Quantitation Report (Not Reviewed)

Data Path : Z:\svoasrv\HPCHEM1\BNA_N\Data\BN111021\
Data File : BN017383.D
Acq On : 10 Nov 2021 15:31
Operator : CG/JU
Sample : SSTDCCC0.4
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Quant Time: Nov 10 16:13:31 2021
Quant Method : Z:\SVOASRV\HPCHEM1\BNA_N\METHODS\8270-SIM-BN110921.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
QLast Update : Wed Nov 10 11:00:44 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	7.552	152	27885	0.400	ng		0.00
7) Naphthalene-d8	10.319	136	127251	0.400	ng		0.01
13) Acenaphthene-d10	14.181	164	66358	0.400	ng		0.00
19) Phenanthrene-d10	16.934	188	120304	0.400	ng		0.00
29) Chrysene-d12	21.144	240	110142	0.400	ng		0.01
35) Perylene-d12	23.339	264	95172	0.400	ng		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	5.163	112	26338	0.410	ng		0.00
5) Phenol-d6	6.740	99	29150	0.412	ng		0.00
8) Nitrobenzene-d5	8.684	82	36086	0.473	ng		0.00
11) 2-Methylnaphthalene-d10	11.911	152	75585	0.403	ng		0.00
14) 2,4,6-Tribromophenol	15.678	330	8234	0.332	ng		0.00
15) 2-Fluorobiphenyl	12.798	172	109174	0.433	ng		0.00
27) Fluoranthene-d10	18.975	212	124082	0.405	ng		0.00
31) Terphenyl-d14	19.591	244	106045	0.432	ng		0.00
Target Compounds							Qvalue
2) 1,4-Dioxane	3.144	88	6335	0.406	ng		90
3) n-Nitrosodimethylamine	3.476	42	12177	0.508	ng	#	99
6) bis(2-Chloroethyl)ether	6.989	93	32369	0.434	ng		99
9) Naphthalene	10.357	128	138149	0.412	ng		100
10) Hexachlorobutadiene	10.649	225	27066	0.412	ng	#	99
12) 2-Methylnaphthalene	11.986	142	90254	0.409	ng		100
16) Acenaphthylene	13.902	152	114693	0.424	ng		100
17) Acenaphthene	14.245	154	77491	0.416	ng		99
18) Fluorene	15.234	166	92065	0.414	ng		100
20) 4,6-Dinitro-2-methylph...	15.336	198	1420	0.280	ng	#	84
21) 4-Bromophenyl-phenylether	16.131	248	28665	0.425	ng		100
22) Hexachlorobenzene	16.240	284	32929	0.436	ng		100
23) Atrazine	16.423	200	17514	0.385	ng		99
24) Pentachlorophenol	16.593	266	7301	0.415	ng		99
25) Phenanthrene	16.970	178	146322	0.424	ng		100
26) Anthracene	17.068	178	117941	0.411	ng		100
28) Fluoranthene	19.005	202	157667	0.424	ng		100
30) Pyrene	19.367	202	155158	0.436	ng		100
32) Benzo(a)anthracene	21.123	228	136960	0.410	ng		100
33) Chrysene	21.176	228	147862	0.416	ng		99
34) Bis(2-ethylhexyl)phtha...	21.080	149	49153	0.417	ng		100
36) Indeno(1,2,3-cd)pyrene	25.546	276	113862	0.342	ng		100
37) Benzo(b)fluoranthene	22.678	252	132451	0.426	ng		99
38) Benzo(k)fluoranthene	22.719	252	139255	0.447	ng		99
39) Benzo(a)pyrene	23.239	252	112197	0.407	ng		99
40) Dibenzo(a,h)anthracene	25.564	278	89124	0.333	ng		100
41) Benzo(g,h,i)perylene	26.221	276	95910	0.332	ng		99

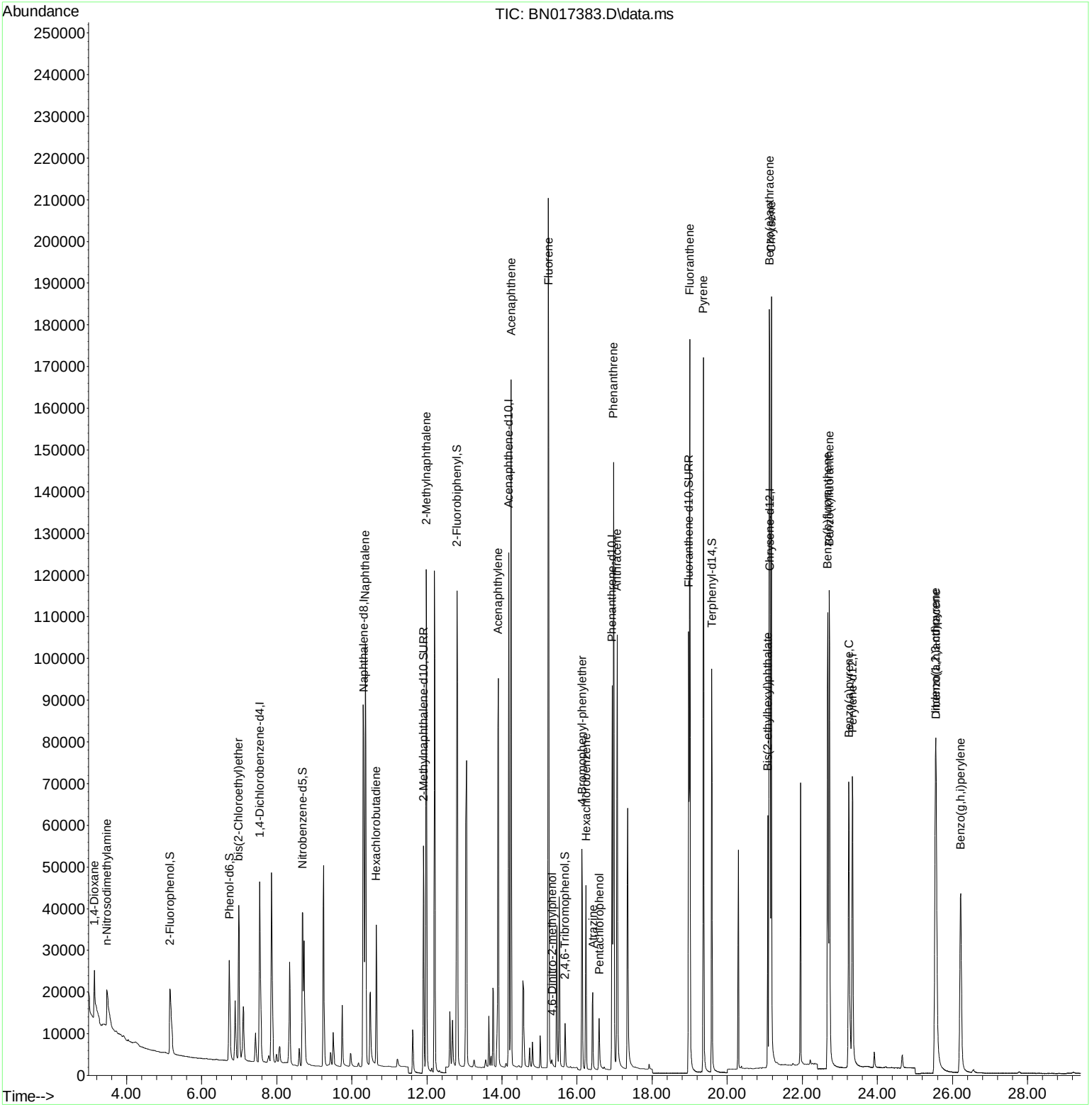
(#) = qualifier out of range (m) = manual integration (+) = signals summed

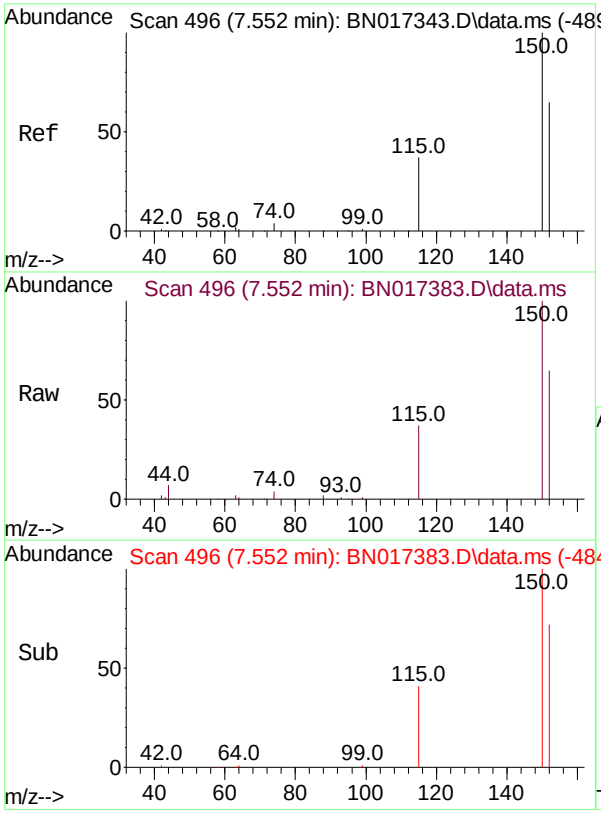
Quantitation Report (Not Reviewed)

Data Path : Z:\svoasrv\HPCHEM1\BNA_N\Data\BN111021\
Data File : BN017383.D
Acq On : 10 Nov 2021 15:31
Operator : CG/JU
Sample : SSTDCCC0.4
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Quant Time: Nov 10 16:13:31 2021
Quant Method : Z:\SVOASRV\HPCHEM1\BNA_N\METHODS\8270-SIM-BN110921.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
QLast Update : Wed Nov 10 11:00:44 2021
Response via : Initial Calibration



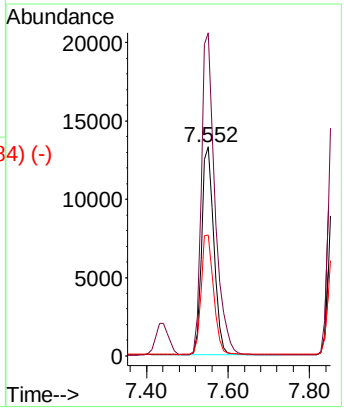


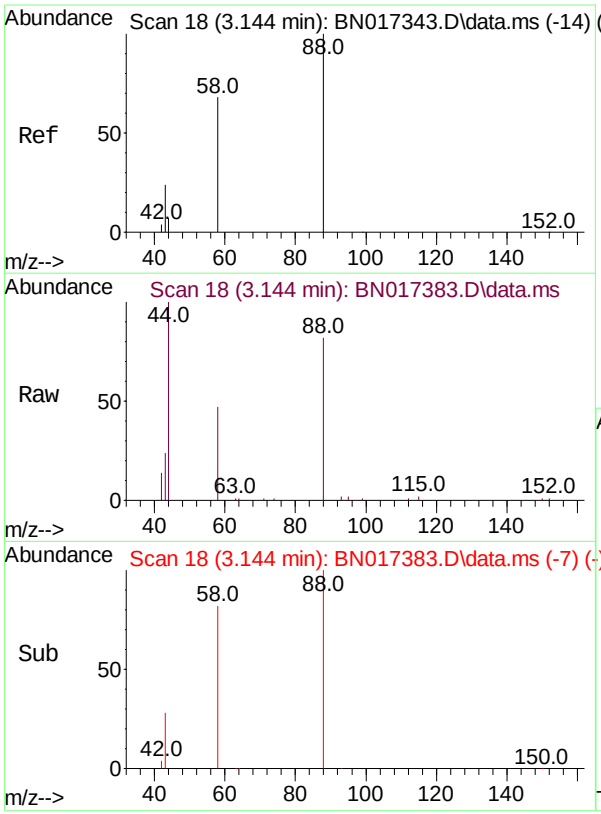
#1
1,4-Dichlorobenzene-d4
Concen: 0.400 ng
RT: 7.552 min Scan# 4
Delta R.T. 0.010 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Tgt Ion:152 Resp: 27885

Ion	Ratio	Lower	Upper
152	100		
150	154.4	123.0	184.4
115	57.6	45.6	68.4

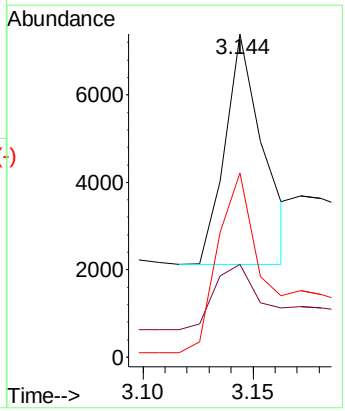


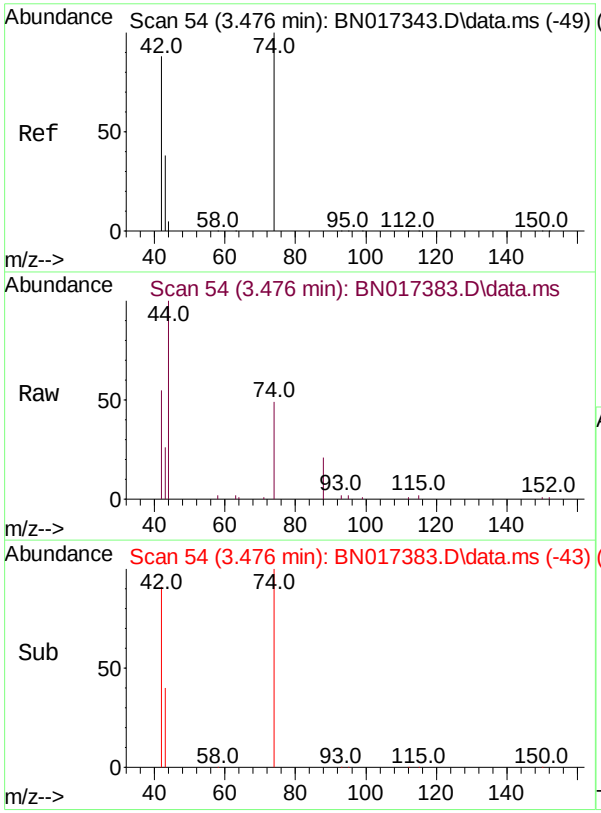


#2
1,4-Dioxane
Concen: 0.406 ng
RT: 3.144 min Scan# 18
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Tgt Ion: 88 Resp: 6335

