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› Homcoice 5-in-1 Water Quality Tester User Manual - pH, Salinity, TDS, EC, Temperature Meter

Homcoice 5 IN 1

Homcoice 5-in-1 Water Quality Tester User Manual

Model: 5 IN 1 | Brand: Homcoice

1. INTRODUCTION

The Homcoice 5-in-1 Water Quality Tester is a versatile and precise instrument designed for comprehensive water analysis. This device accurately measures pH, Salinity, Total Dissolved Solids (TDS), Electrical Conductivity (EC), and Temperature, making it an essential tool for various applications including swimming pools, aquariums, drinking water, hydroponics, and more. Its robust design, featuring IP67 waterproofing and automatic temperature compensation, ensures reliable performance and ease of use in diverse environments.

2. PRODUCT OVERVIEW

2.1 Key Features

- **5-in-1 Functionality:** Measures pH, Salinity, TDS, EC, and Temperature.
- **High Precision:** Equipped with a high-precision algorithmic chip and electrode for accurate and fast readings.
- **Automatic Temperature Compensation (ATC):** Ensures accurate results across a temperature range of 0°C to 60°C.
- **Durable Design:** IP67 waterproof ABS casing, high-definition LCD backlight, and dual data display.
- **User-Friendly:** Features replaceable probe and batteries, and a simple 3-point calibration method.

2.2 Package Contents

- 1 x Homcoice 5-in-1 Water Quality Tester
- 3 x pH Calibration Buffer Powders (pH 4.00, pH 6.86, pH 9.18)
- 1 x User Manual



Figure 1: Homcoice 5-in-1 Water Quality Tester with protective cap removed.

Chaque petite pièce est conçue pour assurer la précision pour une utilisation à long terme

— Puce intelligente complète, précision supérieure, stabilité plus forte, éviter les inexactitudes dans les valeurs dues à des

— Faible consommation d'énergie, arrêt automatique après 5 minutes de non-utilisation

— 3 piles LR44, durables et faciles à remplacer

— IP67 étanche

A diagram of the Homcoice 5-in-1 Water Quality Tester with callouts pointing to various features. The device is shown with a digital display showing 'pH 6.08' and '30.3°C'. The brand name 'Homcoice' is visible below the display. The device is shown with a protective cap removed, revealing the sensor probe at the bottom. The background is a blue, futuristic-looking environment with a circular base.

Figure 2: Detailed view of the tester's components, including replaceable probe, battery compartment, and IP67 waterproof rating.

3. SETUP

3.1 Battery Installation

1. Unscrew the battery compartment cap at the top of the device.
2. Insert three LR44 button cell batteries, ensuring correct polarity.
3. Securely screw the battery compartment cap back on.

3.2 Initial Use

The device is factory calibrated for immediate use. However, for optimal accuracy, especially after prolonged storage or frequent use, calibration is recommended (refer to Section 5).

4. OPERATING INSTRUCTIONS

4.1 Power On/Off

- Press the **ON/OFF** button to turn the meter on.
- Press the **ON/OFF** button again to turn the meter off. The device also features automatic shutdown after 5 minutes of inactivity to conserve battery.

4.2 Mode Selection

- Press the **MODE/CAL** button to cycle through the measurement modes: pH, TDS, EC, and Salinity.
- The current mode will be displayed on the LCD screen.

4.3 Temperature Unit Switching

- Long press the **HOLD/TEMP** button to switch between Celsius (°C) and Fahrenheit (°F).

4.4 Data Hold Function

- During measurement, press the **HOLD/TEMP** button briefly to freeze the current reading on the display.
- Press it again to release the hold and resume live measurement.

4.5 Measurement Procedure

1. Remove the protective cap from the electrode.
2. Rinse the electrode with distilled water and gently blot dry with a clean tissue.
3. Immerse the electrode into the sample solution, ensuring the sensor is fully submerged.
4. Gently stir the meter and wait for the reading to stabilize on the LCD screen.
5. Record the measurement.
6. After use, rinse the electrode with pure water and replace the protective cap.



Figure 3: Illustration of different display modes for pH, TDS, Salinity, and EC measurements.



Figure 4: Example of pH measurement with the Homcoice tester, showing the pH scale.

DIGITAL SALT METER

When the PPM value reaches 10000, it will be automatically converted to PPT value

SALT 1%=10ppt = 10000ppm



Freshwater salinity

Measuring range: 0.00-25.0 %
Ideal range is 0.900%



Seawater salinity

Measuring range: 10.1-200.0 ppt
ideal range is 30 - 35 ppt



Salt water pool salinity

Measuring range 0-9999ppm, Ideal range is 2700 - 3400ppm



Figure 5: Salinity measurement display in percentage, PPT, and PPM, with ideal ranges for different water types.



