

Spectrophotometers have revolutionized the way color is measured and given manufacturers across industries the power to take control of color management in ways that could previously only be imagined. However, the quantification of spectral data is only the first step. In order to unlock the potential of your spectrophotometer, you need to pair your instrument with the right software, creating a partnership between precise instrumentation and analytical tools that allow you to make meaning of your measurements. HunterLab's [EasyMatch QC](#) offers the highest level of flexibility to collect, display, and analyze color data, bringing your color management abilities to unprecedented heights. Developed in response to the diverse needs of our customers, EasyMatch QC allows you to easily produce, display, and interpret data in the way that works for your unique requirements.

## Meticulous Record-Keeping

EasyMatch QC's job files archive make it possible to store data for an unlimited number of samples and offers you a detailed historical record of process variables that can easily be recalled and shared. The analysis of historical color and process data gives you the ability to analyze color variation over time and pinpoint process variables that affect color levels. The high level of customization afforded by EasyMatch QC allows you to create personalized templates that facilitate the creation of new jobs, minimizing set up time and maintaining continuity. Meanwhile, data sharing is made simple through integrated email functionality that gives you the option of emailing job files, and may also be used in the creation of tailored, printable reports. The searchable database means all of your data is categorized and easy to recall.

The ability to view and input data can be controlled via customizable system access with authority check capabilities to preserve data safety. Computer-generated audit trails and electronic signatures further enhance the security of your information.

## Representations of Spectrophotometric Data

EasyMatch QC gives you the option of viewing color data numerically within a spreadsheet or as graphic representations in the form of spectral plots, color plots, and trend plots. The ability to view spectral data visually is a critical component to many color management processes and in some cases it offers the only reliable way of obtaining meaningful color information. Metamerism identification, for example, relies on [examination of spectral reflectance curves to determine the likelihood of color matching](#).<sup>1</sup> The clarity and versatility of EasyMatch QC's data charts optimize your ability to perform detailed analysis of chromatic information.

## Integrated Color Scales and Indexes

Color scales and indexes are invaluable chromatic barometers for a virtually endless variety of products. From [APHA/Pt-Co/Hazen measurement to the Gardner Scale](#), [Citrus Number to whiteness index](#), EasyMatch QC allows you to easily obtain accurate scaling or indexing information of solid and liquid materials. While we have integrated measurement of the major color scales and indexes commonly used within a range of industries, we also offer formulas for more obscure scales for specialized tasks, such as the [AnLab Color Scale](#), and formula fields allow for the calculation of customized indexes. Additionally, the software offers formulations for calculating geometric attributes such as haze, gloss, and opalescence.

## Creating Color Standards

The data supplied by your spectrophotometer allows you to modulate your pigmentation and overall production processes to [create an effective color system with defined variation tolerances](#).<sup>2</sup> These tolerances may be created manually based on your own data or developed through EasyMatch QC's autotolerance feature, which predicts acceptable limits. Once a

standard has been created, you can begin measuring products against the standard, either as discrete measurements of single samples or continuous monitoring in a moving production line. When a product deviates from the standard, EasyMatch QC can work on a Pass/Fail basis to flag the color discrepancies that fall outside your tolerance range, allowing you to quarantine defective product and take corrective action.

## Converting Values

The world of color measurement contains a diverse array of languages to express chromatic information. Industry standards and individual customers rely on particular color space systems to visualize, organize, and quantify chromatic information of objects. Our software package can display colorimetric and spectral data in an array of color values to allow you to easily access the information you need using the language that is relevant to you and your customers. For example, CIE L\*, a\*, b\* values may be converted to X, Y, Z, Hunter L, a, b, among other color space systems, allowing you maximum flexibility.

Full article with photos available here:

<https://www.hunterlab.com/blog/color-measurement-2/how-to-get-the-most-of-your-easymatch-qc-software-and-spectrophotometer-features/>