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Shimadzu UV-1800 UV/Visible Scanning Spectrophotometer

Powerful 1-nm resolution in a compact double-beam instrument

- Extremely versatile with full functionality from 190 to 1100 nm
- Control as a stand-alone unit or through a PC with included UVProbe software
- PC interface and flash-drive data transfer via USB connectivity
- Built-in validation software ensures operational accuracy

The UV-1800 is an advanced high-resolution spectrophotometer utilizing a precision Czerny-Turner optical system equipped with Shimadzu's proprietary Lo-Ray-Light Grade diffraction grating. Operation can be either as a stand-alone instrument or as a PC-controlled instrument with the included UVProbe software. USB memory can be connected directly to the UV-1800 for simple data transfer, and printing is possible with the optional screen-copy printer or printers or commercial printers that that support ESC/P-9, ESC/P-24, ESC/P Raster, and PCL control codes.

Photometric Mode measures the absorbance or transmittance at a single wavelength or at multiple (up to eight) wavelengths. In multiple-wavelength measurement, calculations can be performed on the data obtained for up to four wavelengths, including the calculation of the difference between, or ratio of, the measurements obtained for two wavelengths.

Spectrum Mode obtains sample spectra using wavelength scanning. Changes in the sample can be tracked using repeated scans. Data processing operations, such as the enlargement or reduction of the spectra obtained, peak detection, and area calculations, are also possible.

Quantitation Mode generates a calibration curve from standard samples, and uses it to calculate the concentrations of unknown samples. Various combinations of wavelengths (1 to 3 wavelengths and derivatives) and calibration curves (K-factor and first-to-third order regression calibration curves) are possible.

Kinetics Mode measures the change in absorbance as a function of time, and calculates enzymatic activity values. You can select either the kinetics measurement method or the rate measurement method.

Time-Scan Mode measures the change in absorbance, transmittance, or energy as a function of time.

Multi-Component Quantitation Mode separately quantitates up to eight components mixed in a single sample. Pure components or mixtures of components can be used as standard samples.

Biomethod Mode is capable of analyzing DNA and proteins using the several common quantitation methods including quantitation of DNA or protein using the absorbance at 260/230 nm or 260/280 nm and protein quantitation via the Lowry method, BCA method, CBB method, Biuret method, and UV absorption method (direct measurement at 280 nm).

Security and validation functionality are also preprogrammed. Security functions allow you to restrict functions according to three user levels: administrator, developer, and operator. Automatic or semiautomatic validation functions include wavelength accuracy, wavelength repeatability, resolution, stray light, photometric accuracy, photometric repeatability, baseline flatness, baseline stability, and noise level. The operating time of the lamps can be recorded and displayed so that you can anticipate replacement and avoid downtime.

What's included: USB interface cable, UVProbe software, and power cable with US plug.

Note: Available for sale in the US only.



83400-20

Catalog number		T-83400-20
Type/model		UV/Visible scanning wavelength
Beam type		Double beam
Bandwidth		1 nm
Wavelength range		190 to 1100 nm
Wavelength accuracy		±0.1 nm at D2 peak 656.1 nm, ±0.3 nm for entire range
Wavelength repeatability		±0.1 nm
Scanning speed		2 to 3000 nm/min
Photometric ranges	Transmittance	0.0 to 400% T
	Absorbance	–4.0 to 4.0 A
Noise		<0.00005 A at 700 nm
Drift		<0.0003 A/hour (after warm-up)
Stray light		<0.02% T at 340 and 400 nm, <1.0% T at 198 nm
Source lamp		Tungsten-halogen and deuterium
Lamp life, typical		Tungsten-halogen: 2000 hours
Display		Graphical LCD, 4¾" x 3½" (12.1 x 8.9 cm)
Detector		Silicon photodiode
Input/output		USB
Dimensions (W x H x D)		17⁷⁄₁₀" x 10⅜" x 19³⁄₁₀" (45 x 27 x 49 cm)
Power		100 to 120 VAC, 50/60 Hz
Price		

T-83400-50 **Four-cell sample compartment,** easily interchangeable with standard sample compartment, includes a 4-cell holder for 10-mm square cuvettes

T-83400-51 **Six-cell sample compartment,** easily interchangeable with standard sample compartment, includes a 6-cell holder for 10-mm square cuvettes

T-83400-52 **Constant temperature 2-cell holder,** maintains one sample and one reference cell at uniform temperature with connection to a circulating bath (not incl.)

T-83400-54 **Constant temperature 4-cell holder,** maintains four sample cells and one reference cell at uniform temperature with connection to a circulating bath (not incl.). Requires four-cell sample compartment 83400-50

T-83400-62 **Screen copy printer kit for UV-1800;** capture hard copies of display screen at any time

T-83400-80 **Sipper pump, peristaltic;** for reliable, smooth aspiration of sample through a flow cell

T-83400-90 **Replacement tungsten-halogen lamp**

T-83400-92 **Replacement deuterium lamp**

FREE installation!

Shimadzu instruments include on-site installation, setup, and training at no extra charge.

US Toll-free: 800-323-4340 • Outside the US: 1-847-549-7600 • www.coleparmer.com
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