

Data Path : Z:\HPCHEM1\BNA_E\DATA\BE021815\
 Data File : BE089613.D
 Acq On : 18 Feb 2015 3:30
 Operator : TP/IZ
 Sample : SSTDICC001
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 BNA_E
 LabSampleId :
 SSTDICC001

Quant Time: Feb 18 05:39:31 2015
 Quant Method : Z:\HPCHEM1\BNA_E\METHODS\SIMPAH-BE021815.M
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
 QLast Update : Wed Feb 18 05:28:48 2015
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.34	152	48036	5.00	ng	0.00
4) Naphthalene-d8	12.25	136	192045	5.00	ng	0.00
8) Acenaphthene-d10	16.42	164	92685	5.00	ng	0.00
13) Phenanthrene-d10	19.77	188	183123	5.00	ng	0.00
19) Chrysene-d12	23.66	240	185052	5.00	ng	0.00
25) Perylene-d12	25.34	264	158622	5.00	ng	0.00

System Monitoring Compounds						
5) Nitrobenzene-d5	10.61	82	8088	0.94	ng	0.00
9) 2-Fluorobiphenyl	14.88	172	25517	0.88	ng	0.00
21) Terphenyl-d14	22.30	244	26712	0.79	ng	0.00

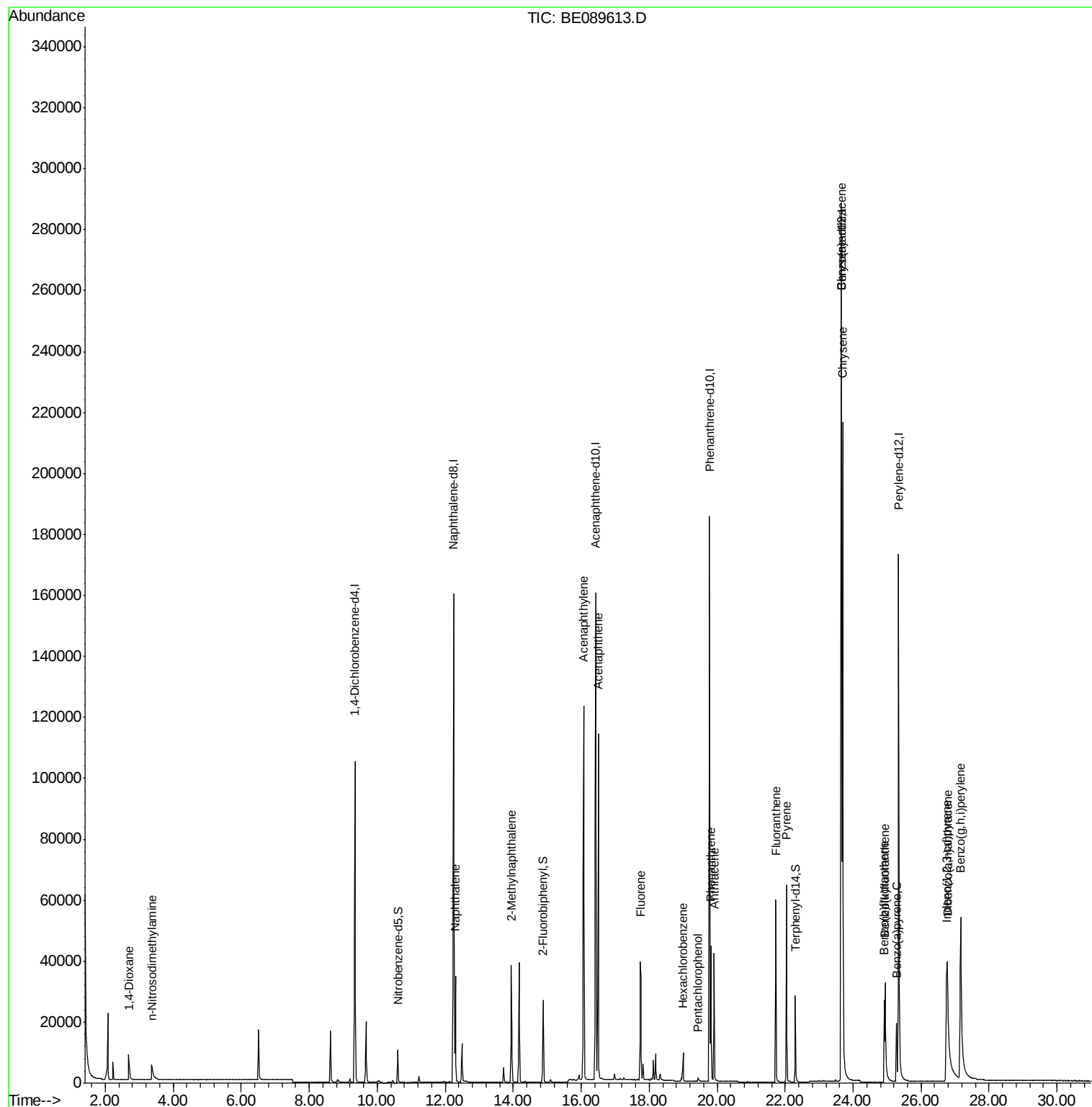
Target Compounds				Qvalue		
2) 1,4-Dioxane	2.69	88	5878	0.93	ng	100
3) n-Nitrosodimethylamine	3.36	42	5777	0.93	ng	100
6) Naphthalene	12.30	128	43580	0.92	ng	100
7) 2-Methylnaphthalene	13.95	142	26625	0.88	ng	100
10) Acenaphthylene	16.07	152	153852	0.89	ng	100
11) Acenaphthene	16.50	154	24737	0.88	ng	100
12) Fluorene	17.74	166	28604	0.90	ng	100
14) Hexachlorobenzene	19.00	284	7926	0.83	ng	100
15) Pentachlorophenol	19.44	266	1116	0.39	ng	100
16) Phenanthrene	19.82	178	45063	0.84	ng	100
17) Anthracene	19.91	178	38690	0.88	ng	100
18) Fluoranthene	21.72	202	42779	0.94	ng	100
20) Pyrene	22.04	202	46977	0.83	ng	100
22) Benzo(a)anthracene	23.64	228	160253	0.86	ng	100
23) Chrysene	23.69	228	183095	0.84	ng	100
24) Indeno(1,2,3-cd)pyrene	26.75	276	124936	0.79	ng	100
26) Benzo(b)fluoranthene	24.91	252	24247	0.78	ng	100
27) Benzo(k)fluoranthene	24.94	252	47813	0.94	ng	100
28) Benzo(a)pyrene	25.28	252	24509	0.81	ng	100
29) Dibenzo(a,h)anthracene	26.78	278	24162	0.79	ng	100
30) Benzo(g,h,i)perylene	27.16	276	116668	0.78	ng	100

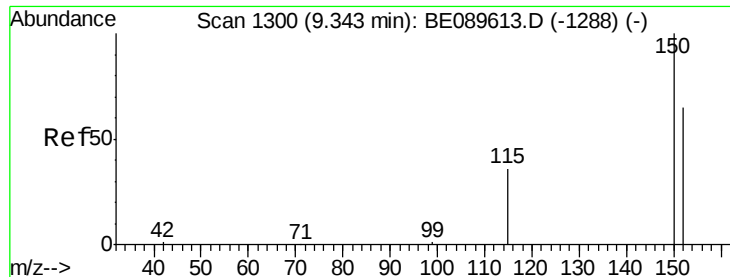
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\HPCHEM1\BNA_E\DATA\BE021815\
Data File : BE089613.D
Acq On : 18 Feb 2015 3:30
Operator : TP/IZ
Sample : SSTDICCC001
Misc :
ALS Vial : 6 Sample Multiplier: 1

Instrument :
BNA_E
LabSampleId :
SSTDICCC001

Quant Time: Feb 18 05:39:31 2015
Quant Method : Z:\HPCHEM1\BNA_E\METHODS\SIMPAH-BE021815.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
QLast Update : Wed Feb 18 05:28:48 2015
Response via : Initial Calibration





#1

1,4-Dichlorobenzene-d4

Concen: 5.00 ng

RT: 9.34 min Scan# 1300

Delta R.T. 0.00 min

Lab File: BE089613.D

Acq: 18 Feb 2015 3:30

Instrument :

BNA_E

LabSampleId :

SSTDIC001

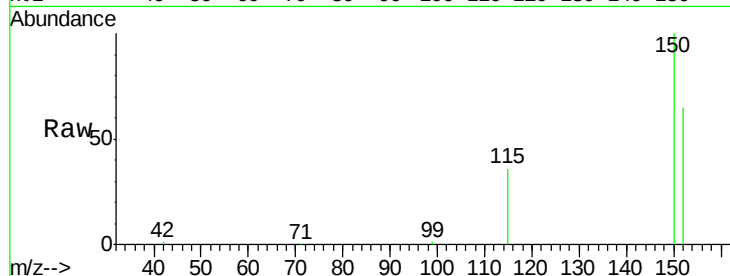
Tgt Ion: 152 Resp: 48036

Ion Ratio Lower Upper

152 100

150 153.0 122.4 183.6

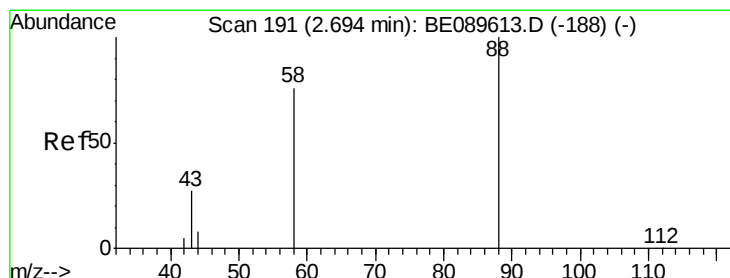
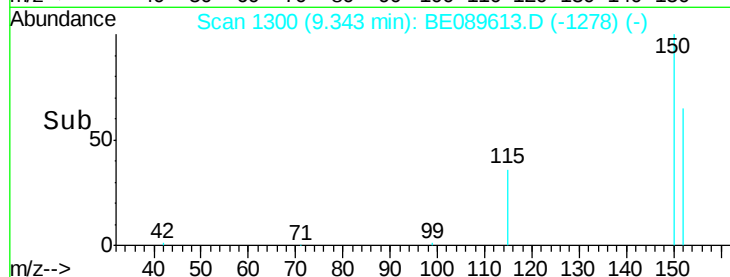
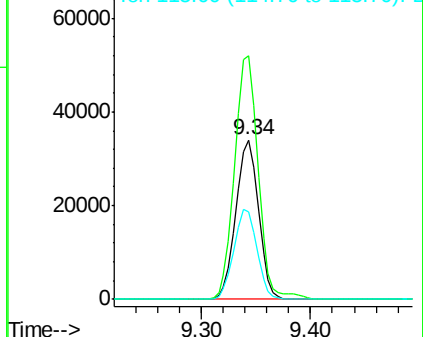
115 55.2 44.2 66.2



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

1,4-Dioxane

Concen: 0.93 ng

RT: 2.69 min Scan# 191

Delta R.T. 0.00 min

Lab File: BE089613.D

Acq: 18 Feb 2015 3:30

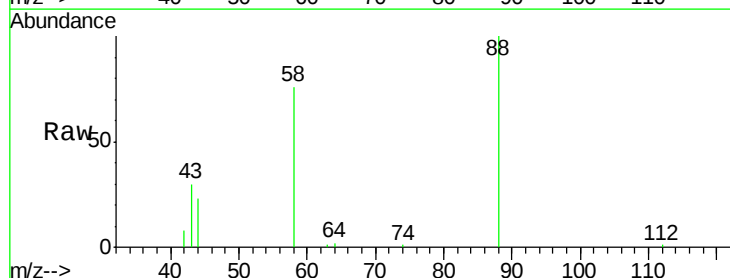
Tgt Ion: 88 Resp: 5878

Ion Ratio Lower Upper

88 100

58 68.2 54.6 81.8

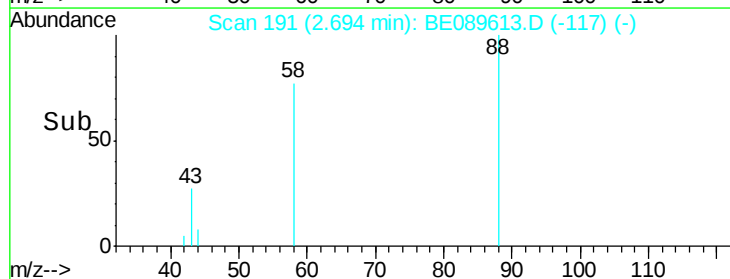
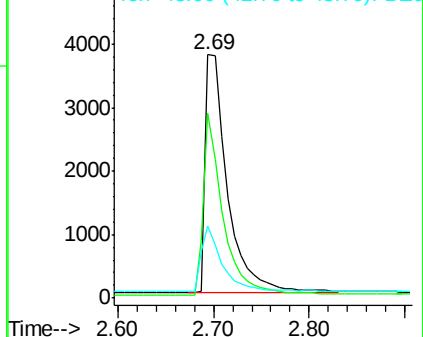
43 25.7 20.6 30.8

