

Keshi pearls and soufflé pearls are two kinds of marketable cultured pearl byproducts. (Keshi pearls can also be created deliberately). They make perfect options for beautiful, affordable, and unique pearl jewelry.

What are Keshi Pearls?

Keshi pearls can develop when a mollusk rejects the **bead nucleus** intended to stimulate the growth of a cultured pearl. When this occurs, sometimes a piece of mantle tissue that accompanied the bead remains in the mollusk. A pearl sac may form around this tissue and ultimately yield a pearl. However, without the bead nucleus, these pearls are usually small and baroque, not the **valuable round shapes** pearl farmers typically intend to grow.

Keshi pearls can form in any nucleated mollusk and range in size from 1 to 10 mm. However, smaller sizes are more common, with most in the 1 to 4 mm range.

Can Gemologists Distinguish Between Keshi Cultured Pearls and Natural Pearls?

Composed entirely of nacre layers, keshi pearls have remarkable **luster**. In this respect, they're very similar to **natural pearls**. Researchers have struggled to determine if keshi pearls were formed in nucleated mollusks or naturally. However, **advances in X-ray computed microtomography** have made it possible to make this distinction, though the methods are time-consuming and the equipment very expensive.

While keshi pearls were once abundant, they're becoming rarer. Many pearl farmers now use x-ray imaging to determine whether the mollusk accepted the bead nucleus. Those that rejected it receive another bead nucleus. So, instead of allowing a keshi pearl to develop, farmers redouble their efforts to grow a larger, rounder, more valuable cultured pearl.

Are Intentionally Tissue-Nucleated Pearls Considered Keshi Pearls?

Keshi pearls are sometimes called "accidental pearls" because they can form from mantle tissue unintentionally after a mollusk rejects a bead nucleus. However, some cultured pearl farmers use only mantle tissue rather than beads to nucleate pearls. The World Jewellery Confederation (CIBJO) defines keshi pearl as a trade name for "a non-beaded cultured pearl formed accidentally or intentionally by human intervention." (p. 32)

Accidental keshi pearls tend to be smaller than those intentionally created. That's because farmers allow these intentionally tissue-nucleated pearls to grow for a longer period, up to seven years. (Bead-nucleated pearls typically grow for about two years before harvest). Thus, intentionally tissue-nucleated pearls grow somewhat larger than those that grow accidentally. In fact, some farmers opt for a second harvest that results in very large non-nucleated pearls.

What are Soufflé Pearls?

A few freshwater pearl farms in China produce soufflé pearls as one of their cultured pearl byproducts. These pearls develop from an unusual type of nucleation. Dried pond mud, molded into a sphere, is inserted into the mussel's existing pearl sac. The mud expands, making the pearl sac bigger. When the nacre grows around this nucleus of earth, the resulting pearl is large, baroque, and remarkably colorful.

At first, because farmers sell freshwater pearls by weight, they discarded many of these hollow pearls as worthless. However, when these pearls grew a thick enough nacre, they found a market of their own. Once drilled and cleaned, soufflé pearls are remarkably lightweight for their size (hence the name), making them a great option for jewelry.

Soufflé pearls are perfect for large, lightweight pearl earrings.

The metallic colors of soufflé pearls are another draw. Although these colors do occur in some freshwater pearls, such bright and vibrant colors are uncommon. They may occur in soufflé pearls more frequently because of metallic elements in the pond mud seed.

Soufflé pearls tend to be very large, commonly ranging in length from 13 to 25 mm, but even larger specimens are known. Large sizes and unusual shapes and colors make soufflé pearls excellent options for statement jewelry.

The Rest of the Mollusk

Of course, pearl farmers don't let any part of the mollusk go to waste. Some of the soft parts of the harvested mollusks are local delicacies. The rest becomes fertilizer or animal feed.

The **shells** themselves are processed, too. Mother of pearl, an **iridescent** layer which forms on the inside of the shell, is a traditional material for buttons, cufflinks, and watch faces. Thus, it provides an additional source of income.

Dangling earrings are a popular way to showcase mother of pearl.

Even low-grade mother of pearl and low-quality cultured pearls have some value. Ground mother-of-pearl powder can be a component in makeup. Some people even believe that it has medicinal powers. In some cases, farmers can process the shells themselves for their fibers. They can be woven into clothing and even added to locally made pottery pieces to strengthen them.

Cultured pearls can make a much more environmentally sustainable option for jewelry than mined gemstones. Growers can use the entire shell and meat of the mollusk. Pearl farmers also have an interest in keeping the environment pristine and often lobby for laws to prevent environmental devastation.

Addison Rice

A geologist, environmental engineer and Caltech graduate, Addison's interest in the mesmerizing and beautiful results of earth's geological processes began in her elementary school's environmental club. When she isn't writing about gems and minerals, Addison spends winters studying ancient climates in Iceland and summers hiking the Colorado Rockies.