
**Martial arts — Wushu Taiji clothing —
Requirements and test methods**

*Arts martiaux — Tenues de tai-chi-chuan — Exigences et méthodes
d'essai*

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 83, *Sports and other recreational facilities and equipment*, Subcommittee SC 6, *Martial arts*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

With the increasing popularity of Wushu (Chinese martial arts also known as Kung Fu), especially various Taiji sports, Wushu Taiji clothing has become a type of sport clothes widely used in sport, leisure activities and workout exercises as well as for demonstration to the public. Although it is being used and sold throughout the world, no relevant standards have been established.

This document is intended to provide guidelines to businesses, practitioners and to promote the international trade of the Wushu Taiji clothing. It has been designed as a technical support and for the promotion of Taiji sports in a scientific and safe way to safeguard consumers' safety and interests.

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Martial arts — Wushu Taiji clothing — Requirements and test methods

1 Scope

This document specifies classifications, requirements and test methods of Wushu Taiji clothing for performing the Wushu Taiji sport. This document is applicable to the Wushu Taiji clothing made of textile fabrics for adult users.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 105-A02, *Textiles — Tests for colour fastness — Part A02: Grey scale for assessing change in colour*

ISO 105-A03, *Textiles — Tests for colour fastness — Part A03: Grey scale for assessing staining*

ISO 105-C10, *Textiles — Tests for colour fastness — Part C10: Colour fastness to washing with soap or soap and soda*

ISO 105-E01, *Textiles — Tests for colour fastness — Part E01: Colour fastness to water*

ISO 105-E04, *Textiles — Tests for colour fastness — Part E04: Colour fastness to perspiration*

ISO 3071, *Textiles — Determination of pH of aqueous extract*

ISO 3759, *Textiles — Preparation, marking and measuring of fabric specimens and garments in tests for determination of dimensional change*

ISO 7769, *Textiles — Test method for assessing the appearance of creases in fabrics after cleansing*

ISO 13935-2, *Textiles — Seam tensile properties of fabrics and made-up textile articles — Part 2: Determination of maximum force to seam rupture using the grab method*

ISO 13938-2, *Textiles — Bursting properties of fabrics — Part 2: Pneumatic method for determination of bursting strength and bursting distension*

ISO 14184-1, *Textiles — Determination of formaldehyde — Part 1: Free and hydrolysed formaldehyde (water extraction method)*

ISO 14362-1, *Textiles — Methods for determination of certain aromatic amines derived from azo colorants — Part 1: Detection of the use of certain azo colorants accessible with and without extracting the fibres*

ISO 14362-3, *Textiles — Methods for determination of certain aromatic amines derived from azo colorants — Part 3: Detection of the use of certain azo colorants, which may release 4-aminoazobenzene*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <https://www.iso.org/obp>

— IEC Electropedia: available at <http://www.electropedia.org/>

3.1 Wushu Taiji clothing
apparel for practice and demonstration of the Wushu Taiji sport, with features of *Chinese stand collar* (3.2), *monolithic even sleeve* (3.4) and *Chinese frog buttons* (3.3) for closure

Note 1 to entry: See [Figure 1](#).

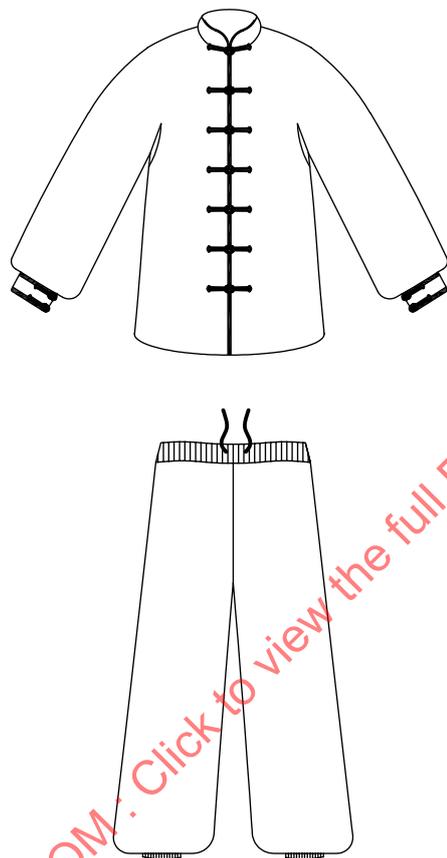


Figure 1 — Men's Wushu Taiji clothing

3.2 Chinese stand collar
stand collar around the neck in whole encircling shape, with rounded corners

Note 1 to entry: See [Figure 2](#).

