

Comparison of brassiere sales patterns in Korea and China

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Abstract

The purpose of this research is to compare and analyze the brassiere patterns sold in Shanghai and Korea and to present basic materials needed in developing the brassiere patterns in Chinese adult women market. The study subject which is to find the difference in brassiere patterns of Korea and China has been selected of 3 Korean brands and 4 Chinese brands.

1. For the brassiere patterns sold in Korea, it were using the same size for the width of Hook&Eye, space between the shoulder lace on the back, slope of wing and the location of the Keeper was similar.

2. For the cup supporting base, Chinese brassiere covers the lower part of the breast and as it is not comfortable and has a phenomenon of loosening up, there were severe puckering. For issues in the wearing experiment, amendments in patterns with the cup part was required.

3. Chinese brassieres were big differences in wing angles and for Aimer, it had the steepest trend in wings and thus the wings headed down and for Gujin, as the angle of the wing was smaller than 90°, it was heading upward.

4. Upon comparing the patterns of the Korean and Chinese brassiere, although most of the sizes excluding the wing angle had similar sizes, there was big differences in the wing angle. The reason why the brassiere patterns sold in China had bigger wing angle was due to the fact that more Chinese women had sway back body type than the Korean women and should reflect such difference in body size into making the brassiere patterns for each women.

Key Words : slope of wing, sway back body type, breast, degree of Polymerization.

I . Introduction

Ever since China enlisted to the WTO in 2001, due to large-scaled businesses domestically and

overseas such as the unmanned starship launch in 2003, liberation of distribution in 2005, Beijing Olympics in 2008 etc, it had set up a consuming environment at global stages and has

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gained attention as a big consumer market with potentials that is not merely a production base. The volume of import and consumption market of China has recorded an annual growth average of 24% since 2000 and in 2017, it is estimated to grow into the biggest consumption market edging out USA.¹⁾

Currently the volume of the textile market in China in 2008 is 500billion wian and in 2010, as the middle-class that can consume non-practical luxuries will increase to 250million people and the consumption for luxuries and premium textile market looks to increase.²⁾ Accordingly, the Chinese government are targeting the middle-class and is accelerating the growth of middle-high end brands and is setting up a textile strategy plan to strengthen the upstream of the textile industry.

On the other hand, China has been ranked #1 in the market share for textile products with 35% and investments in China by the surrounding countries for textile fashion is growing. Korea has also entered the Chinese textile market ever since the Korea-China formal ties in 1992 and although Korea is facing fierce competition with other countries in the global market, due to the rapid increase in currency and wage, logistics cost and the reduction of payback for the value-added tax for the simple processed goods etc, Korea is planning to reduce Chinese business as a mere production base or turning to local production.

However, the Chinese local market which has its increase in consumption due to increase in income is still an endless market with potentials. Therefore, in order to take the Chinese market as a sales place rather than just a mere production site and to secure competitive edge, Korean textile companies should set up systematic plans upon the changes in the market and do

one's best to develop value-added products with high values through setting up information base.

Due to higher-education levels, influx of various information due to the development of mass media, upgrade of fashion levels, increase in the women's social activity, Chinese consumers have a higher level of sensitivity and the demand for brands such as physical fitness, differentiation in textile products and market segmentation has increased.

Therefore, thorough survey analysis for Chinese body type, development of patterns that fit body types of consumption regions, strengthening product edge through developing a creative and differentiated design, cost reduction due to localization of production base and securing mobility, maximization of sales efficiency due to target market segmentation, development of our own marketing path due to long-term investment strategy is needed.³⁾

Currently although the Chinese textile market is in early stages and is not able to catch issues such as partial fitting problems, issues in design and materials, as the Chinese consumer's interest in the fashion products has risen and the textile industry developed further, the fitness issues of the consumer's size and fitness will become a major issue in product development in entering the China market. As the brassiere is a indispensable product that is worn by every adult women, although the fitness is a very important issue, research on the patterns of the brassiere is far behind. Therefore, in order to enhance the effects of entering the China market, a systematic study on the types of breast and size of Chinese women is needed. This research is to compare and analyze the brassiere patterns sold in Shanghai and Korea and to present basic materials needed in

developing the brassiere patterns in Chinese adult women market.

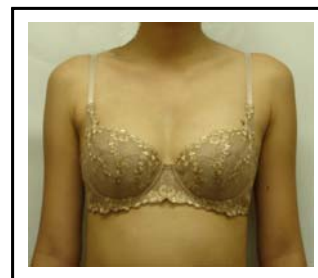
dart style of the round type used with a nonwoven 3/4 cup and the size of 75A.

II. Method of Study and Procedures

The study subject which is to find the difference in brassiere patterns of Korea and China has been selected of 3 Korean brands and 4 Chinese brands. For the brassiere patterns sold in Korea, we gathered the actual patterns from the related companies after selecting 3 lingerie brands sold in department stores and discount stores and for brassiere patterns sold in China, through interviews with specialists and sales force in Shanghai, we have selected a total of 4 brands where among the national brands, Gujin(古今), Aimer(爱慕) were selected and among the license brands, Audrey(奥黛莉) and Wacoal(华歌尔) were selected. Also, we have purchased products that were sold in Shanghai's Xujiahui(徐匯區) Pacific department store and Huaihai Road(淮海路) Pacific department store and Parkson department store.

1. Design of Comparison

The brassiere design selected for the comparison analysis of the patterns was the one



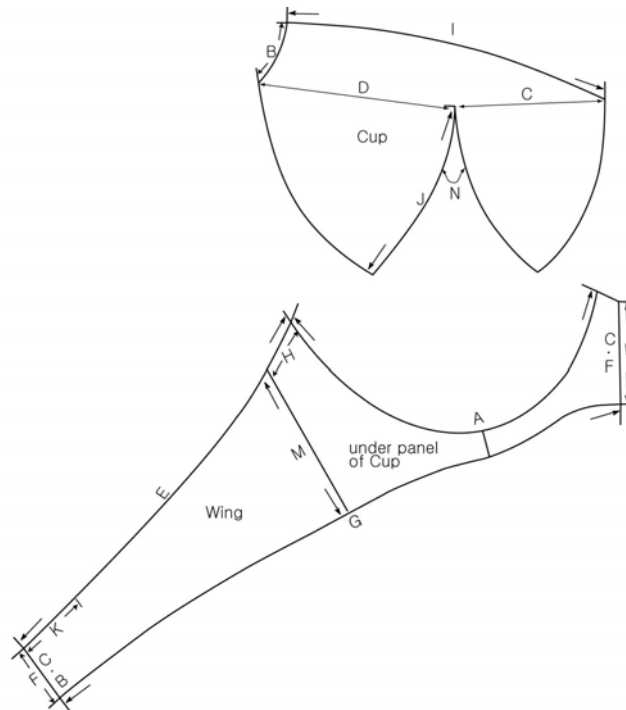
<Figure 1> The Brassiere of 3/4 Cup Round type

