

**Title:** MICROBIOLOGICAL QUALITY OF CHEESE COLONIAL PRODUCED IN OURO, SANTA CATARINA.

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### **Abstract**

The colonial cheese is a dairy derived great acceptability in the regional market from the Vale do Rio do Peixe in the state of Santa Catarina. The production of cheese from raw milk is a traditional activity in rural areas and is intended for consumption by the producer family or to supplement family income. Due to the high content of nutrients present in cheese, it becomes an excellent substrate for the growth of several beneficial and pathogenic microorganisms. Because of the characteristics of process of preparing such cheeses, and the use of non-pasteurized milk, there is the potential risk for the development of spoilage and pathogenic micro-organisms from raw materials or incorporated during the processing and maturation. The objective of this study was to characterize the bacteriological contaminants in colonial cheeses made from raw milk producers on small family farms and compare the results with the current legislation which provides for the tolerated microbiological standards in food, since the marketing of these artisan cheeses It is prohibited. We analyzed eight samples of artisan cheeses collected and evaluated in the period February to May 2015, from the rural community of the District of Santa Lucia, located in the Lageado Caetano Line, Ouro, SC. Microbiological determinations were performed: *Salmonella*/25g, Most Probable Number (MPN) *Listeria monocytogenes*, *Staphylococcus aureus*/g, *Streptococcus ssp*/g, *Enterococcus spp*/g lactic acid bacteria/g, total and fecal coliforms/g. All samples demonstrated no *Salmonella spp.*/25g and NMP of *L. monocytogenes* <0.3/g. The count analyzed microorganisms colonies had to be variable in the study: *S. aureus* ranged from  $5.0 \times 10^3$  UFC/g to  $4.8 \times 10^7$  UFC/g; *Streptococcus* ranged from  $3.4 \times 10^6$  UFC/g  $6.0 \times 10^9$  UFC/g; *Enterococcus* ranged from  $2.7 \times 10^6$  UFC/g  $9.7 \times 10^8$  UFC/g. The lactic acid bacteria count ranged from  $4.7 \times 10^8$  UFC/g  $1.4 \times 10^9$  UFC/g. The thermo tolerant coliforms counts varied from  $3.1 \times 10^6$  UFC/g to  $8.8 \times 10^7$  UFC/g. The results exceeded the limits stipulated by law, parameters except for *Salmonella spp.* and *L. monocytogenes*. It notes that the colonial cheeses are a differentiated product and the process characteristics are factors that hinder the fulfillment of legal limits.

**Keywords:** Artisan cheese. Microbiological contamination. Pathogens in dairy products. Food safety.

**Development agency:** Unoesc.