

ADOBE LOOS & WORMS

Organic Waste & Wastewater Treatment Systems

Liquid Enzymes, General Composting Accelerator

Enzymes rapidly increase the breakdown process and eliminate odours, increasing the efficiency and reliability of the composting toilet system.






What Are Enzymes?

An enzyme is a substance that acts as a catalyst and initiator in chemical reactions. In most cases an enzyme is a chain of molecules composed of amino acids. Amino acids are the components, which are used to build proteins.

How Enzymes Work:

Enzymes work as catalysts in the chemical reactions, which change molecules into components that micro-organisms can use. A catalyst is a substance that starts the chemical reaction and speeds the process without being used in the reaction. In a chemical reaction, different substances are broken down into their base components and then changed into new substances. An example is the photosynthetic process in plants. Carbon dioxide and water are broken down and with energy from sunlight, converted to oxygen and glucose and some excess water. In this reaction the steps are pretty straightforward. The molecules are converted from one to another. Most of the chemical reactions that occur in micro-organisms take more than one step and can require extra components in the middle that aren't actually used to make the products. Enzymes provide these extra components. Instead of waiting until there are enough free components to start using the excess material, the reaction can continue converting the molecules in the shortest possible time. As enzymes aren't used by the reaction they remain to be used again and again.

Why use Enzymes?

-  Enzymes break down the molecules which cause odour quickly. They change the molecular structure of the host environment and use the natural biodegradable process to break down odours
-  By speeding up the natural breakdown process, contaminants are neutralized.
-  They are safe to use, non-toxic, non-allergenic and non-flammable.
-  Adding enzymes directly, speeds up the natural process of breakdown by providing more catalyst.
-  Enzymes are effective over a wide range of pH levels' and temperatures. As it is a liquid is can stimulate the bacteria directly and there is no residue left.

Technical Information

The Optimal operating temperature is between 15C and 40C. At temperatures over 48C Enzymes deactivate allowing the thermophilic bacteria to take over the composting and breakdown process. The Optimal pH is 6.5 although Enzymes can tolerate a range of 3 to 8.5. Oxygen is required to provide faster and more efficient results. The Ventilation Fan in your Composting Toilet provides enough oxygen to assist the enzymes.

Application:

Dilute with water at a ratio of about 20:1.

Use the solution in a spray bottle to be sprayed down the pedestal about 3 - 4 times after each use.

Use it for cleaning the pedestal. Liquid Enzymes can also be used to help your garden compost heap.

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