

GILES CHEMICAL CORPORATION		
COMPANY PROCEDURE		
Standard Operating Procedure	Page : 1 of 2	Revision : Date : 3/6/06
Author: Carl Mooney, Jr.	Title: pH Meter Calibration for Digesters	

MANUF-TECH-04

**Safety:** Observe all area safety rules, in addition to wearing the proper PPE for testing.

**Purpose:** To outline steps to calibrate the pH meters on the plant digester.

**Procedure:**

1. Equipment:
  - a. 3 – 250 ml Plastic Beakers
  - b. Calibration buffers pH 4, and 7
  - c. Deionized water
  - d. pH meter with electrode
  - e. wipes or tissue
2. Set-up and procedure
  - a. Inform the lead operator that you are going to calibrate the pH probes on the digesters.
  - b. Follow Technical procedure MANUF-TECH-01, stopping the digester.
  - c. Pour buffers and water in the beakers
  - d. After stopping the digester, remove the probe from the holder, clean with DI water and brush and wipe dry with tissue.
  - e. Place in 4 buffer and observe the reading.
  - f. Press the Cal button on the controller box.
  - g. “0000” should appear in the screen. The first 0 is blinking
  - h. Press the up arrow to enter 1, then press horizontal arrow, the next 0 blinks, press the up arrow again and the readout should now show “1100”, now press enter.
  - i. Cal-1 appears on the screen. Since the probe is in pH 4 buffer already just press enter.
  - j. The meter should read the buffer for pH and mv after completing the process the meter will show Cal-2
  - k. Remove the probe from the pH 4 buffer solution, rinse with clean DI water, dry with a tissue, then place in pH 7 buffer.
  - l. Press enter then reads the pH and mv. After completing the test, the slope will appear on the screen. 90% and above is acceptable. 85 to 89% must discuss with Technical. Below 85% troubleshoot the system and replace the probe.
  - m. After successfully calibrating press enter two times.
  - n. Observe the reading in the buffer solution.
  - o. Remove probe from buffer solution and rinse with DI water.
  - p. Insert the probe back in the holder and check pH reading against the pH paper.
  - q. Follow the procedure to restart the digester.
  - r. Inform the Lead operator that you have completed the calibration.
  - s. To calibrate the pH probes on the second digesters, stopping the digester is not required – just follow steps e-p.
  - t. Conduct this calibration procedure at least weekly, or as often as needed.

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### TRAINING DOCUMENTATION

	EMPLOYEE	TITLE	SIGNATURE	DATE
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