DRAFT TANZANIA STANDARD

Desiccated coconut – Specification

DRAFT FOR STAKEHOLDER'S COMMENTS ONLY

TANZANIA BUREAU OF STANDARDS

©TBS 2019 – All rights reserved

Desiccated coconut – Specification

0. Foreword

Desiccated coconut is the disintegrated and dehydrated coconut kernel or pulp largely comprising of the white portion of the kernel, after removing the brown testa or parings.Desiccated coconut processing includes selection of nuts, de-husking, de-shelling, removing the testa (paring), washing, heating, disintegrating, drying, sieving and packaging.

Desiccated coconut is used commonly as ingredients in confectionery, bakery, and other food industries, and also for household purposes.

This Tanzania Standard has been prepared to ensure the safety and quality of desiccated coconut produced in, exported or imported into the country.

In preparation of this standard considerable help was derived from CODEX STAN 177-1991(Rev.2011) Codex standard for desiccated coconut.

In reporting the results of a test or analysis made in accordance with this standard, if the final value, observed or calculated is to be rounded off, it shall be done in accordance with TZS 4.

1. Scope

This Tanzania Standard specifies the requirements and methods of sampling and test for desiccated coconut for human consumption.

This Standard does not cover salted, sugared, flavoured or roasted products.

2. Normative references

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:

CODEX STAN 192, *General standards for food additives*

CODEX STAN 193, *General Standard for Contaminants and Toxins in Food and Feed*

TZS 4, *Rounding off numerical values*

TZS 109, *Food processing units – Code of hygiene – General*

TZS 118: 2007 (3rd ed)/ISO 4833: 2003*, Microbiology of food and animal feeding stuffs – Horizontal method for enumeration of micro-organisms – Colony count technique at 30 ºC*

TZS 119: 2010, *Microbiology – General guidance for the enumeration of coliforms – Most probable number technique*

TZS 122: 2007 (3rd ed)/ISO 6579: 2002, *Microbiology of food and feeding stuffs – Horizontal method for the detection of salmonella spp*

TZS 131: 2006 (Rev), *Microbiology – General guidance for enumeration of yeast and moulds – Colony count technique at 25 ^{0}C*

TZS 538 *Labelling of pre-packaged foods — General requirements*

DRAFT FOR STAKEHOLDER'S COMMENTS ONLY

TZS 731: 2007, *Microbiology of food and feeding-stuffs – Horizontal method for the detection and enumeration of presumptive Escherichia coli – Most Probable Number Technique*

TZS 742, *Oilseeds – Sampling*

TZS 1314-1, *Oilseeds – Determination of content of impurities*

TZS 1314-2, *Oilseeds – Determination of moisture and volatile matter content*

TZS 1314-3, *Oilseeds – Determination of oil content (Reference method)*

AFDC 4(6551), *Code of hygienic practice for desiccated coconut*

AFDC 19(6617), *Oilseeds Residues – Determination of total ash*

3.Terms and definitions

For the purpose of this standard the following terms and definitions shall apply:

3.1 coconut
consist of an outer skin (green or brown when harvested) enclosing a thick fibrous coating or husk; inside the husk is a woody shell which encloses the kernel and which is separated from it by a brown skin. The pared kernel consists of a solid white layer enclosing an aqueous liquid known as coconut water.

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

3.3 dehusking
removal of the husk, leaving the shell intact.

3.4 hatcheting
removal of the shell.

3.5 paring
removal of the brown skin around the kernel.

3.6 desiccated coconut
(a) product prepared from substantially sound white kernel obtained from the whole nut of coconut (*Cocos nucifera* L.), having reached appropriate development for processing, without oil extraction in conformity with Table 1(iii)

(b) product processed in an appropriate manner, undergoing operations such as de-husking, hatcheting, paring, washing, comminuting, drying and sifting;

(c) product described in points (a) and (b) from which oil has been partially extracted by appropriate physical means in conformity with Table 1(iii)

3.7 extraneous material
harmless matter associated with the product.

3.8 foreign matter
any visible and/or apparent matter or material not usually associated with the product.

DRAFT FOR STAKEHOLDER'S COMMENTS ONLY

4.Sizing (optional)

Desiccated coconut may be sized according to their granulometry as follows:

(a) **Extra-fine desiccated coconut** - Desiccated coconut of which not less than 90% of the weight shall pass easily through a sieve with square apertures of 0.85 mm, but of which maximum 25% of the weight passes through a sieve of 0.50 mm aperture size.

(b) **Fine desiccated coconut** - Desiccated coconut of which not less than 80% of the weight shall pass easily through a sieve of square aperture size of 1.40 mm, but of which maximum 20% of the weight passes through a sieve of 0.71 mm square aperture size.

