



When you perform color quality control for artificial plants, you can ensure that your product looks as realistic as possible. Image Source: Pixabay user INZEIN_URNS_DESIGN

Today's artificial plants look nothing like the dull silk flowers you might remember from the 1970s. Modern faux plants can now mimic just about any species in great detail, from every small notch of wood on the trunk of a miniature bonsai to the cream-colored thorns on a cactus. Because artificial plants are easier to care for than real plants and add liveliness to any room, more people than ever are choosing to buy these highly-realistic faux plants. However, making these plants look realistic can be a challenge, especially when choosing the perfect colors for your product.

Color quality control for artificial plants is absolutely essential. While the shape of the plant and the material it's made from can also impact its overall appearance, it's the color that will make or break the product. Using a spectrophotometer, you can ensure that your artificial plants look nearly identical to the real thing and attract more customers in the process.

Color is the Most Important Factor

Even when you perfectly mimic the [size and texture of the plant](#), from the unique leaf shape to the roughness of the stem, if the color is off by even a few shades, your plant will look unrealistic. That's because your customers are used to seeing live plants in nature and they've become accustomed to these natural hues. A synthetic green pigment that's too vibrant or saturated won't be aesthetically pleasing to discerning customers.

This is similar to the "uncanny valley" concept in robotics manufacturing.¹ According to the uncanny valley hypothesis, some people feel uneasy when they see an artificial replica of a living organism. Generally, an artificial object either has to look nothing like the living organism or has to look nearly identical in order to be visually appealing. If an artificial plant falls somewhere in the middle (not 100 percent realistic, but not completely unrealistic either), then customers could find its appearance

off-putting. This means that when you make an artificial plant, your colors have to be a near-perfect match for that plant species.



The best artificial plants vary in color and contain some imperfections in order to appear more realistic. Image Source: Maxpixel

How to Make a Realistic Shade

In order to create the most realistic plants, you'll need to trick the human eye by using clever shading and color quality control mechanisms. The most successful artificial plant manufacturers include imperfections in their final product in order to make their plants appear more lifelike, as most plants in nature have some torn leaves or uneven stems ². You can also apply this concept to the colors you use, both for plastics [and for fabrics](#).

Rather than choosing one solid color for the entire plant, you can instead use a few colors that bleed together in different places on the plant. If you look closely at a living plant, you'll see that the leaves often look like one solid shade of green from a distance, but up close, they actually have some lighter and darker shades scattered along the edges or where the leaf meets the stem. To make your plants look as real as possible, you'll need to identify all of these subtle changes in color, and replicate them using artificial pigments ³.



Because artificial plants have varying shapes and textures, you need to use a spectrophotometer that can measure color on uneven surfaces. Image Source: Pixabay user jarmoluk

The Challenges of Color Quality Control

As you begin your color design, you'll run across two challenges: identifying all of the plant's natural shades and determining whether your artificial shades match. A spectrophotometer can help you solve both of these dilemmas.

First, you'll need to identify all of the plant's natural colors. Start by buying a fully-grown, healthy plant that best represents the type of plant that you want to make. From here, take color measurements of each distinct part of the plant using a spectrophotometer. For the best results, you should measure each part of the plant that changes in shade, even if this difference is very subtle. For instance, if the base of the stem is a deep brown-green, and the center of the stem is nearly identical, but with a slightly greener tone, you'll want to measure both of these colors, even if they appear very similar to the naked eye.

Here are just a few places on the plant that you might want to measure with a spectrophotometer:

- The stem — measure the base, center, tip, and branches
- The leaves — measure the center, the outside edges and where the stem meets the leaf at the base
- Flowers — measure these in the same way you measured the leaves
- Seeds, thorns or other characteristics unique to that plant

Once you have your real plant color measurements you'll need to mimic these in your synthetic pigments. Many manufacturers start with a [base color of plastic](#) or fabric that perfectly matches one of the colors found on the test plant, and add shades of other colors using dye or spray paint until

the plant looks more lifelike. Getting a perfect match is much easier once you already have exact measurements on the plant's real colors. By using a spectrophotometer, you can confirm whether your new, synthetic color is an exact match for the real plant and tweak your mix of pigments until they are identical.

The Best Spectrophotometer for Artificial Plants

Because artificial plants need to be color-accurate to the naked eye, a spectrophotometer that's capable of measuring colors as the human eye sees them is an essential tool. In addition, your spectrophotometer will need to measure colors on uneven surfaces, or through rough textures. Both real and artificial plants rarely have a uniform, flat shape and an instrument that's capable of accounting for natural texture variation is vital to ensuring a realistic result. This is why you might choose a spectrophotometer like the [MiniScan EZ](#). This instrument is handheld, making it easy to use on small, delicate plants. It can also measure color on a [variety of surfaces](#), from fabrics and plastics on an artificial plant to the fibrous leaves of a real plant. Its versatility makes it one of the best choices for artificial plant manufacturers.

[Contact HunterLab](#) to find out more about the MiniScan EZ or any other spectrophotometers. Our staff can help you find the perfect tool for measuring plant colors based on your company's needs and budget.

1. "Reducing Consistency in Human Realism Increases the Uncanny Valley Effect", January 2016, <http://www.sciencedirect.com/science/article/pii/S0010027715300755?via%3Dihub>
2. "Fake Plants Look Good and Last", February 16, 2005, <http://www.seattletimes.com/life/garden/realistic-expectations-fake-plants-look-good-and-last/>
3. "The Art of Making Artificial Plants Look Real", June 14, 2016, <https://www.linkedin.com/pulse/art-making-artificial-plants-come-life-linda-taneja>