Quantitation Report (Not Reviewed)

Data Path : Z:\svoasrv\HPCHEM1\BNA_N\Data\BN112521\
Data File : BN017600.D
Acq On : 25 Nov 2021 03:27
Operator : CG/JU
Sample : M4831-06MSD
Misc :
ALS Vial : 18 Sample Multiplier: 1

Instrument :
BNA_N
ClientSampleId :
BP-VPB-RW9-GW-858-860MSD

Quant Time: Nov 26 06:06:13 2021
Quant Method : Z:\SVOASRV\HPCHEM1\BNA_N\METHODS\8270-SIM-BN112521.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
QLast Update : Thu Nov 25 03:24:52 2021
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	7.754	152	26914	0.400	ng	0.00
7) Naphthalene-d8	10.522	136	121953	0.400	ng	#-0.01
13) Acenaphthene-d10	14.372	164	68818	0.400	ng	0.00
19) Phenanthrene-d10	17.116	188	143870	0.400	ng	# 0.00
29) Chrysene-d12	21.303	240	127150	0.400	ng	#-0.01
35) Perylene-d12	23.616	264	88194	0.400	ng	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	5.376	112	25940	0.366	ng	0.03
5) Phenol-d6	6.934	99	30211	0.377	ng	0.00
8) Nitrobenzene-d5	8.887	82	20042	0.312	ng	0.00
11) 2-Methylnaphthalene-d10	12.120	152	74149	0.351	ng	0.00
14) 2,4,6-Tribromophenol	15.856	330	12475	0.351	ng	-0.01
15) 2-Fluorobiphenyl	13.001	172	93886	0.353	ng	0.00
27) Fluoranthene-d10	19.149	212	171640	0.354	ng	0.00
31) Terphenyl-d14	19.754	244	113839	0.382	ng	0.00
Target Compounds						Qvalue
3) n-Nitrosodimethylamine	3.642	42	10655	0.399	ng	# 54
6) bis(2-Chloroethyl)ether	7.174	93	33064	0.420	ng	99
9) Naphthalene	10.573	128	119820	0.391	ng	100
10) Hexachlorobutadiene	10.877	225	29071	0.377	ng	# 100
12) 2-Methylnaphthalene	12.191	142	81501	0.401	ng	98
16) Acenaphthylene	14.093	152	116431	0.400	ng	99
17) Acenaphthene	14.435	154	72307	0.387	ng	99
18) Fluorene	15.425	166	93108	0.395	ng	100
20) 4,6-Dinitro-2-methylph...	15.501	198	149	0.221	ng	# 85
21) 4-Bromophenyl-phenylether	16.313	248	37315	0.415	ng	# 86
22) Hexachlorobenzene	16.435	284	38596	0.373	ng	100
23) Atrazine	16.581	200	21596	0.458	ng	# 96
24) Pentachlorophenol	16.776	266	17022	0.490	ng	99
25) Phenanthrene	17.153	178	155019	0.396	ng	99
26) Anthracene	17.250	178	148588	0.414	ng	100
28) Fluoranthene	19.179	202	187644	0.397	ng	99
30) Pyrene	19.541	202	190364	0.417	ng	100
32) Benzo(a)anthracene	21.293	228	167371	0.396	ng	97
33) Chrysene	21.346	228	165849	0.399	ng	98
34) Bis(2-ethylhexyl)phtha...	21.239	149	140087	1.204	ng	100
36) Indeno(1,2,3-cd)pyrene	25.985	276	81987	0.435	ng	95
37) Benzo(b)fluoranthene	22.918	252	137738	0.404	ng	100
38) Benzo(k)fluoranthene	22.962	252	130286	0.404	ng	98
39) Benzo(a)pyrene	23.513	252	112322	0.413	ng	100
40) Dibenzo(a,h)anthracene	26.005	278	68197	0.431	ng	99
41) Benzo(g,h,i)perylene	26.710	276	62770	0.447	ng	98

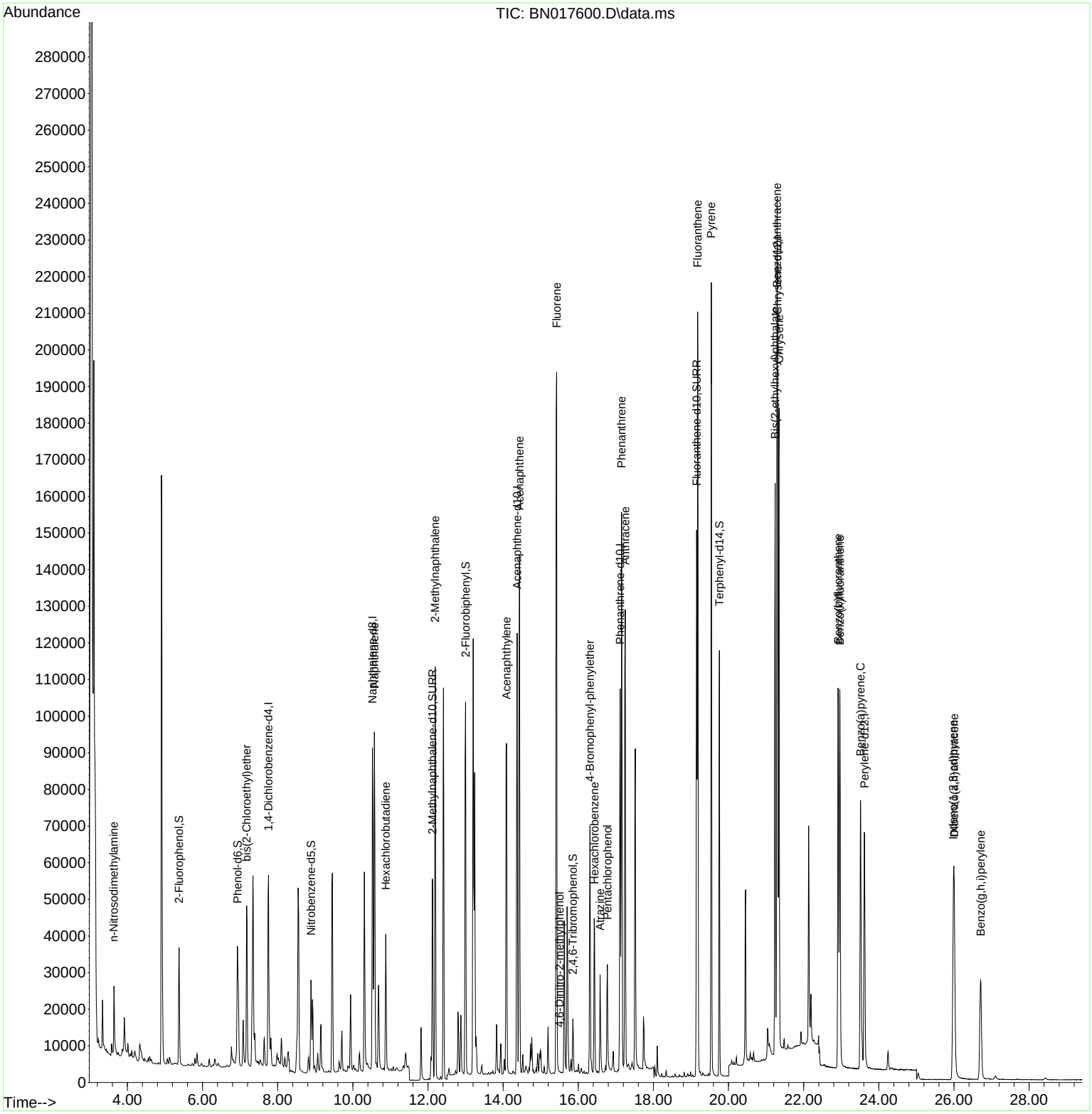
(#) = qualifier out of range (m) = manual integration (+) = signals summed

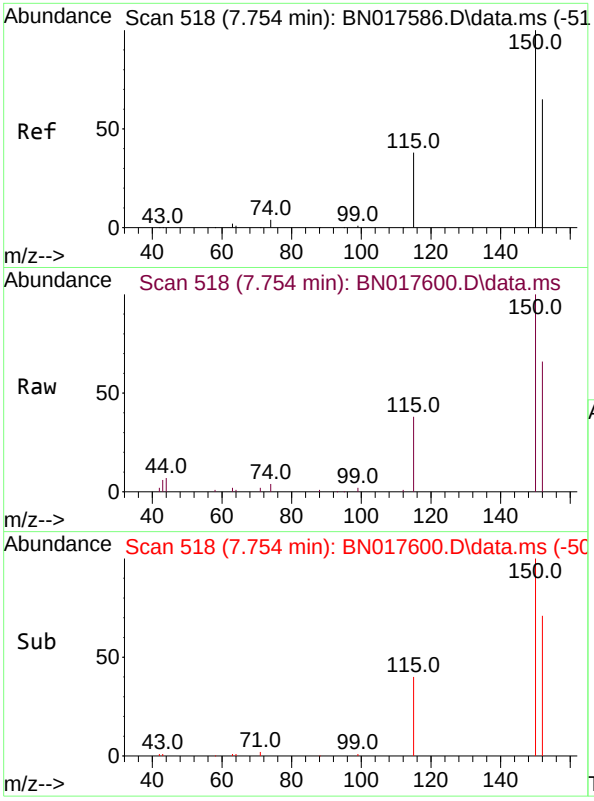
Quantitation Report (Not Reviewed)

Data Path : Z:\svoasrv\HPCHEM1\BNA_N\Data\BN112521\
Data File : BN017600.D
Acq On : 25 Nov 2021 03:27
Operator : CG/JU
Sample : M4831-06MSD
Misc :
ALS Vial : 18 Sample Multiplier: 1

Instrument :
BNA_N
ClientSampleId :
BP-VPB-RW9-GW-858-860MSD

Quant Time: Nov 26 06:06:13 2021
Quant Method : Z:\SVOASRV\HPCHEM1\BNA_N\METHODS\8270-SIM-BN112521.M
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
QLast Update : Thu Nov 25 03:24:52 2021
Response via : Initial Calibration



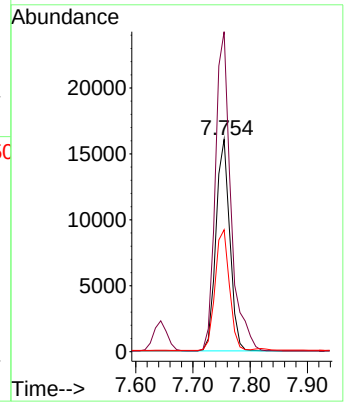


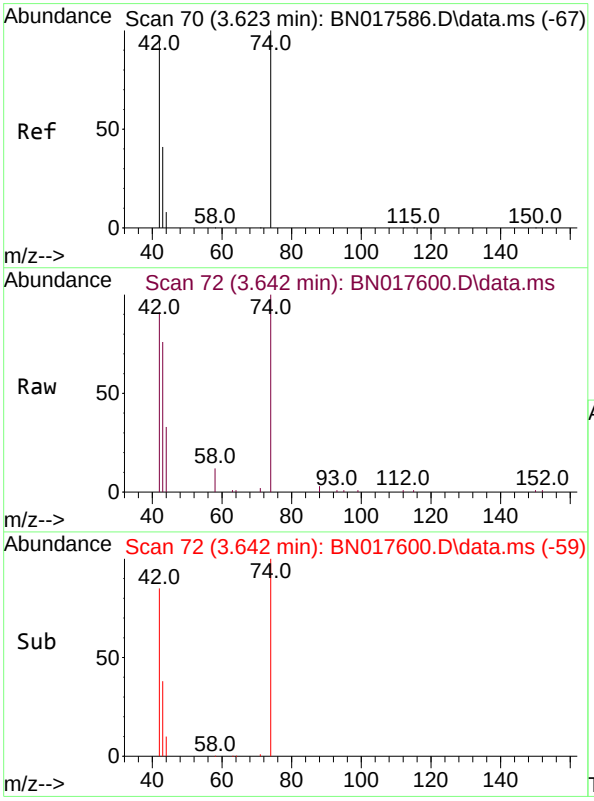
#1
1,4-Dichlorobenzene-d4
Concen: 0.400 ng
RT: 7.754 min Scan# 5
Delta R.T. 0.000 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Instrument :
BNA_N
ClientSampleId :
BP-VPB-RW9-GW-858-860MSD

