



DEAS 1031: 2020

ICS 67.140.30

EAST AFRICAN STANDARD

Cocoa powder and cocoa powder mixture — Specification

EAST AFRICAN COMMUNITY

Copyright notice

This EAC document is copyright-protected by EAC. While the reproduction of this document by participants in the EAC standards development process is permitted without prior permission from EAC, neither this document nor any extract from it may be reproduced, stored or transmitted in any form for any other purpose without prior written permission from EAC.

Requests for permission to reproduce this document for the purpose of selling it should be addressed as shown below or to EAC's member body in the country of the requester:

© East African Community 2020 — All rights reserved
East African Community
P.O. Box 1096,
Arusha
Tanzania
Tel: + 255 27 2162100
Fax: + 255 27 2162190
E-mail: eac@eachq.org
Web: www.eac-quality.net

Reproduction for sales purposes may be subject to royalty payments or a licensing agreement. Violators may be prosecuted.

CALL FOR COMMENTS

Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Ingredients	3
4.2 Raw material for cocoa powder mixtures	3
4.3 Optional ingredients for cocoa powder mixtures	3
5 Requirements	3
5.1 General requirements	3
5.2 Specific requirements	3
5.3 Particle size requirements	4
6 Food additives	4
7 Hygiene	4
8 Contaminants	5
8.1 Pesticides residues	5
8.2 Heavy metals	5
8.3 Mycotoxins	5
9 Packaging	5
10 Labelling	6
11 Sampling	6

Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in the East African Community. It is envisaged that through harmonized standardization, trade barriers that are encountered when goods and services are exchanged within the Community will be removed.

The Community has established an East African Standards Committee (EASC) mandated to develop and issue East African Standards (EAS). The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the public and private sector organizations in the community.

East African Standards are developed through Technical Committees that are representative of key stakeholders including government, academia, consumer groups, private sector and other interested parties. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the Principles and procedures for development of East African Standards. XXXXXX.

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

The committee responsible for this document is Technical Committee EASC/TC 002, Coffee, Cocoa, Tea and related products.

Attention is drawn to the possibility that some of the elements of this document may be subject of patent rights. EAC shall not be held responsible for identifying any or all such patent rights.

Cocoa powder and cocoa powder mixtures — Specification

1 Scope

This Draft East African Standard specifies the requirements, sampling and test methods for cocoa powder and cocoa powder mixtures intended for human consumption.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

DEAS 1030, *Cocoa beans — Specification*

EAS 38, *Labelling of pre-packaged foods — General requirements*

EAS 39, *Hygiene in the food and drink manufacturing industry — Code of practice*

Codex Stan 192, *General standard for food additive*

ISO 1577, *Determination of acid-insoluble ash*

ISO 2171, *Cereals, pulses and by-products — Determination of ash yield by incineration*

ISO 2292, *Cocoa beans — Sampling*

ISO 4833-1, *Microbiology of the food chain — Horizontal method for the enumeration of microorganisms — Part 1: Colony count at 30 °C by the pour plate technique*

ISO 5498, *Agricultural food products — Determination of crude fibre content — General method*

ISO 6579-1, *Microbiology of the food chain — Horizontal method for the detection, enumeration and serotyping of Salmonella — Part 1: Detection of Salmonella spp. — Amendment 1: Broader range of incubation temperatures, amendment to the status of Annex D, and correction of the composition of MSR/V and SC*

ISO 7305, *Milled cereal products — Determination of fat acidity*

ISO 11085, *Cereals, cereals-based products and animal feeding stuffs — Determination of crude fat and total fat content by the Randall extraction method*

ISO 15141, *Cereals and cereal products — Determination of ochratoxin A — High performance liquid chromatographic method with immunoaffinity column cleanup and fluorescence detection*

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*

ISO 16649-2, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli — Part 2: Colony-count technique at 44 degrees C using 5-bromo-4-chloro-3-indolyl beta-D-glucuronide*

ISO 17239, *Fruits, vegetables and derived products — Determination of arsenic content — Method using hydride generation atomic absorption spectrometry*

ISO 21527-2, *microbiology of food and animal feeding stuffs — horizontal method for the enumeration of yeasts and moulds — part 2: colony count technique in products with water activity less than or equal to 0,95*

AOAC 931.04, *Loss on drying (moisture) in cacao products — Gravimetric method*

AOAC 970.21, *PH of cacao products. Potentiometric method*

AOAC 999.11, *Determination of Lead, Cadmium, Copper, Iron, and Zinc in Foods, Atomic Absorption Spectrophotometry after Dry Ashing*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1 cocoa powder
product obtained by finely grinding cocoa cakes which remains after the removal or reduction of the cocoa butter.

3.2 cocoa powder mixture
cocoa powder which has been mixed with other optional ingredients given in sub-clause 4.3

3.5 cocoa beans
whole seeds of the cocoa tree (*Theobroma cacao* L.). which has been fermented and dried

3.6 cocoa nibs
cocoa beans, roasted or unroasted, cleaned, shelled and have undergone germ separation.

3.7 cocoa liquor
cocoa nib reduced to a fine paste by a mechanical process without losing any of its natural fat content.

