

FREEZING AND STORAGE INFLUENCE ON MEAT QUALITY

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Summary. The present study was designed to assess the influence of freezing and storage on the physical-chemical characteristics of meat. The research was carried out at the Laboratory of Meat Characteristics and Quality Assessment of Lithuanian Veterinary Academy. The physical-chemical characteristics of meat were determined before freezing. Furthermore, meat samples were transported to the special freezing bags and frozen at -18°C and -86°C. After 1, 2 and 5 months of storage the samples were defrosted and the physical-chemical characteristics of meat were determined.

This experiment demonstrated that freezing and storage at -18°C and -86°C can have a marked effect on meat quality. At -18°C the drip loss, cooking loss, shear force of meat frozen was on 1.91 %, 8.98 % , and on 0.07 kg/cm² lower and water binding capacity on 7.45% higher, and at -86°C on 0.48 % (p<0.05), 3.95 % (p<0.001), 0.54% lower and on 7.22 % higher, respectively. Freezing temperature had no influence on the other indexes. The results from this study indicate, that storage of meat at -86°C have lower impact on meat physical-chemical characteristics compared to storage at -18°C.

Keywords: meat quality, physical-chemical characteristics, water binding capacity, meat colour, meat freezing.