Ultra Bio-Logics Inc.

Industrial Municipal Food Plant Petroleum Soil and Water Treatment Biological Remediation

Using a Natural Biological Approach

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BioZyme-6000 PC has taken more than 5 years to develop in order to have a safe and effective product for today's and tomorrow's needs. With a viable bacteria content in the billions of organisms per gram.

BioZyme-6000 PC is formulated and engineered to degrade a great variety of troublesome pollutants. The unique strains of microflora can degrade and detoxify a large array of substituted and unsubstituted aliphatic and aromatic hydrocarbons.

BioZyme-6000 PC has been shown to be more resistant to heavy metal content than some other products. Growth on petrochemical compounds and the compounds concurrent biodegradation occur even when up to 100 mg/L of cadmium, arsenic, copper, iron, lead, tin, zinc, cobalt, selenium, or silver are present.

BioZyme-6000 PC can also utilize nitrogenous compounds of various types during the course of remedial detoxification of the carbonaceous compounds.

BioZyme-6000 PC provides a level of bioaugmentation efficiency that is superb in quality, broad in applicability, and unique in stability and reliability.

BioZyme-6000 PC bacteria are able to sustain growth over a wide range of temperatures from a high of 45°C to temperatures approaching as low as 4°C on a great variety of carbon sources.

BioZyme-6000 PC is comprised of immobilized bacteria with special nutrients and stabilizers in a dry granular form. The product is stable for up to 12 months as long as it is kept cool and unexposed to excess moisture and freezing conditions.

BioZyme-600-PC is also available in water dispersable powder form which is suitable for fresh and salt water pond type applications.
BioZyme-6000 PC  Substrates Attacked

**Primary Mode of Action (Substrates Utilized Best):** Phenol; benzene; toluene; other aromatic hydrocarbons with hydroxylated, nitrogenated groups; octane; ethane; other short-chained alkyl hydrocarbons.

**Secondary Action (Substrates also attacked):** Salicylic acid, biphenyl; xylol; phenoxy alcohols; mineral oils; lubricating oils, kerosene; surfactants; gasoline; pentachlorophenol. Intermediate length alkyl hydrocarbons and alcohols, fatty acids, benzolic acid, citrus oils.

**General:** Complex dyes, lignins, starchy complexes, carbohydrate by-product waste, wood pulp waste, structural board and pressboard waste, distillery waste, wood preservative waste, cresols, creosote, naphthalene, ethylene glycol, and heterogeneous aromatic hydrocarbon waste. protein complex wastes, oleaginous waxes or fats containing wastes, wastes with fats & oils and dissolved aromatics, hydrocarbons linked with aminos, glycerol esters.

**Treating fuel oils, intermediate levels of** moderate molecular weight hydrocarbon contamination in soil or aqueous environment, heavier machine oil, heavier grade lubricating oil.

**General Industrial Applications:** Petrochemical plants, refineries, chemical formulators, pharmaceutical processors, pulp and paper mills, wood processing and treatment plants, metal machining and fabrication plants, distilleries, textiles and food processing.

**Example:** (2411) Soil contaminated with fuel oil to 4 to 7 inch depth in a 1.4 acre surface area. The soil was first pre-treated with a natural wetting agent (Our Enviroplex Liquid) during tilling with conventional farming equipment, prior to each application of BioZyme-6000 PC, at a rate of 3 liters Enviroplex with 100 liters local pond water. There were also 3 applications of a conventional NPK 19-19-19 fertilizer at a rate of 100 lbs/as a bio-food source.

**Application:** BioZyme-6000 PC was applied in a water slurry solution 8 times at a rate of 30 lbs per application during an 8 week period and the area was remediated to comply with the local environmental standards (Much to their skeptical surprise). (The area was tilled on a weekly basis during application)

**Activity Count:** 1.5 billion/per/gram/min.

**Status:** The Organisms in our BioZyme-6000 biological dry concentrate comply to: The Canadian Environmental Ministry - DSL list, and Class 1, non pathogenic, non mutating spore form / spore forming organisms, In Asia, Australia, Europe, USA and most other countries.

**DIRECTIONS FOR USE:** Every waste treatment situation is different. Therefore, please contact your local representatives for further information.

**PACKAGING:** 10 and 20 kg lined fiber drums
Natural Biological Soil Remediation Agent

**Detox-O-Zyme:** Helps to detoxify soils contaminated with complex synthetic chemicals, such as cumulative herbicide and pesticide residuals.

The primary reason for the toxic cumulative contamination effects is due in large part to the destruction of the natural biological recycling systems in the soil.

**Detox-O-Zyme:** Helps to revive and re-populate the beneficial indigenous biological recycling populations in the soil which will break down these chemical toxins to simple carbon dioxide and water.

