

Study On Antioxidant And Antimicrobial Effect Of Garlic (*Allium sativum*) In Garlic Incorporated Chicken Sausages

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ABSTRACT

Meat in the human diet is recognized as an important component because of its appealing flavor and texture and its high nutritional value. The present trend of food is to serve processed food items. Chicken sausage is one of the oldest forms of processed food item in the world. Processed products were prepared by using various additives. For the purpose of increasing the shelf life the main additives which were used call as antioxidants. The most common antioxidants used in food preservation are synthetic, such as butylatedhydroxytoluene (BHT), butylatedhydroxyanisole (BHA). With the reveal of adverse health effects of synthetic antioxidants by the researchers the food processors were focused to use natural substances which have the antioxidant and antimicrobial effect. Garlic (*Allium sativum*) is one of the most commonly used ingredients as a flavor enhancer for sausage. In addition to flavoring food, garlic is appreciated for its medicinal properties. Allicin is the main biologically active component of fresh garlic that effect to the antioxidant activity. This study was carried out to determine the suitable garlic form and concentration of garlic in chicken sausages and to determine the antioxidant effect of garlic against lipid oxidation and antimicrobial effect. The sausage was prepared adding fresh garlic and garlic powder and compared to control with added BHA. The evaluation of moisture, protein, fat, pH, rancidity (TBA value) and total plate count in the selected sausage which was selected using sensory evaluation using five hedonic scale. Addition of fresh garlic and garlic powder significantly ($P < 0.05$) affected not only the chemical and microbiological parameters such as moisture content, ash content, crude protein content, crude fat content, WHC and lipid oxidation but also in sensory attributes by changing the flavor.

Key words: Antioxidant, Antimicrobial, Garlic, Chicken sausages, BHA