

# ensure your aquarium plants **THRIVE**

If you have a freshwater planted aquarium and want to ensure that your plants thrive, not just survive, consider adding a carbon dioxide (CO2) unit.

### **The CO2 effect**

[Aquarium plants](#) use light and carbon dioxide during photosynthesis, the process by which they feed. Fish and bacteria in your aquarium give off CO2 through respiration, but in a planted aquarium, the CO2 created from that process is not always sufficient for optimal plant growth. A CO2 unit supplements your freshwater planted aquarium by increasing the amount of carbon dioxide available for your plants in the aquarium water.

With proper CO2 levels, your plants will be healthier and grow faster. A low CO2 level will essentially starve your plants and limit their growth. Keep in mind that the more plants you have, the more they are going to be competing for carbon dioxide, and the greater their need will be for supplemental carbon dioxide. Like most things in the aquarium hobby, balance is required with CO2. Just as it is not healthy for planted aquariums to have low CO2 levels, it is also unhealthy for them to have high CO2 levels. Excess carbon dioxide strips the water of beneficial oxygen, reduces pH levels, and can throw off water quality. Be sure to routinely monitor your water parameters, perhaps even more closely, if you are employing the use of a CO2 unit.

### **Choose the right CO2 unit**

There are a number of different styles of CO2 units available to the hobbyist, each with its own benefits.

The most basic of the CO2 units is a manual unit, in which CO2 is created as a byproduct of fermenting yeast. These units are great for entry-level CO2 users or those with smaller aquariums or budgets. [Semi-automatic systems](#) use a programmable timer to simplify the CO2 injection into the water, and work best for medium size setups. Aquarists looking to fully utilize the technology available for CO2 units, or those with heavily planted or large setups, should consider an [automatic system](#), which adds a pH controller and probe for constant monitoring.

By adding a CO2 unit, you will not only be able to grow a greater variety of more colorful plants, but you will also be able to improve water quality, a benefit for your inhabitants.