3. Methods of Data Process and Analysis

We have measured the size of the 3 Korean brassiere patterns and analyzed the difference according to polymerization level. In order to verify the body fitness of the brassiere purchased in China, we have executed the wearing experiment by selecting 2 people in the 20s and also, after dismantling the products of the Chinese brassiere and making up a Knock-off pattern, we have measured the size for type and compared/analyzed the difference in the brassiere patterns for 4 brands according to the polymerization level. Furthermore, through the pattern size and polymerization level of the Korean and Chinese brassiere, we have extracted the difference.

<Table 1> Items to comparing the size of the brassiere

Term	Part	Term	Part
A	Circumference of Cup	I	Length of a cup's upper side
B	Circumference of Armhole	J	Length of Cup dart
C	Inner Side Diameter	K	Distance of Shoulder Strap
D	External Side Diameter	L	Height of Center Front
E	Length of a wing's upper side	M	Height of Keeper
F	Width of Hook&Eye	N	Slope of Cup dart
G	Length of Wing	O	Slope of wing
H	Distance of Keeper		



<Figure 2> Parts of comparing of Korean's Brassiere Pattern

III. Results

1. Results of comparing Korean's Brassiere Patterns

If we look at the size of patterns for the brassiere sold in Korea, it follows as <Table 2>.

For the brassiere patterns sold in Korea, it were using the same size for the width of Hook&Eye and space between the shoulder lace on the back and the location of the Keeper was similar with sizes of 3.2cm~3.4cm. Although the outline of the cup, armhole, upper length of the wing, center height of the front side are sizes that are influenced by design factors, it was using similar sizes. Also, for the angles of the wing or lower length of the wings, it used a wing angle of 104° and 109° and for the lower

length of the wing, it had a length of 30cm.

In order to look into the polymerization level of the brassiere pattern sold in Korea, for the cup pattern, it overlapped based on the breast nipple point and for the wing pattern, it overlapped based on the front center line. Upon looking over the polymerization level of the brassiere sold in Korea, it had similar types for the cup supporting base and wing patterns and had lots of differences in the cup patterns which meant design factors have affected a lot.

2. Results of comparing Chinese's Brassiere Patterns

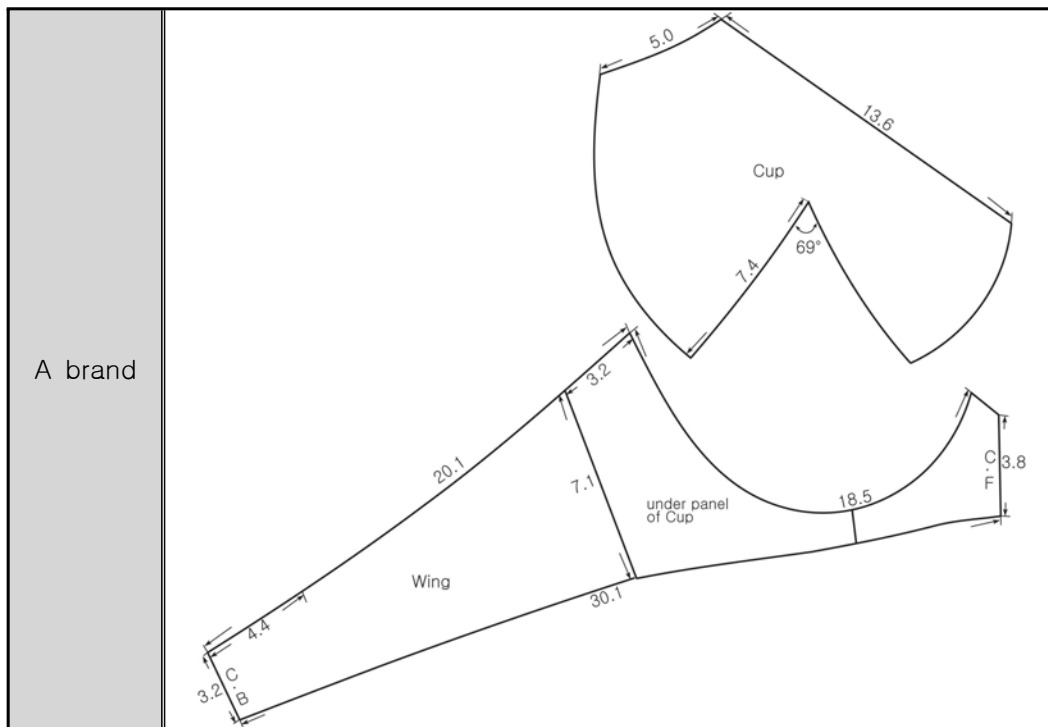
1) Evaluation on the dressing of the brassieres sold in China

In order to check the fitness of the brassieres

<Table 2> Size of Korean's Brassiere Patterns

(Unit: cm)

