PROTOCOL FOR LIFE BALANCE®

Dietary Supplement Information
for Physicians with Naturokinetics®
PRODUCT CODE: P2958
CATEGORY: DIGESTIVE SUPPORT*

BioCor^{e}® Enhanced Enzymes™

TECHNICAL SUMMARY

Digestive enzymes are essential to the body's absorption and full use of food.* The capacity of the body to make enzymes diminishes with age in some individuals, and therefore, the efficiency of digestion may decline. BioCor^{e}® Enhanced Enzymes™ offers a blend of fungal-derived enzymes that will aid in the digestion of most foods, including beans and cruciferous vegetables.* The vegetarian enzymes in BioCor^{e}® Enhanced Enzymes™ have been tested in a controlled laboratory study using a digestive model for their activity throughout the entire pH range of the digestive system and have been shown not to be degraded by acid in the stomach.*

Enzymatic activity: This product has the following enzymatic activity per serving (2 capsules):

Amylase 7,000 DU

Protease 42,000 HUT

Protease 8,000 PC

Protease 4 AP

Protease 100 SAPU

Glucoamylase 10 AGU

Invertase 800 SU

Diastase 3,000 DPº

Lipase 1,000 FIP

Alpha-galactosidase 300 GalU

DU, HUT, PC, AP, SAPU, AGU, SU, DPº, FIP, and GalU are enzymatic activity units allowing to determine enzymes' potencies. For this product we use official FCC (food chemical codex) enzymatic activity units to measure the potency of each enzyme present in this blend. When choosing an enzymatic blend, it is important to not only consider the potency of each enzyme as described by the unit value but also the enzymatic diversity of a blend. Indeed, this product features four different proteases that will each break down proteins in a different manner and at a different pH, allowing for a broader range of enzymatic activity.*

Allergen and Additive Disclosure: Not manufactured with wheat, soy, milk, egg, fish, shellfish, or tree nut ingredients. Produced in a GMP facility that processes other ingredients containing these allergens.

Delivery Form: Vegetable capsules

ROLE AS NUTRIENT/FUNCTION

This product features four different proteases to ensure the highest degree of protein breakdown with a mixture of acid, neutral, and alkaline proteases that work through a wide range of pH values, allowing them to be functional throughout the digestive tract.*

For carbohydrate digestion support, this product features several enzymes.* Amylase breaks down starches to liberate polysaccharides and maltose.* Glucoamylase allows for glucose liberation using polysaccharides as substrate.* Diastase works with amylase and glucoamylase to break down carbohydrates, and invertase breaks down sucrose into glucose and fructose.* Finally, alpha-galactosidase assists in breaking down certain polysaccharides and carbohydrates generally found in beans and legumes.*

Lipase assists in the breakdown of fats.*

Supplement Facts

Serving Size 2 Veg Capsules Servings Per Container 45

Amount Per Serving	
BioCore Optimum™	200 mg*
Amylase (from *Aspergillus oryzae*)	7,000 DU*
Protease (from *Aspergillus oryzae*)	42,000 HUT*
Protease (from *Aspergillus oryzae*)	8,000 PC*
Protease (from *Aspergillus oryzae*)	4 AP*
Protease (from *Aspergillus niger*)	100 SAPU*
Glucoamylase (from *Aspergillus niger*)	10 AGU*
Invertase (from *Saccharomyces cerevisiae*)	800 SU*
Diastase (from *Aspergillus oryzae*)	3,000 DPº*
Lipase (from *Candida rugosa*, *Aspergillus niger* and *Rhizopus oryzae*)	1,000 FIP*
Alpha-galactosidase (from *A. niger*) (300 GalU)	30 mg*

* Daily Value not established.

Other ingredients: Rice Bran, Cellulose (capsule), Rice Maltodextrin and Silica.

- **Maximum Food Utilization***
- **Also Helps Bean and Cabbage Digestion***

SUGGESTED USAGE: Take 1 to 2 capsules before each meal, or as directed by your healthcare practitioner.

NATUROKINETICS®

Liberation: This product, in its vegetable capsule, disintegrates in water within 60 minutes using a USP disintegration test.

Absorption: This product is meant to function within the digestive tract without systemic absorption.

