

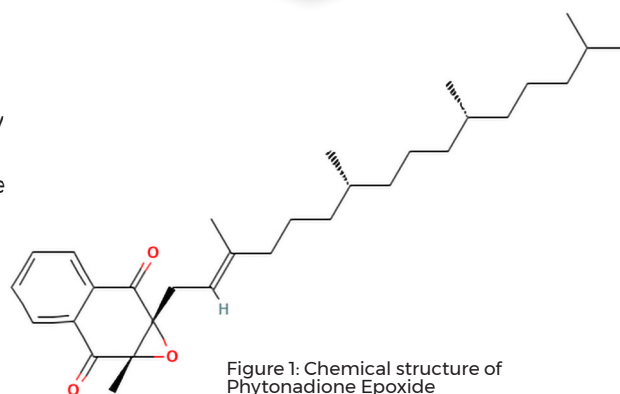


KoxDIS[®]

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.



MECHANISM OF ACTION

Involved in the synthesis of prothrombin (factor II) and clotting factors VII, IX and X, shows capacity to block and avoid blood extravasation and thanks 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 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: 0.1-1 %



WHAT IS ROSACEA?

Rosacea is a chronic skin condition characterized by **redness, visible blood vessels**, and sometimes, small **red bumps and sensitive prone skin** on face and neck

Ingredients like Anti-Inflammatory Agents, Barrier Repair Ingredients, Antioxidants, Microbiome-Friendly Products, Prebiotics and Postbiotics, Gentle Exfoliants, Advanced Delivery Systems, Nanotechnology among others has been used for the reduction of Rosacea and Couperose prone skin.

In **Disproquima** we studied our portfolio to give also a solution to this skin condition and **KoxDIS[®], our Vitamin K1 oxide (INCI:Phytonadione Epoxide) is the solution.**

KoxDIS[®] x ROSACEA AND CUPEROSIS IN VIVO TEST

Objective: evaluate the efficacy reducing symptoms of **rosacea** and **cuperosis**.

Volunteers: 20 volunteers with **cuperosis or rosacea**.

Study duration: 56 days.

Application: Apply a cream containing **1% of KoxDIS[®]** to the face twice a day.

RESULTS



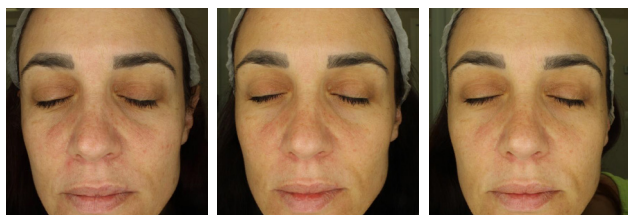
Day 0

Day 28

Day 56

Evaluation of flushing

- After 28 days of product use, there is a statistically significant decrease (31%).
- After 56 days of product use, there is a statistically significant decrease (54.5%).



Day 0

Day 28

Day 56

Evaluation of burning sensation or tightness

- After 28 days of product use, there is a statistically significant decrease (51.5%).
- After 56 days of product use, there is a statistically significant decrease (59.9%).

Evaluation of telangiectasia

- After 28 days of product use, there is a statistically significant decrease (25.7%).
- After 56 days of product use, there is a decrease (20.4%).

KoxDIS[®] x ANTI-DARK CIRCLES IN VIVO TEST

Objective: evaluate the efficacy reducing **eye bags** and **dark circles**.

Volunteers: 20 volunteers with **dark circles**.

Study duration: 56 days.

Application: Apply a cream containing **1% of KoxDIS[®]** to the face twice a day.

RESULTS



Day 0

Day 28

Day 56

Evaluation of anti-dark circles under eyes

- After 28 days of product use, there is a decrease (11.3%).
- After 56 days of product use, there is a decrease (8.9%).

