

Data Path : Z:\svoasrv\HPCHEM1\BNA_P\Data\BP121123\
 Data File : BP018775.D
 Acq On : 12 Dec 2023 19:43
 Operator : MA/JU
 Sample : PB157629BS
 Misc :
 ALS Vial : 54 Sample Multiplier: 1

Instrument :
 BNA_P
 ClientSampleId :

Quant Time: Dec 12 21:41:14 2023
 Quant Method : Z:\svoasrv\HPCHEM1\BNA_P\Methods\SFAM-EPA-BP120123.MA.M
 Quant Title : SVOA CALIBRATION
 QLast Update : Mon Dec 11 22:02:13 2023
 Response via : Initial Calibration

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

Internal Standards						
1) 1,4-Dichlorobenzene-d4	7.840	152	173866	20.000	ng/ul	0.00
20) Naphthalene-d8	10.634	136	666849	20.000	ng/ul	# 0.00
38) Acenaphthene-d10	14.469	164	445427	20.000	ng/ul	0.00
64) Phenanthrene-d10	17.216	188	1064450	20.000	ng/ul	# 0.00
79) Chrysene-d12	21.304	240	1157970	20.000	ng/ul	# 0.00
88) Perylene-d12	23.668	264	1334275	20.000	ng/ul	-0.01
System Monitoring Compounds						
3) 1,4-Dioxane-d8	3.264	96	27757	5.440	ng/uL	0.00
4) Pyridine-d5	3.681	84	355343	26.001	ng/ul	0.00
7) Phenol-d5	7.011	99	430955	24.699	ng/ul	0.00
9) Bis-(2-Chloroethyl)eth...	7.175	67	255366	24.694	ng/ul	0.00
11) 2-Chlorophenol-d4	7.369	132	344443	25.299	ng/ul	0.00
15) 4-Methylphenol-d8	8.552	113	340033	24.081	ng/ul	0.00
21) Nitrobenzene-d5	8.999	128	163575	27.560	ng/ul	0.00
24) 2-Nitrophenol-d4	9.722	143	184817	30.035	ng/ul	0.00
28) 2,4-Dichlorophenol-d3	10.257	165	372354	29.593	ng/ul	0.00
31) 4-Chloroaniline-d4	10.775	131	429561	26.123	ng/ul	0.00
46) Dimethylphthalate-d6	13.887	166	1125755	28.318	ng/ul	0.00
49) Acenaphthylene-d8	14.163	160	1217311	27.808	ng/ul	0.00
54) 4-Nitrophenol-d4	14.675	143	198477	30.415	ng/ul	0.00
60) Fluorene-d10	15.463	176	962567	28.845	ng/ul	0.00
65) 4,6-Dinitro-2-methylph...	15.587	200	189104	29.629	ng/ul	0.00
73) Anthracene-d10	17.316	188	1556110	27.808	ng/ul	0.00
81) Pyrene-d10	19.551	212	2031241	22.535	ng/ul	0.00
92) Benzo(a)pyrene-d12	23.516	264	2282871	29.344	ng/ul	-0.01
Target Compounds						
					Qvalue	
2) 1,4-Dioxane	3.299	88	59615	10.655	ng/uL	97
5) Pyridine	3.699	79	375529	27.210	ng/ul	97
6) Benzaldehyde	6.981	77	229921	25.523	ng/ul	99
8) Phenol	7.040	94	459708	26.867	ng/ul	91
10) Bis(2-Chloroethyl)ether	7.269	93	365377	26.001	ng/ul	99
12) 2-Chlorophenol	7.399	128	363176	26.357	ng/ul	97
13) 2-Methylphenol	8.287	108	339240	25.897	ng/ul	97
14) 2,2'-oxybis(1-Chloropr...	8.369	45	449466	25.208	ng/ul	98
16) Acetophenone	8.663	105	557604	26.497	ng/ul	96
17) N-Nitroso-di-n-propyla...	8.658	70	271541	23.456	ng/ul	97
18) 4-Methylphenol	8.616	108	365996	25.587	ng/ul	99
19) Hexachloroethane	8.916	117	160738	28.455	ng/ul	85
22) Nitrobenzene	9.040	77	430598	29.840	ng/ul	98
23) Isophorone	9.569	82	788941	26.815	ng/ul	98
25) 2-Nitrophenol	9.752	139	206851	31.396	ng/ul#	92
26) 2,4-Dimethylphenol	9.816	107	316810	24.587	ng/ul	95
27) Bis(2-Chloroethoxy)met...	10.057	93	492876	26.534	ng/ul	100
29) 2,4-Dichlorophenol	10.287	162	375526	30.985	ng/ul	98
30) Naphthalene	10.681	128	1139927	28.179	ng/ul	100
32) 4-Chloroaniline	10.799	127	368766	23.530	ng/ul	99
33) Hexachlorobutadiene	10.969	225	301153	37.103	ng/ul	99
34) Caprolactam	11.581	113	86492	23.274	ng/ul	97
35) 4-Chloro-3-methylphenol	11.928	107	402014	29.610	ng/ul	97
36) 2-Methylnaphthalene	12.293	142	812635	28.355	ng/ul	98

Data Path : Z:\svoasrv\HPCHEM1\BNA_P\Data\BP121123\
 Data File : BP018775.D
 Acq On : 12 Dec 2023 19:43
 Operator : MA/JU
 Sample : PB157629BS
 Misc :
 ALS Vial : 54 Sample Multiplier: 1

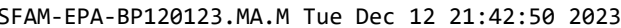
Instrument :
 BNA_P
 ClientSampleId :

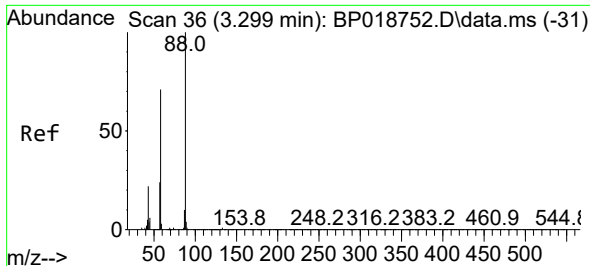
Quant Time: Dec 12 21:41:14 2023
 Quant Method : Z:\svoasrv\HPCHEM1\BNA_P\Methods\SFAM-EPA-BP120123.MA.M
 Quant Title : SVOA CALIBRATION
 QLast Update : Mon Dec 11 22:02:13 2023
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1-Methylnaphthalene	12.510	142	797418	27.552	ng/ul#	98
39) 1,2,4,5-Tetrachloroben...	12.663	216	542484	33.568	ng/ul	98
40) Hexachlorocyclopentadiene	12.640	237	264908	27.655	ng/ul	98
41) 2,4,6-Trichlorophenol	12.904	196	329855	31.729	ng/ul	98
42) 2,4,5-Trichlorophenol	12.975	196	360739	32.007	ng/ul	100
43) 1,1'-Biphenyl	13.304	154	1104907	28.682	ng/ul	99
44) 2-Chloronaphthalene	13.345	162	892918	29.347	ng/ul	99
45) 2-Nitroaniline	13.557	65	254327	30.834	ng/ul	98
47) Dimethylphthalate	13.934	163	1182934	30.229	ng/ul	99
48) 2,6-Dinitrotoluene	14.051	165	246942	33.400	ng/ul	99
50) Acenaphthylene	14.193	152	1421372	28.880	ng/ul	100
51) 3-Nitroaniline	14.381	138	228376	30.944	ng/ul	99
52) Acenaphthene	14.534	153	955994	29.377	ng/ul	98
53) 2,4-Dinitrophenol	14.587	184	125920	32.135	ng/ul	93
55) 4-Nitrophenol	14.692	109	198540	40.271	ng/ul#	77
56) Dibenzofuran	14.869	168	1373114	30.360	ng/ul	98
57) 2,4-Dinitrotoluene	14.840	165	361854	34.794	ng/ul	99
58) 2,3,4,6-Tetrachlorophenol	15.092	232	322784	34.143	ng/ul	95
59) Diethylphthalate	15.298	149	1194091	31.183	ng/ul	99
61) Fluorene	15.516	166	1104931	30.874	ng/ul	99
62) 4-Chlorophenyl-phenyle...	15.516	204	618552	32.955	ng/ul	96
63) 4-Nitroaniline	15.545	138	247679	35.227	ng/ul#	87
66) 4,6-Dinitro-2-methylph...	15.598	198	218760	32.059	ng/ul#	93
67) N-Nitrosodiphenylamine	15.728	169	966666	27.406	ng/ul	99
68) 4-Bromophenyl-phenylether	16.410	248	427619	31.821	ng/ul	96
69) Hexachlorobenzene	16.516	284	514349	34.282	ng/ul	97
70) Atrazine	16.686	200	253876	24.209	ng/ul	99
71) Pentachlorophenol	16.863	266	302599	33.911	ng/ul	100
72) Phenanthrene	17.257	178	1898511	29.531	ng/ul	100
74) Anthracene	17.351	178	1892884	29.374	ng/ul	100
75) 1,2,3,4-Tetrachloroben...	13.269	216	543284	29.518	ng/uL	99
76) Pentachlorobenzene	14.787	250	569904	31.522	ng/uL	99
77) Carbazole	17.622	167	1711356	33.322	ng/ul	99
78) Di-n-butylphthalate	18.181	149	2122973	31.044	ng/ul	100
80) Fluoranthene	19.228	202	2483517	23.309	ng/ul#	92
82) Pyrene	19.580	202	2539017	23.622	ng/ul#	91
83) Butylbenzylphthalate	20.457	149	1015824	25.815	ng/ul	97
84) 3,3'-Dichlorobenzidine	21.227	252	866705	30.800	ng/ul	99
85) Benzo(a)anthracene	21.292	228	2795224	29.739	ng/ul	99
86) Bis(2-ethylhexyl)phtha...	21.216	149	1479726	27.359	ng/ul	99
87) Chrysene	21.339	228	2587521	29.895	ng/ul	100
89) Di-n-octyl phthalate	22.127	149	2628106	26.977	ng/ul	100
90) Benzo(b)fluoranthene	22.945	252	2910977	29.590	ng/ul#	97
91) Benzo(k)fluoranthene	22.998	252	2935398	30.839	ng/ul#	97
93) Benzo(a)pyrene	23.563	252	2751323	30.608	ng/ul#	96
94) Indeno(1,2,3-cd)pyrene	26.127	276	3510407	32.685	ng/ul#	93
95) Dibenzo(a,h)anthracene	26.145	278	2911232	32.585	ng/ul#	95
96) Benzo(g,h,i)perylene	26.880	276	2791227	32.294	ng/ul#	93

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

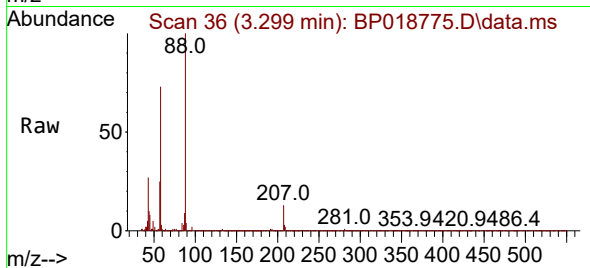
Quant Time: Dec 12 21:41:14 2023
Quant Method : Z:\svoasrv\HPCHEM1\BNA_P\Methods\SFAM-EPA-BP120123.MA.M
Quant Title : SVOA CALIBRATION
QLast Update : Mon Dec 11 22:02:13 2023
Response via : Initial Calibration



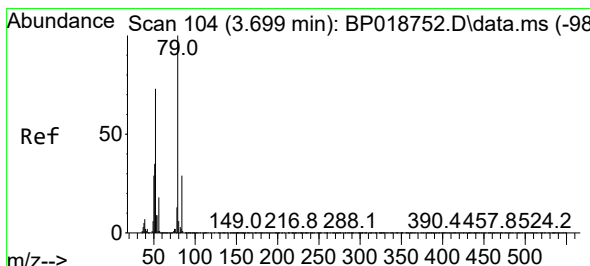
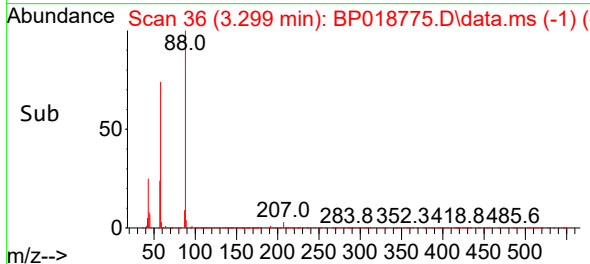
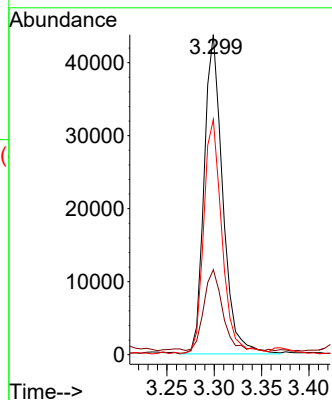


#2
1,4-Dioxane
Concen: 10.655 ng/uL
RT: 3.299 min Scan# 30
Delta R.T. 0.006 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

Instrument :
BNA_P
ClientSampleId :

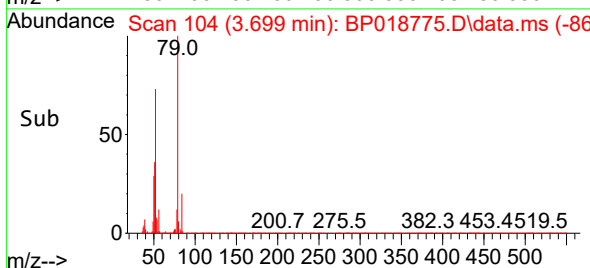
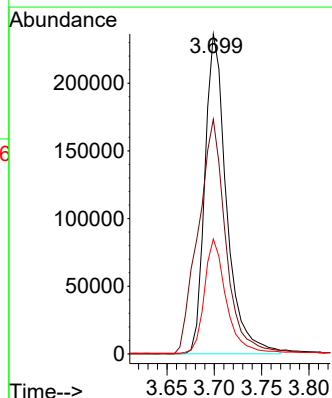
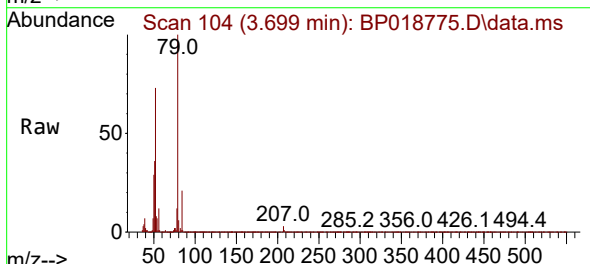


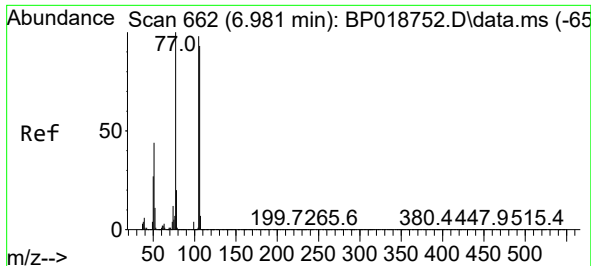
Tgt Ion: 88 Resp: 59615
Ion Ratio Lower Upper
88 100
43 26.6 21.8 32.6
58 73.5 56.5 84.7



#5
Pyridine
Concen: 27.210 ng/uL
RT: 3.699 min Scan# 104
Delta R.T. 0.006 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

Tgt Ion: 79 Resp: 375529
Ion Ratio Lower Upper
79 100
52 73.3 57.4 86.0
51 35.9 26.2 39.4

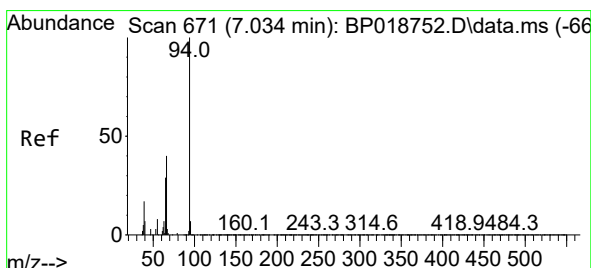
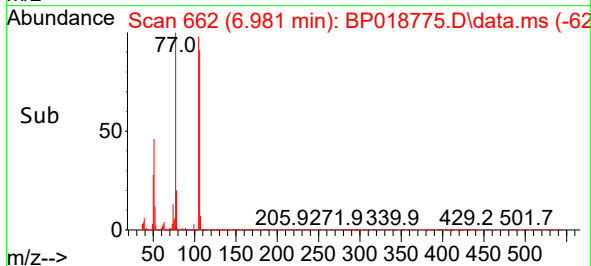
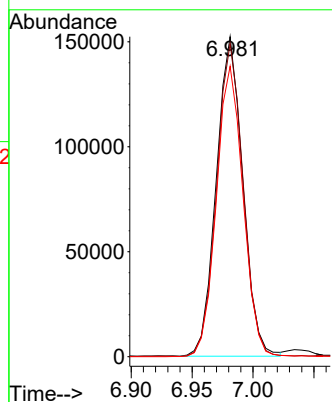
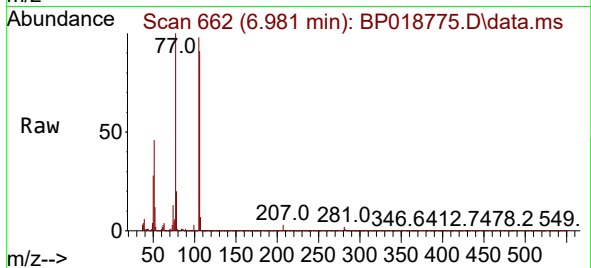




#6
Benzaldehyde
Concen: 25.523 ng/ul
RT: 6.981 min Scan# 662
Delta R.T. 0.006 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

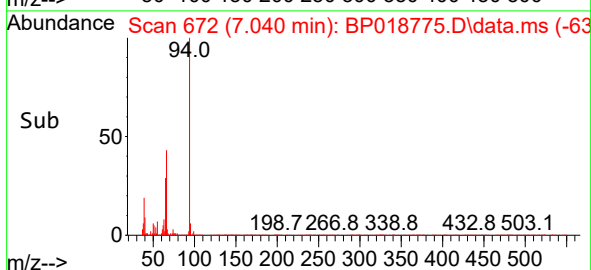
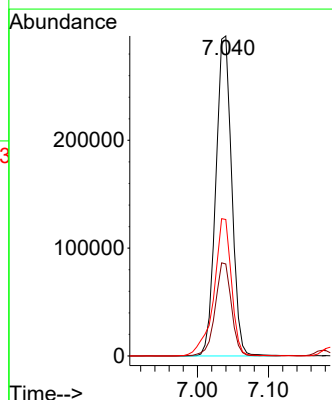
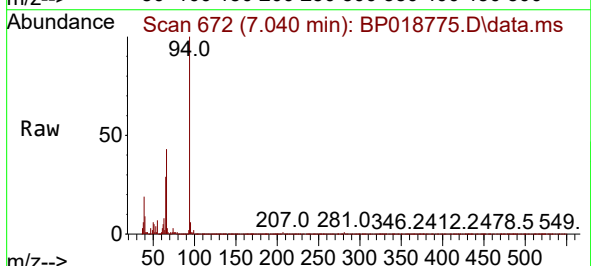
Instrument :
BNA_P
ClientSampleId :

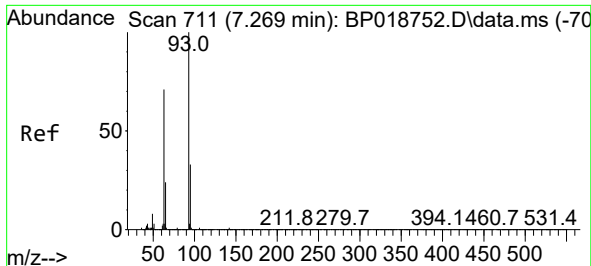
Tgt Ion: 77 Resp: 229921
Ion Ratio Lower Upper
77 100
105 97.8 77.9 116.9
106 90.8 74.6 111.8



#8
Phenol
Concen: 26.867 ng/ul
RT: 7.040 min Scan# 672
Delta R.T. 0.006 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

Tgt Ion: 94 Resp: 459708
Ion Ratio Lower Upper
94 100
65 28.8 21.0 31.6
66 42.6 28.6 43.0

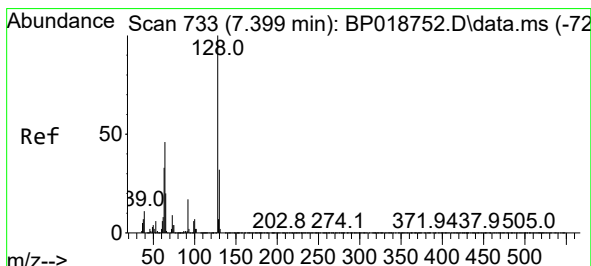
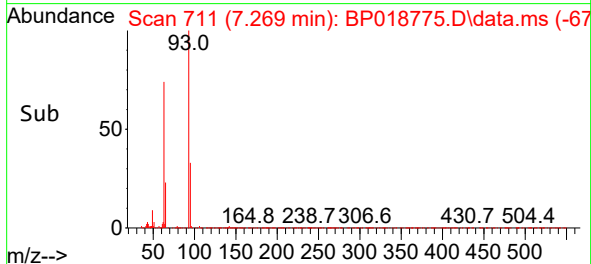
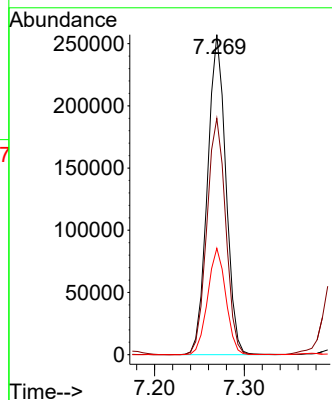
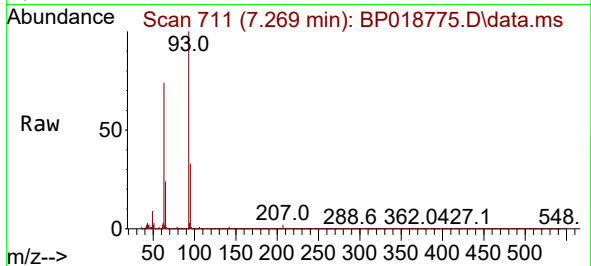




#10
 Bis(2-Chloroethyl)ether
 Concen: 26.001 ng/ul
 RT: 7.269 min Scan# 711
 Delta R.T. 0.006 min
 Lab File: BP018775.D
 Acq: 12 Dec 2023 19:43

