

TECHNICAL BULLETIN

Biological Treatment of Waste: what it is and how it works

Plumbing waste systems can operate more efficiently and cost-effectively when enhanced with bacteria/enzyme waste treatment products from Cape Cod Biochemical Company.

Regular bio-enhancement of single or multiple dwelling on-site residential waste treatment facilities (septic tank systems) and commercial/institutional grease waste systems will:

- Reduce plumbing maintenance costs
- Eliminate organic buildup in drains and pipes
- Eliminate odors associated with buildup
- Eliminate manual cleaning of floor sinks and interior grease traps
- Extend the grease trap pumping interval

An overview:

Bacteria and enzymes are among the building blocks of life. Both are found in every aspect of nature, and many enzymes are in use in most homes on a daily basis. Enzymes are used in baking, in cheeses and yogurt, as meat and fish tenderizers, and in many other areas of food preparation. Wind and beer fermentation is the result of enzymatic action, as is the manufacture of fruit juices. Many laundry products now contain enzymes to enhance cleaning. New uses for enzymes are constantly being developed and sought in industry, health, nutrition, medicine, genetic engineering, and many other areas that affect daily life.

Bacteria/enzyme solutions are often called “bio-catalytic” compounds. These compounds contain naturally occurring enzyme-producing bacteria families. These families are quite specific in action: different bacteria/enzyme solutions work best on different kinds of waste. Very basically, enzymes are chemical catalysts that break down waste matters from complex into simple substrates. Once broken down by enzymes waste can then be digested by bacteria. It is this digestion that biologically changes the physical composition of waste, and converts solid matter into a watery liquid.

Bacteria alone cannot digest complex material and are reliant on enzymes to accomplish that task, and enzymes alone cannot accomplish breakdown of waste. For that reason, nature provided bacteria with the ability to produce their own enzymes for the complete bio-degradation process. As bacteria eat and digest they grow and reproduce, constantly redoubling the bacteria population and creating more enzymes. The population will respond to the demands of that waste present. And when the waste is completely gone the bacteria eliminate themselves.

Applications

Products from Cape Cod Biochemical Company contain micro-organisms type specific to the particular waste being treated. First introduced in municipal waste treatment facilities in 1955, Cape Cod's products have been laboratory-enhanced to digest the grease, fats, oils, carbohydrates, starches, proteins, cellulose, and detergents that commonly build up in residential and commercial/institutional plumbing, septic tanks, and grease waste systems, eliminating backups and odors. When used according to directions they are completely safe to store and use without restriction, special handling or equipment. They contain no caustics acids, or EPA Priority Pollutants. They are authorized by the USDA for use in their poultry, meat and egg program.

- **ccls** Septic Tank & Cesspool Treatment: liquid product with maintenance of residential septic tank systems
- **DrainMaster** Concentrated Drain Cleaner: Liquid product with buildup removal and automatic commercial/institutional grease waste treatment
- **BIO-REM E-D** Grease Trap Cleaner: granular product for manual treatment of grease waste and restoration of failed and failing drainage facilities.
- **BIO-Sock** for commercial floor sinks and interior grease traps

For more information on these products, including data sheets and application guides and pricing contact your distributor of products from Cape Cod Biochemical Company.