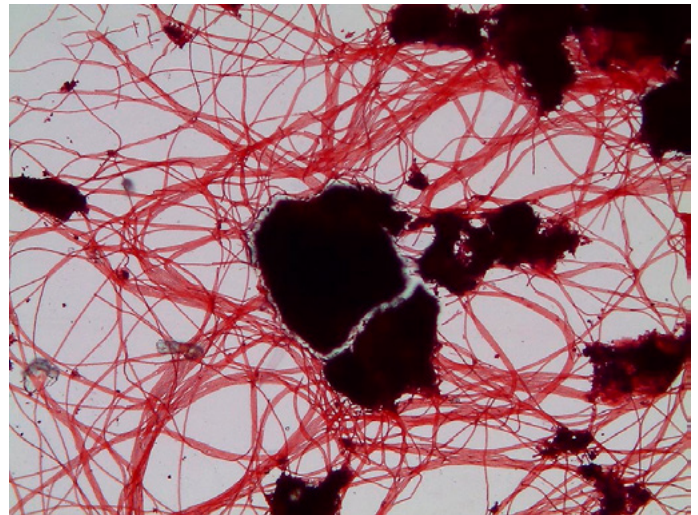


Bioclean ALPHA

The Master of Sludge Yield
(20-50% reduction in excess sludge production)
The Solution to Prevent Filamentous Blooms



MalaTECH
water



PRODUCT DESCRIPTION:

Bioclean ALPHA is an all-natural product made by fermentation technology, which has primarily been developed for minimizing excess sludge production in industrial, and municipal activated sludge wastewater treatment plants without the risk of treatment efficiency drop, while it provides a massive protection for the activated sludge against filamentous blooms. After multiple years of R&D we created Bioclean ALPHA as our most recent development to be an ultimate solution for wastewater treatment plant operators to save costs on sludge handling, and disposal. In the meantime, the operators can provide safe operation without filamentous blooms, and sludge rising, also they can save extra costs spent on manpower or chemicals for treating filamentous blooms, and its effects in the past. Bioclean ALPHA, the new member of the Bioclean product line truly opens a new chapter in bioaugmentation by bringing it to a higher level.

Most of our products contain all-natural bacteria isolated from nature as their weapon of action, unlike Bioclean ALPHA which is the only member of the Bioclean product line which does not contain any bacteria. The product is a complex of co-factors, biostimulants, and fermented organic substances which are selected for 6 basic goals:

1. To maximize food conversion to energy, Carbon Dioxide and water, and minimize sludge yield (Y).
2. To maximize endogenous respiration, and the biodegradation of hardly biodegradable particulate organic matter accumulated in the activated sludge flocs as a non-useful content.
3. To provide flocculant bacteria in your activated sludge flocs a competitive edge against filamentous bacteria, to enable your sludge to run with controlled filamentous count, low SVI, and good settleability throughout the year including seasonal turns.
4. All benefits of the product above can be extracted without deteriorating the current biological treatment capacity of your activated sludge.
5. In case of larger WWTP's which operate anaerobic digesters processing the raw and thickened excess sludge, the biogas output will not decrease despite the decrease of the excess sludge part due to Bioclean ALPHA treatment. Your Bioclean ALPHA treated excess sludge will give a boost to your anaerobic microbe community in your digester, and will increase the specific gas output to equalize the loss of excess sludge fraction in the feed.
6. The application of Bioclean ALPHA does not require any change in your plant's current operational setup to extract its maximum performance. You can continue your operation like you did before, maintaining the same MLSS, DO, recirculation rates etc. Filling the dosing unit with the product will take a few minutes for 1 person from your crew once a week. The product is easy to apply, the specific dosage does not vary too much depending on the plant's technology, layout, load, you can easily calculate your material need, and the return of investment.

We offer 2 versions of Bioclean ALPHA to our valued customers:

Bioclean ALPHA Spec-B is able to deliver 20-35% reduction in excess sludge production with a lower unit price.

Bioclean ALPHA Spec-C is able to deliver from 30% up to 50% reduction in excess sludge production with a higher unit price. Our low-cost micro, and trace element add-on, [BioBooster Micro](#) is needed as a supplemental for Bioclean ALPHA Spec-C.