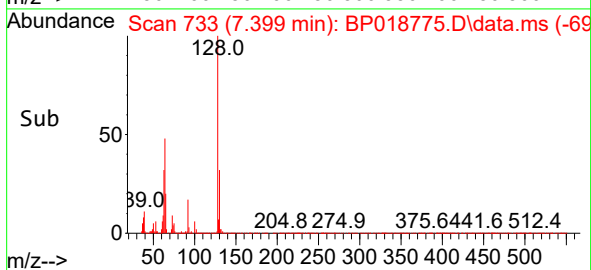
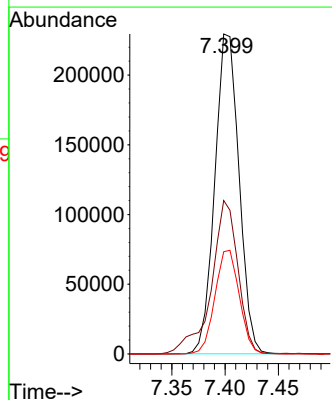
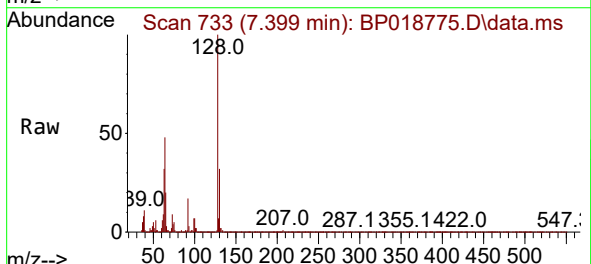
Instrument :
 BNA_P
 ClientSampleId :

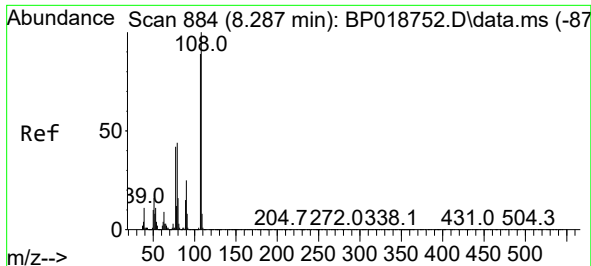
Tgt Ion: 93 Resp: 365377
 Ion Ratio Lower Upper
 93 100
 63 73.9 58.3 87.5
 95 33.3 25.9 38.9



#12
 2-Chlorophenol
 Concen: 26.357 ng/ul
 RT: 7.399 min Scan# 733
 Delta R.T. 0.000 min
 Lab File: BP018775.D
 Acq: 12 Dec 2023 19:43

Tgt Ion:128 Resp: 363176
 Ion Ratio Lower Upper
 128 100
 64 48.0 37.0 55.4
 130 32.0 26.8 40.2





#13

2-Methylphenol

Concen: 25.897 ng/ul

RT: 8.287 min Scan# 884

Delta R.T. 0.006 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

Instrument :

BNA_P

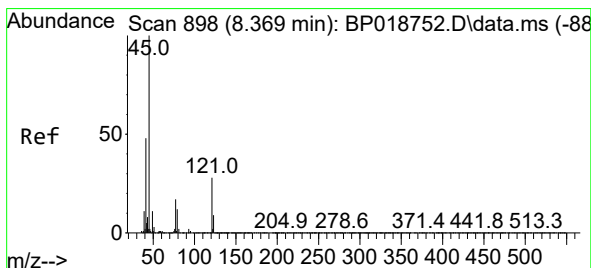
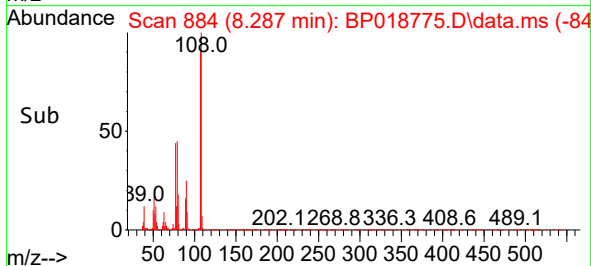
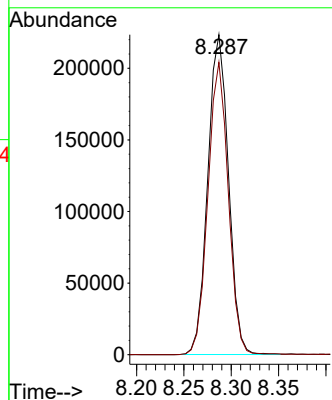
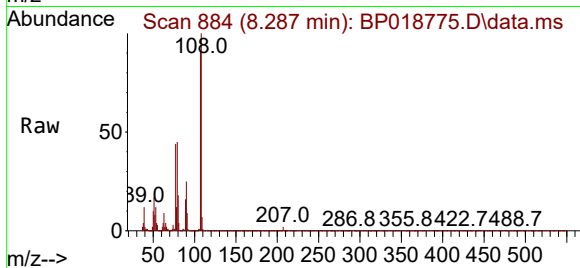
ClientSampleId :

Tgt Ion:108 Resp: 339240

Ion Ratio Lower Upper

108 100

107 91.4 70.6 105.8



#14

2,2'-oxybis(1-Chloropropane)

Concen: 25.208 ng/ul

RT: 8.369 min Scan# 898

Delta R.T. 0.000 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

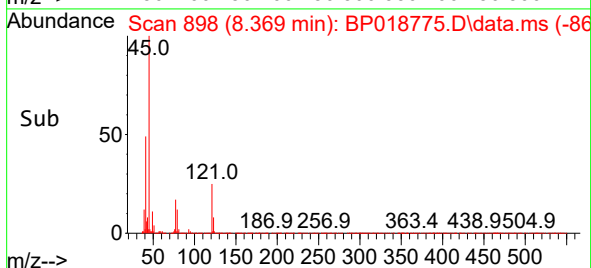
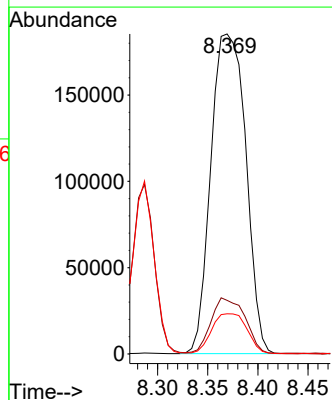
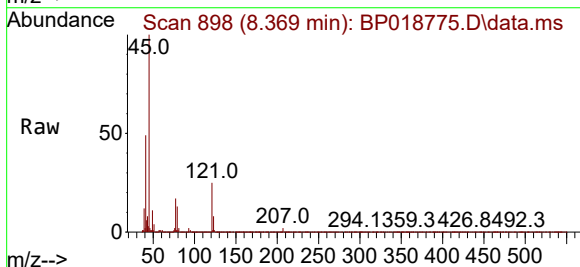
Tgt Ion: 45 Resp: 449466

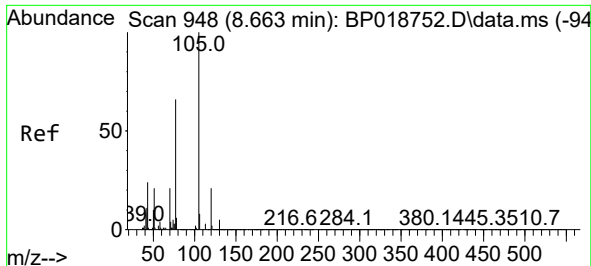
Ion Ratio Lower Upper

45 100

77 16.8 12.7 19.1

79 12.5 10.5 15.7

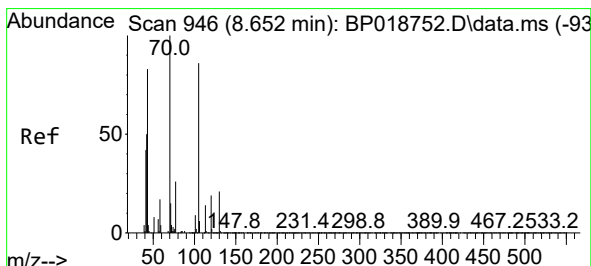
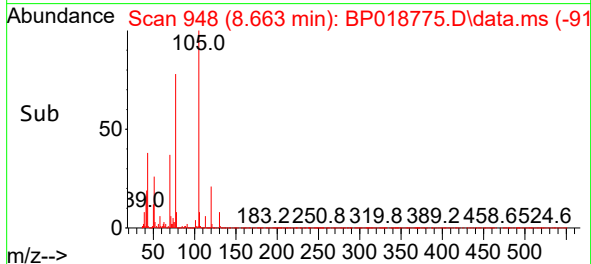
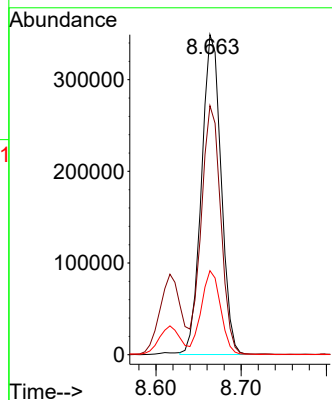
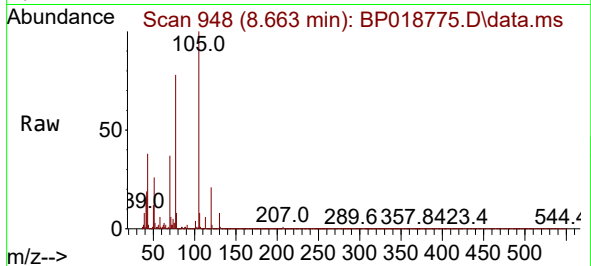




#16
Acetophenone
Concen: 26.497 ng/ul
RT: 8.663 min Scan# 948
Delta R.T. 0.000 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

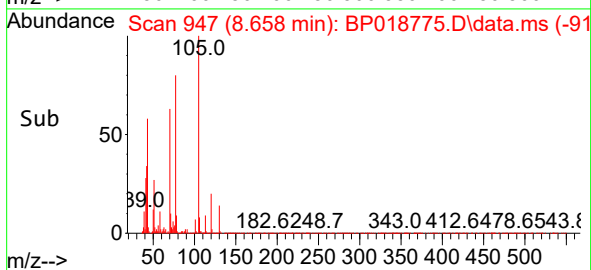
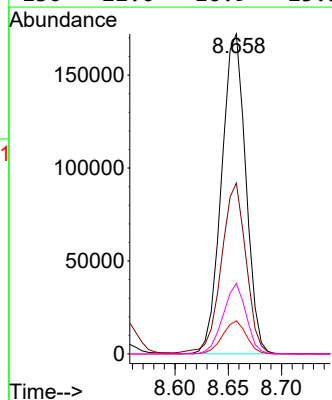
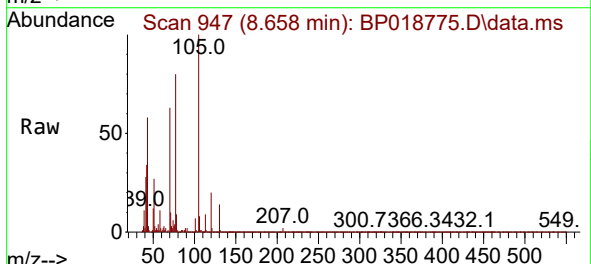
Instrument :
BNA_P
ClientSampleId :

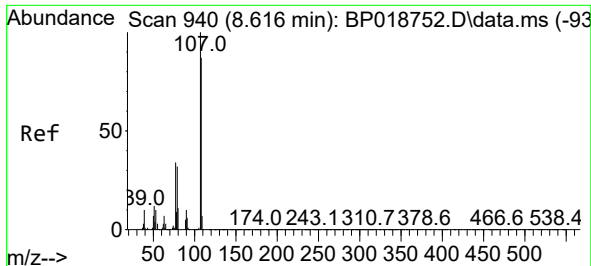
Tgt Ion:105 Resp: 557604
Ion Ratio Lower Upper
105 100
77 77.8 59.4 89.0
51 26.3 19.4 29.0



#17
N-Nitroso-di-n-propylamine
Concen: 23.456 ng/ul
RT: 8.658 min Scan# 947
Delta R.T. 0.006 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

Tgt Ion: 70 Resp: 271541
Ion Ratio Lower Upper
70 100
42 53.4 41.0 61.4
101 10.3 7.8 11.8
130 22.0 16.9 25.3

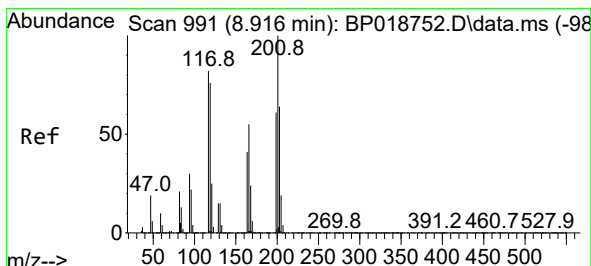
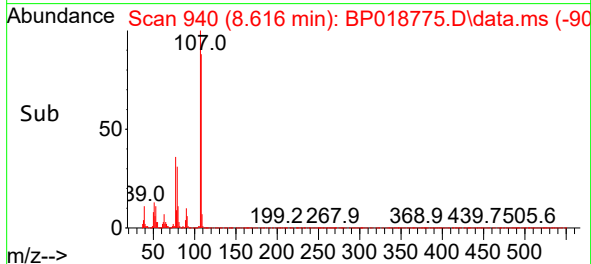
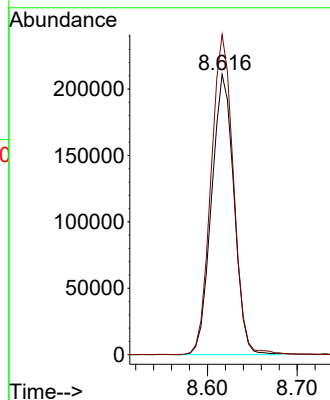
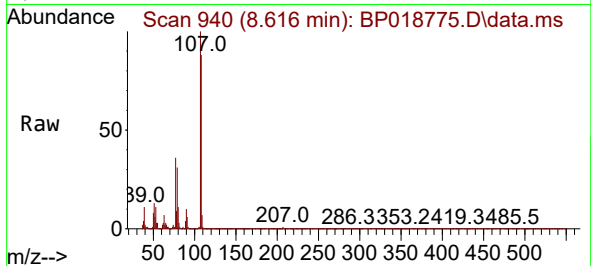




#18
4-Methylphenol
Concen: 25.587 ng/ul
RT: 8.616 min Scan# 940
Delta R.T. 0.000 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

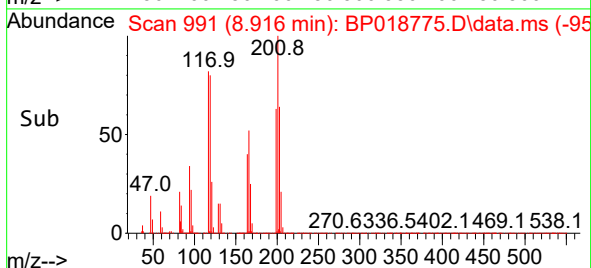
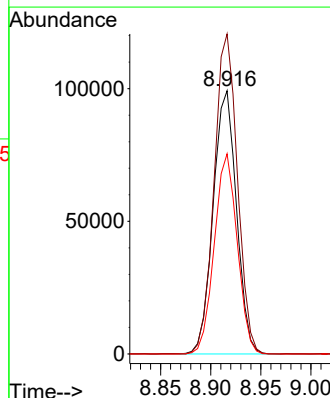
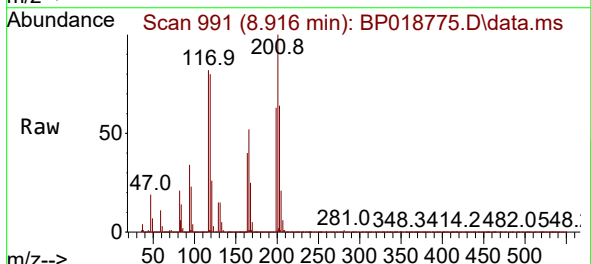
Instrument :
BNA_P
ClientSampleId :

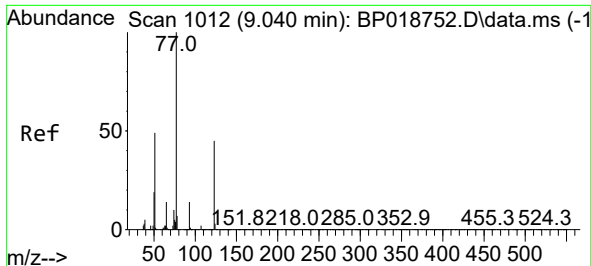
Tgt Ion:108 Resp: 365996
Ion Ratio Lower Upper
108 100
107 114.2 90.6 136.0



#19
Hexachloroethane
Concen: 28.455 ng/ul
RT: 8.916 min Scan# 991
Delta R.T. 0.000 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

Tgt Ion:117 Resp: 160738
Ion Ratio Lower Upper
117 100
201 121.5 83.7 125.5
199 76.0 52.3 78.5

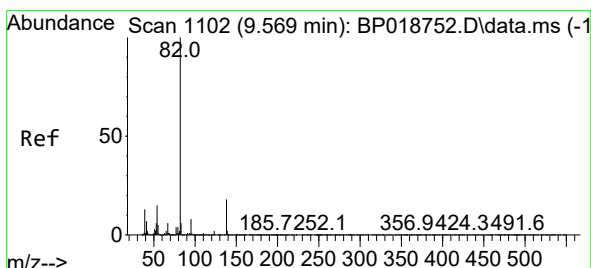
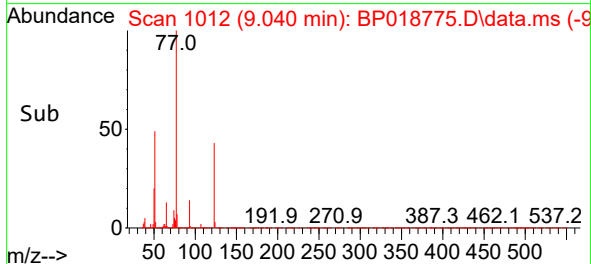
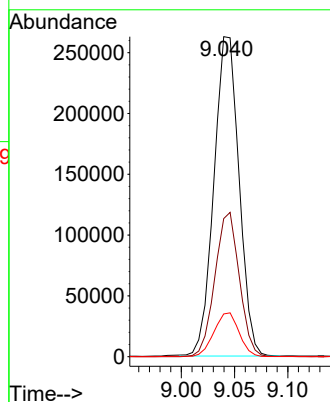
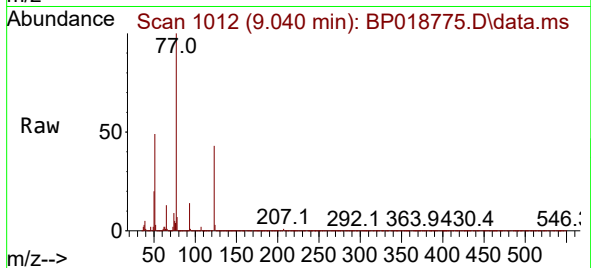




#22
Nitrobenzene
Concen: 29.840 ng/ul
RT: 9.040 min Scan# 1012
Delta R.T. 0.000 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

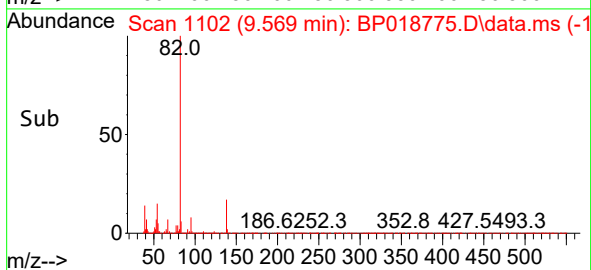
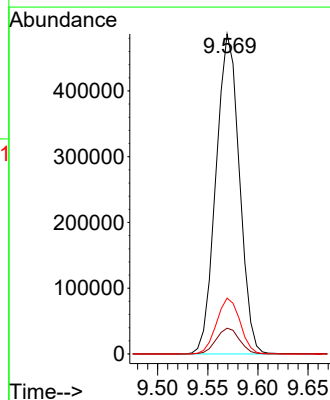
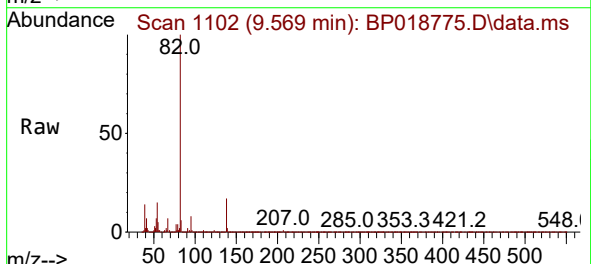
Instrument :
BNA_P
ClientSampleId :

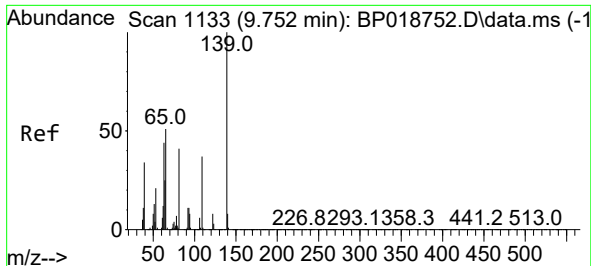
Tgt Ion: 77 Resp: 430598
Ion Ratio Lower Upper
77 100
123 43.2 35.8 53.8
65 13.4 10.5 15.7



#23
Isophorone
Concen: 26.815 ng/ul
RT: 9.569 min Scan# 1102
Delta R.T. 0.000 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

Tgt Ion: 82 Resp: 788941
Ion Ratio Lower Upper
82 100
95 8.0 5.5 8.3
138 17.5 13.5 20.3

