



SCANNING VISIBLE SPECTROPHOTOMETER BEQ-3101

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SINGLE BEAM VISIBLE SPECTROPHOTOMETER



320-1100 nm Visible Range for colorimetric assays and solution concentration testing.

Single-beam Holographic Grating Optics with pre-aligned lamps for stable, low-noise readings.

Low Stray Light & High Stability ensure accurate and repeatable routine analysis.

USB & RS232 Ports support printer/PC connection and data output.

Large LCD Operation with automatic wavelength setting, blank adjustment, and curve display.

Multiple Test Modes: absorbance, transmittance, quantitative analysis; optional software supports spectrum scanning, kinetics, and bio-analysis.

SPECIFICATIONS

Model	BEQ-3101
Wavelength Range	320-1100nm
Spectral Bandwidth	2.0nm or 4.0nm optional
Wavelength Accuracy	±0.8nm
Optical System	Single Beam, Blazed Holographic Grating (1200 lines/mm)
Wavelength Repeatability	≤0.2nm
Wavelength Setting	Auto, Resolution 0.1nm
Photometric Range	0-200%T, - 0.3 - 3A, 0-9999C
Photometric Accuracy	±0.002A (0-0.5A), ±0.004A (0.5-1A), ±0.3%T (0-100%T)
Photometric Repeatability	≤0.001A (0-0.5A), ≤0.002A (0.5-1A), ≤0.2%T (0-100%T)
Stray Light	≤0.1%T(220/360nm)
Scan Speed	High, Medium, Low. Max.1000nm/minute
Baseline Flatness	±0.003A
Stability	±0.002A/h (500nm,0A)
Noise	≤0.2%T/3min (250/500nm,0%T); ≤0.5%T/3min (250/500nm,100%T)
Sample Compartment	Accommodate 5-100mm Pathlength Cuvette
Detector	Silicon Photodiode
Lamps	Tungsten Lamp & Deuterium Lamp (Pre-aligned)
Display	Graphic LCD (128x64 Dots)
Keypad	11-key Membrane Keypad
Output Port	USB Port & RS232 Port
Printer	Mini Serial Printer; PC Printer
PC Software	Optional PC Scanning Software
Power Requirements	AC 90-250V,50/60Hz
Dimension	431x318x195mm
Net Weight / Gross Weight	8.2kgs / 12kgs
Alt Name	Single Beam Visible Spectrophotometer

ITEMS INCLUDED

No	Name	Quantity
1	10mm glass cuvette	4pcs
2	Power line	pcs

ACCESSORIES FOR PURCHASE

No	Name	Quantity
1	Software card	1pcs
2	Software brochure	1pcs
3	Software dog	1pcs
4	USB cable	1pcs
5	PC scanning software	
6	Deuterium lamp	
7	Tungsten Lamp	
8	Micro cuvette cell holder (one-position)	
9	Manual 4-positions cell holder	
10	Automatic 4/8 positions cell holder	

APPLICATIONS

Education & Teaching Laboratories

Widely used in teaching laboratories for demonstrating Beer-Lambert Law, calibration curves, and basic qualitative and quantitative analysis of colored solutions.

Chemical & Industrial Process Control

Measuring absorbance-based color intensity and tracking reaction kinetics in dyes, coatings, inks, and electroplating solutions for routine industrial quality control.

Pharmaceutical & Biotech Quality Control

Used for quantitative analysis of APIs and finished products with visible absorbance, dissolution testing, and optional basic DNA/protein quantification and reaction kinetics monitoring via PC software.

Water & Environmental Analysis

Used for routine colorimetric determination of ammonia nitrogen, total phosphorus, Cr, nitrite, and volatile phenols in environmental water quality monitoring.

Food & Agricultural Quality Control

For colorimetric detection of nitrite, nitrate, phosphate, peroxide value, and pigments in food and agricultural products for quality control compliance.



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