



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

### WITCH HAZEL EXTRACT / A / HGL / CA11 /



**Trade Name:** WITCH HAZEL EXTRACT / A / HGL / CA11 /

**Product Code:** EHMAHGLCA11.

**INCI Name:** AQUA, GLYCERIN, HAMAMELIS VIRGINIANA LEAF EXTRACT, POTASSIUM SORBATE.

**INCI Status:** Conforms.

**REACH Status:** Low Volume Exemption.

**CAS Number:** 7732-18-5; 56-81-5; 84696-19-5; 24634-61-5 / 590-00-1.

**EC Number:** 231-791-2; 200-289-5; 283-637-9; 246-376-1.

**Origin:** GLYCERIN: Vegetable origin.

**HAMAMELIS VIRGINIANA LEAF 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/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:** Astringent and anti-inflammatory action in skin preparations. Wound, cut and abrasion treatment. Oily skin and oily hair products. Cleansing, facial tonics and/or hair lotions formulations.

**Properties:** Astringent, haemostatic, vasoconstrictor, bactericide and soothing.

**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

Witch Hazel (*Hamamelis virginiana* L.) is a bush with several trunks that arise from one root, which makes it very similar to hazelnut tree. It has alternate oval leaves; yellow flowers in groups of three or four; the fruit is a capsule similar to hazelnut. It belongs to the hamamelidaceae family.

WITCH HAZEL EXTRACT by BIOGRÜNDL, S.L. is getting from the leaves of the plant collected in autumn, with a mixture of water and glycerin which drags the following active ingredients:

- Tannins: gallic acid and galitanins.
- Caffeic acid.
- Flavonoids: quercitine and kampherol.
- Flavonic heterosids (mircetol, quercetol, and kenferol).
- Pectines.
- Mucilages.
- Mineral salts.
- Essential oil with very complex composition.
- Resins.
- Coline.
- Phenolic compounds.

### USE AND DOSAGE

The incorporation in cosmetics of witch hazel extract is justified by its astringent with fast and prolonged action, hemostatic, vasoconstrictor, bactericide and soothing properties.

Used for astringent and anti-inflammatory action in skin preparations and, particularly, in oral and nasal cavity. Also in wound, cut and abrasion treatment, as well as, in oily skin and oily hair products. As an active ingredient in cleansing, facial tonics and/or hair lotions formulations.

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/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.

### DERMATOLOGY INNOCUOUSNESS

It was performed by the patch test (Patch test) on 10 volunteers. To this purpose, 15% WITCH HAZEL 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, HAMAMELIS VIRGINIANA LEAF EXTRACT, POTASSIUM SORBATE.

### **EFFECTIVENESS TESTS**

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

**Assayed parameters:** Astringent action. Anti-bacterial action.

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

**Age (volunteers):** 22 – 66 years old.

**Left side part to be treated:**

Placebo, 30 volunteers, suitable cosmetic base.

**Right side part to be treated:**

WITCH HAZEL EXTRACT 2%, 15 volunteers, suitable cosmetic base.

**Right side part to be treated:**

WITCH HAZEL EXTRACT 5%, 15 volunteers, suitable cosmetic base.

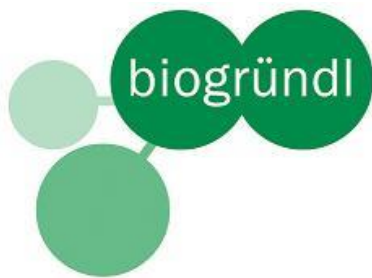


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### Assayed parameters:

