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उत्पाद मैनुअल

Textiles — 100 Percent Polyester Spun Grey and White Yarns
IS 17265:2022 के अनसार

PRODUCT MANUAL
FOR Textiles — 100 Percent Polyester Spun Grey and White Yarns
ACCORDINGTO IS 17265:2022

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम, 2018 की योजना-I के तहत प्रमाणन के संचालन में अभ्यास और पारदर्शिता के संचालन में पारदर्शिता सुनिश्चित करने 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 लाइसेंस/प्रमाणपत्र 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 coherence 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 licence/certificate.

1.	**उत्पाद** **Product**	:	IS 17265:2022
	शीर्षक **Title**	:	Textiles — 100 Percent Polyester Spun Grey and White Yarns -Specification
	संशोधनों की संख्या **No.of amendments**	:	**0**
2.	**नमूना दिशानिर्देश** **Sampling Guidelines**		
a)	**कच्चा माल** **Raw material**	:	No specific requirement
b)	**समूहीकरण दिशानिर्देश** **Grouping Guidelines**	:	Please refer ANNEX-A
c)	**नमूने का आकार** **Sample Size**	:	2 kg of yarn in cone. For Yarn faults-6 cones x 600g Other physical parameter: Each 10 cones x 300g
3.	**परीक्षण उपकरणों की सूची** **List of Test Equipment**	:	Please refer ANNEX –B

4.	**निरीक्षण और परीक्षण की स्कीम** **Scheme of Inspection and Testing**	:	Please refer ANNEX –C
5.	**एक दिन में संभावित परीक्षण** **Possible tests in a day**		
	a) Mean linear density b) Elongation, percent, average c) Single yarn tenacity (RKM) d) Count strength product, CSP e) Twist per meter f) Yarn appearance grade g) Moisture regain h) Unevenness Percent and Imperfections of Yarn i) Classimat Faults j) Freedom from yarn defects k) Hairiness Yarn Index		
6.	**लाइसेंस का दायरा /Scope of the Licence:**		
	"Licence is granted to use Standard Mark as per IS 17265:2022 with the following scope:		
	Name of the product	100 percent polyester spun Grey and White yarns	
	Type of yarn (Based on no. of folds)	Single and/or Double (Two fold) yarn and/or Multifold yarn	
	Type of yarn (based on material and process)	Virgin polyester yarn	Ring Spun/Air jet/Air vortex
		Recycled/blended polyester yarn	Ring Spun/Air jet/Air vortex
	Type of yarn Based on Cross-Section/Construction	• Cross sectional view - Circular, Profiled i.e. Triangular, Lobal (Trilobal), Serrated, Oval (bean shaped), Ribbon Like etc. • Cross Sectional Area - Solid or Hollow etc. • Multi Component Fibres – Concentric Cover-Core,Matrix, Sheath-Core etc.	
	Type of Yarn Based on Lustre	• Full Dull **(FD);** • Semi Dull **(SD)/**Semi Dull Optically Bright **(SDOB)** • Bright **(BRT)/**Optically Bright **(OBRT)** • Super Bright **(SBR);**	
	Type of Yarn Based on Dyeing Method	• Disperse Dyeable [Conventional Dyeable (COD)/Stock Dyeable (STD/Easy Dyeable (ED)] • Cationic Dyeable **(CD)**/Easy Dyeable Cationic (EDCD)**;** • Dope Dyed **(DD)** /Optically White (OW)**;**	
	Yarn Linear density range declared	- In Ne or Tex	
	Optional/Additional requirements	• Flame Retardant/Non-Flame Retardant; • Anti-Microbial/Non Anti-Microbial; • Ultra Violet light Resistant/Non-UltraViolet light Resistant; • Moisture Management Yarn/Not Moisture	

		Management Yarn
	Eco Mark	With or Without ECO Mark;

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ANNEX A
GROUPING GUIDELINES

Based on the classification and identification of Polyester Spun Yarn (PSY), the following grouping guidelines shall apply for Grant of Licence and Change in Scope of Licence

Based on the number of folds, they are classified into single, double (two fold) and multifold yarn. Samples of each type of yarn i.e single, double (two fold) and multifold yarn intended to be covered in the scope shall be tested.

