Quantitation Report (QT Reviewed)

Data Path : Z:\svoasrv\HPCHEM1\BNA_N\Data\BN111322\
Data File : BN022630.D
Acq On : 12 Nov 2022 15:47
Operator : CG/JU
Sample : SSTDICC3.2
Misc :
ALS Vial : 7 Sample Multiplier: 1

Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Quant Time: Nov 14 01:38:42 2022
Quant Method : Z:\svoasrv\HPCHEM1\BNA_N\Methods\8270-SIM-BN111322.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
QLast Update : Mon Nov 14 01:35:37 2022
Response via : Initial Calibration

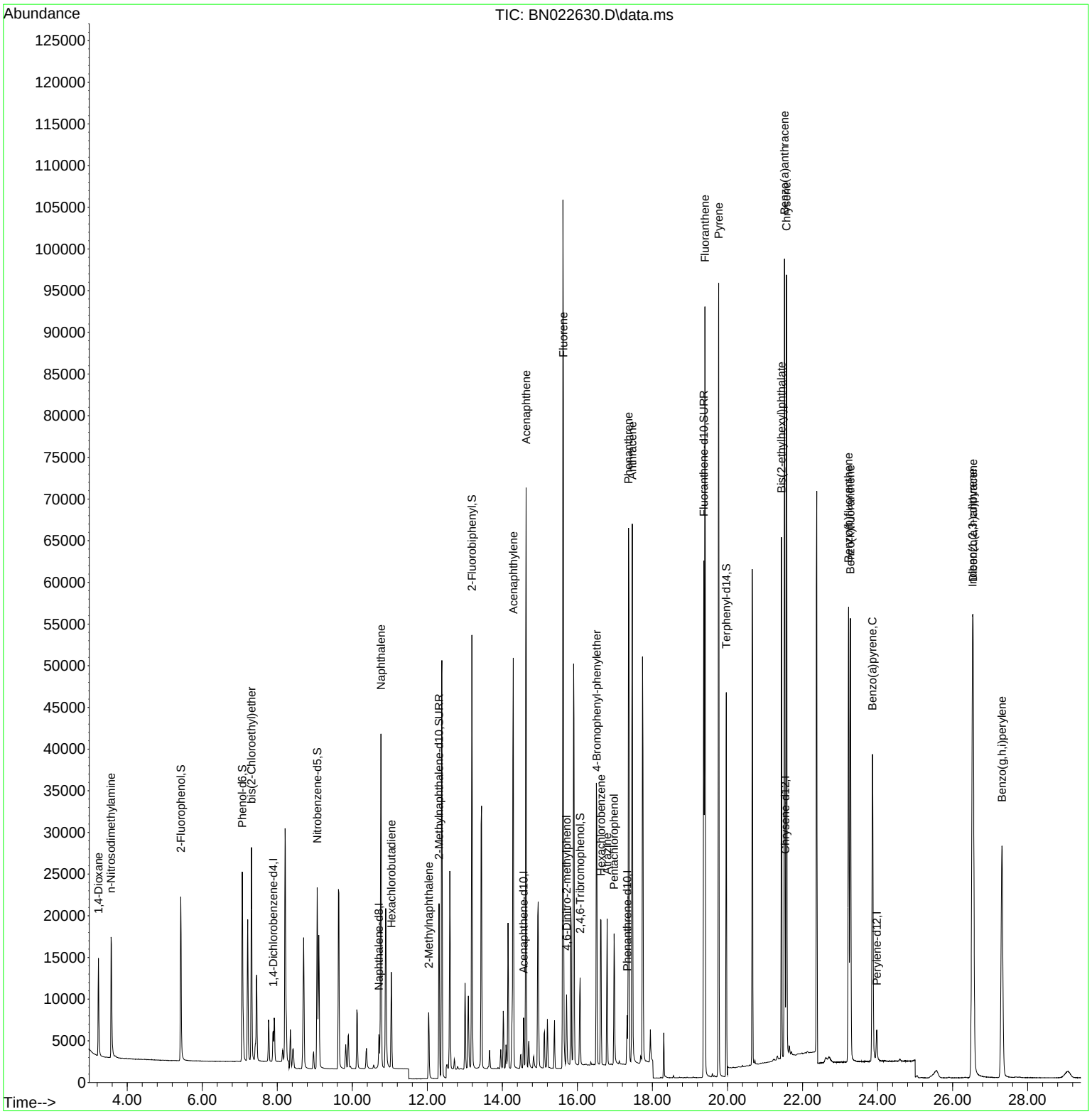
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	7.891	152	1781	0.400	ng		0.00
7) Naphthalene-d8	10.709	136	5197	0.400	ng		#-0.01
13) Acenaphthene-d10	14.568	164	3233	0.400	ng		0.00
19) Phenanthrene-d10	17.325	188	6877	0.400	ng		0.00
29) Chrysene-d12	21.537	240	6153	0.400	ng		0.00
35) Perylene-d12	23.979	264	5362	0.400	ng		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	5.429	112	16192	3.144	ng		0.00
5) Phenol-d6	7.068	99	20927	3.251	ng		0.00
8) Nitrobenzene-d5	9.065	82	17441	3.529	ng		-0.01
11) 2-Methylnaphthalene-d10	12.311	152	28352	3.346	ng		0.00
14) 2,4,6-Tribromophenol	16.071	330	5837	3.733	ng		0.00
15) 2-Fluorobiphenyl	13.188	172	41482	3.152	ng		0.00
27) Fluoranthene-d10	19.369	212	64312	3.396	ng		0.00
31) Terphenyl-d14	19.968	244	57571	3.018	ng		0.00
Target Compounds							Qvalue
2) 1,4-Dioxane	3.233	88	7696	3.063	ng	#	91
3) n-Nitrosodimethylamine	3.573	42	8673	3.377	ng	#	95
6) bis(2-Chloroethyl)ether	7.314	93	18348	3.242	ng		99
9) Naphthalene	10.763	128	50124	3.269	ng		97
10) Hexachlorobutadiene	11.040	225	8914	3.135	ng	#	100
12) 2-Methylnaphthalene	12.035	142	12427	3.965	ng	#	80
16) Acenaphthylene	14.290	152	53325	3.583	ng		100
17) Acenaphthene	14.632	154	33537	3.287	ng		99
18) Fluorene	15.626	166	46519	3.367	ng		98
20) 4,6-Dinitro-2-methylph...	15.711	198	4940	4.786	ng	#	1
21) 4-Bromophenyl-phenylether	16.518	248	13213	3.258	ng		93
22) Hexachlorobenzene	16.630	284	14470	3.062	ng		99
23) Atrazine	16.791	200	12572	3.646	ng		94
24) Pentachlorophenol	16.977	266	7519	4.165	ng		99
25) Phenanthrene	17.362	178	71602	3.230	ng		99
26) Anthracene	17.462	178	65266	3.447	ng		99
28) Fluoranthene	19.399	202	81114	3.375	ng		100
30) Pyrene	19.765	202	82149	3.278	ng		100
32) Benzo(a)anthracene	21.519	228	74754	3.304	ng		98
33) Chrysene	21.573	228	75386	3.232	ng		98
34) Bis(2-ethylhexyl)phtha...	21.439	149	52006	3.983	ng		100
36) Indeno(1,2,3-cd)pyrene	26.531	276	76436	3.017	ng		99
37) Benzo(b)fluoranthene	23.227	252	70677	3.256	ng	#	88
38) Benzo(k)fluoranthene	23.277	252	70968	3.277	ng	#	89
39) Benzo(a)pyrene	23.865	252	57474	3.258	ng	#	84
40) Dibenzo(a,h)anthracene	26.546	278	61453	3.017	ng	#	90
41) Benzo(g,h,i)perylene	27.315	276	62267	2.904	ng		94

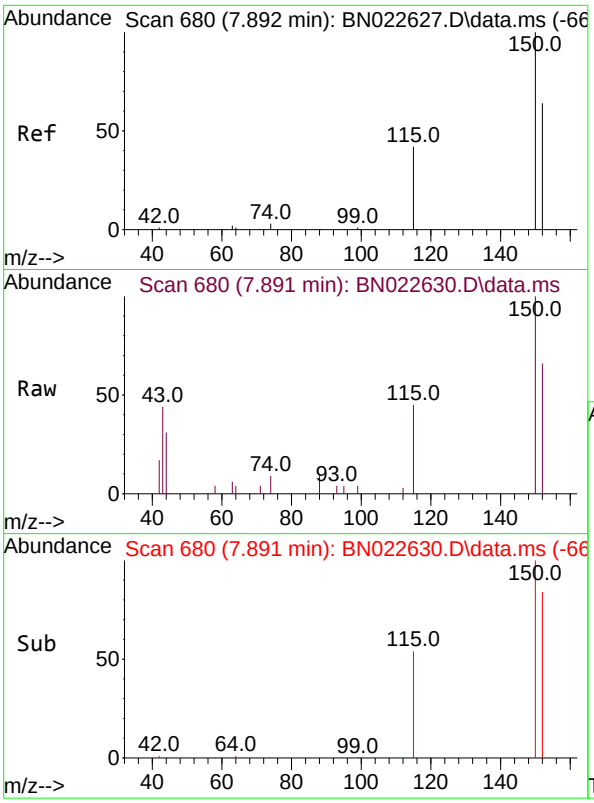
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\svoasrv\HPCHEM1\BNA_N\Data\BN111322\
Data File : BN022630.D
Acq On : 12 Nov 2022 15:47
Operator : CG/JU
Sample : SSTDICC3.2
Misc :
ALS Vial : 7 Sample Multiplier: 1

Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Quant Time: Nov 14 01:38:42 2022
Quant Method : Z:\svoasrv\HPCHEM1\BNA_N\Methods\8270-SIM-BN111322.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
QLast Update : Mon Nov 14 01:35:37 2022
Response via : Initial Calibration



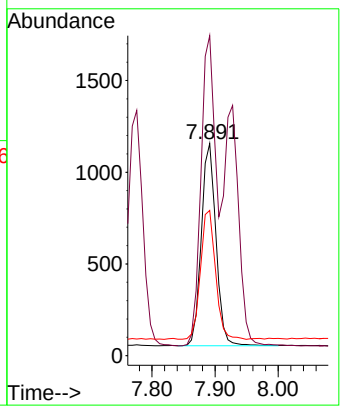


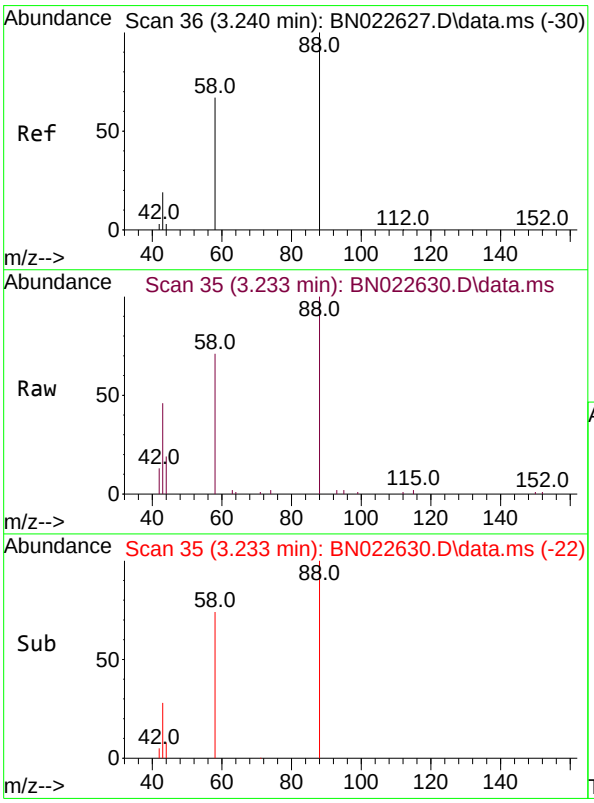
#1
1,4-Dichlorobenzene-d4
Concen: 0.400 ng
RT: 7.891 min Scan# 68
Delta R.T. -0.001 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Tgt Ion:152 Resp: 1781

