



Turning Liabilities Into Leverage!

MicroClear® BioNite™

Odor Suppressant and Biological Organic Degradation

Product Bulletin

Environmental Leverage has Lab Analysis Service Available



1-lb. Water Soluble Bio-Pouch

Controls

Odors
Hydrogen sulfide,
Mercaptans, and Volatile
Organic Acids
Corrosion

Degrades

Fats, Oils & Grease
Starches
Protein, Animal Fat
Organics
Triglycerides
Surfactants, Soaps

Environmental Leverage® Inc.

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North Aurora, IL 60542

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630-906-9791 fax 630-906-9792

www.EnvironmentalLeverage.com

MicroClear® BioNite™ is a proprietary formulation of ingredients containing a nitrate-based Electron Acceptor for Control of Odors. This product can be used for controlling odorous and potentially dangerous chemicals such as hydrogen sulfide, mercaptans, and volatile organic acids. **MicroClear® BioNite™** helps eliminate the odor, corrosion and safety problems associated with hydrogen sulfide in sewage as well as prevent the formation of hydrogen sulfide.

MicroClear® BioNite™ a high potency, bacteria-laden, powdered formulation, for use in degrading many types of waste. **MicroClear® BioNite™** contains a specially formulated, proprietary blend of microorganisms, micro/macronutrients, alternate oxygen source and surface tension suppressants/penetrants. Because of the diversity of the microorganism systems incorporated into this product it is specifically developed for use *in situations where there is a particular high impact from odors as well as fats, oils and grease.*

Our safe, naturally occurring bacteria are present in high numbers to handle difficult organic problems, suppress odors and are very economical to use. This product can be used in the treatment of liquid & solid organic waste.

MicroClear® BioNite™ contains facultative anaerobes, as well as an alternate oxygen source by providing an abundance of oxygen (electron acceptor) for metabolism to occur. This formulation bio-stimulant is non-hazardous and completely biodegradable. Safe, cost effective, easy-to-handle method of odor control with no hazardous byproducts.

Enzymatic Activity

Cellulase (CAU).....	Units/Gram: 150 Min.
Protease (Casein Digesting).....	Units/Gram: 35,000 Min.
Amylase (Modified Wohlgemuth).....	Units/Gram: 55,000-80,000
Lipase (USP).....	Units/Gram: 400

Application Instructions for Sewer & Lift Stations

<u>Flow Rate</u>	<u>Initial Dosage</u>	<u>Maintenance**</u>
Up to 25,000gpd	1-3 lb. per week	1½ lb. per week
Up to 50,000gpd	2lb. 2x week	2 lb. per week
Up to 100,000gpd	2lb. every other day	2 lb. 2x week
Up to 250,000gpd	2lb. per day	2 lb. 3x week



***The required dose ranges from 4 to 15 lbs. of calcium nitrate per pound of sulfide present

Product Advantages

Eliminates malodors at their source
Contains Alternate Oxygen Source
Reduces Corrosion
Greatly reduces labor time
Enhances BOD/COD removal
Reduces hydrogen sulfide
Reduces sludge buildup
Cost effective/Easy to use
Changes biomass dynamics
No special equipment needed
Increases system efficiency
Breaks down fat & grease buildup
Contains facultative aerobes
Degrades a wide range of complex organic compounds

Applications of Use

LIFT STATIONS
WET WELLS
SUMP PITS
SLUDGE TANKS
SEWER MAINS
GREASE TRAPS
LAGOONS
TRICKLING FILTERS
DRAIN LINES
PONDS

Packaging of Product

MicroClear® BioNite™ comes in 1-lb. water soluble Bio-pouches. Packaged in 25-lb. Plastic Pails. Bulk packaging upon request.





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MicroClear® BioNite™

Odor Suppressant and Biological Organic Degradation

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Typical Properties of Product

Appearance.....light tan
 Fragrance.....mild-earthly
 Form.....powder
 pH.....6.8-8.5
 Shelf-Life.....1 year/u.o.c.
 Flash Point.....none



1-lb. Water Soluble Bio-Pouch

Performance Properties

Effective pH range.....5.2 - 9.5
 Effective Temperature Range.....35 - 130°F
 Bacterial Enzyme Production.....Protease,
 Lipase, Amylase, Urease, Cellulase

Storage & Handling

Storage.....Store in a cool, dry place. Do Not Freeze
 Container.....Keep lid closed on Plastic Pail. Do not store water
 soluble pouches out of plastic container.