Based on the material, they are classified into virgin and recycled/blended yarn. Separate samples of virgin and recycled/blended yarn shall be tested. However, the samples may be of any type process i.e. Ring Spun/Air jet/Air vortex based on which the remaining process types may be covered.

Based on linear density range of resultant yarn, PSY shall be classified into five groups as follows

GROUP	LINEAR DENSITY RANGE OF RESULTANT YARN
Group I	6s Ne to 16s Ne (37 tex to 98 tex)
Group II	16s Ne to 32s Ne (18.5 tex to 37 tex)
Group III	32s Ne to 50s Ne (12 tex to 18.5 tex)
Group IV	50s Ne to 75s Ne (7.9 tex to 12 tex)
Group V	Above 75s Ne (Below 7.9 tex)

One Sample of PSY of any Linear Density shall be drawn and tested from each group to cover the entire linear density range in that group intended to be covered in the scope of licence.

One sample of FDY of any type of yarn based on cross section/construction (Cross sectional view, Cross Sectional Area, Multi Component Fibres) shall be tested to cover all types of yarn based on cross section/construction intended to be covered in the licence

However, samples of each type of yarn based on lustre, dyeing method and optional/additional requirements shall be tested to cover the respective types.

In order to cover ECO mark in the scope of licence, sample of each variety intended to be covered in the licence with ECO mark shall also be tested for the additional requirements for ECO mark.

The firm shall declare the types of PSY intended to be covered within the scope of their licence. The scope of the Licence may be restricted based on the Manufacturing capability and Testing facilities of the manufacturer

During the operation of the Licence, BO shall ensure that all the Varieties covered in the Licence are tested in rotation to the extent possible.

ANNEX B

List of Test Equipment

Major Test Equipment required to test as per Indian Standard

Sl. No.	Tests used in with Clause Reference	Test Equipment
1.	Identification and Cross Section (Cl. 5.2)	**Microscopic and dissolution test given in IS 667:** Compound Microscope (100X-500X), Dissecting Needles, glass slides, cover glasses, and cross sectioning device and laboratory reagents as per IS 667 or **Staining Test as per IS 667**: Mixture of dyestuffs (e.g. Shirlastain A, Detex, Fibre Stain etc.), Known Dyed Samples or **Determination of Melting Temperature as per Annex J of IS 16481**: Differential Scanning Colorimeter (DSC), Balance, capable of weighing to ± 10 µg
2.	Mean Linear Density(Denier/Tex)(Clause 6.1, Table 3)	For the purpose of this test any of the following apparatus may be used depending upon the availability- Any Special Balance Pan Balance - capable of measuring to an accuracy of 1 mg. Wrap Reel — having 1 372 m (1.5 yd) or 1 m girth andcapable of reeling known lengths of yarn Yarn Tensioning Device - Skein Gauge - The sensitivity of the skein gauge shall be sufficient to permit rejection of skeins falling outside ± 0.25percent tolerances.
3.	Twist Per metre, (Clause 6.1, Table 3)	Twist counter, Dissecting needle, Means for magnifying the specimen being tested., quipment for reeling laboratory sample skeins (optional) as per IS 832 (Part 1) Or Twist counter or twist tester as per IS 832 (Part 2)
4.	Single Yarn tenacity and Elongation (Clause 6.1, Table 3)	As per IS 1670:1991:- A single-strand tensile testing machine working on one of the following principles: a) Constant-rate-of-traverse (CRT), b) Constant-rate-of loading (CRL), and c) Constant-rate-of-extension (CRE), with clamps to grip the sample and means for adjusting the distance between the clamps and for application of pre-tension Distilled Water
5.	Count Strength Product, (Clause 6.1, Table 3)	Skein breaking load testing machine working on constant-rate-of-traverse (CRT) principle, with clamps to grip the sample and means for adjusting the distance between the clamps. Wrap-Reel - having a girth of l-372 m (1.5 yd) or 1 m and capable of reeling known length of yarn. Yarn Tensioning Device Skein Gauge - The sensitivity of the skein gauge shall be sufficient to permit rejection of skeins falling outside ± 0.25 percent tolerances.

