



# Ther-Biotic<sup>®</sup> Complete

Broad-spectrum synergistic multispecies probiotic formula



# **Ther-Biotic® Complete**

# Broad-spectrum synergistic multispecies probiotic formula

Supporting essential intestinal microdiversity

#### **Multispecies benefits**

#### Diversity of strains for a diversity of benefits

The human intestine naturally contains many diverse species of probiotic bacteria. A multispecies probiotic formulation supports colonization and bioecological transformation of the complex gastrointestinal microenvironment. Probiotic bacteria may interact, through quorum sensing and other mechanisms, with each other to work synergistically in supporting microdiversity and its associated health benefits. Combined use of multiple species enhances growth and metabolic activity of the beneficial organisms resulting in increased nutrient consumption, a well-documented mechanism by which probiotics compete for nutrients, resulting in a favorable shift in the balance of gut microbiota towards more beneficial species.<sup>†</sup>

The 12 synergistic probiotic species in Ther-Biotic® Complete can be expected to provide additive benefits extending far beyond the actions of the individual species.

Ther-Biotic® Complete is a high-CFU, synergistic blend of 12 safe, well-studied lactic acid bacteria vital to well-being. It combines 6 colonizing Lactobacillus species, normally the predominant microorganisms in the small intestine; 4 colonizing Bifidobacterium species, healthful bacteria that vie for dominance in the colon; and 2 beneficial transient lactic acid bacteria used for millennia as starter cultures for yogurt. Each probiotic species in Ther-Biotic® Complete offers unique functions and, when combined, synergistic probiotic nutritional support for both the small and large intestines.†









#### **CAPSULES**

#### **Supplement Facts**

Serving Size 1 Capsule

robiotic Blend (25 billion CFU)	280 mg <sup>3</sup>
in a base of inulin (derived from	chicory root)
Lactobacillus rhamnosus	6.0 billion CFU*
Bifidobacterium bifidum	5.0 billion CFU*
Lactobacillus acidophilus	3.0 billion CFU*
Lactobacillus casei	2.5 billion CFU*
Lactobacillus plantarum	2.0 billion CFU*
Lactobacillus salivarius	2.0 billion CFU*
Bifidobacterium longum	1.0 billion CFU*
Streptococcus thermophilus	1.0 billion CFU*
Lactobacillus bulgaricus	1.0 billion CFU*
Lactobacillus paracasei	0.5 billion CFU*
Bifidobacterium lactis	0.5 billion CFU*
Bifidobacterium breve	0.5 billion CFU*

Other ingredients: Vegetarian capsule (hydroxypropyl methylcellulose, water), InTactic® proprietary polysaccharide complex, and L-leucine.

#### V775-06 60 vegetarian capsules V775-12 120 vegetarian capsules

#### **Suggested use**

**Adults:** 1 capsule daily with food or as directed by a healthcare professional. **Children:** As directed by a healthcare professional. **Caution:** If you are pregnant, nursing, have a medical condition, or taking prescription drugs.

**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.

#### **POWDER**

#### **Supplement Facts**

Serving Size 1/4 Teaspoon (Approx. 1 g) Servings Per Container 60

robiotic Blend (100 billion CFU) in a base of inulin (derived from c proprietary polysaccharide com	, ,
Lactobacillus rhamnosus	24.0 billion CFU*
Bifidobacterium bifidum	20.0 billion CFU*
Lactobacillus acidophilus	12.0 billion CFU*
Lactobacillus casei	10.0 billion CFU*
Lactobacillus plantarum	8.0 billion CFU*
Lactobacillus salivarius	8.0 billion CFU*
Bifidobacterium longum	4.0 billion CFU*
Streptococcus thermophilus	4.0 billion CFU*
Lactobacillus bulgaricus	4.0 billion CFU*
Lactobacillus paracasei	2.0 billion CFU*
Bifidobacterium lactis	2.0 billion CFU*
Bifidobacterium breve	2.0 billion CFU*

Other ingredients: None.

#### K-TCP 2.25 oz. (64 grams) powder

#### **Suggested use**

**Adults:** 1/4 teaspoon daily with food or as directed by a healthcare professional. **Children:** 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.

<sup>1</sup>These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

#### **High-CFU formulations**

#### 25 billion CFU per capsule 100 billion CFU per serving of powder

Healthful probiotic bacteria must survive the passage through the highly acidic stomach and then withstand bile salts and proteolytic acids found in high concentrations in the duodenum before they arrive in the more distal small intestine and colon. A high-CFU probiotic preparation helps ensure that adequate numbers of microorganisms survive to reach the distal small bowel and colon to exert their beneficial effects. Probiotics have been shown to be safe in numerous clinical trials and meta-analyses, even at very high doses.

