

BIOGRÜNDL, S.L.  
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## TECHNICAL DATA SHEET

# HYDROACTIVE MOISTURIZING COMPLEX / A / HG / CA11 /



**Trade Name:** HYDROACTIVE MOISTURIZING COMPLEX / A / HG / CA11 /

**Product Code:** CHHIAHGCA11.

**INCI Name:** AQUA, PROPYLENE GLYCOL, SODIUM PCA, UREA, ALOE FEROX LEAF EXTRACT, OPUNTIA COCCINELLIFERA FLOWER EXTRACT, GLYCOSAMINOGLYCANS, POTASSIUM SORBATE, ALLANTOIN.

**INCI Status:** Conforms.

**REACH Status:** Low Volume Exemption.

**CAS Number:** 7732-18-5; 57-55-6; 28874-51-3; 200-315-5; 84649-82-1; 290-109-1; 94945-04-7; 24634-61-5/ 590-00-1; 97-59-6.

**EC Number:** 231-791-2; 200-338-0; 249-277-1; 57-13-6; 283-462-8; 90082-21-6; 305-682-6; 246-376-1; 202-592-8.

**Origin:** **PROPYLENE GLYCOL:** Petrochemical origin.

**ALOE FEROX LEAF EXTRACT, OPUNTIA COCCINELLIFERA FLOWER EXTRACT,**

**ALLANTOIN:** Vegetable origin.

**POTASSIUM SORBATE, UREA:** Synthetic origin.

**SODIUM PCA:** Vegetable – mineral origin.

**GLYCOSAMINOGLYCANS:** Animal origin (shark).

**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 propylene glycol.

**Appearance:** Clear or slightly opalescent liquid.

**Colour:** Characteristic (yellowish to deep brown).

**Odour:** Characteristic.

**Specific gravity:** 1,000 - 1,100 g/cm<sup>3</sup> (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:** Preparations for intensive treatment of dry, aged, damaged, very devitalized or dehydrated skins. Treatment of certain skin disorders. Sunscreens. Hand creams. Facial or body moisturizing products.

**Properties:** Moisturizing.

**Industrial packing:** 1Kg., 5Kg., 25Kg., 225Kg.

**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.

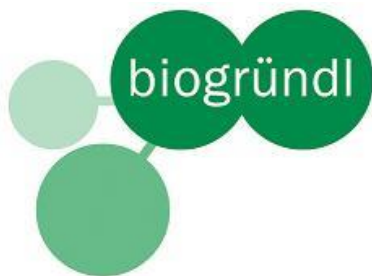
- Fitocosméticos ALVAREZ CRUZ i BAGUE SERRANO.

- 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**

Skin proper moisturizing is essential in the cosmetic treatment. Dry skin with unprotected natural hydrolipidic layer is, inevitably, doomed to premature ageing.

Current cosmetic science has made clear that to conserve the cutaneous water level is not enough to apply any hygroscopic product, such as propylene glycol, glycerin or sorbitol; they must be complemented by other substances with hidroactive action deeper and lasting effect. It is not only to hydrate the most outer layers of the epidermis; the effect should be deeper and, also, achieve its most inner layers, in order that moisturizing action would be, in addition, hydroactive.

HYDROACTIVE MOISTURIZING COMPLEX by BIOGRÜNDL, S.L. presents balanced composition, which aims to achieve deeper moisturizing effect reaching the deeper layers of the epidermis, including the basal layer. For this purpose, it contains the following active ingredients:

