

Concentrations of Polychlorinated Biphenyls In Seafood Products From The U.S. Retail Market

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Abstract

Measurable levels of persistent organic pollutants (POPs), such as polychlorinated biphenyls (PCBs), in aquatic organisms are relatively well documented and recent studies have suggested that shrimp may contain higher concentrations of these chemicals than other types of aquatic food products. In this study, we measured concentrations of the 209 PCB congeners in 87 samples of wild-caught and farm-raised shrimp and three samples of wild-caught crab from various countries around the world. No significant differences in PCB concentrations were observed between wild-caught and farm-raised shrimp. However, concentrations of PCBs differed significantly ($p < .0001$) among countries of origin. Lowest and highest median concentrations of PCBs were observed in shrimp originating in Bangladesh and Belize, respectively. Differences in PCB concentrations observed among shrimp from varying geographic regions implies the source of PCB exposure could be related to regional contamination. Regardless, the PCB concentrations measured in this study are well below government-established tolerance levels for PCBs in edible food.