

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

## CHEMICAL AND PHYSICAL COMPOSITION OF *Longissimus* MUSCLE OF ½ BOER-SAANEN GOATS SUPPLEMENTED WITH VITAMIN E

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Twenty *Longissimus* muscle samples of ½ Boer-Saanen kids were used to evaluate chemical and physical composition. Animals were distributed in a completely randomized design with four treatments: control (with no vitamin E) and inclusions of 50, 150 and 450 mg dl- $\alpha$ -tocopheryl acetate kg<sup>-1</sup> of dry matter (DM). Kids were slaughter with 32 ± 0.8 kg to evaluations of chemical (humidity, protein, mineral matter and total fat) and physical (cooking loss and shear force) composition. Data were submitted to analysis of variance with polynomial regression (P≤0.05), using vitamin E levels included in the diet 0; 50; 150 and 450 mg of dl- $\alpha$ -tocopheryl acetate kg<sup>-1</sup> DM. Chemical analysis showed a positive linear effect to humidity and a negative linear effect to protein and total fat to kid that receive supplementation with vitamin E on diet. The increase in humidity content be related to the membrane integrity of the sarcoplasmic cells in the meat of animals supplemented with vitamin E. The reductions of protein and total fat content are related to distribution of muscular constituent's proportions. Consequently, the increase of the humidity in the meat of the animals supplemented with vitamin E reduces the proportion of fat total and other meat components. Physical characteristics in the *Longissimus* muscle showed no difference for the values obtained in the shear force. However, cooking loss measures showed a linear positive effect with a 0.0155% increase in the loss of water during the cooking process of the meat of the animals for each mg of vitamin E added in the diet. The higher cooking losses, observed in the meat of the animals supplemented with vitamin E in the diet, are associated with the lower fat content in the meat of these animals. The results obtained for the shear force were not influenced by the vitamin supplementation provided to the animals and presented an average of 2.02 kgf, which can be considered as extremely soft meat. Vitamin E supplementation promoted an increase in the humidity content of the *Longissimus* muscle, which altered the proportion of the other chemical constituents of meat, protein and fat, reducing them. This caused a greater cooking loss due to the lower amount of fat present in the meat.

**Keywords:** alpha-tocopheryl, meat quality, shear force

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