Table B1. List of trace metal analytes

Metal Analyte	**Chemical Symbol**
Silver	Ag
Cadmium	Cd
Chromium	Cr
Copper	Cu
Nickel	Ni
Lead	Pb
Zinc	Zn
Arsenic	As
Mercury	Hg

Table B2. List of PCB analytes[a]

PCB Congener #[b]	PCB Congener Structure	Coeluting Analytes
BZ #1 (1 Cl)	Monochlorobiphenyl	
BZ #8 (2 Cl)[c]	2,4'-Dichlorobiphenyl	
BZ #18 (3 Cl)[c]	2,2',5-Trichlorobiphenyl	
BZ #29 (3 Cl)	2,4,5-Trichlorobiphenyl	
BZ #50 (4 Cl)	2,2',4,6-Tetrachlorobiphenyl	
BZ #28 (3 Cl)[c]	2,4,4'-Trichlorobiphenyl	
BZ #52 (4 Cl)[c]	2,2',5,5'-Tetrachlorobiphenyl	
BZ #104 (5 Cl)	2,2',4,6,6'-Pentachlorobiphenyl	
BZ #44 (4 Cl)[c]	2,2',3,5'-Tetrachlorobiphenyl	
BZ #66 (4 Cl)[c]	2,3',4,4'-Tetrachlorobiphenyl	
BZ #77 (4 Cl)	3,3',4,4'-Tetrachlorobiphenyl	o, p' - DDD
BZ #101 (5 Cl)[c]	2,2',4,5,5'-Pentachlorobiphenyl	
BZ #87 (5 Cl)	2,2',3,4,5'-Pentachlorobiphenyl	Dieldrin
BZ #118 (5 Cl)[c]	2,3',4,4',5-Pentachlorobiphenyl	
BZ #188 (7 Cl)	2,2',3,4',5,6,6'-Heptachlorobiphenyl	
BZ #153 (6 Cl)[c]	2,2',4,4',5,5'-Hexachlorobiphenyl	
BZ #105 (5 Cl)[c]	2,3,3',4,4'-Pentachlorobiphenyl	
BZ #138 (6 Cl)[c]	2,2',3,4,4',5'-Hexachlorobiphenyl	
BZ #126 (5 Cl)	3,3',4,4',5-Pentachlorobiphenyl	
BZ #187 (7 Cl)[c]	2,2',3,4',5,5',6-Heptachlorobiphenyl	
BZ #128 (6 Cl)[c]	2,2',3,3',4,4'-Hexachlorobiphenyl	
BZ #200 (8 Cl)	2,2',3,3',4,5',6,6'-Octachlorobiphenyl	
BZ #180 (7 Cl)[c]	2,2',3,4,4',5,5'-Heptachlorobiphenyl	
BZ #170 (7 Cl)[c]	2,2',3,3',4,4',5-Heptachlorobiphenyl	
BZ #195 (8 Cl)[c]	2,2',3,3',4,4',5,6-Octachlorobiphenyl	
BZ #206 (9 Cl)[c]	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	
BZ #209 (10 Cl)[c]	2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	

[a]Additional data with limited QA/QC are available upon request from the senior author on the following PCB congeners: BZ #49, BZ #184, BZ #183, BZ #156, and BZ #169.
[b]Congeners numbered according to Ballschmiter and Zell (1980).
[c]The sum concentrations of these 18 PCB congeners were multiplied by 2 to approximate "Aroclor-based" total PCB data (NOAA1989; ACE-EPA 1992).

Table B3. List of chlorinated pesticide analytes[a]

Compound	Coeluting Analytes
Chlordanes	
Heptachlor	
Heptachlor epoxide	
Oxychlordane	
α-chlordane	
trans-nonachlor	
DDTs and Metabolites	
o,p'-DDE	
p,p'-DDE	
o,p'-DDD	BZ #77
p,p'-DDD	
o,p'-DDT	
p,p'-DDT	
Other Pesticides	
Hexachlorobenzene	
Aldrin	
Dieldrin	BZ #87
Endrin	
Octachlorostyrene	
Photomirex	
Mirex	
BHCs	
Lindane (γ-BHC)	

[a]Additional data with limited QA/QC are available upon request from the senior author on the following pesticides: α-BHC, β-BHC, γ-chlordane, cis-nonachlor, endosulfan I, endosulfan II, and endosulfan sulfate.

Table B4. List of PAH analytes

Low-Molecular-Weight PAH Analyte	High-Molecular-Weight PAH Analyte
Naphthalene	Fluoranthene
2-Methylnaphthalene	Pyrene
1-Methylnaphthalene	Benz[a]anthracene
Biphenyl	Chrysene
2,6-Dimethylnaphthalene	Benzo[b]fluoranthene
Acenaphthylene	Benzo[k]fluoranthene
Acenaphthene	Benzo[e]pyrene
2,3,5-Trimethylnaphthalene	Benzo[a]pyrene
Fluorene	Perylene
Phenanthrene	Indeno[1,2,3-cd]pyrene
Anthracene	Dibenz[a,h]anthracene
1-Methylphenanthrene	Benzo[ghi]perylene

Table B5. List of 2,3,7,8-substituted PCDD and PCDF congeners

Congener Abbreviation	Congener Structure	TEF[a]	TDL[b]
Dioxins			
2,3,7,8-TCDD	2,3,7,8-Tetrachlorodibenzo[p]dioxin	1	1
1,2,3,7,8-PeCDD	1,2,3,7,8-Pentachlorodibenzo[p]dioxin	0.5	5
1,2,3,4,7,8-HxCDD	1,2,3,4,7,8-Hexachlorodibenzo[p]dioxin	0.1	5
1,2,3,6,7,8-HxCDD	1,2,3,6,7,8-Hexachlorodibenzo[p]dioxin	0.1	5
1,2,3,7,8,9-HxCDD	1,2,3,7,8,9-Hexachlorodibenzo[p]dioxin	0.1	5
1,2,3,4,6,7,8-HpCDD	1,2,3,4,6,7,8-Heptachlorodibenzo[p]dioxin	0.01	5
OCDD	Octachlorodibenzo[p]dioxin	0.001	10
	Furans		
2,3,7,8-TCDF	2,3,7,8-Tetrachlorodibenzofuran	0.1	1
1,2,3,7,8-PeCDF	1,2,3,7,8-Pentachlorodibenzofuran	0.05	5
2,3,4,7,8-PeCDF	2,3,4,7,8-Pentachlorodibenzofuran	0.5	5
1,2,3,4,7,8-HxCDF	1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	5
1,2,3,6,7,8-HxCDF	1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	5
2,3,4,6,7,8-HxCDF	2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	5
1,2,3,7,8,9-HxCDF	1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	5
1,2,3,4,6,7,8-HpCDF	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	5
1,2,3,4,7,8,9-HpCDF	1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	5
OCDF	Octachlorodibenzofuran	0.001	10

[a]TEF = toxicity equivalency factor (EPA 1992).
[b]TDL = target method detection limit (pg/g wet weight).

Table B6. Data quality objectives for organic analyses

Parameters/QC Measurements	Frequency	Control Limit Criteria
Laboratory method blank	1 per 20 samples	Warning limit -- analyst should use best judgement if analytes are detected ≤3 times the method detection limit Action limit -- no analyte should be detected at >3 times the method detection limit
Instrumental detection Limit	1 per project	≤5% relative standard deviation for seven replicate measurements
Method detection limit	1 per project	Analyst should use best judgement if the calculated method detection limits are higher than the target method detection limit of 2.0 ppb wet weight for PCBs and pesticides, 10.0 ppb wet weight for PAHs, and within a range of 1-10 pptr for each PCDD and PCDF congener as specified in Table B5
Surrogate internal standards	Each sample	40-150% recovery Recommended control limit for percent difference between accuracy-based material surrogate recoveries and sample surrogate recoveries is <50%
Matrix spike	1 per 20 samples	Recovery should be within 50-120% for at least 80% of the analytes
Laboratory triplicates	1 per 20 samples	≤25% relative standard deviation for analytes >10 times the method detection limit
Accuracy-based material	1 per 20 samples	Recommended control limit for percent difference of certified or consensus value on average for analytes >10 times the method detection limit is ≤30%

Table B7. Concentrations (µg/g [ppm] dry weight) of trace metals found in DOLT-1 standard reference material

	Ag	Cd	Cr	Cu	Ni	Pb	Zn	As	Hg
				Detection Limits					
	0.052	0.016	0.052	0.12	0.038	0.025	0.65	0.91	0.045
Mean (n=6)	1.03	4.02	0.41	19.3	0.26	1.33	92.4	10.5	0.217
Std. dev.	0.04	0.17	0.07	1.2	0.02	0.08	2.6	1.1	0.015
RSD(%)	3.9	4.2	17.1	6.2	7.7	6.0	2.8	10.5	6.9
Certified	[1.00][a]	4.18	0.40	20.8	0.26	1.36	92.5	10.1	0.225
+/-	-	0.28	0.07	1.2	0.06	0.29	2.3	1.4	0.037
Recovery (%)	103	96	102	93	99	98	100	104	96

[a]Consensus value from NOAA-National Research Council Canada intercomparison exercises.

Table B8. Results (µg/g wet weight) of duplicate analyses for trace metals in bluefish, summer flounder, black sea bass, and tautog muscle composites

Composite #	Trace Metal								
	Ag	**Cd**	**Cr**	**Cu**	**Ni**	**Pb**	**Zn**	**As**	**Hg**
					Detection Limits				
	0.013	0.004	0.013	0.030	0.0095	0.006	0.16	0.23	0.011
					Bluefish				
105-A	0.0323	0.173	0.425	0.456	0.136	0.293	10.8	0.37	0.1069
105-B	0.0285	0.172	0.480	0.419	0.126	0.275	10.1	0.38	0.0963
Mean	0.0304	0.173	0.453	0.438	0.131	0.284	10.4	0.38	0.1016
RPD[a]	12.5	0.6	12.1	8.4	7.6	6.3	6.7	2.6	10.4
					Summer Flounder				
124-A	0.0210	0.138	0.084	0.235	0.088	0.163	3.81	1.70	0.0391
124-B	0.0244	0.137	0.074	0.222	0.101	0.163	3.63	1.77	0.0373
Mean	0.0227	0.138	0.079	0.229	0.095	0.163	3.72	1.74	0.0382
RPD[a]	15.0	0.7	12.7	5.7	13.7	0.0	4.8	4.0	4.7
					Black Sea Bass				
131-A	0.0296	0.144	0.420	0.577	0.111	0.223	5.86	3.59	0.0477
131-B	0.0215	0.108	0.336	0.488	0.083	0.184	4.44	2.62	0.0344
Mean	0.0256	0.126	0.378	0.533	0.097	0.204	5.15	3.11	0.0411
RPD[a]	31.6	28.6	22.2	16.7	28.9	19.1	27.6	31.2	32.4
					Tautog				
153-A	0.0265	0.132	0.148	0.237	0.143	0.226	3.86	0.95	0.0679
153-B	0.0249	0.101	0.134	0.232	0.129	0.215	3.18	0.88	0.0621
Mean	0.0257	0.117	0.141	0.235	0.136	0.221	3.52	0.92	0.0650
RPD[a]	6.2	26.5	9.9	2.1	10.3	5.0	19.3	7.6	8.9

[a]RPD (relative percent difference) for duplicate analyses = (100 x absolute value for range)/mean.

