

# THE NATURE OF DIAMOND COLOR:

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Natural colored diamonds are among the World's rarest and most beautiful natural resources. For centuries, colored diamonds have been regarded by the most prominent members of society as a symbol of status and power. They embody the variety of colors we experience in everyday life. For a serious collector, there is no more treasured prize than a high quality colored diamond.

While most prominent collectors and connoisseurs seek the highest of quality and rarest colors, the truth is that colored diamonds occur in a wide range of interesting colors and most of them are relatively affordable. There are diamonds that mimic the colors of the changing leaves in autumn or the shades you may find in a beautiful sunset. In other words, there is a colored diamond that captures the colors of life in the way that no other gemstone can. Hues of pink, orange, yellow, brown, green, blue and gray are combined in unique ways to create some of the most dazzling gemstones in existence.

## Origin of Color:

A diamond's color can be caused by several factors. Trace elements found within the atomic structure of the diamond are responsible for giving certain diamonds their color. Natural blue diamonds are formed by the presence of Boron. Yellow diamond color is attributed to Nitrogen. Green diamonds are formed by natural radiation. The creation of color among pink diamonds is still a matter of debate among gemologists. The general consensus among scientists is that pink diamond color is not caused by any elements from the periodic table, but actually tiny abrasions within the diamond at the microscopic level. This effect, known as *graining* causes the appearance of pink color by



The visual effect of fluorescence on yellow diamonds. From right to left: Yellow fluorescence, green fluorescence, orange fluorescence, blue fluorescence. Note that the color of the diamond in "normal" lighting environments can be changed slightly by the presence of fluorescence.

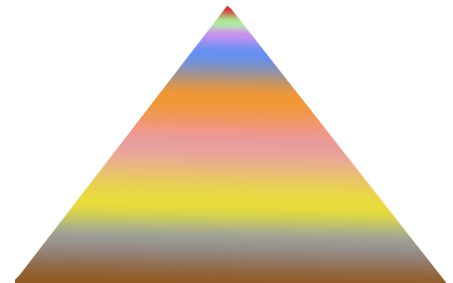
absorbing every color in the visible spectrum other than pink. Graining is attributed to the color appearance from orangy pink diamonds to red diamonds.

Fluorescence also plays a role in determining the final color grade. Fluorescence appears in a number of colors including white, blue, yellow, orange and green and can have different effects on a diamond, depending on the diamond's color and color of fluorescence.

## The Color Spectrum:

Colored Diamonds can be found in a variety of colors. Their overall color is described as a combination of their dominant color or *main body color* and any *secondary color modifiers* that may be present. The following chart illustrates the full spectrum of available colors from the rarest and most desirable to the more common as well as provides average retail prices:

Red	—	\$300,000+/ct
Green	—	\$250,000/ct
Purple	—	\$200,000/ct
Blue	—	\$150,000/ct
Orange	—	\$40,000/ct
Pink	—	\$80,000/ct
Yellow	—	\$12,000/ct
Gray	—	\$6,000/ct
Brown	—	\$4,000/ct



## Secondary Colors:

Any color that can be found in addition to the main diamond color is known as a modifier. As a general rule, the more common colors will lower the cost of the diamond. These common colors include gray, brown, and yellow. On the other hand, most other colors occur much less frequently and are therefore more expensive when added to the main body color. Some of these colors include pink, blue, green, purple and orange.

## Hue, Tone and Saturation:

Colored diamonds are graded based on the face up appearance of the diamond. The overall color grade is comprised of 3 major factors. 1) *Hue* — the main body color and any *modifiers* 2) *Tone* — the darkness of the color and 3) *Saturation* — the strength or intensity of color.



### **Brown “Champagne” Diamonds**

Brown Diamonds, commonly referred to as “champagne” color are among the most common of all colored diamonds. The brown color hue encompassed a variety of hues and saturations ranging from a light “candle light” color to a dark, “chocolate” and finally a “cognac” color, often containing secondary hues of orange. The majority of all browns are mined at the Argyle Mine in Australia and are often referred to by an alpha-numeric description ranging from C1 (very light) to C7 (dark or deep). They generally have the lowest price points of all color diamonds.



### **Yellow Diamonds**

Yellow Diamonds are the most common and most traditional of all colored diamonds. Fancy yellow diamonds are generally less expensive than D color diamonds yet occur far less frequently in nature, making them an affordable investment and a beautiful alternative to a more traditional white diamond. Prices generally range from \$5,000 — \$25,000/ct depending on strength of color, clarity and shape. Yellow Diamonds often contain secondary colors of brown, green and orange.



### **Pink Diamonds**

Pink Diamonds are among the most desirable of all colored diamonds. The Argyle mine is the World’s largest source for pink diamonds, yet only around 0.1% are actually considered pink. Due to the rarity of natural pink diamonds, they tend to be on the more expensive side of the fancy colors with an average price of a 1 carat fancy pink around \$70,000 — \$100,000 per carat. Pink diamonds often contain secondary colors of orange, purple and brown.



### **Blue Diamonds**

Natural Blue diamonds are in high demand and short supply. It is becoming increasingly difficult for many dealers to locate these rare gems and no new sources have been found in recent years. With hues ranging from a faint grayish blue to a sky blue and an ocean blue, these beautiful diamonds are a common addition to a prominent connoisseur’s collection. Prices typically range from \$80,000 — \$250,000/ct.



### **Orange Diamonds**

Although not always regarded as such, natural orange diamonds, referring to those with a single color descriptor of “orange” are some of the most elusive of all natural colored diamonds. A color grade of pure orange is so rare that many collectors have never seen one. More common, yet hardly abundant are orange diamonds with a color modifier such as brown or yellow. Prized for their beauty and rarity, orange diamonds are one of the most sought after colors by prominent collectors. Orange Diamonds can command prices as high as blue diamonds.



### **Green Diamonds**

Because green diamonds have come in contact with radioactive minerals such as uranium through natural irradiation of the earth, authenticating natural origin requires extensive laboratory analysis at a leading gemological institute. Pure green diamonds are highly uncommon, with perhaps only a few significant greens being introduced to the market each year. More common are yellowish green, green-yellows and grayish yellowish greens (Chameleons).



### **Red Diamonds**

Red Diamonds are the rarest of the fancy color diamonds and are often considered priceless. In fact, they are so rare in nature that most jewelers and diamond dealers have never even seen a natural red diamond. Red diamond color is created by high intensities of pink that surpass the “vivid” color grading. The majority of red diamonds are less than half a carat in size. The World’s largest red diamond is known as the Red Shield, and weighs just 5.11 carats! Red diamonds may contain secondary colors of brown and purple.

*For more information on natural color diamonds,  
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