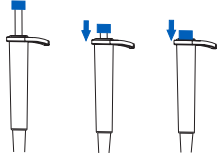


## Proper Use of Minipipette

- Attach the pipette tip.
- Press the button down to the first stop.
- Immerse the pipette tip in the liquid approximately 2-3 mm.
- Slowly let the button move back to the original position, wait 2 seconds.
- Remove the pipette tip from the liquid.
- To dispense the liquid, place the pipette tip on the inside wall of the container.
- Slowly press the button down to the first stop.
- Wait until all of the liquid has been dispensed.
- Press the button down to the second stop, this will allow any remaining liquid to be dispensed.



## Tips for an Accurate Measurement

- Ensure the sample does not contain any debris.
- Whenever the cuvette is placed into the checker, it must be dry outside and free of fingerprints, oil and dirt.
- Wipe the cuvette thoroughly with HI731318 microfiber cleaning cloth or a lint-free cloth prior to insertion.
- Shaking the cuvette can generate bubbles, causing higher readings. To obtain accurate measurements, remove such bubbles by swirling or by gently tapping the cuvette.
- Do not let the reacted sample stand too long after reagent has been added, as accuracy will be affected.
- Discard the sample immediately after the reading has been taken or the glass might become permanently stained.



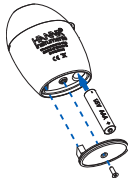
## Battery Replacement

To save the battery, the checker shuts down after 10 minutes of non-use and 2 minutes after reading.

A fresh battery lasts for a minimum of 5000 measurements. When the battery is drained, the instrument displays “bAd” then “bAt”, and turns off.

To replace the battery, follow the next steps:

1. Press and hold the ON/OFF button to turn the checker off.
2. Turn the instrument upside down and use a screwdriver to unfasten the screw and remove the battery cover.
3. Remove the old battery, replace it with a new 1.5V AAA battery, inserting the negative end first.
4. Replace the battery cover, fasten and tighten the screw.



## Accessories

Reagent Sets	
HI758-26	Reagents for 25 Marine Calcium tests
Other Accessories	
HI758-11	Marine Calcium certified standard kit
HI70436M	Deionized water (230 mL)
HI731315	Glass cuvette and cap for Checker <sup>®</sup> HC colorimeters (2 pcs.)
HI731318	Cloth for wiping cuvettes (4 pcs.)
HI731339P	0.1 mL minipipette
HI731349P	Tip for 0.1 mL minipipette (10 pcs.)
HI740028P	1.5V AAA battery set (12 pcs.)
HI93703-50	Cuvette cleaning solution, 230 mL

## Certification

All Hanna<sup>®</sup> 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, or the place of purchase.



RoHS  
compliant



## 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 checker's performance. For your and the checker's safety do not use or store it in hazardous environments.

## Warranty

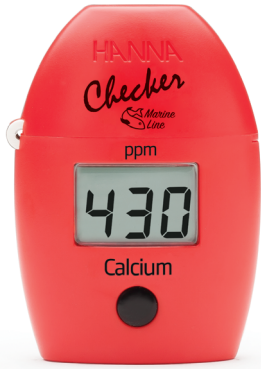
HI758 Checker HC is warranted for a period of one year against defects in workmanship and materials when used for its intended purpose and maintained according to instructions. This warranty is limited to repair or replacement free of charge. Damage due to accidents, misuse, tampering or lack of prescribed maintenance is not covered. If service is required, contact your local Hanna Instruments<sup>®</sup> 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 checker 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 product, make sure it is properly packaged for complete protection.

Hanna Instruments reserves the right to modify the design, construction, or appearance of its products without advance notice.

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# INSTRUCTION MANUAL

## HI758 Marine Calcium



## Dear Customer,

Thank you for choosing a Hanna Instruments® product. Please read this instruction manual carefully before using the Checker® HC handheld colorimeter. For more information about Hanna Instruments and our products, visit [www.hannainst.com](http://www.hannainst.com) or e-mail us at [sales@hannainst.com](mailto:sales@hannainst.com). For technical support, contact your local Hanna Instruments Office or e-mail us at [tech@hannainst.com](mailto:tech@hannainst.com).

## Preliminary Examination

Remove the Checker HC handheld colorimeter and accessories from the packing material and examine it carefully. If you require any further information, please contact Hanna Instruments technical support team.

