Quantitation Report (QT Reviewed)

Data Path : Z:\svoasrv\HPCHEM1\BNA_N\Data\BN012324\
Data File : BN029359.D
Acq On : 23 Jan 2024 23:24
Operator : MA/JU
Sample : SSTDCCC0.4
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Quant Time: Jan 24 01:10:30 2024
Quant Method : Z:\svoasrv\HPCHEM1\BNA_N\Methods\8270-SIM-BN012224.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
QLast Update : Tue Jan 23 02:16:14 2024
Response via : Initial Calibration

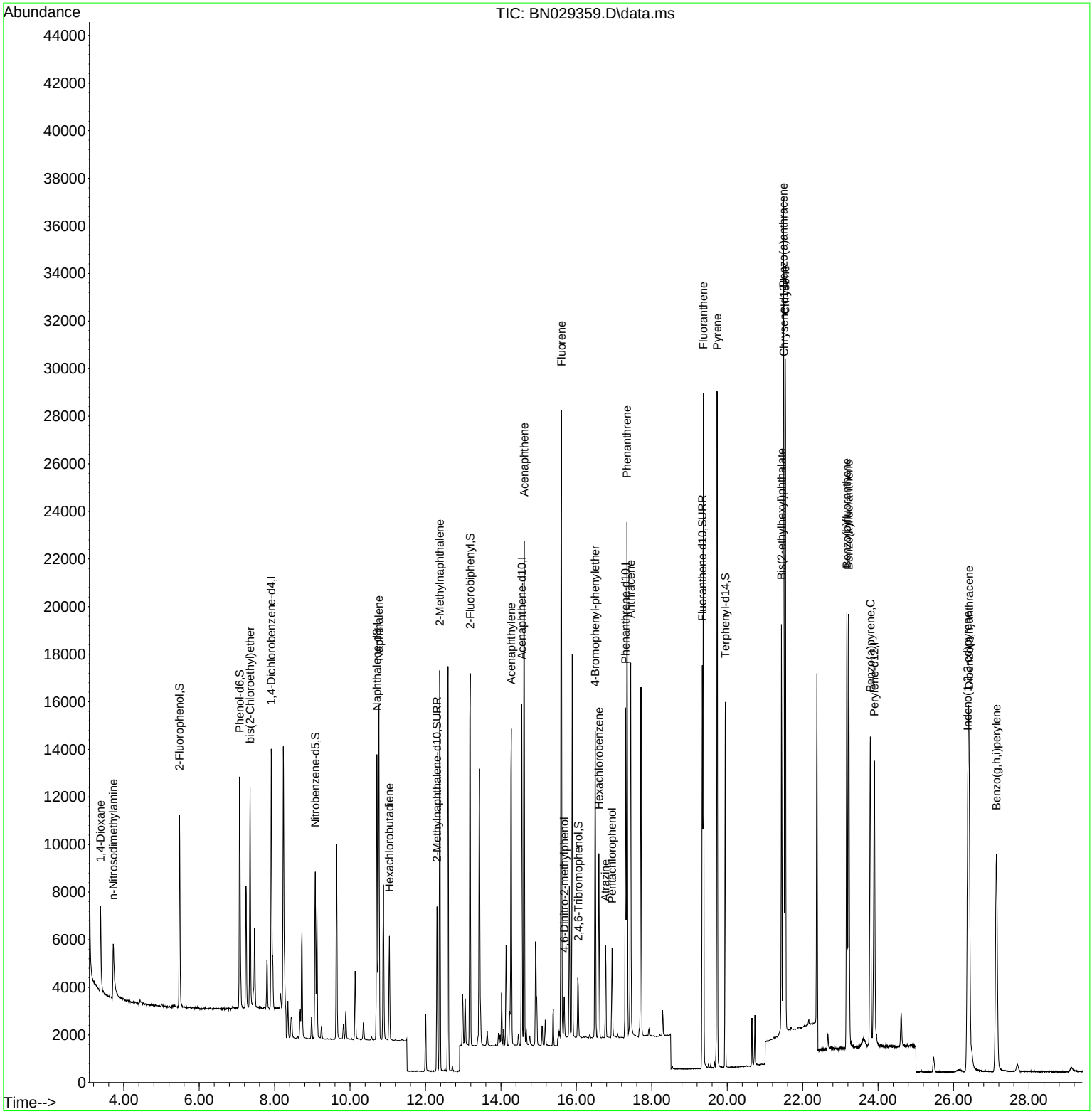
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	7.912	152	5272	0.400	ng		0.00
7) Naphthalene-d8	10.712	136	15099	0.400	ng		0.00
13) Acenaphthene-d10	14.554	164	7925	0.400	ng		0.00
19) Phenanthrene-d10	17.305	188	17350	0.400	ng		0.00
29) Chrysene-d12	21.501	240	15656	0.400	ng	#	0.00
35) Perylene-d12	23.899	264	16662	0.400	ng		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	5.478	112	6566	0.469	ng		0.00
5) Phenol-d6	7.074	99	8844	0.473	ng		0.00
8) Nitrobenzene-d5	9.078	82	5766	0.360	ng		0.00
11) 2-Methylnaphthalene-d10	12.306	152	9044	0.362	ng		0.00
14) 2,4,6-Tribromophenol	16.051	330	1439	0.348	ng		0.00
15) 2-Fluorobiphenyl	13.185	172	14030	0.368	ng		0.00
27) Fluoranthene-d10	19.340	212	17844	0.347	ng		0.00
31) Terphenyl-d14	19.949	244	13864	0.346	ng		0.00
Target Compounds							Qvalue
2) 1,4-Dioxane	3.384	88	2630	0.384	ng		95
3) n-Nitrosodimethylamine	3.723	42	2293	0.330	ng	#	85
6) bis(2-Chloroethyl)ether	7.349	93	6795	0.393	ng		100
9) Naphthalene	10.765	128	18012	0.371	ng		98
10) Hexachlorobutadiene	11.043	225	3379	0.331	ng	#	99
12) 2-Methylnaphthalene	12.378	142	11410	0.362	ng		99
16) Acenaphthylene	14.276	152	15238	0.361	ng		100
17) Acenaphthene	14.618	154	10532	0.371	ng		98
18) Fluorene	15.604	166	13595	0.353	ng		99
20) 4,6-Dinitro-2-methylph...	15.679	198	947	0.296	ng		98
21) 4-Bromophenyl-phenylether	16.498	248	4404	0.348	ng	#	70
22) Hexachlorobenzene	16.597	284	5315	0.340	ng		95
23) Atrazine	16.771	200	3193	0.345	ng	#	88
24) Pentachlorophenol	16.945	266	1683	0.322	ng		98
25) Phenanthrene	17.342	178	21739	0.365	ng		100
26) Anthracene	17.441	178	18590	0.353	ng		99
28) Fluoranthene	19.368	202	24871	0.349	ng		98
30) Pyrene	19.735	202	25520	0.357	ng		100
32) Benzo(a)anthracene	21.492	228	25520	0.391	ng		100
33) Chrysene	21.537	228	24293	0.361	ng		99
34) Bis(2-ethylhexyl)phtha...	21.438	149	15570	0.433	ng		98
36) Indeno(1,2,3-cd)pyrene	26.379	276	24532	0.345	ng		97
37) Benzo(b)fluoranthene	23.171	252	23747	0.335	ng		98
38) Benzo(k)fluoranthene	23.221	252	24081	0.346	ng	#	96
39) Benzo(a)pyrene	23.794	252	20027	0.359	ng		99
40) Dibenzo(a,h)anthracene	26.411	278	19730	0.343	ng		98
41) Benzo(g,h,i)perylene	27.139	276	20923	0.339	ng		96

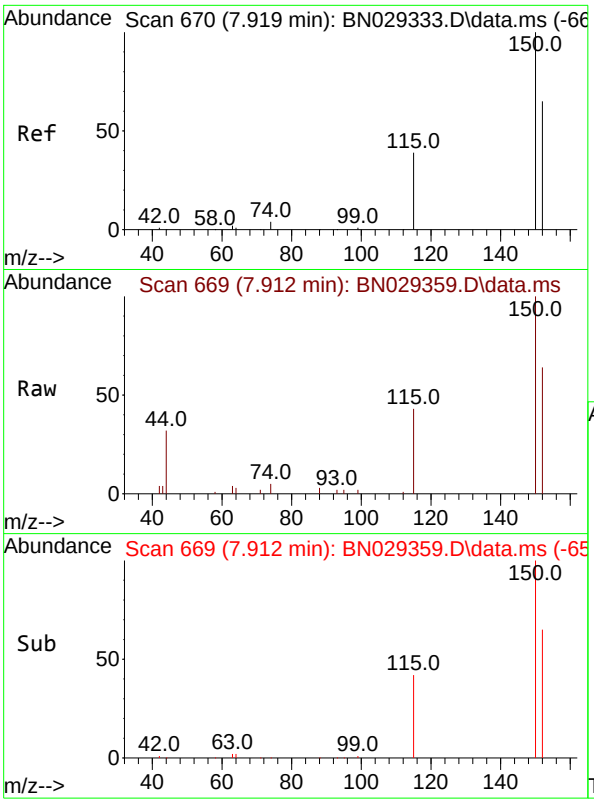
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\svoasrv\HPCHEM1\BNA_N\Data\BN012324\
Data File : BN029359.D
Acq On : 23 Jan 2024 23:24
Operator : MA/JU
Sample : SSTDCCC0.4
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Quant Time: Jan 24 01:10:30 2024
Quant Method : Z:\svoasrv\HPCHEM1\BNA_N\Methods\8270-SIM-BN012224.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
QLast Update : Tue Jan 23 02:16:14 2024
Response via : Initial Calibration



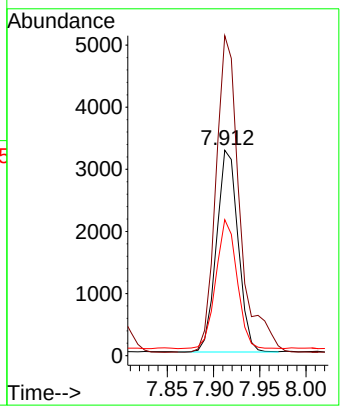


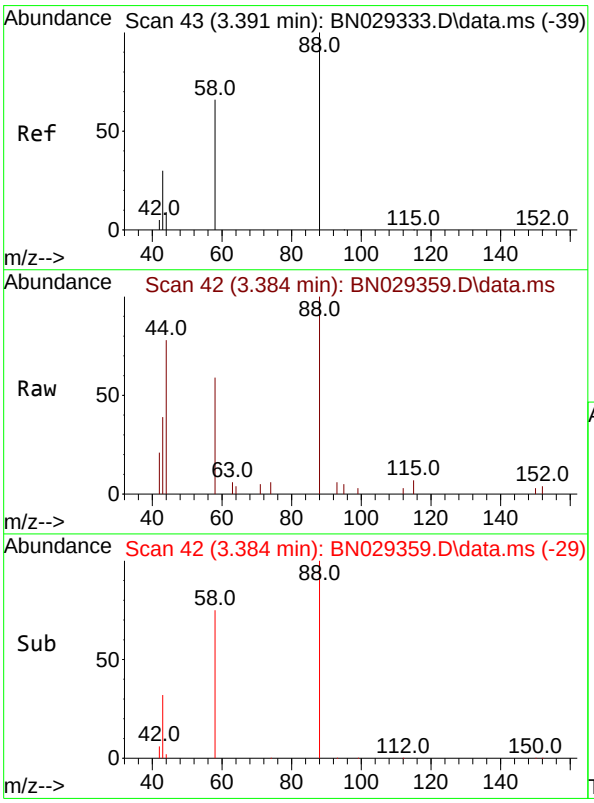
#1
1,4-Dichlorobenzene-d4
Concen: 0.400 ng
RT: 7.912 min Scan# 6
Delta R.T. -0.007 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Tgt Ion:152 Resp: 5272

