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Draft Sri Lanka Standard
SPECIFICATION FOR LIPSTICK
(FIRST REVISION) (DSLS 1464 :)

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(පළමු ප්‍රතිශෝධනය) (ශ්‍රී. ලං. ප්‍ර 1464 :)

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இவ்வரைவு இலங்கைக் கட்டளையொன்றாக கருதப்படவோ அன்றிப் பிரயோகிக்கப்படவோ கூடாது
This draft should not be regarded or used as a Sri Lanka Standard.

අදහස් එවිය යුත්තේ : ශ්‍රී ලංකා ප්‍රමිති ආයතනය, 17, වික්ටෝරියා පෙදෙස, ඇල්විටිගල මාවත, කොළඹ 08.

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

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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 LIPSTICK
(First Revision)

DSLS 1464 :

Gr. 6

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SRI LANKA STANDARDS INSTITUTION
17, Victoria Place
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Colombo 8
Sri Lanka

Draft Sri Lanka Standard
SPECIFICATION FOR LIPSTICK
(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

Lipstick is a cosmetic for colouring the lips, usually in the form of a sticks. Lipsticks available in the forms of lipstick and lipgloss or lip rouge. Lipstick consists of a homogeneous suspension of colour in a fatty base, in the form of stick mounted on propelling type of holder whereas lipgloss or lip rouge is composed of the colours used in lipsticks suspended or dissolved in oil containing film foaming additives.

This Sri Lanka Standard was first published in the year **2009**. In this First Revision, requirements for heavy metals and microbiological limits have been revised. Additionally certain performance test namely pay off test was included.

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

For the purpose of deciding whether a particular requirement of this specification is complied with, the final value, measured or calculated, expressing the result of a test or an analysis, shall be rounded off in accordance with **SLS 102**. The number of decimal places retained in the rounded off value shall be the same as that of the specified value in this specification.

In the preparation of this standard, the assistance derived from the following publications is gratefully acknowledged.

IS 9875 Indian standard specification for lipstick
IFRA Standard for fragrances published by the International Fragrances Association

1 SCOPE

1.1 This Standard prescribes the requirements and methods of sampling and test for lipstick with or without gloss/ rouge.

1.2 Lip-gloss, lip rouge, liquid lipstick or any other form of lipsticks are not covered by this Standard.

2 REFERENCES

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 (First Revision)

	Part 2: Prohibited substances (First Revision)
SLS 495	Methods of sampling cosmetics and toilet preparations
SLS ISO 22716	Guidelines on good manufacturing practices for cosmetics
SLS 1587	Cosmetics - packaging and labelling

3 REQUIREMENTS

3.1 General requirements

3.1.1 Description

The lipstick shall be firm but not brittle in texture. It shall have an attractive appearance, pleasant taste and feel on the lips and shall be reasonably free from sweating, bloom and rancidity.

3.1.2 The lipstick shall be manufactured by a process adhering to Good Manufacturing Practices (GMP) complying with **SLS ISO 22716**.

3.1.3 It shall be responsibility of the manufacturer to ensure the safety of the final product formulation.

3.2 Raw materials

3.2.1 The raw materials used shall comply with the provisions of **Part 1 and Part 2 of SLS 457** and shall be of food grade.

3.2.2 Fragrances used shall comply with the standards for fragrances published by the International Fragrances Association (IFRA).

3.2.3 Flavors used shall comply with the regulations on food (Flavoring substances and flavoring enhances) issued under the Food Act No. 26 of 1980.

3.3 Other requirements

The lipstick 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 lipstick

Sl No. (1)	Characteristic (2)	Requirement (3)	Method of test (4)
i)	Softening point, °C , min.	55	Appendix B
ii)	Rancidity (Peroxide number), max.	10	Appendix C
iii)	Breaking load value, N, min. (See Note)	2.0	Appendix D
iv)	Particle size of undispersed pigments, µm, max.	40	Appendix E
v)	Pay off test, g/cm ²	0.01-0.25	Appendix F
vi)	Arsenic (as As), mg/kg, max.	3	SLS ISO/TR 17276
vii)	Lead (as Pb), mg/kg, max.	10	SLS ISO/TR 17276
viii)	Mercury (as Hg), mg/kg, max.	1	SLS ISO/TR 17276
ix)	Cadmium (as Cd), mg/kg, max.	3	SLS ISO/TR 17276

NOTE : The breaking load value of 2 N (Min) may not applicable for finner lipsticks for which the values range can be as agreed to between the supplier and the buyer.

