



BLOOMAGE FREDA BIOPHARM CO., LTD.

Hyacross™

Hyaluronic Acid Elastomer

Excellent protective film with
long-lasting moisturizing effect on the skin

- Smooth and not sticky feeling
- Forms a crosslinked network on the skin surface
- Long-lasting moisturizing effect because of its good stability
- Increases skin elasticity and reduces skin roughness



Add: No. 678 Tianchen St., High-Tech Development Zone, Jinan, China 250101
Tel: +86 531 82685998 82685996 Fax: +86 531 82685988
Email: customer@bloomagefreda.com
www.bloomagefreda.com
Copyright © Jan 2016, Bloomage Freda Biopharm Co., Ltd.

The Science of Beauty



Hyacross™ *Hyaluronic Acid Elastomer is a crosslinked polymer derived from natural Hyaluronic Acid (HA). Hyacross appears like an elastic gel with high viscosity able to form invisible biological film on the skin surface with various effects, such as moisturizing, protection, slow release, etc.*

1 Mechanisms of Action

Improving skin barrier

The Hyacross microstructure was studied by using scanning electron microscopy (Fig1). Hyacross can form a 3D “breathable” layer on the surface of the skin that improves the skin barrier function, reduces the water evaporation from cuticle and prevents the skin damage caused by external aggressions like UV ray, pollution, etc.

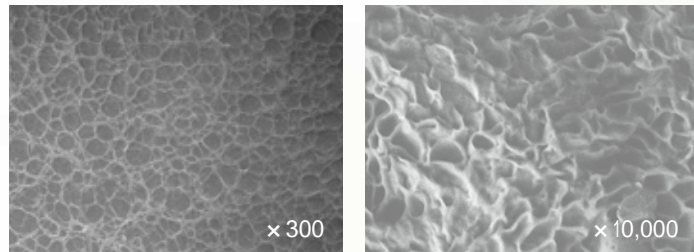


Fig 1. Hyacross microstructure

Excellent water binding capacity

The viscosity of a Hyacross solution is 2-3 times that of HA solution at the same concentration, which indicates that Hyacross can bind more water molecules because of its crosslinked structure (Fig2). Hyacross behaves like a “micro reservoir” delivering continuously water to the skin.

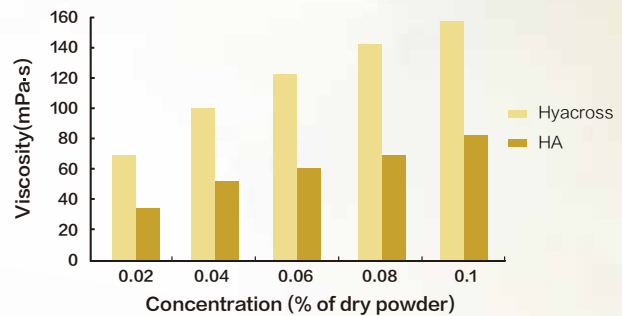


Fig 2. The viscosity test of Hyacross

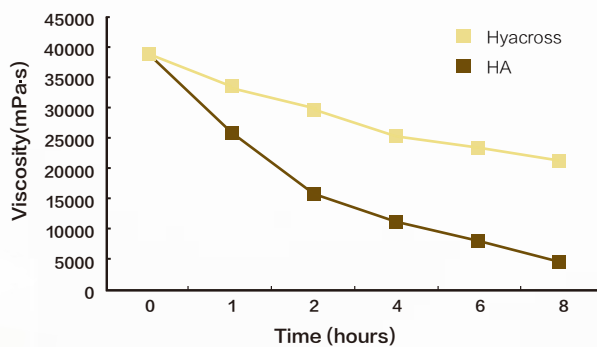


Fig 3. Resistance of Hyacross to Hyaluronidase

Good resistance to Hyaluronidase

Hyacross shows better resistance to Hyaluronidase than common Sodium Hyaluronate (Fig3), so the film formed by Hyacross on the skin surface is more stable and durable.

Long-lasting moisturizing

Hyacross can keep cuticle moisturized because of the excellent water binding capacity and decrease the evaporation of the deeper skin moisture by forming a dense film on the skin surface.

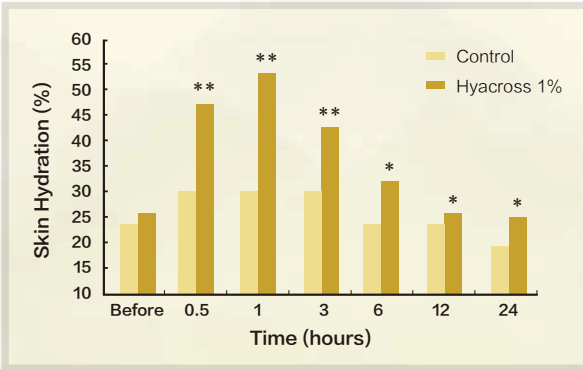


Fig 4. The skin hydration test

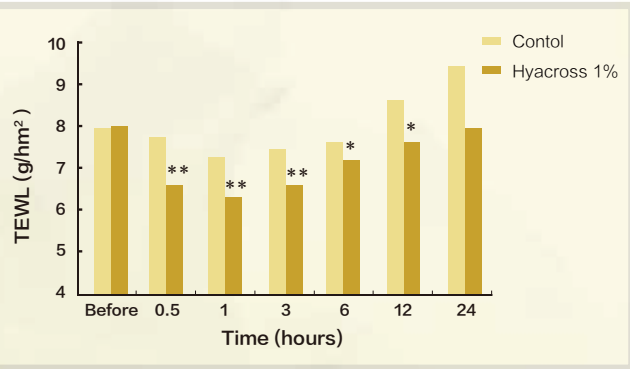


Fig 5. Skin TEWL test

Compared to the control group, the skin hydration of Hyacross group was increased by 85% after 0.5h and 110% after 1h (Fig4). Hyacross increased significantly skin hydration even after 24h. Compared to the control group, the skin TEWL of Hyacross group was reduced by 18% after 0.5h and by 22% after 1h (Fig5). Hyacross reduced significantly skin TEWL even after 12h.

