

इंटरनेट

मानक

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

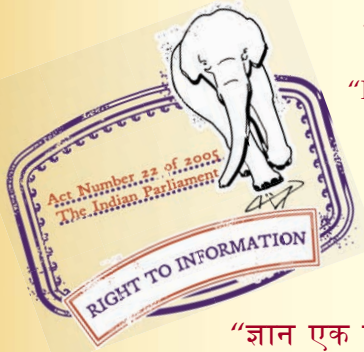
“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 7884 (2004): Shampoo, Surfactant based [PCD 19: Cosmetics]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक
शैम्पू, पृष्ठ सक्रियक से बना — विशिष्टि
(तीसरा पुनरीक्षण)

Indian Standard

SHAMPOO, SURFACTANT BASED — SPECIFICATION
(*Third Revision*)

ICS 71.100.70

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BHADUR SHAH ZAFAR MARG
NEW DELHI 110002

FOREWORD

This Indian Standard (Third Revision) 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.

This standard was published in 1975 and first revised in 1978. Second revision of the standard was carried out in 1992 when minimum limit for total active detergent content as total non-volatile alcohol soluble matter was prescribed and minimum requirement limit for anionic detergent content was also fixed. Besides, requirements for volatile matter and inorganic salts were deleted, as these were not serving any meaningful purpose. An additional requirement for lather was included from consumer's satisfaction point of view. Many of the surfactants which are frequently used in shampoos as cleansing agents develop abundance lacy foam in soft water but this lather drops drastically in presence of oily soils, therefore, ingredients commonly, known as foam boosters are added in shampoos to improve quality volume and characteristics of lather. Minimum foam height was specified to quantify this requirement. The requirement of active detergent as SLES or its equivalent, percent by mass, minimum was subsequently deleted from the second revision of the standard through an amendment. This was done to allow the manufacturers to use cationic, anionic and amphoteric type of detergents alone or in combinations in place of limiting the concentration of one kind of detergents.

Furthermore, information about various attributes of an acceptable shampoo which were not adequate for standardization were included in Annex E to the standard so that the formulators may try to attain as many qualities as possible in their products to have consumer acceptance.

Subsequently through another amendment, the title of the standard was changed from shampoo, synthetic detergent based to shampoo, surfactants based. This was done, since there could be shampoos with combination of detergent base and soap having detergent as the major component. As the word, surfactant covers both detergent as well as soap, the change in title depicted the correct nomenclature. Moreover, the consumers often associate the term detergent with laundry products and the earlier terminology on the packs was sending out a negative impression, hence the change has been carried out. Besides, procedure for determination of non-volatile alcohol soluble matter has been rectified/modified in this revision.

Two new requirements namely 'Best use before' and list of key ingredients have been included in marking clause to safeguard consumer interest.

Shampoos, which contain ingredients that have an effect on the physiological functions of the body, or for which therapeutic claims are made, are not included in this standard.

No stipulations have been made in this standard regarding the composition of the shampoo. However, it is necessary that the raw materials used are such that in the concentrations in which they would be present in the finished shampoo, after interaction with the other raw materials used in the formulation, are free from any harmful effects. For determining the suitability of a new formulation or of a new raw material used in an old formulation, on the skin and in respect of eye irritation, reference may be made to IS 4011 : 1997 'Methods of test for safety evaluation of cosmetics (*second revision*)'. It shall be the responsibility of the manufacturers of shampoo, to satisfy themselves of the dermatological safety of their formulation according to that standard before releasing the product for sale.

A scheme for labelling environment friendly products known as ECO Mark (optional) has been introduced at the instance of the Ministry of Environment and Forests (MEF), Government of India. The ECO Mark is being administered by the *Bureau of Indian Standards Act, 1986* as per the Resolution No. 71 dated 21 February 1991 and No.768 dated 24 August 1992 published in the Gazette of the Government of India. For a product to be eligible for marking with ECO logo, it shall also carry the Standard Mark of BIS besides meeting additional

(Continued on third cover)

Indian Standard

SHAMPOO, SURFACTANT BASED — SPECIFICATION

(Third Revision)

1 SCOPE

This standard prescribes the requirements and methods of sampling and test for shampoo based on surfactants.

