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**Ghee for cosmetic industry —
Specification**

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In order to match with technological development and to keep continuous progress in industries, standards are subject to periodic review. Users shall ascertain that they are in possession of the latest edition

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Foreword

Rwanda Standards are prepared by Technical Committees and approved by Rwanda Standards Board (RSB) Board of Directors in accordance with the procedures of RSB, in compliance with Annex 3 of the WTO/TBT agreement on the preparation, adoption and application of standards.

The main task of technical committees is to prepare national standards. Final Draft Rwanda Standards adopted by Technical committees are ratified by members of RSB Board of Directors for publication and gazettment as Rwanda Standards.

DRS 399 was prepared by Technical Committee RSB/TC 011, Cosmetics and related products.

In the preparation of this standard, reference was made to the following standard:

RS 51:2012, Butter – Specification

This second edition cancels and replaces the first edition RS 399: 2019, of which has been technically revised.

Committee membership

The following organizations were represented on the Technical Committee on Cosmetics and related products (RSB/TC 011) in the preparation of this standard.

ALYVO RWANDA Ltd

Beauty Makers Association (BMA)

GAKO Organic Farming Training Center (GOFTC/Rwanda All Green Investment Ltd)

J&K

KAN-HAN Ltd

MORIJA Cosmetics/Morija Supply Ltd

National Industrial Research and Development Agency (NIRDA)

PHARMACIE NOVA

Rwanda Agriculture Livestock Inspection and Certification Services (RALIS)

Rwanda Biomedical Center (RBC)

SULFO Rwanda Industries

Trust Industries Ltd

University of Rwanda/College of Science and Technology (UR/CST)

Rwanda Forensic Laboratory (RFL)

Rwanda Inspectorate, Competition and Consumer Protection Authority (RICA)

Rwanda Standards Board (RSB) – Secretariat

DRS for public review

Ghee for cosmetic industry — Specification

1 Scope

This Draft Rwanda Standard specifies the requirements, sampling and test methods for ghee used in cosmetic industry. This standard does not cover the ghee for which therapeutic claims are made.

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.

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

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

RS EAS 847 – 2, *Cosmetics — Analytical methods — part 2: Determination of moisture content and volatile matter content*

RS EAS 847-5, *Cosmetics — Analytical methods — Part 5: Determination of unsaponifiable matter*

RS EAS 847-7, *Cosmetics — Analytical methods — Part 7: Determination of specific gravity*

RS EAS 847-9, *Cosmetics — Analytical methods — Part 9: Determination of colour*

RS EAS 847-10, *Cosmetics — Analytical methods — Part 10: Determination of acetyl value and hydroxyl value*

RS EAS 847-12, *Cosmetic — Analytic methods — Part 12: Determination of flash point by Pensky — Martens Closed Cap Tester*

RS EAS 847-13, *Cosmetic — Analytic methods — Part 13: Determination of rancidity*

RS EAS 847-16, *Cosmetic — Analytic methods — Part 16: Determination of lead, mercury and arsenic content*

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

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

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

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

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

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

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

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

RS 278, *Cosmetics — Methods of sampling*

3 Terms and definitions

For the purposes of this standard, the terms and definitions given in RS EAS 846 and the following apply.

3.1

ghee

product exclusively obtained from milk, cream or butter, by means of heat processes which result in almost total removal of water and non-fat solids, with an especially developed flavour and physical structure

3.2

butter

fatty product derived exclusively from milk and products obtained from milk, principally in the form of an emulsion of the type water-in-oil

4 Requirements

4.1 General requirements

4.1.1 The product shall be obtained from cow milk, cream or butter, by means of heat processes which result in almost total removal of water and non-fat solids, with an especially developed flavour and physical structure.

4.1.2 When examined visually, the product shall be free from:

- a) admixture with other oils;
- b) free from sediments and other foreign matter;
- c) separated water;
- d) added colouring and flavouring substances; and
- e) insects, worms, fungal infestation, rodent contaminations.

4.2 Specific requirements

The product shall comply with the requirements given in Table 1 when tested in accordance with methods specified therein.

Table 1 — Specific requirements for ghee for cosmetic industry

S/N	Parameters	Requirements	Test method
i.	Moisture content, % m/m, max.	0.2	RS EAS 847-2
ii.	Insoluble impurities, % m/m, max.	0.25	RS ISO 663
iii.	Colour in a 1" cell on the Lovibond scale, expressed as Y + 5R, max. deepness	4.0	RS EAS 847-9
iv.	Refractive index at 20 °C, range	1.4530 – 1.4590	RS ISO 6320
v.	Specific gravity at 20 °C, range	0.910 – 0.913	RS EAS 847-7
vi.	Saponification value, range	225 - 235	RS ISO 3657
vii.	Iodine value, range	26 - 40	RS ISO 3961
viii.	Acid value, max.	1.0	RS ISO 660
ix.	Unsaponifiable matter, % m/m, max.	1.5	RS EAS 847-5

x.	Acetyl value, min.	143	RS EAS 847-10
xi.	Flash point, °C (Pensky Martens closed), min.	250	RS EAS 847-12
xii.	Test for rancidity	Shall be free from rancidity	RS EAS 847-13
xiii.	Critical solution temperature, °C max.	0	Annex A

4.2.2 The products shall comply with the limits for heavy metal contaminants in accordance with Table 2, when tested in accordance with the methods specified therein.

Table 2 — Limits for heavy metal contaminants for ghee for cosmetic industry

S/N	Characteristics	Maximum limit (mg/kg)	Test method
i.	Lead	10	RS EAS 847-16
ii.	Arsenic	2	
iii.	Mercury	2	
<p>- The total amount of heavy metals as lead, mercury and arsenic, in combination, in the finished product should not exceed 10 mg/kg. - The heavy metals including lead, mercury and arsenic may be as a result of contamination during processing and should not be deliberately added as ingredients.</p>			

4.2.3 The products shall also comply with the microbiological limits given in Table 3 when tested in accordance with the methods described therein.

Table 3 — Microbiological limits for ghee cosmetic in cosmetic industry

S/N	Microorganism	Maximum limit	Test method
i.	Total viable count for aerobic mesophyllic micro-organisms per g.	100	RS ISO 6887-1
ii.	<i>Pseudomonas aeruginosa</i>	Not detected in 0.5 g	RS ISO 22717
iii.	<i>Staphylococcus aureus</i>		RS ISO 22718
iv.	<i>Candida albicans</i>		RS ISO 18416

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 products.

6 Labelling

6.1 In addition to the requirements of RS EAS 346, the Material Safety Data Sheet shall be provided.

6.2 The phrase 'For external use only' shall be conspicuously marked (either printed on the label affixed to the container, or lithographed, or stencilled thereon with indelible ink).

7 Sampling

Sampling shall be done in accordance with RS 278.

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Annex A **(normative)**

Determination of critical solution temperature

A.1 Reagent

The reagent shall be prepared by diluting ethyl alcohol or rectified spirit with distilled water till the relative density of the mixture at 15.5 °C is 0.8303 ± 0.0001 , when compared with distilled water at the same temperature. De-natured alcohol shall not be used for this test.

A.2 Procedure

Mix in a test tube, 1.0 g of the oil, with 4.15 times its mass of the reagent. Upon examination, the solution thus obtained shall be perfectly clear at 20 °C and shall remain clear when cooled and maintained for 5 minutes at a temperature of 0 °C.

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