

KAJIAN KARAKTERISTIK NILAI GIZI BISKUIT KURMA BERBASIS *MOCAF* MELALUI FORTIFIKASI KELOR DAN RUMPUT LAUT

(The Study of The Fortification Moringa Leaf Flour and Seaweed to The Nutrition Quality of Garibaldi Modified Cassava Biscuits)

Ilham Wahyudi^{1)*}, Satrijo Saloko²⁾, I Wayan Sweca Yasa³⁾

¹⁾Mahasiswa Fakultas Teknologi Pangan dan Agroindustri Universitas Mataram

²⁾Staf Pengajar Fakultas Teknologi Pangan dan Agroindustri Universitas Mataram

Jln. Majapahit No. 62, Mataram 83125

*Email: ilhamwahyudi093@gmail.com

ABSTRACT

The reaserch aim was to investigate the appropriate proportion of Moringa leaf and seaweed flour to improve the nutrition quality of Garibaldi Biscuits made from cassava flour. The experiment was carried out in laboratory and arranged with Completely Randomized Block Design (CRBD) of a single factor with three replications of the combination of Moringa leaf and seaweed flour fortification to the biscuit formula. The treatments were the fortification of Moringa leaf flour 5%, seaweed flour 0%, and wheat flour 95% (F1), Moringa leaf flour 5%, seaweed flour 0%, and modified cassava flour 95% (F2), Moringa leaf flour 3%, seaweed flour 12%, and modified cassava flour 85% (F3), Moringa leaf flour 6%, seaweed flour 9%, and modified cassava flour 85% (F4), Moringa leaf flour 9%, seaweed flour 6%, and modified cassava flour 85% (F5), Moringa leaf flour 12%, seaweed flour 3%, and modified cassava flour 85% (F6). The chemical characteristics of the biscuits (the moisture, ash, lipid, protein, crude fiber and antioxidant activity) were evaluated. The physical characteristic of the lightness and °Hue of the biscuit colour were also determined. The sensory attributes of the taste, aroma, colour and texture were evaluated with scoring and hedonic test. Data was analyzed with analyses of variance at 5 percent level of significancy. The post hoc test was done with Least Significant Difference at the same level of significancy. The result showed that the fortification of Moringa leaf and seaweed flour did not affect on the moisture content and the antioxidant activity of the biscuit, but had significantly affected on the other quality parameters of the biscuits. The fortification of Moringa leaf flour 3%, seaweed flour 12%, and modified cassava flour 85% (F3) produced the best quality attribute of the biscuits with moisture, ash, lipid, crude fiber, carbohydrate, protein, and antioxidant activity of 4.90%, 1.82%, 23.51%, 4.87%, 66.32%, 3.42%, and 85.34%, respectively.

Keywords: biscuits, fortification, moringa flour, seaweed flour

ABSTRAK

Penelitian ini bertujuan untuk mengetahui proporsi kelor dan rumput laut terhadap kualitas gizi biskuit kurma berbasis *mocaf*. Penelitian ini dilaksanakan di laboratorium dengan menggunakan rancangan acak kelompok (RAK) faktor tunggal yang terdiri dari 6 perlakuan dan tiga ulangan. Faktor perlakuan meliputi konsentrasi tepung terigu: tepung kelor: tepung rumput laut yaitu F1 (95%: 5%: 0%); dan perlakuan *mocaf*: tepung kelor: tepung rumput laut yaitu F2 (95%: 5%: 0%); F3 (85%: 3%: 12%); F4 (85%: 6%: 9%); F5 (85%: 9%: 6%); F6 (85%: 12%: 3%). Parameter kualitas biskuit yang diukur adalah kualitas kimia yang meliputi kadar air, kadar abu, kadar lemak, kadar protein, kadar serat, kadar karbohidrat dan aktivitas antioksidan, kualitas fisik meliputi warna biskuit, dan sifat organoleptik (rasa, aroma warna dan tekstur). Data dianalisis menggunakan analisis keragaman pada taraf nyata 5% dan uji lanjut menggunakan uji Beda Nyata Terkecil (BNT) pada taraf nyata yang sama. Hasil penelitian menunjukkan bahwa konsentrasi tepung daun kelor dan tepung rumput laut tidak memberikan pengaruh nyata terhadap kadar air, dan aktivitas antioksidan, namun memberikan pengaruh nyata terhadap kadar abu, kadar lemak, kadar protein, kadar serat kasar, kadar karbohidrat, warna, serta mutu organoleptik baik hedonik maupun skoring. Perlakuan F3 merupakan perlakuan terbaik biskuit dengan kadar air 4,90%; kadar abu 1,82; kadar lemak 23,51%; kadar serat 4,87%; kadar karbohidrat 66,32%; kadar protein 3,42% dan kadar antioksidan 85,34%; L* 50,02; °Hue 137,70; serta mutu organoleptik (rasa, warna, aroma dan tekstur) pada tingkat kesukaan panelis yaitu suka.

Kata kunci: biskuit, fortifikasi, tepung kelor, tepung rumput laut