

VEVILIA TRI AMANDA NIM. 21.03.4.1.1.00052. Analisis Kandungan Nutrisi Mikroalga *Thalassiosira* sp. Dalam Media Kultur Yang Berbeda. Dibawah bimbingan **Novi Indriyawati., S.kel., M.Si.**

ABSTRAK

Mikroalga *Thalassiosira* sp. diakui sebagai sumber bioaktif krusial, utamanya yaitu protein, lipid, dan karbohidrat. Penelitian ini bertujuan untuk mengidentifikasi media kultur yang optimal untuk peningkatan biomassa dan kandungan nutrisi pada mikroalga. Pengumpulan data dilakukan menggunakan Rancangan Acak Kelompok (RAK) dengan tiga perlakuan dan tiga ulangan. Analisis nutrisi mencakup kadar air, kadar lemak, kadar abu, kadar protein, dan kadar karbohidrat. Data di analisis secara statistik dengan menggunakan One-Way Anova, dan dilanjutkan dengan Uji Tukey HSD. Hasil penelitian menunjukkan adanya perbedaan signifikan dalam kandungan nutrisi *Thalassiosira* sp. antar media kultur ($p\text{-value} < 0.05$). Rata-rata kandungan protein tertinggi ditemukan pada media air laut steril (PA) sebesar 30,42%. Sementara itu, media air laut tidak steril (PC) menghasilkan rata-rata kadar lemak tertinggi 24,33% dan perlakuan media air buatan (PB) memperoleh kadar abu tertinggi 2,44%. Kesimpulan penelitian ini adalah media air laut PA merupakan media terbaik untuk memaksimalkan kandungan nutrisi terutama protein pada *Thalassiosira* sp. dengan kondisi kultur yang terkontrol.

Kata Kunci: *Thalassiosira* sp., nutrisi, media kultur

VEVILIA TRI AMANDA NIM. 21.03.4.1.1.00052. Analysis of the Nutritional Content of *Thalassiosira* sp. Microalgae in Different Culture Media. Under the guidance of **Novi Indriyawati., S.kel., M.Si.**

ABSTRACT

Thalassiosira sp. microalgae are recognized as a crucial source of bioactive compounds, primarily protein, lipids, and carbohydrates. This study aims to identify the optimal culture medium to enhance biomass and nutritional content in *Thalassiosira* sp. Data were collected using a Randomized Block Design (RBD) with three treatments and three replications. Nutritional analysis included moisture content, lipid content, ash content, protein content, and carbohydrate content. The data were statistically analyzed using One-Way ANOVA, followed by Tukey's HSD test. The results showed significant differences in the nutritional content of *Thalassiosira* sp. across the culture media (p-value < 0.05). The highest average protein content was found in the sterile seawater medium (PA) at 30.42%. Meanwhile, the non-sterile seawater medium (PC) produced the highest average lipid content (24.33%), and the artificial seawater medium (PB) showed the highest ash content (2.44%). In conclusion, the PA medium was the most effective in maximizing the nutritional content, particularly protein, in *Thalassiosira* sp. under controlled culture conditions.

Keywords: *Thalassiosira* sp., nutrition, culture media