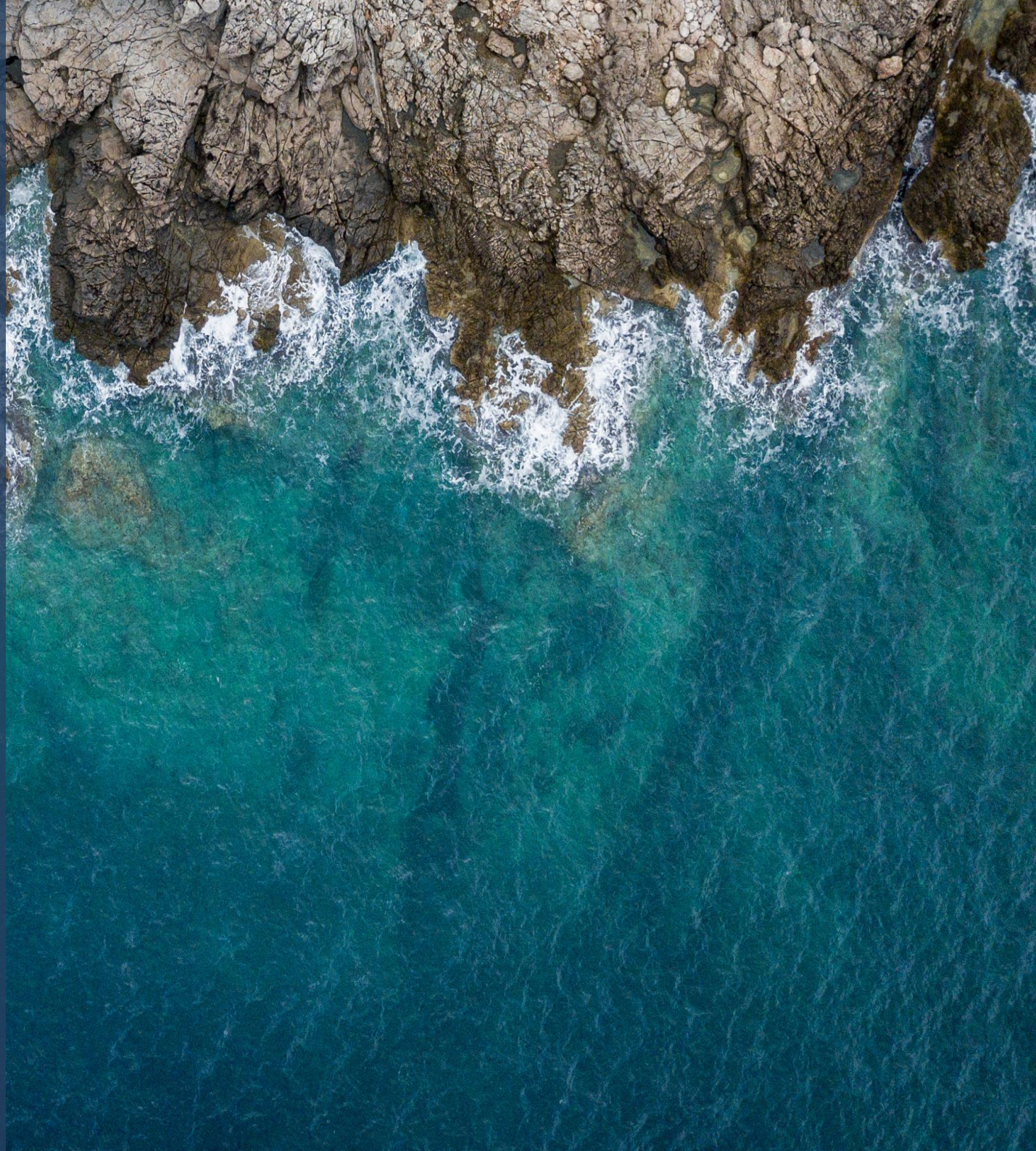


Eggwrack

Product Name: Eggwrack

Plant Name: Eggwrack

Scientific name: *Ascophyllum Nodosum*



About Eggwrack

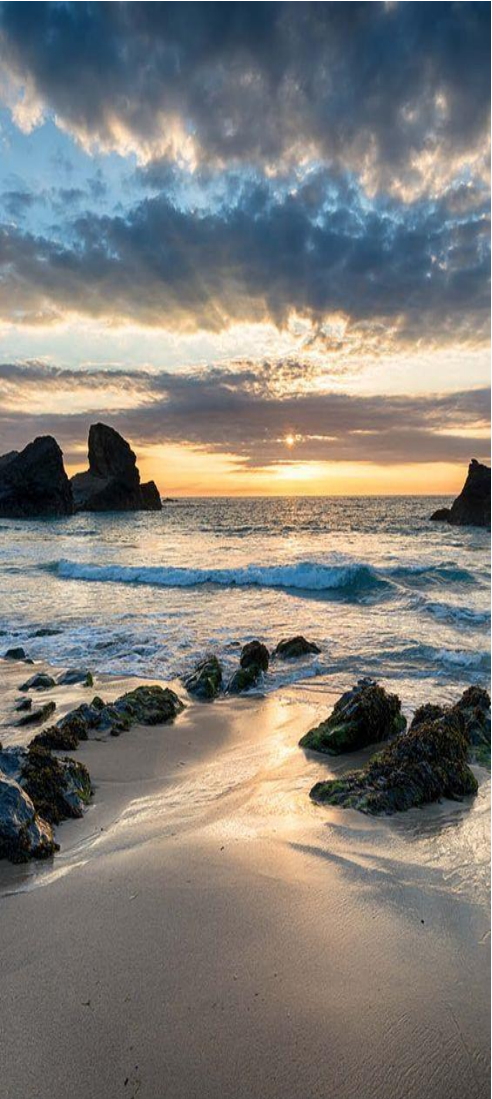
Eggwrack



- **Eggwrack** is a common wrack seaweed which grows on sheltered rocky shores, around the mid shore zone.
- It has long, leathery strap-like fronds with **egg-shaped air bladders along the lengths**.
- Eggwrack is a long-lived species, with individuals growing slowly for decades.
- The dense masses of Eggwrack provide shelter for many species on rocky shores.
- It also has long been used as an organic fertilizer for many varieties of crops due to its combination of both macronutrients and micronutrients.

Reference: <https://www.wildlifewatch.org.uk/wildlife-explorer/marine/seaweeds-and-seagrass/egg-wrack>

Eggwrack Rich in Mineral



Seaweed & Mineral

As we all know, life began in the seas. Sea water is very mineral-rich, and therefore algae absorb plenty of mineral elements, vitamins and trace elements.

Energy

The mineral content of some seaweeds account for up to 80% of their dry matter. Some brown seaweed like Eggwrack contain all the minerals there are on the planet!

Eggwrack



Bioactive Properties

Eggwrack

Oceans cover over 70% of Earth, being home to up to 90% of the organisms in the planet. **Many rich resources and unique environments are provided by the ocean.**

Additionally, **bioactive compounds** that multiple marine organisms have a great potential to produce can be used as **nutraceuticals, pharmaceuticals and cosmeceuticals.**

In algae, **proteins, polysaccharides, fatty acids, and amino acids** are primary metabolites and **phenolic compounds, pigments, vitamins, sterols,** and other bioactive agents, all produced in algae tissues, are secondary metabolites.

These algal active constituents have direct relevance in cosmetics.



Reference: Leonel, P. (2018) Seaweeds as Source of Bioactive Substances and Skin Care Therapy-Cosmeceuticals, Algotherapy and Thalassotherapy. Cosmetics, 5(4), 68.

