

## MICROBIAL DIVERSITY ISOLATED COALHO CHEESE PRODUCED IN THE SERTÃO PARAIBA

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### ABSTRACT

In the Northeast, handmade Coalho cheese production is an important economic activity in the culture and family income. Despite its economic importance and popularity, Coalho cheese manufacturing lacks appropriate technology for the improvement of its quality, noting changes in organoleptic properties of cheeses in each region. The lactic acid bacteria (LAB) are important in improving the Coalho cheese manufacturing technology, among other characteristics, properties such as the addition of flavor, texture and flavor to dairy products. However, other bacteria also make up the microflora of dairy products, especially cheeses made from milk unpasteurized. This study aimed to identify the microbial diversity of the Coalho cheese produced with milk unpasteurization by PCR. Nine handmade Coalho cheese samples were collected in three micro-regions of the Sertão of Paraíba, in the period from June to August 2013. The samples were sent to the Microbiology Laboratory (UFCG) for isolation and characterization of the colonies. Two hundred and three colonies were sent to the Laboratory of Molecular Biology (UFCG) for DNA extraction, PCR reaction and purification of PCR products. After purification the products was performed on Genomics Laboratory (UFPE) to perform the sequencing. The identification of microorganisms occurred through deposit in the GenBank database (National Center for Biotechnology Information, NCBI) using the BLAST tool (Basic Local Alignment Search Tool). The artisan Coalho cheese of the Paraíba has a microbial population very heterogeneous and diverse. The main species of BAL were identified *Enterococcus faecium*, *Lactococcus garvieae*, *Streptococcus lutetiensis* and *Lactococcus lactis* subs *lactis*. Bacteria not lactic were responsible for approximately 10% prevalence, among them *Staphylococcus aureus* and *Cronobacter sakazakii*.

Keywords: molecular biology; Northeast region; microbial diversity; PCR.