

**DEVELOPMENT OF CHICKEN SAUSAGES BY
INCORPORATING PULSES AS A SOURCE OF
MICRONUTRIENTS**

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ABSTRACT

Meat and meat products are a significant source of animal protein and among them, sausages are the most popular and convenient processed meat product which is pre-cooked. Consumers prefer to eat variety of sausages which have different flavors and textures and also in present, they are highly concerning about the nutritional values of their diets. Pulses are leguminous crops which have significant nutritional and health advantages for consumers because it is a good source of essential amino acids and micronutrients such as Iron, Zinc and Selenium.

The study was conducted to develop a pulse incorporated chicken sausage as a source of micro nutrients. Therefore, dhal, cowpea, chickpea and green gram were used as pulses and those were replaced with bread crumbs having different percentages. Bread crumbs can be used 10% of the formulation to produce normal chicken sausage and in this research, bread crumbs were replaced with the four types of pulses. Preliminary trials were conducted to select the best percentages from each pulse incorporated in the sausages and there were three treatments as 25%, 50% and 75% of each pulse out of that 10%. Final experiment was conducted to select the best type of pulse incorporated sausage by using above selected four types of sausages. Finalized products were further tested for subjective qualities, objective qualities and proximate analysis using the commercial chicken sausage as the control. The obtained data were analyzed using MINITAB software package.

The best treatments of preliminary trials were selected in four sensory evaluation as 25% of dhal: 75% of breadcrumbs, 25% of cowpea:75% of bread crumbs, 50% of chickpea:50% of bread crumbs and 50% of green gram:50% of bread crumbs. From the results of the quality assessments from final experiment, treatment 1 was found to be the best product. pH and water holding capacity were decreased significantly in all five samples with the storage time. Microbial counts were within the acceptable level throughout the storage time period. In proximate analysis, the mean values for moisture, crude protein, crude fiber and especially ash content were higher in all pulse incorporated sausages than the commercial chicken sausage. Treatment 1 showed the highest values among all four types of pulse incorporated sausages. Finally, 25% of dhal:75% of bread crumbs incorporated sausage was selected as the best pulse incorporated sausage with superior qualities.