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

GB/T 730-2008

**Textiles -- Tests for colour fastness -- Quality control of Blue
wool reference materials 1 to 7**

(English Translation)

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Foreword

This Standard uses the re-drafting method to modify and adopt ISO 105-B08.1995 Textiles - Tests for colour fastness - Part B08.Quality control of blue wool reference materials 1 to 7 (English version).

The main differences between this Standard and ISO 105-B08.1995 are as follows.

- Replace international standards in normative references by national standards, add FZ/T 01047, and remove ISO 105-A01.1994 and ISO 105-B01.1994;
- Remove the foreword of ISO 105-B08.1995;
- Combine Appendix A and Appendix B of ISO 105-B08.1995 into Appendix A, and adjust it from an informative appendix to a normative appendix;
- Add Appendix B to describe blue wool reference materials and the names of dyes of various grades;
- Change the relevant section of conditions of use in 4.2 computers and related software from 6.2.2 to 6.2.4;
- Change 6.2.2 set the light fastness tester to normal blackboard temperature and effective humidity conditions according to 6.2a) of GB/T 8427-2008 to 6.1a);

-- Add Note 4;

-- Remote Notes 4, 5, 6 and 11 of ISO 105-B08.1995.

This Standard replaces GB 730-1998 Textiles - Tests for colour fastness - Blue wool standards for colour fastness to light and weathering. The main changes between this standard and GB 730-1998 are as follows.

-- Change the standard name to Textiles - Tests for colour fastness - Quality control of blue wool reference materials 1 to 7;

-- Adjust it from a mandatory standard to a recommended standard;

-- Use "blue wool reference materials" instead of "blue wool standards";

-- Use A1 to A7 in Appendix A of the previous version of the standard as the main text;

-- In normative references, add GB/T 250, GB/T 8424.3 and FZ/T 01047, and remove GB/T 8426, GB/T 8429 and GB/T 8430;

-- In light source box for instrument rating, add the description "see FZ/T 01047";

Textiles - Tests for colour fastness - Quality control of blue wool reference materials 1 to 7

1 Scope

This Standard describes the quality control method for blue wool reference materials in batches in tests on colour fastness to light and weathering of textiles.

This Standard specifies an instrumental method for assessing the dyeing uniformity of blue wool reference materials and two methods for assessing fading performance.

visual evaluation and instrumental evaluation. The blue wool reference materials to be tested shall be compared with the reference blue wool reference materials.

For relevant acceptance criteria and storage conditions, see Appendix A.

This Standard applies to all dyed wool fabrics used as blue wool reference materials (1 ~ 7).

Note 1: This Standard does not apply to blue wool reference materials 8, because the time required for fading from 8 to the gray scale 4 and 3 for assessing change

in colour is too long, and alternative methods are being considered for its use.

Note 2: The test method is based on GB/T 8427. This is because this method is recognized as the most widely used test method for color fastness to light and can represent all test methods that specify the use of blue wool reference materials.

Note 3: For blue wool reference materials and names of dyes of various grades, see Appendix B.

2 Normative references

The terms in the following documents become the terms of this Standard by reference to this Standard. For dated references, all subsequent amendments (not including errata content) or revisions do not apply to this Standard. However, parties to agreements that are based on this Standard are encouraged to study whether the latest versions of these documents can be used. For undated references, the latest edition applies to this Standard.

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

Set the light fastness tester (4.3) to normal blackboard temperature and effective humidity conditions according to 6.1a) of GB/T 8427-2008; operate according to 7.1 of GB/T 8427-2008; use the humidity test-control specimen (4.6).

Place the assembled test sample in the light fastness tester and expose it until the color difference between the exposed part and the unexposed part of the reference sample reaches level 4 as assessed by the gray scale for assessing change in colour (4.8). This assessment shall be performed visually by an experienced assessor in the light box for rating (4.9).

At this time, cover the left third of the test sample and the middle part AB with another opaque covering CD (second covering), see Figure 2b); continue to expose until the color difference between the exposed part and the unexposed part of the reference sample reaches level 3 as assessed by the gray scale for assessing change in colour (4.8);

then, terminate the exposure.

Note 6: For visual assessment during exposure, only one rater needs to decide when to add the second covering and when to terminate the exposure.

6.2.3 Visual assessment of fading performance

The visual assessment shall be conducted by at least three experienced raters on two separate days. Assess the discoloration degree of the faded and unfaded parts of the sample using the gray scale for assessing change in colour (4.8) in the light source box for rating (4.9).

Repeat the above assessment for the reference sample.

6.2.4 Instrumental assessment of fading performance

Adjust the spectrophotometer to a small aperture; adjust the light beam to include specular reflection light and, if applicable, UV light, use D65 illuminant and a 10° observer.

Note 7: If the above measurement conditions cannot be achieved, the conditions used must be reported [see Chapter 7 e)].

Measure and record the reflectance values of the corresponding wavelength range on all three exposed and unexposed surfaces of the two test samples and one reference sample on the exposure card.

Use the CMC (l.c) color difference formula (see GB/T 8424.3); set both the lightness coefficient (l) and the chroma coefficient (c) to 1 (i.e., CMC 1.1). For each of the two test samples and one reference sample, compare the unexposed part with the exposed part that has reached level 4 and level 3 as assessed by the gray scale for assessing change in colour (4.8); calculate the color difference ΔE_{cmc} .

Appendix A

(Normative)

Acceptance criteria and storage conditions

A.1 Acceptance criteria

The indicators for judging whether the test fabric can be used as a blue wool reference