SUPPLEMENTAL

1. Reagents and chemicals

1.1. For PAH and PCB analysis

Native standard mixtures were used for calibration curve preparation:

– PAHs: PTM PAH Mix (17 target compounds), 2000 µg/mL, Sigma Aldrich, Germany.

– PCBs: WHO/NIST/NOAA mixture of 28 congeners, 10 µg/mL in n-hexane, Accustandard, USA.

Isotopically-labelled internal standards (IS) were used to correct recovery efficiency and matrix effects in all analytical steps:

– PAHs: EPA 8270 IS mix (naphthalene-d_8, phenanthrene-d_{10}, chrysene-d_{12}, etc.)

– PCBs: mixture of 7 fully ^{13}C-labelled congeners (PCB-28, -52, -101, -138, -153, -180, -209)

– A separate labelled mixture containing PCB-77, -81, -123, -126, -169 was used only as injection internal standards

Working standard solutions (2–2000 ng/mL for PAHs; 0.2–200 ng/mL for PCBs) were prepared fresh weekly in n-hexane and used exclusively for external calibration.

Solvents used for PAH and PCB analysis, such as hexane, acetone, dichloromethane and methanol and other chemicals such as Na_2SO_4, silica gel and H_2SO_4 98% being analytical grade with high purity were collected from Merck (Singapore). Anhydrous Na_2SO_4 was baked at 450^{o}C for 3 hours and kept in an amber glass bottle in the desiccator.

1.2. For PCDD/F analysis

Quantification and recovery correction were performed using the isotope-dilution approach according to US EPA Method 1613B and Method 23.

The standard sets contained:

– Native calibration solutions for the 17 toxic PCDD/F congeners

– Fully ^{13}C-labelled internal standards spiked before extraction to monitor overall method recovery

– ^{13}C-labelled syringe standards added after cleanup to monitor injection variability.

Nitrogen and helium gas with a purity of 99.99%. Solvents for PCDD/Fs analysis (acetone, dichloromethane, toluene, nonane and n-hexane were used at dioxin analysis grade) and chemicals (anhydrous sodium sulphate, potassium hydroxide, sulphuric acid and silver nitrate at chromatography grade) were purchased from Merck (Germany). The 60-200 mesh silica gel for open-column chromatography was collected from VWR International (USA). Activated carbon impregnated on silica gel (P/N 019-11941) was obtained by Wako (Japan).

2. Sample pretreatments and chromatographic condition

The isotopic dilution gas chromatography-tandem high-resolution mass spectrometry was employed to quantify the concentrations of PAHs, PCBs, and PCDD/Fs in smoked beef samples. However, sample

pretreatment processes and the analytical instrumentation were adjusted according to the target compounds. Detailed information for each type of analyzed POPs is provided below.

2.1. For PAH and PCB analysis

2.1.1. Sample extraction

5g freeze-dried sample was taken and respectively spiked with 20 µL (10 pg/µL) ^{13}C-labelled IS of quantified PAHs, and PCBs. Then, the extraction of these smoked beef samples was performed with an accelerated solvent extractor E-916 (Büchi) carried out with the mixture of toluene and acetone (7:3, v/v/) at 120^{o}C and 100 bar at a static time of 15 min. Three static cycles were accomplished.

After that, the total sample extract was divided into two parts. The first was used for fat content measurement and the second was analyzed to determine the POPs content in the smoked beef sample.

2.1.2. Determination of fat content

The fat content in each sample was determined by a gravimetric method. The example extract was evaporated with low pressure until the solvent was completely removed from the samples. After being dried at 80°C for 5 hours, the mass of the extract was measured to determine the fat content.

2.1.3. Purification and enrichment

The remaining extracts were evaporated to 0.5 mL by gentle nitrogen flow, then exchanged to hexane, and cleaned up by acidified silica gel SPE catridge. The acidified silica cartridges were conditioned with 10 mL MeOH and then followed by 10 mL hexane at a flow rate of approximately 3 mL/min. The extracts were transferred to the SPE cartridge and eluted with 12 mL mixture of hexane/dichloromethane (1/1, v/v/). Eluent solutions were concentrated under a gentle stream of nitrogen to nearly dry and then refilled with exactly 1 mL of hexane. These samples were subjected to analysis by GC-EI-MS/MS. The concentration of PAHs in the real samples was quantified by using an isotopically labelled IS calibration curve.

2.1.4. GC-MS analysis and instrumentation

A gas chromatography (GC Trace 1310, Thermo Scientific, USA) including TriPlus RSH liquid autosampler coupled with an electron impact ionization tandem mass spectrometry (Model TSQ 9000, Thermo Scientific, USA) was used for data acquisition. The sensitivity of the mass spectrometer was regularly checked by using FC-43 as a tuning solution. A Thermo DB-5MS capillary column (30 m × 0.25 mm × 0.25 µm, 5% methylphenyl polysiloxane stationary phase) was used to separate 17 PAHs and 28 PCBs. The injection volume was set to 1 µL by liquid autosampler and using the splitless mode. The temperature of injector was kept at 280°C. Helium (99.999% purity) was used as carrier gas and constantly kept at 1.0 mL/min whole gas chromatographic separation time. These congeners were separated by the program of temperature as follows: the initial temperature was started from 100°C and kept for 3 minutes, raised linearly to 210°C at 15°C/min, then increased continuously to 300°C at a rate of 10°C/min, and finally held for 15 minutes for conditioning GC column. The transfer line of the GC coupled with the mass spectrometer was set at 300°C. Temperature of the electron ionisation source and quadrupole were kept constantly at 280°C and 150°C, respectively. Energy ionization was kept at 70 eV. The TSQ 9000 triple-quadrupole mass spectrometer was operated in electron ionization (EI) with selected reaction monitoring (SRM) transitions optimized for each PAH and PCB congener. The 30 m DB-5MS column and the applied temperature program provided sufficient chromatographic resolution for the 17 PAHs and 28 PCBs, from di-chlorinated (PCB 8) to deca-chlorinated (PCB 209),

while any partially co-eluting congeners were discriminated by their compound-specific SRM transitions.

2.1.5. Linearity, method detection limit (MDL), method quantitation limit (MQL), and recovery performance for PAHs and PCBs

Linearity, sensitivity, and recovery performance for PAHs and PCBs were evaluated following EPA guidelines. Multi-level calibration curves were constructed using native and ^{13}C-labelled standards, and all target analytes showed excellent linearity with coefficients of determination (R^2) consistently above 0.999. MDL and MQL values were calculated using the EPA formulas (MDL = 3.3σ/S; MQL = 10σ/S) and are expressed in ppb lipid for consistency with the reporting units in the main manuscript. For PAHs, MDLs ranged from 1.1 to 2.0 ppb lipid and MQLs from 3.7 to 6.7 ppb lipid. For PCBs, MDLs were generally between 0.001 and 0.003 ppb lipid and MQLs between 0.003 and 0.010 ppb of lipid, demonstrating adequate sensitivity for trace-level determination in smoked meat.

Recovery evaluation was performed using spiked blank meat matrices (n = 5). Recoveries of ^{13}C-labelled PAH internal standards ranged from 72% to 108%, within the EPA Method 8270 acceptance criteria of 70–120%. Recoveries of 13C-labelled PCB internal standards ranged from 68% to 102%, consistent with the 60–120% QA/QC range required for PCB isotope-dilution analysis. These results confirm efficient extraction, effective cleanup, and reliable quantitative performance for both PAHs and PCBs.

2.2. For PCDD/F analysis

2.2.1. Sample extraction

Extraction for PCDD/F analysis were followed a protocol analogous to the extraction process designated for PAH and PCB congeners. However, before loading sample in E-916 accelerated solvent extractor, isotopically labeled PCDD/Fs standard solution was spiked into the freeze-dried samples at a volume of 50 µL (2 pg/µL).

The spiked ^{13}C-labeled isotope PCDD/F standards were before extraction to evaluate the extraction efficiency of the method. This procedure was carried out in accordance with Method 1613B, as stipulated by the United States Environmental Protection Agency (US EPA) in 1991.

2.2.2. Fat removal

The remaining extract was subjected to fat removal prior to cleanup before purification and enrichment. It was transferred to a centrifuge tube along with n-hexane. After dropping concentrated sulfuric acid slowly, the centrifuge tube was centrifuged for 5 minutes. The upper n-hexane layer was transferred to another test tube and then washed with deionised water in triplicate to remove all sulfuric acid from the analyzed samples.

2.2.3. Purification and enrichment

The sample after removing acid was placed into a multilayer column coupled with the activated carbon column to purify the sample. After that, the clean extract was continuously evaporated with lower pressure to the volume of approximately 1mL and evaporated in nitrogen gas. Then, it was mixed with 5 µL of the IS at a concentration of 2 pg/µL and made up the volume of 10 µL by nonane.

All sample was filtered through a 0.22 µm membrane before analysis in the GC/HRMS system.

2.2.4. GC-MS analysis and instrument

The analysis of PCDD/F congeners was carried out on a gas chromatographic system comparable to that used for PAH and PCB determination, but coupled to a high-resolution mass spectrometer (magnetic sector, double-focusing system; Thermo Scientific, USA) instead of a tandem quadrupole detector. Separation of the 17 target PCDD/F congeners was achieved using a TG-Dioxin capillary column (60 m × 0.25 mm I.D. × 0.25 µm; P/N 122-5532). The oven temperature program was as follows: initial temperature held at 140°C for 2 min, increased to 228°C at 40°C/min, then to 290°C at 1.6°C/min, followed by a ramp to 315°C at 5°C/min and held for 9 min before cooling to the initial temperature. The solvent delay was set to 17 min.

The mass spectrometer was operated in high-resolution selected ion monitoring (HR-SIM) mode. Helium was used as the carrier gas at a constant flow rate of 1.2 mL/min, with splitless injection at 250°C. The interface temperature was set at 260°C, while the transfer line and ion source temperatures were maintained at 280°C and 250°C, respectively. Instrument performance was routinely checked using perfluorotributylamine (FC-43) to ensure mass accuracy and resolution, which was set at 10,000 (10% valley definition). PCDD/F congeners and their 13C-labelled internal standards were monitored using two exact m/z values per analyte, identified based on relative retention times and ion-ratio criteria within the tolerances specified by EPA Methods 1613B and 23, and quantified by isotope-dilution calibration.

2.2.5. Linearity, method detection limit (MDL), method quantitation limit (MQL), and recovery performance for PCDD/Fs

Linearity and detection capability for PCDD/Fs were assessed in accordance with EPA Methods 1613B and 23 using multi-level native and ^{13}C-labelled calibration solutions. Calibration curves showed highly stable response ratios with R^2 values ranging from 0.9998 to 0.999995. MDL and MQL were determined using the EPA formulas (MDL = 3.3σ/S; MQL = 10σ/S) and are reported in ppb lipid to match the unit convention of the study. Across the 17 PCDD/F congeners, MDLs ranged from 0.17 to 3.44 ppb lipid and MQLs from 0.57 to 11.50 ppb lipid, meeting the sensitivity requirements for high-resolution dioxin analysis. Recovery performance was validated through the use of ^{13}C-labelled internal standards spiked prior to extraction. Mean recoveries ranged from 72% to 115%, within the EPA acceptance limits of 60–120%. These results confirm robust extraction efficiency, reliable cleanup, and consistent isotope-dilution quantification for PCDD/Fs in smoked beef matrices.

2.3. Data processing analysis

Data acquisition and initial processing of chromatographic results were performed using Xcalibur software version 4.2 (Thermo Scientific, USA). Quantitative results were subsequently compiled and organized in Microsoft Excel 2016 (Microsoft Corporation, USA) prior to statistical analysis. Before multivariate analysis, datasets were standardized to minimize scale effects among variables. Principal component analysis (PCA) and hierarchical clustering analysis (HCA) were then carried out using the R statistical environment (R Foundation for Statistical Computing, Vienna, Austria) to explore patterns, similarities, and differences among samples based on their POP concentration profiles.

