



Distribution of Different Organotin and Organolead Compounds in Sediment of Suez Gulf

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ABSTRACT

Organotin and organolead compounds were determined in sediments of the Suez Gulf. The concentrations of Tributyltin (TBT) ranged from 0.27 to 2.77 with an average value of $1.37 \mu\text{g g}^{-1}$; dry wt. However, the concentrations of dibutyltin (DBT) ranged from 0.07 to 2.27 with an average value of $0.58 \mu\text{g g}^{-1}$; dry wt. A significant correlation was found between TBT and DBT with $r = 0.82$, ($p = 0.05$) indicating that the occurrence of DBT is mainly related to the degradation of TBT. Generally, the high concentration of TBT was attributed to shipping activity in harbours. In addition, Diphenyltin (DPHT) concentrations ranged from not detected to 2.09 with an average of $1.10 \mu\text{g g}^{-1}$ dry wt. Antifouling agents, industrial discharge and the influence of sewage discharge are the main sources of pollution by DPHT compounds in Suez Gulf. On the other side, organolead (OLC) concentrations ranged from 10.88 - 440.2 with an average of 168.7 ng g^{-1} ; dry wt. A significant setting of OLC recorded in sediments of Suez Gulf was mainly attributed to cars exhaust and/or spelling and direct evaporation of fuels.

KEYWORDS

Organotin, Organolead, Sediment, Suez Gulf, Egypt

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