

Color and appearance measurements for the beverage industry are used to ensure that the overall product appearance is the same from lot to lot. In the marketplace, it is rare that consumers are permitted to taste food products prior to purchasing them. However, they frequently can look at the product. They make a judgment decision largely based on overall appearance including color.

Coloring the mind of your Consumer:

Never has the consumer been more empowered than now in this digital age where knowledge of the products they purchase has been made available to them at a click or swipe, and this testifies that a greater need has evolved for the F&B industry to build a product with enticing visual properties such as Color and haze without compromising the highest level of quality. A strikingly similar parallel of 'Go-Green' campaign has also weaved its way in the Food & Beverage industry influencing the consumers to choose naturally colored products over artificially bright and unnatural Colored products, and this has birthed the need to test the quality of the beverage for Color consistency across all stages of the process like production and storage as the ingredient changes can alter the base color of a beverage, resulting in the perception that the product is different or of lower quality.

Diverse Optical Characteristics and their Methods for measurements:

The complexity of successfully measuring Color and appearance in the Beverage Industry is further enhanced by the fact that beverages are of types opaque, translucent or transparent, and each form requires different instrumentation and techniques. Opaque liquids have high solids content with a characteristic of high Brix value when light passes through it and Translucent liquids possess medium levels of solids and exhibits a lower brix value when light passes through it. Therefore, it is crucial for the food processors to assess the right measurement modes like reflective or transmittance before they measure the Color during any stage of processing. This significantly increases the need of a spectrophotometer to measure the spectral data values and also measure the transmission haze.

Maintaining Color through various food processes:

Food and beverages are highly volatile as they tend to change Color during production, transportation and even in storage. The cost and labor of adjusting a food or beverage Color in its final stage of production is very high and hence the Color consistency must be measured at each stage of the production.

Additionally, the Food & Beverage Regulatory bodies stress the importance of maintaining product specific Color standards in the industry through their elaborate regulations. This makes the measurement of Color and haze to maintain high degrees of Color quality a top priority for the Producers, also accentuating them towards protecting their license to operate.

Thus, this makes the use of Spectrophotometers essential as it addresses both the challenges of meeting regulations and the capability to measure Color and Haze during any stage of the production process.

Full article with photos available here:

<https://www.hunterlab.com/blog/color-food-industry/a-better-method-of-measuring-color-and-haze-in-beverages/>