

BIOGRÜNDL, S.L.
POLÍGONO LES FALLULLES, NAVE 34 -SECTOR 2-
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TECHNICAL DATA SHEET

SNAIL MUCUS CONCENTRATE **/ A / HG / CA11 /**



Trade Name: SNAIL MUCUS CONCENTRATE / A / HG / CA11 /.

Product Code: CMCAAHGCA11.

INCI Name: AQUA, PROPYLENE GLYCOL, SNAIL SECRETION FILTRATE, POTASSIUM SORBATE.

INCI Status: Conforms.

REACH Status: Low Volume Exemption.

CAS Number: 7732-18-5; 57-55-6; Not available; 24634-61-5 / 590-00-1.

EC Number: 231-791-2; 200-338-0; Not available; 246-376-1.

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

SNAIL SECRETION FILTRATE: Animal 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 propylene glycol.

Appearance: Clear or slightly opalescent liquid.

Colour: Characteristic (colourless to brownish).

Odour: Characteristic.

Specific gravity: 1,020 - 1,080 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: Regenerative, anti-wrinkle, healing, soothing, skin lightening, anti-stretch mark, anti-cellulite, emollient and lenitive products.

Properties: Regenerative, anti-wrinkle, healing, soothing, skin lightening, anti-stretch mark, anti-cellulite, emollient and lenitive.

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

Snail (*Helix aspersa*) is a terrestrial gastropod mollusc, with calcareous shell spiral-shaped, long body and tentacles on the head. It is edible and when moving secretes a mucus or slime that facilitates its movement. This slime also helps, when solidifies, to sustain the snail on a stand, usually vegetable, isolating it, at the same time, from dry or unfavourable environment.

The use of snail and mucus has a long tradition in folk medicine that dates back to very ancient times. Currently, is being carried out a series of research about its active components and its use in medicine, dermatology, dermopharmacy and cosmetics.

SNAIL MUCUS CONCENTRATE by BIOGRÜNDL, S.L. is obtained from these gastropods, stimulating them to segregate the slime and, after that, it is finally subjected to a standardization process of physical, chemical and microbiological constants.

The most active substances of snail mucus are the following:

- Proteins, very similar to the human dermis composition.
- B group vitamins.
- Allantoin, it contains a significant proportion. Allantoin acts as a remarkable cell proliferator and regenerator of the skin tissue.
- Alfa-hydroxiacids, including glycolic, citric, malic and lactic acids. They remove the most external and damaged skin layers.
- Minerals and trace elements, particularly calcium salts that act as an essential factor to harden the aperture of the shell, when snail enter in periods of latency.
- Mucopolysaccharides, giving the typical lubricant and slippery touch to mucus. They have great moisturizing power.
- Antiproteases, they control the action of skin proteases, enzymes that cause biochemical degradation of collagen and elastin, limiting their activity to what is strictly necessary.



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USE AND DOSAGE

The incorporation in cosmetics of SNAIL MUCUS CONCENTRATE by BIOGRÜNDL, S.L. is justified by its unique and interesting properties, are as follows:

- It regenerates the skin after wounds and burns or UV radiation exposure.
- It reduces wrinkles and hides marks and scars.
- It smoothes the epidermis due to its peeling effect.
- It blurs skin spots.
- It has positive effects on stretch marks.
- It acts as an anti-cellulite.
- It helps to control vascular problems.
- Emollient for skin and hair.
- Lenitive and cell growth factor.

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 25%.

INCOMPATIBILITIES

SNAIL MUCUS CONCENTRATE by BIOGRÜNDL, S.L. is stable at pH ranging from 3.5 to 7.5. It must be incorporated at temperatures not exceeding 45°C. It must not be added to preparations containing cationic surfactants.



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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: 1,020 - 1,080 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, 25% SNAIL MUCUS CONCENTRATE 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, PROPYLENE GLYCOL, SNAIL SECRETION FILTRATE, POTASSIUM SORBATE.

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 – 72 years old.

