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Study on Some Heavy Metals (Pb, Cd and V) Concentrations in Surface Sediment and the Shell of Oyster (*Saccostrea cucullata*) in the Lengeh Port, Persian Gulf

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Abstract

In this study, the concentration of Pb, Cd and V in the shell of (*Saccostrea cucullata*) and surface sediments were measured in the intertidal zones of Lengeh Port. Therefore, sampling of Saccostrea cucullata (48 samples) and sediment (15 samples) from 3 coastal stations along Lengeh Port were conducted in 2010 fall. Samples were digested by direct aqua regia method after drying. After that, chemical analysis of the sediment and the oyster samples were done by using Atomic Absorption Spectrophotometer (Shimadzu AA-670). Result of the analysis stated that: the mean values of Pb, Cd and V in the sediment were in order 163.02 ±4.04, 1.26 ±0.05 and 0.028 ±0.001 (μg g^{-1}dw), respectively and in the shell of oyster were in order 124.38 ±1.81, 5.09 ±0.19 and 0.018 ±0.001 (μg g^{-1}dw). In comparison with global standards, Pb levels exceed from the permissible limit, however Cd and V levels were found suitable for the sea foods.

In general, with respect to the results obtained, it was found that the shell of *S. cucullata* is a suitable biomonitor for monitoring Pb and V levels in the area.

Keywords: *Heavy metals, Pollution, Surface sediments, Saccostrea cucullata, Lengeh Port, Persian Gulf.*