

The logo for Special Chemicals features the word "Special" in a large, white, sans-serif font above the word "Chemicals" in a smaller, white, sans-serif font. To the left of the text is a stylized white icon consisting of a central circle with four curved lines extending outwards, resembling a flower or a molecular structure.

Special
Chemicals

SCH Special Hydrant

Actives for the skin

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01

Introduction



01

Introduction

SCH Special Hydrant is the most advanced combination of multifunctional ingredients with important benefits to guarantee an extreme level of hydration to the skin and/or hair.

- Filmogen - PH regulating.
- Moisturising - filmogenic.
- Deep moisturising and repairing.
- Skin and hair conditioner.
- Anti-pollution - environmental stress - procollagen.

01

Composition

- Polyglutamic acid (γ -pga)
- Hyaluronic acid hmw & mmw
- Hyaluronic acid lmw
- Trehalose
- Sodium pca



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Filmogen - PH regulator -
Texturising repairer



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Filmogen - PH regulator -
Texturising repairer



Moisturiser - Filmogen -
Redensifier



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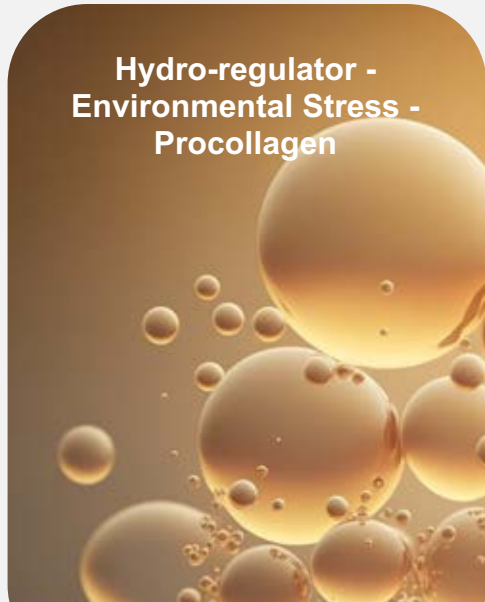
Filmogen - PH regulator -
Texturising repairer



Humectante - Filmógeno -
Redensificador



Hydro-regulator -
Environmental Stress -
Procollagen



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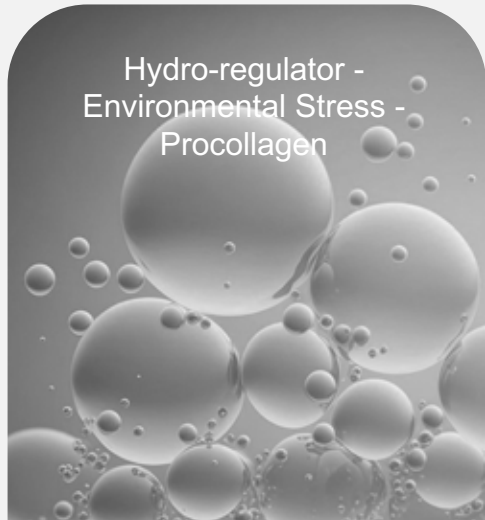
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Texturising repairer



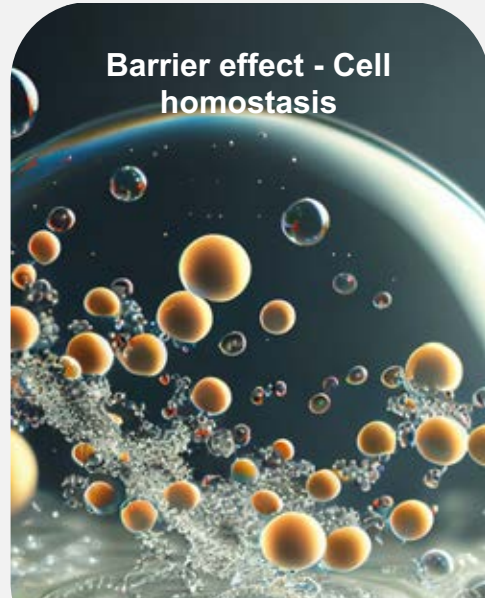
Humectante - Filmógeno -
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Hydro-regulator -
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Barrier effect - Cell
homostasis



