DEAS 842- 1: 2015

ICS 71.100.70

# DRAFT EAST AFRICAN STANDARD

## Hair shampoo,—Part 1: Soap based- Specification





First Edition 2015

# 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.

In order to achieve this objective, the Community established an East African Standards Committee mandated to develop and issue East African Standards.

The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the private sectors and consumer organizations. 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 procedures of the Community.

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.

# Hair shampoo,—Part 1: Soap-based- Specification

## 1 Scope

This Draft East African Standard specifies requirements and methods of sampling and test for soap-based hair shampoo,

This standard applies to:

## 2 Normative references

The following referenced documents are indispensable for the application 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 377-1, *Cosmetics and cosmetic products — Part 1: List of substances prohibited in cosmetic products*

EAS 377-2, *Cosmetics and cosmetic products — Part 2: List of substances which cosmetic products must not contain except subject to the restrictions laid down*

EAS 377-3, *Cosmetics and cosmetic products — Part 3: List of colorants allowed in cosmetic products*

EAS 377-4, *Cosmetics and cosmetic products — Part 4: List of preservatives allowed in cosmetic products*

EAS 377-5, *Cosmetics and cosmetic products — Part 5: Use of UV filters in cosmetic products*

DEAS 847-3, *Determination of Insoluble impurities*

DEAS 847-16, *Determination of Heavy metal Content*

*DEAS 847-17, Physio-chemical tests*

ISO 24153, Random sampling and randomisation procedures

ISO 18416- Detection of candida albicans

*ISO 22717- Detection of Pseudomonas aeruginosa*

*ISO 22718- Detection of Staphylococcus aureus*



 

# 3 Requirements

## 3.1 General requirements

**3.1.1** The shampoo shall be in the form of a liquid, emulsion or paste. It may be coloured and/or perfumed.

**3.1.2** The clear/transparent liquid shampoo, when examined visually, shall be free from any sediment.

**3.1.3** If in the form of an emulsion, the shampoo shall be homogenous and there shall be no visible signs of the emulsion having broken.

**3.1.4** Shampoo in the form of a paste shall be free from any agglomeration.

**3.1.5** The shampoo shall have no undesirable effect on the natural colour of the hair. (This does not include hair already treated with hair dyes). The shampoo shall be non irritating to the scalp and the skin

**3.1.6** The shampoo shall impart all the effects claimed, e.g. dandruff control.

**3.1.7** All ingredients used, including pigments and colours, shall conform to all parts of 377

**3.1.8** Any product containing ingredients for which medicinal claims are made shall be registered with the responsible authority.

**3.1.9** All essential oils/herbs used shall conform to the approved standards where such exist.

**3.**1.10All products claiming antibacterial activity shall pass the test for antibacterial activity outlined in Annex B.

**3.1.11** The hair shampoo shall contain acceptable amounts of the ingredients necessary to effect the intended end use performance as stipulated on the label.

**3.1.12**A list of ingredients conventionally used in the formulation of shampoos is given for guidance in Annex A.

**3.1.13**All active ingredients including anti-bacterial or anti-dandruff agents, shall be named. Any further information concerning the active ingredients shall be supplied by the manufacturer on request.

**3.1.14**It shall be the responsibility of the manufacturer to ensure the dermatological safety of their formulations. For baby shampoos, the active ingredients, perfume and other ingredients shall be of such nature and in such amounts as to leave the final baby product mild in nature. This is due to the sensitive nature of baby skin.

4. **Specific requirements**

The shampoo shall comply with the requirements given in Table 1.

**Table 1 — Requirements for hair shampoo, soap-based**

| **Sl No** | **Characteristic** | Test method | | | | |
|---|---|---|---|---|---|---|
| | | Baby | Neutralising | Treatment/ conditionig | General purpose | |
| i) | Total fatty matter, % by mass, min. | 10.0 | 10.0 | 10.0 | 15.0 | DEAS 847-17 |
| ii) | Matter insoluble in alcohol, % by mass, max. | 2.0 | 2.0 | 2.0 | 2.0 | DEAS 847-3 |
| iii) | Lather volume for 2 % solution, mL, min | 100 | 100 | 100 | 100 | DEAS 847-17 |
| iv) | Free caustic alkali, as NaOH or KOH, % by mass, max. | 0.01 | 0.01 | 0.01 | 0.01 | DEAS 847-17 |
| v) | antimicrobial activity, min. | 0.2 mm | 0.2 mm | 0.2 mm | 0.2 mm | Annex B |
| vi) | pH at 27±2°C, range | 5-7 | 4-5 | 4-7 | 5-9 | DEAS 847-17 |

The products shall comply with the limits for heavy metal contaminants in accordance with Table 2.

