

FUNCTIONAL PROPERTIES OF SUGAR PALM (*Arenga  
pinnata*) SYRUP IN LECHE FLAN

THESIS

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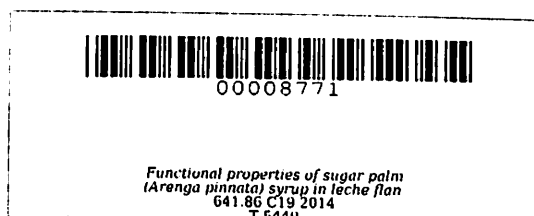
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**FUNCTIONAL PROPERTIES OF SUGAR PALM (*Arenga pinnata*)  
SYRUP IN LECHE FLAN**

**Undergraduate Thesis  
Submitted to the Faculty of the  
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## ABSTRACT

**CARIASO, CHARLENE KIM PAGKALIWANGAN, Funtional Properties of Sugar Palm (*Arenga pinnata*) Syrup in Leche Flan.** Undergraduate Thesis. Bachelor of Science in Food Technologyy. Cavite State University, Indang, Cavite. April 2014. Adviser: Dr. Fe N. Dimero.

A study was conducted to identify the functional properties of sugar palm (*arenga pinnata*) syrup in leche flan. Specifically, this study aimed to determine the amount of sugar palm syrup needed in the production of leche flan; determine the functional properties of sugar palm syrup in leche flan; compare the sensory properties of leche flan with sugar palm syrup and leche flan with sugar cane syrup; determine the glycemic index of leche flan with sugar palm syrup; describe the process in preparing leche flan using sugar palm syrup as sweetener; compute for the production cost; determine the consumer acceptability of leche flan with sugar palm syrup as sweetener.

Results of Friedman analysis of sensory scores indicate that the color development in the caramel and custard produced from sugar palm syrup is comparable to color development of caramel and custard from cane syrup. Likewise, no significant differences were also observed among samples in terms of sweetness, flavor and off-flavor. Sugar palm syrup was observed to promote wholeness of custard and appeared to slow down the melting process in the mouth.

Paired comparison of the sensory properties of leche flan with sugar palm syrup and leche flan with cane syrup revealed that the former is more acceptable than the latter, as evaluated by a laboratory panel composed of 10 trained evaluators. However, the two samples have the same acceptability level as evaluated by 100 consumers.

Glycemic index of leche flan with sugar palm syrup (47.8) was found to be significantly lower than leche flan with cane syrup (81.11).

Based on the results of sensory evaluation of the leche flan samples addition of 150 mL sugar palm heavy syrup per 1400 ml of custard mixture gives the most acceptable leche flan.

Production cost of leche flan with sugar palm syrup was found to be comparable to the traditional leche flan.

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# **FUNCTIONAL PROPERTIES OF SUGAR PALM (*Arenga pinnata*) SYRUP IN LECHE FLAN**

**Charlene Kim P. Cariaso**

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## **INTRODUCTION**

Leche flan is a sweet creamy custard with caramelized sugar on top. It is a dessert which contains around twenty-three percent sugars, which may cause drastic increase in blood sugar, specifically for those who are diabetics.

Sugar palm (*Arenga pinnata*) sap which is commonly known as kaong was identified as a source of low glycemic index brown sugar having 43.0 GI (Lapitan, et al, 2012) as compared to the cane sugar with 58 GI (Powell, et al, 2002 p.43). Sugar palm brown sugar maybe a good alternative sweetener for cane sugar in leche flan.

Sugar makes many nutritious foods taste good enough to eat. It has its own function in preparing of food. For baked products, sugar imparts satisfying texture, body, mouthfeel and color. In the preparation of leche flan, sugar delays coagulation of egg proteins in custards and breaks up the clumps of protein molecules so that they are finely dispersed in the liquid mixture. Sugar also increases the viscosity (thickness) which helps impart a thick, creamy mouthfeel which gives a pleasing taste. It provides a clean, sweet