

MOLECULAR CHARACTERIZATION OF VEROTOXIGENIC *Escherichia coli* IN BEEF SAMPLES

(CARACTERIZAÇÃO MOLECULAR DE *Escherichia coli* VEROTOXIGÊNICAS EM AMOSTRAS DE CARNE BOVINA)

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Escherichia coli is an important pathogen that causes food poisoning in humans. Meat products, even when obtained from healthy animals, can become contaminated during the slaughter, in open markets, butchers and supermarkets and, therefore, reach the consumer table infected (HEUVELINK et al., 2001). The objective of the study was to perform molecular characterization by PCR for the presence of stx1 and stx2 genes in isolates of *E. coli* strains obtained from beef samples commercialized in Jataí and surroundings. Meat samples were collected from 29 butcher shops; one sample of the topside and another from the muscle, totaling 58 samples. The meat samples were plated on EMB-Levine agar and incubated at 37°C for 24 hours. From the 58 meat samples, 290 *Escherichia coli* isolates were obtained. The extraction of DNA from *E. coli* strain isolates was performed by thermal method. Bacterial DNA amplification was performed in a reaction with a final volume of 25µL. To visualize it, the agarose gel was exposed to ultraviolet light. One isolate was genetically characterized as STEC and identified as stx2, with a prevalence of 0.34% (1/290). These results are similar to those found by Rudolph et al. (2007). These authors analyzed 23 samples of minced meat from butcher shops in Taquaritinga (SP), and found 287 isolates of *E. coli*, of which only four were identified as STEC and had the Stx2 gene. Bergamini et al. (2007) evaluated 114 samples of ground beef collected in Ribeirão Preto, and of these, four were positive for VTEC; one, stx1 and three, stx2. The results confirm that meat products are potential sources of infection by pathogenic VTECs. Thus, hygienic-sanitary measures should be adopted throughout the production chain, starting with the living animal, slaughtering, processing and distribution of the meat to the population.

Support: Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) and Fundação de Amparo à Pesquisa do estado de Goiás (FAPEG).

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