

A Comparative Study of Inner Neck Scarf Quality from Different Price Range among the Malaysian Consumers

Nasaie Zainuddin^{1*}, Najua Tulos¹, Asliza Aris², Muhammad Hisyam Zakaria²

*Corresponding Author

¹ Faculty of Applied Sciences, University Technology MARA Shah Alam, 40450, Malaysia

² College of Creative Arts, University Technology MARA Shah Alam, 40450, Malaysia

nasaie@uitm.edu.my, tnajua@uitm.edu.my, arisasliza@uitm.edu.my, mdhisyam@uitm.edu.my
Tel *: +60132225453

Abstract

The inner neck scarf is used to grip the forehead until covering the end of the neck. Due to the many types of it in the market and the need for more information on better quality, customers buy it without knowing whether it is worth the performance offered. This study evaluates comfort properties in terms of the quality of three brands: dUCK Scarf, Naelofar Hijab, and unbranded. Comfort properties such as breathability and absorbency were tested. Its physical properties were also tested, including fabric weight, thickness, and stitch density. Naelofar Hijab's inner neck gives better breathability and absorbency testing results.

Keywords: scarf; quality; comfort; price; properties.

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1.0 Introduction

Hijab can be defined as 'covering' and referred to as the fabric that covers the Muslim head (Yazid, 2016). There are so many types of hijabs all around the world. For example, in Arab, Muslim women wear a traditional black robe – dress, and the faces are covered by Niqab. Then, as for people who stay in Southeast Asian countries, scarves and shawls have been the most hijab fashion used since the 70s. A shawl can be defined as an easy scarf that is used to cover the head. In Islam, the most important rule is to cover the aura. Next, it does show through, and lastly not show body lines (Jun et al, 2020). Second rules of wearing hijab mentioned that hijab must not show through, but most of Malaysia's scarves are thin and see-through.

In this past year, most of the designers came out with another small hijab that is called an inner neck scarf (Dawam & Ahmad, 2020). The inner neck scarf acts as a hair cover which is used to grip the forehead until covering the end of the neck and it is used to make shawl wearers look nice and tidy. Most inner neck scarves are made from blended cottons, such as cotton with Lycra, spandex, and viscose (Asanovic, 2015).

One of the essential factors in the business is the consumers. Consumers can be considered business actors, and consumers are the ones who can enlarge the business profit. Some reasons that can cause the customer's intention to purchase the product is price, the type of product, the quality, and trademarks. A consumer's willingness to pay and attitude toward specific purchasing behavior can be referred to as the consumer's purchasing intention (Zhang et al., 2020). Consumer preference can be defined as an individual or personal taste in goods and services. Peter and Olson (2008) state that customer behavior is about psychological, social, and physical actions when buying a product, idea, or service.

Quality is the level of acceptance of goods or services (Talib & Rahman, 2010). Quality can also be said as conformance to the requirement. There are several main points to define quality which are resistance, where clothing can maintain its shape and comfort, where it needs to feel good on the skin-longevity, where clothing can last long-lasting, and lastly, style. Comfort is essential for achieving

the best quality. The fabric clothing is not good enough if it only performs in color and durability. There should be good comfort properties (Asanovic et al., 2015). Comfort is known as a loss of pain and discomfort. A person's satisfaction in terms of physiological, psychological, and physical balance can be stated as clothing comfort (Slater, 1986). Generally, better-quality products will increase prices (Shirai, 2015). Some lower-cost products can perform better (Peter & Olson, 2008). Hence, the study is to evaluate the comparison of quality in term of comfort properties such as breathability and absorbency between three different brand of inner neck scarf with different price range.

2.0 Literature Review

2.1 Clothing

Clothing is the term that can be used on something that can cover the body and omit modification. The primary purpose of clothing is to make us feel warm and dry. People in the 21st century are aware that the function of clothing is used as protection. Other than that, clothing also acts as identification, modesty, adornment, and status (Jun et al, 2020). Clothing is like adornment; it covers the whole body and is indeed suitable and protective. Still, if it does not cover a specific body part, it causes immodest and gives a bad appearance to the wearer (Asanovic, 2015). The first social interface is one of the fashion perspectives on clothing, as it is an essential and necessary social tool that interfaces the body with the public (Johnson et al, 2014). Clothing also can be a place for wearers to show their emotions and express their feelings (Sullivan et al, 2017).

