



Cleoderm™

Skin Rebalancing Cream

Introduction

Dermatological skin conditions are a large number of clinical manifestations that can affect between 30% and 70% of the population worldwide,¹ and they can vary greatly in symptoms and severity. In the United States, they can affect one in every three Americans, and in 2013, skin diseases were responsible for \$ 75 billion in costs to the healthcare system.^{2,3} In Europe, more than 40% of the population has already reported some kind of skin condition.¹

Some of these conditions can present more or less impact on the quality of life of different individuals, and their knowledge is of high importance to determine the diagnosis, as well as the adequate treatment, both professional and home care.¹ Acne, rosacea, dermatitis, and hyperpigmentation are among the most common ones, and they can affect the patient simultaneously, or as a consequence of each other.^{1,2}

Some conditions can have a genetic background, and others can be a result of lifestyle and other external causes, but in any case, adequate treatment is a key to improving the life quality of patients. Most of these conditions respond well to topical treatments, especially personalized ones, and the adequate choice of the vehicle to compound those treatments is paramount to ensure their success.

Cleoderm™ is a topical cream designed to be used as a vehicle for the compounding of personalized dermatological treatments. Its ingredient profile was specifically designed to be gentle on the skin to allow for its use as a vehicle for compounded preparations that may be applied to the face. **Cleoderm™** has a positive role in decreasing sebum production, lipid peroxidation, and reactive oxygen species, as well as inhibition of *Cutibacterium acnes* proliferation, and control of inflammation. The ingredient profile of **Cleoderm™** makes it a good choice as a vehicle for topical use for inflammatory skin conditions, or conditions in which inflammation can worsen its severity.



Skin conditions



Acne vulgaris, also commonly known only as acne, is an inflammatory disease that affects the pilosebaceous follicles,⁴ with the common skin manifestations being comedones, papules, pustules, cysts, nodules, and scars.⁵ The presence of acne lesions may result in loss of self-confidence, anxiety, or community avoidance,⁶ and may also affect the sexual quality of life in adult patients.⁷ This occurs because acne lesions can become scarring, which can have an impact on psychological factors. Acne is one of the most prevalent skin disorders worldwide, affecting all ethnic and age groups, regardless of sex, nationality, or socioeconomic status.^{5,8-10} Its incidence in adult women is around 12%, and among adolescents of 12 to 18 years old, more than 85%.^{11,12}



Seborrheic dermatitis is a relapsing disease characterized by erythema and scaling. In some cases, there is associated pruritus, which mainly affects the central region of the face, ears, scalp, and central part of the chest.^{18,19} Dermatitis can affect all ages, but it has a bimodal age distribution, with a peak in early childhood (2-12 months) and the second peak in adolescence, after puberty.^{18,20} It affects more men than women due to the more significant presence of androgens in that population, increasing the activity of the sebaceous glands.²⁰ The prevalence in the general population is 1 to 3%, in young adults 3 to 5%, and 34 to 83% in immunocompromised patients.²¹



Rosacea is a chronic skin inflammation that mainly affects the face and is characterized by intermittent skin redness, telangiectasias, papules, and pustules. However, it may also present hyperplasia and hypertrophy of sebaceous glands, with sudden and repeated episodes of vasodilation.¹³⁻¹⁶ Rosacea affects adults between 30 and 50 years, with a higher incidence in women and greater severity in men.¹⁵⁻¹⁷ The worldwide distribution of rosacea seems to vary between 2% and 22%.¹⁵



Hyperpigmentation is a common skin condition that affects many patients, being a frequent complaint in dermatological practice. It is an acquired hyperchromia characterized by an overproduction of melanin in response to a stimulus that can be endogenous (hormone production, genetic predisposition) or exogenous (UV exposure, skin lesions, cosmetics, and medicines composition).²² Hyperpigmentation has many psychological and cultural implications, as it alters the patient's self-image, and



can occur at any age, with a similar incidence in men and women.^{23,24} Although all skin types can be affected, individuals with skin phototypes III to VI are more likely to develop hyperpigmentation than those with skin phototypes I and II, and have a more severe and persistent condition.^{25,26} The prevalence of hyperpigmentation in individuals with high phototypes affected by acne is around 65%.²⁵

The role of dermocosmetic treatments

Considering the many possible causes and the chronic aspects of different skin diseases, the focus of treatments is to control existing symptoms and limit the duration of the disorder, avoiding permanent scarring as much as possible, along with other possible complications of skin disorders. To choose the best strategy for treatment, individual patient factors must be taken into consideration, such as medical condition, disease state, the severity of the lesions, patient history, and the preferred type of treatment (oral or topical).²⁷

The selection of the active pharmaceutical ingredient (API), as well as their dosage, should be based on the severity of each case. Most of these ingredients can be formulated in several forms, and their adequate combination with a suitable cream base can help to decrease possible side effects, increase patient adherence to treatment, and improve the general aspect of the skin.²⁸

Cleoderm™ Skin rebalancing cream

A functional vehicle for affected and sensitive skin

Cleoderm™ is a functional vehicle with selected ingredients that make it the ideal choice for compounding topical treatments for affected and sensitive skin. Its main constituents are *Cleome gynandra* L. leaf extract, palmitoyl tripeptide-8, bisabolol, hyaluronic acid, and functional oils (avocado, jojoba, dog rose, coconut, English lavender, tea tree, rosemary, shea tree, and vitamin E acetate). This unique combination of ingredients provides **Cleoderm™** with great anti-inflammatory and humectant properties as well as sebum reduction.

