

SEBS
Specific Enzyme Bacteria System
for Treatment of Contaminated Water



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Registered Distributor for Enviro Science Technolgies, LLC.

Enviro Science Technologies (EST) Profile

- EST is a specialty chemical company.
- EST chemist and staff have more than 20 years of experience.
- EST has developed more than 300 specialty products.
- EST is a leading company in a Biological Enzyme based product, for sewage and waste treatment industries.
- EST products are shipped nationally. We will custom make, match, and do free product testing for our customers.
- EST trained chemist and chemical engineers will do a turn key job of cleaning up waste lagoons, ponds, and lakes. We will consult on the job site as we develop our customized product for specific problems.
- EST manufactures specialty products for various industries, institutions and many wastewater treatment plants.
- EST's first priority is to keep our environment clean.
- One of EST products, *Specific Enzyme Bacterial Systems (SEBS)* is made to eliminate bad odor from poultry, pig farms, and fish processing factories. Also protects the environment as it relates to water control, wastewater and sewage treatment plants. **SEBS** product does not contain any hazardous chemicals. It is a 100% microbial product that cleans naturally.
- **SEBS** product comes in two components,
 1. **SEBS** liquid
 2. **SEBS** Activator (powder base)
- **Both products need to be mixed prior to applications.**

Safe SEBS – 100% Alive Micro Organism

- ▣ **SEBS** incorporate specific technologies to solve numerous industrial, commercial and institutional problems which result from organic waste. **SEBS** hi tech culture will not harm humans, animals, fish or plants. **SEBS** 100% alive bacteria will reduce organic waste, eliminates odors, reduce nitrite, nitrate phosphate and hydrogen sulfide, without creating any by-products. **SEBS** products are used today in a variety of waste treatment applications.
SEBS Bacterial systems are highly dedicated to the development and manufacture of high quality environmentally friendly and responsible biotechnological products.
- ▣ **WHY SEBS ?** The important thing to remember about biological products is that you are dealing with live organisms. Each generation becomes less and less effective. As the bacteria eat & reproduce in these non-laboratory conditions, the products effectiveness decreases rapidly. **By the time the product is purchased for use, the buyer has no guarantee of any effectiveness.** E.S.T. utilizes a special process called “**micro encapsulation**”. After growing bacteria in laboratory certified conditions to insure first generation potency, our process creates a protective barrier around each cell . The bacteria are neither dead or alive but rather in a state of suspended animation or “dormancy”. When the **activator “protein and folic acid balance food” is introduced, the plasmid DNA is activated and only after that the activation process begins.** This process provides a shelf life of a minimum of one year or more.

SEBS

Product Applications

- ▣ **Septic Systems Treatment**
- ▣ **Livestock Lagoons, Manure Pit Liquefaction**
- ▣ **Pet and Livestock Odor Control**
- ▣ **Ponds, Rivers, Lakes**
- ▣ **Golf Courses, Swimming Pools**
- ▣ **Waste Water Plants**
- ▣ **Restaurants, Food Processing Plant**
- ▣ **Drain and Grease Trap Maintenance**
- ▣ **Fish Hatcheries, Commercial Farms & Ornamental Ponds**
- ▣ **Industrial Manufacturing Plants**
- ▣ **RV , Boat Portable Toilets, Porta Poti**
- ▣ **Chemical Toilet Treatment**
- ▣ **Municipal Waste Processing Plant & Sewage Systems**

SEBS

Applications Benefits

- ▣ *Digesting Oil, Hydrocarbons & Grease*
 - Grease/Oil degradation
 - Fats & Oil digesting
 - Reduce Sludge, Instant odor control
 - Detergent degradation
 - Sanitary waste degradation
 - Restore marine life
 - Improve soil conditions for aquatic plants
 - Eliminates organic fouling
 - Digest phenol and protein
 - Improves water condition naturally for irrigation

 - **HOW SEBS WORKS:** Microbial cleaning process is achieved with a two part system consisting of a liquid bacterial strain and the super activator. They instantly come in to contact with the liquid bacterial strain. They are awoken from the dormant state and begin to feed. The activator provides nutrients to insure that SEBS culture begin their process of multiplication in the shortest amount of time

