

ABSTRAK

Logam berat adalah salah satu sumber polutan yang ditemukan di wilayah perairan disebabkan oleh limbah industri. Logam kadmium (Cd) dan timbal (Pb) bersifat toksik bagi organisme perairan. Logam tersebut masuk kedalam perairan dan mengendap pada sedimen. Kerang darah bersifat *filter feeder* dengan mudah terakumulasi logam berat. Limbah pencemar tersebut tentunya akan memberikan dampak negatif bagi pertumbuhan, reproduksi dan kematangan gonad kerang darah. Penelitian ini bertujuan untuk mengkaji tingkat pencemaran logam berat pada daging serta status reproduksi kerang darah (*Anadara granosa*) yang kemungkinan terpapar logam berat. Penelitian dilaksanakan pada bulan 09 Mei-24 Juni 2024 dengan 3 stasiun pengambilan sampel di pasar tradisional kota Lhokseumawe, pengamatan dilakukan di Laboratorium Hatchery dan Teknologi Budidaya, Program Studi Akuakultur, Fakultas Pertanian, Universitas Malikussaleh uji histologi gonad di Balai Veteriner Medan dan Uji Logam Berat Cd dan Pb di BSPJI Banda Aceh. Penelitian ini menggunakan metode survey dengan metode pengambilan sampel yang digunakan *Purposive sampling*. Analisis data secara deskriptif dan data yang dimaksud antara lain morfometrik, rendemen, jenis kelamin, TKG dan logam berat. Hasil pengukuran morfometrik uji Two Way Anova diperoleh bahwa tidak ada perbedaan morfometrik berdasarkan jenis kelamin dan tidak ada perbedaan panjang tubuh berdasarkan stasiun pemasaran kerang darah. Hasil uji F (Anova) menunjukkan bahwa jenis kelamin kerang darah tidak mempengaruhi jumlah rendemen pada daging kerang darah. Hasil uji regresi antara logam berat dan bobot tubuh kerang menunjukkan hubungan yang lemah sangat kuat terhadap logam berat. Hasil pengukuran morfometrik yaitu bobot total berkisar antara 14,18-20,37 gram, panjang berkisar antara 32,51-35,95 mm, lebar berkisar antara 30,17-32,33 mm, tinggi berkisar antara 25,21-30,31 mm. Persentase rendemen terbesar pada kerang darah jantan dengan rata-rata 42,77% dan betina 42,46%. Persentase jenis kelamin jantan 60% sedangkan betina 40%. Tingkat kematangan gonad paling banyak pada TKG I dan II. Logam berat (Pb) stasiun I sebesar 1,1 mg/l, stasiun II 0,51 mg/l, stasiun III 0,73 mg/l. kandungan logam berat kadmium (Cd) pada stasiun I sebesar 1,60 mg/l, stasiun II 0,41 mg/l, stasiun III 1,31 mg/l

Kata kunci: *Anadara granosa*, Logam berat, Tingkat Kematangan Gonad

ABSTRACT

Heavy metals are one of the sources of pollutants found in waterways from industrial waste. The metals cadmium (Cd) and lead (Pb) are toxic to aquatic organisms. These metals enter the water and settle in the sediment. Blood clams are filter feeders that easily accumulate heavy metals. The polluting waste will certainly have a negative impact on the growth, reproduction and maturation of the gonads of blood clams. This study aims to assess the level of heavy metal contamination in the flesh and the reproductive status of blood clams (*Anadara granosa*) that may be exposed to heavy metals. The research was conducted from 09 May to 24 June 2024 with 3 sampling stations in traditional market of Lhokseumawe city, observations were made at Hatchery and Aquaculture Technology Laboratory, Aquaculture Study Program, Faculty of Agriculture, Malikussaleh University, gonad histology test at Medan Veterinary Center and Cd and Pb heavy metal test at BSPJI Banda Aceh. This study uses survey method with sampling method used purposive sampling. Data analysis was descriptive and the data included morphometrics, yield, sex, TKG and heavy metals. The results of the Two-Way Anova test for morphometric measurements showed that there was no morphometric difference based on sex and no difference in body length based on blood clam marketing station. The results of the F (Anova) test showed that the sex of the blood clams had no effect on the yield of blood clam meat. The results of the regression test between heavy metals and mussel body weight showed a weak to very strong relationship with heavy metals. The results of morphometric measurements were total weight ranging from 14.18-20.37 grams, length ranging from 32.51-35.95 mm, width ranging from 30.17-32.33 mm, height ranging from 25.21-30.31 mm. The percentage yield was highest for male mussels with an average of 42.77% and 42.46% for females. The sex ratio of males was 60% and that of females 40%. Gonad maturity was highest in TKG I and II. The heavy metal content (Pb) in station I was 1.1 mg/l, station II 0.51 mg/l, station III 0.73 ml/kg. The heavy metal content of cadmium (Cd) in station I was 1.60 mg/l, station II 0.41 mg/l, station III 1.31 mg/l.

Keywords: *Anadara granosa*, Gonadal Maturity Stage, Heavy metals