Multi-efficacy Product

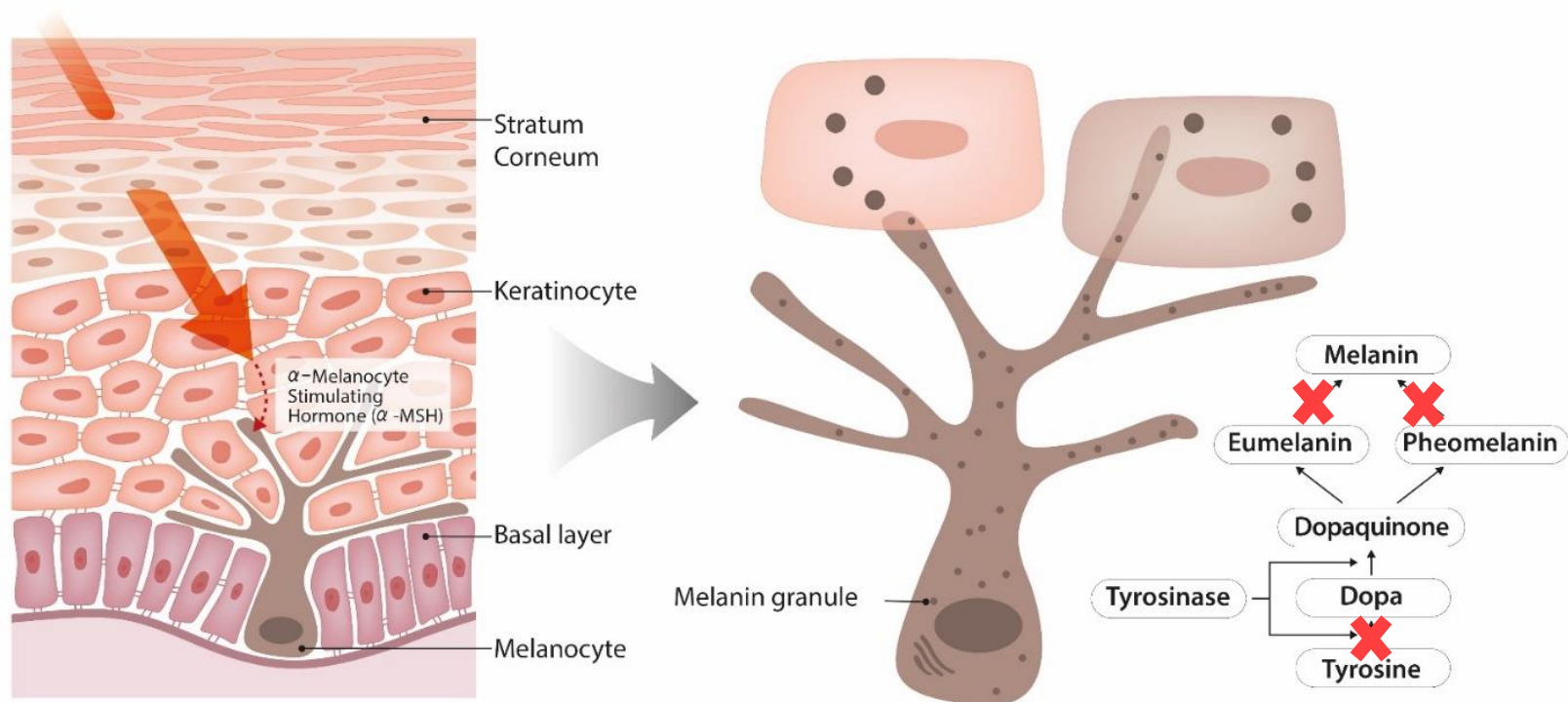
Eggwrack



Mechanism of Skin Pigmentation

Eggwrack

Melanin synthesized from melanocytes is delivered to keratinocytes and accumulates in the epidermis of the skin, causing changes in skin color. Tyrosinase, which plays an important role in the early stages of the melanogenesis process, converts L-tyrosine to L-DOPA and L-DOPA to DOPA-quinone to biosynthesize melanin.

