

DRAFT UGANDA STANDARD

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Chocolate and chocolate products — Specification



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Foreword

Uganda National Bureau of Standards (UNBS) is a parastatal under the Ministry of Trade industry and cooperatives established under Cap 327, of the Laws of Uganda. UNBS is mandated to co-ordinate the elaboration of standards and is

- (a) a member of International Organisation for Standardisation (ISO) and
- (b) a contact point for the WHO/FAO Codex Alimentarius Commission on Food Standards, and
- (c) the National Enquiry Point on TBT/SPS Agreements of the World Trade Organisation (WTO).

The work of preparing Uganda Standards is carried out through Technical Committees. A Technical Committee is established to deliberate on standards in a given field or area and consists of representatives of consumers, traders, academicians, manufacturers, government and other stakeholders.

Draft Uganda Standards adopted by the Technical Committee are widely circulated to stakeholders and the general public for comments. The committee reviews the comments before recommending the draft standards for approval and declaration as Uganda Standards by the National Standards Council.

Committee membership

Chocolate and chocolate product— Specification

1 Scope

The draft Uganda standard specifies the requirements for methods of sampling and test for chocolate and chocolate products intended for human consumption. This standard does not apply to product to which chocolate is used as an enhancer.

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.

ISO 2451, *Cocoa beans — Specification*

US 7, *General standard for labelling of pre-packaged foods*

US 28, *Code of Practice for hygiene in the food and drink manufacturing industry*

general standard for Food Additives (GSFA)

CAC/GL 21, *Principles for the Establishment and Application of Microbiological Criteria for Foods*

US 217-8/EAS 217-8, *Methods for microbiological examination of foods —Part 8: Enumeration of yeasts and moulds*

US 738, *General standard for contaminants and toxins in food and feed*

US ISO 16050 Foodstuffs — Determination of aflatoxin B1, and the total content of aflatoxins B1, B2, G1 and G2 in cereals, nuts and derived products — High-performance liquid chromatographic method

US ISO 7251 Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of presumptive *Escherichia coli* — Most probable number technique

US ISO 6579 Microbiology of food and animal feeding stuffs — Horizontal method for the detection of *Salmonella* spp

3 Description

Chocolate is the generic name for the homogenous products complying with the descriptions below and summarized in Table 1. It is obtained by an adequate manufacturing process from cocoa materials which may be combined with milk products, sugars and/or sweeteners, and other additives. Other edible foodstuffs, excluding added flour and starch and animal fats other than milk fat, may be added to form various chocolate products.

4 COMPOSITIONAL AND QUALITY REQUIREMENTS

4.1 Requirements

4.1.1 Chocolate and chocolate products shall be prepared from cocoa flour or cocoa beans conforming to ISO 2451.

The combinations of other ingredients and additives to the chocolate shall be limited to 40 % of the total weight of the finished product, subject to the labelling provisions.

The addition of vegetable fats other than cocoa butter shall not exceed 5% of the finished product, after deduction of the total weight of any other added edible foodstuffs, without reducing the minimum contents of cocoa materials. Where required by the authorities having jurisdiction, the nature of the vegetable fats permitted for this purpose may be prescribed in applicable legislation

4.1.2 Chocolate and chocolate products shall be:

- a) of colour characteristic of the type of chocolate made
- b) free from rancid odour,
- c) free from extraneous and foreign matter

4.2 Specific requirements

Chocolate and chocolate products shall meet the compositional requirements specified for the different types in Table1

Table1 — Composition requirements for Chocolate and chocolate products

. Chocolate Types	Cocoa Butter	Fat-free Cocoa Solids	Total Cocoa Solids	Milk Fat	Total Milk Solids	Starch / Flour	Ground Hazelnuts
CHOCOLATE TYPES (COMPOSITION)							
Chocolate	>18	>14	>35				
Chocolate a la taza	>18	>14	>35			< 8	
Sweet Chocolate	>18	>12	>30				
Chocolate familiar a la taza	>18	>12	>30			< 18	
Couverture Chocolate	>31	>2.5	>35				
Milk Chocolate		>2.5	>25	>2.5-3.5	>12-14		
Family Milk Chocolate		>2.5	>20	>5	>20		
Milk Chocolate Couverture		>2.5	>25	>3.5	>14		
Other chocolate products							
White Chocolate	>20			>2.5-3.5	>14		
Gianduja Chocolate		>8	>32				>20 and <40
Gianduja Milk Chocolate		>2.5	>25	>2.5-3.5	>10		>15 and <40
Chocolate para mesa							
Chocolate para mesa	> 11	> 9	> 20				
Semi-bitter chocolate para mesa	>15	>14	> 30				
Bitter chocolate para mesa	> 22	>18	> 40				
CHOCOLATE TYPES (forms)							
Chocolate Vermicelli / Chocolate Flakes							
Chocolate Vermicelli / Chocolate Flakes	>12	>14	>32				
Milk Chocolate Vermicelli / Milk Chocolate Flakes		>2.5	> 20	>3	>12		
Filled Chocolate chocolate part of the coating >25% of the total weight of the product concerned							
A Chocolate or Praline chocolate component shall not be less than 25% of the total weight of the product.							

