

SP-UV 500DB SP-UV 500VDB UV-VIS Spectrophotometer

Excellence in Measurement

Accurate · Precision · Affordable Price



Your Friendly Concern Is The Source Of Our Achievement

The SP-UV 500 series is a double beam spectrophotometer in the production series of Spectrum Instruments. It gets a technology patent - "space seperated double beam, Non-Symmetric vertical optical path". Compared with traditional double beam technology, simplified optical path improves reliability. The "width narrow and depth deep" design saves placement room.

Original Touch Screen of SP-UV500, the end users can control the instrument by the touch screen without the keypress. Streamline apperance and pretty colors express a new style fashion.

Specification of SP-UV 500 Series:

SP-UV 500VDB

Bandwidth adjustable 0.5, 1, 2, 4nm 8 inches touch screen for operation

SP-UV 500DB

Bandwidth fix at 1nm 8 inches touch screen for operation

Recommended Application:

Universities, Medicine, Food, Agriculture, Environmental Protection, Petroleum, Chemical industry, Research and Development, ...etc.





Double Beam Asymmetrical Vertical Test Optical Path Technology







Characteristic

- Operation software: Win-spec SP-5.0EN can run on Windows XP, Windows 7/8
- Data sharing: test data can be shifted to word, excel program or other application software.
- Data processing and graphical representation function include: Calculation, Automatic peak search, Feature point, Mathematical statistics, Free remark and so on.
- Professional application function: Data processing function, Standard curve, Time scan, Spectrum scan, Multi-wavelength analysis, DNA/Protein analysis.



Standard Function: Photometric Analysis+Standard Curve Quantitative Analysis+Spectral Analysis+Time Scan

Drug Test Function: Standard Function+Multi-wavelength Quantitative Analysis

Biochemistry: Standard Function+Kinetics Analysis+DNA/ Protein Analysis

Pesticide Residue: Standard Function+Fast Pesticide Residue Test

Environment: Standard Function+Formaldehyde/Nitrogen Test







Standard Introduction of standard-version function

Photometry Analysis

- 1. Mode: A, %T, Conc.
- 2. Concentration Mode: read sample concentration directly compare to known factor
- 3. Concentration factor save and calibration function
- 4. Data Test report



Standard curve quantitative analysis

- 1. In 1,000 standard points range: establish one order linear standard
- 2. 10,000 No. of samples can input
- 3. Calculate sample concentration automatically
- 4. Real time graphical representation, standard point, sample point and standard curve
- 5. The unit of concentration can be selected from the software e.g. mg/l, mg/kg, ug/l, ug/g, ng/ml, ng/g, pg/g, pg/ml...ect.

Time scan (Kinetics analysis)

- 1. Scan range, Interval and Delay free set up
- 2. Dynamic range, Average value, SD, RSD (%)







Spectrum Scan

- 1. Scan mode: %A, %T, Energy
- 2. Derivative spectrum (4 bands)
- 3. Label angle, Label apex, Label valley, Font size
- 4. Auto scale of spectrum image



Drug test: Standard Function+ Multi-wavelength Quantitative Analysis

Multi-wavelength Quantitative Analysis

- 1. Parameter: A or T
- 2. Numbers of wavelength setting ≤ 100
- 3. Factors or standard curve
- 4. Customize Equation programme
- 5. Storage and transfer function
- 6. Multi-wavelength quantitative analysis



Biochemistry Standard Function+Kinetics analysis+DNA/Protein analysis

DNA/Protein analysis

- 1. Test and caculate: DNA/Protein concentration at 230, 260, 280, 320 nm
- 2. 2 methods of calculation
- 3. Customize factor and wavelength
- 4. Real time display Absorbance of 4 points
- 5. DNA/Protein quantitation using the absorbance at 260/230 nm or 260/280 nm



T/C Model Standard Ozive Model 2: Tens Scan Model In: Spectrum Scan Model Re Mutt wavelength Caucevoters Test endres No Conny D-0 Signal



Technical Specification Main specification and accessories for choice

Performance Specification		
ITEM	SP-UV 500DB	SP-UV 500VDB
Monochromator	1200 grooves/mm diffraction grating monochromator	
Optical System	Double beam	
Light path through sample	10mm (standard), up to 100mm (option)	
Spectral bandwidth	1nm	0.5,1,2,4nm
Wavelength range	190-1100nm (0.1nm increment)	
Wavelength accuracy	±0.3nm	
Wavelength repeatability	±0.1nm	
Stray light	≤0.02%T (at 220nm Nal & 340nm, NaNO ₂) ≤1.0%T (at 198nm KCl)	
Photometric modes	T, A, and Conc. measurement	
Photometric range	0-300.0%T, -3.000-4.000A, 0.000-9,999 Conc.	
Photometric accuracy	±0.003A (0 ±0.005A (0.5 ±0.007A (1.0	0-0.5A) 5-1.0A) 0-2.0A)
Photometric repeatability	±0.001A (0-1.0A) ±0.003A (1.0-2.0A)	
Baseline stability	±0.0003A/hr (at 500nm, after lamp turned on for 1 hour)	
Baseline flatness	±0.0006A (200-1100nm)	
Noise level	≤0.00008RMS (at 0A, 500nm)	
Light sources	Tungsten-Halogen & Deuterium	
Detectors	2 Silicon Photodiodes	

Basic instrument functions		
Storage function	128 standard curves	
Baseline setting (100%T or 0%T) setup	Automatic	
System self-testing	Wavelength self-testing, light sources self-testing, filter switching, energy calibratiion	
Switching-over of light sources	Automatic switching at 325nm (can select upto 370nm)	
Light source management	Light source on/off status can be controlled to elongate its working life.	
	Lamp usage time	
Signal output	USB & Printer Port	
Communication function	Intercommunication can be realized after connecting to PC.	

Accessories available

- 10mm lightpath, 8 or 12 cell auto cuvette holder
- Micro-volume cuvette (30µl, as the minimum volume)
- (Adjustable cuvette holder should be used.)
- AC-210 Plus Peltier single cell holder system
- AC-230 Plus Sipper with adjustable temperature cuvette holder
- 16 mm round tube holder for COD test
- Reflectance holder for glass filter sample

Scope of supply

- 10mm cell holder 2 sets
- 10×10×45 mm standard glass cuvettes 4pcs
- 10×10×45 mm standard quartz cuvettes 2pcs
- USB connection cord 1pcs, Power cable 1pcs
- User manual 1pcs

Main Specification

Display 8 inches Color Touchscreen Standard cell holder 10mm Power Requirement 110/220VAC, 50/60Hz, ±10% Size 604(W)×465(D)×255(H) mm Net Weight 30Kg Gross weight 34Kg



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