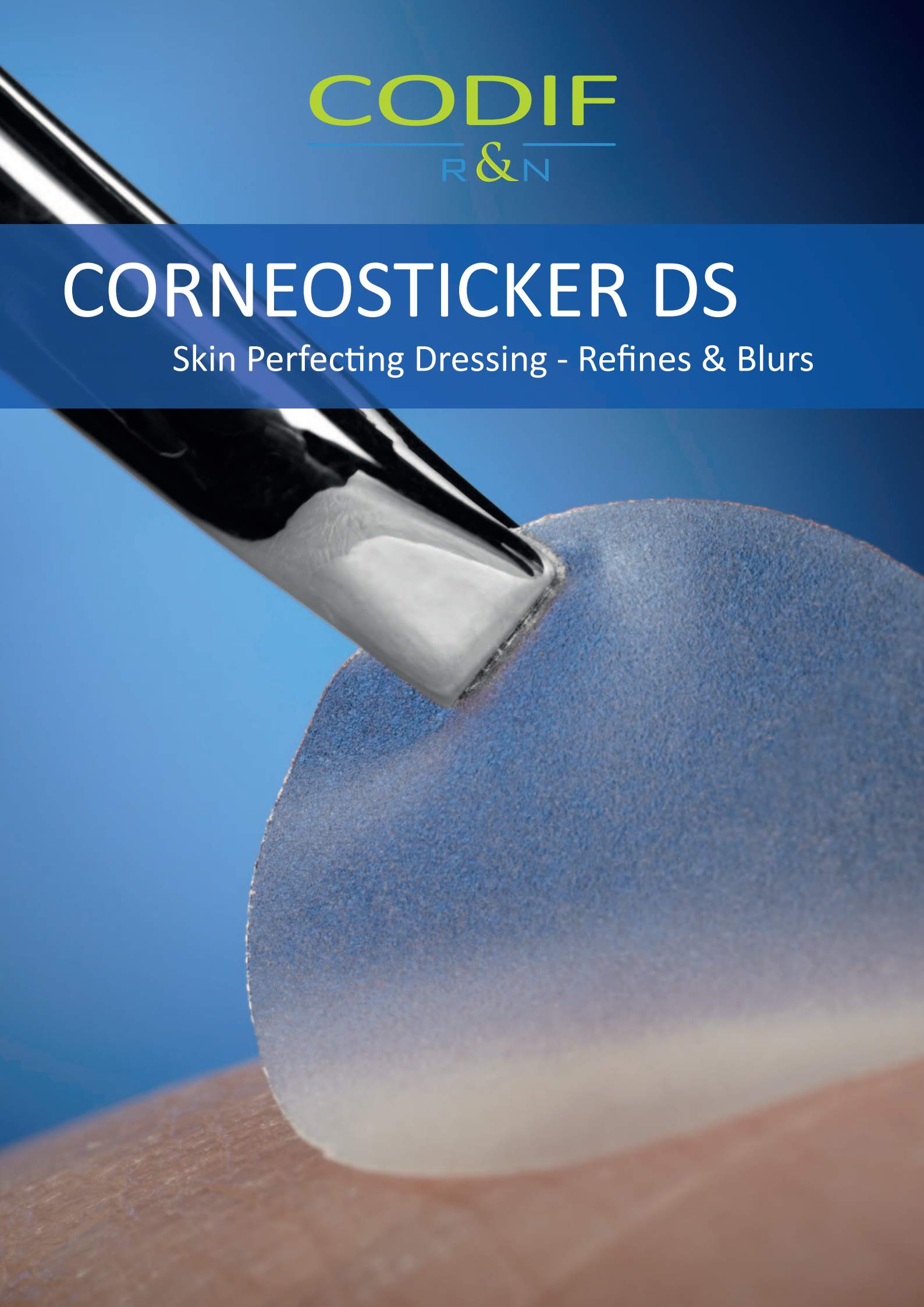
CODIF

R&N

CORNEOSTICKER DS

Skin Perfecting Dressing - Refines & Blurs



CORNEOSTICKER DS
SKIN PERFECTING DRESSING

WHAT IT IS

New tool for Corneotherapy, CORNEOSTICKER DS is an active dressing that mimics the CorneoSphere (corneocyte + its environment) to renovate and perfect skin surface.

