

## The New and Improved Ultimate GreenZone®

The new Ultimate GreenZone formula has been nutritionally enhanced by the addition of chia, quinoa and flax seed lignans.

Chia (*Salvia hispanica*), is an ancient seed that was a staple in the ancient Aztec diet. The name chia is derived from the Aztec word *chian*; meaning oily. The chia seed is considered to be a good source of unsaturated omega-3 and omega-6 fatty acids, dietary fiber and folic acid.<sup>1</sup> Chia seed is also a natural source of protein; its protein content is approximately 23%.<sup>2</sup> Chia also has antioxidant activity. Antioxidant compounds found in chia seeds include quercetin, kaempferol, caffeic acid and chlorogenic acids.<sup>3</sup> Animal studies show that chia may promote cholesterol levels already within the normal range.<sup>4</sup> A recent human study suggested that chia may support heart health.<sup>5</sup> Chia seeds are gluten-free.

Pronounced *keen-WAH*, quinoa (*Chenopodium quinoa*) grain has been cultivated in the Andes for thousands of years. Quinoa was an important Incan food grain, and is still an important grain in the Andes.<sup>6</sup> It has recently gained prominence in use around the world due to its high protein content and as a substitute for wheat. Quinoa is a natural source of minerals including manganese, magnesium, calcium, copper, iron and phosphorous as well as the B vitamins thiamine (B1), riboflavin (B2), pyridoxine (B6) and folate.<sup>7</sup> Quinoa is a good source of fiber and is gluten-free.

Flax seed (*Linum usitatissimum*) is rich in fatty acids, including alpha linolenic acid (ALA), an essential fatty acid that supports a variety of actions in the body. Flax seed is high in soluble fiber and a gummy material called mucilage. These substances expand when they get wet, adding bulk to stool and helping it move more quickly through the gastrointestinal tract.<sup>8</sup> The new Ultimate GreenZone features flax seeds and hulls. The hull, or outer shell of the flax kernel, is a concentrated source of phytonutrients called lignans. A specialized process removes the lignan-rich hull of the flax seed, thus highly concentrating the bioavailability of these phytonutrients. The lignan-rich hull contains a higher concentration of secoisolariciresinol diglycoside (SDG), the main phytonutrient in lignans, than traditional ground flax seed.<sup>9</sup>

In addition to these nutritious new ingredients, Ultimate GreenZone contains alfalfa juice, chlorella, spirulina, flax seed, short chain fructo-oligosaccharides (FOS), amaranth, artichoke leaves, asparagus stems, broccoli flowers, bromelain, brown rice, carrot root, chicory root, horsetail, lemongrass, licorice root, millet, papaya, parsley, pau

d'arco, spinach, acerola fruit extract, beet root extract, kale, lecithin, chlorophyll, and lemon bioflavonoids.

The new Ultimate GreenZone is a healthy, gluten-free complement to a balanced diet. It combines wholesome ingredients that are easily absorbed and metabolized for optimal nutritional benefits.

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1. Justo, M. B., Alfaro, A. D., Aguilar, E. C., Wrobel, K., Guzman, G. A., Sierra, Z. G., and Zanella, Vda M. [Integral bread development with soybean, chia, linseed, and folic acid as a functional food for women]. *Archivos Latinoamericanos de Nutricion* 2007;57(1):78-84.
2. Bushway, A. A., Belyea, P. R., and Bushway, R. J. Chia seed as a source of oil, polysaccharide, and protein. *Journal of Food Science* 1981;46(5):1349-1350.
3. Reyes-Caudillo, E., Tecante, A., and Valdivia-López, M. A. Dietary fiber content and antioxidant activity of phenolic compounds present in Mexican chia (*Salvia hispanica* L.) seeds. *Food Chemistry* 2008;107(2):656-663.
4. Ayerza, R., and Coates, W. Effect of dietary alpha-linolenic fatty acid derived from chia when fed as ground seed, whole seed and oil on lipid content and fatty acid composition of rat plasma. *Annals of Nutrition and Metabolism* 2007;51(1):27-34.
5. Vuksan V, Whitham D, Sievenpiper JL, Jenkins AL, Rogovik AL, Bazinet RP, Vidgen E, Hanna A. Supplementation of conventional therapy with the novel grain Salba (*Salvia hispanica* L.) improves major and emerging cardiovascular risk factors in type 2 diabetes: results of a randomized controlled trial. *Diabetes Care*. 2007 Nov;30(11):2804-10.
6. Ma, W. W., Heinstein, P. F., and McLaughlin, J. L. Additional toxic, bitter saponins from the seeds of *Chenopodium quinoa*. *Journal of Natural Products* 1989;52(5):1132-1135.
7. Food Scout: *Quinoa*. 2008. Available at: <http://www.foodscout.org/food/quinoa.html> Accessed July 21, 2008.
8. *Pharmacist's Letter/Prescriber's Letter Natural Medicines Comprehensive Database*. 8<sup>th</sup> ed. Stockton, CA: Therapeutic Research Faculty; 2007
9. Printed information from raw material supplier.

**Health Sciences**

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