

RINGKASAN

Rice crackers merupakan inovasi modern dari kerupuk gendar tradisional yang dikembangkan sebagai camilan bergizi, praktis, dan aman dikonsumsi. Produk pada penelitian ini menggunakan beras varietas Inpago Unsoed Protani yang kaya protein, serta digunakan STPP dan tepung mocaf sebagai pengganti *bleng* sebagai bahan pengenyal. Tepung mocaf dipilih karena mengandung pati yang mendukung pembentukan tekstur, sementara lama pengukusan juga berperan penting dalam proses gelatinisasi dan pembentukan struktur kerupuk. Penelitian ini bertujuan untuk mengetahui pengaruh penambahan tepung mocaf dan variasi lama pengukusan terhadap karakteristik fisikokimia dan sensori *rice crackers* berbasis beras Inpago Unsoed Protani.

Penelitian ini menggunakan Rancangan Acak Kelompok (RAK) Faktorial dengan dua faktor perlakuan, yaitu penambahan tepung mocaf (15%, 30%, dan 45%) dan lama pengukusan (30, 60, dan 90 menit). Parameter yang diamati meliputi karakteristik fisik (daya kembang dan daya patah), karakteristik kimia (kadar air, kadar abu, kadar protein total dan terlarut, kadar lemak, dan kadar karbohidrat), serta uji sensori (warna, tekstur, rasa, dan tingkat kesukaan). Uji karakteristik fisik dan kimia dilakukan menggunakan metode termogravimetri, gravimetri, Kjeldahl, Soxhlet, dan *by difference*. Uji sensori dilakukan menggunakan metode skoring dengan 20 panelis semi-terlatih. Analisis data dilakukan menggunakan ANOVA dan uji Friedman untuk menentukan pengaruh perlakuan, serta uji Indeks Efektivitas untuk menentukan perlakuan terbaik.

Uji Indeks Efektivitas menunjukkan bahwa perlakuan terbaik adalah perlakuan *rice crackers* dari beras Inpago Unsoed Protani dengan penambahan tepung mocaf sebesar 15% dan lama pengukusan 90 menit, dengan karakteristik daya kembang sebesar 34,28%, serta daya patah sebesar 1294,95 N/s. Selain itu hasil penelitian juga menunjukkan lama pengukusan berpengaruh signifikan terhadap daya kembang, dimana semakin lama pengukusan, daya kembang *rice crackers* semakin meningkat. Penambahan tepung mocaf dan lama pengukusan tidak berpengaruh signifikan terhadap daya patah *rice crackers*. *Rice crackers* menjadi semakin gelap seiring dengan lama pengukusan; penambahan tepung mocaf memengaruhi tekstur *rice crackers* yang dihasilkan karena adanya kandungan amilopektin; rasa *rice crackers* cenderung gurih karena adanya penambahan bumbu-bumbu; tingkat kesukaan *rice crackers* cenderung berkorelasi dengan tekstur dan rasa *rice crackers*. *Rice crackers* dari beras Inpago Unsoed Protani memiliki karakteristik kimia berupa kadar air sebesar 3,72%; kadar abu sebesar 0,13%; kadar lemak sebesar 12,37%; kadar protein total sebesar 2,05%; kadar protein terlarut sebesar 0,57%; dan kadar karbohidrat sebesar 81,73%.

SUMMARY

Rice crackers are a modern innovation from traditional gendar crackers developed as a nutritious, practical, and safe snack for consumption. The product in this study uses Inpago Unsoed Protani variety rice which is rich in protein, as well as STPP and mocaf flour as a substitute for bleng as a chewing agent. Mocaf flour was chosen because it contains starch that supports texture formation, while steaming time also plays an important role in the gelatinization process and cracker structure formation. This study aims to determine the effect of mocaf flour addition and steaming time variation on the physicochemical and sensory characteristics of Inpago Unsoed Protani rice-based rice crackers.

This study used a factorial Randomized Group Design (RAK) with two treatment factors, namely the addition of mocaf flour (15%, 30%, and 45%) and steaming time (30, 60, and 90 minutes). The parameters observed included physical characteristics (expandability and breakability), chemical characteristics (moisture content, ash content, total and soluble protein content, fat content, and carbohydrate content), and sensory tests (color, texture, taste, and level of liking). Physical and chemical characteristics tests were conducted using thermogravimetric, gravimetric, Kjeldahl, Soxhlet, and by difference methods. Sensory tests were conducted using the scoring method with 20 semi-trained panelists. Data analysis was conducted using ANOVA and Friedman test to determine the effect of treatment, and Effectiveness Index test to determine the best treatment.

The Effectiveness Index test shows that the best treatment is the treatment of rice crackers from Inpago Unsoed Protani rice with the addition of 15% mocaf flour and a steaming time of 90 minutes, with the characteristics of growth power of 34.28%, and breaking power of 1294.95 N/s. In addition, the results also show that the length of steaming has a significant effect on expandability, where the longer the steaming time, the increase in the expandability of rice crackers. The addition of mocaf flour and steaming time did not have a significant effect on the breakability of rice crackers. Rice crackers become darker along with the length of steaming; the addition of mocaf flour affects the texture of rice crackers produced due to the presence of amylopectin content; the taste of rice crackers tends to be savory due to the addition of spices; the level of liking of rice crackers tends to correlate with the texture and taste of rice crackers. Rice crackers from Inpago Unsoed Protani rice have chemical characteristics such as moisture content of 3.72%; ash content of 0.13%; fat content of 12.37%; total protein content of 2.05%; soluble protein content of 0.57%; and carbohydrate content of 81.73%.