



BIOGRÜNDL, S.L.
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TECHNICAL DATA SHEET

GINSENG EXTRACT **/ A / HGL / CA11 /**



Trade Name: GINSENG EXTRACT / A / HGL / CA11 /.

Product Code: EGI AHGLCA11.

INCI Name: AQUA, GLYCERIN, PANAX GINSENG ROOT EXTRACT, POTASSIUM SORBATE.

INCI Status: Conforms.

REACH Status: Low Volume Exemption.

CAS Number: 7732-18-5; 56-81-5; 84650-12-4; 24634-61-5 / 590-00-1.

EC Number: 231-791-2; 200-289-5; 283-493-7; 246-376-1.

Origin: GLYCERIN: Vegetable origin.

PANAX GINSENG 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: Anti-ageing, stimulant and anti-wrinkle products. Rejuvenating, musculature strengthener and invigorating sex products.

Properties: Eutrophic, elastifying, tonic, anti-ageing and hair and muscular growth stimulating.

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

The use of this drug dates back to very remote times, at least in the East Asian cultures. Its knowledge and employment in the West countries are relatively recent. It belongs to the araliaceae family.

The root is the active part of the plant, which has characteristic cylindrical form with rolled-up end. It is yellowish-white or brownish-yellow in colour. The main active substances are ginsenosides, which aglucoside part consists of triterpenic saponins, with a central structure of cyclopentaneperydrophenanthrene, in other words like sexual hormones present (Figure 1.); it similarly contains phytosterols, B-group vitamins, tannins and essential oil, with the following main components: limonene, terpineol and citral, in addition to sugars and starches.

