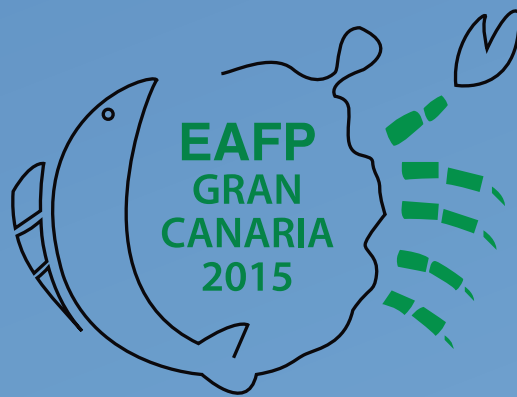


# 17 th International Conference on Diseases Fish and Shellfish

**Las Palmas de Gran Canaria**

September 7 - 11, 2015



**FINAL PROGRAM**



[www.eafp2015.es](http://www.eafp2015.es)



17<sup>TH</sup> INTERNATIONAL CONFERENCE ON  
DISEASES OF FISH AND SHELLFISH  
LAS PALMAS DE GRAN CANARIA, 7-11<sup>TH</sup> SEPTEMBER 2015

BOOK OF ABSTRACTS

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# BOOK OF ABSTRACTS

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## MONITORING OF ENVIRONMENTAL HEAVY METALS ACCUMULATION IN FISH MUSCLES FROM THE TWO LAKES IN MLADENOVAC MUNICIPALITY, BELGRADE AREA, SERBIA

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The major routes of heavy metal uptake by man are food, water and air. Namely fish, are the most important source of mercury and arsenic for human beings. In order to evaluate the current state of heavy metal accumulation in fish, heavy metal content of fish muscles in the two lakes of Mladenovac Municipality, Belgrade area, Serbia was analyzed.

The samples of the Common carp (*Cyprinus carpio*), Pike fish (*Esox lucius*) and Crusian carp (*Carassius auratus gibelio*) were taken on to the locations: Rabrovac Lake and Markovac Lake, during late August 2013. The content of Pb, Cd, Hg, As, Cu, Fe and Zn was determined in the fish dorsal muscle by atomic absorption spectrophotometer (AAS) (Perkin-Elmer Analyst 700).

The lowest concentration of lead in fish muscles was observed in Common Carp and highest in Pike fish, both sampled in Rabrovac Lake ( $P < 0.01$ ). The content of mercury has shown the highest variation between the tested fish species ( $P < 0.01$ ) and ranged between  $0.119 \pm 0.008$  mg/kg in Crusian carp (Markovac Lake) and  $0.401 \pm 0.011$  mg/kg in Common carp (Rabrovac Lake). The concentration of arsenic was higher in Common carp ( $P < 0.01$ ), than in Pike fish and Crusian carp. The concentrations of the cadmium, iron and zinc determined in our study have shown the slightest variation between sampled fish species.

Our survey determined that none of the investigated metals in fish muscles exceeded the Maximum Levels (MLs) set by European regulations in muscle tissues (1881/2006/EC and 629/2008/EC). The maximum levels set by the Serbian Rule Book (2002) were not exceeded either. Based on the results of investigating the heavy metal content of fish samples, measured in our study, fish meat from Rabrovac and Markovac Lakes can be regarded as safe. Therefore the use of these fish in human nutrition poses no risk to the potential consumers.