Ion	Ratio	Lower	Upper
88	100		
43	34.7	24.7	37.1
58	89.0	63.0	94.6



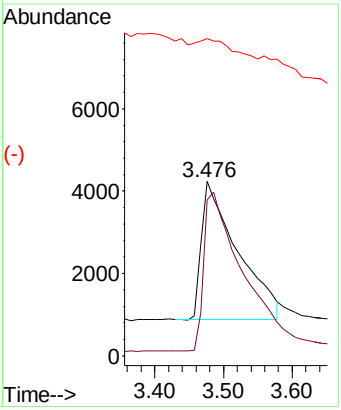


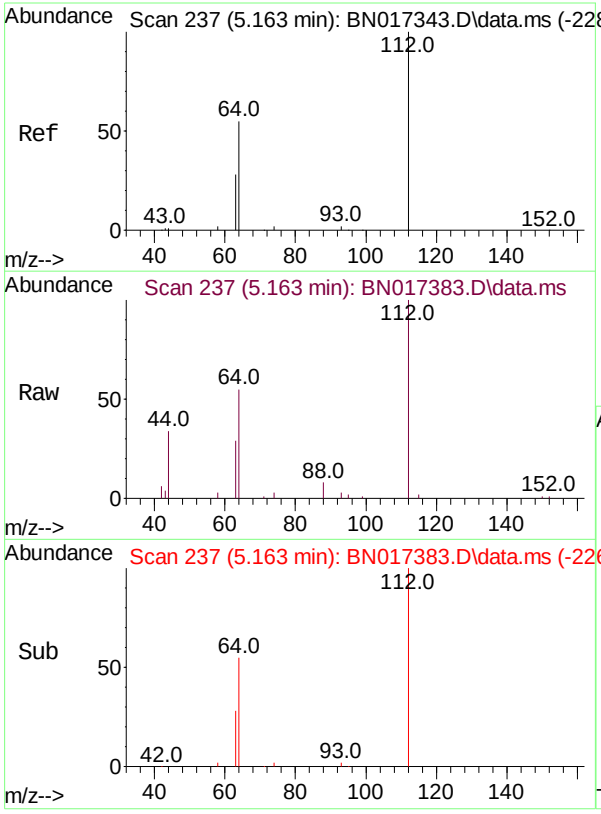
#3
n-Nitrosodimethylamine
Concen: 0.508 ng
RT: 3.476 min Scan# 5
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Tgt Ion: 42 Resp: 12177

Ion	Ratio	Lower	Upper
42	100		
74	121.9	97.8	146.6
44	0.0	5.5	8.3#

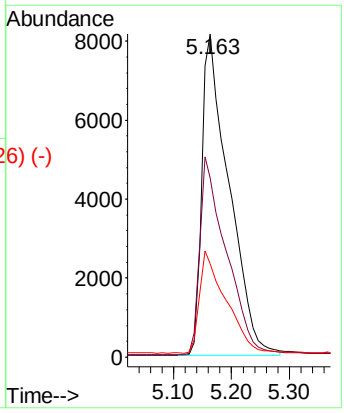


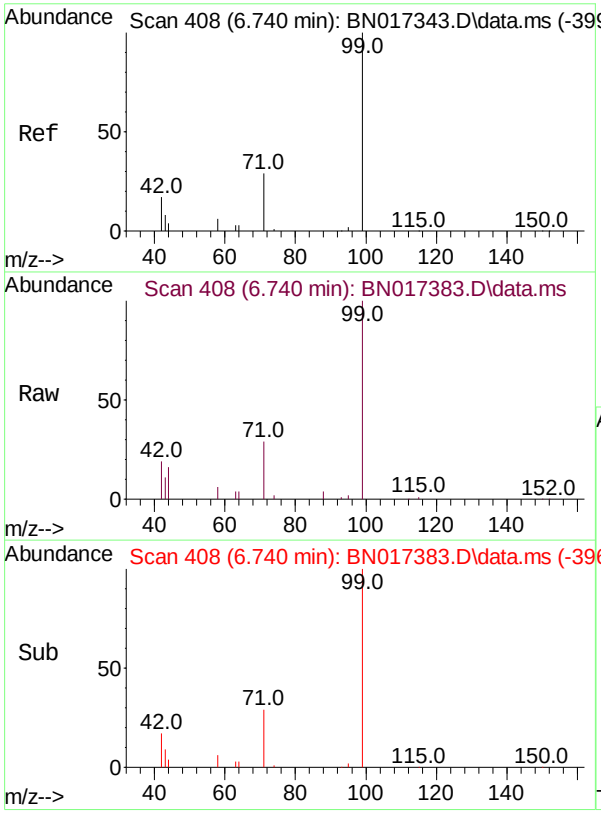


#4
2-Fluorophenol
Concen: 0.410 ng
RT: 5.163 min Scan# 237
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Tgt Ion:112 Resp: 26338

Ion	Ratio	Lower	Upper
112	100		
64	60.0	47.6	71.4
63	30.8	24.6	37.0



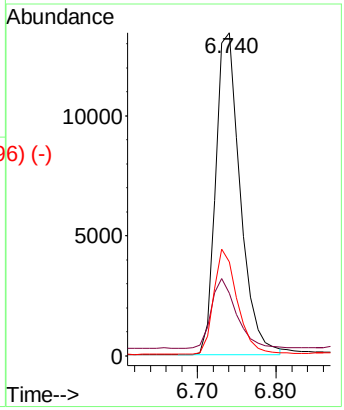


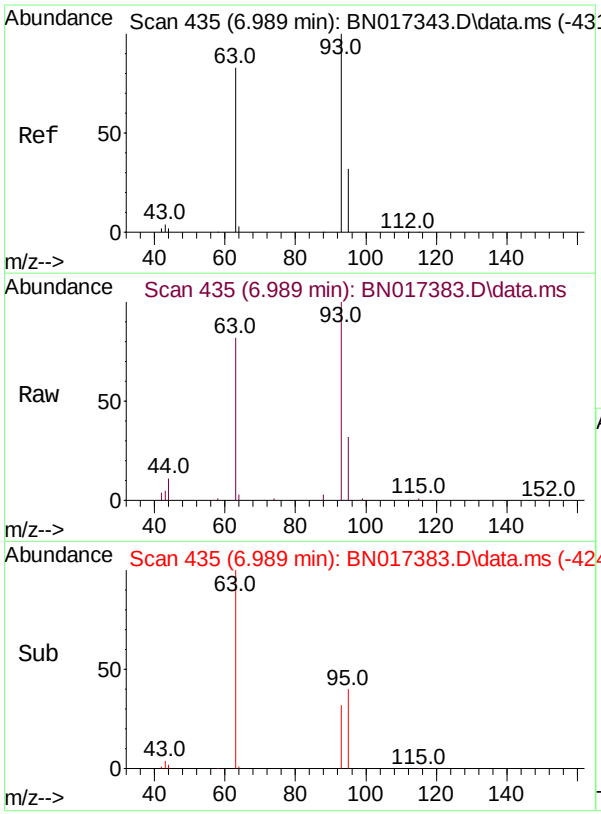
#5
Phenol-d6
Concen: 0.412 ng
RT: 6.740 min Scan# 4
Delta R.T. 0.009 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Tgt Ion: 99 Resp: 29150

Ion	Ratio	Lower	Upper
99	100		
42	22.0	17.0	25.6
71	31.5	24.8	37.2

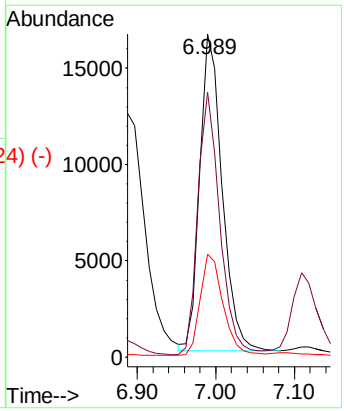


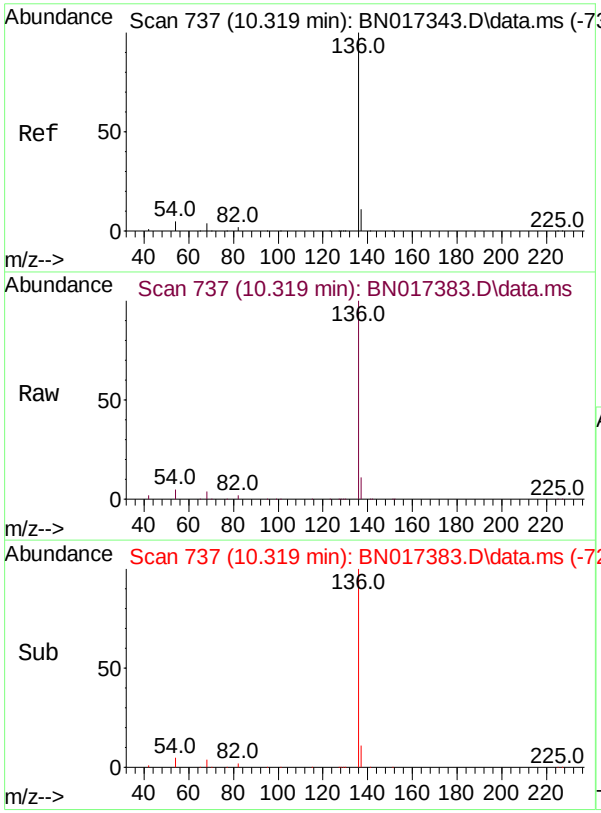


#6
bis(2-Chloroethyl)ether
Concen: 0.434 ng
RT: 6.989 min Scan# 435
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Tgt Ion: 93 Resp: 32369

Ion	Ratio	Lower	Upper
93	100		
63	81.3	65.8	98.6
95	32.6	26.6	39.8



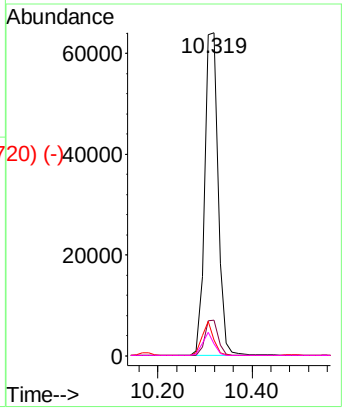


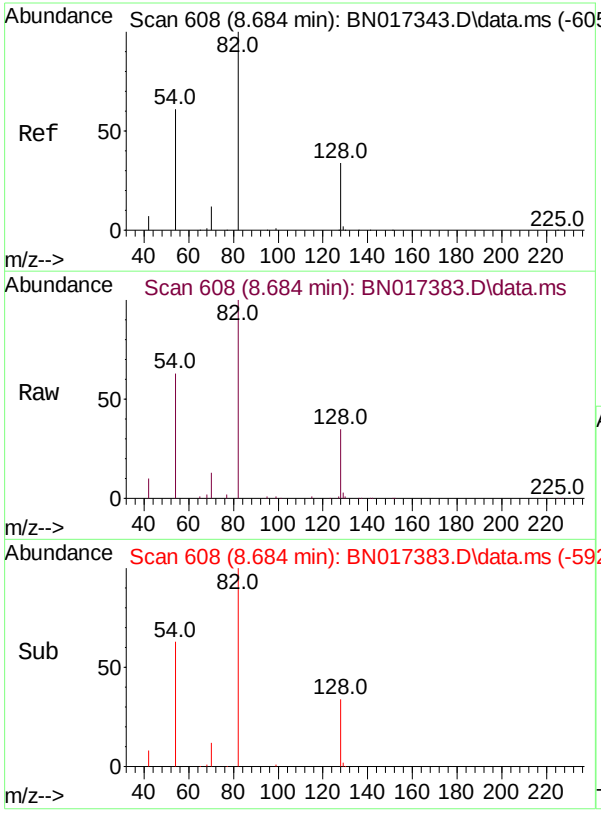
#7
Naphthalene-d8
Concen: 0.400 ng
RT: 10.319 min Scan# 737
Delta R.T. 0.013 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Tgt Ion:136 Resp: 127251

