Assessment of Mercury Accumulation in Surficial Sediments of Musa Estuary (Khuzestan Province, Persian Gulf)

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Abstract

This study was done to determine the mercury concentration in the surficial sediments from the Musa Estuary. 5 creeks including Zangi, Jafari, Petroshimi, Ghazaleh and Majidieh were selected and a total number of 9 sediment samples were collected from each creak. Sampling was performed in November 2009. Mercury concentrations were measured by cold vapor atomic absorption spectrophotometer, after digesting of the samples. The mercury concentrations in the sediments ranged from 0.31 to 0.69 μg/g. The highest Hg contents were found in the Petroshimi estuary followed by Majidieh estaury, probably due to the effluent inputs from Bandar Imam Chloralkali petrochemical plant, oil spills and Navigation and shipping related activities. Regarding the contamination factor at regional level, the studied estauries are classified as a considerably polluted area, but at global scale, contamination factor shows low to moderate degree of pollution in them.

Keywords: *Sediment, Mercury, Pollution, Musa Estuary, Persian Gulf.*