

**UV-VIS Spectrophotometer
with Double Beam
Double Monochromator -
UV-990**



Ultra Lowest Stray Light

The UV-990 Spectrophotometer incorporates dual monochromator technology making it well suited to even the most demanding of applications in all areas of UV-Visible Spectroscopy including :

- **Pharmaceutical**
- **Material Science**
- **Metrological Verification**
- **Biotechnology**
- **Food Safety - Research**

Wireless instrument control and data acquisition can be achieved from a Tablet PC using Wi-Fi technology allowing the analyst to move freely around the laboratory whilst also keeping track of sample measurements



The double monochromator spectrophotometer delivers extremely wide linear dynamic range by ensuring lowest stray light in contrast to a single monochromator system. This type of Instrument is suitable for measurements of highest concentration sample solutions and weak - transmittance materials, such as optical films, coated thin film, semi-conductors, glass, cellulose nanofibre, enzymatic reactions.

- **Truly double beam Double Monochromatic Design with holographic grating 1800 lines/mm,**
- **Variable Bandwidth with 0.1 to 5 nm.**
- **Offer least Signal to noise ratio- 0.00005Abs RMS (500nm)**
- **Integrating sphere with 100 mm diameter**
- **Ultra Low Stray Light < 0.0003%T (NaI at 220 nm, NaNO2 at 340 nm) Higher Accuracy, Broader Linear Dynamic Range.**

Product Features

Linear Dynamic range

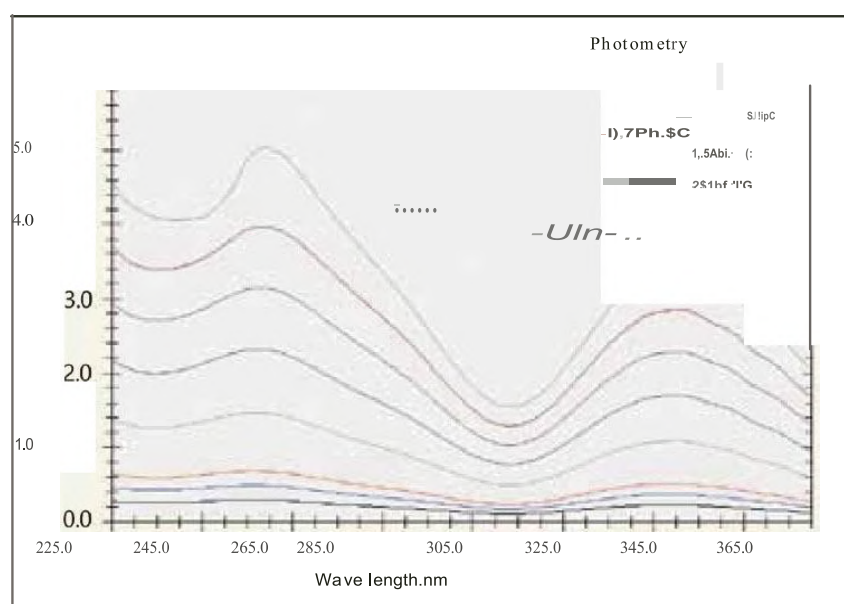
Measured substance : 0.005 mol/L Sulfuric Acid solution of Potassium Dichromate

Test instrument : LABINDIA UV-990

Settings : Wavelength range 225 nm - 380nm

Bandwidth 2nm

Step 0.1 nm

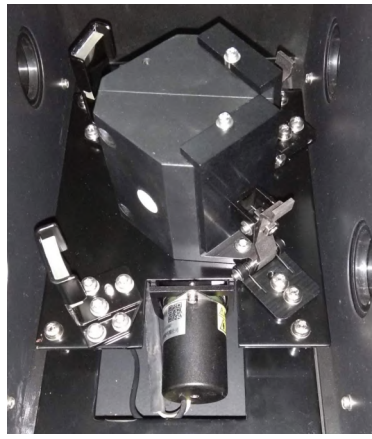


Variable bandwidth design, as low as 0.1 nm, better resolution

Spectrum Workstation

UV-990 UV-Vis Spectrophotometer provides complete functions and is user-friendly

The optical design of UV-990 offer extremely low stray light characteristics 0.0003%T (NaI at 220 nm, NaNO₂ at 340 nm) which allows for an extensive photometric range (-6.0 to +6.0 Abs). Measurements at deep ultra-violet wavelengths can also be achieved with use of Nitrogen purged optics. The instrument can be optically configured to suit the needs of the sample by means of a continually adjustable slit for precise control of spectral resolution and beam size adjustment by means of an attenuating wheel. Precise wavelength accuracy is ensured by the integrated Mercury Emissions Lamp used for automatic correction of spectral deviation. A whole host of specialized accessories are available to suit the specific requirement of the sample.



