

Influence of ultimate pH and storage temperatures on qualitative components of packaged pork chops

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Many studies have been carried out on pig meat quality in order to meet the requirements of the curing industry. The main purpose was to measure cooking losses during the processing of ham into Paris ham.

By contrast, very few studies have been devoted to the behaviour of blister-packed meat. The present study was made with the aim of demonstrating the effect of ultimate pH and storage temperatures on the quality of blister-packed pork chops.

After a one-day storage in a chilled display cabinets, blister-packs were stored for three days in a refrigerator at 2 °C or 6 °C. In meats with a low ultimate pH (< 5.5) exudation was larger (2.89 p. 100 versus 0.79 p. 100 for a pH ranging between 5.5 and 6 and 0.25 p. 100 for a pH > 6.1) and cooking losses were higher (11.27 versus 9.6 p. 100 and 7.07 p. 100. They were more pale as well as more tough.

The effect of storage temperatures on the visual and technological qualities of the meat was not highly significant. Conversely, this effect was much marked on the bacterial contamination (meats stored at 6 °C were 40 to 100-times more contaminated than those stored at 2 °C).

This study emphasized the importance of the chill chain. It also demonstrated the possibility of sorting meats before packaging on the basis of the ultimate pH measurement.

Post-mortem changes in muscle tissue and consequences on pork quality

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This review of literature deals with :

- the mechanisms of rigor mortis setting and their relationships with pH and temperature changes in muscle,
- the relationships between post-mortem pH change and meat quality : tenderness, water holding capacity, colour, keepability,
- the problems related to pale, soft, exudative (PSE) meat,
- the main sources of variation in pork quality : muscle metabolic type, muscle composition and microstructure, halothane sensitivity,
- the influence of slaughter conditions and early carcass processing.