The Effect of the Combination of Nano Calcium Lactate of Eggshells with Different Packaging Types on the Physical Quality of Broiler Meat

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ABSTRACT

This study aims to determine the effect of adding nano calcium lactate to egg centipedes and packaging types on the physical quality of poultry broiler meat stored at a temperature of -18° C. The research materials include skinless chicken fillet meat, calcium lactate nanopowder, onion, garlic, turmeric, ginger, galangal, candlenut, coriander, sugar, salt, palm oil, monosodium glutamate, and water. This study used unidirectional Complete Randomized Design (RAL). In this study, there were 6 treatments including 0% NCaL polyethylene packaging, 0% NCaL nylon packaging, 0% NCaL retort pouch packaging, 0.6% NCaL polyethylene packaging, 0.6% NCaL nylon packaging, and 0.6% NCaL retort pouch packaging. Observations were made at a shelf life of 6 weeks. Each treatment consisted of 4 replicates. Broiler meat is uncovered at 70°C for 90 minutes The parameters observed are water binding, cooking shrinkage, tenderness, and yield. The data from the physical test of broiler meat was analyzed by analyzing unidirectional pattern variance and if there was a significant difference (P<0.05), it was further tested with Duncan's New Multiple Range Test. The results showed that the porridge broiler meat fortified with nano calcium lactate eggshells with different packaging had a real effect on water binding, tenderness, cooking shrinkage, and yield. Broiler meat fortified with nano calcium lactate using nylon packaging is the best packaging for a water binding value of 71.92% and polyethylene packaging is the best packaging for the lowest softness value of 31.65N. Polyethylene packaging is also the best packaging for the lowest cooking shrinkage value of 4.02% and the highest yield of 95.98%.

Keywords: *broiler chicken, ungkep, physical quality, nano calcium, packaging.*