

# L'ABEILLE



SCIENCE-BASED COSMECEUTICALS

## ACTIVE DATA SHEETS

*Bakuchiol*

*Copper Tripeptide-1*

*Ectoïne*

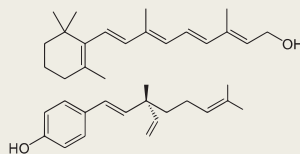
*Marine Blue Vital C*

*Niacinamide*

*Renoumer*

# BAKUCHIOL

The new retinol alternative



## WHY BAKUCHIOL IS THE NEW RETINOL ALTERNATIVE:

Bakuchiol is the first natural alternative to Retinol without having any of the negative effects associated with a Retinol. Derived from Bakuchiol (*Psoralea Corylifolia*) seeds, this ingredient is potent enough to be compared to & displays all the benefits of a Retinol.

It is photochemically and hydrolytically stable, so it can be used during the day. Multiple comparative studies revealed Bakuchiol to be a true alternative to Retinol. It modulates retinoid binding and metabolizing genes, significantly improves multiple dermal and dermo-epidermal junction genes/proteins, and is a Collagen I, III & IV stimulator. This product provides hydration by up-regulating synthesis of hyaluronic acid and aquaporin 3.

Bakuchiol is clinically proven to reduce multiple signs of aging.

## HOW WILL BAKUCHIOL BENEFIT MY SKIN?

- Significant reduction in depth and appearance of fine lines and wrinkles
- Increases elasticity and firmness of skin
- Boost production of skin's building blocks - collagen and elastin
- Has a strong antioxidant profile, protecting skin from free radical damage
- Fades Pigmentation and age spots, providing a more even skin tone
- Improves skin texture for a smoother appearance
- Reduces pore size
- Strong inhibitor of pro-inflammatory enzymes
- Anti-inflammatory and anti-bacterial properties reduce acne, blemishes & breakouts
- Improves dry skin
- Increases skin radiance & brightness
- Protects against the detrimental effects of UV exposure
- Strong inhibitory effect against UV induced erythema
- Suitable for all skin types, even sensitive skin

"When it comes to a natural, plant-based retinol alternative, there is only one ingredient that has been extensively studied and proven to mimic the activity and benefits of Retinol," says cosmetic chemist Al-Nisa Ward, CEO and owner of consulting firm Cosmetic Science Innovations. "That ingredient is Bakuchiol."

## IS BAKUCHIOL BETTER THAN RETINOL?

Retinol is a Vitamin A derivative ingredient that has been used for decades in cosmetic skin creams. Retinyl Palmitate is estimated to be about 20% weaker than Retinol and works by stimulating collagen production, whereas Retinol is stronger and also increases skin cell turnover as well as stimulating collagen production. Similarly to Retinol, Bakuchiol helps to instruct normal cell behaviour, encouraging the natural shedding of the skin and boosting collagen and elastin production, without the associated side effects (increased sensitivity and redness) of Retinol.

## RETINOL SIDE EFFECTS:

- It is listed by the FDA as "category X," meaning it should not be used by pregnant or breastfeeding women.
- Clinical studies carried out on rats suggest that Retinyl Palmitate might accelerate the growth of tumor cells.
- Many scientists believe that as Retinol increases cellular turnover, it also causes thinning of the skin with prolonged use.
- Due to photochemical and hydrolytic instability, use of products that contain Retinol is primarily restricted to night time.
- Physical side effects include redness, irritation, stinging, burning, itching, skin flaking, & significant sensitivity to sunlight.

With modern technology there really is no reason to choose anti-aging skincare that still uses Retinol.

## BAKUCHIOL: A RETINOL-LIKE FUNCTIONAL COMPOUND REVEALED BY GENE EXPRESSION PROFILING AND CLINICALLY PROVEN TO HAVE ANTI-AGING EFFECTS

### DOUBLE BLIND CASE STUDY RESULTS

Prospective, randomized, double-blind assessment of topical Bakuchiol and Retinol for facial photoageing. Dhaliwal S, et al. Br J Dermatol. 2019.

#### Abstract

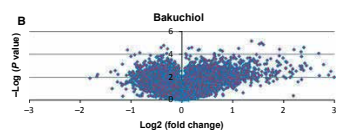
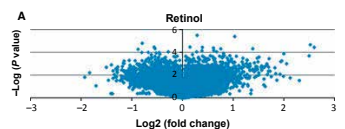
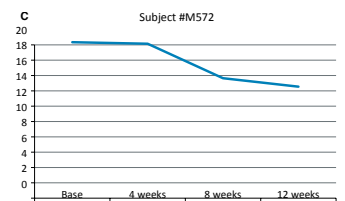
**BACKGROUND:** Bakuchiol is a phytochemical that has demonstrated cutaneous antiaging effects when applied topically. Early studies have suggested that Bakuchiol is a functional analogue of topical retinoids, as both compounds have been shown to induce similar gene expression in the skin and lead to improvement of cutaneous photo damage. No in vivo studies have compared the two compounds for efficacy and side-effects.

**OBJECTIVES:** To compare the clinical efficacy and side-effect profiles of Bakuchiol and Retinol in improving common signs of cutaneous facial ageing.

