

Instructions on Aquarium Cleaning and Maintenance



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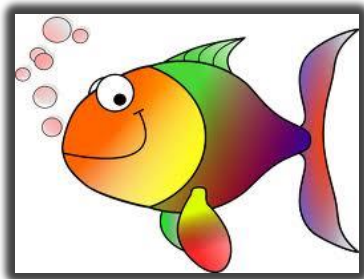
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Introduction to Aquarium Cleaning and Maintenance

This guide will provide you with the knowledge of aquariums cleaning and maintenance. From saltwater and freshwater aquariums to troubleshooting tips, this manual will tell you how to maintain any type of tanks to keep your fish happy and to have a relaxing experience. In this guide you will learn what supplies you need, how to clean your fish tank, and how to keep your fish tank clean.

Throughout the manual, Freddy the fish will provide you with helpful tips.

Life is stressful; cleaning your aquarium should be delightful.



Materials Needed to Clean Aquarium

- An algae pad
- A 5-gallon bucket
- A water syphon, also known as water vacuum
- Fish net
- Sponge
- Towel
- Thermometer, also called water conditioner
- PH set, including a pH up, pH down, a pH indicator solution, and a chart.
- Salt mix (for saltwater)
- Hygrometer (for saltwater)
- 10% bleach solution (optional)
- Filter media if you need to change the filter



Algae pad



Bucket



Water vacuum



Fish net



Sponge



Towel



Thermometer



Hygrometer



PH set



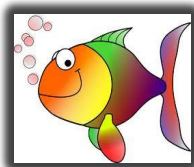
Salt mix



10% bleach solution



Filter media



Tip: Make sure that the tools are only for your fish tank cleaning and maintenance.

Schedule for Cleaning Aquarium

Your schedule for cleaning the fish tank depends on:

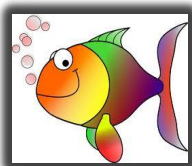
Tank Placement: The setup of your fish tank is important because you will easily move and change the fish tank. Exposing water to sunlight and other factors helps algae grow or change the water temperature rapidly. Also you will have the urge to keep the tank clean if the location is easy to reach.

Tank Size: A small fish tank requires more maintenance than a large tank. A large tank contains much more water than a small tank and water can dissolve chemical waste.

Filtration System: A good filtration system keeps the water clean and provides a healthy environment for your fish. The chemical filter uses carbon to absorb chemical waste.

Feeding Habit: If you over feed your fish, the wasted food will pollute the water and cause an unhealthy environment for you fish.

Number of Fish: For every gallon of water, you can have one-inch of slim-bodied fish the most. Overstocking fish means poor water quality.



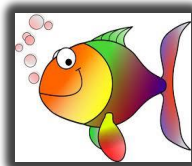
Tip: The best location for a fish tank is against an interior wall out of direct sunlight and drafts from windows.

Preparations Before Cleaning Aquarium

- Cleaning your tank is easy if you have all the materials required.
- Make sure to put 2-3 towels around your fish tank. You need to keep your workplace dry and hold ornaments from your fish tank with these towels.
- Make sure to have a disposal next to the fish tank so that you can dispose waste.



- You will determine how much water you need to change. 10-20% of the water in tank is enough if your fish is healthy. Otherwise, you need to change 25-50% of the water in tank.

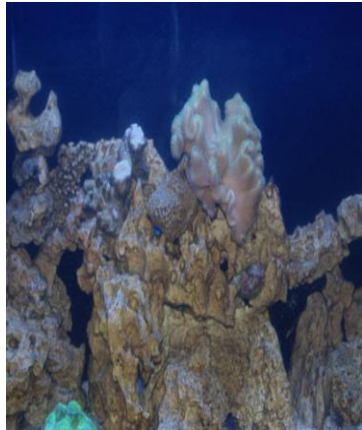


Tip: Treat your fish gently. Fish are very sensitive to light and sound.

Instructions on Aquarium Cleaning

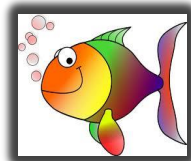
Freshwater Aquarium

Step 1: Remove the ornaments of the fish tank carefully.



Note: After taking out ornaments, you will see debris floating in the water. Use fish net to collect them. Rinse your net after using it. Avoid using detergent or soap to clean your fish tank or ornaments because they are extremely harmful to your fish.

Step 2: Clean the ornaments with an algae pad. Clean them softly.



Tip: If you find algae in spots difficult to clean, soak them in hot water or 10% bleach for 10-15 minutes. Avoid using toothbrush to clean them because the toothbrush might wipe the color off.

Step 3: Use an algae pad to clean the glass inside your fish tank. Move up and down.



Note: Use the rough surface and then the sponge part to clean the glass. Pay attention to the gravel because most of the waste is there.

Step 4: Siphon the water and lead them into your bucket. Make sure your bucket is below your fish tank.



Note: Place one side of the siphon in the tank, and slightly suck the other side of the siphon. When you see the water coming through the pipe, put down the outside part of the siphon in the bucket.

Step 5: Shift water vacuum through the gravel.



Note: You will find waste hidden in the gravel. Watch out for small fish when siphoning and try to clean everywhere inside the gravel.

Step 6: Dispose the excess water and refill the bucket with clean tap water.



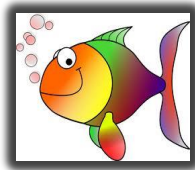
Note: Make sure that the clean water is in the same amount of the excess water.

Step 7: Add one scoop of water conditioner in the bucket to neutralize the water.



