SPECTRO-UV6 Series, Double Beam Spectrophotometer

SPECTRO-UV6 Series is an advanced double beam design consisting of six models.

Stand-alone model:
SPECTRO-UV61 with 1.8nm fixed bandwidth
SPECTRO-UV63 with 1.0 fixed bandwidth.
SPECTRO-UV61S with variable bandwidth: 0.5/1/2/5nm

- Fixed or variable slits (bandwidths)
- For Stand-alone models, all software methods are included as built-in standard; this eliminates the need of software.
- Online software upgrade via internet helps to keep it updated.
- Data Download-to-PC software expands the data storage to unlimited.
- The stand-alone models has 5 inch screen and the PC models has UVNis Analyst software. Stand-alone models of SPECTRO-UV6 Series have the same functions as SPECTRO-UV3 Series, see next page for details.

SPECTRO-UV6 Series

Other specifications of the six models are almost the same except bandwidth. The two detectors measure sample and reference respectively and simultaneously for optimizing measurement accuracy, They provide excellent performance for measurements in the range of 190 to 1100nm, They are suitable for pharmaceutical, biochemical and clinical lab applications as well as routine applications such as quantitative analyses, kinetics, wavelength scan, multiple components and DNA/Protein, PC Windows application software make these instruments versatile.

All instruments provide excellent performance for measurements.

Model	SPECTRO-UV61 SPECTRO-UV61PC	SPECTRO-UV63 SPECTRO-UV63PC	SPECTRO-UV61S SPECTRO-UV61PCS
Wavelength range	190–1100nm		
Spectral bandwidth	1.8NM	1nm	0.5/1/1/4nm
Optical system	Double beam, grating 1200 lines/mm		
Wavelength accuracy	±0.3nm		
Wavelength repeatability	0.2nm		
Scan Speed	Hi, MED., LOW., MAX.3000nm/min		
Photometric accuracy	≤±0.3%T or ±0.002A@1A		
Photometric range	0–200%T, –0.3 –3A		
Stray light	≤0.05%T@220nm, 360nm		
Stability	±0.001A/h @500nm		
Display	5 inches LCD(320*240 dots)		
Baseline Flatness	±0.001A		
Standard cell holder	Standard 10mm single cell holder(2 pcs)		
Sample Compartment	Standard 10mm pathlength cuvette		
Light source	tungsten & Deuterium lamp(pre-aligned)		
Output	USB Port & parallel port (printer)		
Power requirement	AC 110/220V 50/60Hz		
Dimensions (WxDxH)	600x450x200mm		
Weight	22kg		

SPECTRO-UV6 Series Local Control Software
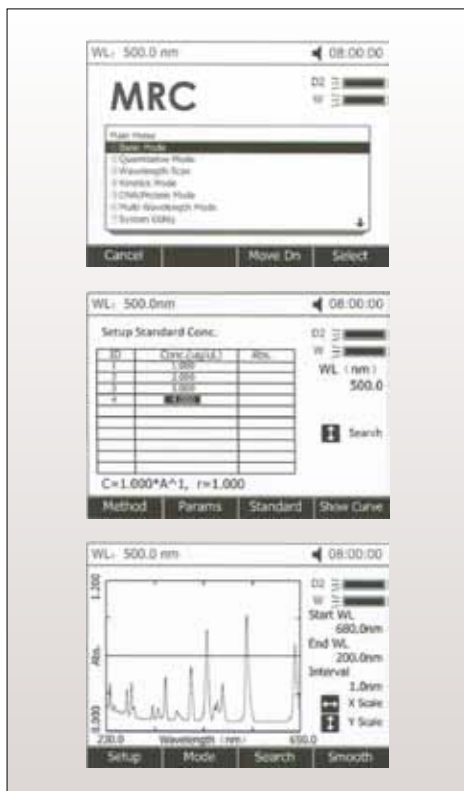
All methods are included as built-in standard; this eliminates the need of software. Online software update via Internet.
**The local control software includes functions such as: Photometry, Quantitative, Wavelength Scan, Kinetics, DNA/Protein, Multi-wavelength and System Utilities.**

Standard Curve·

Up to 10 standard solutions may be used to establish calibration equation curve. There is a choice of four methods for fitting curve through the calibration points: Linear fit, Linear fit through zero, square fit and cubic fit.