2 REFERENCES

The following 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 editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>
321 : 1964	Absolute alcohol (<i>revised</i>)
1070 : 1992	Reagent grade water (<i>third revision</i>)
3958 : 1984	Methods of sampling cosmetics (<i>first revision</i>)
4011 : 1997	Methods of test for safety evaluation of cosmetics (<i>second revision</i>)
4707	Classification of cosmetic raw materials and adjuncts:
(Part 1) : 2001	Dyes, colours and pigments (<i>second revision</i>)
(Part 2) : 2001	List of raw materials generally not recognized as safe for use in cosmetics (<i>second revision</i>)

3 REQUIREMENTS

3.1 Description

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

3.2 Physical Characteristics

The clear/transparent liquid shampoo, when examined visually, shall be free from any sediment. If in the form of an emulsion, it shall be homogeneous 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.

3.3 Ingredients

Unless specified otherwise, all the raw materials used in the manufacture of shampoo shall conform to the

requirements prescribed in the relevant Indian Standards where such standards exist.

3.3.1 Dyes

The dyes used, if any, shall comply with the provisions of IS 4707 (Part 1), subject to the provision of Schedule Q of the *Drugs and Cosmetics Act*, issued by the Government of India.

3.3.2 Other Ingredients

Other ingredients used, if any, shall comply with the provisions of IS 4707 (Part 2).

3.3.3 A list of ingredients conventionally used in formulation of shampoos is given, for guidance, in Annex A.

3.4 The shampoo shall comply with the requirements given in Table 1 when tested according to methods prescribed in Annexes. Reference to relevant Annex is given in col 4 of Table 1.

Table 1 Requirements for Shampoo, Surfactant Based

Sl No.	Characteristic	Requirement	Method of Test, Ref to Annex
(1)	(2)	(3)	(4)
i)	Non-volatile alcohol soluble matter; percent by mass, <i>Min</i>	10	B
ii)	pH	4.0 to 9.0	C
iii)	Foam height for two percent solution, <i>Min</i>	150 mm	D

3.5 Additional Requirements for ECO Mark (Optional)

3.5.1 General Requirements

3.5.1.1 The product shall conform to the requirements for quality, safety and performance given in 3.5.1.2 to 3.5.1.5.

3.5.1.2 All the ingredients that go into formulation of cosmetics shall comply with the provisions of IS 4707 (Part 1) and IS 4707 (Part 2). The product shall also meet specific requirements as given in the standard.

3.5.1.3 The product package shall display a list of key ingredients in descending order of quantity present.

3.5.1.4 The product shall not be manufactured from any carcinogenic ingredients.

3.5.1.5 The manufacturer shall produce to BIS environmental consent clearance from the concerned State Pollution Control Board as per the provisions of the *Water (Prevention and Control of Pollution) Cess Act, 1977* and the *Air (Prevention and Control of Pollution) Act, 1981* along with the authorization, if required under the *Environment (Protection) Act, 1986* and the Rules made there under, while applying for ECO Mark. Additionally, provisions of the *Drugs and Cosmetics Act, 1940* and the Rules thereunder shall also be complied with.

3.6 Specific Requirements

3.6.1 Product shall be dermatologically safe when tested as per IS 4011.

3.6.2 Biodegradable agents wherever used in cosmetic formulations shall be as per their limit finalized for synthetic detergents for ECO Mark by the technical committee.

3.6.3 Heavy metals calculated as lead (Pb) and arsenic (As_2O_3) shall not exceed 20 and 2 ppm, respectively when tested by the respective method prescribed in relevant Indian Standards.

3.6.4 The material for product packaging shall meet the parameters evolved under the scheme of labelling environment friendly packaging/packaging materials.

4 PACKING AND MARKING

4.1 Shampoo shall be packed in glass or plastic containers or any other suitable containers.

4.2 The containers shall be legibly marked with the following information:

- a) Name of the material,
- b) Manufacturer's name and/or his recognized trade-mark, if any;
- c) Net content in volume for liquids and emulsions and in mass for pastes;
- d) Month and year of manufacturing/packing;
- e) Batch or Lot number, in code or otherwise.
- f) 'Best use before. . . .' (month and year to be declared by the manufacturer);

NOTES — This requirement is exempted:

1 In case of pack sizes of 10 g/25 ml or less, and

2 If the shelf life of the product is more than 24 months.

- g) List of key ingredients; and

NOTE — This is exempted in case of pack sizes of 30 g/60 ml or less.

- h) Any other information required by statutory authorities.

