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**Draft Sri Lanka Standard Specification for
Hair Oil
(First Revision) (DSLS 1341 :)**

නිස ගල්වන කෙල් පිළිබඳ ශ්‍රී ලංකා ප්‍රමිති පිරිවිතර කෙටුම්පත
(පළමු ප්‍රතිශෝධනය) (ශ්‍රී.ලං.ප්‍ර. 1341 :)

මෙම කෙටුම්පත ශ්‍රී ලංකා ප්‍රමිතියක් ලෙස නොසැලකිය යුතු මෙන් ම භාවිතා නොකළ යුතු ද වේ.
இவ்வரைவு இலங்கைக் கட்டளையெனக் கருதப்படவேண்டாம். அன்றியும் பயன்பாடுக்கப்படவேண்டாம்.
This draft should not be regarded or used as a Sri Lanka Standard.

අදහස් පිටිය යුත්තේ : ශ්‍රී ලංකා ප්‍රමිති ආයතනය, 17, වික්ටෝරියා පෙදෙස, ඇල්විගල මාවත, කොළඹ 08.

Comments to be sent to: SRI LANKA STANDARDS INSTITUTION, 17, VICTORIA PLACE,
ELVITIGALA MAWATHA, COLOMBO 08.

හැඳින්වීම

මෙම ශ්‍රී ලංකා ප්‍රමිති කෙටුම්පත , ශ්‍රී ලංකා ප්‍රමිති ආයතනය විසින් සකසන ලදුව, සියලුම උදෙසාගේ අංශ වලට තාක්ෂණික විවේචනය සඳහා යවනු ලැබේ.

අදාළ අංශ භාර කමිටු මාර්ගයෙන් ආයතනයේ මහා මණ්ඩල වෙත ඉදිරිපත් කිරීමට පෙර , ලැබෙන සියලුම විවේචන ශ්‍රී ලංකා ප්‍රමිති ආයතනය විසින් සලකා බලා අවශ්‍ය වෙනත් කෙටුම්පත සංශෝධනය කරනු ලැබේ.

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Introduction

This Draft Sri Lanka Standard has been prepared by the Sri Lanka Standards Institution and is now being circulated for technical comments to all interested parties.

All comments received will be considered by the SLSI and the draft if necessary, before submission to the Council of the Institution through the relevant Divisional Committee for final approval.

The Institution would appreciate any views on this draft which should be sent before the specified date. It would also be helpful if those who find the draft generally acceptable could kindly notify us accordingly.

All Communications should be addressed to:

The Director General
Sri Lanka Standards Institution,
17, Victoria Place,
Elvitigala Mawatha,
Colombo 08.

**Draft Sri Lanka Standard
SPECIFICATION FOR HAIR OIL
(First Revision)**

DSLS 1341:

Gr. 4

**SRI LANKA STANDARDS INSTITUTION
17, Victoria Place
Elvitigala Mawatha
Colombo 8
Sri Lanka.**

Draft Sri Lanka Standard
SPECIFICATION FOR HAIR OIL
(First Revision)

FOREWORD

This Standard was approved by the Sectoral Committee on Chemicals and Polymer Technology and was authorized for adoption and publication as a Sri Lanka Standard by the Council of the Sri Lanka Standards Institution on

This Standard was first published in 2008. In this First Revision, microbiological limits and limits for heavy metal have been included. A new requirement for stability has been included.

Hair oils are mainly used to prevent drying of hair and scalp. This Standard prescribes the types of hair oil categorized with respect to the base oil(s) used as main ingredient, the requirements, methods of sampling and test for hair oils.

This Standard is subject to the restrictions imposed under the applicable State Legislative requirements.

For the purpose of deciding whether a particular requirement of this Standard is complied with, the final value, observed or calculated, expressing the results of a test or an analysis, shall be rounded off in accordance with **SLS 102**. The number of significant figures to be retained in the rounded off value shall be the same as that of the specified value in this Standard.

In the preparation of this Standard, the assistance derived from the following publications is gratefully acknowledged:

ISO 17516 Cosmetics – Microbiology – Microbiological limits

IS 7123: 2019 Hair oils- Specification

Standards for fragrances published by the International Fragrance Association (IFRA)

1 SCOPE

1.1 This Specification prescribes the requirements, methods of sampling and test for hair oils.

1.2 This Specification does not cover effleurage type of hair oils, silicon oil, baby oil, hair creams, brilliantines, pomades, preparations sold under the name of hair darkness oils.

1.3 This Specification does not cover products, which do not qualify under the criteria for "cosmetics" on evaluation by the local regulatory authority. (See **5.2.12** of **SLS 1587**.)