Metabolism: Enzymes are proteins; they are therefore broken down in the digestive tract into peptides and amino acids.

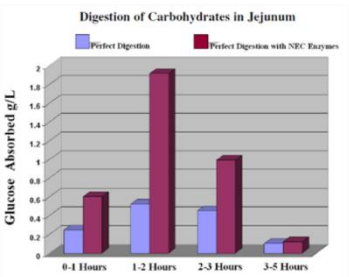
Elimination: Enzymes that are not hydrolyzed within the digestive tract would be eliminated in feces.

CLINICAL VALIDATION

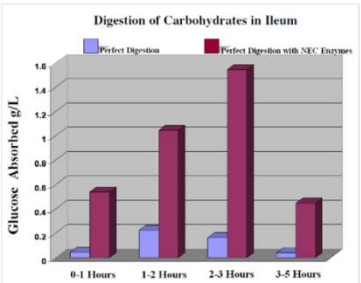
BioCor^{e}® blend of digestive enzymes was tested using a computer controlled dynamic gastrointestinal model (TIM) that simulates the conditions of the human stomach and small intestine and allows the gathering of data regarding the digestion and absorption of nutrients in a controlled environment.

The results for the digestion of carbohydrates and proteins under normal simulated digestive conditions are illustrated in graphs 1-4.

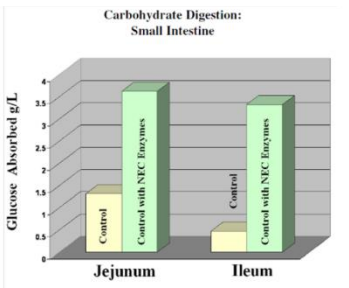
This experiment suggests that a blend of BioCore[e]® digestive enzymes significantly improves the digestibility and bioaccessibilty of proteins and carbohydrates in the lumen of the small intestine under normal simulated digestive conditions.*



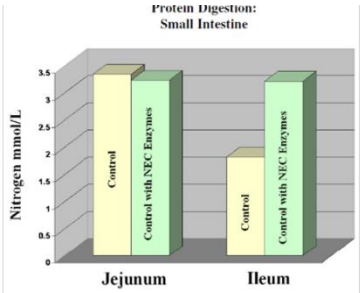
Graph 1: Shows a substantial increase in the level of digestion of carbohydrates in the lumen of the jejunum over a 5 hour span with NEC fungal digestive enzyme blend even under perfect digestive conditions.



Graph 2: Shows a substantial increase in the level of digestion of carbohydrates in the lumen of the Ileum over a 5 hour span with NEC fungal digestive enzyme blend even under perfect digestive conditions.



Graph 3: The total digestion of carbohydrates is increased nearly 4 fold in the small intestine with NEC fungal digestive enzymes even under perfect conditions.



Graph 4: The digestion of proteins is slightly increased in the ileum and remains essentially the same in the jejunum with NEC fungal digestive enzymes under perfect conditions.

SAFETY INFORMATION

Tolerability: Exogenous enzymes from fungal sources are Generally Recognized as Safe (GRAS). Oral supplementation with digestive enzymes is typically well tolerated. Occasional mild gastrointestinal complaints may occur when taking digestive enzymes. Individuals with diabetes should monitor their blood sugar closely when initiating supplementation, as adding this product to the diet may affect the way complex carbohydrates are metabolized and free simple sugars are liberated from food.

Contraindications: Patients with known allergies to the microorganisms used for the production of BioCor[e]® Optimum and to digestive enzymes should avoid taking this product or initiate the supplementation under medical supervision.

INTERACTIONS

Drug Interactions: Proteolytic enzymes may theoretically potentiate the effects of some anticoagulant medications. Carbohydrases may increase the intestinal availability of glucose and thus, might impair the efficacy of hypoglycemic agents.

Supplement Interactions: Proteolytic enzymes may theoretically potentiate the effects of some supplements known to interact with blood coagulation, including angelica, clove, danshen, garlic, ginger, ginkgo, fish oil, turmeric, vitamin E, and willow.

Interaction with Lab Tests: None known.

STORAGE

Store in cool, dry, and dark environment in original sealed container. Protect from extended exposure to moisture, heat, and direct sunlight.