



Soil health in the palm of your hand

How alive is your soil?

There are more microbes in a handful of living soil than there are humans on this planet. Extremely small, yet enormously important, we are just now starting to truly understand how vital the symbiosis is between plants and these microorganisms.

Soil stewards all over the world are seeking to understand the microbial levels in their soil and the ratio of fungal to bacterial life. The higher the microbial biomass, the more nutrients will be available to plants naturally, decreasing or eliminating the need for chemical fertilizers.

Have you measured yours recently?

microBIOMETER® **NOW** gives you the total microbial biomass and breaks it down into the % fungal and % bacterial. This new data allows you to assess if your efforts to increase soil fungi are working. To know more about the benefits of fungi visit our website www.microbiometer.com and YouTube channel.

FAST AND AFFORDABLE

If you don't know your soil's microbial biomass, we can't fault you. Until now, reliable microbial biomass tests have been cumbersome, slow and expensive lab procedures. We are here to change this. Our test only takes 20 minutes to perform, yet accuracy is on par with lab tests costing 10 times as much.

EASY TO USE

Use microBIOMETER® anywhere. Mix sifted soil for 30 seconds in our reagent solution, let it settle for 20 minutes, place 3 drops on our test card, scan it with our smart phone app, and you are done – it really is that simple! Easy to follow instructions embedded in the app or see our

YouTube channel. Results are archived in and accessible from the cloud.

THE BENEFITS

Living soil fixes nutrients, resists stresses, and stores fertilizer and water more efficiently, which means microbes increase productivity while reducing inputs. Quantifying these microbes is crucial and with microBIOMETER®, it is now practical.

In addition, many growers use no-till, cover crops, organic fertilizers, or biological inoculates to try and build up their soil or growing medium. microBIOMETER® allows these growers to track their success. Whether you are growing conventionally or organically, microBIOMETER® is a powerful new tool that will help both your soil, and your bottom line.

“Finally, there is a way to measure if soil or related products actually team with microbes! The microBIOMETER® is an advancement in measuring soil food web activity that finally lets us know if our inputs are working. It is an invaluable new tool with tremendous potential to improve our soils.”

Jeff Lowenfels

Author of *Teaming with Microbes*, *Teaming with Fungi*, and *Teaming with Nutrients*.

PROLIFIC EARTH SCIENCES, INC.

We are experts in the field and in the lab. Our breakthrough technology was developed through the work of

- James Sottilo, a renowned sustainable landscape expert
- Judith Fitzpatrick, Ph.D., a microbiologist and medical device developer with 12 patents
- Brady Trexler, Ph.D., a neuroscientist and expert in computer vision

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US Patents 10,179,926 and 9,315,849 and pending

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microBIOMETER.com



GIVES YOU THE RESULTS IN 10 - 20 MINUTES

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Starter Kit

(10 Tests)

\$359 Inc GST+ freight

Refill Kits

(10 Tests)

\$195 Inc GST+ freight

Green Refill Kits

(50 Tests)

\$750 Inc GST+ freight

The most economical option, these Green Refill Kits include 50 tests but only 5 Vials & Pipettes which are reusable after thorough cleaning.

Vial & Pipette Kit

(10 Vials + 10 Pipettes)

\$15 Inc GST+ freight

microBIOMETER® Testing Procedure

microBIOMETER® measures the microbial biomass of soil, compost, and compost teas/extracts. It also calculates the fungal to bacterial ratio for soil and compost. This data allows you to track the health of your soil over time. Microbial biomass is calculated and displayed in micrograms of microbial-carbon per gram of soil ($\mu\text{g/g}$) and fungal to bacterial ratio is calculated and displayed as F:B, F% and B%. Instructions can be found directly in the app as well.

U.S. Patents 10,179,926, 9,315,849 and Patents Pending



www.microbiometer.com

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microBIOMETER® App

Create an account and log in to save data to the cloud as well as your device. (<https://www.prolificearthcloud.com>)

2

ADD EXTRACTION POWDER

Tear the powder packet open and place the extraction vial upside down on top of the open packet. Invert and tap to empty the contents into the vial.

3

ADD WATER (or compost tea or extract)

Use the small capped measurer to add **9.5 ml** of water or compost tea/extract to the extraction vial.

If using compost tea or extract, go to step 6.

4

COLLECT SOIL & SIFT

Obtain a composite sample of **MOIST** soil from the top 2 to 5 inches. Using the included sifter, shake to remove debris and collect the sifted soil in the provided plastic bag.

5

MEASURE SOIL

Fill the soil sampler syringe to **~1ml** with sifted soil. Compress against your finger to **0.5 ml**, remove any excess from the end, and eject into the extraction vial.

The accuracy of your readings depends on the consistency of the soil volume and compaction.

6

MIX

Compacted soil (especially clay) must be broken up using the included metal spatula. Allow the tube to rest in the hole in the kit, insert the whisker, turn on, and allow to mix for **30 seconds**. You do not need to touch the whisker while mixing.

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SETTLE

This occurs in **2 stages**. After mixing, allow the liquid to rest for **5 minutes**. Tap the bottom of the tube on a hard surface to coax floating debris to settle. Allow to settle for an additional **15 minutes**. Soil particles will settle to the bottom, creating a microbial suspension above.

8

SAMPLE MICROBES

Use a small pipette to draw up liquid from about half an inch below the surface. Squeeze the pipette before entering to avoid blowing bubbles. Avoid any floating debris and foam at the edges.

9

PLACE DROPS ON TEST CARD

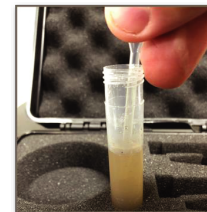
Carefully apply **3 drops** to the sample window. Allow each drop to soak in fully before applying the next.

Analyze with the app within **2 minutes**.

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ANALYZE WITH THE APP

Place the testcard on the appropriate spot on the backing card included in the kit. The app will first ask you to name the sample. Then it will automatically image the testcard and provide a reading. Align the blue square on the screen with the square on the testcard. When correct imaging is occurring the blue square turns green. A sample details screen will appear allowing you to enter sample specific information for your records.



Microbial Biomass Test Results:

<200 Low

200-400 Fair

400-600 Good

>600 Excellent