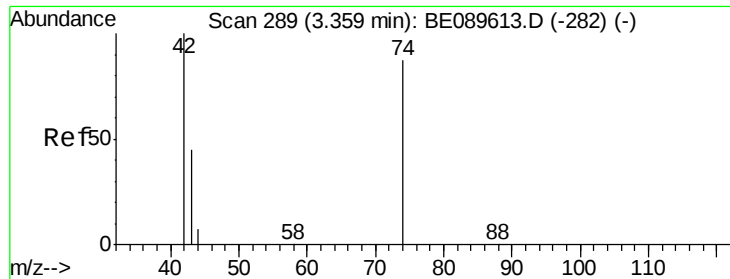


Abundance Ion 88.00 (87.70 to 88.70): BE0

Ion 58.00 (57.70 to 58.70): BE0

Ion 43.00 (42.70 to 43.70): BE0



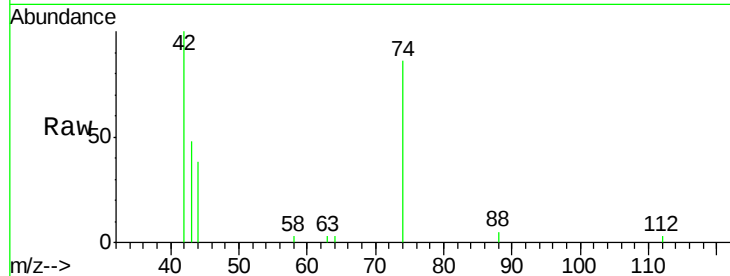


#3

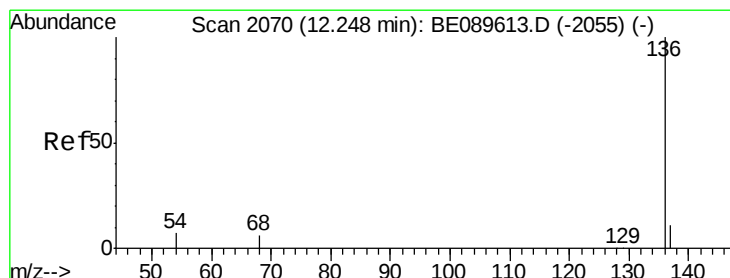
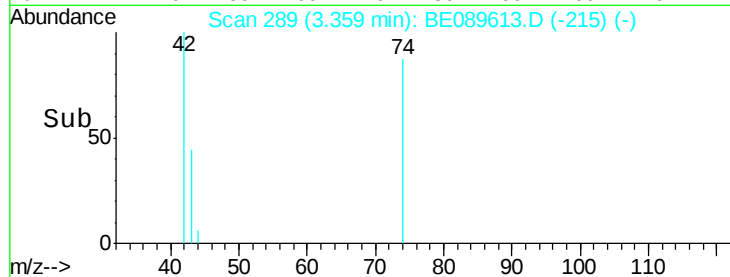
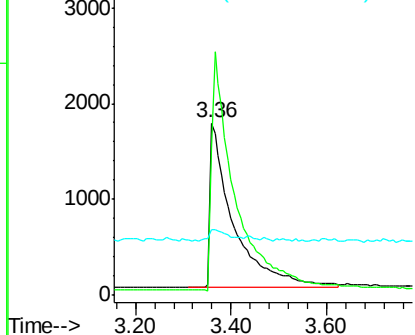
n-Nitrosodimethylamine
 Concen: 0.93 ng
 RT: 3.36 min Scan# 289
 Delta R.T. 0.00 min
 Lab File: BE089613.D
 Acq: 18 Feb 2015 3:30

Instrument :
 BNA_E
 LabSampleId :
 SSTDICC001

Tgt Ion: 42 Resp: 5777
 Ion Ratio Lower Upper
 42 100
 74 151.7 121.4 182.0
 44 6.1 4.5 6.7



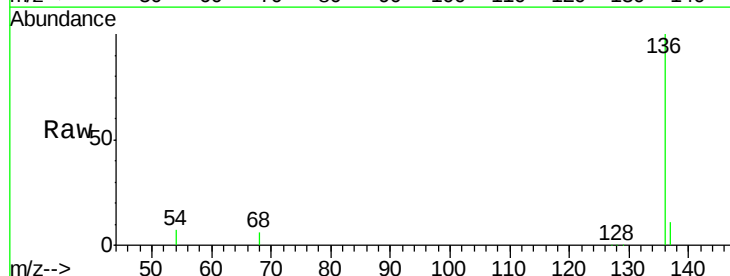
Abundance Ion 42.00 (41.70 to 42.70): BE0
 Ion 74.00 (73.70 to 74.70): BE0
 Ion 44.00 (43.70 to 44.70): BE0



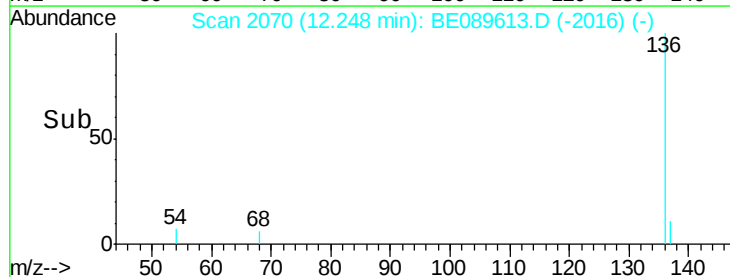
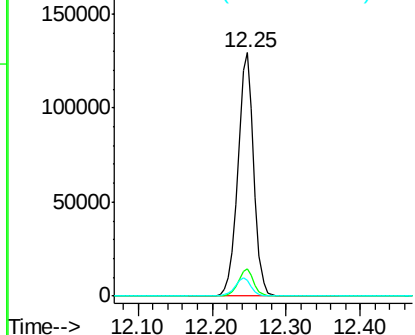
#4

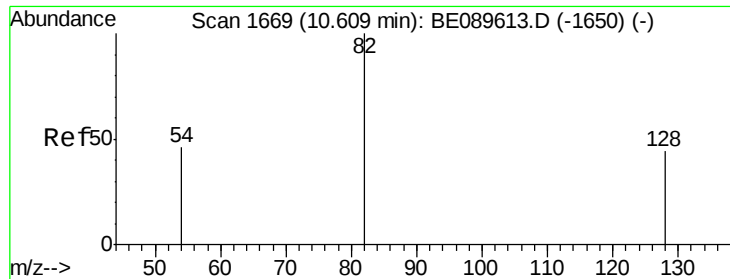
Naphthalene-d8
 Concen: 5.00 ng
 RT: 12.25 min Scan# 2070
 Delta R.T. 0.00 min
 Lab File: BE089613.D
 Acq: 18 Feb 2015 3:30

Tgt Ion: 136 Resp: 192045
 Ion Ratio Lower Upper
 136 100
 137 11.1 8.9 13.3
 54 6.6 5.3 7.9



Abundance Ion 136.00 (135.70 to 136.70): E
 Ion 137.00 (136.70 to 137.70): E
 Ion 54.00 (53.70 to 54.70): BE0





#5

Nitrobenzene-d5

Concen: 0.94 ng

RT: 10.61 min Scan# 1669

Delta R.T. 0.00 min

Lab File: BE089613.D

Acq: 18 Feb 2015 3:30

Instrument :

BNA_E

LabSampleId :

SSTDIC001

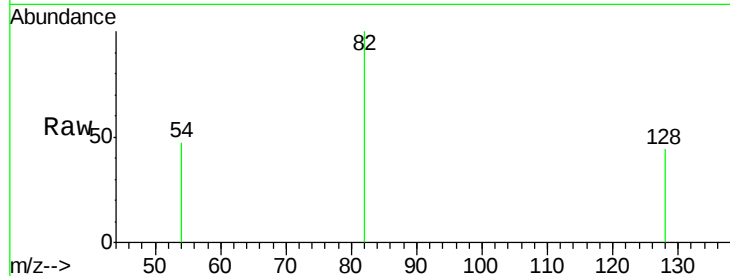
Tgt Ion: 82 Resp: 8088

Ion Ratio Lower Upper

82 100

128 44.4 35.5 53.3

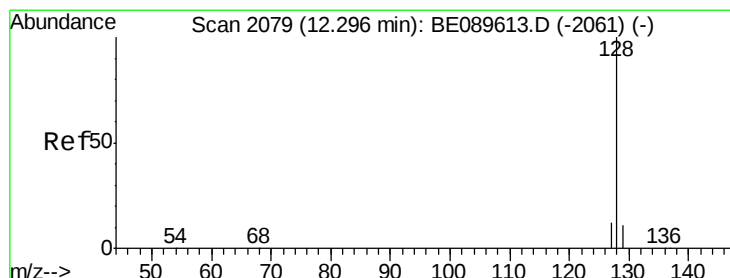
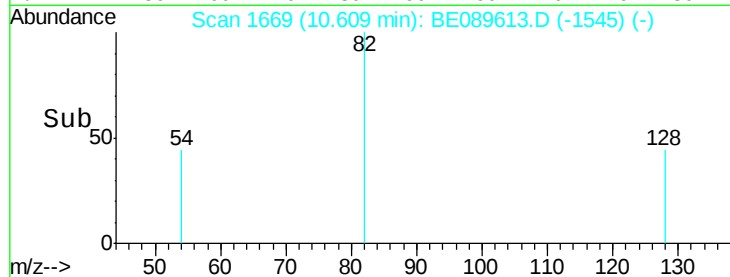
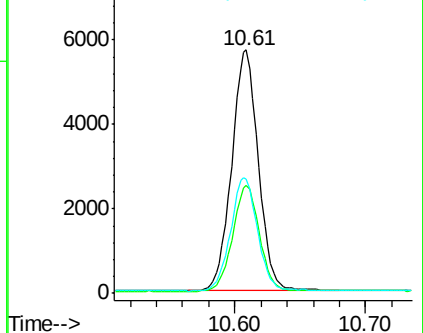
54 46.9 37.5 56.3



Abundance Ion 82.00 (81.70 to 82.70): BE089613.D (-1650) (-)

Ion 128.00 (127.70 to 128.70): BE089613.D (-1650) (-)

Ion 54.00 (53.70 to 54.70): BE089613.D (-1650) (-)