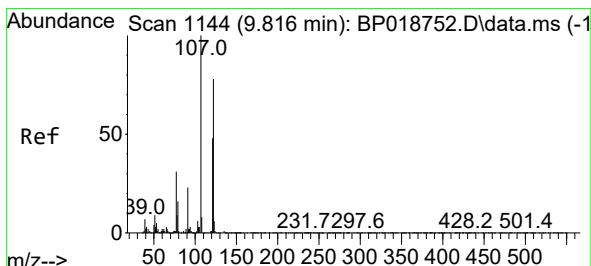
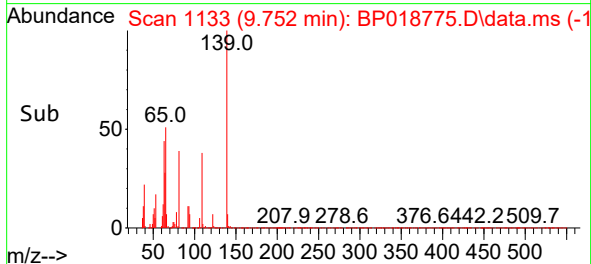
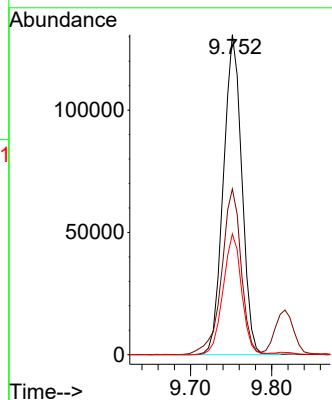
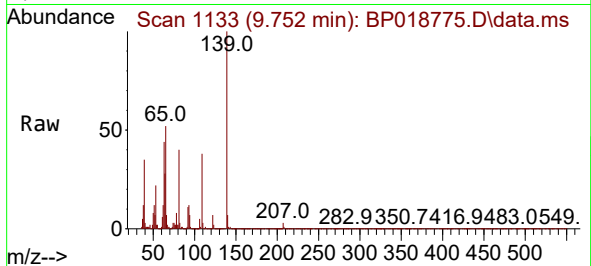




#25
2-Nitrophenol
Concen: 31.396 ng/ul
RT: 9.752 min Scan# 1133
Delta R.T. 0.000 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

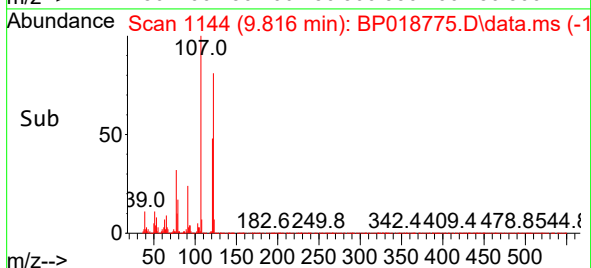
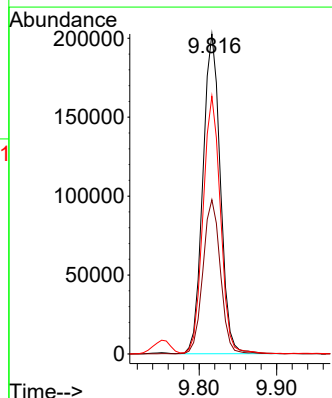
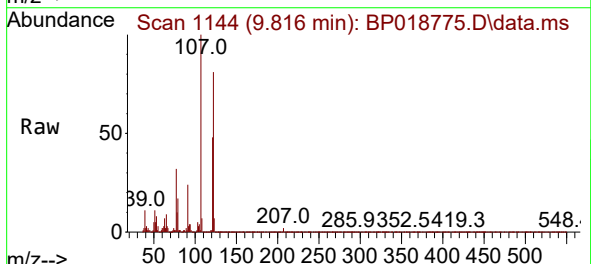
Instrument :
BNA_P
ClientSampleId :

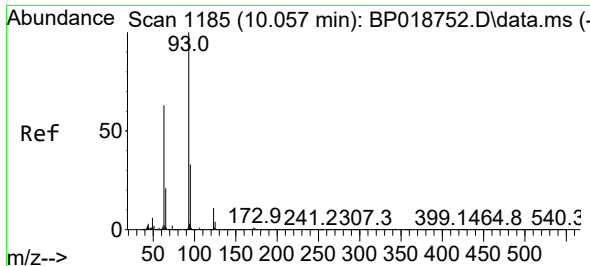
Tgt Ion:139 Resp: 206851
Ion Ratio Lower Upper
139 100
65 51.8 39.1 58.7
109 37.8 23.8 35.6#



#26
2,4-Dimethylphenol
Concen: 24.587 ng/ul
RT: 9.816 min Scan# 1144
Delta R.T. 0.000 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

Tgt Ion:107 Resp: 316810
Ion Ratio Lower Upper
107 100
121 48.2 40.0 60.0
122 80.6 69.1 103.7

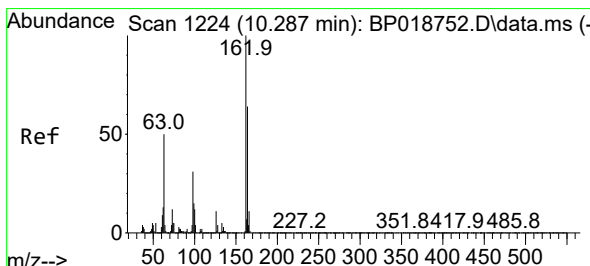
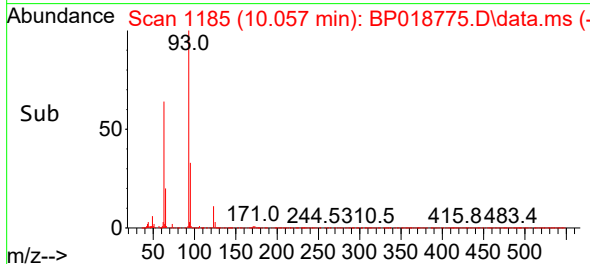
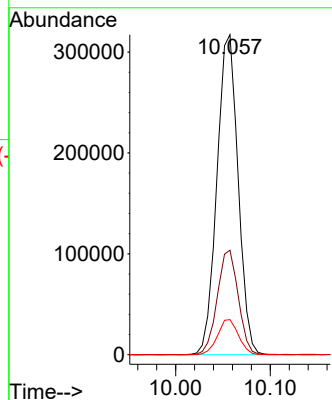
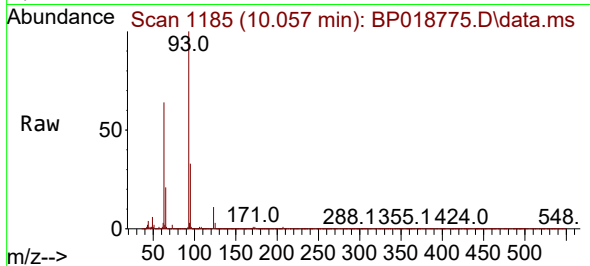




#27
Bis(2-Chloroethoxy)methane
Concen: 26.534 ng/ul
RT: 10.057 min Scan# 1185
Delta R.T. 0.000 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

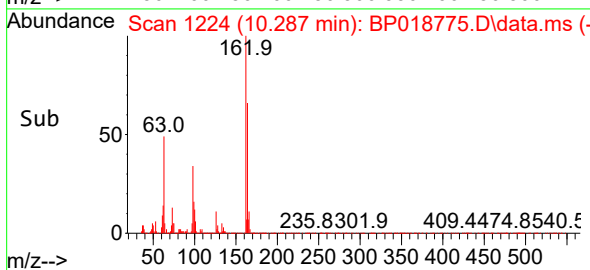
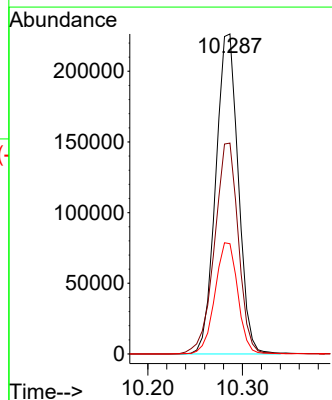
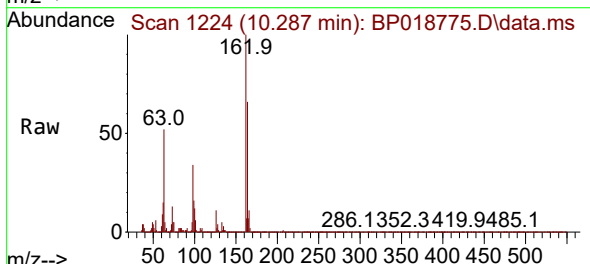
Instrument :
BNA_P
ClientSampleId :

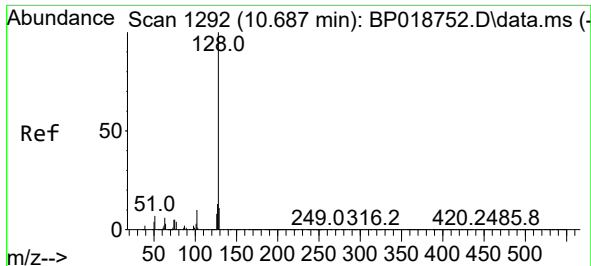
Tgt Ion: 93 Resp: 492876
Ion Ratio Lower Upper
93 100
95 32.6 26.1 39.1
123 10.9 8.9 13.3



#29
2,4-Dichlorophenol
Concen: 30.985 ng/ul
RT: 10.287 min Scan# 1224
Delta R.T. 0.006 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

Tgt Ion:162 Resp: 375526
Ion Ratio Lower Upper
162 100
164 65.9 51.7 77.5
98 34.5 29.2 43.8

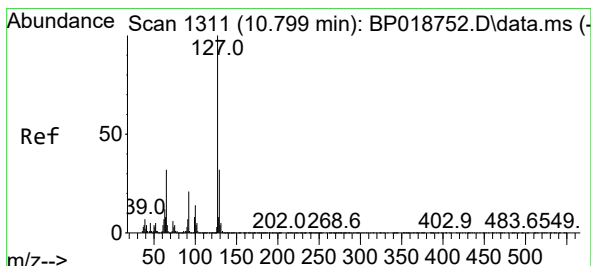
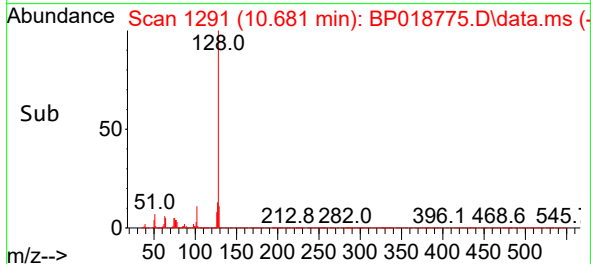
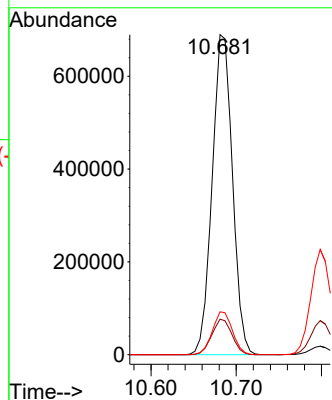
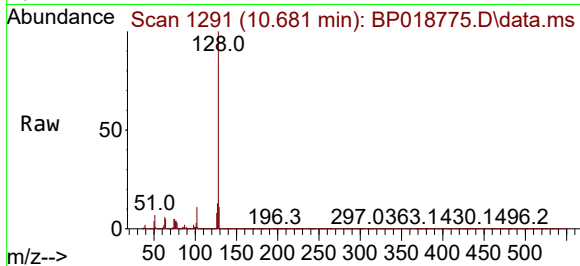




#30
Naphthalene
Concen: 28.179 ng/ul
RT: 10.681 min Scan# 1291
Delta R.T. -0.006 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

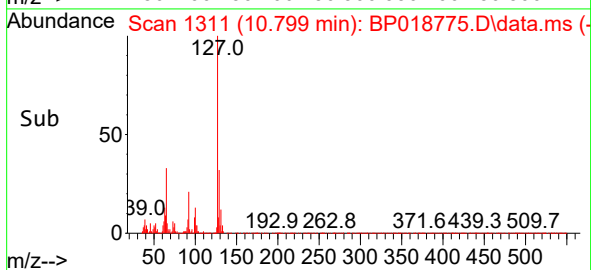
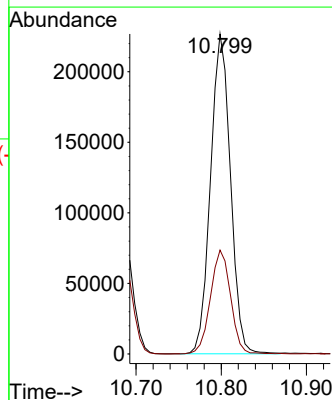
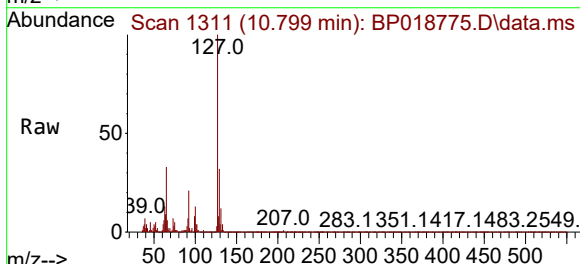
Instrument :
BNA_P
ClientSampleId :

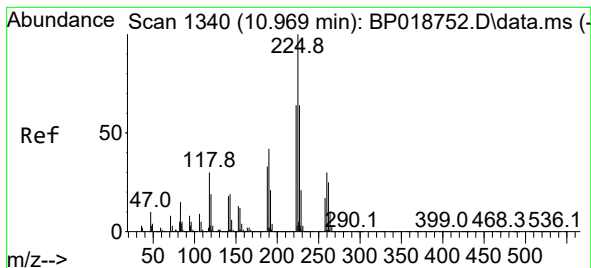
Tgt Ion:128 Resp: 1139927
Ion Ratio Lower Upper
128 100
129 11.1 8.9 13.3
127 13.4 10.5 15.7



#32
4-Chloroaniline
Concen: 23.530 ng/ul
RT: 10.799 min Scan# 1311
Delta R.T. 0.000 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

Tgt Ion:127 Resp: 368766
Ion Ratio Lower Upper
127 100
129 32.4 25.6 38.4





#33

Hexachlorobutadiene

Concen: 37.103 ng/ul

RT: 10.969 min Scan# 1

Delta R.T. 0.000 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

Instrument :

BNA_P

ClientSampleId :

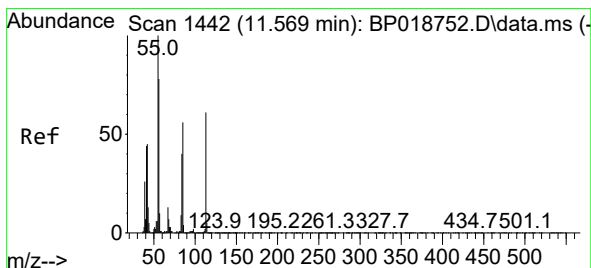
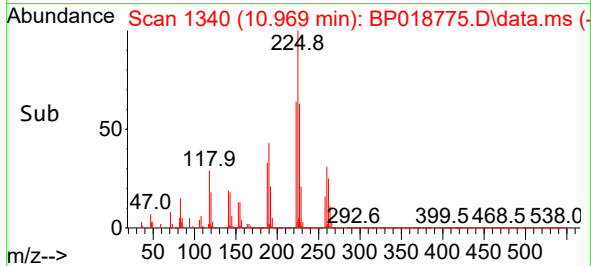
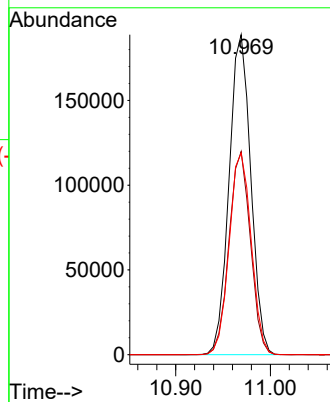
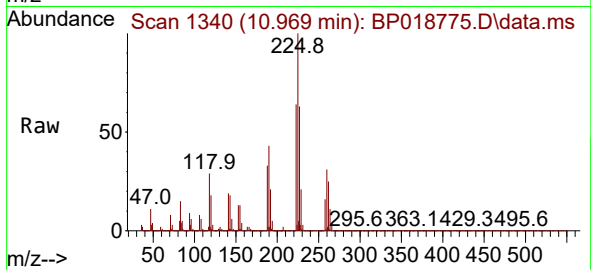
Tgt Ion:225 Resp: 301153

Ion Ratio Lower Upper

225 100

223 63.5 49.5 74.3

227 63.0 50.9 76.3



#34

Caprolactam

Concen: 23.274 ng/ul

RT: 11.581 min Scan# 1444

Delta R.T. 0.006 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

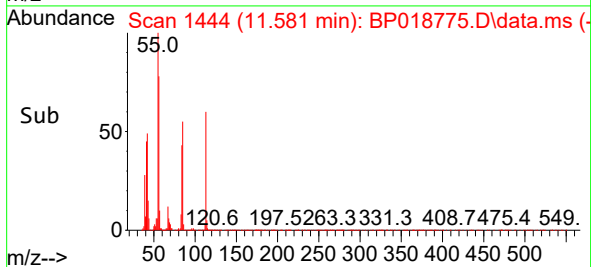
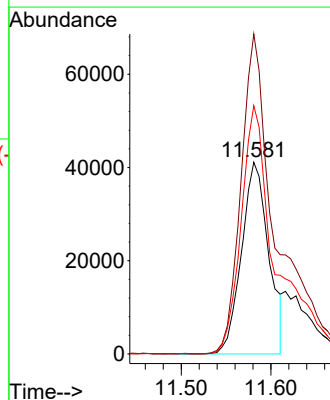
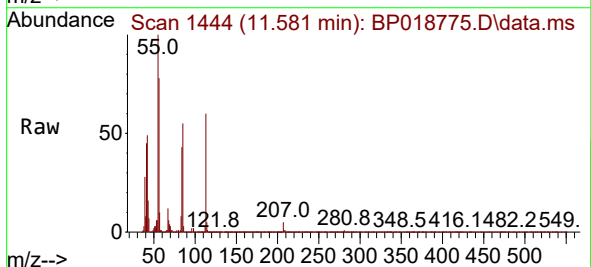
Tgt Ion:113 Resp: 86492

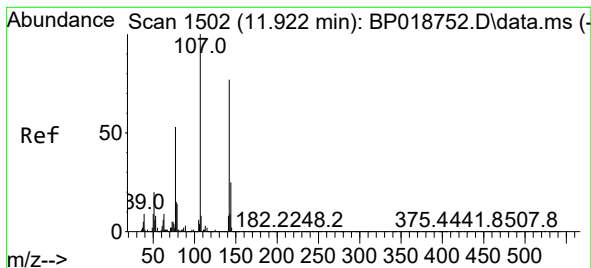
Ion Ratio Lower Upper

113 100

55 166.9 133.7 200.5

56 129.5 97.4 146.2

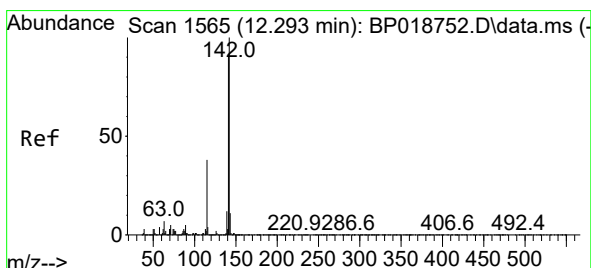
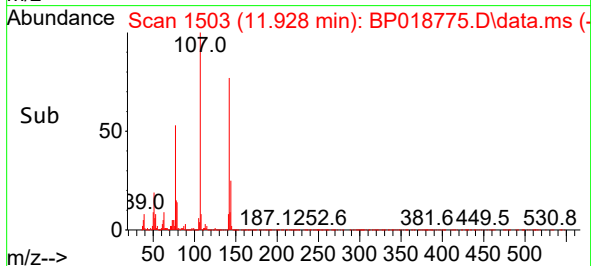
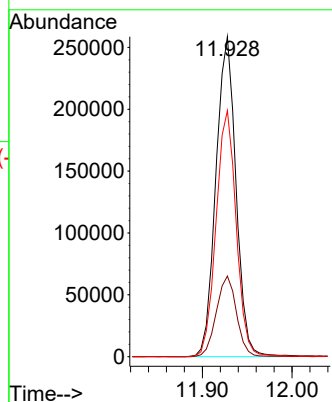
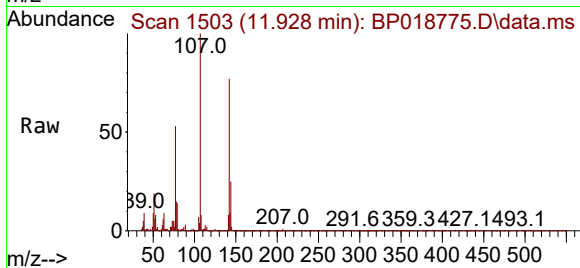




#35
4-Chloro-3-methylphenol
Concen: 29.610 ng/ul
RT: 11.928 min Scan# 1503
Delta R.T. 0.006 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

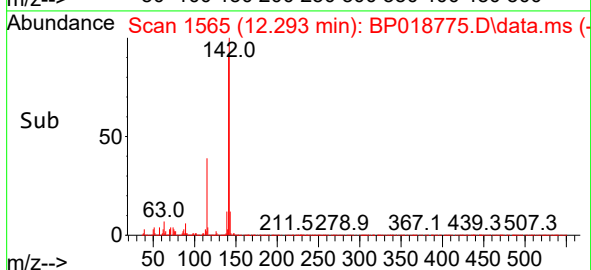
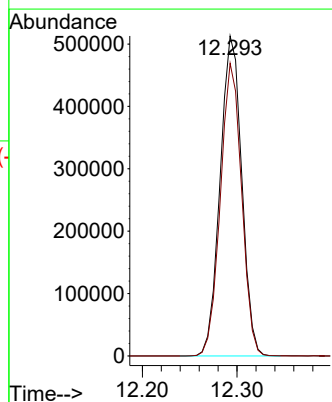
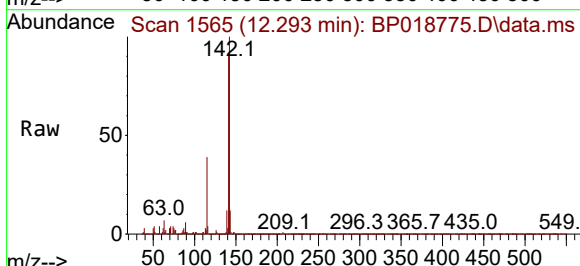
Instrument :
BNA_P
ClientSampleId :

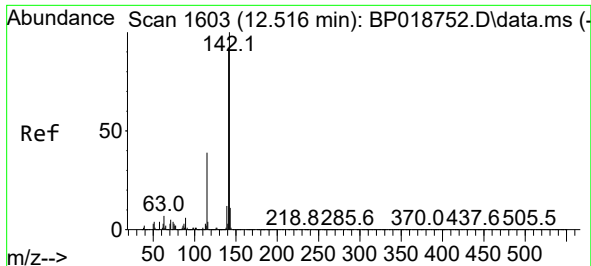
Tgt Ion:107 Resp: 402014
Ion Ratio Lower Upper
107 100
144 25.2 21.0 31.6
142 76.9 63.6 95.4



