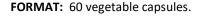
Colostrum

60 vegetable capsules / Code FE0283

New Roots Herbal Colostrum is standardised to 30% IgG and is 100% pure. It is processed at low temperature to preserve its properties and is ethically collected only after the calves have completed their nutritional needs.

It also provides a blend of 11 probiotic strains with over 1.2 billion CFU per capsule to complement the benefits of colostrum.



FORMULA

Ingredients: Bovine colostrum (from *Bos taurus*) (**milk**), bacterial culture (1,2 billion live active cells per capsule, see nutritional information) (in contact with **milk** and **soy**), inulin (from chicory root, *Cichorium intybus*), arabinogalactan (from *Larix laricina*), anti-caking agent (magnesium salts of fatty acids and silicon dioxide), antioxidant (L-ascorbic acid), potato starch, vegetable capsule (glazing agent: hydroxypropylmethylcellulose; purified water).

Nutritional information:	4 capsules
Bovine colostrum, 30% inmunoglobulins G (IgG)	1.920 mg
Lactic acid bacteria (11 strains)	4.800 mill. UFC
Human strains:	
Lactobacillus acidophilus R0418	264 mill. UFC
Bifidobacterium longum ssp. longum R0175	144 mill. UFC
Bifidobacterium longum ssp. infantis R0033	144 mill. UFC
Bifidobacterium breve R0070	144 mill. UFC
Plant strain:	
Lactobacillus plantarum R1012	192 mill. UFC
Dairy strains:	
Lactobacillus rhamnosus R0011	1.920 mill. UFC
Lactobacillus rhamnosus R1039	1.440 mill. UFC
Lactobacillus helveticus R0052	240 mill. UFC
Lactobacillus casei R0215	192 mill. UFC
Streptococcus salivarius spp thermophilus R0083	96 mill. UFC
Lactobacillus delbrueckii spp bulgaricus R9001	24 mill. UFC
Inulin	4 mg
Arabinogalactan (AOS)	4 mg
FU: Colony-Forming Unit Cells	

Cautions:

Consult a health-care practitioner before using if you have fever, vomiting, bloody diarrhoea, or severe abdominal pain; if you have a special medical condition; or if you have an immune-compromised condition (e.g. lymphoma or AIDS). Discontinue use if symptoms of digestive upset persist or worsen beyond 3 days.

Recommended daily dose:

2 capsules twice daily with water on an empty stomach. If you are taking antibiotics, take this product at least 2–3 hours before or after taking them. Consult a health-care practitioner for use beyond 8 weeks. Do not exceed the stated recommended daily dose.

Store preferably refrigerated.

Indications and uses:

- Naturally strengthens the immune system against viruses, bacteria and fungi.
- Accelerates the body's recovery.
- Can support a successful diet by aiding weight loss, fat burning and increasing lean muscle mass.
- Can help slow down the ageing process.





Colostrum

60 vegetable capsules / Code FE0283



DETAILS:

El calostro proviene de la primera leche que se produce para un recién nacido y es rico en los nutrientes que refuerzan el sistema inmune sistema.

El Calostro de SuraVitasan está estandarizado al 30% en IgG y es 100% puro. Se procesa a baja temperatura para conservar sus propiedades y es recogido éticamente únicamente una vez que los terneros hayan completado sus necesidades alimenticias.

Además aporta una mezcla de 11 cepas de probióticos con más de 1.200 millones de UFC por cápsulas para complementar el refuerzo del sistema inmune.

INGREDIENTS:

<u>COLOSTRUM</u>: bovine colostrum has a much higher content of immune factors than human colostrum. It contains a large number of immune factors and growth factors, as well as essential nutrients. It also contains protease inhibitors, which protect against deterioration of the digestive tract. Studies indicate that all species, including humans, benefit from the immunostimulatory properties of bovine colostrum.⁽¹⁻⁴⁾

Components of bovine colostrum:

- Immunoglobulins (IgA, IgD, IgE, IgG and IgM) are the most abundant immune factor found in colostrum. IgG neutralises toxins and microbes in the lymphatic and circulatory system; IgM destroys bacteria; IgE and IgD have potent antiviral properties.⁽⁵⁻¹¹⁾

- Sulphur: A mineral with multiple uses in the metabolism and as part of many structural proteins in the body.⁽¹²⁾

- **Lactoferrin**: a protein with antiviral, antibacterial, anti-inflammatory and iron binding properties that has therapeutic effects on cancer, HIV, cytomegalovirus, herpes, chronic fatigue syndrome, *Candida albicans* (thrush), *Helicobacter pylori* and other infections. Lactoferrin helps deprive bacteria of the iron they need to reproduce and releases iron into red blood cells, which improves tissue oxygenation. Lactoferrin modulates cytokine release, and its receptors are found on most immune cells, including lymphocytes, monocytes, macrophages and platelets.⁽¹³⁻¹⁷⁾

