

AlphaShield

By Citróleo

New challenges require a new AlphaShield

Beyond the new normal, a new you and a new AlphaShield


Looking at the mirror, we see a new version of us, ready for new challenges, dreams, and achievements; this new version also has new doubts and new priorities.

AlphaShield was with you learning how to adapt to the changing world and its new consumer relationships. It was a protective shield for your hands, your environments and followed you in the resumption of the "new normal". Now, this shield will continue by your side in your new demands, efficiently meeting your new challenges and dreams.


More than just protection for your hands, AlphaShield is a true armor to protect you from head to toe against microorganisms that interfere with your confidence and well-being.

Natural pro-antiseptic technology for complete skin and scalp treatment

AlphaShield's exclusive pro-antiseptic natural technology acts selectively to inhibit the main fungi and bacteria that cause dermatitis, folliculitis, and mycoses, with an anti-irritant action. It promotes hygiene, helps in revitalization, reduces sensitivity, and increases resistance to external aggressions.



Line:



CitroGreen
Actives

CAS Number:
68647-73-4, 23089-26-1

Code:
PA3198


INCI Name (CTFA):
Bisabolol, Melaleuca alternifolia leaf oil

Color:
Slightly yellowed

Odor:
Woody, Characteristic

Solubility:
Insoluble in water

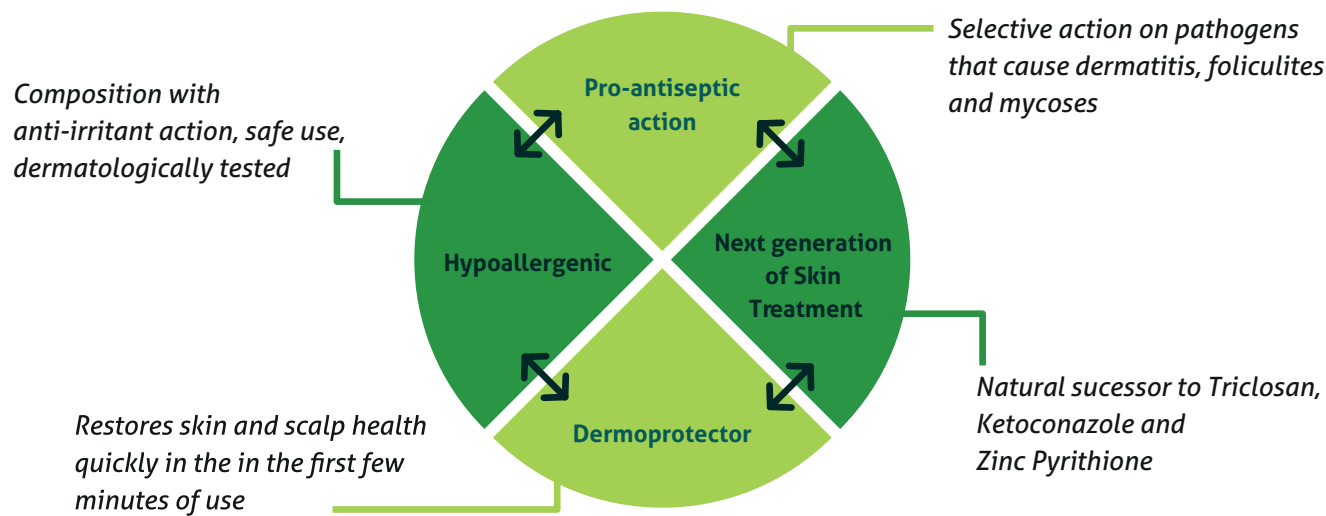
Appearance:
Oily Liquid



Mechanism of action with independent and complementary pathways

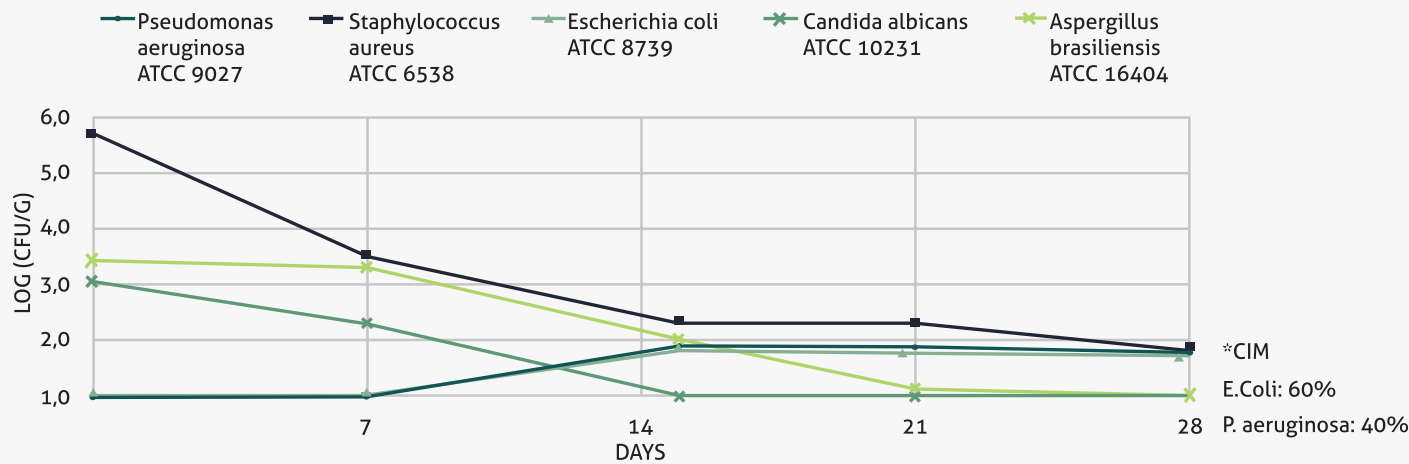