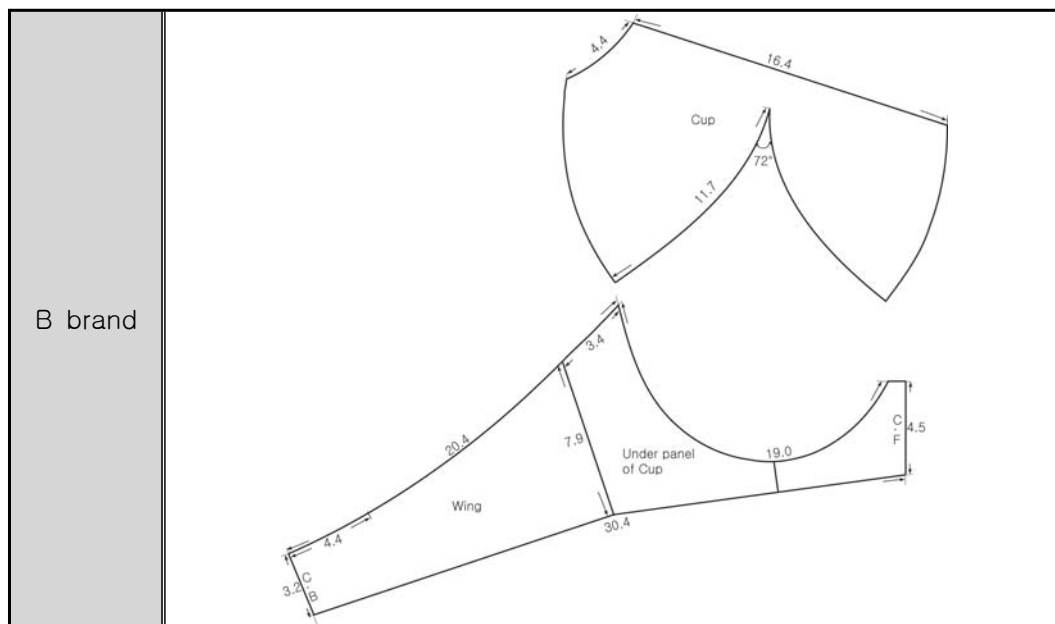
Part	Brand	A	B	C
Circumference of Cup		18.5	19.0	19.7
Circumference of Armhole		5.0	4.4	2.8
Inner Side Diameter		7.7	8.8	7.3
External Side Diameter		9.1	10.2	8.8
Length of a wing's upper side		20.1	20.4	19.7
Width of Hook&Eye		3.2	3.2	3.2
Length of Wing		30.1	30.4	30.3
Distance of Keeper		3.2	3.4	3.4
Length of a cup's upper side		13.6	16.4	14.2
Length of Cup dart		7.4	11.7	8.5
Distance of Shoulder Strap		4.4	4.4	4.4
Height of Center Front		3.8	4.5	4.8
Height of Keeper		7.1	7.9	7.5
Slope of Cup dart		69.0°	72.0°	59.0°
Slope of wing		104.0°	109.0°	104.0°



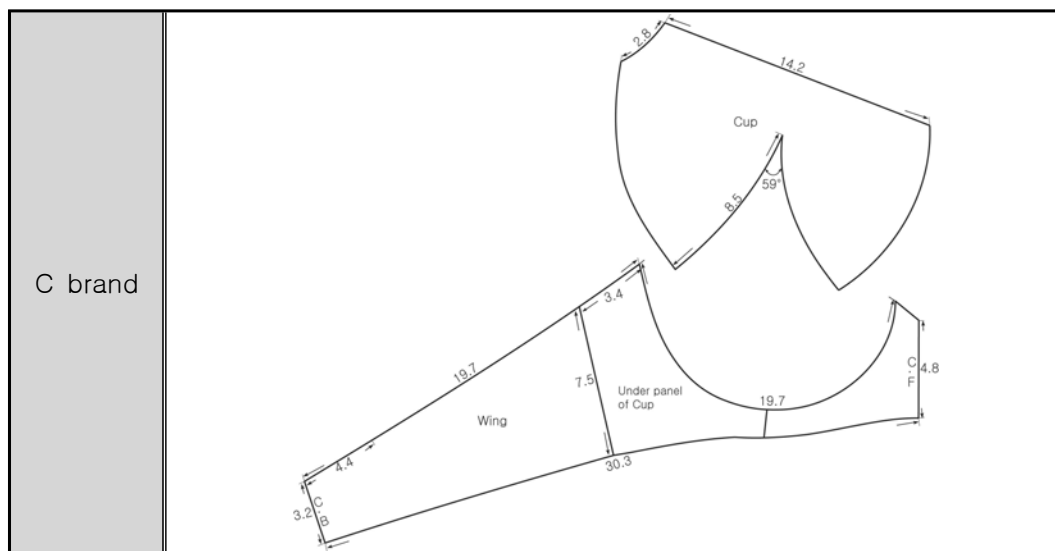
<Figure 3> Brassiere pattern of A brand

sold in China, upon the wearing experiment, there was a phenomenon as the skin wrapped up to the back due to the tight wing length and the upper part of the cup loosened up. Such

phenomenon seems to occur as the Chinese consumers wears a cup bigger than the actual breast size and fills up the remaining part using a supplemental material.



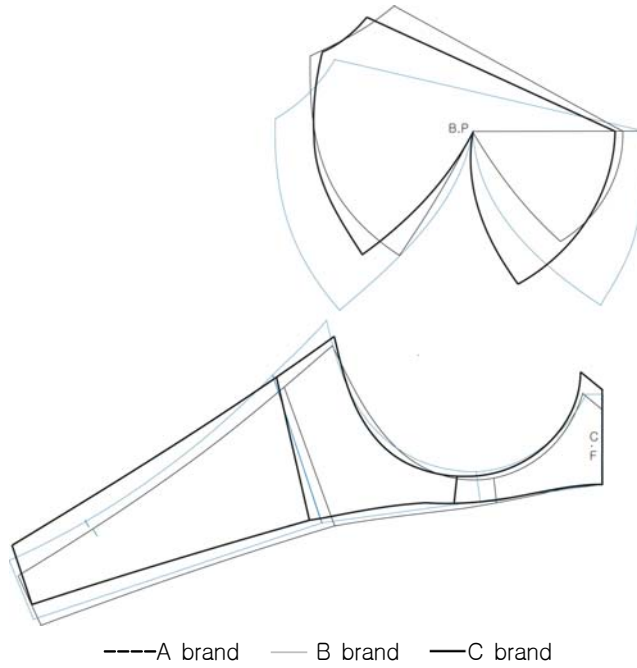
<Figure 4> Brassiere pattern of B brand



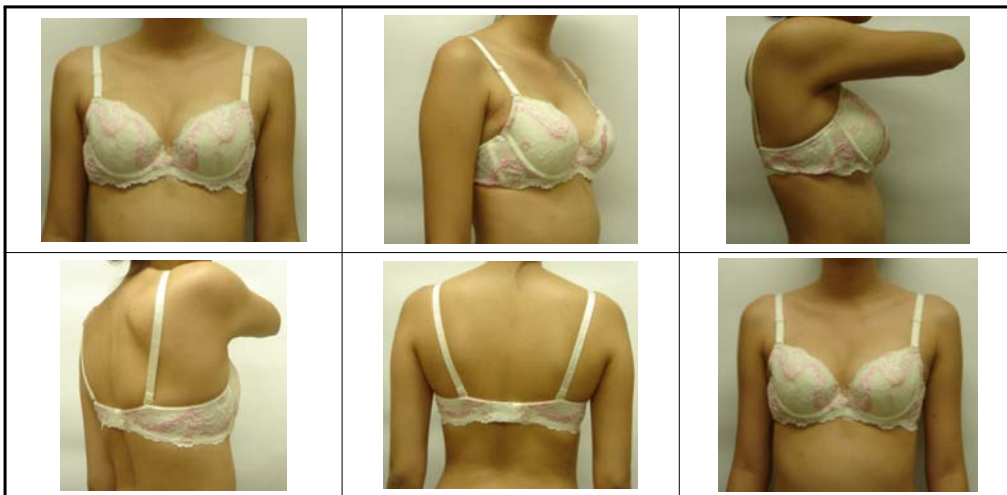
<Figure 5> Brassiere pattern of C brand

For the cup supporting base, it covers the lower part of the breast and as it is not comfortable and has a phenomenon of loosening up, there were severe puckering.

