

To clean:

To ensure accurate readings rinse **Bluelab® Leap™ pH Probe tip** in tap water after each use and clean prior to pH calibration.

- 1 **Remove storage cap if required.** Rinse probe tip under fresh water.
- 2 **Fill small plastic container with clean tap water.** Add a small amount of Bluelab® pH Probe Cleaner or mild detergent (dishwashing liquid).
- 3 **Gently stir the probe tip in the mixture.** Ensure that you do not knock the probe on the side of the container as this may cause damage to the glass probe.
- 4 **The probe tip may require removal of heavy contamination.** Dip a soft toothbrush in the Bluelab® pH Probe Cleaner and water mix. Gently brush **around** the probe tip, do not brush glassware, to remove contamination.
- 5 **Rinse well under fresh running tap water to remove all traces of the detergent mixture.**
- 6 **Calibration is required after every clean.** After calibration, use immediately, or store pH probe in the storage cap, ensuring the probe tip is covered with KCl storage solution.

 **NEVER store or soak the Bluelab® Leap™ pH Probe in RO (Reverse Osmosis), distilled or deionized water.**

Pure water changes the chemistry in the reference, causing the probe to die.

Quick troubleshooting guide: Detailed guide online

Trouble	Reason	Correction
pH reading does not change from solution to solution	Glassware or stem cracked or broken	Check Leap™ pH Probe for damage. Replace probe.
Drift - readings slowly varying	Glassware not clean	Clean glassware
	Wick contaminated, blocked or dry.	Hydrate probe in KCl storage solution for at least a few hours, but ideally overnight
	Glassware aged	Replace probe
Incorrect sample reading following successful calibration	Measurement not stable	Repeat measurement but leave probe in media longer (a couple of minutes) to ensure the reading is stable
	Dirty probe	Clean probe
	Dry grow media	Add small amount of distilled water to media, let soak before measuring.
	Low EC media	pH probe only designed to work in media or solutions with an EC of at least 0.2



Bluelab® are thinking green, please re-use or recycle.

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bluelab®
leap™
pH probe

Before use:

- 1 **Attach the Bluelab® Leap™ pH Probe** to the meter via the BNC fitting (metal end).
- 2 **Loosen the storage cap** - hold cap and twist base one full turn, then gently remove.
Not loosening before removal will damage the probe.
- 3 **Precondition** the pH probe before first use by inserting probe tip several times in media and then clean. Do not scrub glassware, only rinse. Note, bridge at tip of probe will change colour.
- 4 **Calibrate** following calibration instructions on reverse of Bluelab Meter.

Probe Care:

The pH probe tip must not be allowed to dry out. Store in KCl solution. If the probe has accidentally dried, 'hydrate' for 24 hours in KCl solution and calibrate.



Storage: Always store the Bluelab® Leap™ pH Probe in the storage cap, ensuring there is enough KCl Storage Solution to cover the probe tip.

 **Glass components in the probe can easily be damaged.**

Avoid knocks, exerting side ways force, sudden temperature changes, and touching the glass probe tip directly.

Do not immerse in oils, proteins or suspended solids that will leave a coating on the glass bulb.



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How to measure pH values of media and soil solutions

Measuring pH direct in root zone

Pre-condition to your intended grow media before calibration. The bridge between the glass tip of the probe and the body of the probe may change colour/look dirty. This is normal.

Leap pH Probe bridge before and stain after preconditioning in soil.



- 1 If open field testing, remove the top 5 cm / 2"** from the surface of the sample area.
- 2 If the soil/media is dry, moisten** with a small amount of distilled water. For accuracy soak for 24hrs.
- 3 Remove the storage cap from the probe.** Insert probe ensuring it makes direct contact with the root zone. For coarse/gritty media use dibber to extend probe life.
- 4 Turn the meter on.**
- 5 Wait for the reading displayed on the meter to stabilize.** This can take up to four minutes. Record the reading.

If the meter turns off while taking a measurement, simply press the ON/OFF button to turn the meter back on and continue with your measurement.

- 6 Remove the probe from the soil/media and rinse** probe tip under fresh running water (not distilled) to remove any remaining soil residue.
- 7 For field testing,** repeat the procedure in different locations and take the average of the measured data so the pH level is representative of the sample area.
- 8 Store BlueLab® Leap™ pH Probe between measurements.** Place storage cap back on probe tip, ensuring the probe tip is covered with KCl storage solution.

When measuring highly abrasive media (eg: soil, potting mix) or more than 50 insertions a week, weekly calibration is recommended.

Measuring pH of soil solution (slurry)

The greatest source of error in soil analysis comes during sample collection. Ensure each sample represents the area being measured.

A Collection of soil sample

- 1 Sample in a zig-zag pattern** across the required area.
- 2 Take samples of soil of about 20 cm / 8" deep.**
- 3 Mix all collected samples together thoroughly.**
- 4 Ideally, allow to dry** in the air or in an oven at 40 °C / 104 °F.
- 5 Weigh out 20 g / 0.7 oz of the collected soil** into a 150 ml / 5 fl oz plastic sample jar.

B Sample preparation

- 1 Add 100 ml / 3 fl oz of distilled or deionized water,** screw lid on tightly.
- 2 Shake continuously for 5 minutes.** Leave overnight and shake again the next morning.
- 3 Allow to settle for 15 minutes** after shaking and strain sample into clean measuring cup.

C Take pH reading (s)

- 1 Remove the storage cap** and insert the probe tip into the soil solution sample.
- 2 Turn the meter on.**
- 3 Wait for the reading displayed on the meter to stabilize.**
- 4 Remove the probe from the soil solution and rinse** probe tip under fresh running water (not distilled) to remove any remaining soil residue.
- 5 Store BlueLab® Leap™ pH Probe between measurements.** Place storage cap back on probe tip, ensuring the probe tip is covered with KCl storage solution.

For pH of solutions follow steps C1 - 5