TITLE: QUALITY ASSESSMENT OF RAW MILK AND THE OCCURRENCE OF PATHOGENS CAUSING MASTITIS IN THE MILK BOWL OF MATO GROSSO STATE, BRAZIL

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ABSTRACT:
Bovine mastitis is characterized by inflammation of the mammary gland and has as its main cause bacterial infection by *Staphylococcus aureus* and *Escherichia coli,* presenting in clinical or subclinical forms. Monitoring the profile of pathogens that cause mastitis is considered a priority in dairy production systems, contributing to the quality of this product. Infection by these pathogens, in addition to compromising the quality of milk, directly interferes with the animal's productive capacity, causing great economic losses for the producers. The main of this work was to identify the occurrence of *S. aureus* and *E. coli* in milk produced in the dairy basin of the State of Mato Grosso, Brazil. The microbiological analysis of a total of 64 samples obtained through the milk harvest from eight dairy farms located in the city of Cáceres, Mato Grosso, between February and May 2019, was carried out. The samples were collected directly from the cooling tanks and after collection, the samples were cooled and sent to the Microbiology Laboratory of the Federal University of Mato Grosso for the determination of S. aureus and E. coli. Of the total of 64 milk samples, the highest occurrence was for *S. aureus* 93.8% (60/64), while *E. coli* was detected in 6.21% (04/64) samples. Milk quality requires constant monitoring by milk producers for better adaptations, given the importance of monitoring for the identification of these mastitis-causing pathogens, since *S aureus* is the main microbial agent responsible for contagious mastitis in dairy herds leading to a significant increase in somatic cell counts (CCS), in addition to causing serious lesions in the mammary glands, reducing the quality of milk and the productive potential of the animal. However, the presence of *E. coli* can be even more worrying, since bacteria of this group can be a public health problem, triggering more serious pathologies such as hemorrhagic diarrhea and death.

Keywords: Mastitis, milk, *Staphylococcus aureus, Escherichia coli*

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