

Data Path : Z:\svoasrv\HPCHEM1\BNA_P\Data\BP093020\
 Data File : BP003427.D
 Acq On : 30 Sep 2020 22:53
 Operator : CG/JU
 Sample : L4172-04DL 2X
 Misc :
 ALS Vial : 14 Sample Multiplier: 1

Instrument :
 BNA_P
 ClientSampleId :
 B-6(11-13)DL

Quant Time: Oct 01 02:18:38 2020
 Quant Method : Z:\SVOASRV\HPCHEM1\BNA_P\METHODS\8270-BP091520.M
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
 QLast Update : Wed Sep 30 17:14:02 2020
 Response via : Initial Calibration

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

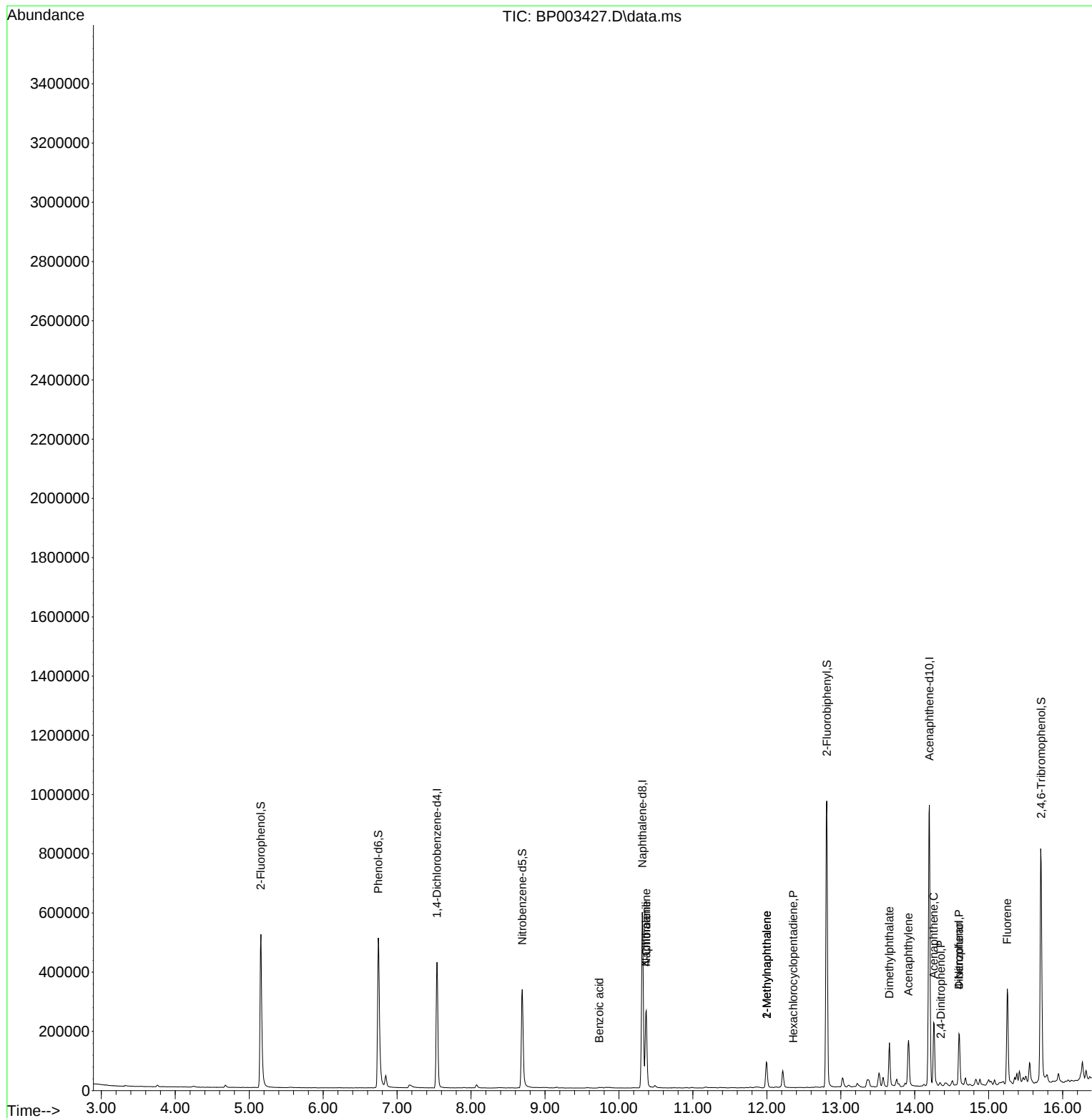
Internal Standards						
1) 1,4-Dichlorobenzene-d4	7.540	152	118579	20.00	ng	0.00
21) Naphthalene-d8	10.316	136	502494	20.00	ng	# 0.00
39) Acenaphthene-d10	14.198	164	322729	20.00	ng	0.00
64) Phenanthrene-d10	16.963	188	698246	20.00	ng	# 0.02
76) Chrysene-d12	21.145	240	605972	20.00	ng	0.08
86) Perylene-d12	23.586	264	413307	20.00	ng	# 0.33
System Monitoring Compounds						
5) 2-Fluorophenol	5.158	112	276845	40.77	ng	0.00
7) Phenol-d6	6.746	99	377117	41.66	ng	0.00
23) Nitrobenzene-d5	8.693	82	226772	26.51	ng	0.00
42) 2,4,6-Tribromophenol	15.710	330	152547	30.99	ng	0.02
45) 2-Fluorobiphenyl	12.810	172	514675	23.32	ng	0.00
79) Terphenyl-d14	19.563	244	661660	22.75	ng	0.03
Target Compounds						
						Qvalue
31) Naphthalene	10.369	128	222507	8.38	ng	99
32) Benzoic acid	9.734	122	23	9.16	ng	# 1
33) 4-Chloroaniline	10.369	127	29504	2.62	ng	# 39
37) 2-Methylnaphthalene	11.998	142	45748	2.38	ng	97
38) 1-Methylnaphthalene	11.998	142	45748	2.51	ng	96
41) Hexachlorocyclopentadiene	12.357	237	32	6.85	ng	85
49) Acenaphthylene	13.916	152	116667	3.83	ng	99
50) Dimethylphthalate	13.657	163	95746	3.72	ng	98
52) Acenaphthene	14.257	154	76207	4.11	ng	98
54) 2,4-Dinitrophenol	14.351	184	32	7.26	ng	# 1
55) Dibenzofuran	14.598	168	111412	3.77	ng	95
56) 4-Nitrophenol	14.598	139	44420	12.14	ng	# 21
58) Fluorene	15.251	166	139004	5.95	ng	98
70) Pentachlorophenol	16.622	266	64	6.78	ng	# 83
71) Phenanthrene	17.004	178	1445981	38.06	ng	99
72) Anthracene	17.098	178	408003	10.90	ng	100
73) Carbazole	17.381	167	168737	4.74	ng	98
75) Fluoranthene	19.010	202	1966781	41.17	ng	99
78) Pyrene	19.363	202	1659907	43.92	ng	99
81) Benzo(a)anthracene	21.127	228	917910	23.43	ng	# 92
83) Chrysene	21.127	228	917910	24.39	ng	# 92
88) Benzo(b)fluoranthene	22.839	252	1341887	51.41	ng	# 95
89) Benzo(k)fluoranthene	22.839	252	1341887	53.65	ng	# 96
90) Benzo(a)pyrene	23.457	252	1174971	47.74	ng	# 84

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

Data Path : Z:\svoasrv\HPCHEM1\BNA_P\Data\BP093020\
Data File : BP003427.D
Acq On : 30 Sep 2020 22:53
Operator : CG/JU
Sample : L4172-04DL 2X
Misc :
ALS Vial : 14 Sample Multiplier: 1

Instrument :
BNA_P
ClientSampleId :
B-6(11-13)DL

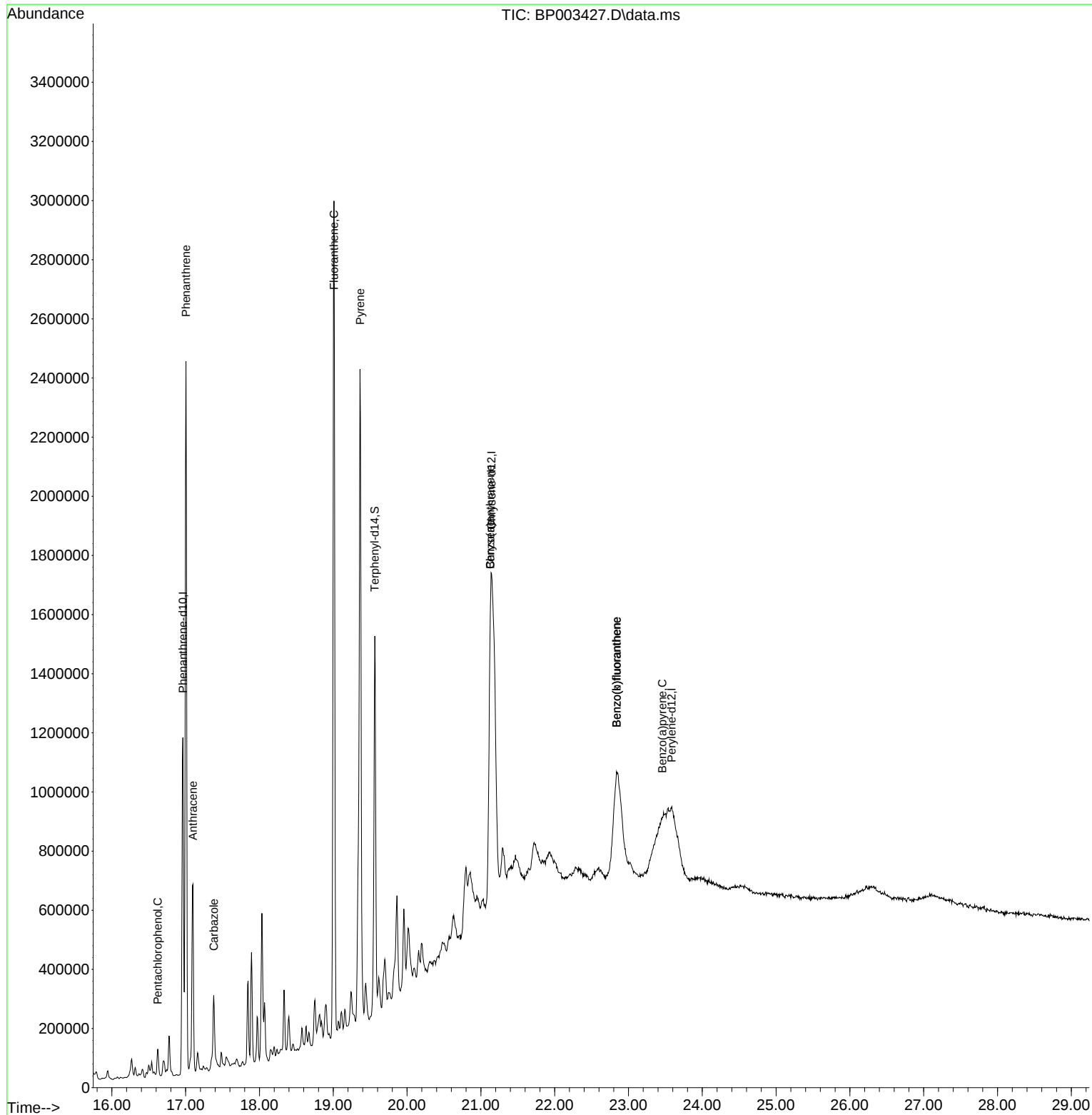
Quant Time: Oct 01 02:18:38 2020
Quant Method : Z:\SVOASRV\HPCHEM1\BNA_P\METHODS\8270-BP091520.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
QLast Update : Wed Sep 30 17:14:02 2020
Response via : Initial Calibration



Data Path : Z:\svoasrv\HPCHEM1\BNA_P\Data\BP093020\
Data File : BP003427.D
Acq On : 30 Sep 2020 22:53
Operator : CG/JU
Sample : L4172-04DL 2X
Misc :
ALS Vial : 14 Sample Multiplier: 1