#36
2-Methylnaphthalene
Concen: 28.355 ng/ul
RT: 12.293 min Scan# 1565
Delta R.T. -0.006 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

Tgt Ion:142 Resp: 812635
Ion Ratio Lower Upper
142 100
141 91.4 71.4 107.0





#37

1-Methylnaphthalene

Concen: 27.552 ng/ul

RT: 12.510 min Scan# 1602

Delta R.T. -0.006 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

Instrument :

BNA_P

ClientSampleId :

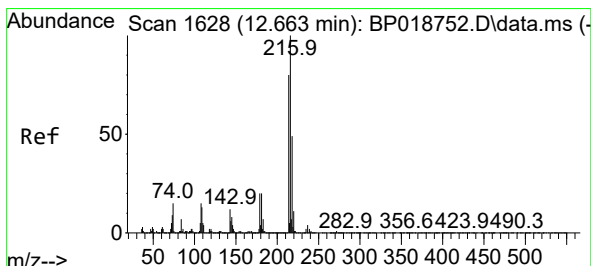
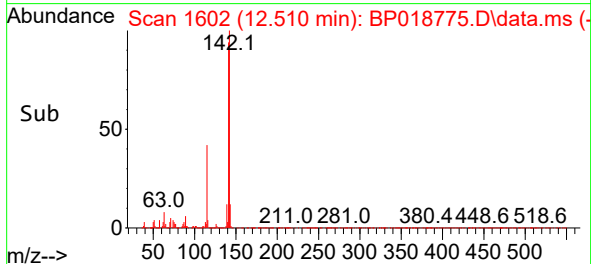
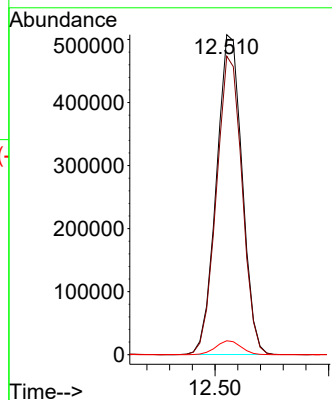
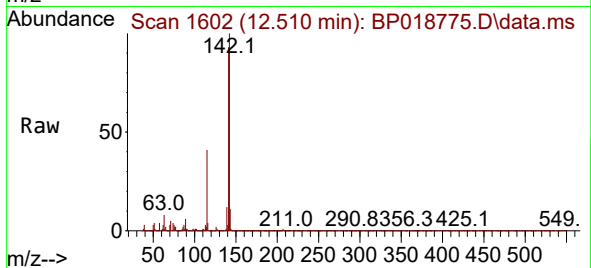
Tgt Ion:142 Resp: 797418

Ion Ratio Lower Upper

142 100

141 93.3 73.5 110.3

116 4.3 2.8 4.2#



#39

1,2,4,5-Tetrachlorobenzene

Concen: 33.568 ng/ul

RT: 12.663 min Scan# 1628

Delta R.T. 0.000 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

Tgt Ion:216 Resp: 542484

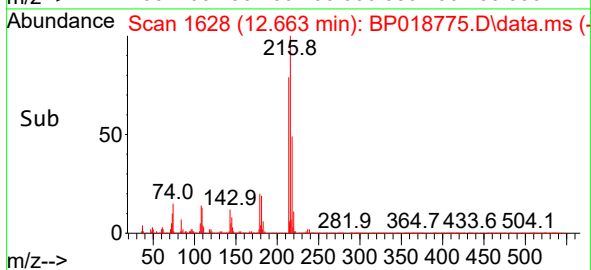
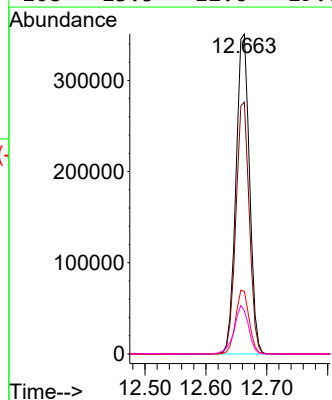
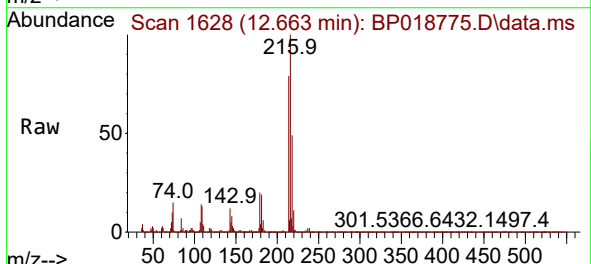
Ion Ratio Lower Upper

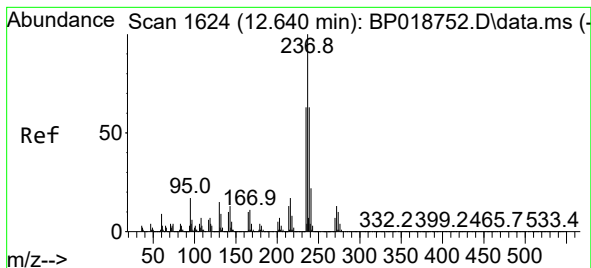
216 100

214 78.7 63.9 95.9

179 19.5 16.3 24.5

108 13.5 12.6 19.0





#40

Hexachlorocyclopentadiene

Concen: 27.655 ng/ul

RT: 12.640 min Scan# 1624

Delta R.T. 0.000 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

Instrument :

BNA_P

ClientSampleId :

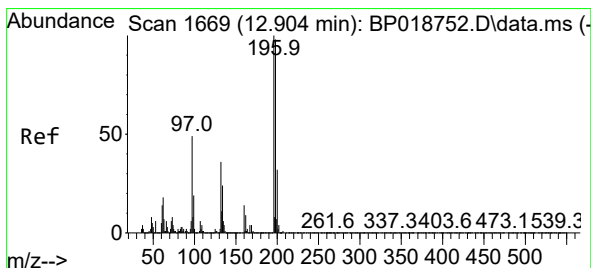
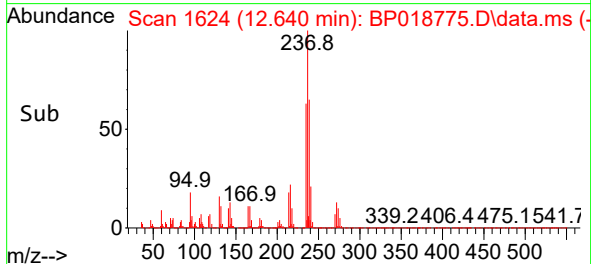
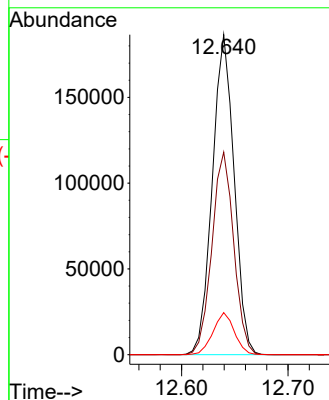
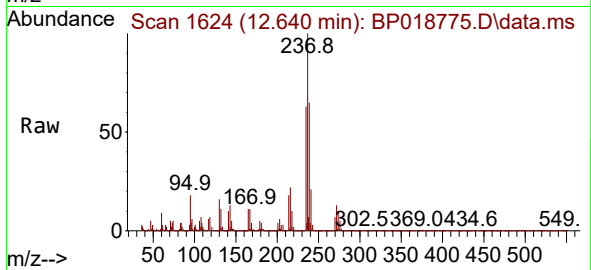
Tgt Ion:237 Resp: 264908

Ion Ratio Lower Upper

237 100

235 63.3 49.4 74.0

272 13.8 9.8 14.8



#41

2,4,6-Trichlorophenol

Concen: 31.729 ng/ul

RT: 12.904 min Scan# 1669

Delta R.T. 0.000 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

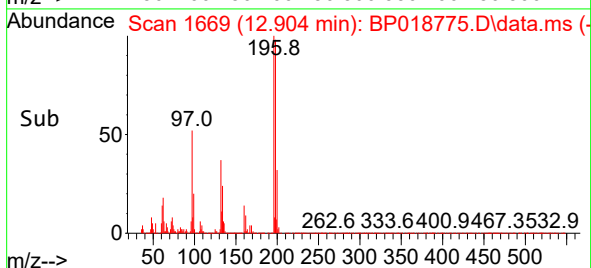
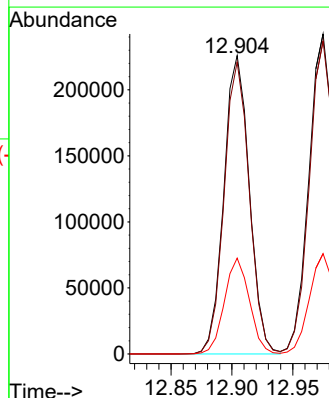
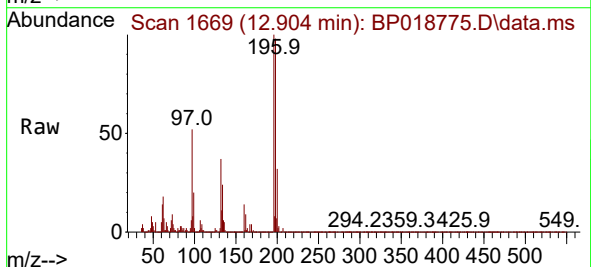
Tgt Ion:196 Resp: 329855

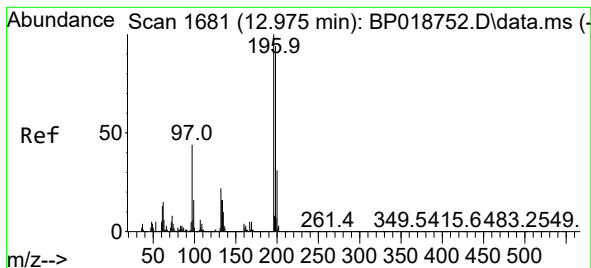
Ion Ratio Lower Upper

196 100

198 97.8 76.9 115.3

200 32.1 25.0 37.6





#42

2,4,5-Trichlorophenol

Concen: 32.007 ng/ul

RT: 12.975 min Scan# 1681

Delta R.T. 0.000 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

Instrument :

BNA_P

ClientSampleId :

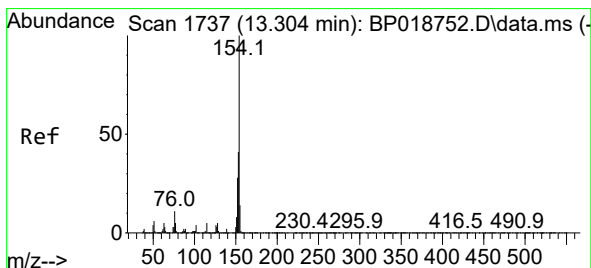
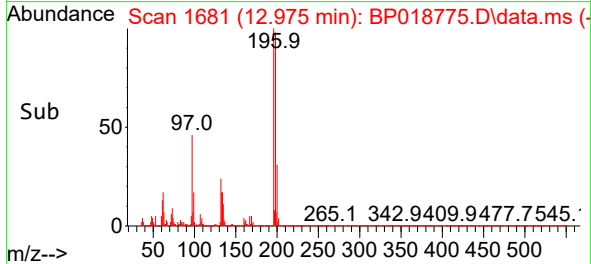
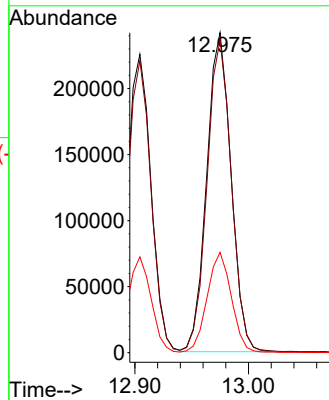
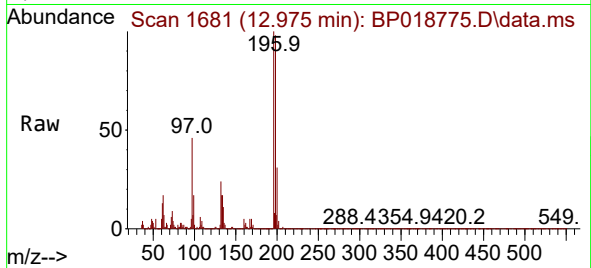
Tgt Ion:196 Resp: 360739

Ion Ratio Lower Upper

196 100

198 97.8 77.9 116.9

200 31.4 25.2 37.8



#43

1,1'-Biphenyl

Concen: 28.682 ng/ul

RT: 13.304 min Scan# 1737

Delta R.T. -0.006 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

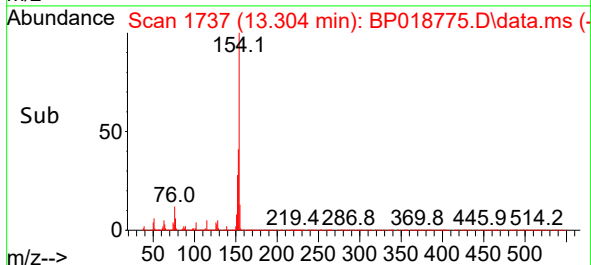
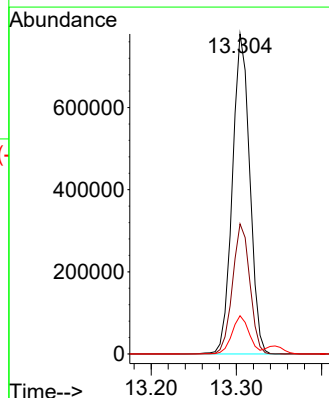
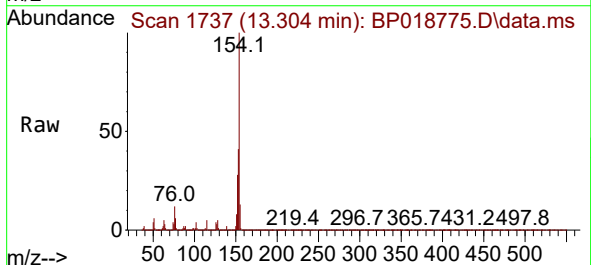
Tgt Ion:154 Resp: 1104907

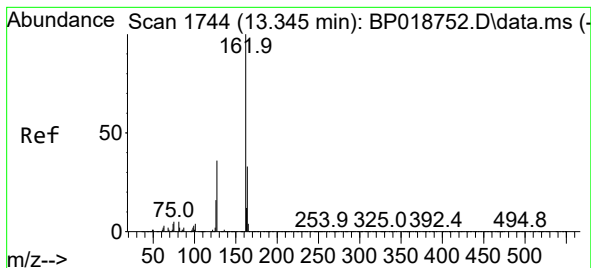
Ion Ratio Lower Upper

154 100

153 40.7 32.8 49.2

76 11.9 10.7 16.1

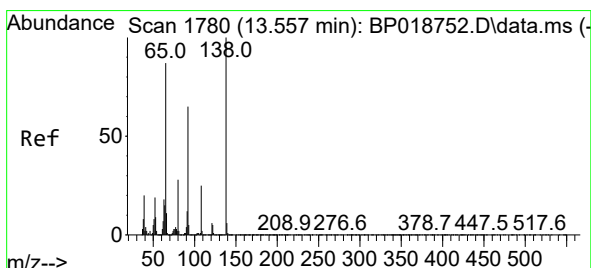
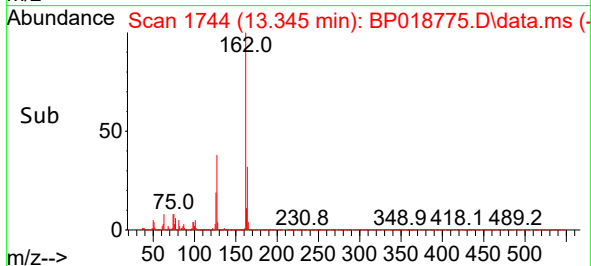
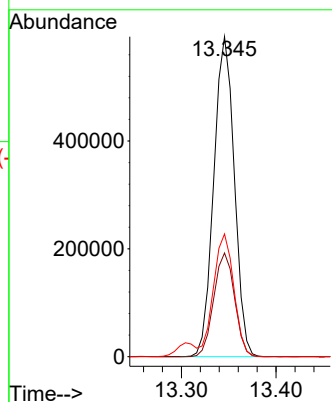
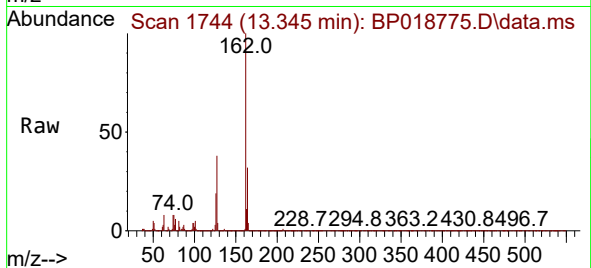




#44
2-Chloronaphthalene
Concen: 29.347 ng/ul
RT: 13.345 min Scan# 1744
Delta R.T. -0.006 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

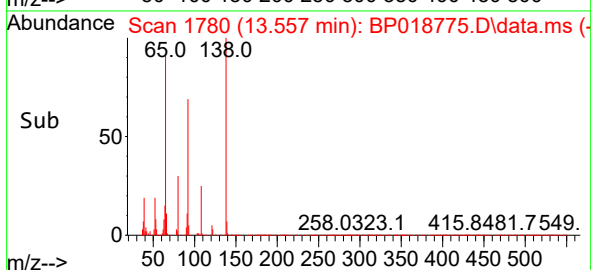
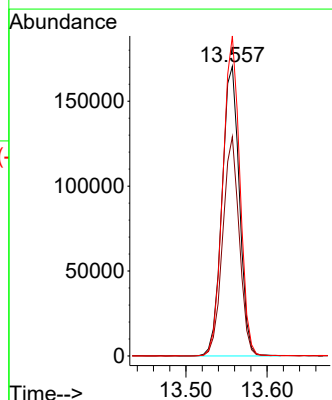
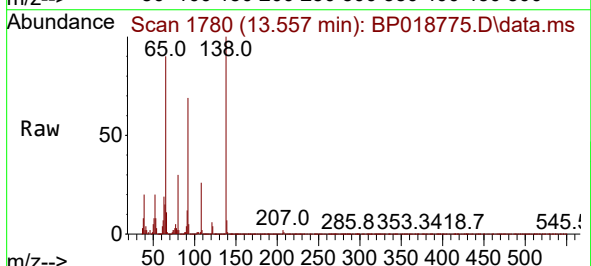
Instrument :
BNA_P
ClientSampleId :

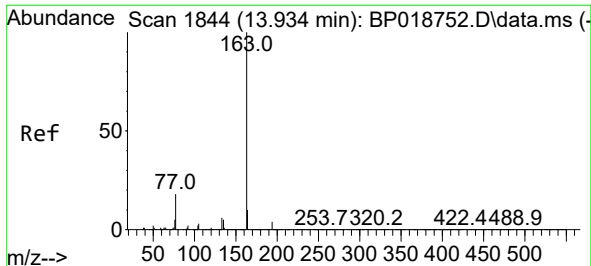
Tgt Ion:162 Resp: 892918
Ion Ratio Lower Upper
162 100
164 32.4 25.7 38.5
127 38.3 30.3 45.5



#45
2-Nitroaniline
Concen: 30.834 ng/ul
RT: 13.557 min Scan# 1780
Delta R.T. 0.000 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

Tgt Ion: 65 Resp: 254327
Ion Ratio Lower Upper
65 100
92 75.7 56.9 85.3
138 110.5 88.2 132.2

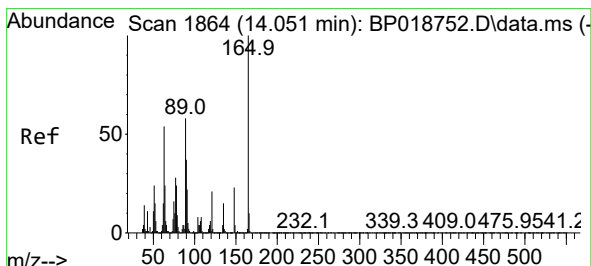
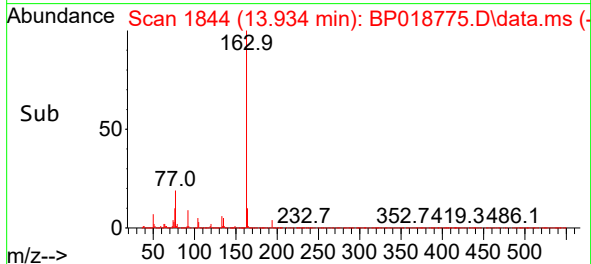
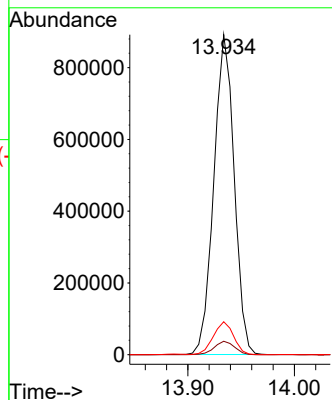
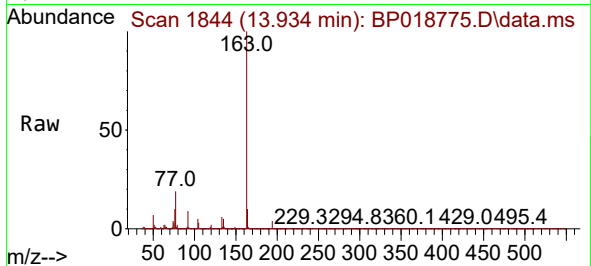




#47
Dimethylphthalate
Concen: 30.229 ng/ul
RT: 13.934 min Scan# 1844
Delta R.T. 0.000 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

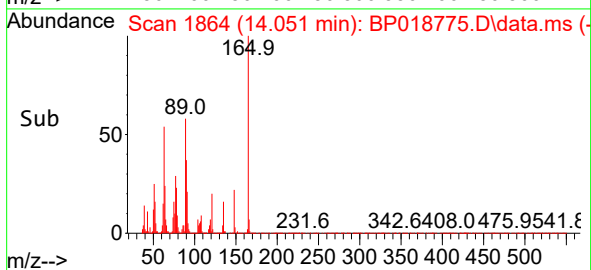
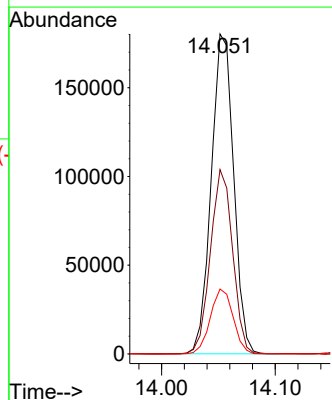
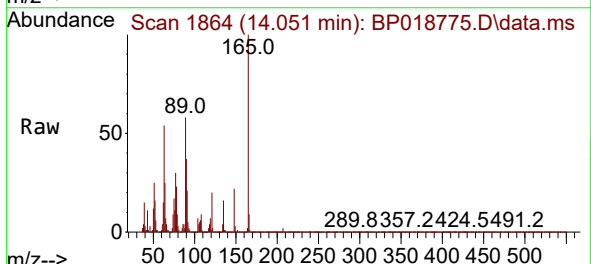
Instrument :
BNA_P
ClientSampleId :

