



update

Introducing the new composition of Gluten DPP IV – digestive enzymes



Nutrined's innovative Gluten DPP IV formula is suitable for those with IBS, SIBO and other unspecified gastrointestinal conditions that cause bloating. Gluten DPP IV lowers Zonulin-induced intestinal damage and fully supports digestion if intestinal absorption is reduced.

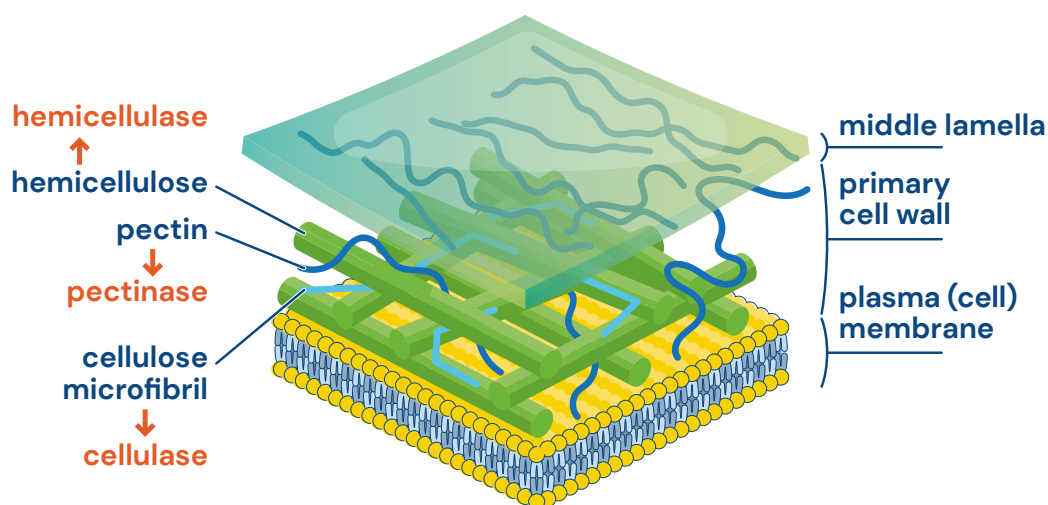
Indication 1

The first complete enzyme formulation that fully supports A LOW FODMAP diet in SIBO, IBS and unspecified GI conditions with bloating.

We have seen increasing interest in dietary therapies for IBS & SIBO, particularly a diet low in fermentable oligosaccharides, disaccharides, monosaccharides and polyols (FODMAPs).

Since ingestion of FODMAPs increases the delivery of readily fermentable substrates and water to the distal small intestine and colon — which results in luminal distention and gas — the reduction of FODMAPs in a patient's diet may improve functional gastrointestinal symptoms.

A unique combination of plant-based enzymes has been added to our DPP IV formula:



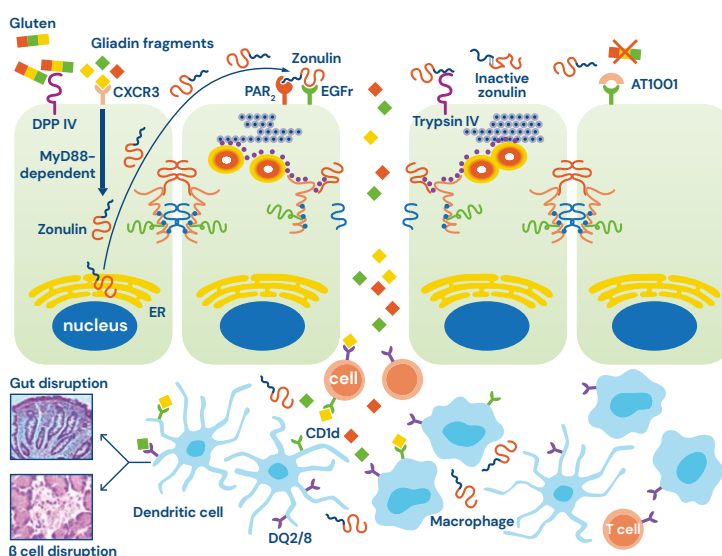
- **Cellulase** to break down cellulose.
- **Hemicellulase** to break down hemicellulose which bonds with cellulose to form fibrous networks.
- **Phytase** to break down phytic acid found in nuts, seeds and pulses.
- **Xylanase** that enables linear polysaccharide xylan to degrade into xylose, further breaking down hemicellulose found within the cell walls of plants.
- **Alpha Galactosidase** which separates glycoproteins, glycolipids and polysaccharides.
- **Pectinase** which enables the breakdown of pectin.

