Ultra Bio-Logics Inc., is a global supplier of natural microbial products and other ecologically friendly solutions used in a wide array of commercial, industrial, agricultural and residential applications, providing a biological alternative to hazardous chemicals and caustic solvents.

Our most important element is our employees. We have generated a team of professionals that assure unparalleled customer service, dedicated account administration and innovative technology. We recognize and respond to the preferences of each and every customer.

Our specialized team has been successful at developing and servicing unique, natural products, which destroy chemical contaminants. The high quality and variety of our products – liquids, solids and powders – ensures our customers complete confidence and satisfaction. We are focused on making your product the best!

Perhaps the best measure of the team is the loyalty of our clients – those who return again and again confident they will be attended to in every way.
The best projects start with the best people and we are fortunate to have exceptional individuals involved at every stage of development - research, manufacturing, and quality control. We have tailored each to offer state of the art processes in order to consistently bring you quality products. Our technique for isolating and producing new and different organisms has evolved over the years and is second to none. Ultra Bio-Logics Inc, is committed to being the leader in the biological industry and will continue to be on the cutting edge with the latest industry innovations. We work together to maintain a comprehensive understanding of the roles of enzymes and microbes in our processes. Our high-tech Research and Development fosters creativity and innovation. We are dedicated to enhancing research and development aimed at natural degradation processes and ways to accelerate or retard them. Armed with the latest technology, our team of innovators is primed for your challenge. Our extensive years of experience have taught us what works for our clients. Therefore we have developed an innovative and customized manufacturing process to ensure consistent quality products that make sense to our clients economically. We are committed to mastering quality. Our Quality Assurance Lab is equipped with the most modern technology to warrant that our products perform as promised. Our commitment to perfection in fermentation will maintain our position at the forefront of our industry and keep our clients on the cutting edge. Whether your needs are for waste degradation, odor control, agriculture development or cleaners; we will continue to provide you with a competitive advantage.
As a microbial manufacturer, we know that there are two schools of thought regarding bioremediation. One is bio augmentation, the other is bio-stimulation.

Bio-augmentation is the addition of specifically selected pre-grown microorganisms to degrade contaminants. The enhancement of the microbial population present at a site subsequently improves contaminant clean up through ensuring the presence of sufficient quantities of microorganisms in the soil to complete biodegradation and additionally reduces clean up costs and time. Bio-augmentation is particularly effective where no indigenous microorganisms are identified in the soil that are capable of degrading the contaminant(s) in question.

Biostimulation is the addition of nutrient amendments to soil and/or groundwater to stimulate indigenous microorganisms and consequently biodegradation.

Although most of our competitors use only bio-augmentation we have been using both technologies to produce results for our clients. We like to add the known degrading bacteria, site specific, and at the same time, stimulate the existing bacteria; thus, generating and maintaining high bacterial growth rates in any given environment.
Our Bacterial Formulations......

All of our microbes are collected from naturally occurring water and sources throughout the world. We have perfected the art of commercially reproducing them in large quantities.

Potential pathogens to man, animals, or plants are excluded by cultivating our microbes in a proprietary process. The microbes are routinely analyzed by an independent laboratory for dangerous and toxic microorganisms, and certified to be human, animal, and plant pathogen free. Bio-Logics Inc, line of bacterial products are available in both dry and liquid forms and in several concentrations.

Details are provided on the Product Data Sheets.

Bio-Logics Inc., concentrated blends of Bacillus spores have been formulated to fit the needs of many industries, applications and product categories. The Organisms in our biological dry and liquid concentrates comply to: The Canadian - DSL list, and Class 1, non pathogenic, non mutating spore form / spore forming organisms of the bacillus family, in Asia, Australia, Europe, USA and most other countries.

These organisms are naturally occurring, non-genetically modified and are sold without added chemicals. As pure spores, the products provide the greatest flexibility for use and application.
Bacteria and Enzymes working together to digest organic wastes......