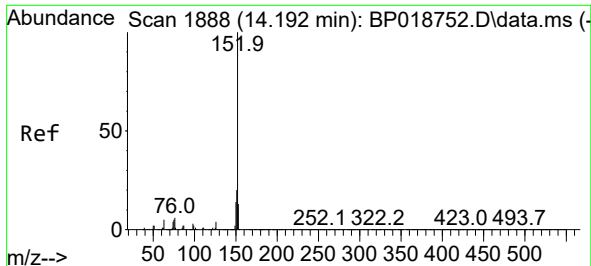
Tgt Ion:163 Resp: 1182934
Ion Ratio Lower Upper
163 100
194 4.2 3.2 4.8
164 10.3 8.0 12.0



#48
2,6-Dinitrotoluene
Concen: 33.400 ng/ul
RT: 14.051 min Scan# 1864
Delta R.T. -0.006 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

Tgt Ion:165 Resp: 246942
Ion Ratio Lower Upper
165 100
89 57.6 46.6 70.0
121 20.3 17.3 25.9

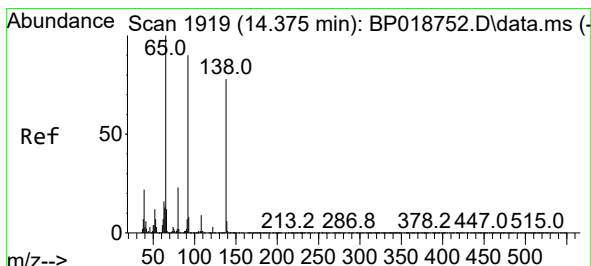
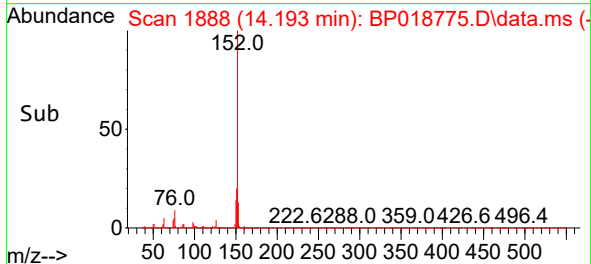
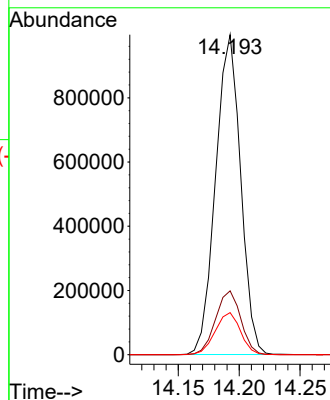
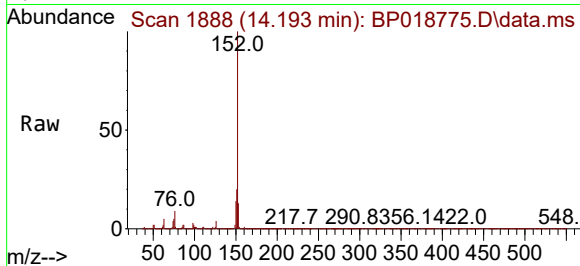




#50
Acenaphthylene
Concen: 28.880 ng/ul
RT: 14.193 min Scan# 1888
Delta R.T. 0.000 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

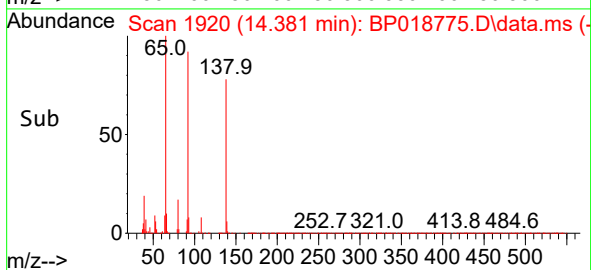
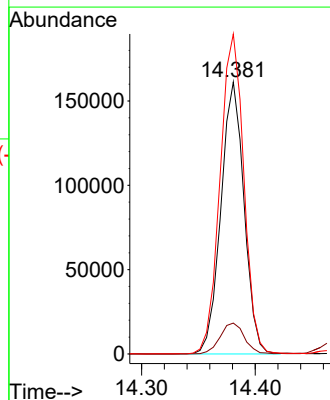
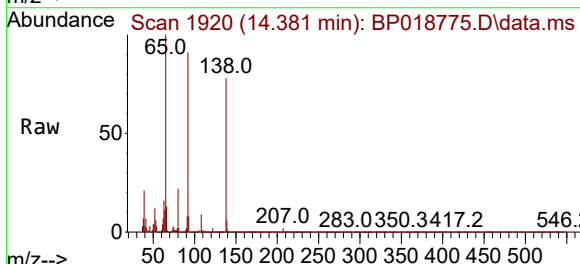
Instrument :
BNA_P
ClientSampleId :

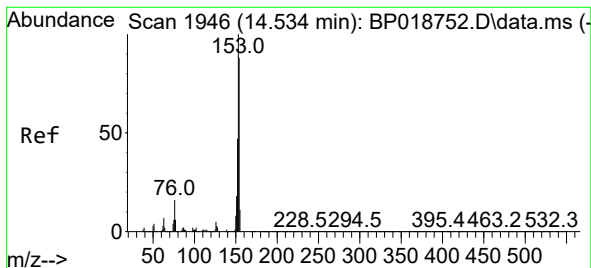
Tgt Ion:152 Resp: 1421372
Ion Ratio Lower Upper
152 100
151 19.9 15.9 23.9
153 13.1 10.6 16.0



#51
3-Nitroaniline
Concen: 30.944 ng/ul
RT: 14.381 min Scan# 1920
Delta R.T. 0.000 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

Tgt Ion:138 Resp: 228376
Ion Ratio Lower Upper
138 100
108 11.4 9.5 14.3
92 117.6 93.1 139.7





#52

Acenaphthene

Concen: 29.377 ng/ul

RT: 14.534 min Scan# 1946

Delta R.T. 0.000 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

Instrument :

BNA_P

ClientSampleId :

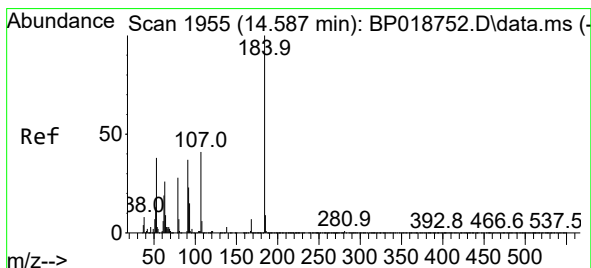
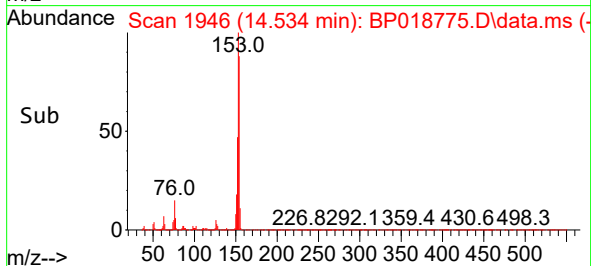
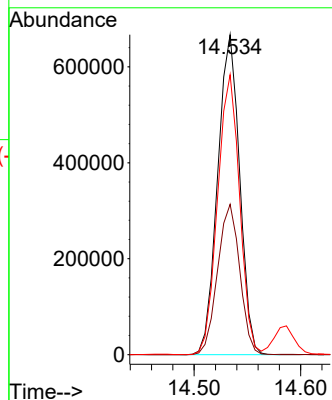
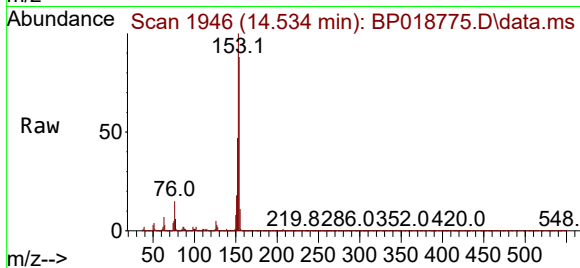
Tgt Ion:153 Resp: 955994

Ion Ratio Lower Upper

153 100

152 47.0 38.1 57.1

154 87.5 71.7 107.5



#53

2,4-Dinitrophenol

Concen: 32.135 ng/ul

RT: 14.587 min Scan# 1955

Delta R.T. 0.000 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

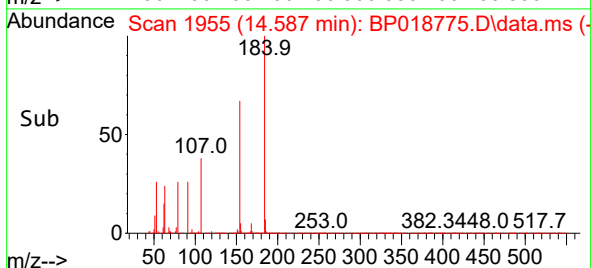
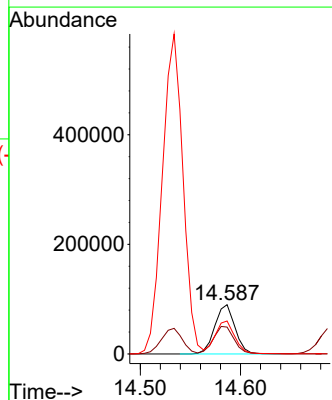
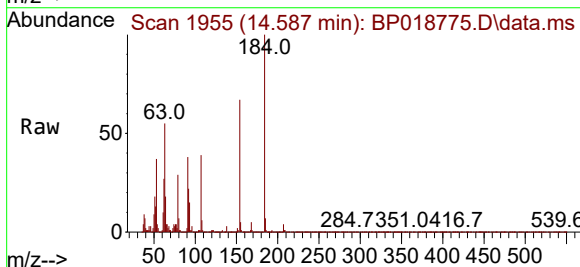
Tgt Ion:184 Resp: 125920

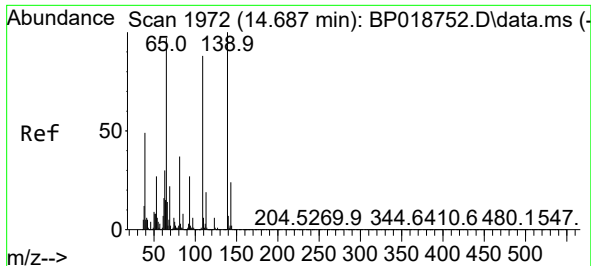
Ion Ratio Lower Upper

184 100

63 54.6 48.2 72.4

154 66.8 49.1 73.7

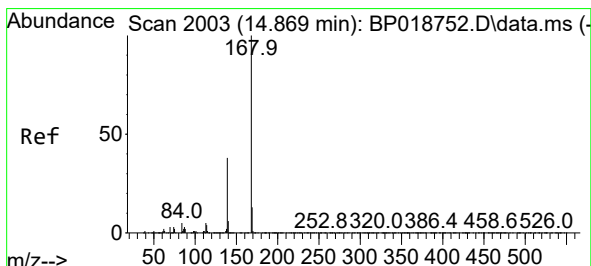
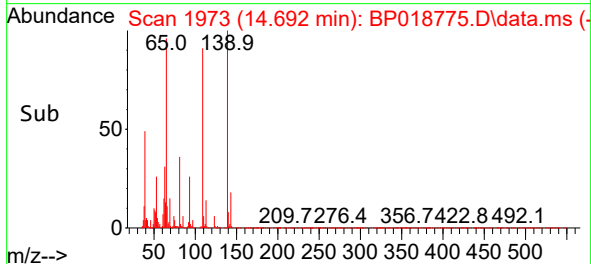
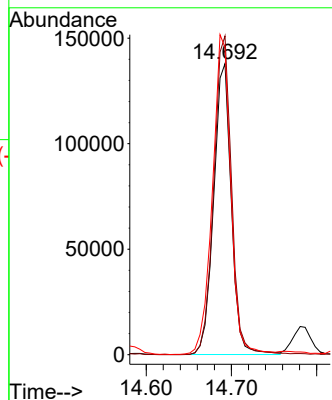
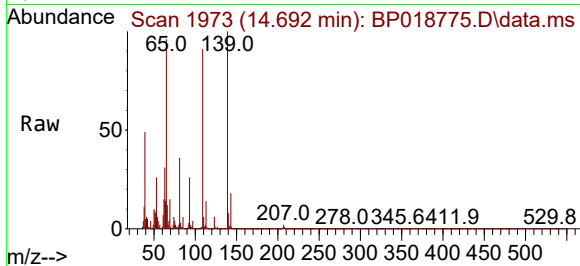




#55
4-Nitrophenol
Concen: 40.271 ng/ul
RT: 14.692 min Scan# 1973
Delta R.T. 0.000 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

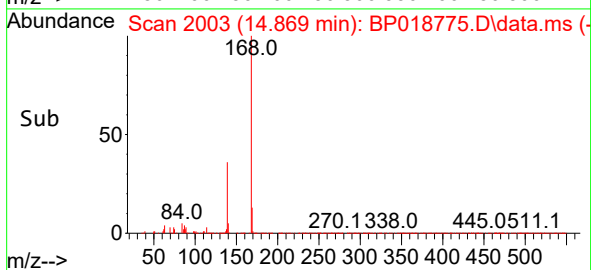
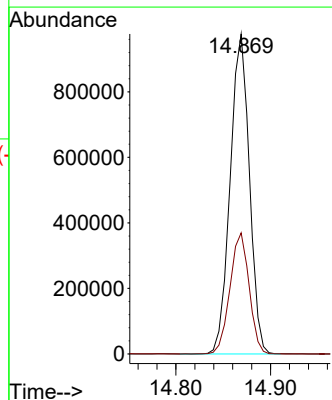
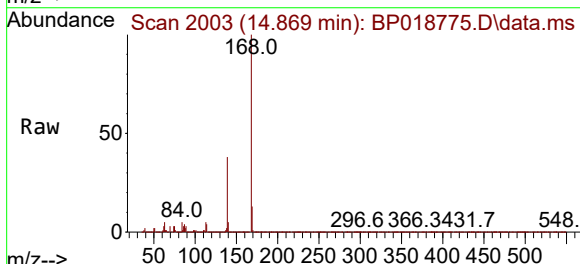
Instrument :
BNA_P
ClientSampleId :

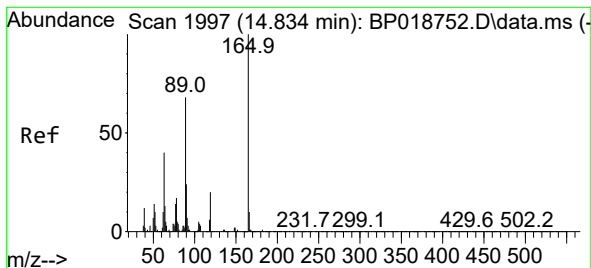
Tgt Ion:109 Resp: 198540
Ion Ratio Lower Upper
109 100
139 109.5 109.0 163.4
65 105.6 106.2 159.4#



#56
Dibenzofuran
Concen: 30.360 ng/ul
RT: 14.869 min Scan# 2003
Delta R.T. 0.000 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

Tgt Ion:168 Resp: 1373114
Ion Ratio Lower Upper
168 100
139 37.9 29.1 43.7





#57

2,4-Dinitrotoluene

Concen: 34.794 ng/ul

RT: 14.840 min Scan# 1997

Delta R.T. 0.000 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

Instrument :

BNA_P

ClientSampleId :

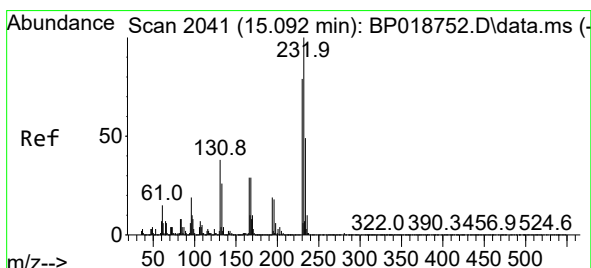
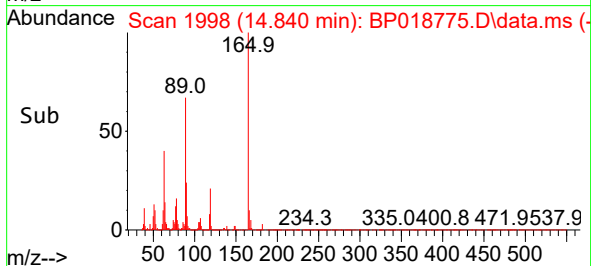
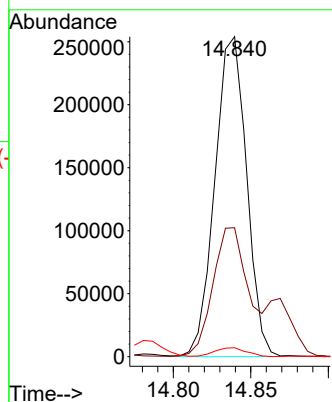
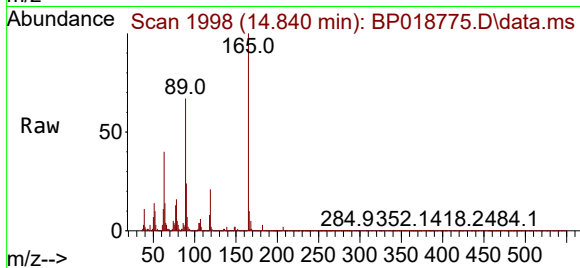
Tgt Ion:165 Resp: 361854

Ion Ratio Lower Upper

165 100

63 40.3 32.7 49.1

182 2.8 2.1 3.1



#58

2,3,4,6-Tetrachlorophenol

Concen: 34.143 ng/ul

RT: 15.092 min Scan# 2041

Delta R.T. -0.006 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

Tgt Ion:232 Resp: 322784

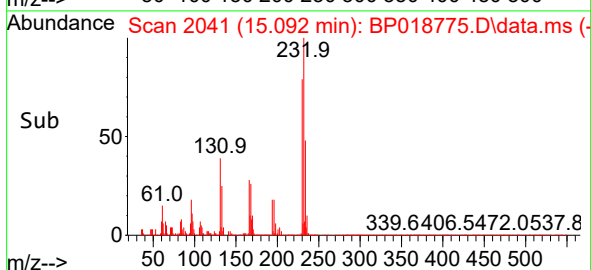
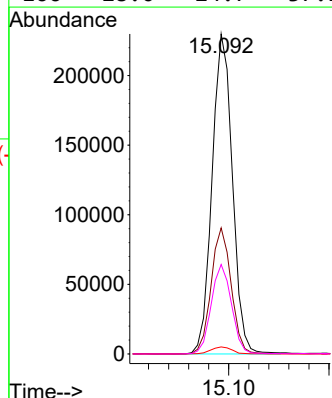
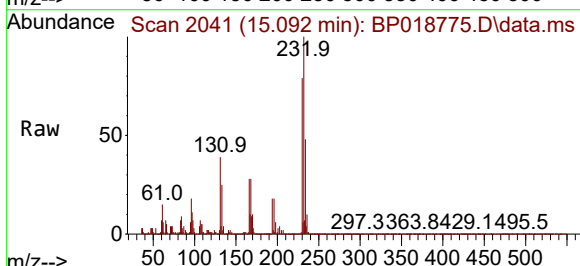
Ion Ratio Lower Upper

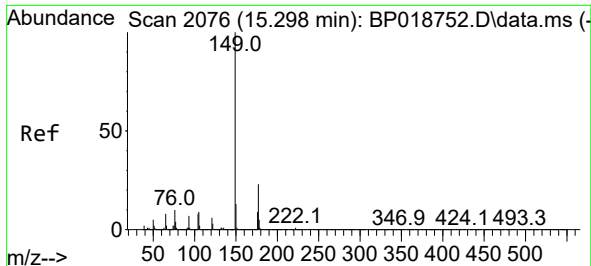
232 100

131 39.4 33.8 50.8

130 2.2 1.8 2.8

166 28.0 24.7 37.1

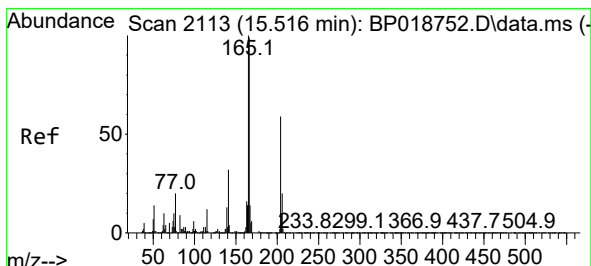
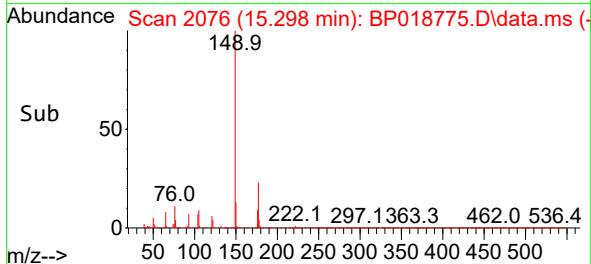
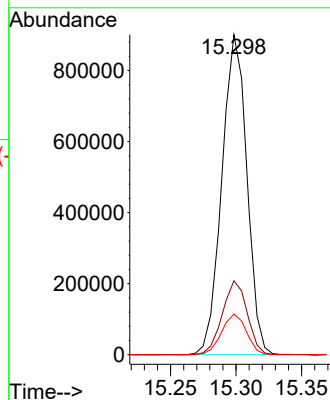
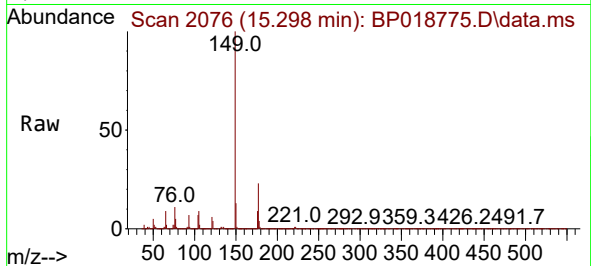