Table FODMAP on page 4.

Indication 2

DPP IV lowers gluten induced damage to the intestinal lining and inflammation.

Gliadin peptides (in Gluten) bind to chemokinereceptors CXCR3, what activates the release of Zonulin. Zonulin activates PAR2 & EGFR, before a complete proteolytic cascade is induced that finally results in a breakdown of tight junctions with big gaps between the enterocytes.



**Your best and most complete digestive support
if intestinal absorption is impaired.**

- ## The complete picture

- Guttae Pepsini
- Perm Plus Coated
- Butyflam Coated

More information about our gut protocol on page 6 and further.

Gluten DPP IV

RS143



GLUTEN DPP IV
NUTAS 1426/59

90
Vocapacs
36 g

Netto gewicht -
Poids net - Net weight

Voedingssupplement -
Complément alimentaire -
Food supplement

NUTAS 1426/59

Loft®

Ten minste houdbaar tot einde /
A consommer de préférence avant fin /
Best used before /
zie verpakking voor emballage-see
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Table FODMAP

Foods high in fermentable oligosaccharides, disaccharides, monosaccharides, and polyols (FODMAPs) and suitable alternatives

FODMAP	Foods high in FODMAPs	Suitable alternatives low in FODMAPs
Excess fructose	Fruits: apple, clingstone peach, mango, nashi pear, pear, sugar snap pea, tinned fruit in natural juice, watermelon	Fruits: banana, blueberry, cantaloupe, carambola, durian, grape, grapefruit, honeydew melon, kiwi, lemon, lime, orange, passion fruit, pawpaw, raspberry, strawberry, tangelo
	Honey sweeteners: fructose, high-fructose corn syrup	Honey substitutes: golden syrup, maple syrup
	Large total fructose dose: concentrated fruit sources, large servings of fruit, dried fruit, fruit juice	Sweeteners: any sweeteners except polyols
Lactose	Milk: regular and low-fat cow, goat, and sheep milk; ice cream	Milk: lactose-free milk, rice milk Ice cream substitutes: gelato, sorbet
	Yogurts: regular and low-fat yogurts	Yogurts: lactose-free yogurts
	Cheeses: soft and fresh cheeses	Cheeses: hard cheeses
Oligosaccharides (fructans and/or galactans)	Vegetables: artichoke, asparagus, beetroot, broccoli, Brussels sprout, cabbage, fennel, garlic, leek, okra, onion, pea, shallot	Vegetables: bamboo shoot, bok choy, capsicum, carrot, celery, chives, choko, choy sum, corn, eggplant, green bean, lettuce, parsnip, pumpkin, silverbeet, spring onion (green part only) Onion/garlic substitutes: garlic-infused oil
	Cereals: rye and wheat cereals when eaten in large amounts (eg, biscuit, bread, couscous, cracker, pasta)	Cereals: gluten-free and spelt bread/cereal products
	Legumes: baked bean, chickpea, lentil, red kidney bean	
	Fruits: custard apple, persimmon, rambutan, watermelon, white peach	Fruit: tomato
Polyols	Fruits: apple, apricot, avocado, cherry, longon, lychee, nashi pear, nectarine, peach, pear, plum, prune, watermelon	Fruits: banana, blueberry, cantaloupe, carambola, durian, grape, grapefruit, honeydew melon, kiwi, lemon, lime, orange, passion fruit, pawpaw, raspberry
	Vegetables: cauliflower, mushroom, snow pea	
	Sweeteners: isomalt, maltitol, mannitol, sorbitol, xylitol, and other sweeteners ending in “-ol”	Sweeteners: glucose, sugar (sucrose), other artificial sweeteners not ending in “-ol”

