Introduction

For some applications a Solid Secondary Standard is available to track to provide a quick and easy way to validate instrument performance of both the *Aqua*Fluor and Trilogy. A secondary standard contains a stable fluorescent material that is intended to give you consistent repeatable readings.

P/N 8000-952 Adjustable Solid Secondary Standard (Red). For use with Chlorophyll, Rhodamine, Phycocyanin and Phycoerythrin channels/modules **ONLY**.

P/N 8000-951 Adjustable Solid Secondary Standard (Orange). For use with Fluorescein channel/module **ONLY**.

Using the Secondary Solid Standard

1. Calibrate your instrument with a known liquid standard as outlined in the User's Manual.

2. After calibration of the instrument, take the adjustable secondary solid standard from its storage case. Using the 0.05" Allen Wrench provided, loosen the locking screw on the back of the secondary standard by turning it counterclockwise one turn. See photo 1.

Photo 1. Loosening the locking setscrew on the backside of the adjustable secondary standard

3. Place the adjustable secondary standard in the fluorometer sample compartment with the handle towards the rear of the instrument. See photo 2.

Photo 2. Placing the adjustable secondary standard in the instrument

4. Press read on the instrument and wait 10 seconds, then record the value.

5. You can use the 3/32" Allen Wrench provided to adjust the attenuation screw through the hole at the top of the secondary standard to increase or decrease the fluorescent response value. Turning the screw counterclockwise will increase the response value and vice versa. See Photo 3.

Photo 3. Adjusting the value on the secondary standard by turning the attenuation screw.

6. Repeat steps 4 and 5 until the secondary standard reads to a desired concentration value of interest, such as a similar fluorescent response given from a calibration from a liquid standard or a value you set yourself. Record the secondary standard reading for future reference.

7. At this point, remove the solid standard and turn the locking setscrew clockwise until it just makes contact with the attenuation screw.

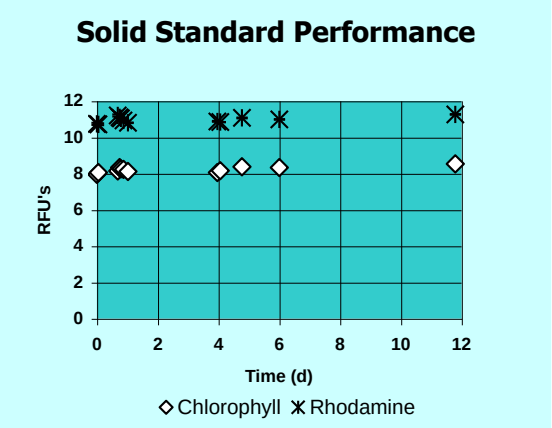
NOTE: DO NOT OVERTIGHTEN or remove either hex screw on the Solid Secondary Standard, overtightening may damage the standard.

8. Proceed with analyzing your samples.

9. You may use your adjustable secondary standard at any time to check the stability of the fluorometer. Simply insert your standard to read the value. The value should be similar to what was previously obtained in step 6 above or within a set tolerance set by applicational needs.

Care and Storage

The Solid Secondary standard should be stored in a dark, dust-free environment. Take care not to introduce foreign objects or liquid into the aperture of the solid standard. Such items can significantly affect the fluorescence response of the standard. Prevent changing of the solid standard response by putting a small tape over the hex opening as a reminder. Fluorescent values will change with calibration of the instrument, so it is important to verify new Solid Secondary Standard readings after calibration and not reuse readings from before or older calibration data.



Example Solid Standard Calibration Record

Date	Instrument S/N	Module/ Channel	Units	Blank %FS	Cal Std %FS	Solid Standard Reading