## Ai/E<sup>10®</sup> Ultra with Colostrum MFT<sup>®</sup>



## **Positioning Statement**

Ai/E<sup>10</sup> Ultra contains a unique combination of bovine colostrum ingredients—utilizing a patented process to produce Colostrum MFT and a proprietary application of antigen-infused colostrum. These ingredients boost primary immune functions and support immune cell communication by providing a concentrated spectrum of supplemental immune antibody proteins and low molecular weight molecules (under 100kDa).

### Concept

Ai/E<sup>10</sup> Ultra is a powerful immune boosting formula provided by two colostrum ingredients, Ai/E<sup>10</sup> and Colostrum MFT. The immune compounds of colostrum include special proteins and messenger molecules that work with the body's own immune system to promote optimal health and wellness. The immune-supporting proteins found in colostrum provide supplemental aid to the body's own production of antibodies and include immunoglobulins, lactoferrin, and bioactive enzymes that provide specific immunity in the gut. The messenger molecules of colostrum include cytokines that function as messengers between immune cells and other memory transfer factors. Colostrum also contains important oligosaccharides, found in human breast milk and in the first milk of cows, which support the immune system\*

Derived using a patented microfiltration process, Colostrum MFT has an extract standardized to 50 percent IgG content, making Colostrum MFT more concentrated than other colostrum products on the market today. Each daily dose of Ai/E<sup>10</sup> Ultra provides 500 times the IgG concentration of raw milk and provides critical supplemental immune support to your body's own antibodies.<sup>\*</sup>

 $Ai/E^{10}$  was developed to meet the need for a consistent and pure antigen infused whey extract. Researchers discovered that infusing the udders of pregnant cows with various antigens effectively protected newborn calves against many health problems, particularly those of the digestive tract. Researchers found that antigen infusion of pregnant cows dramatically lowered calf mortality. Later, it was discovered that feeding animals of other species (sheep and pigs) with antigen infused bovine colostrum also protected these animals from several common health problems. This development led to speculation that antigen infused bovine colostrum might offer similar benefits to humans.

Ai/E<sup>10</sup> is produced using a proprietary and patented method to ensure the highest quality and is derived from privately managed dairy herds infused with antigens shortly before parturition, utilizing a proprietary intra-mammary infusion process (U.S. Patent #4,402,938). The dairy herds are carefully controlled to avoid exposure to antibiotics, hormones, and bovine protein. The product is derived only from organically raised cows in privately managed dairy herds. Hyper-immunization is accomplished by antigen infusion of the cows' udders. This process has been shown to be the most effective method of antigenic stimulation. The final product contains only small molecular weight molecules including cytokines, peptide neurohormones, and other "transfer factors" produced through the infusion process—giving this product a unique twist on immune enhancement capabilities.\*

## **Primary Benefits**

- Provides a boost to your body's own natural immune function and activity\*
- Provides substances involved in immune cell communication including interleukins, interferon, and other memory transfer factors.\*
- Provides a broad spectrum of immune proteins, including immunoglobulin G, to supplement those naturally produced by your body.
- Provides additional low molecular weight molecules including cytokines, lactoferrin, lysozymes, defensins, and disaccharides.\*
- Supports the immune system's role in weakening and destroying harmful organisms in the gut while neutralizing toxic waste products.

## Ai/E<sup>10®</sup> Ultra with Colostrum MFT<sup>®</sup>

## What Makes This Product Unique?

- Ai/E<sup>10</sup> Ultra contains Colostrum MFT, a proprietary colostrum extract derived using a patented microfiltration process that preserves a broad spectrum of the bioactive components of bovine colostrum.
- Colostrum MFT is standardized to a 50 percent IgG content, the highest in the industry.
- The natural immunoglobulins found in Colostrum MFT are backed by peer-reviewed and published clinical tests for safety and efficacy.
- The ultra-filtered extract provides a concentrate of low molecular weight immune molecules.

## Who Should Use This Product?

Ai/E<sup>10</sup> Ultra can be used by the whole family from children to adults. Anyone who is under immune stress, exposed to an environment of unfriendly and toxic organisms, or simply interested in boosting their natural immune system can use Ai/E<sup>10</sup> Ultra. People who are hypersensitive to dairy or lactose-containing products should not use Ai/E<sup>10</sup> Ultra.\*

### **Did You Know?**

- The immunoglobulins in bovine colostrum are the same as those found in raw milk and human milk.
- Pasteurization destroys the undesirable bacteria in milk, but also denatures and inactivates the majority of the beneficial immunoglobulins and immune factors.
- Numerous factors can weaken the human immune system including age, sickness, stress, alcohol consumption, and excess physical exertion.

## **Frequently Asked Questions**

#### What is Ai/E<sup>10</sup> Ultra?

Ai/E<sup>10</sup> Ultra contains a unique combination of bovine colostrum ingredients—utilizing a patented process to produce Colostrum MFT and a proprietary application of antigen-infused colostrum. These ingredients boost primary immune functions and support immune cell communication by providing a concentrated spectrum of supplemental immune antibody proteins and low molecular weight molecules (under 100kDa).

#### What ingredients does Ai/E10 Ultra have?

Each serving of Ai/E^{10} Ultra provides 50 mg of purified bovine whey extract (Ai/E^{10}) and 500 mg of Colostrum MFT.

