

# Instruction Manual

## HI 38051 Nitrite Test Kit with Checker Disc

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Dear Customer,

Thank you for choosing a Hanna Product.

Please read the instruction sheet carefully before using the test kit. It will provide you with the necessary information for correct use of the kit. If you need additional information, do not hesitate to e-mail us at tech@hannainst.com.

Remove the chemical test kit from the packing material and examine it carefully to make sure that no damage has occurred during shipping. If there is any noticeable damage, notify your Dealer or the nearest Hanna office immediately.

Each kit is supplied with:

- HI 93707-0 Reagent, packets (100 pcs);
- 1 checker disc (containing the 38051 disc);
- 2 glass vials with caps;
- 1 plastic pipette (3 mL).

**Note:** Any damaged or defective item must be returned in its original packing materials.

01/05  
ISTR38051R2

## SPECIFICATIONS

Range	0 to 0.5 mg/L (ppm) as NO <sub>2</sub> <sup>-</sup> -N
Smallest Increment	0.01 mg/L (ppm) NO <sub>2</sub> <sup>-</sup> -N
Analysis Method	Colorimetric
Sample Size	10 mL
Number of Tests	100
Case Dimensions	235x175x115 mm (9.2x6.9x4.5")
Shipping Weight	446 g (15.7 oz.)

## SIGNIFICANCE AND USE

Nitrites are intermediate oxidation state of nitrogen (in the oxidation of ammonia to nitrate or in the reduction of nitrate). Such oxidation/reduction may occur in wastewater of treatment plants and in natural waters during the biological decomposition of nitrogen-compounds. In small quantities nitrites can cause methaemoglobinemia among infants. Conversely, high levels are required to inhibit corrosion in cooling towers. Nitrosation reactions of nitrites can yield organic nitrosamines, which are known to be carcinogenic.

**Note:** mg/L is equivalent to ppm (parts per million).

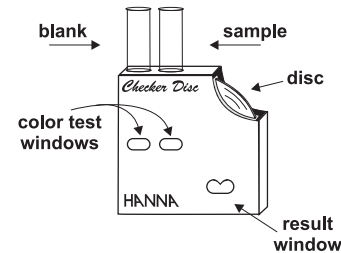
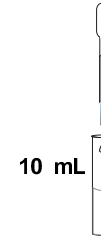
## CHEMICAL REACTION

Nitrites react with chromotropic acid reagent to form a pink tint in the sample. The amount of color developed is proportional to the concentration of nitrite present in the aqueous sample.

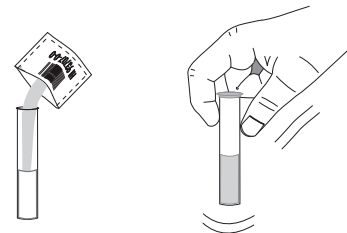
## INSTRUCTIONS

READ THE ENTIRE INSTRUCTIONS BEFORE USING THE KIT

- Use the pipette to fill each glass vial with 10 mL of sample (up to the mark).
- Insert one of them into the left hand opening of the checker disc. This is the blank.



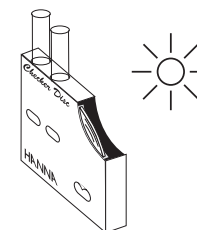
- Add to the other vial 1 packet of HI 93707-0 reagent. Replace the cap and mix to dissolve.



- Wait for 4 minutes to allow color to develop. This is the reacted sample.

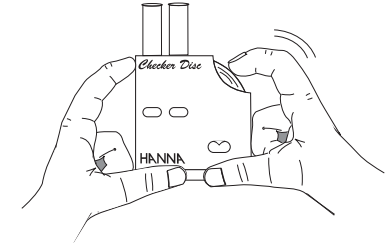


- Remove the cap and insert the reacted sample into the right hand opening of the checker disc.



- Hold the checker disc so that a light source illuminates the samples from the back of the windows.

- Keep the checker disc at a distance of 30-40 cm (12-16") to match the color, while having a background uniform and light in color (e.g. a white sheet). Rotate the disc while looking at the color test windows and stop when you find the color match. Read the value in the result window directly in mg/L (or ppm) of Nitrite-nitrogen (NO<sub>2</sub><sup>-</sup>-N).



**Note:** Do not wait more than 6 minutes to perform the reading.

- To convert the reading to mg/L of Nitrite (NO<sub>2</sub><sup>-</sup>), multiply the reading by a factor of 3.29.
- To convert the reading to mg/L of Sodium nitrite (NaNO<sub>2</sub>), multiply the reading by a factor of 4.93.

**For best results:** Perform the reading three times and take the average value (divide by 3 the sum of the three numbers). Intensely colored samples will make the color matching difficult and they should be adequately treated before performing the test. Suspended matter in large amounts should be removed by prior filtration.

**Caution:** Ultraviolet radiation may cause fading of colors. When not in use, keep the disc protected from light, in a cool and dry place.

## REFERENCES

Adaptation of the EPA approved method 354.1.

## HEALTH AND SAFETY

The chemicals contained in this kit may be hazardous if improperly handled. Read the relevant Health and Safety Data Sheet before performing this test.