Abstract

Staphylococcus aureus is the most prevalent bovine mastitis pathogen in Argentina. The ability of this organism to produce enterotoxins is linked to staphylococcal food poisoning. Staphylococcal enterotoxins are low molecular weight proteins, highly resistant to heat and proteolytic enzyme activity. The aim of this study was to determine the ability to produce enterotoxins and types of enterotoxins A through E produced among 94 S. aureus isolated from bulk tank milk in Argentina by enzyme-linked immunoassay. Eleven isolates (11.7%) produced enterotoxins. Seven of them (7.4%) produced enterotoxin C, two (2.1%) enterotoxin D, one (1.1%) enterotoxin B and one (1.1%) enterotoxins C-D-E. None of the isolates produced enterotoxins A or E alone. Since presence of staphylococcal enterotoxins constitute a potential risk to public health, these findings underscore the need to control S. aureus bovine mastitis and to limit bacterial multiplication in bulk tank milk.

Keywords

Enterotoxins, Bulk tank milk, Mastitis, Staphylococcus aureus.