Instrument :
BNA_P
ClientSampleId :
B-6(11-13)DL

Quant Time: Oct 01 02:18:38 2020
Quant Method : Z:\SVOASRV\HPCHEM1\BNA_P\METHODS\8270-BP091520.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
QLast Update : Wed Sep 30 17:14:02 2020
Response via : Initial Calibration

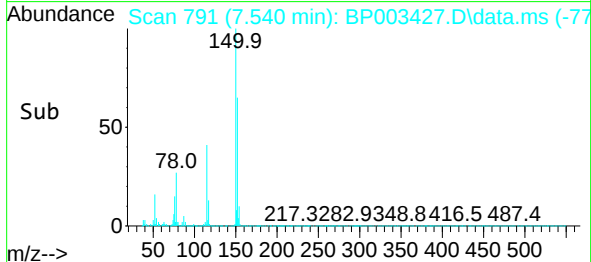
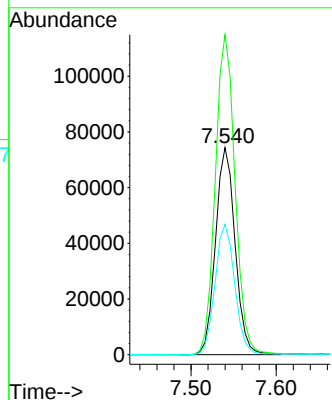
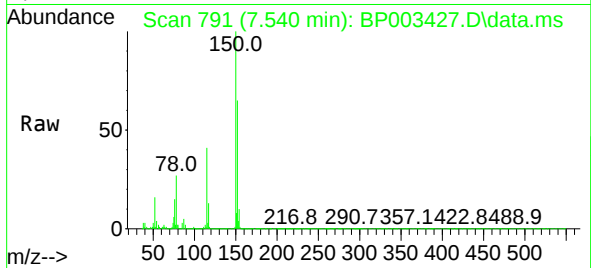




#1
1,4-Dichlorobenzene-d4
Concen: 20.00 ng
RT: 7.540 min Scan# 791
Delta R.T. 0.006 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

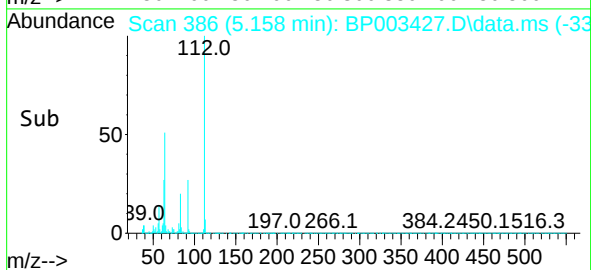
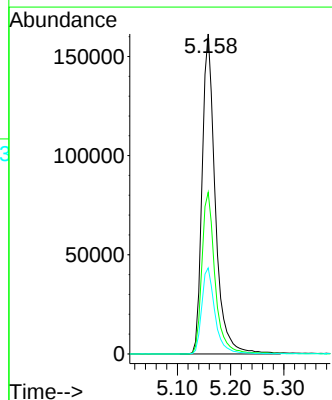
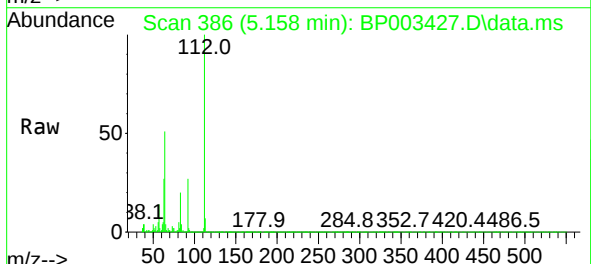
Instrument :
BNA_P
ClientSampleId :
B-6(11-13)DL

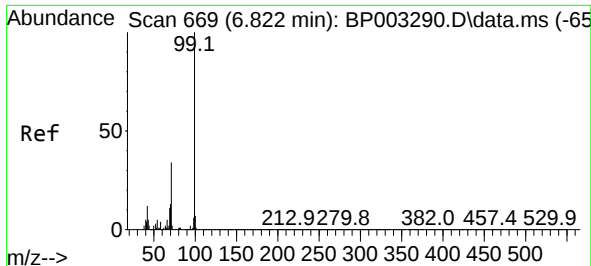
Tgt Ion:152 Resp: 118579
Ion Ratio Lower Upper
152 100
150 154.6 123.8 185.6
115 63.0 43.8 65.6



#5
2-Fluorophenol
Concen: 40.77 ng
RT: 5.158 min Scan# 386
Delta R.T. 0.006 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

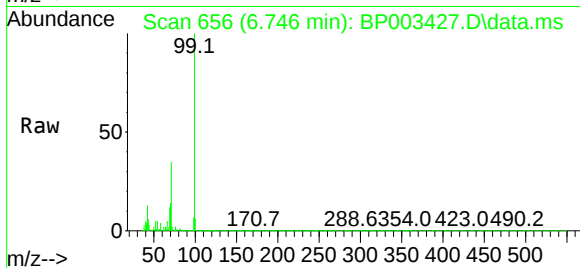
Tgt Ion:112 Resp: 276845
Ion Ratio Lower Upper
112 100
64 50.5 32.8 49.2#
63 26.9 17.0 25.4#



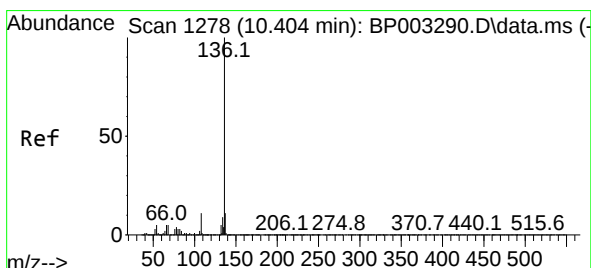
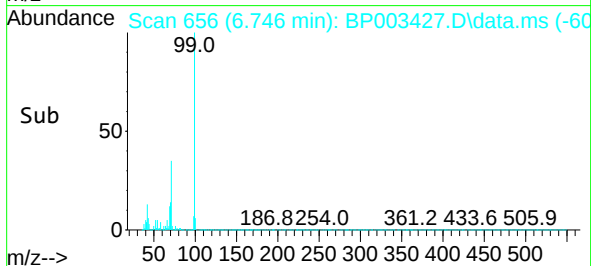
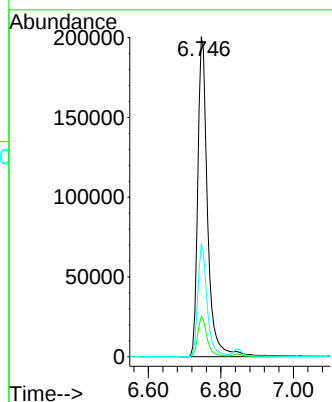


#7
Phenol-d6
Concen: 41.66 ng
RT: 6.746 min Scan# 656
Delta R.T. 0.006 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

Instrument :
BNA_P
ClientSampleId :
B-6(11-13)DL

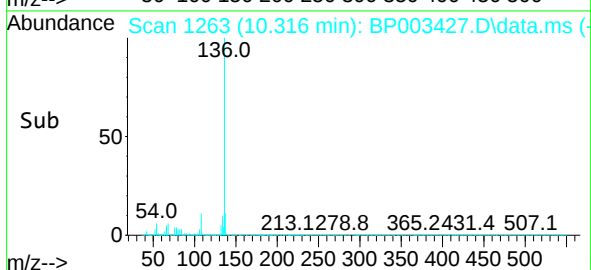
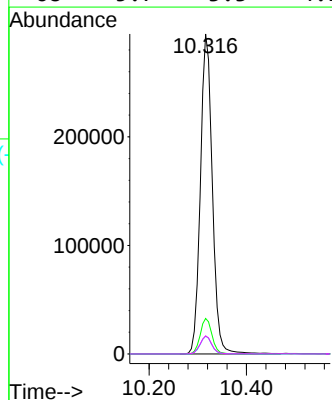
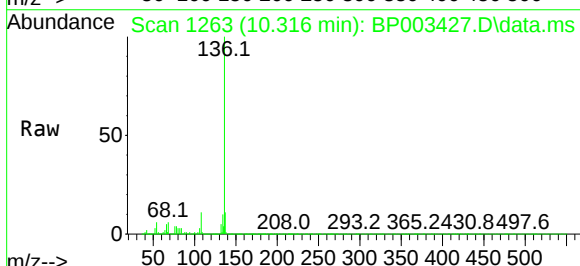


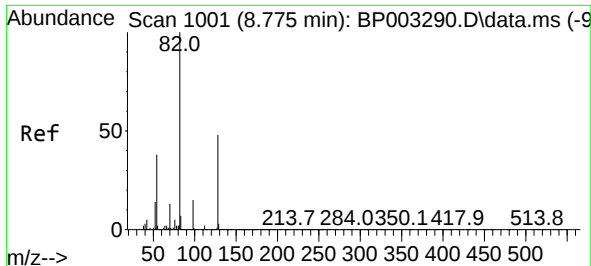
Tgt Ion: 99 Resp: 377117
Ion Ratio Lower Upper
99 100
42 12.5 8.6 13.0
71 35.1 23.4 35.2



#21
Naphthalene-d8
Concen: 20.00 ng
RT: 10.316 min Scan# 1263
Delta R.T. 0.006 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

Tgt Ion: 136 Resp: 502494
Ion Ratio Lower Upper
136 100
137 11.1 8.6 13.0
54 5.6 3.6 5.4#
68 5.7 3.3 4.9#

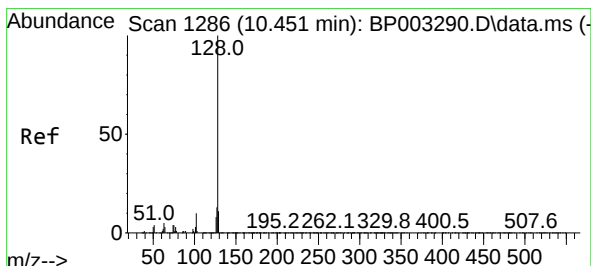
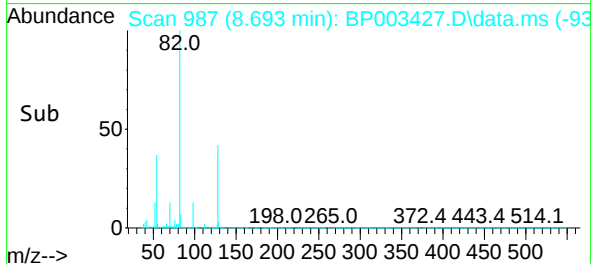
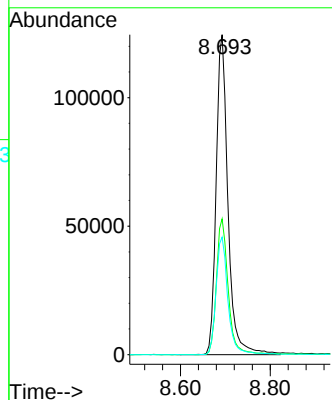
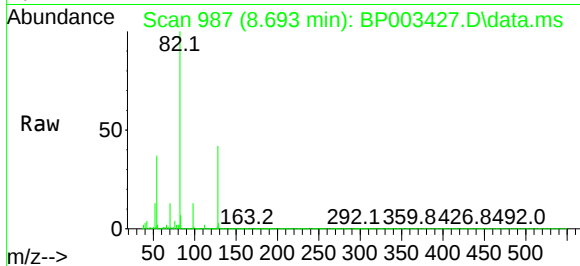




#23
Nitrobenzene-d5
Concen: 26.51 ng
RT: 8.693 min Scan# 987
Delta R.T. 0.006 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