Ion	Ratio	Lower	Upper
152	100		
150	155.8	121.1	181.7
115	66.2	49.8	74.6

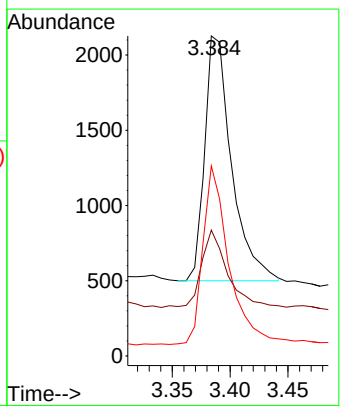


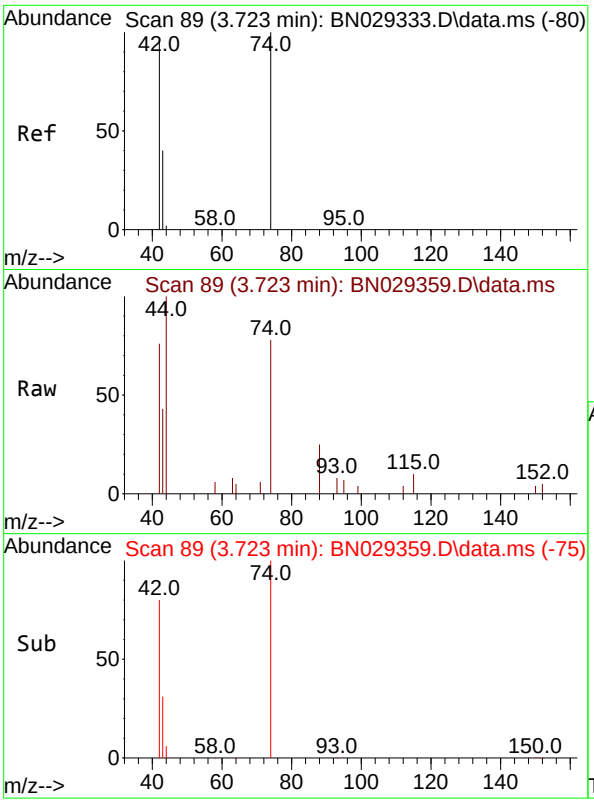


#2
1,4-Dioxane
Concen: 0.384 ng
RT: 3.384 min Scan# 42
Delta R.T. -0.007 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Tgt Ion: 88 Resp: 2630

Ion	Ratio	Lower	Upper
88	100		
43	30.6	29.2	43.8
58	70.4	57.8	86.8



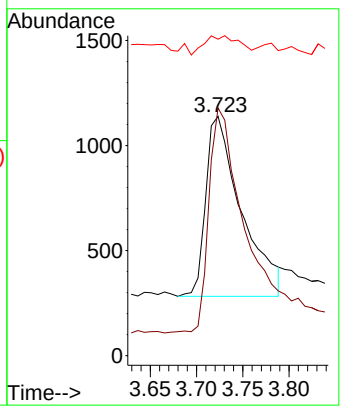


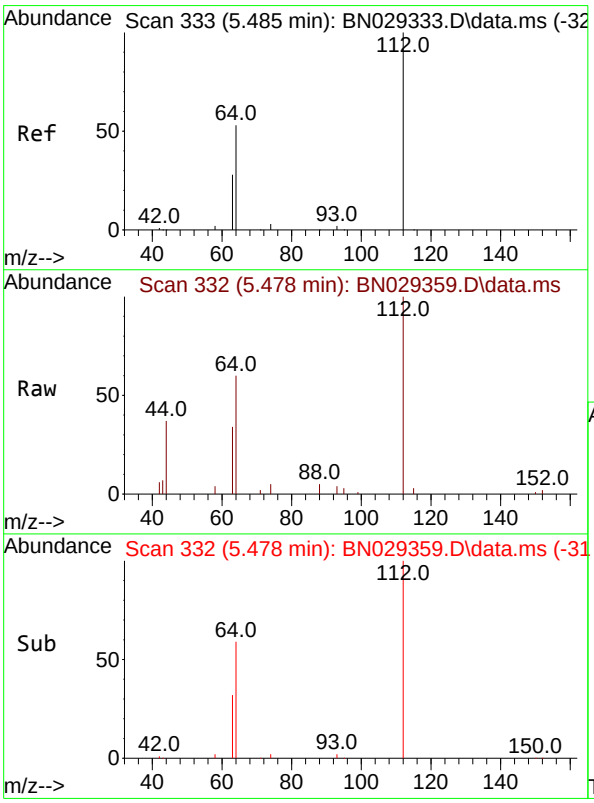
#3
n-Nitrosodimethylamine
Concen: 0.330 ng
RT: 3.723 min Scan# 8
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Tgt Ion: 42 Resp: 2293

Ion	Ratio	Lower	Upper
42	100		
74	124.8	87.4	131.0
44	10.5	3.1	4.7#

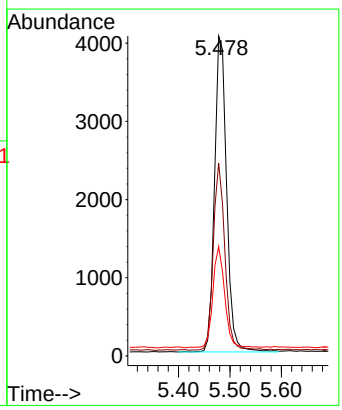


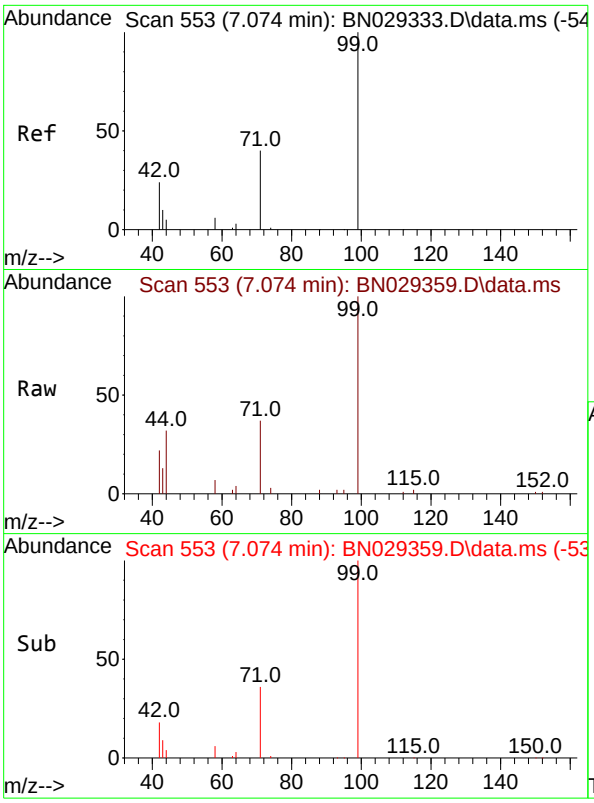


#4
2-Fluorophenol
Concen: 0.469 ng
RT: 5.478 min Scan# 332
Delta R.T. -0.007 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Tgt Ion:112 Resp: 6566

Ion	Ratio	Lower	Upper
112	100		
64	57.1	47.6	71.4
63	31.7	27.0	40.6



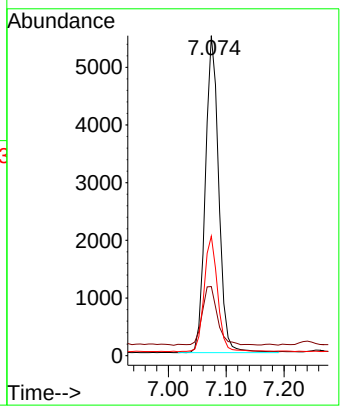


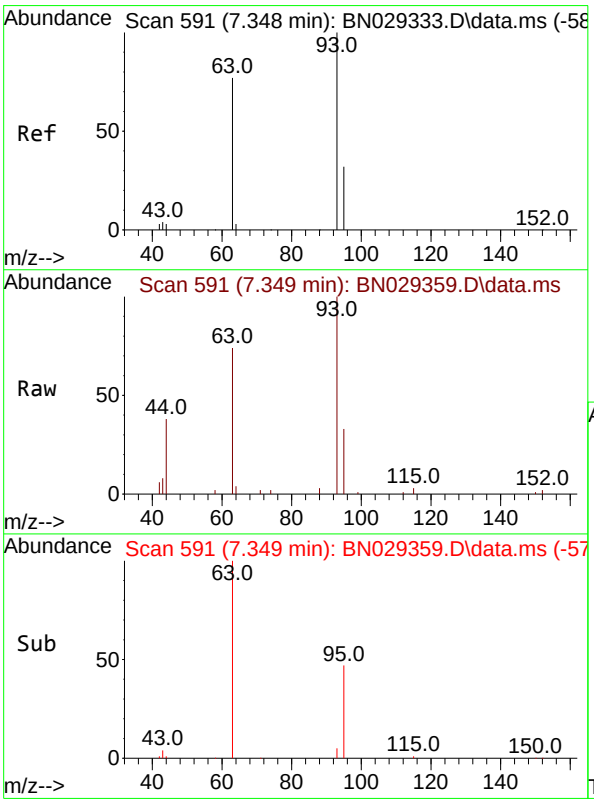
#5
Phenol-d6
Concen: 0.473 ng
RT: 7.074 min Scan# 5
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Tgt Ion: 99 Resp: 8844

Ion	Ratio	Lower	Upper
99	100		
42	21.2	19.3	28.9
71	36.5	31.0	46.6

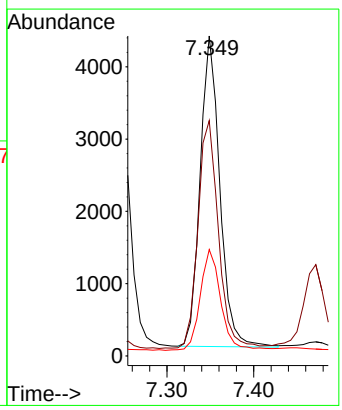


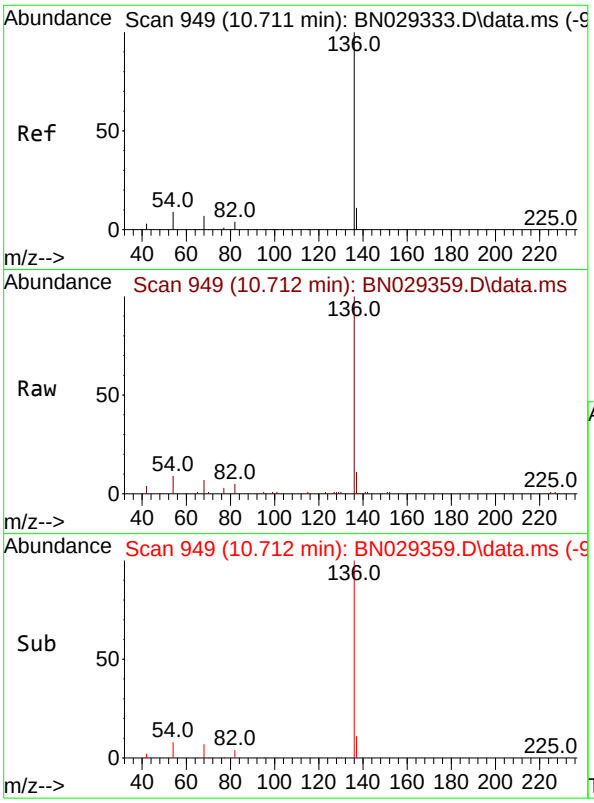


#6
bis(2-Chloroethyl)ether
Concen: 0.393 ng
RT: 7.349 min Scan# 591
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Tgt Ion: 93 Resp: 6795

Ion	Ratio	Lower	Upper
93	100		
63	76.3	61.0	91.4
95	33.8	26.5	39.7



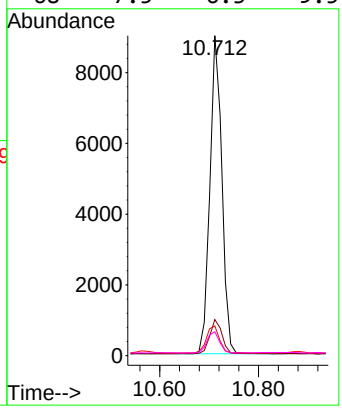


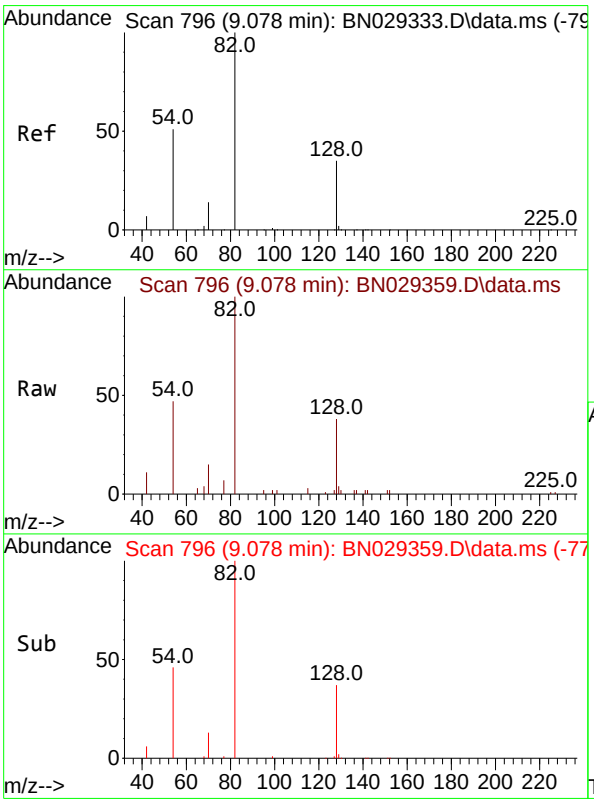
#7
Naphthalene-d8
Concen: 0.400 ng
RT: 10.712 min Scan# 94
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Tgt Ion:136 Resp: 15099

