

raízes
do futuro



AlphaShield

Natural technology for regulating the
skin microbiome

www.citroleogroup.com



AlphaShield: the plus your skin microbiome needs!



Active ingredient that **modulates skin microbiome** activity in acne-prone skin with proven efficacy.



AlphaShield is a **natural active** ingredient in an exclusive combination from CitroBio, with **multi-target action** against microorganisms that harm skin health.



Produced with CitroBio quality, AlphaShield is a safe, **biodegradable active ingredient** and a **natural successor** to synthetic active ingredients such as **Triclosan**.

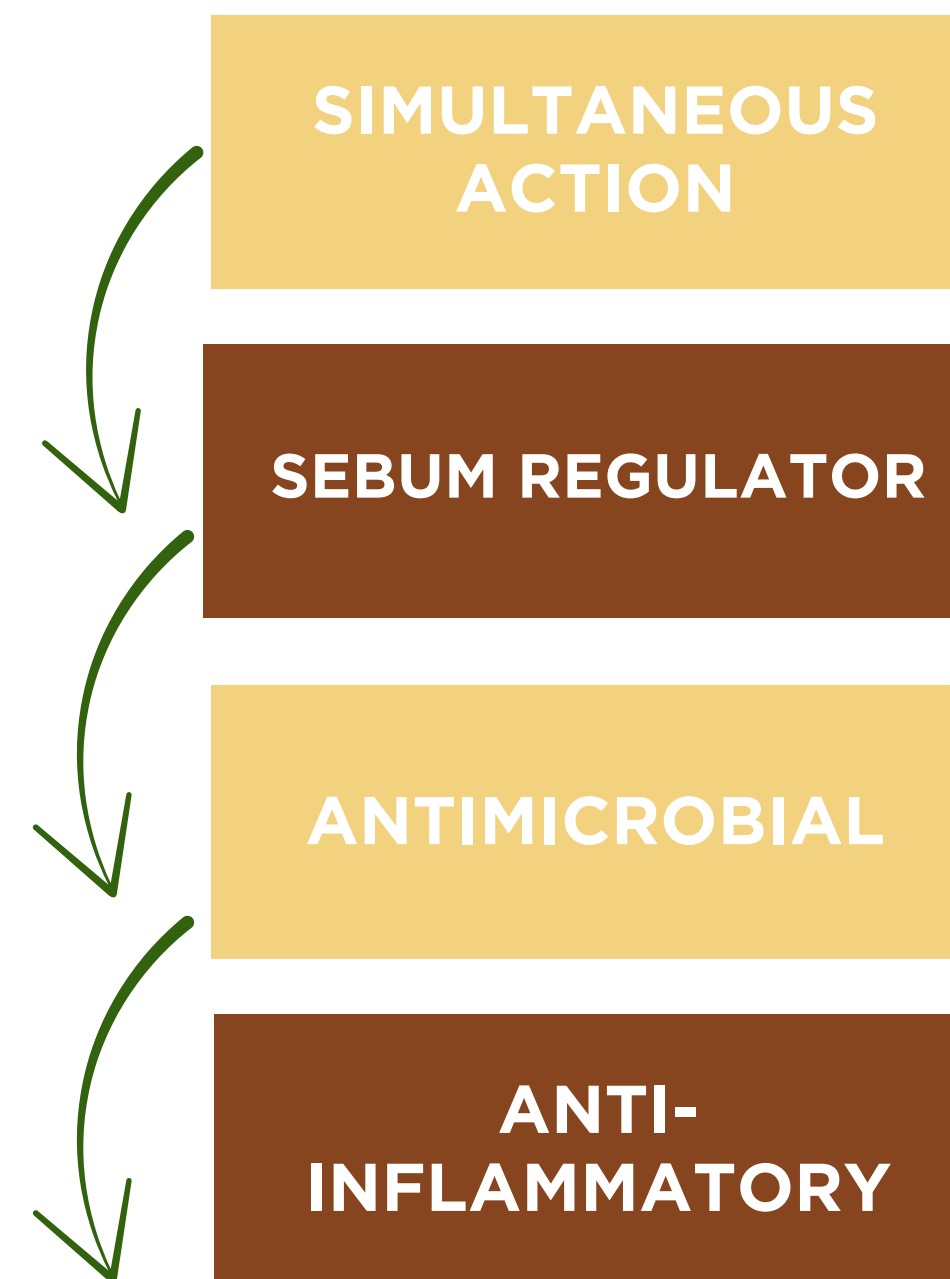


AlphaShield



AlphaShield is a non-comedogenic active ingredient that **reduces** microorganisms associated with skin **inflammation**, **preserving beneficial microbiota**.

With direct action on the **inflammatory cascade of acne**, AlphaShield is a new approach to **skin protection and health**.