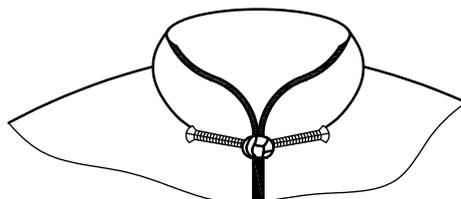


Figure 2 — Chinese stand collar

3.3

Chinese frog button

handmade and knotted button in the shape of Chinese character number one

Note 1 to entry: See [Figure 3](#).

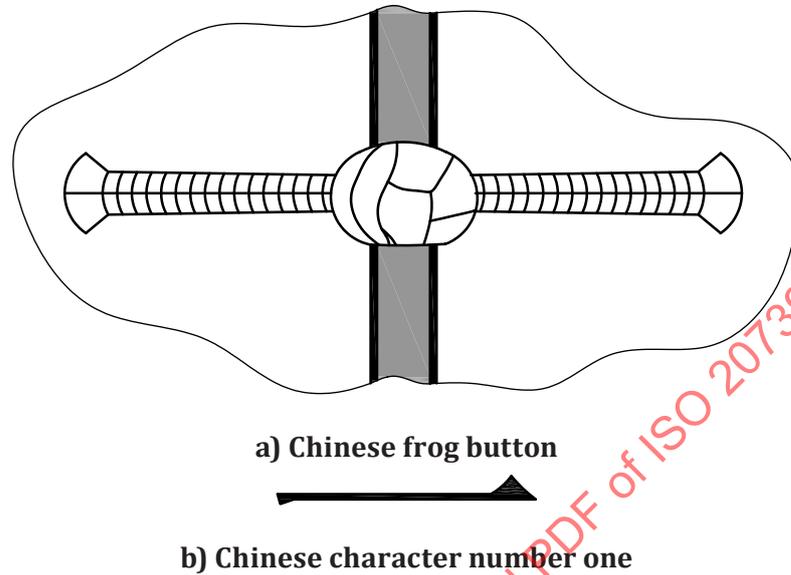


Figure 3 — Chinese frog button in shape of Chinese character number one

3.4

monolithic even sleeve

sleeve that is a seam joining of the armhole and shoulder

Note 1 to entry: See [Figure 4](#).

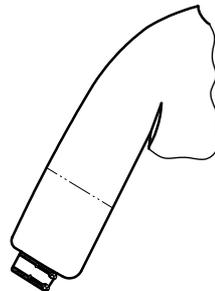


Figure 4 — Monolithic even sleeve

3.5

placket

opening position in front of the jacket

Note 1 to entry: See [Figure 5](#).

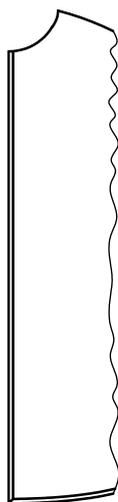


Figure 5 — Plaket

3.6

duijin

two sides of the *placket* (3.5), together without overlapping

Note 1 to entry: See [Figure 6](#).

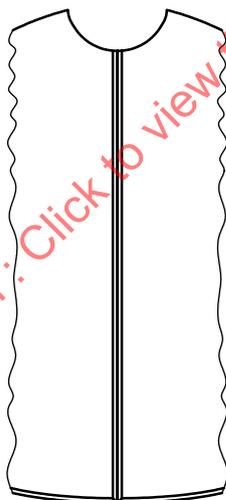


Figure 6 — Duijin

3.7

lantern sleeve

sleeve which looks like a puffed Chinese lantern

Note 1 to entry: See [Figure 7](#).



