

Alexandrite Buyer's Guide

"When you go to buy, use your eyes, not your ears."

Czech Proverb



The largest [alexandrite crystal](#) weighing 5724 grams was discovered in the Takovaya district of the Ural mountains in 1840. This deposit continued to be mined for over 60 years and produced both emeralds and alexandrites until the turn of the century. Alexander Fersman, a noted Russian gemmologist reported, that 2,000 kilos of rough alexandrite in comparison to 20,000 kilos of rough emeralds were mined. This deposit was the only source of alexandrite for many years and the Russian stones set the original standard for this extremely rare and valuable [gemstone](#). The discovery of fine Brazilian alexandrite in 1987 reset that standard. While the Russian stones display a better green in daylight, many experts agree that the purple reds of the Brazilian stones are clearly superior.

Today, there is almost no production of Russian material and almost all of the original Russian stones are in museums or private collections. Even in Russia, most of the [alexandrite](#) sold today, are probably from other deposits outside of Russia. Occasionally a few low quality crystals or very small and included supposedly Russian stones do appear on the market but they are insignificant compared to the alexandrite production from other deposits. With so few Russian stones available anywhere, it is impossible to compare them with stones from newer discoveries. From a historical prospective, the Russian stones always attract the most interest and the highest prices but gemologically, it is unclear how the famous Ural mountain alexandrite compare with fine stones from Brazil, Africa, and India.

See Alexandrite Tsarstone collectors guide, Alexandrite Buyer's Guide, <http://www.alexandrite.net/viewpage.html?id=ALXS-002-00015> (Comprehensive guide for buying and evaluating alexandrite gemstones) (as of).

Fine alexandrites have also been discovered in Sri Lanka, Brazil, Myanmar, Tanzania, Madagascar, Zimbabwe, and India. Each of these deposits can and has produced exceptional stones but they are extremely rare. [Alexandrite](#) is that variety of [chrysoberyl](#) that can exhibit a [color change](#) due to the light source under which the stone is being observed. Chrysoberyl is already a rare [gemstone](#) found sparingly in a few localities around the world. When we consider that the percentage of chrysoberyl that actually shows a color change is always very small regardless of the deposit, we begin to realize just how small the chance of finding alexandrite is at all.

Top quality [alexandrite](#) is very rare indeed and uncommon in modern [jewelry](#) because it is hardly ever available and, because it is too expensive for the general public to buy. Even lower quality more included stones are expensive and very limited in supply. Alexandrite was used in antique Russian jewelry and smaller stones were also occasionally used in Victorian jewelry from England. The few stones that are produced today are usually snapped up by collectors or mounted in special settings by designers. Alexandrite can never be a mass-market item.

Natural alexandrites

Tanzanian alexandrite

Indian alexandrite

Brazilian alexandrite

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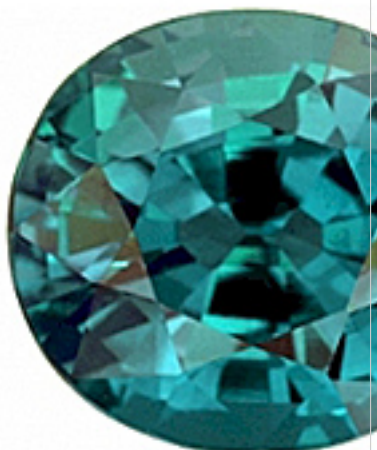


Fig. 26.: Fine color change and exceptional clarity faceted alexandrite (8.66 cts) from the Tundururu deposit, Tanzania.

Fig. 27.: Faceted alexandrite (2.71 cts) with distinctive color change (bluish green to medium red-purple) from Araku, India.

Fig. 28.: Very strong color change and good clarity fine alexandrite (3.61 cts) from Hematita, Brazil.

[Alexandrite](#) has always been hard to find. India is the main source for current production but some stones from Tanzania and Madagascar are also finding their way to the market. Brazil produced some amazing stones in the 1980's but this production seems to have dwindled and few new Brazilian stones have been available in recent years and some dealers claim that this deposit is finished. The majority of the finest stones from Brazil were sold in Japan between 1980 and 2000. The USA is currently the largest market for alexandrite but fine stones are easy to sell almost anywhere.

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Tanzanian stones from Tunduru occur in a wide range of colors. Many of the stones appear to be a khaki or yellowish green in daylight moving to brownish red under incandescent light. The deposit also produces some world class bluish green to purple red stones. Brazil produces some outstanding alexandrites and they probably command the highest prices. Brazilian stones appear reddish purple-to-purple red under incandescent light but their daylight greens are less attractive than the blue greens of the Indian stones. Exceptional stones from the Hematita deposit show a blue primary [hue](#) and a greenish secondary hue when exposed to daylight. Brazilian [alexandrite](#) is generally bluish green to blue/green in daylight. Most gems from Hematita contain a mixture of yellow, which visually dilutes the green in daylight. The less prominent the yellow secondary hue, the better the stone.