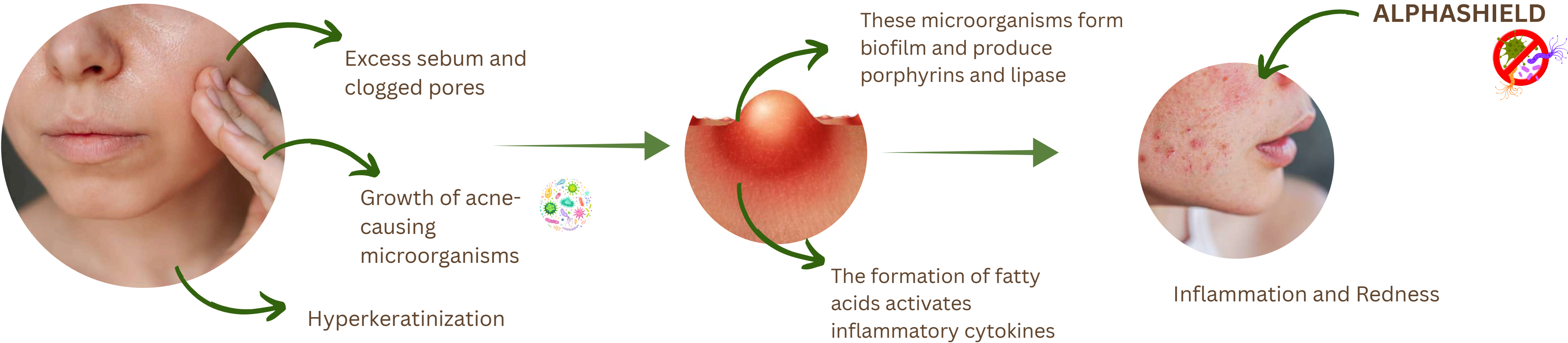


Mechanism of Action

AlphaShield



The acne cascade



Mechanism of Action

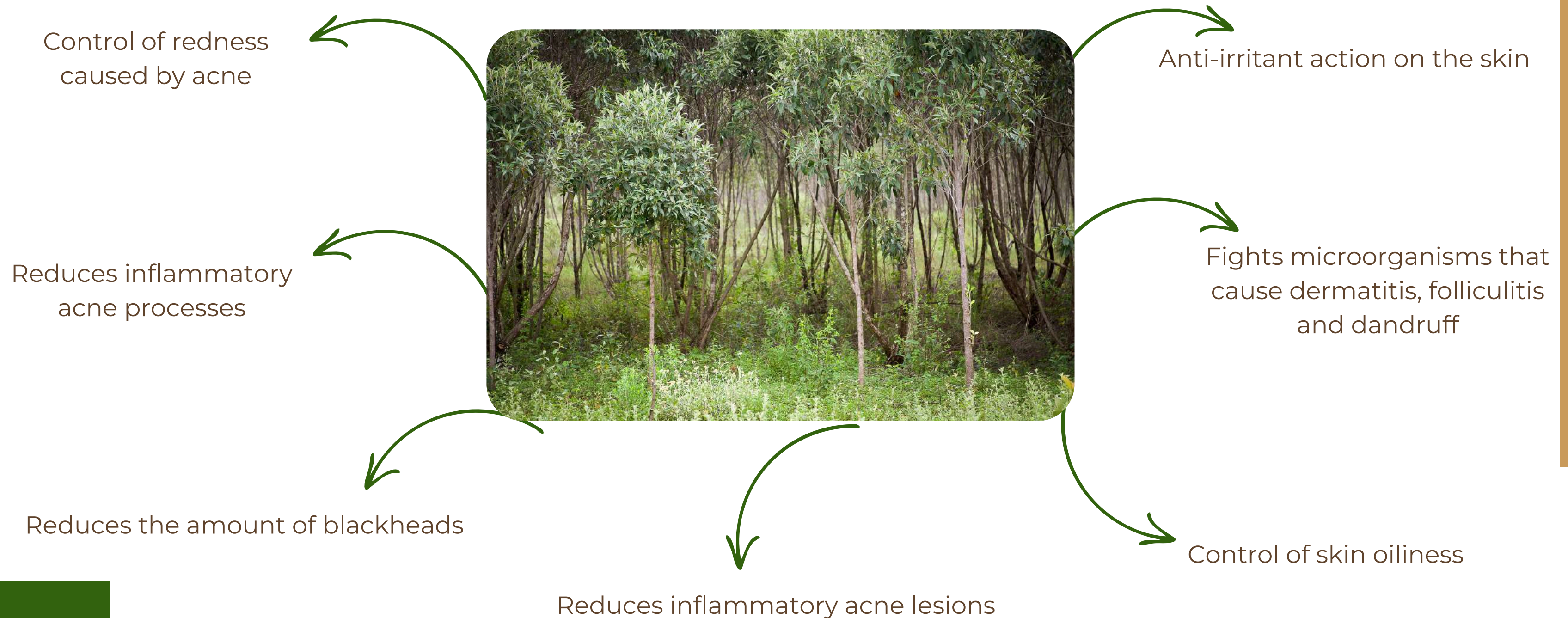
AlphaShield



- AlphaShield is fat-soluble, facilitating its permeation and interaction with the cell membranes of microorganisms, resulting in electrolyte imbalance.
- Generalized homeostatic imbalance makes it impossible for microorganisms to survive, reducing the microbial population.
- AlphaShield controls oiliness, creating cleaner follicles with less obstruction, and controlling the formation of acne and blackheads.

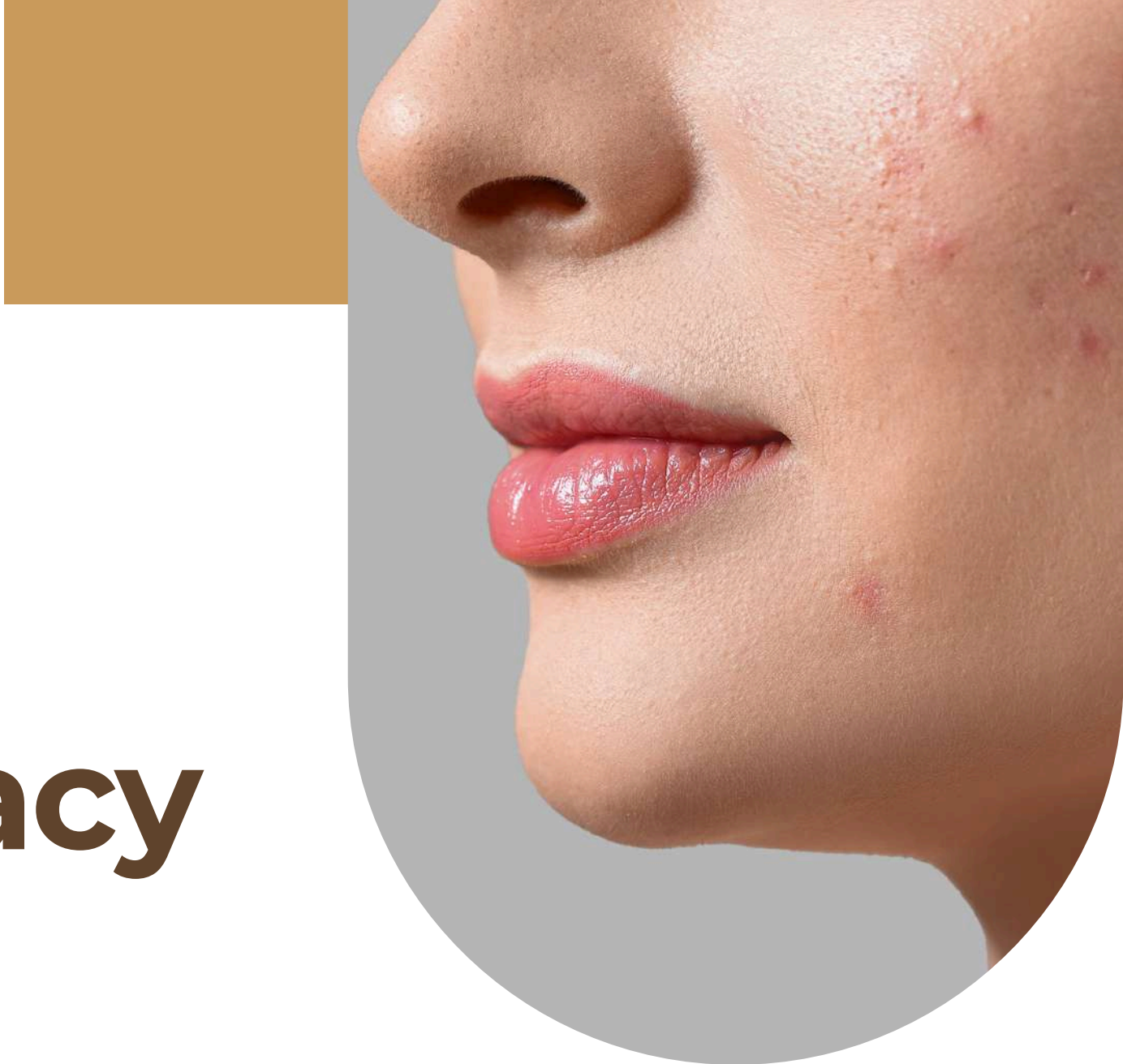


Benefits of AlphaShield



With Proven Effectiveness!





Clinical Efficacy Tests

Anti-Acne

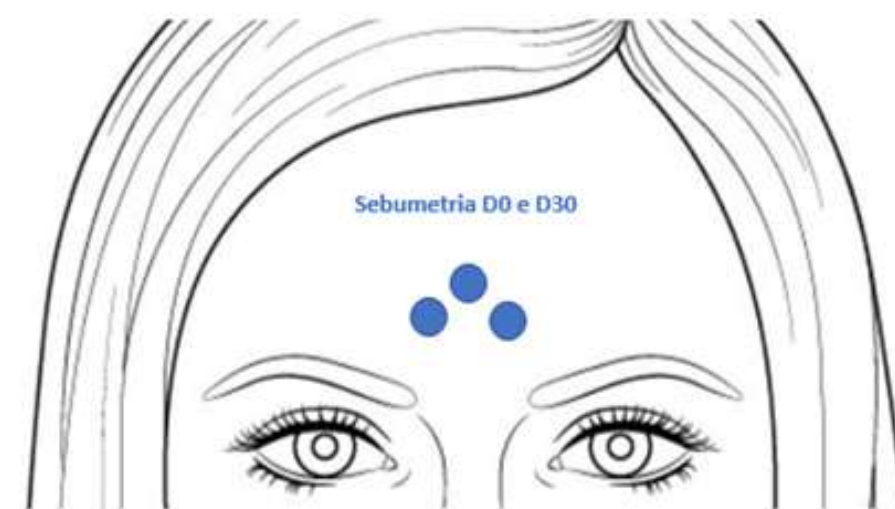


Evaluation of Instrumental Efficacy with the use of Sebumeter® for controlling skin oiliness



Metodology:

- Selection of 16 female participants between 18 to 35 years old with blackheads and moderate acne lesions
- Application of a night serum with **0.75% AlphaShield** for 30 days.
- Evaluation of instrumental efficacy on Days 0 and 30 with Sebumeter® equipment, in a standardized area.