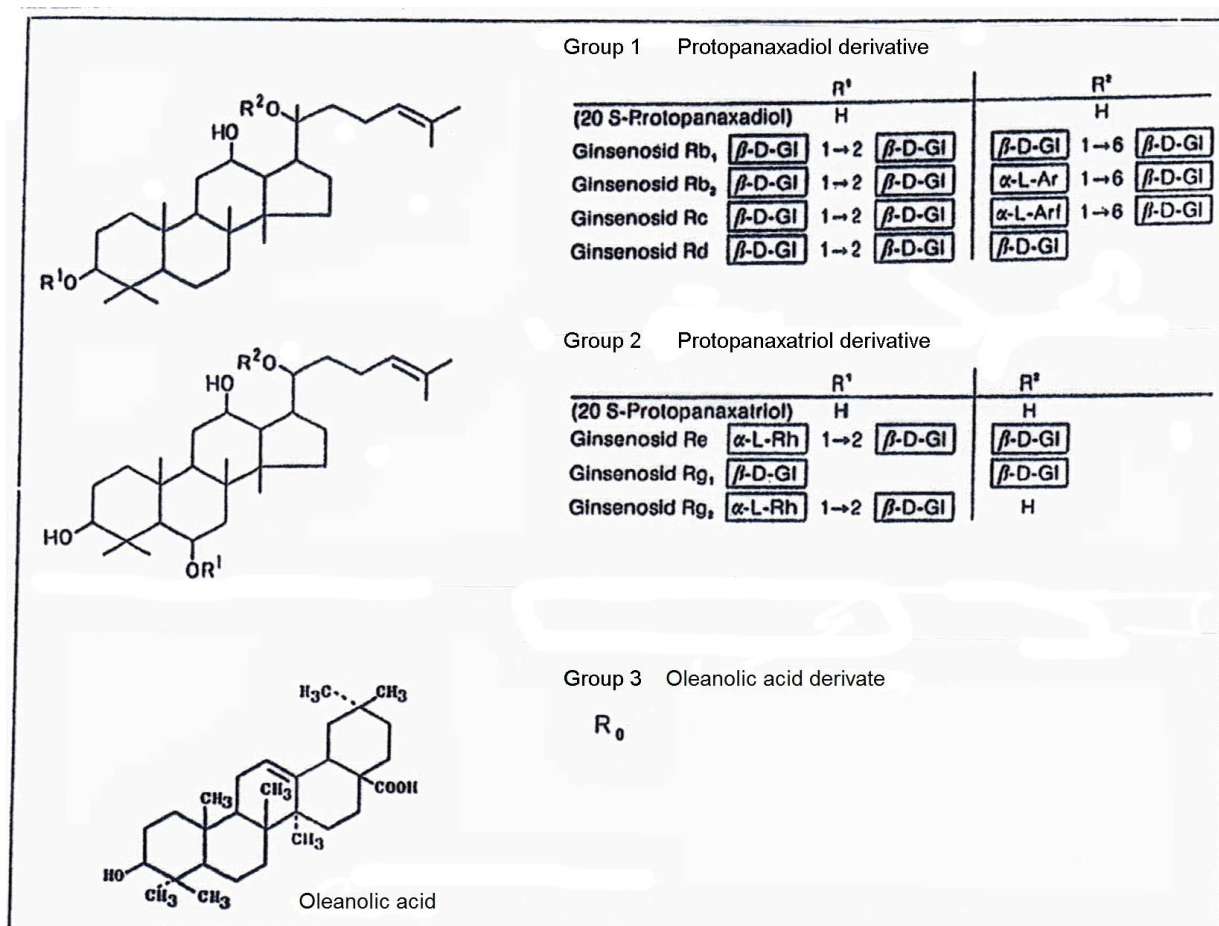


Figure 1. CHEMICAL STRUCTURE OF GINSENOSIDES.

Gl= Glucose, Ar=Arabinose Art= Arabinofuranoside R= Ramnose



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There are three different forms of ginsenosides, depending on its glucoside part: protopanaxadiol, protopanaxatriol or oleanolic acid derivatives. The two first forms are esterified with various sugars.

The central structure of ginsenosides are, therefore, analogous to sexual hormones. This means that they could play a positive role on the formation of such hormones which, as is well-known, causes increased protein production, which will undoubtedly affect muscular mass maintenance.

Ginseng is a drug with non-specific therapeutic properties that does not serve as a treatment for any specific ailment. However, what has been demonstrated is an increase in body defence against various negative and unfavourable environmental influences and also against appearance of ageing symptoms. It supplements body failing in enzyme natural production, something that occurs with time. In this way, metabolism is more or less normalised. All these properties have led to ginseng being considered as a very useful product in geriatric preparations for the prevention and treatment of ageing symptoms.

Ginseng is currently considered as being a fundamental preventive drug because of its positive effects on circulatory, endocrine and nervous systems and on general metabolism.

USE AND DOSAGE

The application of ginseng extract in cosmetics is justified because of its excellent and proven anti-ageing, stimulant and anti-wrinkle actions. The European Council attributes the following effects to it: eutrophic, elastifying, tonic, anti-ageing and, hair and muscular growth stimulation.

In the Far East, since time immemorial, were attributed to ginseng invigorating of sexual appetite and strengthening of muscles properties, without knowing to what was due. Currently it is well demonstrated that it is a consequence of its content in ginsenosides. They have a central structure formed by cyclopentaneperydrophenanthrene, as also occurs with sex hormones.

Therefore, ginseng, both orally and in external application preparations, turns out to be a very active matter for men ranging from rejuvenating to musculature strengthener and invigorating sex 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%.



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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% GINSENG 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, PANAX GINSENG ROOT EXTRACT, POTASSIUM SORBATE.

EFFECTIVENESS TESTS

Assay: Double blind spot trial and subsequent cosmetic evaluation.

Assayed parameters: Anti-wrinkle action. Toning action.

N (volunteers): 30 (20 ♀ and 10 ♂).

Age (volunteers): 26 – 80 years old.

Left side part to be treated:

Placebo, 30 volunteers, suitable cosmetic base.

Right side part to be treated:

GINSENG EXTRACT 2%, 15 volunteers, suitable cosmetic base.

Right side part to be treated:

GINSENG EXTRACT 5%, 15 volunteers, suitable cosmetic base.



