PUTTING THE POWER OF NATURE TO WORK
BREAKING DOWN BACTERIA AND ENZYMES

Natures Microscopic Cleaners

At Hillyard, we’re looking to the power of nature for safe and reliable solutions. In doing so, we’ve found that naturally occurring, non-pathogenic bacteria can help provide effective, yet environmentally-responsible, alternatives that perform a variety of cleaning tasks. From common applications such as odor control in restrooms, to specialized procedures such as grease and drain trap maintenance, bacterial-based products are an ideal choice.

Safe bacteria produce and release enzymes upon contact with organic soil and moisture.

Working like a lock and key, very specific enzymes attach to very specific soil molecules.

The enzymes break down the soil molecule.

Safe bacteria produce and release enzymes to break down soil and moisture.

Safe bacteria produce and release enzymes to break down soil and moisture.

The Magic of Multiplication!

These awesome little cleaners multiply and can continue to digest soil and odors from surfaces for hours and days, as long as soil and moisture are present. The level of moisture can be as little as the humidity indoors (35-45%) or on the soil.

Terminology

Biotechnology: The science of selecting and utilizing living microorganisms for useful tasks.

Bacteria: Any of a group of diverse and numerous, single-celled organisms. Bacteria are either sensible, anaerobic or facultative. Aerobic bacteria require oxygen to live and function. Anaerobic bacteria are capable of living in the absence of oxygen. Facultative bacteria function in either the presence or absence of oxygen.

Spore: The dormant or inactive state of bacteria. Spores are very resilient due to their resistance to unfavorable environments like high heat, acidic/alkaline pH, chemicals, and low water content.

Vegetative State: The active or feeding state bacteria assume when exposed to a food source.

Enzyme: A protein produced by a bacteria that functions as a catalyst in the digestion or decomposition of organic waste. While bacteria metabolize a wide variety of organic material, the enzymes they produce are substrate specific.

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Working like a lock and key, very specific enzymes are able to very specific soil molecules.

The enzymes break down the soil molecules.

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Hillyard Biologicals - Nature’s way to rapidly degrade, consume and digest soil and odors.
Liquid Enzyme II
A live, bacterial suspension that contains a minimum of 200 billion active bacteria per gallon that destroys long-lasting fats, oils, grease, and greasy soaps. Great for treating sink drains, wash basins, shower stalls, and floor drains. Liquid Enzyme II is designed with pet urine neutralizers and can be used in a variety of applications including pet restrooms, carpet, garbage containers, cigarette-ash trays, and anywhere foul odors are a problem. Formulated with an array of enzymes targeted to breakdown specific solids:
- Protease enzymes break down protein.
- Amylase enzymes break down starches, carbohydrates.
- Lipase enzymes break down fat and grease.
- Urease enzymes break down urea.
- Xylanase enzymes break down plant-based sugars.

Liquid Trap Shooter®
The latest advance in bacterial-based products. It uses natural enzymes to break down grease and grime. Liquid Trap Shooter is able to break down waste in as little as 30 minutes. Traditional bacterial products can take as much as eight hours to break down waste. With daily maintenance, Liquid Trap Shooter keeps grease traps free from excessive buildup while reducing plumbing of grease and waste accumulation. Liquid Trap Shooter is able to begin working in as little as 30 minutes. An easily-programmed timer turns the pump on and off to ensure the pump is turned on at the appropriate times. Utilize the flexible programming capabilities of the AutoDose to dose drains at the appropriate times. Further customize AutoDose by changing the frequency and amount of gallons per year. Save water. Cold water application saves energy from not having to use hot water. Conserve Water. No rinse can save thousands of gallons per year.

Take Down®
Works naturally to destroy odors at their source. Unlike many products that simply mask odors, Take Down uses a live, bacterial action to eliminate stinky odors. Place them near trash cans, garbage containers, cigarette-ash trays, and anywhere foul odors are a problem. Available in 4 fragrances:

<table>
<thead>
<tr>
<th>Item Pack</th>
<th>1 Gallon Containers</th>
<th>2.5 Gallon Containers</th>
<th>5 Gallon Pail</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIL0046806</td>
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<tr>
<td>HIL0101404</td>
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<td>1</td>
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</table>

Emulsifies and Removes Grease More Effectively
Laboratory experiment shows how Britenz-It effectively breaks down grease when compared to water and a typical floor cleaner. The cloudy appearance of Britenz-It indicates the fat was emulsified.

<table>
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<th>2.5 Gallon Containers</th>
<th>5 Gallon Pail</th>
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</thead>
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<tr>
<td>HIL0014506</td>
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<td>8</td>
<td>2</td>
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</tbody>
</table>

Cost Effective, Accurate Dilution Control
Use the wall-mount Britenz-It Dispenser to dispense Britenz-It with the 2.5 gallon sealed container to ensure accurate, cost-effective in-use cleaning solution. Dispenser at 4 gpm to quickly fill buckets.

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<tr>
<th>Item Pack</th>
<th>1 Gallon Containers</th>
<th>2.5 Gallon Containers</th>
<th>5 Gallon Pail</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIL22301</td>
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<td>2</td>
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</tr>
<tr>
<td>HIL22302</td>
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<td>10</td>
<td>2</td>
</tr>
</tbody>
</table>

Nonstop Continuous Cleaning Action
The biotechnology in Britenz-It keeps "good bacteria" producing millions of grease-busting enzymes around the clock 24/7. As long as there is a food source, "good bacteria" will be at work consuming grease and making future cleaning easier!

