

Data Path : Z:\SVOASRV\HPCHEM1\BNA_F\DATA\BF073119\
 Data File : BF115876.D
 Acq On : 31 Jul 2019 19:53
 Operator : HP/JU
 Sample : K4044-15
 Misc :
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 BNA_F
 ClientSampleId :
 TP-4

Quant Time: Aug 01 04:57:38 2019
 Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF073019.M
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
 QLast Update : Wed Jul 31 15:31:51 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.85	152	129033	20.00	ng	0.00
21) Naphthalene-d8	8.13	136	479241	20.00	ng	0.00
39) Acenaphthene-d10	9.89	164	233532	20.00	ng	0.00
64) Phenanthrene-d10	11.38	188	351440	20.00	ng	0.00
76) Chrysene-d12	14.02	240	287590	20.00	ng	0.00
87) Perylene-d12	15.49	264	360564	20.00	ng	0.00

System Monitoring Compounds

5) 2-Fluorophenol	5.47	112	671345	87.10	ng	0.00
7) Phenol-d6	6.49	99	884628	90.97	ng	0.00
23) Nitrobenzene-d5	7.41	82	533773	64.29	ng	0.00
42) 2,4,6-Tribromophenol	10.68	330	156646	69.19	ng	0.00
45) 2-Fluorobiphenyl	9.21	172	858227	68.84	ng	0.00
79) Terphenyl-d14	12.96	244	687602	50.38	ng	0.00

Target Compounds

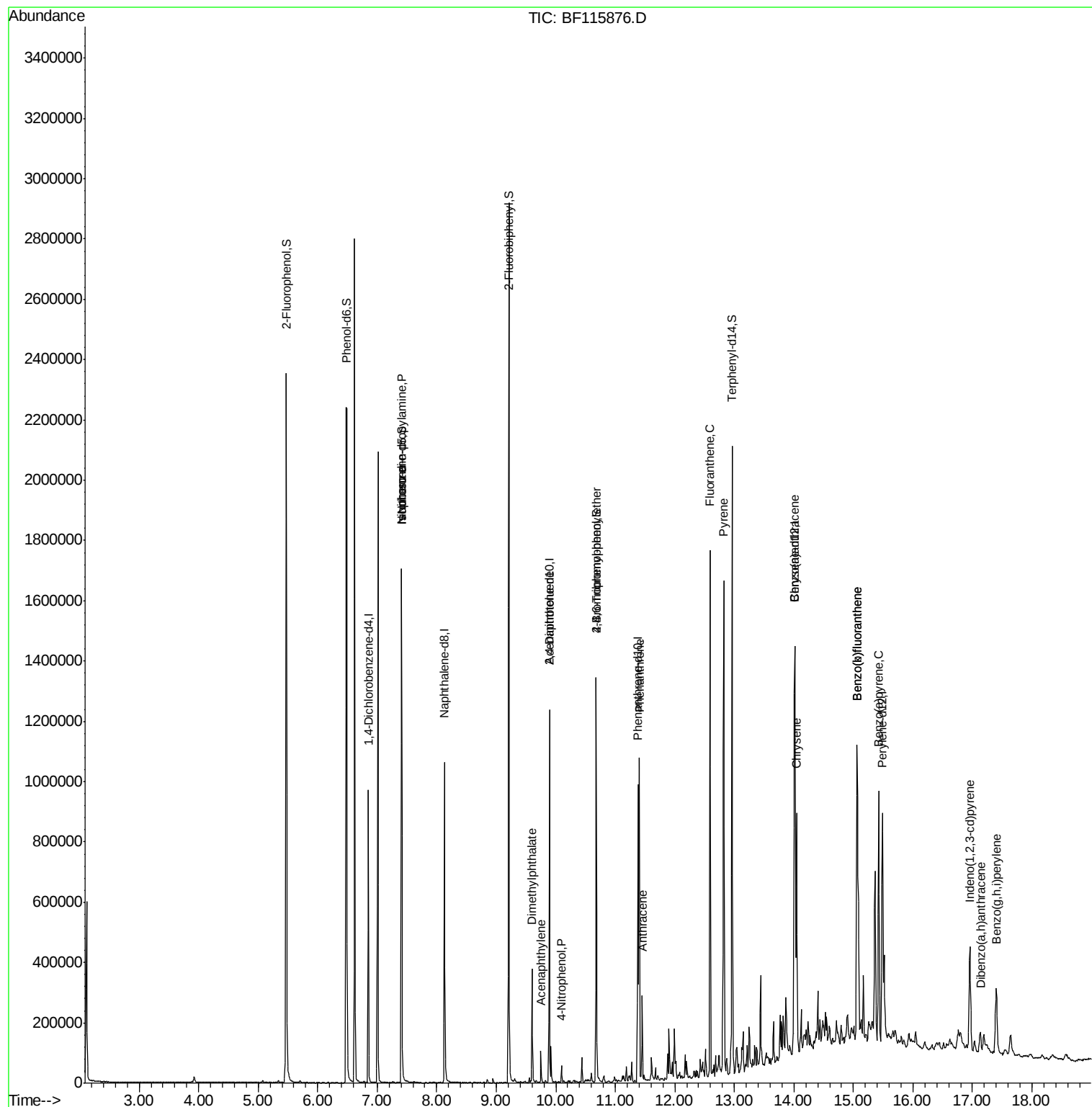
						Qvalue
19) n-Nitroso-di-n-propylamine	7.41	70	70570	11.711	ng	# 79
25) Isophorone	7.41	82	533770	33.622	ng	# 66
49) Acenaphthylene	9.75	152	45669	2.281	ng	99
50) Dimethylphthalate	9.60	163	148905	9.365	ng	99
56) 4-Nitrophenol	10.10	139	8000	2.925	ng	# 8
57) 2,4-Dinitrotoluene	9.89	165	30339	6.594	ng	# 25
67) 4-Bromophenyl-phenylether	10.68	248	9846	2.617	ng	# 1
71) Phenanthrene	11.40	178	405696	22.581	ng	99
72) Anthracene	11.45	178	103861	5.712	ng	99
75) Fluoranthene	12.59	202	649705	34.542	ng	100
78) Pyrene	12.82	202	619652	28.583	ng	100
81) Benzo(a)anthracene	14.01	228	351739	19.135	ng	97
83) Chrysene	14.04	228	281657	15.783	ng	98
86) Indeno(1,2,3-cd)pyrene	16.96	276	220553	14.715	ng	95
88) Benzo(b)fluoranthene	15.06	252	710209	34.066	ng	97
89) Benzo(k)fluoranthene	15.06	252	710209	34.975	ng	100
90) Benzo(a)pyrene	15.43	252	397510	21.329	ng	99
91) Dibenzo(a,h)anthracene	17.13	278	43306	2.684	ng	93
92) Benzo(g,h,i)perylene	17.40	276	189053	11.933	ng	98

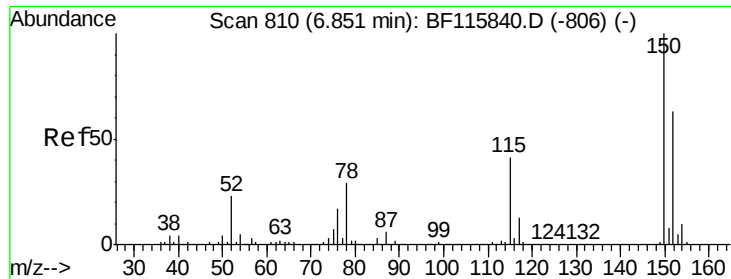
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\SVOASRV\HPCHEM1\BNA_F\DATA\BF073119\
Data File : BF115876.D
Acq On : 31 Jul 2019 19:53
Operator : HP/JU
Sample : K4044-15
Misc :
ALS Vial : 8 Sample Multiplier: 1

Instrument :
BNA_F
ClientSampleId :
TP-4

Quant Time: Aug 01 04:57:38 2019
Quant Method : Z:\SVOASRV\HPCHEM1\BNA_F\METHODS\8270-BF073019.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
QLast Update : Wed Jul 31 15:31:51 2019
Response via : Initial Calibration

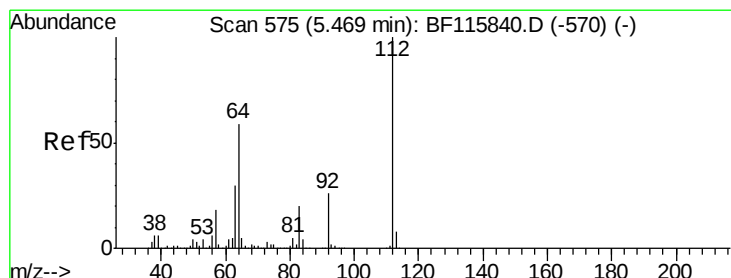
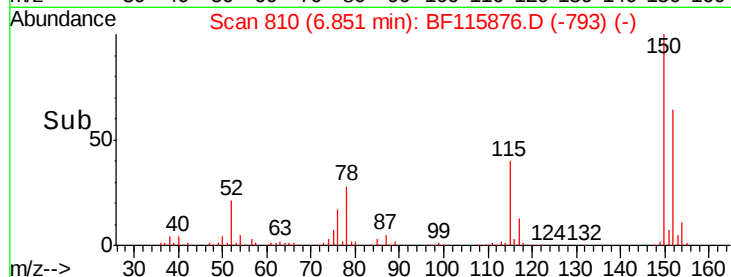
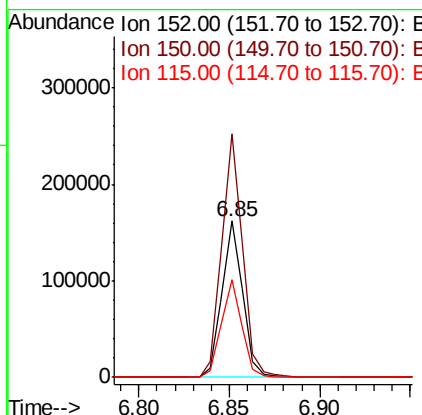
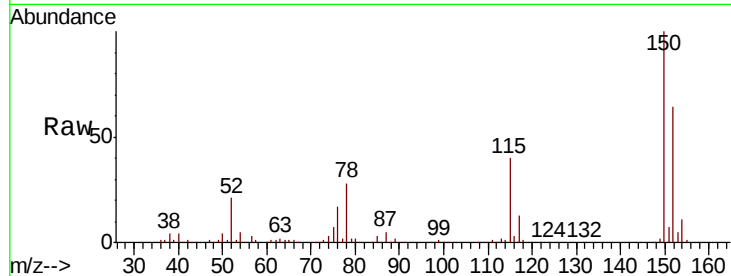




#1
 1,4-Dichlorobenzene-d4
 Concen: 20.000 ng
 RT: 6.85 min Scan# 810
 Delta R.T. -0.00 min
 Lab File: BF115876.D
 Acq: 31 Jul 2019 19:53

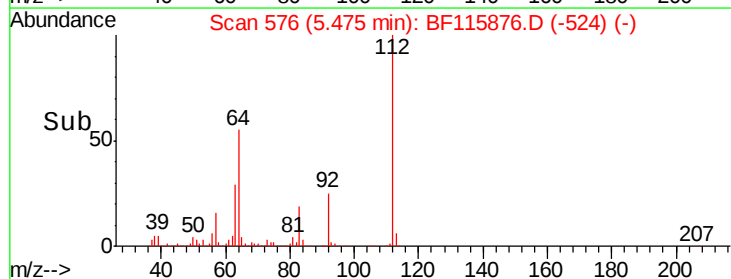
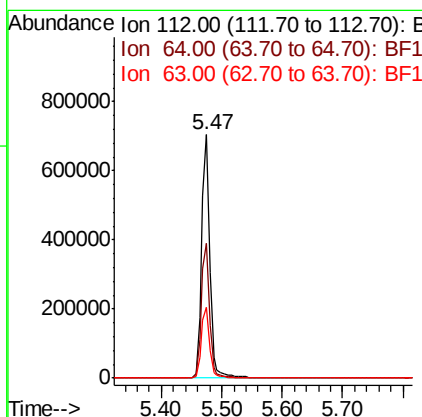
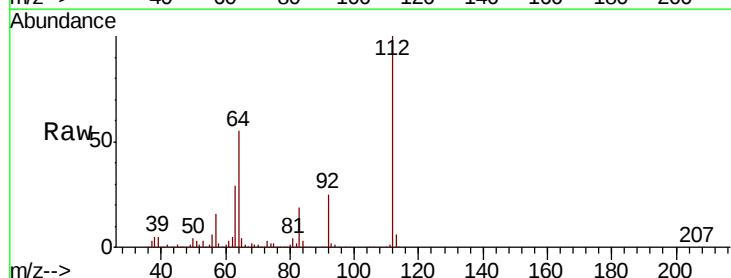
Instrument :
 BNA_F
 ClientSampleId :
 TP-4

