

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF121218\
 Data File : BF111331.D
 Acq On : 12 Dec 2018 19:43
 Operator : JU/SJ
 Sample : J6214-23
 Misc :
 ALS Vial : 11 Sample Multiplier: 1

Instrument :
 BNA_F
 ClientSampleId :
 SB-3(0-2)

Manual Integrations
 APPROVED

Sohil
 12/13/2018 6:06:15 PM

Quant Time: Dec 13 03:36:35 2018
 Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF121218.M
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
 QLast Update : Wed Dec 12 13:16:52 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.79	152	318578	20.00	ng	0.00
21) Naphthalene-d8	8.07	136	1212453	20.00	ng	0.00
39) Acenaphthene-d10	9.83	164	486960	20.00	ng	0.00
64) Phenanthrene-d10	11.32	188	672295	20.00	ng	0.00
76) Chrysene-d12	13.96	240	441533	20.00	ng	0.00
87) Perylene-d12	15.39	264	340712	20.00	ng	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	5.41	112	1747326	92.75	ng	0.00
7) Phenol-d6	6.43	99	2267501	89.27	ng	0.00
23) Nitrobenzene-d5	7.35	82	1410123	65.55	ng	-0.01
42) 2,4,6-Tribromophenol	10.62	330	301763	70.30	ng	0.00
45) 2-Fluorobiphenyl	9.15	172	1975347	65.13	ng	0.00
79) Terphenyl-d14	12.90	244	1230090	61.32	ng	0.00
Target Compounds						
10) Phenol	6.44	94	157583	5.477	ng	Qvalue 91
31) Naphthalene	8.09	128	201190	3.562	ng	94
37) 2-Methylnaphthalene	8.79	142	93243	2.553	ng	98
38) 1-Methylnaphthalene	8.89	142	99813	2.832	ng	98
50) Dimethylphthalate	9.54	163	261798	7.476	ng	97
52) Acenaphthene	9.86	154	360217	12.285	ng	98
55) Dibenzofuran	10.03	168	290395	6.860	ng	93
58) Fluorene	10.37	166	329260	10.874	ng	100
71) Phenanthrene	11.35	178	3805386	109.509	ng	100
72) Anthracene	11.39	178	1025683	28.988	ng	96
73) Carbazole	11.54	167	269111	7.356	ng	94
75) Fluoranthene	12.54	202	4276309	126.058	ng	98
78) Pvrene	12.77	202	4177447	122.591	ng	100
80) Butylbenzylphthalate	13.37	149	37677	2.303	ng	95
81) Benzo(a)anthracene	13.94	228	1959184	79.305	ng	98
83) Chrysene	13.99	228	1777741	70.532	ng	98
86) Indeno(1,2,3-cd)pvrene	16.81	276	706708	35.849	ng	92
88) Benzo(b)fluoranthene	14.99	252	1610890m	83.147	ng	
89) Benzo(k)fluoranthene	15.01	252	625071m	32.322	ng	
90) Benzo(a)pvrene	15.34	252	1224956	67.905	ng	98
91) Dibenzo(a,h)anthracene	16.82	278	185211	12.340	ng	# 91
92) Benzo(g,h,i)perylene	17.24	276	675671	45.029	ng	96

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

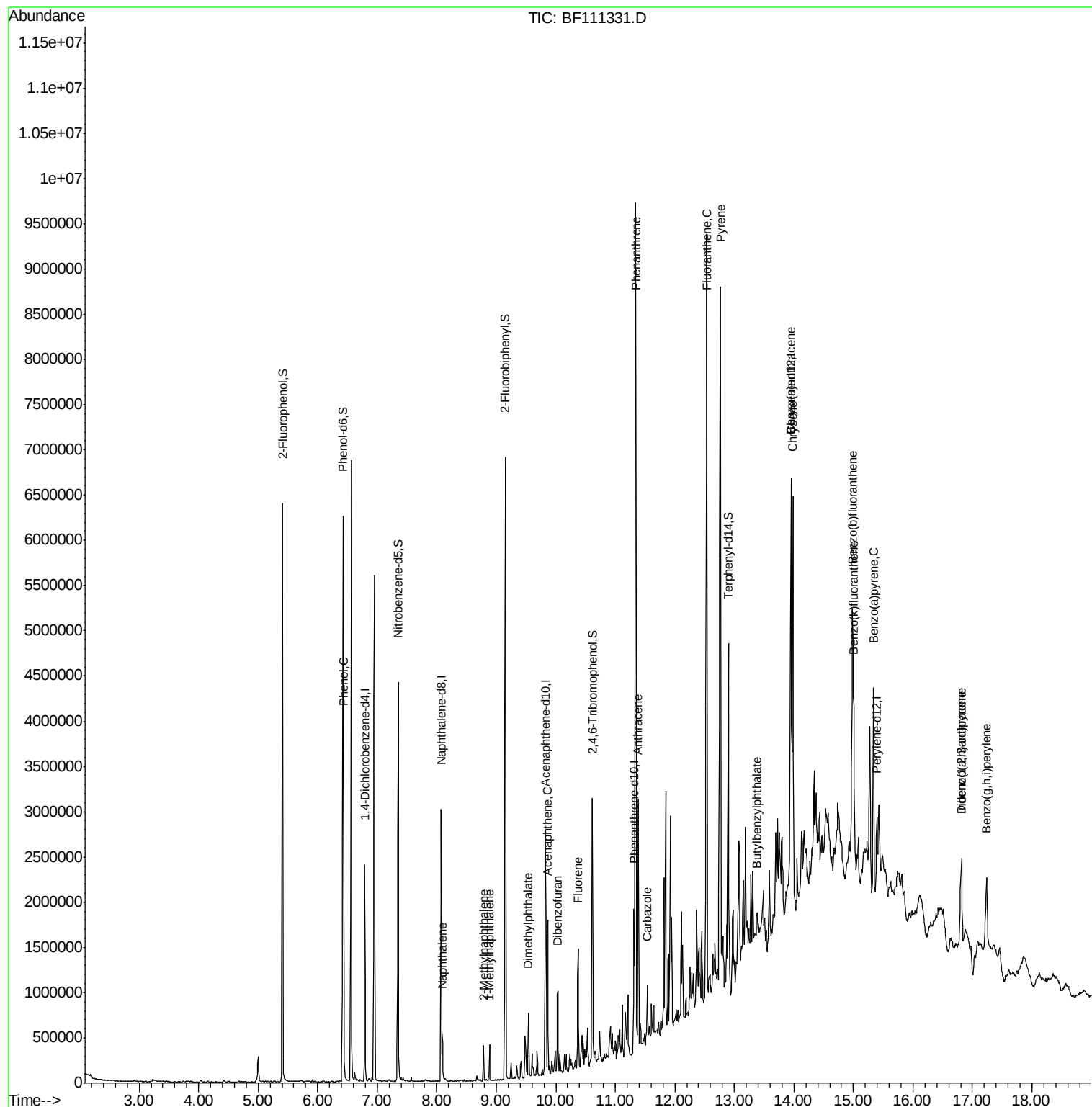
Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF121218\
Data File : BF111331.D
Acq On : 12 Dec 2018 19:43
Operator : JU/SJ
Sample : J6214-23
Misc :
ALS Vial : 11 Sample Multiplier: 1

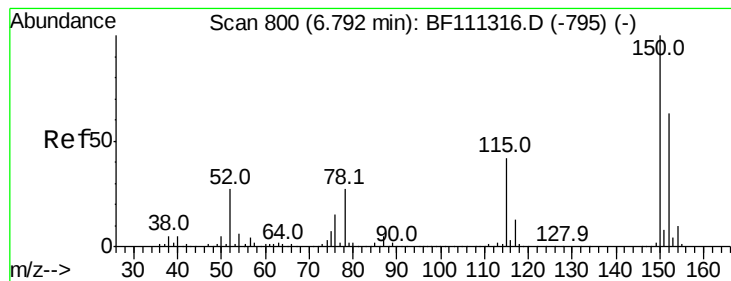
Instrument :
BNA_F
ClientSampled :
SB-3(0-2)

Manual Integrations
APPROVED

Sohil
12/13/2018 6:06:15 PM

Quant Time: Dec 13 03:36:35 2018
Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF121218.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
QLast Update : Wed Dec 12 13:16:52 2018
Response via : Initial Calibration





#1

1,4-Dichlorobenzene-d4

Concen: 20.000 ng

RT: 6.79 min Scan# 800

Delta R.T. -0.00 min

Lab File: BF111331.D

Acq: 12 Dec 2018 19:43

Instrument :

BNA_F

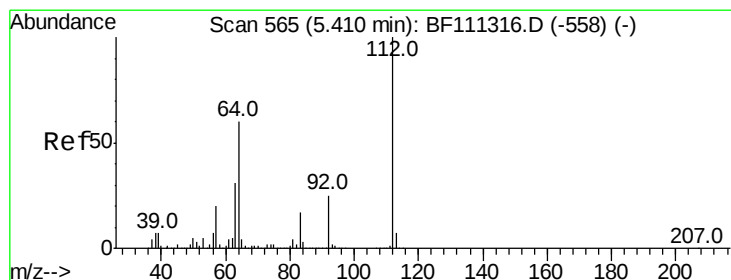
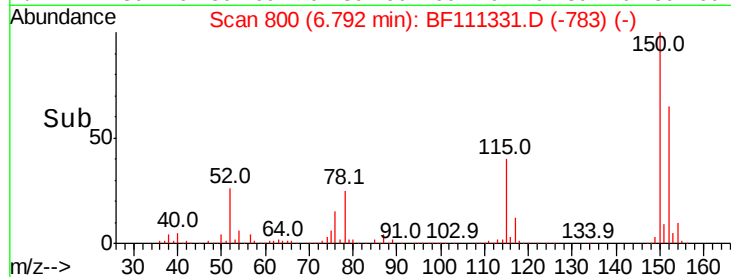
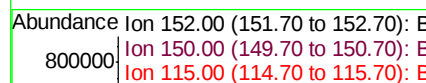
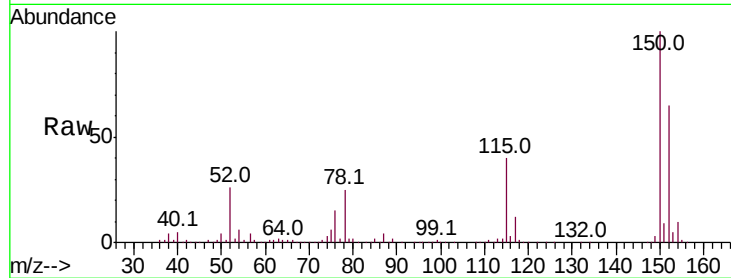
ClientSampled :

SB-3(0-2)

Tot Ion:	152	Resp:	318578
Ion Ratio	Lower	Upper	
152	100		
150	153.4	126.6	189.8
115	61.1	50.7	76.1

Manual Integrations
APPROVED

Sohil
12/13/2018 6:06:15 PM



#5

2-Fluorophenol

Concen: 92.749 ng

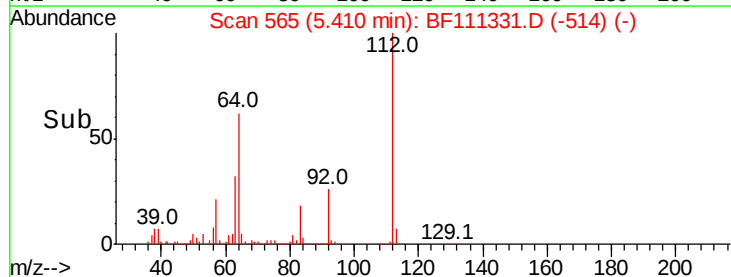
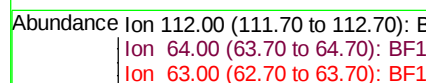
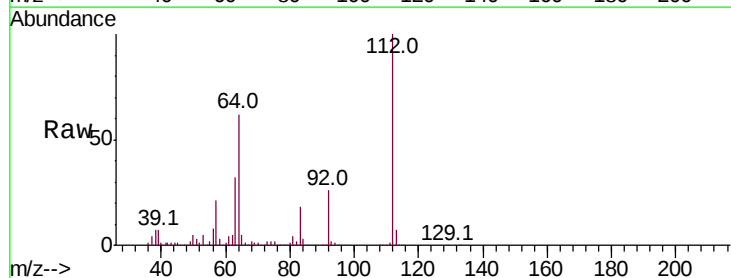
RT: 5.41 min Scan# 565

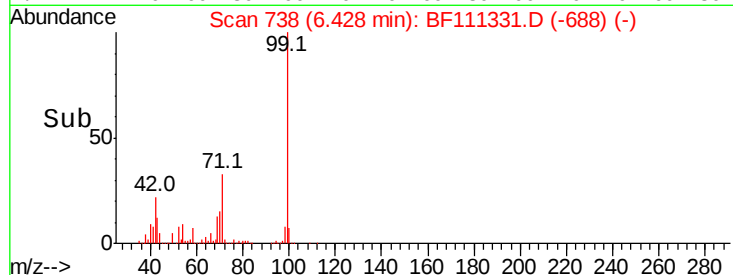
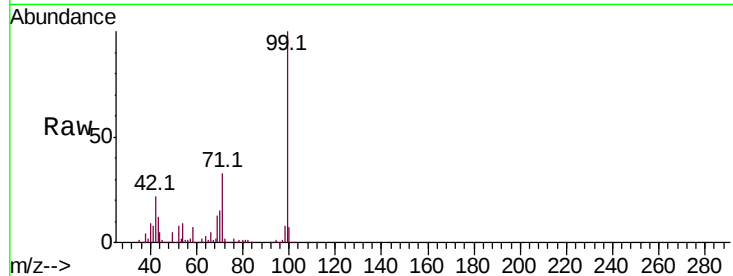
Delta R.T. 0.00 min

