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Quality and Safety of Delactosed Dairy Products

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Mineral elements are ingested through the diet. Essential minerals have structural, biochemical, nutritional and catalytic functions; therefore, they are fundamental for human and animal health. In this research, thirty commercial delactosed dairy products from different varieties were supplied by various markets and their mineral contents were determined by using inductively coupled plasma mass spectrometry (ICP-MS) with the following aims: (1) to highlight the differences among various products; (2) to evaluate if it is possibly related to the analyzed samples of their product group; (3) to evaluate the nutritional quality and safety related to intake of these dairy products. Evident differences were found among the samples depending on the type of product. Based on shares of the RDA, the analyzed dairy samples are a good source of Ca (up to 58% of the nutrient reference values), with a relatively high concentration of Na (between 5.5% and 22%). Any safety risk for consumers due to exposures to toxic elements through analyzed samples is excluded. The obtained results give reason to expect further insight concerning the direct comparison between the delactosed and non-delactosed product, in order to evaluate if the manufacturing process can affect the content of some mineral.

Keywords: food safety; delactosed dairy products; mineral elements; principal component analysis

Biography:

Dr. Rosalia Crupi is a research assistant at Department of Veterinary Science, University of Messina.

Interests: veterinary pharmacology; toxicology; pharmacological activity of natural substances; nutraceuticals; dietary contaminants; animal welfare