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

SN/T 5241-2020

**Import and export textiles automatic evaluation method of color
fastness grade**

进出口纺织品 色牢度等级自动评定方法

(English Translation)

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Table of Contents

Foreword	
1 Scope	
2 Normative references	
3 Terms and definitions	
4 Principle	
5 Materials and equipment	
5.1 Test materials	
5.2 Equipment	
6 Sample preparation	
6.1 Color fastness	
6.2 Color fastness	
7 Test method	
7.1 Black and white board calibration	
7.2 Equipment verification	
7.3 Select test type	
7.4 Image acquisition	
7.5 Reference sample measurement	
7.6 Sample measurement	
7.7 Presentation of results	
8 Test report	

Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard was proposed and managed by the General Administration of Customs of the People's Republic of China.

Drafting organization of this standard. Shijiazhuang Customs, People's Republic of China.

1 Scope

This standard specifies the automatic assessment method of various fabrics for staining and discoloration grades.

This standard applies to the color fastness of textiles with uniform staining and discoloration

and a pattern diameter of not less than 10 mm or greater than the aperture of the observation hole of the instrument assessment.

Note: For the color fastness, due to the influence of fluorescence and/or other factors, there may be a difference between the instrument rating and the visual rating of the sample.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article. For undated reference documents, the latest version (including all amendments) is applicable to this document.

GB/T 250 Textiles Color fastness test Gray scale for evaluating color change GB/T 251 Textiles Color fastness test Gray scale for evaluating staining GB/T 6151 Textiles-Test general rules for color fastness test GB/T 7568.1 Textiles Color fastness test Wool standard lining fabric specifications GB/T 7568.2-2008 Textiles. Test for color fastness. Standard lining fabrics. Part 2: Cotton and viscose fibers GB/T 7568.3 Textiles Color fastness test Standard lining fabric Part 3: Polyamide fiber GB/T 7568.4 Textiles Color fastness test Specification of polyester standard lining fabric GB/T 7568.5 Textiles Color fastness test Specification of polyacrylonitrile standard lining fabric GB/T 7568.6 Textiles Color fastness test Specification of silk standard lining fabric GB/T 7568.7 Textiles Color fastness test Standard lining fabrics Part 7: Divided into multi-fiber GB/T 13765 Textiles Color fastness test Specification of linen and ramie standard lining fabrics GB/T 32598-2016 Textiles Color fastness test Instrumental rating method for staining of lining fabrics GB/T 32616-2016 Textiles-Color fastness test-Apparatus grading method for discoloration of samples ISO 105-F07 Textiles-Color fastness test-Part 7: Specification of regenerated acetate fiber lining fabric

3 Terms and definitions

The following terms and definitions apply to this document.

Background material

When color fastness is measured, the white material lined on the back of the sample and the reference sample.

4 Principle

According to the principles of GB/T 32598-2016 and GB/T 32616-2016, the image information is controlled by the color fastness automatic rating workstation Information collection and spectrophotometric color measurement system to obtain sample position and color difference information, calculate and output the results, and realize the self-grading of

sample color fastness Dynamic assessment.

5.1.1 Standard Gray Card

Gray sample card for evaluating discoloration, in line with GB/T 250.

Gray sample card for staining assessment, in line with GB/T 251.

5.1.2 Color fastness control sample

A sample whose color fastness or staining level is known.

5.1.3 Stained reference sample

Use a lining fabric that has not been in contact with the sample and has undergone a color fastness test as a reference sample for the staining fastness rating.

The lining fabric should comply with GB/T 7568.1~GB/T 7568.7, GB/T 13765, ISO 105-F07.

5.1.4.1 General situation

A sample that has not been tested for color fastness is used as a reference sample for the color fastness rating.

5.1.4.2 Special circumstances

For some fabrics with obvious color difference between wetting and non-wetting, in accordance with the provisions of GB/T 6151, treat them as discoloration after they are treated as they are Reference sample for fastness rating. This situation should be noted in the report.

5.1.5.1 Cotton standard lining

The specifications meet the requirements of 4.1 in GB/T 7568.2-2008.

5.1.5.2 Original recording paper

It is white with uniform texture, and the L value of CIELAB measured by the automatic grading system for color fastness is greater than 95.

Note: In the CIELAB color space, a color is characterized by three parameters. L (brightness), a color, and b color. L stands for Luminosity, relative Regarding the brightness, the value of L is 0~100 (pure black-pure white). a represents the range from red to green, and the value of a is 127~-128 (magenta-green). b Indicates the range from yellow to blue, and the value of b is 127~-128 (yellow-blue). Positive values are warm colors, and negative values are cool colors.

5.2 Equipment

Color fastness automatic rating system, measuring geometric conditions (di. 8°), CIE 10° observer and D65 light source. See Appendix A.

6.1 Color fastness

Put the color fastness reference sample and the lining fabric after the color fastness test on a layer of cotton standard lining or paste the four corners on the original recording paper, make the side of the lining fabric in contact with the sample face up, and then place it on the specified position on the sample table.

6.2.1 General

Put the color fastness reference sample and the color fastness test sample on a layer of cotton standard lining or paste the four corners on the original recording paper, then place it in the specified position on the sample stage.

6.2.2 Special circumstances

For some samples whose appearance (such as pile arrangement, structure, gloss, etc.) has also changed in addition to discoloration, follow GB/T 6151 stipulates that the sample should be processed to restore the sample to its original state as much as possible, and then prepare the sample according to 6.2.1. In this case, if it cannot be restored to its original state, the overall change in appearance should also be noted in the report.

7.1 Black and white board calibration

Through the workstation, black calibration and white calibration are performed separately.

7.2 Equipment verification

Use the color fastness control sample of similar color system and/or the gray sample card for evaluating discoloration and the gray sample card for evaluating staining, in accordance with 7.3~7.5 steps to test; observe the test results, if the results are consistent, continue the experiment; if not, refer to Appendix B for screening, Until the problem is solved.

7.3 Select test type

The correct staining and discoloration test type should be selected according to the needs to ensure that the rating system uses the correct staining and discoloration formula to Ensure the accuracy of the rating results.