NextStep LABORATORIES

PHYTOMOIST

EXCELLENT SKIN-CARE EFFECT

PHYTOMOIST

Phytomoist is 400 times more moisturizing than Sodium Hyaluronate and contains a natural Hyaluronic Acid derived from an edible mushroom widely consumed in Asia. In combination with Betaine, naturally derived from beets and plant derived glycerin, the combination has the following properties:

- Extremely high level of moisturization
- Improved skin softness
- Increase production of SOD in the skin
- Prevention of frizziness in hair due to humidity
- Use level 0.5 - 5%

INCI Name: Water (and) Tremella fuciformis sporocarp (and) Betaine (and) Glycerin

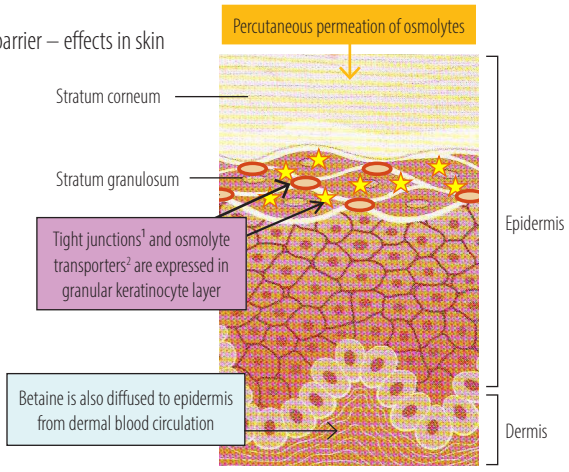
FORMULATION TIPS

Phytomoist is not heat sensitive, but as with most actives it is recommended that it be added to the water phase of formulations below 50C. For W/O emulsions, add to water phase before emulsifying.

MODE OF ACTION

Tremella is a polysaccharide that is very hygroscopic and in combination with glycerin they completely hydrate the epidermis which renders the skin very permeable to transdermal penetration of smaller molecules. Once skin is hydrated, Betaine, which is a very small amino acid derivative easily penetrates the epidermis and permeates the stratum corneum due to it's osmolytic properties. It is then taken up by Keratinocytes through specific betaine transporters to restore water balance in the cells. Betaine also improves tight junction integrity thus preventing water loss from the skin.

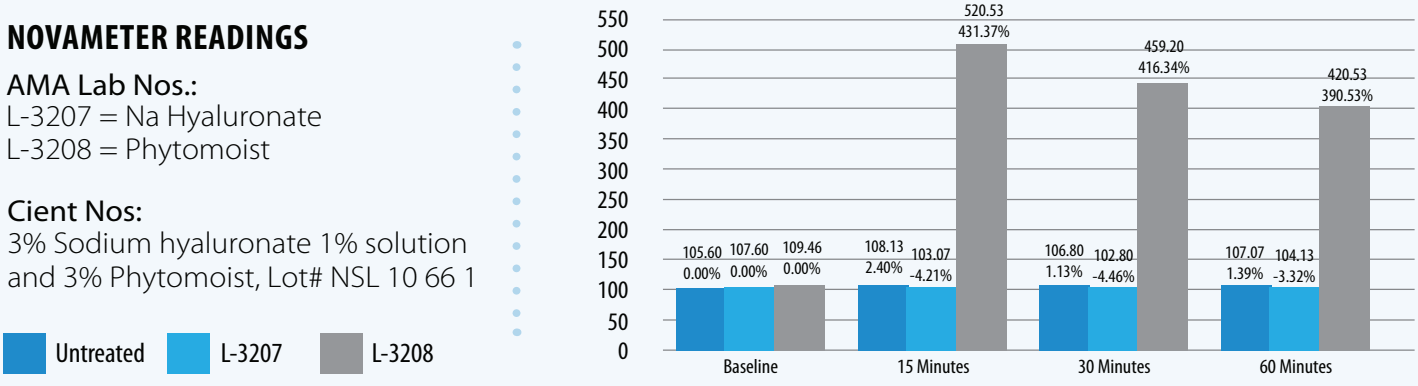
BETAINE:
Strengthens skin barrier – effects in skin