#6

Naphthalene

Concen: 0.92 ng

RT: 12.30 min Scan# 2079

Delta R.T. 0.00 min

Lab File: BE089613.D

Acq: 18 Feb 2015 3:30

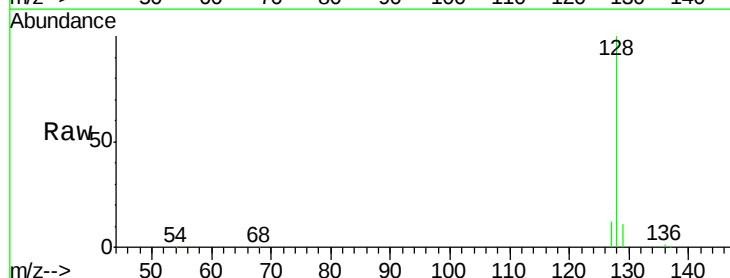
Tgt Ion: 128 Resp: 43580

Ion Ratio Lower Upper

128 100

129 11.1 8.9 13.3

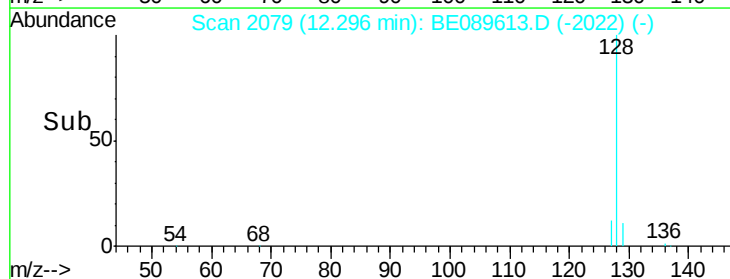
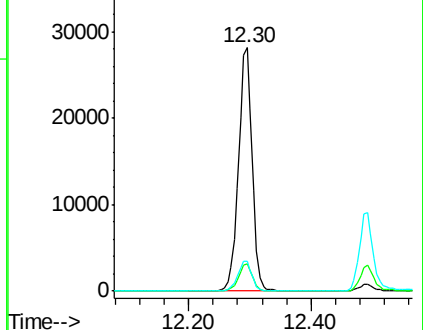
127 12.3 9.8 14.8

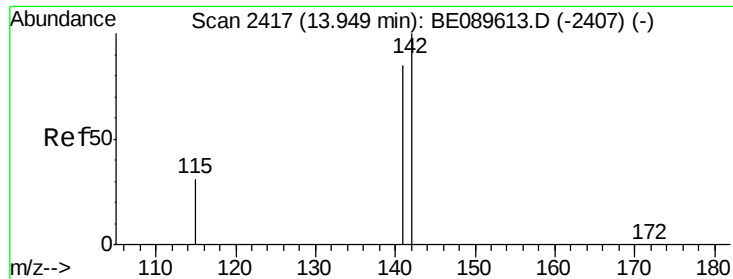


Abundance Ion 128.00 (127.70 to 128.70): BE089613.D (-2061) (-)

Ion 129.00 (128.70 to 129.70): BE089613.D (-2061) (-)

Ion 127.00 (126.70 to 127.70): BE089613.D (-2061) (-)





#7

2-Methylnaphthalene

Concen: 0.88 ng

RT: 13.95 min Scan# 2417

Delta R.T. 0.00 min

Lab File: BE089613.D

Acq: 18 Feb 2015 3:30

Instrument :

BNA_E

LabSampleId :

SSTDICC001

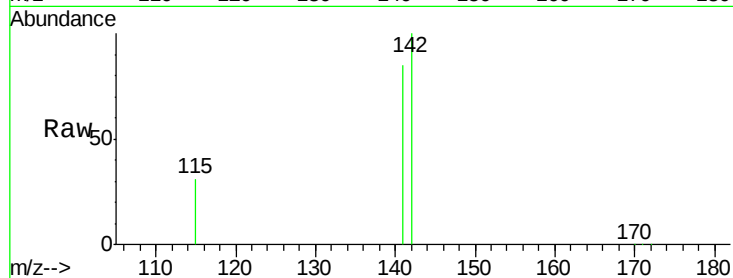
Tgt Ion:142 Resp: 26625

Ion Ratio Lower Upper

142 100

141 85.4 68.3 102.5

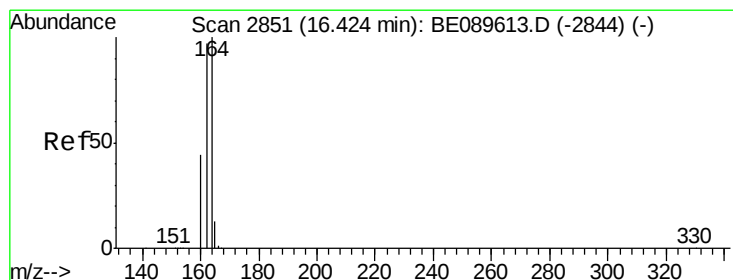
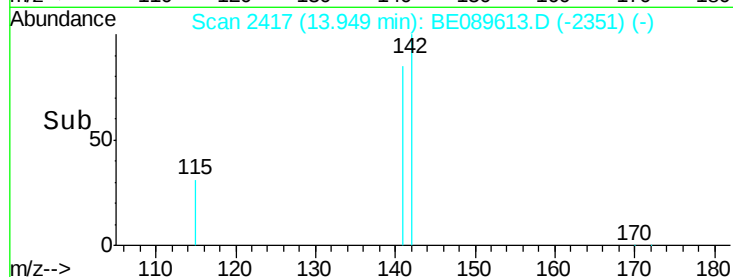
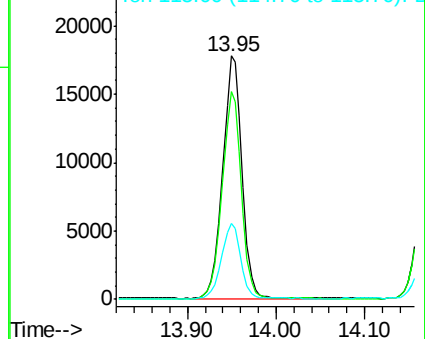
115 31.4 25.1 37.7



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: 16.42 min Scan# 2851

Delta R.T. 0.00 min

Lab File: BE089613.D

Acq: 18 Feb 2015 3:30

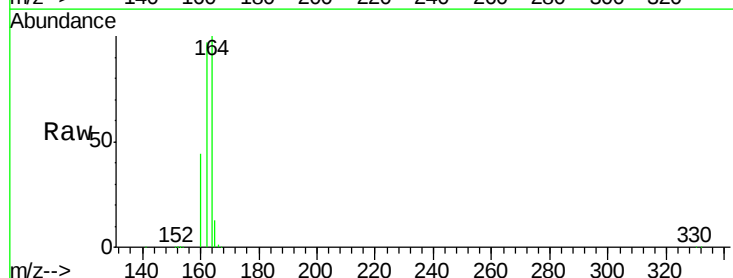
Tgt Ion:164 Resp: 92685

Ion Ratio Lower Upper

164 100

162 96.9 77.5 116.3

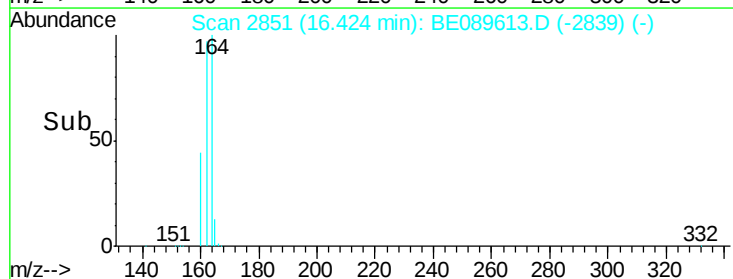
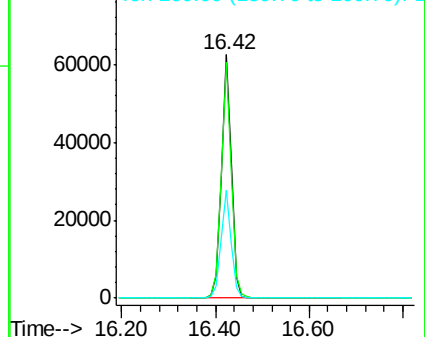
160 44.4 35.5 53.3

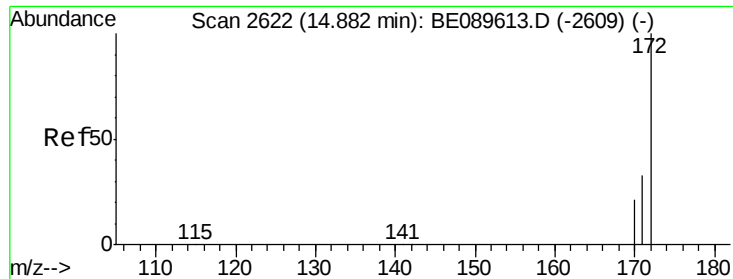


Abundance Ion 164.00 (163.70 to 164.70): E

Ion 162.00 (161.70 to 162.70): E

Ion 160.00 (159.70 to 160.70): E





#9

2-Fluorobiphenyl

Concen: 0.88 ng

RT: 14.88 min Scan# 2622

Delta R.T. 0.00 min

Lab File: BE089613.D

Acq: 18 Feb 2015 3:30

Instrument :

BNA_E

LabSampleId :

SSTDIC001

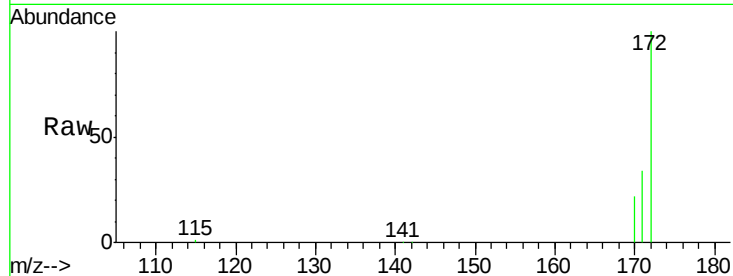
Tgt Ion:172 Resp: 25517

Ion Ratio Lower Upper

172 100

171 33.6 26.9 40.3

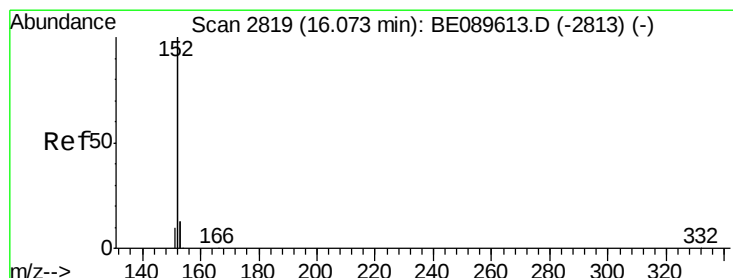
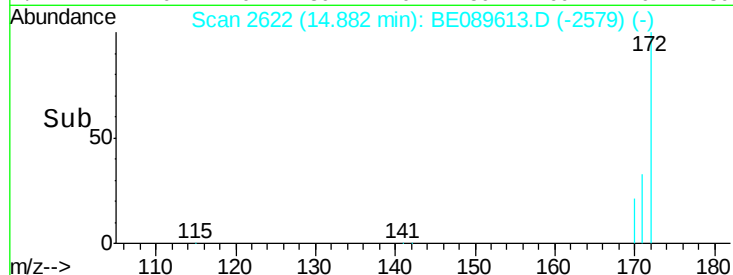
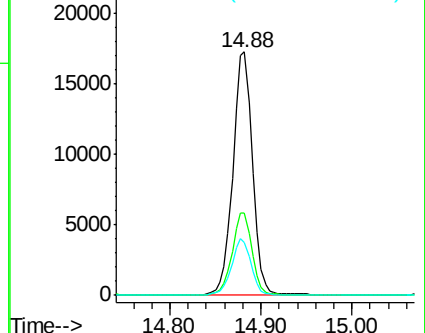
170 21.7 17.4 26.0



