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Indian Standard

LIQUID FOUNDATION MAKE-UP — SPECIFICATION

ICS 71.100.70

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NEW DELHI 110002

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Price Group 2

Cosmetics Sectional Committee, PCD 19

FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Cosmetics Sectional Committee had been approved by the Petroleum, Coal and Related Products Division Council.

Cosmetics preparations are employed for different kind of functions. Covering up skin blemishes and imperfections and giving uniform colouration and improve the attractiveness is one of the major requirements. Such products which decorate the skin are called make-up preparations. The pigments which have property of covering up are usually powders and these pigments do not adhere very well. The adhesion of powder is considerably improved by treating the skin with a preparation on which the powder will remain much longer. Such preparations are called foundation creams. These creams are similar to vanishing cream, day creams, etc. A foundation make-up is a preparation which contains both powder and foundation.

It is necessary that all ingredients used are such that in the concentration in which they would be present in the foundation cream, are free from any harmful effects. For determining the dermatological safety of a new formulation, or of a new raw material in an old formulation, reference may be made to IS 4011 : 1982 for prophetic testing. It shall be the responsibility of the manufacturer to satisfy itself of the dermatological and microbiological safety of its formulation according to IS 4011 : 1982 and the test method given in Annex D of this standard respectively before releasing the product for sale.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

LIQUID FOUNDATION MAKE-UP — SPECIFICATION

1 SCOPE

This standard prescribes the requirements and methods of sampling and test for liquid foundation make-up.

2 NORMATIVE REFERENCES

The following Indian Standards are necessary adjuncts to this standard. The standards contain provisions which through reference in this text constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent revisions of the standards indicated below:

IS No.	Title
1070 : 1992	Reagent grade water — Specification (<i>third revision</i>)
3958 : 1984	Methods of sampling cosmetics (<i>first revision</i>)
4011 : 1982	Methods for dermatological testing for cosmetics (<i>first revision</i>)
4707 (Part 1) : 1988	Classification of cosmetic raw materials and adjuncts: Part 1 Dyes, colours and pigments (<i>first revision</i>)
4707 (Part 2) : 1993	Classification of cosmetic raw materials and adjuncts: Part 2 List of raw materials generally not recognized as safe for use in cosmetics

3 REQUIREMENTS

3.1 Description

The liquid foundation make up should be smooth liquid which spreads well on the skin giving uniform layer of colour pigments.

3.2 Ingredients

Unless specified otherwise, all raw materials used in the manufacture of liquid foundation make up shall conform to the relevant Indian standard where such standards exist.

3.3 Colour Pigments

The pigments used in the manufacture of liquid foundation make-up are inorganic pigments and

shall comply with IS 4707 (Part 1) : 1988 subject to the provisions of Schedule Q of Drug and Cosmetic Act.

3.4 Other Ingredients

Ingredients other than colours and pigments shall comply to the provisions of IS 4707 (Part 2) : 1993.

3.5 Liquid foundation make-up shall also comply with requirement given in Table 1.

Table 1 Requirement for Liquid Foundation Make-up

Sl No.	Characteristics	Requirement	Method of Test, Ref to Annex of this standard
(1)	(2)	(3)	(4)
i)	pH	5.0 to 9.0	A
ii)	Stability at 40°C	Shall pass the test	B
iii)	Suspended solids, percent by mass, <i>Min</i>	5	C
iv)	Microbiological examination	Not more than 1 000 org/gm	D

4 PACKING AND MARKING

4.1 Packing

Each liquid foundation make-up shall be packed in glass or plastic or any other suitable container.

4.2 Marking

Each container shall bear a label with following marking:

- a) Name of the material;
- b) Manufacturer's name and recognized trade-mark, if any;
- c) Shade number and shade name, if required;
- d) Batch number and month and year of manufacture;
- e) 'Best use before.....' the date is to be declared by the manufacturer;
- f) List of critical ingredients; and
- g) Any other particulars required by statutory authority.