Ther-Biotic® Complete capsules contain 25 billion colony forming units (CFU).

Ther-Biotic® Complete powder contains 100 billion colony forming units (CFU) per 1/4 teaspoon (1 gram).

#### **Hypoallergenic formula**

#### Casein and gluten free

Probiotics used in Ther-Biotic® Complete are cultured on a proprietary vegetable-based growth media free of the following common allergens: milk/casein, eggs, fish, shellfish, tree nuts, peanuts, wheat, gluten, and soybeans. Contains no artificial colors, flavors, or preservatives.

#### Inulin oligosaccharide base

Inulin is a non-digestible oligosaccharide derived from chicory root. Inulin and other non-digestible oligosaccharides, referred to as prebiotics, can be metabolized by healthful lactobacilli and bifidobacteria, stimulating their growth. Ther-Biotic® Complete contains inulin as a base ingredient in place of maltodextrin, commonly found in probiotic supplements. Inulin is a naturally derived ingredient that is generally well-tolerated by the highly sensitive person.

#### A versatile formula

#### Suitable for children or adults

Adults and children alike can benefit from Ther-Biotic® Complete through the replenishment of essential intestinal probiotic bacteria that may be depleted by the Standard American Diet. Probiotic supplementation supports healthy intestinal microbiota.¹ Ther-Biotic® Complete provides intensive microbiota support, especially useful when health concerns or drugs lead to diminished populations of these essential commensal organisms.¹

#### **Acid stable matrix**

#### Protected by InTactic®

Ther-Biotic® Complete makes use of Klaire Labs™ proprietary InTactic® technology to protect the probiotics against stomach acid, to ensure that more viable healthful bacteria reach the small intestine and colon. InTactic® is a natural, vegetarian polysaccharide of marine origin that is mixed with the probiotics during production. On exposure to stomach acid, InTactic® forms a gel-like matrix surrounding the probiotics, effectively shielding them from the acid environment. On passage into the duodenum, InTactic® breaks down to release live microorganisms into the intestinal lumen.



#### InTactic® protects viability

- Outer capsule is dissolved by the gastric acid of the stomach.
- 2. Upon exposure to gastric acid, InTactic® forms a gel-like matrix that surrounds and protects the probiotic bacteria. This action facilitates the survival of the probiotics while passing through the acidic stomach.
- In the small intestines, the InTactic® shield dissolves to release high numbers of viable intact probiotics to begin exerting their health-promoting functions.

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### **Ther-Biotic® Complete**

#### **Probiotic Species Characteristics**

#### **Bifidobacterium species**

#### Bifidobacterium bifidum

- Second most prominent species identified in breast-fed infants. The population of *B. bifidum* declines in the elderly.
- Produces an extracellular β-galactosidase which degrades lactose.<sup>†</sup>
- Produces a suite of enzymes dedicated to the metabolism of human milk oligosaccharides (HMO) †
- Efficiently degrade mucin, beneficially influencing epithelial barrier and host responses.<sup>†</sup>
- High adhesion rate and competitive binding to gastric epithelial cells.
- May affect regulation of NF-κB signaling pathways, supporting healthy epithelial cells.<sup>†</sup>
- May support recruitment of lymphocytes to the intestinal mucosa.<sup>†</sup>

#### Bifidobacterium breve

- One of the 3 *Bifidobacterium* species commonly found in the gut of neonates and breastfed infants.
- · Resistant to both bile and acid.
- Facilitates its own colonization while reducing colonization of competing microbes.
- Produces numerous enzymes that degrade or modify carbohydrates, including pullulan and amylopectin.<sup>†</sup>
- May beneficially modulate B-cell proliferation and IgA induction in intestinal cells.<sup>†</sup>
- May support healthy antibody response to an oral vaccine.†
- Administration of B. breve strains increased Actinobacteria and the ratio of Firmicutes/Bacteroidetes in the microbiota of children on a gluten-free diet.<sup>†</sup>

#### Bifidobacterium lactis

 Exceptionally hardy with unusual resistance to acid and high tolerance of oxygen.

