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उत्पाद मैन्युअल

शैम्पू

IS 7884:2023 के अनुसार

PRODUCT MANUAL
FOR SHAMPOO
ACCORDING TO IS 7884:2023

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो) अनुरूपता मूल्यांकन (विनियम, 2018 की योजना -I के तहत प्रमाणन के संचालन में एकरूपता और पारदर्शिता के लिए इस उत्पाद मैनुअल का उपयोग सभी क्षेत्रीय / शाखा कार्यालयों और लाइसेंसधारियों द्वारा संदर्भ सामग्री के रूप में किया जाएगा। दस्तावेज़ का उपयोग बीआईएस प्रमाणन प्राप्त करने के इच्छुक संभावित आवेदकों द्वारा भी किया जा सकता है।

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure uniformity of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations,2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification.

1.	मानक संख्या **IS No.**	:	7884:2023
	शीर्षक **Title**	:	शैम्पू Shampoo
	संशोधनों की संख्या **No. of amendments**	:	Nil
2.	नमूना दिशानिर्देश **Sampling Guidelines**		
a)	कच्चा माल **Raw material**	:	Raw materials used for the manufacture of shampoo shall confirm to Cl. 3.3 of the IS 7884:2023. Conformity may be established through supplier's test certificate of raw material, or test report of BIS recognized/empanelled lab or NABL accredited lab or in-house testing. No testing is required if the material is ISI Marked.

b)	समूहीकरण दिशानिर्देश **Grouping Guidelines**	:	Not Applicable.
c)	नमूने का परिमाण **Sample Quantity**	:	1 LITRE Note: This section indicates the quantity of the sample of the product and/or the raw material (if applicable), required to be sent to the laboratory for testing, for the purpose of Grant of Licence/Change in Scope of Licence/ Factory Surveillance (incase of market surveillance, effort may be made to procure therequired quantity of product sample, as far as possible since raw material sample may not be available in market)
3.	परीक्षण उपकरणों की सूची **List of Test Equipment**	:	कृपया Annex-ए देखें Please refer to Annex – A
4.	निरीक्षण और परीक्षण की स्कीम **Scheme of Inspection and Testing**	:	कृपया Annex-B देखें Please refer to Annex – B
5.	एक दिन में संभावित परीक्षण **Possible tests in a day**		
	All tests except Microbiological tests, Cl. 3.4 Note: This section is for the guidance of BIS Certification Officers/Technical Auditors of BIS Authorized Outside Surveillance Agencies (OSAs) during factory inspection to provide readyreference regarding the tests which can be witnessed during the inspection in the factory by the officer/auditor.		
6.	लाइसेंस का दायरा /**Scope of the Licence:**		
	IS 7884:2023 के अनुसार मानक मुहर का उपयोग करने के लिए लाइसेन्स निम्नलिखित कार्यक्षेत्र के लिए प्रदान किया जाता है "License is granted to use Standard Mark as per 7884: 2023 with the following scope:		
	Name of the product	शैम्पू Shampoo	
	Varieties/Type/Grades etc.	-	
	Optional requirements	-	

ANNEX-A

LIST OF TEST EQUIPMENTS
(INDICATIVE LIST, FOR GUIDANCE ONLY)

Sl.No.	Test Used In With Clause Reference	Test Equipment/Chemical
1.	Description (Cl. 3.1)	Visual
2.	Physical Characteristics(Cl. 3.2)	Visual
3.	Non-volatile alcohol soluble matter, % by mass, (Cl. 3.4,Table 1, Sl.No i), Annex-C of IS 7884	Equipment-Weighing Balance, Steam Bath, Sintered Glass filter funnel, Buchner Flask, Suction pump, Dry Air Oven, Burettes, Pipettes, Conical flasks Chemicals-Methyl Red Indicator , Ethyl Alcohol, Potassium Chromate , Nitric Acid , Silver Nitrate
4.	pH(at 27± 2°C) (Cl. 3.4,Table 1, Sl.No ii), Annex-D of IS 7884	pH meter equipped with glass electrode, Thermometer
5.	Foam Height for two percent solution (Cl. 3.4,Table 1, Sl.No iii), Annex-E of IS 7884	Pipette(as specified in Annex E of IS 7884:2023),Receiver, Distilled Water
6.	Active surfactant content % by mass, (Cl.3.4,Table 1, Sl.No iv) When product contains only anionic surfactant, Annex-F or Annex-G of IS 7884 When product contains anionic and/or non-anionic, and/or amphoteric surfactant, Annex- H or Annex-J of IS 7884	**For only anionic surfactant :** **a)** By Titration-Chloroform, methylene blue, cetyltrimethyl ammonium bromide ,Standard Alkyl Sulphate of known combined SO_3 or active content, Methylene Blue Indicator, Conc. Sulphuric acid, Sodium Dihygrogen Phosphate Indicator, Distilled Water, burette, Chloroform, Equipments -250 ml beaker, 1 litre volumetric flasks, Weighing balance(Least Count- 0.001g), Pipette, 100 ml glass stoppered cylinder (25 mm × 300 mm), Thermometer, Steam bath. **b)** By potentiometry: **i)** General Case- ISE Electrode, Surfactrode Refill,Ag/AgCl Reference Electrode, 20 ml Burette Compatible with the Memotitrator, Helical Stirrer Compatible with the Memotitrator, pH Electrode, Titrated Solution of 0.004 M Hyamine 1622, 0.1 N Solution of Hydrochloric Acid, Demineralized Water **ii)** In case of formulas containing fatty acids- ISE Electrode, Surfactrode Refill,Ag/AgCl Reference Electrode, 20 ml Burette Compatible with the Memotitrator, Helical Stirrer Compatible with the Memotitrator, pH Electrode,Titrated Solution of 0.004 M Hyamine 1622, 0.1 N Solution of Hydrochloric Acid, Demineralized Water, methylisobutylketone (MIBK)/ ethanol mixture

