

Hydrating Solutions

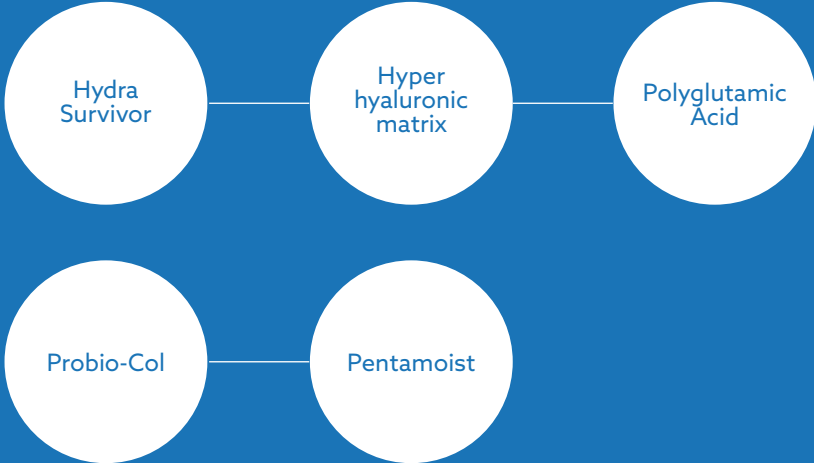


Celcode's Hydrating Solutions

At Celcode, we've developed many products designed specifically to stave off the visible effects of skin dehydration and aging.

Through extensive research and testing, we've formulated various skincare products with key active ingredients to not only support and boost skin hydration, but also fight the unwanted effects of free radicals.

Discover some of our hydrating ingredients



Hydra
Survivor

Hyper
hyaluronic
matrix

Polyglutamic
Acid

Probio-Col

Pentamoist

Hydra Survivor

Protection against extremes

Hydra Survivor is an ultra-hydrating, anti-aging active ingredient derived from the desert resurrection plant.

Just as the compounds from which it was derived help the plant survive in desert environments, it helps our skin remain moisturised in dry conditions.



It protects skin from the worst environmental stressors, keeping it moist and fighting off signs of age.

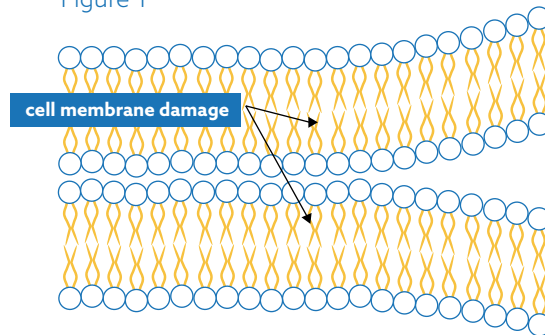
How Hydra Survivor Works

Hydra Survivor is an extremolyte that protects the resurrection plant's cells by inhibiting denaturation at low hydration, thus preventing damage.

It can do the same for skin by targeting stressed and aging cells.

Figure 1

**a - lipid bilayer
(low hydration)**



Less water is present
between the membranes.



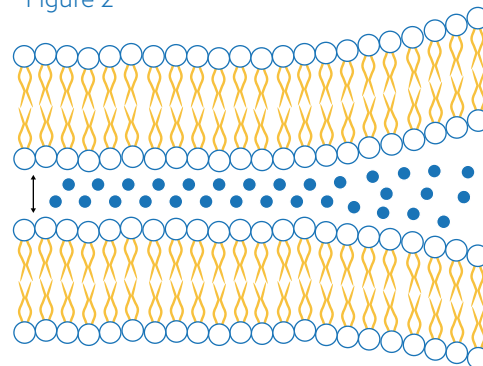
High Lateral
Compressive Stress



Structural Damage and
Denaturation

Figure 2

**b - lipid bilayer /
Hydra Survivor
(low hydration)**



Due to the special properties
of Hydra Survivor, higher water
retention between the membranes.



