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Oil for cosmetic use — Specification — Part 7: Moringa oil

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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 489-7 was prepared by Technical Committee RSB/TC 011, Cosmetics and related products.

This first edition cancels and replaces the first edition of RS 400: 2019, of which has been technically revised.

DRS 489 consists of the following parts, under the general title Oils for cosmetic use — Specification:

— *Part 1: Baobab seed oil*

— *Part 2: Chia seeds oil*

— *Part 3: Passion fruits (maracuja) seed oil*

— *Part 4: Castor oil*

— *Part 5: Macadamia oil*

— *Part 6: Calabash oil*

Committee membership

The following organizations were represented on the Technical Committee on Cosmetic 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

Introduction

Moringa oil comes from seeds of the Moringa oleifera tree, a fast-growing leafy tree species native to the Himalayas. The seeds, harvested from their pods, yield approximately 35 % − 40 % of non-drying Moringa oil, also known as Ben oil or Behen oil.

Moringa seed oil is clear and smells nutty. Thanks to the numerous antioxidants in it, the oil does not become rancid for several years after it is produced. This makes it sought after for a number of health and beauty applications.

Although the oil is viable for use as a cooking oil, its high demand and low levels of production do not make it conducive for everyday use as a dietary product. However, small amounts of oils are often used in recipes calling for a rich, nutty flavor, such as stir-fried dishes and marinades. Moringa oil is also occasionally used as a dressing for vegetables, salads, and other green dishes.

Moringa oil is among the most desired oils in the formulation of skin care products and cosmetics, chosen for its many antioxidants and documented skin-rejuvenating properties. These antioxidants do wonders for aging and nutrient-depleted skin. You can experience these benefits today.

With an impressive oleic acid content of 72 %, Moringa oil penetrates deeply into the skin, delivering vital nutrients and also helping the skin and hair retain moisture. Moringa oil’s benefits include skin care and rejuvenation, stronger and healthier hair, wrinkle reduction and skin blemish removal. Moringa oil suppliers often have a tough time keeping up with the demand for this rare and luxurious oil.

Another interesting application of moringa oil is in the production of expensive and natural perfumes and fragrances. Many commercially produced perfumes are created with scents that are synthesized using chemicals. However, a portion of the perfume market still employs more traditional and natural production practices to create their perfumes, using a technique known as "enflourage". This procedure uses oils to capture the scents of natural plant materials, looking the scent molecules into the oil. Moringa oil’s high oleic level, combined with its enduring shelf life, make it a popular choice for traditional perfume production.

Moringa contains powerful antioxidants, it is included in soaps, shampoos, body washes, and skin scrubs. Moringa oils absorbs quickly into the skin, so it is a good choice for beauty products that are rinsed off the skin, such as soaps and bath scrubs.

Moringa oil can also be found in hand lotions, lip balm, and other products that target dry and flaking skin, and is a popular ingredient in blended massage oils. It is pleasant to the touch, warms well, is not sticky, and combines well with other oils and fragrances.

Oils for cosmetic use — Specification — Part 7: Moringa oil

1 Scope

This Draft Rwanda Standard specifies the requirements, sampling and test methods for moringa oil for cosmetic industry. This standard does not cover the moringa oil 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*

RS ISO 6887-1, *Microbiology of food and animal feeding stuffs — Preparation of test samples, initial suspension and decimal dilutions for microbiological examination — Part 1: General rules for preparation of the initial suspensions and decimal dilutions*

3 Terms and definitions

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

moringa oil

pure refined oil obtained from the seeds of the *Moringa oleifera* tree, a fast-growing leafy tree species. The seeds, harvested from their pods, yield approximately 35 % − 40 % of non-drying Moringa oil

4 Requirements

4.1 General requirements

4.1.1 The product shall be Moringa oil obtained from seed of the Moringa tree (*moringa oleifera*), a fast-growing leafy tree species, by cold or heat pressing, followed by a full refining process to render an oil which is light in colour and mild in odour.

4.1.2 When examined visually, the product shall be:

a) clear;

b) free from sediments and other foreign matter; and

c) free from separated water, added colouring and flavouring substances.

4.1.3 The product shall be free from admixture with other oils.

4.2 Specific requirements

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

Table 1 — Specific requirements for Moringa oil for cosmetic use

S/N	Parameters	Requirements	Test method
i.	Moisture content, % m/m, max.	0.5	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	1.4500 – 1.4600	RS ISO 6320
v.	Specific gravity at 20 °C, range	0.890 – 0.980	RS EAS 847-7
vi.	Saponification value, range	185 – 197	RS ISO 3657
vii.	Iodine value, range	65 – 90	RS ISO 3961
viii.	Acid value, max.	1.0	RS ISO 660
ix.	Unsapnifiable 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

4.2.1 The product 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 Moringa oil for cosmetic use

S/N	Characteristics	Maximum limit (mg/kg)	Test method
i.	Lead	10	RS EAS 847-16
ii.	Arsenic	2	
iii.	Mercury	2	
- 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.			

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

Table 3 — Microbiological limits for moringa oil for cosmetic use

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

Random samples of the product shall be drawn for test in accordance with RS 278 from the market or factory.

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 ^{o}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 ^{o}C and shall remain clear when cooled and maintained for 5 minutes at a temperature of 0 ^{o}C.

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Price based on nnn pages