Fishless Tank Cycling

The most important step in preparing for a pet axolotl is establishing a nitrogen cycle for a safe environment for it to thrive in.
This step is not optional, it is mandatory and must be done WITHOUT your axolotl in the tank.

- API Freshwater master test kit (this is more accurate than the paper strips)
- 1 bottle of Seachem Prime
- Dr. Tim's Ammonium Chloride Solution for Fishless Cycling

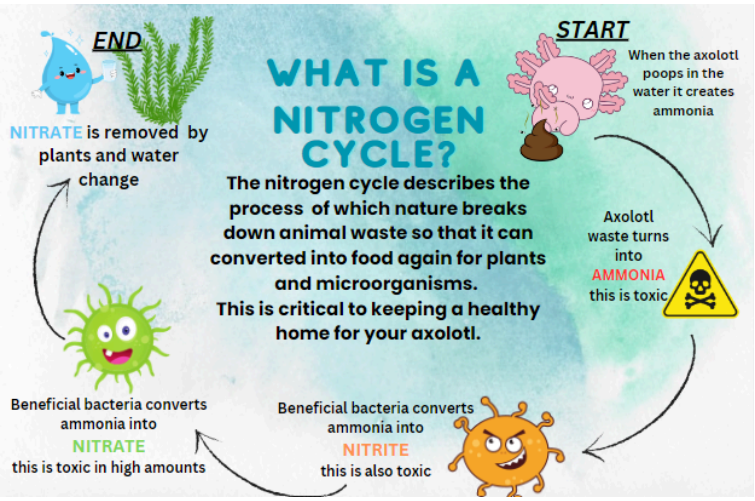
The following items are not necessary but will speed up the process and make it easier:

- Tank heater (only for use during cycling)
- 1 bottle of concentrated bacteria (Microblift Special Blend, Seachem Stability, Fritz & are a few we recommend)
- Seeded filter media or a seasoned sponge filter (sold in our online shop)

Tank cycling requires a lot of patience and monitoring and can take 1-3 months to complete and needs to be completed WITHOUT your axolotl in the tank. You will have to wait to add your axolotl until your tank is fully cycled. If your tank is not ready , it's ok! You can keep your axolotl in a plastic tub of dechlorinated tap water and do 100% daily water changes. Some like this option because it allows you to bond with your axolotl and observe their behavior and is easier for feeding young juveniles.

(These same instructions can be used to cycle a tank for newts that we also sell, however when cycling for newts you only need to dose up to 2ppm and it will take way less time)

This Diagram will help you understand the nitrogen cycle:



Now let's get started!

Step #1: Set up your tank - add the filtration, a thermometer, and whatever decor & substrate you have decided to use. Then fill the tank with water and add Seachem Prime water de-chlorinator to remove the

chlorine from the tap water; follow the dosage on the bottle . This is also when you would want to add your seeded filter if you purchased one, this will have the beneficial bacteria on it that you are working to establish in your filter media. We do sell these in our online shop! *(For more help on tank setup, visit our website under 'Axolotl Care' and then 'Tank Setup')*

Step #2: Add a heater - *(NOTE: this step is optional, you do not need to do this but it does speed up the process)* Adding an aquarium heater for the duration of the cycle to help speed things up by encouraging bacteria growth in warmer water. Keep the temperature between 75-80° F during the cycling process.

Step #3: Add Ammonium Chloride (Ammonia) - *(NOTE: This is **toxic** to axolotls, never add this into the water your axolotl is in!)* Follow the directions on the Dr. Tim's Ammonia Bottle for this part. It should tell you to add 2 drops per gallon of water in your tank. You do not need to take a reading on ammonia immediately and it may not show up right away either on your API Freshwater test kit.
TIP: *A good way to think about ammonia is to remember that is what your axolotl produces through the waste it excretes when it is living in the aquarium, only you are adding it yourself during this process.*

Step #4: Add concentrated beneficial bacteria - *(NOTE: this step is optional, you do not need to do this but it does speed up the process)* This is going to help speed up the process by adding bacteria to start the nitrogen cycle, this helps convert the ammonia you are adding. You will want to follow the directions directly from the bottle for the amount and duration of treatments specific to whatever product you purchase. It will most likely require you to add this over a course of several days so you want to make sure that you follow the instructions given.
TIP: DO NOT USE THE BENEFICIAL BACTERIA BALLS! These will get eaten by your axolotl and can cause death and will need to be removed by a veterinarian.

