Ingredient Spotlight: Broccoli Seed Extract

Findings released from a 2021 annual Favorite Veggie Survey announced that broccoli was awarded the top spot as America's favorite vegetable (1). And with the numerous health benefits associated with the vegetable, that's a good thing.

Broccoli: The Road from Unknown Origin to a Remarkable Discovery

Broccoli (Brassica oleracea var. italia) is a member of the Brassica gene family, including cabbage, mustard, watercress, kale, and cauliflower (2).

The vegetable is characterized by its green, purple, yellow, or white flowers. Interestingly, the origins of broccoli appear quite murky; however, it may have first diversified from its closely related brassica plants in southern Italy (3).

Rich in vitamin C, minerals, polyphenols, carotenoids, and chlorophyll, broccoli also contains compounds known as glucosinolates, of which approximately 90% is glucoraphanin. When broccoli is cut or chewed, glucoraphanin is converted to another, more interesting molecule, sulforaphane.

Indeed, the scientific consensus of broccoli as a food "powerhouse" began 30 years ago when the laboratory of famed Johns Hopkins biochemist Dr. Paul Talalay first isolated sulforaphane from broccoli.

But mere discovery alone of sulforaphane doesn't explain how this discovery was hailed as one of the top 100 scientific discoveries of the 20th century by Popular Mechanics (4).

Sulforaphane: A Potent Cellular Signal for Detoxification and Antioxidant Protection

Talalay's group published numerous studies documenting sulforaphane's ability to stimulate enzymes responsible for cellular detoxification and antioxidant protection.

Working methodically from cells to laboratory animals to humans, they've reported sulforaphane's unmatchable potency to induce "Phase II" detoxification enzymes and its conversion by the gut microbiome (5-7).

Through technological advances, sulforaphane concentration and detoxifying properties are enhanced by carefully selecting young broccoli sprouts and seeds. Subsequently, long-term detoxification and antioxidant protection demonstrate the superior benefit of this enhanced detoxification by sulforaphane.

These sustained benefits compare favorably with essential dietary antioxidants such as vitamin C

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and E, which may rapidly oxidize by free radicals.

Recharge NAD for Cellular Energy and Detoxification

The cellular protective benefits of broccoli-derived sulforaphane combine perfectly with the other bioactives in Recharge NAD™. For example, NADH is required for cellular energy and may provide healthy aging benefits beyond its vitamin B3 (niacin) function.

Recharge NAD also features the adaptogenic herb astragalus, fisetin, an increasingly investigated molecule in aging research, and comprehensive cellular protection by vitamin E-rich tocotrienols.

References

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