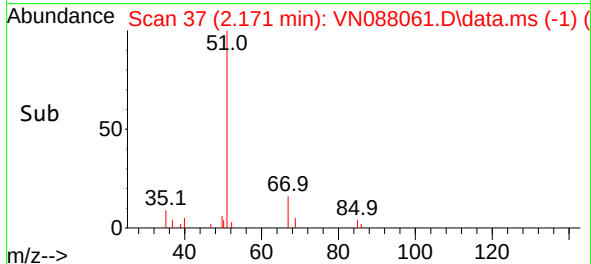
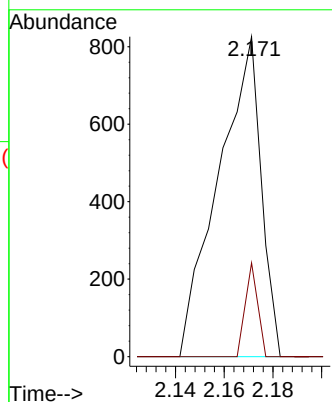
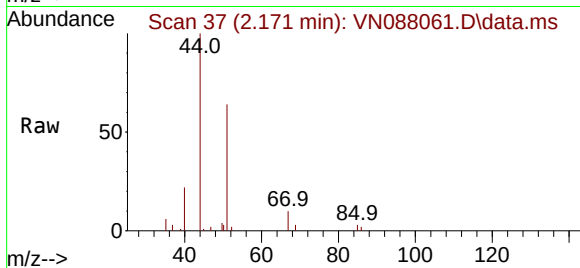




#3
Chloromethane
Concen: 0.348 ug/l
RT: 2.171 min Scan# 31
Delta R.T. -0.212 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

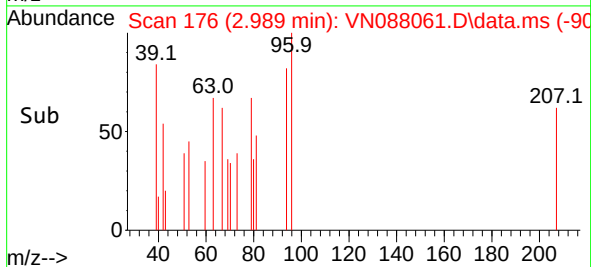
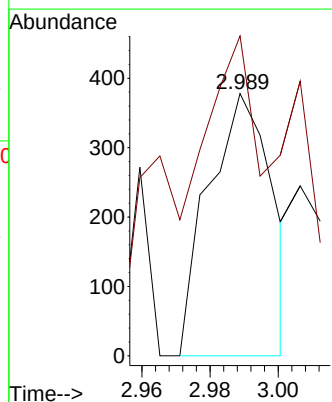
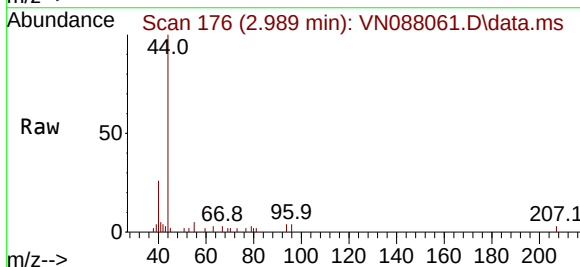
Instrument :
MSVOA_N
ClientSampleId :
VOA 251015085-01

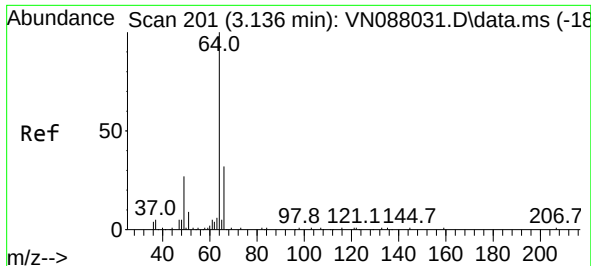
Tgt Ion: 50 Resp: 1002
Ion Ratio Lower Upper
50 100
52 29.3 26.3 39.5



#5
Bromomethane
Concen: 0.303 ug/l
RT: 2.989 min Scan# 176
Delta R.T. 0.006 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

Tgt Ion: 94 Resp: 489
Ion Ratio Lower Upper
94 100
96 70.1 73.0 109.4#

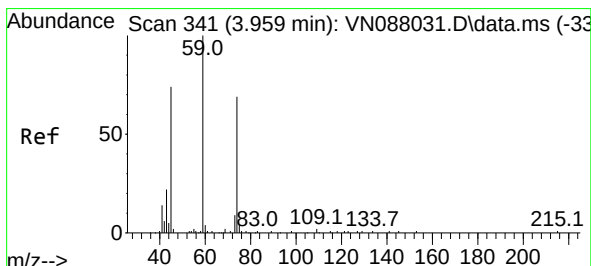
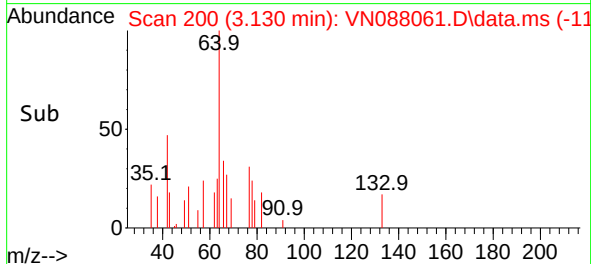
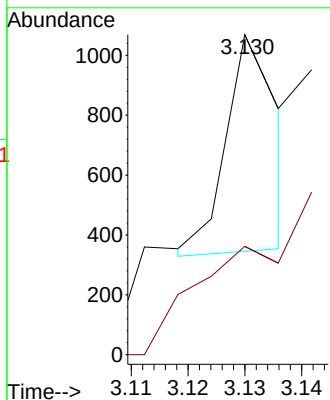
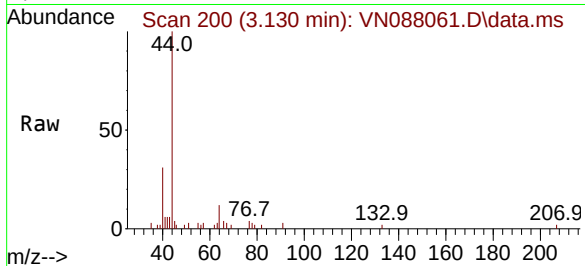




#6
Chloroethane
Concen: 0.235 ug/l
RT: 3.130 min Scan# 201
Delta R.T. -0.006 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

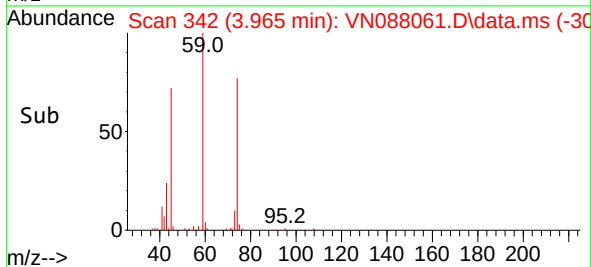
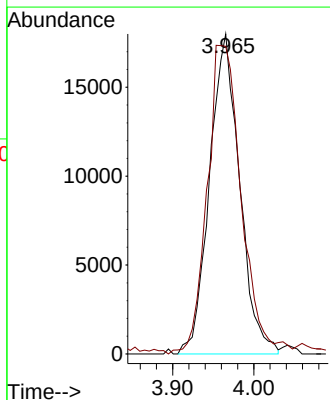
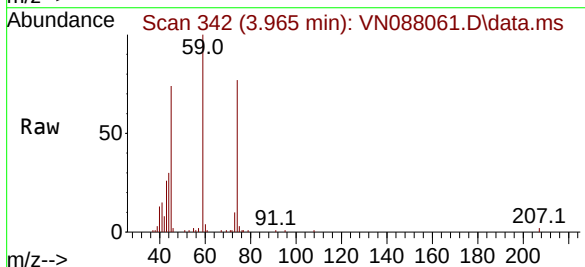
Instrument :
MSVOA_N
ClientSampleId :
VOA 251015085-01

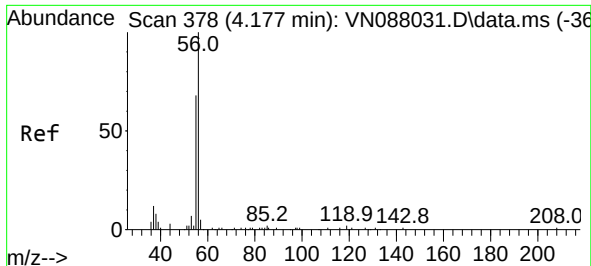
Tgt Ion: 64 Resp: 466
Ion Ratio Lower Upper
64 100
66 22.5 26.8 40.2#



#8
Diethyl Ether
Concen: 25.156 ug/l
RT: 3.965 min Scan# 342
Delta R.T. 0.006 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

Tgt Ion: 74 Resp: 46382
Ion Ratio Lower Upper
74 100
45 105.9 20.4 183.8

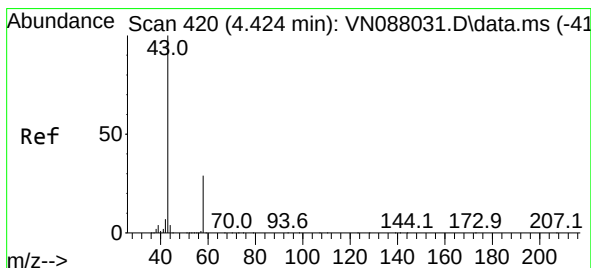
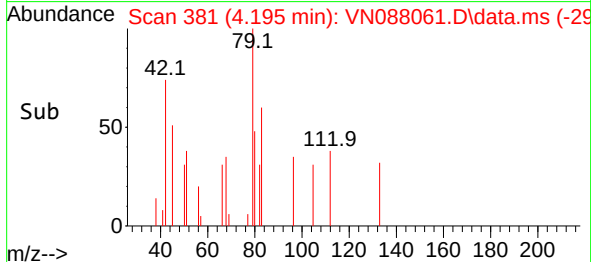
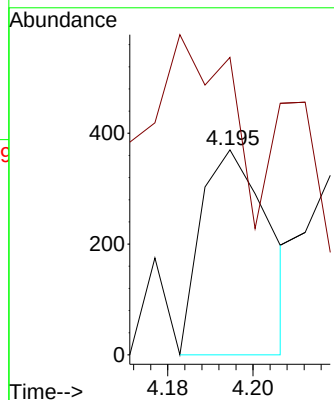
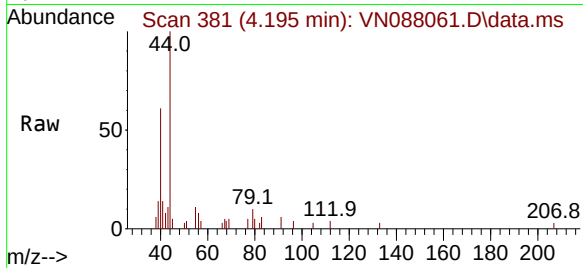




