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Quality of comminuted and formed chicken meat products as affected by addition of chicken skin and mechanically deboned meat as addition binder

A Thesis Submitted by

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Abstract

(**Keywords:** MSM, skin, emulsion, quality, chicken burger)

The main objective of the current study was to investigate the safety and quality of marketed chicken burger. Moreover, the effect of addition of mechanically separated meat (MSM), comminuted skin and skin emulsion to chicken burger formulations on the different quality attributes of chicken burger during frozen storage was studied. To achieve these objectives, ninety chicken burgers sample were collected randomly from different processing plants, in Egypt and analyzed for determination of sensory, chemical and microbiological quality attributes. Furthermore, three-trial based experiment was conducted to evaluate the effect of addition of MSM, comminuted skin and skin emulsion at different levels (20 and 50%) on the proximate chemical composition, eating quality characteristics, bacterial load and sensory quality of chicken burger during frozen storage. The results revealed that most chicken burger samples had bad sensory panel scores, low moisture and protein contents. However, the samples had higher aerobic bacterial and psychrotrophic counts as well as *Salmonella* spp. was isolated from them. The results also indicated that addition of mechanically separated meat had negative effects on the different quality attributes of experimentally produced burgers, while the thermally treated skin emulsion showed the lowest deviations in their quality parameters. Moreover, both increasing the rate of MSM addition and storage period at 4ºC for 3 months adversely affected the organoleptic and eating quality characteristics of chicken burger.

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