

BiOWiSH™ - Aqua FOG

Thank you for choosing BiOWiSH™ - Aqua FOG

BiOWiSH™-Aqua FOG rapidly removes fats, oils and greases along with suspended solids, nitrogenous waste and a wide range of contaminants, improving the overall efficiency of wastewater treatment plants.

BiOWiSH™-Aqua FOG is highly recommended for influent streams with high concentrations of fats, oils, greases or hydrocarbons as processed in aerobic treatment systems, dissolved air flotation units, oil water separators and grease traps.



What is BiOWiSH™?

A result of over 18 years of research and development, BiOWiSH™ is a revolutionary advancement in wastewater treatment technology. BiOWiSH™ combines a broad spectrum of microbial enzymatic activities with a novel complement of non-enzymatic, biocatalysts/co-factors that work cooperatively to significantly enhance overall digestive reaction rates. The result delivers superior reductions in odor, volatile organic compounds (VOC), bio-chemical oxygen demand (BOD), chemical oxygen demand (COD) and overall solid waste.

As a core technology, BiOWiSH™ delivers effective performance in either sterile or activated product forms. Microbial activation greatly extends product efficiency and effectiveness, and is recommended for wastewater treatment applications.

BiOWiSH™ is used extensively and available in Asia, Australia, Europe and now North America.

Benefits of Use

- Reduces sludge biomass by up to 60%
- Substantial energy savings due to less aeration (30 to 50%)
- Lowers sludge haulage and disposal costs
- Reduces chemical additive costs
- Increases plant capacity (capital avoidance)
- Reduces plant equipment wear and tear
- Improves process stability
- Reduces odor
- Improves effluent quality (reduces BOD, COD, SS, TKN and Turbidity)
- Suitable for all biological treatment plants
- No capital costs required for implementation
- Potentially reduces classification of sludge waste
- 100% organic and biodegradable
- Non-toxic, non-chemical and non-pathogenic

Uses

- Municipal and Private Sewage
- Industrial Wastewater



Key Principles of Use

Concentration

There is a wide range of effective concentrations or 'doses' of BiOWiSH™ for certain applications, however the optimum range is generally between 2 and 10 milligrams per liter of volume—that is milligrams of BiOWiSH™ per liter of wastewater or substrate. This is roughly equivalent to parts per million.

Contact Time

To maximize the BiOWiSH™ treatment program, BiOWiSH™ should be kept in contact with the target substrate to the greatest extent possible. This means that when applying BiOWiSH™ to a large volume of wastewater, such as a large lagoon, tank or vessel, it is important to maximize the distribution of BiOWiSH™ throughout that medium. Additionally, the frequency of BiOWiSH™ dosing should match or exceed residence time within the wastewater system. For example, if a septic tank has a residence time of 14 days, then BiOWiSH™ should be applied at least every 14 days. If a grease trap fills and empties completely every day, then daily dosing or continuous with BiOWiSH™ is advised.

Temperature

BiOWiSH™ can operate effectively in a wide range of temperatures. However, the catabolic break-down of organic waste molecules into inert compounds slows significantly as the temperature of the substrate approaches the freezing point (32°F/0°C). There is a similar loss of effectiveness at temperatures above approximately 140°F (60°C). The ideal operating temperature is between 50°F and 120°F (10°C to 49°C). This broad operating range makes BiOWiSH™ a suitable treatment for effluent lagoons, sludge drying beds and effluent storage basins in most climates during most times of the year.

pH

BiOWiSH™ operates within a broad pH range, from 2.5 and 9.5, but the optimum pH is between 3.5 and 8.5 with neutral preferred.

Oxygen Levels

When using BiOWiSH™ in an aerobic process the performance of BiOWiSH™ can be improved by higher levels of dissolved oxygen. Optimum levels in aerobic processes are DO>1.5mg/L, however BiOWiSH™ is equally effective in anaerobic processes with lower DO.

Pre-Activation of BiOWiSH™

BiOWiSH™-Aqua FOG is packaged in a freeze-dried powder form and delivered in vacuum-sealed bags. The powder must be pre-activated by mixing into solution with water before being applied to the wastewater or target medium. This step allows BiOWiSH™ to properly culture and form a high concentration of catalysts. Several factors govern the effectiveness of this BiOWiSH™ dose pre-activation phase.

Pre-Activation Time

The appropriate time for preparing a BiOWiSH™ culture is between 12 and 24 hours. Less time may will result in a less optimal concentration of catalysts, while too much time may cause BiOWiSH™ to run out of its nutrient source and lose viability. Each package contains a proper amount of nutrient to sustain BiOWiSH™ during the pre-activation phase.



BiOWiSH™

The World's most powerful Live Enzyme Technology

Concentration

For pre-activation, BiOWiSH™ should be mixed into solution with water at a concentration between 2,000 and 10,000 milligrams of BiOWiSH™ per liter of water (parts per million). The ideal concentration is approximately 5,000 mg/L. Because BiOWiSH™ is packaged with its own nutrient source, it is important to use a relatively nutrient-free source of water for pre-activation mixing.

Temperature

The range of optimum temperature for pre-activating BiOWiSH™ is not as broad as its effective temperature range once activated. It is ideal to keep the pre-activation culture at a temperature above 60°F (16°C) and below 100°F (38°C).

Oxygen

The BiOWiSH™ pre-activation culture requires adequate oxygen. In some cases—particularly when large volumes of product are being mixed into a pre-activation solution—some mechanical means of aeration is advisable. In most cases it is sufficient to simply leave the solution container uncovered and exposed to ambient air throughout the pre-activation period.

Quality of Water Used

The BiOWiSH™ activation is a biological process. It is important that the water used does not contain any harsh chemicals, such as microbial inhibitors, that would prevent the growth of the BiOWiSH™ Culture.

Dosing

Please refer to the Wastewater Treatment Application Manual for *BiOWiSH™-Aqua FOG* dosing programs.

Available Sizes

- 100g
- 1kg
- 5kg

More Information

For more information on *BiOWiSH™-Aqua FOG* or any of the revolutionary products based on the BiOWiSH™ technology, please visit www.biowishtechnologies.com

We also welcome your feedback or questions on our products. Please email us at contact@biowishtechnologies.com



Biological help for the human race



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