

ICS 59.080.30
CCS W 71

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

SN/T 5238.2-2020

**Import and export textiles fast test of color fastness - Part 2:
Color fastness to acid and perspiration**

进出口纺织品 色牢度快速检测 第2部分：耐酸汗渍色牢度

(English Translation)

Issued on: August 27, 2020

Implemented on: March 1, 2021

Issued by: General Administration of Customs

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Foreword

SN/T 5238 "Rapid Determination of Color Fastness of Import and Export Textiles" is divided into the following two parts.

--Part 1: Color fastness to alkali and perspiration;

--Part 2: Color fastness to acid and perspiration.

This part is part 2 of SN/T 5238.

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

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

Drafting organizations of this section. Nanchang Customs of the People's Republic of China, Jiangxi Infrared Spectroscopy Application Engineering Technology Research Center.

1 Scope

This section specifies the rapid determination method for the color fastness to acid and perspiration of imported and exported cotton, polyester pure textile products and cotton/polyester blended products.

This part is applicable to the rapid determination of the color fastness to acid and perspiration of imported and exported cotton, polyester pure textile products and cotton/polyester blended products.

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 Gray Sample Card for Textile Color Fastness Test to Evaluate Discoloration GB/T 251 Gray sample card for staining evaluation of textile color fastness test GB/T 6151 General rules for textile color fastness test GB/T 6682 Analytical laboratory water specifications and test methods GB/T 7568.1 Textile color fastness test wool standard lining fabric specifications GB/T 7568.2 Textile Color Fastness Test Standard Laminated Fabric Part 2: Cotton and Viscose Fiber GB/T 7568.3 Textile Color Fastness Test Standard Laminated Fabric Part 3: Polyamide Fiber GB/T 7568.4 Textile color fastness test polyester standard lining fabric specifications GB/T 7568.5 Textile color fastness test Polyacrylonitrile standard lining fabric specifications GB/T 7568.6 Textile color fastness test wire standard lining fabric specifications GB/T 7568.7 Textile Color Fastness Test Standard Laminated Fabric Part 7: Multi-fiber GB/T 13765 Textile color fastness test Flax and ramie standard lining fabric specifications GB/T 32598 Textile color fastness test. Apparatus rating method for staining of lining fabrics GB/T 32616 Textile color fastness test sample discoloration instrument rating method FZ/T 01023 Apparatus rating method for staining degree of adhering fabric FZ/T 01024 Instrumental rating method for the degree of discoloration of samples

3 Principle

The sample and the standard lining are stitched together, placed in the acidic test solution containing histidine, and placed in the fastness tester the test is carried out in the sample table, after the specified time, the sample and the lining are dried separately, and the gray sample card or instrument is used to evaluate the discoloration of the sample and the staining of the lining fabric.

4.1 Quick Perspiration Color Fastness Tester

This instrument can make the acid test solution pass through textiles in a single direction at a constant temperature and a circulation rate of 500 L/h. See Appendix A.

4.2 Acid test solution

The reagents used are chemically pure, and the test solution is prepared with grade 3 water in accordance with GB/T 6682, and it is ready for use now.

Each liter of test solution contains.

L-histidine salt-hydrate ($C_6H_9O_2N_3 \cdot HCl \cdot H_2O$) 0.5 g Sodium chloride (NaCl) 5.0 g Sodium dihydrogen phosphate dihydrate ($NaH_2PO_4 \cdot 2H_2O$) 2.2 g Adjust the pH value of the test solution to 5.5 ± 0.2 with 0.1 mol/L sodium hydroxide solution.

4.3 Adhesive fabric

4.3.1

Choose one of the following lining fabrics.

- a) A piece of multi-fiber lining, conforming to GB/T 7568.7.
- b) Two single-fiber lining fabrics, in line with GB/T 7568.1~7568.6 and GB/T 13765. The first piece of lining should be made of the same type of fiber of the sample the second piece of lining is made of the fibers specified in Table 1. If the sample is blended or interwoven fabric, the first piece of lining is mainly composed of the second piece of lining is made of fibers with a minor content, or other provisions may be made.

4.3.2

A piece of non-dyed fabric (such as polypropylene fiber fabric), use it when needed.

4.4 Gray sample card for evaluating discoloration

Comply with GB/T 250.

4.5 Gray sample card for staining assessment

Comply with GB/T 251.

4.6 Spectrophotometric colorimeter or colorimeter

Evaluate discoloration and staining, in accordance with FZ/T 01023 or GB/T 32598 and FZ/T 01024 or GB/T 32616.

4.7 PH meter

Accurate to 0.1.

5 Sample preparation

5.1

For fabrics, prepare a combined sample according to one of the following methods.

- a) Take a rectangular sample of $(50 \pm 2) \text{ mm} \times (100 \pm 2) \text{ mm}$, and a piece of multi-fiber lining fabric on the front side [4.3.1 a)] Touch, stitch along a short side;
- b) Take a rectangular sample of $(50 \pm 2) \text{ mm} \times (50 \pm 2) \text{ mm}$ and clamp it between two pieces $(50 \pm 2) \text{ mm} \times (50 \pm 2) \text{ mm}$ Between the single-fiber lining fabric [4.3.1 b)], stitch along one side. When testing printed fabrics, the front and second lining fabrics are Half of the block touches, cut the other half, cross over the back, stitch the two short sides, such as a piece of test can not contain all Color, multiple combinations of tests are required to include all colors.

5.2

For yarn or loose fiber, take the mass of the yarn or loose fiber approximately equal to half of the total mass of the lining fabric, and follow one of the following methods Prepare combined sample.

- a) Clamp a piece of $(50 \pm 2) \text{ mm} \times (50 \pm 2) \text{ mm}$ multi-fiber interlining fabric [4.3.1 a)] and a piece of $(50 \pm 2) \text{ mm} \times (50 \pm 2) \text{ mm}$ between non-dyed fabrics (4.3.2), stitch along the four sides (see GB/T 6151);
- b) Sandwich between two pieces of $(50 \pm 2) \text{ mm} \times (50 \pm 2) \text{ mm}$ monofilament lining fabric [4.3.1 b)] and stitch along the four sides.

6 Operating procedures

6.1

Add the prepared acid test solution (4.2) according to the bath ratio of 1.50.

6.2

Load the test sample, turn the knob to compress the sample, and set the test temperature of the fast perspiration color fastness tester. Place the sample in a quick sweat on the sample table of the stain fastness tester (4.1), add the prepared acid test solution (4.2) into the water tank of the device, and turn on the constant temperature device of the instrument, when the temperature reaches $(37 \pm 2) ^\circ\text{C}$, the solution cycle is started, and the sample is taken out after 120 min.