

Data Path : Z:\HPCHEM1\BNA_E\DATA\BE021716\
 Data File : BE091407.D
 Acq On : 17 Feb 2016 16:54
 Operator : UM/IZ
 Sample : H1445-01
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 BNA_E
 ClientSampleId :
 LIBERTY-SF-005

Quant Time: Feb 17 23:59:40 2016
 Quant Method : Z:\HPCHEM1\BNA_E\METHODS\8270-SIM-BE020216.M
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
 QLast Update : Wed Feb 03 00:27:53 2016
 Response via : Initial Calibration

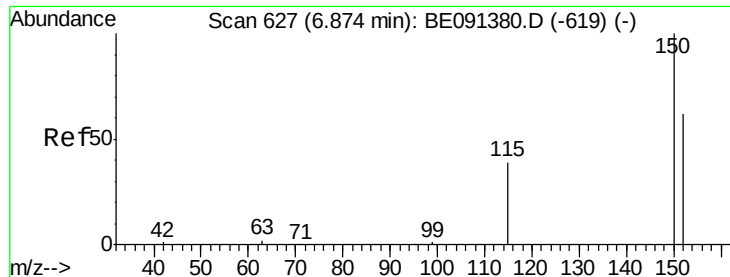
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.87	152	45537	5.00	ng	0.00
4) Naphthalene-d8	9.55	136	227548	5.00	ng	0.00
8) Acenaphthene-d10	13.35	164	146988	5.00	ng	0.00
14) Phenanthrene-d10	16.08	188	323915	5.00	ng	-0.01
18) Chrysene-d12	20.21	240	349294	5.00	ng	0.00
24) Perylene-d12	22.09	264	339359	5.00	ng	0.00

System Monitoring Compounds						
2) 2-Fluorophenol	4.90	112	65732	6.13	ng	-0.04
3) Phenol-d6	6.53	99	109302	7.16	ng	-0.04
5) Nitrobenzene-d5	8.16	82	57856	3.90	ng	0.00
9) 2,4,6-Tribromophenol	14.89	330	25973	3.80	ng	-0.01
10) 2-Fluorobiphenyl	11.99	172	168178	4.40	ng	-0.02
20) Terphenyl-d14	18.60	244	239134	4.63	ng	-0.02

Target Compounds				Qvalue		
6) Naphthalene	9.59	128	43490	0.85	ng	99
7) 2-Methylnaphthalene	11.10	142	91690	2.92	ng	100
11) Acenaphthylene	13.09	152	684773	2.75	ng	100
12) Acenaphthene	13.41	154	148747	3.69	ng	97
13) Fluorene	14.39	166	497204	9.54	ng	99
15) Phenanthrene	16.12	178	2951313	34.70	ng	97
16) Anthracene	16.12	178	2944273	41.31	ng	95
17) Fluoranthene	18.07	202	2481474	27.27	ng	98
19) Pyrene	18.46	202	2229859	29.46	ng	97
21) Benzo(a)anthracene	20.18	228	894215	11.26	ng	95
22) Chrysene	20.24	228	903470	10.52	ng	96
23) Indeno(1,2,3-cd)pyrene	23.68	276	344687	4.36	ng	99
25) Benzo(b)fluoranthene	21.54	252	461769	5.45	ng	# 96
26) Benzo(k)fluoranthene	21.56	252	607238	7.16	ng	# 95
27) Benzo(a)pyrene	21.99	252	636713	8.04	ng	# 96
28) Dibenzo(a,h)anthracene	23.63	278	136278	1.92	ng	# 91
29) Benzo(g,h,i)perylene	24.23	276	337551	4.03	ng	98

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

```
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Sample    : H1445-01  
Misc      :  
ALS Vial  : 5      Sample Multiplier: 1
```



#1

1,4-Dichlorobenzene-d4

Concen: 5.00 ng

RT: 6.87 min Scan# 626

Delta R.T. -0.01 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

Instrument :

BNA_E

ClientSampleId :

LIBERTY-SF-005

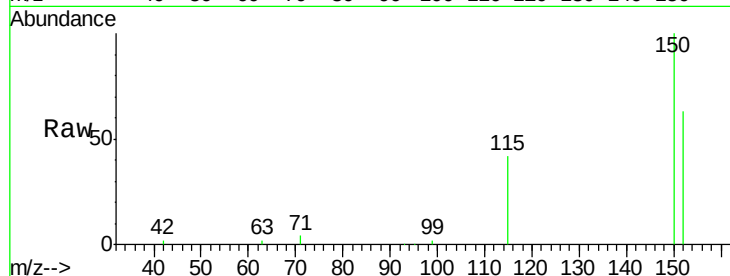
Tgt Ion:152 Resp: 45537

Ion Ratio Lower Upper

152 100

150 159.0 128.9 193.3

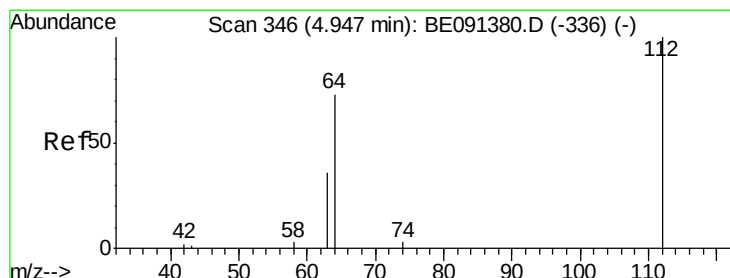
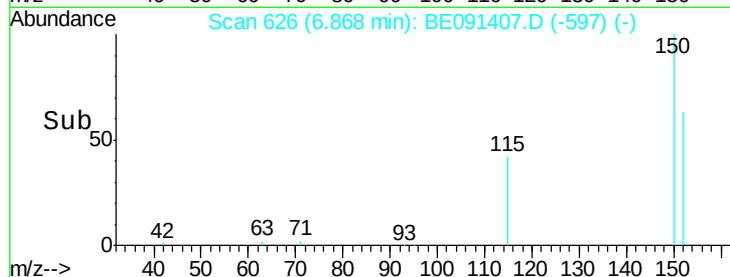
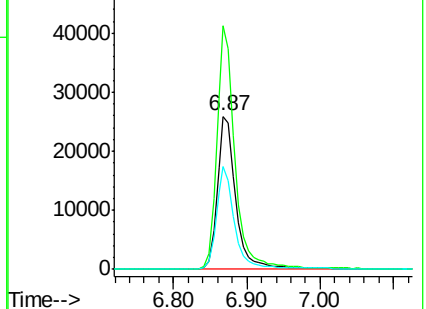
115 67.2 50.9 76.3



Abundance Ion 152.00 (151.70 to 152.70): E

Ion 150.00 (149.70 to 150.70): E

Ion 115.00 (114.70 to 115.70): E



#2

2-Fluorophenol

Concen: 6.13 ng

RT: 4.90 min Scan# 340

Delta R.T. -0.04 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

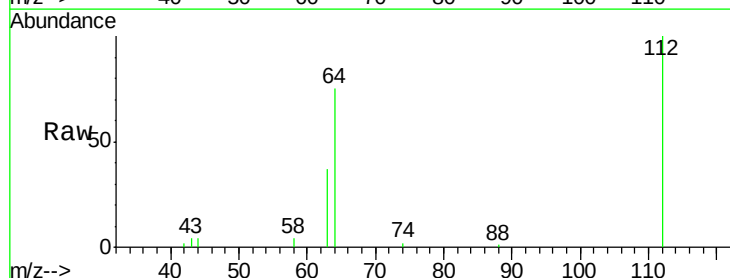
Tgt Ion:112 Resp: 65732

Ion Ratio Lower Upper

112 100

64 76.2 60.5 90.7

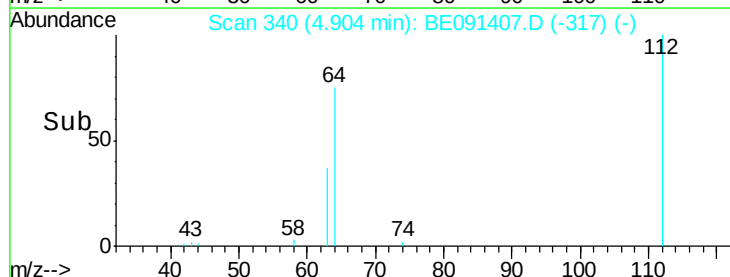
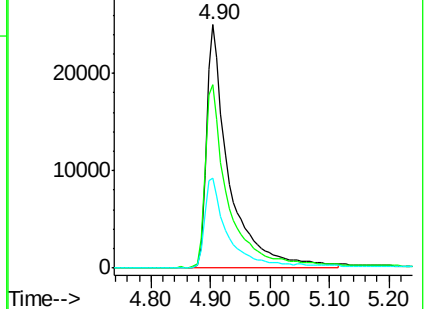
63 38.4 29.8 44.8

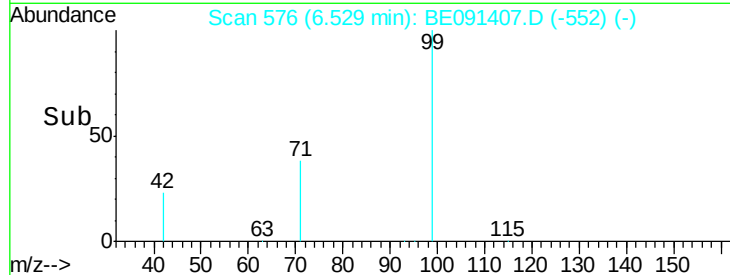
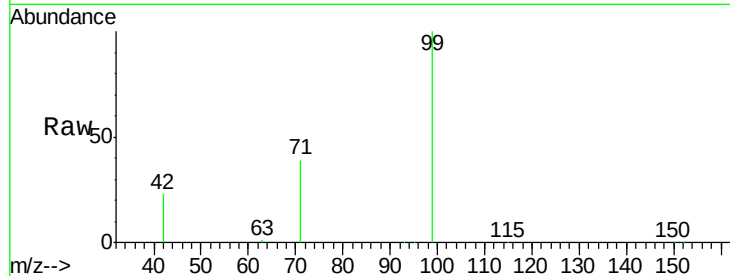
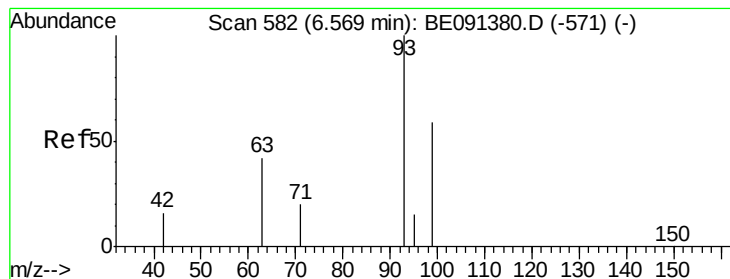


Abundance Ion 112.00 (111.70 to 112.70): E

Ion 64.00 (63.70 to 64.70): BE0

Ion 63.00 (62.70 to 63.70): BE0





#3

Phenol-d6

Concen: 7.16 ng

RT: 6.53 min Scan# 576

Delta R.T. -0.04 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

Instrument :

