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DRAFT EAST AFRICAN STANDARD

Cologne hydrosols and toilet waters — Specification

EAST AFRICAN COMMUNITY

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Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in the East African Community. It is envisaged that through harmonized standardization, trade barriers that are encountered when goods and services are exchanged within the Community will be removed.

The Community has established an East African Standards Committee (EASC) mandated to develop and issue East African Standards (EAS). The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the public and private sector organizations in the community.

East African Standards are developed through Technical Committees that are representative of key stakeholders including government, academia, consumer groups, private sector and other interested parties. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the Principles and procedures for development of East African Standards.

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

The committee responsible for this document is Technical Committee EASC/TC 071, *Cosmetics and related products*.

Attention is drawn to the possibility that some of the elements of this document may be subject of patent rights. EAC shall not be held responsible for identifying any or all such patent rights.

This third edition cancels and replaces the second edition (EAS 335:2013), which has been technically revised.

Cologne, hydrosols and toilet waters — Specification

1 Scope

This Draft East African Standard specifies the requirements, sampling and methods of test for cologne, hydrosols and toilet waters intended for human use.

This standard does not apply to baby colognes and air fresheners.

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.

EAS 346, *Labelling of cosmetics — General requirements*

EAS 377 (all parts), *Cosmetics and cosmetic products*

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

EAS 847-1, *Cosmetics Analytical methods Part 1: Glossary of terms*

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

ISO 24153, *Random sampling and randomization procedures*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

cologne

perfumed liquid applied on the skin composed of alcohol and fragrant oil

3.2

hydrosols

colloidal suspensions of essential oils as well as water-soluble components obtained by steam distillation or hydrodistillation from plants/herbs

3.3

Toilet water

light or dilute form of perfume; also known as eau de toilette

4 Requirements**4.1 Ingredients**

4.1.1 All ingredients used shall comply with all parts of DEAS 377.

4.1.2 If alcohol is used, it shall be of pharmaceutical/food grade.

4.2 General requirements

The product shall

- a) be a clear aqueous solution containing fragrant oil;
- b) be free from sediments and any other visible foreign matter;
- c) not have any harmful effect on the skin when used as intended by the manufacturer; and
- d) not have any objectionable odour.

4.3 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 cologne, hydrosols and toilet waters

S/N	Characteristic	Requirement	Test method
i)	Alcohol content ^a , % v/v, min	50	Annex A
ii)	Stability of smell	To pass test	Annex B
iii)	Cloud temperature	To pass test	Annex C
iv)	pH (neat)	3- 7	Annex D

^a This requirement does not apply to hydrosols, toilet water and non-alcoholic perfume.

4.3 Heavy metal contaminants

The product shall comply with the heavy metal limits given in Table 2 when tested in accordance with the test methods specified therein.

Table 2 — Limits for heavy metal contaminants for cologne

S/No.	Heavy metal	Limit ^a , mg/kg, Max	Test method
i)	Lead	10	EAS 847-16
ii)	Arsenic	2	

^aThe total amount of heavy metals as lead, mercury and arsenic, in combination in the finished product shall not exceed 10 mg/kg.

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 product.

6 Labelling

Labelling of the product shall be in accordance with the labelling requirements given in EAS 346,

7 Sampling

Sampling shall be carried in accordance with ISO 24153.

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Annex A (normative)

Determination of alcohol content

A.1 Reagents

- A.1.1 Sodium chloride
- A.1.2 Hexane
- A.1.3 Sodium hydroxide, 1 N
- 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 a 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*. This 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 cologne 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 cologne can be clearly picked up.

Annex C
(normative)

Determination of cloud temperature

C.1 Procedure

Pour 20 mL of cologne into a wide cylinder and close it with a plug. Insert a thermometer having scale up to $-20\text{ }^{\circ}\text{C}$. 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 $5\text{ }^{\circ}\text{C}$, 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 $5\text{ }^{\circ}\text{C}$. The cologne should be transparent.

Annex D (normative)

Determination of pH

D.1 Apparatus

D.1.1 pH meter, equipped with glass electrode

D.1.2 Beaker, of 100 mL capacity

D.2 Reagents

D.2.1 pH 7.0 buffer solution

D.2.2 pH 4.0 and pH 9.0 buffer solutions

D.2.3 Deionised water

D.3 Procedure

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

D.3.2 Rinse the meter with deionised 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.

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

Bibliography

- [1] EAS 335: 2013, *Cologne — Specification*

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