

DETERMINATION OF HEAVY METALS IN OHRID LAKE FISH - *SALMOTHIMUS OHRIDANUS*

Flakrim Aliu¹, Valon Durguti^{2*}, Fidan Feka², Fisnik Laha², Suzana Aliu², Hyzer Rizani²

¹Faculty of Technology and Metallurgy, Ss. Cyril and Methodius, Blvd. Goce Delcev 9, 1000 Skopje, Macedonia

²Department of Food Sciences and Biotechnology, University for Business and Technology, Lagjja Kalabria n.n., 10000 Prishtina, Kosovo

*e-mail: valon.durguti@ubt-uni.net

Abstract

Determination of heavy metals in the fish is very important for nutrition facts. The fish *Salmothimus ohridanus* is endemic fish in the Ohrid Lake. The aim of this paper has been to determine the concentration of the heavy metals in the fish *S. ohridanus*.

Examined fish were collected from 3 different spots in the Ohrid Lake, from the depth of 15 to 20 meters. The lengths of the fish have been between 21 to 22.7 cm, and their weight between 112.5 to 139.5 gr. Determination of analyzed heavy metals (Pb, Cd, As, and Hg) was done according to MKS EN ISO 14082:2010 (Determination of trace elements - Determination of lead and cadmium by atomic absorption spectrometry (AAS) after dry ashing, version 1 - Foodstuffs).

Obtained results show that concentrations of all analyzed heavy metals do not exceed the permitted levels set by European Commission Regulation (EC) No 1881/2006. The average concentrations of heavy metals expressed in mg/kg (ppm) for three analyzed samples were as follows: Pb 0.074 mg/kg; As 0.098 mg/kg; Hg 0.046 mg/kg; and Cd 0.019 mg/kg.

The obtained results show that concentration of the analyzed heavy metals does not exceed the permitted limits and as such this fish does not pose a risk to human health.

Key words: Fish, Heavy metals, Human health, Ohrid Lake, AA Spectroscopy.