SEBS Performance

Date: June 1996

Subject: Grease Pond (3rd pond)

Location: Cottonwood Alabama

Pond Profile: Grease

Collected from: Poultry

Processing Plant

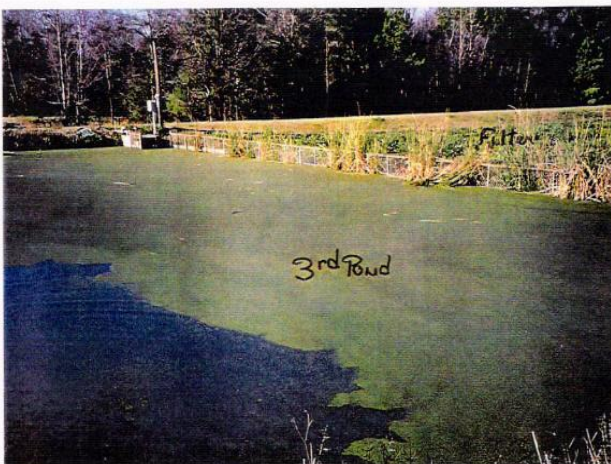
Grease Profile: Contained Poultry fat and bad odor. Hard Crust around the edges and soft crust in the middle of the pond.



Pipe was installed to pump SEBS into pond and for aeration.



Pond was filled with water and first time SEBS was introduced.



After 8 1/2 weeks floating grease was completely cleaned and 80% of the bottom solid were reduced by our SEBS product.



SEBS Competitive Narrative

SEBS LIQUID CULTURE vs POWDER ENZYME

SEBS cultures are liquid form. Mix with water instantly for fast acting active and multiplies more rapidly.

Fast reaction time to bio degrade solid waste more efficiently.

SEBS products are liquid and does contain any filler material. Opens up clogged drains and pipes faster. SEBS activates 100% of all culture.

Has instant odor control. Provide tolerance to a wider range of environmental conditions (34 to 140 degrees).

Reduces Nitrates, Nitrites, Phosphates, Hydrogen Sulfide and Sulfur Dioxide.

SEBS culture makes enzymes to digest waste.

Contains over 24 specialty selected strains types

Custom made packaging for easy handling for consumers and industrial applications.

SEBS is very cost effective

Does not mix with water properly therefore creating a very low potency and multiplies very slowly.

Reaction time is 25% less than liquid SEBS products.

s made with filler material that can clog pipes & drains. Uses five times more enzyme compared to SEBS culture.

Has very slow odor control property or none. Needs warm water temperature to activate work. (70 to 140 degrees).

Does not reduce or remove Nitrates Nitrites, Phosphates and Hydrocarbons.

Enzyme base product.

Contain a maximum of 3 to 4 different of strains.

Powder packaging are moisture sensitive, bulky, hard to handle and store.

Powder Enzyme cost is 4 times the SEBS Enzyme cost.

- By using enzyme only products, you simply are not finishing the job. Enzyme only products usually only pass the problem down the line to cause substantially larger problems later. By combining the proper bacteria strains with the appropriate enzymes, the **SEBS** formulas create an immediate reaction. This digestion enables our bacteria strains to “adhere” to food source, where they continue to eat until the food source is gone. It is important to remember that the “**food source**” is usually the problem. Simple science shows that **SEBS** are far superior to any “competitor” products. Our customers worldwide call **SEBS** “THE BEST and only Enzyme product THEY WILL EVER BUY”

SEBS References

- **DISNEY WORLD - ORLANDO FL**
- **DISNEYLAND - ANAHEIM CA**
- **CITY OF DOTHAN - AL**
- **CITY OF J UAREZ – MX**
- **HO CHI MIN CITY – VIETNAM**
- **CITY OF GREELEY - CO**
- **CITY OF COTTONWOOD – AL**
- **POULTY PROCESSING PLANT
TYSON'S CHICKEN
(Pond Cleaned) COTTONWOOD - AL**
- **FARMLAND INDUSTRIES – PARKSVILLE MO**

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