

# Instruction Manual

## HI 38058 pH 4.0-10.0 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 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:

- pH Wide Range Indicator, 1 bottle with dropper (30 mL);
- 1 checker disc (containing the 38058 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.

## Specifications

Range	4.0 to 10.0 as pH unit
Smallest Increment	0.5 as pH unit
Analysis Method	Colorimetric
Sample Size	5 mL
Number of Tests	300
Case Dimensions	165x150x38 mm (6.5x5.9x1.5")
Shipping Weight	215 g (7.6 oz.)

## Significance and use

pH represents acidity or alkalinity of an aqueous solution and is proportional to the hydrogen-ion concentration of the solution. Under neutral conditions water is dissociated into the OH<sup>-</sup> and H<sup>+</sup> ions in equal ratio and hence it has a pH of 7. When bases or acids are added to a water solution they ionize, increasing the concentration of OH<sup>-</sup> or H<sup>+</sup>, respectively. Thus solutions with a pH of 1-3 contain strong acids, whereas those with a pH of 4-6 contain weak acids. Weak bases result in solutions of pH 8-10 and strong bases in pH of 11-13.

Examples of pH value for some liquids:

Liquid	pH Value
Sea water	7.8-8.2
Gastric juices	1.7
Milk	6.5-7
Soil	6-7 (optimum for crops)

## Chemical reaction

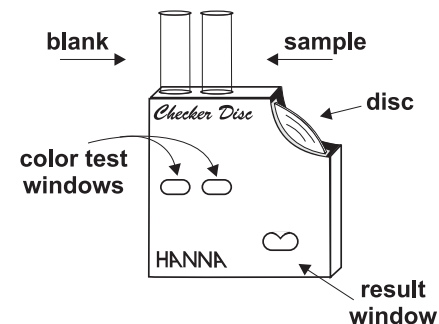
HI 38058-0 reagent reacts in contact with the aqueous solution changing its color according to the hydrogen-ion concentration (pH) in the given range.

## Instructions

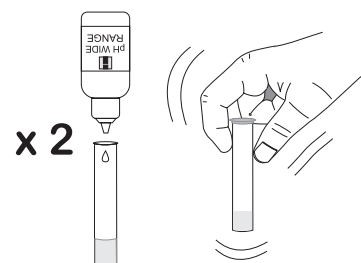
READ THE ENTIRE INSTRUCTIONS BEFORE USING THE KIT

**Note:** Always shake the reagent bottle before use.

- Using the plastic pipette, fill each glass vial with 5 mL of sample (up to the mark).
- Insert one of them into the left hand opening of the checker disc. This is the blank.

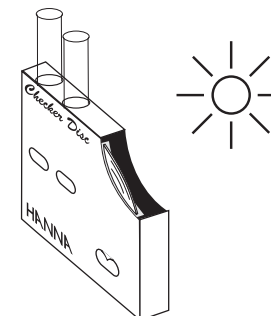


- Add to the other glass vial 2 drops of pH Wide Range Indicator. Replace the cap and mix the solution by gently swirling. This is the reacted sample.

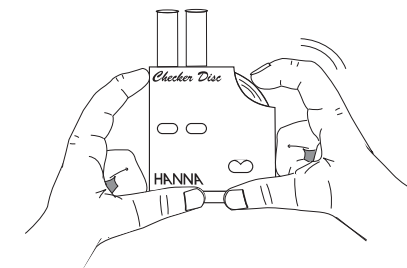


- Remove the cap and insert the reacted sample into the right hand opening of the checker disc.

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



- 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 pH units.



**Note:**

A concentration of Chlorine above 50 ppm causes interference which inhibits the development of the color.

**For best results:**

Intensely colored samples will make the color matching determination 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

Vogel's, *Quantitative Chemical Analysis, 5<sup>th</sup> Ed.*, Longman Scientific & Technical.

## Accessories

HI 38058-100 Replacement reagent (300 tests)  
HI 740231 20 ml glass cylinders with caps (2 pcs)

## Safety Data Sheets

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