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Comparison of Mercury and Cadmium Bioaccumulation in Oyster *Crassostrea* sp. Soft Tissue during Experimental Exposure

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Abstract

In this study, the bioaccumulation of mercury and cadmium in the soft tissue of *Crassostrea* sp. were studied at experimental conditions. Also, the bioaccumulation trend of Hg and Cd in oysters were analyzed and compared during exposure period. The oysters collected from harbor No. 28 in the coast of Imam Khomeini port had lowest pollution of Hg and Cd according to the last studies. After 7 days of acclimation in laboratory, the oysters exposed to Hg at concentrations of 15 and 75 $\mu g.l^{-1}$ and Cd at concentrations of 15 and 150 $\mu g l^{-1}$ for 14 days. Heavy metal contents in oysters were measured by atomic absorption per 48 hours. Results indicated that the Hg bioaccumulation in bivalve soft tissue was faster and stronger than Cd bioaccumulation, despite the fact that Hg had lower concentration in the experiment. The maximum bioaccumulation of metals in bivalves soft tissue was 107.6±6.7 $\mu g.g^{-1}$ Hg and 86.5±7.6 $\mu g.g$ Cd at experimental dose of 75 $\mu g.l^{-1}$ Hg and 150 $\mu g.l^{-1}$ Cd, respectively.

Keywords: *Mercury, Cadmium, Bioaccumulation, Exposure, Oyster.*