Integrating Sphere Accessory (60 / 100 mm)

Solid: Glass, film, textile, paper, solar panel, etc

Powder: Cosmetics, drugs, dyes, etc

Liquid: Milk, tea, sea water, sewage, biological extracts

- Measurement Methods: Diffuse reflectance, total reflectance, diffuse transmission and total transmission
 - Sample Placement: Front wall, black wall and Center
 - Software: Glasses application software and textile application software
 - The coating material has high reflectance in UV-VIS spectrum
- Larger internal space, you can install optional test accessories, such as small sample test accessory, glasses test accessory, fluorescence test accessory, movable sample test accessories
 - Integrating sphere can be off-host and independent utility with external light source

Incident angle : 0-8°

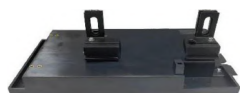
Minimum diameter 12 mm,

Internal diameter : 100mm:

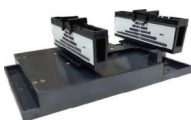
Maximum thickness 10/mm

***Incident angle 0° and 8°, compatible with instruments
Switch between diffuse, total and projection mode easily***

Accessories



Standard 1-cell holder
10 mm universal cell holder.



Long path 1-cell holder
10-100nm universal cell holder
Suitable for multiple cuvette types.



Auto 8-cell changer
10-100 universal 8-cell holder,
suitable for multiple cuvette types.



A-1000 Peltier sipper system
Use semiconductor refrigerator as
temperature control element (10-60°C)



A-1100 sipper system
Automatic injection,
suitable for polluted samples



A-1200 Peltier system
Use semiconductor refrigerator as
Temperature control element (10-60°C)



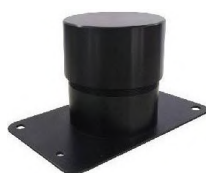
Quartz flow cuvette
Used with Peltier/sipper system, suitable
for samples that need to keep flowing



Glass cuvette
For visible range
(320-1100nm)



Quartz cuvette
For UV/Visible range
(190-1100nm)



Specular Accessories
Suitable for optical plane,
semi-conductor materials etc.



Deuterium lamp
For UV Range (190 - 340 nm),
Service life 2000 hours



Tungsten Halogen Lamp
For Visible range (320 - 1100 nm),
Service life 2000 hours

| Specifications | |
|---------------------------|---|
| Model | Specifications |
| Optical system | Double beam, Double Monochromator, Czerny Turner |
| Bandwidth | 0.1/0.2/0.5/1.0/2.0/4.0/5.0 nm |
| Wavelength range | 190-900nm |
| Wavelength accuracy | ±0.1nm (D ₂ 656.1nm), ±0.3nm all range |
| Wavelength repeatability | ≤0.02nm |
| Wavelength display | 0.1nm |
| Resolution | 0.1nm |
| Wavelength scan rate | 4000 to 0.5 nm/min |
| Wavelength slew rate | 14500 nm/min |
| Photometric accuracy | ±0.002 A @ 0.0-0.5 A , + 0.004 A @ 0.5-1 A , ±0.3%T @ 0-100 %T |
| Photometric repeatability | < 0.001 A @ 0.0-0.5 A , < 0.002 A @ 0.5-1 A , < 0.15 %T @ 0-100 %T |
| Baseline flatness | ±0.0008 A |
| Baseline stability | ±0.0004Abs (200-860nm) |
| Noise level | < 0.00005 A / h @ 500nm , 2 hours |
| Photometric range | - 5.0 to +5.53 Abs |
| Stray light | < 0.0003%T (NaI at 220 nm, NaNO ₂ at 340 nm) |
| Grating | Holographic Gratings 1800 lines/mm |
| Detector | PMT |
| Light source | D2/WI |
| Optional Accessory | Specular Reflection Accessory, Integrating Sphere 60mm / 100mm Automatic 8 Cell Changer, long path cell holder, Peltier Solid Sample holder etc. |
| Interface | LAN, USB, RS-232 |
| Power supply | 160W |
| Dimensions | 660 (W) x 570 (D) x 270 (H) mm |
| Weight | 32 kg |

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Striving to become the best individuals, we endeavour to foster the best team. Performing sensibly, we try to achieve the best efficiency. Working innovatively, we seek to make the best products. Listening patiently, we excel to offer the best service. So, no matter what you needs are, come to us, **GET THE BEST**

LABINDIA reserve the right to change specification without notice as part of its continuous programme of product development.