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› Dr.meter High Precision 0.01 pH Tester PH838 User Manual

Dr.meter PH838

Dr.meter High Precision 0.01 pH Tester PH838 User Manual

1. INTRODUCTION

Thank you for choosing the Dr.meter High Precision 0.01 pH Tester, Model PH838. This device is designed to provide accurate and reliable pH measurements for a wide range of applications. This manual provides detailed instructions for the proper setup, operation, maintenance, and troubleshooting of your pH tester to ensure optimal performance and longevity.

Digital pH Meter

PH Value Range: 0.00 to 14.0



Image 1.1: Dr.meter Digital pH Meter illustrating the pH value range from 0.00 to 14.0, categorized into Acidic, Neutral, and Alkaline, with examples of common substances.

2. PRODUCT FEATURES

- **High Precision 0.01:** Equipped with a sensitive glass electrode sensor, providing accurate pH readings from 0 to 14.0 with a testing accuracy of up to 0.01.
- **Automatic Temperature Compensation (ATC):** Ensures accurate readings across varying temperatures.

- **Clear Backlit LCD Display:** Large, backlit screen for easy reading of pH and temperature values, even in low light conditions.
- **Two-Color Alarm Display:** The display changes from white to red if the pH is below 3.5 or above 12.5, providing a clear visual alert for strong acid or alkali conditions.
- **Automatic Shut-off:** For energy efficiency, the pH meter automatically turns off after 15 minutes of inactivity.
- **Wide Application Range:** Suitable for various applications including pools, aquaculture, aquariums, brewing, and drinking water testing.

3. PACKAGE CONTENTS



Image 3.1: The Dr. meter pH Tester shown with its included accessories: calibration powders, potassium chloride solution, and a protective storage bag.

Upon unpacking, please ensure all items are present:

- Dr. meter High Precision 0.01 pH Tester (Model PH838)
- 6 x Calibration Powder Packets (2x pH 4.00, 2x pH 6.86, 2x pH 9.18)
- 2 x Potassium Chloride (KCl) Powder Packets

- Storage Bag
- User Manual

4. PRODUCT DIAGRAM



Image 4.1: Detailed diagram of the Dr.meter pH Tester with key components labeled for easy identification.

1. Battery Compartment

2. Timer Switch (for auto-off function)
3. pH Value Display
4. Temperature Value Display
5. ON/OFF & Hold Button
6. Calibration/Increase Button (CAL/ ▲)
7. Backlit/Decrease Button (Light/ ▼)
8. Glass Electrode
9. Protection Cap

5. SETUP

5.1 Battery Installation

The Dr.meter PH838 pH tester requires 2x AA batteries (not included). To install:

1. Twist and remove the battery compartment cap located at the top of the device.
2. Insert two AA batteries, ensuring correct polarity (+/-).
3. Securely replace the battery compartment cap.

5.2 Initial Preparation

1. Remove the protective cap from the bottom of the electrode.
2. Rinse the electrode with distilled water or clean tap water. Gently blot dry with a clean tissue.
3. It is recommended to perform a calibration before first use and after prolonged storage.

6. OPERATING INSTRUCTIONS

6.1 Powering On/Off

- Press the **ON/OFF & Hold** button to turn the device on.
- Press and hold the **ON/OFF & Hold** button for a few seconds to turn the device off.

6.2 Calibration (3-Point Calibration)

For accurate results, calibrate the device using the provided buffer powders. A 3-point calibration (pH 4.00, pH 6.86, pH 9.18) is recommended.

3-Point Calibration

For accurate results, please calibrate the device in this specific



Image 6.1: Illustration of the 3-point calibration process using pH 4.00, pH 6.86, and pH 9.18 buffer solutions.

1. Prepare the buffer solutions: Dissolve each calibration powder packet (pH 4.00, pH 6.86, pH 9.18) in 250ml of distilled water.
2. Turn on the pH tester.
3. Immerse the electrode into the pH 6.86 buffer solution (the neutral point). Ensure the electrode is fully submerged.
4. Press and hold the **CAL/▲** button until the display shows 'CAL' and the reading stabilizes to 6.86. Release the button.

5. Rinse the electrode with distilled water and gently blot dry.
6. Immerse the electrode into the pH 4.00 buffer solution.
7. Press and hold the **CAL/▲** button until the display shows 'CAL' and the reading stabilizes to 4.00. Release the button.
8. Rinse the electrode with distilled water and gently blot dry.
9. Immerse the electrode into the pH 9.18 buffer solution.
10. Press and hold the **CAL/▲** button until the display shows 'CAL' and the reading stabilizes to 9.18. Release the button.
11. Rinse the electrode with distilled water. The calibration is now complete.

Important: The glass electrode is delicate. Handle with care and avoid testing strong acids, strong alkalis, or high-temperature liquids that may damage it.

± 0.01

High-Sensitivity Glass Electrode

As the glass probe is delicate, please handle with care—avoid testing strong acids, strong alkalis, and high-temperature liquids.



Image 6.2: Close-up of the high-sensitivity glass electrode and the three types of pH buffer powders used for calibration.

6.3 Taking Measurements

1. Turn on the pH tester.
2. Immerse the electrode into the sample solution up to the immersion line.
3. Gently stir the solution and wait for the reading to stabilize (typically a few seconds).
4. Read the pH value and temperature displayed on the LCD screen.

5. To hold the current reading, press the **ON/OFF & Hold** button briefly. Press again to release.
6. After measurement, rinse the electrode with distilled water and replace the protective cap.

