

Title: ANALYSIS OF PATHOGENIC MICROORGANISMS IN THE MILK *IN NATURA*, COMMERCIALIZED IN THE CITY SENADOR SA-CE.

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ABSTRACT:

Milk is used as the basis of alimentation for being a complete food, because it is composed mainly of protein, vitamins, minerals, calcium and for presenting a high nutritional value. The milk produced and synthesized in the mammary alveoli is sterile, but as it is collected, handled and stored improperly, can be contaminated by various microorganisms. Given the above, the present study was to evaluate the microbiological quality of fresh milk sold in three establishments in the city of Senador Sá, Ceará. Therefore, we collected 15 milk samples from three separate establishments, which were submitted to the determination of the Most Probable Number (MPN) of Total Coliforms (TC) and thermotolerant coliforms (TTC) by fermenting technique in multiple tubes. Of the 15 (100%) samples analyzed, 12 (80%) showed levels of total coliforms and of these, 06 (40%) were contaminated by fecal coliforms with values above the tolerance limit set by law. With the results obtained from the microbiological and biochemical test could be seen the presence of the following bacteria: *Hafnia alvei*, *Enterobacter cloacae*, *Providencia alcalifaciens*, *Klebsiella pneumoniae* and *Escherichia coli*. Such bacteria are Gram-negative bacteria and are usually found in the gastrointestinal tract of man and other warm-blooded animals and thus part of the normal microbiota. The presence of pathogenic microorganisms in the fresh milk is a public health concern because it offers risks to those who consume it directly or in the form of derivatives. The contaminated fresh milk may still be cross-contamination pathway in the production of dairy products such as curd cheese and curd. The high levels of contamination by total and thermotolerant coliforms may be associated with lack of cleaning procedures before milking and improper storage. Therefore it is extremely important to establish preventive measures to address the need to improve the microbiological quality of this product, thus reducing contamination of the milk with bacteria.

KEYWORDS: Fresh milk, microorganisms, thermotolerant coliforms.