

USER MANUAL



**Smart Portable Tester
(7-in-1/5-in-1/2-in-1)**

Please read the instruction manual carefully before use

Our Mission

To make water quality management smarter, more reliable, and simpler for families around the world.

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Choose Your Model

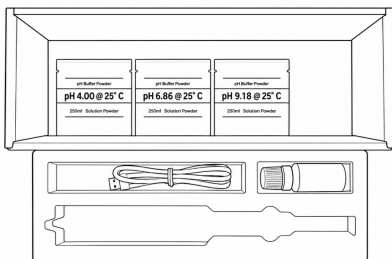
This manual applies to the 7-in-1, 5-in-1, and 2-in-1 models.

- 7-in-1 / 5-in-1: Designed for liquid testing.
- 2-in-1: Features an insertion probe designed for dough, soft cheese, and other compatible semi-solid samples.

Available measurements vary by model. Check the model name on your tester before use.

Note: Calibration Powders Inside

The calibration powders are packed beneath the upper tray. Please remove the tray to access them.



Getting Started

Quick Start



1. Prepare

Remove the protective cap and clean the probe.



2. Turn On

Press the Power button once.



3. Test

Liquids: Immerse the probe below the MAX line and stir gently.

Compatible semi-solids: Gently insert the 2-in-1 probe into the center of the sample.

4. Read

Hold the tester steady until the reading stabilizes.

Press **HOLD** to freeze the reading.

Press **MODE** to switch between measurement screens.



5. Connect to App

Connect your tester to the **Kactaily App** to view and record measurement data.

For detailed connection instructions, please refer to the Kactaily App User Manual.



6. Clean

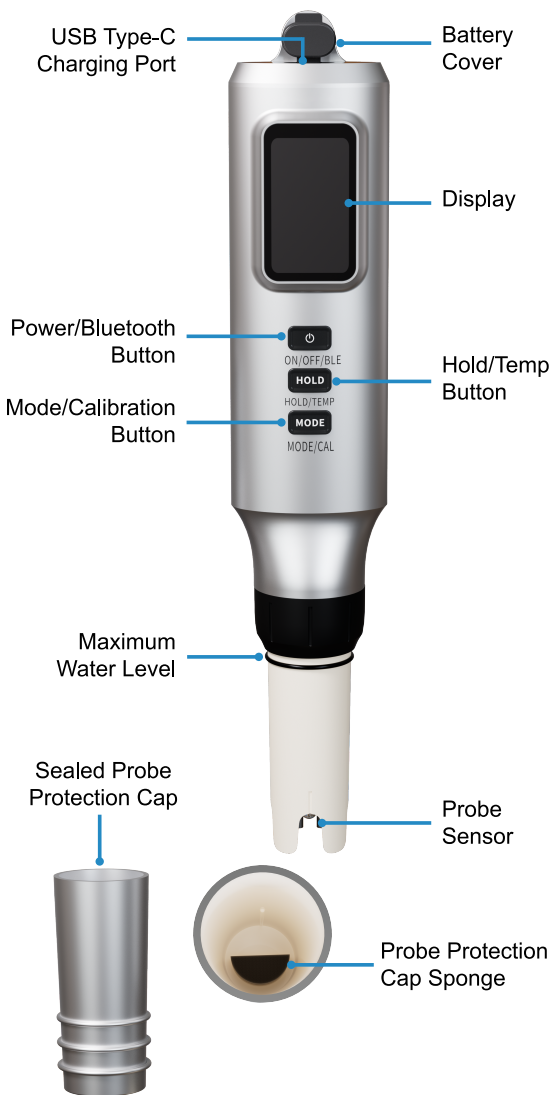
Clean the probe and reinstall the cap.

Important

Do not force, bend, or twist the probe.



Product Overview



Power/Bluetooth Button Functions

1. Power On/Off: Short press to turn the device on/off.
2. Bluetooth Mode: Press and hold the button for 5 seconds, then release it to turn

Bluetooth on/off.

3. Exit Calibration Mode: After calibration is completed, short press to exit calibration mode.

HOLD Hold/Temp Button Functions

1. Hold Measurement: Short press to hold the measured value for observation.

2. C/F Switch: Press and hold the button for 5 seconds, then release it to switch between °C and °F.

3. Increase Value: In calibration mode, short press to increase the value (+).

MODE Mode/Calibration Button Functions

1. Calibration Mode: Press and hold the button for 5 seconds, then release it to enter calibration mode.

2. Display Switching Mode: Short press to switch between display screens.

3. Decrease Value: In calibration mode, short press to decrease the value (-).

Display



Basic Operation

Power On / Off



Power ON:

When the device is off, press the

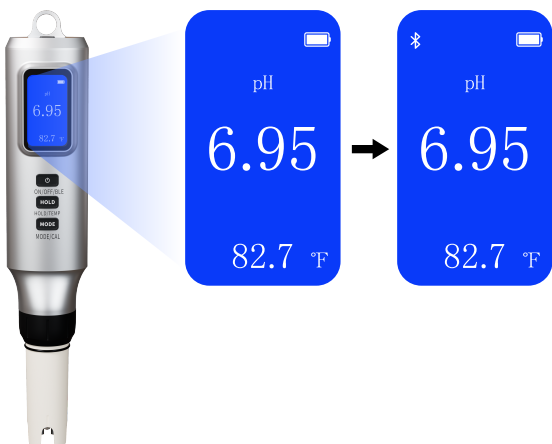


Power OFF:

When the device is on, press the



Bluetooth Mode



Bluetooth ON:

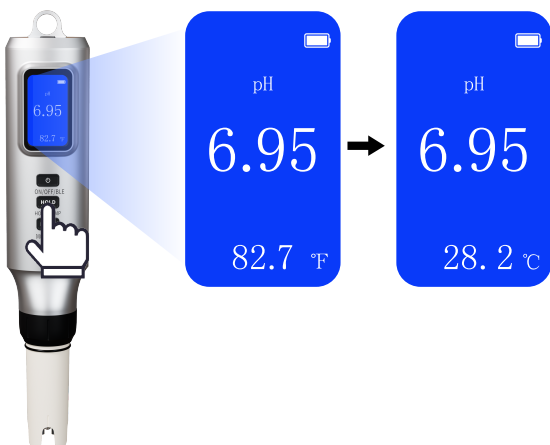
Press and hold the  button for 5 seconds, then release it to turn Bluetooth on. The Bluetooth icon will appear on the display.

Bluetooth OFF:

Press and hold the  button for 5 seconds, then release it to turn Bluetooth off. The icon will disappear from the display.

Note: The device can only connect to your phone when bluetooth is on.

Temperature Unit



When the device is on, press and hold  button for 5 seconds, then release it to switch between °C and °F.

Charging the Device



Please use the charging cable we provide to charge the device. A green battery icon with a lightning symbol means the device is charging. Once fully charged, the lightning symbol will disappear and the battery icon will turn white.

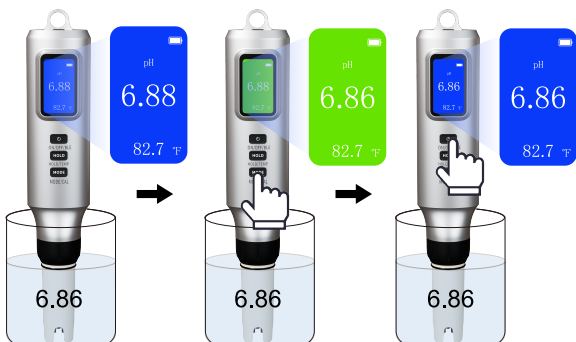
Calibration

Tips: The water level must not exceed the silicone ring on the probe. During calibration, keep the probe vertical to ensure accurate measurements.

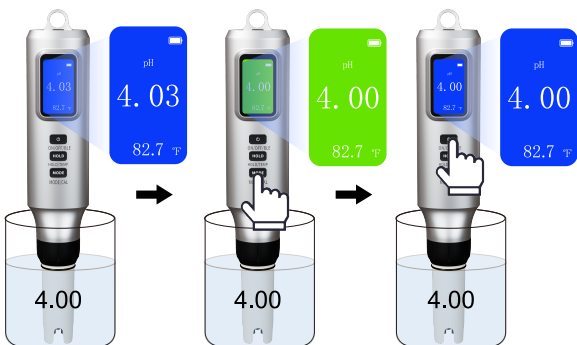
pH Calibration

Note: Both 6.86/4.00/9.18 and 7.00/4.00/10.01 can be used as standard calibration solutions. Either set may be used for calibration. In this manual, the 6.86/4.00/9.18 set is used as the example.

1. Prepare three 250 ml glasses of purified water with no minerals or distilled water. Do not use tap water.
2. Completely dissolve the pH 6.86, 4.00, and 9.18 calibration powders in the three glasses of prepared water.
3. Remove the sealed protective cap from the probe.



4. Put the probe into the 6.86 calibration solution and gently shake it to ensure full contact between the probe and the solution.
5. Once the reading stabilizes, press and hold the **MODE** button for 5 seconds, then release it. The screen will turn green to indicate successful entry into 6.86 calibration mode.
6. Press the **power** button to confirm the 6.86 calibration is complete and exit calibration mode.
7. Clean the probe in neutral water or purified water and gently wipe off any remaining liquid.

