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Correlation between Heavy Metals in Fish and Sediment in Sakumo and Kpeshie Lagoons, Ghana

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ABSTRACT

Concentrations of heavy metals (Cd, Pb, Mn, Zn, and Cu) were measured in bottom sediment and the black-chin tilapia (*Sarotherodon melanotheron*) from the Sakumo and Kpeshie lagoons using Atomic Absorption Spectrometry (AAS). Results for the levels of these metals in the sediments and fish were compared with WHO guideline values. It was observed that heavy metal concentrations in sediments of Sakumo lagoon were higher than those of Kpeshie lagoon. Among the metals, Cu and Zn were found to be highly concentrated in the fish but lower than the World Health Organization (WHO) recommended values. Spearman correlation coefficient study showed significant correlation coefficients between Pb and Zn (0.937) and between Cu and Mn (0.613) at 0.05 levels.

KEYWORDS

Heavy Metal Pollution; Industrial Effluents; Toxicity; Health Hazards; High Population Growth

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