Quantitation Report (Not Reviewed)

Data Path : Z:\HPCHEM1\BNA E\DATA\BE042716\
Data File : BE091727.D
Acq On : 27 Apr 2016 15:39
Operator : UM/SJ
Sample : H2661-01MSD
Misc :
ALS Vial : 20 Sample Multiplier: 1

Instrument : BNA_E
ClientSampleId : CEDAR-HILL-TF-PS-001MSD

Quant Time: Apr 28 03:12:46 2016
Quant Method : Z:\HPCHEM1\BNA E\METHODS\8270-SIM-BE042616.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
QLast Update : Tue Apr 26 16:09:46 2016
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.80	152	37106	5.00	ng		0.00
7) Naphthalene-d8	10.57	136	170921	5.00	ng		0.00
13) Acenaphthene-d10	14.41	164	100970	5.00	ng		-0.01
19) Phenanthrene-d10	17.15	188	249266	5.00	ng		0.00
26) Chrysene-d12	21.31	240	280110	5.00	ng		0.00
35) Perylene-d12	23.75	264	296034	5.00	ng		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	5.39	112	78455	8.61	ng		0.00
5) Phenol-d6	6.95	99	115495	9.56	ng		0.00
8) Nitrobenzene-d5	8.95	82	50901	4.61	ng		0.00
14) 2,4,6-Tribromophenol	15.88	330	34037	9.03	ng		-0.01
15) 2-Fluorobiphenyl	13.03	172	130762	4.58	ng		0.00
29) Terphenyl-d14	19.76	244	217233	4.97	ng		0.00
Target Compounds							Qvalue
2) 1,4-Dioxane	3.33	88	16425	3.78	ng	#	85
3) n-Nitrosodimethylamine	3.63	42	30184	4.48	ng		91
6) bis(2-Chloroethyl)ether	7.21	93	46950	4.41	ng	#	75
9) Nitrobenzene	8.99	77	54417	4.72	ng	#	93
10) Naphthalene	10.61	128	154956	4.49	ng		97
11) Hexachlorobutadiene	10.90	225	23503	4.61	ng		97
12) 2-Methylnaphthalene	12.22	142	109514	4.94	ng		94
16) Acenaphthylene	14.12	152	195962	5.05	ng	#	86
17) Acenaphthene	14.47	154	125854	5.00	ng		99
18) Fluorene	15.45	166	152054	4.86	ng		98
20) 4-Bromophenyl-phenylether	16.33	248	43201	4.82	ng		96
21) Hexachlorobenzene	16.45	284	42858	4.78	ng		98
22) Pentachlorophenol	16.79	266	51295	10.55	ng		89
23) Phenanthrene	17.18	178	271821	4.80	ng		99
24) Anthracene	17.28	178	264667	5.18	ng		98
25) Fluoranthene	19.19	202	329408	5.56	ng	#	97
27) Benzidine	19.38	184	43203	2.05	ng	#	78
28) Pyrene	19.55	202	362019	5.72	ng		99
30) Benzo(a)anthracene	21.29	228	360969	5.28	ng		92
31) 3,3'-Dichlorobenzidine	21.22	252	79024	2.26	ng	#	85
32) Chrysene	21.29	228	360965	5.08	ng	#	88
33) Bis(2-ethylhexyl)phthalate	21.20	149	217112	10.47	ng	#	87
34) Indeno(1,2,3-cd)pyrene	26.31	276	360633	5.70	ng		97
36) Benzo(b)fluoranthene	23.00	252	372235	5.37	ng	#	95
37) Benzo(k)fluoranthene	23.04	252	324210	4.60	ng	#	96
38) Benzo(a)pyrene	23.63	252	328734	5.03	ng	#	97
39) Dibenzo(a,h)anthracene	26.33	278	302022	4.88	ng	#	95
40) Benzo(g,h,i)perylene	27.09	276	305333	4.85	ng		95

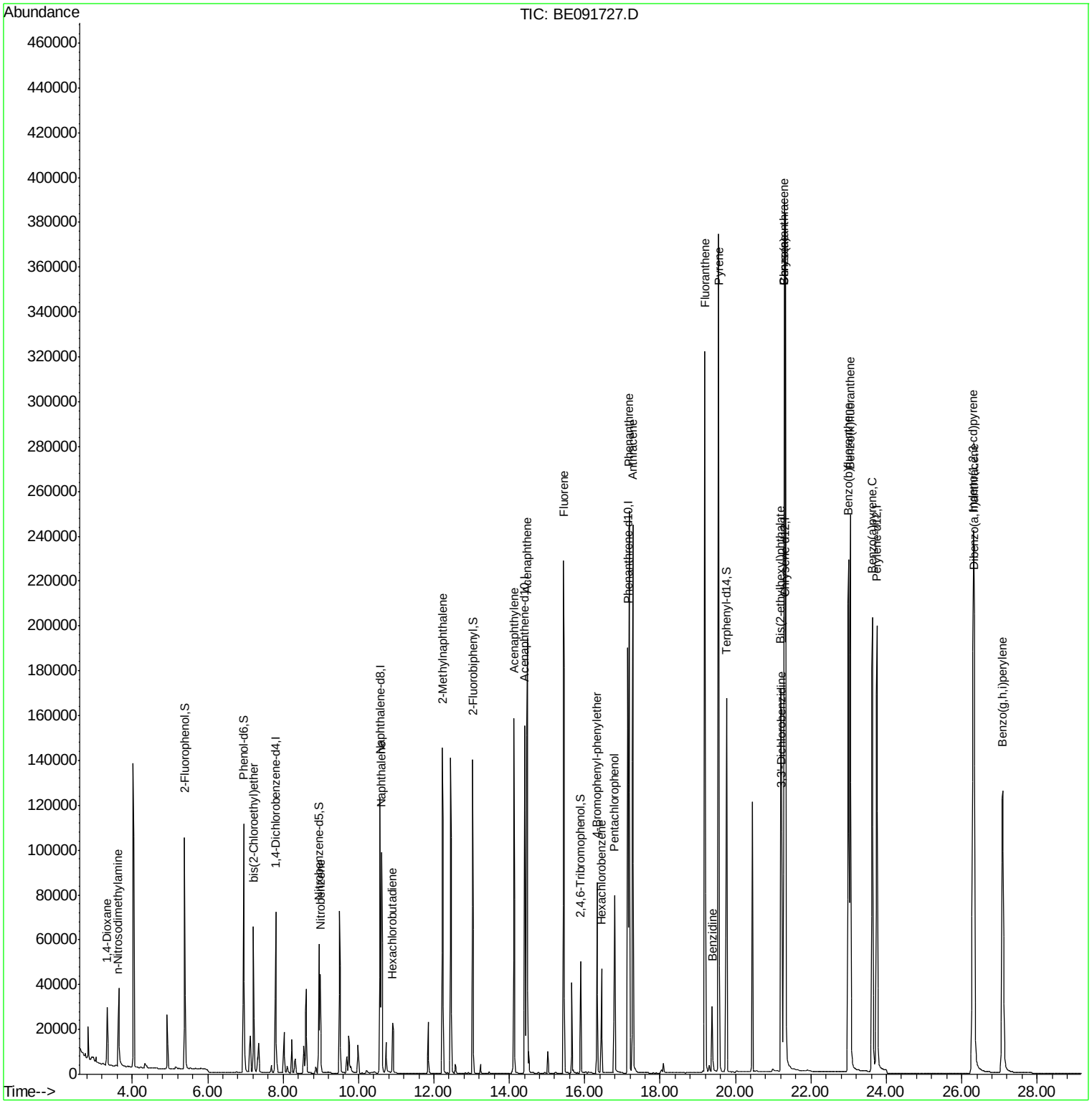
(#) = qualifier out of range (m) = manual integration (+) = signals summed

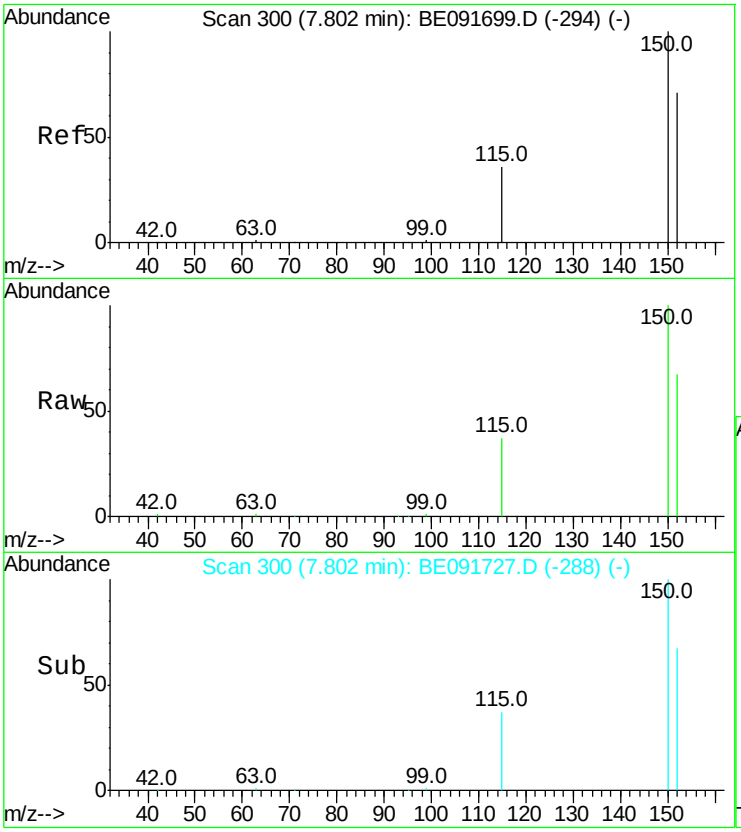
Quantitation Report (Not Reviewed)

Data Path : Z:\HPCHEM1\BNA E\DATA\BE042716\
Data File : BE091727.D
Acq On : 27 Apr 2016 15:39
Operator : UM/SJ
Sample : H2661-01MSD
Misc :
ALS Vial : 20 Sample Multiplier: 1

Instrument :
BNA_E
ClientSampleId :
CEDAR-HILL-TF-PS-001MSD

Quant Time: Apr 28 03:12:46 2016
Quant Method : Z:\HPCHEM1\BNA E\METHODS\8270-SIM-BE042616.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
QLast Update : Tue Apr 26 16:09:46 2016
Response via : Initial Calibration



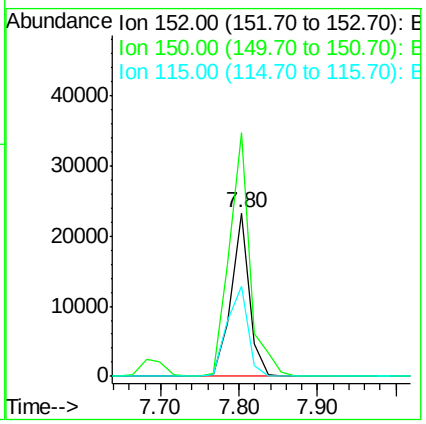


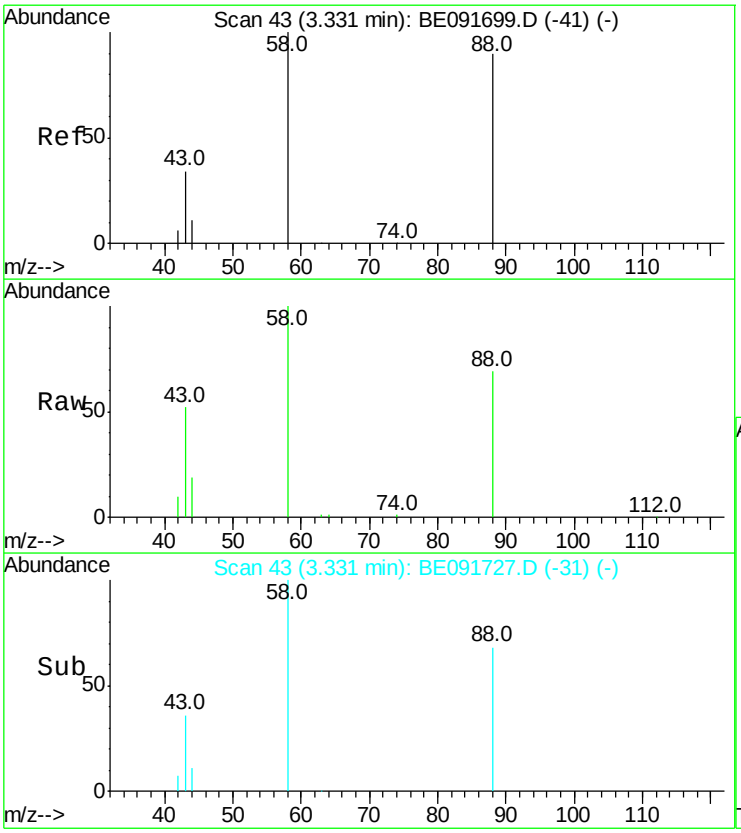
#1
1,4-Dichlorobenzene-d4
Concen: 5.00 ng
RT: 7.80 min Scan# 300
Delta R.T. 0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Instrument :
BNA_E
ClientSampleId :
CEDAR-HILL-TF-PS-001MSD

Tgt Ion:152 Resp: 37106

Ion	Ratio	Lower	Upper
152	100		
150	149.4	122.6	183.8
115	55.2	52.8	79.2

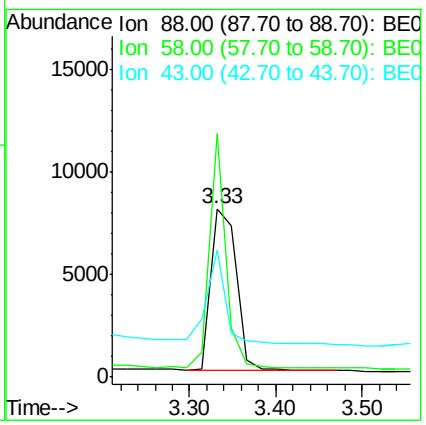


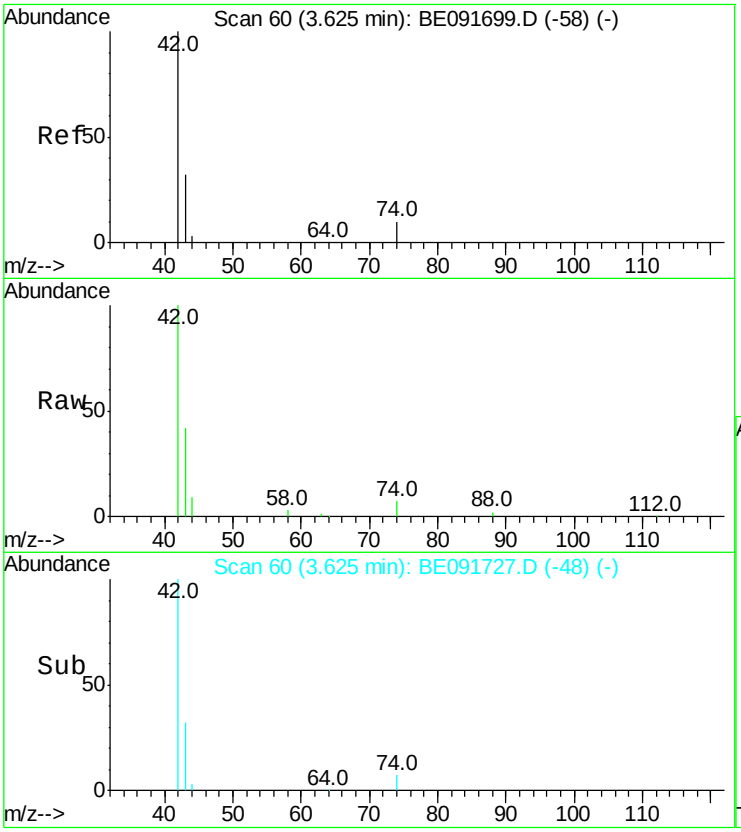


#2
1,4-Dioxane
Concen: 3.78 ng
RT: 3.33 min Scan# 43
Delta R.T. 0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Tgt Ion: 88 Resp: 16425