**Detox-O-Zyme also increases the availability** of non organic nutrients such as phosphates and trace elements which are made available for turf and root growth by metabolic processes.

**SUGGESTED USE METHODS**

A- Mix ½ to 1 kg or 1 to 2 pounds of Detox-O-Zyme per/ton of fine limestone and apply in the regular manner. Water the product into the soil in order to penetrate the contaminated surfaces. 1 to 3 applications may be needed at 3 to 7 day intervals.

B- Detox-O-Zyme may be used at a rate of 1 to 2 applications per season. Soil contaminants analysis test should be taken prior to application and 10 to 60 days after application.

The application of Detox-O-Zyme should be followed by watering in order to activate and establish the beneficial detoxifying organisms in Detox-O-Zyme.

Results are normally observed within 5 to 10 days from application.

**Status:** The Organisms in Detox-O-Zyme dry blend formula comply to: The Canadian Environmental Ministry - DSL list, and Class 1, non pathogenic, non mutating spore form / spore forming organisms, In Asia, Australia, Europe, USA and most other countries.

Contact your local specialist for your specific needs or at our E-mail below or your local authorized distributor

**Available in:** 10 and 20 kg lined re-usable kegs.
Ultra BioZyme-8000

Biological Solution Food Plant and Municipal Pollution

A: Ultra BioZyme-8000 is a Bio-Enzymatic non pathogenic live bacteria/enzyme blend developed for the rapid liquefaction and digestion of food plant and municipal wastes.

B: Ultra BioZyme-8000 provides rapid hydrolyzation of fats, oils and greases to fatty acids which is followed by biological absorption and digestion, that prevents and even eliminates grease deposits and odors.

C: Ultra BioZyme-8000 may be used in effluent lines grease traps, drain lines, holding ponds, lift stations, sewage injection pits and wet wells.

D: Ultra BioZyme-8000 contains a synergistic blend of highly active fat splitting enzymes, that are non pathogenic, non corrosive, safe to handle and store and are certified salmonella free.

Ultra BioZyme-8000 Characteristics

Appearance: Tan colored free flowing powder
Odor: Cereal like pleasant
Effective pH range 5.0 to 9.0
Bacterial count: 1.7 Billion per g min.

Effective use range:  
1 kg to 20 Million liters min.  
1 kg to 1 Million liters max.

Status: The Organisms in our BioZyme-8000 biological dry concentrate comply to: The Canadian Environmental Ministry - DSL list and Class 1 in the USA Asia, Australia, Europe, and most other countries - as non pathogenic, non mutating spore form / spore forming organisms.
BioZyme-8000 Illustration Chart - Sedimental Solids

The following is an example application in sugar mill waste treatment  Case 1292

PACKAGING: 10 and 20kg lined fiber drums

Contact your local specialist for your specific needs or at our E-mail below for your local authorized distributor.
A living cell has a relatively narrow range of conditions that can be considered optimum for its growth and reproduction. It survival range is much more broad but it does not function at an optimal level under conditions of extreme temperatures, low moisture, too acidic or alkaline surroundings, a high population density of competing organisms, high concentrations of dissolved salts, or in fluctuations of temperature, moisture, pH, etc...

A healthy cell has a membrane that can expend energy to maintain a high concentration gradient of nutrients and salts between the cell and the nutrient matrix. This process is known as active transport. When the membrane has been damaged by one or more of the previously listed adverse conditions, the active transport process diminishes. The nutrients in the cell are then lost and general cell functions, including metabolism and reproduction, are impaired.

Biochemical research has shown that a damaged membrane will reform and begin to function properly in the presence of very low concentrations of Enviroplex Extract. Introduction of appropriate plant compounds can thus broaden the range of optimum conditions for living cells.

Application of Enviroplex concentrate to wastes or wastewater promotes the rapid reproduction of the microorganisms, as evidenced by dramatic population increases in treated wastes, and more complete digestion of the unwanted organic wastes.

This results in significantly reducing ammonia and H2S gases and other toxic chemical reactions, which in turn results in effectively controlling waste odors.

Enviroplex is effective regardless of temperature or pH conditions of the liquid or solid waste to which it may be applied. It works in both fresh and salt water and in highly acidic or alkali environments.

General: Enviroplex may be applied to any kind of organic and non organic wastes to accelerate decomposition and control odors with or without other biological products.

* Controls Odors - Ammonia and H2S Gases.
* Cleans and Deodorizes Biologically
* Stimulates Decomposition of Organic wastes.
* Prevents Solidification and Compaction in holding tanks.
* Food Grade - Non Pathogenic - Non Mutating

Use Rates: Mix with 3 to 10 parts of water and spray or pour on the affected area 1 or 2 times per week or as needed. Simply follow your nose.

For a Cleaner Healthier Environment

Web Site: http://www.ublcop.com