



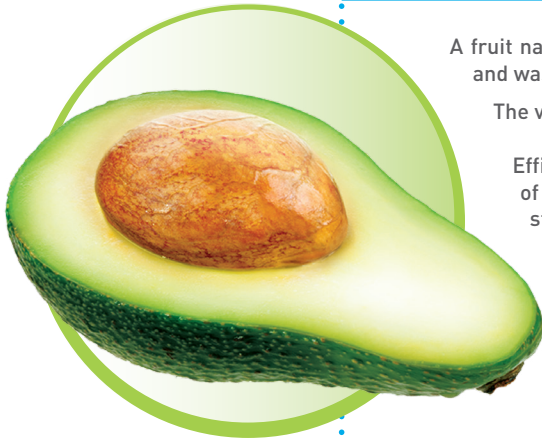
Effipulp®

ANTI-AGEING, PLUMPING AND DETOXIFYING



Restores cell functions to stimulate endogenous synthesis of Hyaluronic Acid.

Avocado, a nourishing force

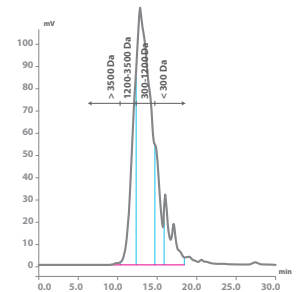


A fruit native to Mexico, the Avocado was consumed more than 10,000 years ago by the Aztecs and Mayas, and was imported to Europe in the 17th century.

The varieties used to produce Effipulp® are mainly harvested in Latin America and Africa.

Effipulp® is a peptides concentrate produced by enzymatic hydrolysis of defatted Avocado pulp (cake). After freeze-drying, we obtain a stabilized powder on an organic maltodextrin carrier, free of preservative. This green process respects the natural character of the fruit. Effipulp®, a dry, water-soluble extract, has a unique composition of peptides with low molecular weight (<10 kDa).

Effipulp® is approved for the formulation of finished products certified by Ecocert.



Proteasome activation: detoxifying effect

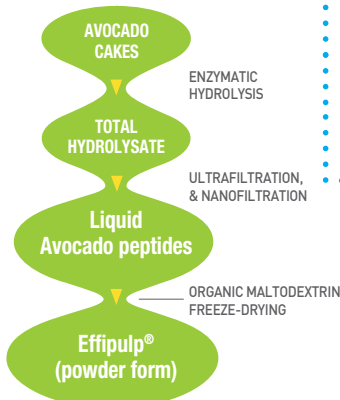
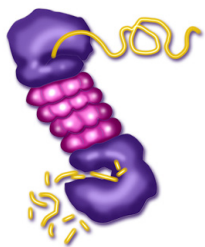
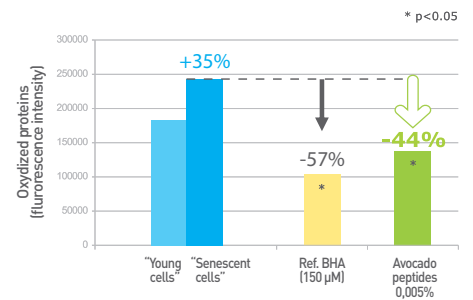
Over time, the skin's defense and detoxification systems become less effective: free radicals accumulate, and cellular functions are impaired. This means that the synthesis of proteins and macromolecules such as Hyaluronic Acid is reduced, the epidermis becomes thinner and dermal and epidermal functions are disrupted.

Effipulp® is capable of reducing the accumulation of senescence-induced oxidized proteins thanks to its action on the following:

- **Thioredoxin** (repair system): gene expression; **+177%** (in-vitro test, fibroblasts, 0.005% Avocado peptides; 48 hours).
- **Proteasome** activity (elimination system): **+43%** (in-vitro test, senescent fibroblasts, 0.005% Avocado peptides; 1h45).

