# ELEMENTS REGARDING THE PROTEOLYSIS AND LIPOLYSIS OF REFRIGERATED MEATS AND FAT FROM THE MANGALITSA BREED

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**Abstract**

*In the case of the present research, we wanted to know and evaluate the proteolytic and lipolytic transformations and changes that intervene in the intimacy of the meat-raw material and fat, obtained from the Mangalitsa pig breed and preserved by refrigeration, for different periods of time.*

*The need to determine such sensory and physico-chemical transformations, appearing during the conservation period in some animal products, is of great interest in the spectrum of the evolution of some quantitative and qualitative parameters and their correlation with the state of freshness and the optimal storage time, in order to know as accurately as possible the term of validity and durability of a food product, as well as to ensure consumer protection.*

*In order to study the proteolytic and lipolytic changes in pork, which appeared during the refrigerated storage period, work was done on a number of 20 carcasses, the samples required for the analyzes being collected before the meat was refrigerated at 0-4°C and then at intervals of 2, 5, 7, 9 and 11 days of storage. The control sample and the experimental samples were taken from the muscles of the rump and the back fat.*

*According to the results obtained, regarding the lipolytic changes, their nature was hydrolytic and oxidative, these transformations being highlighted by determining the free acidity, in the first case, and by determining the peroxide index (PV), the iodine index (IV), of the content in malondialdehyde (MDA-TBARS), epihydrinic aldehyde and fatty acids, in the second case.*

*Carrying out such research has a special role because, for example, oxidation products existing in food and absorbed in the human body have a combined action on the enzyme system, on the use of vitamins and proteins.*

*As for the proteolytic modifications, they were initially located in a beneficial proteolytic register, not exceeding certain limits, a fact characterized by the improvement of nutritional-biological properties, but later harmful forms for the consumer also developed, appearing factors such as biogenic amines (histamines, betaines, etc.) or toxic compounds, such as iodine, hydrogen sulphide, phenols, mercaptans and ammonia.*

*Conclusively, we can state that the lipolytic changes depend on the morphological structure of the meat, the presence of marbling and pearling, the content of saturated and unsaturated fatty acids and the ratio between them, the duration and conditions of storage, the type of salting, the presence of heavy metals, pesticides, the presence of hemoglobin and the intensity of enzymatic activity (lipooxidase action).*

*As for the dynamics of proteolysis in the redirected pork, it was influenced by the age of the animal, the fineness of the muscle fiber, the ratio between the interfibrillar and interfasciolar connective tissue, the freezing temperature, the degree of biotic pollution of the meat, the nature of the biota, etc.*

**Key words**: *proteolysis, lipolysis, refrigerated meat, Mangalitsa*