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ICS 71.100.70

FINAL DRAFT EAST AFRICAN STANDARD

Butter for cosmetic use — Specification — Part 2: Cocoa butter

EAST AFRICAN COMMUNITY

First Edition 2025

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.

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 071, *Cosmetics 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.

EAS 967 consists of the following parts, under the general title *Butter for cosmetic use — Specification*:

— *Part 1: Shea butter*

— *Part 2: Cocoa butter*

— *Part 3: Ghee butter*

Butter for cosmetic use — Specification — Part 2: Cocoa butter

1 Scope

This Final Draft East African Standard specifies requirements, sampling and test methods for cocoa butter intended for cosmetic use.

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.

EAS 346, *Labelling of cosmetics — Requirements*

EAS 377 (All parts), *Cosmetics and cosmetic products*

EAS 846, *Glossary of terms relating to the cosmetic industry*

EAS 847-16, *Cosmetics — Analytical methods — Part 16: Determination of lead, mercury and arsenic content*

ISO 660, *Animal and vegetable fats and oils — Determination of acid value and acidity*

ISO 3657, *Animal and vegetable fats and oils — Determination of saponification value*

ISO 3960, *Animal and vegetable fats and oils — Determination of peroxide value — Iodometric (visual) endpoint determination*

ISO 3961, *Animal and vegetable fats and oils — Determination of iodine value*

ISO 5555, *Animal and vegetable fats and oils — Sampling*

ISO 6321, *Animal and vegetable fats and oils — Determination of melting point in open capillary tubes (Slip point)*

ISO 8534, *Animal and vegetable fats and oils — Determination of water content — Karl Fischer method (pyridine free)*

ISO 15774, *Animal and vegetable fats and oils — Determination of cadmium content by direct graphite furnace atomic absorption spectrometry*

ISO 16212, *Cosmetics — Microbiology — Enumeration of yeast and mould*

ISO 18416, *Cosmetics — Microbiology — Detection of Candida albicans*

ISO 21149, *Cosmetics — Microbiology — Enumeration and detection of aerobic mesophilic bacteria*

ISO 21150, *Cosmetics — Microbiology — Detection of Escherichia coli*

ISO 22717, *Cosmetics — Microbiology — Detection of Pseudomonas aeruginosa*

ISO 22718, *Cosmetics — Microbiology — Detection of Staphylococcus aureus*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EAS 846 and the following 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

— IEC Electropedia: available at http://www.electropedia.org/

cocoa butter
fat obtained from cocoa beans

4 Requirements

4.1 Ingredients

All ingredients used in the manufacture of cocoa butter for cosmetic use shall comply with all parts of EAS 377.

4.2 General requirements

4.2.1 Cocoa butter for cosmetic use shall be white to off-white, and semi-solid.

4.2.2 Cocoa butter for cosmetic use shall be soluble in esters and fixed oils, and shall be insoluble in water.

4.3 Specific requirements

Cocoa butter for cosmetic use shall comply with the specific requirements given in Table 1 when tested in accordance with the test methods specified therein.

Table 1 — Specific requirements for cocoa butter for cosmetic use

S/N	Characteristic	Requirement	Test method
i.	Melting point, °C	30 – 36	ISO 6321
ii.	Moisture, %, max.	0.2	ISO 8534
iii.	Total fatty matter, % m/m, min.	98	Annex A
iv.	Saponification value, mg KOH/g	188 – 198	ISO 3657
v.	Peroxide value, meq O_2/kg, max.	10	ISO 3960
vi.	Iodine value, g I_2/100 g	33 – 42	ISO 3961
vii.	Free fatty acids, % as oleic acid, max.	1.75	ISO 660

4.4 Microbiological requirements

Cocoa butter for cosmetic use shall comply with the microbiological requirements given in Table 2 when tested in accordance with the test methods specified therein.

