

# Grape Leaf Extract

## Scientific Names:

*Vitis vinifera* L. [Fam. Vitaceae]

## Forms:

Grape Leaf Extract standardized to polyphenols and/or quercetin content

## Traditional Usage:

- Anti-inflammatory
- Antioxidant
- Bone and Joint Conditions
- Bruises
- Chronic Venous Insufficiency
- Circulatory Disorders
- Diarrhea
- Edema
- Fever (poultice externally)
- Free Radical Related Diseases
- Headaches (poultice externally)
- Hemorrhoids
- Hepatitis
- Lymphatic Disorders
- Lymphoedema
- Premenstrual Syndrome (PMS)
- Rheumatism (poultice externally)
- Sore Breasts (poultice externally)
- Stomachaches
- Swollen Ankles
- Thrush
- Varicose Veins
- Vascular Disorders
- Venous Insufficiency
- Water Retention

## Overview:

Red grapevine leaves, *Vitis vinifera* L. [Fam. Vitaceae], are rich in flavonoids including anthocyanins, oligomeric proanthocyanidins (OPCs), quercetin and isoquercitrin. Knowledge of the medicinal properties of grape vine (*Vitis vinifera*) can be traced far back in history. In Europe, the leaves of *Vitis vinifera* are documented in the literature of traditional medicine for their astringent and homeostatic properties where they are utilized in the treatment of diarrhea, bleeding, haemorrhoids, varicose veins and other circulatory diseases. Native North American indigenous peoples used the leaf tea of related fox grape (*Vitis labrusca* L.) for treating diarrhea, as well as for hepatitis, stomachaches and thrush and externally poulticed the wilted leaves for sore breasts, rheumatism, headaches and fevers. Other closely related *Vitis* species have been used similarly. Clinical trials have proven the efficacy of preparations made from *Vitis vinifera* leaf in the treatment of venous insufficiency. Once-daily doses of 360 and 720 mg of leaf extract were confirmed to be safe and effective in the treatment of mild chronic venous insufficiency, reducing significantly lower leg edema and circumference whilst improving other chronic symptoms to a clinically relevant extent. The edema reduction is at least equivalent to that reported for compression stockings and/or other edema-reducing agents. The higher dose was as well tolerated as the lower dose but resulted in a slightly greater and more sustained improvement. All subjective symptoms (tired, heavy legs, sensation of tension, tingling and pain in the legs) were statistically significantly improved. It has been suggested that grape vine leaf extracts and teas, being similar to red wine in flavonoid content, may be effective in decreasing the risk of atherosclerosis and ultimately coronary heart disease mortality. Quercetin, found abundantly within the leaves, is known to possess anti-cancer, anti-tumor, and other important therapeutic activities of significant potency and low systemic toxicity.

### **Active Ingredients:**

Grape leaves contain a wide range of polyphenol flavonoids including flavon(ol)-glycosides and glucuronides, quercetin-3-O-beta-D-glucuronide (main flavonoid), isoquercitrin, anthocyanins, oligomeric proanthocyanidins, catechin, epicatechin monomers and dimers, gallic acid and astilbine. The phytoalexin trans-resveratrol, another polyphenolic substance belonging to the stilbene group, can also be found in grape vine. In grape vine leaves, also organic acids appear, mainly malic and oxalic acid but also tartaric acid; citric, fumaric and succinic acid can be detected in the leaves only in traces. Compared to the grape berries, grape leaves are richer in the content of carotenoids and vitamin C. According to the French Pharmacopeia, the dried leaves of red vine should contain at least 4% of total polyphenols and 0.2% of anthocyanins. Lardos and Kreuter 2000, explain the differences between the different flavonoids as follows: All flavonoids are characterized as having a carbon frame, which is made up of three acetate units (C6) and one phenylpropane unit (C6-C3). Quercetin and kaempferol belong to the flavons, while catechins, proanthocyanidins and anthocyanidins belong to the flavans, both sub-groups of flavonoids.

### **Suggested Amount:**

The recommended dosage for Grape Leaf Extract standardized for quercetin and isoquercetin content is 360-720 mg daily for at least six weeks, based on clinical trials. In studies reporting significant results, the long-term daily dosage was 360 mg for treating venous insufficiency. Lower dosages (ca. 30-50mg daily) may be used in products containing other vascular strengthening extracts, or products containing grape leaf extract standardized to contain 90% polyphenols and 5% astilbine. Clinical studies on similar flavonoid extracts indicate that 300 mg per day can quickly repair broken, leaky blood vessels and thus alleviate water retention and edema (puffy eyes, swollen feet, bloating associated with premenstrual syndrome, etc.).

### **Drug Interactions:**

Flavonoids tend to reduce blood platelet stickiness in a beneficial way and therefore may reduce the dosage required for blood thinners. Individuals taking blood thinners should consult with their physician prior to commencing supplementation.

### **Contraindications:**

Flavonoids tend to reduce blood platelet stickiness and therefore individuals taking blood thinners should consult with their physician prior to commencing supplementation. Pregnant and lactating women should notify their doctor prior to taking flavonoid supplements, or should get their flavonoids from natural food sources for maximum safety.

### **Side Effects:**

None known.

### **References:**

Kiesewetter H, Koscielny J, Kalus U, Vix JM, Peil H, Petrini O, van Toor BS, de Mey C. 2000. Efficacy of orally administered extract of red vine leaf AS 195 (*folia vitis viniferae*) in chronic venous insufficiency (stages I-II). A randomized, double-blind, placebo-controlled trial. *Arzneimittelforschung* 2000 Feb; 50(2): 109-17.

Lardos, A. and M. H. Kreuter. 2000. Red vine leaf. Ed. by Dr. M. H. Kreuter, Head of R & D Department, Phytopharm. and Phytochem. Products, Flachsmann AG, Butzenstrasse 60, 8038 Zurich, Switzerland. Published by Ask Intercity Pharmaceuticals and Extracts: <http://www.askic.co.jp/vitis-vinifera/vitis-vinifera-Full-article.htm>.

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