

TITLE: ISOLATION OF ENTEROCOCCUS DURANS ON TYPE “COALHO” CHEESE MARKETING IN THE CITY OF RECIFE, PERNAMBUCO - BRAZIL

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ABSTRACT:

Bacteria of the genus *Enterococcus* have as main reservoir the gastrointestinal tract of man and animals, but can be found in soil and water. *Enterococcus durans* are related to cases of urinary tract infections, in addition to causing endogenous infections acquired through the installation of a catheter, such as endocarditis and bacteremia. From fecal contamination, animal skin, water, milking equipment and expansion tanks these bacteria can contaminate milk and its derivatives. Type “coalho” cheese, a typical product of the Brazilian Northeast, is very popular and widely consumed by the local population and in other regions of the country. Its production plays a considerable part in the economy, being significant in the income of milk suppliers and the product manufacturers. The objective of this study was investigate *Enterococcus durans* in type “coalho” cheese commercialized in hypermarkets in the city of Recife-PE. Thirty-six samples of type “coalho” cheese were purchased from hypermarkets in the city of Recife-PE. Samples were kept in their packaging, placed in insulated boxes containing ice packs and immediately brought to the meat and milk Inspection Laboratory UFRPE, which were stored under refrigeration for the analyzes. From each sample, 25g were placed in 225ml of 1% buffered peptone water, followed by homogenization for 60 seconds in Stomacher. From this dilution (10^{-1}), subsequent dilutions were made until the dilution was 10^{-4} . Then 0.1 ml of each dilution was seeded on Slantz Bartley plates with Drigalski loop and incubated at 40°C for a period of 24 to 48 hours. The colonies suggestive of *Enterococcus* isolates were identified by their morpho-tinorial characteristics (Gram staining) and biochemical characteristics (Bile esculin, 6.5% NaCl and catalase), and the *E. durans* species was identified using automated Vitek® 2 Compact identification, in addition to the biochemical tests Saccharose, dMannitol and Arabinose for definitive confirmation of a strain. Four *E. durans* positive samples were observed. The presence of *E. durans* in type “coalho” cheese represents a public health risk with regard to foodborne diseases. In addition, it may compromise treatments of patients in hospital condition. Therefore, more studies on the microorganism are very relevant, in order to elucidate the other damages caused by the pathogen. As well as later research evaluating antimicrobial resistance and the bacteriogenic potential of these strains are necessary.

Keywords: lactic acid bacteria, foodborne diseases, pathogenic microorganisms, public health.