The following discussion outlines the biological process. This process is responsible for the digestion of organic waste, no matter where it occurs. With minor variations, this same process digest waste in: Aquaculture, Agriculture, Composting, Livestock, Municipal, and Industrial Wastewater Treatment

**BACTERIAL / ENZYME DIGESTION**
Bacterial digestion is the process of bacteria, consuming organic matter. Enzymes act to break the organic matter into water soluble nutrients, which the bacteria digest. Using complex chemical reactions, the organic waste is metabolized down to water and carbon dioxide (the final metabolic waste products), providing the bacteria with energy for growth and reproduction. It may be simply shown by the following equation:

**AEROBIC DIGESTION**
Organic waste + water ----> **Enzyme** ----> water soluble nutrients + oxygen ----> **Bacteria** ----> water + carbon dioxide

**ANAEROBIC DIGESTION**
Organic waste + Water ----> **Enzyme** ----> Water Soluble Nutrients ----> **Bacteria** ----> Water + Carbon Dioxide

*Organic waste is consumed by the bacteria, used as nutrients by the bacteria, and is no longer present to produce odours, sludge, pollution, or unsightly mess.*
Bacteria can be classified into different types......

- Aerobic types (which require oxygen to live)
- Anaerobic (which can live without oxygen)
- Facultative types can thrive under both aerobic and anaerobic conditions.

For waste digestion, we can identify several beneficial characteristics that we want our chosen bacteria to have. The "good" bacteria that we will choose must:
1. Consume (digest) a wide variety of organic material that are present in wastes.
2. Digest waste quickly and completely, without producing significant odours of noxious gas.
3. Not cause any disease in man or animals - they must be non-pathogenic.
4. Grow and reproduce quickly and readily in the environmental conditions found in waste disposal systems.

Certain bacteria belonging to the Bacillus species have these desirable characteristics. They consume organic waste thousands of times faster than the bacteria that are naturally present in the waste. They grow and reproduce easily, are non-pathogenic, and do not produce foul odours or gas as they digest waste.

These "good" bacteria are cultured (grown by artificial means) on liquid or dry nutrient medium. These cultured bacteria are then freeze dried to put them in a state of suspension. They remain alive, ready to swim, eat, and reproduce as soon as they are activated (rehydrated) and put into the proper environment.

The proper environment needed for rapid growth and reproduction of these good bacteria must have these characteristics:
1. A water medium containing food (organic waste).
2. Dissolved oxygen (for the aerobic types that require it) in sufficient quantities.
3. Proper pH -- not too acid nor too alkaline -- between 6 and 9 on the pH scale.
4. Moderate temperature, between 50 deg °F and 110 deg °F.
Ultra Bio-Logics Inc

Product Line...
BioZyme 8000

BioZyme 8000 is a high potency, bacteria-laden, powdered formulation for use in degrading many types of waste. BioZyme 8000 contains a specially formulated blend of microorganisms, micro/macronutrients, and surface tension suppressants/penetrants, developed for use in bioaugmentation. The safe, naturally occurring bacteria are present in high numbers to handle difficult industrial waste-water organic problems.

**ADVANTAGES**
- Greatly reduces labor time
- Cost effective/Easy to use
- Contains facultative anaerobes
- Enhances BOD/COD removal
- Degrades a wide range of complex organics
- Eliminates malodors at their source
- Contains no chemicals
- Reduces hydrogen sulfide
- Breaks down fat & grease buildup
- Discharge compliance is maintained
- Reduces sludge build-up
- Increases system efficiency
- Changes biomass dynamics

**APPLICATIONS**
- WASTE WATER PLANTS
- SEPTIC SYSTEMS
- ACTIVATED SLUDGE
- GREASE TRAPS
- HOLDING TANKS
- LIFT STATIONS
- STATIC PONDS
- OXIDATION DITCHES
- DRAIN LINES
- SEWAGE LAGOONS
- SEWERS
- SHIP BILGE'S
- COLLECTION SYSTEMS

**DEGRADES**
- Phenols
- Cellulose
- Proteins
- Surfactants
- Soaps
- Fats, Oil, & Grease
- Sludge Volumes
- Starches
- Odor Sources
- BTEX
- Ammonia
- Chemicals
BioZyme 8000 Case Studies

A congested sewage works before treatment

Days after dosing with BioZyme 8000 the effluent began to soften

2 weeks after dosing commenced, the solids have broken down, incoming fats still deposited on surface. Note that the stirrer is still broken.