**METHODS:** This was a randomized, double-blind, 12-week study in which 44 patients were asked to apply either Bakuchiol 0.5% cream twice daily or Retinol 0.5% cream daily. A facial photograph and analytical system was used to obtain and analyse high-resolution photographs of patients at 0, 4, 8 and 12 weeks. Patients also completed tolerability assessment questions to review side-effects. During study visits, a board-certified dermatologist, blinded to study group assignments, graded pigmentation and redness.

**RESULTS:** Bakuchiol and Retinol both significantly decreased wrinkle surface area and hyperpigmentation, with no statistical difference between the compounds. The Retinol users reported more facial skin scaling and stinging.

**CONCLUSIONS:** Our study demonstrates that Bakuchiol is comparable with Retinol in its ability to improve photo ageing and is better tolerated than Retinol. Bakuchiol is promising as a more tolerable alternative to Retinol.



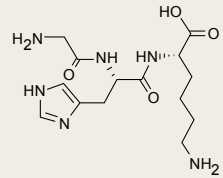
© 2018 British Association of Dermatologists.  
<https://www.ncbi.nlm.nih.gov/m/pubmed/29947134/>

## L'ABEILLE PRODUCTS CONTAINING BAKUCHIOL:

· Phyto-A

# COPPER TRIPEPTIDE-1 (GHK-CU)

Activate stem cells & reset DNA



The development of bio-active peptides has opened a new field in cosmeceutical and pharmaceutical skin care. In the last two decades, many new peptides have been developed, and new knowledge on how peptides improve the skin has been uncovered. The spectrum of peptides in the field of cosmetics is continuously growing.

GHK is present in human plasma but declines with age. The copper tripeptide used in L'abeille is bio-identical to the copper containing enzyme in our body that assists in tissue repair, cell metabolism, inflammation processes and the synthesis of vital molecular structures in our body.

Copper Tripeptide is a carrier peptide that delivers trace elements of copper, necessary for wound healing and enzymatic progress. This peptide is involved in copper transport into skin cells. Copper tripeptide (Cu-GHK) is one of the most well-examined peptides. It plays a role in the extracellular matrix, and is released in wounds or inflammation to support healing and repair. Cu-GHK stimulates cellular regulatory molecules and regenerates, and heals skin and other tissues. GHK significantly increased the expression of DNA repair genes ensuring better wound healing. It acts as signalling peptide and promotes regular collagen, elastin, proteoglycan, and glycosaminoglycan synthesis, provides anti-inflammatory and antioxidant responses. Stem cells treated with GHK regenerated and expressed more stem cell markers.

In cosmetic products, it has been found to tighten loose skin and improve elasticity, skin density, and firmness, reduce fine lines and wrinkles, reduce photodamage, and hyperpigmentation, and increase keratinocyte proliferation. GHK has been proposed as a therapeutic agent for skin inflammation. It is capable of up- and downregulating at least 4,000 human genes, essentially resetting DNA to a healthier state.

The below data summarizes some of the results from controlled in-vivo studies on human skin of the cosmeceutical peptide – GHK-CU (Copper Tripeptide) that works against intrinsic and extrinsic aging.

## FACIAL STUDIES

A number of placebo-controlled clinical studies found GHK-Cu to improve skin quality in women around the age of 50. Experiments have shown that in vitro Cu-GHK increases and stimulates the synthesis of collagen, glycosaminoglycans and other extracellular matrix molecules. Several placebo-controlled clinical trials have confirmed the observed effects. A topically applied cream with Cu-GHK was shown to stimulate dermal skin procollagen synthesis.

Synthesis induced by the copper tripeptide was significantly superior to vitamin C, tretinoin, or melatonin in comparison.

A GHK-Cu facial cream reduced visible signs of aging after 12 weeks of application to the facial skin of 71 women with mild to advanced signs of photoaging. The cream improved skin laxity, clarity, and appearance, reduced fine lines and the depth of wrinkles, and increased skin density and thickness.

A GHK-Cu eye cream, tested on 41 women for twelve weeks with mild to advanced photodamage, was compared to a placebo control and an eye cream containing vitamin K. The GHK-Cu cream performed better than both controls in terms of reducing lines and wrinkles, improving overall appearance, and increasing skin density and thickness.

In another 12-week facial study of 67 women between 50 and 59 years with mild to advanced photodamage, a GHK-Cu cream was applied twice daily and improved skin laxity, clarity, firmness and appearance, reduced fine lines, coarse wrinkles and mottled pigmentation, and increased skin density, and thickness. The cream also strongly stimulated dermal keratinocyte proliferation as determined by the histological analysis of biopsies.