#13
Acrolein
Concen: 0.699 ug/l
RT: 4.195 min Scan# 381
Delta R.T. 0.018 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

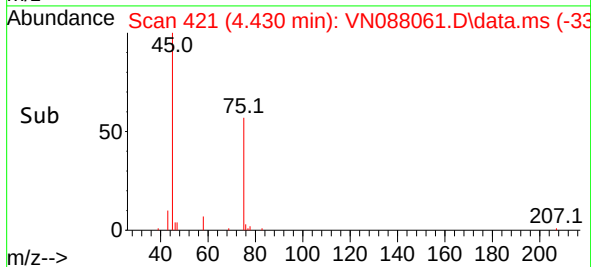
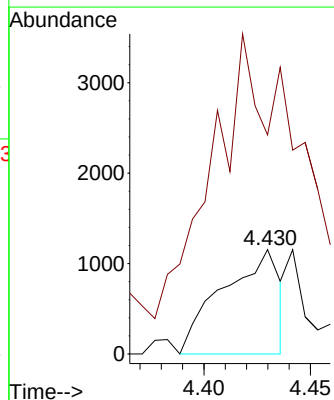
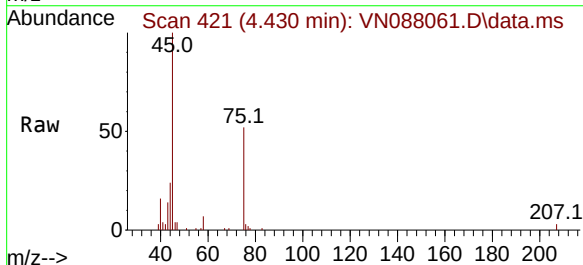
Instrument :
MSVOA_N
ClientSampleId :
VOA 251015085-01

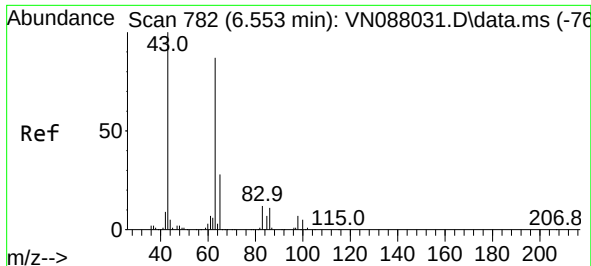
Tgt Ion: 56 Resp: 410
Ion Ratio Lower Upper
56 100
55 136.6 0.3 0.5#



#15
Acetone
Concen: 4.005 ug/l
RT: 4.430 min Scan# 421
Delta R.T. 0.006 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

Tgt Ion: 58 Resp: 2144
Ion Ratio Lower Upper
58 100
43 123.8 282.6 424.0#

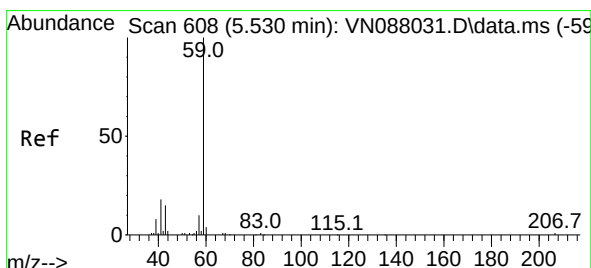
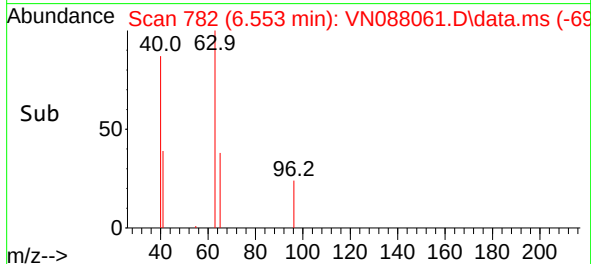
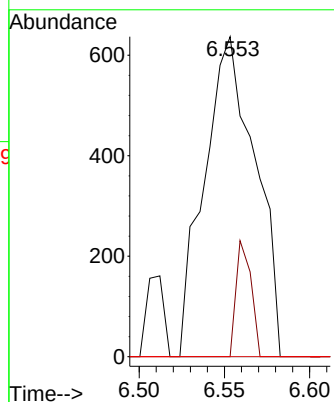
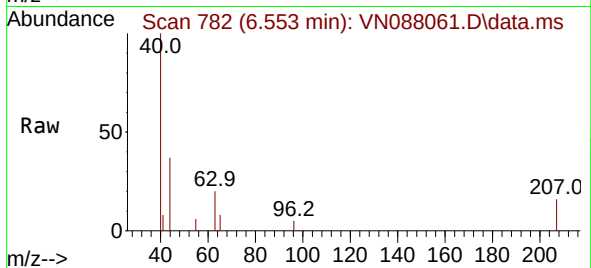




#21
1,1-Dichloroethane
Concen: 0.254 ug/l
RT: 6.553 min Scan# 71
Delta R.T. 0.000 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

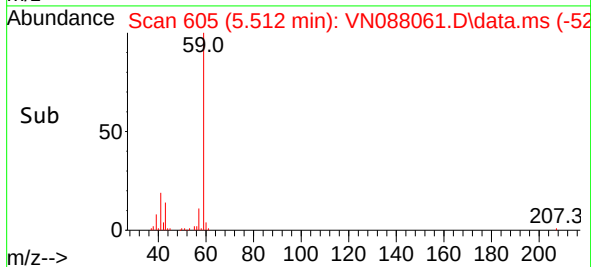
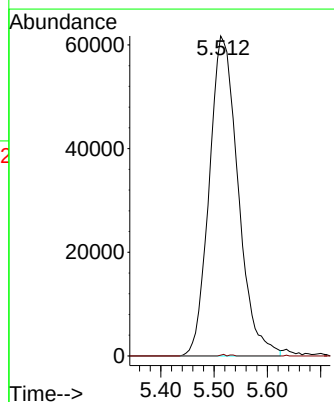
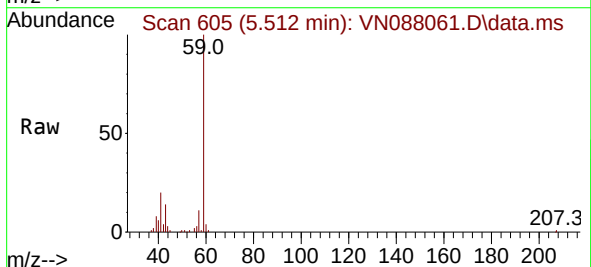
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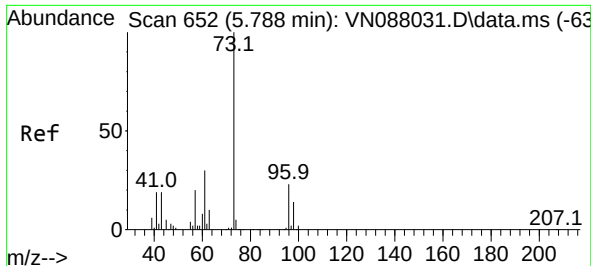
Tgt Ion: 63 Resp: 1323
Ion Ratio Lower Upper
63 100
98 0.0 4.3 12.8#
100 0.0 2.6 8.0#



#23
tert-Butyl Alcohol
Concen: 316.348 ug/l
RT: 5.512 min Scan# 605
Delta R.T. -0.017 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

Tgt Ion: 59 Resp: 231942
Ion Ratio Lower Upper
59 100
52 0.1 0.0 0.0#

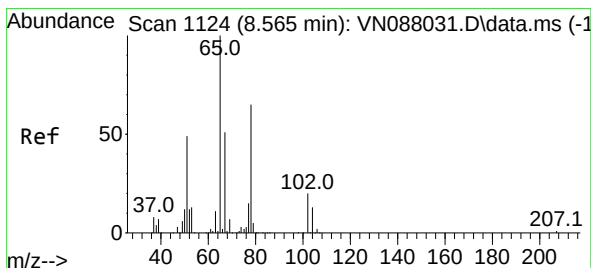
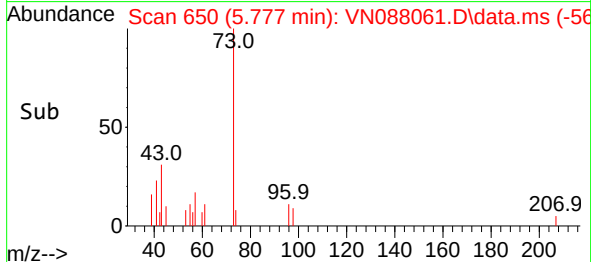
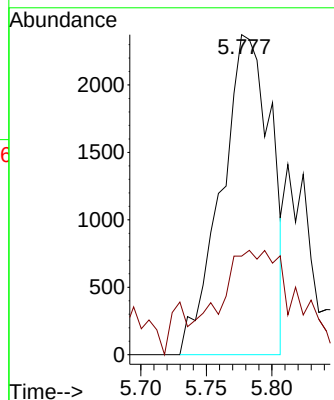
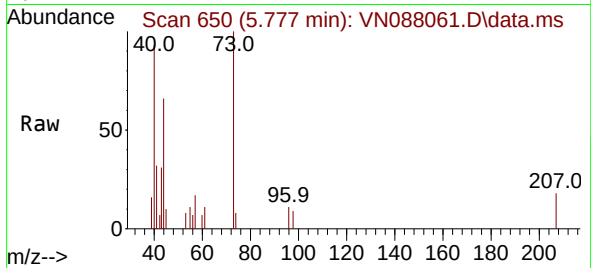




#24
Methyl tert-Butyl Ether
Concen: 0.622 ug/l
RT: 5.777 min Scan# 61
Delta R.T. -0.012 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

