



BIOGRÜNDL, S.L.
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TECHNICAL DATA SHEET

NATURAL MOISTURIZING FACTOR / A / HGL / CA11 /



Trade Name: NATURAL MOISTURIZING FACTOR / A / HGL / CA11 /

Product Code: FHNAHGLCA11.

INCI Name: AQUA, GLYCERIN, SODIUM PCA, UREA, HYDROLYZED COLLAGEN, POTASSIUM SORBATE, ALLANTOIN, LACTIC ACID, SODIUM HYDROXIDE, GLYCOLIC ACID, MALIC ACID, TARTARIC ACID, CITRIC ACID.

INCI Status: Conforms.

REACH Status: Low Volume Exemption.

CAS Number7732-18-5; 56-81-5; 28874-51-3; 200-315-5; 92113-31-0 / 73049-73-7; 24634-61-5/ 590-00-1; 97-59-6; 50-21-5; 1310-73-2; 79-14-1; 97-67-6; 133-37-9 / 147-71-7 / 87-69-4; 77-92-9 / 5949-29-1.

EC Number: 231-791-2; 200-289-5; 249-277-1; 57-13-6; 295-635-5; 246-376-1; 202-592-8; 200-018-0; 215-185-5; 201-180-5; 202-601-5; 205-105-7 / 205-695-6 /; 201-069-1.

Origin: GLYCERIN: Vegetable origin.

SODIUM PCA: Vegetable-mineral origin.

HYDROLIZED COLLAGEN: Animal origin.

ALLANTOIN, TARTARIC ACID: Vegetable origin.

UREA, POTASSIUM SORBATE, GLYCOLIC ACID, MALIC ACID: Synthetic origin.

SODIUM HYDROXIDE: Inorganic.

LACTIC ACID, CITRIC ACID: Fermentation.

Processing: GMO Free. / No Ethoxylation. / No Irradiation. / No Sulphonation. / No BSE/TSE. / No CMR. / No SVHC. / No Nanomaterial. / No DEG. / No DEHP. / No Formaldehyde. / No Phthalates. /

Additives: Preservatives: Potassium sorbate. Paraben Free. / Antioxidants: None. / Other additives: None.

Solvents Used: Water and glycerin.

Appearance: Clear or slightly opalescent liquid.

Colour: Characteristic (yellowish to deep brown).

Odour: Characteristic.

Specific gravity: 1,000 - 1,300 g/cm³ (20°C approx.).

Direct pH value: 4,5 - 6,5 (20°C approx.).

Soluble/ Miscible: Water. Surfactants. Hydroalcoholic, hydroglyceric and hydroglycolic mixtures.

Ecological Information: Sustainable.

Microbial Count: Total aerobics: Max. 300 microorganisms / gram.

Fungi and yeasts: Max. 200 microorganisms / gram.

Pathogens: Total absence in 1 gram.

Suggested Use Levels: 2,0 – 10,0%.

Suggested Applications: Moisturizing and hydroactive preparations.

Properties: Moisturizing.

Industrial packing: 1Kg., 5Kg., 25Kg.

Storage conditions: It is very important to keep the product in well closed containers, away from direct sunlight at temperatures not over 15°C. In case of not having refrigerators, store the product in the coolest and free from artificial light area.

Bibliography: - Atlas Ilustrado de Plantas Medicinales y Curativas, Ed. Susaeta.

- Dumont's grosse Kräuter Enzyklopädie.

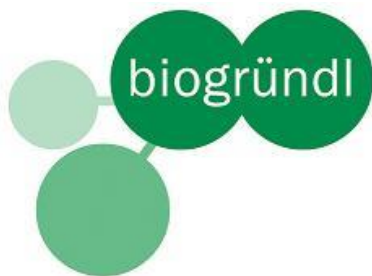
- Fitocosmeticos ALVAREZ CRUZ i BAGUE SERRANO.

- Gran enciclopedia de las plantas medicinales, BERDONCES i SERRA.

- Plantas medicinales, FONT i QUER.

- Proserpio G., Martelli A., Patri GF.; Elementi di Fitocosmeci; Ed. Sepem / Milano 1983.

- Websites.



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OVERVIEW

To keep the correct skin hydration is one of the objectives of the current cosmetic science. Skin has two mechanisms to achieve it. On one hand, its hydrolipidic surface prevents excessive moisture loss; on the other hand, the presence of natural moisturizing factor with great water retentive power in the innermost layers of the epidermis, makes skin retain its moisture content at normal levels.

However, due to various external factors (heat, environmental dryness, cold, surfactants), skin might lose large proportion of the protective hydrolipidic layer and, thus, also, natural moisturizing factor too. The consequences tend to be observable at once, showing flaking, lack of rigidity and modification of skin topography (appearance of wrinkles).