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



#10

Acenaphthylene

Concen: 0.89 ng

RT: 16.07 min Scan# 2819

Delta R.T. 0.00 min

Lab File: BE089613.D

Acq: 18 Feb 2015 3:30

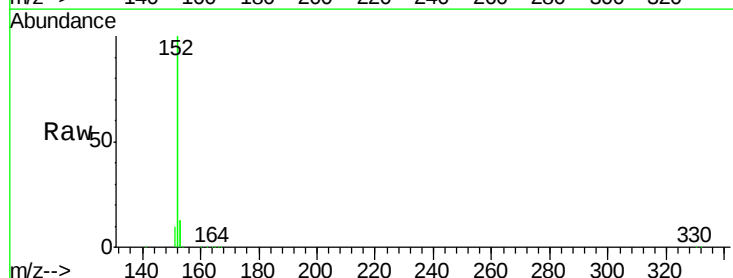
Tgt Ion:152 Resp: 153852

Ion Ratio Lower Upper

152 100

151 4.9 3.9 5.9

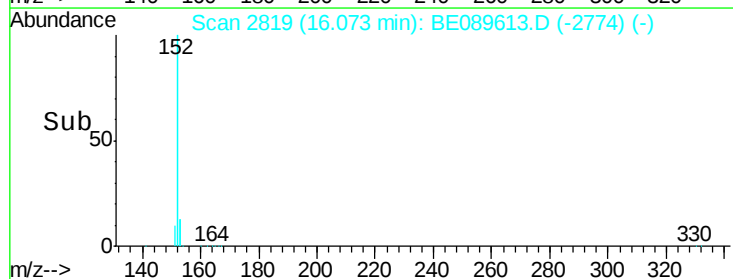
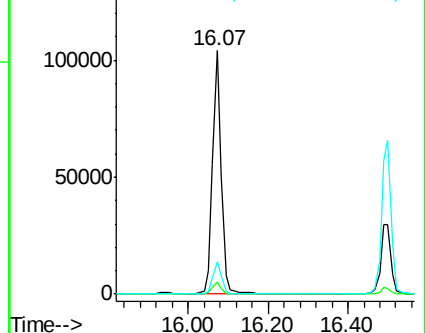
153 13.1 10.5 15.7

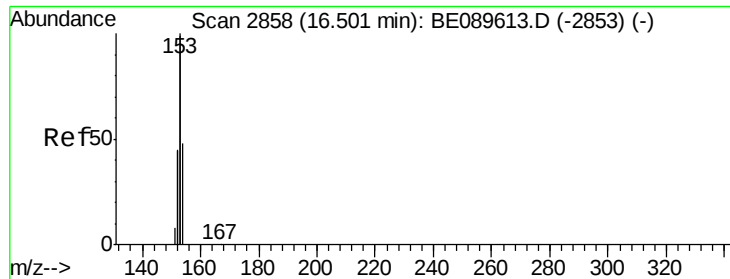


Abundance Ion 152.00 (151.70 to 152.70): E

Ion 151.00 (150.70 to 151.70): E

Ion 153.00 (152.70 to 153.70): E





#11

Acenaphthene

Concen: 0.88 ng

RT: 16.50 min Scan# 2858

Delta R.T. 0.00 min

Lab File: BE089613.D

Acq: 18 Feb 2015 3:30

Instrument :

BNA_E

LabSampleId :

SSTDIC001

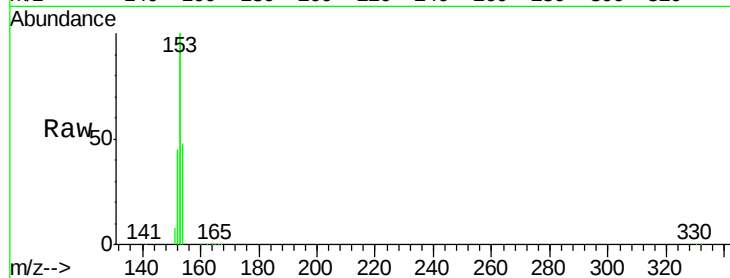
Tgt Ion:154 Resp: 24737

Ion Ratio Lower Upper

154 100

153 436.1 348.9 523.3

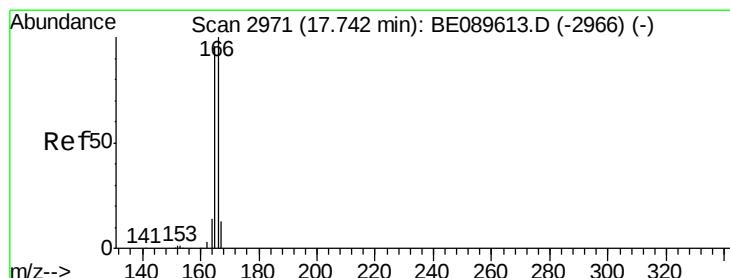
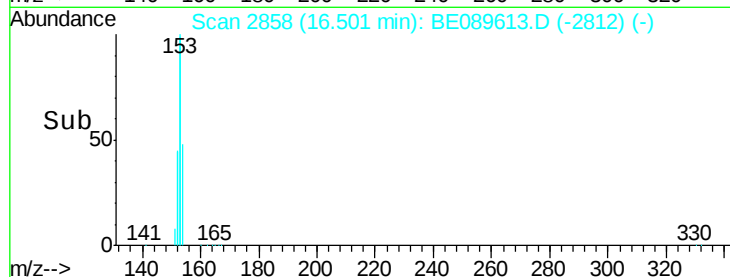
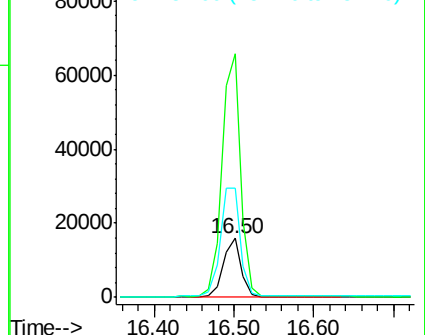
152 208.2 166.6 249.8



Abundance Ion 154.00 (153.70 to 154.70): E

Ion 153.00 (152.70 to 153.70): E

Ion 152.00 (151.70 to 152.70): E



#12

Fluorene

Concen: 0.90 ng

RT: 17.74 min Scan# 2971

Delta R.T. 0.00 min

Lab File: BE089613.D

Acq: 18 Feb 2015 3:30

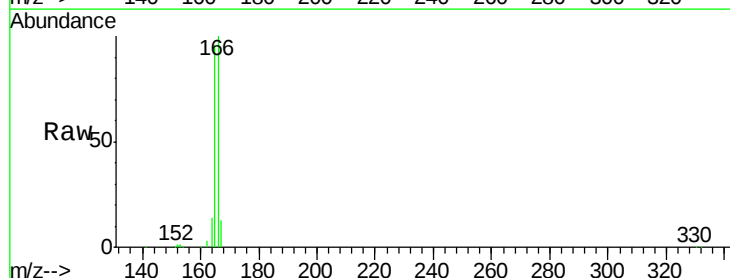
Tgt Ion:166 Resp: 28604

Ion Ratio Lower Upper

166 100

165 93.4 74.7 112.1

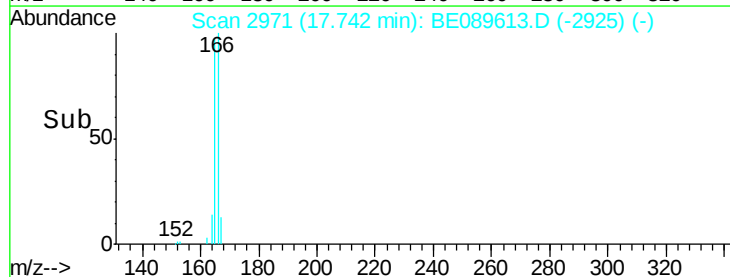
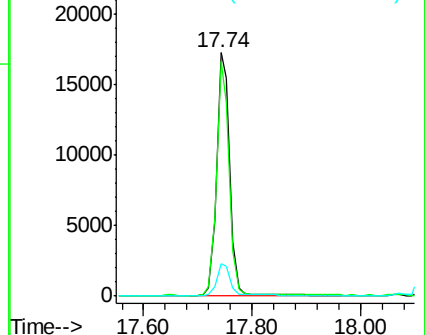
167 13.1 10.5 15.7

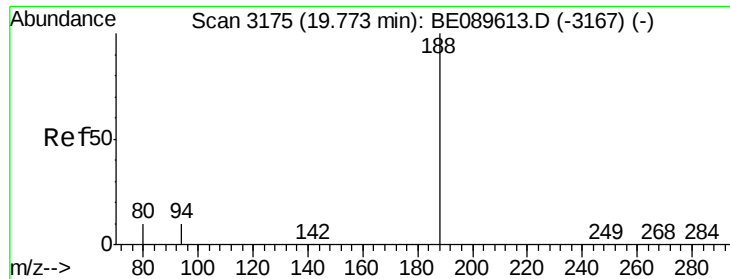


Abundance Ion 166.00 (165.70 to 166.70): E

Ion 165.00 (164.70 to 165.70): E

Ion 167.00 (166.70 to 167.70): E

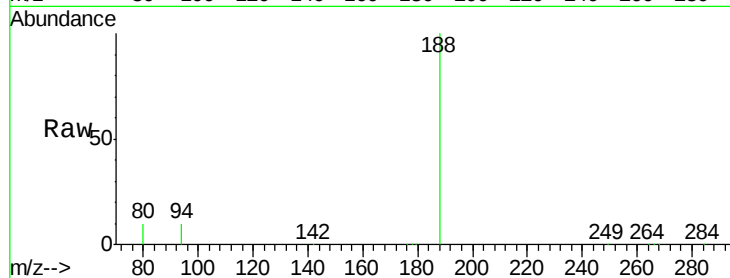




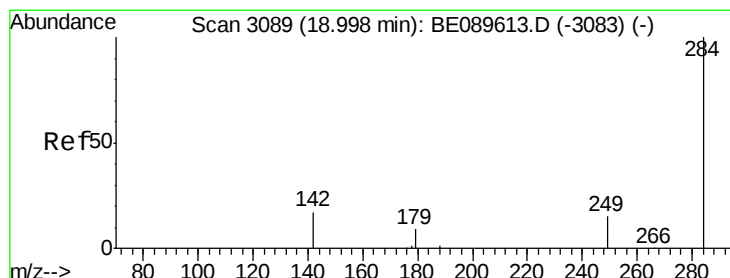
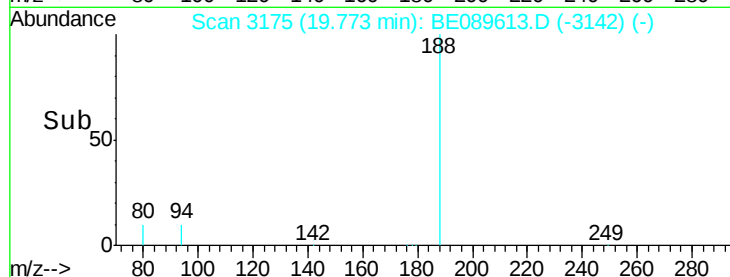
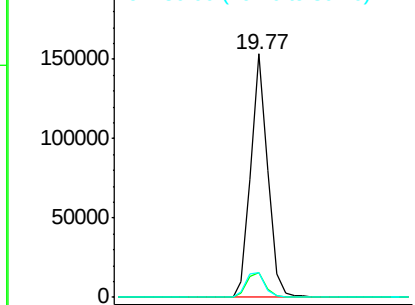
#13
Phenanthrene-d10
Concen: 5.00 ng
RT: 19.77 min Scan# 3175
Delta R.T. 0.00 min
Lab File: BE089613.D
Acq: 18 Feb 2015 3:30

Instrument :
BNA_E
LabSampleId :
SSTDIC001

Tgt Ion:188 Resp: 183123
Ion Ratio Lower Upper
188 100
94 10.3 8.2 12.4
80 10.1 8.1 12.1

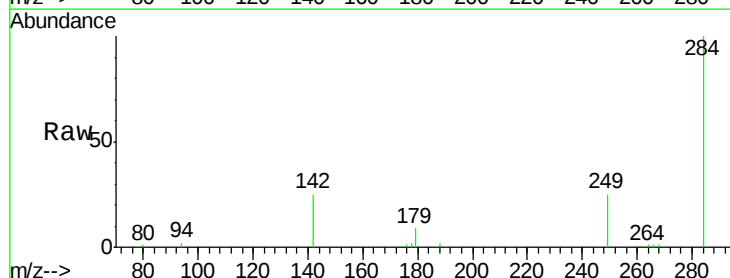


Abundance Ion 188.00 (187.70 to 188.70): E
Ion 94.00 (93.70 to 94.70): BE0
Ion 80.00 (79.70 to 80.70): BE0