Understanding the Technique - Sebumeter®



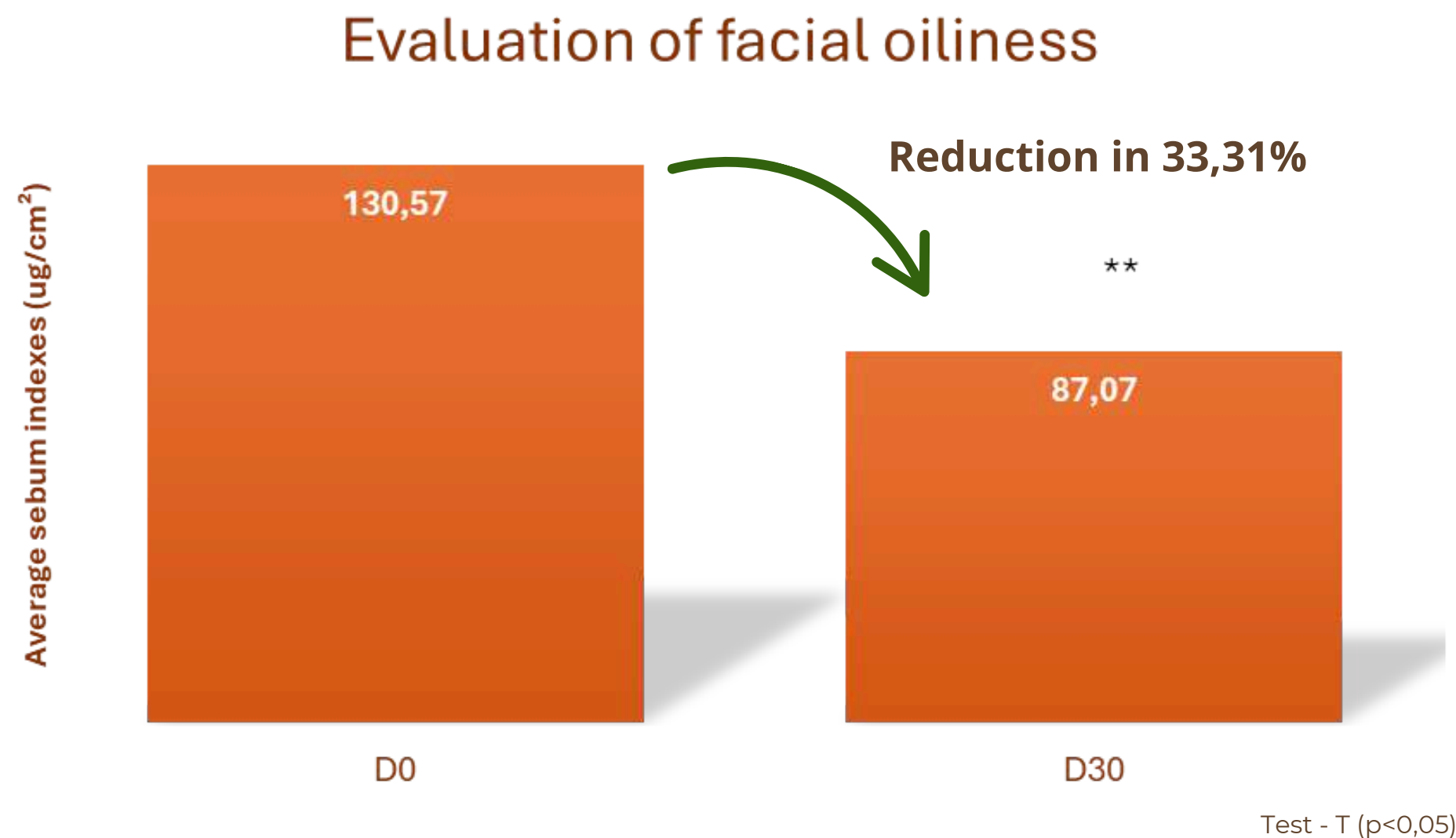
Equipment Sebumeter®

Sebumeter® is a photometric light transmission method that measures the amount of sebum (oil) present on the skin.

- The device has a plastic strip that is sensitive to oil.
- The strip comes into contact with the skin and absorbs the oil, becoming transparent.
- The device has a probe that takes a photometric reading of this strip, indicating the amount of sebum present on the skin.

Evaluation of Instrumental Efficacy with the use of Sebumeter® for controlling skin oiliness

Measurements were taken in triplicate using the Sebumeter®, on D0 and D30.



AlphaShield reduced skin oiliness by **33.31%** after 30 days of use.

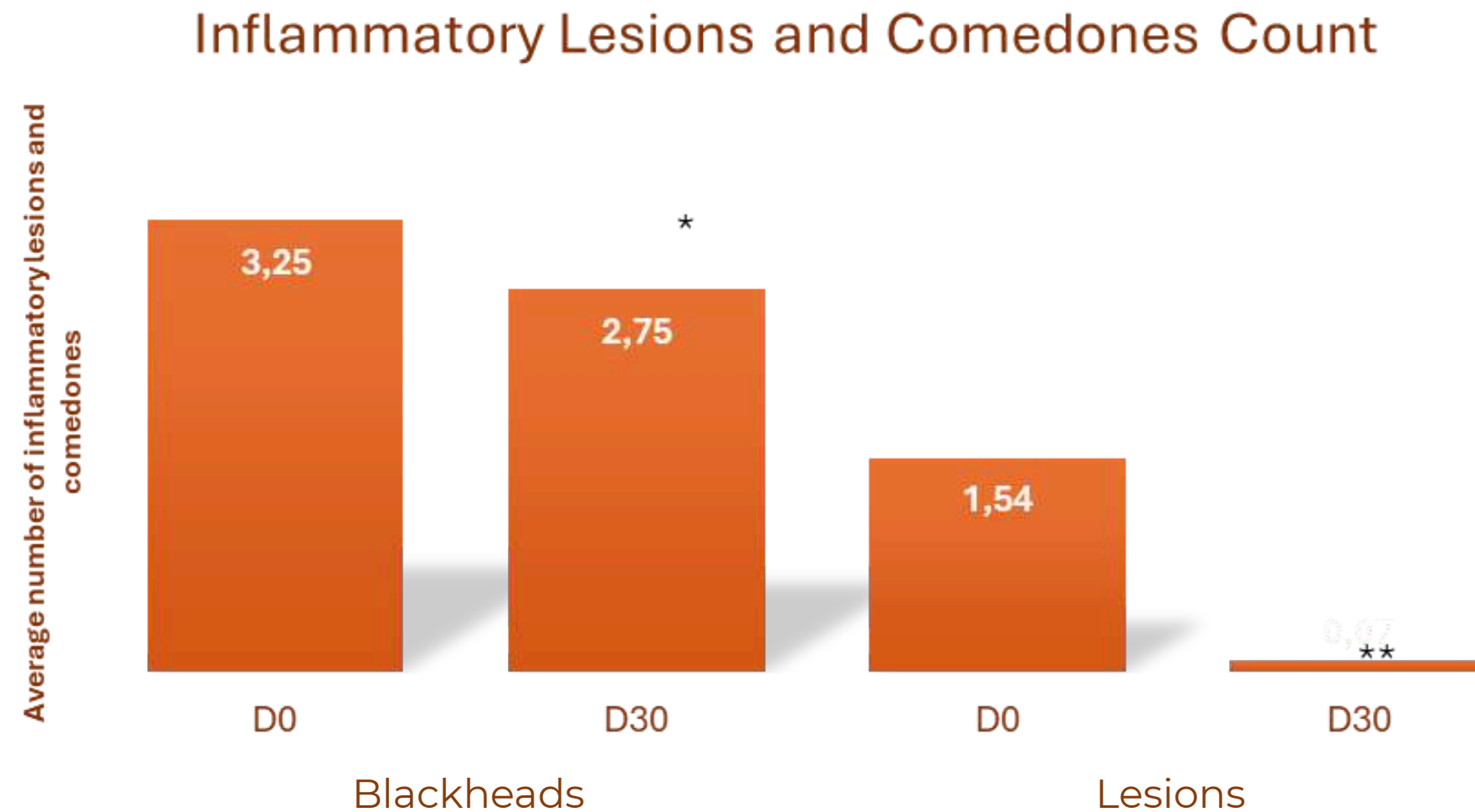
Comedogenicity and Acnegenicity Evaluation



Metodology:

- Selection of 16 female participants between 18 to 35 years old who presented with blackheads and moderate acne lesions.
- Application of a night serum with **0.75% AlphaShield** for 30 days.
- Counting of the number of inflammatory lesions and blackheads present in the frontal area and left hemiface on Days 0 and 30.