Ion	Ratio	Lower	Upper
152	100		
150	150.8	122.2	183.4
115	68.5	56.3	84.5

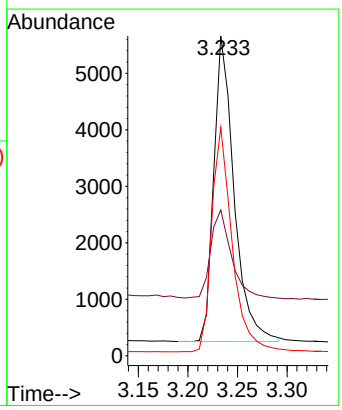


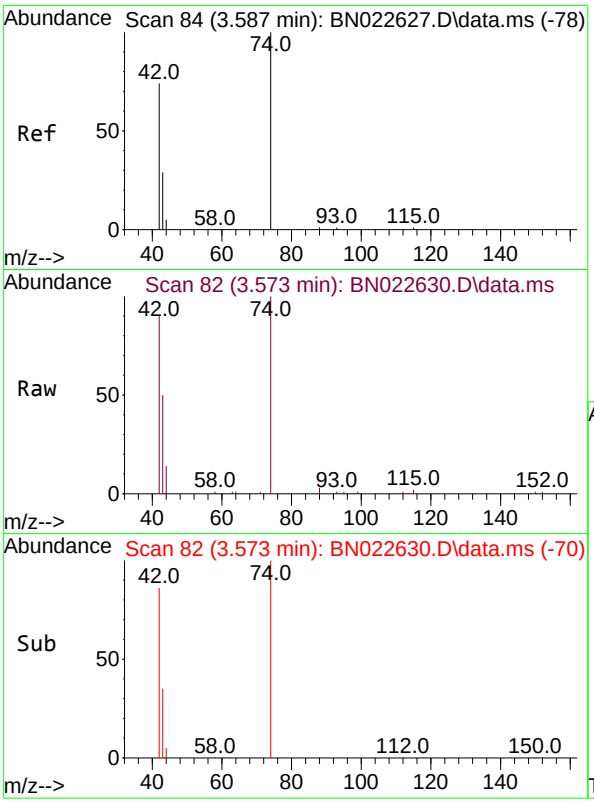


#2
1,4-Dioxane
Concen: 3.063 ng
RT: 3.233 min Scan# 35
Delta R.T. -0.007 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Tgt Ion: 88 Resp: 7696

Ion	Ratio	Lower	Upper
88	100		
43	28.9	34.9	52.3#
58	73.8	58.8	88.2



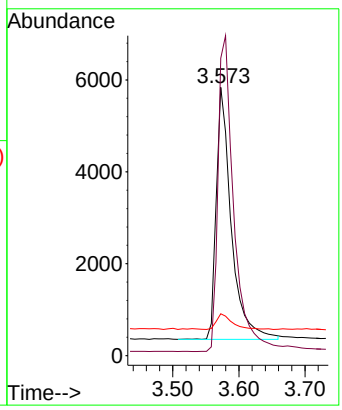


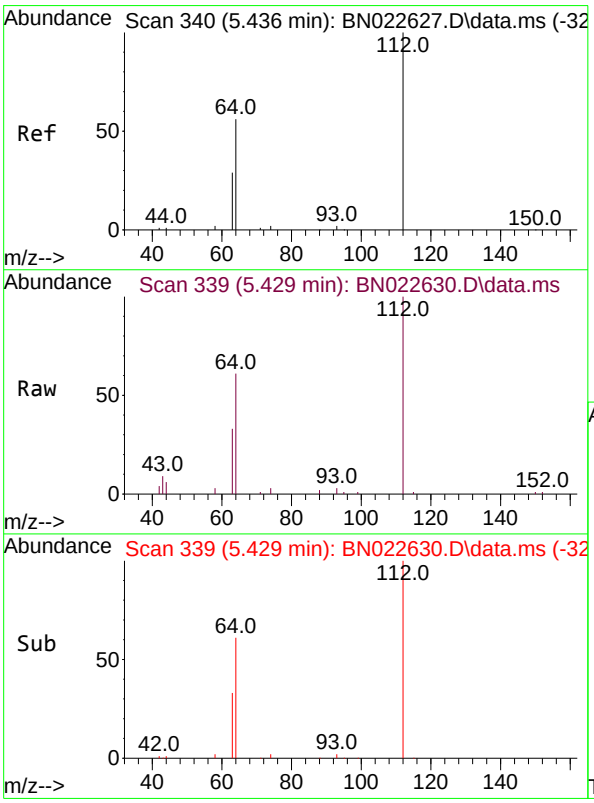
#3
n-Nitrosodimethylamine
Concen: 3.377 ng
RT: 3.573 min Scan# 8
Delta R.T. -0.015 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Tgt Ion: 42 Resp: 8673

Ion	Ratio	Lower	Upper
42	100		
74	131.7	101.3	151.9
44	6.4	7.4	11.0#

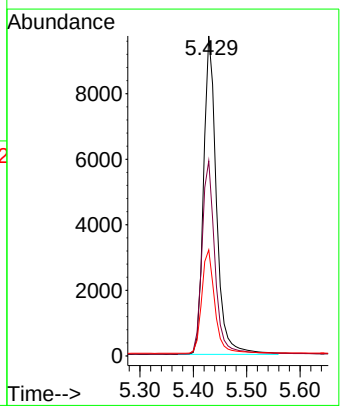


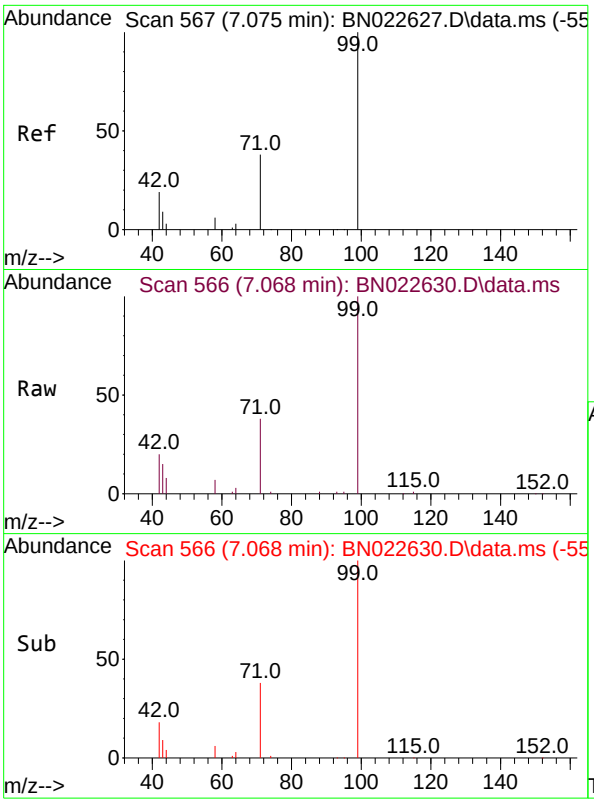


#4
2-Fluorophenol
Concen: 3.144 ng
RT: 5.429 min Scan# 339
Delta R.T. -0.007 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Tgt Ion:112 Resp: 16192

Ion	Ratio	Lower	Upper
112	100		
64	61.4	49.8	74.6
63	33.0	26.0	39.0



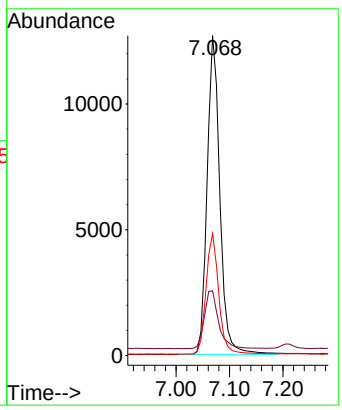


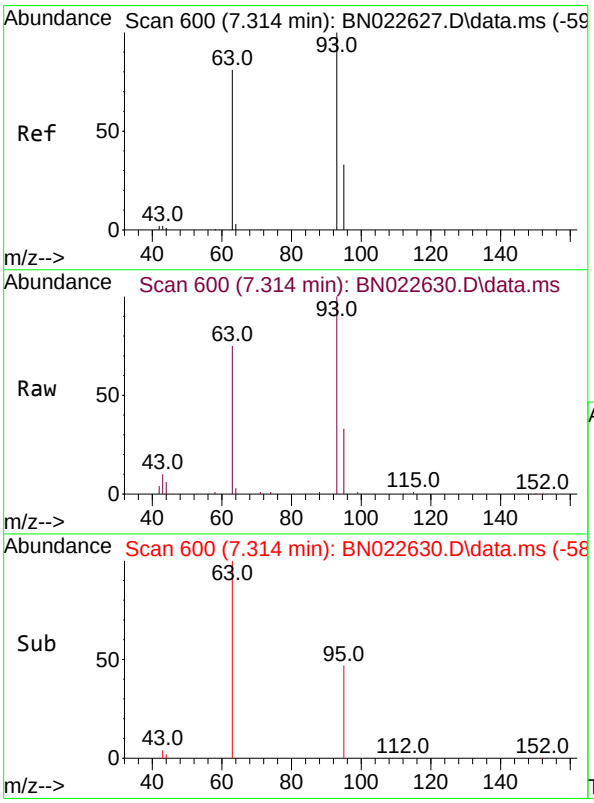
#5
Phenol-d6
Concen: 3.251 ng
RT: 7.068 min Scan# 5
Delta R.T. -0.007 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Tgt Ion: 99 Resp: 20927

Ion	Ratio	Lower	Upper
99	100		
42	20.5	16.9	25.3
71	37.9	30.2	45.4

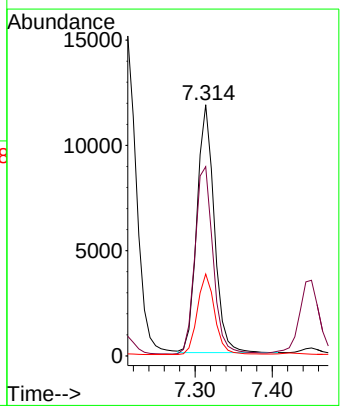


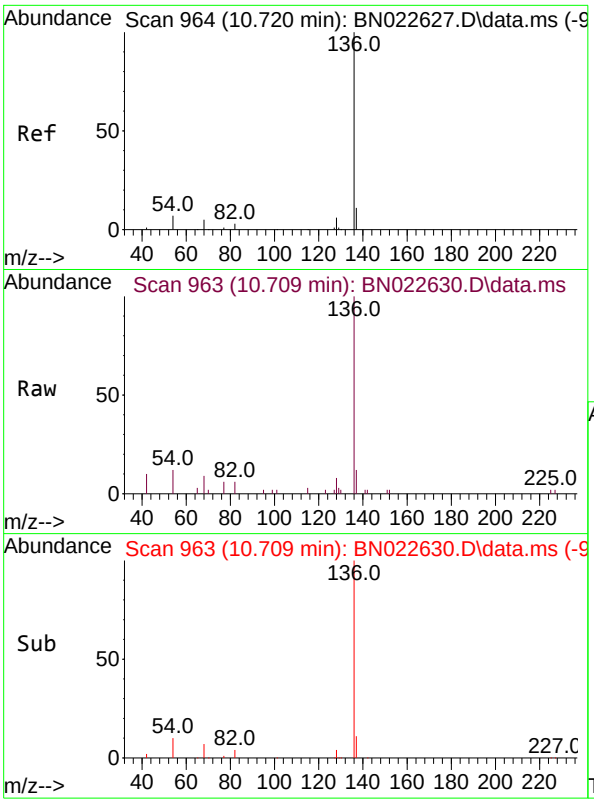


#6
bis(2-Chloroethyl)ether
Concen: 3.242 ng
RT: 7.314 min Scan# 600
Delta R.T. -0.000 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Tgt Ion: 93 Resp: 18348

Ion	Ratio	Lower	Upper
93	100		
63	79.5	62.5	93.7
95	32.8	26.1	39.1



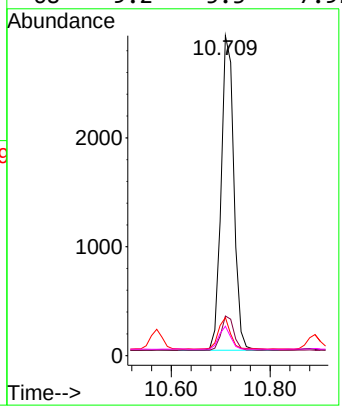


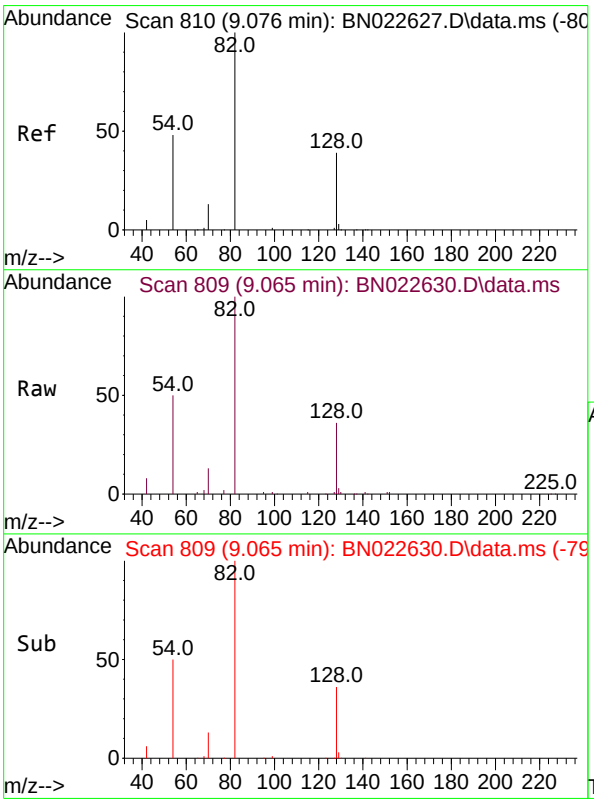
#7
Naphthalene-d8
Concen: 0.400 ng
RT: 10.709 min Scan# 9
Delta R.T. -0.011 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Tgt Ion:136 Resp: 5197

