

Product Rationale: **DIGEST**



Consider the following review of clinical research results on several important enzymes known for their ability to enhance the digestibility of the various dietary food macromolecule most commonly found in the human diet.

Optimal digestion is dependent on the presence of effective digestive enzymes. It has been established that stable, ingested enzymes work with endogenous enzymes in maximizing the digestive process¹.

FORMULA RATIONALE

Transformation Professional Protocol™ Digest is formulated to provide the specific enzymes needed to hydrolyze dietary food macromolecules, including triglycerides, proteins with diverse amino acid sequences, starches, xylans, cellulose, hemicellulose, lactose, dextrans, and others. The enzyme blends in Digest will enhance the digestibility of the molecules most commonly found in human diets and will ultimately optimize a more complete and balanced procurement of nutrients needed by the body to sustain health and vitality.

TZyme® Protease Blend

This proprietary blend of enzymes consists of alkaline, neutral, and acid proteases. These enzymes are active in a wide range of pH's, ensuring that proper protein digestion will initiate in the stomach. In order to ensure the highest degree of protein hydrolysis, this blend also includes enzymes with a wide range of specificities (i.e., both endo- and exo-peptidase activities).

Lipase

The unique blend of lipolytic enzymes in Digest aids the body in the normal digestion of dietary fats. Incomplete digestion of fats may result in a number of essential fatty acid deficiency conditions that include diarrhea, skin ailments, lack of cell membrane integrity, and a reduction of blood-clotting time. The incomplete digestion of fats can also contribute to the coating of food particles that can interfere with the hydrolysis of other food components such as proteins and carbohydrates.

The action of these vital lipid-digesting enzymes helps to secure the optimum absorption of essential fatty acids. This absorption, in turn, can minimize and prevent the occurrence of essential fatty acid deficiencies and can strengthen the overall health of the body.

TZyme® Polysaccharolytic Blend

This enzyme blend helps to facilitate the digestion of all carbohydrates, since the enzymes in this blend can tolerate the low pH of the gastric juice. It is important to note that no single carbolytic enzyme can adequately hydrolyze the various carbohydrates in human diets. Therefore, the TZyme® polysaccharolytic blend is formulated to ensure optimum polysaccharide digestion.

Amylase catalyzes the complete digestion of starch in the gastrointestinal tract.

Phytase hydrolyzes phytic acids (phytates, or inositol hexaphosphoric acid) that are found in grains, seeds, rhizomes, and other plant-derived foods.

Alpha-galactosidase cleaves off the non-reducing terminal 1-3, 1-4, or 1-6 linked galactose residues in oligosaccharides, such as stachyose and raffinose.

Macerase and **pectinase** break down pectins that are commonly found in fruits and vegetables.

Beta-glucanase helps in the digestion of grains such as barley, malt, rice, and other cereals, liberating vital nutrients as well as reducing digestive stress.

Lactase is for the digestion of lactose (milk sugar) into both glucose and galactose.

Cellulase has been added to this formulation in order to increase the water-binding capacity of the cellulosic fibers in the diet. The binding of water increases stool bulk and decreases bowel transit time. Additionally,

the presence of cellulase will increase the ability of cellulose to remove toxins.

Diastase attacks starch that is cleaving off (primarily disaccharides).

Invertase breaks down sucrose into both glucose and fructose.

Hemicellulase hydrolyzes various complex carbohydrates, such as β -1,4-glucans, α -L-arabinosides, β -D-mannosides, 1,3- β -D-xylans, and other polysaccharides.

OTHER INGREDIENTS

This product is encapsulated in a vegetarian capsule. Digest is dairy, gluten, and soy free. No fillers are used in this product.

COMPONENT BENEFITS

Digest contains highly active enzymes with a broad range of specificities in order to handle all food preferences.

Each one-capsule serving of Digest is formulated to include the following.

TZyme® Protease Blend	67 mg
Protease and Peptidase	55,131 HUT + 11 SAPU
Lipase	24 mg
	7,518 FIP
TZyme® Polysaccharolytic Blend	301 mg
Amylase	20,000 DU
Phytase	42 FTU
Glucoamylase	25 AGU
Alpha-galactosidase	438 Gal U
Macerase	400 CU
Beta-glucanase	25 BGU
Lactase	610 ALU
Pectinase	14 endo-PGU
Cellulase	295 CU
Diastase	168 DP°
Invertase	56 SU
Hemicellulase	28 HCU

Other Ingredients:

 Hypromellose

Water
Calcium Citrate

SUMMARY

Transformation’s Professional Protocol™ Digest is an enzyme supplement designed to help promote availability and absorption of nutrients, health and vitality of cells, and improved overall digestive and immune system health.

CLINICAL APPLICATIONS

- Wellness and prevention
- Inability to digest fat, cholesterol, and protein
- Gall bladder removed
- Cardiovascular disease
- Bloating, indigestion, GERD
- Obesity
- Hormone imbalances
- Conditions that challenge major organ systems
- Pancreatic insufficiency
- All chronic health challenges

RECOMMENDED USAGE

Take 1 capsule of Digest with every meal or snack with at least 8 oz. of liquid or as directed by a health care practitioner. If you have difficulty swallowing capsules, then remove contents from capsule, mix with a small amount of tepid water, and ingest immediately.