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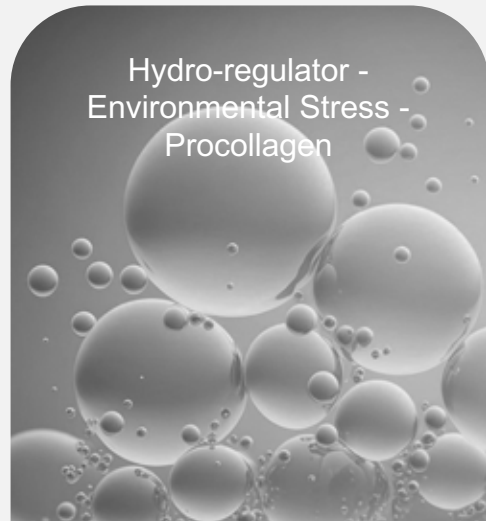
Filmogen - PH regulator -
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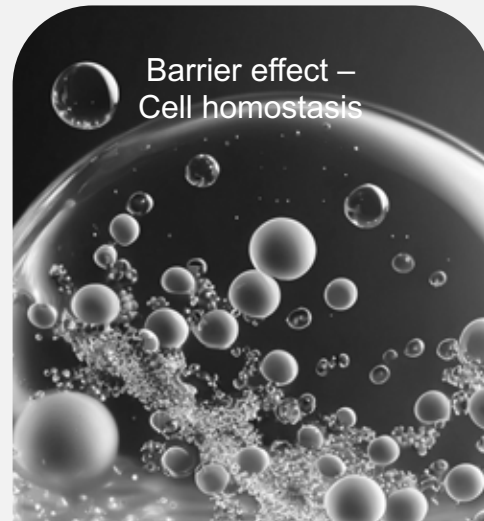
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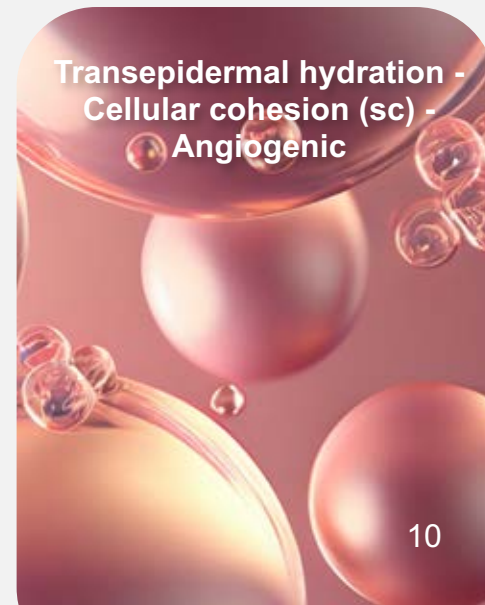
Hydro-regulator -
Environmental Stress -
Procollagen



Barrier effect -
Cell homostasis



Transepidermal hydration -
Cellular cohesion (sc) -
Angiogenic



02

Ingredients



02 Ingredients

1. Polyglutamic acid (γ -PGA)

Moisturising / Barrier effect / Cellular homeostasis

- It forms a **flexible, soft and hygroscopic 3D** cross-linked film on the skin, capable of retaining 10000 times its weight in water.
- Substantially reduces **transepidermal water loss** (TEWL).
- Increases the production of **essential natural moisturising factor (NMF)** constituents such as Pyrrolidone Carboxylic Acid (PCA), Lactic Acid and Urocanic Acid.
- In combination with Hyaluronic Acid, it **synergistically reinforces the barrier effect of the skin by exhibiting anti-hyaluronidase activity**, which prevents its degradation in the stratum corneum.
- It exhibits cytoprotective properties by stimulating TGF- β growth factors and **neutralising environmental xenobiotics** (heavy metals) by chelation. Its proven bacteriostatic effect in turn contributes to preserving the eubiotic balance of the cutaneous **microbiota**, inhibiting the proliferation of P. Acnes and S. Aureus.





02 Ingredients

2. Hyaluronic acid HMW&MMW

Moisturiser / Filmogen / Re-densifier

Hyaluronic acid HMW **high molecular weight** (MW: >1000 KD) and MMW **medium molecular weight** (MW: 10-500 KD) is a linear, non-sulphated biopolymer, a member of the family of polysaccharides containing amino sugars called glycosaminoglycans (GAGs). It is one of the main **constituents of various tissues and body fluids**, half of them in the skin (200 mg/L).

Thanks to its **exceptional visco-elastic and hygroscopic properties** (x 4000), dependent on its size and spatial conformation, it ensures optimal water regulation of the skin through its film-forming effect **and a powerful anti-radical action. At the same time, it** re-densifies and improves the skin's micro-relief by mechanical effect, increasing its tone and elasticity.

02 Ingredients

3. Hyaluronic Acid LMW

Transepidermal hydration / Cell cohesion (sc) /
Angiogenic

Unstructured or low molecular weight hyaluronic acid (MW:15-150 KD) is obtained by biotechnology from a natural substrate, wheat.

It has the ability to permeate the stratum corneum, reaching the dermo-epidermal matrix, and plays a relevant role in multiple cellular mechanisms of the epidermis. In the extracellular matrix of the connective tissue, **its main property is to preserve hydration and prevent transepidermal water loss (TEWL)** thanks to its great capacity to retain water and maintain hydrostatic equilibrium. It is essential in epithelialisation processes, influencing numerous mechanisms of cell **migration, proliferation and differentiation**.

