

Heavy metals in wild Indonesian shortfin eel, *Anguilla bicolor bicolor* (McClelland 1844) and giant mottled eel, *Anguilla marmorata* (Quoy & Gaimard 1824) in the northwest of Peninsular Malaysia

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Abstract

This study reports the heavy metal assessment of Cu, Zn, Fe, Ni, and Pb from wild collected *Anguilla bicolor bicolor* and *Anguilla marmorata* in the northwest of Peninsular Malaysia. There was no significant difference between the mean readings of heavy metal concentrations for both *Anguilla* species for the muscle tissue. However, for the liver, Cu, Zn and Fe concentrations reading showed noticeable differences between both species. The heavy metals concentration measured from both species were higher in the liver, compared to the muscle, with the exception of Ni. All of the heavy metals in the muscle for both species are lower than the minimum permissible limits set by several international guidelines and standards for safety consumption, with the exception of Ni and Pb. However, for liver, all of the readings exceeded the permissible limit. This study reveals that *A. marmorata* and *A. b. bicolor* obtained from the northwest of Peninsular Malaysia contain considerable amount of toxic metals which could raise a concern with prolong consumption of the two species.

Keywords: Heavy metals, *Anguilla bicolor bicolor*, *Anguilla marmorata*, Peninsular Malaysia.

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