

Compost Technology Equipment

CMC soil and compost laboratory

CMC has no exclusive test methods, but has succeeded in the compilation of different test instruments under special criteria. The CMC MINI-LAB is one of the newest products out of this development. In the selection of materials and instruments, special care was given to practical use, durability, ease of cleanup, and naturally the quality of materials. The CMC MINI-LAB has been designed especially for quick tests in the field or at the compost site. Easy sample preparation, simple test methods, quick and applicable results, help the practitioner in his decisions and therefore, allow for immediate action and avoidance of mistakes.

The CMC MINI-LAB gives the farmer and gardener prompt answers over actual values in the soil - no more waiting for results from a test laboratory. Nitrogen in its different ionic forms or pH values may be tested exactly. Fertilizers can be applied precisely and therefore used optimally, which helps maximize efficiency and protect the environment from unnecessary pollution.

A composter also needs immediate answers about the quality of his product, unfinished compost can cause damage to both plants and the environment. Well matured compost, produced under the proper process controls however, can do wonders for better plant growth, disease and pest control, and soil improvement. With the CMC MINI-LAB compost can be tested quickly and easily for nutrient content, pH and phytotoxicity. *Mistakes on the judgment of compost quality can turn out to be quite costly and can be avoided by regular testing.*

A practical users manual is included with your CMC MINI-LAB, to get you off to an easy start on compost evaluation. Easier still, is to enroll in a CMC compost seminar.

Test parameters: Nitrogen (NO_3 , NO_2 , NH_4), pH, sulfide

Scope of supply: reagents necessary for sample preparation and analysis, electronic scale to 0.1 g accuracy, filter paper, different measuring cylinders and apparatus, precision pH-meter, robust, clearly arranged carrying case with cleanable, high quality foam



pH precision meter

The pH-value is an important factor for composting, lime application, tilling soils, choice of crop and rotation. In order to avoid inaccurate results, the pH value should be tested on site, or directly after sample was taken. This eliminates the basis for many false results right from the start. Timely results will also enable a farmer to take immediate action without having to wait for an analysis from an analytical laboratory.

Technical data:

Accuracy:	+/- 0.02 pH
Graduation:	0.01 pH
Range:	0 - 14 pH
Power:	9 V battery

Scope of supply:

- 1 pH meter incl. pH electrode,
- 2 buffering capsules incl. container



Options: different special electrodes, extra puffering capsules, 3mol KCL, solution for electrode storage, adapter for additional electrode

Oxygen/Carbon dioxide

Just like humans, microorganisms need sufficient oxygen to survive. Especially in the composting process, oxygen is an absolute necessity for a balanced microflora. Through microbial respiration, oxygen is consumed and carbon dioxide is produced. As soon as the O₂ content falls below a certain limit or the CO₂ concentration rises above a crucial point, the windrow has to be aerated. If a compost isn't aerated at the necessary time, the population of anaerobic microorganisms increases and the compost putrefies, producing offensive odours and high nutrient losses as a result. Composting-time also increases, and the final product quality is diminished considerably. With the simple CO₂ or O₂ test instruments, immediate answers are supplied. Through a specially designed extraction probe, the gas to be tested is pumped into the measuring cylinder. The plunger valve is then reclosed, the measuring cylinder inverted, and the readout taken. The instruments are very simple both use and service.

Technical data CO₂ meter:

Range: 0 - 20 Vol%
Accuracy: 0.2 Vol%
Graduation: 0.2 Vol%

Test fluid life: 300 - 500 tests

Refills for the CO₂ are very inexpensive, only pennies per test.

Technical data O₂ meter:

Range: 0 - 20 Vol%
Accuracy: 0.2 Vol%
Graduation: 0.2 Vol%

Test fluid life: 50 - 70 tests

Attention: The test fluid has to be disposed off properly (contains Chromium)!



Digital thermometer

The absolute must for any composter!

Compost has to be monitored for their temperature throughout the whole composting process. Temperatures of 65 °C should be reached but never exceeded. Nutrient losses and poor quality are the consequences of composts 'overheating'. Composts remaining at temperatures above 65 °C for a longer period, will burn valuable carbons and turn into 'invaluable ashes'. With the Compost Systems digital thermometer, the compost expert can judge the activity of his composts immediately.

Technical data:

Accuracy: +/- 1 °C
Graduation: 1 °C
Measurement at the tip
Range: - 50 °C to + 1150 °C
Battery: 2x AA
Tip: Ni-Cr-Ni
Probe: Stainless steel 800 mm

Scope of supply:

Instrument with thermo-couple, 3 ft cable, battery

On request:

Probe length in 1,200 mm or 1,500 mm