4.2.1 BIS Certification Marking

The containers may also be marked with the Standard Mark.

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

4.2.2 If the product is covered under ECO Mark (optional), it shall be suitably marked with ECO Mark logo besides Standard Mark. The label may clearly specify that ECO Mark is applicable to the contents or the package or both, as case may be. If the product package is not separately covered under ECO Mark Scheme, it shall be clearly mentioned on the product that ECO Mark label is applicable to contents only.

5 SAMPLING

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

5.2 Tests for all the requirements shall be carried out on a composite sample.

5.3 The shampoo shall be taken to have conformed to this standard if the composite sample passes all the tests.

6 QUALITY OF REAGENTS

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

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

ANNEX A*(Clause 3.3.3)***LIST OF RAW MATERIAL CONVENTIONALLY USED IN FORMULATION OF SURFACTANT BASED SHAMPOOS****A-1 DETERGENTS**

- a) Sodium or potassium or ethanolamine salts of lauryl sulphonic acid,
- b) Lauryl ether sulphates,
- c) Sulphated monoglycerides,
- d) Sodium alkyl sulpho-acetate,
- e) Alkyl benzene polyoxyethyl sulphonates,
- f) Sodium n-lauryl sarcosinate,
- g) Sodium alpha olefin sulphonates, and
- h) Other synthetic detergents.

A-2 FOAM STABILIZERS

- a) Ethanolamides or isopropanolamides of fatty acids,
- b) Amine oxides,
- c) Cocobetaines, and
- d) Cocoamidopropyl betaines.

A-3 CHELATING AGENTS

- a) Sodium polyphosphates, and
- b) Sodium salts of ethylenediamine tetra-acetic acid.

A-4 SOLUBILIZING AGENTS

- a) Urea,
- b) Aliphatic alcohols,
- c) Sodium toluene sulphonate, and
- d) Sodium xylene sulphonate.

A-5 PRESERVATIVES

- a) Alcohols,
- b) Formaldehyde,
- c) Esters of phydroxybenzoic acid,
- d) Sorbic acid, and
- e) Imidazolidinyl urea.

A-6 OPACIFYING AGENTS

- a) Higher fatty alcohols,
- b) Ethylene/Propylene glycol stearates,
- c) Mono and di-stearates of glycerol,
- d) Zinc, calcium and magnesium salts of fatty acids,
- e) PEG-distearate 6000, and
- f) Polyacrylates.

A-7 INORGANIC SALTS

- a) Sodium chloride,
- b) Sodium sulphate,
- c) Sodium phosphate,
- d) Ammonium sulphate,
- e) Ammonium phosphate, and
- f) Ammonium chloride.

A-8 EMOLLIENTS

Lanolin and its derivatives.

A-9 THICKENING AGENTS

- a) Sodium carboxymethyl cellulose,
- b) Methyl cellulose,
- c) Methyl isopropyl cellulose, and
- d) Guar gum.

A-10 OTHER GROUPS OF INGREDIENTS

- a) Perfumes,
- b) Dyes,
- c) Conditioning agents,
- d) Quaternary compounds,
- e) Vitamins,
- f) Vegetable oils,
- g) Silicones,
- h) Proteins, and
- j) Sunscreens, etc.

ANNEX B

[Table 1, Sl No. (i)]

DETERMINATION OF NON-VOLATILE ALCOHOL SOLUBLE MATTER

B-1 GENERAL

This method determines the amount of non-volatile alcohol soluble matter in surfactant based shampoos.

B-2 REAGENTS

B-2.1 Ethyl Alcohol — Neutral, conforming to IS 321.

B-2.2 Methyl Red Indicator Solution — Dissolve 0.1 g of methyl red in 300 ml of ethyl alcohol and 200 ml of water.

B-2.3 Potassium Chromate Solution — 10 percent solution.

B-2.4 Nitric Acid Dilute — 1 : 4 (v/v).

B-2.5 Silver Nitrate Solution — 0.1 M.

B-3 PROCEDURE

B-3.1 Weigh accurately about 10 g of the sample into a 150 ml beaker. Evaporate on a steam-bath to almost complete dryness. Digest with 50 ml of 96 percent ethyl alcohol by heating on a steam bath for about 2 min. Filter the hot alcoholic solution through a sintered glass filter funnel fitted to a Buchner flask to which suction is applied. Wash the beaker and the residue in the sintered glass funnel 5 times with 30 ml portions of hot ethyl alcohol.

