Betalains and Other Nutrients Found in Nopal Fruit

Nopal cactus fruit contains a wide array of nutrients and antioxidant compounds. However, one particular group of highly bioactive phytochemicals gives Nopal its amazingly potent anti-inflammatory and antioxidant properties – **Betalains**.

The Betalains are what provides the fruit with its beautiful pinkish, red color. Ironically, this pigment was not recognized until recently as having medicinal properties. The Betalains in Nopal are unique and rare. The other places these compounds are found in nature are in Red Beets and Swiss chard. However, the concentrations of Betalains found in Nopal are significantly higher than any other source.

When plants grow in harsh environments, they develop unique and complex phytochemical and nutrient profiles as a means to protect them themselves. When we consume those plants, we benefit! Generally, the harsher the environment the more protective nutrients the plant will develop. The cactus fruits used to make Qi Nopal are grown in the volcanic, desert soils at elevations of over 7,500 feet giving this product unparalleled potency.

In addition to the abundant Betalains, the Nopal cactus has a wide variety of highly beneficial nutrients:

**Vitamins:**
Vitamin C, Beta-Carotene, Vitamin E (Alpha, Beta, Gamma and Delta – Tocopherols), Vitamin K

**Minerals:**
Calcium, Iron, Potassium, Magnesium, Manganese, Sodium, Phosphorous, Zinc, Natrium, Ferrous

**Amino Acids:**
Isoleucine, Leucine, Lysine, Methionine, Phenylalanine, Theronine, Tryptophan, Valine, Alanine, Arginine, Asparagine, Asparaginic Acid, Glutamin Acid, Glutamine, Glycine, Histidin, Serine, Tyrosine, Alpha-Aminobutyric Acid, Carnosine, Citrulline, Ornithine, Proline, Taurine, Hydroxyproline

**Polysaccharides:**
D-galactose, D-arabinose, D-xylene, D-glucose, D-mannose, L-fucose, D-glucuronic acid, D-rhamnose, Uronic acids

**Antioxidants:**
Betalains, carotenoids, lutein, Flavinoids – quercetin, kaempferol, isorhamnetin glucoside, isorhamnetin rutinoside, dihydrokaempferol, narcissi, eriodictyol, terpenoids, glucopyranosides, corchoinoside

**Sterols:**
Opuntisterol, opuntisterolside, oxypregnane, beta-sisterol, taraxerol, friedelin, methyl linoleate, oxositosterol, hydroxystigmastene, daucosterol, methyl eucomate, eucomic acid

Sources:
1. “Frontiers in Bioscience” 11, 2577-2578, September 1, 2006 Department of Obstetrics and Gynecology, University of Arizona,
2. Institute of Food Technology, Plant Foodstuff Technology, Hohenheim University, Stuttgart Germany

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