CTech™ SoloVPE® Systems: Best Practices

Recommended Steps for Maintenance, Cleaning, & Proper Use

Best Practices

System Maintenance Checklist

	Daily	Weekly	Monthly	Biannually
Quick Check Test	✓	✓	✓	✓
Clean Fibrette® Optical Components &	✓	✓	✓	✓
Clean Delivery Fiber		✓	✓	✓
Restart Cary Spectrophotometer		✓	✓	✓
Run Standard Test			✓	✓
Coupler Check (V3/ViPER® only)			✓	✓
Biannual System PM (CT)				✓

System Maintenance Guidelines

Quick Check Test

Perform with a new or clean Fibrette Optical Component.

V2 Passing Criteria: %T at 35.00% or greater.

V3/ViPER Passing Criteria: %T at 70.00% 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.

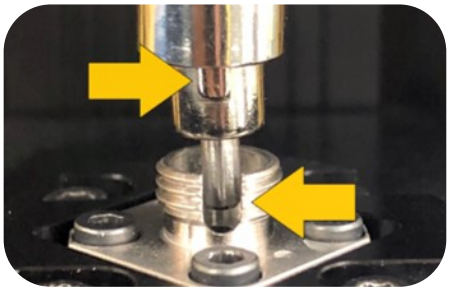
Silica Vessels

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 (SoloVPE Instrument)

See Section 4 in DOC0126 *SoloVPE User Manual (V3 Software)* for cleaning Delivery Fiber surfaces.

- Disconnect the Delivery Fiber from the SoloVPE System by turning the nut counterclockwise.
- Fold a lint-free wipe 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 Spectrophotometer

Restart the Cary once a week. 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 (V3/ViPER only)

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

Biannual System PM & Service Contract

Both services provided by Repligen.

repligen.com

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REPLIGEN

Check out our support portal for help resources: https://ctech.repligen.com/support

Recommended Volumes			
Vessel Size	**Concentration Range**	**Sample Type**	**Volume**
Micro	0.1 mg/ml to 330 mg/ml	Antibody/Protein	60 µl
Small (Fused Silica & Plastic)	0.1 mg/ml to 330 mg/ml	Antibody/Protein	120 µl
Large	0.1 mg/ml or less*	Antibody/Protein	2.5 ml

*The volumes listed cover the maximum pathlength of the vessel. Large vessels are typically used to measure dilute samples of 0.1 mg/ml or less.

Helpful Tips: Best Practices for Use

Regarding Cleaning or Low %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:

For Version 2, there should be a %T value of more than 35.00%. For Version 3 and ViPER, there should be a %T value at or more than 70.00%. Always retest the sample with a new Fibrette Optical Component.

Quick Set Fibrette Coupler:

Insert the Fibrette Optical Component until it stops. It is equipped with SureSet Fibrette Optical Component technique allowing consistent loading. Actuate Quick Set Coupler by pushing it up and releasing to set the Fibrette Optical Component.

TBA (Legacy) Coupler Fibrette Installation:

Remember “Up to stop, then down a drop.” Fibrette Optical Component loading is an important part of SoloVPE System use. It is critical to remember to pull the Fibrette Optical Component down slightly (2–10 mm) after it touches the Delivery Fiber. **It is better to err on the side of pulling down too much rather than too little**, especially when measuring highly concentrated compounds. When wearing gloves, users can mistakenly feel the displacement of the glove rather than the Fibrette Optical Component.

Baseline Correction

When making slope-based concentration measurement, 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 and if the slope is **greater than** 0.01 at the WL of interest, then baseline correction is recommended for higher concentrated samples.

When baseline correction is necessary, it is recommended that the **same Fibrette Optical Component be used 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 SoloVPE instrument with a lint-free wipe or dry with canned air.