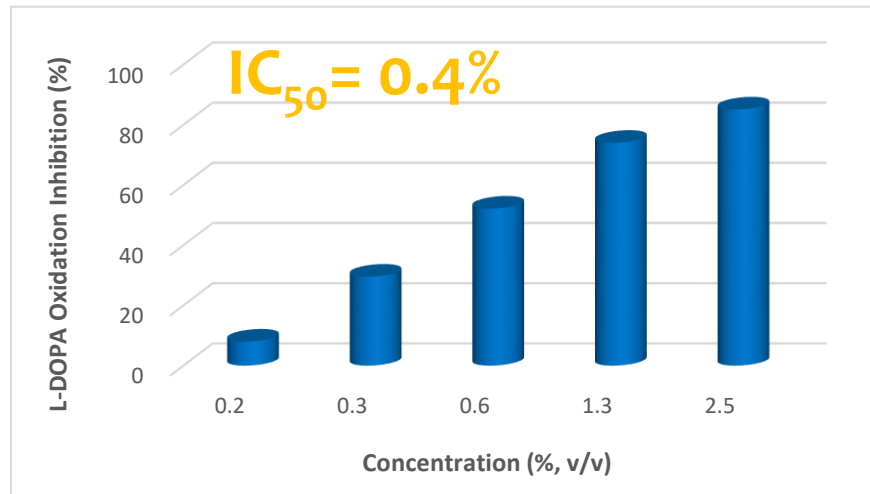


Skin Brightening Effects of Eggwrack

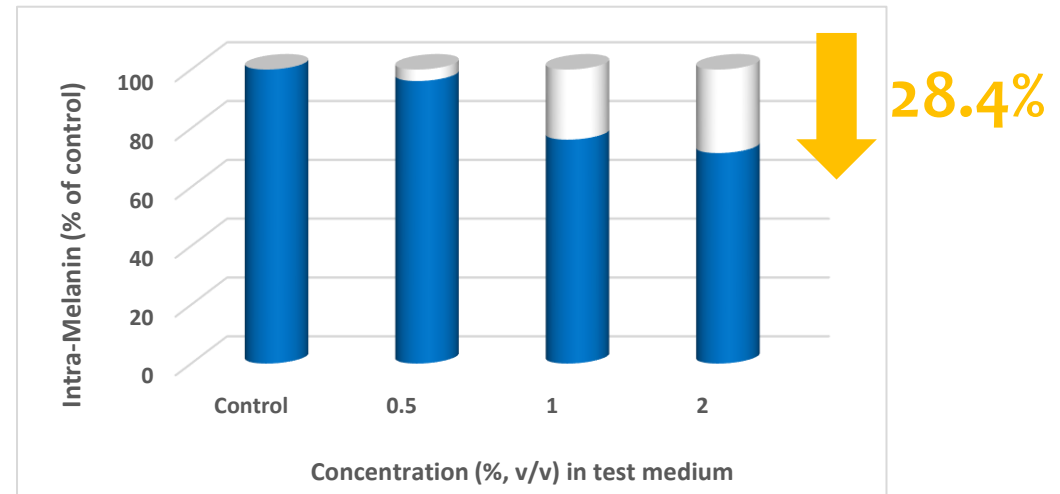
Eggwrack

Eggwrack have a skin brightening efficacy by inhibiting of L-DOPA oxidation. And it inhibits melanin synthesis by 28.4% at 2% (v/v).