6.4 Understanding the Display



Image 6.3: The large backlit LCD display clearly showing pH and temperature values for easy readability.

- The top large number indicates the pH value.
- The bottom smaller number indicates the temperature in Celsius.

- Press the **Backlit**/▼ button to toggle the backlight on or off.

6.5 Alarm Function

Red Warning Screen

⚠ When the pH level < 3.5 or > 12.5 , the screen will display a red warning for **15 minutes** to alert you to the presence of a strong acid or alkali.

PH < 3.5 :

Red backlight is on, representing strong acid solution.

PH > 12.5 :

Red backlight is on, representing strong base solution.

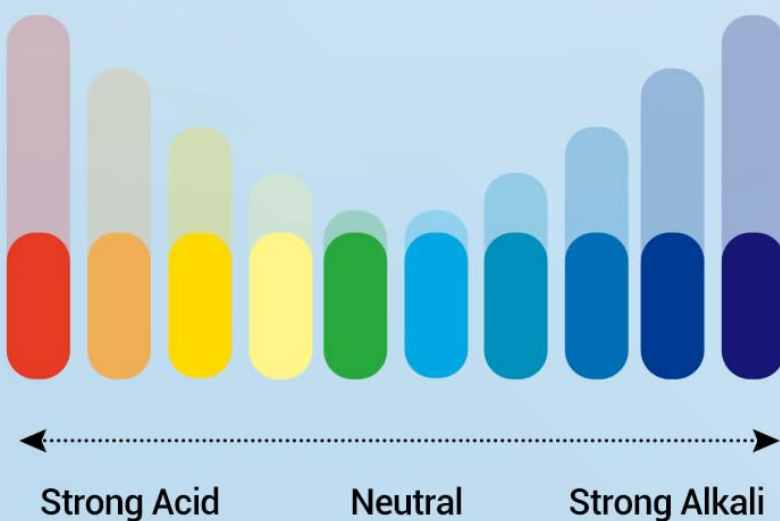


Image 6.4: The pH tester's screen displaying a red backlight, indicating a pH reading outside the normal range (below 3.5 or above 12.5).

The device features a two-color alarm display:

- If the pH level is below 3.5 (strong acid) or above 12.5 (strong alkali), the display backlight will change from white to

red for 15 minutes to alert the user.

7. MAINTENANCE

7.1 Electrode Cleaning

Regular cleaning of the electrode is crucial for accurate readings:

1. After each use, rinse the electrode thoroughly with distilled water.
2. If the electrode is visibly dirty or readings become erratic, soak the electrode in a cleaning solution (e.g., a mild detergent solution or specialized electrode cleaning solution) for 10-20 minutes, then rinse thoroughly with distilled water.

7.2 Electrode Storage

To maintain the accuracy and prolong the lifespan of the electrode:

- Always keep the electrode moist. Store it with a few drops of potassium chloride (KCl) storage solution in the protective cap.
- If the electrode dries out, soak it in KCl storage solution for several hours before use.
- Regularly add potassium chloride solution to the protective cap to ensure the electrode remains hydrated.

7.3 General Care

- Store the device in a cool, dry place away from direct sunlight.
- Avoid dropping or subjecting the device to strong impacts.
- Replace batteries when the low battery indicator appears on the display.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
Inaccurate readings	Electrode is dirty or dry; Calibration is outdated or incorrect; Low battery.	Clean the electrode and re-hydrate; Perform a 3-point calibration; Replace batteries.
Display shows 'Err' or '---'	Electrode malfunction; Out of measurement range.	Ensure electrode is properly submerged; Contact customer support if issue persists.
Device does not turn on	Batteries are dead or incorrectly installed.	Check battery polarity; Replace with new AA batteries.

9. SPECIFICATIONS

Feature	Specification
Model Number	PH838
Measurement Range	0.00 - 14.00 pH
Measurement Precision	± 0.01 pH
Temperature Range	0.1 - 60.0 °C (32.0 - 140.0 °F)

Feature	Specification
Automatic Temperature Compensation (ATC)	Yes
Display	Backlit LCD
Power Supply	2 x AA Batteries (not included)
Automatic Shut-off	15 minutes
Material	PTFE (Polytetrafluoroethylene)
Package Dimensions	22.4 x 9.8 x 5.7 cm
Weight	270 grams
Country of Origin	China

10. INTENDED USE

Suitable for



Hydroponic Gardening



Fish Tanks



Brewing



Swimming Pools



Beverages



Drinking Water

Unsuitable for



Medical Testing



Laboratory Testing

Warning: Please do not use for medical or laboratory purposes.

Image 10.1: Visual guide indicating suitable and unsuitable applications for the Dr.meter pH Tester.

10.1 Suitable For:

- Hydroponic Gardening
- Fish Tanks / Aquariums
- Brewing
- Swimming Pools

- Beverages
- Drinking Water

10.2 Unsuitable For:

- Medical Testing
- Laboratory Testing (professional grade)

Warning: This product is not designed for medical or professional laboratory purposes. Using it for such applications may lead to inaccurate results and potential risks.

11. WARRANTY AND SUPPORT

Dr.meter products are designed for reliability and performance. For warranty information, please refer to the documentation provided at the time of purchase or visit the official Dr.meter website. If you encounter any issues or have questions regarding your PH838 pH Tester, please contact Dr.meter customer support for assistance. Ensure you have your model number (PH838) and purchase details ready when contacting support.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question