4.3 BIS Certification Marking

The containers may also be marked with the Standard Mark.

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4.3.1 The use of the Standard Mark is governed by the provisions of *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the license for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

5 SAMPLING

5.1 Representative samples of the material shall be drawn as prescribed in IS 3958 : 1984.

5.2 Test for all characteristics shall be carried out on the composite sample.

5.3 The material shall be taken to have conformed

to this standard if the composite sample passes all the tests.

6 TEST METHODS

Tests for the requirements listed under 3 shall be carried out according to the methods prescribed in Annex A to Annex D as mentioned under col 4 of Table 1.

7 QUALITY OF REAGENTS

Unless specified otherwise pure chemicals and distilled water (see IS 1070 : 1992) shall be employed in tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

ANNEX A

[Table 1, Sl No. (i)]

DETERMINATION OF pH

A-1 PROCEDURE

A standard single or double electrode pH meter may be used. Instrument shall be initially calibrated

at pH 7 and 0.2 with appropriate buffer solution. The test sample is then poured into a glass beaker and pH is determined directly without dilution.

ANNEX B

[Table 1, Sl No. (ii)]

DETERMINATION OF STABILITY

B-1 APPARATUS

B-1.1 Incubator maintained at $40 \pm 1^\circ\text{C}$.

B-1.2 25 ml cylindrical glass bottles with proper plug and cap.

B-2 PROCEDURE

Take a glass bottle and fill three fourth of its capacity with the product and close it with plug and cap tightly. Keep the bottle in $40 \pm 1^\circ\text{C}$ oven for 10 days. Periodically examine the contents. The emulsion should not split leaving separate layers. Neither the suspended pigments should settle.

ANNEX C

[Table 1, Sl No. (iii)]

DETERMINATION OF SUSPENDED SOLIDS

C-1 APPARATUS

C-1.1 Glass beakers, conical flask.

C-1.2 G4 sintered glass gooch crucible with vacuum arrangement.

C-1.3 Water bath capable of maintaining 100°C .

C-1.4 Oven capable of maintaining 105°C .

C-2 REAGENTS

C-2.1 Isopropanol — reagent grade.

C-3 PROCEDURE

Weigh 1 to 5 g of product accurately on analytical balance in a glass beaker. Add 25 ml isopropanol.

Mix well with glass rod. Keep it on water bath maintained at 100°C for 10 minutes. Stir it intermittently.

Add 25 ml isopropanol. Filter it through weighed gooch crucible. Rinse the beaker with three portions of 10 ml each of isopropanol and transfer it to gooch crucible. Finally add 10 ml of acetone in the gooch crucible which has been fitted to vacuum pump.

Dry the residue in the gooch crucible at 105°C oven for one hour. Weigh the contents and calculate the suspended solids percentage.

ANNEX D

[Table 1, Sl No. (iv)]

MICROBIOLOGICAL EXAMINATION

D-0 OUTLINE OF THE METHOD

D-0.0 The test consists of plating a known mass of the sample on two selected culture media specifically suitable for the growth of bacteria and fungi and incubating them for a specified period to permit the development of visual colonies for counting.

D-1 APPARATUS

D-1.1 Tubes — of resistant glass, provided with closely fitting metal caps.

D-1.2 Autoclaves — of suitable size.

They shall keep uniform temperature within the chamber up to and including the sterilizing temperature of 121°C. They shall be equipped with an accurate thermometer, located so as to register the minimum temperature within the sterilizing chamber, a pressure gauge and properly adjusted safety valves.

D-1.3 Incubators — Capable of being maintained at 25-38°C.

D-1.4 Water Bath — Capable of being maintained at 48±2°C.

D-1.5 Petri Dishes — of 100 mm diameter and 15 mm depth. The bottom of the dishes shall be free from bubbles and scratches and shall be flat so that the medium is of uniform thickness throughout the plate.

