

## **PENGARUH SUBSTITUSI TEPUNG KACANG HIJAU (*Vigna radiata*) TERHADAP KOMPOSISI KIMIA DAN KUALITAS SENSORIS BAKSO DAGING KELINCI**

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### **INTISARI**

Penelitian ini bertujuan untuk mengetahui pengaruh substitusi tepung kacang hijau (*Vigna radiata*) terhadap komposisi kimia dan kualitas sensoris bakso daging kelinci. Bahan yang digunakan dalam penelitian ini adalah daging kelinci, tepung tapioka, tepung kacang hijau, garam, bawang putih, bawang goreng, MSG, lada, *Sodium tripolyphosphate* (STPP), dan es batu. Parameter yang diamati pada penelitian ini yaitu komposisi kimia dan kualitas sensoris. Uji komposisi kimia yang dilakukan berupa kadar air, kadar protein, kadar lemak, kadar karbohidrat, kadar abu, kadar serat kasar, dan estimasi indeks glikemik. Uji kualitas sensoris meliputi warna, aroma, tekstur, rasa, dan daya terima. Data pada komposisi kimia dianalisis dengan *One Way Anova* dan diuji lanjut dengan *Duncan's New Multiple Range Test*, sedangkan pada kualitas sensoris menggunakan analisis *Kruskal-Wallis* dengan uji lanjut *Mann-Whitney* dengan level substitusi tepung kacang hijau yang terdiri atas lima perlakuan dengan level substitusi tepung tapioka dan tepung kacang hijau yang berbeda yaitu (P0) = 100%:0%; (P1) = 25%:75%; (P2) = 50%:50%; (P3) = 75%:25%; dan (P4) = 0%:100%. Substitusi tepung kacang hijau terhadap komposisi kimia berpengaruh signifikan ( $P < 0,05$ ) pada kadar air, kadar protein, kadar karbohidrat, serat kasar, dan estimasi indeks glikemik. Hasil terbaik didapatkan oleh level substitusi dengan tepung tapioka sebesar 0% dan tepung kacang hijau sebesar 100% yang menurunkan kadar air (P0: 65,62% dan P4: 62,29%), kadar karbohidrat (P0: 5,53% dan P4: 2,98%), dan estimasi indeks glikemik (P0: 70,40% dan P4: 46,39%), serta meningkatkan kadar protein (P0: 14,52% dan P4: 18,68%), dan serat kasar (P0: 4,77% dan P4: 7,10%). Substitusi tepung kacang hijau terhadap kualitas sensoris menghasilkan pengaruh signifikan ( $P < 0,05$ ) pada aroma, tekstur, rasa, dan daya terima. Hasil terbaik didapatkan oleh level substitusi dengan tepung tapioka sebesar 100% dan tepung kacang hijau sebesar 0% dengan kualitas sensoris pada parameter aroma yaitu 3,53, tekstur 3,4, rasa 3,78, dan daya terima 3,71. Kesimpulan dari penelitian pengaruh substitusi tepung kacang hijau terhadap komposisi kimia dan kualitas sensoris bakso daging kelinci didapatkan hasil terbaik pada level substitusi tepung tapioka sebesar 50% dan tepung kacang hijau sebesar 50% karena dapat meningkatkan komposisi kimia dan kualitas sensoris bakso daging kelinci.

Kata kunci : Bakso, Daging kelinci, Tepung kacang hijau, Tepung tapioka, Komposisi kimia, Kualitas sensoris.

## **EFFECT OF GREEN BEAN (*Vigna radiata*) FLOUR SUBSTITUTION ON CHEMICAL COMPOSITION AND SENSORY QUALITY RABBIT MEAT BALLS**

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### **ABSTRACT**

This research aims to determine the effect of substitution of green bean (*Vigna radiata*) flour on the chemical composition and sensory quality of rabbit meatballs. The ingredients used in this research were rabbit meat, tapioca flour, green bean flour, salt, garlic, fried onions, MSG, pepper, Sodium tripolyphosphate (STPP), and ice cubes. The parameters observed in this research are chemical composition and sensory quality. The chemical composition tests carried out include water content, protein content, fat content, carbohydrate content, ash content, crude fiber content, and estimated glycemic index. Sensory quality tests include color, aroma, texture, taste, and acceptability. Data on chemical composition were analyzed using One Way Anova and further tested using Duncan's New Multiple Range Test, while for sensory quality Kruskal-Wallis analysis with the Mann-Whitney advanced test with the level of substitution for green bean flour which consisted of five treatments with the level of substitution for tapioca flour. and different mung bean flour, namely (P0) = 100%:0%; (P1) = 25%:75%; (P2) = 50%:50%; (P3) = 75%:25%; and (P4) = 0%:100%. Substitution of green bean flour for chemical composition had a significant effect ( $P < 0.05$ ) on water content, protein content, carbohydrate content, crude fiber, and estimated glycemic index. The best results were obtained by the substitution level with tapioca flour at 0% and green bean flour at 100% which reduced water content (P0: 65.62% and P4: 62.29%), carbohydrate content (P0: 5.53% and P4: 2.98%), and estimated glycemic index (P0: 70.40% and P4: 46.39%), as well as increasing protein levels (P0: 14.52% and P4: 18.68%), and crude fiber (P0: 4.77% and P4: 7.10%). The substitution of mung bean flour for sensory quality had a significant effect ( $P < 0.05$ ) on aroma, texture, taste, and acceptability. The best results were obtained by the substitution level with tapioca flour at 100% and green bean flour at 0% with sensory quality in aroma parameters namely 3.53, texture 3.4, taste 3.78, and acceptability 3.71. The conclusion from research on the effect of green bean flour substitution on the chemical composition and sensory quality of rabbit meatballs was that the best results were obtained at a substitution level for tapioca flour of 50% and green bean flour of 50% because it could improve the chemical composition and sensory quality of rabbit meatballs.

**Keywords:** Meatball, Rabbit meat, Mung bean flour, Tapioca flour, Chemical composition, Sensory quality.