

COCONUT MILK AND CREAM

Coconut Milk products are prepared using a significant amount of comminuted coconut meat are expressed, where most filterable fibers and residues are excluded, with or without coconut water, and/or with additional water, thermally processed and hermetically sealed in a container to prevent spoilage (Codex, 2003).

Product Styles

1. **Light Coconut Milk** The product obtained from either the bottom portion of centrifuged coconut milk or by further dilution of coconut milk
2. **Coconut Milk** The dilute emulsion of comminuted coconut meat in water with soluble and suspended solids
3. **Coconut Cream** The emulsion extracted from matured coconut meat with or without the addition of coconut water/water
4. **Coconut Cream Concentrate** The product obtained after the partial removal of water from coconut cream

Reference: Codex Standards for Aqueous Coconut Products
Coconut Milk and Coconut Cream (Codex Stan 204-2003)

SIMULATED DAIRY MILK BEVERAGE DERIVED FROM COCONUT MILK

Simulated dairy milk beverage is dairy milk substitute formulated to contain approximately those of its dairy milk counterparts. The local milk industry utilizes coconut milk which is a rich source of vegetable fat to substitute for imported butterfat. Coconut milk contains natural emulsifiers and much easier to blend with skim

Milk Substitute Preparations

1. **Low Fat Coconut Filled Milk** Reconstituted skimmed milk with stabilizer is blended and homogenized with coconut milk
2. **Evaporated Reconstituted Milk** Reconstituted skimmed milk with stabilizer is blended and with coconut milk, heated under reduced pressure until it has lost about half its water.
3. **Sweetened Condensed Milk** Concentrated evaporated reconstituted milk is added with sugar to give a total sugar concentration of about 55%.

COMPOSITION OF SIMULATED DAIRY MILK BEVERAGE

	%FAT	%PROTEIN
Low Fat Filled Milk	2.0-3.0	3.6
Evaporated Reconstituted Milk	6.0	7.3
Sweetened Condensed Milk	8.0	7.5

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COCONUT PROCESSING
TECHNOLOGIES

COCONUT MILK



PRODUCT DESCRIPTION

Coconut milk is the liquid obtained by manual or mechanical extraction of comminuted coconut meat with or without



water. The composition of coconut milk depends on the amount of water used for the extraction, affecting significantly moisture and fat content.

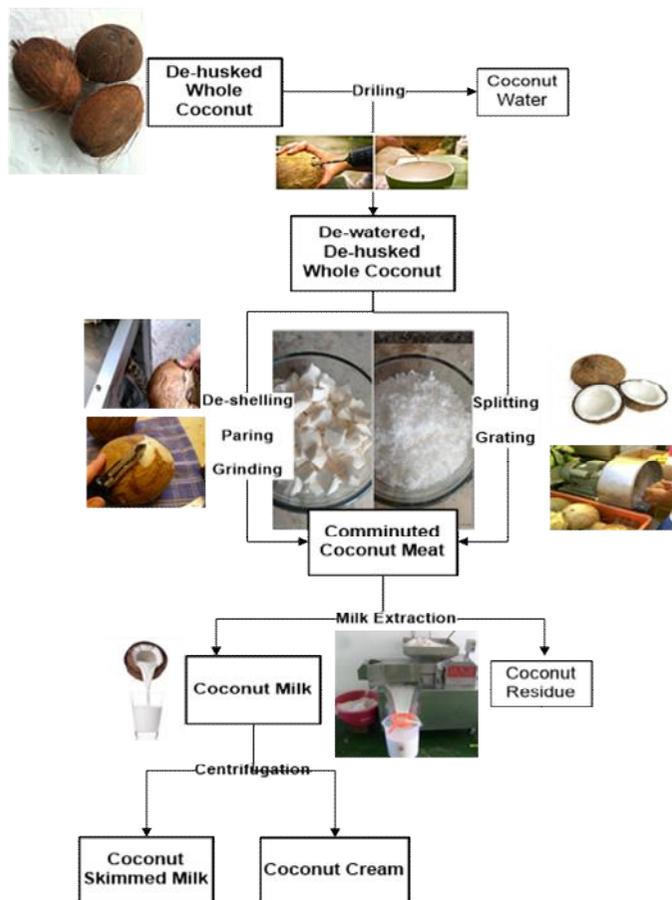
- Coconut milk obtained from single-stage extraction, without added water, is called 'Kakang Gata'.
- It is rich in proteins such as albumin, globulin, prolamin and glutelin.
- It contains emulsifying agents such as phospholipids, cephalin and lecithin which help in increasing dispersibility and stability of food emulsions.
- Freshly extracted coconut milk has pH 6 (slightly acidic) and coagulates when heated to 80°C.

TYPICAL COMPOSITION OF COCONUT MILK

Constituent	Percent (%)
Moisture	47-76
Fat	18-40
Protein	2-5
Ash	0.6-1.3
Carbohydrates	5-16
Total Solids (Non-fat)	9.0

*Source: Banzon, J.A., et al. 1990. Coconut as Food. Philippine Coconut Research and Development Foundation, Inc. (PCRFD). Quezon City, Philippines.

PROCESSING OF COCONUT MILK AND COCONUT MILK PRODUCTS



Basic Equipment Used:

1. **Deshelling Machine:** for removal of the coconut shell
2. **Grinder/ Pulverizer:** pared, quartered coconut meat is reduced in particle size by grinding for a more efficient milk extraction
4. **Grater:** motorized coconut shredder after coconut is split into halves
5. **Coconut Milk Extractor:** for mechanical extraction of coconut milk from the comminuted coconut meat

COCONUT MILK AND ITS PROCESSING

Bottling or Canning

Filtration: the extracted coconut milk is filtered using a vibro screen with a stainless filter of 100 mesh or finer

Pasteurization: filtered coconut milk is pasteurized indirectly by double boiling at 70°C for 15 minutes

Packaging: once pasteurization temperature is achieved, the coconut milk is removed from the heat source, immediately transferred to stainless steel filling vessels hot-filled in appropriate containers and sealed

Cooling: packed coconut milk is immersed in a cooling tank water bath to bring down the temperature.

Storage: coconut milk packed in plastic bottles or pouches is subjected to blast freezing and transferred to freezers for cold storage. Canned coconut milk undergoes sterilization and remains stable at ambient storage after cooling.

Dehydration or Spray-Drying

Dehydration of coconut milk into a powdered product renders stability, convenience and increased consumption while keeping its natural quality, flavor and texture upon rehydration.

Blending: minimal amounts of maltodextrin and casein are blended into fresh coconut cream to improve fluidity

Spray-Drying: blended cream is spray dried

Packaging: resulting powder is packaged in moisture vapor-proof container