Tgt Ion:152 Resp: 26914

Ion	Ratio	Lower	Upper
152	100		
150	150.8	122.5	183.7
115	57.4	47.0	70.4

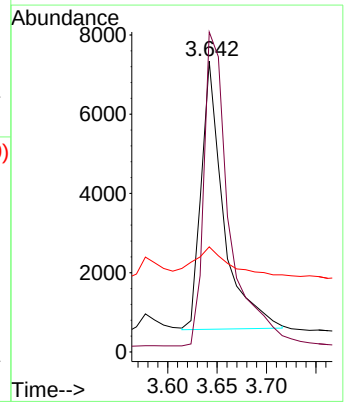


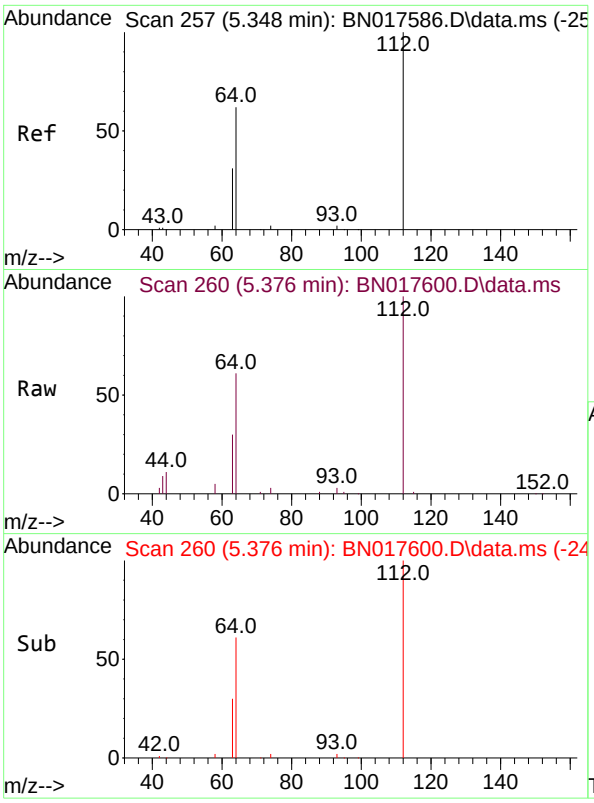


#3
n-Nitrosodimethylamine
Concen: 0.399 ng
RT: 3.642 min Scan# 72
Delta R.T. 0.019 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Tgt Ion: 42 Resp: 10655

Ion	Ratio	Lower	Upper
42	100		
74	133.5	72.1	108.1#
44	15.9	2.6	4.0#



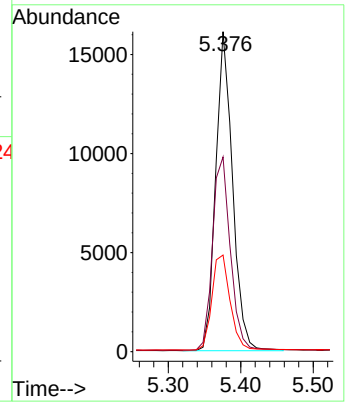


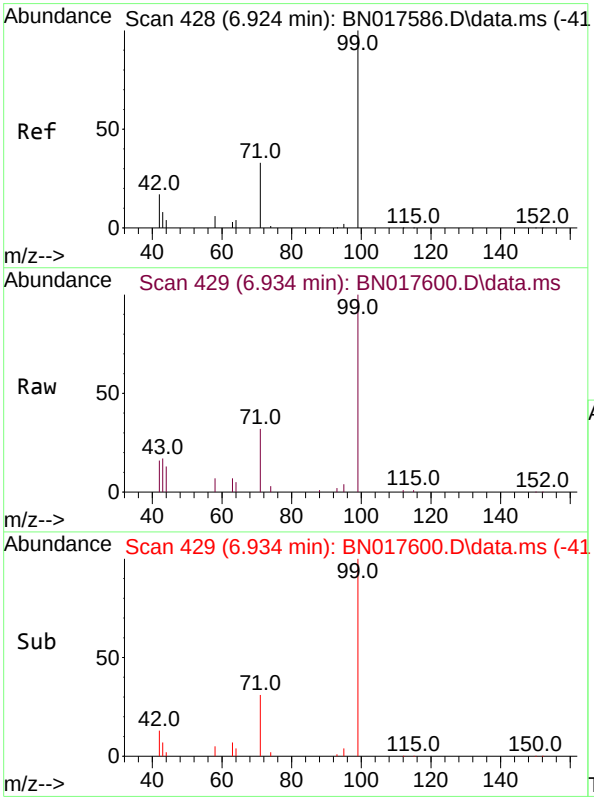
#4
2-Fluorophenol
Concen: 0.366 ng
RT: 5.376 min Scan# 2
Delta R.T. 0.028 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Instrument :
BNA_N
ClientSampleId :
BP-VPB-RW9-GW-858-860MSD

Tgt Ion:112 Resp: 25940

Ion	Ratio	Lower	Upper
112	100		
64	64.3	51.5	77.3
63	32.5	26.6	39.8

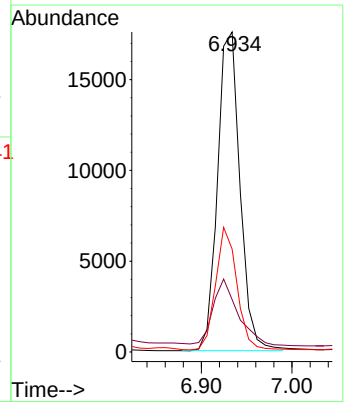


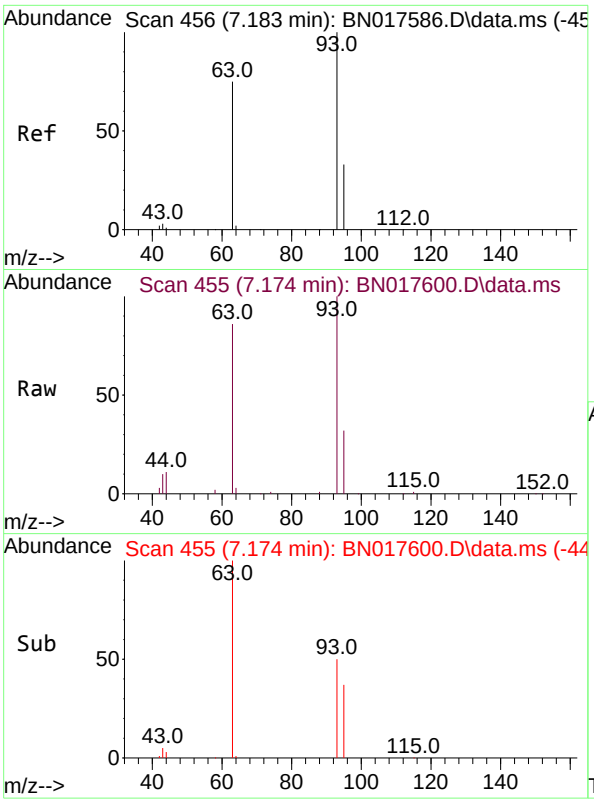


#5
Phenol-d6
Concen: 0.377 ng
RT: 6.934 min Scan# 429
Delta R.T. 0.009 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Tgt Ion: 99 Resp: 30211

Ion	Ratio	Lower	Upper
99	100		
42	23.0	16.2	24.2
71	36.4	27.6	41.4



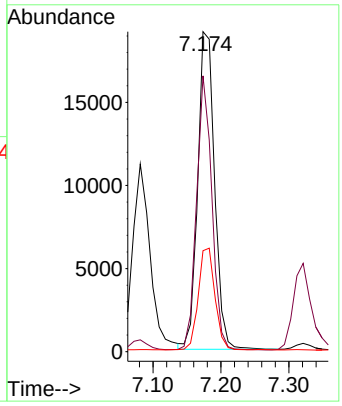


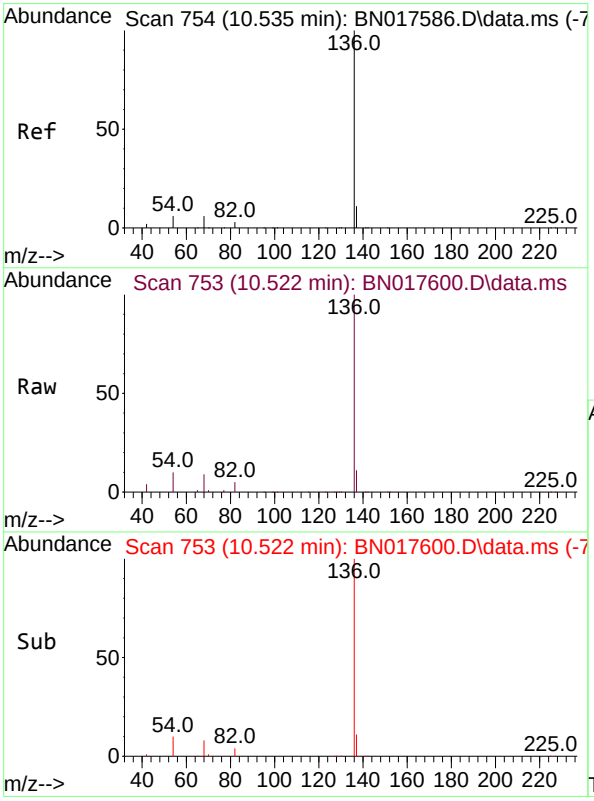
#6
bis(2-Chloroethyl)ether
Concen: 0.420 ng
RT: 7.174 min Scan# 4
Delta R.T. -0.009 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Instrument :
BNA_N
ClientSampleId :
BP-VPB-RW9-GW-858-860MSD

Tgt Ion: 93 Resp: 33064

Ion	Ratio	Lower	Upper
93	100		
63	78.4	63.0	94.6
95	31.7	25.6	38.4

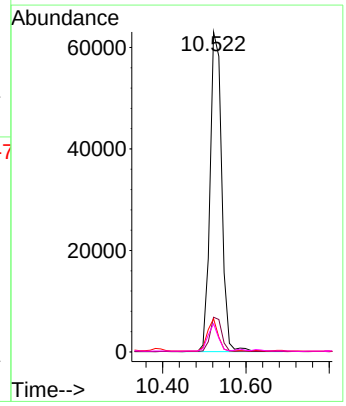


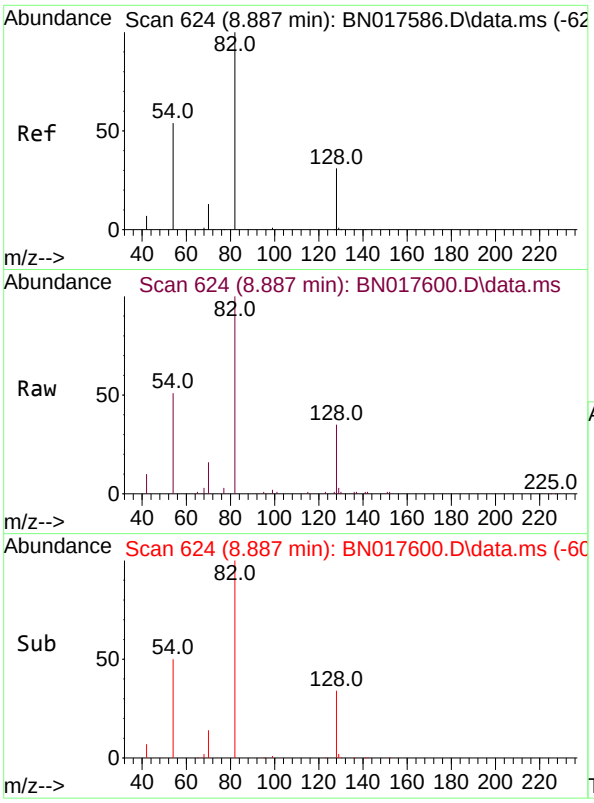


#7
Naphthalene-d8
Concen: 0.400 ng
RT: 10.522 min Scan# 753
Delta R.T. -0.013 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Tgt Ion:136 Resp: 121953

Ion	Ratio	Lower	Upper
136	100		
137	10.9	8.8	13.2
54	10.4	5.2	7.8#
68	8.8	4.6	6.8#



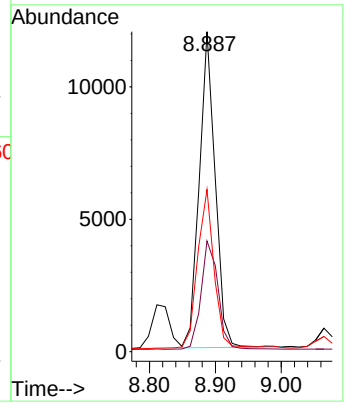


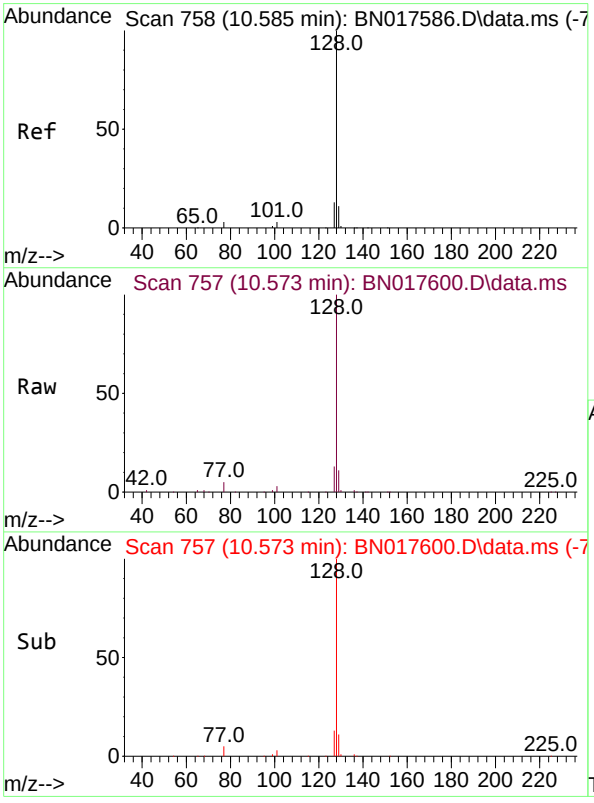
#8
Nitrobenzene-d5
Concen: 0.312 ng
RT: 8.887 min Scan# 6
Delta R.T. 0.000 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Instrument :
BNA_N
ClientSampleId :
BP-VPB-RW9-GW-858-860MSD