## UP-TO-DATE, IT IS ESTABLISHED THAT GHK-CU IS ABLE TO:

- Tighten loose skin and reverse thinning of aged skin
- Improve skin firmness, elasticity, and clarity
- Smooth rough skin
- Reduce photodamage, mottled hyperpigmentation, skin spots and lesions
- Protect skin cells from UV radiation
- Strongly increase keratinocyte proliferation
- Repair protective skin barrier proteins
- Reduce fine lines, depth of wrinkles, and improve structure of aged skin
- Improve overall skin appearance
- Stimulate wound healing
- Reduce inflammation and free radical damage

### EXCERPT INFORMATION OBTAINED FROM THE BELOW PUBLISHED MEDICAL ARTICLES

#### 1. Topical Peptide Treatments with Effective Anti-Aging Results

Silke Karin Schagen

Beldio Research GmbH; Kramerstrasse 15, 87700

Memmingen, Germany

Received: 26 December 2016; Accepted: 16 May 2017; Published: 22 May 2017

Academic Editor: Marie Loden

#### 2. BioMed Research International

GHK Peptide as a Natural Modulator of Multiple Cellular Pathways in Skin Regeneration

Volume 2015, Article ID 648108

Loren Pickart, Jessica Michelle Vasquez-Soltero, & Anna Margolina

Skin Biology, Research & Development Department, 4122 Factoria Boulevard, SE Suite No. 200

Bellevue, WA 98006, USA

Received 21 November 2014; Revised 17 March 2015;

Accepted 9 April 2015

Academic Editor: May Griffith

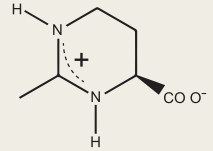
### L'ABELLE PRODUCTS CONTAINING COPPER TRIPEPTIDE-1:

- Peptide Restore

# ECTOINE

## THE ACTIVE CELL PROTECTOR

From nature to science to cosmetic care



## THE SUPER MOISTURISER

Ectoine is a natural extremolyte found in bacteria which grows under extreme conditions of salinity, drought, irradiation, pH, and temperature. Ectoine binds strongly to water molecules, thereby forming a protective hydrate shield around proteins and other biomolecules. It works via a mechanism known as "preferential exclusion" i.e., it is preferentially excluded from the hydrate shield, which protects proteins from damage and irreversible denaturation and stabilizes biological membranes. This patented cell protection booster is compatible with the metabolism of the cell & protects the skin from environmental stressors. It reverses the unsightly & unhealthy effects of daily exposure to sunlight, pollution & stress. By supporting your skin's immune system, Ectoine keeps your skin healthy, while visibly & measurably reducing & preventing wrinkles. Proven protecting mechanisms prevent damage to your skin, allowing it to regenerate, rejuvenate & repair the appearance of aged skin. In vivo assessments confirmed that Ectoine shrinks existing wrinkles & keeps new ones from forming. It not only supports the skin's repair mechanism to UV damage, but also speeds up its defense system, protecting cells against stress 2 to 3 times faster than normal. Ectoine reliably helps to prevent premature photo-aging by binding water molecules & forming nourishing hydration shells around skin cells. Ectoine arms your skin against exposure & prevents dryness, giving you smoother, more supple skin.

The skin is home to beneficial microorganisms that work to protect the skin and keep pathogens away, an unbalanced or disrupted microbiome can cause negative skin reactions, both medical and cosmetic. Ectoine helps balance the skin microbiome, working as a prebiotic.

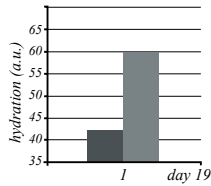
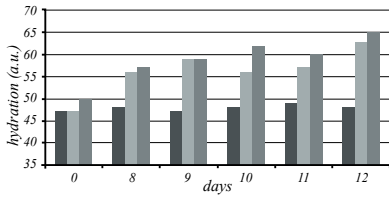
## PROPERTIES IN L'ABELLE:

Proven properties like:

- Protects & stops skin damage induced by UVA radiation
- Reduces the formation of sunburn cells & prohibits light-induced skin aging
- Reduces chemical and physical damage to cell membranes.
- Prevents damage to Langerhans Cells
- Protects & strengthens the skin's natural cellular immune-system
- Super-Moisturizer, stabilising skin's moisture due to its water binding capacity, providing long-term moisturising benefits
- Prevents water loss in dry atopic skin. Demonstration of strong water formation power via molecular modelling
- Anti-inflammatory action
- Stabilization of skin moisture due to its water binding capacity
- Enhances skin wellness sensation and is suitable for sensitive skin
- Proven wrinkle reduction

# MOISTURE RESERVOIR WITH ECTOINE (in vivo)

Treatment with RonaCare® Ectoin 0.5%, 1% for 12 days, evaluating after 8, 9, 10, 11 & 12, 19 day via corneometer



■ Placebo  
■ 0.5% Ectoin  
■ 1.0% Ectoin

RonaCare® Ectoin creates a moisture accumulation in the skin, still detectable after 7 days of last application

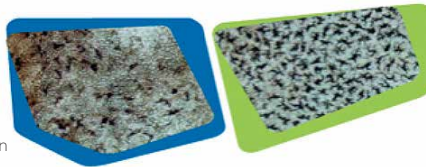
## PROTECTION OF LANGERHANS' CELLS

A) Untreated, non irradiated reference



B) Untreated, 1.5 MED-irradiation

C) Placebo-treated, 1.5 MED-irradiation



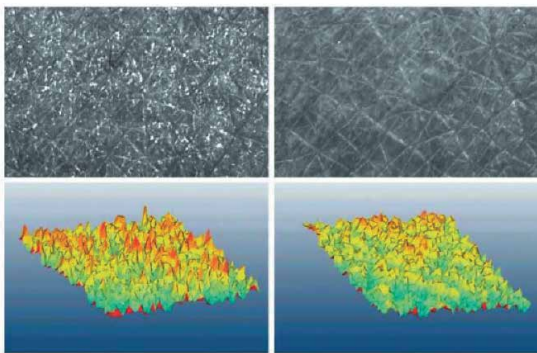
D) 1% Ectoin, 1.5 MED-irradiation

- Ectoin protects effectively against the reduction of Langerhans' cells in UV-irradiated human skin
- Ectoin protects against cellular immune suppression & strengthens the skins immune system

