



# HYDRATED SKIN IS HAPPY SKIN

## A supplement ingredient that can improve skin health

### ceratiq Human Fast Facts:

- Clinical research (in humans) demonstrates improved skin hydration\*
- Demonstrably improved skin health in just 8 weeks\*
- Long-lasting effects\*
- Non-GMO, non-allergenic
- Safe for daily use
- Mild taste

ceratiq® Phytoceramides is a ceramide-rich ingredient with human clinical studies that suggest it can be ideal for animal supplements. Its major components are phytoceramides, glycolipids, and phospholipids. Rich in digalactosyl diglyceride (DGDG), a key glycolipid in cellular membranes, ceratiq is truly innovative in its composition and activity.

ceratiq has been shown in preclinical and human clinical research to improve skin hydration and reduce signs of dry skin, such as flaking, itching, and redness. Ceramides are integral to skin cell membranes, comprising 35-40% of intercellular cement, the part of the connective tissue that binds together keratinocytes, other cells, and structural elements of the epidermis.

Ceramides—essential lipid components of the stratum corneum, the outermost layer of the epidermis—are often found to be deficient in inflammatory skin conditions. Phytoceramide supplementation is a safe and effective way to replenish these vital skin lipids.



# CERATIO CLINICAL STUDIES SHOWED SKIN WITH LESS ITCHING, FLAKING AND REDNESS

Research in humans has shown that function of the lipid barrier of the stratum corneum can be impaired by common skin conditions. Many studies have also documented a deficiency of ceramides in the stratum corneum in these groups. Ceramides are the most abundant type of lipid found in this layer of the epidermis.

A randomized controlled clinical trial in humans evaluated the efficacy of **ceratiq** on skin hydration and on overall wrinkle reduction. Subjects received either 350 mg of **ceratiq** oil or the placebo for 12 weeks. Skin hydration was significantly increased on the arms ( $p < 0.001$ ) and legs ( $p = 0.012$ ) in the **ceratiq** group compared with placebo. Skin dryness and redness tended to be reduced in the **ceratiq** group, although the effect did not achieve statistical significance between groups. The VAS index tended to increase in favor of **ceratiq** for the overall skin hydration ( $p = 0.084$ ) indicating that participants perceived an improvement.

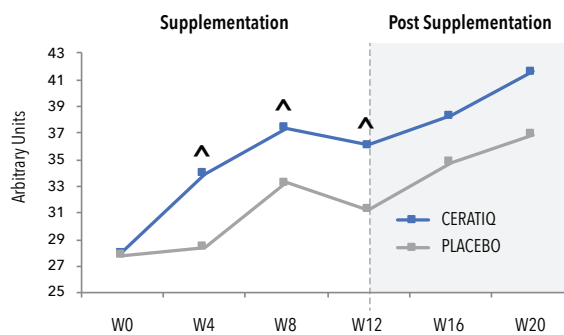
## Safety Studies

**ceratiq** has undergone a series of toxicological tests in humans and animals demonstrating its safety. Toxicological tests included Primary Cutaneous Irritation test in the rabbit (slightly irritant at 5%); Cutaneous Irritation in humans ( $n=20$ , patch test x 20 days; non-irritant); Primary Cutaneous Irritation in humans ( $n=19$ , 48h occlusive patch test; non-irritant); Ocular Toxicity in rabbits (slightly irritant at 1%); Phototoxicity (non-phototoxic at 3%); LD50 by oral route in rats ( $> 200$  mg/kg); Sensitization in Guinea pigs (Grade 1 [weak] sensitizing potential); Bacterial Reverse Mutation test (non-mutagenic); Photoallergic potential in Guinea pigs (Grade 1 [weak] photoallergic potential).

A skin barrier study in dogs documented increased trans-epidermal water loss in the inguinal skin of dogs compared with healthy controls. Protecting the skin barrier of companion animals appears to be especially important, especially for those experiencing inflammation.

## LONG-LASTING HYDRATION (CORNEOMETRY)

8 weeks after the end of supplementation, the effects of Ceratiq on hydration are maintained.



^  $p < 0.05$  - hydrating effect of Ceratiq versus placebo, compared to W0

## Sustainability

Every aspect of **ceratiq**'s production is continually evaluated with sustainability and social responsibility in mind - from the growing and harvesting of its wheat-based starting materials, to its production in the Grasse, France facility. Water and energy use are minimized in the process. By-products from the **ceratiq** production process are being used in many important ways. Some of it is a source of protein in animal feed. More is up-cycled as wheat peptides in the production of shampoos.

Studies on file. Contact us for more information at [info@plthealth.com](mailto:info@plthealth.com)



\* 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.

Contact PLT Health Solutions for samples and more information.

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