Member of the Bioclean Product Line - The Core

Bioclean TM

The Baseline of Malatech Bioaugmentation for Biological Wastewater Treatment

Save operating costs, elevate your biology's treatment performance, optimize effluent quality!

Benefits of Bioclean TM bioaugmentation:

- **Designed to reduce OpEx** at biological wastewater treatment plants, which means that the operator spends less on the maintenance dosage of Bioclean TM bioaugmentation than the **cumulated savings on energy, sludge handling & disposal, chemical usage, and environmental fees.**
- **8-22% reduction in excess sludge production** at municipal or industrial activated sludge, granular sludge wastewater treatment plants
- **5-15% reduction of energy consumption** at municipal or industrial activated sludge, granular sludge, or MBBR (attached growth) wastewater treatment plants
- **Significantly improved Total Nitrogen removal** at municipal or industrial activated sludge, granular sludge, or MBBR (attached growth) wastewater treatment plants, aerated lagoons & tertiary treatment ponds
- **Significantly improved Total Phosphorus removal** at municipal or industrial activated sludge, granular sludge, or MBBR (attached growth) wastewater treatment plants, aerated lagoons & tertiary treatment ponds
- **Wider operational window** for the ranges of all determining operational parameter: temperature, pH, MLSS, Dissolved Oxygen concentration, sludge age etc.
- **Improved resistance for the biology** against shock loads, inhibition, and toxicity
- **Effluent quality optimization (COD, BOD, TSS, NH4-N, TN, TP)** at overloaded municipal or industrial activated sludge, granular sludge, or MBBR (attached growth) wastewater treatment plants, aerated lagoons & tertiary treatment ponds
- **Filamentous blooming, and foam control** at activated sludge wastewater treatment plants
- **Improvement of FOG breakdown** at municipal or industrial activated sludge, granular sludge, or MBBR (attached growth) wastewater treatment plants & aerated lagoons
- **Safe, and easy to incorporate into your normal treatment routine**
- **100% all-natural & biodegradable, non-GMO, non-toxic, non-hazardous**

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Product description & the history:

Bioclean TM is our core technology for wastewater treatment plant bioaugmentation. **We created the first specification of the product 30 years ago** by carefully isolating beneficial microbes from soil & freshwater bodies, selecting species for activated sludge application. The initial 3-decade-old version of Bioclean TM was developed for **increasing the treatment capacity** of municipal & industrial biological WWTP's, mainly in terms of **COD and BOD removal,** and **improve the biology's resistance** against shock & toxic loads.

Based on its initial success, and by cooperating with municipal & industrial WWTP operators for several years, we decided to focus on matters that WWTP operators usually struggle with, and expand Bioclean TM's capabilities. **Upgrades** in microbial composition during the 2000's provided that Bioclean TM bioaugmentation is able to **reduce energy consumption, and excess sludge production** of the treated wastewater treatment plants. Our aim was to provide a solution for all WWTP operators, **where the improved effluent parameters, and increased treatment capacity of their WWTP meet with net savings on OpEx: a better biology with less costs than before, even with the maintenance dosage cost of Bioclean TM bioaugmentation.**

The **recent upgrades in the past decade** added an impressive **nutrient reduction (N,P)** ability to the product & the treated biology, **floc structure improvement**, and **filamentous blooming control.** For today, after 30 years of the birth of Bioclean TM, the technology has become our genuine core solution for every WWTP operator worldwide.

Bioclean TM is a concentrated powder of inactivated all-natural microbes isolated from soil, and water. The product is made by fermentation, and has primarily been developed for optimizing industrial, and municipal biological wastewater treatment processes. After decades of R&D, and many upgrades, Bioclean TM has a high number of microbial species to ensure a broad spectrum of use. As a result of continuous upgrades, we use it in nearly all of our projects at biological wastewater treatment. **Bioclean TM bioaugmentation means your operational window becomes broader, your plant operates in a more stable, economical way with improved, and stabilized effluent quality.**

Fields of application:

- Industrial, and municipal **activated sludge, granular sludge, or MBBR** (attached growth) wastewater treatment plants
- Aerated lagoons
- Old technologies like oxidation ditches, rotating biological contactors or trickling filters
- Tertiary treatment ponds
- Livestock waste streams (lagoons, pre-treatment plants, etc.)
- Biological leachate treatment processes

Application of Bioclean TM:

IMPORTANT INFORMATION:

Recommended daily dosages are given in ppm for the solid product based on average m3/d hydraulic raw wastewater load!

Application of Bioclean TM usually results net savings on various operational costs which make the product highly profitable for operators by spending way less on the maintenance dosage of the product than the savings on operational costs Bioclean TM generate.

For determining exact dosages for your WWTP, please provide us information by sending us our wastewater datasheet filled with information about your plant.

Dosage of the product's aqueous solution is preferably automated & continuous by a metering pump. Recommended maximum amount for dilution in pure water is 30 kg/m3, higher dilution is up to operator, as well as storage tank volume. The product can be easily incorporated in your operation. Manpower is only needed for a few minutes once a week.

Whenever you have any questions, do not hesitate to contact us!

Shock dose:

Week 1: 1-12 ppm per day
Week 2: 0.5-8 ppm per day
Week 3: 0.25-6 ppm per day
Week 4: 0.15-3 ppm per day

Maintenance dosage:

0.1-1.5 ppm per day onwards as daily maintenance dosage

Dosing location: dosing into the first biological reactor of the plant is recommended, or the product can be dosed directly into the primary treated influent wastewater before entering the first bioreactor of the system. In case of SBRs, dosage can be executed in the EQ or buffer tanks.

Packaging information:

The product is available in 1 kg double-wall bags, 20 bags make up 1 carton box which is the lowest unit for ordering.

Storage information & shelf life:

Keep the product in a cool and dry place below 30 Celsius. Avoid exposure to direct sunlight. Shelf life is 5 years from manufacturing date.