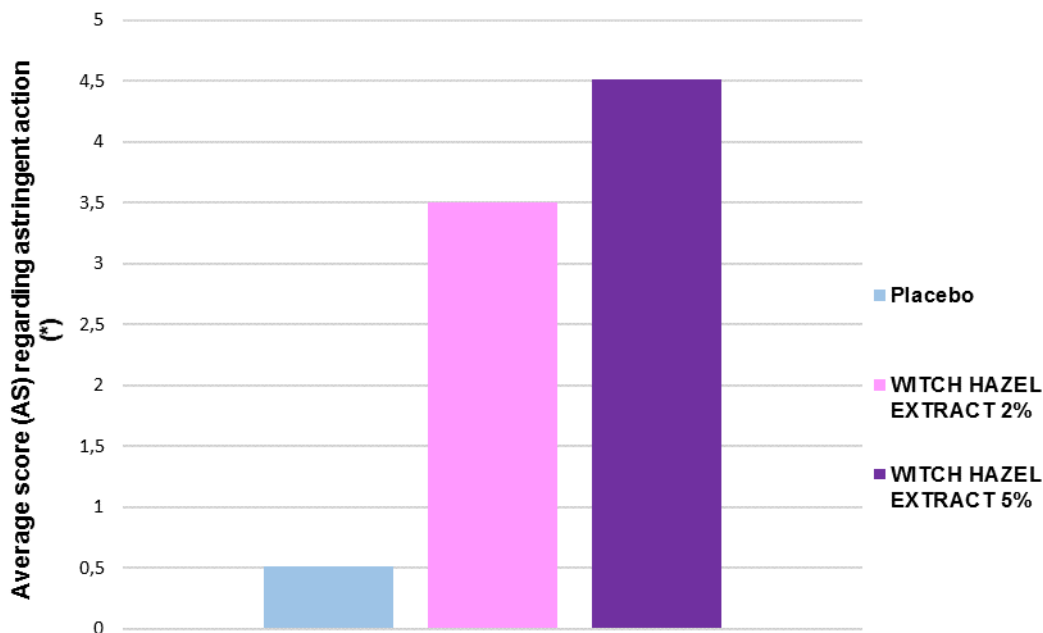
	Assay	N (volunteers)	Age (volunteers)	Placebo	WITCH HAZEL EXTRACT 2%	WITCH HAZEL EXTRACT 5%	Assay performed (Days)	Results measured (Days)
<b>Astringent action</b>	Double blind spot trial and subsequent cosmetic evaluation.	N = 30 16 ♀ 14 ♂	22 – 43	Left side part	Right side part 15 volunteers.	Right side part. 15 volunteers.	D = 30	D' = 1
<b>Anti-bacterial action</b>	Double blind spot trial and subsequent cosmetic evaluation.	N = 30 16 ♀ 14 ♂	22 – 66	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



(\*) Astringent action was determined by quantification of fat substance amount collected from volunteers skin sample.

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% WITCH HAZEL EXTRACT by BIOGRÜNDL, S.L., 5% WITCH HAZEL 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.

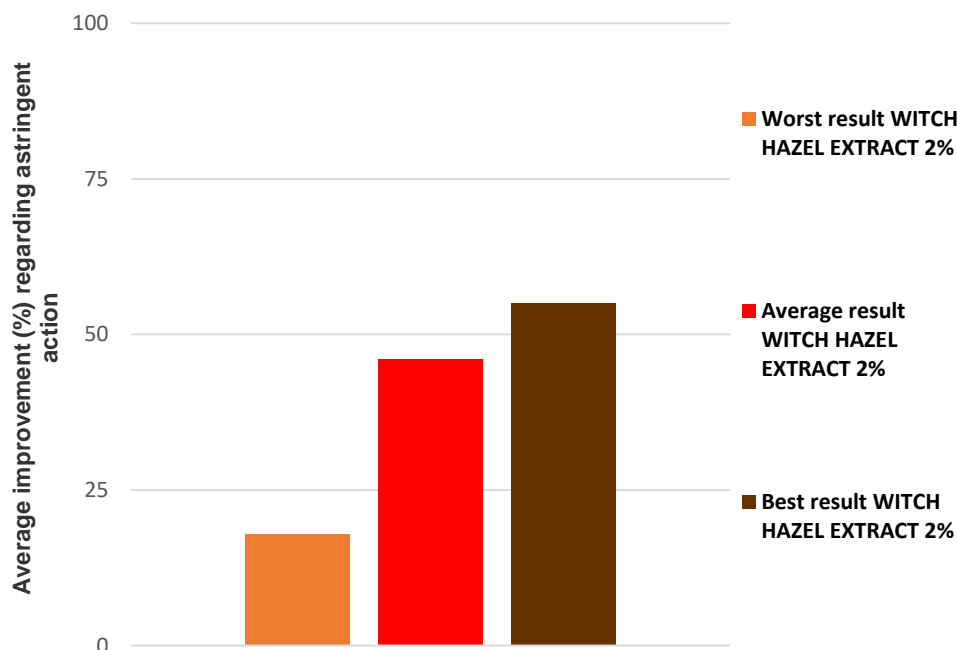
AS rank between 4 – 5: Excellent cosmetic result.