It stimulates the expression of ZO1 and occludin proteins, constituents of T-junctions, **improving cell cohesion and the barrier function of the stratum corneum**. Its angiogenic properties also make it a potent stimulator of blood vessel growth.



02 Ingredients

4. Trehalosa

Hydro regulator / Environmental stress /
Procollagen

Trehalose is a **natural disaccharide made up of two D-glucose units**. In aqueous media, it is considered a "kosmotrope" as it increases the cohesion and structural symmetry of the crystalline network of water molecules by osmosis. As an active moisturiser, **trehalose helps to preserve the hydrolipidic film and permeation channels** in situations of heat stress, dehydration and sun exposure, preventing the degradation of cementitious lipids and amino acids of the skin's natural moisturising factor (MNF). It also **reduces inflammatory processes mediated by environmental stress** by inhibiting NF- κ B.

In combination with polyglutamic acid and hyaluronic acid, **trehalose synergistically increases the barrier function of the stratum corneum by electrostatic interactions** with its various constituents. Trehalose prevents **oxidative stress** and skin photoaging by inhibiting UVB-induced expression of proteases (MMP-1, -3 and -9). It also promotes **keratinocyte autophagy** and **procollagen I production** through the activation of the growth factor FTG- β /Smad pathway.



02 Ingredients

5. Sodium PCA

Filmogen / PH regulator / Repairer

Sodium PCA is the **sodium salt of pyrrolidone carboxylic acid**, a key peptide constituent of the natural moisturising factor (12%) and thus of the stratum corneum (2%). With a marked hygroscopic character (x 250) and in combination with the electrolyte sodium, **PCA increases the surface hydration or "sealing effect"** of the skin mediated by aquaporins (AQPs).

Its PH regulating and compensatory nature of the aggressions caused by daily hygiene and cleansing surfactants makes it a first class **eubiotic and eudermic agent**. It also has sebum-regulating and anti-inflammatory properties.



