



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

MARSH MALLOW EXTRACT / A / HGL / CA11 /



Trade Name: MARSH MALLOW EXTRACT / A / HGL / CA11 /.

Product Code: EVSAHGLCA11.

INCI Name: AQUA, GLYCERIN, ALTHAEA OFFICINALIS ROOT EXTRACT, POTASSIUM SORBATE.

INCI Status: Conforms.

REACH Status: Low Volume Exemption.

CAS Number: 7732-18-5; 56-81-5; 73049-65-7; 24634-61-5 / 590-00-1.

EC Number: 231-791-2; 200-289-5; 277-254-6; 246-376-1.

Origin: GLYCERIN: Vegetable origin.

ALTHAEA OFFICINALIS ROOT EXTRACT: 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: Dry, dehydrated, atonic, irritated and injured skin preparations.

Properties: Emollient, lenitive, refreshing, toning, soothing and balsamic.

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

Marsh mallow (*Althaea officinalis* L.) is a biennial plant belonging to the Malvaceae family, perennial root, oval leaves, flower white-pink color and flattened fruit containing a single seed.

MARSH MALLOW EXTRACT by BIOGRÜNDL, S.L. is obtained from the root by treating it with a mixture of water and glycerin, whereby the following active substances are crawl:

- Mucilages formed by galacturonic acid, rhamnose, arabinose, galactose and glucose.
- Pectins containing betaine, asparagine or alteine.
- Tannins.
- Lecithin.
- Phytosterols.
- Mineral substances rich in phosphates.
- Starch and carbohydrates.

USE AND DOSAGE

The incorporation of marsh mallow extract in cosmetics is justified by its emollient, lenitive, refreshing, invigorating, soothing and balsamic properties.

It is indicated in preparations to treat dry, dehydrated, atonic, irritated and injured skins.

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%.



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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: 1,050 - 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.

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% MARSH MALLOW EXTRACT 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, ALTHAEA OFFICINALIS ROOT EXTRACT, POTASSIUM SORBATE.

EFFECTIVENESS TESTS

Assay: Double blind spot trial and subsequent cosmetic evaluation.

Assayed parameters: Refreshing action. Toning action. Calming action.

N (volunteers): 30 (18 ♀ and 12 ♂).

Age (volunteers): 25 – 70 years old.

Left side part to be treated:

Placebo, 30 volunteers, suitable cosmetic base.

Right side part to be treated:

MARSH MALLOW EXTRACT 2%, 15 volunteers, suitable cosmetic base.

Right side part to be treated:

MARSH MALLOW EXTRACT 5%, 15 volunteers, suitable cosmetic base.

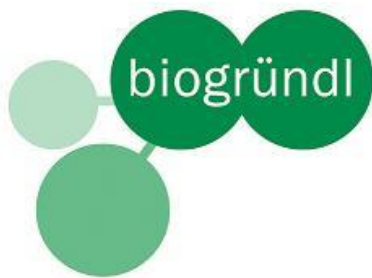


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Assayed parameters:

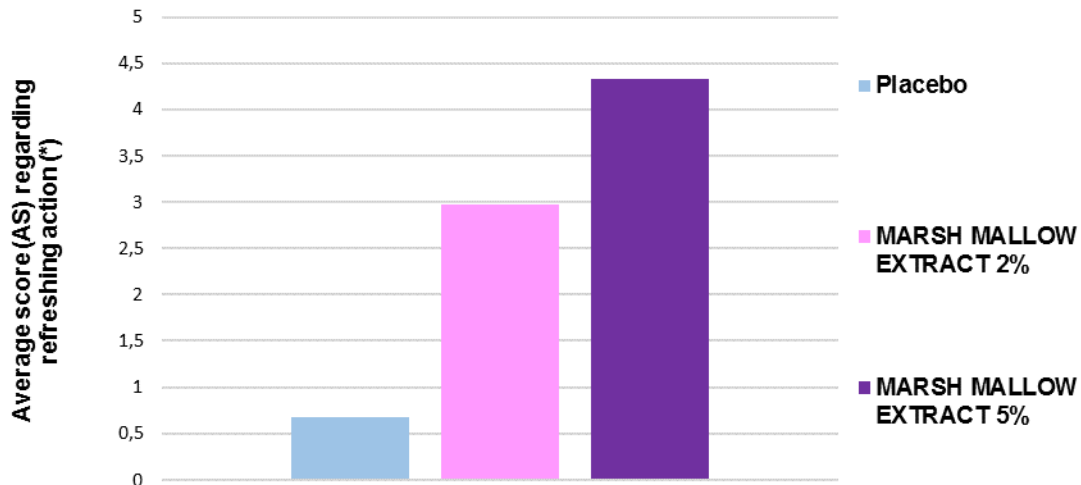
	Assay	N (volunteers)	Age (volunteers)	Placebo	MARSH MALLOW EXTRACT 2%	MARSH MALLOW EXTRACT 5%	Assay performed (Days)	Results measured (Days)
Refreshing action	Double blind spot trial and subsequent cosmetic evaluation.	N = 30 18 ♀ and 12 ♂	25 – 70	Left side part	Right side part 15 volunteers.	Right side part. 15 volunteers.	D = 30	D' = 30
Toning action	Double blind spot trial and subsequent cosmetic evaluation.	N = 30 18 ♀ and 12 ♂	25 – 70	Left side part	Right side part 15 volunteers.	Right side part. 15 volunteers.	D = 15	D' = 1
Calming action	Double blind spot trial and subsequent cosmetic evaluation.	N = 30 18 ♀ and 12 ♂	25 – 70	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