TABLES

Table S1. PCBs and PCDDs/Fs contents of the samples

Sample	Content (Mean ± SD, ppb of lipid)							
	PCB 8	**PCB 18**	**PCB 28**	**PCB 44**	**PCB 52**	**PCB 66**	**PCB 77**	**PCB81**
W1	0.2234 ± 0.0255	0.0966 ± 0.0144	0.3367 ± 0.0425	0.1205 ± 0.0148	0.0627 ± 0.0058	0.1333 ± 0.0187	0.0315 ± 0.0039	Not detected (ND)
W2	0.2467 ± 0.0130	0.0877 ± 0.0100	0.2687 ± 0.0279	0.1025 ± 0.0120	0.0557 ± 0.0060	0.1140 ± 0.0119	0.0260 ± 0.0021	ND
W3	0.2239 ± 0.0174	0.0945 ± 0.0100	0.3425 ± 0.0438	0.1104 ± 0.0164	0.0680 ± 0.0070	0.1085 ± 0.0145	0.0327 ± 0.0036	ND
W4	0.2489 ± 0.0180	0.1056 ± 0.0125	0.3728 ± 0.0384	0.1170 ± 0.0070	0.0702 ± 0.0101	0.1223 ± 0.0132	0.0295 ± 0.0030	ND
W5	0.2579 ± 0.0319	0.0837 ± 0.0112	0.2700 ± 0.0135	0.1310 ± 0.0118	0.0646 ± 0.0045	0.1157 ± 0.0075	0.0294 ± 0.0026	ND
W6	0.2319 ± 0.0273	0.0858 ± 0.0109	0.3519 ± 0.0290	0.0974 ± 0.0082	0.0656 ± 0.0080	0.1400 ± 0.0088	0.0337 ± 0.0036	ND
W7	0.2380 ± 0.0331	0.1019 ± 0.0074	0.3701 ± 0.0192	0.1287 ± 0.0175	0.0589 ± 0.0044	0.1444 ± 0.0117	0.0278 ± 0.0021	ND
W8	0.2046 ± 0.0120	0.0755 ± 0.0040	0.3876 ± 0.0554	0.1424 ± 0.0107	0.0691 ± 0.0062	0.1432 ± 0.0200	0.0251 ± 0.0030	ND
W9	0.2521 ± 0.0232	0.0758 ± 0.0062	0.2717 ± 0.0375	0.1113 ± 0.0077	0.0671 ± 0.0079	0.1359 ± 0.0176	0.0246 ± 0.0012	ND
W10	0.2114 ± 0.0112	0.0789 ± 0.0061	0.3273 ± 0.0436	0.1039 ± 0.0099	0.0654 ± 0.0052	0.1176 ± 0.0160	0.0334 ± 0.0048	ND
W11	0.1794 ± 0.0129	0.1066 ± 0.0076	0.2666 ± 0.0215	0.1419 ± 0.0131	0.0664 ± 0.0054	0.1077 ± 0.0151	0.0329 ± 0.0034	ND
W12	0.2221 ± 0.0223	0.0765 ± 0.0110	0.2707 ± 0.0151	0.1153 ± 0.0090	0.0499 ± 0.0062	0.1324 ± 0.0094	0.0301 ± 0.0037	ND
W13	0.1776 ± 0.0094	0.0946 ± 0.0130	0.3897 ± 0.0537	0.1206 ± 0.0090	0.0559 ± 0.0032	0.1487 ± 0.0111	0.0309 ± 0.0038	ND
W14	0.2051 ± 0.0143	0.0947 ± 0.0077	0.3192 ± 0.0462	0.1095 ± 0.0156	0.0714 ± 0.0068	0.1381 ± 0.0083	0.0328 ± 0.0038	ND
W15	0.2245 ± 0.0258	0.0767 ± 0.0089	0.3094 ± 0.0181	0.1332 ± 0.0126	0.0586 ± 0.0088	0.1253 ± 0.0160	0.0359 ± 0.0031	ND
PE1	0.8500 ± 0.0888	0.2137 ± 0.0191	0.6428 ± 0.0634	0.1315 ± 0.0179	0.1139 ± 0.0170	0.3256 ± 0.0451	0.0523 ± 0.0030	ND
PE2	0.8382 ± 0.0604	0.2101 ± 0.0297	0.7536 ± 0.0429	0.1097 ± 0.0115	0.1241 ± 0.0071	0.3657 ± 0.0331	0.0553 ± 0.0064	ND
PE3	0.8578 ± 0.0934	0.2409 ± 0.0231	0.6474 ± 0.0816	0.1382 ± 0.0076	0.1230 ± 0.0088	0.3331 ± 0.0373	0.0605 ± 0.0050	ND
PE4	0.9752 ± 0.1277	0.2208 ± 0.0169	0.5425 ± 0.0687	0.1144 ± 0.0172	0.1003 ± 0.0077	0.3195 ± 0.0209	0.0475 ± 0.0039	ND
PE5	0.8339 ± 0.0422	0.2366 ± 0.0177	0.5328 ± 0.0335	0.1131 ± 0.0151	0.1106 ± 0.0159	0.3159 ± 0.0452	0.0507 ± 0.0068	ND
PE6	0.9054 ± 0.1182	0.2306 ± 0.0245	0.7085 ± 0.0691	0.1064 ± 0.0156	0.1040 ± 0.0144	0.3364 ± 0.0459	0.0593 ± 0.0072	ND
PE7	0.7812 ± 0.0936	0.2486 ± 0.0190	0.6899 ± 0.0724	0.1268 ± 0.0181	0.1255 ± 0.0173	0.2898 ± 0.0428	0.0466 ± 0.0037	ND
PE8	0.9037 ± 0.0759	0.1949 ± 0.0211	0.6455 ± 0.0494	0.1290 ± 0.0174	0.0914 ± 0.0079	0.2944 ± 0.0386	0.0474 ± 0.0038	ND
PE9	0.7301 ± 0.0479	0.1746 ± 0.0244	0.5824 ± 0.0799	0.1407 ± 0.0094	0.1191 ± 0.0078	0.2891 ± 0.0399	0.0422 ± 0.0038	ND
PE10	0.7540 ± 0.1099	0.1765 ± 0.0159	0.6062 ± 0.0560	0.1530 ± 0.0151	0.1007 ± 0.0134	0.3087 ± 0.0162	0.0467 ± 0.0042	ND
PE11	0.7795 ± 0.0652	0.2105 ± 0.0151	0.6036 ± 0.0430	0.1066 ± 0.0076	0.1235 ± 0.0149	0.2621 ± 0.0324	0.0585 ± 0.0047	ND
PE12	0.8944 ± 0.0530	0.2454 ± 0.0367	0.7047 ± 0.0732	0.1514 ± 0.0136	0.1029 ± 0.0114	0.2611 ± 0.0217	0.0608 ± 0.0038	ND

PE13	0.8637 ± 0.0515	0.2244 ± 0.0227	0.6184 ± 0.0761	0.1521 ± 0.0085	0.1110 ± 0.0165	0.2559 ± 0.0366	0.0606 ± 0.0056	ND
PE14	0.8195 ± 0.1104	0.2112 ± 0.0125	0.6545 ± 0.0459	0.1099 ± 0.0097	0.0910 ± 0.0105	0.3592 ± 0.0468	0.0496 ± 0.0071	ND
PE15	0.9505 ± 0.1049	0.1744 ± 0.0095	0.6886 ± 0.0559	0.1525 ± 0.0227	0.1220 ± 0.0062	0.3791 ± 0.0517	0.0544 ± 0.0064	ND
PVC1	1.5200 ± 0.1987	0.3080 ± 0.0188	0.4680 ± 0.0700	0.6370 ± 0.0487	0.1270 ± 0.0167	0.3070 ± 0.0402	0.1180 ± 0.0166	0.1850 ± 0.0169
PVC2	1.4928 ± 0.1836	0.3364 ± 0.0379	0.4296 ± 0.0494	0.6894 ± 0.0885	0.1182 ± 0.0094	0.3101 ± 0.0238	0.0979 ± 0.0109	0.1545 ± 0.0175
PVC3	1.2874 ± 0.1334	0.2738 ± 0.0354	0.4564 ± 0.0428	0.5459 ± 0.0521	0.1353 ± 0.0157	0.3485 ± 0.0449	0.0962 ± 0.0077	0.1463 ± 0.0102
PVC4	1.6800 ± 0.2475	0.3167 ± 0.0292	0.4906 ± 0.0499	0.7308 ± 0.0675	0.1114 ± 0.0160	0.3535 ± 0.0215	0.1062 ± 0.0111	0.2176 ± 0.0260
PVC5	1.5430 ± 0.1356	0.3361 ± 0.0189	0.3931 ± 0.0244	0.7168 ± 0.1045	0.1210 ± 0.0077	0.3267 ± 0.0448	0.1286 ± 0.0064	0.2147 ± 0.0213
PVC6	1.6769 ± 0.1764	0.3598 ± 0.0317	0.4648 ± 0.0337	0.5931 ± 0.0887	0.1210 ± 0.0074	0.3252 ± 0.0442	0.0972 ± 0.0076	0.2030 ± 0.0151
PVC7	1.7226 ± 0.2290	0.2698 ± 0.0404	0.3954 ± 0.0331	0.5606 ± 0.0592	0.1250 ± 0.0076	0.3599 ± 0.0260	0.1141 ± 0.0106	0.1871 ± 0.0216
PVC8	1.3893 ± 0.1554	0.3364 ± 0.0346	0.4812 ± 0.0524	0.5637 ± 0.0687	0.0997 ± 0.0105	0.2652 ± 0.0349	0.1142 ± 0.0123	0.2184 ± 0.0110
PVC9	1.7698 ± 0.2410	0.3059 ± 0.0450	0.5365 ± 0.0392	0.5586 ± 0.0366	0.1074 ± 0.0083	0.3092 ± 0.0297	0.1258 ± 0.0145	0.1597 ± 0.0200
PVC10	1.5780 ± 0.1700	0.3099 ± 0.0422	0.5398 ± 0.0389	0.6575 ± 0.0524	0.1149 ± 0.0127	0.2539 ± 0.0204	0.1240 ± 0.0120	0.1924 ± 0.0244
PVC11	1.2935 ± 0.1558	0.3241 ± 0.0166	0.5393 ± 0.0308	0.5548 ± 0.0815	0.1470 ± 0.0179	0.3559 ± 0.0461	0.1201 ± 0.0113	0.2095 ± 0.0127
PVC12	1.6130 ± 0.0880	0.2417 ± 0.0295	0.4718 ± 0.0534	0.7015 ± 0.0757	0.1429 ± 0.0101	0.2938 ± 0.0214	0.0999 ± 0.0071	0.1593 ± 0.0147
PVC13	1.2646 ± 0.0921	0.3555 ± 0.0420	0.5037 ± 0.0367	0.5331 ± 0.0556	0.1207 ± 0.0137	0.3218 ± 0.0169	0.0994 ± 0.0097	0.1760 ± 0.0119
PVC14	1.7302 ± 0.1366	0.3167 ± 0.0328	0.3683 ± 0.0518	0.7245 ± 0.0904	0.1474 ± 0.0113	0.2689 ± 0.0186	0.1183 ± 0.0166	0.2184 ± 0.0318
PVC15	1.6648 ± 0.0965	0.2488 ± 0.0191	0.4465 ± 0.0607	0.6989 ± 0.0389	0.1494 ± 0.0148	0.3163 ± 0.0262	0.1119 ± 0.0145	0.2110 ± 0.0215
Mix1	1.1300 ± 0.0828	0.4231 ± 0.0483	0.3897 ± 0.0222	0.3523 ± 0.0382	0.1023 ± 0.0144	0.2168 ± 0.0296	0.1305 ± 0.0087	0.2210 ± 0.0122
Mix2	1.1290 ± 0.0679	0.4757 ± 0.0291	0.4479 ± 0.0331	0.3721 ± 0.0373	0.0953 ± 0.0128	0.2051 ± 0.0301	0.1438 ± 0.0084	0.2564 ± 0.0192
Mix3	1.2908 ± 0.1004	0.3672 ± 0.0343	0.3445 ± 0.0403	0.2917 ± 0.0395	0.1049 ± 0.0062	0.2353 ± 0.0183	0.1308 ± 0.0133	0.2044 ± 0.0276
Mix4	1.1064 ± 0.1257	0.4723 ± 0.0450	0.3859 ± 0.0276	0.3580 ± 0.0235	0.1013 ± 0.0094	0.2110 ± 0.0241	0.1267 ± 0.0144	0.2595 ± 0.0248
Mix5	1.2093 ± 0.1046	0.4973 ± 0.0723	0.3445 ± 0.0218	0.3947 ± 0.0577	0.0948 ± 0.0074	0.2281 ± 0.0205	0.1026 ± 0.0086	0.1923 ± 0.0250
Mix6	1.1098 ± 0.0966	0.3592 ± 0.0494	0.3156 ± 0.0453	0.3298 ± 0.0191	0.0863 ± 0.0043	0.2437 ± 0.0361	0.1159 ± 0.0153	0.2533 ± 0.0296
Mix7	1.0600 ± 0.0752	0.4558 ± 0.0348	0.4342 ± 0.0465	0.2906 ± 0.0199	0.1204 ± 0.0153	0.2238 ± 0.0232	0.1232 ± 0.0154	0.1932 ± 0.0287
Mix8	0.9763 ± 0.0749	0.4202 ± 0.0420	0.3215 ± 0.0313	0.3936 ± 0.0431	0.0839 ± 0.0095	0.1715 ± 0.0247	0.1117 ± 0.0131	0.1901 ± 0.0208
Mix9	1.2965 ± 0.1863	0.3876 ± 0.0263	0.4518 ± 0.0580	0.4077 ± 0.0479	0.1138 ± 0.0087	0.2014 ± 0.0124	0.1172 ± 0.0085	0.2177 ± 0.0316
Mix10	1.2014 ± 0.1379	0.4655 ± 0.0658	0.3168 ± 0.0414	0.3033 ± 0.0223	0.0888 ± 0.0110	0.2062 ± 0.0303	0.1295 ± 0.0091	0.2239 ± 0.0312
Mix11	1.3202 ± 0.1464	0.4888 ± 0.0670	0.3613 ± 0.0249	0.3287 ± 0.0204	0.1103 ± 0.0116	0.2546 ± 0.0173	0.1108 ± 0.0058	0.2091 ± 0.0233
Mix12	1.2444 ± 0.0835	0.3592 ± 0.0287	0.3745 ± 0.0224	0.3072 ± 0.0427	0.0887 ± 0.0082	0.2210 ± 0.0323	0.1534 ± 0.0114	0.2188 ± 0.0267
Mix13	1.1143 ± 0.1370	0.4854 ± 0.0553	0.3578 ± 0.0333	0.4109 ± 0.0307	0.0832 ± 0.0042	0.2168 ± 0.0166	0.1101 ± 0.0107	0.2595 ± 0.0261
Mix14	1.0962 ± 0.0727	0.4884 ± 0.0542	0.3137 ± 0.0290	0.3344 ± 0.0366	0.1141 ± 0.0066	0.1886 ± 0.0115	0.1082 ± 0.0146	0.2224 ± 0.0296