WHAT IT IS DEVELOPED TO DO

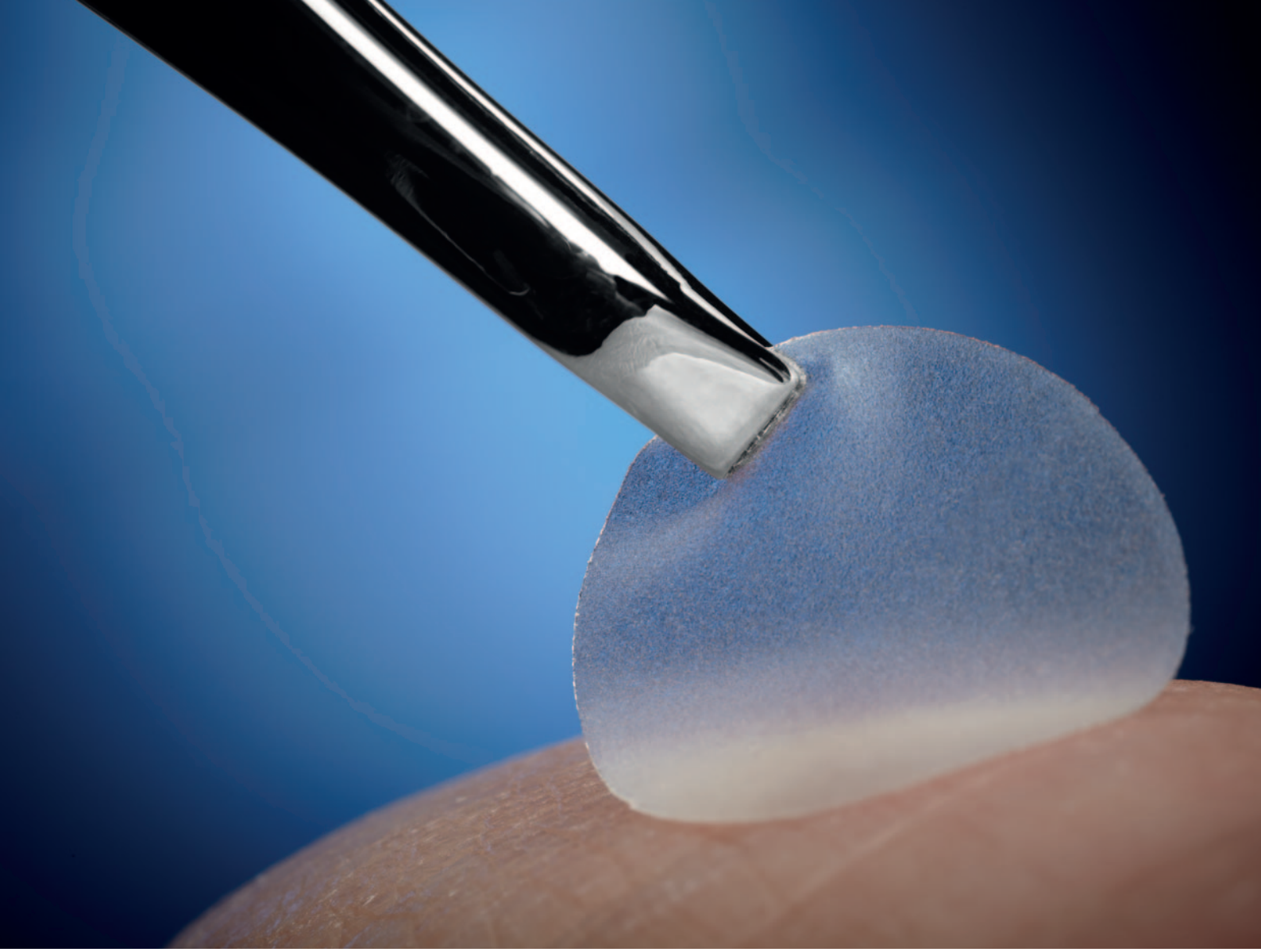
Its innovative helix structure opens on skin surface to instantly blur and smooth skin grain while providing biomolecules that work to restructure the epidermis in depth. After 2 weeks use, the skin is smoother, softer, more luminous and flawless.

HOW TO USE

Dispersible powder to use at 1% in:
- Multifunctional skin care
- Anti-aging cream
- Blurs
- Perfectionist lines
- Primer & foundation

COMPOSITION

Bentonite (and) Olive oil decyl esters (and) Glycerin (and) Citric acid (and) Hydrated silica (and) Water (and) Lactic acid (and) Squalene (and) Chlorella vulgaris extract (and) Sea salt (and) Tocopherol



When applied to the epidermis, CORNEOSTICKER DS forms a second skin that acts as an active dressing. It is a unique and hi-tech complexation of a biomaterial with components of the corneocyte environment in the stratum corneum. CORNEOSTICKER DS is the stratum corneum of THE Stratum Corneum, the corneocyte of THE Corneocyte.
CORNEOSTICKER DS IS A CORNEOSPHERE.

