

Textile Industry Standard of the People's Republic of
China

FZ/T 73012-2017

Replace FZ/T 73012-2008

Brassiere

文胸

(English Translation)

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Foreword

SAC/TC 209/SC 6 is in charge of this English translation. In case of any doubt about the contents of English translation, the Chinese original shall be considered authoritative.

This standard is drafted in accordance with the rules given in the GB/T 1.1-2009 *Directives for standardization Part 1: Structure and drafting of standards*.

This standard replaces FZ/T 73012-2008 Brassiere in whole. The following technical deviations have been made with respect to the FZ/T 73012-2008:

- Modified the description of scope (see Chapter 1, Chapter 1 in 2008 edition);
- Modified normative references (see Chapter 2, Chapter 2 in 2008 edition);
- Revised the diagram of size tolerance measurement part for brassiere (see 4.2.1, 4.2.1 in 2008 edition);
- Revised the requirement of formaldehyde content, pH value, odour and decomposable carcinogenic aromatic amine dyes (see 5.3.1, 5.3 in 2008 edition);
- Added the requirement of “formaldehyde content, pH value and odour are required for the fillings in brassiere exclude latex, organic silica gel and mineral oil” (see 5.3.2);
- Added the requirement of testing part on fiber content (see 5.3.3);
- Deleted the defects type of “incomplete, unclear and wrong labelling” in appearance defects specification (see 5.4.3, 5.4.3 in 2008 edition);
- Deleted the requirement of delivery inspection and type inspection (see 7.2 in 2008 edition);
- Revised the rules of re-inspection (see 7.4, 8.3 in 2008 edition);
- Added the requirement of package, transportation and storage (see 8.3 and 8.4).
- Added the name of each part for brassiere (see Annex A).

The Standard was proposed by China National Textile and Apparel Council.

This standard was prepared by Subcommittee 6 on Knitting Products of National Technical Committee 209 on Textiles of Standardization Administration of China (SAC/TC 209/SC 6).

The previous editions of this standard are as follows:

- FZ/T 73012-1998, FZ/T 73012-2004 and FZ/T 73012-2008.

Brassiere

1 Scope

This standard specifies the terms and definitions, size and specification, requirement, test method, inspection rule, instructions for use, package, transportation and storage of brassiere.

This standard is applicable to identify the quality of brassiere using warp and weft knitted fabrics as the main materials.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document referred to (including any amendments) applies.

GB/T 250, *Textiles - Tests for colour fastness—Grey scale for assessing change in colour*

GB/T 2910 (All parts), *Textiles—Quantitative chemical analysis*

GB/T 2912.1, *Textiles—Determination of formaldehyde—Part 1: Free and hydrolyzed formaldehyde(water extraction method)*

GB/T 3920, *Textiles—Tests for colour fastness—Colour fastness to rubbing*

GB/T 3921-2008, *Textiles —Tests for colour fastness—Colour fastness to washing with soap or soap and soda*

GB/T 3922, *Textiles—Tests for colour fastness—Colour fastness to perspiration*

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

GB/T 5713, *Textiles—Tests for colour fastness—Colour fastness to water*

GB/T 7573, *Textiles—Determination of pH of aqueous extract*

GB/T 17592, *Textiles—Determination of the banned azo colourants*

GB 18401, *National general safety technical code for textile products*

GB/T 29862, *Textiles—Identification of fiber content*

FZ/T 01026, *Textiles—Quantitative chemical analysis—Multinary fibre mixtures*

FZ/T 01057 (All Parts), *Test method for identification of textile fibers*

FZ/T 01095, *Textile—Test method of elastane fibre content*

GSB 16-2159, *Standard depth sample card of knitted products (1/12)*

GSB 16-2500, *Defect appearance replicas of knitted fabric*

3 Terms and Definitions

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

3.1

bust girth

The maximum circumference of the horizontally passing the plumpest place of breast under its natural standing status when wearing the suitable single-layer brassiere without pad or brace.