Mix15	1.2501 ± 0.1099	0.4820 ± 0.0315	0.4245 ± 0.0411	0.3890 ± 0.0435	0.1059 ± 0.0146	0.1923 ± 0.0180	0.1393 ± 0.0080	0.2416 ± 0.0253
Sample	**Content (Mean ± SD, ppb of lipid)**							
	PCB 101	**PCB 114**	**PCB 118**	**PCB 126**	**PCB 128**	**PCB 138**	**PCB 153**	**PCB156**
W1	0.0933 ± 0.0130	0.0264 ± 0.0019	0.0423 ± 0.0051	0.0632 ± 0.0093	ND	0.0371 ± 0.0022	ND	ND
W2	0.0905 ± 0.0113	0.0278 ± 0.0023	0.0434 ± 0.0041	0.0655 ± 0.0067	ND	0.0309 ± 0.0045	ND	ND
W3	0.0911 ± 0.0089	0.0295 ± 0.0037	0.0369 ± 0.0046	0.0547 ± 0.0043	ND	0.0340 ± 0.0045	ND	ND
W4	0.0839 ± 0.0064	0.0231 ± 0.0020	0.0401 ± 0.0059	0.0531 ± 0.0032	ND	0.0338 ± 0.0036	ND	ND
W5	0.1006 ± 0.0075	0.0273 ± 0.0034	0.0431 ± 0.0033	0.0707 ± 0.0049	ND	0.0341 ± 0.0049	ND	ND
W6	0.0952 ± 0.0108	0.0245 ± 0.0033	0.0432 ± 0.0057	0.0537 ± 0.0039	ND	0.0398 ± 0.0060	ND	ND
W7	0.1059 ± 0.0134	0.0235 ± 0.0018	0.0332 ± 0.0034	0.0695 ± 0.0047	ND	0.0402 ± 0.0047	ND	ND
W8	0.0916 ± 0.0094	0.0289 ± 0.0017	0.0442 ± 0.0043	0.0531 ± 0.0027	ND	0.0425 ± 0.0033	ND	ND
W9	0.0967 ± 0.0109	0.0279 ± 0.0014	0.0343 ± 0.0032	0.0724 ± 0.0075	ND	0.0317 ± 0.0017	ND	ND
W10	0.0943 ± 0.0073	0.0306 ± 0.0032	0.0411 ± 0.0051	0.0698 ± 0.0054	ND	0.0299 ± 0.0038	ND	ND
W11	0.0985 ± 0.0057	0.0213 ± 0.0032	0.0332 ± 0.0026	0.0661 ± 0.0097	ND	0.0311 ± 0.0030	ND	ND
W12	0.1014 ± 0.0080	0.0241 ± 0.0020	0.0435 ± 0.0059	0.0581 ± 0.0061	ND	0.0376 ± 0.0043	ND	ND
W13	0.0813 ± 0.0063	0.0268 ± 0.0031	0.0456 ± 0.0061	0.0673 ± 0.0081	ND	0.0315 ± 0.0045	ND	ND
W14	0.0839 ± 0.0069	0.0216 ± 0.0028	0.0340 ± 0.0020	0.0657 ± 0.0041	ND	0.0339 ± 0.0023	ND	ND
W15	0.0972 ± 0.0101	0.0222 ± 0.0026	0.0368 ± 0.0051	0.0705 ± 0.0096	ND	0.0406 ± 0.0044	ND	ND
PE1	0.0632 ± 0.0040	0.1089 ± 0.0137	0.0867 ± 0.0064	0.1294 ± 0.0128	ND	0.0397 ± 0.0045	ND	ND
PE2	0.0496 ± 0.0036	0.0870 ± 0.0126	0.0911 ± 0.0088	0.1444 ± 0.0198	ND	0.0389 ± 0.0039	ND	ND
PE3	0.0669 ± 0.0080	0.1222 ± 0.0085	0.0772 ± 0.0086	0.1200 ± 0.0129	ND	0.0394 ± 0.0023	ND	ND
PE4	0.0682 ± 0.0082	0.0932 ± 0.0048	0.0737 ± 0.0065	0.1420 ± 0.0138	ND	0.0468 ± 0.0040	ND	ND
PE5	0.0606 ± 0.0034	0.1151 ± 0.0075	0.0780 ± 0.0041	0.1441 ± 0.0136	ND	0.0458 ± 0.0038	ND	ND
PE6	0.0670 ± 0.0061	0.1161 ± 0.0073	0.0695 ± 0.0094	0.1117 ± 0.0076	ND	0.0385 ± 0.0045	ND	ND
PE7	0.0650 ± 0.0068	0.1174 ± 0.0137	0.1003 ± 0.0068	0.1099 ± 0.0061	ND	0.0413 ± 0.0056	ND	ND
PE8	0.0684 ± 0.0063	0.1064 ± 0.0113	0.0718 ± 0.0051	0.1232 ± 0.0178	ND	0.0310 ± 0.0026	ND	ND
PE9	0.0686 ± 0.0048	0.1103 ± 0.0079	0.0821 ± 0.0107	0.1340 ± 0.0131	ND	0.0359 ± 0.0043	ND	ND
PE10	0.0660 ± 0.0061	0.1011 ± 0.0121	0.0811 ± 0.0068	0.1146 ± 0.0152	ND	0.0383 ± 0.0030	ND	ND
PE11	0.0541 ± 0.0076	0.0897 ± 0.0114	0.0782 ± 0.0108	0.1067 ± 0.0096	ND	0.0434 ± 0.0063	ND	ND
PE12	0.0703 ± 0.0076	0.0940 ± 0.0063	0.0759 ± 0.0091	0.1077 ± 0.0062	ND	0.0351 ± 0.0046	ND	ND
PE13	0.0746 ± 0.0089	0.0918 ± 0.0102	0.0983 ± 0.0076	0.1188 ± 0.0134	ND	0.0336 ± 0.0035	ND	ND
PE14	0.0555 ± 0.0075	0.1056 ± 0.0132	0.0786 ± 0.0040	0.1448 ± 0.0080	ND	0.0370 ± 0.0035	ND	ND