2 weeks after the first dose the solids have started to break down

7 weeks after dosing with BioZyme 8000 the works begins to operate as it should
BioZyme 8000 Case Studies

Sewage maturation pond after one week of dosing

The organics start to break down after 2 weeks

The maturation pond after 6 weeks

A vast improvement can be seen after 12 weeks
BioZyme 8000 Case Studies

Congested pump station distribution chamber

The same distribution chamber 3 months later after dosing
EcoBlock is a solid, bacterial laden block for use in degrading organic in higher flow systems such as lift stations, wet wells, etc. The safe, natural 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 natural occurring bacteria contained in the block will reduce odor, sludge, fats, oils and grease buildup.

**Advantages**
- Allows for 24 hour continuous treatment of waste, not just periodic dosage.
- Greatly reduces labor time needed for dosage maintenance.
- Reduces hydrogen sulfide and sludge buildup
- Safe and easy to use
- Significantly reduces malodor
- Cost effective and reduces the need for clean-outs
- Breaks down fat and grease buildup and maintains system efficiency
- Eliminates the inconvenience of dosing with other types of treatments daily or weekly
- Eliminates the need for expensive metering pumps.
- Automates waste water maintenance systems

**Degradation Rate (10lb EcoBlock)**

<table>
<thead>
<tr>
<th>Degradation Rate</th>
<th>Days</th>
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<tbody>
<tr>
<td>150 KGD</td>
<td>90+ Days</td>
</tr>
<tr>
<td>250-500 KGD</td>
<td>70-85 Days</td>
</tr>
<tr>
<td>500K-1MGD</td>
<td>60-75 Days</td>
</tr>
<tr>
<td>1-1.5 MGD</td>
<td>55-65 Days</td>
</tr>
<tr>
<td>1.5-2 MGD</td>
<td>35-55 Days</td>
</tr>
</tbody>
</table>

**EcoBlock** Gives round the clock waste degradation treatment with a simple, easy to use system. Simply suspend the block into the treatment area, hanging the block just away from the higher flow areas. The block will dissolve over a 30-90 day as the wastewater flow washes over it. Higher flow rates will result in faster degradation of the block.

**Sizes:**

<table>
<thead>
<tr>
<th>Size</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>2 LB</td>
<td>5 LB</td>
</tr>
</tbody>
</table>
8000 Compost is a high potency, bacteria, fungi and synergistic anaerobes which are for use in degrading many types of compost waste. 8000 Compost attacks the raw materials in a compost pile and converts it into stable, odorless humus. Because of the diversity of the microorganisms and enzyme systems, this product is excellent for accelerated composting degradation. The safe, naturally occurring bacteria and enzyme systems are present in high numbers to handle difficult composting problems which reduces odors and stabilizes/reduces organic compost.

**APPLICATIONS**

SLUDGE COMPOSTING  PILE COMPOSTING  SHEET MULCHING

**Sludge Compost:**
Start-up dosage: Sprinkle one pound of 8000 Compost on each 500 pounds of material to be treated. Aerate or turn compost pile. Adjust moisture content so that the mixed materials feel moist and springy, but does not remain in a compact ball when squeezed. Continue dosage with 1 pound per 2000 lb of material to be treated every 7-14 days.

**Pile Composting:**
Start-up dosage: Make a slurry of one pound of 8000 Compost and water for every 500 pounds of compost. For fast composting, turn the pile every other day for a week to ten days.

**Sheet Mulching:**
Mix the mulch in the soil lightly and add one pound of 8000 Compost in water for each 500 pounds of mulch. Sprinkle evenly over the soil and allow it to stand for several weeks before planting.

**ADVANTAGES**

• Eliminates malodors at their source
• Enhances COD/BOD removal
• Cost effective/Easy to use
• Increases settling
• Environmental friendly
• Changes biomass dynamics
• Contains facultative anaerobes
• Composting time is greatly enhanced
Farming today with larger herds on limited land area requires manure to be spread daily or held in storage until disposal. Lagoons, pits, or slurry stores are typically emptied once or twice a year. The major problems associated with storing liquid manure are solids buildup and odors. Solids buildup leads to the formation of a surface crust, which reduces aeration and slows the digestion of the manure. This makes it extremely difficult to pump, which increases cost and slows down the process of emptying the storage unit.

Bio-MD is a high potency, formulated proprietary blend of Microorganisms, micro/macronutrients, and surface tension suppressants/penetrants, for use in organic digestion of animal waste. Because of its diversity of microorganisms and enzyme systems, this product is excellent for accelerating animal waste degradation. The safe naturally occurring bacteria and enzyme systems are present in high counts to handle difficult animal waste degradation problems.

