

An Innovative Greenwater Filter

Technology Overview

The technology includes an algae-based modular filter for greenwater / aquaculture used water. It incorporates microalgae as phytoremediation agents to remove inorganic contaminants from stressed waters. The effectiveness and convenience of the method application is achieved with the encapsulation of microalgae into porous polymer beads. Compared to existing systems, this biomimicry system has the added benefits of a complete water treatment process and the concurrent generation of feed supplements.

Features & Specifications

1. The use of microalgae as entities to competitively inhibit algae growth in greenwater.
2. The use of microalgae as entities to treat fish wastewater in a complete recirculating aquaculture system and produce fish feed supplements.
3. The use of polymer matrices to eliminate costs in algae separation from water.



Customer Benefits

1. A green modular filter which reduces freshwater demand in fish farming without chemical use or excessive energy demand.
2. Complete water treatment at low capital, maintenance and operational cost
3. Production of natural fish feed supplements containing which boost the dietary nutrition of fish and enhance fish health.

Potential Applications

Greenwaters are a common sight in open ponds and reservoirs. By removing the soluble nutrients, the technology can help prevent unsightly algae growth and maintain the aesthetic outlook of open waters. The technology can also be applied to fish farms, resulting in water and energy savings. The target applications of the filter will be in recreational ponds and commercial fish farms. The technology is applied as modular filter unit(s).