03

Hydration Kinetics Test



520 ml
3.3 ORB

03 Hydration Kinetics Test

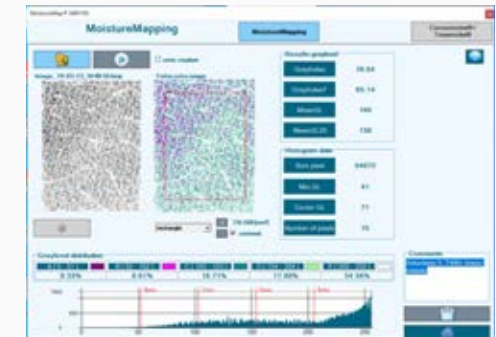
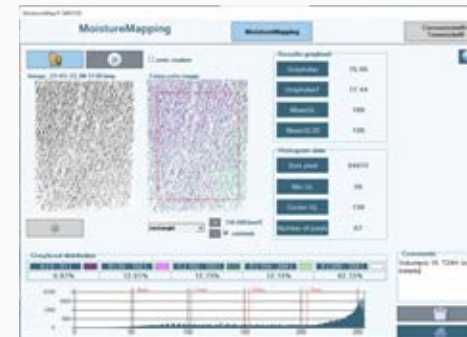
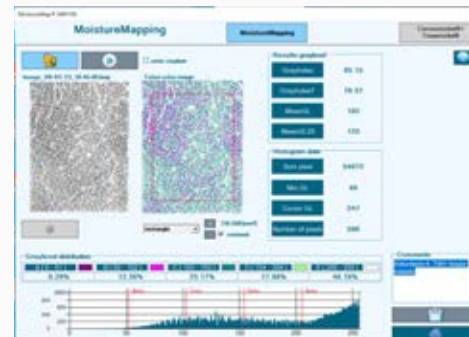
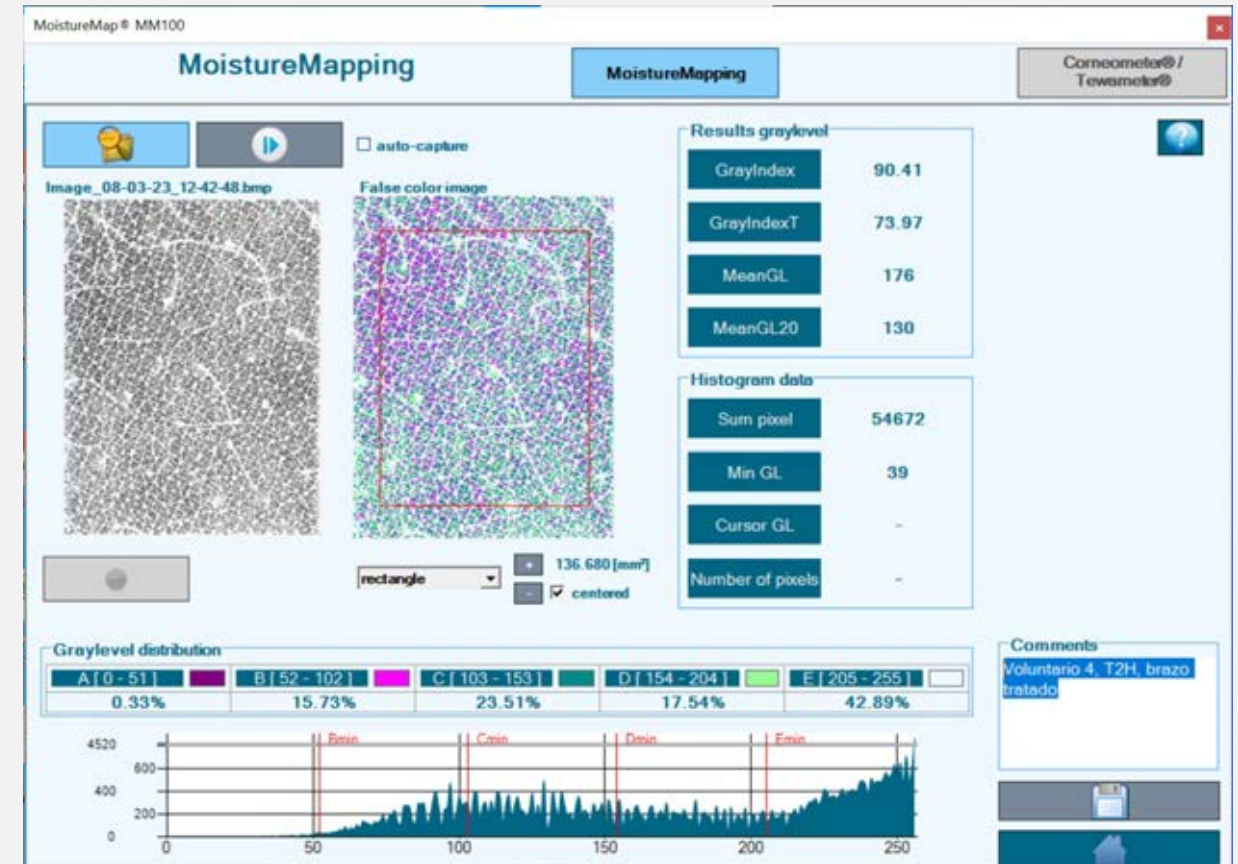
Objective & principle of the study:

This study aimed to determine the moisturising efficacy of a **cosmetic active ingredient**, after a single application, at different measurement times.

The product is a moisturising cream.

To measure the moisturising efficacy of the product, the following **skin biometric measurements** were carried out:

- **Moisturising efficacy:** Moisture Map MM 100 device:
Measurement at initial time, at 2 hours, at 6 hours, at 24 hours and at 48 hours after application.



