

BICOWHITE®  
 MULTI-TARGET DELIVERY:  
 THE ULTIMATE INNOVATION  
 TO ELIMINATE DARK SPOTS

bicowhite®  
 by bicosome®

# BICOWHITE COMPLEX



BICOWHITE COMPLEX is a brightening / lightening multi-target delivery system that works blocking the different processes involved in the formation of dark spots.

Increased melanin production gives rise to different hyperpigmentation disorders characterized by the appearance of dark spots in the skin.

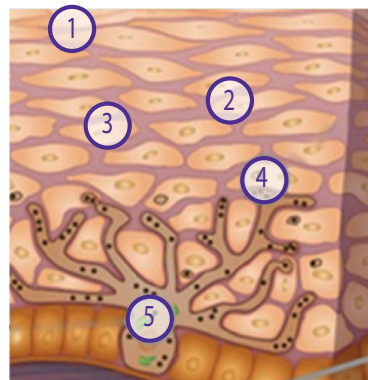
The main strategies to decrease the melanin content in the skin include preventing its formation, diminishing its transport or accelerating its elimination, which are complex processes that occur in different skin layers.

There are several active ingredients addressing one or more of these strategies. The limitation of these treatments usually resides in their poor skin penetration, which compromises their efficacy.

Bicosome® is a double encapsulation system formed by intelligent structures able to penetrate and to be retained in specific skin layers. This allows for a multi-target delivery of various active ingredients in appropriate levels of the skin, which provides real benefit in complex skin disorders, in which several processes occur in different skin levels at the same time.

BICOWHITE incorporates five complementary whitening ingredients named Azeloglicine, Niacinamide, Alfa-Bisabolol, Vitamin C and Phytic Acid that are driven by Bicosomes to their specific site of action in a highly integrated and complete approach.

FIGURE 1: BICOWHITE MULTI-TARGET ACTION



The intelligent structures of Bicowhite were designed to reach target skin layers and to block each process involved in the dark spot formation.

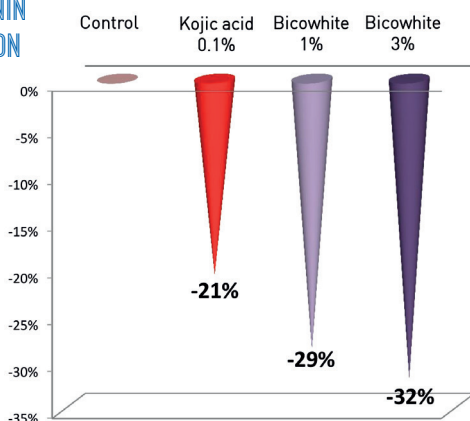
1. Cell renewal
2. ROS production
3. Inflammation
4. Melanin transfer
5. Melanin synthesis

## FIGURES 2 & 3: WHITENING ACTIVITY IN RHE PIGMENTED SKIN AND HISTOLOGICAL ANALYSIS

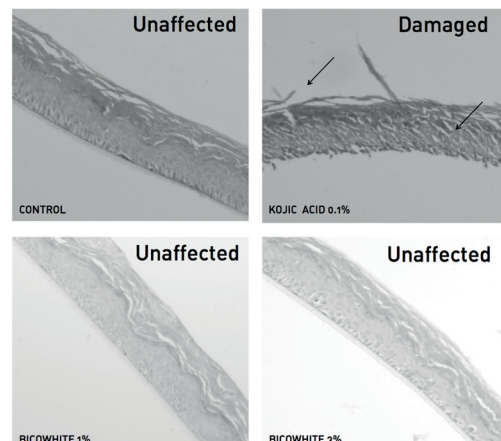
Bicowhite was applied in RHE tissues at two concentrations, 1 and 3%, and compared with Kojic acid at 0.1%. In four days of treatment, Bicowhite in both concentrations showed higher reduction in melanin content than Kojic acid (**Figure 2**).

Bicowhite did not affect the tissues treated, whereas Kojic Acid induced vacuolization of the granular layer and partial loss of stratum corneum (**Figure 3**).