(*) Refreshing action was measured by direct subjective observation of refreshing effect, in the treated part (face) 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' = 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% MARSH MALLOW EXTRACT by BIOGRÜNDL, S.L., 5% MARSH MALLOW EXTRACT 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.

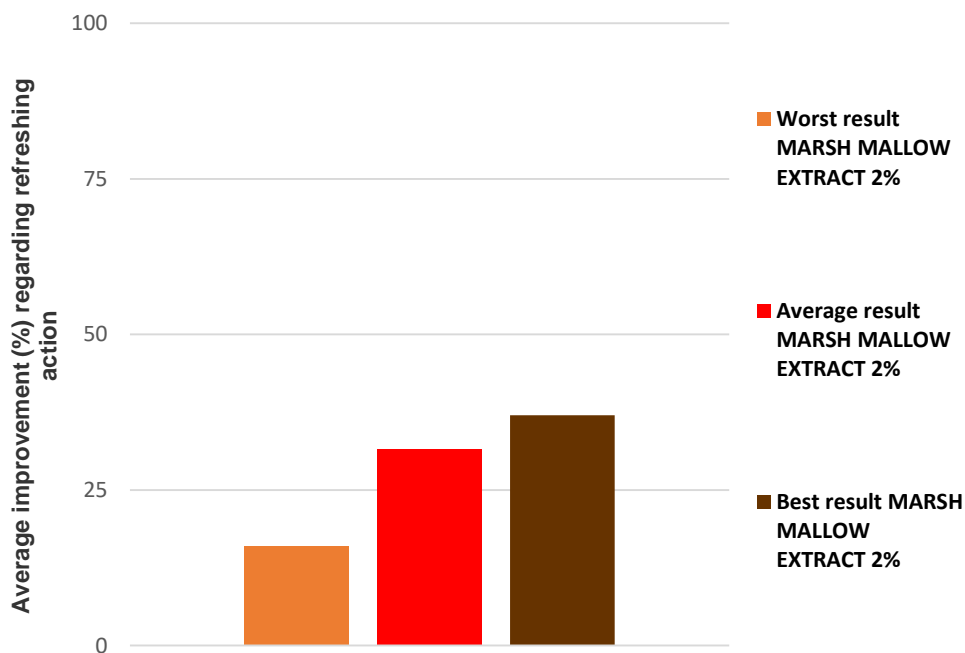
AS rank between 4 – 5: Excellent cosmetic result.



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MARSH MALLOW EXTRACT 2%



Results:

Worst result MARSH MALLOW EXTRACT 2%: 16%.

Average result MARSH MALLOW EXTRACT 2%: 31,5%.

Best result MARSH MALLOW EXTRACT 2%: 37%.

Results meaning:

AI rank between < 20%: No apreciable 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.

