

Health risk from Cu and Zn contamination through consumption of paddy eel, *Monopterus albus*

ABSTRACT

The main objective in this study is to determine Cu and Zn concentration in edible tissues (skin and muscle) of paddy eels, *Monopterus albus*. The collection of *M. albus* samples was based on four paddy seasons (plowing, seedling, growing and harvesting). A total of 163 individuals of *M. albus* were collected. Edible tissues were dissected, digested and analyzed using an atomic absorption spectrometer (AAS) for metal concentration. Results showed bioaccumulation of Cu and Zn in skin was higher than in muscle tissues. Comparison with the Malaysian Food Regulation showed Cu and Zn concentrations in muscle and skin tissues were within the permissible limits. The estimation of chemical doses was calculated in order to evaluate the health risk of Malaysian population via the consumption of *M. albus*. Result showed Cu and Zn levels were low in muscle and skin tissues, thus suggesting edible tissues of *M. albus* are safe for consumption.

Keyword: Heavy metals; *Monopterus albus*; Paddy seasons; Risk assessment; Daily intakes