

Comparison of Labsphere's UV-2000S and the NEW UV3000S In vitro SPF Analyzers

This document compares Labsphere's UV-2000S and UV3000S in vitro SPF analyzers, highlighting their features and improvements.

- **Measurement Quality:** The UV3000S offers enhanced measurement quality with no moving parts in its spectrometers, improving robustness and accuracy, while both models maintain a wavelength accuracy of ± 1 nm and a bandwidth of < 4 nm.
- **Automation and Installation:** The UV-2000S requires manual operation, whereas the UV3000S has an optional automated stage, making it more user-friendly with a simple installation process.
- **Software and Standards:** The UV3000S software includes new ISO standards and features for improved reporting and flexibility in the user interface, while carrying over previous regional SPF testing methods.

FEATURE	Labsphere UV-2000S	Labsphere UV3000S
Lamp	Xenon Flash Lamp for rapid testing	Xenon Flash Lamp for rapid testing
Measurement Quality	<p>Spectrometer with fixed gratings and an NMOS array</p> <p>Selling Points:</p> <ul style="list-style-type: none"> • Faster data acquisition than the more time-consuming scan monochromator methods. • Wavelength Accuracy: ± 1 nm (anything less than 1 nm provides no advantage) • Bandwidth: (FWHM): < 4 nm. (No advantage to a narrower bandwidth) • Absorbance: 0 - 2.7 A (Dual Doped PMMA Method) • Wavelength Step: (Data Interval) 1 nm 	<p>★ NEW! Spectrometers with fixed gratings and an NMOS array and no moving parts for greater robustness</p> <p>Selling Points:</p> <ul style="list-style-type: none"> • Faster data acquisition than the more time-consuming scan monochromator methods. • Wavelength Accuracy: ± 1 nm (anything less than 1 nm provides no advantage) • Bandwidth: (FWHM): < 4 nm • Absorbance: 0 - 3.0 A (Dual Doped PMMA Method) • Wavelength Step: (Data Interval) 1 nm • Wavelength Reproducibility: ± 0.25 nm
Automation	Manual sample stage	★ Manual sample stage with optional NEW! automated sample stage
Easy Installation	<p>Simple software installation with USB connection.</p> <p>Selling Points:</p> <ul style="list-style-type: none"> • The UV3000 installation is user-friendly and uncomplicated, up and going in minutes. • Simple software installation and USB connection. 	
Scan Time	Seconds	
Sample Plate Measurement Time	Seconds	
Photostability Based Measurements	<p>New Flash Lamp designs on UV3000</p> <p>The Xenon Flash method with baseline correction method corrects for a difference between baseline and sample measurements.</p> <p>Selling Points:</p> <ul style="list-style-type: none"> • Much more accurate approach to substitution correlation with minimal time lapse between baseline measurements and sample measures, Unlike the alternative of the longer scanning solution for both baseline and measurements. • Practically maintenance-free • With Pulsed lamp lifetime of $> 10^8$ pulses 	
★ NEW! UV3000 Software	<ul style="list-style-type: none"> • Added New ISO Standards to the Study drop-down method • Improved exporting and reporting features • Controls the Automated Sample Stage with predefined methods and user-defined methods • Can import UV2000 Software • Greater user flexibility in defining the user interface 	

FEATURE	Labsphere UV-2000S	Labsphere UV3000S
Accessories	<ul style="list-style-type: none"> • PMMA HD6 Plates • Calibration Validation Kits • Starter Kit 	<ul style="list-style-type: none"> • PMMA HD6 Plates ★ • NEW! PMMA SB6 Plates • Calibration Validation Kit • Starter Kit
Standards	<p>UV-2000 SPF Software is compatible with Windows® 7 and 11 using a standard USB connection to the system with data storage, retrieval and exporting features. The software runs the following tests:</p> <p>Sunscreens/SPF</p> <ul style="list-style-type: none"> o ISO 24443:2012 UVA Photoprotection o FDA UV1/UVA (2011) Critical Wavelength o US FDA UVA Protection Factor UVA I/UV o Boots Star Rating 2008 o COLIPA UVA Protection Factor:2011 o AS/NZS 2604 o Bare Substrate Analysis o UVA/UVB ratios 	<p>★ NEW! UV3000S Software is compatible with Windows 11 or newer using a standard USB connection to the system with data storage, retrieval and exporting features. The software runs the following tests:</p> <p>Sunscreens/SPF</p> <ul style="list-style-type: none"> o ISO 24443:2012 UVA Photoprotection o FDA UV1/UVA (2011) Critical Wavelength o US FDA UVA Protection Factor UVA I/UV o Boots Star Rating 2008 o COLIPA UVA Protection Factor:2011 o AS/NZS 2604 o Bare Substrate Analysis o UVA/UVB ratios ★ • NEW! ISO 23675 In vitro ★ • NEW! ISO23698 HDRS (Spectrophotometer Method) ★ • NEW! HEVIS Test Range ★ NEW! The UV3000 software directly export feature works with ISO Spreadsheets to eliminate manual data entry.
HEVIS Broad- Spectrum Testing	No	★ Yes, NEW! 400 nm to 500 nm extended range
Integrating Sphere	Yes, Spectralon® sintered PTFE	
Sample Exposure Area	Sample Exposure Area: 0.79 cm², per PMMA plate edge to edge requirements	
UV Dose	UV Dose Per Measurement Cycle: < 0.2 J/cm²	
Validation Kit	Yes	<ul style="list-style-type: none"> ★ • NEW! Linear holder for faster calibration ★ • NEW! Export calibration validation for ISO23675 reporting