

Powered by
**MICRO CARBON
TECHNOLOGY®**

THE BASE
OF ALL OUR PRODUCTS

Using MICRO CARBON TECHNOLOGY® as a base, we have developed many highly efficient products for maximum microbial stimulation in wastewater to **reduce sludge; cut down on odor; lower biological oxygen demand (BOD), chemical oxygen demand (COD), levels; improve nitrogen removal; and lower electrical costs.** Wastewater, in its untreated form, usually does not meet all of the conditions for optimal microbial activity that leads to the breakdown of waste solids. When microbial activity is not optimized, sludge accumulates, odor gets out of control, and COD/BOD/FOG levels fall out of compliance with government regulations.

KEY BENEFITS OF
MICRO CARBON TECHNOLOGY®

NON-SELECTIVE: works with both positive and negative elemental ions.

VERSATILE DELIVERY: hand application, spray, or via simple pumping system.

LOW ENERGY: requires less effort from the microorganisms to uptake nutrients, lowering biological oxygen demand (BOD).

Become a
**Probiotic Solutions®
Distributor**

*Probiotic Solutions® invites you
to experience the benefits
of our broad-spectrum line of
biostimulant, bio-augmentation,
carbon, & nutrient products,
powered by
MICRO CARBON TECHNOLOGY®.*

**Pulp and Paper
Wastewater Solutions**



Our products are used in:

- ▶ Lagoons
- ▶ Activated Sludge Plants
(Ox. Ditch, SBR, Membrane)
- ▶ Digesters (Aerobic & Anaerobic)
- ▶ Solids Holding Tanks



Bio Huma Netics, Inc.
1331 W. Houston Ave., Gilbert, AZ USA 85233
1.480.961.1220

www.Probiotic.com

©2016, Trademarks and registered trademarks are property of Bio Huma Netics, Inc.
All Rights Reserved.
PS-160503-01



**Probiotic
SOLUTIONS®**
Enhancing Nature's Science™

Experience the World's Most Efficient Wastewater Remediation Products, FOR OPERATIONAL STABILITY!

SUPER PHOS®

The Solution for Maximum Phosphate Availability in Water

WHAT IT DOES:

SUPER PHOS® is a liquid phosphate complexed with proprietary Micro Carbon Technology® that is fed into wastewater treatment systems to feed microorganisms that are deficient in phosphorus.

BENEFITS OF USE:

- ▶ Improves phosphate bioavailability and uptake.
- ▶ Stimulates biological activity for enhanced COD/BOD removal.
- ▶ Enhances biological species diversity for better settleability.
- ▶ Decreases filamentous bacteria for less foaming.
- ▶ Improves natural flock formation.
- ▶ Improves SVI and SV30 for better, cleaner decant.
- ▶ Decreases phosphate levels in the effluent stream.
- ▶ Reduces material costs, easier handling, and improved treatment performance.

SUPER NITRO®

Improving Nitrogen Availability in Wastewater and Soil

WHAT IT DOES:

SUPER NITRO® is a Micro Carbon Technology® complexed, highly stable source of nitrogen for wastewater and bioremediation. In wastewater heterotrophic bacteria require nitrogen to assist in metabolizing Biological Oxygen Demand (BOD) and Chemical Oxygen Demand (COD). SUPER NITRO® will assist in increasing the number of bacteria and thereby improving treatment.

BENEFITS OF USE:

- ▶ Provides quick efficient nutrient uptake of nitrogen that is bioavailable immediately.
- ▶ Can be mixed with other nutrients for ease of application.
- ▶ Stimulates biological activity for enhanced BOD/COD removal.
- ▶ Improves sludge reduction and lowers nitrogen nutrient releases due to lower nutrient use.

BIO ENERGIZER® and MICATROL®

WORK TOGETHER TO ACHIEVE STABILITY AND REDUCE UPSETS

BIO ENERGIZER®

Solution for Wastewater Sludge, Grease & Odor Reduction

BENEFITS OF USE:

- ▶ Stimulates existing microbiology.
- ▶ Increases dissolved oxygen levels.
- ▶ Improves flocculation and settleability.
- ▶ Reduces accumulated sludge.
- ▶ Stimulates purification process.

MICATROL®

The Solution for Detoxifying Chemicals in Soil and Water

BENEFITS OF USE:

- ▶ Buffers microbes from chemical toxicity.
- ▶ Breaks down chemical contamination.
- ▶ Complexes heavy metals and salts reducing toxicity.

METHOD OF APPLICATION	RATE PER APPLICATION
In activated sludge plants	0.5 kg to 0.25 kg/ 100 kg BOD
In stabilization basins	0.5 kg to 0.25 kg/ 100 kg BOD
In wastewater stabilization ponds, to stimulate algae growth, spray over the pond's surface	up to 1 quart/surface acre

Wastewater Application	Recommended Rate
Activated Sludge Plants	Up to 1.5 lb/100 lb BOD ≈ 0.5 gal/100 lb BOD
In Stabilization Basins	Up to 1.5 lb/100 lb BOD ≈ 0.5 gal/100 lb BOD

SUGGESTED RATE	
BIO ENERGIZER®	1-2 ppm
MICATROL®	1-2 ppm equal to or 1/2 of BE dose
Sludge Reduction	DB dosing ranges from 3-10 ppm



Before



After



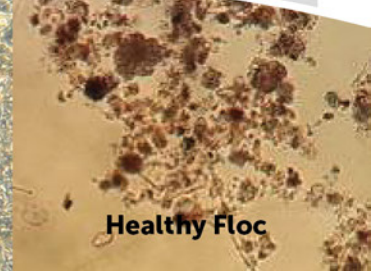
Before



After



Filamentous Bacteria



Healthy Floc