ULMW HA (< 0.1 MDa)

Meteoric Cosmeceutiicals
Beauty Meets Brilliance in Biotech

BIOTECH EDGE

A breakthrough of molecular precision, ULMW Hyaluronic Acid represents the pinnacle of biotech miniaturization. Its ultra-small size enables bioavailable interaction at the cellular level, stimulating repair, reducing inflammation, and restoring youth at the root of skin vitality. A cell-intelligent hydrator redefining what biotechnology can achieve in skin rejuvenation.

HA ULMW represents the most **advanced form of hyaluronic acid.** At this ultra-low molecular size, it achieves a level of penetration beyond conventional HA, reaching the deeper layers of skin where it can interact directly with cellular processes. This unique activity makes it not just a hydrator, but a true skin-active ingredient capable of influencing repair, renewal, and overall skin vitality. Recognized as a **natural moisturizing factor (NMF),** it carries exceptional water-binding ability, while its bioactivity positions it as a next-generation tool in modern dermo cosmetic science.

PRODUCT DETAILS

INCI name: **Sodium Hyaluronate**

Recommended dosage: **0.05 – 0.5%**

Appearance: **White Or Almost White Powder Or Granules**

APPLICATIONS :

- High-performance serums & ampoules
- Premium anti-aging creams
- Moisturising and replenishing cream
- Sheet masks & post-procedure care
- Sensitive-skin and antioxidant formulations

KEY FEATURES :

- Non-GMO Fermentation Technology
- Non-Animal raw materials
- Higher purity, lower impurity
- Multifunctionality with hydration, antiaging and anti-inflammatory benefits
- Higher glucuronic acid content, lower content of protein, nucleic acid, and heavy metals

Please turn for more

WHAT IT BRINGS TO YOUR FORMULATION :

- Delivers deep-penetrating hydration beyond skin surface
- Protects against oxidative stress and inflammation
- Visible reduction in redness and pigmentation
- Antiaging potential to improve skin elasticity

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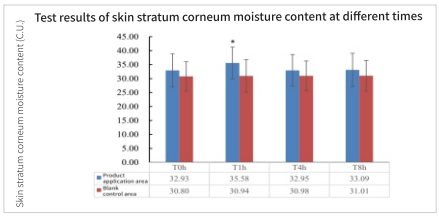
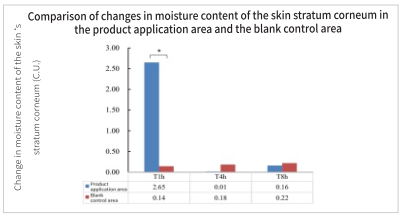
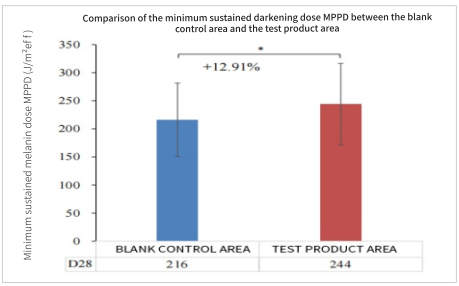
EFFICACY STUDIES :

- Hydration effects can be observed within 1 hour of application and significantly improves over 28 days with continuous application
- UV induced pigmentation and erythema is significantly reduced compared to untreated area with continuous application over 28 days.
- Confers superior hydration efficacy compared to all other high molecular weight HA variant.
- Improves skin elasticity with continuous application for 28 days
- Displays comparable efficacy to Dexamethasone in reducing inflammatory markers (TNF-α and IL-β)

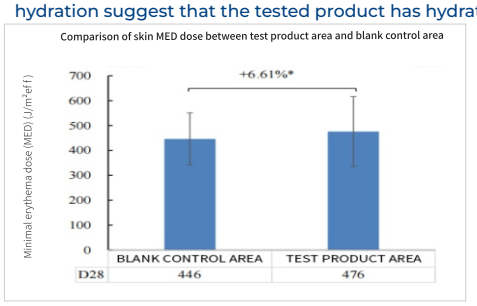




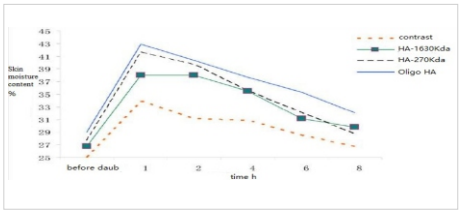
The moisture content of the skin stratum corneum in the product application area increased, and there was a significant difference compared with the blank control area, indicating that the test product has a moisturizing effect.After 1 hour of product application, the results of skin hydration suggest that the tested product has hydration efficacy.



