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## Facts About Pearls



The use of pearls as decoration is dated from thousands of years ago. Today, pearl has become more accessible and affordable than ever. The market is flooded by various of pearls. There are thousands of sellers selling pearl jewelry at prices ranging from one dollar to tens of thousands of dollars. This small article is designed to give you basic understanding of pearls.

## What is a pearl?



A **pearl** is a living gem, a miracle of nature. It is the accumulation of nacre, or mother of pearl, a very thin and semi translucent material similar to the lining inside of a nacreous shell that gives a pearl its unique luster and quality. It takes thousands of layers of nacre to make a pearl.

## Natural Pearls, Cultured Pearls, and Imitation Pearls

### Natural pearl

A **natural pearl** is a product of chance without human intervention. It is formed after an irritant such as a grain of sand or a parasite gets into the body of an oyster. In order to reduce the irritation, the oyster produces layers of nacre to over the irritant. Over the years, a pearl is formed. Today, with the depletion of natural pearls bed about 100 years ago, natural pearls are extremely rare and very expensive.

## Cultured pearl

A **cultured pearl** is formed after an irritant is intentionally inserted by human into an oyster. This technique was first introduced by Mikimoto in the early 1900s. Since then, pearl culture techniques have been improved and perfected over the years. Today, almost all genuine pearls on the market are cultured pearls meaning produced by oysters raised in a pearl farm. There are 4 major varieties of cultured pearls. We will explain each one in details.

## Imitation pearl

An **imitation pearl** is a man-made pearl manufactured from a variety of materials such as glass beads, plastic or polished shells coated with a varnish to make it look like a real pearl. The varnish was traditionally made from fish scales. Nowadays, it is mostly made from reconstructed mother of pearl, hence the pearl is called a shell pearl.

## Four Types of Cultured Pearls

### Akoya Pearls

**Akoya pearls** are produced by Akoya oysters in Japan. They are salt water pearls. The technology was first invented by Mikimoto. Depending on the size of the oyster, the size of the pearl may vary between 3-10mm. The range of color of these pearls includes white, cream, pink, green, silver, and gold. There are no natural black Akoya pearls. The black color is dyed into the structure of the pearl by photochemical reaction during a dyeing process. Akoya pearls are known for their high luster and rich color. Japan and China are the major countries that produce Akoya pearls.

### South Sea Pearls

**South Sea Pearls** are considered the “Queen of Pearls”. They are produced by much larger oysters (*Pinctada maxima*) in the warm waters of the South Seas, in Australia, Indonesia and the Philippines. The size of these pearls are much larger, normally range from 9-17mm. The color of the South Sea pearls is determined by different oyster types. White South Sea pearls are produced by Silver Lipped pearl oysters. Golden pearls are produced by the Golden lipped oyster. Their warm, natural golden color is said to be rarer than gold itself.

### Tahitian Black Pearls

**Tahitian Black Pearls** are produced by black lipped oysters (*Pinctada Margaritifera*) in the ocean waters around Tahiti and Okinawa. They are naturally black pearls with sizes range from 8mm to around 16mm. Their color combines blue, green and violet tones with the peacock green being the most popular. In an effort to guarantee the quality of Tahitian cultured pearls, The French Polynesian government requires a minimum of 0.8mm for the thickness of the nacre. It may take a dozen harvest years to collect enough black pearls that match in size, shape and color to create one necklace.

## Fresh Water Pearls

**Fresh Water Pearls** are cultured mostly in the lakes and rivers of China using *Hyriopsis Cumingi* as the host oyster. As many as ten to fourteen pearls can be cultured in one mussel. The colors of fresh water pearls include white, cream, pink, purple, silver, and gold. Their sizes range from 3-13mm. Fresh water pearls used to be considered as lower quality pearls because most of them were in the shape of a rice grain or a potato. However, in the past 10 years, with break through pearl farming technology, pearl farmers have been able to producing more and more very high quality fresh water pearl. Some of them are just as nice as Akoya pearls. In addition, because of the high productivity of a single mussel, the price of fresh water pearls is much nicer than Akoya pearls with similar quality.

## How to judge a pearl?

Just like 4 C's of diamonds, there are certain characteristics we can use to judge and grade a pearl: **luster**, **color**, **size**, **surface** and **shape**.

### Luster



**Luster**, similar to the brilliance of a diamond, is a very important factor in terms of judging a pearl. It is a display of not only a shiny, reflective surface, but also an inner glow when light reflects from the layers of nacre that form the pearl. The higher the luster, the higher the value of the pearl.

- **Excellent luster:** bright, lively shinny and mirror like reflections on the surface of the pearl
- **Good luster:** still fairly bright reflections with less sharpness
- **Fair luster:** unclear and weak reflections,
- **Poor luster:** chalk like surface with dull or no reflections

### Color



Light color pearl colors



### Black pearl colors

The color of a pearl is a combination of several characteristics: hue, saturation, tone, overtone and orient. It is a consequence of the interaction between light and the structure of the pearl's nacre. Fine pearls are usually iridescent because they not only reflect light, but also break the light into different light waves. That is why a high quality white pearl may seem to possess a very subtle pinkish overtone and a high luster. A Tahitian pearl may display rainbow hues. Usually, the more subtle the color, the higher the value of the pearl.

- **Akoya Pearls:** basically white, cream, greenish, yellow and grey. Black Akoya pearls are artificially dyed.
- **Fresh Water Pearls:** champagne, peach, pink, lavender, lilac, gray. Black and many other colored fresh water pearls are artificially dyed.
- **South Sea Pearls:** silver white, white rose, cream and golden. South Sea pearls are rarely color treated, although they may be bleached.
- **Tahitian Black Pearls:** black with various color overtones (peacock green, bluish green, bluish, silver/gray)

### Size



Different types of pearls have different sizes.

