



BIOGRÜNDL, S.L.
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TECHNICAL DATA SHEET

HYDROLYZED RICE PROTEINS / A / HGL / CA11 /



Trade Name: HYDROLYZED RICE PROTEINS / A / HGL / CA11 /

Product Code: HPAAHGLCA11.

INCI Name: AQUA, GLYCERIN, HYDROLYZED RICE EXTRACT, POTASSIUM SORBATE.

INCI Status: Conforms.

REACH Status: Low Volume Exemption.

CAS Number: 7732-18-5; 56-81-5; 156715-40-1; 24634-61-5 / 590-00-1.

EC Number: 231-791-2; 200-289-5; Not available; 246-376-1.

Origin: GLYCERIN: Vegetable origin.

HYDROLYZED RICE PROTEIN: Vegetable origin.

POTASSIUM SORBATE: Synthetic 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 and glycerin.

Appearance: Clear or slightly opalescent liquid.

Colour: Characteristic (yellowish to deep brown).

Odour: Characteristic.

Specific gravity: 1,050 - 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: Nourishing, moisturizing, repairing, anti-wrinkle, protective and sunscreen products.

Properties: Nourishes and restores skin tissue, antiwrinkle, hydrates deeply, forms a film over the skin giving a tensor effect, emollient and softening.

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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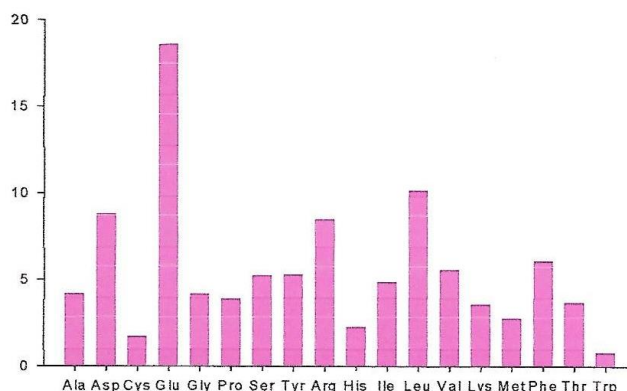
OVERVIEW

Rice (*Oryza sativa*) is an annual plant belonging to Gramineae family. Its grain contains between 10 and 12% of proteins whose aminogram is as follows:

Aspartic acid	8,7%	Tryptophan	0,8%
Threonine	3,7%	Phenylalanine	6,1%
Glutamic acid	18,6%	Cystine	1,7%
Methionine	2,8%	Isoleucine	4,9%
Leucine	10,2%	Valine	5,6%
Lysine	3,6%	Serine	5,2%
Arginine	8,5%	Proline	3,8%
Histidine	2,3%	Glycine	4,2%
Tyrosine	5,3%	Alanine	4,2%

Considering the essential amino acids, protein of rice contains almost 50% of them, so it can be considered with high biological and nutritional value in comparison to proteins of animal origin, especially milk.

Consequently, BIOGRÜNDL, S.L. presents HYDROLYZED RICE PROTEINS whose aminoacidic distribution is as follows:





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These values are based on various analyses of different rice protein hydrolysates so, should not be considered as guarantee but as typical composition.

USE AND DOSAGE

HYDROLYZED RICE PROTEINS by BIOGRÜNDL, S.L. can perfectly replace hydrosilates of animal origin and has the following properties:

- It nourishes and regenerates the skin tissue.
- Powerful anti-wrinkle.
- It moisturizes deep into the skin.
- It forms a film on the skin which protects and elastices, giving an immediate tensor effect.
- Emollient and softener.

Its use is indicated in nourishing, moisturizing, repairing, anti-wrinkle, protective and sunscreen 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: 1,050 - 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.

Molecular weight: >10000 Da.

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% HYDROLYZED RICE PROTEINS 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, HYDROLYZED RICE EXTRACT, POTASSIUM SORBATE.



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EFFECTIVENESS TESTS

Assay: Double blind spot trial and subsequent cosmetic evaluation.

Assayed parameters: Anti-wrinkle action.

N (volunteers): 30 (22 ♀ and 8 ♂).

