ABSTRAK

Logam berat yang sering dan dapat ditemukan di dalam perairan ialah timbal (Pb). Sifat-sifatnya beracun, karsinogenik dan bioakumuator menjadi salah satu sumber utama adanya timbal di air. Kerang dara berfungsi sebagai bioindikator logam berat, yang umum dikonsumsi oleh masyarakat tanpa mengetahui bahayanya, yang mencemari air. Penelitian deskriptif ini dilakukan dari bulan Oktober 2022 hingga Mei 2023 di Laboratorium Baristand dan Laboratorium Kimia Analitik Poltekkes Kemenkes Surabaya Jurusan Teknologi Laboratorium Medis. Tujuan penelitian ini ialah mengetahui kadar timbal (Pb) pada rambut dan urin populasi masyarakat yang mengkonsumsi kerang dara di sekitar tambak TPI Sidoarjo menggunakan Spektrofotometri Serapan Atom (SSA). Pada penelitian ini menggunakan teknik *purposive sampling* pada rambut dan urin masyarakat yang mengkonsumsi kerang dara. Hasil penelitian menunjukkan kandungan kadar timbal pada rambut tertinggi sebesar 0,9018 μg/g, kadar terendah sebesar 0,102 μg/g dengan rata-rata 2,6976 μg/g dan kadar timbal pada urin tertinggi sebesar 0,00051 mg/L, kadar terendah sebesar 0,00021 mg/L memiliki rata-rata 0,00457 mg/L. Semua sampel memiliki kadar timbal dalam kategori normal. Responden yang mengkonsumsi kerang dara sekali setiap bulan memiliki kadar timbal terendah dan mereka yang mengkonsumsi setidaknya tiga kali setiap bulan memiliki kadar timbal tertinggi. Penelitian ini menunjukkan bahwa semakin sering dan sebanyak apapun kerang dara yang dikonsumsi, semakin bertambah nilai kadar timbal dalam tubuh.

Kata Kunci : Timbal (Pb), Kerang dara, Rambut, Urin, Spektrofotometri Serapan Atom (SSA)

ABSTRACT

The heavy metal that is often found in waters is lead (Pb). Its toxic, carcinogenic and bioaccumulating properties are one of the main sources of lead in water. Clams function as bio-indicators of heavy metals, which are commonly consumed by the public without knowing the dangers, which pollute the water. This descriptive research was conducted from October 2022 to May 2023 at the Baristand Laboratory and Analytical Chemistry Laboratory, Health Polytechnic, Ministry of Health Surabaya, Department of Medical Laboratory Technology. The aim of this research is to determine the levels of lead (Pb) in the hair and urine of the population of people who consume clams around the TPI Sidoarjo ponds using Atomic Absorption Spectrophotometry (SSA). This study used a purposive sampling technique on the hair and urine of people who consumed clams. The results showed that the highest level of lead in hair was 0.9018 μg/g, the lowest level was 0.102 μg/g with an average of 2.6976 μg/g and the highest level of lead in urine was 0.00051 mg/L, the lowest level of 0.00021 mg/L has an average of 0.00457 mg/L. All samples have lead levels in the normal category. Respondents who consumed clams once every month had the lowest lead levels and those who consumed them at least three times every month had the highest lead levels. This research shows that the more frequently and how much clams are consumed, the higher the lead levels in the body.

Keywords : Lead, Clams, Hair, Urine, Atomic Absorption Spectrophotometry (AAS)