- **Akoya pearls:** average 2-9mm in size with 2-7mm at the most common. Sizes of 9.5mm and above are extremely rare.
- **Fresh water pearls:** 2-7mm in seedless pearls and can go larger up to 13-14mm with nucleated pearls.
- **South Sea pearls:** 9-18mm in size and in rare occasions up to 20mm
- **Tahitian pearls:** 8-16mm and in rare occasions up to 18mm

Usually, with the same luster, shape and surface quality, the larger the pearl, the higher the value.

### Surface



Just like flawless diamonds, very few pearls are perfectly smooth. Most pearls have blemishes which are natural characteristics. There are many different types of blemishes: bump, spots, discoloration, chip, pit, cap, crack, scratch, wrinkle, etc. Just like diamonds, the cleaner the surface, the higher the value of the pearl.

- **Clean:** No visible blemishes
- **Slightly Spotted:** Generally a clean surface with a few small visible surface imperfections
- **Moderately Spotted:** One side of the pearl is considered clean while surface imperfections can be seen elsewhere.
- **Spotted: Surface:** Imperfections all over the pearl.
- **Heavily Spotted:** Strong surface imperfections that affect both the look and durability of the pearl

When buying on budget, customers should consider a pearl with mild spotting and enough luster to mask the spotting.

### Shape



Pearl is mostly pictured to have a perfect round shape. The fact is that round pearls are very rare. In today's market, off round, tear drop, button, baroque and other irregular shaped pearls are becoming more and more popular. The common shapes of pearl is as following:

- **Round Pearls:** Perfectly spherical pearls
- **Drop Pearls:** Tear drop shaped pearls
- **Button Pearl:** Pearls with a flatten bottom
- **Circle (ringed) Pearls:** Pearls with circular concave rings on the surface
- **Baroque Pearls:** Irregular shaped pearls

In general, the more perfectly round the pearl, the higher the value.

Less than a century ago, only three types pearls were on the market: natural pearls, Akoya cultured pearls and imitation pearls. Today, many more types of pearls are found on the market: cultured Tahitian pearls, cultured fresh water pearls, cultured South Sea pearls, Keshi pearl, Mabe pearls, etc. It becomes more challenging in identifying different pearls and placing appropriate value to them. The following is the most common questions consumers ask regarding the identification of pearls.

### **Natural Or Cultured Pearls**

Natural pearls are very rare. Due to their availability, natural pearl strings contain pearls that are not uniform in size, luster, color and shape. In contrast, cultured pearl strings are uniform in sizes, luster, color and shape. In addition, natural pearls are seedless pearls. Examine the pearl under a loop; if you can find evidence of a seed by the drilled hole, it is a cultured pearl.

### **Genuine Or Imitation Pearls**

- **Performing a teeth test:** Rub a pearl gently with your front teeth. If it feels sandy, it is a genuine pearl. If it feels smooth, it is an imitation pearl.
- **Examination with a loop:** Look for the presence of chipping or cracking of artificial nacre from center beads (glass, plastic or shell).
- **Weight and temperature of the pearl:** Genuine pearls feel colder and heavier than imitation pearls
- **Check with an expert or a gem lab:** A gem lab usually has special equipment to carry out the task, while a pearl expert possesses in-depth knowledge of various topics in this field.

### **Akoya or South Sea?**

Akoya pearls rarely exceed 9.5mm in size, while South Sea pearls are mostly over 9mm in size. Examine the pearl under a loop; if you cannot find the evidence of a seed, the pearl is a fresh water pearl.

### **Akoya or Fresh Water?**

Fresh water pearls that are within Akoya pearl sizes are not seeded. By examining the drilled hole of a pearl and seeing a seed under the nacre, you can determine if the pearl is a seeded Akoya pearl. If you cannot find a seed, then it is a non-seeded fresh water pearl.

### **Fresh Water or South Sea?**

This is very challenging because nuclei-cultured Chinese fresh water pearls can get quite large. However, it is still possible to identify South Sea pearls from fresh water pearls. South Sea pearls have a unique silver gray hue that few fresh water pearls have. In addition, South Sea pearls rarely appear pinkish as fine quality fresh water pearls.

### **Color Enhanced Or Not?**

Check the external surface of a pearl for evidence of dye concentration. Dye concentration can be easily found around the drilled hole, blemishes and cracks. You

can also gently rub the surface with a piece of alcohol wipe, if you see traces of color on the wipe, the pearl is a color treated pearl.

## Taking Care of Pearls

A pearl is different from rock gemstone because it contains organic elements during the production of the pearl by a living creature. If a pearl is cared properly, its luster can last for hundreds of years. Special care is required in order to make a pearl last a long time

### What to do with pearls?

- Store pearls in a soft cloth bag separately from other jewelry to avoid scratches
- Avoid contact with perspiration, cosmetics, perfume, sun screen and acids
- Wipe pearls clean with a soft cloth after wear
- Re-string pearls on a regular basis

### What not to do with pearls?

- Clean pearls with steam or in an ultrasonic cleaner
- Store pearls in a dry environment, such as a bank vault.
- Leave pearl jewelry in the kitchen where acidic ingredients are stored and high heat is used during cooking
- Wear pearls in a swimming pool and during a shower
- Leave pearls under direct sunlight

Avoid contact with make-up, skin cream, perspiration, hair spray, insect repellent, soap, etc.

If you have any questions regarding pearls, you can call TADragon at 805-277-7232 or email us at [sales@tadragon.com](mailto:sales@tadragon.com).