THE PROBO

FOR TRAINING PURPOSES ONLY



HEALTHY TRINITY BAIRY FREE CAPSULES

Three probiotic Super Strains: (1) *Lactobacillus acidophilus*, NAS strain; (2) *Bifidobacterium bifidum*, Malyoth strain and (3) *Lactobacillus delbrueckii* subspecies *bulgaricus*, LB-51 strain

Probiotic supplement to help maintain healthy intestinal flora, aid digestion and absorption

INGREDIENTS

Lactobacillus acidophilus, NAS Super Strain, *Bifidobacterium bifidum*, Malyoth Super Strain, *Lactobacillus delbrueckii* subspecies *bulgaricus*, LB-51 Super Strain, sunflower oil, gelatin, ascorbic acid and mixed tocopherols concentrated (low alpha type)

FORMAT

14, 30, 60 or 90 capsules - Dairy Free

POTENCY GUARANTEE

100% potency guarantee of each species and strain through the printed expiration date, if kept **dry** and **refrigerated**. Contains a minimum of 30 billion colony forming units (cfu) of live, active super strains per capsule:

- 5 billion cfu, Lactobacillus acidophilus, NAS Super Strain
- 20 billion cfu, Bifidobacterium bifidum, Malyoth Super Strain
- 5 billion cfu, Lactobacillus delbrueckii subspecies bulgaricus, LB-51 Super Strain

SUGGESTED USE

For adults and children over 8 years of age and older: take 1 capsule or more daily with purified unchilled water, preferably with meals.

UNIQUE FEATURES

The **Trenev Process**[®] is a unique protective oil matrix delivery system only available from Natren technology. Large numbers of bacterial cells can die due to a lack of protection from stomach acids. Natren's proprietary system micro-enrobes

each strain of bacteria. This process arrests their growth, keeps the three strains separate and noncompetitive and ensures they are shielded from harsh and corrosive stomach acids, providing virtually 100% survivability for over one hour in a pH as low as 1.8. This has been tested and validated by an independent third-party internationally acclaimed European institute. The oil is not broken down by gastric juices; it is emulsified by bile, which is secreted by the bile duct located just above the intestines. The probiotic remains potent through the acidic stomach, and is bile tolerant to flourish in the small and large intestines where it provides optimal benefit.

- ✓ Researched, formulated and manufactured by Natren Inc.
- Proprietary oil matrix delivery system
- ✓ Dairy Free
- ✓ Gluten Free
- ✓ Soy Free
- No FOS
- ✓ No GMOs**

**No genetically modified organisms- Natren does not use ingredients produced by biotechnology.

STORAGE AND HANDLING

Keep **dry** and **refrigerated** to maintain potency guarantee. Do not freeze or expose to moisture, heat or direct sunlight. Do not accept if seal is broken.

CHARACTERISTICS OF STRAINS FOUND IN HEALTHY TRINITY

- Helps the body digest carbohydrates. (1) (2) (3) (4) (5)
- Helps in the production of B vitamins. (6) (7) (8) (9)
- May help maintain normal healthy cholesterol levels. (10) (11) (12) (13) (14) (15) (16) (17) (18)
- Helps maintain and support a healthy immune system. (19) (20) (21)
- May help to promote regularity. (22) (23)
- Produces hydrogen peroxide (H₂O₂). ^{(24) (25)}

• Produces the enzyme lactase, responsible for digestion of milk sugar, lactose. (26) (27) (28) (29)(30) (31) (32) (33)

Produces acetic & lactic acids that lower the pH of the intestines.^{(6) (7)}

• Naturally helps in the digestion of protein. Mild proteolytic activity of these bacteria may aid the digestion of nutrients. The production of free-form amino acids also assists mineral absorption. ^{(2) (5) (34)}

WHY ONLY THREE STRAINS?

Probiotic bacteria do not "play nice" together. Symbiosis is not common to bacteria. Antagonism is more common. ⁽³⁵⁾ Strains that are mixed together fight



for survival and may inhibit one another and decrease each other's growth, thereby decreasing health benefits. Blends of probiotics should be made so that each strain of probiotic is kept separate from one another.

That's why Natren mixes a maximum of only three organisms, and uses their own unique and scientifically tested technology to micro-enrobe each organism in a protective oil matrix delivery system to keep each strain separate and non-competitive.

EXCLUSIVELY DISTRIBUTED BY

Ecotrend Ecologics T: 800-665-7065 E: info@ecotrend.ca www.natren.ca / www.ecotrend.ca

**Natren does not use any ingredients produced by biotechnology. ©2019 by Natren. All rights reserved. The symbol ® denotes a registered trademark of Natren. Product of the U.S.A.

References:

1. Axelsson, L. Lactic acid bacteria: Classification and physiology 2nd edition. *Lactic acid bacteria:* microbiology and functional aspects. Basel : Marcel Dekker Inc, 1998, pp. 1-72.

