

## **Kepekatan logam berat dalam sedimen dan Meretrix sp. di pesisir pantai Bongawan dan Lok Kawi, Sabah**

### **ABSTRACT**

This study aims to determine the concentration of Pb, Cd, Zn, Fe and Cu in the Meretrix sp. and sediments in coastal areas of Bongawan and Lok Kawi, Sabah. The heavy metals were analyzed using ICP-OES after the tissue of Meretrix sp. and sediments were digested using a solution of aqua regia (HNO<sub>3</sub>: HCl). Retrieved concentrations of Pb, Cd, Zn, Fe and Cu in Meretrix sp. were each in the range of 0.08 - 0.50 mgkg<sup>-1</sup> , < 0.01 - 0.05 mgkg<sup>-1</sup> , 5.46 - 12.0 mgkg<sup>-1</sup> , 78.54 - 237.45 mgkg<sup>-1</sup> and 0.45 - 1.2 mgkg<sup>-1</sup> , while in the sediment, the range was 0.25 - 2.95 mgkg<sup>-1</sup> , < 0.01 - 0.35 mgkg<sup>-1</sup> , 1.22 - 16.35 mgkg<sup>-1</sup> , 422.0 - 1028.95 mgkg<sup>-1</sup> and 0.13 - 1.90 mgkg<sup>-1</sup> . Pearson correlation analysis shows that Pb, Cd and Zn concentration in Meretrix sp. has been significantly influenced by the heavy metal content in the sediment ( $p < 0.01$ ). This is also supported by the BCF value between the sediment and the Meretrix sp. which is in the range of Pb (0.12 - 0.56), Cd (0.14 - 4.00), Zn (0.73 - 6.52), Fe (0.12 - 0.56) and Cu (0.16 - 5.14) respectively. Overall, the heavy metal concentrations in Meretrix sp. were not exceed the limit as stated in the Food Act 1983.