BioLAB

PRODUCT CATALOG

PORTABLE SPECTROCOLORIMETER

CE ISO9001 CERTIFIED

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PORTABLE SPECTROCOLORIMETER BJH1E1 TO BJH1E4

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 (ϕ8mm and ϕ4mm)
400 700 nm full waveband balanced LED light source
3.5inch TFT touchscreen offers an intuitive user interface
Excellent repeatability (ΔEab ≤0.08) and interinstrument agreement (ΔEab ≤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	BJH1E1	BJH1E2
Old Model	BPSP-1101	BPSP-1102
Optical Geometry	D/8° (Diffuse illumination, 8° direction reception)	D/8°
Standards compliant	CIE No.15, GB/T 3978, GB 2893, GB/T 18833, ISO77241, ASTM E1164, DIN5033 Teil7	
Integrating Sphere Size	Φ40 mm	
Light Source Device	Combined LED Lamp, UV Lamp	Combined LED Lamp
Spectroscopic Method	Flat grating	
Sensor	Silicon photodiode array (double row 32 groups)	
Light wave range	400-700 nm	
Wavelength Pitch	10 nm	
Semiband Width	10 nm	
Measured Reflectance Range	L: 0-120; reflectivity: 0-200%	
Measuring Aperture	Dual apertures - MAV: ϕ8 mm/ϕ10 mm; SAV: ϕ4 mm/ϕ5 mm	Single apertures - ϕ8 mm/ϕ10 mm
Specular Component	SCI/SCE	
Color Space	CIE LAB, XYZ, Yxy, LCh, CIE LUV, sRGB, βxy, DIN Lab9, DIN Lab99 Munsell (C/2)	CIE LAB, XYZ, Yxy, LCh, sRGB, βxy, Munsell (C/2)
Color Difference Formula	ΔE*ab, ΔE*uv, ΔE*94, ΔE*cmc(2:1), ΔE*cmc(1:1), ΔE*00, DINΔE99	ΔE*ab, ΔE*94, ΔE*cmc(2:1), ΔE*cmc(1:1), ΔE*00, DINΔE99
Other Colorimetric Index	WI (ASTM E313, CIE/ISO, AATCC, Hunter), YI (ASTM D1925, ASTM 313), Metamerism Index MI, Staining Fastness, Color Fastness, Color Strength, Opacity, Color Card Search	
Observer Angle	2°/10°	
Illuminant	D65, A, C, D50, D55, D75, F1, F2 (CWF), F3, F4, F5, F6, F7 (DLF), F8, F9, F10 (TPL5), F11 (TL84), F12 (TL83/U30)	D65, A, C, D50, F2 (CWF), F7 (DLF), F10 (TPL5), F11 (TL84), F12 (TL83/U30)
Displayed Data	Spectrogram/Values, Samples Chromaticity Values, Color Difference Values/Graph, PASS/FAIL Result, Color Simulation, Color Offset	
Displayed Accuracy	0.01	
Measuring Time	About 1.5 s (Measure SCI & SCE about 3.2 s)	

Repeatability	Chromaticity value: MAV/SCI, within ΔE*ab 0.05 (When a white calibration plate is measured 30times at 5 second intervals after white calibration)	Chromaticity value: MAV/SCI, within ΔE*ab 0.06 (When a white calibration plate is measured 30times at 5 second intervals after white calibration)
Interinstrument Error	MAV/SCI, Within ΔE*ab 0.3 (Average for 12 BCRA Series II color tiles)	
Measurement Mode	Single Measurement, Average Measurement (2-99 times)	
Locating Method	Camera Locating, stabilizer cross position	
Dimension	LxWxH = 81 x 71 x 214 mm	
Weight	About 460 g	
Battery	Li-ion battery; 6000 measurements within 8 hours	
Illuminant Life Span	5 years; more than 3 million times measurements	
Display	3.5-inch TFT color LCD; Capacitive Touch Screen	
Data Port	USB, Bluetooth	USB
Data Storage	Standard 1000 Pcs; Sample 30,000 Pcs (one data can include SCI/SCE)	Standard 1000 Pcs; Sample 20,000 Pcs (one data can include SCI/SCE)
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, USB Cable, User Guide, PC Software (download from office website), White & Black Calibration Cavity, Protective Cover, Wrist strap, 8 mm flat aperture, 8 mm tip aperture, 4 mm flat aperture, 4 mm tip aperture	
Optional Accessory	USB Micro Printer, Powder Test Box, Bluetooth Micro Printer	
Alt Name	SpectroColorimeter	

Model	BJH1E3	BJH1E4
Old Model	BPSP-1103	BPSP-1104
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	Φ40 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)	L: 0-100; Reflectivity: can be measured at 1 specific wavelength specified by the user (default: 550 nm)
Measuring Aperture	Φ8 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	Reflectance (userspecified reflectance at a specific wavelength), sample chromaticity value, color difference value/graph, pass/fail result, color simulation, color deviation
Displayed Accuracy	Display 0.1, store 0.01	0.1
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)	Chromaticity value: MAV/SCI, within ΔE*ab 0.10 (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	USB (charging only; software connection not supported)
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, Φ8 mm platform caliber	
Optional Accessory	USB Micro Printer, Powder Test Box	
Alt Name	SpectroColorimeter	



FEATURES

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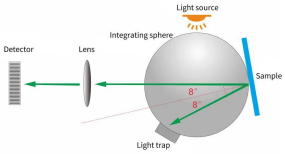
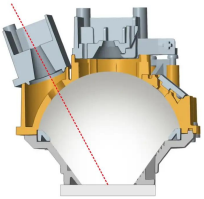
Interface instruction



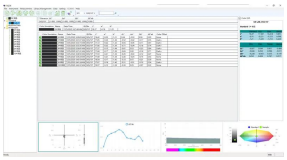
Adopt international common use d/8 SCI/SCE Synthesis technology
Spectrocolorimeter adopts D/8(diffused illumination, 8degree viewing angle) which is widely applicable in the world, and SCI/SCE (specular component included/specular component excluded) Synthesis technology. It is suitable for color management 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 spectrocolorimeter 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 spectrocolorimeter 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 spectrocolorimeter 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, spectrocolorimeter 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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