
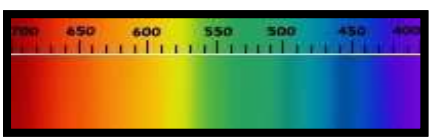
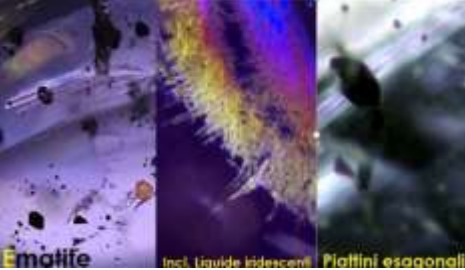


Warning: this version has been completed with Google Translate , it certainly contains errors or inaccuracies.

Technical sheet - general: **iolite-cordierite**

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| Gemma - names | (Italian - lolite) (English - lolite) (French - lolite) (Spanish - lolita) (Portuguese - lolita) (Thai - โอลิไทต์ 'olítít') | (German - lolith) (Arabic - إيوليت 'iywilit') (Russian - Иолит lolit) (Mandarin - 堇青石 jīn qī ngsh í) (Swahili - lolite) (Hindi - आयोलाइट aayolait) | photo  |
| Colors (GIA) | The iolite is strongly pleochroic, therefore from some angles, a bluish iolite it may actually appear completely colorless or yellow, and a purplish iolite it may appear brown. This effect should be considered when examining color. The purple-appearing iolite displays pleochroic colors of light purple, dark purple, and yellow-brown. Bluish iolites show colorless to yellow, blue-gray and dark purple pleochroic colors. | | |
| Cause of Color | Replacement of Mg with Fe ²⁺ and Mn, and Al with Fe ³⁺ . Red variant: Inclusions of hematite and / or lepidocrocite . Allochromatic Gem - Idiochromatic | | |
| Classification | Mineral class Silicates | Species - Group (mineral) iolite - / | Variety - |
| Optical properties | Specific Gravity: 2.58 - 2.66 Municipality : 2.61 | RI: 1,510 - 1,580 Rare (1,592 - 1,597) Polariscope : DR, sometimes with abnormal SR Double refraction: - 0.008-0.012 | Character optical Biaxial negative (weak, sometimes positive) |
| | Luster (luster) - luster of the fracture Vitreo - fatty / oily - Vitreo - fat / oily | | Pleochroism Strongly trichroic : deep violet-blue - blue-gray or brown-yellowish |
| Light | Fluorescence SWUV : Inert LWUV : Inert | | Dispersion (fire) 0.017 |
| Form | Crystalline dress Prismatic, pseudo-hexagonal forms generally geminate Fusion point: below 1200 ° C | Phenomenal optical effects Attitude Asterism | Phosphorescence NO |
| Chemical formula | Magnesium and aluminum silicate Mg ₂ Al ₄ Si ₅ O ₁₈ | | Spectrometer image  Bands at 492 - 456nm, smaller at 535nm - 645nm |
| Fracture | Flaking Pinacoidal bill (1 direction) | Breaking- Parting Common lamellar twinning. | Fracture Conchoidal, irregular |
| Durability | Hardness (Mohs) - Absolute 7 - 7.5; 100 - 150 | Toughness Fragile | Stability (heat, light, chemicals) Weak Sensitive to impacts and acids and strong thermal shocks |