BNA_E

ClientSampleId :

LIBERTY-SF-005

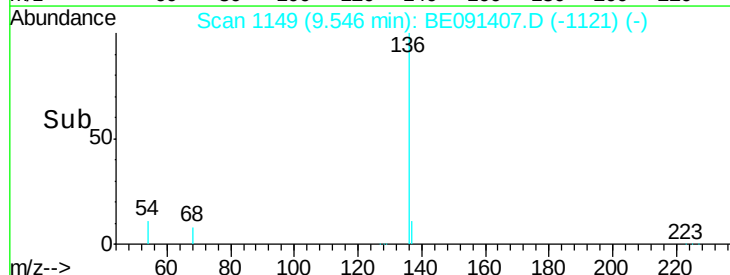
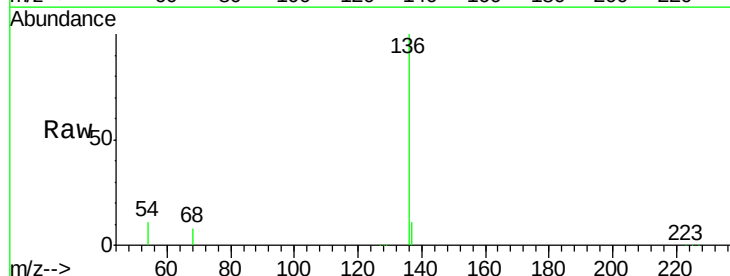
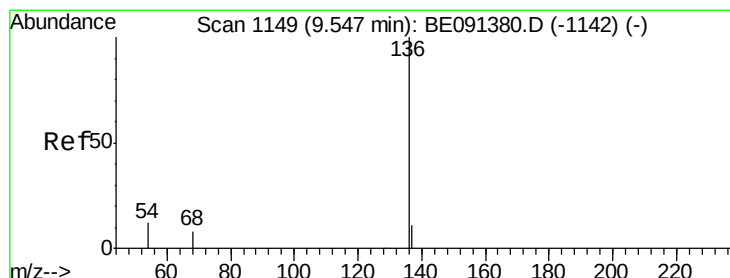
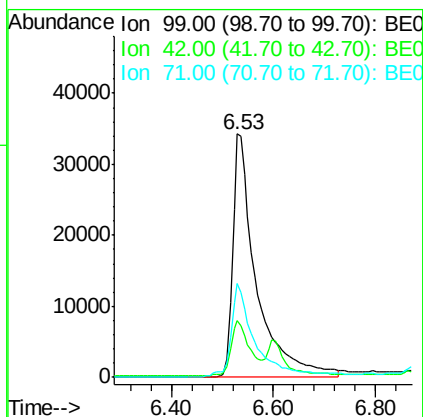
Tgt Ion: 99 Resp: 109302

Ion Ratio Lower Upper

99 100

42 18.2 13.3 19.9

71 37.8 25.6 38.4



#4

Naphthalene-d8

Concen: 5.00 ng

RT: 9.55 min Scan# 1149

Delta R.T. -0.00 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

Tgt Ion: 136 Resp: 227548

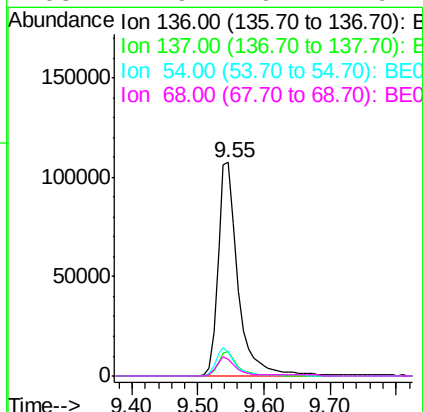
Ion Ratio Lower Upper

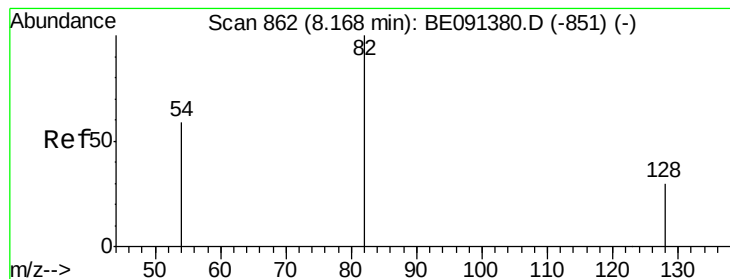
136 100

137 11.2 8.7 13.1

54 11.1 9.3 13.9

68 7.9 6.7 10.1





#5

Nitrobenzene-d5

Concen: 3.90 ng

RT: 8.16 min Scan# 860

Delta R.T. -0.01 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

Instrument :

BNA_E

ClientSampleId :

LIBERTY-SF-005

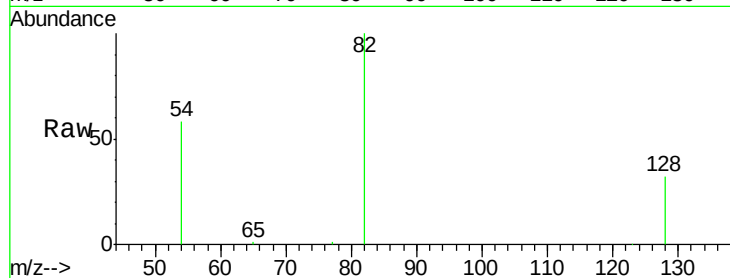
Tgt Ion: 82 Resp: 57856

Ion Ratio Lower Upper

82 100

128 32.4 25.0 37.4

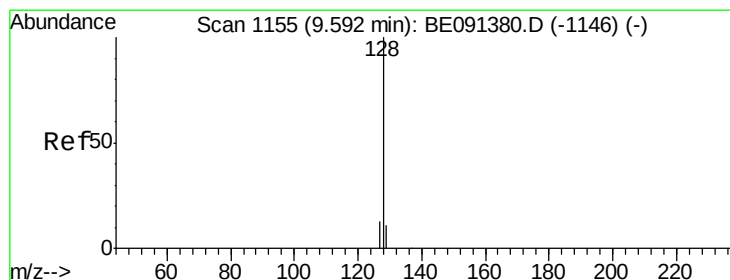
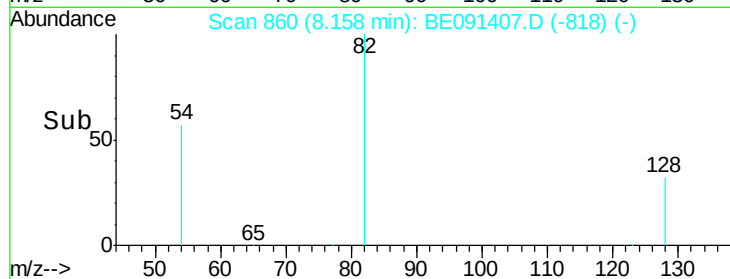
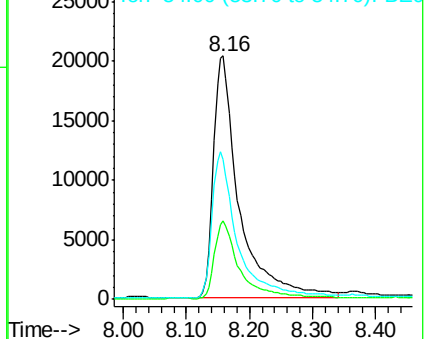
54 57.5 48.1 72.1



Abundance Ion 82.00 (81.70 to 82.70): BE0

Ion 128.00 (127.70 to 128.70): BE0

Ion 54.00 (53.70 to 54.70): BE0



#6

Naphthalene

Concen: 0.85 ng

RT: 9.59 min Scan# 1155

Delta R.T. -0.00 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

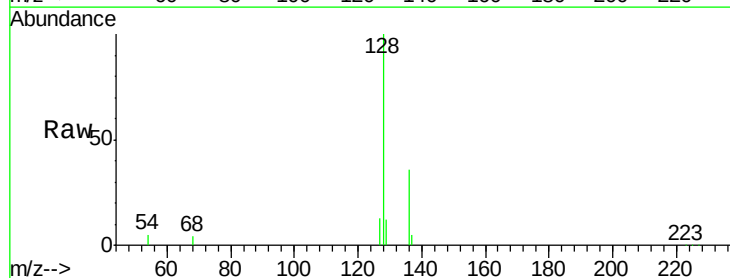
Tgt Ion: 128 Resp: 43490

Ion Ratio Lower Upper

128 100

129 11.9 9.1 13.7

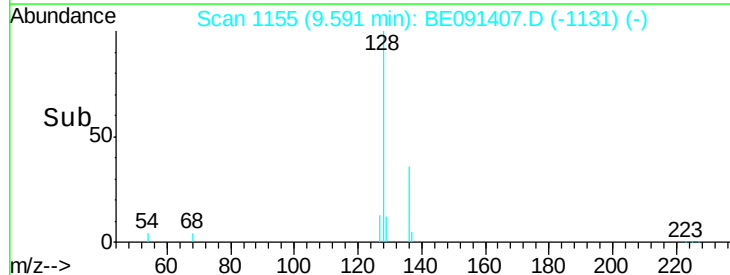
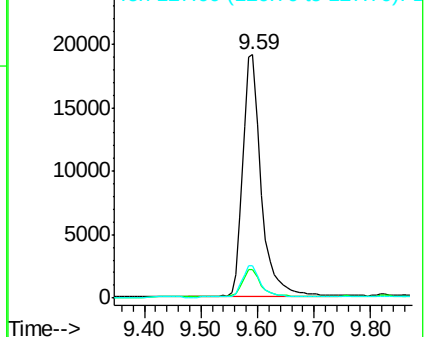
127 13.2 10.5 15.7

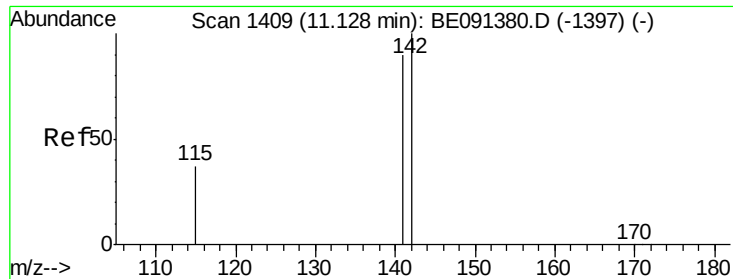


Abundance Ion 128.00 (127.70 to 128.70): E

Ion 129.00 (128.70 to 129.70): E

Ion 127.00 (126.70 to 127.70): E





#7

2-Methylnaphthalene

Concen: 2.92 ng

RT: 11.10 min Scan# 1404

Delta R.T. -0.02 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

Instrument :

BNA_E

ClientSampleId :

