

BIOGRÜNDL, S.L.  
POLÍGONO LES FALLULLES, NAVE 34 -SECTOR 2-  
08620 SANT VICENÇ DELS HORTS, BARCELONA (SPAIN)  
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## TECHNICAL DATA SHEET

### ANTI-GREASE COMPLEX

### / A / HGLA / CA11 /



**Trade Name:** ANTI-GREASE COMPLEX / A / HGLA / CA11 /

**Product Code:** AGAHGLACA11.

**INCI Name:** AQUA, GLYCERIN, ISOPROPYL ALCOHOL, FAEX EXTRACT, PEG-40 HYDROGENATED CASTOR OIL; TOCOPHERYL ACETATE, POTASSIUM SORBATE, RETINYL PALMITATE, TIOXOLONE, NIACINAMIDE, PANTHENOL, RIBOFLAVIN, PYRIDOXINE HCL, INOSITOL, BIOTIN, THIAMINE HCL, CYANOCOBALAMIN.

**INCI Status:** Conforms.

**REACH Status:** Low Volume Exemption.

**CAS Number:** 7732-18-5; 56-81-5; 67-63-0; 8013-01-2; 61788-85-0; 7695-91-2 / 58-95-7; 24634-61-5/ 590-00-1; 79-81-2; 4991-65-5; 98-92-0; 81-13-0 / 16485-10-2; 83-88-5; 58-56-0 / 12001-77-3; 87-89-8; 58-85-5; 67-03-8; 68-19-9.

**EC Number:** 231-791-2; 200-289-5; 200-661-7; 232-387-9; Not available; 231-710-0 / 200-405-4; 246-376-1; 201-228-5; 225-653-0; 202-713-4; 201-327-3 / 240-540-6; 201-507-1; 200-386-2; 201-781-2; 200-399-3; 200-641-8; 200-680-0.

**Origin:** GLYCERIN: Vegetable origin.

ISOPROPYL ALCOHOL, PEG-40 HYDROGENATED CASTOR OIL; TOCOPHERYL ACETATE, POTASSIUM SORBATE, RETINYL PALMITATE, TIOXOLONE, NIACINAMIDE, PANTHENOL, RIBOFLAVIN, PYRIDOXINE HCL, INOSITOL, BIOTIN, THIAMINE HCL, CYANOCOBALAMIN: Synthetic origin.

FAEX EXTRACT: Vegetable 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:** Shampoos. Anti-grease lotions.

**Properties:** Anti-seborrheic.

**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.

- 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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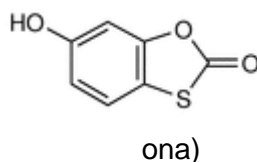
### OVERVIEW

Seborrhea is produced by sebum hyper-secretion from sebaceous glands. The exaggerated function of these glands has a multifactorial origin and, therefore, the treatment for this disorder should be based on some active substances that act on it.

Taking into account these circumstances, BIOGRÜNDL, S.L. presents ANTI-GREASE COMPLEX based on the three following active components:

- *A+B+E VITAMIN COMPLEX*: Containing vitamins of groups A, B and E. These vitamins act as regulators of the sebaceous gland secretion.
- *BEER YEAST EXTRACT*: Obtained by means of a specific process that guarantees the extraction of nearly whole beer yeast active substances. These active agents are constituted by proteins with low molecular weight and free amino acids, with great proportion of cystine, cysteine and methionine; B group vitamins; tannins; enzymes and trace elements. All of them have a regulatory action on sebaceous glands.
- *TIOXOLONE*: Organic substance very rich in sulphur which normalizes sebum production in sebaceous glands. Chemically, it corresponds to 6-hydroxi-1,3-benzoxatiol-2-ona (Figure 1.).

Figure 1. TIOXOLONE



(6-hydroxi-1,3-benzoxatiol-2-

ona)



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### USE AND DOSAGE

The incorporation of anti-grease complex in cosmetics is justified by its anti-seborrheic property.

It is advisable its use in shampoos, anti-grease lotions and in no-rinse preparations.

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.



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### DERMATOLOGY INNOCUOUSNESS

It was performed by the patch test (Patch test) on 10 volunteers. To this purpose, 15% ANTI-GREASE COMPLEX by BIOGRÜNDL, S.L., was added to surfactant solution; 0,5g. of this surfactant solution 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, FAEX EXTRACT, PEG-40 HYDROGENATED CASTOR OIL, TOCOPHERYL ACETATE, POTASSIUM SORBATE, RETINYL PALMITATE, TIOXOLONE, NIACINAMIDE, PANTHENOL, RIBOFLAVIN, PYRIDOXINE HCL, INOSITOL, BIOTIN, THIAMINE HCL, CYANOCOBALAMIN.

