

PENGARUH SUBSTITUSI TEPUNG TERIGU DENGAN TEPUNG BONGGOL PISANG KEPOK TERHADAP ORGANOLEPTIK, VITAMIN C, DAN TOTAL FLAVONOID *COOKIES*

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Abstrak

Inflamasi merupakan respon organisme terhadap perubahan jaringan yang umumnya didasari oleh patogenesis penyakit. Fagositosis yang terjadi pada proses inflamasi akan merangsang peningkatan konsumsi oksigen dan menghasilkan oksigen reaktif. Tujuan penelitian ini untuk menganalisis pengaruh substitusi tepung bonggol pisang terhadap organoleptik, vitamin C, total flavonoid, menentukan formula terpilih serta menganalisis kandungan gizinya. Penelitian ini menggunakan studi eksperimental dengan metode Rancangan Acak Lengkap (RAL) dua faktor dengan dua kali pengulangan terdiri dari 4 taraf perlakuan, yaitu F1 (25%:75%), F2 (50%:50%), F3 (75%:25%), dan F4 (100%:0%). Hasil analisis menunjukkan bahwa substitusi tepung bonggol pisang berpengaruh nyata terhadap peningkatan kadar vitamin C ($p = 0,001$) dan total flavonoid ($p = 0,010$), berpengaruh nyata terhadap tingkat kesukaan panelis pada parameter aroma ($p = 0,026$), tekstur ($p = 0,044$) dan rasa ($p = 0,000$) namun tidak berpengaruh nyata terhadap parameter warna ($p = 0,086$). Formula terpilih adalah F2 yang mengandung kadar air (5,125%), kadar abu (4,33%), protein (5,095%), lemak (23,04%), karbohidrat (62,41%), vitamin C (33,86 mg/100 gram), dan total flavonoid (21,17 $\mu\text{g Qe/g}$).

Kata Kunci: *Cookies*, Flavonoid, Inflamasi, Tepung Bonggol Pisang Kepok, Vitamin C

EFFECT OF WHEAT FLOUR SUBSTITUTION WITH KEPOK BANANA BULBS FLOUR ON ORGANOLEPTIC, VITAMIN C, AND TOTAL FLAVONOID COOKIES

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Abstract

The flour made from kepok banana bulbs contains vitamin C and flavonoids, both of which possess anti-inflammatory properties that help combat oxidative stress caused by free radicals. The aim of this study was to analyze the effects of substituting kepok banana bulb flour on organoleptic characteristics, vitamin C, total flavonoid content, determine the optimal formula, and analyze its nutritional content. This research employed an experimental approach using a Completely Randomized Design (CRD) with two factors and two replications, comprising 4 treatment levels: F1 (25%:75%), F2 (50%:50%), F3 (75%:25%), and F4 (100%:0%). The results of the analysis showed that the substitution of kepok banana bulb flour significantly increased the levels of vitamin C ($p = 0.001$) and total flavonoids ($p = 0.010$). It also significantly influenced the preference levels of the panelists regarding aroma ($p = 0.026$), texture ($p = 0.044$), and taste ($p = 0.000$), but did not significantly affect the parameter of color ($p = 0.086$). The selected formula was F2, which contained moisture content (5.125%), ash content (4.33%), protein (5.095%), fat (23.04%), carbohydrates (62.41%), vitamin C (33.86 mg/100 grams), and total flavonoids (21.17 $\mu\text{g Qe/g}$).

Keywords: Cookies, Flavonoids, Inflammation, Kepok Banana Bulb Flour, Vitamin C