Ion	Ratio	Lower	Upper
136	100		
137	11.0	8.8	13.2
54	5.0	4.0	6.0
68	3.8	3.0	4.6

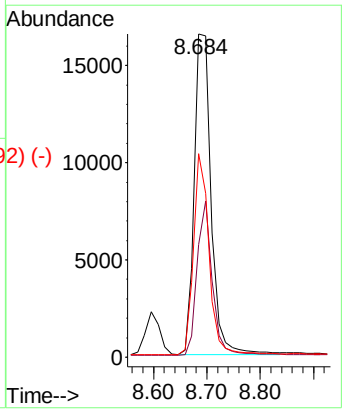


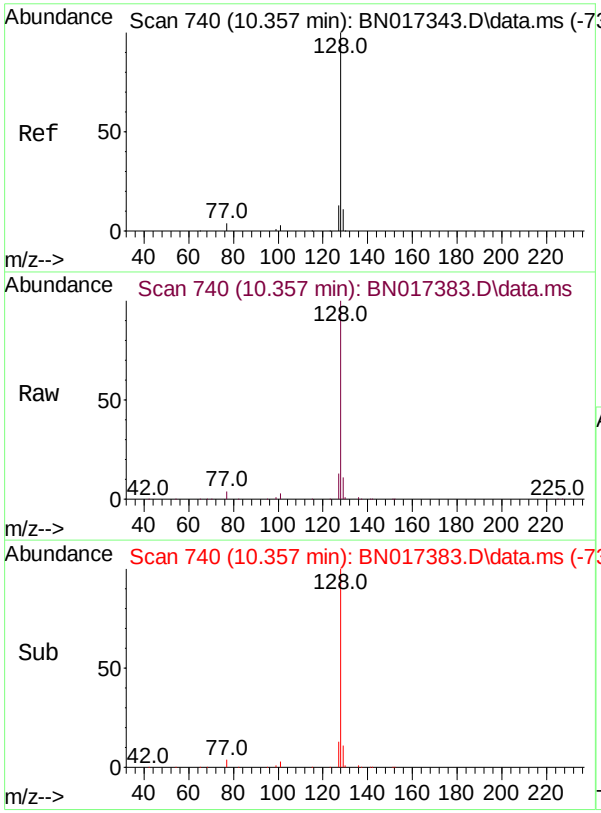


#8
Nitrobenzene-d5
Concen: 0.473 ng
RT: 8.684 min Scan# 608
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Tgt Ion: 82 Resp: 36086

Ion	Ratio	Lower	Upper
82	100		
128	34.8	27.7	41.5
54	63.0	49.2	73.8



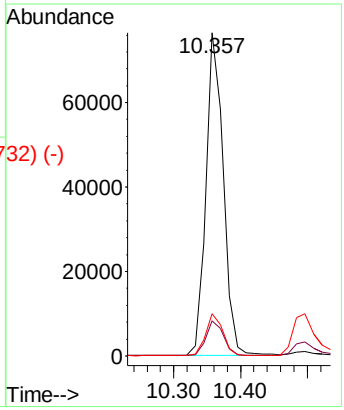


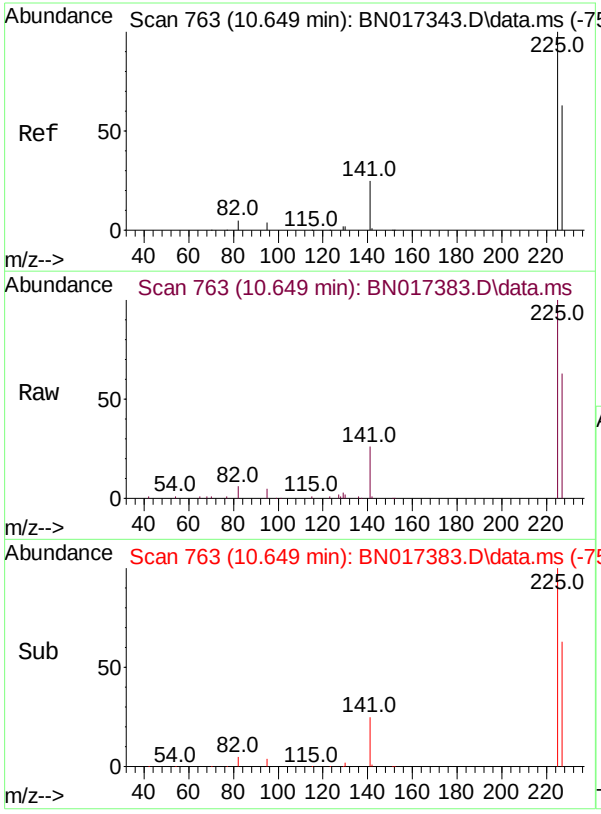
#9
Naphthalene
Concen: 0.412 ng
RT: 10.357 min Scan# 7
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Tgt Ion:128 Resp: 138149

Ion	Ratio	Lower	Upper
128	100		
129	10.9	8.8	13.2
127	13.1	10.6	15.8

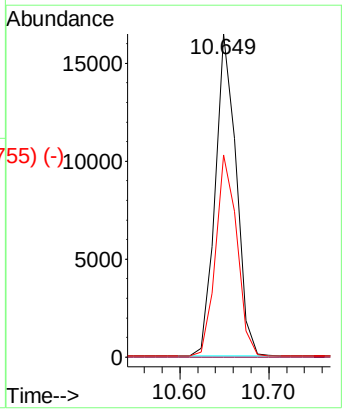


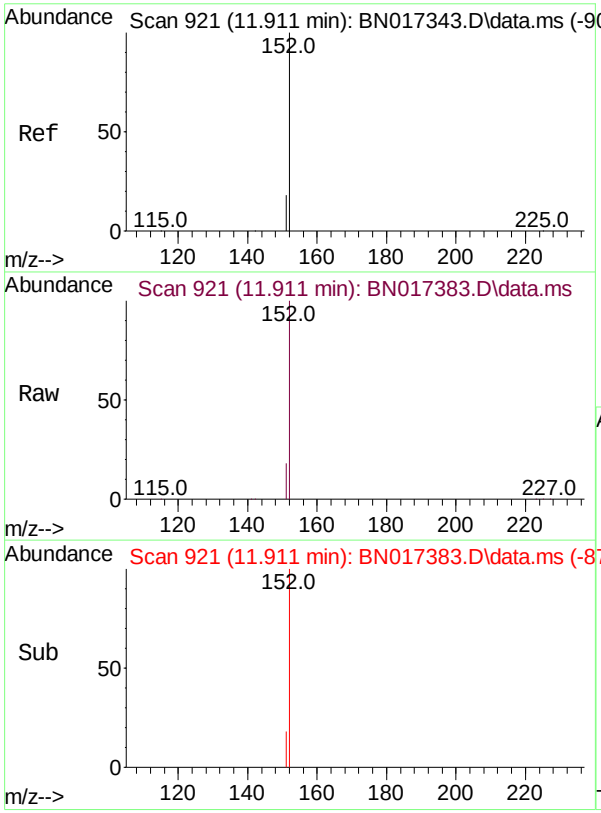


#10
Hexachlorobutadiene
Concen: 0.412 ng
RT: 10.649 min Scan# 763
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Tgt Ion:225 Resp: 27066

Ion	Ratio	Lower	Upper
225	100		
223	0.0	0.0	0.0
227	63.4	51.1	76.7



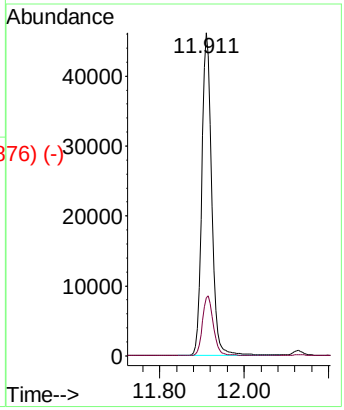


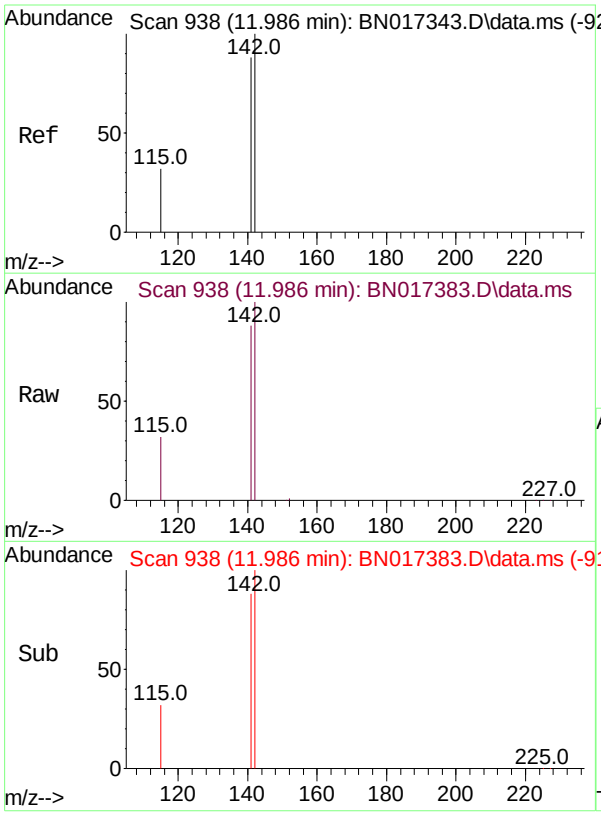
#11
2-Methylnaphthalene-d10
Concen: 0.403 ng
RT: 11.911 min Scan# 9
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Tgt Ion:152 Resp: 75585

Ion	Ratio	Lower	Upper
152	100		
151	20.4	16.2	24.4

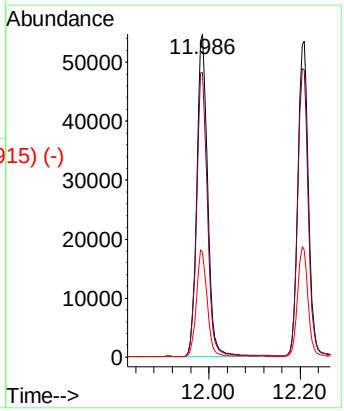


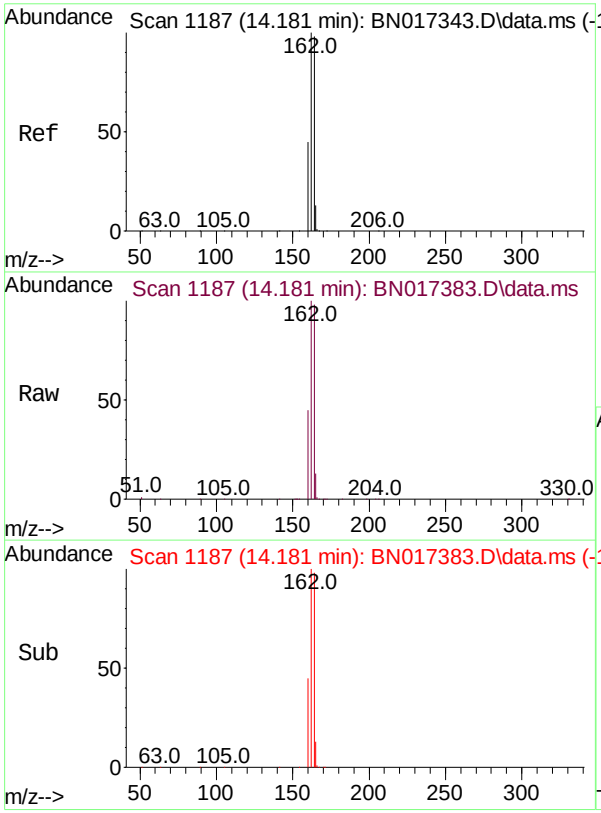


#12
2-Methylnaphthalene
Concen: 0.409 ng
RT: 11.986 min Scan# 938
Delta R.T. 0.004 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Tgt Ion:142 Resp: 90254

Ion	Ratio	Lower	Upper
142	100		
141	88.1	70.6	106.0
115	32.4	25.8	38.6



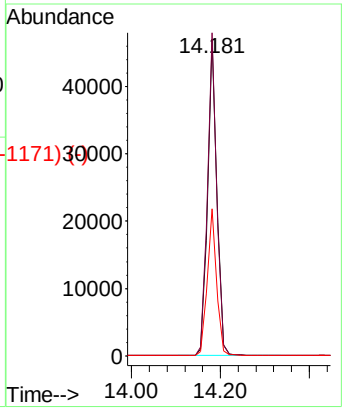


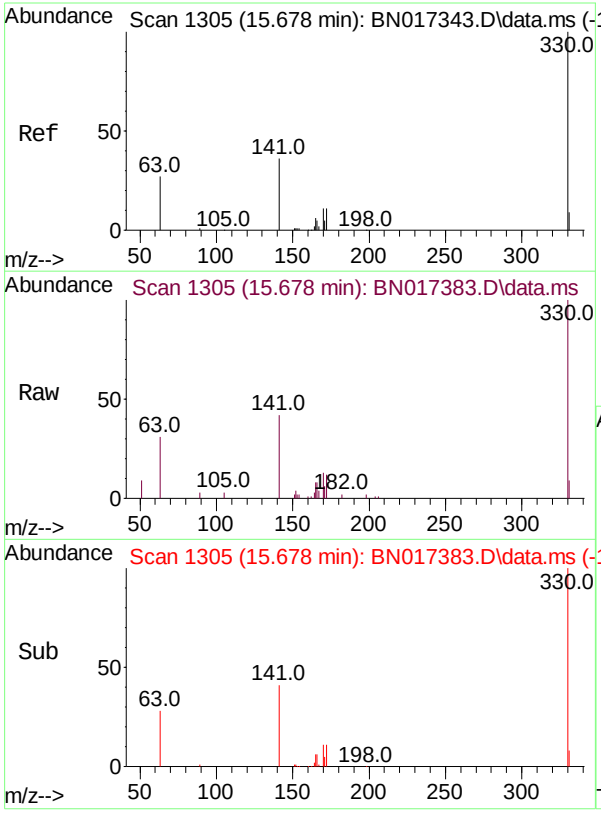
#13
Acenaphthene-d10
Concen: 0.400 ng
RT: 14.181 min Scan# 1
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Tgt Ion:164 Resp: 66358

