

TITLE: ASSESSMENT OF MICROBIOLOGICAL QUALITY OF THE WATER AND RAW MILK USED FOR THE ARTISANAL PRODUCTION OF PORUNGO CHEESE

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ABSTRACT

Porungo cheese is an artisanal product widely manufactured and consumed in the southwest region of São Paulo State. For its production, raw milk and the fermented-whey collected during the previous day's production are used. Commercialization of this product represents a major source of income for many small family farmers. However, as the raw material does not undergo any treatment aimed at controlling contamination by pathogens, this cheese may be associated with cases and outbreaks of food poisoning. The microbiological characterization of the water and milk used in the cheese production has never been done before, and there is an opportunity to know the state of the art of this production as well as to support possible interventions with regard to quality assurance. The objective of this project was to evaluate the microbiological quality of water and raw milk used in the production of porungo cheese manufactured in Angatuba and Campina do Monte Alegre, SP. The water samples were analyzed for potability considering the groups of total and thermotolerant coliforms and heterotrophic bacteria. Milk from each of the 13 properties was analyzed for the presence of total and thermotolerant coliforms and *Staphylococcus aureus*. Most of the water is obtained from mine and results showed no counts of thermotolerant coliforms, except the water from one producer, besides low presence of heterotrophics ($1.78 \log \text{CFU/ml}$) indicating that due care is taken to protect access to the mine by animals and other sources of contamination. In the same direction, the milk analyzed presented low number of total coliforms (97.2 MPN/ml) and thermotolerant coliforms (1.9 MPN/ml) while *S. aureus* was detected in higher number ($3.24 \log \text{CFU/ml}$). These results indicate that good milking practices must be considered aiming improve milk quality. Although during processing this cheese goes through the stretching step in hot water, which significantly reduces contamination, the quality of the raw material is fundamental to a quality product and without risks to the consumer.

Key-words: Artisanal cheese, foodborne pathogens, coliforms, porungo.

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