Ion	Ratio	Lower	Upper
136	100		
137	11.3	9.4	14.0
54	9.3	7.9	11.9
68	7.5	6.3	9.5

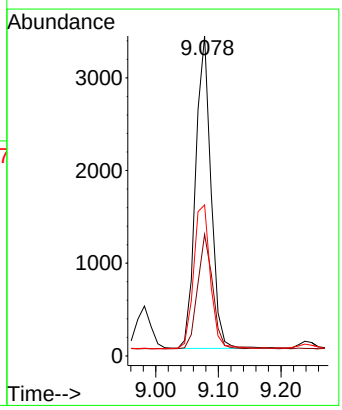


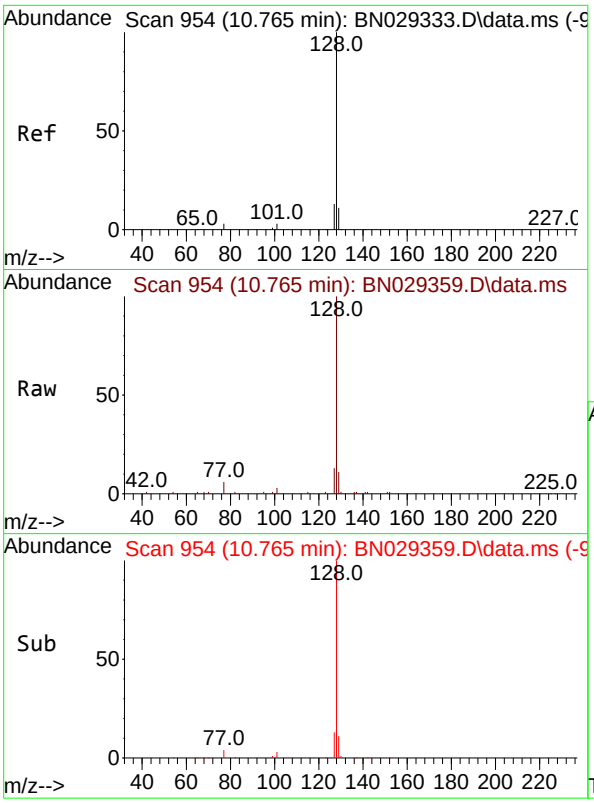


#8
Nitrobenzene-d5
Concen: 0.360 ng
RT: 9.078 min Scan# 796
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Tgt Ion: 82 Resp: 5766

Ion	Ratio	Lower	Upper
82	100		
128	38.0	29.8	44.6
54	47.2	42.5	63.7



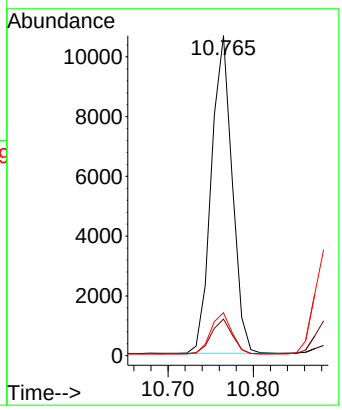


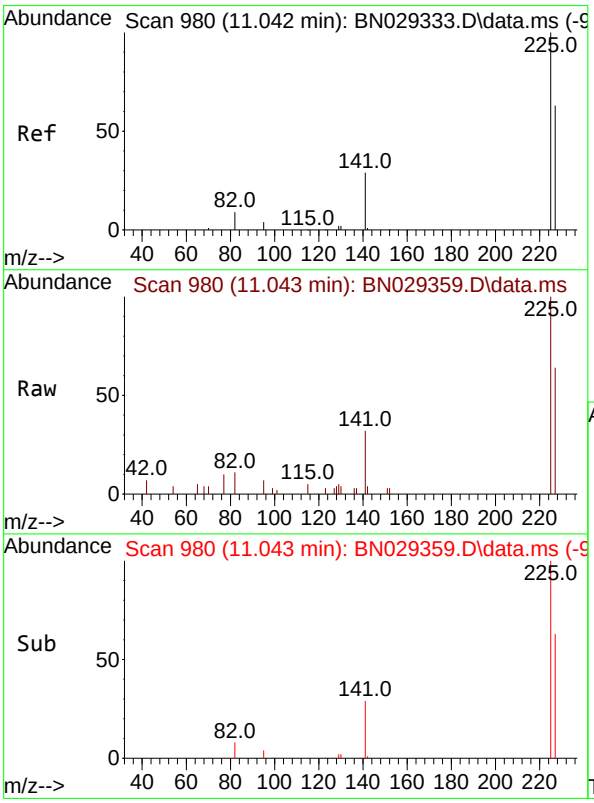
#9
Naphthalene
Concen: 0.371 ng
RT: 10.765 min Scan# 9
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Tgt Ion:128 Resp: 18012

Ion	Ratio	Lower	Upper
128	100		
129	11.4	9.6	14.4
127	13.4	11.3	16.9

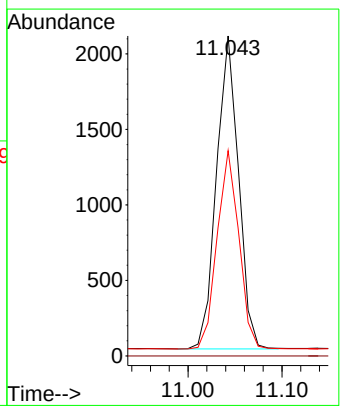


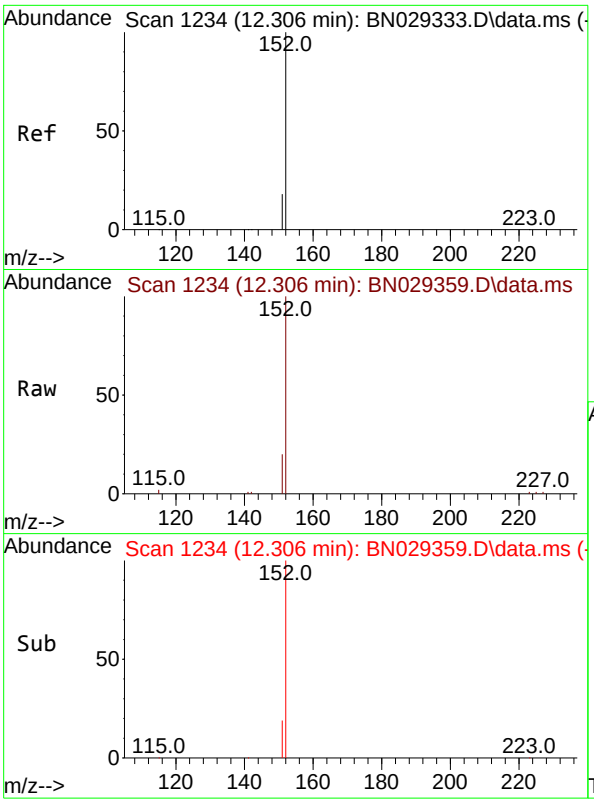


#10
Hexachlorobutadiene
Concen: 0.331 ng
RT: 11.043 min Scan# 980
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Tgt Ion:225 Resp: 3379

Ion	Ratio	Lower	Upper
225	100		
223	0.0	0.0	0.0
227	62.7	50.6	76.0



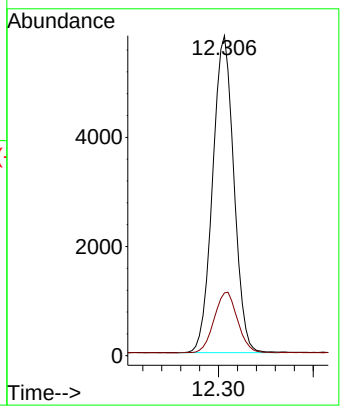


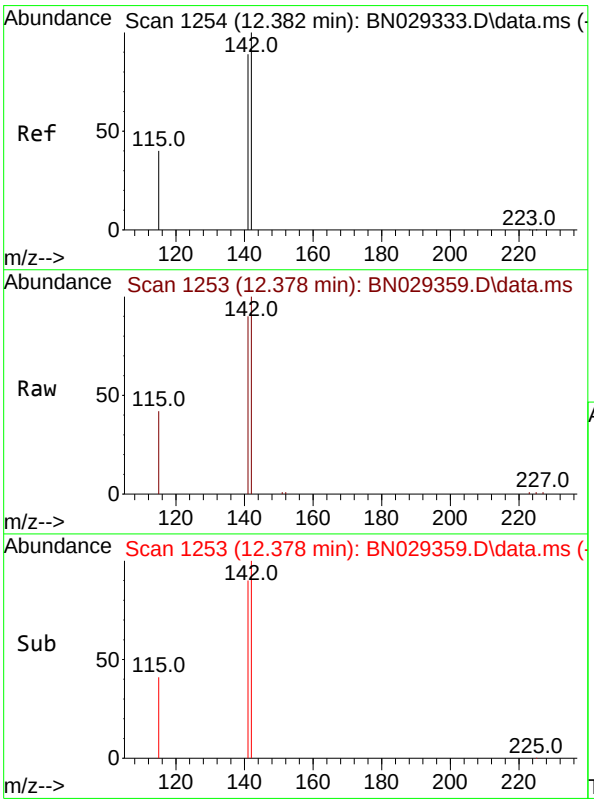
#11
2-Methylnaphthalene-d10
Concen: 0.362 ng
RT: 12.306 min Scan# 1
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Tgt Ion:152 Resp: 9044

Ion	Ratio	Lower	Upper
152	100		
151	21.1	16.9	25.3

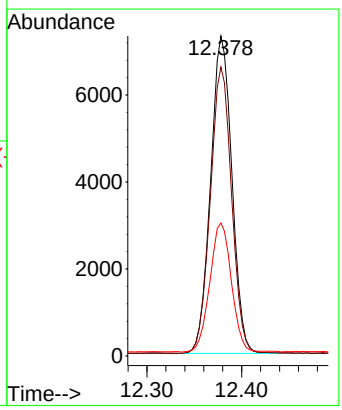


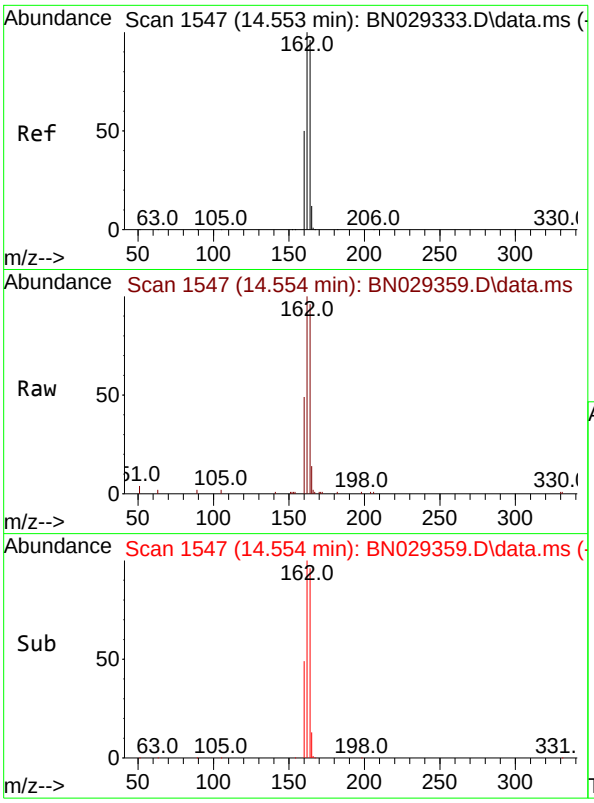


#12
2-Methylnaphthalene
Concen: 0.362 ng
RT: 12.378 min Scan# 1253
Delta R.T. -0.004 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Tgt Ion:142 Resp: 11410

Ion	Ratio	Lower	Upper
142	100		
141	90.2	71.1	106.7
115	41.6	33.4	50.0



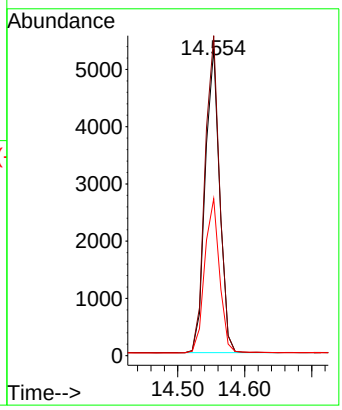


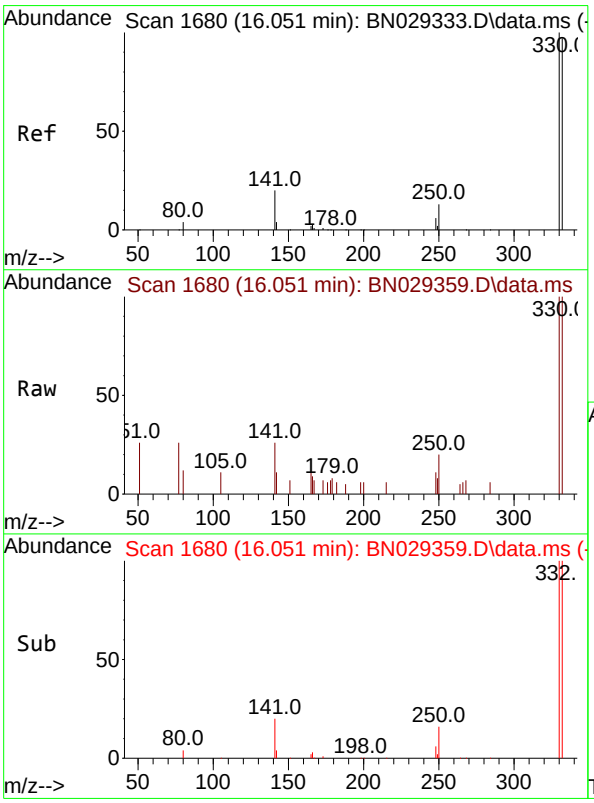
#13
Acenaphthene-d10
Concen: 0.400 ng
RT: 14.554 min Scan# 1
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Tgt Ion:164 Resp: 7925

