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Perfumes — 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 402 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 EAS 335:2013 Cologne – 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.

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

Rwanda Investigation Bureau (RIB)

AQUA RWANDA

Rwanda Standards Board (RSB) – Secretariat

Introduction

Since the beginning of recorded history, humans have attempted to mask or enhance their own odour by using perfume, which emulates nature's pleasant smells. Many natural and man-made materials have been used to make perfume to apply to the skin and clothing, to put in cleaners and cosmetics, or to scent the air. Because of differences in body chemistry, temperature, and body odours, no perfume will smell exactly the same on any two people.

Perfume comes from the Latin "*per*" meaning "through" and "*fumum*" meaning "smoke." Many ancient perfumes were made by extracting natural oils from plants through pressing and steaming. The oil was then burned to scent the air. Today, most perfume is used to scent bar soaps. Some products are even perfumed with industrial odorants to mask unpleasant smells or to appear "unscented."

While fragrant liquids used for the body are often considered perfume, true perfumes are defined as extracts or essences and contain a percentage of oil distilled in alcohol or in distilled water. The United States is the world's largest perfume market with annual sales totalling several billions of dollars.

Perfume types reflect the concentration of aromatic compounds in a solvent, which in fine fragrance is typically ethanol or a mix of water and ethanol. Various sources differ considerably in the definitions of perfume types. The intensity and longevity of a perfume is based on the concentration, intensity and longevity of the aromatic compounds, or perfume oils, used. As the percentage of aromatic compounds increases, so does the intensity and longevity of the scent.

Perfumes — Specification

1 Scope

This Draft Rwanda Standard specifies the requirements, sampling and test methods for perfumes intended for human use.

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

RS EAS 377 (all part), *Cosmetics and cosmetic products*

RS ISO 1271, *Essential oils – Determination of carbonyl value – Free hydroxylamine method*

ISO 1279, *Essential oils – Determination of carbonyl value – Potentiometric methods using hydroxylammonium chloride*

RS EAS 346, *Labelling of cosmetic products – General requirements*

RS ISO 24153, *Random sampling and randomization procedures*

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

perfume

suitably blended composition of various materials of synthetic and/or natural origin, that gives a desired pleasant smell or fragrance

4 Types of perfumes

Perfumes are basically aromatic compounds dissolved in a solvent (ethanol or a mix of water and ethanol) and depending of the amount of the essential oils or aroma compounds, they are classified as follows:

Type 1 – perfume extract, pure perfume, or simply perfume; the strongest concentration of fragrance. It gives long-lasting fragrance and its scent can be very heavy. Of all scents, parfums last the longest; usually six to eight hours.

Type 2 –esprit de parfum (ESdP), a seldom used strength concentration in between EdP and perfume

Type 3 –eau de parfum (EdP) or parfum de toilette (PdT), sometimes called "eau de parfum" or "millésime". On average, eau de parfum will last for four to five hours.

Type 4 –eau de toilette (EdT), the most common concentration which is used to make a cheaper and more affordable variant of more expensive perfumes. EdT fragrance will normally last for two to three hours.

Type 5 –eau de cologne (EdC); often simply called cologne. The scent generally only lasts for up to two hours.

Type 6 – eau fraîche; as "splashes", "mists", "veils" and other imprecise terms. Less aromatic compounds and are diluted with water rather than oil or alcohol. The scent will generally last for up to two hours.

5 Requirements

5.1 General requirements

5.1.1 All ingredients used shall comply with RS EAS 377 (all parts).

5.1.2 Alcohol used shall be pharmaceutical/food grade. Some suitable denaturants used in cosmetic preparations include:

- a) brucine or brucine sulphate;
- b) diethyl phthalate, denatonium;
- c) benzoate, denatonium saccharide;
- d) sucrose octa-acetate; and
- e) thymol.

5.2 Specific requirements

The product shall comply with the specific requirements given in table 1 when tested in accordance with the methods indicated therein.

