

Effect of Nano-calcium Fortification of Duck Eggshells on Sensory Quality of Chicken Sausage

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ABSTRACT

This study aims to determine the effect of nano-calcium fortification of duck eggshells on sensory quality of chicken sausage. The research material consisted of meat fillet broiler chickenbreast, nano calcium powder duck eggshells, tapioca flour, cooking oil, garlic, onion, salt, pepper powder, monosodium glutamate, ice cubes, soy protein isolate, and shells. collagen sausage. The study was conducted using a completely randomized design (CRD) with 5 treatments and 40 untrained panelists with each fortification of P0 (control); P1 (0.15%); P2 (0.30%); P3 (0.45%); and P4 (0.60%) of the total dough. The parameters observed were color, aroma, taste, texture, elasticity, and acceptability. The hedonic scale used is 1 (very dislike), 2 (dislike), 3 (somewhat like), 4 (like), and 5 (really like). Data from sensory test results were analyzed by non-parametric analysis with the Hedonic Kruskal Wallis test and if there were differences in the mean, tested by the Duncan's New Multiple Range Test. The results showed that nano calcium fortification of duck eggshells had a significant effect on P ($0 < 0.05$) on taste, aroma and acceptability. Fortification with a level of 0.30% is the best treatment than other treatments. With the highest score of aroma, taste, and acceptability, namely 3.48; 3.75; and 3.90.

Keywords: *Fortification, Chicken Sausage, Nano-calcium, Sensory Quality*