Left side part to be treated:

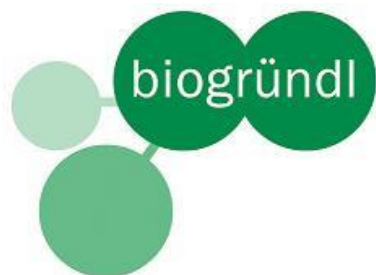
Placebo, 30 volunteers, suitable cosmetic base.

Right side part to be treated:

SNAIL MUCUS CONCENTRATE 2%, 15 volunteers, suitable cosmetic base.

Right side part to be treated:

SNAIL MUCUS CONCENTRATE 5%, 15 volunteers, suitable cosmetic base.



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Assayed parameters:

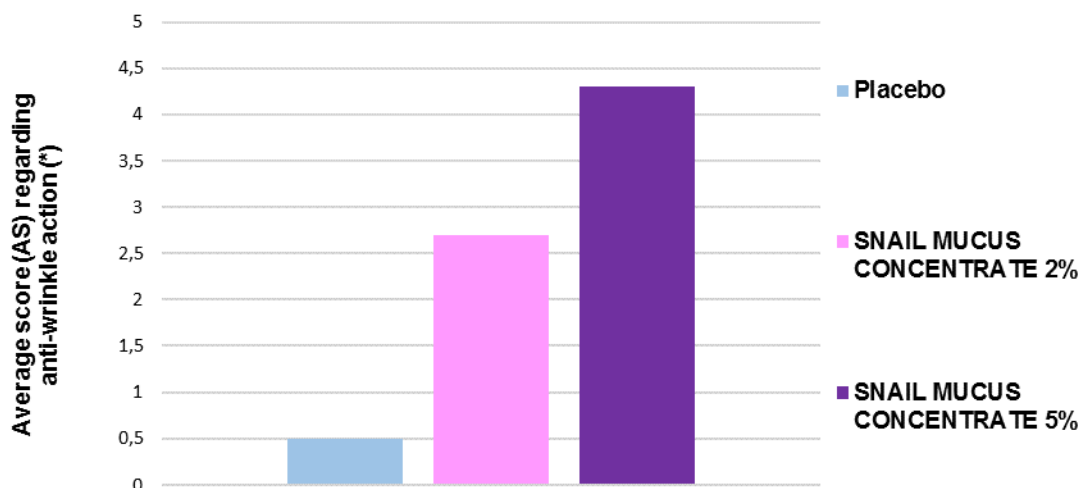
	Assay	N (volunteers)	Age (volunteers)	Placebo	SNAIL MUCUS CONCENTRATE 2%	SNAIL MUCUS CONCENTRATE 5%	Assay performed (Days)	Results measured (Days)
Anti-wrinkle action	Double blind spot trial and subsequent cosmetic evaluation.	N = 30 18 ♀ and 12 ♂	30 – 72	Left side part	Right side part 15 volunteers.	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% SNAIL MUCUS CONCENTRATE by BIOGRÜNDL, S.L., 5% SNAIL MUCUS CONCENTRATE 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.