- **Proline-rich polypeptides (PRPs)**: act as hormones that regulate the performance of the thymus gland, stimulating an underactive immune system or negatively regulating an overactive immune system – as occurs in autoimmune diseases such as multiple sclerosis, rheumatoid arthritis, lupus, scleroderma, chronic fatigue syndrome or allergies.⁽¹⁸⁻²¹⁾

- **Growth factors (GFs)**: epidermal growth factor (EGF), insulin-like growth factors 1 and 2 (IGF 1 and IGF 2), fibroblast growth factor (FCF), platelet-derived growth factor (PDGF), transforming growth factors alpha and beta (TGF- α and TGF- β), and growth hormone (GH). ⁽²²⁻²⁴⁾

- **Leukocytes**: stimulate the production of interferon, which slows the replication of viruses and their penetration of cell walls.^(25,26)

- **Enzymes**: lactoperoxidase-thiocyanate, peroxidase and xanthine oxidase, which are able to oxidise bacteria by releasing hydrogen peroxide.^(18,27-29)

- Lysozyme: is a hydrolysing and immune-stimulating enzyme capable of destroying bacteria and viruses on contact.^(6,30,31)

- **Cytokines/interleukins**: regulating the duration and intensity of the immune response, interleukins are responsible for cell-to-cell communication, stimulating T-cell activity and immunoglobulin production. Interleukins have strong anti-inflammatory properties, especially in arthritic joints.^(6,32-36)

- **Trypsin inhibitors and protease inhibitors**: prevent the immune factors and growth factors in colostrum from being broken down in the gastrointestinal tract. They also suppress *Helicobacter pylori* bacteria: one of the most common causes of peptic ulcers, which account for 80% of stomach ulcers and 90% of duodenal ulcers. These inhibitors prevent bacteria from adhering to the stomach walls and may have a beneficial role in the treatment of peptic ulcers.⁽³⁷⁻³⁹⁾



60 vegetable capsules / Code FE0283

- **Lymphokines**: hormone-like peptides produced by activated lymphocytes that mediate the immune-system response.^(12,40)

- **Oligosaccharides, polysaccharides and glycoconjugates**: attract and bind pathogens (*Streptococcus, E. coli, Salmonella, Cryptosporidium, Giardia, Entamoeba, Shigella, Clostridium difficile* toxins A and B, and cholera), preventing them from adhering to or entering mucous membranes.⁽⁴¹⁻⁴⁶⁾

- **Orotic acid**: stops the formation of pyrimidine nucleotides and prevents haemolytic anaemia, which is the destruction of red blood cells. This occurs when antibodies attach to the cells, causing a reaction in the body and cell death.^(12,18)

- **Other immune factors**: some of the immune factors documented in bovine colostrum include secretory IgA, β -lactoglobulin, lactalbumin, albumin, transthyretin (prealbumin), alpha-1 antitrypsin, alpha-fetoprotein, alpha-2-macroglobulin, alpha-2-AP glycoprotein, C3, C4, and orosomucoids.^(47,48)

- Vitamins A, B12 and E: these natural vitamins are found in colostrum along with traces of the full spectrum of vitamins necessary for a strong immune system and overall good health. ^(12,49,50)

<u>PROBIOTICS</u>: New Roots Herbal's Colostrum also provides a blend of 11 probiotic strains, with over 1.2 billion CFU (2 different strains of *Lactobacillus rhamnosus, L. acidophilus, L. helveticus, L. plantarum, L. casei, Bifidobacterium longum* ssp. *infantis, B. breve, B. longum* ssp. *longum, Streptococcus salivarius ssp. thermophilus and L. delbrueckii* ssp. *bulgaricus*). It is formulated to maintain the balance of microflora in the gastrointestinal tract, which helps the body to reap more of the benefits of colostrum, resulting in a stronger and healthier immune system.^(51,52)

References:

9) Knop, Jürgen G., and Derrick Rowley. "The antibacterial efficiencies of ovine IgA, IgM, and IgG." Journal of Infectious Diseases 130.4 (1974): 368-373.

10) Feeney, Shane, et al. "The Role of Immunoglobulins from Bovine Colostrum and Milk in Human Health Promotion." Novel Proteins for Food, Pharmaceuticals, and

¹⁾ Shing, CM, et al. "Effects of bovine co-lostrum supplementation on immune variables in highly trained cyclists." J. of Applied Physiology 102.3 (2007): 1113-1122. 2) Jones, Arwel W., et al. "The effects of bovine colostrum supplementation on in vivo immunity following prolonged exercise: a randomised controlled trial." European journal of nutrition (2017): 1-10.

