

## Wasabia Detox Plus

### DESCRIPTION

Wasabia Detox Plus is a unique combination of true Japanese wasabi high in long chain isothiocyanates (ITCs) with a specially standardized broccoli sprout concentrate of sulforaphanes to support the liver's natural detoxification processes.†

### FUNCTIONS

As the body's main detoxification organ, the liver is responsible for removing all potentially detrimental molecules such as alcohol, drugs and air pollutants from the blood stream. This detoxification process occurs in 2 phases, known as Phase I and Phase II. During Phase I, enzymes such as cytochrome P-450 mixed-function oxidases are activated, causing potential toxins to be transformed by oxidation, reduction or hydroxylation into biological intermediates. Phase II enzymes, including quinone reductase and glutathione S-transferase then cause these intermediates to be further transformed into substances that are less toxic, water-soluble, and can be safely eliminated. Supporting phase II enzymes such as quinone reductase and glutathione S-transferase is a critical part of maintaining normal liver health.

Certain naturally occurring compounds have the ability to stimulate these detoxification pathways, including a group of compounds called isothiocyanates (ITCs). Found primarily in cruciferous vegetables, including broccoli and cauliflower, ITCs are recognized for the important roles they play in the body's antioxidant and normal detoxifying processes.† Wasabia Detox Plus provides important ITCs from both Wasabia japonica and broccoli sprouts. Wasabi is a familiar green condiment in dishes that contain sushi and sashimi. While many people are familiar with the condiment's spicy, pungent taste, most "wasabi" that is served in restaurants is often not true Japanese wasabi, but instead, American horseradish mixed with starch and coloring. Wasabia japonica (true wasabi) is much different from American horseradish and is generally not found outside of Japan. Wasabia, a member of the cruciferous vegetable family, contains long chain ITCs - forms of ITCs that are thought to be 10-25 times more potent in the detoxification process than most ITCs found in cruciferous vegetables. These long chain ITCs are unique to Wasabia and are not commonly found in other cruciferous vegetables. The Wasabia used in this formula is Sawa™ Wasabia japonica, and is hydroponically grown under highly controlled conditions. This results in a consistent and pure material. Sulforaphane, an ITC found in broccoli, has been studied for its use in supporting normal detoxification processes and helping to maintain antioxidant protection of the body.† Sulforaphane has been found to significantly increase the activity of Phase II enzymes. Recent evidence indicates that sulforaphane can also play important roles in gastrointestinal health as well as helping to support normal cell growth and division.† Among cruciferous vegetables, broccoli sprouts have been found to contain some of the most concentrated levels of sulforaphane.

### INDICATIONS

Wasabia Detox Plus may be a useful dietary supplement for individuals wishing to support the liver's normal detoxification processes.

### FORMULA (#99245)

Each 2 vegetarian capsules contain:

Wasabia japonica (rhizome) .....400 mg  
 (Providing 4800 mcg of isothiocyanates as Allyl ITC, 3-butenyl ITC, and 4-pentenyl ITC)  
 Broccoli powder (sprout) .....400 mg  
 (BroccoPhane™) (Standardized to 1,600 mcg of sulforaphane)

BroccoPhane™ is a trademark of Cyvex Nutrition  
 Sawa™ is a trademark of New Zealand Wasabi, Ltd.

### SUGGESTED USE

Adults take 2 capsules daily with meals or as directed by a healthcare professional.

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### SIDE EFFECTS

No adverse side effects have been reported.

### STORAGE

Store in a cool, dry place, away from direct light. Keep out of reach of children.

### REFERENCES

Morimitsu Y, Nakagawa Y, Hayashi K, Fujii H, Kumagai T, Nakamura Y, Osawa T, Horio F, Itoh K, Iida K, Yamamoto M, Uchida K. A sulforaphane analogue that potently activates the Nrf2-dependent detoxification pathway. *J Biol Chem*. 2002 Feb 1;277(5):3456-63.

Galan MV, Kishan AA, Silverman AL. Oral broccoli sprouts for the treatment of *Helicobacter pylori* infection: a preliminary report. *Dig Dis Sci*. 2004 Aug;49(7-8):1088-90.

Gao X, Talalay P. Induction of phase 2 genes by sulforaphane protects retinal pigment epithelial cells against photooxidative damage. *Proc Natl Acad Sci U S A*. 2004 Jul 13;101(28):10446-5.

Singh SV, Herman-Antosiewicz A, Singh AV, Lew KL, Srivastava SK, Kamath R, Brown KD, Zhang L, Baskaran R. Sulforaphane-induced G2/M phase cell cycle arrest involves checkpoint kinase 2-mediated phosphorylation of cell division cycle 25C. *J Biol Chem*. 2004 Jun 11;279(24):25813-22.

Manesh C, Kuttan G. Effect of naturally occurring allyl and phenyl isothiocyanates in the inhibition of experimental pulmonary metastasis induced by B16F-10 melanoma cells. *Fitoterapia*. 2003 Jun;74(4):355-63.

Morimitsu Y, Hayashi K, Nakagawa Y, Horio F, Uchida K, Osawa T. Antiplatelet and anticancer isothiocyanates in Japanese domestic horseradish, wasabi. *Biofactors*. 2000;13(1-4):271-6.

**For more information on Wasabia Detox Plus™ visit [douglaslabs.com](http://douglaslabs.com)**

† These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

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