#### How is Ai/E<sup>10</sup> processed?

Ai/E<sup>10</sup> production begins with a privately managed herd of dairy cows. This herd is carefully controlled to avoid exposure to antibiotics, hormones, and bovine protein. Just prior to birth, pregnant cows undergo a proprietary process to help the cow produce a number of natural immune cells that will be transferred through the milk to the young calf. After birth, the excess milk is collected, separated, sterilized, filtered (dialyzed), and freeze-dried (lyophilized). Ultrafiltration is accomplished through dialysis, allowing the passage of only molecules less than 100,000 KiloDaltons (KDa). This process eliminates antibodies, large milk proteins, and other higher molecular weight substances, leaving lower molecular weight molecules that function as messenger molecules in the immune system.

#### How is Colostrum MFT manufactured?

The manufacturing process begins with selection of suitable colostrum from Grade A Dairy Farms. A proprietary manufacturing process then sequentially removes selected colostrum components, thereby concentrating the IgG fraction. The colostrum is skimmed to remove fat and acidified to remove casein, and then the resulting diluted whey fraction is ultrafiltered to remove minerals, lactose, water, and other small molecular weight substances. This material is also microfiltered to remove microbial contaminants. The product of the filtration steps is then spray-dried into a powder form. Thorough, extensive documentation is maintained and release testing is conducted to assure that only the safest and most consistent products meeting strict specifications are produced.

#### How does Ai/E10 Ultra work?

A majority of these low molecular weight molecules found in this product are involved in immune cell communication including cytokines, interleukins, and interferon. These messenger molecules are produced by the cow in response to a proprietary technology and are readily excreted into the milk. Consumption of Ai/E<sup>10</sup> Ultra has been shown to confer immunomodulatory benefits to both animals and humans.<sup>\*</sup>

#### Why is it important to modulate immune cell communication?

When functioning properly, the immune system is a formidable defense mechanism essential to maintaining optimal health. Normal immune function is affected by three primary factors: stress, inad-equate nutrient intake, and exposure to environmental pollutants and toxins. The introduction of these factors to the immune system can overload important communication pathways between immune cells. Communication between immune cells is accomplished through a number of low molecular weight molecules that are naturally present in our immune system.

#### What are the active components of Colostrum MFT?

Ai/E<sup>10</sup> Ultra contains a standardized concentrate of bioactive proteins including broad-spectrum immune-supporting microorganisms (immunoglobulins), lactoferrin, lactoperoxidase, lysozyme, growth factors, cytokines, defensins, and disaccharides processed from dairy cow colostrum. Using proprietary techniques, Colostrum MFT is standardized to a minimum of 50 percent immunoglobulin G (lgG), the highest level of these actives in the industry. Colostrum MFT also contains other naturally occurring immunoglobulins including IgA and

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<sup>\*</sup>These statements have not been evaluated by Health Canada. This product is not intended to diagnose, treat, cure, or prevent any disease.

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 ${\rm IgM.}\ {\rm IgG1}\ {\rm comprises}\ 95$  percent of the total  ${\rm IgG}\ {\rm and}\ 80$  to 85 percent of the total immunoglobulins.

#### Are there scientific studies validating Ai/E<sup>10</sup> Ultra?

Independent and internal studies substantiate the health benefits provided by Ai/E<sup>10</sup> Ultra. Colostrum MFT and its related ingredients and technologies are supported by a number of internal pre-clinical and clinical studies relating to the safety and biological effects of its proprietary ingredients. These studies include four in vivo pharmacology studies of veterinary-use products, two toxicology studies, four absorption, distribution, metabolism and excretion studies, and more than a dozen clinical studies.

#### Is Ai/E10 Ultra patented?

Colostrum MFT is supported by a number of process patents that cover the production of concentrated colostral whey fractions using minimal heat (U.S. Patent #5,670,196; 5,707,678; 5,773,000; 5,858,378). Ai/E<sup>10</sup> utilizes intra-mammary infusion with a variety of gastrointestinal antigens utilizing proprietary methods (U.S. Patent #4,402,938).

#### **Key Scientific Studies**

- Greenberg, P.D., Cello, J.P. Treatment of severe diarrhea caused by Cryptosporidium parvum with oral bovine immunoglobulin concentrate in patients with AIDS. J AIDS and Hum Retrovirol, 1996;13:348–354.
- Niess, A.M., Fehrenbach, E., Schlotz, E. et al. Effects of RRRalpha-tocopherol on leukocyte expression of HSP72 in response to exhaustive treadmill exercise. Int J Sports Med, 2002;23:445–52.
- Takahashi, N., Eisenhuth, G., Lee, I., Schachtele, C., Laible, N., and Binion, S. Nonspecific antibacterial factors in milk from cows immunized with human oral bacterial pathogens. J Dairy Sci, 1992; 75:1810–1820.

#### **Directions for Use**

Take two (2) capsules twice daily with your morning and evening meals.

### Warnings

Keep out of reach of children. If you are pregnant or lactating, consult a physician before using this product. People who are hypersensitive to dairy or lactose-containing products should not use Ai/E<sup>10</sup> Ultra\*

## Ingredients

Each 2 capsules contains:

Ai/E <sup>10</sup> Whey Extract	50 mg	
Colostrum MFT® (min. 50% IgG)	500 mg	

**Other Ingredients:** Dicalcium Phosphate, Gelatin Capsule, Microcrystalline Cellulose, Magnesium Stearate, Silicon Dioxide.

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