

## Concentration of heavy metals, Fe, Zn and Cu in muscle, liver and caviar of farmed *Acipenser baerii* from Khuozestan Province

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### Abstract

Essential elements such as iron, zinc and copper in the body of the fish have a biological role. Increased concentrations of these elements in the organs of fish are due to toxicity. This present study was carried out to investigate and comparison the concentration of heavy metals such as, Fe, Zn and Cu in muscle, liver and caviar of farmed *Acipenser baerii* from Khuozestan Province, 2014. 30 samples of *Acipenser baerii* were prepared from five ponds of Hantoshzadeh sturgeon breeding complex. Heavy metal levels in fish samples were analyzed by Perkin Elmer 4100 zl atomic absorption. Data analysis was performed with the software SPSS17 and comparison of the mean to T-test. The highest concentration of Fe, Zn and Cu were  $7.42 \pm 0.68$ ,  $42.22 \pm 3.48$  and  $3.72 \pm 0.32$  mg/Kg in liver of *Acipenser baerii*, respectively. The lowest concentrations of these elements were obtained  $2.22 \pm 0.16$ ,  $10.62 \pm 0.76$  and  $0.51 \pm 0.02$  mg/Kg in muscle of this species, respectively. Concentrations of heavy elements in liver of *Acipenser baerii* from all samples were higher than muscle and caviar. The concentrations of iron, zinc and copper content of caviar in *Acipenser baerii* was  $4.74 \pm 0.35$ ,  $34.29 \pm 2.27$  and  $1.66 \pm 0.02$  mg / kg, respectively. In this study concentration of Fe, Zn and Cu in muscle and caviar of *Acipenser baerii* were lower than comparison of WHO, FDA, MAFF and NHMRC standards.

**Keywords:** Bioaccumulation, Muscle, Liver, Caviar, *Acipenser baerii*.