Tgt Ion:152 Resp: 129033
 Ion Ratio Lower Upper
 152 100
 150 155.7 127.4 191.0
 115 62.3 51.8 77.8



#5
 2-Fluorophenol
 Concen: 87.100 ng
 RT: 5.47 min Scan# 576
 Delta R.T. 0.01 min
 Lab File: BF115876.D
 Acq: 31 Jul 2019 19:53

Tgt Ion:112 Resp: 671345
 Ion Ratio Lower Upper
 112 100
 64 55.3 46.8 70.2
 63 28.9 24.2 36.2





#7

Phenol-d6

Concen: 90.967 ng

RT: 6.49 min Scan# 748

Delta R.T. -0.00 min

Lab File: BF115876.D

Acq: 31 Jul 2019 19:53

Instrument :

BNA_F

ClientSampled :

TP-4

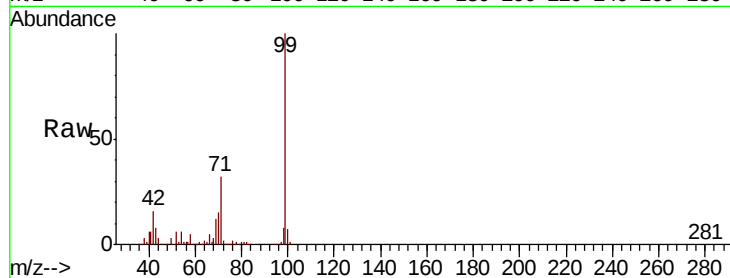
Tgt Ion: 99 Resp: 884628

Ion Ratio Lower Upper

99 100

42 16.0 13.8 20.6

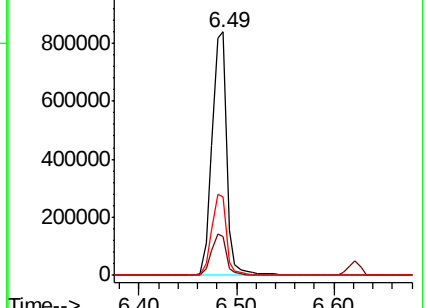
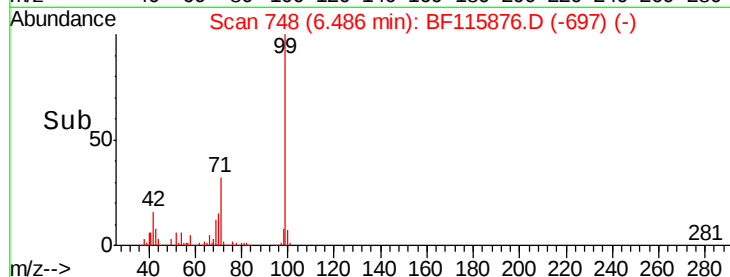
71 32.2 27.1 40.7



Abundance Ion 99.00 (98.70 to 99.70): BF1

Ion 42.00 (41.70 to 42.70): BF1

Ion 71.00 (70.70 to 71.70): BF1



#19

n-Nitroso-di-n-propylamine

Concen: 11.711 ng

RT: 7.41 min Scan# 905

Delta R.T. 0.14 min

Lab File: BF115876.D

Acq: 31 Jul 2019 19:53

Tgt Ion: 70 Resp: 70570

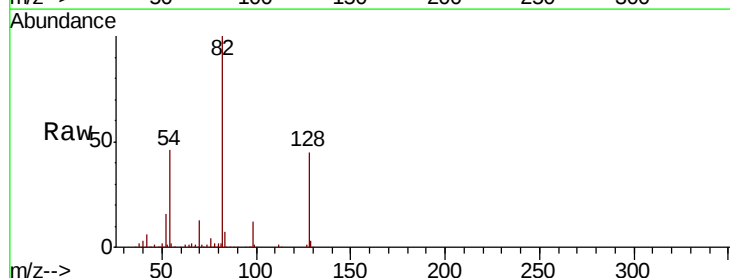
Ion Ratio Lower Upper

70 100

42 44.2 41.8 62.8

101 0.0 7.7 11.5#

130 2.3 17.8 26.6#

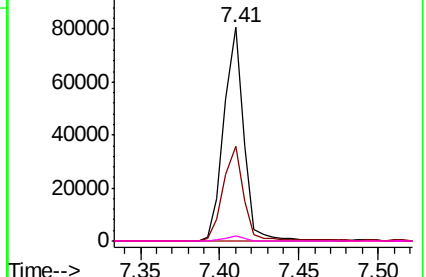
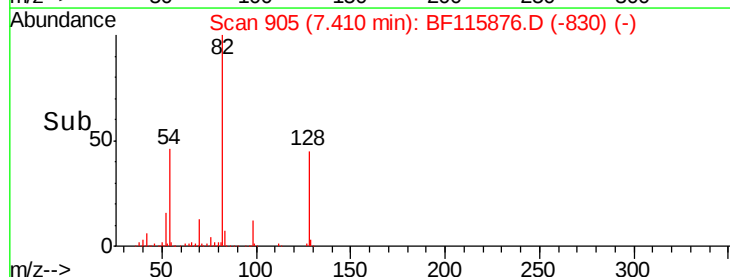


Abundance Ion 70.00 (69.70 to 70.70): BF1

Ion 42.00 (41.70 to 42.70): BF1

Ion 101.00 (100.70 to 101.70): BF1

Ion 130.00 (129.70 to 130.70): BF1





#21

Naphthalene-d8

Concen: 20.000 ng

RT: 8.13 min Scan# 1028

Delta R.T. -0.00 min

Lab File: BF115876.D

Acq: 31 Jul 2019 19:53

Instrument :

BNA_F

ClientSampleId :

TP-4

Tgt Ion:136 Resp: 479241

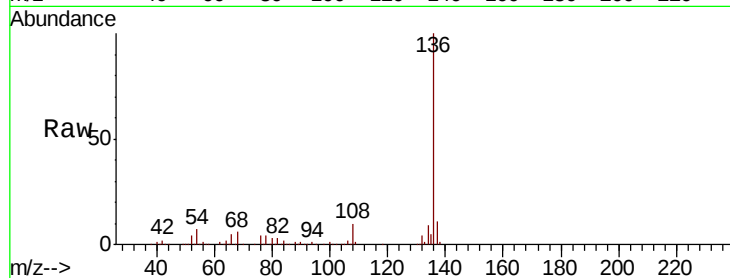
Ion Ratio Lower Upper

136 100

137 10.8 9.1 13.7

54 6.7 6.1 9.1

68 5.8 5.4 8.2

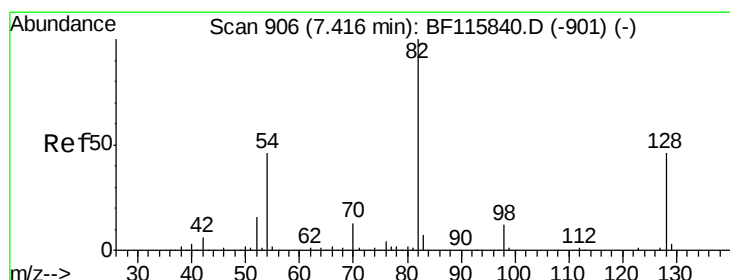
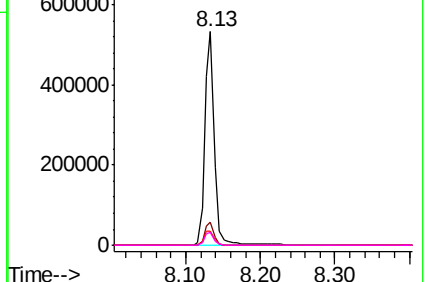
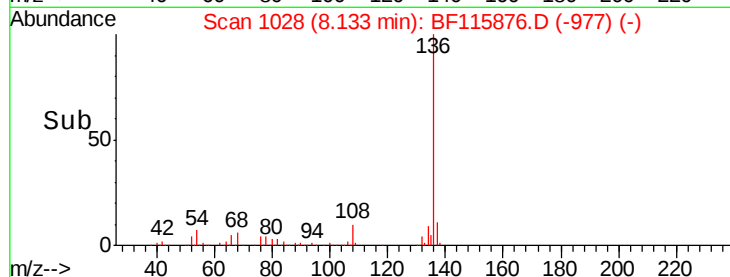


Abundance Ion 136.00 (135.70 to 136.70): E

Ion 137.00 (136.70 to 137.70): E

Ion 54.00 (53.70 to 54.70): BF1

Ion 68.00 (67.70 to 68.70): BF1



#23

Nitrobenzene-d5

Concen: 64.291 ng

RT: 7.41 min Scan# 905

Delta R.T. -0.01 min

Lab File: BF115876.D

Acq: 31 Jul 2019 19:53

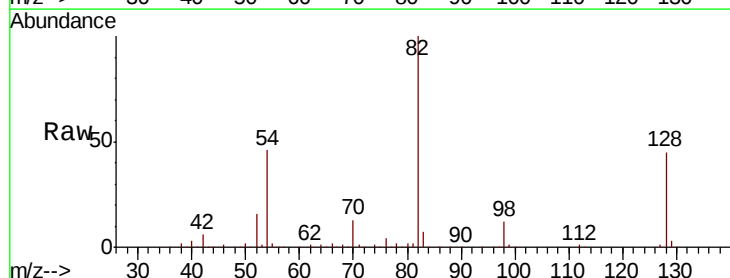
Tgt Ion: 82 Resp: 533773

Ion Ratio Lower Upper

82 100

128 45.2 36.6 55.0

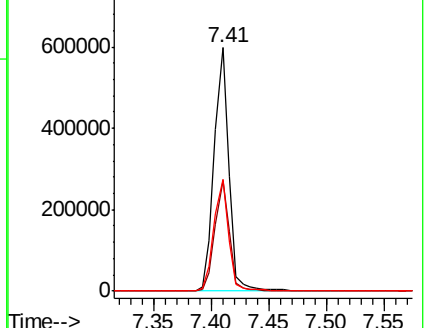
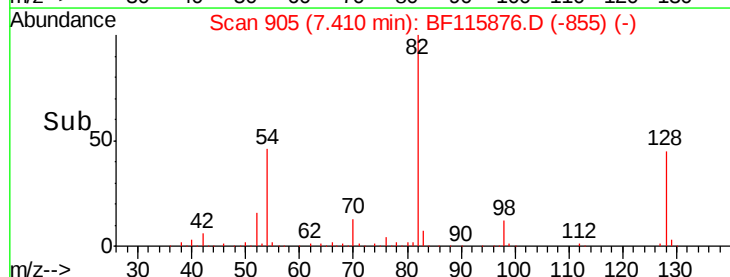
54 45.8 36.6 55.0



Abundance Ion 82.00 (81.70 to 82.70): BF1

Ion 128.00 (127.70 to 128.70): E

Ion 54.00 (53.70 to 54.70): BF1





#25

Isophorone

Concen: 33.622 ng

RT: 7.41 min Scan# 905

Delta R.T. -0.26 min

Lab File: BF115876.D

Acq: 31 Jul 2019 19:53

Instrument :

BNA_F

ClientSampleId :