- Worldwide it is the most widely used *Bifidobacterium* probiotic.
- Shown in experimental animals to support normal bowel movement frequency and stool consistency.
- Excellent adherence to intestinal mucin, a prerequisite for competition with other bacteria.
- May help modulate visceral sensitivity to stress.†
- In animals, supported healthy gastric permeability during NSAID use.
- Produces endopeptidases that digest proteins rich in proline, such as casein and gliadin.<sup>†</sup>
- May support cellular immunity by modulating T cells, NK cells, and the phagocytic activities of monocytes and polymorphonucleocytes.<sup>†</sup>
- May help support a healthy plasma IgG response to vaccination.
- Has beneficially modulated Bifidobacteria/enterobacteria balance in elderly individuals.<sup>†</sup>

#### Bifidobacterium longum

- Often the dominant *Bifidobacterium* species found in humans.
- Exceedingly well-adapted to the colonic microenvironment, fermenting a broad spectrum of plant-derived complex carbohydrates and polyols.<sup>†</sup>
- Cross-feeds butyrate-producing species. Supports the growth of Lactobacillus, Enterococcus, Bifidobacterium, and Bacteroides/ Prevotella in fecal cultures.<sup>†</sup>
- May preserve cell integrity against the effects of bacterial enterotoxins.<sup>†</sup>
- Plays a role in host defense mechanism and strengthen the epithelial barrier.<sup>†</sup>
- May play a role in modulating local inflammatory responses.<sup>†</sup>

#### Lactobacillus species

#### Lactobacillus acidophilus

- Widely recognized probiotic.
- Commonly added to yogurt along with the starter cultures, and highly tolerant to gastric acid, bile salts, and proteases.
- Hydrolyzes casein and gluten.<sup>†</sup>
- Ferments a variety of carbohydrates including fructooligosaccharides (FOS) and galactooligosaccharides (GOS).<sup>†</sup>
- Produces beneficial bacteriocins.†
- May support healthy cholesterol metabolism.<sup>†</sup>

#### Lactobacillus casei

- · Hardy, adaptive transient species.
- Produces proline-specific peptidases to assist breakdown of the prolinerich molecules casein and gluten.<sup>†</sup>
- Beneficially modulates IgAproducing cells, supporting innate immune responses to immunological challenges.<sup>†</sup>
- Supports a healthy balance between the Th1 and Th2 parts of the immune response.†
- Supports normal stool consistency and bowel movements in healthy individuals.<sup>†</sup>

#### Lactobacillus plantarum

- Nearly universally present in the intestinal microbiota of people consuming plant-based, Mediterranean diets; commonly found in vegetarians. Generally lacking in the gut microecology of people consuming a standard Western diet.
- Effectively metabolizes oligofructans (i.e., FOS), semi-resistant carbohydrates found in vegetables.<sup>†</sup>
- Very hardy species. High survival under simulated gastric and intestinal conditions.
- Able to assimilate cholesterol under various intestinal conditions.
- May enhance intestinal barrier function.
- Strongly attaches in vitro to human intestinal cells and can antagonize adherence of competing microbes.
- May beneficially modulateinterleukins, natural killer (NK) cells, and cytokines.†

 May beneficially modulate T cells that participate in acquired cell-mediated immunity.<sup>†</sup>

#### Lactobacillus paracasei

- Transient bacterium that colonizes the intestines when regularly consumed in the diet.
- Excellent acid-tolerance; highly resistant to pepsin and pancreatin.
- Able to ferment inulin and phleins (plant fructans).†
- Produce beneficial bacteriocin-like substances and biosurfactants.<sup>†</sup>
- Homeostasis-restoring effect in colonic mucosa.<sup>†</sup>
- Supported healthy structure of intestinal villi and colonic crypts, as well as healthy stooling patterns, in animals.
- High lactic acid production may contribute to a healthy vaginal microbiota.<sup>†</sup>

#### Lactobacillus rhamnosus

- Transient microorganism that colonizes the intestines when regularly consumed.
- Produces more peptidases than any other *Lactobacillus*.
- Modulates Th1- and Th2-type immune response markers.<sup>†</sup>
- Supports healthy fecal butyrate levels.†
- Supports normal epithelial barrier permeability and morphology in vitro.
- Supports intestinal epithelial homeostasis and modulation of cytokines in vitro.
- Supports normal bowel function in children.<sup>†</sup>

#### Lactobacillus salivarius

- Homofermentative Lactobacillus metabolizes a variety of monoand disaccharides.<sup>†</sup>
- Enhances calcium uptake by intestinal-like cells in culture.
- Supports intestinal barrier function
  in vitro
- Secretes a wide range of beneficial bacteriocins.
- May beneficially modulate interleukin production and balance.<sup>†</sup>
- May work synergistically with B. breve to modulate interleukins.<sup>†</sup>

#### **Transient microorganisms**

#### Lactobacillus bulgaricus

- Subspecies of L. delbrueckii.
- Highly adapted transient Lactobacillus closely related to L. acidophilus.
- Supported systemic immune system, NK cell activity, and viral resistance in mice.
- L. bulgaricus and S. thermophilus exhibit a symbiotic relationship in the production of beneficial exopolysaccharides (EPS).<sup>†</sup>