#59
Diethylphthalate
Concen: 31.183 ng/ul
RT: 15.298 min Scan# 2076
Delta R.T. 0.000 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

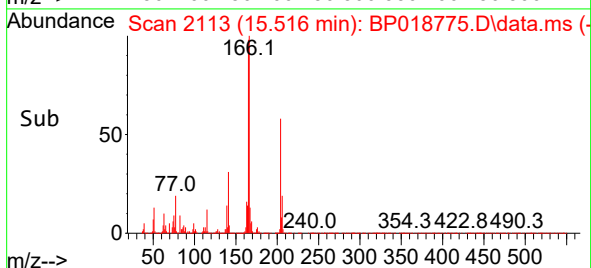
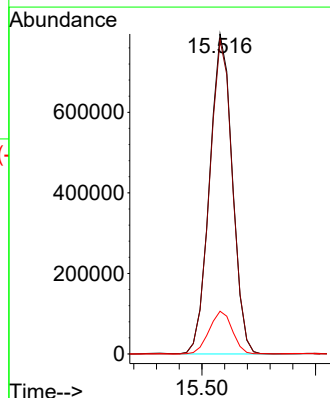
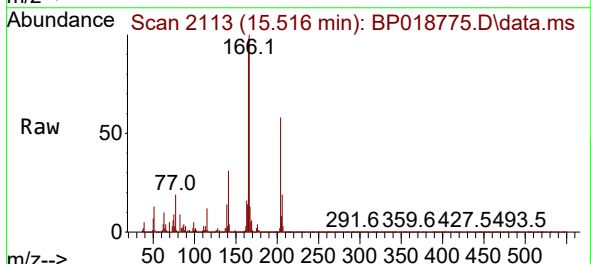
Instrument :
BNA_P
ClientSampleId :

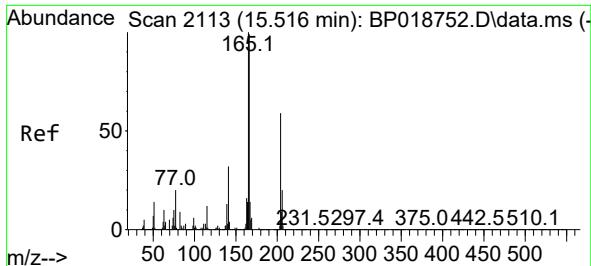
Tgt Ion:149 Resp: 1194091
Ion Ratio Lower Upper
149 100
177 23.1 18.2 27.4
150 12.7 9.9 14.9



#61
Fluorene
Concen: 30.874 ng/ul
RT: 15.516 min Scan# 2113
Delta R.T. -0.006 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

Tgt Ion:166 Resp: 1104931
Ion Ratio Lower Upper
166 100
165 98.1 78.0 117.0
167 13.3 10.8 16.2

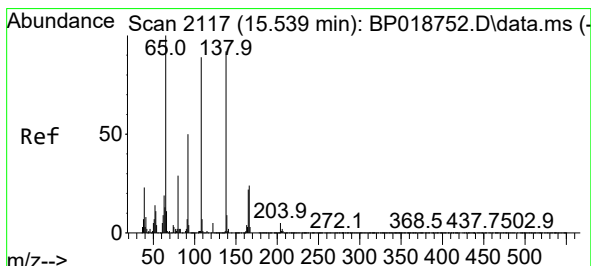
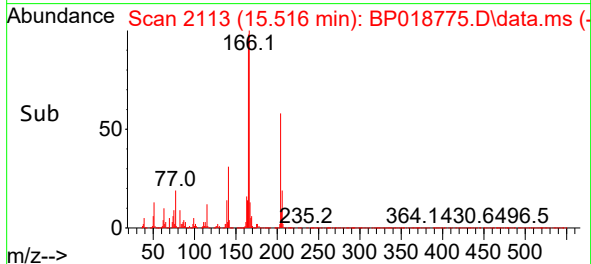
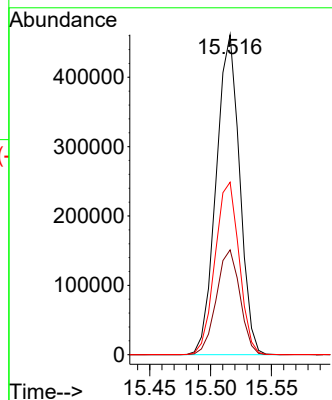
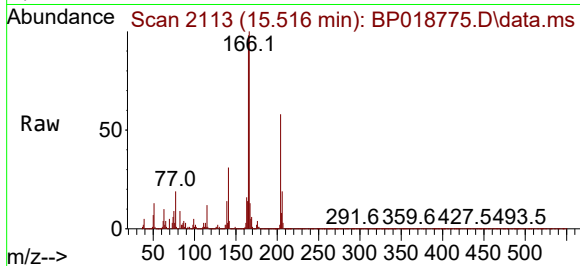




#62
4-Chlorophenyl-phenylether
Concen: 32.955 ng/ul
RT: 15.516 min Scan# 2113
Delta R.T. 0.000 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

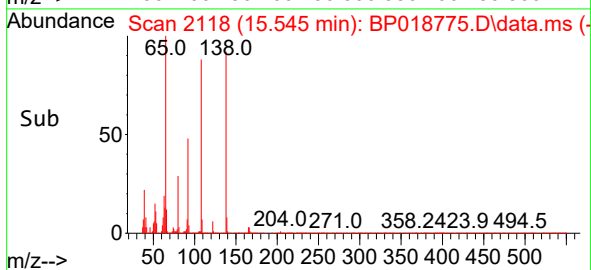
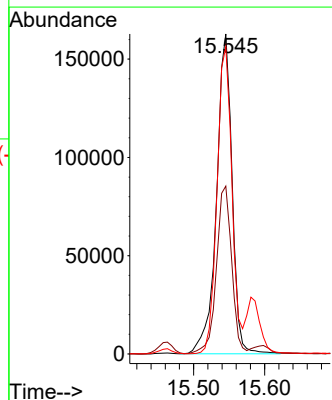
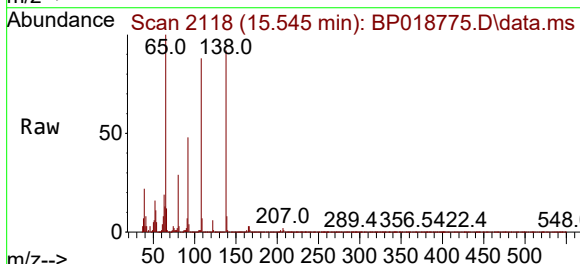
Instrument :
BNA_P
ClientSampleId :

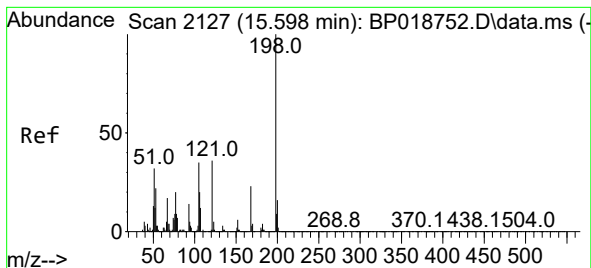
Tgt Ion:204 Resp: 618552
Ion Ratio Lower Upper
204 100
206 32.7 27.1 40.7
141 53.9 45.8 68.8



#63
4-Nitroaniline
Concen: 35.227 ng/ul
RT: 15.545 min Scan# 2118
Delta R.T. 0.000 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

Tgt Ion:138 Resp: 247679
Ion Ratio Lower Upper
138 100
92 52.5 42.3 63.5
108 96.0 62.0 93.0#

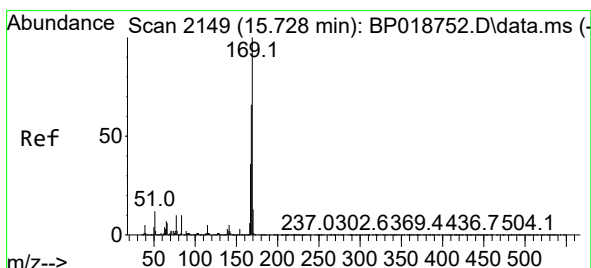
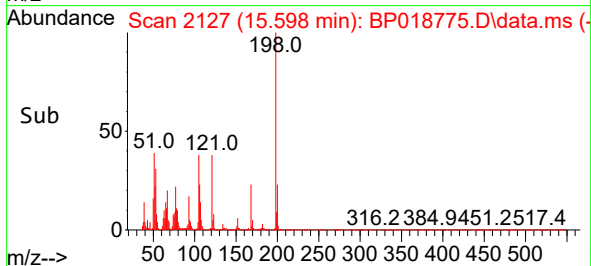
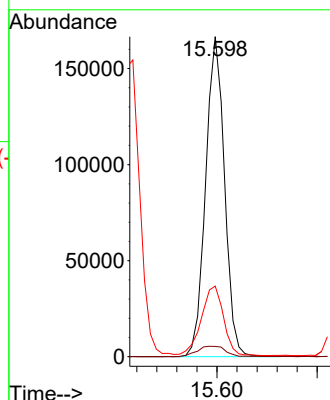
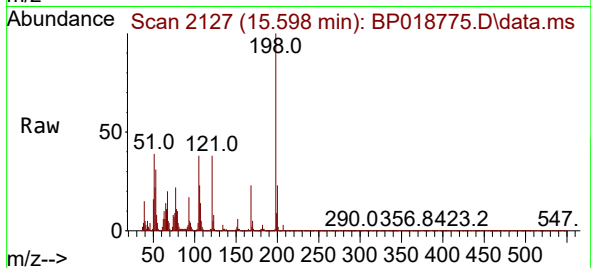




#66
4,6-Dinitro-2-methylphenol
Concen: 32.059 ng/ul
RT: 15.598 min Scan# 2127
Delta R.T. 0.000 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

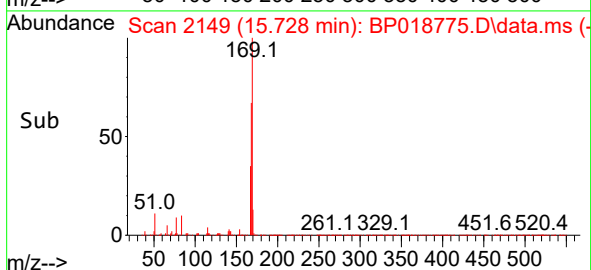
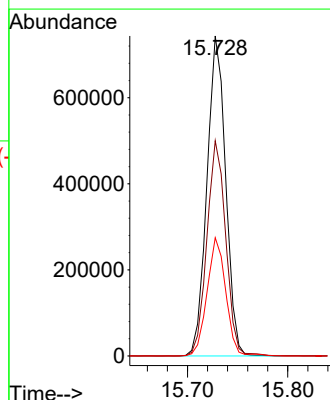
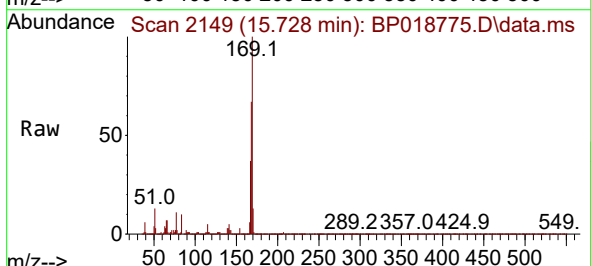
Instrument :
BNA_P
ClientSampleId :

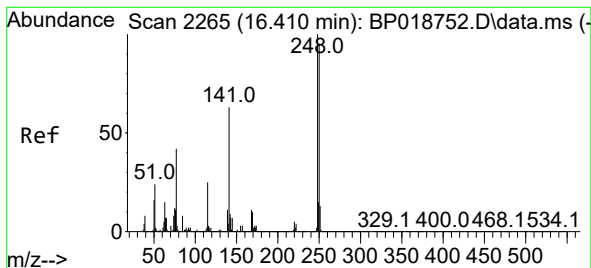
Tgt Ion:198 Resp: 218760
Ion Ratio Lower Upper
198 100
182 3.2 3.4 5.2#
77 22.1 20.6 30.8



#67
N-Nitrosodiphenylamine
Concen: 27.406 ng/ul
RT: 15.728 min Scan# 2149
Delta R.T. -0.006 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

Tgt Ion:169 Resp: 966666
Ion Ratio Lower Upper
169 100
168 67.2 53.1 79.7
167 37.0 29.1 43.7





#68

4-Bromophenyl-phenylether

Concen: 31.821 ng/ul

RT: 16.410 min Scan# 2265

Delta R.T. -0.006 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

Instrument :

BNA_P

ClientSampleId :

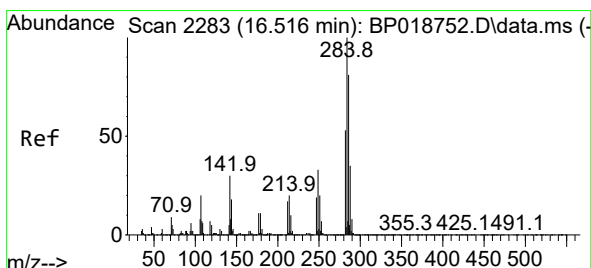
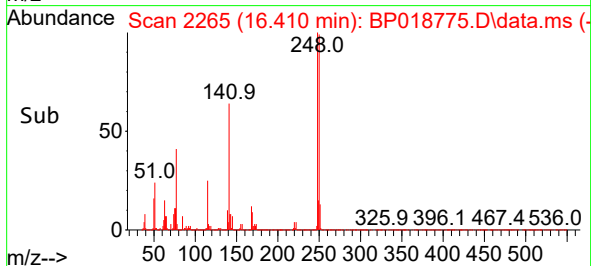
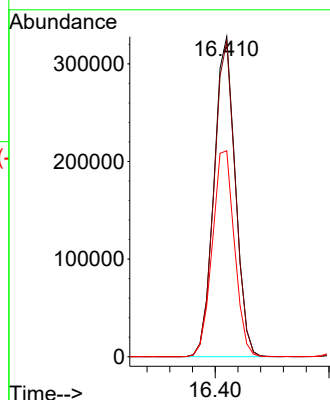
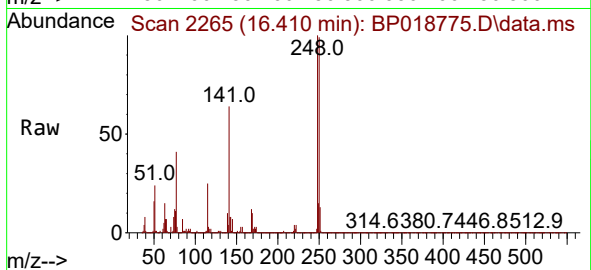
Tgt Ion:248 Resp: 427619

Ion Ratio Lower Upper

248 100

250 98.6 79.3 118.9

141 64.4 57.2 85.8



#69

Hexachlorobenzene

Concen: 34.282 ng/ul

RT: 16.516 min Scan# 2283

Delta R.T. -0.006 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

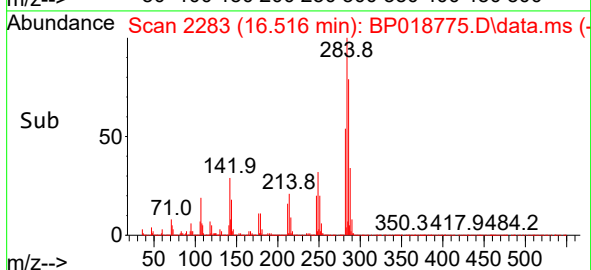
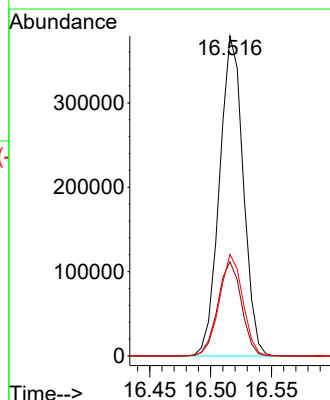
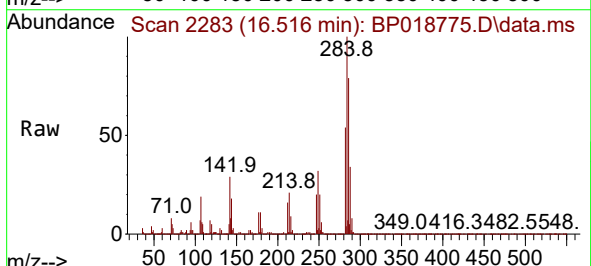
Tgt Ion:284 Resp: 514349

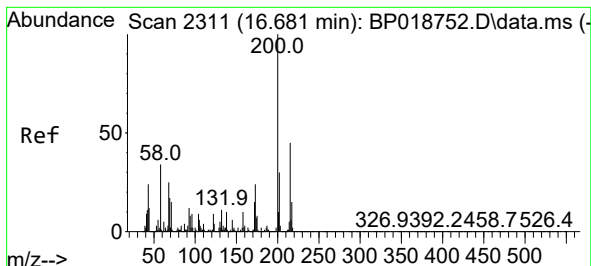
Ion Ratio Lower Upper

284 100

142 29.5 25.8 38.6

249 31.7 24.9 37.3





#70

Atrazine

Concen: 24.209 ng/ul

RT: 16.686 min Scan# 21

Delta R.T. 0.000 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

Instrument :

BNA_P

ClientSampleId :

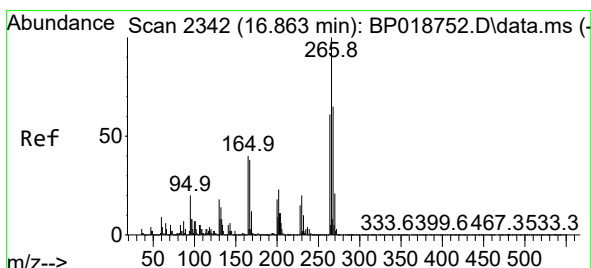
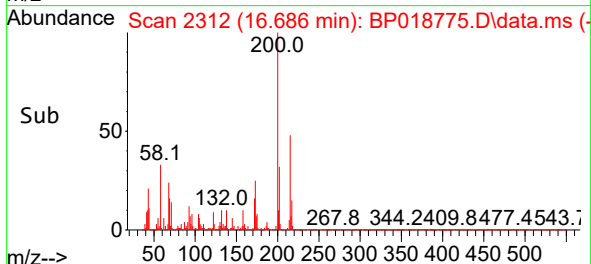
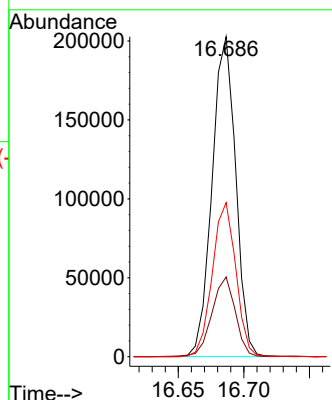
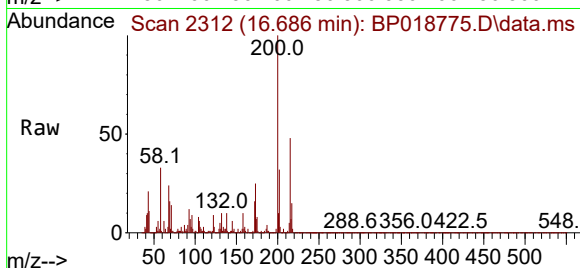
Tgt Ion:200 Resp: 253876

Ion Ratio Lower Upper

200 100

173 24.9 21.0 31.4

215 48.2 38.2 57.2



#71

Pentachlorophenol

Concen: 33.911 ng/ul

RT: 16.863 min Scan# 2342

Delta R.T. -0.006 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

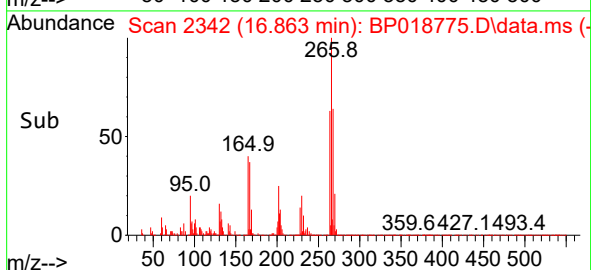
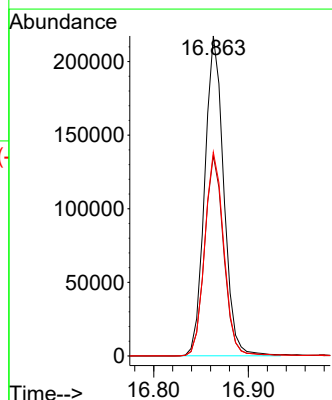
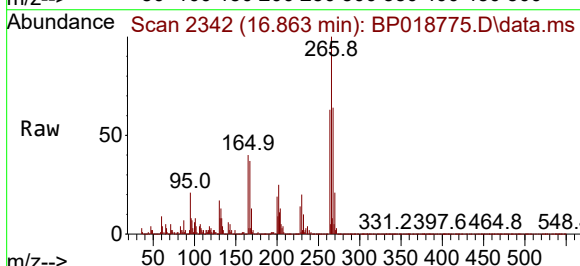
Tgt Ion:266 Resp: 302599

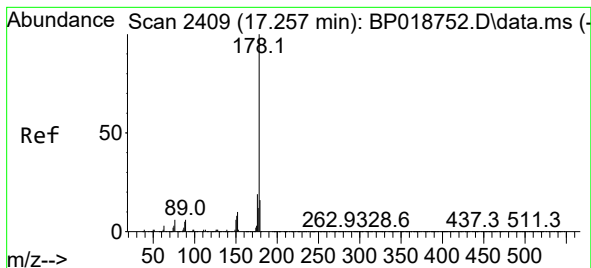
Ion Ratio Lower Upper

266 100

264 62.6 50.2 75.2

268 63.7 50.5 75.7





#72

Phenanthrene

Concen: 29.531 ng/ul

RT: 17.257 min Scan# 2409

Delta R.T. -0.006 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

Instrument :

BNA_P

ClientSampleId :

