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

GB/T 6151-2016

**Textiles -- Tests for colour fastness -- General principles of
testing**

(English Translation)

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Foreword

This Standard is drafted in accordance with the rules given in GB/T 1.1-2009.

This Standard replaces GB/T 6151-1997 "Textiles - Tests for colour fastness - General principles of testing".

Compared with GB/T 6151-1997, the main changes in this Standard are as follows.

- DELETE the ISO foreword (see ISO foreword of 1997 edition);
- DELETE the number of subclauses in Clause 1 and Clause 5, to be the same as ISO;
- ADJUST "Any loose fibres from the specimen adhering to the adjacent fabrics shall be removed before assessment of staining." in the scope TO Clause 14 (see 14.1 of this Standard, 1.2 of 1997 edition);

- DELETE GB/T 11404 and ADD GB/T 8431, GB/T 14576, GB/T 16991 and CIE 51 in the "Normative references".
- MODIFY the heading of Clause 4; ADD "Introductory" and "Terms and definitions" in the headings of the principal clauses;
- ADD Clause 7 "Terms and definitions", followed by subsequent clauses;
- ADD 9.1 in Clause 9 and DELETE note 1 (see clause 8 of 1997 edition);
- DELETE the provisions for adding seam allowances in preparation of composite specimens (see 9.3.2.4 and 9.3.3.4 of 1997);
- ADD "For standard and alternative standard atmospheres for conditioning and testing, see GB/T 6529." (see 11.2);
- ADD the provision for mask in accessing color fastness (see Clause 15);
- ADD information on the test report (see Clause 16).

This Standard uses the re-drafting method to amend ISO 105-A01.2010 "Textiles - Tests for colour fastness - Part A01. General principles of testing". Main differences between this Standard and ISO 105-A01.2010 are as follows.

- DELETE the "Table of contents" and "Foreword";
- ADJUST the bibliography TO Clause 2 and the ISO standard is replaced by the corresponding national and industry standards;

Textiles - Tests for colour fastness

- General principles of testing

1 Scope

This Standard provides general information about the methods for testing colour fastness of textiles for the guidance of users. The uses and limitations of the methods are pointed out, several terms are defined, an outline of the form of the methods is given and the contents of the clauses constituting the methods are discussed.

Procedures common to a number of the methods are discussed briefly.

Colour fastness means the resistance of the colour of textiles to the different agents to which these materials may be exposed during manufacture and their subsequent use.

The change in colour and staining of undyed adjacent fabrics are assessed as fastness ratings. Other visible changes in the textile material under test, for example surface effects, change in gloss or shrinkage, are considered as separate properties and reported as such.

This Standard can be used not only for assessing colour fastness of textiles but also for assessing colour fastness of dyes. When the method is used for assessing colour fastness of dyes, the dye is applied to the textile in specified depths of colour by stated procedures and the textile is then tested in the usual way.

Generally, individual methods are concerned with colour fastness to a single agent, as the agents of interest in a particular case, and the order of application, will generally vary. It is recognized that experience and future developments in practice can justify procedures in which two or more agents are combined.

The conditions in the tests have been chosen to correspond closely to treatments usually employed in manufacture and to conditions of ordinary use. At the same time, they have been kept as simple and reproducible as possible. As it cannot be hoped that the tests will duplicate all the conditions under which textiles are processed or used, the fastness ratings are interpreted according to the particular needs of each user. They provide, however, a common basis for testing and reporting colour fastness.

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 (ISO 105-A02.1993, IDT)

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

GB/T 6529 Textiles - Standard atmospheres for conditioning and testing (ISO139.2005, MOD)

GB/T 6682 Water for analytical laboratory use - Specification and test methods (ISO 3696.1987, MOD)

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

7 Multifibre (ISO 105-F10.1989, MOD)

GB/T 8426 Textiles - Testing method for colour fastness - Colour fastness to light. Daylight (eqv ISO 105-B01.1994)

GB/T 8427 Textiles - Tests for color fastness - Color fastness to artificial light. Xenon arc fading lamp test (ISO 105-B02.1994, MOD)

GB/T 8429 Textiles - Tests for colour fastness - Colour fastness to weathering. Outdoor exposure (eqv ISO 105-B03.1994)

GB/T 8430 Textiles - Tests for colour fastness - Colour fastness to artificial weathering. Xenon arc fading lamp test (eqv ISO 105-B04.1994)

GB/T 8431 Textiles - Tests for colour fastness - Detection and assessment of photochromism (eqv ISO 105-B05.1993)

GB/T 14576 Textiles - Tests for colour fastness - Colour fastness to light of textiles wetted with artificial perspiration (ISO 105-B07.2009, MOD)

GB/T 16991 Textiles - Test for colour fastness - Colour fastness and ageing to artificial light at high temperatures. Xenon arc (ISO 105-B06.1998, MOD)

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

GB/T 32616 Textiles - Tests for colour fastness - Instrumental assessment of change in colour for determination of grey scale rating (ISO 105-A05.1996, MOD)

CIE 51 A method for assessing the quality of daylight simulators for colorimetry

Yarns to be tested may be knitted into fabric, from which a specimen is taken. They may also be wound parallel, for example on a U-shaped wire frame. For dry treatments, close winding on a card is recommended. For certain wet treatments without accompanying undyed adjacent material, hanks of yarn tied at both ends may be used. The method of preparation used shall be specified in the test report (see Clause 16).