ISOLATION, CHARACTERIZATION AND IDENTIFICATION OF BACTERIA ACID LACTIC OF THE ARTISAN CHEESE.

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ABSTRACT

In Brazilian Northeast Region artisanal cheese production is an important economic activity for increasing family income and it is a people's eating habits in that region, nevertheless its manufacture does not have appropriate technology for the improvement of its quality. The use of industrial yeasts and milk pasteurization contribute to the standardization of the organoleptic characteristics and reduction of lactic acid bacteria (LAB). Since the concept of LAB began several works about identification and classification of these microorganisms were performed. Initially, the classification were based on biochemical methods, however the use of molecular markers contributed to the unification of species concept and improved the accuracy in the classification. This study aimed to identify the LABs present in artisan Coalho cheese produced in three microrregions (Souza, Cajazeiras and Patos) in the Paraiba by 16S rRNA gene sequencing. The samples were collected in cheese factories and commerce in the period June to August 2013. After the collected samples were sent for isolation and purification of bacterial colonies. Nine samples of Coalho cheese 191 isolate was sent for DNA extraction, PCR reaction, product purification of PCR and sequencing. The sequences obtained were compared with the GenBank database (National Center for Biotechnology Information - NCBI) using the BLAST tool. The artisan Coalho cheese of the Paraiba has a lactic acid bacteria microbiota very heterogeneous and diverse represented by genres Enterococcus, Lactococcus, Streptococcus, Lactobacillus, Leuconostoc and Weissella. The main species isolated were *Enterococcus faecium, Lactococcus garvieae, Streptococcus lutetiensis* and *Lactococcus lactis* subsp*. lactis* The 16S rRNA gene is a useful tool in the differentiation of these microorganisms.

Keywords: molecular biology; Northeast region; lactic acid bacteria; PCR.