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### WITCH HAZEL EXTRACT 2%



#### Results:

Worst result WITCH HAZEL EXTRACT 2%: 18%.  
Average result WITCH HAZEL EXTRACT 2%: 46%.  
Best result WITCH HAZEL EXTRACT 2%: 55%.

#### Results meaning:

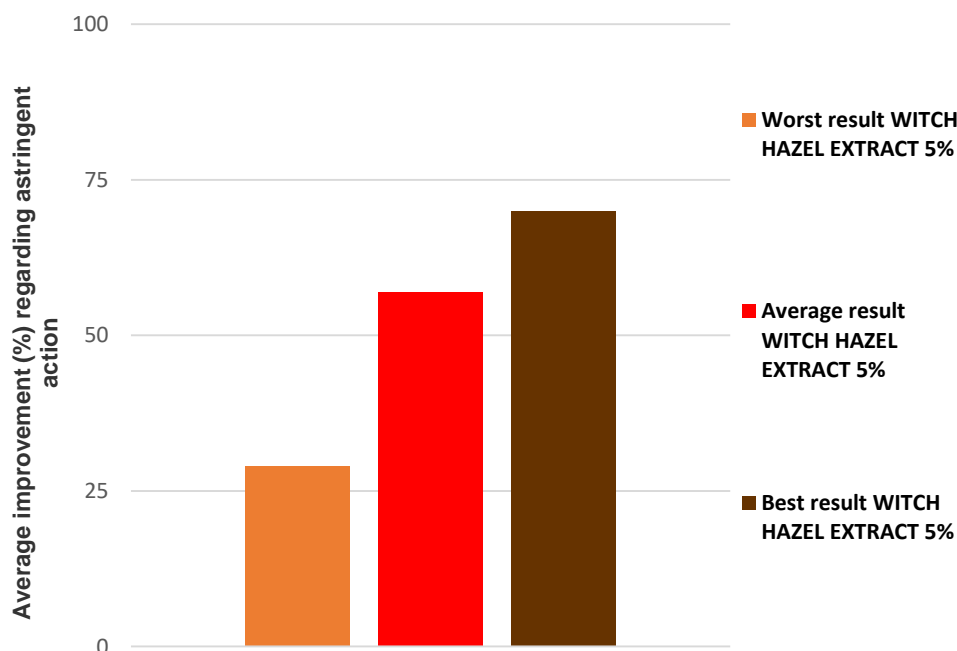
AI rank between < 20%: No significant changes.  
AI rank between 21 – 40%: Slight improvement regarding placebo.  
AI rank between 41 – 60%: Appreciable improvement regarding placebo.  
AI rank between 61 – 80%: Great improvement regarding placebo.  
AI rank between > 81%: Excellent cosmetic result.



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### WITCH HAZEL EXTRACT 5%



#### Results:

Worst result WITCH HAZEL EXTRACT 5%: 29%.

Average result WITCH HAZEL EXTRACT 5%: 57%.

Best result WITCH HAZEL EXTRACT 5%: 70%.

#### Results meaning:

AI rank between < 20%: No significant changes.

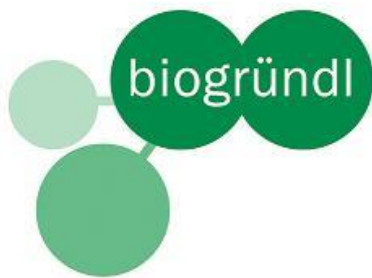
AI rank between 21 – 40%: Slight improvement regarding placebo.

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.

