

► Physical Properties Test

According to the test performed by 'Beauty & Health Innovation Corporation' in Japan, applied it in a variety of formulas of shampoos and hair conditioners, it indicates that:

1. The addition of cationHA™-G to shampoos and conditioners does not show any incompatibility or negative impact on the formulations, and it helps to improve the physical properties of these formulas.
2. cationHA™-G can improve the combability of shampoos in a certain degree and the effect is more significantly in conditioners.

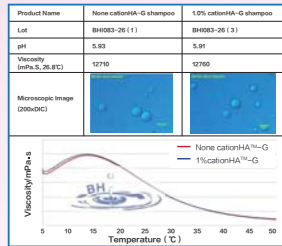


Fig.7 Physical Properties Test (shampoo)

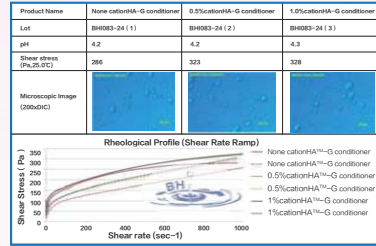


Fig.8 Physical Properties Test (conditioner)

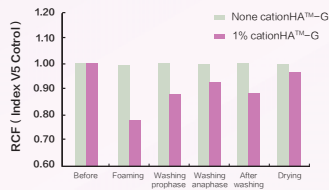


Fig.9 Dynamic Combing Test (shampoo)

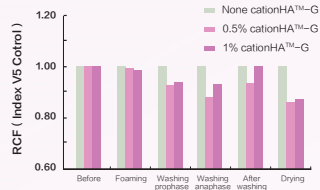


Fig.10 Dynamic Combing Test (conditioner)

► Sensory Evaluation

cationHA™-G shows its superior performance according to a blind test for sensory evaluation, executed on 30 volunteers.

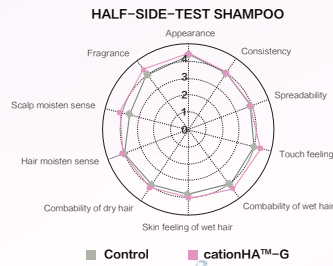
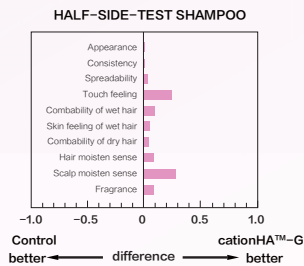


Fig.11 Sensory Evaluation

[Applications] (only for non-transparent formulas)

- Hair and scalp care products like shampoos, conditioners
- Body care products

Recommended dosage 0.5% -1%



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The Science of Beauty

BLOOMAGE FREDA BIOPHARM CO., LTD.

The Science of Beauty

A moisturizer designed especially for hair care that can improve the barrier function of the scalp

- Natural, Mild, conditioning moisturizer
- Suitable for hair care especially in scalp care
- Enhance the hydration of the scalp



cationHA™-G

Substantivity Sodium Hyaluronate

[Introduction]

▶ cationHA™-G , as a conditioning moisturizer, it is a association complex of cationic guar gum and Sodium Hyaluronate (HA) with different molecular weights.

[Advantages]

▶ High Substantivity

It creates asynergistic polymer composite that augments and expands the unique properties of two polymers, and it can improve the substantivity of HA with the hair and skin, can be used in rinse-off products.

▶ Reduce the Irritancy

It helps reduce the irritancy to the skin caused by surfactants in formulas and feeling smooth.

▶ Scalp Care

- It helps to enhance the hydration ability of the scalp, so as to relieve itching and dandruff situation caused by dry.
- Lower molecular weight HA can easily penetrate into the skin, nourish it deeply and eliminate free radicals. It also can repair damaged scalp cells and help to keep the right balance in metabolism.
- Higher molecular weight HA can form a flexible film, which protect hair and skin from UV damage.

[Efficacy Test]

▶ The Resident Test

cationHA™-G, as a conditioning moisturizer, it can build up on the hair more easily than using HA alone. It shows higher substantivity to the hair and suitable for rinse-off products.