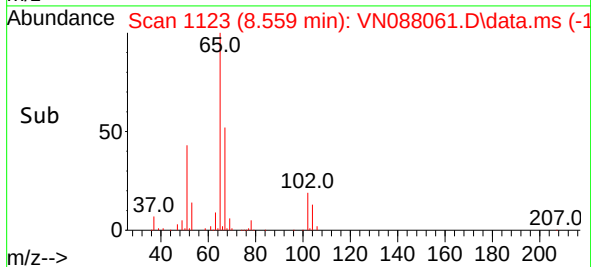
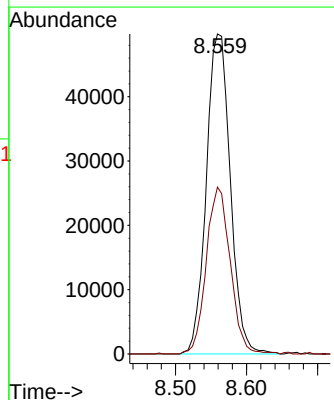
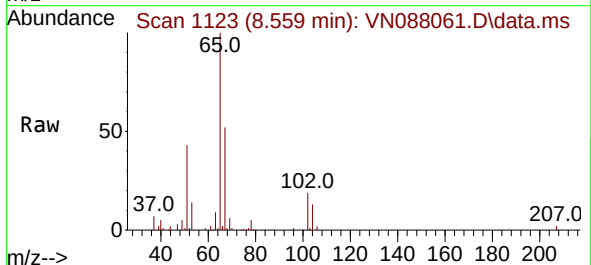
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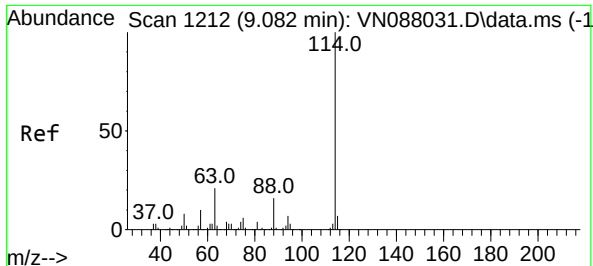
Tgt Ion: 73 Resp: 6259
Ion Ratio Lower Upper
73 100
43 10.6 17.0 25.4#



#27
1,2-Dichloroethane-d4
Concen: 33.878 ug/l
RT: 8.559 min Scan# 1123
Delta R.T. -0.006 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

Tgt Ion: 65 Resp: 116912
Ion Ratio Lower Upper
65 100
67 51.9 41.9 62.9





#28

1,4-Difluorobenzene

Concen: 30.000 ug/l

RT: 9.083 min Scan# 11

Delta R.T. 0.000 min

Lab File: VN088061.D

Acq: 17 Oct 2025 12:14

Instrument :

MSVOA_N

ClientSampleId :

VOA 251015085-01

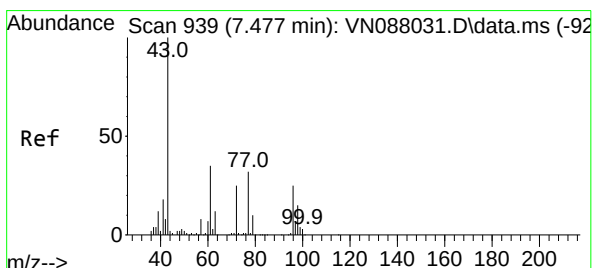
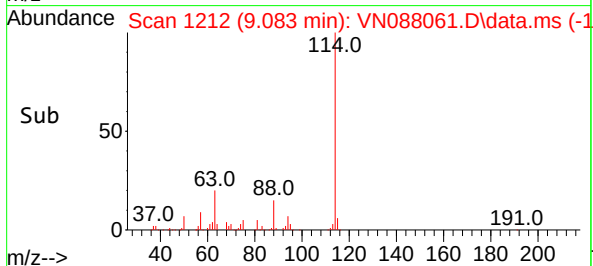
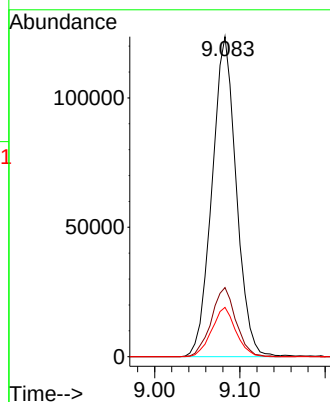
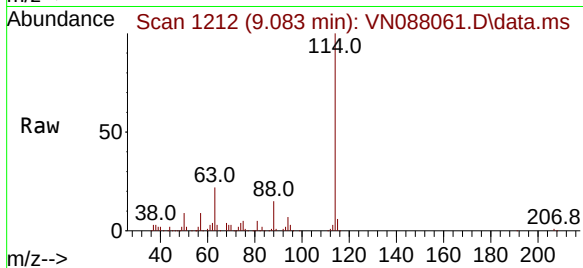
Tgt Ion:114 Resp: 244489

Ion Ratio Lower Upper

114 100

63 21.9 16.6 25.0

88 15.3 12.6 18.8



#30

2-Butanone

Concen: 0.444 ug/l

RT: 7.547 min Scan# 951

Delta R.T. 0.071 min

Lab File: VN088061.D

Acq: 17 Oct 2025 12:14

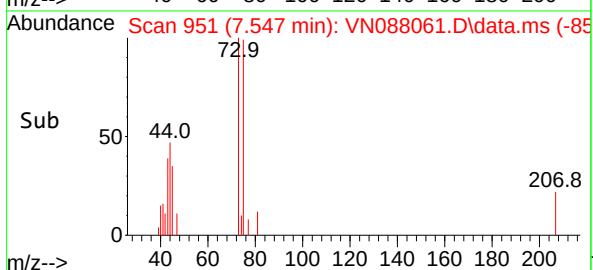
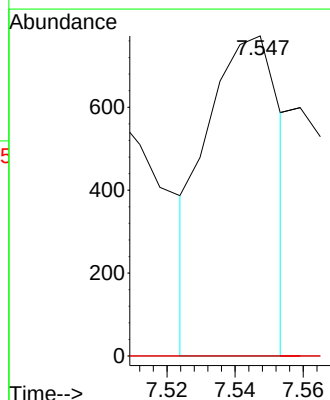
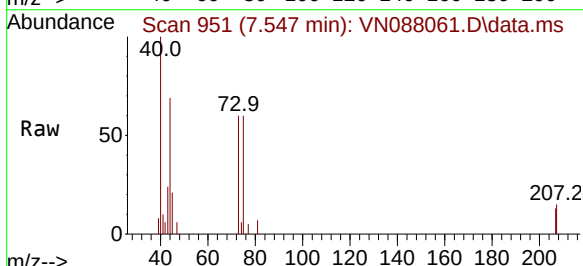
Tgt Ion: 43 Resp: 1148

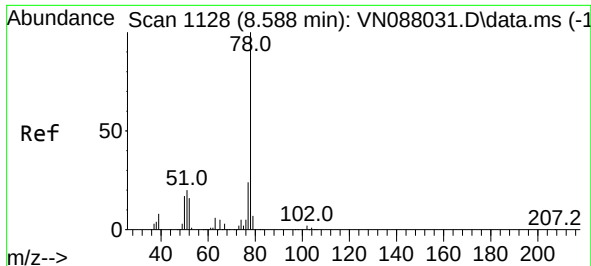
Ion Ratio Lower Upper

43 100

57 36.7 6.5 9.7#

72 49.6 21.4 32.2#

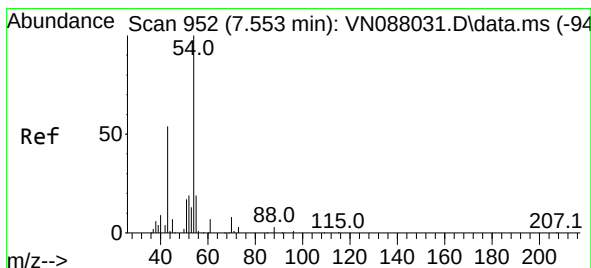
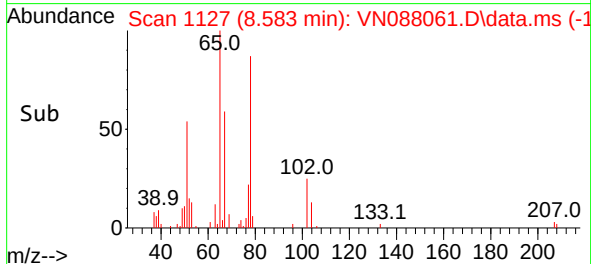
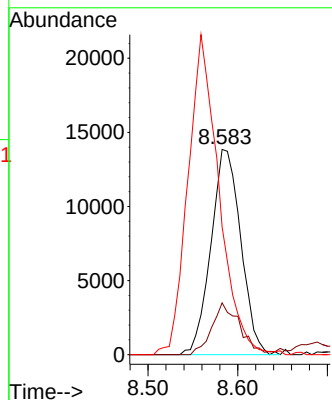
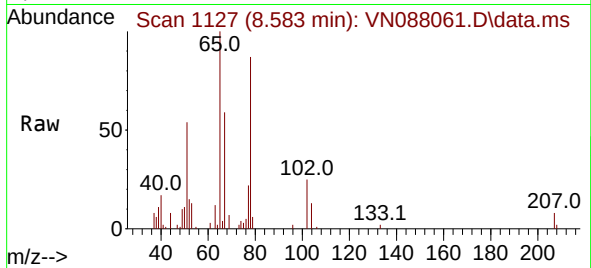




#34
Benzene
Concen: 2.758 ug/l
RT: 8.583 min Scan# 1127
Delta R.T. -0.006 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