Key points:

- Highly spreadable;
- Light skin feel;
- Readily absorbed;
- Non-comedogenic;
- Dermatologically tested.

Meet the Cleoderm™ ingredients



***Cleome gynandra* L. leaf extract**

Known by common names such as Gynandropsis, cat's whisker, and African spider flower, *C. gynandra* has anti-inflammatory and antioxidant properties, as well as positive effects on skin regeneration and allergies.²⁹⁻³² **Cleoderm™** uses a patented *C. gynandra* extract, with specific diluents, rich in polyphenols such as rutin and hydroxycinnamic acid. These substances can act synergistically, decreasing sebum secretion and reducing skin inflammation associated with acne.³³⁻³⁵



Palmitoyl tripeptide-8

This ingredient is a functional lipopeptide derived from neuromediators, with good anti-inflammatory and soothing properties to the skin. It is excellent for reducing irritation caused by UV radiation and inflammatory cytokines, therefore improving redness, flushing, overall appearance, and sensitiveness of the skin.



Bisabolol

A potent antioxidant, anti-inflammatory, and antibacterial that can restore suppleness and protect the skin against daily environmental stress. It can reduce pro-inflammatory cytokines, therefore improving the condition of irritated skin and ameliorating its aspect. In addition, bisabolol can improve the percutaneous absorption of active ingredients, enhancing the efficacy of different topical treatments.³⁶⁻³⁹



Hyaluronic acid

Hyaluronic acid promotes the covering of the stratum corneum, preventing water loss from the skin, and acting as a moisturizer. Hyaluronic acid has shown a wide range of activities on the skin, such as buffering, anti-inflammatory, antibacterial, antioxidant, and regenerative.⁴⁰⁻⁴⁵



Functional oils

Functional oils are natural substances extracted from plants, rich in chemical compounds that can interact directly with the skin when applied topically, providing multiple benefits according to their properties. **Cleoderm™** has a unique blend of functional oils, carefully chosen for optimal effect and sensory experience.

- **Persea gratissima oil (avocado)**: rich in fatty acids, vitamins, minerals, and oligoelements, has positive effects in maintaining the skin barrier and decreasing exfoliation⁴⁶, with positive effects on acne and atopic dermatitis;^{47,48}
- **Simmondsia chinensis seed oil (jojoba)**: positive effect on improving the skin barrier condition, ameliorating acne conditions, psoriasis, rosacea, and wound healing;⁴⁹⁻⁵¹
- **Rosa canina flower oil (dog rose)**: rich in vitamin C, it is a potent antioxidant, anti-inflammatory, and antimicrobial, also with a positive effect on eczema;⁵²⁻⁵⁵
- **Cocos nucifera oil (coconut)**: presents a marked wound healing capacity, anti-inflammatory, and antimicrobial effect;⁵⁶⁻⁵⁸
- **Lavandula angustifolia herb oil (English lavender)**: calming effect, with the capacity of relieving symptoms of irritating conditions such as psoriasis, dermatitis, eczema, and skin allergies;^{59,60}
- **Melaleuca alternifolia leaf oil (tea tree)**: presents a range of positive effects on the skin such as antioxidant, amelioration of acne vulgaris due to its anti-inflammatory and antimicrobial properties, improvement of seborrheic dermatitis, and skin regeneration;⁶¹⁻⁶⁵
- **Rosmarinus officinalis leaf oil (rosemary)**: potent antioxidant and anti-inflammatory activities;^{66,67}
- **Vitellaria paradoxa butter (shea tree)**: good anti-inflammatory and anti-aging properties, with a positive role in skin regeneration and oxidative damage;^{68,69}
- **Tocopheryl acetate (vitamin E)**: potent antioxidant and protector of the skin barrier, with positive effects on atopic dermatitis, psoriasis, skin regeneration, and melasma.^{70,71}



Compounding with Cleoderm™

Cleoderm™ is an easy-to-compound-with vehicle, compatible with a wide range of APIs and dermatological ingredients (DCIs), and different associations. Up to 10% of solvents or levigants can be added to assist the compounding without affecting the final stability of the formulation.

For a complete list of APIs, DCIs, and formulations with **Cleoderm™**, please refer to our latest updated Formulary and our Compatibility Table.

Safety

The safety of **Cleoderm™** was assessed in a clinical evaluation study, showing that it exhibits no irritating, sensitizing, acneogenic, or comedogenic potential, and the claims dermatologically tested, clinically tested, and non-comedogenic/acneogenic can be supported.

Additionally, **Cleoderm™** is free from dyes, parabens, mineral oil, sodium lauryl sulfate, propylene glycol, and petrolatum.

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