

Development of microbial spoilage and lipid and protein oxidation in rabbit meat

ABSTRACT

This experiment aimed to determine microbial spoilage and lipid and protein oxidation during aerobic refrigerated (4 °C) storage of rabbit meat. Forty male New Zealand white rabbits were slaughtered according to the Halal slaughter procedure. The hind limbs were used for microbial analysis while the Longissimus lumborum m. was used for determination of lipid and protein oxidation. Bacterial counts generally increased with aging time and the limit for fresh meat (10⁸ cfu/g) was reached at d 7 postmortem. Significant differences in malondialdehyde content were observed after 3 d of storage. The thiol concentration significantly decreased with increase in aging time. The band intensities of myosin heavy chain and troponin T significantly reduced with increased refrigerated storage while actin remained relatively stable. This study thus proposes protein oxidation as a potential deteriorative change in refrigerated rabbit meat along with microbial spoilage and lipid oxidation.

Keyword: Rabbit meat; Microbial spoilage; Lipid oxidation; Protein oxidation