

Dr.meter PH Meter

Model: PH838

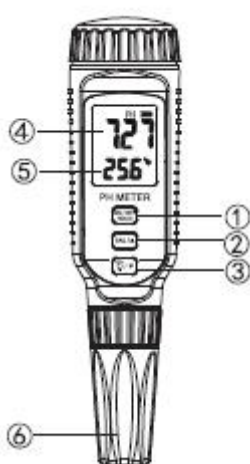
User Manual

Thanks for choosing the Dr.meter PH Meter. Please read this user manual carefully before use and keep it on hand for future reference.

Description

The Dr. Meter pH meter is a cost-effective pH testing solution for household and laboratory use. It can reliably test the pH balance of drinking water, pools, aquariums, foods, RO systems, spas, hydroponics and everything in between. To use this simple tester, just remove the protective cap and immerse the electrode in the solution to be measured. Included with the meter are 6.86 and 4.01 pH buffers for a calibration. Instructions for calibration are also included with the pH meter.

Product Illustration

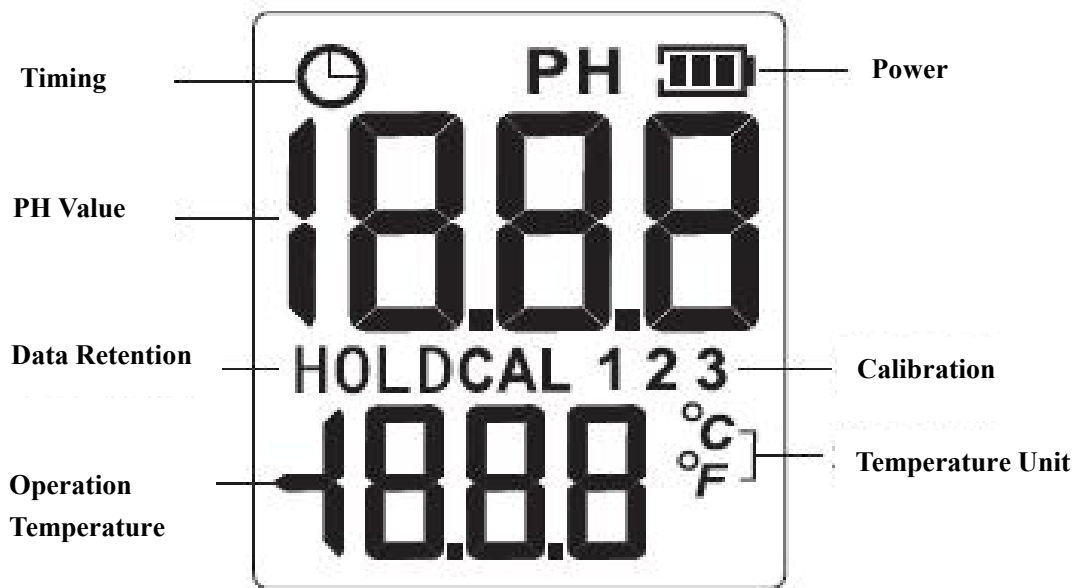


- ① ON/OFF Button / Data Retention
- ② Calibration / Value Increase
- ③ Backlight / Value Decrease
- ④ pH Value Display
- ⑤ Temperature Display
- ⑥ Electrode Probe

Specification

Measurement Range	0.00 --- 14.00 pH
Intrinsic Error	± 0.05 pH
Measurement Stability	± 0.03
Temperature Compensation	0-70°C
Instrument Repeatability	± 0.01
Temperature Range of Tested Solution	0-60°C
Power	1.5V (AAA battery)*2
Screen	LCD Display
Operation Temperature	0-50°C
Operation Humidity	≤85% RH

LCD Display






Operation Instructions

- Before Use
 - a) Open the battery cap and install the battery.
 - b) If the electrode has been changed, the instrument must be recalibrated.
 - c) We recommend recalibrating the unit once a month.
- 3 Point Calibration

In the measuring mode, press and hold the $\text{CAL}/\blacktriangle$ button for 3s.

 - a) The LCD display will show a flashing [CAL 1] icon and the number 4.00 will appear. Rinse the electrode with distilled water and put it into a pH4.00 solution. When the reading is stable, the LCD display will display "PAS", which means the first calibration point has succeeded. Then the device will proceed to the second calibration point --- the [CAL 2] icon will flash and the number 6.86 will appear.
 - b) Rinse the electrode with distilled water and put it into the pH6.86 solution. When the reading is stable, the LCD display will display "PAS", which means the second calibration point has succeeded. Then the device will proceed to the third calibration point --- the [CAL 3] icon will flash and the number 9.18 will appear.
 - c) Rinse the electrode with distilled water and put it into the pH9.18 solution. When the reading is stable, the LCD display will read "PAS", which means the entire calibration has succeeded. Then the device will enter measuring mode.
 - d) If the buffer value doesn't match the preset value, you can correct the value manually by pressing the $\text{CAL}/\blacktriangle$ button or $\text{☺}/\blacktriangledown$ button.
 - e) If [Err] appears in the LCD display, the calibration did not succeed, which means the standard buffer solution outranges the calibration point.