NOVAMETER READINGS

AMA Lab Nos.:
L-3207 = Na Hyaluronate
L-3208 = Phytomoist

Cient Nos:
3% Sodium hyaluronate 1% solution and 3% Phytomoist, Lot# NSL 10 66 1



MOISTURIZATION STUDY

ELECTROCONDUCTIVITY-NOVAMETER

A Nova Dermal Phase Meter, Model DPM 9003 (Nova, Technology Corp., Gloucester, MA) was used to obtain measurements of skin surface impedance to determine electroconductivity of the treatment sites. This meter provides a relative measure of the retained water content of the skin as a function of the skin's dielectric value. Skin impedance was recorded automatically when equilibrium was achieved.

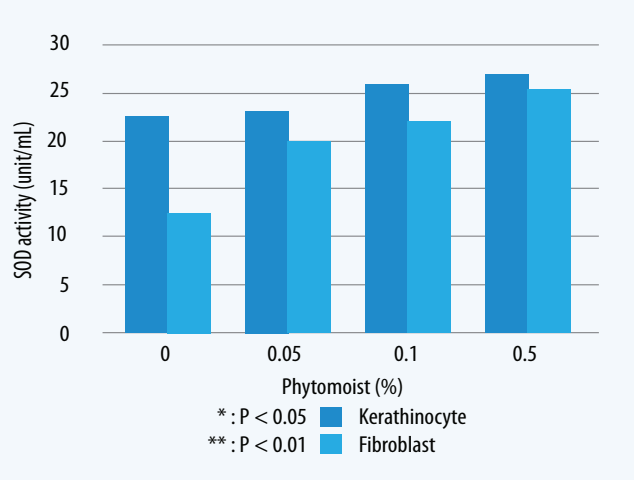
ANTI-OXIDATION AND ANTI-AGING

Phytomoist inhibits the action of active oxygens and helps to prevent the aging of skin

SOD* activity of the skin cells was increased by an addition of Phytomoist to the cultivation medium.

Method

Phytomoist was added to the culture medium cultivating keratinocyte or fibroblast isolated from rat skin. After cultivating 24 hrs. at 37 degrees C in 5% CO2, SOD activity was measured.



1) Keratinocyte

When added more than 0.1% of Phytomoist, increase of SOD activity was observed.

2) Fibroblast

When added more than 0.5& of Phytomoist, increase of SOD activity was observed.

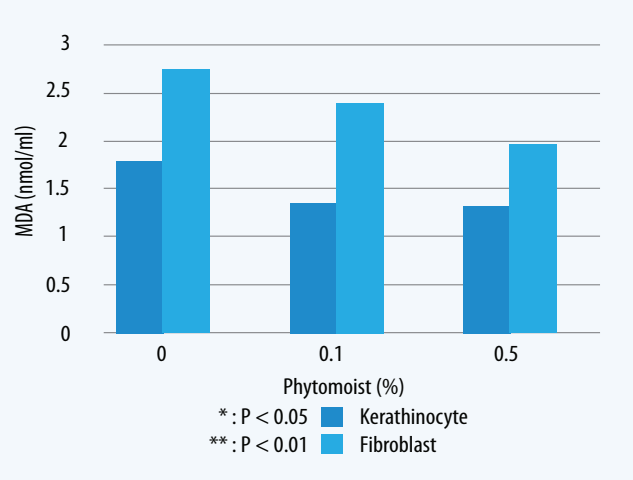
(*SOD: SuperOxide Dismutase)

Phytomoist suppresses peroxidation of the cellular lipids and helps to prevent the aging of the skin.

Phytomoist added to the cultivation medium suppressed lipid peroxidation in the skin cells.

Method

Phytomoist was added to the culture medium cultivating keratinocyte or fibroblast isolated from rat skin. After cultivating 24 hrs. at 37 degrees C in 5% CO2, generated MDA* was measured as a level of peroxidized lipids by TBA** method.



1) Keratinocyte

When added more than 0.1% of Phytomoist, peoxidized lipids in the cell culture decreased significantly.

2) Fibroblast

When added more than 0.5% ofPhytomoist, peroxidized lipids in the cell culture decreased significantly.

(*MDA: Malondialdehyde) (**TBA: Thiobarbituric acid)

NextStep LABORATORIES

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