Comedogenicity and Acnegenicity Evaluation



Test Wilcoxon - ($p < 0,05$)

AlphaShield reduced **95.45% of inflammatory lesions** and **15.4% of blackheads** after 30 days of use.

AlphaShield reduces microorganisms* associated with inflammation, reducing lesions

Evaluation of Acne Lesions/Red Spots by Visia®



Metodology:

- Selection of 16 female participants between 18 and 35 years old who presented with blackheads and moderate acne lesions.
- Application of a drying serum with **0.75% AlphaShield** for 30 days.
- Images were taken with Visia equipment on Days 0 and 30, and later analyzed with Image Pro Plus software to evaluate the lesions and red spots caused by acne.

Understanding the Technique - Visia®

Visia® is a device that takes photos of the face from different angles and under various lighting conditions for a detailed skin assessment.

- Image processing analyzes and identifies skin characteristics.

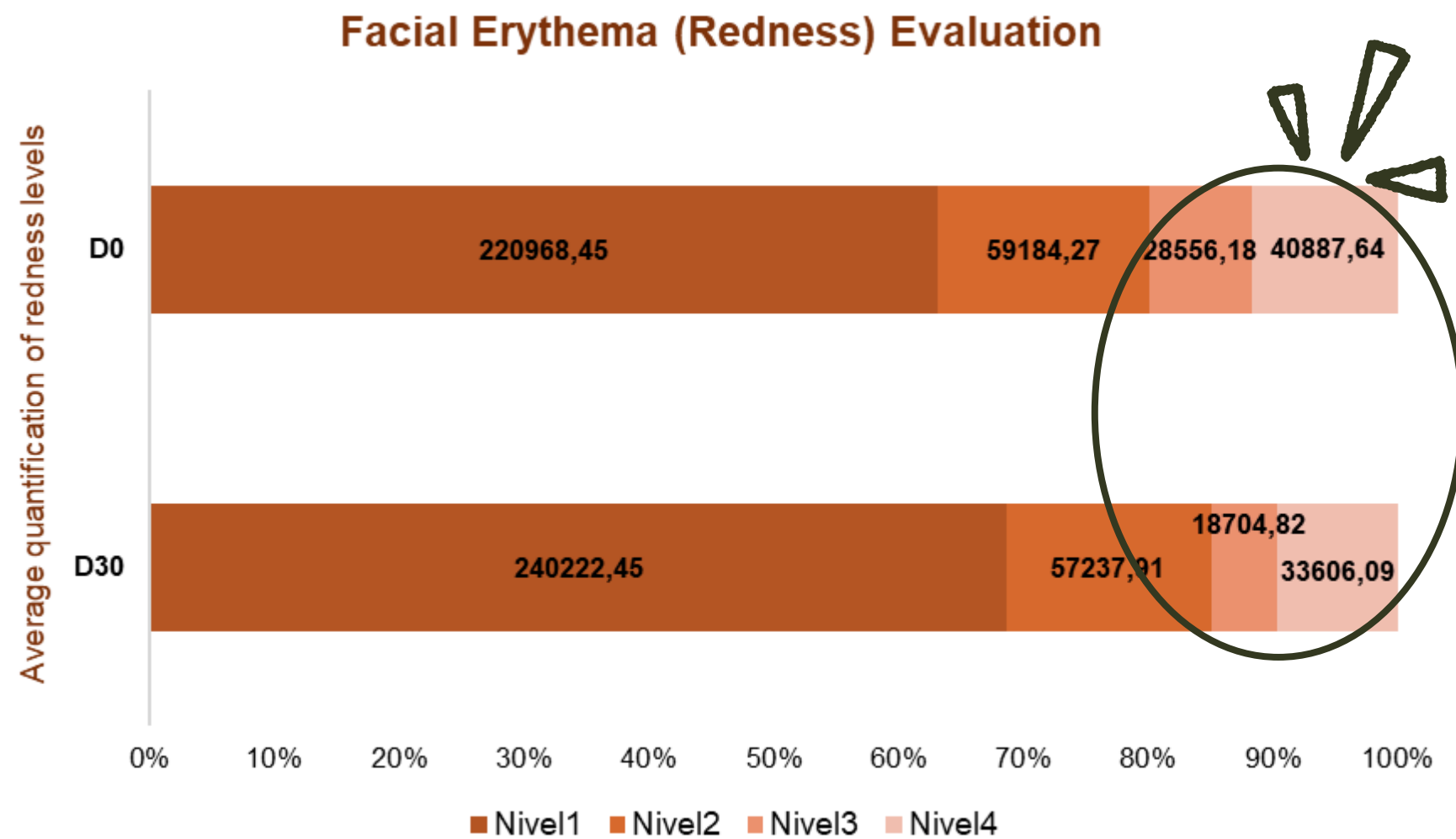
Image Pro Plus software evaluated skin **redness** into **four levels**:

- Level 1: mild redness, slightly above average skin color.
- Level 2: moderate redness, generally associated with lighter-colored lesions.
- Level 3: severe redness, associated with lesions of intermediate intensity.
- Level 4: intense redness, indicative of deeper or more severe lesions.