**Advantages**
- Contains facultative anaerobes
- Enhances COD/BOD removal
- Eliminates malodors at their source by stopping the formation of ammonia
- Changes biomass
- Reduces sludge buildup
- Degrades high concentrations of waste and reduces bulk weight of the litter
- Eliminates need for harsh, corrosive chemicals

**Function**
Protein digesting bacteria, starch digesting bacteria/enzymes, cellulose digesting bacteria/enzymes, detergent digesting bacteria, fat and oil (animal/vegetable) digesting bacteria/enzymes.
The control of livestock odours is a more demanding task than dealing with animal odours in a normal domestic situation. The amount of waste products produced and the frequency and ongoing production of wastes can present a greater odour problem. BioZyme 5000 effectively controls odours in livestock production facilities such as poultry sheds, feedlots, piggeries, stables and larger scale cat and dog facilities.

BioZyme 5000 is a liquid concentrate of specially selected multi-cultured bacterial strain concentrate. The safe, naturally occurring bacteria are present in high numbers to handle difficult industrial waste water organic problems.

**Benefits:**
- Environmentally compliant biodegradable formulation.
- For effective biological odor control and manure recycling
- Stimulates Bio-Fermentation of Wastes
- Reduces sludge build-up
- Prevents Solidification and Compaction of Animal Manures in Liquid Holding Systems
- Conserves and Prevents Nutrient and Ammonia losses in Manures which Maximizes their Potential Agricultural Value

**Function:**
Contains selectively chosen safe Bacillus strains:
* Protein digesting bacteria
* Starch digesting bacteria
* Cellulose digesting bacteria
* Fat, oil and grease digesting bacteria.
The natural biodegradation process relies upon live microorganisms (bacteria, fungus, algae, molds and yeast) to enzymatically seek out organic waste as a source of "food" and energy and to chemically convert these wastes into new cell mass and non-toxic by-products. Like all living organisms, microbes require certain key nutrients for growth and development.

ENVIROPLEX has been designed as a non-bacterial herbal (food grade) formula to assist bio-augmentation for the treatment of animal wastes. Application of EnviroPlex to animal wastes or wastewater promotes normal reproduction of the microorganisms, as evidenced by dramatic population increases in treated wastes, and more complete digestion of the unwanted organic wastes and effective odor control especially when used in conjunction with BioZyme-5000 or Bio-MD (Manure Degrader) biological products.

Benefits:
- Provide vital nutrients for proper microbial cell growth
- Optimize Waste Water treatment and ex-situ/in-situ Biotreatment Project Performance
- Accelerate Biodegradation rates in previously nutrient deficient systems
- It will increase carbon content so as to increase C/N ratio.
- It will bio-activate animal waste substrates before bio-augmentation with a bacterial formula and work as a catalyst.
- The herbal formula alone is neither pH or temperature dependant during winter months, when temperature goes down below 6 C or 47 F.
- Causes urease inhibition thus reducing ammonia levels in the airbiant atmosphere of livestock operations


**BIOZYME 6000 For Petrochemical Use**

BioZyme 6000 contains several types of microorganisms which can degrade aliphatic and Polynuclear Aromatic Hydrocarbon chemicals. BioZyme 6000 contains Micro flora that survives on hydrocarbon waste substances allowing it to utilize it as a source of carbon. Being extremely resistant to toxic effects of the chemical pollutant fraction and are able to multiply and metabolize in the presence of certain heavy metals. These safe, nonpathogenic microbes produce a broad spectrum of enzyme systems. Because of the diversity of the microorganisms and proprietary biological enzyme systems, this product is excellent for all types of **aliphatic & aromatic hydrocarbon degradation**.

**ADVANTAGES**
- Greatly reduces labor time
- Enhances BOD/COD removal
- Reduces hydrogen sulfide & sludge buildup
- Changes biomass dynamics
- Cost effective/Easy to use
- Degrades a wide range of organics
- Increases system efficiency
- Contains facultative anaerobes to work with or without oxygen
- Reduces corrosion due to sulfates
- Discharge compliance is maintained

**APPLICATIONS**
- SEWER MAINS * SUMP PUMPS* SLUDGE TANKS* CLARIFIERS
- BIO SLURRY'S * PARTS WASHER* LIFT STATIONS* IN SITU REMEDIATION
- DIGESTERS* BIO-FARMING* SOIL REMEDIATION* LATERALS* BIOSTIMULATION