Ion	Ratio	Lower	Upper
164	100		
162	104.2	83.5	125.3
160	51.1	42.1	63.1

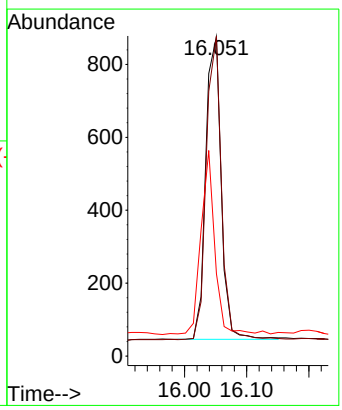


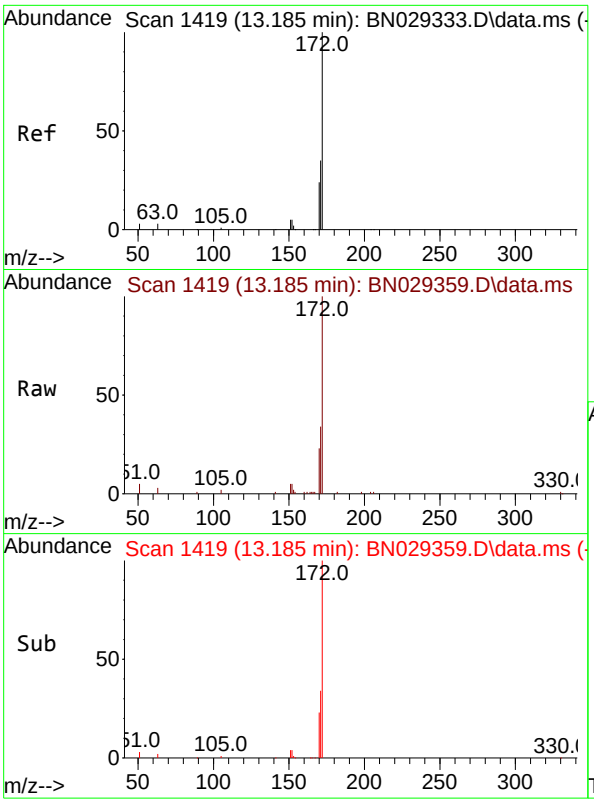


#14
2,4,6-Tribromophenol
Concen: 0.348 ng
RT: 16.051 min Scan# 1680
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Tgt Ion:330 Resp: 1439

Ion	Ratio	Lower	Upper
330	100		
332	98.2	77.3	115.9
141	53.2	37.2	55.8



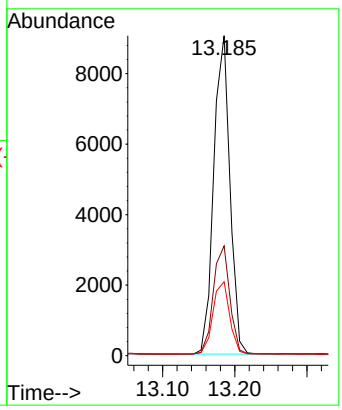


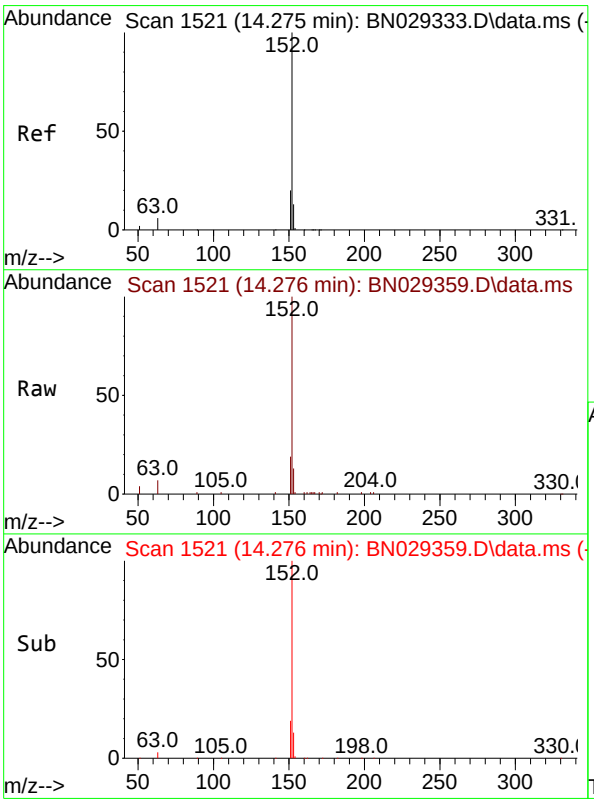
#15
2-Fluorobiphenyl
Concen: 0.368 ng
RT: 13.185 min Scan# 14
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Tgt Ion:172 Resp: 14030

Ion	Ratio	Lower	Upper
172	100		
171	34.3	28.2	42.2
170	23.1	19.3	28.9

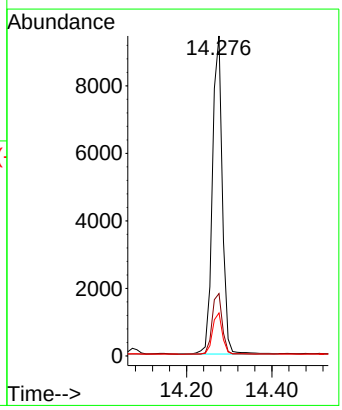


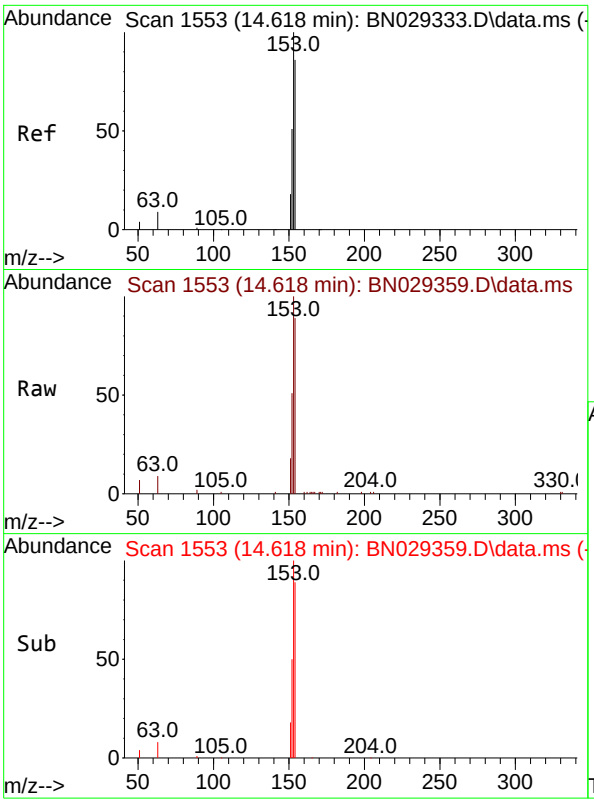


#16
Acenaphthylene
Concen: 0.361 ng
RT: 14.276 min Scan# 1521
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Tgt Ion:152 Resp: 15238

Ion	Ratio	Lower	Upper
152	100		
151	19.6	15.5	23.3
153	12.8	10.2	15.4



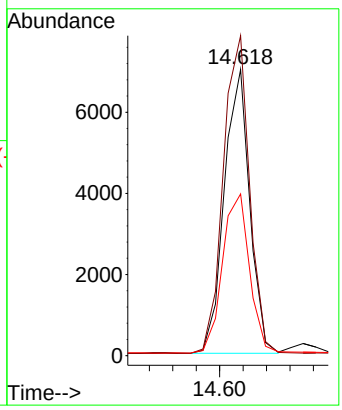


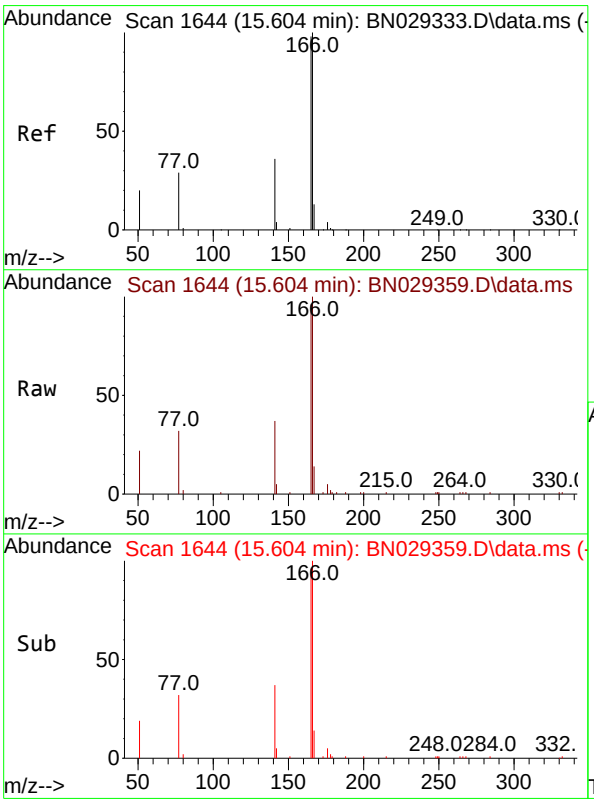
#17
Acenaphthene
Concen: 0.371 ng
RT: 14.618 min Scan# 1
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Tgt Ion:154 Resp: 10532

Ion	Ratio	Lower	Upper
154	100		
153	115.4	93.7	140.5
152	60.3	49.4	74.2

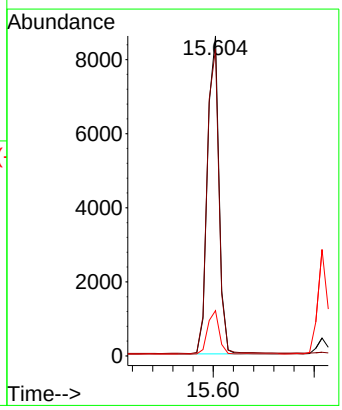


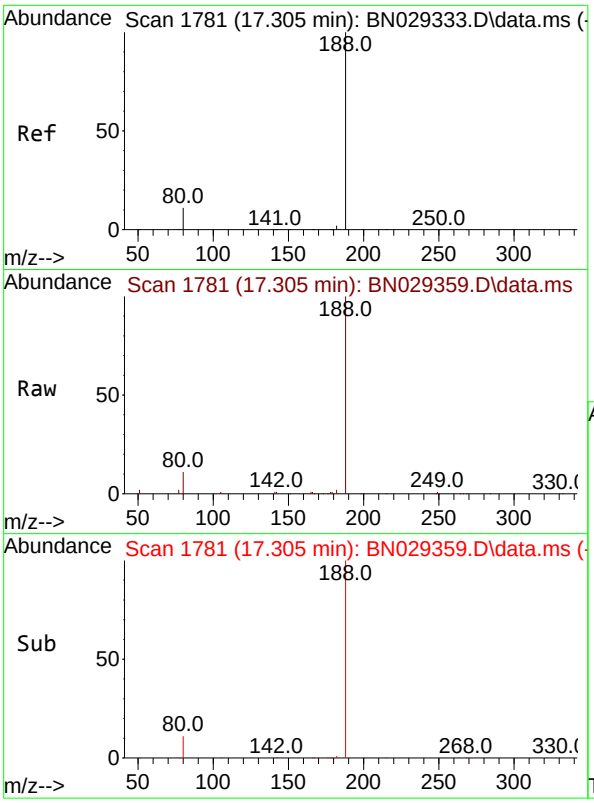


#18
Fluorene
Concen: 0.353 ng
RT: 15.604 min Scan# 1644
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Tgt Ion:166 Resp: 13595