Equipment Visia®

Evaluation of Acne Lesions / Red Spots by Visia®



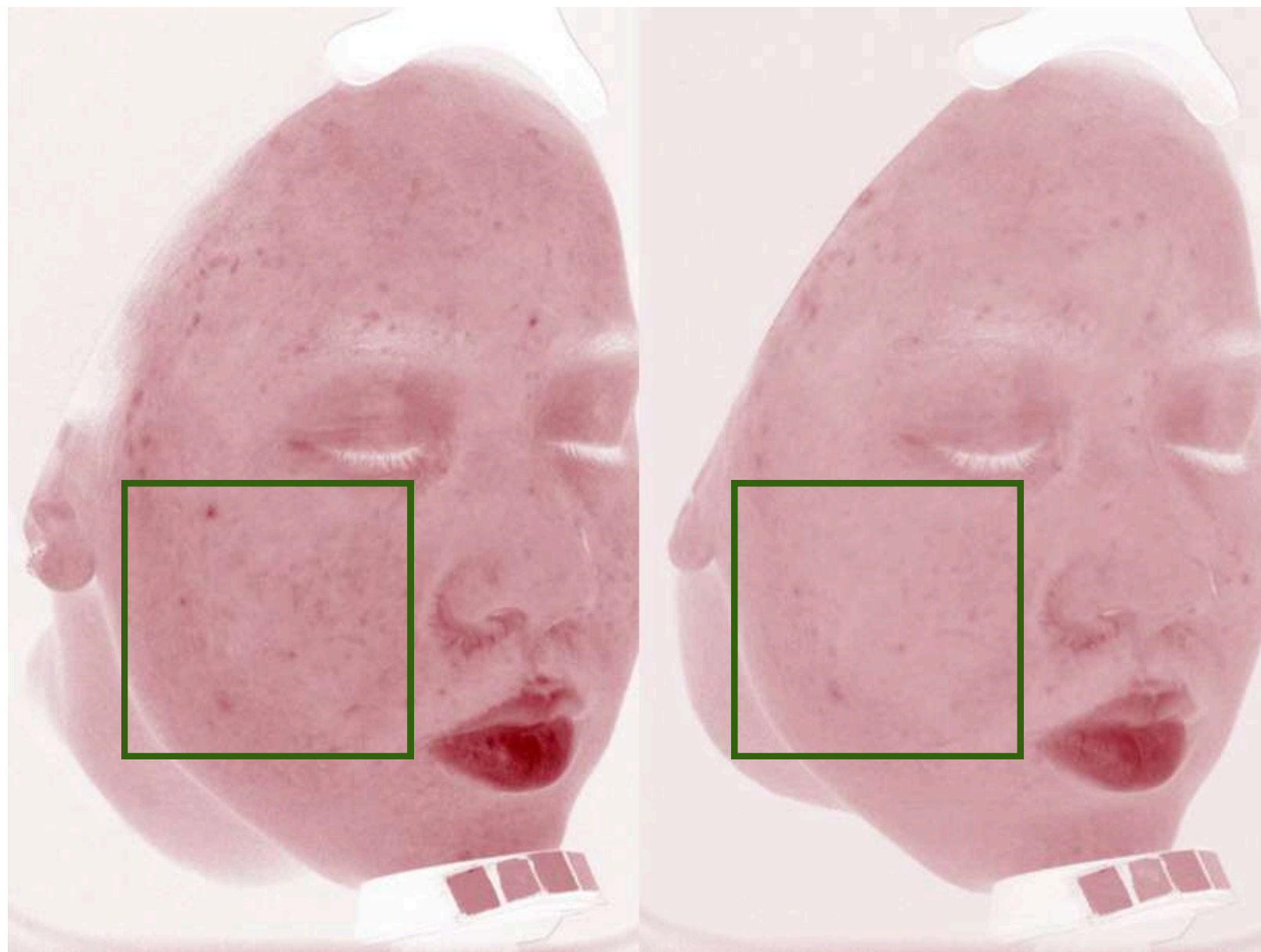
Test Wilcoxon - ($p < 0,05$)

AlphaShield demonstrated a statistically significant **reduction in erythema** for levels **NP3** and **NP4** after 30 days.

- **Level 3:** AlphaShield reduced erythema by **34.5%**
- **Level 4:** AlphaShield reduced erythema by **17.8%**

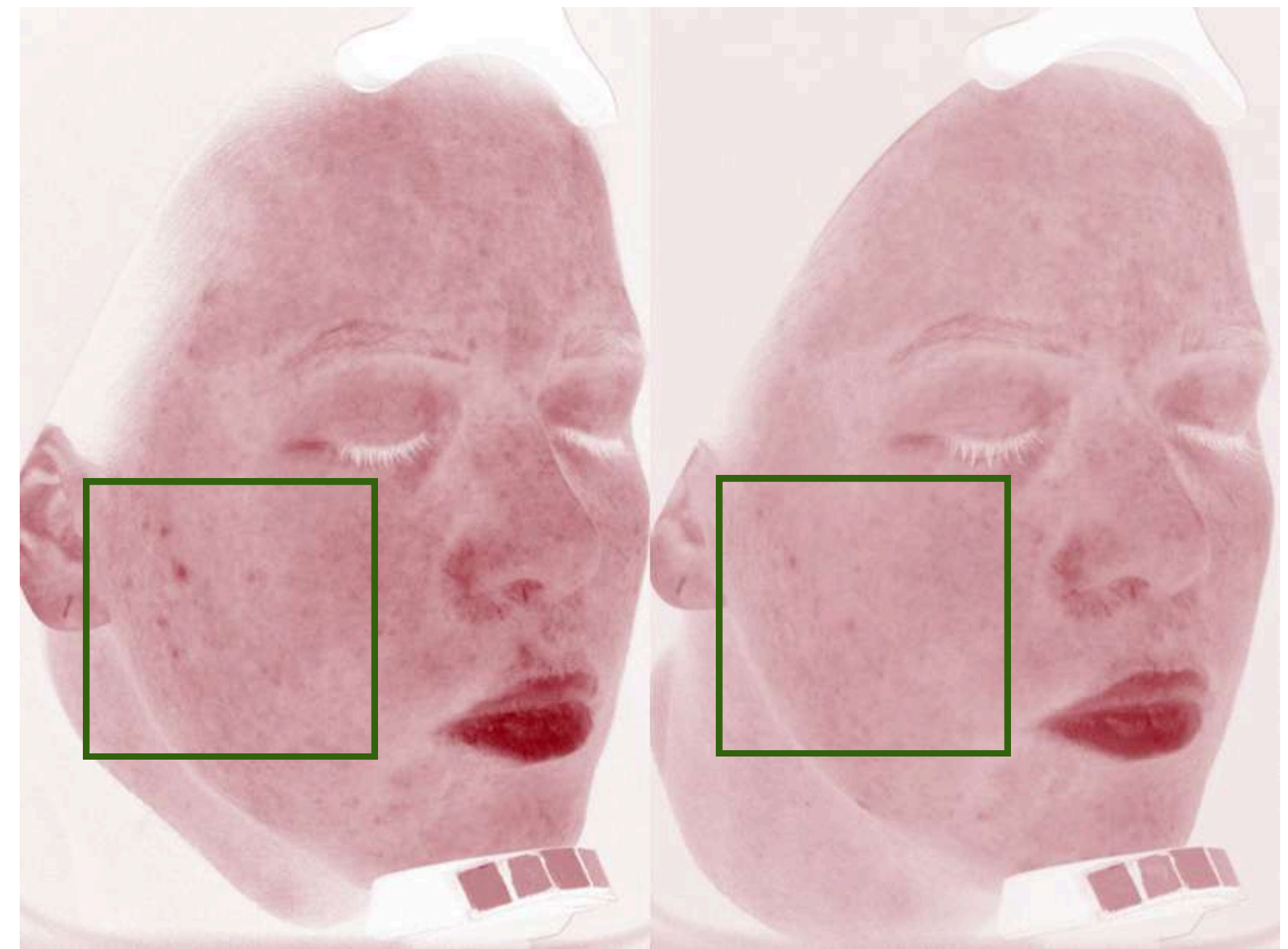
AlphaShield **reduces deep redness** in the skin after 30 days of treatment.