6.	Yarn Hairiness Index (Clause 6.1, Table 3)	Hairiness Index tester as per Annex B of IS 17265
7.	Whiteness index of polyester spun yarn (Clause 6.1, Table 3)	a) Colorimeter instrument; b) Square standard tiles (white, blue, yellow, pink, grey and green) with the instruments; c) Working standard white square plate; d) Pressure device; e) Source of air at 2.10 kg/cm$_2$ ± 0.35 kg/cm$_2$ (regulated); f) Sample holder with glass cover plate and clear plastic disc; and g) Air blender.
8.	Moisture regain (Clause 6.1, Table 4)	- Precision Balance(L.C. – 0.1mg) - Stainless Steel Vessels - Hot Air Oven Capable of Maintaining at 110 ± 5°C - Forceps - Wrap Reel
9.	Isophthalic acid content (Clause 6.1, Table 4)	- PPE's like safety goggles, apron, surgical hand gloves - Gas chromatograph, - capillary column - Dispensette or pipette - Volumetric Flask - Beaker, Funnel, 50ml flask, - Heating Mental - AR grade Dimethyl Isophthalate, Benzyl Alcohol, Chloroform, Isopropyl Titnate, Dimethyl Suburate
10.	Water Soluble Matter (Clause 6.1, Table 4)	- Water Cooled Condensor - Distilled Water - Hot Air Oven - Flat Bottom Flasks
11.	Phosphorus Content(for flame retardant Yarn Only) (Clause 6.1, Table 4)	- Sulphuric Acid - 2000ml Beaker - Demineralized Water - 1000ml flask - Ammonium Molybdate - 500ml and 100ml Volumetric Flask - Hydroquinone - Sodium Sulphite - Zinc Oxide - Whatman Filter Paper No. 1 - Di-sodium Hydrogen Ortho Phosphate Dihydrate - Weighing Balance(LC- 1mg) - Hot Plate - Silica Crucible - Muffle Furnace - Pipettes-10ml and 05ml - UV Spectro-photometer
12.	UV Resistance(For UV Resistance Yarn Only) Clause 6.1, Table 4)	- Conditioning Chamber - Xenon Arc Type Apparatus equipped with inner and outer borosilicate filter glass - Tensile Testing m/c
13.	Anti-Microbial Activity Value (For anti-microbial yarn only) (Clause 6.2, Table 4)	Apparatus/Equipments as per IS/ISO 20743:- - Spectrophotometer - Incubator - Water baths - Mixer - Stomacher - Clean Bench - Washing Machine

		- Humidity chamber - Luminescence Photometer - Printing Apparatus - Refrigerator - Freezer - Balance - Filtering Apparatus - Pipette, Vials, Glass Bottles - Petri Dishes - Glass Rod - Anti Bumping Granules - Erlenmeyer Flask - Cutting template - Disposable Plastic Bag - Tweezers - Stainless Steel Cylinders - Metal Wire Basket - Aluminium Foil - Reciprocal Incubation Shaker - Autoclave - Reagents and Culture media as per clause 6 - Reference Strains as per clause 7
14.	Wettability of woven or knitted fabrics (about 150 gsm) made from the yarn, (For moisture management yarns only)	An apparatus consisting of a base on which are fixed: a) an arm which carries: 1) a boss holding a small burette which is provided preferably with a metal edge, that is, a tip of external diameter 1.2 mm; and 2) a housing containing an electrical lamp. b) a viewing ring which is adjustable for height corresponding to the length of the specimen to be examined. Wooden Embroidery Frame — 15 cm in diameter. Stop-Watch — reading correct to one-tenth of a second.. Burette Distilled water
15.	Wicking characteristic of woven or knitted fabrics (about 150 gsm) made from the yarn, (for moisture management yarns only)	• Woven fabric made out from 100 percent polyester spun yarns 2/30s Ne, plain weave, 150 g per square meter. Knitted fabric made out from 100 percent polyester spun yarns, 1/30s Ne, single jersey, 150 g per square meter. • Vertical Wicking Apparatus • Measuring Glass Beaker • Measuring Scale • Metallic Clip, about 3g of weight to hold the • specimen straight in water. • Vertical Stand, with clamp and platform • Distilled Water • Conditioning chamber
16.	Resultant count of yarn and CV percentage	Pan balance and weights accurate to 0.1 mg Drying oven capable of maintaining temperature of 105±3°C Wrap reel

