SIBIC2016 VI IBERIAN CONGRESS OF ICHTHYOLOGY
MURCIA, SPAIN 21st · 24th June

O-058 AQUACULTURE, ENDOCRINOLOGY AND TOXICOLOGY

HALL 2
PORTUGUESE

CONTRIBUTION TO THE CHARACTERIZATION OF FRESHWATER FISH WITH GASTRONOMIC INTEREST - FILLET NUTRITIONAL COMPOSITION AND METAL CONTAMINANTS

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3 CERNAS-IPCB, projeto UID/AMB/00681/2013 financiado pela FCT.

In some regions of Portugal largemouth bass (*Micropterus salmoides*, Lacépède, 1802), Iberian barbel (*Luciobarbus comizo*, Steindachner, 1864) and common carp (*Cyprinus carpio*, Linnaeus, 1758) are fish species much desired by anglers. In regions of Beira Baixa, Ribatejo and Alentejo those species have high gastronomic interest. However little is known about the nutritional composition and the presence of heavy metals in the edible part of this fish species used for human consumption. The aim of this work was to evaluate the nutritional composition and quantify the metals present on fish muscle tissue. For this study ten specimens of each fish species were captured in Beira Baixa region lentic systems (Ocreza, Ponsul and Tagus rivers and Santa Águeda and Tamujais dams).Once caught all the fish were frozen. In laboratory individuals were measured, weighed, sexed and filleted and the fillet were analyzed. Statistical analysis was performed using SPSS. There were no statistical differences in the fillet energy value of the three fish species. On the other hand, largemouth bass fillets had more K, Na and Mg ($p<0.05$), Iberian barbell fillets had more protein, Ca and P ($p<0.05$) and common carp fillets had more moisture, fat, and ash ($p<0.05$). Cd, Cr and Pb presented concentrations below ICP-OES limit of quantification (0.05, 0.03 and 0.2mg/kg wet weight respectively) for all fillet samples. For other metals, it has been found that the carp fillets have higher Cu (0.34 ±0.088; $p<0.05$), Fe (10.55 ±4.700; $p<0.05$) Mn (0.19 ±0.046; $p<0.05$) and Zn (6.73 ±1.513; $p<0.05$) values (mg/kg wet weight).We concluded that edible part of largemouth bass, Iberian barbel and common carp had high contents of protein, low fat, low calorie and exhibit low levels of heavy metals below the maximum permissible for a safety utilization of theses fishes in human nutrition.