TWINSTAR STERIZIZER

The TWINSTAR sterilizer, developed as the world’s first in 2012, is widely recognized for its performance by users worldwide.

TWINSTAR STERILIZER

The TWINSTAR sterilizer effectively inhibits algae growth and kill pathogens by using voltage differences between electrodes and producing free radicals. It does not produce toxic substances, ensuring safety for aquarium plants, fish, and filter bacteria.

The sterilization efficiency is 99.9%, which is twice as effective as UV sterilizers, and the electrode lifespan is more than three times longer.

Performance Comparison Test

We tested the sterilization performance in two planted tanks set up under the same conditions. In the aquarium without the TwinStar sterilizer, significant algae growth occurred, whereas in the aquarium with the sterilizer installed, aquatic plants are growing well without algae.

Promoting Plants Growth

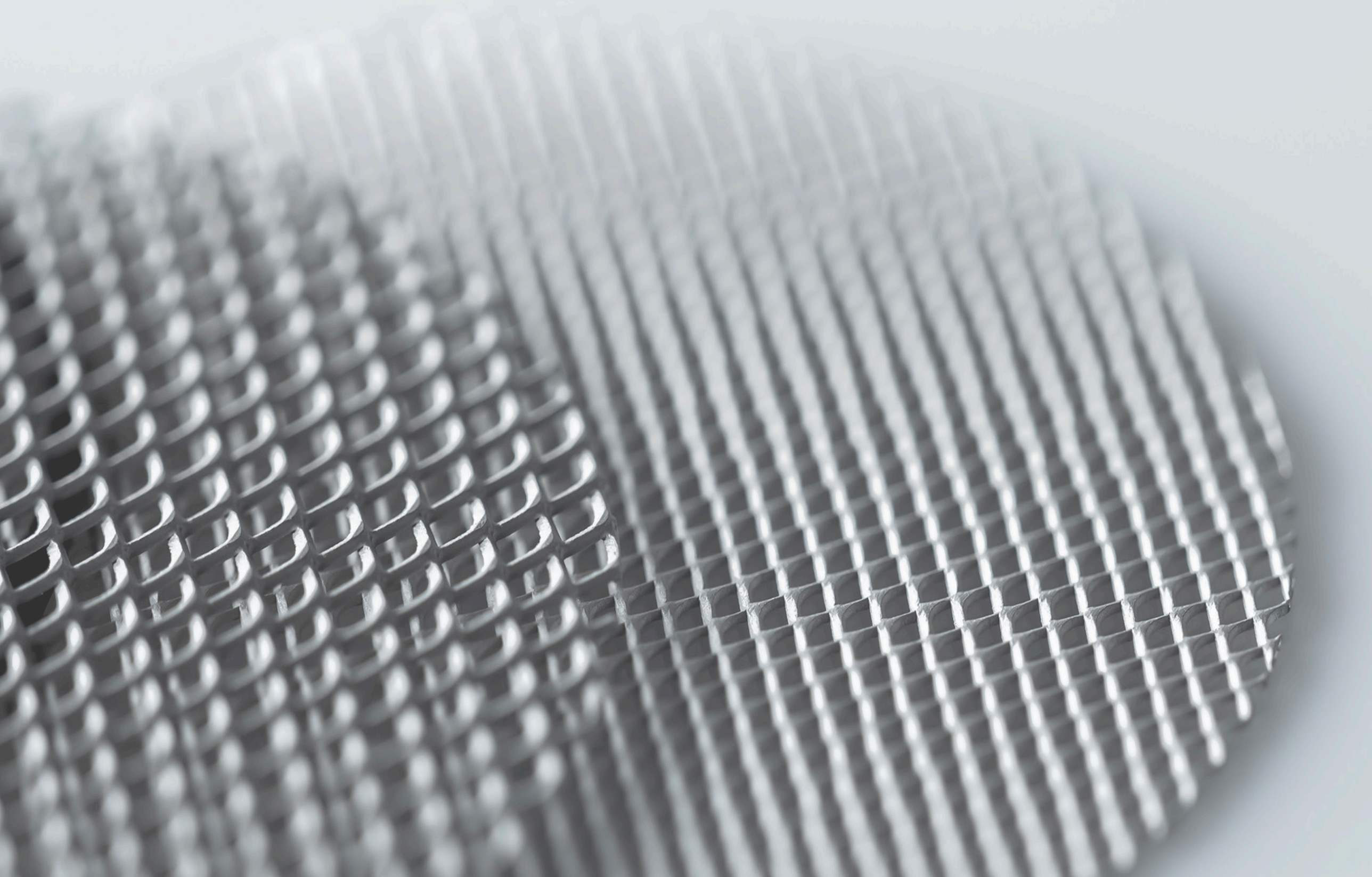
Many customers give very positive reviews about the TwinStar sterilizer. There is particular praise for how it promotes healthy plant growth without algae and enhances photosynthetic efficiency.

