

PROCESSING OF HEALTHY ICE MILK

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(Manuscript received 29 September 2009)

Abstract

The plant oil from safflower as a source of essential linoleic fatty acid, antioxidant and anticancer used to process functional ice milk. Chemical composition of safflower extract and physico-chemical properties of ice milk (containing 10, 20, 30, 40 and 50% safflower extract) mixes were estimated. Sensory evaluation of the resultant ice milk was also determined. The results showed that melting resistance increased as the substitution level increased. On the other hand, overrun decreased as the substitution level increased. The results showed that the maximum substitution ratio with safflower successfully was up to 30%.

Key words: Safflower – ice milk - Essential linoleic fatty acids– healthy food – physico-chemical properties – melting resistance and functional foods.

INTRODUCTION

Ice cream is a popular frozen milk product made from varying mixtures of cream and milk, sweeteners, flavorings and air. The air is beaten into the milk mixture during freezing, causes the final product light and maleable. Ice cream is a frozen dairy product made by freezing a mix with agitation to incorporate air and ensure to be homogenous and acceptable consistency (Arbuckle, 1986). The complex physical structure of ice cream presents a challenge for food chemists. It could be stated, overall goal of designing the ice cream is to incorporate several different air bubbles, ice crystals and fat globules into an aqueous phase in the smallest size and in the greatest numbers possible. The ingredients used to supply this composition of ice cream include a concentrated source of milk fat, usually cream or butter, a concentrated source of the milk solids-not-fat component, usually evaporated milk or milk powder, sugar including sucrose and "glucose solids", a product derived from the partial hydrolysis of the corn starch component in corn syrup and milk. Ingredients are selected by processor, on the basses of fine quality, availability and cost.

As a general trend, in the world today, vegetable oils are used partially or totally as a substitute for animal fat. The partial replacement of milk solids not fat with plant oil or fat has been extensively investigated because of its economical and nutritional status. Consumer trends in relationship between diet and health, increases the demand of functional foods, which are foods or dietary components that may provide a health benefit beyond basic nutrition. Ice milk has become one of the most