

## ELECTRICAL CONDUCTIVITY OF PIG MEAT AND ITS RELATION WITH QUALITY

Vigilijus Jukna, Česlovas Jukna, Nijolė Pečiulaitienė

*Laboratory of Meat Characteristics and Quality Assessment*

*Centre for Animal Health and Quality of Raw Materials of Animal Origin*

*Veterinary Academy of Lithuanian University of Health Sciences*

*Kaunas, Tilžės str. 18, LT-47181, Lithuania, Tel.36 34 14; E-mail: vjukna@lva.lt; nijole@lva.lt*

**Summary.** Electrical conductivity of the muscles of two pigs (*m. longissimus dorsi* and *m. semimembranosus*) was investigated 45, 60, 90, 120 and 150 minutes, and 24 h and 48 h after slaughter. The correlation coefficients between muscle physical-chemical properties and electrical conductivity of meat at different periods were calculated. It was established that the highest correlation coefficients were between the electrical conductivity 45 minutes after slaughtering and meat pH ( $r = 0.56$ ), meat water binding capacity ( $r = 0.61$ ) and meat hardness ( $r = 0.49$ ). With increasing time after slaughter, the correlation coefficients were decreasing. It is concluded that determining electrical conductivity of meat during the first 45-50 minutes post-mortem can be used as a method for separation of pig carcasses with PSE and DFD defects.

**Keywords:** muscles, pig, electrical conductivity, meat quality.