



# LABORATORY SECTOR

## SPECTROCOLORIMETER



**Kalstein**®

A different accompaniment, at your service





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A different accompaniment, at your service

OUR SERVICES

## Benefits and Support

In Kalstein France, we take care of the full satisfaction of our customers, that is why we provide value-added services of the highest level based on our experience.



### Online Inductions and Trainings

In any part of the world, receive your induction or training from our specialized team of engineers



### Quick Response

Our work team is always available to response all your consults or questions, in order to support you in any situation.



### #Letsgivemore ♥

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### Technical Support

Enjoy of personalized advice for the correct preventive and corrective maintenance of your equipment, thanks to Kalstein's manuals and articles, special catalogues and video tutorials.



### Delivery Logistics

We take care of all the necessary logistics for the dispatch of your goods, whether is by sea, land or air.



### Kalstein Worldwide

With more than 25 years growing with our customers, Kalstein's multiformat and modern content, is now present in more than 10 countries and increasing.



**KALSTEIN® Spectrocolorimeter**  
Spectrocolorimeter  
Model YR05516 // YR05517



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**KALSTEIN® Spectrocolorimeter**  
**Spectrocolorimeter**  
**Model YR05516 // YR05517**



**Product Description:**

YR05516 // YR05519 is Kalstein using autonomous core technology research and development of A portable light color difference instrument, is the high level in spectral architecture color difference instrument, in addition to ensure accurate relative  $\Delta E$  at the same time, also to ensure the accuracy of the absolute value of L, A and B for A long time, anytime, anywhere can pass the international standards and national standards of measurement. Using the built-in silicon photodiode array (double row 24) sensors, import the whiteboard, repetitive  $\Delta E^*$  ab easily control within 0.1, both measurement speed and convenience of operation, no need to connect the computer or software can quickly judging color difference measurement, 8 mm diameter meet plastic electronics, paint and ink, textile printing and dyeing, printing, such as the ceramic industry accurate color difference of production and the quality control.

**Product Advantages:**

- ✓  $\Phi$  8 mm diameter measurement,  $10^\circ$  Angle, observer can meet most of the industry customer requirements;
- ✓ Combination of full-spectrum LED light source, plane grating and true color capacitive touch screen, with a high starting point;
- ✓ Silicon photodiode array (24 groups in double columns), display precision 0.1, good repeatability;
- ✓ The light source life is more than 3 million measurements in 5 years, and the lithium battery takes 6,000 measurements within 8 hours, which can be recharged repeatedly and has a long battery life;
- ✓ Quick data search, analysis and comparison with 500 data storage samples and 10,000 samples.



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**KALSTEIN® Spectrocolorimeter****Spectrocolorimeter****Model YR05516 // YR05517****Technical Specifications:**

Model	YR05516	YR05517
<b>Optical Geometry</b>	D/8(diffused illumination, 8-degree viewing angle)	D/8(diffused illumination, 8-degree viewing angle)
	SCI/SCE Mode	SCI/SCE Mode
	Comply to CIE No.15, GB/T 3978,GB 2893,GB/T	Comply to CIE No.15, GB/T 3978,GB 2893,GB/T 18833,ISO7724-1,ASTM E1164,DIN5033 Teil7
	18833,ISO7724-1,ASTM E1164,DIN5033 Teil7	
<b>Characteristic</b>	double apertures, more adaptability; Used for accurate color measurement and quality control in plastic electronics,	single apertures, more adaptability; Used for accurate color measurement and quality control in plastic electronics, paint and ink, textile and garment printing and dyeing, printing, ceramics and other industries
	paint and ink, textile and garment printing and dyeing, printing,	
	ceramics and other industries	
<b>Integrating Sphere Size</b>	Φ40mm	Φ40mm
<b>Light Source</b>	Combined full spectrum LED light source, UV light source	Combined full spectrum LED light source, UV light source
<b>Spectrophotometric Mode</b>	Flat Grating	Flat Grating
<b>Senso</b>	Silicon photodiode array (double row 32 groups)	Silicon photodiode array (double row 32 groups)
<b>Wavelength Range</b>	400~700nm	400~700nm
<b>Wavelength Interval</b>	10nm	10nm
<b>Semiband Width</b>	10nm	10nm
<b>Measured Reflectance Range</b>	L:0~120; reflectivity:0~200%	L:0~120; reflectivity:0~200%
<b>Measuring Aperture</b>	Dual Apertures : MAV:Φ8mm/Φ10mm;SAV:Φ4mm/Φ5mm	Single Apertures : Φ8mm/Φ10mm
<b>Specular Component</b>	SCI/SCE	SCI/SCE
<b>Color Space</b>	CIE LAB,XYZ,Yxy,LCh,CIE LUV,s-RGB,βxy,DIN Lab9,DIN Lab99 Munsell(C/2)	CIE LAB,XYZ,Yxy,LCh,s-RGB,βxy,Munsell(C/2)
	ΔE*ab,ΔE*uv,ΔE*94,ΔE*cmc(2:1), ΔE*cmc(1:1),ΔE*00, DINΔE99	
<b>Other Colorimetric Index</b>	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	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
	2°/10°	2°/10°
	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)

