

**PENGARUH PERBANDINGAN TEPUNG KOMPOSIT
TEMPE SPIRULINA (*Spirulina Sp.*) DAN MOCAF (*Modified
Cassava Flour*) TERHADAP KARAKTERISTIK *COOKIES***



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KOMPOSIT TEMPE SPIRULINA (*Spirulina Sp.*)
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TERHADAP KARAKTERISTIK *COOKIES***

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ABSTRAK

Cookies dengan perbandingan tepung tempe spirulina dan mocaf dapat menjadi alternatif camilan tinggi protein yang menarik bagi konsumen. Penelitian ini dilakukan dengan tujuan untuk mengetahui pengaruh perbandingan tepung tempe spirulina dan tepung mocaf terhadap karakteristik kimia, fisik, aktivitas antioksidan dan organoleptik *cookies*. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan lima perlakuan dan tiga kali ulangan. Analisis data menggunakan *Analysis Of Variance* (ANOVA) dan hasil yang berbeda nyata dilanjutkan dengan uji DNMRT (*Duncan's New Multiple Range*) pada taraf 5%. Analisis yang digunakan meliputi kadar air, kadar abu, kadar protein, kadar lemak, kadar serat kasar, karbohidrat by difference, kekerasan, dan uji organoleptik hedonik (warna, aroma, rasa, tekstur) oleh 30 panelis semi terlatih. Perlakuan terbaik berdasarkan kombinasi mutu kimia, fisik, dan sensori didapat pada perlakuan C dengan perbandingan tepung mocaf dan tepung tempe spirulina (70%:30%) yang menghasilkan kadar air 3,81%, kadar abu 1,00 %, protein 13,77%, lemak 25,27%, serat kasar 2,69%, karbohidrat 56,14 %, serta skor organoleptik warna 3,67, aroma 3,70, rasa 3,53, tekstur 3,33 (skala 1-5). Formulasi ini dinilai optimal karena menawarkan keseimbangan gizi dan penerimaan konsumen.

Kata kunci: Bebas Gluten, *Cookies*, Karakteristik, Tepung mocaf, Tepung Tempe spirulina

**THE EFFECT OF COMPOSITE FLOUR
MIXTURES OF TEMPEH SPIRULINA (*Spirulina*
Sp.) AND MOCAF (Modified Cassava Flour) ON
COOKIE CHARACTERISTICS**

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ABSTRACT

Cookies made with a combination of spirulina tempeh flour and mocaf can be an attractive high-protein snack alternative for consumers. This study aimed to determine the effect of the combination of spirulina tempeh flour and mocaf flour on the chemical, physical, antioxidant activity, and organoleptic characteristics of cookies. This study employed a completely randomized design (CRD) with five treatments and three replications. Data analysis utilized Analysis of Variance (ANOVA), and significantly different results were further analyzed using Duncan's New Multiple Range Test (DNMRT) at the 5% level. The analyses included moisture content, ash content, protein content, fat content, crude fiber content, carbohydrates by difference, hardness, and hedonic organoleptic testing (color, aroma, taste, texture) by 30 semi-trained panelists. The best treatment based on the combination of chemical, physical, and sensory quality was obtained in treatment C with a ratio of mocaf flour and spirulina tempeh flour (70%:30%), resulting in moisture content of 3.81%, ash content of 1.00%, protein of 13.77%, fat of 25.27%, crude fiber of 2.69%, carbohydrates of 56.14 %, and organoleptic scores of color 3.67, aroma 3.70, taste 3.53, and texture 3.33 (scale 1–5). This formulation is considered optimal as it offers a balance of nutritional value and consumer acceptance.

Keywords: Cookies, Characteristics, Gluten Free, Mocaf Flour, Spirulina Tempeh Flour