DETERMINATION OF HEAVY METALS (Cu, Cd, and Pb) CONCENTRATIONS IN MUSCLEMEAT OF FISH FROM DIFFERENT AREAS IN BATAN BAY, AKLAN

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ABSTRACT

Determination of Heavy Metals (Cu, Cd, And Pb) Concentrations in Musclemeat of Fish from Different Areas in Batan Bay, Aklan

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Food safety is of utmost importance but it is usually compromised by the presence of pollutants in the environment such as heavy metals. This study was conducted to investigate heavy metals concentrations in fish musclemeat collected from different areas of Batan Bay, Aklan. A total of 22 fish species were analyzed for Cu, Cd and Pb using Flame Atomic Absorbance Spectroscopy. Pb concentration in the musclemeat of fish ranged from 0.0292 ± 0.2070- 2.09 ± 1.15 mg/kg wet weight and was found to be highest in *Mugil cephalus* (flathead grey mullet), while Cd concentration ranged from 0.0075 ± 0.0016-0.157 ± 0.209 mg/kg wet weight with highest value in *Megalops cyprinoides* (Indo-pacific tarpon), and Cu concentration ranged from 0.0605 ± 0.0667-2.76 ± 0.05 mg/kg wet weight, with highest concentration in *Leiognathus equulus* (common ponyfish). Among the metals, only Pb concentration in flathead grey mullet exceeded the maximum permissible concentration in food as indicated by the Joint FAO/WHO Codex Alimentarius (1984). Assessment of Noncarcinogenic Hazard Quotient (NHQ) gave NHQ values less than 1, indicating that the risk of developing adverse effects due to fish intake is low.