PE15	0.0597 ± 0.0076	0.0990 ± 0.0061	0.0772 ± 0.0112	0.1137 ± 0.0074	ND	0.0406 ± 0.0033	ND	ND
PVC1	0.0940 ± 0.0083	0.2360 ± 0.0311	0.4360 ± 0.0255	0.2080 ± 0.0221	0.1480 ± 0.0178	0.1190 ± 0.0098	0.2300 ± 0.0306	0.1720 ± 0.0164
PVC2	0.0868 ± 0.0044	0.2731 ± 0.0400	0.4107 ± 0.0501	0.1758 ± 0.0141	0.1214 ± 0.0116	0.0942 ± 0.0138	0.2346 ± 0.0234	0.1569 ± 0.0129
PVC3	0.0852 ± 0.0073	0.2781 ± 0.0169	0.5024 ± 0.0497	0.2391 ± 0.0357	0.1282 ± 0.0152	0.1219 ± 0.0110	0.2176 ± 0.0265	0.1763 ± 0.0121
PVC4	0.0876 ± 0.0110	0.2571 ± 0.0135	0.3990 ± 0.0502	0.2062 ± 0.0128	0.1741 ± 0.0248	0.1182 ± 0.0120	0.2148 ± 0.0217	0.1371 ± 0.0164
PVC5	0.0838 ± 0.0113	0.1876 ± 0.0152	0.3859 ± 0.0459	0.1818 ± 0.0230	0.1738 ± 0.0224	0.0979 ± 0.0146	0.2418 ± 0.0187	0.1861 ± 0.0199
PVC6	0.0911 ± 0.0132	0.2131 ± 0.0251	0.4653 ± 0.0533	0.1814 ± 0.0201	0.1713 ± 0.0193	0.1125 ± 0.0130	0.2595 ± 0.0346	0.1925 ± 0.0141
PVC7	0.0848 ± 0.0078	0.2273 ± 0.0331	0.4557 ± 0.0452	0.2132 ± 0.0275	0.1498 ± 0.0174	0.1152 ± 0.0120	0.2144 ± 0.0317	0.1860 ± 0.0237
PVC8	0.0925 ± 0.0115	0.2521 ± 0.0226	0.4889 ± 0.0632	0.1770 ± 0.0128	0.1344 ± 0.0193	0.1156 ± 0.0106	0.1992 ± 0.0148	0.1605 ± 0.0087
PVC9	0.0744 ± 0.0078	0.2207 ± 0.0268	0.4051 ± 0.0240	0.2091 ± 0.0214	0.1362 ± 0.0126	0.1240 ± 0.0085	0.2155 ± 0.0227	0.1524 ± 0.0190
PVC10	0.0790 ± 0.0087	0.2008 ± 0.0116	0.4631 ± 0.0334	0.2020 ± 0.0192	0.1265 ± 0.0132	0.0976 ± 0.0084	0.2017 ± 0.0178	0.1849 ± 0.0223
PVC11	0.0779 ± 0.0056	0.2089 ± 0.0249	0.4339 ± 0.0517	0.2432 ± 0.0229	0.1625 ± 0.0186	0.0954 ± 0.0120	0.1854 ± 0.0264	0.1848 ± 0.0242
PVC12	0.1066 ± 0.0077	0.1926 ± 0.0217	0.4858 ± 0.0392	0.2236 ± 0.0304	0.1504 ± 0.0212	0.1240 ± 0.0140	0.2367 ± 0.0239	0.1712 ± 0.0152
PVC13	0.0749 ± 0.0070	0.2176 ± 0.0131	0.4897 ± 0.0530	0.2120 ± 0.0316	0.1486 ± 0.0197	0.1169 ± 0.0147	0.2565 ± 0.0354	0.1991 ± 0.0232
PVC14	0.0845 ± 0.0045	0.2058 ± 0.0262	0.3802 ± 0.0370	0.1689 ± 0.0136	0.1206 ± 0.0069	0.1100 ± 0.0077	0.2049 ± 0.0279	0.1374 ± 0.0181
PVC15	0.1069 ± 0.0089	0.2760 ± 0.0373	0.4570 ± 0.0471	0.2441 ± 0.0274	0.1657 ± 0.0110	0.0929 ± 0.0097	0.2293 ± 0.0178	0.1970 ± 0.0292
Mix1	0.2021 ± 0.0238	0.1245 ± 0.0137	0.2505 ± 0.0232	0.1247 ± 0.0138	0.1420 ± 0.0115	0.0459 ± 0.0066	0.2010 ± 0.0259	0.0850 ± 0.0085
Mix2	0.2129 ± 0.0193	0.1215 ± 0.0075	0.2520 ± 0.0314	0.1350 ± 0.0167	0.1110 ± 0.0139	0.0398 ± 0.0037	0.2350 ± 0.0215	0.0739 ± 0.0040
Mix3	0.1926 ± 0.0128	0.1094 ± 0.0162	0.2325 ± 0.0193	0.1263 ± 0.0183	0.1542 ± 0.0165	0.0507 ± 0.0061	0.1992 ± 0.0286	0.0928 ± 0.0093
Mix4	0.1602 ± 0.0155	0.1068 ± 0.0137	0.2214 ± 0.0266	0.1046 ± 0.0074	0.1137 ± 0.0090	0.0377 ± 0.0023	0.1886 ± 0.0190	0.0729 ± 0.0079
Mix5	0.2124 ± 0.0133	0.1248 ± 0.0106	0.2056 ± 0.0159	0.1164 ± 0.0083	0.1464 ± 0.0091	0.0405 ± 0.0060	0.1682 ± 0.0222	0.0730 ± 0.0100
Mix6	0.2058 ± 0.0231	0.1208 ± 0.0112	0.2611 ± 0.0196	0.1177 ± 0.0137	0.1143 ± 0.0136	0.0534 ± 0.0059	0.1839 ± 0.0144	0.0846 ± 0.0116
Mix7	0.2203 ± 0.0116	0.1369 ± 0.0119	0.2937 ± 0.0182	0.1056 ± 0.0069	0.1332 ± 0.0160	0.0430 ± 0.0032	0.1606 ± 0.0128	0.0845 ± 0.0079
Mix8	0.1835 ± 0.0164	0.1069 ± 0.0108	0.2583 ± 0.0179	0.1439 ± 0.0097	0.1363 ± 0.0197	0.0469 ± 0.0031	0.2256 ± 0.0245	0.0971 ± 0.0100
Mix9	0.1841 ± 0.0196	0.1124 ± 0.0095	0.2884 ± 0.0179	0.1296 ± 0.0075	0.1577 ± 0.0158	0.0446 ± 0.0047	0.2115 ± 0.0317	0.0797 ± 0.0076
Mix10	0.2240 ± 0.0118	0.1432 ± 0.0193	0.2563 ± 0.0265	0.1419 ± 0.0071	0.1282 ± 0.0127	0.0398 ± 0.0042	0.1735 ± 0.0172	0.0711 ± 0.0087
Mix11	0.1651 ± 0.0189	0.1044 ± 0.0138	0.2854 ± 0.0360	0.1056 ± 0.0100	0.1258 ± 0.0073	0.0401 ± 0.0024	0.2141 ± 0.0139	0.0677 ± 0.0062
Mix12	0.2082 ± 0.0132	0.0978 ± 0.0059	0.2814 ± 0.0193	0.1335 ± 0.0146	0.1612 ± 0.0087	0.0400 ± 0.0060	0.1576 ± 0.0164	0.0795 ± 0.0092
Mix13	0.2139 ± 0.0206	0.1122 ± 0.0164	0.2658 ± 0.0190	0.1024 ± 0.0081	0.1658 ± 0.0155	0.0431 ± 0.0061	0.1676 ± 0.0142	0.0680 ± 0.0044
Mix14	0.1811 ± 0.0100	0.1446 ± 0.0164	0.2014 ± 0.0198	0.1193 ± 0.0087	0.1223 ± 0.0101	0.0376 ± 0.0036	0.1771 ± 0.0186	0.0685 ± 0.0066
Mix15	0.1801 ± 0.0158	0.1122 ± 0.0149	0.2503 ± 0.0307	0.1188 ± 0.0143	0.1299 ± 0.0097	0.0389 ± 0.0024	0.1980 ± 0.0207	0.0978 ± 0.0144

Sample	Content (Mean ± SD, ppb of lipid)							
	PCB 167	PCB169	PCB 170	PCB 180	PCB 189	PCB 195	PCB 206	PCB 209
W1	ND	ND	0.1212 ± 0.0181	0.1038 ± 0.0122	0.0966 ± 0.0068	ND	ND	ND
W2	ND	ND	0.1162 ± 0.0092	0.1208 ± 0.0131	0.0862 ± 0.0062	ND	ND	ND
W3	ND	ND	0.0979 ± 0.0145	0.1148 ± 0.0152	0.0933 ± 0.0128	ND	ND	ND
W4	ND	ND	0.1149 ± 0.0133	0.1138 ± 0.0164	0.1120 ± 0.0093	ND	ND	ND
W5	ND	ND	0.1019 ± 0.0079	0.0887 ± 0.0054	0.0900 ± 0.0058	ND	ND	ND
W6	ND	ND	0.1069 ± 0.0114	0.0931 ± 0.0068	0.0952 ± 0.0133	ND	ND	ND
W7	ND	ND	0.1132 ± 0.0134	0.0964 ± 0.0051	0.1007 ± 0.0051	ND	ND	ND
W8	ND	ND	0.1094 ± 0.0136	0.1181 ± 0.0163	0.0826 ± 0.0112	ND	ND	ND
W9	ND	ND	0.1394 ± 0.0077	0.1086 ± 0.0115	0.1054 ± 0.0068	ND	ND	ND
W10	ND	ND	0.1081 ± 0.0120	0.0970 ± 0.0137	0.0977 ± 0.0062	ND	ND	ND
W11	ND	ND	0.1224 ± 0.0122	0.0922 ± 0.0067	0.1119 ± 0.0084	ND	ND	ND
W12	ND	ND	0.1355 ± 0.0190	0.1130 ± 0.0064	0.0884 ± 0.0060	ND	ND	ND
W13	ND	ND	0.1169 ± 0.0092	0.1132 ± 0.0150	0.0945 ± 0.0110	ND	ND	ND
W14	ND	ND	0.1220 ± 0.0158	0.0887 ± 0.0125	0.1070 ± 0.0056	ND	ND	ND
W15	ND	ND	0.1241 ± 0.0137	0.1029 ± 0.0083	0.0790 ± 0.0041	ND	ND	ND
PE1	ND	ND	0.2105 ± 0.0179	0.1480 ± 0.0134	0.1458 ± 0.0188	ND	ND	ND
PE2	ND	ND	0.1739 ± 0.0198	0.1515 ± 0.0097	0.1524 ± 0.0112	ND	ND	ND
PE3	ND	ND	0.1909 ± 0.0214	0.1182 ± 0.0171	0.1169 ± 0.0096	ND	ND	ND
PE4	ND	ND	0.1718 ± 0.0202	0.1527 ± 0.0123	0.1503 ± 0.0101	ND	ND	ND
PE5	ND	ND	0.2238 ± 0.0273	0.1696 ± 0.0168	0.1290 ± 0.0071	ND	ND	ND
PE6	ND	ND	0.1686 ± 0.0195	0.1195 ± 0.0071	0.1718 ± 0.0213	ND	ND	ND
PE7	ND	ND	0.2274 ± 0.0304	0.1367 ± 0.0190	0.1620 ± 0.0166	ND	ND	ND
PE8	ND	ND	0.2480 ± 0.0280	0.1444 ± 0.0092	0.1493 ± 0.0186	ND	ND	ND
PE9	ND	ND	0.1724 ± 0.0242	0.1169 ± 0.0111	0.1594 ± 0.0156	ND	ND	ND
PE10	ND	ND	0.1734 ± 0.0199	0.1464 ± 0.0171	0.1379 ± 0.0176	ND	ND	ND
PE11	ND	ND	0.2219 ± 0.0180	0.1355 ± 0.0168	0.1597 ± 0.0162	ND	ND	ND
PE12	ND	ND	0.1730 ± 0.0163	0.1649 ± 0.0238	0.1444 ± 0.0088	ND	ND	ND
PE13	ND	ND	0.2156 ± 0.0233	0.1283 ± 0.0118	0.1432 ± 0.0144	ND	ND	ND
PE14	ND	ND	0.2453 ± 0.0302	0.1178 ± 0.0146	0.1352 ± 0.0195	ND	ND	ND
PE15	ND	ND	0.1859 ± 0.0110	0.1176 ± 0.0077	0.1566 ± 0.0085	ND	ND	ND