AlphaShield is composed of molecules such as terpinen-4-ol and α -terpineol with the ability to penetrate the skin and act in the dermis where the hair follicles and sebaceous glands are located. The lipophilic nature of AlphaShield allows it to interact with cell membranes, resulting in increased permeability and consequent electrolyte imbalance.

This mechanism consists of compromising the integrity of the cell membrane of microorganisms and the resulting leakage of cytoplasmic, metabolic and ion constituents, leading a generalized homeostatic imbalance, rendering the microbial cell unable to stay alive. AlphaShield's hair care benefits include eradicating fungus, irritation, inflammation, and excessive oiliness to cleanse and free the follicles so that dandruff is eliminated.



Challenge Test

AlphaShield at 0,5% was solubilized in aqueous solution and tested against key microorganisms that guarantee conservation to formulations and are the cause of several pathologies such as candidiasis, infection in open wounds, irritation, and dermatitis.



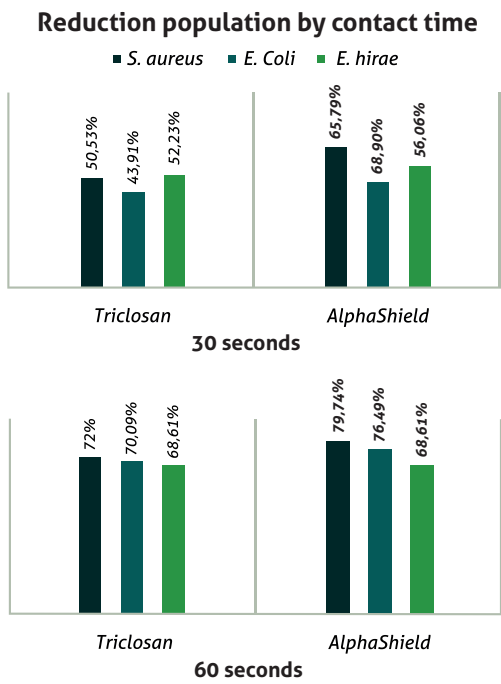
AlphaShield is especially indicated due to its anti-fungal property.

Its action against *C. albicans* and *A. brasilienses* guarantees safe use in intimate hygiene, nail care products and treatment for mycoses. With the results obtained, the action of AlphaShield was observed as an ingredient for vegetalization of preservative systems, as well as a natural alternative for the treatment of candidiasis, dermatitis, and skin irritation.

Evaluation of antibacterial activity

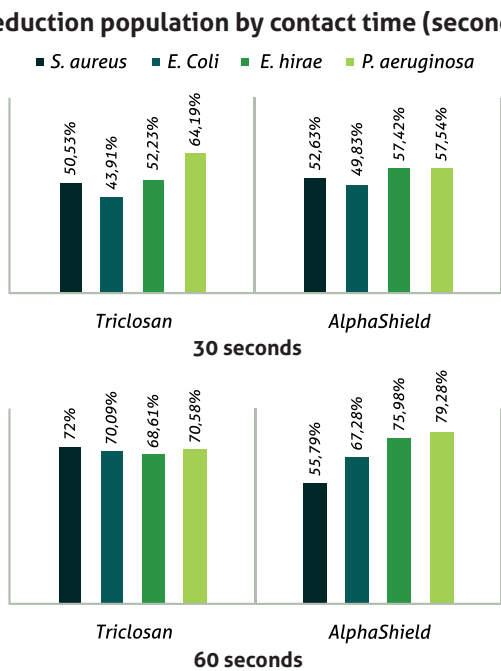
In this test, the effectiveness in controlling the main microorganisms related to the emergence of skin diseases was tested for AlphaShield at a concentration of 0.75% and 1.5% compared to Triclosan at 0.3% for different contact times.

