TITLE: MICROBIOLOGICAL STATUS OF GOAT MILK PRODUCED IN EAST REGION OF MINAS GERAIS STATE, BRAZIL.

AUTHORS: MARTINS, C.A.F.; MAGALHÃES, L.T.A.; BARBOSA, A.O.; MARTHON, A.B.; PIERI, F.A.

INSTITUTION: UNIVERSIDADE FEDERAL DE JUIZ DE FORA, CAMPUS GOVERNADOR VALADARES, GOVERNADOR VALADARES, MG (AVENIDA DOUTOR RAIMUNDO REZENDE, 330, CENTRO, CEP 35012-140, GOVERNADOR VALADARES – MG, BRAZIL)

ABSTRACT

The increasing consumption of goat milk due to its healthy food status has been verified in the last years in Brazil, with a consequent increase in production. This production must be carried out with management measures that guarantee the product's innocuity regarding the transmission of pathogenic microorganisms, and this control can be done by enumerating hygiene microbiological indicators and potentially toxigenic bacteria of the genus *Staphylococcus*. The aim of this study was to evaluate the microbiological quality and safety of raw goat's milk produced in Governador Valadares region, Minas Gerais state. Seventeen samples of goat milk from three collecting points were analyzed for counts of mesophilic aerobes, total and thermotolerant coliforms, on Petrifilm AC™ and EC™ plates and for coagulase positive and negative Staphylococcus (CPS and CNS) with Baird Parker agar added with fibrinogen rabbit plasma, incubated for 72 hours at 37°C. Two samples had mesophilic aerobic counts above 500.000 CFU/mL, the maximum allowed by national legislation. Total coliform counts greater than 1.000 CFU/mL were obtained in seven samples, and for six samples were no coliforms. Thermotolerant coliforms were absent in all samples. Seven samples had CPS above 5000 CFU/mL. Three presented CNS above 5000 CFU/mL, whereas in three samples there was absence of these microbial groups. It can be concluded that goat's milk produced in the region of Governador Valadares meets, for most samples, the Brazilian legislation regarding the hygiene microbiological indicators. However, although there is no regulation of the presence of CPS and CNS, microorganisms potentially producing thermotolerant toxins, the results indicate the importance of adequate refrigeration of the goat's raw milk until its processing, to avoid proliferation of these microbial groups, with consequent contamination of the milk by toxins, which would not be eliminated by ultra-high temperature (UHT) and pasteurization processes, which could lead the final consumer to food poisoning.

Keywords: goat milk, hygiene indicators, coliforms, Staphylococcus.

Development Agencies: FAPEMIG and CNPq.