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

GB/T 30669-2014

**Textiles - Tests for colour fastness - Colour fastness to light
yellowing**

纺织品 色牢度试验 耐光黄变色牢度

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Quarantine;
Standardization Administration of the PRC**

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. The standard proposed by China Textile Industry Association. The standard basis by the National Textile Standards Technical Committee of Standardization Technical Committee (SAC/TC209/SC1) centralized. This standard was drafted. Fiber Inspection Bureau of Fujian Province, China Textile Standard (Beijing) Inspection and Certification Center Co., Ltd. Joeone, Ba Jin Men (Shanghai) Co., Ltd. The main drafters of this standard. Yu Xuefeng, Zhang Hui, Tony Lin, Xu Jingyun. Textiles Tests for color fastness light yellow color fastness

1 Scope

China's national test method for colour fastness to light yellowing in textiles. It specifies a method for determining the yellowing of textile materials on exposure to ultraviolet radiation, and it applies to white textile materials of all kinds, with light-coloured textiles able to use it as a reference. Yellowing under ultraviolet light is the specific failure mode of a white textile, and it is a different problem from ordinary fading. A dyed fabric loses colour on exposure; a white one gains it, developing a yellow cast that is immediately visible against any adjacent white and that no amount of washing removes. The cause is usually not the fibre but what was put on it: optical brightening agents, which work by absorbing ultraviolet light and re-emitting it as blue, degrade under exactly the radiation they are designed to absorb, and once degraded they stop masking the fibre's natural yellowness and may themselves become yellow. Residues of finishing agents, softeners, antioxidants and certain resin treatments do the same. The commercial exposure is direct: white shirts, sportswear, bedding, towels and white trainers are shipped, warehoused and displayed under lighting and daylight, and a garment that has yellowed on the shelf is unsaleable at any price. The method exposes specimens under UV-A 340 lamps in a chamber with irradiance controlled between 300 and 400 nanometres, then compares each exposed specimen with an unexposed one against the grey scale for assessing change in colour of GB/T 250, so that

the resistance is reported as a fastness grade. Issued on 31 December 2014 and in force since 1 June 2015.

This standard specifies the test method for exposure to ultraviolet rays of textile materials, light yellow color fastness. This standard applies to all types of white textile materials, other materials may refer to the use of light-colored textiles.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 250 textile color fastness test assessing change in color like the gray card

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Light yellowing lightyellowing White textile material surface color from yellowing caused by UV radiation phenomena. Principle

4 Samples under UV irradiation after a certain period of time, and non-irradiated samples were compared with assessing change in color gray color sample card assessment process Degrees, thereby determining the ability of textile materials under irradiation of light yellowing in ultraviolet light.

5.1 Device

5.1.1 chamber. Non-reflective inner surface of the inert material, equipped with timing device, the light source is UV-A340 lamp or UV-A340 group Combined lamps, lamp wavelength 320nm ~ 400nm, and to ensure that the specimen sample holder can even accept the irradiance, irradiance from the light source is not the farthest position 90% lower than in the center of the irradiation intensity.

5.1.2 irradiance can be adjusted individually or with a measuring range of 300nm ~ 400nm, irradiance of 0.5W/(m² · nm) ~ 1.0W/(m² · nm) Radiometer.

5.2 Evaluation of color like the gray card In line with GB/T 250 requirements.

6 Sample preparation

6.1 Each sample was prepared in three samples.