PENGARUH SUBSTITUSI DAGING AYAM DENGAN HATI AYAM TERHADAP KUALITAS FISIK DAN KADAR KOLESTEROL SOSIS AYAM

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh substitusi daging ayam dengan hati ayan terhadap kualitas fisik, mikrostruktur, dan kadar kolesterol sosis ayam. Perbandingan daging ayam dan hati ayam di dalam adonan sosis terdiri atas empat perlakuan, yaitu P0 (0%:100%), P1 (75%:25%), P2 (50%:50%), dan P3 (25%:75%). Pada setiap perlakuan dilakukan 5 kali pengulangan. Parameter pengujian yang dilakukan pada penelitian ini adalah pengujian kadar kolesterol, mikrostruktur, dan kualitas fisik sosis yang meliputi derajat keasaman (pH), profil tekstur, dan daya ikat air (DIA). Data pengujian fisik dan kadar kolesterol dianalisis menggunakan analisis variansi pola searah (ANOVA *one way*) dan dilanjutkan dengan uji *Duncan New Multiple Range Test* (DMRT). Hasil pengujian mikrostruktur diamati menggunakan mikroskop dengan perbesaran 40 kali dan dianalisis secara deskriptif. Hasil penelitian ini menunjukkan bahwa substitusi daging ayam dengan hati ayam memberikan pengaruh nyata ($P<0,01$) terhadap nilai pH, profil tekstur, dan kadar kolesterol dengan rerata nilai pH secara berurutan yang diperoleh adalah 6,50; 6,52; 6,54; dan 6;57, rerata profil tekstur yang didapatkan secara berurutan meliputi *hardness* (40,04; 28,62; 16,42; dan 10,15), *springiness* (86,35; 79,6; 75,08; dan 78,91), *gumminess* (2794,22; 1527,57; 783,1; dan 343,58), dan *chewiness* (2636,92; 1337,01; 653,05; dan 424,51), kemudian rerata kadar kolesterol secara berurutan yang diperoleh adalah 51,97; 54,14; 64,54; dan 72,35. Daya ikat air tidak berpengaruh nyata ($P>0,05$), rerata DIA yang diperoleh adalah 63,19; 63,76; 63,8; dan 62,77. Hasil pengamatan mikrostruktur sosis menunjukkan bahwa terjadi penurunan kualitas mikrostruktur sosis seiring kenaikan level substitusi daging ayam dengan hati ayam. Berdasarkan hasil pengujian yang dilakukan dapat disimpulkan bahwa perlakuan perbandingan daging ayam : hati ayam (75% : 25%) menjadi formulasi sosis substitusi hati ayam yang terbaik karena memiliki kualitas yang tidak berbeda jauh dengan kontol sehingga menjadi substitusi hati paling efisien.

Kata kunci: Sosis ayam, Hati ayam, Daging ayam, Kualitas fisik, Mikrostruktur, Kadar kolesterol

THE EFFECT OF CHICKEN MEAT SUBSTITUTION WITH CHICKEN LIVER ON THE PHYSICAL PROPERTIES AND CHOLESTEROL LEVELS OF CHICKEN SAUSAGE

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ABSTRACT

This study aimed to determine the effect of substituting chicken meat with chicken liver on the physical quality, microstructure, and cholesterol content of chicken sausage. The comparison of chicken meat and chicken liver in the sausage mixture consisted of four treatments: P0 (0%:100%), P1 (75%:25%), P2 (50%:50%), and P3 (25%:75%). Each treatment was repeated five times. The parameters tested in this study included cholesterol content, microstructure, and physical quality of the sausages, which encompassed pH, texture profile, and water-holding capacity (WHC). The physical and cholesterol data were analyzed using one-way ANOVA followed by Duncan's New Multiple Range Test (DMRT). Microstructure observations were conducted using a microscope with 40x magnification and analyzed descriptively.The results showed that substituting chicken meat with chicken liver had a significant effect ($P<0.01$) on pH values, texture profile, and cholesterol content. The mean pH values obtained were 6,50; 6,52; 6,54; and 6,57; for P0, P1, P2, and P3, respectively. The mean texture profile values for hardness were 40,04; 28,62; 16,42; and 10,15; springiness values were 86,35; 79,6; 75,08; and 78,91; gumminess values were 2794,22; 1527,57; 783,1; and 343,58; and chewiness values were 2636,92; 1337,01; 653,05; and 424,51. The mean cholesterol levels were 51,97; 54,14; 64,54; and 72,35. Water-holding capacity did not show significant differences ($P>0.05$), with mean values of 63,19; 63,76; 63,8; and 62,77. Microstructure observations indicated a decline in sausage quality as the level of chicken liver substitution increased.Based on the results, it was concluded that the best formulation for chicken liver substitution was 75% chicken meat and 25% chicken liver, as it yielded a quality comparable to the control and was the most efficient liver substitution ratio.

Keywords: Chicken sausage, Chicken liver, Chicken meat, Physical quality, Microstructure, Cholesterol content