

BIOGRÜNDL, S.L.  
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## TECHNICAL DATA SHEET

### **ANTI-WRINKLE COMPLEX** **/ A / HGLA / CA11 /**



**Trade Name:** ANTI-WRINKLE COMPLEX / A / HGLA / CA11 /.

**Product Code:** AARAHGLCA11.

**INCI Name:** AQUA, GLYCERIN, ISOPROPYL ALCOHOL, PEG-40 HYDROGENATED CASTOR OIL, PANAX GINSENG ROOT EXTRACT, HYDROLYZED COLLAGEN, PLACENTAL PROTEIN, HYDROLYZED ELASTIN, THYMUS EXTRACT, TOCOPHERYL ACETATE, ADENOSINE TRIPHOSPHATE, POTASSIUM SORBATE, ASCORBYL PALMITATE, RETINYL PALMITATE.

**INCI Status:** Conforms.

**REACH Status:** Low Volume Exemption.

**CAS Number:** 7732-18-5; 56-81-5; 67-63-0; 61788-85-0; 84650-12-4; 92113-31-0 / 73049-73-7; 84195-59-5; 91080-18-1; 8057-54-3; 7695-91-2 / 58-95-7; 56-65-5; 24634-61-5 / 590-00-1; 137-66-6; 79-81-2.

**EC Number:** 231-791-2; 200-289-5; 200-661-7; No disponible; 283-493-7; 295-635-5; 282-364-2; 293-509-4; 617-118-9; 231-710-0 / 200-405-4; 200-283-2; 246-376-1; 205-305-4; 201-228-5.

**Origin:** GLYCERIN: Vegetable origin.

ISOPROPYL ALCOHOL: Synthetic origin.

PEG-40 HYDROGENATED CASTOR OIL: Synthetic origin– Vegetable.

PANAX GINSENG ROOT EXTRACT: Vegetable origin.

TOCOPHERYL ACETATE, ADENOSINE TRIPHOSPHATE, POTASSIUM SORBATE, ASCORBYL

PALMITATE, RETINYL PALMITATE: Synthetic origin.

HYDROLYZED COLLAGEN, PLACENTAL PROTEIN, HYDROLYZED ELASTIN, THYMUS EXTRACT:

Animal origin.

**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, glycerin and isopropyl alcohol.

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

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

**Odour:** Characteristic.

**Specific gravity:** 1,000 - 1,300 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:** Aged, wrinkled or very dry skin treatment.

**Properties:** Anti-wrinkle, stimulating and protective.

**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.

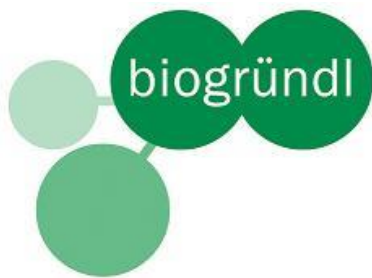
- Fitocosmeticos ALVAREZ CRUZ i BAGUE SERRANO.

- 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**

Skin represents a very reliable and indicative parameter of the aging process in general; in addition, because of its aesthetic connotations, has been a cause of concern since ancient times.

Recent studies on cutaneous ageing have demonstrated, by irrefutable means, that aging process takes place in the connective tissue of the skin. It consists, basically, in scleroproteic fibers: collagen and elastin, which are immersed in mucopolysaccharides, viscous and amorphous material with huge capacity of water retention.

Not aging connective tissues are elastic and turgent, due to the fact that polypeptide chains of collagen molecule are not tied by lateral links, being able to slip each other. On the other hand, elastin consists of two chains that are linked by numerous lateral connections, giving it the unique property of being endowed with great elasticity.

As skin ages, decreases its content of collagen, elastic fibers lose part of this property which characterizes them and mucopolysaccharides are less polymerized, so its moisture retention capacity is decreasing greatly. All these aspects translates it into a loss of elasticity and turgor, resulting the appearance of wrinkles.

