

## PRODUCT DESCRIPTION



**Coconut yoghurt** is made of coconut milk (22%) and non-fat-dry-milk (10%) fermented using a starter culture containing lactic acid-producing bacteria (LAB), *Lactobacillus bulgaricus* and *Streptococcus thermophiles*, which convert lactose in milk to lactic acid resulting to the tangy flavor with sour but refreshing taste.<sup>1</sup> LAB are one of the most significant groups of pro-biotic organisms which help improve digestive health by maintaining levels of 'good bacteria' in the gut.<sup>2</sup>



<https://carolinadigestive.com/about-us/news/prebiotics-vs-probiotics>

Yoghurt is consumed in most parts of the world because of its known health benefits.<sup>3</sup> It is a good source of calcium which is essential for bone health<sup>2</sup>, and protein. It has low calories making it a healthy snack food or light meal.

Coconut milk can be easily utilized and is advantageous in yoghurt production due to its added coconut flavor, healthy saturated fats and added minerals like calcium, iron and potassium.

Source:

<sup>1</sup> Mulyawan, E. (2017). The Science of Yogurt. Science and Food. <https://scienceandfooducla.wordpress.com/2017/07/04/the-science-of-yogurt/>

<sup>2</sup> <https://www.wellandgood.com/good-food/yogurt-benefits/>

<sup>3</sup> Al-Otaibi MM. Evaluation of some probiotic fermented milk products from Al-Ahsa markets, Saudi Arabia, American Journal of Food Technology 2009; 4 (1): 1-8

## COCONUT YOGHURT PRODUCTION

### Ingredients:

- 1200 ml water
  - 440 ml coconut milk
  - 200 g Non-Fat Dry Milk (NFDM)
  - 160 g white sugar
  - 2.5% \* yoghurt starter (commercial yoghurt)
- \*2.5% of the total volume of mixture

### Materials and Utensils:

- Stainless casserole
- High heat resistant spatula
- Food thermometer
- Beaker with graduation
- Ice (for cold water bath)
- Wide mouth container (for packaging)
- Spoons

### Basic Equipment and their intended use:

- Weighing scale: weighing ingredients
- Stove: pasteurization
- Incubator: incubation of yoghurt mixture
- pH meter: measurement of acidity
- Chiller: storage

*Note: Materials and utensils that have direct contact with the yoghurt mixture should be clean and sterilized.*

### Procedure:

**STEP 1: RECONSTITUTION.** Mix the coconut milk and water in a casserole. Heat to 40°C and dissolve the premixed NFDM and sugar.



### STEP 2.

#### PASTEURIZATION.

Pasteurize the mixture at 85-90°C for 10 minutes with continuous stirring.



### STEP 3.

#### INOCULATION.

Cool to 42°C in a cold water bath and add 2.5% yoghurt starter.



### STEP 4.

#### INCUBATION.

Transfer the mixture in wide-mouth container. Incubate at 42°C for a minimum of 12 hours until the desired acidity is achieved (pH ≤ 4.6).



### STEP 5.

#### HOMOGENIZATION.

Remove the mixture from the incubator. Mix manually for 15 minutes while on ice bath to prevent from wheying-off during storage.



### STEP 6.

#### STORAGE.

Pack in suitable container and store in the refrigerator at 4°C.

## NUTRITIONAL COMPOSITION OF COCO YOGURT

PARAMETERS Per 100g	Coconut Yoghurt*	Commercial Yoghurts	
		CBY** 1	CBY 2
Protein, g	3.8	2.72	3.0
Carbohydrates, g	19.3	6.4	13.0
Fat, g	6.27	2.4	7.0
Cholesterol, mg	3.0	8.8	25
Vitamin D <sub>3</sub> , mcg	1.8	-	-
Iron, mg	5.7	-	-
Calcium, mg	132	90.4	-
Potassium, mg	198	-	-

\*PCA-Food Product Development Division, 2019 (Analysis by third-party laboratory)  
\*\*CBY— Commercial Brand Yoghurt made from dairy milk

The coconut yoghurt is comparable in appearance and texture with yoghurt made from cow's milk. Like other commercial brands, coconut yoghurt is also a good source of protein. Fat from coconut milk is regarded as healthy since it is composed primarily of medium chain triglycerides (MCT's) which are abundant in mother's milk particularly lauric acid (Journal of the Americal Oil Chemists' Society, 1996). Lauric acid reduces cholesterol and triglyceride levels which lower heart disease and stroke risks (Brown, 2014).

One serving of coconut yogurt contributes by 36% Vitamin D, 21% iron, and 18% calcium to the Recommended Energy and Nutrient Intake (RENI) for Filipinos aged 19-29 years old and about 5% to the Potassium intake of adults and children (WHO Guidelines on Potassium Intake).

## RECIPE & PREPARATION TIPS

Coconut yoghurt can be used as alternative in several food preparations:



♦ **Smoothies and parfaits:**  
Blend with frozen fruit and a splash of water (or coconut water) or a layer of fresh fruits and granola.

### ♦ Baked goods:

From muffins to quick breads to pancakes, yogurt helps keep all kinds of bake goods moist.



### ♦ Frozen treats:

Can be enjoyed as ice pop or may be whirled in ice cream machine for a batch of Fro yo.

### ♦ Savory dollops:

Plain coconut yoghurt can also be whisked with citrus juice or vinegar and spices to make cream vegan dips, sandwich spreads and dressing.



\*Source: <https://www.verywellfit.com/all-about-coconut-yogurt-4165922>

## FOOD PRODUCT DEVELOPMENT DIVISION

Albay Research Center  
Research and Development Branch  
Philippine Coconut Authority  
Banao, Guinobatan, Albay  
Email: [arc@pca.gov.ph](mailto:arc@pca.gov.ph)  
[fpdd@pca.gov.ph](mailto:fpdd@pca.gov.ph)  
0917-588-1447

FPDD Guide No. 11, Rev. 1, Series of 2022

DEPARTMENT OF AGRICULTURE  
PHILIPPINE COCONUT  
AUTHORITY



ALBAY RESEARCH  
CENTER

COCONUT PROCESSING  
TECHNOLOGIES

# COCONUT YOGHURT

