

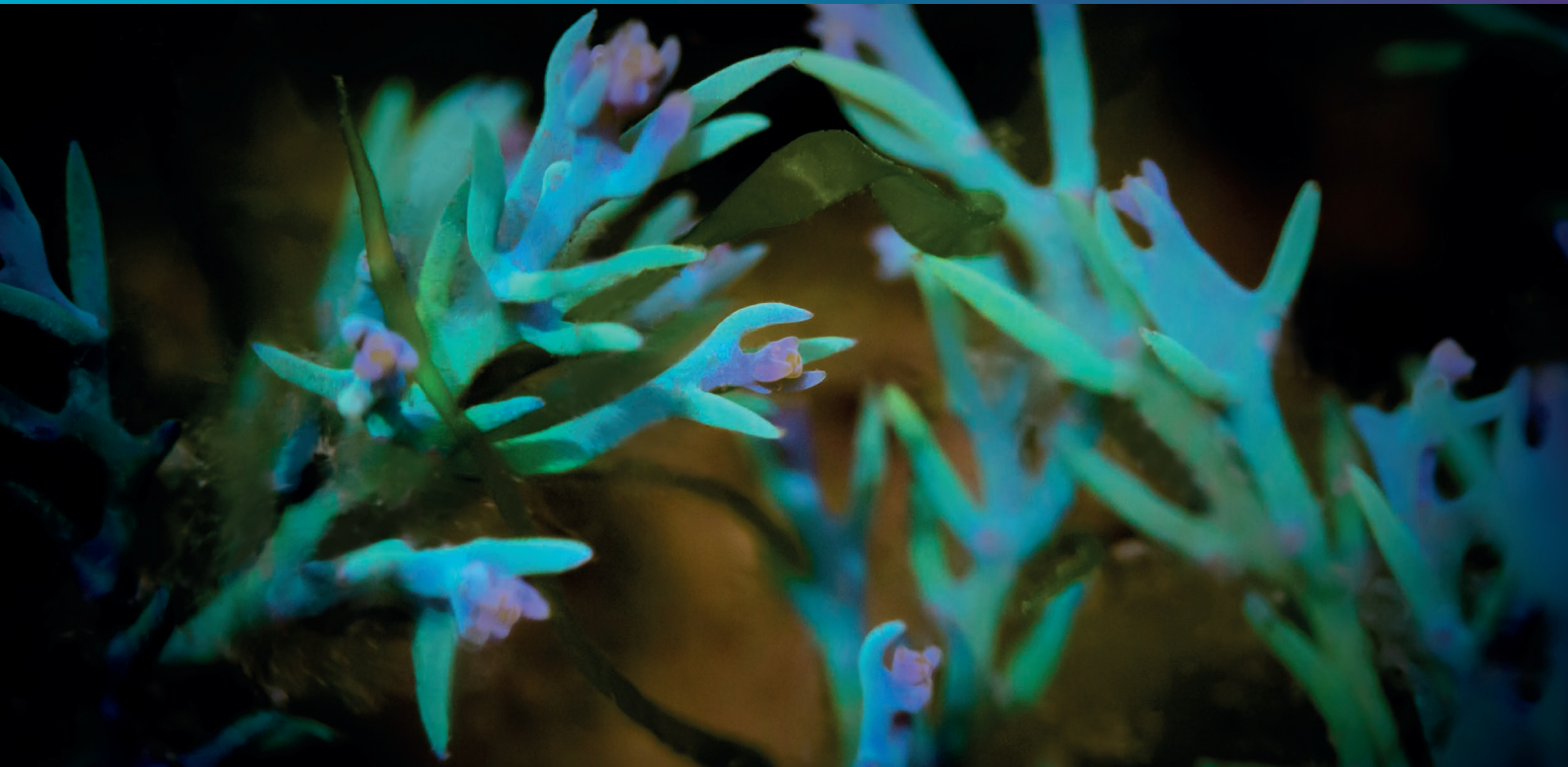


CODIF

Technologie naturelle

CYWHITE

MelanoBreaker - Lightener



CYWHITE...

...A BIOMIMETIC INGREDIENT FROM RAINBOW ALGAE.