		For anionic and/or non-anionic, and/or amphoteric surfactant, a) by UV-VIS spectrophotometer- Chloroform, UV Spectrophotometer, Separating Funnel — 125 ml capacity, Volumetric Flasks — with capacity of 1 litre, 250 ml, 100 ml, 50 ml, 25 ml, 20 ml and 10 ml pipettes; and 250 ml and 100 ml stopper cylinder, Membrane Filters (0.45 µ) — Whatman filter paper No. 41 or equivalent, Weighing Balance — least count 0.1 mg, Sonicator, Water Bath, Stop Watch — least count 1 s, Distilled water , Dichloromethane — analytical reagent grade , Acid Phosphate Buffer, Cobaltothiocyanate Reagent, Sulphuric Acid — technical grade, Hydrochloric Acid — technical grade, Formic Acid — assay ≥ 98 percent, Anthrone Reagent — weigh about 0.08 g of anthrone (technical grade) and dissolve in 100 ml of 80 percent sulphuric acid, Distilled Water, Chloroform — analytical reagent grade, Cationic Solution (Solution A), Anionic Solution (Solution B), Methylene Blue Indicator, Distilled Water, Pipette, sodium dodecyl Sulphate, benzethonium chloride, mixed indicator, standard cocoglucoside b) by potentiometry: Mettler DL53 or Mettler DL55 Titrator or other Mettler or MetrohmTitrator, Propeller Stirrer, 6.0507.010 NIO Electrode with 6.2104.020 Electrode Cable, 6.0726.100 Ag/AgCl Reference Electrode with 6.2106.020 Electrode Cable, Inner Electrolyte c(KCl) = 3 mol/l, Bridge Electrolyte c(NaCl) = 1 mol/l, Mettler Scales, Precision Glassware, Titration Reagent- Sodium Tetraphenylborate, Polyvinyl Alcohol, pH = 10.0 Buffer Solution, Auxiliary Solution - Barium Chloride (BaCl2) or (BaCl2, 2H2O), Hydrochloric Acid at 37 Percent Concentration, Standard Reference Surfactants- Triton X-100 (alkyl phenyl polyethylene glycol) Fluka No. 93426, Merck No. 112298, Standard Reagent for Measuring Titrant Papaverine hydrochloride (for example, fluka No. 76223)
7.	**Microbial limit,** (Cl. 3.4,Table 1, Sl.No v), IS 14648	**General microbiological lab equipment** • Hot air oven • Autoclave (capable of 15 psi/ 121 ºC) of suitable size as per need. • Weighing Balance with least count 0.01

