

Effect of Thymus on *Lactobacillus acidophilus* and *Bifidobacterium bifidum* as the Starter Bacteria of Probiotic Yoghurt and Milk in Veterinary Kazeroon, Iran

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Background & Objectives: The use of natural antimicrobial compounds herbal medicine and flavourings in preserving foods has been widely developed. These compounds other than antimicrobial characteristics, have antioxidant and flavouring characteristics. On the other hand probiotic products by reduction the risk of heart attacks and recovering favorable microbial flora of digestive tract, have an extraordinary effect on consumers' health status. This survey was done in order to evaluate the effect of thymus on *Lactobacillus acidophilus* and *Bifidobacterium bifidum* as the starter bacteria of probiotic yoghurt.

Methods: To determine the effect of thymus different doses (0%, 3%, 6% and 9%) on the growth of probiotic bacteria, *Bifidobacterium bifidum* and *Lactobacillus acidophilus* in the first stage (milk) and the second stage (probiotic yoghurt), 0.33 grams of lyophilized *Bifidobacterium bifidum* and *Lactobacillus acidophilus* separately was added to one liter of sterilised low fat milk. In another experiment, a mixture of two bacteria, in an amount of 0.165, was done according to the above steps.

Results: The samples were evaluated on the basis of pH, acidity and microbial count in the warm holding and preservation periods. In the tenth day of production the products were evaluated under organoleptic tests. The results of questionnaires were in the descriptive analytic test and by the use of SPSS software. The results showed that in the samples containing two bacteria we have got the best results related to the taste, preservation and color. Bio availability of probiotic bacteria was counted by the use of direct counting Methods. In a 15- day period, the number of bacteria was decreased and also no statistically meaningful difference was observed between the control samples and the samples containing different concentrations of thymus.

Keywords: Probiotic; *Bifidobacterium bifidum*; *Lactobacillus acidophilus*; Yoghurt; Milk; Thymus