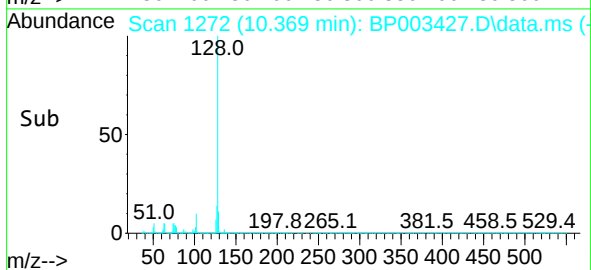
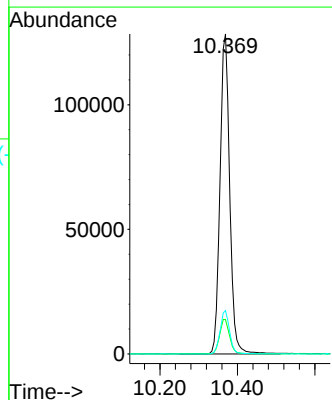
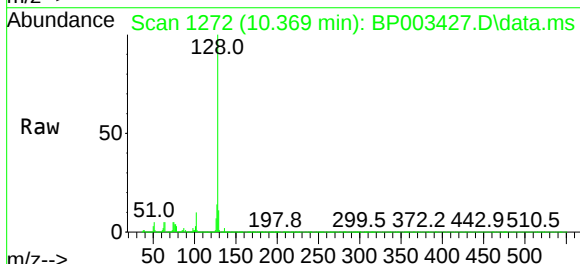
Instrument :
BNA_P
ClientSampleId :
B-6(11-13)DL

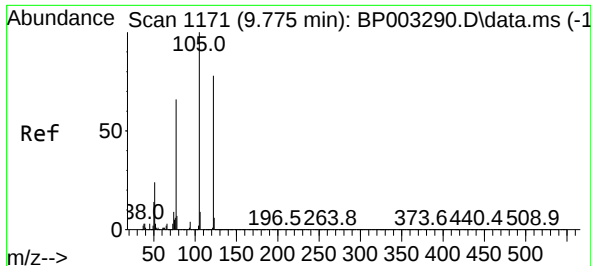
Tgt Ion: 82 Resp: 226772
Ion Ratio Lower Upper
82 100
128 42.5 45.6 68.4#
54 36.8 30.1 45.1



#31
Naphthalene
Concen: 8.38 ng
RT: 10.369 min Scan# 1272
Delta R.T. 0.006 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

Tgt Ion: 128 Resp: 222507
Ion Ratio Lower Upper
128 100
129 10.7 8.8 13.2
127 13.6 10.6 15.8

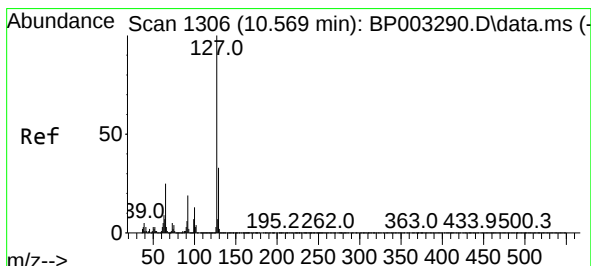
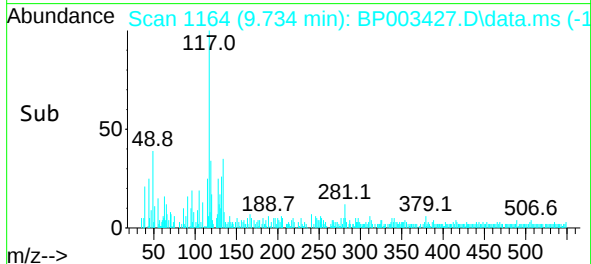
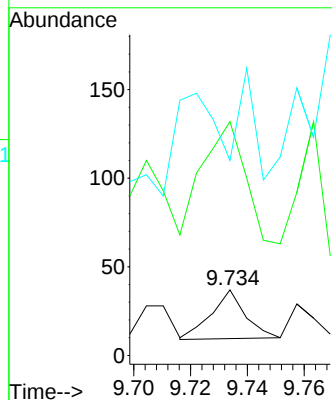
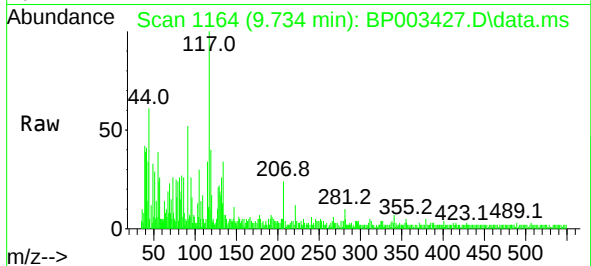




#32
Benzoic acid
Concen: 9.16 ng
RT: 9.734 min Scan# 1164
Delta R.T. 0.018 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

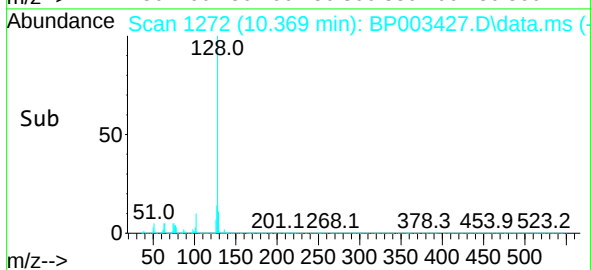
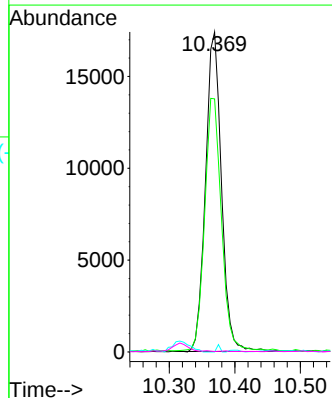
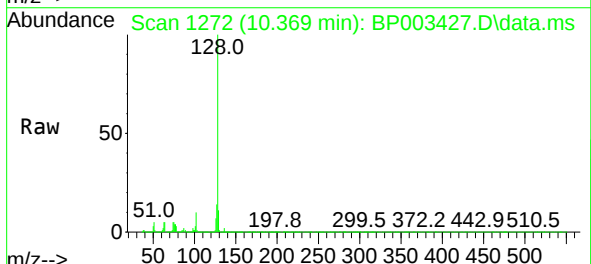
Instrument :
BNA_P
ClientSampleId :
B-6(11-13)DL

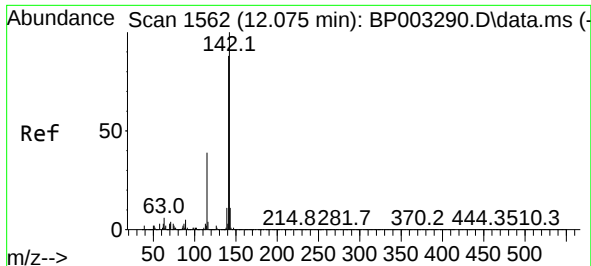
Tgt Ion:	122	Resp:	23
Ion	Ratio	Lower	Upper
122	100		
105	356.8	94.1	134.1#
77	297.3	50.1	90.1#



#33
4-Chloroaniline
Concen: 2.62 ng
RT: 10.369 min Scan# 1272
Delta R.T. -0.112 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

Tgt Ion:	127	Resp:	29504
Ion	Ratio	Lower	Upper
127	100		
129	79.1	25.7	38.5#
65	0.0	17.3	25.9#
92	0.2	12.9	19.3#

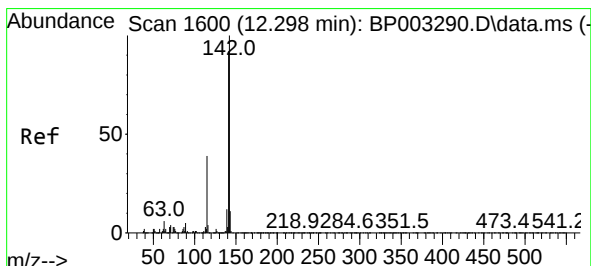
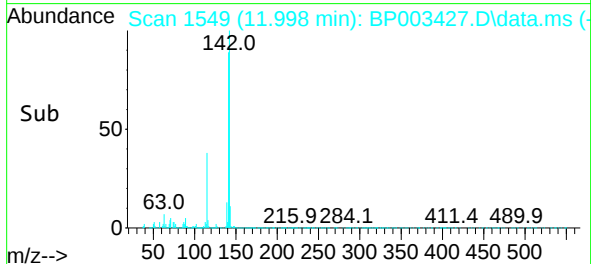
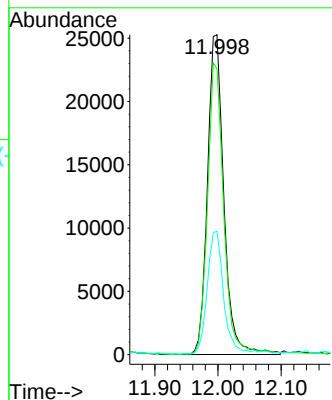
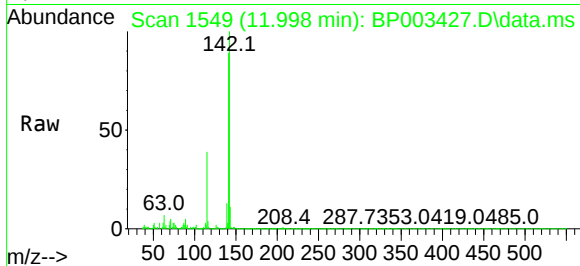




#37
2-Methylnaphthalene
Concen: 2.38 ng
RT: 11.998 min Scan# 1549
Delta R.T. 0.012 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

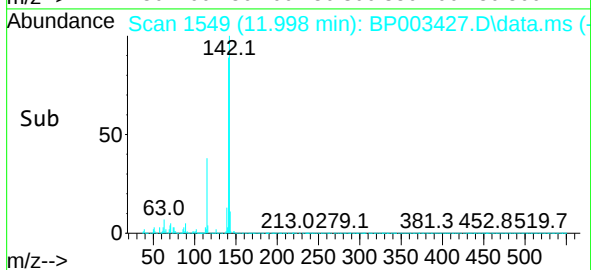
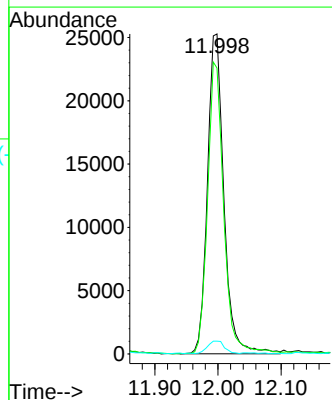
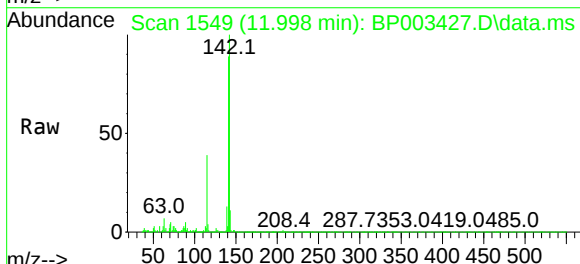
Instrument :
BNA_P
ClientSampleId :
B-6(11-13)DL

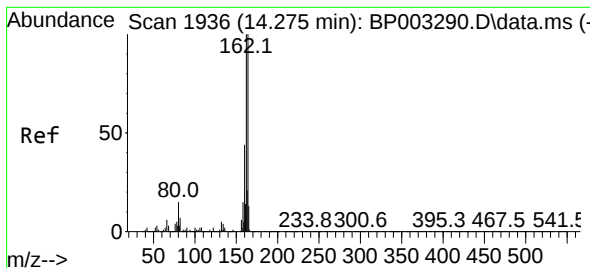
Tgt Ion:142 Resp: 45748
Ion Ratio Lower Upper
142 100
141 89.3 71.4 107.2
115 38.6 25.8 38.6



#38
1-Methylnaphthalene
Concen: 2.51 ng
RT: 11.998 min Scan# 1549
Delta R.T. -0.212 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

Tgt Ion:142 Resp: 45748
Ion Ratio Lower Upper
142 100
141 89.3 74.4 111.6
116 4.0 2.9 4.3





#39

Acenaphthene-d10

Concen: 20.00 ng

RT: 14.198 min Scan# 1923

Delta R.T. 0.006 min

Lab File: BP003427.D

Acq: 30 Sep 2020 22:53

Instrument :

BNA_P

ClientSampleId :