Lab File: BF111331.D

Acq: 12 Dec 2018 19:43

Tgt Ion:	112	Resp:	1747326
Ion Ratio	Lower	Upper	
112	100		
64	62.5	51.8	77.6
63	32.5	26.8	40.2





#7

Phenol-d6

Concen: 89.270 ng

RT: 6.43 min Scan# 738

Delta R.T. -0.01 min

Lab File: BF111331.D

Acq: 12 Dec 2018 19:43

Tot Ion:	99	Resp:	2267501
Ion	Ratio	Lower	Upper
99	100		
42	22.5	17.4	26.0
71	33.3	26.1	39.1

Instrument :

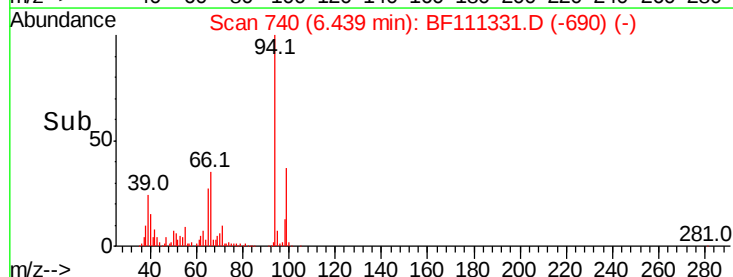
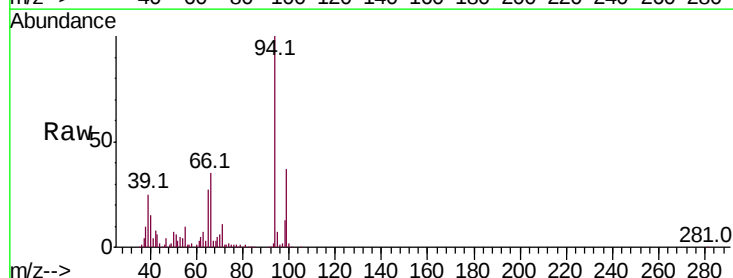
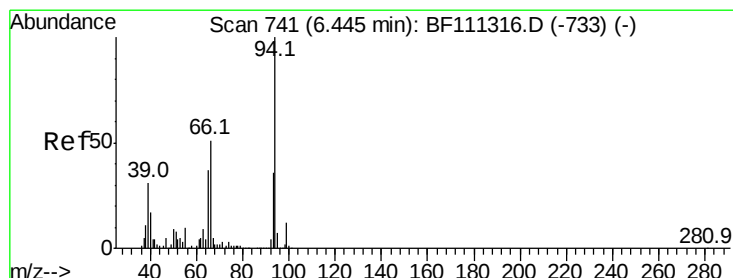
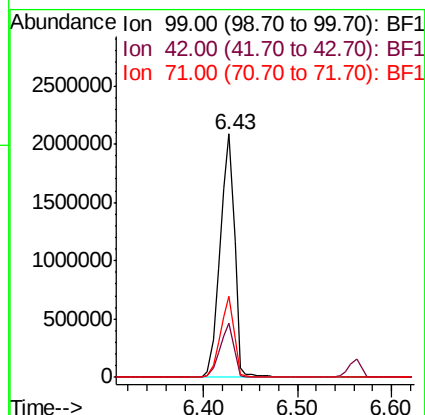
BNA_F

ClientSampled :

SB-3(0-2)

Manual Integrations
APPROVED

Sohil
12/13/2018 6:06:15 PM



#10

Phenol

Concen: 5.477 ng

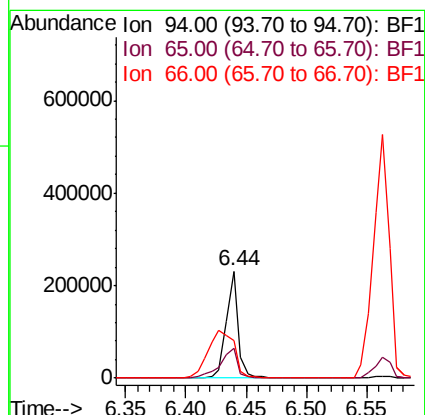
RT: 6.44 min Scan# 740

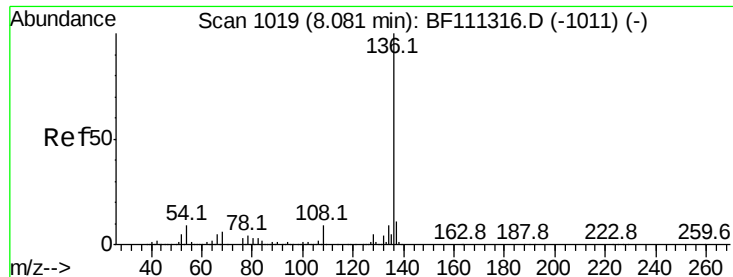
Delta R.T. -0.01 min

Lab File: BF111331.D

Acq: 12 Dec 2018 19:43

Tgt Ion:	94	Resp:	157583
Ion	Ratio	Lower	Upper
94	100		
65	27.3	11.7	51.7
66	34.7	21.0	61.0





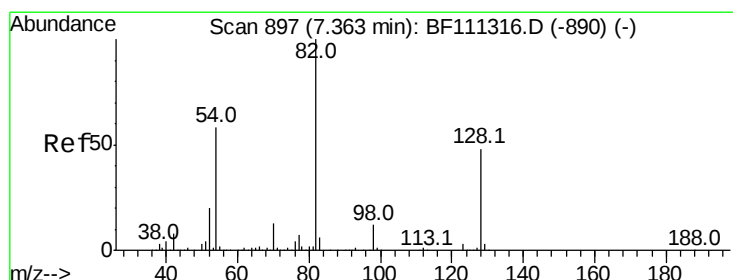
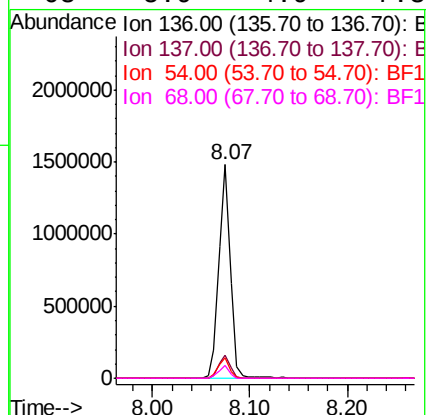
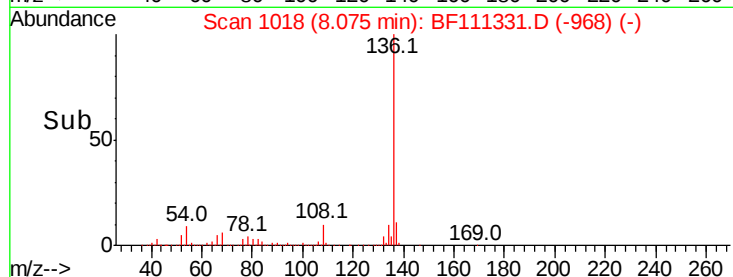
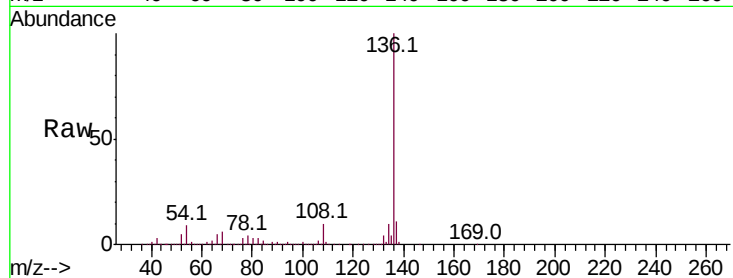
#21
Naphthalene-d8
Concen: 20.000 ng
RT: 8.07 min Scan# 1018
Delta R.T. -0.01 min
Lab File: BF111331.D
Acq: 12 Dec 2018 19:43

Instrument :
BNA_F
ClientSampleId :
SB-3(0-2)

Tot Ion	Ratio	Lower	Upper
136	100		
137	11.1	9.1	13.7
54	9.5	7.7	11.5
68	5.9	4.9	7.3

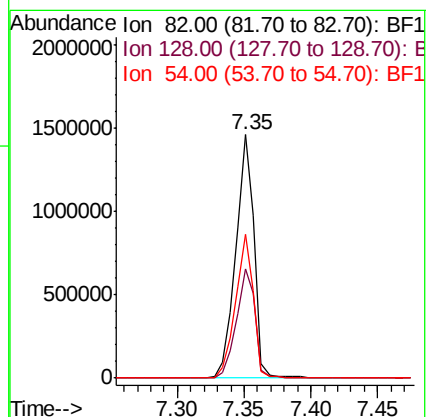
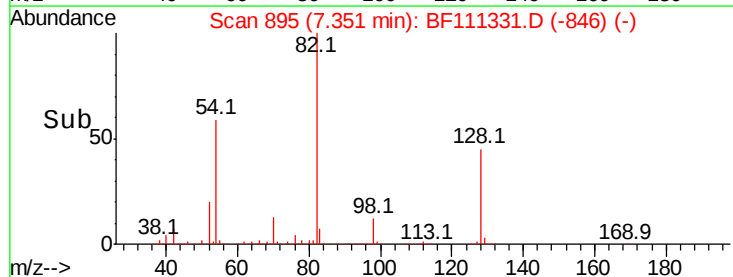
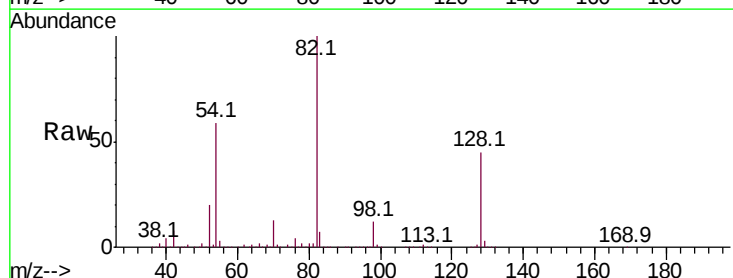
Manual Integrations
APPROVED

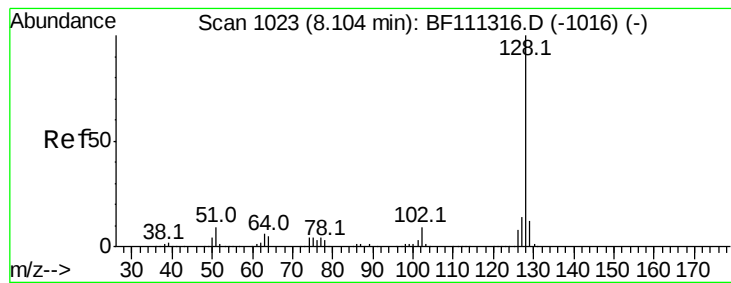
Sohil
12/13/2018 6:06:15 PM



#23
Nitrobenzene-d5
Concen: 65.552 ng
RT: 7.35 min Scan# 895
Delta R.T. -0.01 min
Lab File: BF111331.D
Acq: 12 Dec 2018 19:43

Tgt Ion	Ratio	Lower	Upper
82	100		
128	44.7	37.4	56.2
54	59.0	47.6	71.4





#31

Naphthalene

Concen: 3.562 ng

RT: 8.09 min Scan# 1021

Delta R.T. -0.01 min

Lab File: BF111331.D

Acq: 12 Dec 2018 19:43

Instrument :

BNA_F

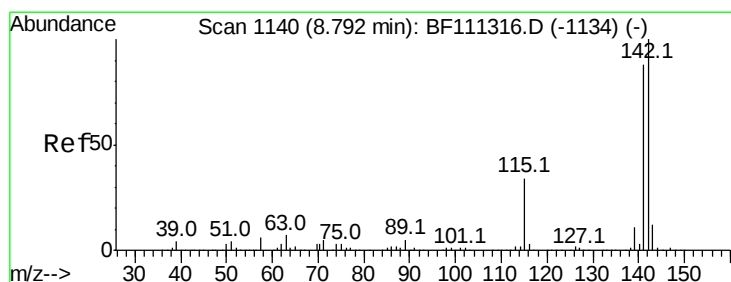
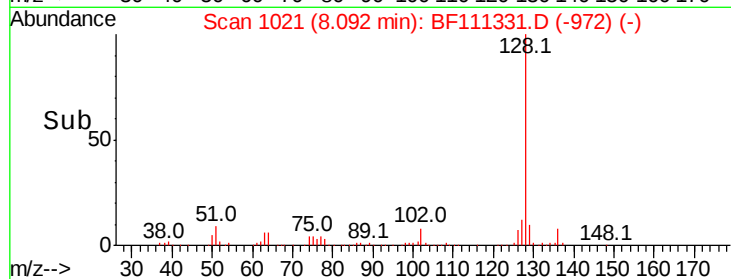
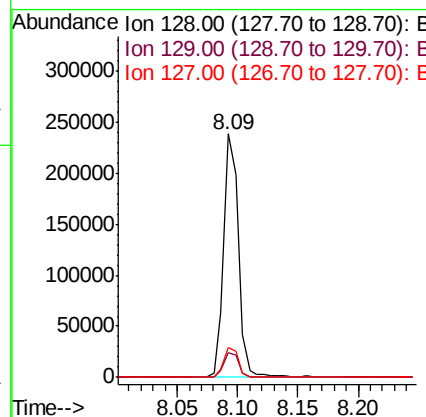
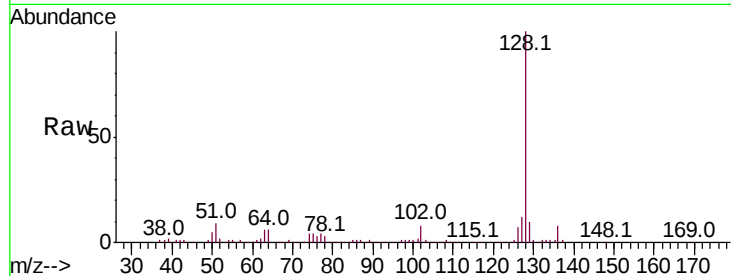
ClientSampleId :