Larger separation
between Membranes



Lower Lateral
Compressive Stress



Inhibits Structural Damage
and Denaturation

Benefits of Hydra Survivor

170% increase in vitality and metabolic activity of aged cells

In vitro study of 1% Hydra Survivor

49% increase in hydration

In vivo study showed 8-hour hydration of skin with just one application of Hydra Survivor

Slows down visible skin aging

In vitro study showed increase in ATP concentration in aged cells

Increase of skin moisture, elasticity and smoothness

In vivo study showed 24% increase in moisture, 61% boost in smoothness, and 93% increase in skin elasticity

9.9% improvement in skin density of mature skin

In vivo study showed improvement with 4 weeks of application in 100% of test applicants

2% boost in skin lightness

In vivo study showed skin pigmentation decreased significantly by up to 38% after 84 days of application

48-hour tissue repair and wound healing

Ex vivo study showed Hydra Survivor's efficacy in stimulating cell renewal and expression of growth factors involved in the wound healing process



Hyper Hyaluronic Matrix

Deep moisturising through all skin layers

This ingredient has a 3D matrix structure, formed through a combination of 4 separate hyaluronic acids - sodium hyaluronate, hydroxypropyl trimonium hyaluronate, sodium acetylated hyaluronate, and hydrolyzed sodium hyaluronate.

The unique matrix structure forms a scaffold that allows the Hyper Hyaluronic Matrix to deeply permeate the different layers of skin and seal in moisture for improved moisture retention.

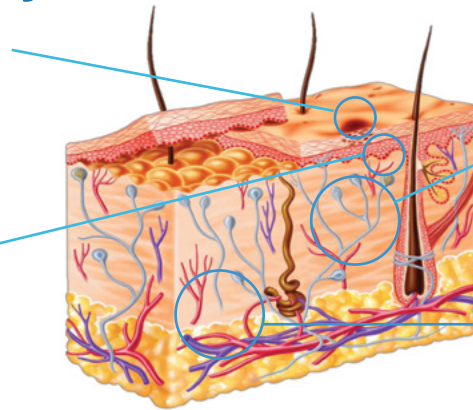
How Hyper Hyaluronic Matrix Works

Sodium Hyaluronate

Forms a dense protective film on the skin surface to reduce moisture loss inside to provide moisturizing and anti-pollution / UV protection

Hydroxypropyltrimonium Hyaluronate

Penetrates into the basal layer and dermis of the skin to increase skin volume



Sodium Acetylated Hyaluronate

Increase skin volume by penetrating the skin dermal layer and supplying water

Hydrolyzed Sodium Hyaluronate

Intensively penetrates to the bottom of the dermis, which is the deepest part of the skin, to supply moisture, increase skin volume

HA molecular weight range 3000 - 1.5m Dalton

Benefits of Hyper Hyaluronic Matrix

Better permeation of ingredient in skin

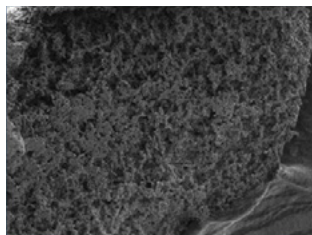
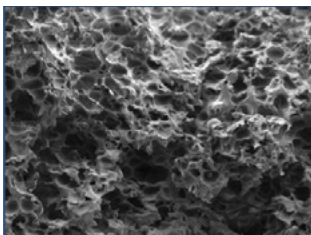
due to matrix structure of 4 hyaluronic acids

Twice as hydrating compared to single molecule hyaluronic acids

resulting in increased skin moisture, tightness and flexibility

Increased skin volume

As smaller molecular weight allows for deep permeation into basal layer and dermis of skin



Hyper Hyaluronic Matrix has a smaller pore size and is higher in density than general hyaluronic acid, so moisture content is higher and moisture resistance is improved.