Tgt Ion: 82 Resp: 20042

Ion	Ratio	Lower	Upper
82	100		
128	34.6	25.3	37.9
54	50.7	43.7	65.5

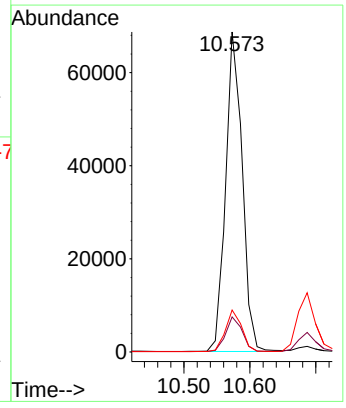


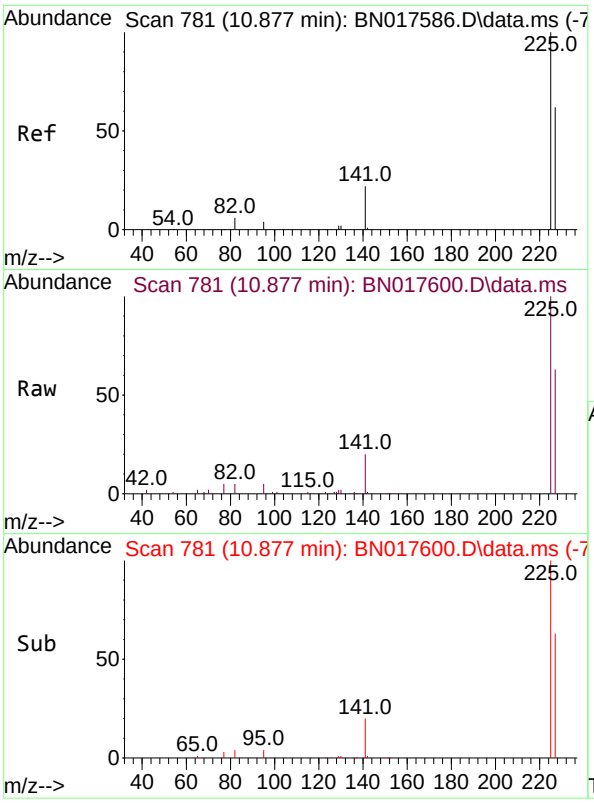


#9
Naphthalene
Concen: 0.391 ng
RT: 10.573 min Scan# 757
Delta R.T. -0.013 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Tgt Ion:128 Resp: 119820

Ion	Ratio	Lower	Upper
128	100		
129	11.0	8.8	13.2
127	13.1	10.2	15.4



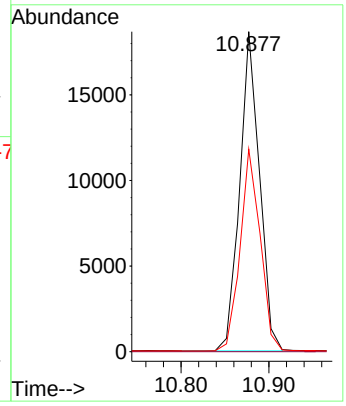


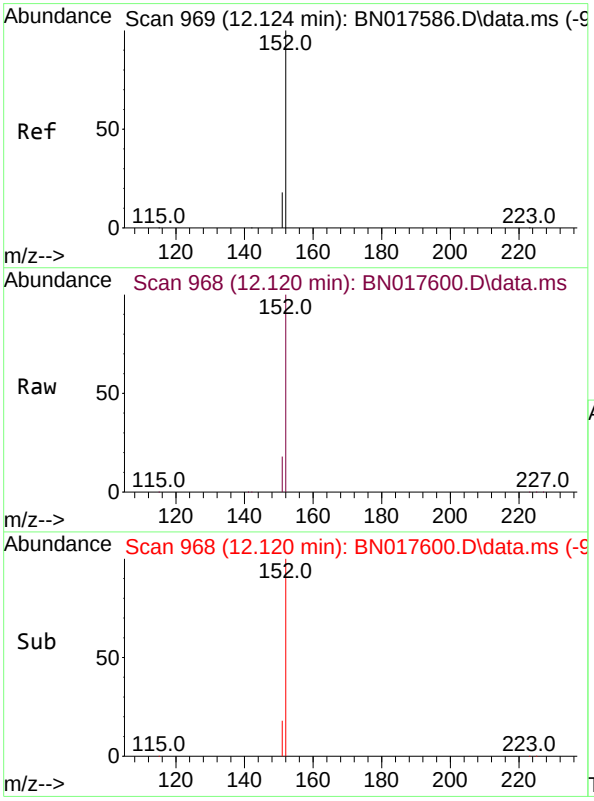
#10
Hexachlorobutadiene
Concen: 0.377 ng
RT: 10.877 min Scan# 7
Delta R.T. 0.000 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Instrument :
BNA_N
ClientSampleId :
BP-VPB-RW9-GW-858-860MSD

Tgt Ion:225 Resp: 29071

Ion	Ratio	Lower	Upper
225	100		
223	0.0	0.0	0.0
227	63.9	51.1	76.7

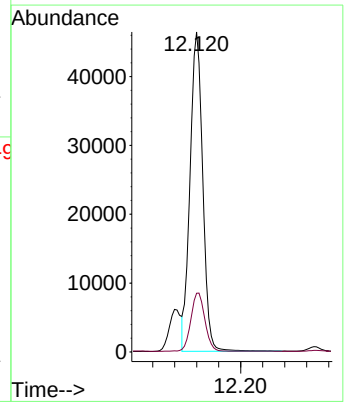


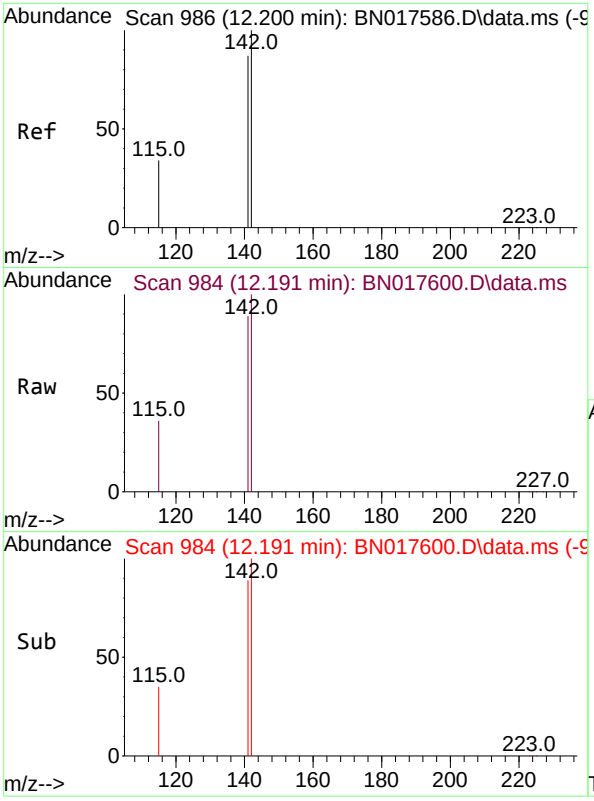


#11
2-Methylnaphthalene-d10
Concen: 0.351 ng
RT: 12.120 min Scan# 968
Delta R.T. -0.004 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Tgt Ion:152 Resp: 74149

Ion	Ratio	Lower	Upper
152	100		
151	20.3	16.2	24.4



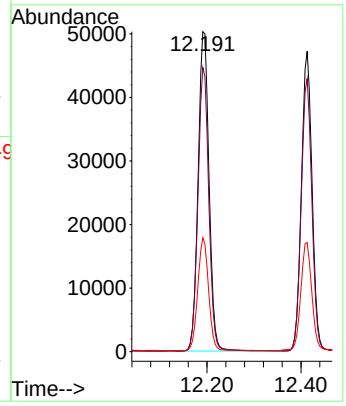


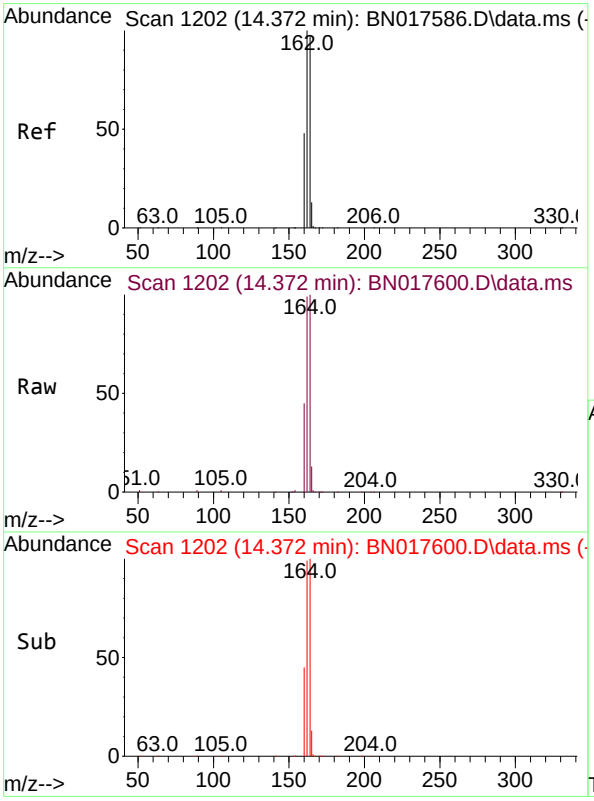
#12
2-Methylnaphthalene
Concen: 0.401 ng
RT: 12.191 min Scan# 9
Delta R.T. -0.009 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Instrument :
BNA_N
ClientSampleId :
BP-VPB-RW9-GW-858-860MSD

Tgt Ion:142 Resp: 81501

Ion	Ratio	Lower	Upper
142	100		
141	88.8	69.4	104.0
115	35.6	27.8	41.6

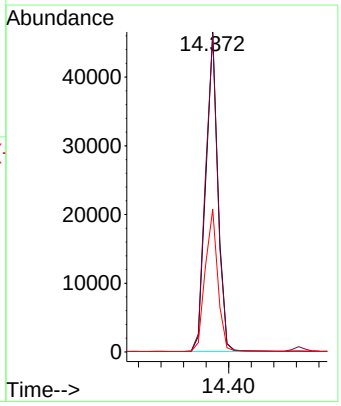


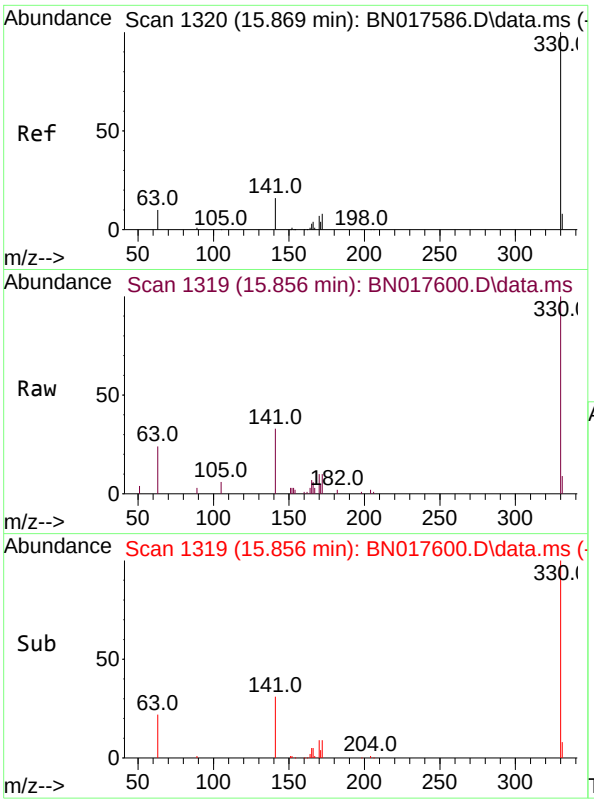


#13
Acenaphthene-d10
Concen: 0.400 ng
RT: 14.372 min Scan# 1202
Delta R.T. 0.000 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Tgt Ion:164 Resp: 68818

