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Tadeto TE027

Tadeto Soil pH Tester Instruction Manual

Model: TE027

INTRODUCTION

This manual provides detailed instructions for the proper use and maintenance of your Tadeto Soil pH Tester, Model TE027. This device is designed for accurate pH measurement across various media, including soil, plants, solutions, food, and water. It features a high-accuracy sensor, a clear LCD display with backlight, temperature display, data hold, and an alarm function for extreme pH values.



Image: The Tadeto Soil pH Tester, Model TE027, shown with included calibration powders and batteries.

PACKAGE CONTENTS

Verify that all items listed below are present in your package:

- Digital pH Meter
- Instruction Manual
- Calibration Powder (pH 4.01 x2, pH 7.00 x2, pH 10.01 x2)
- KCL Powder x2
- Zinc Alloy Protective Cap
- Portable Bag
- Protective Cover
- Empty Bottle
- AAA Batteries x2

- Pipettes x2
- Brush

Package Contents

- | | |
|-----------------------------------|------------------------------|
| 01 Soil pH Meter | 08 Zinc Alloy Protective Cap |
| 02 KCL Powder x2 | 09 Portable Bag |
| 03 pH 4.01 Calibration Powder x2 | 10 Protective Cover |
| 04 pH 7.00 Calibration Powder x2 | 11 Manual |
| 05 pH 10.01 Calibration Powder x2 | 12 Pipettes |
| 06 Batteries | 13 Brush |
| 07 Empty Bottle | |



Image: A visual representation of all components included in the Tadeto Soil pH Tester package, neatly arranged.

PRODUCT OVERVIEW

Familiarize yourself with the various parts of your Tadeto Soil pH Tester:



Image: An exploded view diagram labeling the LCD screen, function buttons, battery compartment, grip design, connection point, pH probe, and alloy protective cap.

- **LCD Screen:** Displays pH readings, temperature, and other indicators. Features a backlight for low-light conditions.
- **Function Buttons:** For power (ON/OFF), data hold, and calibration (CAL/A).
- **Battery Compartment:** Located at the top, houses two AAA batteries.
- **Grip Design:** Ergonomically designed for comfortable handling.
- **Connection:** Securely connects the main unit to the probe extension.

- **pH Probe:** The sensitive electrode responsible for pH measurement.
- **Alloy Protective Cap:** A durable zinc alloy cap designed to protect the pH probe, especially when measuring harder materials like soil.

SETUP AND CALIBRATION

1. Battery Installation

1. Unscrew the battery compartment cap at the top of the device.
2. Insert two AAA batteries, ensuring correct polarity.
3. Securely replace the battery compartment cap.