B-6(11-13)DL

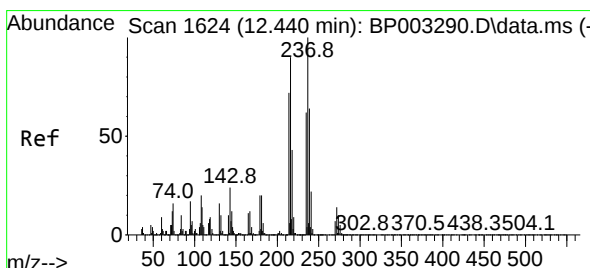
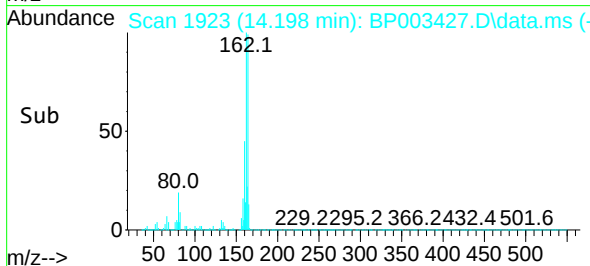
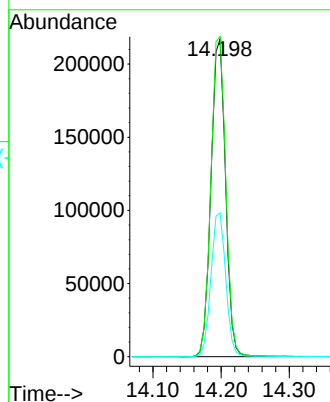
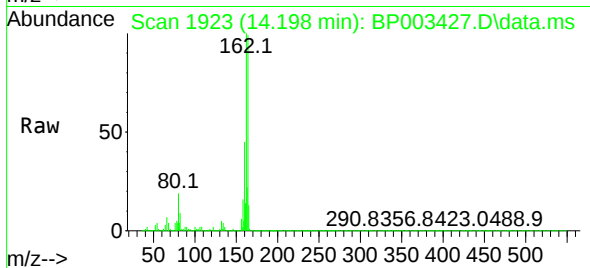
Tgt Ion:164 Resp: 322729

Ion Ratio Lower Upper

164 100

162 100.8 79.4 119.2

160 45.3 36.1 54.1



#41

Hexachlorocyclopentadiene

Concen: 6.85 ng

RT: 12.357 min Scan# 1610

Delta R.T. 0.006 min

Lab File: BP003427.D

Acq: 30 Sep 2020 22:53

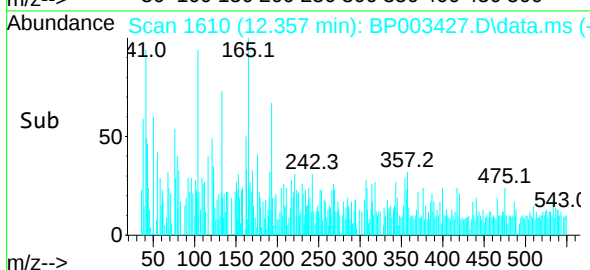
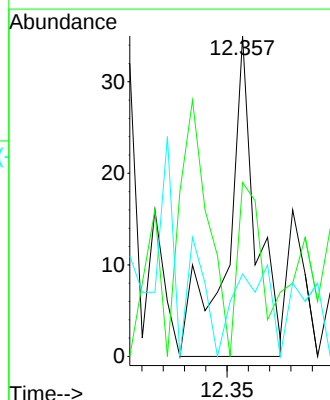
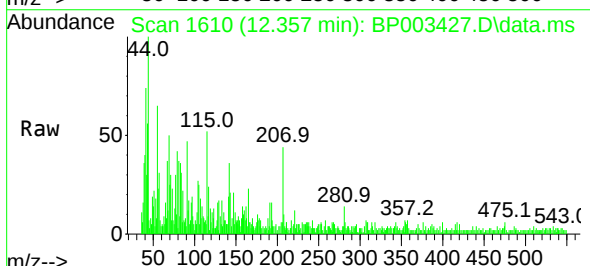
Tgt Ion:237 Resp: 32

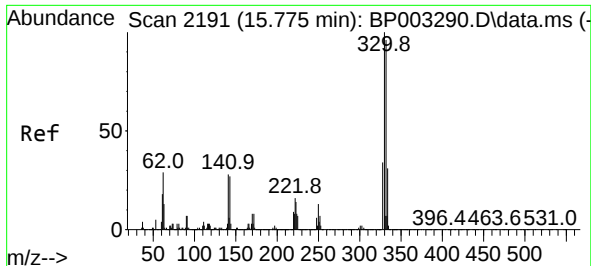
Ion Ratio Lower Upper

237 100

235 54.3 43.2 83.2

272 25.7 0.0 33.3

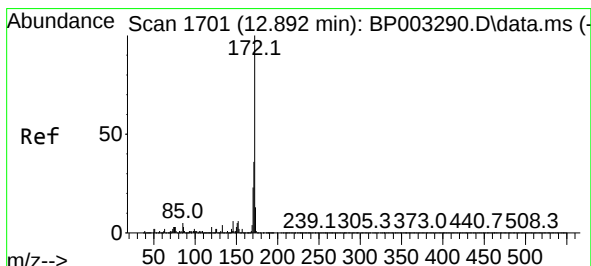
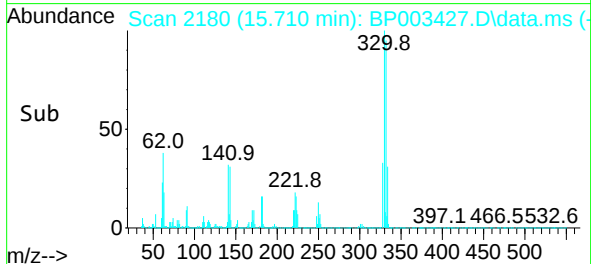
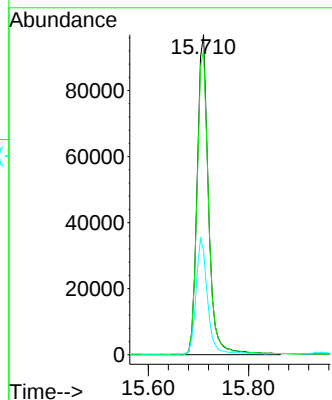
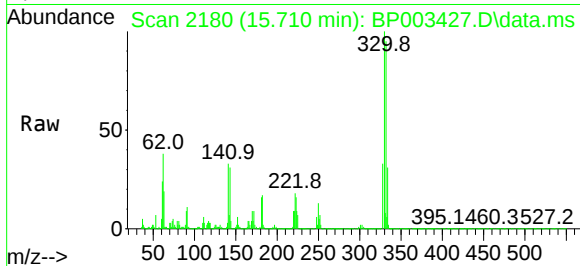




#42
2,4,6-Tribromophenol
Concen: 30.99 ng
RT: 15.710 min Scan# 2180
Delta R.T. 0.018 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

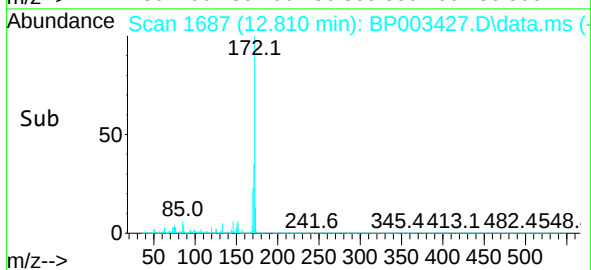
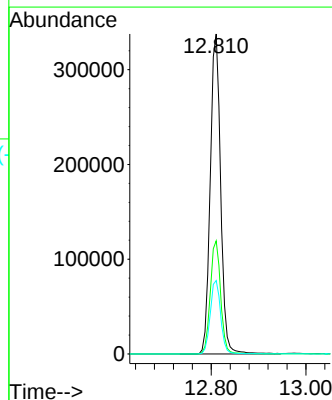
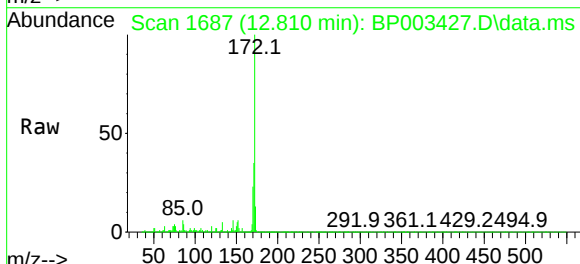
Instrument :
BNA_P
ClientSampleId :
B-6(11-13)DL

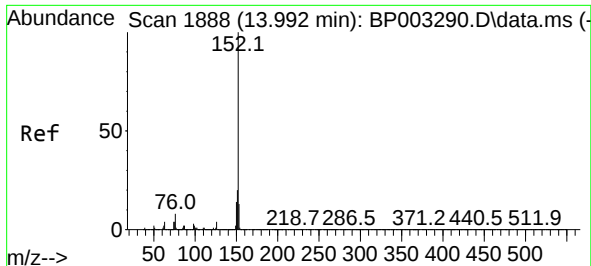
Tgt Ion:330 Resp: 152547
Ion Ratio Lower Upper
330 100
332 97.8 77.1 115.7
141 35.5 23.4 35.2#



#45
2-Fluorobiphenyl
Concen: 23.32 ng
RT: 12.810 min Scan# 1687
Delta R.T. 0.006 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

Tgt Ion:172 Resp: 514675
Ion Ratio Lower Upper
172 100
171 35.4 28.5 42.7
170 22.9 19.2 28.8

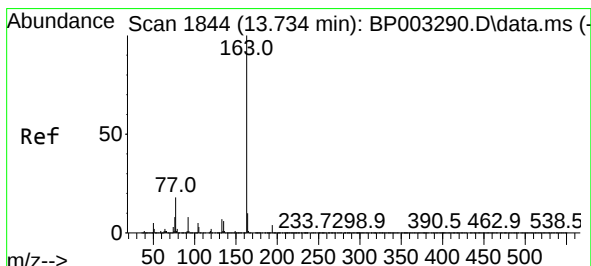
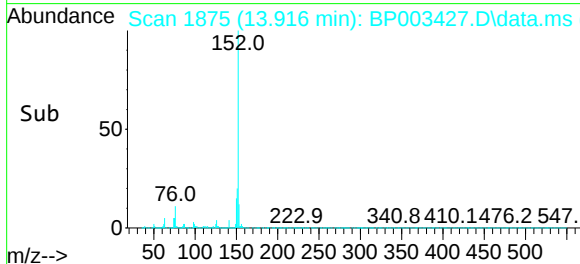
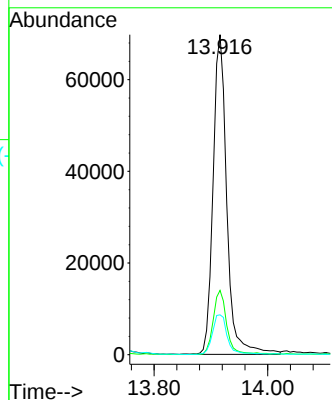
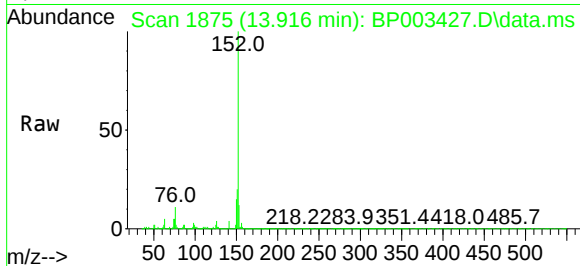




#49
Acenaphthylene
Concen: 3.83 ng
RT: 13.916 min Scan# 1875
Delta R.T. 0.006 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