16.	Freedom from Yarn Defects(Clause 6.3)	- Packing Table UV Light(Clause 6.3.4 and 6.3.7) - Vernier Calliper - Eye Piece Lens(Clause 5.3.15) - Bottom weights(1g to 15g) - Stop watch
17.	**Yarn Unevenness and Yarn Imperfections (Clause 6.4)**	Capacitance-Type Unevenness Testing Instrument with following accessories provided- - Package, Holders, Guides, Tension Devices and Take-up Mechanism - Recorder - Pretwisting arrangement -
18.	**Objectionable Faults (Clause 6.5)**	• Electronic Measuring Device – A capacitance or optical unit with guide alignment of the yarn in a straight path through the measuring zone. • Control Unit – A device that supplies the signal to operate the measuring device, and, also in turn receive the registration signal from the measuring device, stores the information received, responds to this information according to a predetermined setup and outputs computed data at the end of the test. • Winder – A power driven take-up device equipped with a winding drum of uniform diameter and capable of operating at constant take-up speed. • Yarn Tensioning Device – A unit for control of the yarn in the measuring zone so that the yarn travels in a straight path, free from kinks, without stretching the yarn
19.	**Commercial Mass, Clause 6.6.**	- Balance/Weighing instruments - Air tight vessels/Desiccator - Hot air oven/Ventilated air oven - Laboratory Reagents (for cleaning specimens)

15.	**Colour Fastness Properties of PSY**	- For Colour Fastness to Daylight(as per IS/ISO 105-B01 : 2014(Superseding IS 686 : 1985) •Source of Daylight •Reference materials •Exposure Rack •Opaque Cardboard •Grey Scale for Measuring change in colour or - For Colour Fastness to artificial light (as per - IS/ISO 105-B02 : 2014(Superseding IS 2454 :1985)) - Reference materials - Humidity test control fabric - Light Source (xenon arc lamp) - black-standard thermometer or a black-panel thermometer - Humidity chamber - Covers - Colour matching lamps - Assessment cabinet - Sample mounting card - Assessment mask - For Colour Fastness to Washing(as per IS/ISO 105-C10 : 2006 superseding IS 3361) • Suitable Mechanical Laundering Device • Weighing Balance with LC 0.01 grams • Mechanical Stirrer • Non-Corrodible (Stainless Steel) Balls, 6 mm dia • Hot plate • Polyester & Cotton Fabric • Standard Soap & Anhydrous Sodium Carbonate • Soap Solution • Grade 3 Water • Adjacent Fabric (Multifibre and Two Single Fibre) • Non-Dyeable Fabric • Sewing Machine • Grey Scale for Colour & Staining • Viewing Cabinet - For Colour Fastness to Dry heat treatments as per IS 4636: • Conditioning Chamber • Aluminium Foil, Thickness 0.001 to 0.002cm • Two Adjacent Fabric • Grey Scale for Colour & Staining • Graduated Scale • Hot pressing Machine • Loading Arrangement as per Fig 2 of IS 4636 - For Colour Fastness to perspiration as per IS/ISO 105-E04:2008(superseding IS 971) • Test Devices as per Clause 4.1 of IS/ISO 105-E04 • Oven maintained at (37±2) ºC • Alkaline Solution as per Clause 4.3 of IS/ISO 105-E04 • Acid Solution as per Clause 4.4 of IS/ISO 105-

		E04 • Adjacent Fabrics as per Clause 4.5 of IS/ISO 105-E04 • Non-Dyeable Fabric • Grey Scale for Assessing Change in Colour &Staining • Spectrophotometer or Colorimeter - For Colour Fastness to Rubbing as per IS/ISO 105-X12:2016 superseding IS 766 - Suitable Testing Device as per Clause 4.1 of IS/ISO 105 X12 - Cotton Rubbing Cloth - Soft-back waterproof abrasive paper - Grey Scale for Staining
16.	General Lab Conditions	- AC - Thermometer-Hygrometer(optional) - Humidity chamber with provisions to control temperature and relative humidity - Other required glasswares and accessories

The above list is indicative only and may not be treated as exhaustive.

