THE AFTER-SLAUGHTER EXAMINATION AND QUALITY OF HORSE MEAT IN LITHUANIA

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Summary. Examination of 796 horse carcasses showed no pathological changes typical of zymasis diseases. Among the changes caused by non-infectious diseases, pathologies of the lungs (7.16 %), liver (7.04 %) and heart (3.02 %) were the dominant ones. After-slaughter examination showed lesions inflicted during the technological process: incisions of heart and lungs, aspiration of blood in the liver, bruises under the skin, and lesions of limbs.

Physical chemical characteristics of the waist part of the longest back *m. longisimus dorsi (LD*) and hip semi tendon *m. semitendinosus (OT)* muscles were tested in slaughter horses. The *LD* pH was pH_{45} – 6.81 whereas the value of *ST* pH_{45} was by 0.74 % more aciduous ($p < 0.01$); pH_{24} and pH_{48} both *LD* and *ST* were comparable ($p > 0.05$). After slaughter, *ST*-temperature was 33.8^0 C and it was by 1.2 degrees higher compared with LD ($p < 0.05$); after 24 hours. Temperature difference were became more significant: the temperature in the ST muscle was 10.52^0 C and in the LD muscle by 2.64 degrees lower ($p < 0.001$). After 48 hours, the LD muscle temperature was 7.51^0 C, and ST 8.14^0 C ($p < 0.05$).

The water holding capacity of *LD* muscle amounted to 14.36 % and of *ST* muscle it was by 2.06 percent higher ($p < 0.001$); of the lightness of *LD* muscle was 44.80 or by 2.05 % higher ($p < 0.05$) than that of ST; the intensity of pink color in the muscles varied very little, and *ST* muscle was by 2.53 % brighter ($p < 0.05$).

Many authors assume that gender, age, and preparation technology affect the chemical composition of horse meat. In the *LD* muscle, the content of dry mater accounted for 34.38 % whereas the *ST* muscle was more juicy; its dry matter content was by 5.64 % lower ($p < 0.001$) if compared with the *LD* muscle. The *ST* muscle contained 20.26 % or by 1.09 % higher amount of crude protein ($p < 0.001$), by 3.17 % Lower content of crude fat ($p < 0.001$), by 0.1 % more crude ash ($p < 0.05$), and by 3.66 % less nitrogen-containing non-protein substances ($p < 0.001$) if compared with the *LD* muscle chemical composition; the LD muscle had a higher energy value –8.58 MJ/1 kg whereas the energy value of the *ST* muscle was below 1.64 MJ.

Keywords: horse, carcass, muscle, meat quality, pathological changes.