



# LABORATORY SECTOR

SPECTROPHOTOMETER



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A different accompaniment, at your service





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**KALSTEIN® Spectrophotometer**  
**Benchtop Spectrophotometer**  
**Model YR05477**



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# KALSTEIN® Spectrophotometer

## Benchtop Spectrophotometer

### Model YR05477



#### Product Description:

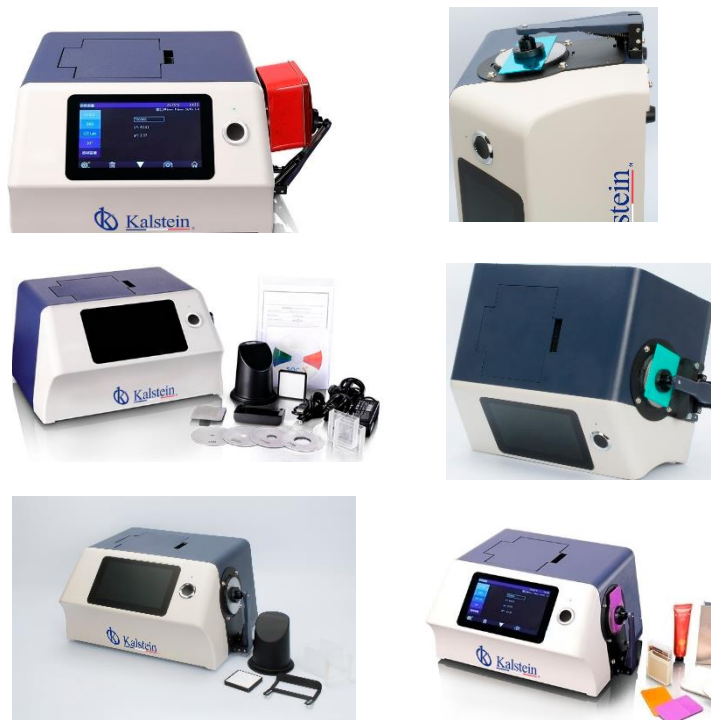
YR05477 is a benchtop grating spectrophotometer which is developed by Kalstein independently with independent intellectual property. YR05477 has many features, like 7 inches TFT capacitive touch screen display, full illuminants, reflective d/8 and transmissive d/0 geometry (including or excluding UV). With very stable and precise color measurement, large storage and powerful PC software all makes YR05477 ideal for color analysis within R&D and laboratory environments. YR05477 spectrophotometer is a bench-top measurement instrument designed to evaluate the color and appearance of many measuring applications for objects' reflectance and also the transmittance of translucent or transparent liquids and solids. It is a compact yet advanced instrument that features a side port in horizontal format and with 7.7 inch TFT touch screen, it's very easy to operate. With high-precision capabilities and great reliability, YR05476 benchtop spectrophotometer allows users to effectively analyze, formulate, and control the color and appearance of solids, liquids, pastes, powders, pills, and granules in a more comprehensive, streamlined

#### Features:

- ✓ High configuration of hardware: 7 inches TFT Color Capacitive Touch-screen Display; Bluetooth 2.1; Concave Grating.
- ✓ Double Array 256 Image Element CMOS Sensor; Long life-span stable xenon lamp.
- ✓ With reflective and transmissive spectrum, accurate Lab value, good to calculate color formula and do precise color transmission.
- ✓ Auto identify measuring aperture. Freely switchable between 3 measuring apertures:  $\Phi$  25.4mm/8mm/4mm. Users also can customize apertures.
- ✓ Built-in temperature sensor to monitor and compensate the measuring temperature to ensure the measurement more precision.
- ✓ Wavelength range 360nm – 780nm. Built-in 400nm/420nm/460nm cut off Xenon lamp, more professional in UV measurement.
- ✓ Independent light source detector, continuously monitor the condition of light sources to ensure the light source reliable.
- ✓ Multiple measurement modes: Quality Management Mode, Sample Mode; Meet more users' requirement.
- ✓ Multiple accessories, sample holders, fixation clamp, suitable to more working condition
- ✓ Big capacity data storage, for 20000 pieces test result.
- ✓ Built-in camera locating.
- ✓ More powerful extended functions at the PC software.

#### Application Industry

YR05477 benchtop spectrophotometer is used to do precise color analysis and transmission in laboratories. It can be widely applied in different industries, such as plastics, electronics, paint and ink, printing, garments, leather, paper, auto, medical, cosmetics, food, science institutes, laboratories.