Table 1 — Specific requirements for perfumes

S/N	Characteristics	Requirements						Test methods
		Type 1	Type 2	Type 3	Type 4	Type 5	Type 6	
(i)	Aromatic compounds, % v/v.	20 - 30	15 - 30	15 - 20	8 - 15	3 - 8	1 - 3	RS ISO 1271 ISO 1279
(ii)	Alcohol content, % v/v	60 - 70	70 - 85	80 - 90	80 - 90	80 - 90	60 - 80	Annex A
(iii)	Stability of smell	To pass test						Annex B
(iv)	Cloud temperature	To pass test						Annex C

(v)	pH (neat)	5 - 7	Annex D
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6 Packaging and labelling

6.1 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 product.

6.2 Labelling

In accordance to the labelling requirements of RS EAS 346, the following information shall be indelibly and legibly marked on the container:

- a) Name of the product;
- b) Type of product;
- c) Name and address of the manufacturer;
- d) List of ingredients;
- e) Net content;
- f) Country of origin;
- g) Batch number in code or otherwise;
- h) Precautions and warnings
- i) Storage condition;
- j) Manufacture date and best before date;
- k) List of ingredients

7 Sampling

Random samples shall be drawn in accordance with RS 278 for test from the market, factory or anywhere else.

Annex A

(normative)

Determination of alcohol content

A.1 Reagents

A.1.1 Sodium chloride

A.1.2 Hexane

A.1.3 Sodium hydroxide, 1N

A.1.4 Phenolphthalein (solid)

A.2 Procedure

Take 25 mL of the sample, accurately measured at 25 °C, in a separator. Add 100 mL of water and mix. Saturate this mixture with sodium chloride, then add 100 mL of hexane and shake the mixture vigorously for 2 min to 3 min. allow the mixture to stand for about 15 min to 20 min. run the lower layer into the distillation flask, wash the hexane in the separator by washing vigorously with about 25 mL of sodium chloride solution, allow to stand and run the wash liquor into the first saline solution. Make the mixed solution just alkaline with sodium hydroxide with solid phenolphthalein as indicator. Add a little pumice powder and 100 mL of water. Distil and collect not less than 90 mL of distillate into 100 mL volumetric flask. Adjust the temperature at 25 °C and dilute with water to 100 mL at the same temperature. Determine the specific gravity at 25 °C. Find the percentage (v/v) of ethyl alcohol corresponding to the specific gravity by reference to the ethyl alcohol tables. The figure gives the alcohol content of the distillate. Multiply by 4 to get the percentage of ethyl alcohol in the sample.

Annex B (normative)

Determination of stability of smell

B.1 Procedure

Put some pieces of bleached gauze of dimensions 5 cm x 10 cm, which have been pre-washed in hot water without soap and dried, into a porcelain cup and pour 1.5 mL of perfume into this cup. After the gauze gets soaked, take it out with the help of pincers. Without squeezing it, dry it in a premise having temperature $37\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$, and humidity of $65\% \pm 5\%$ for 12 h.

B.2 Results

The product shall be taken to have passed the test if after the 12 h, the smell of perfume can be clearly picked up.

Annex C

(normative)

Determination of cloud temperature

C.1 Procedure

Pour 20 mL of perfume into a wide cylinder and close it with a plug. Insert a thermometer having scale up to - 20 °C. Immerse the thermometer into the liquid in such a manner that its bulb is situated at the same distance from the bottom and walls. Immerse the cylinder containing the liquid into a cooling mixture containing ice and salt. After cooling the sample to 5 °C, take out the cylinder, shake it and scan it in transmitted daylight, or in the light of a 40 W electric lamp.

C.2 Results

The product shall be taken to have passed the test if no turbidity appears at a temperature of 5 °C. The perfume should be transparent.

Annex D (normative)

Determination of pH

D.1 Apparatus

C.1.1 pH meter, equipped with glass electrode

C.1.2 Beaker, of 100 mL capacity

D.2 Reagents

C.2.1 pH 7.0 buffer solution

C.2.2 pH 4.0 and pH 9.0 buffer solutions

C.2.3 Deionized water

D.3 Procedure

C.3.1 Dip the pH meter into about 50 mL of pH 7.0 buffer solution. Ensure that the reading is 7.0

C.3.2 Rinse the meter with deionized water, and dip it into about 50 mL of pH 4.0 buffer solution. Ensure that the reading is 4.0. Repeat using pH 9.0 buffer solution.

C.3.3 Determine the pH of the sample solution using the pH meter.

Bibliography

[1]

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