Table B9. Instrumental detection limit (IDL) and estimated method detection limit (EMDL) for PCB congeners

	BZ #																		
	8	**18**	**28**	**52**	**66**	**101**	**77**	**118**	**153**	**105**	**138**	**126**	**187**	**128**	**180**	**170**	**195**	**206**	**209**
Concentration of Solvent Spiked at Low Levels (ng/µL)																			
Replicate 1	0.042	0.042	0.042	0.045	0.044	0.044	0.040	0.042	0.044	0.043	0.044	0.050	0.044	0.044	0.044	0.044	0.045	0.045	0.046
Replicate 2	0.043	0.043	0.041	0.044	0.044	0.044	0.039	0.042	0.043	0.041	0.043	0.051	0.043	0.042	0.042	0.042	0.044	0.044	0.044
Replicate 3	0.040	0.040	0.040	0.043	0.043	0.043	0.038	0.042	0.044	0.042	0.043	0.047	0.044	0.043	0.043	0.043	0.044	0.045	0.045
Replicate 4	0.041	0.041	0.041	0.043	0.044	0.044	0.040	0.042	0.044	0.042	0.043	0.049	0.044	0.043	0.043	0.043	0.044	0.044	0.045
Replicate 5	0.040	0.041	0.041	0.044	0.046	0.044	0.041	0.043	0.044	0.043	0.044	0.050	0.044	0.044	0.044	0.044	0.045	0.046	0.046
Replicate 6	0.039	0.040	0.040	0.043	0.044	0.044	0.041	0.043	0.044	0.043	0.044	0.048	0.044	0.043	0.044	0.044	0.045	0.045	0.045
Replicate 7	0.039	0.040	0.040	0.043	0.045	0.044	0.042	0.043	0.045	0.044	0.044	0.050	0.044	0.044	0.045	0.045	0.046	0.046	0.046
Mean	0.041	0.041	0.041	0.044	0.044	0.044	0.040	0.043	0.044	0.042	0.044	0.049	0.044	0.043	0.044	0.044	0.045	0.045	0.045
Std. dev.	0.002	0.001	0.001	0.001	0.001	0.000	0.001	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.001	0.001	0.001	0.001	0.001
RSD (%)	4.1	3.1	1.5	1.7	2.4	0.56	2.7	1.2	0.92	2.2	1.1	2.5	0.88	1.5	1.6	1.6	1.6	1.6	1.4
IDL[a]	0.005	0.004	0.002	0.002	0.003	0.001	0.003	0.002	0.001	0.003	0.002	0.004	0.001	0.002	0.002	0.002	0.002	0.002	0.002
Corresponding Concentration in a Typical Tissue (ng/g wet weight)[b]																			
Mean	1.02	1.03	1.02	1.09	1.11	1.09	1.01	1.06	1.10	1.06	1.09	1.24	1.10	1.08	1.09	1.09	1.12	1.12	1.13
Std. dev.	0.04	0.03	0.01	0.02	0.03	0.01	0.03	0.01	0.01	0.02	0.01	0.03	0.01	0.02	0.02	0.02	0.02	0.02	0.02
RSD (%)	4.1	3.1	1.5	1.7	2.4	0.6	2.7	1.2	0.92	2.2	1.1	2.5	0.88	1.5	1.6	1.6	1.6	1.6	1.4
EMDL[c]	0.13	0.10	0.047	0.059	0.083	0.019	0.087	0.042	0.032	0.072	0.039	0.097	0.031	0.051	0.055	0.055	0.055	0.057	0.048

[a]Instrumental detection limit is based on 3.143 times the standard deviation of seven replicate measurements.
[b]Assumed 10g wet weight of muscle tissue, 50% recovery in the extraction and cleanup steps, 250 µL final sample volume, and 1 µL sample injection volume.
[c]Estimated method detection limit is based on 3.143 times the standard deviation of a typical tissue.

Table B10. Analyses (ng/g [ppb] wet weight) of spiked replicates of summer flounder muscle for determination of the method detection limit (MDL) for PCB congeners

	BZ #																								
	1	**8**	**18**	**29**	**50**	**28**	**52**	**104**	**44**	**66**	**101**	**118**	**188**	**153**	**105**	**138**	**126**	**187**	**128**	**200**	**180**	**170**	**195**	**206**	**209**
Replicate 1	3.57	6.54	5.91	6.49	6.15	6.65	6.77	7.03	6.89	10.2	9.76	11.3	8.94	11.4	10.0	10.9	12.1	9.95	10.2	9.13	10.5	10.4	10.2	9.92	8.17
Replicate 2	3.36	6.59	5.90	6.32	6.14	6.49	6.70	6.87	6.76	9.46	9.08	10.5	8.34	10.7	9.10	10.1	10.9	9.14	9.40	8.35	9.71	9.62	9.42	9.58	7.97
Replicate 3	2.82	6.30	5.79	6.22	6.16	6.48	6.65	6.98	6.83	9.07	8.51	9.95	7.76	10.0	8.69	9.52	9.92	8.34	8.87	7.96	9.30	9.18	9.02	9.21	7.61
Replicate 4	2.94	5.83	5.00	5.44	5.28	5.56	5.64	5.81	5.74	9.24	8.66	10.2	8.06	10.3	8.99	9.73	10.7	8.52	9.04	8.07	9.37	9.21	9.05	9.26	7.82
Replicate 5	3.35	6.75	6.34	6.35	6.30	6.50	6.60	6.93	6.65	9.04	8.41	9.94	7.83	9.93	8.85	9.65	10.1	8.41	8.85	7.98	9.29	9.08	9.01	9.37	7.94
Replicate 6	2.60	5.95	5.34	5.60	5.51	5.80	5.90	6.24	6.05	8.67	8.23	10.2	7.71	9.91	8.76	9.43	10.1	8.28	8.72	7.92	9.24	8.93	8.94	9.38	8.06
Replicate 7	3.07	5.61	6.27	7.06	7.21	7.57	8.51	8.95	8.52	8.72	8.73	11.2	8.76	11.1	9.66	10.7	11.5	9.93	10.0	9.68	11.0	10.7	11.0	11.3	9.78
Mean	3.10	6.23	5.79	6.21	6.11	6.43	6.68	6.97	6.78	9.19	8.77	10.5	8.20	10.5	9.16	10.0	10.8	8.94	9.30	8.44	9.78	9.60	9.51	9.71	8.19
Std. dev.	0.34	0.43	0.48	0.55	0.62	0.65	0.92	0.99	0.88	0.51	0.51	0.56	0.50	0.62	0.51	0.57	0.82	0.74	0.60	0.69	0.71	0.71	0.78	0.73	0.72
RSD (%)	11	6.9	8.3	8.9	10	10	14	14	13	5.5	5.9	5.3	6.0	5.9	5.5	5.7	7.6	8.3	6.5	8.2	7.3	7.4	8.2	7.5	8.8
MDL[a]	1.1	1.4	1.5	1.7	1.9	2.0	2.9	3.1	2.8	1.6	1.6	1.8	1.6	1.9	1.6	1.8	2.6	2.3	1.9	2.2	2.2	2.2	2.5	2.3	2.3

[a]MDL ≡ σt, where σ = standard deviation and t = Student's "t" value of 3.143 with n-1 degrees of freedom and $\alpha = 0.01$ (one tailed).

Table B11. Results (ng/g [ppb] wet weight) of triplicate analyses for PCBs in bluefish and summer flounder muscle composites (nd = <MDL)

Composite #	PCB (BZ #)																								
	1	**8**	**18**	**29**	**50**	**28**	**52**	**104**	**44**	**66**	**101**	**118**	**188**	**153**	**105**	**138**	**126**	**187**	**128**	**200**	**180**	**170**	**195**	**206**	**209**
Bluefish (Station BL2)																									
107	32.7	6.05	2.56	nd	nd	5.97	9.69	nd	4.80	21.2	28.9	31.1	14.8	63.5	10.2	53.3	7.07	21.6	8.90	3.45	31.0	8.78	4.72	6.46	4.91
107-dup.	49.3	4.94	2.65	nd	nd	6.13	9.51	nd	4.66	19.6	26.8	28.8	13.6	59.4	9.00	49.5	6.48	20.1	8.04	3.20	28.5	8.06	4.37	6.08	4.42
107-trip.	42.7	4.51	2.30	nd	nd	6.26	9.99	nd	4.79	21.2	29.2	31.5	nd	65.4	9.64	54.0	6.95	21.8	8.74	3.36	31.3	8.62	4.61	6.53	4.97
Mean	41.6	5.16	2.50	nd	nd	6.12	9.73	nd	4.75	20.7	28.3	30.5	9.72	62.7	9.62	52.3	6.84	21.2	8.56	3.33	30.2	8.49	4.57	6.36	4.77
Std. dev.	8.33	0.80	0.18	-	-	0.15	0.24	-	0.08	0.94	1.31	1.47	0.88	3.04	0.61	2.42	0.31	0.94	0.46	0.12	1.55	0.38	0.18	0.24	0.30
RSD (%)	20	15	7.3	-	-	2.4	2.5	-	1.6	4.6	4.6	4.8	9.1	4.8	6.3	4.6	4.6	4.4	5.3	3.7	5.1	4.5	4.0	3.8	6.3
Summer Flounder (Station FL2)																									
117	2.16	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
117-dup.	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
117-trip.	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Mean	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Std. dev.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RSD (%)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Summer Flounder (Station FL6)																									
127	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
127-dup.	3.44	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
127-trip.	3.63	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Mean	2.54	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Std. dev.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RSD (%)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MDL	1.1	1.4	1.5	1.7	1.9	2.0	2.9	3.1	2.8	1.6	1.6	1.8	1.6	1.9	1.6	1.8	2.6	2.3	1.9	2.2	2.2	2.2	2.5	2.3	2.3

Table B12. Results (ng/g [ppb] wet weight) of triplicate analyses for PCBs in black sea bass and tautog muscle composites (nd = <MDL)

Composite #	PCB (BZ #)																								
	1	**8**	**18**	**29**	**50**	**28**	**52**	**104**	**44**	**66**	**101**	**118**	**188**	**153**	**105**	**138**	**126**	**187**	**128**	**200**	**180**	**170**	**195**	**206**	**209**
Black Sea Bass (Station SB3)																									
138	6.40	nd	nd	nd	nd	4.03	7.10	nd	3.95	10.3	9.69	9.53	3.07	15.4	3.45	12.4	nd	5.10	nd	nd	5.62	nd	nd	nd	nd
138-dup.	4.24	1.56	nd	nd	nd	2.52	4.63	nd	nd	6.18	6.16	6.46	2.54	10.4	2.58	8.53	nd	3.77	nd	nd	4.42	nd	nd	nd	nd
138-trip.	10.5	nd	nd	nd	nd	4.07	7.05	nd	3.89	9.99	9.39	9.11	3.03	14.6	3.30	11.7	nd	4.87	nd	nd	5.57	nd	nd	nd	nd
Mean	7.04	nd	nd	nd	nd	3.54	6.26	nd	3.08	8.83	8.41	8.37	2.88	13.5	3.11	10.9	nd	4.58	nd	nd	5.20	nd	nd	nd	nd
Std. dev.	3.18	-	-	-	-	0.88	1.41	-	0.04	2.31	1.96	1.67	0.30	2.64	0.47	2.05	-	0.71	-	-	0.68	-	-	-	-
RSD (%)	45	-	-	-	-	25	23	-	1.3	26	23	20	10	20	15	19	-	16	-	-	13	-	-	-	-
Tautog (Station TA1)																									
146	6.38	1.55	nd	nd	nd	2.35	2.97	nd	nd	2.66	6.36	4.18	2.25	9.06	2.09	2.94	nd	3.77	nd	nd	2.59	nd	nd	nd	nd
146-dup.	4.36	nd	nd	nd	nd	nd	nd	nd	nd	2.44	5.77	3.76	nd	8.04	1.87	2.61	nd	3.30	nd	nd	nd	nd	nd	nd	nd
146-trip.	6.70	1.47	nd	nd	nd	2.18	3.02	nd	nd	2.61	6.15	4.09	nd	8.78	2.05	2.86	nd	3.61	nd	nd	2.47	nd	nd	nd	nd
Mean	5.81	nd	nd	nd	nd	nd	nd	nd	nd	2.57	6.09	4.01	nd	8.63	2.00	2.80	nd	3.56	nd	nd	nd	nd	nd	nd	nd
Std. dev.	1.27	-	-	-	-	-	-	-	-	0.11	0.30	0.22	-	0.52	0.12	0.18	-	0.24	-	-	-	-	-	-	-
RSD (%)	22	-	-	-	-	-	-	-	-	4.4	4.9	5.4	-	6.1	5.9	6.3	-	6.7	-	-	-	-	-	-	-
Tautog (Station TA3)																									
156	12.3	nd	nd	nd	nd	5.48	6.61	nd	nd	6.2	13.0	10.8	nd	25.0	4.95	8.54	nd	10.4	2.00	nd	7.68	2.59	nd	nd	nd
156-dup.	10.9	nd	nd	nd	nd	4.21	4.84	nd	nd	5.94	11.6	9.90	nd	22.3	4.42	7.75	nd	8.92	nd	nd	6.94	2.32	nd	nd	nd
156-trip.	5.56	nd	nd	nd	nd	4.15	5.12	nd	nd	5.70	11.6	9.67	nd	22.2	4.44	7.74	nd	9.12	nd	nd	6.82	2.29	nd	nd	nd
Mean	9.57	nd	nd	nd	nd	4.61	5.52	nd	nd	5.95	12.1	10.1	nd	23.2	4.60	8.01	nd	9.47	nd	nd	7.15	2.40	nd	nd	nd
Std. dev.	3.54	-	-	-	-	0.75	0.95	-	-	0.25	0.82	0.60	-	1.61	0.30	0.46	-	0.79	-	-	0.46	0.17	-	-	-
RSD (%)	37	-	-	-	-	16	17	-	-	4.2	6.8	6.0	-	7.0	6.5	5.7	-	8.3	-	-	6.5	6.9	-	-	-
MDL	1.1	1.4	1.5	1.7	1.9	2.0	2.9	3.1	2.8	1.6	1.6	1.8	1.6	1.9	1.6	1.8	2.6	2.3	1.9	2.2	2.2	2.2	2.5	2.3	2.3

Table B13. Recovery (percent) of PCB, pesticide, and PAH surrogate internal standards in bluefish muscle composites

Composite #	PCBs and Pesticides				PAHs[a]				
	4,4'-dibromoocta-fluorobiphenyl	BZ #198	1,2,3-trichloro-benzene	Ronnel	Naphthalene	Acenaphthylene	Chrysene	Pyrene	Benzo[ghi]-perylene
Station BL1									
101	80	95	81	136	27	48	134	97	90
102	67	89	65	93	17	50	104	104	139
103	59	90	84	85	33	50	158	84	10
104	69	90	70	73	27	46	111	91	50
105	64	94	115	107	23	46	61	82	22
Station BL2									
106	62	102	61	81	25	53	120	100	13
107	72	95	154	81	16	44	101	102	18
107-dup.	75	96	164	86	23	50	115	102	31
107-trip.	72	101	84	87	29	59	95	101	16
107 mean (n = 3)	73	97	134	85	23	51	104	102	21
108	68	99	102	84	28	53	75	98	8
109	58	90	74	73	37	57	117	97	11
110	66	83	81	88	32	47	79	77	0
Station BL3									
111	77	84	460	87	34	56	146	103	15
112	69	95	108	72	55	67	188	104	26
113	87	69	564	85	32	53	66	68	9
114	78	91	337	101	54	61	132	115	0
Mean (n = 14)	70	91	167	89	32	53	114	95	30
Std. dev.	8	8	157	16	11	6	35	12	38

[a]All aromatic hydrogen atoms labeled with deuterium [^{2}H] atoms: naphthalene and acenaphthylene with 8 x [^{2}H], pyrene with 10 x [^{2}H], and chyrsene and benzo[ghi]perylene with 12 x [^{2}H].