Figure 7 — Lantern sleeve

3.8 bloomers

pants that legs look like a puffed Chinese lantern

Note 1 to entry: See [Figure 8](#).

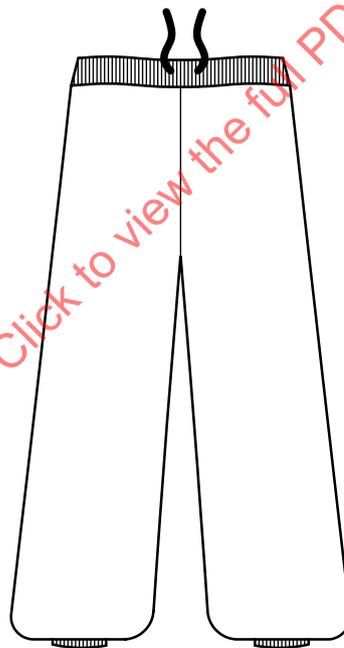


Figure 8 — Bloomers

4 Classifications

4.1 Wushu Taiji clothing is categorized by the following two types according to the users:

- a) men's Wushu Taiji clothing;
- b) women's Wushu Taiji clothing.

4.2 Wushu Taiji clothing is categorized by the following two types according to the product structure:

- a) jackets;

b) bloomers.

5 Requirements

5.1 Fabric selection

5.1.1 The fabric shall be suitable for performing Taiji sport with good air permeability and draping property.

5.1.2 The fabric of Chinese frog buttons and that of the jacket should be suitable.

5.2 Patterns and designs

5.2.1 The jacket shall be made with Chinese stand collar, Chinese frog buttons, monolithic even sleeve and triangle underarm gussets.

5.2.2 The jacket shall be made with side slit open downward from the same level of the 7th pair of Chinese frog buttons, with the hem size of 0,9 cm to 1,2 cm in width along the collar, central fronts, side slits and bottoms.

5.2.3 For men's jacket, the jacket should be in Duijin style, with 7 pairs of Chinese frog buttons down the central front, with the whole length of the button of 10 cm to 13 cm and the distance to the next button of 7 cm to 10 cm. The two halves of the button shall be equal in length. For women's jackets the requirements are the same as for the men jackets.

5.2.4 The jacket shall be made with lantern sleeve with a slit of 5 cm to 10 cm open at the sleeve cuff, which shall be 4 cm to 6 cm wide. Two pairs of Chinese frog buttons shall be on the sleeve cuff with the distance between them of 3 cm to 4 cm.

5.2.5 The pants shall be bloomers with no side seams. The waist and leg openings shall be elastic.

5.3 Measurements and sizes

5.3.1 The measurements and sizes of men's Wushu Taiji jackets shall be according to [Table 1](#).

5.3.2 The measurements and sizes of men's Wushu Taiji pants shall be according to [Table 2](#).

5.3.3 The measurements and sizes of women's Wushu Taiji jackets shall be according to [Table 3](#).

5.3.4 The measurements and sizes of women's Wushu Taiji pants shall be according to [Table 4](#).

Table 1 — Measurements and sizes of men's Wushu Taiji jackets

Dimensions in centimetres

Size	Height	To fit chest	Measurements of men's jackets					
			Chest	Front length	Centre back length	Collar opening	Collar height	Sleeve length
S	153 - 157	83 - 86	108	76	74	42	3,5	80
M	158 - 162	87 - 90	112	78	76	43	3,5	82
L	163 - 167	91 - 94	116	80	78	44	3,5	84
XL	168 - 172	95 - 98	120	82	80	45	3,5	86
2XL	173 - 177	99 - 102	124	84	82	46	3,5	88
3XL	178 - 182	103 - 106	129	86	84	47	3,5	90
4XL	183 - 187	107 - 111	134	88	86	48	3,5	92
5XL	188+	112+	139	90	88	49	3,5	94
Tolerances			±2	±1	±1	±0,5	±0,2	±1