2 REFERENCES

| | | |
|---------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ISO | 660 | Animal and vegetable fats and oils — Determination of acid value and acidity |
| ISO | 3960 | Animal and vegetable fats and oils — Determination of peroxide value — Iodometric (visual) endpoint determination |
| ISO | 15305 | Animal and vegetable fats and oils — Determination of Lovibond colour |
| ISO/TR | 17276 | Cosmetics - Analytical approach for screening and quantification methods for heavy metals in cosmetics |
| ISO/TR | 18811 | Cosmetics — Guidelines on the stability testing of cosmetic products |
| SLS ISO | 22716 | Guidelines on good manufacturing practices for cosmetics |
| SLS | 102 | Rules for rounding off numerical values |
| SLS | 428 | Random sampling methods |
| SLS | 457 | Cosmetics - Classification of raw materials Part 1 Substances permitted subject to restrictions and permitted colourants, preservatives and UV filters Part 2 Prohibited substances |
| SLS | 1349 | Method for the enumeration and detection of aerobic mesophilic bacteria in cosmetics |
| SLS | 1350 | Method for the detection of <i>Pseudomonas aeruginosa</i> in cosmetics |
| SLS | 1351 | Method for the detection of <i>Staphylococcus aureus</i> in cosmetics |
| SLS | 1445 | Method for the enumeration of yeast and mould in cosmetics |
| SLS | 1489 | Cosmetics - Microbiology - Detection of <i>Escherichia coli</i> in cosmetics |
| SLS | 1587 | Cosmetics – Packaging and labeling |

3 DEFINITION

3.1 cosmetic: Any substance or mixture of substances manufactured, sold or represented for use in cleansing, improving or altering the complexion, skin, hair or teeth and includes deodorants and perfumes

4 TYPES

Hair oil shall be of the following three types:

- 4.1 Type 1 based on vegetable oil or blends of vegetable oils;
- 4.2 Type 2 based on mineral oil; and
- 4.3 Type 3 based on mixture of vegetable oils (raw/ refined) and mineral oil.

5 REQUIREMENTS

5.1 General requirements

5.1.1 It shall be free from any sediment and suspended matter at 27 ± 2 °C and unpleasant rancid odour.

5.1.2 Hair oil shall be manufactured by a process adhering to Good Manufacturing Practices (GMP) complying with **SLS ISO 22716**.

5.1.3 Hair oil shall not segregate or physically deteriorate during normal conditions of storage and use.

5.1.4 Hair oil shall meet performance and requirements of this specification for the complete duration of the declared shelf life. The date of expiry / best before / shelf life of the finished product shall be determined using appropriate stability tests as per **ISO/TR 18811**.

5.1.5 It shall be the responsibility of the manufacturers of finished hair oil, to ensure the safety of their formulation before releasing the product for sale. Results of safety assessments/such studies shall be available and shall be produced, whenever required.

5.2 Raw materials

5.2.1 All raw materials used in the manufacture of hair oil shall comply with the provisions of **Part 1** and **Part 2** of **SLS 457**.

5.2.2 It shall be the responsibility of the manufacturer to provide evidence for compliance of any fragrances used with the standards published by International Fragrance Association.

5.3 Other requirements

5.3.1 Hair oil shall also comply with the requirements given in **Table 1** when tested in accordance with the relevant methods given in **Column (4)** of the table.

TABLE 1 - Requirements for hair oil

| Sl. No. (1) | Characteristic (2) | Requirement (3) | Method of Test (4) |
|-----------------------|----------------------------------------------------------------------------------|---------------------------|------------------------------|
| i) | Acid value, max. a) Type 1 hair oil and Type 3 hair oil b) Type 2 hair oil | 1.0 Pass the test | ISO 660 Appendix B |
| ii) | Peroxide value, milliequivalents/kg, max. | 10.0 | ISO 3960 |
| iii) | Stability | Pass the test | Appendix C |

5.4 Microbiological limits

Hair oil shall also comply with the microbiological limits given in Table 2 when tested in accordance with the relevant method given in Column (4) of the table.

TABLE 2 - Microbiological limits

| Sl. No. (1) | Test (2) | Limit (3) | Method of test (4) |
|-----------------------|-----------------------------------------------------------------------------------------|---------------------|----------------------------------------|
| i) | Total aerobic mesophilic microorganisms (bacteria, yeast and mould count), per ml, max. | 1 000 | SLS 1349 and SLS 1445 |
| ii) | <i>Pseudomonas aeruginosa</i> | Absent in 1 ml | SLS 1350 |
| iii) | <i>Staphylococcus aureus</i> | Absent in 1 ml | SLS 1351 |
| iv) | <i>E.coli</i> | Absent in 1 ml | SLS 1489 |

5.5 Limits for heavy metals

Hair oil shall also comply with the heavy metals limits given in Table 3 when tested in accordance with **ISO /TR 17276**.

TABLE 3 – Heavy metals limits

| Sl. No. (1) | Test (2) | Limit (3) |
|-----------------------|------------------------------|---------------------|
| i) | Lead (as Pb), mg/kg, max. | 10 |
| ii) | Arsenic (as As), mg/kg, max. | 3 |
| iii) | Mercury (as Hg), mg/kg, max. | 1 |
| iv) | Cadmium (as Cd), mg/kg, max. | 3 |

6 PACKAGING

The hair oil shall be packed in a well sealed container which do not have deleterious effect on the product.

