LEVELS OF PCBs IN FISHES FROM BULGARIAN BLACK SEA COAST

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Concentration of individual and total polychlorinated biphenyls (PCBs) was determined in fish samples from Bulgarian Black Sea coast. Fishes were collected from the region of Varna city during the period of 2003-2005. Varna is located in northern part of Bulgarian Black Sea coast. The edible tissues of the following fish species-shad (Alonsa pontica), scad (Trachurus mediterraneus) and gobies (Neogobius melanostomus, Neogobius ratan) were determined. The samples were analyzed with Gas Chromatography Mass Spectroscopy method-modified and validated. The fourteen congeners of PCB were analyzed including the set of 7 indicators PCBs (IUPAC No 28, 52, 101, 118, 138, 153, 180). PCBs were found in all investigated samples. European sprat showed the highest total level of PCBs (187.9 - 901.4 ng/g fat) compared to the other species-gobies (66.3 - 192.2 ng/g fat) and scad (14.7 - 208.2 ng/g fat). The highest level of PCBs was found in 2005. Our study illustrated that the concentration level of PCBs in analyzed samples was lower compared with those recommended by the European Union.