#### Streptococcus thermophilus

- Aerotolerant, anaerobic, grampositive coccus highly adapted to metabolizing lactose.
- Genetically facilitates casein breakdown.†
- Produces organic acids that lower pH in culture and antagonize the growth of less desirable organisms.
- Lactic acid production supported healthy bacterial balance in an animal model.
- May support healthy bowel function in infants.†

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# **Beneficial Gastrointestinal Microbiota:**Dietary Essentials for Good Health

The human gastrointestinal tract is host to the most densely populated microbial ecosystem known. Comprising more than 400 identified species and at least another 400 species unknown except by ribosomal RNA sequences, this highly complex community is integral to normal human development and health. A healthy, balanced gastrointestinal microbiota is pivotal to the immune system, regulates against intestinal disturbances, supplies nutrients and vitamins, facilitates mineral absorption, and metabolizes cholesterol and bile salts.

Microbiota within the gut include indigenous native species and healthful microorganisms that colonize the bowel and perform many vital functions for the host. Modern Western diets often lack fresh fruits and vegetables as well as fermented foods like yogurt, kimchee, and sauerkraut that provide the body with beneficial bacteria.

For example, the highly advantageous lactic acid bacterium, *Lactobacillus* plantarum, colonizes the gastrointestinal tracts of the majority of people in Africa and Asia consuming traditional diets rich in plant materials. In contrast, *L. plantarum* is found in fewer than 25% of Americans. Similar intestinal deficiencies of *L. paracasei* and *L. rhamnosus* in Western populations have been described.

Consuming a diet rich in healthful bacteria and supplementing with

probiotic formulas can help support a healthy microbiota balance.† Probiotic supplementation may be especially useful in conjunction with agents that can adversely affect the

A healthy, balanced gut microbial community is vitally important for the support and maintenance of gastrointestinal and immune system health. Probiotic supplementation can help sustain and reinforce the essential intestinal microbiota.

population of beneficial intestinal microorganisms, including during and following use of antibiotics.

Probiotics are "live micro-organisms which, when administered in adequate amounts, confer a health benefit on the host."

WHO/FAO Expert Consultation on Evaluation of Health and Nutritional Properties of Probiotics

# **Ther-Biotic® Complete**

# Broad-spectrum synergistic multispecies probiotic formula

Supporting essential intestinal microdiversity

- · High-CFU formula
- 12 live probiotic species
- InTactic® acid-stable delivery
- · Powder and capsule options
- · Hypoallergenic

#### Klaire Labs™ probiotic certification program

Klaire Labs<sup>™</sup> probiotic quality assurance commitment consists of a thorough, independent testing program that monitors and ensures the identity, activity, and hypoallergenicity of our finished products.

#### **Genetic identification by RNA ribotyping**

Bacterial strains in Klaire Labs<sup>™</sup> probiotics have undergone rRNA ribotyping, a highly reproducible, precise diagnostic genetic fingerprint, to validate the specific genetic pattern in comparison to established, documented strains.

#### Free of all major allergens

Klaire Labs™ Ther-Biotic® Complete probiotic species are cultured on growth media which are free of the following common allergens: milk/casein, eggs, fish, shellfish, tree nuts, peanuts, wheat, gluten, and soybeans. Contains no artificial colors, flavors, or preservatives. This has been, and continues to be verified by input.

#### **GMP manufacturing**

Klaire Labs™ probiotics are manufactured and packaged at a state-of-the-art, GMP-compliant facility, where filtered air systems and a humidity- and temperature-controlled environment help ensure product stability and purity.

#### **Independent laboratory analysis**

All probiotic raw materials for every batch and each finished product undergo independent laboratory analysis for probiotic enumeration and other tests to ensure products meet or exceed the company's specifications and GMP requirements.

#### Validated potency

Klaire Labs™ probiotics are formulated with sufficient overages, stored under refrigerated conditions, and shipped with temperature-control packs to ensure that, when properly stored and refrigerated, they will retain their stated potency for at least one year from the date of manufacture.

## **Contact us and order today**

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Available exclusively through licensed healthcare professionals. Free, 2-day Private Labeling with 12-bottle minimum order.

# About Klaire Laboratories™ practitioner exclusive nutraceuticals

Klaire Labs™ is a proud member of the Soho Flordis International (SFI) family of brands. The Klaire Labs™ range of high-quality nutraceuticals is designed exclusively for healthcare professionals to empower them in providing better choices for those under their care. By focusing on providing quality nutraceuticals for clinical application, Klaire Labs™ is dedicated to delivering optimal health outcomes.

Klaire Labs<sup>™</sup> products are based on a firm scientific foundation and medical research with an unwavering commitment to quality ensuring that active ingredients are selected based on purity, bioavailability, documented actions, and safety characteristics.

Produced under a strict quality management system in compliance with Good Manufacturing Practices (GMPs) and third-party quality certifications.



#### **SFI USA**

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