

Product Specifications

Part ID: SYS-VPE-SOLO5

SoloVPE

Overview

The original Slope Spectroscopy® solution from C Technologies, Inc., the SoloVPE Solution unlocks the power of Slope Spectroscopy with its unique and patented *Variable Pathlength Technology*. By evolving beyond the limitations of traditional fixed pathlength spectroscopy, the SoloVPE Solution transforms the mature UV-Vis technique from a 2-Dimensional to a 3-Dimensional science. Conceptually simple and analytically empowering, C Technologies' variable pathlength solutions revolutionize the measurement of concentration by delivering rapid and accurate results while avoiding costly dilution and background correction steps.

The Slope Spectroscopy® technique leverages the power and flexibility of *Variable Pathlength Technology* to create a rapid and robust concentration measurement method. It is ideally suited to biologics but can be used on any liquid sample typically analyzed with a UV-Vis method. 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 and 1100 nm and at pathlengths between 5 microns and 15 millimeters, the SoloVPE Solution 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.



Variable.Pathlength.Technology

The Originators of **Slope** spectroscopy®

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Features | Advantages | Benefits

No Dilutions: Measure highly concentrated samples directly without dilution

Eliminate Background Correction: Buffer / Background Correction only required in special circumstances

Reduced Sample Prep: Direct measurement of highly concentrated samples saves time and consumables.

Rapid Results: Concentration results in about 1 minute

Low Sample Volume: Method and sample vessel dependent ranging from <20 µl to 2 ml. Can be reclaimed.

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.

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

Linear Range Finder Technology: The system automatically identifies the linear region of Section data sets to verify compliance with the Beer Lambert Law.

SoloVPE Device Specifications

Dimensions: 8.5" [216 mm] (W) x 8.5" [216 mm] (D) x 12" [305 mm] (H)

Weight: 20 lbs. [9 Kg]

***Spectroscopic Engine:** Agilent® Cary 60 Spectrophotometer

Fiber Optic Integration: C Technologies, Inc. Dual-Use Fiber Optic Coupler

SoloVPE Power Requirements: SoloVPE unit contains no power supply (powered via Cary 60)

Cary 60 Power Requirements: 100-240 V AC, Frequency 47-63 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: Silica (Large, Small, Micro), Disposable Plastic (Small)

Fibrette Compatibility: OF0002 (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

Required Computer Hardware: Per the minimum requirements of the Agilent Cary WinUV Software Package:
C Technologies, Inc. Recommends:
Min Processor: Intel i3
Min Hard drive: 250 Gb (SSD Preferred)
Min RAM: 8 Gb

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

**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.

Software Information

Operating System: Microsoft Windows® 7 & Windows® 10 Compatible

Software Environment: Agilent® Cary WinUV Software Suite Version 5.0 / 5.1 Through (1019)

VPT Software Control: C Technologies, Inc. SoloVPE Software Version 3.1

Validation Companion (Optional): C Technologies, Inc. QuickVCA for use with the SoloVPE Validation Cuvette Adapter (SVCA)

Security Companion (Optional): C Technologies, Inc. SecureVPE Software Version 3.1 (for GxP implementations)

Prior Versions: Prior software versions may be available on request. Contact Sales for more information.

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

Customer Support Options

Support and Training: C Technologies, Inc. is committed to customer success from pre-delivery, through installation and training.

Services Include:

- IQOQ included with purchase
- On-site training included with purchase
- Full 12-month warranty support
- Post obsolescence seven (7) year hardware support.
- Single and multi-year Service Contract options which include an annual PM Service
- PM Services
- Remote and on-site training and support
- Software support services

Further Details

Getting more information: For additional information please contact C Technologies, Inc. or your authorized representative. Visit our website: ctechnologiesinc.com

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