Ion	Ratio	Lower	Upper
164	100		
162	99.3	82.5	123.7
160	44.6	39.6	59.4



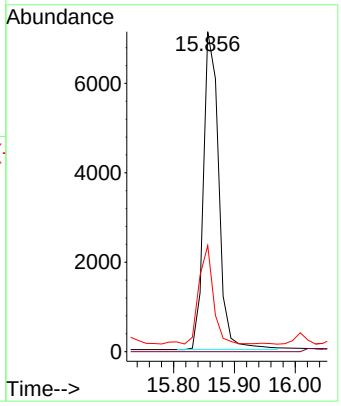


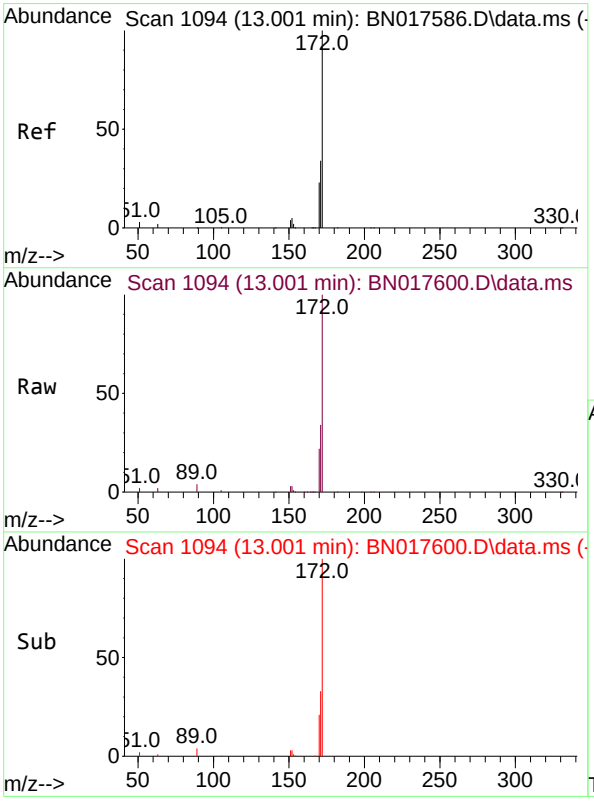
#14
2,4,6-Tribromophenol
Concen: 0.351 ng
RT: 15.856 min Scan# 1
Delta R.T. -0.013 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Instrument :
BNA_N
ClientSampleId :
BP-VPB-RW9-GW-858-860MSD

Tgt Ion:330 Resp: 12475

Ion	Ratio	Lower	Upper
330	100		
332	0.0	0.0	0.0
141	28.7	24.1	36.1

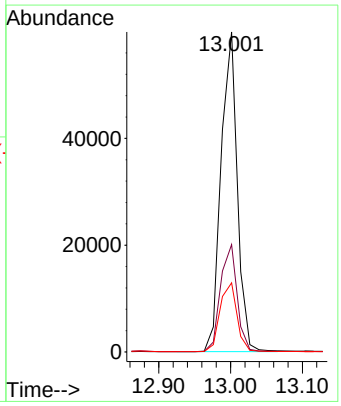


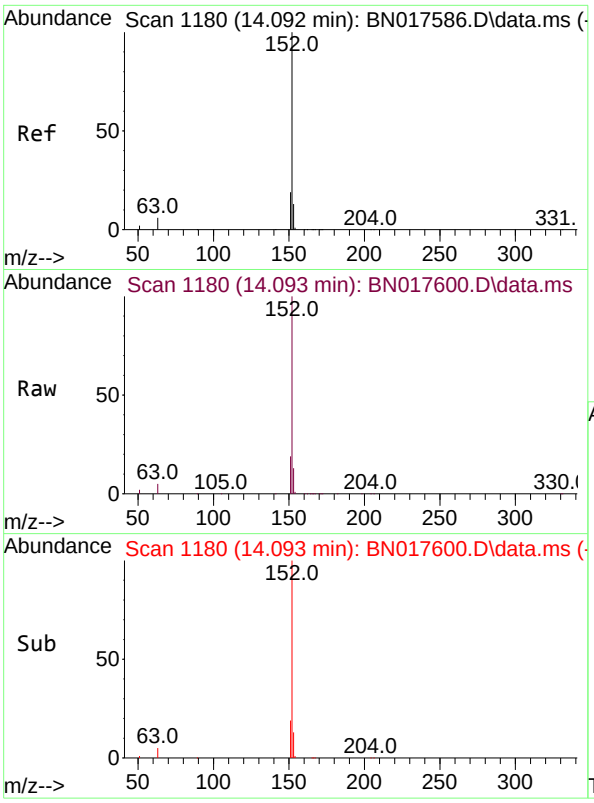


#15
2-Fluorobiphenyl
Concen: 0.353 ng
RT: 13.001 min Scan# 1094
Delta R.T. 0.000 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Tgt Ion:172 Resp: 93886

Ion	Ratio	Lower	Upper
172	100		
171	33.5	27.6	41.4
170	21.6	18.3	27.5



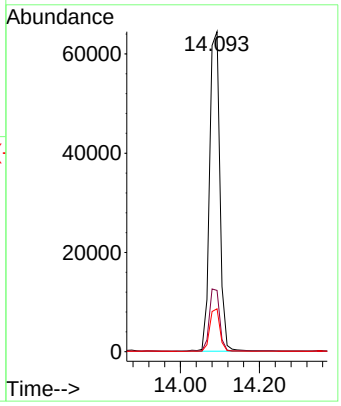


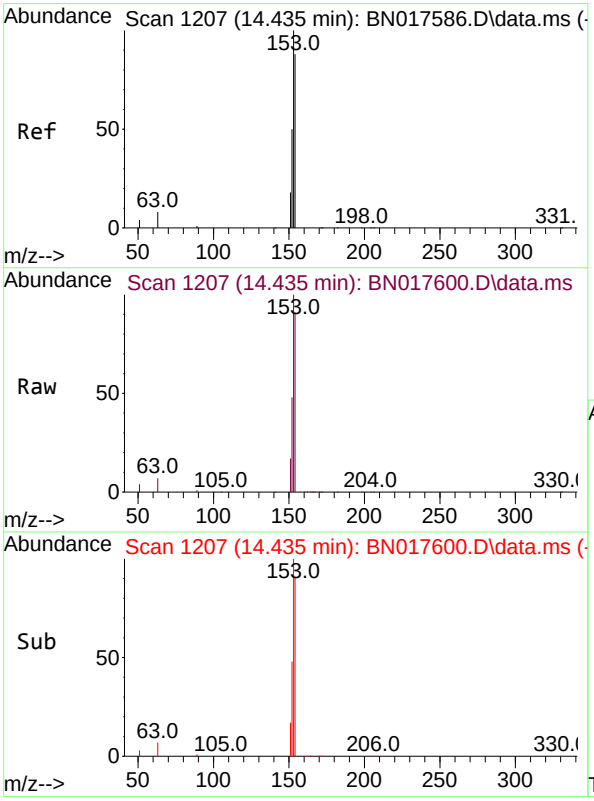
#16
Acenaphthylene
Concen: 0.400 ng
RT: 14.093 min Scan# 11
Delta R.T. 0.000 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Instrument :
BNA_N
ClientSampleId :
BP-VPB-RW9-GW-858-860MSD

Tgt Ion:152 Resp: 116431

Ion	Ratio	Lower	Upper
152	100		
151	19.8	15.5	23.3
153	13.2	10.5	15.7

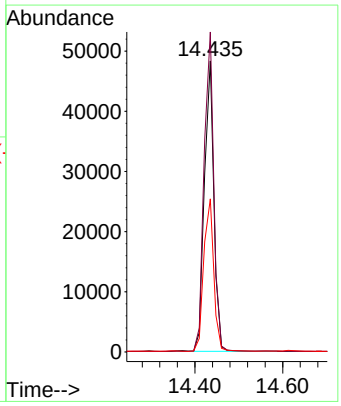


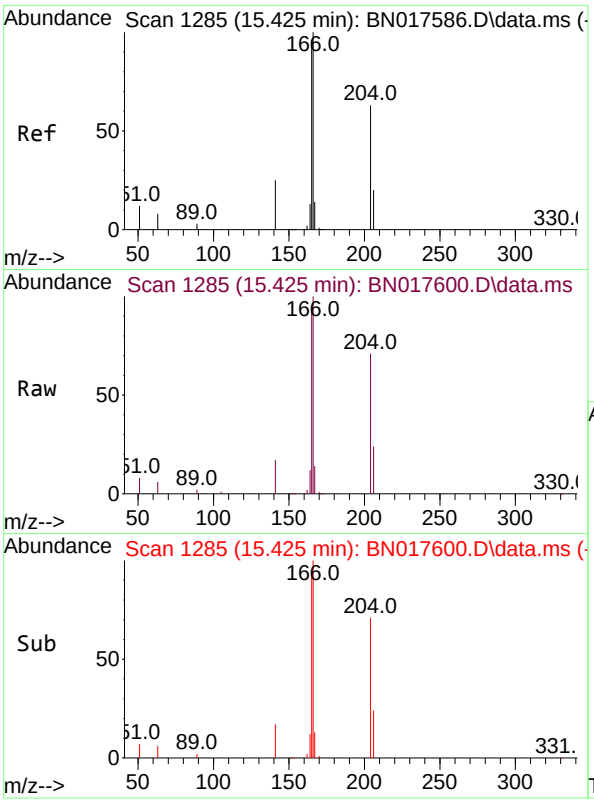


#17
Acenaphthene
Concen: 0.387 ng
RT: 14.435 min Scan# 1207
Delta R.T. 0.000 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Tgt Ion:154 Resp: 72307

Ion	Ratio	Lower	Upper
154	100		
153	112.4	89.8	134.8
152	55.4	45.9	68.9



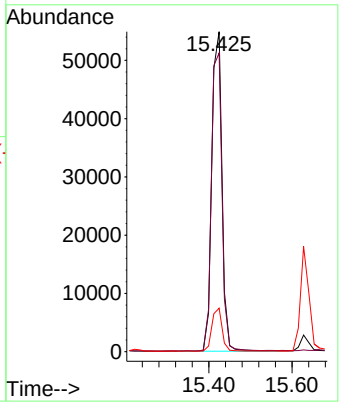


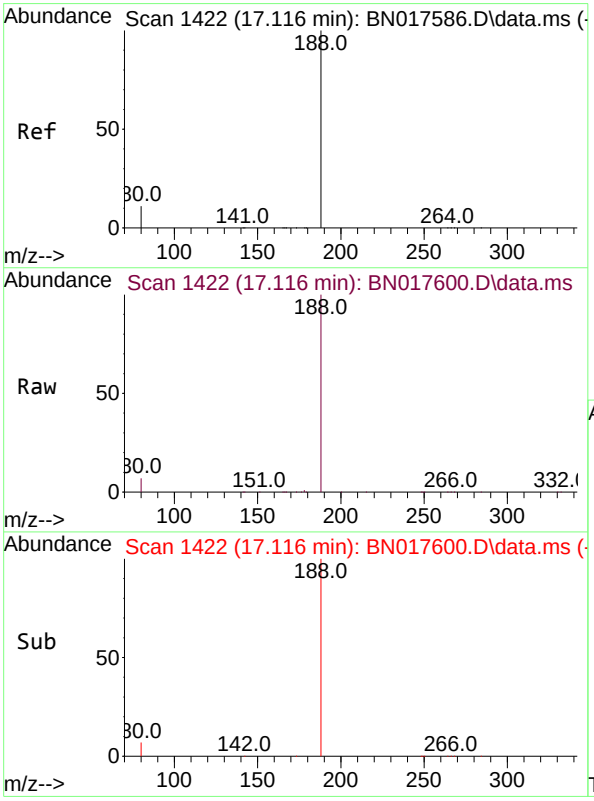
#18
Fluorene
Concen: 0.395 ng
RT: 15.425 min Scan# 1
Delta R.T. 0.000 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Instrument :
BNA_N
ClientSampleId :
BP-VPB-RW9-GW-858-860MSD

Tgt Ion:166 Resp: 93108

Ion	Ratio	Lower	Upper
166	100		
165	97.3	77.6	116.4
167	13.5	10.9	16.3

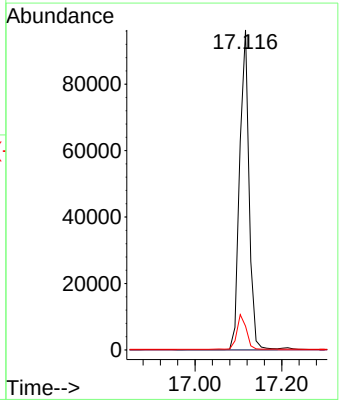


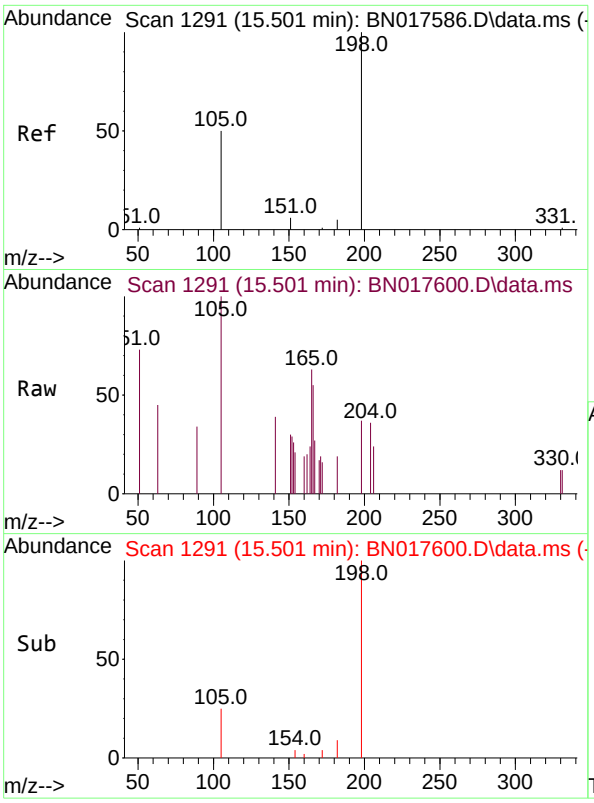


#19
Phenanthrene-d10
Concen: 0.400 ng
RT: 17.116 min Scan# 1422
Delta R.T. 0.000 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Tgt Ion:188 Resp: 143870

