

Product Specifications

Part ID: SYS-VPE-SOLO5

CTech™ SoloVPE® System

Overview

The CTech™ SoloVPE® System unlocks the power of Slope Spectroscopy® with its unique and patented variable pathlength technology (VPT). By evolving beyond the limitations of traditional fixed-pathlength spectroscopy, the SoloVPE System transforms the ultraviolet-visible (UV-Vis) technique from a 2-dimensional to a 3-dimensional science. Conceptually simple and analytically empowering, the patented variable pathlength technology revolutionizes the measurement of concentration by delivering rapid and accurate results while avoiding costly dilution and background correction steps.

The Slope Spectroscopy method leverages the power and flexibility of variable pathlength technology to create a rapid and robust concentration measurement method. It is ideally suited for biologics but can be used on any liquid sample typically analyzed with a UV-Vis instrument. Unlike the single absorbance result generated by legacy UV-Vis methods, the data-dense, slope-based technique characterizes samples using multiple absorbance data points acquired at different pathlengths. The resultant section (absorbance vs. pathlength) data set allows for greater insight into the sample and the measurement result.

The section data is analyzed in real time to verify linearity in compliance with the Beer-Lambert law. The linear region of the section curve is directly proportional to the concentration of the sample based upon the sample extinction coefficient. This relationship allows the SoloVPE System to report concentration results in less than 60 seconds. Capable of making spectral and fixed-point measurements at wavelengths between 190 nm and 1100 nm and at pathlengths between 5 microns and 15 millimeters, the SoloVPE System is adaptable to a wide range of sample types and concentrations. The flexibility and robustness of the technology is unparalleled when compared to traditional UV-Vis techniques and equipment.



Features | Advantages | Benefits

No dilutions: Measure highly concentrated samples directly without dilution.

Eliminate background correction: Buffer/background correction only required in special circumstances.

Reduce sample prep: Direct measurements of highly concentrated samples save time and consumables.

Rapid results: Concentration results in approximately one minute.

Low sample volume: Method and sample vessel dependent ranging from <20 µl to 2 ml.

Slope Spectroscopy methods: The first and only slope spectrometer capable of Slope Spectroscopy-based measurements. Slope results based upon multiple data points instead of a single absorbance value.

Rapid sample characterization: Rapidly characterize samples at different wavelengths and pathlengths using a single method.

Linear range finder technology: The system automatically identifies the linear region of section data sets to verify compliance with the Beer-Lambert law.

Education/support: On-site installation and training included with system purchase.

System Specifications

Device dimensions (W x D x H): 255 x 255 x 381 mm (10 x 10 x 15 in)

Weight: 9 kg (20 lb)

Spectroscopic engine: Agilent Cary 60 spectrophotometer*

Fiber optic integration: CTech Dual Use Fiber Optic Coupler

SoloVPE power requirements: SoloVPE instrument contains no power supply (powered via Cary 60)

Cary 60 power requirements: 100 V–240 V AC, frequency 47 Hz–63 Hz

Maximum pathlength: 15.000 mm

Minimum pathlength step: 0.005 mm

Variable pathlength speed: >1.3 mm/sec

Slope repeatability: ±2%†

Sample vessel compatibility: Fused silica (large, small, micro), disposable plastic (small, tall)

Fibrette® Optical Component: OF0002 (fused silica + polyimide)

Sample volume required: Dependent on sample vessel used and method pathlength range

Proximity to Cary 60: On top of or within 0.5 m

Measurement pathlength axis orientation: Vertical‡

*Photometric performance characteristics are based upon the Cary 60 spectrophotometer specifications and are applicable to the Cary 60 independent of the SoloVPE instrument.

†Repeatability performance requires properly validated method and controlled homogeneous samples.

‡Samples that are not homogeneous, suspensions, improperly mixed or not in solution could produce unexpected results. This should be assessed during method development.

V3.1 Software Information

Required computer hardware: Per the minimum requirements of the Agilent Cary WinUV Software Package, Repligen recommends:

Min processor: Intel i3
Min hard drive: 250 GB (SSD preferred)
Min RAM: 8 GB

Operating system: Microsoft Windows 7 and Windows 10 compatible

Software environment: Agilent Cary WinUV Software Suite Version 5.0/5.1.3.xxx

VPT software control: SoloVPE Software Version 3.1

Validation companion (optional): QuickVCA for use with the SoloVPE Validation Cuvette Adapter (SVCA)

Security companion (optional): SecureVPE Software Version 3.1 (for GxP implementations)

Prior versions: Prior software versions may be available on request. Contact Repligen analytical support for more information.

Legacy support: Support for legacy products can be secured but subject to limitations.

CTech ViPER™ ANLYTX Software Information

Required computer hardware: Per the minimum requirements of the CTech™ ViPER™ ANLYTX software platform, Repligen recommends:

Min processor: Intel i5
Min hard drive: 250 GB (SSD preferred)
Min RAM: 8 GB

Operating system: Microsoft Windows 10 compatible

Software environment: ViPER ANLYTX software platform

VPT software control: ViPER ANLYTX software

Validation companion (optional): ViPER validation check application for use with the SoloVPE Validation Cuvette Adapter (SVCA)

Security companion (optional): ViPER SecureVPT settings (for GxP implementations)

Prior versions: No prior versions, new platform release

Legacy support: New platform release, no legacy products. Please contact Repligen for more information.

Customer Support

Support and training: Repligen is committed to customer success from predelivery through installation and training.

Included with purchase:

- IQQQ
- On-site training
- Full 12-month warranty support
- Post-obsolescence seven-year hardware support
- Single- and multi-year service contract options, which include an annual PM service
- Preventative Maintenance (PM) service options
- Remote and on-site training and support
- Software support services
- Validation services

More information: Final application suitability of all materials and ratings are the sole responsibility of the user. Specified pressure and temperature ratings may be subject to limitations. Contact a Repligen analytical sales representative for more information.

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