INTEGRATIVE
GASTROINTESTINAL™

integrativepro.com/similase • 800.931.1709

SIMILASE®

# SIMILASE®
## DIGESTIVE ENZYMES

Gastrointestinal health is at the core of health of the whole person. Clinical interventions that effectively support gastrointestinal function have been shown to help maintain and restore wellness and support health. Integrative Therapeutics™ developed "Six Principles For Restoring Gastrointestinal Health" to assist in promoting healthy gastrointestinal function for patients with a broad range of health concerns.

Digestive enzymes are essential in the first step in restoring gastrointestinal health: Optimize Digestion. This physician-formulated line of enzymes has been providing unparalleled digestive support to patients for decades.* The microbial enzymes found in Similase are effective under a wide range of gastrointestinal pH conditions, supporting optimal digestion regardless of age, digestive function, and pH balance.* They have been used to: [1-7]

- Support for digestion of dietary carbohydrate, protein, fat, and fiber*
- Relief of occasional indigestion, gas, and bloating*
- Pancreatic enzyme replacement support*
- Support of normal gastric emptying time*
- Promoting lactose digestion*


*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.

# The Essential Role of Digestive Enzymes

Adequate digestive enzyme activity is critical for normal gastrointestinal function and overall health. The three main enzymes involved in the digestion of macronutrients are amylase, protease, and lipase.*

Intestinal mucosal enzymes, including sucrase, lactase, maltase, as well as other enzymes, such as protease with dipeptidyl peptidase IV (DPP IV) activity, are also important for complete digestion and assimilation of nutrients.*

Research links digestive enzyme activity to overall health.[8] If digestion by enzymes is incomplete, byproducts of partially digested and undigested food can cause symptoms of occasional gas, bloating, belching, or nausea. Digestive enzymes and gastrointestinal pH balance may support digestion or nutrient absorption and may contribute to a variety of other health supporting functions.[1,2,4] Supplementation with digestive enzymes can support healthy enzyme levels.*[1-4,9]

The following chart summarizes details regarding the enzymes™ found in the Similase® line of products.

## Microbial Enzymes

| Enzymes | Sources | Activity Units & Assay Method | Food Types Digested |
|---|---|---|---|
| Protease I, II, III, IV, V | *Aspergillus oryzae, A. melleus, A. niger* | USP (pH 7.5)<br>PC; FCC (pH 7.0)<br>HUT; FCC (pH 4.7) | Proteins and polypeptides from animals & plants (meat, fish, eggs, dairy, wheat, legumes, vegetables, etc.), proline dipeptides from gluten, casein |
| Amylase | *A. oryzae* | USP (pH 6.8)<br>DU; FCC (pH 4.8) | Starches, complex carbohydrates, polysaccharides |
| Lipase I, II | *Rhizopus oryzae, A. niger* | FIP (pH 7.0)<br>LU; FCC (pH 6.5) | Fats, oils, triglycerides from animals and plants |
| Cellulase I, II | *A. niger* | CU; FCC (pH 4.5) | Dietary fiber, cellulose, hemicellulose |
| Lactase I, II | *A. oryzae* | ALU; FCC (pH 4.5) | Lactose |
| Sucrase | *Saccharomyces sp.* | Sumner; FCC (pH 4.6) | Sucrose |
| Maltase | Malt barley *(Hordeum vulgare)* | DP°; FCC (pH 4.6) | Maltose, starch, polysaccharides |
| Phytase | *A. niger* | U; FCC (pH 6.0) | Dietary phytate, phytic acid, pectin, cellulose |
| Alpha-Galactosidase | *A. niger* | GalU; FCC (pH 5.5) | Indigestible oligosaccharides and sugars, in beans, legumes, vegetables, grains, e.g. stachyose, raffinose |