ANNEX C

Scheme of Inspection And Testing

1. LABORATORY - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

The manufacturer shall prepare and implement a calibration plan for the test equipments.

2. TEST RECORDS – The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. PACKING AND MARKING – The Standard Mark as given in the Schedule of the licence shall be printed indelibly on each carton/package of polyester spun yarn provided always that the material somarked conforms to each requirement of the specification. The declared parameters as per Table 3 shall be provided in the form of a technical data sheet by either pasting on the package or provided separately linking it with lot/batch/merge no. on request for domestic supplies. Instructions for transportation and handling of the material shall also be provided by the manufacturer for proper care of the product

The spun yarn shall be wound over paper/plastic cones/bobbins/cheeses in any mass as agreed between the buyer and the seller. All packages shall be to be packed in pallets or cartons, properly strapped using polypropylene/PET straps. Packing materials should beroadworthy/airworthy/sea worthy as agreed to between the buyer and the seller. All woodenpallets are to be heat treated. All wooden/paper packing should be free from infestation/fungalgrowth (Container fumigation for domestic supply should be optional.)

Each carton/pallet of polyester spun yarn shall be marked with indelible ink, the following information:

a) Name and description of the material (see 5.2);
b) Designation of the material (see 5.1);
c) Commercial mass of each carton/pallet;
d) Manufacturer’ s name, address and trade-mark
(if available);
e) Lot/batch/merge number;
f) Month and year of manufacture; and
g) BIS Licence No. CM/L --.
h) BIS website details i.e. –“For details of BIS certification please visit www.bis.gov.in.
i) Any other information required by the law in force..

4. CONTROL UNIT – For the purpose of this scheme, a control-unit is defined as the entire quantity of 100 Percent polyester spun gray and white yarn, of each type and variety processed under similarconditions in a single day.

5. LEVELS OF CONTROL - The tests as indicated in column 1 of Table 1 and the levels of control in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

6. REJECTIONS – 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. Such material shall in no case be stored together with that conforming to the specification

TABLE 1 : LEVELS OF CONTROL

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or)S: Sub- contracting permitted	Levels of Control		
Cl.	Requirement	Test Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
4.1, 4.2	Cross-Section	4.1,4.2	IS 17265	S	6	Each consignment (in case fibre is procured from outside) Or Each shift	Samples of each type and variety to be drawn and tested.
5.2	Identification and Description		IS 667, Annex J of IS 16481	S	06 Bobbins	Each month	In addition, each consignment of raw material shall be accompanied by test certificate of supplier
6.1	Physical Requirements of Polyester Spun Yarn (Table 3)						
i)	Mean linear density		IS 1315	R	6 bobbins	Each Control Unit	Samples of each type and variety to be tested
ii)	Twist per metre,		IS 832 (Part 1) or IS 832 (Part 2)	R	6 bobbins	Each Control Unit	-do-
iii)	Single yarn tenacity (RKM)		IS 1670	R	6 bobbins	Each Control Unit	-do-

iv)	Elongation		IS 1670	R	6 bobbins	Each Control Unit	-do-
v)	Count strength product (CSP),		IS 1671	R	6 bobbins	Each Control Unit	-do-
vi)	Yarn hairiness index	Annex B	IS 17265	S	6 bobbins	Once in 3 months	-do-
vii)	Whiteness index of polyester spun yarn	Annex J	IS 17263	S	06 bobbins	Once in 3 months	-do-
6.1, Table 4	Chemical Requirements of Polyester Spun						
i)	Moisture regain,	Annex C	IS 17265	R	2 bobbins	Each Control Unit	Samples of each type and variety tobe drawn
ii)	Isophthalic acid (IPA) content	Annex C	IS 16481	**S**	06 Bobbins	Each month	-do-
iii)	Water soluble matter		IS 3456	S	06 Bobbins	Once in a month	-do-