03 Hydration Kinetics Test

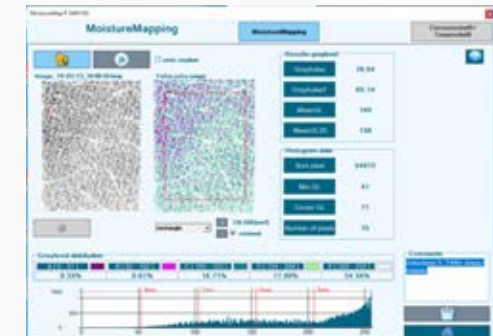
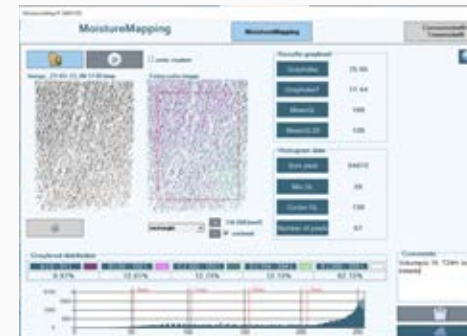
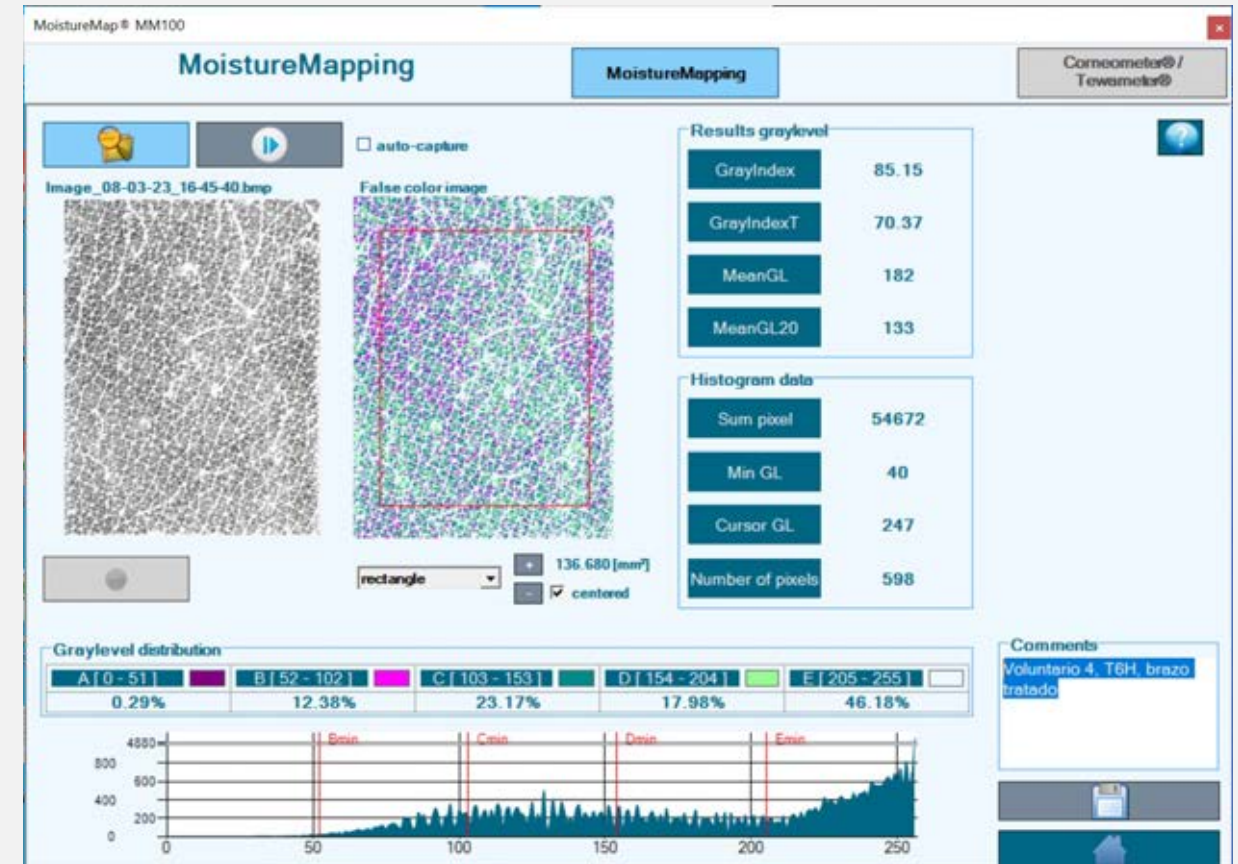
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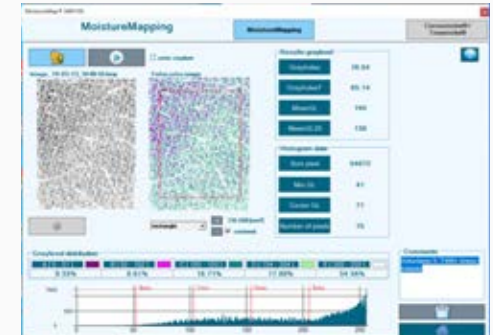