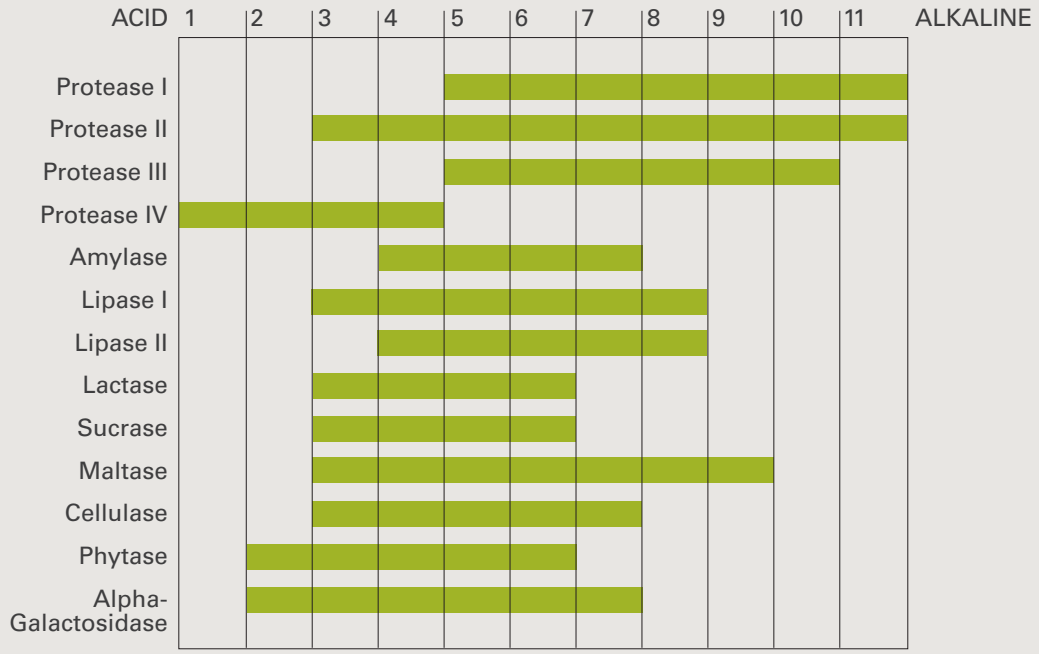
# The Importance of Acid-Stable Enzymes with Broad pH Activity

Digestive enzymes require specific pH conditions for optimal activity. Pepsin activity in the stomach requires normal gastric acidity. Pancreatic enzymes are optimally active only in neutral to alkaline intestinal conditions. Research has shown that production of bicarbonate, needed to alkalinize the upper small intestine, and gastric acid, needed to activate pepsin in the stomach, can decline with age.[2,10,11]

The microbial enzymes in the Similase line of supplements are naturally acid-stable and provide activity in both acid and alkaline conditions. Derived from fungal sources, they begin working in the stomach and continue in the intestines.* Because of their ability to be active throughout a broad pH range, the Similase line of enzyme supplements support digestion regardless of age, digestive function, and pH balance.* They are ideal for individuals who cannot benefit optimally from pancreatic enzymes or pepsin supplements, or who prefer a vegetarian alternative to these animal-derived enzymes.

The following chart summarizes the broad pH range of enzyme activity for Similase digestive enzymes.*

## pH Range of Enzyme Activity




*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.

# The Similase Line of Digestive Enzymes

At Integrative Therapeutics, we are proud to be one of the most trusted and recognized leaders in enzyme supplementation. The Similase family of digestive enzymes has been used in clinical practice for over 20 years.

## Similase®

**Comprehensive, digestive enzymes**

This physician-developed formula provides a broader range of digestive enzymes than other products.* Similase provides excellent digestive support of carbohydrate, protein, fat, fiber, and phytate under virtually all gastrointestinal pH conditions.* Similase helps relieve occasional indigestion, gas, and bloating, and provides comprehensive support for digestion and assimilation of nutrients from the diet.* Similase serves as the foundation for more targeted formulas in the Similase line described below.