Ion	Ratio	Lower	Upper
188	100		
94	0.0	0.0	0.0
80	7.5	9.0	13.4#



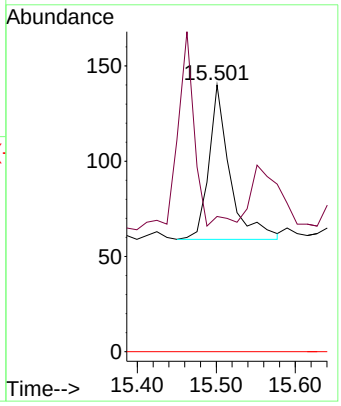


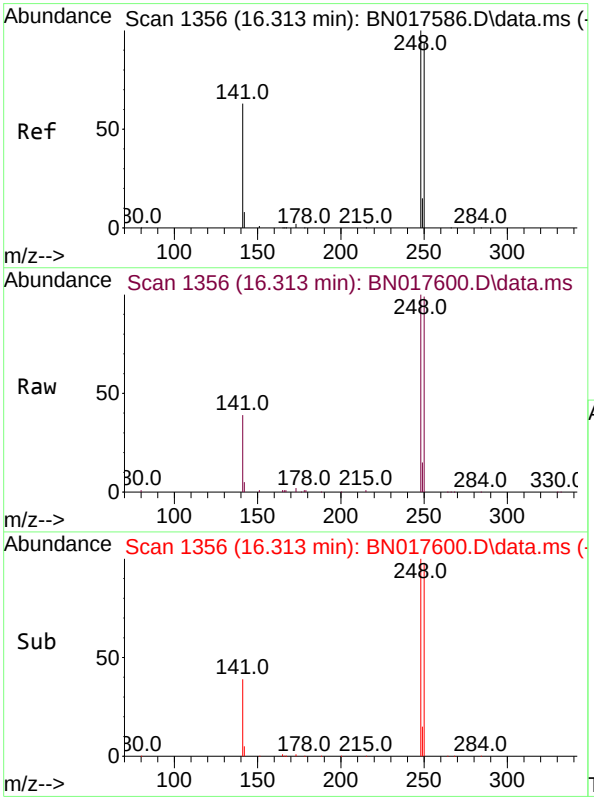
#20
4,6-Dinitro-2-methylphenol
Concen: 0.221 ng
RT: 15.501 min Scan# 1
Delta R.T. -0.000 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Instrument :
BNA_N
ClientSampleId :
BP-VPB-RW9-GW-858-860MSD

Tgt Ion:198 Resp: 149

Ion	Ratio	Lower	Upper
198	100		
182	50.7	33.1	49.7#
77	0.0	0.0	0.0

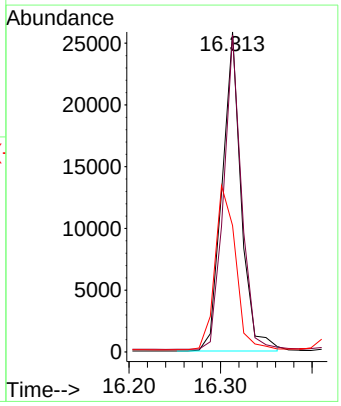


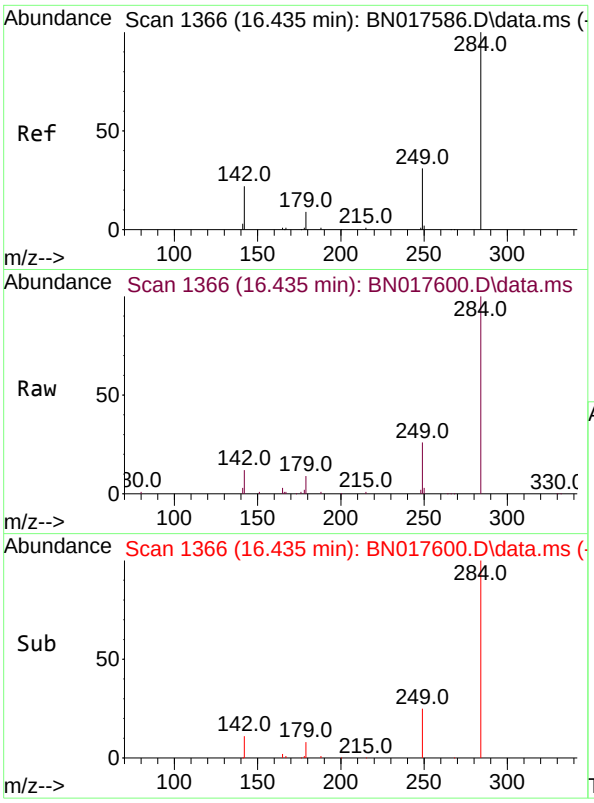


#21
4-Bromophenyl-phenylether
Concen: 0.415 ng
RT: 16.313 min Scan# 1356
Delta R.T. 0.000 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Tgt Ion:248 Resp: 37315

Ion	Ratio	Lower	Upper
248	100		
250	99.0	76.6	114.8
141	39.5	50.5	75.7#



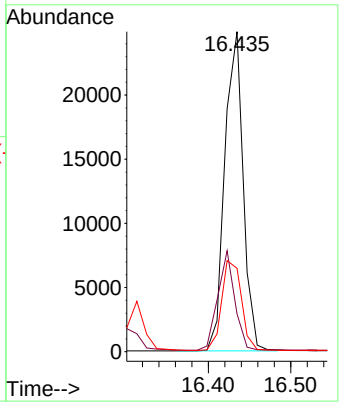


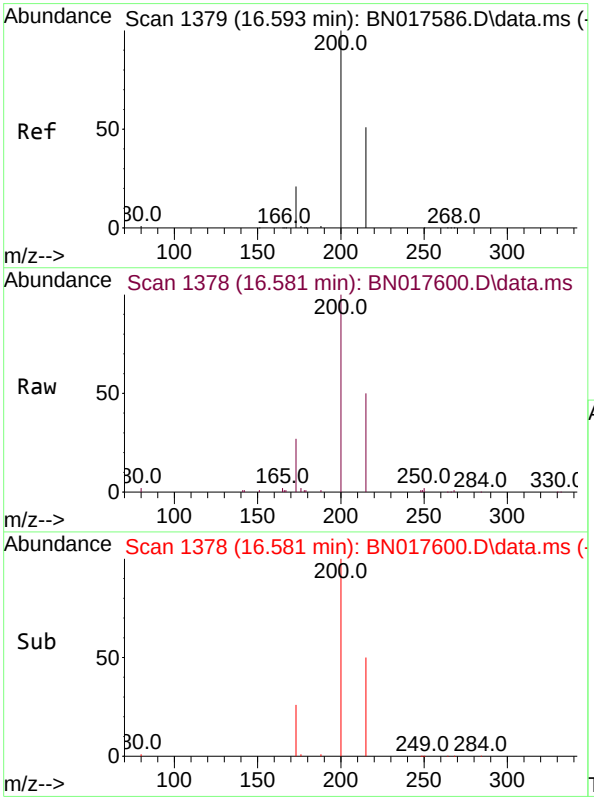
#22
Hexachlorobenzene
Concen: 0.373 ng
RT: 16.435 min Scan# 1
Delta R.T. 0.000 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Instrument :
BNA_N
ClientSampleId :
BP-VPB-RW9-GW-858-860MSD

Tgt Ion:284 Resp: 38596

Ion	Ratio	Lower	Upper
284	100		
142	28.6	23.2	34.8
249	30.2	24.2	36.2

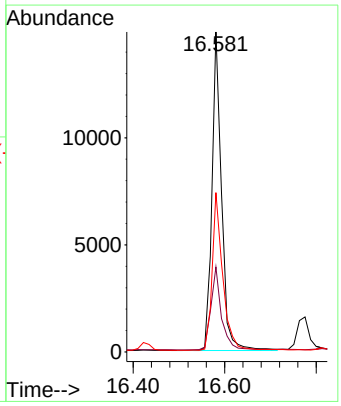


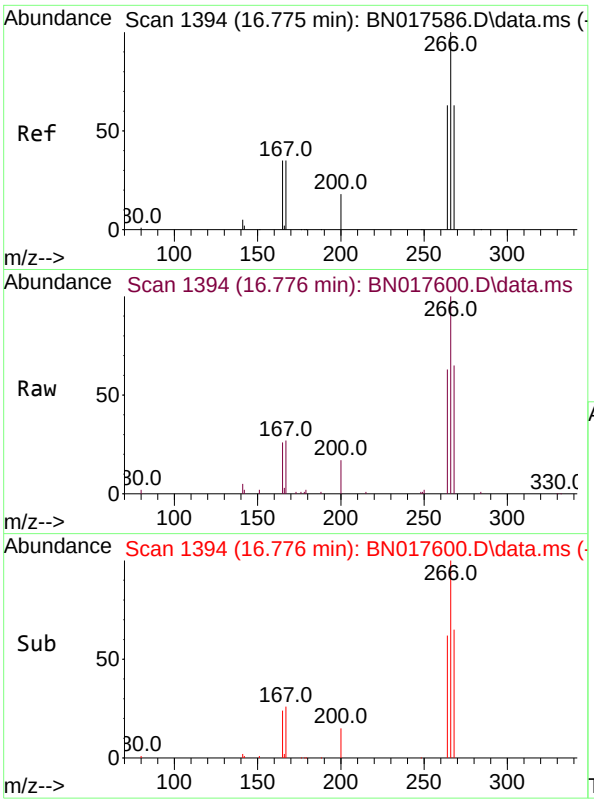


#23
Atrazine
Concen: 0.458 ng
RT: 16.581 min Scan# 1378
Delta R.T. -0.012 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Tgt Ion:200 Resp: 21596

Ion	Ratio	Lower	Upper
200	100		
173	26.6	17.4	26.0#
215	49.8	40.9	61.3



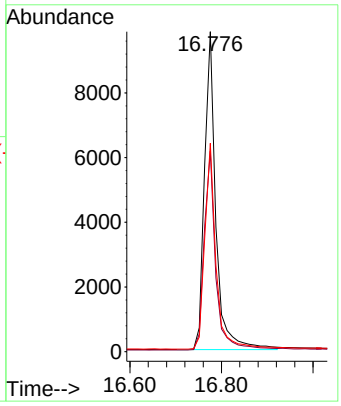


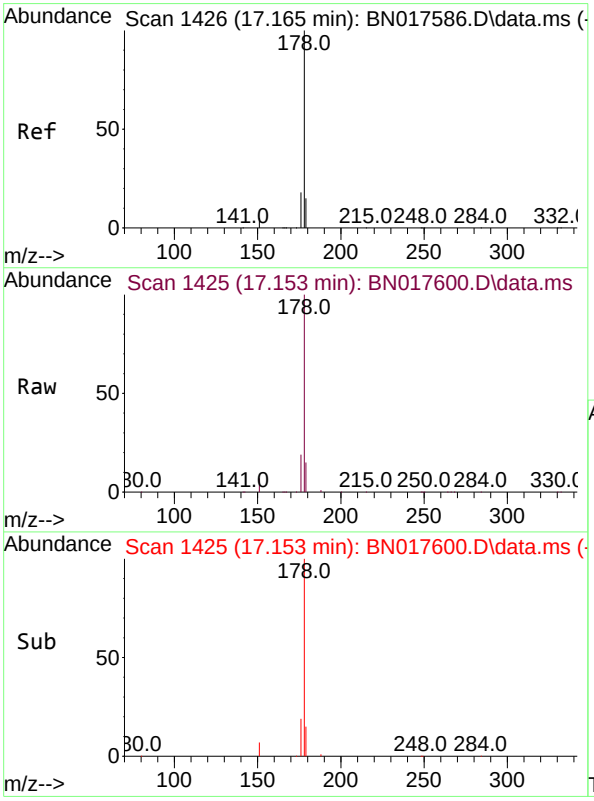
#24
Pentachlorophenol
Concen: 0.490 ng
RT: 16.776 min Scan# 1
Delta R.T. 0.001 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Instrument :
BNA_N
ClientSampleId :
BP-VPB-RW9-GW-858-860MSD

