TITLE: COUNTING AND ANTIMICROBIAL RESISTANCE OF *STAPHYLOCOCCUS AUREUS* ISOLATED FROM COALHO CHESE COMMERCIALIZED IN LAGARTO-SE

AUTHORS: MATOS, R. C. S. R., CAVALCANTE, R. C. M., OLIVEIRA, M. A., SOUZA A. C.

INSTITUTION: UNIVERSIDADE FEDERAL DE SERGIPE – CAMPUS LAGARTO (AVENIDA GOVERNADOR MARCELO DÉDA 330. BAIRRO: SÃO JOSÉ CEP: 49.400-000 LAGARTO – SE)

ABSTRACT:

Foodborne diseases are a serious public health problem, mainly because there are dozens of types and they can be from the simplest, as very serious and can lead to death. Many of these diseases are caused by microorganisms, such as Eschericha coli, Salmonella sp and Staphylococcus aureus. In Brazil, Coalho cheese, especially in Northwest, is high consumption dairy product which is frequently associated to foodborne diseases. S. aureus is the main pathogen isolated from this kind of cheese. In addition, multidrug-resistant strains of this bacterium have been isolated in different foods and in the community. The objective of this study was quantify and find out the antibiotic resistant profile of S. aureus present in Coalho cheese commercialized in Lagarto-SE. The count and detection S. aureus were conduct according to Instrução Normativa 62 (2003) do Ministério da Agricultura e Pecuária. The antibiotic susceptibility was evaluated by disc diffusion method on agar plates. 28 samples of cheese were collected from different sellers in Lagarto-SE. 99 strains of S. aureus were isolated from these samples. 96,4% of the samples exhibited S. aureus counts above than 10⁴ UFC/g, which is higher than the maximum permitted for this food. 64,6% of the strains were resistant to at least one of the antibiotics tested. 100% of the strains were sensitive to chloramphenicol, 2.02% resistant to gentamicin, 3.03% to norfloxacin, amoxicillin + potassium clavulanate and cefoxitin, 4.04% to erythromycin, 7.07% to doxycycline, 8.08% to ciprofloxacin, 10.1% to azithromycin, 11.1% to clindamycin, 13.1% to sulfamethoxazole + trimethoprim, 14.1% to tetracycline and 39.3% to penicillin. The great majority of the analyzed cheese was inappropriate to consumption, probably due a failure in the implementation of Good Manufacturing Practices and/or at packing, transportation or selling of the product. In addition, the presence of resistant strains signaled for possible indiscriminate use of antimicrobials in animals, either for the treatment of diseases or as growth promoters. The presence of multidrug resistant strains in food is very dangerous, once the they can transfer resistance genes to other bacteria and contribute to the occurrence of untreated infections.

Keywords: Coalho cheese; *Staphylococcus aureus*; antibiotic resistance; Good Manufacturing Practices.

Development Agency: UNIVERSIDADE FEDERAL DE SERGIPE – CAMPUS LAGARTO