

— Novel Hyaluronic Acid

# Hybloom™ Zinc Hyaluronate (HA-Zn)

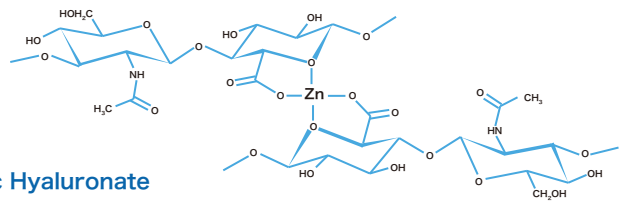
- 1 Moisturizing
- 2 Bacteriostatic
- 3 Soothing
- 4 Repairing

Approved by China NMPA: 国妆原备字20220008

Zinc (Zn) is an essential trace element for human body and widely distributed in various tissues. Skin is the tissue with the third highest zinc content.

As a cofactor for more than 1,000 enzymatic reactions and 2,000 transcription factors, zinc is widely involved in nucleic acid and protein synthesis, cell differentiation and other physiological activities, and plays an important role in skin diseases, immune function, wound healing, etc.

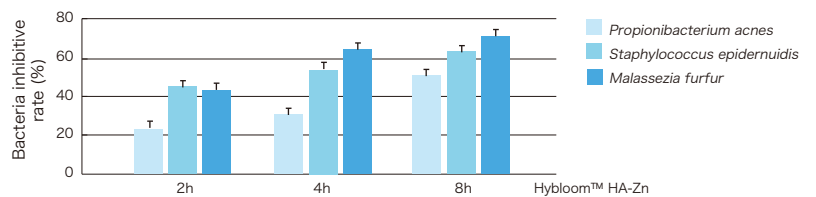
Hybloom™ Zinc Hyaluronate(HA-Zn) is the perfect combination of HA and zinc with both efficacies which is developed by a patented technology. It not only has the characteristics of moisturizing, repairing and nourishing of HA, but also has the functions of anti-oxidation and soothing of Zinc. Hybloom™ Zinc Hyaluronate(HA-Zn) has passed the registration of new cosmetic raw materials of the NMPA on April 23, 2022 and has the characteristics of high zinc content and low sodium residue.



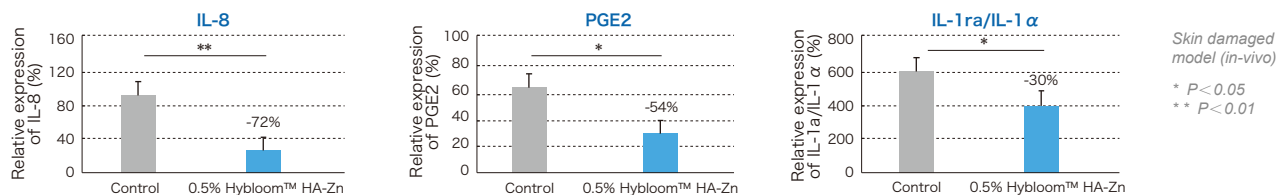
Structure of Zinc Hyaluronate

## Suppress bacterial overgrowth (in-vitro)

Based on the test results, it is suggested that 0.5% HA-Zn can effectively inhibit the overgrowth of bacteria *Propionibacterium acnes*, *Staphylococcus epidermidis* and *Malassezia furfur*.

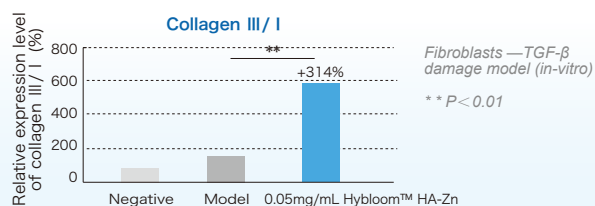


## Decrease the expression of inflammatory factor (in-vivo)



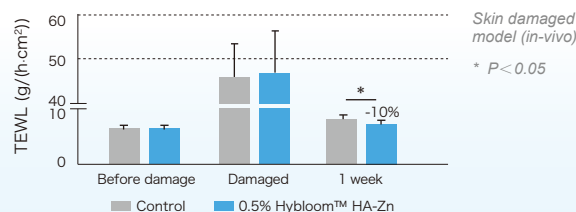
After the skin is stimulated, the expression of inflammatory factors are up-regulated. HA-Zn can significantly reduce the expression of inflammatory factors IL-8 and PGE2, and the ratio of IL-1ra/IL-1α is significantly down-regulated. Results indicated that HA-Zn has a soothing effect on the damaged skin.

## Up-regulate the ratio of collagen III / I to reduce scar formation (in-vitro)



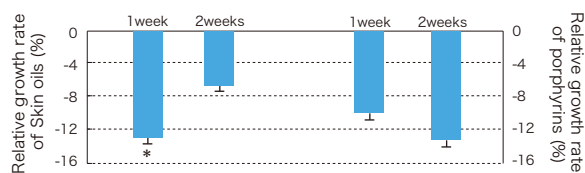
Scar is the result of the repair process of damaged skin. During the process of scar formation, the ratio of collagen III/I is greatly reduced, eventually leads to scar formation. Compared with the model group, HA-Zn can significantly increase the ratio of collagen III / I, so as to reduce the scar formation.

## Strengthen the skin barrier (in-vivo)



Transepidermal Water Loss (TEWL) value is an important indicator for evaluating the skin barrier function. When skin barrier is damaged, TEWL values increase. HA-Zn can significantly reduce the TEWL value and strengthen the skin barrier.

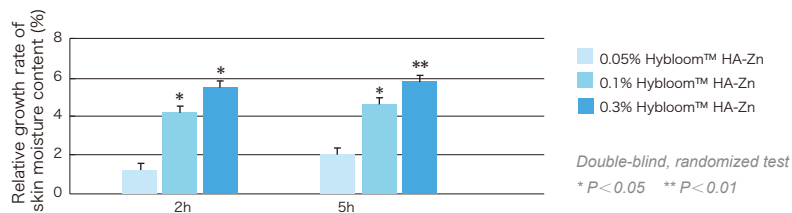
## Reduce excessive secretion of oils and porphyrins (in-vivo)



Double-blind, randomized test  
\* P < 0.05

Compared with the placebo group (HA-Zn free lotion), after using the lotion containing 0.5% HA-Zn, excessive secretion of skin oils and porphyrins were reduced.

## Enhance Hydration capacity (in-vivo)



Double-blind, randomized test  
\* P < 0.05 \*\* P < 0.01

In-vivo test have shown that the essence containing HA-Zn can significantly increase the skin moisture content. The higher the HA-Zn concentration, the more the moisture content increases.

**INCI Name:** Zinc Hydrolyzed Hyaluronate

**Recommended dosage:** 0.1%-0.5%

**Solubility:** Easily soluble in water

**Application:** Lotion, Cream, Essence, Mask, Facial cleansers, Toothpaste, Mouthwash, Shampoo and other products with efficacy requirements such as Humectant and Skin protectant.



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