

Why Test Alkalinity (KH)

Alkalinity measures the buffering capacity of water in an aquarium, or its ability to resist changes in pH caused by acids. In other words, alkalinity plays a significant role in maintaining a stable pH in aquarium water.

Alkalinity is typically measured in units of carbonate hardness (KH) or parts per million (ppm) of calcium carbonate (CaCO₃). A higher alkalinity value indicates that the water has a greater ability to resist pH changes, while a lower alkalinity value indicates that the water is more susceptible to pH swings.

Because KH naturally decreases over time due to nitrification and the introduction of CO₂ and other acids, it is important to test and maintain a proper alkalinity level for the health of aquarium inhabitants. Fluctuations in pH can cause stress and harm to fish and other aquatic creatures. Additionally, alkalinity is essential for coral growth. Without sufficient alkalinity, corals may not be able to properly grow their skeletons and can become stressed or die.

The logo for Fritz Aquatics, featuring the word "FRITZ" in a bold, italicized, sans-serif font with a white outline, set against a black background.

ALKALINITY KH TEST KIT

INSTRUCTIONS

The logo for Fritz Aquatics, featuring the word "FRITZ" in a bold, italicized, sans-serif font with a white outline, followed by the word "AQUATICS" in a smaller, plain sans-serif font.

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FOR FRESH & SALTWATER AQUARIUMS



Directions for Testing KH Levels

NOTE: Read instructions thoroughly before testing.

⚠ DO NOT allow Test Solutions to get into aquarium.

To remove childproof safety cap, push down while turning.

- 01** Fill a clean test tube with **5 ml** of water to be tested (to the line on the tube).
- 02** Holding **KH Reagent Solution** dropper bottle upside down in a completely vertical position add one drop at a time. Cap the test tube and gently shake between drops. Ensure you count the drops as they are added.
- 03** The test is complete when the water in the test tube, after having been gently shaken, turns from **blue to yellow**. If you have difficulty discerning the color after the first drop of test solution is added, remove the cap from the test tube and while holding it over a white background, look down through the tube.

The KH value is determined by the number of drops of reagent that must be added to turn the water in the test tube yellow. See conversion chart to determine KH.

For best results the tube should be viewed against the white area beside the color chart in a well-lit area with a light source behind you. Rinse the test tube with clean water after each use.

ALKALINITY (dKH) TEST CHART

# of Drops	dKH
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12



STARTING
POINT



END POINT

Corrective Actions



To increase the KH of your water, add Fritz pH Higher. For a more significant KH increase for African cichlid systems, add Fritz Rift Lake Cichlid Buffer as needed. Fritz recommends a minimum of 4 dKH (80 ppm) for nitrification when using FritzZyme 7 or FritzZyme Turbo Start 700 bacteria.



To decrease the KH of your water, add Fritz pH Lower, or perform partial water changes.

Soft water fish, like Discus and other South American cichlids - 0 to 4 dKH (0 - 70 ppm)

Tropical community fish, like tetras and betta - 4-8 dKH (70 - 140 ppm)

African rift lake cichlids - 8 to 12 dKH (140 - 215 ppm)