

CHEMICAL AND PHYSICAL CHARACTERISTICS OF *M. PSOAS MAJOR* FROM ALENTEJANO PIGS AT DIFFERENT LIVE WEIGHTS

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The present study was carried out to investigate the evolution of chemical composition and physical traits of the *Psoas major* (PM) muscle during Alentejano pigs (AL) growth. Pigs were fed a commercial diet (15% CP; 3100 kcal DE) offered at 85 % of *ad libitum*, and slaughtered at 70, 80, 90, 100, and 110kg LW. The 24h chilled left side of each carcass was submitted to commercial cuts. Samples from the PM muscle were vacuum packaged and stored (-30° C) until analysis. Moisture, total protein, and neutral and polar lipids were analyzed. The myoglobin content was also obtained. Total hydroxyprolin was analyzed and multiplied by 7.14 to obtain the total collagen content of samples. The pH values and the water loss were measured. Colour CIE L* (lightness), a* (redness), and b* (yellowness) were determined with a Chromameter (CR-200, Minolta Camera Co. Ltd, Japan). Hue angle and chroma values were obtained from the values a* and b*. An ANOVA was carried out and the comparison of means was made by the SNK test. SPSS statistical software was used.

The slaughter weight affected the amount of moisture and protein (a reduction of ~4 and 5%, respectively) and the amount of neutral lipids between 70 and 110kg LW (P=0,001) (an increase of about 80%). The polar lipids and myoglobin content increased significantly by ~27% (P=0,007) and ~30% (P=0,033) respectively, but the amount of collagen was not significantly affected. The pH values showed significant differences but the trend wasn't related to the slaughter weight, since the intermediary groups showed the lower values. The water loss was also significantly different among weights, but as observed in the pH parameter, no pattern of variation was observed. Finally, the colour of *M. Psoas major* samples weren't in general affected by the weigh at slaughter. In conclusion, the weight at slaughter markedly affected the gross chemical composition of the PM muscle, but not its physical characteristics.