Age (volunteers): 34 - 66 years old.

Left side part to be treated:

Placebo, 30 volunteers, suitable cosmetic base.

Right side part to be treated:

HYDROLYZED RICE PROTEINS 2%, 15 volunteers, suitable cosmetic base.

Right side part to be treated:

HYDROLYZED RICE PROTEINS 5%, 15 volunteers, suitable cosmetic base.



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Assayed parameters:

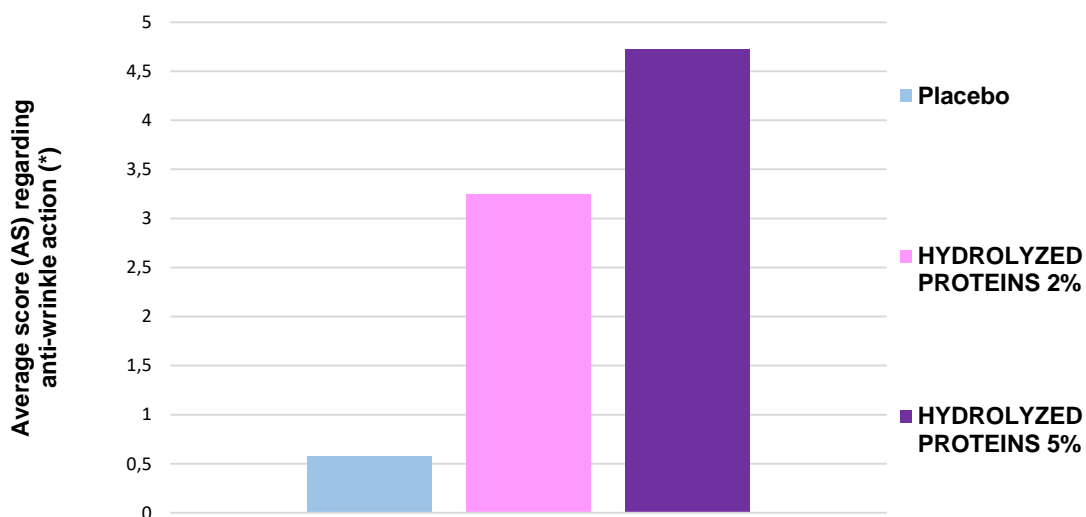
	Assay	N (volunteers)	Age (volunteers)	Placebo	HYDROLYZED RICE PROTEINS 2%	HYDROLYZED RICE PROTEINS 5%	Assay performed (Days)	Results measured (Days)
Anti-wrinkle action	Double blind spot trial and subsequent cosmetic evaluation.	N = 30 22 ♀ 8 ♂	34 - 66	Left side part	Right side part 15 volunteers.	Right side part. 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% HYDROLYZED RICE PROTEINS by BIOGRÜNDL, S.L., 5% HYDROLYZED RICE PROTEINS 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.

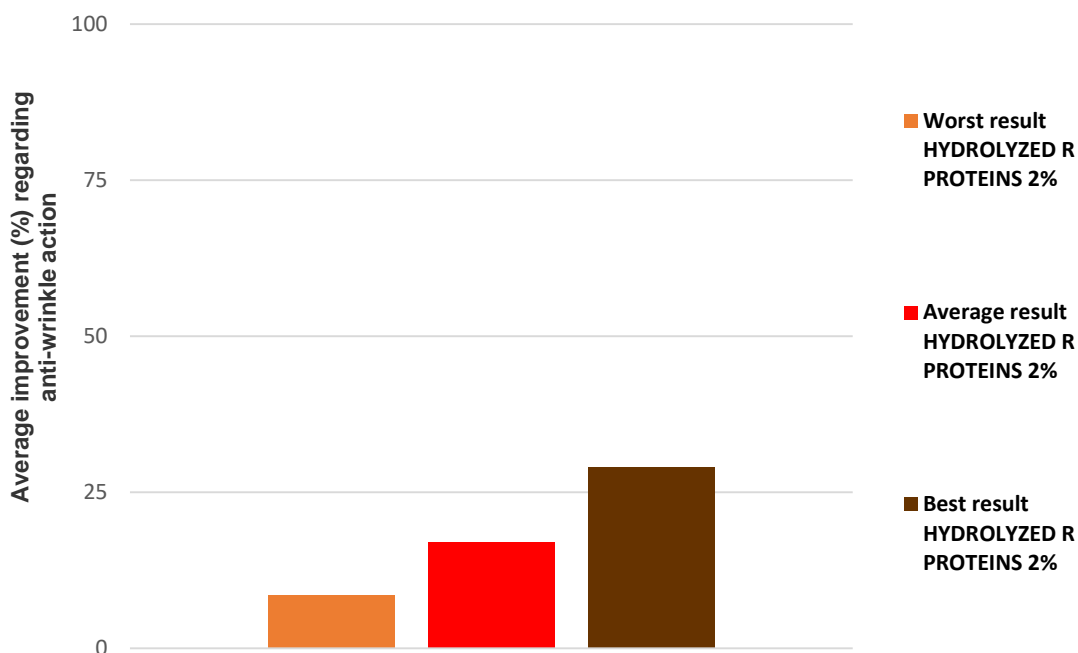
AS rank between 4 – 5: Excellent cosmetic result.



