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Pengaruh Fortifikasi Tepung Daging Tuna Terhadap Karakteristik Fisik, Sensoris, Dan Gizi Beras Analog Porang
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Intisari

Pengaruh Fortifikasi Tepung Daging Tuna terhadap Karakteristik Fisik, Sensoris, dan Gizi Beras Analog Porang

Fortifikasi tepung daging tuna pada beras analog berbasis glukomanan porang berpotensi meningkatkan kandungan protein, tetapi penambahannya dapat memengaruhi karakteristik fisik dan penerimaan sensoris produk. Penelitian ini bertujuan menganalisis pengaruh fortifikasi tepung daging tuna terhadap karakteristik fisik dan sensoris serta kandungan gizi beras analog berbasis glukomanan porang. Tepung daging tuna ditambahkan pada konsentrasi 0%, 5%, 10%, 15%, 20%, dan 25%. Karakteristik fisik yang diamati meliputi dimensi bulir, densitas kamba, tekstur, ketahanan terhadap guncangan, warna, dan waktu rehidrasi. Evaluasi sensoris dilakukan menggunakan uji skoring dan hedonik, sedangkan analisis gizi dilakukan pada formula tanpa fortifikasi, formula terpilih, dan beras analog komersial. Hasil penelitian menunjukkan bahwa peningkatan konsentrasi tepung daging tuna cenderung menurunkan *hardness*, *crunchiness*, ketahanan bulir, dan kecerahan serta memperpanjang waktu rehidrasi. Intensitas *fishiness* meningkat, sedangkan penerimaan sensoris cenderung menurun pada konsentrasi fortifikasi yang lebih tinggi. Fortifikasi 5% menghasilkan penerimaan keseluruhan tertinggi di antara formula yang mengandung tepung tuna dan dipilih sebagai formula terpilih. Formula tersebut mengandung protein 13,46 g, serat pangan 44,89 g, fosfor 46,35 mg, magnesium 56,10 mg, dan zat besi 0,83 mg per 100 g. Fortifikasi tepung daging tuna sebesar 5% memberikan keseimbangan terbaik antara karakteristik fisik, penerimaan sensoris, dan peningkatan kandungan protein beras analog porang

Kata kunci: beras analog, fortifikasi, glukomanan porang, protein, tepung daging tuna

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Abstract

Effect of Tuna Meat Flour Fortification on Physic, Sensory, and Nutrition Characteristics of Porang Analog Rice

Tuna meat flour fortification in porang glucomannan-based analog rice has the potential to increase protein content, but its addition may affect the physical characteristics and sensory acceptance of the product. This study aimed to analyze the effect of tuna meat flour fortification on the physical and sensory characteristics and nutritional composition of porang glucomannan-based analog rice. Tuna meat flour was added at concentrations of 0%, 5%, 10%, 15%, 20%, and 25%. The physical characteristics evaluated included grain dimensions, bulk density, texture, resistance to shaking, color, and rehydration time. Sensory evaluation was conducted using scoring and hedonic tests, while nutritional analysis was performed on the unfortified formulation, selected formulation, and commercial analog rice. The results showed that increasing the concentration of tuna meat flour tended to decrease *hardness*, *crunchiness*, grain integrity, and lightness, while prolonging rehydration time. *Fishiness* intensity increased, whereas sensory acceptance tended to decrease at higher fortification levels. The 5% fortification level resulted in the highest overall acceptance among the tuna-fortified formulations and was selected as the optimal formulation. The selected formulation contained 13.46 g protein, 44.89 g dietary fiber, 46.35 mg phosphorus, 56.10 mg magnesium, and 0.83 mg iron per 100 g. Tuna meat flour fortification at 5% provided the best balance between physical characteristics, sensory acceptance, and increased protein content of porang analog rice.

Keywords**:** analog rice, fortification, porang glucomannan, protein, tuna meat flour