



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

GB/T 8427-2019

**Textiles - Tests for color fastness - Color fastness to artificial
light: Xenon arc**

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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 8427-2008 "Textiles - Tests for color fastness - Color fastness to artificial light. Xenon arc fading lamp test". Compared with GB/T 8427-2008, the main changes of this Standard are as follows.

- Adjust the note in Clause 1 of the previous standard to the note in Clause

3 of this Standard;

- Delete the normative reference GB/T 8426; replace FZ/T 01024 with GB/T 32616; ADD references to GB/T 730, ISO 105-B01.2014 and ISO 9370;
- Delete "For white (bleached or optically brightened) textiles, the whiteness

change of the test specimen is compared with the blue wool reference material to evaluate the color fastness" (see Clause 3 of the 2008 edition);

- ADD a clause of "Principle" (see Clause 4);
- ADD "The blue wool references 1 to 8 used in this test shall meet the quality requirements specified in GB/T 730." (see 5.1.2);
- Delete the content of humidity-test control fabric (see 4.1.3 of the 2008 edition);
- Adjust "the content of the apparatus, does not distinguish in detail between air-cooled and water-cooled" (see 5.2; 4.2 of the 2008 edition);
- ADD "tolerance of irradiance" (see 5.2.1.5);
- Delete 5.3 (see 5.3 of the 2008 edition);
- Adjust the exposure conditions (see Clause 7);
- Refine the effective humidity adjustment steps (see 8.2);
- ADD preliminary assessment of test specimens (see 8.3.2.4);
- ADD a way to replace the original cover with an enlarged cover (see 8.3.2.7, 8.3.3.5, 8.3.3.6, 8.3.4.4 and 8.3.5.4);
- Modify the L9 corresponding to the light fastness 8 TO L8 (see 8.3.2.9;

7.2.2.4 of the 2008 edition);

- Modify the L4 corresponding to the light fastness 6 TO L5 (see 8.3.3.6;

7.2.3.4 of the 2008 edition);

- Refine the test procedures of Method 3; INCREASE from 2 contrast blue wool references to 3 blue wool references (see 8.3.4; 7.2.4 of the 2008 edition);
- Modify the rating stage in Method 4; CHANGE from "grey scale grade 4 and/or 3" to "grey scale grade 4 and 3" (see 8.3.5; 7.2.5 of the 2008 edition);
- Modify "based on the contrasts equal to grey scale grade 4 and grey scale grade 3 (5.2.9)" (see 9.1; 8.1 of the 2008 edition);
- Modify "a rating of 'less than 1' (or 'less than L2')" (see 9.3; 8.3 of the 2008

edition);

- ADD reporting of assessment result of each period [see Clause 10 c) and d)];
- Delete the contents of Annexes A, B and C of the previous standard and integrate and update to Annex C of this Standard;
- Adjust Annex D of the previous standard to Annex A of this Standard;
- Adjust Annex E of the previous standard to Annex B of this Standard;
- ADD Annex D;
- ADD Annex E.

This Standard uses the redraft law to modify and adopt ISO 105-B02.2014 "Textiles - Tests for color fastness - Part B02.Color fastness to artificial light. Xenon arc fading lamp test".

Compared with ISO 105-B02.2014, the structural changes of this Standard are as follows.

- EXCHANGE the positions of Clause "Principle" and Clause "Terms and definitions";
- Delete the subclause number under 5.2.1.4, to avoid further sub-articles under the untitled article;
- Delete the subclause number under 5.2.1.5, to avoid hanging paragraphs and further sub-articles under the untitled article;
- Adjust "Annex D" to this Standard "Annex A", "Annex C" to this Standard "Annex B", "Annex A" to "Annex C", and "Annex B" to "Annex D".

The technical differences between this Standard and ISO 105-B02.2014 and their reasons are as follows.

- As for the normative references, this Standard has adjusted with technical differences, to adapt to the technical conditions of China. The adjustments are mainly reflected in Clause 2 "Normative references". The specific adjustments are as follows.

- ? Replace ISO 105-A02 with GB/T 250 which is identical to the international standard;
- ? Replace ISO 105-B08 with GB/T 730 which modifies and adopts the international standard;
- ? Replace ISO 105-A01 with GB/T 6151 which modifies and adopts the international standard;
- ? Replace ISO 3696 with GB/T 6682 which modifies and adopts the international standard;
- ? Replace ISO 105-B05 with GB/T 8431 which is equivalent to the international standard;
- ? Replace ISO 105-A05 with GB/T 32616 which modifies and adopts the international standard;
- ? ADD reference to FZ/T 01047;
- ? Delete the reference to CIE 51;
- ADD footnote d to Table 2;
- Amend "If the necessary contrast in 8.2.5 is not achieved" in 8.2.7 to "If the necessary contrast in 8.2.6 is not achieved";
- In Clause 10 c) and d), where the difference between the individual assessments of the periods exceeds one half grade, change the remark "grey scale grade of blue reference" to the remark "specific period"; and, add the reporting of the mean assessment result of color fastness to light;
- In Clause 10 d), delete the reporting of reference sample; in e), delete the reporting of blue wool reference;
- ADD the descriptions for Figure D.1 and Figure D.2.

This Standard has made the following editorial change.

- CHANGE the standard name to "Textiles - Tests for color fastness - Color fastness to artificial light. Xenon arc".

Attention is drawn to the possibility that some of the elements of this document