

Radiancyl

NUTRITIVE AND FIRING NATURAL PLANT EXTRACT FOR A RADIANT SKIN AND HAIR

INCI Denomination

Propanediol, Water, Lepidium Meyenii Root Extract

Description



FAMILY: Brassicaceae
GENUS: Lepidium
SPECIES: *Lepidium Meyenii Walp*
COMMON NAMES: Maca, maca - maca, maino, ayak, chichira, ayak willku, huto – huto
BOTANICAL NAME: *Lepidium Meyenii Walp*

HABITAT

The only habitat of Maca is the inhospitable land of the high Andes of Peru and Bolivia, (**altitudes of 3800-4800 m**) where, apart from Maca very little else is able to grow. The land at that altitude has poor and rocky soil and is exposed to intense sunlight, violent winds and below freezing temperatures, but over the course of time the Maca plant learned to survive and prosper under these extreme conditions. Maca is renowned as the highest altitude growing plant in the world.

DESCRIPTION

Lepidium meyenii or Maca is an herbaceous biennial plant or annual plant.

Maca is a radish-like root vegetable that is related to the potato family, and is tuberous and spherical in form. The root itself is about three to six centimetres across and 4.7 centimetres in length. There are four recognized types of Maca Root based on the colour of the root. Root colour varies from creamy yellow or light pink to dark purple or black.

Although it is near the Equator, there is very little oxygen, very low temperature with strong winds at an altitude of more than 4000 meters above sea level. Ecologically speaking it is very harsh environment for a living thing.

It is in this harsh condition that the Maca grows. It absorbs all kinds of nutrients from the earth and synthesizes and reserves in its roots all the necessary principles to leave offspring.

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TRADITIONAL USE

The Maca root is native to Peru and its usage dates back to the Incas. It looks almost like a radish. It is most commonly known as a natural hormone balancer that can treat symptoms of menopause and sexual dysfunction in both men and women. As well as, other conditions that are associated with hormone imbalance such as depression, fatigue, insomnia & acne. It can provide the body with calcium & potassium. Research shows that it has more calcium than milk. It is the presence of 2 recently discovered compounds, macamides & macaenes that give Maca its strong aphrodisiac effect.

The vitality secret of the Inca, Maca (*Lepidium meyenii*) is a treasure from the Peruvian Andes that promotes energy and endurance. New research shows that Maca also has efficiency on the skin.



To the Andean Indians and indigenous peoples, Maca is a valuable commodity. Because so little else grows in the region, Maca is often traded with communities at lower elevations for such other staples as rice, corn, green vegetables, and beans. The dried roots can be stored for up to seven years. Native Peruvians traditionally have utilized Maca since pre-Incan times for both nutritional and medicinal purposes. It is an important staple in the diets of these people, as it has the highest nutritional value of any food crop grown there. It is rich in sugars, protein, starches, and essential nutrients (especially iodine and iron).

The tuber or root is consumed fresh or dried. The fresh roots are considered a treat and are baked or roasted in ashes (in the same manner as sweet potatoes). The dried roots are stored and, later, boiled in water or milk to make a porridge. They also are made into a popular sweet, fragrant, fermented drink called Maca chicha. In Peru even Maca jam, pudding, and sodas are popular. The tuberous roots have a tangy, sweet taste and an aroma similar to that of butterscotch.

This energizing plant is also referred to as **Peruvian ginseng** (although Maca is not in the same family as ginseng). Maca has been used for centuries in the Andes to enhance fertility in humans and animals. Soon after the Spanish conquest in South America, the Spanish found that their livestock was reproducing poorly in the highlands.

The local Indians recommended feeding the animals with Maca; so remarkable were the results that Spanish chroniclers gave in-depth reports. Even colonial records of some 200 years ago indicate that payment of (roughly) nine tons of Maca was demanded from one Andean area alone for this purpose.