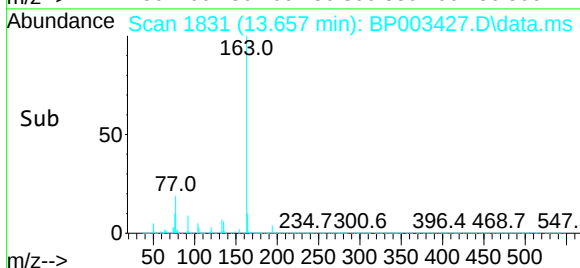
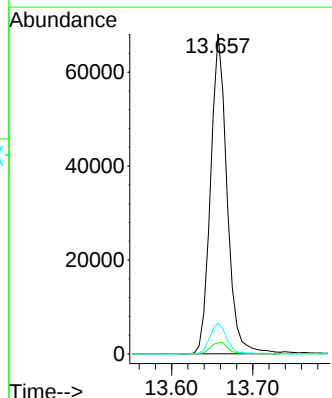
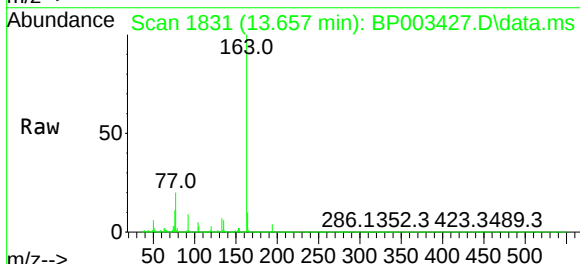
Instrument :
BNA_P
ClientSampleId :
B-6(11-13)DL

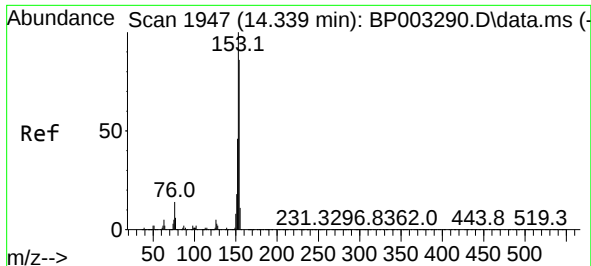
Tgt Ion:152 Resp: 116667
Ion Ratio Lower Upper
152 100
151 20.1 15.9 23.9
153 12.4 10.5 15.7



#50
Dimethylphthalate
Concen: 3.72 ng
RT: 13.657 min Scan# 1831
Delta R.T. -0.000 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

Tgt Ion:163 Resp: 95746
Ion Ratio Lower Upper
163 100
194 3.5 3.3 4.9
164 9.7 8.2 12.2

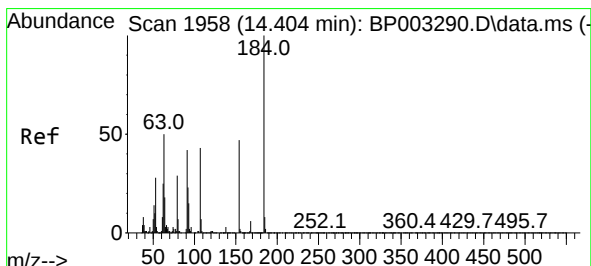
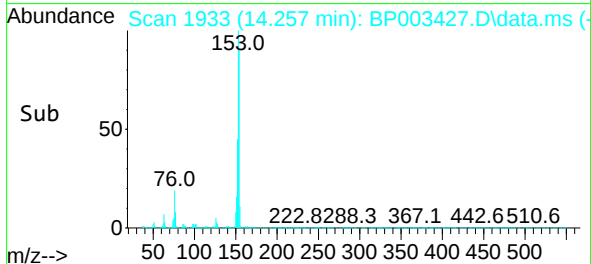
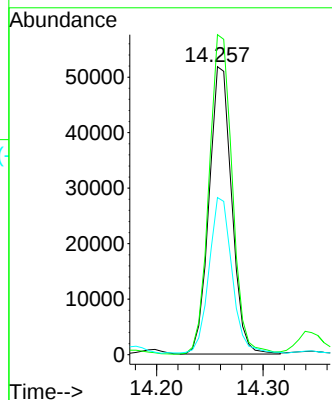
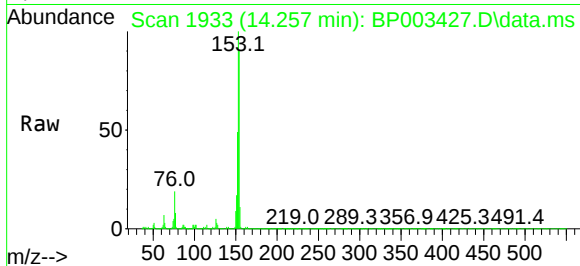




#52
Acenaphthene
Concen: 4.11 ng
RT: 14.257 min Scan# 1933
Delta R.T. -0.000 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

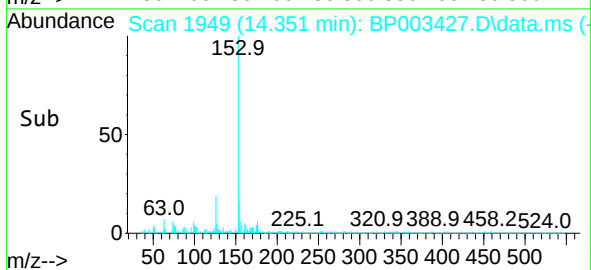
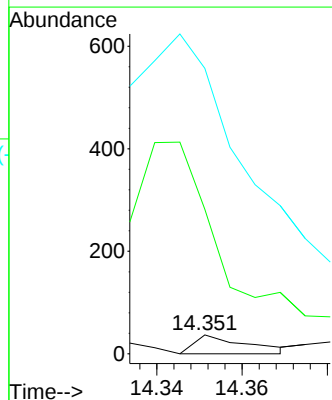
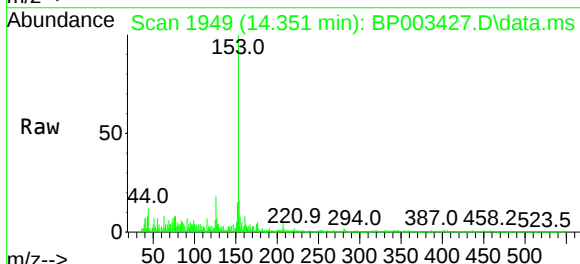
Instrument :
BNA_P
ClientSampleId :
B-6(11-13)DL

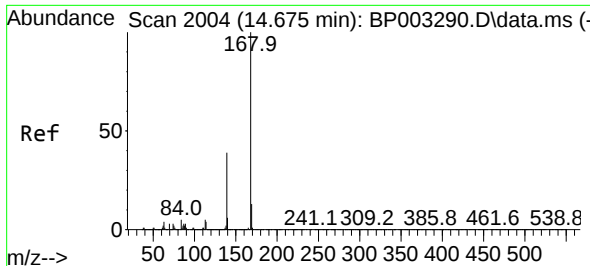
Tgt Ion:154 Resp: 76207
Ion Ratio Lower Upper
154 100
153 111.1 91.0 136.6
152 54.5 43.0 64.6



#54
2,4-Dinitrophenol
Concen: 7.26 ng
RT: 14.351 min Scan# 1949
Delta R.T. 0.006 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

Tgt Ion:184 Resp: 32
Ion Ratio Lower Upper
184 100
63 978.4 32.3 48.5#
154 1505.4 49.1 73.7#

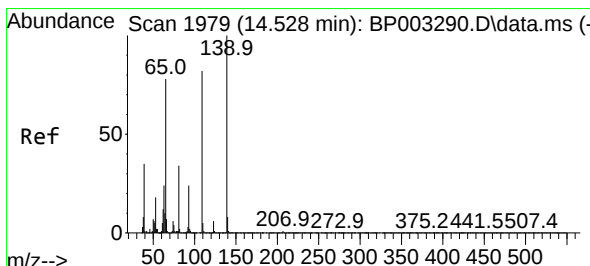
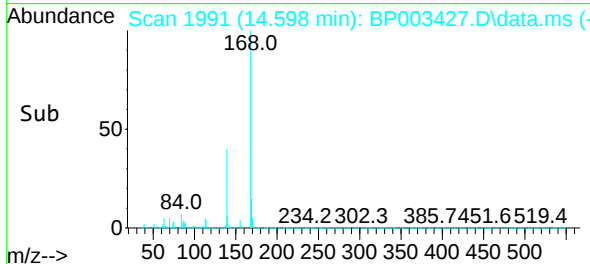
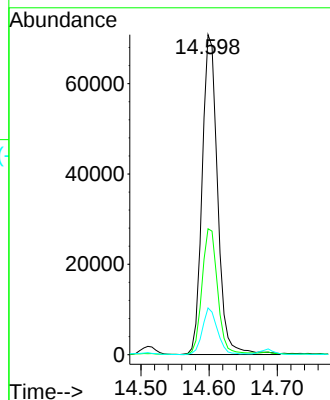
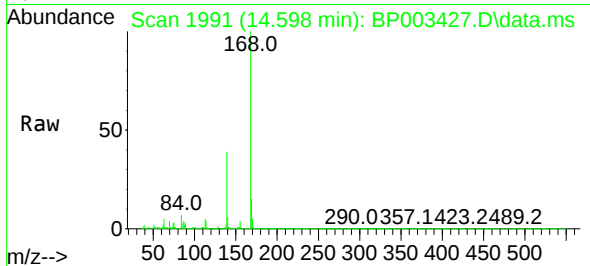




#55
Dibenzofuran
Concen: 3.77 ng
RT: 14.598 min Scan# 1991
Delta R.T. -0.000 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

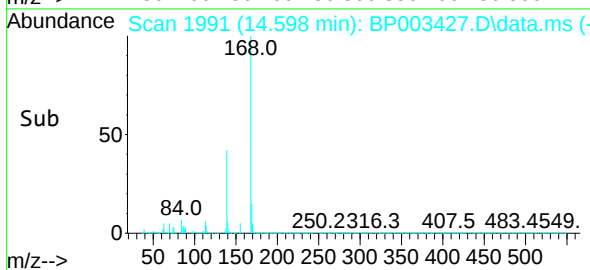
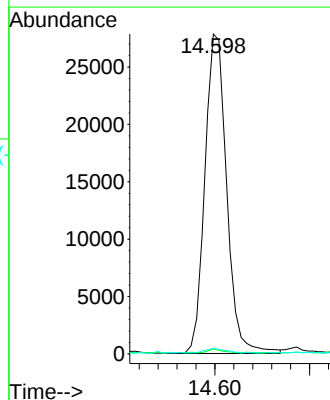
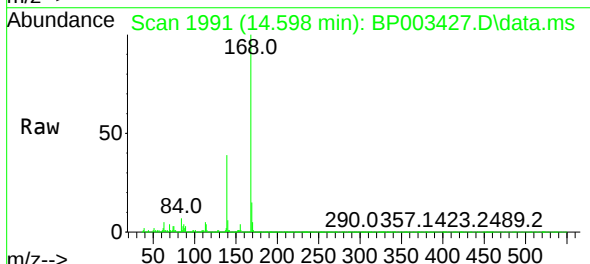
Instrument :
BNA_P
ClientSampleId :
B-6(11-13)DL

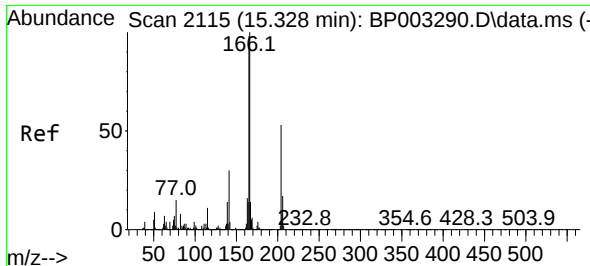
Tgt Ion:168 Resp: 111412
Ion Ratio Lower Upper
168 100
139 39.4 29.1 43.7
169 14.6 10.4 15.6



#56
4-Nitrophenol
Concen: 12.14 ng
RT: 14.598 min Scan# 1991
Delta R.T. 0.123 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

Tgt Ion:139 Resp: 44420
Ion Ratio Lower Upper
139 100
109 1.6 44.6 84.6#
65 1.7 41.6 81.6#

