

Water Quality Testing Instructions and Data Sheet

You have been learning about what makes a healthy stream for salmon. Now it's time to test some water on your own! You will be comparing how much nitrogen, also called nitrate or nitrite, is in your tap water (Sample A) versus water from outside (Sample B).

Materials

- Water testing strips that came with these instructions + the envelope color chart
- 2 cups or other containers
- Tap water
- Water from outside. This can come from a puddle, a drainage ditch, a stream, a beach, or any other place water collects outside near your home or school
- A clock, timer, or stopwatch

Hypothesis

Nitrogen is found in fertilizer and decaying living things.

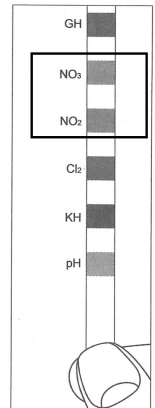
Do you think one sample will have more nitrogen than the other? Yes or No

If yes, which sample do you think will have more nitrogen? _____

Now let's test your hypothesis to find out!

Experiment

1. Label one cup as Sample A and one cup as Sample B.
2. Put about 2 inches of **tap water** in Sample cup **A**, and about 2 inches of **outside water** in Sample Cup **B**.
3. Carefully remove a test strip from the envelope. Make sure to only hold the strip by the end, away from the test pads. **DO NOT** touch the test pads with your fingers.
4. Dip the test strip into Sample A, making sure the water covers the pads for 2 seconds. **DO NOT** move the test strip around in the water.
5. Remove the test strip from the water and lay it down on a flat surface like your desk with the test pads facing **UP**.
6. Use the timer, stopwatch, or clock to help you wait **1 minute**.
7. After one minute, compare the color of the test pads on the strip to the color chart on your envelope. **DO NOT** wait any longer than 1 minute 30 seconds to compare your colors.
8. Record the number that the colors on the strip on the test pads for nitrate and nitrite that most closely match in the data table on this sheet. You can **ignore** the other test pads and colors.
9. Repeat steps 3-8 with Sample B, the water from outside.



Data Table

	Sample A (tap water)	Sample B (outside water)
Nitrate (NO ₃)		
Nitrite (NO ₂)		

Conclusion

Did one of the samples have more nitrogen? Which one? _____

Was your hypothesis correct? _____

Would your outside water be safe for salmon? _____

Extension

These are the directions that came with the strips. You can use your extra strip to test something else, like chlorine in your tap water, or pH of a household liquid, or you can try testing water from another place. What did you find?

Results

NO₂ & NO₃

As part of the nitrogen cycle in your aquarium organic material that contains nitrogen, such as fish waste and uneaten food, along with dissolved waste excreted directly by the fish, degrades to produce nitrite (NO₂) and finally nitrate (NO₃) occur and may accumulate.

NO₂ in concentrations greater than 1 mg/L and if present for extended periods, is harmful to your fish and could over time lead to the loss of your fish.

NO₃ in concentrations greater than 50 mg/L is harmful to sensitive fish and additionally promotes algae growth. It will highly distress your fish and affect the growth of young fish.

When nitrite or nitrate concentrations are too high, carry out a partial water change.

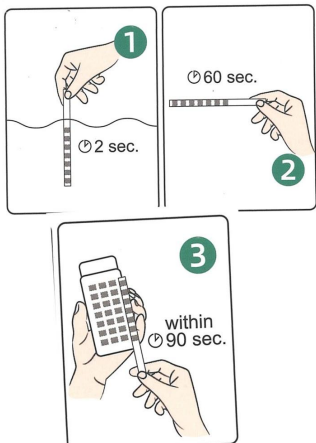
GH

Total hardness refers to the amount of calcium and magnesium in the water.

Favourable hardness values are not too high or too low. If water hardness level is significantly high, add soft water to your aquarium, for example distilled or osmosis water.

If water hardness level is too low, perform a partial water change with tap water of a higher hardness value.

Instructions:



pH

pH refers to the intensity of acid or alkaline materials in your water.

A pH value between 6.5 and 8.5 will be tolerated by most freshwater fish species. However, ideal pH ranges are species dependent.

Cl₂

Chlorine may be present in tap water. It is harmful to fish, damaging their gills and skin, and must not be introduced to the aquarium.

KH

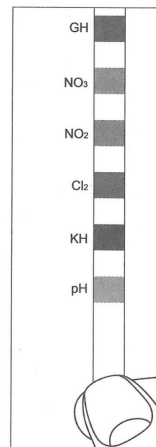
Total alkalinity measures the amount of alkaline substances (primarily, bicarbonates and carbonates) in your water. Ideal range is between 120-180 mg/L.

EASY TEST™ Product Introduction

EASY TEST™ Aquarium Test Strips 6 in 1 is the optimum test kit, one strip performs six important tests. In just 90 seconds you'll know your water's NO₂, NO₃, GH, KH, PH, Cl₂ levels. The whole set contains one barrel and a refill pack, 100 strips in total.

Take a close look at a EASY TEST™ Aquarium 6 in 1 Test Strip

There are six pads on each test strip. Each pad checks a different condition of the water. The test pads work by changing color to indicate the conditions of the aquarium water.



Warning

1. Keep wet fingers out of the bottle.
2. Avoid touching or polluting the test area of strip.
3. Close cap tightly after removing strips.
4. For best results read in natural daylight.
5. Store in a cool dry place.