## REPAIR AND WELLNESS ENHANCER - Improvement In Skins Surface (Visioscan)

Evaluation of repair options using RonaCare®Ectoin

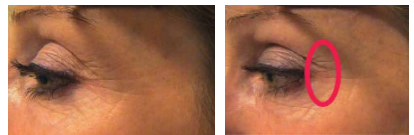
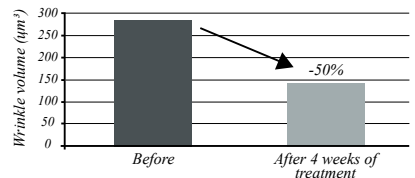
In vivo evaluation of skin surface after 4 weeks treatment



Before treatment

After 4 weeks with product containing 2% RonaCare® Ectoin

Reduction of wrinkle volume (SELS)



## L'ABELLE PRODUCTS CONTAINING ECTOINE:

- Resurfacing Drops
- Youth Boost
- Hydra-Mist
- Hyaluron-3
- Peptide Restore

# MARINE BLUE VITAL C

ONE OF LABELLES UNIQUE & EXCLUSIVE ACTIVES

Country of origin: France

## METHOD OF MANUFACTURE

Marine BlueVital C is obtained by the careful combination of the Caprylic Capric Triglyceride with the *Cylindrotheca Fusiformis* Extract following a maceration process in a closed container at cold temperature under specific agitation during a controlled time. The microalgae inoculum of *Cylindrotheca Fusiformis* is cultivated in a photosynthetic field, in a plant on the Riviera, in closed photo bioreactor. The bioreactor is provided with appropriate sunlight and CO<sub>2</sub>. The inoculum multiplies in a specific culture medium and the microalgae biomass is obtained following a certain time of cultivation. The biomass is then harvested, dried and controlled. The biomass is then extracted to obtain the *Cylindrotheca Fusiformis* Extract.

## PROPERTIES IN L'ABELLE :

Formulation of anti-ageing, anti-wrinkle treatments tailored to suit the story of your skin. It will inspire your lifestyle, your emotions and your environment with an action on the youth and vitality of your skin. Skin care (0,5 2,0%), anti-wrinkle, anti-ageing and moisturising creams, daily creams, eye serums. Used in all kinds of formulations for a "Blue" anti-ageing/anti-wrinkle claim.

## COLLAGEN SYNTHESIS IN VITRO TEST :

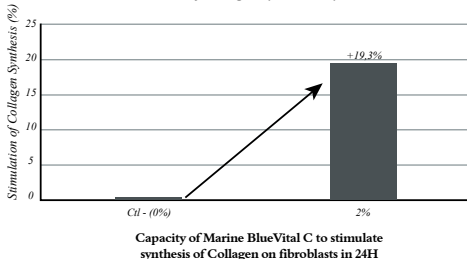
Aim of study: In vitro evaluation of collagen synthesis in human skin fibroblasts exposed to Marine BlueVital C at different concentrations. Collagen synthesis is measured by means of colorimetric assays.

Protocol: · Monolayer culture of human fibroblasts (ATCC-CRL-2703) · Three different concentrations: 0.5%, 1.0% and 2.0% · Three different times: 24h, 48h, 72h · Controls without the active

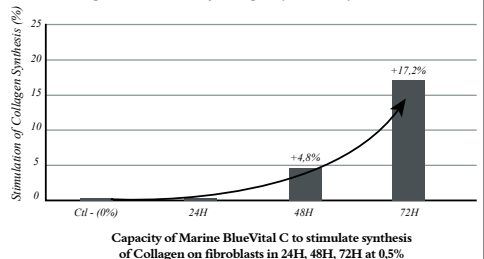
Collagen assay: Quantitative dye-binding method with Sirius Red.

Results: Measure of mean collagen content (µg) and % variation compared to untreated cell cultures (CTR-).

*Used at 2%, increase of collagen synthesis by 19,3% in 24 hours.*



*Used at 0,5%, gradual increase of collagen synthesis by 17,2% in 72 hours.*



Marine BlueVital C has an immediate and excellent efficacy on collagen synthesis at 2%. At small dosage (less than 1%), Marine BlueVital C has a time dependent good efficacy. Highly effective active: with 0,5% almost same collagen production as with 2% over a slightly longer period.



## EVALUATION OF ANTI-WRINKLE EFFICACY

Aim of study: In vivo evaluation of changes of the wrinkles after a repeated application on healthy human skin of two cosmetic products (with and without Marine BlueVital C) by fringe projection.

Protocol: 21 volunteers, female, 35-55 years, T0-T1m-T2m, hemi-facial application of the active cream (1,5% of Marine BlueVital C) and placebo cream twice per day.

Technique: Dermatop Blue uses Breuckmann technology based on a fringe projection unit using blue light combined with imaging techniques.