3.2

underbust girth

The circumference horizontally passing woman's bottom breast root.

3.3

brassiere cup

The part of the brassiere covering breast.

3.4

under border

The part of the brassiere covering underbust girth.

3.5

lateral wing

The part of the brassiere covering breast from the side under armpit to the back.

4 Size and Specification

4.1 Size

4.1.1 The cup code represents the style and centimeter of underbust girth represents the size. For example, A75 or 75A indicates type A cup and 75 cm underbust girth.

4.1.2 The cup code represents the difference between bust girth and underbust girth of the appropriate body, see Table 1.

Table 1 Cup Code

Unit: cm

Cup Code	AA	A	B	C	D	E	F	G
Difference between bust girth and underbust girth	7.5	10.0	12.5	15.0	17.5	20.0	22.5	25.0

4.1.3 The underbust girth baseline is 75 cm and is determined by different in increments or decrements of 5 cm.

4.2 Specification

4.2.1 The name of each parts of brassiere is showed in Annex A. The measurement parts for specification and the requirements are as showed in Table 2 and Figure 1 (Figure 1 is only for reference).

Table 2 Specification Measurement Part and Regulation

Specification		Measurement Method
Under border	a	Measure along with bottom side of brassiere after lying flat (measuring minimum dimension for adjustable brassiere)
Straps length	b	Total length of belt (measuring maximum dimension for adjustable brassiere)

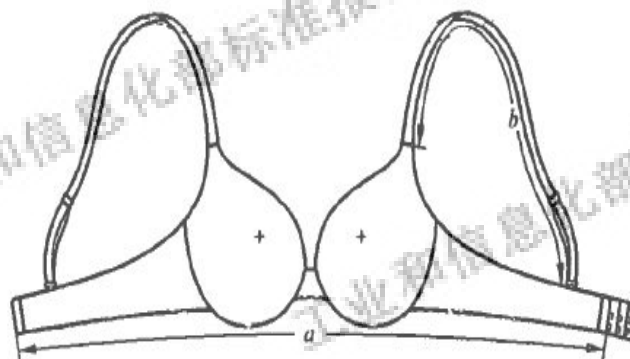


Figure 1 Diagram for measuring parts for specification of brassiere

4.2.2 The specification and dimension are measured subject to the left of the brassiere.

5 Requirement

5.1 The requirement consists of internal quality and appearance quality. The internal quality includes fiber content, formaldehyde content, pH value, odour and decomposable carcinogenic aromatic amine dyes, colour fastness to water, colour fastness to washing with soap or soap and soda, colour fastness to rubbing, colour fastness to perspiration, etc. Appearance quality includes dimensional tolerance, size difference of symmetrical parts, appearance defects, etc.

5.2 Classification rules

5.2.1 The brassiere shall be classified into superior grade, first grade and qualified grade.

5.2.2 The grade classification in terms of internal quality shall be made by lot, and that in terms of appearance quality shall be made by piece. The final grade shall be determined by the lower grade rating of the two.

5.2.3 The lowest testing result in terms of internal quality shall determine the final grade of internal quality of the lot.

5.2.4 In case of appearance defects of different grades in one product, the grade classification shall be made in accordance with the lowest grade.

5.3 Internal quality requirement

5.3.1 The internal quality requirement is showed in Table 3.

Table 3 Internal quality requirement

Item		Superior grade	First grade	Qualified grade	
Fiber content /%		Conform to GB/T 29862			
Formaldehyde content /(mg/kg)		Conform to GB 18401			
pH value					
Odour					
Decomposable carcinogenic aromatic amine dyes /(mg/kg)					
Color fastness /Grade	Water ≥	Colour change	4	3-4	3
		Staining	3-4	3	
	Washing with soap or soap and soda ≥	Colour change	4	3-4	3
		Staining	3		
	Rubbing ≥	Dry	4	3-4	3
		Wet	3	3 (dark: 2-3)	
	Perspiration ≥	Colour change	4	3-4	3
		Staining	3-4	3	
Colour depth is determined according to GSB 16-2159. The colour darker than 1/12 standard depth is regarded as dark colour, and the other colour is regarded as light colour.					