The incandescent colors of Brazilian [alexandrite](#) vary from violetish pink through pinkish purplish red to a purplish red. The incandescent color of Brazilian alexandrite always has a strong purple secondary [hue](#). The best color of Brazilian alexandrite is a reddish purple or raspberry, more purple than pink.

The deposit in Andrapradesh, in India represents the most significant proportion of today's [alexandrite](#) production. The stones are well known for their outstanding daylight bluish green colors and superior clarity. Under incandescent light they appear plumb reddish purple. Although Brazilian stones normally show a superior [color change](#), some Indian stones are outstanding and the daylight greens are the very best.

Cymophane

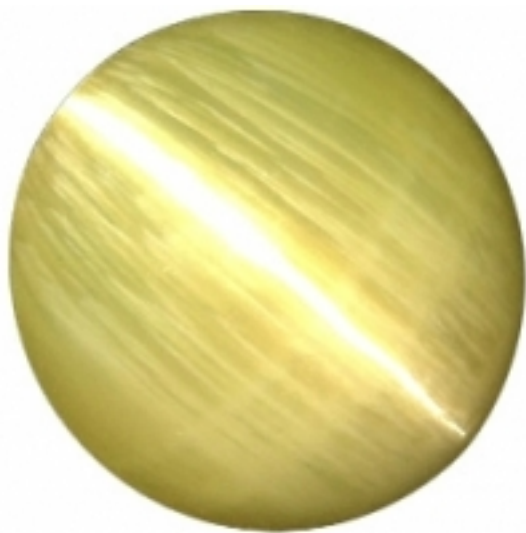


Fig. 29.: Finest quality "milk and honey" cat's eye (cymophane) with sharp silvery white line across the stone that appears to open and close as the stone is rotated.

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Cat's eye [cabochon](#) cut [alexandrite](#) can be [translucent](#) to [opaque](#) and range from very light to very dark in tone. Darker stones are normally more desirable because they exhibit a much stronger eye. The cat's eye effect results from a [reflection](#) of light off of the silky [inclusions](#) oriented perpendicular to the length of the stone. Although more rare than faceted alexandrite, cat's eyes do not command as high a price as faceted stones. Rough stones with high clarity and [color change](#) are almost always faceted because they will sell for more even if they are silky. India produces the most alexandrite cat's eyes and few are produced from any other deposit.

When buying [alexandrite jewelry](#) the buyer should always ask for a Certificate of Authenticity or a Gem Identification report from a reputed Gem Laboratory. Most reputable stores selling alexandrite will supply a certificate. [Color change](#) is the most important factor determining the quality and value of an alexandrite. Although other gemstones like garnet, sapphire and [spinel](#) may also change color as a function of the light source, alexandrite is the most well known, significant and valued of all the color changing stones. The color change can be dramatic changing from a green or blue/green in daylight to red/purple under incandescent light. The more apparent the color change and the more vivid the colors, the more valuable the [gemstone](#). Each alexandrite is individual and it is rare to find two that display exactly the same colors under a variety of lighting conditions unless they are cut from the same [crystal](#). An alexandrite with good clarity may display a less dramatic color change because the silky [inclusions](#) of rutile often enhance the change. Some people may prefer a weaker color change in favor of better clarity but the degree of the change should be the most important factor in determining the value of the stone. Some dealer's price their alexandrite based on the intensity of the incandescent red but a beautiful daylight green should also be an important consideration.

The ideal [alexandrite](#) is one with a medium tone and intense or near vivid color, blue-green in daylight to rich ruby red or purple red under incandescent light or candlelight. Alexandrites that bleed, or those in which one can see the two colors at the same time may be less desirable but since light sources are often mixed anyway, the phenomena is quite common. Grayish and brownish tones are common in many alexandrites and these stones are considered to be less valuable. A fine stone displays a distinct and dramatic [color change](#) where both colors are bright and attractive.

With a limited budget, a buyer can opt for a smaller cleaner stone or a larger more included stone or a small stone with a great [color change](#) or a large stone with a weak change. The price may be the same, but it is still the strength of the color change that should be the most important consideration.

The traditional view is that the best [alexandrite](#) shifts from emerald green to ruby red, but this hardly ever occurs. Most alexandrites seem to show a good green in daylight or a beautiful red under incandescent light but few stones look good under every kind of light. Good quality alexandrite is teal, emerald, or blue-green under [natural](#) daylight or fluorescent lighting that

ideally changes to purple-red or red under regular incandescent light. Often a slightly grey, blue/violet/purple is seen.