Tgt Ion:266 Resp: 17022

Ion	Ratio	Lower	Upper
266	100		
264	63.1	50.2	75.2
268	63.8	51.7	77.5

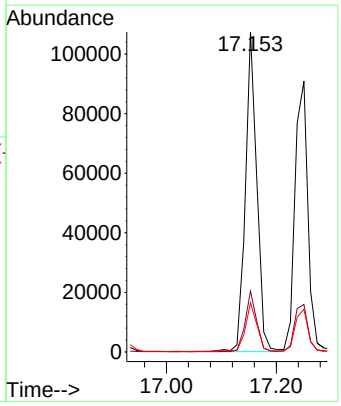


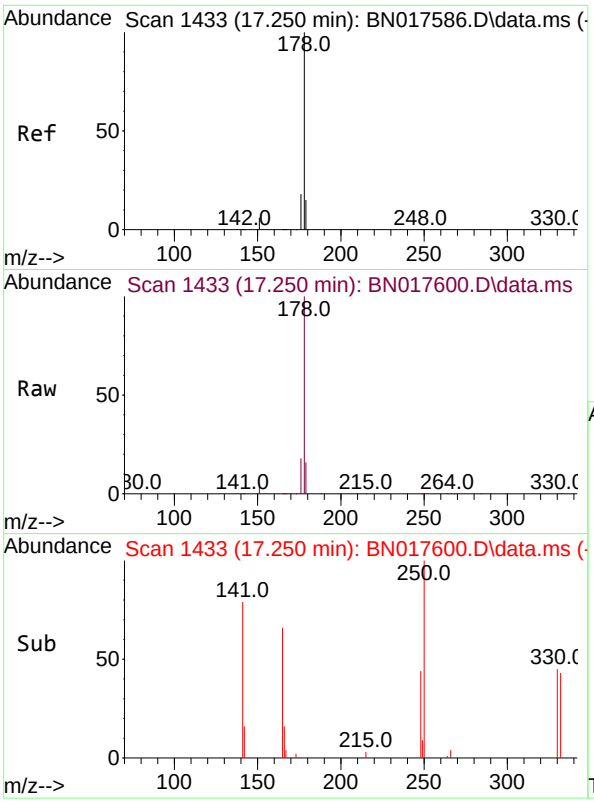


#25
Phenanthrene
Concen: 0.396 ng
RT: 17.153 min Scan# 1425
Delta R.T. -0.012 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Tgt Ion:178 Resp: 155019

Ion	Ratio	Lower	Upper
178	100		
176	18.7	15.0	22.6
179	15.8	12.2	18.4



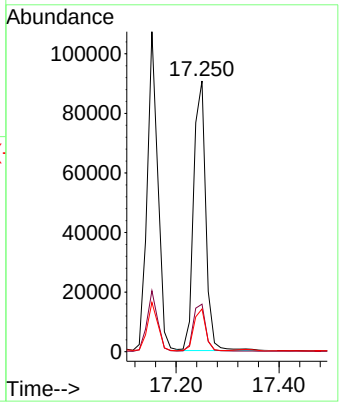


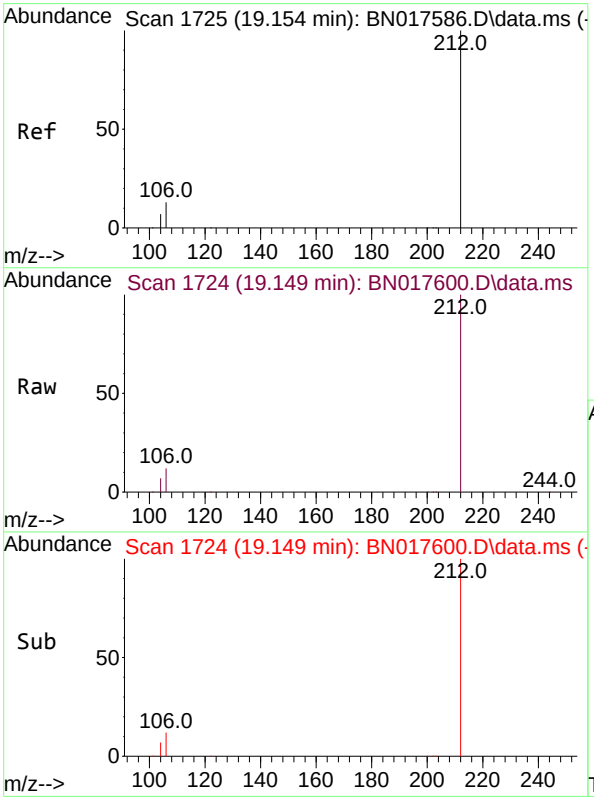
#26
Anthracene
Concen: 0.414 ng
RT: 17.250 min Scan# 14
Delta R.T. 0.000 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Instrument :
BNA_N
ClientSampleId :
BP-VPB-RW9-GW-858-860MSD

Tgt Ion:178 Resp: 148588

Ion	Ratio	Lower	Upper
178	100		
176	18.0	14.6	21.8
179	15.0	12.2	18.4

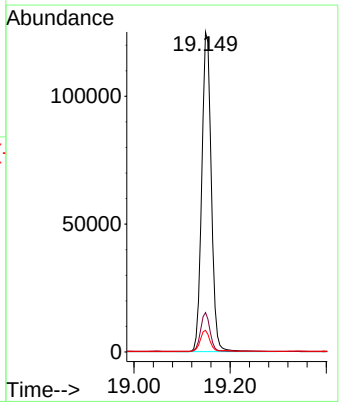


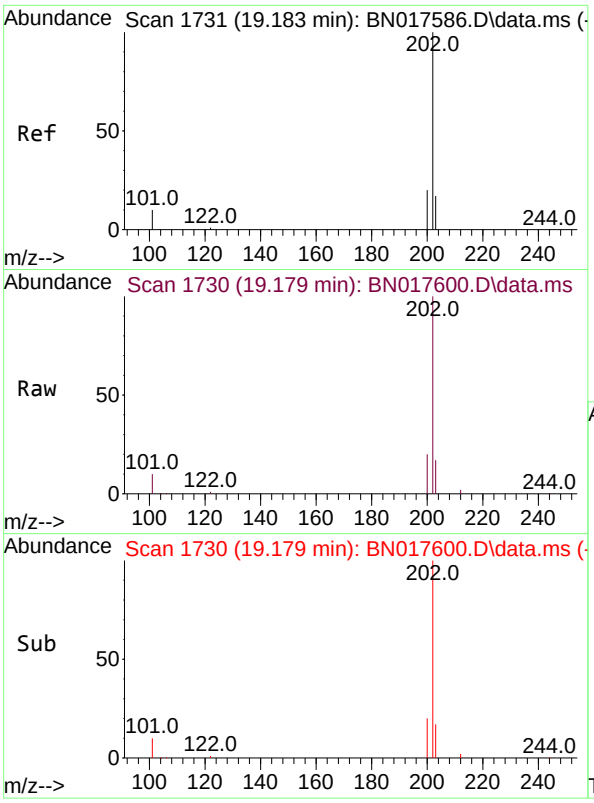


#27
Fluoranthene-d10
Concen: 0.354 ng
RT: 19.149 min Scan# 1724
Delta R.T. -0.005 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Tgt Ion:212 Resp: 171640

Ion	Ratio	Lower	Upper
212	100		
106	12.0	9.6	14.4
104	6.5	5.3	7.9



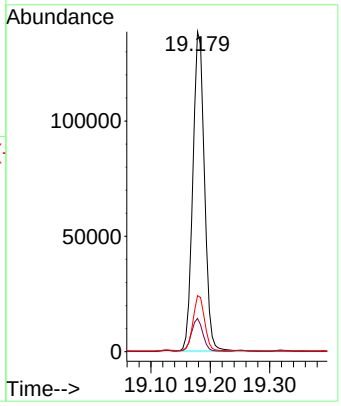


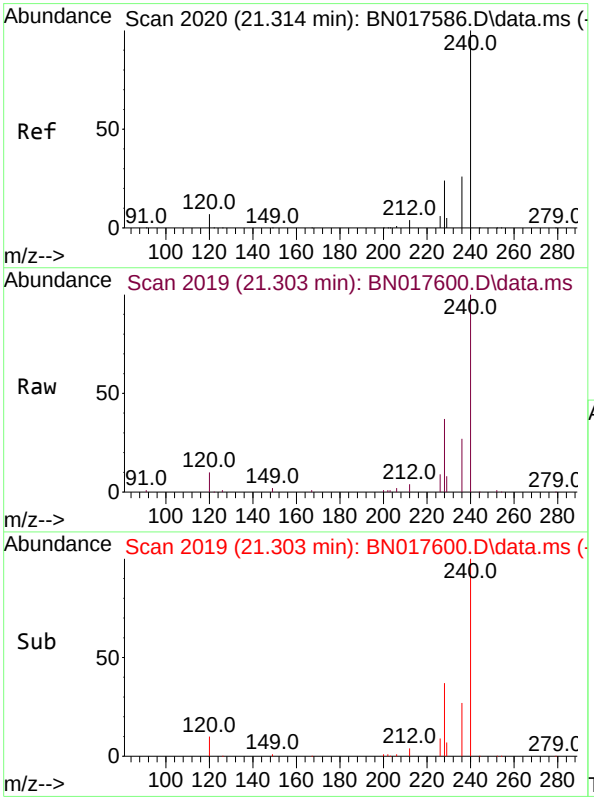
#28
Fluoranthene
Concen: 0.397 ng
RT: 19.179 min Scan# 1
Delta R.T. -0.005 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Instrument :
BNA_N
ClientSampleId :
BP-VPB-RW9-GW-858-860MSD

Tgt Ion:202 Resp: 187644

Ion	Ratio	Lower	Upper
202	100		
101	10.2	8.3	12.5
203	17.1	13.9	20.9

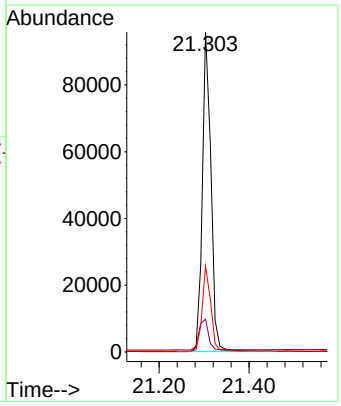


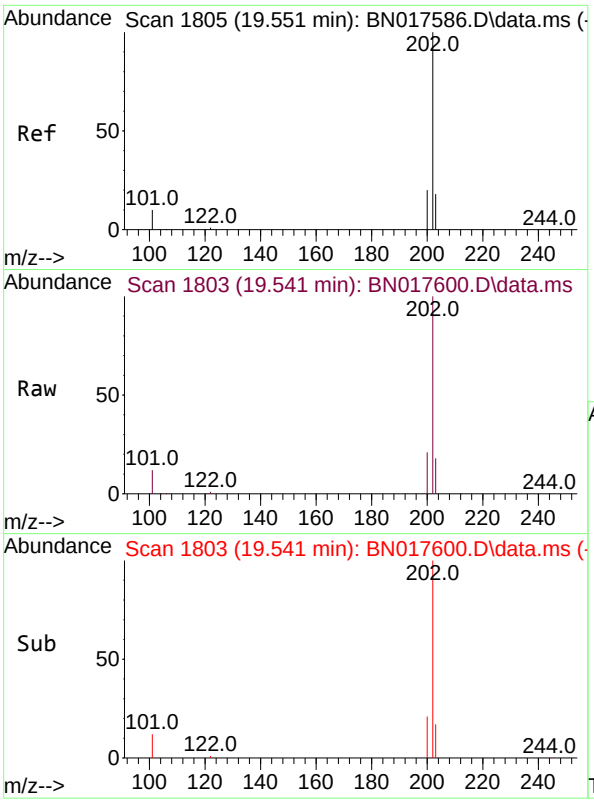


#29
Chrysene-d12
Concen: 0.400 ng
RT: 21.303 min Scan# 2019
Delta R.T. -0.011 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Tgt Ion:240 Resp: 127150