Probio-Col

A natural solution for wrinkle reduction

This probiotic extract combined with collagen is fermented from the ice plant, native to South Africa's Namib desert.

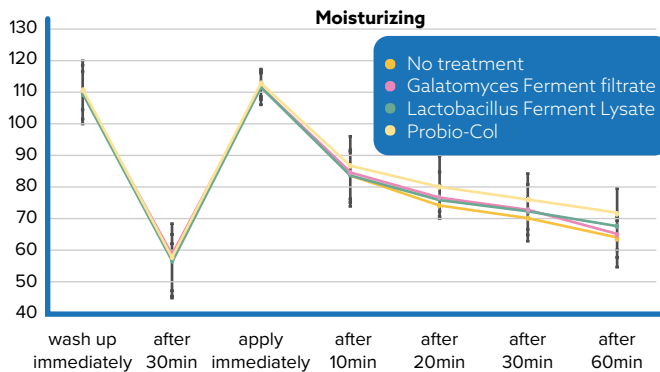
This unique combination of probiotics and collagen extract results in a natural ingredient that shows an excellent moisturising effect, especially for reducing the appearance of wrinkles.



How Probio-Col Works

Similar to how the ingredient helps the ice plant survive harsh and prolonged dryness, probio-col helps to plump up the skin by accumulating and retaining moisture, leaving the skin smooth and wrinkle-free.

Probio-Col inhibits collagen degradation due to its excellent MMP-1 inhibitory effect. As a ferment lysate, this ingredient is more concentrated and has a better efficacy compared to a normal ferment filtrate.



40 year old female

Before

After

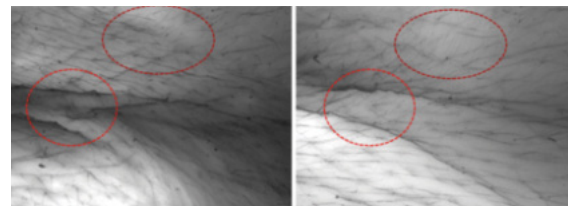


Week 0

Week 4

Before

After



Week 0

Week 4

Benefits of Probio-Col

Visible anti-wrinkle effect

Boost skin collagen
leaves skin plumped

Balances skin microbiome

Boost skin
microflora

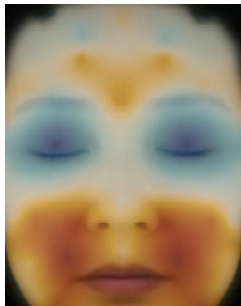
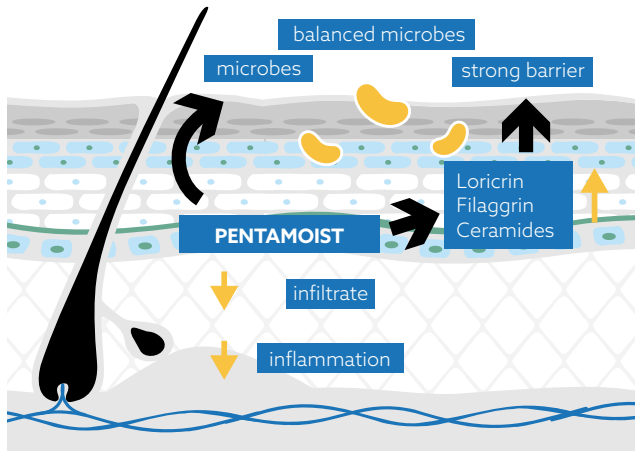
Pentamoist

Hydration for up to 72 hours

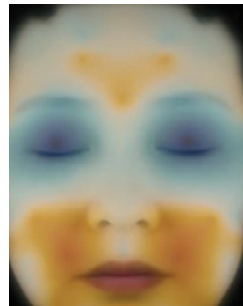
Derived from maize kernels, this ingredient has 100% natural origins. The complex carbohydrate provides long-lasting, deep hydration for the skin.

