

Development of Halal Chinese Fish Sausage Using Different Types of Lipid

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ABSTRACT

*Chinese sausage is in the dried sausage category, has a sweet-savory taste, and can be stored unrefrigerated for several months. It is usually cooked by frying or steaming, and used as an ingredient in rice and vegetable dishes. Its prevailing variety is produced from pork and pork fat, while some varieties are produced from fish but retain pork fat for good texture. Recently, the Asian appetite for sausages significantly expanded its market; unfortunately it is prohibited for Muslims. In this research, a new Chinese sausage formula was developed using fish and vegetable lipids as the main ingredients to make the sausage religiously correct (Halal certified) for Muslim consumers. Pork fat was replaced with 50% vegetable lipids (vegetable oil, margarine or vegetable shortening) and 50% bulking agent (3:2 microcrystalline cellulose gel-powdered cellulose or MCG-PC mixture). Sensory characteristics of the finished product were evaluated and the results revealed that a mixture of 14% vegetable oil and 36% vegetable shortening represented the most satisfying qualities and overall consumer acceptability. Physicochemical properties of the finished product were investigated and showed that moisture content, water activity (a_w) and firmness were 7.75%, 0.48, and 145.78 g, respectively. Microbiological qualities including total bacterial count, *Salmonella* spp., *Staphylococcus aureus*, *Escherichia coli*, as well as yeast and mold count were tested and negative results were obtained. Overall results indicated that vegetable lipids and MCG-PC mixture can be used as a pork fat substitute in Chinese fish sausage for Muslim consumers.*

Keywords: Chinese sausage, Fish sausage, Halal food, Fat replacer, Vegetable lipid, Sensory evaluation