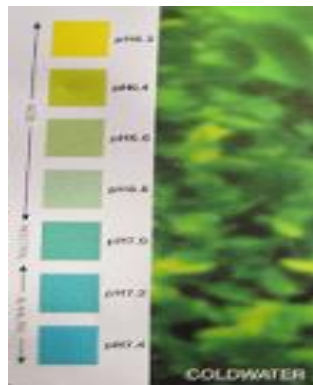
Note: You must add conditioner because fish have troubles processing toxin and heavy metals in the tap water. Use the thermometer to make sure the water at the same temperature of the water in fish tank. Spring water is fine for fish. Avoid using distilled water.

Step 8: Pour the water gently into your fish tank.



Tip: Fish love quiet environment. Please be nice to them.

Step 9: Test the pH level of the water in your fish tank.



Note: Take a sample of the water in your fish tank. Squeeze 2-3 pH indicator solution drops into the sample. The sample will change its color and you can react according to the following table.

Color of Sample	pH level	Solution
Green	7.0-7.5	N/A
Yellow	Below 7.0	Drop 2-3 drops of pH level up
Blue	Above 7.5	Drop 2-3 drops of pH level down

You are done! Just make sure that you put the ornaments back and clean the outside of the fish tank.

Saltwater Aquarium

Cleaning saltwater aquarium is more complicated than cleaning freshwater aquarium. Follow all the steps except step 7 by mixing a saltwater solution. You can divide step 7 into five sub-steps.

Step 1: Buy distilled or reverse osmosis water at grocery store.



Note: You can find distilled water in CVS and Walgreens.

Step 2: Heat the water with a heater designed for saltwater fish.



Note: You can find the heater in Petco and PetSmart.

Step 3: Find salt mix from pet stores and add half cup of mix per gallon. Let the water dissolve the mix for a night.



Step 4: Check the salinity, temperature, and pH level the next day.

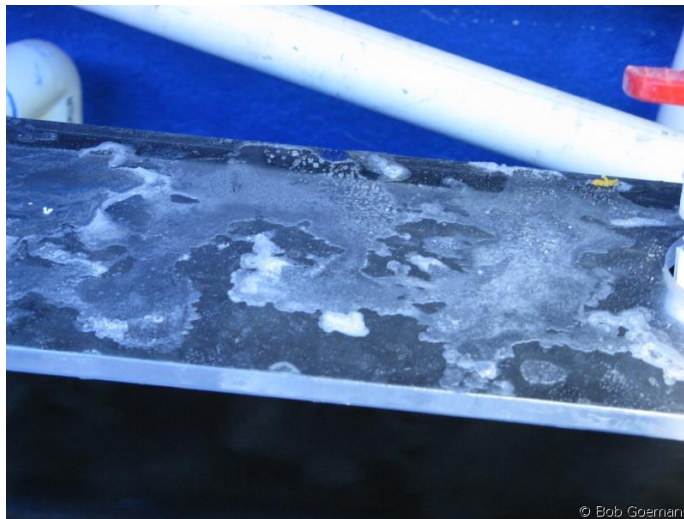


Note: Saltwater fish are sensitive to water salinity, temperature, and pH level.

The ideal ranges for the followings are:

Salinity value	1.021-1.025
Temperature value	73-82 F
pH value	7.0-7.5

Step 5: Use sponge to clean salt creep around the fish tank cover.



Note: When salt water evaporates, it will leave a layout of white crusty debris called salt creep. Salt creep is harmful to your tank because it can destroy air pump, ruin the quality of water, and grow algae. Usually you can find salt creep around the top of your fish tank.

Instructions on Aquarium Maintenance

You should take care of your fish frequently. Daily and weekly maintenance is essential to a safe and enjoyable environment for the fish.

Daily Maintenance

- Food Check- Feed your fish with appropriate amount of food. Food waste pollutes the water.
- Temperature Check - Check the water temperature every morning and evening since the temperature changes frequently. You can make a list of temperature every day to keep in track. If you have saltwater fish, daily checking temperature is essential.
- Equipment Check - Check if the filter, light, heater, and air pump work properly. Every day, you should keep fish tank lights on for at least 10 hours.
- Behavior Check - Observe your fish to check if they are swimming normally. You can tell if your fish are healthy by checking their appearances.
- Water Check - If the water is cloudy for a long time or has an odor, you should change the water. Check pH level as well.

Weekly Maintenance

- Plants Check - If you have live plants, remove the dead leaves and trim them weekly.
- Algae Check- Clean algae on a weekly basis. You should clean both the ornaments and the gravel.
- Filter Check - You need to check your filter every week. Change the filter cartridge every month.
- Glass Check - Clean the glass so the fish tank looks nice and people can enjoy your aquarium.

Troubleshooting Guide

Observe visual cues that indicate changes in water quality. Fundamental water parameters are easy to use by routinely testing water quality, such as pH, ammonia, nitrite, and nitrate. However, many conditions associated with poor water quality develop gradually. Without noticing early signals, serious problems may arise. The followings are three common visual cues that indicate potential problems. This guide provides possible solutions for each problems.

Problem	Possible Causes	Possible Solutions
White, Cloudy Water	<ul style="list-style-type: none"> • Too many fish in one tank • Overfeeding • Over cleaning with chlorinated water • Using antibiotic medications 	<ul style="list-style-type: none"> • Use an air pump with air stones. • Introduce additional oxygen.
Fish gasping or breathing heavily after changing water	<ul style="list-style-type: none"> • Chlorine or chloramine in tap water 	<ul style="list-style-type: none"> • Use chlorine removers for tap water.
Frequent Ammonia Spikes	<ul style="list-style-type: none"> • A decrease in your aquarium's beneficial bacteria population. These bacteria break down ammonia. 	<ul style="list-style-type: none"> • Bacterial additives help restore 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.