SB-3(0-2)

Tot Ion:	128	Resp:	201190
Ion Ratio	Lower	Upper	
128	100		
129	10.2	9.8	14.8
127	12.2	12.0	18.0

Manual Integrations
APPROVED

Sohil
12/13/2018 6:06:15 PM



#37

2-Methylnaphthalene

Concen: 2.553 ng

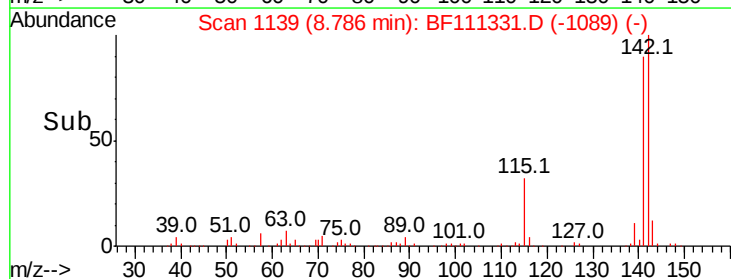
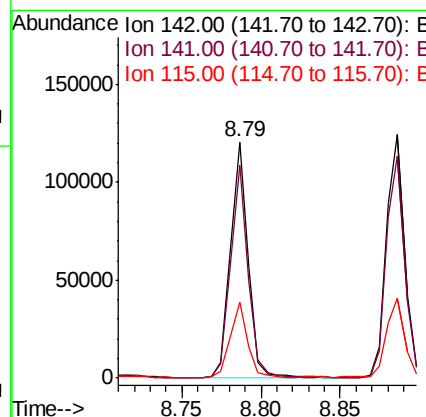
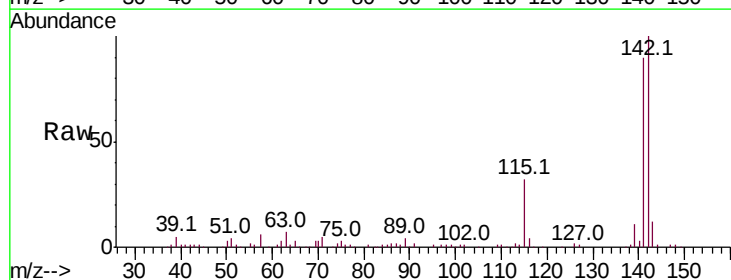
RT: 8.79 min Scan# 1139

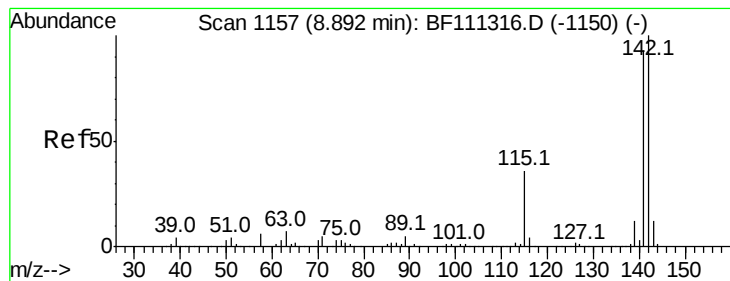
Delta R.T. -0.01 min

Lab File: BF111331.D

Acq: 12 Dec 2018 19:43

Tgt Ion:	142	Resp:	93243
Ion Ratio	Lower	Upper	
142	100		
141	90.3	70.6	105.8
115	32.1	27.0	40.6





#38

1-Methylnaphthalene

Concen: 2.832 ng

RT: 8.89 min Scan# 1156

Delta R.T. -0.01 min

Lab File: BF111331.D

Acq: 12 Dec 2018 19:43

Instrument :

BNA_F

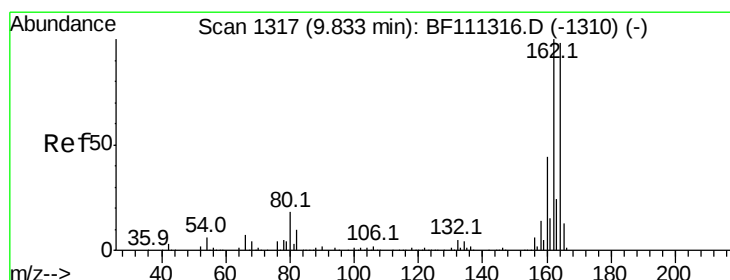
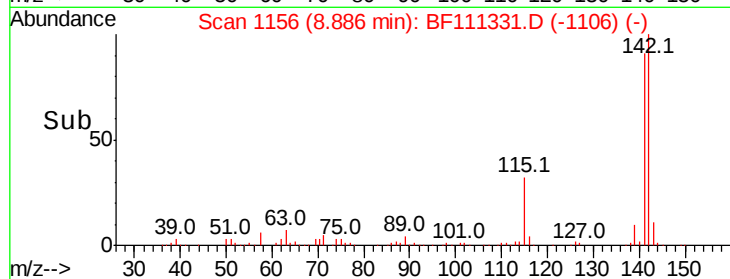
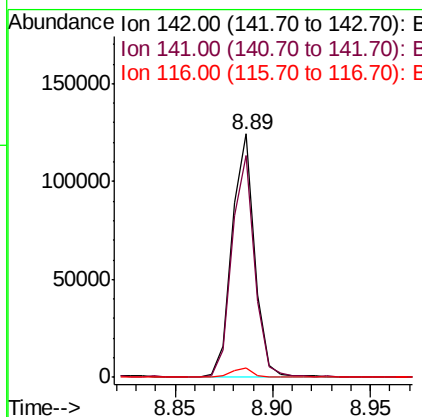
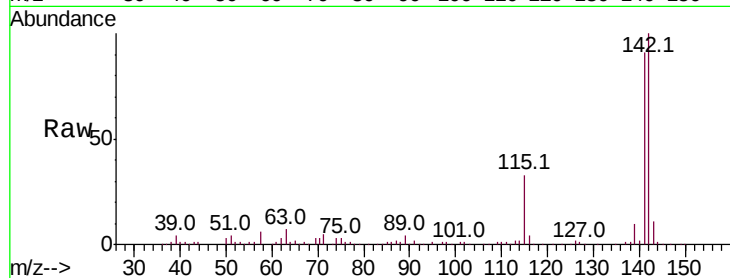
ClientSampleId :

SB-3(0-2)

Tot Ion:	142	Resp:	99813
Ion Ratio	Lower	Upper	
142	100		
141	90.9	74.2	111.4
116	3.9	2.9	4.3

Manual Integrations
APPROVED

Sohil
12/13/2018 6:06:15 PM



#39

Acenaphthene-d10

Concen: 20.000 ng

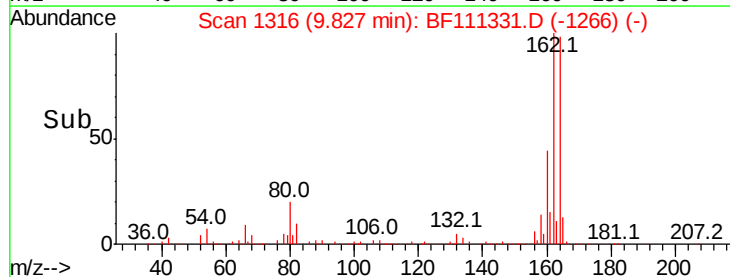
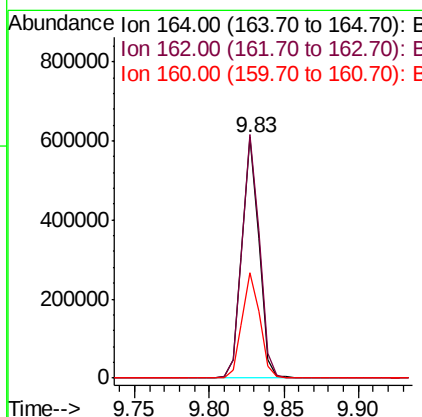
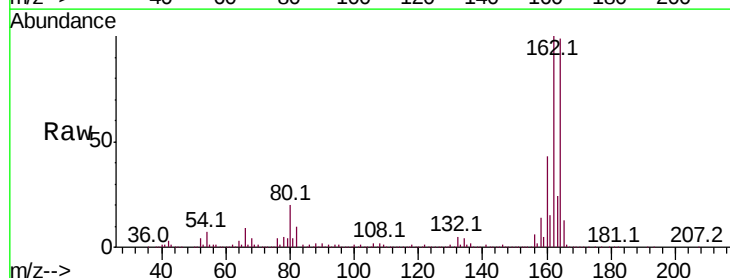
RT: 9.83 min Scan# 1316

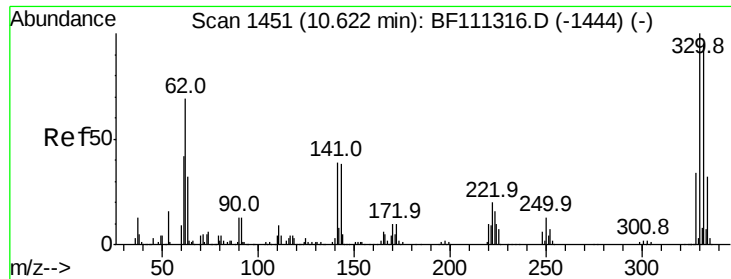
Delta R.T. -0.01 min

Lab File: BF111331.D

Acq: 12 Dec 2018 19:43

Tgt Ion:	164	Resp:	486960
Ion Ratio	Lower	Upper	
164	100		
162	101.1	81.4	122.0
160	43.9	35.7	53.5





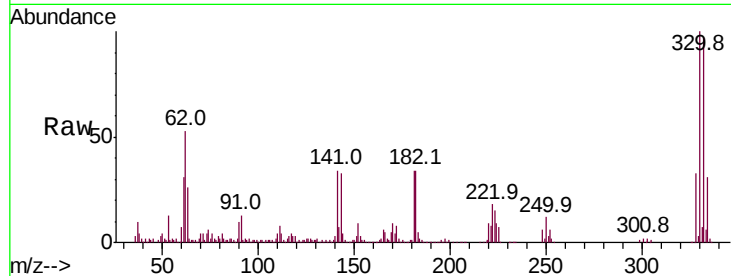
#42
 2,4,6-Tribromophenol
 Concen: 70.298 ng
 RT: 10.62 min Scan# 1450
 Delta R.T. -0.01 min
 Lab File: BF111331.D
 Acq: 12 Dec 2018 19:43

Instrument :
 BNA_F
 ClientSampled :
 SB-3(0-2)

Tot Ion	Ratio	Lower	Upper
330	100		
332	95.0	76.0	114.0
141	40.3	31.0	46.6

Manual Integrations
 APPROVED

Sohil
 12/13/2018 6:06:15 PM

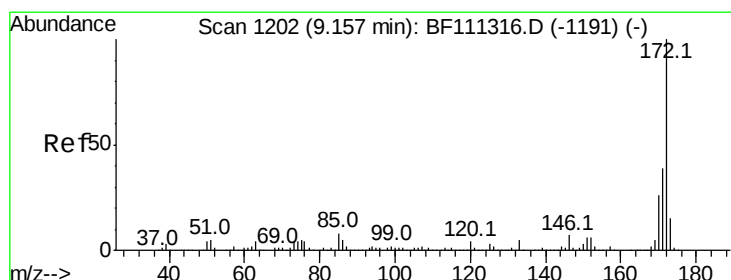
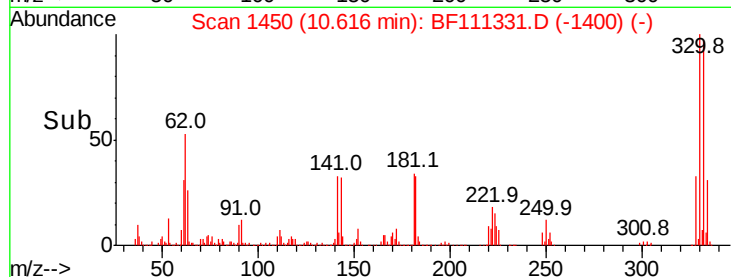
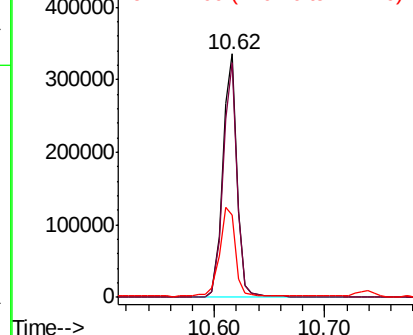


