

The color and clarity of natural stone sealants play an important role in not only protecting the surface of the stone, but creating aesthetic appeal. Indeed, while designers often spend significant time carefully choosing a stone, the final appearance of their project is highly dependent on the quality of the sealant; unwanted color variations or issues with clarity can drastically alter the final appearance of the stone, preventing the designer from realizing their vision. As such, manufacturers must closely monitor the color and clarity of sealants to guarantee that their products behave as expected. Today, breakthroughs in color measurement technology are making this process more simple than ever before, helping sealant manufacturers enhance the quality of their products while optimizing overall efficiency.

The Value of Spectrophotometric Analysis

Whether monitoring clarity or [establishing a color system](#), choosing the right instrumentation can have a significant impact on product quality and the efficiency of the quality control process. Because [spectrophotometers are designed to quantify color and haze with extraordinary precision](#), these instruments can detect any unwanted variations instantly and alert operators to out-of-spec-product. This is particularly vital for clear liquids like sealants, in which variations may be invisible to the naked eye when looking at the product in isolation but become apparent once the liquid is in use. With variation detected, operators can begin correcting any possible process error and quarantine faulty sealants, ensuring batch-to-batch consistency and preventing incorrectly manufactured product from ever reaching customers.

However, spectrophotometric color and haze measurement aren't just important for in-production sealants. Rather, they are also invaluable during the product development process. For example, as sealants are developed, spectrophotometric data can facilitate color matching to ensure consistency and harmony with natural stone materials. Additionally, color and haze data can be correlated with formulation and process variables to refine manufacturing; by understanding how each step informs color and haze formation, manufacturers can not only more easily create the products they want, they can also identify areas of vulnerability that may compromise product appearance and take steps to eliminate them. Choosing a spectrophotometer that includes advanced color measurement software allows you to easily monitor color and haze behavior in relation to ingredients and processing factors, giving you extraordinary insight into your products and processes.

The Next Generation of Color and Haze Measurement

Color and haze measurement have long been known to be critical components of the quality control process when it comes to natural stone sealants, but until recently they required two distinct measurements, sometimes with two distinct instruments altogether. Now, [the HunterLab Vista is changing that](#). The first of its kind, the Vista is designed to measure visible-range transmission color and haze in a single measurement and with extraordinary accuracy. This immediately reduces labor requirements and improves the efficiency of your product development processes for new products and quality control protocols for sealants already in production.

Full article with photos available here:

<https://www.hunterlab.com/blog/color-in-building-materials/the-right-spectrophotometer-can-improve-quality-control-of-natural-stone-sealants/>