

Soil pH

Knowing the pH of your soil is important as it affects the availability of nutrients needed for healthy plant growth. In this exercise you will measure the pH of the soils using the saturation paste method to prepare the sample.

1. Fill 12 ounce Dixie Cup 2/3 full of your soil.
2. Add small amounts of distilled water while stirring.
3. Continue adding water until the paste is the consistency of brownie batter. It should flow freely off your stirrer and glisten.
4. Measure the pH by gently inserting the pH probe into the paste.
5. Record your pH: _____

Carbonates

Carbonates are commonly found in San Diego soils especially on the mesas. Excess carbonates will inhibit the uptake of metals such as iron, zinc, manganese and copper and is commonly referred to as Lime Induced Chlorosis. Knowing if your soil has carbonates is important in planning your amendment schedule, such as sulfur and compost. With citrus and avocado trees it may be necessary to apply foliar nutrients to correct deficiencies.

1. Add about a tablespoon of soil to the small container.
2. Squirt a small amount of acetic acid onto the soil.
3. Record fizzing reaction: _____

Solvita Test for Natural Soil Respiration

This test measures the release of Carbon Dioxide from your soil sample. Measuring the quantity of CO₂ efflux from your soil is an indicator of biological activity. It is done on a fresh sample soil that has been collected with a trowel or knife rather than a soil tube. We will be doing a modified version of the complete method, which can be found at <https://solvita.com/wp-content/uploads/2014/08/SOLVITA-SOIL-MASTER-manual-vers2016.1.0.pdf>. Because the test takes 24 hours, we will set up today and you can read the result tomorrow around noon.

1. Add 90 grams of soil to the Solvita cup.
2. Remove Solvita Testing Probe from the foil packet.
3. Place upright in cup and secure lid.
4. After 24 hours compare the color of the probe to the Visual Color chart below.
5. Record your Solvita CO₂ rating: _____



SOLVITA®

Use under Fluorescent Light

**Visual Color Key
for Low Level CO₂ Probe**