**DEGRADES (Partial Listing)**
- Dichloroethylenes, Toluene, Dinitrotoluene, Crude Oils, Heptachlor, Phenols
- Dichloroethylenes, Naphthalene, Hydrocarbons, Nitrophenols, Benzene, Vinyl Chloride, Halomethanes
- Gasoline, Diesel Fuel
Petroleum Hydrocarbon Site Decontamination with PC-6000

SITE HISTORIES
Petroleum Hydrocarbon Site: A former #6 fuel oil underground storage tank existed at a Central California winery, located in a desert climate. The fuel oil was used in the boiler operation at the winery. Over time, the fuel oil leaked through the wooden storage tank. Approximately 6,000 cubic yards of contaminated soil were impacted. The soil was excavated, removed and spread out on an adjacent 4-acre field. Twelve treatment cells were marked and constructed, each containing 500 cubic yards of soil one foot deep.

After treatment cell construction, soil sampling and chemical analysis was conducted to determine the initial petroleum-hydrocarbon concentration, pH, and moisture content.

MATERIALS & METHODS
Petroleum Hydrocarbon Site: Soil samples were collected and analyzed using standard methods and State of California certified laboratories. Petroleum hydrocarbon concentrations were determined using EPA Methods 418.1 and 8015M (diesel standard). Moisture contents and pH were determined using Methods D2216-92 and 9045, respectively. Toxicity Characteristic Leaching Procedure (TCLP) analyses were determined using State of California Leaking Underground Fuel Tank Field Manual methods.

Waste Treatment products consisting of bio enhancement liquid nutrients, vitamins, minerals and other compounds and selected, naturally occurring hydrocarbon digesting microorganisms were added to a 4,000 gallon water truck and evenly applied to the treatment cells. This procedure was repeated on a monthly basis during three summer months. Mechanical disking of the cells was conducted to provide soil mixing and aeration. Water was added to maintain reasonable moisture content in the cells.

RESULTS & DISCUSSION
Petroleum Hydrocarbon Site: The contaminated soil consisted primarily of sandy loam. Initial petroleum hydrocarbon concentrations in the cells ranged from 2,260 to 4,680 mg/kg or parts per million (ppm) with an average of 3,200mg/kg (ppm). Initial moisture content and pH were 9.3% and 8.0, respectively.

After 1 month of treatment and prior to the second scheduled treatment, soil sampling and chemical analysis was conducted. The petroleum hydrocarbon concentration in the cells ranged from 940 to 2,600 mg/kg with an average of 1,820 mg/kg, or a 43% reduction.

Additional treatments, soil sampling, and chemical analysis indicated steady reduction in the total petroleum hydrocarbon (TPH) concentration. After 11 months the average TPH concentration was reduced to approximately 125 ppm. The target level for closure was 100 ppm.

When breaking down long-chain petroleum hydrocarbons using bioremediation, problems with recalcitrant organics can occur. We encountered interference with the infrared method (418.1) for determining the TPH concentrations. This method is non-specific for petroleum hydrocarbons since it measures the absorbance of the carbon-hydrogen stretch. Any compound containing carbon-hydrogen bonds, such as fatty acids and other break down products, will be included in the 418.1 analysis. To overcome this challenge, the gas chromatography-flame ionization detector (GC-FID) method (8015M) was used with diesel fuel as the standard. This gave better resolution since peak heights could be directly viewed and measured.

Using the GC-FID method, the analyses indicated a broad hump of unresolved substances at the end of the diesel range. This generally occurred at a carbon chain length of 25 or greater. These residues appeared to be stable, non-reactive, non-water soluble and non-biodegradable. Since the final TPH concentrations measured were slightly higher than the target level for closure, the question arose as to whether the residual substances remaining represented an environmentally acceptable endpoint. In order to answer this question, the leachability potential of the residual soil material was evaluated. Toxicity Characteristic Leaching Procedure (TCLP) extractions and analyses were completed to simulate the addition of winery wastewater to the residual soils.

