

## *What organic contaminants does it breakdown?*

Because our products are broad spectrum formulations (our formulations contain 1000's of substrate specific enzymes and co-enzymes) "if its organic we will break it down"; Everything from proteins, starches vegetable fats and oils, cellulose, vegetable gums, pectin and similar carbohydrates; which are the basic building blocks of all organics; are broken down to their basic elements (mostly carbon dioxide and water) leaving no by products or residues. Even complex organics (organics which contain multiple organic elements) like fecal, skunk and vomit are easily broken down due to the fact that our broad spectrum formulas address all organic components, not just a select few. A partial list of common stains and odors Healthy Habitat deals with are: fecal, uric acid, ammonia, blood, sweat, undigested food stuffs both plant and animal, dead skin but to be honest the list is endless.

## How does it break them down?

Enzymes are "biological catalysts." "Biological" means the substance in question is produced or is derived from some living organism (organics). "Catalyst" denotes a substance that has the ability to increase the rate of a chemical reaction, and is not changed or destroyed by the chemical reaction that it accelerates.

Generally speaking, catalysts are specific in nature as to the type of reaction they can catalyze. Enzymes, as a subclass of catalysts, are very specific in nature. Each enzyme can act to catalyze only very select chemical reactions and only with very select substances. An enzyme has been described as a "key" which can "unlock" complex compounds. An enzyme, as the key, must have a certain structure or multi-dimensional shape that matches a specific section of the "substrate" (a substrate is the compound or substance which undergoes the change). Once these two components come together, certain chemical bonds within the substrate molecule change much as a lock is released, and just like the key in this illustration, the enzyme is free to execute its duty once again.

Most organics will breakdown naturally, but the breakdown proceeds at such a slow rate, that the progress would seem to be imperceptible. In conjunction with the introduction of a series of enzymes, these reactions do proceed quite rapidly. Enzymes as biological catalysts allow reactions that proceed relatively quickly at the normal environmental temperatures (temperatures up to 100oF (38oC)). Enzymes often increase the rate of a chemical reaction between 10 and 20 million times what the speed of reaction would be when left uncatalyzed. That's why our broad spectrum approach is the only way to completely guarantee a truly safe and effective approach to stain and odor removal.

### And in what way is the environment made healthier?

By using a pure natural broad-spectrum enzyme formula which is additive free (no chemical agents (alcohols, soaps, etc.), redundant additives (orange oils, emulsifiers) needless bacteria, perfumes/scents or caustic sanitizers and oxidizers) we completely and safely eliminates the source of the problem (any organic build up re; ammonia, fecal, etc.), leaving no by-products to attract dirt and bacteria leaving the habitat free of harmful organic contaminants or caustic chemical residues.

### Is there any concern that the EPA could remove this product from the market?

The simple answers is no ; we make no claims that we are a sanitizer; so we do not fall under their jurisdiction Additionally, enzymes have been reviewed many times by the EPA and as they are a naturally occurring non-toxic substance they feel that they do not have to be regulated.