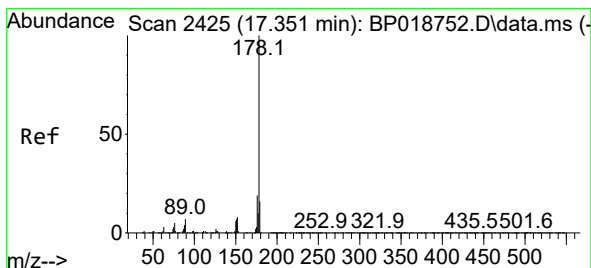
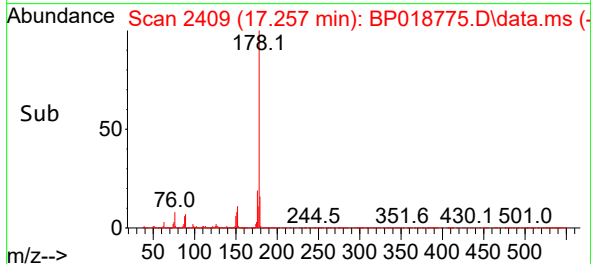
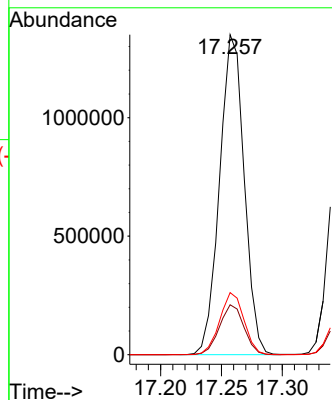
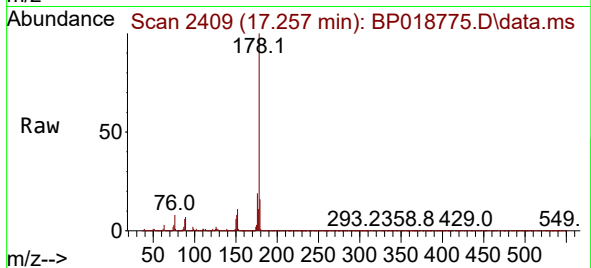
Tgt Ion:178 Resp: 1898511

Ion Ratio Lower Upper

178 100

179 15.6 12.3 18.5

176 19.4 15.4 23.2



#74

Anthracene

Concen: 29.374 ng/ul

RT: 17.351 min Scan# 2425

Delta R.T. -0.006 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

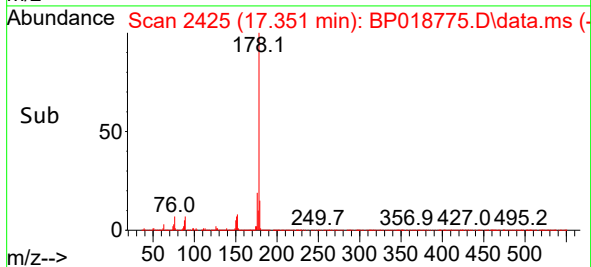
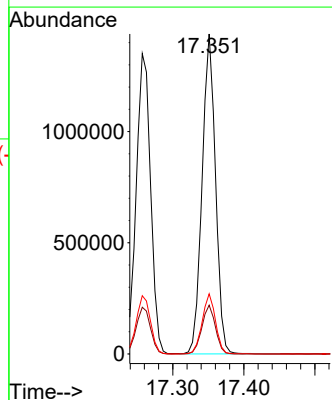
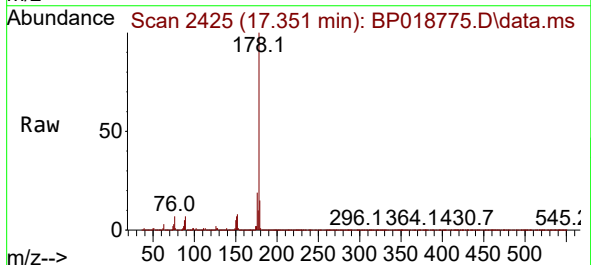
Tgt Ion:178 Resp: 1892884

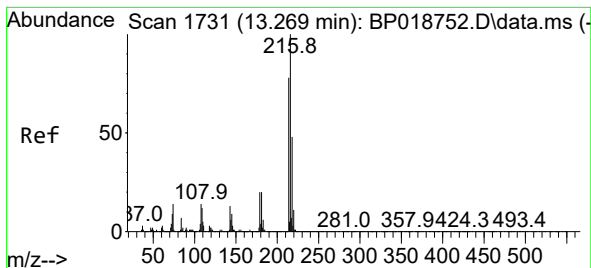
Ion Ratio Lower Upper

178 100

179 15.3 12.5 18.7

176 18.8 15.0 22.6

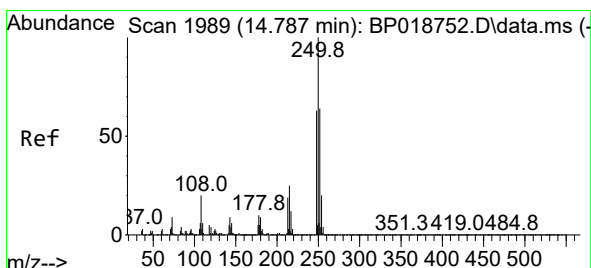
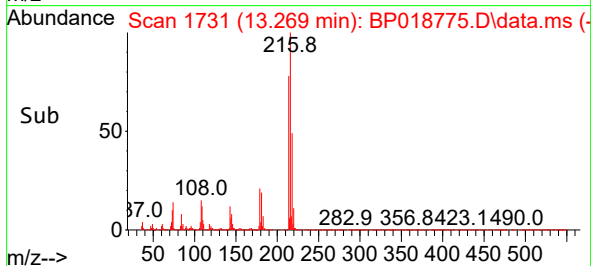
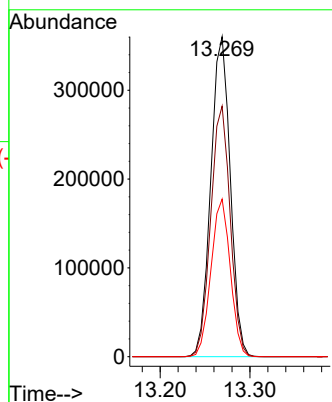
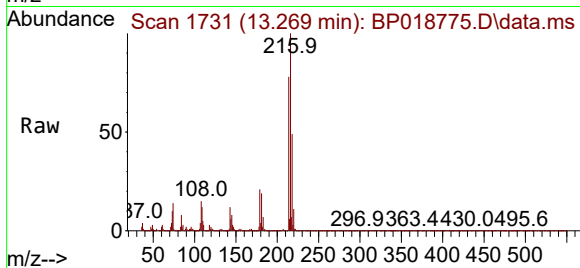




#75
1,2,3,4-Tetrachlorobenzene
Concen: 29.518 ng/uL
RT: 13.269 min Scan# 1731
Delta R.T. 0.000 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

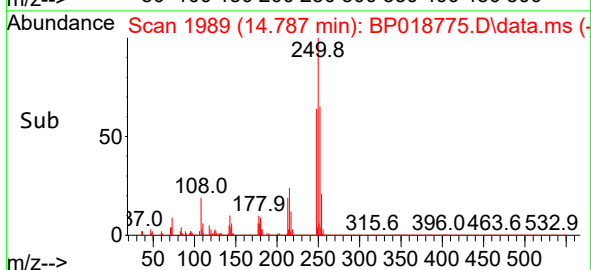
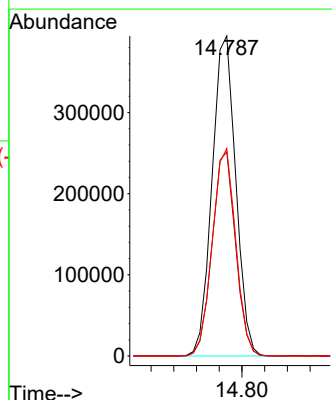
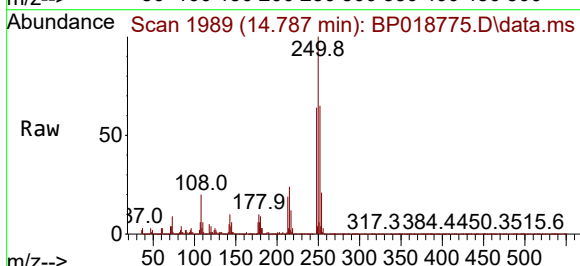
Instrument :
BNA_P
ClientSampleId :

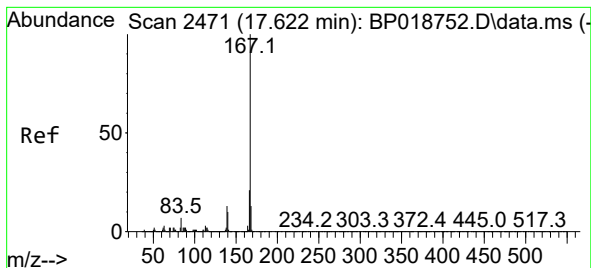
Tgt Ion:216 Resp: 543284
Ion Ratio Lower Upper
216 100
214 78.3 61.4 92.2
218 49.2 39.2 58.8



#76
Pentachlorobenzene
Concen: 31.522 ng/uL
RT: 14.787 min Scan# 1989
Delta R.T. 0.000 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

Tgt Ion:250 Resp: 569904
Ion Ratio Lower Upper
250 100
248 63.8 50.6 75.8
252 64.8 51.3 76.9





#77

Carbazole

Concen: 33.322 ng/ul

RT: 17.622 min Scan# 2471

Delta R.T. -0.006 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

Instrument :

BNA_P

ClientSampleId :

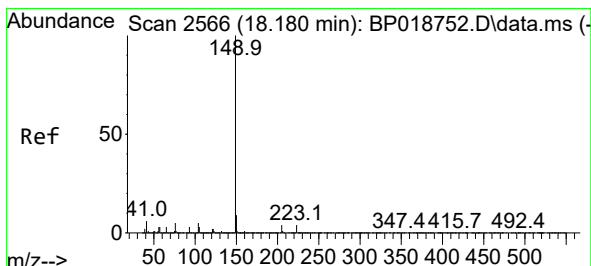
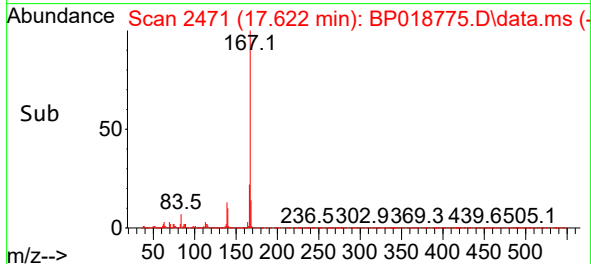
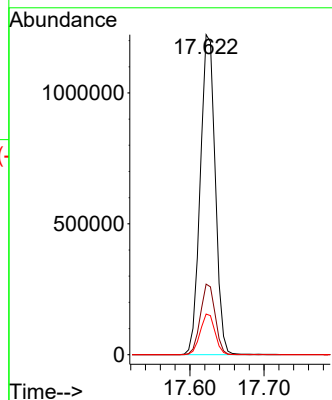
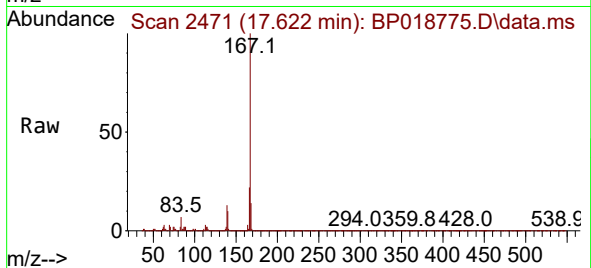
Tgt Ion:167 Resp: 1711356

Ion Ratio Lower Upper

167 100

166 22.0 17.1 25.7

139 12.7 10.2 15.4



#78

Di-n-butylphthalate

Concen: 31.044 ng/ul

RT: 18.181 min Scan# 2566

Delta R.T. -0.006 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

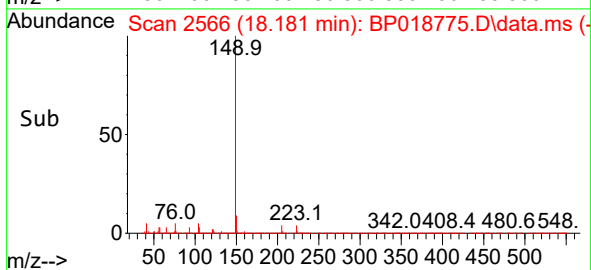
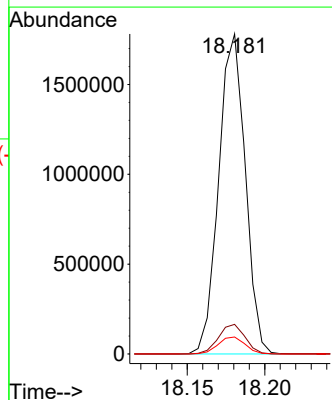
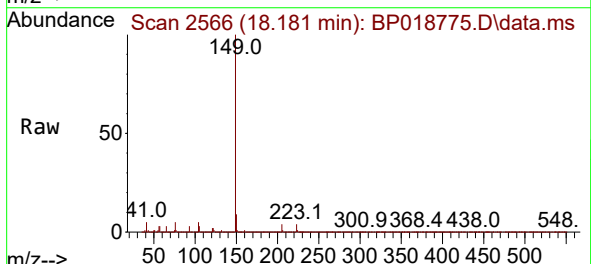
Tgt Ion:149 Resp: 2122973

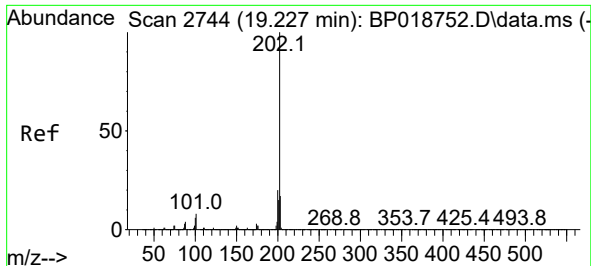
Ion Ratio Lower Upper

149 100

150 9.3 7.4 11.2

104 5.3 3.9 5.9

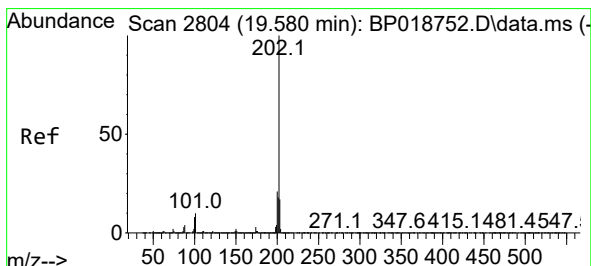
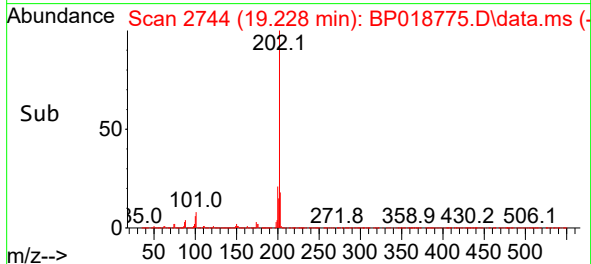
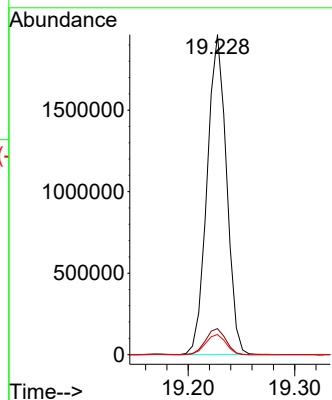
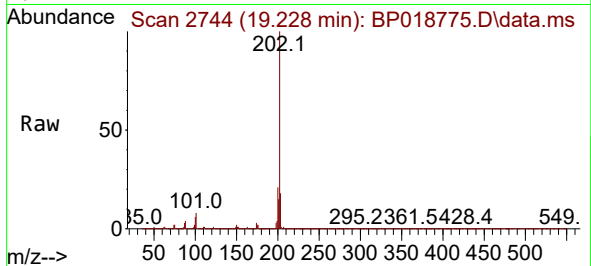




#80
Fluoranthene
Concen: 23.309 ng/ul
RT: 19.228 min Scan# 21
Delta R.T. -0.006 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

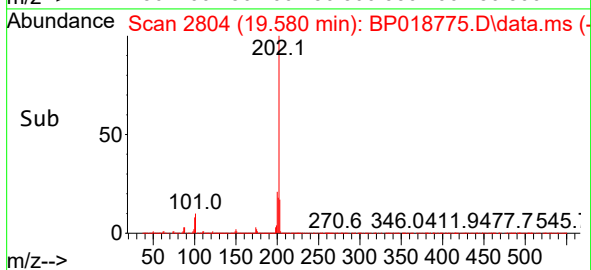
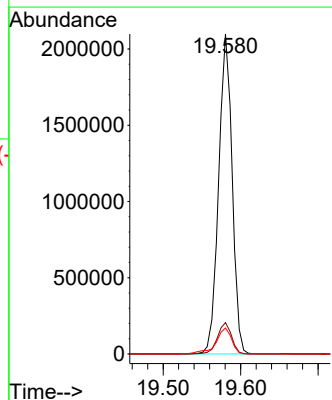
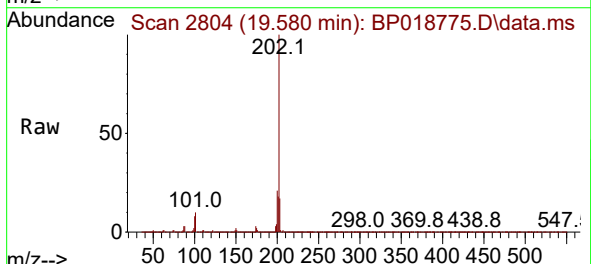
Instrument :
BNA_P
ClientSampleId :

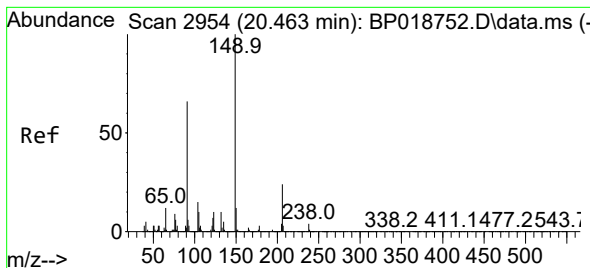
Tgt Ion:202 Resp: 2483517
Ion Ratio Lower Upper
202 100
101 8.1 9.1 13.7#
100 6.3 7.1 10.7#



#82
Pyrene
Concen: 23.622 ng/ul
RT: 19.580 min Scan# 2804
Delta R.T. -0.006 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

Tgt Ion:202 Resp: 2539017
Ion Ratio Lower Upper
202 100
101 9.8 11.0 16.4#
100 8.1 9.1 13.7#





#83

Butylbenzylphthalate

Concen: 25.815 ng/ul

RT: 20.457 min Scan# 2953

Delta R.T. -0.006 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

Instrument :

BNA_P

ClientSampleId :

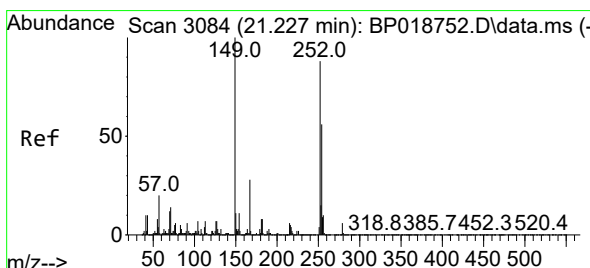
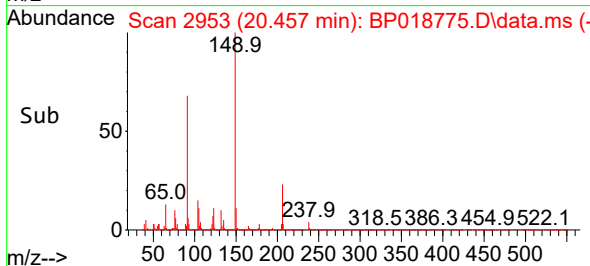
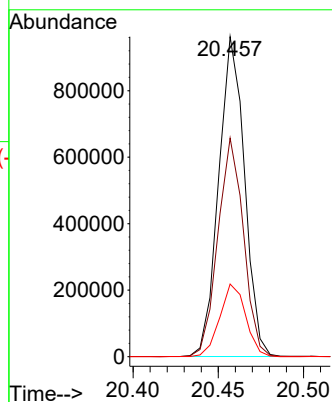
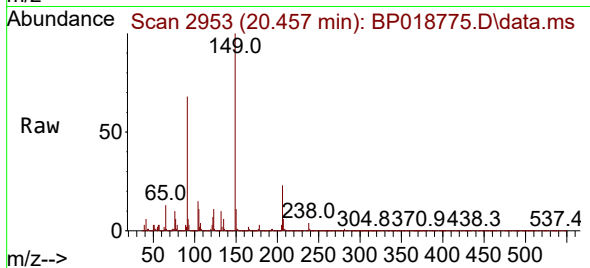
Tgt Ion:149 Resp: 1015824

Ion Ratio Lower Upper

149 100

91 68.3 56.6 85.0

206 22.7 17.4 26.0



#84

3,3'-Dichlorobenzidine

Concen: 30.800 ng/ul

RT: 21.227 min Scan# 3084

Delta R.T. -0.006 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

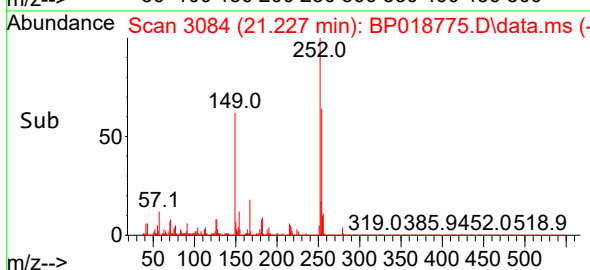
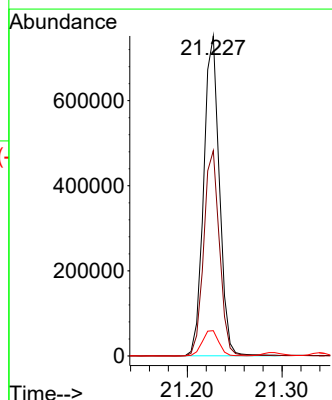
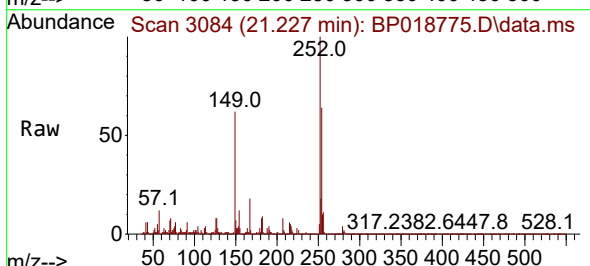
Tgt Ion:252 Resp: 866705

