

ISP

BOTANICALS

Vincience
ACTIVES

Achromaxyl™ IS

Description

A skin-lightening botanical extract with clinically proven efficacy on lightening skin color and reducing age spots.

ACHROMAXYL IS is a new, patented skin-lightening active ingredient for cosmetic products. It is composed of fermented and hydrolyzed proteins extracted from the *Brassicaceae* family.

Skin-lightening biofunctional active ingredients are generally used for two major cosmetic applications: the reduction in the appearance of age spots (one of the major signs of aging) and general skin-lightening.

Properties

- Decreases Tyrosinase activity *in-vitro*
- Reduces melanin content in *ex-vivo* skin
- Lightens skin pigmentation
- Significantly reduces skin imperfections
- Validated by ECOCERT

Cosmetic applications

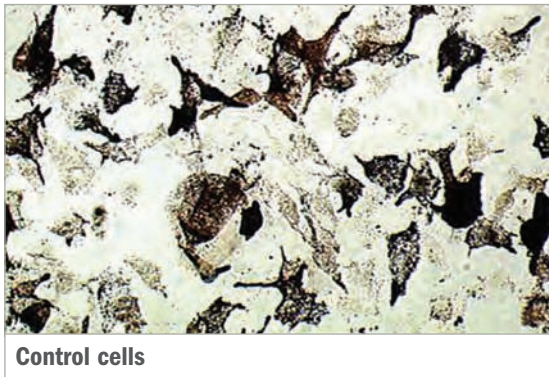
- Skin-lightening products
- Age-spot diminishing products
- Anti-aging products
- Brightening and radiance enhancing skin products
- Hand care products

ISP Vincience™ Actives

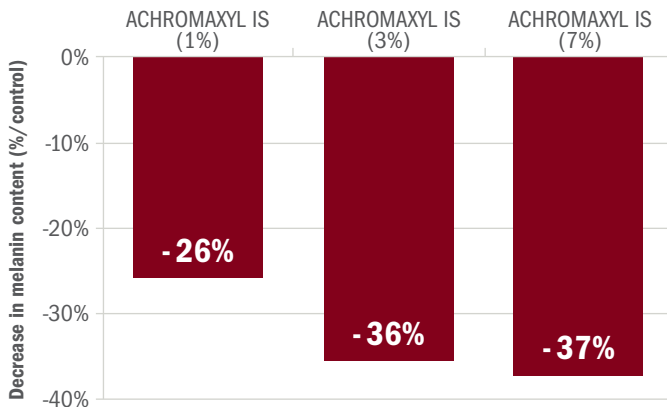
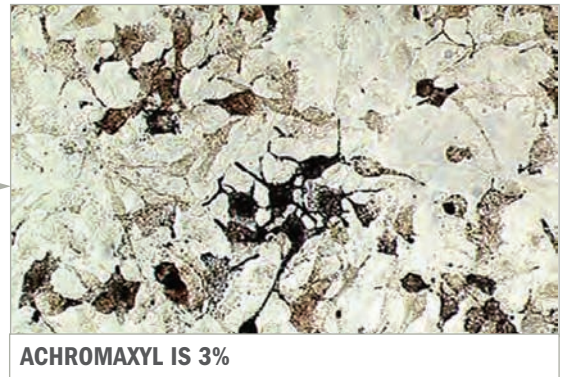
In-vitro efficacy

1. Effect of ACHROMAXYL IS on melanin content

ACHROMAXYL IS was applied on a cell culture of melanocytes for 24 hours. Fontana-Masson histological staining permits a qualitative evaluation of melanin content. A second study using a colorimetric assay quantifies this activity.



24 HOURS

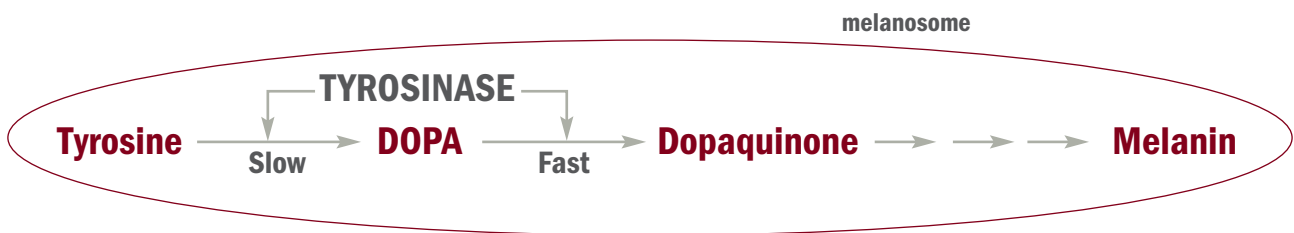


Results demonstrate that ACHROMAXYL IS decreases melanin content in melanocytes. This effect is dose-dependent. Furthermore, a time-course study (result not shown) indicates a maximum effect at 24 hours that continues at 48 and 72 hours.

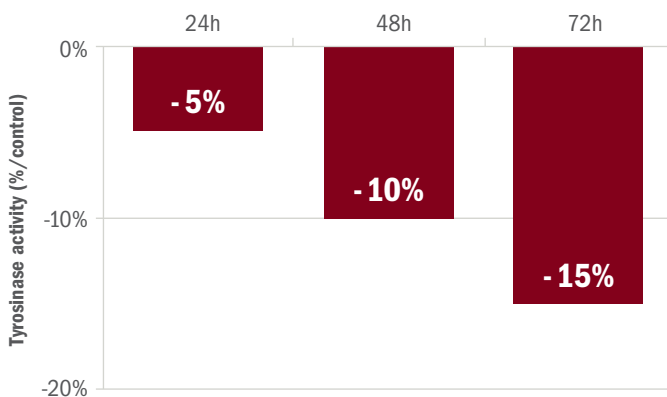
2. Effect of ACHROMAXYL IS on Tyrosinase activity

Tyrosinase is an enzyme involved in the first biochemical transformations of the melanogenesis chemical chain reaction.