Simple Application
1. SWEEP
2. APPLY
3. BRUSH
4. SQUEEGEE
### Liquid Enzyme II

A live, bacterial suspension that contains a minimum of 200 billion active bacteria per gallon that dissolve and break down grease and fat. Great for treating sink drains, wash basins, shower stalls, and other drains. Bioenzymes odor associated with pet urine. Neutrals odors without leaving a heavy "cleaned" scent. Liquid Enzyme II is the safety switch to a variety of applications including restroom, trash, garage containers, cigarette urns, and anywhere foul odors are a problem.

<table>
<thead>
<tr>
<th>Item Pack</th>
<th>Item Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 - 1 Gallon Containers</td>
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<td>4 - 1 Gallon Containers</td>
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<tr>
<td>3 - 1 Gallon Containers</td>
<td>HIL0046806</td>
<td>6 - 1 Gallon Containers</td>
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<tr>
<td>5 Gallon Pail</td>
<td>HIL0047006</td>
<td>1 - 5 Gallon Pail</td>
</tr>
</tbody>
</table>

### Liquid Trap Shooter®

The latest advance in bacterial-based products. Use outside area to clearizing agents to rid grease traps and plumbing of grease and waste accumulation. Liquid Trap Shooter is able to begin working in as little as 30 minutes. Traditional bacterial products can take as long as six hours to begin working. Weekly daily maintenance, Liquid Trap Shooter keeps grease traps free from excessive buildups while reducing odor, sludge, and separator pump-ups.

<table>
<thead>
<tr>
<th>Item Pack</th>
<th>Item Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>2 - 1 Gallon Containers</td>
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<td>2.5 Gallon Container</td>
</tr>
<tr>
<td>4 - 1 Gallon Containers</td>
<td>HIL0046709</td>
<td>6 - 1 Gallon Containers</td>
</tr>
<tr>
<td>12 - 1 Quart Bottles</td>
<td>HIL0046809</td>
<td>20 - 1 Quart Bottles</td>
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</tbody>
</table>

### Take Down®

Works naturally to destroy odors at their source. Unlike many products that simply mask odors, Take Down uses safe, natural bacteria and enzymes to eliminate stubborn odors. Plus there are no harsh chemicals to worry about. The bacteria simply die when their job is done and convert to carbon dioxide and water.

<table>
<thead>
<tr>
<th>Item Pack</th>
<th>Item Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
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<td>2 - 2.5 Gallon Containers</td>
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<tr>
<td>4 - 1 Gallon Containers</td>
<td>HIL0046706</td>
<td>1 - 5 Gallon Pail</td>
</tr>
</tbody>
</table>

### Liquid Enzyme II Formulated with an array of enzymes targeted to breakdown specific cells.

- Protease enzymes break down proteins.
- Amylase enzymes break down starch/carbohydrates.
- Lipase enzymes break down fat and oils.
- Urease enzymes break down urine.
- Xylanase enzymes break down plant-based cellulose.

### pH Drop Confirms Enzyme Performance

<table>
<thead>
<tr>
<th>Time (Days)</th>
<th>pH Drop Confirms Enzyme</th>
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</thead>
<tbody>
<tr>
<td>Initial</td>
<td>7.0</td>
</tr>
<tr>
<td>1 Day</td>
<td>6.5</td>
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<tr>
<td>3 Days</td>
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<tr>
<td>10 Days</td>
<td>5.5</td>
</tr>
<tr>
<td>30 Days</td>
<td>5.0</td>
</tr>
</tbody>
</table>

### Enzymes breakdown grease molecules into fatty acids. Over time, if the enzymes are doing their job breaking down the grease, the pH level will drop. Testing with Britenz-It shows a significant pH value drop in pH, confirming performance.

### Cost Effective, Accurate Dilution Control

Use the wall-mount Britenz-It Dilution Control Dispenser with the 2.5 gallon sealed container to ensure accurate, cost-effective in use cleaning solution. Dispense at 6 gpm to quickly fill buckets.

Dispensing Kit: HIL22300 - 1 Dispenser, Tubing, Supply Hose, Rack for 2.5 gallon container. For No. HIL22302 Dispenser Only: HIL22301

### Simple Application

1. SWEEP
2. APPLY
3. BRUSH
4. SQUEEGEE

### Britenz-It™ with floorbiotics technology

Tackle greasy floors with an everyday, no-rinse floor cleaner fortified with grease-eliminating enzymes.

### Save Energy

Cold water application saves energy from not having to use hot water.

### Conserve Water

No rinse can save thousands of gallons per year.

### Garbage containers, cigarette urns, and anywhere foul odors are a problem.
At Hillyard, we’re looking to the power of nature for safe and reliable solutions. In doing so, we’ve found that naturally occurring, non-pathogenic bacteria can help provide effective, yet environmentally-responsible, alternatives that perform a variety of cleaning tasks. From common applications such as odor control in restrooms, to specialized procedures such as grease and drain trap maintenance, bacterial-based products are an ideal choice.

Safe bacteria produce and release enzymes that have a specific structure and function. They break down soil molecules and require oxygen and moisture. Working like a lock and key, specific enzymes are released by specific enzymes to very specific soil molecules.

The enzymes break down the soil molecule.

Working like a lock and key, very specific enzymes are released to very specific soil molecules.

These awesome little cleaners multiply and can continue to digest soil and odors from surfaces for hours and days, as long as soil and moisture are present. The level of moisture can be as little as the humidity indoors (35-45%) or in the soil.

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