For issues in the wearing experiment, amendments in patterns with the cup part was required.



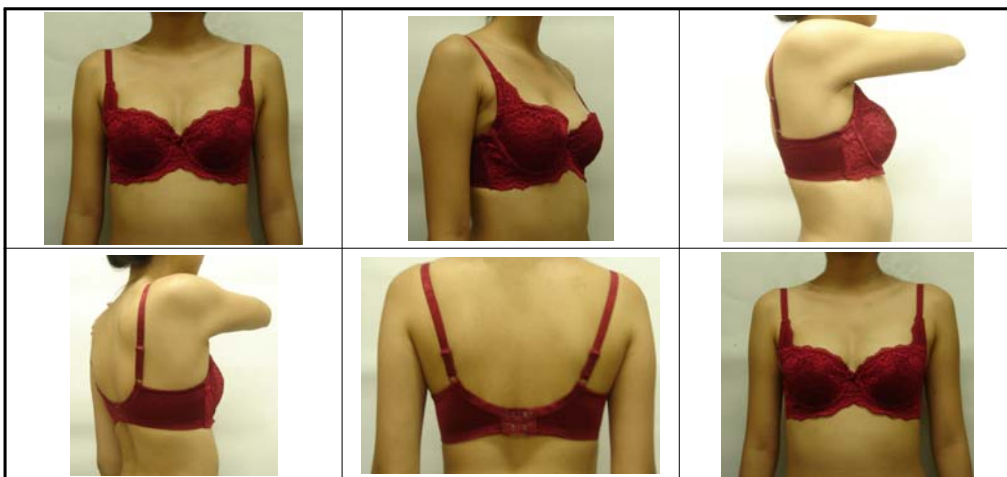
<Figure 6> The degree of Polymerization of Korean Brassiere Patterns



<Figure 7> Evaluation on the dressing of the Gujin's brassieres



<Figure 8> Evaluation on the dressing of the Aimer's brassieres



<Figure 9> Evaluation on the dressing of the Audrey's brassieres

2) Results of comparing Chinese's Brassiere Patterns

If we look at the size of patterns for the brassiere sold in China, it follows as <Table 3>.

The size of the brassiere patterns sold in China differed slightly due to the brand and although the length of the cup outline can differ due to the difference of how it covers the breast upon the design, the length of the brassier pattern for Aimer and Audrey seemed same.

The armhole is the measurement of the length from the wire of the armhole part to the start of the shoulder lace and as it is affected mostly by design factors, it differs a lot due to the level of how much it is covered up.

Although the wing length for the upper part of the wing and the lower part of the wing had big differences according to the flexibility of the textile, for brassiere patterns sold in the market, the flexibility was similar and had small differences in



<Figure 10> Evaluation on the dressing of the Wacoal's brassieres

setting the wing length.

Also, for the length of the upper part of the cup, as the current trend for brassiere design is tended for shoulder lines to move outwards, the length of the upper part of the cup tends to become longer. Gujin has its shoulder lace going outward the most and had the longest length for the upper part of the cup and for Audrey and Wacoal, it was similar.

As the distance of the shoulder lace on the back and the height of the center line in front is mainly affected by design factors, and for Wacoal, the height of the center line in front is the highest and can see that such design is most popular.

There was big difference in the cup dart and for Gujin, the amount of the dart was huge and had the biggest angle for the cup dart. Although

<Table 3> Size of Chinese's Brassiere Patterns

(Unit: cm)