In this test, the inhibiting properties of ACHROMAXYL IS on this enzyme were evaluated.



The activity of ACHROMAXYL IS at 3% was evaluated on a melanocyte cell culture via tyrosinase activity assay, using L-DOPA substrate.

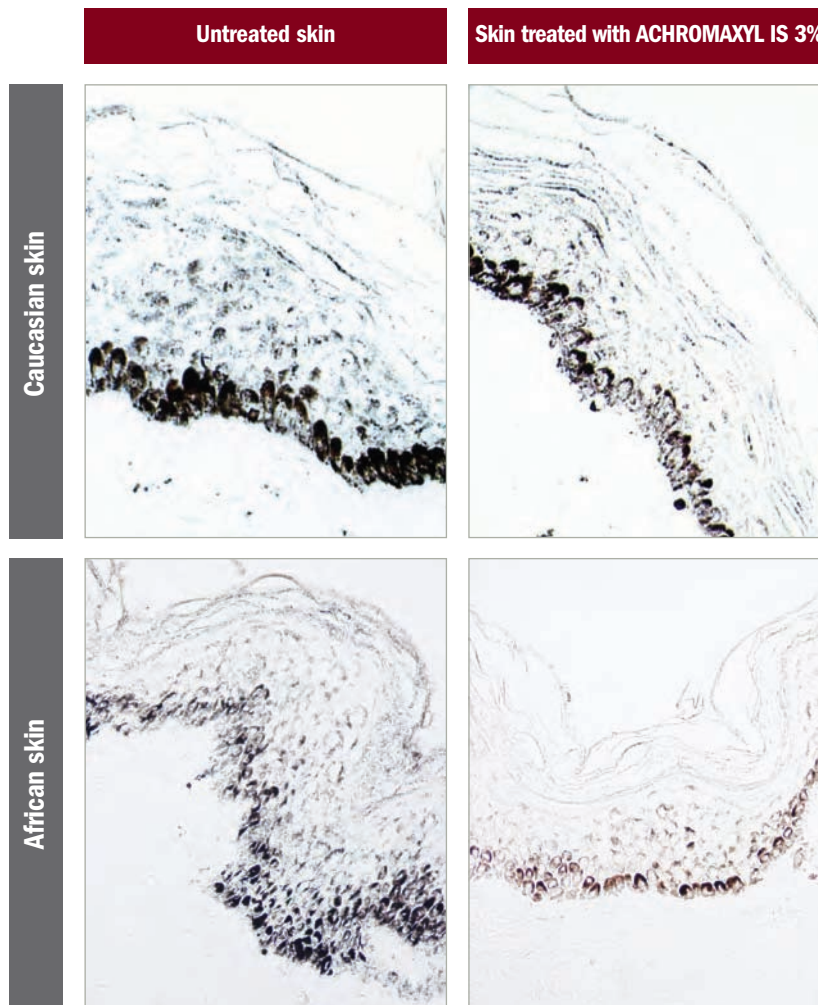


ACHROMAXYL IS induces a significant decrease in melanin content by inhibiting the activity of the tyrosinase enzyme.

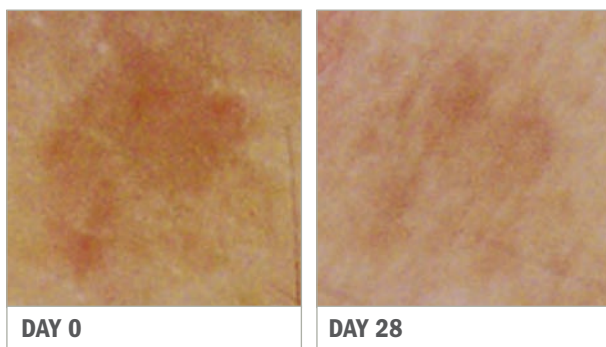
Ex-vivo efficacy

Effect of ACHROMAXYL IS on two skin groups: Caucasian and African

Caucasian and African *ex-vivo* human skin was treated twice a day, for 5 days, with ACHROMAXYL IS at 3%. Melanin content was revealed using Fontana-Masson histological staining.



In-vivo efficacy



A clinical study was carried out on a cream formulated with ACHROMAXYL IS at 3% on 15 healthy volunteers aged between 45 and 75. The cream was applied on the forearm twice a day for 4 weeks. Macrophotographs were taken and cutaneous pigmentation was evaluated by clinical scoring (simple-blind clinical scoring method) and by the volunteers (self evaluation).

ACHROMAXYL IS clearly decreases the size and intensity of age spots and restores a homogenous pigmentation.

	% of decrease in skin pigmentation	% and number of improved volunteers
Clinical scoring	- 21%	67% (10/15)
Volunteer self evaluation	- 41%	86% (13/15)

This clinical study demonstrates that both clinical and volunteer scoring provide evidence of a strong decrease in skin pigmentation after ACHROMAXYL IS application.

Specifications

Form:	Limpid aqueous solution
Color:	Amber
Odor:	Characteristic
Solubility:	Soluble in water
Preservatives:	Preservative-free

INCI Name

WATER (AND) GLYCERIN (AND) BRASSICA NAPUS EXTRACT

Formulation Guidelines

- Add in water phase below 40°C - in emulsion add on cool-down post-emulsification
- Recommended use levels: 1% - 3%, clinically tested at 3%

The above formulation information is for guideline purposes only. Some products may be formulated outside of the parameters of these guidelines. Please contact ISP Vincience for more specific information.



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