

Rizki Sintasari, NPM 220351100057. Pengaruh Formulasi Tepung Rumput Laut (*Eucheuma cottonii*) Dan Tepung Ubi Ungu (*Ipomoea batatas L*) Terhadap Karakteristik Cookies. Dibawah bimbingan bapak Dr. Hafiludin, S. Pi., M. Si

ABSTRAK

Rumput laut (*Eucheuma cottonii*) merupakan komoditas perikanan yang kaya serat dan mineral, sedangkan ubi ungu (*Ipomoea batatas L.*) mengandung antosianin sebagai antioksidan alami, sehingga keduanya berpotensi dikembangkan sebagai bahan pangan fungsional dalam produk cookies. Penelitian ini bertujuan untuk menganalisis pengaruh formulasi tepung rumput laut dan tepung ubi ungu terhadap karakteristik sensori, kimia, dan fisik cookies. Tepung *E. cottonii* yang digunakan sebagai bahan baku dikarakterisasi melalui analisis proksimat dengan hasil kadar air 1,87%, kadar abu 30,90%, kadar serat kasar 70,25%, kadar lemak 5,71%, kadar protein 5,71% dan kadar karbohidrat 55,97%. Penelitian ini menggunakan empat perlakuan, yaitu F0 (0%), F1 (2,5%), F2 (5%), dan F3 (10%) penambahan tepung rumput laut *E. cottonii* dengan tepung ubi ungu sebesar 4% di setiap perlakuan. Hasil penelitian menunjukkan bahwa perbedaan formulasi memberikan pengaruh nyata ($p < 0,05$) pada karakteristik sensori rasa, aroma dan tekstur, sedangkan warna tidak berpengaruh nyata ($p > 0,05$). Pada karakteristik kimia, kadar air tidak berpengaruh nyata ($p > 0,05$) dengan kisaran 0,80–1,05%, sedangkan kadar abu, lemak, serat kasar, protein, dan karbohidrat berpengaruh nyata ($p < 0,05$), dengan nilai masing-masing berkisar antara 1,97–6,27%; 19,46–27,81; 27,81%, 77,56–84,35%; 5,98–6,28%, dan 59,44–69,04%. Pada karakteristik fisik, peningkatan konsentrasi tepung *E. cottonii* berpengaruh nyata ($p < 0,05$) terhadap nilai *hardness* (1143–1854,23), namun tidak berpengaruh nyata ($p > 0,05$) terhadap *fracturability* (1012,85–256,54). formulasi terbaik berdasarkan penerimaan panelis adalah F1, sehingga berpotensi dikembangkan sebagai cookies fungsional.

Kata kunci: *Eucheuma cottonii*, *Ipomoea batatas L*, cookies, pangan fungsional

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ABSTRACT

Seaweed (*Eucheuma cottonii*) is a fisheries commodity rich in fiber and minerals, while purple sweet potato (*Ipomoea batatas L.*) contains anthocyanins as natural antioxidants; therefore, both have potential to be developed as functional food ingredients in cookies. This study aimed to analyze the effect of seaweed flour and purple sweet potato flour formulation on the sensory, chemical, and physical characteristics of cookies. The *E. cottonii* flour used as raw material was characterized through proximate analysis, yielding moisture content of 1.87%, ash 30.90%, crude fiber 70.25%, fat 5.71%, protein 5.71%, and carbohydrates 55.97%. This study employed four treatments: F0 (0%), F1 (2.5%), F2 (5%), and F3 (10%) addition of *E. cottonii* flour with 4% purple sweet potato flour in each treatment. The results showed that differences in formulation had a significant effect ($p < 0.05$) on sensory characteristics of taste, aroma, and texture, while color was not significantly affected ($p > 0.05$). In chemical characteristics, moisture content was not significantly affected ($p > 0.05$) with a range of 0.80–1.05%, while ash, fat, crude fiber, protein, and carbohydrate contents were significantly affected ($p < 0.05$), with respective ranges of 1.97–6.27%; 19.46–27.81%; 77.56–84.35%; 5.98–6.28%; and 59.44–69.04%. In physical characteristics, increasing the concentration of *E. cottonii* flour had a significant effect ($p < 0.05$) on *hardness* values (1143–1854.23), but had no significant ($p > 0.05$) effect on *fracturability* (1012.85–256.54). The best formulation based on panelist acceptance was F1, indicating its potential to be developed as a functional cookie product.

Keywords: *Eucheuma cottonii*, *Ipomoea batatas L.*, cookies, functional food.