Ion	Ratio	Lower	Upper
136	100		
137	12.4	10.0	15.0
54	11.9	7.0	10.4#
68	9.2	5.3	7.9#

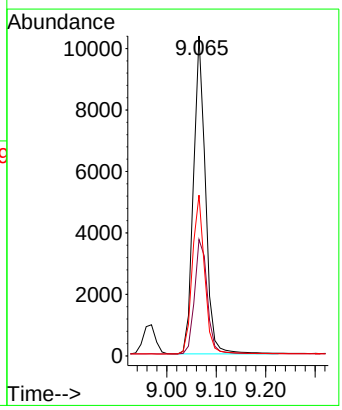


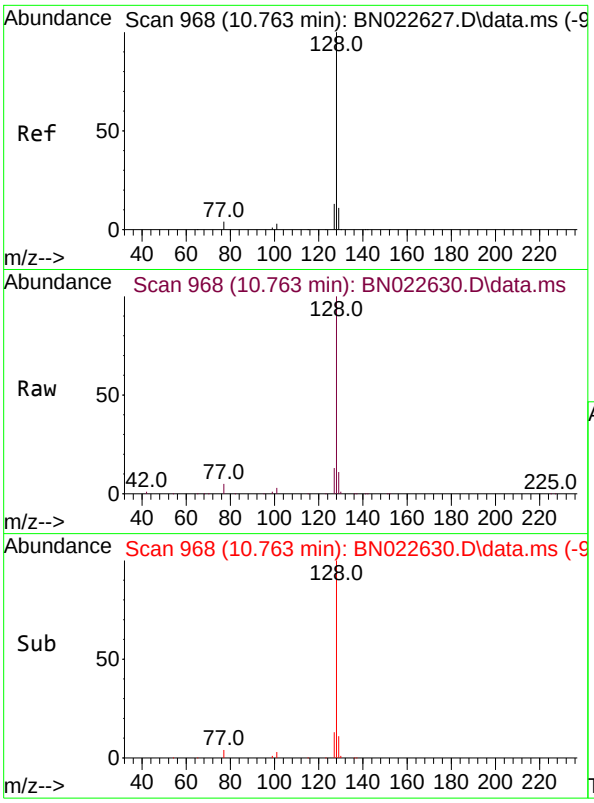


#8
Nitrobenzene-d5
Concen: 3.529 ng
RT: 9.065 min Scan# 809
Delta R.T. -0.011 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Tgt Ion: 82 Resp: 17441

Ion	Ratio	Lower	Upper
82	100		
128	36.4	34.6	51.8
54	50.2	40.4	60.6



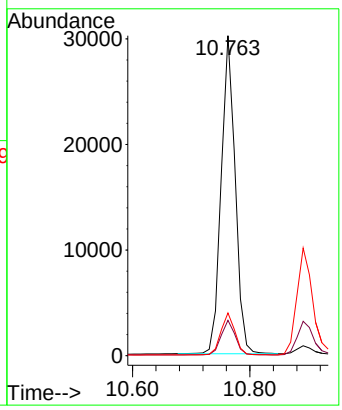


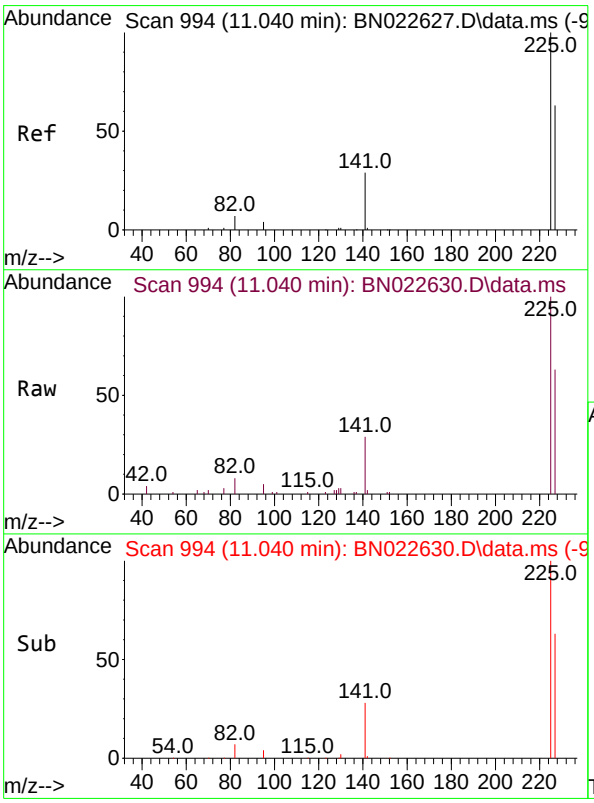
#9
Naphthalene
Concen: 3.269 ng
RT: 10.763 min Scan# 9
Delta R.T. -0.000 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Tgt Ion:128 Resp: 50124

Ion	Ratio	Lower	Upper
128	100		
129	11.0	9.9	14.9
127	13.3	11.4	17.2

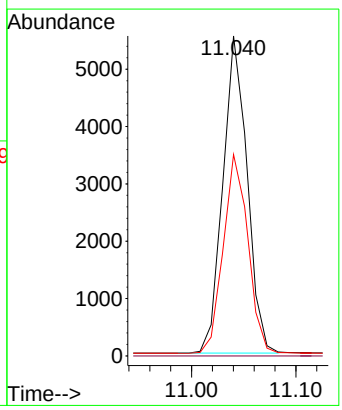


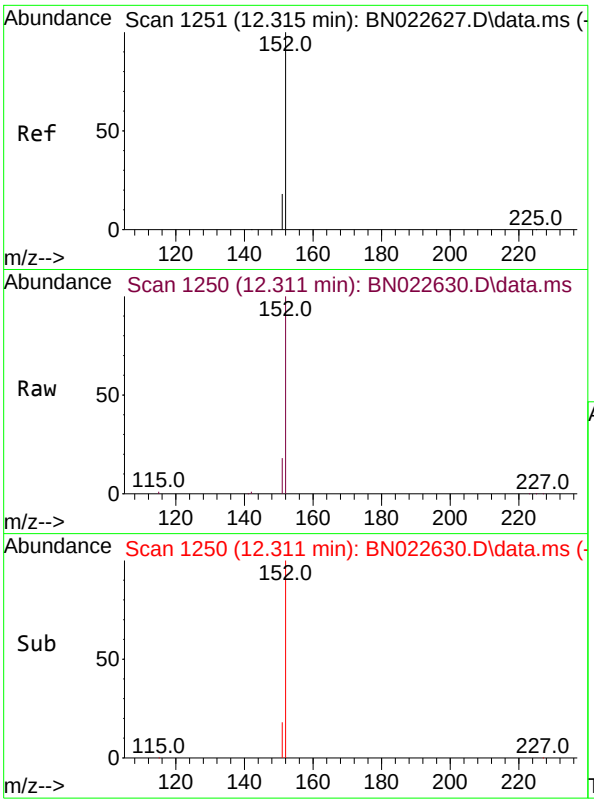


#10
Hexachlorobutadiene
Concen: 3.135 ng
RT: 11.040 min Scan# 994
Delta R.T. -0.000 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Tgt Ion:225 Resp: 8914

Ion	Ratio	Lower	Upper
225	100		
223	0.0	0.0	0.0
227	63.7	51.3	76.9



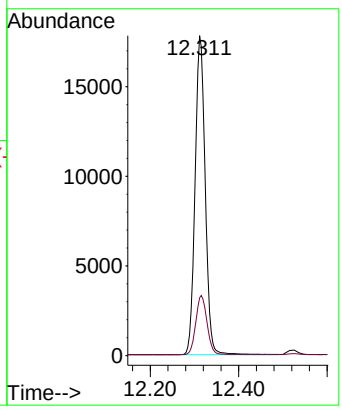


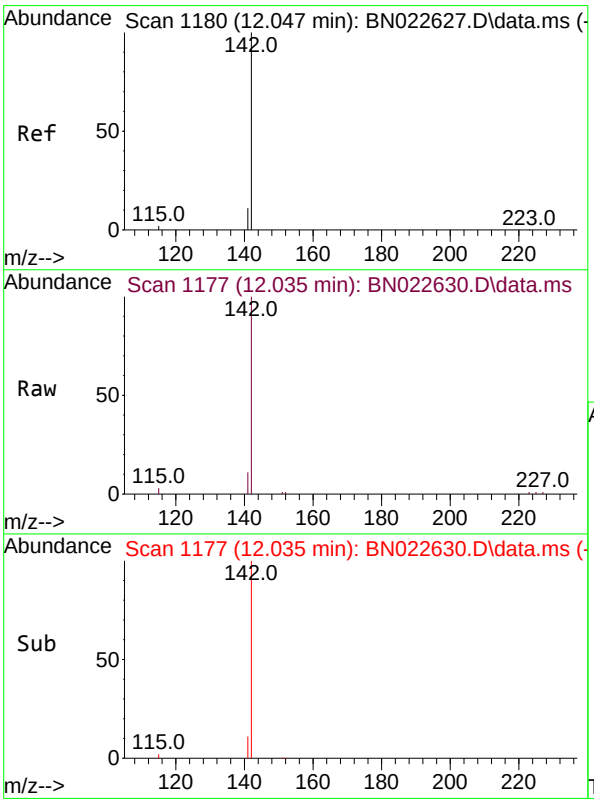
#11
2-Methylnaphthalene-d10
Concen: 3.346 ng
RT: 12.311 min Scan# 11
Delta R.T. -0.004 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Tgt Ion:152 Resp: 28352

Ion	Ratio	Lower	Upper
152	100		
151	20.5	16.3	24.5

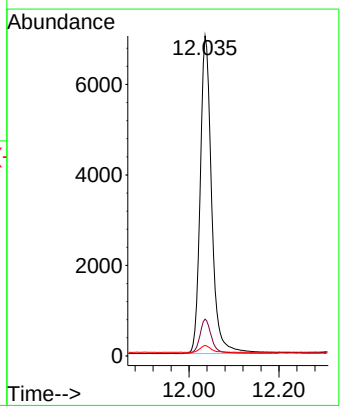


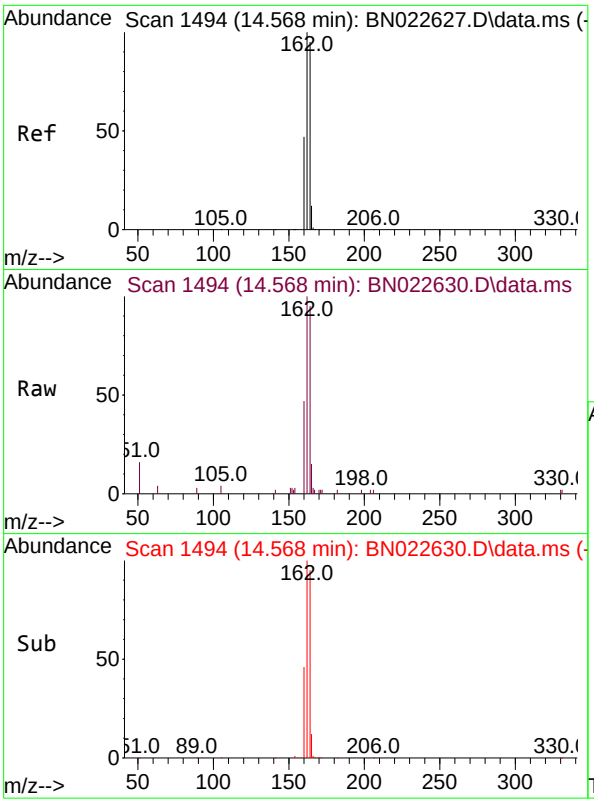


#12
2-Methylnaphthalene
Concen: 3.965 ng
RT: 12.035 min Scan# 1177
Delta R.T. -0.011 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Tgt Ion:142 Resp: 12427

Ion	Ratio	Lower	Upper
142	100		
141	11.5	14.9	22.3#
115	3.3	11.3	16.9#



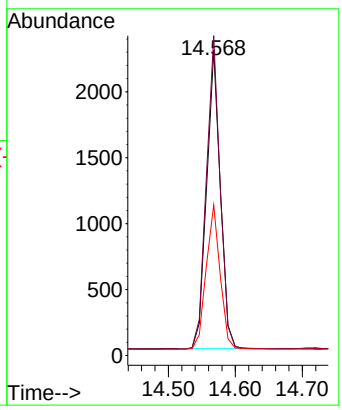


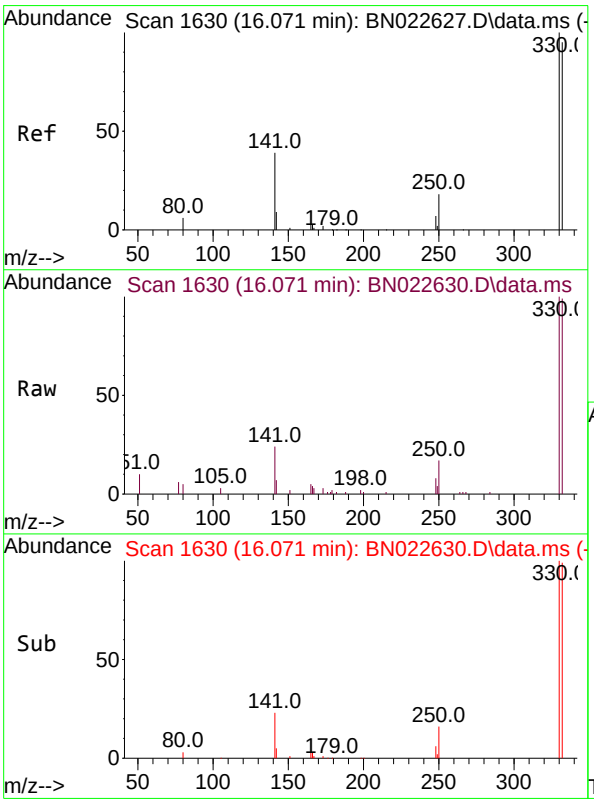
#13
Acenaphthene-d10
Concen: 0.400 ng
RT: 14.568 min Scan# 14
Delta R.T. -0.000 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Tgt Ion:164 Resp: 3233

