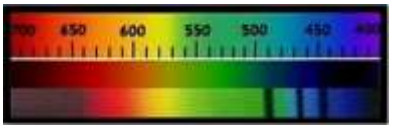
Warning: this version has been completed with Google Translate , it certainly contains errors or inaccuracies.

Technical sheet - general: Peridot

<table>
<tr><td>Gemma - names</td><td colspan="2">(Italian - Peridot)
(English - peridote)
(French - Péridot)
(Spanish - Peridot)
(Portuguese - Peridot)
(Thai - เพ อริ ด อ ท phe xri dxth)</td><td>(German - Peridot)
(Arabic - الزبرجد alzabarjad)
(Russian - Перидот Peridot)
(Mandarin -橄榄石 gǎnlǎn sh í)
(Swahili - Peridot)
(Hindi - पेरिडोट)</td><td>photo
  </td></tr>
<tr><td>Colors (GIA)</td><td colspan="3">The color of the peridot varies from pure green to yellowish green to greenish yellow . The finest shade is green with no hint of yellow or brown. The purity of the green color is a determining factor on the value of the gem. Note that the purer the green color (i.e. the less other color), the more precious the stone. Another factor to consider is the appearance of the edges in fact, a stone that has been handled for a long time usually shows signs of wear (abrasions) along the edges of the veneers. To put in optimal selling conditions, re-polishing is required and the cost of re-polishing should be taken from the price of the stone.</td></tr>
<tr><td>Cause of Color</td><td colspan="4">Iron - due to ferrous iron (ideally 12% - 15%). The presence of chromium gives a brighter green. Mn and Ni may also be present.
Yellowish green, Fe $^{2+}$ in coordination in octahedral series. Green, Fe $^{2+}$ with minor amounts of Cr $^{3+}$ in octahedral coordination.
Idiochromatic Gem</td></tr>
<tr><td>Classification</td><td colspan="2">Mineral class</td><td>Species - Group (mineral)
- Olivine</td><td>Variety
Peridot</td></tr>
<tr><td rowspan="2">Optical properties</td><td>Specific Gravity:
3.32-3.48
Common: 3.32 and 3.35 (green stones)</td><td colspan="2">RI: 1,654 to 1,710
Polariscope : DR
Double refraction: 0.035-38</td><td>Character optical
Positive or sometimes negative biaxial</td><td>Pleochroism
Weak yellow-green and green. Distinguished only in dark stones.</td></tr>
<tr><td colspan="3">Luster (luster) - luster of the fracture
Oily to vitreous - Vitreous / subvitreous</td><td colspan="2">Dispersion (fire)
0.020</td></tr>
<tr><td>Light</td><td colspan="3">Fluorescence
SWUV (254 nm) : inert
LWUV (365nm) : inert</td><td>Phosphorescence
None</td></tr>
<tr><td>Form</td><td>Crystalline dress
Short and compact prisms, vertically streaked.
Melting point: 1200-1900 ° C</td><td>Phenomenal optical effects
Rare: Asterism (4-6 rays)</td><td colspan="2">Crystalline system
Orthorhombic
Crystal class</td></tr>
<tr><td>Chemical formula</td><td colspan="3">Magnesium and iron silicate
(MgFe) $_2$ SiO $_4$</td><td>Spectrometer image
 
Three strong and narrow bands in blue at 497, 474 and 453</td></tr>
<tr><td>Fracture</td><td>Flaking
Poor (one direction), more distinct with increasing iron content</td><td>Breaking- Parting
Uncommon: Simple and cyclic twinnings</td><td colspan="2">Fracture
Concoidal and sub-concoidal</td></tr>
</table>

<table>
<tr><td>Durability</td><td>Hardness (Mohs) - Absolute
6.5-7; 86 -100</td><td>Toughness
Fragile-Good</td><td>Stability (heat, light, chemicals)
Average
Heat and acids</td></tr>
<tr><td>Clarity - characteristics</td><td colspan="3">Typical Inclusions: Peridot may have small rectangular inclusions of biotite (brown), chromite (black), pyrope garnet (dark red), spinel (small octahedra), glass spheres that look like bubbles (Hawaiian), or liquid, gas-filled inclusions reminiscent of water lilies (lily pads). Very characteristic of the peridot are the strong doubling of the junctions and the faceted inclusions, as well as the pale yellowish green color.
 