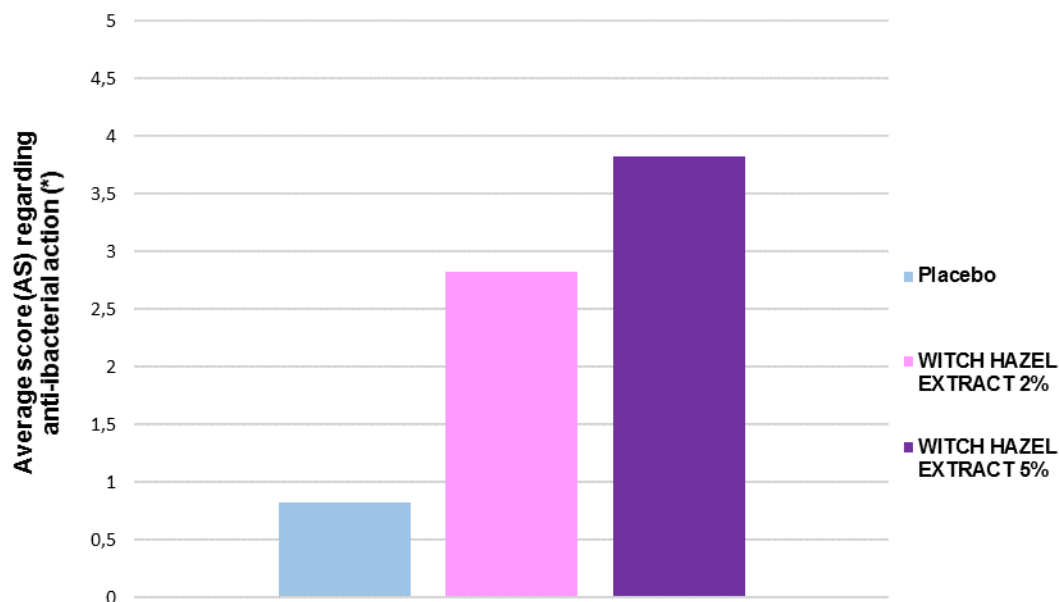




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### SKIN CONDITION EVALUATION AFTER 30 DAYS



(\*) Anti-bacterial action was measured by microbial count of microbiological seeding in appropriate specific medium, from volunteers skin sample.

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% WITCH HAZEL EXTRACT by BIOGRÜNDL, S.L., 5% WITCH HAZEL EXTRACT by BIOGRÜNDL, S.L..

#### Results meaning:

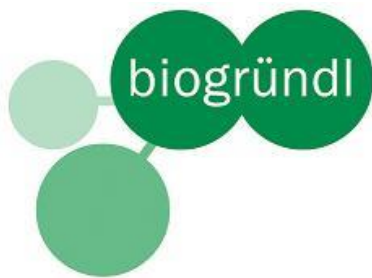
AS rank between 0 – 1: No significant changes.

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.

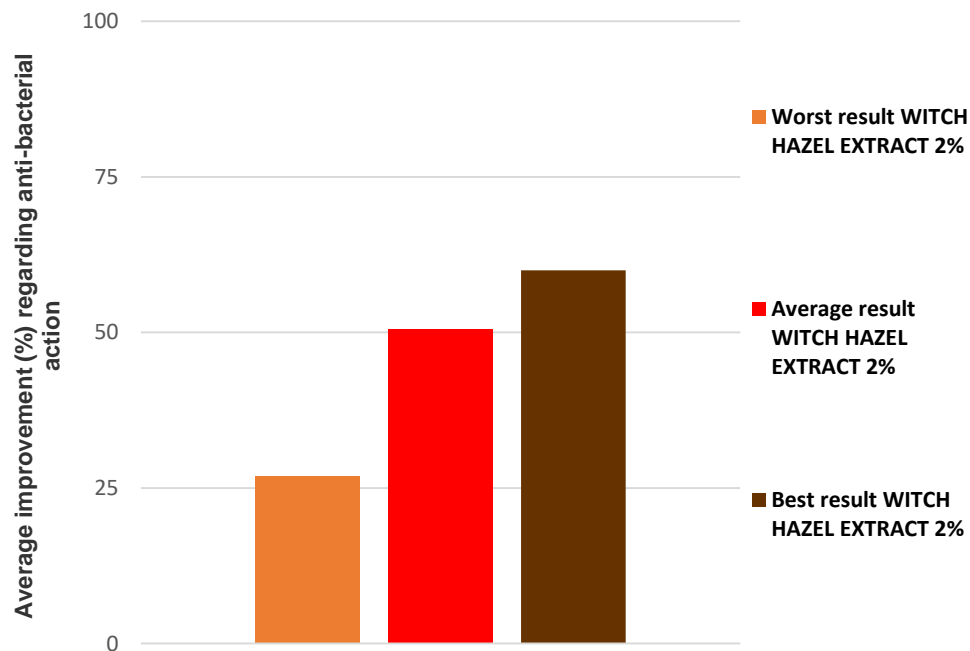
AS rank between 4 – 5: Excellent cosmetic result.



