

Vital-Zymes Complete and Vital-Zymes Chewable

Multi-enzyme supplement for extensive digestive support†

Introduction

Vital-Zymes Complete is a high-strength, comprehensive digestive enzyme formula that provides a wide range of microbial-derived enzymes to support and enhance digestive function.[†] Vital-Zymes Chewable is a moderate-strength, comprehensive enzyme preparation suitable for chewing. Vital-Zymes Complete capsules and Vital-Zymes Chewable tablets contain a broad spectrum of enzymes that facilitate more complete breakdown of proteins, polypeptides, starches, vegetable fiber, polysaccharides, disaccharides, and lipids (fats).[†] These advanced digestive enzyme formulas provide a wide array of enzymes active across a broad pH range including:

- Amylases (amylase, alpha-amylase, and glucoamylase)
- Disaccharidases (lactase, sucrase/invertase, and maltase)
- Acid, alkaline, and neutral proteases
- Protease/peptidase complex with endopeptidase, exopeptidase, and dipeptidyl peptidase-IV activities
- Serratia peptidase
- Pullulanase
- Cellulase
- Phytase
- Lipase
- Lysozyme (In Vital-Zymes Complete)

Product features

- Supports the body's digestive capabilities and facilitates intestinal repair mechanisms[†]
- Broad-acting complex of peptidase and protease enzymes with added DPP-IV activity
- Extensive range of fungal- and microbial-based enzymes (hypoallergenic)
- Vegetarian capsules or tablets with moderate amounts of the same enzymes with the exclusion of lysozyme

Background

Digestive enzymes break down food macronutrients, such as proteins, carbohydrates, and fats into smaller molecules for absorption by the intestines. These enzymes are secreted by salivary glands (alpha-amylase and lingual lipase), the stomach (pepsinogen, gelatinase, and gastric lipase), the pancreas (alpha-amylase, lipase, trypsinogen, and chymotrypsinogen), and the small bowel (disaccharidases, intestinal lipase, and erepsin protease). Digestive enzymes are also present in raw foods such as fresh fruits and vegetables. Enzymes in raw foods are thought to work synergistically with the body's endogenous digestive enzymes to more completely digest food carbohydrates and other macronutrients. This action is lost, however, when foods are cooked or heat processed, as this destroys the natural catalytic activity of food digestive enzymes.¹

Enzyme supplementation supports healthy digestion and may therefore alleviate occasional abdominal discomfort, bloating, gas, indigestion, or loose stools while supporting nutrient absorption.¹ Incompletely digested food in the gut may putrefy and produce irritating substances that affect intestinal mucosal integrity and gut permeability, systemic immune function, and overall energy. Children with dyspepsia typically exhibit low activity of duodenal maltase-glucoamylase and/or disaccharidases.² Supplementing the diet with microbial-derived digestive enzymes can assist the complete digestion of food components, promote normal nutrient absorption, and reduce the number of large, immunologically active molecules that can leak through the intestinal mucosa lining if permeability is not optimal.¹

How it works

Amylases (amylase, alpha-amylase, and glucoamylase) are glycoside hydrolases that cleave α -(1 \rightarrow 4) glycosidic bonds. Amylases hydrolyze amylose and amylopectin found in starchy vegetables such as potatoes, corn, rice, and wheat as well as glycogen and other related carbohydrates.

Disaccharidases (lactase, sucrase/invertase, and maltase) are enzymes that primarily hydrolyze disaccharides into their component monosaccharides (single sugars). Disaccharidases are normally found in the small intestinal brush border and are critical for the final steps of carbohydrate digestion.³

Acid, alkaline, and neutral proteases are enzymes that hydrolyze proteins into smaller fragments known as polypeptides.

Peptidases are enzymes that break polypeptides down into their constituent amino acids. Absorption of the undigested proteins and polypeptides may trigger food hypersensitivities. Incomplete digestion of gluten and casein may result in the production of exorphin

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(exogenous opiate-like) polypeptides that have the capacity to cause or potentiate adverse neurological symptoms. Vital-Zymes Complete and Vital-Zymes Chewable contain a full complement of protease and peptidase enzymes in amounts appropriate to support the breakdown of a wide spectrum of dietary proteins while avoiding excessive amounts of proteases found in some formulations that may irritate mucosal membranes.

