



# Nordic Flora Digestive Enzymes



## Biologically Meaningful Digestive Support\*

### Clinical Applications

- Aids in digestion of carbohydrates, proteins, and fats\*
- Works across a wide pH range—from the acidic stomach to the more pH-neutral intestinal tract
- Vegetarian pancreatin analog mimics functions of animal-derived pancreatic enzymes
- Certified vegetarian and non-GMO

Nordic Flora Digestive Enzymes supports digestive system function and optimizes nutrient availability by helping the body break down carbohydrates, proteins, and fats into smaller, digestible molecules.\* Certified vegetarian and derived entirely from microbial and plant sources, this formula works across the diverse pH environments of the acidic stomach and more pH-neutral intestine to provide biologically meaningful digestive support without altering normal human digestion.\*

### Overview

Food provides us with the nutrients we need to fuel life-sustaining functions within the body. However, in order to obtain the nutritional benefits of foods, we must first be able to digest it into the basic building blocks of our cells. Enzymes naturally residing in the mouth, stomach, pancreas, and small intestine aid in this process by deconstructing the macromolecules that compose our food into component parts, such that proteins are broken down into amino acids, carbohydrates into monosaccharides, and fats into fatty acids. Only as small molecules can our food pass through the intestinal wall and into the bloodstream to be used for nourishment and energy.

A wide range of lifestyle, environment, and health-related variables can influence the production, release, and activity of digestive enzymes. Given the critical role these enzymes play in maintaining structures and functions within the human body, supplementing with digestive enzymes can provide important health benefits for those needing digestive support at certain times or during certain circumstances.

### Broad Spectrum of Enzymes Simulates Normal Human Digestion\*

Each of the major nutrient groups—fats, carbohydrates, and proteins—have specific enzymes that assist in their

breakdown. Having insufficient enzymes to break down any one group can result in a wide range of digestive issues. Thus, supplementing with a broad spectrum of digestive enzymes that can assist in the breakdown of all classes of food can be helpful for optimal digestion.\* Nordic Flora Digestive Enzymes is formulated with a select group of high-quality digestive enzymes—including papaya enzyme, vegetarian pancreatin analog, and lactase—whose actions mimic those of enzymes normally present in the human digestive system.

Although most digestive enzyme supplements on the market contain pancreatic enzymes from bovine and porcine sources, Nordic Flora Digestive Enzymes uses a vegetarian pancreatic blend that mimics the enzymatic processes of animal-derived enzymes without introducing unnecessary alterations to normal human digestion. By using a broad spectrum of plant and microbial enzymes simulating normal human digestive functions, this formula helps to fill functional gaps that may be present without adding foreign enzymatic factors.

### Microbe-Sourced Enzymes Provide Efficient Digestive Support\*

An additional benefit to using enzymes derived from plant and microbial sources is that they can maintain their activity across a wider range of pH and temperature—from the acidic stomach to the more pH-neutral intestine. Because these microbe-sourced enzymes can provide similar activity across a wider range of chemical environments, lower doses can be taken to obtain effective digestive support relative to animal-based enzymes.<sup>1</sup> Numerous studies have investigated and validated the safety and therapeutic efficacy of microbial-based enzymes.<sup>1-7</sup>

**NORDIC NATURALS®**

## Featured Enzymes: Source and Function

DIGESTIVE ENZYME	DERIVED FROM	AIDS IN THE DIGESTION OF*	RELATIONSHIP TO HUMAN DIGESTION
PANCREATIN	Bacteria, Yeast	Proteins, Fats, Carbohydrates	Mimics mixed pancreatic enzyme secretion (small intestine)
AMYLASE	Bacteria	Carbohydrates	Mimics pancreatic amylase (small intestine)
PROTEASE	Bacteria	Proteins	Partially mimics pepsin (stomach) and other endopeptidases (small intestine)
LIPASE	Yeast	Fats	Mimics pancreatic lipase (small intestine)
PAPAIN	Plant	Proteins	Partially mimics pepsin (stomach)
AMYLASE	Fungus	Carbohydrates	Mimics salivary amylase (mouth)
GLUCOAMYLASE	Fungus	Carbohydrates	Mimics α-Dextrinase (small intestine)
PEPTIDASE	Fungus	Proteins	Mimics pancreatic elastase (small intestine)
LACTASE	Fungus	Carbohydrates (dairy/lactose)	Mimics lactase (small intestine)
ACID PROTEASE	Fungus	Proteins	Mimics pepsin (stomach)
INVERTASE	Yeast	Carbohydrates	Mimics sucrase (small intestine)
DIASTASE	Fungus	Carbohydrates	Mimics salivary carbohydrase (mouth)

