Original Paper

Determination of Zinc, Copper, Cobalt and manganese intensity in *Rutilus frisii kutum* and *Cyprinus carpio* fishes of Caspian sea

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Abstract

Background and Objective: Fish as well as other aquatic animals have become an important source of protein diets. Heavy metals due to their specific physical and chemical characteristics as well as their side effects on various ecosystems are considered as a major contaminator of marine environments. Therefore determine determination of Zinc (Zn), Copper (Cu), Cobalt (Co) and Manganese (Mn) intensity in Rutilus frisii kutum and Cyprinus carpio fishes of Caspian sea.

Materials and Methods: In this descriptive study, levels of Zinc, Copper, Cobalt and Manganese were evaluated, using flame atomic absorption spectroscopy (A.S.S) technique, in tissues of two commonly consumed fish in Iran, namely *Rutilus frisii kutum* and *Cyprinus carpio*, collected from the southern coastline of the Caspian sea.

Results: The mean±SD average concentration of Zn, Cu, Co and Mn were detected as (µg g-1) dry weight of *Rutilus frisii kutum's* tissues were 29.97±0.57, 9.45±0.09, 0.30±0.01 and 0.20±0.01, respectively. These values for *Cyprinus carpio* were detected as: 30.20±0.14, 9.14±0.07, 1.08±0.03 and 0.71±0.02, respectively.

Conclusion: This study showed that, the concentration of Zn, Cu and Co in *Rutilus frisii kutum*, *Cyprinus carpio* fish tissues were higher than standard base of Brian.

Keywords: Caspian Sea, *Rutilus frisii kutum*, *Cyprinus carpio*, Zinc, Copper, Cobalt, Manganese, Atomic absorption spectroscopy

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