Source: Gastroenterol Hepatol (N Y). 2012 Nov; 8(11): 739–745. Low-FODMAP Diet for Treatment of Irritable Bowel Syndrome. Suma Magge, MD and Anthony Lembo, MDcorresponding author.

References

References on the indications

1. The first complete enzyme formulation that fully supports A LOW FODMAP diet in SIBO, IBS and unspecific GI conditions with bloating.

Gastroenterol Hepatol (N Y). 2012 Nov; 8(11): 739–745. Low-FODMAP Diet for Treatment of Irritable Bowel Syndrome. Suma Magge, MD and Anthony Lembo, MDcorresponding author.

Nearly two thirds of IBS patients report that their symptoms are related to food:

Simren M, Mansson A, Langkilde AM, et al. Food-related gastrointestinal symptoms in the irritable bowel syndrome. Digestion. 2001;63:108–115.

Barrett JS, Gearry RB, Muir JG, et al. Dietary poorly absorbed, short-chain carbohydrates increase delivery of water and fermentable substrates to the proximal colon. Aliment Pharmacol Ther. 2010;31:874–882.

2. DPP IV enzymes reduce gluten-induced damage to the intestinal lining, causing increased mucosal permeability and inflammation.

König, Julia, et al. “Randomized clinical trial: Effective gluten degradation by *Aspergillus niger*-derived enzyme in a complex meal setting.” Scientific reports 7.1 (2017): 13100.

Ann N Y Acad Sci. Author manuscript; available in PMC 2013 Jul 1. Published in final edited form as: Ann N Y Acad Sci. 2012 Jul; 1258(1): 25–33. doi: 10.1111/j.1749-6632.2012.06538.x Zonulin, regulation of tight junctions, and autoimmune diseases. Alessio Fasano

Scand J Gastroenterol. 2006 Apr;41(4):408–19. doi: 10.1080/00365520500235334. Gliadin, zonulin and gut permeability: Effects on celiac and non-celiac intestinal mucosa and intestinal cell lines Sandro Drago 1, Ramzi El Asmar, Mariarosaria Di Pierro, Maria Grazia Clemente, Amit Tripathi, Anna Sapone, Manjusha Thakar, Giuseppe Iacono, Antonio Carroccio, Cinzia D'Agate, Tarcisio Not, Lucia Zampini, Carlo Catassi, Alessio Fasano. Affiliations expand. PMID: 16635908 DOI: 10.1080/00365520500235334.

General references

Achamrah, N., Déchelotte, P., Coeffier, M. Glutamine and regulation of intestinal permeability: from bench to bedside. Curr Opin Clin Nutr Metab Care. 2017 Jan;20(1):86–91.

Ash, M. The Role of HCl in Gastric Function and Health. 2011. <https://www.clinicaleducation.org/resources/reviews/the-role-of-hcl-in-gastric-function-and-health/>

