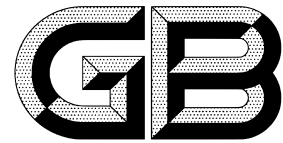


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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 3921-2008

Replacing GB/T 3921.1~3921.5-1997

**Textiles - Tests for Colour Fastness - Colour Fastness to
Washing with Soap or Soap and Soda**

纺织品 色牢度试验 耐皂洗色牢度

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1 Scope

This Standard specifies methods for determining the colour fastness to washing of all kinds of textiles that are commonly used in households, It includes 5 type of tests on different washing procedures from mild to severe procedure.

This Standard is only used to determine the effect of washing on the colour fastness of the textile. It is not intended to reflect the result of the comprehensive laundering procedure.

2 Normative References

The following normative documents contain provision which, through reference in this text, constitute the provisions of this Standard. For dated reference, subsequent amendments (excluding amending error in the text) or revisions of these publications do not apply. However, all parties who enter into an agreement according to this Standard are encouraged to study whether the latest edition of the normative document is applicable. For undated references, the latest edition of the normative document referred to applies.

GB/T 6682 Water for Analytical Laboratory Use - Specification and Test Methods (GB/T 6682-1992, ISO 3696: 1987, NEQ) GB/T 7568.4 Textiles - Tests for Colour Fastness - Specification for Polyester GB/T 13765 Textiles - Tests for Colour Fastness - Specification for Standard Adjacent Fabric of Linen and Ramie ISO 105-F07 Textiles - Tests for colour Fastness - Part F07: Specification for Secondary Acetate Adjacent Fabric

3 Principle

A specimen of the textile in contact with one or two specified adjacent fabrics is mechanically stirred under specified conditions of time and temperature in a soap, or soap and soda ash solution, then rinsed and dried. The change in colour of the specimen and the staining of the adjacent fabric, or fabrics, are assessed with reference to the original fabric, either with the grey scales or instruments.

4 Apparatus

assembly is rotated at a frequency of (40 ± 2) r/min. The temperature of the water bath is thermostatically controlled to maintain the test solution within $\pm 2^\circ\text{C}$ of the prescribed temperature.

Other mechanical devices may be used for this test, provided that the results are identical with those obtained by the apparatus described in 4.1. Be aware of possible contamination (see the note in 7.2).

4.2 Balance: accurate to ± 0.01 g.

4.

5 Reagents and Materials

The soap shall be free from fluorescent brightening agents.

5.2 Sodium carbonate anhydrous (Na_2CO_3). 5.3

Soap solution: containing 5g of soap (5.1) per liter of water (5.4), for test conditions A and B; containing 5g of soap (5.1) and 2g of sodium carbonate (5.2) per liter of water (5.4), for test conditions C, D and E.

It is recommended to vigorously disperse the soap using a mixer in Grade 3 water at $(25 \pm 5)^\circ\text{C}$ and stir for (10 ± 1) min.

5.4 Grade 3 water: complying with GB/T 6682.

5.5 Adjacent fabrics (see GB/T 6151): It shall be selected according to either 5.5.1 or 5.5.2. Multifibre adjacent fabric: complying with GB/T 11404, according to the temperature used: - Multifibre adjacent fabric containing wool and acetate (for tests at 40°C and 50°C . In certain cases, it may be used for test at 60°C , to be indicated in the test report); and in all tests at 95°C). The first piece of adjacent fabrics shall be made of the same kind of the fibre as that of the textile to be tested. The second piece shall be made of the fibre as indicated in Table 1. If the test specimen is a blending or intertexture, then the first piece shall be made of main content of fiber; and the second piece shall be made of secondary content of fiber or as otherwise specified. 5.6 A piece of non-dyeable fabric (e.g. polypropylene), if required. 5.7 Grey scales: for assessing change in colour and staining; complying with GB 250 and GB 251.

6 Test Specimen

6.1 If the textile to be tested is fabric, the composite-specimen shall be prepared according to one of the following methods:

adjacent fabric next to the face side of the specimen.

6.2 Yarn may be knitted into fabric and tested in this form. When yarns or loose fibres are to be tested, take the yarn or loose fibres of which the mass is approximately equal to one-half of the combined mass of the adjacent fabrics. Prepare the composite-specimen according to one of the following methods:

- a) Place it between a $100\text{mm} \times 40\text{mm}$ piece of the multifibre fabric and a piece of the non-dyeable fabric (5.6). Sew them along all four sides (see GB/T 6151).
- b) Place it between 2 single-fibre adjacent fabrics with specification of $(40 \pm 2) \text{ mm} \times (100 \pm 2) \text{ mm}$. Sew along all four sides.