## Formulated by Units of Activity

Enzymes are most accurately measured by their biological activity, which indicates how much of a given molecule (carbohydrates, proteins, and lipids) an enzyme is capable of breaking down under specific conditions (time, temperature, pH). The specific amount of each enzyme included in Nordic Flora Digestive Enzymes is listed in the Supplement Facts, along with its respective unit of activity measurement. These units are defined by the United States Pharmacopeia (USP) and listed in its Food Chemicals Codex (FCC).

Unlike comparable digestive products designed to restore deficiencies that are likely not present in patients, Nordic Flora Digestive Enzymes is designed to provide clean, targeted support for normal human digestion.\* By providing a full spectrum of high-quality, vegetarian enzymes that work across a wide pH range, Digestive Enzymes helps the body break down carbohydrates, proteins, and fats to optimize nutrient availability.\*

## Directions

Take one capsule during each meal (one to three times daily), or as directed by your healthcare professional or pharmacist.

Supplement Facts	
Serving Size: 1 Capsule	Servings Per Container: 45
Amount Per Serving	
Nordic Enzyme Blend	300 mg <sup>†</sup>
Vegetarian Pancreatin Analog	
Amylase ( <i>Bacillus amyloliquefaciens</i> )	31,165 BAU <sup>†</sup>
Protease ( <i>Bacillus subtilis</i> )	87,750 PC <sup>†</sup>
Lipase ( <i>Candida rugosa</i> )	7,800 FIP <sup>†</sup>
Papain ( <i>Carica papaya</i> fruit)	1,000,000 PU <sup>†</sup>
Amylase ( <i>Aspergillus oryzae</i> )	1,875 DU <sup>†</sup>
Glucosylase ( <i>Aspergillus niger</i> )	10 AGU <sup>†</sup>
Peptidase ( <i>Aspergillus oryzae</i> )	50 DPPIV <sup>†</sup>
Lactase ( <i>Aspergillus oryzae</i> )	500 ALU <sup>†</sup>
Acid protease ( <i>Aspergillus niger</i> )	25 SAPU <sup>†</sup>
Invertase ( <i>Saccharomyces cerevisiae</i> )	250 SU <sup>†</sup>
Diastase ( <i>Aspergillus oryzae</i> )	3,750 DP <sup>†</sup>
<sup>†</sup> Daily Value not established.	

**Other Ingredients:** rice maltodextrin, capsule (vegetable cellulose), rice bran.

Contains naturally occurring sulfites. May contain traces of soy, wheat, or milk from materials used during the fermentation process. No artificial colors or flavors.

- Griffin, SM *et al.*, Acid resistant lipase as replacement therapy in chronic pancreatic exocrine insufficiency: a study in dogs. *Gut*, 1989; 30(7):1012-5.
- Roxas, M. The role of enzyme supplementation in digestive disorders. *Altern Med Rev*. 2008;13(4): 307-14.
- Bu, G *et al.*, Milk processing as a tool to reduce cow's milk allergenicity: a mini-review. *Dairy Science & Technology*, 2013; 93(3): 211-223.
- Gayathri, D. and B.S. Rashmi, Development of Celiac Disease; Pathogenesis and Strategies to Control: A Molecular Approach. *Journal of Nutrition & Food Sciences*, 2014;4(6): 1-9.
- Rashmi, B.S. and D. Gayathri, Partial purification, characterization of *Lactobacillus* sp. G5 lipase and their probiotic potential. *International Food Research Journal*, 2014; 21(5):1737-1743.
- Layer, P. and J. Keller, Lipase supplementation therapy: standards, alternatives, and perspectives. *Pancreas*, 2003; 26(1): 1-7.
- Rosado, J.L., *et al.*, Enzyme replacement therapy for primary adult lactase deficiency. Effective reduction of lactose malabsorption and milk intolerance by direct addition of beta-galactosidase to milk at mealtime. *Gastroenterology*. 1984;87(5):1072-82.

# NORDIC NATURALS®

Committed to delivering the world's safest, most effective nutrients essential to health.