5.3.2 The evaluation objects for formaldehyde content, pH value and odour include the fillings in brassiere, exclude latex, organic silica gel and mineral oil.

5.3.3 The testing part for fiber content shall include the lining of brassiere cup and lateral wings at least.

5.4 Appearance quality requirement

5.4.1 The dimensional tolerance is showed in Table 4.

Table 4 Dimensional tolerance

Unit: cm

Item	Superior grade	First grade	Qualified grade
Under border	±1.0	±1.5	±2.0
Strap length	±1.0	±1.5	

5.4.2 Dimension difference in symmetrical position is showed in Table 5.

Table 5 Dimension difference in symmetrical position

Unit: cm

Basic Dimension	Superior grade	First grade	Qualified grade
Less than 5.0	±0.3		±0.5
5.0~20.0	±0.5		±0.8
More than 20.0	±0.8		±1.0

Note: The basic measurement is subject to the left of brassiere.

5.4.3 The appearance defects are showed in Table 6.

Table 6 Appearance defects rules

Defects type		Superior grade	First grade	Qualified grade
Linedefect	Slight	5.0 cm and shorter	5.0 cm-10.0 cm	Allowed
	Obvious	0.5 cm and shorter	0.5 cm-1.5 cm	1.5 cm- 5.0 cm
	Significant	Not allowed		1.0 cm and less
Stripe defect	Slight	2.0 cm and shorter	2.0 cm – 5.0 cm	Allowed
	Obvious	Not allowed	1.0 cm and shorter	1.0 cm – 3.0 cm
	Significant	Not allowed		1.0 cm and shorter
Spread defect		Allowed if appearance is not influenced		Allowed if appearance is influenced slightly
Colour difference of the same fabric/Grade		4-5	4	3-4
Sewing defect	Thread end	Not allowed if more than 0.5 cm	2 places allowed with defect of 0.5 cm- 1.0 cm	3 places allowed with defect longer than 0.5 cm
	stitch size spacing	Not less than 9 stitches within 2 cm		
	Seaming bow	0.2cm	0.4 cm	0.5 cm
	Skipped stitch	Not allowed		No unravel, only one needleat2 places scattered is allowed
Damage defect		Not allowed		

Colour difference is assessed according to GB/T 250.
 Note 1: The linear defect means one stitch or one piece of yarn or the defect less than 0.1 cm wide, beyond which is the stripe defect. The stripe defect is calculated by longitudinal maximum length plus horizontal maximum length.
 Note 2: Defect degree description:
 Slight—not obvious and can be recognized carefully.
 Obvious—easy to be observed, but do not affect the overall effect.
 Significant—obviously affect the overall effect.
 Note 3: The acceptable size of line defects and stripe defects at each part is the accumulated size of defects in the same kind at the same product.
 Note 4: The appearance defects degree shall be tested according to GSB 16-2500.

6 Testing

6.1 Internal quality inspection

6.1.1 Sample preparation

The sample for internal quality inspection shall be sampling on the final product. If product dimension is not enough, sampling could be done on the fabric (includes lining and interlining) of the same lot of product. Test specimens selected shall not have defects that may affect testing result.

6.1.2 Test method

6.1.2.1 Fiber content

The fiber content shall be tested according to FZ/T 01057 (all parts), GB/T 2910 (all parts), FZ/T 01026 and FZ/T 01095.

6.1.2.2 Formaldehyde content

The formaldehyde content shall be tested according to GB/T 2912.1.

6.1.2.3 pH value

The pH value shall be tested according to GB/T 7573.

6.1.2.4 Odour

Odour shall be tested according to GB 18401.

