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Kaolin for cosmetic industry — Specification

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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.

WD XXX 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:

IS:1463, *Kaolin for cosmetic industry — Specification*

The assistance derived from the above source is hereby acknowledged with thanks.

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.

KAN-HAN Ltd

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

Rwanda Forensic Institute (RFI)

Rwanda Inspectorate, Competition and Consumer Protection Authority (RICA)

Rwanda Medical Supply Ltd

Rwanda Food and Drugs Authority (Rwanda FDA)

BARANYUZWE COSMETICS Ltd

SOPYRWA

Rwanda Standards Board (RSB) – Secretariat

Introduction

Kaolin, also known as white clay is a naturally occurring mineral primarily composed of hydrated aluminum silicate, which result from the breaking of aluminium rich silicate rock. It is an important raw material in many industries and applications, and it is an ingredient in skin care products. It is used to cleanse the skin because of its ability to absorb oil and make the surface smooth.

Kaolin clay is also a gentle ingredient that can be used as an exfoliant, and fine kaolin powder is an essential component used to produce the sunscreen lotion. Kaolin clay is also a preservative that increases the shelf life of cosmetic products. Additionally, it manages dry skin and prevents acne.

Kaolin for cosmetic industry — Specification

1 Scope

This Draft Rwanda Standard specifies the requirements, sampling and test methods for kaolin used in cosmetic industry.

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 847-2, *Cosmetics Analytical methods — Part 2: Determination of moisture content and volatile matter content*

RS ISO 21587-3, *Chemical analysis of aluminosilicate refractory products (alternative to the X-ray fluorescence method) — Part 3: Inductively coupled plasma and atomic absorption spectrometry methods*

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

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

RS ISO 16212, *Cosmetics — Microbiology — Enumeration of yeast and mould*

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

RS ISO 24153, *Random sampling and randomisation procedures*

3 Terms and definitions

For the purposes of this standard, the following term and definition apply.

kaolin

clay mineral composed of hydrated aluminium silicate with the chemical formula $Al_2Si_2O_5(OH)_4$

4 Requirements

4.1 General requirements

The material shall be a finely powdered, natural mineral consisting essentially of hydrated aluminium silicate. It shall be dry and free from extraneous impurities and grit.

4.2 Specific requirements

Kaolin for cosmetic industry shall comply with the specific requirements given in Table 1 when tested in accordance with the test methods specified therein.

Table 1 — Specific requirements for kaolin for cosmetic industry

S/N	Characteristic		Requirement	Test method
i.	pH value of aqueous solution		4.5 – 7.0	Annex A
ii.	Moisture and volatile matter, % m/m, max.		0.6	RS EAS 847-2
iii.	Fineness	Residue on 90-micron sieve, % m/m, max.	0.1	Annex B
		Residue on 45-micron sieve, % m/m, max.	2.0	
iv.	Loss on ignition, % m/m, max		15.0	Annex C
v.	Matter soluble in dilute hydrochloric acid, % m/m, max.		2	Annex D
vi.	Aluminum oxide (as Al_2O_3), percent by mass, min.		36.50	RS ISO 21587-3
vii.	Silicon Dioxide (as SiO_2), percent by mass, min.		45.0	
viii.	Iron Trioxide (as Fe_2O_3), percent by mass, max.		0.20	
ix.	Magnesium Oxide (as MgO), percent by mass, max.		0.10	
x.	Calcium Oxide (as CaO), percent by mass, max.		0.07	

4.3 Heavy metal contaminants

Kaolin for cosmetic industry 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 —Heavy metal limits for kaolin for cosmetic industry

S/N	Characteristic	Requirement mg/kg, max.	Test method
i.	Arsenic (As)	2	RS EAS 847-16
ii.	Lead (Pb)	5	
iii.	Mercury	2	
NOTE The total amount of heavy metals as lead, mercury and arsenic, in combination in the finished product shall not exceed 10 mg/kg.			

4.4 Microbiological limit

Kaolin for cosmetic industry shall comply with the microbiological limits given in Table 3 when tested in accordance with the methods specified therein.

Table 3 — Microbiological limits for kaolin for cosmetic industry

S/N	Microorganism	Maximum limit	Test method
i.	Total Aerobic Count, CFU/g	1000	RS ISO 21149
ii.	Yeasts and moulds, CFU/g	100	RS ISO 16212

5 Packaging

The product shall be packaged in well-sealed containers that shall protect the contents and shall not cause any contamination or react with the product.

6 Labelling

Referring to the labelling requirements given in RS EAS 346, the package shall be legibly and indelibly marked with the following information:

a) product name as “Kaolin for cosmetic industry”

b) name and address of manufacture or supplier

c) net content

d) lot number/batch number

e) manufacture date

f) expire date

g) safety information

h) list of ingredients: If the kaolin is mixed with other ingredients, list all ingredients in descending order of their percentage by weight.

i) storage instructions

7 Sampling

Sampling shall be done in accordance with RS ISO 24153

Annex A
(normative)

Determination of pH

A.1 Apparatus

pH meter — equipped with glass electrode.

A.2 Procedure

Boil about 10 g of the material, accurately weighed, with 50 ml of water for 30 minutes, adding water from time to time to maintain approximately the original volume of the liquid. Cool and filter. Determine the pH of the filtrate within 5 minutes of filtration.

Annex B
(normative)

Determination of fineness

B.1 Procedure for material retained on 90-micron sieve

Place about 10 g of the material, accurately weighed, in 90-micron sieve and wash by means of slow stream of running tap water and finally with fine stream from a wash bottle until all the material that can pass through the sieve has passed. Let the water drain from the sieve and then dry the sieve containing the residue on a steam bath. Carefully transfer the residue, on to a tared watch glass, dry it to constant mass at 105 °C ± 2°C and weigh.

B.2 Calculation

Material retained on the specified sieve, percent by mass

$$\% = \frac{M1}{M2} X\ 100$$

where M_1 mass in g of the residue retained on the sieve, and

M_2 mass in g of the material taken for the test

B.3 Procedure for material retained on 45-micron sieve

Carry out the test as given under B.1, using a fresh quantity of the material and 45-micron sieve. Calculate in the manner given under B.2

Annex C
(normative)

Loss on ignition

C.1 Procedure

Weigh accurately about 4 g of the material in a tared crucible and ignite at red heat to constant mass. Cool in a desiccator and weigh.

C.2 Calculation

Loss of ignition, Percent by mass =

$$\% = \frac{M1 - M2}{M2} \; X \; 100$$

where M_1 mass in g of sample taken for the test, and

M_2 mass in g of the sample after ignition

Annex D
(normative)

Determination of matter soluble in dilute hydrochloric acid

D.1 Reagent

Dilute Hydrochloric Acid — approximately 5 N.

D.2 Procedure

Mix about 5 g of the material accurately weighed, with 50 ml of dilute hydrochloric acid in a 250 ml beaker. Cover the beaker with a watch-glass and warm the contents on a steam-bath. Digest the contents of the beaker for about half an hour and filter. Wash the residue with warm dilute hydrochloric acid. Evaporate the filtrate to dryness and dry at 105 ± 2°C to constant mass.

D.3 Calculation

Matter soluble in dilute hydrochloric acid, percent by mass

$$\% = \frac{m}{M} \; X \; 100$$

m = mass in g of the dry residue in the dish, and

M = mass in g of the material taken for test.

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