A number of other factors will also influence the observable daylight colors including the position (latitude) of the observer on earth, the time of day, and the weather. The intensity of the incandescent light and the angle of that light to the table of the stone will also affect the color. Indeed, [alexandrite](#) is a pleochroic [gemstone](#) that will show different colors depending on the orientation of the table to the optic axis. A fibre optic light used as a directional light source highlights the affect of angle on color. Because of the cut and because of the orientation of the optic axis, the red is almost always much better when the light source is directed across the stone as opposed to shining directly into the table.

The AGL (American Gem Lab) endorses the percentage of [color change](#) system. [Alexandrite](#) with a 100% color change shows complete color change on every axis - all facets change color. If half of the facets change color, the gem is classified as a 50% change and so on. Most highly priced alexandrite has a color change percentage of around 85-95%. Stones with a 90% shift should be considered fine. For example, a stone that is teal green in daylight should become purplish red under the light bulb, with little green left when the lighting is changed.

Although the AGL certificate is noteworthy because of its thorough attention to detail, it is easy to see why this complicated system could cause a great deal of confusion and would be difficult to replicate by other gemologists unless they used the same color and light standards. If we wish to assign a percentage of [color change](#) and to duplicate and reconfirm those results in other labs throughout the world, we would need a world wide color standard as a starting point and this does not exist, - even for stones that do not change color. Without internationally accepted standards, work with the numbers and percentages cannot be verified.

Experienced dealers know the lights and can use them to their advantage when buying or selling. A seller would like to maximize the change with the best lights while a buyer might like to minimize it with poor lights hoping for a lower price from the confused seller wondering why the change looked better yesterday. The lights can make the [color change](#) look strong or weak so it is important to understand the lighting and be familiar with it. Bulbs and lighting tubes are available in a complete range of color temperatures that will affect the color of the stone.

Novices do not understand lighting. If you want to use a light bulb to observe [color change](#), there are many kinds; some are daylight and some are incandescent and some are somewhere in between. Always check the labels or the color temperatures. Anything around 3000 - 3300K is a good incandescent source while light at 5000 - 6500K is good for daylight. A flashlight or a penlight is always a good source for incandescent light.

All gems (except pearls and coral) have been weighed in carats (cts) since 1913. One [carat](#) is equal to 200 milligrams (1/5 of a gram). The carat is a unit of weight rather than size. As gemstones vary in [specific gravity \(density\)](#) there will be a difference in size between a one carat ruby and a one carat emerald. Because ruby is more dense than emerald, a one carat ruby will always be smaller than a one ct. emerald cut in the same style.

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It is rare to find [alexandrite](#) weighing over 0.25 cts. Stones less than 0.50 [carat](#) can be worth several thousand dollars at retail prices. Stones over one carat may retail for ten times this amount, and stones over three carats may cost up to \$100,000. Fine large alexandrite, above five or six carats is extremely rare.

The cut will always affect the value of [gemstone](#). The term cut or make refers to the cutting style, the proportions and the finish of a gemstone and because of alexandrites rarity, almost all of the stones found will be cut for maximum weight retention. [Alexandrite](#) is often offered highly included, flawed, and poorly proportioned and well-cut stones are the exception rather than the rule.

Faceting and shaping varies from stone to stone and this is mainly due to the initial shape of the rough and the cutters desire to maximize the weight. Although color is the most important factor in determining the value of an [alexandrite](#) and certain orientations of the [crystal](#) may produce better colors, weight retention, shape and positioning of [inclusions](#) all need to be carefully evaluated when cutting an alexandrite. Some stones may even be cut less symmetrically cut and still be very valuable. Experienced cutters will whittle away at the rough removing the less attractive portions slowly cutting the stone and inspecting the result. Some stones are cut several times to reach the optimum color, size, shape and brilliance.

Stones cut too shallow, too deep or off-center, are less desirable but they can still often be corrected with a re-cut. Too deep stones are easier to improve because the cutter can limit the work area to the culet or smallest area of the stone in contrast to stones which are too shallow and need to be adjusted at the girdle resulting in excessive weight loss. Off-center stones need to be carefully evaluated before re-cutting. Oval and cushion cuts are the most frequently seen [alexandrite](#) cuts..

Gem minerals form from several different geological processes. Gems produced by some of these processes tend to have more [inclusions](#) than those produced by other processes. For this reason, each gem species or variety has a range of clarity normally seen in the [jewelry](#) trade. Clarity ranges can be conveniently grouped into three clarity types. These apply only to [transparent](#), non-phenomenal minerals (and [color change](#) minerals) that normally appear in the market as faceted gems.

