



Water Testing

ALKALINITY

Alkalinity (buffering capacity) determines the ability to maintain a constant pH in the aquarium. The ideal level for freshwater tanks is 120 - 300 ppm, for saltwater tanks 180 - 300 ppm.

CALCIUM

Calcium is an essential component used by corals, calcareous algae, and other invertebrates and is therefore constantly depleted from the aquarium. To promote healthy coral growth a level of at least 400 ppm should be maintained, however, for optimal coral growth 450 ppm is even better.

pH

pH is the measure of acidity or alkalinity in water. The correct pH helps to ensure healthy fish, encourages breeding, and allows plants to grow properly. For most marine aquariums, recommended pH is 8.1 - 8.6.

SALINITY

Salinity is the measure of salt in the water. Salt levels are determined by measuring specific gravity. For most marine aquariums, recommended specific gravity is 1.020 - 1.024.

AMMONIA

Ammonia, which is toxic to fish, is regularly introduced into the aquarium by fish waste. An established biological filter will convert the ammonia to nitrite and thereafter to nitrate, which are less harmful. Concentrations of Ammonia as low as 0.01 ppm show negative effects on fish, while 0.1 can kill some species.

NITRATE

Nitrate is the byproduct of nitrifying bacteria in the biological filter breaking down ammonia and nitrite. Nitrate is used by aquatic plants and algae as a food source. High levels can lead to excessive algae growth. Levels should be kept below 40 ppm.

NITRITE

Nitrite is a waste product produced by bacteria in the biological filter as it breaks down ammonia. Nitrite is extremely harmful to fish and can result in severe fish loss. Levels should be kept below .5 ppm.

PHOSPHATE

Phosphate is regularly introduced into the aquarium through fish waste and the decomposition of fish food. While non-toxic for fish, high phosphate levels will promote the growth of undesirable algae.

Testing Nitrates, Nitrites, Alkalinity, & pH

Instructions:

Remove one test strip from bottle and replace cap tightly. Hold strip at end with no pads. Dip strip (all pads) into aquarium water and remove immediately. Do not shake excess water from strip. Hold strip level to allow colors to develop. At 30 seconds, compare pH, Alkalinity, Hardness and Nitrate pads to color chart. At 60 seconds, compare Nitrate pad to color charts provided.



Testing Salt Levels

Instructions:

Rinse hydrometer with fresh water before using. Slowly fill it by dipping bottom corner fill port below water surface until water flows up and over inner weir. Dislodge air bubbles by tapping hydrometer or pointer, gently with pencil. Placing hydrometer on a level surface, read specific gravity (inside scale) and salinity (outside scale). For most marine aquariums, recommended specific gravity is 1.020 to 1.024.



Testing Calcium



Testing Phosphate



Testing Ammonia