NATURAL MOISTURIZING FACTOR by BIOGRÜNDL, S.L. is a very faithful recomposition of skin moisturizing factor; it can replace it or be used as complementary product, achieving the return of rehydration ability or conservation of normal level of hydration.

Its composition is nearly identical to the natural moisturizing factor and contains, essentially, sodium pyrrolidone carboxylate, alpha-hydroxiacids blend, free amino acids, urea and allantoin.

USE AND DOSAGE

The incorporation of NATURAL MOISTURIZING FACTOR by BIOGRÜNDL, S.L. is justified because of its high moisturizing ability.

NATURAL MOISTURIZING FACTOR by BIOGRÜNDL, S.L. is used in moisturizing and, hydroactive preparations to maintain or to return normal degree of skin hydration. Its retentive of moisture nature increases water content of the skin, resulting more turgent and velvety appearance, as well as, migation of wrinkles. Also, dramatically increases, skin finesse and elasticity.

If turbidity is observed, it is advisable to previously dissolve the product in a portion of the water provided to manufacture the final product and filter after 12-24 hours.

The recommended concentrations of use are between 2% and 10%. For very special effects the dosage can raise up to 15%.

NATURAL MOISTURIZING FACTOR by BIOGRÜNDL, S.L. can be incorporated to o/w emulsions, gels, and solutions.



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PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear or slightly opalescent liquid.

Colour: Characteristic (yellowish to deep brown).

Odour: Characteristic.

Direct pH value: 4,5 - 6,5 (20°C approx.).

Specific gravity: 1,000 - 1,300 g/cm³ (20°C approx.).

Solubility in water: Fully soluble (20°C approx.).

Solubility in other solvents: Insoluble in organic solvents and lipids. Soluble in surfactants, hydroalcoholic, hydroglyceric and hydroglycolic mixtures.

Heavy metals: No more than 5 mg/Kg.

Sulfated ash: No more than 0,01%.

Chlorides: No more than 0,007%.

Sulfates: No more than 0,002%.

Other information: None.

Total aerobics: Max. 300 microorganisms / gram.

Fungi and yeasts: Max. 200 microorganisms / gram.

Pathogens: Total absence in 1 gram.

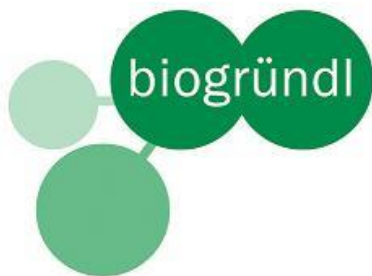
DERMATOLOGY INNOCUOUSNESS

It was performed by the patch test (Patch test) on 10 volunteers. To this purpose, 15% NATURAL MOISTURIZING FACTOR by BIOGRÜNDL, S.L., was added to an O/W emulsion; 0,5g. of this emulsion was poured over the patch and attached on the forearm. It is thus maintained for 24, 48 and 72 hours, after which, the given reaction was evaluated, according to the following table of values:

1. No erythema.
2. Slight erythema.
3. Well defined erythema.
4. Severe erythema.

The result was absence of erythema on the 10 volunteers.

On the recommended concentrations, the product is skin innocuous.



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STORAGE CONDITIONS

It is very important to keep the product in well closed containers, away from direct sunlight at temperatures not over 15°C. In case of not having refrigerators, store the product in the coolest and free from artificial light area.

INCI DENOMINATION

AQUA, GLYCERIN, SODIUM PCA, UREA, HYDROLYZED COLLAGEN, POTASSIUM SORBATE, ALLANTOIN, LACTIC ACID, SODIUM HYDROXIDE, GLYCOLIC ACID, MALIC ACID, TARTARIC ACID, CITRIC ACID.

EFFECTIVENESS TEST

Assay: Double blind spot trial and subsequent cosmetic evaluation.

Assayed parameters: Moisturizing action.

N (volunteers): 30 (17 ♀ and 13 ♂).

Age (volunteers): 21 – 68 years old.

Left side part to be treated:

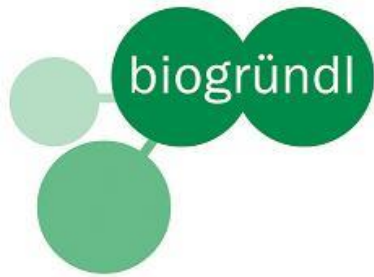
Placebo, 30 volunteers, suitable cosmetic base.

Right side part to be treated:

NATURAL MOISTURIZING FACTOR 2%, 15 volunteers, suitable cosmetic base.