#74239, 90 Veg Capsules; #74230, 180 Veg Capsules


### Supplement Facts

| Serving Size 2 capsules | | Servings per container 45 |
|---|---|---|
| **Amount per 2 capsules** | | |
| Microbial Enzymes | | 613 mg** |
| | Assay Method | |
| Amylase | USP (pH 6.8) | 32,000 USP |
| | FCC (pH 4.8) | 23,800 DU |
| Protease I, II, III, IV | USP (pH 7.5) | 30,000 USP |
| | FCC (pH 7.0) | 48,750 PC |
| | FCC (pH 4.7) | 82,000 HUT |
| Lipase I, II | FIP (pH 7.0) | 2,100 FIP |
| | FCC III (pH 6.5) | 970 LU |
| Lactase I, II | FCC III (pH 4.5) | 1,600 ALU |
| Phytase | Phytic Acid (pH 6.0) | 1.7 PU |
| Cellulase I, II | FCC (pH 4.5) | 350 CU |
| Sucrase (Invertase) | FCC (pH 4.6) | 300 INVU |
| Maltase (Malt Diastase) | FCC (pH 4.6) | 32,100 DP[5] |

**Daily Value not established.

Other ingredients: vegetable capsule (modified cellulose), and cellulose.

**Recommendations:** Take 1 or 2 capsules at the beginning of each meal, or as recommended by your healthcare professional. **Not recommended for use if peptic ulcer, gastritis, or heartburn is present.**

## Similase® Lipo

**High lipase digestive enzymes**

Similase Lipo is a formula with a full range of digestive enzymes plus additional lipase activity to aid in the digestion and assimilation of fats and fat-soluble nutrients.* Similase Lipo promotes an optimal intestinal response to dietary fats.* Studies have shown that acid-stable enzymes like those found in Similase Lipo can be used safely and effectively for pancreatic enzyme replacement support and may be more effective than supplementation with pancreatic enzymes in certain individuals.*[1-3]

#106005, 90 Veg Capsules


### Supplement Facts

| Serving Size 2 capsules | | Servings per container 45 |
|---|---|---|
| **Amount per 2 capsules** | | |
| Microbial Enzymes | | 640 mg** |
| | Assay Method | |
| Amylase | USP (pH 6.8) | 32,000 USP |
| | FCC (pH 4.8) | 23,800 DU |
| Protease I, II, III, IV | USP (pH 7.5) | 30,000 USP |
| | FCC (pH 7.0) | 48,750 PC |
| | FCC (pH 4.7) | 82,000 HUT |
| Lipase I, II | FIP (pH 7.0) | 6,150 FIP |
| | FCC III (pH 6.5) | 2,530 LU |
| Lactase I, II | FCC III (pH 4.5) | 1,600 ALU |
| Phytase | Phytic Acid (pH 6.0) | 1.7 PU |
| Cellulase I, II | FCC (pH 4.5) | 350 CU |
| Sucrase (Invertase) | FCC (pH 4.6) | 300 INVU |
| Maltase (Malt Diastase) | FCC (pH 4.6) | 32,100 DP[5] |

**Daily Value not established.

Other ingredients: vegetable capsule (modified cellulose),cellulose, and ascorbyl palmitate.

**Recommendations:** Take 1 or 2 capsules at the beginning of each meal, or as recommended by your healthcare professional . **Not recommended for use if peptic ulcer, gastritis, or heartburn is present.**

## Similase® BV

**Bean and vegetable digestive enzymes**

This comprehensive microbial supplement aids in the digestion of all food groups, while also providing added enzyme activity for the digestion of beans, legumes, and cruciferous vegetables (e.g., broccoli, cabbage, and Brussels sprouts) that produce gas in sensitive individuals.* Similase BV features alpha-galactosidase to support the breakdown of difficult to digest sugars and oligosaccharides in offending foods.*

#106001, 90 Veg Capsules; #106002, 180 Veg Capsules


### Supplement Facts

| Serving Size 2 capsules | | Servings per container 90 |
|---|---|---|
| **Amount per 2 capsules** | | **%DV*** |
| Microbial Enzymes | | 626 mg* |
| | Assay Method | |
| Amylase | USP (pH 6.8) | 21,320 USP |
| | FCC (pH 4.8) | 15,860 DU |
| Protease I, II, III, IV | USP (pH 7.5) | 30,000 USP |
| | FCC (pH 7.0) | 48,750 PC |
| | FCC (pH 4.7) | 82,000 HUT |
| Alpha-Galactosidase | FCC (pH 5.5) | 900 GalU |
| Cellulase I, II | FCC (pH 4.5) | 280 CU |
| Lipase I, II | FIP (pH 7.0) | 2,100 FIP |
| | FCC III (pH 6.5) | 970 LU |
| Phytase | Phytic Acid (pH 6.0) | 1.7 U |
| Lactase I, II | FCC III (pH 4.5) | 1,130 ALU |
| Sucrase (Invertase) | FCC (pH 4.6) | 270 INVU |
| Maltase (Malt Diastase) | FCC (pH 4.6) | 32,100 DP[5] |

*Daily Value (DV) not established.