Ion	Ratio	Lower	Upper
88	100		
58	92.4	65.8	98.6
43	45.9	25.3	37.9#



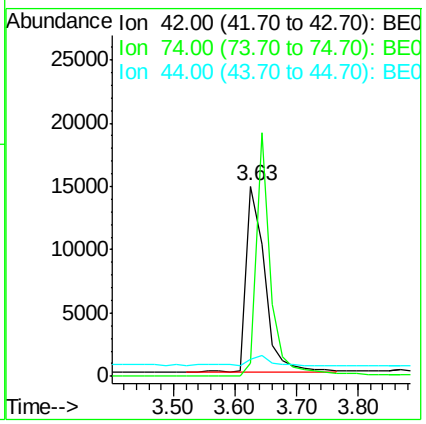


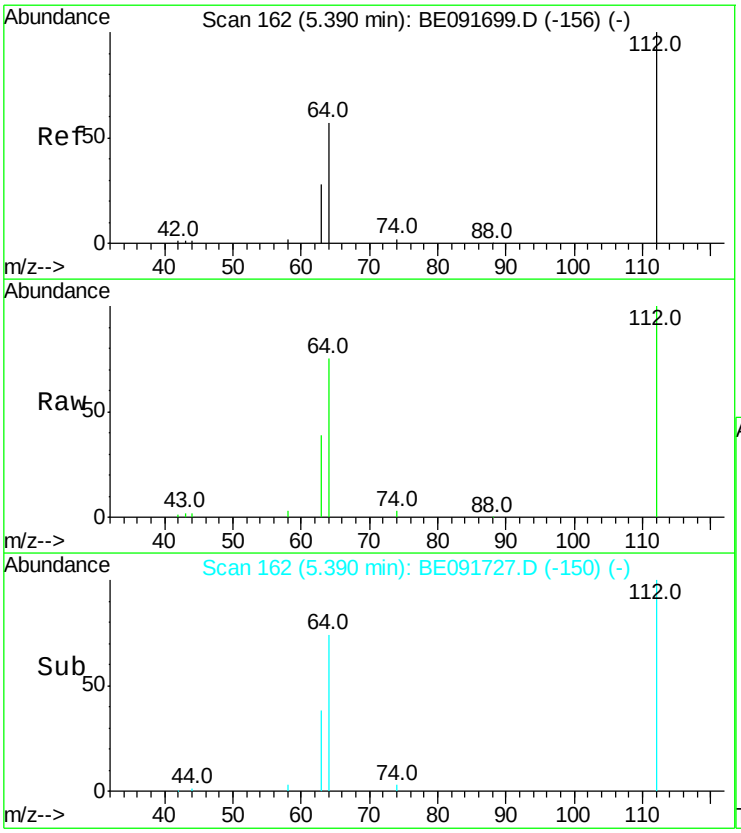
#3
n-Nitrosodimethylamine
Concen: 4.48 ng
RT: 3.63 min Scan# 60
Delta R.T. 0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Instrument :
BNA_E
ClientSampleId :
CEDAR-HILL-TF-PS-001MSD

Tgt Ion: 42 Resp: 30184

Ion	Ratio	Lower	Upper
42	100		
74	100.0	87.9	131.9
44	6.7	6.6	9.8

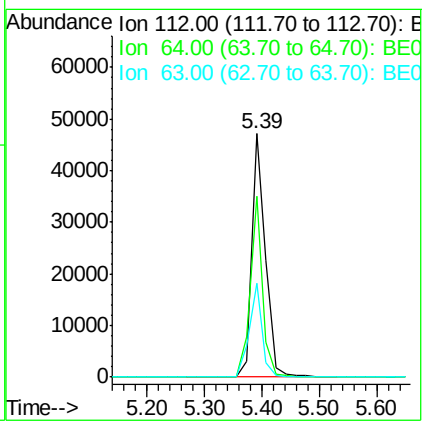


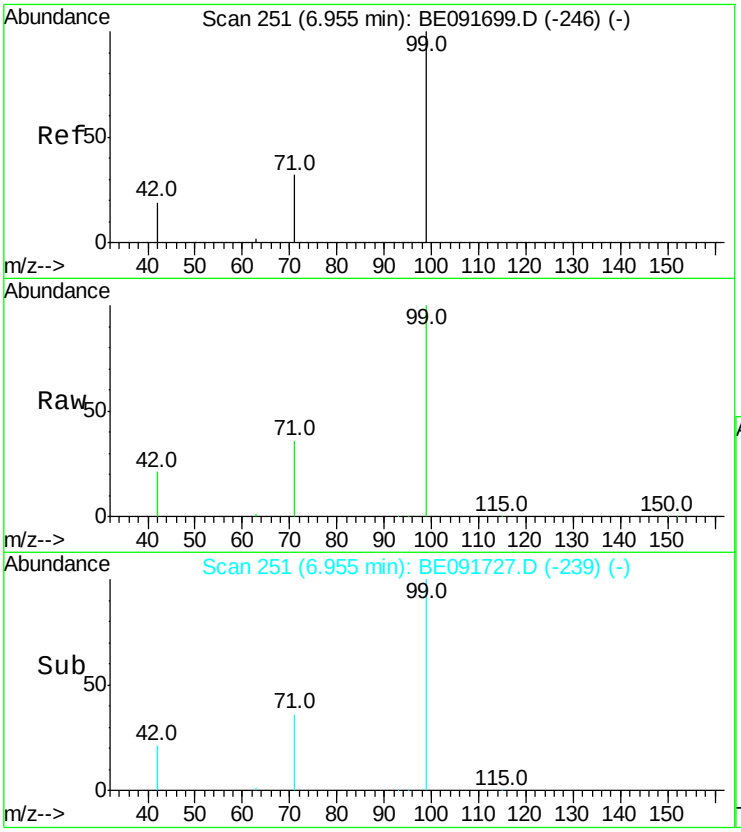


#4
2-Fluorophenol
Concen: 8.61 ng
RT: 5.39 min Scan# 162
Delta R.T. 0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Tgt Ion:112 Resp: 78455

Ion	Ratio	Lower	Upper
112	100		
64	67.3	30.9	46.3#
63	36.2	16.7	25.1#



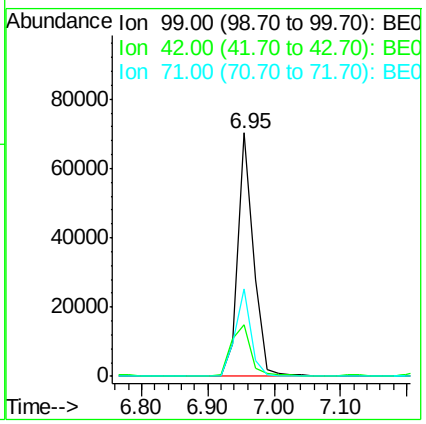


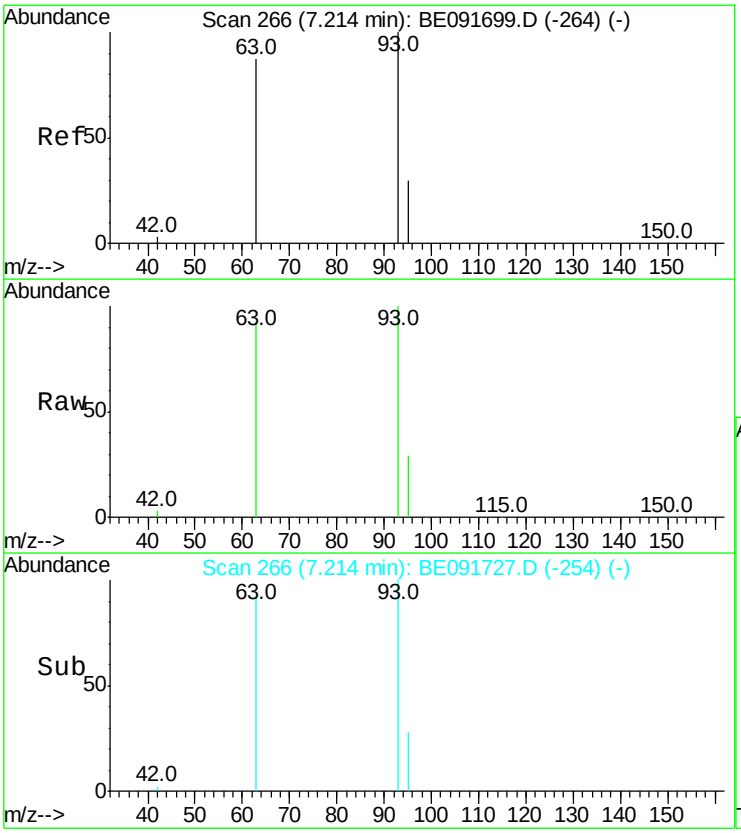
#5
Phenol-d6
Concen: 9.56 ng
RT: 6.95 min Scan# 251
Delta R.T. 0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Instrument :
BNA_E
ClientSampleId :
CEDAR-HILL-TF-PS-001MSD

Tgt Ion: 99 Resp: 115495

Ion	Ratio	Lower	Upper
99	100		
42	25.9	16.2	24.2#
71	35.9	29.0	43.4

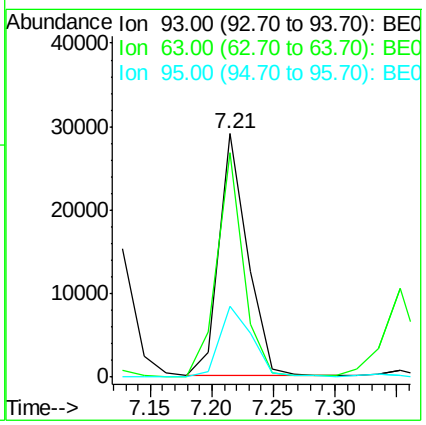


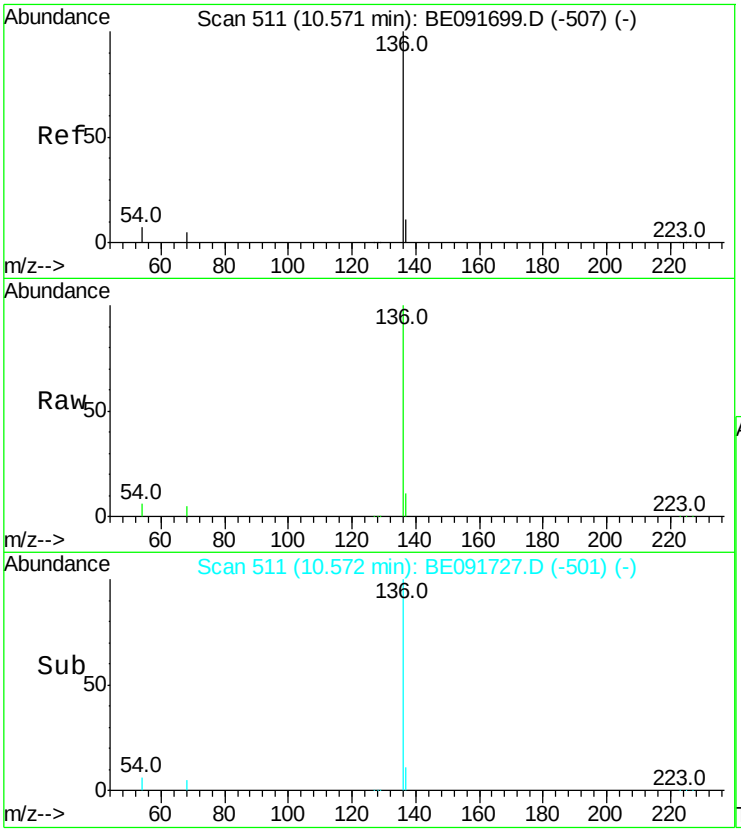


#6
bis(2-Chloroethyl)ether
Concen: 4.41 ng
RT: 7.21 min Scan# 266
Delta R.T. 0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Tgt Ion: 93 Resp: 46950

Ion	Ratio	Lower	Upper
93	100		
63	86.3	49.5	74.3#
95	32.4	22.2	33.4



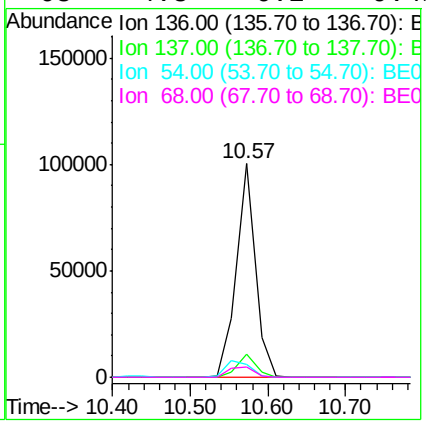


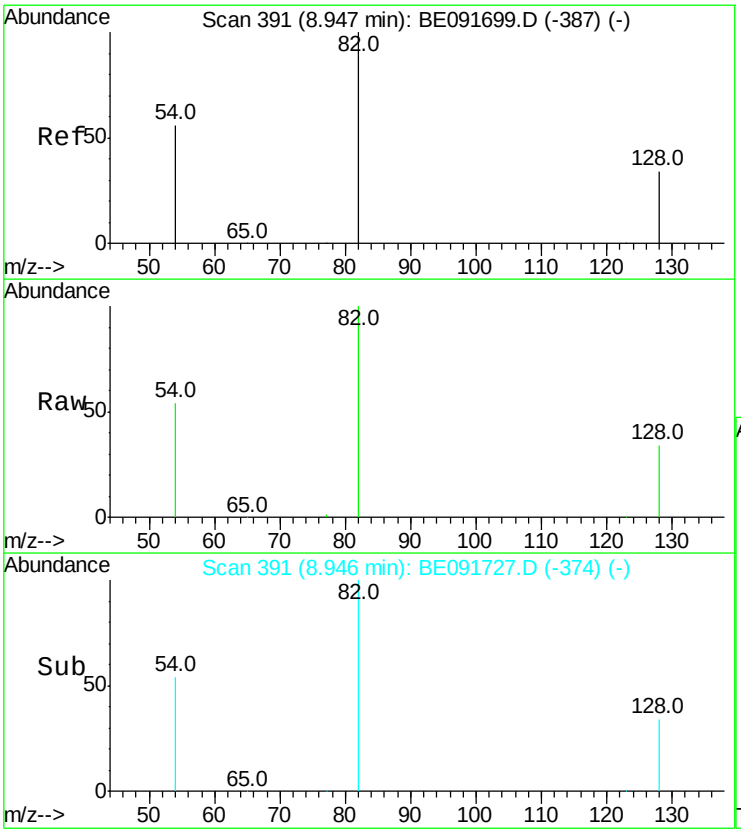
#7
Naphthalene-d8
Concen: 5.00 ng
RT: 10.57 min Scan# 511
Delta R.T. 0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Instrument :
BNA_E
ClientSampleId :
CEDAR-HILL-TF-PS-001MSD

Tgt Ion:136 Resp: 170921

Ion	Ratio	Lower	Upper
136	100		
137	11.1	8.9	13.3
54	6.2	8.2	12.4#
68	4.8	6.2	9.4#

