

**Order Code - 58003**

### Double Beam UV/VIS Spectrophotometer

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.

#### SALIENT FEATURES :

- Wide Wavelength range, satisfying requirements of various fields.
- Fully automated design, realizing the simplest measurement & satisfying the requirement of pharmacopoeia.
- Maximum of 9 Wavelength & 1 samples can be measured at one time.
- Automatic change-over between T lamp & D2 lamp.
- Optimized optics and large scale integrated circuits design, light source and receiver from world famous measurement methods all add up to high performance and reliability.
- Rich measurement methods : wavelength scan, time scan multi-wavelength determination, multi-order derivative determination, double-wavelength methods and triple-wavelength methods etc, meet difference measurement requirement.
- 10mm 2-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 measurement can be achieved for more accurate and flexible requirement.

#### STANDARD CONFIGURATION

- Glass Cells : 4No.
- Quartz Cell : 2Nos.
- Instrument Cover : 1No.
- Software Cover : 1No.
- Software CD : 1No.
- USB Cable : 1No.
- Operational Manual : 1No.
- Software Manual : 1No.
- Software Key : 1No.



Note: Specifications are subject to change.

### **Tesca Technologies Pvt. Ltd.**

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension,  
Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India,  
Tel: +91-141-2771791 / 2771792; Email: info@tesca.in, tesca.technologies@gmail.com  
Website: www.tescaglobal.com

## TECHNICAL SPECIFICATION

Monochromator	:	Double Beam Equipped with high resolution concave diffraction grating and seya Namioka mount.
Optical System	:	Double Beam, Grating 1200 lines/mm:
Wavelength Range	:	190nm - 1100nm
Spectral Bandwidth	:	1nm
Wavelength Accuracy	:	$\leq \pm 0.1$ nm (656.1 nmD2), $\leq \pm 0.3$ nm(full wavelength Range)
Wavelength Repeatability	:	0.1nm
Photometric Accuracy	:	$\pm 0.3\%$ T(0-100%T)
Photometric Repeatability	:	0.001Abs(0-0.5Abs)
Photometric Range	:	-0.3A~3A
Stray Light	:	$\leq 0.02\%$ T(220nm,na1,340nm NaMO2)
Stability	:	$\pm 0.0004$ A/H@500nm
Baseline Flatness	:	$\pm 0.001$ A
Noise	:	0.0003 A/H
Scanning Speed	:	Fast, Mid, Slow
Wavelength Setting	:	AUTO
Keyboard	:	Membrane Keypad
Light Source	:	Deuterium & Tungsten Lamp
Wavelength Resolution	:	0.1nm
Photometric Mode	:	A,T,C
Detector	:	Silicon Photodiode
Interface	:	USB Portandparallelport (Printer)
Power	:	AC 220V/50Hz or AC 110V/60Hz
Dimension	:	590x460x220mm
Weight	:	25kg
Drift	:	$\leq \pm 0.0004$ A bs/h
Cell Holder	:	2 Cell Holder

Note: Specifications are subject to change.

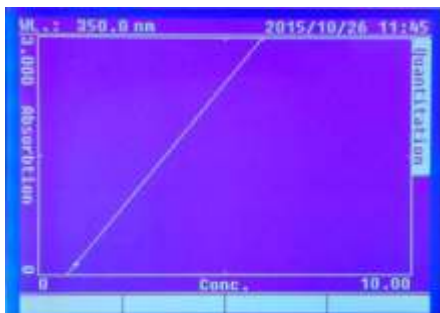
### **Tesca Technologies Pvt. Ltd.**

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension,  
Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India,  
Tel: +91-141-2771791 / 2771792; Email: info@tesca.in, tesca.technologies@gmail.com  
Website: www.tescaglobal.com



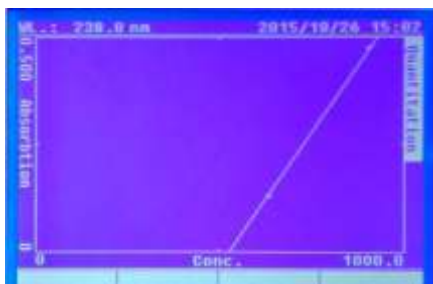


**Basic Mode :**  
 To measure the Absorbance and transmittance

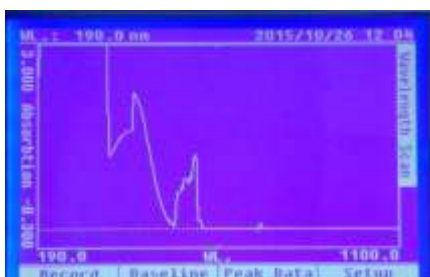


**Quantitative :**

1. Coefficient Method
2. 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 ratios: 260 nm / 280 nm with optional subtracted absorbance at 320 nm.  
 DNA concentration =  $62.9 \times A_{260} - 36.0 \times A_{280}$   
 Protein concentration =  $1552 \times A_{260} - 757.3 \times A_{280}$



**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-scaling, curve tracking and selection of the part of the curve required for rate calculation. Rate is calculated using a linear regression algorithm before multiplying by the entered factor.

Note: Specifications are subject to change.

**Tesca Technologies Pvt. Ltd.**

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension,  
 Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India,  
 Tel: +91-141-2771791 / 2771792; Email: info@tesca.in, tesca.technologies@gmail.com  
 Website: www.tescaglobal.com

