

UTILIZATION OF SUGAR PALM (*Azadirachta indica*) SYRUP
IN THE PRODUCTION OF BIKO

THESIS

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UTILIZATION OF SUGAR PALM (*Arenga pinnata*) SYRUP IN THE
PRODUCTION OF *BIKO*

Undergraduate Thesis
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ABSTRACT

RAMOS, NICHOLE JOHN D. Utilization of Sugar Palm Syrup (*Arenga pinnata*) as Sweetener in the Production of Biko. Undergraduate Thesis. Bachelor of Science in Food Technology. Cavite State University, Indang, Cavite. December 2016. Adviser: Mrs. Aitee Janelle E. Reterta, MSc.

Biko is an all-time favorite snack items basically prepared by the principle of gelatinized starch. *Biko* is a Filipino rice cake made from sticky rice, coconut milk, and brown sugar. Like other rice cakes, this is referred to as *kakanin* and is often eaten as dessert or *meryenda*. This study, it aimed to; determine the amount of sugar palm sap as sweetener in *Biko*; formulate *Biko* with sugar palm sap; describe the processing methods for *Biko* with sugar palm sap; evaluate sensory properties of *Biko* with sugar palm sap; determine consumer acceptability; determine the glycemic index of *Biko* with sugar palm syrup; and determine the cost of production of *biko* with sugar palm syrup.

The process of making *biko* with sugar palm syrup consist of; washing the glutinous rice, cooking the glutinous rice in rice cooker, cooking the coconut milk and sugar palm syrup in casserole, mix the cooked glutinous rice and sugar palm medium syrup, continue cooking until all the liquids evaporates, *biko* was placed in a microwavable plastic container and cooled for 30 minutes to 1 hour.

Three (3) treatments were used in the preparation of *biko*; each treatment used 500 grams of glutinous rice but with different kind and amount of sweetener. T₀ (control) 500g of brown sugar, T₁ with 750ml of medium (55° Brix) syrup and T₂ with 1000ml of medium (55° Brix) syrup.

Sensory properties of the resulting *biko* were compared to the traditional *biko* with brown sugar used. The laboratory panelist described that T₁ with 750 ml medium sugar palm syrup was the most acceptable among two samples in terms of sweetness and color.

Consumer acceptability test showed that 48% of the consumers rated the *biko* with sugar palm syrup as highly acceptable. The total production cost in producing *biko* with sugar palm syrup is 181 per 1kl. Unit cost for *biko* is 45.25 for 1 kilo.

Glycemic Index (GI) of food items using only the available data for Available Carbohydrates and GI of each ingredient, Biko can be classified as a medium (56-69 GI range) glycemic food with GI value of 62.29.

This study is recommended to determine of glycemic index of *biko* with sugar palm syrup using the modified ISO 26642 International Standard for Glycemic Index Determination using test animals, physic-chemical; microbial analysis; micro-scale; shelf-life study and packaging material development of the product is recommended.

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UTILIZATION OF SUGAR PALM (*Arenga pinnata*) SAP AS SWEETENER IN THE PRODUCTION OF *BIKO*

Nichole John D. Ramos

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INTRODUCTION

Biko is an all-time favorite Filipino snack items basically prepared by the principle of gelatinized starch. *Biko* is a Filipino rice cake made from sticky rice, coconut milk, and brown sugar. Like other rice cakes, this is referred to as *kakanin* and is often eaten as dessert or *meryenda* (<http://ivoryhut.com>, 2010). This delicious rice cake is placed over banana leaves in a *bilao* and garnished with *latik* on top. In addition, *Biko* is served during special occasions such as birthday parties, family reunions and town fiesta (<http://ivoryhut.com>, 2010).

Biko is was made by combining the sticky rice and water in a rice cooker and cooked until the rice is ready, while the rice is cooking, the coconut milk with brown sugar and salt was combined in a separate pot and cooked in low heat until the texture became thick. Once the rice is cooked and the coconut milk-sugar mixture is thick enough, cooked rice was added in the coconut mixture, then mixed well. Continue