

*melavoid*TM

Global lightening effect



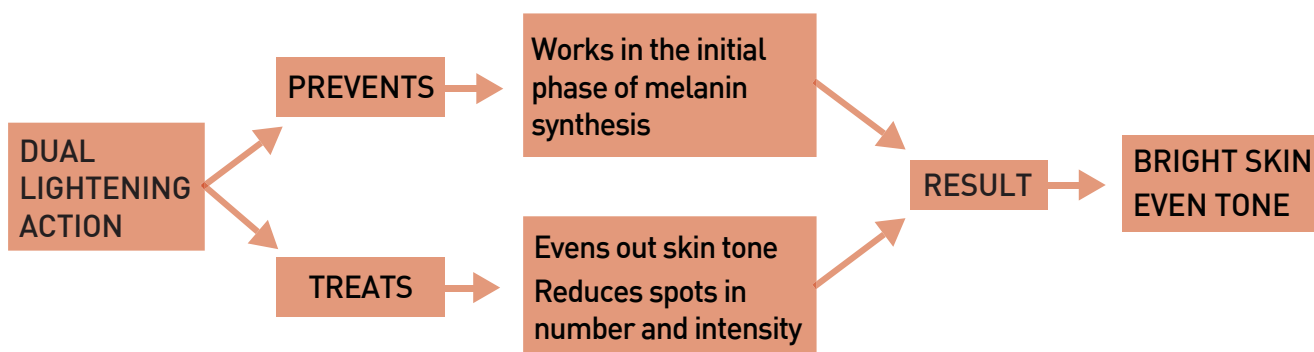
To show a bright and even skin tone is one of the major cosmetic concerns of consumers.

- In some countries, fair skin is perceived as more attractive.
- Spots and irregular pigmentation give an aged appearance, which does not correspond with reality.

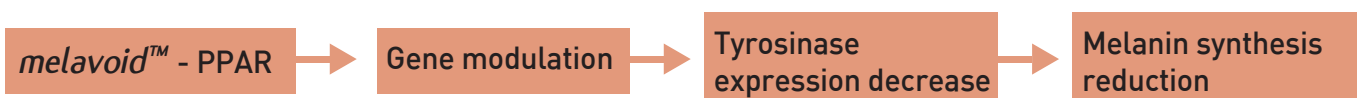
*melavoid*TM, lightening active ingredient, works on the initial mechanisms of pigmentation, decreasing skin tone and spots

How does *melavoid*TM work?

*melavoid*TM, through its binding to PPAR γ , acts on previous phases of the melanin metabolism:



Regulates melanogenesis by gene modulation of melanocytes:



*melavoid*TM is obtained from the roots of punarnava (*Boerhaavia diffusa*), standardized in boeravinones.

An in silico screening demonstrated that boeravinone B, a component of *Boerhaavia diffusa*, is the suitable active to act as a natural agonist of PPAR γ .



TESTED ON ASIAN SKIN
WORKS BOTH IN DEEP AND SUPERFICIAL SPOTS

In vitro efficacy

● Depigmenting activity

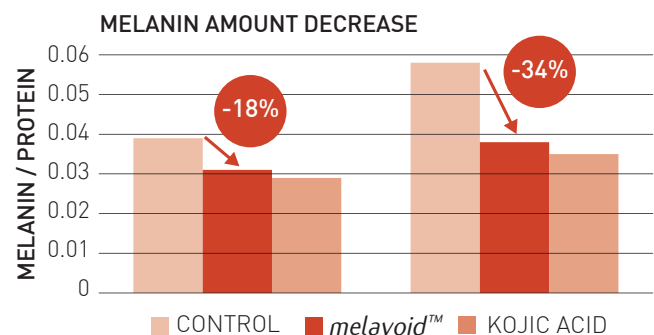
The activity of *melavoid*TM on human melanocytes NHEM (Normal Human Epidermal Melanocytes) was assessed and demonstrated:

- -63% of tyrosinase expression.
- -55% of tyrosinase activity.

At the same time, it was observed that *melavoid*TM maintains melanocytes viability (unlike kojic acid) by reducing their number of dendrites, thus preventing an accumulation of pigment in the epidermis.

*melavoid*TM decreases by 34% the amount of melanin without affecting melanocytes viability

In the same culture, melanin synthesis reduction was specifically evaluated:



In vivo efficacy

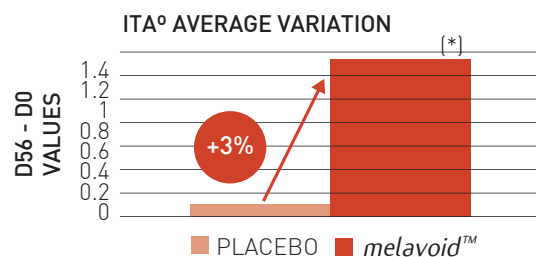
Tests performed in a panel of 20 Asian female volunteers. 3% *melavoid*TM on one side of the face, and placebo on the other. 56 days of twice daily application. Two areas: normal skin and spots.

● Evaluation of normal skin without spots

An increase of ITA° parameter means a decrease of skin pigmentation intensity.

*melavoid*TM produces a maximum ITA° increment up to 28%, diminishing skin pigmentation intensity

(*) *melavoid*TM statistically significant respect to D0.



● Evaluation of spotted skin

In the hyperpigmented area, the ITA° parameter is increased by 5% on average. This difference about the value of ITA° in the spotted skin results in an homogeneous and uniform tone.

*melavoid*TM is an intelligent depigmentant; its activity is higher in areas with spots and thus evens skin color

The maximum reduction obtained by *melavoid*TM in the different types of pigmentary spots is:

- -19% in superficial spots.
- -15% in UV spots.
- -28% in brown spots.



Untreated skin D0 measurement:
82 superficial spots



Treated with *melavoid*TM D56
measurement: 51 superficial spots ▶▶▶▶