Concentrations of heavy metal in different parts of the gastropod, Faunus ater (linnaeus), collected from intertidal areas of Peninsular Malaysia.

Abstract

Marine gastropods, Faunus ater (Linnaeus), were collected from Pantai Sri Tujoh (Kelantan), Pantai Bisikan Bayu (Kelantan), Kg. Telaga Nenas (Perak) and Kesang Laut (Johor). Soft tissues of gastropods were dissected into digestive caecum (DC), foot, remainder, muscle, and operculum. The shell and dissected parts were analyzed for Cd, Cu, Ni, and Pb. It was found that the DC and the remainder accumulated high concentrations of Cu ranging between 159.1 and 290.2 μ g/g dw. The shell was shown to highly accumulate non-essential Pb, Ni, and Cd compared to the soft tissues. Meanwhile, higher bioavailabilities of Cd and Cu were found in Pantai Sri Tujoh, whereas higher bioavailabilities of Ni and Pb were found in Pantai Bisikan Bayu compared to other sampling sites. The present results suggested that F. ater could be used as a potential biomonitor of heavy metal contamination. However, further studies are still needed in order to validate the use of F. ater as a good biomonitor of heavy metal pollution.

Keyword: Different parts; Faunus ater; Heavy metals; Peninsular Malaysia