Ion	Ratio	Lower	Upper
164	100		
162	104.7	84.1	126.1
160	49.3	40.2	60.2

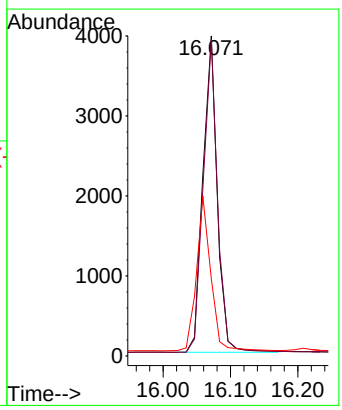


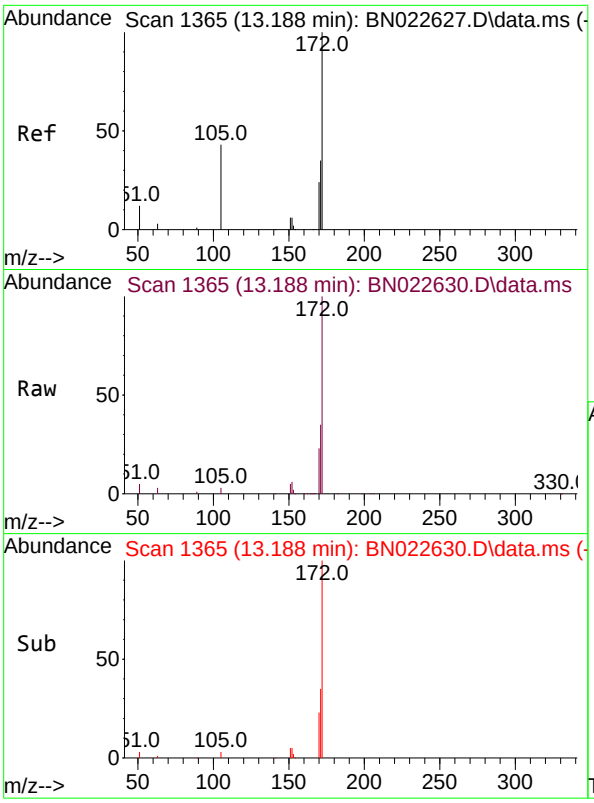


#14
2,4,6-Tribromophenol
Concen: 3.733 ng
RT: 16.071 min Scan# 1630
Delta R.T. -0.000 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Tgt Ion:330 Resp: 5837

Ion	Ratio	Lower	Upper
330	100		
332	98.0	77.2	115.8
141	48.5	46.2	69.2



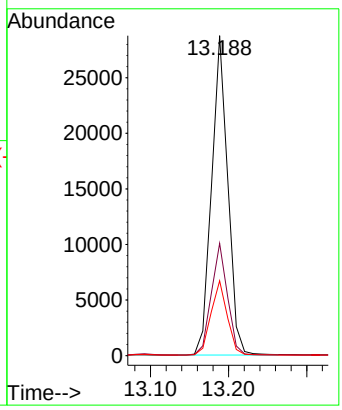


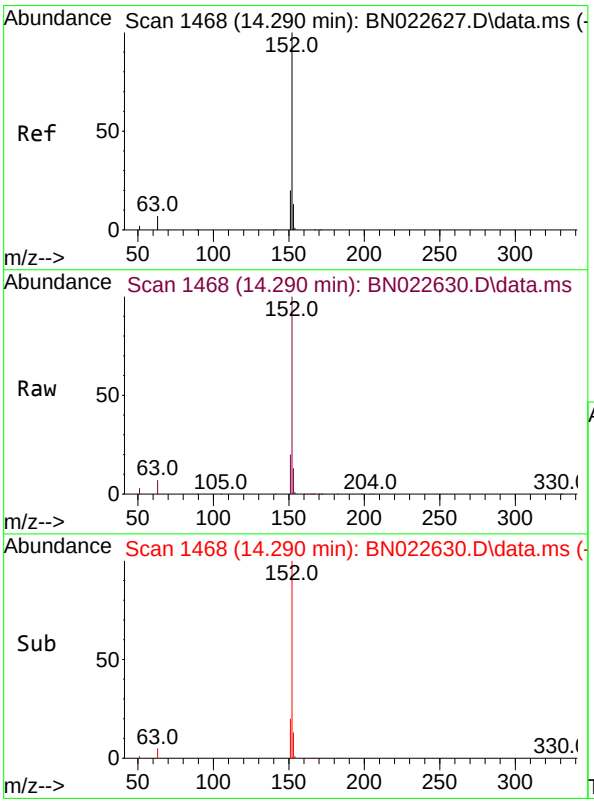
#15
2-Fluorobiphenyl
Concen: 3.152 ng
RT: 13.188 min Scan# 1
Delta R.T. -0.000 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Tgt Ion:172 Resp: 41482

Ion	Ratio	Lower	Upper
172	100		
171	35.1	29.0	43.4
170	23.4	20.1	30.1

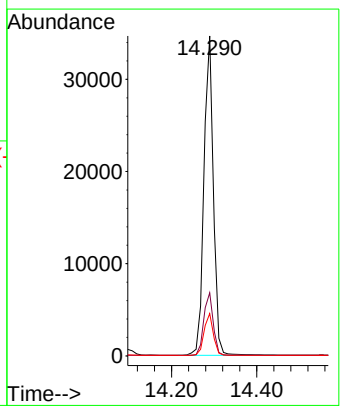


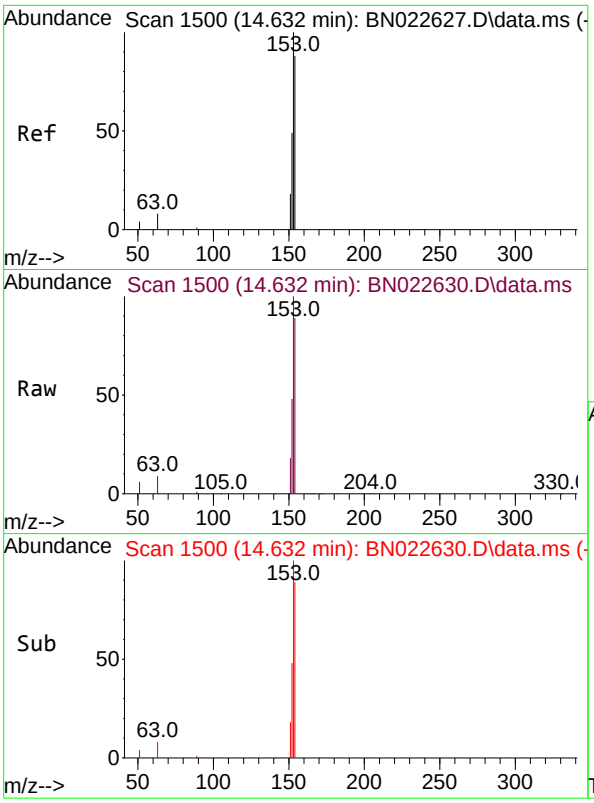


#16
Acenaphthylene
Concen: 3.583 ng
RT: 14.290 min Scan# 1468
Delta R.T. -0.000 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Tgt Ion:152 Resp: 53325

Ion	Ratio	Lower	Upper
152	100		
151	19.6	15.7	23.5
153	12.9	10.3	15.5



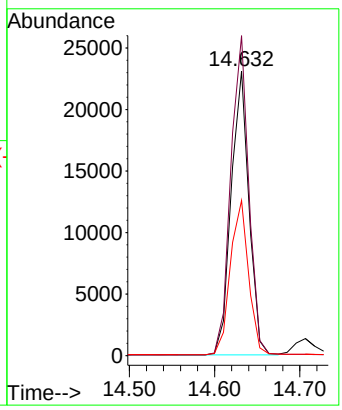


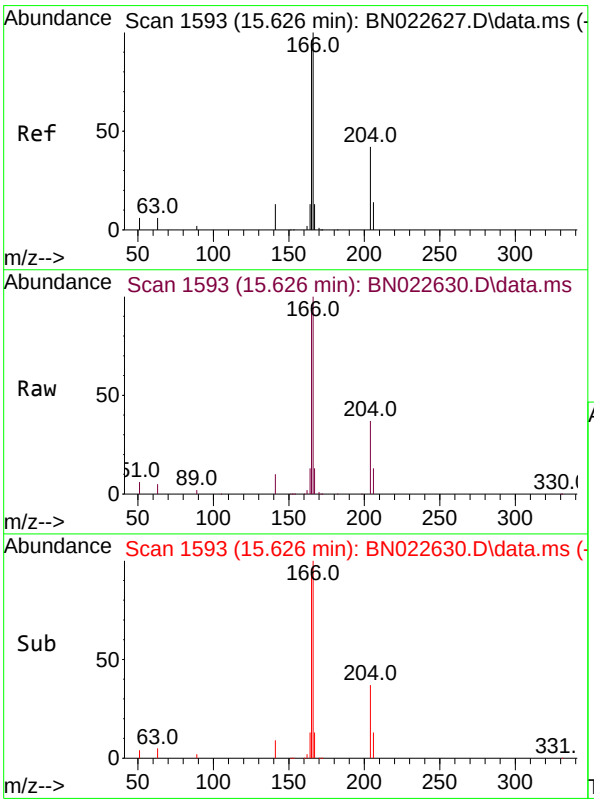
#17
Acenaphthene
Concen: 3.287 ng
RT: 14.632 min Scan# 1
Delta R.T. -0.000 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Tgt Ion:154 Resp: 33537

Ion	Ratio	Lower	Upper
154	100		
153	114.1	91.6	137.4
152	56.0	45.6	68.4

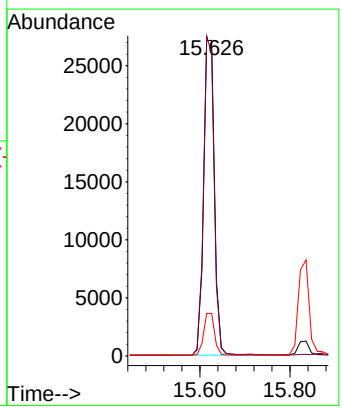


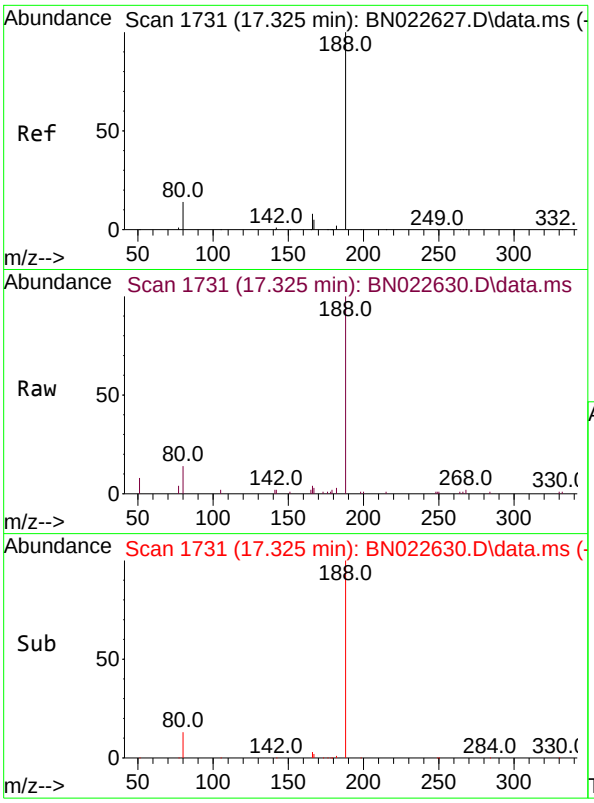


#18
Fluorene
Concen: 3.367 ng
RT: 15.626 min Scan# 1593
Delta R.T. -0.000 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Tgt Ion:166 Resp: 46519