GIA clarity types

Type 1	Type 2	Type 3
Stones that are often virtually inclusion free. They are so abundant in this quality that even minor inclusions detract from their desirability. Faceted Type 1 stones with eye-visible	Stones that are usually included. Stones with minor inclusions visible to the unaided eye are often faceted for use in jewelry.	Stones that are almost always included. Even specimens with obvious inclusions are faceted for use in jewelry.

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inclusions are rarely used in jewelry.		
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[Alexandrite](#) is a Type II (GIA [Clarity Grading](#) System) stone and even the best alexandrite is expected to contain [inclusions](#). Graders employ a system of five clarity grades ranging from eye clean down to severely included to classify clarity in [transparent](#) colored gemstones. The eye clean grade includes the top-clarity qualities of gems that commonly appear on the market. Colored stone graders do not use [diamond](#) grades to describe colored stones. Colored stones are rarely as clean as diamonds and should not be graded using the same criteria. Although some specimens do meet the standards of flawless clarity established for diamonds, the top qualities of most colored stones include gems with at least some inclusions. Blemishes are confined to the surface and are not considered as a part of clarity grading. Colored stones are clarity graded without magnification.

Expensive gemstones always create a market for something that looks the same and costs much less and there has always been a market for [alexandrite](#) impostors. Knowing the difference between a fake or a [synthetic](#) and a genuine [natural](#) alexandrite requires both experience and knowledge. Most gemstones described as [synthetic alexandrite](#) are actually [corundum](#) laced with trace elements to produce the [color change](#). This alexandrite like sapphire material has been around for almost 100 years and should actually be more accurately described as simulated alexandrite rather than synthetic alexandrite. Many of these stones were sold to tourists in Mexico and in Egypt (Alexandria), after the Second World War and still exist in private collections or as inheritances. Gemologists still receive many inquiries about these old and now inherited alexandrites bought by an aunt, an uncle, or a grandmother in Egypt or someplace else and almost all of them are synthetic alexandrite like corundum. Gemologists study the [inclusions](#) to determine if the stones are natural in origin but most synthetic alexandrites are not difficult to spot with experience. Since large clean stones are so rare in nature, a large clean stone is warning sign for caution.

Some [natural](#) gemstones may also change color and can easily confused with [alexandrite](#). Although the stones may look like alexandrite they can be easily differentiated with a measurement of their refractive index. Some [spinel](#) from Sri Lanka exhibits an alexandrite effect and will appear violet colored in daylight and violet red by transmitted or artificial incandescent light. [Color change](#) sapphire from Songea, Tanzania changes from a brownish green in daylight to red under incandescent light and can look very much like African alexandrite. It has been given the name "Alex type sapphire" in the trade. Andalusite is another example. Andalusite sometimes called "poor man's alexandrite" because it offers color play at a low price, but in fact andalusite prices are always high in Africa because the natives either believe or pretend to believe that their rough is alexandrite, which is worth almost 100 times more than rough andalusite. However, the most convincing natural alexandrite look alike is probably color change garnet. The color change in some of these stones can be intense and equal to the color change

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of top quality alexandrite. Some of the best color change [garnets](#) are from the deposit in Bekily, Southern Madagascar.

Average retail prices for alexandrite 2007 - 2008

Faceted (Alexandrite)	0.5 to 1 carat	1 carat plus
Top Red/Green	\$5,000 to \$15,000/ct	to \$100,000/ct
Medium Red/Green	\$3,000 to \$9,000/ct	to 60,000/ct
Slight Red/Green	\$100 to \$2,500/ct	to \$6,000/ct
Other colors	\$1,100 to \$8,000/ct	to \$10,000/ct
Cabochon (Alexandrite)	0.5 to 1 carat	1 carat plus
Strong red/green	\$500 to \$2,500/ct	to \$30,000/ct
Cabochon (Cat´s Eye)	0.5 to 1 carat	1 carat plus
Strong red/green	\$1,500 to \$5,000	N/A

[Alexandrite](#) commands a high price equivalent to or even exceeding the price of gemstones like, sapphires, rubies, emeralds, and diamonds. Alexandrite from Russia would be more valuable if their origin could be verified and if they were of superior quality. Top-quality alexandrite from Russia has sold for as much as \$3000 to \$10,000 for a one-[carat](#) gem. The price of alexandrite has risen in recent years due to high international demand, especially from Japan, but as a [gemstone](#) investment, alexandrite is a good choice because of its rarity, [durability](#) and distinctive historical significance.

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