L-DOPA Inhibition Activity (*in tubo*)



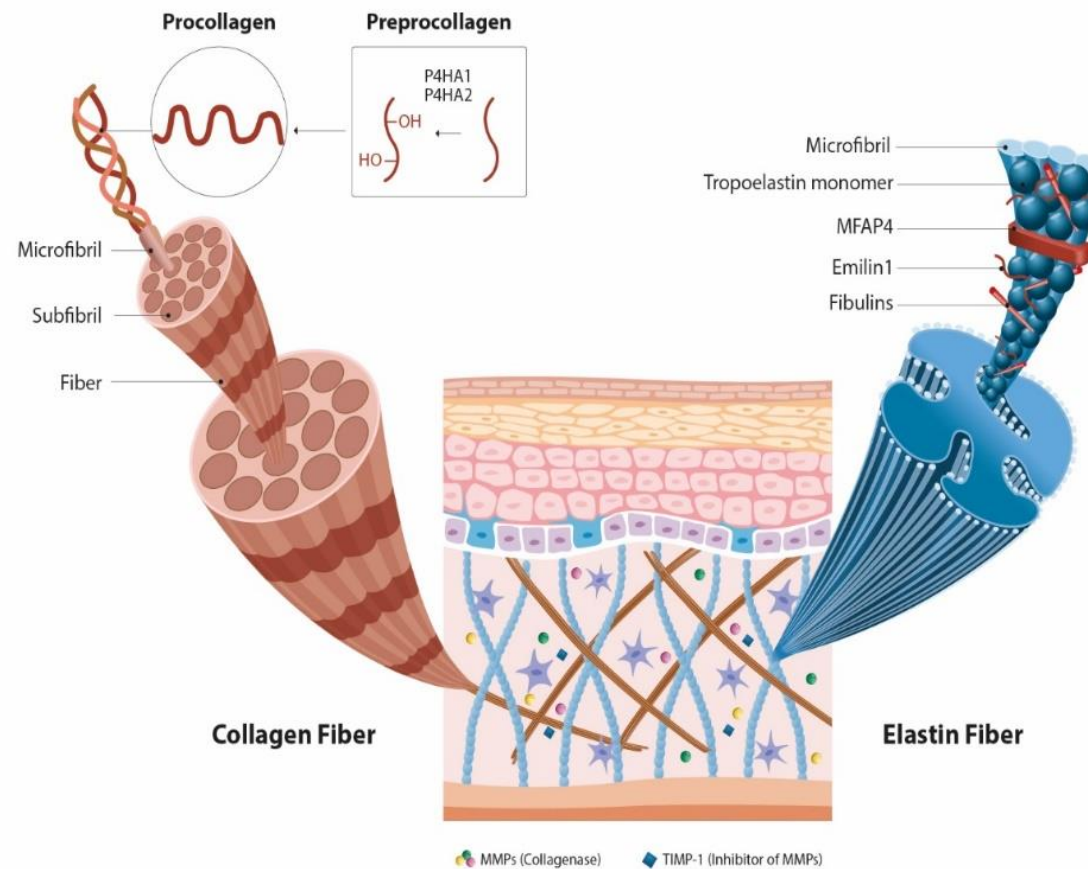
Intracellular Melanin Inhibition Activity (*in vitro*)



Skin Ageing and Wrinkle Formation

Eggwrack

Collagen and Elastin, which account for 70% of the skin dermis, have a mesh-like texture that crosses each other. It is the main component of the connective tissue that makes up the dermis with collagen fibers and elastic fibers. As the network structure is broken, the skin sags and causes wrinkles, and skin aging occurs.

