

Woods End Releases Solvita® Soil Master for Measuring Soil Respiration in the Field

(Mt. Vernon, ME – April 14, 2016) [Woods End Laboratories](#), manufacturer of Solvita® [soil biology tests](#), has announced the release of [Solvita Soil Master](#), a field toolkit to test soil CO₂ respiration as naturally as possible with freshly-sampled soil. The application includes accessories that make it convenient for farmers and crop consultants to take soil biology samples in the field with minimal disturbance.

Why Measure Using the Solvita Soil Master?

As growers have become more interested in biological soil fertility (soil health), American soil labs have experimented with new soil biological test procedures. Many already offer a lab-based version of Solvita, which is conducted with regular nutrient testing. The Solvita Soil Master now makes it possible to sample fresh, moist soil (representing its natural state) right in the field.

Measuring soil respiration using freshly sampled soil that is not dried and ground can provide vital information regarding a soil's natural behavior. William Brinton, Ph.D., the kit's developer and founder of Woods End, said the idea came to him when working on field respiration of irrigated soils in Idaho. "We noticed that when the soil was over-irrigated, soil respiration dropped 70 percent. This means biological functioning and nutrient release to plants are being diminished temporarily. And, by the time samples can be taken, shipped and further processed in soil labs, these effects may no longer be observed."

How the Solvita Soil Master Aids in More Accurate Field Testing

The Solvita Soil Master seeks to minimize unnatural influences due to soil sampling and soil processing known to influence biology results. Laboratories standardize testing by drying, grinding and sieving samples to uniformity, which improves nutrient extraction. But, according to Brinton, "we now know that this kind of soil lab handling has a huge impact on soil biology." To help prepare homogenous samples without grinding, the Soil Master Kit employs a coarse soil sieve to gently remove debris and stones. The toolkit also includes a graduated soil knife instead of soil corer for taking samples; Brinton has found that soil corers compress and shear moist soil in a way that also affects natural soil respiration. Also included is a soil thermometer that is used to correct results from room temperature testing to actual field soil temperature. Woods End even provides a convenient online [calculator](#), where soil temperature and moisture factors can be entered. This results in a more accurate estimate of soil respiration's seasonal behavior and potential nutrient mineralization.

The Solvita Soil Master includes:

- Field Hand-Held Spectrometer
- 25 Solvita CO₂ Probes
- Miniature Digital Balance
- 4 Incubation Jars
- Soil Knife and Soil Thermometer
- Standard Soil Sieve and Soil Wire Brush
- USB Cable for PC Upload
- Interpretation Guide