TP-4

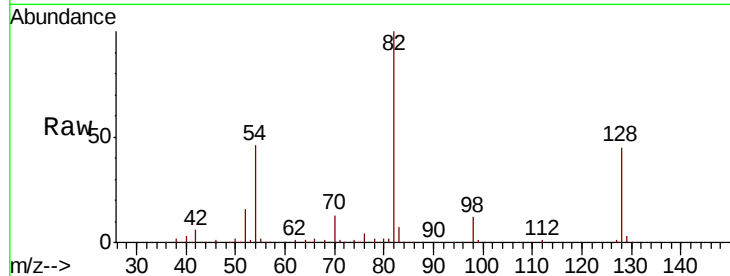
Tgt Ion: 82 Resp: 533770

Ion Ratio Lower Upper

82 100

95 0.0 5.5 8.3#

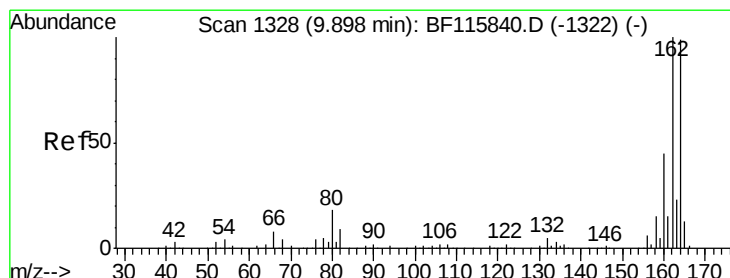
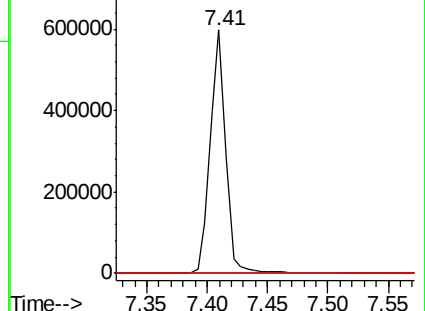
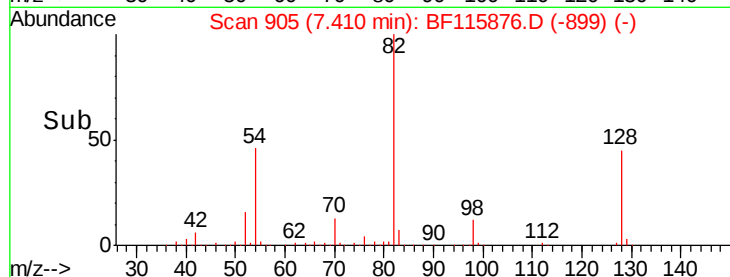
138 0.0 13.9 20.9#



Abundance Ion 82.00 (81.70 to 82.70): BF1

Ion 95.00 (94.70 to 95.70): BF1

Ion 138.00 (137.70 to 138.70): BF1



#39

Acenaphthene-d10

Concen: 20.000 ng

RT: 9.89 min Scan# 1327

Delta R.T. -0.01 min

Lab File: BF115876.D

Acq: 31 Jul 2019 19:53

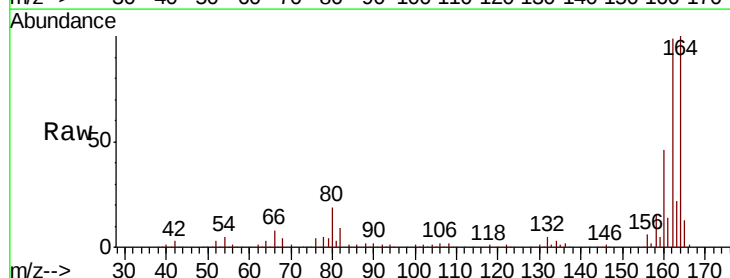
Tgt Ion: 164 Resp: 233532

Ion Ratio Lower Upper

164 100

162 99.0 80.8 121.2

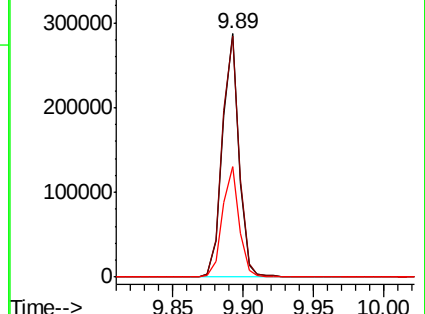
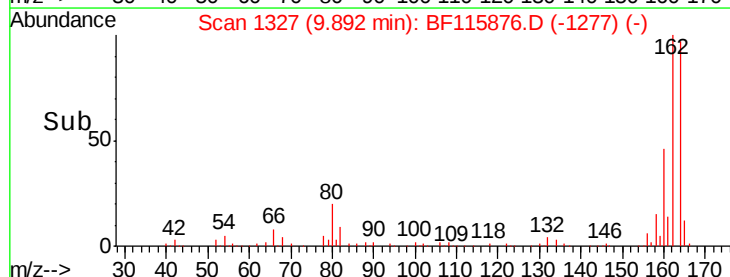
160 45.5 36.2 54.4



Abundance Ion 164.00 (163.70 to 164.70): E

Ion 162.00 (161.70 to 162.70): E

Ion 160.00 (159.70 to 160.70): E

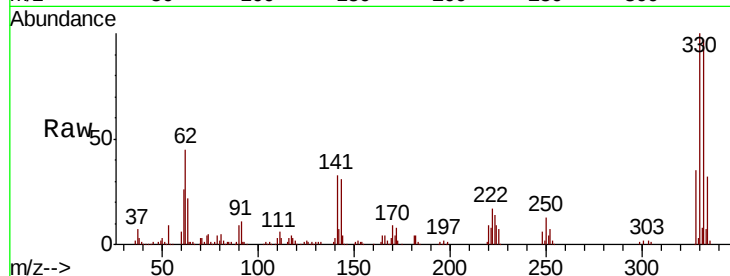




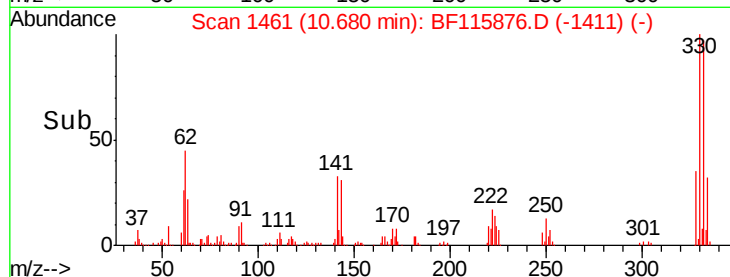
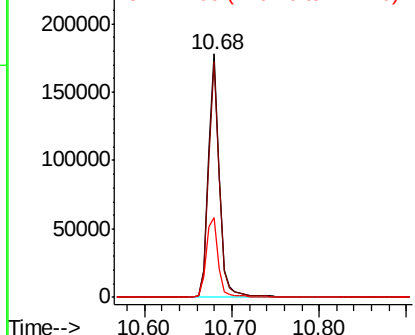
#42
 2,4,6-Tribromophenol
 Concen: 69.185 ng
 RT: 10.68 min Scan# 1461
 Delta R.T. -0.01 min
 Lab File: BF115876.D
 Acq: 31 Jul 2019 19:53

Instrument :
 BNA_F
 ClientSampleId :
 TP-4

Tgt Ion:330 Resp: 156646
 Ion Ratio Lower Upper
 330 100
 332 96.3 77.7 116.5
 141 36.4 28.1 42.1

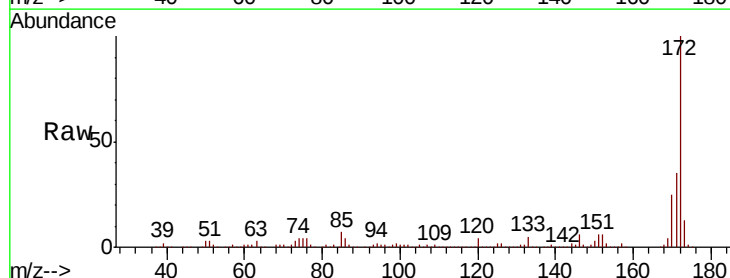


Abundance Ion 329.80 (329.50 to 330.50): E
 Ion 331.80 (331.50 to 332.50): E
 Ion 141.00 (140.70 to 141.70): E

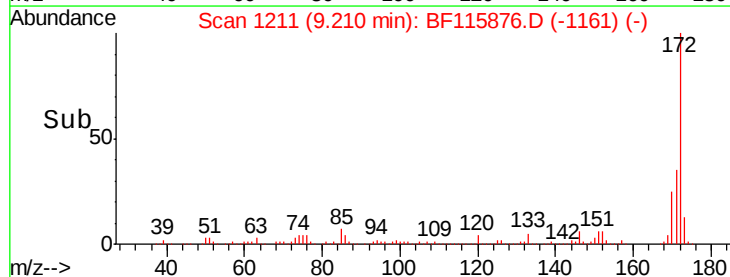
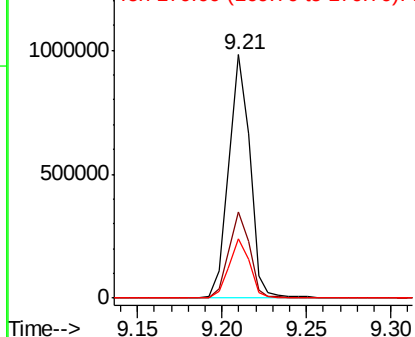


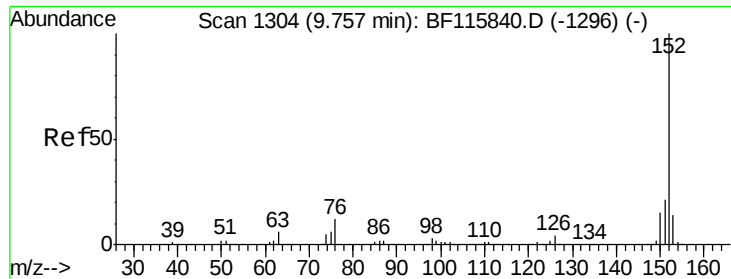
#45
 2-Fluorobiphenyl
 Concen: 68.835 ng
 RT: 9.21 min Scan# 1211
 Delta R.T. -0.01 min
 Lab File: BF115876.D
 Acq: 31 Jul 2019 19:53

Tgt Ion:172 Resp: 858227
 Ion Ratio Lower Upper
 172 100
 171 35.4 29.1 43.7
 170 24.6 20.1 30.1



Abundance Ion 172.00 (171.70 to 172.70): E
 Ion 171.00 (170.70 to 171.70): E
 Ion 170.00 (169.70 to 170.70): E





#49

Acenaphthylene

Concen: 2.281 ng

RT: 9.75 min Scan# 1303

Delta R.T. -0.01 min

Lab File: BF115876.D

Acq: 31 Jul 2019 19:53

Instrument :

BNA_F

ClientSampleId :

TP-4

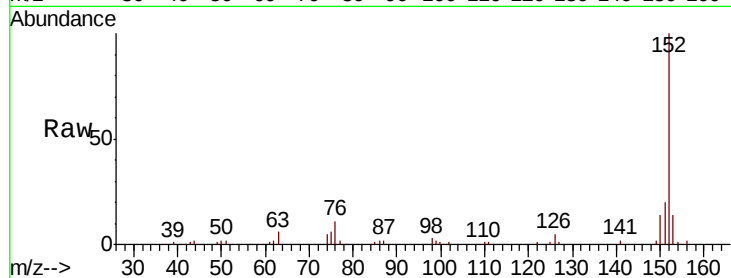
Tgt Ion:152 Resp: 45669

Ion Ratio Lower Upper

152 100

151 20.2 16.8 25.2

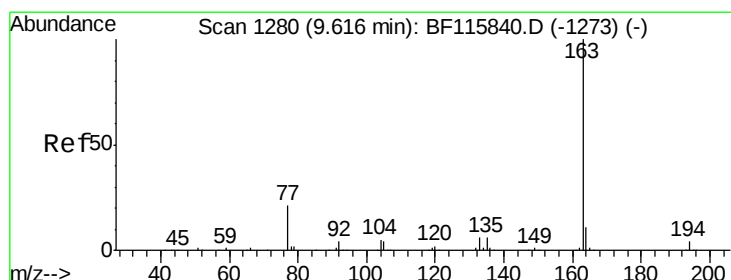
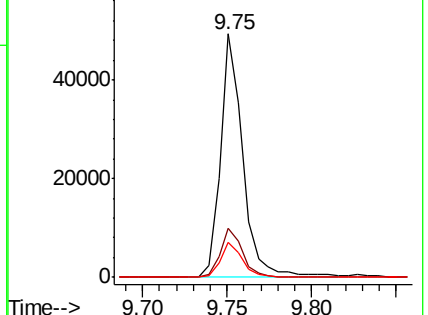
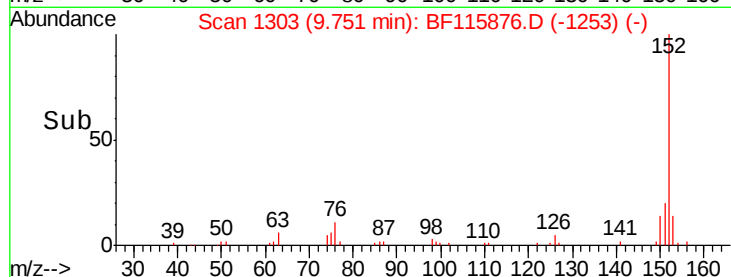
153 14.2 11.6 17.4