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Assayed parameters:

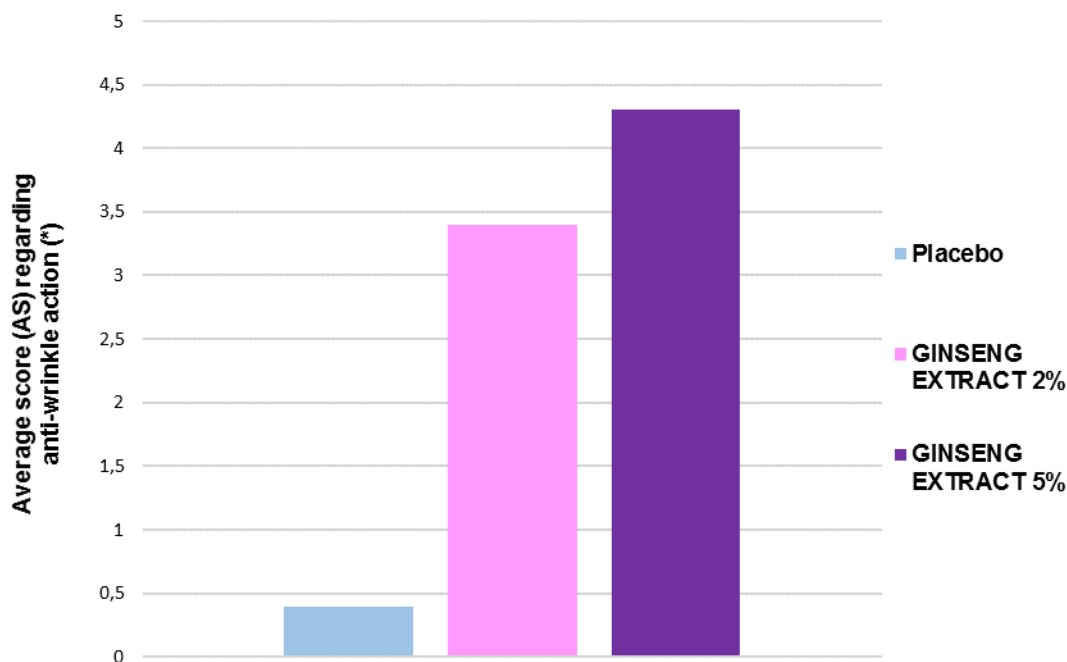
	Assay	N (volunteers)	Age (volunteers)	Placebo	GINSENG EXTRACT 2%	GINSENG EXTRACT 5%	Assay performed (Days)	Results measured (Days)
Anti-wrinkle action	Double blind spot trial and subsequent cosmetic evaluation.	N = 30 20 ♀ 10 ♂	30 – 55	Left side part	Right side part 15 volunteers.	Right side part. 15 volunteers.	D = 30	D' = 1
Toning action	Double blind spot trial and subsequent cosmetic evaluation.	N = 30 20 ♀ 10 ♂	26 – 80	Left side part	Right side part 15 volunteers.	Right side part. 15 volunteers.	D = 15	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% GINSENG EXTRACT by BIOGRÜNDL, S.L., 5% GINSENG EXTRACT by BIOGRÜNDL, S.L..

Results meaning:

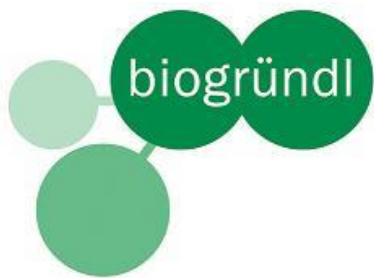
AS rank between 0 – 1: No appreciable changes.

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.

