

PENGARUH SUBSTITUSI TEPUNG TAPIOKA DENGAN TEPUNG HANJELI (*Coix lacryma-jobi* L.) TERHADAP KUALITAS FISIK NUGGET AYAM KAMPUNG

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INTISARI

Nugget ayam merupakan salah satu inovasi bahan pangan berbahan dasar daging unggas yang sangat populer dikalangan masyarakat. Tepung hanjeli dijadikan sebagai pengganti *filler nugget* karena memiliki indeks glikemik yang lebih rendah dan memiliki kandungan gizi yang lebih tinggi dari tepung tapioka. Tujuan penelitian ini adalah untuk mengetahui pengaruh substitusi tepung tapioka dengan tepung hanjeli terhadap kualitas fisik dan mikrostruktur *nugget* ayam kampung. Perbandingan tepung tapioka dan tepung hanjeli yaitu (100:0), (75:25), (50:50), (25:75), dan (0:100). Variabel uji yang diamati yaitu uji nilai pH, daya ikat air (DIA), warna, tekstur, dan *cooking yield*, serta mikrostruktur *nugget* ayam kampung. Data kualitas fisik dianalisis menggunakan analisis variansi pola searah. Hasil analisis dengan perbedaan nyata dilanjutkan dengan *Duncan's New Multiple Range Test* (DMRT). Uji mikrostruktur *nugget* ayam kampung menggunakan analisis deskriptif. Substitusi tepung tapioka dengan tepung hanjeli berpengaruh nyata ($P < 0,05$) pada daya ikat air, *cooking yield*, *chewiness*, *springiness*, *hardness*, dan *gumminess*. Hasil analisis daya ikat air secara berurutan sebesar 47,16%; 49,53%; 50,94%; 55,56%; dan 58,38%. Hasil analisis *cooking yield* secara berurutan sebesar 104,53%; 103,67%; 103,61%; 103,29%; dan 102,68%. Hasil analisis *chewiness* secara berurutan sebesar 1988,15; 1811,21; 1663,28; 1594,38; dan 1527,84. Hasil analisis *springiness* secara berurutan sebesar 82,43%; 85,105; 86,84%; 89,035; dan 93,91%. Hasil analisis *hardness* secara berurutan sebesar 4098,40; 3878,89; 3568,66; 3532,43; dan 3421,67. Hasil analisis *gumminess* secara berurutan sebesar 2478,29; 2241,46; 2023,55; 1917,38; dan 1684,19. Mikrostruktur *nugget* ayam kampung dengan substitusi tepung hanjeli memiliki struktur yang lebih baik daripada yang menggunakan tepung tapioka pada rasio substitusi (0:100).

Kata kunci: *Nugget* , Ayam kampung, Tepung hanjeli, Kualitas fisik, Mikrostruktur

THE EFFECT OF SUBSTITUTION TAPIOCA STARCH WITH HANJELI FLOUR (*Coix lacryma-jobi* L.) ON PHYSICAL QUALITY OF NATIVE CHICKEN *NUGGETS*

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ABSTRACT

Chicken nuggets are one of the food innovations made from poultry meat that is very popular among the public. Hanjeli flour is used as a substitute for *nugget* filler since it has a lower glycemic index and has a higher nutritional content than tapioca starch. The purpose of this study was to determine the effect of substituting tapioca starch with hanjeli flour on the physical quality and microstructure of native chicken nuggets. The ratios of tapioca starch and hanjeli flour were (100:0), (75:25), (50:50), (25:75), and (0:100). The test variables observed were pH, Water Holding Capacity (WHC), color, texture profile, cooking yield, and microstructure of chicken nuggets. Physical quality data were analyzed using unidirectional pattern analysis of variance. Analysis results with significant differences were followed by Duncan's New Multiple Range Test (DMRT). The microstructure test of local chicken nuggets utilized descriptive analysis. The substitution of tapioca starch with hanjeli flour had a significant effect ($P < 0.05$) on water holding capacity, cooking yield, chewiness, springiness, hardness, and gumminess of the chicken *nugget* s. The results of the water holding capacity analysis were 47,16%; 49,53%; 50,94%; 55,56%; and 58,38%, respectively. The results of cooking yield analysis were 104,53%; 103,67%; 103,61%; 103,29%; and 102,68%, respectively. The results of chewiness analysis were 1988,15; 1811,21; 1663,28; 1594,38; and 1527,84, respectively. The results of springiness analysis were 82,43%; 85,105%; 86,84%; 89,035%; and 93.91%, respectively. The hardness analysis results were 4098,40; 3878,89; 3568,66; 3532,43; and 3421,67, respectively. The results of gumminess analysis were 2478,29; 2241,46; 2023,55; 1917,38; and 1684,19. respectively. The microstructure of native chicken nuggets with hanjeli flour substitution has a better structure than those using tapioca starch on ratio substitution (0:100).

Keywords: *Nugget* , Native chicken, Hanjeli flour, Physical quality, Microstructure