

Pengaruh Lama Fermentasi *Sargassum hystrix* dengan *Lactobacillus plantarum* terhadap Kadar Proksimat dan Karakteristik Sensoris

Rumput laut *Sargassum hystrix* yang berpotensi dikembangkan menjadi pangan fungsional masih terkendala bau amis sehingga dapat dilakukan fermentasi untuk mengurangnya. Penelitian ini bertujuan untuk mengetahui pengaruh lama fermentasi *S. hystrix* dengan *Lactobacillus plantarum* terhadap kadar proksimat dan karakteristik sensoris produk. Penelitian menggunakan rancangan acak lengkap dengan lima perlakuan (kontrol tanpa bakteri, fermentasi 1, 2, 3, dan 4 hari) dan tiga ulangan. Parameter yang diamati meliputi kadar proksimat (air, abu, protein, lemak, dan karbohidrat), karakteristik sensoris (aroma, rasa, warna) dengan *Quantitative Descriptive Analysis* (QDA), serta uji hedonik. Hasil penelitian menunjukkan bahwa lama fermentasi berpengaruh nyata ($P < 0,05$) terhadap kadar air, abu, dan lemak, serta perubahan karakteristik sensoris. Lama fermentasi yang lebih panjang cenderung menurunkan aroma amis, meningkatkan keasaman rasa, serta mencerahkan warna produk. Perlakuan fermentasi selama 4 hari menghasilkan nilai hedonik tertinggi secara keseluruhan, menunjukkan penerimaan sensoris terbaik. Temuan ini menunjukkan bahwa fermentasi selama 4 hari berpotensi menghasilkan produk rumput laut dengan karakteristik fungsional dan sensoris yang lebih unggul.

Kata kunci: fermentasi, *Sargassum hystrix*, *Lactobacillus plantarum*, kadar proksimat, karakteristik sensoris

ABSTRACT

The Effect of *Sargassum hystrix* Fermentation Duration with *Lactobacillus plantarum* on the Proximate Content and Sensory Characteristics

Sargassum hystrix seaweed, which has the potential to be developed into functional food, is still hampered by its fishy smell, so fermentation can be carried out to reduce it. This study aimed to determine the effect of fermentation duration of *S. hystrix* using *Lactobacillus plantarum* on its proximate composition and sensory characteristics. The study employed a completely randomized design with five treatments (control without bacteria, fermentation for 1, 2, 3, and 4 days) and three replications. The observed parameters included proximate composition (moisture, ash, protein, fat, and carbohydrate content), sensory characteristics (aroma, taste, color) assessed by Quantitative Descriptive Analysis (QDA), and hedonic test. The results showed that fermentation duration significantly affected ($P < 0.05$) moisture, ash, and fat contents, and had a notable impact on sensory attributes. Longer fermentation durations reduced the fishy odor, enhanced acidity, and brightened the color. Four-day fermentation yielded the highest overall hedonic score, indicating superior sensory acceptance. These findings suggest that a 4-day fermentation period produces a seaweed powder product with improved functional and sensory qualities.

Keywords: fermentation, *Sargassum hystrix*, *Lactobacillus plantarum*, proximate composition, sensory characteristics