Abundance

Ion 329.80 (329.50 to 330.50): E

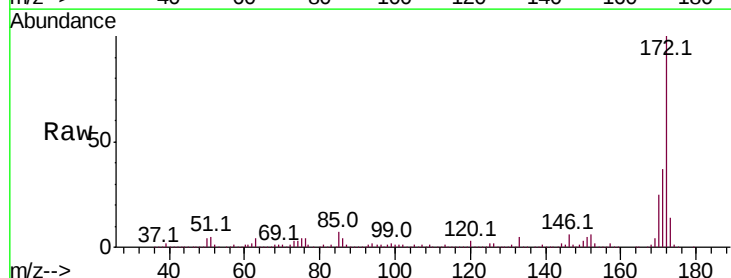
Ion 331.80 (331.50 to 332.50): E

Ion 141.00 (140.70 to 141.70): E



#45
 2-Fluorobiphenyl
 Concen: 65.126 ng
 RT: 9.15 min Scan# 1201
 Delta R.T. -0.01 min
 Lab File: BF111331.D
 Acq: 12 Dec 2018 19:43

Tgt Ion	Ratio	Lower	Upper
172	100		
171	37.0	33.0	49.4
170	24.6	22.3	33.5

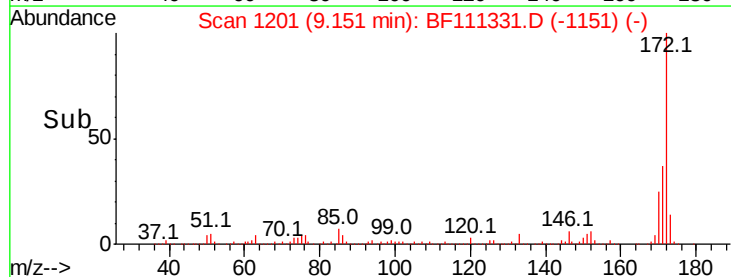
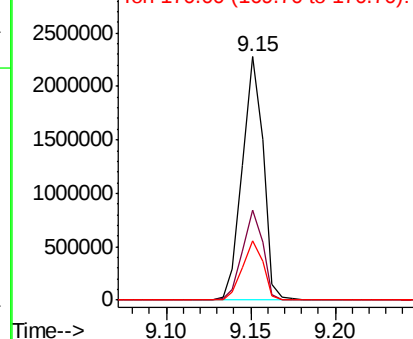


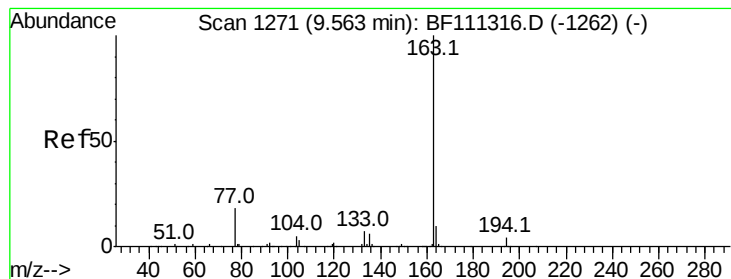
Abundance

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





#50

Dimethylphthalate

Concen: 7.476 ng

RT: 9.54 min Scan# 1267

Delta R.T. -0.02 min

Lab File: BF111331.D

Acq: 12 Dec 2018 19:43

Instrument :

BNA_F

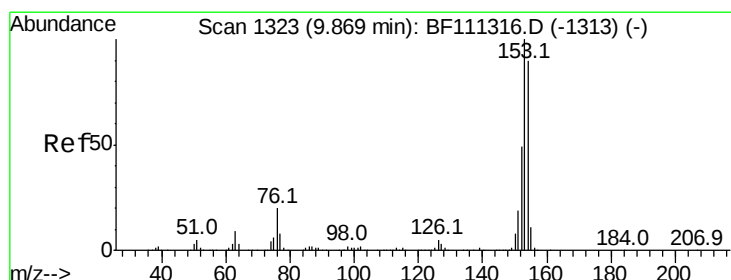
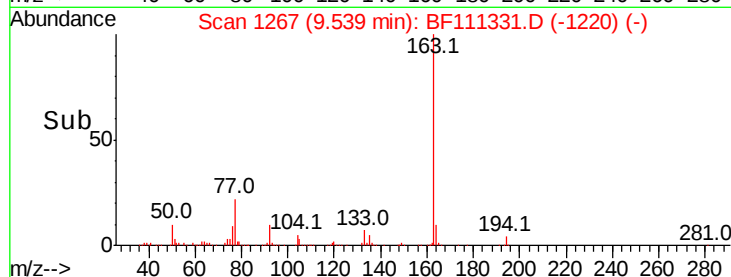
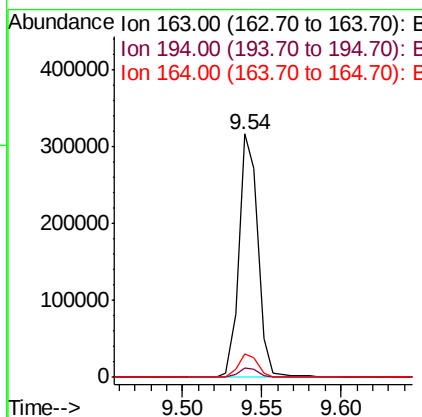
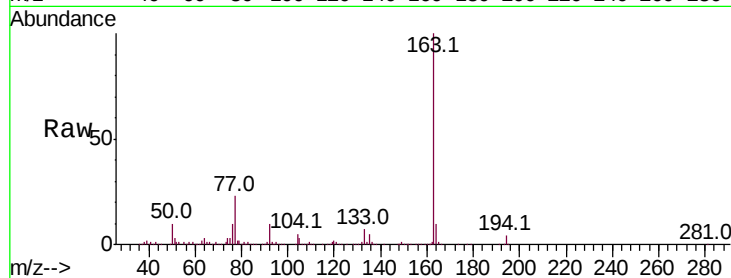
ClientSampleId :

SB-3(0-2)

Tot Ion	163	Resp	261798
Ion Ratio	Lower	Upper	
163	100		
194	4.0	3.0	4.6
164	9.6	8.9	13.3

Manual Integrations
APPROVED

Sohil
12/13/2018 6:06:15 PM



#52

Acenaphthene

Concen: 12.285 ng

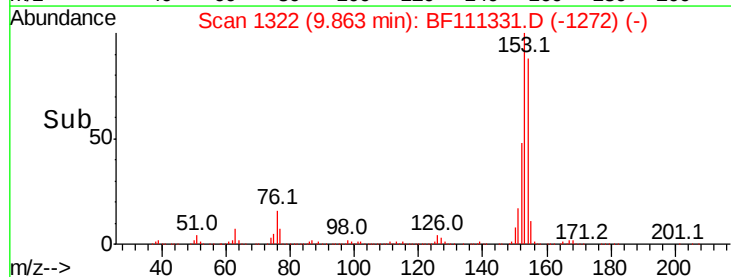
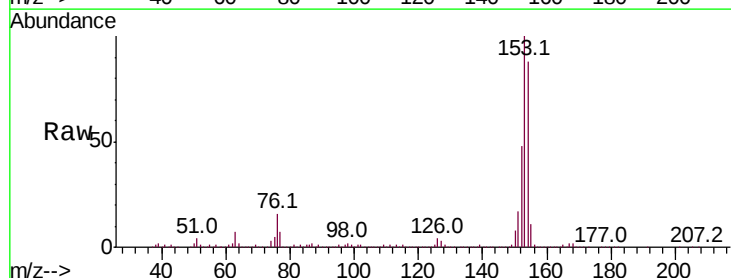
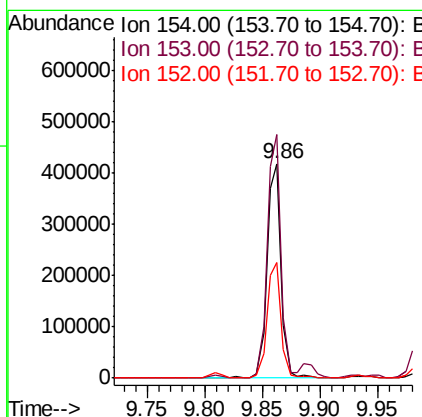
RT: 9.86 min Scan# 1322

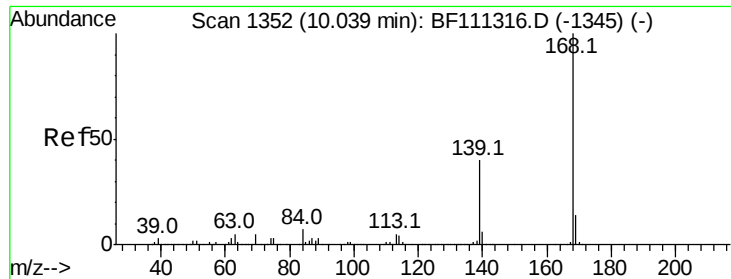
Delta R.T. -0.01 min

Lab File: BF111331.D

Acq: 12 Dec 2018 19:43

Tgt Ion	154	Resp	360217
Ion Ratio	Lower	Upper	
154	100		
153	113.6	87.8	131.8
152	54.2	43.4	65.2





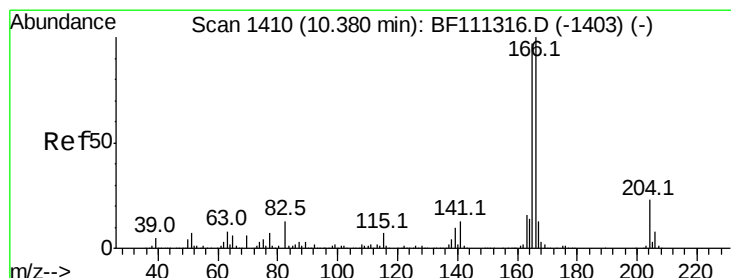
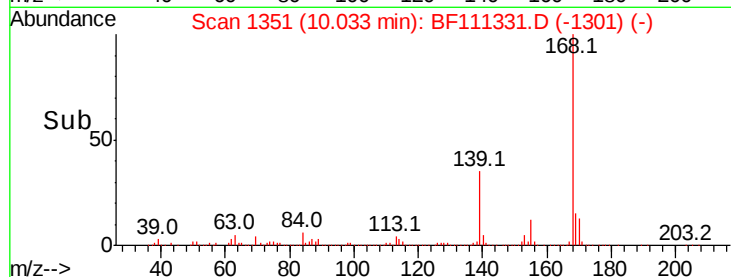
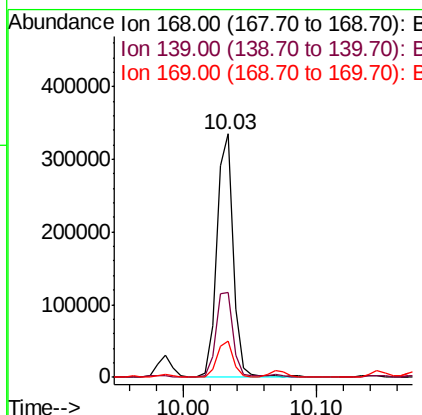
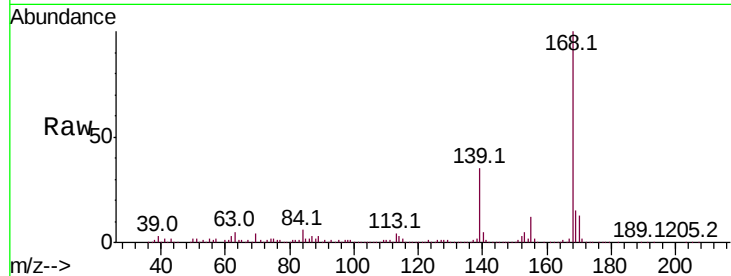
#55
Dibenzofuran
Concen: 6.860 ng
RT: 10.03 min Scan# 1351
Delta R.T. -0.01 min
Lab File: BF111331.D
Acq: 12 Dec 2018 19:43

Instrument :
BNA_F
ClientSampleId :
SB-3(0-2)

Tot Ion	Ratio	Resp	Lower	Upper
168	100	290395		
139	34.9		32.6	49.0
169	15.0		11.8	17.6

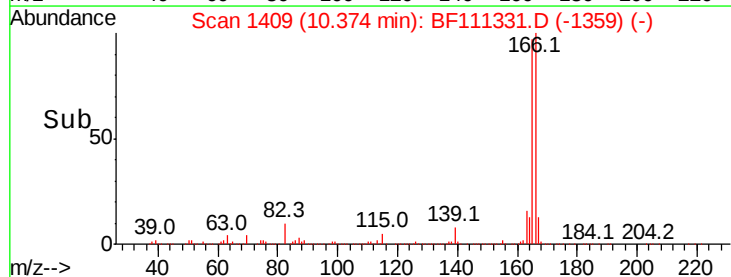
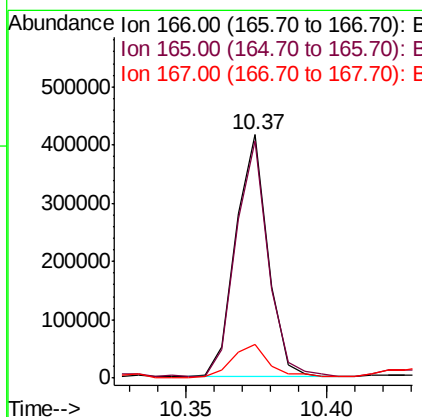
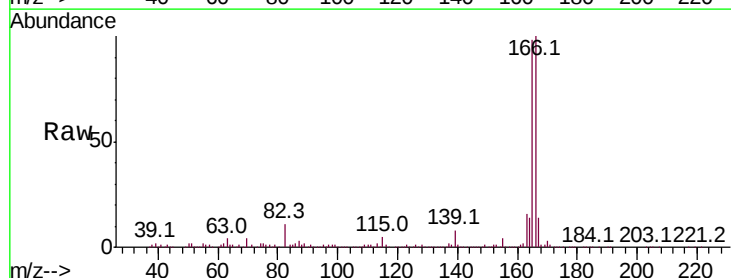
Manual Integrations
APPROVED