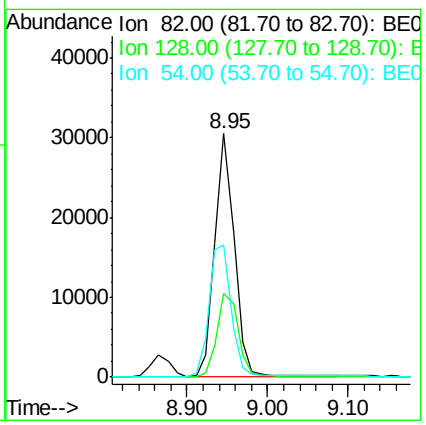


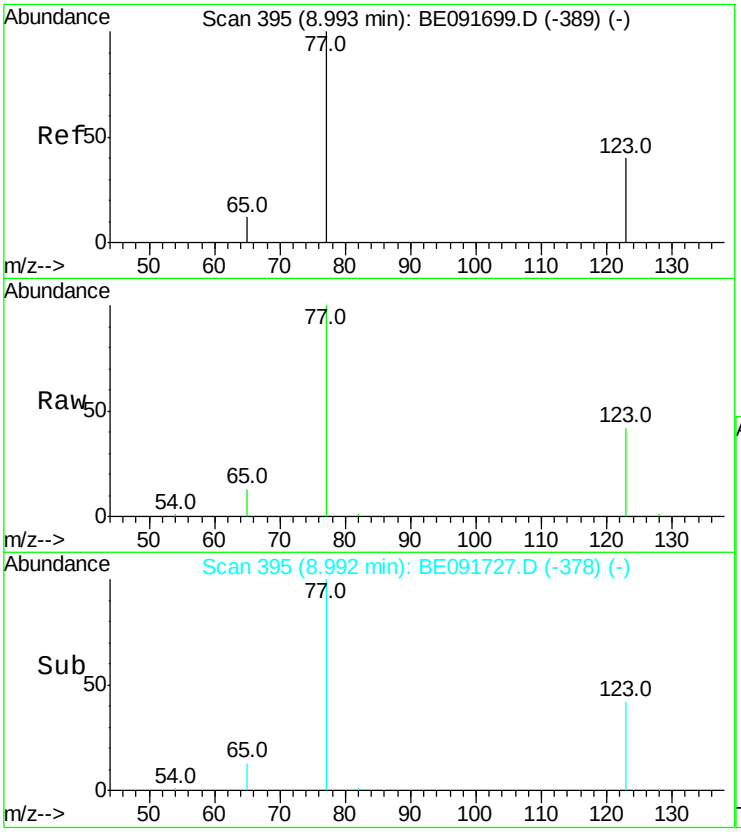


#8
Nitrobenzene-d5
Concen: 4.61 ng
RT: 8.95 min Scan# 391
Delta R.T. -0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Tgt Ion: 82 Resp: 50901

Ion	Ratio	Lower	Upper
82	100		
128	34.2	25.4	38.0
54	54.3	48.4	72.6



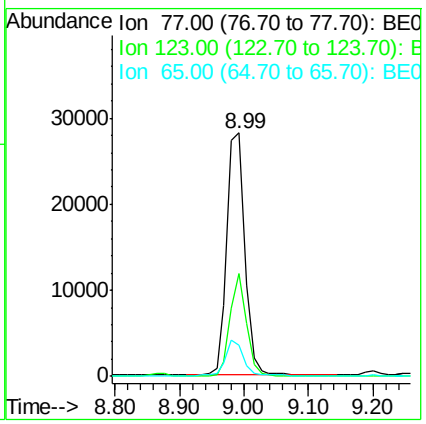


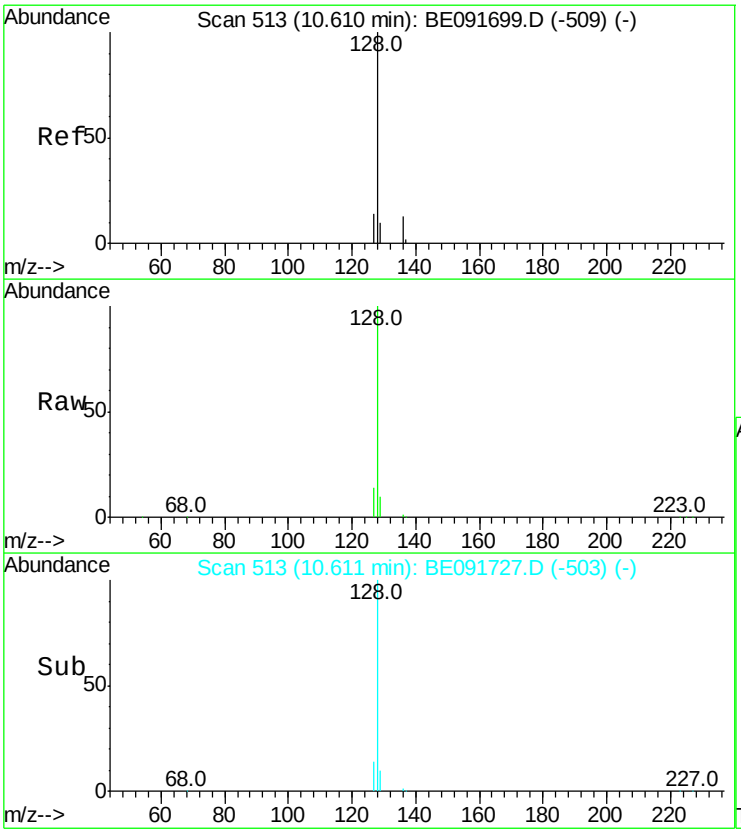
#9
Nitrobenzene
Concen: 4.72 ng
RT: 8.99 min Scan# 395
Delta R.T. -0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Instrument :
BNA_E
ClientSampleId :
CEDAR-HILL-TF-PS-001MSD

Tgt Ion: 77 Resp: 54417

Ion	Ratio	Lower	Upper
77	100		
123	37.8	26.9	40.3
65	14.2	9.4	14.2#

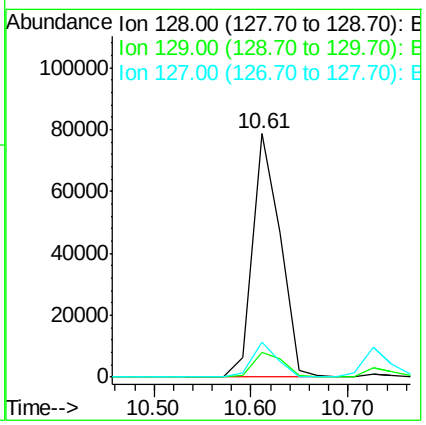


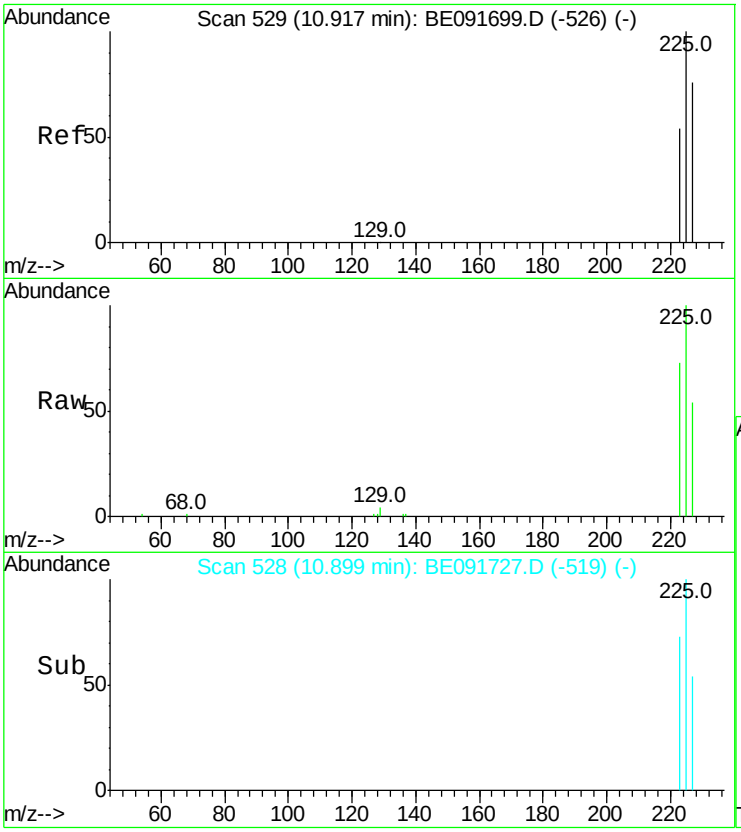


#10
Naphthalene
Concen: 4.49 ng
RT: 10.61 min Scan# 513
Delta R.T. 0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Tgt Ion:128 Resp: 154956

Ion	Ratio	Lower	Upper
128	100		
129	10.2	9.3	13.9
127	14.2	10.7	16.1



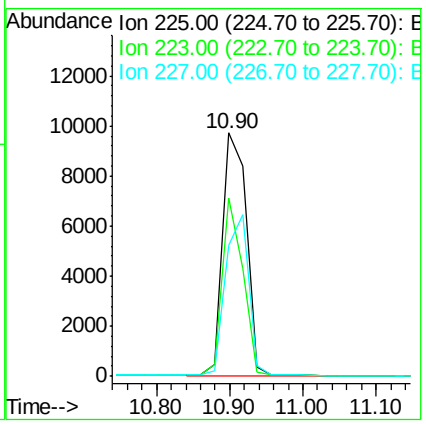


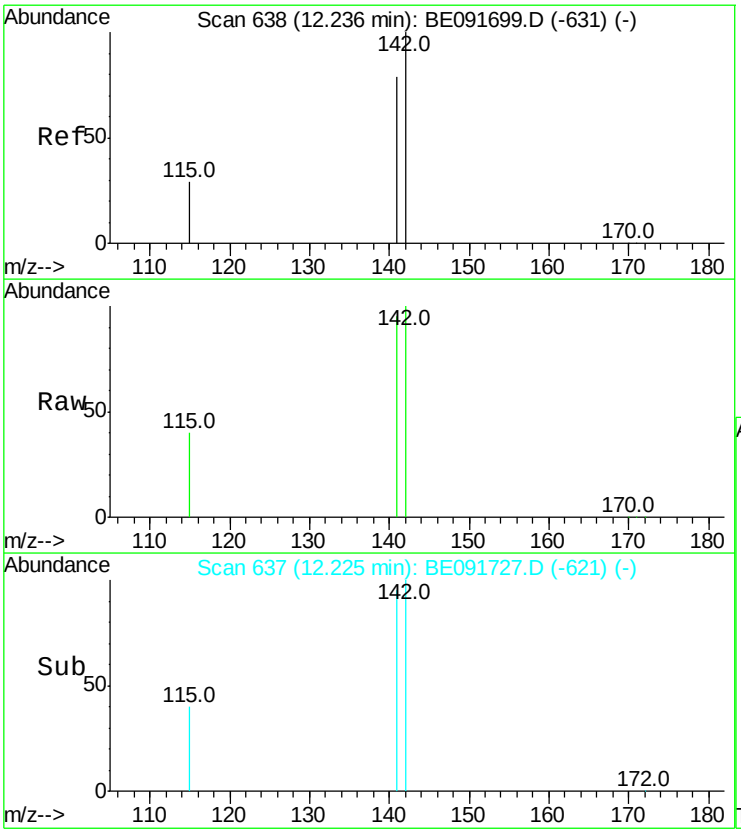
#11
Hexachlorobutadiene
Concen: 4.61 ng
RT: 10.90 min Scan# 528
Delta R.T. -0.02 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Instrument :
BNA_E
ClientSampleId :
CEDAR-HILL-TF-PS-001MSD

Tgt Ion:225 Resp: 23503

Ion	Ratio	Lower	Upper
225	100		
223	64.3	49.0	73.6
227	65.3	50.3	75.5

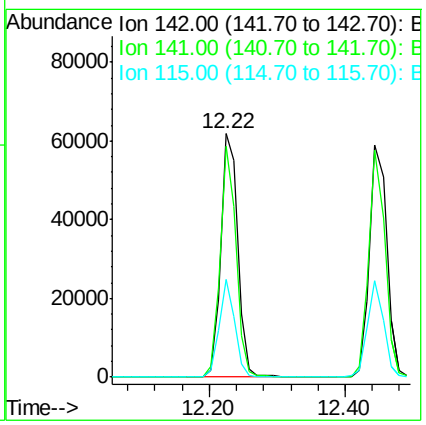


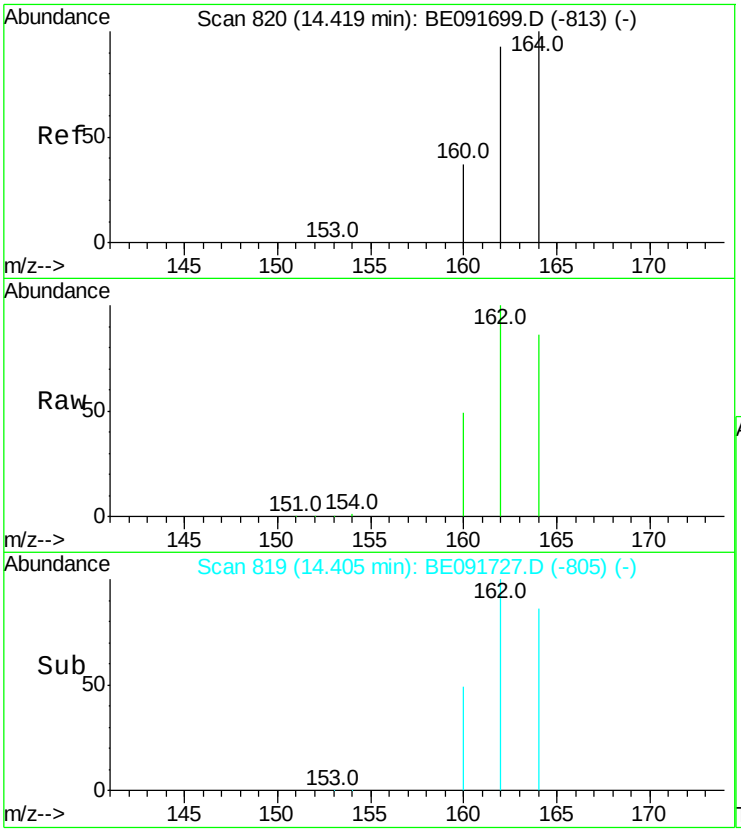


#12
2-Methylnaphthalene
Concen: 4.94 ng
RT: 12.22 min Scan# 637
Delta R.T. -0.01 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Tgt Ion:142 Resp: 109514

Ion	Ratio	Lower	Upper
142	100		
141	95.0	71.4	107.0
115	40.2	30.3	45.5



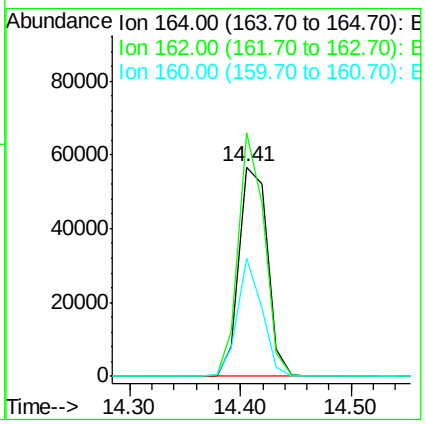


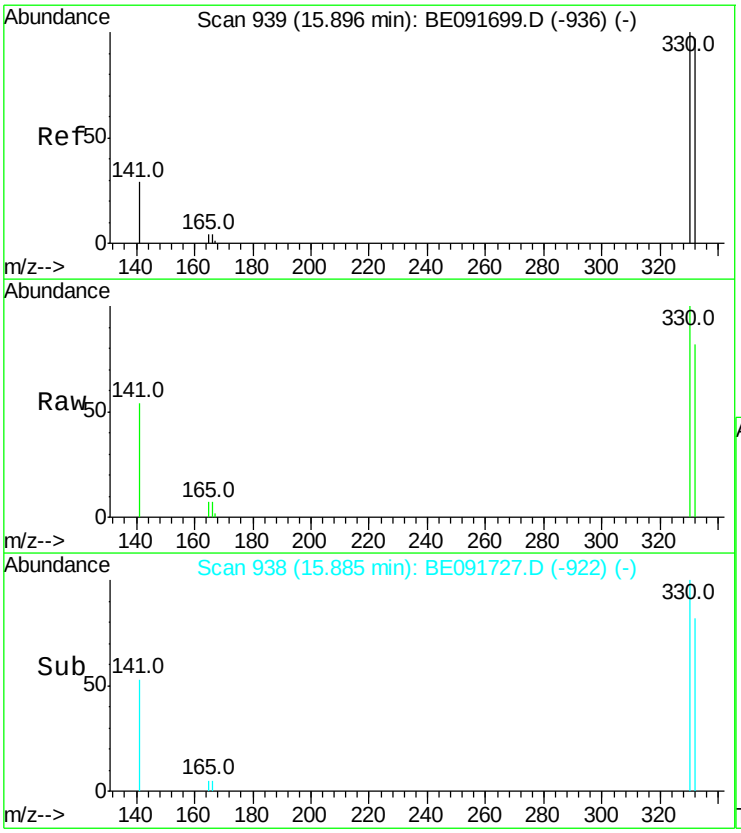
#13
Acenaphthene-d10
Concen: 5.00 ng
RT: 14.41 min Scan# 819
Delta R.T. -0.01 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Instrument :
BNA_E
ClientSampleId :
CEDAR-HILL-TF-PS-001MSD