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HYDROLYZED RICE PROTEINS 2%



Results:

Worst result HYDROLYZED RICE PROTEINS 2%: **8,5%**.

Average result HYDROLYZED RICE PROTEINS 2%: **17%**.

Best result HYDROLYZED RICE PROTEINS 2%: **29%**.

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.

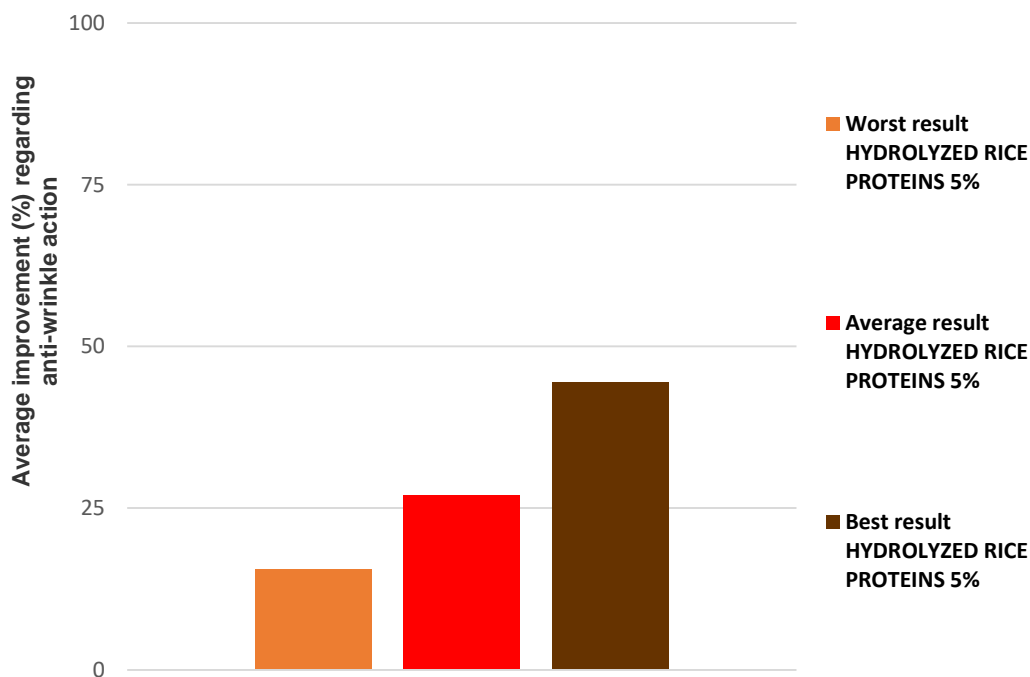
AI rank between > 81%: Excellent cosmetic result.



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HYDROLYZED RICE PROTEINS 5%



Results:

Worst result HYDROLYZED RICE PROTEINS 5%: 15,5%.
Average result HYDROLYZED RICE PROTEINS 5%: 27%.
Best result HYDROLYZED RICE PROTEINS 5%: 44,5%.

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.