



Effect of Using Different Proportions of Clove Oil on the Quality Characteristics of Breast Meat Cuts of Broiler Chickens Stored in Cold Storage

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Abstract: The present study included the addition of clove oil to boneless chicken breast pieces at different concentrations. Clove oil was added to the samples (12 pieces, weighted 300 gm each) at different proportions and then packed in vacuum polyethylene bags. Control treatment packed in polyethylene bags without clove oil. Treatment 1 kept with polyethylene bags with the addition of 0.5% clove oil. Treatment 2 kept with polyethylene bags with the addition of 0.75% clove oil. Treatment 3 kept with polyethylene bags with the addition of 1% clove oil. The meat was stored at a temperature of 4 ° C for 9 days with storage periods of (0, 3, 6, 9) days. The results of the study showed that total bacteria and coliform bacteria counts decreased with the advancement of storage periods in the third treatment at a concentration of 1%. The results show improvement in chemical and physical of breast pieces treated with 1% of clove oil throughout the storage period. We conclude that clove oil-treated meat improves water retention capacity and reduces liquid loss during cooking. Reduces oxidation indicators by decreasing TBA value.

Keywords: Breast, Broiler, Clove oil, Meat Cuts.

Introduction:

There has been a growing demand for the disposal of antibiotics used as growth stimulants in poultry production since 2006 due to their residues that remain on finished meat products, and the evolution of some of these bacterial strains and their resistance to antibiotics has increased widespread consumer rejection of synthetic additives (Hussein *et al.*, 2020). In

recent years, the use of antibiotic growth promoters (AGPs) in poultry diets has raised concern about the development of antibiotic-resistant microbes and their effect on human health (Castanon, 2007). Consequently, there is a trend in many investigations to seek for possible replacements for AGPs in broiler chicken diets, such as probiotics, prebiotics, organic acids and enzymes (Rosin *et al.*, 2007), plant extracts, herbs