EVALUATION OF BRUCELLA SPP. IN LIVER OF CATTLE INTENDED FOR SLAUGHTER IN THE STATE OF SÃO PAULO, BRAZIL USING qPCR TECHNIQUE

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Beef is considered one of the most important foods for human consumption, and Brazil stands out as the holder of the largest global commercial cattle herd, with approximately 234.352 million head of cattle, resulting in high domestic consumption of this product. The export of agricultural products from Brazil is influenced by various factors such as volume, supply, production costs, and product quality, generating comparative advantages and competitiveness based on the productive capacity of specific regions compared to their competitors. In this context, institutions and industries seek to establish guidelines to control potential diseases transmitted by these products. Among potentially pathogenic microorganisms, we can mention bacteria of the genus Brucella spp. The aim of this study was to identify Brucella spp. in bovine livers destined for slaughter. Two hundred and fifty samples of bovine liver from slaughterhouses in the State of São Paulo (SP) were used. The 250 bovine liver samples were processed using the Easypure Blood Genomic DNA Kit (TransGen Biotech), according to the manufacturer\'s manual. The primers (Primer-F: 5' TCAGGCGCTTATAACCGAAG 3' and Primer-R: 5' ATCTGCGCATAGGTCTGCTT 3') for the qPCR reactions were used with the GoTag qPCR master mix kit (Promega[™]) in a 22 µL reaction, with an annealing temperature of 58 °C. A pure Brucella sp. sample was used as a positive control, and nuclease-free water as a negative control. The reactions were conducted on the AriaMx equipment (Agilent), and amplification graphs and melting curves were evaluated to verify the presence or absence of targets in the samples. Brucella sp. was not detected in any of the analyzed samples. Given that this disease is part of the government\'s eradication program aimed at eliminating the circulation of the bacterium within national territory, efficient sanitary control in the field is necessary. Therefore, the results of this study reinforce that the procedures for eliminating these microorganisms are being properly followed.

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