
pH 6.4

The pH of an aqueous solution is controlled by interrelated chemical reactions that produce or consume hydrogen ions (Hem, 1985). Water pH is a useful index of the status of equilibrium reactions in which water participates (Hem, 1985). The pH of water directly affects physiological functions of plants and animals, and it is, therefore, an important indicator of the health of a water system.

- ▶ pH is reported on a scale that most commonly ranges from 0 to 14 and that is directly related to the ratio of hydrogen (H^+) and hydroxyl (OH^-) ion activities at a given temperature.
- ▶ A solution is considered acidic if H^+ activity is greater than OH^- activity (pH less than 7 at 25°C); a solution is considered basic, or alkaline, when OH^- activity is greater than H^+ activity.
- ▶ Carbon dioxide (CO_2)-free water at 25°C is considered neutral because activities of H^+ and OH^- are equal.

pH: a measure representing the negative base-ten logarithm of hydrogen-ion activity of a solution, in moles per liter.
