

DETECTION OF ADULTERATION OF MINAS FRESCAL CHEESE BY GEL ELECTROPHORESIS

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Minas Frescal cheese is a typical and popular cheese in Brazil and is traditionally produced by enzymatic coagulation of pasteurized milk with rennet. In this cheese-making, casein forms the curd structure while the whey proteins are lost in the whey. With a similar appearance at Minas Frescal, the Ricotta cheese has traditionally been prepared by heating whey or combinations of whey and up to 20% milk. Due to the entire procedure for production, the Minas Frescal cheese is a food of high price than Ricotta cheese and so, it is important to safeguard it from adulteration. Adulteration of Minas Frescal cheese involving the replacement of milk, an expensive ingredient, with the whey. The aim of this work was to detect possible adulteration by replacement of milk by whey in Minas Frescal cheese by SDS-polyacrylamide gel electrophoresis (PAGE). Eight samples of different brands of Minas Frescal cheese were obtained from local market of Florianópolis, Santa Catarina, Brazil, and its eletroforetograms and values of moisture (%) and fat in dry matter (%) were compare with the control samples of Minas Frescal and Ricotta cheese. The moisture and fat values showed great variation, but all samples presented moisture values according to Brazilian legislation and only one sample showed no fat in dry matter value according to legislation. The SDS-PAGE separation profile of samples showed that only two samples of Minas Frescal cheese presented similar bands with the control sample, while the other samples showed bands as obtained for the sample of ricotta control.