

**EFFECT OF INULIN AND SKIMMED MILK POWDER LEVELS ON
THE VIABILITY OF PROBIOTIC BACTERIA AND CHEMICAL
CHARACTERISTICS IN PROBIOTIC FERMENTED DRINKS**

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Inulin behaved as a prebiotic to improve viability of probiotic bacteria. Fermented bio drinks containing probiotic bacteria were produced by mixing 50% low fat yoghurt, 50% water and 0.7% salt mixing with different skimmed milk powder concentrations (0.5, 1, 1.5 w/v). Probiotic was grown (37°C, 3h) in drinks supplemented with or without inulin addition (0.5 w/v) as a prebiotic factor. Drinks were stored in +4°C for three weeks. Every week each kind of drink was examined in order to check the growth of *Lactobacillus casei* bacteria. Acidity and pH of bio drinks were determined during refrigerated storage. The inulin addition to bio drinks caused an increase in the numbers of all bacteria in comparison to control sample obtained without addition of prebiotic. The viable counts of *L. casei* when 0.5%, 1%, 1.5% of skimmed milk powder added to drinks were about: 4.73 log cfu/mL, 4.79 log cfu/mL and 8.099 log cfu/mL, respectively. In the presence of 0.5% inulin only, *L. casei* reached the growth at the level 4.10 log cfu/mL. Acidity with addition skimmed milk powder and inulin increased during 21 days of refrigerated storage. Generally, viability of bacteria was sufficient for 14 days and then their numbers decreased but usually is not lower than 10⁶ cfu/mL. Prebiotics as inulin added to fermented drinks exhibited stimulatory effect on growth *L. casei*. Addition of prebiotics caused an increase acidity number and decrease in pH of obtained fermented bio drinks. Also by increasing the percent of skimmed milk powder concentration, the suitable conditions for growth of probiotic bacteria increased.

Keywords: Probiotic, inulin, fermented bio yoghurts, powder, skimmed milk, *L. casei*

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