



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

GB/T 21294-2024

Replacing GB/T 21294-2014

**Testing Methods of Physical and Chemical Performance of
Garments**

服装理化性能的检验方法

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Foreword

This document was drafted in accordance with the rules provided in GB/T 1.1-2020 Directives for Standardization - Part 1: Rules for the Structure and Drafting of Standardizing Documents.

This document serves as a replacement of GB/T 21294-2014 Testing Methods of Physical and Chemical Performance of Garments. In comparison with GB/T 21294-2014, apart from structural adjustments and editorial modifications, the main technical changes are as follows:

---The test methods for fiber composition and content are modified (see 4.1; Chapter 7 of color fastness to artificial light, color fastness to hot pressing, color fastness to transfer in joints, color fastness to light of textiles wetted with artificial perspiration, and color fastness to phenolic yellowing are modified (see 4.2.1, 4.2.2, 4.2.7, 4.2.8, 4.2.10, 4.2.12 and 4.2.13; 5.2 ~ 5.6, 5.8 and 5.9 of Version 2014);

---The test method for dye migration performance is deleted (see 5.7 of Version 2014); fastness to light yellowing, color fastness to nitrogen oxides and color fastness to ozone are added (see 4.2.9, 4.2.11, and 4.2.14 ~ 4.2.16);

flatness after washing and drying, seam appearance flatness after washing and drying, and appearance after washing are modified (see 4.4.1 ~ 4.4.3; 8.1, 8.2 and 8.5 of Version 2014);

appearance flatness after washing and drying are deleted (see 8.3 and 8.4 of Version 2014);

performance, water resistance, solar ultraviolet radiation protective properties, oil repellency and soil release are modified (see 5.1 ~ 5.3, 5.6, 5.7 and 5.8; 10.1 ~ 10.4, 10.6 ~ 10.8 of Version 2014);

performance, anti-wrinkle performance, anti-static performance, prickly resistance, anti-mosquitoes properties, anti-mould performance, anti-mites performance, antibacterial performance, deodorizing performance, cool feeling in contact instant and electromagnetic radiation protective properties are added (see 5.4, 5.5, 5.9 ~ 5.19);

combustion properties, extractable heavy metals, flame retardant finishing agents, nonylphenol (NP) and nonylphenol oxyethylene ether (NPEO) are modified (see 6.1.3 ~ 6.1.6, 6.2.1, 6.2.3 and 6.2.6; 3.4, Chapter 4 and Chapter 6 of Version 2014);

of metal needles, nickel release, allergenic dyes, carcinogenic dyes, short chain chlorinated paraffins, permethrin content, perfluorooctane sulfonic acid (PFOS) and its salts, perfluorooctane sulfonyl fluoride (PFOSF), perfluorooctanoic acid (PFOA) and its salts, chlorinated toluene, polycyclic aromatic hydrocarbons (PAH), solvent residues and vinyl

chloride monomer are added (see 6.1.5, 6.1.9 ~ 6.1.11, 6.2.2, 6.2.4, 6.2.5, 6.2.7 ~ 6.2.14);
 ---The test method for dye migration performance, the test method for transfer in joints, the test method for phthalate content, the pre-treatment method for textile product accessories and decorative parts, and alkylphenols (AP) content are deleted (see Appendix A ~ Appendix E of Version 2014).

Please be noted that certain content of this document may involve patents. The institution issuing this document does not undertake the responsibility of identifying these patents.

This document was proposed by China National Textile and Apparel Council.

This document shall be under the jurisdiction of National Technical Committee 219 on Garment of Standardization Administration of China (SAC/TC 219).

Inspection and Technical Research; JOEONE Co., Ltd.; 361° (China) Co., Ltd.; TRIES Clothing Co., Ltd.; Beijing Products Quality Supervision and Inspection Institute; Shenzhen Academy of Metrology and Quality Inspection; Hangzhou Quality and Technical Supervision and Inspection Institute; SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.; Zhejiang Light Industrial Products Inspection and Research Institute; Intertek Testing Services Shenzhen Ltd. Guangzhou Branch; HLA Brand Management Co., Ltd.; Zhejiang Giuseppe Clothing Co., Ltd.; Foshan Nanhai No.1 Industrial Co., Ltd.; BUDDInG Group Co., Ltd.; EmbryForm (Shandong) Clothing Co., Ltd.; Modern Textile Technology Innovation Center (Jianhu Laboratory); Weihai Textile Group Import and Export Co., Ltd.; Zhejiang E-commerce Testing Co., Ltd.

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1 Scope

This document describes the test methods for physical and chemical performance of garments.

This document is applicable to the inspection of physical and chemical performance technical indicators of garment products produced with textile woven fabrics as the main fabric.

2 Normative References

The contents of the following documents constitute indispensable clauses of this document through the normative references in the text. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references

without a specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 31127-2014 Textiles - Tests for Color Fastness - Color Fastness to Transfer in Joints
 Chinastandards.org GB 31701-2015 Safety Technical Code for Infants and Children Textile
 Products GB/T 31702 Testing Method for Sharpness of Attached Components on Textile
 Products GB/T 32008-2015 Textiles - Tests for Color Fastness - Color Fastness to Dye
 Transfer in Storage GB/T 33610.2 Textiles - Determination of Deodorant Property - Part 2:
 Detector Tube Method GB/T 33610.3 Textiles - Determination of Deodorant Property - Part
 3: Gas Chromatography Method GB/T 33615 Garments - Testing Method of
 Electromagnetic Shielding Effectiveness GB/T 35263 Textiles - Testing and Evaluation for
 Cool Feeling in Contact Instant GB/T 35446 Textiles - Determination of Some Organic
 Solvents GB/T 35762 Textiles - Test Method for Thermal Transmittance - Flat Plate Test
 GB/T 40263 Textiles - Determination of Short Chain Chlorinated Paraffins GB/T 40271 Test
 Method for Identification of Textile Fibers - Differential Scanning Calorimetry (DSC) FZ/T
 01057 (all parts) Test Method for Identification of Textile Fibers FZ/T 01101 Textile Test
 Method - Fiber Content - Quantitative Physical Analysis FZ/T 01118 Textiles - Testing and
 Evaluation for Anti-soil Properties - Soil Release FZ/T 01144 Textiles - Quantitative
 Analysis of Fiber - Near-infrared Spectroscopy Method FZ/T 01158 Textiles - Determination
 of Fabric Propensity to Evoked Prickle - Vibration Audio Pickup Method FZ/T 30003
 Method for Quantitative Analysis of Ramie (flax hemp) Cotton Blended Textile - Micro
 Projection FZ/T 80007.1 Test Method of Peeled off Strength Value for Garments Used
 Adhesive Interlining FZ/T 80007.3-2006 Dry Wash Resistance Test Method for Garments
 Used Adhesive Interlining ISO 17294-2:2016 Water Quality - Application of Inductively
 Coupled Plasma Mass Spectrometry (ICP-MS) - Part 2: Determination of Selected
 Elements Including Uranium Isotopes Chinastandards.org Non-volatile Compounds by
 Extraction Method Using Liquid Chromatography

3 Terms and Definitions

The terms and definitions defined in GB/T 21295 are applicable to this document.

4 Determination of Basic Properties

4.1 Fiber Composition and Content

The fiber composition and content of the raw materials used in finished products shall be tested in accordance with the methods described in FZ/T 01057 (all parts), GB/T 40271, GB/T 2910 (all parts), GB/T 16988, FZ/T 30003, FZ/T 01101 and FZ/T 01144, etc.

4.2 Color Fastness