

Abstract:

Since Heavy metals are stable contaminants and able to accumulate in sediment, so investigating the amount of their concentration can holistic perspective about ecosystem pollution. This research aims to investigate and determine of heavy metals (Zn, V, Ni, Cd, Cu) in sediments, depths (5, 10, 20 meters) and muscle tissue of some marine animals (white Indian shrimp, *Penaeus indicus*, Indian halibut, *Psettodes eruemii* & Orange-spotted grouper, *Epinephelus coioides*) of Hormozgan province (Jask, Kohe Mobarak and Sirik Ports). After sampling and biometry of 30 muscles of each species (15 Male and 15 Female) and sediments from three areas to measure heavy metals concentration were transferred to the laboratory frozenly. To extract heavy metals from muscle tissues and sediments, after preparation, acid digestion method was applied. Then Spectrometric apparatus (THERMO Model) was used to extract heavy metals. To analysis data and graphs, Excell software and T test as well as Pearson correlation Coefficient and SPSS 15 software were used. The mean and Standard deviations were presented in graphs with 0.05 error. In some considering the results of this research compare with world standards, indicated that all of the elements are acceptable. The results showed that heavy metals concentration in Shrimp, Indian halibut and orange-spotted grouper are free of Sexuality and Length. In general, the existing amounts indicated that heavy metal amounts in under investigation species are comparable with other species in Persian Gulf. In shrimp, the average of heavy metals concentration in selected areas for V, Cd, Cu, Ni and Pb were 0.4495, 1.4209, 1.3815, 2.4433, 0.3823, 0.0728 and in halibut were 0.1828, 0.5097, 3.2639, 0.1781, 0.1893, 0.0318 and 0.0842, 0.1188, 0.2296, 0.1687, 0.1498, 0.0201 $\mu\text{g/g}$ dry weight respectively. Statistical analysis (Levels of %95) showed that heavy metals Concentration independent of depth and sampling areas. In selected areas, the total average of heavy metals in sediments were 0.5402, 0.002, 0.1170, 0.4990, 0.4339 and 0.2847 mgr/gr dry weight for V, Cd, Cu, Ni and Pb respectively. In comparison with sediments quality standard, the results indicated that sediments in this study are considered as less polluted areas.

Key words: Heavy Metal – sediment, Hormozgan province, Jask port, Kohe mobark, Sirik, *Psettodes eruemii* - *Penaeus indicus* - *Epinephelus coioides*, Muscle Tissue