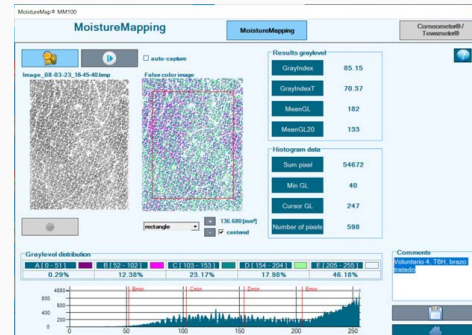
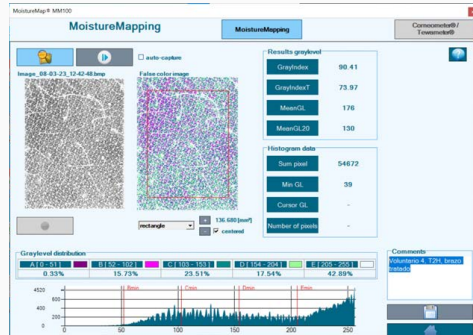
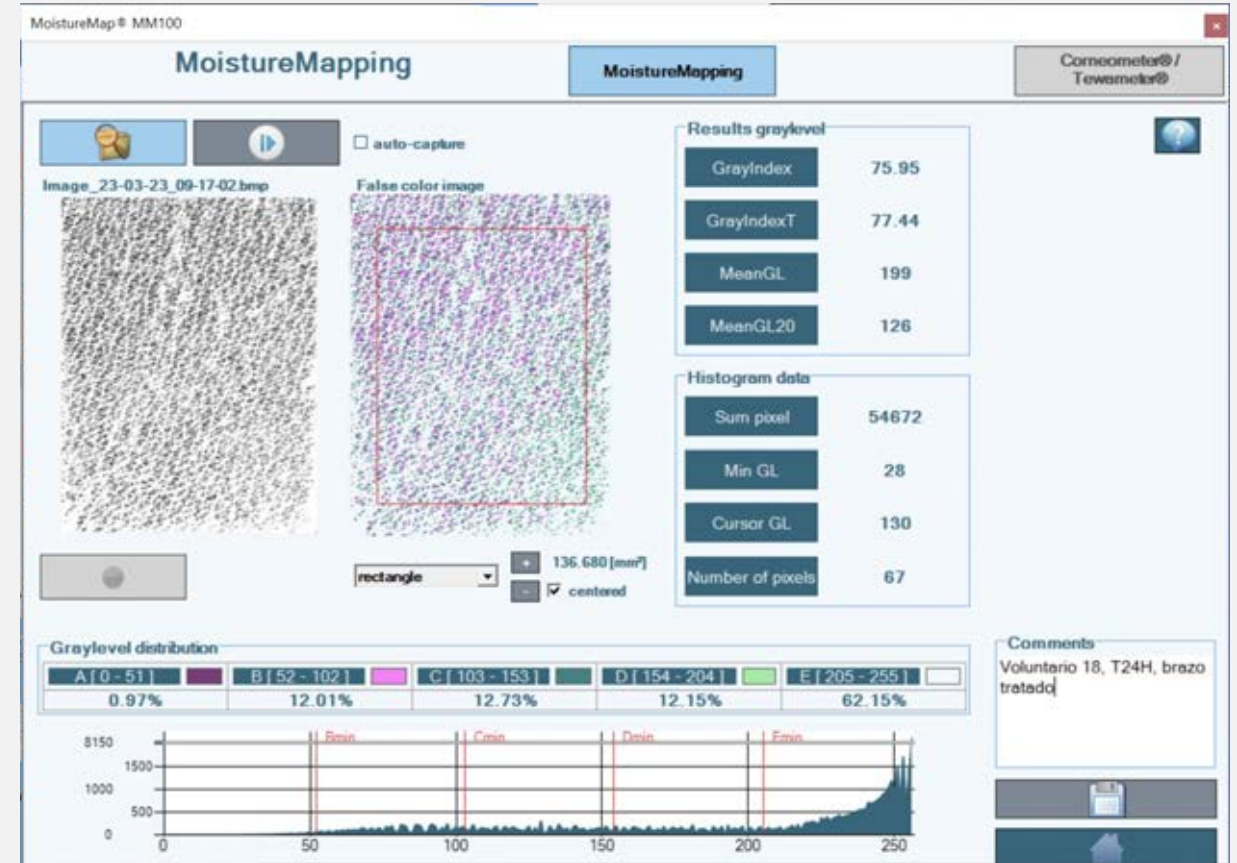
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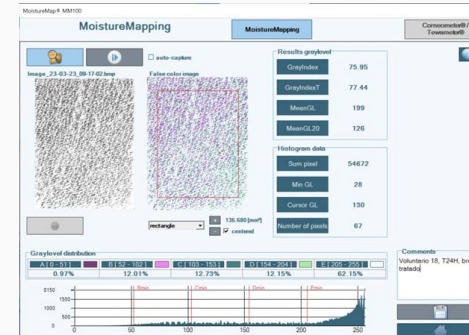