- SODIUM SALT OF PYRROLIDONCARBOXYLIC ACID, main component of natural skin moisturizing factor. It has an extraordinary moisturizing power being present in greater proportion.
- UREA, organic compound, product from the metabolism of proteins in all mammals. It has high and recognized hydrating, antiseptic and vulnerary properties. It is totally safe for the skin and, even, protective actions against contact dermatitis are attributed to it.
- MUCOPOLYSACCHARIDES, they are components of the connective tissue, in which the scleroproteic fibres are immersed. They are composed of linear units of disaccharides (d-glucuronic acid or l-hyaluronic) and N-acetylhexosamine. They are very moisturizing components and of them depends, mainly, the proper hydration and skin turgor. They present great substantiveness with proteins, so, applied on the skin, its action is prolonged.
- ALLANTOIN, compound formed in the metabolism of proteins. It has significant cell proliferating properties; hence its application in preparations to treat dry, aged or toneless skins. It has, also, soothing, hydrating and softening effects on skin tissue.
- ALOE VERA AND OPUNTIA EXTRACTS, obtained from two cacti very common throughout the Mediterranean Sea. They contain mucilages that form on the skin a protective film, with proven effect on transepidermal moisture loss.



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HYDROACTIVE MOISTURIZING COMPLEX by BIOGRÜNDL, S.L. is not a simple surface moisturizer. Its action is dual: it acts on surface and depth, reaching up to the deeper layers of the epidermis. In addition, the effect achieved with it, is much more lasting and long.

### USE AND DOSAGE

The incorporation in cosmetics of HYDROACTIVE MOISTURIZING COMPLEX by BIOGRÜNDL, S.L. is justified by its excellent moisturizing properties.

It is advisable its use in preparations for intensive treatment of dry, aged, damaged, very devitalized, and, particularly, dehydrated skins.

It, also, has very effective protective action in very dramatic environments (beach, mountain, highly contaminated environments), and, in addition, in the treatment of certain skin disorders, such as wounds, sores, infections and contact dermatitis.

It is very indicated its inclusion in sunscreens and very protective hand creams, as well as, in all kind of facial or body moisturizing products.

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%.

### 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 - 1,100 g/cm<sup>3</sup> (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%.

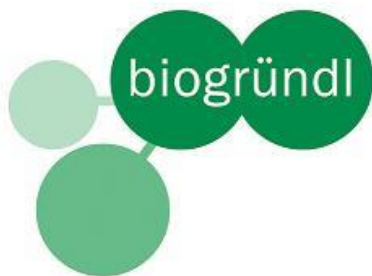
**Sulfates:** No more than 0,002%.

**Other information:** None.

**Total aerobics:** Max. 300 microorganisms / gram.

**Fungi and yeasts:** Max. 200 microorganisms / gram.

**Pathogens:** Total absence in 1 gram.



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### **DERMATOLOGY INNOCUOUSNESS**

It was performed by the patch test (Patch test) on 10 volunteers. To this purpose, 15% HYDROACTIVE MOISTURIZING COMPLEX 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.

### **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, PROPYLENE GLYCOL, SODIUM PCA, UREA, ALOE FEROX LEAF EXTRACT, OPUNTIA COCCINELLIFERA FLOWER EXTRACT, GLYCOSAMINOGLYCANS, POTASSIUM SORBATE, ALLANTOIN.

### **EFFECTIVENESS TEST**

**Assay:** Double blind spot trial and subsequent cosmetic evaluation.

**Assayed parameters:** Moisturizing action.

**N (volunteers):** 30 (16 ♀ and 14 ♂).

**Age (volunteers):** 22 – 71 years old.

**Left side part to be treated:**

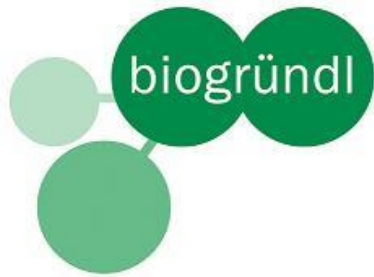
Placebo, 30 volunteers, suitable cosmetic base.

**Right side part to be treated:**

HYDROACTIVE MOISTURIZING COMPLEX 2%, 15 volunteers, suitable cosmetic base.

**Right side part to be treated:**

HYDROACTIVE MOISTURIZING COMPLEX 5%, 15 volunteers, suitable cosmetic base.

