bluelab®
pH probe

Care and use guide

LIMITED PRODUCT GUARANTEE
6 month
WITH PROOF OF PURCHASE

Contents

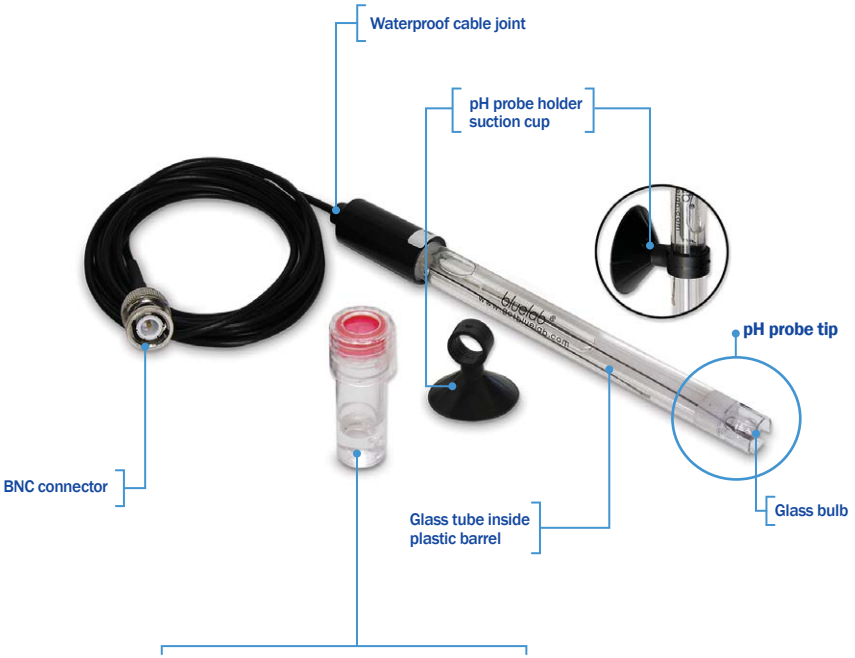
CE FC

www.getbluelab.com

English

Features	
Easy to clean	Waterproof cable joint
Gel filled (non-refillable)	Quality BNC connection
Double junction	2 meter / 6.56 foot standard cable
Probe holder included (keeps probe secure)	

Bluelab pH Probe



The pH probe tip must not be allowed to dry out. Always place the storage cap back onto the pH probe after each use. Ensure the cap contains enough Bluelab pH Probe KCl Storage Solution to cover the probe tip.

ATTENTION
If it dries, it dies!

Keep your pH probe tip wet
at all times to avoid permanent damage

1.0 Preparing for use

The following tasks must be performed before the Bluelab pH Probe is used for the first time.

1 Connect pH probe

Connect the pH probe to the meter by lining up the lugs of the BNC fittings.

Fasten securely by pushing the pH probe connector on and twisting one quarter turn.

Inserting Twisting Attached

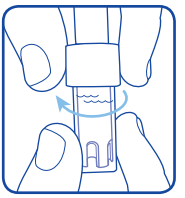
Attaching the Bluelab pH Probe to the Meter

2 Remove the storage cap

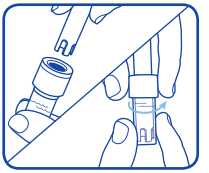
Remove the pH probe storage cap by gripping the top of the cap and gently twisting the base one rotation clockwise to loosen slightly. Next slowly slide the cap off the pH probe. DO NOT completely remove the base of the cap from the top of the cap.

CAUTION: When the pH probe is not in use, add enough Bluelab pH Probe KCl Storage Solution to the storage cap so the probe tip is covered. Then replace the cap and store in a secure place.

DO NOT use RO (Reverse Osmosis), Distilled or De-ionized water. Pure water changes the chemistry in the reference, causing the probe to die.



Removing pH probe storage cap



Ensure probe tip is covered by the KCl storage solution in cap

2.0 IMPORTANT - Bluelab pH Probe care

pH probes DO NOT last forever. They age through normal use and will eventually fail. The life time of a pH probe depends on the environment it is used in and the way that it is treated. To receive a long life from your pH probe, please ensure you follow the guide below.

pH probes contain glass and are therefore FRAGILE. With good care, they will give a long service life.