		• Incubators with range specified in ISS • Microscope • pH meter with least count 0.1 pH unit. • Laminar air flow chamber OR Class II Biosafety Cabinets • Hot plate for media preparation. • Inoculation loop/needle. • Bunsen burner with LPG cylinder. • Thermostatically controlled water bath. • Air conditioner (recommended) • Refrigerator • Colony counting equipment (recommended) • General glass wares including, petri dishes (made of glass or plastic), volumetric pipettes (of capacity 1 ml and 10 ml), flasks, test tubes, culture bottles, funnels, glass rod, measuring cylinders. • Thermometer
	a)Total microbial count, cfu/g	Peptone broth/Nutrient broth, Soyabean casein digest medium (Trypticase Soy agar/TSA),
	b)Yeast and mould count, cfu/g,	Peptone broth/Nutrient broth , Sabourauds Dextrose agar/Potato Dextrose agar
	c)Pseudomonas aeruginosa, per gram	Pseudomonas aeruginosa ATCC 9027 strain, Eugon LT 100 broth or any other validated neutralizing enrichment medium, Cetrimide agar medium, and Pseudomonas agar medium for detection of pyocyanin and pyorubin. Gram staining reagents, oxidase test reagents
	d)Escherichia coli, per gram	Strains Escherichia coli ATCC 8739, Eugon LT 100 broth/ Fluid lactose medium with neutralizing and dispersing agents/Fluid lactose medium Modified letheen broth/D/E neutralizing broth/Soyabean casein digest lecithin polysorbate 80 medium., MacConkey agar medium, Levine Eosin — Methylene Blue agar medium., Gram staining reagents
	e)Staphylococcus aureus, per gram	Strains of Staphylococcus aureus ATCC 6538/6538P , Eugon LT 100 broth/ Fluid soyabean casein digest medium/D/E neutralizing broth/Modified latheen broth. Baird Parker Agar/ Mannitol salt agar medium/Vogel Johnson agar medium, Gram staining reagents, catalase test reagents, co-agulase test reagents
	f)Candida albicans, per gram	Strains Candida albicans ATCC 10231, LT 100 broth/ Fluid soyabean casein digest medium/ Modified latheen broth/Glucose and peptone added lecithin polysorbate medium/D/E neutralizing broth/Soyabean casein digest lecithin polysorbate 80 medium., Sabouraud dextrose chloramphenicol agar/Potato dextrose agar with antibiotics/BIGGY Agar , Corn meal agar with 1 percent polysorbate 80. Gram staining reagents, horse/calf serum
8.	**Heavy Metals,** (Cl. 3.4,Table 1, Sl.No vi),	Hot plate, Muffle Furnace, Filtration apparatus, Nessler Cylinders

	Annex-K of IS 7884 or IS 16913	Dilute Hydrochloric Acid , Dilute Acetic Acid, Dilute Ammonium Hydroxide , Hydrogen Sulphide Solution, Standard Lead Solution OR Atomic Absorption Spectrometer(GF-AAS), Digestion apparatus Nitric acid, Hydrochloric acid, Hydrogen peroxide, reductant, Magnesium nitrate, standard lead solution
9.	**Arsenic** Annex-L of IS 7884 or IS 16913 or IS 17495	Gutzeit bottle Conc. Sulphuric acid, Ferric Ammonium Sulphate , Conc. Hydrochloric Acid, Sodium Chloride , Stannous Chloride, mercuric bromide, zinc, potassium iodide, standard arsenic solution Or Atomic Absorption Spectrometer(GF-AAS & FIAS-AAS), Digestion apparatus Nitric acid, Hydrochloric acid, Hydrogen peroxide, reductant, Magnesium nitrate, standard arsenic solution Or Digestion apparatus, standard arsenic solution, Inductively coupled plasma optical emission spectroscopy (ICP-OES)/(ICP-AES)/ Inductively coupled plasma mass spectrometry (ICP-MS) Or X-ray fluorescence
10.	**Mercury** IS 16913 or IS 17495	Atomic Absorption Spectrometer(GF-AAS & FIAS-AAS), Digestion apparatus Nitric acid, Hydrochloric acid, Hydrogen peroxide, reductant, Magnesium nitrate, standard mercury solution Or Digestion apparatus, standard Mercury solution and: Inductively coupled plasma optical emission spectroscopy (ICP-OES)/(ICP-AES)/ Inductively coupled plasma mass spectrometry (ICP-MS) Or X-ray fluorescence

ANNEX B

SCHEME OF INSPECTION AND TESTING

1. QUALITY ASSURANCE PLAN

1.1 It is expected that manufacturers (licensees/applicants) will implement a Quality Assurance Plan i.e. a plan of regular testing and in-process controls, designed to ensure that the product bearing the Standard Mark conforms to all requirements of the Indian Standard.

1.2 The manufacturers shall define a Quality Assurance Plan defining the control unit (i.e. lot/batch etc.) and the levels of control (i.e. the frequency and number of samples for conducting the different tests as per the Indian Standard) and submit the same to BIS Branch Office for information. The manufacturer shall comply with the same and maintain test records in accordance with para 2.4.

1.3 **RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT**:

1.3.1 For the guidance of manufacturers, the recommended definition of control unit is the entire quantity of the shampoo produced in a batch mixer at a time.

1.3.2 For the guidance of manufacturers in preparing the Quality Assurance Plan, recommended levels of control are given in **Table 1**.

1.3.3 The manufacturer shall ensure inspection and testing as per the Quality Assurance Plan submitted by them on the whole production of the factory which is covered by this plan. Alternatively, the manufacturer has the option of adherence to the quality plan as per levels of control recommended in column 3 of Table 1.

1.4 However, all manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard.

2. ENSURING COMPLIANCE THROUGH TESTING- It is expected that manufacturers (licensees/applicants) will establish a suitably equipped and staffed in house laboratory (In house testing facility) for testing at least those parameters of the Indian Standard which require routine testing for ensuring quality of the product. This includes in-process controls as may be defined and put in place by the manufacturer and testing parameters/requirements which can only be performed in the factory.