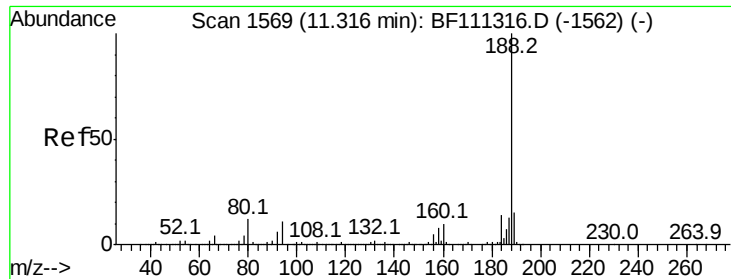
Sohil
12/13/2018 6:06:15 PM



#58
Fluorene
Concen: 10.874 ng
RT: 10.37 min Scan# 1409
Delta R.T. -0.01 min
Lab File: BF111331.D
Acq: 12 Dec 2018 19:43

Tgt Ion	Ratio	Resp	Lower	Upper
166	100	329260		
165	97.7		78.4	117.6
167	13.6		11.2	16.8





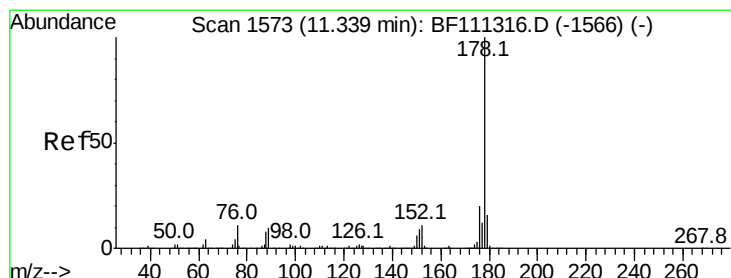
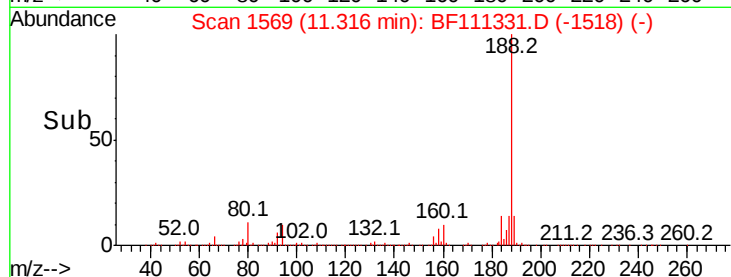
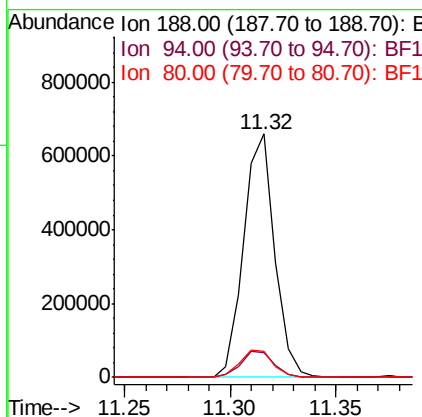
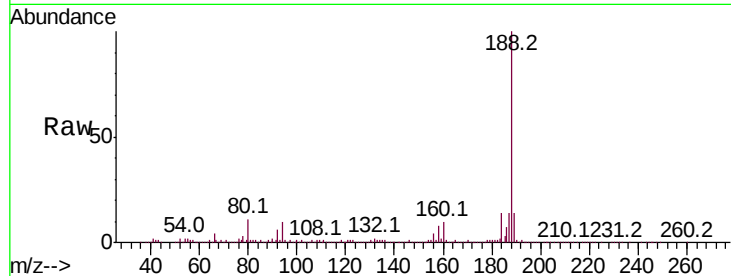
#64
Phenanthrene-d10
Concen: 20.000 ng
RT: 11.32 min Scan# 1569
Delta R.T. -0.00 min
Lab File: BF111331.D
Acq: 12 Dec 2018 19:43

Instrument :
BNA_F
ClientSampleId :
SB-3(0-2)

Tot Ion	Ratio	Resp	Lower	Upper
188	100	672295		
94	10.3		9.6	14.4
80	10.6		9.8	14.6

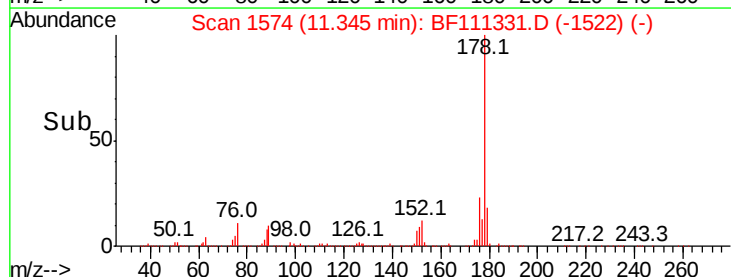
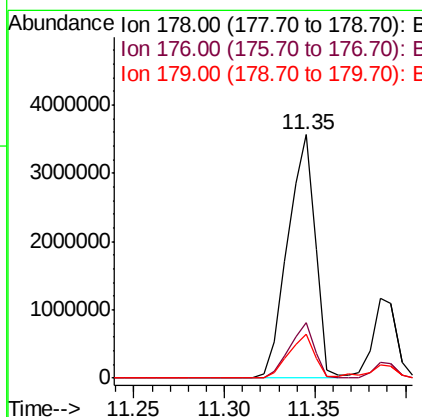
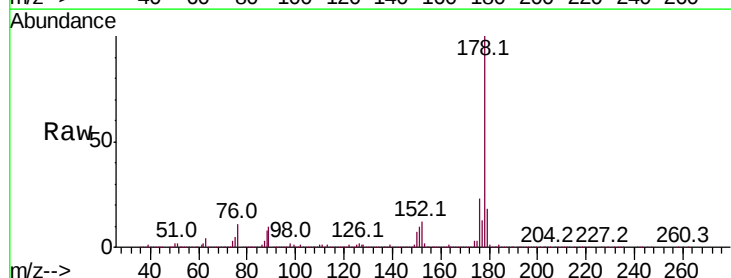
Manual Integrations
APPROVED

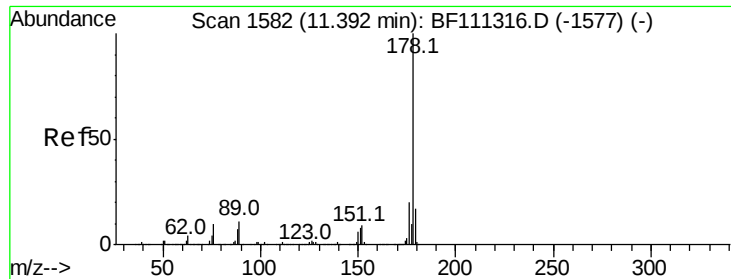
Sohil
12/13/2018 6:06:15 PM



#71
Phenanthrene
Concen: 109.509 ng
RT: 11.35 min Scan# 1574
Delta R.T. 0.01 min
Lab File: BF111331.D
Acq: 12 Dec 2018 19:43

Tgt Ion	Ratio	Resp	Lower	Upper
178	100	3805386		
176	22.6		18.1	27.1
179	17.8		14.0	21.0





#72

Anthracene

Concen: 28.988 ng

RT: 11.39 min Scan# 1581

Delta R.T. -0.01 min

Lab File: BF111331.D

Acq: 12 Dec 2018 19:43

Instrument :

BNA_F

ClientSampleId :

SB-3(0-2)

Tot Ion:178 Resp: 1025683

Ion Ratio Lower Upper

178 100

176 18.9 17.2 25.8

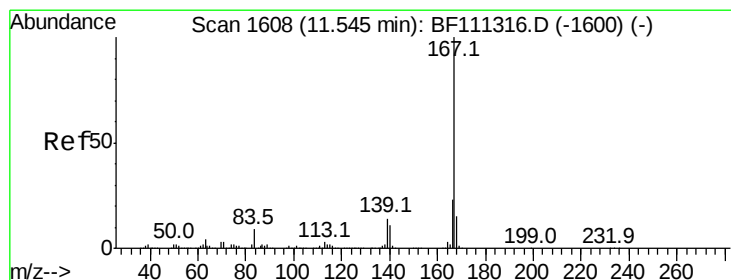
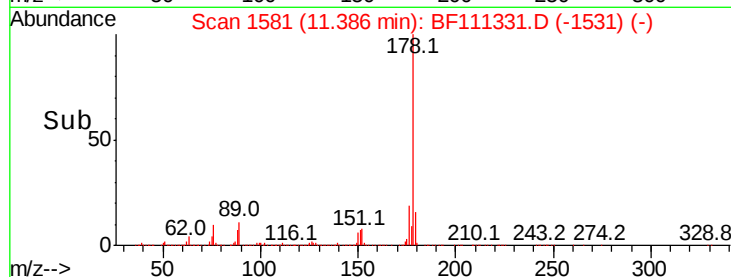
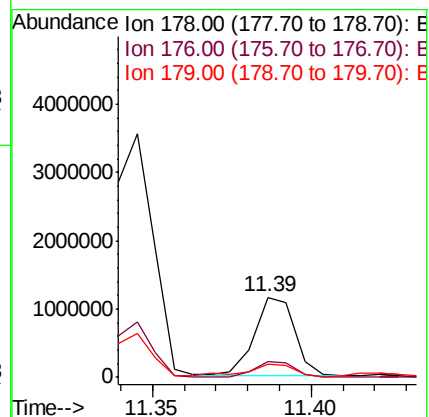
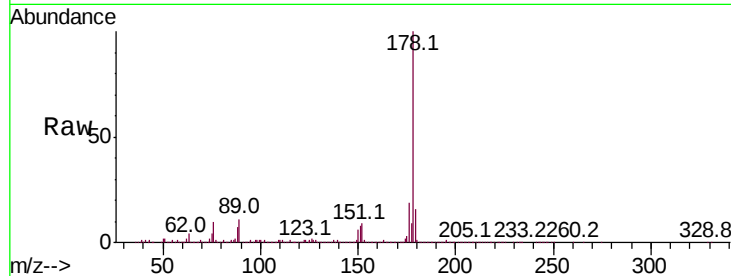
179 16.0 13.8 20.8

Manual Integrations

APPROVED

Sohil

12/13/2018 6:06:15 PM



#73

Carbazole

Concen: 7.356 ng

RT: 11.54 min Scan# 1607

Delta R.T. -0.01 min

Lab File: BF111331.D

Acq: 12 Dec 2018 19:43

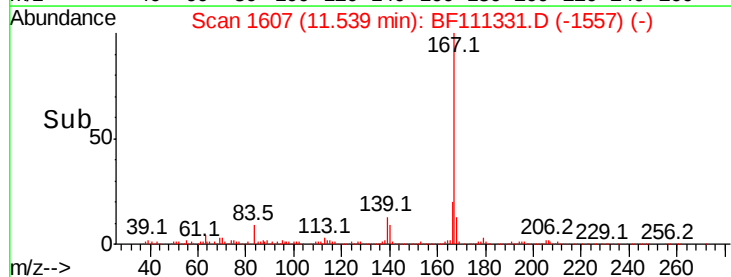
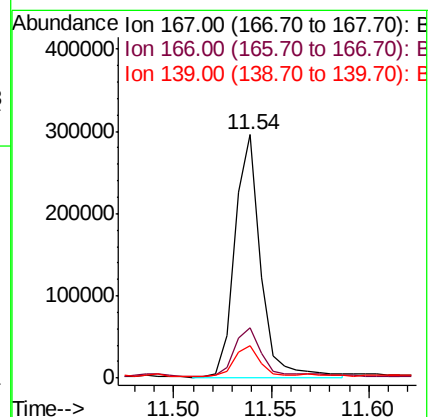
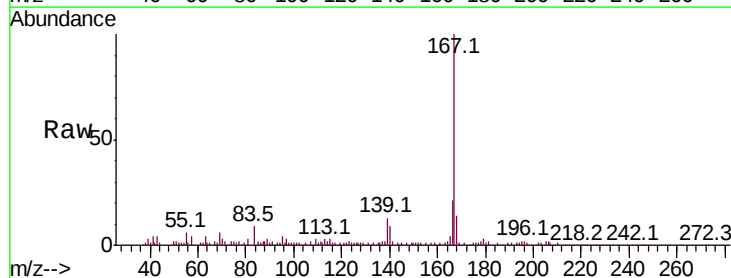
Tgt Ion:167 Resp: 269111

