

RINGKASAN

MARIA VERONIKA AZA (20390016). Pengaruh Persentase Tepung Rumput Laut Jenis *Kappaphycus alvarezii* Terhadap Karakteristik Roti Manis. Yunaldi H. Teffu, S.Pi, M.Si sebagai Pembimbing I dan Dewi S. Gadi, S.Pi., M.Si sebagai Pembimbing II. Program Studi Teknologi Hasil Perikanan, Fakultas Perikanan dan Ilmu Kelautan, Universitas Kristen Artha Wacana, Kupang.

Rumput laut merah *Kappaphycus alvarezii* merupakan komoditas unggulan Indonesia yang banyak dimanfaatkan sebagai sumber karagenan dan memiliki kandungan gizi tinggi, terutama serat pangan dan mineral. Di sisi lain, tingkat konsumsi serat masyarakat Indonesia masih tergolong rendah. Oleh karena itu, diperlukan inovasi pangan yang tidak hanya digemari masyarakat tetapi juga bernilai gizi tinggi, salah satunya melalui fortifikasi rumput laut pada produk roti manis. Penelitian ini bertujuan untuk menganalisis pengaruh fortifikasi tepung rumput laut jenis *Kappaphycus alvarezii* terhadap karakteristik organoleptik, fisik, dan kimia roti manis. Penelitian dilaksanakan pada bulan September-Oktober 2025 menggunakan Rancangan Acak Lengkap (RAL) dengan 5 perlakuan dan 2 ulangan, yaitu penambahan tepung rumput laut sebesar 0% (P0), 1,17% (P1), 2,33% (P2), 3,50% (P3), dan 4,67% (P4). Parameter yang diuji meliputi sifat organoleptik (warna, bau, tekstur, dan rasa) dengan 30 panelis semi-terlatih, uji kadar air, kadar abu, serta daya kembang roti. Data dianalisis menggunakan ANOVA, dan dilanjutkan dengan uji BNJ apabila terdapat perbedaan nyata. Hasil penelitian menunjukkan bahwa Peresentase tepung rumput laut berpengaruh nyata terhadap warna dan kadar air roti manis Kadar Abu juga, tetapi tidak berpengaruh nyata terhadap bau, tekstur, rasa, dan kadar abu. Nilai kesukaan panelis tertinggi secara umum diperoleh pada perlakuan P3, yang menunjukkan keseimbangan terbaik antara karakteristik sensori dan fisik roti. Seluruh perlakuan memenuhi standar mutu roti manis berdasarkan SNI nomor 8372:2018 khususnya pada parameter kadar air dan kadar abu. Secara keseluruhan, dapat disimpulkan bahwa tepung rumput laut *Kappaphycus alvarezii* berpotensi digunakan sebagai bahan fortifikasi pada roti manis untuk meningkatkan nilai fungsional pangan tanpa menurunkan tingkat penerimaan konsumen, dengan konsentrasi optimum pada perlakuan menengah.

Kata Kunci: Roti manis, tepung rumput laut, *Kappaphycus alvarezii*, organoleptik

SUMMARY

MARIA VERONIKA AZA (20390016). *The Percentage of Dried Seaweed Flour of *Kappaphycus alvarezii* on the Characteristics of Sweet Bread*. YUNIALDI H. TEFFU, S.Pi., M.Si as Supervised I and DEWI S. GADI, S.Pi, M.Si as Supervisor II. Study Program of Fishery Product Technology, Faculty of Fisheries and Marine Sciences, Artha Wacana Christian University, Kupang.

Red seaweed *Kappaphycus alvarezii* is one of Indonesia's leading commodities widely utilized as a source of carrageenan and is rich in nutrients, particularly dietary fiber and minerals. However, dietary fiber consumption among the Indonesian population remains relatively low. Therefore, food innovation is needed to provide products that are not only widely accepted by consumers but also nutritionally beneficial, one of which is through seaweed fortification in sweet bread products. This study aimed to analyze the effect of fortification with dried *Kappaphycus alvarezii* seaweed flour on the organoleptic, physical, and chemical characteristics of sweet bread. The research was conducted from September to October 2025 using a Completely Randomized Design (CRD) with five treatments and two replications, consisting of seaweed flour addition at levels of 0% (P0), 1.17% (P1), 2.33% (P2), 3.50% (P3), and 4.67% (P4). The parameters observed included organoleptic properties (color, aroma, texture, and taste) evaluated by 30 semi-trained panelists, proximate analysis consisting of moisture content and ash content, as well as bread expansion capacity. Data were analyzed using Analysis of Variance (ANOVA) and further tested using the Honestly Significant Difference (HSD) test when significant differences were detected. The results showed that seaweed flour fortification had a significant effect on the color and moisture content of sweet bread, but no significant effect on aroma, texture, taste, and ash content. The highest overall panelist acceptance was observed in treatment P3, indicating the best balance between sensory and physical characteristics. All treatments met the quality standards for sweet bread based on the Indonesian National Standard (SNI), particularly for moisture and ash content. In conclusion, dried *Kappaphycus alvarezii* seaweed flour has strong potential as a fortification ingredient in sweet bread to enhance its functional value without reducing consumer acceptance, with the optimal concentration found at moderate fortification levels.

Keywords: sweet bread, seaweed flour, *Kappaphycus alvarezii*, organoleptic