

## ABSTRAK

Kromium merupakan logam berat berbahaya yang dapat mengakibatkan terjadinya pencemaran. Penelitian ini bertujuan untuk mengetahui kandungan logam berat Cr pada media air, sedimen dan ikan di perairan Plawangan timur, Segara Anakan, Cilacap serta untuk mengetahui tingkat pencemaran logam berat Cr berdasarkan nilai *Pollution Index* (PI), *Contamination Factor* (CF), *Index of Geoaccumulation* (Igeo), dan *Bioaccumulation Factor* (BAF). Pengambilan sampel dilakukan di 5 stasiun yaitu muara Sungai Kembang Kuning, muara Sungai Sapuregel, pertemuan dua sungai, muara Sungai Donan, dan pertemuan tiga sungai. Hasil analisis data menunjukkan bahwa kandungan logam berat Cr pada media air, sedimen, dan ikan Belanak berkisar 0,0010-0,0025 mg/L, 1,8990-4,0024 mg/kg, 0,0073-0,0173 mg/kg. Kandungan Cr masih di bawah nilai ambang batas aman berdasarkan standar baku mutu yaitu PP RI No. 22 Tahun 2021 (baku mutu air 0,005 mg/L), *Australian and New Zealand Environment and Conservation Council* (ANZECC, 2000) (baku mutu sedimen 80 mg/kg), dan (SNI No. 7387 dan FAO/WHO) Tentang Batas Maksimal Cemaran Logam Berat dalam Pangan (baku mutu ikan 1,0 mg/kg). Analisis korelasi koefisien Pearson (R) menunjukkan korelasi linier positif pada air dengan sedimen dan korelasi linier negatif pada air dengan ikan Belanak. Hasil perhitungan Pi menunjukkan kategori tidak tercemar, CF menunjukkan kategori kontaminasi rendah, Igeo menunjukkan kategori tercemar ringan, dan BAF menunjukkan (*P. subviridis*) yang memiliki kemampuan mengakumulasi logam berat dalam tubuh.

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

## ABSTRACT

Chromium (Cr) as a harmful heavy metal is one of the main risk factors for the pollution. The research aimed to analyse the content of Cr in the water, sediment and mullet fish as well as pollution levels based on the Pollution Index (PI), Contamination Factor (CF), Index of Geoaccumulation (Igeo), and Bioaccumulation Factor (BAF). Samples were taken at 5 stations, namely the estuary of the Kembang Kuning River, the estuary of the Sapuregel River, the confluence of two rivers, the mouth of the Donan River, and the confluence of three rivers. The results showed that Cr in the water, sediment, and mullet fish ranged from 0,0010 to 0,0025 mg/L, 1,8990 to 4,0024 mg/kg, 0,0073 to 0,0173 mg/kg. The content of Cr is still below the safe quality standard value based on the quality standard of PP RI No. 22 of 2021 (water quality standards of 0,005 mg/L), Australian and New Zealand Environment and Conservation Council (ANZECC, 2000) (sediment quality standards of 80 mg/kg), and (SNI No. 7387 and FAO/WHO) regarding the maximum limit of heavy metal contamination in food (fish quality standard of 1,0 mg/kg). The analysis of correlation coefficient Pearson (R) showed a positive linier in water with sediment and positive linier in water with mullet fish. The results of the Pi calculation show that the category is not polluted, CF shows the category of low contamination, Igeo shows the category of lightly polluted, and BAF shows the category of Mullet fish that have the ability to accumulate Cr in the body.

**Key words:** East Plawangan, Chrome (Cr), Water, Sediment, Mullet Fish  
(*Planiliza subviridis*)