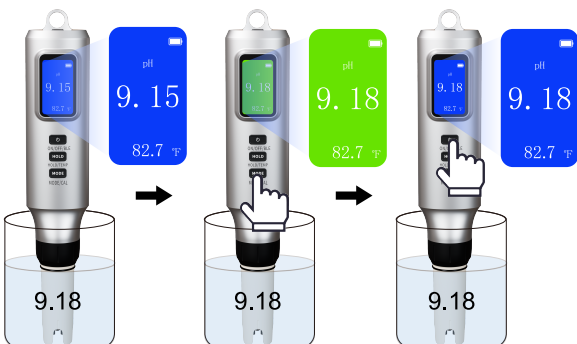


8. Put the probe into the 4.00 calibration solution and gently shake it to ensure full contact between the probe and the solution.

9. Once the reading stabilizes, press and hold the **MODE** button for 5 seconds, then release it. The screen will turn green to indicate successful entry into 4.00 calibration mode.

10. Press the **power** button to confirm the 4.00 calibration is complete and exit calibration mode.

11. Clean the probe as before.



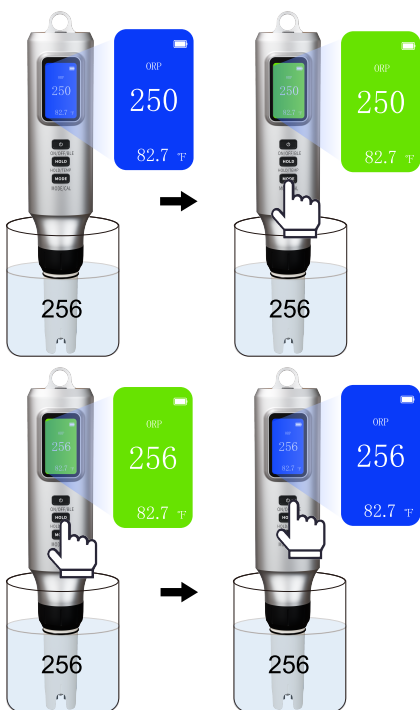
12. Put the probe into the 9.18 calibration solution and gently shake it to ensure full contact between the probe and the solution.

13. Once the reading stabilizes, press and hold the **MODE** button for 5 seconds, then release it. The screen will turn green to indicate successful entry into 9.18 calibration mode.

14. Press the **ON/OFF** button to confirm the 9.18 calibration is complete and exit calibration mode.

15. Clean the probe as before; pH calibration is completed.

ORP Calibration



1. Prepare 50 ml purified water with no minerals or distilled water. Do not use tap water.

2. Completely dissolve the 256 mV ORP

calibration powder in the prepared water.

3. Remove the sealed protective cap from the probe.

4. Put the probe into the ORP calibration solution and gently shake it to ensure full contact between the probe and the solution.

5. Once the reading stabilizes, press and hold the **MODE** button for 5 seconds, then release it. The screen will turn green to indicate successful entry into ORP calibration mode. If the value does not reach 256, press the **HOLD** or **MODE** button (“-” / “+”) to adjust the value to 256.

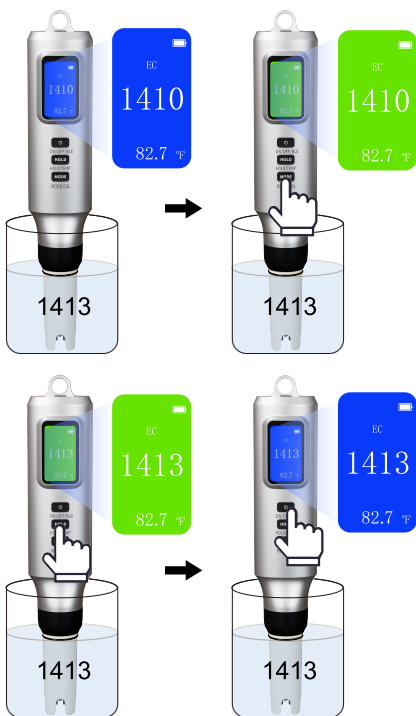
6. After adjusting the value to 256, press the **⏻** button to confirm the ORP calibration is complete and exit calibration mode.

7. Clean the probe in neutral water or purified water and gently wipe off any remaining liquid.

8. ORP calibration is completed.

EC Calibration

Note: When calibrating EC, salinity, TDS, and SG will also be calibrated simultaneously. You can choose either 1413 $\mu\text{S}/\text{cm}$ or 12.88 mS/cm calibration solution depending on your measurement range. In this manual, the 1413 $\mu\text{S}/\text{cm}$ set is used as the example.



