PENGARUH PENAMBAHAN TEPUNG TAPIOKA TERHADAP KARAKTERISTIK HATI ANALOG BERBASIS TEPUNG BERAS HITAM DAN TEPUNG KEDELAI YANG DIAPLIKASIKAN PADA RENDANG

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FAKULTAS TEKNOLOGI PERTANIAN
UNIVERSITAS ANDALAS
PADANG
2026

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ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan tepung tapioka terhadap karakteristik fisikokimia dan organoleptik rendang hati analog serta menentukan konsentrasi tepung tapioka terbaik. Penelitian menggunakan Rancangan Acak Lengkap (RAL) dengan lima perlakuan penambahan tepung tapioka, yaitu A (0%), B (10%), C (15%), D (20%), dan E (25%), serta tiga kali ulangan. Data yang diperoleh dalam penelitian ini dianalisis secara statistik menggunakan ANOVA kemudian dilanjutkan dengan analisis Duncan's New Multiple Range Test (DNMRT) pada taraf 5%. Hasil penelitian menunjukkan bahwa penambahan tepung tapioka berpengaruh nyata terhadap kekerasan, kadar air, kadar abu, kadar lemak, kadar karbohidrat, daya serap minyak dan lemak, asam lemak bebas, serat pangan, dan tekstur organoleptik. Namun, tidak memberikan pengaruh signifikan terhadap kadar protein serta organoleptik warna, rasa, dan aroma. Perlakuan terbaik diperoleh pada perlakuan D dengan penambahan tepung tapioka 20% (10 g), yang menghasilkan nilai kekerasan 110,38 N/cm² mendekati produk komersial, kadar air 30,38%, kadar abu 2,23%, kadar protein 11,94%, kadar karbohidrat 35,36%, daya serap minyak dan lemak 14,85%, asam lemak bebas 0,71%, serat pangan 10,46%, serta nilai rata-rata warna 4,02 (suka), rasa 4,10 (suka), aroma 4,25 (suka), dan tekstur 3,79 (biasa).

Kata kunci: rendang hati analog, tepung beras hitam, tepung kedelai, tepung tapioka

THE EFFECT OF ADDING TAPIOCA FLOUR ON THE CHARACTERISTICS OF A RICE FLOUR-BASED LIVER ANALOG MADE WITH BLACK RICE FLOUR AND SOYBEAN FLOUR USED IN RENDANG

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ABSTRACT

This study aimed to determine the effect of adding tapioca flour on the physicochemical and organoleptic characteristics of analog liver rendang and to identify the optimal concentration of tapioca flour. The study used a completely randomized design (CRD) with five treatments of tapioca flour addition, namely A (0%), B (10%), C (15%), D (20%), and E (25%), as well as three replicates. The data obtained in this study were statistically analyzed using ANOVA, followed by Duncan's New Multiple Range Test (DNMRT) at the 5% level. The results showed that the addition of tapioca flour had a significant effect on hardness, moisture content, ash content, fat content, carbohydrate content, oil absorption, free fatty acids, dietary fiber, and organoleptic texture. However, it did not significantly affect protein content or the organoleptic attributes of color, taste, and aroma. The best results were obtained in treatment D with the addition of 20% tapioca flour (10 g), which yielded a hardness value of 110.38 N/cm² —close to that of commercial products—a moisture content of 30.38%, an ash content of 2.23%, a protein content of 11.94%, a carbohydrate content of 35.36%, oil and fat absorption of 14.85%, free fatty acids of 0.71%, dietary fiber of 10.46%, as well as average ratings of 4.02 (like) for color, 4.10 (like) for taste, 4.25 (like) for aroma, and 3.79 (average) for texture.

Keywords : analog liver rendang; black rice flour; soy flour; tapioca flour