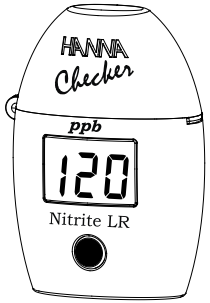
# HI707

## Nitrite Low Range




HANNA instruments

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Dear Customer,
Thank you for choosing a Hanna Instruments Product.
Please read this instruction manual carefully before using the instrument. If you need additional technical information, do not hesitate to e-mail us at tech@hannainst.com or view our worldwide contact list at www.hannainst.com.

### *Preliminary examination:*

Please examine this product carefully. Make sure that the instrument is not damaged. If any damage occurred during shipment, please contact your local Hanna Instruments Office. Each **HI707** meter is supplied complete with:

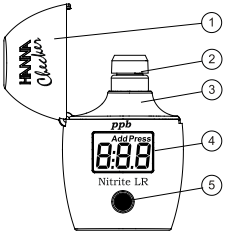
- Two Sample Cuvettes and Caps
- Reagents for 6 tests
- 1 x 1.5V AAA Battery
- Instruction Manual and Quick Reference Guide

***For more details about spare parts and accessories see "Accessories".***

### Technical specifications

| | |
|---|---|
| Range | 0 to 600 ppb |
| Resolution | 1 ppb |
| Accuracy | ±20 ppb ±5% of reading @25 °C/77 °F |
| Light Source | Light Emitting Diode @470 nm |
| Light Detector | Silicon Photocell |
| Method | Adaptation of the EPA Diazotization method 354.1. The reaction between nitrite and the reagent causes a pink tint in the sample. |
| Environment | 0 to 50 °C (32 to 122 °F); max 95% RH non-condesing |
| Battery Type | 1.5V AAA (1 pc.) |
| Auto-Shut off | After 10 minutes of non-use |
| 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:*




1. Dust cover.
2. Cuvette with cap.
3. Cuvette holder.
4. Liquid Crystal Display.
5. Button.

### *Errors and warnings:*




**Light High:** There is too much light to perform a measurement. Please check the preparation of the zero cuvette.




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




**Inverted Cuvettes:** The sample and the zero cuvette are inverted.




**Under Range:** A blinking "**0**" indicates that the sample absorbs less light than the zero reference. Check the procedure and make sure you use the same cuvette for reference (zero) and measurement.




**Over Range:** A flashing value of the maximum concentration indicates the reading is over range. Dilute the sample and re-run the test.




**Battery Low:** The battery must be replaced soon.







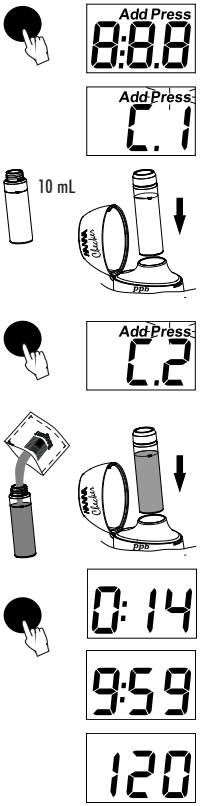
**Dead Battery:** This indicates that the battery is dead and must be replaced. Once this indication is displayed, normal operation of the instrument will be interrupted. Change the battery and restart the meter.

## *Measurement procedure:*

- Turn the meter on by pressing the button. All segments will be displayed. When the display shows "**Add**", "**C.1**" with "**Press**" blinking, the meter is ready.
- Fill the cuvette with 10 mL of unreacted sample and replace the cap. Place the cuvette into the meter and close the meter's cap.
- Press the button. When the display shows "**Add**", "**C.2**" with "**Press**" blinking the meter is zeroed.
- Remove the cuvette from the meter and unscrew the cap. Add the content of one packet of **HI707-0** reagent. Replace the cap and shake gently for 15 seconds. Place the cuvette back into the meter.
- Press and hold the button until the timer is displayed on the LCD (the display will show the countdown prior to the measurement) or, alternatively, wait for 15 minutes and press the button.

**Note:** Between 15 and 10 minutes the timer will be displayed in minutes and under 10 minutes timer is expressed in minutes and seconds.

- The instrument displays concentration in ppb of $NO_2^-$-N.
- To convert the displayed concentration to the nitrite ion concentration ($NO_2^-$), multiply the reading by 3.29. To convert the $NO_2^-$-N concentration to sodium nitrite ($NaNO_2$) multiply the reading by 4.93. The meter automatically turns off after 10 minutes.




## *Tips for an accurate measurement*

- It is important that the sample does not contain any debris.
- Whenever the cuvette is placed into the measurement cell, it must be dry outside, and completely free of fingerprints, oil and dirt. Wipe it thoroughly with **HI731318** or a lint-free cloth prior to insertion.
- Shaking the cuvette can generate bubbles, causing higher readings. To obtain accurate measurements, remove bubbles by swirling or by gently tapping the cuvette.
- Do not let the reacted sample stand for too long after reagent is added, as accuracy will be affected.
- After the reading it is important to immediately discard the sample, otherwise the glass might become permanently stained.

## *Battery management*

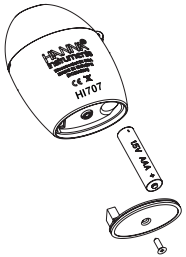
To save the battery, the instrument shuts down after 10 minutes of non-use.

One fresh battery lasts for a minimum of 5000 measurements. When the battery is dead the instrument will display "**bAd**" then "**bAt**" for 1 second and then turns off.

To restart the instrument, the battery must be replaced with a new one.

To replace the instrument's battery:

- Turn the instrument off by holding the button until the meter shuts off.
- Turn the instrument upside down and remove the battery cover with a screwdriver.




- Remove the battery from its location and replace it with a new one, inserting the negative end first.
- Insert the battery cover and replace the screw with a screwdriver.

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## *Accessories:*

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|---|---|
| REAGENT SETS | |
| HI707-25 | Reagent for 25 Nitrite Low Range tests |
| OTHER ACCESSORIES | |
| HI707-11 | Nitrite LR Certified Standard Kit |
| HI731318 | Cloth for wiping cuvettes (4 pcs.) |
| HI731315 | Glass Cuvettes and Caps for Checker® HC Colorimeters (2 pcs.) |
| HI731353 | Cuvette Seal Cap for Checker® HC Colorimeters (4 pcs.) |
| HI740028P | 1.5V AAA batteries (12 pcs.) |
| HI93703-50 | Cuvette cleaning solution (230 mL) |

### *Recommendations for Users*

Before using this product, make sure that it is entirely suitable for your specific application and for the environment in which it is used.

Operation of this instrument may cause unacceptable interferences to other electronic equipment, thus requiring the operator to take all necessary steps to correct interferences.

Any variation introduced by the user to the supplied equipment may degrade the instrument's EMC performance.

To avoid damage or burns, do not put the instrument in microwave oven. For the safety of you and the instrument do not use or store the instrument in hazardous environments.

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

***For additional information, contact your local Hanna Instruments Office. To find a Hanna Instruments Office in your area, visit our web site:***

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