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DNA WI-29 (pH Meter)	Document ID: 939
	Revision: 2
	Effective Date: 02/20/2015
Approved by Director: Dr. Guy Vallaro	Status: Retired
	Page 1 of 2

Electrode preparation

- 1. Remove Wetting Cap from electrode.
- 2. Clean any salt deposits from the electrode by rinsing with dH₂O.
- 3. Verify the Electrode Filling Solution is at least 2" high. If not, remove plug on fill hole and fill.
- 4. Leave the fill hole open during use and closed during storage.

Rinse (with dH₂O) and blot-dry electrodes between each measurement (**DO NOT WIPE**).

Standardizing for pH measurment

- Standardize before each use.
- Standardize meter and electrode using at least 2 buffers with pH values bracketing the expected pH of your samples.
- Stir with magnetic stir bar and stirrer for faster response.
- To escape from standardizing mode, press "Standardize" key again.
- 1. Clear existing buffers when doing a new standardization. Use the **setup** and **enter** buttons to clear the existing buffers.
- 2. Press and release the **mode** button until your digital display indicates pH mode.
- 3. Immerse electrode in a buffer solution. Stir gently. Allow the electrode to reach a stable value.
- 4. Press **standardize**. The meter flashes the current buffer set and recognizes the flashing buffer. When the signal is stable, or when you press **enter**, the buffer is entered.
- 5. The meter displays the percent slope of the electrode as 100.0% on the first buffer.
- 6. To enter a second buffer, place the electrode in the second buffer solution, stir, allow time for the electrode to stabilize, and press **standardize** again. The meter recognizes the buffer.
- 7. Next, the meter performs a diagnostic test of the electrode. The display indicates electrode condition. The meter displays the % slope of the electrode.
- 8. **Slope Error** indicates that your electrode is not working properly. The electrode response must be between 90 and 105% slope. Measurements causing slope error are not accepted, used or stored by the meter. Press **enter** to continue if error occurs.
- 9. To enter a third standard, place the electrode in the third buffer solution, stir, allow to stabilize, and press **standardize**. The results will be the same as in steps 7 and 8.
- 10. After entering each buffer, the *Standardizing* icon goes off and the *Measuring* or *Stable* icon appears on the display to indicate that the meter returns to *Measuring* operation.
- 11. You can now measure the pH of your solution.

Electrode storage

Store electrode in its Wetting Cap containing 3M KCl. Use QR-267 for recording formulation of 3M KCL. A purchased solution of 3M KCL may also be used for electrode storage. DO NOT STORE IN WATER OR BUFFER!!!!

State of Connecticut Department of Emergency Services and Public Protection Division of Scientific Services

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