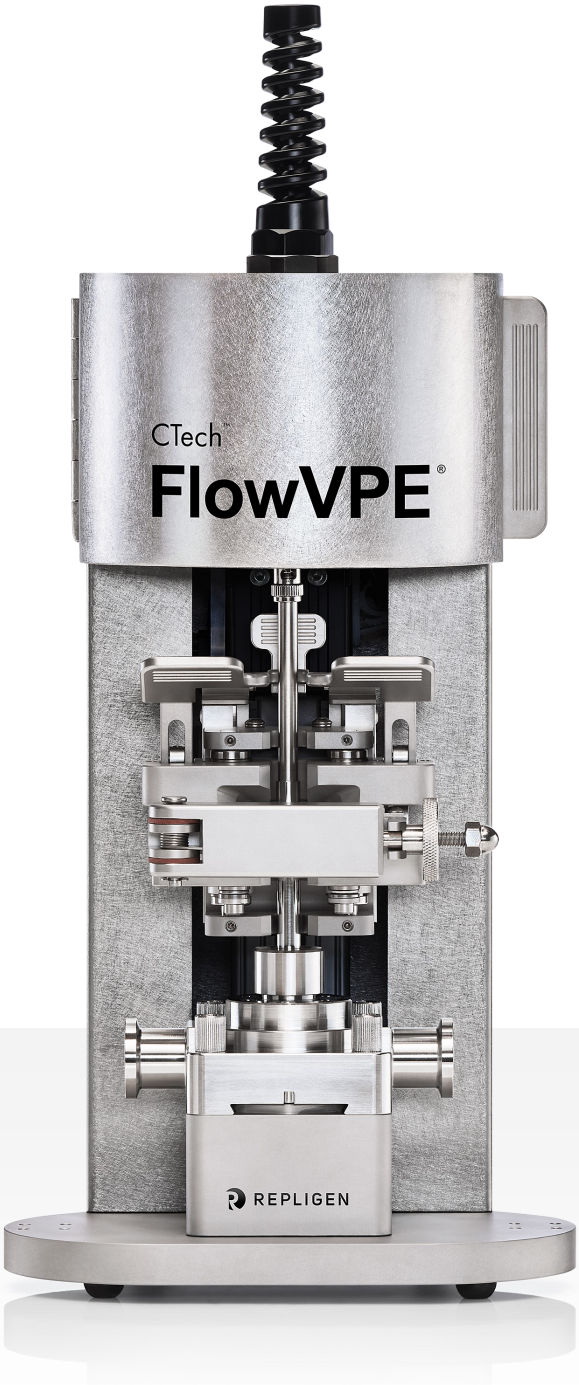
Product Specifications

Part ID: SYS-VPE-FLOW

CTech™ FlowVPE® System



Overview

The CTech™ FlowVPE® System unleashes the power of Slope Spectroscopy® on the online process monitoring and PAT fields. Evolving beyond the limitations of traditional fixed-pathlength ultraviolet-visible (UV-Vis) spectroscopy, the FlowVPE solution reveals process insights and enables application and innovations that help accelerate development and drive success.

Conceptually simple, but analytically empowering, the Slope Spectroscopy technique, with its unique patented variable pathlength technology (VPT), has revolutionized the measurement of concentration by delivering rapid and accurate results while avoiding costly dilution and background correction steps on the widest range of samples.

Capable of making spectral and fixed-point measurements at wavelengths between 190 nm and 1100 nm within a concentration of 0.1 mg/ml and 250 mg/ml at a 1.5 extinction coefficient, the FlowVPE System is adaptable to a wide range of sample types. It can support lab-scale flow lines of 3 mm, pilot-scale flow lines of 10 mm, and manufacturing flow lines of 22 mm. Directly integrating the FlowVPE instrument into one or more locations of a process stream helps to reveal process characteristics previously hidden from commonly used online fixed-pathlength solutions. Some of these processes are UF/DF, chromatography, mixing, and fill finish. The versatility of this robust technology is unparalleled.

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Features | Advantages | Benefits

Stainless steel construction: Robust stainless head design to withstand process environment.

Removable Flow Cells: System comes with two removable Flow Cells of 3 mm and a 10 mm ID (larger sizes available upon request).

Direct measurement: Concentration measurement at the absorbance max ensures accurate quantification.

Low dead volume:
3 mm Flow Cell volume: 0.75 ml
10 mm Flow Cell volume: 10 ml
22 mm Flow Cell volume: 55 ml

Rapid acquisition: Concentration acquisition every five seconds.

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 Beer-Lambert law.

Integration options: The system comes with a 4 mA–20 mA and 0 V–5 V analog output.

System Specifications

Dimensions:
Cary 60 (unpacked): 477 x 567 x 196 mm (19 x 23 x 8 in)
FlowVPE Head: 7 x 8 x 16 in
Computer (Dell Latitude Rugged Extreme Laptop, open): 13.5 x 12 x 12 in

Weight:
Cary 60: 18.14 kg (40 lb)
FlowVPE Head (without Flow Cell): 7.71 kg (17 lb)
Flow Cell: 0.68 kg (1.5 lb)
Computer (Dell Latitude Rugged Extreme Laptop, open): 3.63 kg (8 lb)

Spectroscopic engine: Agilent Cary 60 spectrophotometer

Process contact materials:

EPDM and platinum-cured silicone seals	316L stainless steel	UV-grade fused silica
Medical-grade epoxy	Polyimide	Teflon seals

Maximum pathlength: 8.000 mm

Minimum pathlength step: 0.005 mm

Slope repeatability: ±2%*

Proximity to Cary 60: Delivery Fiber optic standard length 3 m (optional 6 m cable available upon request).

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

System power requirements: FlowVPE unit contains no power supply (powered via Cary 60).

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

System Specifications *(cont.)*

Operating system: Windows 10 compatible (for Win10 version 1809, v1.2.138 or later required)

Software environment: Agilent Cary WinUV Software Suite Version 5.0/5.1 through 1019

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

Customer Support

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

Included with purchase:

- IQOQ
- On-site system 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
- One Flow Cell and Flow Fibrette® Optical Component

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. See the *FlowVPE User Manual* DOC0096 or contact a Repligen analytical sales representative for more information.

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