

PHILIPPINE NATIONAL STANDARD

PNS/BAFPS 25:2007
ICS 67.080.10

Desiccated coconut



BUREAU OF PRODUCT STANDARDS

Foreword

The proposal for revising the current Codex standard for desiccated coconut (DCN) and the need to adopt a national standard emanated from the initiative of the private sector. Manufacturers believed that the provisions stated in the standard are not anymore reflective of current practices. The focal concern was amending the minimum oil content. It is a known fact that the fat of the coconut provides the distinctive, tropical flavor in the fruit. Thus, it is an indicator of the quality of DCN. Others changes include classifying DCN according to the granulometry of the product, modifying the quality criteria, improving the analytical characteristic, and specifying the microbiological standards.

A formal technical working group was not created. However, the establishment of the Philippine National Standard (PNS) was done in close collaboration and consultation with the major DCN producers.

This standard was created to provide a common language on the classification of DCN, essential composition and quality factors, allowed food additives, contaminants, hygiene, packaging, transport and storage, labeling requirements and methods of analysis and sampling.

Desiccated coconut

1 Scope

This standard applies to full fat desiccated coconut and exclude products resulting from further processing of desiccated coconut (such as sweetening, toasting and creaming).

2 References

Codex Standard for Grated Desiccated Coconut (CODEX STAN 177-1991) Codex Alimentarius Volume 5A-1994 is 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.

3 Definitions

For the purpose of this standard the following definitions apply.

3.1**desiccated coconut (DCN)**

finished product obtained by drying the granulated or shredded full fat white meat of the fresh mature coconut kernel processed, so as to be suitable for human consumption

In aqueous process where the meat is subject to pressing to obtain coconut cream before drying, the resulting product (whether pure or blended) shall not be classified as desiccated coconut but as reduced fat dehydrated coconut and shall be labeled as such.

3.2**coconut**

refers exclusively to the coconut palm, *Cocos nucifera L.* or its components, including its drupe or fruit which contains a unique range of oils, proteins, carbohydrates (including dietary fiber), sugars, minerals and water, and the aqueous effusion from the inflorescence

3.3**kernel**

the solid endosperm of the coconut fruit covered by a brown outer skin or testa. The kernel consists of cellular layer commonly termed as coconut meat

3.4**mature coconut**

refers to 11-month – 12-month old harvested coconut

3.5**paring**

the testa and the outer portion of the kernel removed during peeling

4 Classification

4.1 Desiccated coconut is classified for the purposes of commercialization into three types according to the granulometry of the product:

4.1.1 Extra-fine desiccated coconut

Sieve square apertures, mm	US Sieve series #	% Retained
1.70	12	0
0.85	20	10 max.
0.60	30	45 max.

4.1.2 Fine desiccated coconut

Sieve square apertures, mm	US Sieve series #	% Retained
2.36	8	0
1.40	14	10 max.
0.71	25	70 min.

4.1.3 Medium desiccated coconut

Sieve square apertures, mm	US Sieve series #	% Retained
4.75	4	0
2.80	7	4 max.
1.40	14	76 max.

4.2 Unclassified desiccated coconut covers all “fancy cuts” or special cuts (i.e. tender or thin flakes, long and thin chips, extra fancy shreds, long shreds, standard shreds, etc.)

5 Essential composition and quality factors

5.1 Basic ingredient

Coconut as defined in 3.2. Desiccated coconut shall be prepared from the full fat white meat of the whole coconut without undergoing any pressing. The fruit shall be wholesome and free of disease.

5.2 Quality criteria

5.2.1 The color shall be natural white to light creamy white.

5.2.2 The taste shall be sweet and pleasant without any off-flavors due to deterioration or absorption of extraneous substances.

5.2.3 The odor shall be sweet and pleasant and shall not be mouldy, fermented, rancid, cheesy, smoky, soapy, sour or possess any undesirable odor.

5.3 Analytical characteristic

5.3.1 Total acidity of extracted oil

The total acidity of extracted oil from desiccated coconut shall not be more than 0.15 % m/m calculated as lauric acid or 0.21 % as oleic acid.

5.3.2 Moisture

The moisture content of desiccated coconut shall not exceed 3 % m/m for fine (macaroon) and extra fine, 3.8 % m/m for medium and coarse, and 4.5 % m/m for other cuts (special).

5.3.3 Oil content

The oil content of desiccated coconut shall not be less than 62 % m/m.

5.3.4 Extraneous vegetable matter

The extraneous vegetable matter consisting exclusively of fragments of fiber, parings and burnt particles in medium and coarse cuts shall not exceed 15 fragments per 100 g 55 for fine and 75 for extra fine.

5.4 Microbiological standards

The microbial count shall not exceed the following limits.

Microbiological analyses	Maximum limits
Salmonella	Negative in 25 grams
Total plate count	5,000 cfu/gram
Coliform group count	50 cfu/gram
Yeast	100 cfu/gram
Molds	100 cfu/gram
E.coli	<3mpn/g (Not detected)

6 Food additives

Food additives when used should be in accordance with the current regulations of Bureau of Food and Drugs (BFAD) and standards approved by the Codex Alimentarius Commission for this product.