Ion	Ratio	Lower	Upper
240	100		
120	10.2	6.1	9.1#
236	26.8	21.2	31.8



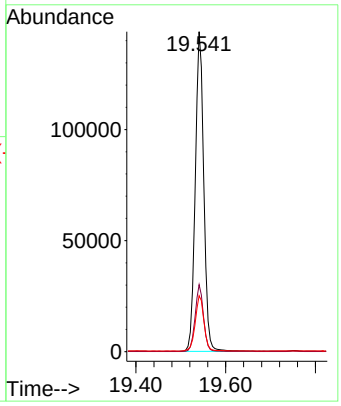


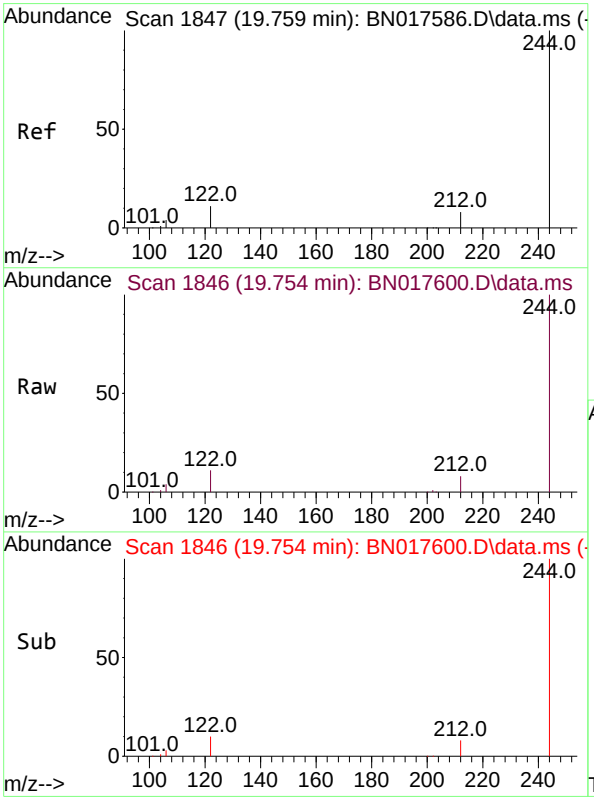
#30
Pyrene
Concen: 0.417 ng
RT: 19.541 min Scan# 1
Delta R.T. -0.010 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Instrument :
BNA_N
ClientSampleId :
BP-VPB-RW9-GW-858-860MSD

Tgt Ion:202 Resp: 190364

Ion	Ratio	Lower	Upper
202	100		
200	20.6	16.4	24.6
203	17.7	13.9	20.9

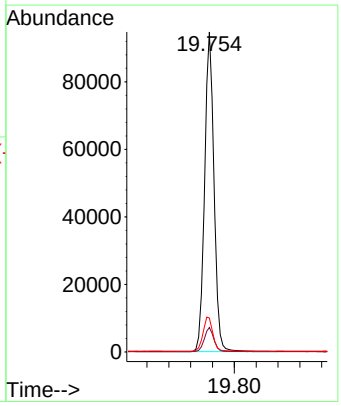


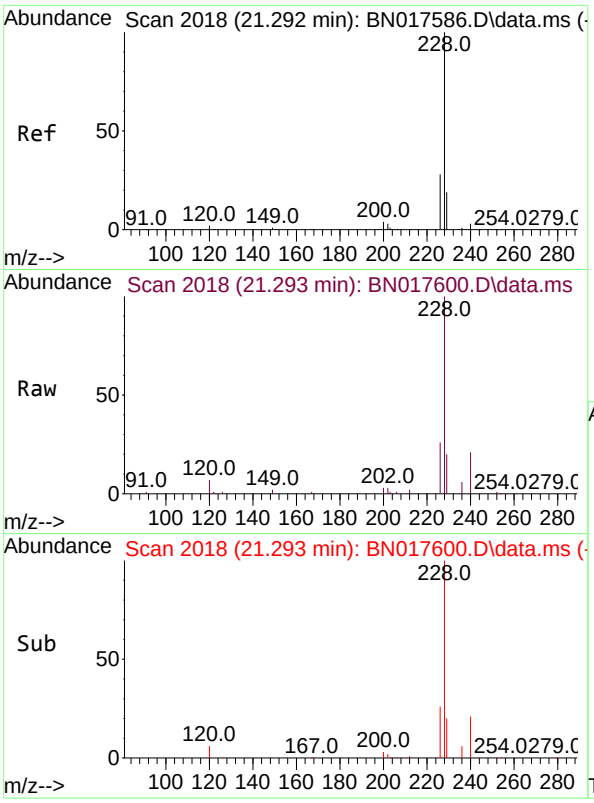


#31
Terphenyl-d14
Concen: 0.382 ng
RT: 19.754 min Scan# 1846
Delta R.T. -0.005 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Tgt Ion:244 Resp: 113839

Ion	Ratio	Lower	Upper
244	100		
212	7.6	6.2	9.2
122	10.6	8.9	13.3



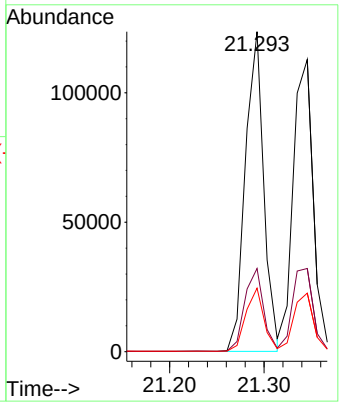


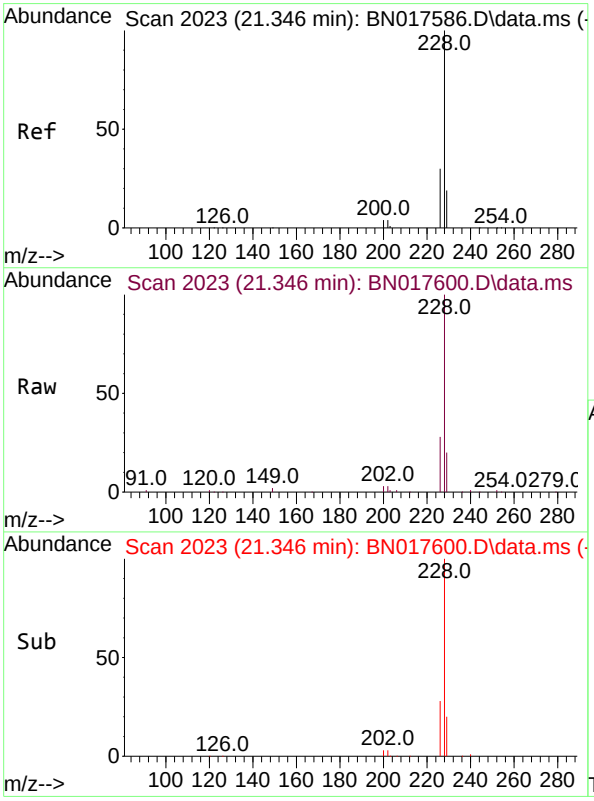
#32
Benzo(a)anthracene
Concen: 0.396 ng
RT: 21.293 min Scan# 2
Delta R.T. 0.000 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Instrument :
BNA_N
ClientSampleId :
BP-VPB-RW9-GW-858-860MSD

Tgt Ion:228 Resp: 167371

Ion	Ratio	Lower	Upper
228	100		
226	26.0	22.4	33.6
229	19.9	15.4	23.2

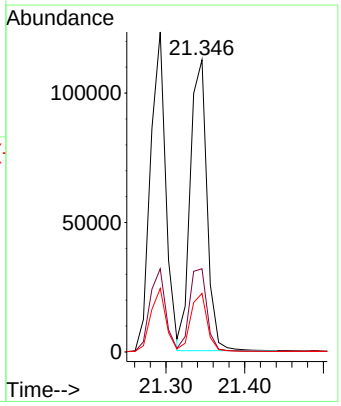


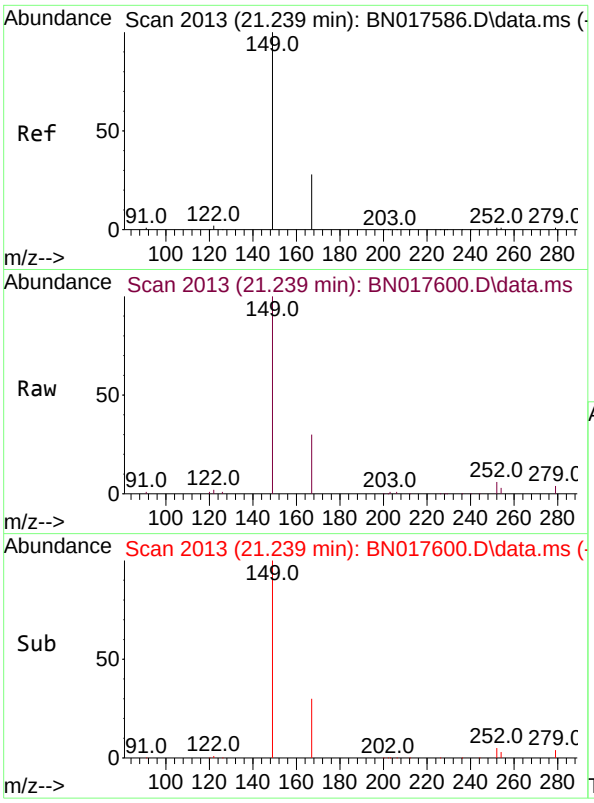


#33
Chrysene
Concen: 0.399 ng
RT: 21.346 min Scan# 2023
Delta R.T. 0.000 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Tgt Ion:228 Resp: 165849

Ion	Ratio	Lower	Upper
228	100		
226	28.5	24.0	36.0
229	20.1	15.6	23.4



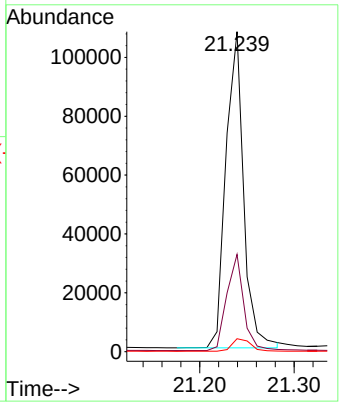


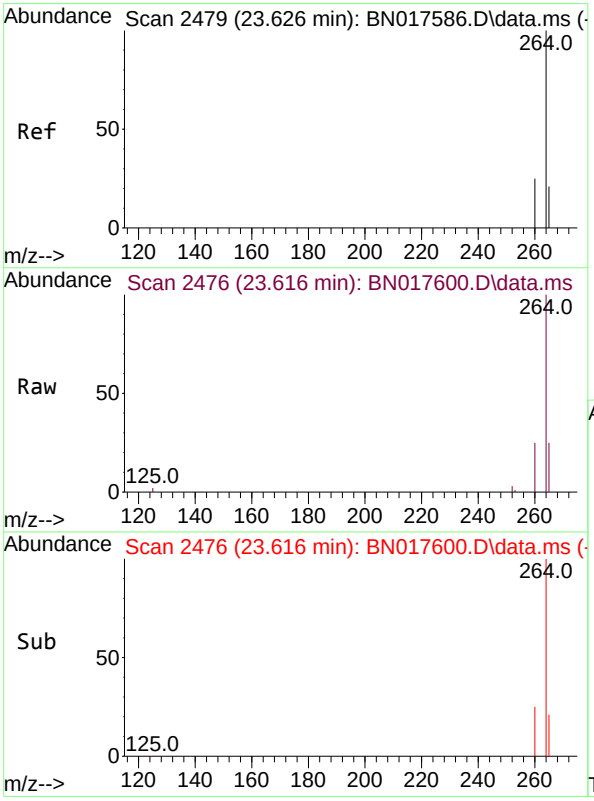
#34
Bis(2-ethylhexyl)phthalate
Concen: 1.204 ng
RT: 21.239 min Scan# 2
Delta R.T. 0.000 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Instrument :
BNA_N
ClientSampleId :
BP-VPB-RW9-GW-858-860MSD

Tgt Ion:149 Resp: 140087

Ion	Ratio	Lower	Upper
149	100		
167	29.1	23.2	34.8
279	4.2	3.4	5.0

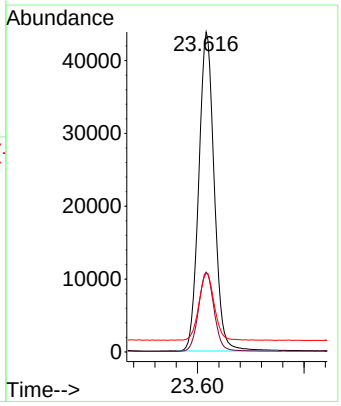


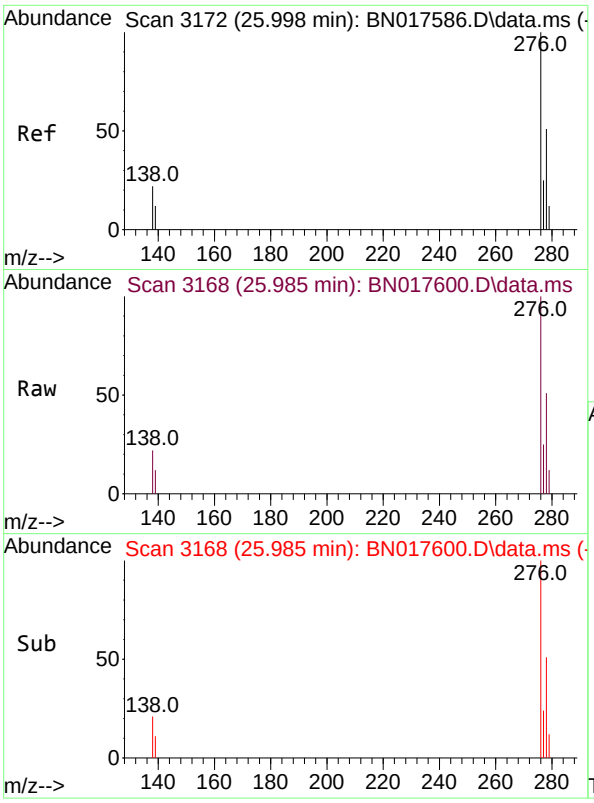


#35
Perylene-d12
Concen: 0.400 ng
RT: 23.616 min Scan# 2476
Delta R.T. -0.010 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Tgt Ion:264 Resp: 88194

