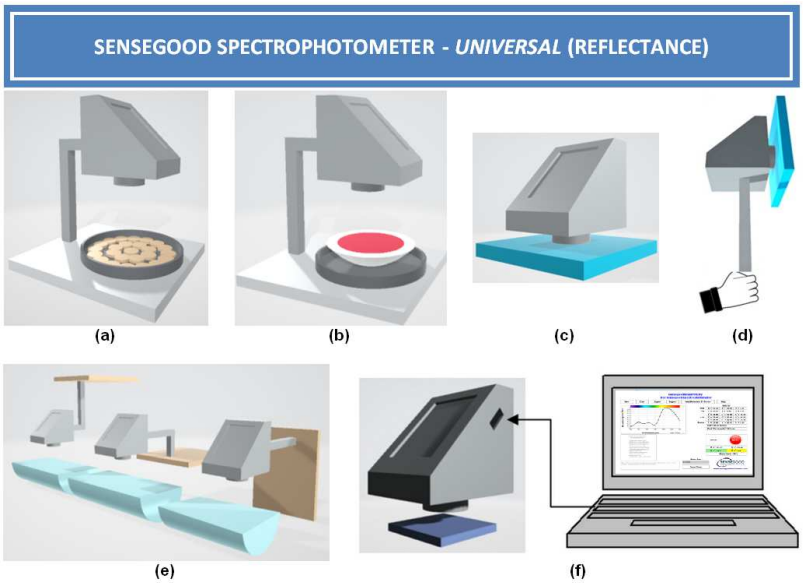
Sensegood spectrophotometer for color measurement in whole spices

Photo: Mind triggering spices in vibrant colors. Image source: experiencekerala.in

Spices are the soul of food. One can judge food even before tasting it just by its mind triggering aroma and appearance. Apart from food, spices are also used in medicinal applications, perfumes and cosmetics.

Importance of color in spices:

It is important to maintain a quality of spice color to achieve desired appealing food texture. Customer is not willing to buy too dull or too bright colored spices. As spices get older, they lose their aroma especially in the influence of temperature or sunlight. Dull colored spices are not preferable as they are perceived as with less aromatic oils. While on the other hand, bright colored spices create doubts of adulteration in consumer's mind. Apart from this, there are large number of varieties exist in each spice category which have distinct flavor and color. It is important to sort and grade according to physical properties like color and appearance of particular spice. Spice color (turmeric, chili, to name a few) also serves as food decoration to make food more appealing. Supplying right colored spice is the market's demand driven necessity.



- ✓ Benchtop/ Tabletop: (a) (b) (Rotating sample platform)
- ✓ Handheld/ Portable: (c) (d)
- ✓ Online/ In-process: (e)

- ✓ Solid: (a) (c) (d) (e)
- ✓ Liquid: (b) (e)
- ✓ Paste: (b) (e)
- ✓ Powder: (a) (b) (e)

- ✓ Contact measurement: (c) (d)
- ✓ Non-contact measurement: (a) (b) (e) (Adjustable height)

Works with:
- ✓ 5V adapter (cell phone charger)
- ✓ Power bank
- ✓ Computer/ Laptop (f)

- ✓ Averaging
- ✓ Auto repeat measurement mode
- ✓ Color match percentage
- ✓ Color indices (whiteness, yellowness, …)

- ✓ *SensegoodSmart* – computer interface software utility

Sensegood spectrophotometer for color measurement in whole spices:

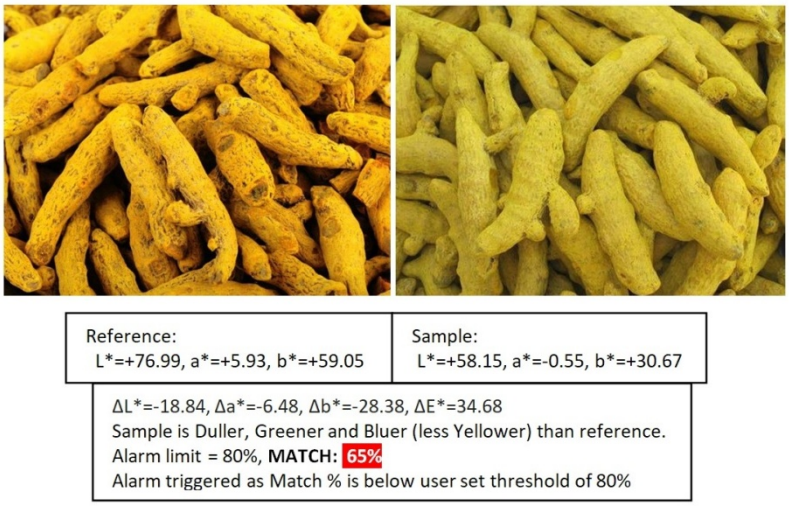
Sensegood spectrophotometer is an analytical color measurement instrument that is widely accepted in the industry and research fraternity for reliability. From raw material to final product, it comprehensively evaluates the color attributes of various samples, including solids, liquids, powders and pastes. Rotating sample platform and large viewing area (sensor's field of view) averages out even a non-homogeneous sample and produces accurate repeatable color attributes. As a result, consistency can be maintained and quality standards can be met with less waste, time, and effort. Sensegood spectrophotometer is the versatile device that is engineered to work as handheld/portable, benchtop/table-top or in-process/online color measurement instrument.

