
	GILES CHEMICAL ~ PREMIER MAGNESIA		
	Company Procedure		
	Title: USP pH Meter Calibration and Maintenance	Number: L12-PR-100-015	
	Owner: Stephen Ballew	Revision: 1	
	Effective Date: 03/31/13	Page: 1 of 2	

1.0 Purpose

This SOP will address the basic procedure, and frequency for the calibration of the pH meter used for USP analysis.

2.0 Scope

This procedure applies to the USP pH meter. Calibration will be performed on the pH meter by QA Lab personnel on a daily basis, maintenance will be performed on a weekly basis.

3.0 Responsibility

QA Lab personnel are responsible for performing this procedure.

4.0 Safety Considerations

Wear safety glasses and lab coat when working in the lab.

Safety is a condition of employment. Employees are not authorized to work in an unsafe manner and are prohibited from harming the environment of the facility or community.

5.0 Materials/Equipment

- pH 4 calibration buffer
- pH 7 calibration buffer
- pH 10 calibration buffer
- Distilled water
- 3 - 150mL Beakers

6.0 Procedure



Calibration and Maintenance of the VWR Model SB20 pH meter (daily and weekly):

Daily Calibration:

1. Place the pH electrode into the pH 4.0 calibration buffer.
2. Press lower left key on the pH meter to turn the unit on.
3. Press the cal key and "calibrate" will be displayed in the lower field. "P1" will be displayed indicating it is ready for the first buffer point.
4. When "ready" flashes, record that value on *pH Meter Calibration and Maintenance Log (L12-PR-100-F015)*. And press "ok" to accept the pH value. "P2" will then be displayed.

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5. Rinse the electrode with distilled water and place the electrode into the pH 7.0 buffer.
6. When “ready” flashes again, record that value on *pH Meter Calibration and Maintenance Log (L12-PR-100-F015)* and press the “ok” key. “P3” will then be displayed.
7. Rinse electrode with distilled water and place the electrode into the pH 10.0 buffer.
8. When “ready” flashes again, record that value on *pH Meter Calibration and Maintenance Log (L12-PR-100-F015)* and press the “ok” key.
9. The display will freeze for 2 seconds, and then the slope will momentarily be displayed. Record the slope on *pH Meter Calibration and Maintenance Log (L12-PR-100-F015)*. The slope should be between 92-102%.
10. Meter will automatically advance to the measure mode. Rinse electrode and place into sample or storage solution.

Weekly Maintenance:

To be done before daily calibration

1. Inspect the electrode for scratches, cracks, salt/crystal build up, or membrane/junction deposits.
2. Rinse off salt build up with distilled water and remove any other deposits as indicated in manual.
3. Replace storage solution.
4. Record maintenance completion on *pH Meter Calibration and Maintenance Log (L12-PR-100-F015)* along with calibration data.

7.0 Reference Documents

USP pH Meter Calibration And Maintenance Log (L12-PR-100-F015)

8.0 Change Information

Updated using *SOP Template Instructions (Q12-PR-100-004)* and *Document Numbering (Q12-PR-100-003)*

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