

TITLE: OCCURRENCE OF PATHOGENIC MICROORGANISMS IN RAW MILK FROM DAIRY HERDS IN THE STATE OF PERNAMBUCO

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ABSTRACT:

Considering the importance of milk production in the country's economy, attention must be paid to the quality of raw milk, since it is subject to contamination by various pathogens that negatively affect milk production and public health. In this context, some microorganisms are related to cases of mastitis and are capable of forming biofilms that are considerably resistant to sanitizers and antimicrobials. In view of the above, the objective was to analyze microbiologically milk samples from dairy herds in the state of Pernambuco. At first, a survey of the main cattle herds in the state of Pernambuco was carried out and then samples of the mammary quarters of 446 animals were collected, totaling 1864 ceilings of bovine females, from ten dairy farms located in seven municipalities of the state of Pernambuco. After physical examination of the mammary gland and the California Mastitis Test, after cleaning, drying and antisepsis of the ceilings, an average of 5mL of milk were collected in sterile weights from all mammary quarters, regardless of the reaction to CMT, totaling 1864 samples Collected. Of these, 885 corresponded to animals with clinical or subclinical mastitis, and were then seeded in 5% sheep blood agar medium and incubated at 37° C for 48 hours. Afterwards, the microorganisms were identified by means of morphological, dyeing and biochemical characteristics. Laboratory analyzes were performed at the Meat and Milk Inspection Laboratory of the Federal Rural University of Pernambuco. The results obtained were positive for *Staphylococcus* spp. in 80.63% of the samples. In addition, other microorganisms causing mastitis, such as *Streptococcus* spp. in 11.70% of the samples; Gram negative cocci in 3.40% of samples; *Corynebacterium* sp. in 1.70% of the samples; Gram negative coccobacilli in 0.64% of samples; *Micrococcus* sp. In 0.43% of the samples and Bacillus Gram negative in 0.21% of the samples. *Staphylococcus* spp. Consists of the main genus of bacteria causing mastitis, and their presence in high amounts in milk represents a risk to consumer health. In addition, it is evident that the procedures of hygiene and cleaning by the employees of the properties visited need to be applied more rigorously.

Keywords: Food safety; Manual milking; Mechanical milking; Microbiological quality; Public health;