3.4 Microbiological limits

3.4.1 The lipstick 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 for lipstick

Sl. No. (1)	Test (2)	Limit (3)	Method of test (4)
i)	Total aerobic mesophilic microorganisms (Including bacteria, yeast and mould), per g or ml, max.	1000	SLS 1349 and SLS 1445
ii)	<i>Pseudomonas aeruginosa</i>	Absent in 1 g	SLS 1350
iii)	<i>Staphylococcus aureus</i>	Absent in 1 g	SLS 1351
iv)	<i>Candida albicans</i>	Absent in 1 g	SLS 1488
v)	<i>Escherichia coli</i>	Absent in 1 g	SLS 1489

4 PACKING AND MARKING

The product shall be packaged and marked as follows and it shall also comply with **SLS 1587**.

4.1 Packing

Each lipstick shall be packed in a metallic, plastic or any other suitable container, which shall not provide deteriorate effect on the product from light, humidity and temperatures.

4.2 Marking

Each container shall bear a label marked with the following information and have a label marked or printed legibly and indelibly with following:

- a) Name of the product ;
- b) Name and address of the manufacturer for products manufactured in Sri Lanka. Name and address of the manufacturer including the country of origin and the distributor in Sri Lanka/ Importer for imported products;
- c) Batch or lot number ;
- d) Colour;
- e) List of ingredients:
- f) Date of manufacture ; and
- g) Expiry date/ date for best before/ shelf life.

NOTE : *Attention is drawn to the Certification Marking facilities offered by the Sri Lanka Standards Institution. See the inside back cover of the standard.*

5 SAMPLING

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

6 METHODS OF TEST

Tests shall be carried out as specified in Appendices **B** to **G** of this Specification and **SLS 1349, SLS 1350, SLS 1351, SLS 1445, SLS 1488, SLS 1489** and **SLS 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 Specification is to be assured, based on manufacturer's control systems coupled with Type Tests and Testing Procedures and appropriate schemes of sampling and inspection shall be adopted

A.1 LOT

In a single consignment, all the packages containing lipsticks of the same size (mass) and colour representing the same batch of manufacture shall constitute a lot.

A.2 SCALE OF SAMPLING

A.2.1 Representative samples of the material shall be drawn according to the procedure given in **SLS 495**.

A.3 NUMBER OF TESTS

A.3.1 Each container and each package selected as in **A.2.1** shall be examined for packaging and marking requirements specified in **4**.

A.3.2 Softening point, peroxide number, breaking load, particle size and pay off test shall be tested on each of the individual sample and tests for the remaining characteristics shall be carried out on the composite sample.

A.4 CRITERIA FOR CONFORMITY

A.4.1 *For individual sample*

The mean (x) and Range (R) for the test results shall be calculated (range being the difference between the maximum and the minimum test results). The lot shall be declared to have satisfied the requirements for tests mentioned in **A.2.2** if the value of expression $(x - 0.6 R)$ for each characteristic is equal to or greater than 99.

A.4.2 *For composite sample*

The test results on the composite sample shall meet the corresponding requirements specified in **Table 1** and **Table 2**.

A lot shall be declared as conforming to this specification if it satisfies the requirements for each of the characteristic listed in **Table 1** and **Table 2**. If the requirement for any of the characteristic is not met, the lot shall be declared to have not satisfied the requirements of the specification.

APPENDIX B DETERMINATION OF SOFTENING POINT

B.1 APPARATUS

B.1.1 *Flat bottom tube* , 12 cm long and 2.5 cm in diameter.

B.2.1.2 *Thermometer* , accurate to 0.1 °C.

B.2 PROCEDURE

Place the lipstick with protruded salve in the flat bottom tube. Fix the thermometer through a cork in such a way that the tip of the thermometer just touches the lipstick salve. Insert this arrangement into a 1-litre beaker filled with water to a level one centimeter above the upper tip of the lipstick salve. Slowly heat the water while stirring so that temperature rises at a rate not exceeding 2 °C per minute. When the temperature reaches about 45 °C, raise the temperature at the rate of 1 °C per minute. Constantly watch the lipstick salve. Record the temperature when the salve starts bending and loosing its shape.

