

Gita Indah Antoni. NIM 190341100017. Kadar Logam Berat (Pb) pada Air, sedimen, dan Kerang dara (*Anadara granosa*) Di Kawasan Surabaya dan Gresik. Dibawah bimbingan **Ashari Wicaksono, S.Kel., M.Si., M.Sc.**

ABSTRAK

Kawasan pesisir Surabaya menghasilkan limbah rumah tangga, aktivitas kapal, dan wisata meningkatkan kontaminasi logam berat jenis Pb. Kawasan pesisir Gresik Mengare terbagi menjadi daerah pemukiman penduduk dan kawasan industri serta tambak. Kawasan industri terdiri dari , Industri perkakas Maspion , industri semen, industri cat, industri tekstil. Pelabuhan PT. Semen Gresik, Pelindo III Gresik, PT Petrokimia Gresik. Tujuan dari penelitian ini adalah untuk mengetahui kadar Pb pada kerang dara ,air, dan sedimen serta batasan aman konsumsi kerang dara. Penelitian dilakukan pada bulan Januari 2023. Analisis sampel Spektrofotometri Serapan Atom (AAS) Balai Besar Laboratorium Kesehatan (BBLK) Surabaya. Hasil penelitian Kandungan logam berat timbal (Pb) pada air di perairan Gresik (Mengare) sebesar 0,000011 mg/l lebih tinggi dibandingkan perairan Surabaya (Kenjeran) 0,00008 mg/l. Kandungan logam berat Pb pada kerang dara (*Anadara granosa*) berkisar antara 0,00009-0,000042 mg/kg. Perairan Gresik (Mengare) dan Surabaya (Kenjeran) tergolong dalam kategori telah tercemar logam berat Pb baik pada air dan kerang dara. Batasan maksimal asupan mingguan aman *A. granosa* dikonsumsi di Perairan Surabaya untuk individu berat badan rata-rata 50 kg , sebesar 86,03 -38 mg/kg, individu berat rata-rata 60 kg konsumsi kerang dara 117,61 - 46,02 mg/kg, dan berat rata-rata 65 kg ,konsumsi kerang 113,5 -1,65 mg/kg, dan asupan mingguan aman kerang dara Gresik per minggu untuk individu berat rata –rata 50 kg 94,48 - 35 mg/kg, individu berat rata-rata 60 kg 110,11 -41,54 mg/kg, dan individu berat rata –rata 65 kg ,konsumsi kerang 121,04 -42,52 mg/kg. Mengonsumsi *A. granosa* dari pesisir Surabaya dan Mengare yang mengandung logam berat di wilayah studi ini masih dalam batas aman.

Kata kunci: Air, *Anadara Granosa*, Gresik, Surabaya, Timbal

Gita Indah Antoni. NIM 190341100017. Heavy Metal (Pb) Levels in Water, Sediment, and Hemp (*Anadara granosa*) in Surabaya and Gresik Regions. Supervised by **Ashari Wicaksono, S.Kel., M.Si., M.Sc.**

ABSTRACT

*The coastal area of Surabaya produces household waste, ship activity and tourism increase heavy metal contamination of Pb. The coastal area of Gresik Pengare is divided into residential areas and industrial areas as well as ponds. The industrial area consists of the Maspion tool industry, the cement industry, the paint industry, the textile industry. Port of PT Semen Gresik, Pelindo III Gresik, PT Petrokimia Gresik. The purpose of this study was to determine the levels of Pb in blood clams, water, and sediments as well as the safe limits for consumption of blood clams. The research was conducted in January 2023. Analysis of the Atomic Absorption Spectrophotometry (AAS) sample at the Center for Health Laboratory (BBLK) Surabaya. The results of the study showed that the content of heavy metal lead (Pb) in water in Gresik (Mengare) waters was 0.000011 mg/l, higher than Surabaya (Kenjeran) waters, which was 0.00008 mg/l. The heavy metal Pb content in blood clams (*Anadara granosa*) ranged between 0.00009-0.000042 mg/kg. Gresik (Mengare) and Surabaya (Kenjeran) waters are classified as having been polluted by the heavy metal Pb in both water and hemp. The maximum safe weekly intake of *A. granosa* consumed in Surabaya Waters for individuals with an average weight of 50 kg is 86.03 - 38 mg/kg, for individuals with an average weight of 60 kg, consumption of virgin clams is 117.61 - 46.02 mg/kg, and an average weight of 65 kg, consumption of shellfish 113.5 - 1.65 mg/kg, and a safe weekly intake of Gresik virgin clams per week for individuals with an average weight of 50 kg 94.48 - 35 mg/kg, Individuals with an average weight of 110.11 - 41.54 mg/kg, and individuals with an average weight of 65 kg consume shellfish 121.04 - 42.52 mg/kg. Consume *A. granosa* from the coast of Surabaya and Pengare containing heavy metals in this study area are still within safe limits.*

Keywords: *Anadara granosa, Gresik, Lead, Surabaya, Water*