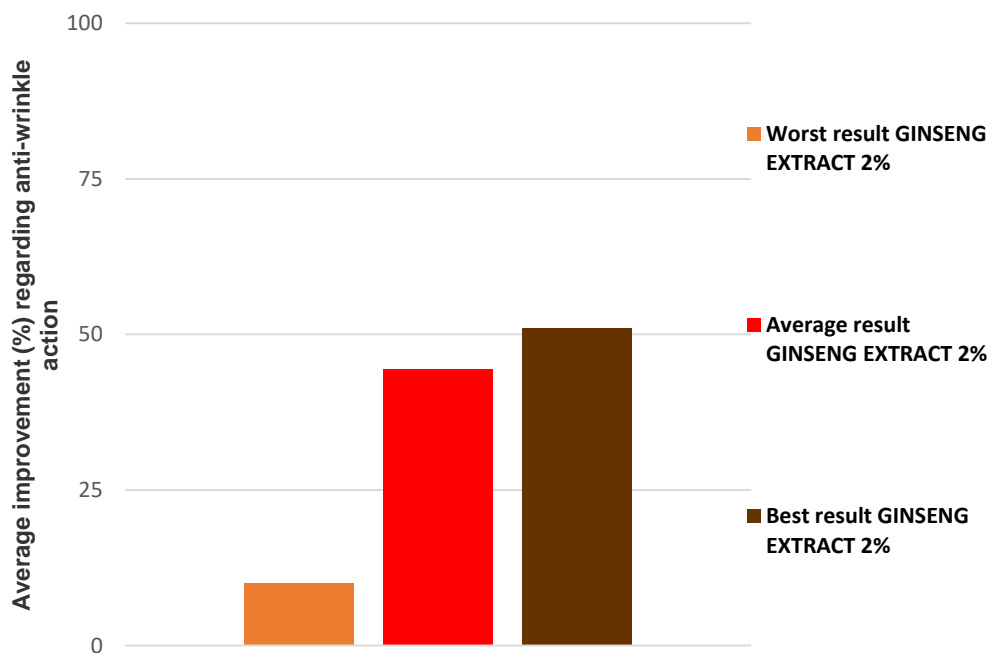
AS rank between 4 – 5: Excellent cosmetic result.



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GINSENG EXTRACT 2%



Results:

Worst result GINSENG EXTRACT 2%: 10%.
Average result GINSENG EXTRACT 2%: 44,4%.
Best result GINSENG EXTRACT 2%: 51%.

Results meaning:

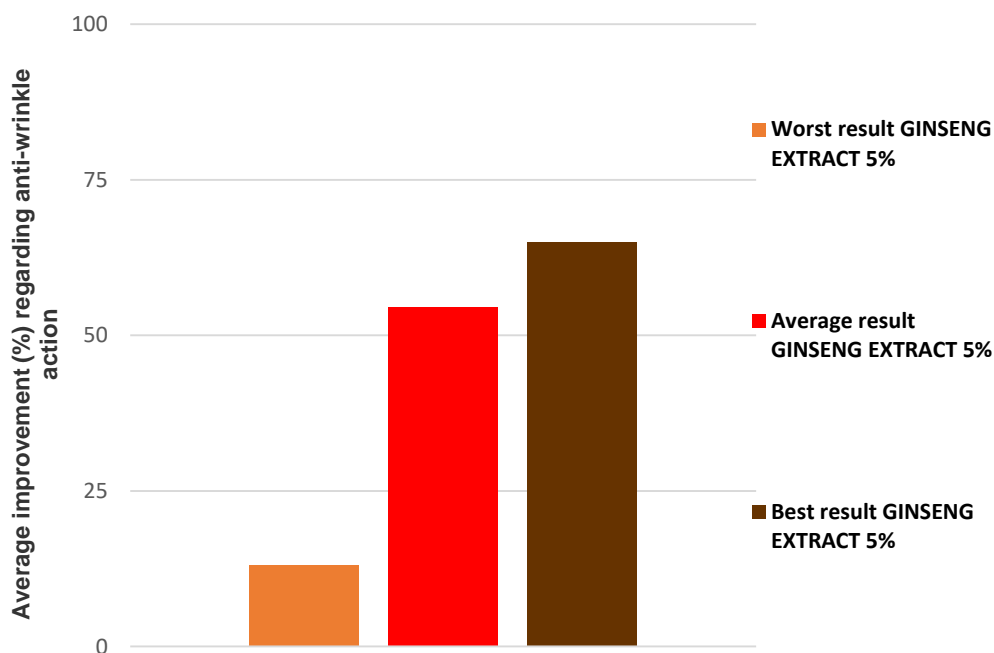
AI rank between < 20%: No appreciable changes.
AI rank between 21 – 40%: Slight improvement regarding placebo.
AI rank between 41 – 60%: Appreciable improvement regarding placebo.
AI rank between 61 – 80%: Great improvement regarding placebo.
AI rank between > 81%: Excellent cosmetic result.



