

Effect Of Nano Calcium Fortification From Chicken Eggshells On The Sensory Quality Of Ungkep Rooster Layer Chicken Meat

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ABSTRACT

Rooster layer chicken are a by product of the poultry industry that has the potential to be used as a source of animal protein, but its utilization is still limited because the characteristics of the meat tend to be tougher and less juicy than broiler chicken meat. One effort to increase consumer acceptance of rooster layer meat is through mineral fortification using nano calcium derived from chicken eggshells. This study aims to determine the effect and best concentration of nano calcium lactate fortification on the sensory quality of ungkep rooster layer meat. The study was conducted by adding nano calcium lactate at concentrations of 0%, 0.30%, and 0.60%. The observed sensory parameters included color, aroma, taste, texture, tenderness, juiciness, and acceptability through hedonic tests and hedonic quality tests using untrained panelists from Jember State Polytechnic students. Sensory test data were analyzed using non-parametric analysis through the Kruskal-Wallis Hedonic test and if there were differences, further tests were carried out using the Mann-Whitney test. The results showed that nano calcium fortification of chicken eggshells did not significantly affect the sensory quality of ungkep rooster layer meat, in the form of color, aroma, taste, texture, tenderness, juiciness, and acceptability. The best concentration of nano calcium lactate fortification was 0.30% because it was proven to be the best treatment and did not reduce the panelists' preference for color, aroma, taste, texture, tenderness, juiciness, and acceptability. Nano calcium lactate fortification of chicken eggshells has the potential to be used as an alternative to natural nano calcium fortification to improve the sensory acceptability of ungkep rooster layer meat.

Keyword: *rooster layer chicken, nano calcium lactate, chicken eggshell, sensory quality, ungkep.*