Abundance Ion 152.00 (151.70 to 152.70): E

Ion 151.00 (150.70 to 151.70): E

Ion 153.00 (152.70 to 153.70): E



#50

Dimethylphthalate

Concen: 9.365 ng

RT: 9.60 min Scan# 1278

Delta R.T. -0.01 min

Lab File: BF115876.D

Acq: 31 Jul 2019 19:53

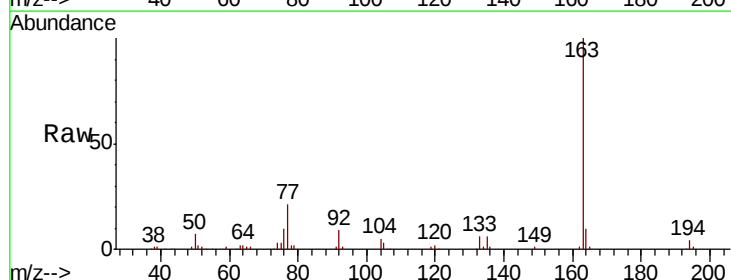
Tgt Ion:163 Resp: 148905

Ion Ratio Lower Upper

163 100

194 3.7 3.0 4.6

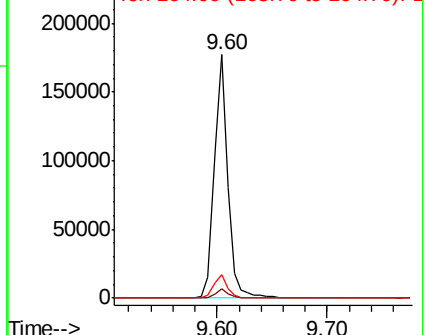
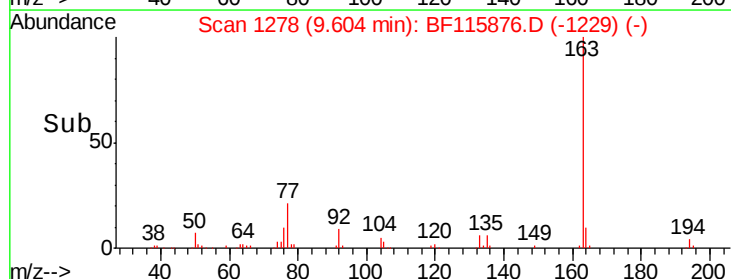
164 9.8 8.4 12.6

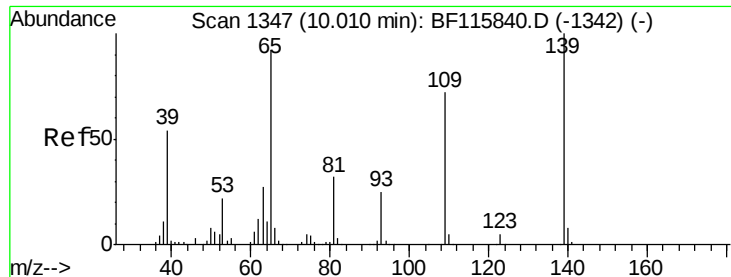


Abundance Ion 163.00 (162.70 to 163.70): E

Ion 194.00 (193.70 to 194.70): E

Ion 164.00 (163.70 to 164.70): E

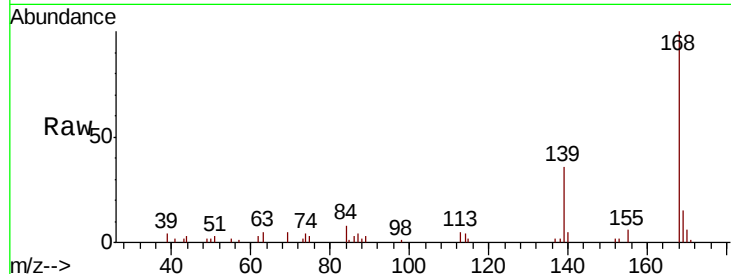




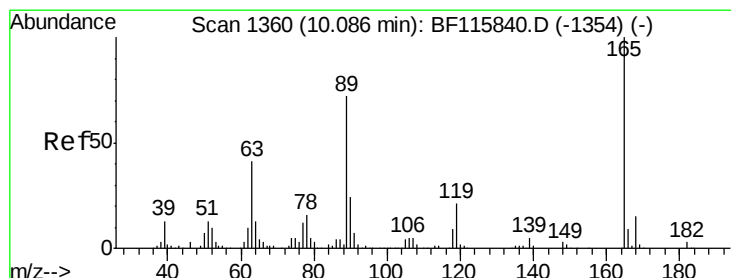
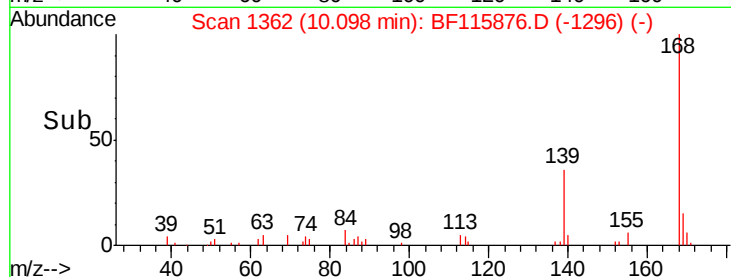
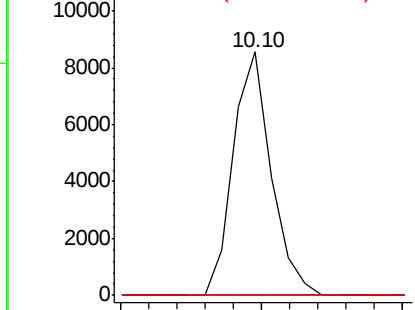
#56
4-Nitrophenol
Concen: 2.925 ng
RT: 10.10 min Scan# 1362
Delta R.T. 0.09 min
Lab File: BF115876.D
Acq: 31 Jul 2019 19:53

Instrument :
BNA_F
ClientSampled :
TP-4

Tgt Ion:139 Resp: 8000
Ion Ratio Lower Upper
139 100
109 0.0 52.0 92.0#
65 0.0 72.6 112.6#

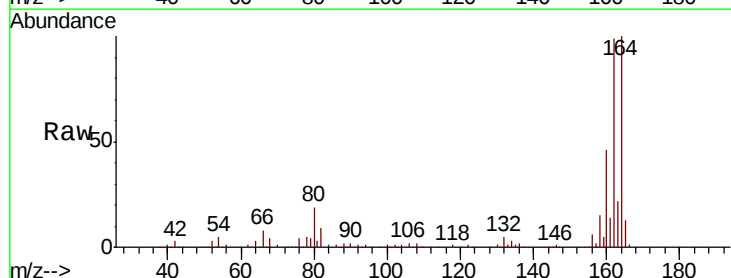


Abundance Ion 139.00 (138.70 to 139.70): E
Ion 109.00 (108.70 to 109.70): E
Ion 65.00 (64.70 to 65.70): BF1

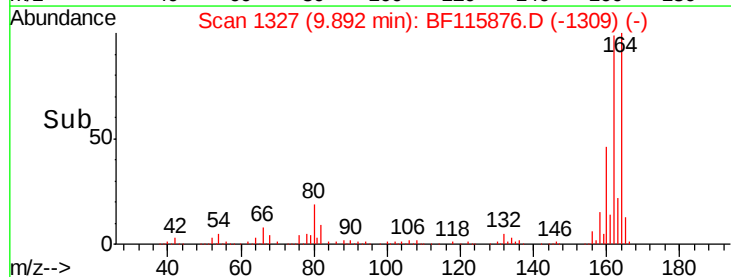
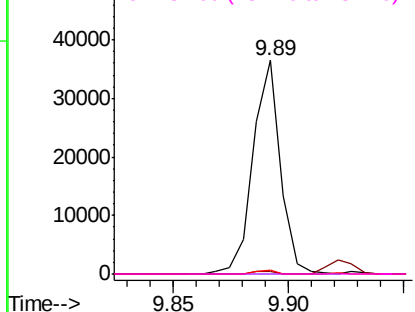


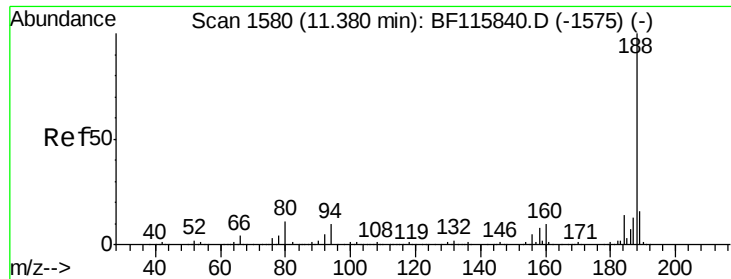
#57
2,4-Dinitrotoluene
Concen: 6.594 ng
RT: 9.89 min Scan# 1327
Delta R.T. -0.19 min
Lab File: BF115876.D
Acq: 31 Jul 2019 19:53

Tgt Ion:165 Resp: 30339
Ion Ratio Lower Upper
165 100
63 1.1 33.2 49.8#
89 1.7 57.3 85.9#
182 0.0 2.1 3.1#



Abundance Ion 165.00 (164.70 to 165.70): E
Ion 63.00 (62.70 to 63.70): BF1
Ion 89.00 (88.70 to 89.70): BF1
Ion 182.00 (181.70 to 182.70): E

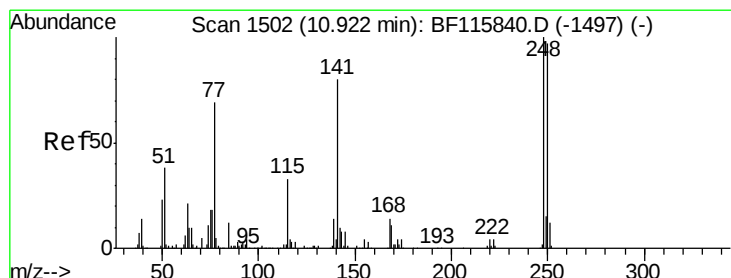
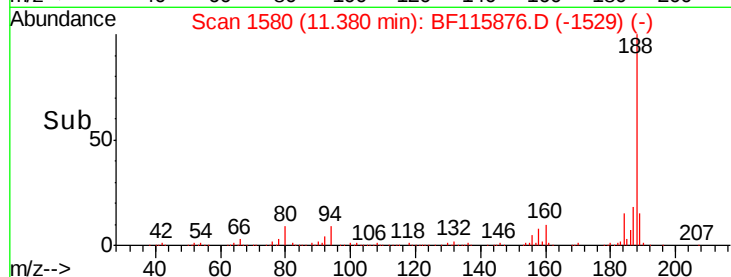
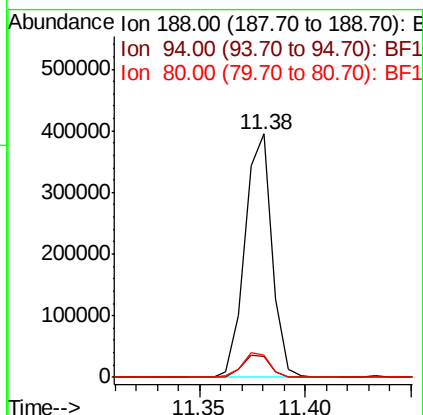
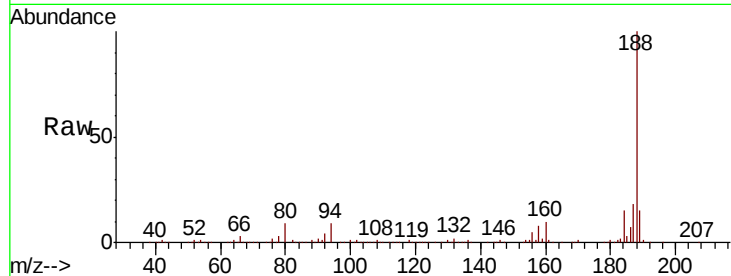




