

## Environmentally Friendly, Non-Toxic Leachate Treatment

### Benefits

- Rapid ammonia reduction
- Pre-treats leachate in collection systems
- Increases plant treatment capacity
- Improves leachate stability
- Reduces sludge production
- Helps to meet local Publicly Owned Treatment Works (POTW) requirements
- Reduces odors
- 100% natural and non-toxic
- Works cooperatively with existing biology delivering fast and powerful results

### Powerful Bioaugmentation for Landfill Leachate

BiOWiSH® Leachate is a powerful bioaugmentation product that delivers rapid ammonia nitrogen reduction for landfill leachate. The strong biology in BiOWiSH® Leachate accelerates the biological removal of nutrients from leachate.

### How Does BiOWiSH® Leachate Work?

BiOWiSH® Leachate is a proprietary composite biocatalyst that enhances a broad range of hydrolytic, oxidative, and reductive biochemical reactions. BiOWiSH® Leachate contains a novel consortium of metabolically cooperative microorganisms and is composed of all natural, non-genetically modified materials.

### The Crushing Cost of Leachate Disposal

Often, waste management companies will spend tens of thousands of dollars per week to safely dispose of their landfill leachate. Factors such as organic load and pollutant concentration can exponentially increase these costs.

How can waste management companies lessen the burden of these costs? It's simple. By using BiOWiSH® Leachate, companies can reduce the organic load of leachate discharged to POTWs and, consequently, reduce their costs. In fact, BiOWiSH® Leachate can improve the overall quality of leachate by reducing BOD, COD, and TSS..



Now available in 22 lb bags!

# BiOWiSH® Leachate

## Applications

- Aerated leachate tanks
- Aerated leachate lagoons

## Dosing Instructions

**Dissolution Ratio:** 20 gal (100 liters) of fresh water for 22 lb of product.

### For Aerated Leachate Tanks:

Dissolve the solid product in fresh water and dose the active solution directly into the aerated tank.

### For Aerated Leachate Lagoons:

Dissolve the solid product into fresh water and dose evenly into leachate lagoon once a week.

## Product Dose

- 88 lb/260,000 gal (40 kg / 1,000 m<sup>3</sup>) tank per week
- 88 lb/1,000,000 gal (40 kg / 4,500 m<sup>3</sup>) lagoon per week

Country	Goal	Results
USA	Lower ammonia N in tank discharge from > 700 mg/L to < 300 mg/L in winter months	58% reduction in Ammonia Nitrogen within 3 weeks. Stable ammonia levels < 300 mg/L for more than 3 months after implementation of BiOWiSH® Leachate bioaugmentation program.
South Korea	Meet local discharge standards of Total Nitrogen below 30 mg/L and reduce use of TN removal chemicals	Within 3 weeks of dosing, Total Nitrogen levels were below 30 mg/L. From week 4 onwards, use of chemicals were totally eliminated.
South Korea	Reduce odors associated with NH <sub>3</sub> , H <sub>2</sub> S, and VOCs	Significant reduction in odor and 100% reduction in all the parameters in 2 weeks.



Dosing 260,000 gal tanks



Dosing 1,000,000 leachate lagoon



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