Table 2 — Microbiological requirements of cocoa butter for cosmetic use

S/N	Microorganism	Requirement	Test method
i.	Total aerobic count[a], CFU/g, max.	1 000	ISO 21149
ii.	Yeasts and moulds count, CFU/g, max.	100	ISO 16212
iii.	*Candida albicans*, per g	Not detected	ISO 18416
iv.	*Escherichia coli*, per g	Not detected	ISO 21150
v.	*Pseudomonas aeruginosa*, per g	Not detected	ISO 22717
vi.	*Staphylococcus aureus*, per g	Not detected	ISO 22718
[a] The total aerobic count of cocoa butter for children below 3 years shall not exceed 100 CFU/g.			

4.5 Heavy metal contaminants

Cocoa butter for cosmetic use shall comply with the heavy metal limits given in Table 3 when tested in accordance with the test methods specified therein.

Table 3 — Heavy metal limits of cocoa butter for cosmetic use

S/N	Microorganism	Maximum limit[a] mg/kg	Test method
i.	Lead	10	EAS 847-16
ii.	Arsenic	2	
iii.	Mercury	1	
iv.	Cadmium	2	ISO 15774
[a] The total amount of heavy metals as lead, mercury and arsenic, in combination in the finished product, shall not exceed 10 mg/kg.			

5 Packaging

Cocoa butter for cosmetic use shall be packaged in suitable well-sealed containers that shall protect the contents and shall not cause any contamination or react with the product.

6 Labelling

6.1 In addition to the labelling requirements given in EAS 346, the package shall be legibly and indelibly labelled with the following information:

a) name of the product as “Cocoa butter”; and

b) indication if the product is applicable to children below three years.

6.2 The words “For cosmetic use” and “For external use only" shall be conspicuously labelled.

7 Sampling

Sampling shall be done in accordance with ISO 5555.

Annex A
(normative)

Determination of total fatty matter content

A.1 Principle

The emulsion is broken with dilute mineral acid and the fatty matter is extracted with petroleum ether. It is weighed after removal of the solvent.

A.2 Reagents

A.2.1 **Dilute hydrochloric acid**, 1:1 (v/v)

A.2.2 **Petroleum**, boiling point 40 °C to 60 °C

A.2.3 **Methyl orange indicator solution**, dissolve 0.1 g of methyl orange in 100 ml of water

A.2.4 **Sodium sulphate**, anhydrous

A.3 Procedure

A.3.1 Weigh accurately about 2 g of the material into a conical flask; add 25 ml of dilute hydrochloric acid, fit a reflux condenser into the flask and boil the contents until the solution is perfectly clear.

A.3.2 Pour the contents of the flask into a 300-ml separation funnel and allow it to cool to 20 °C. Rinse the conical flask with 50 ml of petroleum ether in portions of 10 ml. Pour the ether rinsings into the separation funnel. Shake the separation funnel well and leave until the layers separate.

A.3.3 Separate out the aqueous phase and shake it out with 50-ml portions of ether twice. Combine all the ether extracts and wash them with water until free of acid (when tested with methyl orange indicator solution).

A.3.4 Filter the ether extracts through a filter paper containing sodium sulphate into a conical flask which has been previously dried at a temperature of 60 °C ± 2 °C and then weigh.

A.3.5 Wash the sodium sulphate on the filter with ether and combine the washings with the filtrate.

A.3.6 Distil off the ether and dry the material remaining in the flask at a temperature of 60 °C ± 2 °C to constant mass.

A.4 Calculation

The total fatty matter, expressed as percent by mass, shall be calculated using the formula below:

$$\frac{M_1}{M_2} \times 100$$

where

M_1 is the mass, in grams, of the residue;

M_2 is the mass, in grams, of the material taken for the test.

Bibliography

[1] US 2391: 2021, *Cocoa butter for cosmetic industry —Specification*

[2] EAS 1032: 2021, *Cocoa butter for food industry — Specification*

