



**FOR USE IN SOIL ONLY.
DO NOT USE IN ANY
LIQUIDS OF ANY KIND.**

TESTING SOIL

Preparation of the soil sample

Remove the top 2" of the surface soil. Break up and crumble the soil underneath to a depth of 5". Remove any stones or organic debris such as leaves and twigs because they can affect the final result.

Thoroughly wet the soil with distilled water to a mud consistency. Also see further advice, below.

Preparation of the probe

Using the specially supplied pad, lightly shine the probe, carefully avoiding the bullet shaped tip, to remove any oxides that may have formed on the surface of the metal.

Wipe the probe clean, always wiping away from the tip and towards the probe handle.

Taking a pH reading

Push the probe vertically into the moistened soil. If it does not slip into the ground fairly easily select a new position. Never force the probe.

Twist the probe clockwise and counter-clockwise between your fingers several times to ensure that damp soil is well distributed over the surface of the probe. Wait for **60 seconds** to acclimatize the probe and take the reading.

If the reading is pH 7 or higher

Remove the probe from the soil and wipe any soil particles from the surface of the probe. **Re-shine the probe** and insert back into the soil at a different point, avoiding the first hole made by the probe.

Twist the probe two or three times between the fingers, as before, and wait **30 seconds** before taking the final reading.

If the reading is below pH 7

Remove the probe from the soil and wipe any soil particles from the surface of the probe. **Do not re-shine the probe.** Insert the probe back into the soil at a different point avoiding the first hole made by the probe. Twist the probe two or three times between your fingers, as before, and wait 60 seconds before taking the final reading.

FURTHER ADVICE ON PREPARATION OF THE SOIL SAMPLE

In order to obtain an even more accurate result with the Soil pH Meter, the following procedure may be followed:

1. Take the sample of soil to be tested from the ground and remove stones and organic debris.
2. Prepare the sample by crumbling the soil into small particles.
3. Measure 2 cups of soil from the prepared sample.
4. Fill a clean glass or plastic container with 2 cups distilled water and add the measured soil sample.
5. Ensure the soil and water are thoroughly mixed and compact the sample firmly. Drain off any excess water.
6. Take your tests as detailed under the heading "Taking a pH reading."

TIPS ON TESTING

- Don't leave the probe in the soil longer than necessary because the metal electrodes may pit, with the possibility of damage to the meter mechanism.
- Ensure that the probe is wiped clean and well dried before storing in order to minimize the oxidation.
- Be sure to keep the probe away from metal objects.
- **USE THE METER ONLY IN SOIL. DO NOT PLACE THE PROBE INTO LIQUIDS OF ANY KIND.**

TROUBLESHOOTING

Erratic needle movement

- Stones or other organic matter touching the electrode.
- Sample area not sufficiently compacted
- Metal particles adhering to probe after cleaning.
- Soil not adhered to the probe sufficiently.
- Probe too close to the side and/or the bottom of the pot.

Sluggish or no response

- Probe requires cleaning.
- Sample area is too dry.
- Damaged or pitted probe.

SOIL ADVICE

Raising and lowering pH is not an exact science and most plants have a reasonably wide pH tolerance, certainly to within 1 pH point. The long list of pH preferences included indicates that while a majority of plants can survive on a pH around 6.5, some need a particularly acid or alkaline soil. Altering pH takes time. Do not expect rapid changes. Work steadily towards giving a plant its ideal conditions.

SOIL TYPES

Sandy Soils: A light, coarse soil comprised of crumbling and alluvial debris.

Loam Soils: A medium friable soil, consisting of a blend of coarse (sand) alluvium and fine (clay) particles mixed within fairly broad limits with a little lime and humus.

Clay Soils: A heavy, clinging, impermeable soil, comprised of very fine particles with little lime and humus and tending to be waterlogged in winter and very dry in summer.

ADDING LIME TO INCREASE pH

Lime can be added at any time of year but it does need time to take effect – which is why the autumn, winter and early spring are the preferred times. Hydrated lime may take effect in two or three months but ground chalk or limestone may take up to six months. Avoid adding lime at the same time as sulfate of ammonia, superphosphate, basic slag or animal manures. Lime may be used in combination with sulfate of potash or muriate of potash.

This table gives approximate amounts to alter soil pH by up to 1 point up or down the pH scale.

Material	pH Change	Sandy	Loamy	Clay
Dolomitic or calcic limestone	+0.5 unit (0.5 pH)	2.5	5	5.5
	+1 unit (1.0 pH)	5	8.5	11
Hydrated Lime	+0.5 unit (0.5 pH)	1.5 - 2	3 - 4	4 - 4.5
	+1 unit (1.0 pH)	3.5 - 4	6 - 6.5	8 - 8.5
Iron Sulfate	-0.5 unit (0.5 pH)	0.75	1.5	2
	-1 unit (1.0 pH)	1.5	3	4
Aluminum Sulfate	-0.5 unit (0.5 pH)	0.5 - 0.75	1 - 1.25	1.5
	-1 unit (1.0 pH)	1 - 1.25	2.25	3

Amounts listed are pounds per 100 square feet. *Do not add more than 5 lbs. of lime or sulfur in one application.

If you have any questions or difficulties when using the meter, please contact Luster Leaf at info@lusterleaf.com or 800-327-4635. Please do not return your meter to your place of purchase until speaking with us.

Special Cleaning Pad

Additional pads are available at a cost of \$2.00 for 3 pads, plus \$1.00 for postage and handling. Please send a check or money order, payable to Luster Leaf Products, Inc., to the address below. No phone orders, please.

For service, or information regarding other Luster Leaf items, please address:

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