











SOP: SP023.1
Modified: 3/5/18 by MCL

Operation of (Symphony) pH meter

Materials and Reagents:

1. pH meter
2. Sample to be analyzed
3. Magnetic stir plate
4. Magnetic stir bar
5. Appropriate acid or base to adjust pH
6. pH 4, 7, 10 calibration buffers (Beckman 582517, 582521 and, 582525 respectively)
7. ddH₂O water bottle
8. Discard beaker
9. 3M KCl probe storage buffer (Corning 47706)

Key Description			
 power	 up arrow	 line select	 view log
 calibrate	 down arrow	 setup	 stir
 measure	 digits		

Protocol:

1. ____ Press **Power** button (once on, the **Power** button toggles LCD backlight on/off).
2. ____ Press **Calibrate**.
3. ____ Select two appropriate calibration buffers to bracket expected sample pH.
4. ____ Thoroughly rinse probe with ddH₂O, place in the first calibration buffer.
5. ____ When the **pH** icon stops flashing, press **Calibrate** to confirm (note 1).
6. ____ Thoroughly rinse probe with ddH₂O, place in the second calibration buffer.
7. ____ When the **pH** icon stops flashing, press **Measure** to save and end calibration (note 2).
8. ____ Thoroughly rinse probe with ddH₂O and place in stirring sample to be analyzed. The **pH** icon will stop flashing when the reading is stable (note 3).
9. ____ Adjust sample pH to desired point with appropriate acid or base.
10. ____ Thoroughly rinse probe with ddH₂O and place in probe storage buffer (note 4).
11. ____ Press and hold the **Power** button to turn off (note 5).

Notes:

1. If calibration is not accurate, use the **Up** and **Down** keys to set proper pH (use **Digit** key to correct each digit).
2. The pH meter will briefly display the slope value of the calibration. The slope value should be greater than 95%. If the slope is less, the calibrations buffers may need to be replaced.
3. If the pH meter is in AUTO-READ measurement mode (AR icon appears on the screen), the display will freeze and the **Measure** button must be pressed again to continue reading.
4. pH probe must be stored submerged in storage buffer when not in use.
5. The meter will shut off automatically after 20 minutes without a keypress.