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



AlphaShield exhibits a maximum reduction of almost 80% of *Staphylococcus aureus*, more efficient compared to Triclosan (maximum reduction of almost 72%).

In just 1 minute, AlphaShield also controls *Escherichia coli* (maximum 76%) and *Enterococcus hirae* (maximum 69%) in hand rub applications.



With 1.5% concentration, AlphaShield is effective against *Pseudomonas aeruginosa*, with a reduction of 79%, 12% higher than the same test performed with Triclosan (0.3%).

Analysis of primary and accumulated dermal irritation

Participants	55
Age	18-59
Phototype	II-IV
Gender	Female
Use	3 weeks
% of use	5% of AlphaShield

Methodology: Single-center, blinded, non-comparative clinical study to assess primary and accumulated dermal irritability. Readings were performed according to the reading scale recommended by the International Contact Dermatitis Research Group (ICDRG).

At the end of the 30 days, it was concluded that AlphaShield does not cause irritation or sensitization in the epidermis, allowing the “dermocalming” and “safe for use” claims to be associated with this ingredient.

Time kill - antimicrobial activity reduction determination

Assessment of AlphaShield 1.5% activity against different bacteria in just 1 minute.

Methodology: Brazilian Pharmacopoeia 6th edition /2019 and ASTM E2315, Standard Guide for Assessing Antimicrobial Activity Using a Time-Kill Procedure, ASTM International, 2016. *Corynebacterium xerosis* and *Staphylococcus aureus* are bacteria commonly found in different parts of the body.

The increase in these population is related to skin problems such as Atopic Dermatitis, Folliculitis, Itching, as well as bad odors (especially in the armpits and groin) and irritations.

AlphaShield can efficiently control ($\geq 99\%$) the presence of these pathogens, regulating skin health and restoring superficial bacteria levels. Its action is combined and acts selectively, without creating an unbalanced environment.

PARAMETERS (microorganisms tested)	Inoculum log/UFC	After 10 seconds log/UFC	After 60 seconds log/UFC	PR* (%)
<i>Corynebacterium xerosis</i> ATCC	6,54	5,95	4,00	99,0
<i>Staphylococcus aureus</i> ATCC 6538	6,08	5,94	3,08	99,9

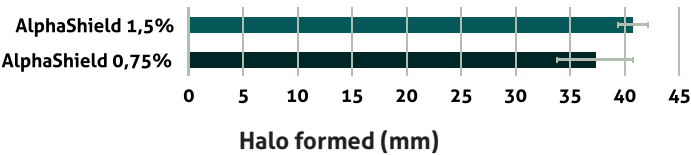
Results expressed in Colony Forming Units in logarithm base 10.
* PR: Percentage of microbial population reduction.

Evaluation of antifungal activity for *Malassezia furfur*

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

Malassezia furfur is found on some parts of 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. With its activity against *Malassezia furfur*, AlphaShield is the natural successor to Ketoconazole (the main active against PV), acting positively in cutaneous treatments against pityriasis versicolor.

In Seborrheic Dermatitis, AlphaShield is an antifungal agent that provides longer-lasting relief against the main symptoms (scaling, itching and excessive oiliness), thanks to its terpenic composition. It is already considered a next generation of treatments, after Zinc Pyritionate.



Technical Data

Formulation: Apply to the oil phase before emulsification or at the end of the formulation process and directly onto anhydrous formulas. It can be added to ethanol systems with the aid of a solubilizer suitable for this system. Pre-dispersion in non-ionic solubilizers such as Polysorbate 60 or PEG-40 Hydrogenated Castor Oil and addition at the end of the formulation process (below 40 °C) helps to incorporate the active into cleaning systems.

Recommended Dose: 0.5% - 5.0%

Recommended pH: 3-10

Applications: Body deodorants, treatment lotions, ointments, creams, sports products, intimate hygiene products, liquid soaps, bar soaps, scalp serum, shampoo, cleaning sprays, makeup, nail care, specific products for hands and feet and male beauty.

- Dermatologically tested
- China Compliant
- Vegan
- Non-animal testing
- Chemical-free
- Preservative-free
- Self-preserved