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SUITABILITY OF BUTTERMILK AS CULTURE MEDIUM TO SUPPORT THE SURVIVAL OF PROBIOTIC STRAINS

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Buttermilk is the liquid phase released during churning of cream in the process of butter making. This liquid phase contains most of the water-soluble components of cream. Buttermilk finds applications in various food products. This subproduct represents an important volume for the dairy industry and a way to use it and give it value is to study its suitability to support the growth of probiotic strains in order to use it to formulate synbiotic dairy drinks. With this idea in mind, in this work we proposed to evaluate the growth and survival of several probiotic strains, namely *Lactobacillus paracasei* L-26, *Lactobacillus acidophilus* L-10, *Lactobacillus acidophilus* LA-5, *Lactobacillus casei* 01, *Lactobacillus casei* 431, *Lactobacillus plantarum* 226v PROBI AB, *Lactobacillus brevis* D24, *Bifidobacterium lactis* B94 e *Bifidobacterium lactis* BB12 when inoculated in buttermilk at 2% inoculum. Growth was performed at 37 °C for 24 h. Based on the results obtained, we carried out a further study to determine the optimal conditions to formulate a synbiotic drink where fructooligosaccharides were used as prebiotic compounds. Results achieved enable us to conclude that buttermilk is a suitable matrix to maintain the viability of probiotic strains and to formulate a drink with appropriate sensory properties. The use of buttermilk has a double benefit, on the one hand we eliminate an important sub product and on the other hand we obtain an added-value product that can be marketed.