

DRAFT UGANDA STANDARD

First Edition
2021-mm-dd

Cocoa butter for cosmetic industry — Specification



Reference number
DUS 2391:2021

© UNBS 2021

Compliance with this standard does not, of itself confer immunity from legal obligations

A Uganda Standard does not purport to include all necessary provisions of a contract. Users are responsible for its correct application

© UNBS 2021

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilised in any form or by any means, electronic or mechanical, including photocopying and microfilm, without prior written permission from UNBS.

Requests for permission to reproduce this document should be addressed to

The Executive Director
Uganda National Bureau of Standards
P.O. Box 6329
Kampala
Uganda
Tel: +256 414 333 250/1/2/3
Fax: +256 414 286 123
E-mail: info@unbs.go.ug
Web: www.unbs.go.ug

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, as amended. UNBS is mandated to coordinate 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 Agreement 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 key stakeholders including government, academia, consumer groups, private sector and other interested parties.

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.

The committee responsible for this document is Technical Committee UNBS/TC 310, *Cosmetics and related products*

Cocoa butter for cosmetic industry — Specification

1 Scope

This Draft Uganda Standard specifies the requirements, sampling and test methods for cocoa butter for cosmetic industry.

2 Normative references

The following referenced documents 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.

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

ISO 662, *Animal and vegetable fats and oils — Determination of moisture and volatile matter content*

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

US EAS 346, *Labelling of cosmetics - General requirements*

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

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

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

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

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

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

3 Terms and definitions

No terms and definitions are listed in this document. 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>

cocoa butter

fat obtained from cocoa nib and its derivatives.

4 Requirements

4.1 General requirements

4.1.1 cocoa butter for cosmetic industry shall be white to off-white semi-solid butter

4.1.2 Cocoa butter for cosmetic industry shall be soluble in esters and fixed oils and insoluble in water

4.2 Specific requirements

Cocoa butter for cosmetic industry 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 industry

S/No.	Characteristic	Requirement	Test method
i	Melting Point (°C)	30° - 36°	US ISO 6321
ii	Moisture (%), max	0.2	ISO 662
iii	Total fatty matter,% m/m, min	98%	Annex A
iv	Saponification Value (mgKOH/g)	188 – 198	ISO 3657
v	Peroxide Value (meq O ₂ /kg),max	10	ISO 3960
vi	Iodine Value (g I ₂ /100g)	33 – 42	ISO 3961
vii	Free Fatty Acids (% oleic), max	1.75	ISO 660

4.3 Heavy metal limits

Cocoa butter for cosmetic industry shall comply with the limits for heavy metal contaminants in accordance with Table 2 when tested in accordance with the methods prescribed therein.

Table 2 — Heavy metal limits for Cocoa butter for cosmetic industry

S/No	Characteristic	Requirement, mg/kg, max.	Test method
i)	Lead	10	US EAS 847-16
ii)	Arsenic	2	US EAS 847-16
iii)	Mercury	2	US EAS 847-16
iv)	Cadmium	2	ISO 15774

4.4 Microbiological limit

Cocoa butter for cosmetic industry shall comply with the microbiological limits given in Table 3 when tested in accordance with the methods prescribed therein

Table 3 — Microbiological limits for Cocoa butter for cosmetic industry

S/No	Characteristic	Requirement	Test method
I	Total Aerobic Count, CFU/g ,max	1000	ISO 21149
li	Yeast and moulds count, CFU/g, max	100	ISO 16212
	Candida albicans	Absent per g	ISO 18416
	Escherichia coli	Absent per g	ISO 21150

5 Packaging

The product 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

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

product name as “Cocoa butter for cosmetic industry”.

7 Sampling

Sampling shall be done in accordance with ISO 5555.

Annex A (normative)

Determination of total fatty substance content

A.1 Outline of the method

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, B.P. 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 weighed.

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 substance shall be calculated as follows:

$$\text{Total fatty substance, percent by mass} = \frac{M_1}{M_2} \times 100$$

where,

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

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

DRAFT UGANDA STANDARD FOR PUBLIC REVIEW

Bibliography

- [1] KS 2862:2019, *Cocoa butter-Specification*
- [2] US CODEX STAN 86:1981, *Standard for cocoa butter*

DRAFT UGANDA STANDARD FOR PUBLIC REVIEW

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.

Further particulars of the terms and conditions of licensing may be obtained from the Director, Uganda National Bureau of Standards.



DRAFT UGANDA STANDARD FOR PUBLIC REVIEW

ICS 71.100.70

Price based on nn pages