

# Double Beam Microprocessor UV-VIS Spectrophotometer (Variable Bandwidth)

**AB-UV-VIS-4092** 

DOUBLE BEAM UV-VIS Spectrophotometer with more accuracy and flexible requirements. The two detectors are used to measure sample and reference respectively and simultaneously for optimizing measurement accuracy. It has wide wavelength range satisfying requirement of various fields, such as biochemical research and industry, pharmaceuticals analysis and production, education, environment, protection, food industry etc.



# **Application**

- \* Medicine/Pharmaceutical Industry
- \* Environment Monitoring
- \* Commodity Inspection
- \* Food Inspection
- \* Agricultural Chemistry
- \* Teaching in Colleges & Universities
- \* Metallurgy
- \* Geology
- \* Machine Manufacturing
- \* Petrochemical Industries
- \* Water and Waste wate Labs
- \* Food and beverages Labs

# SALIENT FEATURES

Wide Wavelength range, satisfying requirements various fields.

Fully automated design realizing the simplest measurements & satisfying the requirement of pharmacopeia

Maximum of 9 Wavelength & 8 Sample can be measured at one time.

Automatic changes - over Between W lamp & D2 lamp

Optimized optics a HD large scale integrated circuits design, light source and receiver From world famous measurement methods all add up to high performance and reliability Rich measurements methods scan time scan multi wavelength Determination

Multi-order derivative determination double-wavelength method and triple wavelength

Methods etc, meet difference measurement requirement

Automatic 10mm 8- cell holder or 2 fix cell holder

Data output can be obtained via a printer port and a USB interface

Parameters and data can be saved for user's convenience

PC controller measurements can be achieved for more accurate flexible requirement





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# **TECHNICAL SPECIFICATIONS:**

Optical System	Double Beam (1200 Lines/nm Grating)
Wavelength Range	190-1100 nm
Mode	Basic/ Quantative/ Wavelength Scan/ DNA
	Protein Test/ Kinetics/ Multi Wavelength Mode
Scanning Speed	Fast/Medium/ Low
Band Width	0.5/1.0/2.0/4.0 nm
Wavelength Accuracy:	±0.3nm
Wavelength Repeatability	0.2nm
Photometric Accuracy :	±0.3 % T
Photometric Repeatability	0.2% T
Photometric Display Range	0-200% T, -0.3 -3.0A, 0-9999 C
Stability	0.001A/h @ 500nm
Baseline Flatness	±0.001A
Noise	± 0.001A
Stray Light	<0.05% @ 220nm & 360nm
Data Output Port	USB
Printer Port :	Parallet Port
Display :	Graphic LCD (320x240 Dots)
Lamps	Deuterium Lamps & Tungsten Halogen Lamp
Detector	Silicon Photo Diode
Packing Dimension:	625x430x206 nm
Weight	26 Kg



#### **Basic Mode**

To measure the Absorbance and transmittance



# Quantitative

- 1. Coefficient method
- Standard curve Up to 10 Standard sample may be used to establish a curve. Four methods for fitting a curve through the calibration points: Linear fit. Linear fit through zero square fit and cubic fit.



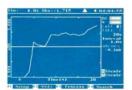
# **DNA/Protein Test**

Concentration and DNA purity are quickly and easily calculated: Absorbance rations: 260nm/280nm with optional subtracted absorbance at320nm.DNA con concentration = 62.9XA260-36.0XA280 Protein concentration = 1552xA260-757.3xA280.



# Wavelength Scan

- 1. The wavelength scan intervals are 0.1,0.2,0.5,1,2,5 nm
- 2. High medium and low scan speed are available they vary from 100 to 3600 nm/min
- 3. Wavelength are scanned from high to low so that the instrument waits at high WL. And it minimizes the degradation of UV sensitive samples.



#### Kinetics

Abs vs time graphs is displayed on the screen in real time wait time and measurement time up to 12 hours may be entered with time interval of 0.5,1,2,5,10,30 seconds and one min. Post-run manipulation includes re-scalling, curve tracking and selection of the part of the curve required for rate calculation. Rate is calculated using a linear regression algorithm before multiplying be the entered factor.