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## TECHNICAL DATA SHEET

### WITCH HAZEL EXTRACT 2%

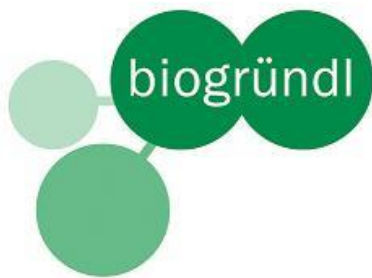


#### Results:

Worst result WITCH HAZEL EXTRACT 2%: 27%.  
Average result WITCH HAZEL EXTRACT 2%: 50,5%.  
Best result WITCH HAZEL EXTRACT 2%: 60%.

#### Results meaning:

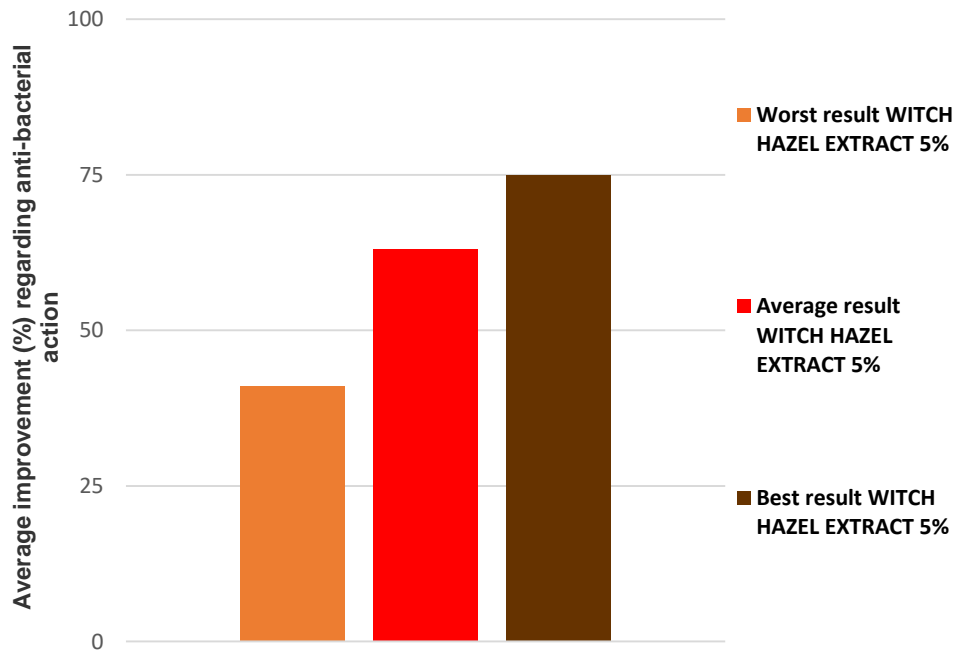
AI rank between < 20%: No significant changes.  
AI rank between 21 – 40%: Slight improvement regarding placebo.  
AI rank between 41 – 60%: Appreciable improvement regarding placebo.  
AI rank between 61 – 80%: Great improvement regarding placebo.  
AI rank between > 81%: Excellent cosmetic result.



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### WITCH HAZEL EXTRACT 5%



#### Results:

Worst result WITCH HAZEL EXTRACT 5%: 41%.

Average result WITCH HAZEL EXTRACT 5%: 63%.

Best result WITCH HAZEL EXTRACT 5%: 75%.

#### 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.