Protease/peptidase complex has endopeptidase, exopeptidase, and DPP-IV activity. DPP-IV activity is critical to the catabolic inactivation of exorphins, bioactive peptides derived from food proteins with morphine-like opioid effects.⁴ Exorphins derive primarily from the milk protein casein, gluten, and soy. The DPP-IV activity present in the protease/peptidase provides for complete digestion of proline-rich proteins and efficient breakdown of dietary exorphins.[†]

Serratia peptidase is a unique endopeptidase enzyme that supports healthy inflammatory response during occasional GI stress by protecting sensitive gastrointestinal tissue from irritation and breaking down extraneous fibrin, mucus, and other compounds that accumulate as a part of the body's natural repair process.[†]

Pullulanase, together with glucoamylase, supplies the isomaltase activity lacking in fungal- and microbial-derived sucraes facilitating the complete breakdown of highly branched amylopectin starch molecules.

Cellulase denotes a family of enzymes that digest plant material and promote greater nutrient absorption.

Phytase breaks down phytic acid, an anti-nutrient that would otherwise complex with dietary minerals and interfere with their absorption.[†]

Lipase converts dietary triglycerides (fats or lipids) into diglycerides, monoglycerides, fatty acids, and glycerol. Absorption of fatty acids is important for health, normal fat digestion and stool fat content, and absorption of fat-soluble nutrients such as vitamins A, D, E, and K.⁵⁻⁷ The lipase in Vital-Zymes Complete and Vital-Zymes Chewable promotes healthy fat digestion and absorption of essential lipids and fat-soluble nutrients.[†]

Lysozyme (in Vital-Zymes Complete) is an enzyme found in tears, saliva, mucus, and breast milk. Lysozyme breaks down peptidoglycans found in bacterial cell walls especially those of Gram-positive bacteria.[†]

Formula

Supplement Facts		
Serving Size 2 Capsules or 2 Tablets		
Amount Per	2 Capsules	2 Tablets
Comprehensive Enzyme Blend	800 mg*	320 mg*
With the following enzyme activity:		
Carbohydrate Specific Enzymes		
Amylase	1,830 BAU Δ	732 BAU Δ
Alpha-Amylase	100 DU Δ	40 DU Δ
Glucoamylase (with isomaltase side chain activity)	30 AGU Δ	12 AGU Δ
Sugar Specific Enzymes		
Lactase	1,500 ALU Δ	600 ALU Δ
Sucrase (invertase)	400 SU Δ	160 SU Δ
Maltase (diastase)	200 DP Δ	80 DP Δ
Pullulanase (debranching enzyme with isomaltase side chain activity)	25 U Δ	10 U Δ
Vegetable/Plant Fiber Specific Enzymes		
Cellulase	500 CU Δ	200 CU Δ
Hemicellulase/Pectinase/Phytase Complex	200 HSU Δ	80 HSU Δ
Phytase	10 PU Δ	4 PU Δ
Beta-Glucanase	20 BGU Δ	8 BGU Δ
Alpha-Galactosidase	100 AGSU Δ	40 AGSU Δ
Galactomannase	200 HCU Δ	80 HCU Δ
Protein and Peptide Specific Enzymes		
Acid Protease	50 SAPU Δ	20 SAPU Δ
Alkaline Protease	50 PC Δ	20 PC Δ
Protease/Peptidase Complex with endopeptidase, exopeptidase, and DPP-IV activity	40,000 HUT Δ	16,000 HUT Δ
Fat Specific Enzyme		
Lipase	1,500 FIPU Δ	600 FIP Δ
Other Enzymes		
Lysozyme (from egg white)	100,000 SHU Δ	
Serratia peptidase (enteric-coated) [†]	2,500 SPU Δ	1,000 SPU

*Daily Value not established.

Other ingredients: **Capsules:** Vegetarian capsule (hydroxypropyl methylcellulose, water), coconut oil powder, and cellulose. **Tablets:** Xylitol, mannitol, stearic acid, silicon dioxide, and natural cherry flavor.

Δ Units are those used in edition nine (IX) of the Food Chemicals Codex (FCC).

[†]Peptizyme SP[®], a registered trademark of Specialty Enzymes.

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Suggested use

Tablets: 2 tablets at the beginning of each meal or as directed by a healthcare professional. **Caution:** If you are pregnant, nursing, have a medical condition, or taking prescription drugs, consult your healthcare professional before using this product. Keep out of reach of children.

K-VCH 180 chewable tablets

Capsules: 2 capsules at the beginning of each meal or as directed by a healthcare professional. **Caution:** If you are pregnant, nursing, have a medical condition, taking prescription drugs, or are allergic to eggs, consult your healthcare professional before using this product. Keep out of reach of children.

K-VZM 120 vegetarian capsules