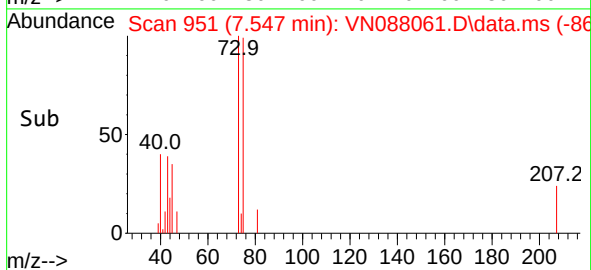
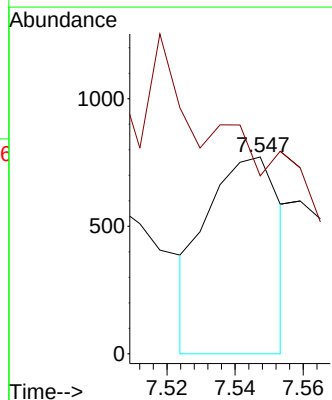
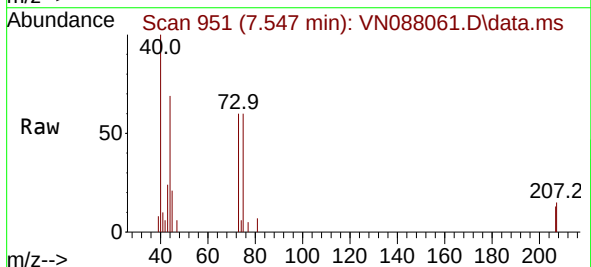
Instrument :
MSVOA_N
ClientSampleId :
VOA 251015085-01

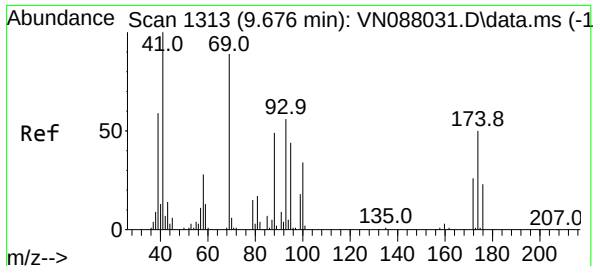
Tgt Ion: 78 Resp: 32057
Ion Ratio Lower Upper
78 100
77 25.2 18.9 28.3
51 60.3 15.6 23.4#



#43
Ethyl Acetate
Concen: 0.231 ug/l
RT: 7.547 min Scan# 951
Delta R.T. -0.006 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

Tgt Ion: 43 Resp: 1148
Ion Ratio Lower Upper
43 100
45 22.5 10.2 15.4#

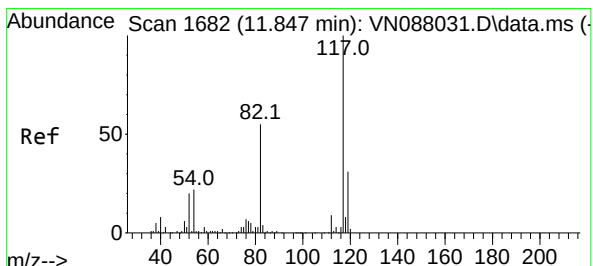
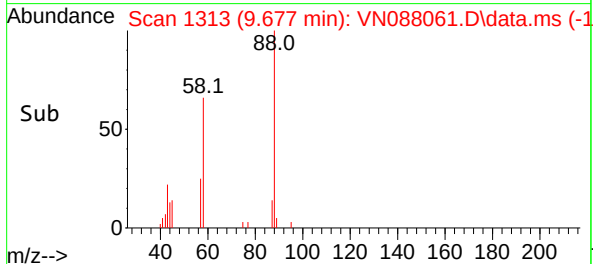
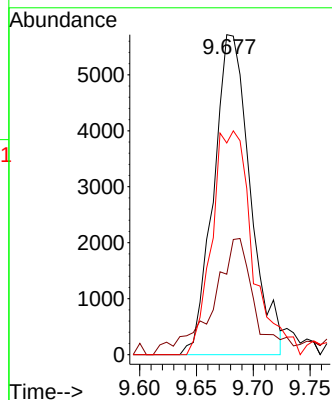
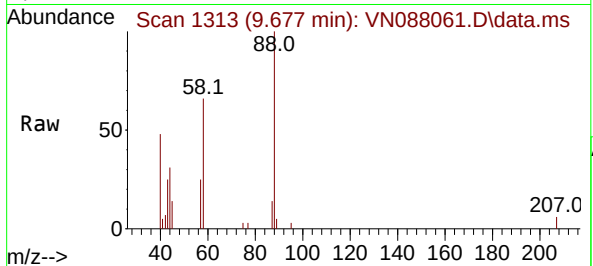




#45
1,4-Dioxane
Concen: 238.123 ug/l
RT: 9.677 min Scan# 11
Delta R.T. 0.000 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

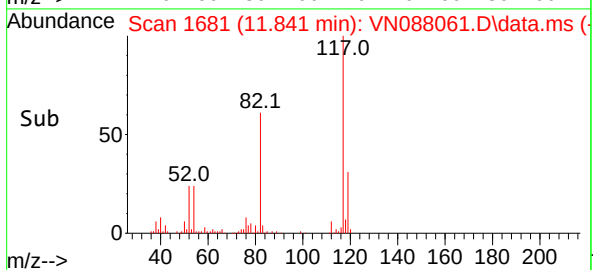
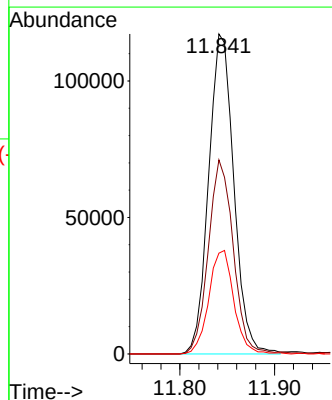
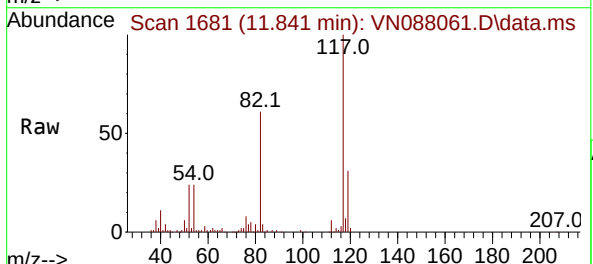
Instrument :
MSVOA_N
ClientSampleId :
VOA 251015085-01

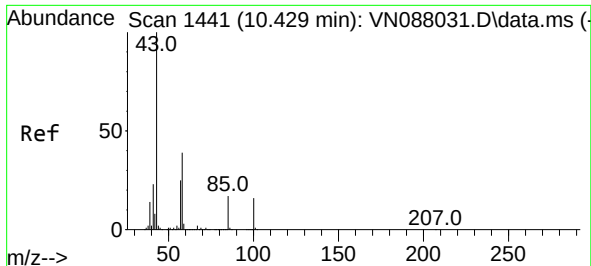
Tgt Ion: 88 Resp: 12852
Ion Ratio Lower Upper
88 100
43 35.2 18.6 27.8#
58 33.7 57.4 86.2#



#57
Chlorobenzene-d5
Concen: 30.000 ug/l
RT: 11.841 min Scan# 1681
Delta R.T. -0.006 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

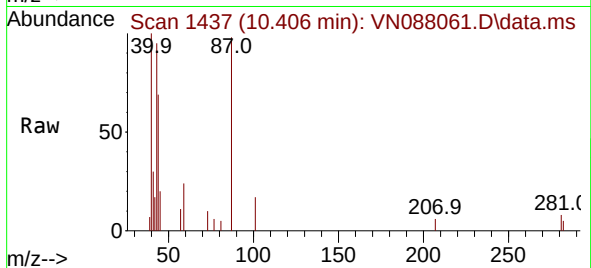
Tgt Ion: 117 Resp: 216449
Ion Ratio Lower Upper
117 100
82 59.8 45.2 67.8
119 32.1 25.9 38.9



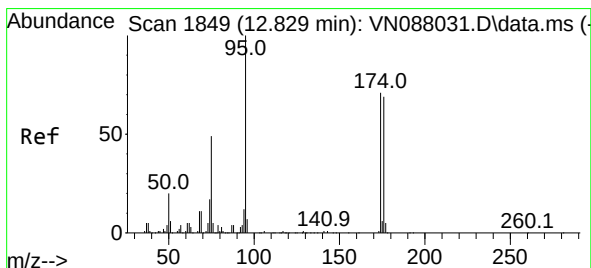
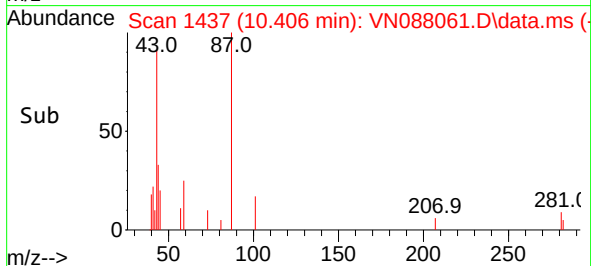
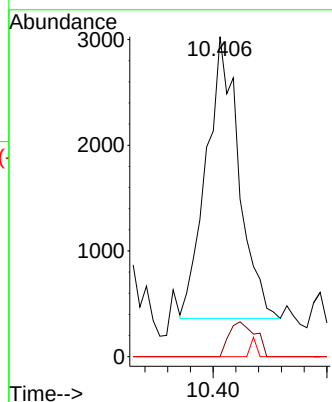


#58
4-Methyl-2-Pentanone
Concen: 1.101 ug/l
RT: 10.406 min Scan# 1441
Delta R.T. -0.023 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

Instrument :
MSVOA_N
ClientSampleId :
VOA 251015085-01

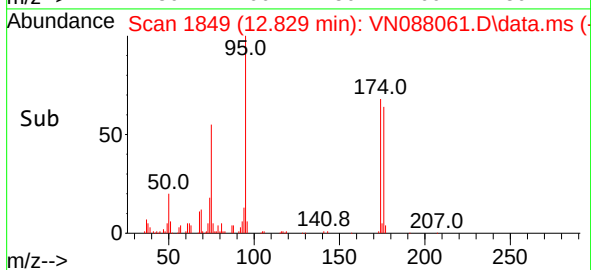
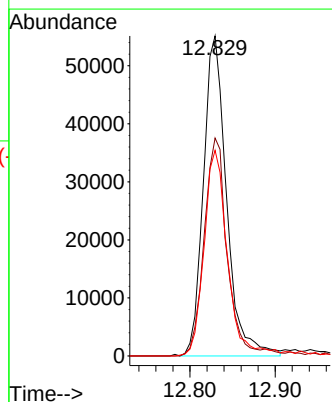
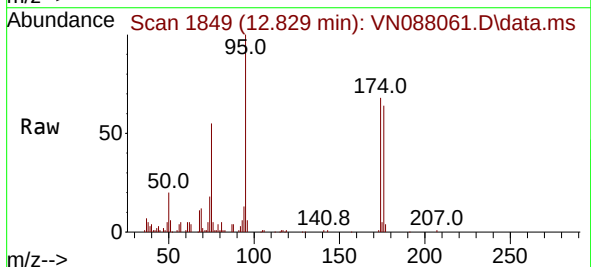