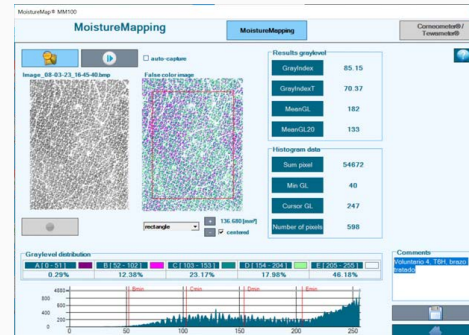
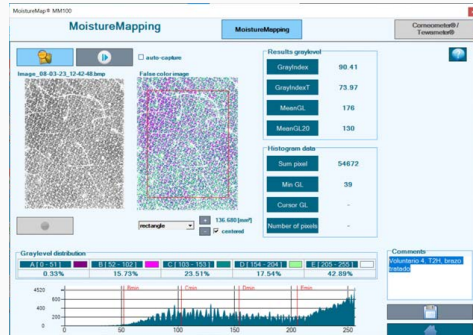
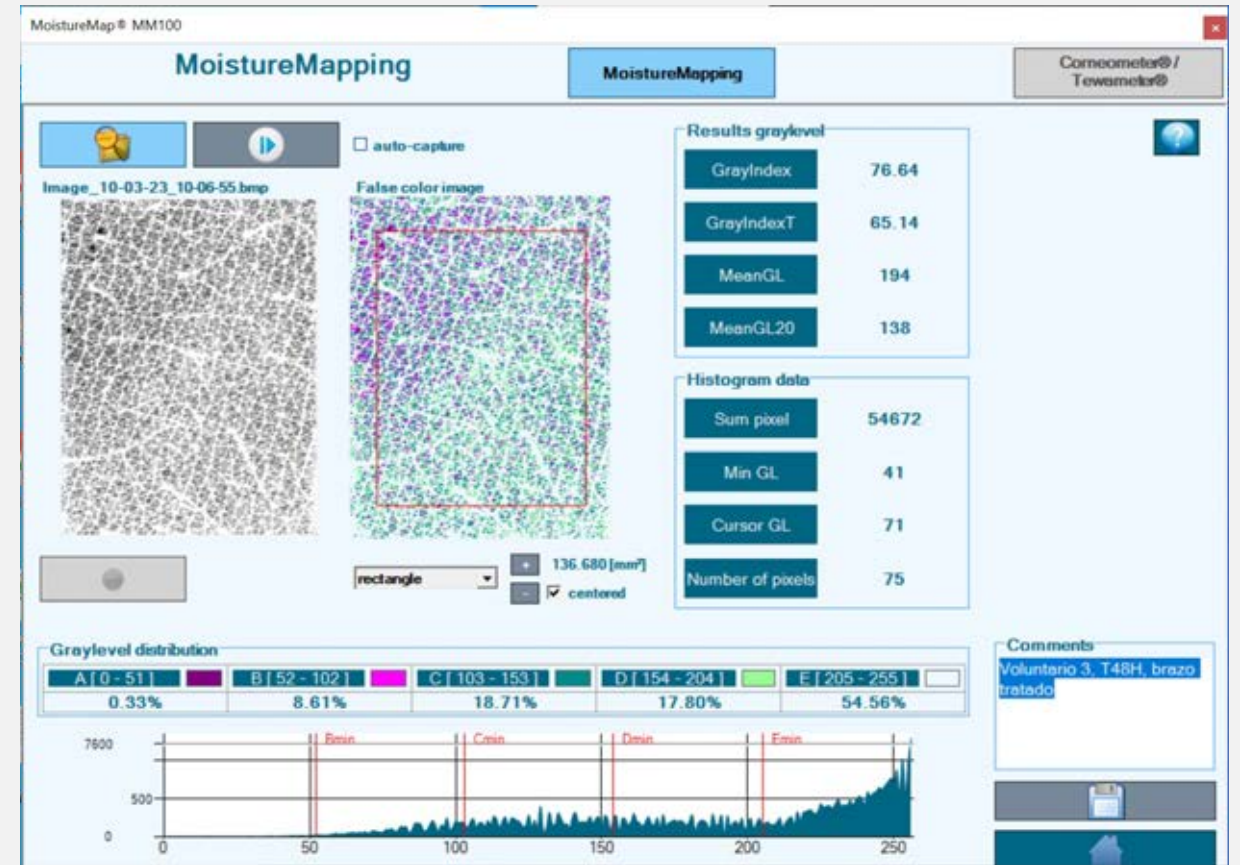
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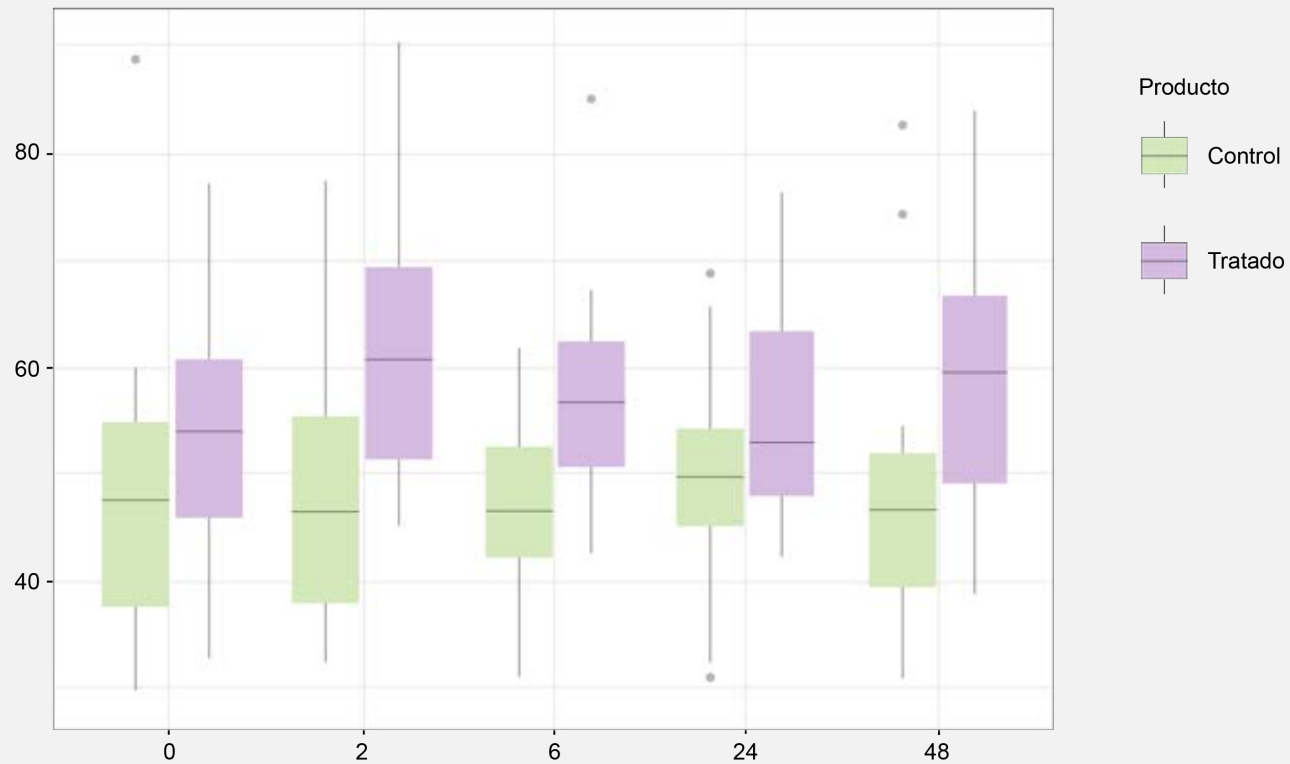


