PENGARUH KORO PEDANG PUTIH (*Canavalia ensiformis* L.), KEDELAI (*Glycine max*), DAN TEPUNG TAPIOKA TERMODIFIKASI TERHADAP KARAKTERISTIK FISIK DAN SENSORIS ANALOG KEJU MOZZARELLA

INTISARI

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Keju mozzarella analog adalah produk serupa keju mozzarella yang diolah menggunakan bahan nabati sebagai pengganti protein hewani. Penelitian ini bertujuan untuk mengetahui pengaruh penambahan tepung tapioka termodifikasi serta rasio kacang koro pedang putih dan kedelai terhadap kualitas fisik, sensoris, dan kimiawi keju mozzarella analog. Tepung tapioka dan tapioka termodifikasi digunakan untuk meningkatkan kualitas tekstur, sedangkan koro pedang putih dan kedelai digunakan sebagai sumber protein nabati dengan tiga level kombinasi yang berbeda (100%:0%, 80%:20%, dan 60%:40%). Keju mozzarella analog dengan rasio penambahan pati dievaluasi berdasarkan analisis fisik (mencakup warna, titik leleh, kemuluran, tekstur), sedangkan untuk rasio penambahan kacang dianalisis berdasarkan analisis fisik dan sensoris. Formulasi terbaik yang dihasilkan, kemudian dianalisis proksimatnya. Berdasarkan hasil penelitian, rasio penambahan tepung berpengaruh terhadap sifat fisik keju mozzarella analog. Penambahan tepung tapioka termodifikasi menyebabkan semakin tinggi daya kohesif, kelengketan, daya lenting, titik leleh dan nilai pH, sedangkan untuk kecerahan warna, kekerasan, daya kunyah, dan kemuluran semakin menurun. Penambahan kacang kedelai menyebabkan semakin tinggi kecenderungan warna kuning, daya kohesif, kelengketan, daya lenting, dan kemuluran, tetapi semakin menurun nilai pH, kecerahan, kekerasan, daya kunyah, dan titik lelehnya. Pada uji sensoris menunjukkan semakin baik dan meningkatnya tingkat penerimaan konsumen. Keju mozzarella analog dengan rasio penambahan tepung tapioka 80% : tapioka termodifikasi 20% dengan penambahan koro pedang putih 60% : kedelai 40% merupakan formulasi terbaik dengan kandungan proksimat protein 5,71%, lemak 4,83%, abu 3,12%, air 59,10%, total padatan 40,90%, dan karbohidrat 27,24%.

Kata kunci : keju mozzarella analog, koro pedang putih, kedelai, tepung tapioka, tepung tapioka termodifikasi

THE EFFECTS OF JACK BEAN (*Canavalia ensiformis* L.), SOYBEAN (*Glycine max*), AND MODIFIED TAPIOCA STARCH ON PHYSICAL AND SENSORY PROPERTIES OF MOZZARELLA CHEESE ANALOG

ABSTRACT

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This study developed a mozzarella cheese analog, an imitation product of mozzarella produced with vegetable ingredients as a substitution for animal based protein. The research involved two stages; the first stage aimed to understand the impacts of adding modified tapioca starch on the physical properties of the product, the second was to study the optimum ratio of white jack bean and soybean based on the physical, sensory, and chemical quality of mozzarella cheese analog. Native and modified tapioca starch was used to improve the texture. This study used a combination of white jack bean and soybean as plant protein sources with three different combinations (100%:0%, 80%:20%, and 60%:40%). Optimum level of starches ingredients was evaluated through physical analysis (including color, melting point, stretchability, texture); optimum combination of the beans was also evaluated through physical and sensory analysis. The best formulation was subjected to proximate analysis. The result showed that adding starches affected the physical characteristics of the cheese. Adding more modified tapioca starch increased cohesiveness, gumminess, resilience, melting point, and pH value but decreased brightness, hardness, chewiness, and stretchability. Adding more soybean tends to intensify the cheese's yellowish color, increasing cohesiveness, gumminess, resilience, and stretchability, but decreasing pH value, brightness, hardness, chewiness, and melting point. Sensory evaluation showed increasing in consumer acceptability. The best formulation was 80% native tapioca: 20% modified tapioca starch when 60% jack bean: 40% soybean. The chosen formulation contained 5.71% protein, 4,83% fat, 3,12% ash, 59,10% water, 40,90% total solid material, and 27,24% carbohydrate.

Keywords: mozzarella cheese analogue, jack bean, soybean, tapioca, modified tapioca starch