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GINSENG EXTRACT 5%



Results:

Worst result GINSENG EXTRACT 5%: 13%.
Average result GINSENG EXTRACT 5%: 54,6%.
Best result GINSENG EXTRACT 5%: 65%.

Results meaning:

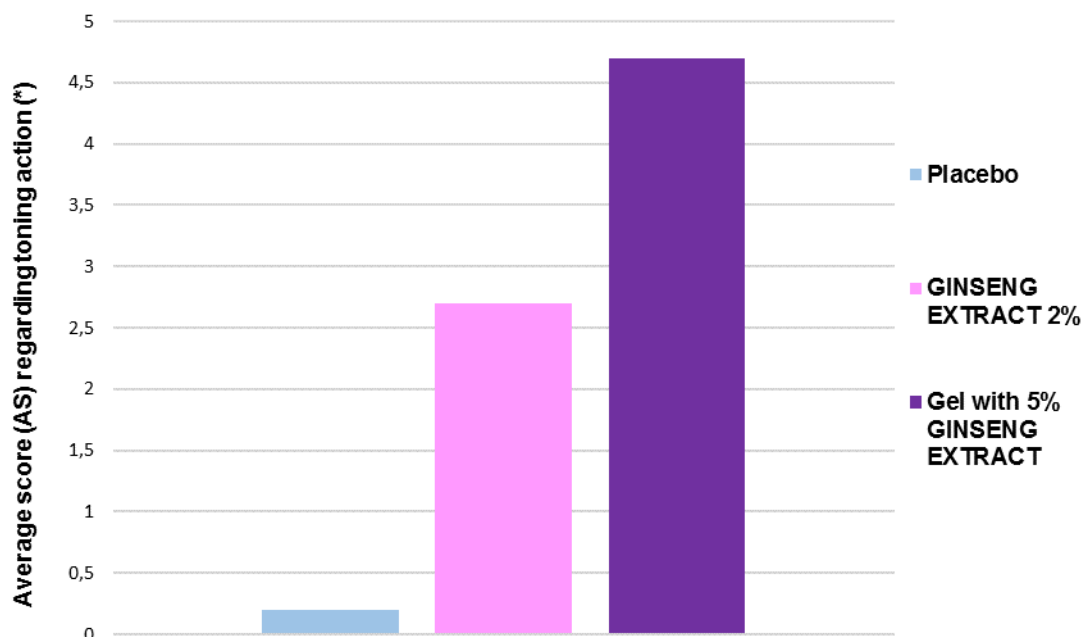
AI rank between < 20%: No apreciable changes.
AI rank between 21 – 40%: Slight improvement regarding placebo.
AI rank between 41 – 60%: Appreciable improvement regarding placebo.
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AI rank between > 81%: Excellent cosmetic result.



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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% GINSENG EXTRACT by BIOGRÜNDL, S.L., 5% GINSENG EXTRACT by BIOGRÜNDL, S.L..

Results meaning:

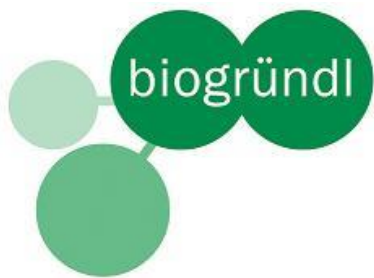
AS rank between 0 – 1: No appreciable changes.

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.