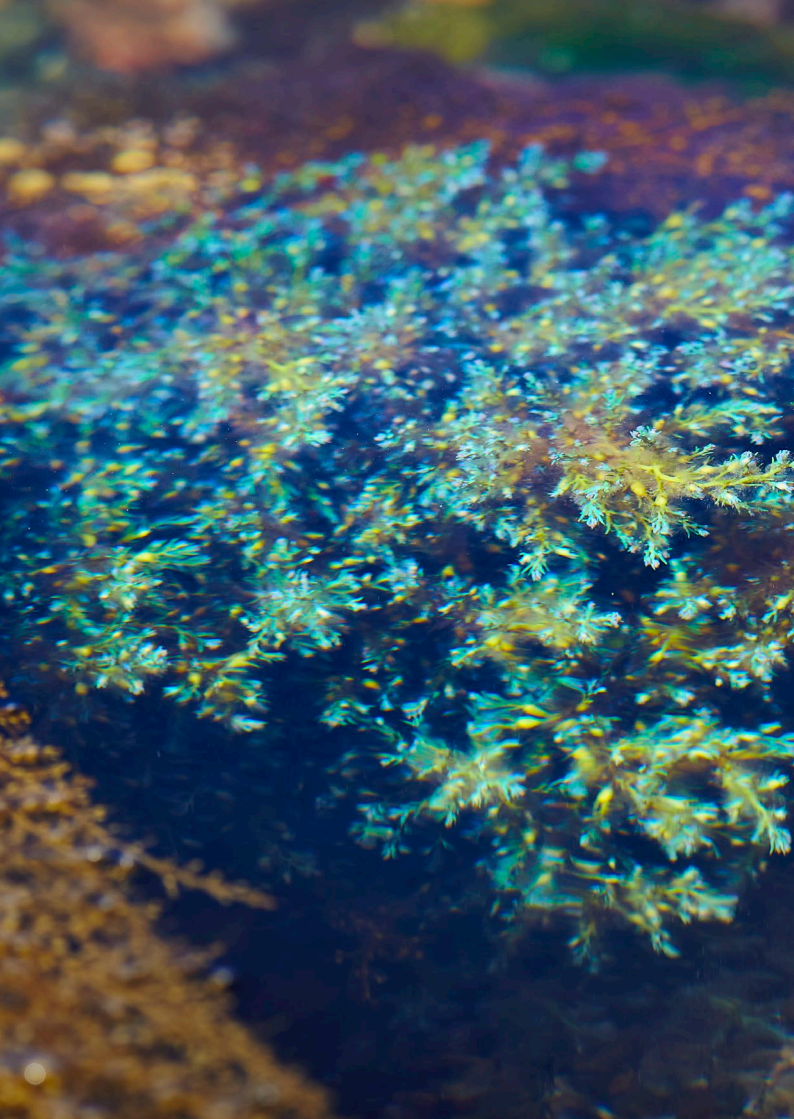
The brown algae *Cystoseira tamariscifolia* possesses branches covered in spines which become iridescent when put into water: their colour changes from green to violet passing through blue – hence the name, Rainbow Algae.

...TARGETING NEW SKIN LIGHTENING MOLECULES.

In addition to inhibiting melanogenesis, Cywhite targets molecules involved in the absorption of melanosomes by keratinocytes and then their degradation inside the keratinocytes.

...TO LIGHTEN AND SMOOTH OUT SKIN TONE IMPERFECTIONS.

Cywhite makes the skin tone uniform for a more luminous and sparkling skin. Used in a more concentrated formulation, it lightens skin pigmentation after one week's use.



...AN ALGAE WITH CHAMELEON-LIKE QUALITIES.

In 2018 Martin Lopez-Garcia* and his team published a new study on the phenomenon of iridescence in algae. The iridescence is due to the regular stacking of particles of grease in pockets in the epidermal cells of the algae. *"This effect had only been observed before in certain animals such as chameleons"*.

