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EFFECT OF *MORINGA OLEIFERA* LEAVES AQUEOUS EXTRACT ON THE PHYSICOCHEMICAL, COLOR, SHEAR FORCE, AND LIPID OXIDATION OF VARIOUS GOAT MUSCLES

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ABSTRACT

The present study evaluated the effect of aqueous extract of *Moringa oleifera* leaves (MOLE) on various physicochemical characteristics color, shear force, and lipid oxidation of various goat muscles. Longissimus dorsi m., infraspinatus m., biceps femoris m., and semimembranous m., were marinated with MOLE (0.10, 0.50, and 1.0% w/v) along with positive control containing 0.1% BHT (butylated hydroxytoluene) and negative control (without extract and BHT). The samples were marinated under refrigeration in low-density polyethylene bags for 7 days and assessed for various quality attributes on 1, 3, and 7 days. The water-holding capacity and moisture content of goat muscles were observed to follow a decreasing trend with increasing storage days, and a higher ($p<0.05$) value was recorded for samples on day 1 of storage as compared to day 7 of storage. Lipid oxidation recorded a significant ($p<0.05$) increase with the advancement of storage days, and samples with 1.0% MOLE were observed to show comparable ($p>0.05$) thiobarbituric acid reactive substances (TBRAS) to that of BHT-added samples. Thus, the inclusion of MOLE at a 1.0% concentration demonstrated significant improvement in the physico-chemical quality, and color stability while also inhibiting lipid oxidation similar to that achieved with 0.10% BHT.