



A WaterZoo guide to...

# New tank syndrome

One of the main objectives in a new aquarium is to establish sufficient numbers of bacteria to breakdown (mineralise) the highly toxic waste (ammonia) excreted by your fish. When bacteria mineralise ammonia they produce nitrite, which is slightly less toxic, and finally relatively harmless nitrate, which can then be diluted by frequent partial water changes, or other methods.

See our guide to nitrate for more details.

When a new aquarium is set up the filter only circulates and aerates the water and removes larger suspended particles. It does not mineralise the toxic ammonia. Filtration systems are not capable of removing ammonia without the naturally occurring bacteria that live upon the filtering material, however large, powerful, or advanced. It takes around six weeks, longer in cool water from the time you add your first fish to the time the bacteria reach sufficient numbers to mineralise all the waste produced by the fish.

Therefore, you must be careful not to introduce too many fish into your aquarium too quickly. If you do, this will result in high levels of ammonia and or nitrite that could cause your fish to be poisoned, reducing their resistance to disease and in the worst cases they could be killed. If your aquarium has been set up for less than six weeks we recommend that the following items are attended to reduce the effects of New Tank Syndrome: -

- Change no more than 25% of the water at least once a week this dilutes the concentration of ammonia & nitrite. Use water that is of a similar temperature as your aquarium and treat with a water conditioner, e.g. Tetra Aquasafe or Seachem Prime.
- Fish food is concentrated, so feed sparingly several times a day; uneaten food should be removed after five minutes.
- Add a product that contains live bacteria or enzymes, this will reduce the levels of ammonia & nitrite, and mature the filter quicker. Tetra Safestart, Seachem Stability, are good examples, but there are many other bacterial starter products available that will help.
- Frequently test for ammonia and nitrite using a reliable test kit to ensure water quality is within acceptable limits. These levels normally peak at between one and four weeks after the first fish have been added. Unheated aquariums may take longer to mature. NEVER add more fish without checking the water first.
- As a guide, **Do not** exceed the stocking level of 2cm of Tropical fish per 10 litres (2.2gal) of water in the first six weeks. For example a maximum of 21cm of fish in a 36X15X12 aquarium. Always test the water before adding more fish.
- As a guide, **Do not** exceed the stocking level of 3cm cold-water fish per 20 litres (4.4gal) of water in the first six to eight weeks. For example a maximum of 14cm of fish in a 36X15X12 aquarium. Always test the water before adding more fish.
- Always wash biological filter media in water that has been removed from the aquarium. **Not** tap water, this may kill most, if not all of the beneficial bacteria.
- If you know any other fish keepers, ask them for a small amount of gravel or filter media. This can be added to a new aquarium to help establish the filter.

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