

Bifidobacterium longum

General Information

Bifidobacteria are anaerobes with a special metabolic pathway which allows these lactic acid bacteria to produce acetic acid as well.

Quality of food (whether babies are breast-fed) could influence intestinal flora. It has been demonstrated that there are in higher concentration in breast-fed infants' flora than in other infants.

Bifidobacteria have many beneficial health effects.

Bifidobacteria have been reported to be responsible for many different effects, including: increasing the frequency of stools and increasing the transit time.

Although the mechanism by which Bifidobacteria may alter the intestinal microflora has not been clearly determined, it is possibly related to the production of lactic acid and acetic acid (which is even more bacteriostatic than lactic acid) which may restrict the growth of potential pathogenic and putrefactive bacteria.

Probiotic properties

Resistance to gastric acidity and bile

Microorganisms chosen to be incorporated into probiotic preparations should remain alive until they reach the intestine. In order to do so, they have to pass through the gastrointestinal tract alive. Evaluation of their resistance to stomach acidity and biliary salts is one of the fundamental criteria for probiotic selection, even if tests are performed in vitro.

Stomach pH will vary during the day: the pH is 6 at breakfast, drops to 5 at lunch and over 4 at dinnertime.

Bifidobacterium longum R-175 is resistant to gastric acidity at a pH over 3.

If taken at mealtime (pH over 4), it will thus be able to pass through the stomach without being damaged.

Bile has an inhibitory effect on the growth of B. longum R-175 (70%). However, this probiotic bacteria is able to survive in high concentrations of bile and should, in vivo, reach the distal end of the small intestine without damage.

Other properties: Inhibition of intestinal pathogens and Immune modulation

Bifidobacterium longum R-175 may have beneficial preventive effects against troubles caused by Escherichia coli.

Bifidobacterium longum R-175 seems to be able to modulate some immunological parameters of inflammation as well as activate immune cells in in vitro models.

Microencapsulation:

The strain's microencapsulation increases 1000 times its resistance to acidity. It also allows probiotics to better resist to heat shock.