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## DRAFT EAST AFRICAN STANDARD

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Hair shampoo — Specification — Part 2: Synthetic detergent-based

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 second edition cancels and replaces the first edition (EAS 842-2:2017), which has been technically revised.

EAS 842 consists of the following parts, under the general title *Hair shampoo*:

- — *Specification — Part 1: Soap based*
- — *Specification — Part 2: Synthetic detergent based*



## Hair shampoo — Specification — Part 2: Synthetic detergent-based

### 1 Scope

This Draft East African Standard prescribes the requirements, sampling and test methods for synthetic detergent-based hair shampoo.

This standard does not cover animal shampoo, soap based hair shampoo and shampoo with medicinal/therapeutic claims.

### 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 794, *Determination of the microbial inhibition of cosmetic soap bars and liquid hand and body washes — Test method*

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

EAS 847-3, *Cosmetics — Analytical methods — Part 3: Determination of insoluble impurities*

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

EAS 847-17, *Cosmetics — Analytical methods — Part 17: Determination of pH*

EAS 847-20, *Cosmetics — Analytical methods — Part 20: Determination of lather volume (foaming power)*

ISO 2870, *Surface active agents — Detergents — Determination of anionic-active matter, hydrolysable and non-hydrolysable under acid conditions*

ISO 2871-1, *Surface active agents — Detergents — Determination of cationic-active matter content — Part 1: High-molecular-mass cationic-active matter*

ISO 2871-2, *Surface active agents — Detergents — Determination of cationic-active matter content — Part 2: Cationic-active matter of low molecular mass (between 200 and 500)*

ISO 18416, *Cosmetics — Microbiology — Detection of *Candida albicans**

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

ISO 22717, *Cosmetics — Microbiology — Detection of *Pseudomonas aeruginosa**

ISO 22718, *Cosmetics — Microbiology — Detection of Staphylococcus aureus*

ISO 24153, Random sampling and randomisation 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>

### 4 Classification

Synthetic detergent based hair shampoo shall be classified into four types:

- a) general purpose shampoo - this shall be for "dry", "oily" or "normal" hair, and shall be indicated so;
- b) treatment/conditioning/ multi-functional shampoo;
- c) baby shampoo; and
- d) neutralizing shampoo.

### 5 Requirements

#### 5.1 Ingredients

5.1.1 All ingredients used including dyes, pigments and colours shall comply with EAS 377.

NOTE A list of ingredients commonly used in the formulation of shampoos is given as information in Annex A.

5.1.2 All essential oils/herbs used shall comply with the relevant standards.

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

5.1.4 For baby shampoos, the active detergent, perfume and all 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.

#### 5.2 General requirements

5.2.1 The hair shampoo shall be in the form of a liquid, emulsion or paste.

5.2.2 The clear/transparent liquid shampoo, when examined visually shall be free from any sediment. If in the form of an emulsion, it shall be homogenous and there shall be no visible signs of the emulsion having broken. Shampoo in the form of a paste shall be free from any agglomerated particles.

5.2.3 Hair shampoo may be coloured and perfumed.

5.2.4 Hair shampoo shall not be harmful to the user, and shall have no undesirable effect on the natural colour of the hair. (This does not include hair already treated with hair dyes).

5.2.5 Hair shampoo shall impart all the effects claimed when used as per the instructions for use.

### 5.3 Specific requirements

**5.3.1** Hair shampoo shall comply with the specific requirements given in Table 1 when tested in accordance with the methods prescribed therein

Table 1 — Specific requirements for synthetic detergent based hair shampoo

S.No.	Characteristic	Requirement				Test method
		General purpose	Baby	Neutralizing	Multifunctional	
i	Active detergent matter content, % m/m, min.	6.0	5.0	10.0	6.0	ISO 2870 ISO 2871-1 ISO 2871-2
ii	pH	4.5 - 9.0	5.0 - 9.0	4.0 - 5.0	4.5 - 9.0	EAS 847-17
iii	Lather volume for 1 % solution, mL, min.	100	100	100	100	EAS 847-20
iv	Matter insoluble in alcohol, % m/m, max.	2.0	2.0	2.0	2.0	EAS 847-3
V	Antibacterial activity <sup>a</sup>	To pass test	To pass test	To pass test	To pass test	EAS 794

<sup>a</sup>This test is only applicable for hair shampoos with antibacterial claims or ingredients.

**5.3.2** Baby shampoo shall comply with the specific requirements given in Table 2 when tested in accordance with the methods prescribed therein.