INSTANT SMOOTHING ACTION

- Skin softness is instantly improved: +22%*** on average
- Skin grain is instantly finer: +19%*** on average
- Skin roughness is instantly decreased: -6% on average

INSTANT BLURRING ACTION

- Skin surface is instantly blurred: +21%*** on average
- Skin imperfections are instantly masked: +13%*** masking effect on average

RESTRUCTURING BENEFITS AFTER 2 WEEKS

- Skin isotropy is increased: +7%* on average
- The skin is softer, brighter, skin grain is finer and imperfections are decreased

*p<0.05 ; ***p<0.001 Wilcoxon test

CORNEOSTICKER DS IS AN ACTIVE DRESSING THAT ANSWERS THE CONCEPT OF SKIN PERFECTIONISTS

THE CONCEPT → **THE CUTANEOUS TARGET** → **THE BIOLOGICAL ANSWER**

SKIN PERFECTIONISTS

Blurs, Idealist, Perfectionist, Instant Smoother… they all meet the growing demand for instant zero-defect skin but which above all lasts long.

STRATUM CORNEUM

This upper layer of the skin incorporates several adaptive mechanisms to maintain and reestablish its structural integrity. When these mechanisms are altered, the skin becomes irritated, dry, looses its softness and brightness.

CORNEOTHERAPY

A TREATMENT CENTRED ON THE RENOVATION OF THE CORNEAL LAYER TO CORRECT THE ENTIRE SKIN

CORNEOTHERAPY - A RESPONSE TO THE DEMAND FOR PERFECT SKIN

Corneotherapy is a science which was largely developed by the famous American dermatologist Albert Kligman in the 1960s.
It combines cosmetic and dermatology and may represent “the skin care concept of the future”.

Kligman designed a treatment centred on renovation of the corneal layer to correct the entire skin which he called “outside-in-therapy”. He explained that the long term effects of therapeutic treatment of the corneal layer could assist repair of the underlying structures of the skin such as the epidermis and dermis.

CARING FOR, RENOVATING AND REVEALING THE SKIN IN ACCORDANCE WITH THE PRINCIPLES OF CORNEOTHERAPY REQUIRES THE DEVELOPMENT OF CORNEO-MIMETIC TOOLS.

Science Of Corneotherapy

Corneotherapy Founder Albert M. Kligman

Corneotherapy has been practiced unwittingly by dermatologists from the earliest times

Many studies have been conducted by Professor Albert M. Kligman at the intersection of science, resulting in cosmetology and medicine appear such terms as “photoaging”, “cosmeceuticals” and “corneotherapy”.

Albert Montgomery Kligman, (March 17, 1916 – February 9, 2010), Professor of Dermatology, University of Pennsylvania School of Medicine, author of hundreds of papers, which were the scientific basis of dermatology.

Dr. Kligman was first to describe the human hair-growth cycle, investigated the pathogenesis and treatment of acne, athlete foot and dandruff, disproved the “common knowledge” that chocolate promotes acne, identified the effects of sunlight on the skin.

> “Corneotherapy refers to preventive interventions that are primarily directed to the correction and restoration of the stratum corneum barrier that has been rendered defective and impaired by disease, genetics and a variety of mechanical, physical, chemical and psychological exogenous insults and stresses.”

The most modern trends in the science of healthy skin

At the base of corneotherapy, the need to protect and to restore the stratum corneum, the destruction of which leads to the appearance of skin diseases, allergies, infections, dehydration and dryness. Stratum corneum is the outermost of the layers of the epidermis and is largely responsible for the vital barrier function of the skin.

For the first time demonstrated that the stratum corneum is not a conglomeration of “dead” cells but is a “living” structure that is capable of self-regulation and interaction with other layers of the epidermis and dermis.

The skin gets its moisture from “inside”, by the diffusion of fluid from the capillaries, as the stratum corneum prevents the penetration of water from the “outside”.

Maintenance of the necessary moisture in all layers of the skin, the skin barrier function performance – the result of metabolic processes in the epidermal layer. Studies have shown that the epidermis is able to cleave the lipids that cosmetics contains and use the resulting fragments to restore the skin’s lipid barrier. The renewal process of epithelial cells is 28-30 days, in some cases even more. It is important to ensure the normal course of the process of cell renewal.

The fact that cosmetics can influence on the processes of the uppers layers of the skin, places high demands on its composition. Cosmetics should help maintain the protective barrier of the skin, supplying essential for restore components, to protect against negative environmental influences.

CORNEOSTICKER DS
A CORNEOSPHERE TO REVOLUTIONIZE CORNEOTHERAPY

Biotech Design Expertise

CORNEOSTICKER DS is made up of a large number of mineral sheets which open up in the shape of a helix. Once opened, the sheets reveal a combination of components which make up the corneocyte environment in the stratum corneum:
- Minerals to boost the NMF (concentrated seawater)
- Lactates
- Lipids to strengthen lipidic cement (sebum like)
- Amino acids to boost the NMF (microalga)

Each object mimics a corneocyte with its own environment.