B-3.2 Transfer the filtrate in the Buchner flask to a weighed wide mouth flat-bottomed flask. Evaporate nearly to dryness on a water bath and drive off the remaining alcohol by directing a gentle stream of dry air into the flask whilst continuously rotating the latter in the water bath. Heat the flask in an air oven at a temperature of 105°C until constant mass. Calculate mass percent of residue obtained.

$$\text{Mass, percent of residue (Y)} = \frac{\text{Mass of residue obtained} \times 100}{\text{Mass, in g, of the material taken for tes}}$$

B-3.3 Dissolve the residue in 50 ml of distilled water and add to it 2 drops of methyl red indicator solution. If the solution is yellow in colour, neutralize it by adding dilute nitric acid drop by drop to get pink colour. Titrate the solution with silver nitrate solution using 2.5 ml of potassium chromate solution as indicator, till a brown colour is obtained. Carry out a blank determination using the same quantity of all reagents except the sample.

B-3.4 Calculate the chloride content in shampoo in terms of molecular mass of sodium chloride (X) in percent by the formula:

$$\text{Sodium chloride in percent (X)} = \frac{V \times 0.5844}{M}$$

where

V = volume, in ml, of standard silver nitrate solution required for the material minus volume, in ml, of standard silver nitrate solution required for the blank; and

M = mass, in g, of the material taken for test.

B-3.5 Calculation

To calculate percent non-volatile alcohol soluble matter, subtract the mass percent of sodium chloride as determined in B-3.4 as (X) from the mass percent of the residue (Y) obtained in B-3.2.

$$\text{Percent non-volatile alcohol soluble matter} = Y - X$$

ANNEX C

[Table 1, Sl No. (ii)]

DETERMINATION OF pH

C-1 APPARATUS

pH meter equipped with glass electrode.

C-2 PROCEDURE

Determine the pH at a temperature of $27 \pm 2^\circ\text{C}$. In the

case of liquid shampoo, read the pH directly in the sample in the pH meter. In the case of a shampoo in the form of a powder or paste, mix 1g of the sample with 9 ml of water and determine the pH of the resulting solution.

ANNEX D

[Table 1, Sl No. (iii)]

DETERMINATION OF FOAM HEIGHT

D-1 OUTLINE OF THE METHOD

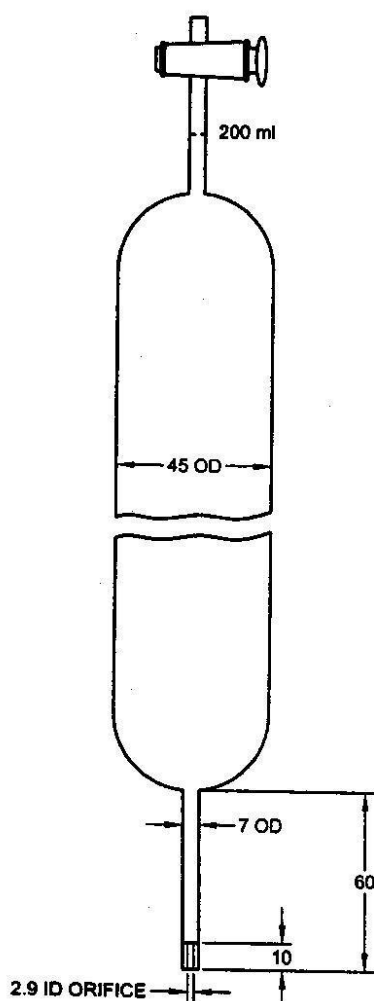
In order to check the ability of a shampoo to produce lather, the volume of foam obtained under specific experimental conditions is determined.

D-2 APPARATUS

D-2.1 Pipette

The pipette shown in Fig. 1 shall be constructed from standard-wall chemically resistant glass tubing having the following dimensions:

- For the bulb, 45.0 ± 1.5 mm outside diameter; and
- For the lower stem, 7.0 ± 0.5 mm outside diameter.



All dimensions in millimetres.

