

ANALISIS KANDUNGAN KALIUM SERTA MAGNESIUM PADA *COOKIES* BERBASIS TEPUNG KACANG KEDELAI DAN TEPUNG SORGUM SEBAGAI ALTERNATIF MAKANAN SELINGAN HIPERTENSI

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Abstrak

Hipertensi merupakan masalah kesehatan dengan prevalensi tinggi di Indonesia. Pengembangan pangan selingan yang mengandung kalium dan magnesium merupakan salah satu upaya nonfarmakologis untuk membantu pengendalian tekanan darah. Penelitian bertujuan menganalisis kandungan proksimat, kalium, magnesium, dan sifat organoleptik *cookies* berbasis tepung kacang kedelai dan tepung sorgum bagi penderita hipertensi. Penelitian menggunakan Rancangan Acak Lengkap dengan tiga formulasi, yaitu F1 (60%:40%), F2 (50%:50%), dan F3 (40%:60%). Data kimia dianalisis menggunakan uji ANOVA dan uji Duncan, data organoleptik dianalisis menggunakan uji Kruskal–Wallis dan Mann–Whitney. Formula terbaik ditentukan menggunakan metode De Garmo. Formulasi berpengaruh signifikan terhadap energi, kadar abu, protein, lemak, karbohidrat, kalium, magnesium, serta warna, aroma, dan rasa ($p < 0,05$), tetapi tidak berpengaruh signifikan terhadap kadar air dan tekstur ($p > 0,05$). F2 menjadi formula terbaik dengan nilai produktivitas 0,880. Dalam satu takaran saji (50 g), F2 mengandung energi 238,68 kkal, protein 7,82 g, lemak 12,69 g, karbohidrat 23,32 g, kalium 360,11 mg, dan magnesium 73,95 mg. Takaran saji direkomendasikan untuk dikonsumsi dalam dua kali waktu selingan dengan pendamping buah tinggi kalium, seperti pisang, untuk membantu memenuhi kebutuhan kalium harian.

Kata Kunci: Hipertensi, Kalium, Magnesium, Tepung Kacang Kedelai, Tepung Sorgum

ANALYSIS OF POTASSIUM AND MAGNESIUM CONTENT IN COOKIES BASED ON SOYBEAN FLOUR AND SORGHUM FLOUR AS AN ALTERNATIVE SNACK FOR HYPERTENSION

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Abstract

Hypertension is a health issue with a high prevalence in Indonesia. Developing snack foods rich in potassium and magnesium is a non-pharmacological strategy to help manage blood pressure. This study aimed to analyze the proximate composition, potassium and magnesium contents, and organoleptic properties of cookies made from soybean and sorghum flours for individuals with hypertension. A Completely Randomized Design was employed with three formulations: F1 (60%:40%), F2 (50%:50%), and F3 (40%:60%). Chemical data were analyzed using ANOVA and Duncan's test, while organoleptic data were analyzed using the Kruskal-Wallis and Mann-Whitney tests. The best formulation was determined using the De Garmo method. The formulations significantly affected energy, ash, protein, fat, carbohydrate, potassium and magnesium contents, as well as color, aroma, and taste ($p < 0.05$), but did not significantly affect moisture content or texture ($p > 0.05$). F2 was identified as the best formula, with a productivity value of 0.880. In one serving (50 g), F2 contains 238.68 kcal of energy, 7.82 g protein, 12.69 g fat, 23.32 g carbohydrates, 360.11 mg potassium, and 73.95 mg magnesium. It is recommended that this serving be consumed across two snack occasions, accompanied by high-potassium fruits such as bananas, to help meet daily potassium requirements.

Keywords: Hypertension, Magnesium, Potassium, Sorghum Flour, Soybean Flour