

# ILLUMISCIN®

June 2010

## Product Spotlight

### The new Anti-Age Spot Programme

**RAHN** | Cosmetics



ILLUMISCIN® is effective against age spots and provides illuminated, even-toned skin. A balanced, patented composition of Oleuropein, stabilised Vitamin C and Zinc PCA is responsible for its activity.

# ILLUMISCIN®

---

Dear reader

Thirty years ago Mrs. M. was still envied for her cute freckles. This morning, the 45-year old stands in front of the mirror in total frustration: when she was counting the fine lines on her face she discovered her first age spot...

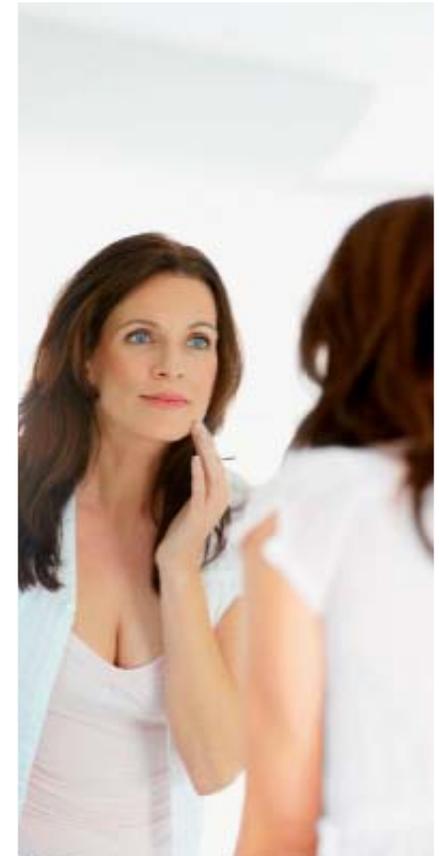
The brownish, oval-shaped spots usually appear after the age of 40, and in areas which have been exposed to the sun: the back of the hand, the fore-arms and the face.

With ILLUMISCIN®, RAHN has developed a new treatment concept to reduce the appearance and size of age spots. This patented active ingredient comprehensively fights against both the pigments being responsible for the appearance of age spots, Melanin and Lipofuscin.

The formula "Age Spots Eliminating Treatment" was tested in an *in-vivo* study. With this formulation we demonstrated that the size of existing age spots was successfully reduced and their contours are diminished. This leads to a more even skin tone and provides a more radiant skin.

Happy reading!

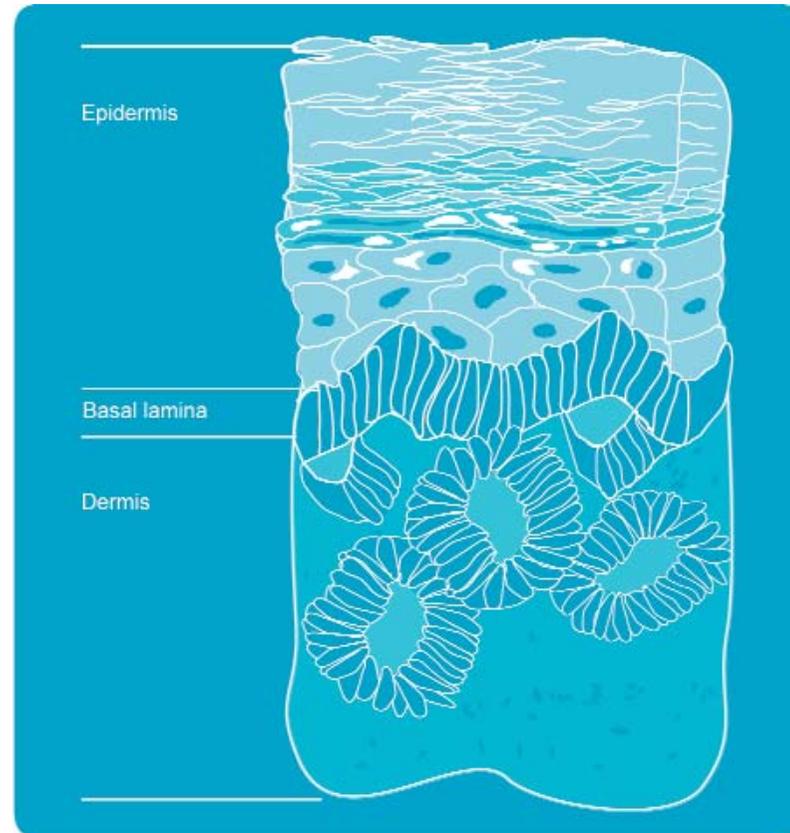
Yours sincerely  
The RAHN-Team



## Profile of age spots

Sun and age are the factors which induce the formation of age spots. The skin pigmentation disorders appear after the age of 40 and in skin zones exposed to the sun. The spots are initially yellow to light brown in colour, round or oval in shape and around 2–4 mm in diameter. Their number and size gradually increase with age and they can eventually merge into larger formations.