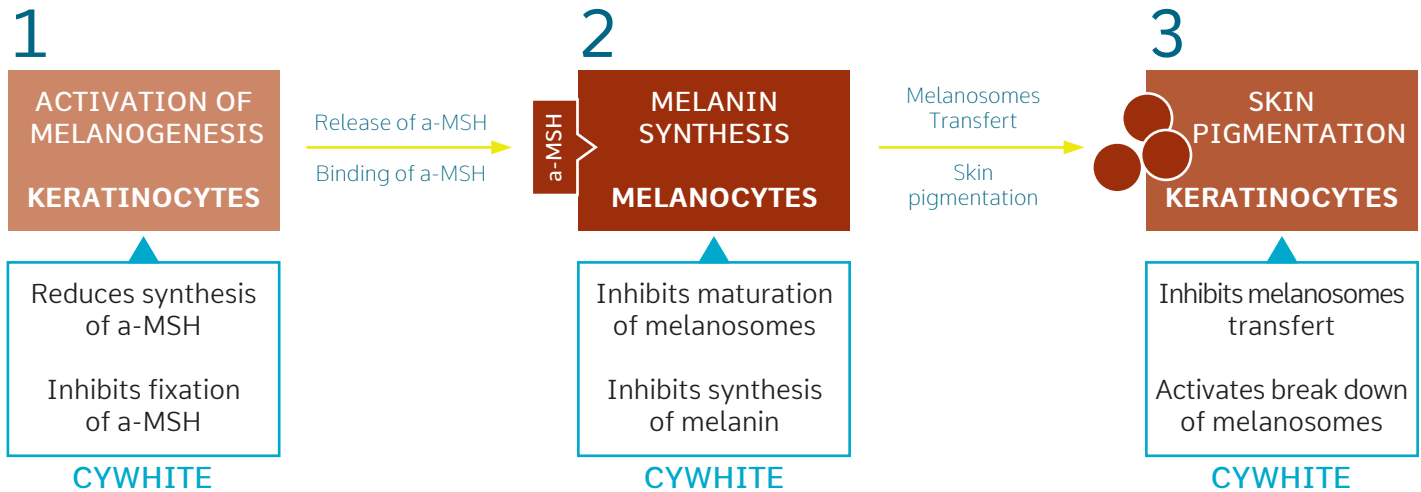
This adaptation seems to be a response to environmental factors. The algae is exposed to light of varying intensity which changes with the tide and depth of the water. The iridescence enables the algae to improve diffusion of the ambient light to the chloroplasts.

...RESPONSIBLE AND ORGANIC CULTIVATION.

At L'Armor-Pleubian (Brittany – FRANCE): the "land" of marine agriculture; a causeway opens up at low tide, carved into the rocks between Penn Lann and the île Maudez.

Where the causeway starts is the harvesting area of the rainbow alga. It is made up of ecosystems specific to a few species which are not yet collected by other seaweed-collectors. *Cystoseira tamariscifolia* is harvested 100% by hand and meets ORGANIC, COSMOS standards. To minimise waste and promote regrowth, each year's shoots are cut with a knife. Cutting the young part of the algae with a knife and washing on site reduces waste later on. The location where it is harvested is itself Ecocert/Cosmos approved and the algae is Organic quality.

Cywhite acts through 3 steps:
Before, during and after melanin synthesis to decrease skin pigmentation.



1 - WITHIN THE KERATINOCYTES, INHIBITING ACTIVATION OF MELANOGENESIS

By reducing the synthesis of molecules involved in its maturation from α -MSH.

BY stimulating synthesis of a molecule that competes with α -MSH to prevent it fixing and activating melanogenesis.

2 - WITHIN THE MELANOCYTES, INHIBITING MELANOGENESIS

By reducing the maturation of melanosomes. Melanosomes can only synthesise melanin after they have undergone a phase of maturation.

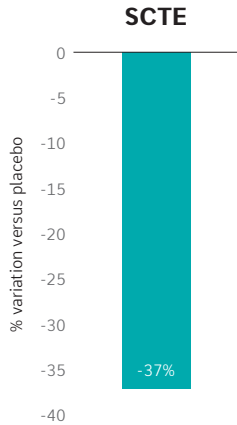
By activating an inhibitor which prevents tyrosinase synthesis, the enzyme responsible for producing melanin.

3 - WITHIN THE KERATINOCYTES, DECREASING THE AMOUNT OF PIGMENTS

By decreasing a factor involved in the absorption of melanosomes by keratinocytes; then activating cathepsins L2 (CTSL2) involved in the degradation of melanosomes. The role of CTSL2 in the degradation of melanosomes is being studied more and more. Its expression is very clearly increased in light skin whose activity of melanosome degradation is greater than in dark skin*.

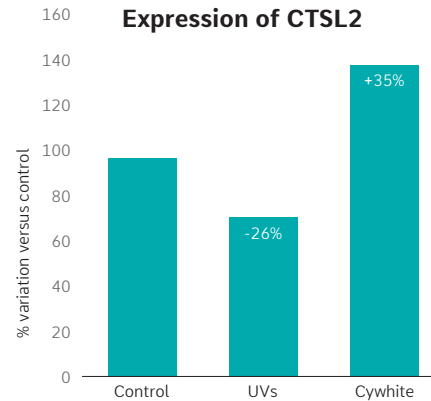
Limiting the absorption of melanosomes

Cywhite decreases the known SCTE enzyme to activate the PAR-2 factor involved in phagocytosis (uptake) of melanosomes by keratinocytes.