Each HI758 is delivered in a case with custom insert and is supplied with:

- Sample cuvette and cap (2 pcs.)
- Marine Calcium reagent starter kit (reagents for 25 tests)
- 1 mL syringe with tip (1 pc.)
- Minipipette with tip (1 pc.)
- Plastic pipette (1 pc.)
- 1.5V AAA Alkaline battery (1 pc.)
- Instruction manual

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

## General Description & Intended Use

HI758 Marine Calcium handheld checker is designed to accurately determine calcium levels in saltwater aquariums and marine biology applications.

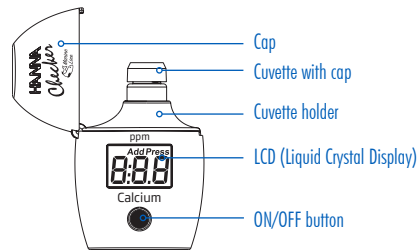
HI758 features a single-button operation system and is easy to use.

The large LCD is easy to read and the auto shut-off feature assures the battery will not be drained.

## Specifications

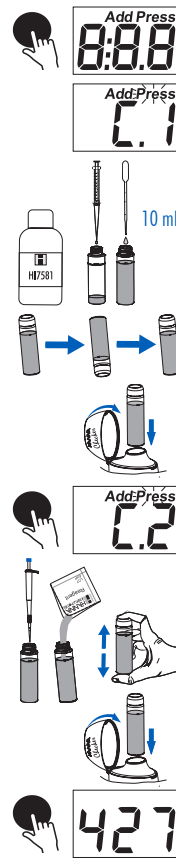
Range	200 to 600 ppm (as $\text{Ca}^{2+}$ )
Resolution	1 ppm
Accuracy	$\pm 6 \text{ ppm} \pm 5\%$ of reading @ 25 °C (77 °F)
Light source	Light Emitting Diode @ 610 nm
Light detector	Silicon photocell
Method	Adaptation of the Zincon Method
Environment	0 to 50 °C (32 to 122 °F); max. 95% RH non-condensing
Battery type	1.5V AAA Alkaline
Auto shut-off	After 10 minutes of non-use and 2 minutes after reading
Dimensions	86.0 x 61.0 x 37.5 mm (3.4 x 2.4 x 1.5")
Weight	64 g (2.3 oz)

## Functional Description & LCD Display



## Measurement Procedure

- Press the ON/OFF button to turn the checker on. All segments will be displayed for a few seconds, followed by "Add", "C.1" with "Press" blinking.
- Add 1 mL of HI7581 Marine Calcium reagent A to the cuvette using the 1 mL syringe. Use the plastic pipette to fill the cuvette to the 10 mL mark with deionized water and replace the cap. Invert 3-5 times to mix.
- Insert the cuvette into the checker and close the cap. Press the ON/OFF button. When the display shows "Add", "C2" with "Press" blinking the checker is zeroed.
- Remove the cuvette and unscrew the cap. Use the minipipette and add 0.1 mL of sample to the cuvette. Add the content of 1 packet of HI7582 Marine Calcium reagent B. Replace the cap and shake vigorously for 15 seconds or until the powder is completely dissolved. Allow air bubbles to dissipate for 15 seconds before taking a reading.
- Insert the cuvette into the checker and close the cap. Press the ON/OFF button. The instrument displays the calcium concentration in ppm. The checker automatically turns off after 2 minutes.



## Errors & Warnings

The checker shows clear warning messages when erroneous conditions appear and when measured values are outside the expected range. The information below provides an explanation of the errors and warnings, and the recommended action to be taken.

**Light High:** There is an excess amount of ambient light reaching the detector. Please check the preparation of the zero cuvette.

L.H.

**Light Low:** There is not enough light to perform a measurement. Please check the preparation of the zero cuvette.

L.Lo

**Inverted Cuvettes:** The sample and the zero cuvettes are inverted. Swap the cuvettes and repeat the measurement.

Inu

**Under Range:** A blinking "200" indicates that the sample absorbs less light than the lower range limit. Check the measurement procedure and make sure to use the same cuvette for reference (zero) and measurement.

200

**Over Range:** Maximum concentration value displayed blinking indicates the measured value is outside the limits of the method. Verify that the sample does not contain any debris. Dilute the sample and repeat the measurement.

600

**Battery Low:** Battery level is too low for the checker to function properly. Replace the battery with a new one.

bAt

**Drained Battery:** The battery is drained and must be replaced. Replace the battery with a new one and restart the checker.

bAd

bAt