Taking into account the premises above exposed, BIOGRÜNDL, S.L. presents its ANTI-WRINKLE COMPLEX, consisting of the following components:

- Collagen and elastin hydrolisates activated by ATP (adenosintriphosphate). Aminoaciladenilate is the activated form of amino acid that is able to join others to form proteins. It is formed by the union of a amino acid molecule of these hydrolysates with ATP. So does nature in protein biosynthesis. The complex amino acid plus ATP is able to better interact with other similar groups of the skin, with the positive outcome of higher rate of proteins formation. With this fact a remarkable skin revitalization is achieving.
- Cytokines obtained from bovine placenta and thymus. Cytokines are biochemical components, endowed with high biological activity. They are from protein nature and have an essential function: citokinesis, in other words, cell proliferation, that increase mitosis or cell division, as well as, their biological activation, growth and differentiation. It can be considered as cellular growth factors. In the skin they cause perceptible increase in cell proliferation, which translates it into an anti-aging, anti-wrinkle, repairing and biostimulating action.



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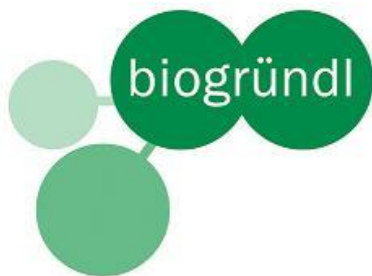
Placenta and thymus extracts used in ANTI-WRINKLE COMPLEX by BIOGRÜNDL are especially rich in the following cytokines: IL-1, IL-2, IL-6, IL-9, IL-11, IL-12 and TGF (IL = interleucine); TGF = Transforming growth factor).

Cytokine word derives from Greek roots Citos=cell and Kinema=movement; having its origin and explanation considering that such substances have an essential function: the citoquinesis. That is, the proliferation of cells, increasing their mitosis or reproduction, as well as, biological activation, growth and differentiation. They may be considered, then, as cell growth factors, being very active in the tissues that make up the skin. They are involved, also, in specific immune response, causing a fast proliferation of lymphocytes B and T.

In the specific case of the skin, cytokines act as messengers which, into appropriate receptors, cause various processes of skin regeneration resulting in a metabolism increase, better appearance with attenuation of wrinkles and expression lines, as well as, rejuvenation. Cytokines increase the response to external and internal agents reinforcing the immunological action (radiations, dryness, pollution, free radicals, etc.). Recent experiences have shown, also, notable influence on hair growth. In addition, slows hair fall. Cytokines presents, also, very positive influence on nails health.

According to the latest researches, cytokines are very appropriate substances for man, both to strengthen muscles and in skin treatments, also, to include in preparations to facilitate sexuality.

- Ginseng extract, obtained from the root of the Asian plant Panax ginseng, belonging to the Araliaceae family. Ginseng extract is rich in ginsenosids presenting a central structure corresponding to the cyclopentanoperhydrofenantrene, similar group to sex hormones. This fact means that they can have positive influence on the formation of sex hormones that cause an increase of protein formation, which influences muscle mass maintenance and, in the skin, causes more protein fibres formation.
- A+C+E vitamin complex, mixture of three basic vitamins with anti-oxidant and free radical scavenger effect. They act synergistically, they enhance each other, they, also, increase metabolic activity and fiber collagen formation in connective tissue.



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### USE AND DOSAGE

ANTI-WRINKLE COMPLEX by BIOGRÜNDL, S.L. is used in preparations for aging, wrinkled or very dry skin treatment. Its more specific actions can be summarized as follows:

- Increase of skin metabolism.
- Remarkable biostimulant effect.
- Increase of skin protection mechanisms against internal and external harmful factors.
- Smoothing of skin surface with visible attenuation or disappearance of wrinkles and expression lines.

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 - 1,300 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.

### DERMATOLOGY INNOCUOUSNESS



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It was performed by the patch test (Patch test) on 10 volunteers. To this purpose, 15% ANTI-WRINKLE 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, GLYCERIN, ISOPROPYL ALCOHOL, PEG-40 HYDROGENATED CASTOR OIL, PANAX GINSENG ROOT EXTRACT, HYDROLYZED COLLAGEN, PLACENTAL PROTEIN, HYDROLYZED ELASTIN, THYMUS EXTRACT, TOCOPHERYL ACETATE, ADENOSINE TRIPHOSPHATE, POTASSIUM SORBATE, ASCORBYL PALMITATE, RETINYL PALMITATE.

### **EFFECTIVENESS TEST**

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

**Assayed parameters:** Anti-wrinkle action.

**N (volunteers):** 30 (18 ♀ and 12 ♂).

**Age (volunteers):** 30 – 75 years old.

**Left side part to be treated:**

Placebo, 30 volunteers, suitable cosmetic base.

**Right side part to be treated:**

ANTI-WRINKLE COMPLEX 2%, 15 volunteers, suitable cosmetic base.