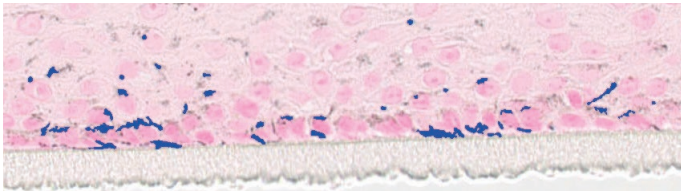
Promoting the degradation of melanosomes in keratinocytes

CTSL2 is higher in fair skin with more melanosome degradation activity than in dark skin. Our laboratories have shown that UV exposure results in a -26% decrease in CTSL2.

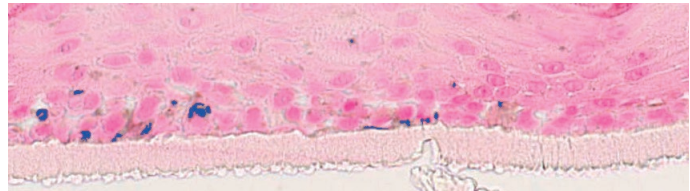


Decreasing the total amount of melanin in the epidermis by -90% *** ($p < 0.001$ Student test).

Untreated - Melanine in blue



Treated with Cywhite - Melanine in blue



*** $p < 0.001$ Student t test

1 - WITHIN THE KERATINOCYTES, INHIBITING ACTIVATION OF MELANOGENESIS

Cywhite reduces synthesis of molecules involved in the maturation of a-MSH:

-**46%** POMC (Pro-Opio-MelanoCortine)

Cywhite stimulates the synthesis of a molecule that competes with a-MSH:

+ **117%** AGRP (AGouti Related neuroPeptide).

2 - WITHIN THE MELANOCYTES, INHIBITING MELANOGENESIS

Cywhite reduces the expression of the molecule responsible for maturation of melanosomes:

-**25%** PMEL 17 (PreMELAnosome protein).

Cywhite stimulates the expression of a tyrosinase inhibitor:

+**48%** DKK1 (Dickkopf WNT signalling pathway inhibitor 1).

3 - WITHIN THE KERATINOCYTES, ELIMINATING PIGMENTS ALREADY PRESENT

Cywhite decreases the expression of a factor involved in melanosome absorption:

-**37%** SCTE (Stratum Corneum Trypsine like Enzyme).

Cywhite stimulates the expression of an enzyme involved in the degradation of melanosomes:

+**35%** CTSL2 (Cathepsin L2).

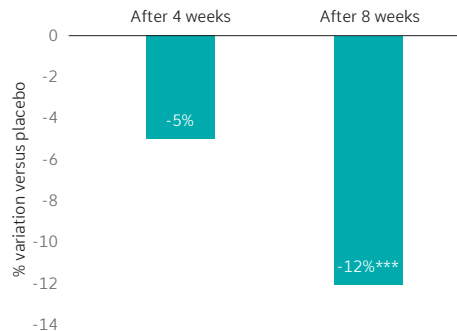
Cywhite reduces the quantity of melanin in the epidermis

-**90%***** melanin

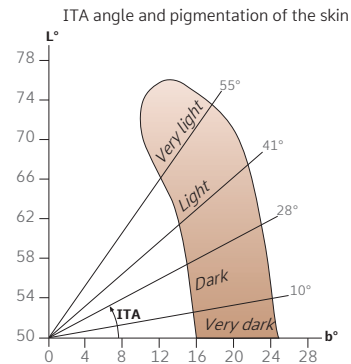
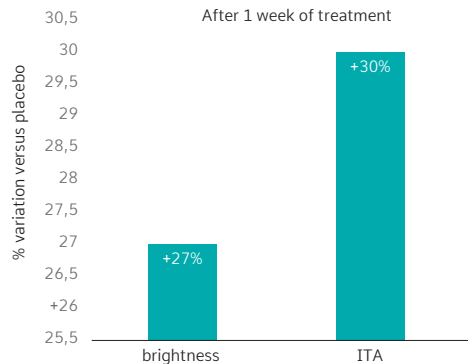
Used at 1% Cywhite reduces heterogeneity of skin tone.

Measurement of visibility of pigmentary defects (skin/ blemish contrast).

*** $p < 0.001$ Student *t* test



Used at 1.5% Cywhite lightens skin pigmentation.



MORE TRANSPARENT



LIGHTER TONE



MORE LUMINOUS TONE



ACTION ON HOMOGENEITY OF SKIN TONE AT 1%

Tested on two panels of 23 volunteers with Asian skin (Bangkok – Thailand).
2 applications per day for 8 weeks on the entire face.
Application of Cywhite at 1% or a placebo.