Table B14. Recovery (percent) of PCB, pesticide, and PAH surrogate internal standards in summer flounder muscle composites

Composite #	PCBs and Pesticides				PAHs[a]				
	4,4'-dibromoocta-fluorobiphenyl	BZ #198	1,2,3-trichloro-benzene	Ronnel	Naphthalene	Acenaphthylene	Chrysene	Pyrene	Benzo[ghi]-perylene
Station FL1									
115	37	73	58	37	17	40	76	65	65
116	43	85	48	50	22	47	107	76	175
Station FL2									
117	36	77	67	15	21	45	139	71	97
117-dup.	38	89	68	14	23	45	144	78	148
117-trip.	39	82	58	1	23	45	90	75	64
117 mean (n = 3)	38	83	64	10	22	45	124	75	103
118	41	74	69	31	22	45	180	81	205
Station FL3									
119	40	69	67	16	2	26	278	113	206
120	69	115	130	55	32	57	151	116	79
121	65	106	141	66	31	55	142	113	88
Station FL4									
122	43	81	68	50	23	46	103	76	37
123	38	81	71	1	22	44	93	66	28
124	34	83	110	23	23	48	153	91	17
Station FL5									
125	52	85	77	42	24	45	172	84	143
126	48	83	81	29	26	47	140	77	114

Table B14. (Cont.)

Composite #	PCBs and Pesticides				PAHs[a]				
	4,4'-dibromoocta-fluorobiphenyl	BZ #198	1,2,3-trichloro-benzene	Ronnel	Naphthalene	Acenaphthylene	Chrysene	Pyrene	Benzo[ghi]-perylene
Station FL6									
127	9	83	0	35	0	1	113	82	79
127-dup.	47	84	77	34	22	44	130	75	113
127-trip.	47	86	77	20	26	49	129	72	70
127 mean (n = 3)	34	84	52	30	16	31	124	76	87
128	54	92	80	39	31	52	169	84	144
Mean (n = 14)	45	85	80	34	23	45	144	85	107
Std.dev.	11	12	28	18	8	8	49	17	62

[a]All aromatic hydrogen atoms labeled with deuterium [^{2}H] atoms: naphthalene and acenaphthylene with 8 x [^{2}H], pyrene with 10 x [^{2}H], and chyrsene and benzo[ghi]perylene with 12 x [^{2}H].

Table B15. Recovery (percent) of PCB, pesticide, and PAH surrogate internal standards in black sea bass muscle composites

Composite #	PCBs and Pesticides				PAHs[a]				
	4,4'-dibromoocta-fluorobiphenyl	BZ #198	1,2,3-trichloro-benzene	Ronnel	Naphthalene	Acenaphthylene	Chrysene	Pyrene	Benzo[ghi]-perylene
Station SB1									
129	74	107	124	106	36	58	87	111	41
130	81	115	107	118	32	56	85	108	129
131	67	86	78	90	29	51	114	87	28
132	56	93	78	51	26	47	118	85	59
Station SB2									
133[b]	58	83	68	73					
134	70	91	78	79	30	52	139	94	44
135	59	84	78	50	27	47	107	85	37
136	62	91	74	61	33	51	91	96	34
137	59	95	76	63	36	54	100	97	40
Station SB3									
138	62	86	78	60	32	53	80	88	23
138-dup.	55	90	76	15	33	54	73	85	41
138-trip.	66	85	83	74	37	55	133	97	88
138 mean (n = 3)	61	87	79	50	34	54	95	90	51
139	65	82	80	39	38	56	132	93	86
140	50	82	60	52	30	46	129	83	71
141	53	89	64	65	29	50	176	97	200
142	45	82	66	51	30	49	159	73	373
Mean (n = 14)	62	91	80	67	32	52	118	92	92
Std. dev.	10	10	17	24	3	4	28	10	97

[a]All aromatic hydrogen atoms labeled with deuterium [^{2}H] atoms: naphthalene and acenaphthylene with 8 x [^{2}H], pyrene with 10 x [^{2}H], and chyrsene and benzo[ghi]perylene with 12 x [^{2}H].
[b]PAHs were not analyzed for this muscle composite.

Table B16. Recovery (percent) of PCB, pesticide, and PAH surrogate internal standards in tautog muscle composites

Composite #	PCBs and Pesticides				PAHs[a]				
	4,4'-dibromoocta-fluorobiphenyl	BZ #198	1,2,3-trichloro-benzene	Ronnel	Naphthalene	Acenaphthylene	Chrysene	Pyrene	Benzo[ghi]-perylene
Station TA1									
143	53	87	75	70	34	51	154	100	40
144	50	81	72	62	25	50	121	96	69
145	56	85	81	74	24	47	125	92	68
146	60	94	90	81	27	51	145	96	50
146-dup.	53	85	79	71	29	52	317	105	190
146-trip.	50	92	82	75	27	51	205	96	82
146 mean (n = 3)	54	90	84	76	28	52	223	99	108
147	60	78	99	79	31	57	194	90	54
Station TA2									
148	58	104	88	80	34	59	189	105	64
149	59	100	93	83	25	53	113	98	33
150	60	105	94	85	29	58	123	100	36
151	69	116	106	98	28	62	146	110	50
Station TA3									
152	58	93	90	69	32	57	156	109	54
153	46	89	67	63	26	44	168	108	92
154	63	102	78	80	19	47	88	75	5
155	73	103	116	87	35	59	115	108	7
156	71	98	143	97	30	51	111	141	5
156-dup.	59	96	98	83	35	55	80	100	5
156-trip.	61	97	114	85	32	57	170	100	13
156 mean (n = 3)	64	97	118	88	32	54	121	113	8
Mean (n = 14)	59	95	90	78	29	54	145	100	49
Std. dev.	7	11	15	10	5	5	37	10	31

[a]All aromatic hydrogen atoms labeled with deuterium [^{2}H] atoms: naphthalene and acenaphthylene with 8 x [^{2}H], pyrene with 10 x [^{2}H], and chyrsene and benzo[ghi]perylene with 12 x [^{2}H].

Table B17. Recovery (percent) of PCB congeners added to matrix spike muscle composites

Composite #	Station	BZ # 1	8	18	29	50	28	52	104	44	66	101	118	188	153	105	138	126	187	128	200	180	170	195	206	209
107	BL2	95	77	61	67	74	62	75	66	71	85	84	87	0	0	332	0	0	2	30	92	5	41	8	2	2
117	FL2	47	48	54	56	52	60	58	58	63	80	71	88	72	78	80	80	76	72	74	72	75	76	77	78	77
127	FL6	34	55	50	52	51	53	55	56	57	71	68	81	70	74	73	79	76	72	77	73	77	78	79	79	76
138	SB3	108	59	54	57	0	110	75	57	71	97	92	36	0	0	181	0	0	1	0	26	1	61	0	0	0
146	TA1	34	64	61	65	62	71	74	70	71	83	84	103	94	90	90	91	82	89	86	83	90	97	89	90	95
156	TA3	30	72	65	65	0	113	77	68	72	87	89	19	3	0	225	0	0	3	0	40	1	67	6	1	0

Table B18. Concentrations (ng/g [ppb]) of PCB congeners found in NIST mussel tissue V (QA93TIS5)

	Wet Weight Basis						Dry Weight Basis					
	Measured			Consensus[a]			Measured			Consensus		
PCB Analyte	**n**	**Mean**	**Std. Dev.**	**Value**	**Std. Dev.**	**z-Score[b]**	**n**	**Mean**	**Std. Dev.**	**Value**	**Std. Dev.**	**z-Score[b]**
BZ #8	8	0.867	0.462	0.623	0.253	1	8	7.42	3.98	5.72	2.32	0.7
BZ #18	8	1.88	0.203	3.35	0.88	-1.7	8	16.1	1.79	30.7	8.1	-1.8
BZ #28	8	8.05	0.633	7.17	2.69	0.3	8	68.9	5.86	65.8	24.7	0.1
BZ #52	8	7.51	0.653	11.3	4.03	-0.9	8	64.3	5.81	104	37	-1.1
BZ #44	8	5.12	0.42	6.74	2.98	-0.5	8	43.8	3.8	61.8	27.3	-0.7
BZ #66	8	14.6	1.52	11.2	3.4	1	8	125	13.8	103	31	0.7
BZ #101	8	10.8	0.999	14.1	4.8	-0.7	8	92.1	9.16	129	44	-0.8
BZ #118	8	9.95	1.19	14.5	3.6	-1.3	8	85.2	10.8	133	33	-1.4
BZ #153	8	12.4	1.87	16	4.1	-0.9	8	106	16.8	147	38	-1.1
BZ #105	8	5.28	0.538	6.06	2.02	-0.4	8	45.2	4.71	55.6	18.5	-0.6
BZ #138	8	11.1	1.28	16	3.9	-1.2	8	95.3	11.5	147	36	-1.4
BZ #187	8	2.95	0.251	3.51	0.97	-0.6	8	25.2	2.29	32.2	8.9	-0.8
BZ #128	8	1.62	0.177	2.37	0.69	-1.1	8	13.9	1.6	21.7	6.3	-1.2
BZ #180	8	2.75	0.478	1.44	0.36	3.6	8	23.6	4.29	13.2	3.3	3.1
BZ #170	8	0.81	0.117	0.479	0.254	1.3	8	6.93	1.04	4.39	2.33	1.1
BZ #195	8	0.35	0.064	0.074	0.041	6.7	8	3	0.572	0.68	0.38	6.1
BZ #206	8	0.256[c]	0.273	0.057	0.044	4.6	8	2.20[c]	2.35	0.52	0.4	4.2
BZ #209	8	0.224	0.146	0.119	0.15	0.7	8	1.92	1.27	1.09	1.38	0.6

[a]Consensus values from 1993 NIST/NOAA/NS&T/EPA EMAP intercomparison exercise (NIST 1993).
[b]z-score = (measured mean - consensus value) / consensus standard deviation.
[c]Includes two values (-0.03 and -0.08 ppb, wet weight) which were treated as zero.