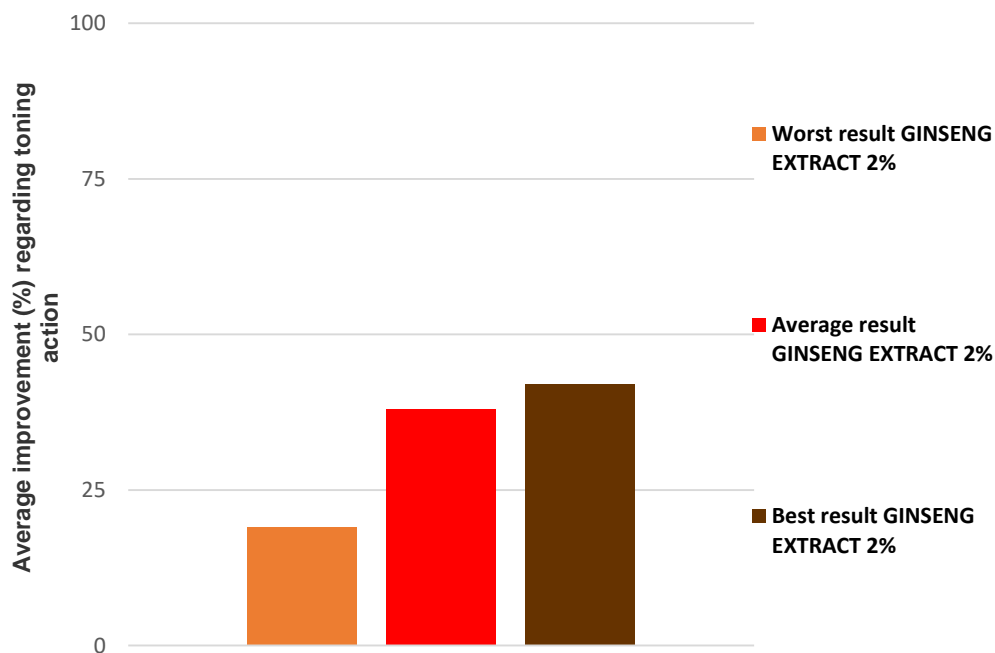
AS rank between 4 – 5: Excellent cosmetic result.



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GINSENG EXTRACT 2%



Results:

Worst result GINSENG EXTRACT 2%: 19%.
Average result GINSENG EXTRACT 2%: 38,1%.
Best result GINSENG EXTRACT 2%: 42%.

Results meaning:

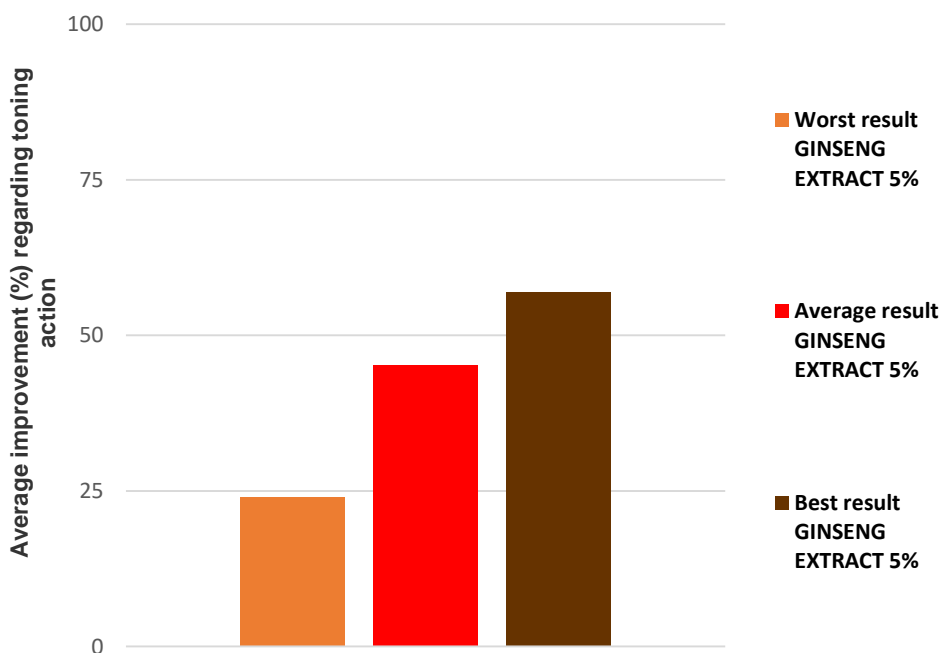
AI rank between < 20%: No appreciable changes.
AI rank between 21 – 40%: Slight improvement regarding placebo.
AI rank between 41 – 60%: Appreciable improvement regarding placebo.
AI rank between 61 – 80%: Great improvement regarding placebo.
AI rank between > 81%: Excellent cosmetic result.



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GINSENG EXTRACT 5%



Results:

Worst result GINSENG EXTRACT 5%: 24%.
Average result GINSENG EXTRACT 5%: 45,3%.
Best result GINSENG EXTRACT 5%: 57%.

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.