#64
 Phenanthrene-d10
 Concen: 20.000 ng
 RT: 11.38 min Scan# 1580
 Delta R.T. -0.00 min
 Lab File: BF115876.D
 Acq: 31 Jul 2019 19:53

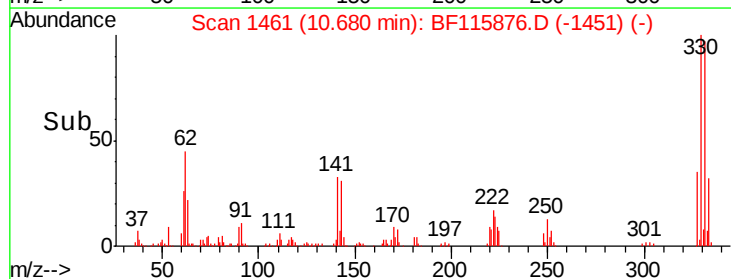
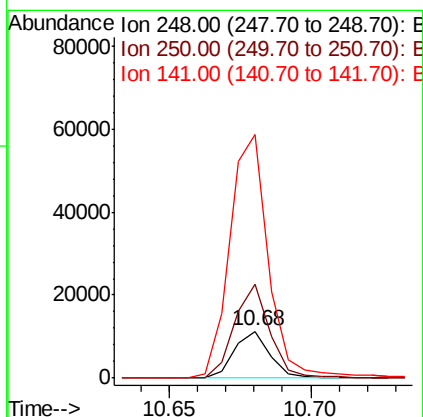
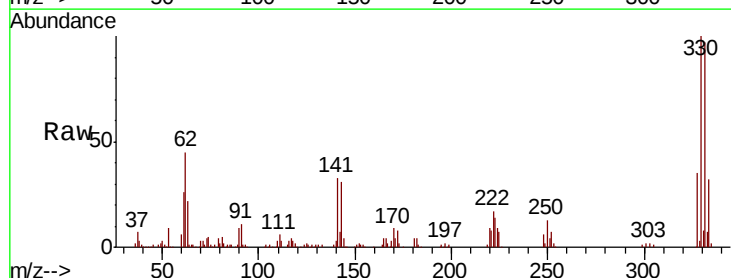
Instrument :
 BNA_F
 ClientSampled :
 TP-4

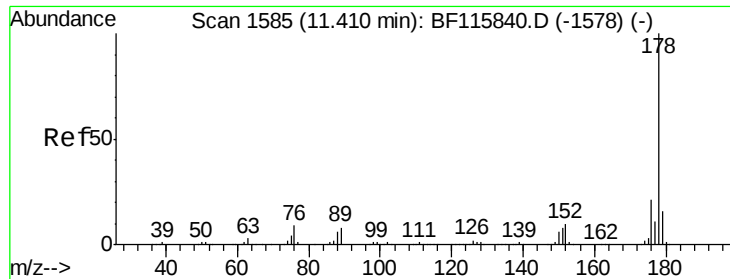
Tgt Ion:188 Resp: 351440
 Ion Ratio Lower Upper
 188 100
 94 8.5 8.0 12.0
 80 8.9 8.6 12.8



#67
 4-Bromophenyl-phenylether
 Concen: 2.617 ng
 RT: 10.68 min Scan# 1461
 Delta R.T. -0.24 min
 Lab File: BF115876.D
 Acq: 31 Jul 2019 19:53

Tgt Ion:248 Resp: 9846
 Ion Ratio Lower Upper
 248 100
 250 201.9 77.8 116.6#
 141 522.1 64.3 96.5#





#71

Phenanthrene

Concen: 22.581 ng

RT: 11.40 min Scan# 1584

Delta R.T. -0.01 min

Lab File: BF115876.D

Acq: 31 Jul 2019 19:53

Instrument :

BNA_F

ClientSampleId :

TP-4

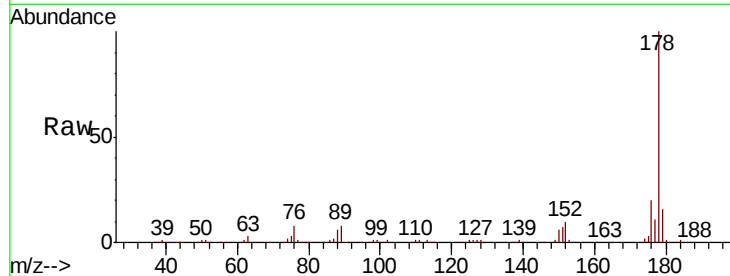
Tgt Ion:178 Resp: 405696

Ion Ratio Lower Upper

178 100

176 19.8 16.5 24.7

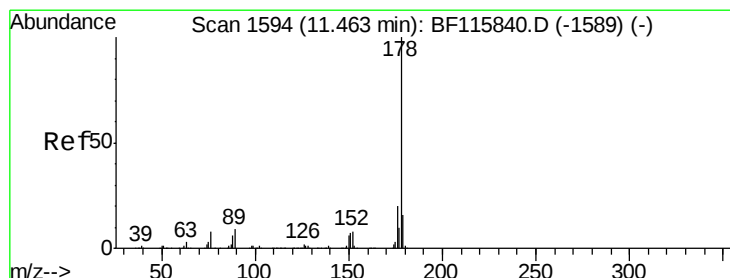
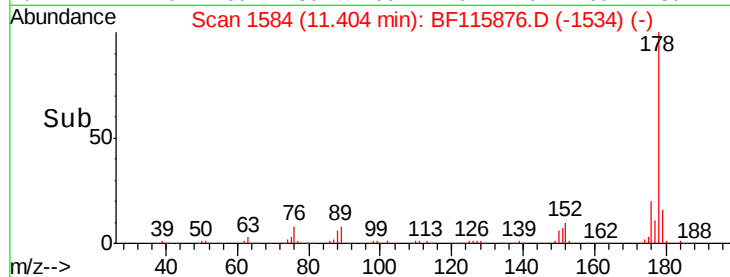
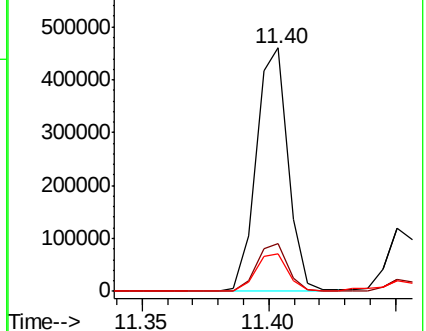
179 15.6 12.6 18.8



Abundance Ion 178.00 (177.70 to 178.70): E

Ion 176.00 (175.70 to 176.70): E

Ion 179.00 (178.70 to 179.70): E



#72

Anthracene

Concen: 5.712 ng

RT: 11.45 min Scan# 1592

Delta R.T. -0.01 min

Lab File: BF115876.D

Acq: 31 Jul 2019 19:53

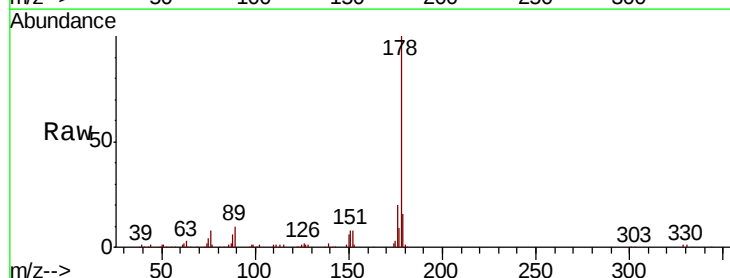
Tgt Ion:178 Resp: 103861

Ion Ratio Lower Upper

178 100

176 19.6 15.7 23.5

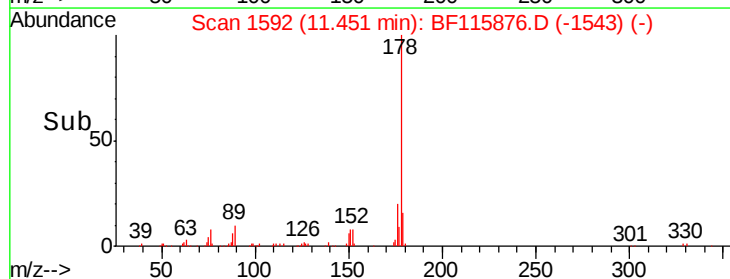
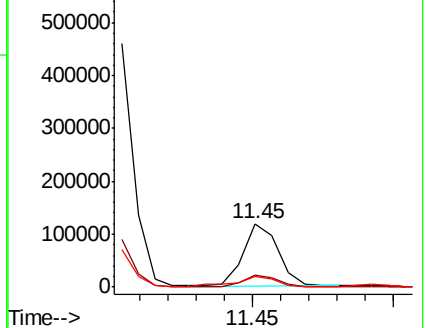
179 16.1 12.4 18.6

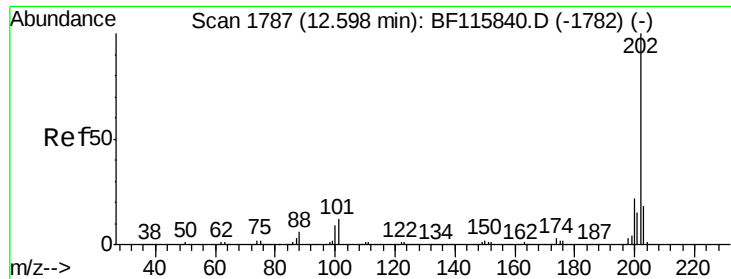


Abundance Ion 178.00 (177.70 to 178.70): E

Ion 176.00 (175.70 to 176.70): E

Ion 179.00 (178.70 to 179.70): E





#75

Fluoranthene

Concen: 34.542 ng

RT: 12.59 min Scan# 1786

Delta R.T. -0.01 min

Lab File: BF115876.D

Acq: 31 Jul 2019 19:53

Instrument :

BNA_F

ClientSampleId :

TP-4

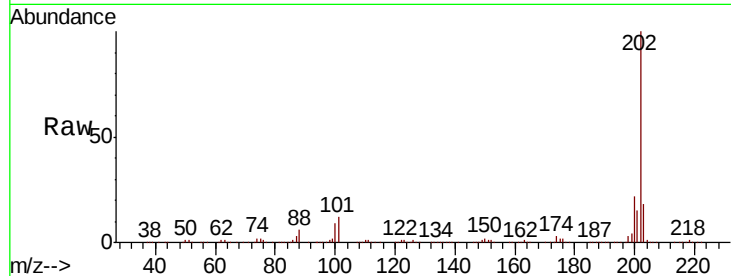
Tgt Ion: 202 Resp: 649705

Ion Ratio Lower Upper

202 100

101 11.9 0.0 31.5

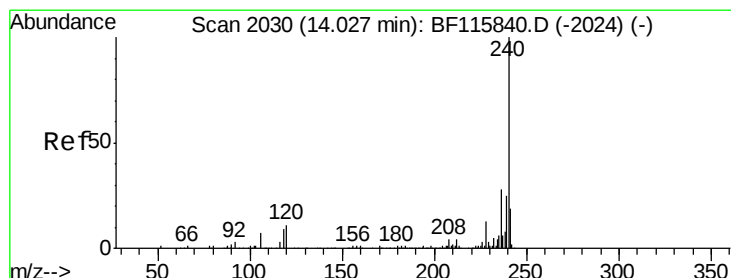
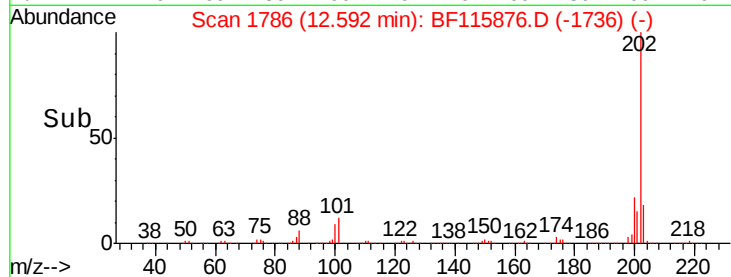
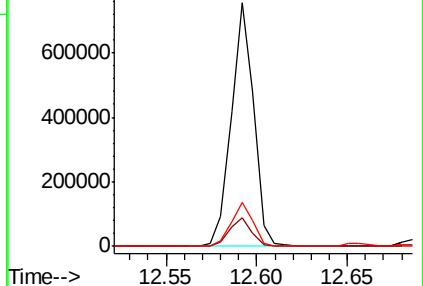
203 17.9 0.0 37.9



