

IDENTIFICATION AND SENSITIVITY TEST IN MICROORGANISMS FROM PASTEURIZED TYPE C MILK SAMPLES DISTRIBUTED IN DAY CARE CENTER IN THE MUNICIPALITY OF VIÇOSA-AL

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Abstract:

The contamination by microorganisms is one of the shortcomings of the dairy supply chain and it is related to handling and hygiene lack during milking and sanitary problems such as mastitis, and lack of trained personnel. This study aimed to identify possible microorganisms in pasteurized milk and cooked pasteurized type C milk distributed to six children's day care centers in the city of Viçosa-AL. Six milk samples were subjected to microbiological diagnosis and isolated microorganisms have their antibiotics susceptibility tested in vitro by Disc Diffusion Method (DDM) on agar Mueller-Hinton and an herbal antibiotic, respectively Amoxicillin 10mcg, Cephalothin 30mcg, 5 mcg Ciprofloxacin, Tetracycline 30mcg, 10mcg Gentamicin and Zanthoxylum rhoifolium Lam. (500mcg). Microorganism contamination was found in 100% of the samples of pasteurized milk, 50% (3/6) caused by *Streptococcus* sp., 33.33% (2/6) by *Staphylococcus* sp. 16.66% (1/6) by Gram negative coccobacillus. The microorganisms showed a higher sensitivity to gentamicin 66.66% (4/6) and Ciprofloxacin 50% (3/6). Herbal Zanthoxylum rhoifolium lam showed 100% (6/6) of action against all the bacteria. All of the microorganisms (6/6) showed Amoxicillin resistance besides Cephalothin and Tetracycline resistance. Among cooked pasteurized samples only one showed growth of Gram negative Coccobacillus 16.66% (1/6). Other studies support it, as a work that analyzed some samples of pasteurized milk in the city of Fortaleza with 60% of contamination . Another work analyzed samples from the city of Sao Jose do Rio Preto-SP, found similar results (57%) and elevated levels of contamination. Considering the sample results, a special attention is needed from public health authorities and a better guidance and supervision in the production and distribution of milk. The poor quality of the samples is a result of the highly contaminated raw material, showing problems in the hygienic conditions of the beneficitation process and after-cooking. Hygiene and sanitary control of herds and milking are essential to reduce the risk of zoonoses or food-borne illness transmission.

Keywords: Milk Microbiology, antibiogram, *Streptococcus* sp.