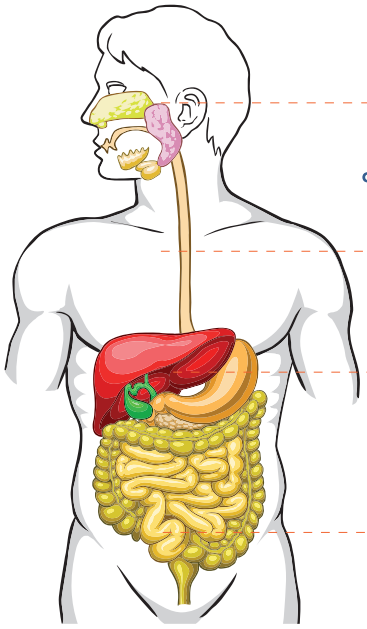
GUNA LABORATORI

proFLORA™

Innovative and unique enhanced probiotic action

INTESTINAL ECOSYSTEM: "THE GUARDIAN OF THE BODY"

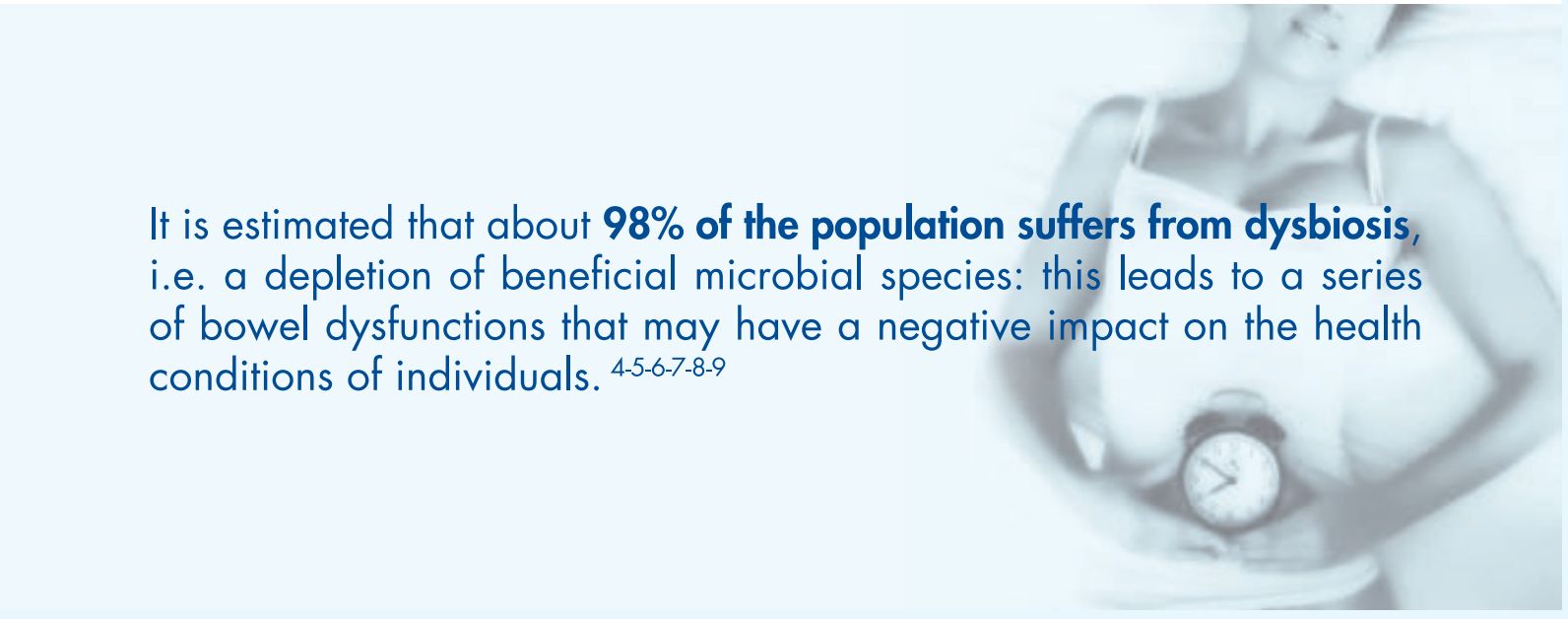
Apart from its primary function of nutrient absorbtion, the intestinal mucosa has also an important immune function. This is secondary to antigenic stress induced by food intake (with its microbial load) and by the presence of a **varied flora of resident microorganisms** (Microbiota) adhering to the intestinal walls or transient: [1-2-3]