D-1.6 Colony Counter

An approved counting aid, such as Quebec colony counter. If such a counter is not available, counting may be done with a lens giving a magnification of 1.5 diopter. In order to ensure uniformity of conditions during counting illumination equivalent to that provided by the Quebec colony counter shall be employed.

D-2 MEDIA

D-2.1 Nutrient Agar Medium

Dissolve 5 g of yeast extract (or meat extract), 5 g of sodium chloride and 10 g of peptone in 1 000 ml of distilled water contained in a 2-litre beaker by heating on water bath. Add 25 g of powdered agar and continue boiling till the agar is completely dissolved. Adjust the pH to 7.4 with sodium hydroxide solution using pH meter or comparator. Filter while hot through lint cloth placed in funnel

and dispense into tubes in 20 ml quantities. Filter only if necessary. Close the tubes with metal caps or cotton plugs and sterilize in an autoclave at 121°C and 1.05 kgf/cm² pressure for 20 minutes. After that, store the tubes in a refrigerator and use them within 3 weeks.

Alternately, commercially available dehydrated Nutrient Agar may be used. Soyabean Casein Digest Agar, or Trypticase Soy Agar (TSA) may also be used instead of Nutrient Agar.

D-2.2 Sabouraud Agar Medium

Dissolve 10 g peptone and 40 g glucose in 1 000 ml distilled water contained in a 2-litre conical flask by heating in water bath. Add 25 g of powdered agar and continue boiling until the agar is completely dissolved. pH need not be adjusted (it automatically comes to 5.4). Filter while hot through lint cloth placed in a funnel and dispense into tubes in 20-ml quantities. Filter only if necessary. Close the tubes with metal caps or cotton plugs and sterilize in an autoclave at 121°C and 1.05 kgf/cm² pressure for 15 minutes. After autoclaving, store the tubes in a refrigerator and use them within 3 weeks.

Alternately, commercially available dehydrated Sabouraud Agar may be used. Potato Dextrose (PDA) may also be used instead of Sabouraud Agar.

D-3 STERILIZATION OF APPARATUS

D-3.1 Tubes

These shall be sterilized in the autoclave at 121°C and 1.05 kgf/cm² pressure for 20 minutes or individually wrapped in kraft paper and sterilized in a hot air oven at 160°C for one hour.

D-3.2 Petri Dishes

These shall be packed in drums and sterilized in the autoclave at 121°C and 1.05 kgf/cm² pressure for 20 minutes or individually wrapped in kraft paper and sterilized in a hot air oven at 160°C for one hour.

D-3.3 Pipettes

These shall be placed in pipettes cone (of copper, stainless steel, or aluminum) after plugging the broader end with cotton and sterilized in a autoclave at 121°C and 1.05 kgf/cm² pressure for 20 minutes or in a hot air oven at 160°C for one hour.

D-4 PROCEDURE

D-4.1 Melt sufficient number of nutrient agar tubes and Sabouraud Agar tubes in a water bath

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and transfer while hot into a constant temperature water bath maintained at $48 \pm 2^\circ\text{C}$.

D-4.2 Collect 3 or 5 different samples from a batch. Make a composite sample by pooling these samples. Take 1.0 g of the composite sample and add 9 ml of dilutant. Make a further ten-fold dilution, if necessary. Add 1 ml of each dilution to duplicate petri-dishes. Add approximately 15 ml of nutrient agar or TSA to the petri-dishes and mix. Allow the agar to solidify. Repeat the above procedure for Sabouraud Agar or PDA for fungal counts. Nutrient agar (or TSA) plates should be incubated

at $28-30^\circ\text{C}$ for 48 h and the sabouraud agar (or PDA) plates should be incubated at $28-30^\circ\text{C}$ for 3-5 days.

D-5 TEST RESULT

Determine the average number of colonies per gram of the sample on nutrient agar tubes, as well as, the average number of colonies per gram of sample on Sabouraud Agar tubes. The mean of the two average number shall be taken as the number of micro-organisms per gram of the samples.

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