

KENYA STANDARD

KS 1792-1: 2013
ICS 67.140.30

Malt-based cocoa products — Specification

Part 1:

Granulated products

KS 1792-1: 2013

TECHNICAL COMMITTEE REPRESENTATION

The following organizations were represented on the Technical Committee:

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Government Chemist

Cadbury (K) Ltd.

Proctor & Allan E.A Ltd

Trufoods Ltd

Excel Chemicals Ltd. (Foods Division)

University of Nairobi – Department of Food Technology and Nutrition

Consumer Information Network

Kenya Industrial and Research Development Institute

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Foreword

This Kenya Standard has been prepared by the Cocoa and Cocoa Products Technical Committee under the guidance of the Standards Projects Committee and it is in accordance with the procedures of the Kenya Bureau of Standards.

This standard is one of a series of Kenya Standards on malt-based cocoa products. A malt-based cocoa product is a product made primarily from malt, cocoa and sugar, which is usually marketed as a nutritious or an energy giving drink. Other optional ingredients can also be added.

The standard is in three parts, covering granulated products, powdered products and ready to drink products.

This Part 1 of the standard gives the quality specifications, the microbiological limits and the heavy metal contaminants for granulated malt-based cocoa products.

Implementation of this standard will ensure that products offered for sale are safe for human consumption.

During the preparation of this standard, reference was made from the following documents:

Codex Standards for cocoa products and chocolate.

Codex Stan 192- Codex Standard for Food Additives – 1995

Codex Stan 193- Codex Standard for contaminants and toxins in food and feed.

IS 1164 : 1986 reaffirmed 2007(Revision 3 First Reprint July 2009 including amendment 1 and 2)
Indian Standard- Specification for cocoa powder.

MS 871 : 2001 -Specification for Malaysian cocoa powder.

Cocoa and Chocolate Technology 1974 by B.W. Minifie, Oxford University Press.

Acknowledgement is hereby made for the assistance derived from these sources.

Malt-based cocoa products — Specification

Part 1:

Granulated products

1 Scope

This Kenya Standard specifies the requirements and test methods for malt-based cocoa products presented in granulated form.

2 Normative references

The following referenced documents are indispensable for the application of this document:

EAS 38- Labelling of prepackaged foods

EAS 217 –Methods for the microbiological examination of foods.

EAS 41: 2000 - Part 1-16. –Methods of test for processed fruits and vegetables

EAS 39- Code of Hygienic Practice in the Food and Drink Manufacturing companies.

KS ISO 16050 -- Foodstuffs - Determination of aflatoxin B1 and total content of aflatoxin B1, B₂, G₁ and G₂ in cereals ,nuts and derived products-HPLC Method.

KS ISO: 4833—Methods for the microbiological examination of foods – Colony count Technique at 30 °C. -- General Guidance.

KS ISO 4832: Methods for the microbiological examination of foods – Enumeration of coliforms- - colony count technique at 30 °C. -- General Guidance.

KS ISO: 6888-1- 3 Methods for the microbiological examination of foods – Enumeration of coagulase-positive staphylococci.

KS ISO 21527-1, 2 Methods for the microbiological examination of foods—Enumeration of yeasts and moulds in food.

KS ISO 6579: - Methods for the microbiological examination of foods—Examination for salmonellae.

KS ISO: 16654—Microbiology of food and animal feeding stuffs- horizontal method for the detection of Escherichia coli 0157?

KS 05-229, *Specification for edible salt*

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KS 436-3 Test methods for cocoa powders

KS 05-1051 Guide on maximum limits of pesticide residues

KS 05-660, *Guide to the safe use of food additives*

KS 1812-1-8, *Cocoa and cocoa products — Test methods*

KS 38, *Specification for plantation (mill) white sugar*

KS Codex Stan 54, *Standard for powdered dextrose (icing dextrose)*

KS 05-344, *Specification for honey*

KS 05-345, *Specification for glucose syrup*

KS 436-1, *Cocoa and cocoa products — Specification Part 1: Unsweetened cocoa powder*

KS 05-660, *Guide to the safe use of food additives*

KS 1701, *Refined sugar — Specification*

3 Definitions

For the purposes of this standard, the following definitions shall apply.

3.1

Cocoa powder It is the final product obtained from the cocoa liquor through cocoa press cake from which the fat (cocoa butter) has been partially removed. Cocoa liquor is derived from the cocoa beans after these have first been fermented, dried, cleaned, roasted, cracked and substantially freed from the shell to obtain the nibs, which are then ground. The beans, nibs, cocoa liquor and cocoa press cake may sometimes be alkalized by suitable alkalizing agent.

Shall be as defined in KS 436-1

3.2

Malt-based cocoa product

shall be the product made from malt extract to which cocoa, sugars and any other optional ingredient (as stated in Clause 4.2) have been added

3.3

Malt extract

Shall be a golden brown viscous liquid extracted from barley

3.4

Dehydrated malt extract

Shall be a light brown to white free flowing powder

4 Compositional requirements

4.1 Basic raw materials

4.1.1 Cocoa powder

This shall comply with KS 436-1. The amount of cocoa powder in granulated malt-based product shall not be less than 5 % m/m.

