

# PROPERTIES

Table 1. Physical Characteristics of coconut flour

Parameters	Characteristic of Coconut Flour
Color	white to cream to very light brown
Odor	typical nutty odor
Taste	bland taste
Particle Size	fine to medium
Shelf-life	26 months at 20°C; 14 months at 30 C; 9 months at 40°C
Water absorption capacity	high

Table 2. Chemical Composition of coconut flour

Chemical Composition	Value (%) dry weight basis
Moisture	≤ 5.0
Ash	4.0-6.0
Protein	10.0-19.0
Fat	10.0-12.0
Total Dietary Fiber	40.0-60.0
Carbohydrates	50.0-70.0
Free Fatty Acid (as lauric acid) (as oleic acid)	<0.20 0.01—0.02
Peroxide value, meq	<3.0

# CLASSIFICATIONS

**Premium Class** - white to creamy white color; fine particle size (0.15-0.20 mm)

**Class I (Good Quality)** - very light brown in color; medium particle size (0.21-0.25 mm)

**Class II (Fair Quality)** - very light brown to brown color; medium particle size (0.21-0.25 mm)

# USES AND HEALTH BENEFITS

Coconut flour has been proven to have high amounts of soluble and insoluble dietary fiber (40% - 60%) which is important in functional food development. (PCA, 2001).

High-fiber and high-protein coconut flour can be used as food supplement and/ or additive in breads, cookies and snack food to provide dietary fiber sources.

Test foods containing 15% - 25% dietary fiber from coconut flour reduces serum total and LDL cholesterol of humans with moderately raised serum cholesterol.

Coconut flour can also be used as fillers for emulsified products such as sausages, meat loaf and burger patties. Several recipes were prepared utilizing 5%-25% coconut flour which were found acceptable.



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# COCONUT FLOUR



# PRODUCT DESCRIPTION



**Coconut flour** refers to the screened food-grade product obtained after drying, expelling and/or extracting most of the oil or milk from coconut meat. The granulation is dependent upon the degree of grinding and meshing to which the raw material has been subjected and varies from 30-250 mesh. Coconut flour is proven to contain dietary fibre.

## TYPES OF COCONUT FLOUR

**Full Fat Coconut Flour** is prepared from unpared, dehydrated and edible coconut kernels by pre-pressing and solvent extraction.

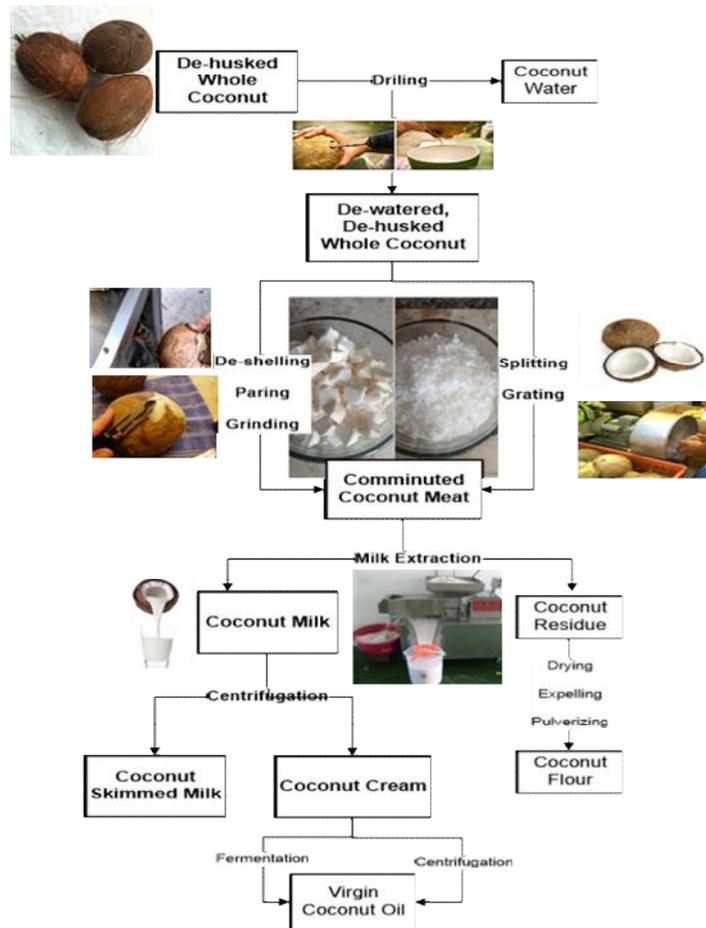
**Defatted Coconut Flour** is obtained from food grade copra that has been defatted by solvent/mechanical extraction. The resulting flour is brownish in color because the kernel is not pared. Sub classified into: low fat (10-15%); medium fat (16-25%); high fat (25-48%).

**Low Fat, High Fibre Coconut Flour** is coconut flour made from finely ground coconut residue with a fat content of 10-15%.

**High Protein, Low Fibre Coconut Flour** is enzyme-translated coconut flour made from finely ground residue.

**Paring Flour** is prepared from the paring of the coconut.

## INTEGRATED PRODUCTION OF DEFATTED COCONUT FLOUR AND VIRGIN OIL (BAWALAN—MASA PROCESS)



**Drying** - involves removal of water from the food product



**Expelling** - extracting the oil from the dried coconut residue



**Pulverizing** - crushing of the coconut flakes resulting to powder-like form

## PRODUCTION PROCESS

The manufacturing of coconut flour involves Dry Process or Wet Process. Below is the summary of the processing methods.

	FRESH-DRY PROCESS	WET PROCESS
<b>Description</b>	<ul style="list-style-type: none"> <li>involves drying of the ground coconut meat, followed by residue oil extraction and pulverization</li> <li>produces high protein which can be used as wheat substitute</li> </ul>	involves extraction of coconut milk, then drying of the coconut meat residue, followed by expelling of excess oil and grinding/pulverization
<b>Characteristics</b>	cream or light brown in colour; high fat; taste range from pronounced coconut flavour to bland taste	cream colored; high fiber; low fat; less coconut flavour
<b>Yield/Recovery</b>	33% flour from whole nut	26% flour from whole nut
<b>Process Requirement</b>	fresh coconut meat with or without paring	fresh residue after coconut milk extraction