It operates automatically 24 hours a day

The TWINSTAR sterilizer monitors water quality in real-time through electrical signals and operates at the optimal sterilization intensity.

THE REACTOR

The TWINSTAR reactor is made of titanium and coated with white gold, making it the most important part for maximizing sterilization performance. Only reactors made under these conditions can produce non-toxic free radicals.



TWINSTAR EFFECT

GREEN ALGAE

7

TYPE

The national fisheries Research Institute certified TWINSTAR`s sterilizein effect for thread, algae, spot algae, brown algae and so on.

PATHOGENS

12

TYPE

E.Coi, E.Tarda, S.Aureus, Edwards, etc.

MAXIMUM

45 %

Plants growth promotion effect

We confirmed that when TWINSTAR is set, rotala indica, glossos tigma`s growth speed are maximum 50% faster than normal condition.

Design of
THE REACTOR M9

Design of THE REACTOR M5

STERILIZER SPECIFICATION

1. MODEL NAME : NANO
   - Capacity: 30 to 120 Liters
   - The Reactor type : M5

2. MODEL NAME : NANO PLUS
   - Capacity: 50 to 250 Liters
   - The Reactor type : M9

TWINSTAR

Sterilizer FAQ

Q: What are the differences in the new TWINSTAR Sterilizer?

A: The previous model was divided into the Nano series, which inhibits algae, and the Yotta, which kills fish pathogens. The new model has been released with an integrated algorithm that allows it to both kill pathogens and inhibit algae simultaneously.

Q: What is the sterilization principle of TWINSTAR?

A: The TWINSTAR sterilizer induces a sterilization effect by electrolyzing water through electrodes. Typically, two electrodes (anode and cathode) coated with white gold are immersed in water, and a voltage is applied to these electrodes to electrolyze the water.

Active Oxygen Generation: During the electrolysis process, water (H_2O) generates not only oxygen (O_2) and hydrogen (H_2) but also various reactive oxygen species (ROS). These reactive oxygen species possess strong oxidizing power, effectively sterilizing bacteria, viruses, fungi, and other microorganisms in the water.

Sterilization Action: The generated active oxygen and oxygen gas destroy the cell walls of microorganisms in the water or oxidize substances within the cells, thereby exhibiting sterilization effects.

Q: What is precautions for Using the Sterilizer?

A: The reactor has polarity, so if there is dust in the aquarium or if the water is not clean, it can adhere to the electrode surface and shorten the reactor’s lifespan. If you have newly set up a planted aquarium, it is recommended to use the sterilizer 3-4 days after the soil dust has settled.

Q: What is the lifespan of the RACTOR?

A: If used in a clean aquarium environment without dust, The REACTORr can be used for 6 to 12 months. The REACTOR is made of titanium and plated with platinum, making it highly polar like a magnet. Therefore, it is important to maintain a clean aquarium environment.

Q: What is features of the TWINSTAR Sterilizer?

A: The sterilizer stores extensive sterilization test data in the IC chip. Additionally, it checks the water condition in real-time through the reactor. Based on the real-time data, it determines the optimal sterilization intensity and operation cycle to effectively eliminate bacteria and fungi.

No Use of Chemicals: Electrolytic sterilizers do not use chemicals, leaving no residues in the water, making them environmentally friendly.

Real-Time Sterilization: As water passes through the device, it is sterilized in real-time, providing immediate sterilization effects.

Q: What is the best method for installing a sterilizer in a newly set up planted aquarium?

A: In the initial setup, there is a lot of dust, so it is recommended to install the sterilizer on the seventh day after setting up the planted aquarium. The best installation location for the reactor is 10 cm below the outlet. maintain a clean aquarium environment.

Q: What is the method for installing a sterilizer in an aquarium where algae have already developed?

A: First, completely remove the algae. If a large amount of algae has developed, perform a 50-60% water change 2-3 times before installation. After all the work is completed, install the sterilizer and turn off the lights for two days, operating only the sterilizer.

Q: Does it affect pH and hardness changes?

A: The TWINSTAR sterilizer does not affect pH and hardness at all.

Q: How do I operate the sterilizer? Do I need to use a timer?

A: The TWINSTAR sterilizer has a built-in timer, so you just need to turn on the power and set the mode according to the capacity. The operation will automatically turn On/Off. During this time, it will check the water condition in the aquarium in real-time and adjust the sterilization intensity accordingly.

Q: Can it be used in a saltwater aquarium?

A: It is not possible to use it. If the reactor reacts with salt, toxic substances may be generated, so it should not be used.

Q: What are the bubbles generated when the sterilizer operates?

A: Oxygen.

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