Specific Enzyme/ Bacteria System (SEBS)
guaranteed bio-augmentation/remediation process

Every "sewer treatment" facility, from a Porta Potty or cesspool to the most advanced municipal membrane filter processes, is an engineering endeavor to create as conducive an atmosphere as possible to help the natural bacterial degradation processes work. Most systems depend on available Bacteria delivered to the treatment system from the human body.

SEBS, when introduced per label direction, at the Boat or RV head, Portable Toilet, Septic Tank, Grease Trap, Lift Station, Processing Plant, Ponds or Agricultural feed lot holding facilities will eliminate odor, remove Sulphur compounds, reduce pollutants, nutrients and sludge by 70% or more and reduce maintenance time and costs in the individual facility, plant, lift stations and delivery system. Once your system is cleaned, balanced and operation properly, the cost of the process will be paid for many times over by the savings you will enjoy – we guarantee it!

Bacteria are generally grouped by the way they "breathe"- Anaerobic bacteria use little oxygen in processing their food (best in closed tanks and pipe), Aerobic bacteria need more oxygen to process their food and work better in an oxygenated atmosphere (in leach field or sewer facility aeration chamber) and Facultative bacteria can work in either atmosphere. Each single cell Bacterium has a favorite "diet", so a variety of Bacteria are required to process all the pollutants encountered in any sewage processing system.

The Bacteria in our bodies, which we couldn't live without, are primarily Anaerobic. Through their adaptation to living in our bodies, they have evolved into highly specialized Sessile critters, and have done most of what work they are capable of in processing our waste before they enter the sewer system. Many of them are destroyed by the pollutants we flush down our sewer system every day- soaps, cleansers, bleach, medicines, grease etc., so their numbers are limited and not adapted to coping with these various other pollutants. Included in our bodies' Bacteria are species which, through their processes, create sulphur compounds (that obnoxious "rotten egg" smell) that, when acidified, damage the sewer system infrastructure as well as create bad odors.

Bacteria begin their evolution as planktonic ("free swimming") creatures. They, like most creatures, like to "attach" themselves to something, and each other. As they attach themselves to each other, or some surface, they are referred to as Sessile ("non-swimming") and develop a biofilm ("slime") by producing EPS ("exocellular polysaccharide substances") to bind themselves together. Once in their biofilm and "colonized" they begin to assume specific "duties", reproduce at a much slower rate and generally become far less effective than their planktonic predecessors.

This aging process generally occurs over approximately 28 days, so regular infusion of new planktonic species is necessary to maintain an efficient sewer system.

No matter how hard we try to create the perfect atmosphere for the bacteria to do their job, if we do not have the proper mix of species of Bacteria, in sufficient quantities and strength to mitigate all the pollutants, the battle will be lost. The Bacteria introduced into any septic processing system from our bodies is too docile and limited in breadth of species to do the job.

We might compare Bacteria's "Planktonic" stage (1st and 2nd generation – 1 to 10 days) to Attila the Hun's hoards, and their "Sessile" stage (3rd to 4th generation – 14 to 18 days) to the Roman Empire near its collapse.

EcoSeal and the Specific Enzyme/ Bacteria System (SEBS) process, is your Hun's hoard against the most difficult to destroy pollutants in your system.

It is even more important in Grease Trap operation, as the Bacteria content from kitchen activities is negligible, and indeed, most of the other pollutants associated with kitchen and wear washing activities that flush through grease traps are deadly to Bacteria.
EcoSeal will analyze your requirements, and blend the necessary breadth of species in sufficient quantities of natural, non-pathogenic aerobic, anaerobic and facultative bacteria into a compound of symbiotic species needed to address your specific problems, and introduce these 1st generation planktonic bacteria, in the proper dosage, to remedy and maintain your system.

The photos below demonstrate the ability of our broad spectrum, highly concentrated SEBS process:

A retention pond at a chicken processing plant in Alabama solid with fat, grease and processing by-products. EcoSeal SEBS was applied over an 8 ½ week period. The surface was cleared and bottom sludge reduced by 80%. A maintenance dosage continues to consume residue.

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