

# Advantages of Using Computer Color Matching

In today's ever increasing competitive global economy, the maximizing of product output becomes ever more important. For those of us that deal with color as one of our product's critical specifications, this can be a thorny and time consuming issue. Manufacturers that produce items such as paints, plastics, cosmetics and food will attest to not only the importance of having the correct color and appearance every order but also the time it takes to bring the color of a product into acceptable specification limits.

When talking about these industries, typically there are three main steps to the production process. The first step is batching raw materials that are necessary to make a finished product. Barring any unforeseen problems, one can usually certainly estimate the time it will take for completion. The third step, yes we jumped to third, is filling or packaging the finished product. Again, without unexpected issues, one could calculate a fair estimate of the time it would take to finish. The one uncertainty in this process is step number two.

Step number two is the adjustment of the physical properties of the product itself. If we use paint and coatings as an example, this would normally consist of adjusting viscosity and gloss as well other properties such as hardness, flow, adhesion, etc. While these properties usually take a minimal amount of time to achieve, there is another step that can be time consuming: matching the color. If this step is done entirely by eye it becomes the single uncertainty in this process and can decrease output by up to 30%. How can we help maximize the efficiency of this process? We can use computer color matching.

Before we go any further, we need to emphasize the importance of visual evaluation of color and appearance. In no way should computer color matching eliminate the need and usefulness of the human

eye. However, one can achieve great improvements in the time it takes to move material through their facility with a properly maintained and running spectrophotometer and color matching software.

Computer color matching typically consists of three components. The first component is a QC module that allows the user to compare samples to one another and calculates a numerical result or difference. Along with this most commonly used function, comes other advantages such as the ability to evaluate and monitor the strength of incoming pigments or colorants. There are also numerous whiteness and yellowness indices that adhere to ASTM standards.



