

What Colors Are Geodes Naturally?

From the outside, geodes resemble common rocks, but when they are broken open they reveal a hollow cavity lined with a layer of agate and filled with crystals. Most geodes are hollow, although crystal growth can fill all of the interior volume, and they range in size from 2 to 30 inches in diameter. The color of a geode depends on the agate layer and the type of crystal inside, both of which come in a variety of colors themselves. Most geodes are brown or white: geodes that are very brightly colored are likely artificially dyed.

Agate – *Most* of a geode's color is supplied by the agate layer that surrounds the hollow crystal center. The color of an agate depends on the distribution of various minerals within the stone. Often, this color appears in concentric bands. Different minerals contribute different colors. For example, iron oxides and cobalt create a red color, titanium is blue, nickel or chromium is green, manganese is pink and copper can make the stone appear red, blue or green depending on if it has been combined with other minerals.

Quartz – The most common geodes are lined with transparent or white quartz crystals, but quartz comes in other colors as well. Amethyst is the name for a purple variety of quartz, and amethyst geodes appear purple on the inside. Very large amethyst geodes are found in Brazil and other South American countries.

Chalcedony – Chalcedony is the name for quartz crystals that are too small to be seen with the naked eye. Chalcedony layers can cover the interior walls of geodes with a variety of colors, including white, gray, blue, yellow or orange. The color of chalcedony that is deposited on the inside of the geode depends on the location. For example, California is famous for its blue chalcedony.

References (CTRL + Click to follow links)

- The Mineral and Gemstone Kingdom: Geodes
- Iowa Department of Natural Resources: Geodes
- The Rock Collector: Agates
- Mineralogy Database: Chalcedony
- The Mineral and Gemstone Kingdom: Amethyst
- USGS Mineral Resources Program: Chalcedony

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How to Buy Geodes

While buying a geode is always a guessing game, there are a few simple tricks you can use to increase your odds of finding one that is filled with beautiful crystals. Rather than randomly hunting and picking through a pile of geodes, use a more careful method of elimination. Since geodes that contain crystals are usually lighter than those that contain solid agate--and the color of the exterior sometimes corresponds to the color of the interior--you can eliminate those geodes that are unlikely to contain what you want and increase your chances of going home with a geode you love.

Things You'll Need

- Scale
- Pick up several different geodes, comparing their weights and choosing the lightest one. Continue comparing weights, setting aside any that feel somewhat light for their size until you've set aside about a dozen lighter geodes.
- Weigh the small pile of geodes you have set aside, eliminating the ones that are heaviest for their size.
- Inspect the remaining geodes for size and shape, eliminating any that are not the size you are looking for or that are not an eye-pleasing shape. They do not necessarily need to be perfectly round, but if you dislike the shape, eliminate that geode.
- Set aside geodes that are extraordinarily light for their size. Inspect the light geodes for signs that they may contain mud rather than crystals. Although there are not always obvious signs, mudballs will often have brown or black streaks on the exterior and may have pieces of the exterior chipped away, revealing an ugly brown interior. Eliminate any geodes that are likely to be mudballs.
- Examine the exteriors of the remaining geodes. If the exterior is completely white, without a blue or black undertone, the geode is likely to contain white quartz crystals or light-colored banded agate. If it has black, blue or purple undertones, it may contain amethyst or other colored quartz crystals or blue banded agate. Keep the geodes with exteriors that match what you hope to find inside.
- Check the exterior for any chips or cracks that reveal the interior. Although it's not common, some geodes will have small openings that will reveal their inner contents. If you see a hole or crack that reveals something you like, hang on to that geode.
- Weigh the remaining geodes, choosing the ones that are lightest.

Tips & Warnings

- If a scale isn't handy or available, use a simple method of comparison by hand, looking for the geodes that are the lightest for their size.
- Don't toss the geodes against each other in an attempt to break or chip them. Small flying pieces are sharp and can easily get embedded in your skin or your eyes.

References (CTRL + Click to follow links)

- [eBay guide to choosing geodes](#)
- [Rocks4u.com geode collecting guide](#)