**Soil pH (1:2 dilution)**

**Overview**

Soil pH is a measure of the hydrogen ion activity in soil solution. This measure is generally considered an index of the acid or base intensity of a soil. The pH reading is a product of complex electrode behavior with the soil suspension and differences in soil:solution ratio, electrolyte concentration of the soil suspension, and spatial placement of the electrode can affect this reading (Mclean 1982). Soil acidity has a direct effect on the plant and is a major factor affecting nutrient availability to plants.

**General Procedure**

Weigh out 10 g of field moist soil into a labeled extraction cup. Cups are capped after weighing to avoid moisture loss. Using a repeat pipette or pump, 20 ml deionized water is added to each cup and shaken for a few seconds. The cap is removed to allow the solution to equilibrate with the atmosphere for at least 30 minutes. The pH meter is standardized at pH 7 and 4.

While gently swirling the slurry the electrode is placed into the slurry. pH is measured to the nearest 0.01. Between samples the electrode is rinsed with deionized water.

**Materials**

* pH meter
* Extraction cups
* Deionized water

**Procedure**

* Weigh 10 g field moist soil into an extraction cup.
* Add 20 ml of deionized water.
* Gently swirl cups to form soil slurry.
* Remove caps at least 30 minutes before measuring pH.
* Standardize pH meter using pH 7 and 4.
* Gently swirl the soil slurry while taking measurement.
* Record pH to the nearest 0.01.
* Record in your metadata sheet for your project, backup in OneDrive

**References**

Mclean, E.O. 1982. Soil pH and line requirements. In Methods of Soil Analysis, Part 2. Chemical and Microbiological Properties. Ag. Monograph No. 9, 2nd edition.