Visible Results - AlphaShield



D0

D30

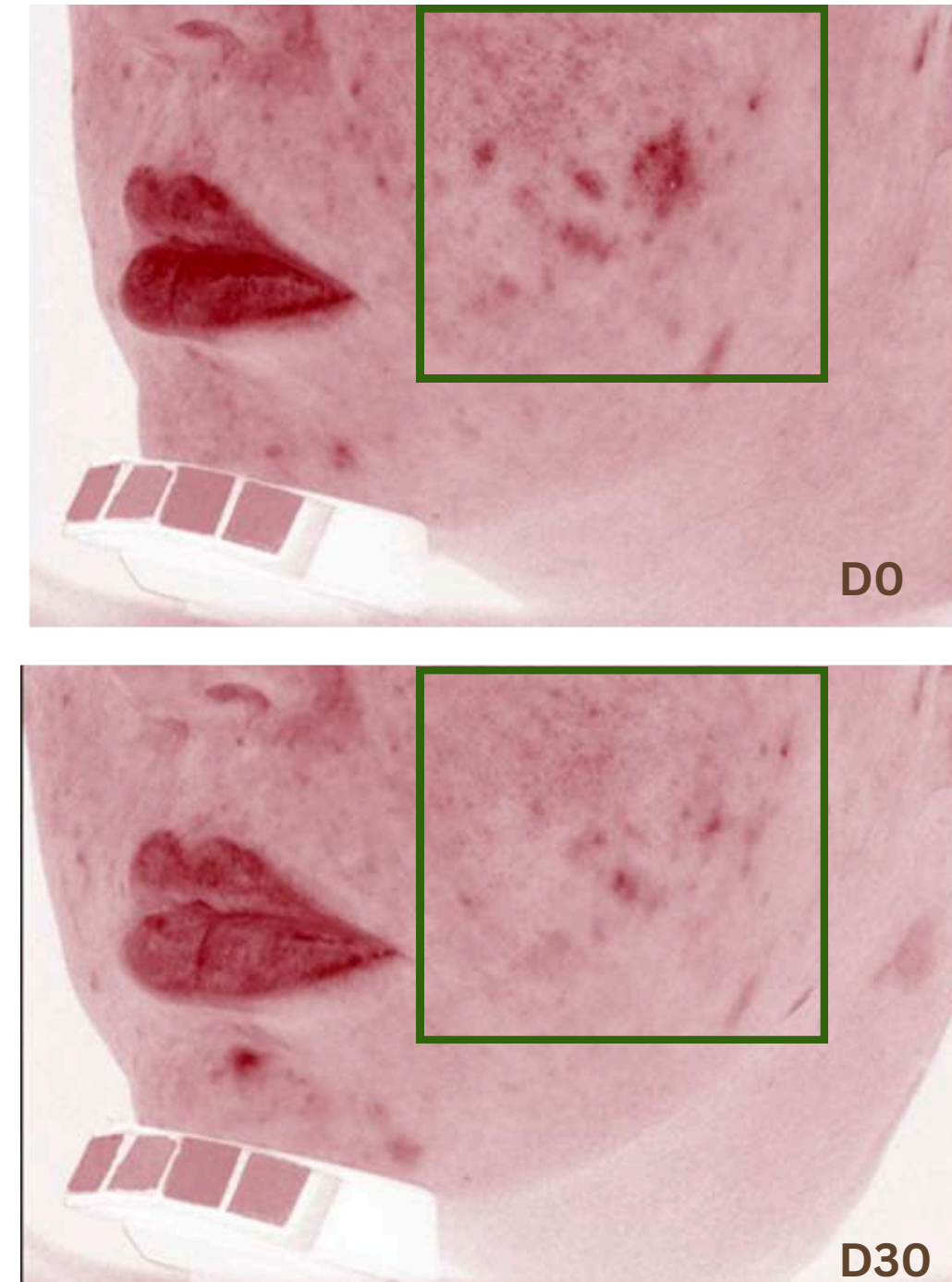
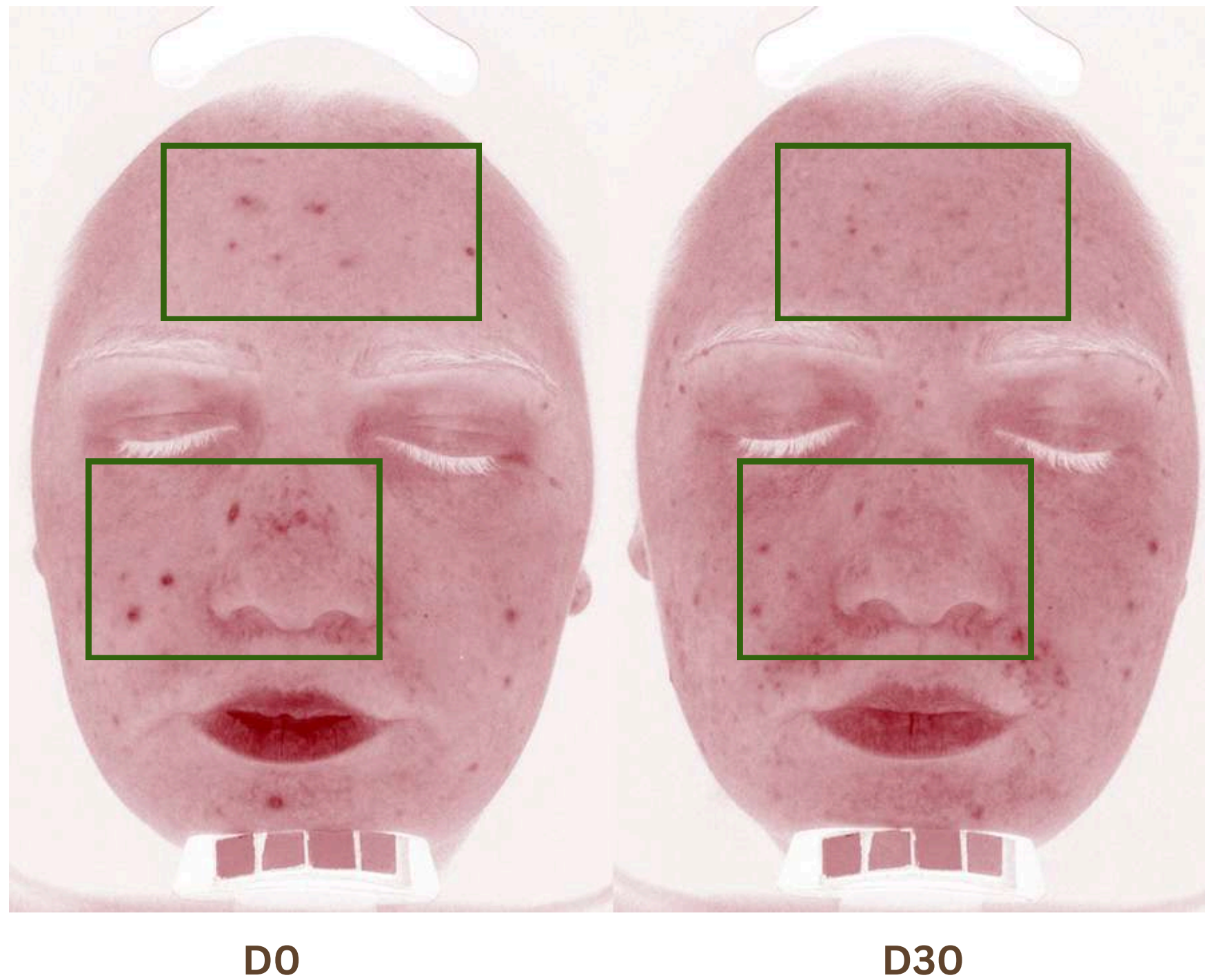


D0

D30

Control of lesions and reduction of skin redness.

Visible Results - AlphaShield



Control of lesions and reduction of skin redness

Purchase Indicator

AlphaShield is the new natural alternative for acne with proven effectiveness and approved by participants.

100% of participants reported that the **overall appearance** of their skin improved

85,71% felt a significant **reduction** in the **amount of acne** after using AlphaShield

92,86% reported a **reduction** in the number of **blackheads** on the skin

92,86% of participants reported that AlphaShield **controlled skin oiliness**

78,57% of participants reported improvement in **old acne scars**

*Opinions after 30 days of using AlphaShield

Cosmetic Appreciability - AlphaShield

AlphaShield according to participants

“

I liked the product, I felt that it improved the appearance of blackheads and oiliness and left the skin clearer and more even.

”

“

I loved the product, it leaves my face very dry and dries out pimples.

”

“

I liked the texture, it absorbs well into the skin, it dried out my pimples.

