



JOINT FAO/WHO FOOD STANDARDS PROGRAMME
FAO/WHO COORDINATING COMMITTEE FOR AFRICA
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PROPOSED DRAFT REGIONAL STANDARD FOR SHEA BUTTER

Comments at Step 3

(Comments of Kenya)

General comment

Kenya appreciates the opportunity to provide comments on the work of the electronic Working Group Chaired by Mali and co-chaired by Guinea on agenda item 10.

Section 1 - Introduction and Section 2 - Title of the standard

Comments

We propose the deletion of clause 1 introduction and Clause 2 (the title of the standard) and renumbering begin with the scope.

Rationale: the clauses are not in consistency with the provisions of layout of codex commodity standards as per the 24th Edition of the Codex procedural manual

4.1 2.1 Definitions

4.1.4 2.1.1 Shea butter

Vegetable fat from the kernels of the shea nut (nut kernels from the tree) denominated scientifically known as *Vitellaria paradoxa*, C.F. Gaertn (synonyms: *Butyrospermum paradoxum*, *Butyrospermum parkii*), from the Sapotaceae family.

4.1.3 2.1.3 Lot

A specified quantity of the lot shea butter that has uniform characteristics, enabling the quantity to be assessed.

4.1.4 2.1.4 Consignment

The quantity of shea butter despatched at one time and covered by a particular contract or shipping document, which may comprise at least one lot ~~or different lots~~.

5. 3. ESSENTIAL COMPOSITION AND QUALITY FACTORS:

5.1. 3.1 Raw materials

2nd Paragraph

The raw materials shall be stored, processed, and handled under hygienic conditions while that maintaining their chemical and ~~bacteriological~~ characteristics.

Comment:

We propose the editing paragraph two of clause 3.1 to read "The raw materials shall be stored, processed, and handled under hygienic conditions while maintaining their chemical characteristics"

Rationale: For clarity, raw materials must be handled under hygienic conditions not to compromise of the microbiological characteristics and prevent of contamination but still maintain their chemical characteristics intact

5.2.2 3.2.2 Quality criteria

Shea butter shall meet the quality criteria specified in Table 1 of this standard.

Table 1. Quality criteria

| Characteristics | Unrefined shea butter | | | | | |
|---|-----------------------|------|----------------------|-------------------|----------------------|---------------|
| | Grade 1 ^a | | Grade 1 ^b | | Grade 1 ^c | |
| | Concentration | | Concentration | | Concentration | |
| | Min. | Max. | Min. | Max. | Min. | Max. |
| Water content (%) | - | 0.05 | 0.06 | 0.2 | 0.3 | 2 |
| Free fatty acids (%) | | | | | | |
| Peroxide value (meq/kg) | - | 1 | 1.1 | 3 | 3.4 | 8 |
| Insoluble impurities | | | | | | |
| <u>Volatile matter at 105°C</u> (% m/m) 0.2 | - | 10 | 11 | 1.5-15 | 15.1 | 50 |

Comment:

Delete grade 1c and edition of typographic errors observed

The limits of these descriptive key variables of composition and quality of generic unrefined shea butter may appear very broad, with a large range of values between minimum and maximum values. This is because the descriptors consider the actual variation in characteristics found in shea butter in all production areas.

- The first grade of unrefined shea butter can be used for ~~the cosmetic and pharmaceutical industries, and for direct consumption~~
- The second grade of unrefined shea butter can be used for the food industry (confectionery, chocolate, edible oil or the base for margarines)
- ~~The third grade of unrefined shea butter can be used for the soap-making industry, or it can be refined for direct consumption.~~

Comment:

We propose the deletion and removal of grade 1c and its uses.