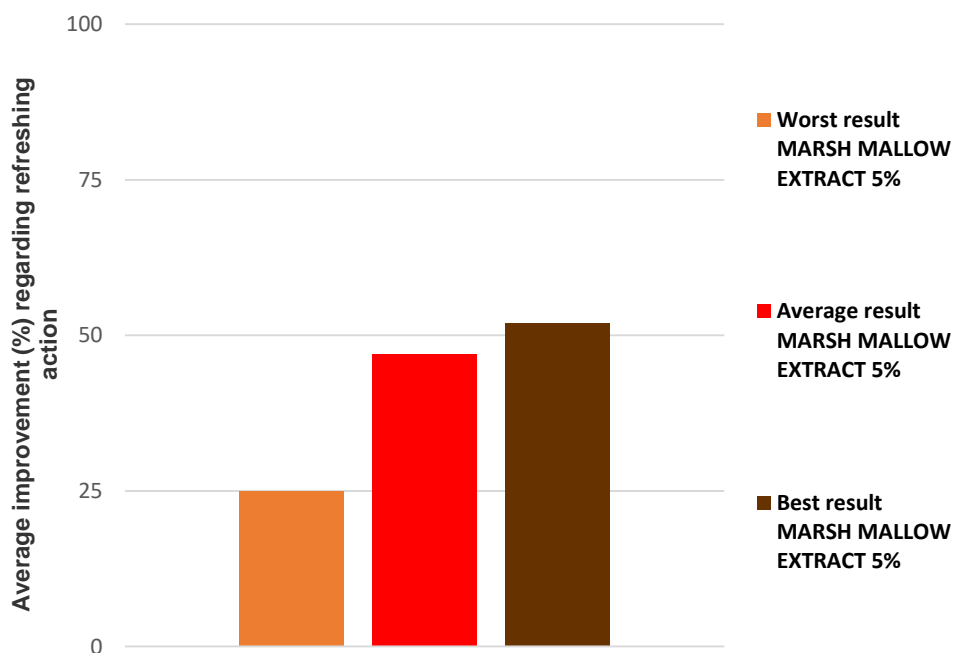
AI rank between > 81%: Excellent cosmetic result.



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MARSH MALLOW EXTRACT 5%



Results:

Worst result MARSH MALLOW EXTRACT 5%: 25%.
Average result MARSH MALLOW EXTRACT 5%: 47%.
Best result MARSH MALLOW EXTRACT 5%: 52%.

Results meaning:

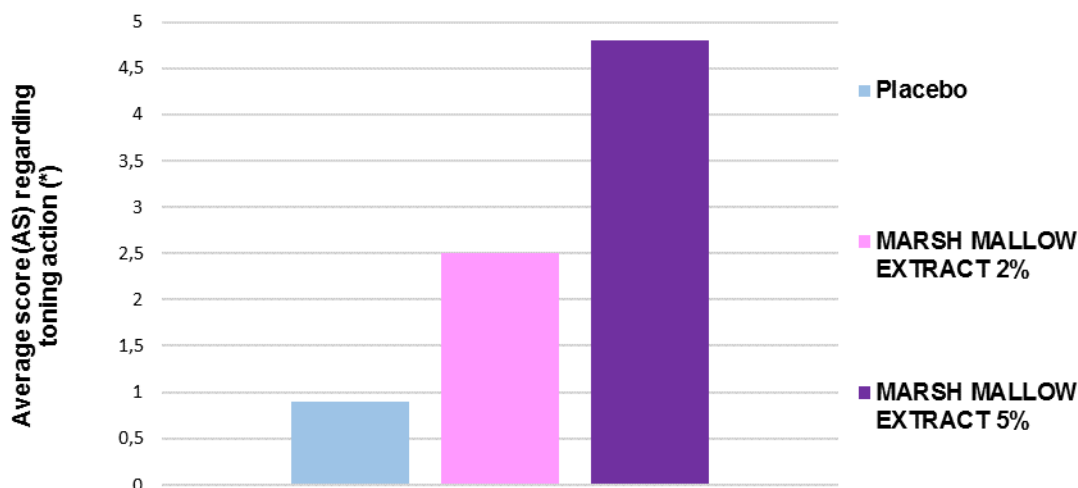
AI rank between < 20%: No appreciable changes.
AI rank between 21 – 40%: Slight improvement regarding placebo.
AI rank between 41 – 60%: Appreciable improvement regarding placebo.
AI rank between 61 – 80%: Great improvement regarding placebo.
AI rank between > 81%: Excellent cosmetic result.



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SKIN CONDITION EVALUATION AFTER 30 DAYS



(*) Toning action was measured by a cutometer and by direct observation of volunteers skin firmness (tension).

Total number of days in which the assay was performed (treatment was applied):
D = 15 days (every other 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% MARSH MALLOW EXTRACT by BIOGRÜNDL, S.L., 5% MARSH MALLOW EXTRACT 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.

