

ABSTRAK

Arsen merupakan logam berat berbahaya yang dapat mengakibatkan terjadinya pencemaran. Penelitian ini bertujuan untuk mengetahui kandungan logam berat As pada media air, sedimen dan ikan di perairan Plawangan timur, Segara Anakan serta untuk mengetahui tingkat pencemaran logam berat As berdasarkan nilai *Pollution Index* (PI), *Contamination Factor* (CF), *Index of Geoaccumulation* (Igeo), dan *Bioaccumulation Factor* (BAF). Metode yang digunakan yaitu survei dengan teknik pengambilan sampel purposive random sampling di 5 stasiun. Hasil analisis data menunjukkan bahwa kandungan logam berat As pada media air berkisar 0,0008 - 0,0030 mg/L, media sedimen berkisar 0,7868 - 0,9810 mg/kg dan pada ikan belanak berkisar 0,0014 - 0,0044 mg/kg. Kandungan As masih di bawah nilai ambang batas aman berdasarkan standar baku mutu yaitu PP RI No. 22 Tahun 2021 (baku mutu air), Swedish Environmental Protection Agency (SEPA, 2002) (baku mutu sedimen), dan (SNI No. 7387) Tentang Batas Maksimal Cemar Logam Berat dalam Pangan (baku mutu ikan). Kandungan logam berat As antara media air dengan sedimen dan media air dengan ikan memiliki hubungan yang searah, jika semakin tinggi kandungan logam berat As di air maka semakin tinggi pula kandungan logam berat As di sedimen dan ikan. Tingkat pencemaran di Plawangan timur masuk kategori tercemar ringan berdasarkan nilai PI, CF dan Igeo. Nilai BAF menunjukkan ikan belanak dapat mengakumulasi As dalam tubuhnya.

Kata kunci: Plawangan Timur, Logam Berat As, Air, Sedimen, Ikan Belanak (*Planiliza subviridis*)

ABSTRACT

Arsenic (As) as a harmful heavy metal is one of the main risk factors for the pollution. This study aimed to analyse the content of arsenic (As) in the water, sediment and mullet fish among stations and to know pollution levels based on Pollution Index (PI), Contamination Factor (CF), Index of Geoaccumulation (Igeo), and Bioaccumulation Factor (BAF). Method of this research was a survey method by purposive random sampling technique in five stations and four replications. The results showed that the arsenic (As) in the water was 0,0008 - 0,0030 mg/L, in the sediment range between 0,7868 - 0,9810 mg/kg and the mullet fish was 0,0014 - 0,0044 mg/kg. The content of arsenic (As) is still below the safe quality standard value based on the quality standard of PP RI No. 22 of 2021 (water quality standards), Swedish Environmental Protection Agency (SEPA, 2002) (sediment quality standards), and (SNI No. 7387) regarding the maximum limit of heavy metal contamination in food (fish quality standard). The content of arsenic (As) between water with sediment and water with fish has a direct relationship, the higher the arsenic (As) content in the water, the higher content in the sediment and fish. East Plawangan are classified as lightly polluted based on the PI, CF and Igeo values. BAF value shows that mullet can accumulate arsenic (As) in its body.

Key words: East Plawangan, Arsenic (As), Water, Sediment, Mullet Fish (*Planiliza subviridis*).

