

PHILIPPINE NATIONAL STANDARD

PNS/BAFPS 75:2010
ICS 67.060

Coconut flour – Specification



BUREAU OF PRODUCT STANDARDS

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Foreword

The development of the Philippine National Standard for Coconut flour, PNS/BAFPS 75:2010 was undertaken by the Bureau of Agriculture and Fisheries Product Standards (BAFPS) upon the request of the Philippine Coconut Authority in October 2008. Coconut Flour is a processed product which is beyond the mandate of BAFPS pursuant to Republic Act 8435 or the Agriculture and Fisheries Modernization Act (AFMA). Permission for the formulation of the said standard was sought by BAFPS from the Bureau of Food and Drugs (BFAD), an authority competent for the standards formulation of processed products under the Department of Health in January 2009 and was approved in February 2009.

A Technical Committee (TC) was organized by the Bureau of Agriculture and Fisheries Product Standards (BAFPS) through Special Order No. 140, series of 2008 to present common information and understanding on the quality and safety requirements for coconut flour. The TC conducted technical reviews and public consultations in the three major islands of the country to generate further scientific data and opinions needed prior to the finalization of the draft standards.

Drafting of the PNS for Coconut flour was established to reflect the recent technology developments in the industry and the need for harmonization with Codex requirements in Heavy Metals, Pesticide Residues and Hygiene.

In line with the current demand for alternatives to the imported wheat flour, the Product Development Department of PCA encourages bakeries to use coconut flour as substitute for wheat flour/functional food ingredient for bread, cakes and cookies. Presently, there are existing companies that produce coconut flour and some have already exported their product to other countries.

Finally, we would like to acknowledge the efforts of the PCA for their whole-hearted support and assistance in establishing the Philippine National Standard for Coconut Flour.

Coconut Flour – Specification

1 Scope

This standard applies to flour prepared from coconut meat, *Cocos nucifera* Linn. residue or coconut sapal.

2 References

The titles of the standard publications and other references of this standard are listed on the inside back cover.

3 Definitions

For the purpose of this standard the following definitions apply.

3.1**coconut flour**

product produced from fresh finely grated or ground coconut meat with or without paring, or coconut sapal or coconut residue

3.2**coconut sapal/coconut residue**

solid material left after extraction of milk from fresh mature coconut meat

3.3**filth/impurities**

extraneous or foreign matters

3.4**mature coconut**

nuts are eleven to twelve (11-12) months old from button formation (fruit set)

3.5**sound mature nuts**

free from any damage caused by handling and pests

4 Minimum requirements

Coconut flour must meet the following requirements:

4.1 Coconut flour must be prepared from either coconut residue or the meat of sound mature nuts.

4.2 It must be suitable for human consumption.

4.3 It must have a natural flavor and odor.

4.4 It must be free from filth/impurities.

5 The quality and composition of coconut flour

5.1 Physical characteristics

Coconut flour should conform to the physical characteristics specified in the table 1.

Table 1 – Physical characteristics

Parameters	Characteristic of coconut flour
Color	White to cream to very light brown
Odor	Typical nutty odor
Particle size	Fine and Medium

5.2 Chemical properties

Coconut flour should conform to the proximate chemical composition specified in the table 2.

Table 2 – Chemical composition

Chemical composition	Value (%) (dry weight basis)
1. Moisture	≤ 5.0
2. Ash	4.0 – 6.0
3. Protein	10.0 – 19.0
4. Fat	10.0 – 12.0
5. Total dietary fiber	40.0 – 60.0
6. Carbohydrates	50.0 – 70.0
7. Free fatty acid (as lauric acid) (as oleic acid)	< 0.20 0.01 – 0.02
8. Peroxide value, meq	< 3.0

5.3 Microbiological characteristics

Microbiological characteristics of coconut flour specified in the table 3.

Table 3 – Microbiological characteristics

Parameter	Level
Aerobic plate count	≤ 10,000 cfu/g
Coliform count	≤ 50 cfu/g
Escheria coli (MPN/100g) or (cfu/g)	Negative
Staphylococcus aureus (cfu/g)	Negative
Salmonella (/25 g)	Negative
Yeast/Molds	≤ 100 cfu/g

6 Classification

In all classes, coconut flour is classified based on the quality specified in the Table 4.

Table 4 – Classification based on the quality

Class	Parameter
Premium Class (Superior quality)	Color: white to creamy white Particle size: Fine (0.15 mm – 0.20 mm) sieve
Class I (Good quality)	Color: very light brown Particle size: Medium (0.21 mm – 0.25 mm) sieve
Class II (Fair quality)	Color: very light brown - brown Particle size: Medium (0.21 mm – 0.25 mm) sieve

7 Contaminants

7.1 Heavy metals

The coconut flour should conform with heavy metals levels established by the Codex Alimentarius Commission and/or authority for this commodity.

7.2 Pesticide residues

The coconut flour should comply with the maximum residue limits established by the Codex Alimentarius Commission and/or authority for this commodity.

8 Hygiene

Coconut flour should be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice – General Principles of Food Hygiene (CAC/RCP 1 – 1969, Rev. 2-1985, Codex Alimentarius Vol. 1B) and other Codes of Practice recommended by the Codex Alimentarius Commission and BFAD Administrative Order No.153 series of 2004, Revised Guidelines on Current Good Manufacturing Practice in Manufacturing, Packing, Repacking or Holding Food which are relevant to this product.

9 Packaging

9.1 Coconut flour should be packed in suitable containers which will safeguard the integrity of the product.

9.2 The packaging materials should be made of substances which are safe and food grade suitable for the intended use.

10 Marking and labeling

In addition to the requirements of the Codex General Standard for Labeling of Prepackaged Foods (Codex Stan 1 – 1985, Rev. 1 –1991, Codex Alimentarius Vol. 1 A, the mandatory label information per BFAD AO 88-B series of 1984 and RA 7394 should be applied as follows:

10.1 Brand and trade names,

10.2 Specific name of the product – Coconut Flour,

10.3 Lot identification code,

10.4 Name and address of the manufacturer/importer/distributor,

10.5 Net weight, in metric system,

10.6 Date of manufacture,

10.7 Best before date,

10.8 Nutrition facts, and

10.9 Product of the Philippines.

References

PNS/BAFPS 75:2010

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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