Other ingredients: vegetable capsule (modified cellulose), cellulose, and ascorbyl palmitate.

**Recommendations:** Take 1 or 2 capsules at the beginning of each meal, or as recommended by your healthcare professional. **Not recommended for use if peptic ulcer, gastritis, or heartburn is present.**

# Similase® GFCF

**Gluten and casein digestive enzymes**

Digestion of gluten and casein can be particularly difficult for some individuals. Similase GFCF provides enzymes to support comprehensive digestive health, while also featuring superior dipeptidyl peptidase IV (DPP IV) activity for the digestion of proline-containing dipeptides from gluten and casein.* Similase GFCF supports a gluten-free, casein-free lifestyle and helps relieve occasional indigestion, gas, and bloating.*

#73952, 120 Veg Capsules

wheat free | gluten free | soy free | dairy free | vegetarian

## Supplement Facts

Serving Size 2 capsules — Servings per container 60

| Amount per 2 capsules | | | %DV** |
|---|---|---|---|
| **Total Carbohydrate** | | **<1 g** | **<1%**** |
| Microbial Enzymes | | 536 mg*** | |
| | Assay Method | | |
| DPP IV Protease Blend (Protease I, II, III, IV, V) | FCC (pH 4.7) | 134,660 HUT | |
| | FCC (pH 7.0) | 22,660 PC | |
| | USP (pH 7.5) | 12,557 USP | |
| Amylase | FCC (pH 4.8) | 9,530 DU | |
| | USP (pH 6.8) | 12,807 USP | |
| Lipase I, II | FCC (pH 6.5) | 408 LU | |
| | FIP (pH 7.0) | 888 FIP | |
| Phytase | Phytic Acid (pH 6.0) | 0.67 U | |
| Lactase I, II | FCC (pH 4.5) | 642 ALU | |
| Cellulase I, II | FCC (pH 4.5) | 141 CU | |
| Sucrase (Invertase) | FCC (pH 4.6) | 181 SU | |

**Percent Daily Values (DV) are based on a 2,000 calorie diet.
***Daily Value not established.

Other ingredients: cellulose, vegetable capsule (modified cellulose), inulin (from chicory root), calcium laurate, and silicon dioxide.

**Recommendations:** Take 2 capsules with each meal or as recommended by your healthcare professional.

# Similase® Jr.

**Children's digestive enzymes**

This comprehensive microbial enzyme supplement in easy-to-swallow capsules is designed specifically for children. Similase Jr. also contains DPP IV and supports the digestion of proteins, carbohydrates, fats, fiber, and phytates under virtually all gastrointestinal pH conditions.* It helps to relieve occasional indigestion, gas, and bloating.*

#106009, 90 Veg Capsules

wheat free | soy free | dairy free | vegetarian

## Supplement Facts

Serving Size 2 capsules — Servings per container 45

| Amount per 2 capsules | | | %DV* |
|---|---|---|---|
| Microbial Enzymes | | 252 mg* | |
| | Assay Method | | |
| Amylase | USP (pH 6.8) | 6,700 USP | |
| | FCC (pH 4.8) | 6,000 DU | |
| Protease (Provides Dipeptidylpeptidase IV (DPP IV), Exopeptidase, Endopeptidase, and Peptide Peptidohydrolase activity) | USP (pH 7.5) | 14,500 USP | |
| | FCC (pH 7.0) | 20,200 PC | |
| | FCC (pH 4.7) | 34,300 HUT | |
| | (pH 7.0) | 2,000 CFAU | |
| Lactase | FCC III (pH 4.5) | 2,400 LacU | |
| Cellulase | FCC (pH 4.5) | 124 CU | |
| Lipase | FIP (pH 7.0) | 630 LU | |
| | FCC III (pH 6.5) | 300 LU | |
| Sucrase (Invertase) | FCC (pH 4.6) | 300 INVU | |
| Phytase | Phytic Acid (pH 6.0) | 0.64 PU | |
| Maltase (Malt Diastase) | FCC (pH 4.6) | 10,800 DP* | |

*Daily Value (DV) not established.