### Calculations and statistics:

Rz (mm): Average Maximum profile height difference: represents the average width of the negative peak  
 Ra (mm): Linear average profile roughness: represents the arithmetic average of the volume of the micro profile of the skin.

Variation % =  $[(v1-v0) / v0] \times 100$ , Student t-test

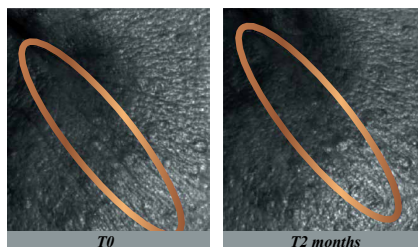
### Results:

<i>Placebo</i>	<i>1 month</i>		<i>2 months</i>	
<i>Compared to T0, %</i>	<i>Marine BlueVital C</i>	<i>Placebo</i>	<i>Marine BlueVital C</i>	<i>Placebo</i>
Main wrinkle average depth (Rz)	<b>-8,2%</b> a<0,01	0,4% ns	<b>-10,4%</b> a<0,01	0,5% ns
Main wrinkle average depth (Ra)	<b>-8,8%</b> a<0,01	-0,2% ns	<b>-12,0%</b> a<0,01	-0,1% ns

Marine BlueVital C significantly decreases wrinkle depth and volume at only 1,5% of use and already after 1 month of use.

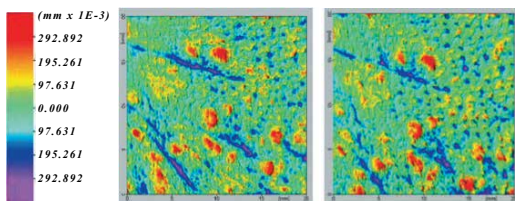
### Illustrative results:

Photo of wrinkles crow's feet before and after application of a cream with 1,5% Marine BlueVital C



## MICRO-RELIEF EVALUATION SHOWING SKIN IMPROVEMENT IN 2 MONTHS DERMASURF SOFTWARE

Marine BlueVital C visibly decreases appearance of wrinkles at only 1,5% of use after 2 months of use. The formulation containing 1,5% Natura-Tec Marine Blue vital C shows significant anti-wrinkle results when compared to the placebo formulation. In 2 months, with 2 applications per day, the wrinkle depth decreases by 10,4%, and the wrinkle volume decreases by 12% when compared to T0.



L'ABEILLE PRODUCTS CONTAINING MARINE BLUE VITAL C:  
 · Glow Drops                      · Phyto-A                      · Antioxidant-C

# NIACINAMIDE

Vitamin B3

Niacinamide is a standout cosmetic ingredient because of its versatility for almost any skin care concern and skin type. Research about niacinamide unanimously demonstrates how versatile and effective it is, and continued research keeps showing it's one of the most exciting skin care ingredients around.

## WHAT IS NIACINAMIDE?

Also known as vitamin B3 and nicotinamide, niacinamide is a water-soluble vitamin that works with the natural substances in your skin to help visibly improve enlarged pores, uneven skin tone, fine lines and wrinkles, dullness, and a weakened barrier.

Niacinamide also reduces the impact of environmental damage because of its ability to improve the skin's barrier (its first line of defense), plus it also plays a role in helping skin to repair signs of past damage. Left untreated, this type of daily environmental assault makes skin appear older, dull, and less radiant.

## WHY YOU SHOULD USE NIACINAMIDE

Niacinamide is uniquely compatible with any of the products in your skin care routine, including those that contain retinol, peptides, hyaluronic acid, AHAs, BHA, vitamin C, and all types of antioxidants. Niacinamide is an impressive ingredient, that when incorporated into skin care products like toners, serums, and highly concentrated skin care boosters, is an extremely effective active.

Multiple niacinamide-containing products can be incorporated in your skincare routine, and it will still be non-sensitizing as it is an ingredient that is well tolerated by all skin types, and suitable for those with sensitive or rosacea-prone skin.

Niacinamide helps to renew and restore the surface of skin against moisture loss and dehydration by helping skin improve its natural production of skin-strengthening ceramides. When ceramides become depleted over time, skin is left vulnerable to all sorts of problems, from persistent patches of dry, flaky skin to increasingly becoming extra-sensitive.

Topical application of niacinamide has been shown to boost the hydrating ability of moisturizers so that the skin's surface can better resist moisture loss that leads to dry, tight, flaky skin. Niacinamide works brilliantly with common moisturizer ingredients like glycerin, plant oils, sodium PCA, and sodium hyaluronate. This is why we have combined all these ingredients into our HYDRA-BRIGHT ESSENCE.

How does Niacinamide reduce pore size? It seems that niacinamide has a normalizing ability on the pore lining, and that this influence plays a role in keeping debris from getting backed up, which leads to clogs and rough, bumpy skin. As the clog forms and worsens, the pores stretch to compensate, and what you'll see is enlarged pores.

By helping things get back to normal, niacinamide use helps pores return to their normal size.

## HOW TO USE NIACINAMIDE

Use niacinamide products along with other beneficial ingredients like antioxidants (POTEN-C), skin-restoring agents, and other skin-replenishing ingredients.