### EFFECTIVENESS TEST

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

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

**N (volunteers):** 30 (16 ♀ and 14 ♂).

**Age (volunteers):** 20 – 45 years old.

**Left side part to be treated:**

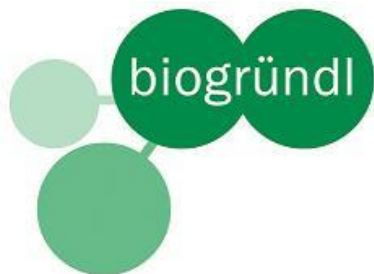
Placebo, 30 volunteers, suitable cosmetic base.

**Right side part to be treated:**

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

**Right side part to be treated:**

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



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### Assayed parameter:

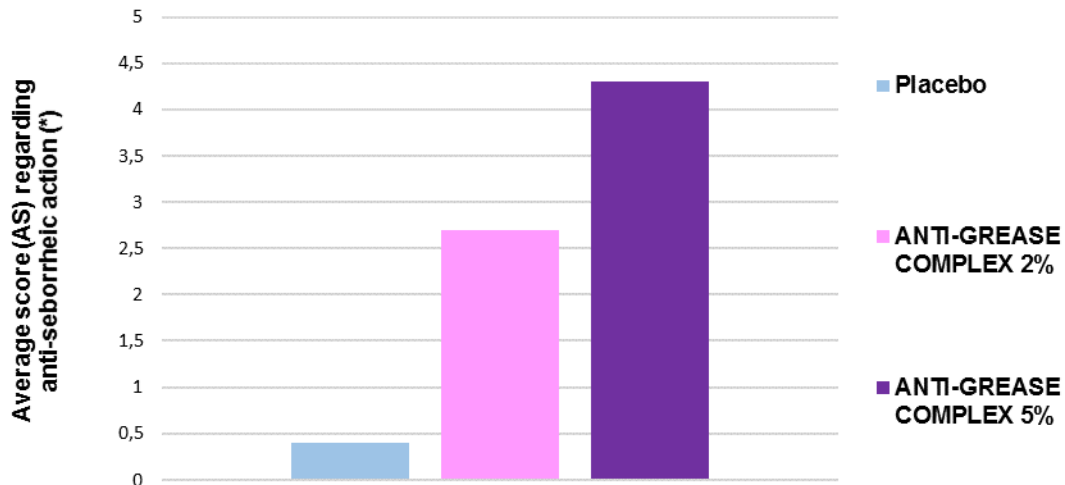
	Assay	N (volunteers)	Age (volunteers)	Placebo	ANTI-GREASE COMPLEX 2%	ANTI-GREASE COMPLEX 5%	Assay performed (Days)	Results measured (Days)
<b>Anti-seborrheic action</b>	Double blind spot trial and subsequent cosmetic evaluation.	N = 30 16 ♀ and 14 ♂	20 – 45	Left side part	Right side part 15 volunteers.	Right side part. 15 volunteers.	D = 10	D' = 1



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### HAIR/SCALP CONDITION EVALUATION AFTER 30 DAYS



(\*) Anti-seborrheic action was determined by quantification of fat substance amount collected from volunteers hair sample.

Total number of days in which the assay was performed (treatment was applied):  
D = 10 days ( every three days 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-GREASE COMPLEX by BIOGRÜNDL, S.L., 5% ANTI-GREASE 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.