The TCLP results indicated that 0.8 to 1.7% of the TPH as Diesel present in the soil had the potential to leach out by using aggressive extraction methods. These results agree favorably with the extensive research indicated in the Gas Research Institute report. Effective bioremediation can reduce hydrocarbon concentrations to levels where they no longer pose a threat to human health or the environment. Based on these findings, the regulatory agencies granted closure of the site.
Algae survive, grow and reproduce by feeding off of the nutrients – nitrogen potassium and phosphorous– in the water. There are a variety of algae that differ in make-up and size. Unmonitored growth of these species can degrade water quality – low oxygen levels and sunlight unable to penetrate the algae scum on the surface. This poses threats to other organisms in the water like fish, plants and other aquatic life. In addition, algae growth makes it increasingly difficult for treatment plants to meet effluent permit limits.

Introduce **Clear Pond Extreme** into the pond, lagoon, lake, etc. to prevent these periods of excessive algae growth. **Clear Pond Extreme** uses bio-augmentation, a non-chemical and natural method - to remove the nutrients that are vital to algae growth. The microbes that are introduced ingest carbon, phosphorous, potassium and nitrogen at an accelerated rate, which limits the nutrients available for algae to consume. This control by competitive inhibition increases water clarity, reduces sludge and promotes overall better health for the aquatic environment.

**APPLICATIONS**
Waste Water Plants* Holding Tanks* Reactors & Contractors* Waste Pumps* Oxidation Ditches* Lift Stations* Activated Sludge* Lagoons

**ADVANTAGES**
Create a healthy pond environment with this safe and 100% natural bacteria blend. It will reduce noxious odors, ammonia levels and organic sludge. It improves water clarity, dissolved oxygen level and fish growth. This product is harmless to fish, plants and wildlife.

**TARGET COMPOUNDS**
• Waste Digestants
• Cellulose
• Sludge Volume
• Nutrients Required For Algae Growth.
CLEAR POND EXTREME CASE STUDY

TREATMENT LABOUR DAY SEPT 07 2007

15 DAYS AFTER TREATMENT

AFTER 30 DAYS
THANKSGIVING OCT 09 2007
AQUA CULTURE is the rapid growth of fish by artificially feeding heavily stocked fish systems. As a result of this increased feeding, metabolic activity of the fish is increased, thus increasing the levels of organic wastes and toxic compounds. Algae, bacteria and other microorganisms begin to grow. As a result, the ponds natural ecosystem cannot be maintained. Proper balances cannot be maintained and organic wastes build up to toxic levels (such as ammonia and nitrites). Therefore, massive blooms of algae grow. The dominant type of algae that is prevalent is blue-green algae. This is the major cause of off-flavors in fish. A supplement is needed to restore the ecosystem to a proper balance.

ULTRA BIOZYME A.C. is added to aqua culture systems to augment the natural process of waste removal. This improves water quality by providing a more diverse microbial population. The specially selected strains of bacteria in BIOZYME A.C. break down waste to remove nutrients from the water. Treatment of your aqua culture system with ULTRA BIOZYME A.C., when water quality is poor or nutrient concentrations are high, allows you to operate your system at capacity. Every successive treatment with ULTRA BIOZYME A.C. decreases the concentration of toxic nutrients and improves the balance of nutrients and microorganisms in your system. Isolated treatments can improve water quality temporarily. A program of successive treatments will consistently improve water quality.
BIOZYME AC BENEFITS SAVES YOU MONEY

<table>
<thead>
<tr>
<th>USAGE</th>
<th>PERFORMANCE</th>
<th>BENEFITS</th>
<th>SAVINGS ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. High nutrient build up</td>
<td>Decreases the nutrient build-up.</td>
<td>Stabilizes oxygen levels.</td>
<td>Less chance of fish loss due to oxygen depletion.</td>
</tr>
<tr>
<td>3. Ammonia nitrate build up</td>
<td>Reduces these nitrogen nutrients</td>
<td>Wards off toxic ammonia levels and brown blood disease. Controls algae bloom.</td>
<td>Less stress on fish fewer deaths.</td>
</tr>
<tr>
<td>5. Off-Flavor</td>
<td>Reduces nutrients- Algae, bacteria and compounds which cause off-flavor</td>
<td>Gets fish “on-flavor”-ready to sell.</td>
<td>Helps market fish on schedule. Improves cash flow.</td>
</tr>
</tbody>
</table>

Application:
Every situation is different, please consult with your local representative.
EcoBrick is a solid, bacterial laden brick for use in degrading organic waste in grease traps. The safe, natural occurring bacteria are present in high numbers to handle difficult organic problems. The unique brick will gradually dissolve over a 35-120 day period, which allows for continuous treatment and degradation of waste. The natural occurring bacteria contained in the brick will reduce odor, sludge, fats, oils and grease buildup.

