**pH Calibration**  
(Hach SensION™ 156 meter)

**PRE-CALIBRATION**

1. Loosen the screw top cap and remove the pH probe from the storage solution bottle.

2. Rinse the probe with deionized (DI) water then blot it dry with the soft Kim wipes provided in the sampling kit.

3. Replace old solution with fresh solution of pH 7.00 Primary Calibration Standard (PCS). Rinse the PCS field container once with fresh PCS from your large bottle of PSS. Discard the rinse, then fill and tightly cap the container. You can dispose of used CCS by pouring down the sink or toilet.

4. Dip the pH probe into the container with the fresh pH 7.00 solution. Make sure the probe is properly submerged. Stir the probe gently a few times to dislodge air bubbles, if any.

   NOTE: Take care to blot the probe dry following rinsing with deionized water so as not to contaminate the pH standards.

5. Press the power/exit key on the SensION™ 156 meter to turn the meter on. If you don’t see pH on the screen, press the pH key (button #6) to put the meter into the pH measurement mode.

6. Once the meter is set to read pH, press the READ/enter key.

7. Wait for the reading to stabilize (Stabilizing…. will appear on the screen). The reading has stabilized once the lock icon appears on the display and the meter beeps.

8. Record the reading on the pH calibration sheet in the pre-calibration column.

9. Remove the probe from the pH 7.00 Calibration Standard, rinse the probe with DI water, blot it dry.

10. Repeat steps 3-7 using the pH 4.00 Primary Calibration Standard (PCS) and record the information on the pH calibration sheet in the pre-calibration column.

**CALIBRATION**

1. Always read pH 7.00 Calibration Standard (CS) first then pH 4.00 CS.

2. With the meter still on, rinse the probe with DI water and blot it dry with the soft Kim wipes provided in the sampling kit.
3. Open the pH 7.00 Calibration Standard (CS) and dip the pH probe into the bottle. Make sure the probe is properly submerged. Stir the probe gently to dislodge air bubbles, if any.

4. From the pH reading mode, press the CAL button (button #6). CAL, a flashing ? and Standard 1 will appear on the screen.

5. Press the READ button. The instrument will automatically recognize the calibration standard value.

6. When the reading has stabilized, the standard number on the display will change to 2 with a flashing ?.

7. Remove the probe from the pH 7.00 standard, rinse it with DI water, blot dry, place the probe in the fresh solution of pH 4.00 standard and press READ button.

8. Now the displayed standard number will change to 3 with a flashing ?. To accept the calibration, press the EXIT button.

9. 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 on the pH calibration sheet. If it is out of the range, recalibrate using fresh standards that have been provided.

10. Press the ENTER button to accept and save the calibration. DO NOT press EXIT as that will cancel the calibration without saving it.

11. After the new calibration has been saved, re-read 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.

12. Record the information on the pH calibration datasheet.

13. The used pH 7.00 and pH 4.00 Calibration Standard (CS) solutions can be disposed of in the sanitary sewer (e.g., sink or toilet) following calibration.

14. Remember to refresh the Calibration Check Standard (CCS) solution for the pH Field Calibration Check (pH 6.00) and place the container in the sampling kit for sampling day field calibration check. Used solution can be disposed of in the sanitary sewer system (down the sink or toilet).

SETUP (only necessary if the meter is new or there is a memory malfunction):
1. Turn on the meter and press the pH key.

2. Press the SETUP key.

3. Use the up and down arrow keys to scroll between the desired options.

4. If needed, set the time, date and year from the setup option 1, 2 and 3 respectively.

5. Otherwise, scroll down to the setup option 4 to change the temperature units. Press ENTER to toggle between ºC and ºF. The default is ºC. When the desired option is selected, press EXIT to return to the reading mode.

6. 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.

7. 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 displayed on the screen, scroll up/down or press exit to return to the reading mode.

8. Similarly, set the setup 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.