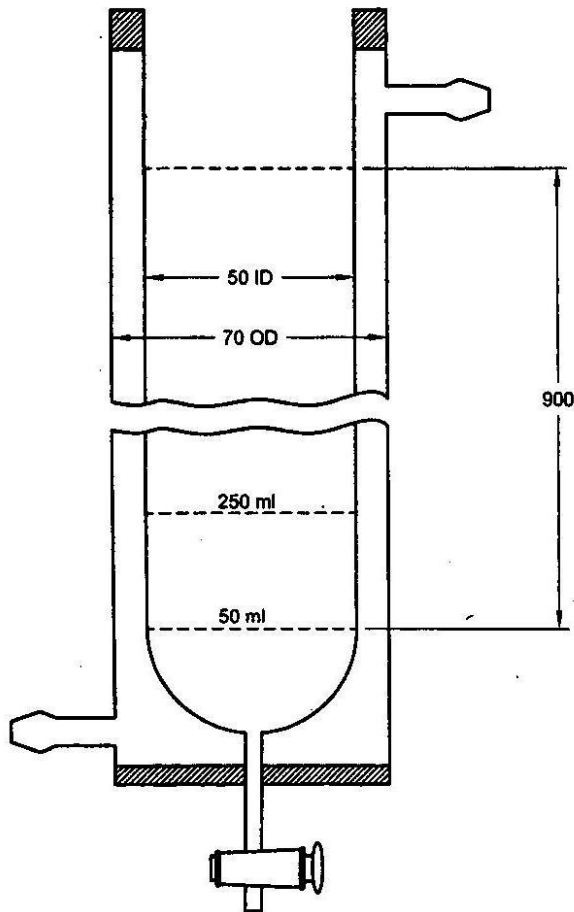
FIG. 1 FOAM PIPETTE

The upper stem shall be constructed to contain a solid-stopper, straight bore, No. 2, standard taper stopcock having a 2-mm bore and stems 8 mm in outside diameter. Both the upper and lower seals of the bulb to the stems shall be hemispherical in shape. The lower stem shall be 60 ± 2 mm in length from the point of attachment to the bulb and shall contain an orifice sealed into the lower end. The orifice shall be constructed from precision bore tubing having an inside diameter of 2.90 ± 0.02 mm and a length of 10.00 ± 0.05 mm, with both ends ground square. The orifice shall have an outside diameter so as to fit snugly into the lower stem and form a secure seal to the stem when heated with a sharp pointed flame in the blow torch. The pipette shall be calibrated to contain 200.0 ± 0.2 ml at 20°C . The calibration mark shall be on the upper stem at least 15 mm below the barrel of the stopcock and shall completely encircle the stem.

D-2.2 Receiver

The receiver shown in Fig. 2 shall be constructed from standard-wall, chemically resistant glass tubing having an internal diameter of 50.0 ± 0.8 mm, with one end constricted and sealed to a straight-bore, solid-plug, standard-taper No. 6 stopcock having a 6-mm bore and 12-mm stems. The receiver shall have three calibration marks which shall completely encircle the tube. The first mark shall be at the 50-ml point, shall be measured with the stopcock closed, and shall not be on any curved portion of the constriction. The second mark shall be at the 250-ml point, and the third mark at a distance of 90.0 ± 0.5 cm above the 50-ml mark. The receiver tube shall be mounted in a standard-wall tubular water jacket, having an external diameter of not less than 70 mm, fitted with inlet and outlet connections. The jacket may be attached to the receiver with rubber stoppers or may be sealed at the top and bottom. The seal at the bottom shall be as close to the barrel of the stopcock as practicable. The assembled receiver and jacket shall be mounted securely in a plumb position and the jacket connected to a source of water thermostatically maintained at $48.0 \pm 0.5^\circ\text{C}$ for circulating through the jacket. At the top of the receiver there shall be a platform, flush with the top of the assembly, having a metal plate in which is drilled three indexing holes circumferentially placed around the receiver and having an angular displacement of 120° from each other. A clamp which may be securely attached to the upper part of the pipette, shall fit into the holes. The clamp shall have three levelling screws

and lock nuts and when properly mounted shall exactly centre the pipette in the receiver and bring the lower tip of the pipette level with the upper calibration mark on the receiver. A metre stick shall be fastened to the side or behind the receiver with the zero point level with the 250 ml calibration point on the receiver.



All dimensions in millimetres.

FIG. 2 FOAM RECEIVER

D-3 PREPARATION OF SAMPLE SOLUTION

Distilled water, or water hardness 100 expressed in parts per million of calcium carbonate shall be taken

for test. Preheat the water to a temperature of $30 \pm 2^\circ\text{C}$. Add 500 ml of water to 10 g of shampoo solution while stirring vigorously. Continue stirring in such a manner until miscibility of shampoo with water is complete. Age the solution at a temperature of $30 \pm 2^\circ\text{C}$ for a total period of 30 min counting the time when the shampoo is first added to the water.