</td></tr>
<tr><td></td><td colspan="2">Type II
Normally included</td><td>Transparency (commercial) - transparency
Transparent to translucent</td></tr>
<tr><td>Deposits - types of rocks</td><td colspan="3">It is one of only two gems - the other being diamond - that was not created in the earth's crust in silica-deficient rocks such as basalt. Most formed deep in the Earth's mantle and brought to the surface through earthquakes and tectonic activity. Dubbed the "Sun Gem," peridots have an extraterrestrial edge: some of the oldest of its kind have been found in Palasite meteorites , derived billions of years ago during the formation of the solar system.
Geological age : about 600 million years</td></tr>
<tr><td>Characteristics of rough stones</td><td colspan="3">Striated prisms, laminated pebbles, well-formed crystals are rare.</td></tr>
<tr><td>Main deposits</td><td colspan="3">China, Jilin , Egypt , Red Sea Governorate , Ethiopia , Oromia Region , Kyrgyzstan, Naryn Region , Myanmar, Mandalay Region , Norway , Møre og Romsdal , Pakistan, Khyber Pakhtunkhwa Province , Sri Lanka, Sabaragamuwa Province , USA, Arizona ,
Navajo in Arizona is an important deposit where peridot crystals are collected as small pebbles on the surface. Pure green stones are rare and most peridots are a more yellowish green. The higher quality stones have an intense color. Most of the finest colored stones come from Myanmar and Pakistan. The American Gem Society notes, until a few years ago, that an estimated 80% - 95% of the world supply of peridots was in the San Carlos Apache Indian Reservation in Arizona.</td></tr>
<tr><td>Year of discovery</td><td colspan="3">Before 1500 BC: Associated with the ancient Egyptians, peridot is considered one of the oldest precious stones. It is known that as early as in 1500 BC this gem was extracted.</td></tr>
<tr><td>History</td><td colspan="3">The legendary origin of peridot dates back to ancient Egypt, on the volcanic island of Zebargad in the Red Sea. It was so appreciated by the ancient Egyptians that they kept the location of the island a secret. With the fall of the country, the island lost importance in antiquity, but was only rediscovered in 1906. Since then, Zebargad 's peridot deposits have run out.
Peridot is also prominent in Christianity and is repeatedly referred to as "chrysolite" in the Bible or by its Hebrew name " Pitdah ". Scholars theorize that Moses' brother Aaron wore one on his breastplate.
The Egyptian scrolls found by modern archaeologists indicate that the ancient Egyptian priests believed that Peridot contained the forces of nature and used cups encrusted with this gem to gain communion with their Gods of Nature.
Due to its green hue, it was often confused with emeralds. Indeed, Cleopatra's collection of emeralds is believed to have consisted largely of peridot. The same goes for the Shrine of the Three Holy Kings in the cathedral of Cologne, Germany, which for centuries was thought to be decorated with 200 carats of emeralds, which in modern analysis have turned out to be peridots, however beautiful.
The Crusaders brought some examples to Europe in the Middle Ages. It is recorded that on his death in 1245 , Bishop Giovanni bequeathed various objects to the Abbey, including the peridot .
In 2005, the "Stardust" robotic spacecraft reported some very interesting things from space. One of the things reported was the peridots! Extraterrestrial peridots are unlikely</td></tr>
</table>

	to be found in jewelry stores. Very few of them were large enough to be faceted and used in jewelry. **Name** : The origin of the name *peridot* is uncertain. The Oxford English Dictionary suggests an alteration of Anglo-Norman pedoretés (Classical Latin *pæderot* -), a kind of opal, rather than the **Arabic word *faridat*** , which means "gem". The Middle English dictionary entry on peridot includes several variations: peridod , peritot , pelidod , and pilidod - other variants replace *y* with *is* . From the earliest times, people confused this stone, now known as peridot, with other gems. It was one of **many labeled "topaz".** **Other trade names** : Olivine, chrysolite, peridot, topaz, forsterite, fayalite , "evening emerald" and sinhalite . The mineralogist calls it OLIVINE (pronounced AHL- uh- veen), although he calls an olivine-rich rock PERIDOTITE (pear-ID-oh- tite). If, on the other hand, the rock is all olivine, he calls it DUNITE (DEW- nite). The term peridot derives directly from the French " peridot " which in old French was " peritot ". The origin of the word is uncertain, however the form " perldota " was in use in England in the thirteenth century and was later called " peridote ". The word CHRYSOLITE (KRIS-oh-lite), from the Greek words for flgodlenfl and "stone". It was used by Pliny for quartz-topaz and perhaps topaz: today, however, it is often applied to peridot from greenish yellow to yellowish green. Further evidence of the lack of logic and coherence of today's terms is the rather clear evidence that the so-called Pliny topaz (" topaziusff) referred to our peridot, as he said it came from an island in the Red Sea, the main source of gem-quality peridot FORSTERITE and FAYALITE are mineralogical terms for the close relatives of peridot and "evening emerald" is a relic of the period when any less expensive gem than emerald, ruby, sapphire or diamond was given a fancy name that involved another gem. (SIN-ha-lite) is a recently described mineral long believed to be a variety of peridot. Excellent pale green stones, locally called " **Job's Tears** (work, Job's tears) ", are occasionally found on an Indian reservation **Variety** : **Peridot** : This term is applied to the higher grades of this gem. It is a medium to dark, slightly yellowish green, which to many gives the impression of a swarmy, velvety color. It never has such an intense color as the more expensive grades of emerald or demantoid garnet, but for those who appreciate peridot, this is an important aspect of its beauty. **Chrysolite** : The color range of this type ranges from light yellow-green to greenish yellow. **Olivine** : The term olivine refers to dark yellow-green to brownish green to almost brown stones. **Fayalite** : An iron-dominant olivine mineral. **Forsterite** : A magnesium dominant olivine mineral.
Property attributed	It is a 16th anniversary gem Peridot is a very special birthstone for the month of August and offers the wearer the opportunity to have jewelry not commonly seen on others. Modern peridots are mainly used for rings, earrings and pendants. They can be cut into many different shapes from square, oval, teardrop and heart shape. In Hawaii, the stone is involved in ancient folklore and is said to symbolize the tears of the goddess Pele , the goddess of volcanoes and fire. It has been widely recognized for its ability to **stimulate change between one's heart and personal will** . As our heart releases emotions every day, our sacral chakra is the point in the body that processes everything. Also known as our "second brain," our gut helps decipher unstable emotions that may be emanating from your most vital organ. During this, a backlog of negative emotions can find themselves embedded in our core, thus causing daily anxiety and discomfort. The green rays of Peridot facilitate the removal of these feelings through deep meditation and excessive breathing exercises. As one begins to open up to this ancient stone, one must be prepared to fully engage one's physical, spiritual and emotional body. Peridot is a powerful cleanser. Releases and neutralizes toxins at all levels. Relieves jealousy, resentment, resentment, bitterness, irritation, hatred and greed. It reduces stress, anger and guilt. Peridot opens our hearts to joy and new relationships. Enhance trust and affirmation, motivating growth and change. Refine and open your mind to new levels of awareness. It banishes lethargy, apathy and fatigue. Peridot allows you to take responsibility for your life. **It strengthens the immune system, metabolism and benefits the skin** . Helps ailments of the heart, thymus, lungs, gallbladder, spleen and intestinal tract. Treat the ulcer and strengthen the eyes. It balances bipolar disorders and overcomes hypochondria.