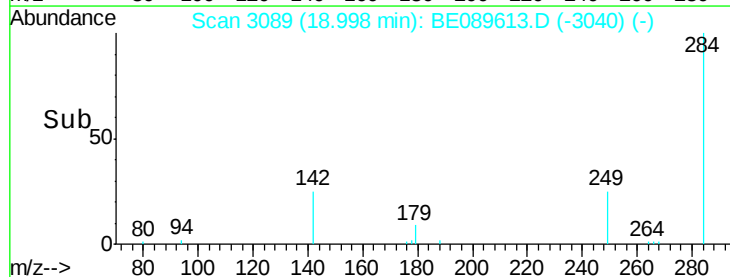
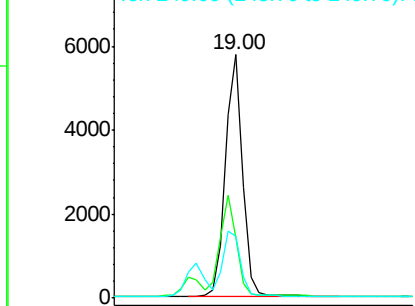


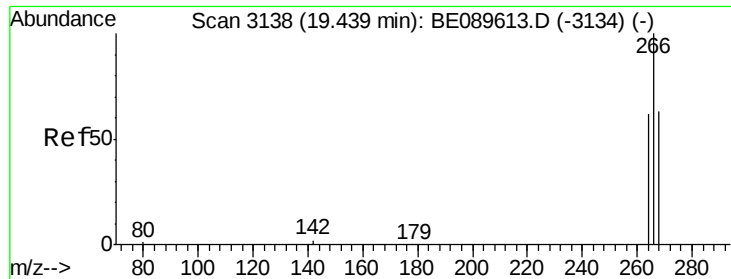
#14
Hexachlorobenzene
Concen: 0.83 ng
RT: 19.00 min Scan# 3089
Delta R.T. 0.00 min
Lab File: BE089613.D
Acq: 18 Feb 2015 3:30

Tgt Ion:284 Resp: 7926
Ion Ratio Lower Upper
284 100
142 40.4 32.3 48.5
249 27.9 22.3 33.5



Abundance Ion 283.80 (283.50 to 284.50): E
Ion 142.00 (141.70 to 142.70): E
Ion 249.00 (248.70 to 249.70): E

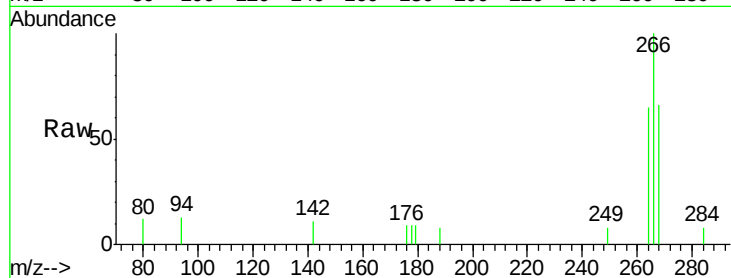




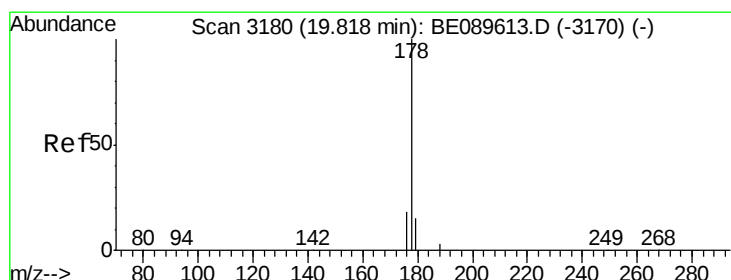
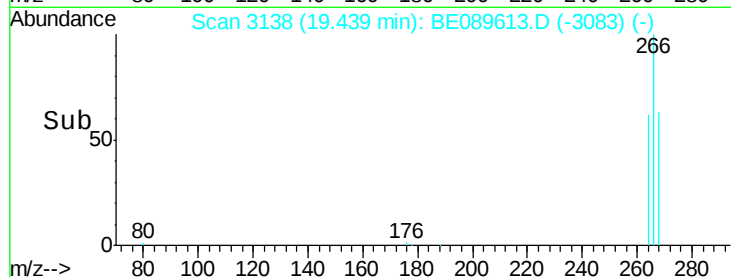
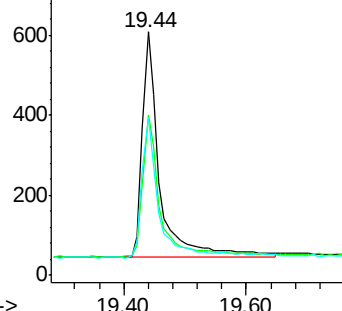
#15
 Pentachlorophenol
 Concen: 0.39 ng
 RT: 19.44 min Scan# 3138
 Delta R.T. 0.00 min
 Lab File: BE089613.D
 Acq: 18 Feb 2015 3:30

Instrument :
 BNA_E
 LabSampleId :
 SSTDICC001

Tgt Ion: 266 Resp: 1116
 Ion Ratio Lower Upper
 266 100
 268 65.8 52.6 79.0
 264 64.8 51.8 77.8

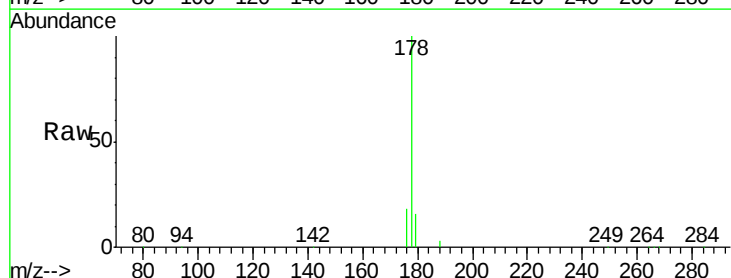


Abundance Ion 265.70 (265.40 to 266.40): E
 Ion 268.00 (267.70 to 268.70): E
 Ion 264.00 (263.70 to 264.70): E

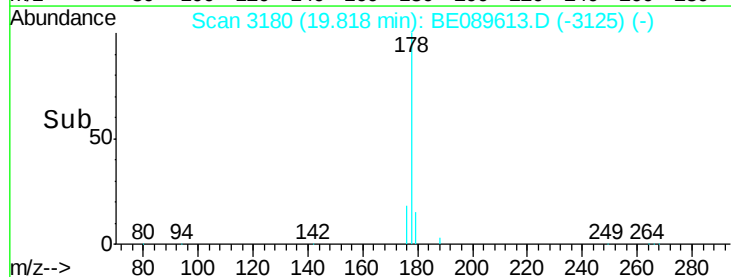
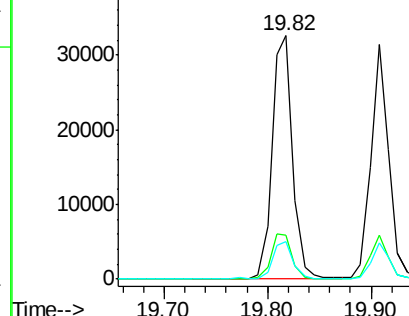


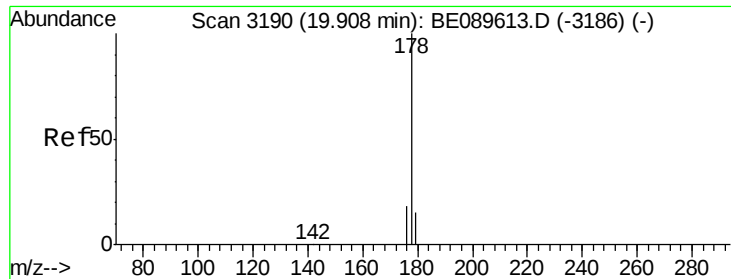
#16
 Phenanthrene
 Concen: 0.84 ng
 RT: 19.82 min Scan# 3180
 Delta R.T. 0.00 min
 Lab File: BE089613.D
 Acq: 18 Feb 2015 3:30

Tgt Ion: 178 Resp: 45063
 Ion Ratio Lower Upper
 178 100
 176 18.9 15.1 22.7
 179 15.4 12.3 18.5



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

Anthracene

Concen: 0.88 ng

RT: 19.91 min Scan# 3190

Delta R.T. 0.00 min

Lab File: BE089613.D

Acq: 18 Feb 2015 3:30

Instrument :

BNA_E

LabSampleId :

SSTDICC001

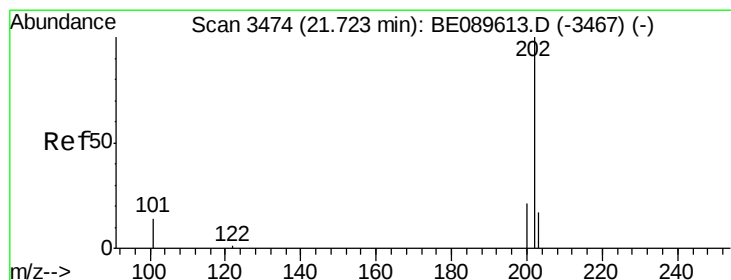
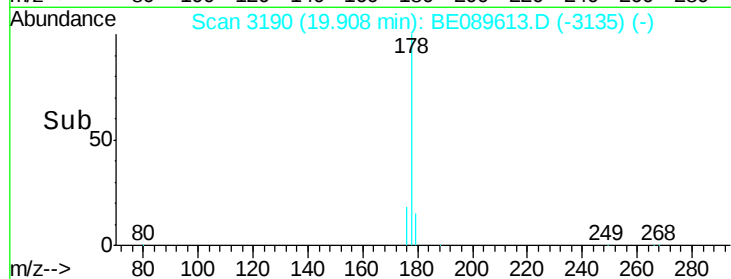
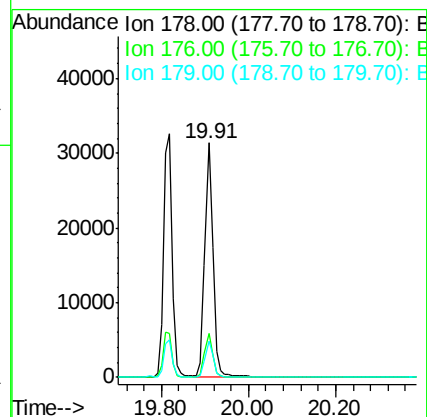
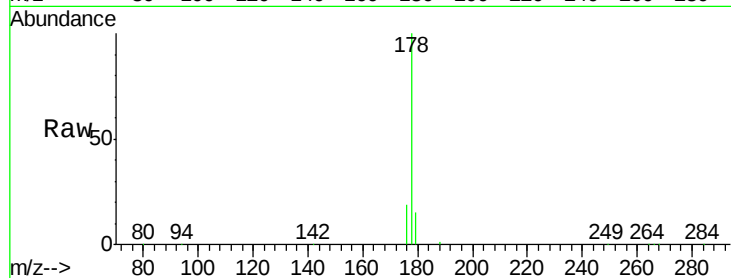
Tgt Ion:178 Resp: 38690