Tgt Ion:164 Resp: 100970

Ion	Ratio	Lower	Upper
164	100		
162	116.3	85.3	127.9
160	56.5	46.2	69.2

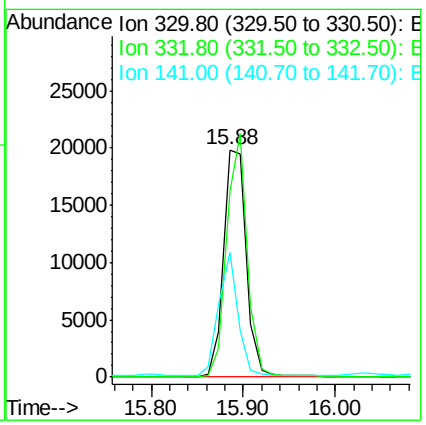


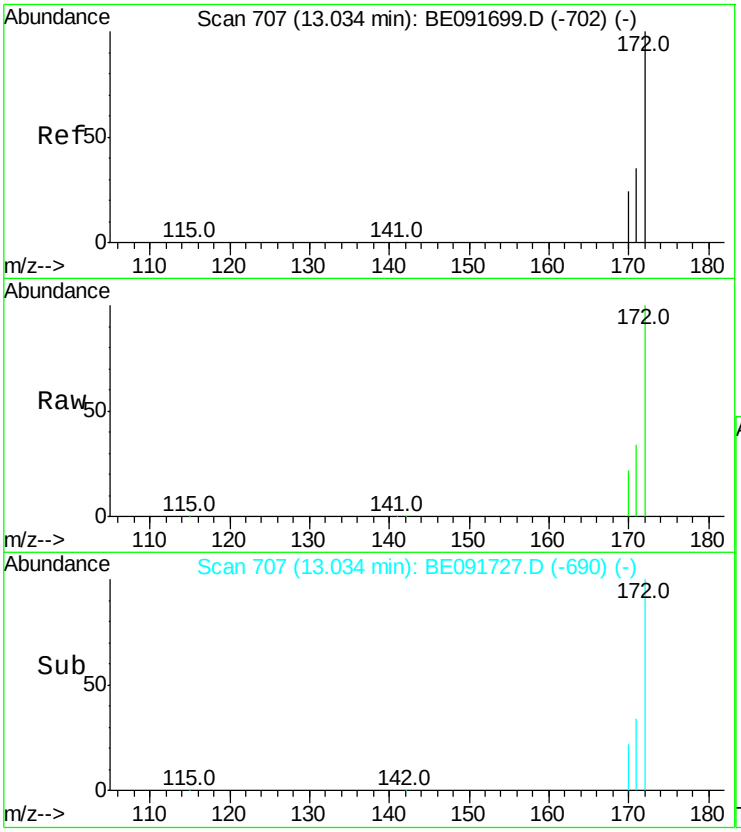


#14
2,4,6-Tribromophenol
Concen: 9.03 ng
RT: 15.88 min Scan# 938
Delta R.T. -0.01 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Tgt Ion:330 Resp: 34037

Ion	Ratio	Lower	Upper
330	100		
332	96.8	79.1	118.7
141	46.0	125.4	188.0#



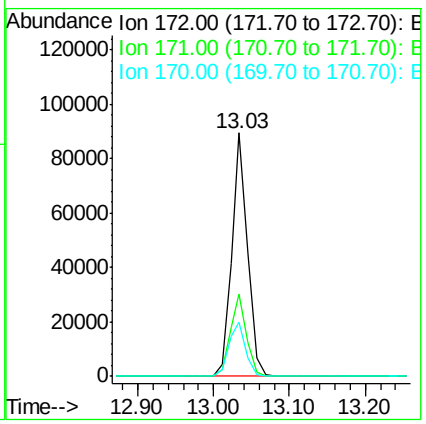


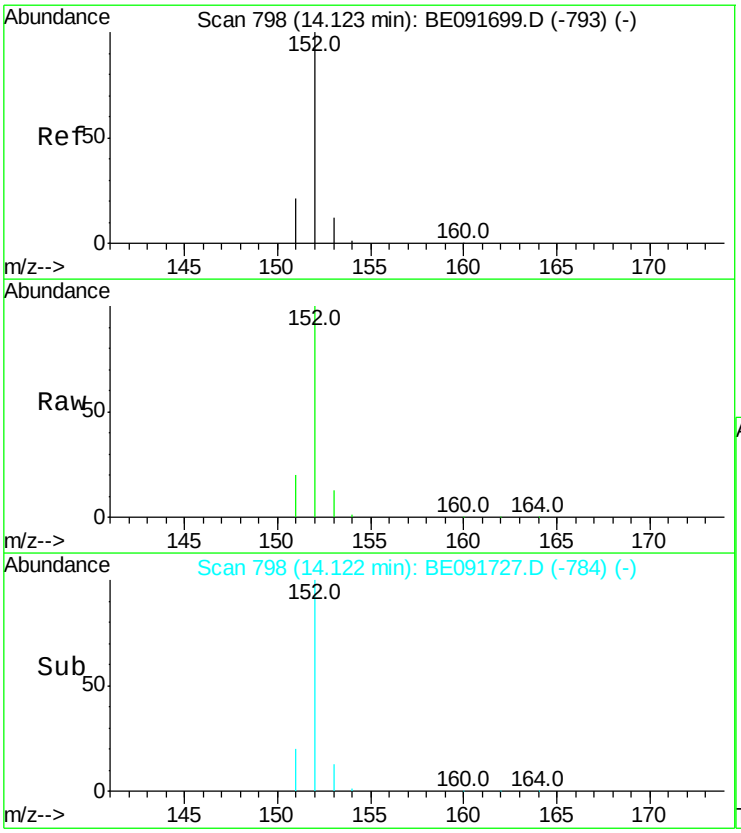
#15
2-Fluorobiphenyl
Concen: 4.58 ng
RT: 13.03 min Scan# 707
Delta R.T. 0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Instrument :
BNA_E
ClientSampleId :
CEDAR-HILL-TF-PS-001MSD

Tgt Ion:172 Resp: 130762

Ion	Ratio	Lower	Upper
172	100		
171	33.9	28.8	43.2
170	22.3	19.3	28.9

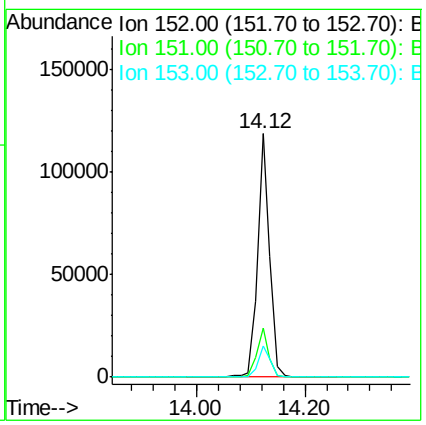


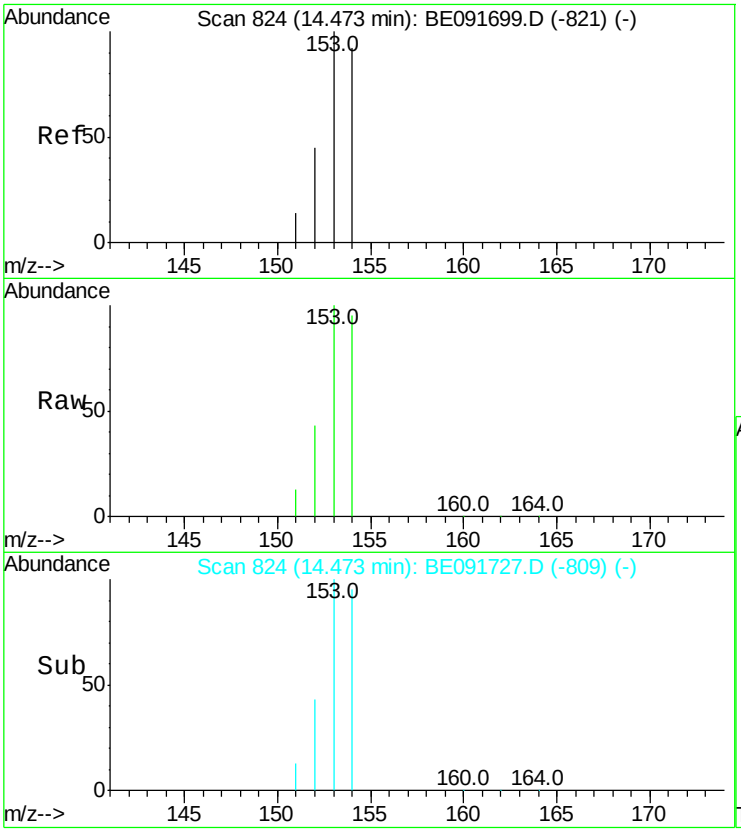


#16
Acenaphthylene
Concen: 5.05 ng
RT: 14.12 min Scan# 798
Delta R.T. -0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Tgt Ion:152 Resp: 195962

Ion	Ratio	Lower	Upper
152	100		
151	20.3	3.9	5.9#
153	13.5	10.3	15.5



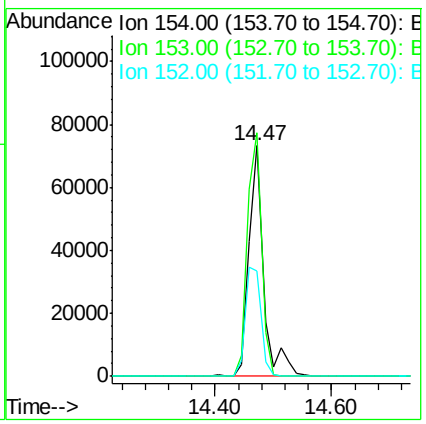


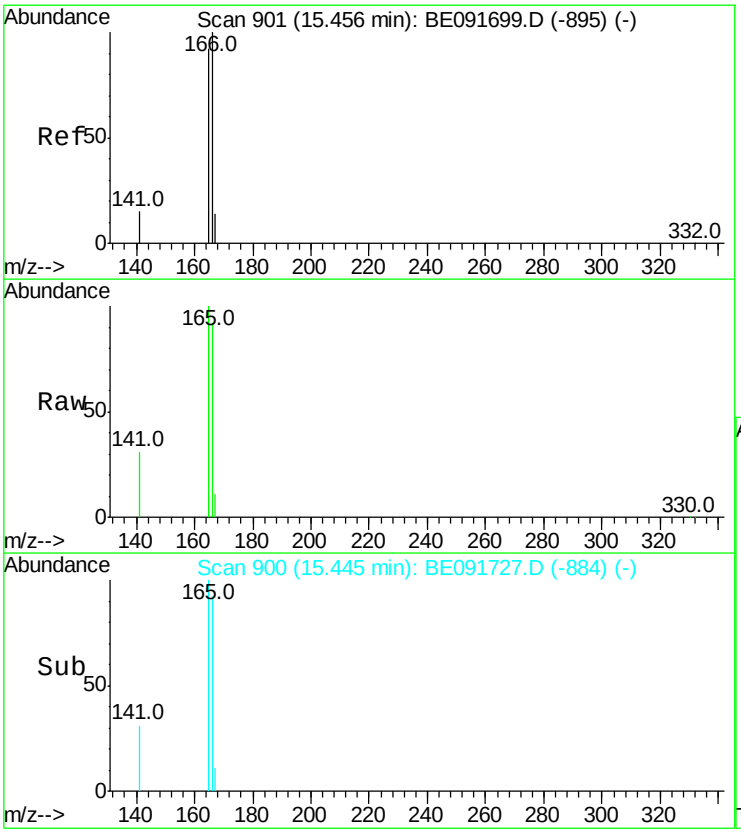
#17
Acenaphthene
Concen: 5.00 ng
RT: 14.47 min Scan# 824
Delta R.T. -0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Instrument :
BNA_E
ClientSampleId :
CEDAR-HILL-TF-PS-001MSD

Tgt Ion:154 Resp: 125854

Ion	Ratio	Lower	Upper
154	100		
153	101.4	80.0	120.0
152	50.2	40.0	60.0

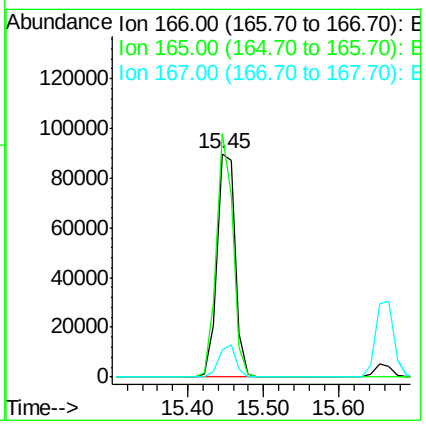


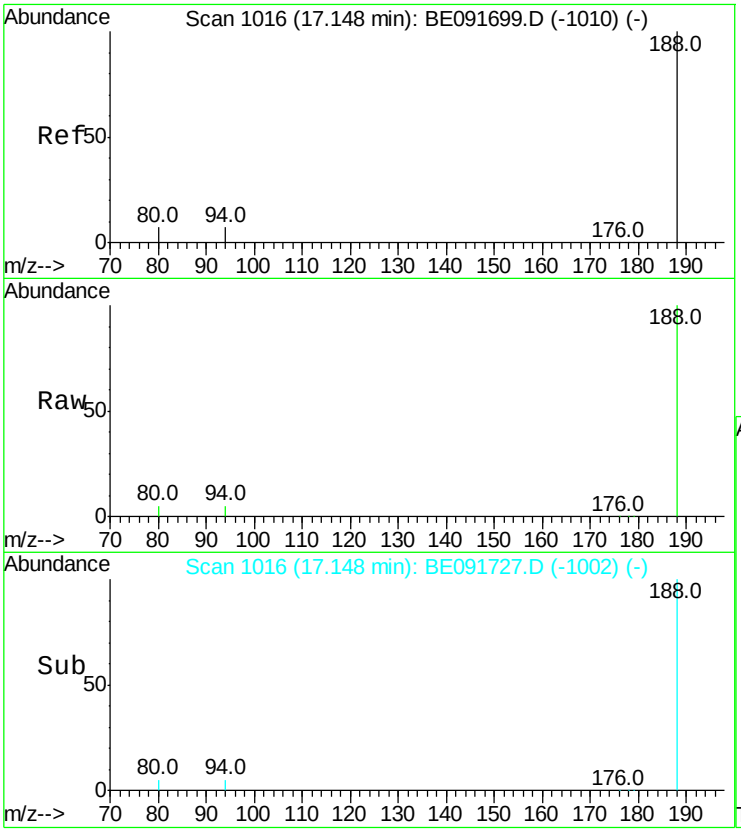


#18
Fluorene
Concen: 4.86 ng
RT: 15.45 min Scan# 900
Delta R.T. -0.01 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Tgt Ion:166 Resp: 152054

