

QUANTITATIVE MICROBIOLOGICAL EVALUATION OF *E. Coli* IN GROUND BEEF SAMPLES OF COMMERCIAL SHOPS IN UMUARAMA, PR, AND ITS CORRELATION WITH ASPECTS OF PERSONAL HYGIENE OF FOOD HANDLERS

AVALIAÇÃO MICROBIOLÓGICA QUANTITATIVA PARA A PRESENÇA DE E. Coli EM AMOSTRAS DE CARNE BOVINA MOÍDA DE ESTABELECIMENTOS COMERCIAIS DE UMUARAMA, PR, E SUA CORRELAÇÃO COM ASPECTOS DE HIGIENE PESSOAL DOS MANIPULADORES

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Beef is an excellent source of protein, vitamins and minerals, widely used as food for humans (MERRIMAN, 1996). However, it is also a good culture medium that favors the growth of microorganisms capable of causing intoxications. Its handling and contact with utensils exacerbate this risk while ground beef presents an even larger surface that may come in contact with utensils often not properly sanitized (SOUZA, 2006). *Escherichia coli* is an indicator of fecal contamination and a major pathogen transmitted by meat leading to food borne illnesses categorized as very important public health problem worldwide. We collected 4 ground beef samples from 10 shops in Umuarama, PR, totaling 40 samples that were transported refrigerated to the Microbiology Laboratory of the UEM, Umuarama. Subsequently, a 25g sample was homogenized in 225mL of 0.1% peptone water (dilution 10⁻¹), from which dilutions up to 10⁻³ (MUNHOZ, 2007) were obtained. The samples were placed in Petrifilm® RSA-3M plate (AOAC Official Method No. 991.14) incubated at 35 ± 1°C for 48 ± 2 hours. After that, the reading, counting and result interpretation were performed. A questionnaire was applied to meat handlers, and the responses regarding routine hygiene aspects were compared with the results of the microbiological analyses obtained. Except for two shops, all samples had *E. coli* in at least one dilution. The results showed high levels of fecal microorganisms, certainly due to poor hygiene habits of some of the professionals involved, as evidenced by the questionnaire. It is possible to work and maintain good hygiene habits in order to avoid food contamination, but this was not the reality found in the shops in Umuarama, pointing to the need for informing and training meat handlers (MUNHOZ, 2007).

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