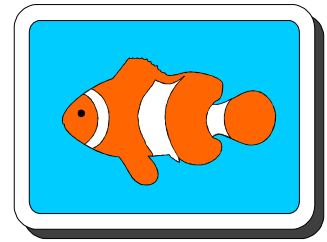


ASA N meer



ASA N meer is a mixed culture of nitrifying, halophil microorganisms, which were isolated from natural seawater.

The microorganisms in **ASA N meer**

- reduce ammonium, ammonia and nitrite in the seawater
- accelerate the formation of a stable population of nitrifying microorganisms in the seawater aquarium
- are harmless for fish, invertebrates and plants

ASA N meer should be used

- ⇒ after resetting up of a seawater aquarium
- ⇒ after a water change
- ⇒ after setting in new organisms
- ⇒ for the constant maintenance of an active nitrifying population
- ⇒ if a medicine treatment was necessary

Dosage:

At resetting up:
50 ml per 100 litres, after 7 days repeat

At regular application:
10 ml per 100 litres by the week

Tips:

- shake before use
- protect against chill and high temperatures
- one year durable at ambient temperature
- After a treatment with medicines a charcoal filtering and the following dosage of 50 ml per 100 litres water are recommendable.

Nitrogen is contained in nature in the amino acids, the components of the proteins. The degradation of protein happens first by heterotrophic microorganisms setting thereby ammonium free. By excretions of the organisms the ammonium concentration will be increased further. Made of ammonium fish-toxic ammonia develops as a function of the pH value: at pH=8 4% and at pH=9 75% of the ammonium are already present as ammonia.

By nitrifying microorganisms ammonium is oxidated over the intermediate stage nitrite to nitrate, which is harmless for fish and plants. Thereby ammonium and nitrite serve as energy source for the microorganisms. But the application of energy is so low that the cells grow slowly and the generation times constitute between 6 hours and a few days. Experiential it takes many weeks after resetting up in a seawater aquarium for the growth of a stable nitrifying population. During this time the critical concentration of ammonium can be overstepped.

The slow growth of the nitrificants leads also to the fact that the ecological system in the aquarium becomes susceptible in relation to disturbances: A load of the water with toxically acting substances (e.g. through a died organism or a medicine treatment) can inhibit again the nitrification strongly. By addition of **ASA N meer** immediately after the resetting up of the seawater aquarium **kann man all dem entgegenwirken.**

ASA N meer

- contains the important nitrifying microorganisms
- accelerates the adjustment of the ecological equilibrium in the seawater aquarium

Importance of the nitrogen-diminishing microorganisms in the seawater aquarium