

Fish Tank - Technical support sheet

Key Points

- 1) The Nitrogen Cycle is the key to a balanced aquarium.
 - a. Fish waste build up is the main problem with fish tank water imbalance
 - b. Clean filters and constant water additions are critical
 - c. Filtration and the natural Nitrogen Cycle (NC) must be maintained for a clean tank
 - d. The NC is how the tank waste are converted in the tank to less harmful substance
 - e. It can take up to 30 days to complete a healthy stable nitrogen cycle.
 - f. A completed Nitrogen cycle must create a test that shows NO ammonia and Nitrite.
 - g. Once established keep stocking low and do not over feed.
 - h. Fish recommendations ONE INCH OF FISH PER GALLON OF WATER
 - i. Remember some fish can grow

- 2) Some bacteria thrive on processing Ammonia by Oxidation (Nitrosomonas sp.)
 - a. These are safe bacteria
 - b. Can be carried on fish
 - c. Fish help seed the filters. (Dirty filters do not have bacterial seeding)
 - d. People can buy fish that are somewhat ammonia resistant
 - e. A balance aquarium contains a balance between fish, feeding levels, temperature and normal beneficial bacteria.
 - f. Tanks can also produce nitrites These also effect the fish
 - g. Nitrobacteria process nitrites, these can be found in normal fish tanks
 - h. The complete tank Nitrogen cycle is breaking down tank waste to break down ammonia, to nitrite and then to Nitrate a non harmful metabolite.

- 3) NITRATE COMES FROM THE NITROGEN CYCLE AND IS CRITICAL FOR CAUSING TANK WATER CLOUDYNESS AND BAD WATER CONDITIONS.
 - a. Nitrates are only harmful to fish in large concentrations
 - b. High Nitrate levels lead to Algae. (direct sun also is detrimental)
 - c. Bioverse products attack the waste agents that create harmful bio based environments in unhealthy fish tanks

- 4) Keep the tank exposed to natural light

- 5) DO NOT have direct exposure to sun light

- 6) Be sure the tank is out of and away from windows

- 7) Sunlight direct Water get to warm and Algae growth becomes excessive unsightly and unhealthy.

- 8) Avoid drafts

- 9) Keep in a room with constant temperature
- 10) Fish need a stable environment. Constant temp. water condition etc.
 - a. Water temperature should be maintained at 75-78 degrees F.
- 11) Added substrate. (Bottom Rocks) Must be washed before adding NO soap or detergents
- 12) Live tank vegetation will increase day time oxygen levels, and will help keep nitrate levels lower.
- 13) Some non aquatic approved products are added to tanks. Be sure only approved products are added to the tank
- 14) Unapproved tank products can leach sealant dyes and coating materials that can affect the B product
- 15) Chlorine is toxic to fish never clean with Chlorine containing products
- 16) Dechlorination products can be bought to clean chlorinated water
- 17) Never use a Chloramine product in any aquarium.
- 18) Tank Ph is better if slightly on the acidic side. 6.5-7 is great
 - a. Coral will help in keeping Ph balanced
 - b. We may want to consider referring people to a Ph test kit
- 19) Build up of ammonia is detrimental
 - a. Ammonia KILLS fish
 - b. Zero tolerance policy is needed
 - c. As ph rises it is a good sign that ammonia levels are increasing
 - d. Ammonia comes from fish waste, fish respiration, to many fish, overfeeding , decaying food, organic tank matter
 - e. Ammonia can and will overwhelm a filtration system. A sticky smelly filter is BAD
 - f. A bad filter with denitrifying bacteria will lead to a bacterial bloom
 - g. A bacterial bloom is cloudy water low oxygen and poor fish performance
 - h. High Ph will harm fish quickly
 - i.
- 20) BAD DEAL IF THE FILTER LOOKS LIKE THE ON IN BRADS TANK. ALSO WITH PLASTIC SIDES THE ISSUE IS EVEN MORE DANGEROUS.
- 21) THE FILTERS ARE DESIGNED TO TRAP AND COLLECT WATER CONTAMINATION FOOD, PLANT MATTER AND ORGANIC SOILDS
- 22) Good bacteria can be produced in any tank. These process ammonia and waste contaminates.
- 23) Clean filters remove harmful gases, chemicals and increase oxygen levels.
 - a. Dirty filters reduce oxygen levels and begin the process for unstable water conditions.

24) Some tips

- a. Do not add excessive fish
- b. Do not over feed
- c. Remove uneaten food
- d. Keep filters clean
- e. Test water weekly
- f. Change or clean filters monthly
- g. Add water as need gradually

25) Cloudy water is always a sign of Compromised water and unstable aquarium conditions.

26) The Bio-load is unstable in fish tanks

- a. Excessive plants and fish plus high water temperatures become an incubator and thus oxygen levels can be reduced very fast and cloudiness will be seen.

27) Any tank without a power filter will tend to have lower oxygen and increased water concerns

28) MAINTANCE TIPS

- a. Daily
 - i. Check fish
 - ii. Remove dead fish
 - iii. Check water temperature
 - iv. Check filtration system
 - v. Do not overfeed
- b. Weekly
 - i. Clean exterior of the tank
 - ii. Make sure no cleaning agents enter the tank
 - iii. Check for algae film
 - iv. Check water level
 - v. Inside glass can be cleaned with a CLEAN chemical free sponge
- c. Bi monthly
 - i. Test tank water
- d. Monthly
 - i. Check all electrical operations of the tank
 - ii. Check filters
 - iii. Replace 20% of the tank water with fresh water
 - iv. Vacuum gravel