Abundance Ion 202.00 (201.70 to 202.70): E

Ion 101.00 (100.70 to 101.70): E

Ion 203.00 (202.70 to 203.70): E



#76

Chrysene-d12

Concen: 20.000 ng

RT: 14.02 min Scan# 2029

Delta R.T. -0.01 min

Lab File: BF115876.D

Acq: 31 Jul 2019 19:53

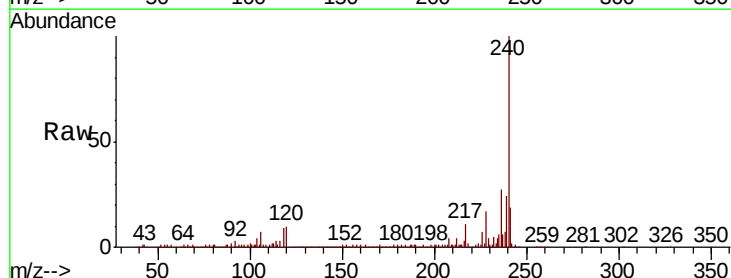
Tgt Ion: 240 Resp: 287590

Ion Ratio Lower Upper

240 100

120 9.9 8.5 12.7

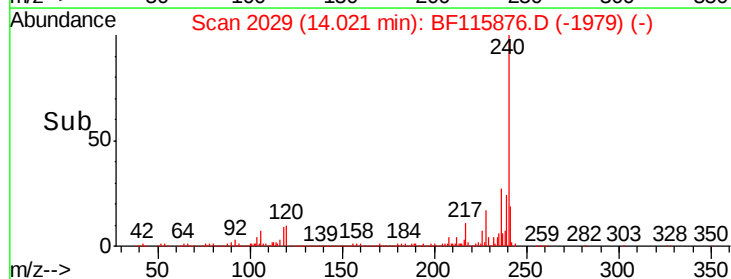
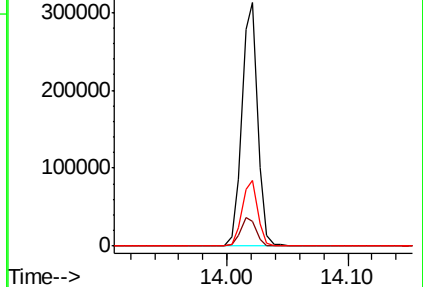
236 26.7 22.2 33.2

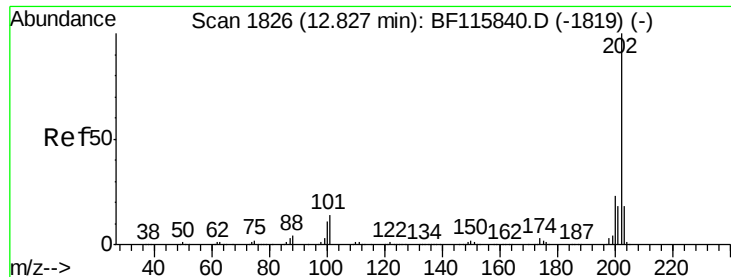


Abundance Ion 240.00 (239.70 to 240.70): E

Ion 120.00 (119.70 to 120.70): E

Ion 236.00 (235.70 to 236.70): E

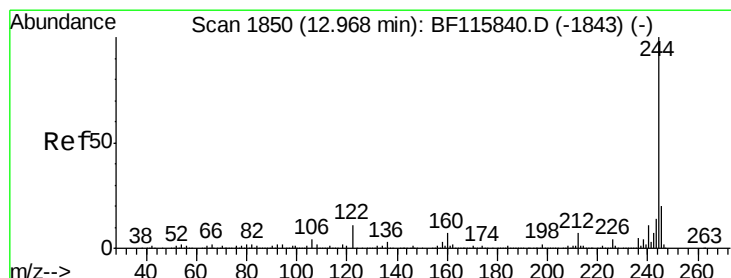
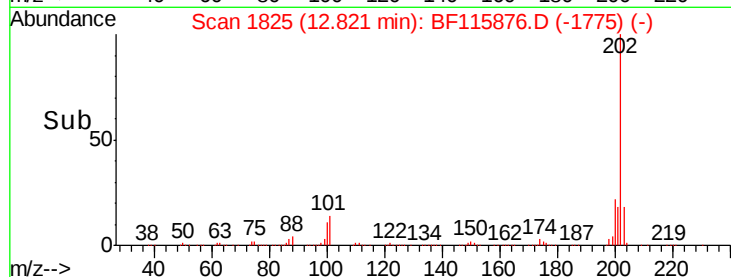
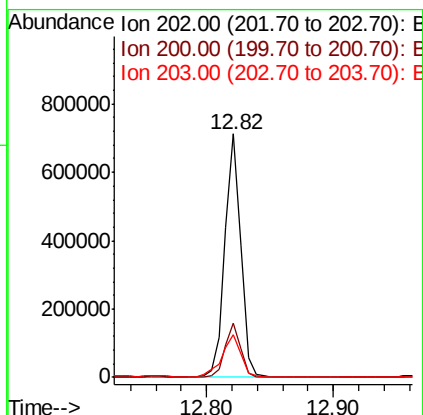
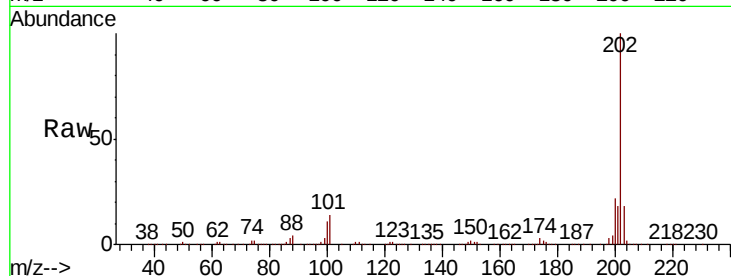




#78
Pyrene
Concen: 28.583 ng
RT: 12.82 min Scan# 1825
Delta R.T. -0.01 min
Lab File: BF115876.D
Acq: 31 Jul 2019 19:53

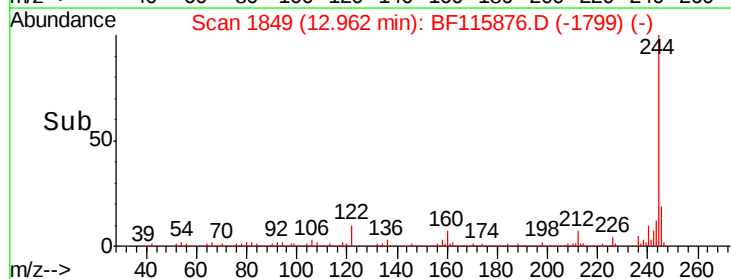
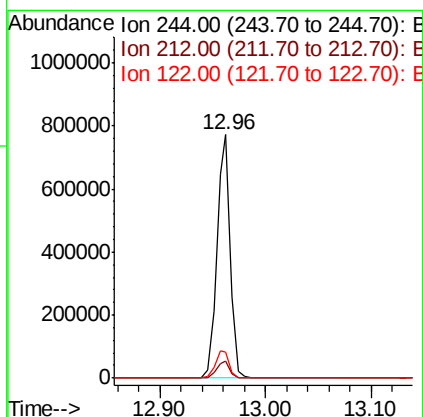
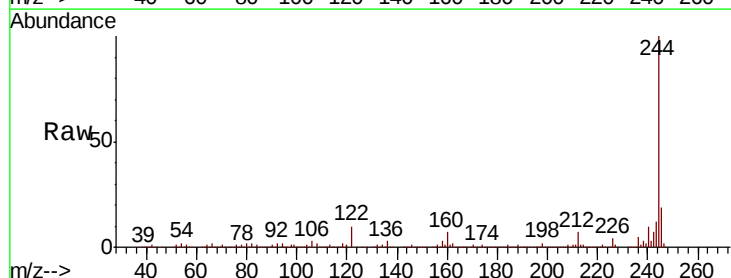
Instrument :
BNA_F
ClientSampleId :
TP-4

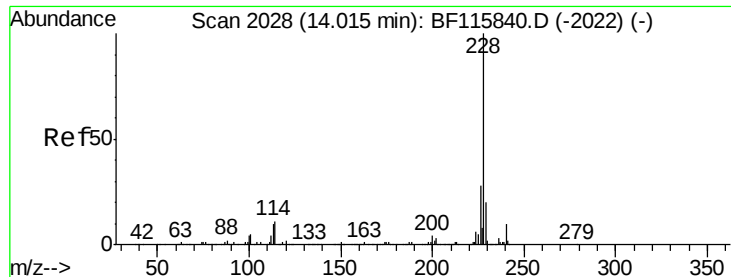
Tgt Ion: 202 Resp: 619652
Ion Ratio Lower Upper
202 100
200 22.5 18.2 27.2
203 17.7 14.3 21.5



#79
Terphenyl-d14
Concen: 50.380 ng
RT: 12.96 min Scan# 1849
Delta R.T. -0.01 min
Lab File: BF115876.D
Acq: 31 Jul 2019 19:53

Tgt Ion: 244 Resp: 687602
Ion Ratio Lower Upper
244 100
212 7.0 5.6 8.4
122 10.5 8.6 13.0

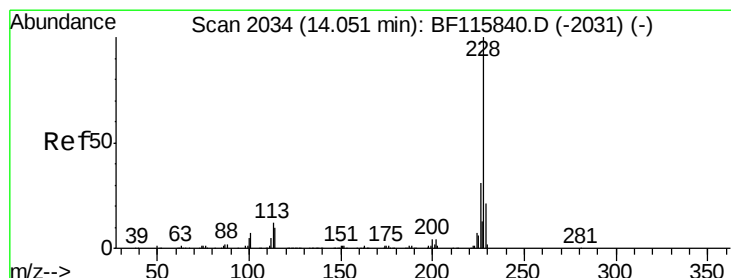
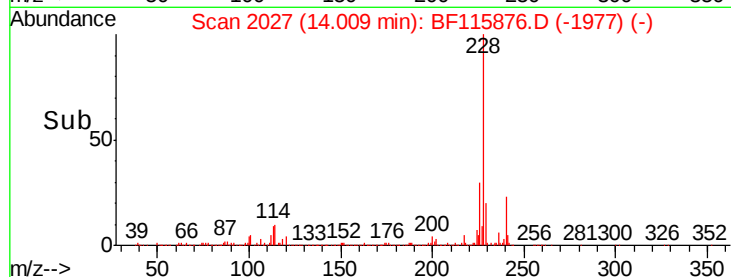
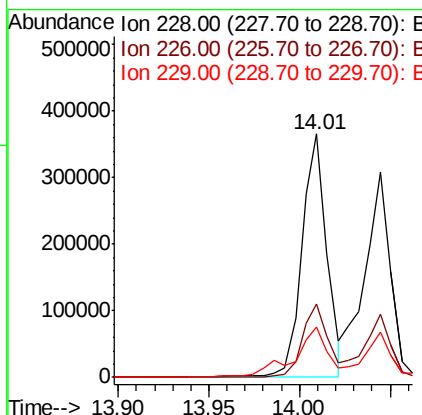
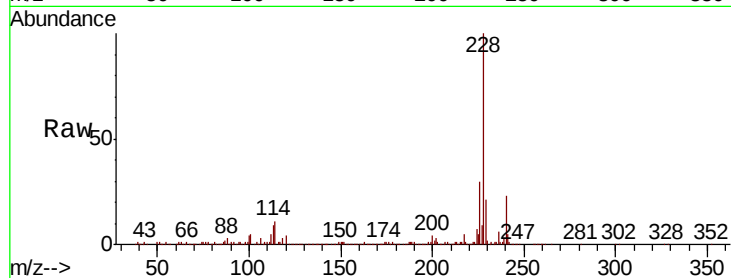