2.1 For the guidance of manufacturers, Table 1 giving the recommended levels of control is given below. Column 2 of Table 1 indicates routine tests where test equipment is required in house as "R" or other tests which can be subcontracted as "S". Subcontracting is permitted to BIS recognized/empaneled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.2 For MSME manufacturers, the requirement of maintaining a laboratory/in-house testing facility for routine tests (indicated as "R" in Column 2 of Table 1) is also optional.

2.2.1 MSME manufacturers may utilize common cluster based facilities as per guidelines for the utilization of cluster based test facilities by MSMEs or the provisions of Sharing of testing facilities or get testing done from BIS recognized/empaneled laboratory or any other laboratory having valid

NABL accreditation as per IS/ISO/IEC 17025.

2.3 **Large Scale manufacturers shall maintain an in-house laboratory equipped at least with test facilities for routine tests (indicated as "R" in Column 2 of Table 1)**, where different tests given in the specification shall be carried out in accordance with the method given in the specification**.** They shall also implement a calibration plan for the in-house test equipment.

2.3.1 Alternatively, in lieu of an in-house laboratory, large scale manufacturers can also utilize the provisions of Sharing of testing facilities as per the Guidelines for Grant of Licence available on BIS website www.bis.gov.in. (Under Conformity Assessment>Product Certification Process). Even for subcontracted tests, provisions for sharing of testing facilities can be utilized.

2.4 **TEST RECORDS**- The manufacturers maintaining an in-house laboratory or utilizing common cluster based facilities or shared test facilities shall maintain test records for the tests carried out to establish conformity. For the tests being subcontracted to BIS recognized/empanelled laboratoryor any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025, test reports issued by the laboratories shall be available for inspection by BIS.

3. PACKING AND MARKING - The Standard Mark as given in the Schedule of the licence shall be incorporated legibly and indelibly on the container, provided always that the material so marked conforms to each requirement of the specification.

3.1 Packing and Marking shall be done as per the Indian Standard.

3.2 **Additional Marking requirements**: The material shall also be marked with the following additional requirement:

a) "For BIS certification details please visit www.bis.gov.in"

4 REJECTION - All the production which conforms to the Indian Standard and covered under the scope of this licence shall be marked with the Standard Mark. Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.

TABLE 1
(ONLY FOR GUIDANCE PURPOSE)

(1)				(2)	(3)		
Test Details				**Test equipment requirement** R: required (or)S:Sub-contracting permitted	**Levels of Control**		
Cl.	Requirement	Test Methods Clause Reference			No. of Sample	Frequency	Remarks
3.1	Description	--	IS 7884	R	Firm to have adequate in-process controls to check compliance of this parameter as per the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity.		
3.2	Physical Characteristics	--	IS 7884	R	Firm to have adequate in-process controls to check compliance of this parameter as per the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity.		
3.3	Ingredients	3.3 3.3.1 3.3.2 3.3.3	IS 7884 IS 4707(P:1) IS 4707(P:2) IS 4011	S	Each batch of the raw materials used shall confirm to the relevant Indian standard where such standards exist through supplier TC or in-house testing.		
3.4 & Table 1	i) Non-volatile alcohol soluble matter; percent by mass	Annex-C	IS 7884	R	1	Each Control unit	*
	ii) pH (at 27 °C ± 2 °C)	Annex-D	IS 7884	R	1	Each Control unit	*
	iii) Foam height for two percent solution	Annex-E	IS 7884	R	1	Each Control unit	*
	iv) Active surfactant content, percent by mass	Annex-F/ Annex-G/ Annex-H/ Annex-J	IS 7884	R	1	Each Control unit	*
3.4 & Table 1	v) Microbial limit *						

	a) Total microbial count, cfu/g, Max	--	IS 14648	R	One	Each Control unit	
	b)Yeast and mould count, cfu/g, Max	--		R	One	Each Control unit	
	c)Pseudomonas aeruginosa, per gram	--		S	One	Once in Month	
	d)Escherichia coli, per gram			S	One	Once in Month	
	e)Staphylococcus aureus, per gram			S	One	Once in Month	
	f)Candida albicans, per gram			S	One	Once in Month	
3.4 & Table 1	vi) Heavy metals as lead (Pb), parts per million,	Annex-K	IS 7884 or IS 16913	S	One	Once in Month	*
	vii) Arsenic (as As2O3), parts per million,	Annex-L	IS 7884 or IS 16913/IS 17495	S	One	Once in Month	*
	Mercury (Hg), parts per million	--	IS 16913/IS 17495	S	One	Once in six months	*

* Tests shall be carried out on a composite sample drawn from the representative material as prescribed in IS 3958.