6.1 Sulfur dioxide	Maximum level in the final product 200 mg/kg
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7 Contaminants

7.1 Heavy metals

The product covered by this Standard shall comply with those maximum levels for heavy metals established by the Codex Alimentarius Commission for these products.

7.2 Pesticide residues

The products covered by this Standard shall comply with those maximum residue limits established by the Codex Alimentarius Commission for these products.

8 Hygiene

8.1 It is recommended that the product covered by the provisions of this standard 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 Volume 1), and other Codes of Practice recommended by the Codex Alimentarius Commission, which are relevant to this product.

8.2 To the extent possible in Good Manufacturing Practice (GMP) as stated under the Bureau of Food and Drugs (BFAD) Administrative Order (A.O.) 153 s. 2004, the product shall be free from objectionable matter.

8.3 When tested by appropriate methods of sampling and examination, the product:

- a) shall be free from microorganisms in amounts which may represent a hazard to health,
- b) shall be free from parasites which may represent a hazard to health,
- c) shall not contain any substance originating from microorganisms in amounts which may represent a hazard to health.

9 Packaging, transport and storage

9.1 Full fat desiccated coconut shall be packaged, transported and stored in food grade containers which will safeguard the hygienic, technological and organoleptic qualities of the standard.

9.2 The packaging material of food grade quality shall be such as to protect against bacteriological and other contamination; it shall protect the product as far as possible against any infiltration of moisture, rehydration and against leaking. The packaging material shall not impart any odor, taste or color or any other extraneous property to the product and shall not result in contamination of the product with the packaging material.

10 Labelling

In addition to the requirements of the Codex General Standard for Labelling of Pre-packaged Foods (Codex Stan 1-1985, Rev.1-1991) and the current BFAD regulations on labelling, the following specific provisions apply:

10.1 Name of the product

The name of the product shall be “desiccated coconut” preceded or followed by the cut or grade and/or special markings and descriptions.

10.2 Labelling of non-retail package

Information for non-retail package shall include the following:

1. Name of the product: “Desiccated coconut”;
2. Cut or grade of product;
3. Name and address of manufacturer/distributor;
4. Registered trademark (optional);
5. Lot identification date;
6. Net weight, in kilograms (pounds, optional); and
7. The phrase “Product of the Philippines”.

11 Methods of analysis and sampling

Sampling method to be used for ascertaining conformance to the requirements of this specification shall be in accordance with PNS/ISO 874.

11.1 Determination of sulfite

According to AOAC 990:26

11.2 Determination of granularity

According to ISO 2591-1:1988

11.3 Determination of titrable acidity of extracted oil

According to AOCS Ca 5a-40

11.4 Determination of moisture

According to AOAC 925.40 or AOCS Ba 2-38

11.5 Determination of oil content

According to AOAC 928.22 or AOCS Ba 3-38

11.6 Determination of extraneous matter

Visual count on white background using 100-gram sample

11.7 Determination of salmonella

According to AOAC 967.25, AOAC 967.26, AOAC 967.27

11.8 Determination of coliform/E. coli

According to AOAC 966.24

LIST OF STAKEHOLDERS INVOLVED IN THE DEVELOPMENT OF THE PHILIPPINE NATIONAL STANDARD FOR DESICCATED COCONUT

Government

Mr. Gilberto F. Layese	Director Bureau of Agriculture and Fisheries Product Standards Department of Agriculture
Mr. Carlos B. Carpio	Deputy Director Philippine Coconut Authority Department of Agriculture
Ms. Norma Z. Granada Ms. Alicia Fontecha	Philippine Coconut Authority Department of Agriculture
Ms. Norma C. Hernandez Ms. Myra F. Magabilin	Bureau of Product Standards Department of Trade and Industry
Ms. Adelisa Ramos Ms. Ofelia Alba Ms. Liberty Importa Ms. Theresa Cerbolles	Bureau of Food and Drugs Department of Health

Academe

Dr. Ma. Concepcion Lizada	Professor Department of Food Science and Nutrition College of Home Economics University of the Philippines-Diliman
Dr. Evangeline Santiago	Natural Science Research Institute University of the Philippines-Diliman
Dr. Connie Reaño	Institute of Plant Breeding University of the Philippines-Los Baños

Industry

Ms. Yvonne T. Agustin	Executive Secretary United Coconut Associations of the Philippines
Mr. Cesar Acosta Ms. Fe T. Reyes Mr. Carlos Mercado	Franklin Baker Incorporated
Mr. Napoleon Irasusta Mr. Rustico Macaraig	Pacific Royal Basic Foods Inc.

Industry

Mr. Angie Galang

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Ms. Melba Garcia

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Ms. Yolanda Espolita

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Superstar Coconut Products Company Incorporated