Ion Ratio Lower Upper

178 100

176 18.3 14.6 22.0

179 15.4 12.3 18.5



#18

Fluoranthene

Concen: 0.94 ng

RT: 21.72 min Scan# 3474

Delta R.T. 0.00 min

Lab File: BE089613.D

Acq: 18 Feb 2015 3:30

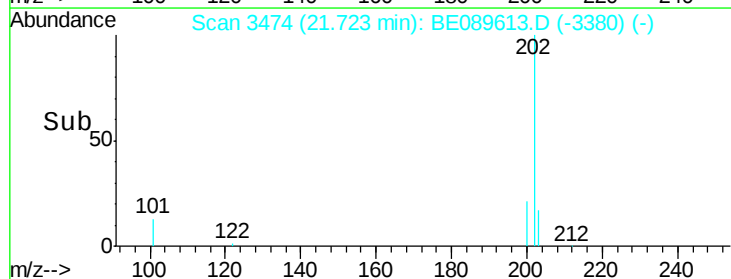
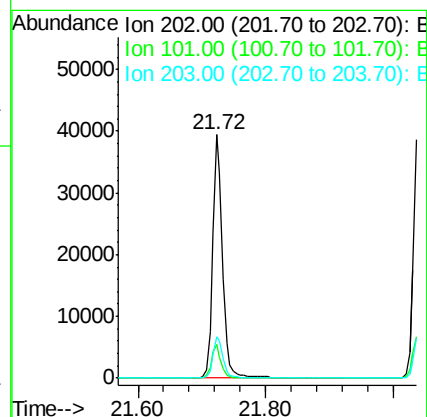
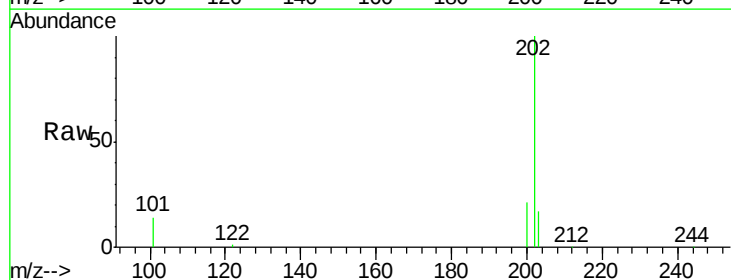
Tgt Ion:202 Resp: 42779

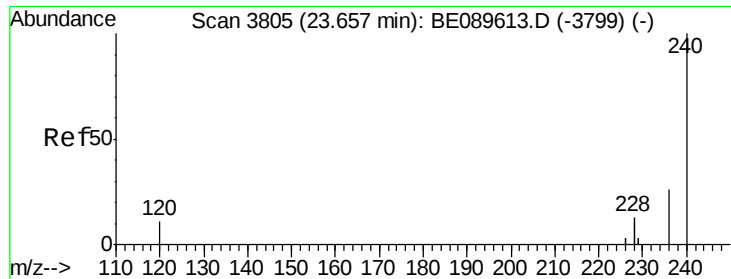
Ion Ratio Lower Upper

202 100

101 13.0 10.4 15.6

203 17.4 13.9 20.9





#19

Chrysene-d12

Concen: 5.00 ng

RT: 23.66 min Scan# 3805

Delta R.T. 0.00 min

Lab File: BE089613.D

Acq: 18 Feb 2015 3:30

Instrument :

BNA_E

LabSampleId :

SSTDICC001

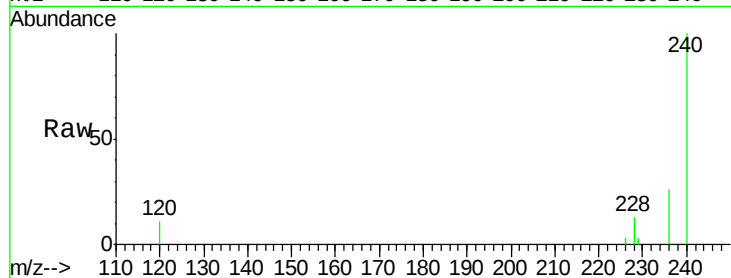
Tgt Ion:240 Resp: 185052

Ion Ratio Lower Upper

240 100

120 11.2 9.0 13.4

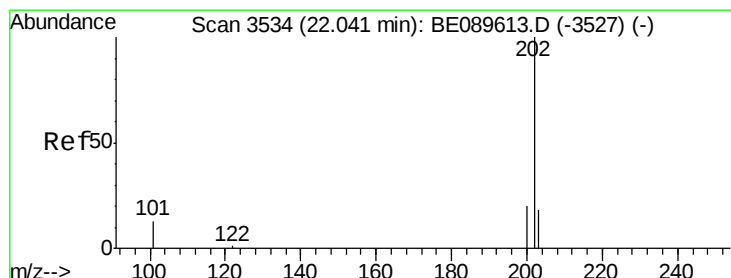
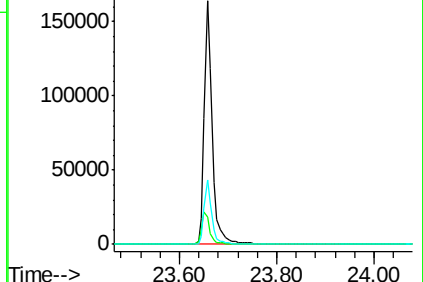
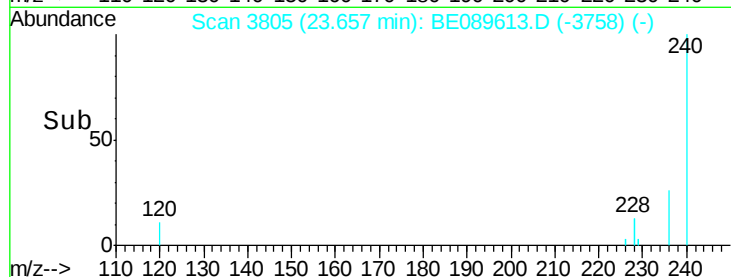
236 26.3 21.0 31.6



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



#20

Pyrene

Concen: 0.83 ng

RT: 22.04 min Scan# 3534

Delta R.T. 0.00 min

Lab File: BE089613.D

Acq: 18 Feb 2015 3:30

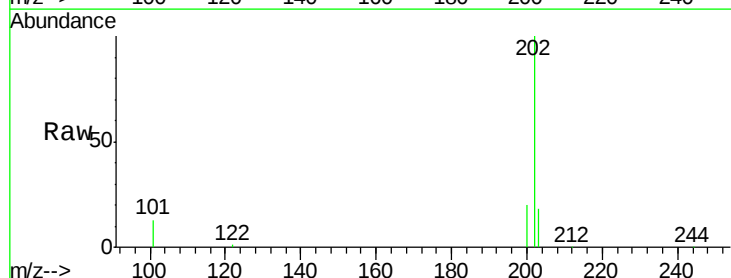
Tgt Ion:202 Resp: 46977

Ion Ratio Lower Upper

202 100

200 20.4 16.3 24.5

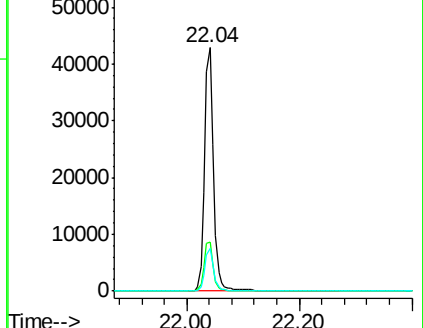
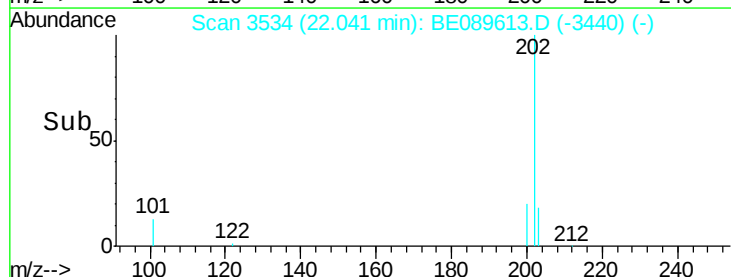
203 17.3 13.8 20.8

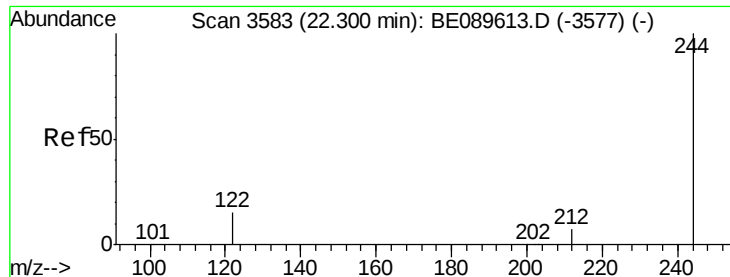


Abundance Ion 202.00 (201.70 to 202.70): E

Ion 200.00 (199.70 to 200.70): E

Ion 203.00 (202.70 to 203.70): E





#21

Terphenyl-d14

Concen: 0.79 ng

RT: 22.30 min Scan# 3583

Delta R.T. 0.00 min

Lab File: BE089613.D

Acq: 18 Feb 2015 3:30

Instrument :

BNA_E

LabSampleId :

SSTDIC001

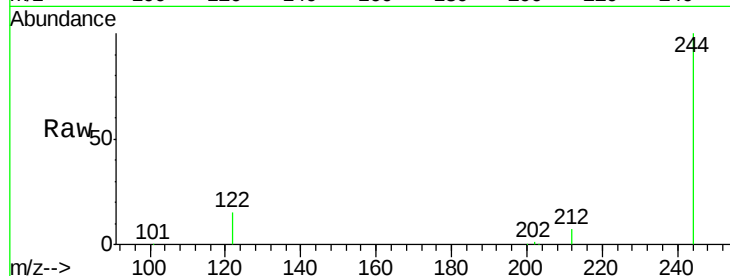
Tgt Ion:244 Resp: 26712

Ion Ratio Lower Upper

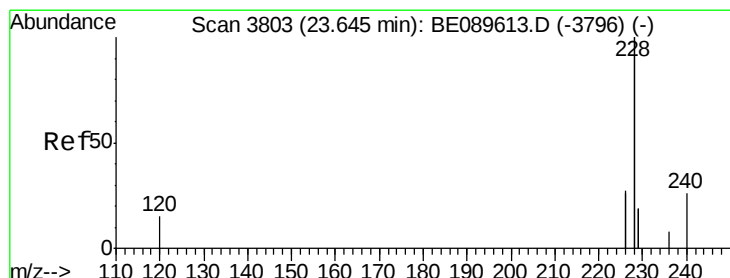
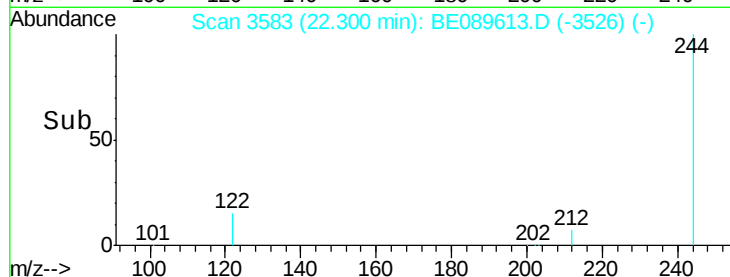
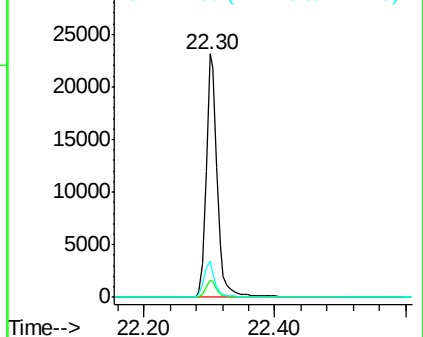
244 100