2.2 Fashion and Accessories

Renaissance Europe is where fashion began changing dressing customs and struggle between old and new brought from this era (Johnson et al, 2014). Style can be said as an ongoing trend. This term refers to how people dress, stylish themselves and are up to date. Clothing, footwear, lifestyle, accessories, makeup, hairstyle, and body proportion can be described as fashion expressions. Decorative items used as an add-on on a garment are the definition of fashion accessories (Jun et al, 2020). In general, fashion accessories are an item that is usually used to supplement the wearer's outfit and used to make the outfit look complete. Some fashion accessories include jewellery, gloves, handbags, bow ties, watches, sunglasses, stockings, leggings, and scarves. In addition, a shawl and scarf can also be categorized as accessories. During this past year, women made scarves or hijabs as accessories (Johnson et al, 2014).

2.3 Head Covering

Head covering, headgear, or headgear is one of the clothing elements worn on the head. Headwear serves a variety of purposes which are for protection, decoration or fashion, religious meaning, medical purpose, modesty, and sports uniform. In fashion, headwear is a hat, headscarf or hijab, cap, turbans, veils, and wig. As time moves, many people have come out with some kind of head covering either for practical or ceremonial purposes (Hassan & Harun, 2016).

2.4 Hijab

According to Hassan & Harun (2016), the word hijab comes from ha-ja-ba, which means to cover or veil. It is also known as modesty and respect symbols. Hijab also referred to as a scarf used by Muslim women, wrap around their heads and then cover their chest. A hijab acts as a fashion statement or expression of one's personality. It is also considered the symbol of Islam as Muslims believe that hijab can be used to differentiate between women and men. Islam asks women to wear hijab as it can protect wearer from danger and harassment (Hassan & Harun, 2016).

2.5 Inner Neck

Inner neck is a small hijab that was designed to be worn with a shawl or scarf. This is because shawl and scarf are produced with thin fabric which can see through so by having this small hijab or familiarly called as inner neck scarf, it can protect women's hair, neck and ear from being seen. Inner neck used to grip the forehead until the end of the neck (Dawam & Ahmad, 2020). Even though it is only being worn inside, it has many functions and advantages. For example, it is used to secure hair so it will stay in the scarf properly and can reduce the friction between inner neck and shawl.

2.6 Type of fabric material used for Inner neck scarf

Blended cotton is a standard fabric for making inner neck scarves, for example, cotton with Lycra, spandex, and cotton with viscose. Brands like dUCK scarf and Naelofar Hijab choose cotton lycra.

2.6.1 Cotton fabric

Cotton is widely chosen as the main fabric because of its properties. Cotton has good breathability, is very water absorbent, and is an incredibly soft and light fabric where all of these properties are needed to produce better quality inner neck.

2.6.2 Lycra fabric

A manufactured fiber, which is a fiber-forming substance is a long-chain synthetic polymer that has 85% of segmented polyurethane is the definition of Lycra. Lycra can stretch more and have good dimensional recovery compared to cotton alone (Raccuglia et al., 2018).

Then, Lycra, also known as synthetic elastane fiber that its length can stretch up to six times and then come back to the original shape (Virginia, 2020). Lycra is widely used for competitive wear, the detective sector, ski pants, yoga pants, shorts, and others.

2.6.3 Spandex

Spandex was introduced in the late 1950s as it has been used to replace rubber in narrow elastic fabrics (Virginia, 2020). Spandex has good properties in terms of wear properties, comfort, recovery, remarkable stretch, and functionality, all of which these properties are needed to form comfort in the textile industry. Fashion outerwear, swimwear, sportswear, intimate clothing, hosiery, and medical application are examples of spandex end-use applications.

2.6.4 Blended cotton and Lycra/spandex

Clothes manufactured from blended cotton and lycra or spandex are good because they have good breathability, stretchy comfort, and affordable price (Raccuglia et al, 2017). Other than that, Lycra and spandex also have good properties in terms of elasticity, and it is often used for women's and men's outerwear, innerwear, and activewear. Because of the mentioned properties, many retailers used cotton lycra and cotton spandex for their inner neck products.

