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Potentially Toxic Nickel and Their Potential Human Health Risks In The Sea Food (FISH AND MOLLUSKS)

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Human exposure to highly nickel-polluted environments through oral ingestion pathways may cause various pathological effects. This biomonitoring study aimed to assess the human health risk of potentially toxic nickel in 19 species of marine fishes from Setiu (Terengganu) and two popular seafood mollusks (mangrove snail Cerithedea obtusa and cockle Anadara granosa) from the coastal area of Peninsular Malaysia. The Ni levels of the three seafood types were found below the maximum permissible limit for nickel target hazard quotient values of all seafood were lower than 1 for average and high-level Malaysian consumers, indicating nickel's non-carcinogenic risk of seafood consumption. It was also found that the calculated values of estimated weekly intake were below than established provisional tolerable weekly intake of nickel for both average and high-level consumers. It can be concluded that the average consumption of seafood would not pose adverse effects of nickel to the consumers although the questionable target cancer risk of nickel was considered unacceptable. This study provided a scientific basis for the food safety assessment of nickel and suggestions for risk management of seafood consumption in Malaysia.

Biography

Chee Kong Yap is working as a full professor in Universiti Putra Malaysia (UPM) since 2021. Prof Yap is an academician for more than 18 years in UPM and 23 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 ecotoxicological genetics. Prof Yap has published more than 320 papers in refereed academic journals, 5 books (three of them published in NOVA Science Publishers, USA) and 32 book chapters. Until July 2021, 204 of them have now been indexed in Elsevier's Scopus with an H-index of 30 (>2761 citations). Prof Yap has also been invited in honorary as Editorial Board members for more than 30 international academic journals. Prof Yap 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).