

Effect of Nano Calcium Fortification of Duck Eggshells on Physical Quality of Sausage Chicken

Shintia Septiani Nur Jannah
Poultry Agribusiness Study Program
Departement of Animal Science

ABSTRACT

This study aims to determine the effect of nano fortification of calcium in duck eggshells on the physical quality of chicken sausage. The research material consisted of meat fillet broiler chicken breast, nano calcium powder duck eggshell, tapioca flour, palm oil, garlic, onion, salt, pepper powder, frunkfuter, monosodium glutamate, ice cubes, soy protein isolate, and shells collagen sausage. The study was conducted using a completely randomized design (CRD) with five treatments and three replications each treatment with 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 the pH value, activity water, water holding capacity and tenderness. Data from physical test results were analyzed by analysis of variance. Analysis with the Duncan's Mutiple Range Test if there were differences in the mean. The results showed that nano calcium fortification of duck eggshells had a very significant effect ($P < 0.01$) on the pH value and water holding capacity. Fortification with nano calcium duck eggshells up to a level of 0.30% have a good pH value and water holding capacity.

Keywords: *Fortification, Chicken Meat, Nano Calcium, Physical Quality, Sausage*