Pollution externe

Diverses sources industrielles et agricoles de pollution, métaux lourds, substances toxiques, etc. dépassant la norme



Pollution des pipelines

Vieillesse et rouille des conduites d'eau, produisant de la rouille et d'autres grosses particules d'impuretés

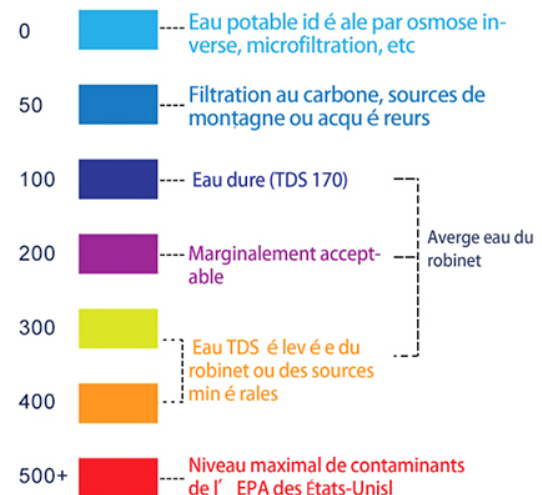


Pollution des réservoirs d'eau

Les réservoirs d'eau ne sont pas nettoyés à temps, ce qui entraîne la reproduction de bactéries, d'algues, de sédiments, etc.

TDS IN PPM

TDS = Total des solides dissous en parties par million



5. CALIBRATION

The Homcoice 5-in-1 Water Quality Tester supports a 3-point automatic calibration for pH (4.00, 6.86, and 9.18). Regular calibration ensures the accuracy of your measurements.

5.1 pH Calibration Procedure

1. Prepare 250ml of distilled water for each buffer powder. Dissolve one packet of pH 4.00, pH 6.86, and pH 9.18 buffer powder separately in 250ml of distilled water each. Ensure the water temperature is around 25°C.
2. Turn on the meter by pressing the **ON/OFF** button.
3. Immerse the electrode into the pH 6.86 buffer solution.
4. Press and hold the **MODE/CAL** button for approximately 6 seconds until the display flashes three times, indicating calibration mode. The meter will automatically recognize the buffer solution and calibrate.
5. Once the reading stabilizes, rinse the electrode with distilled water.
6. Repeat steps 3-5 for pH 4.00 and pH 9.18 buffer solutions. It is recommended to calibrate in the order of 6.86, then 4.00, and finally 9.18 for best results.
7. After calibration, rinse the electrode with distilled water and replace the protective cap.



Figure 7: Visual guide for the 3-point pH calibration process using buffer powders.

6. MAINTENANCE

6.1 Electrode Cleaning

After each use, it is crucial to clean the electrode. Rinse the electrode thoroughly with pure water (distilled or deionized water) to remove any residual sample. Gently blot dry with a clean, soft tissue. Do not rub the electrode as this can damage the sensitive sensor.

6.2 Storage

Always replace the protective cap after cleaning to keep the electrode moist and protected. Store the meter in a cool, dry place away from direct sunlight and extreme temperatures.

6.3 Battery Replacement

When the battery indicator on the LCD screen shows low power, replace the LR44 button cell batteries as described in Section 3.1.

7. TROUBLESHOOTING

7.1 Inaccurate Readings

- **Recalibration:** If readings appear inaccurate or inconsistent, perform a full 3-point pH calibration as described in Section 5.
- **Electrode Cleanliness:** Ensure the electrode is clean and free from residue. Clean it thoroughly with pure water.
- **Buffer Solutions:** Ensure your calibration buffer solutions are fresh and correctly prepared. Expired or contaminated buffers can lead to inaccurate calibration.
- **Temperature:** Verify that the sample temperature is within the operating range (0°C-60°C) and allow the meter to stabilize for accurate ATC.

7.2 Display Not Working / No Power

- **Check Batteries:** Replace the LR44 batteries if the display is dim or not turning on. Ensure correct polarity.
- **Power Button:** Ensure the ON/OFF button is pressed firmly.

8. SPECIFICATIONS

Parameter	Value
Brand	Homcoice
Model Number	5 IN 1
pH Range	0 - 14
Salinity Range	0.00-25.0% (Freshwater), 10.1-200.0 ppt (Seawater)
TDS Range	0-9999 ppm (Water Pool Salinity)
EC Range	Not explicitly stated, but implied by 5-in-1 functionality.
Temperature Range	0°C - 60°C (32°F - 140°F)
Temperature Compensation	Automatic (ATC)
Waterproof Rating	IP67
Material	ABS
Power Supply	3 x LR44 Button Cell Batteries

Dimensions	19.3 x 5.2 x 4.9 cm (Package)
Weight	90 grams (Package)

9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please refer to the documentation provided with your purchase or contact the retailer/manufacturer directly. Specific warranty terms and support channels may vary by region and point of purchase.