

Development of a Canned Chicken Product

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Abstract—Canning is a method of preserving food in which the food contents are processed and sealed in an airtight container. Canning provides a variety to food, ease in consumption along with longer shelf life to the product. The experiment was carried out to develop a value added canned chicken product at low price to local market. Three preliminary trials were conducted to find out the best salt level, the best sugar level and the best black pepper level to adjust the flavor of the canned chicken product based on sensory evaluation for each preliminary trial. The acceptable levels of salt, sugar and black pepper among different levels in the final spice mixture as 8% salt, 8% sugar, 4% black pepper powder along with 4% chili powder, 4% curry powder, 0.4% ginger powder, 2% garlic powder, 0.8% MSG, 0.4% color enhancer and 68.2% water. Spice mixture was mixed with chicken pieces and filled in to cans. Cans were subjected to sterilization at 121 °C for 15 minutes of holding time under 15 psi pressure. Proximate composition and physicochemical parameters as free fatty acid value, pH and water holding capacity were evaluated for the final product for two months of storage period at room temperature. Sensory data were analyzed using Friedman non parametric test and physicochemical data were analyzed by ANOVA using MINITAB 15 statistical package. There were significant difference ($P < 0.05$) in sensory attributes, color, texture, spiciness, smell, taste and overall acceptability of selected spice mixtures. Proximate composition of product is 76.4% moisture, 15.7% crude protein, 1.7% crude fat and 1.3% of ash. Based on the commercial sterility test results, the product is commercially sterile during the storage period. Physicochemical parameters were in accordance with the acceptable levels during two months of storage period at room temperature.

Keywords: *Canning, Chicken, Spice mixture.*