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## KALSTEIN® Spectrocolorimeter

### Spectrocolorimeter

Model YR05516 // YR05517



	Spectrogram/Values, Samples	Spectrogram/Values, Samples
<b>Displayed Data</b>	Chromaticity Values, Color Difference	Chromaticity Values, Color Difference Values/Graph, PASS/FAIL Result, Color Simulation, Color Offset
	Values/Graph, PASS/FAIL Result, Color	
	Simulation, Color Offset	
<b>Displayed Accuracy</b>	0.01	0.01
<b>Measuring Time</b>	About 1.5s (Measure SCI & SCE about 3.2s)	About 1.5s (Measure SCI & SCE about 3.2s)
<b>Repeatability</b>	Chromaticity value: MAV/SCI, within $\Delta E^*ab$ 0.05 ( When a white calibration plate is measured 30 times at 5 second intervals after white calibration)	Chromaticity value: MAV/SCI, within $\Delta E^*ab$ 0.06 ( When a white calibration plate is measured 30 times at 5 second intervals after white calibration)
<b>Inter-instrument Error</b>	MAV/SCI, Within $\Delta E^*ab$ 0.3 (Average for 12 BCRA Series II color tiles)	MAV/SCI, Within $\Delta E^*ab$ 0.3 (Average for 12 BCRA Series II color tiles)
<b>Measurement Mode</b>	Single Measurement, Average	Single Measurement, Average Measurement(2-99times)
	Measurement(2-99times)	
<b>Locating Method</b>	Camera Locating, stabilizer cross position	Camera Locating, stabilizer cross position
<b>Dimension</b>	L*W*H=81X71X214mm	L*W*H=81X71X214mm
<b>Weight</b>	About 460g	About 460g
<b>Battery</b>	Li-ion battery, 6000 measurements	Li-ion battery, 6000 measurements within 8 hours
	within 8 hours	
<b>Illuminant Life Span</b>	5 years, more than 3 million times measurements	5 years, more than 3 million times measurements
<b>Display</b>	3.5-inch TFT color LCD, Capacitive Touch S screen	3.5-inch TFT color LCD, Capacitive Touch Screen
<b>Data Port</b>	USB, Bluetooth 5.0	USB
<b>Data Storage</b>	Standard 1000 Pcs, Sample 30000	Standard 1000 Pcs, Sample 20000 Pcs(One data is able to include SCI/SCE)
	Pcs(One data is able to include SCI/SCE)	
<b>Language</b>	Simplified Chinese, English, Traditional Chinese	Simplified Chinese, English, Traditional Chinese
<b>Operating Environment</b>	0~40°C, 0~85%RH (no condensing), Altitude < 2000m	0~40°C, 0~85%RH (no condensing), Altitude < 2000m
<b>Storage Environment</b>	-20~50°C, 0~85%RH (no condensing)	-20~50°C, 0~85%RH (no condensing)
<b>Standard Accessory</b>	Power Adapter, USB Cable, User Guide, SQCX Software(Download from office website),	Power Adapter, USB Cable, User Guide, SQCX Software(Download from office website), White and Black Calibration Cavity, Protective Cover, Wrist strap, 8mm flat aperture, 8mm tip aperture
	White and Black Calibration Cavity,	
	Protective Cover, Wrist strap, 8mm	
	flat aperture, 8mm tip aperture,	
	4mm flat aperture, 4mm tip aperture	
<b>Optional Accessory</b>	USB Micro Printer, Powder Test	USB Micro Printer, Powder Test Box,
	Box, Bluetooth Micro Printer	
<b>Notes</b>	Technical parameters are only for	Technical parameters are
	reference, subject to the actual sale of the product	only for reference, subject
		to the actual sale of the product



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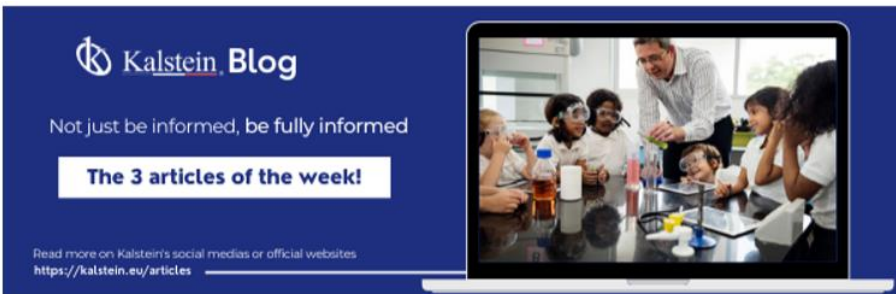
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