



Cosmetics brands are fostering inclusivity by offering a wider range of shades for all skin tones.  
Image source: Pexels user Gumzito Leruo

The [cosmetics industry](#) is changing at a rapid pace. In the past, it was nearly impossible for people of color to find the perfect shade of foundation for their skin tones, as most cosmetics brands only offered a handful of darker shade options. For instance, one cosmetics brand famously claimed to offer 30 different foundation shades, but only five of those shades were marketed toward people of color.<sup>1</sup> Today, we're seeing a significant shift in shade offerings from top makeup manufacturers and the emergence of exciting new brands building their reputations on their diverse palettes. Rihanna's Fenty Beauty, for example, recently released a 40-shade collection of foundations that cover a massive range of skin tones, and nearly half of those shades are marketed toward people of color. As Marissa Muller writes in W Magazine, the move is regarded by many in the beauty industry as "ushering in a new era of inclusivity."<sup>2</sup>

As the need for inclusivity becomes more apparent, many cosmetics brands are creating broader spectrums of foundation colors in order to better meet their customers' needs. However, to consistently create a diverse array of shades, you need to implement strict color quality control protocols based on spectrophotometric color measurement.

#### Why Color Matching is Important

Because foundation is meant to mimic a customer's natural skin tone, precise color formulation and consistency matters. Even slight variations in color could make the foundation appear either too light or too dark for someone's natural skin. People of color who have darker skin tones often find color matching particularly difficult, as many foundation shades make their skin appear grey or ashy. This happens when a foundation is too light in color or too opaque—it doesn't blend in seamlessly with the skin's natural undertones and this is especially apparent on darker skin.<sup>3</sup>

Due to the difficult process of finding the perfect match, customers generally like to stick with the same foundation brand once they find a shade that works well with their skin. In fact, a recent Corra Research study found that only 11 percent of makeup wearers switch foundation brands frequently and customers were significantly less likely to switch if they found products that closely matched their skin color.<sup>4</sup> As such, offering a wide range of shades that will blend with a diverse array of skin tones will help you meet the needs of your customers today and likely for years to come.



The more foundation shades a manufacturer creates, the more likely one of the shades will match a customer's skin tone. Image source: Wikimedia user Jen

#### The Challenges of Creating A More Inclusive Palette

One of the biggest challenges that cosmetics brands face when they create a larger number of foundation shades is that differences between the shades will naturally be more subtle compared to a smaller collection of shades, making distinctions between shades less apparent to the human viewer. In a 10-shade collection, for instance, the difference between the darkest and second-darkest shade available will likely be obvious to the naked eye. In a 50-shade collection, the difference between the darkest shade and the second-darkest will likely be far less obvious.

The color variation between shades depends on the [amount of pigment](#) used to create the foundation. Most foundation manufacturers use varying amounts of titanium dioxide or iron oxide pigments to make different colors of foundation.<sup>5</sup> The more pigment that a foundation has in the mix, the darker the final color will be. If you have a lot of color variation between one shade and the next-closest shade, then you likely used a higher percentage of pigment in the darker shade's mix than you did in the lighter shade. However, if you want to create a more inclusive product range that matches a wide range of skin tones, then the amount of pigment that you use will likely only change by a percentage or two between each shade, perhaps even less. For instance, the darkest shade in

your collection may contain 15 percent pigment, and the next-darkest shade may contain 14.5 percent pigment—a difference of just half a percentage.

This small change in pigment is far too subtle for the human eye to easily detect on its own, but it can make a significant difference once the product is applied to the skin. As such, if you only rely on visual assessment of your product's color, then both the formulation and manufacturing processes may be compromised. A spectrophotometer is therefore necessary to facilitate formulation and ensure that future products remain consistent batch-to-batch.



Spectrophotometers can help you ensure that every foundation in your shade range is consistent from product-to-product. Image source: Pexels user Beata Dudova

### The Benefits of Spectrophotometric Color Measurement

Spectrophotometers are designed to see color the way the human eye sees it, only better. By distilling color to numerical data, spectrophotometers quantify each foundation shade and can detect even the most subtle differences between shades. As such, these sophisticated color measurement instruments take the guesswork out of the formulation process, showing you exactly what color the resulting shade is and determining whether your product falls within [the tolerance you specify](#). With color measurement software already built into each instrument, you can decide exactly how much color variation you want between one shade and the next, allowing you to more precisely tailor your palette to your needs.

Not only can spectrophotometers help you determine how much pigment to mix into your final formulation, they are also invaluable for ensuring consistent batch-to-batch production of your foundations. Whether you are working with [liquid](#) or [powder](#) products, integrating

spectrophotometric color measurement in the manufacturing process allows you monitor your foundations at critical points of production. By doing so, operators can detect unwanted color variation as early as possible, allowing them to take swift corrective action and prevent the release of inaccurately pigmented products. When a brand is building relationships with customers based on its ability to create accurate color matches, this level of quality control is essential.

#### HunterLab Innovation

HunterLab has been a leader in color measurement for over 60 years. Today, we combine cutting-edge technologies with user-friendly designs to create versatile, innovative, and reliable spectrophotometers that help our customers take color quality control to the highest level. With advanced color measurement algorithms, [integrated software](#), and state-of-the-art hardware in every instrument, our spectrophotometers are essential tools for cosmetics manufacturers looking to create the best products possible. [Contact us](#) to learn more about our renowned instruments, customizable software packages, and world-class customer support services.

1. "Makeup That Addresses the Many Shades of Women", March 19, 2014, <https://www.nytimes.com/2014/03/20/fashion/makeup-foundation-for-the-many-shades-of-women.html>
2. "How Rihanna's Fenty Beauty is Ushering in a New Era of Inclusivity in the Beauty Industry", September 19, 2017, <https://www.wmagazine.com/story/how-rihanna-fenty-beauty-changing-beauty-industry>
3. "Here's Why Your Foundation Looks Grey", <https://beautybytes.beautybar.com.ph/heres-why-your-foundation-looks-grey/>
4. "Beauty Product Loyalty", <https://corra.com/beauty-product-loyalty/>
5. "Anatomy of Liquid Foundations", October 9, 2013, <https://www.beautylish.com/a/vxais/anatomy-of-liquid-foundations>