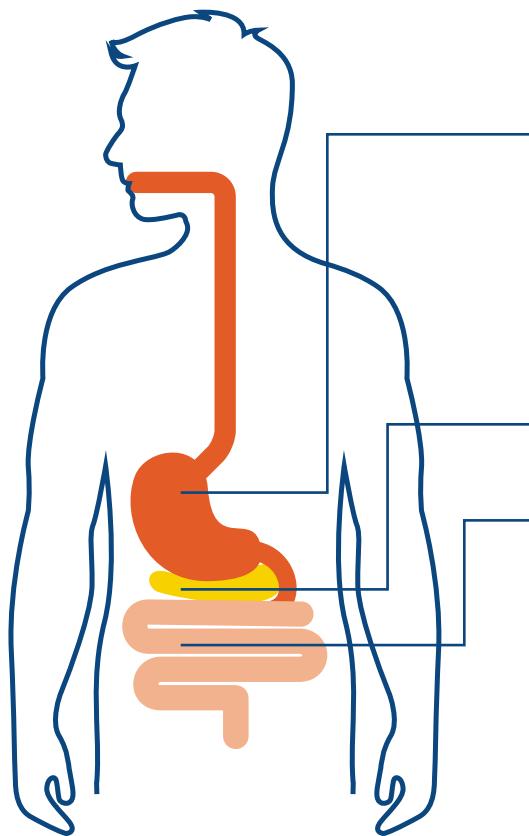
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Dos Santos R. D., Viana, M. L., Generoso, S. V., Arantes, R. E. Glutamine supplementation decreases intestinal permeability and preserves gut mucosa integrity in an experimental mouse model. JPEN J Parenter Enteral Nutr. 2010 Jul-Aug;34(4):408–13.

Ianira, G., Pecere, S., Giorgio, V., Gasbarrini, A. Digestive Enzyme Supplementation in Gastrointestinal Diseases. Curr Drug Metab. 2016;17(2):187–93.

Radhakrishna R., Geetha, S. Role of Glutamine in protection of intestinal epithelial Tight Junctions. J Epithel Biol Pharmacol. 2012 Jan; 5 (Suppl 1-M7): 47–54.

Gut protocol



Global intestinal support is a multilevel support

Optimize gastric acid level

- Prevents pathogenic overgrowth
- First line defense
- Essential for activation of the pancreas to release digestive enzymes
- Digestive breakdown of polypeptides into individual amino acids (auto-immune reactivity is reduced if separate amino acids)

Enzyme complex to optimize digestion (including gluten modifying enzymes)

Targeted released Glutamine & cofactors heal the mucosal lining

- Reduce inflammation
- Improve the synthesis of s IgA by the intestinal lymphocytes

Butyrate coated

- Immune tolerance intestinal & systemic
- s IgA barrier
- Mucus barrier
- Epithelial barrier



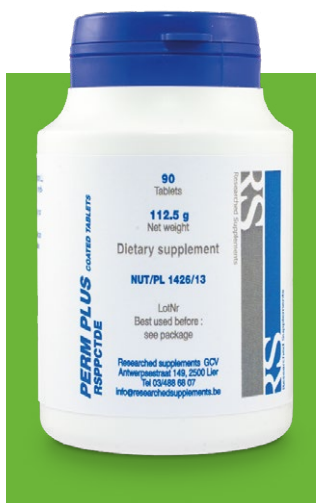


Guttae Pepsini

indication	Stomach acid deficiency Poor digestion Intestinal malabsorption Rebuilds intestinal pH		
dosage	3 x 10 - 20 drops per day at the start of each meal, dilute in water and swallow immediately		
packaging	30 ml per bottle		
composition (amount per 30 drops)	Purified water	5,3 ml	
	Glycerol	10 ml	
	Hydrochloric acid HCl 37%	2,7 ml	
	Pepsine	2 ml	

Gluten DPP IV

indication	DPP-IV proteolytic enzyme complex. Breaks down proline residues in Gluten and decreases the intestinal immune reaction. Intolerance for gluten and/or casein. Indigestion, gas, bloating, constipation and diarrhea.		
dosage	3 x 1 caps per day at the beginning of each meal		
packaging	90 vegecaps per container		
composition (amount per 3 vegecaps)	Digestive enzyme blend: Amylase 5000 DU, Protease 4.5 24.500 HUT, Gluco-amyase 16 AGU, 4 Protease 6.0 7500 HUT, Lipase 3000 FIP, Cellulase 7500 CU, Alpha-galactosidase 125 GalU, Pectinase 12 endo-PGU, Protease 3.0 10 SAPU, Phytase 5 FTU, Xylanase 100 XU, Hemicellulase 75 HCU	150 mg	
	Hemicellulase (1500 U)	75 mg	
	Phytase (7500 U)	75 mg	
	Biocore DPP IV: Protease (<i>Aspergillus oryzae</i> 18000 HUT / 300 DPP-IV, <i>Aspergillus meleus</i> 5.1 AP)	60 mg	
	Lactase (3900 U)	60 mg	



