PATsmart™ SoloVPE® and SoloVPE® PLUS Systems

Recommended Steps for Maintenance, Cleaning & Proper Use

Best Practices

System Maintenance Checklist

	Daily	Weekly	Monthly	Annually
Quick Check Test	✓	✓	✓	✓
Clean Fibrette Optical Components & Fused Silica Vessels	✓	✓	✓	✓
Clean Delivery Fiber		✓	✓	✓
Restart Cary Spectrophotometer		✓	✓	✓
Run Standard Test			✓	✓
Coupler Check			✓	✓
Repligen Preventive Maintenance Service				✓

System Maintenance Guidelines

Quick Check Test

Perform with a new or clean Fibrette Optical Component.

Passing criteria: 70.00%T or greater.

Fibrette Optical Components (only if cleaning)

After each use of a Fibrette Optical Component, store in distilled water in a small beaker or neoprene tube to keep them wet (minimum 30 minutes). Fibrette Optical Components are not to be stored in water for longer than one day. **Note:** Do not soak too many Fibrette Optical Components in a container, otherwise they will clump together.

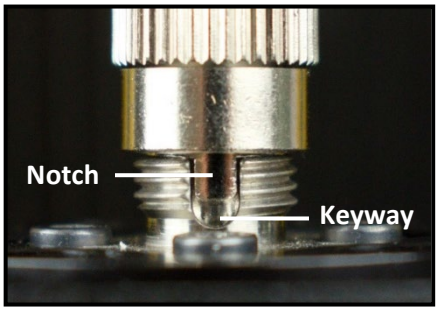
- At the end of the day, pour out water and fill tube with IPA, methanol, or ethanol, and let it soak for 2–5 minutes.
- Pour out solution and lay Fibrette Optical Components out on paper towel to dry.
- Wipe entire length of Fibrette Optical Component with a lint-free wipe then spin **both** ends on a folded lint-free wipe.
- Place the Fibrette Optical Component back in the clean tube for future use. Do not reuse more than 5 times.

Fused Silica Vessels

Clean after each use. Follow current procedures for fused silica vessel cleaning. Water rinse followed by cleaning agent (IPA, methanol, or ethanol). Rinse, then air dry or spray with compressed air.

Cleaning Delivery Fiber

- Disconnect the Delivery Fiber from the instrument by turning the nut counterclockwise.
- Fold a lint-free and firmly wipe the fiber connector surface in one direction a few times.
- Use compressed air over connector surface (optional).
- Reconnect Delivery Fiber, making sure the notch is properly positioned in the fiber platform, and tighten the nut by turning clockwise.



- With no vessel and no vessel holder installed, blow compressed air across the Detector Window in the sample platform. Clean with a lint-free wipe if necessary.

Cary 60 Spectrophotometer

Restart the Cary once a week or before every run (if run > 7 days). This is recommended by Repligen for consistent performance.

Run Standard Test

Run provided CHEM013 standard, ConfiRM® slope reference material, or the current UV standard (e.g., BSA).

Coupler Check

Run a Coupler Check monthly or after several failed Quick Checks.

Annual System PM (Service Contract)

Preventive maintenance (PM) service is performed as part of a service contract from Repligen.

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Cleaning General Instrument Surfaces

The following cleaning solutions are recommended for wiping down SoloVPE and SoloVPE PLUS surfaces:

- 70% ethanol (EtOH)
- 70% isopropyl alcohol (IPA)
- Low pH sterilant/disinfectant

Check out our Knowledge Base for additional helpful resources:
www.repligen.com/support/knowledge-base

Sample Vessels

Vessel Size	Maximum Pathlength	Volume Needed for Max Pathlength
Micro	5 mm	60 µl
Small (Fused Silica & Plastic)	5 mm	120 µl
Large*	15 mm	2.5 ml

**Large vessels are typically used to achieve a long pathlength that can measure dilute samples of 0.1 mg/ml or less.*

Helpful Tips: Best Practices for Use

Noisy Spectra or Low Transmission (%T)

If poor R^2 values begin to appear (less than 0.999) during measurements on samples that have had a successful history, it could be a sign that something is dirty. Follow the **weekly procedure** and clean the Delivery Fiber.

Quick Check

Transmission (%T) should be **greater than 70.00%**. Always run the Quick Check test with a new Fibrette Optical Component.

Quick Set Fibrette Coupler

The Quick Set Fibrette Coupler is designed to facilitate consistent Fibrette Optical Component loading.

Insert the Fibrette Optical Component until it stops. Actuate the Quick Set Coupler by pushing up and releasing to set the Fibrette in the appropriate position.

Baseline Correction

When making slope-based concentration measurements, frequent baseline correction is **not** required. When there is no pathlength-dependent absorbance contribution by buffer components at the method wavelength (e.g., water), the slope-based method will yield equivalent results without performing baseline correction, which saves time and consumables.

Note: Run the buffer **in a large silica vessel** using Quick Slope; if the slope is **greater than 0.01 Abs/mm** at the wavelength of interest, then baseline correction is recommended for higher concentrated samples.

When baseline correction is necessary, it is recommended to use the **same Fibrette Optical Component for the baseline acquisition and the sample data acquisition.** Simply perform a gentle wipe of the Fibrette Optical Component while it is loaded in the instrument with a lint-free wipe or dry with canned air.

See our YouTube channel for videos explaining these practices and more:
www.youtube.com/@repligen-PAT