- **ALWAYS** loosen the storage cap before removing or replacing on the pH probe tip.
- **DO NOT** let the pH probe tip dry. IF IT DRIES IT DIES!
- **DO NOT** bend the probe; this will break its internal glass tube.
- **DO NOT** knock the probe; this will break its internal glass tube or external glass bulb.
- **DO NOT** plunge a cold pH probe into a hot liquid - sudden temperature changes can crack the glass and permanently damage the probe.
- **DO NOT** immerse in oils, proteins or suspended solids that will leave a coating on the glass bulb.
- **DO NOT** 'kink' or bend the lead sharply.
- **DO NOT** attempt to lengthen the lead on the pH probe.
- **DO NOT** wet the BNC connector at the end of the lead.

3.0 Calibration

pH calibration is required before first use and then monthly to ensure readings are accurate.

To calibrate the probe to the pH instrument:

1. **Clean pH probe tip.**
   See section 4.0 (the pH probe does not require cleaning before the first use).
2. **Calibrate the pH.**
   This must be done before the pH probe is used for the first time. Follow the calibration instructions on the back of the meter, in the manual or watch our videos online.

For accurate pH readings the pH probe is cleaned and recalibrated when:

- The reading is different to what you were expecting.
- The batteries have been removed or changed.
- The pH probe is replaced with a new one or is disconnected from the meter.
- The pH calibration indicators have disappeared.

When calibrating the pH after first use the pH probe needs to be cleaned. See pH probe cleaning in section 4.0. The pH probe does not need to be cleaned prior to initial calibration.

For best pH calibration

pH reading accuracy is dependant on the accuracy and age of the calibration solutions used, and use and cleanliness of the pH probe tip.

- Ensure the pH probe has been cleaned and rinse the pH probe tip with clean water between calibration solutions to reduce contamination of the pH solutions.
- Only fresh uncontaminated solutions should be used.
- Calibrate the pH at the same temperature as the solution to be measured.
- ALWAYS calibrate the pH probe with pH 7.0 then pH 4.0 or pH 10.0.

The pH calibration involves cleaning the pH probe tip and then calibrating in TWO SOLUTIONS.

If a reading below pH 7.0 is expected, use pH 7.0 and pH 4.0 calibration solutions.
If a reading above pH 7.0 is expected, use pH 7.0 and pH 10.0 calibration solutions.

Storage and use of calibration solutions

- Always place the lid back onto the bottle after use or evaporation will occur rendering the solution useless.
- Store in a cool place.
- DO NOT measure directly into the bottle. Tip a small amount into a clean container and discard after use.
- Never add water to solutions.

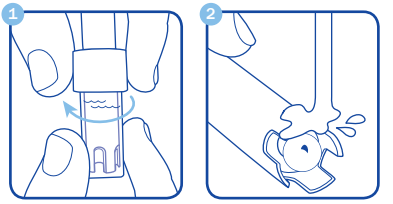
pH reading accuracy is dependant on the accuracy and age of the calibration solutions used, and use and cleanliness of the pH probe tip.

4.0 Cleaning the Bluelab pH Probe

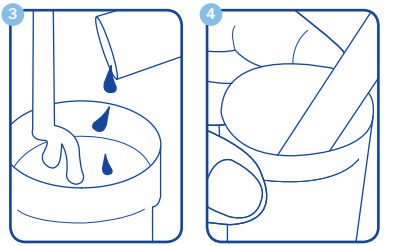
To ensure accurate readings the pH probe tip needs to be rinsed in water after each use and cleaned prior to calibration using the following instructions.

The storage cap must always be put back on after cleaning. Always ensure it contains enough Bluelab pH Probe KCl Storage Solution to cover the probe tip.

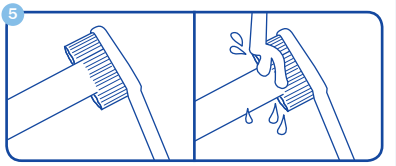
1. **Remove storage cap from pH probe.**
   Hold the top of the storage cap, twist the cap to loosen then remove.
2. **Rinse pH probe tip under fresh tap water.**
   Never use RO (Reverse Osmosis), Distilled or De-ionized water.



