

## **Prevalence of enterotoxin genes in strains of *S. aureus* isolates from bovine subclinical mastitis.**

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*Staphylococcus aureus* is considered a major cause of subclinical bovine mastitis in Brazil, causing losses to dairy farms and risks of food poisoning to consumers. Staphylococcal enterotoxins are recognized as food poisoning agents and may be involved in other types of infections in humans and animals. The symptoms of food poisoning *Staphylococcus aureus* have a short duration, depending on the amount of food eaten and the susceptibility of the individual. The amount of enterotoxin required to onset of symptoms is short, requiring approximately  $10^5$  CFU / g of food to occur toxin production. The five classic serological types of staphylococcal enterotoxin (SE) were identified and classified as SEA, SEB, SEC, SED and SEE. Thus, the aim of this study was to evaluate the presence of genes for the production of classic enterotoxin in strains of *S. aureus* isolated from cows with subclinical mastitis on a farm in the state of São Paulo. Samples of milk were collected from cows with subclinical mastitis and passed in a specific medium for the isolation of the colonies. The strains of *S. aureus* were identified by biochemical tests (catalase and coagulase) and presence of nuc gene. The 30 strains were identified by the Polymerase Chain Reaction (PCR) with specific primers for the identification of genes SE. The results showed that 70% of the strains had at least one of the genes for the production of enterotoxins, and 13% were positive for more than one type. The most prevalent gene was for SEC, appearing in 21 strains, followed by SEE (5 strains) and SEA (4 strains). We don't find genes to SEB and SED. With these results, we note the importance of sanitary controls, since these toxins are synthesized, remain at high temperatures and can generate a public health problem. In addition, control of mastitis and good handling with animals are essential to prevent the spread of the disease.

**Palavras-chaves:** mastitis, enterotoxin, *Staphylococcus aureus*

**Agência Fomento:** Capes