

## Gluten-Dairy Ultra Enzyme

Natural Berry Flavor

### DESCRIPTION

Gluten-Dairy Ultra Enzyme from Douglas Laboratories® contains effective enzymes to support the digestion of gluten and lactose in a delicious natural berry chew designed for children and adults. These clinically researched enzymes assist with gastric and pancreatic enzymes of the gastrointestinal tract to break down gluten and lactose into their basic components. It is specially formulated with Tolerase® G, a proline-specific endoprotease that has been shown to effectively aid in the digestion of gluten.

### INDICATIONS

- Helps to break down residual gluten †
- Individuals following a gluten-free diet†
- Supports digestion of dairy protein and lactose‡

### FUNCTIONS AND MECHANISM OF ACTION

Up to 1% of the population is estimated to have celiac disease, but even more are gluten-sensitive. Gluten is rich in proline, which is highly resistant to hydrolysis mediated by proteases of the human gastrointestinal tract. Studies show that even when following a gluten-free diet, unintentional gluten intake can range from 200 mg/day to up to 3,000 mg/day, depending on the diet parameters. This can cause abdominal discomfort, irregular bowel habits, skin concerns, imbalanced electrolytes, and nutrient malabsorption. Tolerase G® is a Prolyl Endoprotease derived from *Aspergillus niger*. According to preclinical studies, this specialized enzyme effectively breaks down residual gluten by cleaving proline-rich gluten epitopes. It has been shown in-vivo to efficiently break-down intact gluten (gliadin) after a meal; making it a superior option for those following a gluten-free diet. Furthermore, it remains active under the harsh conditions of the stomach and is resistant to pepsin. †

Undigested lactose is fermented by the intestinal microflora and can result in bloating, cramping, gas and diarrhea. In some cases, those who have gastric distress after consuming dairy products may not have an issue with lactose. Instead, the milk proteins or fat may be contributing to their discomfort or sensitivities. Beta-lactoglobulin occurs primarily in the whey fraction of milk. It is an acid-stable protein and therefore may not be broken down by pepsin and pancreatin. BioCore Dairy® includes proteolytic enzymes and lactase that breaks down the beta-lactoglobulin and lactose, which may help to relieve occasional bloating or gas that some people can experience from dairy consumption. Recent studies have shown lactose intolerance is correlated with low calcium intake and reduced bone mineral density. Supplemental enzymes such as those found in BioCore™ Dairy may help individuals consume calcium-rich dairy foods without discomfort. ‡

If you are on a controlled diet and/or under the care of a health professional for dairy and/or gluten digestion, continue to follow those recommendations. This product is not intended to substitute for the recommendations of a health professional.

### FORMULA (#202467)

1 chewable tablet contains:

Tolerase® G Prolyl Endopeptidase

(from *Aspergillus niger*) ..... 144 mg

Supplying Prolyl Endopeptidase Activity..... 83,520 PPI

BioCore Dairy®-I..... 105 mg

Supplying:

Protease (from *Aspergillus niger*) .....399 BLGU

Protease (from *Aspergillus oryzae*).....231 BLGU

Lactase (from *Aspergillus oryzae*)..... 1,000 ALU

## Gluten-Dairy Ultra Enzyme

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Other Ingredients: Mannitol, xylitol, sunflower lecithin, organic acacia gum, natural mixed berry and dark cherry flavors, and citric acid.

### Non-GMO, Gluten-Free, Vegetarian

BioCore® is a trademark of National Enzyme Company

Tolerase® G is a trademark of DSM

### SUGGESTED USE

Adults or children age 3+ chew 1 tablet with a meal, up to 3 times daily or as directed by a health professional.

Tolerase® G is not intended to replace a gluten-free diet.

Tolerase® G is not intended to treat or prevent Celiac disease.

### SIDE EFFECTS

No adverse effects have been reported.

### STORAGE

Store in a cool, dry place, away from direct light. Keep out of reach of children.

### REFERENCES

Tack DV, et al; *World Gastroenterol and Hepatol* 2010

DiGiacomo DV, et al; *Scand J Gastroenterol* 2013

Stepniak D et al. *AJP-Gastrointest Liver Physiol* 2006

Mitea C, et al. *Gut* 2008

Salden B, et al. *Alim Pharmacol Therap* 2015

König J, et al. *Scientific Reports*. 2017;7:13100.

Janssen G, et al; *PLoS One* 2015; Jun 1; 10(6).

Salden BN, et al; *Aliment Pharmacol Ther* 2015

Alm, L. *Journal of Dairy Science*, 1982; 65(3), 346-352.

Suarez, F. L., Savaiano, D. A., & Levitt, M. D. *New England Journal of Medicine*. 1995. 333(1), 1-4.

Karry A. Jackson, Dennis A. Savaiano. *JACN*. 2001. 20:2, 98S-207S.

Buchowski, M. S., Semenza, J., & Johnson, A. O. *JACN*. 2002, 21(1), 47-54.

Di Stefano M, et. al. *Gastroenterology*. 2002, 122;1793-1799.

**For more information on Gluten-Dairy Ultra Enzyme visit [douglaslabs.com](http://douglaslabs.com)**

‡ 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.

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