Portable Spectrocolorimeter - Handheld Color Spectrophotometer - 400-700 nm - SCI/SCE

Model **MSSP-CLR301SWISS** | Brand **Master Science**





The Master Science Portable Spectrocolorimeter is a handheld spectrophotometer that records the full reflectance spectrum of a sample from 400 to 700 nm and converts it into accurate color data for matching and quality control. Its D/8 geometry measures SCI and SCE simultaneously, so gloss-related appearance and true color can be assessed in a single reading.

KEY HIGHLIGHTS

- True color and surface effect together
- Precise targeting
- Broad index library
- Reliable color matching
- Large memory

AT A GLANCE

400 to 700 nm WAVELENGTH RANGE	**10 nm** HALF BANDWIDTH
0 to 200 % REFLECTANCE RANGE	

Request a Quotation
Contact us for pricing, configuration options and delivery details.

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Overview

A concave grating with a 256-element dual-array CMOS sensor, a camera viewfinder for exact positioning and a 3.5-inch touchscreen make the instrument practical both on the shop floor and in the lab.

Key Benefits

True color and surface effect together
simultaneous SCI and SCE readings show both pigment color and gloss influence.

Precise targeting
the camera viewfinder places the aperture exactly on small or patterned areas.

Broad index library
the Master Science Portable Spectrocolorimeter reports whiteness, yellowness, metamerism, fastness and opacity indices.

Reliable color matching
full spectral data supports formulation and remote color communication.

Large memory
up to 20,000 sample records stay on the instrument.

For a lighter single-mode option, see the Master Science portable D/8 colorimeter.

Technical Specifications

GENERAL

Brand	Master Science
Model Number	MSSP-CLR301SWISS
SKU	MSSP-CLR301SWISS
Standards	CIE No.15, GB/T 3978, GB 2893, GB/T 18833, ISO 7724-1, ASTM E1164, DIN 5033
Integrating Sphere	48 mm
Sensor	256-element dual-array CMOS image sensor
Reflectance Range	**0 to 200 %**
Measuring Aperture	Switchable 8 mm / 4 mm
Specular Component	SCI and SCE
Color Spaces	CIE Lab, XYZ, Yxy, LCh, CIE LUV, Hunter Lab
Color Difference Formulas	ΔE*ab, ΔE*uv, ΔE*94, ΔE*cmc (2:1 and 1:1), ΔE*00, ΔE Hunter
Other Indices	Whiteness, yellowness, tint, metamerism, staining and color fastness, color strength, opacity, 8° gloss
Observer	2° / 10°
Illuminants	D65, A, C, D50
Measurement Time	2.6 s
Repeatability	ΔE* ≤ 0.06 (MAV/SCI)
Inter-instrument Error	ΔE* ≤ 0.4 (MAV/SCI)
Positioning	Camera viewfinder
Battery	Li-ion, 5000 measurements in 8 hours
Operating Conditions	0 to 40 °C, 0 to 85 % RH non-condensing

OPTICAL PERFORMANCE

Optical Geometry	di:8° / de:8° (diffuse illumination, 8° viewing)
Light Source	Combined LED
Spectral Method	Concave grating
Wavelength Range	**400 to 700 nm**
Wavelength Interval	**10 nm**
Half Bandwidth	10 nm
Lamp Life	5 years, more than 3 million measurements

DISPLAY & DATA

Display	3.5-inch TFT color capacitive touchscreen
Data Port	USB
Storage	2000 standards, 20,000 samples
Inconsistent supplier data	shared standards and low inter-instrument error align measurements.

DIMENSIONS & WEIGHT

Dimensions (L × W × H)	184 × 77 × 105 mm
Net / Gross Weight	2 kg / 4.8 kg

COMMON COLOR CONTROL PROBLEMS AND HOW THIS INSTRUMENT HELPS

Common Color Control Problems and How This Instrument Helps	How the Master Science Portable Spectrocolorimeter supports color quality work:
Gloss differences hiding color errors	SCE and SCI readings separate surface and pigment effects.
Measuring the wrong spot	camera targeting shows exactly where the reading is taken.
Metamerism complaints	metamerism index and multiple illuminants reveal the risk early.
Limited reporting	PC software extends analysis and reporting.

The Master Science Portable Spectrocolorimeter is used in

- **Paint, coating and ink formulation**
- **Plastics and masterbatch production**
- **Textile dyeing and color fastness testing**
- **Printing, paper and packaging**
- **Food, cosmetics and pharmaceutical color QC**

Optics and Sensor

- D/8 geometry with SCI and SCE
- Concave grating spectral separation
- 256-element dual-array CMOS sensor
- Long-life, low-power LED source

Usability

- Camera locating function
- Switchable 8 mm and 4 mm apertures
- 3.5-inch capacitive touchscreen
- Stain-resistant white calibration plate

Data

- Spectrogram, chromaticity and color difference display
- Pass/fail and color offset results
- USB link to PC software

Standard Accessories Included

- Power adapter
- Built-in Li-ion battery
- User guide
- PC software
- White and black calibration cavity
- Dust cover

Optional Accessories

- Micro printer
- Powder test box