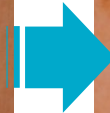
Cywhite lightens pigmentary blemishes: +7% ITA angle versus placebo after treatment for 8 weeks.
Cywhite reduces the visibility of pigmentary defects (skin/ blemish contrast).
-5% on average after 4 weeks versus placebo.
-12%*** on average after 8 weeks versus placebo. ($p < 0.001$ Student *t* test)

OVERALL LIGHTENING ACTION AT 1.5%

Tested on a panel of 16 volunteers with Asian skin (Bangkok – Thailand).
2 applications per day on the forearm for 1 week.
Application of a cream containing 1.5% Cywhite or a placebo.
Standardisation of UV exposure by exposure to UV light at D0, D1, D2 and D3.

Cywhite lightens skin pigmentation after 1 week:
+27% luminosity of the skin on average versus placebo.
+30% ITA angle (lightening) on average versus placebo.

VISIBLE BENEFITS ON IMPERFECTIONS AND HOMOGENEITY OF SKIN TONE



CARE BENEFITS

MELANOBREAKER
LIGHTENER – UNIFORMITY OF SKIN TONE

TO REDUCE OVERALL PIGMENTATION OF THE SKIN

- Reduction of factors involved in activation of melanogenesis.
- Reduction of factors involved in maturation of melanosomes.
- Reduction of melanin synthesis.
- Break down of melanosomes.
- Lightening of the skin and improvement in skin brightness.

TO REDUCE PIGMENTARY IMPERFECTIONS

- Lightening of pigmentation blemishes.
- Reduction in pigmentation heterogeneity of the skin.
- Reduction in visibility of pigmentation blemishes.

INDICATIVE FORMULATION • SNOW WHITE SERUM

Phase	Raw ingredient / Trade name	INCI Name	%
A	PHENOXYETHANOL (1)	Phenoxyethanol	0,80
	CETIOL LC (2)	Coco-caprylate/caprata	3,00
	SILICONE (DIMETHICONE (100CS)) (3)	Dimethicone	2,00
B	EAU DEMINERALISEE	Aqua	87,63
	ELESTAB CPN (4)	Chlorphenesin	0,27
C	DIPROPYLENE GLYCOL (5)	Dipropylene glycol	2,00
	KELTROL CGSFT (6)	Xanthan gum	0,20
D	SEPI NOV EMT 10 (7)	Hydroxyethyl acrylate/sodium acryloyldimethyl taurate copolymer & Sorbitan isostearate & Polysorbate 60 & Aqua	1,50
E	SEPIPLUS 400 (7)	Polyacrylate-13 & Polyisobutene & Polysorbate 20 & Sorbitan isostearate & Aqua	1,00
F	PARFUM	Parfum	0,10
	CYWHITE G (8)	Glycerin & Aqua & Cystoseira tamariscifolia extract	1,50
			100,00

(1) LEVHOSS ; (2) SACI-CFPA ; (3) QUIMDIS SA ; (4) A.M.I ; (5) BRENNTAG MAINE BRETAGNE ; (6) AZELIS ; (7) SEPPIC ; (8) CODIF Technologie Naturelle

PROCEDURE

- Heat phase B to 75°C in an emulsifier with gentle stirring. Add pre-mixed C (prepared previously in a defloculator) and emulsify at 1500 rpm for 10 minutes
- Leave to cool at 35°C while stirring gently
- Add D and emulsify at 2500 rpm for 10 minutes
- Emulsify A in BCD in an emulsifier at 2500 rpm for 10 minutes
- Add E and emulsify at 2500 rpm for 10 minutes
- Add the F ingredients and stir gently for 20 minutes
- Check the pH.

HOW TO USE IT

Water soluble ingredient to be used at 1 to 1.5% with:

NEUROLIGHT: for complete lightening and pigmentation blemish action.

SKINPERF LWG: to perfect, lighten and resurface the skin.

RAYKAMI: for a lightening and protective effect against radiations.

INCI

CYWHITE GP

Glycerin (and) Water (and) Cystoseira tamariscifolia extract (and) Phenoxyethanol

CYWHITE G

Glycerin (and) Water (and) Cystoseira tamariscifolia extract



infotech@codif-tn.com

commercial@codif-tn.com

70, rue du Commandant l'Herminier - CS 11781 - 35417 Saint-Malo CEDEX - FRANCE

Tel : +33-2-23-18-31-07 - Fax : +33-2-23-18-31-01

www.codif-tn.com



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