Ion	Ratio	Lower	Upper
166	100		
165	98.2	79.4	119.2
167	13.5	10.9	16.3



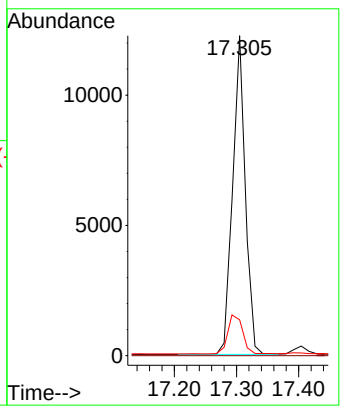


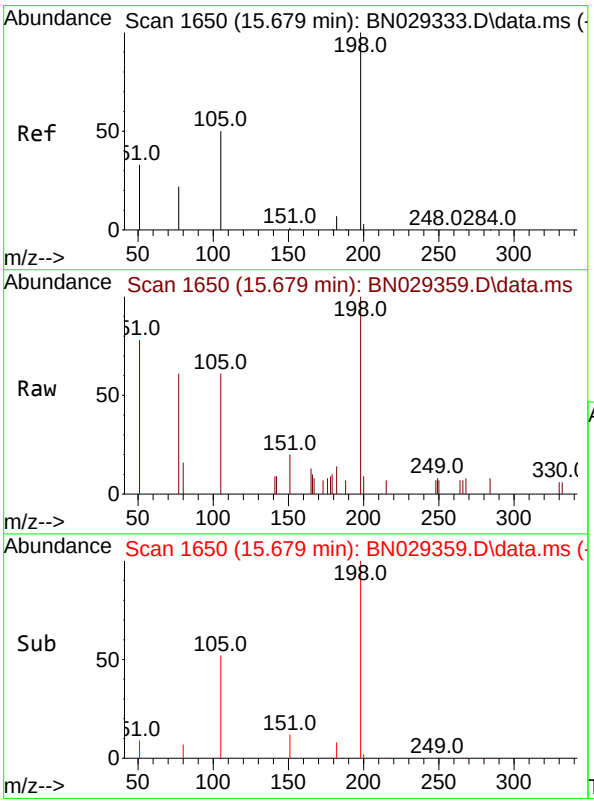
#19
Phenanthrene-d10
Concen: 0.400 ng
RT: 17.305 min Scan# 1
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Tgt Ion:188 Resp: 17350

Ion	Ratio	Lower	Upper
188	100		
94	0.0	0.0	0.0
80	11.2	9.4	14.2

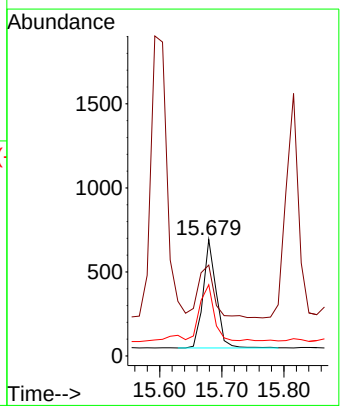


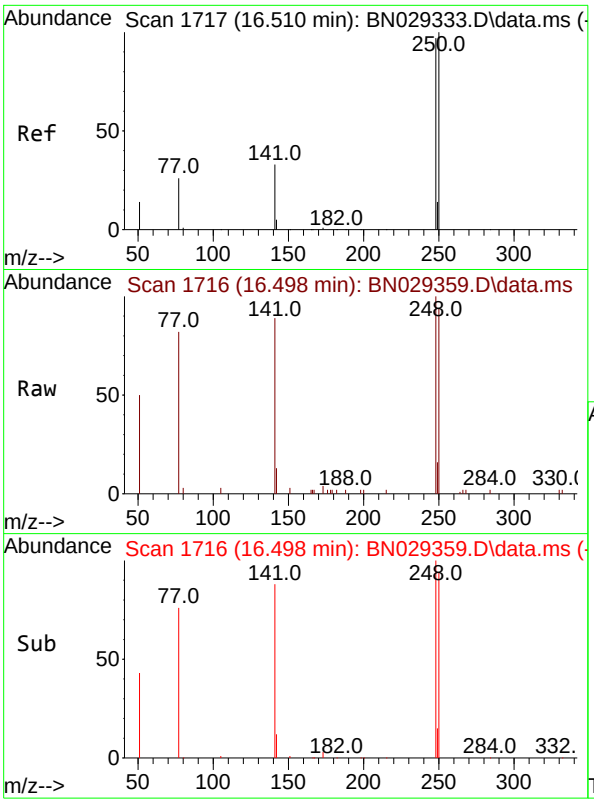


#20
4,6-Dinitro-2-methylphenol
Concen: 0.296 ng
RT: 15.679 min Scan# 1650
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Tgt Ion:198 Resp: 947

Ion	Ratio	Lower	Upper
198	100		
51	78.1	60.5	90.7
105	61.2	48.7	73.1



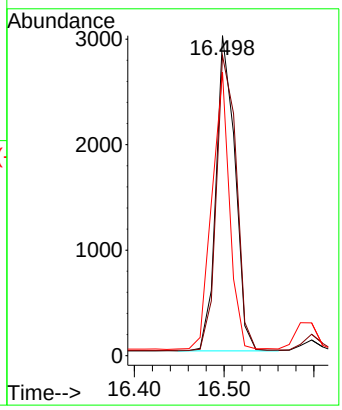


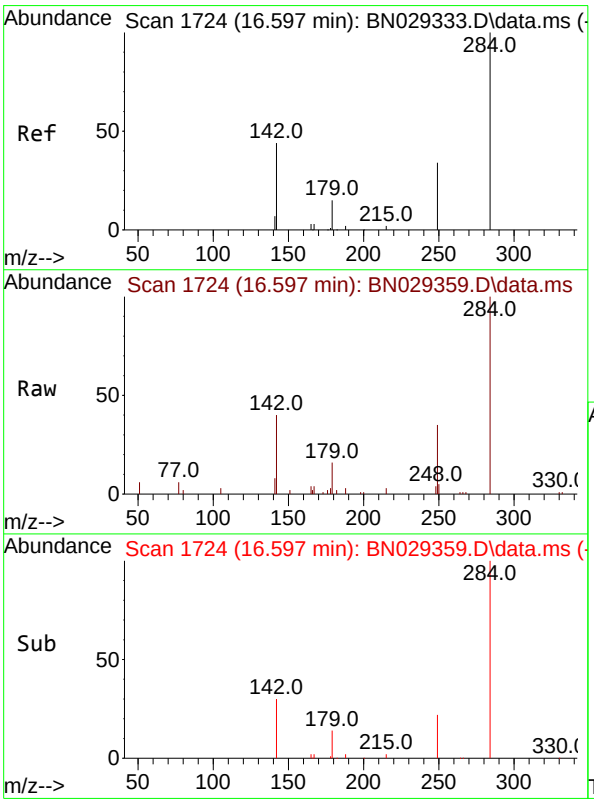
#21
4-Bromophenyl-phenylether
Concen: 0.348 ng
RT: 16.498 min Scan# 1
Delta R.T. -0.012 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Tgt Ion:248 Resp: 4404

Ion	Ratio	Lower	Upper
248	100		
250	93.8	82.6	123.8
141	88.5	28.7	43.1#

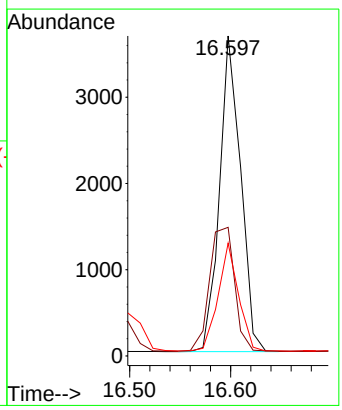


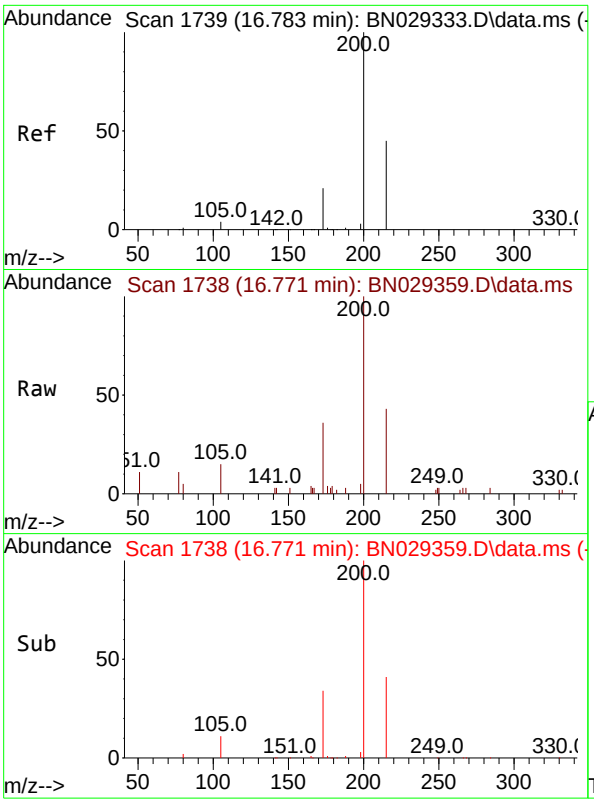


#22
Hexachlorobenzene
Concen: 0.340 ng
RT: 16.597 min Scan# 1724
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Tgt Ion:284 Resp: 5315

Ion	Ratio	Lower	Upper
284	100		
142	46.5	33.8	50.6
249	32.9	25.5	38.3



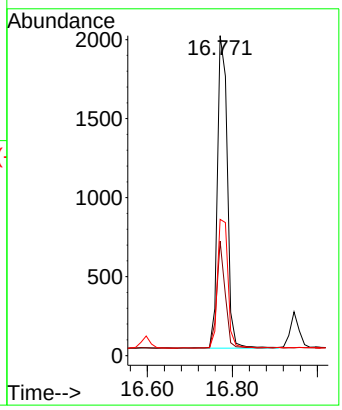


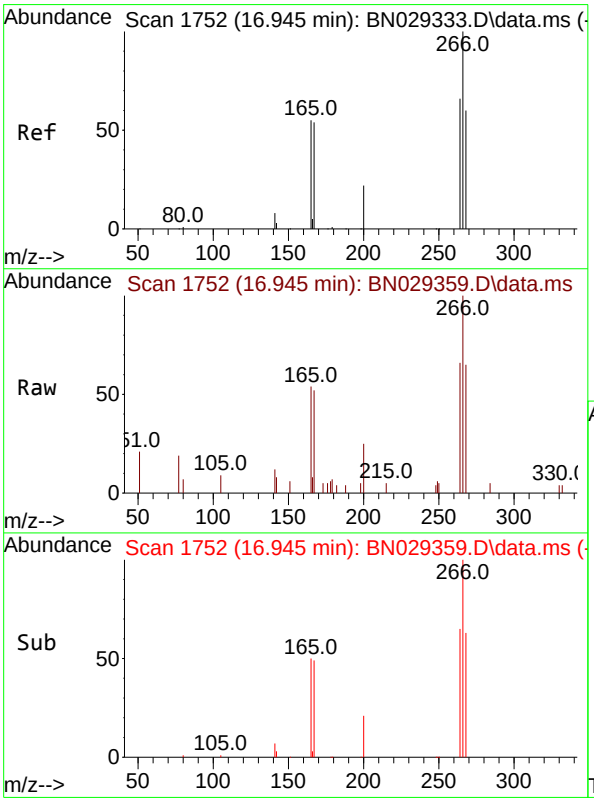
#23
Atrazine
Concen: 0.345 ng
RT: 16.771 min Scan# 1
Delta R.T. -0.012 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Tgt Ion:200 Resp: 3193

Ion	Ratio	Lower	Upper
200	100		
173	35.8	18.6	28.0#
215	42.6	37.1	55.7

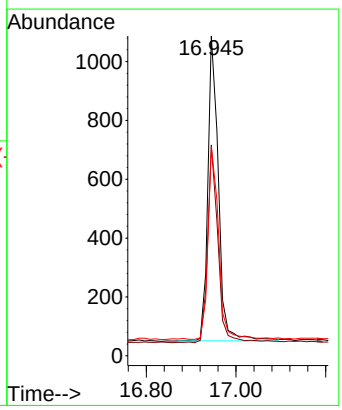


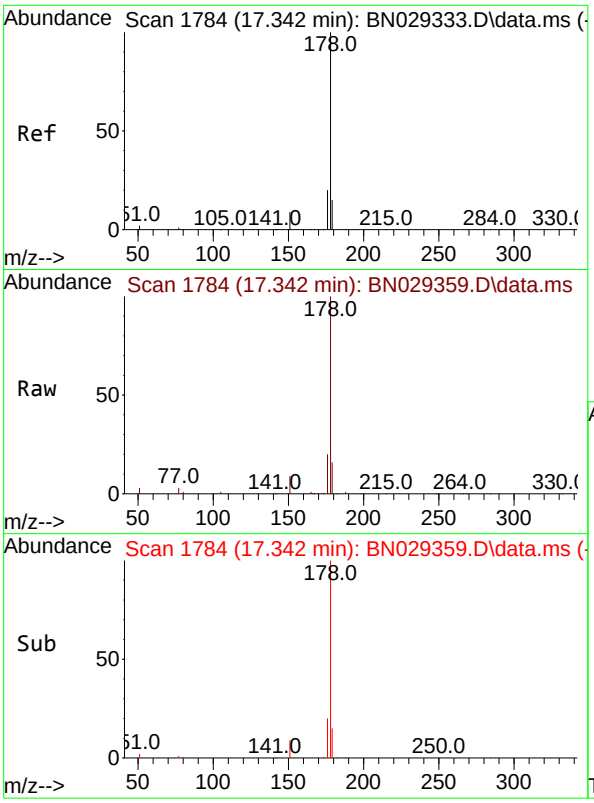


#24
Pentachlorophenol
Concen: 0.322 ng
RT: 16.945 min Scan# 1752
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Tgt Ion:266 Resp: 1683

