INNOVACTIVE INGREDIENTS

A company inspired by nature and supported by science

EN

(GFT)

The Green Ferment Tech®

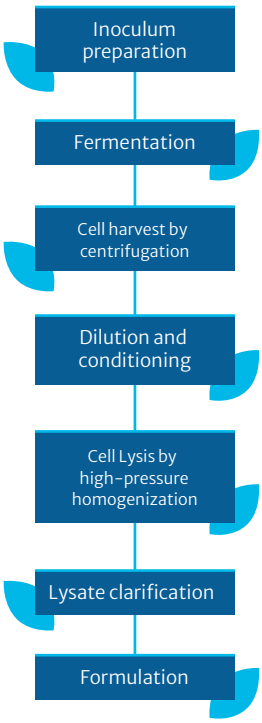
Transformation of simple raw materials in a Ferment-Peptide Complex by a process that combines Natural ferment with a natural origin peptide

INNOVACTIVE BACILFERM

an antioxidant/protective Ferment with Catalase and Lipase activity

TECHNOLOGY	EFFICACY STUDIES	DOSAGE	REGULATORY
BIO FERMENTATION	Protective activity (TEWL) Moisturizing activity MIC evaluation including C. Acnes Protective action against damages induced by H2O2 Antioxidant in vivo study	3%	EU AU CN KR US CA JP

FLOWCHART FOR INNOVACTIVE BACILFERM PREPARATION



INNOVACTIVE BIO FERMENTATION

Production of unique bio ferments that contain well-selected peptides and peptides produced during the fermentation process.

Bacillus Subtilis originally obtained from Natto (the oldest Japanese food) during soybeans lactic fermentation, is fermented in the laboratory under controlled technological conditions in a specific medium with natural substrates and natural peptides having cosmetic properties.

During fermentation process, Bacillus Subtilis sp. Natto produces several bio actives peptides and enzymes playing key roles in skin cells.

***Bacillus Subtilis*:** a universal cellular machine for industry agriculture, biomaterials, cosmetics and medicines

INNOVACTIVE BACILFERM — a high quality and unique ferment with antioxidant properties titrated in key enzymes, biologically active peptides and B Group Vitamins.

KEY ACTIVE INGREDIENTS AND THEIR FUNCTIONS

At the end of fermentation, the bacteria are filtered and lysed to obtain a concentrate rich in active ingredient such as:

- **Vitamins Group B/K2/C**
- **Biologically active peptides**
- **Antioxidants**
- **Peptides and Proteins**
- **Catalase enzyme**
- **Lipase enzyme**

Peptides and enzymes are titrated as total proteins and specific enzymatic activities which together with the B Group Vitamins make the ferment particularly effective in several activities such as: antimicrobial, lipolytic, protective, antioxidant...

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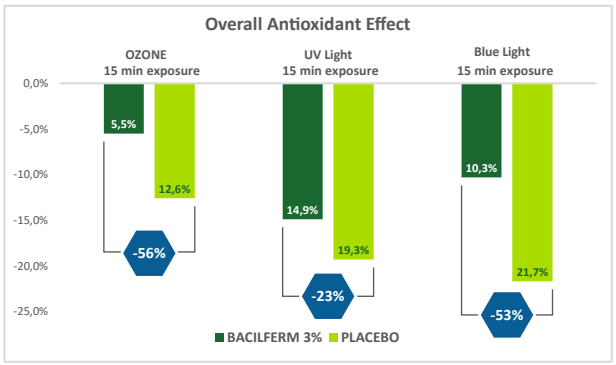
INNOVACTIVE BACILFERM

ANTIOXIDANT IN VIVO STUDIES

Carotenoids level measure



Technique: BIOZOOM (Skin Autoflorescence)
Dose: 3% Bacilferm vs Placebo
1 Application 15 min exposition to Oxidative sources

In the BACILFERM particularly:

Lipase Enzyme : acting on adipocytes will play an important role in tissue remodeling in the treatment of cellulite and in the face and body shaping contours.

Catalase Enzyme : essential to degrade H2O2 preventing skin oxidative stress and hair follicles oxidative damage that would contribute to appearance of gray hair as the reduction of melanin synthesis.