6 Food additives

Only the food additives permitted in US 738 standards for food additives may be used;

- a) glazing agents
- b) antioxidants
- c) colouring
- d) processing aid
- e) bulking agents
- f) sweeteners
- g) flavouring agents
- h) emulsifiers
- i) acidity regulators

7 Contaminants

7.1 Pesticide residues

Chocolate and chocolate products shall conform to the limits for pesticide residues set by the Codex Alimentarius Commission.

7.2 Other contaminants

Chocolate and chocolate products shall conform to those maximum levels for contaminants and toxins set by Codex Alimentarius Commission.

7.3 Aflatoxins

The maximum content of aflatoxins in Chocolate and chocolate products when determined in accordance with the method described in US ISO 16050 shall not exceed 5 µg/kg (ppb) for aflatoxin B₁ and 10 µg/kg for total aflatoxins

7 Hygiene

7.1 The chocolate and chocolate products shall be prepared under good hygienic practices as stipulated in US 28,

7.2 The chocolate and chocolate products shall be free from objectionable matter and shall be free from pathogenic micro-organisms, substances originating from micro-organisms or any other deleterious substances in amounts which may constitute a health hazard

7.3 Chocolate and chocolate products shall comply with microbiological requirements in Table 2

Table 2 – Microbiological limits for chocolate and chocolate products

S/n	Microorganism	Maximum limit	TEST Method
I.	<i>E.coli</i> , MPN/g	Absent	ISO 7251
II.	<i>Salmonella spp</i> per 25 g	Absent	ISO 6579
III.	Yeast and moulds , cfu/g	10 ²	US EAS 217-8

8 Labelling and marking

8.1 In addition to the requirements in US 7, each package of Chocolate and chocolate products shall be legibly and indelibly marked with the following;

- a) The name of the product shall be of the chocolate depending on the type and composition of the chocolate
- b) Brand name/trade name;
- c) The name and physical address of the manufacturer;
- d) Lot identification/ batch/code number
- e) Net weight in metric units;
- g) Country of origin;
- h) Storage conditions;
- i) Expiry date
- j) Language shall be English
- k) ingredients:

9 Methods of analysis and sampling

Sampling and testing shall be done in accordance with the AOAC methods stated in Annex A..

Annex A
(normative)

AOAC SAMPLING AND ANALYSIS METHODS

A.1 General

A.2 Determination of Centre and Coating of Filled Chocolate

All methods approved for the chocolate type used for the coating and those approved for the type of centre concerned

A.2 Determination of Cocoa Butter

According to AOAC 963.15 or IOCCC 14-1972.

A.3 Determination of Fat-free Cocoa Solid

According to AOAC 931.05.

A.4 Determination of Fat-free Milk Solids

According to IOCCC 17-1973 or AOAC 939.02.

A.2 Determination of Milk Fat

According to IOCCC 5-1962 or AOAC 945.34, 925.41B, 920.80.

A.6 Determination of Moisture

According to IOCCC 26-1988 or AOAC 977.10 (Karl Fischer method); or AOAC 931.04 or IOCCC 1-1952 (gravimetry).

A.7 Determination of Total Fat

According to AOAC 963.15.

A.8 Determination of Non-Cocoa Butter Vegetable Fat in Chocolate and Chocolate Products

The following methods of analysis are the best available at the present time. Further systematic improvement is required. Documentation identifying the type of commercial blends of non-cocoa butter vegetable fats used must be made available upon request by competent authorities.

A.8.1 Detection of Non-Cocoa Butter Vegetable Fats in Chocolate

Detecting sterol breakdown products in refined vegetable fats added to chocolate by method AOCS Ce 10/02(02).

Bibliography

CODEX STAN 87-1981, Rev 1-2003, *Chocolate and chocolate standard*

Certification marking

Products that conform to Uganda standards may be marked with Uganda National Bureau of Standards (UNBS) Certification Mark shown in the figure below.

The use of the UNBS Certification Mark is governed by the Standards Act, and the Regulations made thereunder. This mark can be used only by those licensed under the certification mark scheme operated by the Uganda National Bureau of Standards and in conjunction with the relevant Uganda Standard. The presence of this mark on a product or in relation to a product is an assurance that the goods comply with the requirements of that standard under a system of supervision, control and testing in accordance with the certification mark scheme of the Uganda National Bureau of Standards. UNBS marked products are continually checked by UNBS for conformity to that standard.

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