

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

EMULGAR BG-7 EMULSIFIER

/ A /



Trade Name: EMULGAR BG-7 EMULSIFIER / A /

Product Code: EMEMULGBG7A.

INCI Name: GLYCERYL STEARATE, C12-20 ACID PEG-8 ESTER, CETYL PHOSPHATE, PRUNUS AMYGDALUS DULCIS OIL, TOCOPHEROL.

INCI Status: Conforms.

REACH Status: Low Volume Exemption.

CAS Number: 31566-31-1; 68908-68-9; 3539-43-3; 8007-69-0 / 90320-37-9; 59-02-9 / 16698-35-4 / 54-28-4 / 119-13-1.

EC Number: 250-705-4/286-490-9; 614-763-8; 222-581-1; 291-063-5; 200-412-2 / 240-747-1 / 200-201-5 / 204-299-0.

Origin: GLYCERYL STEARATE, C12-20 ACID PEG-8 ESTER, PRUNUS AMYGDALUS DULCIS OIL, TOCOPHEROL: Vegetable origin.
CETYL PHOSPHATE: 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: None. Preservative Free. / Antioxidants: Tocopherol. / Other additives: None.

Appearance: Waxy mass.

Colour: Characteristic (Ivorian white).

Odour: Characteristic.

Soluble/ Miscible: Soluble in lipids. Insoluble in surfactants and 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: Non-ionic nature emulsifier.

Properties: Antioxidant and emollient.

Industrial packing: 1Kg., 5Kg., 25Kg., 200Kg.

Storage conditions: It is very important to keep the product in well closed containers, away from direct sunlight at temperatures not over 25°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

One of the key components of an emulsion is, no doubt, the emulsifier system. From it depends to a great extent the stability, the correct extensibility on the skin and the fineness, also having it a significant influence on the consistency and penetrability.

In order to limit the laboratory tests and save accumulation of ingredients, BIOGRÜNDL, S.L. presents EMULGAR BG-7 EMULSIFIER, non-ionic in nature product, stable at normal emulsification temperatures (up to 110°C) and for a wide pH range (between 3.0 and 9.0); likewise, emulsions based on it resist high electrolyte content.

With EMULGAR BG-7 EMULSIFIER by BIOGRÜNDL, S.L. stable emulsions of thick or medium-thick nature are performed; with excellent texture, gloss and extensibility.

EMULGAR BG-7 EMULSIFIER by BIOGRÜNDL, S.L. is very suitable to formulate products for delicate and sensitive skin.

USE AND DOSAGE

EMULGAR BG-7 EMULSIFIER by BIOGRÜNDL, S.L. is a system formed by four synergistic components which enhance its action. It is protected against oxidation and it has an HLB (hydrophilic-lipophilic balance) of 11. It has to be incorporated into the fat part of the emulsions, being carried out the usual process of preparation.

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: Waxy mass.

Colour: Characteristic (Ivorian white).

Odour: Characteristic.

Drip point: Between 50 – 55°C.

HLB: 11 (hydrophilic-lipophilic balance).

Solubility in water: Fully insoluble.

Solubility in other solvents: Soluble in lipids. Insoluble in surfactants and in hydroalcoholic, hydroglyceric and hydroglycolic mixtures.

Acid value: Maximum 2 mg.KOH/g.

Saponification value: 130 - 180 mg.KOH/g.

Iodine value: Maximum 6 g.I₂/100g.

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 1g.

DERMATOLOGY INNOCUOUSNESS

It was performed by the patch test (Patch test) on 10 volunteers. To this purpose, 15% EMULGAR BG-7 EMULSIFIER 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 and at temperatures not over 25°C. In case of not having refrigerators, store the product in the coolest and free from artificial light area.

INCI DENOMINATION

GLYCERYL STEARATE, C12-20 ACID PEG-8 ESTER, CETYL PHOSPHATE,
PRUNUS AMYGDALUS DULCIS OIL, TOCOPHEROL.

EFFECTIVENESS TESTS

Assay: Double blind spot trial and subsequent cosmetic evaluation.

Assayed parameters: Emollient action.

N (volunteers): 30 (15 ♀ and 15 ♂).

Age (volunteers): 37 – 63 years old.

Left side part to be treated:

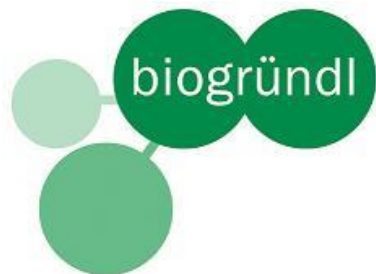
Placebo, 30 volunteers, suitable cosmetic base.