1. Remove the sealed protective cap from the probe.
2. Put the probe into the 1413 $\mu\text{S}/\text{cm}$ calibration solution and gently shake it to ensure full contact between the probe and the solution.
3. Once the reading stabilizes, press and hold the **MODE** button for 5 seconds, then release it. The screen will turn green to indicate successful entry into EC calibration mode. If the value does not reach 1413, press the **HOLD** or **MODE** button (“-” / “+”) to adjust the value to 1413.
4. After adjusting the value to 1413, press the **power** button to confirm the EC calibration is complete and exit calibration mode.
5. Clean the probe in neutral water or

purified water and gently wipe off any remaining liquid.

6. EC calibration is completed.

Care and Maintenance

Cleaning

Clean the probe after every use.

- Do not use abrasive cleaners or strong solvents.
- Do not rub a glass sensor with a tissue or rough cloth.
- Clean the insertion probe thoroughly after testing semi-solid samples.

Storage

1. Add a few drops of the included KCl storage solution to the protective cap before storage.
2. Reinstall the protective cap after each use.
3. Store the tester in a cool, dry place.
4. Do not store the pH probe in distilled or deionized water.

Note: White crystals are normal if the storage solution dries. Rinse before use.

Help and Information

Frequently Asked Questions

1. How often to Calibrate it?

Calibration Frequency	
pH	Once every 3-6 months
ORP	Once every 3-6 months
EC	Once a year

Note: The pH calibration sequence must be 6.86 → 4.00 → 9.18, or 7.00 → 4.00 → 10.01.

2. How should I position the probe?

Keep the probe vertical during measurement and calibration. This helps trapped air bubbles escape.

3. Why are there white crystals on the probe?

They come from the KCl storage solution and are normal. This does not mean the tester has been used. Rinse the probe before use.

4. Why should I gently swirl the probe?

Gently swirling the probe removes air bubbles that may affect the reading. Do not shake it vigorously.

5. What is the silicone ring for?

It marks the maximum immersion level. Do

not allow the sample or calibration solution to rise above it.

6. How do I start calibration?

Place the probe in the correct calibration solution and wait for a stable reading. Press and hold MODE/CAL for 5 seconds. When the screen turns green, press Power to confirm.

Never start calibration in air.

7. What should I do if the storage sponge is dry?

Add a few drops of KCl storage solution. Do not overfill the protective cap.

8. How should I protect the probe?

Keep the glass sensor away from hard or sharp objects. Do not force, bend, twist, or drop the probe.

Troubleshooting

1. Tester Will Not Turn On

Charge the tester, then try again.

2. Reading Is Unstable

Clean the probe, remove air bubbles, and allow more time for the reading to stabilize.

3. Reading Appears Incorrect

Clean the probe and recalibrate the tester using fresh calibration solution.

4.Calibration Fails

Check the calibration mode and solution.
Clean the probe, then restart calibration.

5.Bluetooth Will Not Connect

Make sure Bluetooth is on, allow the required app permissions, and move the tester closer to the phone.

6.Tester Will Not Charge

Dry the charging port and use a compatible USB cable and power source.

7.Probe Is Difficult to Insert

Do not force the probe. Use the 2-in-1 insertion probe only with compatible soft or semi-solid samples.

Specifications

Parameters	pH	Range	0.00-14.00
		Resolution	0.01
		Accuracy	±0.05
	TEMP	Range	0.0-60.0℃; 32.0-140.0℉
		Resolution	0.1℃; 0.1℉
		Accuracy	±0.5℃
	EC	Range	0-9990μS/cm; 10.01-19.99mS/cm; 20.1-200.0mS/cm
		Resolution	1μS/cm; 0.01mS/cm; 0.1mS/cm
		Accuracy	+2%F.S
	TDS	Range	0-9990ppm; 10.01-100.0ppt
		Resolution	1ppm; 0.1ppt
		Accuracy	+2%F.S
	SALT	Range	0.01-15.00%; 0-9990ppm; 10.01-150.0ppt
		Resolution	0.01%; 1ppm; 0.1ppt
		Accuracy	+2%F.S
	ORP	Range	-999mV~999mV
		Resolution	1mV
		Accuracy	±15mV
	SG	Range	1.000-1.222
Calibration	pH	6.86/4.00/9.18 or 7.00/4.00/10.01 (Optional calibration standard)	
	EC	1413uS/cm Calibration or 12.88mS/cm Calibration (Optional calibration standard)	
	ORP	256mv	
Power Supply	5V1A/USB Type-C		

Safety Information

1. Keep the tester and solutions away from children. Do not swallow any calibration, cleaning, or storage solution.
2. Do not use, charge, disassemble, or modify a damaged tester.

FCC Warning

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception,

which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction

Note: Even highly precise instruments may have minor errors. If results are near the limit or outside the expected range, please retest using other equipment, recalibrate, or contact us if needed.

Water Testing Has Never Been Easier

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