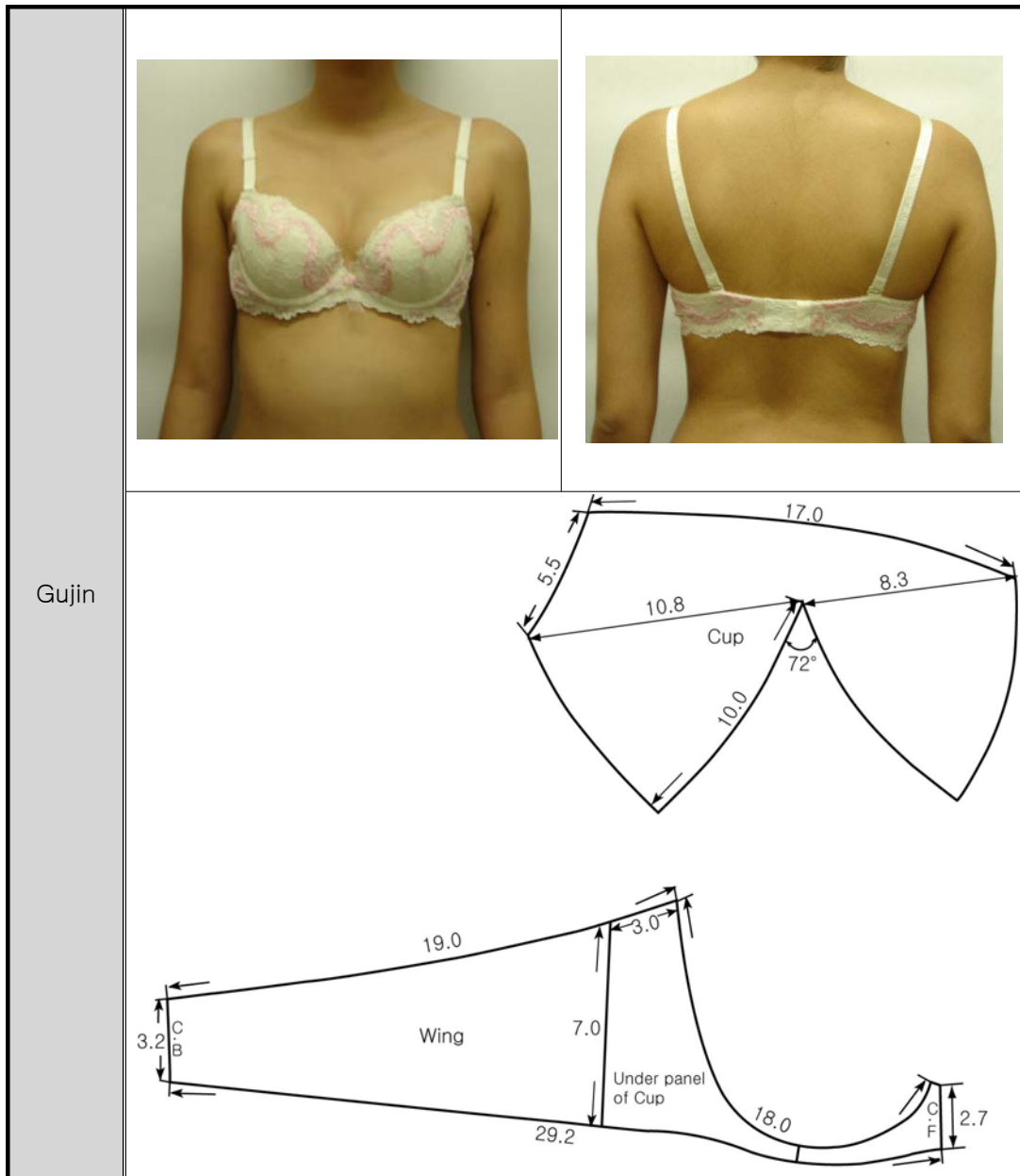
Part \ Brand	Gujin	Aimer	Audrey	Wacoal
Circumference of Cup	18.0	18.8	19.8	18.8
Circumference of Armhole	5.5	2.8	4.0	3.2
Inner Side Diameter	8.3	6.6	7.0	7.2
External Side Diameter	10.8	10.3	9.8	9.3
Length of a wing's upper side	19.0	19.6	20.6	19.8
Width of Hook&Eye	3.2	3.2	3.5	2.8
Length of Wing	29.2	29.0	30.0	30.0
Distance of Keeper	3.0	3.0	3.4	2.5
Length of a cup's upper side	17.0	15.4	16.2	16.0
Length of Cup dart	10.0	8.3	9.0	8.5
Distance of Shoulder Strap	3.7	4.0	5.5	4.3
Height of Center Front	2.7	3.7	4.2	4.8
Height of Keeper	7.0	7.5	8.0	7.5
Slope of Cup dart	72.0°	67.0°	41.0°	51.0°
Slope of wing	84.0°	125.0°	111.0°	117.0°

it had same sizes, there were huge differences in the amount of the dart.

There were big differences in wing angles and

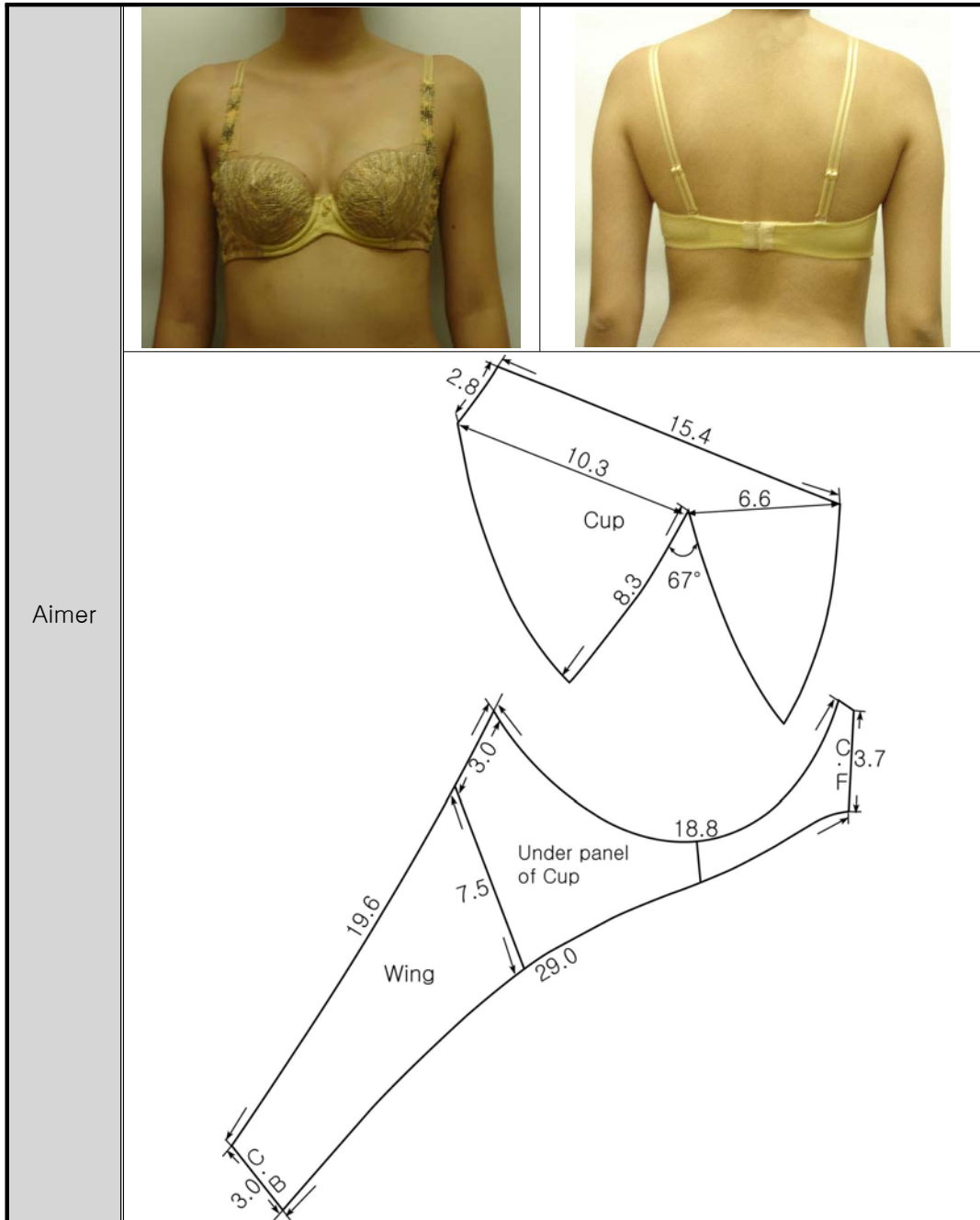
for Aimer, it had the steepest trend in wings and thus the wings headed down and for Gujin, as the angle of the wing was smaller than 90°, it

