



ENZYME RESEARCH GROUP

Enzymes: The Difference Between Plant and Animal

Enzymes are the energy of life. All supplemental enzymes, with very rare exception, can be beneficial to one degree or another. If you must choose one, which would it be? When considering the benefits of animal (or glandular, usually represented by USP or milligrams) versus plant enzymes, the following may be helpful.

Animal enzymes, or pancreatic enzymes, are from the pancreas of a slaughter house animal. Ask yourself "What was the condition of this animal and its organs before he was slaughtered." How does anyone know?

Pancreatic enzymes tend to claim high unit amounts, such as 31,500 units of protease. However, this amount, or unit measurement, does not indicate the actual enzyme activity level. 31,500 units of protease will yield a level of only 356 units of digestive activity. Compare this to hundreds of thousands of actual protease activity in our plant derived enzymes. Enzyme effectiveness depends on activity not weight. Remember to compare "apples to apples".

Don't forget about the importance of the pH balance. Pancreatin requires an 8.0 pH to be of use in the system. The human body reaches this 8.0 pH in the small intestine after major digestion has already taken place. Plant enzymes have the capability to work between 3 and 9 pH. They are blended as neutral, alkaline and acidic to cover all concerns in our formulations. This means they work throughout the entire digestive tract and in the blood. For instance, one English study showed a small dose of acid-stable lipase from a plant source was more effective than a dosage 25 times larger of conventional pancreatin in the treatment of mal-absorption and mal-nutrition due to pancreatic enzyme deficiency.

FCC codes are based on the Food Chemical Codex. These are the codes accepted by the FDA. Not all manufacturers use FCC units, as you will immediately notice. Some of their measurements are just made up from their company names. The appropriate codes are as follows:

Protease	HUT	Hemoglobin Unit Tyrosine base
Lipase	FCCFIP	Lipase Units
Amylase	DU	Alpha-amylase Dextrinizing Units
Cellulase	CU	Cellulase Unit
Invertase	INVU	Invertase Activity Unit
Lactase	ALU	Lactase Unit
Maltase	DP°	Degrees of Diastatic Power

Recognize how often a less effective enzyme is used. Sad to say, commercial grade enzymes (the least expensive) may be used rather than the pharmaceutical grades, which are purer and stronger. They are also usually measured in "mg".

Knowledge of this information may be helpful when deciding which enzyme supplement will work best for you. Remember, not all enzyme products are alike or even equal in their capabilities. You will notice, however, three basic facts. The price will normally be very high in comparison (compare price per active unit, not per capsule), the strength is not adequate, or they are based on animal enzymes (USP).