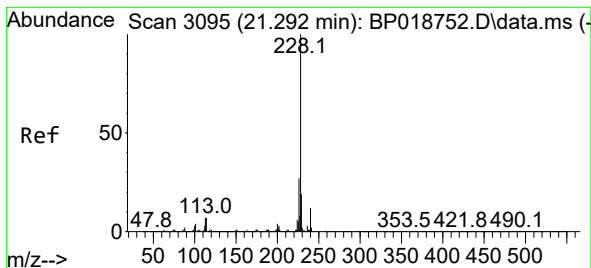
Ion Ratio Lower Upper

252 100

254 64.2 51.0 76.4

126 7.9 7.8 11.6





#85

Benzo(a)anthracene

Concen: 29.739 ng/ul

RT: 21.292 min Scan# 3095

Delta R.T. -0.006 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

Instrument :

BNA_P

ClientSampleId :

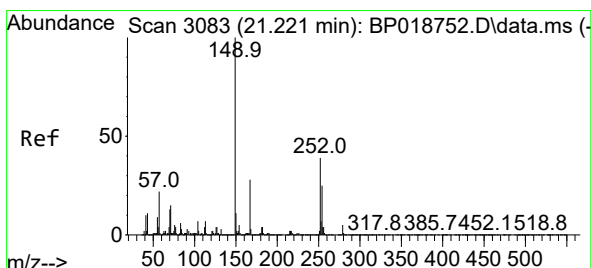
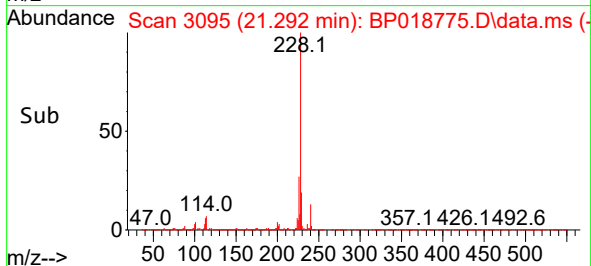
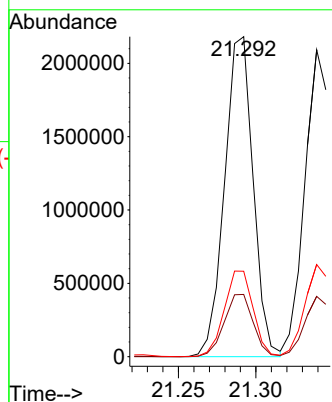
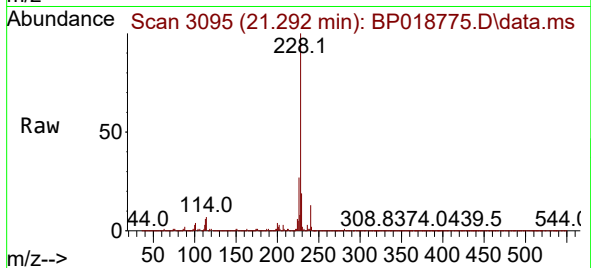
Tgt Ion:228 Resp: 2795224

Ion Ratio Lower Upper

228 100

229 19.5 15.7 23.5

226 26.7 21.9 32.9



#86

Bis(2-ethylhexyl)phthalate

Concen: 27.359 ng/ul

RT: 21.216 min Scan# 3082

Delta R.T. -0.012 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

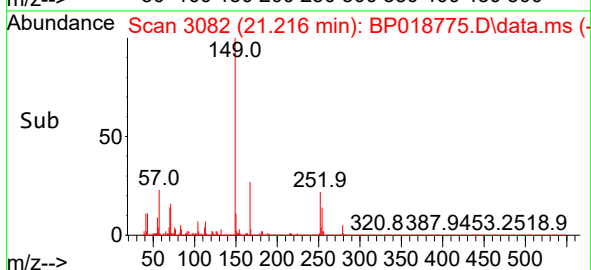
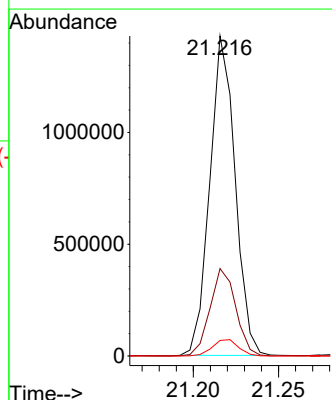
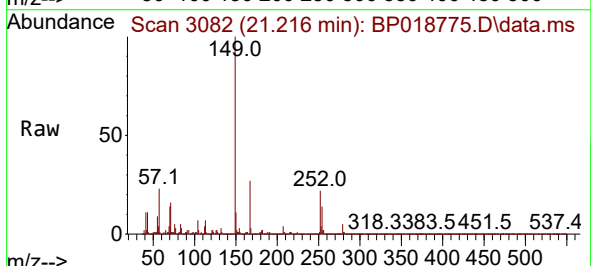
Tgt Ion:149 Resp: 1479726

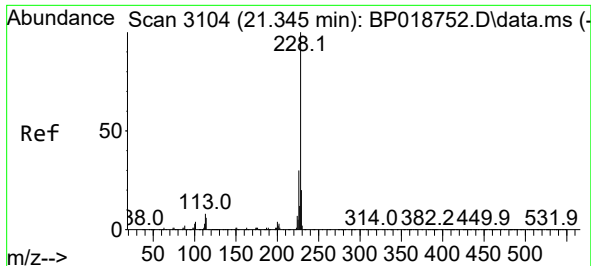
Ion Ratio Lower Upper

149 100

167 27.3 22.2 33.2

279 4.9 3.3 4.9

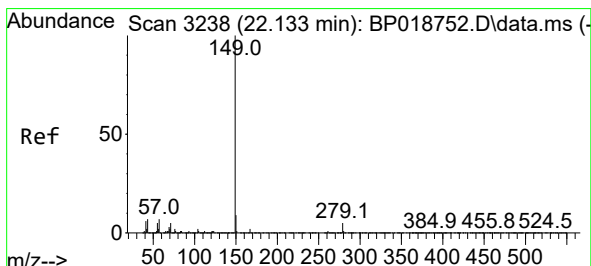
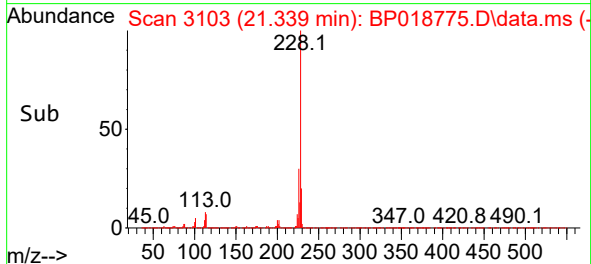
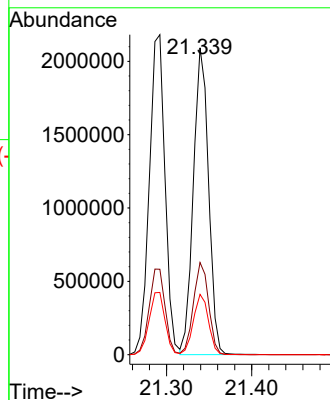
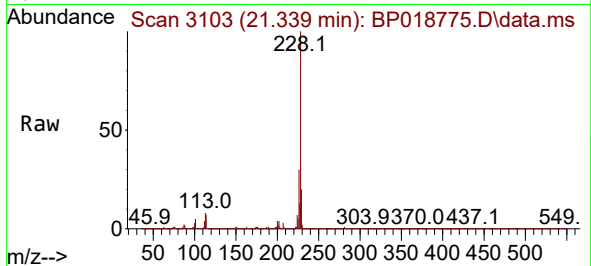




#87
Chrysene
Concen: 29.895 ng/ul
RT: 21.339 min Scan# 3104
Delta R.T. -0.012 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

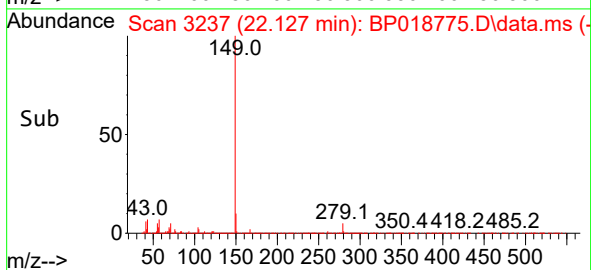
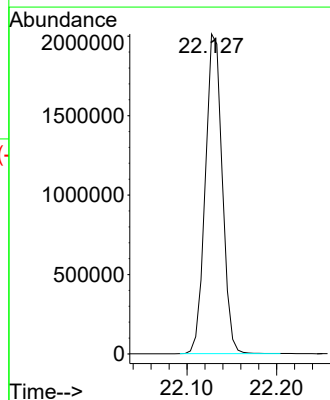
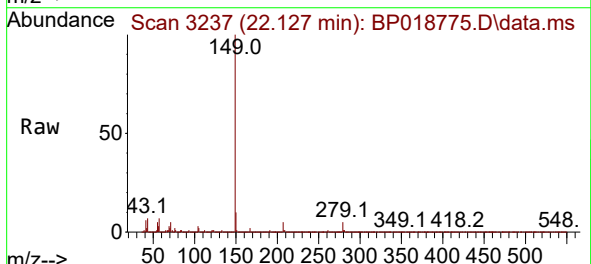
Instrument :
BNA_P
ClientSampleId :

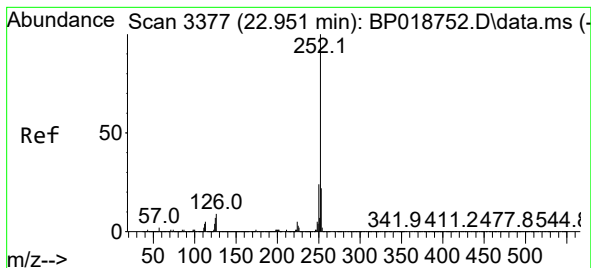
Tgt Ion:228 Resp: 2587521
Ion Ratio Lower Upper
228 100
226 30.0 23.9 35.9
229 19.7 15.6 23.4



#89
Di-n-octyl phthalate
Concen: 26.977 ng/ul
RT: 22.127 min Scan# 3237
Delta R.T. -0.012 min
Lab File: BP018775.D
Acq: 12 Dec 2023 19:43

Tgt Ion:149 Resp: 2628106





#90

Benzo(b)fluoranthene

Concen: 29.590 ng/ul

RT: 22.945 min Scan# 3376

Delta R.T. -0.012 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

Instrument :

BNA_P

ClientSampleId :

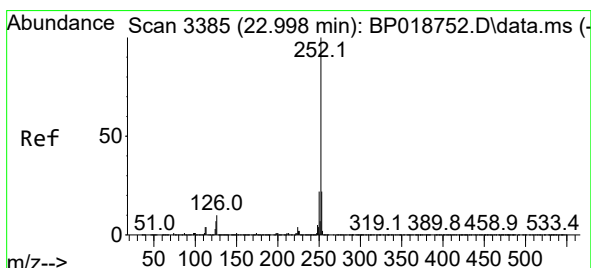
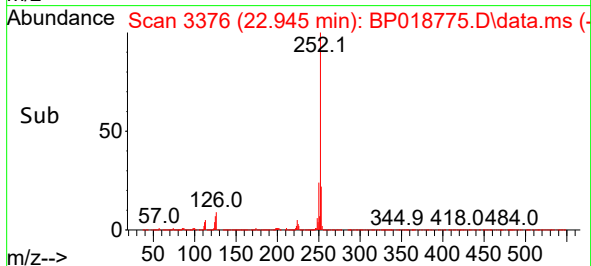
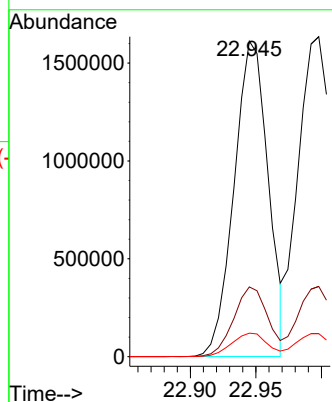
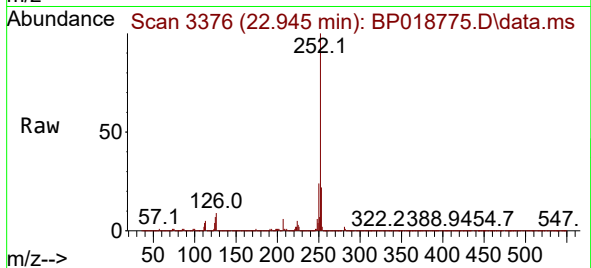
Tgt Ion:252 Resp: 2910977

Ion Ratio Lower Upper

252 100

253 22.1 17.3 25.9

125 7.4 7.8 11.6#



#91

Benzo(k)fluoranthene

Concen: 30.839 ng/ul

RT: 22.998 min Scan# 3385

Delta R.T. -0.006 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

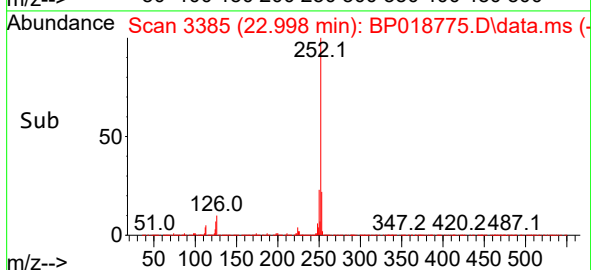
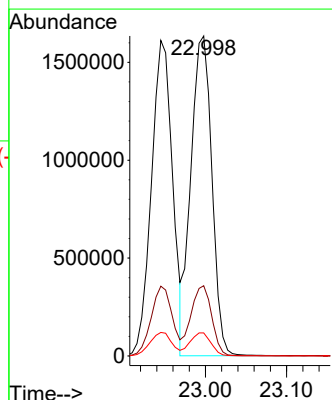
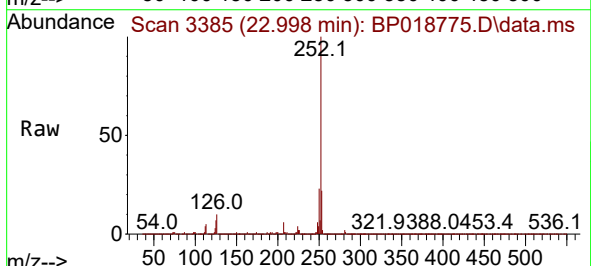
Tgt Ion:252 Resp: 2935398

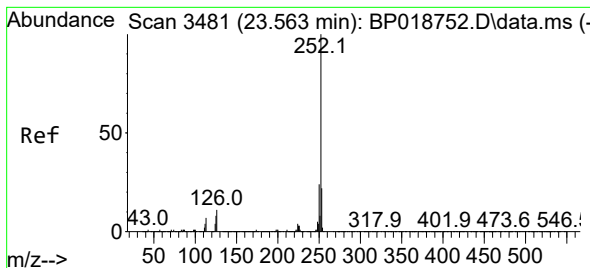
Ion Ratio Lower Upper

252 100

253 22.0 17.7 26.5

125 7.2 8.0 12.0#





#93

Benzo(a)pyrene

Concen: 30.608 ng/ul

RT: 23.563 min Scan# 3481

Delta R.T. -0.012 min

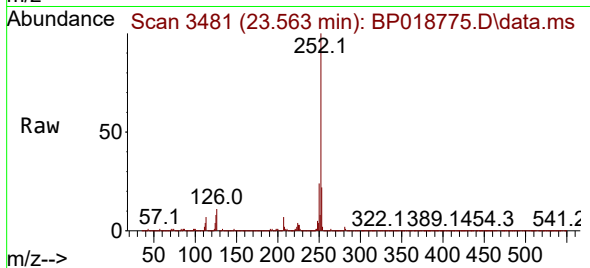
Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

Instrument :

BNA_P

ClientSampleId :



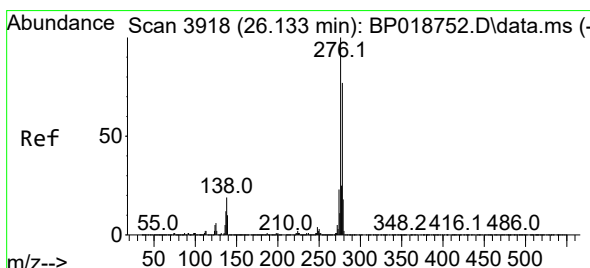
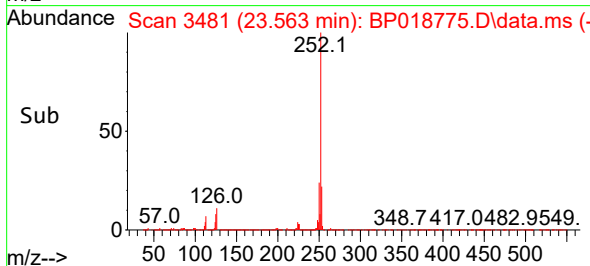
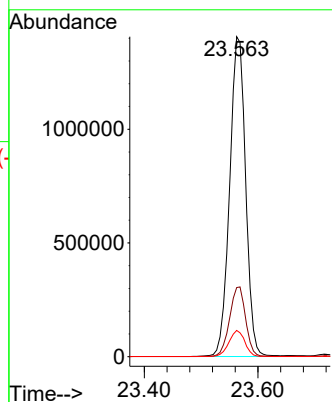
Tgt Ion:252 Resp: 2751323

Ion Ratio Lower Upper

252 100

253 21.6 17.8 26.8

125 8.2 9.2 13.8#



#94

Indeno(1,2,3-cd)pyrene

Concen: 32.685 ng/ul

RT: 26.127 min Scan# 3917

Delta R.T. -0.012 min

Lab File: BP018775.D

Acq: 12 Dec 2023 19:43

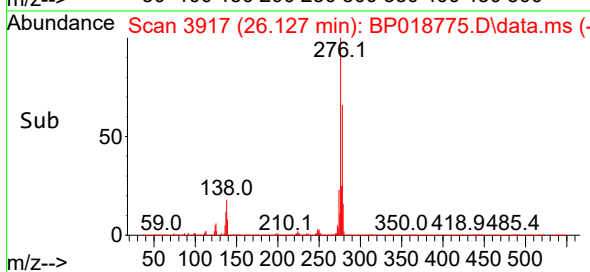
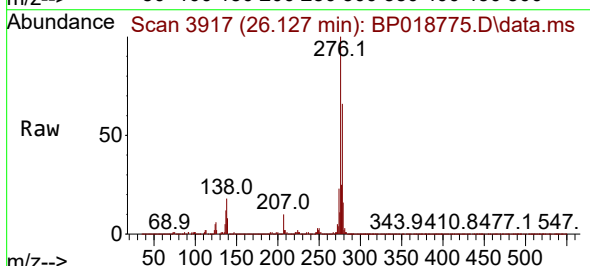
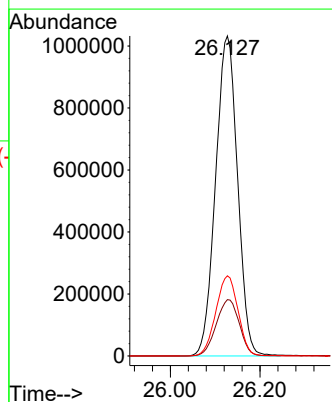
Tgt Ion:276 Resp: 3510407

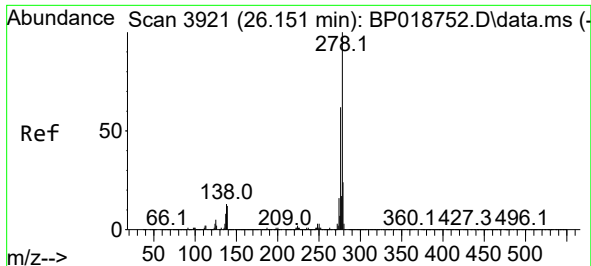
Ion Ratio Lower Upper

276 100

138 17.6 19.4 29.2#

277 25.1 19.8 29.6

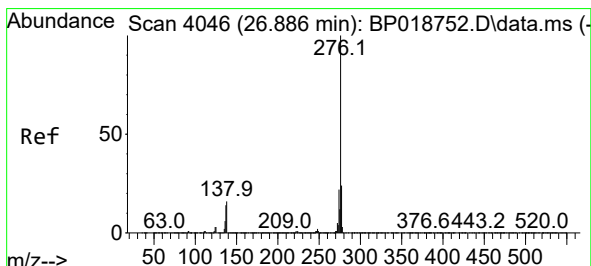
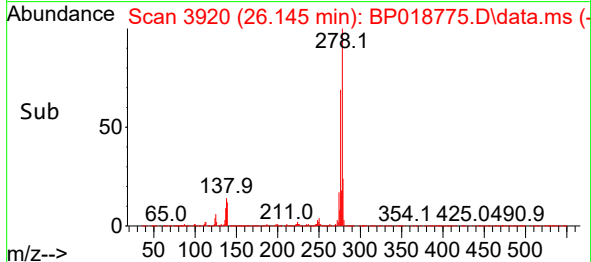
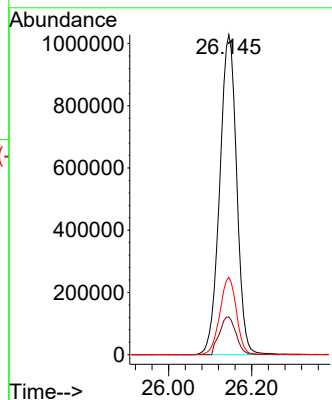
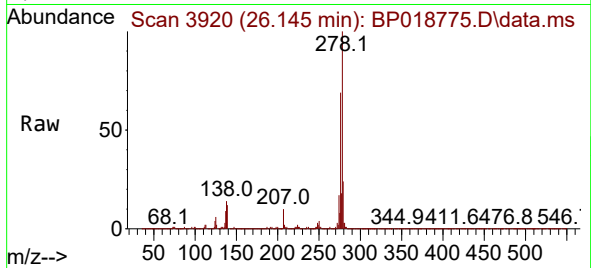




#95
 Dibenzo(a,h)anthracene
 Concen: 32.585 ng/ul
 RT: 26.145 min Scan# 3921
 Delta R.T. -0.018 min
 Lab File: BP018775.D
 Acq: 12 Dec 2023 19:43

Instrument :
 BNA_P
 ClientSampleId :

Tgt Ion:278 Resp: 2911232
 Ion Ratio Lower Upper
 278 100
 139 11.8 13.0 19.6#
 279 24.1 18.7 28.1



#96
 Benzo(g,h,i)perylene
 Concen: 32.294 ng/ul
 RT: 26.880 min Scan# 4045
 Delta R.T. -0.023 min
 Lab File: BP018775.D
 Acq: 12 Dec 2023 19:43

Tgt Ion:276 Resp: 2791227
 Ion Ratio Lower Upper
 276 100
 138 15.9 18.1 27.1#
 277 23.7 19.4 29.0