BIOCLEAN ALPHA - FIELDS OF APPLICATION AND BENEFITS:

- Excess sludge reduction in activated sludge WWTP's by 30-50% (see also our related product in this subject: [Bioclean TM](#))
- Filamentous blooming, and foam control in activated sludge WWTP's (see also our related product in this subject: [Bioclean TM](#))



APPLICATION OF BIOCLEAN ALPHA – DOSING, PLANT SETUP, TECHNICAL INFORMATION

IMPORTANT INFORMATION:

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

Application of Bioclean ALPHA 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 ALPHA generate.

For determining exact dosages for your WWTP, please provide us information by sending us our questionnaire filled with information as much as possible: [Click here for questionnaires!](#)

Dosage of Bioclean ALPHA is continuous by mixing the product with pure water, and pour the content into our Malatech-C Dosing Unit. Our dosing units are easy to install, and use, consume low amount of space, isolated, and have a heating function for outdoor operations at winter. [Click here](#) for more information on the Malatech-C Dosing Unit!

Whenever you have any questions, do not hesitate to [contact us!](#)

EXCESS SLUDGE REDUCTION, AND FILAMENTOUS BLOOMING CONTROL OF ACTIVATED SLUDGE WWTP'S:

The application of Bioclean ALPHA does not require any change in your activated sludge WWTP's operational setup, you can go ahead with the settings you are used to. You need to keep an eye on MLSS only: once the Bioclean ALPHA treatment is launched, after the first 2-3 weeks, you will experience a massive drop in sludge yield, which means you need to decrease excess sludge removal rate as soon as possible. We recommend you to maintain the MLSS constant, and modify sludge removal rate accordingly. For example, if you kept your MLSS at 4.0 g/l before Bioclean ALPHA treatment, you could stick with that, keep it as constant as possible. During the first weeks of Bioclean ALPHA treatment we recommend more frequent sampling of the activated sludge for MLSS check than before, until you get to set up the daily excess sludge removal rate for your Bioclean ALPHA optimized WWTP.

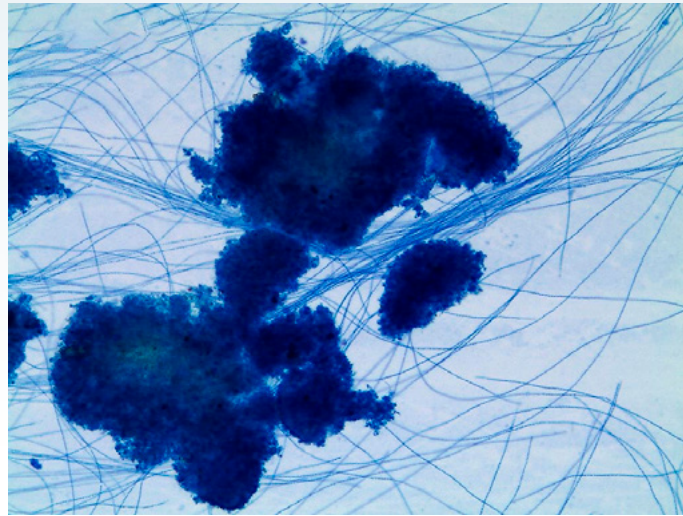


The dosage of Bioclean ALPHA Spec-B, and Bioclean ALPHA Spec-C is the same, as follows:

Week 1: 0.4-0.6 ppm per day

Week 2: 0.4-0.6 ppm per day

Onwards: 0.15-0.4 ppm per day as daily maintenance dosage



Dosing location: Warning! Bioclean ALPHA cannot be dosed to a Bio-P reactor, or phase. For fulfilling its primary goals, excess sludge reduction, and filamentous control, the product can be dosed to the primary treated influent wastewater entering the bioreactors, or first activated sludge reactor, IF THE FIRST REACTOR IS NOT AN ANAEROBIC BIO-P REACTOR! Bioclean ALPHA dosage point should be chosen taking the following considerations below:

1. As close to the start of the process in space or time as possible, BUT
2. Nitrate or Dissolved Oxygen must be present as terminal electron acceptor in the mixed liquor.

Considering the above written we recommend to dose Bioclean ALPHA to the first anoxic reactor of your system, considering continuous flow plant where the internal (Nitrate) recirculation is driven, or anoxic phase at SBR's.

In case of plants running with generally high MLSS, and sludge age, or extremely high MLSS, and sludge age (UF membrane systems), please [contact us](#) for further assistance, also please contact us for Complete Process Engineering Assistance service to extract the most of your WWTP with Bioclean ALPHA!

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:

Keep the product in a cool and dry place below 30 Celsius. Avoid exposure to direct sunlight.