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

GB/T 23319.3-2010

**Textiles -- Determination of spirality after laundering -- Part 3:
Woven and knitted garments
(English Translation)**

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1 Scope

This Part of GB/T 23319 specifies the methods for measuring the spirality of woven and knitted garments after laundering.

Test results obtained using different methods may not be comparable.

This Part is applicable to measuring the spirality of garments after laundering, not to spirality formed during garment manufacturing.

NOTE: Some fabric structures, such as coarse twill cotton, are intentionally skewed during production. Garments made from fabrics produced by circular knitting machines may have an inherent non-perpendicular stripe arrangement.

2 Normative References

The clauses in the following documents become clauses of this Part by reference to this Part of

GB/T 23319. In terms of references with a specified date, the subsequent amendments (excluding corrections) or revisions do not apply to this Part. However, parties to agreements based on this Part are encouraged to investigate the possibility of using the most recent versions of these documents. In terms of references without a specified date,

the latest versions apply to this Part.

GB/T 6529 Textiles - Standard atmospheres for conditioning and testing (GB/T 6529-2008, ISO

139.2005, MOD)

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

2001, eqv ISO 6330.2000)

3 Terms and Definitions

The following terms and definitions are applicable to this Part of GB/T 23319.

3.1 Spirality

Twisting occurs in various parts of garments (usually laterally) made from woven or knitted fabrics during laundering due to the release of latent stress.

NOTE: This phenomenon sometimes occurs in fabrics made of twisted yarns, such as the twisting of the legs in twill cotton jeans.

4 Principle

The specimen is prepared, marked, and washed according to a prescribed procedure. The spirality value is measured in millimeters, and the result is taken as a percentage of the marked length.

5 Instruments

5.1

Automatic washing machine, as specified in GB/T 8629, the type of washing machine shall be determined through negotiation.

5.2

Automatic dryer, as specified in GB/T 8629, shall be determined through negotiation.

5.3

Steel ruler, at least 500 mm in length, with a graduation of 1 mm.

5.4

T-square, at least 500 mm in length.

5.5

Conditioning rack.

6 Conditioning

Before marking and measuring the specimens, condition the garment samples in standard atmospheric conditions for at least 4 h, as specified in GB/T 6529.

7 Specimen

Select two garments as samples and mark appropriate lengths on the garment samples.

8.1.1 Conventional marking

Draw a straight line YZ parallel to the width direction of the garment, 75 mm from the bottom edge (see Figure 1). If the bottom edge of the garment is not straight, the straight line YZ shall be perpendicular to the longitudinal axis of symmetry of the garment.

Mark reference point A at the midpoint of YZ. Place one right-angled side of the T-square along

YZ, and draw a perpendicular line from the other right-angled side through point A. Draw a straight line parallel to YZ at 500 mm from point A. Mark the intersection of the parallel line and the perpendicular line as point B. If the garment dimensions are insufficient to achieve 500 mm between the two parallel lines, mark the maximum possible distance between the two parallel lines, ensuring that the position of the straight line parallel to YZ is at least 75 mm from the top edge of the test garment.

8.1.2 Optional marking

If necessary, the spirality rate can be determined using Method A in GB/T 23319.2.

8.2 Method B - Garment, Side Marking Method

Lay the test garment flat, allowing its seams to align naturally. Lay a seamless circular knitted garment flat as if it were a seamed garment.

Mark point A, the intersection of the bottom edge and the side seam or the side edge of the garment. Mark point B 500 mm away from point A on the side seam or overlap (see Figure 3).

If the garment dimensions are insufficient to achieve 500 mm between A and B, mark the maximum possible length between A and B.

If the specimen exhibits spirality before laundering, this shall be recorded in the report.

9.1 Select the laundering procedure according to GB/T 8629, consistent with the maintenance

method on the garment label.

9.2 Determine the number of laundering cycles according to the agreement of the relevant parties.

9.3 After the final laundering cycle, condition the specimen in standard atmospheric conditions

according to GB/T 6529.

10.1 General

Lay the specimen naturally spread out on a smooth surface.

10.2.1 Method A - Garment, front marking method

Place one right-angled side of the T-square along YZ, and draw a perpendicular line from the other right-angled side through point B. Mark the intersection of this perpendicular line with

YZ as A' (see Figure 2).

Measure and record the lengths of A'B and AA', rounding to the nearest 1 mm.

Calculate the spirality rate X (%) of each garment according to the formula below, rounding to

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