

FOR LEGS WELLNESS



HEALTH - FOOD

# RED VINE LEAF

STANDARDIZED RED VINE LEAVES EXTRACT

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.

Please note that the physiological activity of the ingredient described herein is supported by the referenced clinical trial reports. Marketers of finished products containing the ingredient described herein are responsible for determining whether the claims made for such products are lawful and in compliance with the laws of the country in which they will market the products.

## WHAT IS RED VINE LEAF?

**RED VINE LEAF** is a standardized dry extract from the leaves of specific varieties of vines (*Vitis vinifera* L.) **capitalizing from the traditional use of red vine leaves in France for healthy legs.**

## SPECIFICATIONS

**RED VINE LEAF** is standardized to contain:  
≥0.3% of anthocyanins by spectrophotometry.  
≥3.0 of total flavonoids by HPLC

There is currently only one pharmacopoeia monograph of red vine leaves, which was included in the 10th edition of the French Pharmacopoeia (Ph. Franc. X), published in 1996.<sup>1</sup> The standardization only uses colorimetric determinations (Folin method), and is currently considered insufficient for a proper characterization of the extracts due to its lack of specificity.<sup>2</sup>

## RECOMMENDED DOSE

**RED VINE LEAF** is a red to dark red colored powder used in nutritional supplements.  
Recommended daily dose: 360 mg

### References

<sup>1</sup> Pharmacopée française (PF10), 10ème édition. Paris: Agence Française de sécurité sanitaire des produits de santé. Jan. 1996, Monograph Vigne Rouge.

<sup>2</sup> Schenider, E.; von der Heydt, H.; Esperester, A. Evaluation of polyphenol composition in red leaves from different varieties of *Vitis vinifera*. *Planta Medica* 2008, 74, 565-572.

<sup>3</sup> Lee, D. *Nature's Palette. The Science of Plant Color.* University of Chicago Press, Chicago and London, 2007, pgg.270-295. 2.

<sup>4</sup> Boucheny, A.; Brum-Bousquet, M. Contribution a l'étude de la feuille de vigne rouge. *Plantes Médicinales et Phytothérapie* 1990, 24, 179-192.

## WHAT MAKES RED VINE LEAF UNIQUE?

Indena's **RED VINE LEAF** is extracted from the leaves of selected French vine varieties and is **rigorously standardized based on the Indena30® quality system.**

Aqueous extracts from red vine leaves have **traditionally been used for healthy legs in France.**

### DID YOU KNOW?

The color change of falling leaves in autumn has fascinated not only poets and artists, but also scientists, and the biochemical bases of the process have been largely clarified.<sup>3</sup>

As leaves age, **chlorophyll is removed in order to save nitrogen**, a precious element that most plants cannot fix from the atmosphere.

The disappearance of the green pigment makes visible the yellow color of **xanthophylls**, a class of oxygenated carotenoids that accompany chlorophylls in chloroplasts, the site of photosynthesis.

In some plants, to protect the "retreat" of chlorophyll from the leaves, pigments capable of absorbing visible and UV light are produced. **In the leaves that turn red, pigmentation is due to anthocyanins.**

Other pigments might also be involved, like in ginkgo, whose falling leaves assume a bright yellow color because of the accumulation of 6-hydroxykynurenic acid, a fluorescent pigment that absorbs UV radiation and emits yellow light.<sup>3</sup>

Normally, green grape leaves do not contain significant amounts of anthocyanins,<sup>4</sup> but during maturation, compounds of this type, and especially cyanidin-3-monoglucoside and peonidin-3-monoglucoside, are increasingly produced. In some varieties, their accumulation is so marked that the leaves turn deep-red. **Remarkably, these anthocyanins are different from those contained in berries, where malvidin generally predominates, and their profile, including the level of acylation, is specific to plant variety.**<sup>2,3</sup>



us.indena.com