Figure 3. Mean parameter results \pm standard error at different experimental times.



03 Hydration Kinetics Test

Conclusion

The objective of the study was to determine **the efficacy in hydration of the product ACTIVO HIDRATANTE, Reference 001**, by means of biometric measurements in 22 volunteers 2, 6, 12 and 48 hours after the use of the product.

Under the experimental conditions adopted and considering the defined experimental parameters, we can conclude:

2h after product application

hydration in the treated area is increased by **29%**

6h after product application

hydration in the treated area is increased by **21%**

24h after product application

hydration in the treated area is increased by **14%**

48h after product application

hydration in the treated area is increased by **23%**

04

Moisturising Cream Formulation



04 Moisturising cream formulation

Ingredient	Inci	%	Phase
Water	Water	66,8	A
Zemea	Propanediol	3	A
Lecigel	Sodium polyacrylate Lecithin	0.5	B
Neossance	Squalane	5	B
Myritol 318	Caprylic/Capric Triglyceride	5	B
Cupuacu Butter	Theobroma Grandiflorum seed butter	2	B
Phytocream 2000	Potassium palmitoyl hydrolyzed wheat protein, Cetearyl alcohol, Glyceryl Stearate	5	B
Vitamin E	Tocopheryl acetate	0.5	B
Dermosoft OM	Methylpropanediol, Caprylyl glycol	2	C
SCH Special Hydratant	Water, Trehalose, Sodium PCA, Sodium hyaluronate, sodium polyglutamate, Methylpropanediol, Caprylyl glycol	10 0.2	C
Perfume	Perfume	0.2	C

METHOD OF MANUFACTURE

- **Mix** the ingredients of **phase A** and heat to between 60-65 degrees.
- **Mix** the ingredients of **phase B** and heat to 60-65 degrees.
- **Add phase B on top of phase A and homogenise** with turrax until an emulsion is formed.
- **Cool and below 40 degrees** add phase C with stirring.

04 Moisturising serum formulation

Ingredient	Inci	%	Phase
Water	Aqua	71.6	A
Gliceryn	Glycerin	5	A
Siligel	Xanthan gum, 70 71.6 5 1 Lecithin, Sclerotium gum, Pullulan, Silica	1	A
Dermosoft OM	Methylpropanediol, 2 Caprylyl glycol	2	A
SCH Special Hydrant	Aqua, Trehalose, 20 Sodium PCA, Sodium hyaluronate, sodium polyglutamate, Methylpropanediol, Caprylyl glycol	20	A
Perfume	Parfum	0,4	A

METHOD OF PRODUCTION

Mix all the ingredients and homogenise with turrax until the serum is formed.

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