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In Peruvian herbal medicine today, Maca is reported to be used as an immunostimulant; for anaemia, tuberculosis, menstrual disorders, menopause symptoms, stomach cancer, sterility (and other reproductive and sexual disorders); and to enhance memory. Maca has been growing in world popularity over the last several years due to several large U.S. marketing campaigns touting its energizing, fertility enhancement, hormonal balancing, aphrodisiac, and, especially, enhanced sexual performance properties.

Maca root actually provides the body with many healthful nutrients, including potassium and calcium (it actually has higher levels of calcium than milk). It also contains protein, carbohydrates, and fatty acids. However, it is the presence of two recently discovered compounds, macamides and macaenes that are thought to give Maca its powerful aphrodisiac effects.

In the April 2000 issue of the medical journal Urology, researchers reported that rodents fed a concentration of macamides and macaenes developed a striking increase in energy, sex drive, and stamina.

SUSTAINABLE DEVELOPMENT – SUPPORT TO LOCAL COMMUNITIES

BioTrade refers to those activities of collection, production, transformation, and commercialization of goods and services derived from native biodiversity under the criteria of environmental, social and economic sustainability.



ethiplayer

Cobiosa Bio-Trade: ethiplayer

We have the commitment of giving the highest priority to indigenous, botanical ingredients for the purpose of supporting the development of local communities and the principles of fair trade.

ethiplayer is a warranty that the products are cultivated not depreeding the Peruvian natural resources, and with sustainable collection, education and support of local communities:



www.ethiplayer.com

ETHICAL COSMETIC SUPPLIER

- ✓ Ethical work with people
- ✓ Ethical work with products
 - ✓ Ethical work with environment

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Composition:

Maca root extract is extremely rich in the amino acids, vitamins, and minerals nutrients required to drive many cellular functions in the body.

Radiancyl contains various nutritious substances:

- Proteins (in a higher quantity than at any other vegetables)
- Amino acids (18 including essential amino acids)
- Minerals (Fe, Zn, Mn, Ca, Potassium, etc)
- Vitamins (Vitamin B's including niacin)
- Active principles: Flavonoid, Terpenoid, Alkaloid, Saponin, Glucosinolate, etc.

It is characteristic of the Maca that so many substances are condensed in its root. It is not difficult to find out plants containing each one of these substances but it is difficult to discover a single plant that should contain so many valuable principles as Radiancyl.

Nutritional Profile of Dried Maca Root

Components per 10 gram		Amino Acids per 10 gram	
Proteins	1-1.4 g	Alanine	63.1 mg
Carbohydrates	6-7.5 g	Arginine	99.4 mg
Lipids	220 mg	Aspartic Acid	91.7 mg
Fibers	850 mg	Glutaminc Acid	156.5 mg
Ash	4.9 mg	Glycine	68.3 mg
Sterols	5-10 mg	Histidine	41.9 mg
Calories	32.5	HO Proline	26.0 mg
Vitamines per 10 gram		Isoleucine	47.4 mg
B2	39 mcg	Leucine	91.0 mg
B6	114 mcg	Lysine	54.5 mg
C	28.6 mg	Methionine	28.0 mg
Niacine	565 mcg	Phenylalanine	55.3 mg
Minerals per 10 gram		Proline	0.5 mg
Calcium	25 mg	Sarcosine	0.7 mg
Copper	0.6 mg	Serine	50.4 mg
Iron	1.5 mg	Threonine	33.1 mg
Iodine	52 mcg	Tryptofaan	4.9 mg
Manganese	80 mcg	Tyrosine	30.6 mg
Potassium	205 mg	Valine	79.3 mg
Sodium	1.9 mg		
Zink	380 mcg		

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Maca includes newly discovered two groups of novel compounds, the macamides and the macaenes. These agents are believed to be directly responsible for maca's sex-boosting powers.