D-4 PROCEDURE

While the shampoo solution is aging, circulate water at $30 \pm 2^\circ\text{C}$ through the water jacket of the receiver so as to bring it to the proper temperature. Rinse down the walls of the receiver with distilled water and, as an indication of cleanliness, observe whether the water drains down the walls in an unbroken film. At the completion of the aging period close the stopcock at the bottom of the receiver. Rinse the walls of the receiver with 50 ml of the solution, using a pipette, and after draining to the bottom of the receiver, adjust the stopcocks so that the level of the solution in the receiver is exactly at the 50 ml mark. Fill the pipette with the solution to the 200 ml mark, using a slight suction for the purpose. Immediately place it in position at the top of the receiver and open the stopcock. When all of the solution has run out of the pipette, start a stop-watch, take a reading of the foam height and take a second reading at the end of 5 min. Take the reading by measuring the foam production at the top of the foam column at the highest average height to which the rim of the foam has reached. This height is proportional to the volume of air remaining in the foam.

D-5 REPORTING

- Concentration, in g/l;
- Temperature of the test;
- Degree of hardness of water;
- Initial foam height; and
- Foam height after 5 min.

D-5.1 The foam height of two percent shampoo solution shall not be less than the specified limit in Table 1.

ANNEX E*(Foreword)***IDEAL PROPERTIES OF A SHAMPOO****E-1 EASE OF APPLICATION**

The shampoo should be viscous enough to stay in the hand before application to the hair and scalp, yet during application the shampoo must spread easily and disperse quickly over the head and hair.

E-2 RINSING

The shampoo should rinse out easily and should not leave a residual tackiness or stickiness. It should not precipitate in hard water since insoluble calcium and magnesium salts form a dulling film on the hair.

E-3 EASY WET COMBING

After rinsing the hair should comb through easily without tangling.

E-4 MANAGEABILITY

The hair should be left in a manageable condition when combed dry. There should be no fly away or frizziness.

E-5 LUSTER

The hair should be left in a lustrous condition.

E-6 BODY

The hair should have body when dry, that is hair should not be limp or over conditioned.

E-7 FRAGRANCE

A fragrance should be used that not only covers any objectionable odour due to components used to formulate the shampoo but which develops a clean refreshing scent during shampooing and leaves a clean residual scent on the hair. This could be a major factor in consumer acceptance of the product.

E-8 LOW LEVEL OF IRRITATION

The formulator should try to accomplish all of the above qualities while keeping the irritation level as low as possible.

E-9 WELL PRESERVED

The product must be properly preserved against bacterial and fungal contamination.

E-10 GOOD STABILITY

The product should have good stability for at least two or three years at room temperature as well as when stored in daylight or in warehouses with low or high ambient temperatures.

E-11 ECONOMICAL

The product should not be over-formulated. The formulation should be as simple as possible using only those raw materials that are necessary to accomplish the desired goal.

ANNEX F

(Foreword)