Table B19. Instrumental detection limit (IDL) and estimated method detection limit (EMDL) for pesticide analytes

	Hexa-chloro-benzene	Lindane	Heptachlor	Aldrin	Octa-chloro-styrene	Hepta-chlor-epoxide	Oxy-chlordane	o,p'-DDE	α-chlor-dane	trans-nonachlor	Dieldrin	p,p'-DDE	o,p'-DDD	Endrin	p,p'-DDD	o,p'-DDT	p,p'-DDT	Photo-mirex	Mirex
Concentration of Solvent Spiked at Low Levels (ng/µL)																			
Replicate 1	0.047	0.045	0.046	0.043	0.044	0.044	0.045	0.044	0.043	0.043	0.043	0.041	0.043	0.045	0.043	0.043	0.044	0.044	0.044
Replicate 2	0.045	0.044	0.045	0.042	0.043	0.045	0.046	0.044	0.043	0.042	0.042	0.041	0.042	0.043	0.042	0.043	0.042	0.043	0.044
Replicate 3	0.045	0.044	0.045	0.044	0.045	0.044	0.046	0.045	0.044	0.044	0.043	0.042	0.043	0.041	0.043	0.045	0.043	0.045	0.045
Replicate 4	0.044	0.044	0.046	0.044	0.043	0.048	0.051	0.045	0.044	0.044	0.044	0.043	0.044	0.043	0.044	0.046	0.044	0.045	0.045
Replicate 5	0.044	0.043	0.044	0.043	0.044	0.044	0.045	0.044	0.044	0.044	0.044	0.042	0.043	0.044	0.043	0.046	0.044	0.046	0.046
Replicate 6	0.042	0.040	0.041	0.040	0.043	0.042	0.044	0.043	0.042	0.042	0.042	0.040	0.041	0.043	0.041	0.044	0.042	0.044	0.044
Replicate 7	0.044	0.042	0.044	0.042	0.046	0.043	0.047	0.046	0.045	0.045	0.046	0.045	0.046	0.048	0.049	0.047	0.046	0.048	0.047
Mean	0.045	0.043	0.045	0.042	0.044	0.044	0.046	0.044	0.043	0.044	0.043	0.042	0.043	0.044	0.043	0.045	0.044	0.045	0.045
Std. dev.	0.001	0.002	0.002	0.002	0.001	0.002	0.002	0.001	0.001	0.001	0.001	0.002	0.001	0.002	0.002	0.001	0.001	0.001	0.001
RSD (%)	3.2	4.0	3.8	3.6	2.7	4.0	4.8	2.4	2.4	2.6	2.8	4.1	3.3	4.9	5.5	3.0	3.4	3.3	2.8
IDL[a]	0.004	0.005	0.005	0.005	0.004	0.006	0.007	0.003	0.003	0.004	0.004	0.005	0.005	0.007	0.008	0.004	0.005	0.005	0.004
Corresponding Concentration in a Typical Tissue (ng/g wet weight)[b]																			
Mean	1.11	5.40	5.57	5.31	5.49	5.53	5.76	5.54	5.44	5.44	5.43	5.27	5.39	5.48	5.43	5.62	5.48	5.63	5.64
Std. dev.	0.036	0.219	0.213	0.191	0.147	0.221	0.275	0.131	0.132	0.144	0.154	0.214	0.180	0.269	0.300	0.169	0.185	0.185	0.160
RSD (%)	3.2	4.0	3.8	3.6	2.7	4.0	4.8	2.4	2.4	2.6	2.8	4.1	3.3	4.9	5.5	3.0	3.4	3.3	2.8
EMDL[c]	0.11	0.69	0.67	0.60	0.46	0.69	0.86	0.41	0.42	0.45	0.48	0.67	0.57	0.85	0.94	0.53	0.58	0.58	0.50

[a]Instrumental detection limit is based on 3.143 times the standard deviation of seven replicate measurements.
[b]Assumed 10g wet weight of muscle tissue, 50% recovery in the extraction and cleanup steps, 250 µL final sample volume, and 1 µL sample injection volume.
[c]Estimated method detection limit is based on 3.143 times the standard deviation of a typical tissue.

Table B20. Analyses (ng/g [ppb] wet weight) of spiked replicates of summer flounder muscle for determination of the method detection limit (MDL) for pesticides

	Hexachloro-benzene	**Lindane**	**Heptachlor**	**Aldrin**	**Octachloro-styrene**	**Heptachlor epoxide**	**Oxy-chlordane**	**o,p'-DDE**	**α-chlor-dane**	**trans-nonachlor**	**p,p'-DDE**	**Endrin**	**p,p'-DDD**	**o,p'-DDT**	**p,p'-DDT**	**Photo-mirex**	**Mirex**
Replicate 1	6.27	2.59	6.18	7.13	7.17	6.01	3.82	11.5	8.82	8.33	16.1	10.6	6.24	6.92	5.68	8.07	7.71
Replicate 2	6.27	2.08	5.98	7.02	6.87	7.12	4.72	10.7	8.14	7.81	15.4	9.35	5.96	6.16	4.61	7.85	7.79
Replicate 3	6.31	2.55	6.24	7.68	6.52	7.06	4.72	10.1	7.85	7.55	14.1	9.08	6.06	6.31	5.56	7.57	7.51
Replicate 4	5.29	2.30	5.43	6.04	6.67	6.9	4.50	10.3	7.93	7.79	14.5	9.22	5.99	6.30	5.70	7.78	7.52
Replicate 5	6.32	2.60	6.39	7.81	6.64	7.28	4.79	10.2	7.77	7.52	14.0	9.06	6.06	5.77	5.31	7.56	7.83
Replicate 6	5.66	1.80	5.70	6.84	6.23	6.82	4.18	10.1	7.48	7.29	14.7	8.68	4.76	5.20	4.27	7.56	7.90
Replicate 7	6.41	1.67	5.55	8.18	6.08	4.86	3.15	9.92	7.78	8.14	15.4	7.16	4.93	4.93	3.60	9.06	9.21
Mean	6.08	2.23	5.92	7.24	6.60	6.58	4.27	10.4	7.97	7.78	14.9	9.03	5.71	5.94	4.96	7.92	7.92
Std. dev.	0.43	0.38	0.37	0.71	0.37	0.87	0.60	0.55	0.42	0.36	0.77	1.03	0.60	0.69	0.82	0.54	0.59
RSD (%)	7.1	17	6.2	9.9	5.6	13	14	5.2	5.3	4.7	5.2	11	11	12	16	6.8	7.4
MDL[a]	1.3	1.2	1.2	2.2	1.2	2.7	1.9	1.7	1.3	1.1	2.4	3.2	1.9	2.2	2.6	1.7	1.8

[a]MDL ≡ σt, where σ = standard deviation and t =Student's "t" value of 3.143 with n-1 degrees of freedom and $\alpha = 0.01$ (one tailed).

Table B21. Results (ng/g [ppb] wet weight) of triplicate analyses for pesticides in bluefish and summer flounder muscle composites (nd = <MDL)

Composite #	Pesticide																
	Hexachloro-benzene	Lindane	Aldrin	Octachloro-styrene	Endrin	Heptachlor	Heptachlor epoxide	Oxy-chlordane	α-chlor-dane	trans-nonachlor	o,p'-DDE	p,p'-DDE	p,p'-DDD	o,p'-DDT	p,p'-DDT	Photo-mirex	Mirex
Bluefish (Station BL2)																	
107	nd	2.35	nd	nd	4.77	nd	nd	2.53	28.2	16.6	13.1	114	55.9	nd	7.25	7.45	nd
107-dup.	nd	2.58	nd	nd	4.38	nd	nd	2.21	25.7	15.0	11.7	106	49.6	nd	6.43	6.77	nd
107-trip.	nd	1.42	nd	nd	4.61	nd	nd	2.38	28.5	16.2	12.4	115	54.2	nd	6.72	7.30	nd
Mean	nd	2.12	nd	nd	4.59	nd	nd	2.37	27.5	15.9	12.4	111	53.2	nd	6.80	7.18	nd
Std. dev.	-	0.61	-	-	0.20	-	-	0.16	1.54	0.82	0.69	4.79	3.26	-	0.42	0.36	-
RSD (%)	-	29	-	-	4.3	-	-	6.8	5.6	5.2	5.6	4.3	6.1	-	6.1	5.0	-
Summer Flounder (Station FL2)																	
117	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
117-dup	nd	nd	nd	nd	nd	nd	nd	nd	1.42	nd	nd	nd	nd	nd	nd	nd	nd
117-trip.	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Mean	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Std. dev.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RSD (%)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Summer Flounder (Station FL6)																	
127	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
127-dup.	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
127-trip.	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Mean	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Std. dev.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RSD (%)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MDL	1.3	1.2	1.2	2.2	1.2	2.7	1.9	1.7	1.3	1.1	2.4	3.2	1.9	2.2	2.6	1.7	1.8

Table B22. Results (ng/g [ppb] wet weight) of triplicate analyses for pesticides in black sea bass and tautog muscle composites (nd = <MDL)

Composite #	Pesticide																
	Hexachloro-benzene	**Lindane**	**Aldrin**	**Octachloro-styrene**	**Endrin**	**Heptachlor**	**Heptachlor epoxide**	**Oxy-chlordane**	**α-chlor-dane**	**trans-nonachlor**	**o,p'-DDE**	**p,p'-DDE**	**p,p'-DDD**	**o,p'-DDT**	**p,p'-DDT**	**Photo-mirex**	**Mirex**
Black Sea Bass (Station SB3)																	
138	nd	nd	nd	nd	nd	nd	nd	nd	4.89	3.20	3.42	16.6	10.7	nd	nd	1.71	nd
138-dup.	nd	nd	nd	nd	nd	nd	nd	nd	3.00	2.09	2.07	9.60	7.41	nd	nd	nd	nd
138-trip.	nd	nd	nd	nd	nd	nd	nd	nd	4.73	3.07	3.25	15.1	9.97	nd	nd	nd	nd
Mean	nd	nd	nd	nd	nd	nd	nd	nd	4.21	2.79	2.91	13.7	9.34	nd	nd	nd	nd
Std. dev.	-	-	-	-	-	-	-	-	1.04	0.61	0.74	3.66	1.71	-	-	-	-
RSD (%)	-	-	-	-	-	-	-	-	25	22	25	27	18	-	-	-	-
Tautog (Station TA1)																	
146	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.97	nd	4.80	5.95	nd	nd	nd	nd
146-dup.	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.79	nd	4.27	5.38	nd	nd	nd	nd
146-trip.	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.91	nd	4.48	5.83	nd	nd	nd	nd
Mean	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.89	nd	4.52	5.72	nd	nd	nd	nd
Std. dev.	-	-	-	-	-	-	-	-	-	0.09	-	0.27	0.30	-	-	-	-
RSD (%)	-	-	-	-	-	-	-	-	-	4.8	-	5.9	5.2	-	-	-	-
Tautog (Station TA3)																	
156	nd	nd	nd	nd	nd	nd	nd	2.48	2.01	4.21	2.31	17.6	11.9	nd	nd	2.00	nd
156-dup.	nd	nd	nd	nd	nd	nd	nd	2.33	1.87	3.81	2.09	14.8	10.7	nd	nd	1.81	nd
156-trip.	nd	nd	nd	nd	nd	nd	nd	2.29	1.82	3.81	2.09	14.8	10.6	nd	nd	1.83	nd
Mean	nd	nd	nd	nd	nd	nd	nd	2.36	1.90	3.94	2.16	15.7	11.1	nd	nd	1.88	nd
Std. dev.	-	-	-	-	-	-	-	0.10	0.10	0.23	0.12	1.64	0.70	-	-	0.10	-
RSD (%)	-	-	-	-	-	-	-	4.2	5.2	5.9	5.8	10	6.4	-	-	5.5	-
MDL	1.3	1.2	1.2	2.2	1.2	2.7	1.9	1.7	1.3	1.1	2.4	3.2	1.9	2.2	2.6	1.7	1.8

Table B23. Recovery (percent) of pesticide analytes added to matrix spike muscle composites

Composite #	Station	Hexachloro-benzene	Lindane	Heptachlor	Aldrin	Octachloro-styrene	Heptachlor epoxide	Oxy-chlordane	o,p'-DDE	α-chlor-dane	trans-nonachlor	p,p'-DDE	Endrin	p,p'-DDD	o,p'-DDT	p,p'-DDT	Photo-mirex	Mirex
107	BL2	61	70	67	86	71	77	70	93	91	87	93	83	92	136	49	146	3
117	FL2	54	23	48	55	59	45	50	78	70	72	109	8	55	64	49	64	62
127	FL6	54	33	39	53	56	27	54	69	66	63	94	22	56	68	57	62	66
138	SB3	55	46	56	61	71	67	68	86	88	82	122	104	94	81	0	96	0
146	TA1	59	65	65	67	74	74	84	85	83	84	108	97	101	88	95	76	87
156	TA3	64	60	62	71	75	74	76	87	84	89	110	107	0	0	0	138	3

Table B24. Concentrations (ng/g [ppb]) of pesticide analytes found in NIST mussel tissue V (QA93TIS5)

Pesticide Analyte	Wet Weight Basis						Dry Weight Basis					
	Measured			Consensus[a]			Measured			Consensus		
	n	Mean	Std. Dev.	Value	Std. Dev.	z-Score[b]	n	Mean	Std. Dev.	Value	Std. Dev.	z-Score[b]
Hexachlorobenzene	8	0.465	0.306	0.024	0.008	57.8[c]	8	4	2.66	0.22	0.07	54[c]
Lindane	8	0.465	0.141	0.298	0.313	0.5	8	3.98	1.21	2.73	2.87	0.4
Aldrin	3	0.91	0.698	0.761	0.898	0.2	3	7.87	6.07	6.98	8.24	0.1
Heptachlor	8	0.511	0.081	0.489	0.455	0	8	4.38	0.71	4.49	4.17	0
Heptachlor epoxide	8	0.759	0.266	0.525	0.396	0.6	8	6.5	2.3	4.82	3.63	0.5
α-chlordane	8	5.92	0.584	1.7	0.305	13.8	8	50.7	5.33	15.6	2.8	12.5
trans-nonachlor	8	1.71	0.167	1.91	0.676	-0.3	8	14.6	1.53	17.5	6.2	-0.5
o,p'-DDE	8	4.13	0.723	0.989	0.9	3.5	8	35.3	6.47	9.07	8.26	3.2
p,p'-DDE	8	6.27	0.626	5.5	1.48	0.5	8	53.7	5.65	50.5	13.6	0.2
p,p'-DDD	8	7.49	1.534	4.59	1.4	2.1	8	64.2	13.7	42.1	12.8	1.7
o,p'-DDT	8	nf[d]	-	0.649	0.344	-	8		-	5.95	3.16	-
p,p'-DDT	8	0.887	0.247	0.332	0.12	4.6	8	7.61	2.19	3.05	1.1	4.1
Mirex	8	0.581	0.499	0.153	0.11	3.9	8	4.99	4.31	1.4	1.01	3.6

[a]Consensus values from 1993 NIST/NOAA/NS&T/EPAEMAP intercomparison exercise (NIST 1993).
[b]z-score = (measured mean - consensus value) / consensus standard deviation.
[c]Inflated z-score probably resulted from very low consensus value for hexachlorobenzene.
[d]nf = peaks not found.

