

## VITIKARINE COMPLEX Lipid complex anti-aging / A / O V / E /

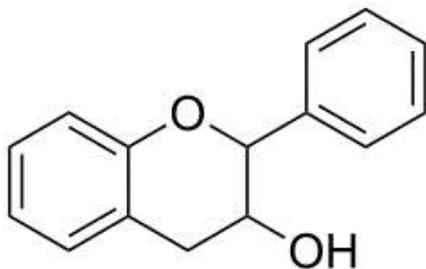
### OVERVIEW

VITIKARINE COMPLEX of BIOGRÜNDL is a naturally origin fatty base to include in emulsions, ointments or lipsticks for regeneration and biostimulation of all skin types, specially, of those very dry, dehydrated in depth, aged or subjected to extreme environmental conditions.

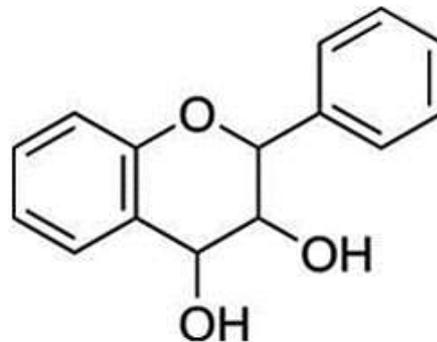
The composition includes the following active ingredients:

- **Grapeseed oil**, obtained from the seeds of the grape (*Vitis vinifera*), is very rich in polyunsaturated fatty acids (F vitamin), specially linoleic acid, containing between 55 and 70%. It is removed by cold-pressure that also drags other seed components, such as polyphenols and trans-resveratrol.

Polyphenols are oligomeric proanthocians (OPC), wich are derivatives from catechines (flavan-3-ol) and leucoanthocians (flavan-3,4-diol) (Figures 1. and 2.).



**Figure 1.** Flavan-3-ol

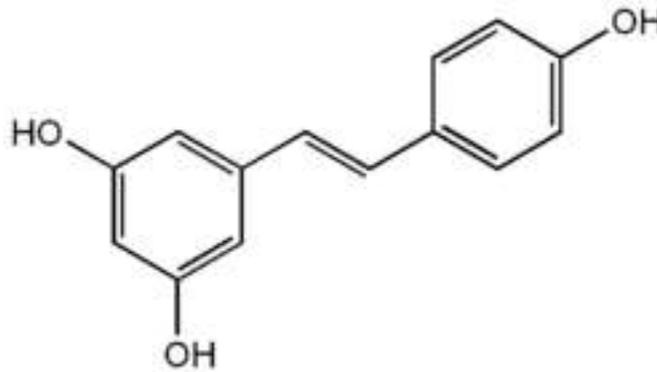


**Figure 2.** Flavan-3,4-diol

The most outstanding action of these bioflavonoids is its strong reducer character, and today, represent the most effective neutralizing agents of oxydant free radicals from vegetable origin. In addition, due to its chemical structure, can pass through cell membranes, and thus, neutralize free radicals, lipo or water-soluble, in the protoplasm and nucleus of cells. It is also shown that the scleroproteins that form connective tissue (collagen, elastin) are protected by them from the attack of free radicals and enzymes that degrade them (collagenases and elastases). Bioflavonoids also have an effect of vitamin P on the blood capillaries that regulate the permeability and decrease their

fragility. They have also, anti-inflammatory, antiedematous and protective qualities. They increase, significantly, the immune response and act on skin hyperchromic stains.

Trans-Resveratrol, on the other hand, it is a potent phytoestrogen polyphenol nature (Figure 3).



**Figure 3.** TRANS-RESVERATROL

Many are the physiological benefits of resveratrol. Referring only to skin tissue, it is proven that regulates the activity of sebaceous glands, acts on seborrheic and acneic symptoms, delays the manifestations of aging and its strong reducing character has positive effects on oxidative stress. Also increases the immune response and acts on the spots of the skin.

• **Shea Butter**, is extracted from the seeds (*Butyrospermum parkii*), a tree belonging to the Sapotaceae family, which grows in central Africa. The seed, size of a walnut, contains 50% lipids extracted by pressure.

One of the characteristics of the Shea Butter is its high content in unsaponifiable, which makes it of great interest in the fields of cosmetics and dermatology.

The outstanding effects of Shea Butter can be summarized as follows:

- Emollient for skin and hair.
- Soothing for wounds.
- Protector against UV radiation and other harmful agents.
- Nutritive.
- Anti-aging.
- Refatting.

Its use is recommended in the treatment of dry, aged, irritated, or sensitive skin, also with wounds and bruises. As fat component in sunscreen and after-sun products and in protective lipsticks. Very useful, also, in hair treatments, such as balms and masks.

- **Coenzyme Q-10**, also known as ubiquinone because of its ubiquity, since it is present in all cells of the body; in fact, almost in all the energy produced is coenzyme Q-10 directly involved.

With age and adverse environmental conditions, the amount of coenzyme Q-10 present in the cells, progressively decreases. In the skin, this reduction may be offset, at least partially, with an external input. This fact increases metabolism, stimulation of vital functions and an antioxidant and antiradical effect is achieved.

- **A + E vitamin complex**, they are two antioxidant vitamins that act as a protective shield against oxidative stress, one of the most influential and decisive to advance skin aging factor.

## **USE AND DOSAGE**

The recommended concentrations of use are between 5% and 20%.

## **PHYSICAL AND CHEMICAL PROPERTIES**

**Physical state:** Solid.

**Colour:** Characteristic.

**Odour:** Characteristic.

**Melting point:** 33-42°C.

**Solubility in water:** Fully insoluble.

**Solubility in other solvents:** Soluble in organic solvents and lipids. Insoluble in surfactants and in hydroalcoholic, hydroglyceric and hydroglycollic mixtures.

**Acid value:** Less than 5.

**Iodine value:** 125 to 140.

**Saponification value:** 180 to 200.

**Unsaponifiable:** Min. 2%.

**Other information:** None.

**Total aerobics:** Max. 300 microorganisms / gram.

**Fungi and yeasts:** Max. 200 microorganisms / gram.

**Pathogens:** Complete absence in 1g.

### **DERMATOLOGY INNOCUOUSNESS**

It was performed by the patch test (Patch test) on 10 volunteers. 20% VITIKARINE COMPLEX of BIOGRÜNDL was added to an O/W emulsion; poured over the patch 0,5 g. and attached on the forearm. It is thus maintained for 24, 48 and 72 hours, after which, evaluates the given reaction, according to the following table of values:

1. No erythema
2. Slight erythema
3. Well defined erythema
4. Severe erythema

The result was absence of erythema on the 10 volunteers.

On the recommended concentrations, the product is skin innocuous.

### **STORAGE CONDITIONS**

It is very important to keep the product in well closed containers, away from direct sunlight and at temperatures not over 25°C.

### **INCI DENOMINATION**

VITIS VINIFERA SEED OIL, BUTYROSPERMUM PARKII BUTTER, UBIQUINONE, TOCOPHERYL ACETATE, RETINYL PALMITATE.