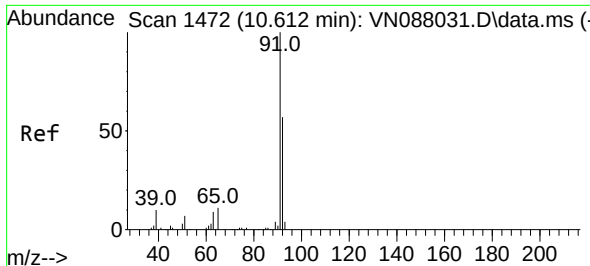
Tgt Ion:	43	Resp:	5329
Ion Ratio	Lower	Upper	
43	100		
58	9.9	31.2	46.8#
85	0.0	13.7	20.5#



#60
4-Bromofluorobenzene
Concen: 29.193 ug/l
RT: 12.829 min Scan# 1849
Delta R.T. 0.000 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

Tgt Ion:	95	Resp:	104169
Ion Ratio	Lower	Upper	
95	100		
174	66.5	57.4	86.0
176	63.0	57.0	85.4

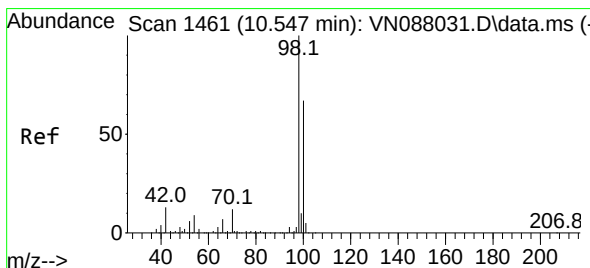
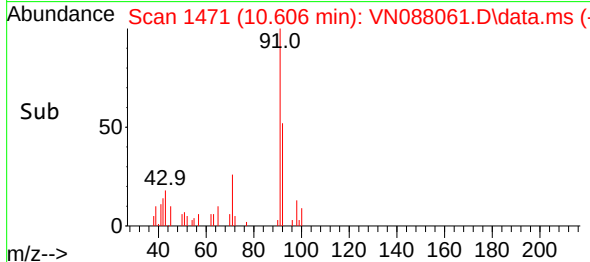
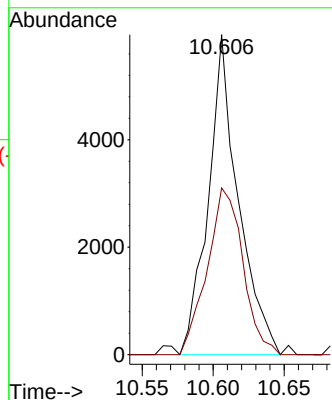
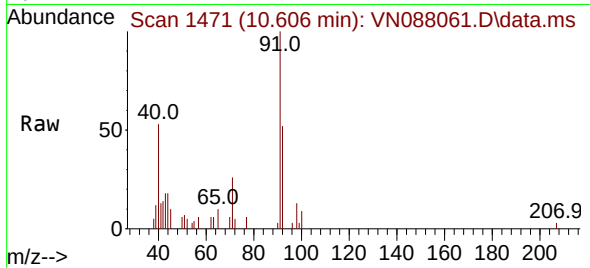




#62
Toluene
Concen: 0.715 ug/l
RT: 10.606 min Scan# 1472
Delta R.T. -0.006 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

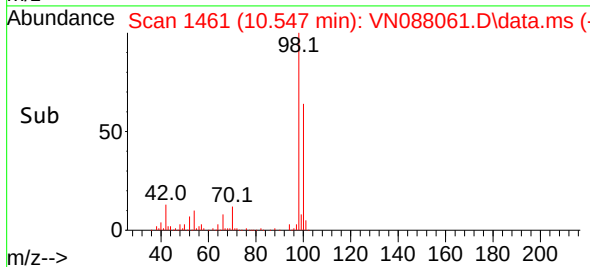
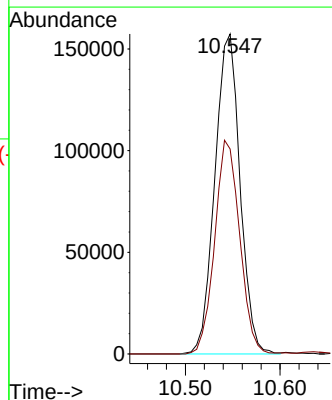
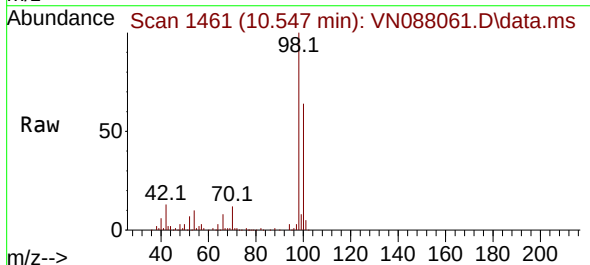
Instrument :
MSVOA_N
ClientSampleId :
VOA 251015085-01

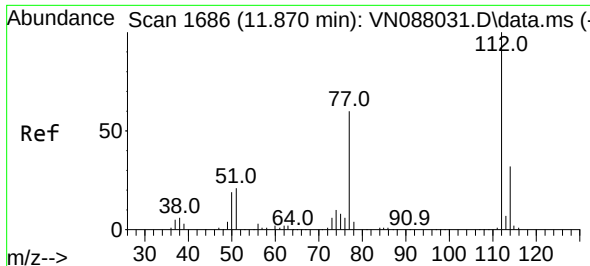
Tgt Ion: 91 Resp: 8780
Ion Ratio Lower Upper
91 100
92 61.8 45.8 68.8



#63
Toluene-d8
Concen: 30.157 ug/l
RT: 10.547 min Scan# 1461
Delta R.T. 0.000 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

Tgt Ion: 98 Resp: 290824
Ion Ratio Lower Upper
98 100
100 66.3 53.1 79.7

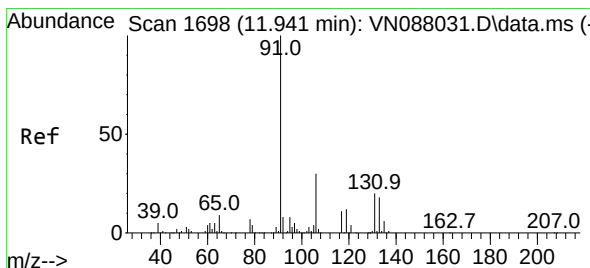
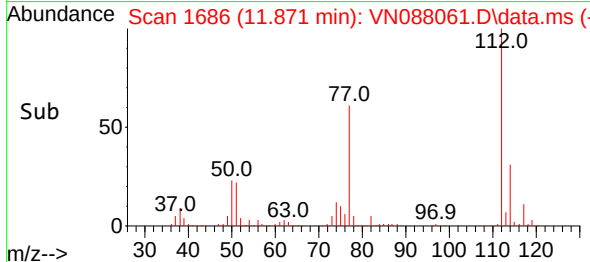
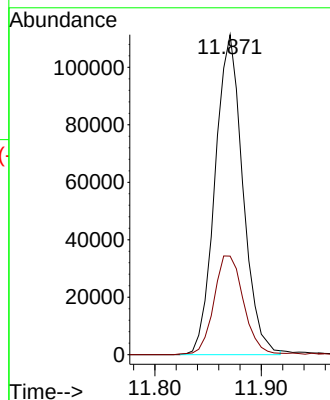
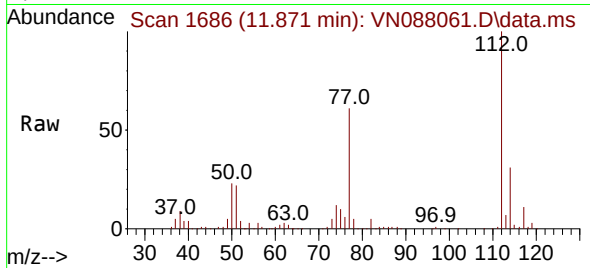




#64
Chlorobenzene
Concen: 25.747 ug/l
RT: 11.871 min Scan# 1686
Delta R.T. 0.000 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

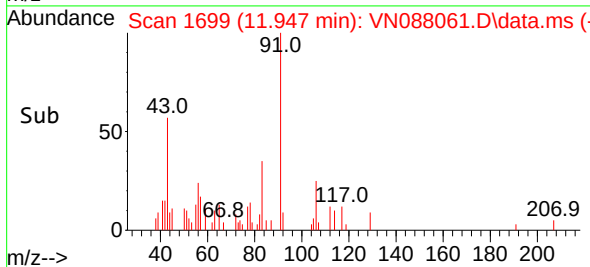
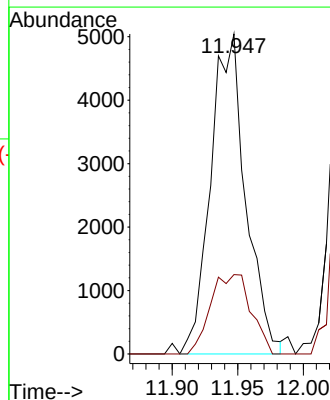
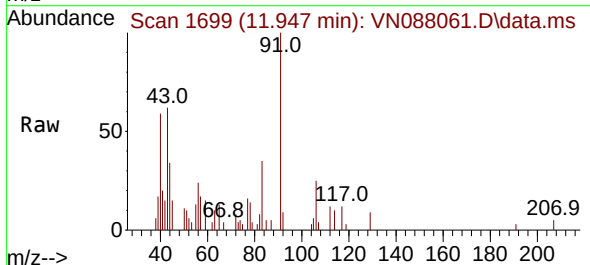
Instrument :
MSVOA_N
ClientSampleId :
VOA 251015085-01