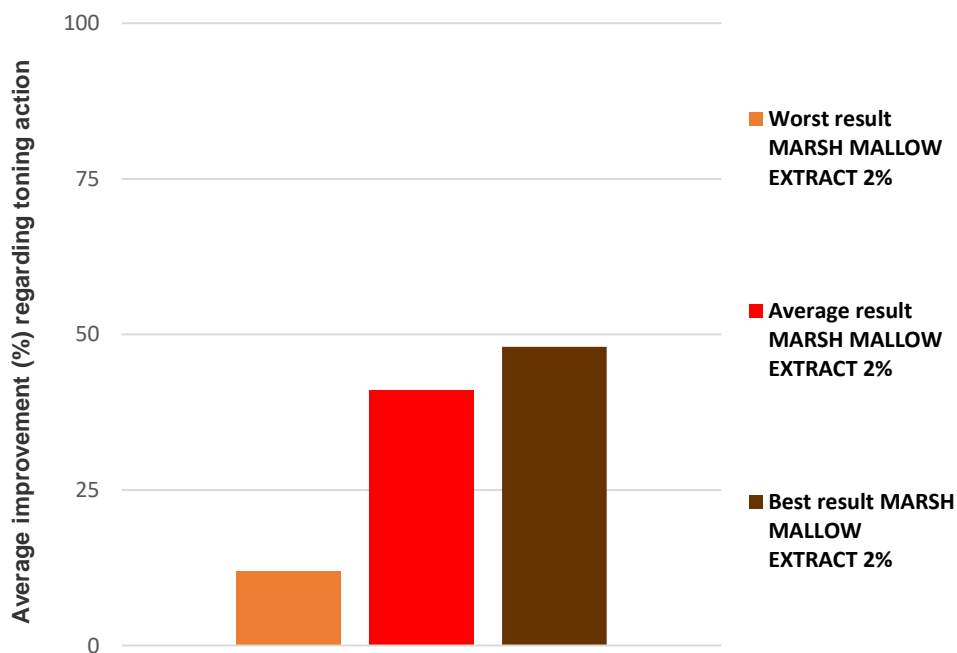
AS rank between 4 – 5: Excellent cosmetic result.



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MARSH MALLOW EXTRACT 2%



Results:

Worst result MARSH MALLOW EXTRACT 2%: 12%.
Average result MARSH MALLOW EXTRACT 2%: 41%.
Best result MARSH MALLOW EXTRACT 2%: 48%.

Results meaning:

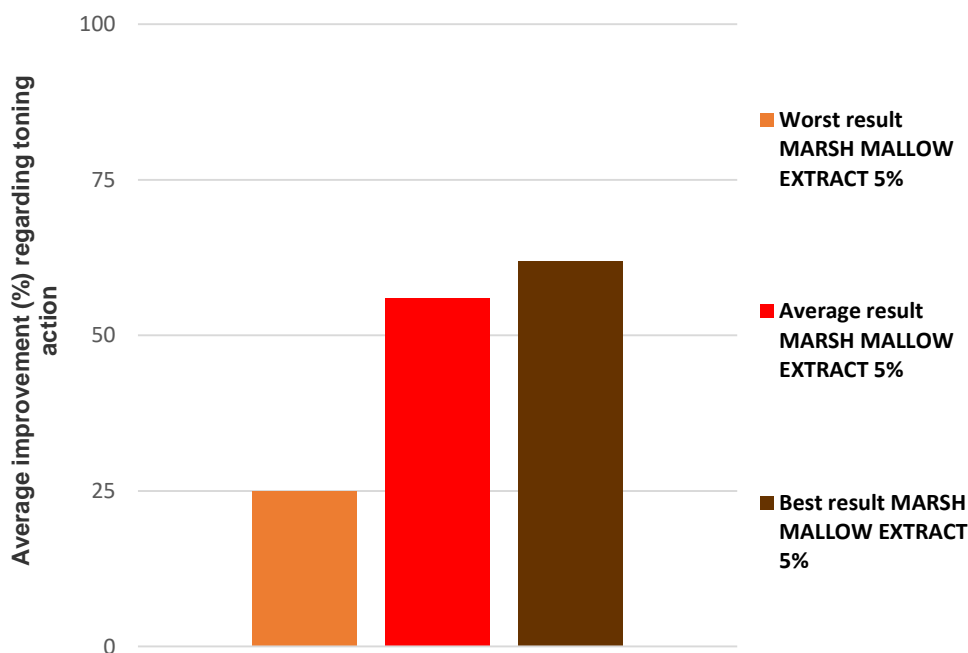
AI rank between < 20%: No significant changes.
AI rank between 21 – 40%: Slight improvement regarding placebo.
AI rank between 41 – 60%: Appreciable improvement regarding placebo.
AI rank between 61 – 80%: Great improvement regarding placebo.
AI rank between > 81%: Excellent cosmetic result.



