

Quantification of Fat Content in Meat Products by Different Extraction Methods.

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The most common used methods for lipid extraction in meat and meat products are the Soxhlet (AOAC, 1990) and those using a mixture of chloroform and methanol, and described by Folch et al. (1957) and Bligh and Dyer (1959). Nowadays, lots of meat products with different matrices and different fat contents are being manufactured. The determination of total lipids and its characterization is a basic requirement for testing this products. Thus, this study was aimed to evaluate the efficiency of three extraction methods for lipid determination in meat products with different matrices and fat contents.

The three studied methods (Soxhlet, Folch and Bligh & Dyer) were used for extracting lipids from cooked ham, fresh sausage and salami, whose fat content are 3.5%, 19,5% and 48.6%, respectively (according to the label provided by the manufacturer). Results showed that the three extraction methods significantly differed ($p < 0.0001$) in total extracted lipids in the three tested meat products. The methods that extracted a higher amount of lipids were the Soxhlet and the Folch. Moreover, in cooked ham and salami, the total lipids extracted using the Folch method was higher (3.91% and 49.39%, respectively) than with the Soxhlet method (2.85% and 45.48%, respectively). In whole muscle meat products, such as cooked ham, the strong links between fat and proteins, which could not been totally broken by the acid hidrolisis of the Soxhlet method, could explain these differences. The Bligh and Dyer method showed the lowest extraction of total lipids (1.58%, 6.33% and 33.25 % in cooked ham, fresh sausage and salami, respectively).

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