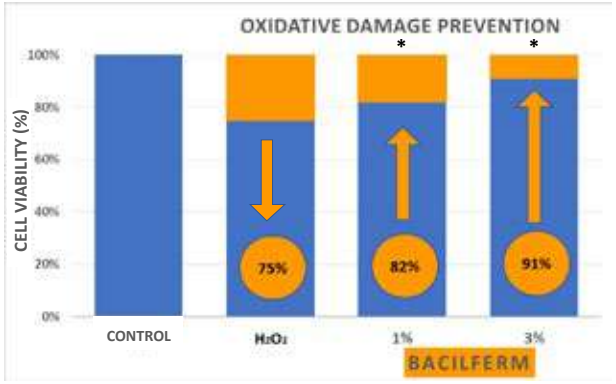
Group B Vitamins (especially B6) : reinforce skin barrier, supply hydration, protects from pollution damaging factors while reduces acne, balance sebum and calms irritated skin by controlling UV skin sensitivity.

Biologically active peptides : with antimicrobial activity help to balance skin microbiota, and contribute as a preservative booster.

INNOVACTIVE BACILFERM EFFICACY

1. Microbiota skin balance
2. Barrier reinforcement
3. Moisturizing effect
4. Regenerating effect
5. Protection against oxidative environmental induced damages (pollution, UV, blue light)
6. Lipolitic activity
7. Antimicrobial activity
8. Catalase activity which stimulates the synthesis of melanin and delays the hair graying process related to the increase of Hydrogen Peroxyde (H2O2) in the hair follicles due a decreased catalase activity

PROTECTIVE ACTION AGAINST DAMAGES INDUCED BY H_2O_2



* $p < 0.05$ vs H_2O_2 stimulated cells

MIC EVALUATION (INCLUDING C. ACNES)

BACILFERM	Inoculo (UFC/ml) - Inoculum (CFU/ml)						
	S. aureus	*S. epidermidis*	*E. coli*	*P.aeruginosa*	*A. brasiliensis*	*C. albicans*	*C. acnes*
Concentrazioni/ concentrations	5,0 x 10^4	5,0 x 10^4	5,0 x 10^4	5,0 x 10^4	5,0 x 10^4	5,0 x 10^4	5,0 x 10^4
5,00%	A	A	P	A	P	P	A
4,00%	A	P	P	P	P	P	A
3,00%	P	P	P	P	P	P	P
2,00%	P	P	P	P	P	P	P
1,00%	P	P	P	P	P	P	P
0,50%	P	P	P	P	P	P	P

legenda/legend
P Presenza UFC/UFC presence
A Assenza UFC/UFC absence

INNOVACTIVE INGREDIENTS
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info@innovingredients.com

TECHNICAL PRODUCT DATA

INCI: Glycerin, Bacillus Ferment Filtrate | **Solubility**: water soluble | **pH**:6-8
Colour: colorless-yellowish | **Preservative Free** | **Recommended dose**: 3%

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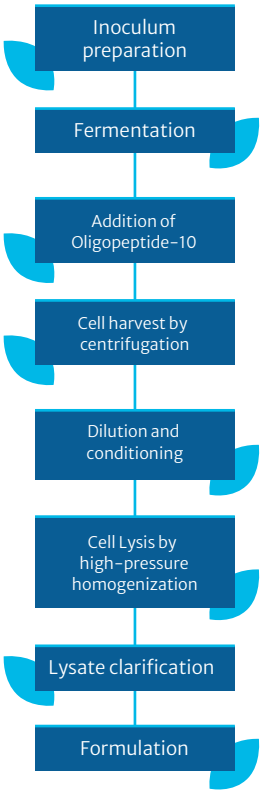
Transformation of simple raw materials in a Ferment-Peptide Complex by a process that combines Natural ferment with a natural origin peptide

INNOVACTIVE MICROFERM

a natural anti-microbial Ferment-Peptide Complex with a strong activity against bacteria pathogens and also C. Acnes

TECHNOLOGY	EFFICACY STUDY	DOSAGE	REGULATORY
BIO FERMENTATION	In vitro comparative MIC evaluation vs Bacilferm Including C. Acnes Anti-Acne in vivo test Sebum-balancing in vivo test	1-3%	EU AU US CA

FLOWCHART FOR INNOVACTIVE MICROFERM PREPARATION



INNOVACTIVE FERMENTATION STRATEGY

Bacillus Subtilis originally obtained from Natto (the oldest Japanese food) during soybeans lactic fermentation, is fermented in the laboratory under controlled technological conditions in a specific medium with natural substrates and natural peptides having cosmetic properties.