Right side part to be treated:

NATURAL MOISTURIZING FACTOR 5%, 15 volunteers, suitable cosmetic base.

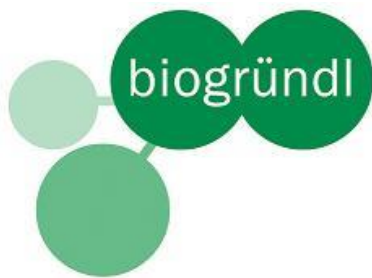


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Assayed parameter:

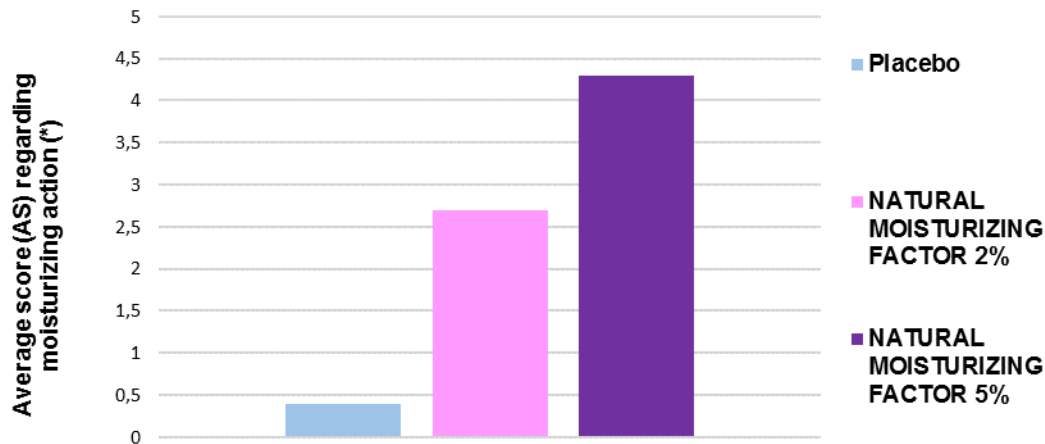
	Assay	N (volunteers)	Age (volunteers)	Placebo	NATURAL MOISTURIZING FACTOR 2%	NATURAL MOISTURIZING FACTOR 5%	Assay performed (Days)	Results measured (Days)
Moisturizing action	Double blind spot trial and subsequent cosmetic evaluation.	N = 30 17 ♀ and 13 ♂	21 – 68	Left side part	Right side part 15 volunteers.	Right side part. 15 volunteers.	D = 30	D' = 30



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SKIN CONDITION EVALUATION AFTER 30 DAYS



(*) Moisturizing action was determined by using a device called Tewameter which evaluates moisturizing effectiveness, providing TEWL parameters (transepidermal water loss), on volunteers treated zone.

Total number of days in which the assay was performed (treatment was applied):
D = 30 days (every day during the effectiveness test).

Total number of days in which the results were measured:
D' = 30 days (every day during the effectiveness test).

Average score:

Worst result: Zero limit value is assigned.

Best result: Five limit value is assigned.

Score is assigned to obtained results between the two limit values.

Average computation for each obtained results group is done:

Placebo, 2% NATURAL MOISTURIZING FACTOR by BIOGRÜNDL, S.L.,
5% NATURAL MOISTURIZING FACTOR by BIOGRÜNDL, S.L..

Results meaning:

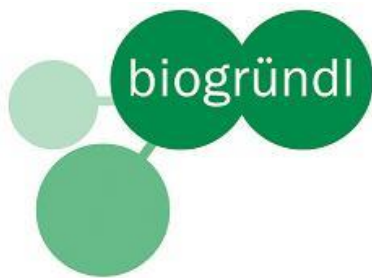
AS rank between 0 – 1: No significant changes.

AS rank between 1 – 2: Slight improvement regarding placebo.

AS rank between 2 – 3: Appreciable improvement regarding placebo.

AS rank between 3 – 4: Great improvement regarding placebo.