WHEN APPLIED TO THE EPIDERMIS, CORNEOSTICKER DS FORMS A SECOND SKIN THAT ACTS AS AN ACTIVE DRESSING. CORNEOSTICKER DS IS THE STRATUM CORNEUM OF THE STRATUM CORNEUM, THE CORNEOCYTE OF THE CORNEOCYTE.
CORNEOSTICKER DS IS A CORNEOSPHERE.

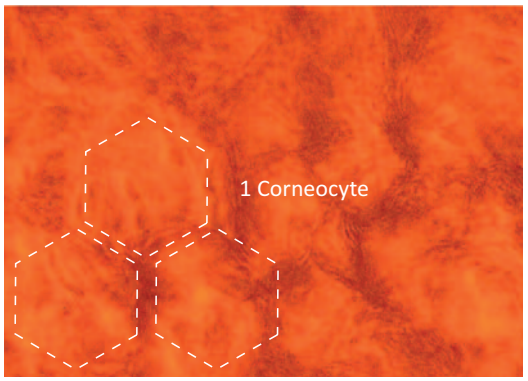
ANATOMICAL & PHYSIOLOGICAL DRESSING
CORNEOSTICKER DS IS THE CORNEOCYTE OF THE CORNEOCYTE.

Opposite photo on the top allows the visualization of the pentagonal shape of corneocytes at the surface of a human skin explant. Below, after application of CORNEOSTICKER DS, corneocytes are no more visible, hey have been totally recovered by the smaller corneocyte-like of CORNEOSTICKER DS.
CORNEOSTICKER DS is physically opened on the surface of the skin, on and between the altered corneocytes, to form a second anatomical skin which protects the surface of the stratum corneum.

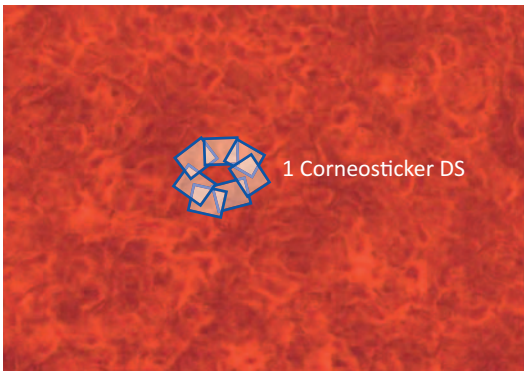
BESIDES ITS ANATOMICAL DRESSING ACTION CORNEOSTICKER DS IS ALSO ABLE TO REINFORCE THE PHYSIOLOGICAL BARRIER OF THE SKIN.

From the surface of the skin, CORNEOSTICKER DS acts as a physiological dressing by reinforcing the buffering properties of the stratum corneum.
It also provides an immediate humectant effect that contributes to reducing the Trans-Epidermal Water Losses within 4 hours following an alteration of the stratum corneum.

Photonic microscopy of the surface of a skin explant.



Photonic microscopy of the surface of a skin explant after application of CORNEOSTICKER DS.



INSTANT SMOOTING ACTION

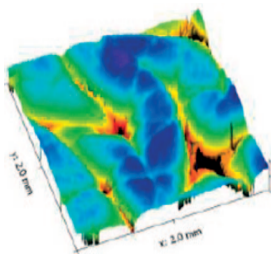
ANALYSIS OF SKIN RELIEF

EX-VIVO TEST: **ANALYSIS OF SKIN PROFILOMETRY**

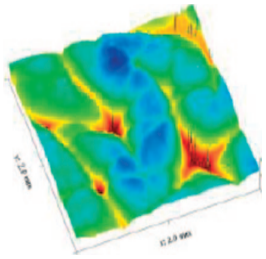
Protocol: Analysis of cutaneous micro-roughness profile of skin explants by profilometry before and after a single application of 1% CORNEOSTICKER DS.

When CORNEOSTICKER DS is applied to the surface of the skin, it instantly fills in the cutaneous relief: -34% roughness on average.

3D image of cutaneous relief before applying CORNEOSTICKER DS



3D image of cutaneous relief after applying CORNEOSTICKER DS



IN-VIVO TEST: **ANALYSIS OF SKIN SURFACE DEPRESSIONS**

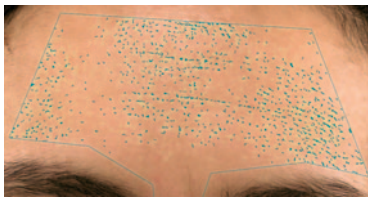
Protocol: CORNEOSTICKER DS 1% - Single Application - 24 volunteers aged 30 to 49 - Evaluation of number and size of depressions in the cutaneous relief.

