

Livestock Rendering Plants

Introducing BiOWiSH™-Aqua FOG

BiOWiSH™-Aqua FOG has been specifically formulated for wastewater or influent streams with high concentrations of Fat/Oil/Grease (>100mg/L) such as animal rendering plants. This product is highly effective on mineral and organic forms of Fat/Oil/Grease.



Key Benefits

- Accelerates the decomposition of organic waste (sludge)
- Reduces sludge haulage and disposal
- Removes rather than masks odors
- Saves energy costs (retention times, agitation, aeration)
- Reduces chemical additives
- Reduces wear and tear on plant & equipment
- Reduces solids and H₂S
- Minimizes capital cost for bolt-on technology
- Improves process stability
- Significantly reduces BOD, COD, SS, TKN and Turbidity

About BiOWiSH™

The result of over 18 years of research and development, BiOWiSH™ technology provides a solution to some of the most complex problems of our time, from food production to environmental pollution.

BiOWiSH™ is a powerful blend of biocatalysts that breaks down complex organic molecules to help eliminate waste, reduce odors, improve soil fertility and enhance water quality, among other uses.

100% natural and non-toxic, BiOWiSH™ is safe for everyday use in a wide range of consumer and industrial products. It has been proven to solve problems in environmental management (including wastewater, solid waste, soil and water remediation and industrial emissions), as well as agriculture.

BiOWiSH™ products are used extensively and available in Asia, Australia, Europe, North America and Latin America.

Site Specific Data Collection

Collection of the following site-specific information will assist in developing the most appropriate application program for use of BiOWiSH™ at a livestock rendering plant.

- Type of facility, wastewater treatment and characteristics of effluent (composition)
- Volume of the lagoon in cubic feet or gallons or liters OR lagoon length, width, depth & side slope calculation
- Design: Liner, aeration, mixing apparatus, flow through to other lagoons etc
- Daily inflow: Estimated daily inflow to the lagoon from the rendering plant.

Applications and Dosage

Where Fat/Oil/Grease content is in excess of 100mg/L (ppm), BiOWiSH™-Aqua FOG should be used. If the Fat/Oil/Grease content is below this level then BiOWiSH™-Aqua is recommended.

Application Rate

Contact BiOWiSH™ technical support for a site specific protocol at techsupport@biowishtechnologies.com

Pre-activation

Follow these basic directions for the proper pre-activation of each dose of BiOWiSH™-Aqua FOG.

- Clean tank/vessel/container thoroughly.
- Mix the prescribed amount of BiOWiSH™ in water.
- Leave the container uncovered and exposed to ambient air—or use a mechanical aerator.
- Keep the container in a warm place above 15°C.
- Let the mix activate for a minimum of 12 hours.

Note:

- *The BiOWiSH™ carrier material may clog fine spray nozzles. This can be avoided by decanting the activated solution, using a filter bag of appropriate micron or using a larger nozzle.*
- *To reduce the risk of accidental pre-activation of the product always re-seal bags and avoid exposure to moisture.*

Application Method

The use of BiOWiSH™-Aqua FOG in a lagoon, pond or other type of wastewater holding cell should begin with a series of relatively high “shock” doses designed to quickly stimulate a large amount of enzymatic activity. This can be thought of as a rehabilitation phase with the goal of clearing accumulated organic solids from the system.

We recommend that shock doses be applied weekly for the first 3 or 4 weeks, with the dose being incrementally decreased. For ponds with a very high daily inflow relative to the total pond volume, it is more effective to apply a series of daily shock doses for the first 3 or 4 days.

After three or four consecutive shock doses either daily or weekly, it is effective to continue to apply a monthly or periodic shock dose until organic solids are effectively cleared from the pond. It may be useful to administer follow-up shock doses as needed, for example, when weather conditions change significantly, or when the effluent feeding the pond has a sudden spike in flow volume or volatile characteristics.

The dose indicated for a specific pond can vary considerably—the most important variables are pond volume, daily flow volume, temperature and general climatic conditions, the quantity of built up solids in the system, and individual variances in the biochemical constituency of the pond.

We recommend that the first shock dose be applied at a concentration of approximately 2-4 milligrams of BiOWiSH™-Aqua FOG per liter of pond volume—roughly equivalent to 2-4 parts per million. The subsequent shock doses may be reduced to 1 mg/L.

While beginning shock dose applications on the pond, we recommend that you also begin applying BiOWiSH™ daily to the flow of wastewater entering the pond. We prescribe a daily dose of approximately 0.5 mg of BiOWiSH™-Aqua FOG per liter of daily flow volume. For example, a daily inflow of 50,000 gallons/189,270 liters would require a daily dose of approximately 100 g of BiOWiSH™-Aqua FOG. This daily dose should be continued indefinitely to continually treat wastewater as it enters the pond.

How will I know that BiOWiSH™ is working?

The collection of data is critical to tracking the progress of BiOWiSH™-Aqua FOG in meeting the key objectives. We recommend that before implementing a program of dosing with BiOWiSH™-Aqua FOG, first establish a thorough baseline by measuring as many performance parameters as are applicable to the wastewater system. The following is an example of a performance data collection program, beginning with baseline data and then tracked at regular intervals throughout the dosing program.

	Frequency				
	Baseline	Weekly	30 days	60 days	90 days
Average daily inflow (measured or estimated)	X	X			
Fat/Grease/Oil Content	X				
Pond temperature	X	X			
Precipitation	X	X			
Log of subjective observations - odor water clarity, bubbling activity	X	X			
Water quality analysis - BOD, COD, TKN, TSS, Turbidity	X		X	X	X

Contact Us

For further advice and assistance please contact:

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