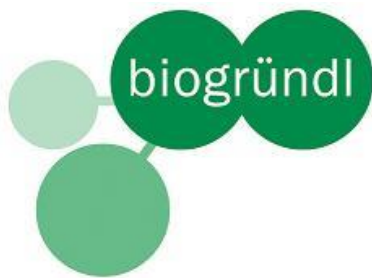


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### Assayed parameter:

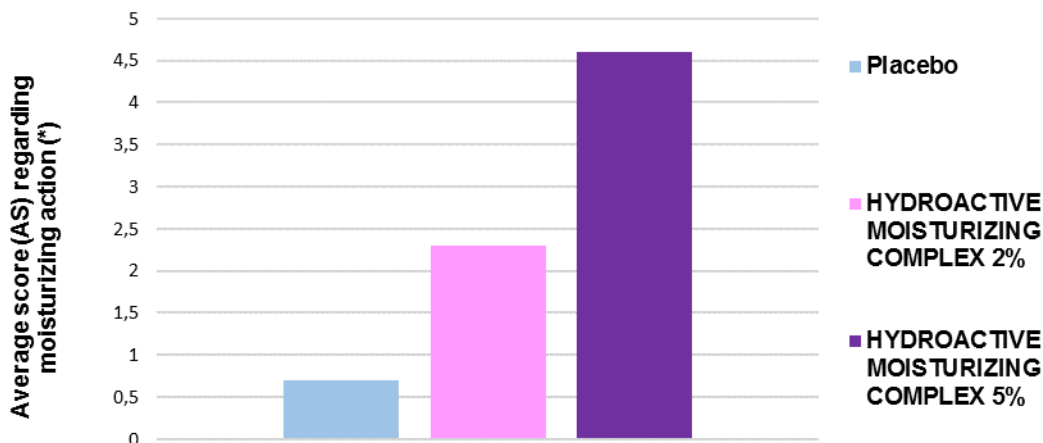
	Assay	N (volunteers)	Age (volunteers)	Placebo	HYDROACTIVE MOISTURIZING COMPLEX 2%	HYDROACTIVE MOISTURIZING COMPLEX 5%	Assay performed (Days)	Results measured (Days)
<b>Moisturizing action</b>	Double blind spot trial and subsequent cosmetic evaluation.	N = 30 16 ♀ and 14 ♂	22 – 71	Left side part	Right 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% HYDROACTIVE MOISTURIZING COMPLEX by BIOGRÜNDL, S.L., 5% HYDROACTIVE MOISTURIZING COMPLEX 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.

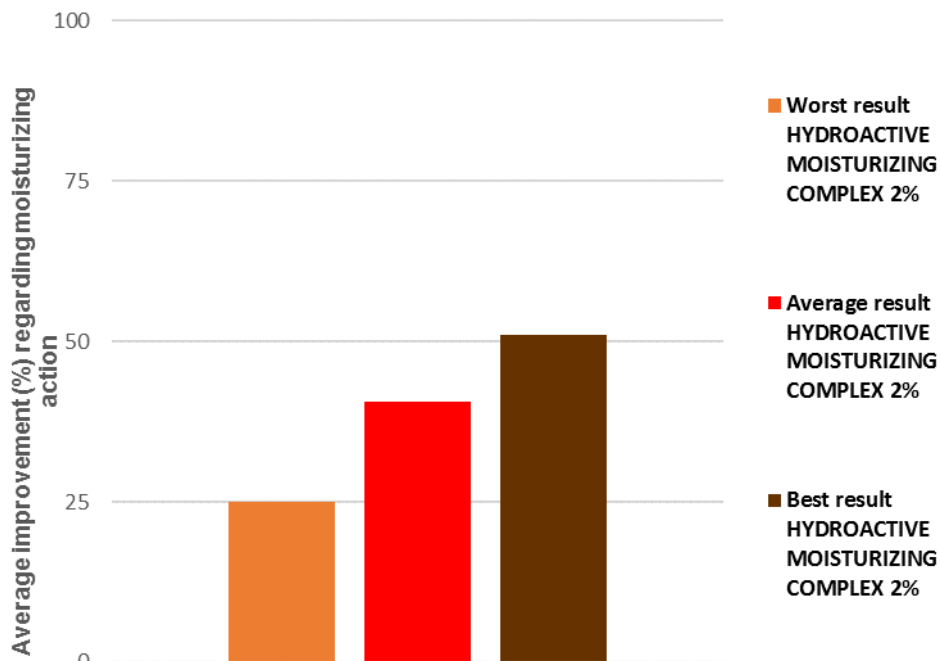
AS rank between 4 – 5: Excellent cosmetic result.