APPENDIX C DETERMINATION OF RANCIDITY (PEROXIDE NUMBER)

C.1 GENERAL

This test when carried out on dark coloured lipsticks is likely to be vitiated because the end point in determination of peroxide number may not be very sharp. In such cases, it is expected, as a good manufacturing practice, manufacturer should check rancidity of lipstick raw materials, especially vegetable oils and other rancidity prone materials regularly in lipsticks base mixtures without colours, by peroxide number test.

C.2 REAGENTS

C.2.1 *Acetic acid*

C.2.2 *Chloroform*

C.2.3 *Potassium iodide solution, saturated.*

C.2.4 *Sodium thiosulphate solution, – approximately 0.01 M.*

C.2.5 *Starch solution, freshly prepared.*

C.3 PROCEDURE

Weigh 5.0 ±0.05 g of lipstick sample in a 250-ml conical flask and dissolve in 30 ml of acetic acid – chloroform mixture (3:2). Heat if necessary to dissolve the sample. Add 0.5 ml of freshly made saturated Potassium iodide solution. Shake and after two minutes add 30 ml of distilled water and then titrate with 0.01 M Sodium thiosulphate solution using starch as an indicator.

Peroxide number = Milli equivalents peroxide per 1 000 g sample

$$= \frac{A \times M \times 1000}{m}$$

A is the volume, in ml, of Sodium thiosulphate;

m is the mass, in g, of the sample; and

M is the molality of Sodium thiosulphate solution.

APPENDIX D DETERMINATION OF BREAKING LOAD

D.1 GENERAL

This test gives the value of maximum load a lipstick can withstand before it breaks.

D.2 APPARATUS

D.2.1 *Burette*, 500 ml capacity.

D.2.2 *Screw chuck*, to hold the lipstick.

D.2.3 *Aluminium cup*, of 6-cm diameter and 12-cm length with an arrangement of a hook to suspend it on lipstick salve.

D.3 PROCEDURE

Fix firmly the lipstick container with protruded salve of diameter ranging 11 mm to 13 mm, into a screw type of chuck so that the assembly is perfectly horizontal. Adjust the burette just above the lipstick salve. Make a marking at a distance of 15 mm from the base of the salve where lipstick salve sits in salve holder cap. Weigh the aluminium container along with the hook and suspend it on this 15 mm mark slowly. Release water from the burette into the Aluminium container till the salve breaks. The water used shall be at 25 ± 2 °C. Burette reading added with the mass of the suspended container gives the breaking load of the lipstick.

APPENDIX E DETERMINATION OF PARTICLE SIZE OF UNDISPERSED PIGMENTS

E.1 APPARATUS

E.1.1 *Microscope*

E.1.2 *Glass slides*

E.2 PROCEDURE

Apply a small portion of the lipstick paste on glass slide. Press and spread it with the help of another glass slide. Separate both the glass slides. Observe one of the slides under microscope using a specially calibrated eye piece. Determine the particle size of the largest pigment particle.

APPENDIX F DETERMINATION OF PAY-OFF TEST

F.1 PRINCIPAL

This test gives the idea of mass release from the lipstick salve.

F.2 APPARATUS

F.2.1 The apparatus (See Figure 1) consists of constant speed electric motor A of power 180W (0.25 hp approximately) attached to gear arrangement B which pulls the strip of paper F (about 7 cm wide) from a roller C on to another roller G fixed on platform D through supports H. A slot arrangement B having a cylindrical tube of 4 cm length and 1.7 cm diameter is also fixed on the platform.

F.2.2 Constant speed motor, of power 180 W (0.25 hp approximately) attached to gear arrangement which pulls the strip of paper over a fixed platform.

