Public Abstract

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Graduation Term:SP 2012

Department:Food Science

Degree:PhD

Title:Sensory Analysis, Instrumental Analysis and Consumers' Acceptance toward Multifunctional Ice Creams

The task of this study was to create a multifunctional ice cream to deliver the health benefits encompassed by four functional ingredients. The descriptive sensory analysis was carried out to investigate the effect of adding varying levels of dietary fiber (0%, 5%, 10% and 15%) to a multifunctional ice cream that contained fixed levels of antioxidants (12% of acai), prebiotics (4%) and probiotics (10^8 cfu/ mL) on sensory properties. The results showed that an increase in dietary fiber contents significantly influenced the textural perceptions and slightly influenced flavor perceptions. Based on a texture analysis, dietary fiber increased the overrun and viscosity, but decreased the melting rate of ice creams. The antioxidant capacities and flavor profiles of acai puree and multifunctional ice creams were also determined. Moreover, the results of hedonic sensory test showed that consumers preferred 0% and 5% dietary fiber containing multifunctional ice creams. Even though ice cream containing 5% dietary fiber showed some differences to the control ice cream in the descriptive and instrumental analyses, there was no significant difference in preference. Therefore, an ice cream containing 5% of dietary fiber, 4% of prebiotic, 10^8 cfu/ mL of probiotic and 12% of acai can be considered an ideal formulation for a multifunctional ice cream. The multifunctional ice cream would provide consumers a healthier/smart snack option. This could also broadcast an idea that healthy snacking does not have to be unpalatable or boring as long as consumers pay more attention on the serving size and have moderate eating habit.