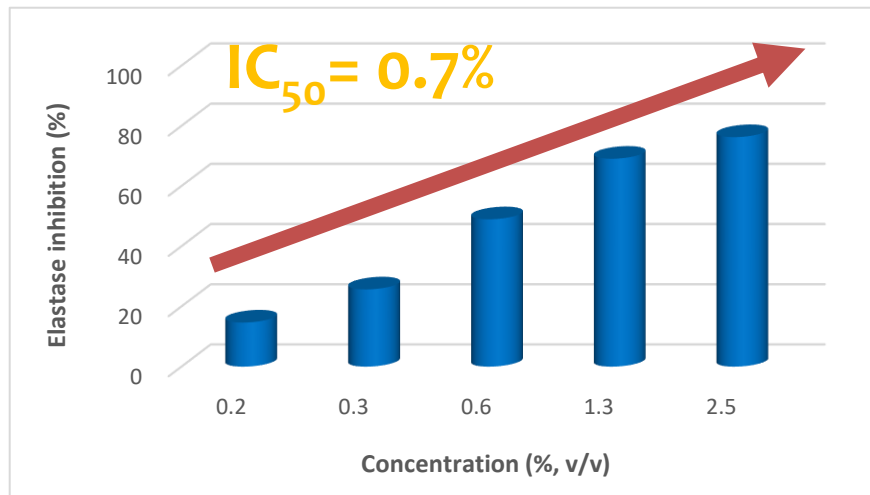


Anti-wrinkle Effects of Eggwrack

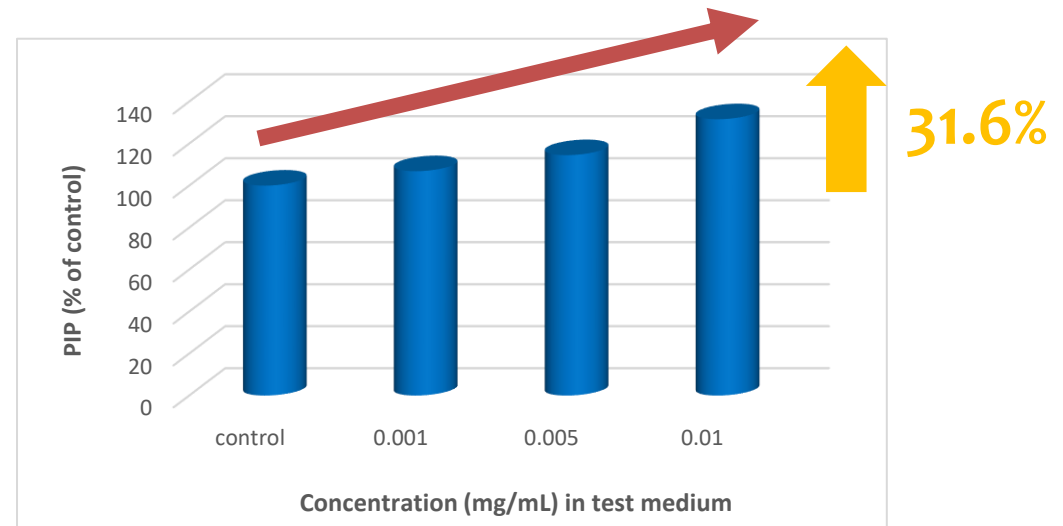
Eggwrack

Eggwrack have a skin brightening efficacy by inhibiting of L-DOPA oxidation. And it inhibits melanin synthesis by 31.6% at 0.01 mg/mL.

Elastase Inhibition Activity (*in tubo*)