PVC1	0.1310 ± 0.0110	0.1010 ± 0.0108	0.1560 ± 0.0124	0.4790 ± 0.0438	0.3750 ± 0.0481	0.0750 ± 0.0071	0.0480 ± 0.0052	0.0180 ± 0.0022
PVC2	0.1121 ± 0.0134	0.0901 ± 0.0116	0.1462 ± 0.0182	0.5443 ± 0.0326	0.3413 ± 0.0467	0.0691 ± 0.0050	0.0414 ± 0.0030	0.0142 ± 0.0010
PVC3	0.1346 ± 0.0155	0.1159 ± 0.0078	0.1426 ± 0.0096	0.4733 ± 0.0468	0.4235 ± 0.0433	0.0822 ± 0.0069	0.0421 ± 0.0049	0.0162 ± 0.0015
PVC4	0.1346 ± 0.0182	0.0855 ± 0.0050	0.1762 ± 0.0111	0.4786 ± 0.0435	0.3852 ± 0.0369	0.0849 ± 0.0081	0.0462 ± 0.0033	0.0150 ± 0.0013
PVC5	0.1209 ± 0.0163	0.1141 ± 0.0156	0.1462 ± 0.0152	0.5529 ± 0.0803	0.3931 ± 0.0576	0.0846 ± 0.0077	0.0457 ± 0.0028	0.0178 ± 0.0015
PVC6	0.1193 ± 0.0162	0.0899 ± 0.0101	0.1674 ± 0.0246	0.5381 ± 0.0287	0.3803 ± 0.0213	0.0835 ± 0.0050	0.0534 ± 0.0072	0.0185 ± 0.0023
PVC7	0.1460 ± 0.0128	0.1146 ± 0.0085	0.1721 ± 0.0177	0.5237 ± 0.0456	0.3908 ± 0.0383	0.0675 ± 0.0063	0.0539 ± 0.0047	0.0159 ± 0.0020
PVC8	0.1418 ± 0.0116	0.1012 ± 0.0143	0.1248 ± 0.0176	0.4546 ± 0.0429	0.3097 ± 0.0279	0.0697 ± 0.0081	0.0507 ± 0.0064	0.0157 ± 0.0017
PVC9	0.1258 ± 0.0153	0.1180 ± 0.0076	0.1809 ± 0.0241	0.5448 ± 0.0790	0.3274 ± 0.0388	0.0712 ± 0.0062	0.0445 ± 0.0048	0.0157 ± 0.0009
PVC10	0.1454 ± 0.0183	0.1162 ± 0.0112	0.1812 ± 0.0137	0.4071 ± 0.0552	0.3844 ± 0.0381	0.0616 ± 0.0040	0.0421 ± 0.0055	0.0177 ± 0.0010
PVC11	0.1402 ± 0.0192	0.0889 ± 0.0067	0.1640 ± 0.0217	0.3750 ± 0.0225	0.4073 ± 0.0574	0.0663 ± 0.0094	0.0395 ± 0.0053	0.0179 ± 0.0012
PVC12	0.1199 ± 0.0064	0.1036 ± 0.0078	0.1251 ± 0.0123	0.3942 ± 0.0467	0.3675 ± 0.0211	0.0644 ± 0.0037	0.0518 ± 0.0076	0.0152 ± 0.0017
PVC13	0.1410 ± 0.0080	0.1052 ± 0.0054	0.1815 ± 0.0237	0.4402 ± 0.0460	0.2932 ± 0.0170	0.0607 ± 0.0081	0.0476 ± 0.0063	0.0164 ± 0.0019
PVC14	0.1028 ± 0.0116	0.0841 ± 0.0110	0.1754 ± 0.0219	0.3995 ± 0.0590	0.3424 ± 0.0379	0.0823 ± 0.0049	0.0475 ± 0.0053	0.0201 ± 0.0016
PVC15	0.1426 ± 0.0203	0.0858 ± 0.0120	0.1809 ± 0.0152	0.3846 ± 0.0330	0.3135 ± 0.0177	0.0830 ± 0.0050	0.0442 ± 0.0051	0.0146 ± 0.0017
Mix1	0.0970 ± 0.0145	0.0523 ± 0.0062	0.1598 ± 0.0098	0.2638 ± 0.0237	0.2218 ± 0.0172	0.0489 ± 0.0061	0.0312 ± 0.0016	0.0110 ± 0.0011
Mix2	0.0892 ± 0.0111	0.0554 ± 0.0036	0.1526 ± 0.0223	0.2113 ± 0.0146	0.2440 ± 0.0276	0.0548 ± 0.0072	0.0350 ± 0.0050	0.0098 ± 0.0009
Mix3	0.1098 ± 0.0103	0.0524 ± 0.0049	0.1632 ± 0.0105	0.2369 ± 0.0147	0.2493 ± 0.0261	0.0426 ± 0.0045	0.0353 ± 0.0047	0.0125 ± 0.0010
Mix4	0.1095 ± 0.0066	0.0442 ± 0.0037	0.1553 ± 0.0228	0.2596 ± 0.0350	0.1778 ± 0.0147	0.0403 ± 0.0044	0.0269 ± 0.0021	0.0109 ± 0.0014
Mix5	0.0895 ± 0.0101	0.0574 ± 0.0062	0.1656 ± 0.0225	0.2070 ± 0.0198	0.2620 ± 0.0392	0.0426 ± 0.0045	0.0311 ± 0.0021	0.0123 ± 0.0008
Mix6	0.0956 ± 0.0131	0.0500 ± 0.0057	0.1713 ± 0.0210	0.2216 ± 0.0258	0.2154 ± 0.0222	0.0565 ± 0.0047	0.0251 ± 0.0030	0.0118 ± 0.0011
Mix7	0.0941 ± 0.0089	0.0457 ± 0.0042	0.1460 ± 0.0216	0.2282 ± 0.0261	0.2020 ± 0.0193	0.0507 ± 0.0032	0.0295 ± 0.0024	0.0106 ± 0.0008
Mix8	0.1021 ± 0.0122	0.0617 ± 0.0046	0.1617 ± 0.0237	0.2144 ± 0.0235	0.2280 ± 0.0252	0.0573 ± 0.0049	0.0323 ± 0.0027	0.0120 ± 0.0014
Mix9	0.0934 ± 0.0131	0.0586 ± 0.0079	0.1435 ± 0.0187	0.2675 ± 0.0139	0.2404 ± 0.0144	0.0441 ± 0.0051	0.0246 ± 0.0012	0.0114 ± 0.0011
Mix10	0.0850 ± 0.0046	0.0434 ± 0.0030	0.1400 ± 0.0121	0.2675 ± 0.0344	0.1978 ± 0.0238	0.0464 ± 0.0058	0.0335 ± 0.0046	0.0094 ± 0.0011
Mix11	0.0930 ± 0.0121	0.0413 ± 0.0037	0.1790 ± 0.0231	0.2913 ± 0.0217	0.1778 ± 0.0241	0.0539 ± 0.0074	0.0320 ± 0.0034	0.0118 ± 0.0006
Mix12	0.0991 ± 0.0079	0.0595 ± 0.0059	0.1812 ± 0.0093	0.2269 ± 0.0142	0.1776 ± 0.0204	0.0544 ± 0.0066	0.0326 ± 0.0029	0.0088 ± 0.0008
Mix13	0.0897 ± 0.0078	0.0571 ± 0.0042	0.1880 ± 0.0195	0.2820 ± 0.0300	0.2462 ± 0.0312	0.0562 ± 0.0083	0.0310 ± 0.0020	0.0101 ± 0.0011
Mix14	0.0976 ± 0.0063	0.0454 ± 0.0049	0.1283 ± 0.0122	0.3087 ± 0.0176	0.1838 ± 0.0224	0.0494 ± 0.0054	0.0249 ± 0.0028	0.0126 ± 0.0006
Mix15	0.0941 ± 0.0097	0.0447 ± 0.0048	0.1392 ± 0.0163	0.2678 ± 0.0339	0.1963 ± 0.0140	0.0421 ± 0.0036	0.0289 ± 0.0015	0.0093 ± 0.0007

Sample	Content (Mean ± SD, ppb of lipid)							
	12378-PeCDF	123478-HxCDF	123678-HxCDF	123789-HxCDF	234678-HxCDF	1234678-HpCDF	Total PCB	Total PCDD
W1	ND	ND	ND	ND	ND	ND	1.5886 ± 0.0824	ND
W2	ND	ND	ND	ND	ND	ND	1.4826 ± 0.0746	ND
W3	ND	ND	ND	ND	ND	ND	1.5326 ± 0.0819	ND
W4	ND	ND	ND	ND	ND	ND	1.6410 ± 0.0900	ND
W5	ND	ND	ND	ND	ND	ND	1.5086 ± 0.0759	ND
W6	ND	ND	ND	ND	ND	ND	1.5579 ± 0.0843	ND
W7	ND	ND	ND	ND	ND	ND	1.6523 ± 0.0893	ND
W8	ND	ND	ND	ND	ND	ND	1.6179 ± 0.0893	ND
W9	ND	ND	ND	ND	ND	ND	1.5549 ± 0.0775	ND
W10	ND	ND	ND	ND	ND	ND	1.5064 ± 0.0784	ND
W11	ND	ND	ND	ND	ND	ND	1.4781 ± 0.0702	ND
W12	ND	ND	ND	ND	ND	ND	1.4987 ± 0.0739	ND
W13	ND	ND	ND	ND	ND	ND	1.5953 ± 0.0878	ND
W14	ND	ND	ND	ND	ND	ND	1.5277 ± 0.0784	ND
W15	ND	ND	ND	ND	ND	ND	1.5369 ± 0.0786	ND
PE1	ND	ND	ND	ND	0.0022 ± 0.00014	ND	3.2620 ± 0.2092	0.00220 ± 0.00090
PE2	ND	ND	ND	ND	0.00221 ± 0.00019	ND	3.3456 ± 0.2216	0.00221 ± 0.00090
PE3	ND	ND	ND	ND	0.00192 ± 0.00028	ND	3.2527 ± 0.2112	0.00192 ± 0.00078
PE4	ND	ND	ND	ND	0.00249 ± 0.0003	ND	3.2189 ± 0.2193	0.00249 ± 0.00102
PE5	ND	ND	ND	ND	0.00201 ± 0.00018	ND	3.1596 ± 0.1965	0.00201 ± 0.00082
PE6	ND	ND	ND	ND	0.00211 ± 0.00023	ND	3.3134 ± 0.2251	0.00211 ± 0.00086
PE7	ND	ND	ND	ND	0.00245 ± 0.00035	ND	3.2683 ± 0.2042	0.00245 ± 0.00100
PE8	ND	ND	ND	ND	0.0019 ± 0.00015	ND	3.2488 ± 0.2174	0.00190 ± 0.00078
PE9	ND	ND	ND	ND	0.00257 ± 0.00023	ND	2.9580 ± 0.1829	0.00257 ± 0.00105
PE10	ND	ND	ND	ND	0.00243 ± 0.00031	ND	3.0046 ± 0.1898	0.00243 ± 0.00099
PE11	ND	ND	ND	ND	0.00185 ± 0.00024	ND	3.0336 ± 0.1928	0.00185 ± 0.00076
PE12	ND	ND	ND	ND	0.00177 ± 0.00021	ND	3.2858 ± 0.2209	0.00177 ± 0.00072
PE13	ND	ND	ND	ND	0.00246 ± 0.00033	ND	3.1903 ± 0.2066	0.00246 ± 0.00101
PE14	ND	ND	ND	ND	0.00189 ± 0.00023	ND	3.2145 ± 0.2086	0.00189 ± 0.00077
PE15	ND	ND	ND	ND	0.0023 ± 0.00027	ND	3.3717 ± 0.2309	0.00230 ± 0.00094
PVC1	0.00885 ± 0.00063	0.00159 ± 0.00021	0.01074 ± 0.00114	0.01422 ± 0.00093	0.01205 ± 0.00124	0.00174 ± 0.00013	6.6960 ± 0.3069	0.04919 ± 0.00536
PVC2	0.00768 ± 0.00049	0.00152 ± 0.00011	0.01236 ± 0.0014	0.01663 ± 0.00093	0.01272 ± 0.00146	0.00153 ± 0.00014	6.5411 ± 0.3099	0.05245 ± 0.00627
PVC3	0.00972 ± 0.00073	0.00173 ± 0.00019	0.00895 ± 0.00101	0.01139 ± 0.00069	0.01094 ± 0.00101	0.00157 ± 0.00012	6.4688 ± 0.2665	0.04430 ± 0.00452
PVC4	0.00709 ± 0.00059	0.00148 ± 0.00015	0.00999 ± 0.00136	0.01428 ± 0.002	0.01223 ± 0.00105	0.00149 ± 0.00019	7.0068 ± 0.3411	0.04656 ± 0.00542
PVC5	0.00908 ± 0.00046	0.00161 ± 0.00014	0.01202 ± 0.00135	0.01171 ± 0.00099	0.0096 ± 0.00083	0.00169 ± 0.00016	6.7941 ± 0.3161	0.04570 ± 0.00476
PVC6	0.00979 ± 0.00122	0.00172 ± 0.00014	0.00986 ± 0.00064	0.01212 ± 0.00147	0.01052 ± 0.00072	0.00138 ± 0.00014	6.9781 ± 0.3359	0.04538 ± 0.00474
PVC7	0.00698 ± 0.00047	0.0017 ± 0.00014	0.0092 ± 0.00052	0.01665 ± 0.00167	0.00946 ± 0.00068	0.00196 ± 0.00016	6.8653 ± 0.3405	0.04595 ± 0.00556
PVC8	0.00991 ± 0.00087	0.00181 ± 0.00015	0.00985 ± 0.00093	0.01615 ± 0.00109	0.01421 ± 0.00206	0.00155 ± 0.0002	6.3565 ± 0.2833	0.05347 ± 0.00611
PVC9	0.00968 ± 0.00117	0.00186 ± 0.00012	0.00896 ± 0.00072	0.01364 ± 0.00102	0.0127 ± 0.00125	0.00194 ± 0.00019	6.8384 ± 0.3529	0.04878 ± 0.00514
PVC10	0.00885 ± 0.00089	0.00144 ± 0.00015	0.01269 ± 0.00098	0.01669 ± 0.00157	0.0104 ± 0.00076	0.00149 ± 0.0002	6.6819 ± 0.3209	0.05154 ± 0.00612
PVC11	0.01 ± 0.00133	0.00177 ± 0.00011	0.00988 ± 0.00055	0.01635 ± 0.00154	0.01307 ± 0.00083	0.00175 ± 0.00015	6.4353 ± 0.2659	0.05282 ± 0.00595
PVC12	0.00905 ± 0.00118	0.0018 ± 0.00018	0.01047 ± 0.00105	0.01539 ± 0.00157	0.01145 ± 0.00066	0.00201 ± 0.00029	6.6568 ± 0.3275	0.05017 ± 0.00543
PVC13	0.00697 ± 0.0004	0.00161 ± 0.00023	0.00862 ± 0.0007	0.01398 ± 0.00092	0.01135 ± 0.00153	0.0016 ± 0.00024	6.3757 ± 0.2602	0.04414 ± 0.00505
PVC14	0.01038 ± 0.00141	0.00137 ± 0.00012	0.01125 ± 0.00107	0.01162 ± 0.00101	0.01028 ± 0.00062	0.00201 ± 0.00019	6.5589 ± 0.3466	0.04690 ± 0.00478

