Citróleo®
Nature by Itself

CitroGreen
Actives

A new protection antibac of Dermo-Skin Care frontier

Product:	ALPHASHIELD	Color:	Slightly yellowed
Code:	PA3198	Odor:	Woody, characteristic
CAS Number:	68647-73-4, 23089-26-1	Solubility:	Insoluble in water
INCI Name (CTFA):	Bisabolol, Melaleuca alternifolia leaf oil	Appearance:	Oily liquid

Clean & Care

ALPHA SHIELD is a new active for a new era, where to protecting the skin (the greatest protection shield for human health) has never been so important.

ALPHASHIELD is an active100% natural, biodegradable, produced through a powerful synergy of certified and exclusive essential oils, obtained from sustainable sources to help create a healthier planet. The fair trade in its development is done in partnership with several families in the states of Minas Gerais, São Paulo and Bahia.

The botanical complex that makes up ALPHASHIELD, provides this asset with an exclusive and potent germicidal action, proven by tests, quickly eliminating (within one minute) 99.99% of germs (gram positive and negative bacteria, in addition to fungi). The Active is hypoallergenic, anti-irritant and without contraindications, as it is 100% natural.

ALPHASHIELD helps in the antiseptic power of formulations and can be combined with the action of surfactants for complete cleaning or as antiseptic solutions (also containing alcohol or benzalkonium chloride) for topical use.

Protecting the health of the whole Family

In addition to its antiseptic potential, the active ALPHASHIELD, helps in the development of personal care formulations that provide a feeling of hydration to the skin, as it does not induce dryness. Its superconcentrated antibacterial composition, besides regulates, can helps in prolonged microbial control. Its lipophilic nature and high soothing power inhibit the appearance of itching, in addition to reducing adverse reactions caused by disinfection and excessive sanitization of the skin.

ALPHASHIELD is a dermo-purifier that restores the health of the skin, providing moisturization and control of moisture loss.

This new active is safe, even in products without rinsing, protecting against contamination by microorganisms.

ALPHASHIELD is a cosmetic active that represents a new proposal to conventional bactericides, such as triclosan, for a safe, effective and ecological approach.

ALPHASHIELD is stable over a wide range of pH and temperature, and can be incorporated into several bases, including systems with a high ethanol index. Due to its anti-inflammatory properties, ALPHASHIELD softens the unwanted effects of these systems that are observed over the long term, such as skin sensitization to components and dryness.

When solubilized in aqueous systems, the active also acts as a preservative.

Mechanism of action

ALPHASHIELD acts in the control of viruses, fungi and bacteria through its exclusive action related to the chemical complexity of its oils. The synergy of the compounds presents in the candeia oil mimics the resistance of its tree, capable of growing in poor and poorly agricultural soils; it has non-cytotoxic antimicrobial activity, however, preserving the balance of the beneficial microbiome of natural skin protection. Among other natural compounds, ALPHASHIELD has alpha, beta and gamma bisabolene, with anti-inflammatory, antiviral, analgesic and antiproliferative action. These properties are potentiated by tea tree oil, with an ancient action against viruses, bacteria and fungi, in addition to the Citrue Bisabolol, which due to the wide range of properties, is used from dermocosmetic products to hospital products.

The action of ALPHASHIELD involves the deactivation of bacterial homeostasis, by compromising the microbial cell barrier, preventing the survival of the microorganism. ALPHASHIELD also has an anti-inflammatory action, being softer for the skin than common antiseptics and sanitizing, acting in the inhibition of lipoxygenase and cyclooxygenase, blocking the biosynthesis of leukotrienes and prostaglandins, which are important chemical mediators of inflammatory processes. ALPHASHIELD has cutaneous permeation, but covers the skin with a hydrophobic layer, ensuring longer protection time and a barrier against germs.

Proven Germicidal Effect

ALPHASHIELD was tested against strains of gram-positive bacteria, although its components also exhibit action against gram-negative and viruses, and distinct strains of fungi. The results show a significant and satisfactory reduction for the use of ALPHASHIELD as a professional, antiseptic, non-irritating and safe germicide.

Contact time (minutes)	Counting survivors	Decimal reduction	Reduction Percentage	Counting survivors	Decimal reduction	Reduction Percentage
TI	$1,6x10^4$	2,49	**99%**	<10	5,69	**99,9999%**
1	$4,0x10^2$	4,09	**99,99%**	<10	5,69	**99,9999%**
2	$5,1x10^4$	1,99	**99%**	<10	5,69	**99,9999%**
3	$1,1x10^5$	1,65	**99%**	<10	5,69	**99,9999%**
5	$5,1x10^3$	2,99	**99,9%**	<10	5,69	**99,9999%**
30	$3,0x10^2$	4,22	**99,99%**	<10	5,69	**99,9999%**
60	$4,1x10^4$	2,08	**99%**	<10	5,69	**99,9999%**
90	$5,3x10^3$	2,97	**99,9%**	<10	5,69	**99,9999%**
Microorganisms	**Staphylococcus aureus - ATCC 6538** Initial count (UFC/mL): $5x10^5$			**Trichophyton mentagrophytes – ATCC 9533** Initial count (UFC/mL): $5x10^5$		

Natural preservative

ALPHASHIELD can still be used as a natural preservative, allowing the finished product to use the "preservative free" claim. The Challenge Test showed that, based on data from the Brazilian Pharmacopeia (2019), there were reductions in the growth of viable bacteria, molds and yeasts used. And, in view of a reduction in growth from the 14th day, followed by continuous reduction until the end of the test with 28 days, ALPHASHIELD as a preservative system is effective for these microorganisms.

Challenge Test Formulation: 0.5% ALPHASHIELD

Application Suggestions

Gel alcohol, booster in hand/body sanitizer and surfaces: 0.5 to 5.0%
Topical antiseptics: 0.5 to 5.0%
Body lotions, wet wipes: 0.5 to 3.0%
Makeup: 0.1 to 0.3%
Soaps and liquid foams, bar soaps: 0.5 to 5.0%
Daily use shampoos: 0.5 to 1.0%
Body deodorants: 0.5 to 2.0%
Oral Hygiene Products (mouthwash, gels and mouth creams): 0.1 to 0.3%
Preservative systems: 0.5 to 1.0% pre-dispersed in solubilizers and applied to the aqueous phase

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