

An aerial photograph of a wastewater treatment plant showing several large circular tanks. The tanks contain various colored liquids, including blue, white, and orange. The tanks are arranged in a grid-like pattern.

BIOREACT AD

Drylet's biocatalyst solution boosts biogas generation by over 30% by integrating material science and microbiology.

WHY DRYLET'S BIOREACT AD?

Drylet's innovative technology enables the enhanced degradation of undigested solid waste (**hydrolysis**), increasing biogas generation and solids reduction.

The application protocol is tailored to each facility, after analysis of influent characteristics and of historical performance average data.

BioReact AD requires no commitment to new or expensive equipment -- ZERO CAPEX.

HOW TO USE DRYLET'S BIOREACT AD?

It is added daily as part of your routine biodigester maintenance program. A daily dose of 0.5 to 1 kilogram is typically recommended per 3 800 daily cubic meters of wastewater flow treated at the plant.

WHAT IS DRYLET'S BIOREACT AD?

BioReact AD is a dry-to-the-touch engineered substrate. It is formulated with patented micro-bioreactor particles seeded with mixed microbial cultures beneficial for anaerobic digestion systems.

Every kilogram of product provides about 140 000 m² of area loaded with billions of beneficial microbes. Drylet's MBR particles provide bacteria with an ideal environment to reproduce at significantly accelerated rates, enhancing microbial activity.

Case study #1: 200 000 m³/day WWTP

RESULTS SUMMARY

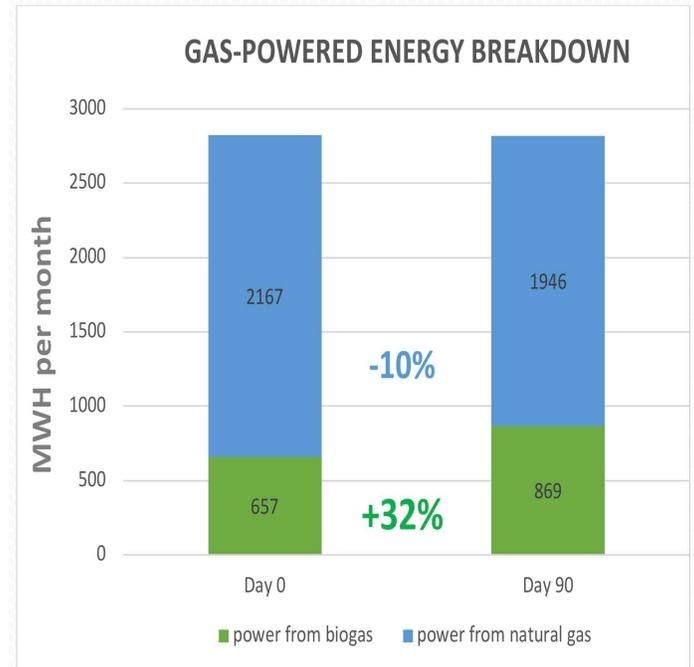
32% biogas generation boost
9% increase in Total Solids reduction in biodigesters
10% reduction in natural gas use
\$22 000 in monthly gross savings

THE SITE

This American wastewater treatment plant has been a leader in the use of renewable energy for wastewater treatment. It currently generates 95 percent of the energy it uses from onsite biogas, purchased natural gas, and solar energy generation. Only 5 percent of its energy requirement is imported from the local power utility. Fourteen primary and secondary anaerobic digesters make up the anaerobic digester complex. The primary digester contents are heated and maintained at about 35°C.

THE PROCESS

Data was collected on a broad range of operational parameters such as biogas generation, biogas composition, alkalinity, sludge-haulage volumes, solids flows to and from the digesters, energy generation from various sources and natural gas costs. Training was provided to facility personnel on the best points of product application. BioReact AD was added to the digesters starting in November 2018 with a daily dosing of 22.5 kg. The goal was to boost biogas and enhance solids reduction. The demonstration took place over 90 days.



Case study #2: Industrial anaerobic digestion facility

RESULTS SUMMARY

>300% biogas generation boost
49.2% Total Solids reduction

THE SITE

This US food-rendering facility treats all the wastewater its operations generate. It has seen loading increase to its wastewater system due to increased production. The treatment facility is comprised of two anaerobic lagoons (L1 and L2 on the photo), followed by three anoxic-aerobic lagoons which feed into the retention pond. Water is then recycled back to the operations.

THE PROCESS

Drylet started applying product to all lagoons in November 2018, treating L1 and L2 with BioReact AD. The plant does not have any onsite boiler or CHP systems and flares all the biogas it generates. The amount of biogas generated is estimated from the number of hours of flare operations. Before November 2018, the facility was operating the flare for about 3-4 hours each day. Since the facility started using BioReact AD, daily flare operations now average 10-12 hours. Analysis of samples collected between 11/01/2018 and 01/23/19 show a 49.2% Total Solids reduction in L2 over the period.



Treatment lagoon system layout

Note: Lagoon designated as L6 is a stormwater sink and not part of the wastewater treatment process.



Contact info: sales@drylet.com | (+31) 20-888-5284