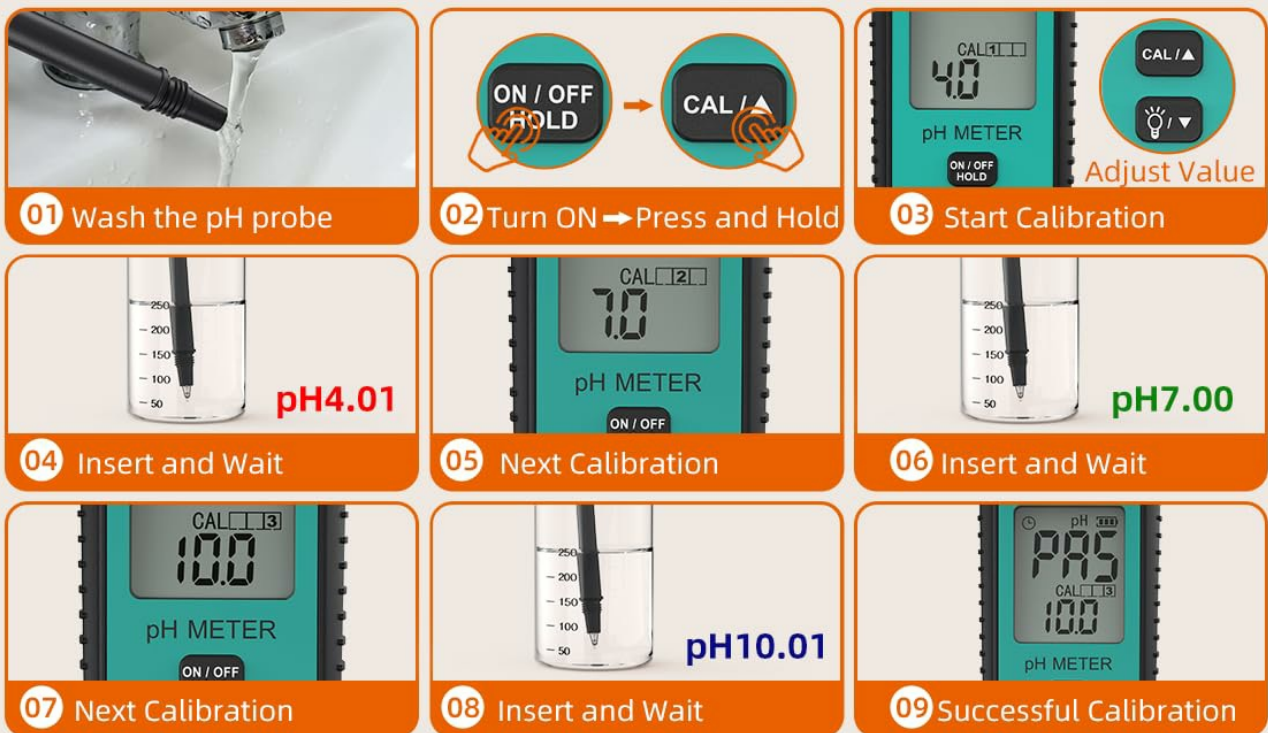
2. Initial Calibration (3-Point Method)

For accurate readings, calibrate the pH meter before first use and periodically thereafter. The device uses a three-point calibration method (pH 4.01, 7.00, and 10.01).

Calibration of pH Meter



Process of Calibration



Maintenance of Probe



Notice: If the probe is not used for a long time, please store it in KCL solution.

Image: A step-by-step visual guide demonstrating the 3-point calibration process using pH 4.01, 7.00, and 10.01 buffer solutions, and subsequent probe maintenance.

- 1. Prepare Buffer Solutions:** Dissolve one packet of pH 4.01, pH 7.00, and pH 10.01 calibration powder each into 250ml of distilled water to create your buffer solutions.
- 2. Clean the Probe:** Rinse the pH probe with distilled water and gently blot dry.
- 3. Start Calibration:**
 - Turn on the meter by pressing the **ON/OFF HOLD** button.

- Press and hold the **CAL/A** button until "CAL" appears on the display.

4. Calibrate pH 7.00:

- Immerse the probe into the pH 7.00 buffer solution.
- Wait for the reading to stabilize (usually indicated by a stable value on the screen). The meter will automatically recognize the buffer.
- Once stable, the meter will indicate successful calibration for pH 7.00.

5. Calibrate pH 4.01:

- Rinse the probe with distilled water.
- Immerse the probe into the pH 4.01 buffer solution.
- Wait for the reading to stabilize. The meter will automatically recognize the buffer.
- Once stable, the meter will indicate successful calibration for pH 4.01.

6. Calibrate pH 10.01:

- Rinse the probe with distilled water.
- Immerse the probe into the pH 10.01 buffer solution.
- Wait for the reading to stabilize. The meter will automatically recognize the buffer.
- Once stable, the meter will indicate successful calibration for pH 10.01.

7. **Completion:** After all three points are calibrated, the meter will display "PAS" (Pass) or a similar indication, then return to measurement mode.

