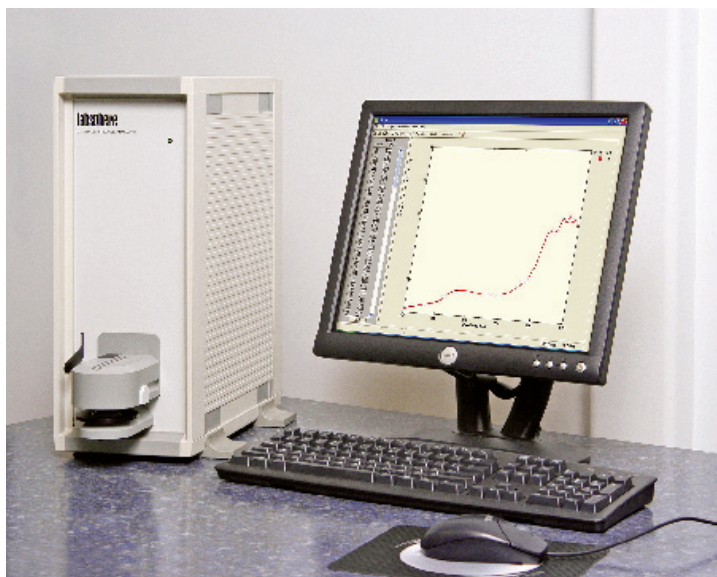


# UV-1000S ULTRAVIOLET TRANSMITTANCE ANALYZER

Measures the spectral transmittance of a sunscreen sample then automatically converts data to provide the SPF of the sunscreen product



## FAST

The UV-1000s operates by measuring the diffuse transmittance in the ultraviolet wavelength region, from 250 to 450 nm. A dual diode array spectrometer with a xenon flashlamp, optimized for UV emission, and an integrating sphere provides instant spectral acquisition. The diffuse illumination geometry of the sphere measures the transmittance from all angles and path lengths through the sample, and utilizes the total energy from the xenon flashlamp for optimal signal-to-noise performance. This design delivers exceptional wavelength stability and flash-to-flash repeatability.

The efficiency of the dual diode array spectrometer, coupled with the xenon flash lamp gives reliable and repeatable measurement results in seconds. Instrument software calculates the average value for the UVB (280-315 nm), UVA (315-400 nm) and SPF. The UVA to UVB ration is calculated, and instantly converts to give you the Boots Star Rating for the level of UVA protection offered by the sunscreen product.

## FEATURES:

One touch sample analysis, with results in less than five seconds

Rugged construction for trouble free, reliable measurements

Easy-to-use menu driven application software

Convenient small size saves laboratory bench space

Simple instrument performance validation routine ensures accurate, repeatable measurements

RS-232C serial port for direct connection to your PC

Diffuse illumination Spectralon® integrating sphere provides optimal signal-to-noise performance

Automatic calculation of SPF, UVA to UVB ration, and Boots Star Rating

## EASY-TO-OPERATE

Windows® compatible application software provides an easy-to-use environment with pull down menus, dialog boxes, and built-in report generation functions. The application software guides the operator through analysis without complicated routines. This means a minimal amount of operator training.

A built-in report function generates essential information at the click of a button. Reports include necessary GLP/GMP information such as date, time, operator name, sample identification, and test parameters. Reports are conveniently viewed on your PC, printed, or exported as text to data processing software for further review and analysis.

## POWERFUL APPLICATION SOFTWARE

Application software includes pre-programmed solar spectral irradiance and CIE erythral action spectra to precisely calculate the SPF value of the sample. Spectral irradiance data and test method parameters are easily set to your specific needs. Multiple scans are averaged and viewed simultaneously in easy-to-read formats.

For validation of the UV-1000S Ultraviolet Transmittance Analyzer's performance, application software includes an integrated Performance Validation Routine. This allows for on-site validation and revalidation and ensures optimum instrument performance. A set of four calibrated standards is included with each analyzer to validate the accuracy of both wavelength and photometric scales.

The set includes three photometric standards and a wavelength calibration standard to ensure precise placement each time the validation routine is performed. The instrument Performance Validation Routine assures quality measurement results as well as satisfying the requirements of regulatory agencies.

# Specifications

System Model Numbers  
UV-1000S

System Order Number  
AA-00225-000

## System Properties and Performance

Wavelength Range	250 to 450 nm*	
Wavelength Accuracy	±2 nm	
Transmittance Accuracy: (nominal ± uncertainty (%T))	2% ± 0.5%	
	10% ± 1.0%	
	20% ± 1.5%	
Data Interval	1 nm	
Effective Slitwidth	< 5 nm	
Optical Geometry	hemispherical illumination/0° viewing (d/0)	
Measurement Range	Transmittance	0-100%
	Absorbance	0-2.5A
	SPF	1-50
	Scan Time	< 5 seconds

\*Application software allows for user definable limits within the instruments wavelength region.

Computer Interface	RS-232C Serial Port
Data Transfer	9600 baud
Min computer requirements	486/33 processor, Windows® 3.2 or higher
	Color VGA, 640 x 480 Resolution
	8 MB RAM, 2 MB disk space

Power Requirements	110/120 VAC, 60/50 Hz
Operating environment	0°-50° C, 0%-70%RH
Dimensions	17H x 18D x 7W Inches (44H x 45D x 17W cm)
Weight	26 lbs. (12kg)