



Cigar manufacturers can employ advanced color quality control techniques to stay competitive. Image credit: Flickr user heidi schempp fournier (CC BY 2.0)

In the 1960's, aromatic smoke from a bodyguard's cigar caught Fidel Castro's attention. According to the story, Castro was so enchanted by the scent that he established a factory in Cuba to produce cigars according to the bodyguard's instructions.¹

Over the next thirty years, that factory's Cohibas spread to the rest of the world—except, of course, to the US.

But the United States' lifting of its more than fifty-year-old embargo in 2016 left aficionados anticipating an influx of Cuban cigars. It's possible that smokers will find the initial quality of Cuban imports lacking,² but as more and more cigars begin to arrive, US producers must be prepared to hold their own. Many smaller cigar manufacturers currently subject their final products to visual inspections. But making the switch to spectrophotometric technology will allow you to maintain more stringent standards. Inexpensive portable spectrophotometers are a valuable tool for remaining competitive in a shifting market.

Variability in Cured Tobacco Leaves



Advanced color analysis can help insure tobacco crops are harvested for peak flavor. Image credit: Flickr user Romtomtom ([CC BY 2.0](#))

The color of a cured tobacco leaf correlates directly to the chemical components that create the complex cigar smoke flavors prized by connoisseurs—a range of factors that include starch, sugar, chlorophyll, carotenoid, protein, and amino acid levels, as well as total moisture.³ In other words, color can tell you a lot if it's properly measured.

Some producers monitor color transitions with visual inspection, but this leaves a lot of room for subjective color interpretation. Taking measurements with a spectrophotometer avoids this issue. The device can be used to establish reference standards for various colors of cured tobacco, letting you measure all leaves against the same standards—and helping ensure that crops are processed at peak flavor levels.

Portable spectrophotometers are particularly advantageous for cigar manufacturers. The color and quality of wrapper leaves have the greatest effect on a cigar's appearance and flavor, but if you use a benchtop spectrophotometers, you'd need to take wrapper leaf samples from your curing facilities and color-test those samples at a separate location, leaving a time gap between sampling and feedback that could slow down your production cycle. [Handheld spectrophotometers](#) eliminate this gap, giving you immediate feedback on degrees of curing.

Assessing Variations in Cigar Color



Portable spectrophotometers allow for more streamlined quality control of cigar wrapper leaves. Image credit: Flickr user daniel.stark ([CC BY 2.0](#))

It's also important to remember that color names like "double claro" or "oscuro" are ultimately industry conventions rather than objective quality indicators. Cigar quality is more apparent from the consistency of color across cigars in any given box.

In this scenario, too, you can turn to portable spectrophotometers to create a series of objective reference standards that each box of cigars must satisfy. Quality assurance inspectors can use handheld devices to sample random boxes for confirmation that natural color variations have not affected the consistency of a specific brand or category, ensuring minimal box-to-box color variation.

Handheld devices [like HunterLab's Mini EZ 4500S](#) are ideal for these types of environments. The device is configured to measure small samples and discrete areas with one-hand operation. A quality inspector can easily master the use of the spectrophotometer and incorporate it into routine production line inspections.



Consumers expect consistent box-to-box cigar quality. Image credit: Flickr user Alex Brown ([CC BY 2.0](#))

A quality cigar can satisfy a smoker's epicurean desires—but to encourage brand loyalty, cigar producers must strive for consistent quality, from box to box and cigar to cigar. Portable spectrophotometers, like those produced by HunterLab, can help cigar manufacturers achieve this goal. Please [get in touch with us](#) to learn more about which of our instruments are right for your production facility. We have more than sixty years of experience working with leaders [across a wide variety of industries](#), and we're proud to offer unparalleled customer support.

1. "A Conversation With Fidel," 1994, <http://www.cigaraficionado.com/webfeatures/show/id/A-Conversation-With-Fidel-6005/p/1>
2. "Why U.S. cigar companies can't wait for you to light up Cuban cigars," September 2015, <http://www.foxnews.com/world/2015/09/09/why-us-cigar-companies-cant-wait-for-to-light-cuban-cigars.html>
3. Relationship between color changes and chemical components of flue-cured tobacco leaves during curing, December 2014, https://www.researchgate.net/publication/288973551_Relationship_between_color_changes_and_chemical_components_of_flue-cured_tobacco_leaves_during_curing

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