

Distinctive® Phytostem Edelweiss

INCI: Glycerin, Leontopodium alpinum Meristem Cell Culture, Xanthan Gum

October 19, 2010 rev.

Plant Tissue Culturing

In recent years, researchers have successfully developed active ingredients through *plant tissue culturing*. Many medicinal, nutritional and cosmetic active ingredients have been enhanced through this technology.

Resources of Nature, in partnership with global leaders in this field, can now selectively harvest cells from a plant, allowing the utilization of even the most rare plant species without harm. These cells are specially cultivated to generate cultures rich in plant stem cells and complex compounds. These specifically designed plant cell cultures act as nature-made liposomes and are fully compliant with the skin, perfect for delivering their contents of powerful antioxidants and cell regenerating molecules.

Up until recently, harvesting these highly active cells had been extremely difficult and expensive. Through advances in the most specialized processing technologies, they are now available in quantities feasible for commercialization for cosmetic applications as “**Distinctive® Phytostem Cell Ingredients**”.

Compared to standard botanical extraction methods, this highly sustainable, eco-friendly technology provides higher purity products with up to 1000 times the active molecule concentrations, and because of their highly controlled production techniques, Distinctive® Phytostem Cell Ingredients meet and exceed Certified Organic and Bio-Eco Cosmesi guidelines.



Distinctive® Phytostem Edelweiss is derived from the rare and strictly protected plant symbolic of Alpine flora, *Leontopodium alpinum*. Found in mountain ranges from the Pyrenees and Alps to the Himalayas, edelweiss has developed many defensive mechanisms to survive the extremes in climatic and environmental conditions (i.e., temperature, altitude, solar radiation and drought).

This tiny “Flower of Emperors and Kings” has long been known for its unusual beauty and was once considered the ultimate love charm. In addition, its medicinal value has been recognized for hundreds of years. Edelweiss contains potent *adaptogens*, or substances which help the body's ability to “adapt” or strengthen itself against internal or external stressors and has been used to treat and cure a variety of different ailments.

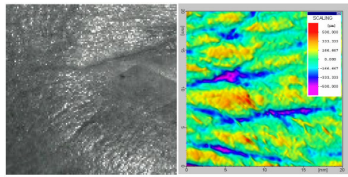
Distinctive® Phytostem Edelweiss delivers the protective properties of the edelweiss to the skin: This cultured plant concentrate is rich in stem cells with the capacity to differentiate into specialized cell types and the potential to regenerate tissue. It contains powerful antioxidants and other adaptogenic substances with the ability to protect, nurture and heal damaged cells, including high concentrations of leontopodic acids A and B, chlorogenic acid, 3,5-dicaffeoylquinic acid, phytosterols, amino acids and polysaccharides.

- ◆ Anti-Inflammatory
- ◆ Collagen Production
- ◆ Firming
- ◆ Restructuring
- ◆ Moisturizing
- ◆ Sun Protection
- ◆ Wrinkle Reduction
- ◆ Anti-Aging
- ◆ Healing Soothing
- ◆ Free Radical Scavenging

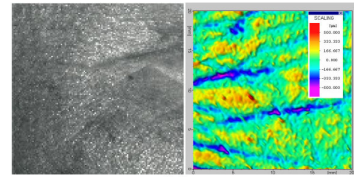
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ANTI-WRINKLE ACTIVITY



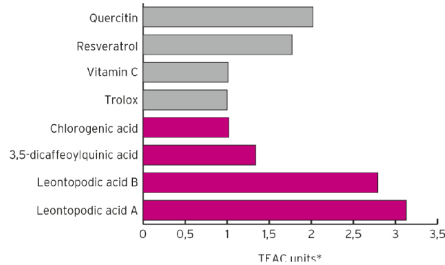
Before



After

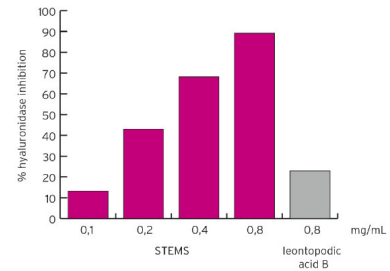
Eye contour area; 1% in a cream reduces wrinkle depth by 15% of after only 20 days of treatment

ANTI-OXIDANT ACTIVITY



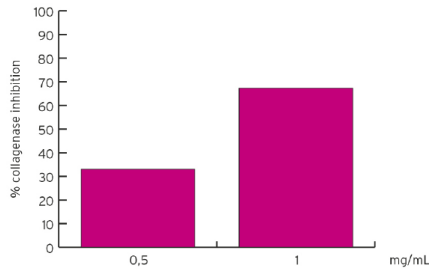
Rich in substances with antioxidant activity higher than that of common natural antioxidant benchmarks

ANTI-HYALURONIDASIC ACTIVITY



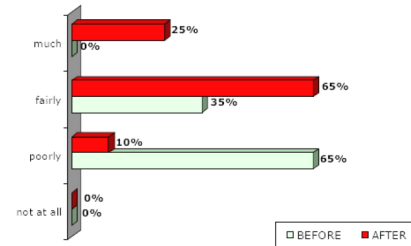
Inhibits hyaluronidase far more efficiently than purified leontopodic acid B thanks to the synergistic effect of its constituents

ANTI-COLLAGENASIS ACTIVITY



Inhibits collagenase thus maintaining skin firmness and limiting collagen degradation

MOISTURIZING ACTIVITY



Perception of skin hydration before and after application of treatment

TYPICAL PROPERTIES

- Composition
- Appearance
- Aflatoxins
- GMO
- Pesticides
- Microbiology
- Packaging
- Storage
- Shelf Life

DISTINCTIVE® PHYTOSTEM EDELWEISS

- Leontopodium alpinum cell cultures 20%, glycerin 80%, xanthan gum 0.3%
- Light brown liquid
- Absent
- Absent
- Absent
- Total microbial count: Bacteria < 100 UFC/g
- 1 kg
- Store the product in the original, well closed container, in a cool, dry area and protected from light
- 12 months

FORMULATION GUIDELINES

Use Level: 0.5 – 5.0 %
Compatible with O/W emulsions, serum. Introduce during the cooling phase. pH ≤ 6

SAFETY

Safety tested for both cosmetic and nutritional applications

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