1. INCI Ingredients List.

Water, Glycerin, Dendrobium Nobile Stem Extract, Aloe Barbadensis Leaf Extract, Sophora Flavesence Root Extract, Lycium Barbarum Fruit Extract, Echinacea Purpurea Extract.

2. Product Information.

AQP Free is a functional herbal moisturizing cosmetic ingredient. It combines the principles of "holistic, syndrome differentiation" of TCM, through four ways of "replenishing, clearing, consolidating and nourishing" to regulate the skin conditions.

AQP Free has the following characteristics:
1) promotes the expression of aquaporin AQP3 in keratinocytes, open up the "water channels" and invigorates body fluid production;
2) effectively inhibit hyaluronidase activity, prevent hyaluronic acid hydrolysis, protect the "water source" that use to clear heat and suppress the fire;
3) improve expression of Filaggrin and Claudin-1, consolidate the "barrier function", which is strengthening of the skin barrier;
4) immediately smoothes fine lines and repair flaking skin, and capable of providing long-lasting nourishing and moisturizing effect for the skin;
5) leaving the skin feeling silky smooth and supple.

3. Symptom

Skin drying is a common skin problem, especially in the autumn and winter or under dry and water-deficient environment. The apparent symptoms such as that the skin is prone to scales, the appearance of fine lines and other phenomena. Consumers feel that the skin surface is dry, uncomfortable, rough and tight, and in more severe cases, the skin looks like dry, dead leaves.

4. Theory

Skin dryness can be due to internal dehydration and external consumption. The internal dryness is like a fire in the skin. Despite the constant water replenishment, loss of water through the skin is continuous, TCM regarded such as internal heat consumption. Under the conditions of internal dryness and external consumption (evaporation), these attribute to "body fluid deficient" in the skin. Deficient of body fluid will also accompany a weak skin barrier, which is due to lack of nourishment.

The following factors will evolve into dry skin and showing all the above symptoms:
1) body fluid deficiency;
2) internal heat consumption;
3) weak skin barrier;
4) denutrition.

Nutri-Woods comes up with an innovative idea with a complete hydrating philosophy of "Replenish, Clear, Sustain, and Nourish".
5. Efficacy.

5.1 Improve Skin Moisture Content.

Fig. 1 Changes of skin moisture content of volunteers.

Statistically significant Vs Sodium Hyaluronate, (*) P < 0.05, (**) P < 0.01, n=30

- Formula base
- 5% Dendrobium Nobile extract
- 5% AQP Free
- 0.05% Sodium Hyaluronate

5.2 Smooth out Fine Lines and Scaling Caused by Skin Dryness.

Fig. 2 Skin surface images of test areas of one of the volunteers.

5.3 Replenish of body fluid.

Blank control

AQP Free

Fig. 3 Skin scaling condition of volunteers.

Statistically significant Vs baseline (0h).

(+) P < 0.1, (*+) P < 0.05, n=8

5.4 Clearing Away Heat & Suppressing Fire.

Fig. 4 Average skin roughness of volunteers.

Statistically significant Vs (0h).

(+) P < 0.1, (*+) P < 0.05, n=8

5.5 Strengthen the skin barrier to retain hydration.

Fig. 5 Expression of AQP3 in keratinocytes.

5.6 Nourish, moisturize and enrich the Yin.

Fig. 6 The inhibitory effect of AQP Free on hyaluronidase.

Statistically significant, (**) P < 0.05, n=8

Note: Detail information is available from the respective product manuals.

Disclaimer: For all products produced by Nutri-Woods BioTech (Beijing) Co. Ltd. is printed on the SDS and product manual of the particular products.