



“Respected and Trusted Leaders
in the Water Industry”

AQUARIUM CARE

The process of water treatment is a very important aspect of aquarium care and maintenance. Since March 1984, the City of Arlington has been using chloramine to disinfect its water. Now the predominant method of water treatment, chloramination is the process of adding chlorine and ammonia to the water supply to reduce certain harmful chlorine byproducts. However, chloramine is harmful to fish and must be removed before water is added to an aquarium. This can be accomplished by one of three ways:

- 1) Absorption by fresh activated carbon:
 - Activated carbon can absorb chloramine and remove it from water. Caution must be exercised in using this method because absorptive powers of different carbons can vary significantly. Once the carbon becomes saturated with ammonia, it must be replaced.
- 2) Dechlorination with sodium thiosulfate followed by ammonia removal using zeolites or biological filters:
 - Zeolites are naturally porous minerals. They trap ammonia and other organic compounds but do not remove other forms of nitrogen such as nitrates and nitrites. Zeolites must be replaced when they become saturated with ammonia.
- 3) Breakpoint chlorination:
 - By adding sufficient chlorine to water, the ammonia will oxidize to nitrogen gas. This must then be followed by dechlorination with sodium thiosulfate. The recommended procedure is to add one teaspoon of chlorine bleach for every ten gallons of tap water. Mix well and let stand for 24 hours (or mix constantly for 2-3 hours). Then add three times the recommended amount of chlorine remover and let sit overnight (or mix constantly for 2-3 hours).

Irrespective of which method is used, a chlorine test must be run to ensure that the aquarium water is free of chlorine and chloramine.

Removing chloramine from tap water is important not only for setting up a new tank, but also for changes of water necessary to maintain a balanced aquatic environment. Approximately a quarter of the water in the tank must be replaced with fresh water on a weekly basis.

Changing the water also promotes a healthy environment by removing harmful nitrates, which tend to build up in the tank. Nitrates result from the mix of bacteria, gravel, and equipment that make up the undergravel filter. Waste from fish is also given off as ammonia nitrogen.

Please read these maintenance suggestions:

- Window spray products should never be used to clean the tank, as they contain ammonia and other toxic substances.
- If algae grow in abundance, it likely means that the aquarium is receiving too much light. Move it away from sunlight and use a light source specifically meant for aquariums.
- Rinse off any soap, hand lotions, perfumes, etc. before reaching into the aquarium.
- Chemical products for the aquarium do have a shelf life. Buy only fresh products and date them upon opening.

Follow the recommended cleaning and startup procedures and allow some time for the biological processes in the aquarium to stabilize. Then buy one or two fish and try them for about a week. The aquarium will finally be ready for more fish.

If you have any questions or concerns, please call Laboratory Services at 817-457-7550 and we will gladly answer them.