

**PENGARUH SUBSTITUSI TEPUNG TAPIOKA DENGAN TEPUNG
SUKUN (*Artocarpus communis*) TERHADAP KUALITAS
KIMIA DAN SENSORIS BAKSO DAGING
AYAM JAWA SUPER**

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INTISARI

Penelitian ini bertujuan untuk mengetahui kualitas kimia dan sensoris bakso ayam jawa super dengan substitusi filler tapioka menggunakan tepung sukun. Bahan pembuatan bakso ayam jawa super meliputi daging ayam joper, tepung tapioka, tepung sukun, STPP, putih telur, garam, gula, merica, bawang putih, dan es batu. Perlakuan dalam penelitian ini adalah substitusi tepung tapioka dengan tepung sukun dengan level substitusi 0, 25, 50, 75, dan 100%, dengan lima kali pengulangan. Parameter yang diamati yaitu kualitas kimia yaitu air, karbohidrat, protein, abu, serat pangan, lemak, dan estimasi indeks glikemik, serta sensoris yaitu warna, rasa, aroma, tekstur, dan daya terima. Analisis data uji kualitas kimia menggunakan analisis variansi Rancangan Acak Lengkap (RAL) pola searah dilanjutkan dengan uji *Duncans New Multiple Range Test* (DMRT). Data uji sensoris dianalisis dengan uji *Kruskal-Wallis Test* dilanjutkan dengan uji *Mann-Whitney*. Substitusi tepung sukun memberikan pengaruh ($P < 0,05$) pada kadar air, karbohidrat, protein, dan serat pangan. Didapatkan hasil kualitas kimia terbaik pada level substitusi 100% pada kadar air 65,82%, karbohidrat 8,94%, protein 13,56%, serat pangan 4,03%, dan estimasi indeks glikemik 50,15. Substitusi tepung sukun memberikan pengaruh ($P < 0,05$) pada warna, rasa, aroma, dan daya terima. Nilai kualitas sensoris terbaik pada level 0% yaitu warna 4,04, rasa 4,17, aroma 4,09, dan daya terima 4,20. Kesimpulan penelitian ini menunjukkan bahwa substitusi tepung sukun terhadap kualitas kimia dan kualitas sensoris terbaik terdapat pada level substitusi 25% karena meningkatkan kadar air, protein, dan serat pangan, menurunkan karbohidrat dan estimasi indeks glikemik, serta menghasilkan kualitas sensoris terbaik.

Kata kunci: Bakso, Daging Ayam Jawa Super, Tepung Tapioka, Tepung Sukun, Kualitas Kimia, Sensoris.

**THE EFFECT OF SUBSTITUTION TAPIOCA FLOUR WITH
BREADFRUIT FLOUR (*Artocarpus communis*) ON
CHEMICAL QUALITY AND SENSORY OF JAWA
SUPER CHICKEN MEATBALLS**

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ABSTRACT

This research aimed to determine the chemical and sensory quality of Jawa Super chicken meatballs with the substituting of tapioca filler using breadfruit flour. The ingredients for making super Javanese chicken meatballs include joper chicken meat, tapioca flour, breadfruit flour, STPP, egg white, salt, sugar, pepper, garlic, and ice cubes. The treatment in this research was the substitution of tapioca flour with breadfruit flour at substitution levels of 0, 25, 50, 75, and 100%, with five repetitions. The parameters observed were chemical quality, namely water, carbohydrates, protein, ash, dietary fiber, fat, and estimated glycemic index, as well as sensory qualities such as color, taste, aroma, texture, and acceptability. Analysis of the chemical quality test data was conducted using a unidirectional Completely Randomized Design (CRD) analysis of variance followed by the Duncans New Multiple Range Test (DMRT). Sensory test data were analyzed using the Kruskal-Wallis Test followed by the Mann-Whitney test. The substitution of breadfruit flour had a significant effect ($P < 0.05$) on water, carbohydrate, protein, and dietary fiber content. The best chemical quality results were obtained at a 100% substitution level, with a water content of 65.82%, carbohydrates at 8.94%, protein at 13.56%, dietary fiber at 4.03%, and an estimated glycemic index of 50.15. Substitution with breadfruit flour also had a significant effect ($P < 0.05$) on color, taste, aroma, and acceptability. The best sensory quality values were observed at the 0% substitution level, with color at 4.04, taste at 4.17, aroma at 4.09, and acceptability at 4.20. The conclusion of this research indicates that the optimal substitution level of breadfruit flour, resulting in the best chemical and sensory quality, is found at 25% substitution level. This level increases water, protein, and dietary fiber content, reduces carbohydrates and the estimated glycemic index, and produces the highest sensory quality.

Keywords: Meatballs, Jawa Super Chicken Meat, Tapioca Flour, Breadfruit Flour, Chemical Quality, Sensory.