



KOXDIS[®]

VITAMIN K1 OXIDE

This vitamin K1 oxidized form (vitamin K1 oxide), has been developed to be used for treating purpura and hyperpigmentation in cosmetics. Avoids blood extravasation giving it a high decongestive capacity as well as a high capacity to reduce erythema and facial redness.

It can be used in products for treating couperose and to reduce the violet pigmentation under-eye circles and hematomas.

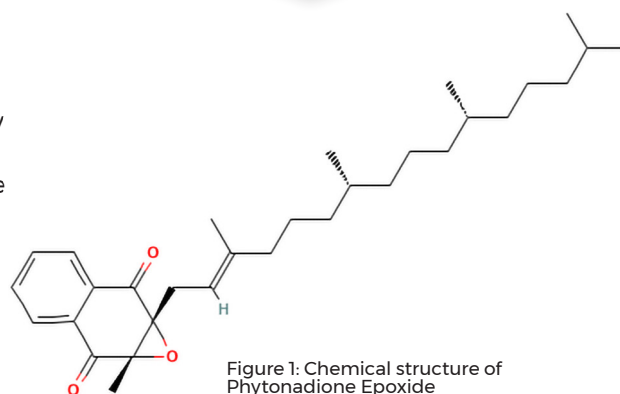


Figure 1: Chemical structure of Phytonadione Epoxide

MECHANISM OF ACTION

Involved in the synthesis of prothrombin (factor II) and clotting factors VII, IX and X, shows capacity blocking and avoiding blood extravasation and tanks to its effect on build ups of hemosiderin, it reduces the violet pigmentation found in under-eye circles and hematomas.

Its action is focused on keeping iron in its bivalent (ferrous) form, avoiding its transformation to its trivalent (ferric), component responsible for pigmentary deposit.

Vitamin K contained in cosmetics has an impact on Gamma-glutamyl carboxylase, accelerates the blood coagulation process and makes dilated blood vessels less visible. Additionally, vitamin K strengthens blood vessel walls and decreases their fragility.

BENEFITS AT A GLANCE

- Reduces dark coloration of eye bags
- High decongestive properties
- Reduces erythema and skin flushing
- Accelerates the reabsorption of blood extravasation
- Improves skin tone

TECHNICAL INFORMATION

- **INCI name:** Phytonadione Epoxide
- **Appearance:** Clear intense yellow oily liquid
- **Solubility:** Oil soluble. Insoluble in water and methanol, slightly soluble in ethanol at 80°C
- **Shelf life:** 2 years
- **Recommended use concentration:** Skin care creams: 0.1 %

