

# **Heavy Metal Concentrations in Fish Muscle Tissues of Grey Mullet (*Mugil cephalus*) Obtained From Negombo Estuary in Sri Lanka.**

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## **Abstract**

Negombo estuary is used by the local community for fishery resources in western province in Sri Lanka. Nevertheless it is becoming polluted with chemicals from various sources. The objectives of this study were determine the levels of five heavy metals viz, lead, cadmium, mercury, copper and zinc. For this study, fish samples were collected from four main locations of Negombo estuary as Pitipana, Munnakkaraya, Duwa and Katunayake sites. Sampling sites during the one year study period from January to December 2015. The levels of fish tissue metals were analyzed employing standard methods. Therefore, the levels of Hg metals were analysed by cold vapour atomic absorption spectrophotometer. Whereas the other metals were analysed by flame furnace atomic absorption spectrophotometer. The results revealed that the average concentration of metals Pb, Cd, Hg, Cu and Zn in fish tissue were 0.04 to 0.07 mg/kg; 0.03 to 0.04 mg/kg; 0.24 to 0.41 mg/kg; 0.352 to 0.378 mg/kg and 3.32 to 5.82 mg/kg respectively.

Hence, the Pitipana, Duwa, Munnakkaraya and Katuayake area were highest values indicated that discharge of sewage and dumping of solid waste from households and other anthropogenic activities and accelerating sedimentation. Large amounts of wastewater containing organic pollutants and various processes of chemicals release to this sites. The results indicated that heavy consumption of *Mugil cephalus* from Negombo estuary especially from Duwa and Munnakkaraya may pose a health hazard to the consumers.

**Key words:** Heavy metals, Fish tissue, *Mugil cephalus*, Health hazard