Ion	Ratio	Lower	Upper
266	100		
264	63.0	49.8	74.8
268	63.6	48.8	73.2



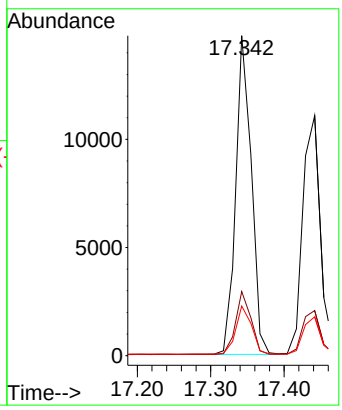


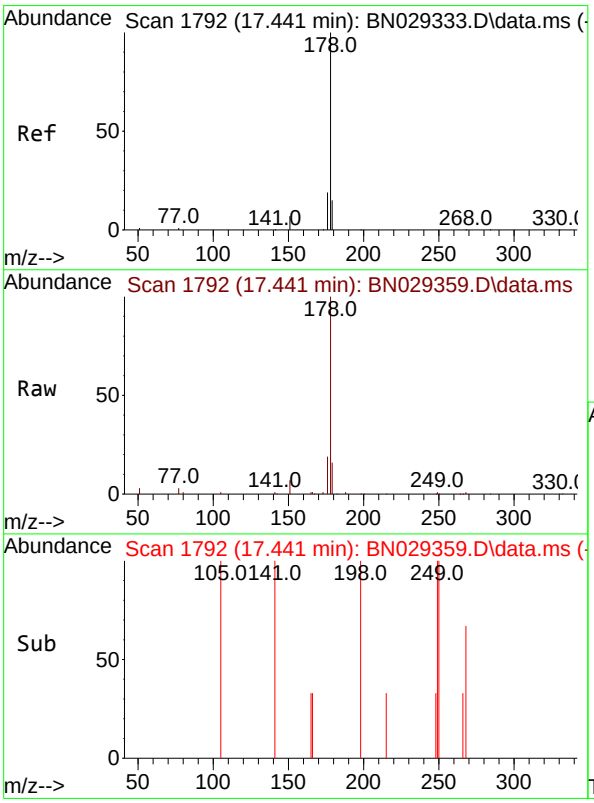
#25
Phenanthrene
Concen: 0.365 ng
RT: 17.342 min Scan# 1
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Tgt Ion:178 Resp: 21739

Ion	Ratio	Lower	Upper
178	100		
176	19.4	15.4	23.2
179	15.5	12.4	18.6

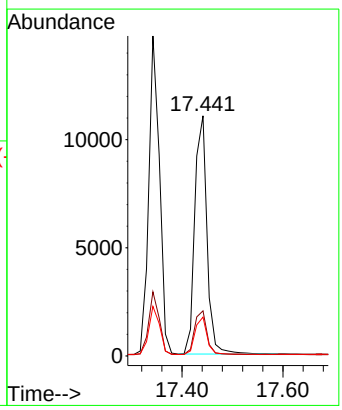


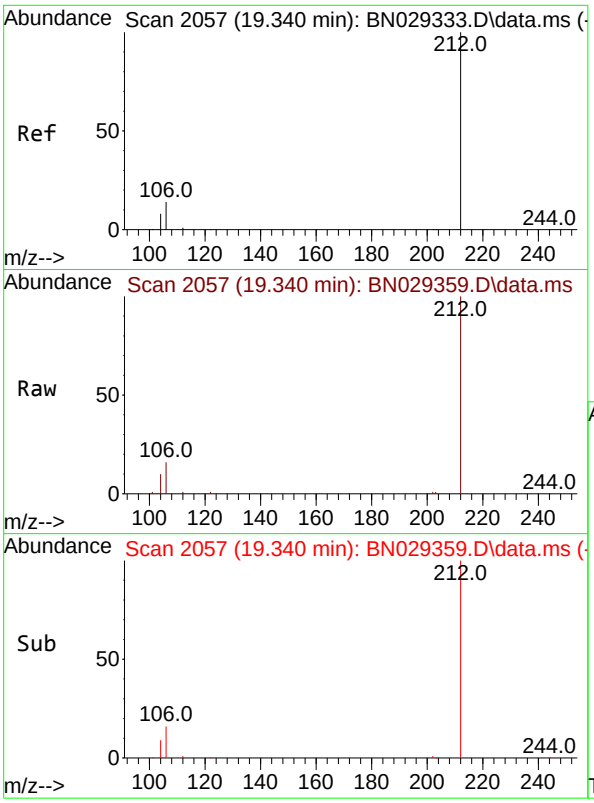


#26
Anthracene
Concen: 0.353 ng
RT: 17.441 min Scan# 1792
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Tgt Ion:178 Resp: 18590

Ion	Ratio	Lower	Upper
178	100		
176	18.7	15.3	22.9
179	15.3	12.1	18.1



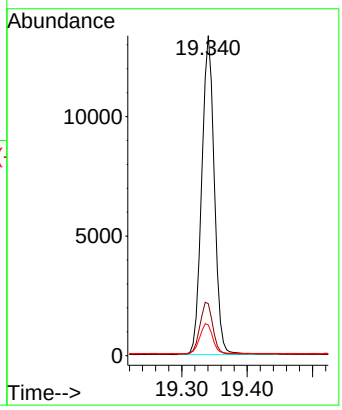


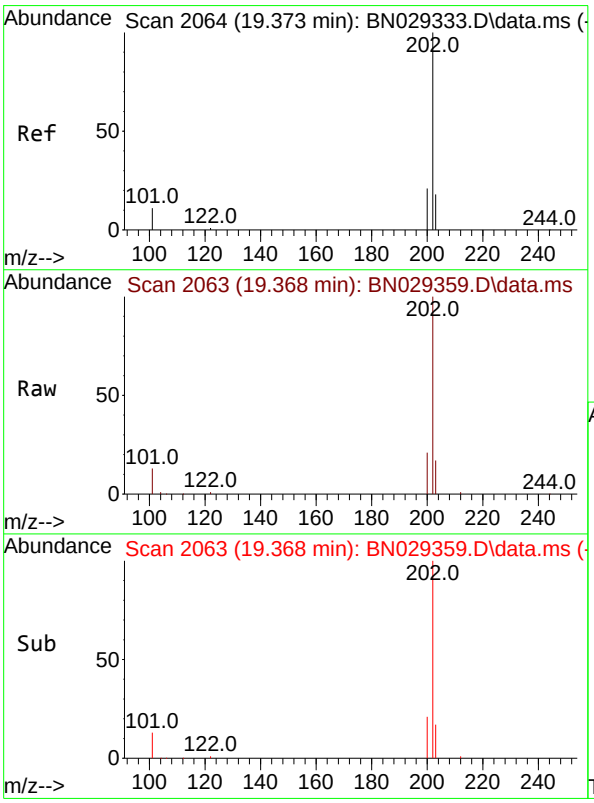
#27
Fluoranthene-d10
Concen: 0.347 ng
RT: 19.340 min Scan# 2
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Tgt Ion:212 Resp: 17844

Ion	Ratio	Lower	Upper
212	100		
106	16.6	11.4	17.0
104	9.7	6.8	10.2

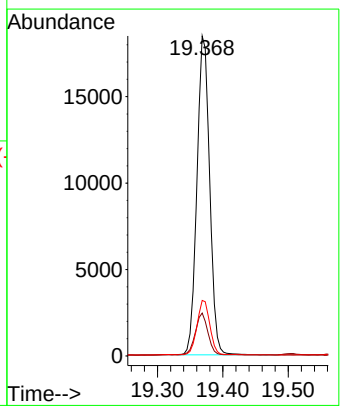


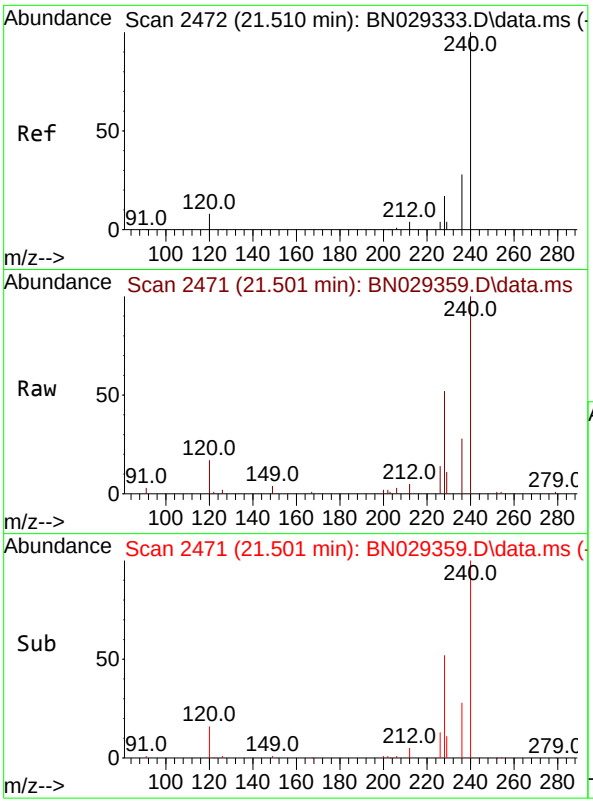


#28
Fluoranthene
Concen: 0.349 ng
RT: 19.368 min Scan# 2063
Delta R.T. -0.004 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Tgt Ion:202 Resp: 24871

Ion	Ratio	Lower	Upper
202	100		
101	13.0	9.0	13.4
203	17.2	13.8	20.8



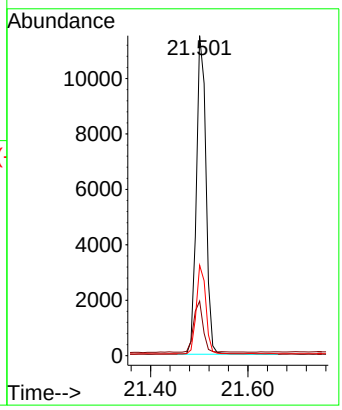


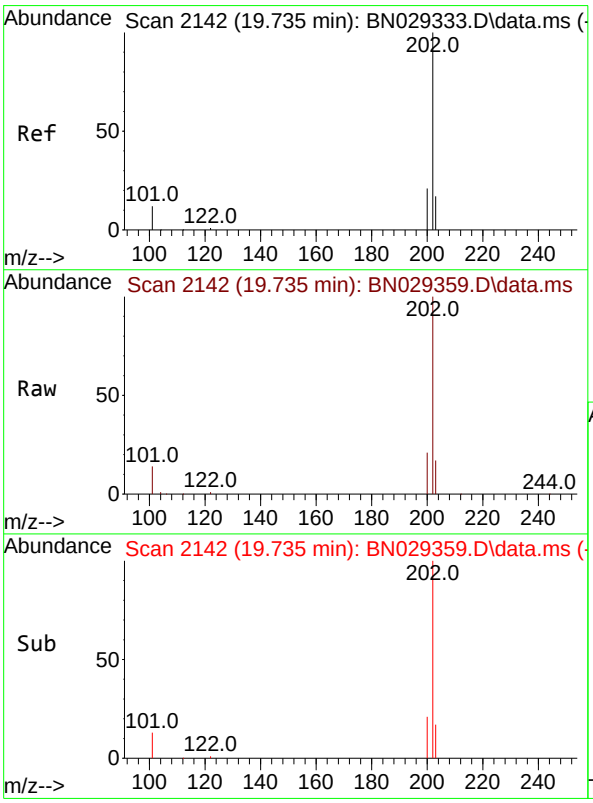
#29
Chrysene-d12
Concen: 0.400 ng
RT: 21.501 min Scan# 24
Delta R.T. -0.009 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Tgt Ion:240 Resp: 15656