Handling.....Wash hands thoroughly with warm, soapy water

Bacterial Count

MicroClear® BioNite™>1x10⁹ (Billion per gram)

Controls

Odors

Hydrogen sulfide,
Mercaptans, and Volatile

Organic Acids

Corrosion

Degrades

Fats, Oils & Grease

Starches

Protein, Animal Fat

Organics

Triglycerides

Surfactants, Soaps



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Turning Liabilities Into Leverage!™

MicroBlock™ For Bioaugmentation

Product Bulletin

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Degrades
Fats, Oils & Grease
Starches
Protein
Malodors
Animal Fat
Triglycerides
Foaming
Surfactants
Soaps

MicroBlock™ is a solid, bacterial laden, slow release block for use in degrading organics. The safe, naturally occurring bacteria are present in high numbers to handle difficult organic problems. The unique block will gradually dissolve over a 30-90 day period which allows for continuous treatment and degradation of waste. The naturally occurring bacteria contained in the block will reduce odor, sludge, fats, oils and grease buildup.

Biological products offer a more efficient alternative to chemicals. They actually degrade the grease and organics at the source. The **MicroBlock™** is suspended below the water level and provides slow, continuous release for the bacteria.

Application Sewer, Lift Stations & Wet Wells

DOSAGE RATE GUIDELINES

1 - lb. MicroBlock™	<i>Floor drains only</i>	30-65 Days	less than 1000g for grease drains
2 - lb. MicroBlock™		35-60 Days	flows less than 50,000 gpd
5 - lb. MicroBlock™		45-75 Days	flows 50,000-100,000 gpd
10 - lb. MicroBlock™		60-90 Days	flows >100,000 gpd

Product Advantages

- * Allows for 24 hour continuous treatment of waste, not just periodic dosage
- * Greatly reduces labor time needed for dosage maintenance
- * Reduces hydrogen sulfide & sludge buildup
 - * Easy to use
 - * Significantly reduces malodors
- * Cost effective & reduces the need for pump-outs and dredging
 - * Breaks down fat & grease buildup
- * Eliminates need for metering pump - no initial or maintenance cost
- * Eliminates need for personnel to dose other types of treatments daily or weekly
 - * Automates septic and grease trap maintenance program



Applications of Use

LIFT STATIONS
WET WELLS
SUMP PITS
DIGESTERS
SLUDGE TANKS
SEWER MAINS
LATERALS
GREASE TRAPS
AERATION SBR'S
LAGOONS
TRICKLING FILTERS
DRAIN LINES

Packaging of Product

2 lb. / 4 per Case
5 lb. / 4 per Case
10 lb. / 4 per Case
1 lb. / 16 per Case

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Turning Liabilities Into Leverage!

MicroBlock™

For Bioaugmentation

Product Bulletin

Environmental Leverage has Lab Analysis Service Available

MicroBlock™ gives round the clock waste degradation treatment with a simple, easy to use system. Simply suspend the **MicroBlock™** into the treatment area, hanging the MicroBlock™ ½ the way into the lift station liquid, wet well, grease trap or pre-treatment site. The block will dissolve over a 30-90 day period, depending on size and flow rates in a typical lift stations or wet wells, providing optimal efficiency and treatment.



2 lb. MicroBlock
Start taking the Grease & Scum out of your system Today!



1 lb. MicroBlock
Perfect size for small septic tanks or to fit into a drain.



Typical Properties of Product

Appearance.....medium green
Fragrance.....mild-earthy
Form.....block
pH.....7.8-8.5
Shelf-Life.....2 years/u.o.c.
Flash Point.....none

Performance Properties

Effective pH range.....5.2 - 9.5
Effective Temperature Ran.....40 - 120°F

Storage & Handling

Storage.....Store in a cool, dry place. Do Not Freeze
Container.....Keep box closed & blocks in plastic bag. Seal end of bag to keep blocks away from air flow.