Ion	Ratio	Lower	Upper
164	100		
162	102.0	81.4	122.2
160	46.4	36.8	55.2

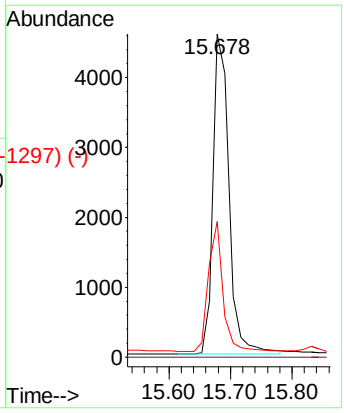


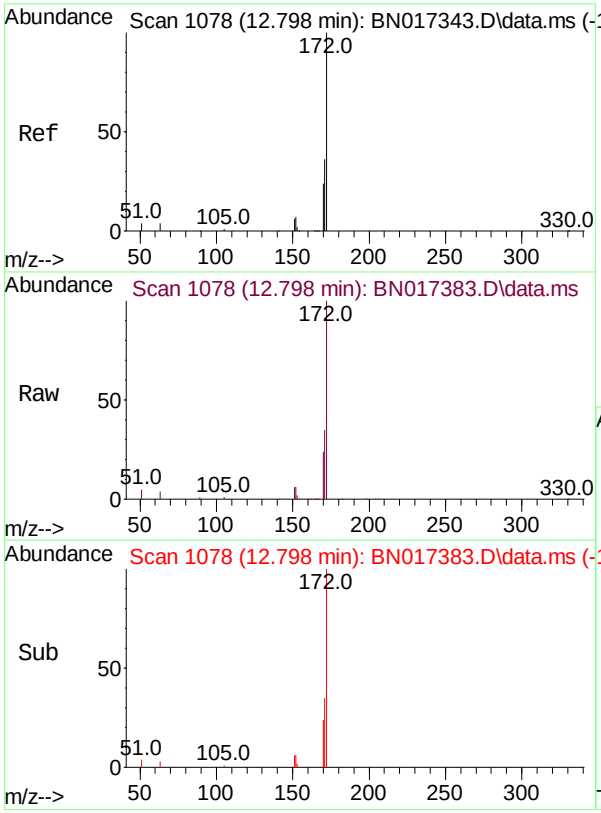


#14
2,4,6-Tribromophenol
Concen: 0.332 ng
RT: 15.678 min Scan# 1305
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Tgt Ion:330 Resp: 8234

Ion	Ratio	Lower	Upper
330	100		
332	0.0	0.0	0.0
141	37.4	28.9	43.3



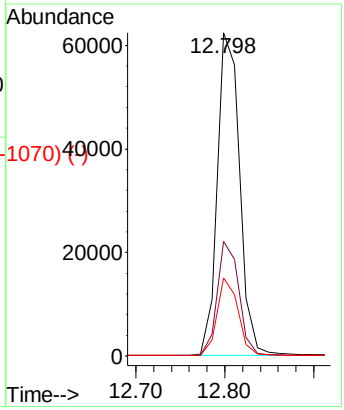


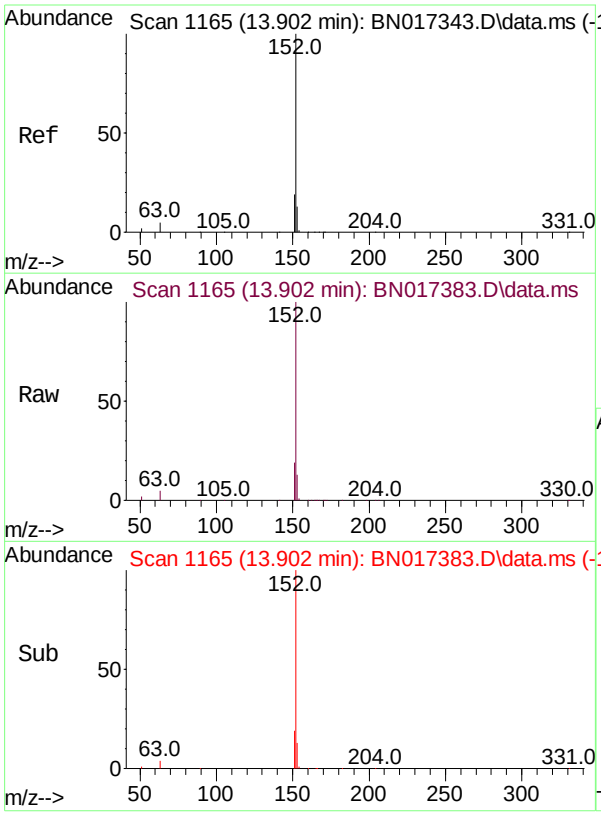
#14
2-Fluorobiphenyl
Concen: 0.433 ng
RT: 12.798 min Scan# 1
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Tgt Ion:172 Resp: 109174

Ion	Ratio	Lower	Upper
172	100		
171	35.4	28.7	43.1
170	24.2	19.4	29.2

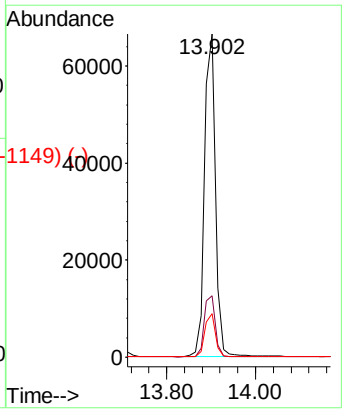


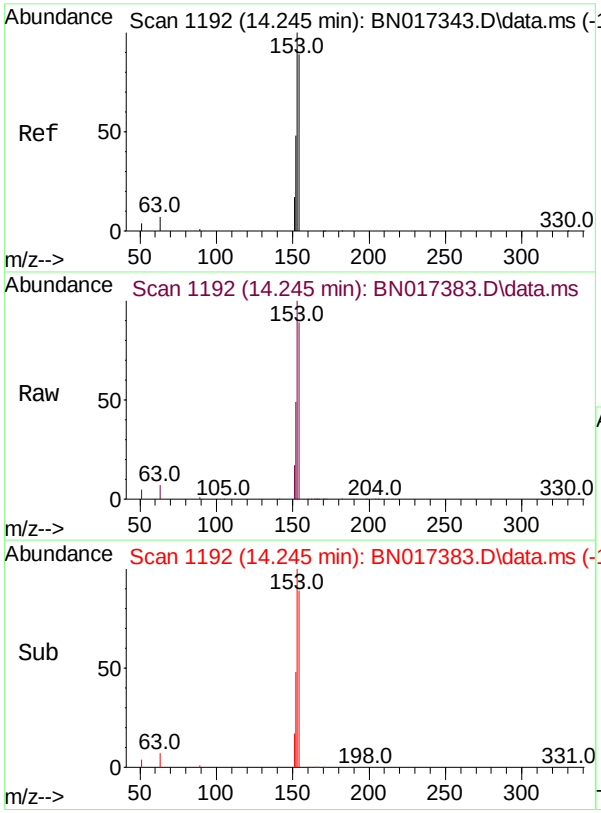


#16
Acenaphthylene
Concen: 0.424 ng
RT: 13.902 min Scan# 1165
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Tgt Ion:152 Resp: 114693

Ion	Ratio	Lower	Upper
152	100		
151	19.4	15.5	23.3
153	13.1	10.4	15.6



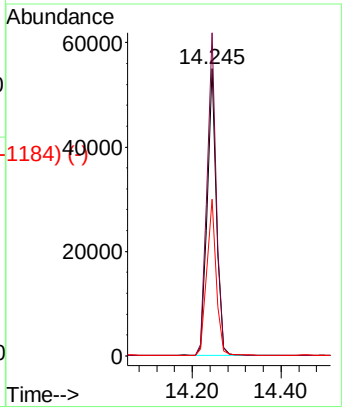


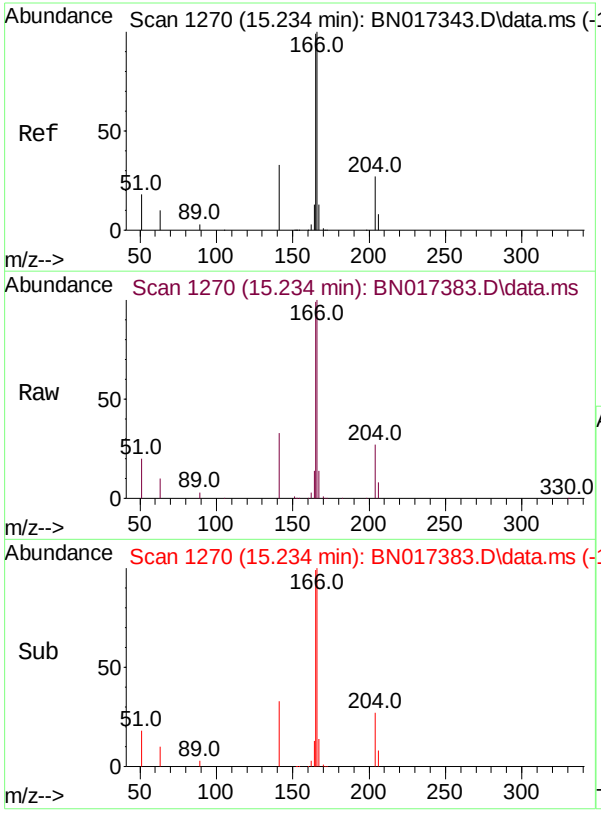
#47
Acenaphthene
Concen: 0.416 ng
RT: 14.245 min Scan# 1
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Tgt Ion:154 Resp: 77491

Ion	Ratio	Lower	Upper
154	100		
153	113.5	91.2	136.8
152	56.1	44.3	66.5

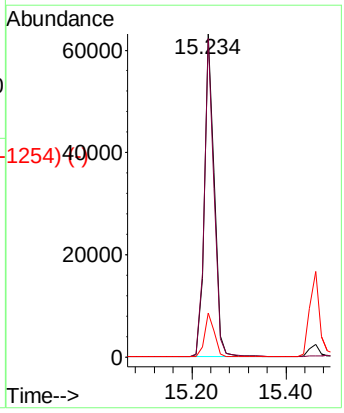


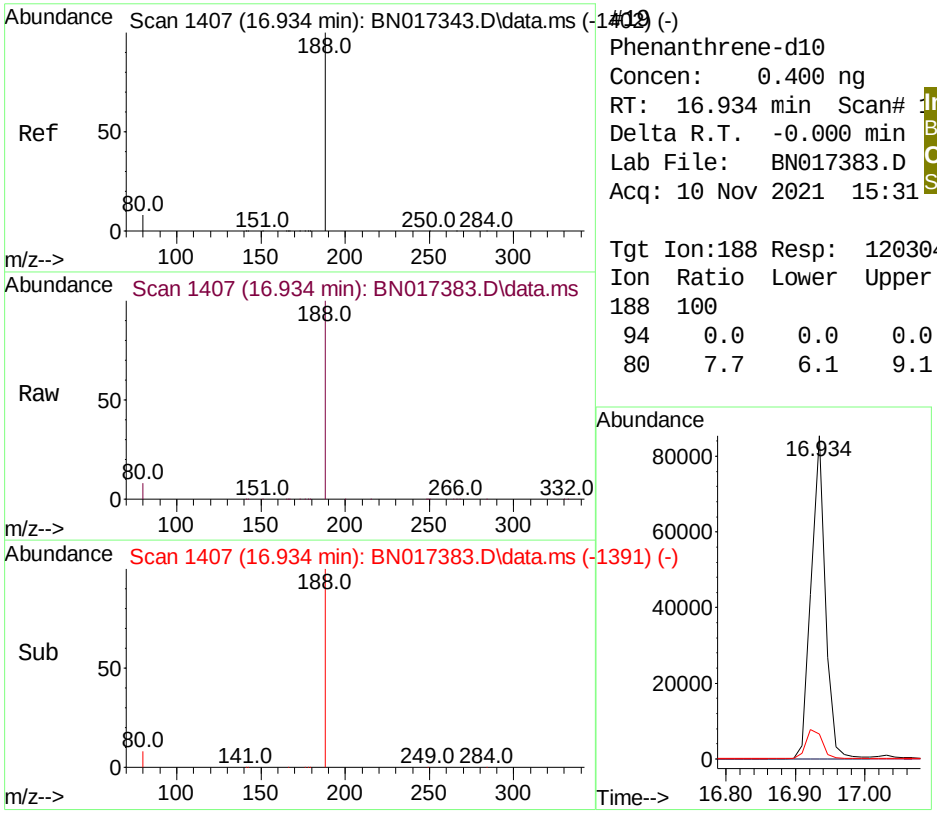


#48
Fluorene
Concen: 0.414 ng
RT: 15.234 min Scan# 1270
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Tgt Ion:166 Resp: 92065