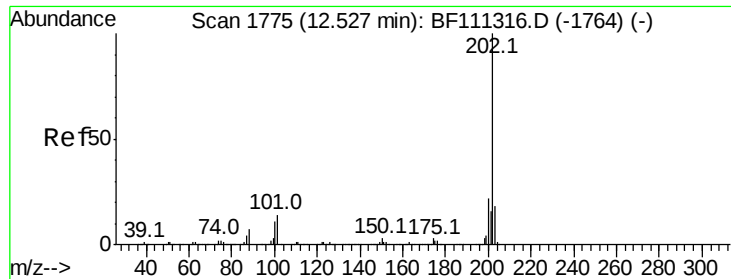
Ion Ratio Lower Upper

167 100

166 20.9 19.3 28.9

139 13.2 11.9 17.9





#75

Fluoranthene

Concen: 126.058 ng

RT: 12.54 min Scan# 1777

Delta R.T. 0.01 min

Lab File: BF111331.D

Acq: 12 Dec 2018 19:43

Instrument :

BNA_F

ClientSampled :

SB-3(0-2)

Tot Ion:202 Resp: 4276309

Ion Ratio Lower Upper

202 100

101 14.0 0.0 33.8

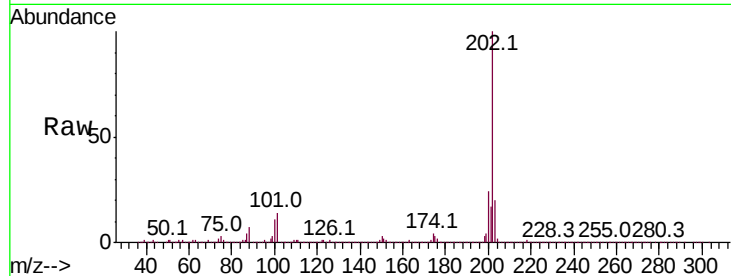
203 19.6 0.0 38.6

Manual Integrations

APPROVED

Sohil

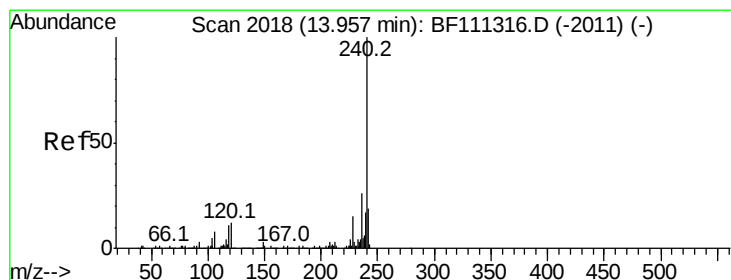
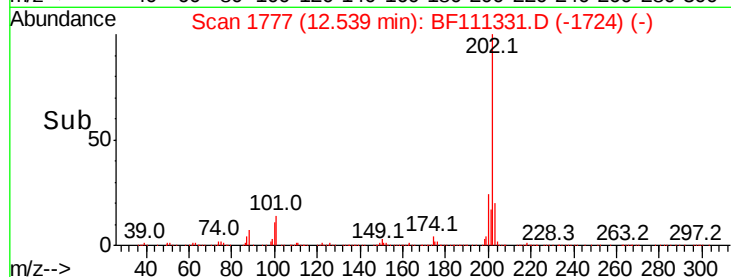
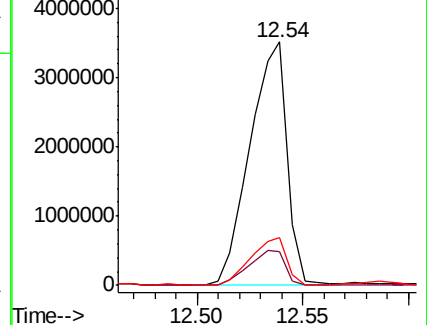
12/13/2018 6:06:15 PM



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: 13.96 min Scan# 2018

Delta R.T. -0.00 min

Lab File: BF111331.D

Acq: 12 Dec 2018 19:43

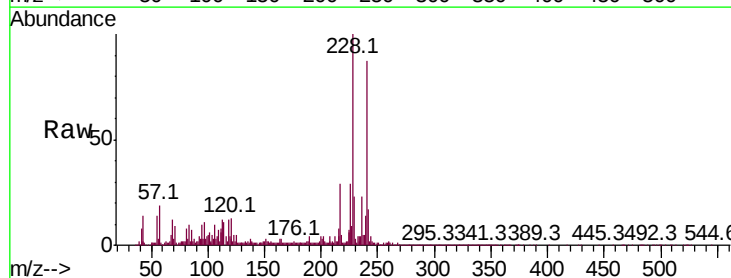
Tgt Ion:240 Resp: 441533

Ion Ratio Lower Upper

240 100

120 15.0 12.2 18.2

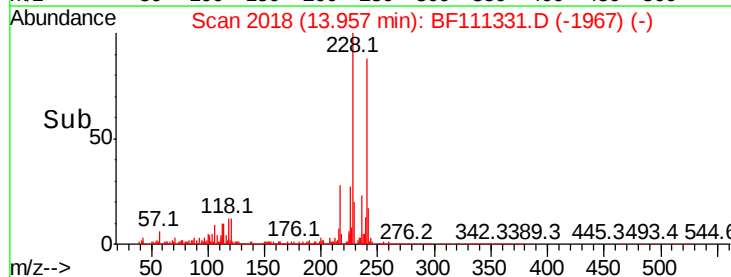
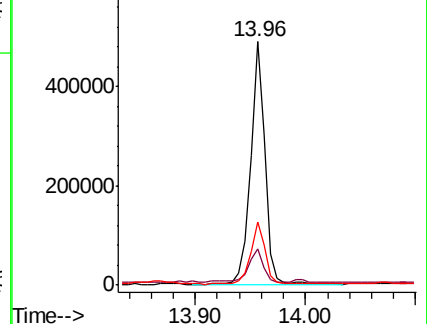
236 26.2 20.2 30.2

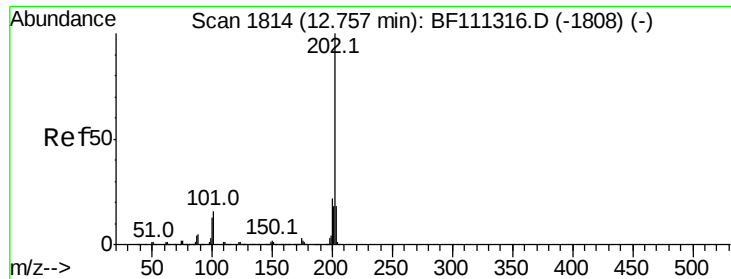


Abundance Ion 240.00 (239.70 to 240.70): E

Ion 120.00 (119.70 to 120.70): E

Ion 236.00 (235.70 to 236.70): E





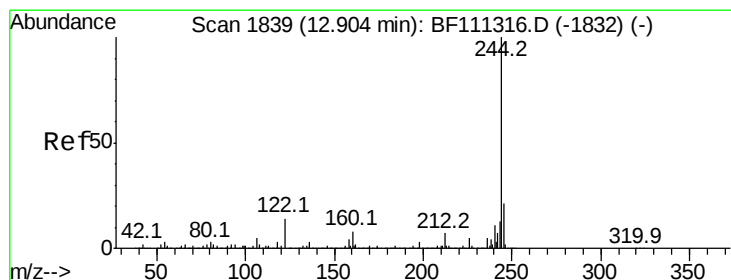
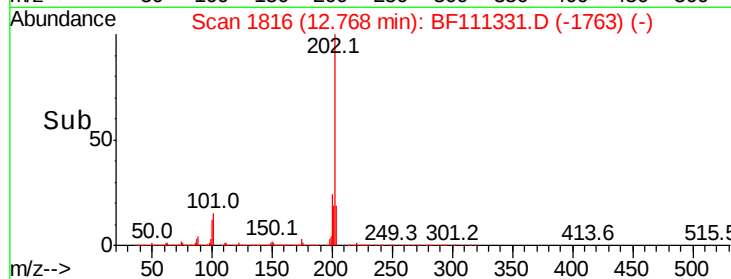
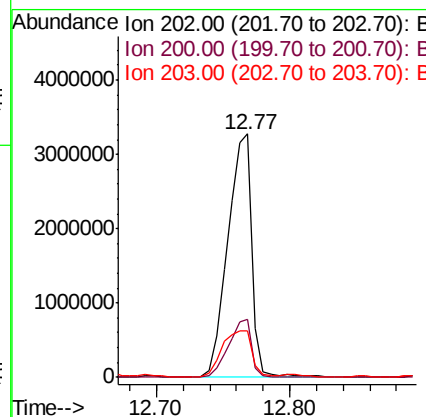
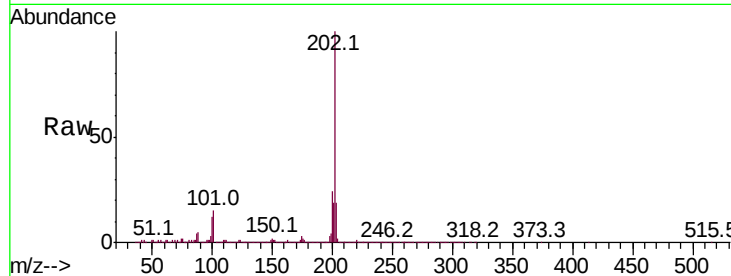
#78
Pvrene
Concen: 122.591 ng
RT: 12.77 min Scan# 1816
Delta R.T. 0.01 min
Lab File: BF111331.D
Acq: 12 Dec 2018 19:43

Instrument :
BNA_F
ClientSampleId :
SB-3(0-2)

Tot Ion:202 Resp: 4177447
Ion Ratio Lower Upper
202 100
200 23.6 19.0 28.4
203 19.3 15.2 22.8

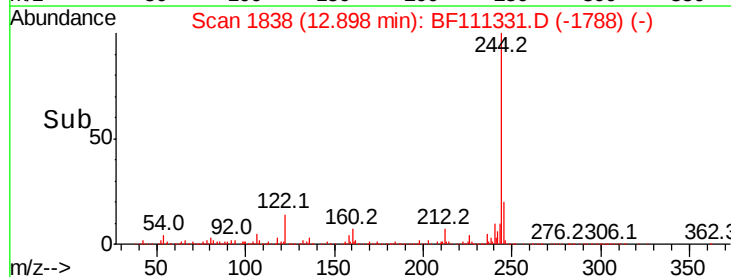
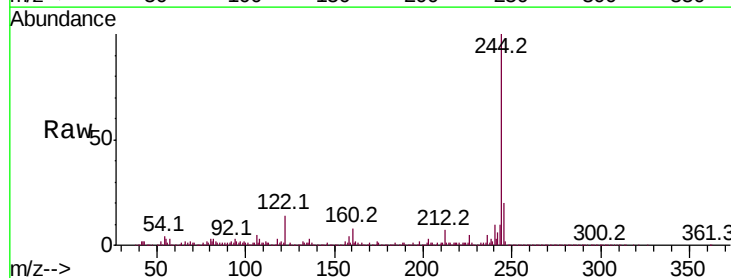
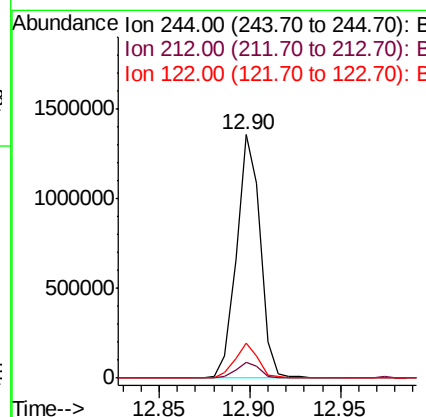
Manual Integrations
APPROVED

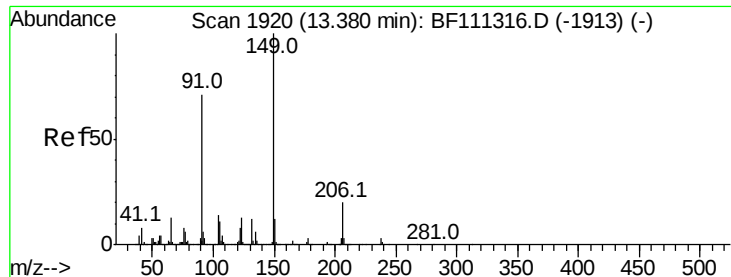
Sohil
12/13/2018 6:06:15 PM



#79
Terphenyl-d14
Concen: 61.317 ng
RT: 12.90 min Scan# 1838
Delta R.T. -0.01 min
Lab File: BF111331.D
Acq: 12 Dec 2018 19:43

Tgt Ion:244 Resp: 1230090
Ion Ratio Lower Upper
244 100
212 6.6 5.7 8.5
122 14.2 13.1 19.7