212 7.3 5.8 8.8

122 14.8 11.8 17.8



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



#22

Benzo(a)anthracene

Concen: 0.86 ng

RT: 23.64 min Scan# 3803

Delta R.T. 0.00 min

Lab File: BE089613.D

Acq: 18 Feb 2015 3:30

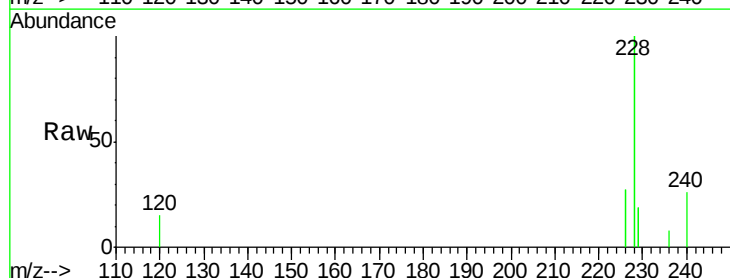
Tgt Ion:228 Resp: 160253

Ion Ratio Lower Upper

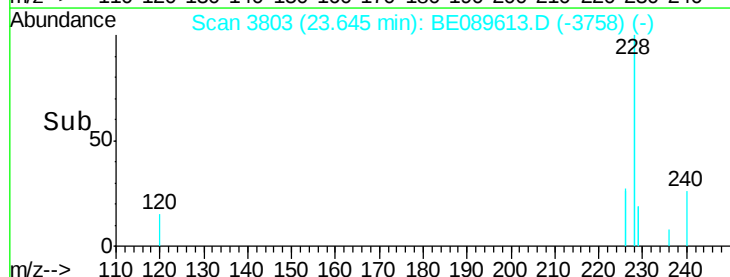
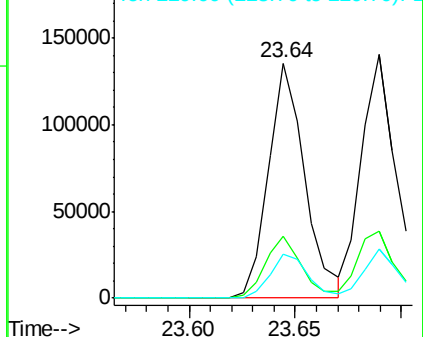
228 100

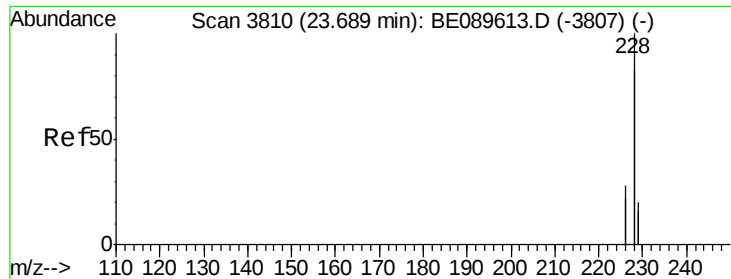
226 26.5 21.2 31.8

229 19.0 15.2 22.8



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

Chrysene

Concen: 0.84 ng

RT: 23.69 min Scan# 3810

Delta R.T. 0.00 min

Lab File: BE089613.D

Acq: 18 Feb 2015 3:30

Instrument :

BNA_E

LabSampleId :

SSTDIC001

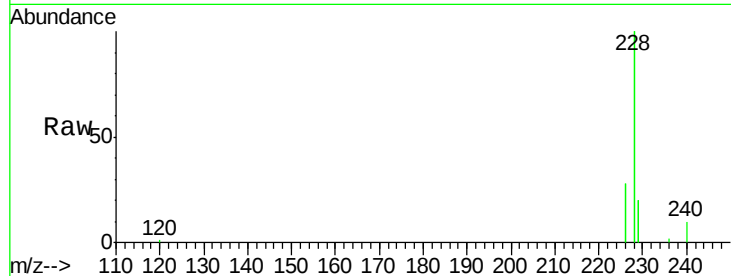
Tgt Ion:228 Resp: 183095

Ion Ratio Lower Upper

228 100

226 27.8 22.2 33.4

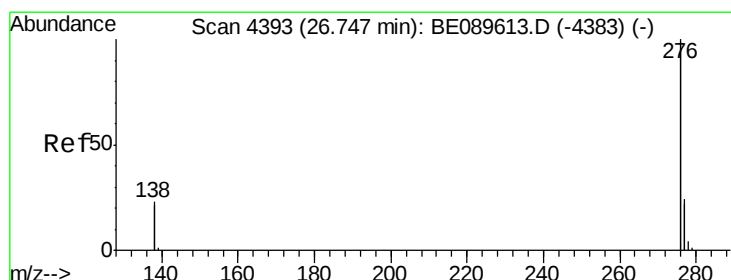
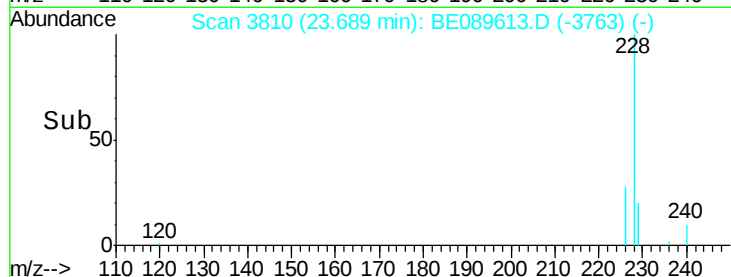
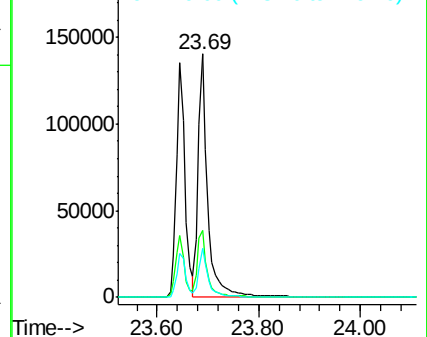
229 20.0 16.0 24.0



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



#24

Indeno(1,2,3-cd)pyrene

Concen: 0.79 ng

RT: 26.75 min Scan# 4393

Delta R.T. 0.00 min

Lab File: BE089613.D

Acq: 18 Feb 2015 3:30

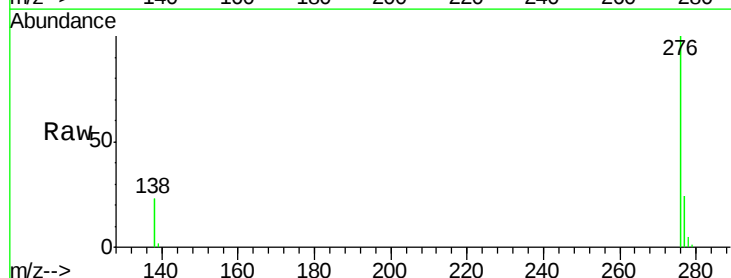
Tgt Ion:276 Resp: 124936

Ion Ratio Lower Upper

276 100

138 26.8 21.4 32.2

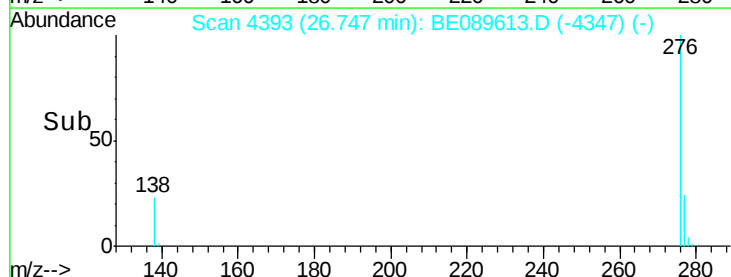
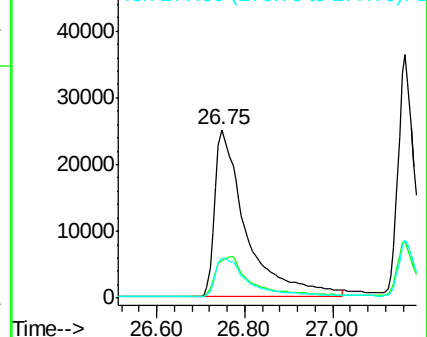
277 24.9 19.9 29.9

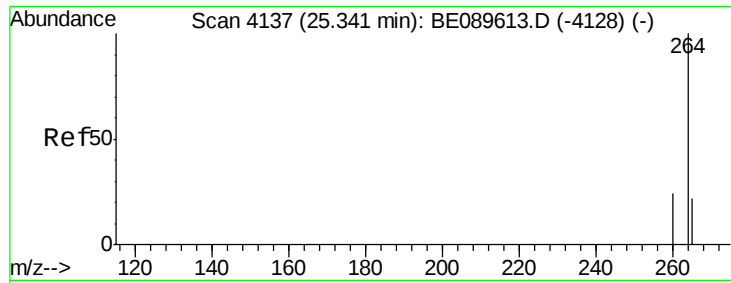


Abundance Ion 276.00 (275.70 to 276.70): E

Ion 138.00 (137.70 to 138.70): E

Ion 277.00 (276.70 to 277.70): E

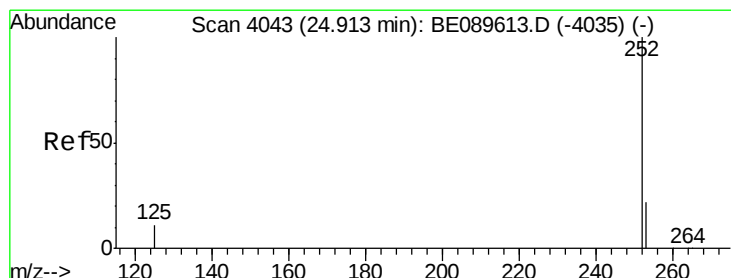
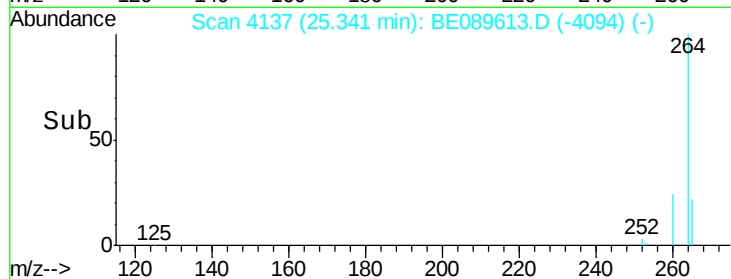
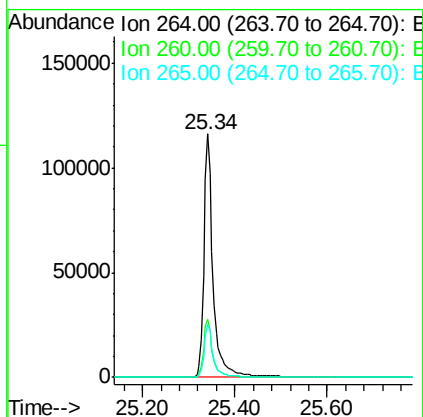
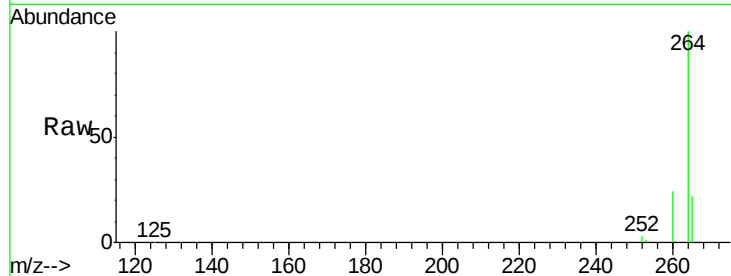




#25
 Perylene-d12
 Concen: 5.00 ng
 RT: 25.34 min Scan# 4137
 Delta R.T. 0.00 min
 Lab File: BE089613.D
 Acq: 18 Feb 2015 3:30

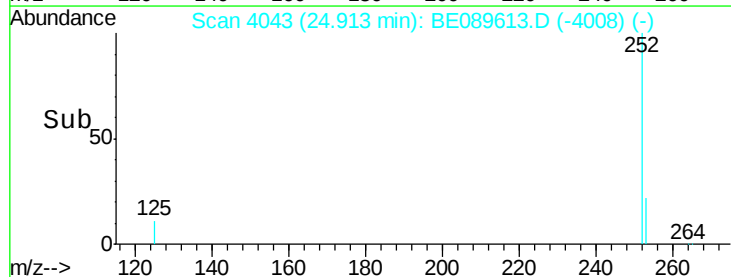
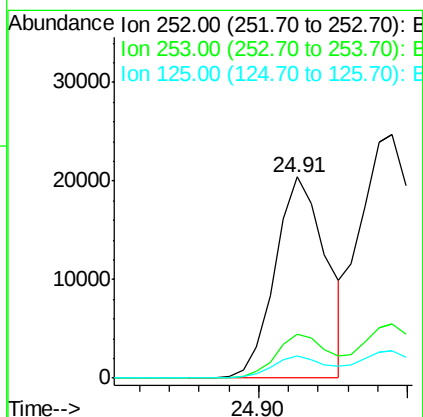
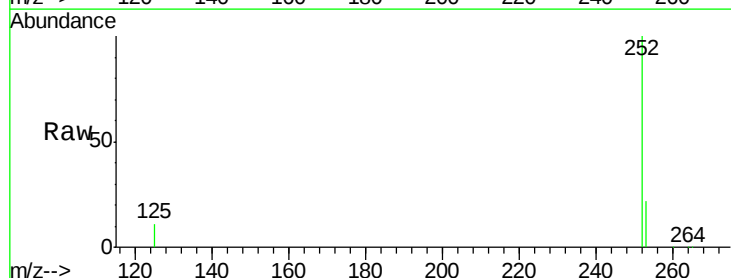
Instrument :
 BNA_E
 LabSampleId :
 SSTDICC001

