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CCS W 04



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 33283-2016

**Textiles -- Tests for colour fastness -- Colour fastness to
industrial laundering
(English Translation)**

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1 Scope

This Standard specifies methods for determining the colour fastness to industrial laundering of various types of textiles.

This Standard applies to a cycle test, approximates to the colour loss and cross staining resulting from chemical and/or mechanical action achieved after multiple (5 ~ 10) industrial launderings.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 250, Textiles - Tests for colour fastness - Grey scale for assessing change in colour (GB/T 250-2008, ISO 105-A02:1993, IDT)

GB/T 251, Textiles - Tests for colour fastness - Grey scale for assessing staining (GB/T 251-2008, ISO 105-A03:1993, IDT)

GB/T 6151, Textiles - Tests for colour fastness - General principle of testing (GB/T 6151-2016, ISO 105-A01:2010, MOD)

GB/T 6529, Textiles - Standard atmospheres for conditioning and testing (GB/T 6529-2008, ISO 139:2005, MOD)

GB/T 7568.2, Textiles - Tests for colour fastness - Standard adjacent fabrics - Part 2:

Cotton and viscose

GB/T 7568.4, Textiles - Tests for colour fastness - Specification for polyester adjacent fabric (GB/T 7568.4-2002, ISO 105-F04:2001, MOD)

GB/T 7568.7, Textiles - Tests for colour fastness - Standard adjacent fabrics - Part 7:

Multifibre (GB/T 7568.7-2008, ISO 105-F10:1989, MOD)

GB/T 32598, Textile - Tests for colour fastness - Method for the instrumental assessment of staining of adjacent fabrics (GB/T 32598-2016, ISO 105-A04:1989, MOD)

5.2 Mechanical stirrer, minimum rotation speed of $(1\ 100 \pm 100)$ r/min, or other devices that can obtain the same stirring effect, to ensure full dispersion of substances in the container and prevent precipitation.

5.3 Corrosion-resistant stainless-steel balls, approximately 6.0 mm in diameter.

5.4 Adjacent fabrics, either 5.4.1 or 5.4.2.

5.4.1 Multi-fiber adjacent fabrics, conforming to type (TV) of GB/T 7568.7.

5.4.2 Two single-fiber adjacent fabrics, one cotton and one polyester, in accordance

with GB/T 7568.2 and GB/T 7568.4, or as otherwise specified between interested parties.

5.4.3 If required, a non-dyeable fabric (e.g. polypropylene) (for example, to stabilize

some knitted specimens that are easily deformed or loosely structured).

5.5 Grey scale for assessing change in colour, in accordance with GB/T 250, or instrument for assessing change in colour of the specimens, in accordance with GB/T

32616; grey scale for assessing staining, in accordance with GB/T 251, or instrument for assessing the degree of staining of adjacent fabrics, in accordance with GB/T 32598.

5.6 Flat-iron (if ironing treatment is required), not exceeding (2.5 ± 0.1) kg, and capable of providing the temperature given in 7.2.5.

6.1 Fabric specimen

Take two test specimens of 80 mm x 160 mm, one in the warp direction and the other in the weft direction. For knitwear, prepare two specimens. Weigh the specimens to two decimal places (in grams) in mass. Fold each specimen (see Figure 1) with the right side facing out.

Use dimensionally stable thread, and sew along the two sides to form a bag. Put 25 stainless steel balls (5.3) in each bag, and then seal by sewing.

6.2 Adjacent fabrics

Select the adjacent fabrics from any one of a) and b).

a) Cut a type-TV multi-fiber adjacent fabric (5.4.1) of 100 mm x 80 mm; weigh it to two decimal places (in grams).

b) Cut two single-fiber adjacent fabrics (5.4.2) of 100 mm x 80 mm; weigh them to two decimal places (in grams).

Note: Do not sew between the two fabric test specimens and the adjacent staining fabrics to allow friction between the fabrics.

During the assessment, if a flat iron is used, the specimen must be placed in the standard atmosphere for 24 h before the assessment; otherwise, it must be placed in the standard atmosphere specified in GB/T 6529 for at least 4 h before the assessment.

7.2.6 Use the grey scale (5.5) or the instrument to access against the unwashed fabric, the change in colour of the specimen and the staining of the adjacent fabric.

Any change in color at the fold line shall be assessed.

7.2.7 If agreed upon between parties, to simulate multiple industrial launderings, the

same specimen may be subjected to multiple wash cycles.

8 Test report

The test report shall include the following:

- a) reference to this Standard;
- b) the grey scale or instrumental ratings for the change in colour of the specimen and for the staining of the adjacent fabrics;
- c) the test number used (as listed in Table 1);
- d) whether souring treatment is carried out according to 7.2.3;
- e) drying method, air drying or ironing (giving the pressing temperature);
- f) the number of wash cycles (see 7.2.7);
- g) details of the non-dyeable fabric, if used;
- h) detailed description of the specimen;

i) testing authority and date of testing.

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