**Right side part to be treated:**

ANTI-WRINKLE COMPLEX 5%, 15 volunteers, suitable cosmetic base.

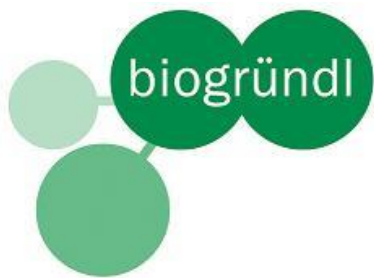


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### Assayed parameter:

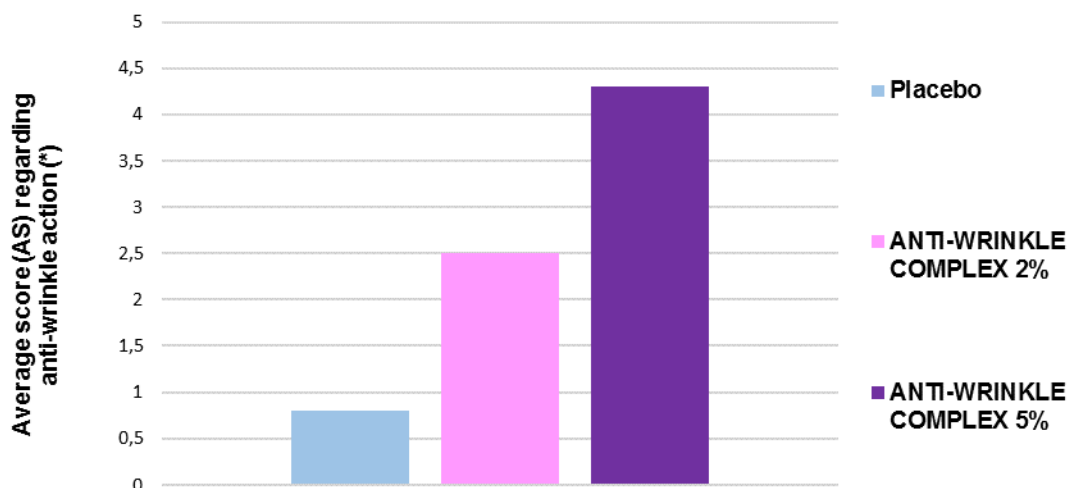
|                     | Assay   | N (volunteers)          | Age (volunteers) | Placebo        | ANTI-WRINKLE COMPLEX 2%           | ANTI-WRINKLE COMPLEX 5%            | Assay performed (Days) | Results measured (Days) |
|---------------------|---|-------------------------|------------------|----------------|-----------------------------------|------------------------------------|------------------------|-------------------------|
| Anti-wrinkle action | Double blind spot trial and subsequent cosmetic evaluation. | N = 30<br>18 ♀ and 12 ♂ | 30 – 75          | Left side part | Right side part<br>15 volunteers. | Right side part.<br>15 volunteers. | D = 30                 | D' = 1                  |



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### SKIN CONDITION EVALUATION AFTER 30 DAYS



(\*) Anti-wrinkle action was determined by microscopic observation of depth and length of furrows, wrinkles and expression lines from volunteers.

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' = 1 day ( effectiveness test last day).

#### 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% ANTI-WRINKLE COMPLEX by BIOGRÜNDL, S.L., 5% ANTI-WRINKLE 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.

