

DRAFT UGANDA STANDARD

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Shea butter — Specification



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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 co-ordinate 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 representatives of consumers, traders, academicians, manufacturers, government and other stakeholders.

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.

DUS 1635 was prepared by Technical Committee TC 2-SC 2, *Oil Seeds, Edible Fats and Oils*.

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Shea butter — Specification

1 Scope

This Draft Uganda standard specifies requirements and methods of sampling and test for shea butter (*Butyrospermum parkii*) derived from the kernels of the nut of Bassia (or Butyrosylarmum) Parkij.

2 Normative references

The following referenced documents are indispensable for the application 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.

US 45:2015, *General standard for food additives*

EAS 38, *Labelling of pre-packaged foods — Specification*

EAS 39, *Code of practice for hygiene for food and drink manufacturing industries*

EAS 767, *Fortified edible oils and fats — Specification*

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

ISO 661, *Animal and vegetable fats and oils — Preparation of test sample*

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

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

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

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

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

ISO 6320, *Animal and vegetable fats and oils — Determination of refractive index*

ISO 6883, *Animal and vegetable fats and oils — Determination of conventional mass per volume (litre weight in air)*

ISO 8294, *Animal and vegetable fats and oils — Determination of copper, iron and nickel contents — Graphite furnace atomic absorption method*

ISO 12193, *Animal and vegetable fats and oils — Determination of lead by direct graphite furnace atomic absorption spectroscopy*

ISO 2590, *General method for determining of arsenic — Diethyldithiocarbamate photometric method*

ISO 10539, *Animal and vegetable fats and oils — Determination of alkalinity*

3 Terms and definitions

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

3.1

Shea butter

The oil derived from the kernels of the nut of *Bassia* (or *Butyrosylarmum*) Parkij,

3.2

food grade packaging material

packaging material, made of substances which are safe and suitable for the intended use and which will not impart any toxic substance or undesirable odour or flavour to the product

4 Quality and compositional requirements

4.1 General requirements

Shea butter shall:

- a) be expressed from Shea nuts which are fit for the purpose;
- b) be free from adulterants, and any other foreign matter, separated water and added colouring substances;
- c) be free from rancid odour and taste;
- d) have colour characteristic of the designated product; and
- e) be free from admixture with other oils, when tested according to appropriate method.

4.2 Compositional requirements

Shea butter shall comply with requirements specified in Table 1.

Table 1 — Compositional requirements of shea butter

S.No	Characteristic	Requirement	Method of test
i)	Moisture and matter volatile at 105 °C, % m/m, max.	1	ISO 662
ii)	Insoluble impurities, % m/m, max.	0.05	ISO 663
iii)	Slip point	30°C - 42°C	ISO 10539
iv)	Relative density (40 °C/ water at 20 °C) g/cm ³	0.900 - 0.930	ISO 6883
v)	Refractive index, 40 °C	1.460 - 1.470	ISO 6320
vii)	Saponification value (mg KOH/g oil)	170 – 190	ISO 3657

viii)	Iodine value (Wij's),	52 - 70	ISO 3961
x)	Unsaponifiable matter, g/kg, max.	10	ISO 3596
xi)	Acid value, mg KOH/g oil, max	1	ISO 660
xii)	Peroxide value, mEq peroxide oxygen/kg oil, max.	5	ISO 3960
xiv)	Free Fatty Acid, Max	0.5	ISO 660

5 Fortification

Shea butter may be fortified in accordance to EAS 767.

6 Food additives

Shea butter may contain the following food additives in accordance with US 45

7 Hygiene

Shea butter shall be produced, prepared and handled in accordance with EAS 39

8 Contaminants

8.1 Pesticide residues

Shea butter shall comply with those maximum pesticide residue limits established by the Codex Alimentarius Commission for this commodity.

8.2 Other contaminants

Shea butter shall comply with those maximum limits specified in Table 5.

Table 5 — Limits for contaminants in Shea butter

S. No.	Contaminant	Maximum level	Method of test
i)	Iron, mg/kg	5	ISO 8294
ii)	Copper, mg/kg	0.4	
iii)	Nickel, mg/kg	0.1	
iv)	Lead, mg/kg	0.1	ISO 12193
v)	Arsenic, mg/kg	0.1	ISO 2590

9 Packaging

Shea butter shall be packaged in food grade containers and sealed in manner to ensure the safety and quality requirements specified in this standard are maintained throughout the shelf life of the product.

10 Labelling

In addition to the labeling requirements in EAS 38, the following shall be indicated:

The name of the product shall be "Shea butter"

11 Sampling

Sampling shall be carried in accordance with ISO 5555

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Bibliography

- [1] Natural Sourcing, specialists in cosmeceutical ingredients ; 2012
- [2] Codex committee on fats and oils report of London meeting 6th-8th april 1965

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Products that conform to Uganda standards may be marked with Uganda National Bureau of Standards (UNBS) Certification Mark shown in the figure below.

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