(1) Brassiere pattern of Gujin



<Figure 11> Brassiere pattern of Gujin

(2) Brassiere pattern of Aimer



Aimer

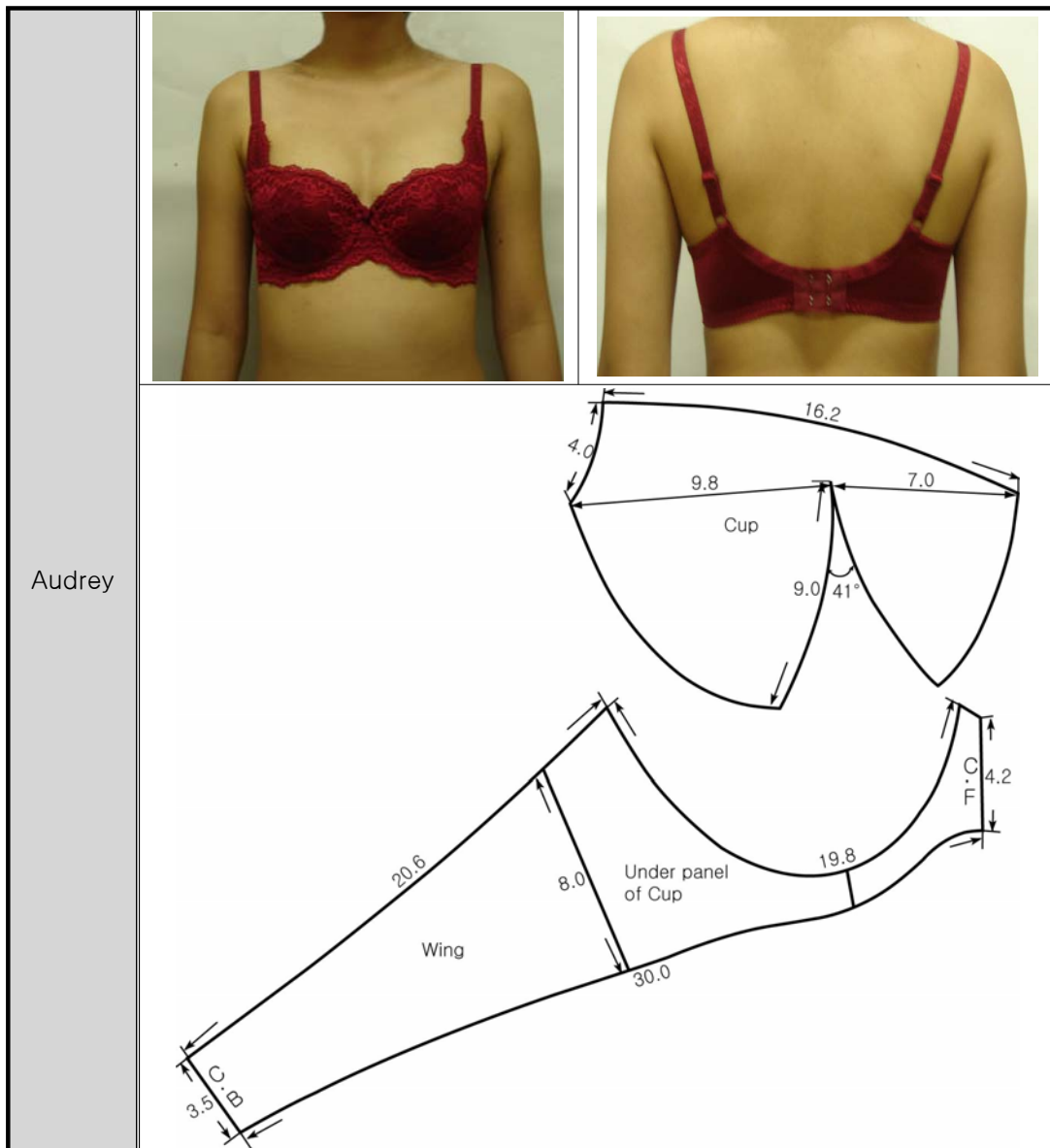
<Figure 12> Brassiere pattern of Aimer

was heading upward.

When we look into the cup pattern through the polymerization level of the brassiere pattern sold in China, as it values the beauty of it, it has a type that does not cover the upper part

of the breast and although it has same size, it shows much difference in the amount of cup dart and as the wing pattern has types of bending low or soaring up, the type of wing is quite different due to the brand or design.