NUMBER OF CUTANEOUS DEPRESSIONS AFTER 2H
-6% on average and up to -32%

SIZE OF CUTANEOUS DEPRESSIONS AFTER 2H
-5% on average and up to -32%

Visualization of depressions on the forehead

T0



T2H

ANALYSIS OF SKIN GRAIN & SOFTNESS

IN-VIVO TEST:

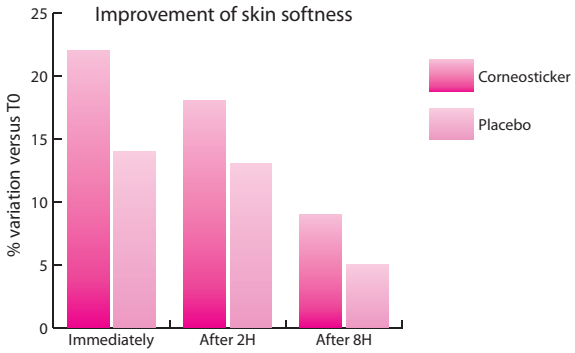
Protocol: CORNEOSTICKER DS 1% versus placebo – 24 volunteers aged 30 to 49 – Single Application – Evaluation by dermatological scoring on a scale of 1 to 10.

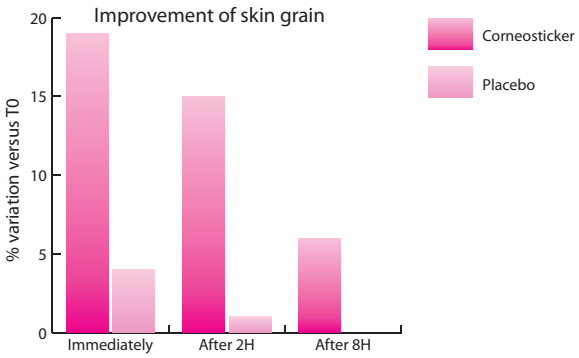
SKIN IS INSTANTLY SOFTER
Immediately: +22%*** on average and up to +67%
After 2H: +18%*** on average and up to +67%
After 8H: +9%** on average and up to +67%

SKIN GRAIN IS INSTANTLY REFINED
Immediately: +19%*** on average and up to +33%
After 2H: +15%*** on average and up to +33%
After 8H: +6%* on average and up to +20%

*p<0.05 **p<0.01 ***p<0.001 Wilcoxon test

CORNEOSTICKER DS IMPROVES THE SURFACE OF THE SKIN IMMEDIATELY AND TILL 8 HOURS AFTER APPLICATION WITH A BETTER EFFICACY THAN THE PLACEBO. THIS DEMONSTRATES THE BENEFITS OF THE ANATOMICAL DRESSING ACTION PROVIDED BY CORNEOSTICKER DS.



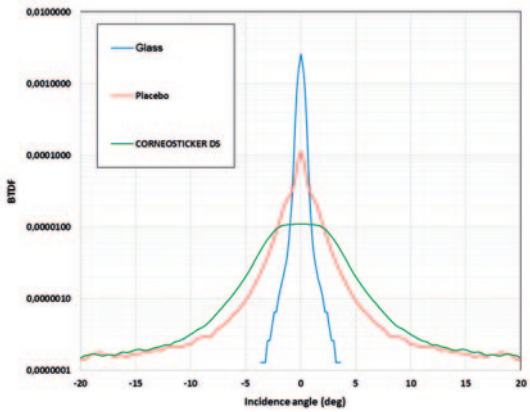


INSTANT BLURRING ACTION

MEASUREMENT OF THE BLURRING EFFECT OF CORNEOSTICKER DS

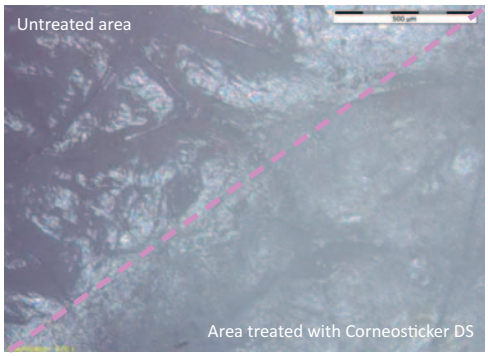
Protocol: Cream 1% CORNEOSTICKER DS versus placebo. Combined analysis of BTDF index and directional angles using an EZContrast XL88 Fourier transform analyzer.