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MARSH MALLOW EXTRACT 5%

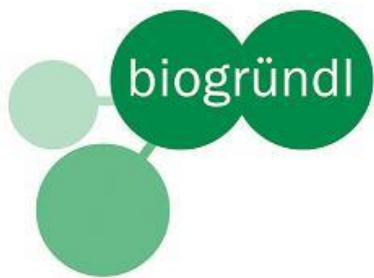


Results:

Worst result MARSH MALLOW EXTRACT 5%: 25%.
Average result MARSH MALLOW EXTRACT 5%: 56%.
Best result MARSH MALLOW EXTRACT 5%: 62%.

Results meaning:

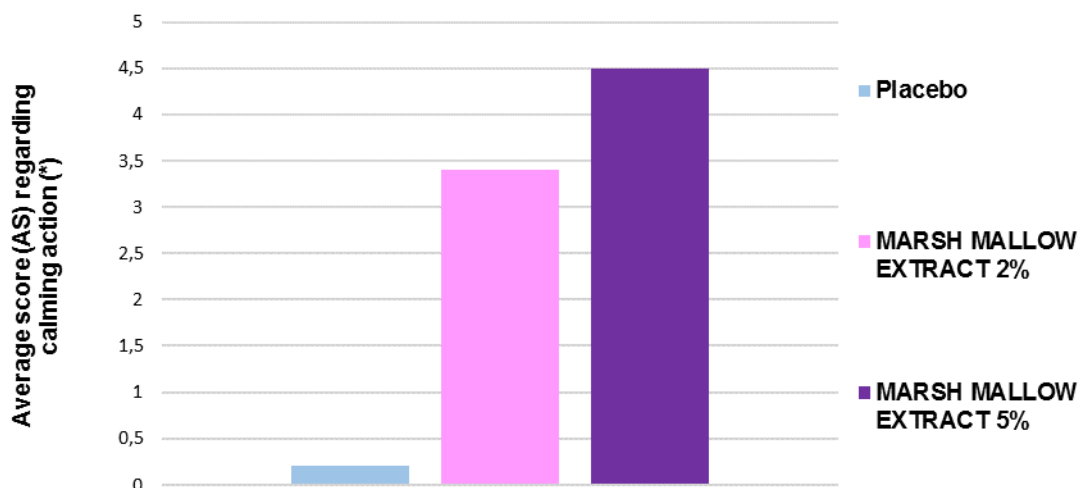
AI rank between < 20%: No significant changes.
AI rank between 21 – 40%: Slight improvement regarding placebo.
AI rank between 41 – 60%: Appreciable improvement regarding placebo.
AI rank between 61 – 80%: Great improvement regarding placebo.
AI rank between > 81%: Excellent cosmetic result.



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SKIN CONDITION EVALUATION AFTER 30 DAYS



(*) Calming action was measured by itch, redness and warm feeling decrease, by subjective assessment from volunteers, in the treated skin 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% MARSH MALLOW EXTRACT by BIOGRÜNDL, S.L., 5% MARSH MALLOW EXTRACT 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.

