ABSTRAK

Oysters are one of the high-nutrient-value aquatic commodities whose nutritional content can be influenced by the environmental conditions of their habitat. This study aims to compare the lipid content of cultivated and wild oysters (*Saccostrea* sp.), as well as assess water quality conditions in both habitats in the waters of Lhokseumawe City. The research was conducted in July 2026 with sample collection at two stations: cultivation area and natural habitat area. Lipid content analysis was carried out using the Soxhlet extraction method with n-hexane as solvent, while measured water quality parameters included temperature, salinity, pH, and dissolved oxygen (DO) Biochemical Oxygen Demand (BOD). The results showed that the average lipid content of cultivated oysters was 10.95%, higher compared to wild oysters at 10.14%, but statistical analysis indicated this difference was not significant at the 95% confidence level ($p>0.05$). Water quality measurements recorded higher values of salinity, pH, and dissolved oxygen in the cultivation habitat, while water temperature was higher in the natural habitat. These findings indicate that although there is a descriptive tendency for higher lipid content in cultivated oysters, differences in environmental characteristics between the two locations have not yet produced a significant effect on oyster lipid content. This study is expected to serve as basic information regarding the nutritional quality of oysters and support efforts to manage and develop oyster resources in the coastal area of Lhokseumawe City.

Keywords: cultivated oysters, lipid content, *Saccostrea* sp, water quality, wild oysters.

RINGKASAN

FAISAL ARBY YAHDA RAMBE. Uji Perbedaan Kandungan Lemak pada Tiram (*Saccostrea* sp.) yang Dibudidaya dan Tiram Hidup Alami di Kota Lhokseumawe. Dibimbing oleh ERNIATI dan YUDHO ANDIKA.

Penelitian ini bertujuan untuk membandingkan kandungan lemak tiram budidaya dan tiram hidup alami serta mengkaji kondisi kualitas air habitatnya di perairan Kota Lhokseumawe. Analisis kandungan lemak dilakukan menggunakan metode soxhlet, sedangkan parameter kualitas air yang diukur meliputi suhu, salinitas, pH, oksigen terlarut (DO), dan kebutuhan oksigen biokimia (BOD). Hasil penelitian menunjukkan bahwa rata-rata kandungan lemak tiram budidaya sebesar 10,95%, lebih tinggi dibandingkan tiram alami sebesar 10,14%. Namun, hasil uji statistik menunjukkan bahwa perbedaan tersebut tidak signifikan ($p > 0,05$). Kondisi kualitas air pada habitat budidaya menunjukkan nilai salinitas, pH, dan DO yang lebih tinggi dibandingkan habitat alami, sedangkan suhu lebih tinggi pada habitat alami. Secara umum, tiram budidaya memiliki kandungan lemak yang cenderung lebih tinggi dibandingkan tiram alami, tetapi perbedaan kondisi habitat belum memberikan pengaruh yang signifikan terhadap kandungan lemak tiram di perairan Kota Lhokseumawe.

Kata kunci: Kandungan lemak., Kualitas air, *Saccostrea* sp, Tiram alami, Tiram budidaya.