3.8 cocoa press cake
cocoa mass converted into a cake, which removes a proportion of cocoa butter.

3.9 cocoa butter
fat obtained from cocoa nib and its derivatives.

4 Ingredients

4.1 Raw material for cocoa powder

Cocoa cakes derived from cocoa beans complying with DEAS 1030

4.2 Raw material for cocoa powder mixtures

Cocoa powders

4.3 Optional ingredients for cocoa powder mixtures

The following ingredients may be used and shall comply with relevant East African standards

- a) sugar
- b) milk powder
- c) salts, and
- d) spices

5 Requirements

5.1 General requirements

Cocoa powder and cocoa powder mixture shall:

- a) be in the form of free-flowing powder;
- b) have colour, taste, odour and flavour characteristic of the product;
- c) be free from fungal infestation;
- d) be free from foreign matter; and
- e) free from any adulterants

5.2 Specific requirements

Cocoa powder and cocoa powder mixture shall comply with the specific requirements specified in Table 1, Table 2 and Table 3 when tested according to the respective methods of test indicated therein

Table 1 — Specific requirements for cocoa powder and cocoa powder mixture

S/N	Parameter	Limits	Test method
i	Moisture content, m/m, %, max	7	AOAC 931.04
ii	Total ash, m/m, max, % on dry basis	14 (for alkalisied powder); 10 (for natural powder)	ISO 2171

iii	Acid insoluble ash m/m, max, % on dry basis	1	AOAC 971.33 ISO 1577
iv	pH	5-8	AOAC 970.21
V	Crude fibre m/m, max, % on dry basis	7	ISO 5498
vi	Fat acidity, mg KOH/100g, max	50	ISO 7305

Table 2 — Cocoa butter limits for cocoa powder and cocoa powder mixture

S/N	Product	Cocoa butter limits	Test method
i	Cocoa powder/cocoa powder mixture, %, m/m	≥ 20	ISO 11085
ii	Fat reduced cocoa powder/cocoa powder mixture, %, m/m	≥ 10 and < 20	
iii	High fat reduced cocoa powder/cocoa powder mixture, %, m/m	< 10	

Table 3 — Cocoa powder limits for sweetened cocoa powder mixture

S/N	Product	Cocoa powder content, %, m/m	Test method
i	Sweetened Cocoa Powder, or Drinking Chocolate	≥25	GMP
ii	Sweetened Cocoa powder Mix, or Sweetened Mixture with Cocoa powder	≥20	
iii	Sweetened Cocoa flavoured Mix	< 20	

5.3 Particle size requirements

99.8% of cocoa powder shall pass through 75µm micro sieve

6 Food additives

The use of food additives in cocoa powder or cocoa powder mixtures shall comply with Codex Stan 192

7 Hygiene

7.1 Cocoa powder and cocoa powder mixtures shall be processed and handled in accordance with the appropriate provisions stipulated in EAS 39.

7.2 Cocoa powder and cocoa powder mixture shall not exceed microbiological limits in Table 4 when tested in accordance with test methods specified therein.

Table 4 — Microbiological maximum limits for cocoa powder and cocoa powder mixtures

S/N	Microorganism	Maximum limits	Test method
i	Total Plate Count, cfu/g	10 ⁴	ISO 4833-1
	Yeasts and moulds cfu/g	10 ²	ISO 21527-2
iv	<i>Escherichia coli</i> , cfu/g	Absent	ISO 16649-2
v	<i>Salmonella spp.</i> , /25g	Absent	ISO 6579-1

8 Contaminants

8.1 Pesticides residues

Cocoa powder and cocoa powder mixture shall comply with those maximum pesticide residue limits established by the Codex Alimentarius Commission online database.

8.2 Heavy metals

Cocoa powder and cocoa powder mixtures shall not exceed maximum heavy metal limits established by the Codex Alimentarius Commission

8.3 Mycotoxins

Cocoa powder and cocoa powder mixtures shall not exceed maximum limits for mycotoxins specified 5 when tested in accordance with method of test specified therein.

Table 5 — Maximum limits for mycotoxins

S/N	mycotoxin	Maximum limits, µg/kg,	Test method
i	Total aflatoxin	10	ISO 16050
ii	Aflatoxin B1	5	
iii	Orchratoxin A	10	ISO 15141

9 Packaging

Cocoa powder and cocoa powder mixture shall be packaged in containers made from food grade packaging material and sealed in a manner that will safeguard the hygienic, nutritional and organoleptic properties of the product throughout the shelf life of the product.

10 Labelling

In addition to the labelling requirements specified in EAS 38, packages of cocoa powder and cocoa powder mixtures product shall be labelled legibly and indelibly with the following information.

- a) name of the products as “cocoa powder” or “cocoa powder mixture”;
- b) where an artificial sweetener to replace sugar, partially or totally, the words “artificially sweetened” shall be declared immediately before the name;
- c) cocoa butter content; and
- d) cocoa powder content for cocoa powder mixture.

11 Sampling

Sampling shall be done in accordance with ISO 2292

CALL FOR COMMENTS

CALL FOR COMMENTS