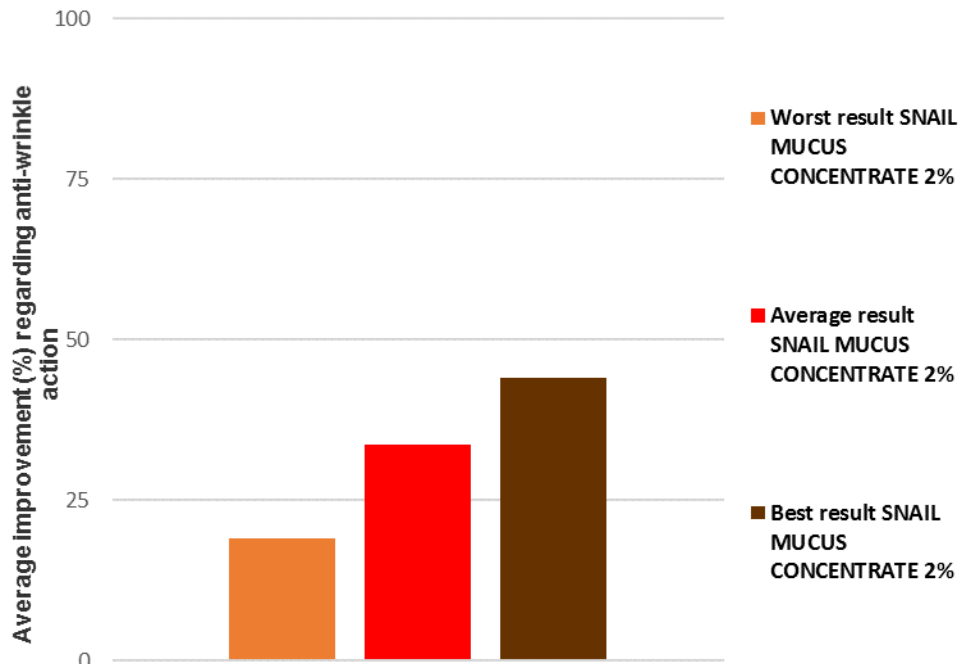
AS rank between 4 – 5: Excellent cosmetic result.



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SNAIL MUCUS CONCENTRATE 2%



Results:

Worst result SNAIL MUCUS CONCENTRATE 2%: 19%.

Average result SNAIL MUCUS CONCENTRATE 2%: 33,5%.

Best result SNAIL MUCUS CONCENTRATE 2%: 44%.

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.

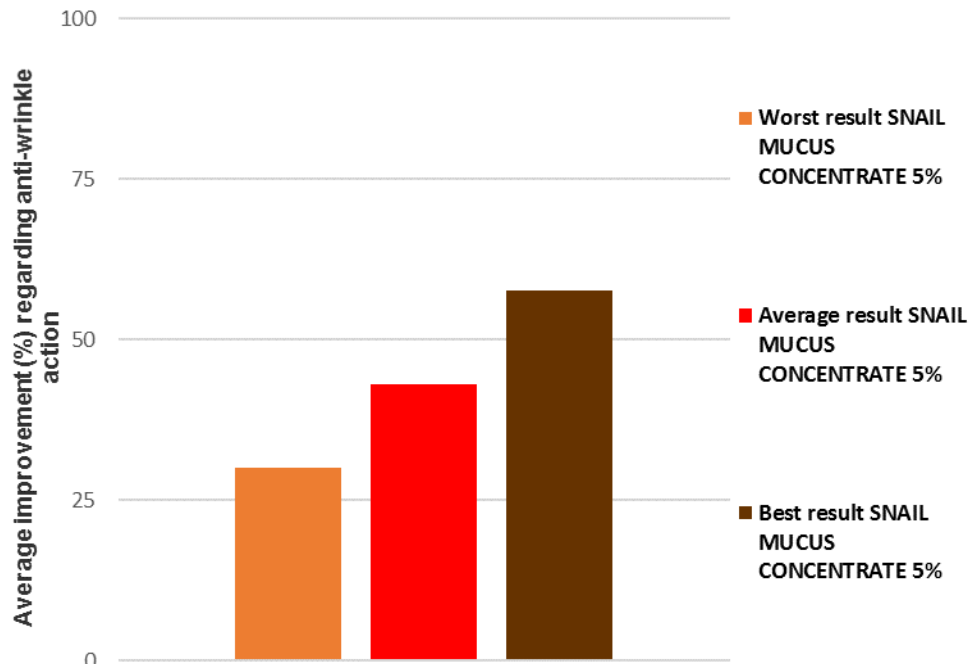
AI rank between > 81%: Excellent cosmetic result.



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SNAIL MUCUS CONCENTRATE 5%



Results:

Worst result SNAIL MUCUS CONCENTRATE 5%: 30%.

Average result SNAIL MUCUS CONCENTRATE 5%: 43%.

Best result SNAIL MUCUS CONCENTRATE 5%: 57,5%.

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.