Ion	Ratio	Lower	Upper
240	100		
120	17.0	7.8	11.6#
236	28.3	23.0	34.4

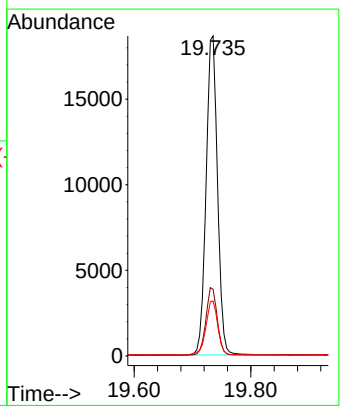


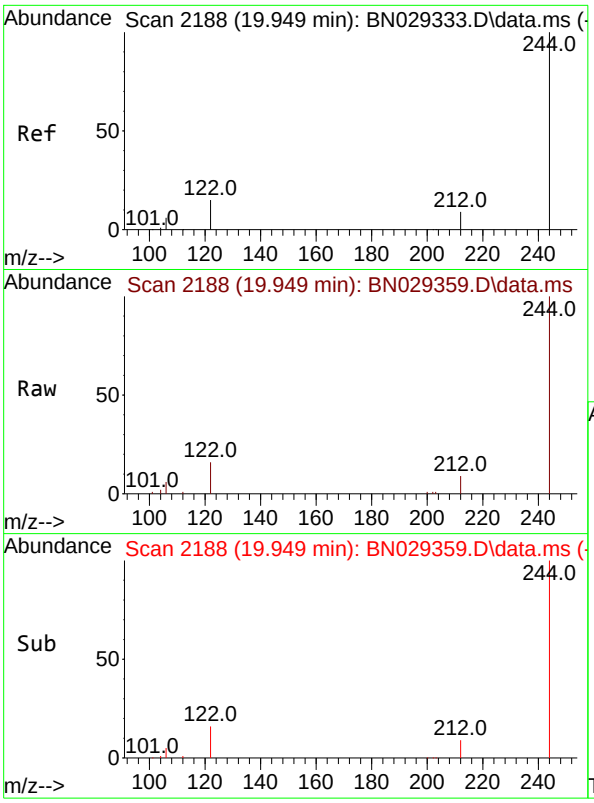


#30
Pyrene
Concen: 0.357 ng
RT: 19.735 min Scan# 2142
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Tgt Ion:202 Resp: 25520

Ion	Ratio	Lower	Upper
202	100		
200	20.9	16.6	25.0
203	17.7	14.1	21.1



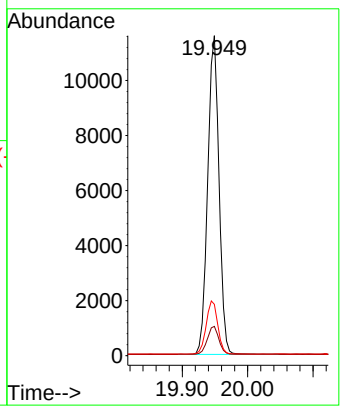


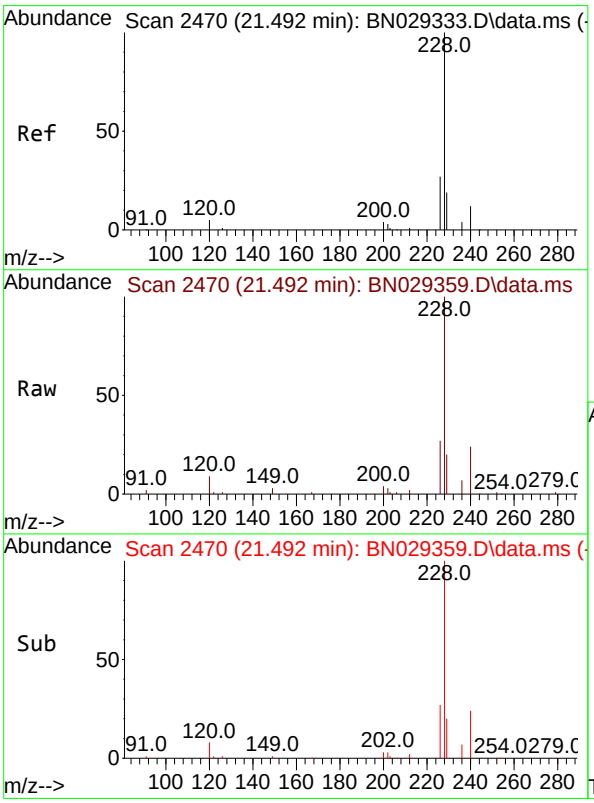
#31
Terphenyl-d14
Concen: 0.346 ng
RT: 19.949 min Scan# 21
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Tgt Ion:244 Resp: 13864

Ion	Ratio	Lower	Upper
244	100		
212	9.2	7.6	11.4
122	16.1	12.8	19.2

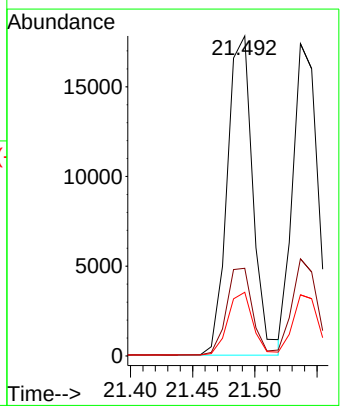


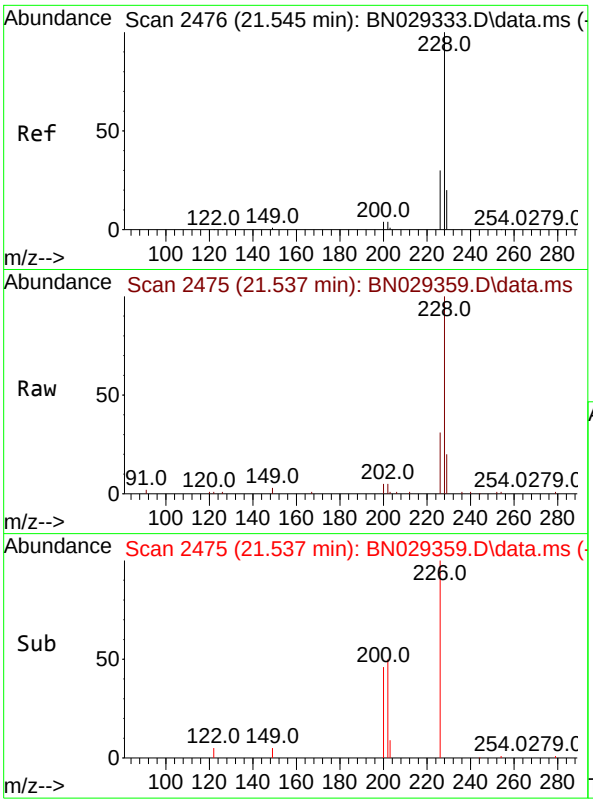


#32
Benzo(a)anthracene
Concen: 0.391 ng
RT: 21.492 min Scan# 2470
Delta R.T. 0.000 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Tgt Ion:228 Resp: 25520

Ion	Ratio	Lower	Upper
228	100		
226	27.4	22.0	33.0
229	19.9	15.6	23.4



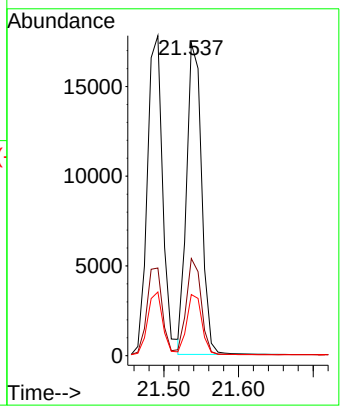


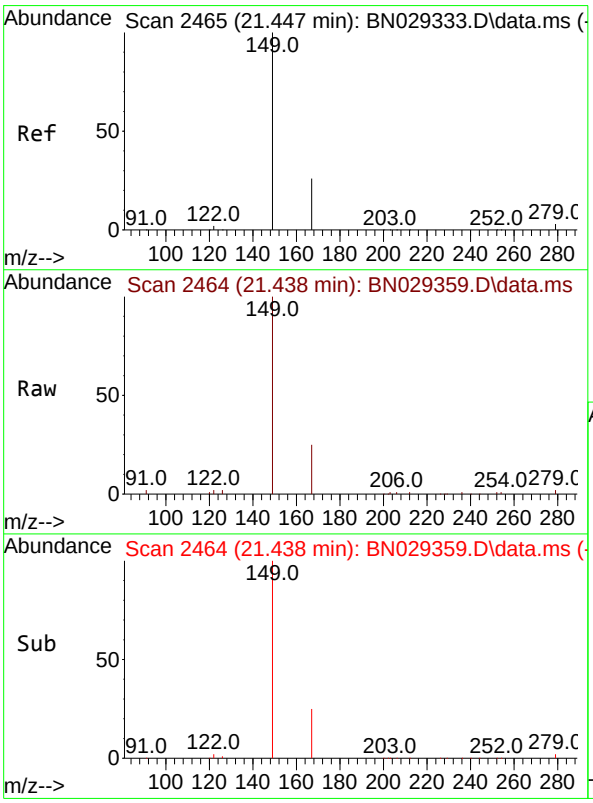
#33
Chrysene
Concen: 0.361 ng
RT: 21.537 min Scan# 24
Delta R.T. -0.009 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Tgt Ion:228 Resp: 24293

Ion	Ratio	Lower	Upper
228	100		
226	31.1	24.6	36.8
229	19.6	16.1	24.1

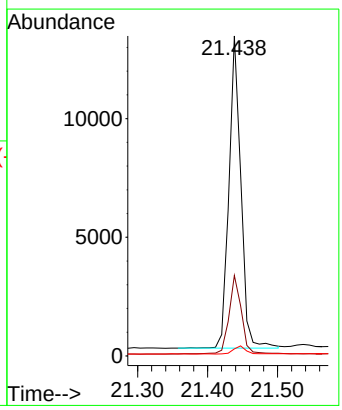


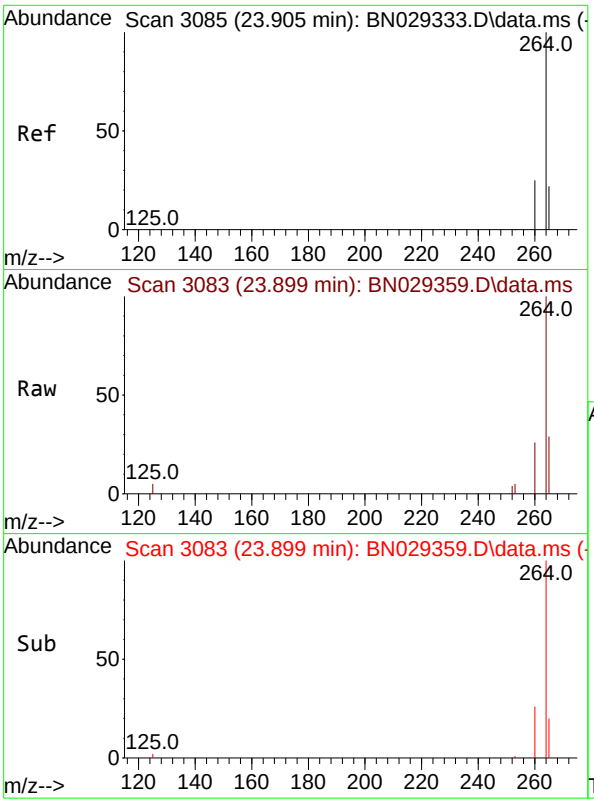


#34
Bis(2-ethylhexyl)phthalate
Concen: 0.433 ng
RT: 21.438 min Scan# 2464
Delta R.T. -0.009 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Tgt Ion:149 Resp: 15570

Ion	Ratio	Lower	Upper
149	100		
167	26.0	19.9	29.9
279	2.7	2.2	3.4



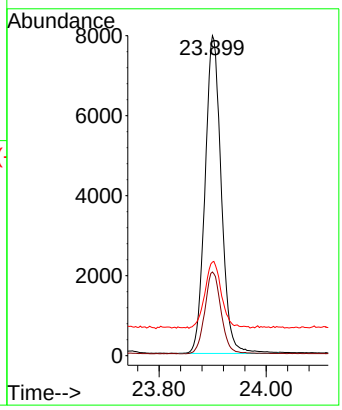


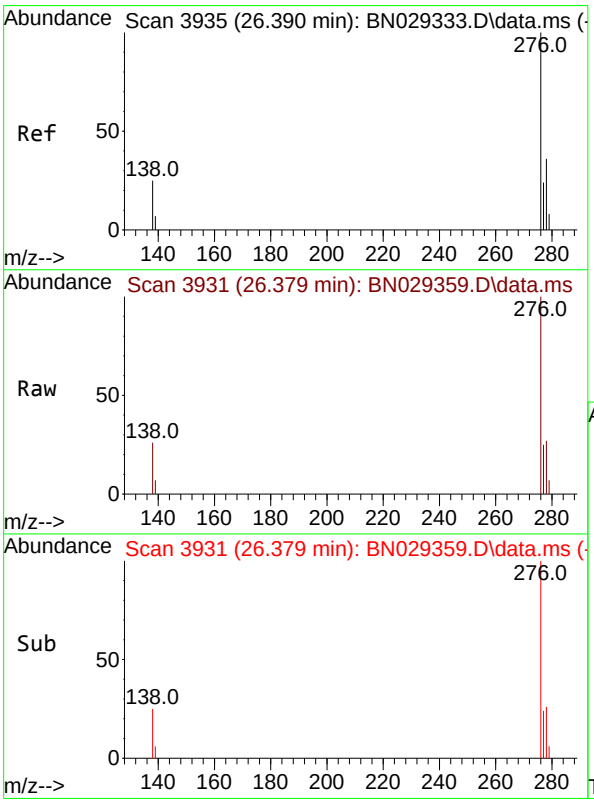
#35
Perylene-d12
Concen: 0.400 ng
RT: 23.899 min Scan# 3
Delta R.T. -0.006 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Tgt Ion:264 Resp: 16662