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### HYDROACTIVE MOISTURIZING COMPLEX 2%



#### Results:

Worst result HYDROACTIVE MOISTURIZING COMPLEX 2%: 25%.  
Average result HYDROACTIVE MOISTURIZING COMPLEX 2%: 40,5%.  
Best result HYDROACTIVE MOISTURIZING COMPLEX 2%: 51%.

#### Results meaning:

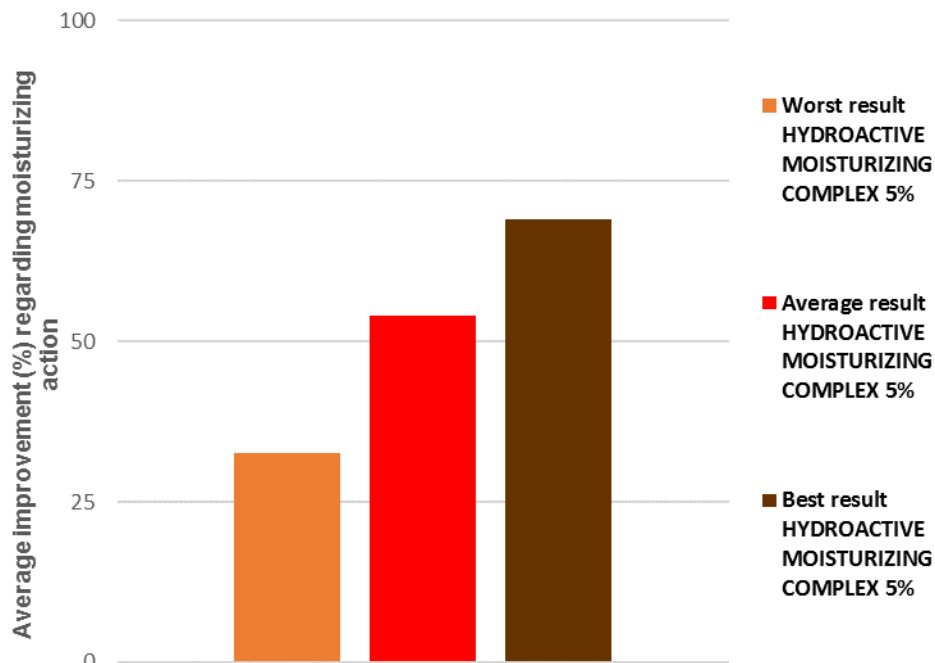
AI rank between < 20%: No significant changes.  
AI rank between 21 – 40%: Slight improvement regarding placebo.  
AI rank between 41 – 60%: Appreciable improvement regarding placebo.  
AI rank between 61 – 80%: Great improvement regarding placebo.  
AI rank between > 81%: Excellent cosmetic result.



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### HYDROACTIVE MOISTURIZING COMPLEX 5%



#### Results:

Worst result HYDROACTIVE MOISTURIZING COMPLEX 5%: 32,5%.  
Average result HYDROACTIVE MOISTURIZING COMPLEX 5%: 54%.  
Best result HYDROACTIVE MOISTURIZING COMPLEX 5%: 69%.

#### 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.