

TITLE: PROFILE OF ANTIMICROBIAL SENSITIVITY IN VITRO OF MICRO-ORGANISMS ISOLATED IN SAMPLES OF CHEESE WHEEL MARKETING IN THE STATE OF ALAGOAS, BRAZIL.

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ABSTRACT:

The objective of this study was to evaluate the in vitro antimicrobial susceptibility of microorganisms isolated from samples of rennet cheese marketed in the State of Alagoas, Brazil. The phenotypic classification of 60 isolates of *Staphylococcus* spp. and 12 of *Enterobacteria*, and then were submitted to analysis of the sensitivity profile antimicrobial, with: Gentamicin, Sulfazotrim, Enrofloxacin, Amoxicillin and Cefquinoma. The multiple antibiotic resistance index was calculated. Sensitivity of *Staphylococcus* spp. to Gentamicin (50%), Amoxicillin (83.3%), Sulfazotrim (50%), and Enrofloxacin (75%). For *Enterobacteria* it was observed a high percentage of sensitivity to Enrofloxacin and Gentamicin (100%), and low to Cefquinoma and Sulfazotrim (33.4% and 16.7%, respectively). The multiresistance profile found was considered low. The Multiple Antimicrobial Resistance Index (IRMA) ranged from 0 to 0.6. Among the isolates analyzed, 75% (45/60) showed resistance to at least one of the antimicrobial agents tested. A low antimicrobial resistance index was observed in this study. It was concluded with this study that the sensitivity of *Staphylococcus* sp. and *Enterobacteria* compared to antimicrobials tested, however, a significant percentage of resistance was observed, which constitutes a risk to the health of the population that consumes this product, by the ability to transmit microorganisms resistant to various drugs, reducing the therapeutic arsenal available for treatment by infections caused by these pathogens. The results are indicative of the need for an urgent revision of the current food sanitary legislation with the inclusion of microbiological standards. It is necessary to adopt measures to control the indiscriminate use of antibiotics in milk production to reduce human health hazards and to maintain sensitivity indices of microorganisms.

Keywords: Antimicrobials, *Staphylococcus*, *Enterobacteria*, milk