	transit time	pH	amount of microorganisms/ml	microbial groups	microbial processes	physiological processes
oral cavity (saliva)			10^6-10^8	streptococci, bacteroides, lactic acid bacilli, peptostreptococci, clostridia, yeast		digestion
stomach	15 - 20 minutes	2 - 3	10^2-10^3	lactic acid bacilli, streptobacteria, Helicobacter pylori yeast		digestion
small intestine	2 - 3 hours	4 - 8	duodenum 10^2-10^3 fasting 10^3-10^5 ileum 10^4-10^8	lactic acid bacilli, streptobacteria, bifidobacteria, enterococci, bacteroides, clostridia	proteolytic and saccharolytic action - limited production of toxins and SCFA*	absorption of minerals, sugars, amino acids, other nutrients
colon	24 - 72 hours	7 - 9	10^{13}-10^{14}	lactic acid bacilli, streptococci, enterobacteria, bifidobacteria, bacteroides, clostridia, yeast, peptococci, ruminococci, fusobacteria, lubacteria, Atopobium	intense proteolytic and saccharolytic action, toxins and SCFA*	absorption of water, minerals, organic acids

** Short-chain fatty acids*

Bacterial and physiochemical interactions in different areas of the gastro intestinal tract in adults (From: adapted from Gibson and Rastell)



It is estimated that about **98% of the population suffers from dysbiosis**, i.e. a depletion of beneficial microbial species: this leads to a series of bowel dysfunctions that may have a negative impact on the health conditions of individuals. [4-5-6-7-8-9]

FROM GUNA RESEARCH STUDIES IN THE PROBIOTIC FIELD

NEW "MICRO-ENCAPSULATED" *pro*FLORA™

"ENHANCED" COLONY-FORMING ACTION TO REBALANCE THE ECOSYSTEM OF THE DIFFERENT BOWEL TRACTS

ALLERGEN FREE PATENTED PROBIOTICAL

TECHNOLOGICAL INNOVATION

6 PROBIOTIC STRAINS (LACTOBACILLI AND BIFIDOBACTERIA) IN GASTRO-PROTECTED MICRO-ENCAPSULATED FORM

✓ The use of a natural coating for the process of **microencapsulation** significantly **improves** the **survival capacity** and the **resistance** of all probiotic strains during the gastroduodenal transit and digestive processes.[10-11]

✓ **100%** of the **alive and viable** probiotic strains reach the different tracts of the intestine, **for the maximum documented activity of colonization**:

"It was shown "in vivo" that the colonization kinetics of 1x10⁹/CFU of probiotics in a "gastro protected micro-encapsulated" form is comparable to that of 5x10⁹/CFU of non micro-encapsulated probiotics".*

*** Del Piano M. *et Al.* – Evaluation of the intestinal colonization by micro-encapsulated probiotic bacteria in comparision with the same uncoated strains. – J. Clin. Gastroenterol. 2010 Sept; 44 Suppl 1:S42-6.** *Double blind study.*

proFLORA™ PREBIOTIC AND PROBIOTIC SYNERGY

ALLERGEN FREE PATENTED PROBIOTICAL

Proflora™ is **allergen free tested**. Patented by Probiotical S.p.A., i.e., it is free of ALL allergens according to current legislation (Annex II Reg. EU 1169/2011): wheat, rye, barley, oats, spelt, kamut and hybridised strains, crustaceans and products based on shellfish, eggs and egg products, fish and seafood, peanuts, soy and soy products, milk and dairy including lactose, nuts, celery, mustard, sesame seeds, lupins, molluscs and products based on molluscs, sulfur dioxide and sulphites at concentrations above 10 mg / kg or 10 mg / liter.

BENEFITS

- 6 selected probiotics strains, in "gastro-protected micro-encapsulated" form, for maximum probiotic biological activity:
  - ✓ *Bifidobacterium lactis* BS01, *Lactobacillus acidophilus* LA02 and *Lactobacillus paracasei* LPC00: 3 specific strains for an effective colonization of the intestine
  - ✓ *Bifidobacterium lactis* BS01, *Lactobacillus acidophilus* LA02 and *Lactobacillus paracasei* LPC00: 3 specific strains for an effective colonization of the intestine
  - ✓ *Lactobacillus rhamnosus* LR06 and *Lactobacillus plantarum* LP02: specific to counteract the spread of coliform bacteria (*Escherichia coli*)
- Enhanced ability to restore the intestinal environment and function
- Fructo-oligosaccarides (FOS) are associated to probiotic strains, for an effective synergy.
- easy to use

proFLORA™ PREBIOTIC AND PROBIOTIC SYNERGY

THE 6 "GASTRO-PROTECTED" MICROENCAPSULATED STRAINS OF proFLORA™ :

(content per sachet)