Ion	Ratio	Lower	Upper
166	100		
165	94.7	77.8	116.8
167	12.8	10.2	15.4





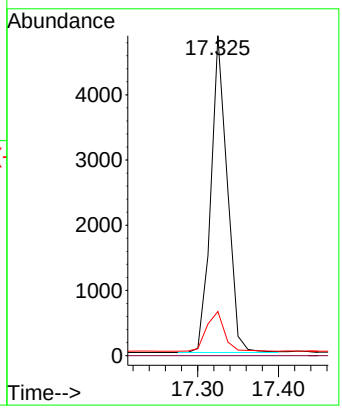
#19
Phenanthrene-d10
Concen: 0.400 ng
RT: 17.325 min Scan# 1

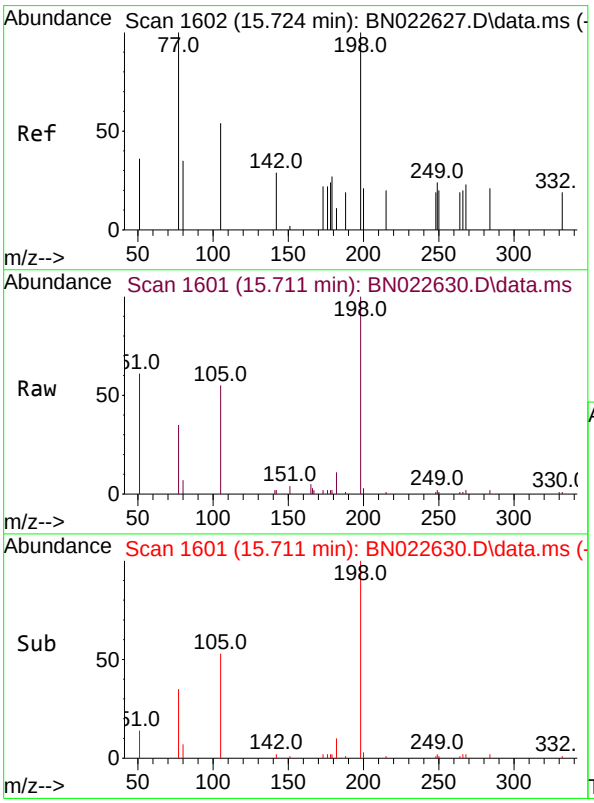
Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Delta R.T. -0.000 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Tgt Ion:188 Resp: 6877

Ion	Ratio	Lower	Upper
188	100		
94	0.0	0.0	0.0
80	13.8	12.6	19.0

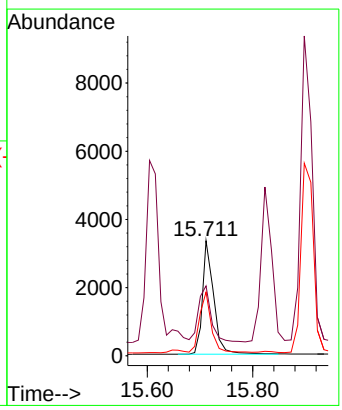


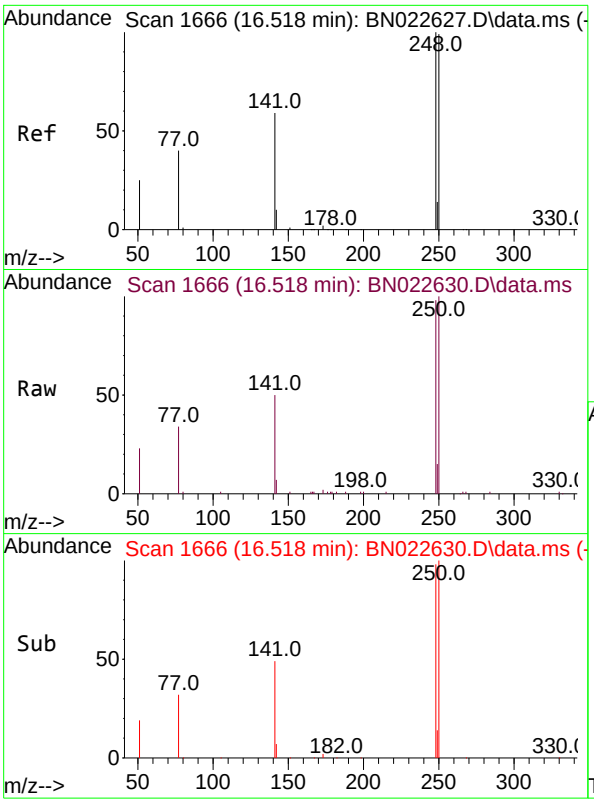


#20
4,6-Dinitro-2-methylphenol
Concen: 4.786 ng
RT: 15.711 min Scan# 1601
Delta R.T. -0.012 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Tgt Ion:198 Resp: 4940

Ion	Ratio	Lower	Upper
198	100		
51	60.8	266.5	399.7#
105	55.3	64.5	96.7#



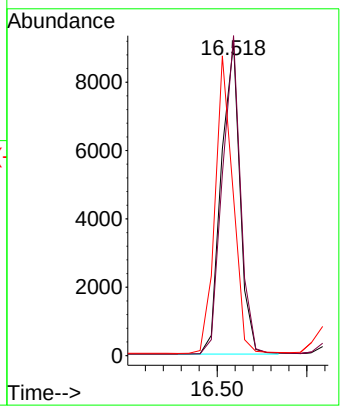


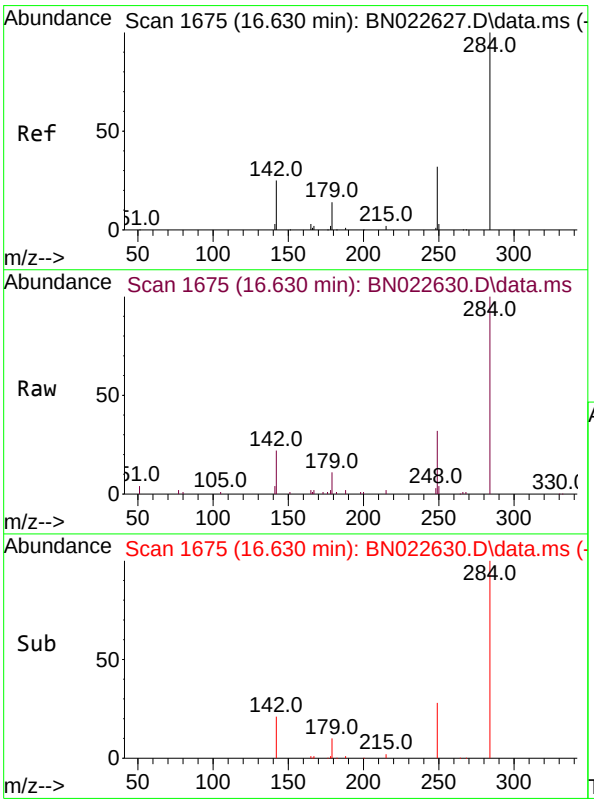
#21
4-Bromophenyl-phenylether
Concen: 3.258 ng
RT: 16.518 min Scan# 1
Delta R.T. -0.000 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Tgt Ion:248 Resp: 13213

Ion	Ratio	Lower	Upper
248	100		
250	102.2	79.8	119.6
141	50.6	49.8	74.8

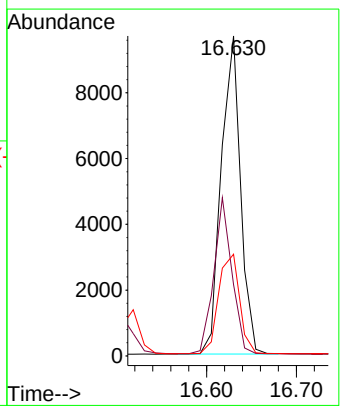


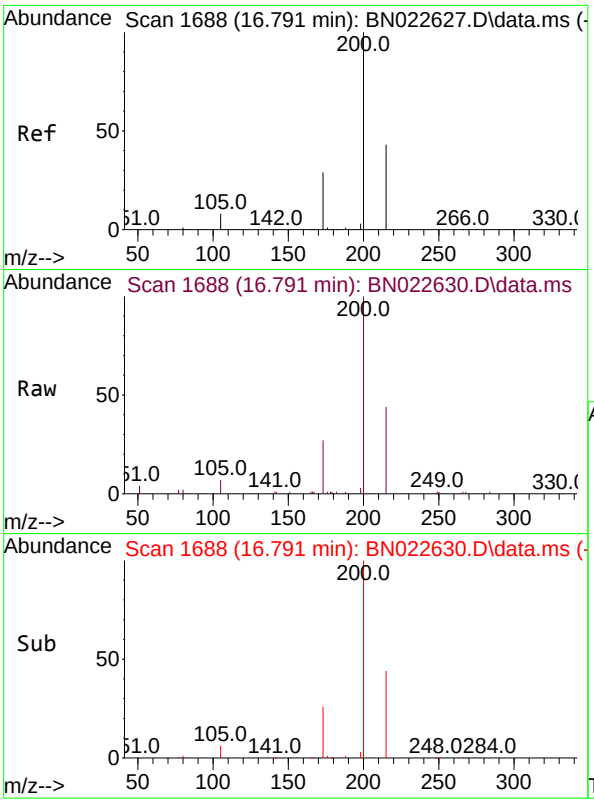


#22
Hexachlorobenzene
Concen: 3.062 ng
RT: 16.630 min Scan# 1675
Delta R.T. -0.000 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Tgt Ion:284 Resp: 14470

Ion	Ratio	Lower	Upper
284	100		
142	45.8	36.2	54.2
249	34.1	27.6	41.4



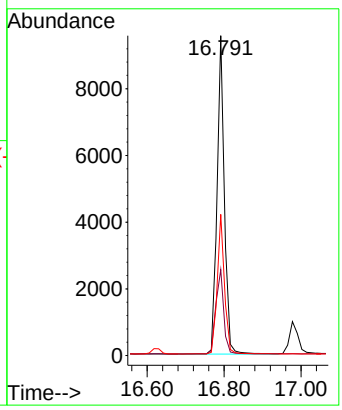


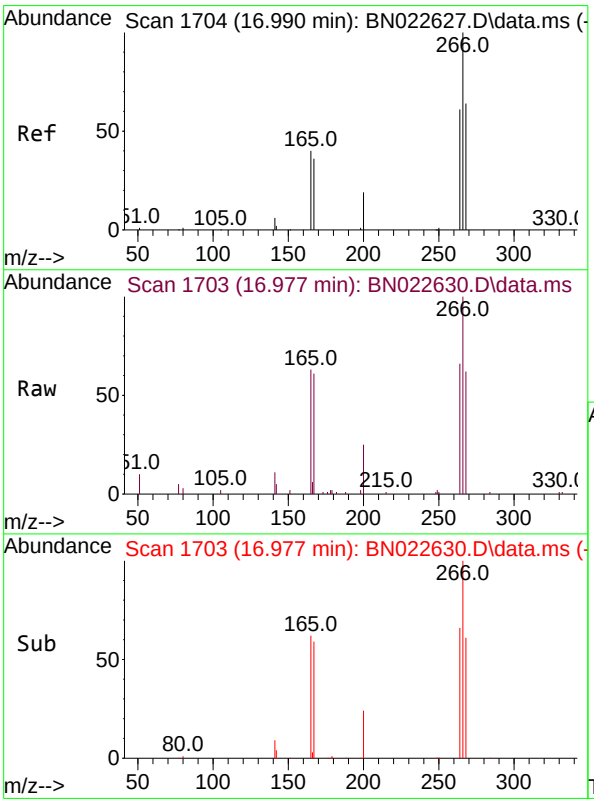
#23
Atrazine
Concen: 3.646 ng
RT: 16.791 min Scan# 1
Delta R.T. -0.000 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Tgt Ion:200 Resp: 12572

Ion	Ratio	Lower	Upper
200	100		
173	26.9	26.2	39.4
215	44.1	36.4	54.6

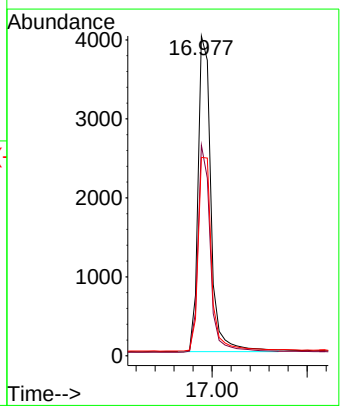


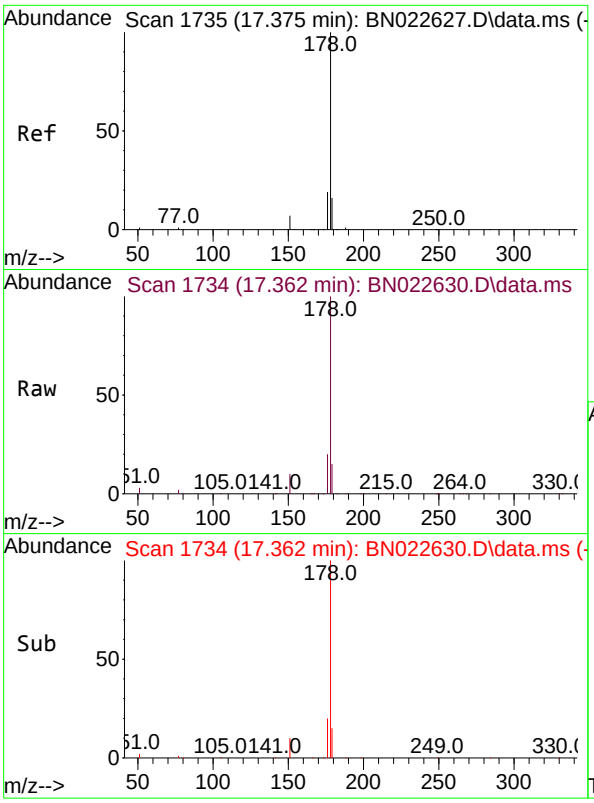


#24
Pentachlorophenol
Concen: 4.165 ng
RT: 16.977 min Scan# 1703
Delta R.T. -0.012 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Tgt Ion:266 Resp: 7519

