

PRODUCT DESCRIPTION



Coconut sap syrup is a natural sweetener obtained by boiling the pure and fresh coconut sap until it becomes sticky under moderate to very low heat. It has a lovely rich and sweet taste with a distinct coconut fruity flavour. Coconut sap syrup is rich in nutrients and has a low Glycemic Index (GI) of 39 (www.naturepaci4c.com; www.coconutresearch.org).



Coconut sap - also known as "tuba" or toddy; the liquid oozing out from the tapped unopened inflorescence of the coconut palm (PNS/BAFPS 76:2010)

Glycemic index (GI) - a physiological classification of dietary carbohydrates based on how they raise the blood sugar levels. Low GI foods (≤ 55) are more slowly absorbed and produce a less pronounced rise in blood sugar

pH - a measure of the acidity and basicity of an aqueous solution

Total Soluble Solids (TSS) - the sum of the solids present in a solution

Brix - the weight-to-weight ratio of the sugar content of a solution



GI	GI rating	Effect
HIGH GI	≥ 70	Rapid increase in blood sugar levels
MED GI	56 - 69	Moderate increase in blood sugar levels
LOW GI	0 - 55	Slow increase in blood sugar levels

Glycemic Index classification

COMPOSITION OF COCONUT SAP SYRUP

Table 1. Nutrient Composition*

PARAMETER	VALUE (per 100 grams)
Total Calories	288 kcal
Calories from Fat	0 kcal
Total Carbohydrates	71.2 g
Protein	0.77 g
Fat	<0.10 g

Note: *Sample source: Aroman, Carmen, North Cotabato

Table 2. Glycemic Index of Common Commercial Syrup

	GI LEVEL	CLASSIFICATION
Coco Sap Syrup ^a	39	Low
Honey ^b	50	Low
Maple Syrup ^b	55	Low
Black Strap Molasses ^b	55	Low
Corn Syrup ^c	75	High
Brown Rice Syrup ^c	85	High
High Fructose Corn Syrup (HFCS) ^c	87	High

^aSource: Trinidad, T.P. and Mallillin, A.C., Glycemic Index of Commonly Consumed Carbohydrate Foods in the Philippines, 2011

^bSource: <http://www.sugar-and-sweetener-guide.com/glycemic-index-for-sweeteners.html>

^cSource: <http://www.natural-health-guide.com/low-glycemic-food-list.html>

COCONUT SAP SYRUP PRODUCTION



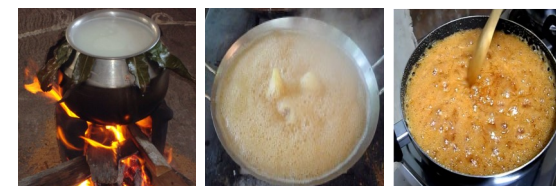
Tap the coconut inflorescence and collect the sap/toddy



Filter the sap



Check for pH (5.5-5.9) and total soluble solids (15-20 °Brix)



Boil the coconut sap at 100°C Concentrate and evaporate until thick at 75-78°Brix or until it forms into soft ball when dropped in cold/tap water



Pack hot in sterilized bottles or plastic containers

Seal tightly and invert the bottle, then,



Store in cool, dry place, not more than 30°C and away from sunlight.

Shelf-life: 6 months if properly processed and stored

USES OF COCO SAP SYRUP

Coconut sap syrup can be used as an ingredient or a low-calorie sweetener in:

- ⇒ pancake, waffle, hot bread, French toast spread
- ⇒ soft and hard candies
- ⇒ beverages (e.g., fruit juice, shakes, tea, coffee)
- ⇒ fruits, snacks, pastries, jams, desserts (e.g., biscuits, donuts, ice cream, hot cereal, corn fritters, baked apples, crème brulee, custards, muffins)
- ⇒ salad dressings, appetizer sauces, soups and cocktails

HEALTH BENEFITS

Coconut sap and coconut sap-based food products have the following benefits:

- ⇒ rich in amino acids, specifically glutamic acid, which plays a vital role in the normal function of prostate gland (male reproductive system); used by the body to build protein
- ⇒ good source of carbohydrates, sugar, B-vitamins, and minerals such as calcium, sodium, iron for healthy body
- ⇒ rich in inositol which functions in nerve transmission, regulation of enzyme activity, transportation of fats in the body and essential for hair growth and prevent some causes of thinning hair and baldness
- ⇒ contain substantial amount of calories for energy
- ⇒ has a low Glycemic Index of 39 which makes it good for persons with diabetes, when used in moderation

MARKET POTENTIAL

The current global trend shows an increasing demand for natural, healthy, low-calorie products. In 2010, the global market for non-sugar sweeteners was about US \$9.2B. Coconut sap syrup has a potential for both local and export market since it has been found to have low glycemic index of 39. The syrup can be used as sweetener in sugar-free products and reduced sugar products.

FOOD PRODUCT DEVELOPMENT DIVISION

Albay Research Center
Research Development Branch
Philippine Coconut Authority
Banao, Guinobatan, Albay
E-mails: arc@pca.gov.ph
fpdd@pca.gov.ph
0917-558-1447

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COCONUT PROCESSING

COCONUT SAP SYRUP

