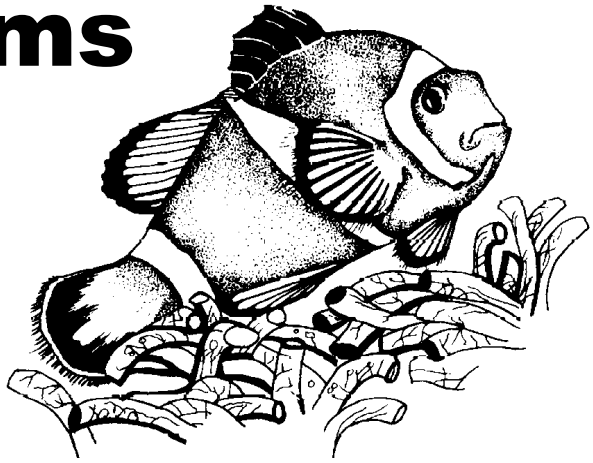
Mobile's Pet Store B&B PET STOP INC. SM

Basic Information on
Marine Aquariums



Starting a saltwater tank is not difficult! Here are the basics:

Tank selection
Tanks can range from 2 or 3 gallons to hundreds of gallons, but the principles are the same. When choosing a tank size, our rule is: the bigger – the better! The larger the amount of water the slower any change will take place. For instance, if your heater malfunctions, a drop in temperature will take longer to occur in 75 gallons than in 20 gallons. You will have more time to notice a problem and take measures to fix it. For this discussion we will assume a 30 gallon tank – which is a great starter tank size.

Gravel
A saltwater tank should use calcium carbonate based gravel or sand. The calcium carbonate buffers the pH of the water and acts as a stabilizer by fighting the pH's natural tendency to drop. We recommend crushed coral, crushed shell, aragonite sand, or similar products. We do have decorative colored sands, but they do not buffer the pH of the water. If you choose colored sands remember extra vigilance is needed where your pH is concerned.

Filtration – *"Fish Only" Tank*
Filtration is a critical aspect of a saltwater tank. We suggest you purchase a filter that moves about 10 gallons of water per hour per gallon of tank water (10 X 30 gallons = 300 gallons per hour). For larger tanks we have larger filtration systems. They are a little more complicated and not pertinent to this discussion. You will also need a protein skimmer (which is another type of filter) to remove organic waste from the water before it becomes a problem.

Filtration – *"Reef Tank"*
As mentioned above, filtration is critical. The more the better. If you wish to keep live corals you must also have (in addition to a power filter) two small water pumps (power-heads, one at each end of the tank) for water movement. Water movement brings oxygen to the corals, stops debris from settling on the corals, helps feed them, and prevents water from stagnating in pockets behind the "live rock" structure in the tank.

Lighting – "*Fish Only" Tank*
In a "fish only" tank one fluorescent fixture is needed to illuminate your tank. A good bulb, such as Power-Glo by Hagen, will bring out the brilliant colors of your fish.

Lighting – *"Reef Tank"*
In a reef tank the lighting becomes a little more difficult because proper lighting is **essential** in order to keep most corals, clams, anemones, and polyps alive and healthy. The symbiotic algae that lives in the tissue of corals require a high intensity light to survive. If the algae dies, the coral dies. There are some polyps, stony corals, and soft corals that are hardier and can be maintained under "lower intensity lighting", but for most reef tanks we suggest approximately 4 watts of light per gallon of tank.

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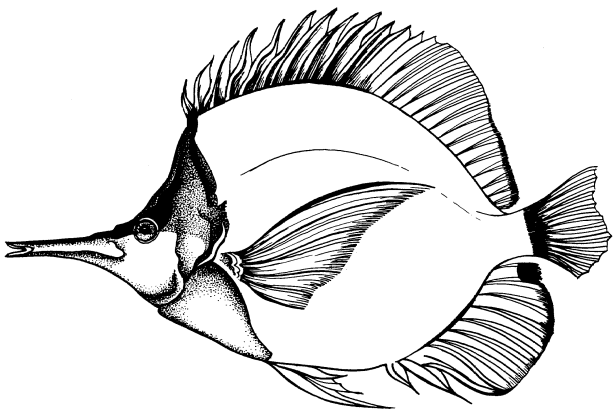

In a beginner's reef tank with hardy corals, a combination of two white and one actinic blue bulb would be sufficient. This recommendation is for a tank that is only 16" deep. For deeper tanks higher intensity lighting will be needed. Also remember that glass tops **do** filter out some of the spectrum and lower the intensity of the light that reaches the corals. We do not recommend the use of a glass top in reef tanks.

For a more advanced reef with more difficult stony corals and clams, you will need more "high intensity lighting" such as metal halide, power compact, or VHO (very high output) fluorescent bulbs.

Water Conditioning

The first step is to de-chlorinate the water. Next, adjust the salinity of the water. Synthetic sea salt is specially formulated to dissolve quickly and bring the pH up to its proper range of 8.0 – 8.4 (with 8.2 being ideal). We don't measure salinity directly, we use a hydrometer to measure the specific gravity of the water. There is a table that relates salinity to specific gravity. For most hobbyists the specific gravity measurement will suffice. For reef tanks containing invertebrates, the water needs more salt with a specific gravity of 1.023. A "fish only" tank should be kept between 1.018 and 1.021.

Temperature

A heater should be used to keep the temperature within a range of 74° - 82° with a temperature of 78° being ideal. The general rule of 3 to 5 watts per gallon should be followed. A 30 gallon tank should have a 100 watt or a 150 watt heater. Remember to position your heater and wait 15 minutes before plugging it in. This allows the glass heater tube to adjust to the same temperature as the water. If the heater is plugged in too quickly (before the temperature of the glass is allowed to adjust) the heater tube can crack.

Maintenance

Like a freshwater tank, a saltwater tank should be algae wiped and gravel washed regularly. If you choose a sand substrate there are several animals that will sift the sand and help keep it clean. Snails, hermit crabs, and some fish are excellent natural forms of algae control. In a reef tank, there are several supplements that should be added regularly. (Please consult a salesperson to determine exactly what you would need and when you need it.)

One of the most critical, yet often overlooked forms of maintenance is "water changes". After the cycle is complete, (see handout: "Basic Information on the Aquarium Cycle") water changes depend on the level of nitrites and nitrates (we will test your water for these two elements free of charge in the store) in your tank. With proper maintenance and filtration, you should not have to change a large amount of water.

Remember, the water that is replacing old tank water must have the same salinity and temperature as the water in the tank. A sudden change in salinity could be disastrous for your aquarium inhabitants.

When water evaporation occurs you could simply add dechlorinated freshwater back to the tank to top it off. The best idea is to add reverse osmosis or distilled water instead of tap water. (Tap water has many other dissolved chemicals besides just chlorine). Do not add salt to this water. Remember – water evaporates – but salt does not. If you add salt to this water your salinity will rise.

Please Note: The information in this handout is meant to provide basic information only. There are several good books available on the care and maintenance of marine aquariums.