Characterization of *Longissimus lumborum* muscle of an Algerian camel: the case of Sahraoui population

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Abstract

Sahraoui population dromedary is the most important producer of camel meat in Algeria. This study aimed to characterize physicochemical evolution of the muscle after slaughter and to estimate the drip losses during storage at 5°C.

Twelve Algerian Sahraoui dromedaries reared under extensive system were slaughtered following the facilities and guidelines of the Algerian abattoir procedures. The *Longissimus lumborum* muscle samples excised within the first hour post-slaughter were used to determine contractile type of the muscle and the evolution of pH, water holding capacity (WHC) and drip loss during ageing.

Electrophoresis of MyHC isoforms indicated the presence of type IIA fibers only. The pH of the muscles decreased from 6.68 to 5.71 during ageing time. The average drop rate is 0.17 UpH/h. One to two pH stability steps are observed during the 6 first hours *postmortem* at pH range of 6.8 and 6.15. WHC of muscle proteins expressed by the amount of juice released during centrifugation, increased from 0.02 mg/g of muscle at 1h to 0.16 mg/g at 48h *postmortem*. Our findings showed that drip loss increase during ageing, from 2.86% to 6.76% for 24h and 72h *postmortem* respectively. This study is the first to describe an exsudative problem in camel meat. We found that this problem implies economic losses estimated, for 10 kg of muscle, of about 420 DA (3.8 €) after 3 days of storage. Other conservation methods can probably reduce these losses.

Key words: Algerian Sahraoui camel, meat, Ageing, quality.