

Investigation of Occurrences of Mercury Level in Tune Fish (*Thunnus albacares*) in Relation to it Habitat and Size Variation

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Mercury is poisonous to human being and the level of mercury in fish is regarded as high when it exceeds 0.3 ppm. Mercury level is a hazard point in fish processing and finding ways in reducing the hazards of mercury is important for export market. In this study, distribution of mercury in yellowfin tuna in relation to its habitat and size was investigated. Three hundred and sixty samples of fish were collected from 120 individuals from four fish landing sites; Galle, Trincomalee, Dondra, and Negombo. From each fish three samples were collected from head, underneath the pectoral fin and tail end respectively. Mercury content in each part was analysed using Atomic Absorption Spectroscopic method. Total mercury levels in four landing sites; Galle, Trincomalee, Dondra, and Negombo ranged from 0.0733 ppm to 0.2225 ppm with reference to yellowfin tuna. Highest mean mercury level (0.1668 ppm) and highest variation of mercury (± 0.0327) was recorded at L.ondra. The lowest mean mercury level (0.1048 ppm) was recorded at Galle. Mercury level in tuna harvested from eastern coast of Sri Lanka was significantly higher than the mercury level in tuna harvested from western coast. This suggests that mercury gets distributed through oceanic currents. Weight and mercury level of tuna showed a positive correlation ($R^2 = 0.123$) while fork length of fish and mercury level of fish has shown a negative correlation ($R^2 = 0.123$). Body location of the fish has no significant effect on the deposition of mercury in tuna.

Keyword: Mercury level, Yellowfin tuna, Landing site, Body location, Weight

