



Evaluation of Mercury, Selenium, Methylmercury in Consumed Fish from Shkodra Lake

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Abstract: In the present study, mercury and selenium levels were evaluated in fish tissues and fish organs from Shkodra Lake. 45 species of fish exists in this lake where 12 are migrate species. Some of the main types of fish that grow up in this lake are: crap, mullet, buy, carsi, cubla *etc.* Also the Shkodra Lake contains a very rich biota of microalgae, about 700 species with 250 algae type's which grow up to 3 meter depth. These constitute a good environment food, but from the other side exist like a reservoir for collection of toxic waste and Hg in particular. The mains from the biggest mineral industrial complexes pollute all Albania's lake water and specially Shkodra Lake. In the estuary system the part of filters pollution is absent before it reaches the lakes. The determination of mercury and methyl mercury were performed using Spectrometry. The only method that reliably produced results that agreed with the certified value for selenium in the reference material was the combination wet/dry aching method incorporating elevated pressure recommended by the Association of Official Analytical Chemists (AOAC) for determination using hydride generation atomic absorption spectrometry (AAS). The validation methodology for the determination of these elements was carried out by means of reference materials analyses. The concentrations of mercury and methyl mercury in muscle of aquatic carnivorous species will determine and discussed. Although the Albania's lakes are less contaminated compared with the estuary system of the mineral industries, it presents signs of environmental impact. We think that the Albanian lakes including Shkodra Lake are under the influence of heavy loads affecting the food chain and environmental.

Key words: *environment, fish, lake, methyl mercury, selenium*

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