The blurring effect of a substance is a result of its ability to re-transmit light after diffusion in several directions. The measure of diffuse transmission is called BTDF: Bidirectional Transmittance Distribution Function.
The peak obtained for glass is characteristic of diffused light completely reflected along a single direction. **The flatter and wider peak obtained with CORNEOSTICKER DS is characteristic of diffused light reflected in several directions.**



***EX-VIVO TEST:* VISUALIZATION OF THE BLURRING EFFECT OF CORNEOSTICKER DS**

Protocol: 1% CORNEOSTICKER DS in water. Topical application on explant. Microscopic observation.



THE BIOMATERIAL OF CORNEOSTICKER DS DISPLAYS THE PHYSICAL PROPERTIES OF A BLURRING AGENT.

IMMEDIATE BLURRING & MASKING EFFECT OF CORNEOSTICKER DS

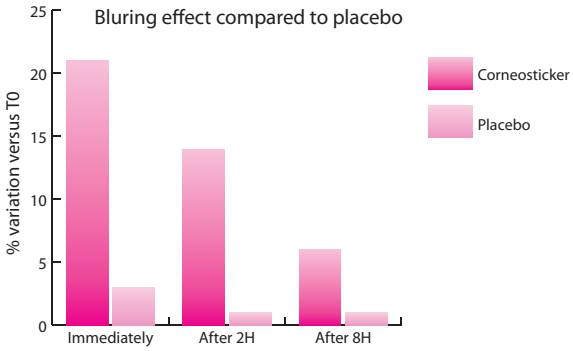
IN-VIVO TEST:

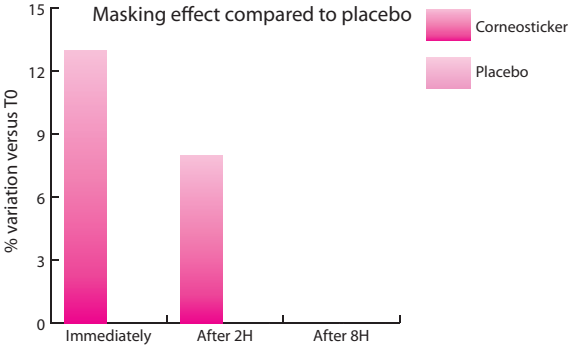
Protocol: CORNEOSTICKER DS 1% versus placebo- Single Application.
24 volunteers aged 30 to 49 - Evaluation of blurring and masking effect by dermatological scoring on a scale of 1 to 10.

BLURRING EFFECT OF CORNEOSTICKER DS
Immediately: +21%*** on average and up to +40%
After 2H: +14%*** on average and up to +33%
After 8H: +6%* on average and up to +33%

IMPERFECTIONS MASKED WITH CORNEOSTICKER DS
Immediately: +13%*** on average and up to +33%
After 2H: +8%* on average and up to +33%
After 8H: no more visible

*p<0.05 ***p<0.0001 Wilcoxon test





BY PROVIDING A SIGNIFICANT BLURRING EFFECT CORNEOSTICKER DS CONTRIBUTES TO BLURRING AND THEREFORE TO MASKING CUTANEOUS IMPERFECTIONS IMMEDIATELY AFTER APPLICATION.

2 WEEKS RESTRUCTURING ACTION

"The long term effects of therapeutic treatment of the corneal layer could assist repair the underlying structures of the skin such as the epidermis".

IN-VIVO TEST
SMOOTHING OUT CUTANEOUS RELIEF

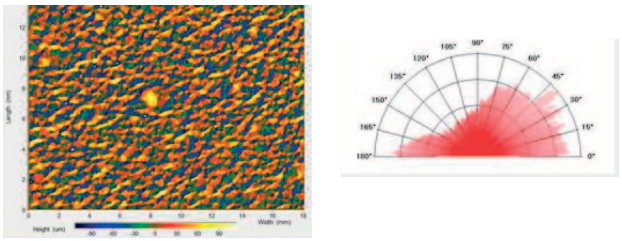
Protocol: 24 volunteers aged 30 to 49. CORNEOSTICKER DS 1% - twice daily applications for 2 weeks. Evaluation of skin isotropy using a 3D Primos Lite system.

ISOTROPY DEFINES THE ORIENTATION OF THE LINES OF CUTANEOUS RELIEF

The ageing mechanism leads to a change in the organization of cutaneous lines which change from an isotropic uniform state (lines oriented in all directions) in a young person to a state where only deep furrows remain which lead to the formation of wrinkles (preferential direction).