2. Casein degradation and amino acid liberation in milk by two highly proteolytic strains of lactic acid bacteria. Chebbi, N. B., H. Chander, and B. Ranganathan. 3, s.l. : Acta microbiologica polonica, 1976, Vol. 26, pp. 281-284.

3. De Vuyst, L. and Vandamme, Eerick J. Antimicrobial Potential of Lactic Acid Bacteria. *Bacteriocins of Lactic Acid Bacteria*. London : Springer US, 1994, pp. 91-142.

4. **Ouwehand, Arthur C.** Antimicrobial components from lactic acid bacteria. *Lactic acid bacteria: microbiology and functional aspects.* New York : Marcel Dekker Inc., 1998, pp. 139-160.

5. *Cell-wall-bound proteinase of Lactobacillus delbrueckii subsp. lactis* ACA-DC 178: characterization and specificity for β -casein. **Tsakalidou, E., R. Anastasiou, I. Vandenberghe, Jozef Van Beeumen, and G. Kalantzopoulos.** 5, s.l. : Applied and environmental microbiology, 1999, Applied and environmental microbiology, Vol. 65.

6. *Role of bifidobacteria in nutrition, medicine and technology*. **Arunachalam, Kantha D.** 10, s.l. : Nutrition research, 1999, Nutrition research, Vol. 19, pp. 1559-1597.

7. Bifidobacteria and probiotic action. [book auth.] J. Ballongue. [ed.] and A. von Wright S. Salminen. *Lactic acid bacteria*. New York : Marcel Dekkar, 1993, pp. 357-428.

8. Probiotic spectra of lactic acid bacteria (LAB). Naidu, A. S., W. R. Bidlack, and R. A. Clemens. 1, s.l. : Critical reviews in food science and nutrition, 1999, Vol. 39, pp. 13-126.

9. Rasic, Jeremija Lj. and Kurmann, Joseph A. Bifidobacteria and Their Role - Microbiological, Nutritional-Physiological, Medical and Technological Aspects and Bibliography. Basel : Birkhauser Verlag, 1983.

10. Influence of yogurt and acidophilus yogurt on serum cholesterol levels in mice. Akalin, A. Sibel, Siddik Gönç, and Selmin Düzel. 11, s.l. : Journal of dairy science, 1997, Journal of dairy science, Vol. 80, pp. 2721-2725.

11. Effect of fermented milk (yogurt) containing Lactobacillus acidophilus L1 on serum cholesterol in hypercholesterolemic humans. Anderson, James W., and Stanley E. Gilliland. 1, s.l. : Journal of the American College of Nutrition, 1999, Journal of the American College of Nutrition, Vol. 18, pp. 43-50.

12. Anticholesteremic property of Lactobacillus acidophilus yogurt fed to mature boars. Danielson, A. D., E. R. Peo Jr, K. M. Shahani, A. J. Lewis, P. J. Whalen, M. A. Amer, and Win Butler. ". s.l. : Journal of Animal Science, 1989, Journal of Animal Science, Vol. 67, pp. 966-974.

13. *Hypocholesterolemic Action of Lactobacillus acidophilus ATCC 43121 and Calcium in Swine with Hypercholesterolemia Induced by Diet.* **De Rodas, B. Z., S. E. Gilliland, and C. V. Maxwell.** <u>12, s.l. : Jou</u>rnal of dairy science, 1996, Journal of dairy science, Vol. 79, pp. 2121-2128.

14. Effects of a mixture of organisms, Lactobacillus acidophilus or Streptococcus faecalis on cholesterol metabolism in rats fed on a fat-and cholesterol-enriched diet. Fukushima, Michihiro, and Masuo Nakano. 6, s.l. : British Journal of Nutrition, 1996, British Journal of Nutrition, Vol. 76, pp. 857-867.

15. Factors to Consider When Selecting a Culture of Lactobacillus acidophilus as a Dietary Adjunct to Produce a Hypocholesterolemic Effect in Humans. Gilliland, S. E., and D. K. Walker. 4, 1990, Journal of dairy science, Vol. 73, pp. 905-911.

16. Assimilation of cholesterol by Lactobacillus acidophilus. Gilliland, S. E., C. R. Nelson, and C. Maxwell. 2, s.l. : Applied and Environmental Microbiology, 1985, Applied and Environmental Microbiology, Vol. 49, pp. 377-381.

17. Anticarcinogenic, hypocholesterolemic, and antagonistic activities of Lactobacillus acidophilus. Mitall, Brij K., and Satyendra K. Garg. 3, s.l. : Critical reviews in microbiology, 1995, Critical reviews in microbiology, Vol. 21, pp. 175-214.

18. Inhibition of Candida albicans by Lactobacillus acidophilus. Collins, E. B., and Pamela Hardt. 5, s.l. : Journal of dairy science, 1980, Journal of dairy science, Vol. 63, pp. 830-832.

19. Modulation of a specific humoral immune response and changes in intestinal flora mediated through fermented milk intake. Link-Amster, H., F. Rochat, K. Y. Saudan, O. Mignot, and J. M.

