

Distribution of mineral contents in the selected tissues of *Meretrix lyrata*

ABSTRACT

Background and Objective: *Meretrix lyrata* is hard clam that is found abundantly at Kuching division in Sarawak and used as delicacy by the local people. This study aimed to determine amount of macro and micro-minerals in the soft tissue of *M. lyrata*. **Materials and Methods:** Macro and micro-minerals extracted from tissues of *Meretrix lyrata*, sediment and seawater were determined using air-acetylene flame Atomic Absorption Spectrophotometer (AAS). The minerals; Na, K, Mg, Ca, Zn, Cu, Mn and Fe were extracted from environment, adductor muscle, foot, gill, mantle and siphon from the clam. Concentration of macro and micro minerals were analysed using one way ANOVA and multivariate analysis. **Results:** The Na ($319.552 \pm 9.47 \mu\text{g g}^{-1}$) and Fe ($19.48 \pm 4.726 \mu\text{g g}^{-1}$) concentration were high in *M. lyrata* tissues compared to other elements. This result suggested that *M. lyrata* tend to accumulate more Na and Fe from the environment and this supported by high concentration of Na and Fe in the seawater. Furthermore, multivariate analysis indicated that tested tissues were grouped according to the mineral elements and not based on tissue variety. Therefore, macro and micro-minerals that accumulated in the *M. lyrata* tissues were non tissue dependent. **Conclusion:** The affinity of hard clam tissue to accumulate other elements was high and it depends on availability of the elements in the seawater. Hence, pristine environment was important to harvest hard clam as the food source to prevent consumption of unwanted elements such as heavy metals.

Keyword: Hard clam; Macronutrient; *Meretrix lyrata*; Micronutrient; Component