

ABSTRAK

(Luthfia Ristyaningsih. 26060122130052. Pengaruh Penambahan Tepung Rumput Laut *Eucheuma spinosum* Terhadap Karakteristik dan Kadar Serat Pangan *Brownies* Panggang. Eko Nurcahya Dewi dan Romadhon).

Rumput laut *E. spinosum* memiliki kandungan serat pangan yang tinggi sehingga berpotensi digunakan sebagai bahan fortifikasi pada produk *bakery* seperti *brownies* panggang yang umumnya rendah serat karena hanya mengandalkan tepung terigu. Penelitian ini bertujuan untuk mengetahui pengaruh perbedaan konsentrasi penambahan tepung *E. spinosum* terhadap karakteristik fisik, kimia, dan sensori *brownies* panggang, serta menentukan konsentrasi terbaik yang menghasilkan mutu optimal. Penelitian menggunakan metode eksperimen dengan perlakuan penambahan tepung *E. spinosum* sebanyak 0%, 2%, 4%, dan 6% dengan tiga kali pengulangan. Parameter pengujian meliputi analisis proksimat, serat pangan, *hardness*, warna, dan hedonik. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan *Analysis of Variance* (ANOVA) dilanjutkan dengan Uji Beda Nyata Jujur untuk data parametrik dan Kruskal-Wallis untuk nonparametrik. Hasil penelitian menunjukkan bahwa penambahan tepung *E. spinosum* memberikan pengaruh terhadap karakteristik *brownies* panggang, terutama pada kadar serat pangan dan *hardness*. Perlakuan terbaik diperoleh pada penambahan tepung *E. spinosum* 4% (B), dengan karakteristik produk, meliputi kadar serat pangan total (4,24%), kadar air (26,50%), abu (2,66%), protein (3,65%), lemak (21,84%), karbohidrat (45,35%), *hardness* (1534,82 gf) dan warna dengan nilai tingkat kecerahan (L^*) sebesar 18,11, kemerahan (a^*) 14,67 dan kekuningan (b^*) 6,5, serta uji hedonik dengan B(4%) sebagai perlakuan terbaik dengan selang kepercayaan $4,196 < \mu < 4,204$. Penambahan tepung *E. spinosum* terbukti dapat meningkatkan nilai gizi *brownies* tanpa mengurangi tingkat penerimaan konsumen secara signifikan.

Kata kunci : *E. spinosum*, Serat Pangan, *Brownies* Panggang, Nilai Gizi.

ABSTRACT

(Luthfia Ristyaningsih. 26060122130052. *The Effect of Adding Eucheuma spinosum* Seaweed Flour on the Characteristics and Dietary Fiber Content of Baked Brownies. Eko Nurcahya Dewi and Romadhon).

E. spinosum is a red seaweed with a high dietary fiber content, making it a potential fortification ingredient for bakery products such as baked brownies, which are typically low in fiber because they rely mainly on wheat flour. This study aimed to determine the effect of varying concentrations of *E. spinosum* flour on the physical, chemical, and sensory characteristics of baked brownies and to identify the optimal concentration for the best quality product. An experimental method was employed, involving the addition of *E. spinosum* flour at levels of 0%, 2%, 4%, and 6%, with three replications. Testing parameters included proximate analysis, dietary fiber content, hardness, color, and hedonic attributes. The study utilized a Completely Randomized Design (CRD) with Analysis of Variance (ANOVA), followed by the Honestly Significant Difference (HSD) test for parametric data and the Kruskal-Wallis test for non-parametric data. The results indicated that the addition of *E. spinosum* flour influenced the characteristics of the baked brownies, particularly regarding dietary fiber content and hardness. The best results were obtained with the addition of 4% *E. spinosum* flour (Treatment B). The product characteristics included total dietary fiber (4.24%), moisture content (26.50%), ash (2.66%), protein (3.65%), fat (21.84%), and carbohydrates (45.35%), with a hardness of 1534.82 gf and color values of $L^* : 18.11$, $a^* : 14.67$, and $b^* : 6.5$. Hedonic testing identified Treatment B (4%) as the best treatment, with a confidence interval of $4.196 < \mu < 4.204$. The addition of *E. spinosum* flour was shown to enhance the nutritional value of the brownies without significantly compromising consumer acceptance.

Keywords : *E. spinosum*, dietary fiber, baked brownies, nutritional value.