pHscan 30 Pocket pH Meter

PHMT-030-001

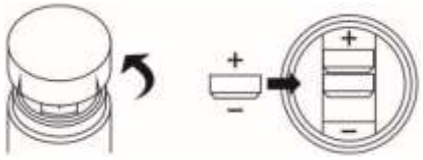
Introduction

Thank you for choosing the pHscan30 pocket pH tester. This manual provides a step-by-step guide to help you operate the meter. Please carefully read the following instructions before use.

Inserting the Batteries

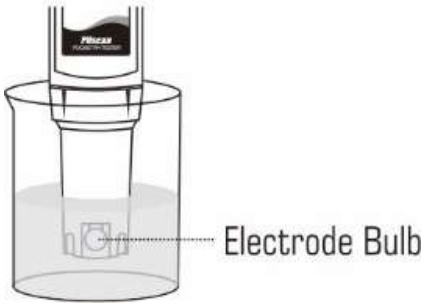
Take out the three “G13A” button cell batteries from the packaging. Follow the steps below to insert the batteries into the battery compartment.

- Remove the battery compartment lid. Insert the batteries into the battery compartment, noting polarity.
- After installation, replace the battery compartment lid and turn it clockwise until it is tight.



Prior to Use

Remove the electrode protective cap from the tester. If the electrode bulb dries out, soak the electrode module in storage solution or tap water for at least 15 minutes. Do not use distilled or deionized water, as it will shorten the sensor's life.



Preparation of pH Standard Buffer Solutions

The tester is packaged with three pH buffer packets required for calibration.

- Open the pH 7.00 buffer packet, place the powder into a 250 ml volumetric flask. Pour distilled water up to the scale line, totaling 250 ml, and mix the solution until the reagent is completely dissolved.
- Preparation of pH 4.01 and pH 10.01 standard buffer solutions is the same as above.
- The prepared standard buffer solutions should be stored in hermetically sealed glass containers.

Power ON/OFF

- Press the MEAS key to turn on the tester; the meter displays measured values.
- Press and hold the MEAS key for 5 seconds to turn off the tester.
- If no key is pressed for 8 minutes, the tester will automatically turn off to conserve energy.

Calibration

The tester must be calibrated prior to its first use or when a new electrode is replaced. Regular calibration is recommended to ensure accuracy. Do not reuse calibration solution after calibration, as contaminants in the solution will affect the calibration and eventually the accuracy of the measurement.

1. Rinse the pH electrode with distilled water, then press the MEAS key to turn on the tester.
2. Press and hold the CAL key for 3 seconds; the display will show “CAL 7-4”. If necessary, press the CAL key again, and the tester will display “CAL 10-7”.

3. Choose the pH buffer option you want to use, then press the ENTER key to confirm. The tester will display the first calibration point, pH 7.00.

4. Dip the electrode into the pH 7.00 standard buffer solution, ensuring that the end of the electrode is completely immersed in the calibration solution. Gently stir the tester.
5. Press the ENTER key to confirm. Wait for the measured value to stabilize; the reading will flash 3 times, indicating that the first calibration point is completed.

The tester will automatically display “CAL 4” or “CAL 10” (depending on the option selected in step 2).

6. Rinse the electrode with distilled water. Dip the electrode into the pH 4.01 or 10.01 standard buffer solution. Stir the tester gently.
7. Press the ENTER key to confirm. Wait for the measured value to stabilize; the reading will flash 3 times. The “CAL” indicator will disappear from the display, and the tester will return to measurement mode. Calibration is completed.

Exiting Calibration

During the calibration process, if you wish to exit calibration mode, simply press the MEAS key. The tester will immediately return to measurement mode.

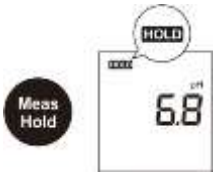
pH Measurement

1. Thoroughly rinse the electrode with distilled water, then press the MEAS key to turn on the tester.
2. Dip the electrode into the sample solution and gently stir the tester.
3. Wait for the reading to stabilize, then record the measured value displayed.

In pH measurement mode, press ENTER/°C key to view current temperature. Press MEAS/HOLD key return to pH measurement mode.
Note: The temperature range of this meter is 0 to 60°C.

Hold Function

1. During the measurement, press the HOLD key; the tester immediately freezes the currently displayed value, and the “HOLD” indicator appears on the display.
2. Press the key again to release the measured reading, allowing you to continue taking measurements.



Electrode Care and Maintenance

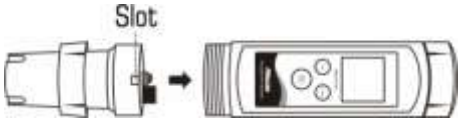
- For the best results, always keep the sensor's glass bulb wet.
- Ensure thorough washing of the sensor with distilled water after each use.
- If the tester will not be used for long periods, store the sensor with electrode storage solution. DO NOT use de-ionized or distilled water.

Electrode Replacement

When the tester fails to calibrate or provides fluctuating readings for calibration standards, you need to replace the electrode module.

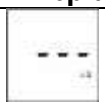
1. Twist the electrode collar anticlockwise and pull the old electrode module away from the tester.

2. Align the slot on the new electrode module and gently push the module into the tester.



3. Twist the electrode collar clockwise until it is tight. Installation is completed.

Troubleshooting

LCD Display	Cause
	Electrode drying out: Soak the electrode module in tap water for 10 minutes.
	Measured value is out of range: Check if the electrode is clogged, dirty, or broken.
	Incorrect buffer used or contaminated buffer solution: Use fresh pH buffer solutions for calibration.
	Electrode is broken: Replace the electrode module.

Specifications

Model	pHScan 30
pH Range	0.00 – 14.00
pH Accuracy	±0.05
pH Calibration Points	2
pH Buffer Options	USA Standard (pH 4.01 / 7.00 / 10.01)
Operating Temperature	0 – 60 °C, 32 – 140 F°
Power Requirements	3 x 1.5 V "G13A" Batteries
Dimensions	180 (L) x 40 (Dia.) mm
Weight	100 g

Appendix

1. Dissolve 223.65 g of potassium chloride reagent (KCl) in 1 liter of distilled water.
2. Pour 50 mL of the KCl solution into a beaker.
3. Pour 50 mL of pH 4.01 standard buffer solution into the same beaker.
4. Stir the solution until thoroughly mixed; preparation is complete.