Table B25a. Instrumental detection limit (IDL) and estimated method detection limit (EMDL) for low-molecular-weight PAH analytes

	Naph-thalene	2-methyl-naphthalene	1-methyl-naphthalene	Biphenyl	2,6-dimethyl-naphthalene	Acenaph-thylene	Acenaph-thene	2,3,5-trimethyl-naphthalene	Fluorene	Phen-anthrene	Anthra-cene	1-methylphen-anthrene
Concentration of Solvent Spiked at Low Levels (ng/µL)												
Replicate 1	0.211	0.227	0.204	0.220	0.227	0.202	0.222	0.201	0.222	0.211	0.153	0.196
Replicate 2	0.224	0.229	0.221	0.242	0.247	0.215	0.230	0.201	0.218	0.224	0.170	0.221
Replicate 3	0.220	0.204	0.222	0.213	0.248	0.226	0.249	0.182	0.226	0.216	0.168	0.215
Replicate 4	0.222	0.214	0.207	0.218	0.252	0.220	0.241	0.194	0.240	0.222	0.172	0.216
Replicate 5	0.216	0.215	0.205	0.215	0.244	0.223	0.231	0.203	0.220	0.215	0.179	0.212
Replicate 6	0.222	0.213	0.211	0.210	0.219	0.212	0.231	0.193	0.233	0.228	0.188	0.221
Replicate 7	0.235	0.220	0.220	0.220	0.238	0.237	0.263	0.181	0.238	0.223	0.180	0.216
Mean	0.221	0.217	0.213	0.220	0.239	0.219	0.238	0.193	0.228	0.220	0.173	0.214
Std. dev.	0.007	0.009	0.008	0.010	0.012	0.011	0.014	0.009	0.009	0.006	0.011	0.008
RSD (%)	3.4	4.1	3.8	4.7	5.1	5.1	5.8	4.7	4.0	2.8	6.6	3.9
IDL[a]	0.023	0.028	0.025	0.033	0.038	0.035	0.044	0.028	0.029	0.019	0.036	0.026
Corresponding Concentration in a Typical Tissue (ng/g wet weight)[b]												
Mean	5.53	5.44	5.32	5.50	5.98	5.48	5.95	4.84	5.71	5.50	4.32	5.35
Std. dev.	0.185	0.222	0.202	0.259	0.304	0.277	0.348	0.226	0.227	0.153	0.284	0.207
RSD (%)	3.4	4.1	3.8	4.7	5.1	5.1	5.8	4.7	4.0	2.8	6.6	3.9
EMDL[c]	0.58	0.70	0.64	0.81	0.96	0.87	1.1	0.71	0.71	0.48	0.89	0.65

[a]Instrumental detection limit is based on 3.143 times the standard deviation of seven replicate measurements.
[b]Assumed 10g wet weight of muscle tissue, 50% recovery in the extraction and cleanup steps, 250 µL final sample volume, and 1 µL sample injection volume.
[c]Estimated method detection limit is based on 3.143 times the standard deviation of a typical tissue.

Table B25b. Instrumental detection limit (IDL) and estimated method detection limit (EMDL) for high-molecular-weight PAH analytes

	Fluor-anthene	Pyrene	Benz[a]-anthracene	Chrysene	Benzo[b]-fluoranthene	Benzo[k]-fluoranthene	Benzo[e]-pyrene	Benzo[a]-pyrene	Perylene	Indeno[1,2,3-cd]pyrene	Dibenz[a,h]-anthracene	Benzo[ghi]-perylene
Concentration of Solvent Spiked at Low Levels (ng/µL)												
Replicate 1	0.198	0.225	0.183	0.209	0.213	0.215	0.218	0.203	0.168	0.196	0.182	0.208
Replicate 2	0.228	0.217	0.191	0.228	0.223	0.220	0.224	0.207	0.176	0.205	0.194	0.204
Replicate 3	0.226	0.223	0.194	0.222	0.221	0.224	0.236	0.234	0.186	0.218	0.180	0.205
Replicate 4	0.224	0.220	0.186	0.220	0.226	0.229	0.230	0.213	0.175	0.206	0.163	0.202
Replicate 5	0.243	0.232	0.201	0.225	0.239	0.238	0.240	0.218	0.185	0.208	0.202	0.199
Replicate 6	0.245	0.232	0.204	0.240	0.239	0.237	0.241	0.220	0.185	0.212	0.174	0.198
Replicate 7	0.228	0.227	0.190	0.220	0.211	0.213	0.221	0.205	0.166	0.194	0.162	0.197
Mean	0.227	0.225	0.193	0.223	0.225	0.225	0.230	0.214	0.177	0.206	0.180	0.202
Std. dev.	0.015	0.006	0.008	0.010	0.011	0.010	0.009	0.011	0.008	0.008	0.015	0.004
RSD (%)	6.8	2.5	4.1	4.3	5.0	4.4	4.0	5.1	4.8	4.0	8.3	2.0
IDL[a]	0.049	0.018	0.025	0.030	0.035	0.031	0.029	0.034	0.027	0.026	0.047	0.013
Corresponding Concentration in a Typical Tissue (ng/g wet weight)[b]												
Mean	5.68	5.63	4.82	5.58	5.61	5.63	5.75	5.36	4.44	5.14	4.49	5.05
Std. dev.	0.386	0.143	0.196	0.238	0.278	0.249	0.231	0.271	0.212	0.206	0.372	0.102
RSD (%)	6.8	2.5	4.1	4.3	5.0	4.4	4.0	5.1	4.8	4.0	8.3	2.0
EMDL[c]	1.2	0.45	0.62	0.75	0.87	0.78	0.73	0.85	0.67	0.65	1.2	0.32

[a]Instrumental detection limit is based on 3.143 times the standard deviation of seven replicate measurements.
[b]Assumed 10g wet weight of muscle tissue, 50% recovery in the extraction and cleanup steps, 250 µL final sample volume, and 1 µL sample injection volume.
[c]Estimated method detection limit is based on 3.143 times the standard deviation of a typical tissue.

Table B26a. Analyses (ng/g [ppb] wet weight) of replicates of NIST mussel tissue V (QA93TIS5)[a] for determination of the method detection limit (MDL) for low-molecular-weight PAHs

	Naph-thalene	2-methyl-naphthalene	1-methyl-naphthalene	Biphenyl	2,6-dimethyl-naphthalene	Acenaph-thylene	Acenaph-thene	2,3,5-trimethyl-naphthalene	Fluorene	Phen-anthrene	Anthra-cene	1-methylphen-anthrene
Replicate 1	nf[b]	nf[b]	nf[b]	nf[b]	nf[b]	1.34	nf[b]	nf[b]	nf[b]	1.48	2.14	1.91
Replicate 2	1.03	1.07	0.81	0.89	1.03	0.91	0.81	nf[b]	nf[b]	1.84	1.33	2.02
Replicate 3	0.500	1.05	0.85	1.44	nf[b]	0.91	1.36	nf[b]	nf[b]	2.22	nf[b]	2.36
Replicate 4	0.43	1.13	0.36	0.99	1.44	nf[b]	1.09	nf[b]	nf[b]	2.31	nf[b]	nf[b]
Replicate 5	0.53	0.880	nf[b]	0.98	nf[b]	nf[b]	nf[b]	nf[b]	nf[b]	2.28	nf[b]	nf[b]
Replicate 6	0.66	0.78	0.81	1.39	nf[b]	nf[b]	1.92	nf[b]	nf[b]	2.57	nf[b]	nf[b]
Replicate 7	2.44	1.91	2.06	2.49	nf[b]	2.49	nf[b]	nf[b]	nf[b]	5.16	nf[b]	nf[b]
Replicate 8	nf[b]	0.47	nf[b]	0.27	nf[b]	nf[b]	nf[b]	nf[b]	nf[b]	1.70	1.07	1.74
n =	6	7	5	7	2	4	4	-	-	8	3	4
Mean	0.933	1.04	0.979	1.21	1.23	1.41	1.29	-	-	2.44	1.51	2.01
Std. dev.	0.771	0.444	0.636	0.686	0.288	0.746	0.473	-	-	1.15	0.555	0.261
RSD (%)	83	43	65	57	23	53	37	-	-	47	37	13
Student's "t"	3.36	3.14	3.75	3.14	31.8	4.54	4.54	-	-	3	6.96	4.54
MDL[c]	2.59	1.40	2.38	2.16	9.18	3.39	2.15	10 [b]	10 [b]	3.46	3.87	1.19

[a]NIST mussel tissue V (QA93TIS5) was included in each of eight extraction batches as a part of the QA/QC protocol.
[b]nf = peak not found; assuming 10 g wet weight of mussel tissue, 50% efficiency in the sample extraction and cleanup steps, a 250µL final sample colume, and an instrument (GC/MS) detection limit of 0.2 ng/µL, the MDL calculates to be 10 ppb wet weight.
[c]MDL ≡ σt, where σ = standard deviation and t = Student's "t" value with n-1 degrees of freedom and $\alpha = 0.01$ (one tailed).

Table B26b. Analyses (ng/g [ppb] wet weight) of replicates of NIST mussel tissue V (QA93TIS5)[a] for determination of the method detection limit (MDL) for high-molecular-weight PAHs

	Fluor-anthene	Pyrene	Benz[a]-anthracene	Chrysene	Benzo[b]-fluoranthene	Benzo[k]-fluoranthene	Benzo[e]-pyrene	Benzo[a]-pyrene	Perylene	Indeno[1,2,3-cd]pyrene	Dibenz[a,h]-anthracene	Benzo[ghi]-perylene
Replicate 1	14.3	14.0	7.81	12.22	8.81	3.88	11.04	1.96	nf[b]	1.37	nf[b]	1.17
Replicate 2	13.0	12.2	6.48	10.53	6.94	3.39	8.32	1.76	nf[b]	0.928	nf[b]	0.675
Replicate 3	13.2	12.1	7.00	9.53	7.63	5.68	8.41	4.84	nf[a]	5.73	nf[a]	5.64
Replicate 4	13.8	12.7	7.75	10.92	8.48	3.77	10.78	2.37	1.66	nf[b]	nf[b]	nf[b]
Replicate 5	12.6	12.0	7.80	10.45	6.87	3.57	8.52	nf[b]	nf[b]	nf[b]	nf[b]	nf[b]
Replicate 6	10.7	10.5	6.13	8.58	5.73	2.88	7.67	1.74	nf[b]	nf[b]	nf[b]	3.36
Replicate 7	11.6	10.8	7.15	8.47	6.70	5.48	7.21	4.98	nf[b]	nf[b]	nf[b]	nf[b]
Replicate 8	15.2	15.8	5.62	8.72	4.24	2.77	4.18	nf[b]	nf[b]	nf[b]	nf[b]	nf[b]
n =	8	8	8	8	8	8	8	6	-	3	-	4
Mean	13.0	12.5	6.97	9.93	6.92	3.93	8.27	2.94	-	2.68	-	2.71
Std. dev.	1.44	1.71	0.828	1.33	1.47	1.09	2.15	1.54	-	2.65	-	2.27
RSD (%)	11	14	12	13	21	28	26	52	-	99	-	84
Student's "t"	3	3	3	2.998	3	3	2.998	3.36	-	6.7	-	4.54
MDL[c]	4.33	5.12	2.48	3.99	4.41	3.28	6.44	5.19	10[b]	17.8	10[b]	10.3

[a]NIST mussel tissue V (QA93TIS5) was included in each of eight extraction batches as a part of the QA/QC protocol.
[b]nf = peak not found; assuming 10 g wet weight of mussel tissue, 50% efficiency in the sample extraction and cleanup steps, a 250µL final sample colume, and an instrument (GC/MS) detection limit of 0.2 ng/µL, the MDL calculates to be 10 ppb wet weight.
[c]MDL ≡ σt, where σ = standard deviation and t = Student's "t" value with n-1 degrees of freedom and $\alpha = 0.01$ (one tailed).

