

Levels of Heavy Metals in Different Tissues of *Lethrinus Miniatus* Fish from Arabian Gulf

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Abstract : In the present study, accumulation of eight heavy metals, lead (Pb), cadmium (Cd), manganese (Mn), copper (Cu), zinc (Zn), iron (Fe), nickel (Ni) and chromium (Cr) was determined in kidney, heart, liver and muscle tissues of *Lethrinus Miniatus* fish caught from Arabian Gulf. Metal concentrations in all the samples were measured using Graphite Furnace Atomic Absorption Spectroscopy (GF-AAS). Analytical validation of data was carried out by applying the same digestion procedure to standard reference material (NIST-SRM 1577b bovine liver). Levels of lead (Pb) in the liver tissue (0.60 µg/g) exceeded the limit set by European Commission (2005) at 0.30 µg/g. Zinc concentration in all tissue samples were below the maximum permissible limit (50 µg/g) as set by FAO. Maximum mean cadmium concentration was found to be 0.15 µg/g in the kidney tissues. Highest content of Mn in the studied tissues was seen in the kidney tissue (2.13 µg/g), whereas minimum was found in muscle tissue (0.87 µg/g). The present study led to the conclusion that muscle tissue is the least contaminated tissue in *Lethrinus Miniatus* and consumption of organs should be avoided as much as possible.

Keywords : Arabian gulf, *Lethrinus miniatus*, heavy metals, atomic absorption spectroscopy

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