

# DOUBLE BEAM UV-VIS SPECTROPHOTOMETER

## ALS-INS006



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## DESCRIPTION

ALS-INS006 is an instrument that measures the amount of light that a sample absorbs. THE DOUBLE BEAM SPECTROPHOTOMETER works by passing a light beam through a sample to measure the light intensity of a sample. These instruments are used in the process of measuring the concentration of any unknown solution and for monitoring absorption accuracy throughout production.

## KEY FEATURES

- Wide Wavelength range, satisfying requirements of various fields. Fully automated design, realizing the simplest measurement & as per requirement of pharmacopoeia.
- Upgradable to 8 samples to 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 triple-wavelength methods etc., meet different measurement requirements.
- Data Output can be obtained via a printer port. Parameters and data can be saved for the user's convenience.
- PC controller measurement can be achieved for more accurate and flexible requirements.
- Glass Cell: 4 Nos
- Quartz Cell: 2 Nos
- Software, Instrument Cover, USB Cable, Software Manual, Instrument Manual

## MEASUREMENT

### • Basic Mode

To measure the absorbance and transmittance

### • Quantitative

▪ Coefficient Method

▪ Standard Curve Up to 10 Standard samples 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 320nm. 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

▪ High, Medium and low scan speeds are available. 100 to 3600 nm/min

▪ Wavelengths are scanned from high to low so that the instrument waits at high. WL and it minimizes the degradation of UV-sensitive samples.

### • Kinetics

This mode may be used for time course scanning or reaction rate calculations.

**TECHNICAL SPECIFICATION**

Optical System	Double Beam Spectrophotometer, Grating 1200 lines/mm
Wavelength Range	190 nm - 1100 nm
Spectral Bandwidth	Fixed 1.0 nm
Wavelength Accuracy	$\leq 0.3$ nm (656.1 nm D2), $\leq 0.5$ nm (full wavelength Range)
Wavelength Repeatability	0.1 nm
Wavelength Display Setting	0.1 nm increment
Photometric Accuracy	$\pm 0.3\%$ T(0~100%T)
Photometric Repeatability	0.001 Abs(0~0.5 Abs)
Wavelength Slew rate	15000 nm/min
Photometric Range	$\pm 0.3\%$ T(0~100%T)
Transmittance	0-100% T
Stray Light	$\leq 0.02\%$ T(220 nm, NaI, 340 nm NaMO2)
Stability	$\leq 0.0004$ A/H@500 nm
Baseline Flatness	$\pm 0.001$ A
Scanning Speed	Fast, Mid, Slow
Wavelength Setting	Auto
Keyboard	Membrane Keypad
Light Source	Deuterium & Tungsten Lamp
Wavelength Resolution	0.1 nm
Photometric	A, T and C
Detector	Imported Silicon Photodiode
Interface	USB Port and parallel port (Printer)
Power	AC 220 V/50 Hz or AC 110 V/60 Hz
Dimension	590 x 460 x 220 mm
Weight	25 kg
Drift	$\leq 0.0004$ A bs/h
Cell Holder	2 Cell Holder