Table B27a. Results (ng/g [ppb] wet weight) of triplicate analyses for low-molecular-weight PAHs in bluefish and summer flounder muscle composites (nd = <MDL)

Composite #	PAH											
	Naph-thalene	**2-methyl-naphthalene**	**1-methyl-naphthalene**	**Biphenyl**	**2,6-dimethyl-naphthalene**	**Acenaph-thylene**	**Acenaph-thene**	**2,3,5-trimethyl-naphthalene**	**Fluorene**	**Phen-anthrene**	**Anthra-cene**	**1-methylphen-anthrene**
						Bluefish (Station BL2)						
107	nd	nd	nd	nd	nd	nd	8.44	nd	nd	nd	nd	nd
107-dup.	nd	nd	nd	nd	nd	nd	8.24	nd	nd	nd	nd	nd
107-trip.	nd	nd	nd	nd	nd	nd	8.33	nd	nd	nd	nd	nd
Mean	nd	nd	nd	nd	nd	nd	8.34	nd	nd	nd	nd	nd
Std. dev.	-	-	-	-	-	-	0.10	-	-	-	-	-
RSD (%)	-	-	-	-	-	-	1.2	-	-	-	-	-
						Summer Flounder (Station FL2)						
117	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
117-dup.	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
117-trip.	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
						Summer Flounder (Station FL6)						
127	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
127-dup.	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
127-trip.	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
MDL	4.33	5.12	2.48	3.99	4.41	3.28	6.44	5.19	10	17.8	10	10.3

Table B27b. Results (ng/g [ppb] wet weight) of triplicate analyses for high-molecular-weight PAHs in bluefish and summer flounder muscle composites (nd = <MDL)

Composite #	PAH											
	Fluor-anthene	**Pyrene**	**Benz[a]-anthracene**	**Chrysene**	**Benzo[b]-fluoranthene**	**Benzo[k]-fluoranthene**	**Benzo[e]-pyrene**	**Benzo[a]-pyrene**	**Perylene**	**Indeno[1,2,3-cd]pyrene**	**Dibenz[a,h]-anthracene**	**Benzo[ghi]-perylene**
Bluefish (Station BL2)												
107	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
107-dup.	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
107-trip.	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Mean	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Std. dev.	-	-	-	-	-	-	-	-	-	-	-	-
RSD (%)	-	-	-	-	-	-	-	-	-	-	-	-
Summer Flounder (Station FL2)												
117	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
117-dup.	nd	nd	2.49	nd	nd	nd	nd	nd	nd	nd	nd	nd
117-trip.	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Summer Flounder (Station FL6)												
127	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
127-dup.	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
127-trip.	nd	nd	2.49	nd	nd	nd	nd	nd	nd	nd	nd	nd
MDL	4.33	5.12	2.48	3.99	4.41	3.28	6.44	5.19	10	17.8	10	10.3

Table B28a. Results (ng/g [ppb] wet weight) of triplicate analyses for low-molecular-weight PAHs in black sea bass and tautog muscle composites (nd = <MDL)

Composite #	PAH											
	Naph-thalene	**2-methyl-naphthalene**	**1-methyl-naphthalene**	**Biphenyl**	**2,6-dimethyl-naphthalene**	**Acenaph-thylene**	**Acenaph-thene**	**2,3,5-trimethyl-naphthalene**	**Fluorene**	**Phen-anthrene**	**Anthra-cene**	**1-methylphen-anthrene**
						Black Sea Bass (Station SB3)						
138	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
138-dup.	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
138-trip.	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Mean	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
						Tautog (Station TA1)						
146	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
146-dup.	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
146-trip.	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Mean	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Std. dev.	-	-	-	-	-	-	-	-	-	-	-	-
RSD (%)	-	-	-	-	-	-	-	-	-	-	-	-
						Tautog (Station TA3)						
156	nd	1.41	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
156-dup.	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
156-trip.	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Mean	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Std. dev.	-	-	-	-	-	-	-	-	-	-	-	-
RSD (%)	-	-	-	-	-	-	-	-	-	-	-	-
MDL	2.59	1.40	2.38	2.16	9.18	3.39	2.15	10	10	3.46	3.87	1.19

Table B28b. Results (ng/g [ppb] wet weight) of triplicate analyses for high-molecular-weight PAHs in black sea bass and tautog muscle composites (nd = <MDL)

Composite #	PAH											
	Fluor-anthene	**Pyrene**	**Benz[a]-anthracene**	**Chrysene**	**Benzo[b]-fluoranthene**	**Benzo[k]-fluoranthene**	**Benzo[e]-pyrene**	**Benzo[a]-pyrene**	**Perylene**	**Indeno[1,2,3-cd]pyrene**	**Dibenz[a,h]-anthracene**	**Benzo[g,h,i]-perylene**
						Black Sea Bass (Station SB3)						
138	nd	nd	2.89	nd	nd	nd	nd	nd	nd	nd	nd	nd
138-dup.	nd	nd	3.12	nd	nd	nd	nd	nd	nd	nd	nd	nd
138-trip.	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Mean	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
						Tautog (Station TA1)						
146	nd	nd	2.59	nd	nd	nd	nd	nd	nd	nd	nd	nd
146-dup.	nd	nd	2.88	nd	nd	nd	nd	nd	nd	nd	nd	nd
146-trip.	nd	nd	2.60	nd	nd	nd	nd	nd	nd	nd	nd	nd
Mean	nd	nd	2.69	nd	nd	nd	nd	nd	nd	nd	nd	nd
Std. dev.	-	-	0.16	-	-	-	-	-	-	-	-	-
RSD (%)	-	-	6.1	-	-	-	-	-	-	-	-	-
						Tautog (Station TA3)						
156	nd	1.41	3.82	nd	nd	nd	nd	nd	nd	nd	nd	nd
156-dup.	nd	nd	3.54	nd	nd	nd	nd	nd	nd	nd	nd	nd
156-trip.	nd	nd	3.60	nd	nd	nd	nd	nd	nd	nd	nd	nd
Mean	nd	nd	3.65	nd	nd	nd	nd	nd	nd	nd	nd	nd
Std. dev.	-	-	0.15	-	-	-	-	-	-	-	-	-
RSD (%)	-	-	4.1	-	-	-	-	-	-	-	-	-
MDL	4.33	5.12	2.48	3.99	4.41	3.28	6.44	5.19	10	17.8	10	10.3

Table B29a. Recovery (percent) of low-molecular-weight PAH analytes added to matrix spike muscle composites

Composite #	Station	Naph-thalene	2-methyl-naphthalene	1-methyl-naphthalene	Biphenyl	2,6-dimethyl-naphthalene	Acenaph-thylene	Acenaph-thene	2,3,5-trimethyl-naphthalene	Fluorene	Phen-anthrene	Anthra-cene	1-methylphen-anthrene
107	BL2	26	38	41	39	46	42	45	49	43	71	58	85
117	FL2	15	22	22	25	28	29	30	38	39	48	60	63
127	FL6	28	32	32	33	36	37	37	41	43	52	59	63
138	SB3	40	46	46	46	47	52	46	46	44	59	65	63
146	TA1	30	36	36	39	42	44	44	47	47	62	68	70
156	TA3	22	27	27	31	33	35	33	40	35	32	40	53

Table B29b. Recovery (percent) of high-molecular-weight PAH analytes added to matrix spike muscle composites

Composite #	Station	Fluor-anthene	Pyrene	Benz[a]-anthracene	Chrysene	Benzo[b]-fluoranthene	Benzo[k]-fluoranthene	Benzo[e]-pyrene	Benzo[a]-pyrene	Perylene	Indeno[1,2,3-cd]pyrene	Dibenz[a,h]-anthracene	Benzo[ghi]-perylene
107	BL2	88	82	52	50	19	18	17	12	7	30	22	28
117	FL2	69	71	101	90	76	76	62	47	1	32	26	21
127	FL6	64	64	87	77	73	72	67	42	1	55	38	36
138	SB3	69	70	104	88	69	69	57	58	40	34	23	26
146	TA1	73	75	107	94	93	91	79	73	50	82	69	65
156	TA3	60	46	50	43	28	29	23	24	22	14	10	11

Table B30. Concentrations (ng/g[ppb]) of PAH analytes found in NIST mussel tissue V (QA93TIS5)

PAH Analyte	Wet Weight Basis						Dry Weight Basis					
	Measured			Consensus[a]			Measured			Consensus		
	n	Mean	Std. Dev.	Value	Std. Dev.	z-Score[b]	n	Mean	Std. Dev.	Value	Std. Dev.	z-Score[b]
Naphthalene	3	1.38	0.941	1.62	0.927	-0.3	6	7.99	6.66	14.9	8.5	-0.8
2-methylnaphthalene	6	1.14	0.401	0.791	0.335	1	7	8.92	3.84	7.26	3.07	0.5
1-methylnaphthalene	4	1.13	0.618	0.481	0.202	3.2	4	9.74	5.34	4.41	1.85	2.9
Biphenyl	6	1.36	0.599	0.445	0.147	6.2	6	11.7	5.21	4.08	1.35	5.6
2,6-dimethylnaphthalene	2	1.23	0.288	0.63	0.461	1.3	2	10.6	2.52	5.78	4.23	1.1
Acenaphthylene	4	1.41	0.746	0.532	0.215	4.1	4	12.1	6.44	4.88	1.97	3.7
Acenaphthene	3	1.45	0.426	0.342	0.118	9.4	4	11.1	4.08	3.14	1.08	7.4
2,3,5-trimethylnaphthalene		nf[c]	-	0.549	0.274			nf[c]	-	5.04	2.51	
Fluorene		nf[c]	-	0.462	0.085			nf[c]	-	4.24	0.78	
Phenanthrene	8	2.44	1.15	1.95	0.556	0.9	8	20.9	9.97	17.9	5.1	0.6
Anthracene	3	1.51	0.555	0.79	0.3	2.4	3	13	4.68	7.25	2.75	2.1
1-methylphenanthrene	4	2.01	0.261	1.16	0.327	2.6	4	17.3	2.21	10.6	3	2.2
Fluoranthene	8	13	1.44	20.4	6	-1.2	8	112	12.8	187	55	-1.4
Pyrene	8	12.5	1.71	19.4	4.69	-1.5	8	107	15.1	178	43	-1.7
Benz[a]anthracene	8	6.97	0.828	4.08	1	2.9	8	59.6	6.7	37.4	9.2	2.4
Chrysene	8	9.93	1.33	9.7	2.39	0.1	8	84.9	11	89	21.9	-0.2
Benzo[e]pyrene	8	8.27	2.15	9.95	2.29	-0.7	8	70.7	18.2	91.3	21	-1
Benzo[a]pyrene	6	2.94	1.54	1.91	0.414	2.5	6	25.3	13.3	17.5	3.8	2
Perylene		nf[c]	-	0.789	0.239			nf[c]	-	7.24	2.19	
Indeno[1,2,3-cd]pyrene	3	2.68	2.65	1.75	0.501	1.8	3	23	22.8	16.1	4.6	1.5
Dibenz[a,h]anthracene		nf[c]	-	0.286	0.119			nf[c]	-	2.62	1.09	
Benzo[ghi]perylene	4	2.71	2.27	3	0.73	-0.4	4	23.3	19.6	27.5	6.7	-0.6
Benzo[b]fluoranthene	8	6.92	1.47				8	59.2	12.5			
Benzo[k]fluoranthene	8	3.93	1.09				8	33.6	9.47			
Benzo[b]+[k]fluoranthenes		10.8		9.74	1.81	0.6		92.9		89.4	16.6	0.2

[a]Consensus values from 1993 NIST/NOAA/NS&T/EPA EMAP intercomparison exercise (NIST 1993).
[b]z-score = (measured mean - consensus value) / consensus standard deviation.
[c]nf = peaks not found.

Table B31a. Analyses (pg/g [pptr] wet weight) of spiked replicates of summer flounder muscle for determination of the method detection limit (MDL) for 2,3,7,8-substituted PCDD congeners

Composite #	Congener						
	2,3,7,8-TCDD	**1,2,3,7,8-PeCDD**	**1,2,3,4,7,8-HxCDD**	**1,2,3,6,7,8-HxCDD**	**1,2,3,7,8,9-HxCDD**	**1,2,3,4,6,7,8-HpCDD**	**OCDD**
Replicate 1	5.80	29.98	24.38	21.29	22.66	22.40	47.29
Replicate 2	5.34	29.19	24.99	22.13	24.35	24.23	46.14
Replicate 3	5.64	27.90	24.14	21.28	21.24	22.95	46.82
Mean	5.59	29.02	24.50	21.57	22.75	23.19	46.75
Std. dev.	0.23	1.05	0.44	0.49	1.56	0.94	0.58
RSD (%)	4.2	3.6	1.8	2.3	6.8	4.0	1.2
MDL[a]	1.63	7.31	3.05	3.40	10.8	6.54	4.03
Target MDLs	1	5	5	5	5	5	10

[a]MDL ≡ σt, where σ = standard deviation and t = Student's "t" value, where t has the value of 6.965 for n = 3 with n-1 degrees of freedom and α = 0.01 (one tailed). Note that there is a potential that the calculated MDLs are inflated when three replicates are used, since a larger Student's t value is used.