Histological skin studies have revealed that age spots have a hyper-pigmented basal layer with extended papillae, which protrude deep into the dermis. In the epidermis there are accumulations of Keratinocytes which retain and accumulate the skin pigment Melanin. Together with pigment cells (Melanocytes) these Keratinocytes grow downwards from the basal membrane into the dermis, where they form bud-shaped micro-invasions.



Keratinocytes and Melanocytes that are growing into the dermis can form micro-invasions.

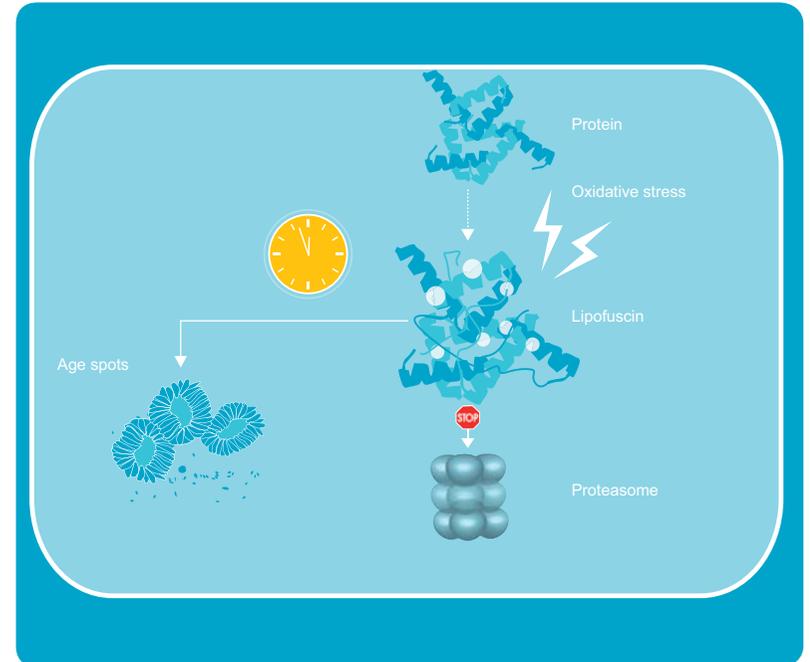
## The battle against age spots

Most age-spots-reducing active ingredients are inhibiting the sun-induced pigment Melanin, which is built in the Melanocytes. However this is only half of the truth. In addition to Melanin, there is a second dark agglomerate which is composed of several cellular waste products. Its formation leads to the development of age spots: the ageing pigment Lipofuscin.

Lipofuscin is a complex heterogeneous structure composed of oxidised proteins (30–58 %) and fat waste products (19–51 %). It also contains carbohydrates and metals such as iron, copper and Zinc. The pigment is created when the so-called “proteasomal system,” the cellular recycling factory, becomes limited in its activity as a result of cell ageing. This is the reason why proteins can only be degraded to a limited extent. They oxidise, accumulate in the cell and together with further metabolic degradation prod-

ucts build the aggregation product Lipofuscin. The ageing pigment is cellular waste which can neither be degraded nor removed from the cell.

In the phenomenon of age spots, Lipofuscin accumulates in the micro-invaginations of the keratinocytes growing into the dermis. As it can not be degraded, the pigment becomes visible as an annoying spot.



The formation of the ageing pigment Lipofuscin leads to the appearance of age spots.

## Profile of ingredients

### Stabilised Vitamin C

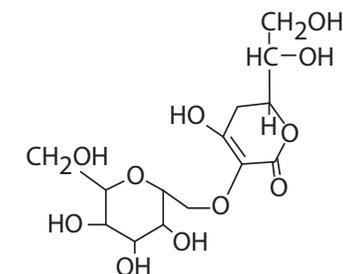
Vitamin C and its derivatives are well known due to their outstanding free radical scavenging properties. In addition, many studies both *in-vitro* and *in-vivo* have demonstrated that Vitamin C and its derivatives reduce the production of Melanin. This effect can be ascribed to the Tyrosinase inhibiting effect of the Ascorbic Acid, which prevents the Melanin formation process. As Vitamin C is not synthesised by the body, it has to be taken in foods or as a topical application. It is transported into the cells by means of Vitamin C transporters.

