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Human health risks of essential but potentially toxic metals in commercial marine fishes

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At least 15 different areas or nations have documented the presence of potentially hazardous metals (PTMs) in the edible marine fishes. This clearly demonstrated the need of PTM monitoring in fish fillets from a human health risk (HHR) standpoint. This study aims to evaluate the HHR of Cu and Zn in 19 species of marine fish taken between August 2016 and February 2017 from popular marine fish loading sites in Setiu, Terengganu, on the east coast of Peninsula Malaysia. With Cu concentrations (mg/kg dry weight) ranging from 1.50 to 7.83 and Zn concentrations (24,1 to 80.5) ranging from 24.1 to 80.5, the 19 species of marine fishes from Setiu demonstrated that they are good sources of these essential elements because they fell below the maximum levels permitted by seafood safety guidelines. The target hazard quotient values for Cu and Zn were less than 1, showing that Cu and Zn in fish do not pose carcinogenic concerns. It was also determined that the projected weekly intake values were lower than the defined provisional acceptable weekly intake for copper and zinc. It may be inferred that intake of Setiu fish would not expose people to harmful levels of PTMs. To protect the safety of consumers who rely significantly on marine fish in Setiu's coastal waters, continual monitoring is required.

Biography

Chee Kong Yap is working as a full professor in University Putra Malaysia (UPM) since 2021. He obtained his PhD degree from University Putra Malaysia in 2003. He is an academician for more than 18 years in University Putra Malaysia and 25 years as a researcher. Prof Yap has supervised more than 80 undergraduates and 30 postgraduate students in the fields of ecotoxicology, environmental biology, environmental sciences, water quality and Eco toxicological genetics. Yap has published more than 325 papers in refereed academic journals, 5 books (three of them published in NOVA Science Publishers, USA) and 32 book chapters. As on 1 April 2022, 212 of them have now been indexed in Elsevier's Scopus with an H-index of 30 (>3001 citations). Prof Yap has also been invited in honorary as Editorial Board members for more than 30 international academic journals. He has been an invited visiting researcher at National institute of Environmental Studies, Tsukuba (Japan), an invited visiting professor at Nihon University (Japan) and Hokkaido University (Japan), and an invited visiting researcher at Kobe University (Japan).

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