LIBERTY-SF-005

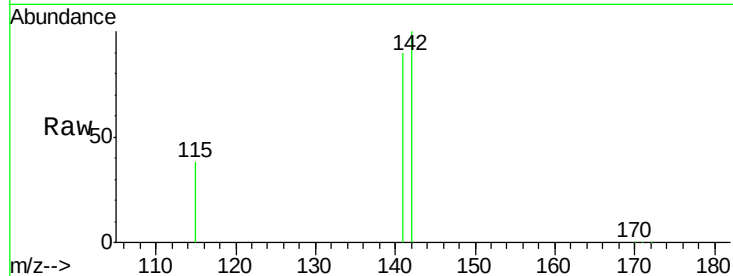
Tgt Ion:142 Resp: 91690

Ion Ratio Lower Upper

142 100

141 89.8 72.3 108.5

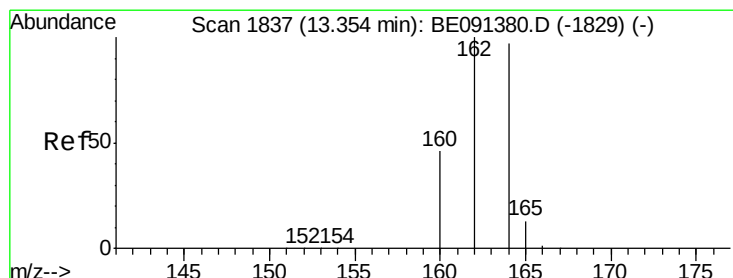
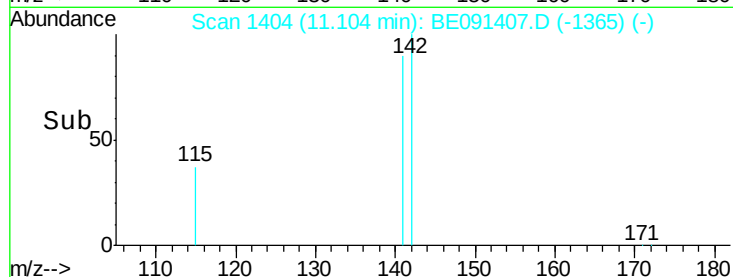
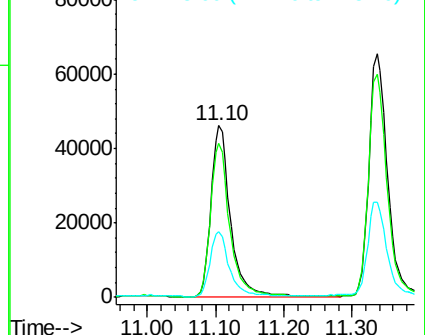
115 38.1 30.5 45.7



Abundance Ion 142.00 (141.70 to 142.70): E

Ion 141.00 (140.70 to 141.70): E

Ion 115.00 (114.70 to 115.70): E



#8

Acenaphthene-d10

Concen: 5.00 ng

RT: 13.35 min Scan# 1836

Delta R.T. -0.01 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

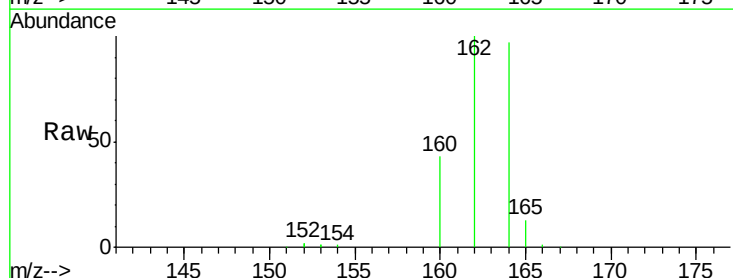
Tgt Ion:164 Resp: 146988

Ion Ratio Lower Upper

164 100

162 102.9 82.2 123.2

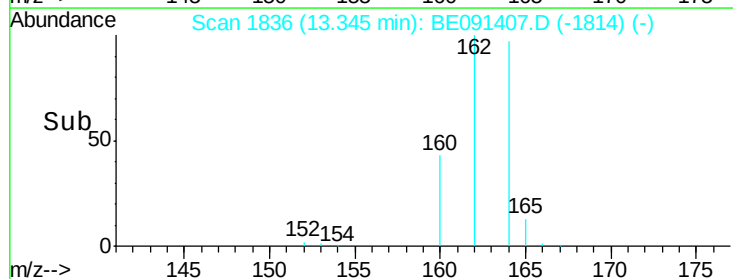
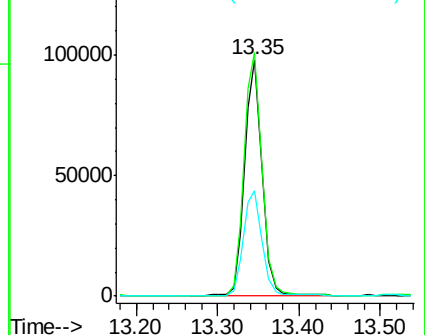
160 44.6 37.8 56.8

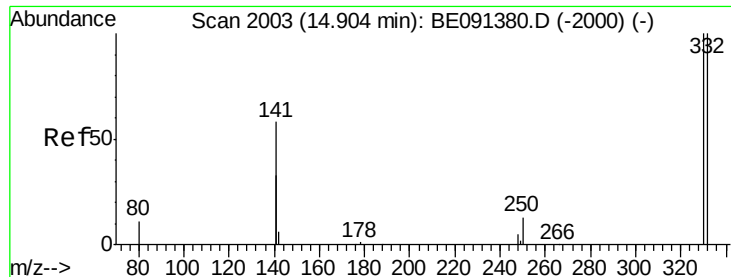


Abundance Ion 164.00 (163.70 to 164.70): E

Ion 162.00 (161.70 to 162.70): E

Ion 160.00 (159.70 to 160.70): E





#9

2,4,6-Tribromophenol

Concen: 3.80 ng

RT: 14.89 min Scan# 2002

Delta R.T. -0.01 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

Instrument :

BNA_E

ClientSampleId :

LIBERTY-SF-005

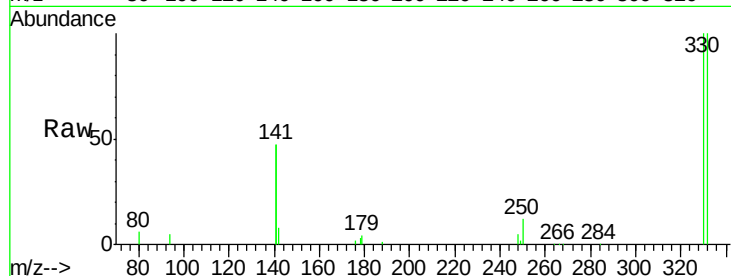
Tgt Ion:330 Resp: 25973

Ion Ratio Lower Upper

330 100

332 98.1 78.8 118.2

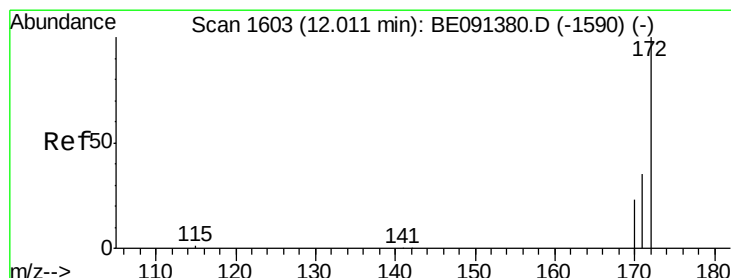
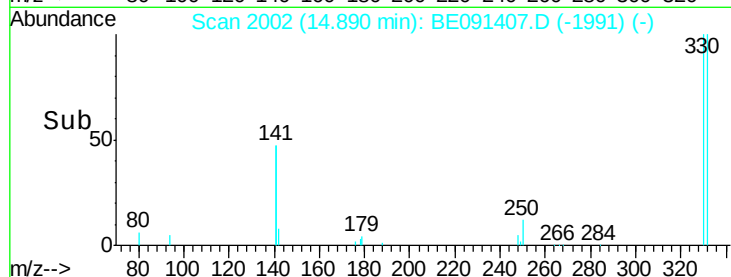
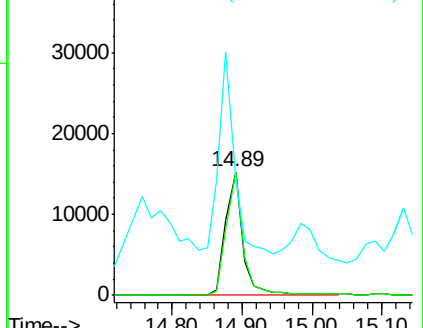
141 150.0 105.1 157.7



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



#10

2-Fluorobiphenyl

Concen: 4.40 ng

RT: 11.99 min Scan# 1599

Delta R.T. -0.02 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

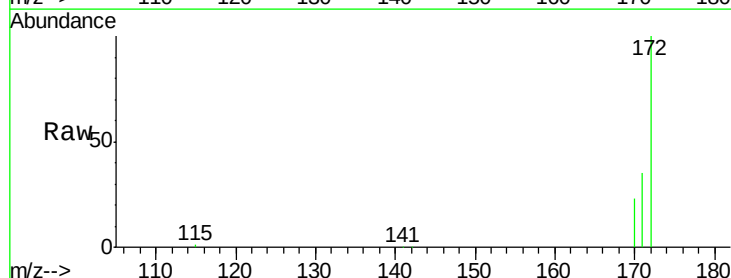
Tgt Ion:172 Resp: 168178

Ion Ratio Lower Upper

172 100

171 34.9 27.8 41.8

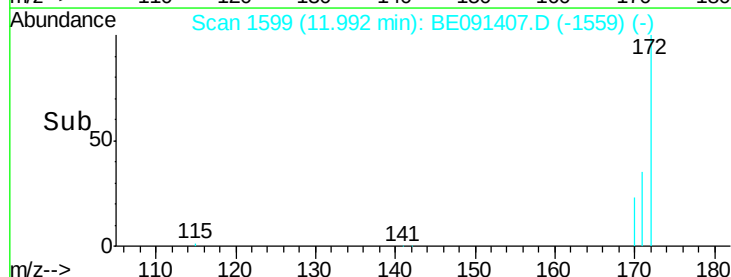
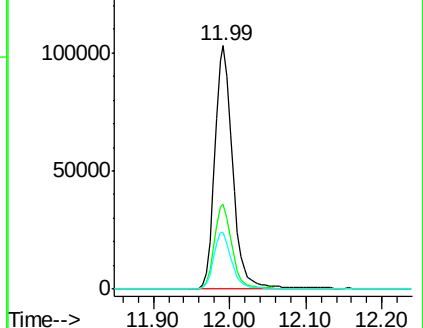
170 23.2 18.6 28.0