Ion	Ratio	Lower	Upper
166	100		
165	97.4	77.9	116.9
167	13.6	10.9	16.3



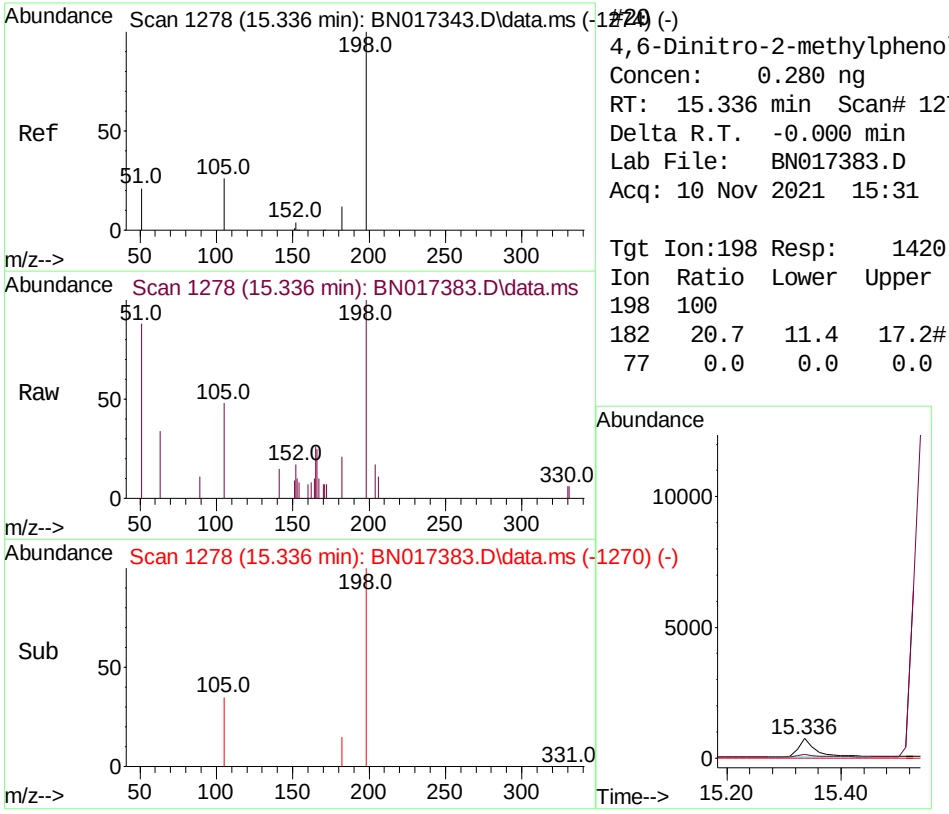


#19
Phenanthrene-d10
Concen: 0.400 ng
RT: 16.934 min Scan# 1
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Tgt Ion:188 Resp: 120304

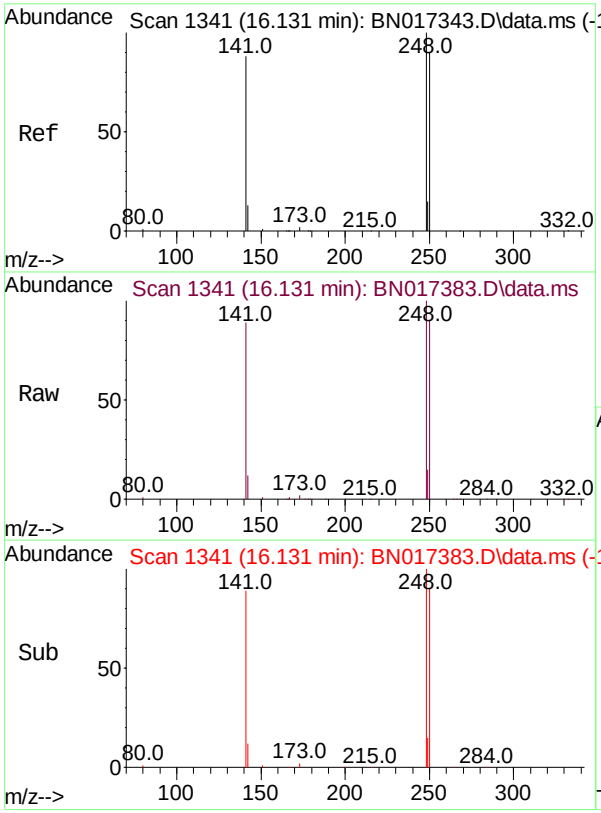
Ion	Ratio	Lower	Upper
188	100		
94	0.0	0.0	0.0
80	7.7	6.1	9.1



#20
4,6-Dinitro-2-methylphenol
Concen: 0.280 ng
RT: 15.336 min Scan# 1278
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Tgt Ion:198 Resp: 1420

Ion	Ratio	Lower	Upper
198	100		
182	20.7	11.4	17.2#
77	0.0	0.0	0.0

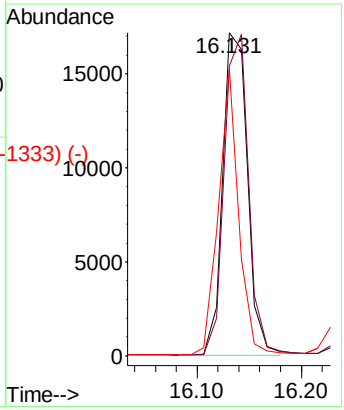


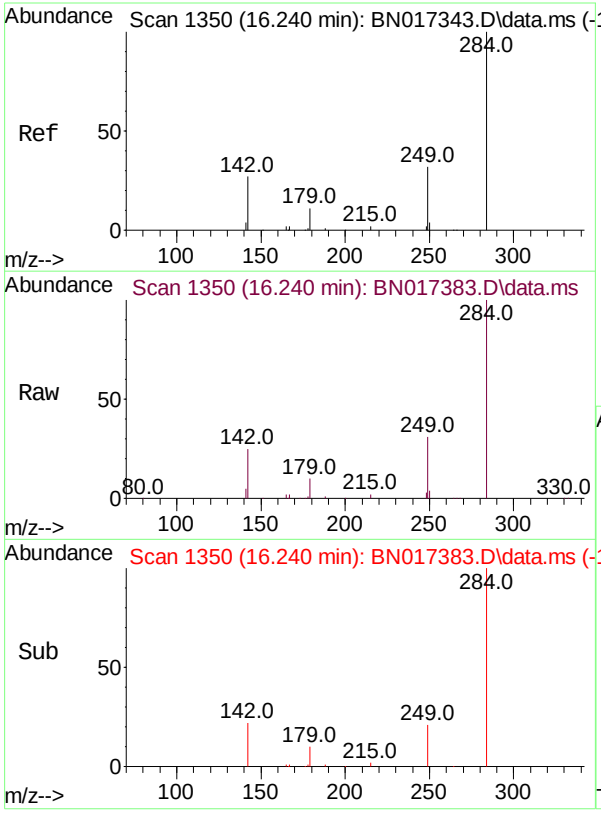
#21
4-Bromophenyl-phenylether
Concen: 0.425 ng
RT: 16.131 min Scan# 1
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Tgt Ion:248 Resp: 28665

Ion	Ratio	Lower	Upper
248	100		
250	89.7	71.8	107.8
141	88.9	70.9	106.3

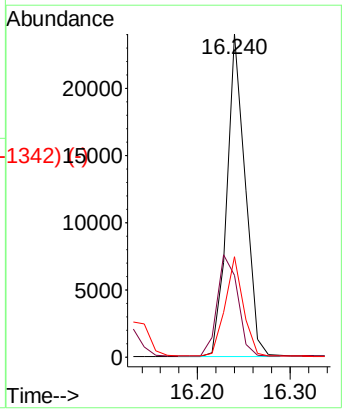


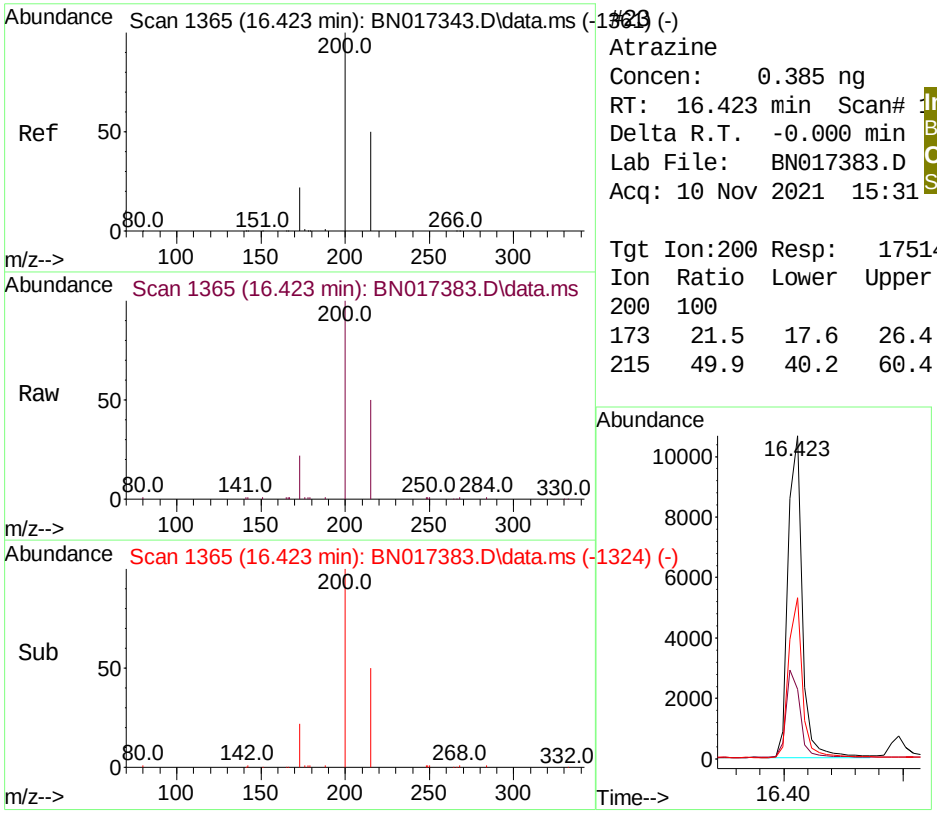


#22
Hexachlorobenzene
Concen: 0.436 ng
RT: 16.240 min Scan# 1350
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Tgt Ion:284 Resp: 32929

Ion	Ratio	Lower	Upper
284	100		
142	35.3	28.2	42.2
249	30.5	24.4	36.6



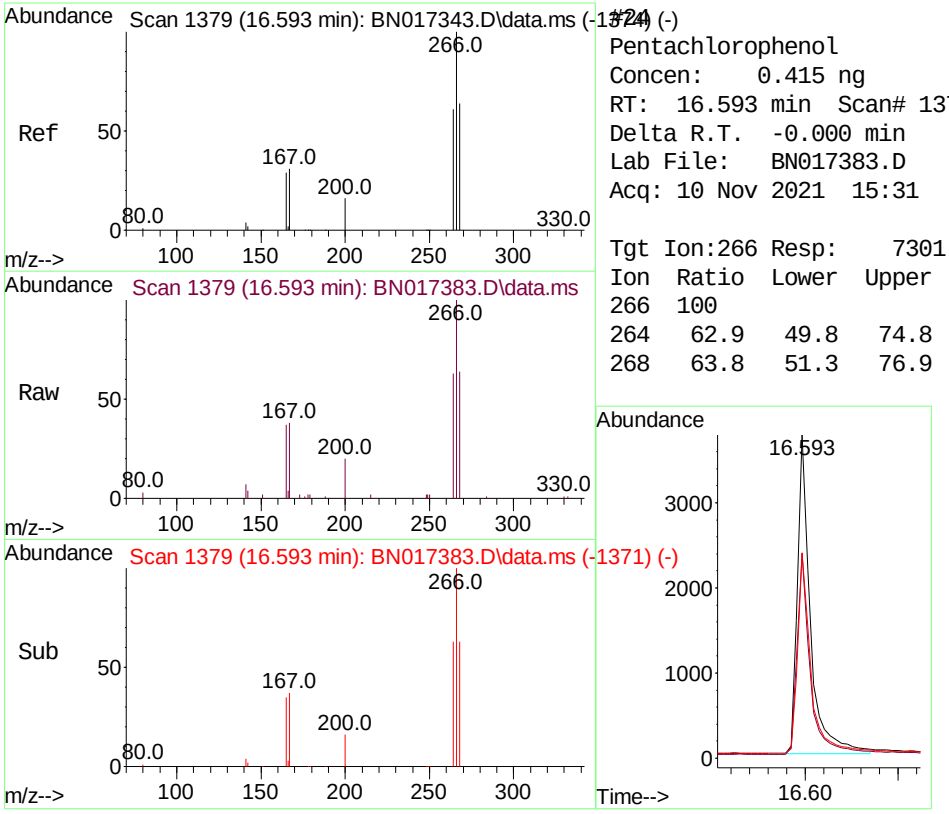


#20
Atrazine
Concen: 0.385 ng
RT: 16.423 min Scan# 1
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Tgt Ion:200 Resp: 17514