7 LABELING

7.1 The following information shall be legibly and indelibly marked on each container.

- a) Name and type of product;
- b) Name and address of the manufacturer including country of origin; (**NOTE** : *Name and address of the manufacturer and the distributor should be marked on imported hair oils*).
- c) Trade mark or brand name, if any
- d) Batch or lot number;
- e) Net content in ml;
- f) Date of manufacture;
- g) Expiry date/ best before;
- h) List of ingredients (see Note);
- i) Instruction for use where necessary;
- j) Special precautions to be observed in use, if required; and
- k) Specific warning statement necessary or appropriate, if any.

NOTE: *Composition percentage of mineral oil as well as vegetable oil shall be declared in Type 3 hair oil.*

7.2 A number of such containers, as agreed to between the purchaser and the supplier, shall be packed in cartons. Each carton shall be marked with the following:

- a) Name of the product;

- b) Name and address of the manufacturer including country of origin; (**NOTE** : *Name and address of the manufacturer and the distributor should be marked on imported baby oils*).
- c) Trade mark or brand name, if any;
- d) Batch or lot identification number/code; and
- e) Number of containers.

7.3 The packaging and labeling shall also be in accordance with **SLS 1587**.

8 SAMPLING

The method of drawing representative samples of the product for ascertaining conforming to the requirements of this Standard shall be prescribed in Appendix A.

9 METHOD OF TEST

Tests shall be carried out as per the methods given in Column (4) of Table 1 and Table 2 of this standard and **ISO /TR 17276**.

APPENDIX A COMPLIANCE OF A LOT

The sampling scheme given in this appendix should be applied where compliance of a lot to the requirements of this standard is to be assessed based on statistical sampling and inspection.

Where compliance with this standard is to be assured based on manufacturer's control systems coupled with type testing and check tests or any other procedure, appropriate scheme of sampling and inspection should be adopted.

A.1 LOT

In any consignment all containers of hair oil of the same size belonging to one batch of manufacture or supply shall constitute a lot.

A.2 GENERAL REQUIREMENTS OF SAMPLING

In drawing, preparation, storing and handling samples the following precautions shall be observed:

A.2.1 Samples shall be drawn in an environment not exposed to damp air, dust and soot.

A.2.2 A sampling tube may be used for drawing the material from the containers. It shall be clean and dry when used

A.2.3 The samples shall be placed in clean, dry, glass or any other suitable containers. The sample containers shall be sealed air-tight after filling and shall be marked with the necessary details of sampling.

A.2.4 The material being sampled, the samples, the sampling instrument and the sample containers shall be protected from adventitious contamination.

A.2.5 Samples shall be stored, so that conditions of storage do not affect the quality of the material.

A.3 SCALE OF SAMPLING

A.3.1 Samples shall be tested from each lot for ascertaining the conformity of the material to the requirements of this specification.

A.3.2 The number of containers to be selected from a lot shall be in accordance with Table 4.

TABLE 4 - Scale of sampling

| Number of containers in the lot (1) | Number of containers to be selected (2) |
|------------------------------------------------|----------------------------------------------------|
| Up to 150 | 3 |
| 151 to 500 | 5 |
| 501 to 1 200 | 6 |
| 1 201 to 3 200 | 8 |
| 3 201 and above | 10 |

A.3.3 If the containers are packed in cartons, at least 05 per cent of the cartons shall be selected from the lot and as far as possible equal number of containers shall be drawn from each carton to form the sample size as given in Column (2) of Table 4.

A.3.4 Containers and cartons shall be selected at random. In order to ensure randomness of selection, random number tables as given in **SLS 428** shall be used.

A.4 COMPOSITE SAMPLE

A.4.1 An equal quantity of material shall be drawn from each container selected as in **A.3.2**. The material so obtained shall be mixed thoroughly to form a composite sample which shall be of sufficient size to carry out the tests specified in **A.5.2**.

A.5 NUMBER OF TESTS

A.5.1 Each container and/or carton selected as in **A.3.2** or **A.3.3** shall be inspected for packaging and marking requirements.

A.5.2 The composite sample prepared as in **A.4.1** shall be tested for the requirements given in **5.3, 5.4** and **5.5**.

A.6 CRITERIA FOR CONFORMITY

A lot shall be declared as conforming to the requirements of this specification if the following conditions are satisfied:

A.6.1 Each container and/or carton inspected as in **A.5.1** satisfies the marking and packaging requirements.

A.6.2 Each composite sample tested as in **A.5.2** satisfies the relevant requirements.

APPENDIX B DETERMINATION OF ACID VALUE (FOR TYPE 2 OIL)

B.1. PROCEDURE

B.1.1. Shake 20 g of the material with an equal amount of hot distilled water.

B.1.2 Test the aqueous portion with blue litmus paper.

B.1.3 The material shall be taken as pass the test if the litmus does not change its colour.

APPENDIX C DETERMINATION OF STABILITY

C.1 APPARATUS

C.1.1 Ultra Violet lamp

C.2 PROCEDURE

C.2.1 Take 50 ml of the sample in a clean beaker, place under the ultraviolet lamp and expose it for a total period of 6 h. Measure the colour of the sample either in Lovibond units using 18 inch cell. (See **ISO 15305**.)

C.2.2 The sample shall be taken to have passed the test if the colour of the sample is not darker than: $1.2 Y + 0.3 R$.

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