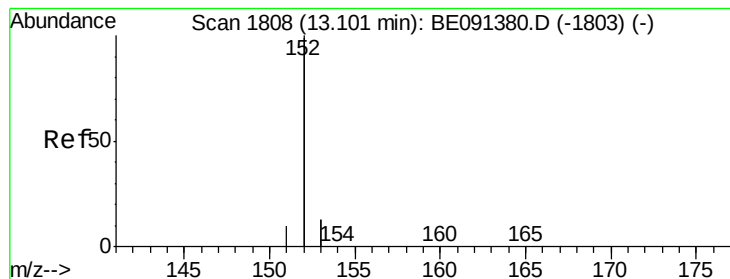


Abundance Ion 172.00 (171.70 to 172.70): E

Ion 171.00 (170.70 to 171.70): E

Ion 170.00 (169.70 to 170.70): E





#11

Acenaphthylene

Concen: 2.75 ng

RT: 13.09 min Scan# 1807

Delta R.T. -0.01 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

Instrument :

BNA_E

ClientSampleId :

LIBERTY-SF-005

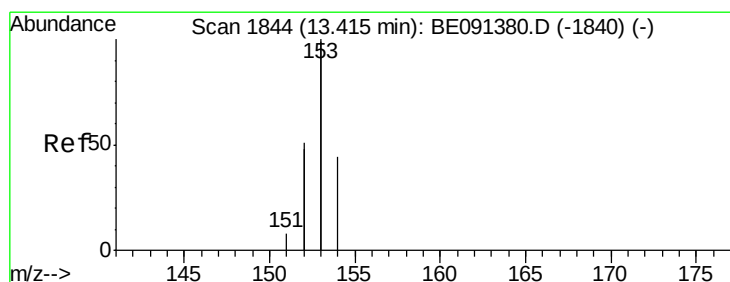
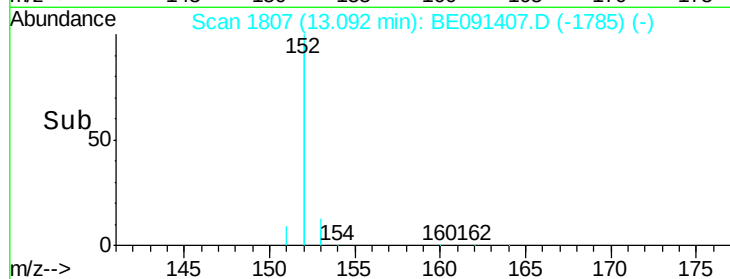
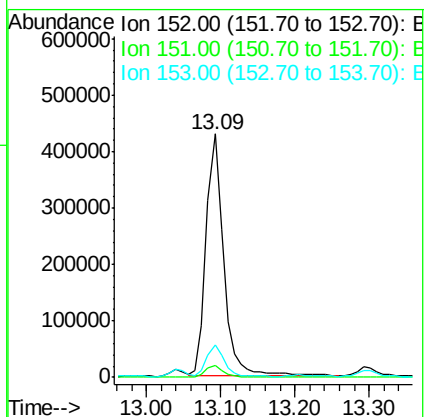
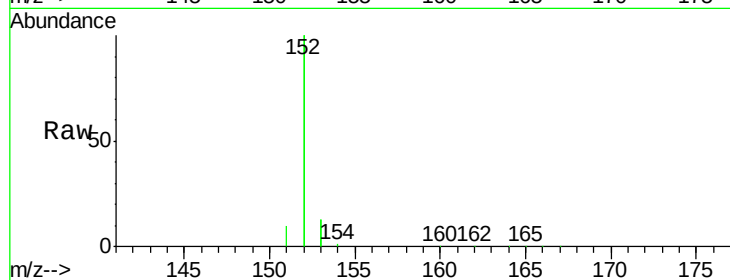
Tgt Ion:152 Resp: 684773

Ion Ratio Lower Upper

152 100

151 4.8 3.8 5.8

153 12.5 10.2 15.4



#12

Acenaphthene

Concen: 3.69 ng

RT: 13.41 min Scan# 1843

Delta R.T. -0.01 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

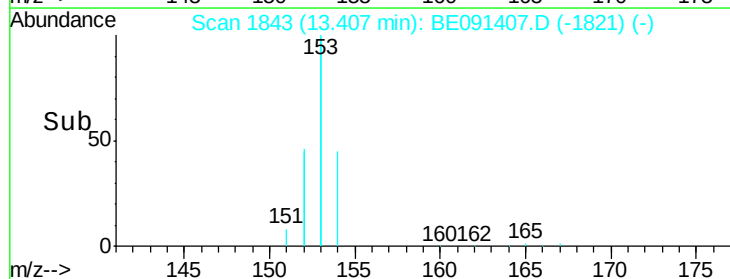
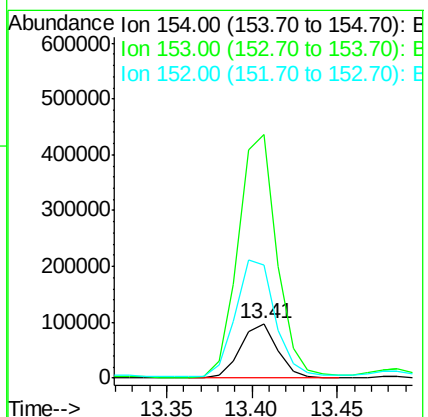
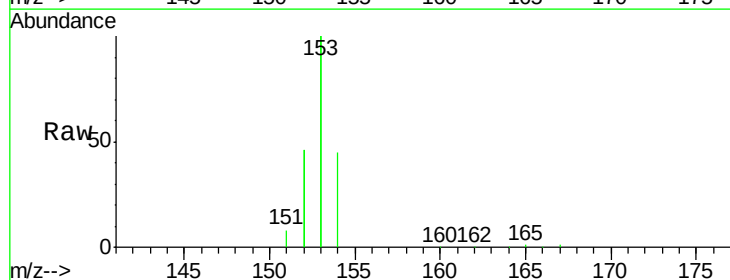
Tgt Ion:154 Resp: 148747

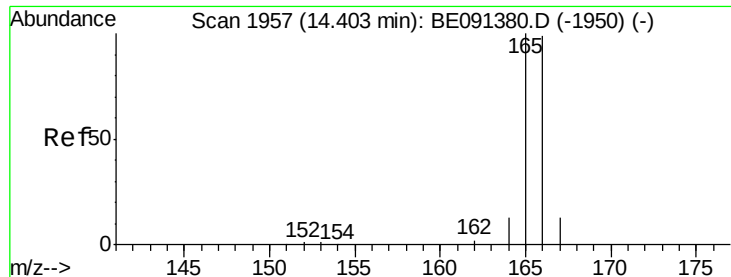
Ion Ratio Lower Upper

154 100

153 463.9 369.8 554.8

152 228.8 194.4 291.6





#13

Fluorene

Concen: 9.54 ng

RT: 14.39 min Scan# 1955

Delta R.T. -0.02 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

Instrument :

BNA_E

ClientSampleId :

LIBERTY-SF-005

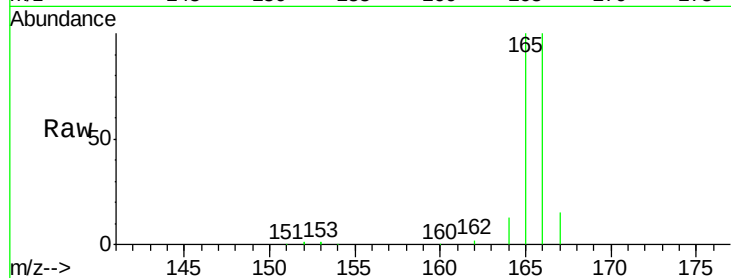
Tgt Ion:166 Resp: 497204

Ion Ratio Lower Upper

166 100

165 98.5 79.3 118.9

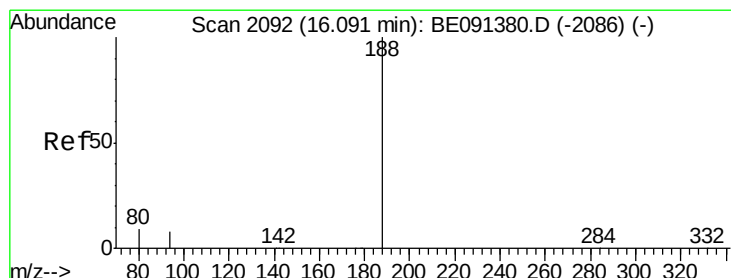
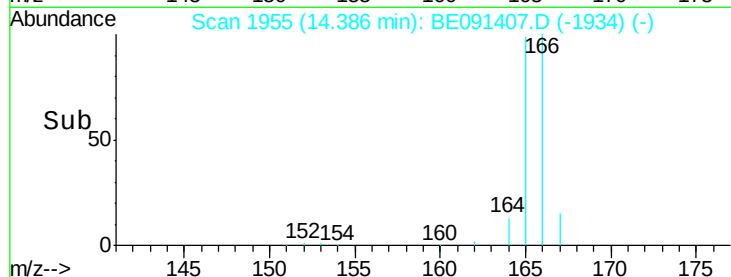
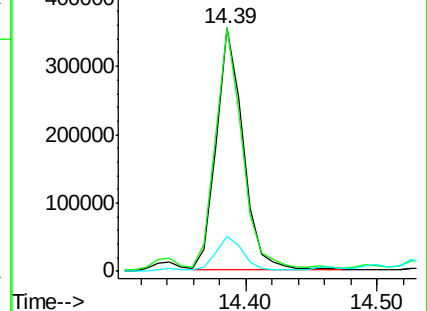
167 14.2 10.6 16.0



Abundance Ion 166.00 (165.70 to 166.70): E

Ion 165.00 (164.70 to 165.70): E

Ion 167.00 (166.70 to 167.70): E



#14

Phenanthrene-d10

Concen: 5.00 ng

RT: 16.08 min Scan# 2091

Delta R.T. -0.01 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

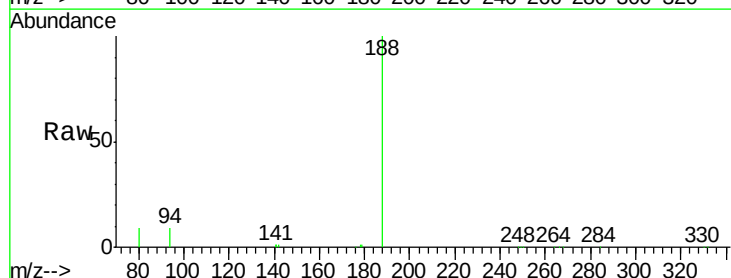
Tgt Ion:188 Resp: 323915

Ion Ratio Lower Upper

188 100

94 9.2 6.6 10.0

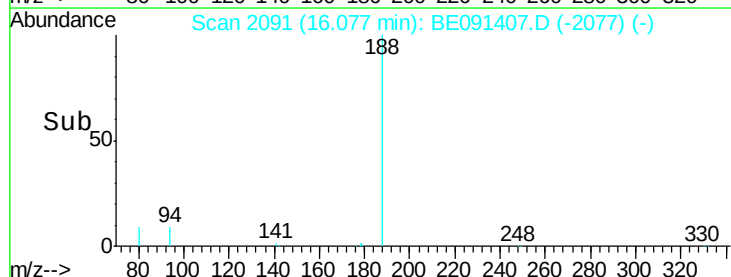
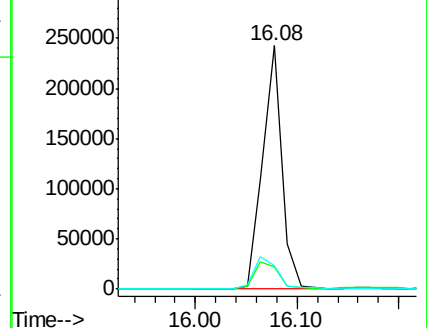
80 9.5 7.0 10.6