Table 2 — Measurements and sizes of men's Wushu Taiji pants

Dimensions in centimetres

Size	Height	To fit hip	Measurements of men's pants			
			Pants length	Waist	Hip	Leg opening
S	153 - 157	87 - 90	107	106	114	22
M	158 - 162	91 - 94	110	110	118	23
L	163 - 167	95 - 98	113	114	122	23
XL	168 - 172	99 - 103	116	118	126	24
2XL	173 - 177	104 - 107	119	122	130	24
3XL	178 - 182	108 - 113	122	126	134	25
4XL	183 - 187	114 - 119	125	130	138	25
5XL	188+	120+	128	134	142	26
Tolerances			±2	±2	±2	±0,5

Table 3 — Measurements and sizes of women's Wushu Taiji jackets

Dimensions in centimetres

Size	Height	To fit chest	Measurements of women's jackets					
			Chest	Front length	Centre back length	Collar opening	Collar height	Sleeve length
XS	148 - 152	80 - 83	104	73	71	40	3,5	78
S	153 - 157	84 - 87	108	75	73	41	3,5	80
M	158 - 162	88 - 91	112	77	75	42	3,5	82
L	163 - 167	92 - 95	116	79	77	43	3,5	84
XL	168 - 172	96 - 99	120	81	79	44	3,5	86
2XL	173 - 177	100 - 103	124	83	81	45	3,5	88
3XL	178+	104+	128	85	83	46	3,5	90
Tolerances			±2	±1	±1	±0,5	±0,2	±1

Table 4 — Measurements and sizes of women's Wushu Taiji pants

Dimensions in centimetres

Size	Height	To fit hip	Measurements of women's pants			
			Pants length	Waist	Hip	Leg opening
XS	148 - 152	83 - 86	101	102	110	22
S	153 - 157	87 - 89	104	106	114	22
M	158 - 162	91 - 94	107	110	118	23
L	163 - 167	95 - 98	110	114	122	23
XL	168 - 172	99 - 102	113	118	126	24
2XL	173 - 177	103 - 106	116	122	130	24
3XL	178+	107+	119	126	134	25
Tolerances			±2	±2	±2	±0,5

5.4 Properties

The required properties are specified in [Table 5](#).

Table 5 — Required properties

Properties		Standard value	
		Knitting	Weaving
Dimensional stability to washing (%) (in accordance with ISO 3759)	Fill direction	-5,0 ~ +2,0	≥ 2,5
	Warp direction		≥ 2,0
Formaldehyde content (mg/kg)	≤ 75		
pH value	4,0 ~ 8,5		
Decomposable aromatic amine dyes (mg/kg)	≤ 20		
Colour fastness to water (grade) (in accordance with ISO 105-E01)	Change in colour	≥ 3 ~ 4	
	Staining		
Colour fastness to washing with soap (grade) (in accordance with ISO 105-C10)	Change in colour		
	Staining		
Colour fastness to perspiration (grade) (in accordance with ISO 105-E04)	Change in colour		
	Staining		
Tear strength, <i>N</i> (pure silk fabric excluded from the test) (in accordance with ISO 13938-2)	—	≥ 150	
Seam strength of the back rise of the pants (<i>N</i>) (in accordance with ISO 13935-2)	—	≥ 140	

5.5 Aspect

5.5.1 Stitches shall be neat and even.

5.5.2 The collar shall be flat and smooth with its corners round, left-right symmetric and in the same size.

5.5.3 Chinese frog buttons shall be placed at equal distance and can be buttoned up smoothly and flatly.

5.5.4 The fabrics should be in good shape in both warp and weft directions.

5.6 Change in colour

The grade of change in colour < 3 (according to ISO 105-A02) shall be reached within any piece of the clothing.

5.7 Defects in aspect

Table 6 illustrates the aspect defects and Figure 9 illustrates the positions.

