

SINGLE BEAM UV VISIBLE SPECTROPHOTOMETER MODEL- BS-SBS-102



Brand- **BIOGENIX®**

OVERVIEW

Designed to conserve bench space, our product offers the measurement range of 190-1100nm at bandwidth of 2nm. Engineered for a wide range of applications, our systems provide dependable performance and reliable results. It produces the photometric range of -0.3 to 3 A; 0-200 %T and photometric accuracy of $\pm 0.3\%T$ which makes it suitable for various quantitative assays. Used in Most suitable for quantitative determination assays and toxicological assays in environmental, industrial, pharmaceutical fields.

Features

- Wavelength range: 320nm-1100nm
- Optical System: High quality Czerny Turner Diffraction Grating monochromator ensures high resolution, high photometric accuracy and low stray light
- Bandwidth: 4nm
- Detector: Silicon Photodiode
- Measurement Range with ultra-low Stray Light: With its ultra-low stray light ($\leq 0.2\%T$ (220nm, 340nm)) is achieved on wavelength range of 320 - 1100 nm

UV-Vis spectroscopy analysis, absorption spectrum and absorbance units

UV-Vis spectroscopy information may be presented as a graph of absorbance, optical density or transmittance as a function of wavelength. However, the information is more often presented as a graph of absorbance on the vertical y axis and wavelength on the horizontal x axis. This graph is typically referred to as an absorption spectrum

- Sample size: A wide range of standard cuvettes can be used based on the sensitivity or sample volume requirements.
- Sophisticated and simplified sample analysis software: The Sample analysis software deliver scanning, fixed wavelength analysis, quantitative analysis, data collection, storage, export, and reporting.
- With additional feature of an easy access USB port available in the unit, which enables results to be stored directly to a USB memory stick for easy transfer of data.



How does a UV-Vis spectrophotometer work?

Whilst there are many variations on the UV-Vis spectrophotometer, to gain a better understanding of how an UV-Vis spectrophotometer works, let us consider the main components,

SPECIFICATION



Wavelength Accuracy	±2 nm
Wavelength Repeatability	±1 nm
Spectral Bandwidth	4 nm
Photometric Range	-0.3 to 3 A
0-200 %T	-9999 to 9999 C
Photometric Accuracy	±0.5 %T (0-100%T)
Photometric Repeatability	±0.2 %T (0-100%T)
Stability	±0.002 A/hr at 500 nm, 0 A
Baseline Flatness	None
Stray Light	≤ 0.2%T (220 nm, NaI ; 340 nm, NaNO ₂)
Photometric Mode	None
Optical System	Littrow, Grating 1200 line/mm
Monochromator	Littrow Diffraction Monochromator
Gross Dimension (W/D/H)	470x380x200 mm
Display	LCD
Weight (Net/Gross)	14 kg
Power Supply	240V 60Hz

APPLICATIONS OF SINGLE BEAM SPECTROPHOTOMETER

- ❑ Most suitable for quantitative determination assays and toxicological assays in environmental, industrial, and pharmaceutical fields.
- ❑ The use of the UV spectrophotometer or conventional spectrophotometers is not limited to the field of physics. It is also frequently used in other scientific fields such as chemistry, biochemistry, and molecular biology.
- ❑ It is widely used in many industrial applications, including printing and several forensic examinations.

DNA and RNA analysis

- ❑ Quickly verifying the purity and concentration of RNA and DNA is one particularly widespread application

Beverage analysis

- ❑ The identification of particular compounds in drinks is another common application of UV-Vis spectroscopy. Caffeine content must be within certain legal limits, for which UV light can facilitate quantification

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