

## ABSTRACT

### **THE EFFECT OF CHAYA LEAF FLOUR (*Cnidoscolus aconitifolius*) SUBSTITUTION ON THE PHYSICOCHEMICAL AND SENSORY CHARACTERISTICS OF MOCAF COOKIES**

By

**MUHAMMAD HAFIZ FADHLURRAHMAN**

Cookies are generally made with wheat flour, which contains gluten. However, as an alternative, mocaf flour can be used to replace wheat flour. The use of chaya leaf flour as a substitute in mocaf cookies can increase iron mineral intake for consumers. This research aims to obtain a formulation of mocaf cookies with chaya leaf flour substitution that results in the best sensory properties according to panelists and to determine the nutritional content of the mocaf cookies with chaya leaf flour substitution in the best treatment. The research was designed using a Completely Randomized Block Design (CRBD) with 6 treatments and 4 replications. The treatments used in this study were the formulations of mocaf flour and chaya leaf flour in cookie-making, namely; P1 (100:0), P2 (96:4), P3 (92:8), P4 (88:12), P5 (84:16), P6 (80:20). The results of this research showed that the best mocaf cookie formulation with chaya leaf flour substitution according to the panelists was the treatment with 92% mocaf flour and 8% chaya leaf flour. This cookie was selected as the best treatment, receiving the highest preference scores among the other treatments in terms of color, taste, aroma, texture, and overall. The nutritional content of the best mocaf cookies with chaya leaf flour substitution (92% mocaf flour: 8% chaya leaf flour) includes an iron content of 47.38 mg/kg, protein content of 5.68%, fat content of 28.56%, carbohydrate content of 62.75%, ash content of 0.96%, and moisture content of 2.05%.

**Key words:** cookies, *Cnidoscolus aconitifolius*, sensory test, chaya leaf flour, and mocaf flour.

## ABSTRAK

### PENGARUH SUBSTITUSI TEPUNG DAUN CHAYA (*Cnidoscopus aconitifolius*) TERHADAP KARAKTERISTIK FISIK KIMIA DAN SENSORI *COOKIES* MOCAF

Oleh

**MUHAMMAD HAFIZ FADHLURRAHMAN**

*Cookies* umumnya dibuat dengan tepung terigu, yang memiliki kandungan gluten. Tetapi sebagai alternatif lain, tepung mocaf dapat digunakan menggantikan tepung terigu. Penggunaan tepung daun chaya sebagai substitusi dalam *cookies* mocaf dapat meningkatkan asupan mineral zat besi bagi yang mengkonsumsi. Penelitian ini bertujuan untuk memperoleh formulasi *cookies* mocaf substitusi tepung daun chaya yang menghasilkan sifat sensori terbaik menurut panelis dan mengetahui kandungan gizi *cookies* mocaf substitusi tepung daun chaya pada perlakuan terbaik. Penelitian ini disusun dengan Rancangan Acak Kelompok Lengkap (RAKL) dengan 6 perlakuan dan 4 ulangan. Perlakuan yang digunakan pada penelitian ini adalah formulasi tepung mocaf dan tepung daun chaya pada pembuatan *cookies* yaitu; P1 (100:0), P2 (96:4), P3 (92:8), P4 (88:12), P5 (84:16), P6 (80:20). Hasil penelitian ini menunjukkan bahwa Formulasi *cookies* mocaf substitusi tepung daun chaya terbaik menurut panelis adalah perlakuan tepung mocaf 92% dan tepung daun chaya 8%. *Cookies* ini terpilih sebagai perlakuan terbaik yang mendapatkan penilaian tingkat kesukaan terbaik diantara perlakuan lainnya pada parameter warna, rasa, aroma, tekstur, dan keseluruhan. Kandungan gizi *cookies* mocaf substitusi tepung daun chaya pada perlakuan terbaik (tepung mocaf 92% : tepung daun chaya 8%) meliputi kadar zat besi 47,38 mg/Kg, kadar protein 5,68%, kadar lemak 28,56%, kadar karbohidrat 62,75%, kadar abu 0,96%, dan kadar air 2,05%.

**Kata kunci:** *cookies*, *Cnidoscopus aconitifolius*, uji sensori, tepung daun chaya, tepung mocaf.