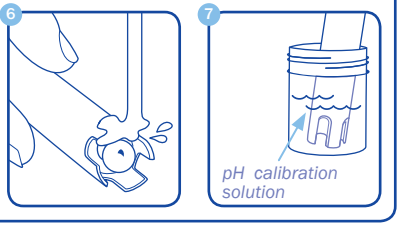
3. **Fill a small plastic container with clean tap water.**
   Add a small amount of Bluelab pH Probe Cleaner or mild detergent (dishwashing liquid).
4. **Gently stir the probe tip in the mixture.**
   Ensure that you do not 'knock' the pH probe on the side of the container as this may cause damage to the probe.
   Rinse well under fresh running water to remove all traces of the detergent mixture.



5. **If the probe tip requires removal of heavy contamination:**
   Gently brush around the glassware with a few drops of Bluelab pH Probe Cleaner or mild detergent (dishwashing liquid) and a soft toothbrush.

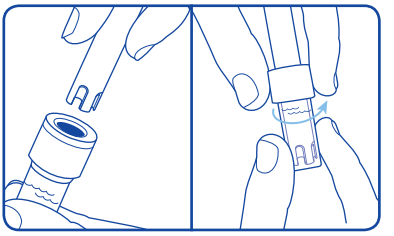


6. **Rinse well under fresh running tap water to remove all traces of the detergent mixture.**
7. **Calibrate pH probe to meter after cleaning.**
   Follow the calibration instructions on the back of the meter, in the manual or watch our videos online.



5.0 Storing the Bluelab pH Probe

1. **To prepare the pH probe for storage:**
   Add enough Bluelab pH Probe KCl Storage Solution into the probe storage cap to fully submerge the pH probe tip. Then replace the cap and store in a secure place.
   DO NOT use RO (Reverse Osmosis), Distilled or De-ionized water. Pure water changes the chemistry in the reference, causing the probe to die.



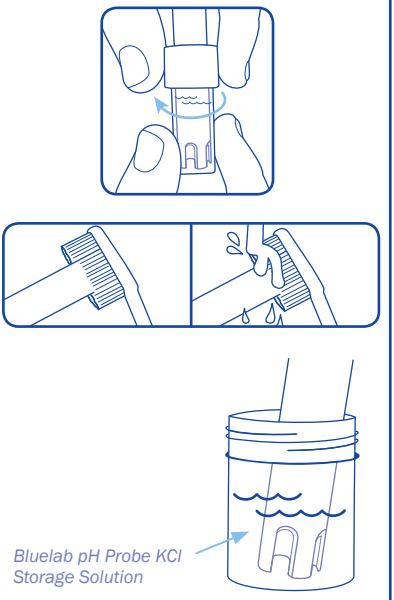
6.0 Hydrating the pH probe

Hydrate the pH probe in Bluelab pH Probe KCl Storage Solution when:

- *the probe tip has not always been stored in KCl storage solution, to improve the reading response speed.*
- *the probe tip has been accidentally allowed to dry out.*

Never use RO (Reverse Osmosis), De-ionized or Distilled water.
Pure water changes the chemistry in the reference, causing the probe to die.

1. **Loosen, then remove the storage cap.** Place the pH probe upright in a plastic container.
2. **Clean the pH probe tip.** Ensure the probe tip has been cleaned before hydrating. See section 4.0 for instructions.
3. **Add enough Bluelab pH Probe KCl Storage Solution to a plastic container to submerge the pH probe tip.**
4. **Leave to soak for at least 24 hours.** After hydration, always calibrate the pH probe to ensure accuracy.



7.0 Technical specifications

	pH
Measurement range	0.0 - 14.0 pH
Accuracy at 25 °C/77 °F	±0.1 pH
Reference	Double junction, Ag/AgCl, Sat. KCl gel
Operating environment	0 - 60 °C 32 - 144 °F

