



## **Bioaccumulation heavy metals (Cd, Pb, Ni) in *Epinephelus coioides* captured along coastal of Persian Gulf (Bushehr-Assaloyieh), Iran**

Pazir M, K. \*<sup>1</sup>; Hossein Khezri P. <sup>1</sup>

1-Iranian Shrimp Research Center, Iranian Fisheries Science Research Institute, Agricultural Research, Education & Extension Organization (AREEO), Bushehr, Iran.

\*Corresponding author's email: dr.pazir@gmail.com

### **Abstract:**

In this research heavy metals (Cd, Pb, Ni) levels were determined in muscle tissue of *Epinephelus coioides* species and their effects were surveyed on sizes of species by linear regression analysis. The fish samples were sampled along coastal of Persian Gulf (Bushehr-Assaloyieh) in January 2020 and then were transferred to the laboratory at 4°C. In the laboratory, length and weight of samples were measured. Their muscles tissues were separated and were dried in the oven at 70°C. The dried tissues were digested by concentrated HNO<sub>3</sub> and the values of metals were measured by Atomic Absorption (AA). On the obtained results, the values of Cd, Pb and Ni were increased as the sizes of species were increased. In other words, the values of Cd, Pb, Ni in elder species (W: 680g, L: 37cm) and smaller species (W: 510 g, L: 25cm) were obtained 23.53, 47.76, 32.57 ppb and 13.10, 12.50, 12.60 ppb, respectively. Thus, in confidence level %95, the differences in results were significant. Nevertheless, the concentrations of three metals (Cd, Pb, and Ni) were lower than the proposed magnitudes of WHO. Three linear models were estimated by the linear regression analysis (stepwise). These models showed Cd had the most effect on sizes of *Epinephelus coioides* (% 68).

**Key word:** Heavy metals, *Epinephelus coioides*, Bushehr, Persian Gulf