ABSTRAK

Hutan mangrove Desa Mojo Pemalang mengalami degradasi lingkungan akibat alih fungsi lahan menjadi area tambak. Adanya area tambak menjadi penyebab tingginya aktivitas antropogenik di wilayah tersebut, sehingga berpotensi sebagai sumber pencemaran logam berat di perairan tersebut, salah satunya adalah Pb. Penelitian ini bertujuan untuk menganalisis kandungan Pb di sedimen dan gastropoda, serta menganalisis potensi gastropoda sebagai bioindikator pencemaran Pb. Preparasi sampel mengacu pada metode USEPA 3051 dan analisis kandungan Pb dilakukan dengan alat *Atomic Absorption Spectrofotometry* (AAS). Hasil penelitian menunjukkan bahwa terdapat 5 jenis gastropoda, yang terdiri dari *Littoraria melanostoma, Littoraria scabra, Cerithidea cingulata, Cerithidea obtusa,* dan *Cerithidea decollata*. Kandungan Pb pada sedimen memiliki rata-rata nilai sebesar 11,86 ± 1,24 mg/kg dan pada gastropoda rata-ratanya adalah 0,43 ± 0,16 mg/kg. Kandungan Pb di sedimen memiliki tingkat kontaminasi rendah dan tidak tercemar, namun dapat berdampak dan berpotensi memberikan efek biologis yang merugikan. Gastropoda jenis *Cerithidea cingulata* dan *Cerithidea obtusa* memiliki kemampuan akumulasi yang dikategorikan sebagai *decoconcentrator*. Hasil uji kriteria bioindikator menunjukkan bahwa *Cerithidea cingulata* dan *Cerithidea obtusa* berpotensi menjadi bioindikator pencemaran Pb. Hasil penelitian juga menunjukkan bahwa terapat hubungan yang sangat kuat antara kandungan Pb pada sedimen dan gastropoda.

Kata Kunci: Bioindikator, gastropoda, logam berat, sedimen, Pb

ABSTRACT

The mangrove forest in Mojo Village, Pemalang, experienced environmental degradation due to land conversion into aquaculture areas. The establishment of these aquaculture areas led to increased anthropogenic activities, making it a potential source of heavy metal pollution in the waters, with lead (Pb) being one of the contaminants. This study aimed to analyze the Pb content in sediments and gastropods and to assess the potential of gastropods as bioindicators of Pb pollution. Sample preparation followed the USEPA 3051 method, and Pb content analysis was conducted using Atomic Absorption Spectrophotometry (AAS). The results indicated the presence of five gastropod species: Littoraria melanostoma, Littoraria scabra, Cerithidea cingulata, Cerithidea obtusa, and Cerithidea decollata. The average Pb content in the sediments was 11.86 ± 1.24 mg/kg, while the average Pb content in gastropods was 0.43 ± 0.16 mg/kg. Although the Pb content in the sediments indicated low contamination levels and was not classified as polluted, it could still have had adverse biological effects. Cerithidea cingulata and Cerithidea obtusa were identified as deconcentrators due to their accumulation capabilities. Bioindicator criteria testing suggested that Cerithidea cingulata and Cerithidea obtusa had the potential to serve as bioindicators of Pb pollution. This study also found a strong correlation between Pb content in sediments and gastropods.

***Keywords**: Bioindicator, gastropods, heavy metals, sediments, Pb*