iv)	Phosphorus content (For fire retardant yarn only)	Annex D	IS 17265	S	6 bobbins	Once in a month	-do-
v)	Ultraviolet resistance, 500 h Percent retained strength (For UV resistant yarn only)		IS 13162 (Part 2)	S	6 bobbins	Once in a month	-do-
vi)	Anti-microbial activity value (For anti-microbial yarn only)		IS/ISO 20743	S	6 bobbins	Once in a month	-do-
vii)	Wettability of woven or knitted fabrics (about 150 gsm) made from the yarn (For moisture management yarns only)		IS 2349	S	6 bobbins	Once in a month	-do-
viii)	Wicking characteristic of woven or knitted fabrics (about 150 gsm) made from the yarn, height in cm, *Min* (for moisture management yarns only)	Annex E	IS 17265	S	6 bobbins	Once in a month	-do-
6.2.2	resultant count of yarn and CV percentage of resultant count		IS 1315	R	6 bobbins	Each Control Unit	-do-
6.2.3	breaking strength of folded yarn		IS 1671	R	6 bobbins	Each Control Unit	-do-

6.2.3	count strength product of folded yarn	6.2.3	IS 17265	R	6 bobbins	Each Control Unit	-do-
6.2.4	Tolerance on ply twist in folded yarn		IS 832	R	6 bobbins	Each Control Unit	-do-
6.3	Freedom from Yarn Defects	6.3	IS 17265	R	Each Bobbins	Each Control Unit	-do-
6.4	Yarn Unevenness and Yarn Imperfections		IS 7703 (Part 5)	R	06 Bobbins	Each control unit	-do-
6.5	Objectionable Faults	Annex F	IS 17265	S	06 Bobbins	Once in a month	-do-
6.6	Commercial Mass		IS 7703 (Part 3)	R		Each consignment	-do-
6.7	Colour Fastness Properties of PSY						
i)	Light Change in colour		IS/ISO 105-B01 or IS/ISO 105-B02	**S**	06 Bobbins	Once in a Year*(See Note-3)	Sample of each type and variety to be drawn and tested

ii)	Washing test 2 Change in colour Staining		IS/ISO 105-C10	**R**	06 Bobbins	Once in a week	-do-
iii)	Rubbing Dry Wet		IS/ISO 105-X12	**R**	06 Bobbins	Once in a week	-do-
iv)	Perspiration (acidic and alkaline) Change in colour Staining		IS/ISO 105-E04	**R**	06 Bobbins	Once in a week	-do-
6.8	Additional Requirements for Ecomark (Optional)						
i)	Free and releasable formaldehyde		IS 14563 (Part 1) and IS 14563 (Part 2)	S	One	Once a year	Only for Eco marked material
ii)	Extractable heavy metals by artificial Acidic sweat/saliva	Annex A	IS 15651	S	One	Once a year	-do-
iii)	Pentachlorophenol	Annex B	IS 15651	S	One	Once a year	-do-
iv)	Pesticides (sum parameter)	Annex D	IS 15651	S	One	Once a year	-do-

v)	Banned pesticides	Annex D	IS 15651	S	One	Once a year	-do-
vi)	Banned azo colourants		IS 15570	S	One	Once a year	-do-

Note-1: Whether test equipment is required or sub-contracting is permitted in column 2 shall be decided by the Bureau and shall be mandatory. Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empaneled by the Bureau.

Note-2: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification for approval to BO head.

*Note-3:In the first instance, samples for each colour and shade shall be drawn and tested either in laboratory recognized by the Bureau or Government laboratories empaneled by the Bureau or in the in-house lab of manufacturer, in case if facility exists. Those colours and shades shall be marked only if they conform to the relevant requirement of the specification. Afterwards, an undertaking to the effect that there shall be no change in brand, colour, shade and processing conditions shall be obtained from the manufacturer. However, two samples drawn from each colour & shade shall be got testedonce a year in an independent laboratory or in laboratory of manufacturer, in case if facility exists.