



## pH OF SOIL AND TOPSOIL

### 1. SCOPE

- 1.1 This method covers the procedure for determining the acidity or alkalinity of topsoil and soil for agricultural or engineering purposes.

### 2. APPARATUS

- 2.1 *pH Meter* – The pH meter shall be capable of electrometric pH measurement of aqueous solutions and mixtures using glass and calomel reference electrodes. The meter shall have a working range from 0.0 pH to 14.0 pH, with an accuracy of at least 0.2 pH.
- 2.2 Miscellaneous laboratory glassware and buffer solutions as required.

### 3. SAMPLE PREPARATION

- 3.1 Samples for pH determination shall be obtained from the materials to be tested by use of a sample splitter or by quartering.
- 3.2 The samples for testing may be in air-dry or naturally moist condition. The use of saturated samples for testing should be avoided.
- 3.3 Samples containing silt and / or clay lumps shall be pulverized prior to testing.

### 4. PROCEDURE

- 4.1 Place 7.0 - 8.8 ounces (200 – 250 grams) of sample into a 11.8 fl oz. (350 mL) beaker
- 4.2 Add approximately 6.8 fl oz. (200 mL) of distilled water
- 4.3 Stir the mixture until the soil is dispersed.
- 4.4 Let the mixture stand for 20 minutes.
- 4.5 Stir the mixture again.
- 4.6 Let stand for an additional 10 minutes.

4.7 Stir again, and immediately make the pH measurement. *The procedure used to make the measurement shall be in accordance to methods and instructions provided by the pH meter manufacturer.*

4.8 Report the results of the pH measurement in pH units to the nearest tenth.