DEVELOPMENT OF A NEW SYMBIOTIC FERMENTED BEVERAGE WITH EXTRACTS OF QUINOA AND SOY

Fernanda Bianchi, Elizeu Antonio Rossi, Raquel Guttieres Gomes, Katia Sivieri. School of Pharmaceutical Science - UNESP - Araraquara-Jaú Km 1, 14801-902, Araraquara, São Paulo, Brazil.

Several studies in recent years have shown the benefits resulting from the ingestion of probiotics and, a large number of products containing lactobacilli have been formulated. The aim of this study was to develop a symbiotic beverage with aqueous extracts of quinoa and soy fermented with *Lactobacillus casei* (Lc1) and added of frutoooligosaccharides (FOS). Five formulations were tested with different proportions of soy and quinoa extracts (F1= 100% quinoa extract, F2= 70% quinoa extract and 30% soy extract, F3= 50% quinoa extract and 50% soy extract, F4= 30% quinoa extract and 70% soy extract and F5= 100% soy extract). Changes in pH values and titratable acidity were monitored on stored products. Sensorial and rheological analyses were performed after three and ten days of production respectively. It was investigated the survivability ability of *L. casei* in symbiotic beverages during refrigerated storage (5ºC) for 28 days. The formulations F3 and F4 showed better results of chemical composition. The increase of percentage of quinoa in the beverages, both at 10ºC and 25ºC, caused an increase in the viscosity and the consistency index values. The formulation F4 had better sensory acceptance (overall mean of 6.00± 1.87). The viability of the probiotic was maintained at 10^9 log CFU/mL during 28 days of storage in all studied formulations. The formulation F4 (30% quinoa extract – 70% soy extract) was considered the best formulation developed. It was possible to prepare a symbiotic beverage using soy and quinoa extracts with appropriate technological, nutritional and sensorial characteristics.