Title: MEASUREMENT OF POSITIVE AND NEGATIVE COAGULASE IN RICOTTA CHEESE AND MINES FRESH

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Summary:

The Ricotta and Mines Fresh cheese are foods that favor the development of micro-organisms due to their high moisture and richness of nutrientes. The intense handling of the products during the manufacturing favors contamination with bacteria from the handler and own processing plant. Furthermore, such micro-organisms can be associated with not properly pasteurized. *Staphylococcus aures* are a major public health concern because they are able to produce thermostable toxins. Thus, to assess the potential risk of the presence of this micro-organism in high-moisture cheeses, ANVISA (RDC12 / 2001) establishes the ceiling for coagulase positive Staphylococci $5,0x10^2$CFU/g $1,0x10^3$CFU/g for Ricotta and Minas cheese, respectively. This work aimed at the detection and quantification of coagulase positive Staphylococci (ECP) and coagulase negative Staphylococci (CNS) in samples of Ricotta and Minas cheese produced and marketed in southern Minas Gerais, Brazil. They analyzed 60 samples, 30 and 15 Ricotta cheese industrialized Fresh Mines (QMFI) and 15 artisan cheese Minas Fresh (QMFA). The samples were processed using serial dilutions of inoculum and Baird Parker Agar, incubated at 35°C/48h. Features colonies were submitted to catalase and coagulase tests. In the analysis of Ricotta, the ECP were detected in seven samples, and in six of them (20%), the maximum was exceeded. Although 16 samples showed ECN counts greater than 10^2CFU/g. As for the Minas cheese, seven samples of QMFI (46.6%) and nine QMFA (60%) were at odds with the legislation in relation to ECP. As to the CNS, a sample of QMFI (6.66%) and eight QMFA (53.33%) showed higher counts than 10^4CUF/g, 10^3CFU/g, respectively. These results suggest that the use of poor quality of raw materials and/or non-compliance to good manufacturing practices. It is noteworthy that the high measurements of ECP and ECN are worrying because, currently, it is known that the ECN can also produce toxins. To improve the hygienic and sanitary quality of products and protect consumer health, it reinforces the need for adoption of good manufacturing practices and training of handlers, both in industry and in craft production.

Key words: food poisoning, microbiology, cheese

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