PHENOTYPIC CHARACTERIZATION OF *STAPHYLOCOCCUS* SPP. STRAINS ISOLATED FROM A MINAS FRESCAL CHEESE MANUFACTURING PLANT IN SAO PAULO STATE, BRAZIL


Some species and strains of *Staphylococcus* spp. are potential enterotoxin producers. Minas Frescal cheese is often involved in staphylococcal contamination and intoxication cases in Brazil. To detect potential pathogenic *Staphylococcus* in food, some biochemical tests can be used. According to scientific literature, the presence of deoxyribonuclease (DNAse) activity is highly correlated to coagulase activity, which is strongly related to the staphylococcal enterotoxin production, although some coagulase-negative *Staphylococcus* strains can also produce enterotoxins. Seven hundred and four colonies obtained from raw and pasteurized milk, handlers, equipments surfaces and cheeses samples during Minas Frescal cheese manufacturing in a dairy plant in Sao Paulo state (Brazil) were isolated in Baird Parker Agar, inoculated in Brain Heart Infusion Broth, reisolate d in Tryptone Soy Agar and then characterized through Gram, coagulase, DNAse and catalase tests. From all isolated strains, 113 showed coagulase activity between 1⁺ (low) to 4⁺ (high) intensity scores (73.5% = 4⁺, 2.7% = 3⁺, 2.7% = 2⁺ and 21.2% = 1⁺). All coagulase-positive strains were also Gram positive cocci occurring in pairs, short chains or clusters and presented catalase activity, being characterized as the genus *Staphylococcus*. Conflicting results were obtained with 31 isolates (28%) when the coagulase test was compared with DNase test, independent of coagulase intensity score, showing that DNAse test can improve the detection of potential pathogenic *Staphylococcus* in the laboratory routine, but doesn’t substitute tube coagulase test as described in many others studies.