Table B31b. Analyses (pg/g [pptr] wet weight) of spiked replicates of summer flounder muscle for determination of the method detection limit (MDL) for 2,3,7,8-substituted PCDF congeners

Composite #	Congener									
	2,3,7,8-TCDF[a]	**1,2,3,7,8-PeCDF**	**2,3,4,7,8-PeCDF**	**1,2,3,4,7,8-HxCDF**	**1,2,3,6,7,8-HxCDF**	**1,2,3,7,8,9-HxCDF**	**2,3,4,6,7,8-HxCDF**	**1,2,3,4,6,7,8-HpCDF**	**1,2,3,4,7,8,9-HpCDF**	**OCDF**
Replicate 1	5.41	23.81	24.82	24.59	25.15	27.08	24.19	23.89	27.22	38.11
Replicate 2	5.25	21.73	22.33	25.66	24.43	25.02	25.02	24.30	27.41	45.49
Replicate 3	5.09	23.44	23.50	25.57	24.75	24.18	23.91	22.73	24.35	44.24
Mean	5.25	22.99	23.55	25.27	24.78	25.43	24.37	23.64	26.33	42.61
Std. dev.	0.16	1.11	1.25	0.59	0.36	1.49	0.58	0.81	1.71	3.95
RSD (%)	3.0	4.8	5.3	2.3	1.5	5.9	2.4	3.4	6.5	9.3
MDL[a]	1.11	7.73	8.68	4.13	2.51	10.4	4.02	5.67	11.9	27.5
Target MDLs	1	5	5	5	5	5	5	5	5	10

[a]MDL ≡ σt, where σ = standard deviation and t = Student's "t" value, where t has the value of 6.965 for n = 3 with n-1 degrees of freedom and α = 0.01 (one tailed). Note that there is a potential that the calculated MDLs are inflated when three replicates are used, since a larger Student's t value is used.

Table B32a. Results (pg/g [pptr] wet weight) of triplicate analyses for 2,3,7,8-substituted PCDD congeners in bluefish muscle composites (Station BL1; nd = <MDL)

Composite #	Congener						
	2,3,7,8-TCDD	**1,2,3,7,8-PeCDD**	**1,2,3,4,7,8-HxCDD**	**1,2,3,6,7,8-HxCDD**	**1,2,3,7,8,9-HxCDD**	**1,2,3,4,6,7,8-HpCDD**	**OCDD**
104	2.17	nd	nd	nd	nd	nd	nd
104-dup.	2.44	nd	nd	nd	nd	nd	nd
104-trip.	2.26	nd	nd	nd	nd	nd	nd
Mean	2.29						
Std. dev.	0.14						
RSD (%)	6.0						
MDL	1.6	7.3	3.1	3.4	11	6.5	4.0

Table B32b. Results (pg/g [pptr] wet weight) of triplicate analyses for 2,3,7,8-substituted PCDF congeners in bluefish muscle composites (Station BL1; nd = <MDL)

Composite #	Congener									
	2,3,7,8-TCDF[a]	**1,2,3,7,8-PeCDF**	**2,3,4,7,8-PeCDF**	**1,2,3,4,7,8-HxCDF**	**1,2,3,6,7,8-HxCDF**	**1,2,3,7,8,9-HxCDF**	**2,3,4,6,7,8-HxCDF**	**1,2,3,4,6,7,8-HpCDF**	**1,2,3,4,7,8,9-HpCDF**	**OCDF**
104	2.18	nd	nd	nd	nd	nd	nd	nd	nd	nd
104-dup.	2.44	nd	nd	nd	nd	nd	nd	nd	nd	nd
104-trip.	1.90	nd								
Mean	2.17									
Std. dev.	0.27									
RSD (%)	12.4									
MDL	1.1	7.7	8.7	4.1	2.5	10	4.0	5.7	12	28

[a]Value for 2,3,7,8-TCDF in Batch 3 is taken from "DB-Dioxin" second-column confirmation.

Table B33a. Results (pg/g [pptr] wet weight) of triplicate analyses for 2,3,7,8-substituted PCDD congeners in tautog muscle composites (Station TA1; nd = <MDL)

Composite #	Congener						
	2,3,7,8-TCDD	**1,2,3,7,8-PeCDD**	**1,2,3,4,7,8-HxCDD**	**1,2,3,6,7,8-HxCDD**	**1,2,3,7,8,9-HxCDD**	**1,2,3,4,6,7,8-HpCDD**	**OCDD**
144	nd	nd	nd	nd	nd	nd	nd
144-dup.	nd	nd	nd	nd	nd	nd	nd
144-trip.[a]							
Mean							
Std. dev.							
RPD[b]							
MDL	1.6	7.3	3.1	3.4	11	6.5	4.0

[a]Triplicate results not included due to 8-fold dilution required for analysis. RPD reported instead.
[b]RPD (relative percent difference) for duplicate analyses = (100 x absolute value for range)/mean.

Table B33b. Results (pg/g [pptr] wet weight) of triplicate analyses for 2,3,7,8-substituted PCDF congeners in tautog muscle composites (Station TA1; nd = <MDL)

Composite #	Congener									
	2,3,7,8-TCDF[a]	**1,2,3,7,8-PeCDF**	**2,3,4,7,8-PeCDF**	**1,2,3,4,7,8-HxCDF**	**1,2,3,6,7,8-HxCDF**	**1,2,3,7,8,9-HxCDF**	**2,3,4,6,7,8-HxCDF**	**1,2,3,4,6,7,8-HpCDF**	**1,2,3,4,7,8,9-HpCDF**	**OCDF**
144	1.7	nd	nd	nd	nd	nd	nd	nd	nd	nd
144-dup.	1.4	nd	nd	nd	nd	nd	nd	nd	nd	nd
144-trip.[b]										
Mean	1.6									
Std. dev.	0.2									
RPD[c]	19.1									
MDL	1.1	7.7	8.7	4.1	2.5	10	4.0	5.7	12	28

[a]Value for 2,3,7,8-TCDF in Batch 3 is taken from "DB-Dioxin" second-column confirmation.
[b]Triplicate results not included due to 8-fold dilution required for analysis. RPD reported instead.
[c]RPD (relative percent difference) for duplicate analyses = (100 x absolute value for range)/mean.

Table B34a. Recovery (percent) of ^{13}C- and ^{37}Cl-labeled 2,3,7,8-substituted PCDD surrogate internal standards in bluefish muscle composites

Composite #	Station	^{13}C-Labeled[a] 2,3,7,8-TCDD	1,2,3,7,8-PeCDD	1,2,3,4,7,8-HxCDD	1,2,3,6,7,8-HxCDD	1,2,3,4,6,7,8-HpCDD	OCDD	^{37}Cl-Labeled[b] 2,3,7,8-TCDD
101	BL1	52	45	53	57	51	42	84
102	BL1	82	74	83	90	78	69	123
102-MS	BL1	76	83	87	98	66	60	262[c]
103	BL1	57	65	68	78	65	52	77
104	BL1	75	63	67	86	68	59	87
104-dup.	BL1	78	64	74	91	72	64	88
104-trip.	BL1	81	68	86	92	78	72	131
104 mean (n = 3)	BL1	78	65	76	90	73	65	102
105	BL1	57	60	58	74	57	43	79
106	BL2	54	57	56	67	49	45	72
107	BL2	64	56	60	67	60	49	103
108	BL2	59	61	61	79	63	55	75
109	BL2	87	78	84	103	77	56	96
109-MS	BL2	90	76	85	98	79	66	385[c]
110	BL2	82	74	81	93	73	64	103
111	BL3	93	84	86	105	77	61	121
112	BL3	95	85	86	97	78	57	110
113	BL3	85	77	75	96	76	59	96
114	BL3	69	65	69	83	66	36[c]	82
Mean (n = 14)		73	69	72	85	67	56	95
Std. dev.		15	12	12	14	10	8	17

[a]Labeled with ^{13}C at all 12 carbons on the two benzene rings.
[b]Labeled with ^{37}Cl at all four chlorines.
[c]These values exceeded the 40-150% criterion.

Table B34b. Recovery (percent) of ^{13}C-labeled[a] 2,3,7,8-substituted PCDF surrogate internal standards in bluefish muscle composites

Composite #	Station	2,3,7,8-TCDF	1,2,3,7,8-PeCDF	2,3,4,7,8-PeCDF	1,2,3,4,7,8-HxCDF	1,2,3,6,7,8-HxCDF	1,2,3,7,8,9-HxCDF	2,3,4,6,7,8-HxCDF	1,2,3,4,6,7,8-HpCDF	1,2,3,4,7,8,9-HpCDF
101	BL1	52	42	31	48	49	45	50	47	43
102	BL1	77	101	39[b]	77	79	80	82	76	69
102-MS	BL1	76	82	78	83	83	74	81	70	57
103	BL1	57	68	68	66	69	63	67	67	61
104	BL1	64	68	67	64	72	64	70	66	61
104-dup.	BL1	65	68	67	67	72	68	71	73	63
104-trip.	BL1	69	70	58	85	83	75	81	68	71
104 mean (n = 3)	BL1	66	69	64	72	76	69	74	69	65
105	BL1	58	63	63	60	61	60	61	56	53
106	BL2	51	59	58	54	58	55	57	52	47
107	BL2	60	52	33	58	60	56	59	58	52
108	BL2	52	61	60	62	65	58	64	63	57
109	BL2	87	88	87	83	87	78	89	77	65
109-MS	BL2	69	76	82	78	83	72	84	82	69
110	BL2	80	83	84	75	82	72	82	63	56
111	BL3	45	91	92	83	87	80	92	73	61
112	BL3	56	89	97	76	79	74	80	78	64
113	BL3	82	81	78	76	80	67	80	77	62
114	BL3	70	70	68	72	76	62	75	65	47
Mean (n = 14)		65	73	71	70	73	66	73	66	57
Std. dev.		13	16	17	11	12	10	13	10	8

[a]Labeled with ^{13}C at all 12 carbons on the two benzene rings.
[b]This value slightly exceeded the 40-150% criterion.

Table B35a. Recovery (percent) of ^{13}C- and ^{37}Cl-labeled 2,3,7,8-substituted PCDD surrogate internal standards in summer flounder muscle composites

Composite #	Station	^{13}C-Labeled[a] 2,3,7,8-TCDD	1,2,3,7,8-PeCDD	1,2,3,4,7,8-HxCDD	1,2,3,6,7,8-HxCDD	1,2,3,4,6,7,8-HpCDD	OCDD	^{37}Cl-Labeled[b] 2,3,7,8-TCDD
115	FL1	72	58	68	91	74	66	92
116	FL1	83	66	81	103	79	74	106
117	FL1	69	64	66	78	59	44	97
117-dup.	FL1	92	93	93	107	85	75	117
117-trip.	FL1	90	92	89	98	75	71	112
117 mean (n = 3)	FL1	84	83	83	94	73	63	109
118	FL2	79	82	77	83	70	49	147
119	FL3	79	69	73	89	77	68	101
120	FL3	70	61	62	80	66	61	112
121	FL3	63	55	55	76	55	50	97
122	FL4	70	64	63	82	62	57	96
123	FL4	89	81	82	107	85	78	130
124	FL4	88	81	78	95	78	63	128
124-MS	FL4	90	85	89	98	85	75	125
125	FL5	87	77	79	100	74	61	118
126	FL5	92	82	87	110	88	81	132
127	FL6	91	77	87	112	82	70	124
128	FL6	87	78	73	100	75	54	99
128-MDL1	FL6	52	48	50	69	51	37[c]	60
128-MDL2	FL6	75	67	68	90	75	65	85
128-MDL3	FL6	85	82	75	101	72	63	95
128-MDL4	FL6	92	90	84	105	83	70	98
128 mean (n = 4)	FL6	76	72	69	91	70	66	85
Mean (n = 18)		80	73	74	94	74	65	108
Std. dev.		11	12	11	12	10	9	20

[a]Labeled with ^{13}C at all 12 carbons on the two benzene rings.
[b]Labeled with ^{37}Cl at all four chlorines.
[c]This value slightly exceeded the 40-150% criterion.

