ABSTRAK

Merkuri (Hg) merupakan salah satu logam berat yang berbahaya dan dapat mengakibatkan terjadinya pencemaran di perairan. Penelitian ini bertujuan untuk mengetahui kandungan Hg pada air, sedimen, dan ikan nilem (O. *hasselti*) di Sungai Tajum, Banyumas serta mengetahui tingkat pencemaran Hg berdasarkan *Contamination Factor* (CF), *Index of Geoaccumulation* (Igeo), *Bioaccumulation Factor* (BAF), *Estimated Daily Intake* (EDI), dan *Target Hazard Quotient* (THQ). Metode penelitian menggunakan Teknik *purposive random sampling*. Lokasi penelitian dibagi menjadi 5 stasiun dengan 3 kali ulangan pengambilan sampel. Hasil analisis data menunjukan kandungan Hg pada air berkisar 0,001-0,0023 mg/L, sedimen berkisar 0,024-0,035 mg/kg, dan ikan nilem berkisar 0,001-0,002 mg/kg. Kandungan Hg pada air telah melebihi Nilai Ambang Batas menurut KEPMEN LH No. 22 Tahun 2021, kandungan Hg pada sedimen menurut pedoman *Canadian Council of Ministers of the Environment* (CCME) masih dalam NAB. Kandungan Hg pada ikan nilem tidak melebihi NAB yang ditentukan oleh BPOM RI No. 5 Tahun 2018 dan Kepmen-KKP No.37 Tahun 2019. Tingkat pencemaran di Sungai Tajum menunjukan kategori tercemar kontaminasi sedang berdasarkan CF, berdasarkan Igeo tidak tercemar hingga sedang, berdasarkan BAF organisme memiliki kemampuan dalam mengakumulasi Hg, berdasarkan EDI termasuk tinggi, dan berdasarkan THQ terdapat risiko. Hal ini menunjukan ikan nilem yang terus menerus dikonsumsi akan menimbulkan risiko kesehatan pada manusia.

Kata kunci : Sungai Tajum, Logam berat Hg, Air, Sedimen, Ikan Nilem (O. *Hasselti*)

ABSTRACT

Mercury (Hg) is a heavy metal that is dangerous and can cause pollution in waters. This study aims to determine the content of Hg in water, sediment, and nilem fish (O. hasselti) in the Tajum River, Banyumas and to determine the level of Hg contamination based on Contamination Factor (CF), Index of Geoaccumulation (Igeo), Bioaccumulation Factor (BAF), Estimated Daily Intake (EDI), and Target Hazard Quotient (THQ). The research method uses a purposive random sampling technique. The research location was divided into 5 stations with 3 repetitions of sampling. The results of data analysis showed that the Hg content in water ranged from 0.001-0.0023 mg/L, sediment ranged from 0.024-0.035 mg/kg, and nilem fish ranged from 0.001-0.002 mg/kg. The Hg content in water has exceeded the Threshold Limit Value according to KEPMEN LH No. 22 of 2021, the Hg content in sediment according to the Canadian Council of Ministers of the Environment (CCME) guidelines is still in the NAB. The Hg content in nilem does not exceed the NAV determined by BPOM RI No. 5 of 2018 and Kepmen-KKP No.37 of 2019. The level of pollution in the Tajum River shows a moderately polluted contamination category based on CF, based on Igeo not polluted to moderate, based on BAF organisms have the ability to accumulate Hg, based on EDI including high, and based on THQ there is a risk. This shows that nilem fish which is continuously consumed will pose a health risk to humans.

Keywords : Tajum River, Heavy Metal Hg, Water, Sediment, Nilem Fish (O. *hasselti*)