**5.3.3** Neutralizing shampoo shall comply with the specific requirements given in Table 3 when tested in accordance with the methods prescribed therein.

### 5.4 Heavy metal contaminants

The hair shampoos shall comply with the limits for heavy metal contaminants in given in Table 4 when tested in accordance with the methods prescribed therein.

Table 4 — Limits for heavy metal contaminants for synthetic detergent-based hair shampoo

S/N	Heavy metal contaminant <sup>a</sup>	Maximum limit ,mg/kg	Test method
i.	Lead	10	EAS 847-16
ii.	Arsenic	2	
iii.	Mercury	2	

<sup>a</sup> The total amount of heavy metals as lead, mercury and arsenic, in combination, in the finished hair shampoo shall not exceed 10 mg/kg.

### 5.5 Microbiological limits

The hair shampoo shall comply with the microbiological limits given in Table 5 when tested in accordance with the methods indicated therein.



Table 5 — Microbiological limits for synthetic detergent-based hair shampoos

	Micro-organisms	Limits	Test method
i	Total viable count for aerobic mesophyllic microorganisms CFU/g or CFU/ml, max.	100	ISO 21149
ii	<i>Pseudomonas aeruginosa</i>	Not detected in 1 ml or 1 g of cosmetic product	ISO 22717
iii	<i>Staphylococcus aureus</i>		ISO 22718
iv	<i>Candida albicans</i>		ISO 18416

## 6 Packaging

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

## 7 Labelling

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

- a) product name as “Synthetic detergent based hair shampoo” and
- b) type

## 8 Sampling

Sampling shall be carried in accordance with ISO 24153.

## **Annex A** (informative)

### **List of ingredients conventionally used in formulation of synthetic detergent based hair shampoo**

#### **A.1 Detergents**

- A.1.1 Sodium or potassium or ethanolamine salts of lauryl sulphonic acid
- A.1.2 Lauryl ether sulphates
- A.1.3 Sulphated monoglycetides
- A.1.4 Sodium alkyl sulpho-acetate
- A.1.5 Alkyl benzene polyoxyethyl sulphonates
- A.1.6 Sodium n-lauryl sarcosinate
- A.1.7 Sodium alpha olefin sulthonates
- A.1.8 Other synthetic detergents

#### **A.2 Foam stabilizers**

- A.2.1 Ethanolamides or isopropanolamides of fatty acids
- A.2.2 Amine oxides
- A.2.3 Cocobetaines
- A.2.4 Cocomidopropyl betaines

#### **A.3 Solubilizing agents**

- A.3.1 Urea
- A.3.2 Aliphatic alcohols
- A.3.3 Sodium toluene sulphonate
- A.3.4 Sodium xylene sulphonate

#### **A.4 Preservatives**

- A.4.1 Alcohols
- A.4.2 Formaldehyde Licensed by UNBS to Lydia Nayiga Standards Officer -UNBS
- A.4.3 Esters of p-hydroxybenzoic acid
- A.4.4 Sorbic acid

A.4.5 Imidazolidinyl urea

**A.5 Opacifying agents**

A.5.1 Higher fatty alcohols

A.5.2 Ethylene / propylene glycol stearates

A.5.3 Mono and di-stearates of glycerol

A.5.4 Zinc, calcium and magnesium salts of fatty acids

A.5.5 PEG - distearates 6000

A.5.6 Polyacrylates

**A.6 Inorganic salts**

A.6.1 Sodium chloride

A.6.2 Sodium sulphate

A.6.3 Sodium phosphate

A.6.4 Ammonium sulphate

A.6.5 Ammonium phosphate

A.6.6 Ammonium chloride

**A.7 Emollients**

Lanolin and its derivatives

A.8 Thickening agents

A.8.1 Sodium carboxymethyl cellulose

A.8.2 Methyl cellulose

A.8.3 Methyl isopropyl cellulose

A.8.4 Guar gum

**A.9 Other groups of ingredients**

A.9.1 Perfumes

A.9.2 Dyes

A.9.3 Conditioning agents

A.9.4 Anti-dandruff agents

A.9.5 Anti-bacterial agents

A.9.6 Quaternary compounds

A.9.7 Vitamins and proteins

A.9.8 Vegetable oils and mineral oils

A.9.9 Silicones

A.9.10 Sunscreens, etc.

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## Bibliography

- [1] EAS 842-2: 2017, Hair shampoo — Part 2: Synthetic detergent-based — Specification
- [2] KS 577;2006, Hair shampoo, synthetic detergent based — Specification

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