EFFECT OF THE ADDITION OF BLUEBERRIES ON THE DEVELOPMENT OF FUNCTIONAL FERMENTED MILK

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The main goal of this research was study the effects of blueberry addition on the physicochemical, microbiological, sensory properties and shelf life of a functional fermented milk. Initially it was analyzed fresh blueberries that showed: 326.35 mg GAE/100g of total phenolic compounds, antioxidant capacity of 64.86 DPPH-VCEAC mg/100g, 14.6°B, pH of 3.32. To blueberries was added 40% of sugar, 20% of water and 3% of pectin and it was heated (95°C/10 minutes). The fruit preparation showed: 336.41 mg GAE/100g, 66.33 DPPH-VCEAC mg/100g, 30.2°B and pH of 3.35. For the fermented milk was used: UHT milk, 3% skimmed milk powder and lactic acid bacteria (Streptococcus thermophilus and Lactobacillus acidophilus). The product was formulated with 20% of blueberry preparation and 80% fermented milk, and kept at 4°C until analyzes. The results of physicochemical and microbiological showed that it was in accordance with the current legislation. Immediately after processing, it was determined coliforms (35°C) and mesophilic aerobic count which showed adequate process conditions. On days 1, 7, 14 and 21 of storage it was evaluated the count of the lactic acid bacteria, molds and yeasts, the pH and % of syneresis. According to the results, the shelf life was 14 days. In the sensory evaluation (color, flavor, texture and overall acceptability), the scores ranged between 8.3 and 8.5, and on the purchase intent test, 82% of the panelists said that they definitely would buy. In conclusion, it is feasible to use blueberries in functional fermented milk, which is a good way to add value to the product.