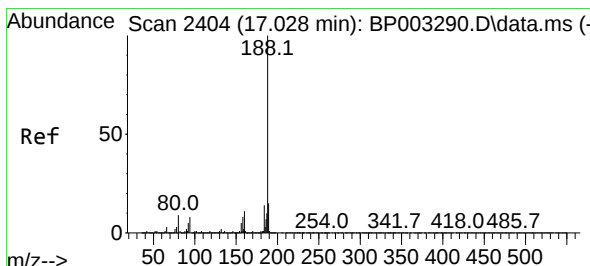
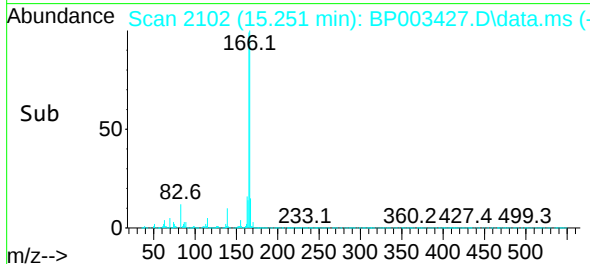
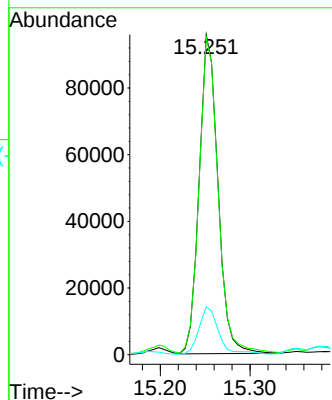
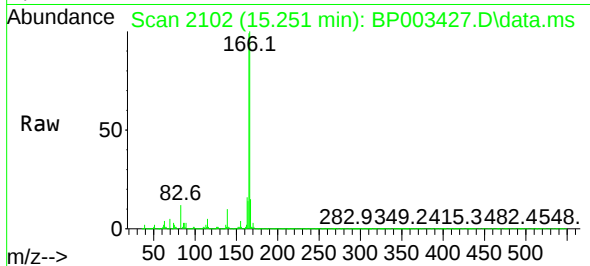




#58
Fluorene
Concen: 5.95 ng
RT: 15.251 min Scan# 2102
Delta R.T. -0.000 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

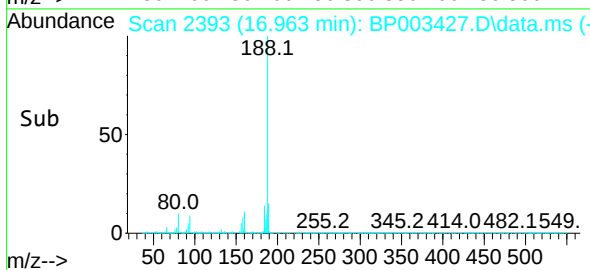
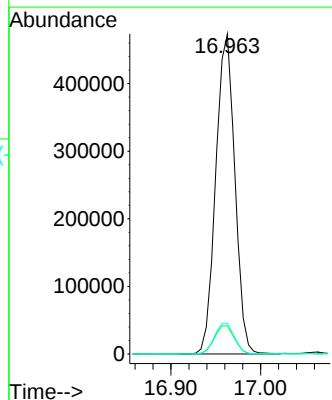
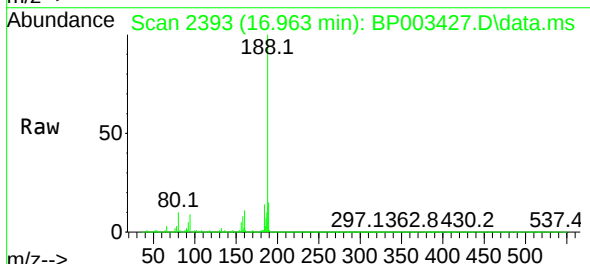
Instrument :
BNA_P
ClientSampleId :
B-6(11-13)DL

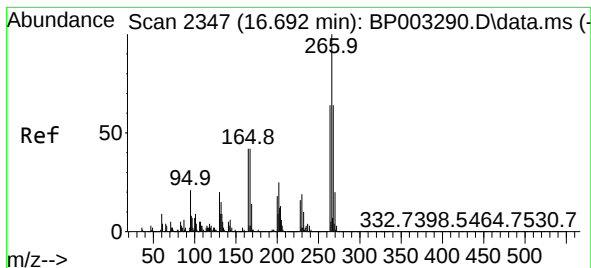
Tgt Ion:166 Resp: 139004
Ion Ratio Lower Upper
166 100
165 99.2 77.8 116.8
167 15.0 11.0 16.4



#64
Phenanthrene-d10
Concen: 20.00 ng
RT: 16.963 min Scan# 2393
Delta R.T. 0.018 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

Tgt Ion:188 Resp: 698246
Ion Ratio Lower Upper
188 100
94 8.7 6.2 9.2
80 9.7 6.2 9.2#

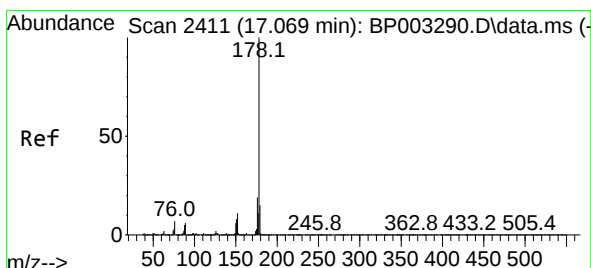
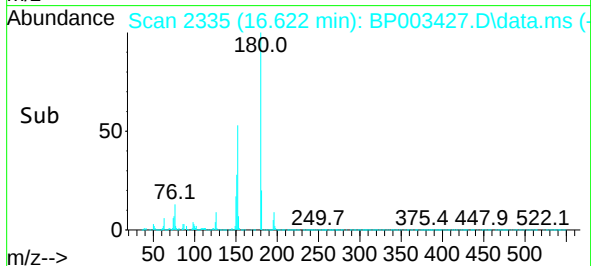
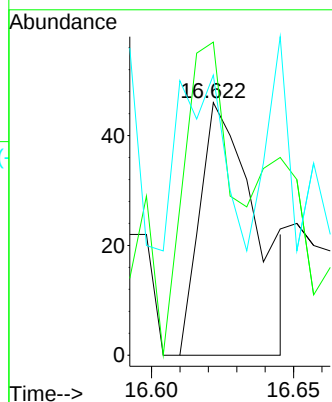
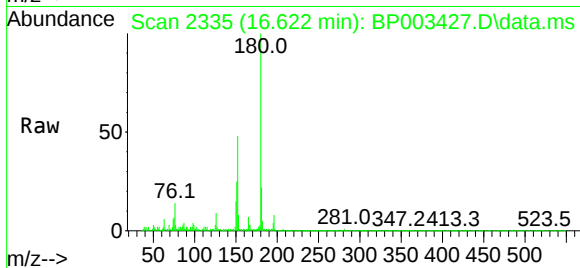




#70
Pentachlorophenol
Concen: 6.78 ng
RT: 16.622 min Scan# 2335
Delta R.T. -0.000 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

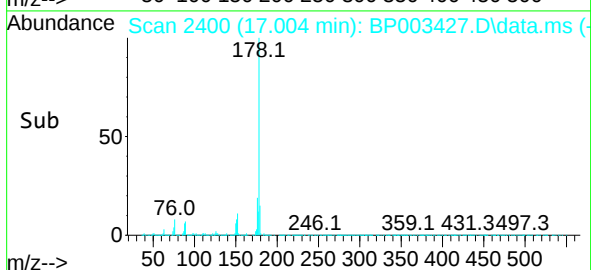
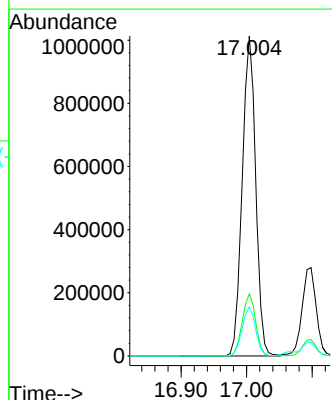
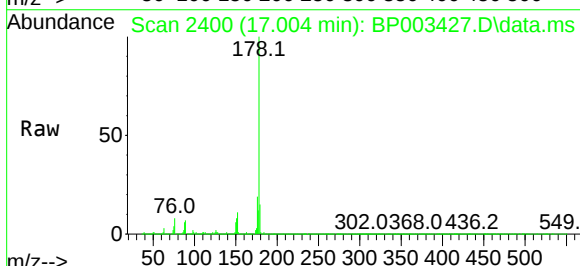
Instrument :
BNA_P
ClientSampleId :
B-6(11-13)DL

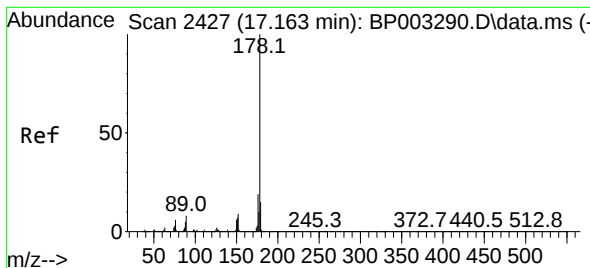
Tgt Ion:266 Resp: 64
Ion Ratio Lower Upper
266 100
268 81.4 51.1 76.7#
264 72.9 50.6 76.0



#71
Phenanthrene
Concen: 38.06 ng
RT: 17.004 min Scan# 2400
Delta R.T. 0.012 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

Tgt Ion:178 Resp: 1445981
Ion Ratio Lower Upper
178 100
176 19.4 15.3 22.9
179 15.4 12.5 18.7





#72

Anthracene

Concen: 10.90 ng

RT: 17.098 min Scan# 2416

Delta R.T. 0.018 min

Lab File: BP003427.D

Acq: 30 Sep 2020 22:53

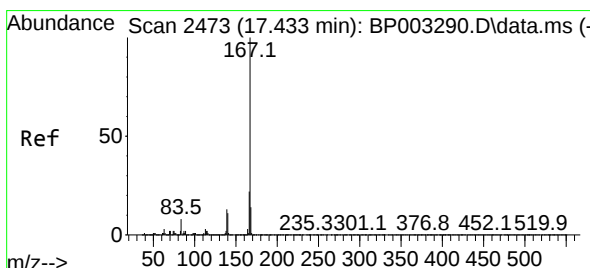
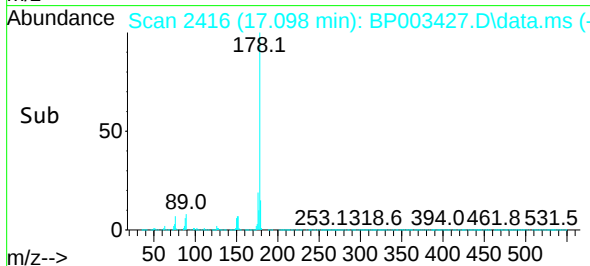
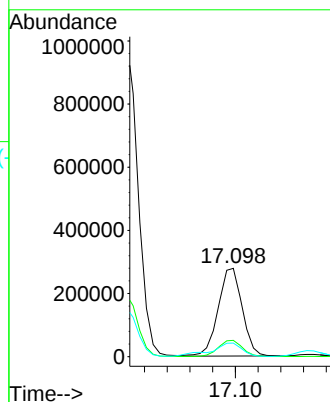
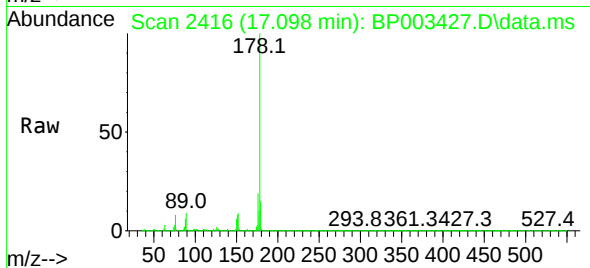
Tgt Ion:178 Resp: 408003

