

The Effect of Nano Calcium Citrate Chicken Bone Fortification on Sensory Quality of Marinated Broiler Meat

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ABSTRACT

This study aims to determine the effect of nano calcium citrate fortification of chicken bones on the sensory quality of marinated broiler chicken meat. The material for this research consists of broiler chicken meat, chili powder, salt, pepper, garlic, cinnamon, ginger, palm oil, lime, monosodium glutamate, broiler bones, ethanol and distilled water. Broiler bone calcium citrate nano fortification treatment consisted of: P0 (0%), P1 (0.15%), P2 (0.3%), P3 (0.45%), and P4 (0.6%) of the total meat. The marinade used is 20% calculated from the weight of the meat. The duration of the marinating process is 60 minutes at room temperature and then stored cold at 4°C for 20 hours. The parameters observed include color, aroma, taste, texture, tenderness, juiciness and acceptability. Sensory quality testing with a hedonic test uses a Likert scale, namely: 1 (dislike very much), 2 (don't like), 3 (somewhat like), 4 (like), and 5 (like very much). Sensory quality testing was carried out by 40 untrained panelists on cooked marinated broiler chicken meat. The data from the sensory test results were analyzed using non-parametric analysis using the Hedonic Kruskal Wallis test and if there were differences, the Duncan's New Multiple Range Test was tested. The research results showed that nano calcium citrate fortification of broiler chicken bones affected the taste of broiler meat, but did not affect the color, aroma, texture, tenderness, juiciness and acceptability. The level of panelist preference is subjective and varies between individuals, the higher the concentration of nano calcium citrate given can increase the taste of the product to become more sour, overall the panelists can accept or like marinated broiler meat fortified with nano calcium citrate chicken bones. Nano calcium citrate in broiler chicken bones can be added up to a level of 0.6% in the chicken meat marination process.

Keywords : *broiler meat, fortification, sensory quality, marination, nano calcium citrate.*