Applications:

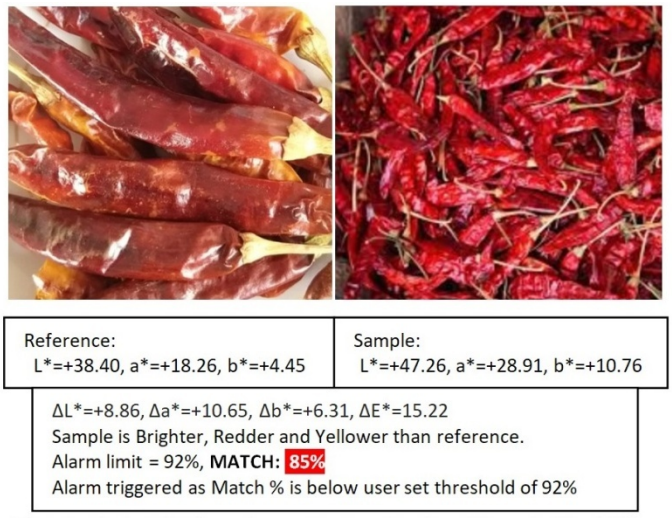
Using Sensegood spectrophotometer, you can maintain color quality of mixed spices (*masala*) or independent whole or ground spices like:

Saffron, cardamom, clove, cinnamon, black pepper, green pepper, cumin, celery, coriander, nutmeg, mustard seed, fenugreek, whole chili, chili seeds and flakes, garlic flakes, oregano, lemon grass, curry leaves, to name a few.

Further suggested read for mixed ground spices (*masala*) manufacturers: Ground spices



Sensegood Spectrophotometer for color measurement and quality control in turmeric



Sensegood Spectrophotometer for color measurement and quality control in chili

Photo: Determination of color matching percentage in turmeric fingers and whole chili samples. User can establish color tolerances of their choice. Sensegood spectrophotometer measurement information assists for color based sorting and grading for better market acceptance. Same varieties can be grouped according to similar color properties.

Using Sensegood spectrophotometer, user can set desired sample as a reference and check match percentage value with other batch samples. If matching is poor; below set threshold, it provides audible alarm and display indication on LCD to alert operator.

Do more with Sensegood spectrophotometer:
Sensegood spectrophotometer also incorporates continuous auto measurement mode. In this mode, it wakes up at user selectable intervals, takes measurement, compares the sample color with the saved reference, displays percentage match, and alarms to the operator with beeping sound in case if the matching percentage is below preset threshold. It has provision for averaging option in normal mode as well as in auto repeat measurement mode.

Sensegood spectrophotometer is equipped with various color indices like: whiteness index, yellowness index to name a few. Measured CIE L*a*b* values indicate strength of color parameters like: bright or dull, red – green and yellow – blue respectively. Measured color is also represented as reflectance graph, peak wavelength and color temperature on color touch LCD. Sensegood spectrophotometer is non-messy non-contact type instrument which has benefit of measuring sample's color from a distance. Because of this, sensor's optical assembly remains scratch proof enabling long life in retaining calibration. Non-contact measurement avoids any sample contact and contamination on sensor measuring surface.

SensegoodSmart utility:
Sensegood spectrophotometer provides computer interface software *SensegoodSmart* which lets you to convey numeric color data across all plants and warehouses that may be located at multiple places across the globe. SensegoodSmart utility enables user to store unlimited number of references to the computer. Any desired reference can be recalled and downloaded to Sensegood spectrophotometer whenever required. The utility provides all color related analytical information on single screen. This feature is even more desirable when using Sensegood spectrophotometer for in-process/online applications.

SENSEGOOD
INSTRUMENTS PVT LTD

www.sensegoodinstruments.com
Phone, WhatsApp, Signal, Telegram: +91 79 8484 8002
info@sensegoodinstruments.com

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