

HEAVY METAL CONCENTRATION IN TUNA FROM THE INDIAN OCEAN

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ABSTRACT

The concentration of heavy metal (Cd, Cu and Zn) in bigeye, yellowfin and skipjack tuna from the Eastern Indian Ocean during February – March 2001 was analyzed and measured by Atomic Absorption Spectrophotometry. The relationship between fish length and metal concentration was also investigated by linear regression analysis.

Level of metal concentration in skipjack tuna was highest compared to bigeye and yellowfin tuna. Mean concentration of cadmium, copper and zinc in skipjack tuna was 17.881 $\mu\text{g}/\text{kg}$ FW, 0.535 $\mu\text{g}/\text{g}$ FW and 5.843 $\mu\text{g}/\text{g}$ FW respectively. However the level was below acceptable level for human consumption as established in most countries. The significant positive relationship at 95% confidence limit was found between fish length and cadmium concentration in the muscle of bigeye and skipjack tuna but copper concentration in yellowfin tuna revealed significance negative related to size. However the relationship between zinc concentration and fish length did not show any significance.

Key words : heavy metal, tuna, Indian Ocean