Common Aquarium Problems Troubleshooting Guide

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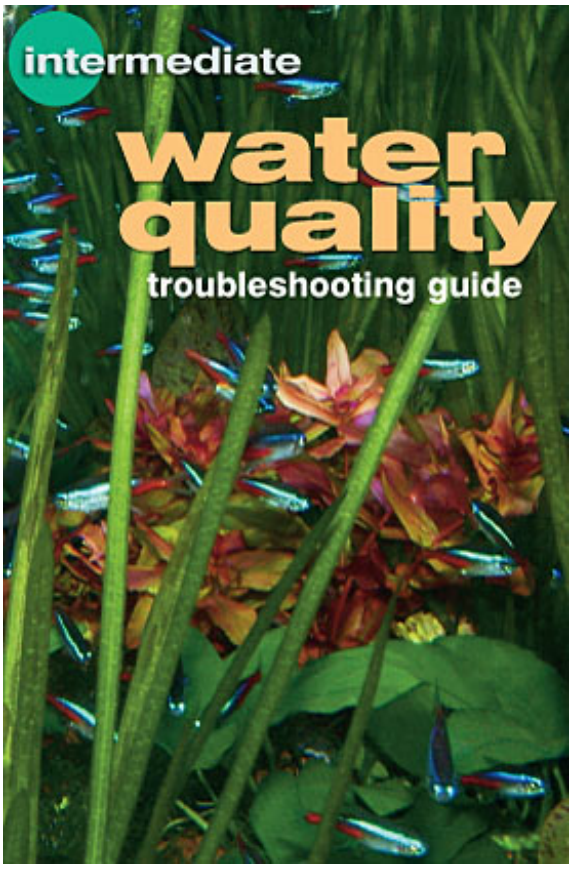

While it may seem like a passive endeavor, regular observation provides important visual cues, indicating changes in water quality and alerts you that something may be off balance in your aquarium. Fundamental water parameters that influence water quality, such as pH, ammonia, nitrite, and nitrate, are relatively easy to monitor through routine testing. However, many conditions associated with poor water quality develop gradually. Early signals may go unnoticed, leading to more serious or more persistent conditions. The following are some common "problems" or visual cues that indicate something may be off balance in your aquarium.

PROBLEM
LOTS OF WHITE OR TAN WORMS IN YOUR FRESHWATER AQUARIUM

POSSIBLE CAUSE: Population boom of planarian due to overfeeding or excess organic debris. May also be due to fish overpopulation, filter malfunction, or inadequate filtration. While generally considered harmless, large numbers of these worms indicate poor water quality.

RECOMMENDED SOLUTION: Avoid overfeeding and promptly remove uneaten food with a siphon or fine mesh net. Perform regular water changes and siphon out debris from the substrate. Use bacterial additives to supplement existing biological filtration and use water conditioners that actively process and break down organic waste. The planarian population will decrease as water quality improves and the food source for the worms diminishes. Verify filtration is working properly and perform maintenance per manufacturer's recommendations.

PROBLEM
WHITE, CLOUDY WATER

POSSIBLE CAUSE: Bacterial bloom triggered by high levels of ammonia. Nitrifying bacteria that consume ammonia reproduce rapidly to the point that they are visible, creating what looks like clouds of swirling, white smoke. Adding too many fish at one time, overfeeding, overcleaning with chlorinated water, and the use of antibiotic medications are common triggers. If bacterial blooms occur without these triggers, it may indicate inadequate nitrifying bacteria or biological filtration.

RECOMMENDED SOLUTION: Use an air pump with airstones to introduce additional oxygen. The air bubbles help release toxic gasses from the water and the added oxygen helps nitrifying bacteria process the ammonia more efficiently.

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Use bacterial additives to replenish or re-establish beneficial bacteria depleted by medications or large water changes.

PROBLEM
RED OR RUST-COLORED WATER

POSSIBLE CAUSE: Discoloration due to mineral-rich source water containing iron (i.e. well water). Aquariums with high oxygen levels may experience a more pronounced discoloration (redness) due to the oxidization of dissolved iron particles. High levels of minerals, such as iron and silicate, not only discolor the water but also provide nutrients that spark aggressive algae growth. Water with high mineral content (hard water) also has a greater buffering capacity and makes pH adjustments difficult.

RECOMMENDED SOLUTION: Chemical filter media such as Poly Filter removes specific pollutants such as iron and silicate and is a good choice. Peat or similar water softening chemical media can be used to help stabilize pH to desired levels. However, if the mineral content of the source water is very high, avoid using pH decreasers to adjust pH. The minerals in the hard water will buffer the water, making it difficult to successfully lower the pH. A water purification system such as a reverse osmosis unit provides the most reliable, long-term solution for problems resulting from hard water conditions.

PROBLEM
FISH GASPING OR BREATHING HEAVILY AFTER A WATER CHANGE

POSSIBLE CAUSE: Chlorine or chloramine in tap water. These chemicals are commonly added to municipal tap water for their disinfectant qualities. Even small quantities of chlorine and chloramine can be detrimental to fish. Chlorine can severely stress fish by attacking their gills, causing them to gasp and breathe heavily. At higher concentrations, chlorine kills. Unfortunately, chlorine and chloramine will not only harm aquarium fish but can affect the entire aquarium system. These chemicals also kill beneficial bacteria and impair biological filtration. As a result, a series of water quality problems, including harmful ammonia spikes, can ensue.