Ion	Ratio	Lower	Upper
266	100		
264	62.9	49.6	74.4
268	64.0	50.9	76.3



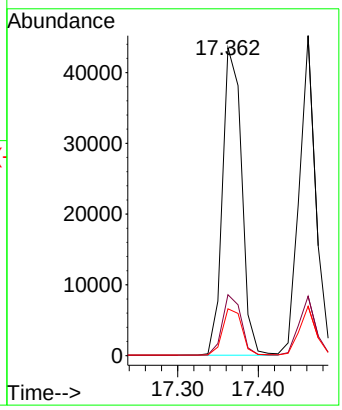


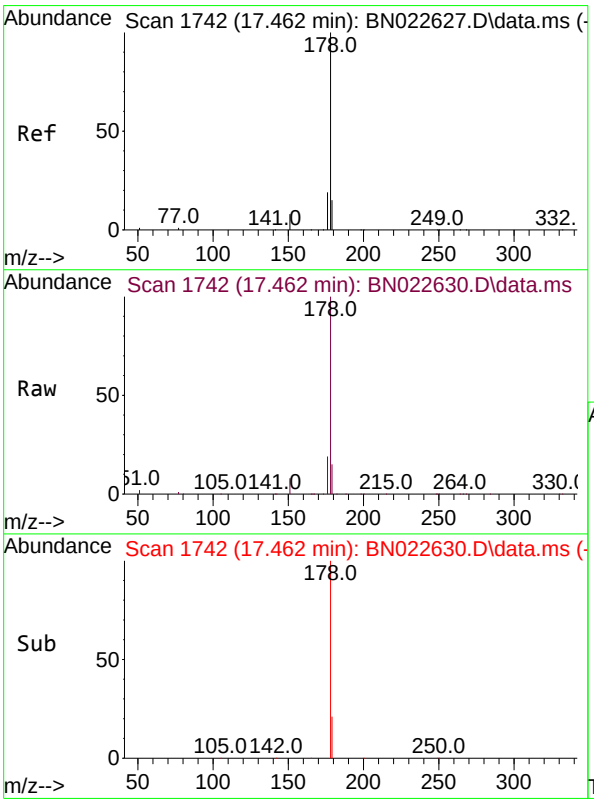
#25
Phenanthrene
Concen: 3.230 ng
RT: 17.362 min Scan# 1
Delta R.T. -0.012 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Tgt Ion:178 Resp: 71602

Ion	Ratio	Lower	Upper
178	100		
176	19.4	15.7	23.5
179	15.3	12.6	19.0

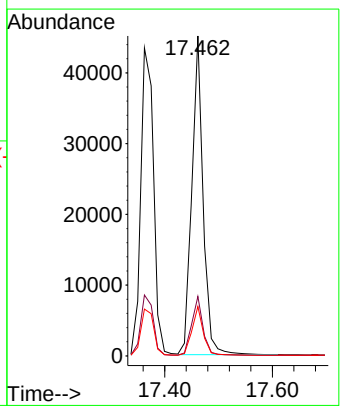


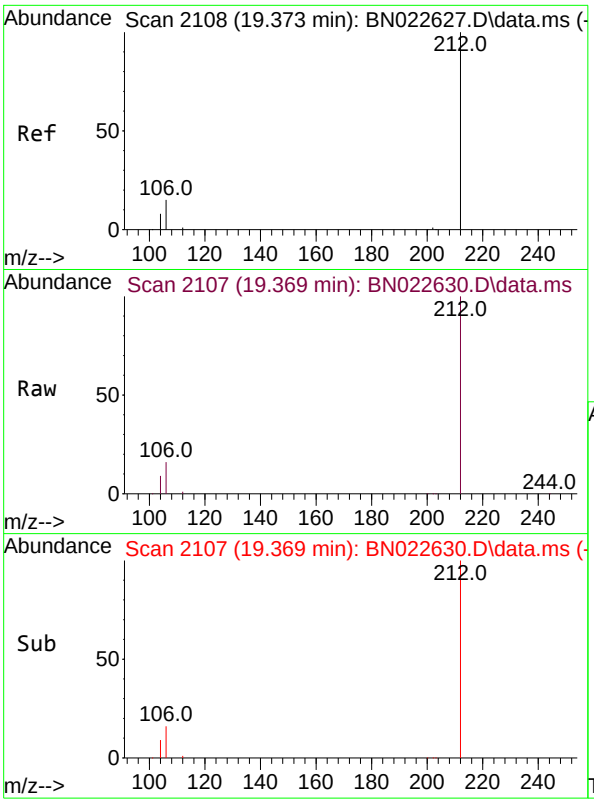


#26
Anthracene
Concen: 3.447 ng
RT: 17.462 min Scan# 1742
Delta R.T. -0.000 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Tgt Ion:178 Resp: 65266

Ion	Ratio	Lower	Upper
178	100		
176	18.6	15.1	22.7
179	15.2	11.7	17.5



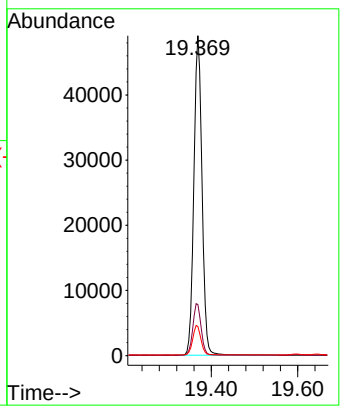


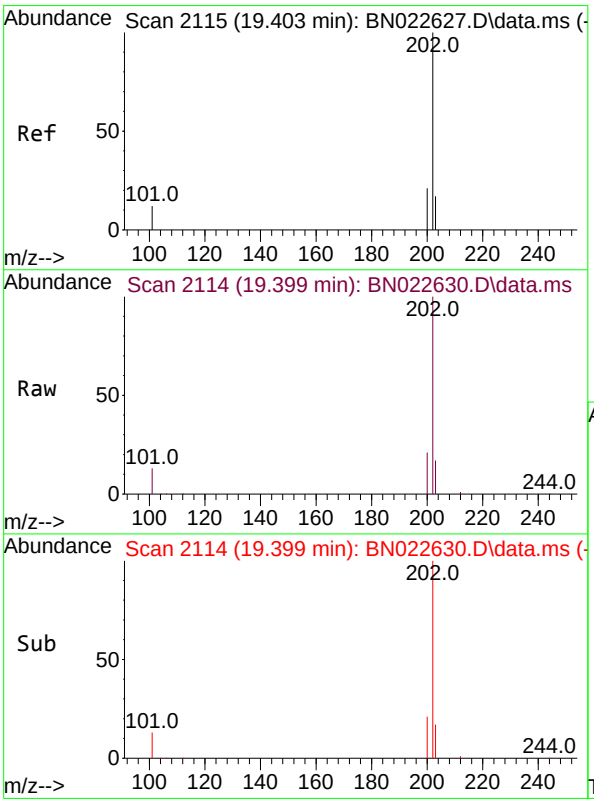
#27
Fluoranthene-d10
Concen: 3.396 ng
RT: 19.369 min Scan# 21
Delta R.T. -0.004 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Tgt Ion:212 Resp: 64312

Ion	Ratio	Lower	Upper
212	100		
106	16.3	13.3	19.9
104	9.3	7.8	11.8

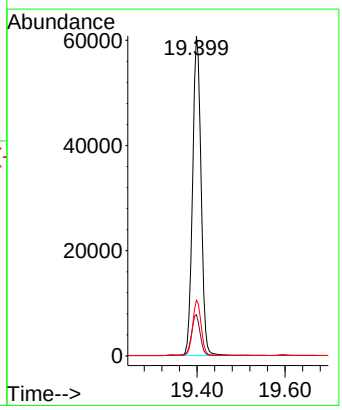


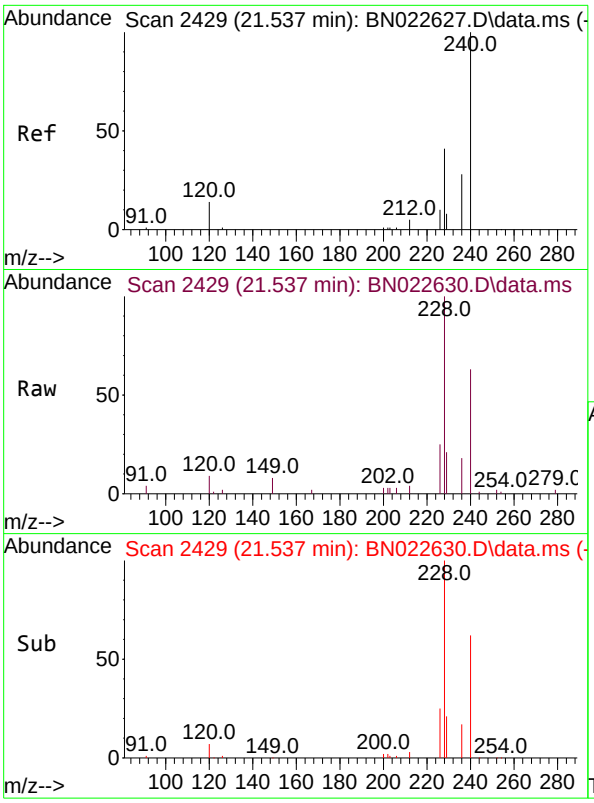


#28
Fluoranthene
Concen: 3.375 ng
RT: 19.399 min Scan# 2114
Delta R.T. -0.004 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Tgt Ion:202 Resp: 81114

Ion	Ratio	Lower	Upper
202	100		
101	13.1	10.4	15.6
203	17.2	13.9	20.9



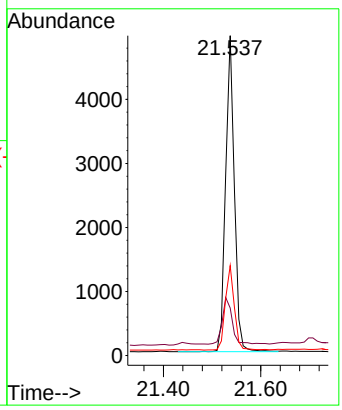


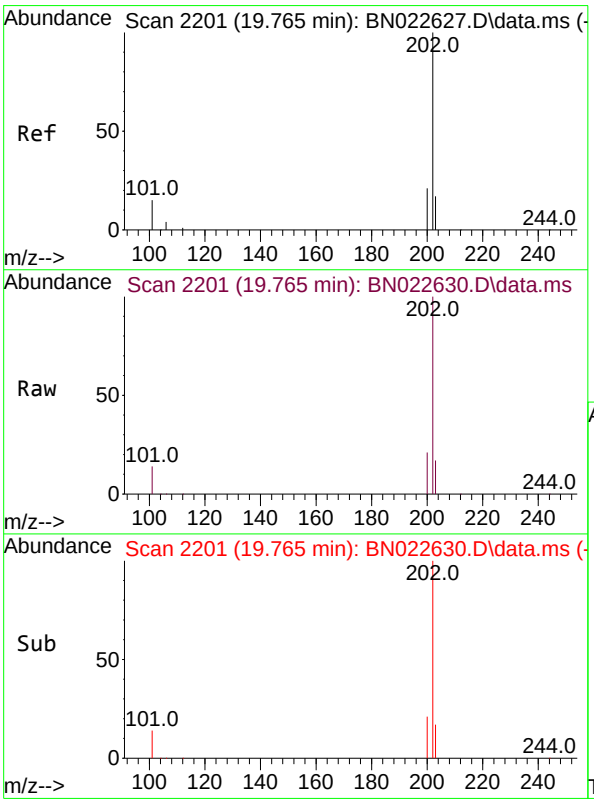
#29
Chrysene-d12
Concen: 0.400 ng
RT: 21.537 min Scan# 24
Delta R.T. -0.000 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Tgt Ion:240 Resp: 6153