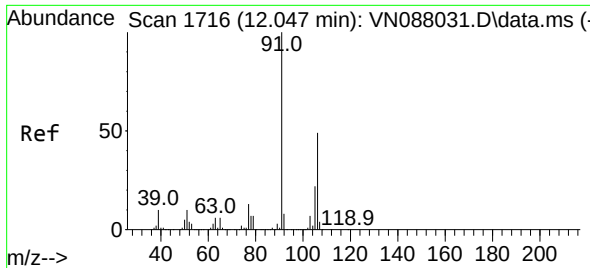
Tgt Ion:112 Resp: 201914
Ion Ratio Lower Upper
112 100
114 30.6 25.7 38.5



#66
Ethyl Benzene
Concen: 0.702 ug/l
RT: 11.947 min Scan# 1699
Delta R.T. 0.006 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

Tgt Ion: 91 Resp: 9378
Ion Ratio Lower Upper
91 100
106 24.8 24.0 36.0

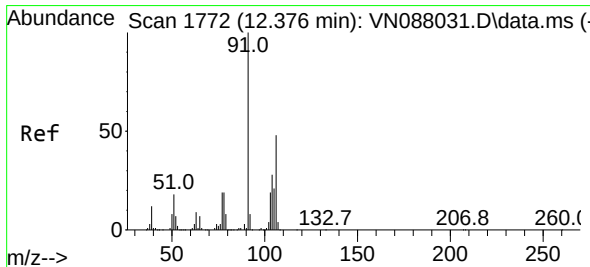
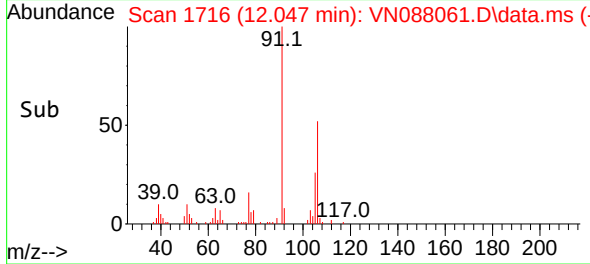
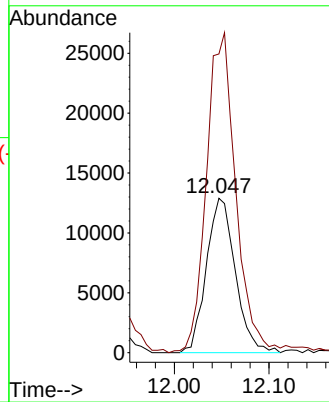
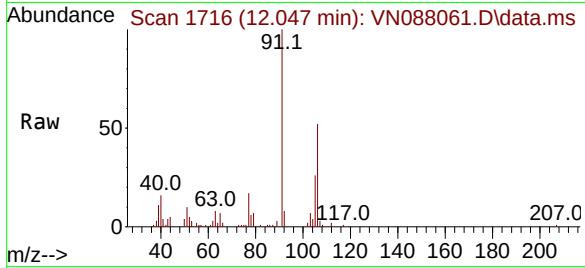




#67
m/p-Xylenes
Concen: 5.324 ug/l
RT: 12.047 min Scan# 1716
Delta R.T. 0.000 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

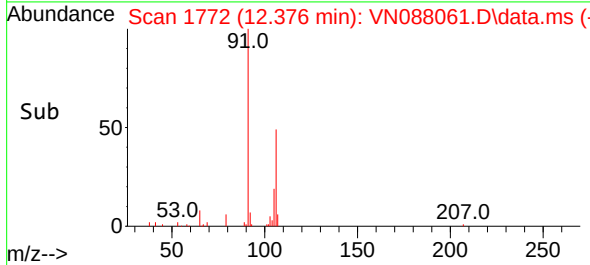
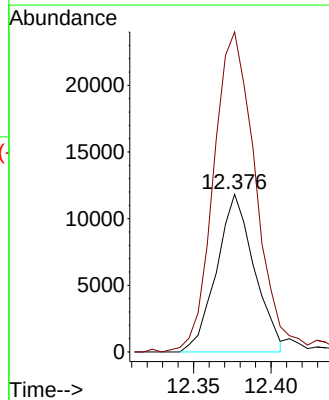
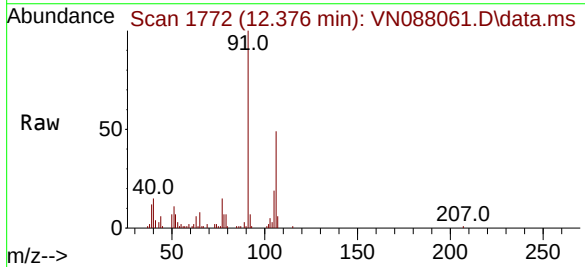
Instrument :
MSVOA_N
ClientSampleId :
VOA 251015085-01

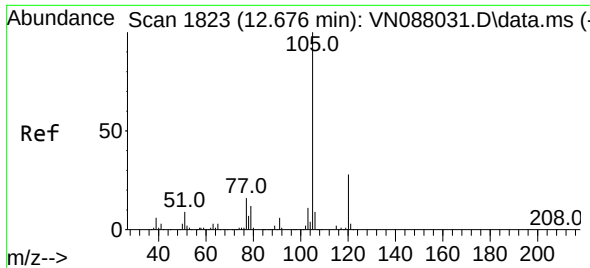
Tgt Ion:106 Resp: 27399
Ion Ratio Lower Upper
106 100
91 209.4 161.4 242.0



#68
o-Xylene
Concen: 3.900 ug/l
RT: 12.376 min Scan# 1772
Delta R.T. 0.000 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

Tgt Ion:106 Resp: 19980
Ion Ratio Lower Upper
106 100
91 225.8 105.2 315.6

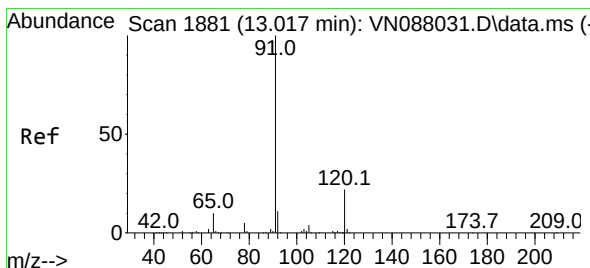
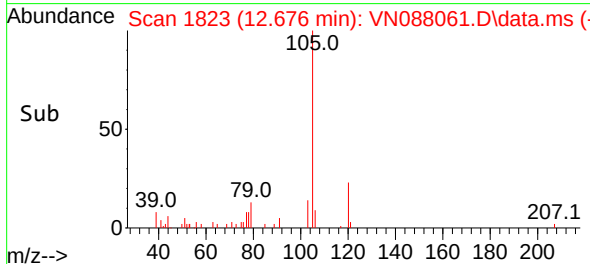
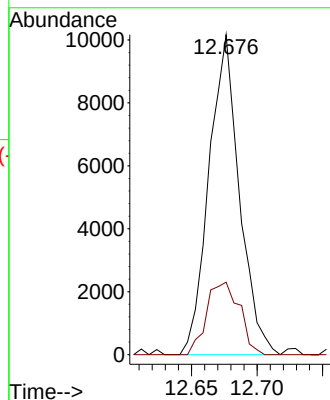
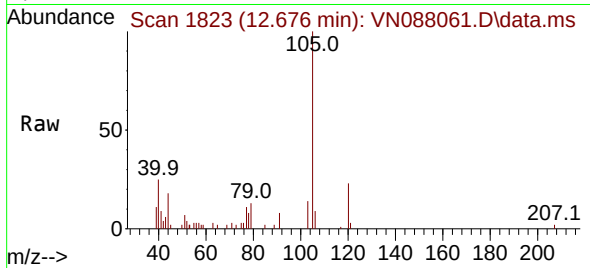




#70
Isopropylbenzene
Concen: 1.307 ug/l
RT: 12.676 min Scan# 1823
Delta R.T. 0.000 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

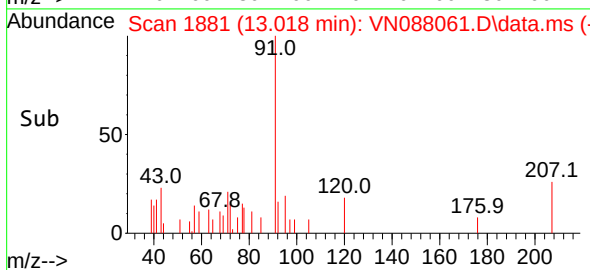
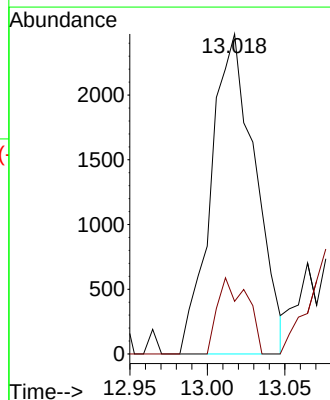
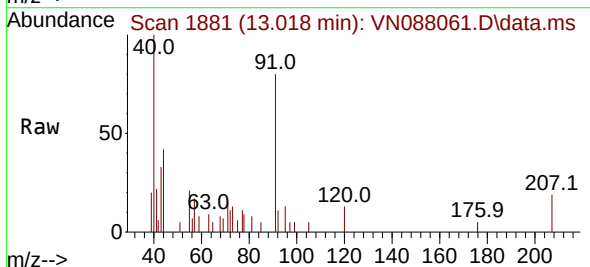
Instrument :
MSVOA_N
ClientSampleId :
VOA 251015085-01

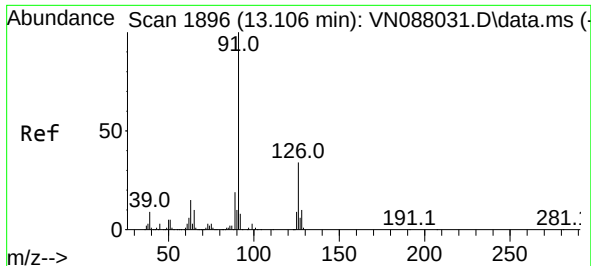
Tgt Ion:105 Resp: 16411
Ion Ratio Lower Upper
105 100
120 24.5 19.1 35.5



#74
n-propylbenzene
Concen: 0.323 ug/l
RT: 13.018 min Scan# 1881
Delta R.T. 0.000 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

