

KH

KH also referred to as Carbonate Hardness is a measurement of the amount of carbonates and bicarbonates present in our water.

We are interested in KH levels as they affect the pH buffering capacity of our water. KH can neutralise acids and prevent dangerous pH crashes. The higher the KH the more stable the pH level will be. The lower the KH the more rapidly the pH level can change.

Rain water will have a very low KH value and this means it is somewhat unsuitable for use in a pond or aquarium. Ro water will also have a very low KH and this means care must be taken when it is used in an aquarium.

A low KH is not a problem to the fish, however if the water pH drops and becomes a strong acid then it can very quickly result in fatalities. In very simple terms you could think about the KH test as a method of determining how closely you should monitor your pH

Testing KH on a regular basis is highly recommended.

Instructions for Tetra KH test are as follows:

Fill your test Tube with 5ml of water.

We need to count how many drops of reagent are required in order to turn our water from blue to yellow in colour. The number of drops gives us our KH.

Reagent should be added one drop at a time and the test tube should be agitated between each drop added.

If the water turns yellow after the first drop our KH is zero.

This is extremely low and the potential for pH problems would be massive. Corrective steps must be taken as a matter of urgency.

If the water turns yellow after just a few drops (less than 5) then our KH is low and we may need to take corrective steps.

In general most fish keepers should be looking to maintain a KH of between 6 to 8. However certain fish species such as discus may benefit from a lower KH and others such as African cichlids would prefer higher levels.

For more detailed information consult additional references.

How to correct KH levels.

The most effective method to adjust low KH levels would be by the addition of KH buffer treatment.

The amount a treatment required can be determined by referring to the instructions on the product. Regular testing and accurate pond volume calculation will allow precise dosing and regulation of KH level.

For this example using Columbo KH Buffer:

First calculate the volume of water in the pond in litres. (Working in metres LxWxDx1000 = Litres)

Then add 150ml of treatment for every 2,000 litres of pond water to raise KH by 2°DH.

Treatment should be dissolved in a bucket of pond water and care should be taken not to pour directly over plants.

Blind dosing.

Whilst it is highly desirable to check KH level with a test kit it is a fact that some people will choose not to do so or, they will lack the knowledge necessary to correct it properly.

In these circumstances I would suggest blind dosing one egg cup of KH buffer, per 1000 gallons to the pond weekly.

This would generally ensure the KH does not become desperately low and is unlikely to result in a KH that becomes worryingly high.

Extra notes to consider.

You can use oysters shells in the pond or filter to help improve KH levels, although the effects of this will be slow. Shells are best used as a preventative measure rather than a Water changes are extremely important and can help in so many ways.

Regular testing of pH is strongly recommended.

Sometimes it may be possible to maintain adequate KH levels by regular water changes.

You may find these YouTube videos interesting.