2.7 Definition of Clothing Comfort

Consumers can perceive comfort when wearing clothing (Sun, 2017). Nowadays, comfort is the first thing consumers will look at before purchasing any clothing. Raccuglia et al (2017) mentioned that tactile and thermal sensation when skin contacts the environment could significantly influence clothing comfort.

Slater (1986) mentioned three factors that cause discomfort, which is physiological, physical, and psychological. Physiological comfort is thermal comfort, which describes clothing comfort in physiological aspects. Then, physical comfort or tactile comfort can be explained as an interaction between fabric and human skin. This physical comfort can increase customer purchasing as they can directly touch and feel the clothing and can personally evaluate the comfort properties. The last factor is psychological comfort which refers to individual consumer preference for comfort, which includes their role, value, and social life. Therefore, it isn't easy to see only one factor that can cause individual comfort to disappear (Raccuglia et al, 2017). Comfort properties depend on the construction of fibers, yarns, and fabric in the clothing. Various material and design factors are other definitions of clothing comfort (Raccuglia et al, 2018).

3.0 Methodology

This study uses a qualitative method that focuses on fabric testing. First, three brand samples of inner neck scarves, dUCK Scarf, Naelofar Hijab, and Unbranded inner neck, were prepared with a price range between RM 60 to RM 10. Next, two tests are done, which analyze the inner neck's physical and comfort properties. Then for physical properties, the inner necks were tested regarding fabric weight, fabric thickness, and stitch density.

The fabric weight is tested according to ASTM D 3776/ D 3776M – 2009a, where three samples are needed and cut using a standard cutter of area 100cm. Then all samples were measured in weighing balance while for comfort properties and thickness, the testing was conducted according to standard ASTM D 1777 – 96 / 2007, where ten readings were taken using a Thickness Gauge. Then for stitch density, the test was done according to standard MS ISO 7211/2 – 2003, where five samples were prepared randomly for 1 inch and measured using a counting glass.

This study required testing comfort through breathability and absorbency testing. The breathability is tested using Water Vapor Transmission of Material according to standard ASTM E96, where 40 ml of distilled water was used to fill the cup. All samples were cut based on the cup size and put on the cup with the environment temperature at 27°C, and the cup's weight was recorded before running the machine and after 7 hours. Lastly, for the absorbency test, used standard method AATCC Method 79 called a wettability test where four samples are placed in an embroidery hoop and put 9.5 mm under the burette where the burette used to drop water onto the fabric, and time is recorded until the water drop completely absorb into the fabric.

4.0 Result

Five tests have been done, and all testing followed the standard. Physical testing is done to get results for weight, thickness, and density, while for comfort properties, testing for breathability and absorbency has been done.

4.1 Physical Testing

Three physical tests were conducted: weight, density, and thickness. All the data is shown below in Table 1.

Table 1. Physical Testing result

Physical Testing		dUCK Scarf	Naelofar Hijab	Unbranded
Weight (g)		1.9604	1.3916	1.5991
Thickness (mm)		5.4	5.8	6.3
Density	WPCM	46	38	40
	CPCM	42	36	38

(Source :Nasaie Zainuddin)

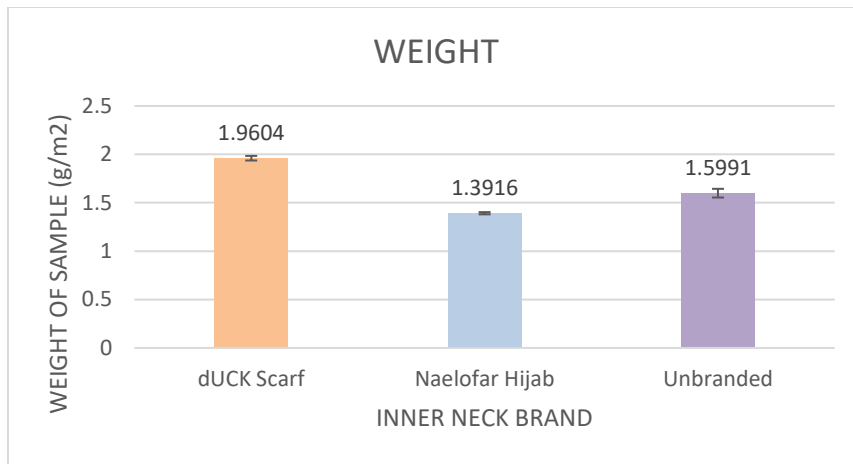


Fig.1: Graph shows relationship between weight of three brands.
(Source:Nasaie Zainuddin)