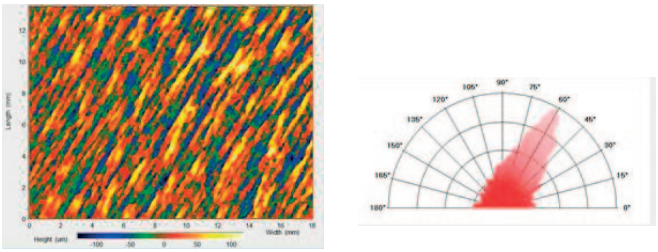
An increase in the percentage of isotropy characterizes a restructuring / antiageing effect and therefore the smoothing effectiveness of the product.

Young volunteer



Cutaneous lines oriented in all directions
Isotropic uniform state.

Older volunteer



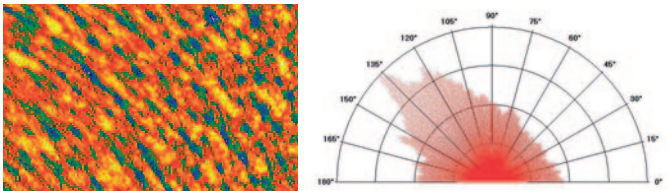
Cutaneous lines oriented in preferential directions (formation of wrinkles)
Anisotropic uniform state.

RESULTS

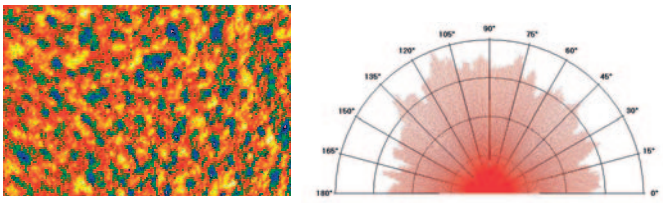
No significant improvement of skin isotropy is observed within the 2H following the application of CORNEOSTICKER DS. However, **after 2 weeks treatment CORNEOSTICKER DS increases skin isotropy by +7%* on average and up to +74%** (*p<0.05 Student test).

This demonstrates that this restructuring action is not the result of the immediate film-forming action of Cornesticker DS, but the daily improvement of skin depth thanks to the biomolecules composing the corneosphere recreated through CORNEOSTICKER DS.

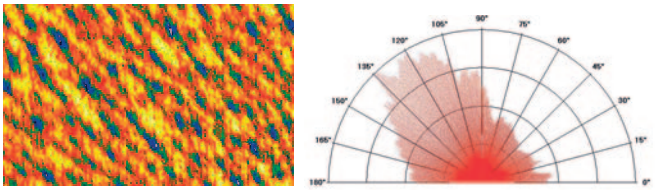
Example 1 before treatment



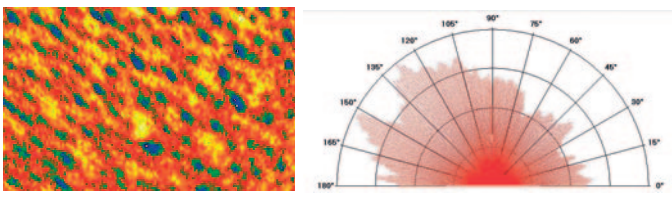
After 2 weeks treatment



Example 2 before treatment



After 2 weeks treatment

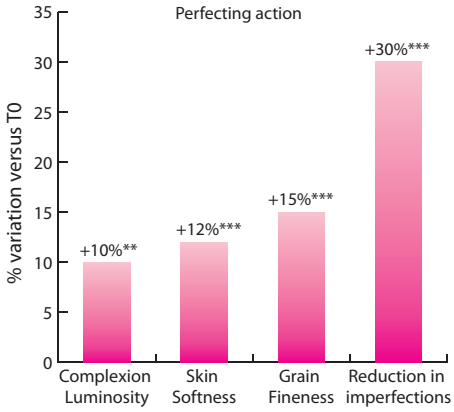


IN-VIVO TEST

GLOBAL PERFECTING EFFECT AFTER 14 DAYS

Protocol: 24 volunteers aged 30 to 49. CORNEOSTICKER DS 1% - Applied twice a day for 14 days and evaluation of the overall perfecting effect by the volunteers themselves on a structured scale of 1 to 10.

Repeated application of CORNEOSTICKER DS for 2 weeks visibly and significantly improves the quality of the skin.
- More luminous complexion
- Softer skin
- Finer skin grain
- Imperfections reduced



**p<0.01; ***p<0.001 Student test

CORNEOSTICKER DS ACTS FROM THE SURFACE OF THE EPIDERMIS TO IMPROVE ITS QUALITY IN DEPTH.