PVC15	0.01026 ± 0.00056	0.00151 ± 0.00019	0.0094 ± 0.00052	0.01371 ± 0.00107	0.00962 ± 0.00122	0.00192 ± 0.00015	6.8655 ± 0.3320	0.04642 ± 0.00492
Mix1	0.00904 ± 0.00047	0.00181 ± 0.00024	0.00897 ± 0.00119	0.01433 ± 0.0013	0.01666 ± 0.00222	0.00193 ± 0.00017	5.0272 ± 0.2252	0.05274 ± 0.00614
Mix2	0.0103 ± 0.00146	0.00191 ± 0.00025	0.00971 ± 0.00056	0.01549 ± 0.0013	0.01732 ± 0.0024	0.00202 ± 0.00021	5.1587 ± 0.2311	0.05675 ± 0.00650
Mix3	0.00888 ± 0.00121	0.00156 ± 0.00011	0.01054 ± 0.00144	0.01144 ± 0.00126	0.01777 ± 0.00096	0.00222 ± 0.00033	5.0294 ± 0.2496	0.05241 ± 0.00610
Mix4	0.009 ± 0.00097	0.00174 ± 0.00011	0.00896 ± 0.00121	0.01609 ± 0.00207	0.01323 ± 0.00111	0.00215 ± 0.00028	4.8518 ± 0.2259	0.05117 ± 0.00577
Mix5	0.00755 ± 0.00081	0.00204 ± 0.00014	0.00781 ± 0.00087	0.01322 ± 0.00152	0.01567 ± 0.00198	0.00162 ± 0.00021	5.0186 ± 0.2440	0.04791 ± 0.00570
Mix6	0.00795 ± 0.00096	0.00176 ± 0.00019	0.00962 ± 0.00097	0.01282 ± 0.00073	0.01498 ± 0.00095	0.00173 ± 0.00011	4.8024 ± 0.2176	0.04886 ± 0.00553
Mix7	0.00961 ± 0.00088	0.00143 ± 0.00018	0.00843 ± 0.00081	0.01654 ± 0.00098	0.01441 ± 0.00126	0.00209 ± 0.00016	4.8859 ± 0.2160	0.05251 ± 0.00619
Mix8	0.00745 ± 0.00046	0.00197 ± 0.00023	0.01032 ± 0.00109	0.01296 ± 0.00153	0.0146 ± 0.00097	0.00216 ± 0.00025	4.7369 ± 0.1972	0.04947 ± 0.00537
Mix9	0.0094 ± 0.00049	0.00202 ± 0.00014	0.0096 ± 0.00124	0.01628 ± 0.00128	0.0163 ± 0.00217	0.00213 ± 0.00029	5.2853 ± 0.2589	0.05573 ± 0.00636
Mix10	0.00982 ± 0.00081	0.00182 ± 0.00023	0.01041 ± 0.00145	0.01317 ± 0.00161	0.01482 ± 0.00188	0.00226 ± 0.00024	4.9364 ± 0.2384	0.05229 ± 0.00548
Mix11	0.01015 ± 0.00132	0.00202 ± 0.0002	0.00935 ± 0.00089	0.01539 ± 0.00178	0.01448 ± 0.0019	0.00213 ± 0.00013	5.1721 ± 0.2638	0.05352 ± 0.00580
Mix12	0.00726 ± 0.00081	0.00149 ± 0.00019	0.00893 ± 0.00117	0.01572 ± 0.00221	0.0135 ± 0.0009	0.00184 ± 0.00025	4.9665 ± 0.2427	0.04873 ± 0.00586
Mix13	0.00777 ± 0.00103	0.00166 ± 0.00021	0.00989 ± 0.00114	0.01196 ± 0.00164	0.01653 ± 0.00155	0.00161 ± 0.00022	5.1371 ± 0.2285	0.04943 ± 0.00588
Mix14	0.00875 ± 0.00124	0.00193 ± 0.00018	0.00874 ± 0.00072	0.01447 ± 0.00121	0.01662 ± 0.00151	0.0019 ± 0.00015	4.7684 ± 0.2220	0.05242 ± 0.00613
Mix15	0.00724 ± 0.00043	0.00142 ± 0.0002	0.00912 ± 0.00089	0.01492 ± 0.00162	0.0184 ± 0.00216	0.00199 ± 0.00025	5.1730 ± 0.2528	0.05309 ± 0.00682

Table S2. PAHs contents of the samples

Sample	Content (Mean ± SD, ppb of lipid)					
	Naphthalene	**Acenaphthylene**	**Acenaphthene**	**Fluorene**	**Phenanthrene**	**Anthracene**
W1	408.12 ± 46.50	3.95 ± 0.59	11.24 ± 1.42	54.73 ± 6.73	375.23 ± 34.49	6.03 ± 0.85
W2	379.17 ± 19.91	4.09 ± 0.47	10.44 ± 1.09	58.19 ± 6.83	355.00 ± 38.47	7.05 ± 0.74
W3	363.23 ± 28.15	3.52 ± 0.37	8.56 ± 1.09	58.57 ± 8.69	312.17 ± 31.93	5.57 ± 0.74
W4	507.05 ± 36.67	3.83 ± 0.45	10.69 ± 1.10	53.37 ± 3.19	416.23 ± 59.72	4.84 ± 0.52
W5	503.38 ± 62.24	4.79 ± 0.64	13.65 ± 0.68	55.45 ± 5.01	354.62 ± 24.97	6.79 ± 0.44
W6	460.07 ± 54.14	5.05 ± 0.64	9.36 ± 0.77	50.96 ± 4.28	416.60 ± 50.67	7.58 ± 0.48
W7	517.68 ± 72.07	3.63 ± 0.26	13.48 ± 0.70	53.59 ± 7.30	472.58 ± 34.91	7.14 ± 0.58
W8	366.09 ± 21.49	4.51 ± 0.24	10.65 ± 1.52	56.66 ± 4.24	306.54 ± 27.46	6.38 ± 0.89
W9	462.93 ± 42.68	3.25 ± 0.27	10.68 ± 1.47	64.55 ± 4.46	313.30 ± 36.71	7.18 ± 0.93
W10	486.22 ± 25.76	4.04 ± 0.31	12.61 ± 1.68	49.09 ± 4.66	308.04 ± 24.64	5.08 ± 0.69
W11	383.66 ± 27.57	4.92 ± 0.35	10.66 ± 0.86	67.23 ± 6.20	367.02 ± 29.96	7.57 ± 1.06
W12	377.94 ± 38.00	3.80 ± 0.55	11.20 ± 0.62	43.12 ± 3.36	473.70 ± 59.30	5.49 ± 0.39
W13	513.59 ± 27.04	3.04 ± 0.42	9.00 ± 1.24	45.04 ± 3.38	445.91 ± 25.53	6.79 ± 0.51
W14	310.93 ± 21.73	3.65 ± 0.30	11.14 ± 1.61	43.51 ± 6.19	444.78 ± 42.62	5.25 ± 0.32
W15	515.23 ± 59.25	3.10 ± 0.36	11.53 ± 0.68	57.70 ± 5.44	427.50 ± 64.06	4.92 ± 0.63
PE1	674.52 ± 70.48	7.98 ± 0.71	12.67 ± 1.25	81.26 ± 11.06	402.11 ± 60.16	4.84 ± 0.67
PE2	643.11 ± 46.33	8.17 ± 1.16	15.45 ± 0.88	94.69 ± 9.95	486.98 ± 27.92	7.53 ± 0.68
PE3	840.73 ± 91.58	7.52 ± 0.72	11.33 ± 1.43	64.51 ± 3.55	414.65 ± 29.57	3.90 ± 0.44
PE4	759.70 ± 99.48	10.23 ± 0.78	13.98 ± 1.77	96.00 ± 14.39	512.47 ± 39.21	4.19 ± 0.27
PE5	803.59 ± 40.70	7.15 ± 0.53	11.37 ± 0.71	91.77 ± 12.26	475.03 ± 68.08	5.99 ± 0.86
PE6	852.89 ± 111.37	9.89 ± 1.05	12.16 ± 1.19	101.37 ± 14.89	332.52 ± 45.92	5.35 ± 0.73
PE7	814.40 ± 97.58	7.89 ± 0.60	14.70 ± 1.54	61.18 ± 8.73	337.35 ± 46.53	4.32 ± 0.64
PE8	576.70 ± 48.46	8.58 ± 0.93	12.29 ± 0.94	70.13 ± 9.46	333.73 ± 29.02	3.82 ± 0.50
PE9	841.41 ± 55.15	8.25 ± 1.15	13.64 ± 1.87	99.01 ± 6.60	449.27 ± 29.55	5.88 ± 0.81

PE10	763.75 ± 111.29	7.93 ± 0.71	15.50 ± 1.43	70.70 ± 6.97	329.70 ± 43.97	5.36 ± 0.28
PE11	642.88 ± 53.78	8.66 ± 0.62	14.98 ± 1.07	96.97 ± 6.92	414.65 ± 49.90	4.57 ± 0.57
PE12	534.83 ± 31.70	9.21 ± 1.38	13.88 ± 1.44	84.85 ± 7.65	326.89 ± 36.34	4.27 ± 0.36
PE13	512.54 ± 30.58	10.22 ± 1.03	10.44 ± 1.28	95.18 ± 5.32	386.06 ± 57.42	4.81 ± 0.69
PE14	568.59 ± 76.62	6.65 ± 0.39	10.41 ± 0.73	90.38 ± 7.94	398.95 ± 46.04	5.03 ± 0.66
PE15	737.42 ± 81.39	7.23 ± 0.40	12.33 ± 1.00	70.53 ± 10.48	482.28 ± 24.49	4.92 ± 0.67
PVC1	1022.00 ± 133.59	18.61 ± 1.13	13.89 ± 2.08	78.49 ± 6.01	62.50 ± 8.23	21.10 ± 2.77
PVC2	1022.14 ± 125.70	21.36 ± 2.41	11.45 ± 1.32	83.61 ± 10.74	242.00 ± 19.34	23.00 ± 1.76
PVC3	901.41 ± 93.41	17.79 ± 2.30	13.14 ± 1.23	67.81 ± 6.48	49.74 ± 5.79	23.13 ± 2.98
PVC4	976.10 ± 143.79	22.34 ± 2.06	12.38 ± 1.26	97.75 ± 9.02	78.28 ± 11.26	19.71 ± 1.20
PVC5	843.09 ± 74.07	19.30 ± 1.09	13.04 ± 0.81	62.94 ± 9.17	71.52 ± 4.54	19.54 ± 2.68
PVC6	1309.65 ± 137.78	14.05 ± 1.24	14.18 ± 1.03	75.67 ± 11.32	61.70 ± 3.80	20.79 ± 2.82
PVC7	805.23 ± 107.05	17.40 ± 2.60	10.89 ± 0.91	59.33 ± 6.26	65.32 ± 3.97	22.31 ± 1.61
PVC8	866.62 ± 96.93	20.35 ± 2.09	10.87 ± 1.18	71.66 ± 8.73	59.82 ± 6.30	16.24 ± 2.14
PVC9	809.32 ± 110.21	15.28 ± 2.25	14.87 ± 1.09	65.85 ± 4.31	49.87 ± 3.85	22.35 ± 2.15
PVC10	1055.91 ± 113.76	23.51 ± 3.20	12.81 ± 0.92	99.01 ± 7.89	63.89 ± 7.06	20.87 ± 1.68
PVC11	1081.49 ± 130.27	22.77 ± 1.16	13.95 ± 0.80	85.34 ± 12.53	63.13 ± 7.69	19.52 ± 2.53
PVC12	848.20 ± 46.30	22.10 ± 2.70	10.61 ± 1.20	92.41 ± 9.97	79.90 ± 5.62	26.26 ± 1.91
PVC13	1309.65 ± 95.33	15.84 ± 1.87	14.81 ± 1.08	76.30 ± 7.95	50.31 ± 5.71	18.95 ± 0.99
PVC14	1025.21 ± 80.93	16.58 ± 1.72	14.30 ± 2.01	61.84 ± 7.72	50.75 ± 3.88	25.94 ± 1.80
PVC15	1190.96 ± 69.05	14.05 ± 1.08	13.49 ± 1.83	82.74 ± 4.61	57.19 ± 5.65	17.98 ± 1.49
Mix1	1486.00 ± 108.89	113.20 ± 12.92	15.44 ± 0.88	114.56 ± 12.42	198.00 ± 27.83	13.10 ± 1.79
Mix2	1734.65 ± 104.25	140.53 ± 8.59	18.12 ± 1.34	124.55 ± 12.49	222.41 ± 29.94	14.06 ± 2.06
Mix3	1678.12 ± 130.55	112.88 ± 10.55	19.59 ± 2.29	116.76 ± 15.79	164.33 ± 9.73	14.96 ± 1.17
Mix4	1655.80 ± 188.05	103.81 ± 9.90	15.77 ± 1.13	134.76 ± 8.86	227.56 ± 21.02	11.92 ± 1.36
Mix5	1413.31 ± 122.23	102.56 ± 14.91	18.43 ± 1.17	93.13 ± 13.60	253.13 ± 19.66	10.49 ± 0.94
Mix6	1742.09 ± 151.59	130.90 ± 18.01	18.28 ± 2.62	101.39 ± 5.88	227.56 ± 11.46	12.52 ± 1.85