For best results, use leave-on products with niacinamide and apply them to cleansed skin twice daily. Apply the HYDRA-BRIGHT ESSENCE immediately after cleansing to rehydrate and replenish skin. Followed with the RICH RESTORING PEPTIDE CREAM in the mornings/evenings to give your skin an extra boost of skin restoring actives and added niacinamide. Finish your regime with GLOW INTENSE SERUM/PHYTO-RETINOL SERUM to add to your skin replenishing actives and seal in all the treatment serums.

Niacinamide-containing products can be around your eyes. It helps improve the look of under eye circles, helps soften the appearance of crow's feet, and enables this delicate area to retain skin-smoothing moisture and resist loss of firmness.

Niacinamide brings many topical benefits to improve skin's appearance, so it appears more even, brighter, and younger.

### REFERENCES FOR THIS INFORMATION :

Experimental Dermatology, February 2019, Supplement 1, pages 15-22; and October 2018, ePublication  
Dermatologic Therapy, September 2017, ePublication  
Journal of Investigative Dermatology, May 2017, page S116  
International Journal of Pharmaceutics, March 2017, pages 158-162; and January 2013, Pages 192-201  
Facial Plastic Surgery Clinics of North America, May 2016 , pages 145-152  
Clinical, Cosmetic, and Investigational Dermatology, July 2015, pages 405-412  
Skin Pharmacology and Physiology, June 2014, pages 311-315  
International Journal of Pharmacy, January 2013, pages 192-201  
Dermatoendocrinology, July 2012, pages 308-319  
Dermatologic Surgery, Volume 31, Part 2, 2005, Discussion 865  
International Journal of Cosmetic Science, October 2004, pages 231-238  
Journal of Cosmetic Dermatology, March 2004, pages 88-93

### L'ABEILLE PRODUCTS CONTAINING NIACINAMIDE :

· Peptide Restore

· Hyaluron-3

· NIACIN-B

# RENOUMER

ONE OF LABELLES UNIQUE & EXCLUSIVE ACTIVES  
THE POWERFUL OCEAN SECRET

Country of origin: France

## DISCOVER THE BEAUTY SECRETS OF THE FRENCH OCEAN

Ocean life is one of the last secrets of our planet. Therefore, the ocean is still a source of undiscovered health and beauty solutions. Scientists from Agrimer have searched the vibrant biotopes of the Breton coast for new plant sources to create effective skin beautifying solutions. This joint effort resulted in a breakthrough discovery of the naturally occurring and newly characterized *Polysiphonia elongata* red algae.

"STAY YOUNG" - Renoumer has been developed from the nourishing cytoplasm of the newly characterized Breton red Algae *Polysiphonia Elongata*. This species lives exposed in full light and has developed cell protection processes. Through cytoplasmic extraction, we found the most extraordinary skin rejuvenation properties.

It turns out that cytoplasmic components of these algae are highly effective in both counteracting photoaging, and in promoting collagen renewal, which supports skin firmness

### UNIQUE, RARE & VALUABLE IN L'ABELLE:

Collagen is a powerful spring of youth. As collagen renewal gradually becomes weaker with increasing age, the dermis gets thinner, stores less water and the skin loses its smoothness. In vitro and in vivo studies impressively demonstrate how RenouMer counteracts this development with the power of ocean secrets restoring and maintaining our skin's powerful 'Spring of Youth'. Renoumer is suitable for ages 20 to 80+.

#### RENOUMER Benefits:

- Direct impact on collagen and skin smoothing plus skin densifying effect
- Improved skin moisture and elasticity
- Positive impact on algae diversity in Brittany
- Makes use of holistic and nourishing cytoplasm as a natural principle of life
- Based on the discovery of new ocean sources

### COLLAGEN SYNTHESIS IN VITRO TEST:

Investigation of stimulation of fibroblast-derived collagen synthesis

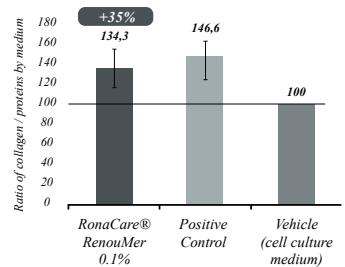
Cell line: Human fibroblast MRC-5 cell line

Positive control: TGF- $\beta$  (transforming growth factor- $\beta$ ) (1 ng/ml)/  
EGF (epithelial growth factor) (10 ng/ml)

Test product: RenouMer (0.1%)

Staining: The collagen was stained by Sirius red staining solutions

Absorption: 500 nm with a Mutiskan®EX\* microplate photometer



+ 35% collagen synthesis

## IN VIVO TESTING: Smoothing of skin surface (3d primos):

A decrease in Ra characterizes a smoothing effect. Ra value demonstrates the smoothing effect.