### 2: MELANIN REDUCTION



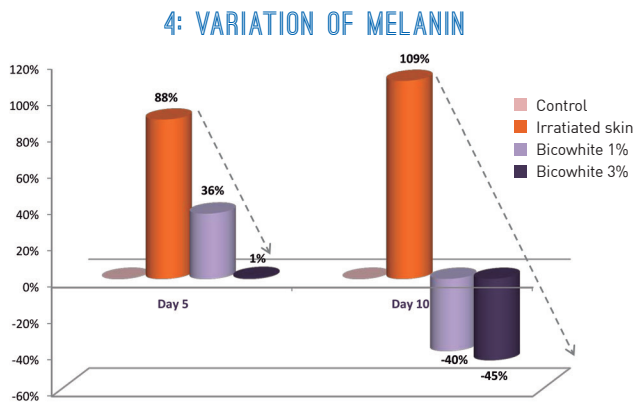
### 3: HISTOLOGICAL ANALYSIS



Bicosomes are commercialised under a patent license agreement with the Spanish National Research Council (CSIC).

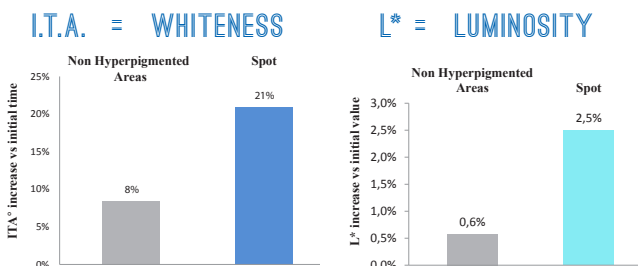
**FIGURE 4: WHITENING ACTIVITY IN SKIN EXPOSED TO UV RADIATION**

The use of Bicowwhite 1% and 3% prevented the increase of melanin content of skin explants exposed to UV radiation and also reduced the initial melanin values on 40% and 45% after 10 days.



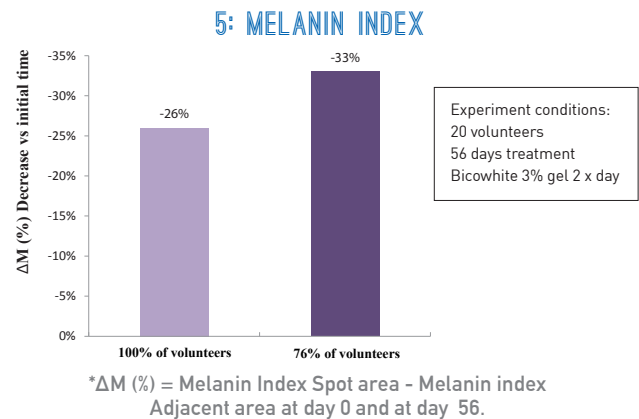
**FIGURE 6: WHITENING & LUMINOSITY EFFECT (in vivo)**

The use of Bicowwhite 3% gel increased skin whiteness and luminosity on both non hyperpigmented and spot areas after 56 days of treatment.



**FIGURE 5: DEPIGMENTING EFFECT (in vivo)**

The treatment with Bicowwhite 3% gel reduced the  $\Delta$  Melanin Index of total subjects in 26%. A mean reduction of 33% was observed in the most responsive subjects (76% of the panel).



**FIGURE 7: SPOT COLOUR INTENSITY & UNIFORMITY OF THE SKIN**



Front face of a volunteer before and after 56 days of treatment with Bicowwhite 3% gel. An improvement of the most relevant spot is pointed.

## Summary of Bicowwhite® benefits:

- ⦿ **MULTI-TARGET** delivery of 5 complementary whitening ingredients
- ⦿ **BLOCKS** the main processes involved in the formation of dark spots
- ⦿ **REDUCES** melanin content in regular conditions and under UV exposure
- ⦿ **PROTECTS** the microstructures of the skin, preventing damages
- ⦿ **HIGHLY EFFECTIVE** to depigment dark spots, whiten, brighten and unify skin tone
- ⦿ **HIGHLY SPECIFIC** for hyperpigmented areas
- ⦿ **HELPS to REDUCE** wrinkles and fine lines
- ⦿ Tested under Dermatological control

## Formulation with Bicowwhite®:

Recommended dosage: 1 - 3%

Max. temperature: 50° C

pH range: 4 - 8

Max. stirring speed: 3000rpm

## PRODUCT TYPES

WHITENING  
LOTIONS

AGE SPOTS  
LIGHTENERS

RADIANCE  
SERUMS

LIGHTENING  
ESSENCES

BRIGHTENING  
EMULSIONS

LIGHTENING  
MAKE-UP

## INCI of Bicowwhite® Complex:

Aqua, Lecithin, Lysolecithin, Niacinamide, 3-O-ethyl Ascorbic Acid, Potassium Azeloyl Diglycinate, Phenethyl Alcohol, Bisabolol, Caprylhydroxamic Acid, Tocopheryl Acetate, Caprylyl Glycol, Phytic Acid.

