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

FZ/T 73023-2006

**Antibacterial knitwear
(English Translation)**

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1 Scope

This standard specifies the requirements, test methods, inspection rules, packaging and marking of antibacterial knitwear.

This standard applies to antibacterial knitwear, which is made of natural fibers, chemical fibers, blended fibers.

2 Normative references

The provisions in following documents become the provisions of this Standard through reference in this Standard. For the dated references, the subsequent amendments (excluding corrections) or revisions do not apply to this Standard; however, parties who reach an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable. For undated references, the latest edition of the referenced document applies.

GB/T 4856 Package of cotton goods and knitwear

GB 5296.4 Instructions for use of products of consumer interest - Part 4: Textiles and apparel

GB 7919 Procedures and methods of safety evaluation for cosmetics

GB/T 8629-2001 Textiles - Domestic washing and drying procedures for textile testing

GB 18401-2003 National general safety technical code for textile products

3 Terms and definitions

The following terms and definitions apply to this standard.

3.1

Antibacterial fiber

Chemical fiber, which has antibacterial substance and antibacterial function.

3.2

Antibacterial finish

The dyeing and finishing process of treating textiles, by the use of antibacterial substances, to make them have antibacterial functions.

3.3

Antibacterial finishing agent

Antibacterial substances, which are used as antibacterial finishing of textiles.

According to its dissolution characteristics on fabric fibers, it can be divided into two categories: Dissolution type antibacterial finishing agents and non-dissolution type antibacterial finishing agents.

3.4

Antibacterial knitwear

Knitwear, which is subject to antibacterial finishing OR contains antibacterial fibers, that can inhibit the growth, reproduction of bacteria and fungi on the fabric OR inactivate them.

4 Product categories and variety specifications

4.1

According to fiber raw materials, products can be divided into knitwear of natural fiber, chemical fiber, blended fiber.

4.2

According to the product structure, the products can be divided into knitted products partially inlaid or patched with antibacterial fabrics AND knitted products composed of antibacterial fabrics as a whole.

4.3

According to the use of the products, the products can be divided into knitted underwear, underwear, sportswear, T-shirts, socks, hats, bras, abdominal belts, swimwear, other knitted products and various knitted fabrics.

4.4

The varieties and specifications of various products shall be implemented, in accordance with the current national standards or industry standards, for the corresponding knitwear.

5 Requirements

The requirements of antibacterial knitwear are divided into four aspects: intrinsic quality, appearance quality, antibacterial effect, safety.

5.3 Safety

5.3.1

The antibacterial substances, which are used in antibacterial knitwear, must be approved by relevant departments AND have a test report from a qualified organization (chemical content test method of antibacterial substances, acute oral toxicity, skin irritation, eye irritation, mutagenicity, the test report corresponding to the products).

The instructions for use, which is provided by the manufacturer of antibacterial substances, according to the function promotion of the manufacturer, shall show the test report of the test content corresponding to its function promotion.

5.3.2

The skin irritation and allergy, which are caused by the leaching of antibacterial substances, which are used in antibacterial knitwear, shall be negative in the body patch test, according to GB 7919.

5.3.3

Antibacterial knitwear shall meet the requirements of GB 18401-2003.

5.3.4

Dissolution index of antibacterial substances, which are used to antibacterial knitwear: After the antibacterial fabric is washed once, the width of the antibacterial ring $D \leq 5$ mm.

6.1 Inspection of intrinsic quality and appearance quality

The test methods for the intrinsic quality and appearance quality of various antibacterial knitwear shall be implemented, in accordance with the current national standards or industry standards, for the corresponding knitwear.

6.2.1 Test according to the Quinn method, absorption method or oscillation method, in

Appendix D of this standard.

6.2.2 The arbitration inspection method for grade A products shall be implemented, according to the absorption method in Appendix D of this standard.

6.2.3 The arbitration inspection method of grade AA products and grade AAA products

shall be implemented, according to the oscillation method in Appendix D of this standard.

6.3 Dissolution test of antibacterial substances used in antibacterial knitwear

It is performed, according to the halo method, as shown in Appendix E of this standard.

7 Inspection rules

7.1

For the sampling quantity and rules of various types of antibacterial knitwear, in addition to following the current national or industrial standards for the corresponding knitwear, during the sampling, it shall randomly take about 200 g of antibacterial fabric samples, for the antibacterial effect testing and the testing of dissolution of antibacterial substances.

7.2 The intrinsic quality and appearance quality of all kinds of antibacterial knitwear

shall be evaluated, according to the current national standards or industry standards, for the corresponding knitwear.

7.3 All kinds of antibacterial knitwear shall be evaluated whether they meet the requirements, according to the provisions in GB 18401-2003.

7.4 The relevant testing report, which is issued by the qualified organization of the state, is based to evaluate the antibacterial substances, which are used in antibacterial knitwear.

7.5 The testing report of the body patch test, which is issued by the qualified organization of the state, is based, to evaluate the skin irritation and allergenicity of the leaching substance of the antibacterial substances, which are used in the antibacterial knitwear.

7.6 For randomly selected antibacterial fabric samples, evaluate the antibacterial effect, according to the bacteriostatic rate index, which is specified in Table 1 of this standard.