Mix7	1774.82 ± 125.92	99.50 ± 7.60	16.24 ± 1.74	134.76 ± 9.24	173.25 ± 22.02	11.58 ± 1.20
Mix8	1759.94 ± 134.98	87.26 ± 8.73	14.43 ± 1.40	110.10 ± 12.06	167.90 ± 19.09	15.78 ± 2.27
Mix9	1218.42 ± 175.04	96.22 ± 6.53	13.73 ± 1.76	96.23 ± 11.31	249.37 ± 19.00	10.79 ± 0.66
Mix10	1321.07 ± 151.66	133.84 ± 18.91	12.82 ± 1.68	129.83 ± 9.55	252.14 ± 31.30	10.58 ± 1.56
Mix11	1777.79 ± 197.18	87.26 ± 11.96	12.79 ± 0.88	138.66 ± 8.60	156.00 ± 16.41	16.04 ± 1.09
Mix12	1178.25 ± 79.08	105.85 ± 8.45	19.56 ± 1.17	116.87 ± 16.25	183.56 ± 17.03	11.38 ± 1.66
Mix13	1203.54 ± 147.93	127.38 ± 14.51	12.66 ± 1.18	118.25 ± 8.82	159.77 ± 8.14	15.58 ± 1.19
Mix14	1169.33 ± 77.57	89.87 ± 9.97	18.85 ± 1.74	88.66 ± 9.70	156.00 ± 8.97	14.09 ± 0.86
Mix15	1135.11 ± 99.83	97.80 ± 6.38	13.79 ± 1.33	122.49 ± 13.71	228.75 ± 31.64	15.07 ± 1.41
Sample	**Content (Mean ± SD, ppb of lipid)**					
	Fluoranthene	**Pyrene**	**Benzo[a]anthracene**	**Chrysene**	**Benzo[b]fluoranthene**	**Benzo[k]fluoranthene**
W1	19.05 ± 2.34	12.80 ± 1.17	18.20 ± 1.60	9.24 ± 0.57	5.47 ± 0.79	1.43 ± 0.09
W2	20.10 ± 1.64	9.65 ± 1.09	18.20 ± 0.92	11.21 ± 1.48	5.79 ± 0.34	1.33 ± 0.14
W3	15.03 ± 1.66	14.52 ± 1.01	20.86 ± 1.78	8.15 ± 1.19	5.67 ± 0.69	1.13 ± 0.09
W4	16.42 ± 1.66	14.20 ± 1.70	16.51 ± 2.07	7.28 ± 0.44	5.94 ± 0.59	1.68 ± 0.25
W5	23.92 ± 2.12	12.97 ± 1.29	14.34 ± 1.94	6.97 ± 0.37	4.33 ± 0.54	1.73 ± 0.11
W6	19.99 ± 2.15	13.07 ± 0.97	16.09 ± 2.34	9.06 ± 0.74	4.61 ± 0.55	1.24 ± 0.16
W7	18.98 ± 1.43	13.16 ± 1.52	18.53 ± 1.70	11.37 ± 1.34	4.79 ± 0.55	1.08 ± 0.12
W8	16.38 ± 1.98	10.44 ± 0.53	17.69 ± 2.21	7.24 ± 1.06	5.45 ± 0.54	1.21 ± 0.16
W9	17.85 ± 0.90	12.65 ± 1.58	16.40 ± 1.72	10.83 ± 0.97	6.88 ± 0.89	1.80 ± 0.13
W10	14.82 ± 2.11	13.90 ± 1.77	20.37 ± 2.25	8.56 ± 1.04	6.56 ± 0.39	1.36 ± 0.14
W11	15.10 ± 1.57	10.93 ± 0.66	16.93 ± 1.22	8.95 ± 0.52	4.78 ± 0.34	1.77 ± 0.17
W12	20.04 ± 2.44	9.70 ± 0.90	22.27 ± 1.60	10.32 ± 1.23	4.99 ± 0.59	1.68 ± 0.16
W13	19.15 ± 2.38	12.76 ± 0.86	22.28 ± 2.09	7.77 ± 0.88	5.43 ± 0.44	1.66 ± 0.23
W14	19.55 ± 2.29	10.79 ± 1.57	22.45 ± 1.19	6.96 ± 0.42	4.58 ± 0.50	1.27 ± 0.19
W15	17.62 ± 1.52	14.44 ± 1.47	20.32 ± 1.70	8.92 ± 1.14	5.84 ± 0.57	1.24 ± 0.10
PE1	31.65 ± 1.80	18.47 ± 1.02	22.20 ± 2.62	21.48 ± 2.90	20.30 ± 2.09	8.03 ± 0.90

PE2	28.63 ± 3.33	21.36 ± 1.60	42.80 ± 3.87	40.40 ± 4.45	88.10 ± 8.15	13.80 ± 1.53
PE3	33.84 ± 2.81	21.65 ± 2.92	16.96 ± 1.13	21.03 ± 1.31	19.84 ± 2.47	8.35 ± 1.04
PE4	29.21 ± 2.38	14.57 ± 1.39	22.83 ± 2.21	20.19 ± 3.00	20.36 ± 1.69	9.05 ± 1.31
PE5	39.70 ± 5.35	14.44 ± 1.88	22.74 ± 1.43	20.92 ± 2.68	15.28 ± 1.84	9.41 ± 0.67
PE6	23.86 ± 2.91	19.38 ± 2.26	27.65 ± 3.10	18.15 ± 1.54	18.78 ± 1.45	9.24 ± 0.66
PE7	39.80 ± 3.19	15.13 ± 2.25	27.31 ± 1.44	18.21 ± 1.69	16.56 ± 1.24	9.25 ± 1.07
PE8	29.91 ± 2.42	14.26 ± 1.56	23.49 ± 2.10	21.40 ± 1.86	23.88 ± 1.48	8.56 ± 0.56
PE9	38.34 ± 3.48	13.92 ± 2.02	23.03 ± 2.45	20.13 ± 2.02	18.62 ± 1.29	8.14 ± 0.55
PE10	26.01 ± 2.35	19.23 ± 2.68	25.78 ± 1.36	21.29 ± 1.79	17.93 ± 1.11	10.13 ± 0.58
PE11	34.57 ± 2.75	23.13 ± 2.57	27.69 ± 3.16	25.42 ± 3.43	22.25 ± 2.30	8.07 ± 0.41
PE12	30.23 ± 1.90	14.96 ± 1.82	18.16 ± 1.15	21.20 ± 2.80	25.57 ± 3.23	8.61 ± 0.82
PE13	38.72 ± 3.56	23.02 ± 2.31	28.29 ± 2.72	17.76 ± 1.08	23.03 ± 1.58	6.57 ± 0.72
PE14	25.79 ± 3.71	14.96 ± 1.99	23.71 ± 1.30	21.57 ± 3.15	19.06 ± 1.37	6.56 ± 0.52
PE15	38.15 ± 4.49	19.66 ± 2.06	27.07 ± 2.38	19.83 ± 2.25	15.75 ± 1.55	7.66 ± 0.56
PVC1	41.22 ± 5.78	25.89 ± 3.62	32.43 ± 2.31	31.06 ± 4.13	25.87 ± 3.17	4.51 ± 0.54
PVC2	45.97 ± 5.13	29.35 ± 3.65	ND	9.24 ± 1.12	27.66 ± 4.08	6.32 ± 0.76
PVC3	43.45 ± 3.48	29.52 ± 2.88	36.72 ± 3.04	31.75 ± 2.97	28.18 ± 2.89	5.51 ± 0.53
PVC4	39.04 ± 4.09	19.98 ± 1.52	24.55 ± 3.10	28.39 ± 3.50	31.00 ± 2.43	4.43 ± 0.53
PVC5	51.42 ± 2.57	22.47 ± 1.68	40.16 ± 3.53	39.80 ± 5.83	31.42 ± 1.89	5.10 ± 0.73
PVC6	38.54 ± 3.03	22.50 ± 2.56	24.38 ± 3.05	27.61 ± 2.13	29.60 ± 2.05	4.79 ± 0.62
PVC7	40.77 ± 3.79	31.70 ± 4.01	40.45 ± 5.39	30.63 ± 4.01	20.36 ± 1.48	4.07 ± 0.46
PVC8	43.54 ± 4.70	20.11 ± 2.05	27.69 ± 2.08	32.71 ± 3.40	27.61 ± 1.88	3.48 ± 0.40
PVC9	33.92 ± 3.92	29.42 ± 3.31	27.66 ± 1.61	34.36 ± 3.38	25.59 ± 1.32	5.18 ± 0.74
PVC10	31.36 ± 3.03	22.96 ± 1.78	26.88 ± 1.40	38.34 ± 3.59	21.21 ± 2.19	5.74 ± 0.53
PVC11	49.27 ± 4.64	28.62 ± 1.65	26.46 ± 2.75	39.09 ± 4.81	26.31 ± 2.04	5.62 ± 0.59
PVC12	36.27 ± 2.59	27.37 ± 2.15	36.75 ± 5.51	35.51 ± 2.73	27.53 ± 4.06	4.21 ± 0.48
PVC13	31.20 ± 3.04	24.86 ± 1.92	39.90 ± 3.39	30.88 ± 4.17	29.01 ± 3.06	4.38 ± 0.62