Ion	Ratio	Lower	Upper
240	100		
120	14.9	14.0	21.0
236	28.1	23.4	35.2

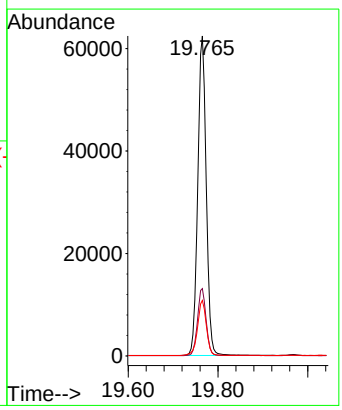


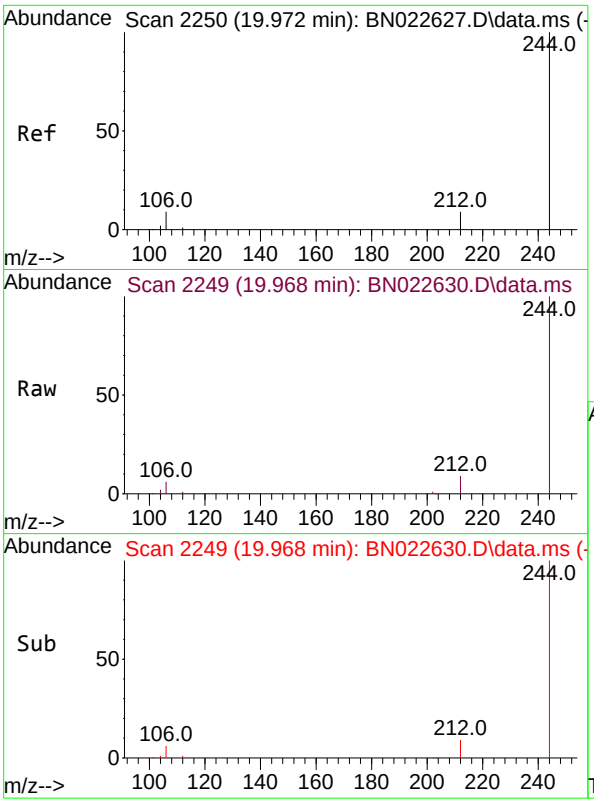


#30
Pyrene
Concen: 3.278 ng
RT: 19.765 min Scan# 2201
Delta R.T. -0.000 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Tgt Ion:202 Resp: 82149

Ion	Ratio	Lower	Upper
202	100		
200	21.2	17.0	25.4
203	17.9	14.6	22.0



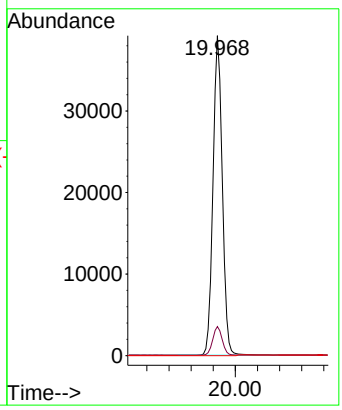


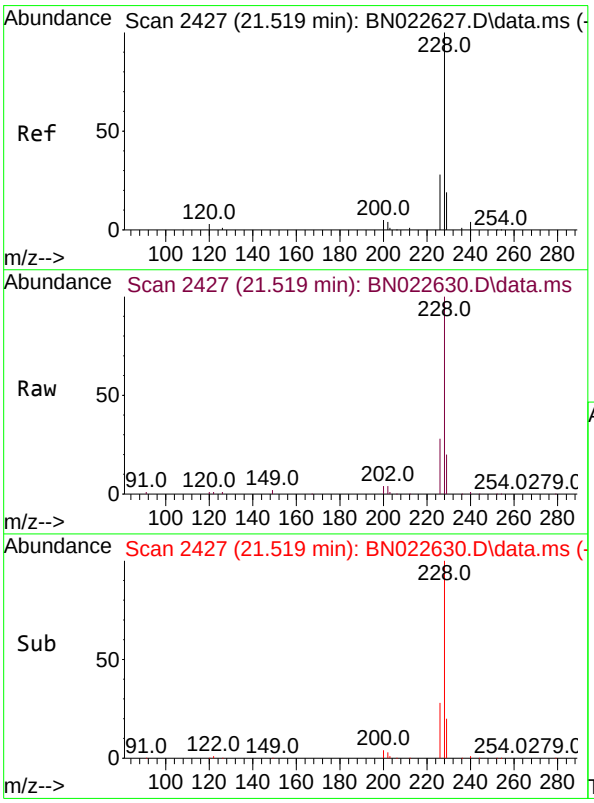
#31
Terphenyl-d14
Concen: 3.018 ng
RT: 19.968 min Scan# 2
Delta R.T. -0.004 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Tgt Ion:244 Resp: 57571

Ion	Ratio	Lower	Upper
244	100		
212	9.1	8.3	12.5
122	0.0	0.0	0.0

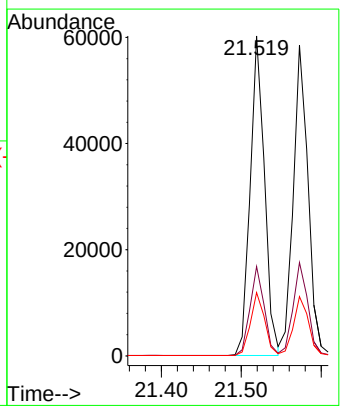


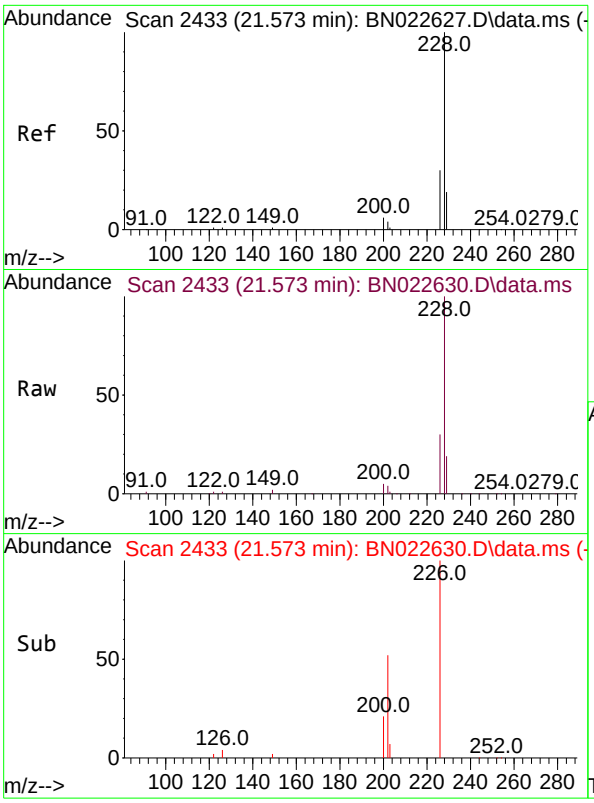


#32
Benzo(a)anthracene
Concen: 3.304 ng
RT: 21.519 min Scan# 2427
Delta R.T. -0.000 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Tgt Ion:228 Resp: 74754

Ion	Ratio	Lower	Upper
228	100		
226	27.9	23.3	34.9
229	19.8	16.5	24.7



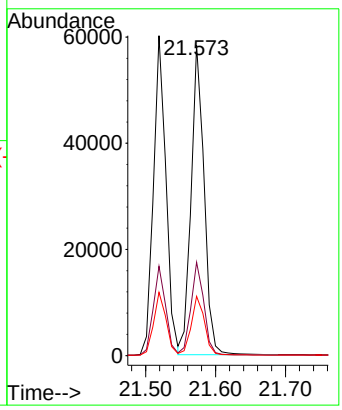


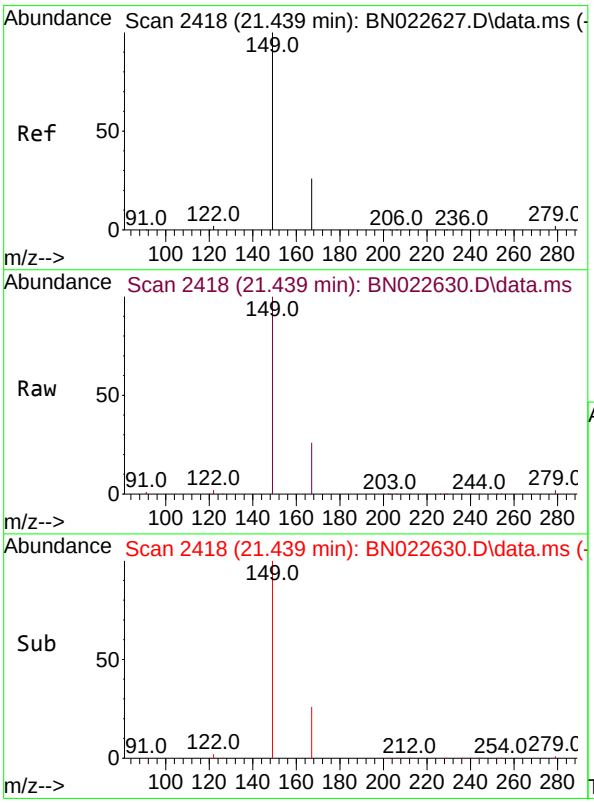
#33
Chrysene
Concen: 3.232 ng
RT: 21.573 min Scan# 24
Delta R.T. -0.000 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Tgt Ion:228 Resp: 75386

Ion	Ratio	Lower	Upper
228	100		
226	30.1	24.9	37.3
229	19.1	16.2	24.2

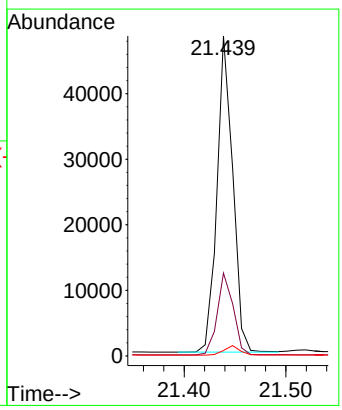


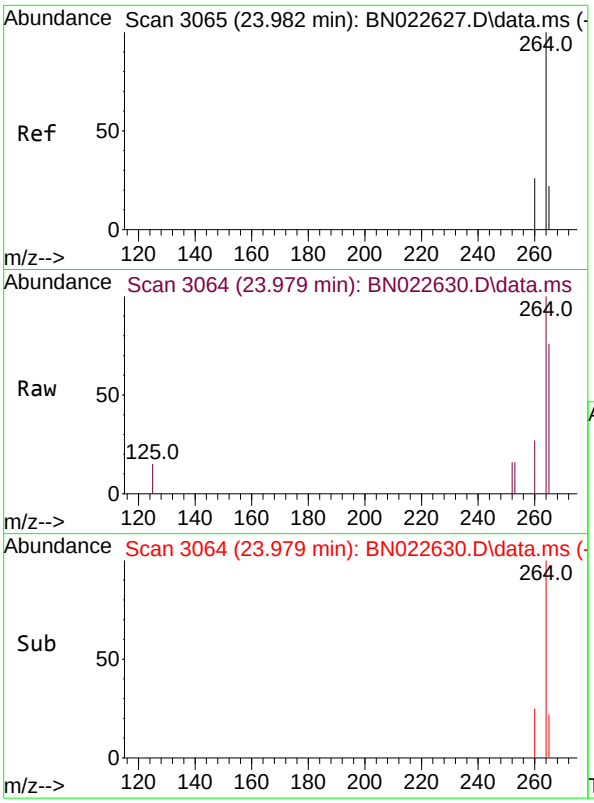


#34
Bis(2-ethylhexyl)phthalate
Concen: 3.983 ng
RT: 21.439 min Scan# 2418
Delta R.T. -0.000 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Tgt Ion:149 Resp: 52006

Ion	Ratio	Lower	Upper
149	100		
167	26.2	21.1	31.7
279	3.0	2.8	4.2



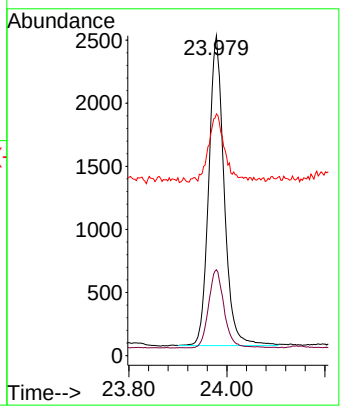


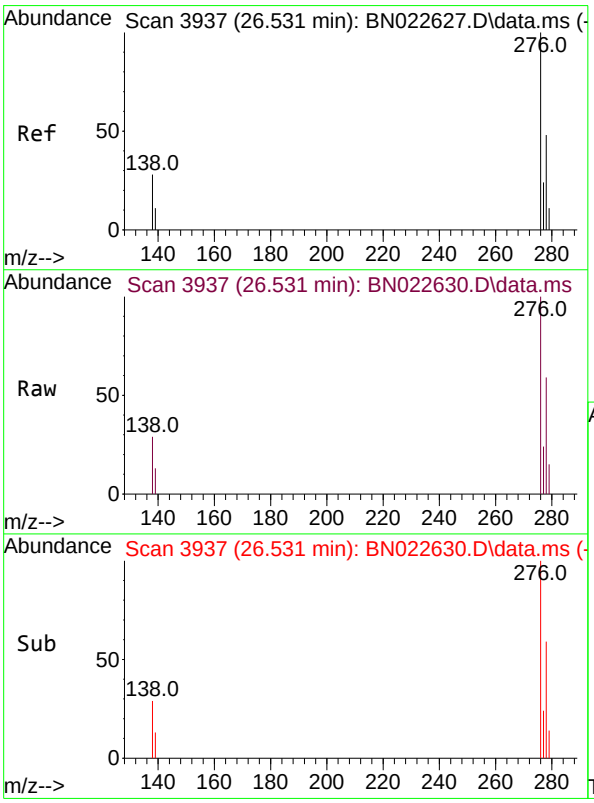
#35
Perylene-d12
Concen: 0.400 ng
RT: 23.979 min Scan# 3
Delta R.T. -0.003 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Tgt Ion:264 Resp: 5362