”

“

I really liked the product, on the first day I already noticed a difference

”

*Opiniões relatadas em diário de uso do produto



Performance against target microorganisms

AlphaShield

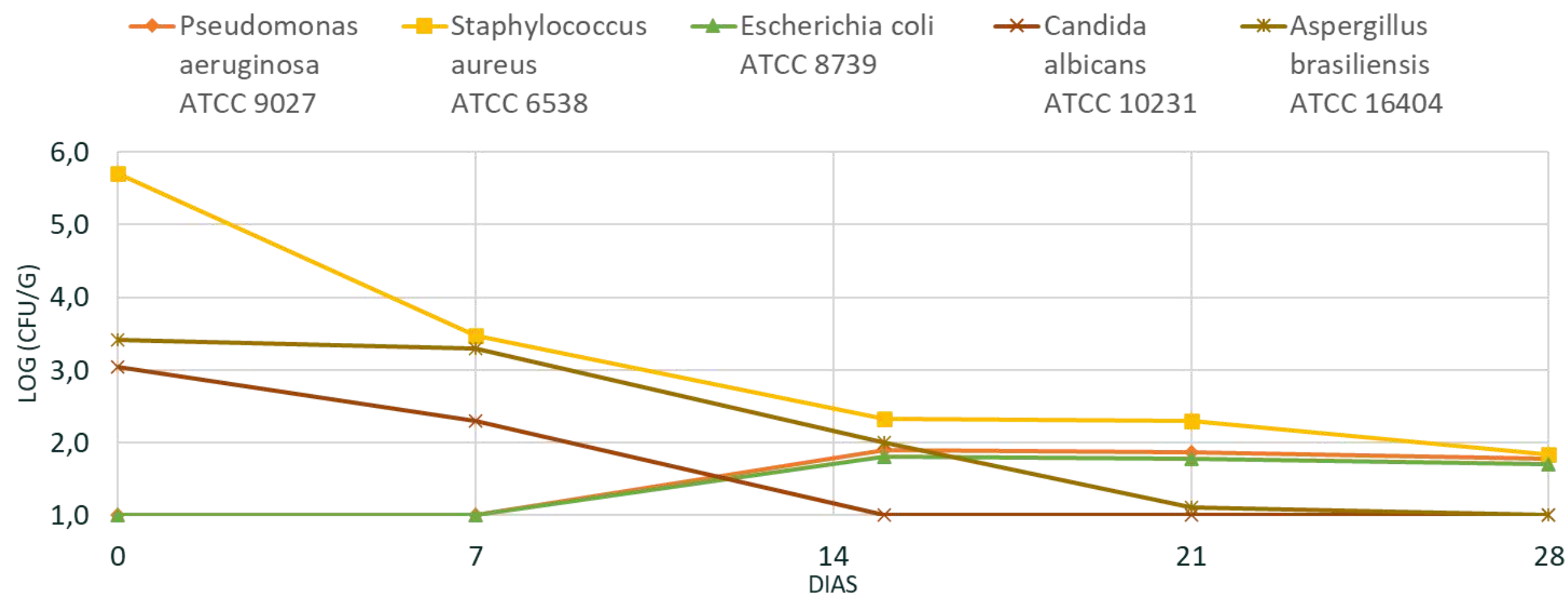




AlphaShield 0.5% - Challenge Test



AlphaShield solubilized in aqueous solution for vegetalization of preservative systems* and cosmetic use

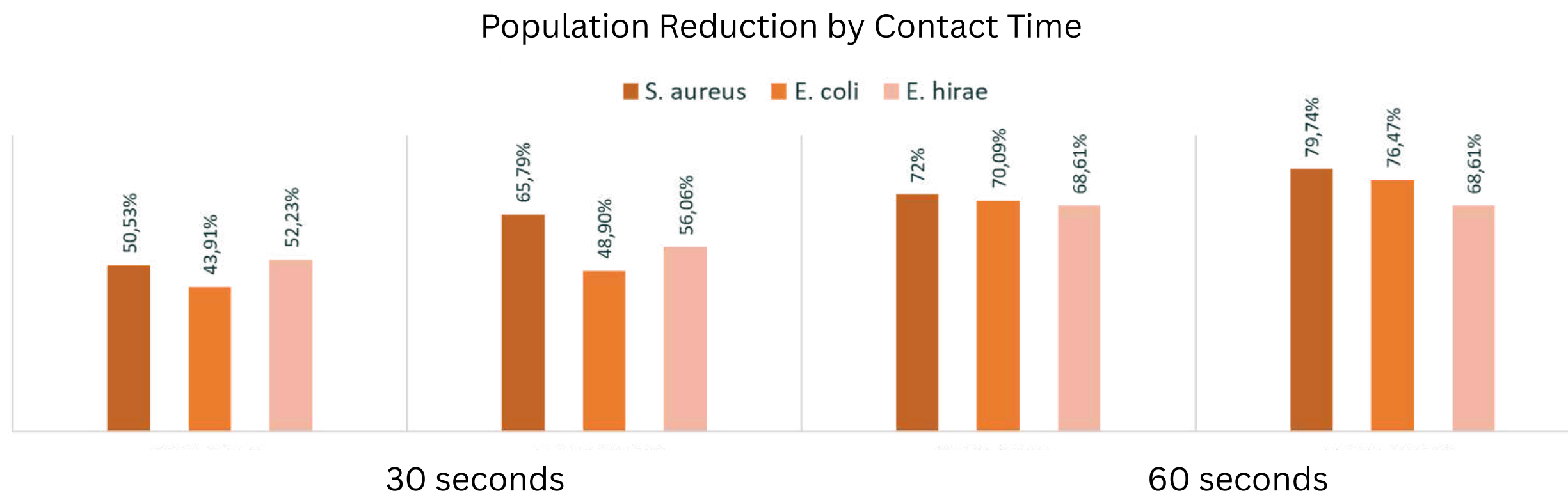


AlphaShield is particularly recommended for its **antifungal properties**.

Its action against *C. albicans* and *A. brasiliensis* ensures safe use in **intimate hygiene** products, nail care products, and fungal treatments.

AlphaShield 0.75% - Evaluation of antibacterial activity

Methodology according to NF EN1276: 2019 – comparison with **Triclosan (0.3%)** at different contact times



- AlphaShield exhibits a **maximum reduction of nearly 80%** of *Staphylococcus aureus*, **10% more effective than Triclosan**.
- In just 1 minute, AlphaShield also controls *Escherichia coli* (maximum 76%) and *Enterococcus hirae* (maximum 69%) in handrub applications.

AlphaShield 1.50% - Evaluation of antibacterial activity

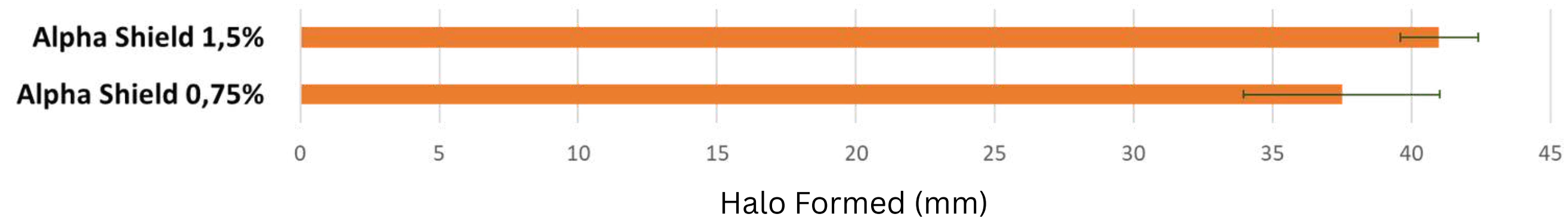
Methodology according to NF EN1276: 2019 – comparison with **Triclosan (0.3%)** at different contact times



- AlphaShield exhibits **varying levels of effectiveness** at higher concentrations due to its unique mechanism of interaction with microorganisms.
- At 1.5% concentration, the active ingredient is also effective against *Pseudomonas aeruginosa*, with a 79% reduction, **12% greater** than the same test performed with Triclosan (0.3%).

