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Assessment of the meat quality of lamb *M. longissimus thoracis et lumborum* and *M. triceps brachii* following three different Halal slaughter procedures.

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Abstract

A total of fifteen male and fifteen female lambs were allocated to three groups of ten animals and subjected to: traditional Halal slaughter without stunning (TNS); slaughter following electric head-only stunning (EHOS) or; post-cut electric head-only stun (PCEHOS) and their meat quality was determined. Instrumental and sensory analyses were carried out on two muscles; *M. longissimus thoracis et lumborum* (LTL) and *M. triceps brachii* (TB). Additionally, the effects of sex and muscle type were also assessed. No differences were found among slaughter methods for pH, drip loss and shear force. TB had a higher pH_u and was more tender than LTL. Muscles from EHOS and PCEHOS lambs discoloured more quickly than TNS muscles. There were no differences in the measured sensory attributes, with the exception of EHOS meat being tougher than PCEHOS and TNS meat. This study showed that the three slaughter methods had no substantial effect on lamb meat quality.

Keywords: Lamb; Halal slaughter without stunning; Electric head-only stunning; Post-cut electric head-only stunning; meat quality.

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