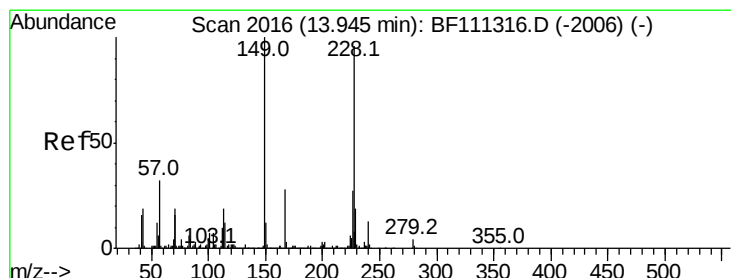
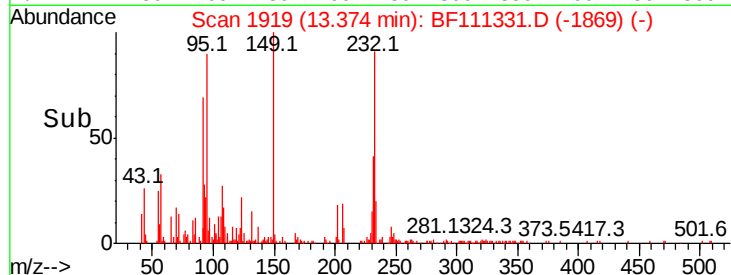
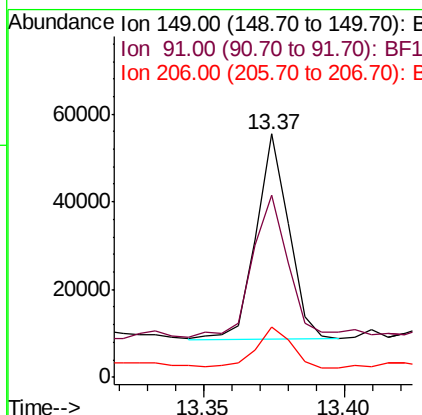
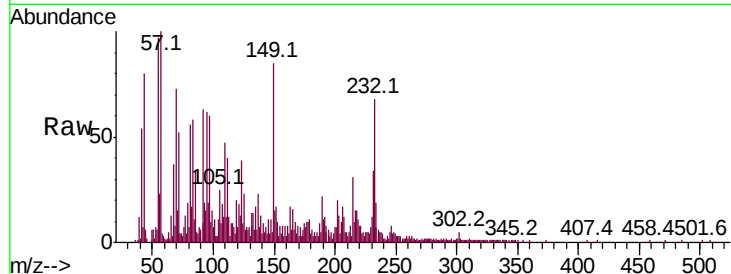
#80
Butylbenzylphthalate
Concen: 2.303 ng
RT: 13.37 min Scan# 1919
Delta R.T. -0.01 min
Lab File: BF111331.D
Acq: 12 Dec 2018 19:43

Instrument :
BNA_F
ClientSampleId :
SB-3(0-2)

Tot Ion	Ratio	Lower	Upper
149	100		
91	74.8	63.8	95.6
206	20.5	15.1	22.7

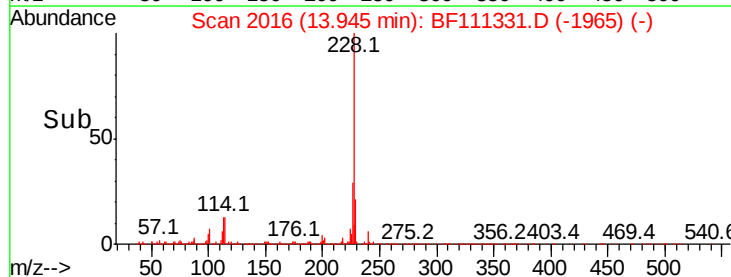
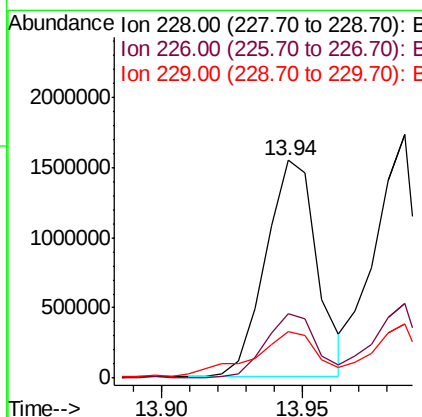
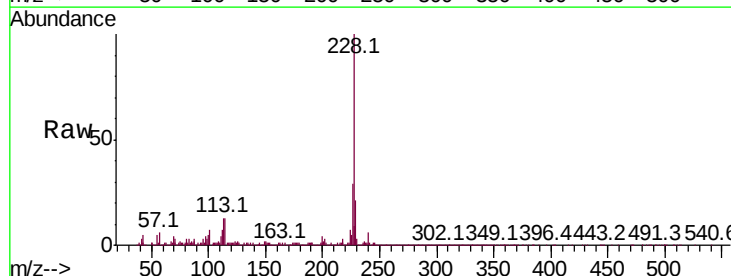
Manual Integrations
APPROVED

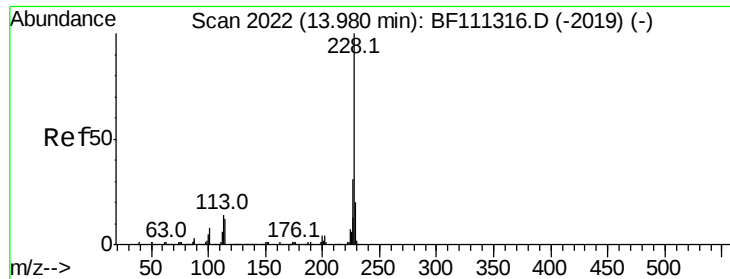
Sohil
12/13/2018 6:06:15 PM



#81
Benzo(a)anthracene
Concen: 79.305 ng
RT: 13.94 min Scan# 2016
Delta R.T. -0.00 min
Lab File: BF111331.D
Acq: 12 Dec 2018 19:43

Tgt Ion	Ratio	Lower	Upper
228	100		
226	29.4	22.6	34.0
229	21.3	16.3	24.5





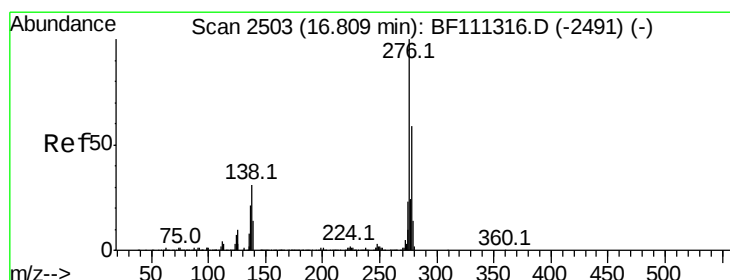
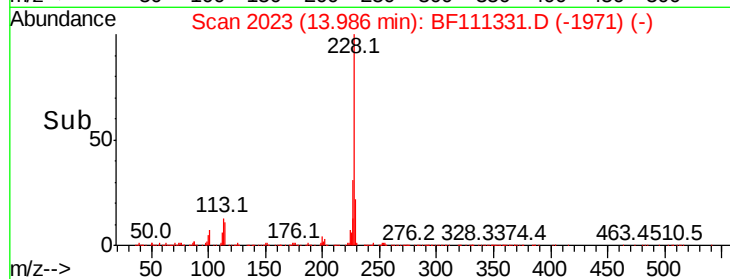
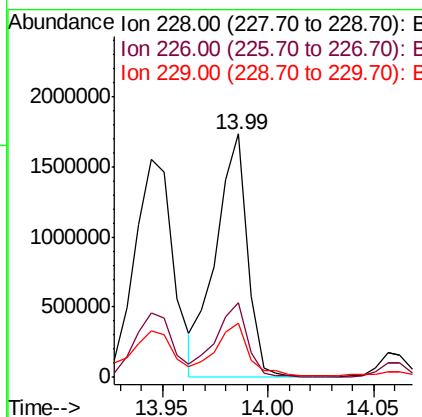
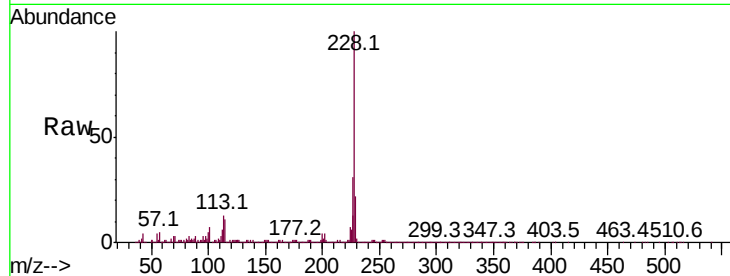
#83
Chrysene
Concen: 70.532 ng
RT: 13.99 min Scan# 2023
Delta R.T. 0.01 min
Lab File: BF111331.D
Acq: 12 Dec 2018 19:43

Instrument :
BNA_F
ClientSampleId :
SB-3(0-2)

Tot Ion:228 Resp: 1777741
Ion Ratio Lower Upper
228 100
226 30.9 25.3 37.9
229 22.4 17.2 25.8

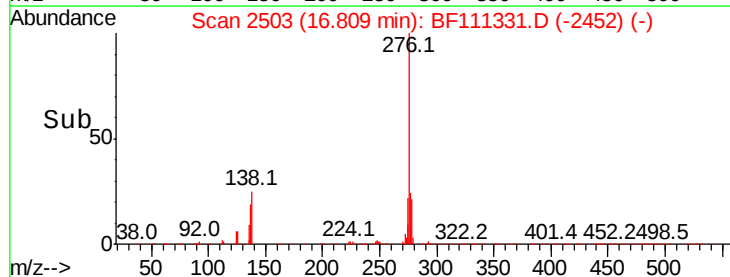
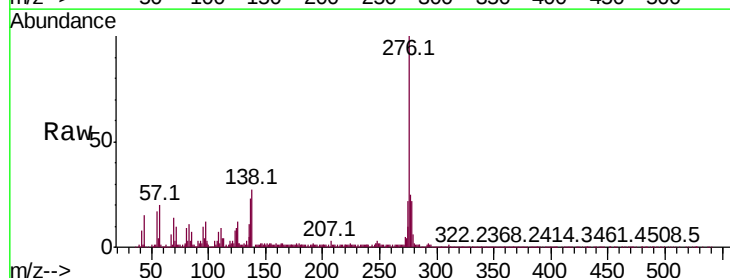
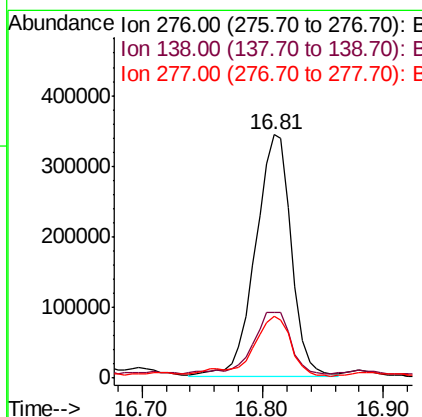
Manual Integrations
APPROVED

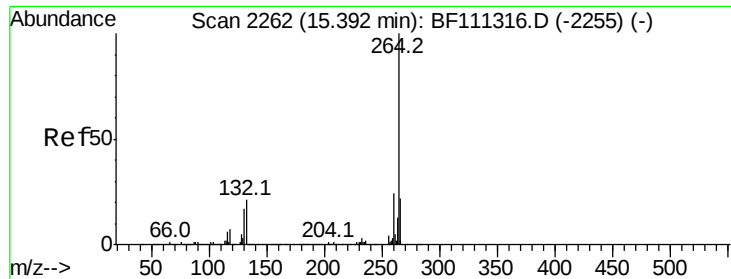
Sohil
12/13/2018 6:06:15 PM



#86
Indeno(1,2,3-cd)pyrene
Concen: 35.849 ng
RT: 16.81 min Scan# 2503
Delta R.T. -0.00 min
Lab File: BF111331.D
Acq: 12 Dec 2018 19:43

Tgt Ion:276 Resp: 706708
Ion Ratio Lower Upper
276 100
138 27.9 27.8 41.6
277 24.3 20.1 30.1





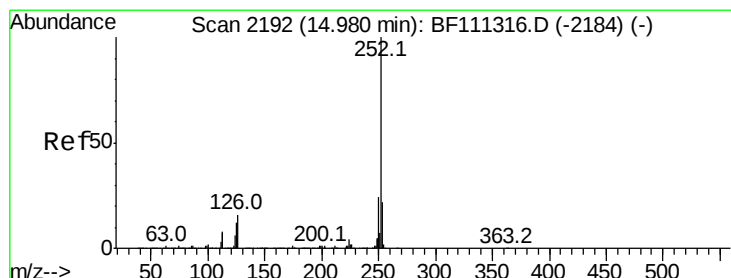
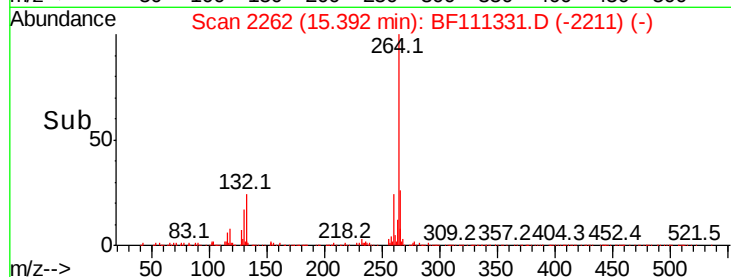
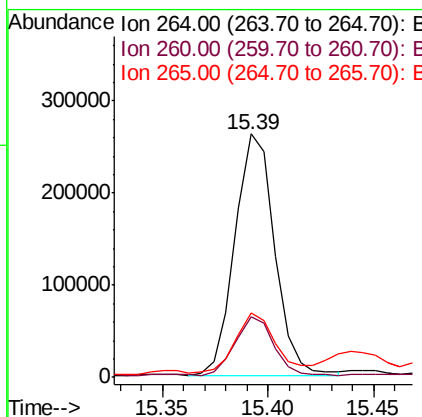
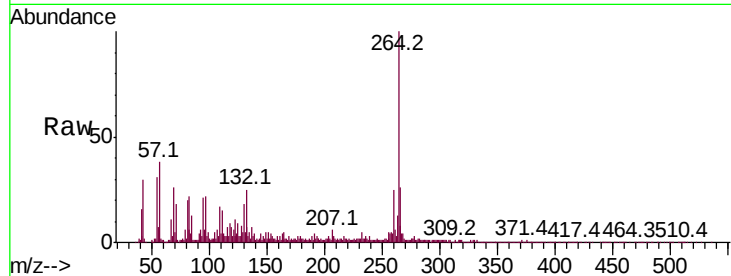
#87
Pervlene-d12
Concen: 20.000 ng
RT: 15.39 min Scan# 2262
Delta R.T. -0.00 min
Lab File: BF111331.D
Acq: 12 Dec 2018 19:43

