




SoloVPE Best Practices

Recommended Steps For Maintenance, Cleaning and Proper Use

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System Maintenance

Daily	Weekly
<ul style="list-style-type: none"> • Perform a Daily Quick Check test: (%T <35%) • Vessels: Clean after each use. Follow your current procedure for quartz vessel cleaning. Water rinse followed by cleaning agent (Hellmanex, Methanol, or Ethanol. Rinse then dry. <div style="display: flex; align-items: center; margin: 10px 0;">  <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>Dilute concentrated Hellmanex in water to make a 2% solution</p> </div> </div> <ul style="list-style-type: none"> • Fibrettes: After each use of a fibrette you will store them in distilled water in a neoprene tube or soft container to keep them wet. <ul style="list-style-type: none"> ○ At the end of the day pour out water and fill tube with cleaning agent and let soak for 2 to 5 minutes. ○ Pour out solution and lay fibrettes out on paper towel to dry. ○ Wipe entire length of fibrette with a Kimwipe then SPIN BOTH ENDS on a folded Kimwipe. ○ Place the fibrette back in the clean tube for future use. <p><u>Fibrettes are not to be stored in water for longer than two days.</u></p>	<ul style="list-style-type: none"> • Cary Spectrophotometer: Restart the Cary once a week. This is recommended by Agilent for consistent performance. • Solo VPE: See Pg. 33 in Manual (cleaning fiber surface) <ul style="list-style-type: none"> ○ Disconnect Delivery Fiber from SoloVPE turning the nut counter-clockwise. ○ (Optional) Use compressed air over connector surface ○ Fold a Kimwipe and firmly wipe the surface of the fiber connector surface in one direction a few times. ○ Reconnect Delivery Fiber making sure the connector key is properly positioned in the Delivery Fiber mount and tighten by turning nut clockwise ○ With no Vessel and no Vessel holder installed, blow compressed air across the Detector Window in the Sample Platform. Clean with a Kim Wipe if necessary. • Perform All Daily Maintenance Steps
Monthly	Annually
<ul style="list-style-type: none"> • Perform All Daily and Weekly Maintenance Steps • Run provided calibration standard CHEM013 or your current UV calibration solution. (ex: BSA) 	<ul style="list-style-type: none"> • Annual System PM performed • Service Contract <p style="text-align: center;"><i>Both Services Provided by C Technologies, Inc</i></p>

If issues arise during the performance of these procedures, contact the System Owner, Maintenance Group or the Vendor.
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Recommended Volumes

Vessel Size	Concentration Range	Sample Type	Volume
Micro	10mg/ml to 330mg/ml	Antibody / Protein	10ul / 20ul
Micro	1mg/ml to 5mg/ml	Antibody / Protein	30ul / 50ul
Micro	.1mg/ml to .9mg/ml	Antibody / Protein	100ul
Small			
Small	10mg/ml to 330mg/ml	Antibody / Protein	20ul/30ul
Small	1mg/ml to 5mg/ml	Antibody / Protein	50ul / 100ul
Small	.1mg/ml to .9mg/ml	Antibody / Protein	150ul / 200ul
Large			
Large	.1mg/ml to .9mg/ml	Antibody / Protein	1ml
Large	.01mg/ml to .05mg/ml	Antibody / Protein	1.5ml
Large	.001mg/ml to .005mg/ml	Antibody / Protein	2.0ml
Peptide			
Micro	10mg/ml to 80mg/ml	Peptide	10ul / 20ul
Small	.5mg/ml to 1mg/ml	Peptide	30ul / 50ul
Small	.01mg/ml to .1mg/ml	Peptide	80ul / 100ul

Best Practices for Use and Helpful Tips

Most Common Red Flag Regarding Cleaning or Low %T: If you start to see poor R^2 values, (less than .999) during measurements on samples you have had a successful history with could it could be a sign that something is dirty. Follow the [daily procedure](#) and clean the optical fiber. Remember you want to see a %T value over 35% when using Quick Check. Now re-test the sample with new fibrette.

Fibrette Installation: Remember “Up to stop, then down a drop”. Fibrette loading is an important part of SoloVPE use. It is critical to remember to pull the Fibrette down slightly (2-8 mm) after it touches. *It is better to err on the side of pulling down too much rather than too little*, especially when measuring highly concentration compounds. When wearing gloves users can mistakenly feel the displacement of the glove rather than the Fibrette.

Keep It Clean: Like all spectroscopy measurement systems, cleanliness is critical. Always makes sure to use clean Sample Vessels and Fibrettes when making measurements. Follow the recommended cleaning procedures and schedules.

Baseline Correction Required? When making *Slope* based concentration measurements, frequently Baseline Correction is NOT Required. When there is no pathlength dependent absorbance contribution by buffer components at the method wavelength (e.g Water) Slope based method will yield equivalent results without performing Baseline Correction which saves times and consumables. * **Run your buffer using Quick Slope and if your Slope is “0” at your WL of interest then Baseline Correction is not required.**

When Using Baseline Correction: When Baseline Correction is necessary, it is recommended that the **SAME FIBRETTE** be used for the Baseline acquisition and the Sample Data acquisition. Simply perform gentle wipe of the Fibrette while loaded in the SoloVPE with a Kimwipe or dry with canned clean air.