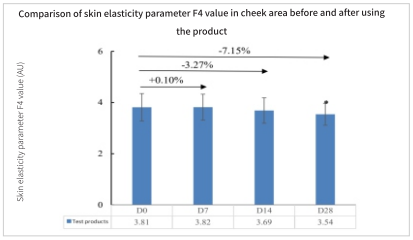
After using the product, the skin is less likely to produce photo-oxidative pigmentation caused by UVA, indicating that the product has a significant antioxidant effect.

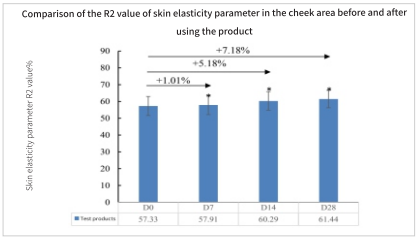


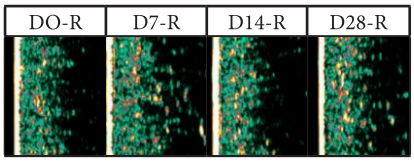
After using the product, the data analysis results of the minimum erythema dose (MED) of the skin showed that the test product has the effect of improving the erythema reaction caused by ultraviolet rays (UVA+B).

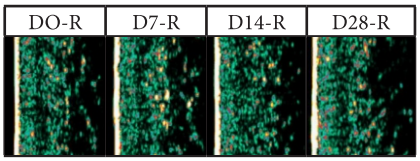


Different molecular weight HA (concentration 0.1%) was added to the basic cosmetic formula as the experimental product, and the basic formula without HA was used as a control to compare the effect of the difference in molecular weight on the skin moisturizing effect. The experimental results are shown in Figure 1: Ultra low molecular weight has a better effect of increasing skin moisturizing content.

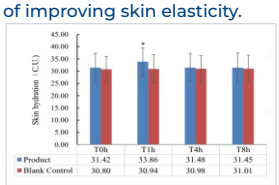


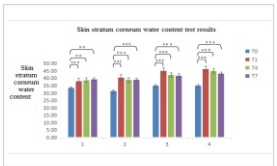


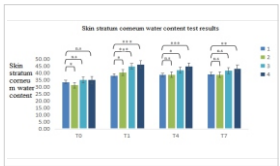


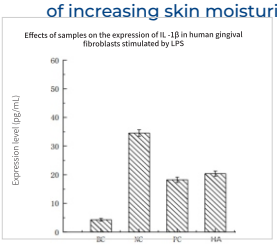


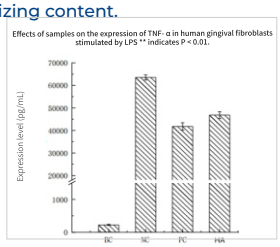
After using the product for 28 days, the data analysis results of the skin elasticity parameter R2 value and skin elasticity parameter F4 value suggest that the test product has the effect of improving skin elasticity.











Remark: BC means Blank control group; Sample name: human gingival fibroblasts culture medium. NC means Negative control group; sample name: human gingival fibroblasts culture medium PC means Positive control group; Sample name: Dexamethasone (action concentration 100ug/ml) HA means Ultra low molecular weight(action concentration 0.45%). Conclusion: Ultra low molecular weight has function of reduce oral inflammation

CLINICALLY PROVEN BENEFITS :

- Provides rapid and sustained hydration benefits
- Protects against UV-induced oxidative stress, inflammation and damage Erythema
- Has significant anti-oxident effect and reduces inflammatory markers
- Improves skin elasticity and provides visible skin smoothness

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