Instrument :
BNA_F
ClientSampled :
SB-3(0-2)

Tot Ion	Ratio	Lower	Upper
264	100		
260	24.8	18.3	27.5
265	26.5	17.7	26.5

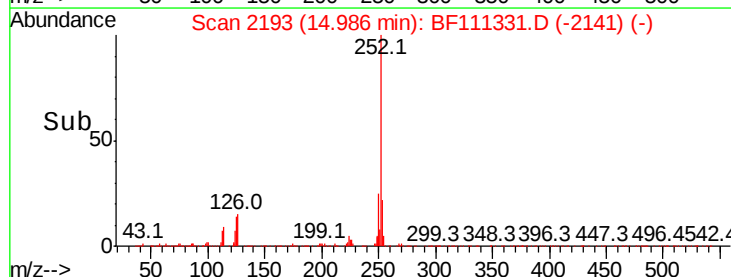
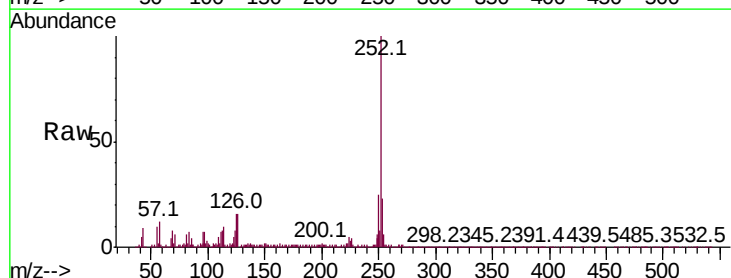
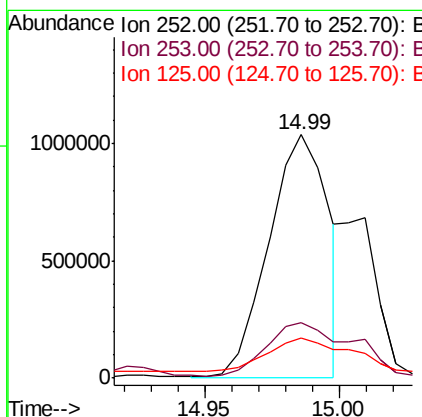
Manual Integrations
APPROVED

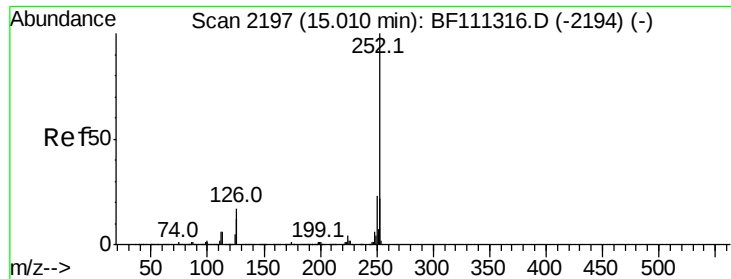
Sohil
12/13/2018 6:06:15 PM



#88
Benzo(b)fluoranthene
Concen: 83.147 ng m
RT: 14.99 min Scan# 2193
Delta R.T. 0.01 min
Lab File: BF111331.D
Acq: 12 Dec 2018 19:43

Tgt Ion	Ratio	Lower	Upper
252	100		
253	23.0	18.2	27.2
125	16.3	10.4	15.6





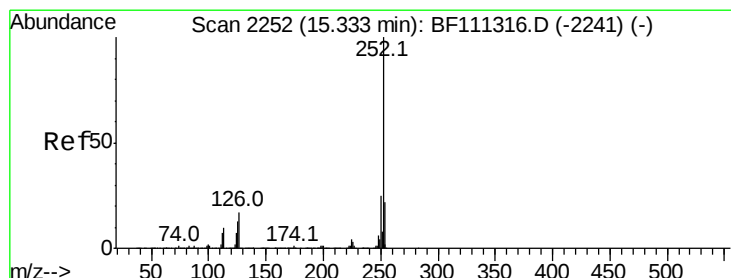
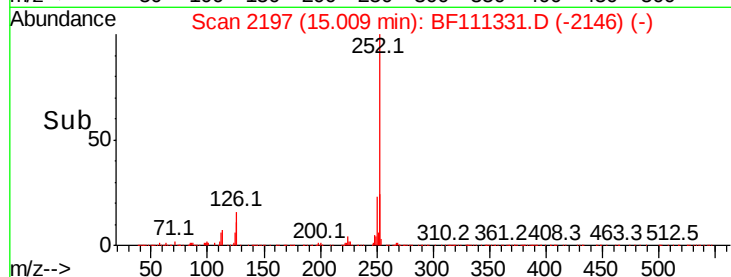
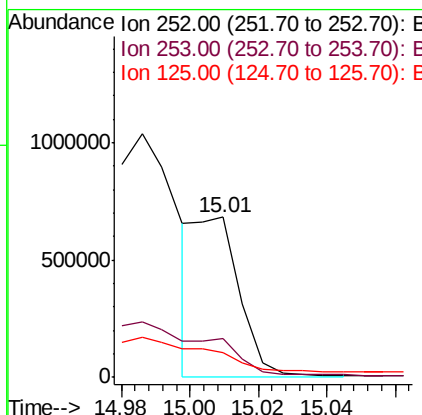
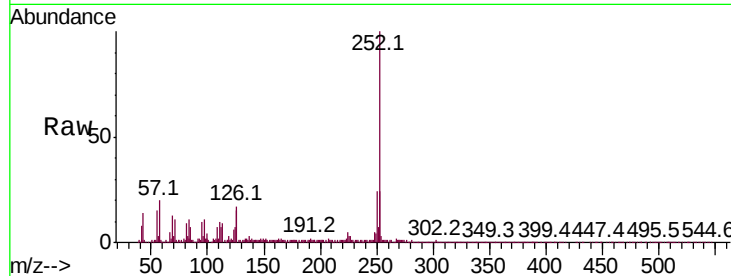
#89
Benzo(k)fluoranthene
Concen: 32.322 ng m
RT: 15.01 min Scan# 2197
Delta R.T. -0.00 min
Lab File: BF111331.D
Acq: 12 Dec 2018 19:43

Instrument :
BNA_F
ClientSampled :
SB-3(0-2)

Tot Ion	Ratio	Lower	Upper
252	100		
253	24.4	18.1	27.1
125	15.2	9.8	14.8

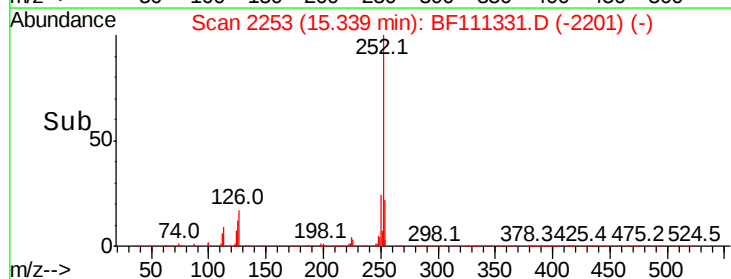
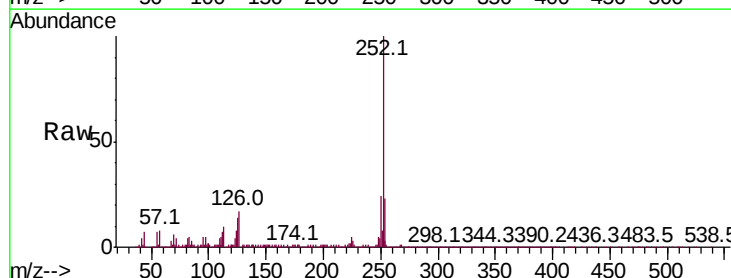
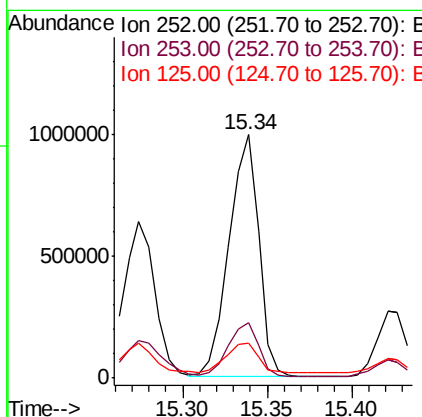
Manual Integrations
APPROVED

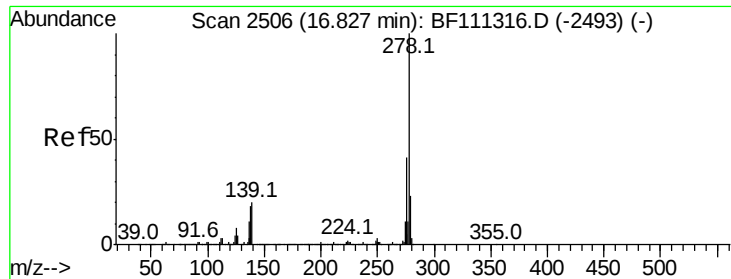
Sohil
12/13/2018 6:06:15 PM



#90
Benzo(a)pyrene
Concen: 67.905 ng
RT: 15.34 min Scan# 2253
Delta R.T. 0.01 min
Lab File: BF111331.D
Acq: 12 Dec 2018 19:43

Tgt Ion	Ratio	Lower	Upper
252	100		
253	22.8	17.8	26.8
125	14.3	12.3	18.5





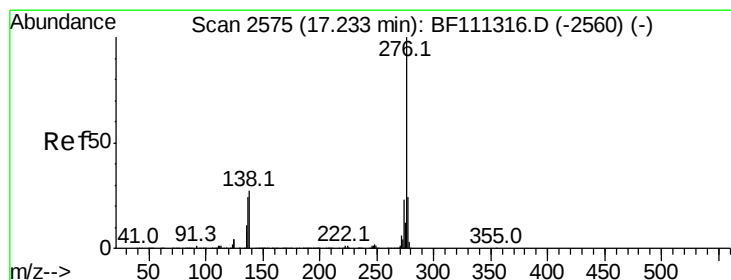
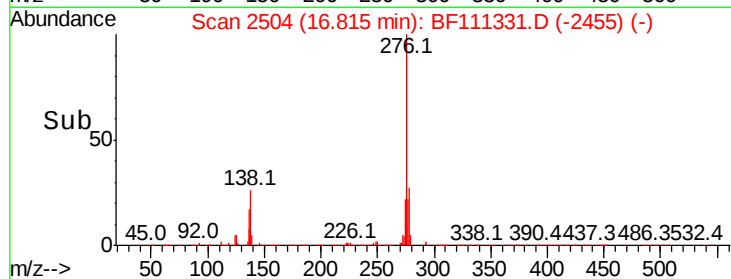
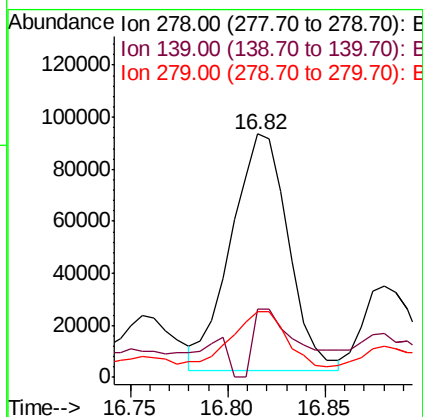
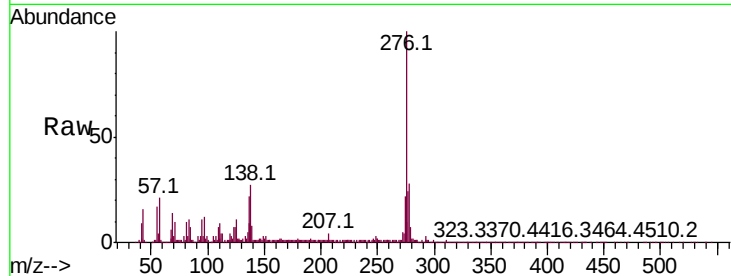
#91
Dibenzo(a,h)anthracene
Concen: 12.340 ng
RT: 16.82 min Scan# 2504
Delta R.T. -0.01 min
Lab File: BF111331.D
Acq: 12 Dec 2018 19:43

Instrument :
BNA_F
ClientSampleId :
SB-3(0-2)

Tot Ion	Ratio	Lower	Upper
278	100		
139	28.0	18.2	27.4#
279	27.0	19.0	28.6

Manual Integrations
APPROVED

Sohil
12/13/2018 6:06:15 PM



#92
Benzo(g,h,i)perylene
Concen: 45.029 ng
RT: 17.24 min Scan# 2576
Delta R.T. 0.01 min
Lab File: BF111331.D
Acq: 12 Dec 2018 19:43

Tgt Ion	Ratio	Lower	Upper
276	100		
277	24.2	19.2	28.8
138	27.4	24.9	37.3

