DEVELOPMENT OF A FUNCTIONAL FOOD: MINAS CHEESE CONTAINING SPICES PHENOLIC COMPOUNDS WITH ANTIOXIDANT ACTIVITY

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The incorporation of phenolic compounds in foods is an alternative to minimize or delay the oxidative deterioration in the human body due to their antioxidant properties. The objective of this study was to develop a minas fresh cheese, with phytochemical bioactive compounds containing in extracts of Mentha piperita, Origanum vulgare and Salvia officinalis, determining their physicochemical and sensory characteristics. Medicinal plants extracts extracted by solvent followed by vacuum filtration and evaluation of antioxidant activity of phenolic compounds. The total amounts of the phenolic compounds were, respectively, 46.5, 44.3 and 38.1 mg of tannic acid equivalents (TSS) / g leaves of M. piperita, O. vulgare and S. officinalis. The percentage of antioxidant activity was respectively 85.2%, 91.6% and 91.5% inhibition in the extract. In the manufacture, were added 51.7, 49.2 and 42.3 mg of product phenolic/100g respectively of extracts. The maximum physical and chemical parameters were found in cheeses is 0.15% titratable acidity (lactic acid %), 22.0% fat, 41.4% fat in dry matter, 57.0% total solids, 39.0% nonfat dry, 5.4% ash, 16.8% total protein, 16.9% carbohydrates, 303.6 kcal/100g calories and 3.9% sodium chloride. For sensory attributes are obtained for appearance and acidity values of 8.06 and 6.8 respectively for cheeses with S. officinalis, flavor of 8.1 with O. vulgare and 7.8 to 7.9 points for texture global impression of cheeses with M. piperita. According to the physicochemical and sensory characteristics obtained, this products has the potential to be offered to the consumer, beyond the functional appeal that it can provide.

Keywords: Minas fresh cheese, functional food, phenolic compounds, spices extract, antioxidant activity.