Double beam UV/Vis Spectrophotometer, Xenon lamp, 1.8 nm

Code HJD016 | Model 4510/7

Versatile device with a wide range of analytical and research applications including quantitative and qualitative analysis of compounds, kinetics, chemistry, environmental research, or quality control.

Reference	HJD016
Model	4510/7
Optical system	Double beam, 1200 lines / mm grid
Wavelength range	190-1100 nm
Wavelength accuracy	±0,3 nm
Wavelength repeatability	≤0,1 nm
Wavelength display	0,1 nm
Wavelength swing speed	10000 nm / min
Wavelength scanning speed	20-3200 nm / min
Light source	Flashing Xenon lamp
Spectral bandwidth	1,8 nm
Modes	Photometry, Quantitation, Spectrum, Kinetics, Time scanning, Multi Wavelength, DNA/Protein, Custom
Detector	Dual silicon photodiode
Photometric range	-0,3-3 A | 0-200 %T | 0-9999.9 C
Sample holder	10 mm cuvettes (sample and reference)
Display	IPS colour capacitive touchscreen,10,1 inches, resolution 12800 x 800
Storage	64 GB, unlimited (USB storage, SD card, network storage)
Interface	USB-A x3 (extensible, connectable to printer, storage, mouse, keyboard), USB-B (PC) x1, RJ-45 x1 (Ethernet), VGA x1, HDMI x1, Bluetooth (extensible, WIFI)
Power	100-240 VAC, 50 / 60 Hz, 100 W
Dimensions (LxWxA)	580 x 420 x 230 mm
Weight	15 kg

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- 1200 l/mm holographic grating with low stray light and optimised design of the double-beam optical system ensure higher accuracy.
- Reinforced structure design makes the instrument stronger and more durable.
- Improved wavelength accuracy and repeatability and reduced noise by the new wavelength driving mechanism (patented).
- Built-in computer (10.1-inch IPS colour LCD touch screen) provides excellent viewing effect and easy operation.
- Self-calibration and warm-up on start-up.
- Powerful measurement and analysis functions and open self-defined measurement methods can meet the measurement requirements of scientific research.
- The software (UVstudio) has GLP/GMP functions, which can effectively track and manage instrument performance and measurement data.
- File management function.
- A variety of interfaces (USB, Ethernet, VGA, HDMI, expandable Bluetooth, WIFI, SD card reader, etc.) can be used to connect keyboards, mouses, scanners and printers for data input and output, and to access networks for remote control, data transmission and sharing.
- IQ / OQ / PQ protocols available.

Functions

Photometry

- A / % T conversion
- Custom coefficient

Multi Wavelength

- Measure up to 20 wavelengths at a time
- Customize formulas for data calculation
- User-selectable one-point measurement times (1-50)
- Parameters can be saved and loaded
- Results can be recorded, renamed, deleted, saved, printed, and exported (in Excel, Word, PDF, etc.)
- Customize report layouts.

Time scanning

- Unlimited scanning time
- Scan interval can be customized
- Point by point (peak) view, mark and select
- Adaptive coordinates and a variety of ways to modify coordinates
- Curves and data can be deleted, saved, printed, and exported (in Excel, Word, PDF, etc.)
- Curves can be saved and printed automatically

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Funciones

Kinetics

- Unlimited scanning time
- Delay time and interval can be customized
- Automatically calculate kinetic rates
- Point by point (peak) view, mark and select
- Adaptive coordinates and a variety of ways to modify coordinates
- Curves and data can be deleted, saved, printed, and exported (in Excel, Word, PDF, etc.)
- Curves and results can be saved and printed automatically

Quantitation

- Single wavelength, dual wavelength (difference, ratio), three wavelength and custom methods
- 3 ways to establish a standard curve (input coefficients, measure 2-20 standard samples or input absorbance and concentration values of standard samples)
- 4 fitting methods (linear through zero, linear, quadratic, cubic)
- Parameters can be saved and loaded
- Standard curves can be saved and loaded
- Built-in common concentration units and user-defined units
- Diagram of measure values are displayed, and results are determined automatically
- Results can be recorded, named, deleted, saved, printed, and exported (in Excel, Word, PDF, etc.)
- Customize report layouts

DNA / Protein

- 7 built-in methods /260/280, 260/320, Lowery, UV method, BCA, CBB, Biuret), custom calculation
- User-selectable one-point measurement times (1-50)
- Parameters can be saved and loaded
- Display the distribution map of the measured values and automatically determine the results
- Results can be recorded, named, deleted, saved, printed, and exported (in Excel, Word, PDF, etc.)
- Customize printed reports

Custom

- Edit formulas as needed
- Formulas can be used for multiple modules
- Formulas can be added, modified, and saved as necessary

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Functions

Spectrum

- The scanning speed is optional (low, medium, high)
- The scanning interval is optional (0.1, 0.2, 0.5, 1, 2, 5, 10 nm)
- A/%T display mode can be switched
- Automatically find the peak
- Point by point (peak) view, mark and select
- Rich map processing functions (arithmetic operation, derivation, area, and 3D map)
- Adaptive coordinates and a variety of ways to modify coordinates
- Curves and data can be deleted, saved, and printed (in Excel, Word, PDF, etc.)

File

- Files can be deleted, renamed, import/export

System

- System calibration (dark current, wavelength, system baseline)
- Light source (light switch, timing)
- Clock management
- Storage management (storage status display, formatting)
- Language
- General setting (display resolution, system parameter, etc.)
- Reset
- About (System information)

Performance verification

- Wavelength accuracy and wavelength repeatability verification
- Photometric accuracy and photometric repeatability verification
- Stray light verification
- Resolution verification
- Linearity verification