

pH Calibration and Determination

(Hach SensionTM 156 meter)

PRE-CALIBRATION

- Pre-calibration reading: Record the pH readings for both Yellow (pH7) and Red (pH 4) pH standards (Just like you do the Calibration Check before doing the sample measurements; details in the field manual). Use the Calibration standards (that you keep at home) and not the field LCS standards from the kit.

CALIBRATION

- Always read pH 7 first then pH 4.
- Turn the instrument on. From the pH reading mode, press the CAL button. CAL and flashing ? and Standard 1 will appear on the screen.
- Place the pH electrode in the pH 7 Std solution. Gently stir the probe.
- Press READ. The instrument will automatically recognize the calibration standard value.
- When the reading has stabilized the standard number on the display will change to 2 with a flashing ?.
- Remove the probe from the pH 4 std, rinse it with deionized water, blot dry and place in the pH 4 std and press READ.
- Now the displayed standard number will change to 3 with a flashing ?. To accept the calibration, press EXIT.
- The **slope value** and the Store and ? icons will appear. Check the slope value against the acceptable limit of $-58 \pm 3\text{mV}$. If it is within the range, record the value. If it is out of the range, recalibrate.
- Press ENTER to accept and save the calibration. Do not press EXIT as that will cancel the calibration without saving it.
- After the new calibration has been saved, reread the pH 7 and 4 standards once again to check the calibration (as you did in the PRE-CALIBRATION; see above). This reading will be your post calibration reading.
- Record the information in pH calibration datasheet.

Waccamaw River Volunteer Monitors' Standard Operating Procedure: KCH 011009

SETUP

- Turn on the meter and press the pH key.
- Press the SETUP key.
- Use the up and down arrow keys to scroll between the desired options.
- If needed, set the time, date and year from the setup option 1, 2 and 3 respectively.
- Otherwise, scroll down to the setup option 4 to change the temperature units. Press ENTER to toggle between °C and °F. The default is °C. When the desired option is selected, press EXIT to return to the reading mode.
- Press SETUP and go to the setup 5 (display lock). Press ENTER to toggle between lock off and on. When the desired option is selected, press EXIT to return to the reading mode.
- Set up 6 allows you to set the measurement resolution. Choose from 0.0, 0.00 and 0.000 by pressing ENTER. With your selection being displayed on the screen scroll up/down or press exit to return to the reading mode.
- Similarly, set the set up number 7 (Auto buffer recognition) to the buffer value of 7.00. Default is 7.00. Make sure that it is not set on 6.86.