

Establishing Biological Filtration

Biological filtration is simply the action of beneficial bacteria in the aquarium consuming fish waste. Fish release urine, ammonia, and solid waste into the aquarium water. This fish waste can build up, especially during the first few weeks of starting a new aquarium. Fortunately, beneficial bacteria convert fish waste into harmless nitrate. This bacteria takes time to develop. If too many fish or too much food are added at one time, the ammonia and nitrite levels will reach poisonous levels. To help start the process, we suggest adding beneficial bacteria to the aquarium.

Ammonia and nitrite levels should be tested twice a week after the first fish are added. The levels will rise and fall as the biological filter develops. As the biological filter grows it will convert the ammonia to nitrite and then to nitrate. Once the biological filter is established, ammonia and nitrite will remain at zero levels. It usually takes about four weeks for the biological filter to become established. A few days after fish are added to the aquarium, the water may turn cloudy. This is normal and happens to most new aquariums. In a few days, the cloud will disappear as the aquarium becomes established.

As soon as the biological filter is established, more fish can be added. Add only one or two fish per week since the biological filter will need time to multiply to consume the additional fish waste.

Feeding Your Fish

It is best to feed your fish only enough food that it can eat in five minutes. If food is sitting on the bottom of the aquarium, the fish have been overfed. Overfeeding promotes fish waste (ammonia) to build up to a harmful level, and is one of the major causes of fish loss.

Cleaning Your Aquarium

Dirty aquariums not only look bad, they are also unhealthy for fish. By following a few simple maintenance steps your aquarium will always look beautiful. To help keep algae under control, select some fish and snails that prefer algae as their primary food source.

Weekly

Test the pH, ammonia, nitrite, and salt levels. Regular water testing is the only way to monitor water quality in the aquarium. The pH level may shift over time and require an adjustment. The ammonia and nitrite levels should always be zero.

Monthly

Clean the filter and add new Activated Carbon. Change about 20% of the water. Partial water changes remove excess pollutants and algae-promoting nutrients. The easiest way to make a partial water change is with a gravel siphon. Gravel siphons remove debris from the substrate while removing unwanted pollutants from the aquarium. When adding new water, be sure to use a water conditioner, add the correct amount of salt to reestablish the proper salt level, and test the pH level before adding to the aquarium. Clean the inside of the aquarium with an algae scraper.

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Starting a Saltwater Fish Aquarium



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About Saltwater Fish Aquariums

Your first decision is whether you want a fish aquarium or reef aquarium. A fish aquarium is primarily designed for the fish with modest decorations. A reef aquarium is for invertebrates (corals, anemones and crustaceans), and the fish balance the aquarium. While each are beautiful, the focus is slightly different. If you decide to create a reef aquarium, please request a copy of *Starting a Saltwater Reef Aquarium*.

Selecting Your Aquarium

Your next decision is selecting an aquarium. Available in a variety of sizes and shapes, a larger aquarium allows you to have a greater number of fish, more diversity, and keeps the water chemistry more stable because of the larger volume of water.

The Equipment

You will need five major pieces of equipment.

Heater. Tropical fish require a steady water temperature of 76° to 78°F. Fluctuating water temperature stresses fish, making them more vulnerable to disease. High quality aquarium heaters minimize water temperature fluctuations. The heater wattage required will vary depending on the size of your aquarium.

Filter. Aquarium filters remove suspended debris and harmful pollution while adding oxygen to the water. The larger the filter, the less often you will need to perform maintenance. Select a filter that has a good flow rate and a large area to hold filter media.

Hood. The hood reduces water evaporation and minimizes the risk that the fish will jump out of the aquarium. Adding a light fixture to the hood will enhance your viewing experience. Make sure to only use the light a maximum of 12 hours per day, as it will cause algae to develop.

Protein Skimmer. A protein skimmer improves water quality by removing organic compounds before bacteria decompose them. Make sure to purchase the correct size skimmer for your aquarium.

What Else Do I Need?

Decorations. Adding decorations to your aquarium provides a hiding place for your fish during times of stress. You should only use decorations, such as gravel, ornaments, and plants, designed for use with saltwater fish aquariums.

Aquarium Cleaner. Household cleaning products are harmful to fish so make sure you purchase aquarium cleaner.

Water Conditioner. Tap water can be full of dangerous chemicals that can harm your fish, such as chlorine and chloramines. These are poisonous to fish. Water conditioner will instantly neutralize the chemicals in tap water, making the water safe for your fish.

Hydrometer. A hydrometer measures the salt level of the water in the aquarium. The desired salt level for saltwater aquariums is 1.020 to 1.025. Without the proper salt level, fish cannot properly breathe making them more vulnerable to disease. Synthetic sea salts are readily available and easy to mix.

pH Test Kit. Tap water may not have the right pH for tropical fish. Most saltwater fish thrive at a pH of 8.2. In addition to a pH test kit, make sure to purchase products to adjust the pH level.

And of course, don't forget the fish food!

Choosing Your Fish

When choosing fish for your aquarium, consider the following:

1. What does the fish eat?
2. How big will the fish get?
3. Does it want friends?

Adding Fish to an Aquarium

Once your aquarium and decoration have been cleaned, the water conditioned, pH levels tested and/or adjusted, and the correct temperature has been established, you are ready to add your fish. Only add a few fish until the natural balance of the tank has been established. Add fish in order of least aggressive to most aggressive.

Whenever fish are netted and handled, their protective slime coat is rubbed off. When adding fish to any aquarium, be sure to add additional water conditioner to help relieve stress. The best method to add new fish is to float the unopened bag of fish in their new home for 10 minutes to allow the fish to adjust to the water temperature. Then, open the bag and gently release the fish into their new home. The bag water may contain fish waste (ammonia), so try to avoid adding the bag water to the aquarium.