PENGARUH SUBTITUSI TEPUNG TAPIOKA DENGAN *MODIFIED CASSAVA FLOUR* TERHADAP KUALITAS FISIK,SENSORIS, DAN MIKROSTRUKTUR SOSIS DAGING KAMBING

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh subtitusi tepung tapioka dengan *modified cassava flour* (tepung mocaf) pada kualitas fisik, sensoris, dan mikrostruktur sosis daging kambing. Bahan utama pembuatan sosis adalah daging kambing, tepung mocaf, tepung tapioka, susu skim, dan bumbu-bumbu seperti garam, bawang putih, lada, ketumbar, dan STPP. Penelitian ini dilakukan lima perlakuan subtitusi tepung mocaf (*modified cassava flour*) dengan tepung tapioka yaitu (0%:100%), (25%:75%), (50%:50%), (75%:25%), dan (100%:0%). Uji kualitas fisik meliputi nilai pH dan keempukan yang dianalisis menggunakan analisis variansi pola searah (ANOVA) dan beda rerata diuji *Duncan's New Multiple Ranges Test* (DMRT). Masing-masing perlakuan dilakukan sebanyak lima kali pengulangan. Uji kualitas sensoris yang meliputi warna, rasa, tekstur, aroma, kekenyalan dan daya terima dianalisis dengan analisis statistik non parametrik dengan uji Hedonik (H-test) menurut Kruskal dan Wallis. Uji mikrostruktur sosis dibuat dengan metode pewarnaan *Hematoksilin-Eosin* (HE) kemudian dilihat dengan mikroskop perbesaran 100x dan dianalisis secara deskriptif. Hasil analisis statistik terhadap kualitas sensoris menunjukkan bahwa perlakuan subtitusi tepung mocaf pada sosis kambing berpengaruh sangat nyata ($P<0,01$) terhadap keempukan sosis tetapi tidak berpengaruh nyata pada nilai pH sosis. Keempukan sosis menurun seiring dengan meningkatnya level subtitusi tepung mocaf. Sosis dengan subtitusi tepung mocaf 75% dan 100% menghasilkan sosis yang kenyal. Hasil analisis statistik terhadap kualitas sensoris menunjukkan bahwa perlakuan subtitusi tepung mocaf pada sosis 0, 25, 50, 75, dan 100% kambing tidak berpengengaruh nyata terhadap warna, aroma, dan daya terima tetapi berpengaruh nyata ($P<0,05$) terhadap rasa, tekstur, dan kekenyalan sosis. Sosis Mikrostruktur sosis dengan subtitusi tepung mocaf sebesar 75 dan 100% lebih baik dibandingkan sosis dengan subtitusi 0, 25, dan 50%. Hasil yang diperoleh dapat disimpulkan sosis kambing dengan subtitusi tepung mocaf 75% menghasilkan kualitasi fisik, sensoris, dan mikrostruktur yang baik.

Kata kunci: Sosis kambing, Tapioka, Mocaf, Karakteristik fisik, Sensoris, Mikrostruktur

THE EFFECT OF TAPIOCA FLOUR SUBSTITUTION WITH MODIFIED CASSAVA FLOUR ON PHYSICAL QUALITY, SENSORY, AND MICROSTRUCTURE OF GOAT SAUSAGE

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ABSTRACT

This study aims to determine the effect of tapioca flour substitution with mocaf flour on physical, sensory, and microstructure quality of goat sausage. The main ingredients for making sausage were goat, mocaf flour, tapioca flour, skim milk, and spices such as salt, garlic, pepper, coriander, and STPP. This study was carried out with five treatments of mocaf flour (modified cassava flour) substitution with tapioca flour (0%: 100%), (25%: 75%), (50%: 50%), (75%: 25%), and (100%: 0%). Each treatment was carried out with five replications. Physical quality tests including pH and tenderness. Data were analyzed by analysis of variance of One-Way ANOVA and difference between mean was tested using *Duncan's New Multiple Ranges* Test (DMRT). Sensory quality tests which included color, taste, texture, aroma, elasticity and acceptability data were analyzed by non-parametric statistical analysis with Hedonic test (H-test) according to Kruskal and Wallis. The sausage microstructure test was made by Hematoxylin-Eosin (HE) coloring method then viewed by using microscope with 100x magnification before getting descriptively analyzed. The results showed that the substitution of tapioca flour with mocaf flour in goat sausage have very significant effects ($P<0.01$) on tenderness but not on the pH value. Sausage tenderness decreased with the increasing of mocaf flour substitution. Sausage with the substitution of mocaf flour 75% and 100% resulted elastic sausage. The sensory quality showed that the substitution of tapioca flour with mocaf flour in 0, 25, 50, 75, and 100% on goat sausage did not significantly affect color, aroma, and acceptability but significantly affected ($P<0.05$) on the taste, texture, and elasticity of the sausage. Sausage microstructure with mocaf flour substitution of 75% and 100% were better than the microstructure substitution of 0, 25 and 50%. Based on the analysis, the substitution of 75% mocaf flour on goat sausage resulted good physical, sensory, and microstructure quality.

Keywords: Goat Sausage, Tapioca, Mocaf, Physical Characteristics, Sensory, Microstructure