



GENESTRA  
BRANDS®



# HMF Digest-zyme

## Advanced digestive and gastrointestinal support formula<sup>†</sup>

- Features fungal amylase, protease and lipase
- Provides 25 billion CFU per daily dose from a combination of four proprietary probiotic strains
- Aids digestion and promotes gastrointestinal health<sup>†</sup>
- Convenient capsule format

HMF Digest-zyme supports overall digestive function with a combination of vegetarian enzymes and proprietary, research-driven probiotics. Each convenient capsule provides fungal amylase, protease and lipase to help break down carbohydrates, proteins and lipids, respectively. Adequate production and activity of digestive enzymes is critical for proper nutrient digestion and absorption, including the absorption of fat-soluble vitamins. HMF Digest-zyme contains microbial-derived enzymes that act like those normally secreted by the body, aiding the digestion of nutrients. Research suggests that microbial enzymes, such as those derived from *Aspergillus oryzae*, are stable and active across a wide pH range, allowing them to function throughout the entire digestive tract. To further support gastrointestinal function, this formula includes clinically studied *Lactobacilli* and *Bifidobacteria* strains to promote colonization in both the small and large intestines. Ideal for vegetarians and vegans, HMF Digest-zyme is an easy way to promote both digestive and gastrointestinal health.<sup>†</sup>

### Supplement Facts

Serving Size 1 Capsule  
Servings per Container 60

	Amount Per Serving	% DV
<b>Probiotic Consortium</b>	12.5 billion CFU	*
<i>Lactobacillus acidophilus</i> (CUL-60 & CUL-21)		
<i>Bifidobacterium animalis</i> subsp. <i>lactis</i> (CUL-34)		
& <i>Bifidobacterium bifidum</i> (CUL-20)		
Alpha-Amylase ( <i>Aspergillus flavus</i> var. <i>oryzae</i> )	4.5 mg (750 FCC DU)	*
Fungal protease ( <i>Aspergillus flavus</i> var. <i>oryzae</i> )	20 mg (20,000 FCC HUT)	*
Triacylglycerol Lipase ( <i>Rhizopus oryzae</i> )	13.3 mg (933 FCC LU)	*

\* Daily Value (DV) not established

Other ingredients: Cellulose, hypromellose, sunflower lecithin, silica

Contains: Soy, wheat

### Recommended Dose

Take 1 capsule 2 times daily with meals or as recommended by your health professional.

**Size**  
60 Vegetarian Capsules

**Product Code**  
10340



Tried, tested and true.

GenestraBrands.com | 1.888.737.6925

© 2019 Genestra Brands®. All rights reserved.

<sup>†</sup>These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

# HMF Digest-zyme

## Scientific Rationale:

The gastrointestinal tract is responsible for the digestion and absorption of nutrients, water and electrolytes.<sup>1</sup> Digestion includes the mechanical breakdown of chewing, churning and mixing, as well as enzymatic breakdown due to secretions from the stomach, pancreas and biliary tract.<sup>1</sup> Once broken down, the end-products of digestion can be absorbed by intestinal epithelia.<sup>1</sup>

Protein digestion begins in the stomach as pepsin and stomach acid break down and denature polypeptides.<sup>2</sup> In the small intestine, protein digestion continues with trypsin and chymotrypsin, two key **proteases** produced by the pancreas.<sup>2</sup> These enzymes hydrolyze polypeptides into amino acids and oligopeptides, which may be further metabolized into amino acids, dipeptides and tripeptides by brush border enzymes.<sup>2</sup> The amino acids, dipeptides and tripeptides produced are then absorbed by the intestinal epithelial cells.<sup>2</sup>

The digestion of lipids begins in the mouth with lingual **lipase**, and continues in the stomach with the addition of gastric lipase.<sup>2</sup> However, pancreatic lipases are responsible for a majority of lipid hydrolysis in the digestive system, helping to convert triglycerides into fatty acids and monoglycerides.<sup>2,3</sup> Once these breakdown products enter the intestinal epithelial cells, they are resynthesized into triglycerides and packaged alongside proteins, phospholipids and cholesterol into chylomicrons.<sup>2</sup> Newly formed chylomicrons exit the epithelial cell, pass through lymphatic vessels and eventually enter the bloodstream via the thoracic duct.<sup>2</sup>

