

## DIASPORE; THE COLOR-CHANGE, THE CAT'S EYE, AND THE RED...

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Diaspore from Turkey has been an exciting find for the devoted mineral and gem collectors for many decades. Global gem trade, on the other hand, has known diaspore with the trade names "zultanite" or "csarite" depending on the supplier's choice. Such trade names were chosen for marketing purposes but every time a new name is appointed by the manufacturer, it confused the trade, therefore the consumer. Furthermore, recent discoveries in Afghanistan had abolished Turkey's status of "the one and only locality" of gem diaspore. Although it is published and made available to the trade, the output of Afghan material does not seem to be consistent.

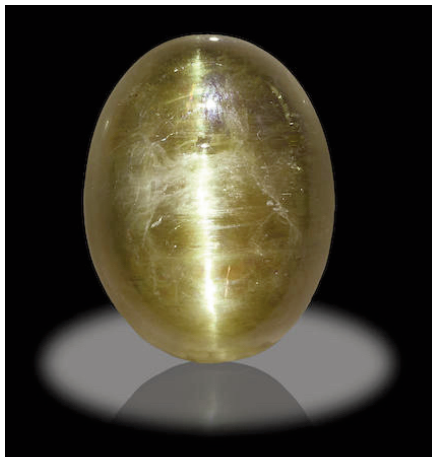
Diaspore is more recognized as a bauxite mineral by mineralogists. Bauxite is fine grained massive form of diaspore, boehmite, gibbsite as aluminum hydroxide polymorphs and considered to be a major source of aluminum. Bauxite, along with non-gem quality diaspore is mined in several different localities in the world, including Muğla, Turkey; Naxos, Greece; Postmasburg, South Africa; Pennsylvania, Massachusetts and Colorado, USA.

Diaspore is an unusual gemstone. The color-change and transparent crystals are only known from Küçükçamlıktepe Mine despite the bauxite formation throughout western and southern Turkey. Although it is mostly advertised as "color-change diaspore," it almost always has color change effect and some-



*Faceted and rough diaspore from Turkey displaying pleochroic colors.  
Courtesy and photo by Göktürk Bircan*

times with additional chatoyancy. While chatoyancy is caused by fine hollow tubular inclusions with post-crystallization two-phase fillings, the color-change effect is caused by chromium and vanadium. The body color is a light to medium yellowish green in day-



*Cat's eye diaspore from Turkey, 64.08ct.  
Courtesy of Bonham's Auctions.*



*Red/pink diaspore crystal from Turkey.  
Courtesy and photo by Göktürk Bircan.*

light and light to medium brownish pink in incandescent light. Recently, a new pocket is discovered with pink to red body color in daylight in the area. Afghan material is also known for its pink/red hues in daylight too.

Gemological properties of diaspore leave very little room for misidentification. Refractive Index of 1.70 to 1.75 creates a healthy doubling. It is also strongly pleochroic with yellowish green and brownish pink colors. Although it has a decent hardness of 6.5 to 7,

due to its perfect cleavage, its durability is low. Therefore, cutting and setting can be a challenge. Cleaning should not involve steam pressure or ultrasonic device.

Consumers and collectors should be aware that there are plenty of color-change glass sold as diaspore in the market. Good news is that neither synthetic production, nor a particular treatment is known for diaspore so a simple gemological testing should separate it from a glass simulant. ♦

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