COMMITTEE COMPOSITION

Cosmetics Sectional Committee, PCD 19

<i>Organization</i>	<i>Representative(s)</i>
Directorate General of Health Services, New Delhi	SHRI ASHWINI KUMAR (<i>Chairman</i>)
All India Small Scale Cosmetic Manufacturer's Association, Mumbai	SHRI M. B. DESAI SHRI B. M. CHOPRA (<i>Alternate I</i>) SHRI S. CHATTERJEE (<i>Alternate II</i>)
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Central Drugs Laboratory, Kolkata	DR M. K. MAZUMDER DR A. C. DAS GUPTA (<i>Alternate</i>)
Central India Pharmacopoeia Laboratory, Ghaziabad	DR SANTOSH K. TALWAR DR SUKOMAL DAS (<i>Alternate</i>)
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Consumer Guidance Society, Mumbai	SHRI N. G. WAGLE DR S. G. BHAT (<i>Alternate</i>)
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Commissioner, Food & Drugs Administration, Mumbai	SHRI K. B. SHENDE
Dabur Research Foundation, Sahibabad	DR N. M. SUNDER
Food & Drugs Control Administration Gujarat State, Gandhinagar	DR B. N. PATEL SHRIMATI R. B. DESAI (<i>Alternate</i>)
Godrej Soaps Ltd, Mumbai	SHRI A. RANGARAJAN DR (SHRIMATI) ROHINI THAKKAR (<i>Alternate</i>)
Hindustan Lever Research Centre, Mumbai	SHRI V. R. DHANUKA, SHRI N. S. BILANI (<i>Alternate</i>)
Hygienic Research Institute, Mumbai	SHRI M. B. DESAI SHRI MANISH K. CHHABRA (<i>Alternate</i>)
Indian Soaps and Toiletries Members Association, Mumbai	SHRI R. HARIHARAN
Johnson & Johnson Ltd, Mumbai	DR PRASHANT ABHYANKAR DR V. R. BAMBULKAR (<i>Alternate</i>)
Lady Irwin College, New Delhi	THE PRINCIPAL
Lady Amritbai Doga College, Nagpur	DR (SHRIMATI) S. B. KULKARNI
Maharishi Ayurved Products, Noida (U.P.)	DR S. C. SAXENA SHRI D. K. SHRIVASTAVA (<i>Alternate</i>)
Procter & Gamble, Mumbai	DR ARUN VISWANATH SHRIMATI SHWETA PURANDARE (<i>Alternate</i>)
Bajaj Sevashram, Udaipur	SHRI R. F. HINGER DR. S. ADHIKARI (<i>Alternate</i>)
Shingar Ltd, Mumbai	SHRI V. K. SINGH SHRIMATI SWATI SINGH (<i>Alternate</i>)
Le'Oreal India Pvt Ltd, Umbergaon, Gujarat	DR ARCHANA SHEKHER
Balsara Home Products, Mumbai	DR K. C. GOUNDEN
Emami Limited, Kolkata	PROF B. K. GUPTA

<i>Organization</i>	<i>Representative(s)</i>
Marico India Ltd, Mumbai	SHRI R. MOHILE SHRI BENEDICT M. (<i>Alternate</i>)
Cavinkare Ltd, Chennai	DR M. P. PRASAD DR G. V. RAO (<i>Alternative</i>)
BIS Directorate General	SHRI ANJAN KAR, Director and Head (PCD) [Representing Director General (<i>Ex-officio</i>)]

Member Secretary
DR (SHRIMATI) VIJAY MALIK
Director (PCD), BIS

Composition of Hair Care Products Subcommittee, PCD 19 : 2

Godrej Soaps Ltd, Mumbai	DR (SHRIMATI) ROHINI THAKKAR (<i>Convener</i>) SHRI A. RANGARAJAN (<i>Alternate</i>)
Bengal Chemicals & Pharmaceuticals Ltd, Kolkata	DR S. K. ROY CHOWDHURY DR A. K. MANDAL (<i>Alternate</i>)
Cavin Kare Ltd, Chennai	DR M. P. PRASAD DR G. V. RAO (<i>Alternate</i>)
Consumer Guidance Society, Mumbai	SHRI N. G. WAGLE DR S. G. BHAT (<i>Alternate</i>)
Food & Drugs Administration, Mumbai	SHRI K. B. SHENDE
Food & Drugs Control Admn, Gandhinagar	DR B. N. PATEL SHRIMATI R. B. DESAI (<i>Alternate</i>)
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Mayar India Ltd, Delhi	DR S. ADHIKARI

**AMENDMENT NO. 1 AUGUST 2008
TO
IS 7884 : 2004 SHAMPOO, SURFACTANT BASED —
SPECIFICATION**

(Third Revision)

(Page 2, clause 3.6) — Read this clause as '3.5.2 Specific Requirements'.

(Page 2, clause 3.6.1) — Renumber this clause as 3.5.2.1.

(Page 2, clause 3.6.2) — Renumber this clause as 3.5.2.2.


(Page 2, clause 3.6.3) — Renumber this clause as 3.5.2.3.

(Page 2, clause 3.6.4) — Renumber this clause as 3.5.2.4.

(PCD 19)

Reprography Unit, BIS, New Delhi, India

(Continued from second cover)

environment friendly requirements. For this purpose, the Standard Mark of BIS would be a single mark being a combination of the BIS monogram  and the ECO logo. Requirements for the ECO friendliness will be additional, manufacturing units will be free to opt for Standard Mark alone also.

The Committee responsible for the formulation of this standard is given in Annex F.

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.

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