

GH & KH TEST KIT INSTRUCTIONS

Why Test for KH (Carbonate Hardness)

& GH (General Hardness)?

Tap water rarely provides the water conditions necessary to maintain an optimal aquarium. Some tap water supplies have very low KH (below 3 °dKH) which can contribute to wide pH swings in the aquarium. Also, when water evaporates, it leaves behind hardness ions. Topping off with tap water simply adds more minerals to the aquarium, resulting in a steady increase in GH. It is therefore necessary to test the GH and KH to monitor water quality and prevent stressful conditions.



To remove childproof safety cap: With one hand, push red tab left with thumb while unscrewing cap with free hand.

Directions for Testing KH

1. Fill a clean test tube with 5 ml of water to be tested (to the line on the tube).
2. Holding the bottle vertically, **add KH Test Solution, 1 drop at a time. Be sure to count the number of drops being added.**
3. Cap test tube & invert several times after each drop.
4. The test is completed when the water in the test tube, after having been 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.
5. The KH value is determined by the number of drops of test solution that must be added to turn the water in the test tube bright yellow. **See GH & KH Conversion Chart at end of instructions.**

Directions for Testing GH

1. Fill a clean test tube with 5 ml of water to be tested (to the line on the tube).
2. Holding the bottle vertically, **add GH Test Solution, 1 drop at a time. Be sure to count the number of drops being added.**
3. Cap test tube & invert several times after each drop.
4. The test is completed when the water in the test tube, after having been shaken, turns from orange to green. 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.
5. The GH value is determined by the number of drops of reagent that must be added to turn the water in the test tube green. **See GH & KH Conversion Chart at end of instructions.**

What the Test Results Mean

Use the table below to create the ideal water hardness levels for your aquarium fish. When keeping a community aquarium with a variety of tropical fish, adjust the GH and KH to 3 - 6° (50-100 ppm).

GH & KH Range	Aquarium Life
0° - 3° (0-50 ppm)	Discus, Arowana, Elephantnose, Neons, Cardinals, Live Plants
3° - 6° (50-100 ppm)	Most tropical fish including Angelfish, Cichlids, Tetras, Botia, Live Plants
6° - 11° (100-200 ppm)	Most tropical fish including Swordtails, Guppies, Mollies, Goldfish
8° - 12° (140-200 ppm)	Marine fish and invertebrates
11° - 22° (200-400 ppm)	Rift Lake Cichlids, Goldfish, Brackish Water Fish

Adjusting KH

Partial water changes can be used to decrease KH. To increase KH use API PROPER pH® buffers. PROPER pH 6.5, 7.0 and 7.5 are non-carbonate buffers that automatically adjust pH and increase KH. PROPER pH 8.2 is a carbonate buffer suitable for marine and African Cichlid aquariums.

Adjusting GH in Freshwater

GH can be lowered with API WATER SOFTENER PILLOW, which removes calcium and magnesium ions. Also, partial water changes with deionized water will gradually reduce GH to the desired level.

DANGER





GH TEST SOLUTION

Causes skin irritation • Causes serious eye damage • May cause an allergic skin reaction • May cause respiratory irritation • May cause damage to organs through prolonged or repeated exposure • Do not breathe dust/fume/gas/mist/vapors/spray • Use only in outdoors or in a well-ventilated area • Wear protective gloves/protective clothes/eye protection/face protection • Contaminated work clothing should not be allowed out of the workplace • IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing • Immediately call a POISON CENTER/Doctor/physician/first aider • Specific treatment (see advice on this label) • IF ON SKIN: Wash with plenty of water and soap • If skin irritation or rash occurs: get medical advice/attention • Take off contaminated clothing and wash before reuse • IF INHALED: Remove person to fresh air and keep comfortable for breathing • Store locked up • Store in a well-ventilated place • Keep container tightly closed • Dispose of contents/container to authorized chemical landfill or if organic to high temperature incineration.

Questions or Comments?

In North America, call us at 1-800-847-0659.

Or visit us at www.apifishcare.com

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GH & KH CONVERSION CHART

# of Drops	°dKH	ppm GH/KH
1	1	17.9
2	2	35.8
3	3	53.7
4	4	71.6
5	5	89.5
6	6	107.4
7	7	125.3
8	8	143.2
9	9	161.1
10	10	179
11	11	196.9
12	12	214.8

MARS

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