

-Hyaluronic Acid Scrub Solutions (Designed for Sensitive Skin)

Hyacross[™] Hyaluronic Acid Microbeads TG300

Crystal HA microbeads with high elasticity,
Gentle exfoliating, easy to clean
Replace plastic microbeads with degradable and sustainable source
Customize the microbeads size and cross-linking degree

Hyacross[™]TG300 is a kind of swelled but water insoluble sodium hyaluronate crosspolymer, obtained from natural sodium hyaluronate by applying the patented cross-linking technology. Hyacross[™]TG300 can turn into crystal and highly elastic HA microbeads after swelling, which is able to replace the traditional plastic microbeads. It can be used in an exfoliating scrub to smooth skin and promote skin blood circulation, especially suitable for sensitive skin.

Swelling Degree

TG300 can reach the equilibrium swelled state in enough water after 5 minutes. The swelling degree is 12.5mL/g.

Particle size comparison before and after swelling



Before Swelling: $16\mu m$

After Swelling: 418 µm

Efficacy [Exfoliate and brighten skin (in-vivo)]

We recruited 15 healthy volunteers aged 24 to 35 years for a randomized, double-blind, half-face control test. They applied TG300 and TG300-free scrub creams on their left and right sides of face, then massage the area for 5 min before rinsing with water. We tested the skin after 30 mins and found that scrub cream containing 1% and 3% TG300 can increase skin glossiness by 4.2% and 10.6% respectively compared with the blank group. The results show that TG300 has significant exfoliating and smoothing efficacy.



Scrub Cream

Normal

3% TG300

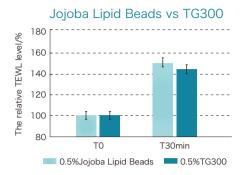
Scrub Cream

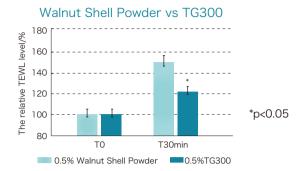
Before using the scrub cream

After using the scrub cream

[Soft and hydrated, skin friendly]

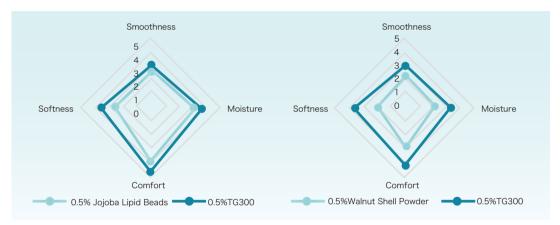
Transepidermal water loss increases after using the scrub cream, which means that the skin barrier has been damaged to some extent. Compared with the same concentration of jojoba lipid beads and walnut shell powder, the TEWL in TG300 group was respectively decreased by 5.40% and 19.43%. So TG300 can moisturize the skin and reduce cuticle barrier damage caused by the scrub.





(Sensory Evaluation)

Compared with the control group, the skin smoothness, moisture, firmness, and softness were improved after the application of TG300-containing scrub cream. Subjects particularly liked the feelings of softness and elasticity that TG300 brought.



Biodegradable

According to OECD 301 F <MANOMETRIC RESPIROMETRY TEST>, TG300 is biodegradable and corresponds to sustainable development trend.

Specification

INCI name	Sodium Hyaluronate Crosspolymer
Appearance	White or almost white granules
Particle size	Distribution within 0.05 mm-0.4 mm ≥ 60%
Recommended Dosage	Facial scrub products: 0.3-3%; Body scrub products: 1-5%
Usage	For non-emulsifying system, directly add swelled TG300 to the formula; for emulsifying system, add swelled TG300 during cooling stage of the emulsification.
Application	Scrub products, such as scrub body lotion, exfoliating cleanser/gel, etc. Clean massage products, such as body massage cream, scalp massage essence, etc.



华熙生钧科技股份有限公司

BLOOMAGE BIOTECHNOLOGY CORPORATION LIMITED

Add: No.678 Tianchen St., High-Tech Development Zone, Jinan, China 250101 Tel: +86 531 82685998 Fax: +86 531 82685988 www.bloomagebioactive.com E-mail: customer@bloomagebioactive.com



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