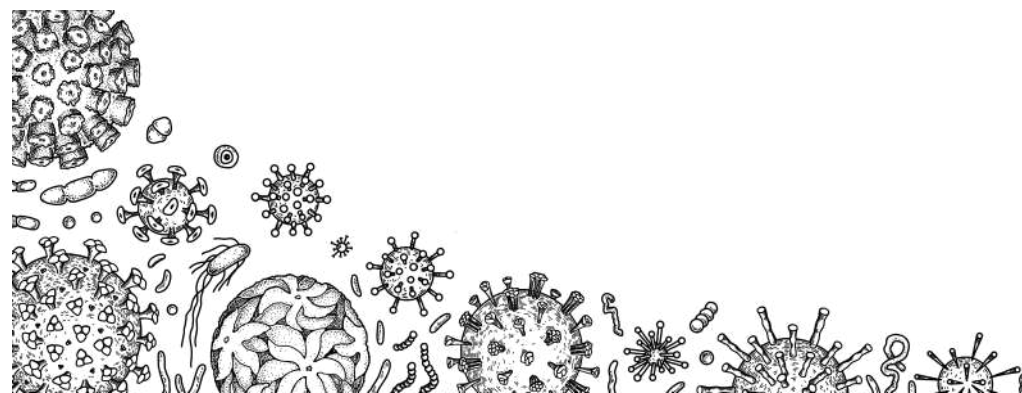
Evaluation of antifungal activity - *Malassezia furfur*

Methodology: Brazilian Pharmacopoeia 6th edition /2019 and ASTM E2315, Standard Guide for Evaluation of Antimicrobial Activity Using a Time-Kill Procedure, ASTM International, 2016



AlphaShield acts directly on the main fungus that causes dandruff, *Malassezia furfur* ATCC 14521.

This fungus is found in some parts of the human skin where sebum secretion is highest, such as the scalp, nasolabial folds, ears and chest, and is associated with superficial skin diseases such as pityriasis versicolor (PV or white cloth) and seborrheic dermatitis.





TIME KILL - Determination of Reductive Antimicrobial Activity

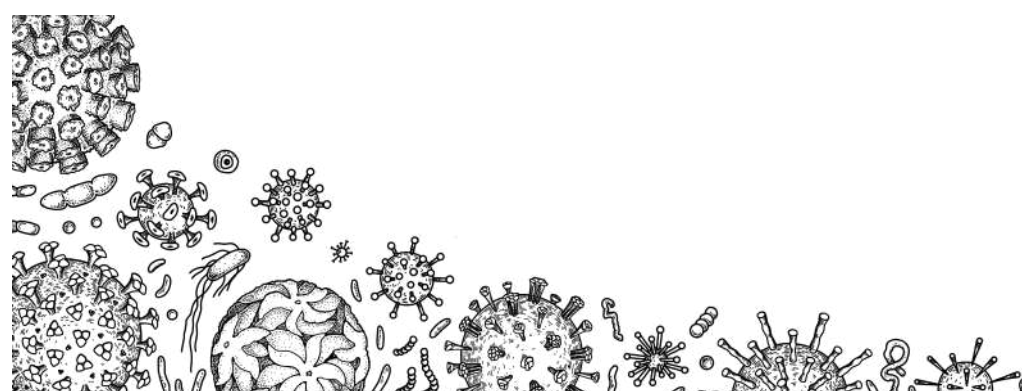
Methodology: Brazilian Pharmacopoeia 6th edition /2019 and ASTM E2315, Standard Guide for Evaluation of Antimicrobial Activity Using a Time-Kill Procedure, ASTM International, 2016

Microorganisms Tested	Inoculum log/UFC	after 10 seconds log/UFC	after 60 seconds log/UFC	PR* (%)
Corynebacterium xerosis ATCC 373	6.54	5.95	4.00	99.0
Staphylococcus aureus ATCC 6538	6.08	5.94	3.08	99.9

Results expressed in Colony Forming Units in base 10 logarithms.

*PR: Percentage of microbial population reduction.

- *Corynebacterium xerosis and Staphylococcus aureus are bacteria commonly found in various parts of the body.*
- *AlphaShield efficiently controls ($\geq 99\%$) the presence of these pathogens, **regulating skin health** and restoring surface bacteria levels. Its combined action **acts selectively**, without creating an imbalanced environment.*



AlphaShield

INCI Name: *Bisabolol, Melaleuca alternifolia seed oi*



Recommended Dose: 0.5-1.5%

Recommended pH: 3-10

Solubility: Liposoluble



Dermatologically Tested

China Compliant

Vegan

No Animal Testing

Chemical-Free

Preservative-Free

Halal Certified

Cosmos Approved

Non-Comedogenic

Non-Acnegenic



APPLICATIONS



PRODUCTS ANTI-ACNE



DEODORANTS



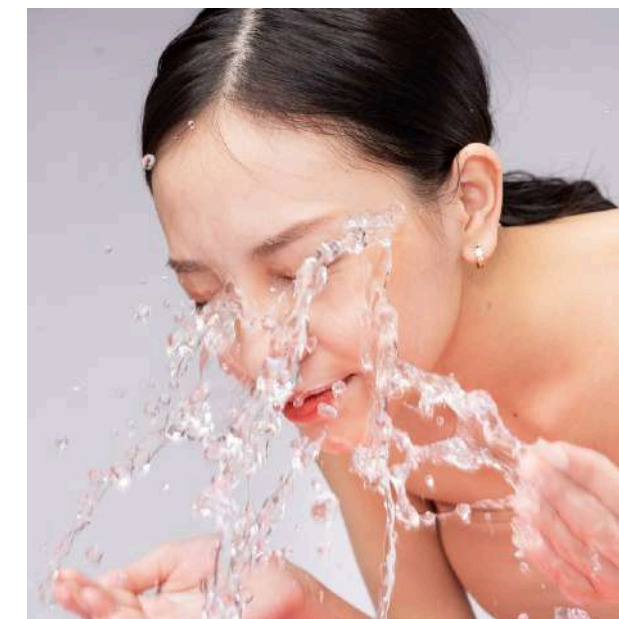
SPORTS PRODUCTS



**ANTI-DANDRUFF
PRODUCTS**



LIQUID/BAR SOAPS



**INTIMATE HYGIENE
PRODUCTS**



CLAIMS



**Reduces redness
caused by acne**



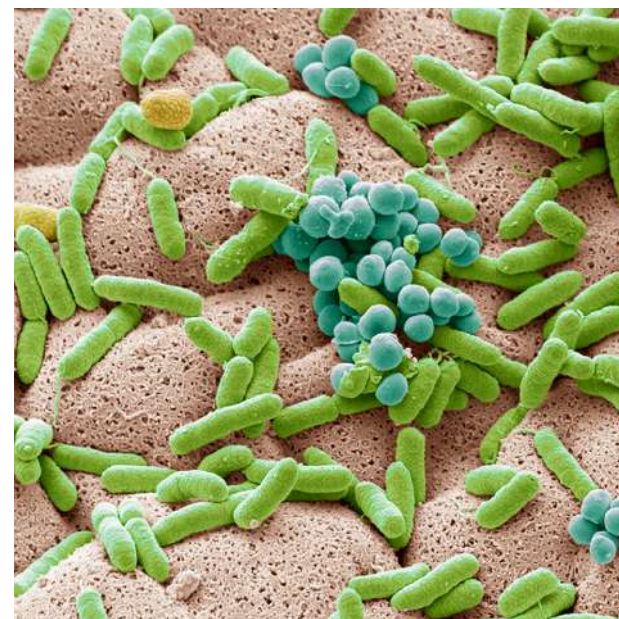
**Reduces blackheads
on the skin**



**Controls skin oiliness and
prevents new lesions**



**Modulates the skin
microbiome**



Anti-Dandruff Action



**Natural Pro-Antiseptic
Action - Triclosan Successor**



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AlphaShield is more than an active ingredient: it is **CitroBio's new frontier** in intelligent skin protection and care, bringing a natural, exclusive and effective solution to **transform the health of the microbiome in acne-prone or sensitized skin.**



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Thank you!

Contact

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