TITLE: NECTAR OF POTENTIALLY SYMBIOTIC MURICI

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ABSTRACT:

The growing demand for a healthy lifestyle means that the consumer prefers functional foods with ingredients and/or microorganisms desirable in their composition, such as prebiotics, probiotics and symbiotics. The objective of this study was to evaluate the viability of the probiotic culture *Bifidobacterium longum* 5^{1A} in nectar-type non-fermented beverage, as well as other microbiological and physico-chemical characteristics during the refrigerated storage period. A murici (Byrsonima verbascifolia L. Rich) nectar was prepared following the formulation: 30% pulp, sucrose up to 14 °BRIX, 4% fructooligosaccharide/FOS, 7.5 g microencapsulated probiotic, 0.2 % stabilizer xanthan gum and 300 mL of water. The product was homogenized, added with the prebiotic (FOS), pasteurized (90°C/60 sec), cooled (37 °C), inoculated with the probiotic culture and packed. The control product was prepared in a similar way, without addition of prebiotic and probiotic. The products were stored at 5±2 °C for 14 days and the samples were submitted to microbiological analyses (molds and yeasts count, coliforms at 35 °C and 45 °C count, Salmonella spp. and viability of *B. longum* 5^{1A}) and physicochemical analyses (pH, titratable acidity, total soluble solids, total solids and total carotenoids) at 0, 3, 7 and 14 days of storage. The two products presented hygienic-sanitary conditions according to the parameters of molds and yeasts, coliforms at 45 °C and Salmonella spp. determined by current Brazilian legislation. The counts of the probiotic during the shelf life of the nectar remained at 10⁶ to 10⁷ CFU/mL, and could reach the expected beneficial effect. given the consumption of 200 to 300 mL of the product, the standard amount for this type of food, resulting in 10⁸ to 10⁹ CFU per serving per day. Regarding the physicalchemical parameters, there was no difference (p>0.05) between the four storage times in the control nectar. Comparing the storage times of the experimental nectar, there was a significant difference (p<0.05) regarding pH only, on the 14th day of storage. Although a very low value of total carotenoids was observed in both nectars, there was a retention of 90.14% in the symbiotic drink. Thus, it was possible to elaborate symbiotic murici nectar with functional potential, microbiological and physical-chemical stability during the shelf-life (up to the 14th day of storage at 5±2 °C), without addition of chemical preservatives.

Keywords: functional foods, *Bifidobacterium longum* 5^{1A}, fructooligosaccharide, quality control

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