PVC14	40.57 ± 5.68	25.35 ± 2.08	27.92 ± 3.21	36.47 ± 4.85	28.93 ± 3.46	5.03 ± 0.67
PVC15	46.26 ± 6.00	26.26 ± 2.73	37.86 ± 4.85	31.56 ± 1.85	20.46 ± 1.28	5.38 ± 0.31
Mix1	47.20 ± 3.16	12.80 ± 0.82	26.70 ± 3.08	24.28 ± 3.35	21.20 ± 2.90	4.55 ± 0.30
Mix2	55.90 ± 3.27	12.76 ± 0.93	28.04 ± 3.52	30.38 ± 2.26	23.13 ± 2.29	5.38 ± 0.43
Mix3	50.99 ± 5.18	13.43 ± 1.60	27.61 ± 4.00	22.90 ± 2.21	21.16 ± 2.90	3.94 ± 0.49
Mix4	43.57 ± 4.94	16.15 ± 1.95	23.79 ± 1.66	29.27 ± 3.25	23.60 ± 2.53	4.46 ± 0.48
Mix5	40.21 ± 3.36	14.63 ± 0.83	29.43 ± 1.53	19.76 ± 1.74	24.45 ± 2.37	4.31 ± 0.34
Mix6	47.30 ± 6.24	10.71 ± 0.97	20.34 ± 1.33	30.02 ± 1.59	20.08 ± 1.89	5.03 ± 0.31
Mix7	57.65 ± 7.21	14.08 ± 1.47	30.34 ± 1.90	19.03 ± 2.57	23.24 ± 1.59	5.45 ± 0.65
Mix8	41.39 ± 4.85	10.37 ± 0.95	31.09 ± 3.64	29.19 ± 1.99	23.79 ± 1.31	5.06 ± 0.61
Mix9	38.61 ± 2.80	11.76 ± 0.83	30.13 ± 3.21	29.78 ± 2.12	17.53 ± 2.53	5.05 ± 0.73
Mix10	55.15 ± 3.86	14.04 ± 1.29	22.05 ± 1.58	28.56 ± 3.71	21.08 ± 2.06	4.17 ± 0.42
Mix11	46.78 ± 2.45	9.88 ± 1.39	29.59 ± 3.55	22.14 ± 1.86	21.99 ± 2.91	4.68 ± 0.47
Mix12	44.56 ± 3.32	15.57 ± 1.69	31.84 ± 4.03	30.41 ± 4.20	16.83 ± 1.52	4.59 ± 0.27
Mix13	48.06 ± 4.69	13.81 ± 1.65	27.05 ± 1.81	27.64 ± 3.32	22.07 ± 1.27	5.64 ± 0.30
Mix14	40.07 ± 5.41	12.57 ± 1.71	27.10 ± 3.00	26.86 ± 2.09	20.33 ± 2.30	5.72 ± 0.53
Mix15	36.10 ± 2.07	15.76 ± 1.99	25.10 ± 3.13	23.36 ± 1.19	26.42 ± 1.46	5.46 ± 0.45
Sample	**Content (Mean ± SD, ppb of lipid)**					
	Benzo[e]pyrene	**Benzo[a]pyrene**	**Indeno[1,2,3-cd]pyrene**	**Dibenz[a,h]anthracene**	**Benzo[g,h,i]perylene**	**Total PAHs**
W1	1.23 ± 0.09	2.25 ± 0.14	1.56 ± 0.23	1.43 ± 0.15	3.27 ± 0.38	**935.23 ± 118.32**
W2	1.15 ± 0.07	1.75 ± 0.23	1.68 ± 0.14	1.57 ± 0.23	2.87 ± 0.34	**889.24 ± 62.88**
W3	1.03 ± 0.15	2.15 ± 0.21	1.92 ± 0.23	1.69 ± 0.13	2.82 ± 0.31	**826.59 ± 59.18**
W4	0.98 ± 0.13	2.37 ± 0.29	1.22 ± 0.14	1.17 ± 0.17	3.95 ± 0.52	**1067.73 ± 146.25**
W5	1.21 ± 0.13	2.79 ± 0.28	1.56 ± 0.21	1.30 ± 0.15	3.19 ± 0.46	**1012.99 ± 83.93**
W6	1.20 ± 0.17	2.69 ± 0.21	1.19 ± 0.16	1.61 ± 0.12	2.64 ± 0.16	**1023.01 ± 66.25**
W7	1.49 ± 0.22	2.47 ± 0.33	1.24 ± 0.17	1.79 ± 0.19	3.54 ± 0.26	**1146.54 ± 160.58**
W8	1.29 ± 0.15	2.23 ± 0.33	1.64 ± 0.14	1.49 ± 0.18	3.31 ± 0.17	**819.20 ± 41.19**

W9	1.33 ± 0.10	2.57 ± 0.19	1.91 ± 0.16	1.56 ± 0.19	3.44 ± 0.48	**939.11 ± 127.57**
W10	1.46 ± 0.08	1.70 ± 0.18	1.73 ± 0.21	1.43 ± 0.08	3.61 ± 0.38	**940.58 ± 60.64**
W11	1.30 ± 0.16	1.79 ± 0.16	1.32 ± 0.17	1.37 ± 0.15	2.78 ± 0.39	**908.08 ± 57.21**
W12	1.32 ± 0.13	2.56 ± 0.36	1.43 ± 0.20	1.76 ± 0.18	2.57 ± 0.19	**993.89 ± 74.61**
W13	1.54 ± 0.18	1.92 ± 0.19	1.58 ± 0.08	1.83 ± 0.26	3.34 ± 0.19	**1102.63 ± 74.37**
W14	1.34 ± 0.19	1.80 ± 0.25	1.89 ± 0.11	1.52 ± 0.12	3.74 ± 0.50	**895.15 ± 103.93**
W15	1.16 ± 0.08	2.82 ± 0.38	1.68 ± 0.19	1.23 ± 0.16	2.94 ± 0.41	**1098.19 ± 57.74**
PE1	2.70 ± 0.29	4.65 ± 0.36	1.93 ± 0.27	3.87 ± 0.43	5.05 ± 0.41	**1323.71 ± 68.15**
PE2	9.48 ± 1.08	5.32 ± 0.69	7.65 ± 1.15	3.21 ± 0.27	4.21 ± 0.38	**1520.89 ± 196.19**
PE3	2.81 ± 0.28	5.87 ± 0.54	1.86 ± 0.23	4.56 ± 0.52	5.36 ± 0.34	**1484.77 ± 109.57**
PE4	2.34 ± 0.14	5.04 ± 0.72	2.01 ± 0.19	3.19 ± 0.36	6.13 ± 0.89	**1531.49 ± 126.16**
PE5	2.54 ± 0.22	4.51 ± 0.45	1.90 ± 0.11	3.35 ± 0.39	3.88 ± 0.31	**1533.57 ± 103.40**
PE6	3.44 ± 0.29	4.52 ± 0.60	2.06 ± 0.23	3.42 ± 0.42	4.74 ± 0.47	**1449.42 ± 80.07**
PE7	2.92 ± 0.34	5.16 ± 0.40	1.85 ± 0.25	4.56 ± 0.53	3.80 ± 0.23	**1384.39 ± 171.90**
PE8	2.84 ± 0.39	4.47 ± 0.36	2.28 ± 0.22	3.60 ± 0.48	6.30 ± 0.87	**1146.24 ± 117.61**
PE9	2.36 ± 0.20	4.06 ± 0.44	1.79 ± 0.21	4.13 ± 0.47	5.62 ± 0.36	**1557.60 ± 194.02**
PE10	2.49 ± 0.30	3.91 ± 0.59	1.71 ± 0.24	4.35 ± 0.61	5.39 ± 0.51	**1331.16 ± 129.95**
PE11	2.66 ± 0.21	4.56 ± 0.45	1.59 ± 0.09	3.25 ± 0.37	4.89 ± 0.57	**1340.79 ± 171.36**
PE12	2.49 ± 0.36	5.13 ± 0.33	2.21 ± 0.29	4.89 ± 0.40	4.76 ± 0.59	**1112.14 ± 112.69**
PE13	3.11 ± 0.41	5.38 ± 0.56	2.44 ± 0.19	3.32 ± 0.31	5.59 ± 0.81	**1176.48 ± 71.65**
PE14	3.09 ± 0.32	4.19 ± 0.35	2.22 ± 0.19	4.80 ± 0.52	5.32 ± 0.49	**1211.28 ± 121.59**
PE15	2.19 ± 0.21	4.55 ± 0.48	2.01 ± 0.13	4.94 ± 0.61	4.07 ± 0.51	**1460.59 ± 211.12**
PVC1	9.46 ± 0.77	7.98 ± 0.83	9.05 ± 0.93	7.05 ± 0.42	2.37 ± 0.16	**1413.48 ± 76.80**
PVC2	11.23 ± 0.92	8.14 ± 0.78	6.32 ± 0.67	6.21 ± 0.49	1.85 ± 0.17	**1555.85 ± 199.65**
PVC3	10.89 ± 1.60	7.44 ± 0.61	6.98 ± 0.90	5.46 ± 0.68	1.86 ± 0.11	**1280.78 ± 175.08**
PVC4	7.25 ± 0.66	9.50 ± 0.65	11.01 ± 0.74	8.67 ± 0.59	1.95 ± 0.19	**1392.33 ± 142.22**
PVC5	8.63 ± 0.88	7.52 ± 0.90	8.39 ± 0.49	5.34 ± 0.34	2.40 ± 0.22	**1252.08 ± 119.95**

PVC6	8.85 ± 1.32	9.83 ± 1.05	10.82 ± 1.48	8.86 ± 0.92	2.53 ± 0.37	**1684.35 ± 246.59**
PVC7	10.38 ± 1.20	7.17 ± 0.53	9.41 ± 1.05	8.00 ± 1.18	2.80 ± 0.15	**1186.22 ± 66.53**
PVC8	12.05 ± 1.26	6.93 ± 0.88	7.37 ± 0.55	9.03 ± 0.93	2.62 ± 0.23	**1238.70 ± 121.27**
PVC9	7.94 ± 0.73	9.28 ± 0.50	8.07 ± 1.14	6.36 ± 0.90	2.95 ± 0.28	**1168.27 ± 105.33**
PVC10	8.22 ± 0.57	7.23 ± 0.90	8.07 ± 0.52	7.26 ± 0.97	2.99 ± 0.43	**1456.26 ± 172.73**
PVC11	8.13 ± 0.70	8.86 ± 1.07	10.87 ± 1.04	6.97 ± 0.53	2.94 ± 0.40	**1499.34 ± 148.47**
PVC12	8.50 ± 1.07	9.99 ± 1.31	6.93 ± 0.52	8.72 ± 1.16	2.02 ± 0.12	**1283.28 ± 180.90**
PVC13	9.46 ± 1.06	9.71 ± 0.86	11.51 ± 0.87	5.51 ± 0.54	2.61 ± 0.31	**1684.89 ± 96.63**
PVC14	10.77 ± 1.36	8.96 ± 1.04	9.80 ± 0.50	6.30 ± 0.82	2.95 ± 0.31	**1397.67 ± 81.18**
PVC15	11.63 ± 0.82	9.55 ± 1.26	10.93 ± 1.43	8.56 ± 1.07	1.94 ± 0.29	**1586.80 ± 175.86**
Mix1	14.49 ± 1.52	12.63 ± 1.87	11.80 ± 1.65	4.44 ± 0.37	7.33 ± 0.63	**2127.72 ± 120.36**
Mix2	17.57 ± 2.51	10.28 ± 1.02	10.80 ± 1.27	3.47 ± 0.21	6.63 ± 0.60	**2458.66 ± 190.55**
Mix3	11.71 ± 1.10	14.14 ± 0.76	9.70 ± 0.64	5.37 ± 0.79	9.17 ± 0.63	**2296.76 ± 260.24**
Mix4	16.16 ± 1.94	12.06 ± 1.21	10.04 ± 0.95	4.37 ± 0.28	6.47 ± 0.40	**2339.56 ± 245.27**
Mix5	11.91 ± 0.74	13.29 ± 1.45	13.21 ± 1.12	4.89 ± 0.72	6.01 ± 0.81	**2073.15 ± 171.07**
Mix6	15.26 ± 2.25	12.48 ± 1.71	13.34 ± 1.45	4.37 ± 0.59	8.08 ± 0.77	**2419.75 ± 361.66**
Mix7	10.91 ± 1.21	10.98 ± 1.51	13.44 ± 1.53	3.67 ± 0.45	7.74 ± 0.90	**2406.68 ± 248.02**
Mix8	17.02 ± 1.26	14.72 ± 1.38	14.25 ± 1.32	4.24 ± 0.63	9.22 ± 1.05	**2355.75 ± 224.67**
Mix9	16.90 ± 1.11	10.62 ± 1.09	12.86 ± 0.96	4.51 ± 0.66	7.15 ± 0.78	**1869.66 ± 206.68**
Mix10	14.10 ± 1.48	10.33 ± 0.99	12.97 ± 1.74	5.41 ± 0.71	8.01 ± 0.42	**2056.15 ± 123.20**
Mix11	15.03 ± 1.58	15.30 ± 1.87	14.03 ± 0.98	5.20 ± 0.45	8.88 ± 1.14	**2382.04 ± 286.27**
Mix12	13.51 ± 0.80	9.93 ± 0.90	14.73 ± 1.30	4.66 ± 0.60	7.49 ± 0.56	**1809.59 ± 244.80**
Mix13	13.06 ± 1.95	11.06 ± 1.28	14.58 ± 1.43	4.87 ± 0.25	8.22 ± 0.51	**1833.24 ± 210.99**
Mix14	14.01 ± 1.98	13.39 ± 0.88	9.17 ± 0.68	5.69 ± 0.59	8.23 ± 0.88	**1719.94 ± 218.25**
Mix15	11.55 ± 1.11	11.39 ± 1.10	15.04 ± 1.61	4.04 ± 0.39	8.59 ± 0.49	**1795.82 ± 219.24**