Instruction Manual

HI 38049
Ammonia
Test Kit
for Fresh Water
with Checker Disc

HANNA instruments

www.hannainst.com

Dear Customer,

Thank you for choosing a Hanna Product.

Please read the instruction manual 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:

- Ammonia Reagent 1 for Fresh Water, 1 bottle with dropper (20 mL);
- Nessler Reagent, 1 bottle with dropper (20 mL);
- 1 checker disc (containing the 38049 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.

ISTR38049R3 01/05

SPECIFICATIONS

Range	0.0 to 3.0 mg/L (ppm) as NH_3-N
Smallest Increment	0.1 mg/L (ppm) NH_3-N
Analysis Method	Colorimetric
Sample Size	5 mL
Number of Tests	100
Case Dimensions	165x150x38 mm (6.5x5.9x1.5")
Shipping Weight	248 g (8.7 oz.)

SIGNIFICANCE AND USE

Ammonia is commercially used as a fertilizer, either as such or in the form of compounds. Its presence in raw surface waters indicates animal or plant microbiological decay and above certain critical levels it is toxic to fish.

The Hanna test kit measures concentration of ammonia-nitrogen up to 3 ppm in fresh waters, employing the Nessler colorimetric method.

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

CHEMICAL REACTION

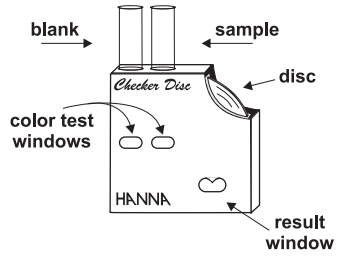
Ammonia reacts with the reagent in basic solution to form a yellow compound. The absorbance of this colored product is proportional to the concentration of ammonia-nitrogen present in the aqueous sample.

INSTRUCTIONS

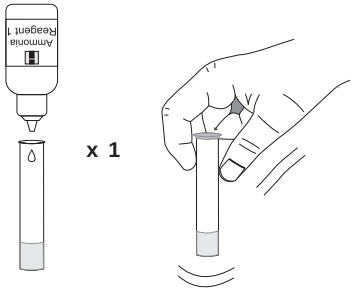
READ THE ENTIRE INSTRUCTIONS BEFORE USING THE KIT

- Using the plastic pipette, fill each glass vial with 5 mL of sample (up to the mark).

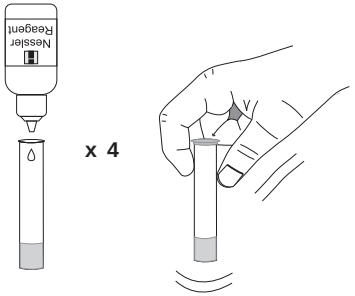
- Insert one of the vials into the left hand opening of the checker disc. This is the blank.



- Add 1 drop of Ammonia Reagent 1, replace the cap and mix.

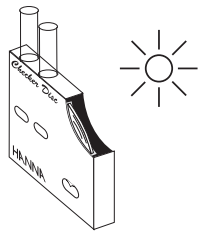


- Add 4 drops of Nessler Reagent, replace the cap and mix.

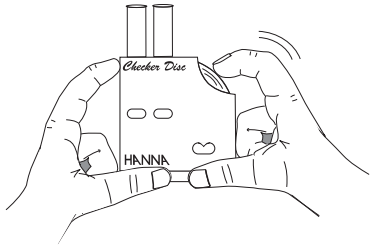


- Wait for 5 minutes to allow color to develop. This is the reacted sample.

- 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. It is better to match the color with a white sheet on the background. 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 Ammonia-nitrogen (NH_3-N).



- To convert the reading to mg/L of Ammonia (NH_3), multiply it by a factor of 1.214.

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.

Interferences: interference may be caused by hardness above 1 g/L, iron, sulfide, glycine, various aliphatic and aromatic amines, organic chloramines, acetone, aldehydes, alcohols.

REFERENCES

Adaptation of the *ASTM Manual of Water and Environmental Technology,* D1426-92, Nessler method.

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.