

THE EFFECT OF USING FROZEN YOGURT AS A SOURCE OF DIETARY FIBER

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ABSTRACT

Our objective was to determine if an acceptable frozen yogurt product supplemented with dietary fiber could be produced. Three different types of dietary fiber were used: Frutafit TEX! (inulin), Glucagel® (betaglucan), and Vitacel SMOOV 240 (cellulose). These three were used at the 3%, 5% and 7% levels in the frozen yogurt. Frozen yogurt base was manufactured using nonfat milk, heavy cream, sugar, corn syrup solids, nonfat dry milk, stabilizer, water, and vanilla. The base was mixed with yogurt (ratio of 80 : 20) that had been cultured from nonfat milk, and a yogurt culture containing *Streptococcus salivarius* subsp. *thermophilus*, *Lactobacillus delbrueckii* subsp. *bulgaricus*, and *Lactobacillus acidophilus*. Microbiological enumeration, Titratable acidity and pH were conducted on the treatments before being frozen. A descriptive sensory analysis, hedonic sensory study, viscosity, texture analysis, and melt rate test were conducted during storage. Lactic acid bacteria counts were found to be around 7.9×10^7 CFU/ml. Titratable acidity and pH did not change when measured before and after freezing, and did not show a difference between types, or levels of fiber. The types and levels of fiber used had a significant effect on the flavor and texture of the frozen yogurt products, as well the overall liking. The results suggest that a frozen yogurt product could be successfully manufactured when fortified with 7% Frutafit TEX!.