RECOMMENDED SOLUTION: Commercial dechlorinators (chlorine removers) are available to help remove chlorine from tap water. When used as directed, they instantly remove chlorine from tap water to make it safe for aquarium use. However, not all dechlorinators will remove chloramine so it is important to know what chemicals are used to treat your tap water. Our Drs. Foster and Smith Chlorine Neutralizer addresses both chlorine and chloramine to effectively neutralize these harmful chemicals. Reverse osmosis (RO) units are a good choice for serious hobbyists who require large amounts of pure water for sensitive reef aquariums. RO units can remove up to 99.9% of tap water impurities including phosphate, nitrate, minerals, and heavy metals for contaminant-free water.

PROBLEM
FREQUENT AMMONIA SPIKES

POSSIBLE CAUSE: A decrease in your aquarium's beneficial bacteria population. These bacteria are necessary to the nitrogen cycle, in which ammonia is broken down. Ammonia spikes are most commonly associated with newly established systems where too many fish are added before a suitable bacteria colony is established. However, ammonia spikes can also occur in mature home aquariums, after gravel substrate or bio-media is cleaned or replaced.

RECOMMENDED SOLUTION: Bacterial additives, such as our Live Nitrifying Bacteria help replenish beneficial bacterial populations. Simply add the correct amount to your aquarium while setting up a new system or on a regular basis after routine cleaning in established systems. Also, minimize the amount of beneficial bacteria removed from your aquarium with each cleaning. To do so, use a Aqueon Aquarium Water Changer to clean aquarium gravel in sections with each water change instead of cleaning the entire substrate floor in one marathon session. Similarly, do not clean or replace all of your filter media at once or when performing water changes. Replace filter media in stages to allow biological and mechanical media to retain existing beneficial bacterial population.

PROBLEM
WHITE FUZZY CLUMPS ON AQUARIUM SUBSTRATE

POSSIBLE CAUSE: Overfeeding can often result in the accumulation of uneaten fish food. If excess food is not removed promptly, it can decay and encourage mold or fungus growth. The decaying food is soon covered in unsightly tufts of fuzzy fungus. While this growth may not directly harm aquarium fish, the presence of fungal growth is an indication of poor water quality. As a precaution, it is a good idea to measure water quality with a test kit and, if necessary, perform a partial water change to remove pollutants and improve water quality.

RECOMMENDED SOLUTION: Remove uneaten food and monitor feedings with automatic feeders. These

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programmable devices offer an easy and convenient way to prevent overfeeding. Automatic feeders reliably dispense appropriate amounts of fish foods whether you are home or away on vacation. Fill these feeders with a variety of flake or pellet food to ensure proper fish nutrition. Controlled feeding not only encourages healthy fish growth, but also plays an important role in maintaining water quality for the overall health of the aquarium.

PROBLEM
AQUARIUM PH STEADILY DECREASING OVER TIME

POSSIBLE CAUSE: Buildup of organic material in substrate or filter media. Decomposing organic waste materials have an acidifying effect on aquarium water. As the buffering capacity of the water is compromised by decaying organic material, aquarium pH level becomes susceptible to fluctuations.

RECOMMENDED SOLUTION: Inspect mechanical filter media for excess organic waste buildup. Remove old filter media and replace with clean, new media. Also, during your next scheduled water change, be sure to thoroughly siphon a portion of your aquarium substrate. Clean or siphon no more than 50% of your substrate at a time. Over-cleaning your substrate can remove beneficial bacteria living in your substrate and negatively affect your biological filtration. A routine maintenance regimen of a 25% water change, every 1-2 weeks, is the easiest way to reduce waste buildup and improve overall aquarium water quality.

PROBLEM
GREEN WATER

POSSIBLE CAUSE: Algae bloom due to excess light or algal nutrients such as nitrate and phosphate. While algae growth is normal in aquariums, aggressive algae growth suggests steady organic nutrient buildup in a system unable to efficiently process the material. This suggests insufficient filtration or the introduction of surplus nutrients from a secondary source, including food or even source water.

RECOMMENDED SOLUTION: Algaecides may be used for immediate results. However, the algae will return if the root of the problem is not addressed. Keep nutrient levels in check through regular water changes. Use activated carbon or chemical resin media designed to remove organic compounds. Perform regular filter maintenance to remove trapped organic debris. Test your source water for nitrate and phosphate. If these algal nutrients are present, consider using purified water such as reverse osmosis water. Limit the length of time the lights are on to 10-14 hours per day for planted aquariums and 6-10 for ornamental setups.

PROBLEM
EXCESS OF DEBRIS OR PARTICLES SUSPENDED IN THE WATER COLUMN

POSSIBLE CAUSE: Accumulation of organic waste material due to over-feeding or inadequate mechanical filtration. As these organic materials break down, they compromise water quality by releasing nitrogen products as well as the algal nutrient, phosphate. If excess organic debris settles on aquarium surfaces, it can provide a nutrient-rich biological media for algae.

RECOMMENDED SOLUTION: Clean or replace mechanical filter media on a regular basis to maintain optimum performance. To enhance mechanical filtration, use water clarifiers (flocculants) to bind fine particles together so they are easier to remove through filtration. The occasional use of extra-fine "water polishing" mechanical filter media such as micron filter pads are another option.

ESSENTIALS

Tetra EasyStrips™ Aquarium Test Strips are a fast and easy way to test vital aquarium water parameters.

Marineland Black Diamond Premium Activated Carbon eliminates odors, discoloration, and dissolved organic wastes from aquarium water.

What is the best way to stay on top of the water quality in my aquarium?

RELATED INFORMATION

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In addition to routine water changes, test your water regularly using a test kit. Carefully observe your aquarium daily to detect visual cues that may tip you off to poor water quality.

Ideal Water Parameters

The Importance of Regular Water Quality Testing

Test and Treat Tap Water to Prevent Problems

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