BergaVinTM Cardiovascular and Lipid Metabolism Support*

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BergaVin[™] features the trademarked ingredients Bergavit[®] 40 bergamot and Vinia[®] red grape powder with research demonstrating their potential to support cardiovascular health.* The polyphenols and flavonoids in bergamot and red grapes support healthy cholesterol metabolism.* These ingredients also support antioxidant status and promote a healthy inflammatory response.*

Ingredient Highlights*

- 400 mg of bergamot as Bergavit[®] 40, standardized to contain 39% flavonoids to promote normal cholesterol metabolism*
- 200 mg of Vinia[®] red grape powder providing the whole matrix of red grape nutrients and polyphenols to support antioxidant status*

Bergamot (Bergavit[®] **40)** (*Citrus bergamia*) is a citrus plant that grows almost exclusively in the narrow coastal Calabria region in southern Italy.^{1,2} Bergamot supports cardiovascular health and promotes normal lipid metabolism.* The potential health benefits of bergamot is likely to be derived from its unique profile of phenolic compounds, such as neoeriocitrin, neohesperidin, naringin, rutin, neodesmin, rhoifolin, and poncirin.^{1,2}

Naringin has been shown to support the maintenance of a normal inflammatory balance, whereas neoeriocitrin and rutin have been found to exhibit a strong capacity to guench free radicals and support healthy low-density lipoprotein (LDL) cholesterol levels.*1,2 Bergamot also contains the neohesperidosides hesperetin and naringenin, which have a 3-hydroxy-3-methylglutaryl moiety with a potential to inhibit 3-hydroxy-3-methylglutaryl coenzyme A reductase (the rate-limiting enzyme responsible for cholesterol synthesis) to support healthy cholesterol levels.*1,2 This may occur due to binding bile acids and increasing blood and liver cholesterol turnover rates.¹ The polyphenols in bergamot may activate adenosine monophosphate-activated protein kinase to support healthy glucose and lipid metabolism.*³ These polyphenols may also inhibit pancreatic cholesterol ester hydrolase, which catalyzes the hydrolysis of sterol esters into sterol and fatty acids, and when disrupted can improve serum lipid profiles.³ Bergamot may also reduce the oxidation of LDL cholesterol to support cardiovascular health.*³

In a study that included both animal models and human studies, a rat model of diet-induced hyperlipidemia and a randomized controlled trial of 237 human patients with hypercholesterolemia were orally given 500 mg of bergamot with 50 mg of ascorbic acid for 30 days. These studies resulted in a significant reduction in the risk of cardiovascular disease due to the improvement in lipid markers and reduced glucose levels.¹ A systematic review of the effect of bergamot on lipid profiles in the human studies found that 75% of the 12 studies included had demonstrated a significant decrease in total cholesterol (range, 12.3% to 31.3%), triglycerides (range, 11.5% to 39.5%), and LDL cholesterol (range, 7.6% to 40.8%). These studies also demonstrated a dose-dependent effect. From the studies included, doses ranged from 150 mg to 1,500 mg for a period ranging from 1 to 6 months.²

Benefits*

 Supports cardiovascular health

O designs for health[®]

- Supports healthy cholesterol metabolism
- Supports healthy blood pressure
- Promotes healthy glucose metabolism
- Supports antioxidant status
- Promotes a healthy inflammatory response

Supplement Facts

Serving Size 2 capsules Servings per container 30

Amount Per Serving	% Daily Valu	e
Bergamot (Bergavit® 40) (<i>Citrus aurantium L. var. be</i> . (standardized to contain 39		*
Red Grape Powder (Vinia®) (<i>Vitis vinifera</i>)(cells)	200 mg	*
*Daily Value not established.		

Other Ingredients: Dicalcium phosphate, vegetable stearate, microcrystalline cellulose, silicon dioxide.

Another systematic review found that bergamot juice supplements led to a reduction of plasma lipids and an improvement of the lipoprotein profile in patients with moderate hyperlipidemia. These three clinical studies included doses that ranged from 500 mg/day to 1,000 mg/day for a period ranging from 30 days to 6 months.⁴

In a clinical trial of 80 subjects with moderate hypercholesterolemia, participants took 550 mg to 600 mg of Bergavit[®] 40 daily for 6 months, which is the bergamot in BergaVin[™] containing 150 mg of bergamot flavonoids. Participants experienced a decrease in total cholesterol, LDL cholesterol, and triglycerides, and an increase in high-density lipoprotein (HDL) cholesterol levels. The most significant reduction was seen in those with the highest baseline levels of cholesterol. The results demonstrated a shift in LDL pattern with a 67% reduction in dense LDL and a 20% increase in large LDL. Bergavit[®] also helped to decrease carotid intima-media thickness by 25%.⁵

Red Grape Powder (Vinia®) is a complex of red grape cells from red grape skins, flesh, pulp, and seeds, providing the full spectrum of nutrients and polyphenols found in red grapes and wine. This includes the following polyphenols: resveratrol, tannins, quercetin, catechins, and anthocyanins. An in vitro study analyzed the polyphenol content of red grape cells complex and its impact on human plasma. Its polyphenol composition was similar to that of agricultural red grapes but contained twice the level of resveratrol. The study also demonstrated that red grape cells had high bioavailability with six times higher the solubility than resveratrol from polygonum, and antioxidant and anti-inflammatory properties with the potential for a strong inhibitory effect on LDL oxidation.⁶

The polyphenols in Vinia[®] may promote redox balance and a healthy inflammatory response that potentially may be occurring through the activation of the Nrf2 pathway.⁷⁻¹¹ This may benefit dysfunction associated with increased oxidative stress and chronic inflammation, such as an increased risk of cardiovascular disease and metabolic disorders. Resveratrol, one of the main polyphenols in Vinia[®], has demonstrated its potential to support antioxidant status, metabolic health, and cardiovascular health in clinical studies.^{*12-14}

Rats with metabolic syndrome were given a high-fat diet to consume. Supplementation with red grape cell powder attenuated increases in blood pressure, triglycerides, and insulin.¹⁵ A randomized, controlled trial found that the consumption of 200 mg or 400 mg of red grape cell powder for 12 weeks led to an improvement in endothelial function, flow-mediated dilation, and blood pressure, and a significant decrease in lipid peroxidation compared to the placebo group.¹⁶ A clinical trial also found that supplementing with 1,000 mg of red grape cell powder for 12 weeks led to a reduction in hemoglobin A1c and improved insulin sensitivity in patients with type 2 diabetes.¹⁷

Recommended Use: Take 2 capsules daily with a meal or as directed by your health-care practitioner.

For a list of references cited in this document, please visit: http://www.designsforhealth.com/techsheet-references/bergavin-references.pdf

> Vinia[®] is a registered trademark of BioHarvest, Ltd. Bergavit[®] 40 is a registered trademark of BIONAP Srl.

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