



# Products Accessories



## RED Solid Secondary Standards for Chlorophyll *a* & Rhodamine Analysis

for the 10-AU, TD-700, and Model 10 Fluorometer



Preparing primary standard for Chlorophyll *a* or Rhodamine WT analysis can be troublesome as well as time consuming. Handling of concentrated solutions should be minimized since they are temperature and photosensitive. Stability of the final standard is always a concern. Solid Secondary standards circumvent some of these concerns, especially in field applications where there is little time and few resources to prepare new standards or examine the stability of existing standards. This product provides a simple, stable, and less expensive alternative to multiple calibrations with of a primary standard. Once the instrument is calibrated with a primary standard, the solid secondary standard can be used effectively for calibration, with only occasional verification with a primary standard. Thus, solid secondary standards make it simple to check for instrument drift and to perform routine recalibrations. Turner Designs now offers solid secondary standards, sealed in a holder, that contains two ready-to-use fluorometric standard concentrations: one high-level and one low-level concentration equivalent.

### Features of the Solid Secondary Standards

10-AU: P/N 10-AU-904, Model 10: P/N 10-404, TD-700: P/N 7000-994

- **Saves Time and Money.** Preparation of primary standards are capital and labor intensive. Purchasing premade primary standards each time you calibrate is extremely costly. Traditional secondary standards are often used to decrease costs, but can require special handling and preparation time. Our solid secondary standards are stable and ready to use upon arrival with no preparation needed.
- **No Special Storage Conditions.** The solid secondary standards can be stored in a drawer or on the benchtop. They are not photosensitive or temperature sensitive. Degradation is minimal after years of environmental exposure.
- **Guaranteed.** The solid secondary standards are guaranteed for two years after arrival in your lab.

### Calibrating with the Solid Secondary Standards:

1. Calibrate your fluorometer with a known primary standard.
2. With the 10-AU, insert the 13 mm adaptor if you have not already done so.
3. With the TD-700, remove the sample adaptor.
4. Insert the solid secondary standard and record the reading for low

concentration. Rotate your standard and record the reading for high concentration. Record these numbers on the log sheet included with your standard.

5. Future instrument calibrations or checks may be performed by using the solid secondary standards and values obtained in step 3.

### Relative Concentration of the Solid Standard

| <b>10-AU</b>  | <b>Chlorophyll (10-040 kit)</b> | <b>Rhodamine WT(10-041Rkit)</b> |
|---------------|---------------------------------|---------------------------------|
| High          | ~ 40 µg/L                       | ~ 5 ppb                         |
| Low           | ~ 6 µg/L                        | ~ 0.6 ppb                       |
| <hr/>         |                                 |                                 |
| <b>TD-700</b> | <b>Chlorophyll (10-040 kit)</b> | <b>Rhodamine WT(10-041Rkit)</b> |
| High          | ~ 120 ppb                       | ~ 15 ppb                        |
| Low           | ~ 15 ppb                        | ~ 1 ppb                         |

These are approximate values. Values will vary from standard to standard and instrument to instrument due to slight variations in alignment.

**Turner Designs manufactures more fluorimeters and research grade luminometers than any other company in the world.**

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