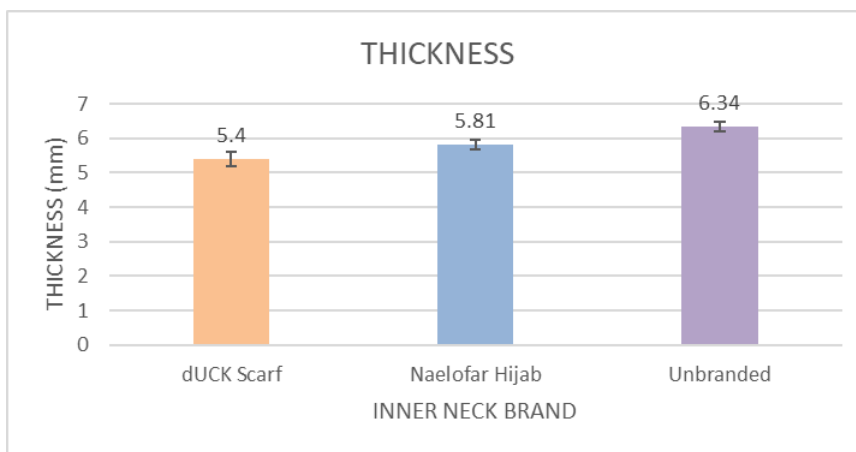


Fig.2: Graph shows relationship between thickness and different brand of inner neck.
(Source: Nasaie Zainuddin)

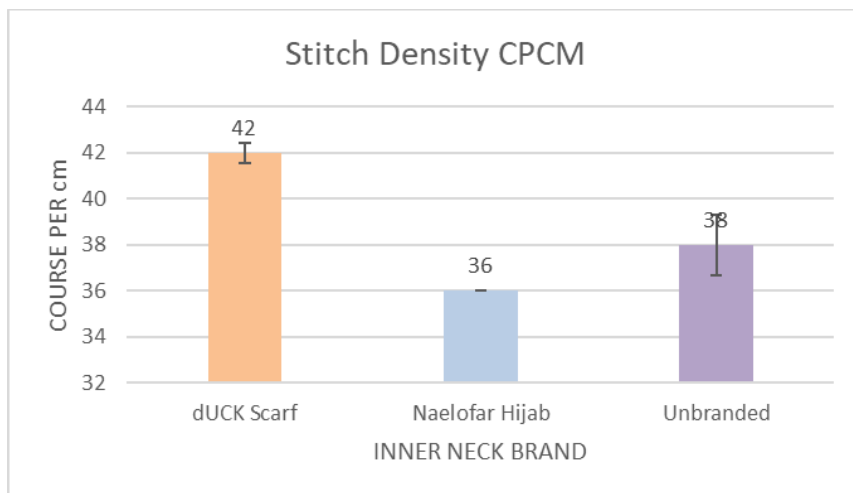


Fig.3: Graph shows relationship between number of wales per cm for different brand.
(Source: Nasaie Zainuddin)

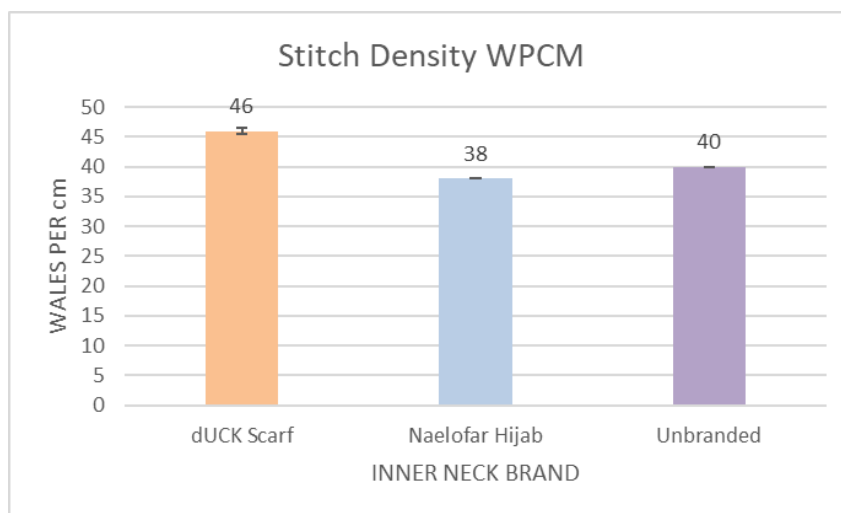
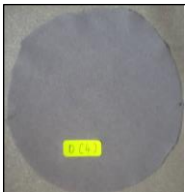