**Table 2 — Limits for heavy metal contaminants**

| **S/N** | **Characteristic** | **Limitst** | **Method of test** |
|---|---|---|---|
| i. | Lead, ppm, max. | 20 | DEAS 847-16 |
| ii. | Arsenic, ppm, max. | 2 | DEAS 847-16 |
| iii. | Mercury, ppm, max. | 2 | DEAS 847-16 |
| NOTE The total amount of heavy metals as lead, mercury and arsenic, in combination, in the finished product should not exceed 20 ppm. | | | |



The product shall also comply with the microbiological limits given in Table 3 when tested in accordance with the methods indicated therein.

**Table 3 — Microbiological limits**

| **Micro-organisms** | **Limits, max.** cfu/g | **Method of test** |
|---|---|---|
| Total viable count | 100 in 0.5 g[1)] | - |

| | | |
|---|---|---|
| *Pseudomonas aeruginosa*[3)] | Not detectable | ISO 22717 |
| *Staphylococcus aureus*[3)] | | ISO 22718 |
| *Candida albicans*[3)] | | ISO 18416 |

1) For products specifically intended for children under 3 years, eye area and mucous membranes

2) For other products

3) For *Pseudomonas aeruginosa, Staphylococcus aureus* and *Candida albicans*, the limits shall not be detectable in 0.5 g for products specifically intended for children under 3 years, eye area and mucous membranes and in 0.1 g for other products.

## 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

In addition to the labeling requirements outlined in EAS 346, the package shall be legibly and indelibly marked with the following information in English, Kiswahili or French or in combination as agreed between the manufacturer and supplier

i) type of shampoo;

## 7 Sampling

Random samples of the product shall be drawn for test in accordance with ISO 24153 from the market, factory or anywhere else.

# Annex A
(normative)

# List of ingredients conventionally used in formulation of soap-based shampoo

## A.1 Chelation agents

a) Sodium polyphosphates

b) Sodium salt of ethylenediamine tetra-acetic acid (EDTA)

## A.2 Preservatives

a) Alcohols

b) Formaldehyde

c) Sorbic acid

d) Ester of p-hydroxybenzoic acid

e) Imidazolidinyl urea

f) Kathon CG (Methylchloroisothiazolinone and methyl-isothiazoline)

## A.3 Emollients

a) Lanoline and its derivatives

## A.4 Thickening agents/viscosity enhancers

a) Sodium carboxymethyl cellulose

b) Methyl isopropyl cellulose

c) Methyl cellulose

d) Methyl glycoside derivatives

e) Guar gum

## A.5 Counter-irritants

a) Ethoxylated fatty alcohols

b) Ethoxylated fatty esters



 

c) Methyl glycoside derivatives

## A.6 Conditioners

a) Polyquaternary ammonium compounds and monomeric quaternary ammonium compounds

b) Hydrolized proteins

c) Amphoterics

## A.7 U.V. Stabilizers

a) Benzophenone derivatives

## A.8 Other groups of ingredients

a) Perfumes

b) Dyes

# Annex B
(normative)

# Antimicrobial test

## B.1 Procedure

Prepare nutrient agar for bacterial growth by dispersing 28 g of nutrient agar powder in 1 litre of de-ionized water. Allow to soak for 10 minutes, swirl to mix and then heat gently with stirring to ensure uniformity. Sterilize by autoclaving for 15 minutes at 121 °C, cool at 47 °C, mix well and then pour to sterilized petridishes. Leave it to solidify undisturbed. Plant *Staphylococcus aureus, Pseudomonas aeruginosa* and *Candida albicans* on the so prepared nutrient agar in petri dishes.

Meanwhile, prepare filter paper discs and sterilize them by autoclaving. Dip in various samples. Place in the petri dishes containing bacteria culture agar mixture. Incubate the petri dishes at 35 °C for 48 hours. Determine bacteria growth inhibition zones.

## B.2 Antifungal test

Dissolve potato dextrose agar (39 g) in 1 $dm^3$ of distilled water. Use the same procedure as for bacterial test (F.1) above. Test the cream against fusarium fungi. Obtain the results after 4 days and the temperature of incubation should be 25 °C.

## B.3 Results

The inhibition zone shall be at least 0.2 mm in diameter.



 