

## عنوان مقاله:

Heavy metal concentrations in the selected tissues of the Persian sturgeon, *Acipenser persicus*, from the southern coast of the Caspian Sea

## محل انتشار:

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## خلاصه مقاله:

Bioaccumulation of heavy metals including Cd, Pb, Cu and Zn in muscle, gill, liver, kidney and stomach in *Acipenser persicus* was studied. Fish were collected from the 'Iranian fishery zone 1' located between Astara and Kiyahshahr. Samples (n=25) were collected from five stations in the study area during the autumn catch season in 2001. Samples were analyzed by wet digestion with hydrogen peroxide and nitric acid. Analyses were testified using spike method. A sample of bovine liver (CRM 185R) was tested to ascertain reliability of analyses. Digested samples were analyzed using Flame Atomic Absorption Spectrophotometer. The bioaccumulation pattern for Zn in different tissues studied was stomach>liver> kidney> gills>muscle tissue. The mean concentration of Zn in the stomach was  $136.6 \pm 10.70$  mg g<sup>-1</sup> dry weight. Cu with the maximum concentration of  $39.71 \pm 8.88$  mg g<sup>-1</sup> dry weight in liver showed a bioaccumulation pattern of liver>kidney>stomach>gills>muscle tissue. The bioaccumulation pattern for Pb was determined as gills>liver> kidney>stomach>muscle tissue. Maximum mean concentrations of Pb  $6.87 \pm 2.25$  mg g<sup>-1</sup> dry weight belonged to gills. Bioaccumulation pattern for Cd in the different organs studied in *A. persicus* was kidney>liver>gills>stomach> muscle tissue. Maximum mean concentration of  $5.1 \pm 0.97$  mg g<sup>-1</sup> dry weight belonged to kidneys and the minimum mean concentration of  $0.05 \pm 0.007$  mg g<sup>-1</sup> dry weight belonged to muscle tissue. Concentration of the metals in the muscles samples were below the most guidelines for human consumption. Concentrations for heavy metals were lower than the guidelines in some organs and were higher than that in the other organs studied. The observed concentrations do not pose health problems as these organs are not used for human consumption.

## کلمات کلیدی:

*Acipenser persicus*, Heavy metals, Muscle, Organ, Caspian Sea, Iran

## لینک ثابت مقاله در پایگاه سیویلیکا:

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