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Ali Mehdinia et al., J Mar Biol Oceanogr 2017, 6:4 (Suppl)
DOI: 10.4172/2324-8661-C1-008

5th International Conference on
OCEANOGRAPHY AND MARINE BIOLOGY
October 18-20, 2017 Seoul, South Korea

Trochus erythraeus gastropod: A heavy metal pollution bioindicator in the Persian Gulf

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The bioaccumulation of trace metals (iron, lead, copper, zinc, manganese, molybdenum and nickel) in shell and soft tissue of a gastropod (*Trochus erythraeus*) were measured in order to evaluate sediment contamination. Bioaccumulation factor (BAF) for the essential elements (Zn and Cu) in soft tissues was averagely about 12 and 8, respectively. In respect of Cd in some stations BAF was about 1, but in others it was about 11. In hard tissue, the maximum BAF was calculated for Sb, Cu and Cd (about 1). In comparison between total concentrations of trace metals in sediments and soft tissue, a significant correlation was found between Cr, Ni and Zn concentrations in these ambiances. Also, there were significant correlations between total concentrations of Ni and Zn in hard tissue and those in the sediment samples. The analysis showed that the shell is more indicative of sediment characteristics. It could be concluded that mechanisms of accumulation in shell is less selective than soft tissues. It could be counted that this gastropod could be an environmental indicator for trace metals.

Biography

Ali Mehdinia is an Associate Professor of Chemistry in Iranian National Institute for Oceanography and Atmospheric Science. He has expertise in assessment of marine environmental pollution.

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