Right side part to be treated:

EMULGAR BG-7 EMULSIFIER 2%, 15 volunteers, suitable cosmetic base.

Right side part to be treated:

EMULGAR BG-7 EMULSIFIER 5%, 15 volunteers, suitable cosmetic base.

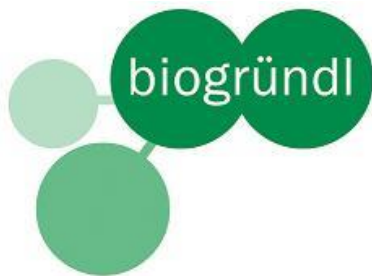


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Assayed parameter:

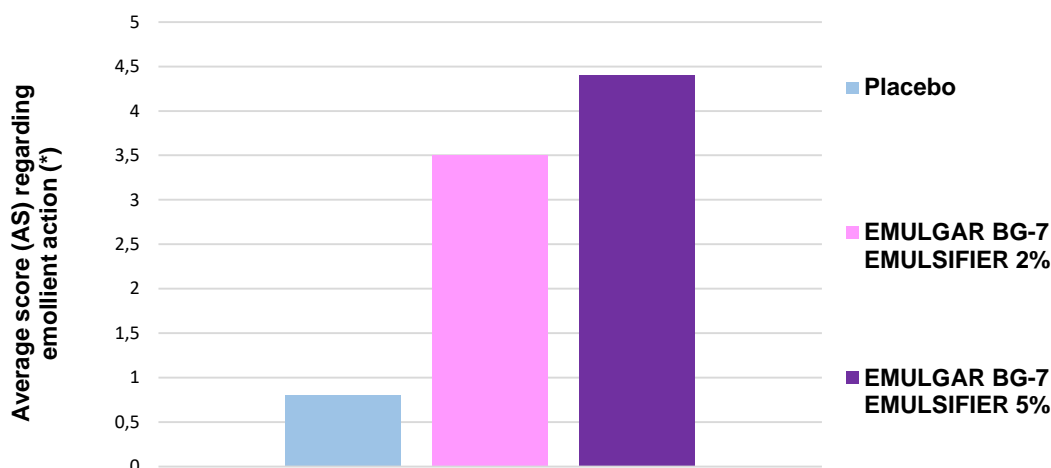
	Assay	N (volunteers)	Age (volunteers)	Placebo	EMULGAR BG-7 EMULSIFIER 2%	EMULGAR BG-7 EMULSIFIER 5%	Assay performed (Days)	Results measured (Days)
Emollient action	Double blind spot trial and subsequent cosmetic evaluation.	N = 30 15 ♀ 15 ♂	37 - 63	Left side part	Right side part 15 volunteers.	Right side part. 15 volunteers.	D = 30	D' = 1



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SKIN CONDITION EVALUATION AFTER 30 DAYS



(*) Emollient action was determined by softening degree of calluses on volunteers treated body 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' = 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% EMULGAR BG-7 EMULSIFIER by BIOGRÜNDL, S.L., 5% EMULGAR BG-7 EMULSIFIER by BIOGRÜNDL, S.L..

Results meaning:

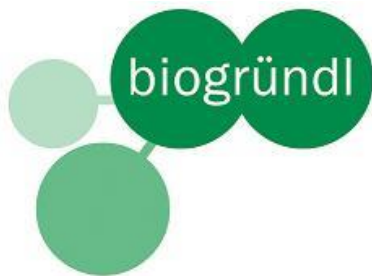
AS rank between 0 – 1: No significant changes.

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.

