

CLINICAL DATA – SACCHARIDE ISOMERATE (MARINE DERIVED)

Description

Exopolysaccharide obtained through biotechnology by fermentation of a marine Y-proteo-bacteria strain, isolated from the surface of a Laminaria alga in the AberWrac'h estuary. Saccharide Isomerate (marine derived) stimulates hyaluronic acid (HA) synthesis, providing a replenishing effect to the skin.

Properties

Saccharide Isomerate (marine derived) boosts HA production with a clearly improvement of the depth, circumference, area and volume of the nasolabial folds.

Applications

Saccharide Isomerate (marine derived) can be incorporated in cosmetic formulations to reduce the visible signs of ageing, both for daily skin care products as for specific anti-ageing treatments.

Science

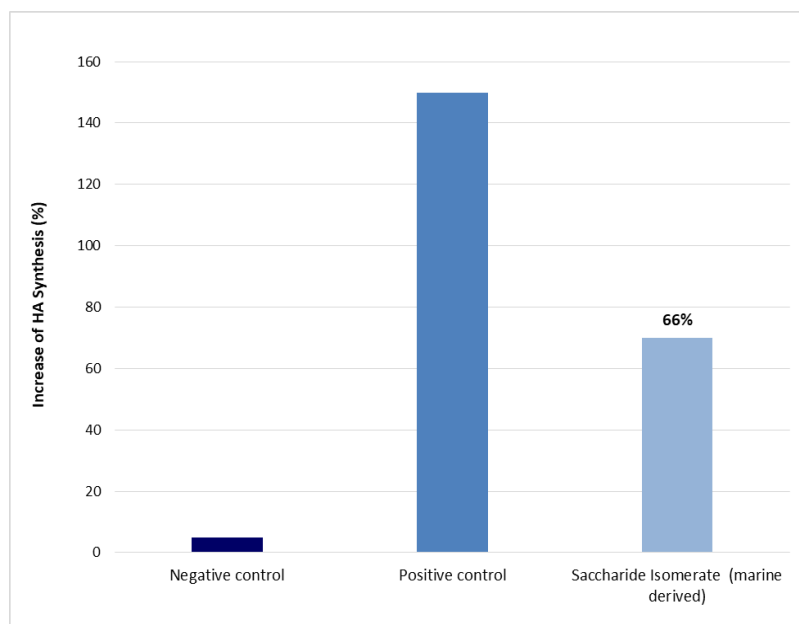
Microorganisms living in AberWrac'h estuary (Brittany, France) withstand an environmental stress, as both salty water from the sea and water from rivers and rain join together. This area is rich in nutrients and phytoplankton, but its inhabitants suffer from high gradients of salinity, pH, temperature, oxygen and light from marine ecosystem to fresh water (rain and rivers).

The macroalgae Laminaria have marine Y-proteobacteria strains that secrete exopolysaccharides (EPS), with inter- and intra-cellular signalling functions to increase their survival and help the colony. Saccharide Isomerate (marine derived) is an EPS that induces HA synthesis, glycosaminoglycan which is a major compound of the extracellular matrix. Ageing alters the balance of HA synthesis and degradation, therefore HA availability is decreased, leading to dehydration and volume loss. Saccharide Isomerate (marine derived) provides support and volume to the skin, reducing nasolabial folds appearance.

In vitro efficacy

Hyaluronic acid induction

As human dermal fibroblasts (HDFa) are the main producers of HA, 1 mg/ml Saccharide Isomerate (marine derived) was added to HDFa to measure the induction of HA by an ELISA assay. Non-treated cells were used as the negative control and cells treated with platelet-derived growth factor, as the positive control. Absorbance values were read at 405 nm in a microtiter plate reader.



66% increase of HA synthesis

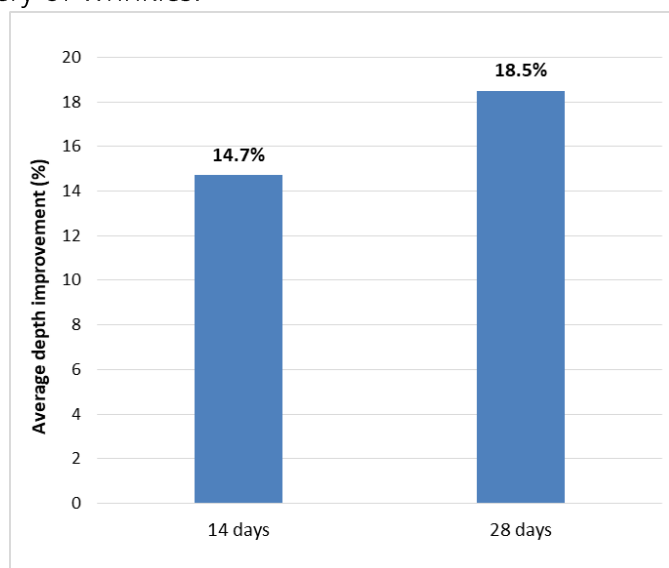
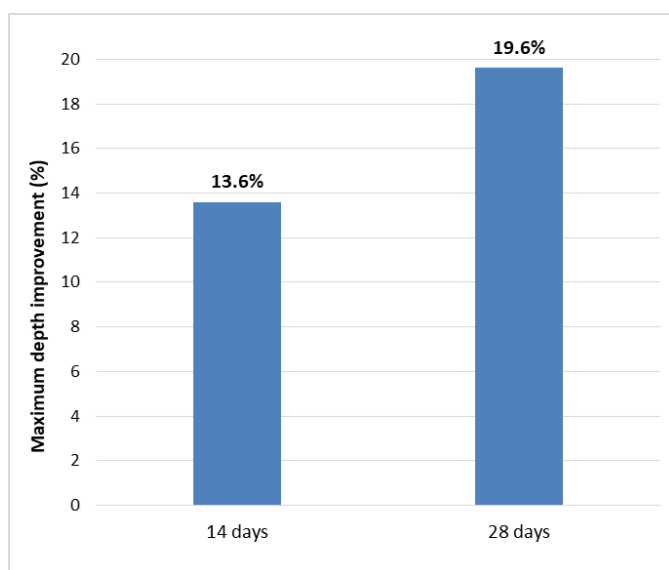
Saccharide Isomerate (marine derived) produced a statistically significant induction at the tested concentration.

***In vivo* efficacy**

Nasogenian folds recovery

A panel of 19 volunteers between 44-56 years old with nasolabial fold of moderate intensity applied a cream containing 1% Saccharide Isomerate (marine derived) Solution twice a day, insisting on the nasogenian fold.

Skin topography was evaluated before the first application and after 14 and 28 days by FOITS. Fringe projection 3D images were used to calculate the maximum and average depth recovery of wrinkles.



Excellent improvements in wrinkle appearance

Saccharide Isomerate (marine derived) reduced maximum wrinkle depth up to 70.6%, average wrinkle depth up to 71.4%, wrinkle circumference up to 79.3%, wrinkle area up to 77.8% and wrinkle volume up to 93.5% after 28 days.