Ion	Ratio	Lower	Upper
166	100		
165	98.8	80.8	121.2
167	13.7	10.9	16.3



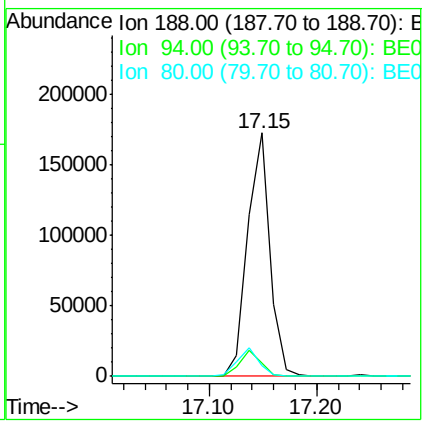


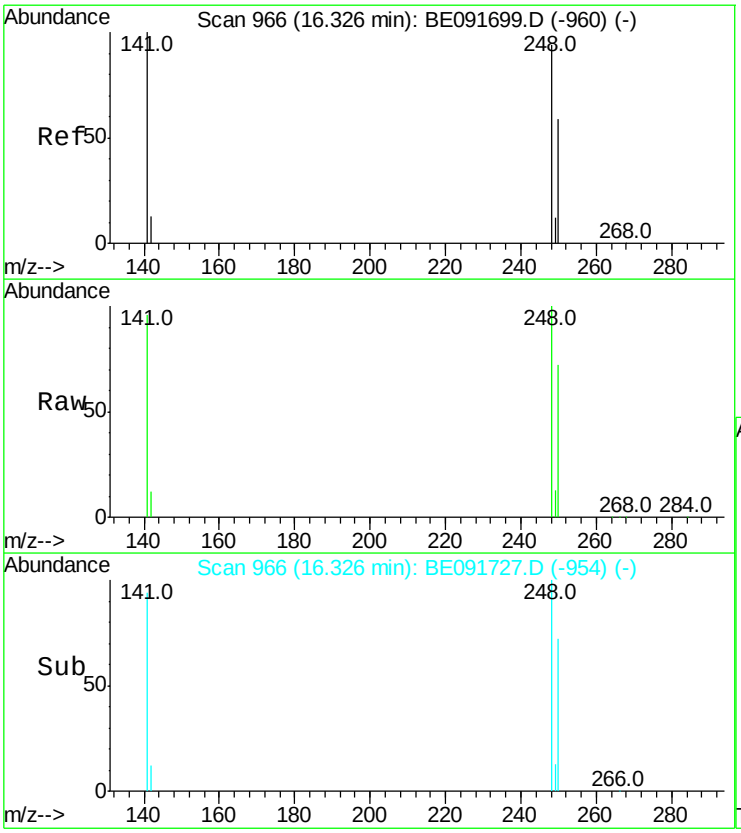
#19
Phenanthrene-d10
Concen: 5.00 ng
RT: 17.15 min Scan# 1016
Delta R.T. 0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Instrument :
BNA_E
ClientSampleId :
CEDAR-HILL-TF-PS-001MSD

Tgt Ion:188 Resp: 249266

Ion	Ratio	Lower	Upper
188	100		
94	5.4	8.7	13.1#
80	4.6	9.4	14.0#

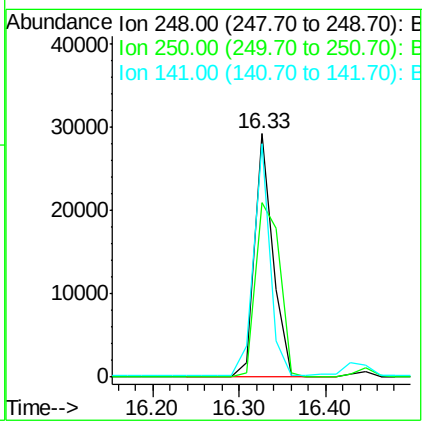


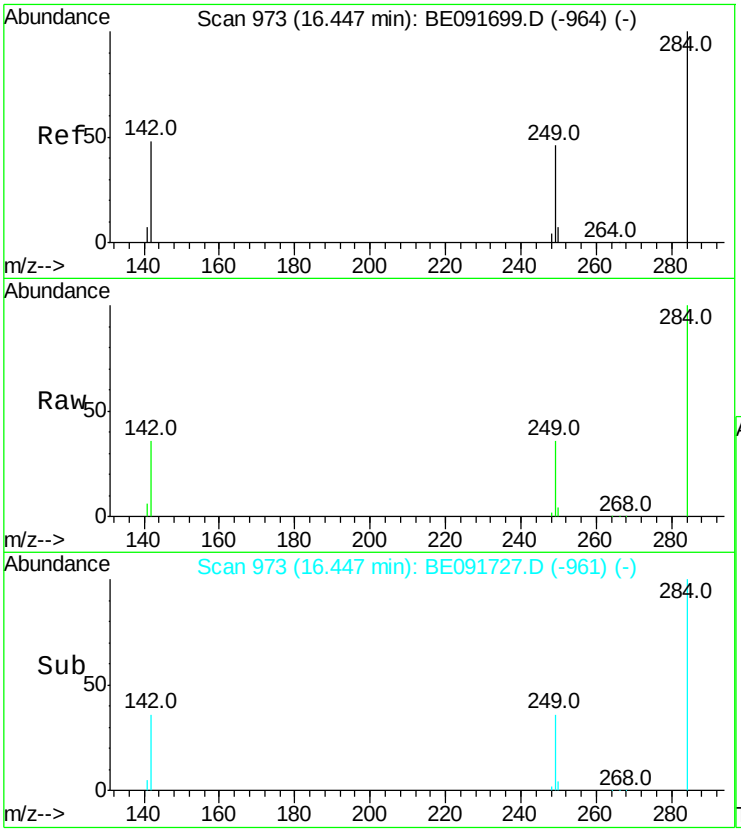


#20
4-Bromophenyl-phenylether
Concen: 4.82 ng
RT: 16.33 min Scan# 966
Delta R.T. -0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Tgt Ion:248 Resp: 43201

Ion	Ratio	Lower	Upper
248	100		
250	95.8	80.5	120.7
141	86.2	72.0	108.0



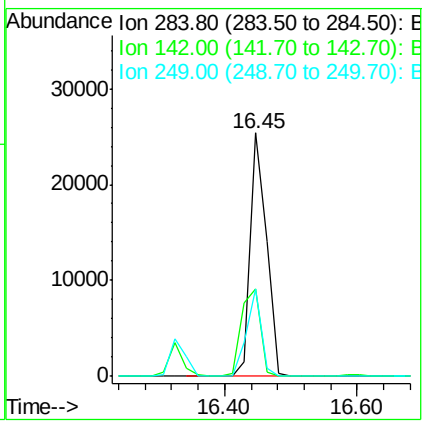


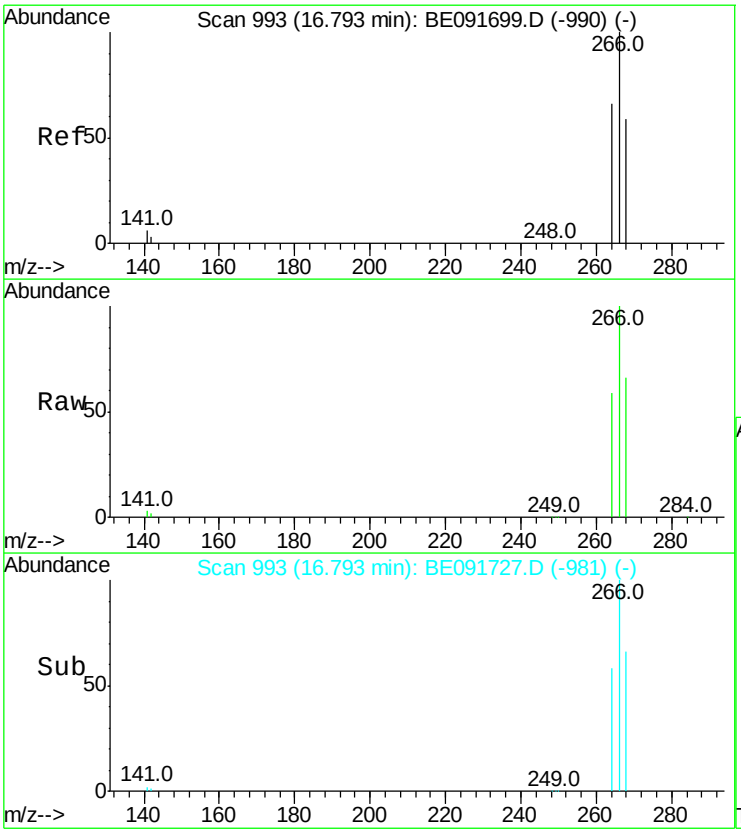
#21
Hexachlorobenzene
Concen: 4.78 ng
RT: 16.45 min Scan# 973
Delta R.T. -0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Instrument :
BNA_E
ClientSampleId :
CEDAR-HILL-TF-PS-001MSD

Tgt Ion:284 Resp: 42858

Ion	Ratio	Lower	Upper
284	100		
142	41.6	32.2	48.2
249	32.5	25.4	38.2

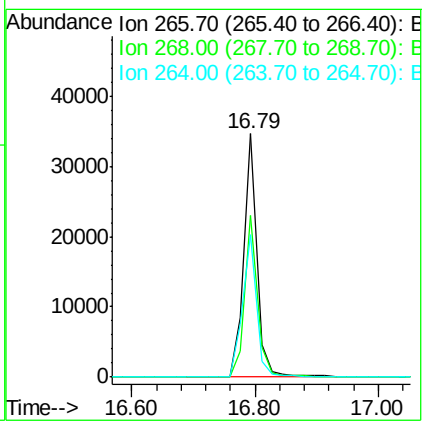


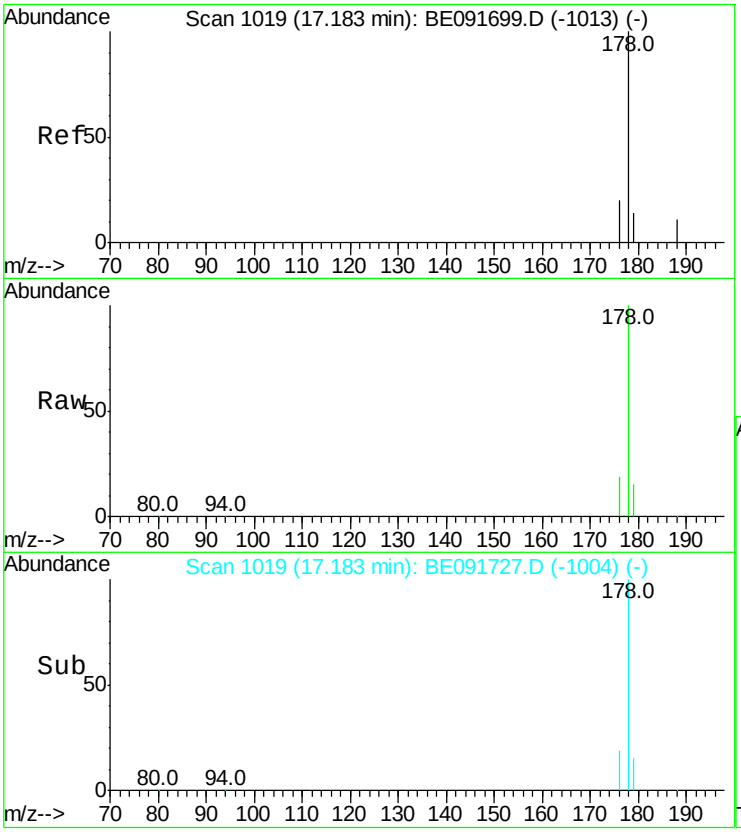


#22
Pentachlorophenol
Concen: 10.55 ng
RT: 16.79 min Scan# 993
Delta R.T. -0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Tgt Ion:266 Resp: 51295

Ion	Ratio	Lower	Upper
266	100		
268	66.3	58.2	87.2
264	58.5	56.2	84.4



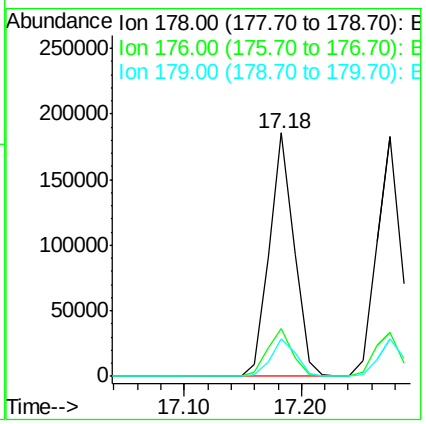


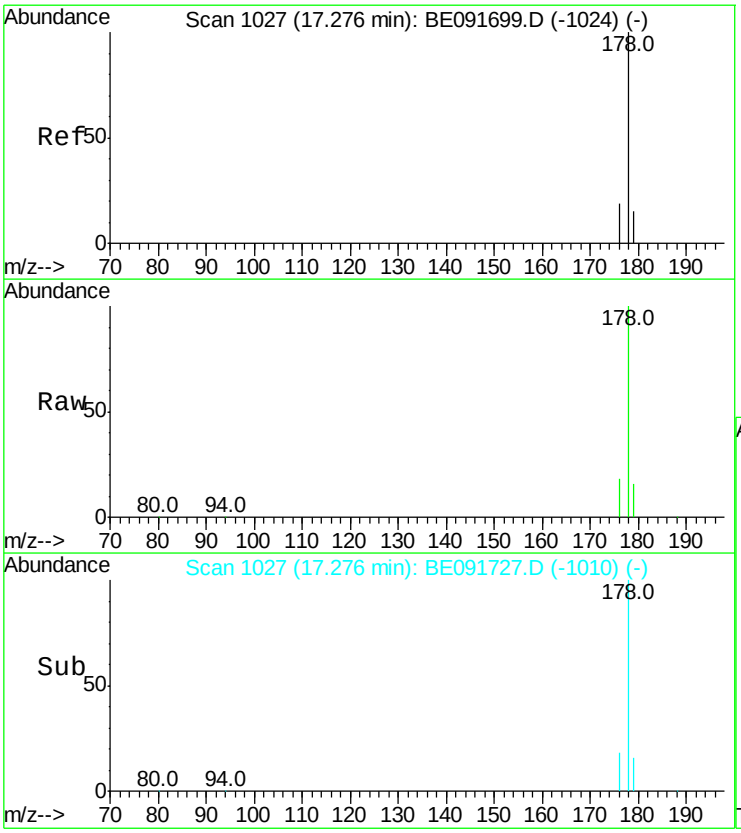
#23
Phenanthrene
Concen: 4.80 ng
RT: 17.18 min Scan# 1019
Delta R.T. 0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Instrument :
BNA_E
ClientSampleId :
CEDAR-HILL-TF-PS-001MSD