- RonaCare®RenouMer (2%) shows a smoothing effect
- RonaCare®RenouMer performed two times better than benchmark after 56 days of treatment

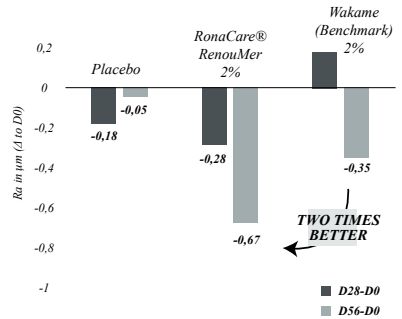
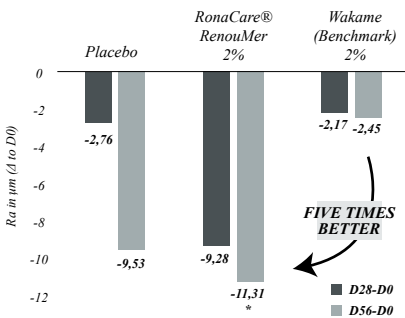


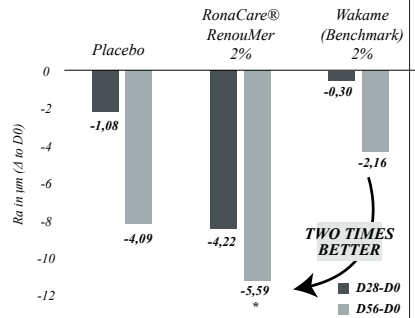
Figure 1: The Ra values were determined by 3D Primos®. Adjusted changes from baseline (D0) are shown.

## Anti-wrinkle microstructure of skin surface (3d primos):

- Renoumer (2%) shows a significant anti-wrinkle effect better than after 56 days treatment
- Renoumer performed up to five times better than the benchmark



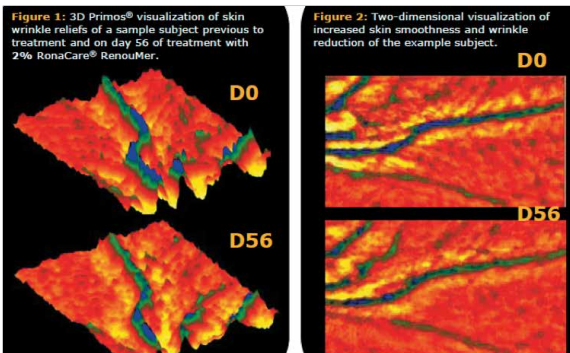
Rt VALUE DEMONSTRATES THE ANTI-WRINKLE EFFECT  
Figure 1: The Ra values were determined by 3D Primos®. Adjusted changes from baseline (D0) are shown.



Rz VALUE DEMONSTRATES THE ANTI-WRINKLE EFFECT  
Figure 1: The Ra values were determined by 3D Primos®. Adjusted changes from baseline (D0) are shown.

Renoumer (2%) shows a significant anti-wrinkle effect after 56 days treatment. Renoumer performed up to five times better than the benchmark.

## 3D PRIMOS PICTURES SHOW SUPERIOR ANTI-WRINKLE EFFECT:



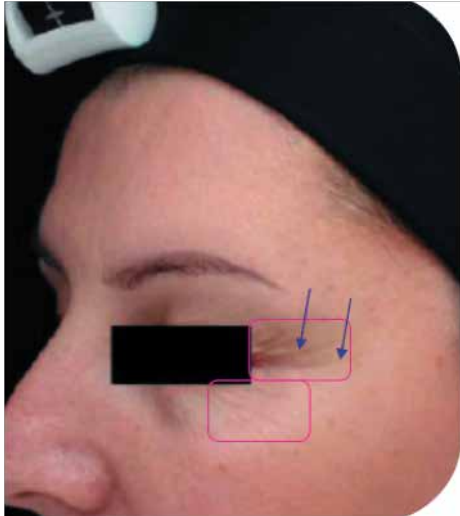
The observation of these pictures provides a clear impression of treatment success by RenouMer.

Furthermore, the determination of skin smoothness (Ra upto -15,8%\*) and wrinkle parameters (Rt upto -22,5%\*; Rz upto -15,5%\*) helps to quantify the treatment progress of the sample subject.

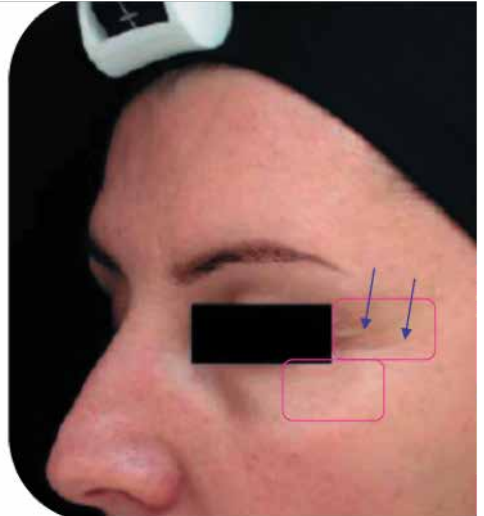
\*Values extracted from one single test subject

## CROW'S FEET PICTURES DEMONSTRATE SUPERIOR ANTI-WRINKLE EFFECT:

These photos impressively demonstrate the reduction of crow's feet after 56 days of treatment with RenouMer



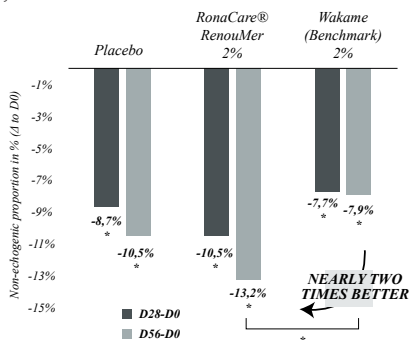
**FIGURE 1:**  
Crow's feet picture of sample subject previous to treatment with 2% RenouMer.



