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EFFECT OF SODIUM CHLORIDE ON FAT OXIDATION IN THE PRESENCE OF HEME PIGMENTS

E.K.Tunieva [1*], A.A. Semenova [1], A.N. Ivankin [2], V.V. Nasonova [1], A.N. Nikolaeva [1]

[1]V.M. Gorbatov Federal Research Center for Food Systems of Russian Academy of Sciences, 109316, Moscow, Talalikhina str., 26,
[2]Bauman Moscow State Technical University, Moscow, Russia
**e.tunieva@fncps.ru*

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ABSTRACT

The effects of salt on oxidative changes in fat and heme pigments were evaluated. The back fat was salted with sodium chloride in the presence of the hemoglobin. The indicators of the hydrolytic and oxidative spoilage were investigated in the samples of back fat from White Large pigs at two years of age. The proportions of heme and non-heme iron, as well as the content of metmyoglobin were determined in the samples of m. *Longissimus dorsi* from two-year-old female Large White pigs. Back fat salting did not significantly affect the acid value of back fat. Addition of salt in amounts of 3.5 % and 5.0 % initiated the oxidative changes. Addition of sodium chloride initiated fatty acid oxidation in the presence of the heme pigments. The content of unsaturated acids decreased by 22.8 % when 5.0 % of salt were added. The proportion of heme iron increased by 6.5 % relative to free iron when 5.0 % of sodium chloride were added. The positive correlation between the metmyoglobin content and the thiobarbituric acid value was found with the correlation coefficient of 0.98.