

## Instruction Manual

# HI 3873 Nitrite Test Kit

**HANNA**  
instruments  
www.hannainst.com

Dear Customer,  
Thank you for choosing a Hanna Product.  
Please read the instructions carefully before using the chemical test kit. It will provide you with the necessary information for correct use of the kit.

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 3873-0 Reagent, packets (100 pcs);
- 1 glass cuvet;
- 1 color comparator cube.

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

## SPECIFICATIONS

Range	0 to 1.0 mg/L (ppm) as NO <sub>2</sub> -N
Smallest Increment	0.2 mg/L (ppm) NO <sub>2</sub> -N
Analysis Method	Colorimetric
Sample Size	10 mL
Number of Tests	100
Case Dimensions	230x59x70 mm (9.0x2.3x2.8")
Shipping Weight	169 g (6.0 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 it can cause methaemoglobinemia among infants. Conversely, high levels are used 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.

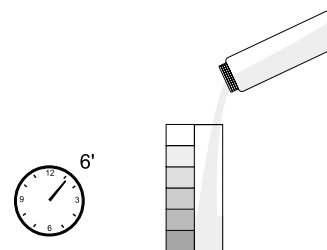
## INSTRUCTIONS

READ THE ENTIRE INSTRUCTIONS BEFORE USING THE KIT

- Fill the glass cuvet with 10 mL of the sample, up to the mark.
- Add 1 packet of HI 3873-0 reagent.



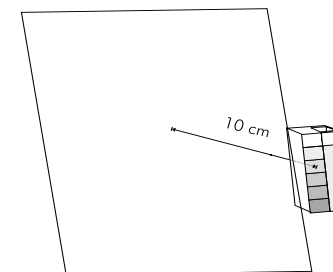
- Replace the cap and shake gently until the powder is dissolved. A deposit may remain but it will not affect the reading.
- Wait for 6 minutes to allow the color to develop. Remove the cap and fill the color comparator cube with 5 mL of the treated sample (to the mark).



- Determine which color matches the solution in the cube and record the result in mg/L (or ppm) of Nitrite-nitrogen.



- It is better to match the color with a white sheet at about 10 cm behind the comparator.



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

## 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 Health and Safety Data Sheet before performing this test.