

Viability of Probiotic Bacteria *Bifidobacterium lactis* in Butter

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Background & Objectives: Probiotics are live microorganisms which when administered in adequate amounts confer a health benefit on the host. Consumption of probiotic bacteria via food products is an ideal way to re-establish the intestinal microflora balance. Among the treated foods, dairy products are the suitable carrier for probiotics. The survival of probiotic bacteria in fermented dairy bio-products depends on several factors such as type of used strains, interaction between species, culture conditions and chemical composition of the fermentation medium. Butter is a dairy product made by churning sweet or fermented cream. In this study survival of probiotic strains of *Bifidobacterium lactis* in butter was investigated.

Methods: Viable cells were enumerated by plating diluted samples (peptonized water) on solid MRS agar after incubation in anaerobic jars at 37 °C for 72 h.

Results: The results indicated that the numbers of *Bifidobacterium lactis* in the butter sample were 8.41 log cfu/gr at the first day of production. These figure reached to 6.02 after 90 days. The numbers of live probiotic cells were higher than those recommended for beneficial effect at the end of 90th day. Results of sensory evaluation by panelists showed that butter with *Bifidobacterium lactis* had no distinct difference in organoleptic properties with commercial samples.

Conclusion: *Bifidobacterium lactis* can be used successfully in butter without adversely affects on butter quality during storage.

Keywords: *Bifidobacterium lactis*; Butter; Probiotic Bacteria