Ion	Ratio	Lower	Upper
264	100		
260	26.8	22.0	33.0
265	75.6	60.6	90.8

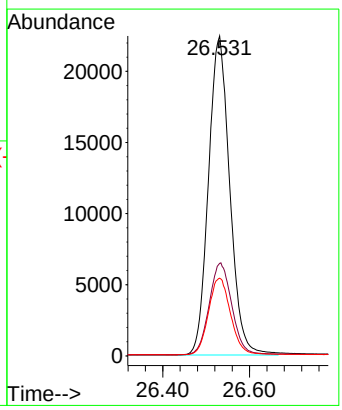


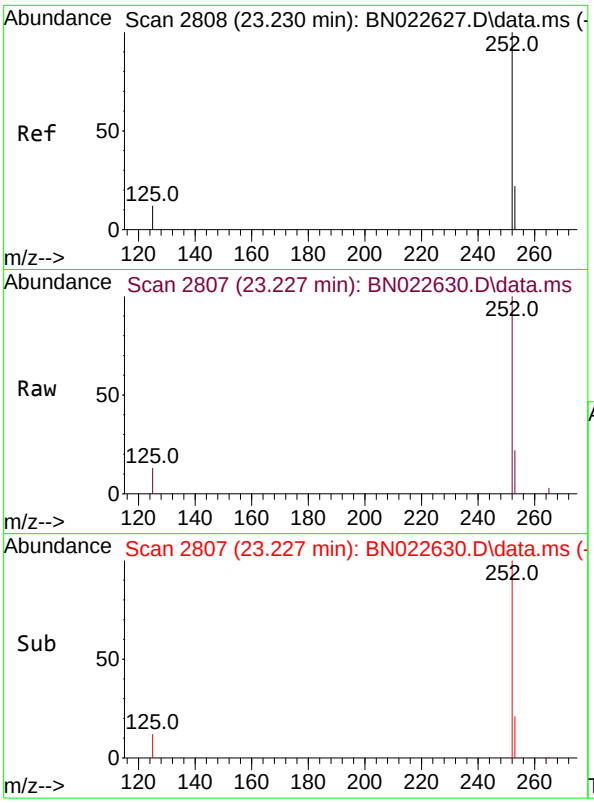


#36
Indeno(1,2,3-cd)pyrene
Concen: 3.017 ng
RT: 26.531 min Scan# 3937
Delta R.T. -0.000 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Tgt Ion:276 Resp: 76436

Ion	Ratio	Lower	Upper
276	100		
138	30.5	23.8	35.8
277	25.0	19.9	29.9



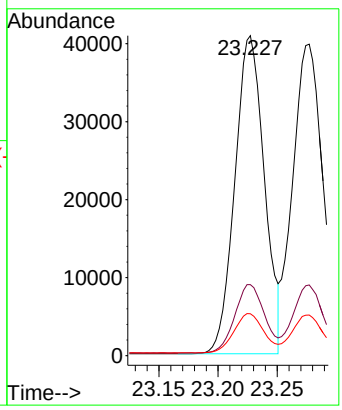


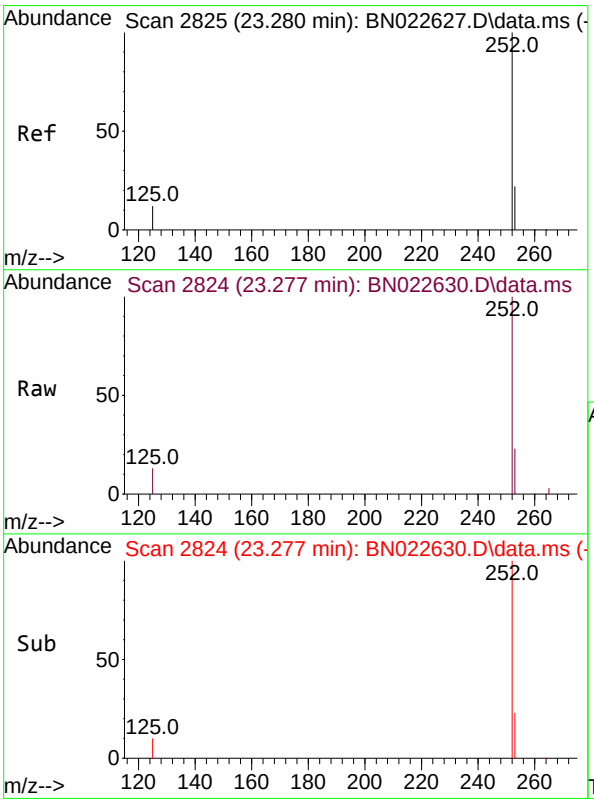
#37
Benzo(b)fluoranthene
Concen: 3.256 ng
RT: 23.227 min Scan# 28
Delta R.T. -0.003 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Tgt Ion:252 Resp: 70677

Ion	Ratio	Lower	Upper
252	100		
253	22.2	22.7	34.1#
125	13.1	15.2	22.8#

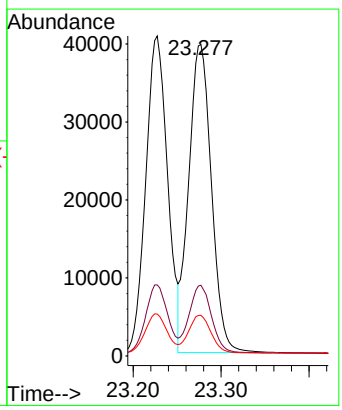


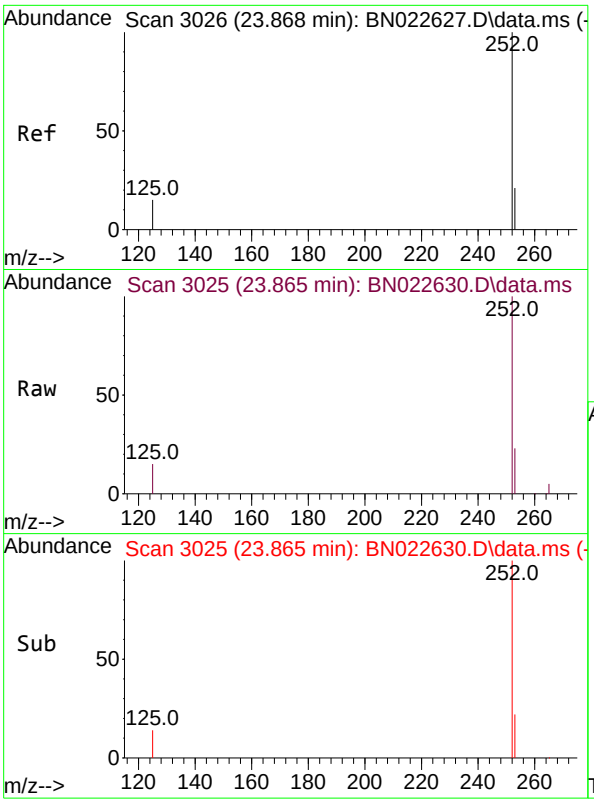


#38
Benzo(k)fluoranthene
Concen: 3.277 ng
RT: 23.277 min Scan# 2824
Delta R.T. -0.003 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Tgt Ion:252 Resp: 70968

Ion	Ratio	Lower	Upper
252	100		
253	22.7	22.6	33.8
125	13.0	14.9	22.3#



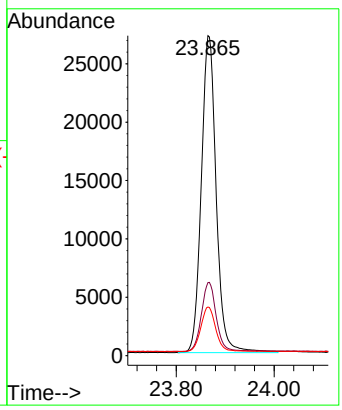


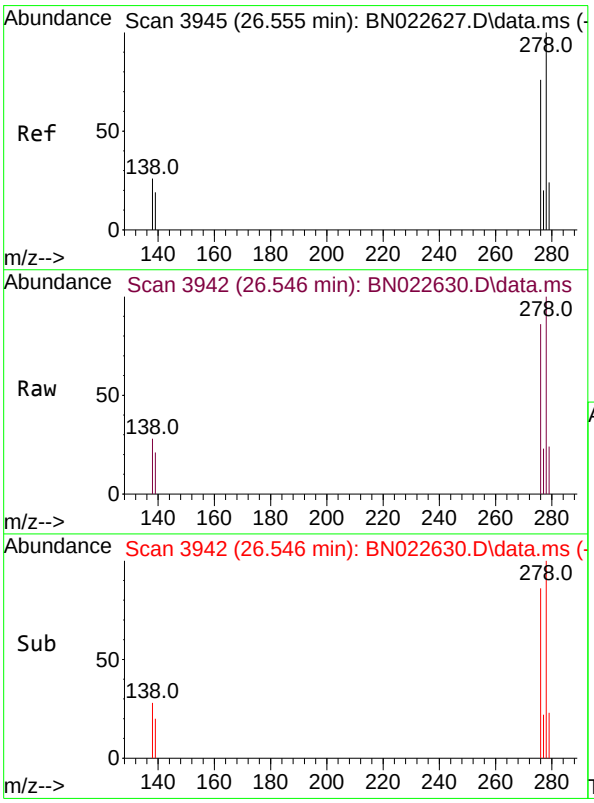
#39
Benzo(a)pyrene
Concen: 3.258 ng
RT: 23.865 min Scan# 3
Delta R.T. -0.003 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Tgt Ion:252 Resp: 57474

Ion	Ratio	Lower	Upper
252	100		
253	22.9	24.6	36.8#
125	15.2	19.4	29.0#

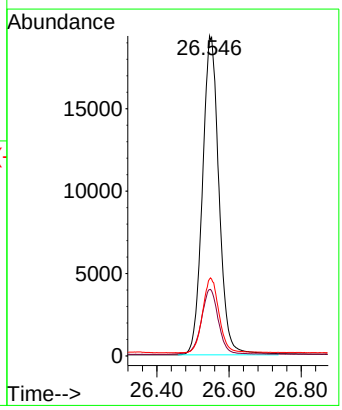


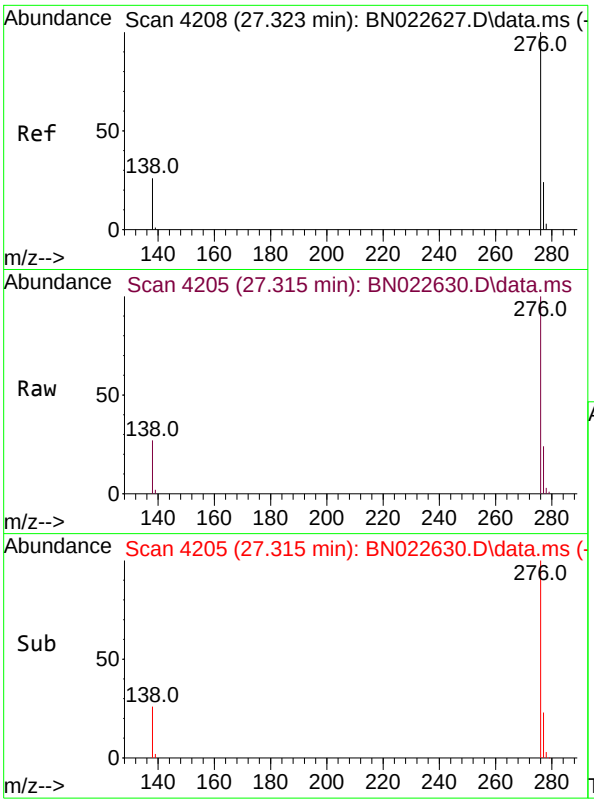


#40
Dibenzo(a,h)anthracene
Concen: 3.017 ng
RT: 26.546 min Scan# 3942
Delta R.T. -0.009 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Tgt Ion:278 Resp: 61453

Ion	Ratio	Lower	Upper
278	100		
139	20.7	19.1	28.7
279	24.0	24.8	37.2#





#41
Benzo(g,h,i)perylene
Concen: 2.904 ng
RT: 27.315 min Scan# 4
Delta R.T. -0.009 min
Lab File: BN022630.D
Acq: 12 Nov 2022 15:47

Instrument :
BNA_N
ClientSampleId :
SSTDICC3.2

Tgt Ion:276 Resp: 62267

Ion	Ratio	Lower	Upper
276	100		
277	23.8	21.2	31.8
138	26.5	23.8	35.8