F.2.3 Paper, 7 cm wide roll

F.2.4 Slot arrangement, inner diameter 1.7 cm and length 4 cm (for inserting lipstick)

F.2.5 Procedure

Chop off the portion of lipstick salve one centimeter from the tip using a sharp blade. Rub remaining portion of the salve on a piece of paper and make the end portion perfectly flat. Run the constant speed motor and determine the time required for pulling out 100 cm of paper length. Weigh the lipstick with chopped off tip on a balance accurately. Insert this lipstick in the slot arrangement so that the fattened salve portion rests on the surface of the paper strip (See Figure 2). Place a total load of 50 g including mass of the lipstick on top of the lipstick. Start the constant speed motor and with the help of stopwatch allow 100 cm length of paper to run. Re-weigh the lipstick after the rub off and measure the length using ruler and width of the line drawn on the paper strip using Vernier caliper.

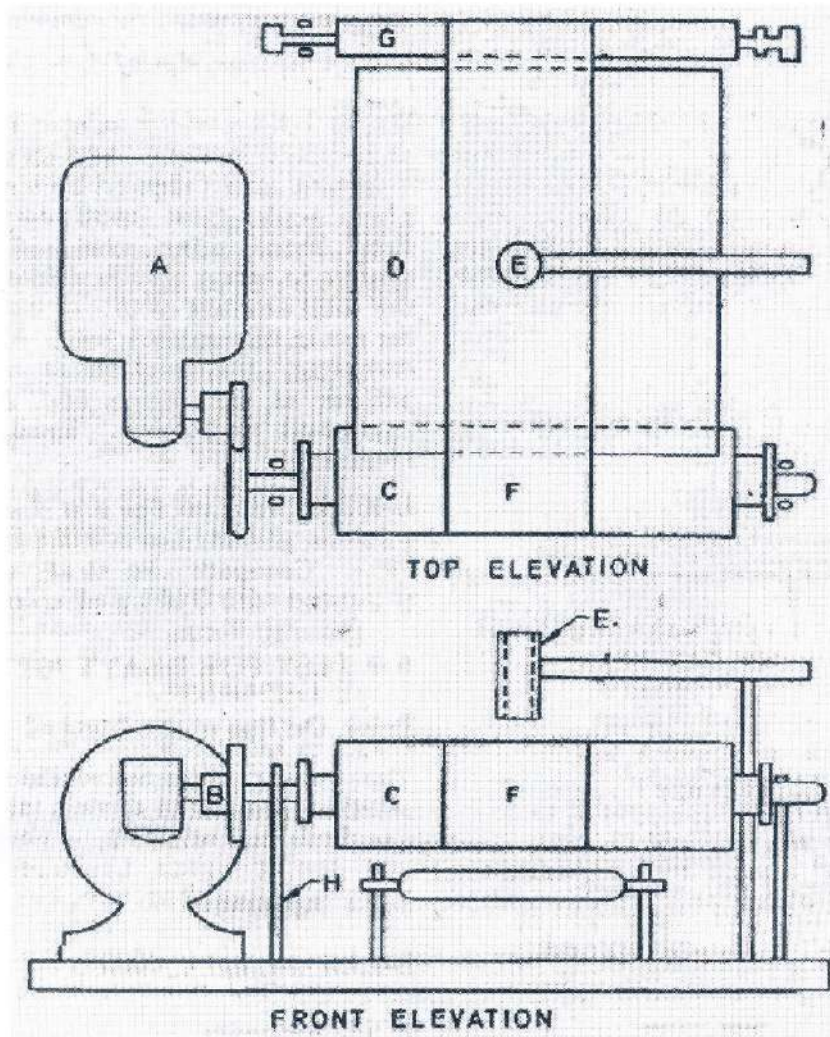


Figure 1- Details of pay off measuring instrument

- | | | | |
|----|--|----|---------------------------------------|
| A- | Constant speed electric moter | B- | Gear arrangement for speed transfer |
| C- | Rollers | D- | Platform |
| E- | Cylindrical tube arrangement for putting lipstick under test | G- | Roller for keeping marked paper strip |
| F- | Paper strip | | |
| H- | Support for rollers | | |

F.2.6 Calculation

$$\text{Pay off, g/cm}^2 = \frac{M_1 - M_2}{l \times b}$$

where,

M_1 is the mass, in g of the lipstick before the test

M_2 is the mass in g, of the lipstick after the test

l is the length in cm, of the line drawn on paper strip; and

b is the breadth in cm, of the line drawn on paper strip

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