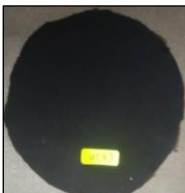


Fig.4: Graph shows relationship between number of course per cm for different brand.
(Source: Nasaie Zainuddin)

Table 1 above shows each brand sample's weight, thickness, and stitch density results. In terms of weight, as shown in Fig.1 stated, the dUCK Scarf is the heaviest one, with 1.9604 g compared to Naelofar Hijab and which is 1.3916g and 1.5991g. Next, Fig.2 shows a graph for thickness in which Unbranded is thicker than other brands while dUCK Scarf is less thick than Unbranded. Stitch density indicates the number of yarns at has in the inner neck. Fig.3 and 4 stated that dUCK Scarf has more yarn (wales x course) than other brands. This can be related to the weight of the sample, where the dUCK Scarf is heavier because it has more yarn in the sample, while the Naelofar Hijab is lighter than others since the number of yarns is less.

4.2 Breathability

Table 2. Result for breathability testing (water vapor transmission)

Brand	Figure	Weight Before (G/m ²)	Weight After 7 Hours (G/m ²)	Weight Loss (G/m ²)	Water Vapor Permeability (G/m ²) / Hr
dUCK Scarf		124.9144	123.3206	1.5938	3.3488
Naelofar Hijab		123.5986	121.7589	1.8397	3.8655
Unbranded		124.6830	122.9197	1.7635	3.7054

(Source: Nasaie Zainuddin)

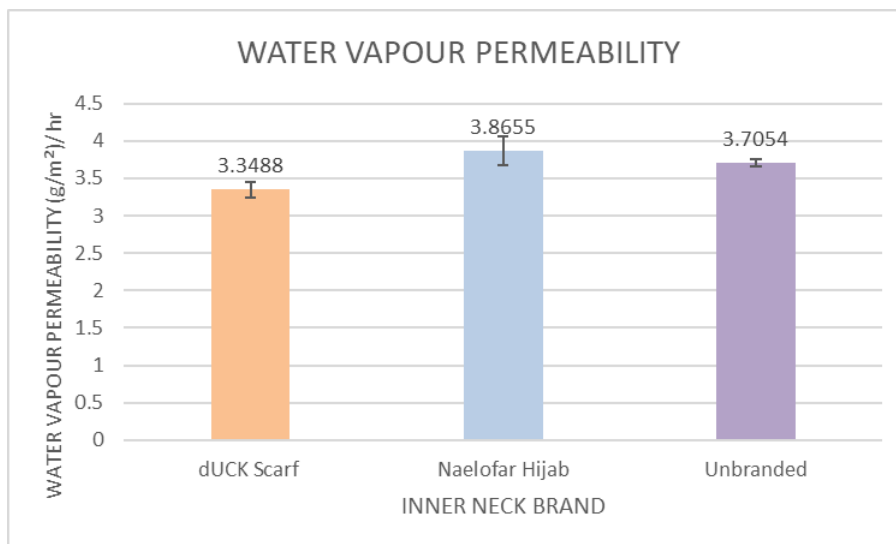



Fig.5: Graph relationship between water vapor permeability for different brand.
(Source: Nasaie Zainuddin)

Breathability has been tested by using a Water Vapour Permeability tester. The test results have been summarized in a graph in Fig.5. The figure above shows the graph data for all three brands. It shows Naelofar Hijab has the highest water vapor permeability, which is 3.8655 (g/m²) / hr, while the dUCK Scarf and Unbranded are 3.3488 (g/m²) / hr and 3.7054 (g/m²) / hr. It shows that Naelofar Hijab allows more moisture vapor transmission compared to other brands.