Tgt Ion:178 Resp: 271821

Ion	Ratio	Lower	Upper
178	100		
176	19.6	15.3	22.9
179	15.6	12.6	18.8

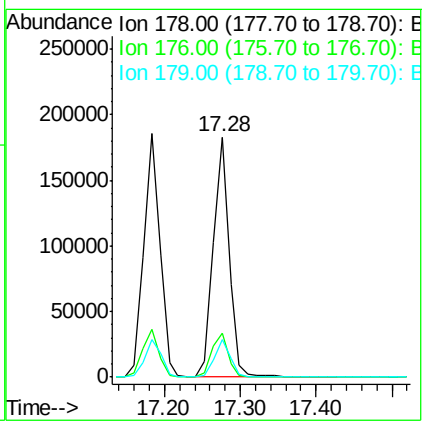


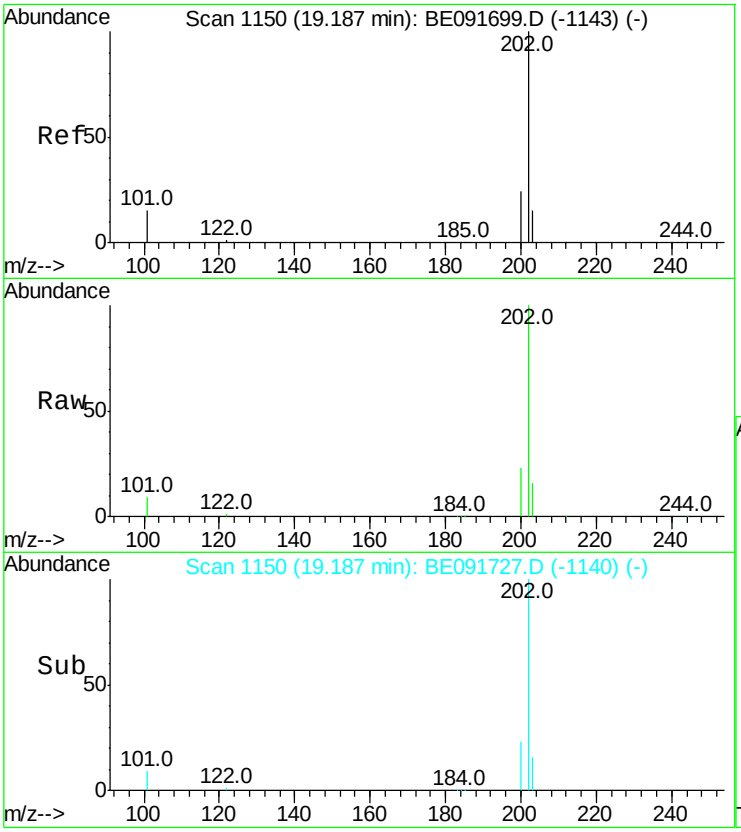


#24
Anthracene
Concen: 5.18 ng
RT: 17.28 min Scan# 1027
Delta R.T. 0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Tgt Ion:178 Resp: 264667

Ion	Ratio	Lower	Upper
178	100		
176	19.0	14.6	21.8
179	15.3	11.8	17.6



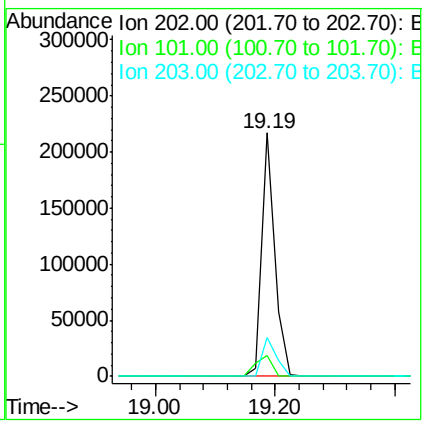


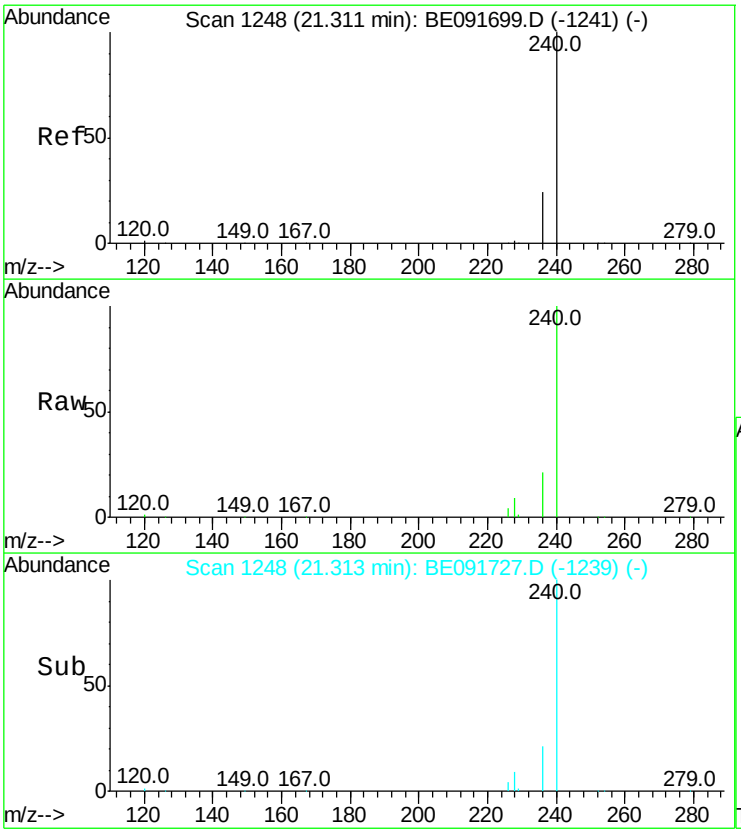
#25
Fluoranthene
Concen: 5.56 ng
RT: 19.19 min Scan# 1150
Delta R.T. -0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Instrument :
BNA_E
ClientSampleId :
CEDAR-HILL-TF-PS-001MSD

Tgt Ion:202 Resp: 329408

Ion	Ratio	Lower	Upper
202	100		
101	11.0	11.0	16.6#
203	17.5	13.9	20.9

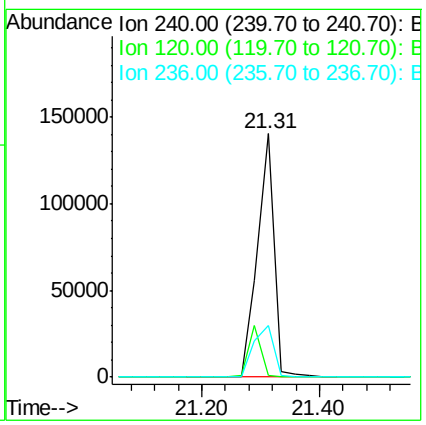


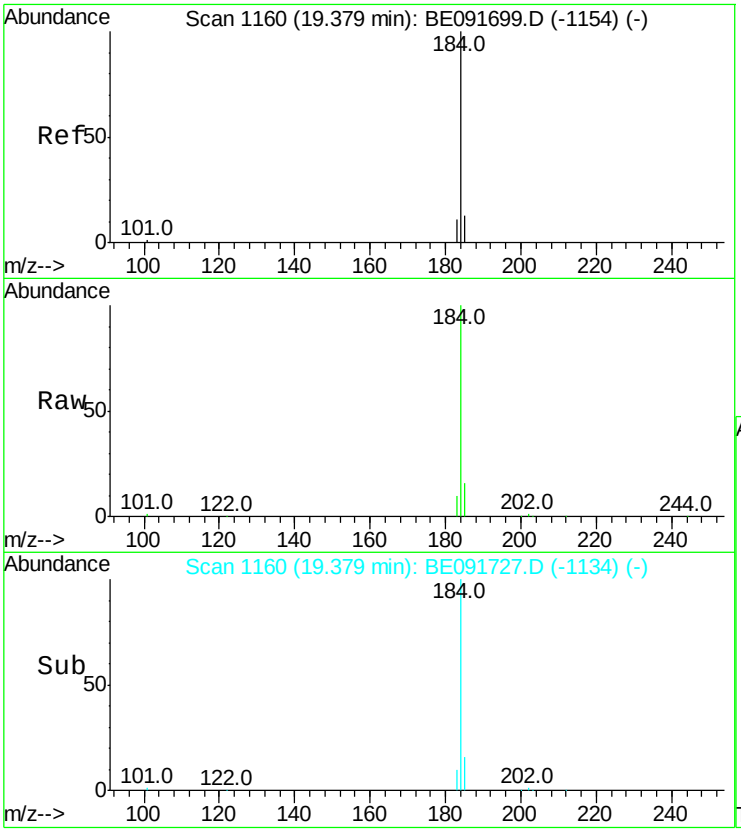


#26
Chrysene-d12
Concen: 5.00 ng
RT: 21.31 min Scan# 1248
Delta R.T. 0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Tgt Ion:240 Resp: 280110

Ion	Ratio	Lower	Upper
240	100		
120	0.8	11.0	16.4#
236	21.0	21.7	32.5#



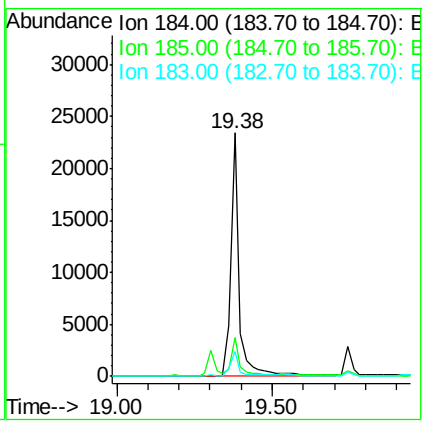


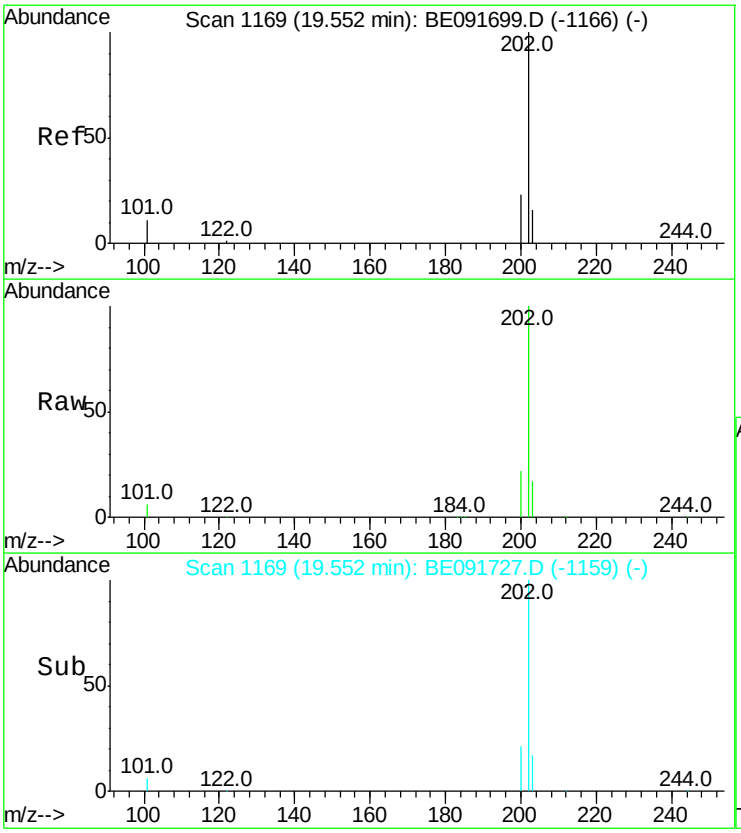
#27
Benzidine
Concen: 2.05 ng
RT: 19.38 min Scan# 1160
Delta R.T. 0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Instrument :
BNA_E
ClientSampleId :
CEDAR-HILL-TF-PS-001MSD

Tgt Ion:184 Resp: 43203

Ion	Ratio	Lower	Upper
184	100		
185	15.9	22.3	33.5#
183	10.4	16.4	24.6#

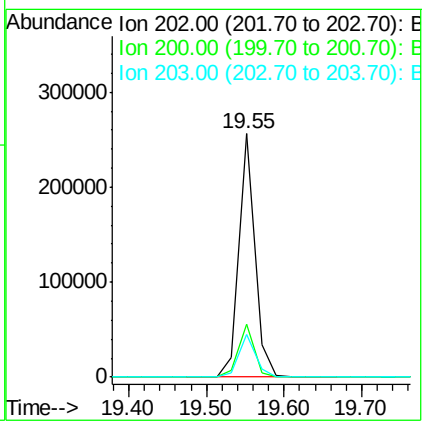


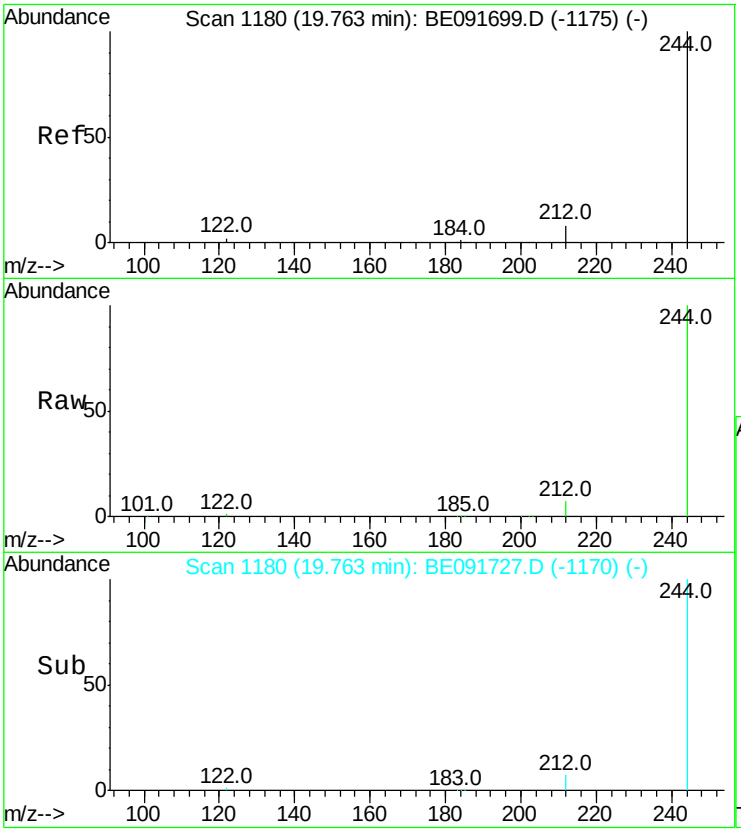


#28
Pyrene
Concen: 5.72 ng
RT: 19.55 min Scan# 1169
Delta R.T. -0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Tgt Ion:202 Resp: 362019

Ion	Ratio	Lower	Upper
202	100		
200	21.5	16.8	25.2
203	18.3	14.0	21.0



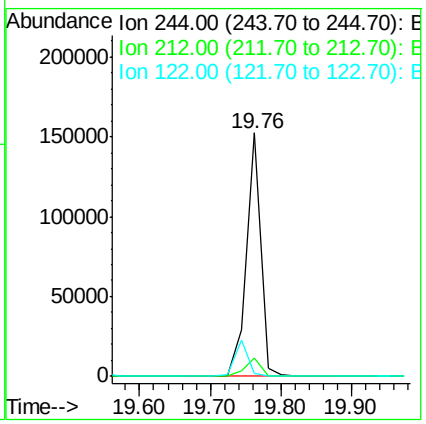


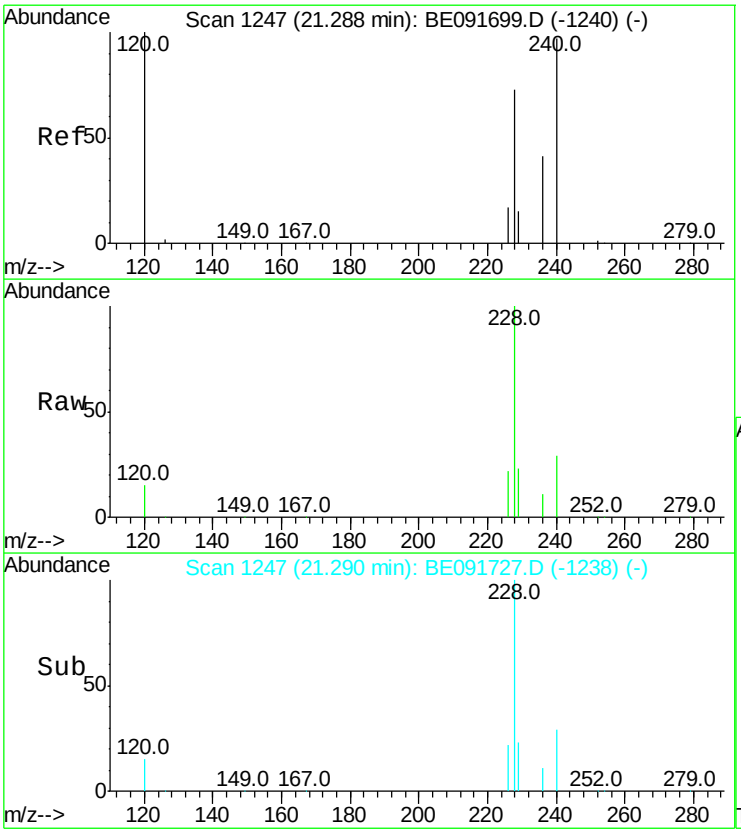
#29
Terphenyl-d14
Concen: 4.97 ng
RT: 19.76 min Scan# 1180
Delta R.T. -0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Instrument :
BNA_E
ClientSampleId :
CEDAR-HILL-TF-PS-001MSD