Table 6 — Aspect defects

Defect type	Tolerance of the defects on the different positions		
	Part A1 and Part B1	Part A2 and Part B2	Part A3
Coarse yarn (double the thickness of the regular one)	0,3 cm ~ 1,0 cm	1,0 cm ~ 2,0 cm	2,0 cm ~ 4,0 cm
Big-belly yarn (3 strands)	Unacceptable	Unacceptable	1,0 cm ~ 4,0 cm
Pleat (crease mark)	Unacceptable	1,0 cm ~ 2,0 cm Unobvious	2,0 cm ~ 4,0 cm Unobvious
Stain (oil, rust and colour stains, dirty marks)	Unacceptable	No more than 0,3 cm ²	No more than 0,5 cm ²
Holes	Unacceptable	Unacceptable	Unacceptable

NOTE A for jackets and B for pants.

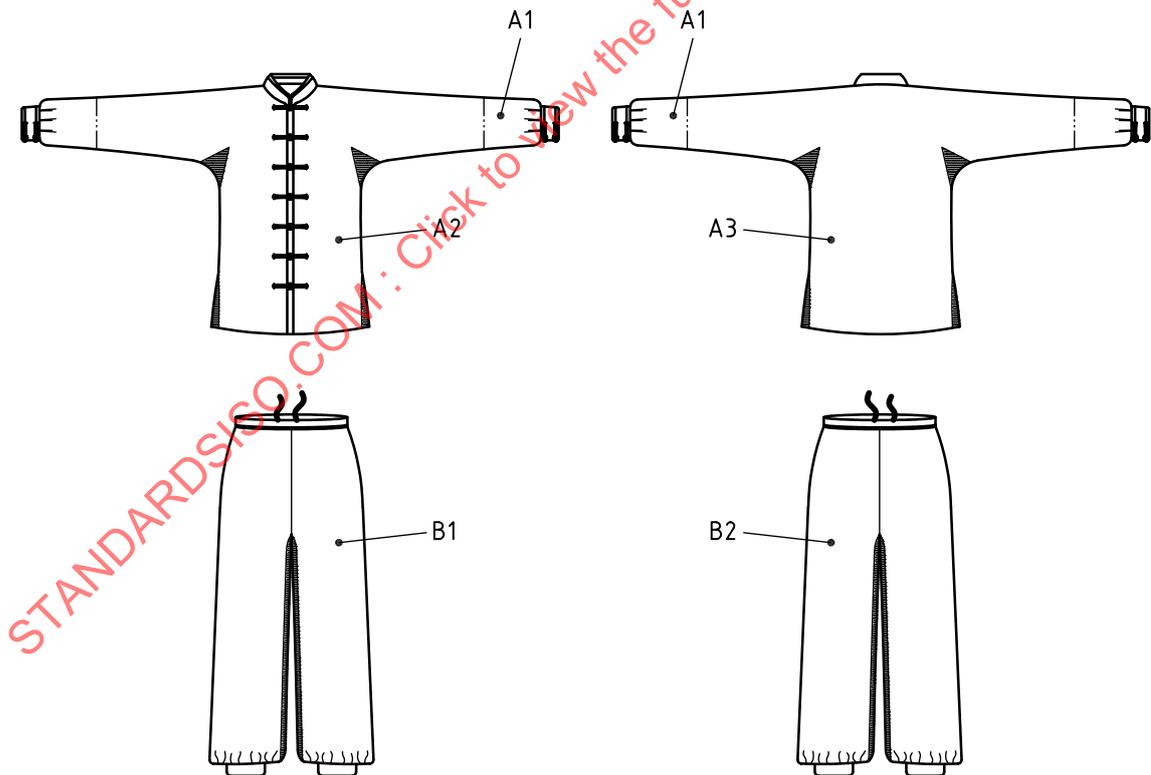


Figure 9 — Positions of defects in aspect

After production, the clothing shall be neat and smooth, with no loose threads and stains left.