Perm Plus Coated

indication	Rebuilding intestinal permeability and immunity with targeted released molecules		
dosage	The first month: 3 x 2 tablets per day Then take 3 x 1 tablet per day 20 min. before food		
packaging	90 tablets per container		
composition (amount per 3 tablets)	L-Glutamine	975 mg	
	N-Acetyl-D - Glucosamine	375 mg	
	N-Acetylcystein	300 mg	
	Liquorice root powder (<i>Glycyrrhiza Glabra</i> L.)	255 mg	
	Gamma oryzanol	180 mg	
	L-Carnosine	60 mg	
	Zinc (as zinc bisglycinate and zinc methionin)	22,5 mg	



Butyflam Coated

Butyrate is a short-chain fatty acid produced by the intestinal bacteria through fermentation of non-digestible fibers. Butyflam Coated delivers bio-available levels of butyrate in our intestines to guarantee immune tolerance and avoid excessive inflammation or auto-immune reactions.

indication	Neuroinflammation Immune modulating (T reg + IL-10 anti-inflammation) Remodeling intestinal barrier function
dosage	3 x 2 caps per day
packaging	180 coated caps per container
composition (amount per 6 caps)	Butyrate – 3000 mg

References

Gut protocol

> Increased intestinal permeability resulting in low grade inflammation

Front. Immunol., 15 May 2015, Stress induces endotoxemia and low-grade inflammation by increasing barrier permeability, Karin de Punder and Leo Pruimboom.

> Optimizing gut brain axis for better brain health

Ann Gastroenterol. 2015 Apr-Jun; 28(2): 203–209. PMCID: PMC4367209 PMID: 25830558 The gut-brain axis: interactions between enteric microbiota, central and enteric nervous systems.

Marilia Carabotti,^a Annunziata Scirocco,^a Maria Antonietta Maselli,^b and Carola Severia.

> Disturbed gastro-intestinal function

Food allergies: Maintaining intestinal permeability is crucial for preventing the development of food allergies

True food allergy caused by IgE-mediated type 1 hypersensitivity is rare in adults, occurring in not more than 1–2% of the adult population. The innate and adaptive immune systems of the gut act as active barriers to foreign antigens. Therefore maintaining intestinal permeability is crucial for preventing the development of food allergies.

Camilleri M, McKinzie S, Busciglio I, et al. Prospective study of motor, sensory, psychologic, and autonomic functions in patients with irritable bowel syndrome. Clin Gastroenterol Hepatol. 2008;6:772–781.

> Intestinal and Multi-Systemic Autoimmune conditions

Smyth, Megan Ciara. "Intestinal permeability and autoimmune diseases." Bioscience Horizons: The International Journal of Student Research 10 (2017).

> Essential support in treatment of gastro-intestinal infections like SIBO and Candida overgrowth gastro-intestinal toxicity induced by mold, mycotoxins, pesticides, environmental toxins & heavy metals

Toxicol Ind Health. 2009 Oct-Nov, The biocontaminants and complexity of damp indoor spaces: more than what meets the eyes, Thrasher JD, Crawley S.

Luo, Su, et al. "In vitro and in vivo effects of a mycotoxin, deoxynivalenol, and a trace metal, cadmium, alone or in a mixture on the intestinal barrier." Environment international 132 (2019): 105082.

Ren, Zhihua, et al. "Progress in Mycotoxins Affecting Intestinal Mucosal Barrier Function." International journal of molecular sciences 20.11 (2019): 2777.