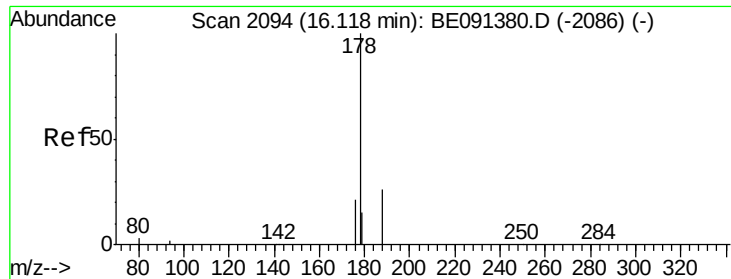


Abundance Ion 188.00 (187.70 to 188.70): E

Ion 94.00 (93.70 to 94.70): BE0

Ion 80.00 (79.70 to 80.70): BE0





#15

Phenanthrene

Concen: 34.70 ng

RT: 16.12 min Scan# 2094

Delta R.T. -0.00 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

Instrument :

BNA_E

ClientSampleId :

LIBERTY-SF-005

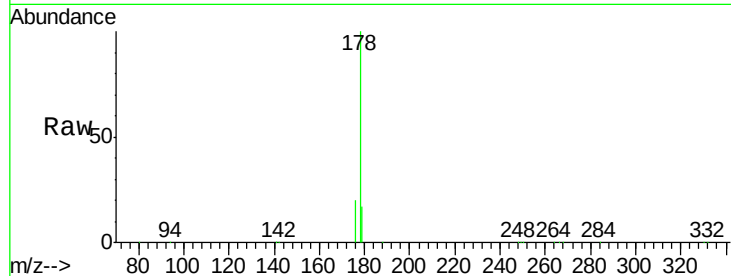
Tgt Ion:178 Resp: 2951313

Ion Ratio Lower Upper

178 100

176 21.0 15.4 23.2

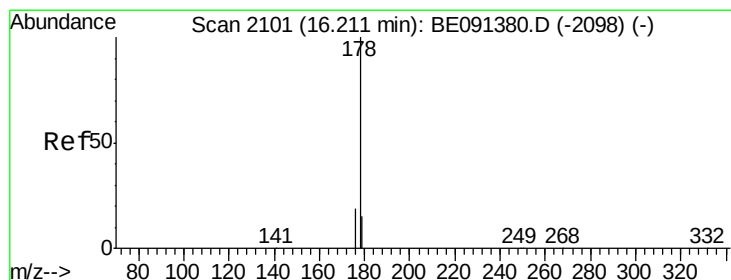
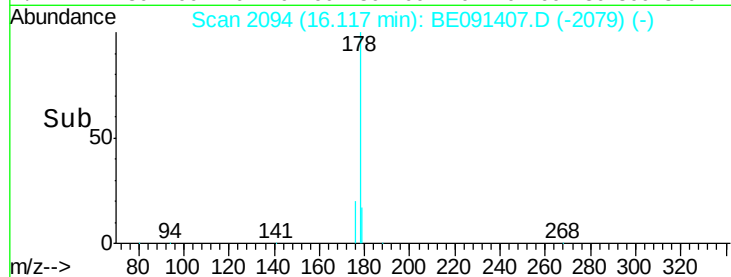
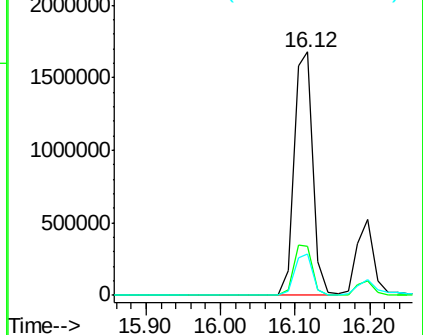
179 16.8 12.7 19.1



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



#16

Anthracene

Concen: 41.31 ng

RT: 16.12 min Scan# 2094

Delta R.T. -0.09 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

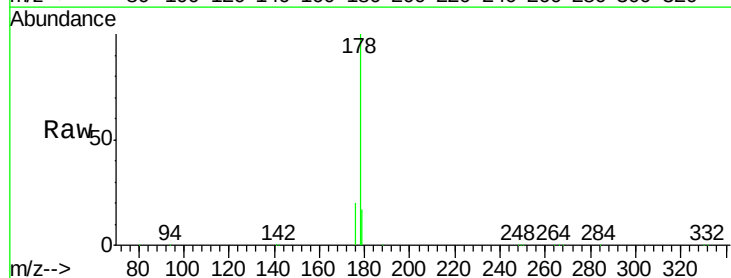
Tgt Ion:178 Resp: 2944273

Ion Ratio Lower Upper

178 100

176 21.0 14.8 22.2

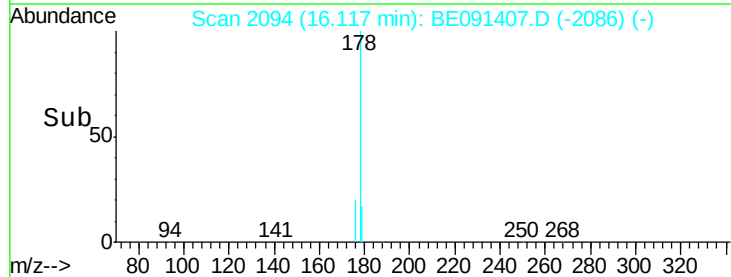
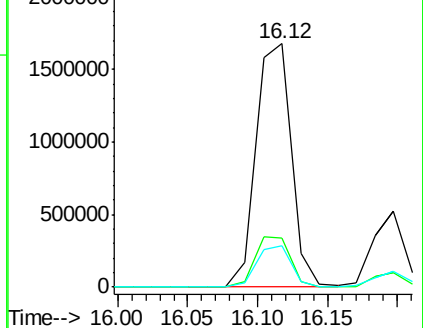
179 16.6 12.1 18.1

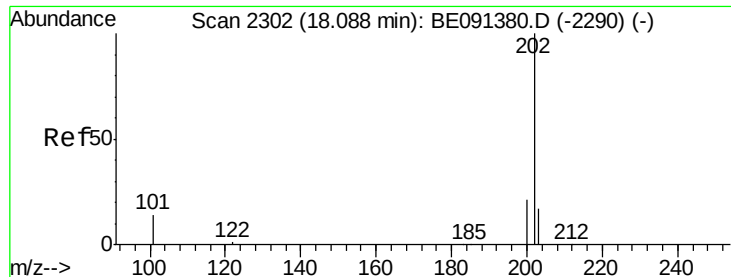


Abundance Ion 178.00 (177.70 to 178.70): E

Ion 176.00 (175.70 to 176.70): E

Ion 179.00 (178.70 to 179.70): E

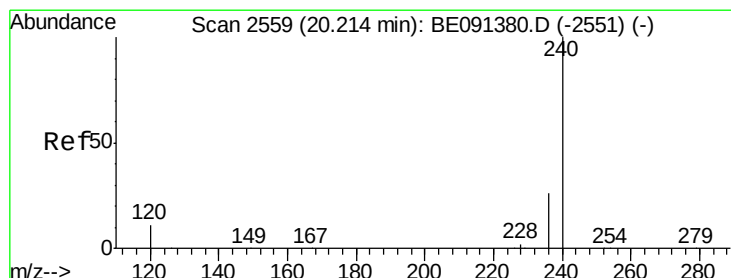
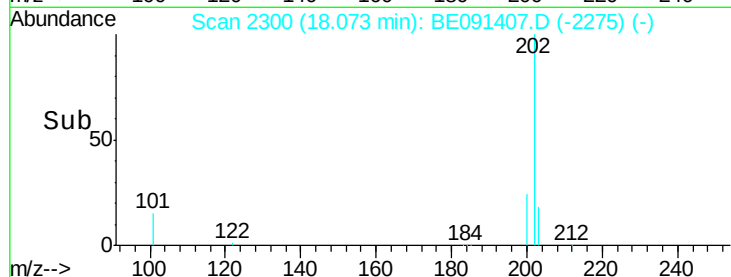
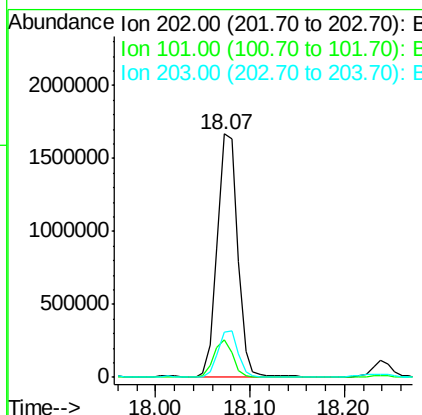
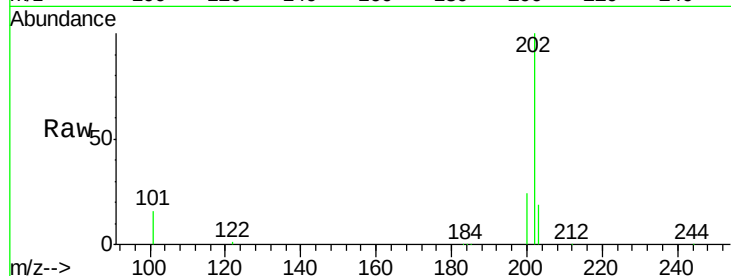




#17
 Fluoranthene
 Concen: 27.27 ng
 RT: 18.07 min Scan# 2300
 Delta R.T. -0.02 min
 Lab File: BE091407.D
 Acq: 17 Feb 2016 16:54

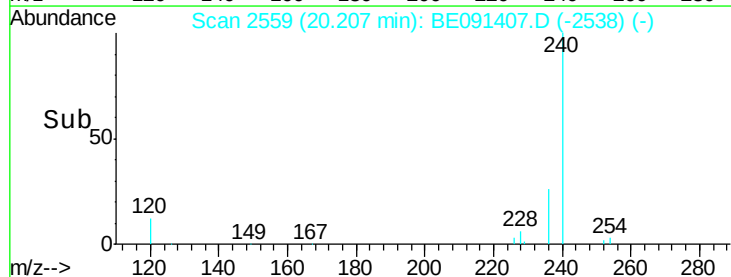
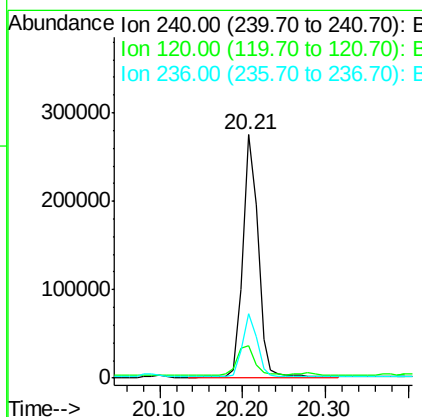
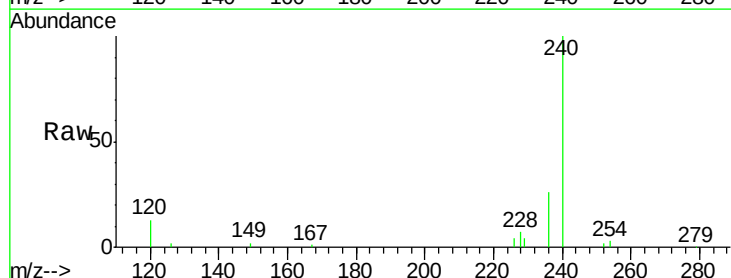
Instrument :
 BNA_E
 ClientSampleId :
 LIBERTY-SF-005