INDICATIONS

Impaired Gall Bladder Function

The normal digestion of dietary fats is accomplished by lipases with the assistance of bile, which is produced by the liver and supplied through the gall bladder and whose function is to bring ingested fats into emulsion in order to facilitate the work of the lipases. With its high concentration of lipase, Digest provides the liver and gall bladder with additional assistance. This support can help the body compensate for impaired bile production due to gall bladder stress or due to gall bladder removal.

Malabsorption

The absorption of nutrients from the digestive tract depends upon the degradation of proteins into amino acids and carbohydrates into simple sugars. The absorption of nutrients derived from fats is somewhat

complicated and requires both emulsification from bile and degradation from lipases. Malabsorption of nutrients may therefore arise as a result of incomplete digestion. The broad spectrum of stable and functional digestive enzymes in Digest addresses this problem.

Food Allergies

Food allergies may result from undegraded food macromolecules leaking into the blood. The immune system mounts a response to these “invaders” and becomes primed to strongly respond to subsequent presentations of these antigens. However, a thorough degradation of the ingested food macro-molecules into their simplest monomers will destroy any antigenicity and will reduce the re-occurrence of food allergy.

SAFETY / QUALITY ASSURANCE

All Transformation™ formulas are carefully prepared to assure maximum quality and nutritional effectiveness.

MICROBIOLOGICAL EVALUATION

This product was tested and found to be NSF/ANSI compliant and absent of any traces of *E.coli*, *salmonella*, and *S.aureus*.

PRODUCT SPECIFICATIONS

Digest is available in bottles of 60, 90, and 120 capsules.

Does not contain any dairy, gluten, soy, artificial colors, flavors, or preservatives.

Store in a cool, dry place. Keep out of reach of children.

REFERENCES

1. Prochaska LJ, Pickutowski WV. “On the synergistic effects of enzymes in food with enzymes in the human body. A literature survey and analytical report.” *Med Hypotheses*. 1994 Jun;42(6):355-62.

ADDITIONAL READING

Bashaw E. *Digestion, Assimilation, Elimination and You*. Woodland Pub, 1994.

Beazell JJ. “A re-examination of the role of the stomach in the digestion of carbohydrate and protein.” *American Journal of Physiology*. 1941;132:42-50.

Dutta SK, Rubin J, Harvey J. “Comparative evaluation of the

therapeutic efficacy of a pH-sensitive enteric coated pancreatic enzyme preparation with conventional pancreatic enzyme therapy in the treatment of exocrine pancreatic insufficiency.” *Gastroenterology*. 1983 Mar;84(3):476-82.

Fuller D. *The Healing Power of Enzymes*. New York: Forbes Publishing Co, 1998.

Godfrey T, Reichelt J, eds. *Industrial Enzymology: The Application of Enzymes in Industry*. New York: The Nature Press, 1983.

Graham DY. “Ins and outs of pancreatic enzymes and adjuvant therapies.” *J Pediatr Gastroenterol Nutr*. 1984;3 Suppl 1:S120-6.

Grossman MI, Greengard H, Ivy AC. “The effect of dietary composition on pancreatic enzymes.” *American Journal of Physiology*. 1942;139:676-82.

Grossman MI, Greengard H, Ivy AC. “On the mechanism of the adaptation of pancreatic enzymes to dietary composition.” *American Journal of Physiology*. 1944;141:38-41.

Howell E. *Enzyme Nutrition: The Food Enzyme Concept*. Wayne, NJ: Avery Publishing Group, 1985.

Howell E. *Food Enzymes for Health and Longevity*. Woodstock Valley, CN: Omangod Press, 1980.

Howell E. *The Status of Food Enzymes in Digestion and Metabolism*. Avery Publications, 1946.

Ivy AC, Schmidt CR, Beazell JM. “On the effectiveness of malt amylase on the gastric digestion of starches.” *The Journal of Nutrition*. 1936;12:59-83.

Meagher MM, Reilly PJ. “Kinetics of the hydrolysis of di- and trisaccharides with *Aspergillus niger* glucoamylases I and II.” *Biotechnol Bioeng*. 1989 Aug 20;34(5):689-93.

Smyth RD, Brennan R, Martin GJ. “Systemic biochemical changes following the oral administration of a proteolytic enzyme, bromelain.” *Arch Int Pharmacodyn Ther*. 1962 Mar 1;136:230-6.

Wolf M, Ransberger K. *Enzyme Therapy*. Regent House, 1972.

Copyright © Transformation™



Transformation Enzyme Corporation
16203 Park Row Dr Ste 160
Houston, TX 77084
1-800-777-1474
TransformationEnzymes.com
moreinfo@tecenzymes.com

*This statement has not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.