The quantity of oxidized proteins is greatly reduced: **-44%**, in-vitro test (senescent fibroblasts), 0.005% Avocado peptides, 72 hours vs. BHA (benchmark antioxidant).

Effipulp® restores the systems that repair and eliminate oxidized protein (thioredoxin, Proteasome), enabling fibroblasts and keratinocytes to recover their original functions.



APPLICATION: anti-ageing, plumping and detoxifying skincare

RECOMMENDED DOSAGE: 0.1-0.6%

DESCRIPTION: Beige water-soluble powder

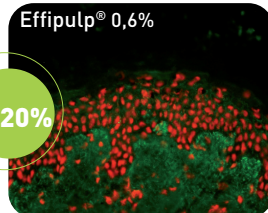
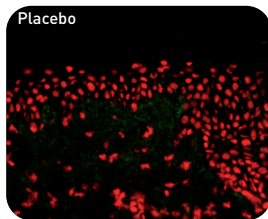
INCI NAME: Hydrolyzed Avocado Protein and Maltodextrin

EXPANSCIENCE®
LABORATOIRES

Effipulp®

Moisture redensification of the epidermis and dermis

By trapping water (up to 1,000 times its molecular weight), **Hyaluronic Acid** makes the skin supple, giving it a plumped, smooth appearance. Over time, and especially under the effect of oxidative stress, its quantity decreases significantly. As a result, the skin (particularly the epidermis) loses volume.



Effipulp® stimulates endogenous synthesis of key hygroscopic molecules of the epidermis and dermis, such as **Hyaluronic Acid**.

An emulsion containing 0.6% Effipulp® was applied on skin explants vs a placebo (one application every 24 hours for 72 hours).

Hyaluronic Acid is marked by immunofluorescence (green) and quantified by image analysis.

In addition, Effipulp® stimulates the synthesis of **Filaggrin** and **Transglutaminase** (cornified envelope), two compounds essential for proper cohesion and resistance of the stratum corneum. In this way, Effipulp® preserves the moisture content of the skin.

Clinical test

One of the main signs of skin ageing is the thinning of the epidermis. A clinical study comparing two populations (average age: 22.5 vs 55.3) revealed, via OCT* measurement, average thinning of the facial epidermis of 8.4%.

(Neerken, S et al., Journal of Biomedical Optics, 2004)

Comparative, randomized study, double-blind vs. placebo

49 women (average age: 49) with dry, sensitive skin, divided into two groups, applied a cream to their faces, one containing 0.6% Effipulp® and the other a placebo.

Study term: 56 days, with two applications daily.

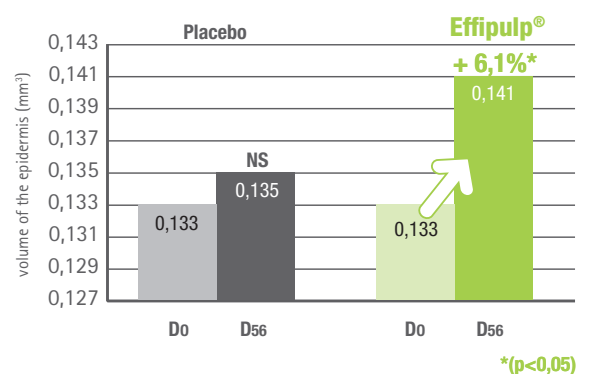
The **Plumping** effect was assessed by quantifying the variation in epidermal volume using the **OCT*** technique, which reconstructs the epidermis in 3D via very-high-resolution images.

*(Optical Coherence Tomography)

Results (/Do) :

- placebo: no significant effect.

- cream with 0.6% Effipulp®: +6.1% significant increase in epidermis volume.



Thanks to its detoxifying action, Effipulp® stimulates endogenous synthesis of Hyaluronic Acid to restore volume to mature, dehydrated and stressed skin.

www.expanscience-ingredients.com

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