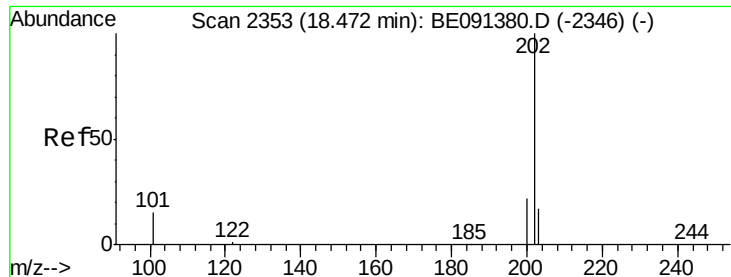
Tgt Ion:202 Resp: 2481474
 Ion Ratio Lower Upper
 202 100
 101 14.0 10.5 15.7
 203 18.5 13.9 20.9



#18
 Chrysene-d12
 Concen: 5.00 ng
 RT: 20.21 min Scan# 2559
 Delta R.T. -0.01 min
 Lab File: BE091407.D
 Acq: 17 Feb 2016 16:54

Tgt Ion:240 Resp: 349294
 Ion Ratio Lower Upper
 240 100
 120 13.4 8.9 13.3#
 236 26.2 21.0 31.4





#19

Pyrene

Concen: 29.46 ng

RT: 18.46 min Scan# 2352

Delta R.T. -0.01 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

Instrument :

BNA_E

ClientSampleId :

LIBERTY-SF-005

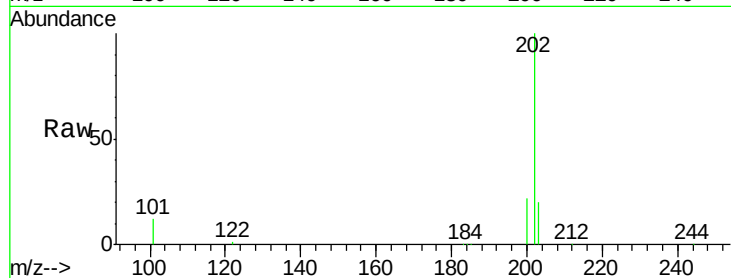
Tgt Ion:202 Resp: 2229859

Ion Ratio Lower Upper

202 100

200 22.5 16.8 25.2

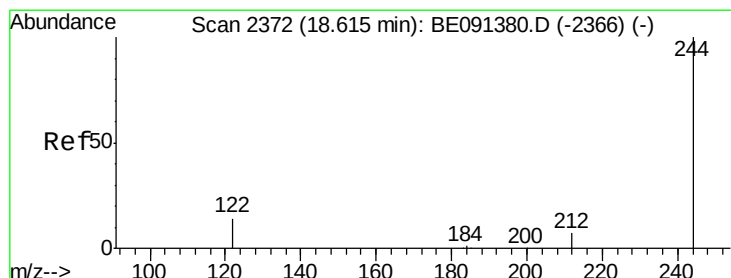
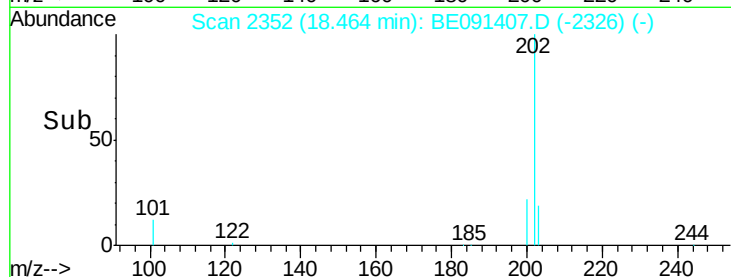
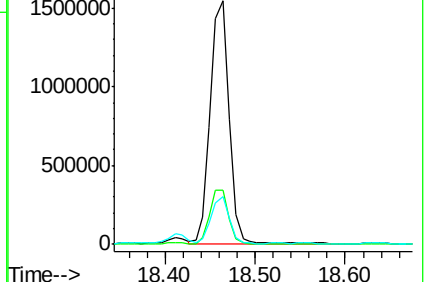
203 18.7 14.0 21.0



Abundance Ion 202.00 (201.70 to 202.70): E

Ion 200.00 (199.70 to 200.70): E

Ion 203.00 (202.70 to 203.70): E



#20

Terphenyl-d14

Concen: 4.63 ng

RT: 18.60 min Scan# 2370

Delta R.T. -0.02 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

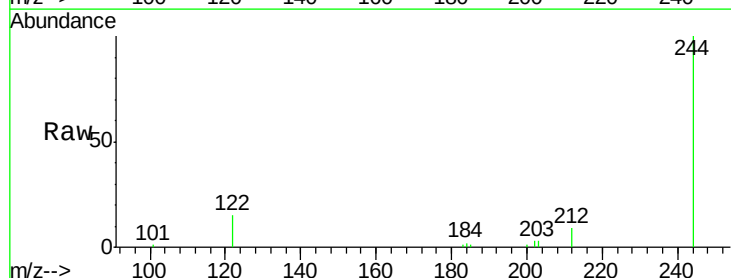
Tgt Ion:244 Resp: 239134

Ion Ratio Lower Upper

244 100

212 8.6 6.1 9.1

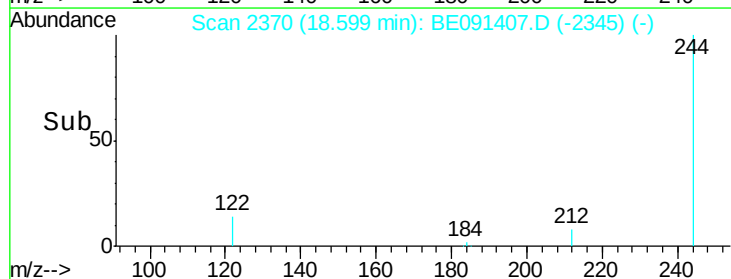
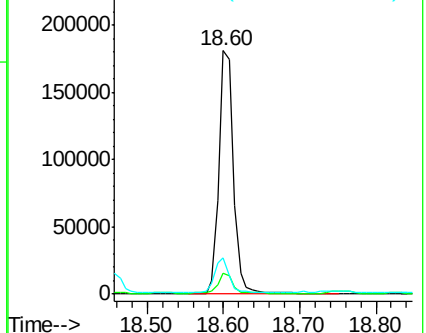
122 14.9 11.0 16.6

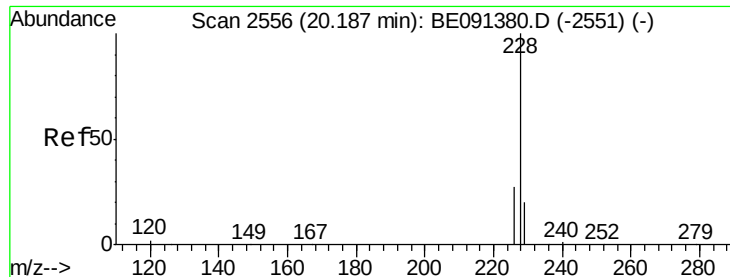


Abundance Ion 244.00 (243.70 to 244.70): E

Ion 212.00 (211.70 to 212.70): E

Ion 122.00 (121.70 to 122.70): E





#21

Benzo(a)anthracene

Concen: 11.26 ng

RT: 20.18 min Scan# 2556

Delta R.T. -0.01 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

Instrument :

BNA_E

ClientSampleId :

LIBERTY-SF-005

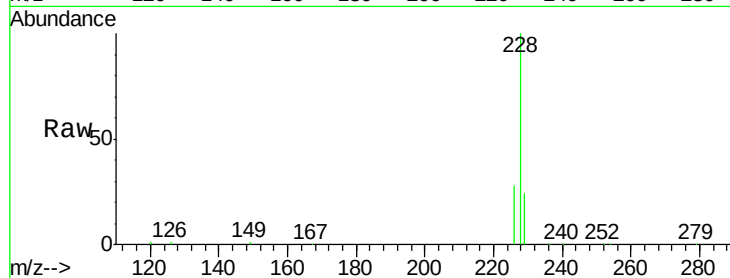
Tgt Ion:228 Resp: 894215

Ion Ratio Lower Upper

228 100

226 28.1 21.7 32.5

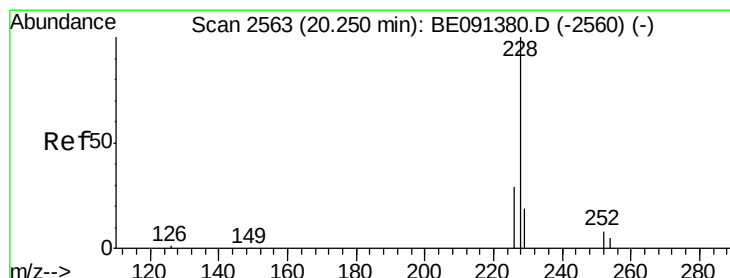
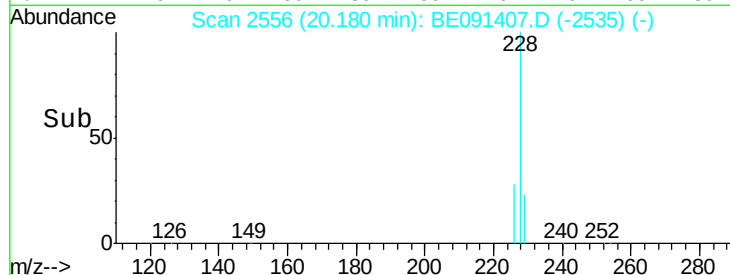
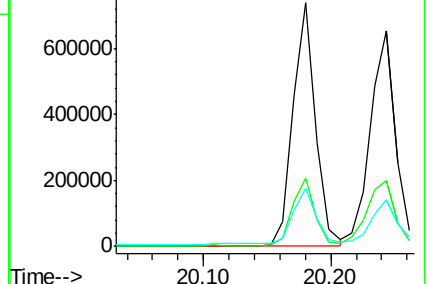
229 24.0 16.1 24.1