(c) **Medium desiccated coconut** - Desiccated coconut of which not less than 90% of the weight shall pass easily through a sieve of square aperture size of 2.80 mm, but of which maximum 20% of the weight passes through a sieve of 1.40 mm square aperture size.

(d) **Other sized desiccated coconut** - covers all other presentations including “fancy cuts” or special cuts (i.e. tender or thin flakes, long and thin chips, extra fancy shreds, long shreds, standard shreds, etc.).

5. Requirements

5.1 Basic Ingredients

Coconut as defined in 3.1

5.2 General requirements

Desiccated coconut shall;

a) be free from foreign matter when tested according to TZS 1314-1
b) have colour of natural white to light creamy white. The texture shall be characteristic of the product.
c) have taste characteristic of the product without off-flavours due to deterioration or absorption of extraneous substances
d) have odour characteristic of the product, shall not be mouldy, cheesy, smoky, fermented or rancid, and shall not possess any undesirable odour.

5.3 Specific requirements

Desiccated coconut shall comply with the specific requirements given in table 1 when tested in accordance with the methods specified therein.

DRAFT FOR STAKEHOLDER'S COMMENTS ONLY

Table 1 – Specific requirements for desiccated coconut

SNo.	Parameter	Requirement	Method of test
i	Free Fatty Acids as lauric acid,%,m/m,max.	0.3	TZS 1331
ii	Moisture,%,m/m,max.	4	TZS 1314-2
iii	Oil content, %, m/m	≥ 60 for desiccated coconut as described in 3.6 (a) and (b)	TZS 1314-3
		≥ 35 < 60 for desiccated coconut as described in 3.6 (c)	
iv	Ash, %, m/m,max.	2.5	AFDC 19(6617)
v	Extraneous material	≤15 fragments per 100 g	Annex A

6. Food Additives

6.1 Food additives may be used and shall be in accordance to CODEX STAN 192.

6.2 The antioxidant in the table 2 below is also permitted for use, under the conditions of good manufacturing practices, in the products covered by this standard.

Table 2 – Antioxidant

INS No.	Name of Antioxidant	Maximum Level
330	Citric acid	GMP

7. Hygiene

7.1 Desiccated coconut shall be produced, processed, handled and stored in accordance with AFDC 4(6551) and TZS 109.

7.2 Desiccated coconut shall comply with microbiological limits given below when tested in accordance with the methods specified therein;

DRAFT FOR STAKEHOLDER'S COMMENTS ONLY

Table 3- Microbiological limits for desiccated coconut

S/No	Microorganism	Maximum limits	Method of test
1	Total plate count cfu/g,	5×10^2	TZS 118
2	Yeasts and mould cfu/g,	1×10^2	TZS 131
3	*Salmonella* per 25 g	absent	TZS 122
4	Coliforms MPN/g	absent	TZS 119
5	*E. coli* MPN/g	absent	TZS 731

8 Contaminants

8.1 Pesticide residues
Desiccated coconut shall comply with relevant maximum pesticide residue limits established by the Codex Alimentarius Commission.

8.2 Heavy metal contaminants
Desiccated coconut shall comply with those maximum heavy metal contaminants stipulated in Codex Stan 193.

9.Sampling and Tests

9.1 Sampling
The product shall be sampled as prescribed in TZS 742.

9.2 Tests
Testing shall be done as provided in the respective Tables and Annex of this standard.

10. Packaging, Transport and storage

Desiccated coconut shall be packaged, transported and stored in accordance with AFDC 4(6551).

11. Marking and Labelling

11.1 The product shall be marked and labeled in accordance with TZS 538.

11.2 In addition each container/packet of product shall be legibly and indelibly marked with the following information:

a) Name of the product “Desiccated Coconut”

b) Oil content of the product

c) Sizing of the product(optional);

d) Trade name or brand, if any;

e) Name, address of the manufacturer and/or packer;

f) Batch or code number;

g) Date of manufacturing;

h) Expiry date;

DRAFT FOR STAKEHOLDER'S COMMENTS ONLY

i) Country of origin;

j) Storage condition;

k) Disposal of used container/package

l) Net weight

m) Language-Kiswahili/English or Kiswahili and English

11.3 The containers may also be marked with the TBS Standards Mark of Quality.

NOTE – The TBS Standards Mark of Quality may be used by the manufacturers only under licence from TBS. Particulars of conditions under which the licences are granted, may be obtained from TBS

DRAFT FOR STAKEHOLDER'S COMMENTS ONLY

Annex A
(Normative)

DETERMINATION OF EXTRANEOUS MATTER

The determination is carried out by spreading 100 g of the sample in a thin layer against a white background and counting the extraneous material with the naked eye.

DRAFT FOR STAKEHOLDER'S COMMENTS ONLY