**Advantages**

- Allows for 24 hour continuous treatment of waste, not just periodic dosage.
- Greatly reduces labor time needed for dosage maintenance.
- Reduces sludge buildup
- Safe and easy to use
- Significantly reduces malodor
- Cost effective and reduces the need for pump-outs
- Breaks down fat and grease buildup and maintains system efficiency
- Eliminates the inconvenience of dosing with other types of treatments daily or weekly
- Eliminates the need for expensive metering pumps.
- Automates grease trap maintenance systems

**Dosage Rate Guidelines**

<table>
<thead>
<tr>
<th>Brick Size</th>
<th>Trap Capacity</th>
<th>Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Pound Brick</td>
<td>15-25 Gal. Trap</td>
<td>35-60 Days</td>
</tr>
<tr>
<td>5 Pound Brick</td>
<td>26-150 Gal. Trap</td>
<td>45-75 Days</td>
</tr>
<tr>
<td>10 Pound Brick</td>
<td>151-400 Gal. Trap</td>
<td>60-90 Days</td>
</tr>
<tr>
<td>30 Pound Brick</td>
<td>401+ Gal. Trap</td>
<td>100-120 Days</td>
</tr>
</tbody>
</table>

EcoBrick gives round the clock waste degradation treatment with a simple, easy to use system. Simply suspend the brick into the treatment area, hanging the brick ½ the way into the grease trap. The brick will dissolve over a 35-120 day depending on size and flow rates in a typical grease trap providing optimal efficiency and treatment.
STCD DRY

STCD Dry is a Natural Biological Septic Tank and Cesspool Cleaner Waste Digester and Deodorizer, using a safe and effective beneficial microorganism and fast acting enzyme blend.

Septic tanks must be maintained just as you maintain your car, your furnace, your home. It’s a must in today’s world of soaps, detergents and harsh chemicals.

The failure to maintain your septic tank will lead to headaches - big expensive headaches.

Unmaintained in time, sludge deposits block off septic lines. Odours develop and sludge backs up into the toilets or leaks into lawn areas. Pumping only helps for a short time before problems return.

Use ¼ of a cup every month, STCD Dry helps keep troubles away. Just flush STCD down the toilet. In an efficiently operating system sludge breaks down in a rapid "Sludging out process". STCD helps accelerate liquefaction, waste digestion and “SYSTEM FLOW THROUGH”.

Benefits
- Scientifically selected bacteria that provide outstanding performance in your septic tank that thrives in an aerobic (with oxygen) and anaerobic (without oxygen) environment!
- Environmentally friendly biological treatment safe to use around humans and animals.
- Rapidly digests all types of organic waste in septic tanks and clogged drain fields which results in the prevention of putrid odours, backups, wet spots, poor flushing drains and toilets.
- Prevent costly septic system repairs.
**STCD** drain line and grease trap cleaner

STCD drain line and grease trap cleaner will incrementally break down organic build up in restaurant kitchen drain lines, grease trap systems and control odour in an environmentally sound manner.

STCD drain line and grease trap cleaner contains powerful waste digesting enzymes, essential nutrients and selected strains of bacteria. The complex blend breaks down the organic material into water-soluble nutrients. The selected bacteria digest the released nutrients, multiply and produce more enzymes to continue cleaning the entire restaurant drain lines and grease trap systems under aerobic and anaerobic conditions.

**Advantages:**
- Reduces offensive odour in drain line and grease traps environment.
- Liquefies organic build-up in slow running drain line.
- Prevents drain and sewer line blockage.
- Ensures free flowing drain line.
- Reduces grease trap pumping-out.
- Restores natural beneficial bacteria in drain line and grease traps.
- Extremely economical to use.
- Accelerates and speed up the liquefying process.
- No residue, environmental friendly and safer to use than harsh chemicals.

**Restaurant kitchen drain lines application:**
Dissolve ¼ of cup of STCD formula with 20 liter of lukewarm water, sufficient for 20-30 meter of main drain lines; spread the solution into every sinks, branches, P trap and U trap and all around the kitchen area, repeat daily until drain runs free. STCD should be used during the longest period of non-use, generally at close of the day.