Step #5: Test your water - (this is the longest and most tedious step and will require you to test the water very frequently over the next 1-3 months.) For the first week or two we test our tanks about 2 times a week, the reason for this is because you will not see much change in the first couple weeks. After that we test every 1-2 days, the more frequently you test the water and add ammonia as needed the faster your tank is going to cycle. Reason being, if you do not test it and all the ammonia is gone, the beneficial bacteria has nothing to eat and will die this will slow down your cycling process.
***TIP**: for water testing, we recommend keeping record of the date and the PH, Ammonia, Nitrite and Nitrate test results in a notebook or a file on your computer or phone.*

Here is more information you will need to refer to through the entire process, it explains what you will see and what to look for to determine your progress when testing your water:

You are going to need an API Master Test kit for freshwater tanks for testing the parameters of the water in your tank. In your test kit you will find a test review guide that shows the different levels of each parameter you will be testing. Follow the instructions provided with your test kit for use. *Shake the bottles well before adding the drops into the test tubes, especially the nitrate bottles.*
***TIP**: Do not do water changes during the cycle! This will slow the entire process down and make it a very frustrating process for you. The only time a water change may be needed is if the nitrates go up to 160 or ammonia is way above 4ppm.*

Below are some tips for completing this step:

- **Throughout the testing process your PH levels should be between 7.6 - 8.0ppm**. You will want to ensure your ph does not drop too low (anything under 7.0 is too low) and can cause

issues with your cycle. If it gets low you can add a bit of baking soda or buffer (see website for recommended products) to the water to get it back up to the ideal ph.

- **Your levels for ammonia should be 3-4pmm during the cycling process.** If it drops you can get it back up to 3-4ppm by adding more ammonia. If it gets too high, do not add anymore ammonia. (If you are following these directions you should not have issues with it rising above 3-4ppm.)
- **When you start seeing the ammonia drop, the nitrites and nitrates will start to rise, this is normal.**
- **You will notice that over time the ammonia will more frequently drop to 0**, this means you are nearing the end.
- **Your nitrites will drop next**, those need to be at 0ppm when the cycle is complete. .
- **After your ammonia and nitrites are staying at 0, you will then assess your nitrates**. Nitrates are only removed by plants and doing water changes, they do not naturally drop. If they are higher than 20ppm you will want to do a water change as anything over 20ppm can cause illness in axolotls. The amount of water you remove will depend on how high the nitrates are. *For example: Nitrates at 40ppm I would do a 30-40% water change, if they are 60-80ppm I would do a 50% water change. You will only do this is the ammonia and nitrites are at 0 later in the cycling process.*

***Tip**: you never want to do a 100% water change because it will remove too much of the bacteria you have worked so hard to create.*

- Before you add your axolotl I recommend checking your cycle to ensure it is in fact complete. But let's go to the next step to check it out!

Step #6: Check your cycle- When you get to this point, re-dose the tank with ammonia to 4ppm. Test the water each day until it goes back to 0 for 3 days in a row. If the nitrites remain at 0 & Nitrates are in the safe zone of 5-20ppm you will know your tank is cycled! Use the guidelines below to ensure your parameters are safe!

IDEAL WATER PAREMENTERS *(this is what you are working on through the cycling process to obtain)*:
Ammonia - 0ppm *(Ammonia is toxic, anything over 0 needs to be addressed)*
Nitrites - 0ppm (Nitrites are toxic, *anything over 0 needs to be addressed*)
Nitrates - 5ppm - 20ppm (low levels = cycle crash, high levels = toxic)
PH - 7.6 - 8

Step #7:. Add your Axolotl - First, remove the heater! You will need to ensure the tank temperature drops to between the ideal 60-68° F before adding your axolotl. Once it drops you may now add your axolotl to their tank!
***Important**: Continue to check your parameters at a minimum of once a week so you know how much water needs to be removed weekly.*
See website for tank maintenance instructions for more information on maintaining your tank.