Ion	Ratio	Lower	Upper
264	100		
260	26.1	20.6	31.0
265	29.2	24.8	37.2

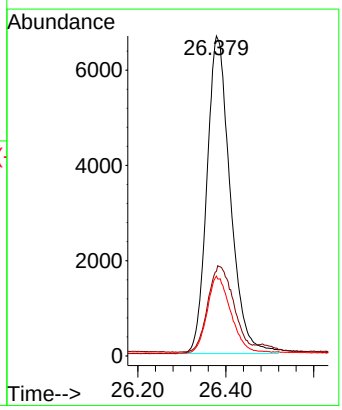


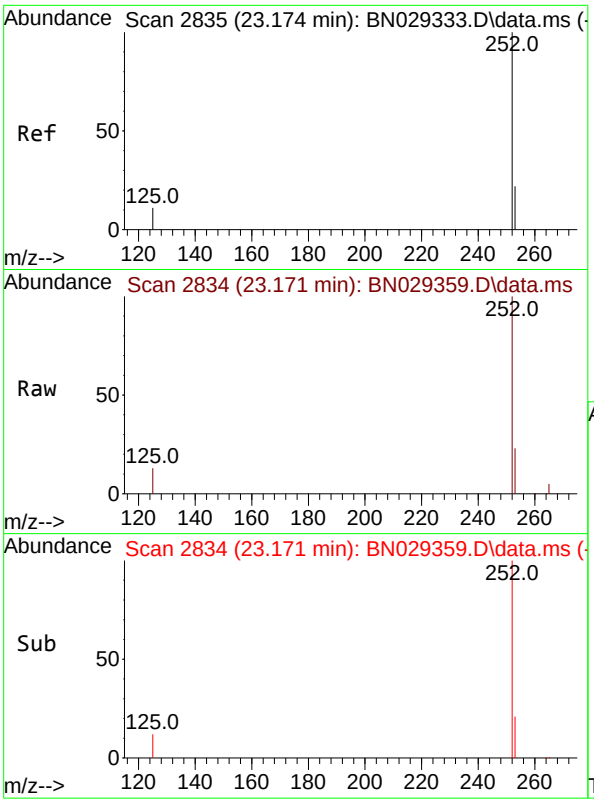


#36
Indeno(1,2,3-cd)pyrene
Concen: 0.345 ng
RT: 26.379 min Scan# 3931
Delta R.T. -0.011 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Tgt Ion:276 Resp: 24532

Ion	Ratio	Lower	Upper
276	100		
138	30.1	21.9	32.9
277	24.9	19.9	29.9



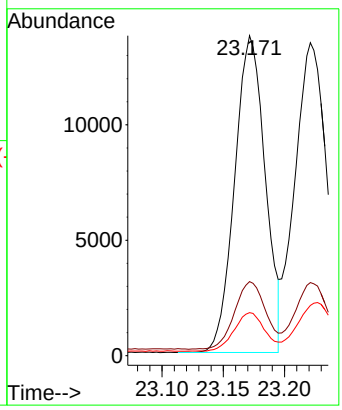


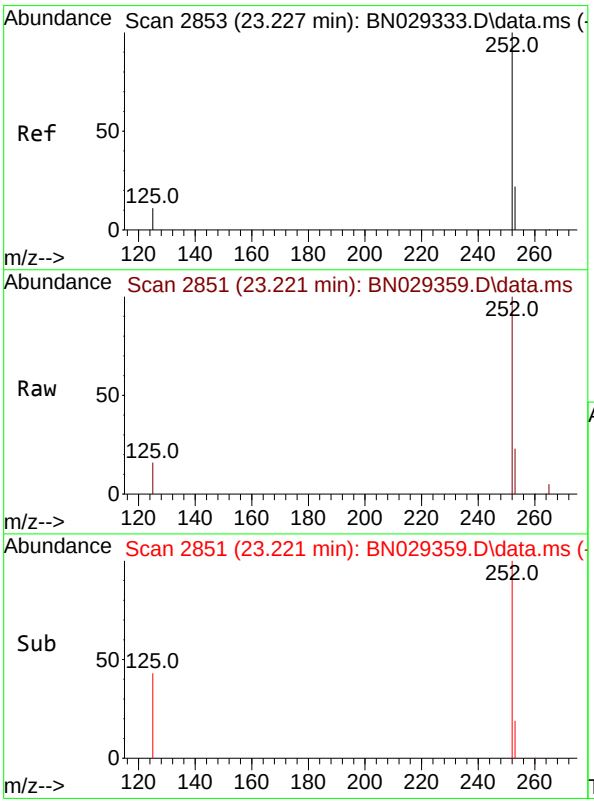
#37
Benzo(b)fluoranthene
Concen: 0.335 ng
RT: 23.171 min Scan# 2
Delta R.T. -0.003 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Tgt Ion:252 Resp: 23747

Ion	Ratio	Lower	Upper
252	100		
253	23.1	18.7	28.1
125	13.4	9.7	14.5

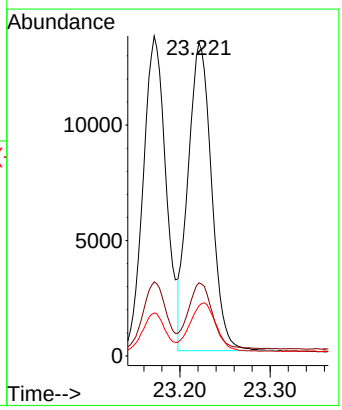


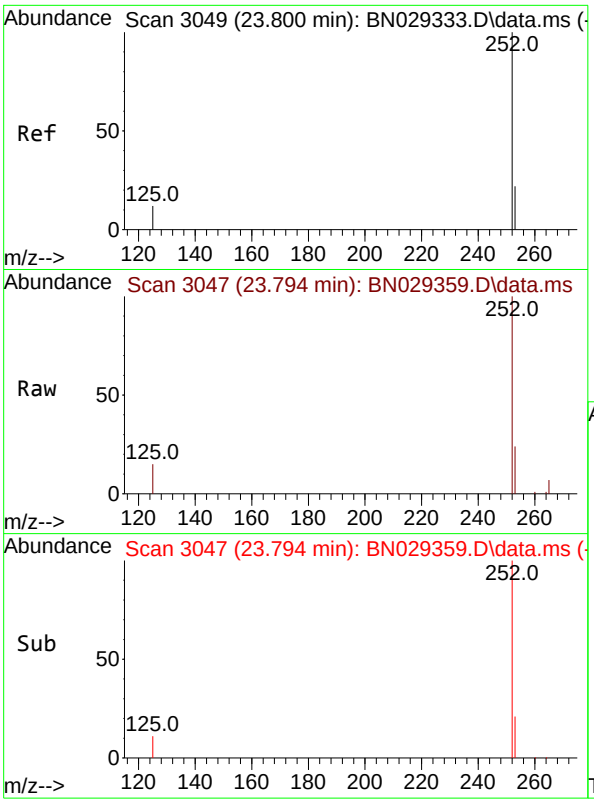


#38
Benzo(k)fluoranthene
Concen: 0.346 ng
RT: 23.221 min Scan# 2851
Delta R.T. -0.006 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Tgt Ion:252 Resp: 24081

Ion	Ratio	Lower	Upper
252	100		
253	23.4	18.8	28.2
125	16.0	9.7	14.5#



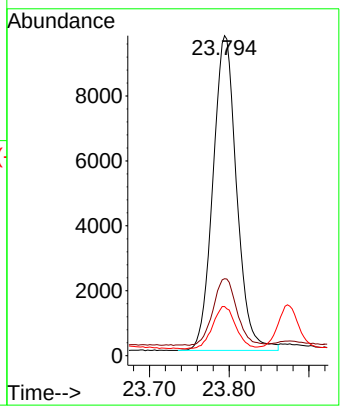


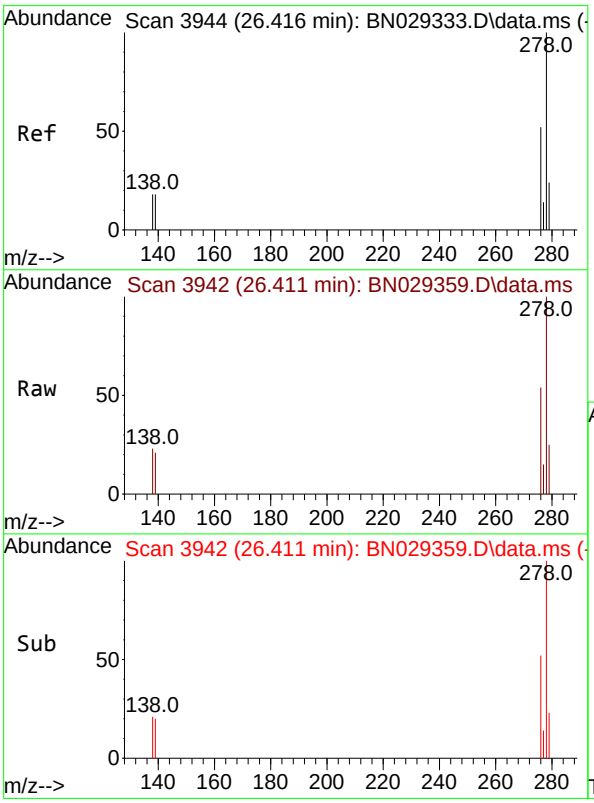
#39
Benzo(a)pyrene
Concen: 0.359 ng
RT: 23.794 min Scan# 3
Delta R.T. -0.006 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Tgt Ion:252 Resp: 20027

Ion	Ratio	Lower	Upper
252	100		
253	24.1	19.6	29.4
125	15.3	11.6	17.4

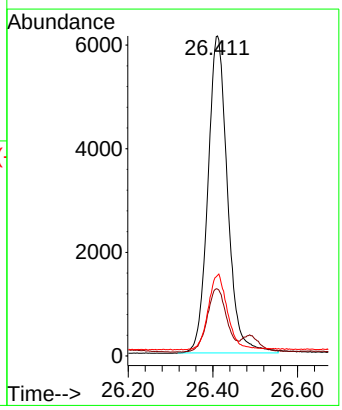


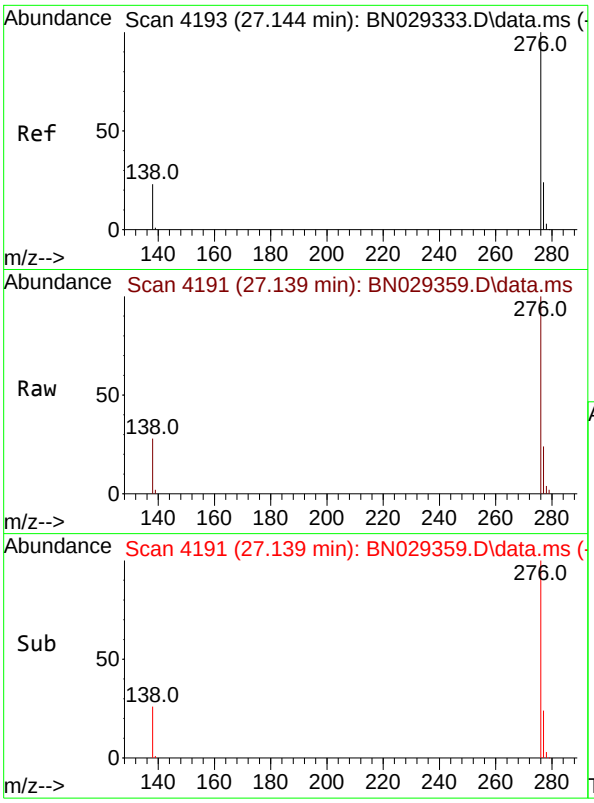


#40
Dibenzo(a,h)anthracene
Concen: 0.343 ng
RT: 26.411 min Scan# 3942
Delta R.T. -0.006 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Tgt Ion:278 Resp: 19730

Ion	Ratio	Lower	Upper
278	100		
139	20.9	15.7	23.5
279	25.2	20.5	30.7





#41
Benzo(g,h,i)perylene
Concen: 0.339 ng
RT: 27.139 min Scan# 4
Delta R.T. -0.006 min
Lab File: BN029359.D
Acq: 23 Jan 2024 23:24

Instrument :
BNA_N
ClientSampleId :
SSTDCCC0.4

Tgt Ion:276 Resp: 20923

Ion	Ratio	Lower	Upper
276	100		
277	24.4	19.8	29.8
138	27.6	19.5	29.3