Starch digestion begins in the mouth with salivary **amylase**, although the majority is hydrolyzed in the small intestine with pancreatic amylase.<sup>2</sup> Pancreatic amylase helps break down starch into disaccharides and trisaccharides, such as maltose and maltotriose.<sup>2</sup> These breakdown products are further hydrolyzed into monosaccharides (such as glucose) by brush border enzymes before absorption by the intestinal epithelium.<sup>2,3</sup>

Adequate production and activity of digestive enzymes is needed for the proper breakdown of protein, lipids and carbohydrates.<sup>4</sup> As a result, the absorption of nutrients, including the fat-soluble vitamins A, D, E and K, is also dependent on the digestive function of enzymes.<sup>4</sup> Impaired digestion of nutrients can lead to weight loss or common gastrointestinal complaints, including mild bloating, abdominal discomfort, loose stools and steatorrhea (fatty stools).<sup>5</sup> By increasing the activity of enzymes in the small intestine, enzyme supplementation can help promote proper nutrient digestion and absorption.<sup>4†</sup>

HMF Digest-zyme supports digestive function with a combination of fungal protease, lipase and amylase. These exogenous enzymes act like the digestive enzymes normally secreted by the body, offering support for digestion in the intestines.<sup>4</sup> While many enzyme preparations include enzymes derived from porcine pancreas, this formula offers microbial enzymes derived from the fungi *Aspergillus oryzae* and *Rhizopus oryzae*. As such, it is ideal for vegetarians, vegans, and those with allergies or other dietary restrictions. Additionally, as microbial enzymes reportedly remain stable and active over a wide pH range, they can function across the entire digestive tract.<sup>6†</sup>

To further support gastrointestinal health, HMF Digest-zyme is formulated with proprietary, research-driven **probiotics**. Included in this blend are two strains of *Lactobacilli* and two strains of *Bifidobacteria* to ensure colonization in both the small and large intestines. These proprietary strains were selected based on their high quality, viability, strong epithelial adherence and naturally high tolerance to stomach acid.<sup>7</sup> HMF Probiotics have been evaluated for their effectiveness in clinical trials over the past 15 years and are some of the most studied probiotic cultures in the world.<sup>8-11</sup> Research demonstrates that these strains effectively maximize intestinal colonization to promote the growth of beneficial bacteria and support gastrointestinal comfort.<sup>8,9†</sup>

### REFERENCES

1. Turki, S, Kallel, H. (2011). *New Advances in the Basic and Clinical Gastroenterology*. Croatia: Intech.
2. Goodman, BE. *Adv Physiol Educ*. 2010; 34(2): 44-53.
3. Whitcomb, DC, Lowe, ME. *Dig Dis Sci*. 2007; 52(1): 1-17.
4. Keller, J, Leyer, P. *Gut*. 2005; 54(Suppl VI): vi1-28.
5. Hackert, T, Schütte, K, Malfertheiner, P. *Viszeralmedizin*. 2014; 30(3): 190-7.
6. Rachman, B. *Clin Nutr Insight*. 1997; 5(10): 1-4.

7. Seroyal. Data on file.
8. Plummer, SF, Garaiova, I, Sarvotham, T, Cottrell, SL, Le Scouiller, S, Weaver, MA, Tang, J, Dee, P, Hunter, J. *Int J Antimicrob Agents*. 2005; 26(1): 69-74.
9. Williams, EA, Stimpson, J, Wang, D, Plummer, S, Garaiova, I, Barker, ME, Corfe, BM. *Aliment Pharmacol Ther*. 2009; 29(1): 97-103.
10. Madden, JA, Plummer, SF, Tang, J, Garaiova, I, Plummer, NT, Herbison, M, Hunter, JO, Shimada, T, Cheng, L, Shirakawa, T. *Int Immunopharmacol*. 2005; 5(6): 1091-1097.
11. Plummer, S, Weaver, MA, Harris, JC, Dee, P, Hunter, J. *Int Microbiol*. 2004; 7(1): 59-62.

**Tried, tested and true.**  
**GenestraBrands.com | 1.888.737.6925**



**GENESTRA**  
BRANDS®