In ILLUMISCIN® stabilised Vitamin C in the form of Ascorbyl Glucoside is used to prevent the formation of the skin pigment Melanin and thus counteract the occurrence of age spots.

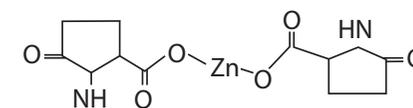
### Zinc PCA

Zinc PCA is the Zinc salt of Pyrrolidonic Carboxylic Acid. When associated with Vitamin C and its derivatives, Zinc PCA has a further property: when applied to skin cells, the substance dose-dependently increases the expression of SVCT2. Hence the application of Zinc PCA makes a higher quantity of Vitamin C transporters available, thus alleviating the limited transport of Ascorbic Acid into the skin cells.

**ILLUMISCIN® combats both the pigments responsible for the formation of age spots, Melanin and Lipofuscin**



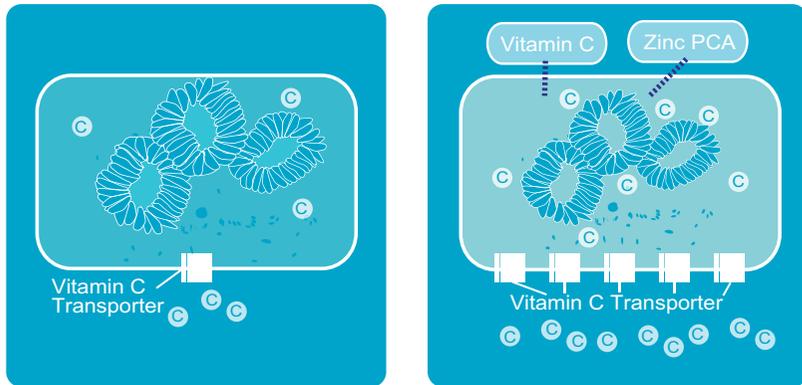
Ascorbyl Glucoside



Zinc PCA

# ILLUMISCIN®

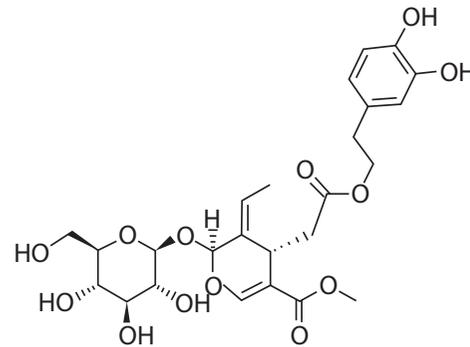
In ILLUMISCIN® Zinc PCA takes on the role of opening the door for the Vitamin C. The vitamin derivative can be more easily taken up by the skin cells and can exhibit a better inhibitory effect on Melanogenesis.



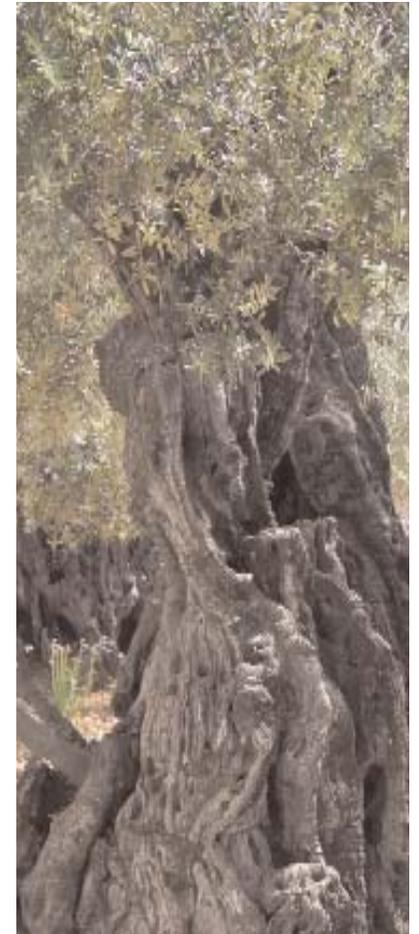
A strong team: stabilised Vitamin C and Zinc PCA

## Oleuropein

The bitter tasting polyphenol Oleuropein is the main active ingredient in Olive leaves. It protects the tree against pathogenic germs and thus makes a major contribution to its survival strategy. Oleuropein is highly relevant in combating age spots: *in-vitro* it has been shown that Oleuropein in ILLUMISCIN® reduces the formation of the cellular waste product Lipofuscin. This activity is due to the fact that Oleuropein re-activates the cellular recycling factory, the proteasomal system, which only functions to a limited extent in ageing skin cells.



