

DRAFT UGANDA STANDARD

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Shea butter for cosmetic industry— Specification



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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

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The committee responsible for this document is Technical Committee UNBS/TC 5, *Chemicals and Environment*, Subcommittee SC 1, *Industrial and public health chemicals*.

Shea butter for Cosmetic industry — Specification

1 Scope

This Draft Uganda standard specifies requirements, sampling and test methods for shea butter for cosmetic use derived from the kernels of the sheanuts (*Butyrospermum parkii*). This standard does not cover products for which therapeutic claims are made.

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.

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

FDEAS 847-16, *Oils for cosmetic industry — Methods of test — Part 16: Determination of Heavy metal Content*

FDUS ISO 18416, *Cosmetics — Microbiology — Detection of candida albicans*

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

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

FDUS ISO 24153 — *Random sampling and randomisation procedures*

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

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

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

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

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

US ISO 663, *Animal and vegetable fats and oils — Determination of insoluble impurities content*

US ISO 3596, *Animal and vegetable fats and oils — Determination of unsaponifiable matter — Method using diethyl ether extraction*

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

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

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

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

US ISO 22716, *Cosmetics -- Good Manufacturing Practices (GMP) -- Guidelines on Good Manufacturing Practices*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in FDEAS 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>

3.1
pure (raw or unrefined) shea butter
fat or oil extracted from the kernel of the nut of the shea tree without the use of chemicals or preservatives.

3.2
grade A shea nuts
nuts free from moulds, decays, weevils, cracks, discoloration and sprouts. They are not spilt, shrivelled, decayed, damaged, skinned, broken or empty.

3.3
refined shea butter
fat or oil extracted from the kernel of the nut of the shea tree by the use of chemicals or preservatives

4 Requirements

4.1 General requirements

4.1.1 The shea butter shall be extracted from grade A shea nuts. The shea butter shall be white, off-white, ivory, or beige yellowish soft solid with a characteristic odour.

4.1.2 The shea butter shall be free from any other visible foreign matter

4.1.3 Shea butter shall be insoluble in water and soluble in organic solvents.

4.2 Quality requirements

Shea butter shall comply with requirements specified in Table 1 when tested in accordance with the test methods specified therein.

Table 1 — Quality requirements for Shea butter for cosmetic industry

Characteristic	Requirement		Method of test
	pure	Refined	
Moisture content, %, m/m, Max	0.2	0.1	ISO 662
Free fatty acid, % as (oleic),	1 – 5	0.1(max)	ISO 660
Peroxide value, meg/kg, Max.	10	5	ISO 3960
Insoluble impurities, %, m/m	<1	<1	ISO 663
Unsaponifiable matter, %	>6	4 – 9	ISO 3596
Saponification Value, mgKOH/g	170-190	178 – 195	ISO 3657
Acid value, max	6.0	1.5	ISO 660
Iodine value, Wij's	50 – 61	50 – 70	ISO 3961
Melting point	28 – 42		US ISO 6321

4.3 Microbiological requirements

Shea butter shall comply with the microbiological limits given in Table 2 when tested in accordance with the test methods specified therein

Table 2 — Microbiological limits for shea butter for cosmetic industry

Characteristic	Limit	Test method
Total viable count for aerobic mesophyllic micro-organisms per g, max.	100	ISO 21149
<i>Pseudomonas aeruginosa</i>	Not detectable in 0.5 g of cosmetic product	FDUS ISO 22717
<i>Staphylococcus aureus</i>		FDUS ISO 22718
<i>Candida albicans</i>		FDUS ISO 18416

4.4 Heavy metals

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

Table 3 — Heavy metal limits for shea butter for cosmetic industry

Characteristic	Limit	Test method
Lead, mg/kg, max.	20	FDEAS 847-16
Arsenic, mg/kg, max.	2	FDEAS 847-16
Mercury, mg/kg, max.	2	FDEAS 847-16
NOTE The total amount of heavy metals as lead, mercury and arsenic, in combination, in the finished product shall not exceed 20 mg/kg		

5 Hygiene

Shea butter shall be produced, prepared and handled in accordance with US ISO 22716

6 Packaging

Shea butter shall be packaged in suitable containers and sealed in manner to ensure the safety and quality throughout the shelf life of the product.

7 Labelling

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

- a) manufacturer's name and physical address;
- b) product name as "Pure shea butter" or Refined shea butter";
- c) batch number;
- d) net content of the material when packed;
- e) country of origin;
- f) month and year of manufacture and expiry, and
- g) recommended storage conditions

8 Sampling

Sampling shall be carried in accordance with US ISO 5555.

Bibliography

- [1] *Dynasty Shea & Essentials, Organically Refined Shea Butter Specifications*
- [2] *Quality characteristics of West African shea butter (Vitellaria Paradoxa) and approaches to extend shelf-life by Hee Seung Nahm, May, 2011*
- [3] *Shea butter export guide, September 2005, by Peter Lovett, Emily Miller, Philip Mensah, Vanessa Adams and Catherine Kannenberg at the West Africa Trade Hub (WATH).*
- [4] *Safety Assessment of Butyrospermum parkii (Shea) -Derived Ingredients as Used in Cosmetics*
- [5] *Journal of Food Research; Vol. 2, No. 5; 2013.Effect of Nut Treatments on Shea Butter Physicochemical Criteria and Wrapper Hygienic Quality Influence on Microbiological Properties*
- [6] *Journal of Stored Products and Postharvest Research Vol. 3(3), pp. 24 – 29, 8 February, 2012, Microbiological and physicochemical characterization of shea butter sold on Benin markets.*
- [7] *SCCS/1564/15, The sccs notes of guidance for the testing of cosmetic ingredients and their safety evaluation, 9th revision, 25 April 2016*
- [8] *US 1635 2016, Shea butter – Specification*
- [9] *US 1636:2016, Shea nut – Specification*

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