Skin elasticity

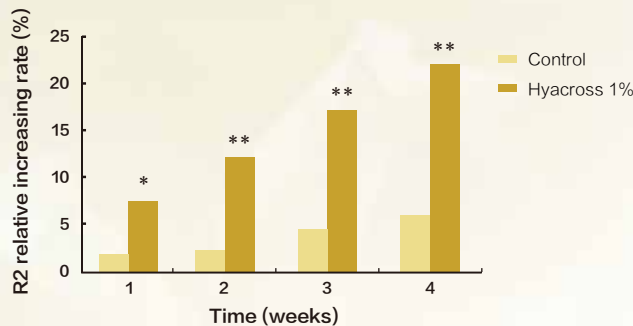


Fig 6. Skin elasticity test

Compared to the control group, the skin elasticity of Hyacross group was significantly increased (Fig.6). After 4 weeks of application, the relative skin elasticity increasing rate for the Hyacross group reached 21.6%.

Skin smoothness

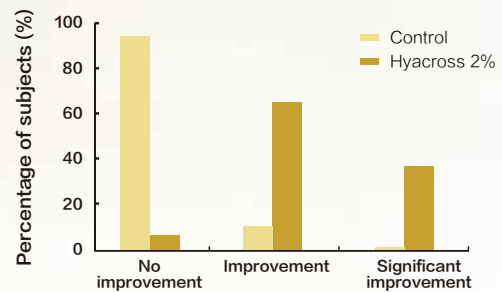


Fig 7. Sensory evaluation test-I

Randomized, double-blind placebo-controlled evaluation of Hyacross was carried out on 20 healthy females. The result showed a significant improvement of skin smoothness appearance on 35% of the volunteers after 30 days (Fig7).

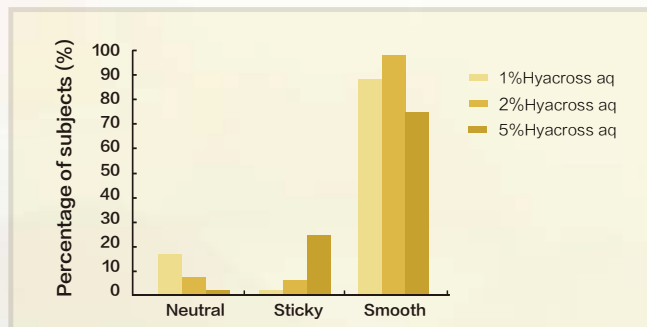


Fig 8. Sensory evaluation test-II

Skin feeling

Hyacross has higher viscosity and better thickening capacity than common HA and it feels smooth but not sticky when dissolved in water media. Most volunteers reported that the 2% solution has the best feeling (Fig8).

Hyacross™ TL100

INCI name: Sodium Hyaluronate Crosspolymer/ Pentylene Glycol /Aqua

CAS No.: —/5343-92-0/7732-18-5

EINECS No.: —/226-285-3/231-791-2

Appearance: Colorless and transparent aqueous gel

Recommend range: 1.0-5.0%

Usage: Soluble in water, it can be added directly to the water phase by gentle stirring until complete dissolution.

Package: 500g/bottle

Storage: Keep the container well closed and protected by air and light at room temperature.

Shelf Life: Two years

Hydrating and nourishing sleeping mask

Example of formulation

No	Ingredient name (INCI name)	Wt/%
1	Glycerin	8.0
2	Hyacross	2.0
3	Betaine	2.0
4	Niacinamide	1.5
5	Simmondsia chinensis(Jojoba) seed oil	1.0
6	Dicaprylyl carbonate	1.0
7	Dimethicone	1.0
8	Dimethicone /Dimethiconol	1.0
9	Cetearyl olivate/Sorbitan olivate	1.0
10	Phenoxyethanol/Ethylhexylglycerin	0.8
11	Trehalose	0.5
12	Tocopheryl acetate	0.5
13	Ammonium acryloyldimethyltaurate/VP copolymer	0.35
14	Acrylates/C10-30 alkyl acrylate crosspolymer	0.25
15	Methylpropanediol	0.1
16	Allantoin	0.1
17	Fragrance	Q.S.
18	Aqua	To 100

Hyacross™ TG100

INCI name: Sodium Hyaluronate Crosspolymer/ Pentylene Glycol /Aqua

CAS No.: —/5343-92-0/7732-18-5

EINECS No.: —/226-285-3/231-791-2

Appearance: Colorless and transparent aqueous gel with soft particles

Recommend range: 1.0-5.0%

Usage: Insoluble transparent particles are still present in the solution after this product is dissolved in the aqueous phase. These particles are very small and disappear during the homogenization process. In particular these particles are visible in water based products, just like “HA droplet” and they are absorbed easily by the skin during the application of the product.

Package: 500g/bottle

Storage: Keep the container well closed and protected by air and light at room temperature.

Shelf life: Two years

High Purity HA Serum

Example of formulation

No.	Ingredient name (INCI name)	Wt/%
1	Butylene glycol	5.0
2	Glycerin	3.0
3	Hyacross	2.0
4	Betaine	2.0
5	Glyceryl polymethacrylate/propylene glycol/PVM/MA copolymer	2.0
6	Phenoxyethanol/Ethylhexylglycerin	0.8
7	Allantoin	0.2
8	Carbomer	0.05
9	Methylpropanediol	0.02
10	Aqua	To 100