Tgt Ion:244 Resp: 217233

Ion	Ratio	Lower	Upper
244	100		
212	7.4	6.9	10.3
122	1.2	11.0	16.4#

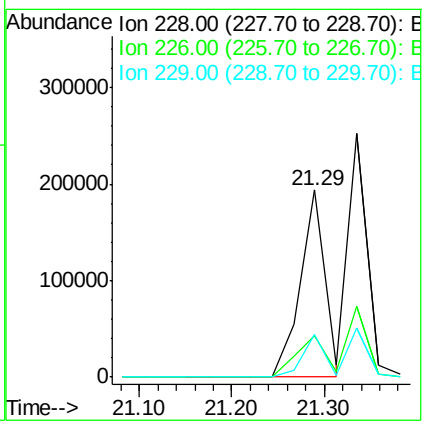


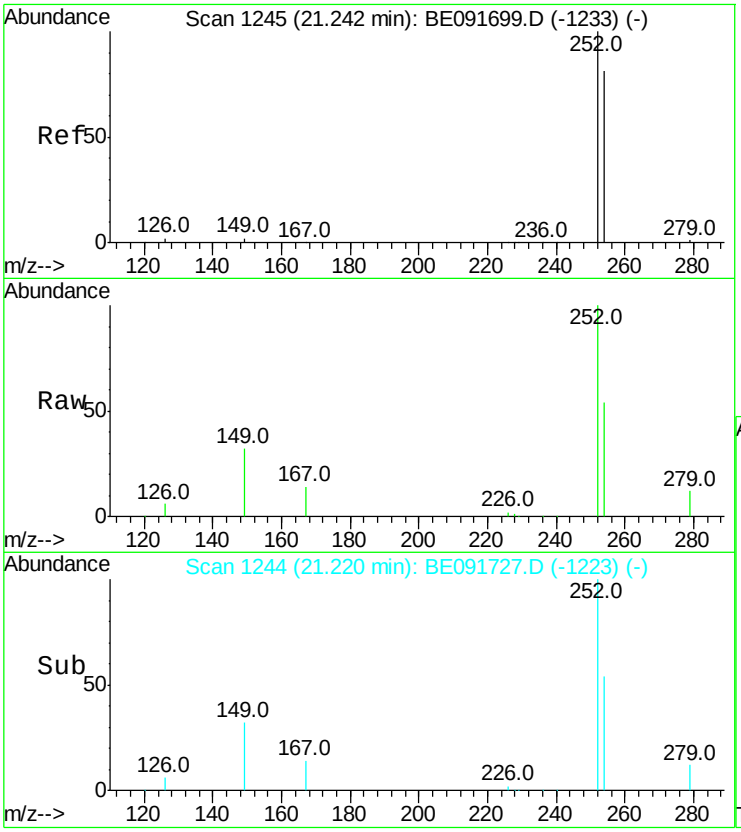


#30
Benzo(a)anthracene
Concen: 5.28 ng
RT: 21.29 min Scan# 1247
Delta R.T. 0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Tgt Ion:228 Resp: 360969

Ion	Ratio	Lower	Upper
228	100		
226	21.9	21.0	31.4
229	23.1	15.7	23.5



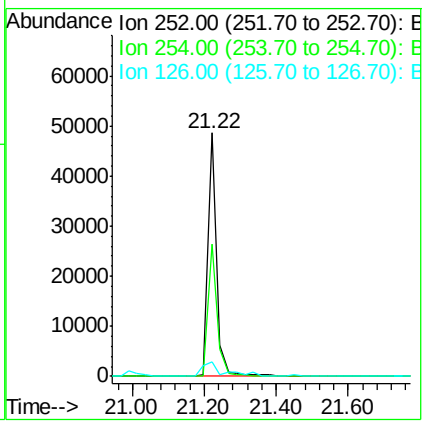


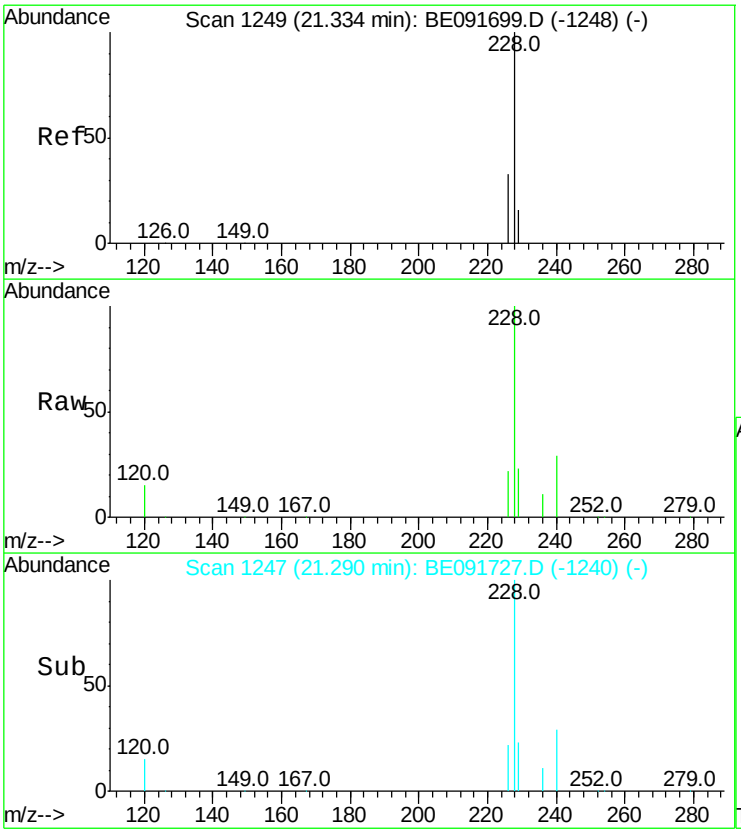
#31
3,3'-Dichlorobenzidine
Concen: 2.26 ng
RT: 21.22 min Scan# 1244
Delta R.T. -0.02 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Instrument :
BNA_E
ClientSampleId :
CEDAR-HILL-TF-PS-001MSD

Tgt Ion:252 Resp: 79024

Ion	Ratio	Lower	Upper
252	100		
254	54.3	51.1	76.7
126	5.8	12.6	18.8#

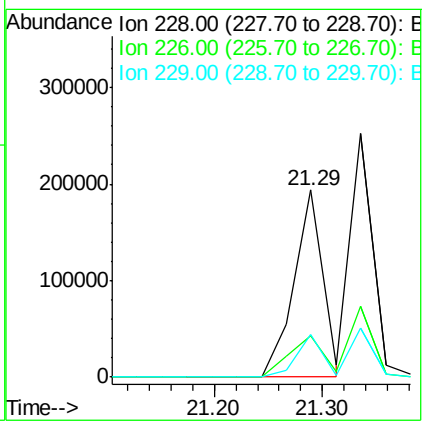


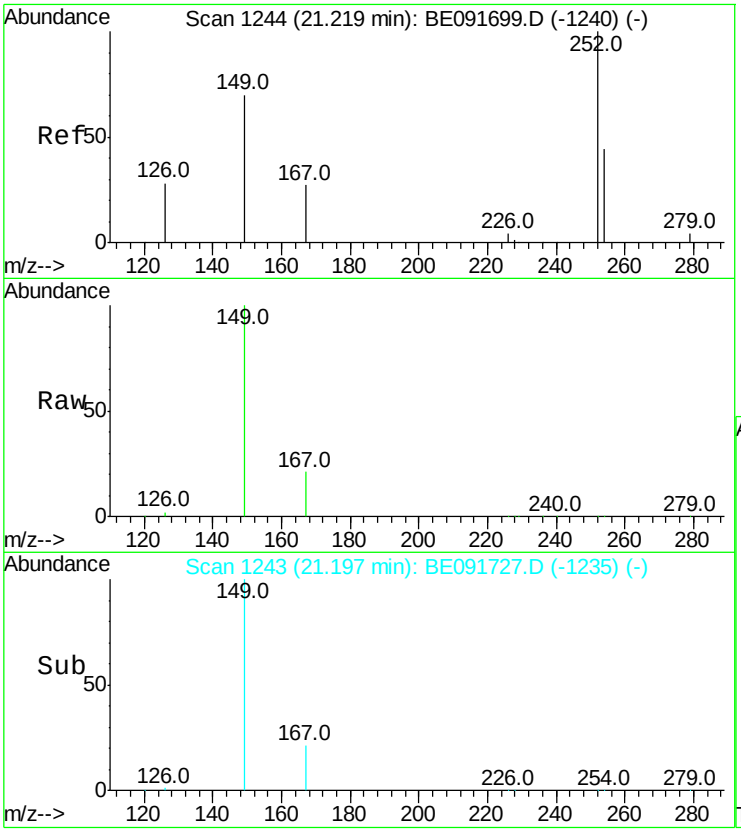


#32
Chrysene
Concen: 5.08 ng
RT: 21.29 min Scan# 1247
Delta R.T. -0.04 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Tgt Ion:228 Resp: 360965

Ion	Ratio	Lower	Upper
228	100		
226	21.9	24.0	36.0#
229	23.1	15.9	23.9



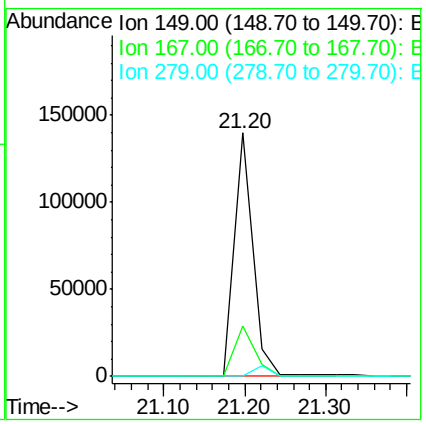


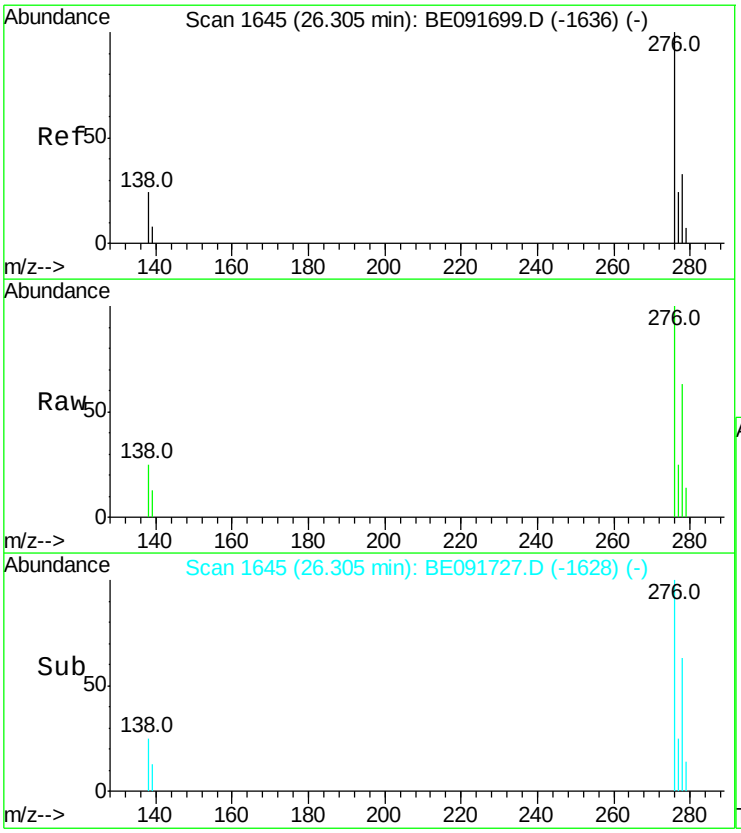
#33
Bis(2-ethylhexyl)phthalate
Concen: 10.47 ng
RT: 21.20 min Scan# 1243
Delta R.T. -0.02 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Instrument :
BNA_E
ClientSampleId :
CEDAR-HILL-TF-PS-001MSD

Tgt Ion:149 Resp: 217112

Ion	Ratio	Lower	Upper
149	100		
167	23.1	19.5	29.3
279	0.0	10.0	15.0#

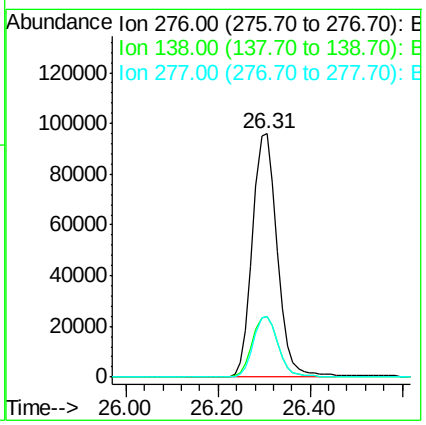


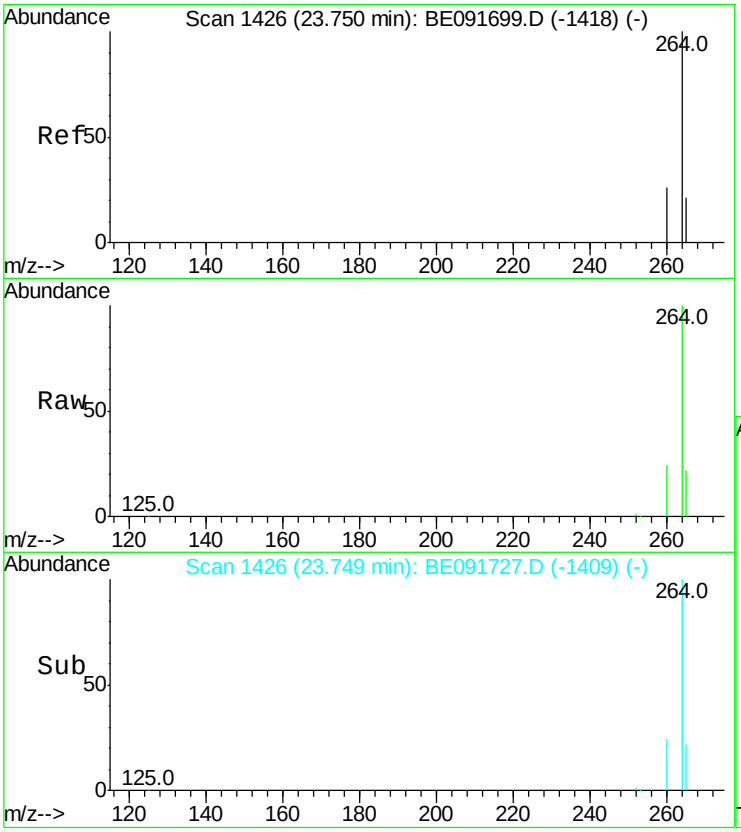


#34
Indeno(1,2,3-cd)pyrene
Concen: 5.70 ng
RT: 26.31 min Scan# 1645
Delta R.T. 0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Tgt Ion:276 Resp: 360633

