

THE EFFECT OF SUBSTITUTING TAPIOCA FLOUR WITH SWEET POTATO FLOUR (*Ipomoea batatas* L.) AS A FILLER ON THE PHYSICAL QUALITY OF SPENT QUAIL MEAT SAUSAGE

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ABSTRACT

This study was conducted to examine the impact of substituting tapioca flour with sweet potato flour as a filler on the physical characteristics of sausages made from spent quail meat. The ingredients used included spent quail meat fillets, tapioca flour, sweet potato flour (white, yellow, and purple varieties), egg white, seasonings, carrageenan, soy protein isolate (ISP), sodium tripolyphosphate (STPP), cooking oil, and ice cubes. A Completely Randomized Design (CRD) was employed with five treatments and four replications, consisting of: P1 (control/no substitution), P2 (20% white sweet potato flour substitution), P3 (20% yellow sweet potato flour substitution), P4 (20% purple sweet potato flour substitution), and P5 (20% substitution using a combination of white, yellow, and purple sweet potato flours). The variables measured were pH, water-holding capacity (WHC), cooking loss, and sausage tenderness. The data were analyzed using Analysis of Variance (ANOVA) followed by Duncan's Multiple Range Test (DMRT) at a 5% significance level. The analysis results indicated that replacing tapioca flour with sweet potato flour as a filler had a significant effect ($P < 0.05$) on the water-holding capacity and tenderness of the sausages, but no significant effect ($P > 0.05$) on pH and cooking loss. The best formulation was obtained with treatment P5 (20% combination of the three sweet potato types), which yielded a water-holding capacity of 45.91% and a tenderness level of 25.64 N.

Keywords : Sweet Potato Flour, Spent Quail Meat, Spent Quail Sausage, Physical Quality