

# Full Sonde Calibration Log Sheet

Sonde ID: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Calibrator's Initials: \_\_\_\_\_  
Battery Check (V): \_\_\_\_\_ Field User's Initials (if different from Calibrator): \_\_\_\_\_  
Temperature (°C): \_\_\_\_\_ *Temperature must be recorded for all Calibrations  
(even single probe calibrations)!*

## DO Probe Calibration

### Routine Maintenance Checklist:

1. *Check the age of the DO probe. It should be no more than 2 years old for 600 XL YSIs (5-7 years for 556 YSIs). First 3 characters of Serial # \_\_\_\_\_  
Is it too old?  Yes or  No*
2. *Is the D.O. Membrane > 30 days old?  Yes or  No If so, it needs to be changed regardless of the amount of use it has seen.*
3. *For those sondes that have it, is the D.O. charge <100?  Yes or  No  
If not, then resurface the probe's electrodes with sandpaper.*

Atmospheric Pressure (mm Hg): \_\_\_\_\_  New DO Membrane Installed  
Initial % Sat: \_\_\_\_\_ Final % Sat: \_\_\_\_\_  
Initial DO (mg/L): \_\_\_\_\_ Final DO (mg/L): \_\_\_\_\_ DO Charge: \_\_\_\_\_

## Specific Conductance Probe Calibration

### Routine Maintenance Checklist:

1. *For best accuracy, Specific Conductivity should be calibrated according to the expectations of the streams/sites you will be sampling. It may be necessary to recalibrate between streams/sites due to extreme differences between streams/sites (e.g., 1000 vs. 10000  $\mu\text{mhos/cm}$ ). Was Specific Conductance calibrated accordingly?  Yes or  No*
2. *Be sure to check the age of the Specific Conductivity probe. It should be no more than 3 years old. First 3 characters of Serial # \_\_\_\_\_  
Is it too old?  Yes or  No*

Conductivity Solution ( $\mu\text{mhos/cm}$ ): \_\_\_\_\_  
Initial Sp Cond ( $\mu\text{mhos/cm}$ ): \_\_\_\_\_ Final Sp Cond ( $\mu\text{mhos/cm}$ ): \_\_\_\_\_  
Low-End Sp Cond Check (i.e., <5  $\mu\text{mhos/cm}$ )  
Solution:  Deionized or  Distilled Water Sp Cond ( $\mu\text{mhos/cm}$ ): \_\_\_\_\_  
Monthly Mid-Range Sp Cond Check (e.g., 500 or 1000  $\mu\text{mhos/cm}$ )  
Conductivity Solution ( $\mu\text{mhos/cm}$ ): \_\_\_\_\_ Sp Cond ( $\mu\text{mhos/cm}$ ): \_\_\_\_\_

## pH Probe Calibration

### Routine Maintenance Checklist:

1. **Be sure to check the age of the pH probe. It should be no more than 12 to 18 months old. First 3 characters of Serial # \_\_\_\_\_**  
**Is it too old?  Yes or  No**
  
2. **If the pH probe has electrodes that can be refreshed with new Reference Solutions and Tablets, check them to see if they need refreshed. Was new pH Reference Solution & Tablet Installed?  Yes or  No**

**IMPORTANT: If the streams/sites you will be sampling are expected to fall within the same pH range (i.e., 4-7 vs. 7-10), pH should be calibrated using a two-point calibration for best possible accuracy. Should a stream site fall outside of the calibrated pH range, then on-site recalibration is necessary. If expectations are unknown, use a three-point calibration.**

Initial pH (7): \_\_\_\_\_ Final pH (7): \_\_\_\_\_ mV (7): \_\_\_\_\_ (0 +/- 30 mV)

3. **The pH 7 mV should be in a range of +/- 30 mV. Between +/- 30-50 mV, the probe is still useable, but should be monitored closely for irregularities with the ranges of mV on the 10 and/or 4 buffer solutions. After +/- 50mV, the probe should no longer be used. Is the pH 7 calibration showing an acceptable range?  Yes or  No**

Initial pH (10): \_\_\_\_\_ Final pH (10): \_\_\_\_\_ mV (10): \_\_\_\_\_ (-180 +/- 30 mV)

Initial pH (4): \_\_\_\_\_ Final pH (4): \_\_\_\_\_ mV (4): \_\_\_\_\_ (+180 +/- 30 mV)

4. **Is the Nernst Equation (mV ranges) OK for all the calibration points?  Yes or  No**

### Probe Maintenance Info

Probe Installed:  New or  Used      Probe Type:  pH  DO  Temp/Sp. Cond.

Probe Model #: \_\_\_\_\_ Probe S/N: \_\_\_\_\_

Calibration/Maintenance Notes: \_\_\_\_\_

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