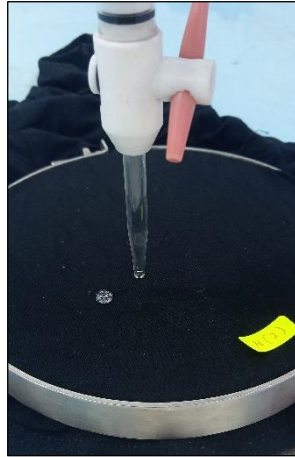
This can be related to stitching density from Table.2. Naelofar Hijab has a low density which means it has less yarn and more yarn space which causes the water vapor to easily pass through. Water vapor transport behavior was influenced by the fabric construction, especially in the low-density textile structure. The researchers conclude that less stitch density will result in the increment of water vapor permeability. It also shows that the dUCK Scarf with more yarn has the least moisture transmission compared to Unbranded. Thus, Naelofar Hijab has better breathable properties.

4.3 Absorbency (Wettability Test)

Table 3. Result for absorbency testing (wettability)

Brand	Figure	Time Taken The Water Drop Absorb Into The Fabric (s)
dUCK Scarf		39.91

Naelofar Hijab



3770.25

Unbranded



5293.50

(Source: Nasaie Zainuddin)

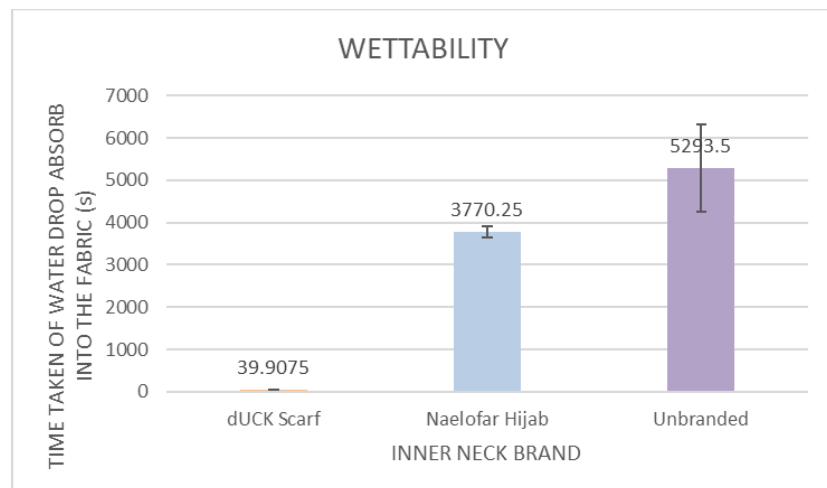


Fig.6: Graph relationship between time taken of water drop absorb into the fabric for different brand.
(Source: Nasaie Zainuddin)

Next, absorbency is one of the elements to test the fabric's comfort. It has been tested by using a wettability test. The study used a wettability tester to determine which brand can absorb water quickly. The time taken to soak water drop into the fabric has been shown in Fig.6. The graph indicates that dUCK Scarf absorbs water faster than other brands. This brand only takes 39.91 seconds to absorb one drop of water, while Naelofar Hijab and Unbranded take more time to absorb the water. Naelofar Hijab takes 3770.25 seconds, and

Unbranded takes 5293.50 seconds. Here it can be concluded that the dUCK Scarf has good absorbency properties then, followed by Naelofar Hijab, and lastly, Unbranded. Table 3 shows that the dUCK Scarf has a high stitch density. Thus, it takes the shortest time to absorb the water. Some properties can influence wicking and wetting behavior: the structure of yarn, the twist, yarn tension, construction, and composition of the fabric.

5.0 Conclusion

Naelofar Hijab gives the best quality comfort, and affordable price compared other two brands. Both the higher and moderate prices of the inner neck give better results on the comfort properties and proof the branded inner neck provides better quality. Besides that, Naelofar Hijab, with a moderate price, gives better breathability properties. This is because Naelofar Hijab's inner neck has the highest number of Water Vapour Permeability which allows a lot of moisture to pass through the fabric and makes the wearer feel comfortable wearing it for the whole day. Next, the best brand of inner neck scarf for absorbency properties is brand dUCK Scarf which only takes less than 60 seconds to absorb the water during testing. Therefore, it can make the wearer feel comfortable as it can easily absorb sweat quickly.

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