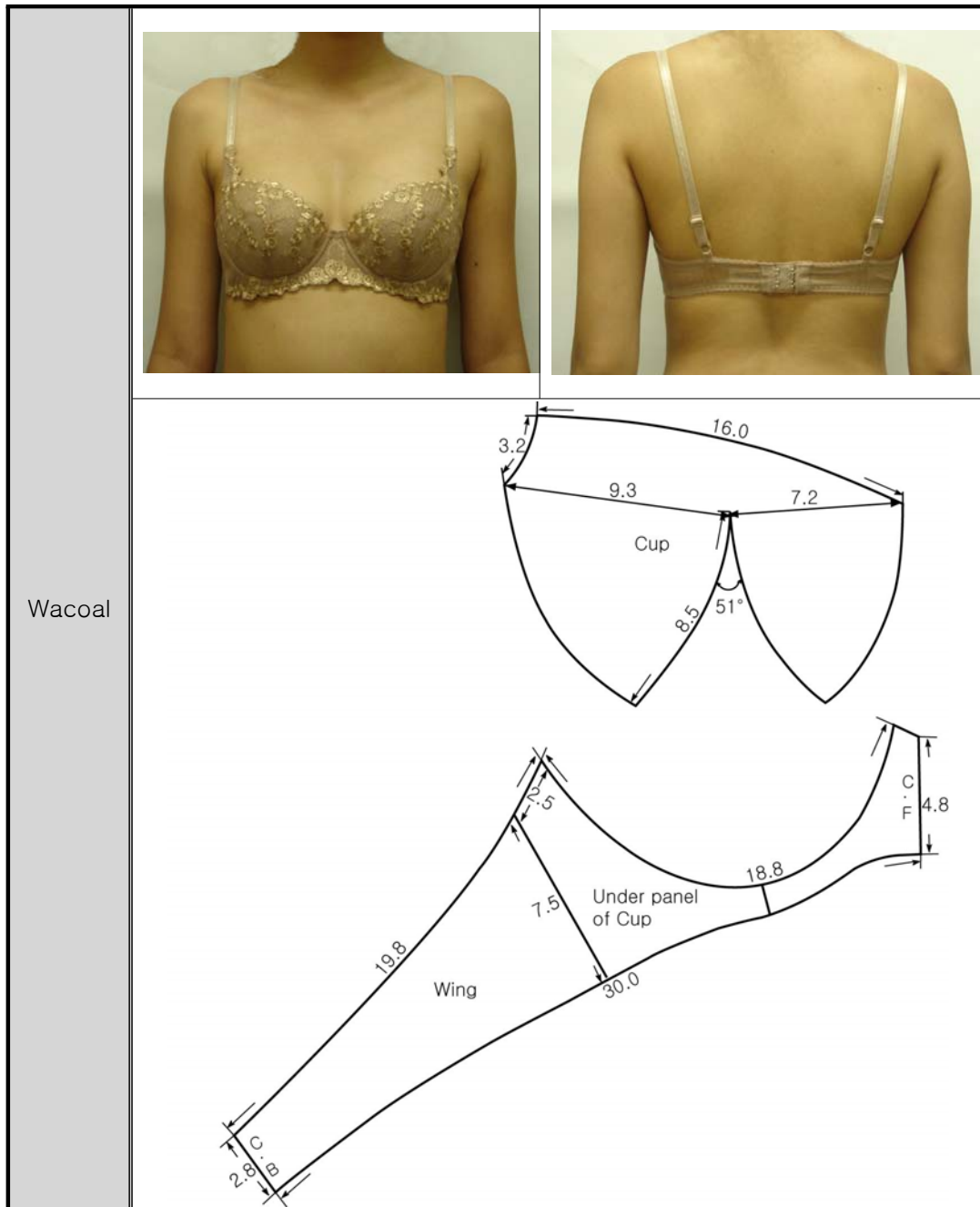
(3) Brassiere pattern of Audrey



Audrey

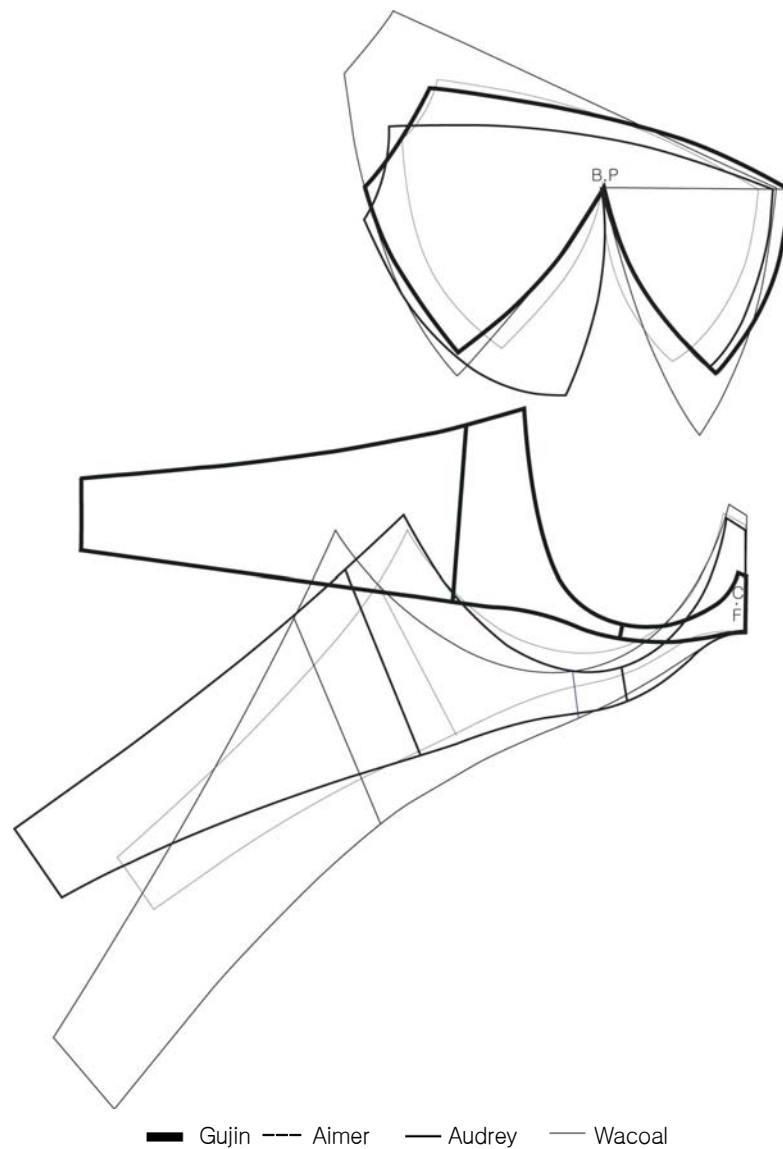
<Figure 13> Brassiere pattern of Audrey

(4) Brassiere pattern of Wacoal



Wacoal

<Figure 14> Brassiere pattern of Wacoal



<Figure 15> The degree of Polymerization of Brassiere Patterns for China

3. Comparison analysis of brassiere patterns for Korea and China

Upon comparing the patterns of the Korean and Chinese brassiere, although most of the sizes excluding the wing angle had similar sizes,

there was big differences in the wing angle. The reason why the brassiere patterns sold in China had bigger wing angle was due to the fact that more Chinese women had half-sized body than the Korean women and⁴⁾ should reflect such

difference in body size into making the brassiere patterns for each women.

When we look into the polymerization level of the brassiere patterns sold in Korea and China, the main difference lies in the wing angle. Although the wing angle of the Korean brassiere pattern is quite similar, for the Chinese brassiere pattern, it differs a lot and tends to bend to the lower part.

Conclusively, for the brassier patterns sold in China, the ones with the wider wing angles is due to the body features of Chinese women who has a more sway back body type than the Korean women and needs to reflect the difference in brassiere patterns in making the brassiere patterns. For brassiere patterns sold in Korea, as it had similar wing angles regardless of the brand, we can say that it is standardized but for China, as there are differences in brassiere patterns due to brand or design, we can say that the standardization of patterns are not yet set up.