	It is the gem of the **16th wedding anniversary** **Planet:** Mercury, Venus **Month:** August (official) **Zodiac sign:** Libra, Gemini, Pisces and Virgo **Chakra:** Solar plexus, heart		
Treatments	Peridot is not enhanced or heat treated to improve its color. Occasionally, it is infused with colorless oils, waxes, or resins to fill surface voids or cracks and to enhance the appearance or luster of the gem's surface.		
Synthetic counterpart	Peridot has never been synthesized, but numerous imitations exist, including natural stones such as tourmaline and artificial imitations such as glass. Green glass is the most common and can be easily separated from its single refraction. Common substitutes for peridot include synthetic sapphire and synthetic spinel. Both are isotropic (have only one refractive index) and doubling will not be observed. The glass will show elongated bubbles and no doubling.		
It can be confused with	Materials that may resemble Peridot in appearance include: **Sinhalite** (separation by: pleochroism, spectrum), **Diopside** (separation by: RI, spectrum), **Tourmaline** (separation by: optical figure, RI, SG, pleochroism), **Apatite** (separation by : RI, birefringence, inclusions, spectrum), **Fluorite** (separation by: optical character), **Glass** (separation by: optical character), Synthetic Spinel Triplet (optical character, inclusions). **green zircon** (separation by: RI, birefringence).		
Indicative gemological tests	The combination of the visible doubling of the posterior facets detectable under magnification and the wide separation of the refractive index readings normally identifies the peridot with almost no further testing. If when a peridot is rotated on the refractometer, a single reading is seen at any point during the rotation, it is usually just above 1.67, while the extreme will be near 1.654 and 1.690.		
Value (2021)	**High : 450-500** $ / ct **3 carat +**	**Medium:** 50-80 $ / ct **1-3 carats**	**Low:** $ 20-30 / ct **below the carat**
Typical cut	Faceted cut, cabochons, beads, carvings, etc. When fashioned in beaded, suite, patterned or cabochon cuts, the versatility of peridot makes it a wonderful choice for any collection. Also, because it's cut into many different shapes and sizes, designers often build a piece around a spectacular peridot rather than placing it in a pre-made setting. Sculptures and works of art made from this gem often exceed 100 carats in weight.		
Famous stones	In Cologne, Germany, stands the impressive Cathedral of St. Peter and Mary. The most famous work of art inside is The Shrine of the Three Kings, adorned with gold and over 1,000 precious stones. For several centuries it was thought that the large green jewels that decorate the sanctuary were emeralds. One of the most famous peridots is a **46.16-carat stone that was mined in Pakistan** and can be seen today at the Smithsonian Museum. Another specimen from the Smithsonian's collection is an exquisite **34.65-carat peridot necklace** with its modified triangular stepped gemstone that was found on the San Carlos Indian Reservation, a place in Arizona now used for stone mining. A **146.10 carat peridot** is in the collection of the Natural History Museum in London.		
Record stones	Very large and good quality gems are not common, their price per carat does not exceed that required for those up to 20 carats. In fact, extremely large stones, difficult to assemble and impractical to wear, often cost less than smaller stones of the same quality.		