

An Investigation of Wild-Caught And Farm-Raised Shrimp Samples With High Concentrations Of Polychlorinated Biphenyls

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Abstract

As part of a study to characterize levels of different persistent organic pollutants in a variety of aquatic food products, 168 PCB congeners/congener pairs were measured in samples of uncooked shrimp and crab and cooked shrimp. Ten uncooked samples of shrimp were determined to be outliers, 60% of which were wild-caught and 40% of which were farm-raised. All but one of the outliers were from North American countries, with the majority of samples originating in the United States. As expected, the average number of congeners detected in the outliers was greater than the number detected in all other uncooked shrimp samples. While the percent contribution of PCBs 28, 52/69, 90/101, 106/118, 138/163/164, 153, and 180 were generally similar between the outliers and all other uncooked shrimp samples, homologue fractions of mono-, di-, octa-, nona- and deca-PCBs varied considerably. Results from this evaluation suggest that for a few outliers, high concentrations of PCBs may be due to contaminated feed or local point sources. For other samples, excess loading of PCBs could be due to broader regional contamination.