Ion Ratio Lower Upper

178 100

176 18.5 15.0 22.4

179 15.3 12.5 18.7



#73

Carbazole

Concen: 4.74 ng

RT: 17.381 min Scan# 2464

Delta R.T. 0.018 min

Lab File: BP003427.D

Acq: 30 Sep 2020 22:53

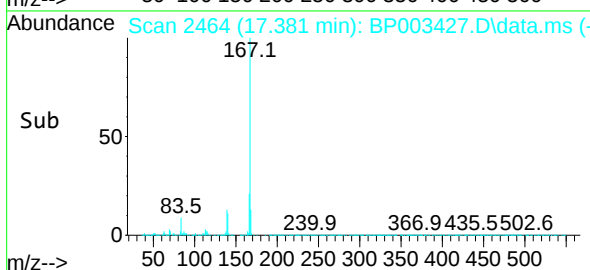
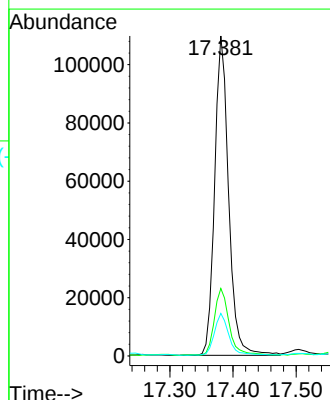
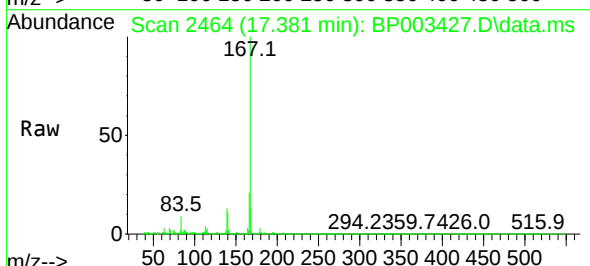
Tgt Ion:167 Resp: 168737

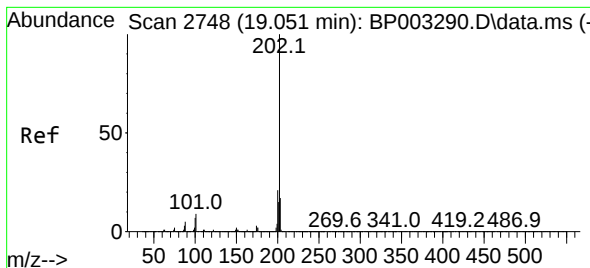
Ion Ratio Lower Upper

167 100

166 21.1 17.6 26.4

139 13.3 10.2 15.4

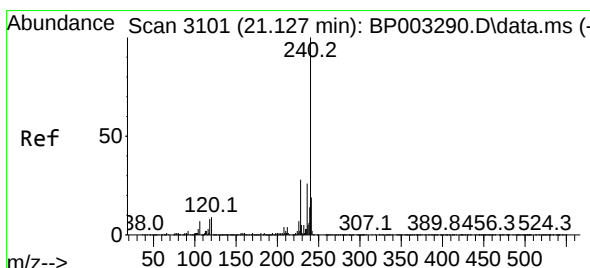
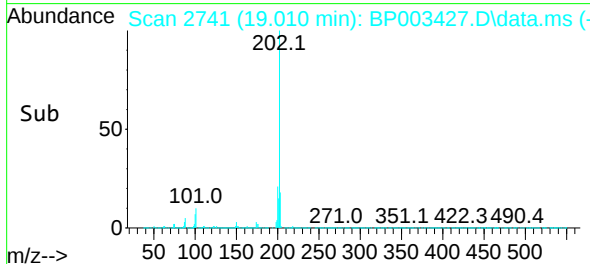
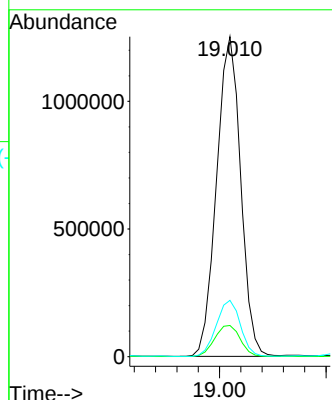
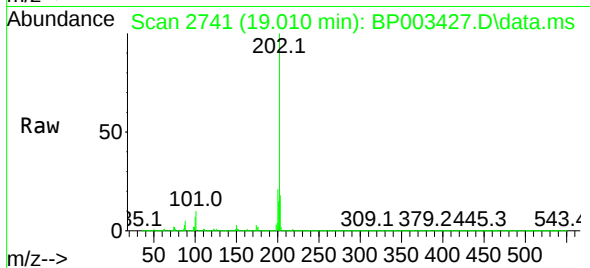




#75
Fluoranthene
Concen: 41.17 ng
RT: 19.010 min Scan# 2741
Delta R.T. 0.029 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

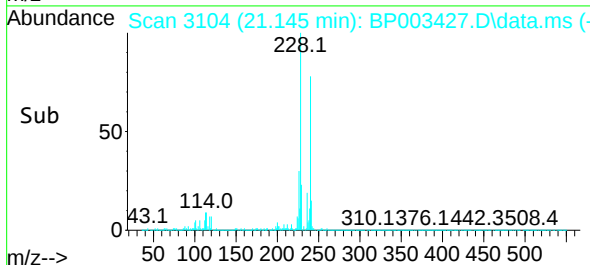
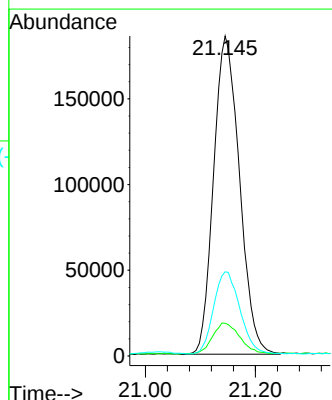
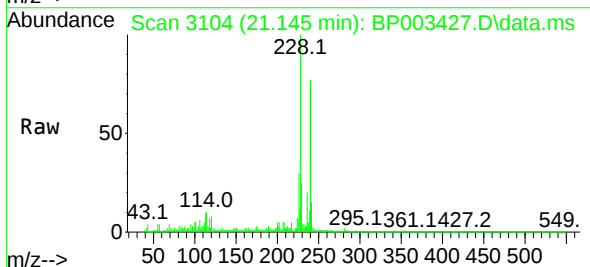
Instrument :
BNA_P
ClientSampleId :
B-6(11-13)DL

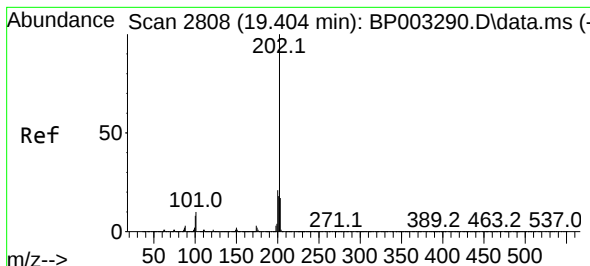
Tgt Ion:202 Resp: 1966781
Ion Ratio Lower Upper
202 100
101 9.8 0.0 29.4
203 17.6 0.0 37.8



#76
Chrysene-d12
Concen: 20.00 ng
RT: 21.145 min Scan# 3104
Delta R.T. 0.082 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

Tgt Ion:240 Resp: 605972
Ion Ratio Lower Upper
240 100
120 10.2 7.8 11.6
236 26.3 20.8 31.2





#78

Pyrene

Concen: 43.92 ng

RT: 19.363 min Scan# 2801

Delta R.T. 0.029 min

Lab File: BP003427.D

Acq: 30 Sep 2020 22:53

Instrument :

BNA_P

ClientSampleId :

B-6(11-13)DL

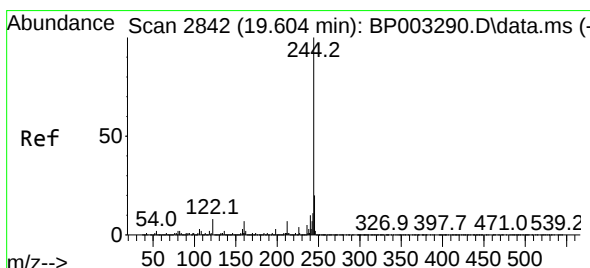
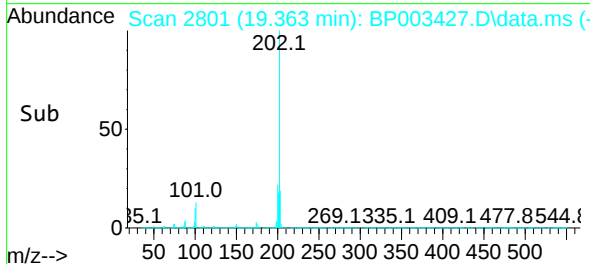
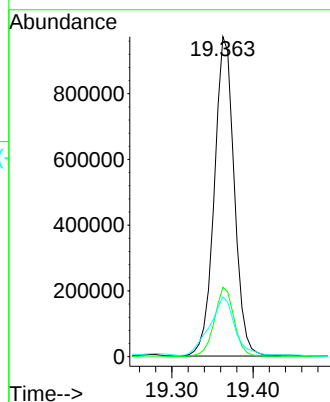
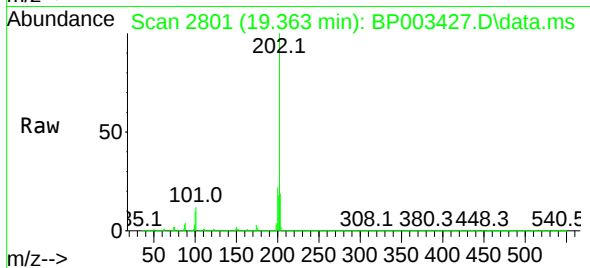
Tgt Ion:202 Resp: 1659907

Ion Ratio Lower Upper

202 100

200 21.7 17.1 25.7

203 18.6 14.2 21.2



#79

Terphenyl-d14

Concen: 22.75 ng

RT: 19.563 min Scan# 2835

Delta R.T. 0.029 min

Lab File: BP003427.D

Acq: 30 Sep 2020 22:53

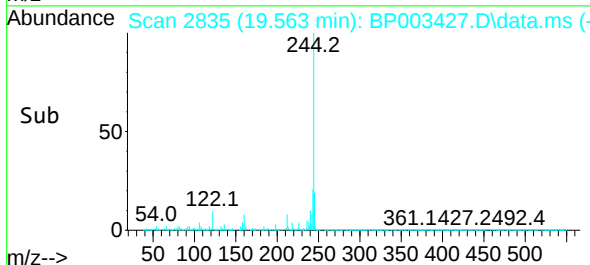
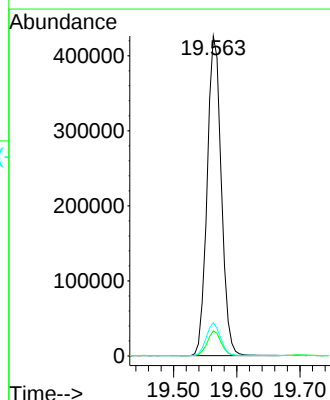
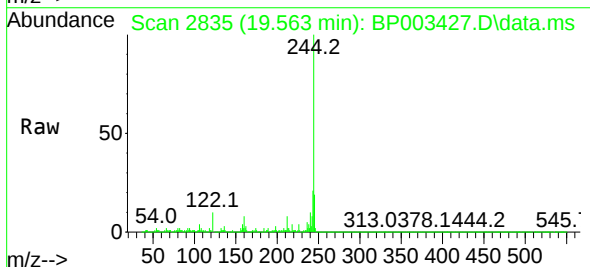
Tgt Ion:244 Resp: 661660