• *Bifidobacterium lactis* BS01	> 1.00 billion B
• *Lactobacillus acidophilus* LA02	> 0.25 billion B
• *Lactobacillus paracasei* LPC00	> 0.25 billion B
• *Lactobacillus rhamnosus* LR06	> 0.25 billion B
• *Lactobacillus plantarum* LP02	> 0.25 billion B
• *Lactobacillus salivarius* LS03	> 0.02 billion B

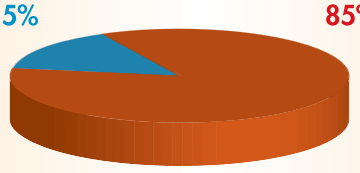
FOR A TOTAL OF NO LESS THAN 2 BILLION ALIVE AND VIABLE CELLS PER SACHET

✓ Each of the six microbial species, belonging to the genus ***Bifidobacterium*** and ***Lactobacillus***, are **"gastro-protected"** and act in synergy for a **higher effectiveness and colonization of the different intestinal segments**.
The effect continues over time thanks to a high ability to adhere to the intestinal mucosa, due to the action of ***Lactobacillus salivarius*** **LS03**.

✓ The micro-encapsulated probiotic strains of **Proflora™** include ***Lactobacillus rhamnosus*** **LR06** and ***Lactobacillus plantarum*** **LP02**. They are both able to produce **active substances (bacteriocins) that limit the spread of coliform bacteria in various intestinal segments**. That's why **Proflora™** is especially recommended for subjects with frequent episodes of infections of the genitourinary tract due to ***Escherichia coli***:

Bacteria responsible for urinary tract infections

From:
University of Trieste,
Institute of Clinical Urology



- *Escherichia coli*
- *Proteus*
  Klebsiella
  Enterococcus faecalis
  Staphilococcus Saprophyticus

FRUCTO-OLIGOSACCHARIDES (FOS) WITH CERTIFIED PREBIOTIC ACTIVITY

Derived from sugar beet, **FOS** contained in Proflora are not hydrolized by digestive enzymes nor absorbed by the mucosa of the small intestine, and succeed in reaching intact the colon where they **are able to selectively stimulate the development of probiotic strains present in Proflora™ and of all beneficial microbial groups of Lactobacilli and Bifidobacteria of the resident microflora**.
The **FOS** have a positive role in the carbohydrate and fat metabolism, **improve** the function of the intestinal mucosa by increasing the "barrier" effect, and **facilitate** the absorption of certain minerals, especially **calcium** and **magnesium**.

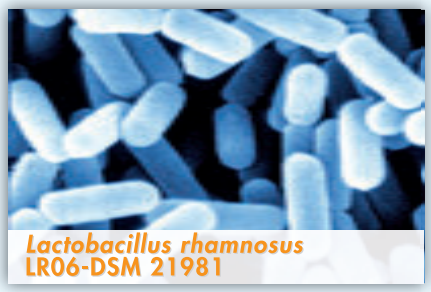
proFLORA™ PREBIOTIC AND PROBIOTIC SYNERGY

ALLERGEN FREE PATENTED PROBIOTICAL

GASTRO-PROTECTED MICRO-ENCAPSULATED

NUTRITION FACTS	per sachet (2.5 g)	per 100 g
Energy	*28.26 kJ 6.75 kcal*	*1130 kJ 270 kcal*
Fat	17.6 mg	0.7 g
of which saturates	7.8 mg	0.31 g
Carbohydrate	2336.5 mg	93.46 g
of which sugars	958 mg	38.32 g
Fibre	1380 mg	55.20 g
Protein	2 mg	0.08 g
Salt	1 mg	0.04 g
• *Bifidobacterium lactis* BS01	> 1.00 B *	> 40 B *
• *Lactobacillus rhamnosus* LR06	> 0.25 B *	> 10 B *
• *Lactobacillus paracasei* LPC00	> 0.25 B *	> 10 B *
• *Lactobacillus acidophilus* LA02	> 0.25 B *	> 10 B *
• *Lactobacillus plantarum* LP02	> 0.25 B *	> 10 B *
• *Lactobacillus salivarius* LS03	> 0.02 B *	> 0.8 B *
Fructo-oligosaccharides FOS	1500 mg	60 g

- Proflora™ is recommended for:
  - ✓ children, the elderly, pregnant and breast feeding women
  - ✓ allergic, celiac subjects or with the most diverse food intolerances
- **100% alive and viable** probiotic content of over 2 billion/ sachet, guaranteed until expiration date.
- Certification and traceability (abbreviation: BS-LR-LP-LS) of probiotic strains registered in an International Culture Collection
- The stability and survival of the strains is guaranteed during production and storage, and for the entire shef life.
- Odorless



Lactobacillus rhamnosus
LR06-DSM 21981

Bifidobacterium lactis
BS01-LMG P-21384

Lactobacillus acidophilus
LA02-DSM 21717

proFLORA™ PREBIOTIC AND PROBIOTIC SYNERGY

A HEALTHY SUPPORT IN CASE OF:

- Antibiotic and/or laxative treatments
- Diarrhea
- Gastrointestinal disorders
- Digestive difficulties
- Irritable colon
- Uro-genital infections
- Respiratory allergies
- Adverse reactions to foods
- Abdominal bloating
- Meteorism
- Mental and physical stress

INSTRUCTIONS FOR USE

Adults and children:
1 sachet daily for periods of 30 consecutive days.