Wavelength Scan

The Wavelength Scan intervals are 0.1, 0.2, 0.5, 1, 2, 5nm, and High, Medium and Low scan speeds are available. Scan speeds vary from 100 to 1000 nm/min. Wavelengths are scanned from high to low so that the instrument stand-by at high wavelength. This minimizes the degradation of UV sensitive samples. Precise control of filter and lamp changes means that their effects are not seen on the final scan. Post-run manipulation includes re-scaling axes, curve tracking and peak picking.
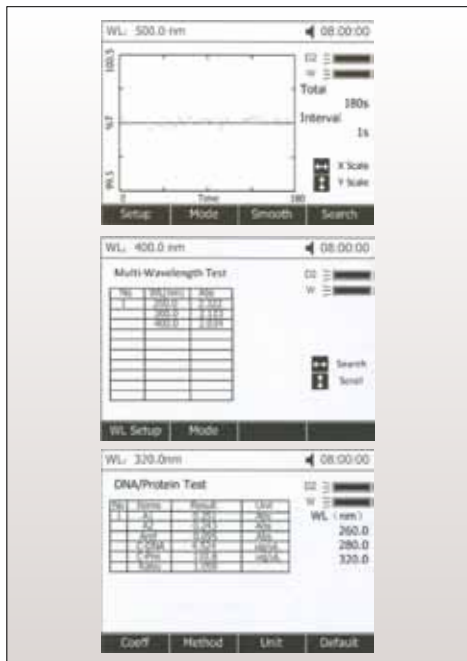
Kinetics

This mode may be used for time course scanning or reaction rate calculations. 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 intervals of 0.5, 1, 2,5, 10, 30, seconds and 1 min. Post–run manipulation includes re–scaling, curve tracking and selection of the part of the curve required for the rate calculation. Rate is calculated using a linear regression algorithm before multiplying by the entered factor.

Multi–Wavelength

Up to 10 wavelengths may be entered, allowing the measurement of multiple wavelengths on a Series of Samples.

DNA/Protein Test

Concentration and DNA purity are calculated absorbance ratios 260nm/280nm or 260nm/230nm with optional subtracted absorbance at 320nm

DNA Concentration=$62.9*A260-36.0*A2BO$ Or $49.1*A260-3.48*A230$
Protein Concentration=$1552*A26o-757.3*A2Bo$ Or $183*A260-7S.8*A230$
Other wavelengths and factors may be entered.

UV/Vis Analyst for SPECTRO–UV3 & SPECTRO–UV6 Series

The MRC Windows based PC application software UV/Vis Analyst takes the best features of the stand–alone version plus more powerful data processing, expanded data collecting, and storage capability. It comes standard with PC models and is optional to stand–alone models.

The PC application software offers:
● Photometric Mode ● Quantitative test (standard curve) ● Wavelength Scan ● Kinetics ● DNA/Protein ● Multi–Wavelength ● System Utility.

Quantitative Test (Standard curve)
Use up to 20 standards to establish standard curve.
Four methods for fitting a curve:
● Linear fit
● Linear through zero
● Square fit
● Cubic fit

Wavelength Scan
Automatically record peaks and valleys. The quantity of channels is unlimited; you can simultaneously store as many as desired.
Post–run manipulation and processing includes:
● Re-scaling axes, curve
● 1 st to 4th derivative
● Smoothing, combination, zooming, overlap.

Kinetics (Abs vs. Time)
The Kinetics mode may be used for time course scanning or reaction rate calculations. Abs. Vs. Time graphs are displayed on the screen in real time. Waiting time, measurement time and time intervals may be entered.
Post–run manipulation includes re–scaling, curve tracking and selection of the part of the curve required for the rate calculation.
Rate is calculated using a linear regression algorithm before multiplying by the entered factor.

DNA/Protein
Concentration and DNA purity are quickly and easily calculated: Absorbance ratios 260nm/280nm with optional subtracted absorbance at 320nm.
DNA Concentration=$62.9*A260-36.0*A280$
Protein Concentration=$1552*A260-757.3*A280$
Other wavelengths and factors may be entered.

Multi–wavelength
Up to 20 wavelengths can be selected and multiple samples can be measured. (Auto cell changer is required to run multiple samples automatically)

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