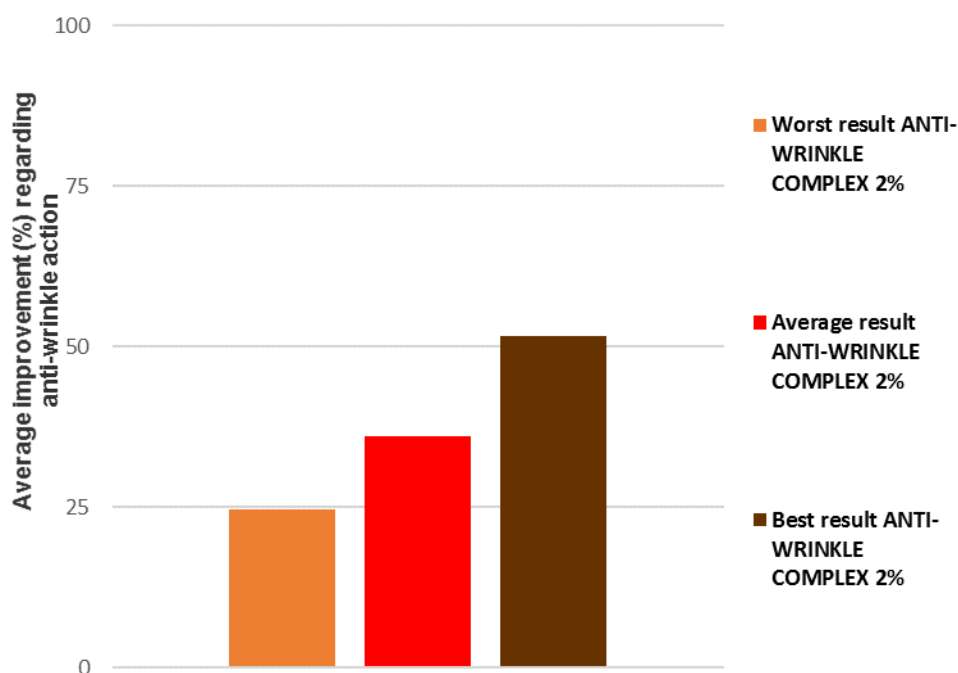




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### ANTI-WRINKLE COMPLEX 2%



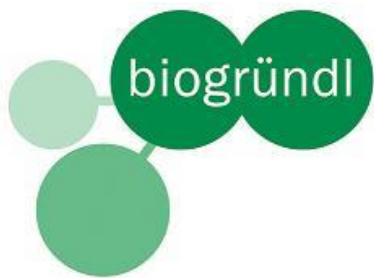
#### Results:

Worst result ANTI-WRINKLE COMPLEX 2%: 24,5%.  
Average result ANTI-WRINKLE COMPLEX 2%: 36%.  
Best result ANTI-WRINKLE COMPLEX 2%: 51,5%.

#### 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.

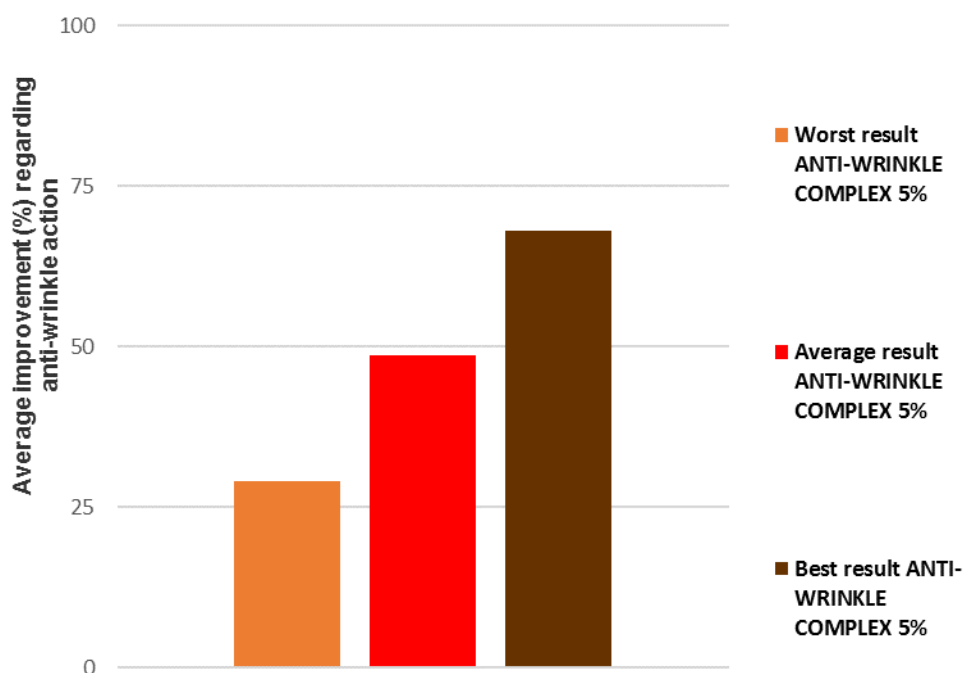




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### ANTI-WRINKLE COMPLEX 5%



#### Results:

Worst result ANTI-WRINKLE COMPLEX 5%: 29%.

Average result ANTI-WRINKLE COMPLEX 5%: 48,5%.

Best result ANTI-WRINKLE COMPLEX 5%: 68%.

#### 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.