

Foodcare

HI981039

Chocolate pH Tester



Battery Replacement

To change the CR2032 lithium-ion battery, turn the battery cover, located on the back of the tester, counterclockwise to unlock. Remove cover and replace the battery with positive (+) side facing out.

Note: Only use the battery type specified in the manual. Old batteries should be disposed in accordance with local regulations.

Warranty

The HI981039 is warranted for a period of one year against defects in workmanship and materials when used for its intended purpose and maintained according to instructions. This warranty is limited to repair or replacement free of charge. Damage due to accidents, misuse, tampering or lack of prescribed maintenance is not covered. If service is required, contact your local Hanna Instruments Office. If under warranty, report the model number, date of purchase, serial number and the nature of the problem. If the repair is not covered by the warranty, you will be notified of the charges incurred. If the instrument is to be returned to Hanna Instruments, first obtain a Returned Goods Authorization (RGA) number from the Technical Service department and then send it with shipping costs prepaid. When shipping any instrument, make sure it is properly packaged for complete protection.

Recommendations for Users

Before using this product, make sure it is entirely suitable for your specific application and for the environment in which it is used. Any variation introduced by the user to the supplied equipment may degrade the tester's performance. For yours and the tester's safety do not use or store the tester in hazardous environments.

Certification

All Hanna Instruments conform to the CE European Directives.

Disposal of Electrical & Electronic Equipment. The product should not be treated as household waste. Instead hand it over to the appropriate collection point for the recycling of electrical and electronic equipment which will conserve natural resources.

Disposal of waste batteries. This product contains batteries, do not dispose of them with other household waste. Hand them over to the appropriate collection point for recycling.

Ensuring proper product and battery disposal prevents potential negative consequences for the environment and human health. For more information, contact your city, your local household waste disposal service, the place of purchase or go to www.hannainst.com.

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IST981039 10/19



- The outer junction sleeve can be removed and cleaned with purified water. Once cleaned, a small amount of supplied gel electrolyte should be added to refresh the junction and improve the pH measurement.

Note: Never immerse the tester over the maximum immersion level.

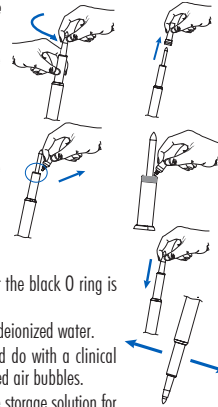
Refilling the Electrode

- To remove the electrode sleeve, rotate it carefully and slide it off the probe body, keeping it parallel to the pH electrode.

Note: Handle the probe with care, the pH electrode stem is made of glass.

- Rinse off any traces of electrolyte gel from the sleeve. Soak the tip of the electrode in HI700601 General purpose cleaning solution or HI700685 Electrode cleaning and disinfection solution for chocolate deposits for 20 minutes. Rinse with distilled or deionized water.

- Refill the reference well with HI9071 Gelled bridge electrolyte.
- Replace the sleeve making sure that the black O ring is fixed inside the electrode.
- Rinse off excess gel with distilled or deionized water.
- Shake the probe down as you would do with a clinical thermometer to eliminate any trapped air bubbles.
- Soak the probe in HI70300 Electrode storage solution for a minimum of 30 minutes before calibrating.



Accessories

pH Buffer Solution

| | |
|----------|--|
| HI70004P | pH 4.01 buffer solution, 20 mL sachet (25 pcs.) |
| HI70007P | pH 7.01 buffer solution, 20 mL sachet (25 pcs.) |
| HI77400P | pH 4.01 & 7.01 buffer solution, 20 mL sachet (10 pcs., 5 each) |

Electrode Cleaning Solution

| | |
|-----------|---|
| HI700601P | General purpose cleaning solution, 20 mL sachet (25 pcs.) |
| HI700685P | Electrode cleaning and disinfection solution for chocolate deposits, 20 mL sachet (25 pcs.) |

Electrode Storage Solution

| | |
|----------|---|
| HI70300L | Electrode storage solution, 500 mL |
| HI70300M | Electrode storage solution, 230 mL |
| HI9072 | Electrode storage solution, 13 mL dropper |

