

Color target technology has revolutionized the plastic industry with near-perfect color matching capabilities. From [prosthetics and maxillofacial reconstruction](#) in the medical field to innovative building materials in industrial and high-tech industries, new color target measurement applications continue to flood the market and have made a huge progression since their early stages of development. Color target technology in polymer production now replaces other more expensive materials and manufacturers are excited about the possibilities for products to take nearly any shape, size, or form. With the right color measurement tools, meeting color target demands is both simple and efficient.

## Color Matching

Color matching can be a complex and tedious task, but with advanced color target technology the job is quick, effective, and, most importantly, easy to replicate. New color matching technology allows manufacturers to attain a variety of color targets to meet the numerous demands of consumers. Revolutionary instrumentation can store color target data for repeated production and consistent results. Advanced color measurement instrumentation transfers this data from the color target samples to polymer material for precise color reproduction every time.

Perfect color matches can be created to replicate virtually any sample.<sup>1</sup> Whether working with plastic plaques or samples to other non-polymer sample colors, spectrophotometers take the guesswork out of the color matching process. Matching a color target to an organic or man-made material is now simplified through spectrophotometric technology.

## Spectral Technology and Instrumentation

Color quality has such major influence on consumer satisfaction that spectrophotometry has now become a necessity in polymer manufacturing a production. When developing color formulations to meet color target samples, color concentrates<sup>2</sup> must be added to raw polymer materials to achieve the perfect match. Throughout this process, color changes must be carefully monitored to allow for accurate color matching. Choosing the right instrumentation is dependent on individual product needs and can vary in both size and function. From hand-held to bench top to online processing spectrophotometers, the right instrumentation is crucial in maintaining color consistency and quality throughout the various phases of processing.

## Challenges in Color Measurement

Plastic materials can vary in both color and consistency. From [translucent or transparent to opaque](#), specific angles and calculations are key to successful color target matching. As manufacturers continue to expand their color pallets to meet consumer demands, color plaque samples must continue to meet quality standards throughout the industry. The American Standards for Testing Materials (ASTM) has set specific guidelines that address the quality standards governing plastic color matching sample production.<sup>3</sup> These standards are dependent on specific spectrophotometric technology to measure color using the best practices available. With the right instrumentation, any color target can be attained using the right technique and geometric calculations for the visual quality and surface appearance of each individual sample.

Full article with photos available here:

<https://www.hunterlab.com/blog/color-plastics/utilizing-effective-color-target-technology-to-hit-the-mark-in-plastic-measurement/>