Other ingredients: vegetable capsule (modified cellulose), cellulose, and ascorbyl palmitate.

**Recommendations:** Take 1 or 2 capsules at the beginning of each meal, or as recommended by your healthcare professional. **Not recommended for use if peptic ulcer, gastritis, or heartburn is present.**

# Similase® Sensitive Stomach

**Digestive enzymes plus GI mucosal support***

Similase Sensitive Stomach features microbial enzymes and demulcent herbs, marshmallow and slippery elm, to provide gentle support for digestion.* Gamma-oryzanol and deglycyrrhizinated licorice (DGL) extract are also included for the support of healthy gastrointestinal mucosa.* Similase Sensitive Stomach helps relieve occasional indigestion, gas, and bloating while providing targeted support for the GI mucosa.* Protease is omitted due to its potential for irritation in sensitive patients.

#136006, 90 Veg Capsules; #136007, 180 Veg Capsules

wheat free | gluten free | soy free | dairy free | vegetarian

## Supplement Facts

Serving Size 2 capsules — Servings per container 45

| Amount per 2 capsules | | | %DV*** |
|---|---|---|---|
| **Total Carbohydrate** | | **<1 g** | **<1%***** |
| Slippery Elm (Ulmus rubra) Bark | | 240 mg | ** |
| Microbial Enzymes | | 220 mg | ** |
| | Assay Method | | |
| Amylase | USP (pH 6.8) | 21,170 USP | |
| | FCC (pH 4.8) | 15,750 DU | |
| Cellulase | FCC (pH 4.5) | 38 CU | |
| Lipase | FCC III (pH 6.5) | 54 LU | |
| Deglycyrrhizinated Licorice (DGL) (Glycyrrhiza glabra) Root Extract | | 200 mg | ** |
| Gamma-Oryzanol (from rice bran) | | 170 mg | ** |
| Marshmallow (Althaea officinalis) Root Extract | | 80 mg | ** |

***Percent Daily Values (DV) are based on a 2,000 calorie diet.
**Daily Value not established.

Other ingredients: vegetable capsule (modified cellulose), cellulose, and ascorbyl palmitate.

**Recommendations:** Take 1 or 2 capsules three times daily at the beginning of meals, or as recommended by your healthcare professional.

*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.

## References


1. Roberts I. *Pancreas*. 1989;4(4):496-503.
2. Schneider MU, Knoll-Ruzicka ML, Domschke S, Heptner G, Domschke W. *Hepatogastroenterology*. 1985;32(2):97-102.
3. Zorn J. *Fortschr Med*. 1978;96(38):1941-3.
4. Medow MS, Thek KD, Newman LJ, et al. *Am J Dis Child*. 1990;(11):1261-4.
5. Di Stefano, Miceli E, Missanelli A, et al. *Dig Dis Sci*. 2007;52(1):78-83.
6. Sandberg AS, Hulthen LR, Turk M. *J Nutr*. 1996;126(2):476-80.
7. Nakae Y, Onouchi H, Kagaya M, Kondo T. *J Gastroenterol*. 1999;34(4):445-9.
8. Vellas B, Balas D, Moreau J, er al. *Int J Pancreatol*. 1988;3(6):497-502.
9. Borowitz D, Goss CH, Limauro S, et al. *J Pediatr*. 2006;149(5):658-662.
10. Guslandi M, Pellegrini A, Sorghi M. *Gerontology*. 1999;45(4):206-8.
11. Britton E, McLaughlin JT. Ageing and the gut. *Proc Nutr Soc*. 2013 Feb;72(1):173-7.
12. Miller PC, Bailey SP, Barnes ME, Derr SJ, Hall EE. *J Sports Sci*. 2004 Apr;22(4); 365-72.
13. Miller PC, Bailey SP, Cormier S, Khlebopros A, Hall EE. Comparison of Protease and Nsaid Supplementation on Muscle Soreness and Contractile Performance Following Eccentric Contractions. *Med Sci Sports Exerc*. 2002;34(5)Supplement 1:S232.




15-ITLLC-0427 #66834.02

*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.