#81
Benzo(a)anthracene
Concen: 19.135 ng
RT: 14.01 min Scan# 2027
Delta R.T. -0.01 min
Lab File: BF115876.D
Acq: 31 Jul 2019 19:53

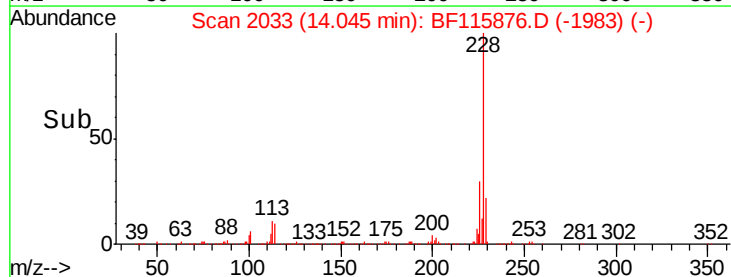
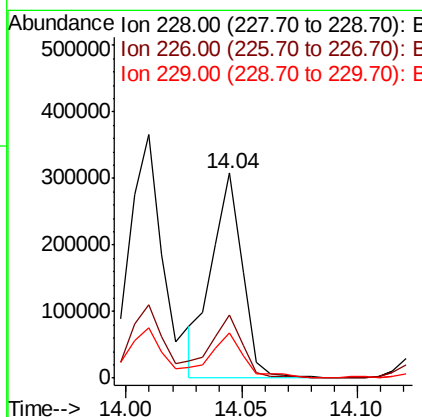
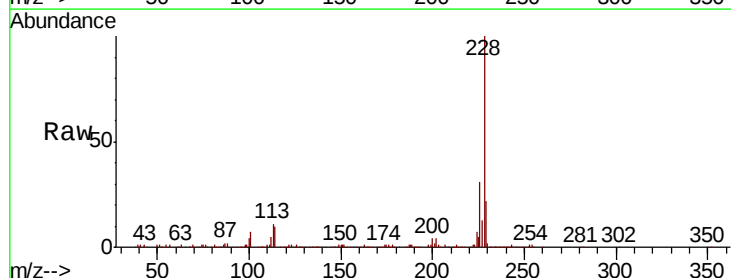
Instrument :
BNA_F
ClientSampleId :
TP-4

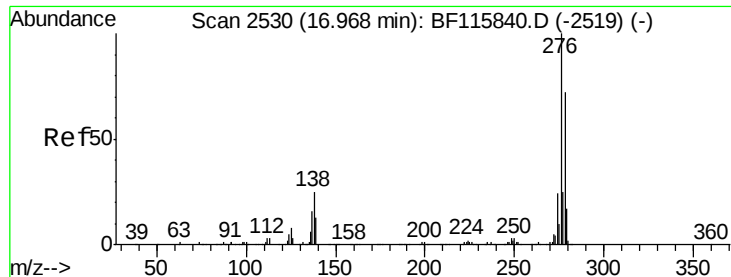
Tgt Ion	Ratio	Lower	Upper
228	100		
226	30.1	22.5	33.7
229	20.6	16.1	24.1



#83
Chrysene
Concen: 15.783 ng
RT: 14.04 min Scan# 2033
Delta R.T. -0.01 min
Lab File: BF115876.D
Acq: 31 Jul 2019 19:53

Tgt Ion	Ratio	Lower	Upper
228	100		
226	30.6	24.8	37.2
229	22.4	16.4	24.6

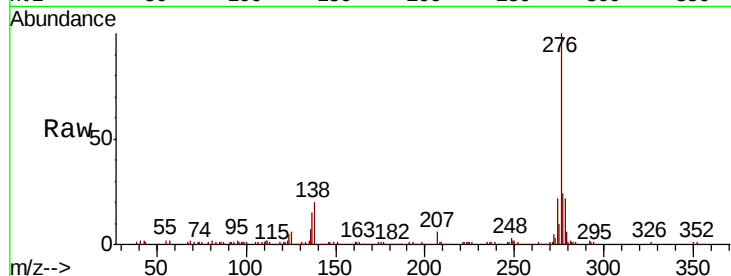




#86
 Indeno(1,2,3-cd)pyrene
 Concen: 14.715 ng
 RT: 16.96 min Scan# 2528
 Delta R.T. -0.01 min
 Lab File: BF115876.D
 Acq: 31 Jul 2019 19:53

Instrument :
 BNA_F
 ClientSampleId :
 TP-4

Tgt Ion	Ratio	Lower	Upper
276	100		
138	20.8	19.6	29.4
277	24.1	20.1	30.1

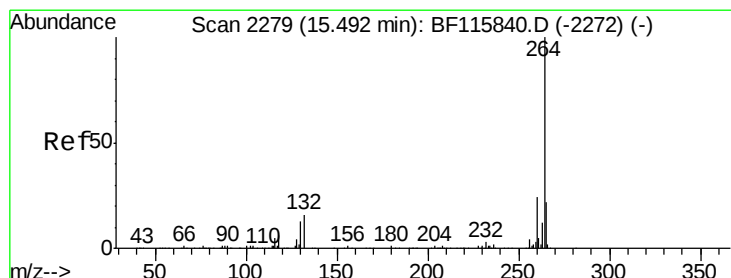
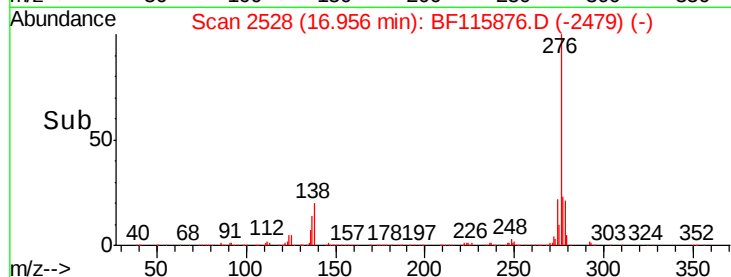
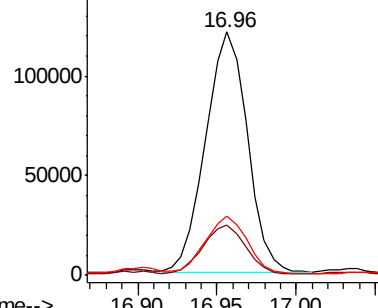


Abundance

Ion 276.00 (275.70 to 276.70): E

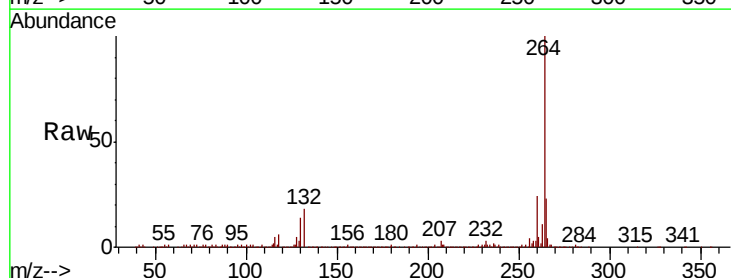
Ion 138.00 (137.70 to 138.70): E

Ion 277.00 (276.70 to 277.70): E



#87
 Perylene-d12
 Concen: 20.000 ng
 RT: 15.49 min Scan# 2278
 Delta R.T. -0.01 min
 Lab File: BF115876.D
 Acq: 31 Jul 2019 19:53

Tgt Ion	Ratio	Lower	Upper
264	100		
260	23.7	19.4	29.2
265	22.6	17.5	26.3

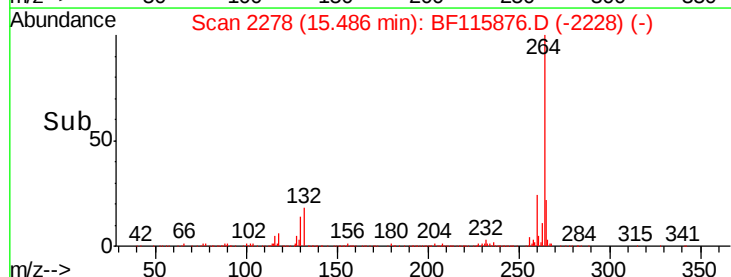
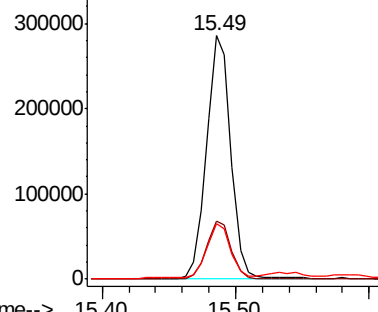


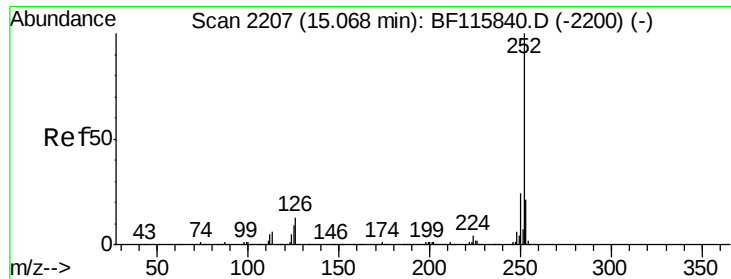
Abundance

Ion 264.00 (263.70 to 264.70): E

Ion 260.00 (259.70 to 260.70): E

Ion 265.00 (264.70 to 265.70): E

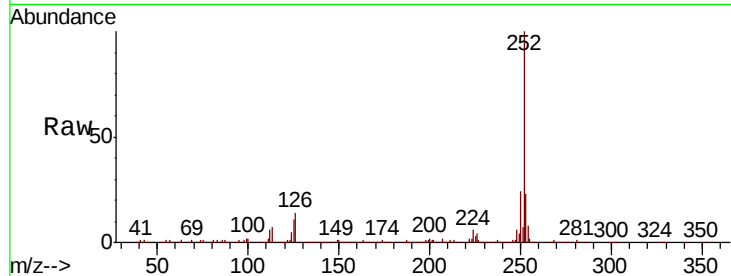




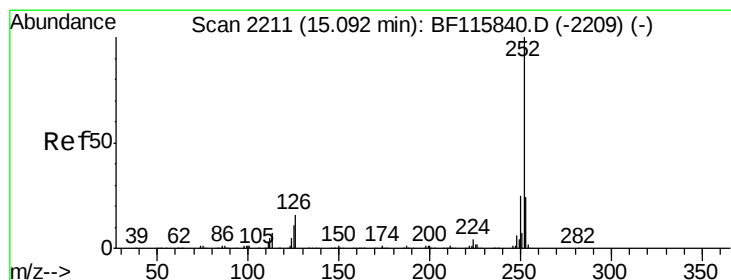
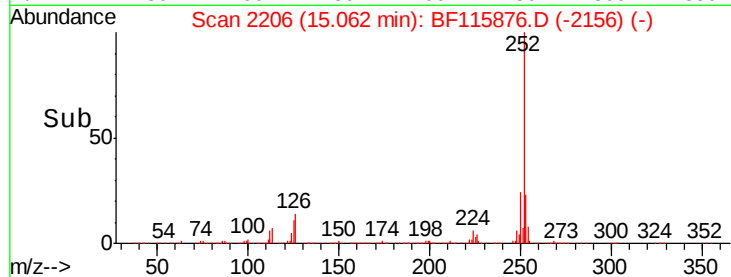
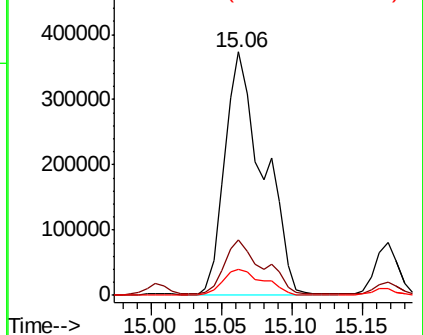
#88
Benzo(b)fluoranthene
Concen: 34.066 ng
RT: 15.06 min Scan# 2206
Delta R.T. -0.01 min
Lab File: BF115876.D
Acq: 31 Jul 2019 19:53