Tgt Ion: 91 Resp: 4900
Ion Ratio Lower Upper
91 100
120 9.7 0.0 46.2

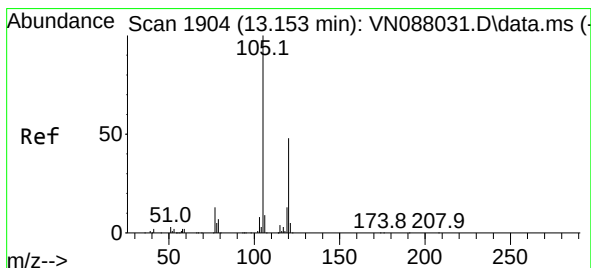
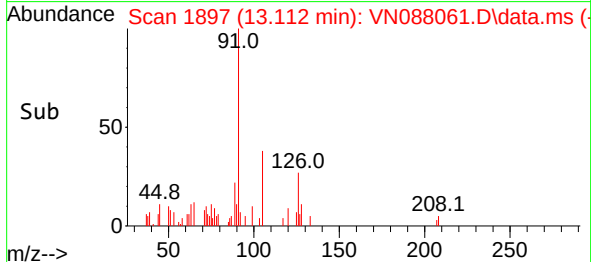
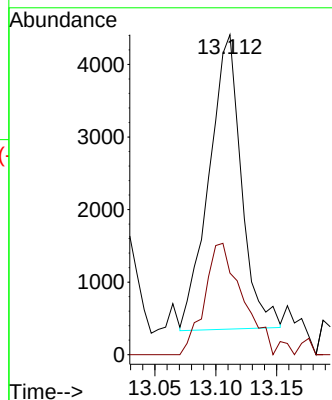
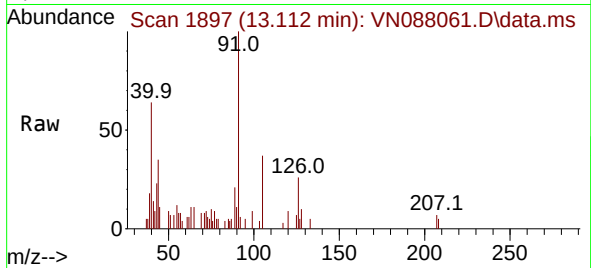




#75
2-Chlorotoluene
Concen: 0.810 ug/l
RT: 13.112 min Scan# 1897
Delta R.T. 0.006 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

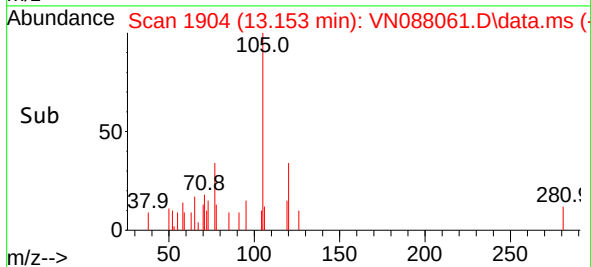
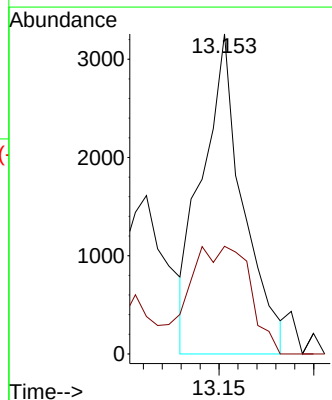
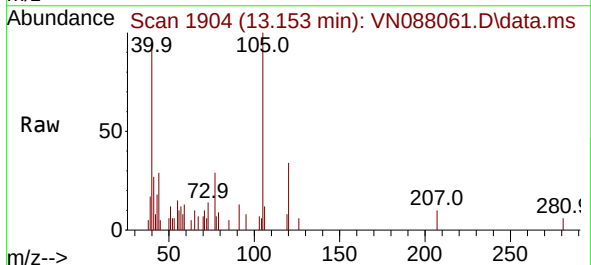
Instrument :
MSVOA_N
ClientSampleId :
VOA 251015085-01

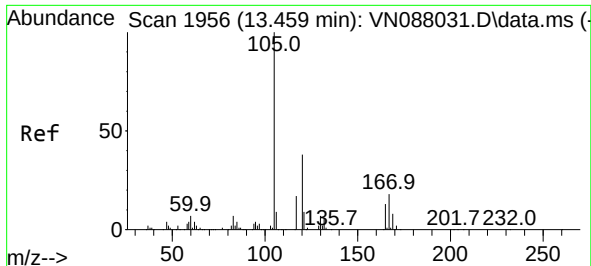
Tgt Ion: 91 Resp: 7506
Ion Ratio Lower Upper
91 100
126 44.2 0.0 66.6



#76
1,3,5-Trimethylbenzene
Concen: 0.456 ug/l
RT: 13.153 min Scan# 1904
Delta R.T. 0.000 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

Tgt Ion: 105 Resp: 4866
Ion Ratio Lower Upper
105 100
120 14.7 0.0 100.6

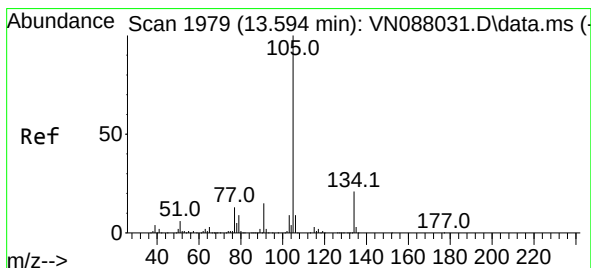
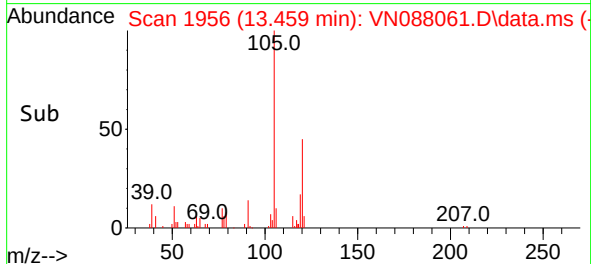
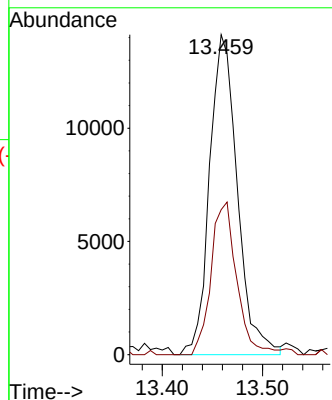
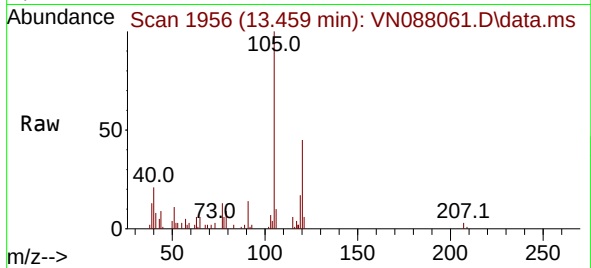




#80
1,2,4-Trimethylbenzene
Concen: 2.551 ug/l
RT: 13.459 min Scan# 1956
Delta R.T. 0.000 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

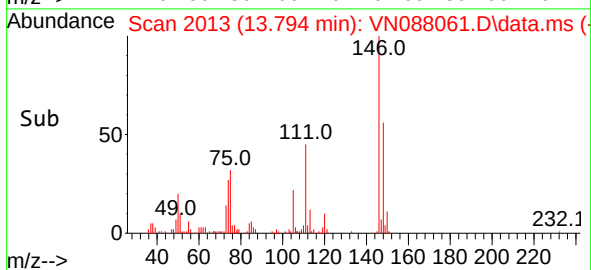
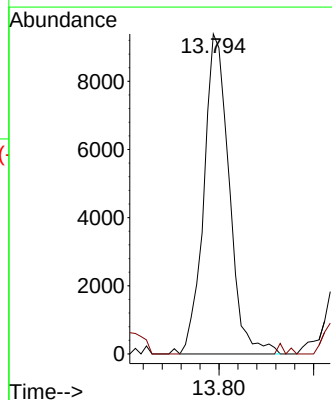
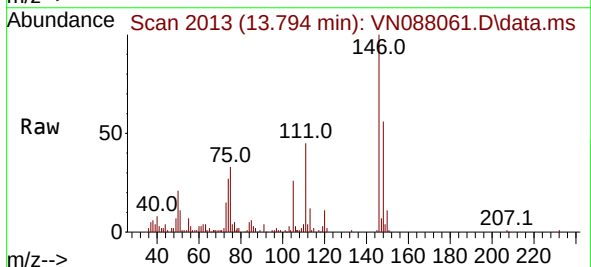
Instrument :
MSVOA_N
ClientSampleId :
VOA 251015085-01

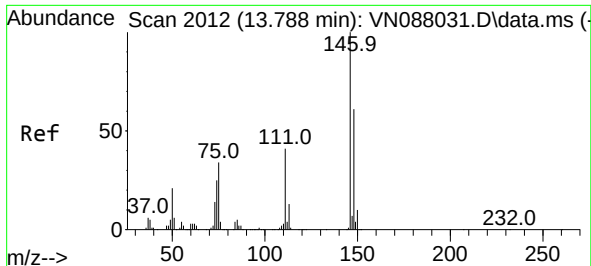
Tgt Ion:105 Resp: 27241
Ion Ratio Lower Upper
105 100
120 43.9 0.0 93.8



#81
sec-Butylbenzene
Concen: 1.336 ug/l
RT: 13.794 min Scan# 2013
Delta R.T. 0.200 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