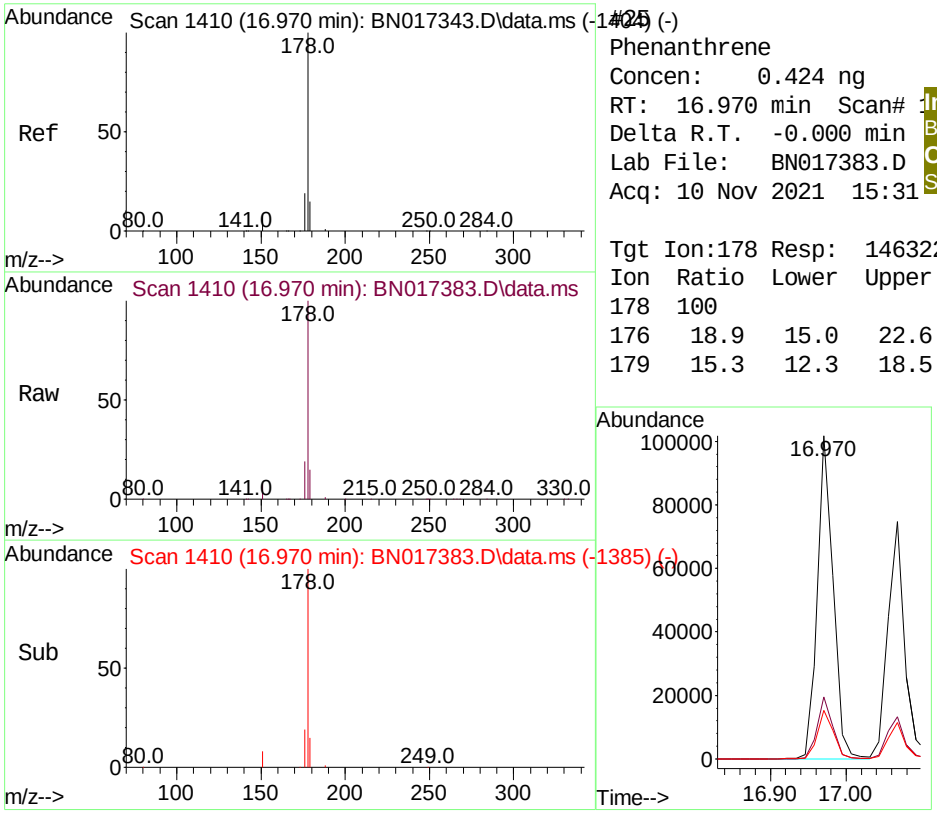
Ion	Ratio	Lower	Upper
200	100		
173	21.5	17.6	26.4
215	49.9	40.2	60.4



#24
Pentachlorophenol
Concen: 0.415 ng
RT: 16.593 min Scan# 1379
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Tgt Ion:266 Resp: 7301

Ion	Ratio	Lower	Upper
266	100		
264	62.9	49.8	74.8
268	63.8	51.3	76.9

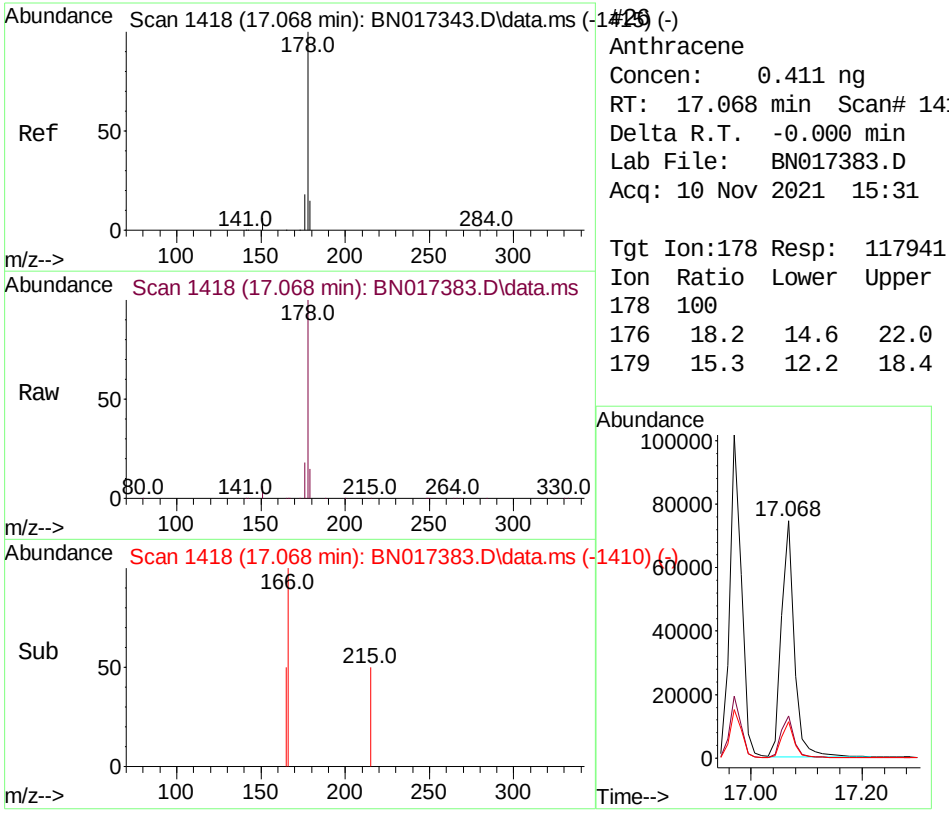


#25
Phenanthrene
Concen: 0.424 ng
RT: 16.970 min Scan# 1
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Tgt Ion:178 Resp: 146322

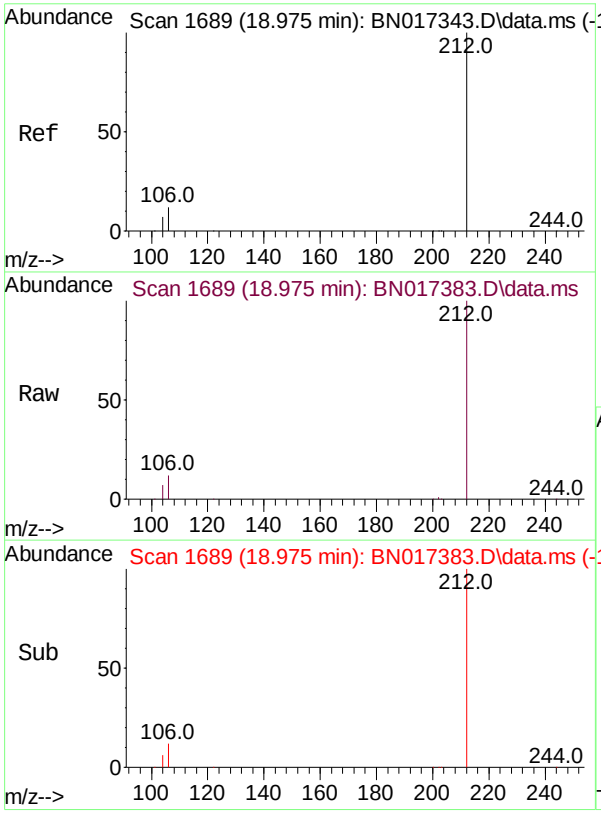
Ion	Ratio	Lower	Upper
178	100		
176	18.9	15.0	22.6
179	15.3	12.3	18.5



#26
Anthracene
Concen: 0.411 ng
RT: 17.068 min Scan# 1418
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Tgt Ion:178 Resp: 117941

Ion	Ratio	Lower	Upper
178	100		
176	18.2	14.6	22.0
179	15.3	12.2	18.4

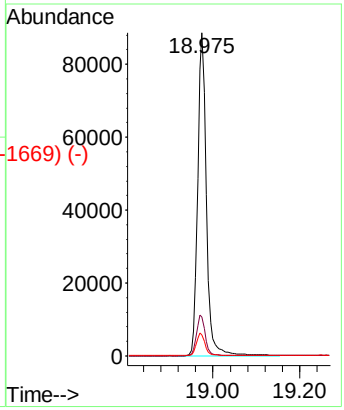


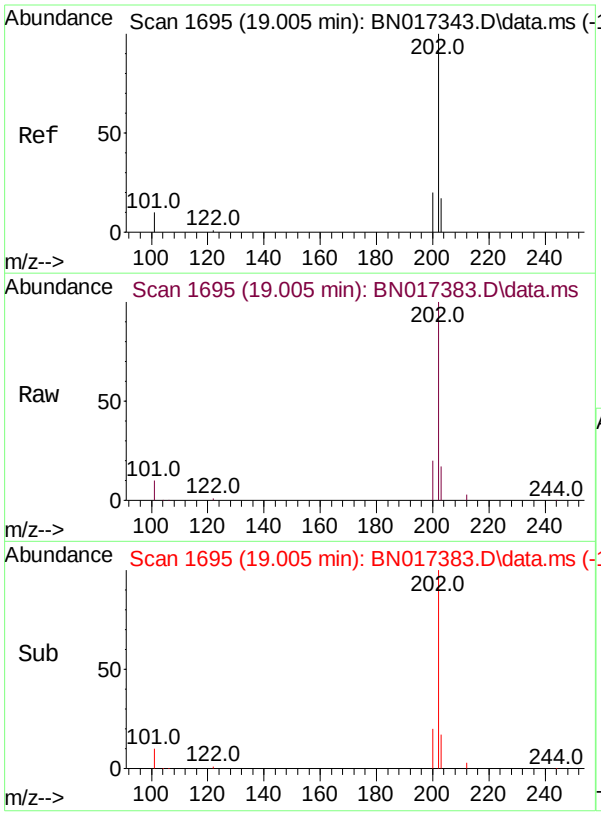
#27
Fluoranthene-d10
Concen: 0.405 ng
RT: 18.975 min Scan# 1
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Tgt Ion:212 Resp: 124082

Ion	Ratio	Lower	Upper
212	100		
106	12.8	10.5	15.7
104	7.0	5.8	8.6

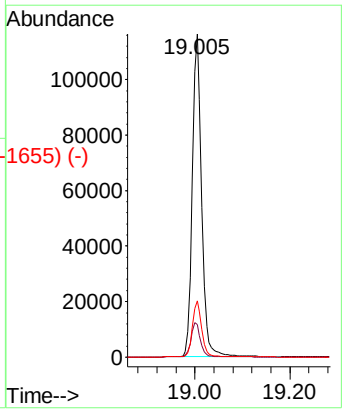


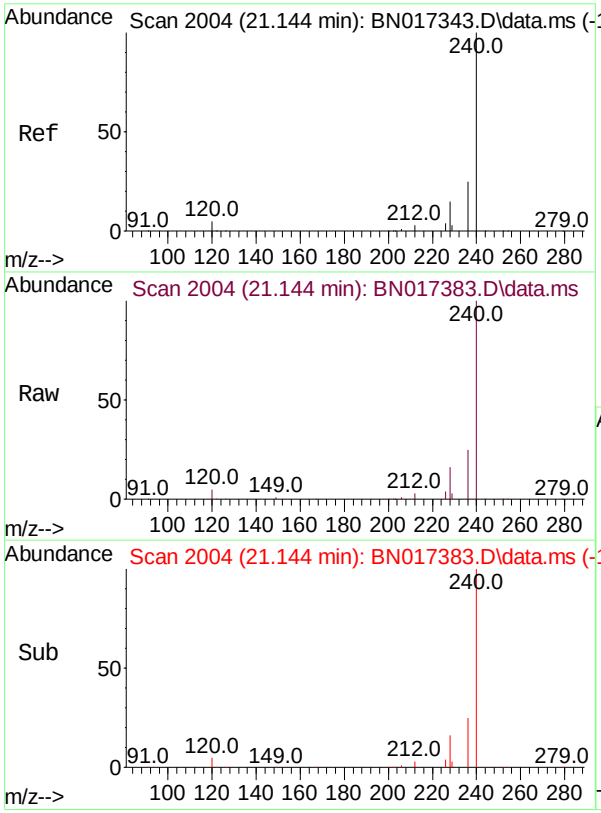


#28
Fluoranthene
Concen: 0.424 ng
RT: 19.005 min Scan# 1695
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Tgt Ion:202 Resp: 157667

Ion	Ratio	Lower	Upper
202	100		
101	11.0	8.9	13.3
203	17.3	13.8	20.6



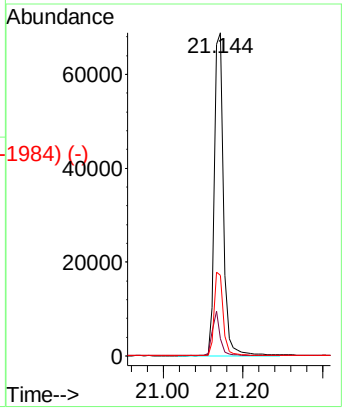


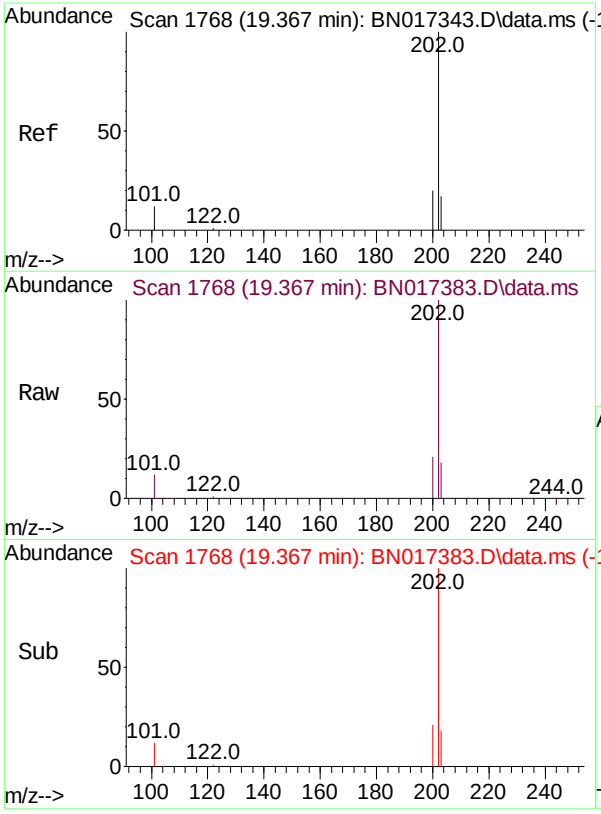
#29
Chrysene-d12
Concen: 0.400 ng
RT: 21.144 min Scan# 1
Delta R.T. 0.011 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Tgt Ion:240 Resp: 110142