6.1.2.5 Decomposable carcinogenic aromatic amine dyes

Decomposable carcinogenic aromatic amine dyes shall be tested according to GB/T 17592.

6.1.2.6 Colour fastness to water

The colour fastness to water shall be tested according to GB/T 5713. Sew a specimen of 4 cm x 5 cm together with an adjacent of the same size to test representatively when the specimen could not be obtained from final product for one test and there's no fabric of same lot.

6.1.2.7 Colour fastness to washing with soap or soap and soda

The colour fastness to washing with soap or soap and soda shall be tested according to GB/T 3921-2008, A(1). Sew a specimen of 4 cm x 5 cm together with an adjacent of the same size to test representatively when the specimen could not be obtained from final product for one test and there's no fabric of same lot.

6.1.2.8 Colour fastness to rubbing

The colour fastness to rubbing shall be tested according to GB/T 3920 and only for longitudinal.

6.1.2.9 Colour fastness to perspiration

The colour fastness to perspiration shall be tested according to GB/T 3922. Sew a specimen of 4 cm x 5 cm together with an adjacent of the same size to test representatively when the whole specimen could not be obtained from final product for one test and there's no fabric of same lot.

6.2 Appearance quality inspection

6.2.1 Light inspection is generally used with a 40 W white fluorescent lamp with a lampshade above it, and the vertical distance between the lampshade and the center of the inspection table is 80 cm ± 5 cm.

6.2.2 If it is inspected by natural light indoors, the light source direction shall be left (or right) angle in the north and it can't directly illuminate the product.

6.2.3 The product shall be placed flat on the inspection table with a layer of white cloth on it. The inspector's eyes shall be squarely on the surface of the flat product, and the distance between the eyes and the product shall be more than 35 cm.

6.2.4 Each product shall be inspected both sides and the single layer of product is inspected the front.

7 Judgement rules**7.1 Sampling**

7.1.1 For the assessment of appearance quality, 1% ~3% of each lot shall be taken at random based upon different categories, colours and sizes. The minimum sampling size shall be 20 pieces. Inspect all the products if the product number less than 20 pieces.

7.1.2 For the testing of internal quality, samples shall be taken at random from each lot based upon different categories and colours, the number of samples shall ensure one test for each test items.

7.2 Internal quality

Internal quality shall be tested according to requirement in Clause 5.3. The lost is judged as failed if one item is failed. Colour fastness items are judged according to the colours.

7.3 Appearance quality

The percent nonconforming of appearance quality is calculated based upon categories and colours. If the percent nonconforming is not more than 5%, the lot is assessed conformity, otherwise the lot is assessed nonconformity.

7.4 Re-inspection

7.4.1 If there is a dispute between each party, re-inspection can be carried out.

7.4.2 Re-inspection result is judged as specified in 7.2, 7.3, and the re-inspection result shall prevail.

8 Instruction for use, package, transportation and storage

8.1 The instruction for use shall conform to GB/T 5296.4.

8.2 Package shall conform to GB/T 4856 or the agreement.

8.3 Product transportation shall be moisture-proof, fire-proof and pollution-proof.

8.4 The products shall be stored in a cool, ventilated, dry and clean warehouse, and shall be mothproof and mould proof.

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Annex A (Informative)

Name of each part for brassiere

The name of each part in brassiere is showed in Table A.1.

Table A.1 Name of each part for brassiere

Product type	Diagram	No.	Part name
Brassiere		1	Brassiere cup
		2	Brassiere cup top
		3	Brassiere cup bottom
		4	Brassiere cup front
		5	Brassiere cup back
		6	Brassiere cup front bottom
		7	Brassiere cup back bottom
		8	Brassiere cup front panel edge
		9	Brassiere cup back panel edge
		10	Center front
		11	Lateral wing
		12	Side frame
		13	Lateral wing upper edge
		14	Under border
		15	Strap