It also acts as a prebiotic, increasing skin microflora.

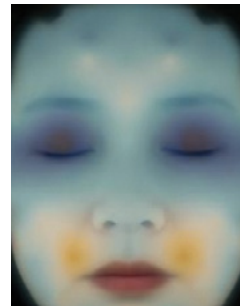
How Pentamoist Works



Before application



Single application
1% PENTAVITIN®
after 3 hours



Twice daily application
1% PENTAVITIN®
after 28 days

Benefits of Pentamoist

43%

**better than glycerin
on dry and normal skin**

Binds 2.8 times more
moisture than glycerin
after 30 minutes in vivo

22%

**reduction in skin irritation
caused by AHA**

**72-hour
deep hydration**

In vivo study shows increased
skin hydration for up to 6 days
after application

**Rebalances
microbiome interaction**

In vitro study showed
effectiveness in controlling
microbial species equilibrium

**28 days
to achieve full facial
hydration**

With application of 1%
Pentamoist twice a day

Polyglutamic Acid

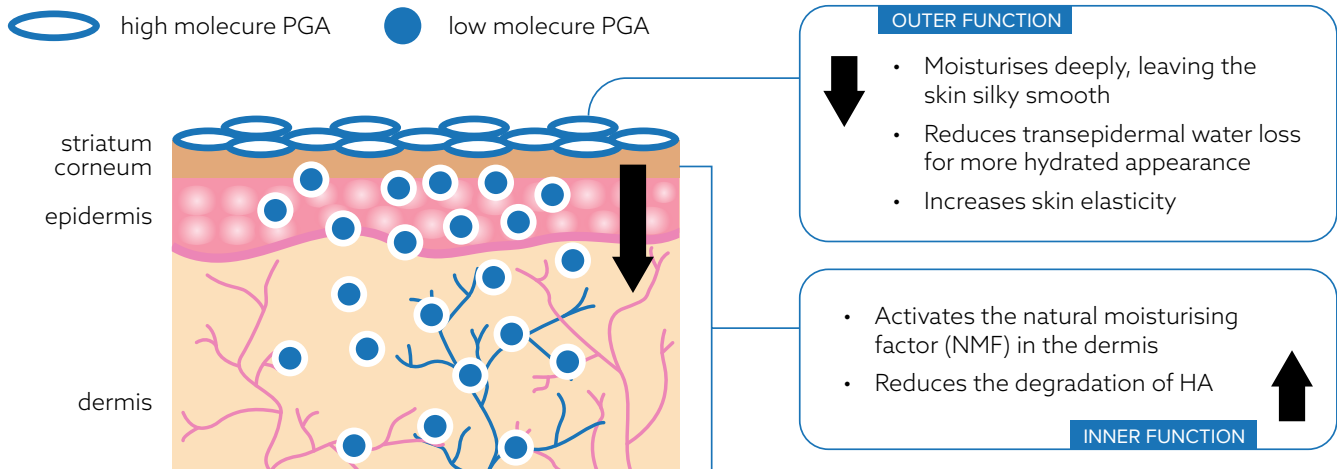
Four times as powerful
as hyaluronic acid

This natural ingredient is derived from fermented soybeans more commonly known as the traditional Japanese food *Natto*.

When applied to the skin, it has effects on both the outer appearance and inner dermis and epidermis layers of the skin, leaving a dewy, smooth finish.



How Polyglutamic Acid Works



Benefits of Polyglutamic Acid

**Absorbs water up
to 4000 times
its own weight**

Provides improved hydration for skin



**4 times more effective
than hyaluronic acid**

Polyglutamic Acid is able to absorb up to 4000 times its own weight, compared to HA which can only absorb up to 1000 times its weight



**Effective in
preventing
skin diseases**

such as atopic skin regeneration



**Proven hyaluronidase
inhibitor**

Reduces the degradation of HA, relieves inflammation and improves symptoms of atopy