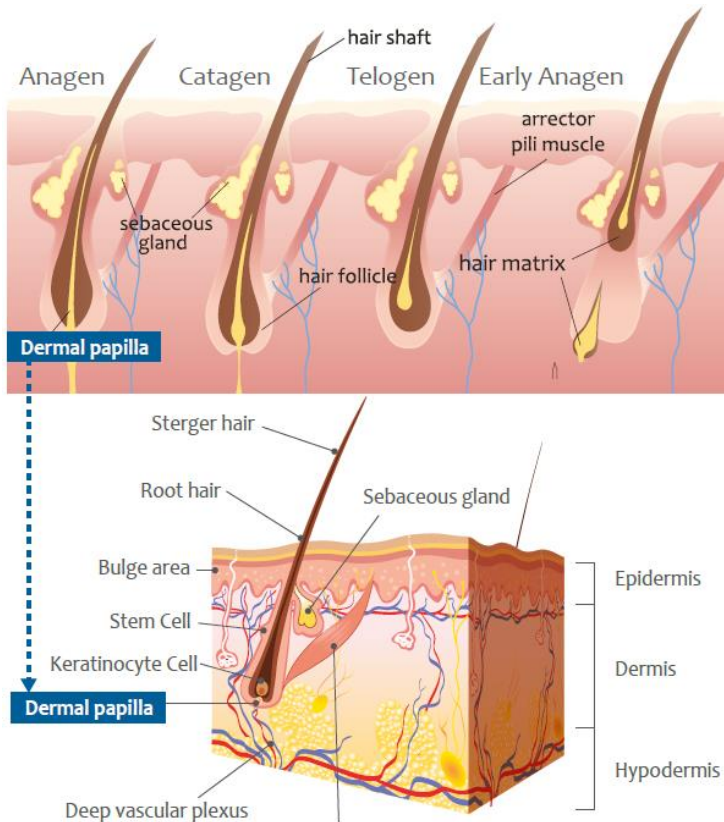
Procollagen Peptide Synthesis Activity (*in vitro*)



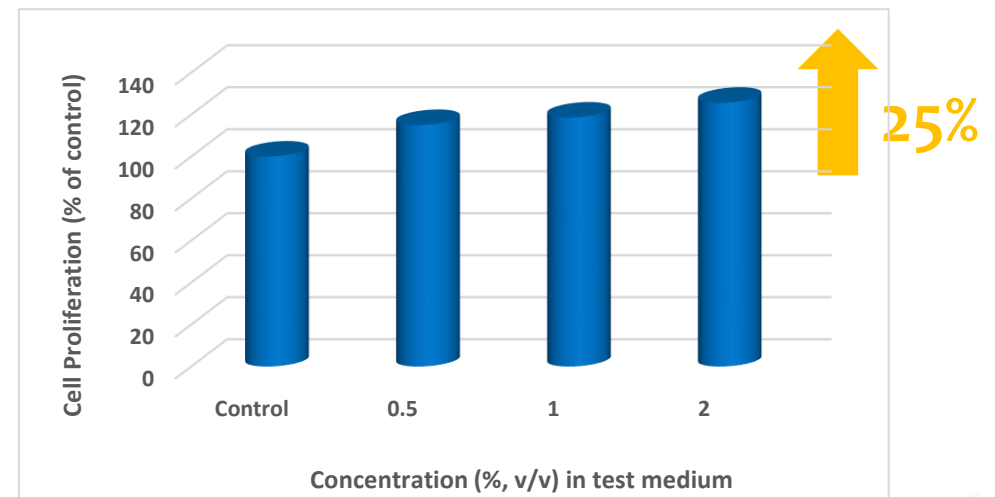
Hair Growth Effects of Eggwrack

Eggwrack

To evaluate the hair growth effects of Eggwrack, 2% Eggwrack was added to the test medium, and the result confirms its significant hair-growth efficacy by increasing hair cell proliferation by 25%.



Hair Cell Proliferation (*in vitro*)



Summary

Eggwrack

- Grow on rocky shores
 - Mineral-rich Seaweed
- **Multi-efficacy:**
skin brightening, anti-wrinkle, hair growth



Product Information

Eggwrack



Energy from the Sea

- **Product Name:** Eggwrack
- **INCI name:** Ascophyllum Nodosum Extract
- **IECIC 2015:** ASCOPHYLLUM NODOSUM EXTRACT
- **CAS No.:** 84775-78-0
- **EINECS / ELINCS No.:** 283-907-6
- **Dosage:** 1 - 3%



The Secrets of Caledonia

The Secrets of Caledonia (TSOC) is a supplier of natural cosmetic ingredients inspired by Scottish traditional herbal medicine. Taking advantage of Scotland's biodiversity and working in collaboration with established Scottish herbalists, we aim to provide the most effective and innovative natural ingredients at the highest quality.



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