JADE

Jade is one of the oldest gemstones known to man, and has been appreciated throughout history as an object of ritual significance, as well as a store of value and wealth. Today jade is perceived as an object of art and personal adornment. It was not until the 19th century that a French mineralogist determined that "jade" was, in fact, two different materials. Jade refers to two chemically different stones: jadeite and nephrite. Even though the two types look and feel quite similar, they are classified by gemologists as separate species due to their different chemical compositions. Jadeite jade is generally more valuable, while nephrite is predominantly known for its carving properties and antique characteristics.

Nephrite and jadeite were used from prehistoric times for hardstone carving. Jadeite has a similar hardness as quartz, while nephrite is somewhat softer. Jadeite measures between 6.0 and 7.0 on the Mohs Scale of Hardness, and nephrite between 6.0 and 6.5, so it can be processed using quartz or garnet sand, and polished with bamboo or even ground jade. Nephrite and jadeite both possess exceptional toughness. Jade is the toughest of all known gemstones.

From mines to market:

Jadeite is rarer than nephrite and is more valuable and sought after. The earliest known jade (nephrite) used by the Chinese probably came from the northwest of China. Nephrite deposits are found in the United States, the Swiss Alps, Russia, New Zealand, China and many other locations worldwide. Dark green jade - also referred to as Canada jade - is found in western Canada. Jadeite is found in Russia, China, the United States and Burma. Today, Myanmar (Burma) is perceived as the primary source of high quality jadeite, and Canada for nephrite.

Jadeite and nephrite rocks and boulders. Nephrite boulders are made up of interwoven fibrous crystals. However, jadeite boulders hide their color and transparency under a crusty brownish or yellowish covering, called a skin; this is caused by oxidation. Their rough, ordinary-looking surfaces make it difficult to distinguish jadeite boulders from common rock. Only after gaining years of experience can a miner tell the difference. After mining, these huge blocks of jade are normally auctioned. However, when purchasing these blocks, dealers need to be fairly lucky, as these fragments of blocks are sold either whole or sometimes cut into slices, and there is only a small area or window which may reveal the inside color of the jade. So the buyer cannot see what is hidden inside: valuable green jadeite or an entirely worthless speckled streaked material. It is not until the cutting process begins that the real quality is revealed. In the jade-cutting centers of Guangdong, Beijing and Hong Kong, the raw material is cut and polished with carborundum and diamond powder.

Nephrite is found in various shades of green, yellow and brown. Jadeite's three most important qualities in order of their impact on its market value are color, transparency and texture. Most consumers are surprised to learn that jadeite, traditionally associated with the color green, also occurs in other attractive colors such as lavender, red, yellow, white and black. Green is the most important and desirable color. A special category, imperial jadeite, was traditionally owned by royalty. Imperial jadeite possesses an almost transparent and vibrant emerald-green color, without visible flaws and color irregularities. The green color of jade comes from the chromium coloring agent which also causes the green color in emeralds. Values, in descending order, for other colors are: lavender, red, yellow, white and black.

Since jade is a rule, not transparent, but has a fine luster, the cabochon is the most suitable shape. Thin slivers, which can be worn as pendants, and jade bracelets are popular too. Round, cylindrical and flat shapes can be combined to make attractive necklaces. Among the earliest known jade artifacts excavated from prehistoric sites are simple ornaments with bead, button, and tubular shapes. Additionally, jade was used for arrow heads, knives, and other weapons which can be delicately shaped. As metal-working technologies became available, the beauty of jade made it valuable for ornaments and decorative objects. Traditionally, jade is processed into slender figures, filigree images or thin-walled vessels. Here, once again, we see the subtle difference between nephrite and jadeite: whilst polished nephrite has a surface with a resinous luster, the glassy luster of jadeite after polishing seems to shine almost like a mirror.

While most colored stones are sold by carat weight, jade is sold by the piece. Fine cabochons, bangles, beads, carvings, discs and other popular forms of jade jewelry can command high prices. Nephrite, in comparison, is less valuable. Jade may be treated to improve color or clarity. The common classification for jadeite jade includes: A jade (waxed); B jade (bleached and polymer impregnated); and C jade (dyed). The treated jade may display good color and transparency, but its beauty may not last long. There are many natural minerals such as aventurine quartz, soapstone, serpentine, and maw-sit-sit that resemble jade. Common imitations are man-made green glass, plastic and assembled stones. Due to the large price differences between natural jade and its stimulants, consumers should ensure that stones are submitted to a laboratory for certification.

IGI has been at the forefront of diamond and colored gemstone certification since 1975, and large quantities of jade are submitted to our laboratories worldwide. Every IGI laboratory is equipped with the latest technical equipment and experienced gemologists, thus protecting consumer confidence and safeguarding the interests of consumers and the gemstone trade at large.

International Gemological Institute (IGI)

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