Instrument :
BNA_F
ClientSampleId :
TP-4

Tgt Ion	Ratio	Lower	Upper
252	100		
253	22.7	17.2	25.8
125	10.9	7.4	11.0

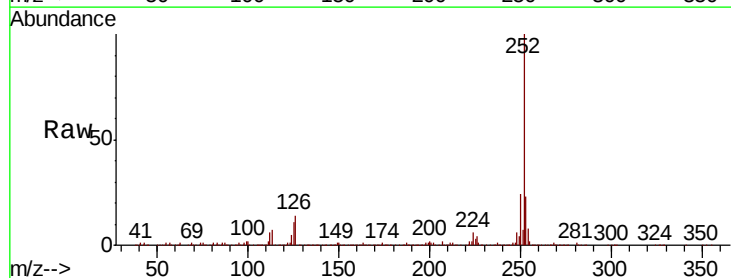


Abundance Ion 252.00 (251.70 to 252.70): E
Ion 253.00 (252.70 to 253.70): E
Ion 125.00 (124.70 to 125.70): E

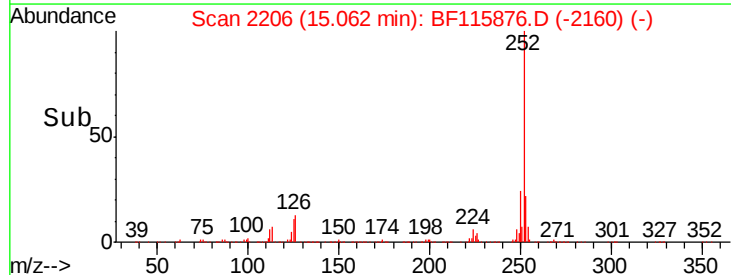
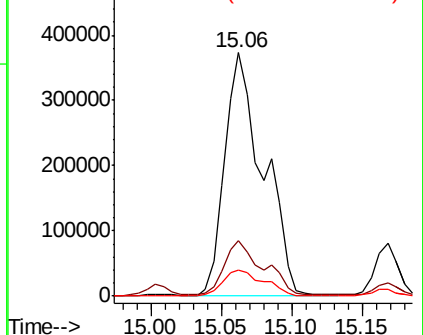


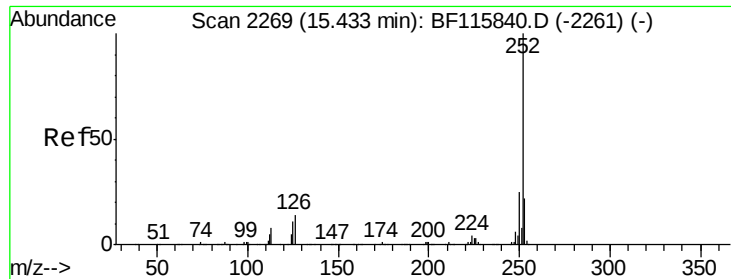
#89
Benzo(k)fluoranthene
Concen: 34.975 ng
RT: 15.06 min Scan# 2206
Delta R.T. -0.03 min
Lab File: BF115876.D
Acq: 31 Jul 2019 19:53

Tgt Ion	Ratio	Lower	Upper
252	100		
253	22.7	18.2	27.4
125	10.9	8.9	13.3



Abundance Ion 252.00 (251.70 to 252.70): E
Ion 253.00 (252.70 to 253.70): E
Ion 125.00 (124.70 to 125.70): E





#90

Benzo(a)pyrene

Concen: 21.329 ng

RT: 15.43 min Scan# 2268

Delta R.T. -0.01 min

Lab File: BF115876.D

Acq: 31 Jul 2019 19:53

Instrument :

BNA_F

ClientSampled :

TP-4

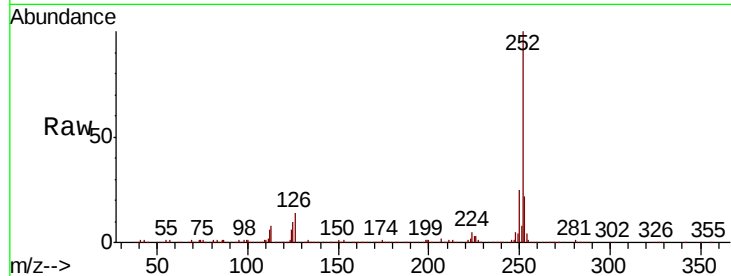
Tgt Ion:252 Resp: 397510

Ion Ratio Lower Upper

252 100

253 22.4 17.8 26.6

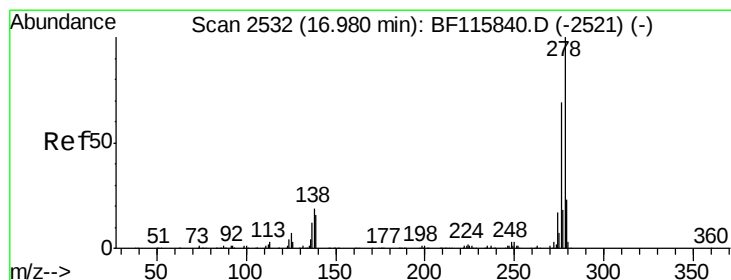
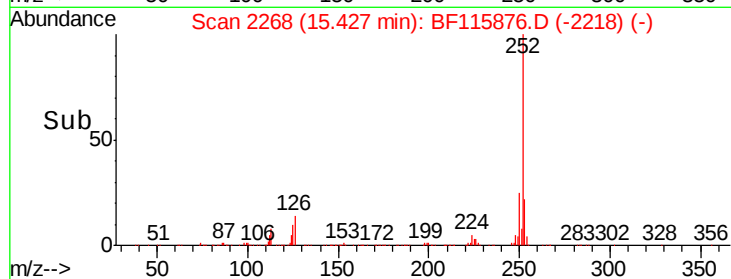
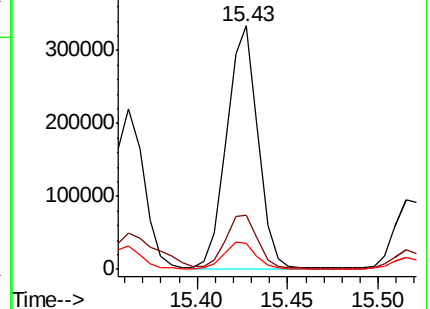
125 10.5 8.8 13.2



Abundance Ion 252.00 (251.70 to 252.70): E

Ion 253.00 (252.70 to 253.70): E

Ion 125.00 (124.70 to 125.70): E



#91

Dibenzo(a,h)anthracene

Concen: 2.684 ng

RT: 17.13 min Scan# 2558

Delta R.T. 0.15 min

Lab File: BF115876.D

Acq: 31 Jul 2019 19:53

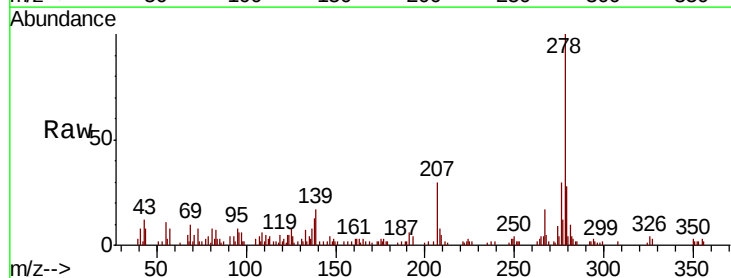
Tgt Ion:278 Resp: 43306

Ion Ratio Lower Upper

278 100

139 17.3 12.6 19.0

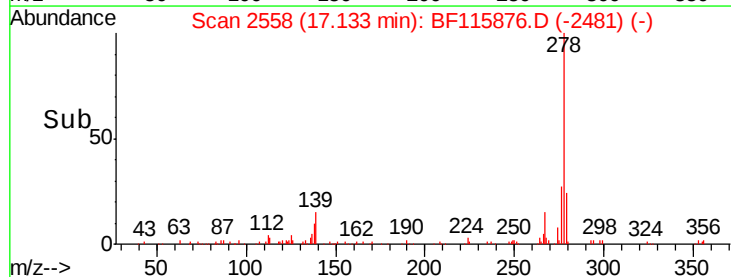
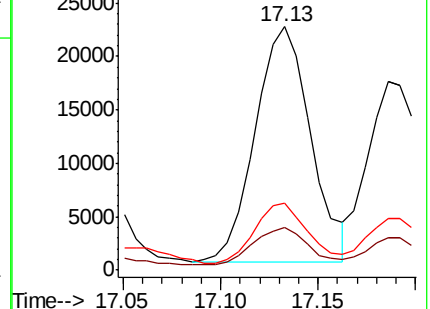
279 27.6 18.8 28.2

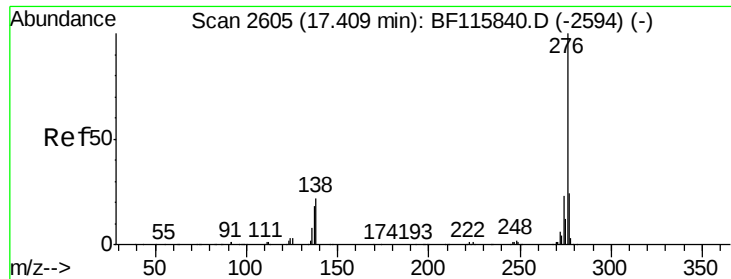


Abundance Ion 278.00 (277.70 to 278.70): E

Ion 139.00 (138.70 to 139.70): E

Ion 279.00 (278.70 to 279.70): E





#92

Benzo(g,h,i)perylene

Concen: 11.933 ng

RT: 17.40 min Scan# 2604

Delta R.T. -0.01 min

Lab File: BF115876.D

Acq: 31 Jul 2019 19:53

Instrument :

BNA_F

ClientSampleId :

TP-4

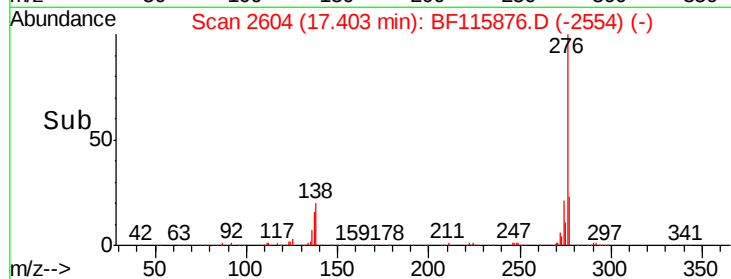
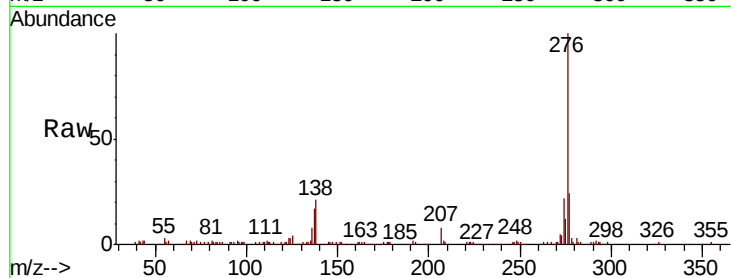
Tgt Ion: 276 Resp: 189053

Ion Ratio Lower Upper

276 100

277 24.0 19.5 29.3

138 20.7 17.8 26.8



Abundance Ion 276.00 (275.70 to 276.70): E

Ion 277.00 (276.70 to 277.70): E

Ion 138.00 (137.70 to 138.70): E

