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Effects of blade tenderisation and postmortem storage on the quality characteristics of mature camel (*Camelus dromedarius*) meat

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Abstract

Two experiments were carried out to determine the effects of blade tenderisation (BT) and postmortem storage (PM) on the tenderness of meat from mature (> 8 years, as determined by dentition) male camels. In experiment 1, 18 *Longissimus dorsi* (LD, from the 9th to the 12th vertebrate) and 18 *Biceps femoris* (BF) muscles of 18 mature male camels were obtained from a local meat market to determine the effect of BT. Twenty-four hours after slaughter, each muscle was divided into 3 steaks, which were passed: 0 (control), 1 pass and 2 passes through a blade tenderiser. After treatment, steaks were cooked and slice shear force (SSF) was determined. The SSF values of LD and BF were significantly reduced by 3.2 kg or 22.4% and 6.3 kg or 21.6%, respectively, when muscles were passed through the blade tenderizer twice compared to control muscles. Experiment 2 was conducted to determine the effect of PM on LD tenderness. Nine LD muscles of mature male camels were purchased from a local meat market and stored at 2º C. Each LD muscle was divided into 3 steaks and stored for 2, 7 or 14 days PM at 2º C. Postmortem storage significantly decreased SSF, increased myofibril fragmentation index and did not affect cooking loss, cooking time and sarcomere length. Postmortem storage for 14 days was more effective in reducing SSF (reduction of 7.9 kg or 56.5%) than BT. Our results indicated that both BT and PM are effective methods to improve the tenderness of mature camel meat.

Key words: Blade tenderisation, Camel, Meat tenderness, Postmortem, Tenderness