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# THE OBTAINING AND CHARACTERIZING OF SOME LOW-FAT PORK SAUSAGES

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## Abstract:

The main objective of this work was to develop the healthier low-fat pork sausages enriched in PUFA by replacing animal fat with some emulsions based on vegetable oils.

The intake of animal fat, whith high content in saturated fatty acids, increases the risk factors related to cardiovascular diseases (Blekkenhorst et al., 2015). That is why there is a growing concern of the meat industry to nutritionally improve the lipid profile of meat products. The replacement of animal fat by oils rich in n-3 PUFAs may be a very effective alternative (Dominguez, Pateiro, Agregán, & Lorenzo, 2017). The use, in meat products, of ingredients considered beneficial for health offers processors the opportunity to improve the nutritional and health qualities of their products (Fernandez-Gines et al., 2005).

Animal fat is an important factor that determines the quality of meat products including texture, flavor and mouth-feel. Therefore, reducing fat levels in meat products, as using less amounts of fat in the formulation, is not so simple.

Ayo et al., 2008, showed that healthier meat product formulations need either to contain less saturated fat or promote the presence of specific healthy compounds (nonmeat ingredients). Anyway the meat processors could use both variants. The researchers have used different ways to improve health related qualities and to maintain the sensorial properties at good level. Yilmaz et al. (2002) showed that different low-fat meat products or chicken sausages using sunflower oil had no negative sensory characteristics.

Twenty percent or higher reduction of fat content in meat products can lead to an unacceptable product texture, flavor and appearance. Total substitution of fat with water produces unacceptably soft and rubbery product with an increased moisture loss during processing (Claus & Hunt, 1991).

The formulas containing n-3 PUFA components could result in potentially issues due to their susceptibility at oxidizing processes (Lee et al., 2005). Also, the muscles by themselves can be oxidized. Moreover, addition of some potential prooxidant ingredients, the meat processing operations with particle size reduction and an increasing of exposed surface area, as well as heat-induced changes affect oxidative stability of final products.

In the recipes of the experimental variants different levels of emulsions were used. The assess of physicochemical and sensory properties was made in order to compare the quality attributes of low-fat pork sausages containing vegetable oils.

**Key words:** *meat products, health, oils*

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