TITLE: THE EFFICIENCY OF COOKING IN ELIMINATING PATHOGENIC MICROORGANISMS IN OVINE CARCASES

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According to the World Health Organization, high temperature contributes to guarantee the safety of food, and can eliminate almost all pathogenic microorganisms. Studies show high thermotolerant coliforms count in ruminants. These microorganisms can be found in this type of raw meat due to inadequate procedures before and after slaughter, as well as incorrect handling during the preparation of this meat. The aim of this study was to evaluate the microbiological quality of *in natura* meat and the efficiency of cooking in the process of eliminating pathogenic microorganisms in ovine carcasses. A sampling plan was carried out in five ovine carcasses, obtained from the same producer from Russas ï a city in the countryside of Ceará. Each carcass, analyzed in triplicate, has undergone two treatments, totalizing 30 samples. In treatment 1, the samples were analyzed in the *in natura* form; and in treatment 2, after the cooking process for five minutes at an average temperature of 95°C. Determinations were made of the most probable number (MPN) of total coliforms, thermotolerant coliforms, *Escherichia coli*, research of *Salmonella* sp. and the positive count of *Staphylococcus aureus* coagulase. The results showed that three carcasses *in natura* presented a high count of thermotolerant coliforms, with values Ó 2400 MPN/g; in one of them it was also detected the presence of *Escherichia coli*. The remaining carcasses presented values of 460 MPN/g and 210 MPN/g. None of the *in natura* samples showed a positive result for *Salmonella* sp. and the coagulase test in the count of *Staphylococcus aureus*. After cooking, in addition to the negative results already found for microorganisms in *in natura* samples, all carcases presented absence (< 3 MPN/g) of the coliform group. As the RDC Nº 12/2001 only envisages the absence of *Salmonella* sp. in carcasses of *in natura* mammals, the samples analyzed were already in compliance with the Brazilian legislation before the thermal process was applied. However, the heating process was important for the reduction of the microbial load that was present, possibly a result of bad handling during the slaughter process. Therefore, it can be concluded that the heat treatment applied enabled the elimination of total coliforms in ovine carcases, showing its importance for eliminating possible pathogenic microorganisms that may damage the health of the consumer.

Keywords: High Temperature, Heating, Thermal Process, Safety