Ion	Ratio	Lower	Upper
276	100		
138	26.0	23.4	35.2
277	24.9	19.8	29.8



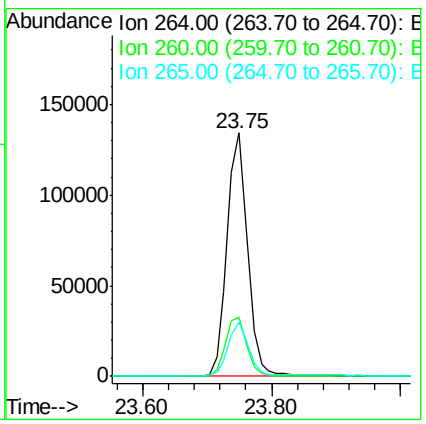


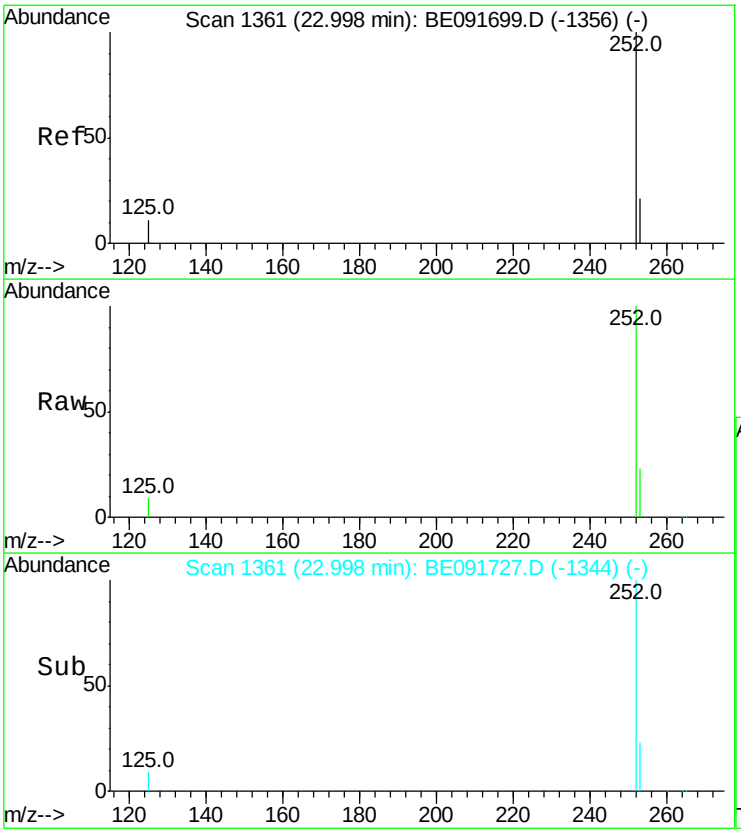
#35
Perylene-d12
Concen: 5.00 ng
RT: 23.75 min Scan# 1426
Delta R.T. -0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Instrument :
BNA_E
ClientSampleId :
CEDAR-HILL-TF-PS-001MSD

Tgt Ion:264 Resp: 296034

Ion	Ratio	Lower	Upper
264	100		
260	24.3	20.0	30.0
265	22.3	17.5	26.3

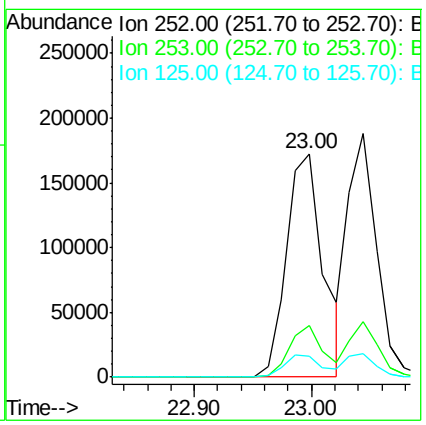


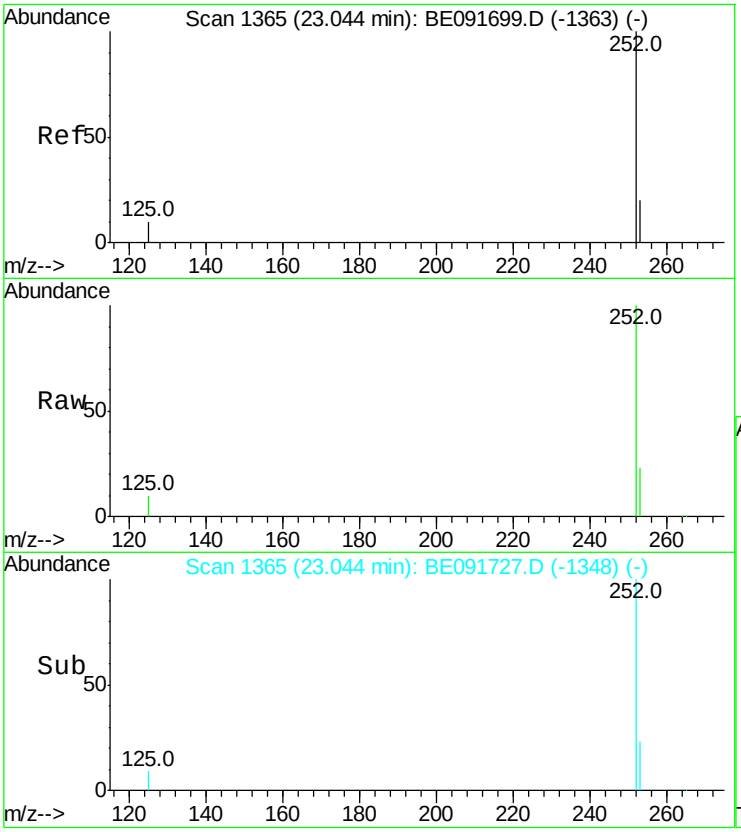


#36
Benzo(b)fluoranthene
Concen: 5.37 ng
RT: 23.00 min Scan# 1361
Delta R.T. -0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Tgt Ion:252 Resp: 372235

Ion	Ratio	Lower	Upper
252	100		
253	23.2	17.4	26.0
125	9.4	10.2	15.2#



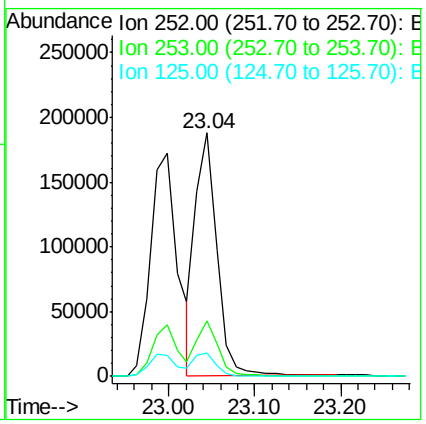


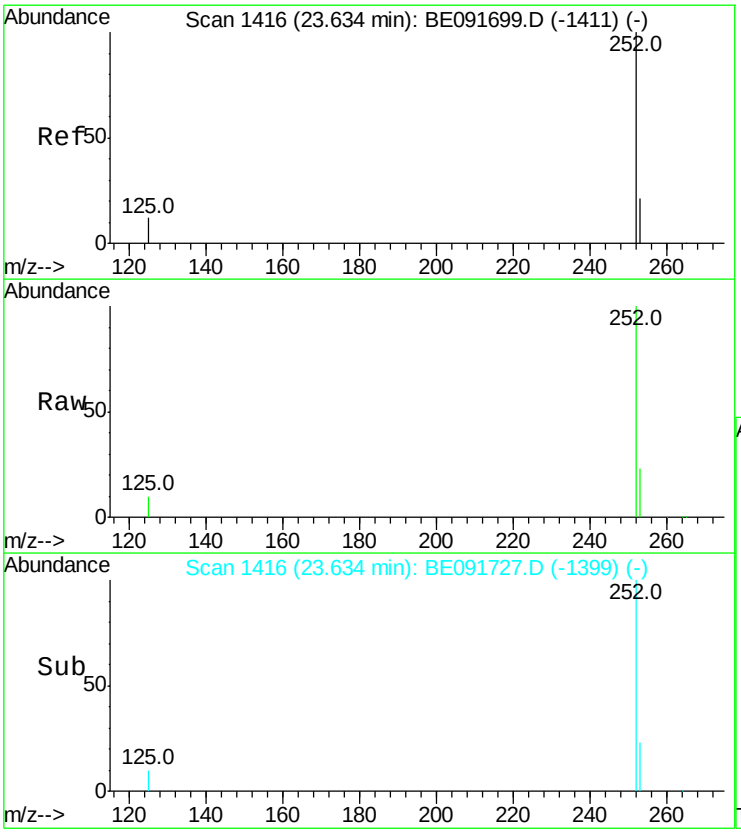
#37
Benzo(k)fluoranthene
Concen: 4.60 ng
RT: 23.04 min Scan# 1365
Delta R.T. -0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Instrument :
BNA_E
ClientSampleId :
CEDAR-HILL-TF-PS-001MSD

Tgt Ion:252 Resp: 324210

Ion	Ratio	Lower	Upper
252	100		
253	22.9	17.6	26.4
125	9.6	9.9	14.9#

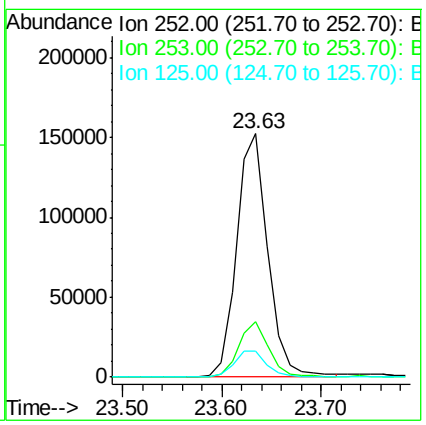


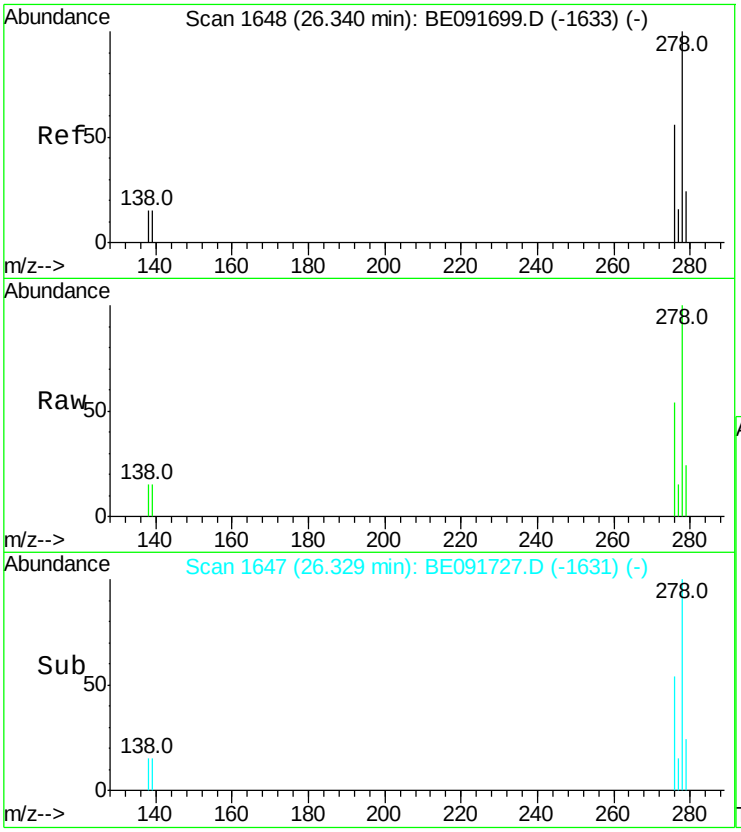


#38
Benzo(a)pyrene
Concen: 5.03 ng
RT: 23.63 min Scan# 1416
Delta R.T. -0.00 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Tgt Ion:252 Resp: 328734

Ion	Ratio	Lower	Upper
252	100		
253	22.9	18.1	27.1
125	10.5	11.0	16.4#



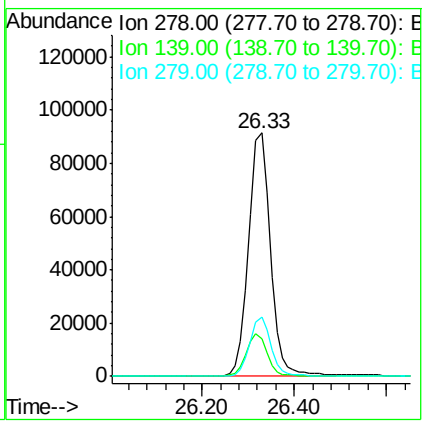


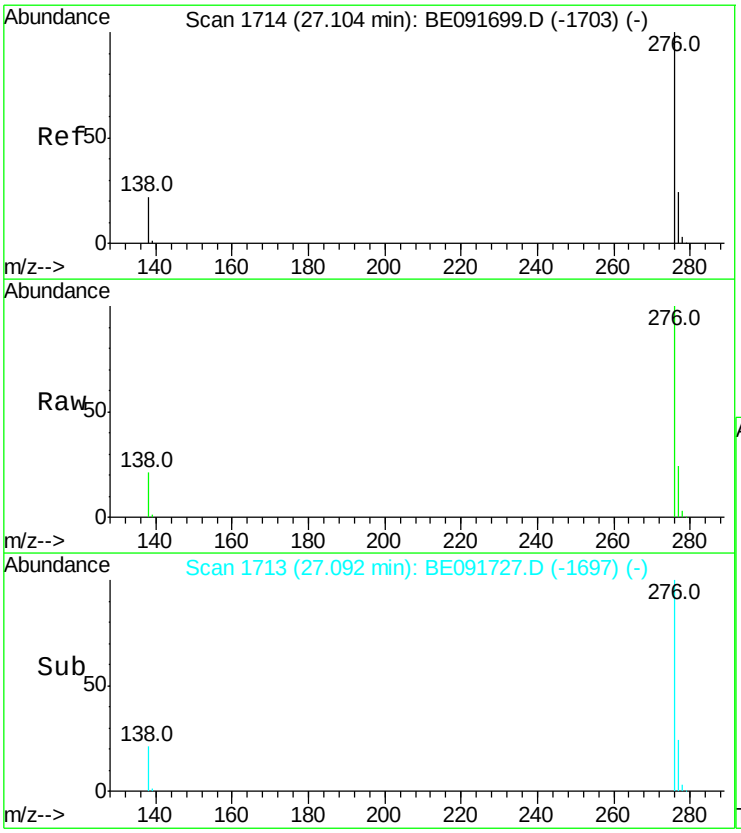
#39
Dibenzo(a,h)anthracene
Concen: 4.88 ng
RT: 26.33 min Scan# 1647
Delta R.T. -0.01 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Instrument :
BNA_E
ClientSampleId :
CEDAR-HILL-TF-PS-001MSD

Tgt Ion:278 Resp: 302022

Ion	Ratio	Lower	Upper
278	100		
139	15.3	16.0	24.0#
279	24.5	19.4	29.2





#40
Benzo(g,h,i)perylene
Concen: 4.85 ng
RT: 27.09 min Scan# 1713
Delta R.T. -0.01 min
Lab File: BE091727.D
Acq: 27 Apr 2016 15:39

Tgt Ion:276 Resp: 305333

Ion	Ratio	Lower	Upper
276	100		
277	23.7	18.6	28.0
138	21.1	20.4	30.6