4.1.2 Malt extract

The amount shall not be less than 20 % m/m.

4.1.3 Sugars

For the purposes of this standard, any or a combination of the following sugars can be used and shall comply with the relevant Kenya standards. These shall be:

- a) Fructose
- b) Dextrose complying with KS Codex Stan 54;
- c) Icing sugar complying with KS 38;
- d) Dry or liquid glucose syrup complying with KS 05-345;
- e) Honey complying with KS 05-344;
- f) Mill white sugar complying with KS 05-38;
- g) Refined sugar complying with KS 1701;
- h) Caramel sugar.

4.2 Optional ingredients

4.2.1 Milk and milk products, complying with the relevant Kenya Standards.

4.2.2 Salt, complying with KS 05-229.

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4.2.3 Vitamins, the maximum levels of RDA shall be those specified in EAS38.

4.2.4 Any other food grade ingredients limited by GMP. These shall be those approved by the Foods, Drug and Chemical Substances Act Cap 254 of the Laws of Kenya, and the Codex Alimentarius Commission.

5 Food additives

The use of food additives shall comply with KS 05-660, Codex Stan 192 and the Food, Drugs and Chemical Substances Act, Cap.254 of the Laws of Kenya.

6 Quality requirements

6.1 General quality requirements

6.1.1 Granulated malt-based cocoa product shall be free from impurities and shall not contain any foreign matter.

6.1.2 It shall have a uniform colour and shall be free from burnt particles.

6.1.3 The product shall not have off-flavors and tastes.

6.2 Chemical requirements

When tested in accordance with the referenced test methods, granulated malt-based cocoa products shall comply with the chemical requirements stipulated in Table 1.

Table 1 — Chemical requirements for granulated malt-based cocoa Products

SI No	Characteristic	Requirement	Test method
i)	Moisture content, % mass by mass, max.	3.0	KS 1812-2
ii)	Total ash, m/m % max.	5.5	KS 1812 -3
iii)	pH	6-8	KS 1812 -4
iv)	Particle size distribution (through a 300-micron sieve)		KS 1812 -5
	a) Dust, % max.	15	"
	b) Granular, % min.	85	"

7 Hygiene

7.1 The product shall be manufactured in approved and licensed premises which shall comply with EAS 39, the Public Health Act, Cap. 242, Laws of Kenya.

7.2 The granulated malt-based cocoa shall comply with the Food, Drug and Chemical Substances Act, Cap. 254 of the Laws of Kenya.

7.3 Granulated malt-based cocoa products shall not contain any pathogenic microorganisms and when tested against EAS 217 –Methods for the microbiological examination of foods, the product shall comply with the microbiological requirements stipulated in Table 2.

Table 2 — Microbiological limits for Granulated malt-based cocoa products

SI No	Type of Micro-organism	Max. limit
i)	Presumptive coliforms, cfu per g	Absent
iii)	<i>E-coli</i> ,cfu per g	Shall be absent
iii)	<i>Salmonella</i> , cfu per 25 g	Shall be absent
iv)	<i>Staphylococcus aureaus</i> , cfu per g	Shall be absent
v)	Yeast and moulds, cfu per g, Max	10 ²

7.4 Granulated cocoa products shall not have total aflatoxins exceeding 10ppb and 5ppb for aflatoxin B₁

8 Heavy metal contaminants?

When tested by the Atomic Absorption Spectrophotometer method, granulated malt-based cocoa product shall not contain heavy metal contaminants in excess of the limits stipulated in Table 3.

Table 3 — Limits for heavy metal contaminants in granulated malt-based cocoa products

SI No	Contaminant	Maximum limit (ppm)
i)	Copper	50
lii)	Arsenic	1
iv)	Lead	1
v)	Cadmium	1

9 Environmental Management

9.1 The product shall be processed in an environment that complies with EMCA No 8 1999

9.2 disposal of used package and condemned materials shall comply with EMCA No 8 1999.

10 Packaging

10.1 The product shall be packaged in food grade materials that secure the integrity and safety of the product.

10.2 The weight of the product shall comply with the Weights and Measures Act Cap 513, Laws of Kenya.

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11 Labelling

In addition to the labeling requirements in EAS 38- Labelling of prepackaged foods , the following specific declarations shall be legibly and indelibly made:

- i) Name of the product;
- ii) Name, address and physical location of the manufacturer;
- iii) Declaration of any vitamins or fortificants;
- iv) Manufacturing date;
- v) Net weight, in grams or kilograms;
- vi) List of ingredients in descending order of proportion;
- vii) Expiry date;
- viii) Instructions for use;
- ix) Storage instructions
- x) Country of origin;
- xi) Lot/batch number.
- Xii) Instructions for disposal of used package
- Xiii) GMO status; where applicable
- Xiv) Irradiation status; where applicable

11 Sampling

Any package drawn randomly from a lot/batch shall constitute a representative sample of that lot/batch.

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