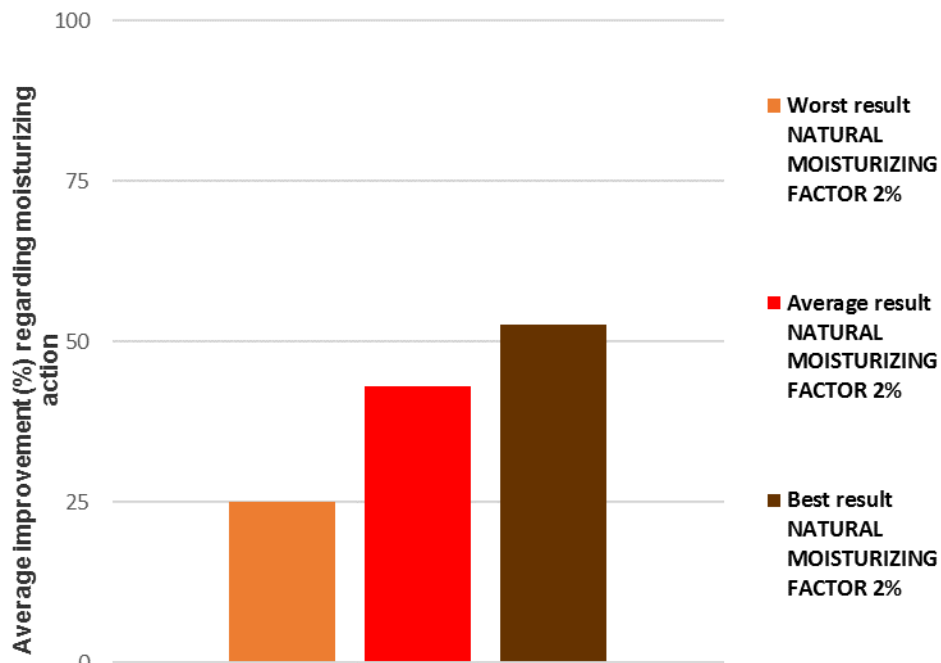
AS rank between 4 – 5: Excellent cosmetic result.



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NATURAL MOISTURIZING FACTOR 2%



Results:

Worst result NATURAL MOISTURIZING FACTOR 2%: 25%.
Average result NATURAL MOISTURIZING FACTOR 2%: 43%.
Best result NATURAL MOISTURIZING FACTOR 2%: 52,5%.

Results meaning:

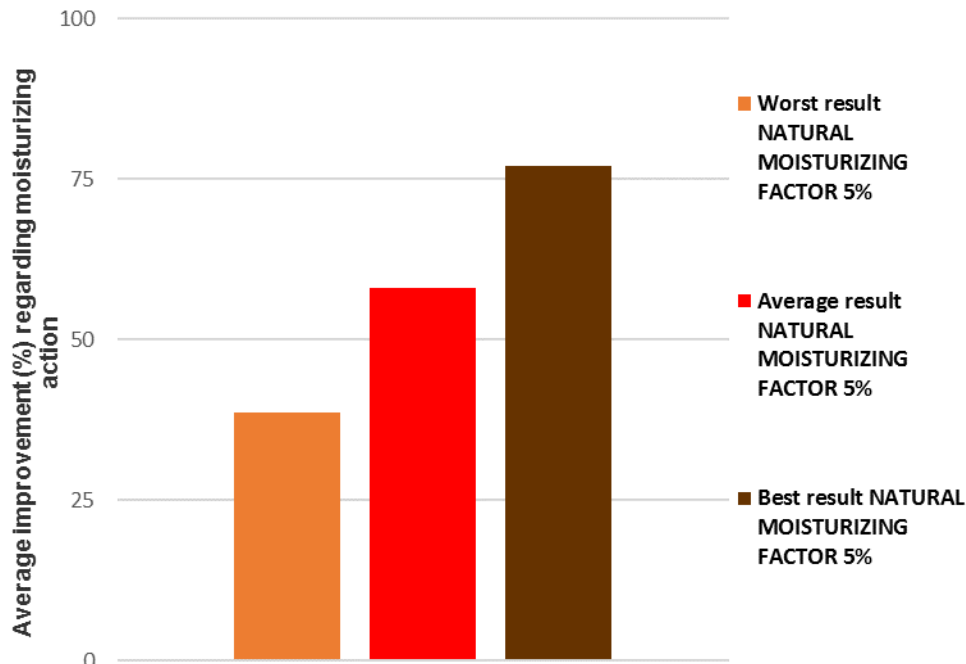
AI rank between < 20%: No significant changes.
AI rank between 21 – 40%: Slight improvement regarding placebo.
AI rank between 41 – 60%: Appreciable improvement regarding placebo.
AI rank between 61 – 80%: Great improvement regarding placebo.
AI rank between > 81%: Excellent cosmetic result.



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NATURAL MOISTURIZING FACTOR 5%



Results:

Worst result NATURAL MOISTURIZING FACTOR 5%: 38,5%.

Average result NATURAL MOISTURIZING FACTOR 5%: 58%.

Best result NATURAL MOISTURIZING FACTOR 5%: 77%.

Results meaning:

AI rank between < 20%: No significant changes.

AI rank between 21 – 40%: Slight improvement regarding placebo.

AI rank between 41 – 60%: Appreciable improvement regarding placebo.

AI rank between 61 – 80%: Great improvement regarding placebo.

AI rank between > 81%: Excellent cosmetic result.