In cases of acute symptoms:
Adults and children:
1 to 2 sachets daily for 8-10 days depending on the symptoms.

Take **preferably half an hour before meals**: pour the content of one sachet, then add **half a glass of water or milk**, stir well and **drink immediately**.

THE MOST COMMON ASSOCIATIONS

ASSOCIATIONS	INDICATIONS
PROFLORA™ + COLOSTRO NONI 	Protection of the intestinal mucosa Supportive gastro-intestinal treatment Supportive treatment of respiratory allergies Supportive treatment of acute and chronic cystitis Adverse reactions to food
PROFLORA™ + VIT FORMULA™ 	Vitamin and mineral malabsorption
PROFLORA™ + FERROGUNA 	Supportive treatment of iron deficiency anemia
PROFLORA™ + GUNAELMINT 	Recovery of the intestinal microflora to prevent or treat helminth infestation

proFLORA™

ALLERGEN FREE PATENTED PROBIOTICAL

The content of alive and viable microorganisms is guaranteed until the expiration date stated on the label

KEY WORDS:

Unique and innovative enhanced "micro-encapsulated" synbiotic for the natural rebalancing of the ecosystem of the different tracts of the intestine

Ingredients

Fructo-oligosaccharides (FOS); Maltodextrin; **Gastro-protected micro-encapsulated probiotics**: *Bifidobacterium lactis* BS01 (LMG P-21384), *Lactobacillus acidophilus* LA02 (DSM 21717), *Lactobacillus paracasei* LPC00 (LMG P-21380), *Lactobacillus plantarum* LP02 (LMG P-21020), *Lactobacillus rhamnosus* LR06 (DSM 21981), *Lactobacillus salivarius* LS03 (DSM 22776); Anti-caking agent: silicon dioxide.

Storage conditions

Store in a dry place, away from direct light and at a temperature not exceeding 25° C.

Warnings

The expiry date refers to a product correctly stored in its original and undamaged packing. Do not exceed the stated recommended daily dose. Keep out of reach of young children.
Food supplements should not intended as a substitute for a varied diet and a healthy lifestyle.

Packaging

10 sachets. Net weight 25 g.
30 sachets. Net weight 75 g.

References

1. Bottazzi V. – Il Microbiota Intestinale. Università degli Studi di Milano; *Pubblicazione Mofin Alce* **2009**.
2. Faria A.M.,Weiner H.L. – Oral tolerance: mechanisms and therapeutic applications. *Adv. Immunol.* 73: 153-264; **1999**.
3. Guarner F., Malagelada J.R. – Gut flora in health and disease. *Lancet* **2003**; 361: 512-19.
4. Heine H. – Medicina omotossicologica e regolazione di base: reazione immunologica di soccorso. *La Med. Biol.* **1998**/4; 9-12.
5. Neutra M.R. – Role of M cells in transepithelial transport of antigens and pathogens to the mucosal immune system. *Am. J. Physiol. Gastrointest. Liver Physiol.* 274: G785-G791; **1998**.
6. Perugini F. – Il sistema immunitario associato alle mucose (MALT) e la Medicina Biologica. *La Med. Biol.* **1996**/4; 27-31.
7. Pilette C., Ouadrhiri Y., Godding V., Vaerman J.P., Sibille Y. – Lung mucosal immunity: immunoglobulin-A revisited. *Eur Respir J*;18 (3): 571-588 **2001**.
8. Shanahan F. – Transforming Growth Factor-β as a Regulator of Site-Specific T-Cell Inflammatory Response. *Am. J. Physiol. Gastrointest. Liver Physiol.* 278: G191–G196; **2000**.
9. Strober W.B., Marth T. – Oral tolerance. *J. Clin. Immunol.* 18: 1-30, **1998**.
10. Del Piano M. *et* Al. – In vitro Sensitivity of Probiotics to Human Pancreatic Juice. *J Clin Gastroenterol.* **2008**; 42(3): S170-173.
11. Charteris W.P. *et* Al. – Development and application of an in vitro methodology to determine the transit tolerance of potentially probiotic Lactobacillus and Bifidobacterium species in the upper human gastrointestinal tract. *J Appl Microbiol.* **1998**; 84(5):759-768.

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