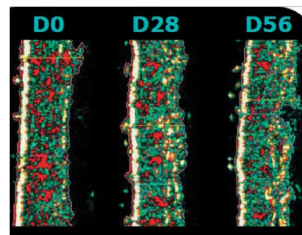
**FIGURE 2:**  
Crow's feet picture of sample subject after 56 days of treatment with 2% RenouMer

## SUPERIOR SKIN REDENSIFYING EFFECT:

**FIGURE 1:** The skin re-densifying effect of wakame is not different from placebo. The skin re-densifying effect of 2% RenouMer is significantly better than benchmark after 56 days.



**FIGURE 2:** The high frequency echogram of skin treated with 2% RenouMer shows the impressive decrease of tissue gaps (red) and improved conjunctive tissues (green to yellow) over the course of treatment. This improvement is especially visible in the deeper skin regions (dermis). This supports the hypothesis that 2% RenouMer improves collagen fibres.

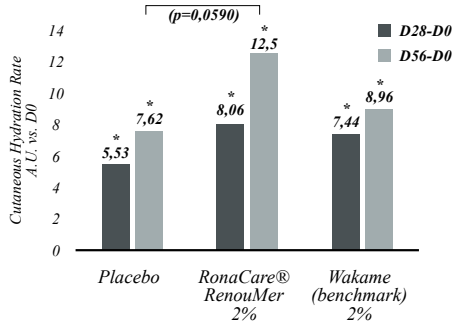


The high frequency echo graph allows the bi-dimensional visualisation of the skin on epidermis & dermis levels with a 13mm penetration. The ratio of the non-echogenic surface to the total surface (non-echogenic proportion in %) characterises the dermis density.

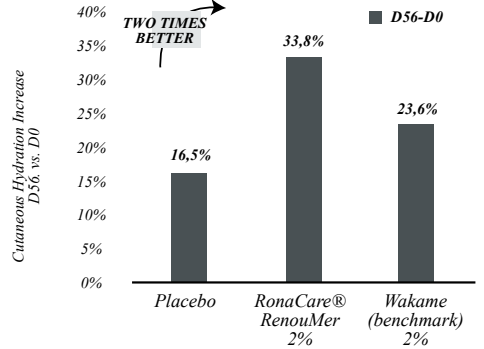
- Red illustrates non-echogenic tissues (water)
- Yellow & green indicates conjunctive tissue

## SUPPORT OF SKIN HYDRATION:

**FIGURE 1:** Skin hydration investigated via Corneometer® CM825\*. Adjusted changes from baseline (D0) are shown.



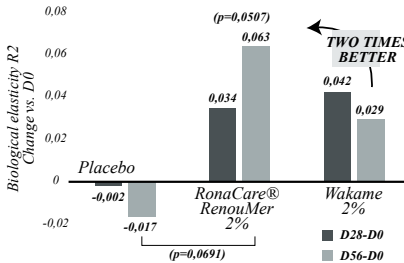
**FIGURE 2:** Skin moisture improvement (% changed to baseline based on mean values)



All treated subjects showed a clear improvement of skin moisture status. However, the positive skin hydration effect of RenouMer is much higher than the effect of the placebo or reference test product. The renewal of collagen fibres supports a favourable environment for improved skin moisture.

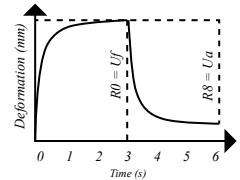
## IMPROVEMENT OF SKIN ELASTICITY:

**FIGURE 1:** Skin elasticity was investigated via MPA 580 Cutometer®\*. Adjusted changes from baseline (D0) are shown.



Study Parameter: R2

- R2 demonstrates the biological cutaneous elasticity.
- It is defined as the ratio of the initial state (Ua) to the final distension (Uf)
- An increase of the R2 parameter indicates an improvement of skin elasticity.

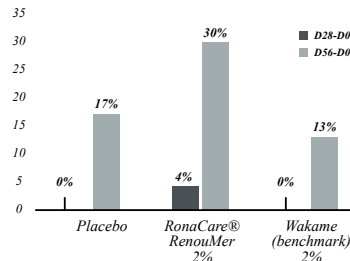


## CLINICAL WRINKLE SCORE:

A dermatologist evaluated and documented the individual skin wrinkle status in accordance with a standardized wrinkle score on day 0, 28 and 56.

**State of wrinkles:**  
Proportion of the sample subjects with an improvement in wrinkle score.

RenouMer showed a superior clinical anti-wrinkle effect.



## RENOUMER TEST RESULTS:

In vitro

- Up to 35% collagen increase In vivo with 2% RenouMer
- +17% skin hydration vs. placebo after 56 days
- Twice as good as benchmark (Wakame) in skin smoothing
- Significant dermis re-densifying effect after 56 days
- Superior wrinkle reduction
- Improved skin elasticity

## L'ABEILLE PRODUCTS CONTAINING RENOUMER:

· Youth Boost

· Peptide Restore

· Hydra-Mist

· Hyaluron-3