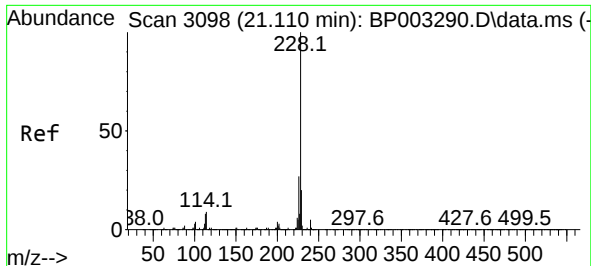
Ion Ratio Lower Upper

244 100

212 7.8 5.8 8.6

122 10.4 7.8 11.8

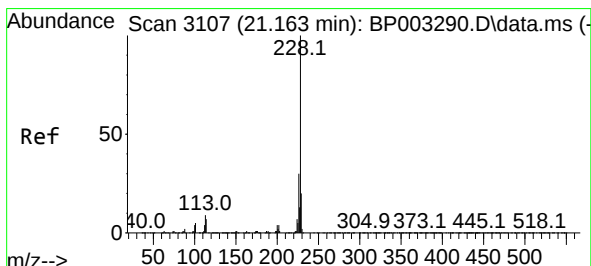
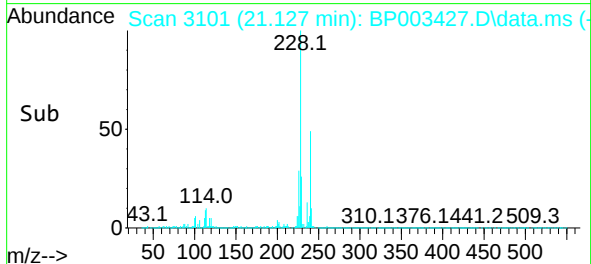
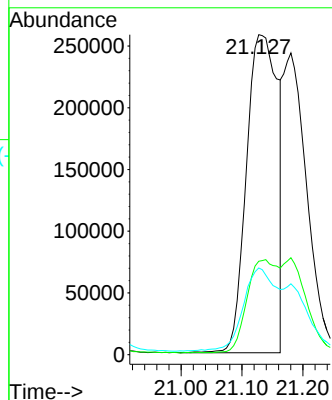
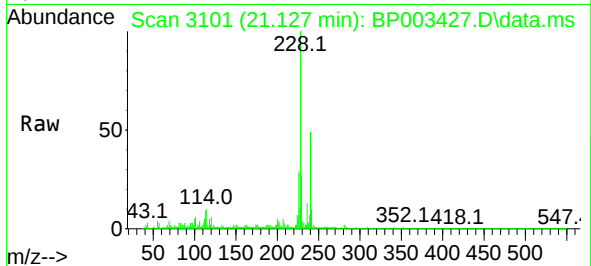




#81
Benzo(a)anthracene
Concen: 23.43 ng
RT: 21.127 min Scan# 3101
Delta R.T. 0.082 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

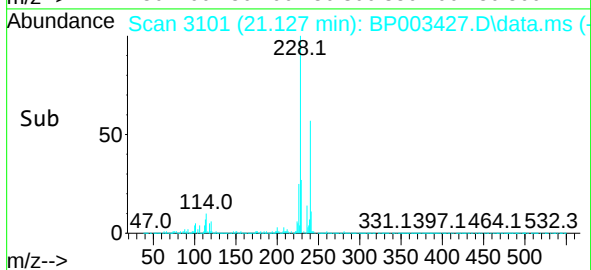
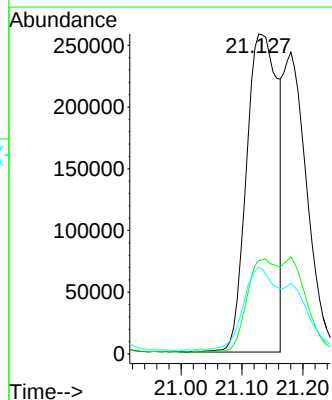
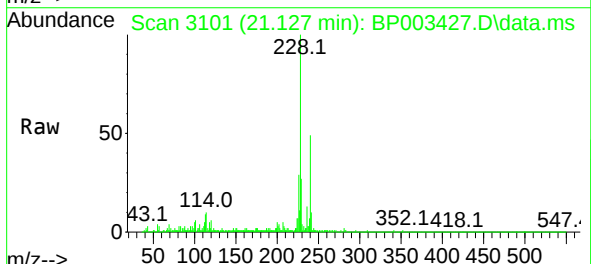
Instrument :
BNA_P
ClientSampleID :
B-6(11-13)DL

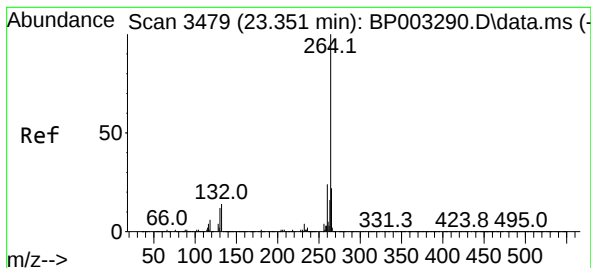
Tgt Ion:228 Resp: 917910
Ion Ratio Lower Upper
228 100
226 29.2 22.1 33.1
229 27.1 15.9 23.9#



#83
Chrysene
Concen: 24.39 ng
RT: 21.127 min Scan# 3101
Delta R.T. 0.029 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

Tgt Ion:228 Resp: 917910
Ion Ratio Lower Upper
228 100
226 29.2 24.4 36.6
229 27.1 15.8 23.6#

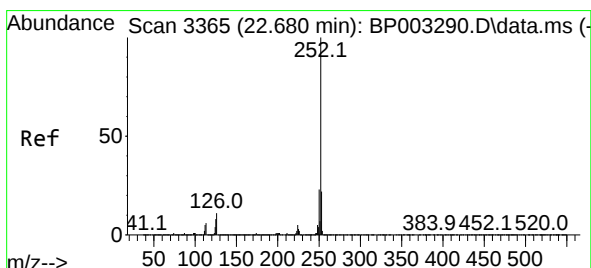
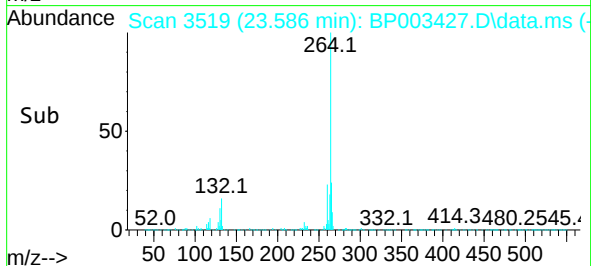
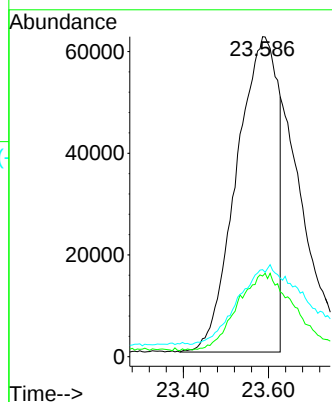
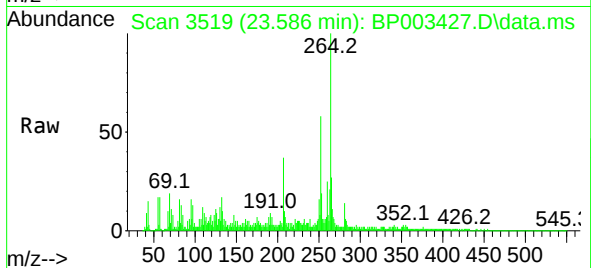




#86
Perylene-d12
Concen: 20.00 ng
RT: 23.586 min Scan# 3519
Delta R.T. 0.329 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

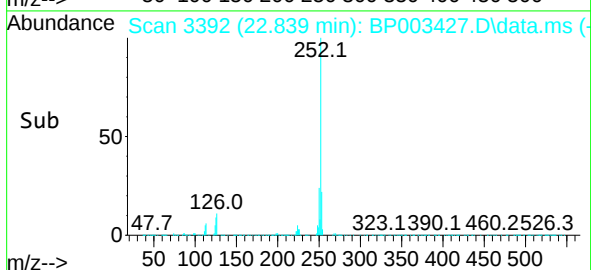
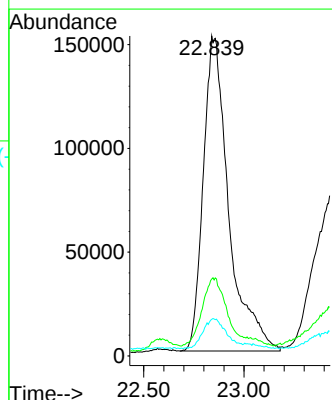
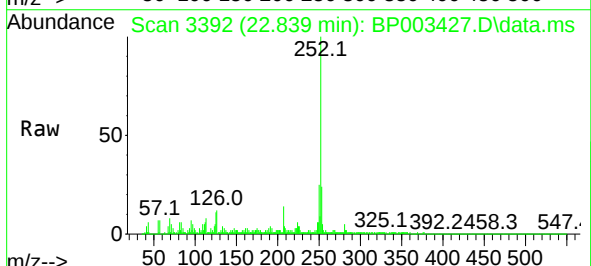
Instrument :
BNA_P
ClientSampleId :
B-6(11-13)DL

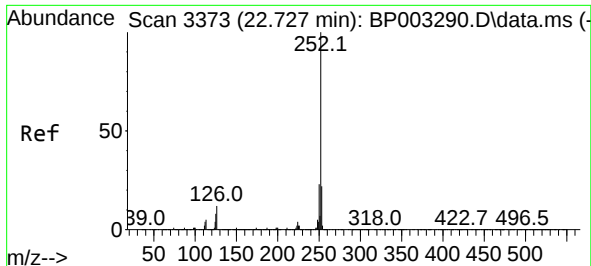
Tgt Ion:264 Resp: 413307
Ion Ratio Lower Upper
264 100
260 25.2 18.8 28.2
265 27.2 17.4 26.2#



#88
Benzo(b)fluoranthene
Concen: 51.41 ng
RT: 22.839 min Scan# 3392
Delta R.T. 0.247 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

Tgt Ion:252 Resp: 1341887
Ion Ratio Lower Upper
252 100
253 24.1 17.6 26.4
125 11.5 7.3 10.9#

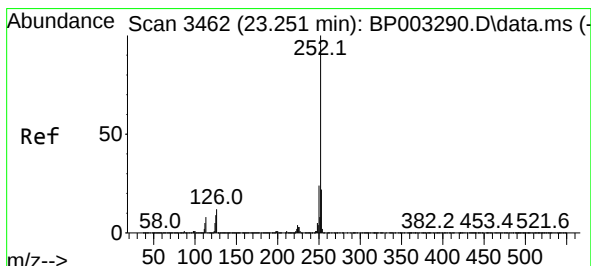
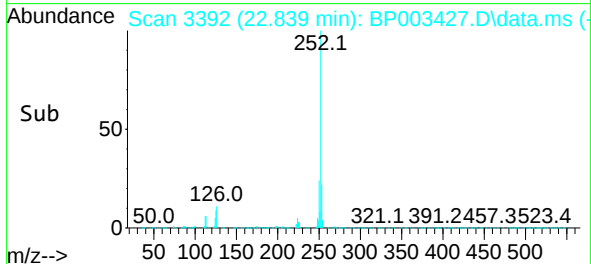
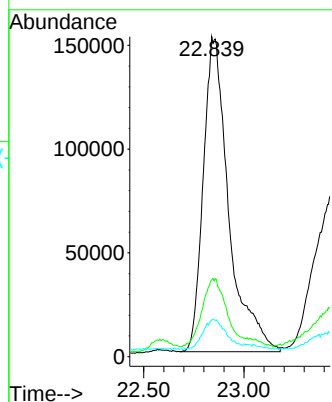
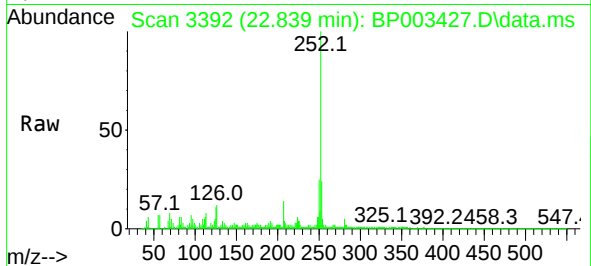




#89
Benzo(k)fluoranthene
Concen: 53.65 ng
RT: 22.839 min Scan# 3392
Delta R.T. 0.194 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

Instrument :
BNA_P
ClientSampleId :
B-6(11-13)DL

Tgt Ion:252 Resp: 1341887
Ion Ratio Lower Upper
252 100
253 24.1 17.8 26.8
125 11.5 7.4 11.2#



#90
Benzo(a)pyrene
Concen: 47.74 ng
RT: 23.457 min Scan# 3497
Delta R.T. 0.294 min
Lab File: BP003427.D
Acq: 30 Sep 2020 22:53

Tgt Ion:252 Resp: 1174971
Ion Ratio Lower Upper
252 100
253 30.7 17.4 26.0#
125 13.7 8.2 12.4#