Ion	Ratio	Lower	Upper
264	100		
260	25.0	20.1	30.1
265	24.5	20.6	30.8



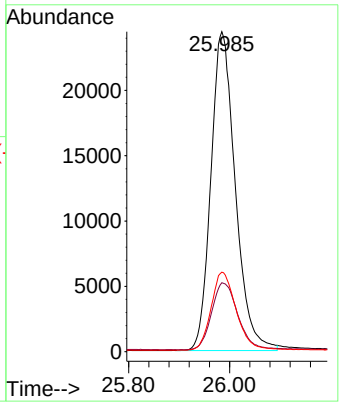


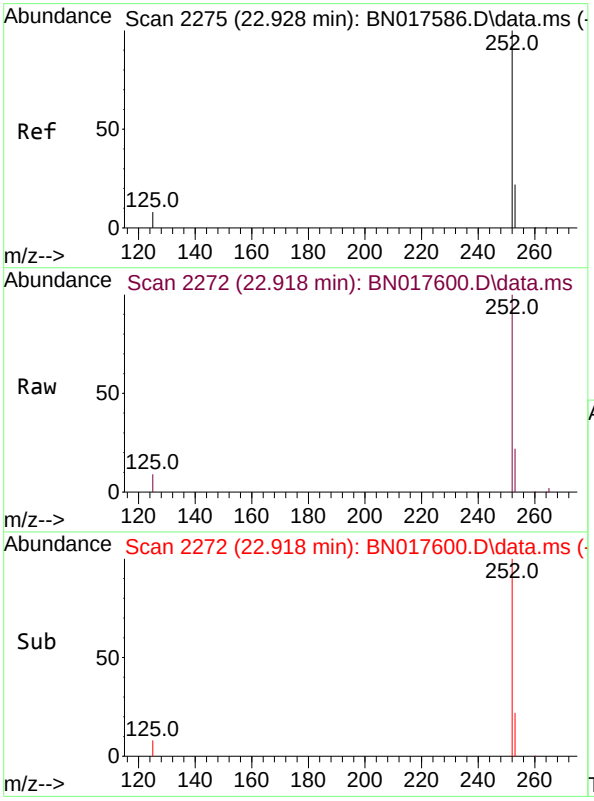
#36
Indeno(1,2,3-cd)pyrene
Concen: 0.435 ng
RT: 25.985 min Scan# 3
Delta R.T. -0.014 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Instrument :
BNA_N
ClientSampleId :
BP-VPB-RW9-GW-858-860MSD

Tgt Ion:276 Resp: 81987

Ion	Ratio	Lower	Upper
276	100		
138	22.6	16.4	24.6
277	25.0	17.9	26.9

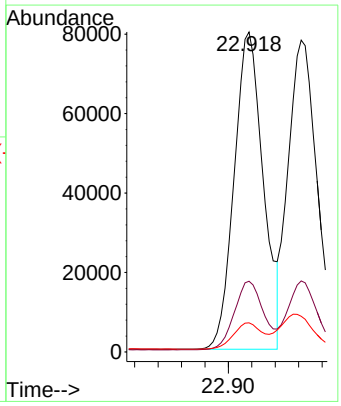


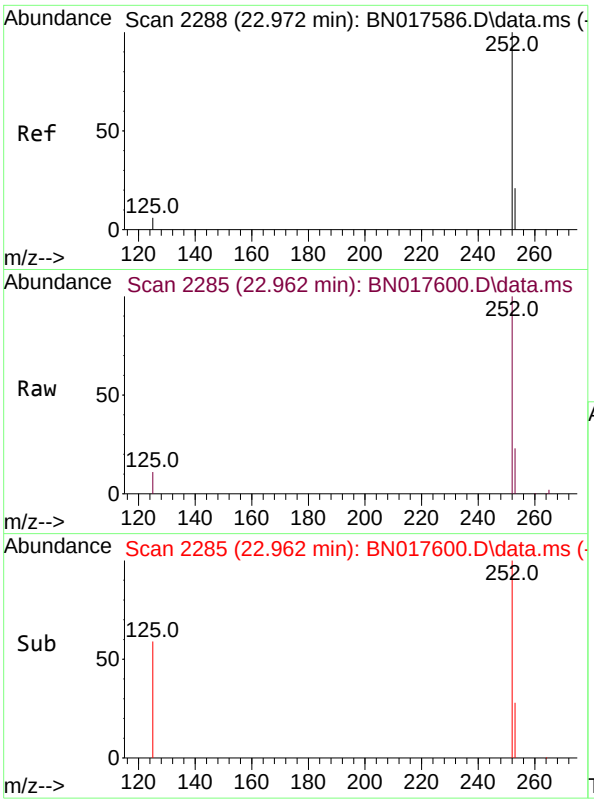


#37
Benzo(b)fluoranthene
Concen: 0.404 ng
RT: 22.918 min Scan# 2272
Delta R.T. -0.010 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Tgt Ion:252 Resp: 137738

Ion	Ratio	Lower	Upper
252	100		
253	22.1	17.5	26.3
125	9.1	7.1	10.7



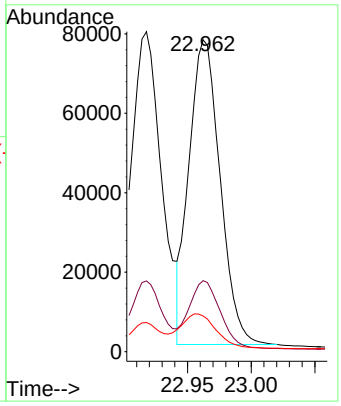


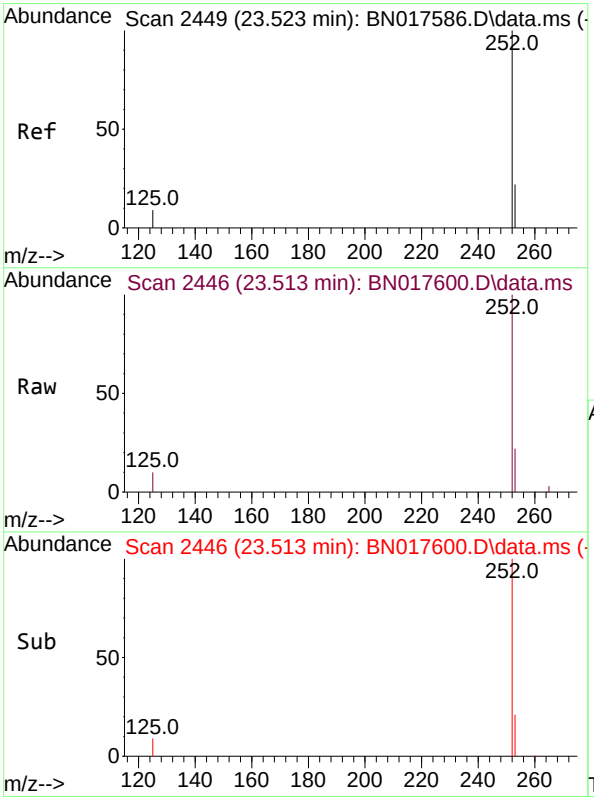
#38
Benzo(k)fluoranthene
Concen: 0.404 ng
RT: 22.962 min Scan# 2
Delta R.T. -0.010 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Instrument :
BNA_N
ClientSampleId :
BP-VPB-RW9-GW-858-860MSD

Tgt Ion:252 Resp: 130286

Ion	Ratio	Lower	Upper
252	100		
253	22.8	17.7	26.5
125	11.5	7.9	11.9

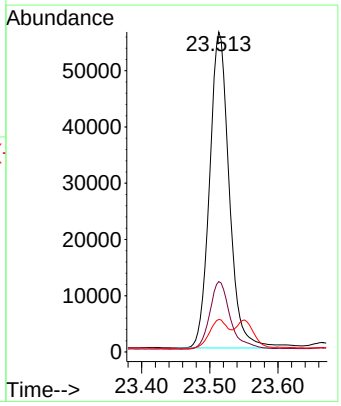


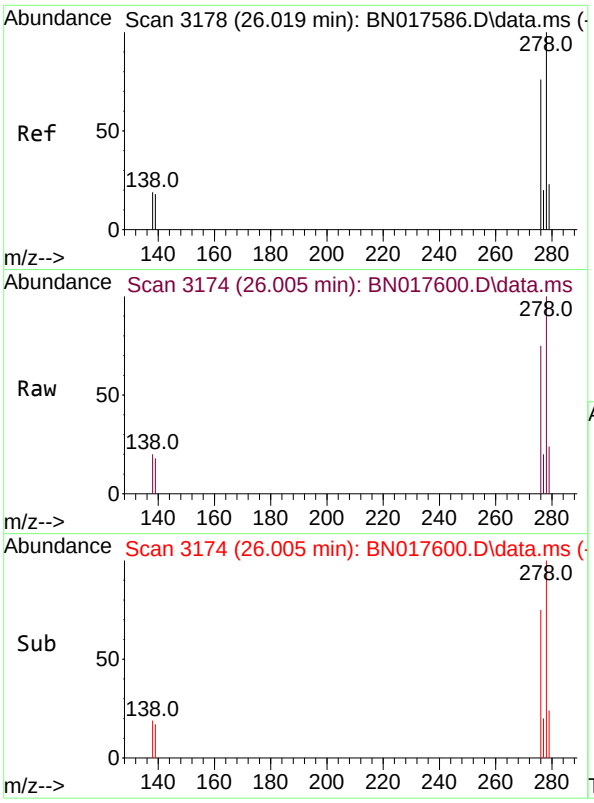


#39
Benzo(a)pyrene
Concen: 0.413 ng
RT: 23.513 min Scan# 2446
Delta R.T. -0.010 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Tgt Ion:252 Resp: 112322

Ion	Ratio	Lower	Upper
252	100		
253	22.0	17.7	26.5
125	10.2	8.0	12.0



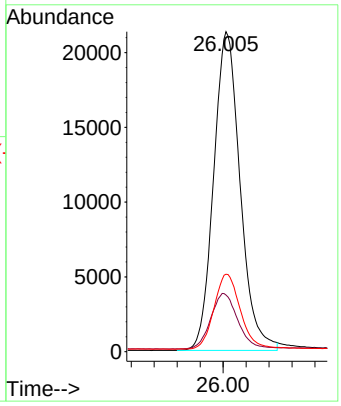


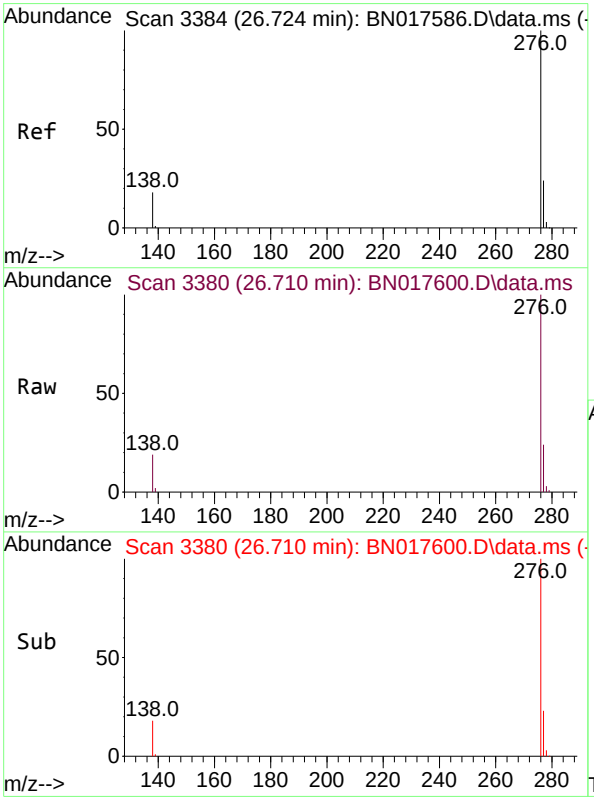
#40
Dibenzo(a,h)anthracene
Concen: 0.431 ng
RT: 26.005 min Scan# 3
Delta R.T. -0.014 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Instrument :
BNA_N
ClientSampleId :
BP-VPB-RW9-GW-858-860MSD

Tgt Ion:278 Resp: 68197

Ion	Ratio	Lower	Upper
278	100		
139	17.7	15.2	22.8
279	24.2	19.5	29.3





#41
Benzo(g,h,i)perylene
Concen: 0.447 ng
RT: 26.710 min Scan# 3380
Delta R.T. -0.014 min
Lab File: BN017600.D
Acq: 25 Nov 2021 03:27

Tgt Ion:276 Resp: 62770

Ion	Ratio	Lower	Upper
276	100		
277	24.0	20.0	30.0
138	19.0	15.7	23.5