Ion	Ratio	Lower	Upper
240	100		
120	5.3	4.2	6.2
236	25.0	20.0	30.0

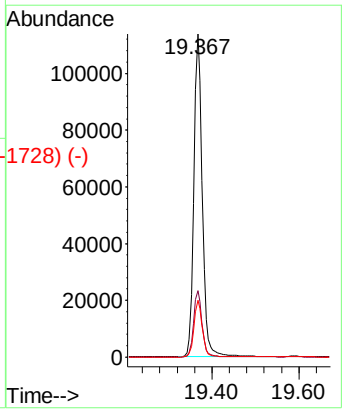


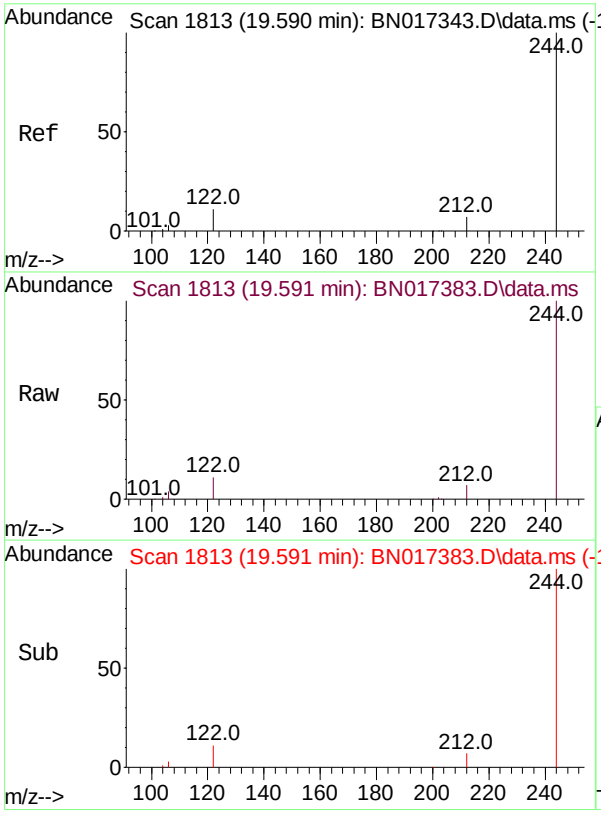


#30
Pyrene
Concen: 0.436 ng
RT: 19.367 min Scan# 1768
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Tgt Ion:202 Resp: 155158

Ion	Ratio	Lower	Upper
202	100		
200	20.6	16.5	24.7
203	17.5	14.0	21.0



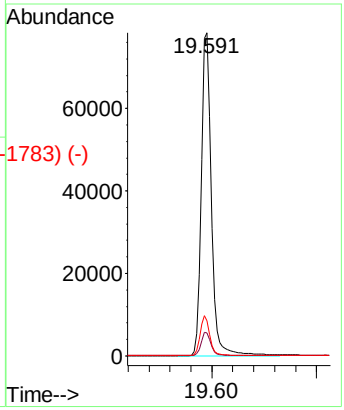


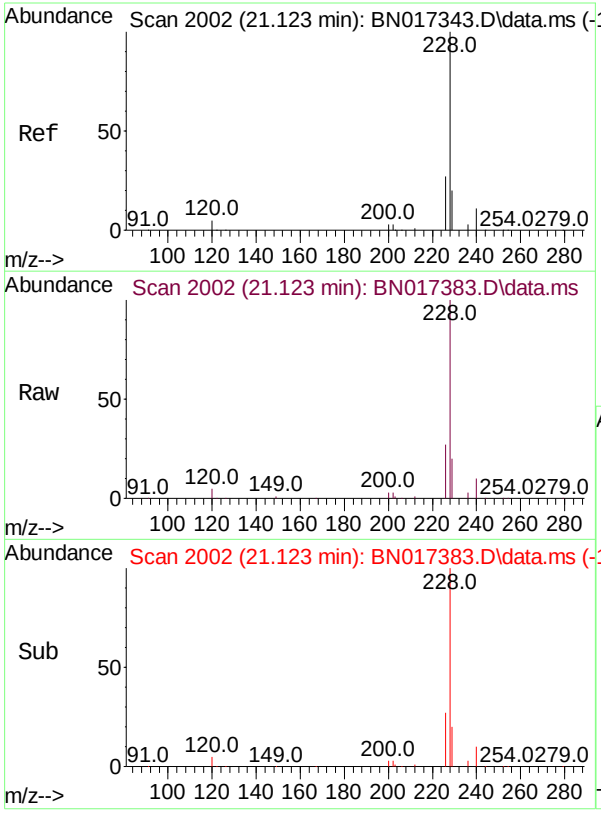
#31
Terphenyl-d14
Concen: 0.432 ng
RT: 19.591 min Scan# 1
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Tgt Ion:244 Resp: 106045

Ion	Ratio	Lower	Upper
244	100		
212	7.1	5.7	8.5
122	10.8	8.6	13.0

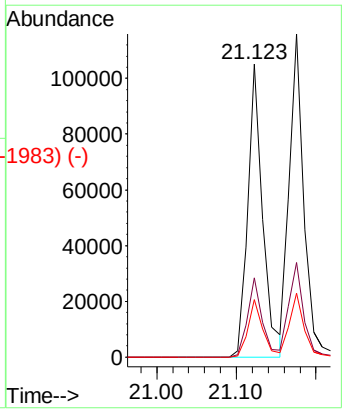


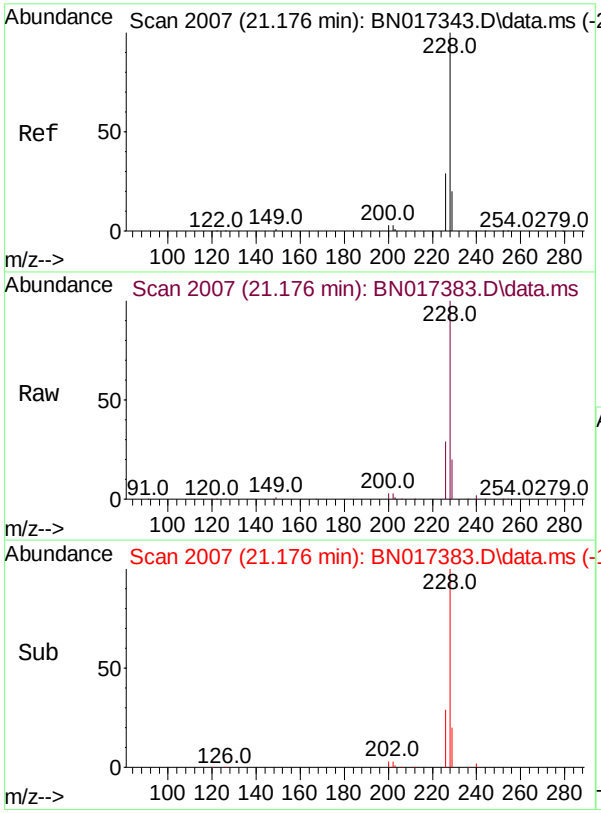


#32
Benzo(a)anthracene
Concen: 0.410 ng
RT: 21.123 min Scan# 2002
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Tgt Ion:228 Resp: 136960

Ion	Ratio	Lower	Upper
228	100		
226	27.0	21.3	31.9
229	19.6	15.7	23.5



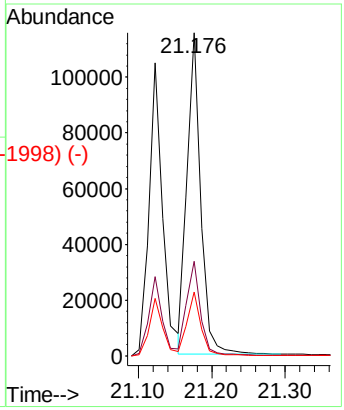


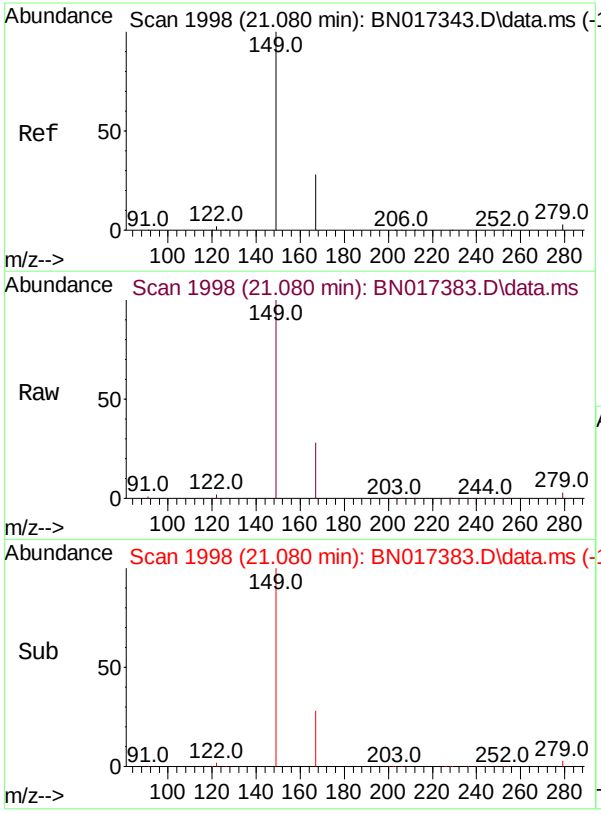
#33
Chrysene
Concen: 0.416 ng
RT: 21.176 min Scan# 1
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Tgt Ion:228 Resp: 147862

Ion	Ratio	Lower	Upper
228	100		
226	29.4	23.3	34.9
229	19.8	15.6	23.4

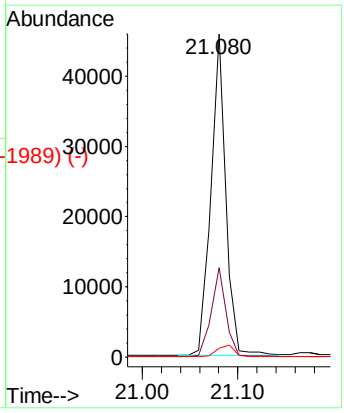


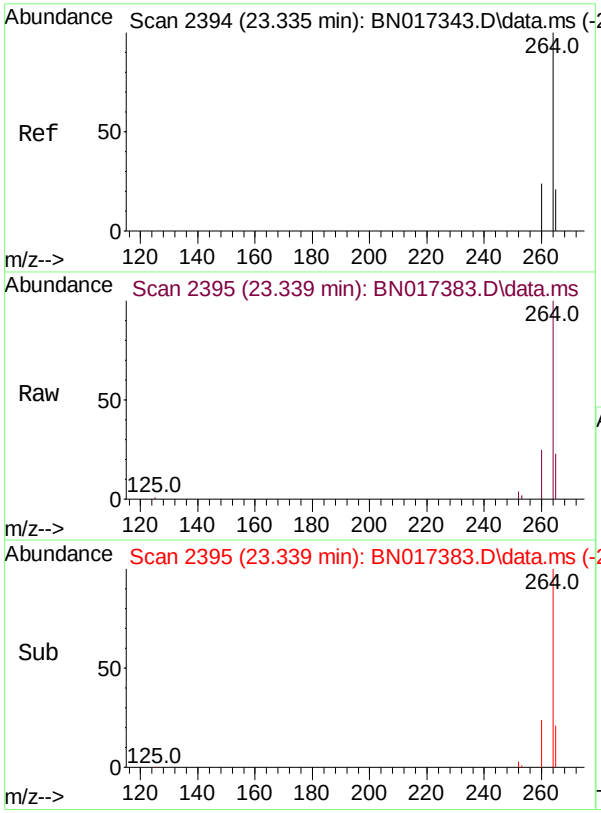


#34
Bis(2-ethylhexyl)phthalate
Concen: 0.417 ng
RT: 21.080 min Scan# 1998
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Tgt Ion:149 Resp: 49153

Ion	Ratio	Lower	Upper
149	100		
167	27.3	21.8	32.6
279	4.1	3.4	5.0



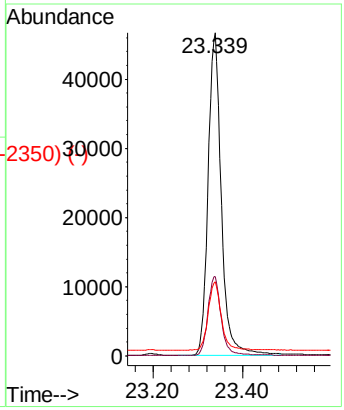


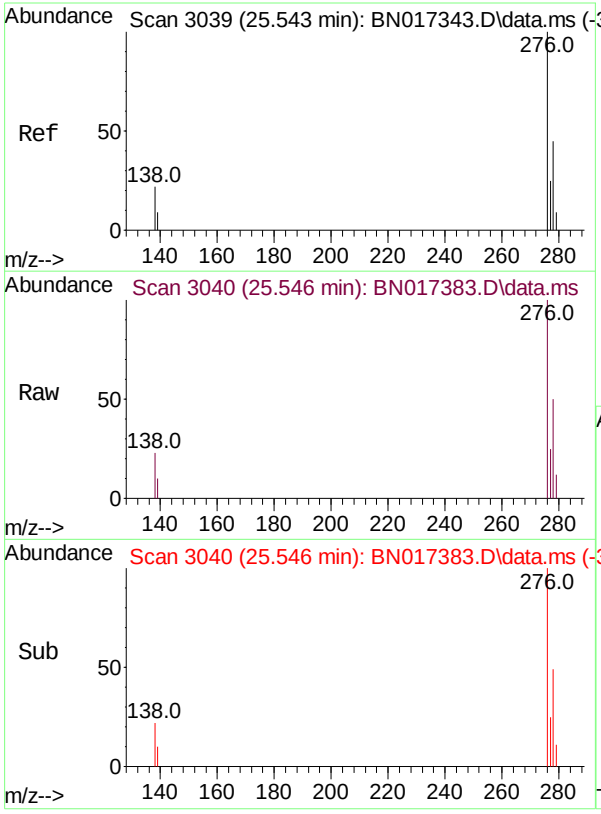
#35
Perylene-d12
Concen: 0.400 ng
RT: 23.339 min Scan# 2
Delta R.T. 0.003 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Tgt Ion:264 Resp: 95172

