

Field analysis of ammonia in fish ponds using color disk kits

The use of the color disk kits (as the one in the photo) is ideal ammonia analysis under field condition. This method can produce fast and reasonably accurate results especially when the individual color perception is high (individual sensitivity), especially this method depends on color comparison.



Field analysis of ammonia in fish ponds using color disk kits – Procedures (1)

Place the ammonia color disk on the center pin of the color comparator with the lettering facing out

Rinse the 2 viewing test tubes using the sample water before testing

Insert the blank test tube (only sampled water) into the left opening of the color comparator

Insert the ammonia-nitrogen test tube into the right opening of the color comparator. Add three drops of Nessler Reagent to the water sample and swirl to mix. A yellow color will develop if ammonia-nitrogen is present. Allow samples to sit for a maximum of 10 minutes.



Field analysis of ammonia in fish ponds using color disk kits – Procedures (2)

Hold the color comparator up to sunlight or a lamp and view the openings in front. Rotate the color disk until a color match is reached then read and record the value of ammonium-nitrogen in mg/l as seen through the scale window.

The temperature and pH of sampled water should be measured in the same time of ammonia sampling. In order to obtain the toxic (unionized) component of total ammonia (NH_3), consult a specialized table that considers the pH and temperature values.

Accuracy of the analysis

For variety of reasons, the outcomes of the test may be less accurate and/or away from expected values. This could be due to any of the sampling procedures such as low color perception, sample contamination and others. If the results turn questionable, the accuracy of the results should be validated. This could be done through:

Using a standard solution in place of the sample

Running the test twice or more as required