Fig.1 cationHA™-G Resident Test

▶ The Irritancy Test

The test performed by a professional third party lab, using different dosage of HA mixed with SLS applied on the upper of epidermal skin models (Episkin), tissue viability and the level of the inflammatory factor (IL-1α) are quantified, and the results indicate that HA can reduce the stimulating to the skin caused by SLS, and the effect of lower molecular weight HA is more significant.

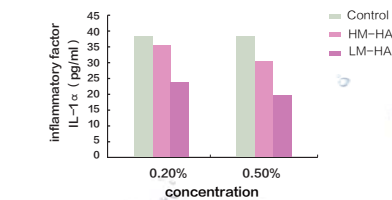


Fig.2 Reconstructed Human Skin Model Anti-irritation Test

▶ The Test of the Barrier Function of the Scalp

The test has carried on 30 volunteers. Considering the specificity of the scalp, the skin of the forearm flexor side has been treated, they cleaned it once every two days within four consecutive weeks with shampoo containing 1% cationHA™-G.

The test indicates that cationHA™-G can protect and improve the barrier function of the scalp when shampoo the skin.

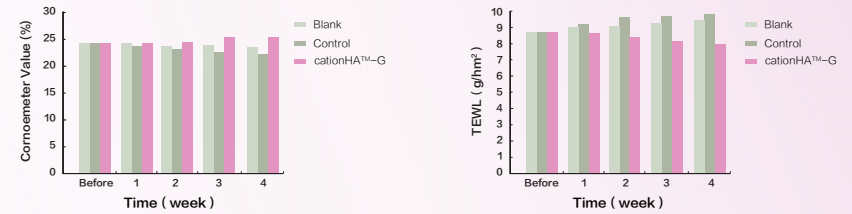


Fig.3 The Test of the Barrier Function of the Scalp

▶ Foam Test

Foaming properties of shampoo with cationHA™-G are tested and it shows that its foams are more fine and stable.

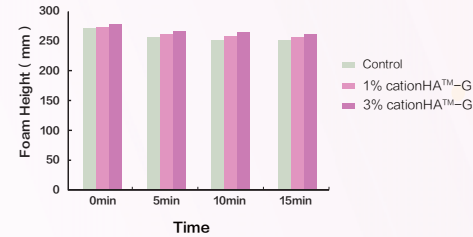


Fig.4 Shampoo Foam Test

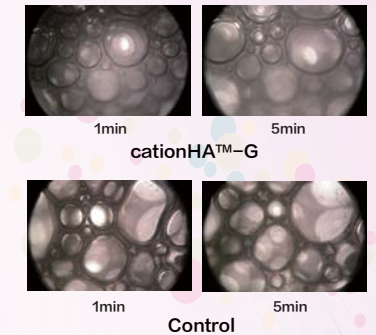


Fig.5 Microscopic Image of Shampoo Foam

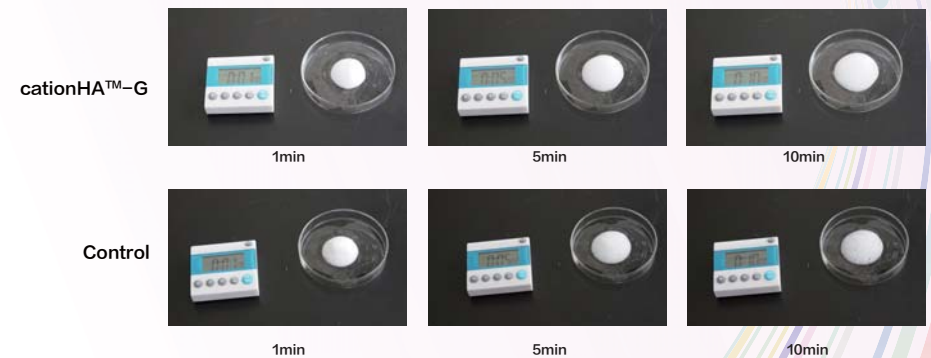


Fig.6 Test for foam's quality