



PORTABLE SPECTROCOLORIMETER BPSP-1103

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SPECTROCOLORIMETER FOR ACCURATE MEASUREMENT

The Portable Spectrocolorimeter is a compact, handheld color measurement device designed to provide stable color comparisons for materials and products wherever color control is important. Its rugged, ergonomic design ensures portability and durability for field inspections or production lines, providing efficient, reliable color measurement solutions for demanding environments.



- CMOS dualbeam splitting sensor
- CIE LAB, XYZ, LCH, and sRGB color spaces
- D/8 optical geometry (SCI/SCE)
- Two measurement apertures ($\phi 8\text{mm}$ and $\phi 4\text{mm}$)
- 400-700 nm full waveband balanced LED light source
- 3.5inch TFT touchscreen offers an intuitive user interface
- Excellent repeatability ($\Delta E_{ab} \leq 0.08$) and interinstrument agreement ($\Delta E_{ab} \leq 0.25$)
- Adopt full waveband balanced LED light source
- Silicon photodiode array sensor (32 groups with double rows)
- A variety of color space, a variety of observation light sources
- Interface instruction
- Adopt international common use d/8 SCI/SCE Synthesis technology

SPECIFICATIONS

Model	BPSP-1103
Optical Geometry	D/8° (Diffuse illumination, 8° direction reception)
Standards compliant	CIE No.15, GB/T 3978, GB 2893, GB/T 18833, ISO77241, ASTM E1164, DIN5033 Teil7
Integrating Sphere Size	$\phi 40\text{ mm}$
Light Source Device	Combined LED Lamp
Spectroscopic Method	Flat grating
Sensor	Silicon photodiode array (dual row 24 groups)
Light wave range	400-700 nm
Wavelength Pitch	10 nm
Measured Reflectance Range	L: 0-100; Reflectivity: can be measured at 3 specific wavelengths specified by the user (default: 440 nm, 550 nm, 600 nm)
Measuring Aperture	$\phi 8\text{ mm}$
Specular Component	SCI
Color Space	CIE LAB, XYZ, Yxy, LCh
Color Difference Formula	ΔE^*_{ab} , ΔE^*_{00}
Observer Angle	10°
Illuminant	D65, A, F2 (CWF)
Displayed Data	Reflectance (userspecified reflectance at 3 specific wavelengths), sample chromaticity value, color difference value/graph, pass/fail result, color simulation, color deviation
Displayed Accuracy	Display 0.1, store 0.01
Measuring Time	About 1.5 s
Repeatability	Chromaticity value: MAV/SCI, within ΔE^*_{ab} 0.08 (white calibration plate measured 30x at 5 s intervals after calibration)
Interinstrument Error	MAV/SCI, within ΔE^*_{ab} 0.4 (Average for 12 BCRA Series II color tiles)
Measurement Mode	Single Measurement, Average Measurement (2-99 times)
Locating Method	Stabilizer cross position
Dimension (LxWxH)	81 x 71 x 214 mm
Weight	About 460 g
Battery	Liion battery, 6000 measurements within 8 hours

Illuminant Life Span	5 years; more than 3 million times measurements
Display	3.5inch TFT color LCD; Capacitive Touch Screen
Data Port	USB
Data Storage	Standard 500 Pcs; Sample 10,000 Pcs
Language	Simplified Chinese, English, Traditional Chinese
Operating Environment	0-40 °C; 0-85% RH (no condensing); Altitude < 2000 m
Storage Environment	-20-50 °C; 0-85% RH (no condensing)
Standard Accessory	Power adapter, data cable, manual, SQCX quality management software (download from official website), black & white calibration box, protective cover, wrist strap, ϕ 8 mm platform caliber
Optional Accessory	USB Micro Printer, Powder Test Box
Alt Name	SpectroColorimeter



FEATURES

CMOS dualbeam splitting sensor

CIE LAB, XYZ, LCH, and sRGB color spaces

D/8 optical geometry (SCI/SCE)

Two measurement apertures (ϕ 8mm and ϕ 4mm)

400 700 nm full waveband balanced LED light source

3.5inch TFT touchscreen offers an intuitive user interface

Excellent repeatability ($\Delta E_{ab} \leq 0.08$) and interinstrument agreement ($\Delta E_{ab} \leq 0.25$)

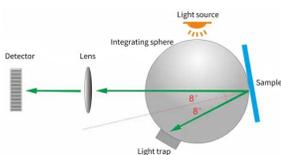
Adopt full waveband balanced LED light source

Silicon photodiode array sensor (32 groups with double rows)

A variety of color space, a variety of observation light sources



Interface instruction



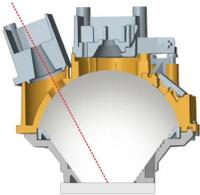
Adopt international common use d/8 SCI/SCE Synthesis technology

Spectrocolorimeter adopts D/8(diffused illumination, 8degree viewing angle) which is widely applicable in the world, and SCI/SCE (specular component included/specular component excluded) Synthesis technology. It is suitable for color management and quality control in various industries such as color matching and coating, textile, plastic, food, building materials, cosmetics, etc.



Ergonomic design and easy measuring device :

The spectrophotometer has a beautiful, smooth shape and comfortable grip, in line with the structure design of human mechanics, fit the palm for continuous testing, so that you can use it quickly and easily. An automatic measuring device is added, which is portable, quick and easy to measure.



Standard whiteboard

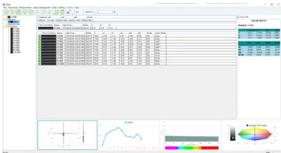
ETC realtime calibration technology:

The spectrophotometer adopts imported standard white board, which is resistant to yellowing and dirt infiltration and can be wiped, ensuring the long-term accuracy of the instrument. An innovative ETC realtime calibration technique is also used, with a builtin standard white board into the optical system, which is reliably accurate and repeatable for each Test.



Camera locating can clearly observe the measured area:

A spectrophotometer has a builtin camera for positioning, which can accurately determine whether the measured part of the object is the center of the target through realtime viewing by the camera, thus improving the measurement efficiency and accuracy.



Color management software:

SQCX quality management software with spectrophotometer is suitable for quality monitoring and color data management in various industries. Data the user's color management, compare color differences, generate test reports, provide multiple color space measurement data, and customize the customer's color management.

APPLICATIONS

With 8mm and 4mm dual apertures, spectrophotometer is widely suitable for the industry production and quality inspection of accurate color difference control like plastic electronics, paint and ink, textile printing and dyeing, printing, ceramic industry etc.



Building materials



Coatings



Textile



Plastics



Food



Cosmetics



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