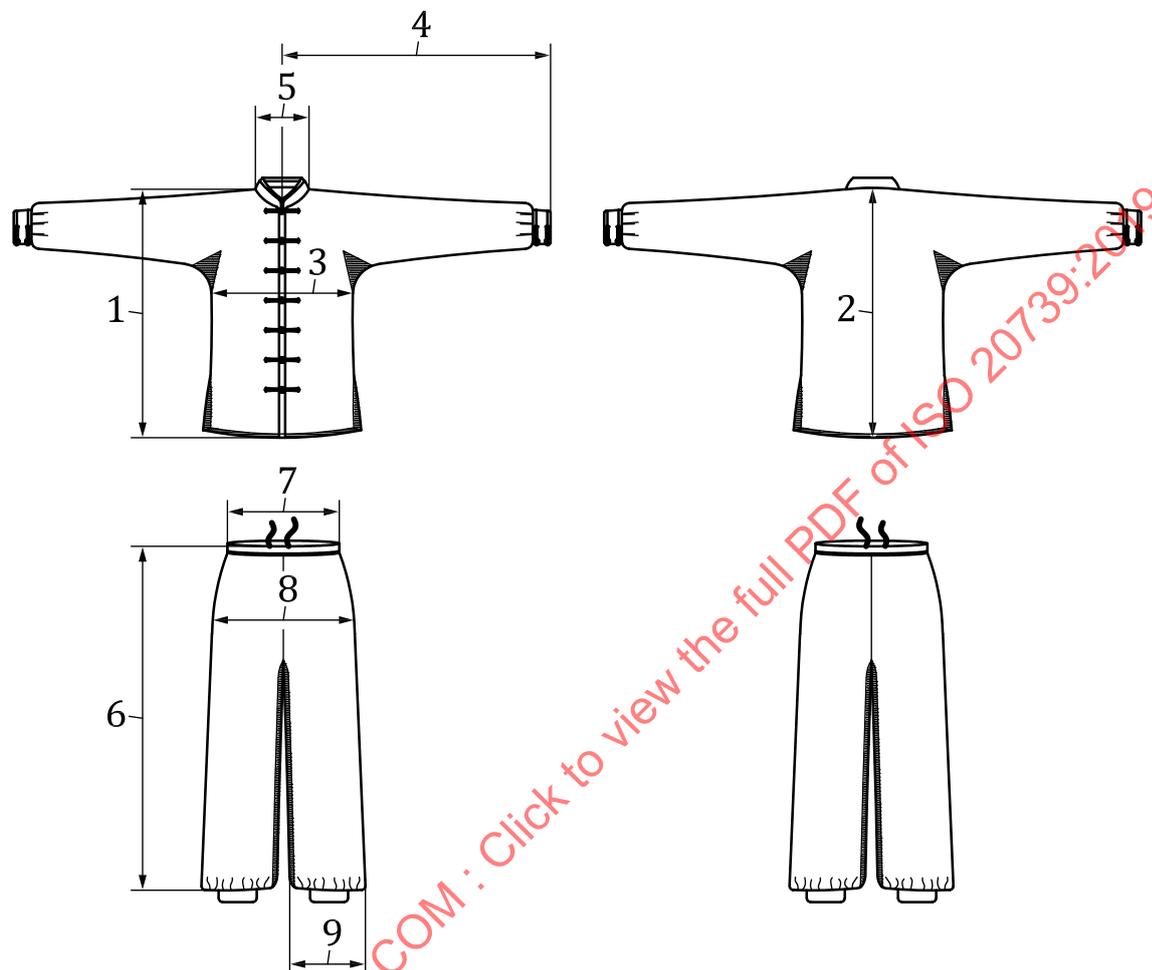
5.8 Stitch density of sewing

Stitch density of sewing shall be 4 to 5 stiches in 1 cm length for slant stitch, blind stitch, overlock stitch, hand seaming and frog button sewing.

6 Test methods

6.1 Measurements and sizes

A tape measure shall be used to measure the different parts (see [Figure 10](#)).



Key

- | | | | |
|---|--------------------|---|-------------------------|
| 1 | front length | 6 | pant length |
| 2 | centre back length | 7 | 1/2 waist circumference |
| 3 | chest width | 8 | 1/2 hip size |
| 4 | sleeve length | 9 | bottom-leg width |
| 5 | collar opening | | |

Figure 10 — Measurement diagram

6.2 Properties

6.2.1 Dimensional stability to washing

Carry out the test in accordance with ISO 3759.

6.2.2 Formaldehyde content

Carry out the test in accordance with ISO 14184-1.