SYMBIOTIC FERMENTED PRODUCED WITH HUMAN MILK PRESENTING HIGH DORNIC ACIDITY: DETERMINATION OF SHELF LIFE ACCORDING TO SENSORIAL, PHYSICOCHEMICAL AND MICROBIOLOGICAL CHARACTERISTICS


Human milk is the ideal source of energy, nutrition and protection for newborns, providing the daily demands of infants. Human Milk Banks supply the needs when mothers are unable to feed their children for any reasons. Dornic acidity is a routine analysis used for quality control in such Banks once it suggests a relationship between high acidity and bacterial contamination. However, studies show that acidity values above 8°D may also be caused by other factors leading to an improper disposal of large volumes of samples. In order to avoid such loss, two symbiotic fermented milks, one mixing human milk and soy extract and another based only in human milk, were developed at FATEC-Marília, Brazil. The present study was performed to determine their shelf life according to their sensorial, physicochemical and microbiological characteristics. Under storage at 4°C, chemical analysis revealed that the fermented drink using soy extract showed a more pronounced post-production acidification, which was still acceptable up to 42 days. Nevertheless, according to sensorial analysis it was reasonably accepted up to 21 days. Chemical analysis showed a high fat content in both drinks, with an average equal to 4.52%. The protein content was high for both formulations, but it was twice higher for the one with soy extract (5.88%). Cell viability was above 10⁷ CFU mL⁻¹ during the 42 days, as recommended for any probiotic product. Considering all the results, the shelf life of symbiotic fermented milks, with or without soy extract was about 21 days under 4°C.