Handling.....Wash hands thoroughly with warm, soapy water

Bacterial Count

MicroBlock™.....4 Billion CFU's per gram
Block Contents include..... 4 strains of Bacillus & Nutrient Package

****Ask about the impact of supplementing N and P.***

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MicroClear® 207

High Impact Grease Digestor

Product Bulletin

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MicroClear® 207 is a high potency, bacteria-laden, powdered formulation, for use in degrading many types of waste. **MicroClear® 207** contains a specially formulated, proprietary blend of microorganisms, micro/macronutrients, and surface tension suppressants/penetrants. Because of the diversity of the microorganism systems incorporated into this product it is specifically developed for use *in situations where there is a particular high impact from fats, oils and grease.* The safe, naturally occurring bacteria are present in high numbers to handle difficult organic problems and are very economical to use.



1-lb. Water Soluble Bio-Pouch

Enzymatic Activity

Cellulase (CAU).....Units/Gram: 150 Min.
 Protease (Casein Digesting).....Units/Gram: 35,000 Min.
 Amylase (Modified Wohlgemuth).....Units/Gram: 55,000-80,000
 Lipase (USP).....Units/Gram: 400

Application Instructions for Sewer & Lift Stations

Flow Rate	Initial Dosage	Maintenance**
Up to 25,000gpd	1lb. per week	½ lb. per week
Up to 50,000gpd	1lb. 2x week	1 lb. per week
Up to 100,000gpd	1lb. every other day	1 lb. 2x week
Up to 250,000gpd	1lb. per day	1 lb. 3x week



Degrades

- Fats, Oils & Grease (FOG)
- Starches
- Protein
- Malodors
- Animal Fat
- Triglycerides
- Foaming
- Surfactants
- Soaps

Product Advantages

- Greatly reduces labor time
- Enhances BOD/COD removal
- Reduces H₂S Production
- Reduces sludge buildup
- Cost effective/Easy to use
- Changes biomass dynamics
- No special equipment needed
- Increases system efficiency
- Breaks down fat & grease (FOG) buildup
- Eliminates malodors at their source
- Contains facultative anaerobes
- Contains no chemicals
- Degrades a wide range of complex organic compounds

Applications of Use

- LIFT STATIONS
- WET WELLS
- SUMP PITS
- AERATION BASINS
- OXIDATION TANKS & DITCHES
- RBC'S & SBR's
- CLARIFIERS
- DIGESTERS
- SLUDGE TANKS
- SEWER MAINS
- LATERALS
- GREASE TRAPS
- AERATION SBR'S
- LAGOON'S
- TRICKLING FILTERS
- IMHOFF TANKS
- DRAIN LINES

Packaging of Product

MicroClear® 207 comes in
 1-lb. water soluble Bio-pouches.
 Packaged in 25-lb. Plastic Pails.
 Bulk or Smaller pouch packaging upon request.

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MicroClear® 207

High Impact Grease Digestor

Product Bulletin

Environmental Leverage has Lab Analysis Service Available

Typical Properties of Product

Appearance.....light tan
Fragrance.....mild-earthly
Form.....powder
pH.....6.8-8.5
Shelf-Life.....2 years/u.o.c.
Flash Point.....none



Performance Properties

Effective pH range.....5.2 - 9.5
Effective Temperature Range.....35 - 130°F
Bacterial Enzyme Production.....Protease,
Lipase, Amylase, Urease, Cellulase

Storage & Handling

Storage.....Store in a cool, dry place. Do Not Freeze
Container.....Keep lid closed on Plastic Pail. Do not store water soluble pouches out of plastic container.

Handling.....Wash hands thoroughly with warm, soapy water

Bacterial Count

MicroClear® 207.....>1x10⁹ (Billion per gram)



1-lb. Water Soluble Bio-Pouch

Degrades

- Fats, Oils & Grease
- Starches
- Protein
- Malodors
- Animal Fat
- Triglycerides
- Foaming
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