Abundance Ion 228.00 (227.70 to 228.70): E

Ion 226.00 (225.70 to 226.70): E

Ion 229.00 (228.70 to 229.70): E



#22

Chrysene

Concen: 10.52 ng

RT: 20.24 min Scan# 2563

Delta R.T. -0.01 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

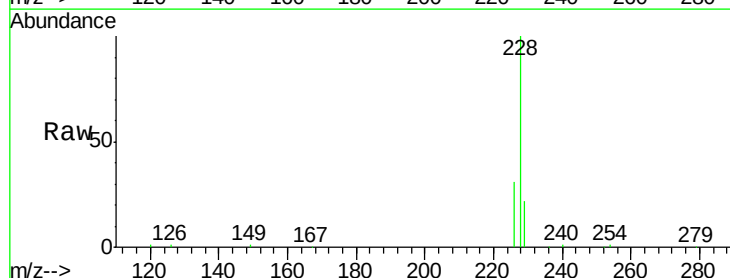
Tgt Ion:228 Resp: 903470

Ion Ratio Lower Upper

228 100

226 30.7 23.4 35.0

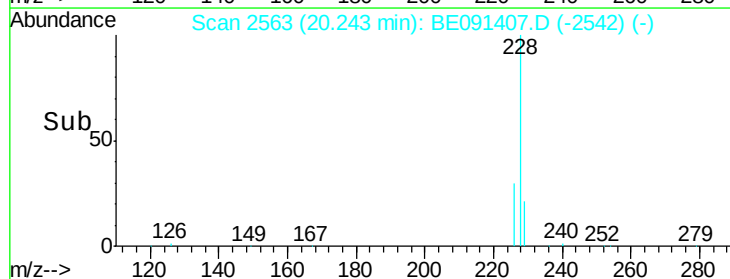
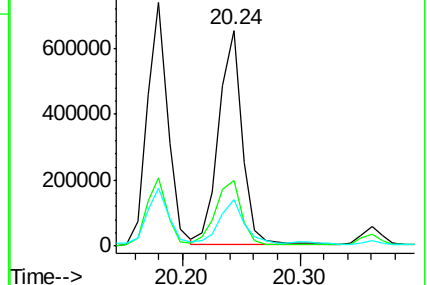
229 21.8 15.7 23.5

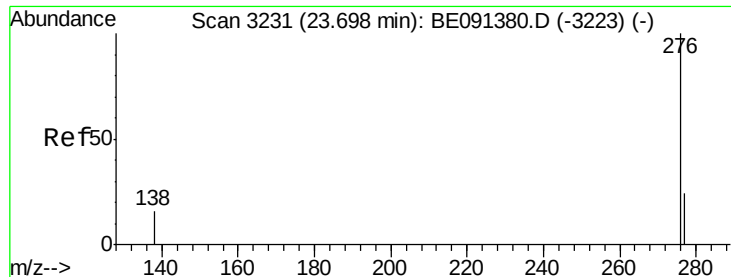


Abundance Ion 228.00 (227.70 to 228.70): E

Ion 226.00 (225.70 to 226.70): E

Ion 229.00 (228.70 to 229.70): E





#23

Indeno(1,2,3-cd)pyrene

Concen: 4.36 ng

RT: 23.68 min Scan# 3228

Delta R.T. -0.02 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

Instrument :

BNA_E

ClientSampleId :

LIBERTY-SF-005

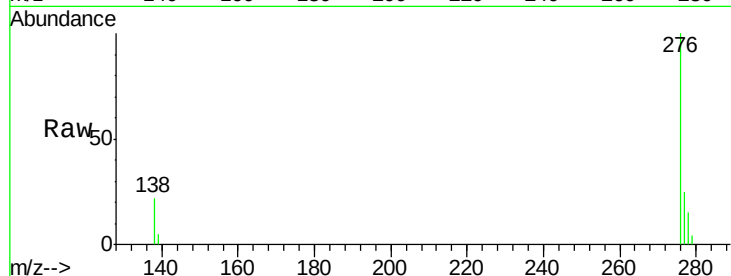
Tgt Ion:276 Resp: 344687

Ion Ratio Lower Upper

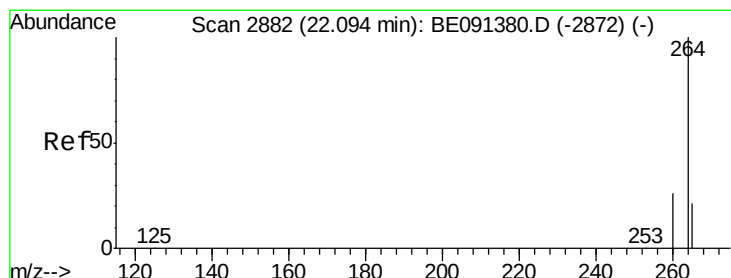
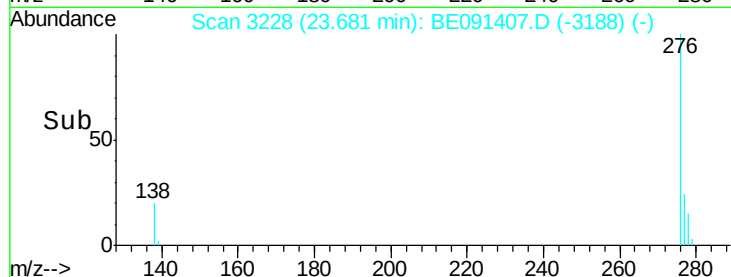
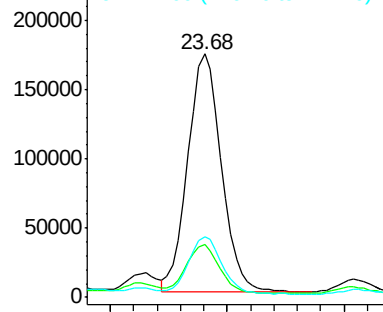
276 100

138 20.1 16.6 25.0

277 24.2 19.0 28.6



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



#24

Perylene-d12

Concen: 5.00 ng

RT: 22.09 min Scan# 2882

Delta R.T. -0.00 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

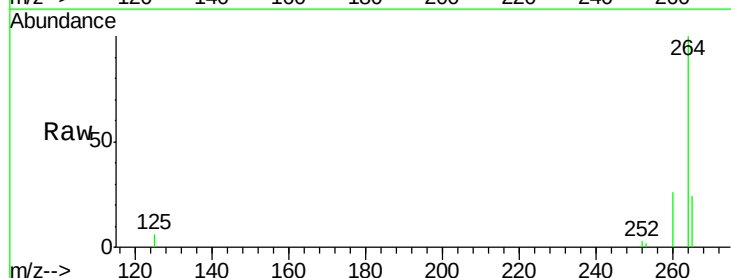
Tgt Ion:264 Resp: 339359

Ion Ratio Lower Upper

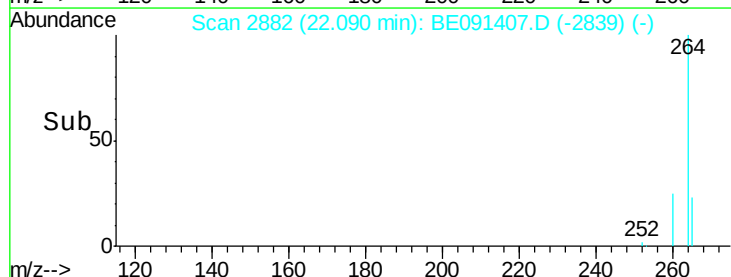
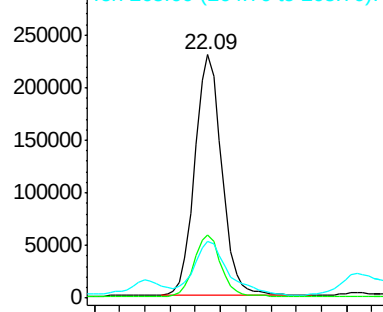
264 100

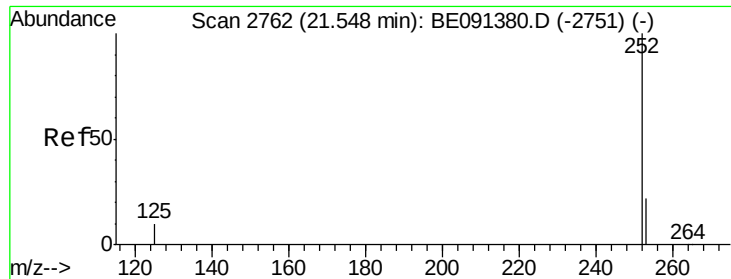
260 25.7 20.7 31.1

265 23.5 17.2 25.8



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





#25

Benzo(b)fluoranthene

Concen: 5.45 ng

RT: 21.54 min Scan# 2761

Delta R.T. -0.01 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

Instrument :

BNA_E

ClientSampleId :

LIBERTY-SF-005

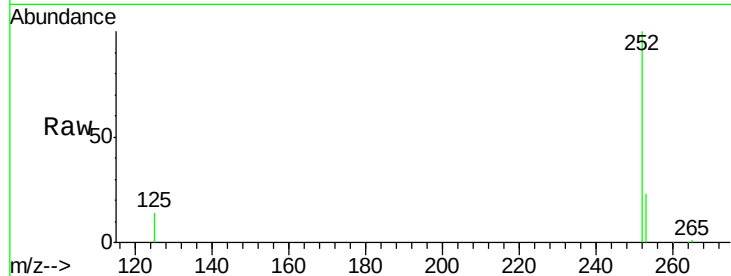
Tgt Ion:252 Resp: 461769

Ion Ratio Lower Upper

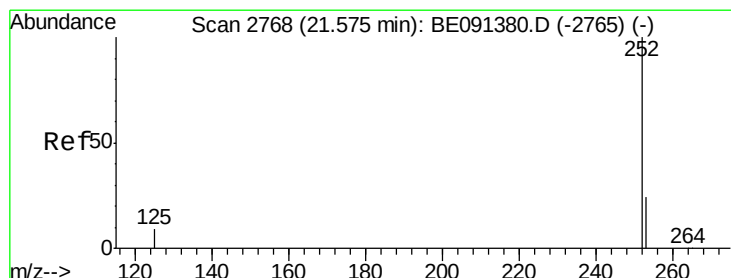
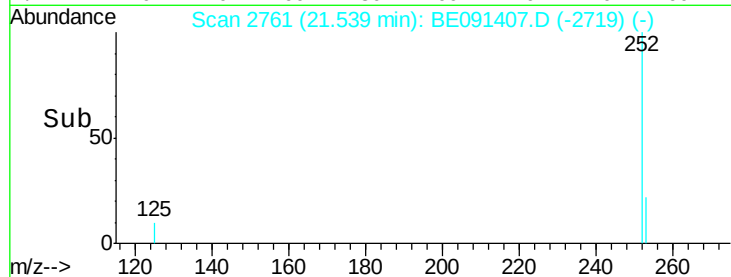
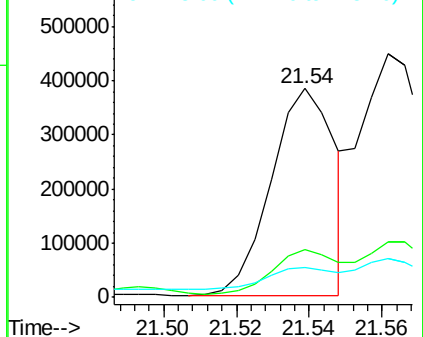
252 100

