

KARAKTERISTIK FISIK, KIMIA, DAN SENSORIS BAKSO NABATI BERBASIS JAMUR TIRAM (*Pleurotus ostreatus*) DAN JAMUR KUPING (*Auricularia auricula*)

INTISARI

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Konsumsi pangan nabati semakin mengalami peningkatan seiring dengan bertambahnya kesadaran masyarakat akan pentingnya kesehatan, keberlanjutan lingkungan, dan ketahanan pangan. Jamur tiram (*Pleurotus ostreatus*) merupakan komoditas yang dominan digunakan sebagai basis *meat analogue* karena struktur hifanya yang mampu mereplikasi jaringan fibrilar otot daging, namun menghasilkan tekstur yang cenderung lunak. Upaya penguatan matriks tekstur dilakukan melalui pemanfaatan jamur kuping (*Auricularia auricula*) yang memiliki karakteristik kartilaginous yang kaya akan beta-glukan. Kandungan tersebut dapat membentuk struktur matriks gel yang kokoh sekaligus meningkatkan nilai fungsional produk melalui kandungan serat pangan yang tinggi. Penelitian ini bertujuan untuk menganalisis pengaruh substitusi parsial jamur kuping terhadap karakteristik fisik, kimia, dan sensoris bakso nabati jamur tiram dengan matriks tepung tempe dan bubuk konjac. Penelitian dilaksanakan menggunakan Rancangan Acak Lengkap (RAL) satu faktorial dengan variasi tingkat substitusi parsial jamur kuping sebesar 0%, 15%, 25%, dan 35%. Parameter yang diuji meliputi karakteristik fisik (warna, tekstur, WHC), karakteristik kimia (proksimat dan serat pangan), serta karakteristik sensoris (uji hedonik).

Hasil penelitian menunjukkan bahwa peningkatan substitusi parsial jamur kuping menurunkan kecerahan produk. Secara kimiawi, peningkatan substitusi parsial tersebut meningkatkan kadar abu dan karbohidrat, namun menurunkan kadar lemak, protein, dan serat pangan. Secara sensoris, formulasi terbaik diperoleh pada formulasi dengan substitusi parsial jamur kuping sebanyak 15% dengan nilai kesukaan atribut keseluruhan sebesar $6,40 \pm 1,14$. Substitusi parsial jamur kuping meningkatkan fungsionalitas fisik bakso nabati, meskipun diperlukan metode analisis serat yang lebih spesifik untuk mendeteksi fraksi serat berat molekul rendah yang terbentuk selama proses produksi.

Kata Kunci: Bakso nabati, jamur tiram, jamur kuping, tepung tempe, bubuk konjac

**PHYSICAL, CHEMICAL, AND SENSORY PROPERTIES OF
PLANT-BASED MEATBALLS BASED ON OYSTER MUSHROOM
(*Pleurotus ostreatus*) AND WOOD EAR MUSHROOM (*Auricularia auricula*)**

ABSTRACT

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The consumption of plant-based foods is increasing alongside public awareness of health, environmental sustainability, and food security. Oyster mushroom (*Pleurotus ostreatus*) is a dominant commodity used as a base for meat analogues due to its hyphal structure, which can replicate the fibrillar network of muscle tissue; however, they often result in a relatively soft texture. To strengthen the textural matrix, wood ear mushroom (*Auricularia auricula*), which possesses cartilaginous characteristics and is rich in beta-glucan, was utilized. These components can form a firm gel matrix structure while simultaneously enhancing the product's functional value through high dietary fiber content. This study aims to analyze the effect of partial substitution of wood ear mushroom on the physical, chemical, and sensory characteristics of oyster mushroom plant-based meatballs within a matrix of tempeh flour and konjac powder. The research was conducted using a one-factorial Completely Randomized Design (CRD) with variations in the partial substitution levels of wood ear mushroom at 0%, 15%, 25%, and 35%. The parameters tested included physical characteristics (color, texture, WHC), chemical characteristics (proximate & dietary fiber), and sensory characteristics (hedonic test).

The results showed that increasing the partial substitution of wood ear mushrooms decreased product lightness. Chemically, the increase in wood ear mushrooms' partial substitution increased ash and carbohydrate content, but decreased fat, protein, and dietary fiber content. Sensorially, the best formulation was obtained in the formulation that utilized 15% partial substitution with an overall attribute liking score of 6.40 ± 1.14 . Partial substitution of wood ear mushrooms enhances the physical functionality of plant-based meatballs, although a more specific fiber analysis method is required to detect low-molecular-weight fiber fractions formed during the production process.

Keywords: Plant-based meatball, oyster mushroom, wood ear mushroom, tempeh flour, konjac powder