Electrode Fill Solution

| | |
|--------|---------------------------|
| HI9071 | Gelled bridge electrolyte |
|--------|---------------------------|

Auto-Off

From measurement mode, press and hold the ON/OFF button. The LCD will show "OFF", "CAL" followed by "d08" (default setting, 8 minutes). Release the ON/OFF button. A single press on the ON/OFF button will change the auto-off timer to "d60" (60 minutes). To disable the auto-off feature press the ON/OFF button again, LCD will show "d--". Press and hold to exit.

Clear Calibration

To clear the user calibration and restore the tester to factory default. From calibration mode, press and hold the ON/OFF button, the LCD will show "CL".

"Err" Message

In calibration mode, if the probe is in the correct buffer solution and the "Err" message is displayed, the probe should be cleaned. Soak the probe in cleaning solution for 20 minutes. Rinse with water and hydrate electrode in storage solution for a minimum of 30 minutes before calibrating.

Battery Indicator

When the battery level is low, the tag on the LCD will blink. When the battery is depleted the "Erb" message is displayed and the tester is powered off.



Care & Maintenance

General Information

Please read the information below, to ensure the highest possible accuracy:

- Fresh buffer should be used for each calibration, once the sachets are opened the buffer value can change over time.
- For improved accuracy a two-point calibration is recommended.
- If the electrode is slow or sluggish, soak it in cleaning solution for 20 minutes. Rinse with water and hydrate the electrode in storage solution for a minimum of 30 minutes before calibrating.
- If measurements are taken successively, rinse the probe thoroughly in distilled or deionized water to eliminate cross-contamination.
- When not in use, add a few drops of storage solution to the protective cap to keep the glass tip and the junction hydrated. If storage solution is not available, pH 4.01 or pH 7.01 buffer can be used. Never store the probe in distilled or deionized water.

Dear Customer,

Thank you for choosing a Hanna Instruments product. Please read this instruction manual carefully before using the tester.

For more information about Hanna Instruments and our products, visit www.hannainst.com or e-mail us at sales@hannainst.com.

For technical support, contact your local Hanna Instruments Office or e-mail us at tech@hannainst.com.

Preliminary Examination

Remove the tester and accessories from the packing material and examine it carefully. If you require any further information, please contact Hanna Instruments technical support team at tech@hannainst.com.

Each **HI981039** is delivered in a cardboard box and is supplied with:

- **HI70004** pH 4.01 buffer solution, 20 mL sachet (2 pcs.)
- **HI70007** pH 7.01 buffer solution, 20 mL sachet (2 pcs.)
- **HI700685** Electrode cleaning and disinfection solution for chocolate deposits, 20 mL sachet (2 pcs.)
- **HI9072** Electrode storage solution, 13 mL dropper
- **HI9071** Gelled bridge electrolyte
- CR2032 3V Lithium-ion battery
- Instrument quality certificate
- Instruction manual

Note: Save all packing material until you are sure that the tester works correctly. Any damaged or defective item must be returned in its original packing material with the supplied accessories.

General Description & Intended Use

HI981039 Chocolate pH Tester is designed to measure the pH during the main processing steps of chocolate manufacturing and ensure it meets the food-hygiene and Hazard Analysis Critical Control Point (HACCP) regulations.

It features a single button operation system and is easy to use. It has a compact and waterproof casing and automatic pH calibration at one or two points.

All readings are automatically compensated for temperature variations with a built-in temperature sensor. The specialized pH probe has an outer junction sleeve that can be removed and cleaned, extending the life of the tester.

The conical tip allows measurements to be taken directly in solid or semisolid samples.

Probe Features

Open Junction Reference

The open junction design consists of a solid gel interface between the sample and internal Ag/AgCl reference. This interface prevents silver from entering the sample and makes it impermeable to clogging, resulting in a fast response and stable reading.