Table B35b. Recovery (percent) of ^{13}C-labeled[a] 2,3,7,8-substituted PCDF surrogate internal standards in summer flounder muscle composites

Composite #	Station	2,3,7,8-TCDF	1,2,3,7,8-PeCDF	2,3,4,7,8-PeCDF	1,2,3,4,7,8-HxCDF	1,2,3,6,7,8-HxCDF	1,2,3,7,8,9-HxCDF	2,3,4,6,7,8-HxCDF	1,2,3,4,6,7,8-HpCDF	1,2,3,4,7,8,9-HpCDF
115	FL1	69	67	72	65	73	62	76	73	61
116	FL1	81	79	82	76	83	78	96	79	66
117	FL1	68	64	67	64	64	61	66	58	49
117-dup.	FL1	95	98	99	86	93	80	94	85	72
117-trip.	FL1	98	92	100	87	94	84	90	73	64
117 mean (n = 3)	FL1	87	85	89	79	84	75	83	72	62
118	FL2	94	86	47	77	73	72	83	68	60
119	FL3	72	71	74	70	77	71	75	74	68
120	FL3	62	61	62	59	63	62	65	59	53
121	FL3	67	61	64	53	66	56	66	54	49
122	FL4	71	68	71	62	72	63	67	60	56
123	FL4	88	84	89	81	91	82	92	81	75
124	FL4	90	84	97	73	82	73	78	73	69
124-MS	FL4	92	93	90	82	88	79	87	95	76
125	FL5	83	81	86	70	78	74	92	75	63
126	FL5	92	92	95	82	93	77	87	84	80
127	FL6	96	88	97	77	85	80	109	81	72
128	FL6	85	88	90	75	91	74	84	80	70
128-MDL1	FL6	49	53	54	50	61	48	56	50	42
128-MDL2	FL6	73	75	80	68	82	69	79	74	64
128-MDL3	FL6	87	88	88	73	85	74	81	72	65
128-MDL4	FL6	82	89	90	81	89	83	87	85	72
128 mean (n = 4)	FL6	73	76	78	68	79	69	76	70	61
Mean (n = 14)		80	79	80	71	80	71	81	73	64
Std. dev.		12	12	15	10	10	9	12	11	10

[a]Labeled with ^{13}C at all 12 carbons on the two benzene rings.

Table B36a. Recovery (percent) of ^{13}C- and ^{37}Cl-labeled 2,3,7,8-substituted PCDD surrogate internal standards in black sea bass muscle composites

		^{13}C-Labeled[a]						^{37}Cl-Labeled[b]
Composite #	**Station**	**2,3,7,8-TCDD**	**1,2,3,7,8-PeCDD**	**1,2,3,4,7,8-HxCDD**	**1,2,3,6,7,8-HxCDD**	**1,2,3,4,6,7,8-HpCDD**	**OCDD**	**2,3,7,8-TCDD**
129	SB1	98	92	91	113	92	76	124
130	SB1	84	85	81	95	77	43	105
131	SB1	95	92	91	104	83	57	107
132	SB1	97	91	95	106	86	74	118
133	SB2	69	62	67	83	69	61	83
134	SB2	80	72	81	99	85	81	93
135	SB2	81	73	81	93	84	69	95
136	SB2	77	67	78	84	76	66	87
137	SB2	81	68	77	98	81	73	93
138	SB3	79	77	74	97	80	62	101
139	SB3	83	78	82	90	81	73	101
140	SB3	70	66	71	77	57	48	80
141	SB3	62	53	96	104	60	36	65
142	SB3	63	59	64	67	58	49	72
Mean (n = 14)		80	74	81	94	76	62	95
Std. dev.		11	13	10	12	11	14	17

[a]Labeled with ^{13}C at all 12 carbons on the two benzene rings.
[b]Labeled with ^{37}Cl at all four chlorines.

Table B36b. Recovery (percent) of ^{13}C-labeled[a] 2,3,7,8-substituted PCDF surrogate internal standards in black sea bass muscle composites

Composite #	Station	2,3,7,8-TCDF	1,2,3,7,8-PeCDF	2,3,4,7,8-PeCDF	1,2,3,4,7,8-HxCDF	1,2,3,6,7,8-HxCDF	1,2,3,7,8,9-HxCDF	2,3,4,6,7,8-HxCDF	1,2,3,4,6,7,8-HpCDF	1,2,3,4,7,8,9-HpCDF
129	SB1	105	94	102	87	93	83	93	90	74
130	SB1	90	83	88	78	81	74	81	75	63
131	SB1	100	93	98	89	90	86	92	82	66
132	SB1	96	94	92	94	98	89	94	81	69
133	SB2	72	71	69	75	75	69	72	73	69
134	SB2	82	81	79	86	91	80	84	91	84
135	SB2	82	80	78	81	83	78	84	85	76
136	SB2	76	76	76	74	73	72	69	78	70
137	SB2	79	76	75	77	84	76	86	83	76
138	SB3	78	84	82	82	88	80	83	84	74
139	SB3	81	85	82	83	83	84	82	87	77
140	SB3	68	70	70	73	73	71	73	70	48
141	SB3	57	59	51	100	98	61	64	69	51
142	SB3	60	63	61	61	60	60	63	56	50
Mean (n = 14)		80	79	79	81	84	76	80	79	68
Std. dev.		14	11	14	10	11	9	10	10	11

[a]Labeled with ^{13}C at all 12 carbons on the two benzene rings.

Table B37a. Recovery (percent) of ^{13}C- and ^{37}Cl-labeled 2,3,7,8-substituted PCDD surrogate internal standards in tautog muscle composites

Composite #	Station	^{13}C-Labeled[a] 2,3,7,8-TCDD	1,2,3,7,8-PeCDD	1,2,3,4,7,8-HxCDD	1,2,3,6,7,8-HxCDD	1,2,3,4,6,7,8-HpCDD	OCDD	^{37}Cl-Labeled[b] 2,3,7,8-TCDD
143	TA1	82	76	83	92	74	62	96
144	TA1	77	71	68	94	69	54	99
144-dup.	TA1	76	80	72	89	69	36	94
144-trip.	TA1	116	87	80	93	75	61	144
144 mean (n = 3)	TA1	90	79	73	92	71	50	112
145	TA1	73	67	71	80	59	52	105
146	TA1	81	76	79	98	72	60	108
147	TA1	72	65	68	82	75	47	114
148	TA1	73	64	66	86	65	45	81
149	TA2	71	61	60	77	60	40	77
150	TA2	83	74	70	96	75	65	101
151	TA2	75	68	66	89	68	56	87
152	TA3	83	72	75	105	78	63	113
153	TA3	80	75	71	93	68	63	93
154	TA3	78	75	70	93	74	63	83
155	TA3	10[c]	12[c]	11[c]	17[c]	14[c]	7[c]	16[c]
156	TA3	79	70	71	90	70	62	90
Mean (n = 14)		78	71	71	90	70	56	97
Std. dev.		5	6	6	8	6	8	13

[a]Labeled with ^{13}C at all 12 carbons on the two benzene rings.
[b]Labeled with ^{37}Cl at all four chlorines.
[c]These values exceeded the 40-150% criterion.

Table B37b. Recovery (percent) of ^{13}C-labeled[a] 2,3,7,8-substituted PCDF surrogate internal standards in tautog muscle composites

Composite #	Station	2,3,7,8-TCDF	1,2,3,7,8-PeCDF	2,3,4,7,8-PeCDF	1,2,3,4,7,8-HxCDF	1,2,3,6,7,8-HxCDF	1,2,3,7,8,9-HxCDF	2,3,4,6,7,8-HxCDF	1,2,3,4,6,7,8-HpCDF	1,2,3,4,7,8,9-HpCDF
143	TA1	81	74	90	76	80	72	80	72	59
144	TA1	75	78	60	69	85	68	83	73	62
144-dup.	TA1	81	79	84	73	80	70	78	69	57
144-trip.	TA1	98	94	38[b]	81	82	77	85	75	64
144 mean (n = 3)	TA1	85	84	72	74	82	72	82	72	61
145	TA1	79	71	29[b]	65	67	56	68	56	45
146	TA1	84	79	32[b]	77	80	70	81	72	58
147	TA1	72	68	45	71	74	67	74	73	61
148	TA1	75	67	70	63	70	62	69	67	51
149	TA2	73	62	62	60	68	56	64	61	50
150	TA2	82	81	79	70	84	68	79	73	61
151	TA2	83	73	73	59	72	58	67	67	54
152	TA3	76	78	78	72	84	73	83	77	65
153	TA3	77	76	52	69	76	67	74	68	57
154	TA3	82	84	86	73	85	72	81	74	64
155	TA3	10[b]	12[b]	13[b]	12[b]	14[b]	12[b]	14[b]	13[b]	10[b]
156	TA3	81	78	78	71	80	69	84	73	58
Mean (n = 14)		79	75	71	69	77	66	76	70	57
Std. dev.		4	7	14	6	6	6	7	6	6

[a]Labeled with ^{13}C at all 12 carbons on the two benzene rings.
[b]These values exceeded the 40-150% criterion.

Table B38a. Recovery (percent) of 2,3,7,8-substituted PCDD congeners added to matrix spike muscle composites

Composite #	Station	2,3,7,8-TCDD	1,2,3,7,8-PeCDD	1,2,3,4,7,8-HxCDD	1,2,3,6,7,8-HxCDD	1,2,3,7,8,9-HxCDD	1,2,3,4,6,7,8-HpCDD	OCDD
102-MS	BL1	131[a]	118	110	87	92	100	87
109-MS	BL2	111	109	94	90	86	98	92
124-MS	FL4	131[a]	133[a]	111	104	103	110	109

[a] These values exceeded the 50- 20% criterion.

Table B38b. Recovery (percent) of 2,3,7,8-substituted PCDF congeners added to matrix spike muscle composites

Composite #	Station	2,3,7,8-TCDF	1,2,3,7,8-PeCDF	2,3,4,7,8-PeCDF	1,2,3,4,7,8-HxCDF	1,2,3,6,7,8-HxCDF	1,2,3,7,8,9-HxCDF	2,3,4,6,7,8-HxCDF	1,2,3,4,6,7,8-HpCDF	1,2,3,4,7,8,9-HpCDF	OCDF
102-MS	BL1	99	115	111	108	120	114	105	101	117	97
109-MS	BL2	115	115	98	99	114	100	98	94	103	91
124-MS	FL4	120	113	113	116	116	116	112	106	118	114

Table B39a. Concentrations (pg/g [pptr] wet weight) of 2,3,7,8-substituted PCDD congeners found in Cambridge Isotope Laboratory fish tissue EDF-2526 standard reference material

	Congener						
Composite #	**2,3,7,8-TCDD**	**1,2,3,7,8-PeCDD**	**1,2,3,4,7,8-HxCDD**	**1,2,3,6,7,8-HxCDD**	**1,2,3,7,8,9-HxCDD**	**1,2,3,4,6,7,8-HpCDD**	**OCDD**
Replicate 1	20.8	44.7	55.8	49.0	51.9	73.7	186
Replicate 2	21.0	45.1	53.0	50.3	48.3	71.8	183
Replicate 3	20.0	43.5	54.6	50.6	43.0	73.1	189
Mean (n = 3)	20.6	44.4	54.5	50.0	47.7	72.9	186
Std. dev.	0.514	0.824	1.45	0.811	4.46	0.944	2.77
Consensus value	19	40	60	56	60	76	192
Recovery (%)	109	111	91	89	80	96	97
Difference (%)	9	11	9	11	20	4	3

Table B39b. Concentrations (pg/g [pptr] wet weight) of 2,3,7,8-substituted PCDF congeners found in Cambridge Isotope Laboratory fish tissue EDF-2526 standard reference material

	Congener									
Composite #	**2,3,7,8-TCDF**	**1,2,3,7,8-PeCDF**	**2,3,4,7,8-PeCDF**	**1,2,3,4,7,8-HxCDF**	**1,2,3,6,7,8-HxCDF**	**1,2,3,7,8,9-HxCDF**	**2,3,4,6,7,8-HxCDF**	**1,2,3,4,6,7,8-HpCDF**	**1,2,3,4,7,8,9-HpCDF**	**OCDF**
Replicate 1	19.4	37.2	37.7	82.4	63.5	60.1	57.3	78.7	84.6	183
Replicate 2	20.5	37.4	37.9	82.1	59.6	57.9	56.6	72.0	76.5	176
Replicate 3	20.0	38.9	37.3	85.1	63.2	62.3	60.6	76.0	82.0	206
Mean (n = 3)	20.0	37.8	37.6	83.2	62.1	60.1	58.2	75.6	81.0	188
Std. dev.	0.583	0.930	0.287	1.64	2.17	2.21	2.12	3.38	4.12	15.3
Consensus value	17	40	38	80	63	58	60	83	73	190
Recovery (%)	118	95	99	104	99	104	97	91	111	99
Difference (%)	18	5	1	4	1	4	3	9	11	1