8.0 Troubleshooting guide

Trouble	Reason	Correction
pH reading does not change from solution to solution	Broken glass bulb, tube or connector	Check pH probe for damage. Replace probe.
pH reading inaccurate (Drift, readings slowly varying)	Contaminated pH probe / glassware not clean	Clean pH probe (see section 4.0); then calibrate.
	Wick contaminated, blocked or dry	Hydrate probe in KCl storage solution for up to 24 hours, see section 6.0. Avoid measuring proteins or oils. Replace unit.
	Incorrect pH calibration	Ensure calibration solutions are accurate. Replace if in doubt. Wait longer for readings to stabilize to a constant value before calibrating. Calibrate using two points - 7.0 pH, then 4.0 pH or 10.0 pH.
	pH calibration unreliable	Calibrate pH probe.
	pH probe damaged or old.	Replace pH probe.
Incorrect sample reading following successful calibration	Ground loop (often occurs in process systems)	Verify by removing the sample from its environment then take measurement. May require electrical circuitry to be checked in system.
	Wick blocked	Replace probe.
Unsuccessful calibration (Low slope <90%)	Buffers inaccurate	Replace buffers.
	Glassware not clean	Clean pH probe (see section 4.0); then calibrate.
	Glassware aged (glassware will not clean)	Replace probe.
	BNC fitting wet	Use cloth to dry (note terms of guarantee).
Noisy - readings jumping	Poor connection to meter	Check probe is connected to meter correctly.
	Contact zone not immersed	Lower probe into solution at least 2 cm / 1”.
Displays pH 7 for all buffers	Electrical short	Check BNC fitting and cable for damage.
	BNC fitting wet	Use cloth to dry (note terms of guarantee).
	Broken or cracked glass bulb or tube	Replace probe.

Bluelab Probe Care Kits

The instrument is only as accurate as the probe is clean!

Probe cleaning is one of the most important parts of owning and operating any Bluelab meter, monitor or controller.

If the probe is contaminated (dirty) it affects the accuracy of the reading displayed.

Bluelab Probe Care Kit range is available for:

- pH probe care
- pH & conductivity probe care
- Conductivity probe care

All the tools you need are included in each kit.

To re-stock your care kit, choose from the Bluelab Solutions range.

Bluelab Probe Care Kit - pH contains:

- Probe care instructions
- 3 x plastic cups
- 20ml single-use Bluelab Solution Sachets, 2 each of: pH 7.0 & pH 4.0, KCl
- Bluelab pH Probe Cleaner
- Toothbrush (pH probe cleaning instrument)

Bluelab pH Probe KCl Storage Solution

The perfect solution to store and hydrate your Bluelab pH products.

Bluelab pH Probe KCl Storage Solution is designed to increase response time and maximize the life of Bluelab pH pens and pH probes.

For best results, use the KCl solution for storage of the pH probe.

Instructions are on the label of the bottle.

Use Bluelab pH Probe KCl Storage Solution with:

- Bluelab pH Pen
- Bluelab Soil pH Pen
- Bluelab pH Probes
- Bluelab Soil pH Probes

Bluelab pH Probe limited product guarantee

Bluelab Corporation Limited guarantees this product for a period of **6 months** from the date of sale to the original purchaser.

Standard Terms and Conditions of the Bluelab Limited Product Guarantee:

How Long Does The Coverage Last? 1) The product guarantee becomes effective from the date of purchase by the first purchaser. Coverage terminates if you sell or otherwise transfer the product; 2) The repair of your product under guarantee will not extend the period of the guarantee.

How Do You Get Service? 1) Products are to be returned to point of purchase; 2) Any parts replaced will become the property of Bluelab Corporation Limited ("Bluelab").

What is covered? Provided you supply proof of purchase via a store-printed receipt, we will repair or replace your product if your product is found, within the guarantee period, to be defective due to defective materials or workmanship existing at the time of purchase. If any part is no longer available or out of manufacture, Bluelab will replace it with a functionally-equivalent replacement part.

What is not covered? Bluelab shall not be liable for costs of repair or replacement of a product incurred as a result of: 1) Normal wear and tear; 2) Accidental damage, faults caused by negligent use or care, neglect, careless operation or handling of the product which is not in accordance with the Bluelab Instruction Manuals; 3) Use of parts not assembled or installed in accordance with the instructions of Bluelab; 4) Use of parts or accessories other than those produced or recommended by Bluelab; 5) External sources such as transit damage or weather; 6) Repairs or alterations carried out by parties other than Bluelab or its authorised agents; 7) Serial numbers defaced or missing.

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