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### Model YR05477



<b>Model</b>	YR05477
<b>Optical Geometry</b>	Reflectance: d/8 (SCI&SCE; Include UV/Exclude UV)
	Transmittance: d/0 (SCI&SCE; Include UV/Exclude UV); Haze(ASTM D1003)
	Conforms to CIE No.15, GB/T 3978, GB 2893, GB/T 18833, ISO7724/1, ASTM E1164, DIN5033 Teil7
<b>Integrating Sphere Size</b>	Φ 154mm
<b>Light Source Device</b>	360nm-780nm Xenon Lamp, 400nm cut-off Xenon Lamp,420nm cut-off Xenon Lamp,460nm cut-off Xenon Lamp
<b>Spectrophotometric Mode</b>	Concave Grating
<b>Sensor</b>	256 Image Element Double Array CMOS Image Sensor
<b>Wavelength Range</b>	360-780nm
<b>Wavelength Pitch</b>	10nm
<b>Semiband Width</b>	5nm
<b>Reflectance Range</b>	0~200%
<b>Measuring Aperture</b>	Reflective : Φ30mm/Φ25.4mm, Φ18mm/Φ15mm, Φ10mm/Φ8mm, Φ6mm/Φ4mm;
	Transmissive : Φ30mm/Φ25mm;Remark: 1. Automatic identification of switch caliber 2. Customized Configuration caliber and lens position
<b>Specular Component</b>	Reflectance: SCI&SCE
	Transmittance: SCI&SCE
<b>Color Space</b>	CIE Lab, XYZ, Yxy, LCh, CIE LUV, Hunter LAB, Munsell, s-RGB, HunterLab, DIN, βxy
<b>Color Difference Formula</b>	$\Delta E^*ab$ , $\Delta E^*uv$ , $\Delta E^*94$ , $\Delta E^*cmc(2:1)$ , $\Delta E^*cmc(1:1)$ , $\Delta E^*00v$ , $\Delta E$ (Hunter), DIN $\Delta E99$
<b>Colorimetric Index</b>	WI (ASTM E313, CIE/ISO, AATCC, Hunter),
	YI (ASTM D1925, ASTM 313),
	MI (Metamerism Index),
	Staining Fastness, Color Fastness, Color Strength, Opacity,
	Gardner Index, Pt-Co Index, 555 Index, Haze(ASTM D1003)
<b>Observer Angle</b>	2° & 10°
<b>Illuminants</b>	D65, A, C, UV, D50, D55, D75, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12
<b>Displayed Data</b>	Spectrogram/Values, Chromaticity Values, Color Difference Values/Graph, Pass/Fail Result, Color Offset
<b>Measuring Time</b>	About 2.4s (Measure SCI & SCE about 5s)
<b>Repeatability</b>	Spectral reflectance: Φ25.4mm/SCI, Standard deviation within 0.06% (400 nm to 700 nm: within 0.05%)
	Chromaticity value: Φ25.4mm/SCI, Standard deviation within $\Delta E^*ab$ 0.012 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration)
	Spectral Transmittance: Φ25.4mm/SCI, Standard deviation within 0.06% (400 nm to 700 nm: within 0.06%)
	Chromaticity value: Φ25.4mm/SCI, Standard deviation within $\Delta E^*ab$ 0.015 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration)



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## KALSTEIN® Spectrophotometer Benchtop Spectrophotometer Model YR05477



<b>Inter-instrument Error</b>	Φ25.4mm/SCI, Within ΔE*ab 0.12 (Average for 12 BCRA Series II color tiles)
<b>Size</b>	370×300×200mm
<b>Weight</b>	About 9.6kg
<b>Power Supply</b>	DC 24V, 3A Power Adapter
<b>Light Source Device Life</b>	5 years, more than 3 million times measurements.
<b>Display</b>	7" TFT Capacitive Screen-touch Display
<b>Data Port</b>	USB & Bluetooth & Print serial port
<b>Data Storage</b>	Standard 5000 Pcs, Sample 40000 Pcs
<b>Language</b>	Simplified Chinese, Traditional Chinese, English, (Optional Customized German, French and Spanish)
<b>Working Environment</b>	Temperature: 0~40°C; Humidity: 0~85% (No Condensation)
<b>Storage Environment</b>	Temperature: -20~50°C; Humidity: 0~85% (No Condensation)
<b>Standard Accessory</b>	Power Adapter, User Guide, CD Disk(PC Software), USB cable, Standard Calibration Board, Black Calibration Cavity, Transmission black baffle, Sample holder, 25.4 caliber, 15 caliber, 8 caliber, 4 caliber, Transmissive Test Component
<b>Optional Accessory</b>	Micro-printer, Micro Aperture(4mm) transmission test clamp component, Instrument inversion components
<b>Notes: The specifications are subject to change without notice.</b>	



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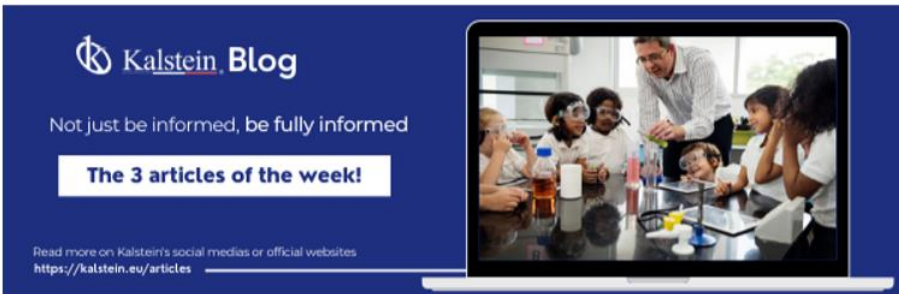
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**2**  
Read this ARTICLE NOW  
**What is the importance of the laboratory refrigerator?**  
Refrigerator is a piece of equipment that is one of the most important in a laboratory. It is used to store samples in a controlled environment (refrigerated space), without freezing and without drying.

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**Article of the week:**  
What is the importance of the laboratory refrigerator?  
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