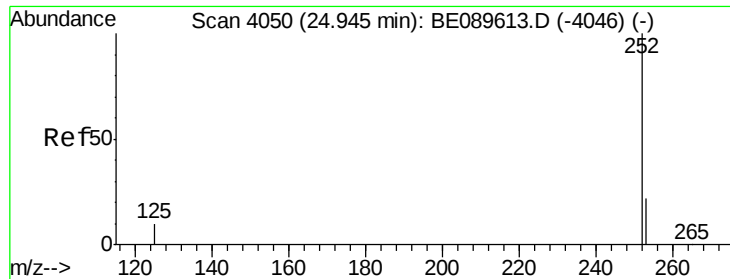
Tgt Ion: 264 Resp: 158622
 Ion Ratio Lower Upper
 264 100
 260 23.8 19.0 28.6
 265 21.7 17.4 26.0



#26
 Benzo(b)fluoranthene
 Concen: 0.78 ng
 RT: 24.91 min Scan# 4043
 Delta R.T. 0.00 min
 Lab File: BE089613.D
 Acq: 18 Feb 2015 3:30

Tgt Ion: 252 Resp: 24247
 Ion Ratio Lower Upper
 252 100
 253 22.0 17.6 26.4
 125 11.0 8.8 13.2





#27

Benzo(k)fluoranthene

Concen: 0.94 ng

RT: 24.94 min Scan# 4050

Delta R.T. 0.00 min

Lab File: BE089613.D

Acq: 18 Feb 2015 3:30

Instrument :

BNA_E

LabSampleId :

SSTDICC001

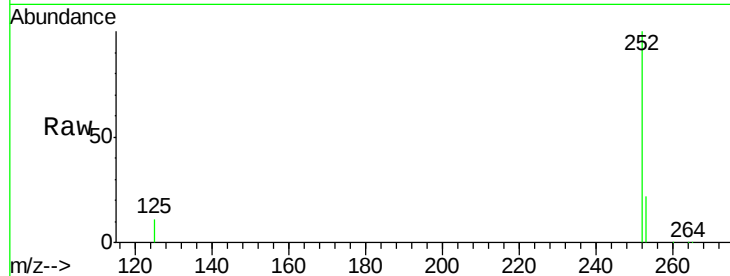
Tgt Ion:252 Resp: 47813

Ion Ratio Lower Upper

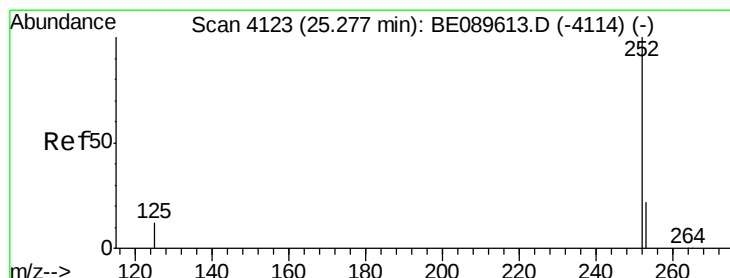
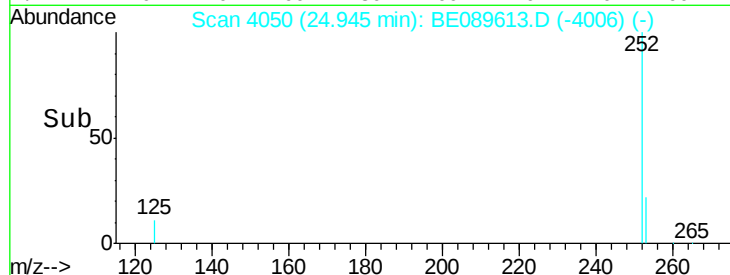
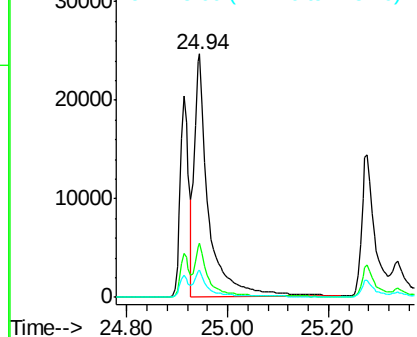
252 100

253 22.1 17.7 26.5

125 11.0 8.8 13.2



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



#28

Benzo(a)pyrene

Concen: 0.81 ng

RT: 25.28 min Scan# 4123

Delta R.T. 0.00 min

Lab File: BE089613.D

Acq: 18 Feb 2015 3:30

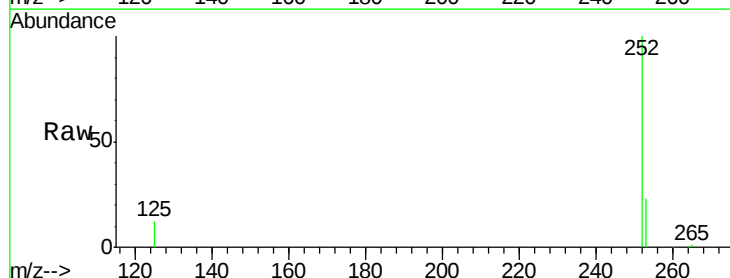
Tgt Ion:252 Resp: 24509

Ion Ratio Lower Upper

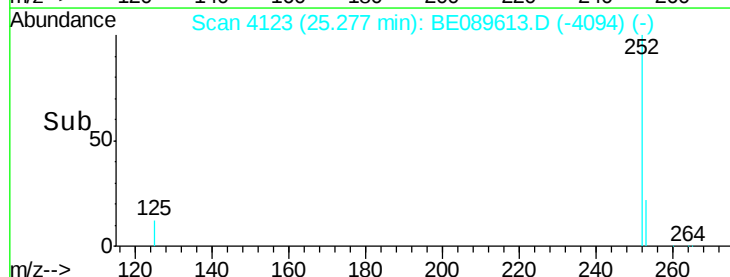
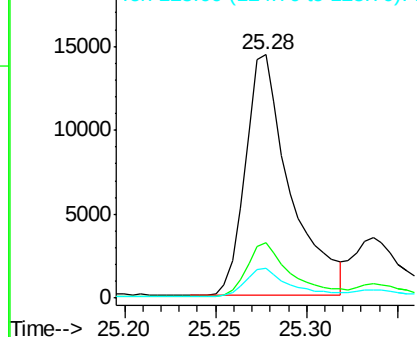
252 100

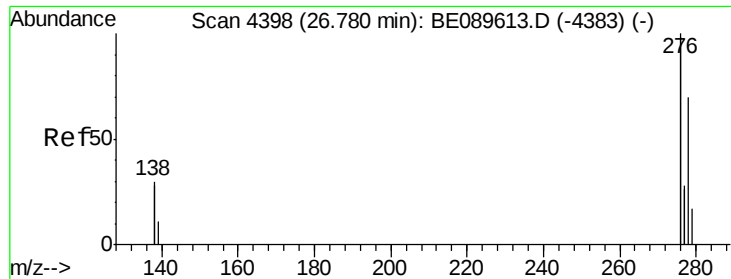
253 22.6 18.1 27.1

125 12.0 9.6 14.4



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





#29

Dibenzo(a,h)anthracene

Concen: 0.79 ng

RT: 26.78 min Scan# 4398

Delta R.T. 0.00 min

Lab File: BE089613.D

Acq: 18 Feb 2015 3:30

Instrument :

BNA_E

LabSampleId :

SSTDIC001

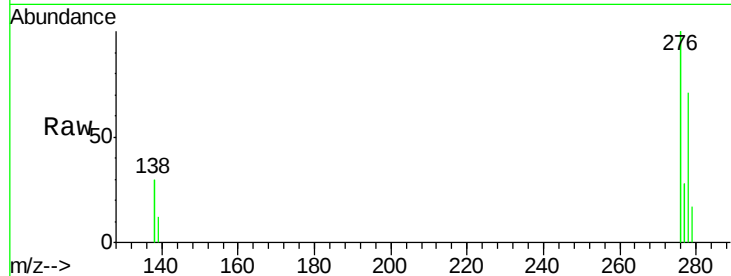
Tgt Ion:278 Resp: 24162

Ion Ratio Lower Upper

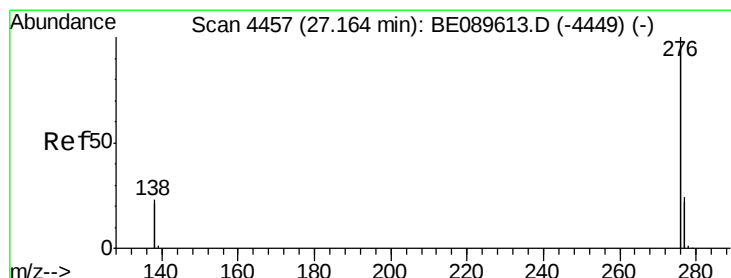
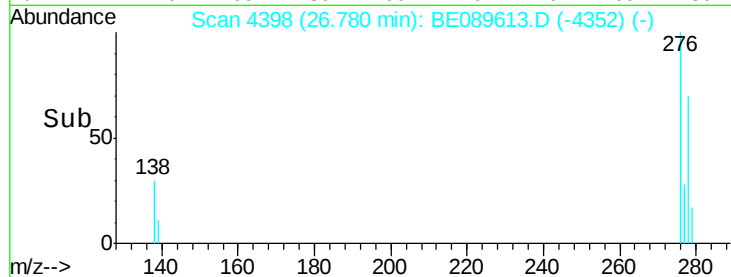
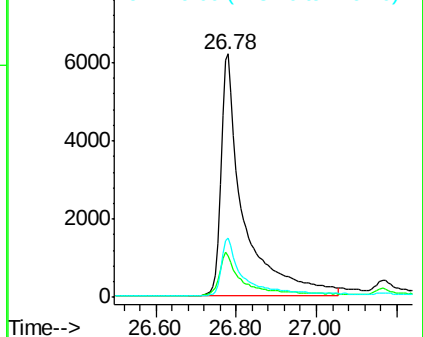
278 100

139 17.1 13.7 20.5

279 24.6 19.7 29.5



Abundance Ion 278.00 (277.70 to 278.70): E
Ion 139.00 (138.70 to 139.70): E
Ion 279.00 (278.70 to 279.70): E



#30

Benzo(g,h,i)perylene

Concen: 0.78 ng

RT: 27.16 min Scan# 4457

Delta R.T. 0.00 min

Lab File: BE089613.D

Acq: 18 Feb 2015 3:30

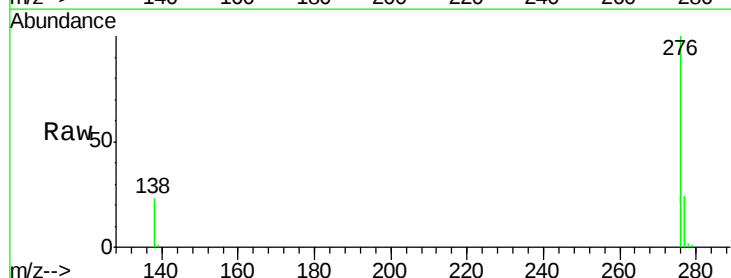
Tgt Ion:276 Resp: 116668

Ion Ratio Lower Upper

276 100

277 23.9 19.1 28.7

138 23.4 18.7 28.1



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

