

No one likes the idea of waste piling up in our landfills, but the financial impact of losing valuable materials is often the driving force that fuels the need for instrumental analysis. Color control plays a vital role in managing material usage and maintaining quality and consistency in a variety of manufactured goods. With appropriate color measurement instrumentation, the average business can save thousands while delivering the quality and value expected of their products.

Instrumental analysis has infiltrated nearly every consumer driven industry imaginable. From automobile parts and building materials to paints and plastics, spectrophotometers are the leading technology used for [color measurement](#) and quality control. “Any manufacturer of consumer products...should implement stringent quality controls to ensure that the first run matches required color specifications and that each successive lot is consistent. To do otherwise risks significant scrap and rework, delayed shipments, lot recalls, and loss of profits, if not valuable business relationships and contracts.”¹ The benefits of instrumental analysis are undeniable, yet not all spectrophotometers are created equal. Advancements in technology have created a wide range of choices in color measurement tools, and developing an understanding of these options will help you make the most of your investment.



Color measurement instrumentation ensures consistency from lot to lot, reducing wasted materials and ensure product quality.

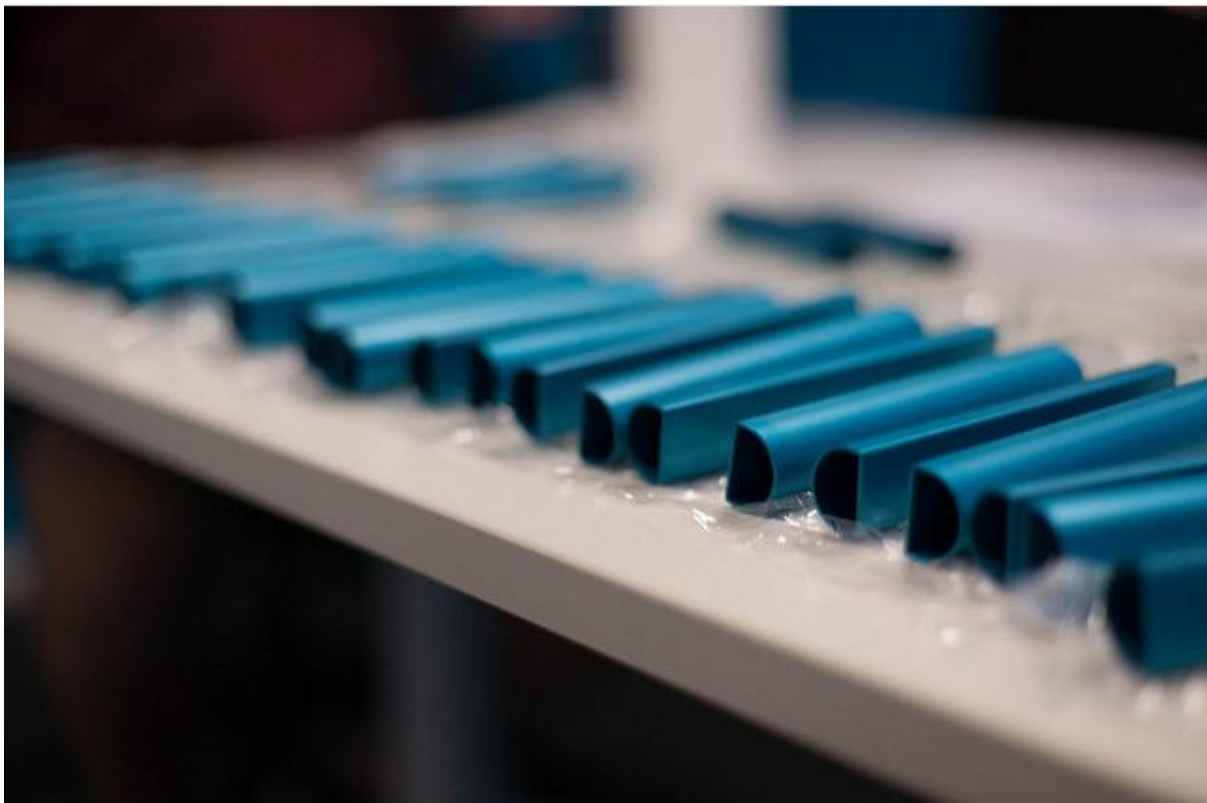
Image Source: Flickr user garlandcannon

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Increase Speed and Improved Accuracy

Today's spectrophotometers have taken instrumental analysis to new levels. As portability and durability improve, color measurement can be obtained in nearly any environment with even better accuracy than ever before. [Color matching technology](#) is dependent on instrumental analysis to meet the growing palette of options in consumable goods. As product demand increases so do production speeds, requiring a more versatile tool to monitor and quantify even the slightest color changes that may otherwise go undetected by the human eye.²Even a slight shift in color can lead to product rejection and waste, therefore increasing the costs of materials and lowering profits.



Ensuring color consistency throughout production and from batch to batch reduces waste and improve consumer satisfaction.

Image Source: Flickr user Locus Research

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In-line spectrophotometers use [color process automation technology](#) to provide a solution to fast-paced production lines where color errors can quickly ruin an entire product line. With continual color monitoring, even a slight miscalculation can be detected in the early stages of product and corrected rapidly before excess materials are wasted. These modern analytical tools not only offer flexible options in style and size, but [new technology eliminates variables such as lighting interference, reflectance, and texture](#) that can often interfere with the accuracy of color-sensitive products.

Flexible Options at Affordable Prices

As the need for color-specific products continues to grow, instrumental analysis must also provide the means necessary to keep up with industry demands. Spectrophotometers offer a wide range of capabilities that can be tailor-made to meet the specific needs of individual products. Whether measuring solids or liquids, textured or glossy surfaces, the versatility of quality instrumentation can adapt accordingly.



Whether clear or opaque, liquid or solid, to even molten sample measurements, spectrophotometers offer a highly versatile source of instrumental analysis.
Image Source: Flickr user Nelson Alexandre Rocha

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HunterLab is a leading name in color technology with many options in instrumentation. Our line of spectrophotometers provides to tools needed to meet nearly any color measurement need with instrumentation that ensure color consistency from batch to batch and lot to lot. With a variety of options to meet any budget, our spectrophotometers can help you attain a higher level of color quality, increase product quality, and improve consumer satisfaction. For more information on choosing the right tools to meet your color measurement need, please [contact us today](#).

1. "Spectrophotometers: Cheaper, better, faster,"

http://www.qualitydigest.com/sept07/articles/01_article.shtml

2. "Human Vision and Color Perception," last modified November 13, 2015,
<http://micro.magnet.fsu.edu/primer/lightandcolor/humanvisionintro.html>