Oleuropein, a polyphenol found in Olive leaves

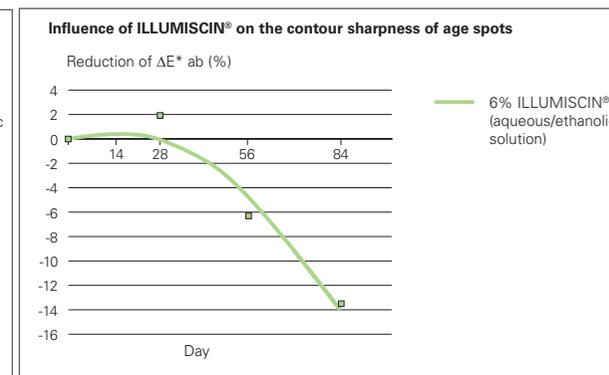
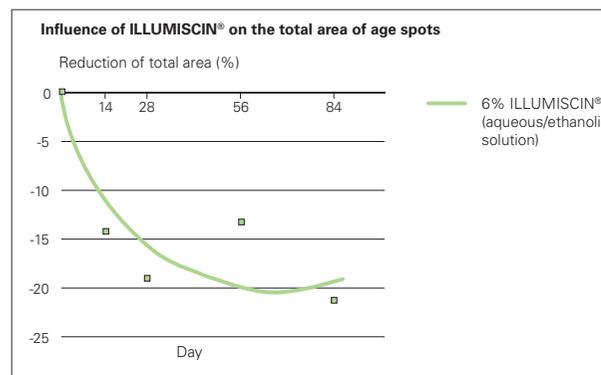


## “Age Spots Eliminating Treatment” – the Anti-Age-Spot Programme from RAHN

The “Age Spots Eliminating Treatment” contains a solution of ILLUMISCIN® in water and ethanol.

Phase	Substance	INCI Name EU	% [w/w]
A	Water demin.	Aqua	76.00
B	Ethanol	Alcohol denat.	18.00
C	ILLUMISCIN®	Glycerin, Aqua, Olea Europaea Leaf Extract, Ascorbyl Glucoside, Zinc PCA	6.00

The formula was tested by 20 volunteers aged between 50 and 70 years over a period of 3 months. It was applied twice daily. On Day 0, 14, 28, 56 and 84 of the treatment, high resolution digital images of the test subjects’ age spots were taken. Using specially developed software, the total area and the contour sharpness of the age spots were determined.



After just 14 days, the “Age Spots Eliminating Treatment” formulation shows a reduction of the total area of age spots of 14.2 %. After an application period of 3 months, the average decrease in age spot size was 21.2 %. After 4 weeks of application, the age spots contours begin to diminish. After 3 months the contours sharpness was reduced by 13.5 %, the skin tone is evened out.

### Advantages and Claims:

- Inhibits Melanin and Lipofuscin, the main causes of age spots
- Acts quickly with results after two weeks
- Reduces the total area of age spots by 21.2 % after 3 months
- Evens out skin tone
- Diminishes the contours of age spots
- Rejuvenation treatment against age spots
- Comprehensive Anti-Age-Spot Programme providing illuminated skin

RAHN AG

Dörflistrasse 120

CH-8050 Zürich

Tel. +41 44 315 42 00

Fax +41 44 315 42 45

RAHN GmbH

Hahnstrasse 70

DE-60528 Frankfurt am Main

Tel. 0800 1 816 015

Fax 0800 1 816 016

RAHN (UK) Ltd.

75 Park Road

GB-Peterborough

PE1 2TN

Tel. 0800 0 323 743

Fax 0800 0 323 744

RAHN USA Corp.

1005 North Commons Drive

Aurora, Illinois 60504, USA

Tel. +1 630 851 4220

Fax +1 630 851 4863

[Cosmetics@rahn-group.com](mailto:Cosmetics@rahn-group.com)

[www.rahn-group.com](http://www.rahn-group.com)

### Disclaimer

The information contained herein is, to our best knowledge, true and accurate, but all recommendations or suggestions are made without guarantee.

It shows a formula thought as a support by developing with our raw materials.