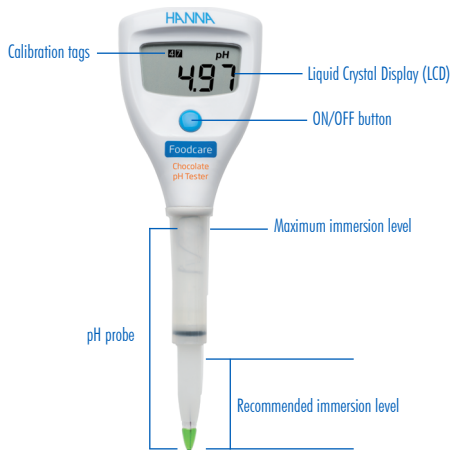
Polyvinylidene Fluoride (PVDF) Body

PVDF is a food-grade plastic that is resistant to most chemicals and solvents, including sodium hypochlorite, it is also resistant to fungal growth. It has high abrasion resistance, mechanical strength, and resistance to ultraviolet.

Specifications

| | |
|--------------------------|---|
| Range | 0.00 to 12.00 pH |
| Resolution | 0.01 pH |
| Accuracy | ±0.05 pH |
| Calibration | Automatic, one or two-point |
| Temperature compensation | Automatic, 0 to 50 °C |
| Electrode | Built-in probe for specific application |
| Battery type | CR2032 Lithium-ion (included) |
| Battery life | Approximately 800 hours of continuous use |
| Auto-off | 8 minutes, 60 minutes or disabled |
| Environment | 0 to 50 °C (32 to 122 °F), RH 95% max |
| Dimensions | 51 x 148 x 21 mm (2 x 5.8 x 0.9") |
| Weight | 45 g (1.58 oz.) |

Functional Description & LCD Display



Preparation

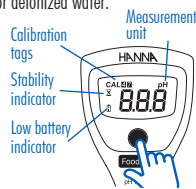
- Remove the protective cap. Do not be alarmed if salt deposits are present. Rinse the probe with water and blot dry.
- If the glass and / or junction are dry, soak the electrode (bottom 4 cm / 1.5") in storage solution for a minimum of 30 minutes. Rinse with water and blot dry.
- Calibrate the electrode before using. For best results is recommended to recalibrate periodically.

Storage

- To ensure a quick response, the glass tip and junction should be kept moist.
- Replace the protective cap with a few drops of storage solution when not in use. Do not store the electrode in distilled or deionized water.

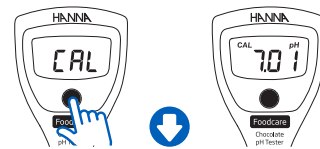
Operation

Press the ON/OFF button to turn the tester on. The tester displays all LCD segments for a few seconds. The tester will enter measurement mode, the current reading and calibrated buffers will be shown.



Calibration

From measurement mode, press and hold the ON/OFF button until "CAL" is displayed.



- A** For one or two-point calibration using pH 7.01 buffer solution, follow procedure A.
- B** For one-point calibration using pH 4.01 buffer solution, follow procedure B.

Note: It is recommended to calibrate the electrode with buffers at the temperature it will be used at.

A One or Two-Point Calibration with pH 7.01



One-Point



Press the ON/OFF button to save the one-point calibration.



"Sto" will be displayed when the calibration is saved.



The tester will return to measurement mode and the calibration tag will be displayed.

When "7.01" is displayed, place the tip of the electrode in pH 7.01 buffer. When the reading is stable, the stability icon will disappear.

Two-Point



Place the tip of the electrode in pH 4.01 buffer. The buffer is automatically recognized, the stability indicator will blink.



Wait until the measurement is stable and the stability indicator disappears. "Sto" will be displayed when the calibration is saved.



The tester will return to measurement mode and the calibration tag will be displayed.

B One-Point Calibration with pH 4.01



When "7.01" is displayed, place the tip of the electrode in pH 4.01 buffer. The buffer value will be recognized automatically and "4.01" will be displayed.



When the reading is stable, the stability indicator will disappear. "Sto" will be displayed when the calibration is saved.



The tester will return to measurement mode and the calibration tag will be displayed.