
	GILES CHEMICAL ~ PREMIER MAGNESIA		
	Company Procedure		
	Title: USP pH Meter Calibration and Maintenance	Number: L12-PR-100-015	
	Owner: Stephen Ballew	Revision: 0	
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1.0 Purpose

- 1.1 A proper performed pH meter calibration is essential to get an accurate and repeatable sample measurement.

2.0 Scope

- 2.1 USP Monograph: Magnesium Sulfate, and General Chapter <791>.

3.0 Responsibility

- 3.1 Quality Associate is responsible for this procedure.

4.0 Safety Considerations

- 4.1 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



- 5.1 pH meter
5.2 4.0, 7.0 and 10.0 pH buffer solution

6.0 Procedure

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

6.1 Daily Calibration:

- 6.1.1 Place the pH electrode into the pH 4.0 calibration buffer.
- 6.1.2 Press lower left key on the pH meter to turn the unit on.
- 6.1.3 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.
- 6.1.4 When "ready" flashes, record that value on pH Meter Calibration Log. And press "ok" to accept the pH value. "P2" will then be displayed.
- 6.1.5 Rinse the electrode with distilled water and place the electrode into the pH 7.0 buffer.
- 6.1.6 When "ready" flashes again, record that value on pH Meter Calibration Log and press the "ok" key. "P3" will then be displayed.
- 6.1.7 Rinse electrode with distilled water and place the electrode into the pH 10.0 buffer.
- 6.1.8 When "ready" flashes again, record that value on pH Meter Calibration Log and press the "ok" key.

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- 6.1.9 The display will freeze for 2 seconds, and then the slope will momentarily be displayed. Record the slope on pH Meter Calibration Log. The slope should be between 92-102%.
- 6.1.10 Meter will automatically advance to the measure mode. Rinse electrode and place into sample or storage solution.

6.2 Weekly Maintenance: To be done before daily calibration

- 6.2.1 Inspect the electrode for scratches, cracks, salt/crystal build up, or membrane/junction deposits.
- 6.2.2 Rinse off salt build up with distilled water and remove any other deposits as indicated in manual.
- 6.2.3 Replace storage solution.
- 6.2.4 Record maintenance completion on pH Meter Calibration Log along with calibration data.

7.0 Reference Documents

- 7.1 *USP pH Meter Calibration and Maintenance Log* L12-PR-100-F015

8.0 Amendment Record

Revision Number	Revision Date	Revision Author	Revision Description
0	02/24/12	SB	New Document