IV. Conclusion

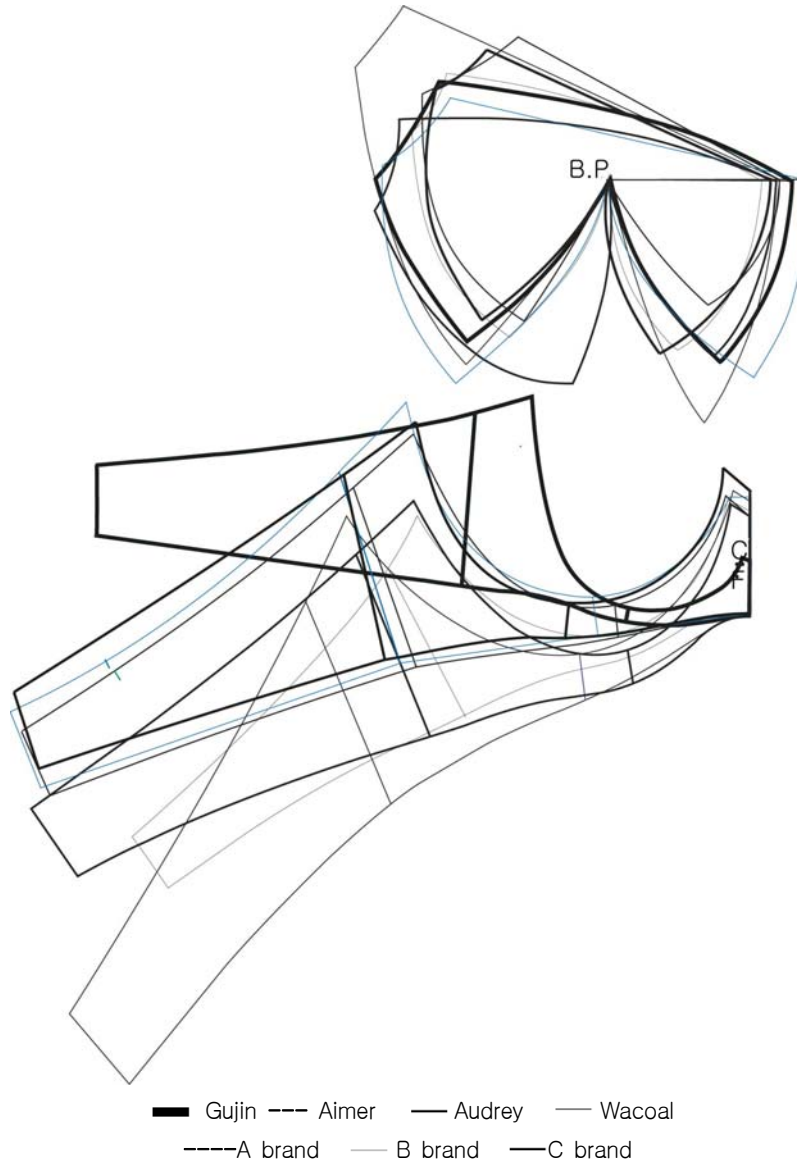
This research is to compare and analyze the brassiere patterns sold in Shanghai and Korea and to present basic materials needed in developing the brassiere patterns in Chinese adult women market. The study subject which is to find the difference in brassiere patterns of Korea and China has been selected of 3 Korean brands and 4 Chinese brands.

1. For the brassiere patterns sold in Korea, it were using the same size for the width of Hook&Eye, space between the shoulder lace on the back, slope of wing and the location of the Keeper was similar.

2. For the cup supporting base, Chinese brassiere covers the lower part of the breast and as it is not comfortable and has a phenomenon of loosening up, there were severe puckering. For issues in the wearing experiment, amendments in patterns with the cup part was required.

<Table 4> Comparison analysis of brassiere pattern size for Kore and China (Unit: cm)

Part	Brand	Korea			China			
		A brand	B brand	C brand	Gujin	Aimer	Audrey	Wacoal
Circumference of Cup		18.5	19.0	19.7	18.0	18.8	19.8	18.8
Circumference of Armhole		5.0	4.4	2.8	5.5	2.8	4.0	3.2
Inner Side Diameter		7.7	8.8	7.3	8.3	6.6	7.0	7.2
External Side Diameter		9.1	10.2	8.8	10.8	10.3	9.8	9.3
Length of a wing's upper side		20.1	20.4	19.7	19.0	19.6	20.6	19.8
Width of Hook&Eye		3.2	3.2	3.2	3.2	3.2	3.5	2.8
Length of Wing		30.1	30.4	30.3	29.2	29.0	30.0	30.0
Distance of Keeper		3.2	3.4	3.4	3.0	3.0	3.4	2.5
Length of a cup's upper side		13.6	16.4	14.2	17.0	15.4	16.2	16.0
Length of Cup dart		7.4	11.7	8.5	10.0	8.3	9.0	8.5
Distance of Shoulder Strap		4.4	4.4	4.4	3.7	4.0	5.5	4.3
Height of Center Front		3.8	4.5	4.8	2.7	3.7	4.2	4.8
Height of Keeper		7.1	7.9	7.5	7.0	7.5	8.0	7.5
Slope of Cup dart		69.0°	72.0°	59.0°	72.0°	67.0°	41.0°	51.0°
Slope of wing		104.0°	109.0°	104.0°	84.0°	125.0°	111.0°	117.0°



<Figure 16> The degree of Polymerization of Brassiere Patterns for Korea and China

3. Chinese brassieres were big differences in wing angles and for Aimer, it had the steepest trend in wings and thus the wings headed down and for Gujin, as the angle of the wing was smaller than 90°, it was heading upward.

4. Upon comparing the patterns of the Korean

and Chinese brassiere, although most of the sizes excluding the wing angle had similar sizes, there was big differences in the wing angle. The reason why the brassiere patterns sold in China had bigger wing angle was due to the fact that more Chinese women had sway back body type

than the Korean women and should reflect such difference in body size into making the brassiere patterns for each women.

Finally, this research result has looked only into certain patterns of brands and also for the brassiere patterns sold in Korea, it was acquired through related companies but for the brassiere patterns sold in China, as it dismantled and analyzed the product, we should take keen attention from over-reacting to it.

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