Heavy metal concentrations (CD, CU, NI, PB, FE AND ZN)in the different soft tissues and shells of pholas orientalis collected from Sekinchan and Pantai Remis, Selangor.

Abstract

The clam, Pholas orientaliswere collected from the mudflats of Sekinchan and Pantai Remis, and their soft tissues were dissected into crystalline style, siphon, mantle and foot; while the shells were divided into three parts namely the umbo, smooth part (anterior of shell) and rough part (posterior of shell). Generally, the results show that: 1) All the different soft tissues accumulated higher concentrations of essential Cu, Zn and Fe when compared to those in the hard tissues; 2) On the other hand, the three hard tissues accumulated higher concentrations of nonessential Cd, Ni and Pb than those in the soft tissues. These results reflected a different binding affinity for the two different metal groups between the soft and the hard tissues; 3) The different levels of metals found within the four different tissues indicated that metal detoxification mechanism in the different organs are not similar in P. orientalis. The ecological distribution and metal distribution in the different tissues of P. orientaliscan serve as a baseline for future reference.

Keyword: Pholas orientalis; Clam; Heavy metals; Different tissues.