³⁾ Kotsis, Yiannis, et al. "A low-dose, 6-week bo-vine colostrum supplementation maintains perfor-mance and attenuates inflammatory indices following a Loughborough Intermittent Shuttle Test in soccer players." European journal of nutrition (2017): 1-15.

⁴⁾ Crooks, Christine, et al. "Effect of bovine co-lostrum supplementation on respiratory tract mu-cosal defenses in swimmers." International journal of sport nutrition and exercise metabolism 20.3 (2010): 224-235..

⁵⁾ Gapper, Leyton W., et al. "Analysis of bovine immunoglobulin G in milk, colostrum and dietary supplements: a review." Analytical and bioanalytical chemistry 389.1 (2007): 93-109.

⁶⁾ Stelwagen, K., et al. "Immune components of bovine colostrum and milk." Journal of animal science 87.suppl_13 (2009): 3-9.

⁷⁾ El-Loly, M. M. "Bovine milk immunoglobulins in relation to human health." International Journal of Dairy Science 2.3 (2007): 183-195.

⁸⁾ Rainard, P. "Bacteriostasis of Escherichia coli by bovine lactoferrin, transferrin and immunoglobulins (IgG1, IgG2, IgM) acting alone or in combination." Veterinary microbiology 11.1-2 (1986): 103-115.

60 vegetable capsules / Code FE0283

Colostrum



Agriculture: Sources, Applications, and Advances (2018): 291.

11) Barakat, Sana Hosny, et al. "Bovine Colostrum in the Treatment of Acute Diarrhea in Children: A Double-Blinded Randomized Controlled Trial." Journal of tropical pediatrics (2019).

12) Rona, Zoltan P. "Bovine colostrum emerges as immune system modulator." American Journal of Natural Medicine 3 (1998): 19-23.

13) Chierici, Roberta. "Antimicrobial actions of lactoferrin." Advances in Nutritional Research. Springer, Boston, MA, 2001. 247-269.

14) Wang, Bo, et al. "Lactoferrin: Structure, function, denaturation and digestion." Critical reviews in food science and nutrition 59.4 (2019): 580-596.

15) Donovan, Sharon M. "The role of lactoferrin in gastrointestinal and immune development and function: a preclinical perspective." The Journal of pediatrics 173 (2016): S16-S28.

16) Drago-Serrano, Maria E., et al. "Lactoferrin and peptide-derivatives: antimicrobial agents with potential use in nonspecific immunity modulation." Current pharmaceutical design 24.10 (2018): 1067-1078.

17) Dzik, Sara, et al. "Properties of bovine colostrum and the possibilities of use." Polish Annals of Medicine 24.2 (2017): 295-299.

18) Buttar, Harpal S., et al. "Health Benefits of Bovine Colostrum in Children and Adults." Dairy in Human Health and Disease Across the Lifespan. Academic Press, 2017.

19) Sochocka, Marta, et al. "New therapeutic targeting of Alzheimer's disease with the potential use of proline-rich polypeptide complex to modulate an innate immune response-preliminary study." Journal of neuroinflammation 16.1 (2019): 137.

20) Bagwe, Siddhi, et al. "Bovine colostrum: an emerging nutraceutical." Journal of Complementary and Integrative Medicine 12.3 (2015): 175-185.

21) Nitsch, Alejandro, and Fabiola P. Nitsch. "The clinical use of bovine colostrum." Journal of orthomolecular medicine 13.2 (1998): 110-118.

22) Playford, Raymond J., Christopher E. Macdonald, and Wendy S. Johnson. "Colostrum and milk-derived peptide growth factors for the treatment of gastrointestinal disorders." The American Journal of Clinical Nutrition 72.1 (2000): 5-14.

23) Pakkanen, R., and J. Aalto. "Growth factors and antimicrobial factors of bovine colostrum." International Dairy Journal 7.5 (1997): 285-297.

24) Gauthier, Sylvie F., Yves Pouliot, and Jean-Louis Maubois. "Growth factors from bovine milk and colostrum: composition, extraction and biological activities." Le Lait 86.2 (2006): 99-125.

25) Riedel-Caspari, G., F. W. Schmidt, and J. Marquardt. "The influence of colostral leukocytes on the immune system of the neonatal calf. IV. Effects on bactericidity, complement and interferon; synopsis." DTW. Deutsche tierarztliche Wochenschrift 98.10 (1991): 395-398.

26) Rona, Zoltan P. "Bovine colostrum emerges as immune system modulator." American Journal of Natural Medicine 3 (1998): 19-23.

27) Koksal, Zeynep, Ilhami Gulcin, and Hasan Ozdemir. "An Important Milk Enzyme: Lactoperoxidase." Milk Proteins (2016): 141.

28) Ma, Fengtao, et al. "Bioactive Proteins and their Physiological Functions in Milk." Current Protein and Peptide Science 20.7 (2019): 759-765.