CORNEOSTICKER DS
SKIN PERFECTING DRESSING – NEW TOOL FOR CORNEOTHERAPY

CORNEO-MIMETIC
Anatomical and Physiological Dressing
Acts as a second skin
Humectant power
Limits Trans-Epidermal Water Loss

IMMEDIATE SKIN PERFECTIONIST
Immediate resurfacing effect
Improvement in skin grain
Improvement in skin softness
Smoothing effect
Blurring effect
Masking effect on cutaneous imperfections

CUTANEOUS RESTRUCTURING (2 WEEKS)
Improves skin isotropy
Restructuring / smoothing effect
More luminous complexion
Finer skin grain
Reduces imperfections
Softer skin

Outside-In-Therapy

FORMULATION GUIDELINE
THE BLUR

This Blur has been formulated with CORNEOSTICKER DS ; PHYCOSACCHARIDE ACP, to regulate sebum production and correct acne imperfections ; and PHYCOJUVENINE to promote skin oxygenation and treat crow's feet wrinkles.

Phase	Raw material / Trade name	INCI name	%
A	NIKKOMULESE LC (1)	Behenyl Alcohol & Stearyl Alcohol & PEG-20 Phytosterol & Cetyl Alcohol & Phytosterols & Glyceryl Stearate & Hydrogenated Lecithin & Caprylic/Capric Triglyceride & Tocopherol	5.00
	EUMULGIN SG (2)	Sodium Stearoyl Glutamate	0.15
	LIPOCIRE A PASTILLES (3)	C10-18 Triglycerides	1.00
	CRODAMOL GTCC / MIGLYOL 812 / WAGLINOL (2)	Caprylic/Capric Triglyceride	1.00
	PHENOXYETHANOL (4)	Phenoxyethanol	0.80
	CETIOL CC (2)	Dicaprylyl Carbonate	2.00
	ARLAMOL HD (5)	Isohexadecane	2.00
A'	DERMOSOFT OCTIOL (6)	Caprylyl Glycol	0.15
B	DEMINERALISED WATER	Aqua	71.38
	ELESTAB CPN (2)	Chlorphenesin	0.27
C	CARBOPOL ETD 2020 (3)	Acrylates/C10-30 Alkyl Acrylate Crosspolymer	0.30
D	GLYCERINE BIDISTILLEE CODEX (5)	Glycerin	1.00
	KELTROL CGSFT (7)	Xanthan Gum	0.20
E	SOUDE (SOLUTION 5 N) (8)	Aqua & Sodium Hydroxide	0.60
F	COVI-OX T90EU C (2)	Tocopherol & Helianthus Annuus Seed Oil	0.05
	PHYCOJUVENINE (9)	**Aqua & Laminaria Digitata Extract & Phenoxyethanol**	**1.00**
	PHYCOSACCHARIDE ACP (9)	**Aqua & Hydrolyzed Algin & Phenoxyethanol & Zinc Sulfate**	**1.00**
	PARFUM CANDY R17213 (10)	Parfum	0.10
G	DEMINERALISED WATER	Aqua	5.00
	CORNEOSTICKER DS (9)	**Bentonite & Olive Oil Decyl Esters & Glycerin & Citric Acid & Hydrated Silica & Aqua & Lactic Acid & Squalene & Chlorella Vulgaris Extract & Maris Sal & Tocopherol**	**1.00**
H	GLYCERINE BIDISTILLEE CODEX (5)	Glycerin	5.00
	COVACRYL MV60 (11)	Glycerin 5.00 COVACRYL MV60 (11) Sodium Polyacrylate	1.00

Protocol :

Warm A up to 75°C. Warm B up to 75°C. Disperse Carbopol under emulsifier 2500 rpm for 15 min. Add D under emulsifier 2500 rpm for 5 min. Realize the emulsion by slowly introducing A into (B+C+D) under emulsifier 2500 rpm for 10 minutes. Neutralise with E under emulsifier 2500 rpm for 5 min. Cool down to 35°C. Add one by one component of the phase F. Add the predispersion G. Add the pre-mix H under emulsifier 2500 rpm for 10 minutes.

CORNEOSTICKER DS: SKIN PERFECTING DRESSING

INSTANT SMOOTHING ACTION

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- Skin roughness is instantly decreased: -6% on average

INSTANT BLURRING ACTION

- Skin surface is instantly blurred: +21%*** on average
- Skin imperfections are instantly masked: +13%*** masking effect on average

RESTRUCTURING BENEFITS AFTER 2 WEEKS

Skin isotropy is increased: +7%* on average
The skin is softer, brighter, skin grain is finer and imperfections are decreased

INCI NAME: Bentonite (and) Olive oil decyl esters (and) Glycerin (and) Citric acid (and) Hydrated silica (and) Water (and) Lactic acid (and) Squalene (and) Chlorella vulgaris extract (and) Sea salt (and) Tocopherol

RECOMMENDED % OF USE: 1%

CHARACTERISTICS: dispersible powder

CODIF R&N

www.codif-recherche-et-nature.com