Tgt Ion:105 Resp: 17364
Ion Ratio Lower Upper
105 100
134 0.6 0.0 41.2

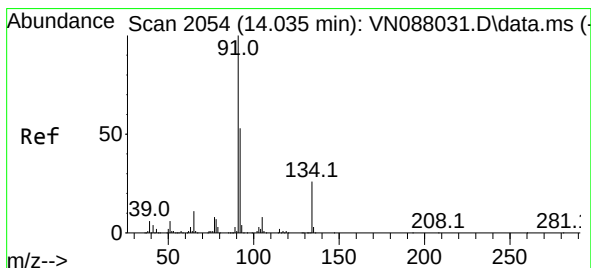
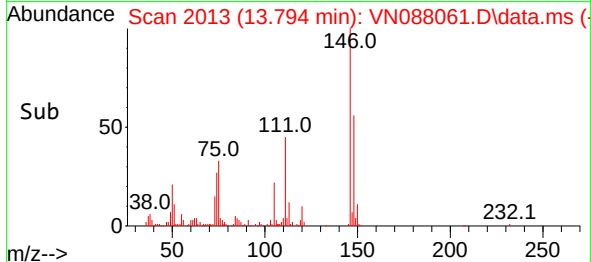
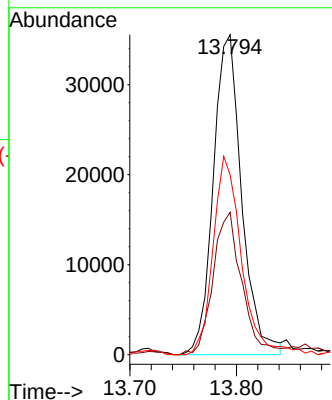
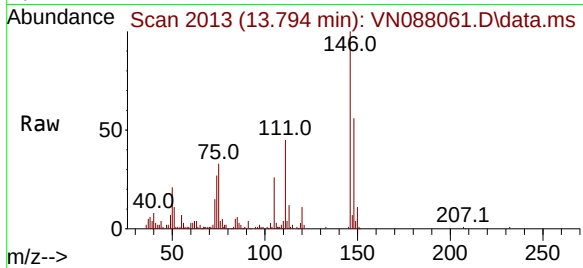




#84
1,4-Dichlorobenzene
Concen: 11.057 ug/l
RT: 13.794 min Scan# 2012
Delta R.T. 0.006 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

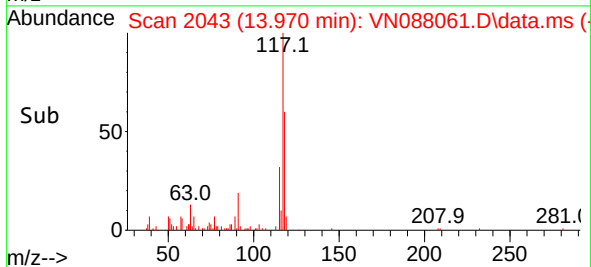
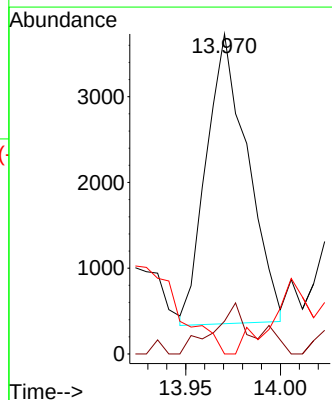
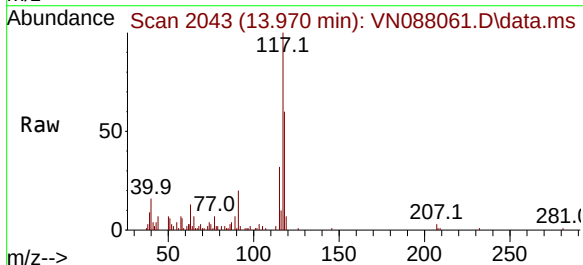
Instrument :
MSVOA_N
ClientSampleId :
VOA 251015085-01

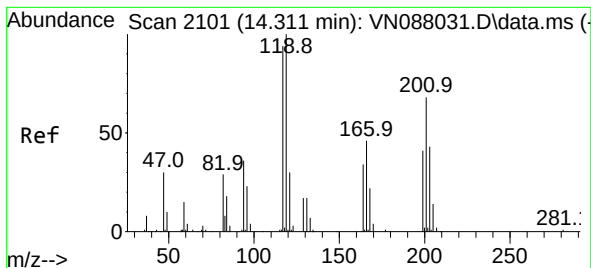
Tgt Ion:146 Resp: 65851
Ion Ratio Lower Upper
146 100
111 45.1 20.5 61.6
148 62.1 31.9 95.9



#85
n-Butylbenzene
Concen: 0.496 ug/l
RT: 13.970 min Scan# 2043
Delta R.T. -0.065 min
Lab File: VN088061.D
Acq: 17 Oct 2025 12:14

Tgt Ion: 91 Resp: 5126
Ion Ratio Lower Upper
91 100
92 11.2 0.0 107.6
134 3.3 0.0 52.6





#86

Hexachloroethane

Concen: 0.677 ug/l

RT: 14.306 min Scan# 2100

Delta R.T. -0.006 min

Lab File: VN088061.D

Acq: 17 Oct 2025 12:14

Instrument :

MSVOA_N

ClientSampleId :

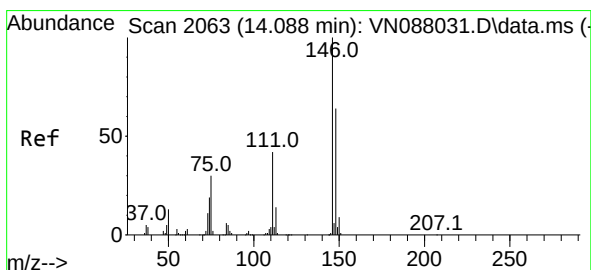
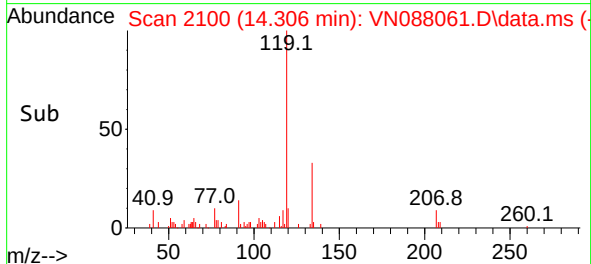
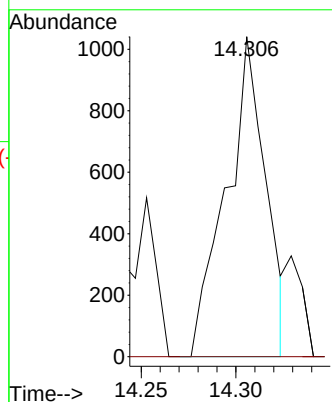
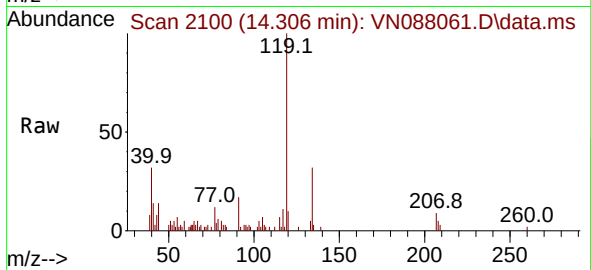
VOA 251015085-01

Tgt Ion:117 Resp: 1506

Ion Ratio Lower Upper

117 100

201 0.0 34.8 104.3#



#87

1,2-Dichlorobenzene

Concen: 0.914 ug/l

RT: 14.082 min Scan# 2062

Delta R.T. -0.006 min

Lab File: VN088061.D

Acq: 17 Oct 2025 12:14

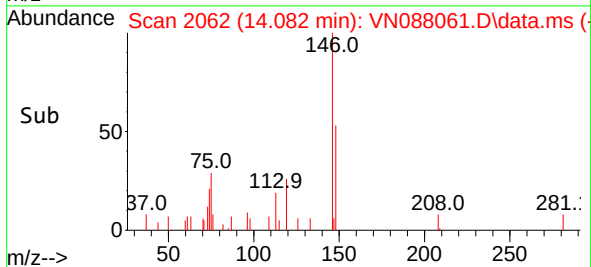
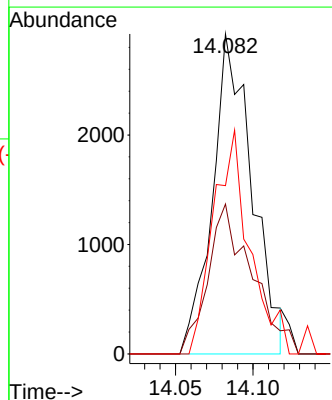
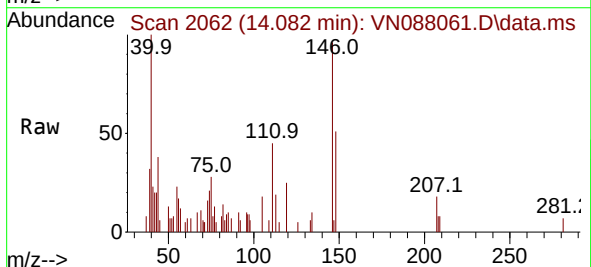
Tgt Ion:146 Resp: 5192

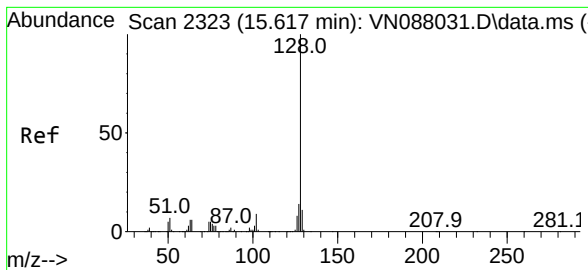
Ion Ratio Lower Upper

146 100

111 50.4 22.3 66.8

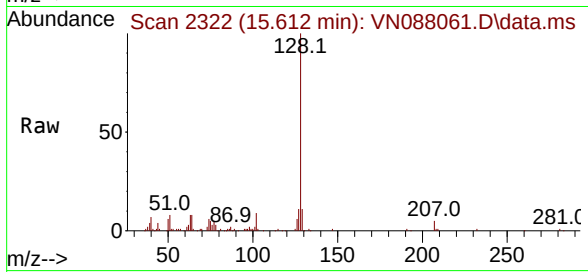
148 61.4 31.4 94.3





#91
 Naphthalene
 Concen: 7.993 ug/l
 RT: 15.612 min Scan# 21
 Delta R.T. -0.006 min
 Lab File: VN088061.D
 Acq: 17 Oct 2025 12:14

Instrument :
 MSVOA_N
 ClientSampleId :
 VOA 251015085-01



Tgt Ion:	128	Resp:	99009
Ion	Ratio	Lower	Upper
128	100		
127	13.2	10.3	15.5
129	10.8	8.6	13.0

