LABORATORY SCALE PRODUCTION OF SUGAR FROM SUGAR PALM SAP

Research Study

BEATRICE MARION M. BASCUGUIN
JAMAECA D. CRUZ
MARIA IVY ANN J. DE LA CRUZ

Science High School
CAVITE STATE UNIVERSITY
Indang, Cavite

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A Research Study submitted to the Faculty of the Science High School, College of Education, Cavite State University, Indang, Cavite

In Partial Fulfillment of the Requirements for Graduation

Beatrice Marion M. Bascuguin
Jamaeca D. Cruz
Maria Ivy Ann J. de la Cruz

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ABSTRACT

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The study entitled LABORATORY SCALE PRODUCTION OF SUGAR FROM SUGAR PALM SAP was conducted at Banaba Cerca, Indang, Cavite to determine the possibility of producing sugar from sugar palm sap, to determine the sensory properties of sugar from sugar palm sap, and to determine the consumer's acceptability of the produced sugar.

Direct and indirect boiling were used for the production of sugar from sugar palm sap. One gallon of sugar palm sap was utilized per trial.

The direct treatment of the study produced 505 grams of sugar for the first trial and 480 grams of sugar for the second trial. These findings show that the percentage yield for the first and second trial were 8.40% and 7.98%, respectively. While on the indirect treatment, there was no sugar produced.

One hundred (100) respondents were chosen purposively and by chance for the sensory and the general acceptability evaluation of the produced sugar.

The researchers used descriptive analysis such as frequency counts, mean and percentage to determine the sensory properties and general acceptability of the produced sugar.

Findings showed that the sugar produced from sugar palm sap was generally described as "brown" in color by the respondents. In terms of texture, the sugar produced

was described as "neither fine nor coarse" by the respondents. On the other hand, the taste of sugar produced was "moderately sweet" for respondents.

As regards to acceptability of sensory properties, respondents rated the produced sugar as "acceptable" in color, texture and taste.

Thus, the researchers concluded that the sugar produced from sugar palm sap was acceptable and could be a substitute for other commercial sugar.

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Beatrice Marion Bascuguin
Jamaeca Cruz
Maria Ivy Ann de la Cruz

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INTRODUCTION

Sugar or sucrose is a carbohydrate that occurs naturally in every fruit and vegetable. It is the major product of photosynthesis, the process by which plants transform the sugar to food. Sugar occurs in greatest quantities in sugar cane and sugar beets (wikipedia.org).

Sugar is considered as one of the most commonly used products because of its many uses (pccard.com). Some sugar served as a nutritive sweetener to foods so they would taste better. It also adds tenderness to dough and acts as a preservative to different types of foods. Since sugar has many uses, many Filipinos are engaged in the production and marketing of this product.

Today, the rate of the production of sugar is very high and continuously increasing. Some of the sources of sugar are sugar cane, sugar plum, sugar maple, sugar beets and sugar palm.