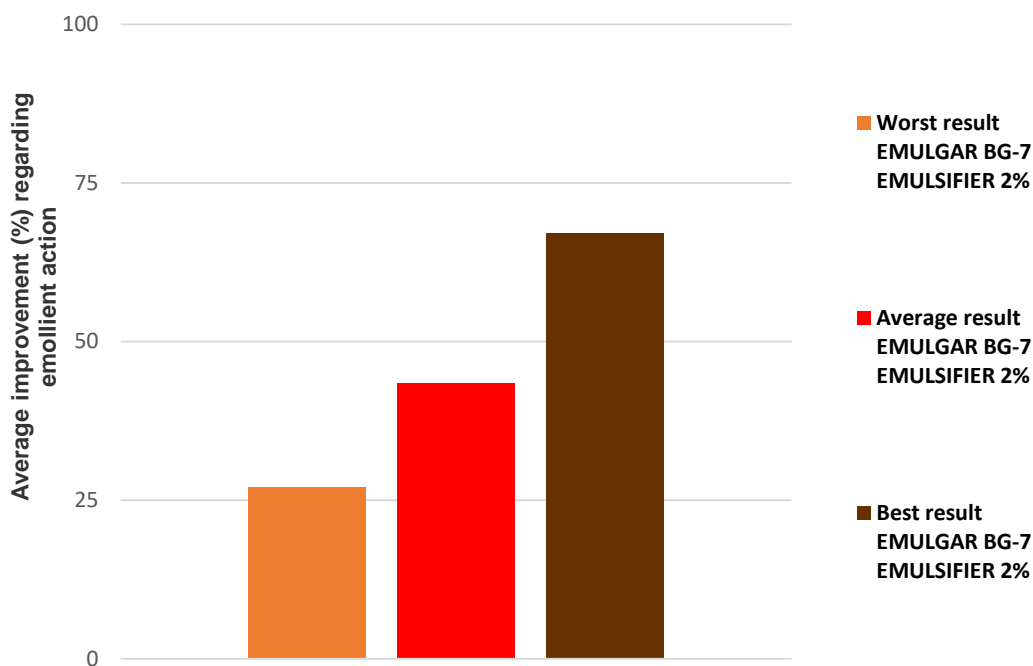
AS rank between 4 – 5: Excellent cosmetic result.



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EMULGAR BG-7 EMULSIFIER 2%



Results:

Worst result EMULGAR BG-7 EMULSIFIER 2%: 27%.

Average result EMULGAR BG-7 EMULSIFIER 2%: 43,5%.

Best result EMULGAR BG-7 EMULSIFIER 2%: 67%.

Results meaning:

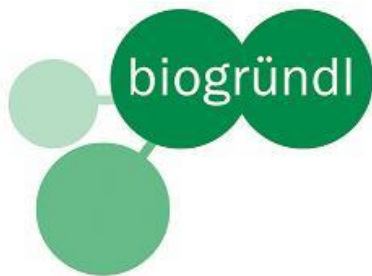
AI rank between < 20%: No significant changes.

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.

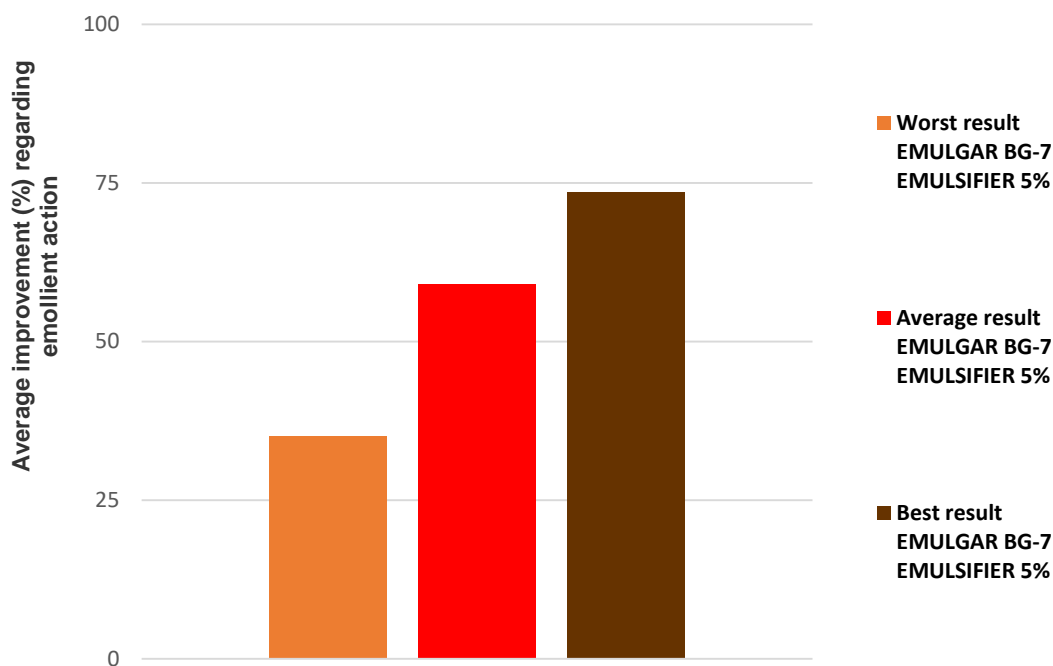
AI rank between > 81%: Excellent cosmetic result.



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EMULGAR BG-7 EMULSIFIER 5%



Results:

Worst result EMULGAR BG-7 EMULSIFIER 5%: 35%.
Average result EMULGAR BG-7 EMULSIFIER 5%: 59%.
Best result EMULGAR BG-7 EMULSIFIER 5%: 73,5%.

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.