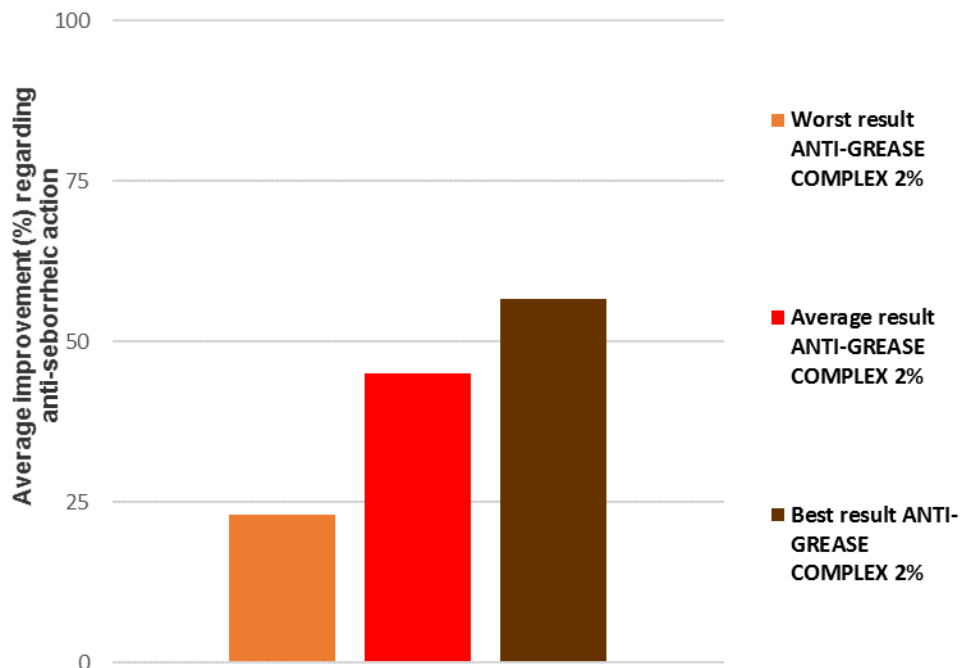
AS rank between 4 – 5: Excellent cosmetic result.



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### ANTI-GREASE COMPLEX 2%



#### Results:

Worst result ANTI-GREASE COMPLEX 2%: **23%**.  
Average result ANTI-GREASE COMPLEX 2%: **45%**.  
Best result ANTI-GREASE COMPLEX 2%: **56,5%**.

#### Results meaning:

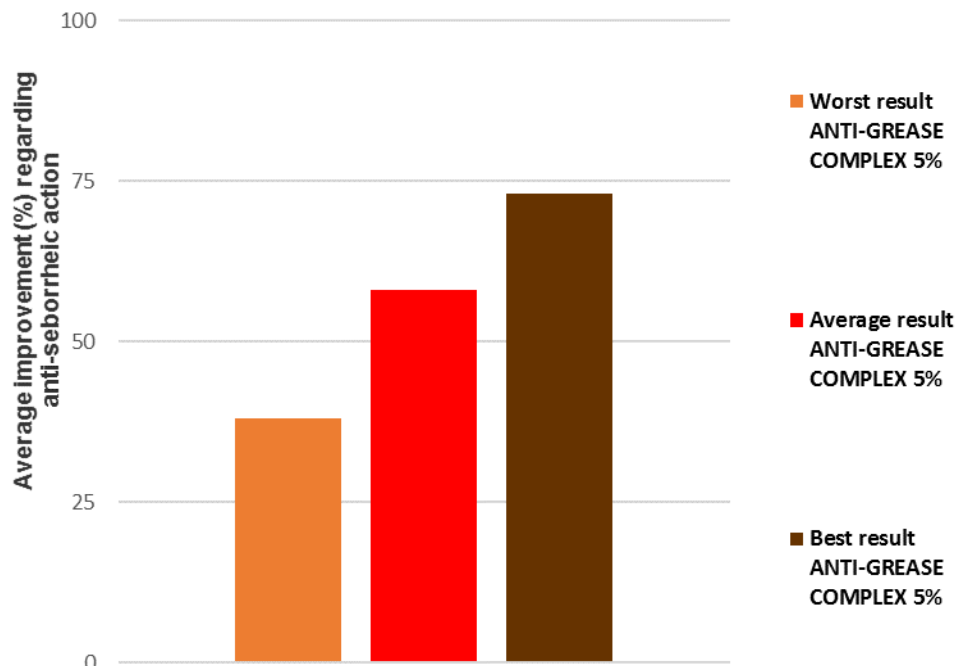
AI rank between < 20%: No significant changes.  
AI rank between 21 – 40%: Slight improvement regarding placebo.  
AI rank between 41 – 60%: Appreciable improvement regarding placebo.  
AI rank between 61 – 80%: Great improvement regarding placebo.  
AI rank between > 81%: Excellent cosmetic result.



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## TECHNICAL DATA SHEET

### ANTI-GREASE COMPLEX 5%



#### Results:

Worst result ANTI-GREASE COMPLEX 5%: **38%**.  
Average result ANTI-GREASE COMPLEX 5%: **58%**.  
Best result ANTI-GREASE COMPLEX 5%: **73%**.

#### 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.