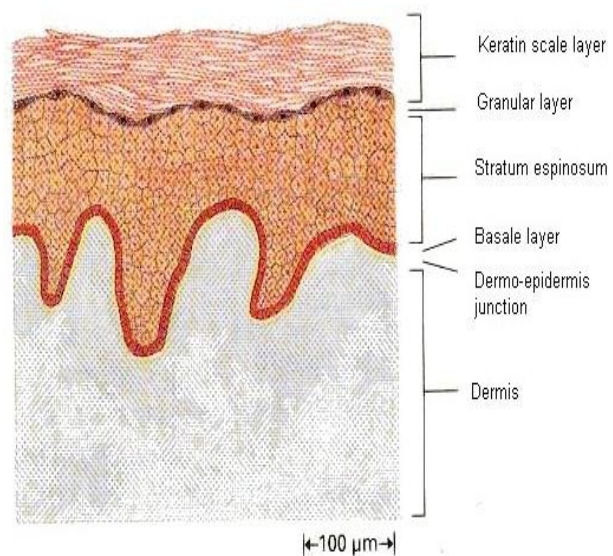
Effects in Cosmetic Products

Radiancyl as a cosmetic active ingredient can improve the growth and genesis of new cells (mitosis), specifically keratinocytes, which are the predominant cell type in the epidermis or uppermost skin layer.

As we age, we experience reduced skin renewal. There is a disorganization of the Basale Layer, the layer between the dermis and epidermis, due to a reduction in the production of collagen IV, as well as a loss of density of the lattice structure. The cohesion between the dermis and epidermis layers of the skin decreases, reducing critical biochemical functions between the tissues that are necessary for the continued production of healthy, youthful skin.

Keratinocytes are essential cells of the epidermis's basement layer and are covered with structures called Integrins. No migration could take place without Integrins. These proteins are so named because they integrate the function of the cell with the outside world. This exterior region is generally known as the Extracellular Matrix, or ECM. The ECM is composed of a wide variety of different molecules that "fill in the space" between cells. Integrins are transmembrane proteins which bind ligands found in the extracellular matrix. Since the Extra Cellular Matrix allows chemical and mechanical communication between the cells, this connection ensures that the cells of the epidermis are healthy and function properly.

epidermis's basement layer and are covered with



At the Dermo-epidermic Junction, collagen IV is one of the basement membrane's main components. Produced by keratinocytes, collagen IV gives the basement membrane a lattice structure to which other components and adjacent cells can fasten themselves. Healthy collagen leads smooth, taut skin.

At anti-aging skin care formulations, Radiancyl can improve keratinocyte production, thereby increasing collagen synthesis and improving the integrity of the skin's structural matrix.

Regarding Hair Care, Radiancyl can be used at products formulated to maintain hair thickness and fight hair loss, Radiancyl can be used to both combat hair loss and promote hair growth.

Hair growth begins in the hair bulb, at the root. And during the average three year growing phase of a typical hair, keratinocytes mitosis happens within the hair bulb – the visible result of this is hair growth. Radiancyl encourages hair growth and maintenance by allegedly promoting keratinocyte mitosis and protecting the ever-important hair bulb.

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Dosage – Solubility – Processing

A- DOSAGE:

Recommended dosage is from 3 to 5%.

B- SOLUBILITY:

Hydro-soluble.

C- PROCESSING:

RADIANCYL is compatible with most of the raw materials normally used in cosmetics, with a pH range of 5 to 8. Avoid heating over 60°C. Nevertheless, it is the duty of the formulator to make sure of the stability of the formulae with the necessary tests.

It would be preferably incorporated into cosmetic preparations during the finishing process, at the cooling phase at around 30 °C. Maintain agitation until its complete solution.

Other Data

PRESERVATIVES: None

MICROBIOLOGY: Maximum 50 CFU (not pathogenic)

TOLERANCE: Excellent.

STORAGE: Store at room temperature, dry and away from light.

If original container is opened, to avoid secondary microbiological contamination handle with special care and keep refrigerated.