Rationale: The strike off do not apply to food and food products and further refining is inevitable

5.2.3 3.2.3 Physicochemical characteristicsComment:

We propose the deletion of table 2 and retain table 1

Rationale: Table 1 and 2 contradicting and therefore cannot be both maintained in this standard

5.2.3.1 General characteristics of non-distinctive qualities

Table 2: General characteristics of non-distinctive qualities

| | |
|-------------------------------------|--------------------|
| Water content/moisture (%) | 0.02—0.60 |
| Free fatty acids (%) | <4 |
| Peroxide value (meq/kg) | <10 |
| Insoluble impurities (%) | <0.5 |

5.2.3.2. 3.2.4 Distinctive criteria**Table 2: Physicochemical characteristics of unrefined shea butter** ~~variables and values~~Comment:

We propose renaming of table 3 to table 2 as “Physicochemical characteristics of unrefined shea butter” and inclusion of subtitles “parameter” and “range” within the table

Rationale: For clarity

| <u>Parameter</u> | <u>Range</u> |
|---|-----------------------------|
| - Density (20°C) | 0.91 – 0.98 |
| - Density (40°C) | 0.89 – 0.93 |
| - Saponification value (mg KOH/g) | 160 - 190(195) |
| - Iodine value (g I ₂ /100g) | 30- 75 (50—60) |
| - Unsaponifiables (%) | 1 – 19 |
| - Refractive index at 44°C | 1.4620 – 1.4650 |
| - Melting point (°C) | 35 - 40 |

Comment:

Deletion of bracketed saponification and iodine value ranges. The predominant unsaturated FattyAcid-oleic acid value of 50-60 range is limiting and the saponification value of 195 is high.

Rationale: To be consistence with the level of unsaturation in table 3” fatty acid composition of unrefined shea butter”. The saponification value beyond 190 will lower the quality of the unrefined shea butter.

Table 4: Table 3: fatty acid composition of unrefined shea butter

GLC ranges of fatty acid composition²

| <u>Fatty Acid</u> | <u>% levels of fatty acids</u> |
|---------------------------|--------------------------------|
| Lauric acid (C 12:0) | < 1 |
| Myristic acid (C 14:0) | <0.7 |
| Palmitic acid (C 16:0) | 2 - 10 |
| Palmitoleic acid (C 16:1) | <0.3 |
| Stearic acid (C 18:0) | 25-50 |
| Oleic acid (C 18:1) | 32-62 |
| Linoleic acid (C 18:2) | 1-11 |
| Linolenic acid (C 18:3) | 1-11 |
| Arachidonic acid (C 20:0) | <3.5 |

Comment:

We propose the renaming of Table 4 into table 3 as “Table 3: fatty acid composition of unrefined shea butter” and titles “fatty acid” and “% levels of fatty acids”

² ~~Samples in which the fatty acid composition does not correspond to the ranges indicated do not conform to the standard. According to requirements, other criteria of a non-binding nature may be applied to confirm whether a given sample conforms to the provisions of the standard.~~

5.2.4 Other characteristics:

Comment:

Delete table 5 Other Characteristics

Rationale: repetition of the contents in contaminants section and other parameters in other tables.

6. Food additivesComment:

No additives are permitted in unrefined shea butter.

Rationale: To be consistent with other codex texts. Additives can also change the chemical composition

Comment:

Propose deletion of **table 6** and **table 7**

Rationale: The tables are irrelevant since the no additives are allowed

7.3. Microbiological impurities

When tested by appropriate methods of sampling and examination, the product shall conform to the following microbiological limits:

Table 9: Microbiological limits

| Parameters | Microbiological limits |
|----------------------------------|------------------------------|
| Total Viable Count (TVC) (cfu/g) | 1×10^3 |
| Total coliforms (cfu/g) | Nil absent |
| Escherichia coli (cfu/g) | Nil absent |
| Salmonella (cfu/g) | Nil absent |
| Yeast & Mould (cfu/g) | 1×10^2 |

Comment:

In the column for microbiological limit we propose the replacement of “Nil” with “absent”

Rationale: countable parameters are regarded as absent and not nil.

9.2 Labelling

(a) Name of the product **and grade – to be consistent with table 1**

10. Methods of sampling and analysis**10.2 Analysis**

To ensure compliance with this quality standard, the samples selected as specified in clause 9 shall be tested in accordance with the appropriate testing procedures:

Comment:

We propose the tabulation of clause 10.2 and inclusion of a clause indicating that the latest version of the ISO standards applies where applicable

11. Criteria for conformity:

~~A lot shall be declared as conforming to these standards if the final sample satisfies the provisions of this standard.~~

Comment:

We propose the deletion of clause 11

Rationale: It's not consistent with the format of codex commodity standards and also implied within the standard.