253 22.9 18.2 27.2

125 14.3 8.3 12.5#



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



#26

Benzo(k)fluoranthene

Concen: 7.16 ng

RT: 21.56 min Scan# 2766

Delta R.T. -0.01 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

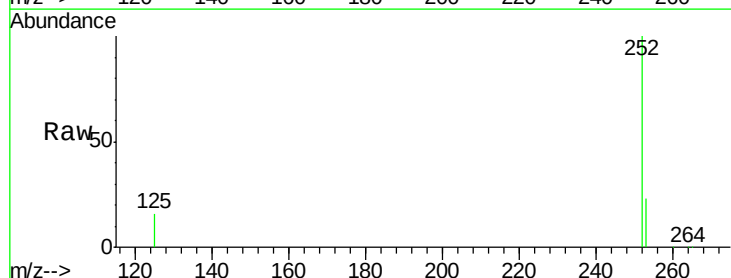
Tgt Ion:252 Resp: 607238

Ion Ratio Lower Upper

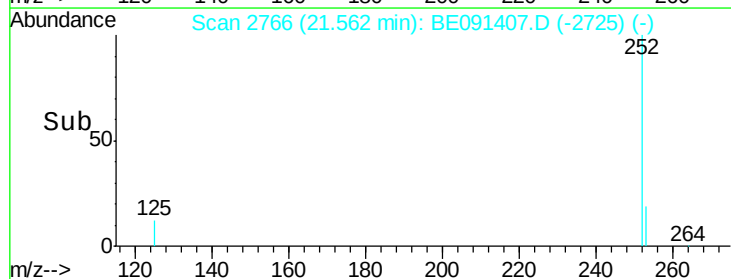
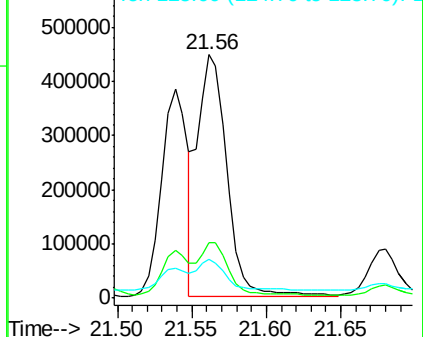
252 100

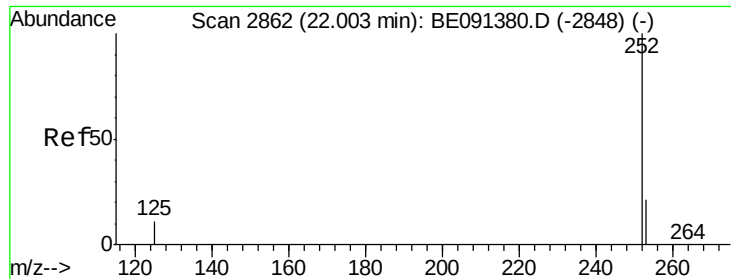
253 22.8 18.1 27.1

125 15.7 8.2 12.4#



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





#27

Benzo(a)pyrene

Concen: 8.04 ng

RT: 21.99 min Scan# 2861

Delta R.T. -0.01 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

Instrument :

BNA_E

ClientSampleId :

LIBERTY-SF-005

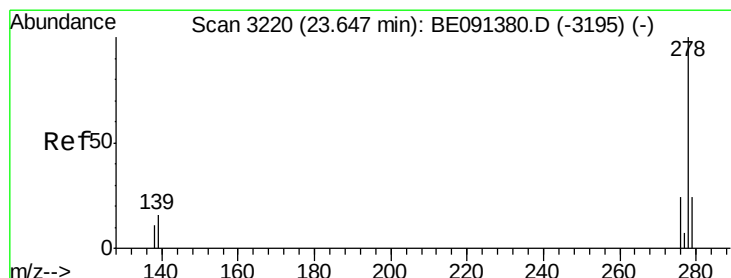
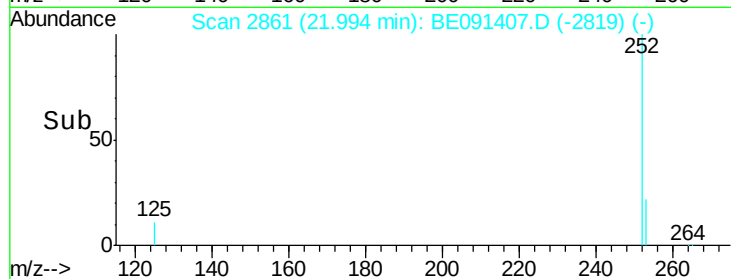
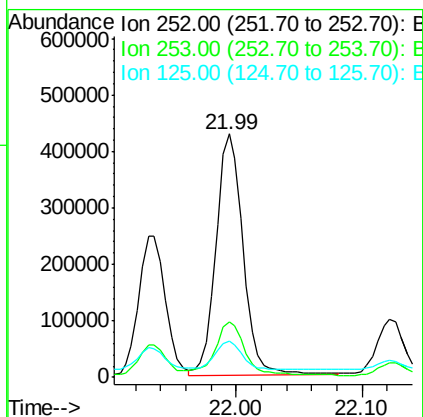
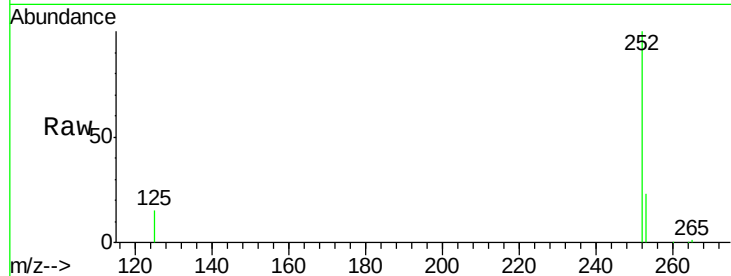
Tgt Ion:252 Resp: 636713

Ion Ratio Lower Upper

252 100

253 23.0 17.5 26.3

125 14.7 9.4 14.0#



#28

Dibenzo(a,h)anthracene

Concen: 1.92 ng

RT: 23.63 min Scan# 3217

Delta R.T. -0.02 min

Lab File: BE091407.D

Acq: 17 Feb 2016 16:54

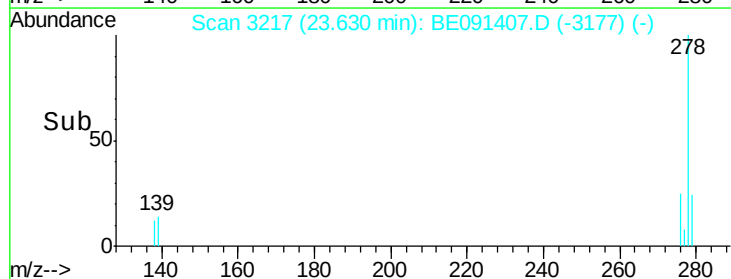
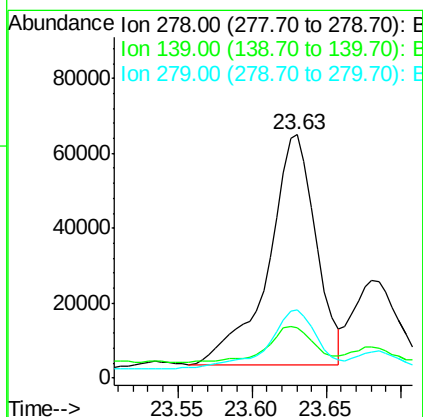
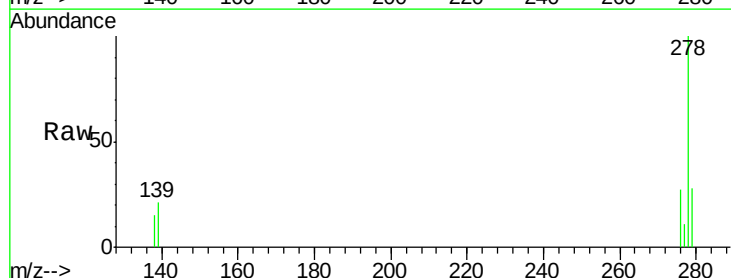
Tgt Ion:278 Resp: 136278

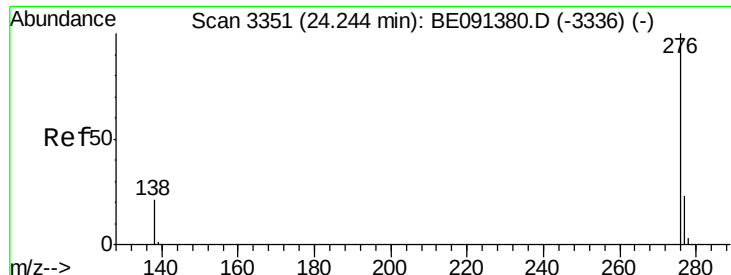
Ion Ratio Lower Upper

278 100

139 20.6 13.0 19.4#

279 28.3 19.2 28.8





#29

Benzo(g,h,i)perylene

Concen: 4.03 ng

RT: 24.23 min Scan# 3349

Delta R.T. -0.01 min

Lab File: BE091407.D

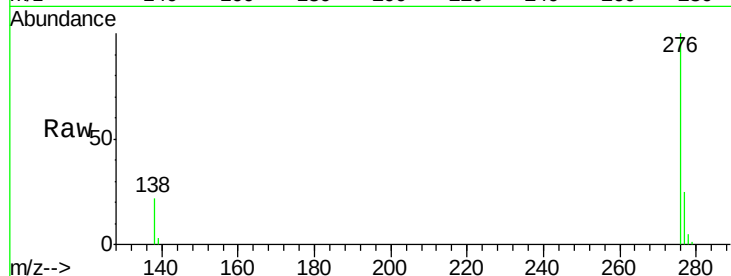
Acq: 17 Feb 2016 16:54

Instrument :

BNA_E

ClientSampleId :

LIBERTY-SF-005



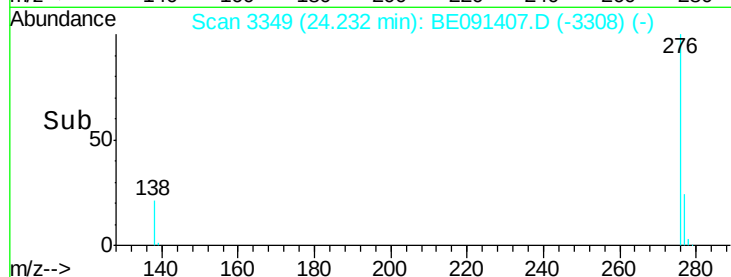
Tgt Ion: 276 Resp: 337551

Ion Ratio Lower Upper

276 100

277 25.3 18.9 28.3

138 21.9 17.0 25.6



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