Aeschlimann. s.l. : FEMS immunology and medical microbiology, 1994, FEMS immunology and medical microbiology, Vol. 10, pp. 56-64.

20. Systemic augmentation of the immune response in mice by feeding fermented milks with Lactobacillus casei and Lactobacillus acidophilus. Perdigon, Gabriela, M. E. De Macias, S. Alvarez, G. Oliver, and A. Pesce de Ruiz Holgado. 1, s.l. : Immunology, 1988, Immunology, Vol. 63.

21. Enhancement of Immune Response in Mice Fed with Streptococcus thermophilus and Lactobacillus acidophilus. Perdigon, G., M. E. Nader de Macias, S. Alvarez, G. Oliver, and A. A. Pesce de Ruiz Holgado. 5, s.l. : Journal of dairy science, 1987, Journal of dairy science, Vol. 70, pp. 919-926.

22. Alm, L and Robinson, R. K. The therapeutic effects of various cultures-an overview. *Therapeutic properties of fermented milks.* London : Elsevier Science Publishers Ltd., 1991, pp. 45-64.

23. The effects of lactulose-sweetened yoghurt on the rate of gastric emptying and intestinal transit in healthy human volunteers. **Porkka, L., E. Salminen, and S. Salminen.** 3, s.l. : Zeitschrift für Ernährungswissenschaft, 1988, Vol. 27, pp. 150-154.

24. Ingestion of yogurt containing Lactobacillus acidophilus as prophylaxis for candidal vaginitis. Hilton, Eileen, Henry D. Isenberg, Phyllis Alperstein, Kenneth France, and Michael T. Borenstein. 5, s.l. : Annals of Internal Medicine, 1992, Annals of Internal Medicine, Vol. 116, pp. 353-357.

25. Control of the microbial flora of the vagina by H202-generating lactobacilli. Klebanoff, S. J., S. L. Hillier, D. A. Eschenbach, and A. M. Waltersdorph. 1, s.l. : Journal of Infectious Diseases, 1991, Journal of Infectious Diseases , Vol. 164, pp. 94-100.

26. Effect of viable starter culture bacteria in yogurt on lactose utilization in humans. Gilliland, Stanley E., and H. S. Kim. 1, s.l. : Journal of Dairy Science, 1984, Journal of Dairy Science, Vol. 67, pp. 1-6.

27. *Lactic acid bacteria and human health.* **Gorbach, Sherwood L.** 1, s.l. : Annals of Medicine, 1990, Annals of Medicine, Vol. 22, pp. 37-41.

28. Lactobacillus acidophilus as a Dietary Adjunct for Milk to Aid Lactose Digestion in Humans. Kim, Hyung Soo, and Stanley E. Gilliland. 5, s.l. : Journal of dairy science, 1983, Journal of dairy science, Vol. 66, pp. 959-966.

29. Influence of nonfermented dairy products containing bacterial starter cultures on lactose maldigestion in humans. Lin, Meei-Yn, Dennis Savaiano, and Susan Harlander. 1, s.l. : Journal of dairy science, 1991, Journal of dairy science, Vol. 74, pp. 87-95.

30. Strains and species of lactic acid bacteria in fermented milks (yogurts): effect on in vivo lactose digestion. Martini, Margaret C., Eric C. Lerebours, Wei-Jin Lin, Susan K. Harlander, Nabil M. Berrada, Jean M. Antoine, and Dennis A. Savaiano. 6, s.l. : The American journal of clinical nutrition, 1991, The American journal of clinical nutrition, Vol. 54, pp. 1041-1046.

31. Alleviation of lactose malabsorption from sweet acidophilus milk. McDonough, F. E., N. P. Wong, A. Hitchins, and C. E. Bodwell. 2, s.l. : The American journal of clinical nutrition, 1985, The American journal of clinical nutrition, Vol. 42, pp. 345-346.

32. Effect of Milks Inoculated with Lactobacillus acidophilus or a Yogurt Starter Culture in Lactose-Maldigesting Children. Montes, R. G., T. M. Bayless, J. M. Saavedra, and J. A. Perman. 8, s.l. : Journal of dairy science, 1995, Journal of dairy science, Vol. 78, pp. 1657-1664.

33. Improvement of Lactose Digestion by Humans Following Ingestion of Unfermented Acidophilus Milk: Influence of Bile Sensitivity, Lactose Transport, and Acid Tolerance of Lactobacillus acidophilus. **Mustapha, Azlin, Tianan Jiang, and Dennis A. Savaiano.** 8, s.l.: Journal of dairy science, 1997, Journal of dairy science, Vol. 80, pp. 1537-1545.

34. Yoghurt: Scientific grounds, technology, manufacture and preparations. Rasic, Jeremija Lj. and Kurman, Joseph A. Denmark : Technical Dairy Publishing House, 1978, Yoghurt: Scientific grounds, technology, manufacture and preparations.

35. The concept of symbiosis: A survey of terminology used in description of associations of dissimilarly named organisms. **Rusch, V. s.l.** : Microecology and Therapy, 1989, Vol. 19, pp. 33-59