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

GB/T 45044-2024

Textiles - Tests for colour fastness - Colour fastness to bleeding

纺织品 色牢度试验 耐渗色色牢度

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Foreword

This Document was drafted as per the rules specified in GB/T 1.1-2020 Directives for Standardization - Part

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1 Scope

GB/T 45044-2024 gives the test for colour fastness to bleeding in textiles. Bleeding is the failure that ruins a garment in a single wash and generates most consumer complaints about colour: dye leaves a wet fabric and transfers to whatever is pressed against it, so a dark panel stains a light one in the same garment and a red item ruins a whole load. It is distinct from the fastness tests done in a laundering machine, because it is about dye leaving the fibre into water under pressure and contact rather than about the full wash cycle. The standard sets the principle, the apparatus and materials, the specimen, the test environment, the test procedure and the test report. It takes effect on 1 July 2025.

This Document describes the method for determining the color fastness to bleeding of textile products. This Document is applicable to all types of colored textile products.

2 Normative References

The provisions in following documents become the essential provisions of this Document through reference in this Document. For the dated documents, only the versions with the dates indicated are applicable to this Document; for the undated documents, only the latest version (including all the amendments) is applicable to this Document.

GB/T 251 Textiles - Tests for color fastness - Grey scale for assessing staining

GB/T 6529 Textiles - Standard atmospheres for conditioning and testing

GB/T 6682 Water for analytical laboratory use - Specification and test methods

GB/T 7568 (all parts) Textiles - Tests for color fastness - Standard adjacent fabric

GB/T 13765 Textiles - Tests for color fastness - Specification for STANDARD adjacent fabric of linen and ramie

3 Terms and Definitions

For the purposes of this Document, the following terms and definitions apply.

3.1 Color fastness to bleeding The ability of colorant to resist the penetration of water when the colored textile is wet.

4 Principle

The specimen is sewn with the specified adjacent fabric to form a combined specimen (regular 2 - Support; 3 - Lifting beam; 4 - Clamp; 5 - Combined or independent specimen; 6

- Beaker; 7 - Test solution; 8 - Fixing screw; 9 - Adapter. Figure 1 - Schematic diagram of the specimen holder

5.2 Reagents or materials

5.2.1 Water, in accordance with Grade-3 water in GB/T 6682. 5.2.2 0.05% non-ionic surfactant aqueous solution. Take polyethylene glycol trimethylnonyl ether (CAS No. 68131-40-8, HLB value 12~13) and use Grade-3 water to prepare a 0.05% (volume fraction) test solution. The test solution shall be prepared for immediate use.

5.2.3 Gray scale for staining assessment. In accordance with the requirements of GB/T 251.

5.2.4

b) is two pieces.

6.2 Preparation of adjacent fabrics Cut one or two pieces of single fiber adjacent fabrics with a size of (200 ± 2) mmx (25 ± 2) mm (weftxwarp).

6.3 Combined specimens Overlap half of the specimen in the length direction (at 15 mm) with the short side of the standard adjacent fabric at 15 mm; and sew a line (white dacron thread is used for the sew line) at 5 mm from the upper and lower ends of the overlapped part to make a combined specimen (see Figure 2). Select the adjacent fabric according to

5.2.4 to form one or two independent combined specimens as follows:

a) The specimen is sewn with the cotton standard adjacent fabric to form a combined specimen;

6.1 Preparation of specimen

6.1.1 If the sample is a fabric, cut one or two pieces of specimens with a size of (30 ± 2) mmx (25 ± 2) mm (weftxwarp or transversexlongitudinal). Fabrics of different colors that meet the specimen size need to be sampled and prepared separately.

6.1.2 If the sample is a yarn, weave it into a fabric and cut one or two pieces of specimens with a size of (30 ± 2) mmx (25 ± 2) mm.

6.1.3 If the sample is loose fiber, comb and press a sufficient number of fibers to form one or two pieces of thin sheets with a size of (30 ± 2) mmx (25 ± 2) mm; clamp and sew them to the undyed fabric on one side. NOTE. For adjacent fabrics, the specimen selected in