- **Measuring Mode**
The measuring mode is on by default when you turn on the device. The measuring mode tells you the pH value and the environmental temperature. Just immerse the electrode in the tested solution and you will get the pH value.
- **Battery**
When the icon [] appears at the right corner of the LCD display, it is time to change the battery. Remember to take out the batteries if you will not be using the device for a long time.
- **ON/OFF Hold Button**
 - a) Press the button to turn on the device.
 - b) Press the button again to lock the current reading.
 - c) To turn off the device, press and hold the ON/OFF button.
- **CAL/▲ Button**
 - a) In measuring mode, press and hold the button for 3s to enter calibration mode.
 - b) In calibration mode, press the button to increase the value; press and hold to quickly increase the value.
- ** / ▼ Button**
 - a) Press the button to turn the backlight on or off.
 - b) Under calibration mode, press the button to decrease the value; press and hold to quickly decrease the value.
- **Auto Off**
Before turning on the device, press and hold the ON/OFF button and CAL/▲ simultaneously and the LCD display will show APO ON or APO OFF. Press the ON/OFF button to select APO ON or APO OFF; then, press and hold the ON/OFF button to save the selection and exit.
 - a) APO ON Mode: The timing icon will appear, and the unit will shut down automatically after 15 min if it is not used.
 - b) APO OFF Mode: No timing icon will appear, and the unit won't shut down automatically.
- **Temperature Unit Conversion**
Before turning on the device, press and hold the ON/OFF button and  / ▼ simultaneously and the LCD display will show °C or ° F. Press the ON/OFF button to select the desired unit; after that, press and hold the ON/OFF button to save the selection and exit.
- **Outrange Indication**
When the pH value is lower than 3.5pH, the backlight is on, indicating that the tested solution is close to a strong acid; when the pH value is higher than 12.5pH, the backlight is on, indicating that the tested solution is close to a strong base.

Recalibration

In the following cases, the instrument must be recalibrated.

- Long-term unused electrode or new electrode.

- After measuring concentrated acids ($\text{pH} < 2$) or strong alkali solutions ($\text{pH} > 12$).
- After measuring solutions containing fluoride, acid ($\text{pH} < 7$) and concentrated organic solutions.

Maintenance

- The compound sensitive electrode should be kept clean at all times. Do not unplug the electrode plug frequently to avoid dust and extra moisture from entering the unit.
- Make sure the glass ball of the sensitive PH compound electrode doesn't touch any hard objects.
- The electrode must not touch dirt. If it does, please wipe it gently with medical cotton or rinse it with a 0.1 MOL/L HCL solution.
- For the best, most accurate results, please replace the electrode if there is crack or burn-in. The new electrode should be immersed in 3 MOL/L KCL solution for 24 hours before using.
- When making a standard buffer solution, make sure to keep it clean the whole time for the best, most accurate results. For information on how to make a standard buffer solution, please refer to appendix 1.

Appendix 1 Making up standard buffer solution

The Dr. Meter PH Meter comes with 3 buffer solutions for calibration: 4.00, 6.86, and 9.18.

- Make up each solution in a separate container (or bottle) by adding the contents of each sachet to 250ml distilled water.
- Wait 30 min for it to dissolve thoroughly.
- Mark each bottle with the labels---pH4.00, pH6.86, and pH9.18.

Precautions

- Please choose the standard buffer solution that is closest to the PH value of the test solution for the most accurate measurement results.
- After taking off the protective cap, make sure the glass ball of the sensitive PH compound electrode doesn't touch any hard objects. Please put the protective cap on after using.
- Make sure there is 3.3 MOL/L KCL solution available for the glass ball of the sensitive PH compound electrode under humid conditions.
- For the best and most accurate results, please keep the electrode outlet dry and clean.
- Do not immerse the electrode in distilled water, protein solution, or acid fluoride solution for long periods of time.
- The electrode must not come into contact with silicone grease.
- To renew the electrode, immerse it in a 4% HF solution for 3 ~ 5 seconds; then rinse it with distilled water and soak it in a KCL solution.

- If the electrode is passivated and being contaminated or blocked by the substances in the tested solution, please rinse it with the proper solution to renew the electrode. (Note: When rinsing, please choose the solution according to the properties of the substances in the tested solution.)

Package Contents

- 1 x pH meter
- 2 x pH 4 powder
- 2 x pH 6.86 powder
- 2 x pH 9.18 powder
- 1 x user manual
- 1 x warranty card