29) Przybylska, J., E. Albera, and M. Kankofer. "Antioxidants in bovine colostrum." Reproduction in Domestic Animals 42.4 (2007): 402-409.

30) Saad, Khaled, et al. "Effects of bovine colostrum on recurrent respiratory tract infections and diarrhea in children." Medicine 95.37 (2016).

31) McGrath, Brian A., et al. "Composition and properties of bovine colostrum: a review." Dairy science & technology 96.2 (2016): 133-158.

32) Hagiwara, Katsuro, et al. "Detection of cytokines in bovine colostrum." Veterinary immunology and immunopathology 76.3-4 (2000): 183-190.

33) Yamanaka, Hitoki, et al. "Proinflammatory cytokines in bovine colostrum potentiate the mitogenic response of peripheral blood mononuclear cells from newborn calves through IL-2 and CD25 expression." Microbiology and immunology 47.6 (2003): 461-468.

34) Shing, Cecilia M., et al. "Bovine colostrum modulates cytokine production in human peripheral blood mononuclear cells stimulated with lipopolysaccharide and phytohemagglutinin." Journal of Interferon and Cytokine Research 29.1 (2009): 37-44.

35) Hung, Lan-Hsin, et al. "Hyperimmune colostrum alleviates rheumatoid arthritis in a collagen-induced arthritis murine model." Journal of dairy science 101.5 (2018): 3778-3787.

36) Thapa, B. R. "Health factors in colostrum." The Indian Journal of Pediatrics 72.7 (2005): 579-581.

37) Rao, R. K., R. D. Baker, and S. S. Baker. "Bovine milk inhibits proteolytic degradation of epidermal growth factor in human gastric and duodenal lumen." Peptides 19.3 (1998): 495-504.

38) Playford, R. J., et al. "Bovine colostrum is a health food supplement which prevents NSAID induced gut damage." Gut 44.5 (1999): 653-658.

39) Korhonen, H., et al. "Bactericidal effect of bovine normal and immune serum, colostrum and milk against Helicobacter pylori." Journal of Applied Bacteriology 78.6 (1995): 655-662.

40) Suwarba, I. G. N., et al. "The role of bovine colostrum on recovery time and length of hospital stay of acute diarrhea in infants and children: a double-blind randomized controlled trial." Paediatrica Indonesiana 46.3 (2006): 127-33.

41) Urakami, Hiroshi, et al. "Isolation and assessment of acidic and neutral oligosaccharides from goat milk and bovine colostrum for use as ingredients of infant formulae." International Dairy Journal 83 (2018): 1-9.

42) Verardo, Vito, et al. "Oligosaccharides From Colostrum and Dairy By-Products: Determination, Enrichment, and Healthy Effects." Studies in Natural Products Chemistry. Vol. 57. Elsevier, 2018. 157-178.

43) Nord, Jill, et al. "Treatment with bovine hyperimmune colostrum of cryptosporidial diarrhea in AIDS patients." AIDS (London, England) 4.6 (1990): 581-584.

44) Kim, K., et al. "In vitro and in vivo neutralizing activity of human colostrum and milk against purified toxins A and B of Clostridium difficile." Journal of Infectious Diseases 150.1 (1984): 57-62.

45) Gopal, Pramod K., and H. S. Gill. "Oligosaccharides and glycoconjugates in bovine milk and colostrum." British Journal of Nutrition 84.S1 (2000): 69-74.

46) Douëllou, Thomas, Marie-Christine Montel, and D. Thevenot Sergentet. "Invited review: Anti-adhesive properties of bovine oligosaccharides and bovine milk fat globule membrane-associated glycoconjugates against bacterial food enteropathogens." Journal of dairy science 100.5 (2017): 3348-3359.

47) Yamada, Masamichi, et al. "Identification of low-abundance proteins of bovine colostral and mature milk using two-dimensional electrophoresis followed by microsequencing and mass spectrometry." Electrophoresis 23.7-8 (2002): 1153-1160.

48) Ounis, Wassef Ben, et al. "Separation of minor protein components from whey protein isolates by heparin affinity chromatography." International dairy journal 18.10-11 (2008): 1043-1050.

49) Przybylska, J., E. Albera, and M. Kankofer. "Antioxidants in bovine colostrum." Reproduction in Domestic Animals 42.4 (2007): 402-409.

50) McGrath, Brian A., et al. "Composition and properties of bovine colostrum: a review." Dairy science & technology 96.2 (2016): 133-158.

51) Timmerman, H. M., et al. "Monostrain, multistrain and multispecies probiotics—a comparison of functionality and efficacy." International journal of food microbiology 96.3 (2004): 219-233.

52) Wei, Hua, et al. "Synergistic effects of Lactobacillus rhamnosus ZDY114 and bovine colostrums on the immunological function of mouse in vivo and in vitro." Applied microbiology and biotechnology 75.2 (2007): 427-434.