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| Clarity - characteristics | Typical inclusions: Crystalline and fluid inclusions, red hexagonal platelets of hematite, color zoning. Parallel tabular brownish-red iron oxide particles can cause shimmering effects (bloodshot iolite) |  |
| | Type II Normally included | Transparency (commercial) - transparency Transparent to translucent |
| Deposits - types of rocks | Iolite-cordierite typically occurs in contact or regional metamorphism of pelitic rocks. It is particularly common in <i>hornfels</i> produced by the contact metamorphism of pelitic rocks. Two common metamorphic mineral associations include sillimanite-cordierite-spinel and cordierite-spinel-plagioclase- orthopyroxene . Geological age : | |
| Characteristics of rough stones | Gem-quality iolite is found in alluvial deposits in the form of small, transparent, water-consumed pebbles. | |
| Main deposits | Major deposits: Australia (Northern Territory), Brazil , Burma , Canada (Yellowknife area of the Northwest Territories), India , Madagascar , Namibia , Sri Lanka , Tanzania and United States (Connecticut). | |
| Year of discovery | 1813: Cordierite was discovered in 1813 and was named after the French geologist Louis Cordier (1777–1861). In 1912, it was renamed iolite (Greek - purple), and is sometimes mistakenly called " Water Sapphire ". | |
| History | Iolite is said to be been worn for centuries. It is often argued that due to its strong pleochroism, the ancient Vikings used it for navigation on cloudy days (others say it was tourmaline). It is hypothesized that the gem served as a polarizing filter and allowed ancient sailors to determine the position of the sun. Name : The name "iolite" comes from the Greek word for purple. The term dichroite derives from the Greek word meaning "two-tone", due to its strong pleochroism. Other trade names: Cordierite, dichroite , shaman's stone, water sapphire / aquatic sapphire, viking compass, steinheilite and purple stone. Variety: " Bloodshot Iolite" comes from Sri Lanka. It has a distinct reddish sheen with a hint of aventurescence , caused by inclusions of hematite and goethite. | |
| Property attributed | In ancient Greece , cordierite represented the owl and was the stone of the goddess Athena. Even today this gem is associated with the nocturnal bird. It is considered, due to its color, as a gem of spirituality, initiation, but softer than sapphire and tanzanite. Associated with the throat and anterior chakra, it provides a strong link between the earthly anchor and the cosmic mind. Revered for its power to awaken the <i>Soma Chakra</i> or Amria , the <i>Soma Chakra</i> is a very high level for Hinduism which sanctifies it as an elixir of life . Similar to the dark winter sky, lolite resonates with the energy of twilight as it is the Stone of the Muses and is also excellent for karmic debts . Calm the overactive mind , nerves and bring spirits of other dimensions to actively communicate with you. Dreaming of lolite is a signal that something you have deliberately rejected in the past will rewind and become the centripetal force in your life. lolite sheds light on your inner path and destiny. Relieve frustration, anger and regret by opening the divine eye chakra. The purple stone is also one of the emphatic energies of Soma which revitalizes by erasing your karmic debts to regrets and invisible negativity around. Cordierite is believed to be intended for those who need to find a healthy , sentimental base. It helps to open up to new people and provides emotional comfort, thus helping to regain self-confidence. Known to promote falling asleep, it also promotes the restorative function of sleep , which tends to deepen, and reduces the nightmares of those who use it. People with sensitive liver, suffering from ailments such as alcohol or other factors, will be able to use this crystal not only to help eliminate toxins , but also to regenerate the liver. The cordierite stone is also more generally a detoxifying stone, and therefore recommended for those suffering from addictions. In Brazil, this silicate stone is used to treat tropical ailments that cause fever. It is in fact useful in case of bacterial or viral infection and strengthens the immune system; being insoluble in water as well as in acid, this stone tends to transmit its resistance to you. The | |

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| | <p>effects of the cordierite stone are also beneficial for the kidneys and heart . It stimulates the respiratory and cardiovascular system. This calming rock also helps regulate the wearer's blood pressure . One of its major fields of action concerns digestion. It acts on a number of intestinal and stomach ailments. Finally, this tanzanite stone is widely used against circulatory disorders and skin rashes.</p> <p>It is the 21st wedding anniversary gem Planet: Saturn (Shani in Hindu astrology) Month: September Zodiac sign: Pisces, Aries and Capricorn Chakra: Eye</p> | | |
| Treatments | Iolite is typically not treated, so coatings and dyes are generally not a problem with this gem. | | |
| Synthetic counterpart | Catalytic converters are commonly made from ceramic containing a large percentage of synthetic cordierite, although there is no known commercial gem-quality synthetic counterpart. There are, however, glass imitations. Its strong pleochroism can easily differentiate it from imitations. | | |
| It can be confused with | Blue Sapphire (Separation by: RI, SG, inclusions, pleochroism), Tanzanite (Separation by: R pleochroism, RI, SG), Amethyst (Separation by: R optical figure, pleochroism), Scapolite (Separation by: R optical figure, pleochroism , UV fluorescence), Glass (Separation by: R optical character) Less common: Benitoite , Kyanite, Spinel, | | |
| Indicative gemological tests | Strong trichroism is usually distinctive, other tests that can help are those concerning RI, polariscope reaction and optical character. | | |
| Value (2021) | High : 200 + \$ / ct 3 carat + | Medium: \$ 100-150 / ct 1-3 carats | Low: 60-80 \$ / ct below the carat |
| Typical cut | The strong pleochroism of the Iolite makes the gem difficult to cut to obtain the best color. A sage lapidary generally maintains the direction of the optical axis (yellow hue) of the Iolite either at the girdle or at the apex (in faceted cut stones); so that it cannot be easily seen by traders and can be sold as a simulant for other stones (e.g. blue sapphire, tanzanite , etc.). Another main fact for maintaining the yellow hue of the Iolite at both the girdle and the apex is to increase its value in terms of price. The better the dark blue / purple hue on the face up facet of the Iolite, the better the price. An Iolite that has good clarity, color, cut and size but with a yellow / brown tinge appearing on the facet of the table will reduce its price. Stones larger than 8 carats are rarely free of inclusions. | | |
| Famous stones | There are no known famous pieces related to this stone. | | |
| Record stones | Giant Iolite gems, including the largest Iolite gems in the world, were discovered in the Laramie Mountains of Wyoming. Gemstones weighing more than 24,000 carats have been recovered from Grizzly Creek with masses left in the outcrop estimated to include stones of over 100,000 carats and some that could potentially exceed a million carats. Many of these were solid transparent stones and others were highly fractured but also transparent with excellent color. | | |