

**PENGARUH FORTIFIKASI TEPUNG DAUN KELOR TERHADAP
PENGARUH FORTIFIKASI TEPUNG DAUN KELOR TERHADAP MUTU *COOKIES*
SEBAGAI ALTERNATIF MP-ASI**

*THE EFFECT OF MORINGA LEAF FLOUR FORTIFICATION ON THE QUALITY OF COOKIES
AS A COMPLEMENTARY FOOD ALTERNATIVE*

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ABSTRACT

The aims of this studied was to determine the effect of Moringa leaf flour fortification on the quality of cookies as an alternative for complementary foods. This study used an experimental method of Completely Randomized Design (CRD) with a single factor, namely the concentration of moringa leaf flour, which consisted of 6 treatments including 0%, 1%, 3%, 5%, 7%, and 9% of moringa leaf flour. Each treatment was repeated 3 times, thus there were 18 experimental units. The parameters analysed were the chemical quality (the moisture, ash content, protein content, fat content, and carbohydrate content), and the organoleptic quality (texture, aroma, taste, and color). Data from the observations were analyzed using Analysis of Variance (ANOVA) analysis at the 5% level using Co-stat Software, and if there was a significant difference, further tests were carried out using the Honest Significant Difference (HSD) test. The results of this study showed that the fortification using moringa flour gave significant effect on the water content, ash content, protein content, fat content, carbohydrates. The fortification treatment also resulted in significantly different effect on the aroma, taste, and color parameters, but did not significantly affect the texture. The treatment with 3% Moringa leaf flour concentration was the best treatment, which produced cookies with the water content of 4,67%; the ash content of 1.98%; the protein content of 10.24%; the fat content of 32,07%; the carbohydrate content of 51,02%; and the texture which that preferred, the aroma, taste, and color that slightly preferred by the panelists.

Keywords: *fortification, cookies, complementary foods, and moringa leaf flour.*

ABSTRAK

Penelitian ini bertujuan untuk mengkaji pengaruh fortifikasi tepung daun kelor terhadap mutu *cookies* sebagai alternatif MP-ASI. Penelitian ini menggunakan metode eksperimental Rancangan Acak Lengkap (RAL) dengan faktor tunggal yaitu pengaruh konsentrasi tepung daun kelor terdiri atas 6 perlakuan antara lain tepung daun kelor 0%, 1%, 3%, 5%, 7%, dan 9%. Setiap perlakuan diulang sebanyak 3 kali sehingga diperoleh 18 unit percobaan. Parameter yang diuji dalam penelitian ini adalah mutu kimia (kadar air, kadar abu, kadar protein, kadar lemak, dan kadar karbohidrat), dan mutu organoleptik (tekstur, aroma, rasa, dan warna). Data hasil pengamatan dianalisis menggunakan analisis keragaman atau *Analysis of Variance* (ANOVA) pada taraf 5% menggunakan *Software Co-stat* dan apabila terdapat perbedaan nyata, maka dilakukan uji lanjut menggunakan uji Beda Nyata Jujur (BNJ). Hasil penelitian ini menunjukkan bahwa perlakuan fortifikasi daun kelor memberikan pengaruh yang signifikan terhadap kadar air, kadar abu, kadar protein, kadar lemak, kadar karbohidrat. Perlakuan fortifikasi daun kelor juga memberikan pengaruh yang berbeda nyata terhadap aroma, rasa, dan warna yang diuji secara hedonik dan skoring, tetapi tidak berbeda nyata pada tekstur. Perlakuan konsentrasi tepung daun kelor 7% merupakan perlakuan terbaik yang menghasilkan *cookies* MP-ASI dengan kadar air sebesar 4,67%; kadar abu 1,98%; kadar protein 10,24%; kadar lemak 32,07%; kadar karbohidrat 51,02%; tekstur yang disukai, aroma, rasa dan warna yang agak disukai panelis.

Kata kunci: fortifikasi, *cookies*, MP-ASI, dan tepung daun kelor