Ion	Ratio	Lower	Upper
264	100		
260	24.5	19.4	29.2
265	23.0	18.6	28.0

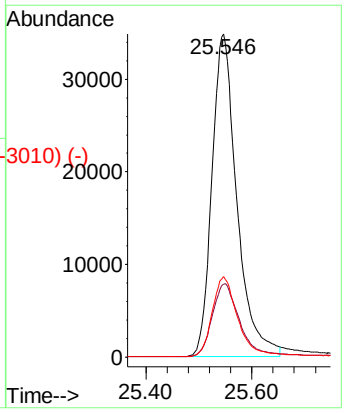


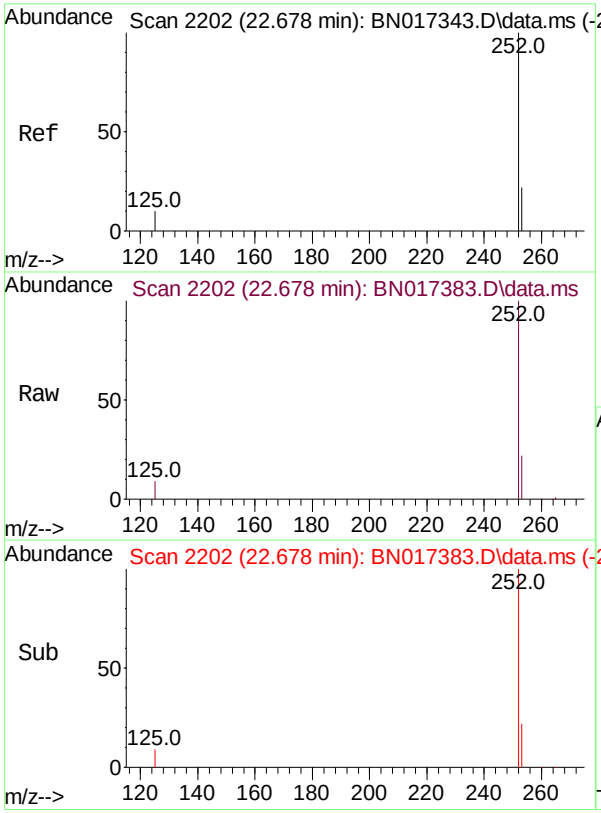


#36
Indeno(1,2,3-cd)pyrene
Concen: 0.342 ng
RT: 25.546 min Scan# 3040
Delta R.T. 0.003 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Tgt Ion:276 Resp: 113862

Ion	Ratio	Lower	Upper
276	100		
138	24.3	19.7	29.5
277	25.1	20.0	30.0



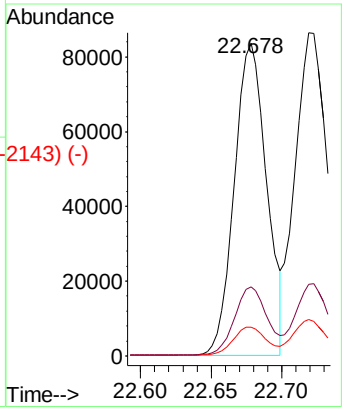


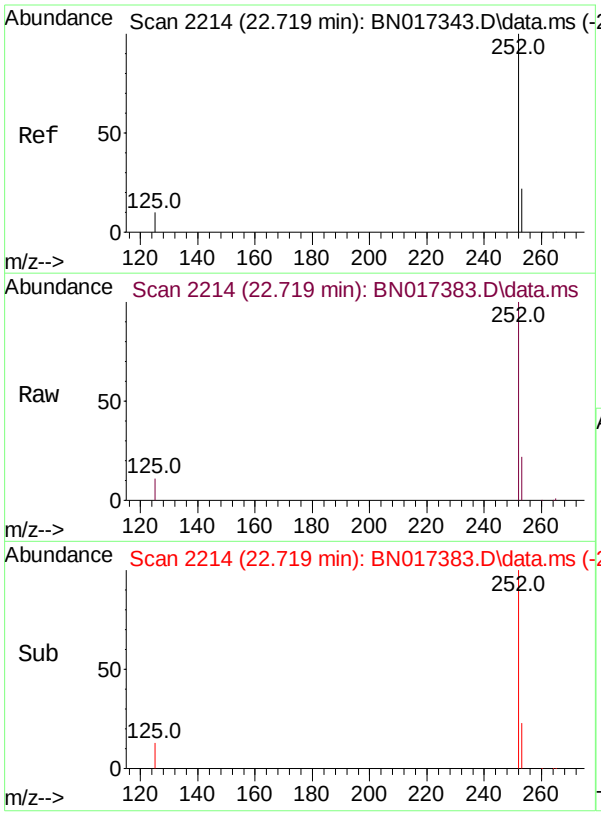
#37
Benzo(b)fluoranthene
Concen: 0.426 ng
RT: 22.678 min Scan# 1
Delta R.T. 0.003 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Tgt Ion:252 Resp: 132451

Ion	Ratio	Lower	Upper
252	100		
253	22.2	17.7	26.5
125	9.2	7.8	11.8

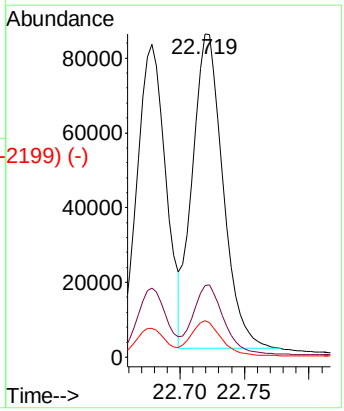


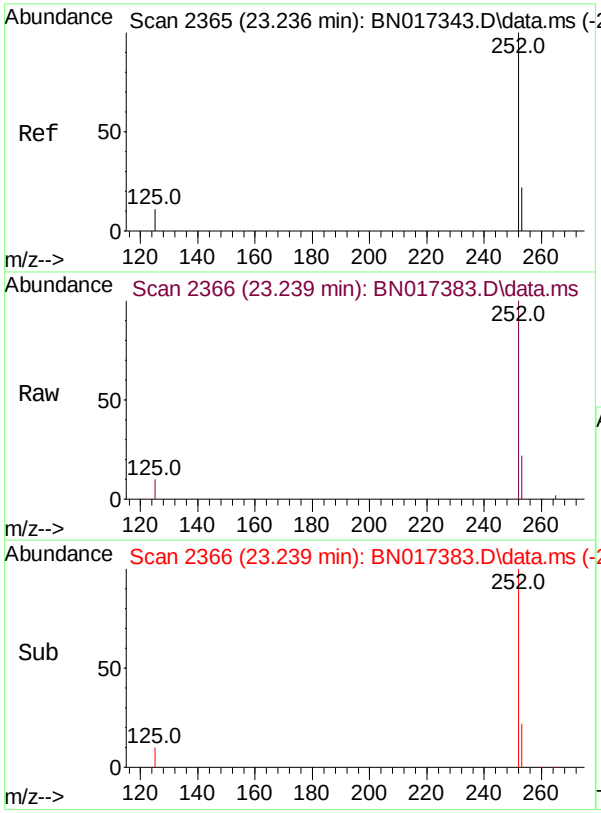


#38
Benzo(k)fluoranthene
Concen: 0.447 ng
RT: 22.719 min Scan# 2214
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Tgt Ion:252 Resp: 139255

Ion	Ratio	Lower	Upper
252	100		
253	22.2	17.7	26.5
125	11.3	8.2	12.2



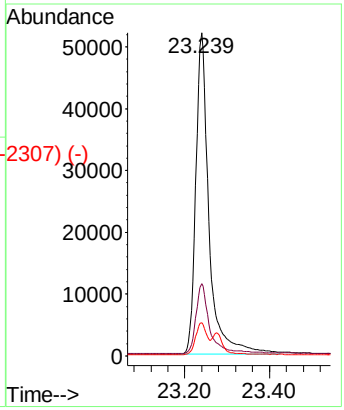


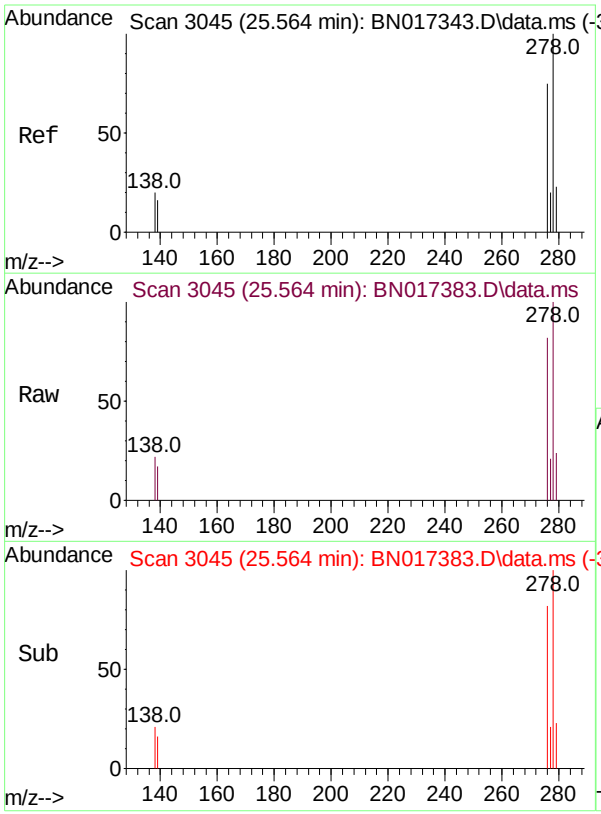
#39
Benzo(a)pyrene
Concen: 0.407 ng
RT: 23.239 min Scan# 1
Delta R.T. 0.003 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Tgt Ion:252 Resp: 112197

Ion	Ratio	Lower	Upper
252	100		
253	22.4	17.9	26.9
125	10.4	9.2	13.8

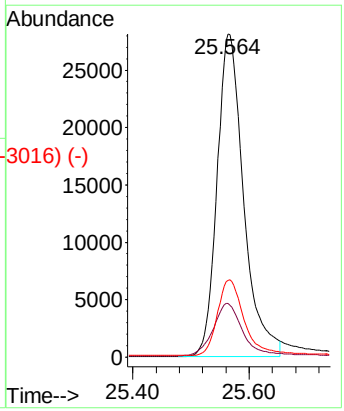


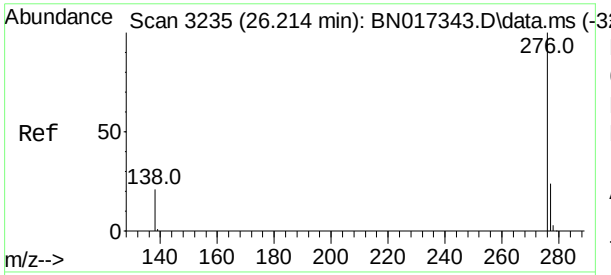


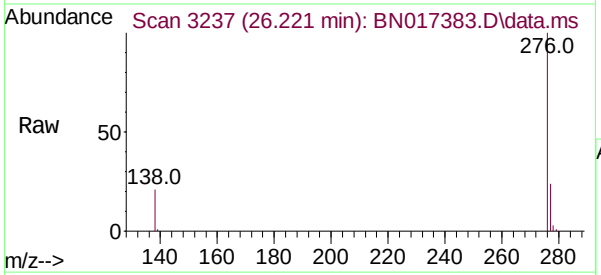
#40
Dibenzo(a,h)anthracene
Concen: 0.333 ng
RT: 25.564 min Scan# 3045
Delta R.T. -0.000 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

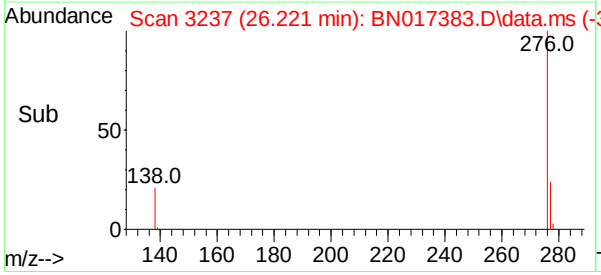
Tgt Ion:278 Resp: 89124

Ion	Ratio	Lower	Upper
278	100		
139	16.6	13.0	19.6
279	23.8	19.2	28.8









#47
Benzo(g,h,i)perylene
Concen: 0.332 ng
RT: 26.221 min Scan# 1
Delta R.T. 0.003 min
Lab File: BN017383.D
Acq: 10 Nov 2021 15:31

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4EC

Tgt Ion:276 Resp: 95910

Ion	Ratio	Lower	Upper
276	100		
277	23.9	19.0	28.4
138	21.0	17.1	25.7