OPERATING INSTRUCTIONS

1. General Measurement Procedure

1. **Prepare the Sample:** Ensure the sample (soil, solution, food, water) is ready for testing. For soil, ensure it is moist enough for the probe to penetrate easily.
2. **Turn On:** Press the **ON/OFF HOLD** button to power on the device.
3. **Insert Probe:** Carefully insert the pH probe into the sample. For soil, use the alloy protective cap to assist in penetrating harder soil without damaging the probe. Ensure the probe tip is fully immersed or in firm contact with the sample.
4. **Read Measurement:** Wait for the reading on the LCD screen to stabilize. The display will show the pH value and temperature.
5. **Data Hold:** Press the **ON/OFF HOLD** button briefly to freeze the current reading on the screen. Press again to release.
6. **Alarm Function:** If the pH value is below 3.5 or above 12, the LCD backlight will turn red to indicate an extreme acid or alkali environment.
7. **Turn Off:** Press and hold the **ON/OFF HOLD** button to power off the device after use.

Wide Applications



Image: The Tadeto Soil pH Tester being used to measure pH in soil, chemical solutions, baby food, and fruit juices, demonstrating its wide range of applications.

2. Using the Alloy Protective Cap

The unique zinc alloy protective cap is designed to safeguard the pH probe, especially when measuring in dense or hard materials like soil.

Zinc Alloy Protective Cap



Extended
Life



Complete
Protection



Muti -
Functions



Special
Design

Image: A detailed view of the zinc alloy protective cap and the pH probe, highlighting how the cap provides a solid barrier for the probe.

- Attach the cap to the probe before inserting into hard soil.
- The cap helps create a path, reducing the risk of damage to the delicate glass electrode.
- Ensure the probe tip is exposed through the cap for accurate readings.

MAINTENANCE

1. Probe Cleaning

- Always rinse the pH probe with distilled water after each use to remove any residue.
- Gently blot dry with a soft, lint-free cloth. Do not rub the glass bulb.

2. Probe Storage

Proper storage is essential to maintain the probe's activity and prolong its lifespan.

- After cleaning, inject a small amount of potassium chloride (KCL) solution into the protective cap.
- Place the cap back onto the probe, ensuring the probe tip is immersed in the KCL solution.
- If KCL solution is unavailable, distilled water can be used for short-term storage, but KCL is recommended for long-term preservation.

3. Battery Replacement

When the battery indicator on the LCD screen shows low power, replace the AAA batteries as described in the "Battery Installation" section.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Inaccurate or unstable readings	<ul style="list-style-type: none">• Probe not calibrated• Dirty probe• Probe dry or damaged• Insufficient sample immersion	<ul style="list-style-type: none">• Perform 3-point calibration.• Clean the probe with distilled water.• Ensure probe is stored in KCL solution. If damaged, replace.• Ensure probe tip is fully immersed in the sample.
Display not working or partial display	<ul style="list-style-type: none">• Low batteries• Incorrect battery installation• Device malfunction	<ul style="list-style-type: none">• Replace batteries.• Check battery polarity.• Contact customer support if problem persists after battery replacement.
Meter does not turn on	<ul style="list-style-type: none">• Dead batteries• Incorrect battery installation	<ul style="list-style-type: none">• Replace batteries.• Check battery polarity.
Probe difficult to insert into soil	<ul style="list-style-type: none">• Soil is too dry or compact• Protective cap not used	<ul style="list-style-type: none">• Moisten the soil before testing.• Ensure the alloy protective cap is attached to the probe.

SPECIFICATIONS

Feature	Detail
Model Number	TE027
Product Dimensions	1.6"W x 10"H (1.6 x 1.6 x 10 inches)
Item Weight	301 Grams (10.62 ounces)

Feature	Detail
Power Source	2 AAA batteries (included)
pH Measurement Range	0.0 - 14.0 pH
Temperature Measurement Range	32 - 122 °F (0 - 50 °C)
Accuracy	±0.1 pH
Display	LCD with Backlight
Special Features	3-point calibration, Data Hold, Alarm Function (red backlight for extreme pH), Zinc Alloy Protective Cap

WARRANTY AND SUPPORT

For specific warranty details, please refer to the documentation included with your product at the time of purchase or contact Tadeto customer support directly.

If you encounter any issues or have questions regarding your Tadeto Soil pH Tester, please contact the manufacturer's customer service for assistance. Contact information is typically provided in the product packaging or on the official Tadeto website.