**Grease trap application:**
Initial treatment of any grease trap systems should be four times the volume of STCD required for normal preventative maintenance. As a general rule, normal preventative maintenance is 100 ppm of STCD per day, determined by the total weight of the wastewater in the grease trap system.
Bio-Fizz Tabs are biologically active effervescent tablets. The effervescent tablet quickly dissolves in water releasing, and mixing, billions of powerful bacillus bacteria spores, ready to become active and effective.

Bio-Fizz Tabs contain bacteria spores that remain dormant in the tablet. Once dissolved in water, the spores will begin germination. If the water has nutrients, and food, the bacteria spores will germinate and begin an active growth phase, multiplying rapidly and consuming the available food and nutrients.

Bio-Fizz Tabs are used for effective bi-weekly treatment. Easy-to-use effervescent tablets offer a complete solution to all the common problems associated with septic tanks and drain lines. Biologically reactivates and maintains the system to reduce accumulations.

**Applications:**
- Septic Tank Maintenance
- Toilet Maintenance in Ships and Boats
- RV Toilet (holding tank) Maintenance in Recreational Vehicles
- Drain Line Maintenance for homes
- Trash Chute and Dumpster Maintenance

**Usage rates:**
On a bi-weekly basis, drop 2 tablets into the toilet bowl and permit it to dissolve and then flush. Use one tablet for each 1,000 gallons of tank capacity. Treatment with regular doses is highly recommended to keep the septic system trouble free.

For drain treatment, dissolve one tablet into 1 gallon of water and pour the solution into all drain lines. Repeat treatment monthly.

**Advantages:**
- Degrade fecal material, cellulose, paper and all protein and grease or fat waste.
- Reactivate and maintain the microbial flora destroyed by the discharge of chemical products, cleaners and detergents.
- Effectively suppresses foul smelling odors.
**Portable Treat** is a concentrated and specialized blend of microorganisms specifically selected and adapted to treat human waste during temporary storage. Formulated for use in all types of portable toilets and holding tanks, **Portable Treat** will keep solid waste liquefied and control offensive odors. These naturally occurring bacterial strains are nonpathogenic and unlike conventional chemical toilet products, are completely harmless to the environment. Through proper application and continued use, **Portable Treat** will improve the digestion efficiency of waste solids and limit the production of noxious gases by increasing the level of natural bacterial activity.

Because people expect to see and smell a colored and scented treatment product, **Portable Treat** also contains an aqua-blue dye plus a Fresh fragrance. In addition to being pleasing to the eye, **Portable Treat** will also be pleasant to the nose, as the fragrance will help to mask immediate odors while the bacteria will prevent longer term odors from forming.

**Advantages of Use**

- Safe — Non-formaldehyde formula. Mix only with water
- Convenient - No measuring, no waste, no mess.
- Enhances user experience by controlling offensive odors
- Replaces toxic deodorant chemicals with natural microbial product
- Provides bacterial blend plus aqua-blue dye & fresh fragrance
- Reduces frequency of emptying by digesting waste solids and toilet paper
- Liquefies waste solids to make pumping or dumping easier and more complete
**Application Instructions**

Apply by dropping water soluble packets into empty toilet or holding tank. Fill holding tank or toilet with fresh water charge amount. Packets will quickly dissolve in water and release the enclosed bacteria, blue dye and fragrance. After dumping or pumping tank, repeat the above process when charging with fresh water. If tank is not emptied after 3 or 4 days additional product must be added to treat the influx of new organic waste. Use odor as an indicator and add additional packets every couple of days or as necessary. Best results are obtained by applying regularly and in advance of heavy use periods. *Do not use in conjunction with any chemical deodorant or treatment product.*

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**Specifications**

<table>
<thead>
<tr>
<th>Description</th>
<th>Water soluble pouches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaging</td>
<td>Pail of 300-28g pouches</td>
</tr>
<tr>
<td>Stability</td>
<td>Max. loss of 1 log/yr</td>
</tr>
<tr>
<td>pH</td>
<td>6.0 – 8.5</td>
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<tr>
<td>Bulk Density</td>
<td>0.5 – 0.61 g/cm³</td>
</tr>
<tr>
<td>Moisture Content</td>
<td>15%</td>
</tr>
<tr>
<td>Bacteria Count</td>
<td>1.5 billion per gram</td>
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</tbody>
</table>
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