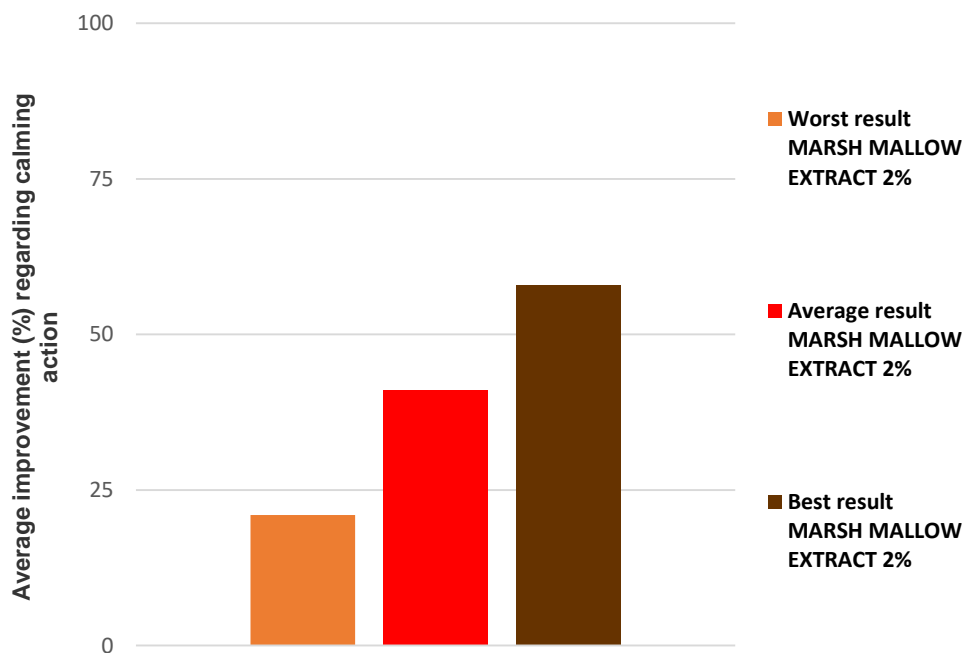
AS rank between 4 – 5: Excellent cosmetic result.



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MARSH MALLOW EXTRACT 2%

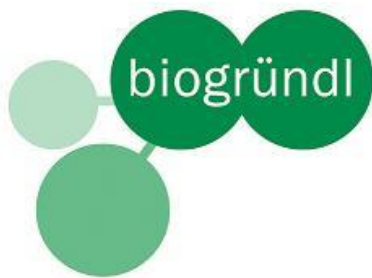


Results:

Worst result MARSH MALLOW EXTRACT 2%: 21%.
Average result MARSH MALLOW EXTRACT 2%: 41%.
Best result MARSH MALLOW EXTRACT 2%: 58%.

Results meaning:

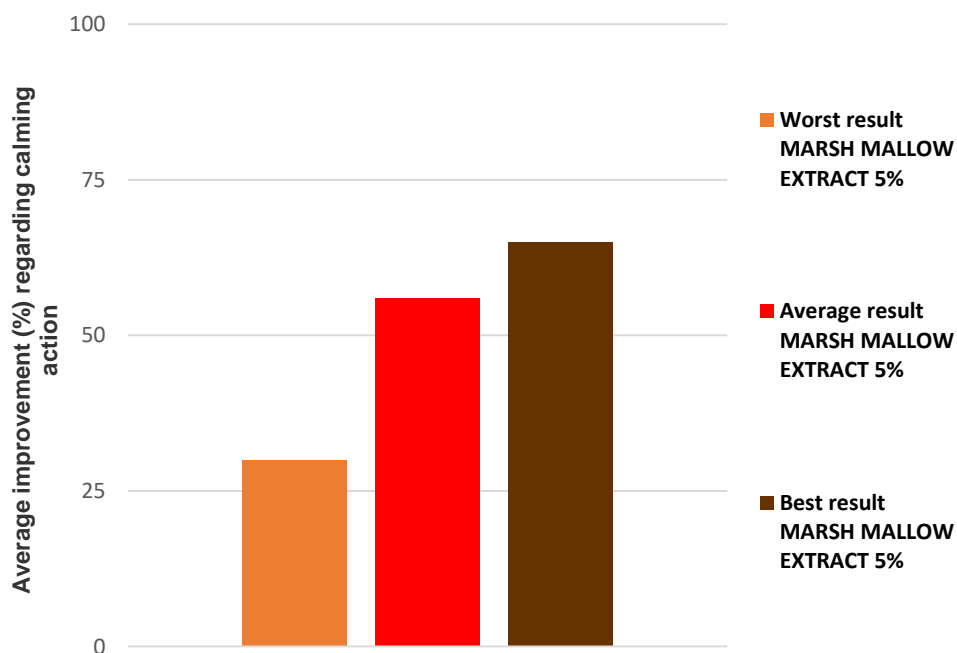
AI rank between < 20%: No significant changes.
AI rank between 21 – 40%: Slight improvement regarding placebo.
AI rank between 41 – 60%: Appreciable improvement regarding placebo.
AI rank between 61 – 80%: Great improvement regarding placebo.
AI rank between > 81%: Excellent cosmetic result.



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MARSH MALLOW EXTRACT 5%



Results:

Worst result MARSH MALLOW EXTRACT 5%: 30%.
Average result MARSH MALLOW EXTRACT 5%: 56%.
Best result MARSH MALLOW EXTRACT 5%: 65%.

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.