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## Why A Color Viewing Booth May Be The Best Way To Match Color

Before spectrophotometers became commonplace in industry as they are today, the only way to determine if a color matched a sample and evaluate the effectiveness of a match was to judge it visually under a quality viewing environment.

Now that spectrophotometers and colorimeters have become such commonplace devices found in all areas of color evaluation, many are under the false impression that these instruments are the only way to perform an effective color match. In some instances, using an instrument alone can be done. In most instances however nothing could be further from the truth!

One example that illustrates this very well is the evaluation of textiles for a color match. Even though much progress has been made in eliminating directionality and the effects of texture on the measurement, the best systems are not perfect and cannot be relied on completely to judge if an adequate match has been achieved. The match still needs to be done visually.

More importantly however, is the realization that in the case of many textured materials (cloth, wallpaper, molded plastic products) the original sample to be used as the standard for the color match may have an entirely different texture from the texture of the sample to which it is compared. Under such conditions, relying on the data from an instrument will not be possible; a visual color match will have to be made.

Likewise, with a patterned sample, such as a tweed or herringbone, the reliance on an instrumental color match will not be possible. Such samples have intricate details, all with color, and the match requires the interaction of all the colors combined. If one of the colors is off, but the background is also off in the opposite direction of color space as the detail color, it is very possible to obtain an instrumental color match that no person would find acceptable. A visible color match must be utilized. The human eye can see the subtle changes in color of the fine details that an instrument cannot detect. Instruments with very small areas of view have not been developed to a reliability level even close to what a trained human eye can achieve.

These are just two examples where the use of a quality viewing system may be the only way a color match can be performed effectively. Similar examples can be related for the plastics industry, where heavy texturing can be used for decorative purposes, the paint industry, where texturing is used to allow a sample to be gripped more effectively and the home décor markets, where wood grains are actually manufactured into the finished product.

GTI Graphic Technology, Inc. manufactures a series of Color Matching booths, luminaries, and viewing systems to allow a viewer to perform effective and accurate color matches. Available in an array of sizes, they meet the strict ASTM 1729-96 standards for color viewing and have a CIE rating of B/C based on CIE Publication 51, one of the highest in the industry.



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