During fermentation process, Bacillus Subtilis sp. Natto produces several bio actives peptides and enzymes playing key roles in skin cells.

The **INNOVACTIVE FERMENTATION STRATEGY** to obtain a Ferment-Peptide Complex is based on the addition of peptide during natural fermentation of Bacillus Subtilis grown with plant-derived nutrients.

INNOVACTIVE MICROFERM

Ferment-Peptide Complex derived from natural fermentation in which Bacillus Subtilis grows in a specific medium including a natural antimicrobial peptide which is the Oligopeptide-10, to synergize with peptides produced by the bacteria offering a strong antimicrobial activity against bacteria pathogens and also against C. Acnes.

KEY ACTIVE INGREDIENTS AND THEIR FUNCTIONS

At the end of fermentation, the bacteria are filtered and lysed to obtain a concentrate rich in active ingredient such as:

- **Vitamins Group B/K2/C**
- **Biologically active peptides**
- **Antioxidants**
- **Peptides and Proteins**
- **Catalase enzyme**
- **Lipase enzyme**

Peptides and enzymes are titrated as total proteins and specific enzymatic activities which together with the B Group Vitamins make the Ferment-Peptide Complex particularly effective in several activities.

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INNOVACTIVE MICROFERM

In the MICROFERM particularly:

The **Oligopeptide-10** is an anti-microbial derived from plant amino acids with a broad spectrum activity against many types of microorganisms, including C. Acnes bacteria

We observe a synergistic antimicrobial effect with antimicrobial peptide produced by the bacteria during the natural fermentation process.

INNOVACTIVE MICROFERM EFFICACY

1. Broad antibacterial efficacy which makes it a valuable booster of the preservative system of finished products helping to reduce the necessary preservative system concentration
2. Its marked activity against the C. Acnes bacterium makes it useful to treat acne symptoms
3. Moisturizing activity
4. Antioxidant protection from pollution, blue light and UV
5. Anti-Acne activity
6. Sebum balancing

IN VITRO COMPARATIVE EVALUATION OF MIC (MINIMUM INHIBITORY CONCENTRATION), INCLUDING C.ACNES

BACILFERM over MICROFERM

MICROFERM	Inoculo (UFC/ml) - Inoculum (CFU/ml)						
	S. aureus	*S. epidermidis*	*E. coli*	*P.aeruginosa*	*A. brasiliensis*	*C. albicans*	*C. acnes*
Concentrazioni/ concentrations	5,0 x 10^4	5,0 x 10^4	5,0 x 10^4	5,0 x 10^4	5,0 x 10^4	5,0 x 10^4	5,0 x 10^4
5,00%	A	A	A	A	P	P	A
4,00%	A	A	P	A	P	P	A
3,00%	A	A	P	A	P	P	A
2,00%	P	A	P	A	P	P	P
1,00%	P	P	P	P	P	P	P
0,50%	P	P	P	P	P	P	P

BACILFERM	Inoculo (UFC/ml) - Inoculum (CFU/ml)						
	S. aureus	*S. epidermidis*	*E. coli*	*P.aeruginosa*	*A. brasiliensis*	*C. albicans*	*C. acnes*
Concentrazioni/ concentrations	5,0 x 10^4	5,0 x 10^4	5,0 x 10^4	5,0 x 10^4	5,0 x 10^4	5,0 x 10^4	5,0 x 10^4
5,00%	A	A	P	A	P	P	A
4,00%	A	P	P	P	P	P	A
3,00%	P	P	P	P	P	P	P
2,00%	P	P	P	P	P	P	P
1,00%	P	P	P	P	P	P	P
0,50%	P	P	P	P	P	P	P

legenda/legend		
	P	Presenza UFC/UFC presence
	A	Assenza UFC/UFC absence

INNOVACTIVE INGREDIENTS
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info@innovingredients.com

TECHNICAL PRODUCT DATA

INCI: Glycerin, Bacillus Ferment Filtrate, Oligopeptide-10 | **Solubility**: water soluble
pH:6-8 | **Colour**: colorless-yellowish | **Preservative Free** | **Recommended dose**: 1-3%

INNOVACTIVE INGREDIENTS (GFT) The Green Ferment Tech®

INNOVACTIVE MICROFERM

NEW EFFICACY IN VIVO TEST ANTI-ACNE

Acne is a rather common disorder characterized by inflammation of the pilosebaceous glands.

Typical of puberty, acne can still occur at any age, as it can be triggered by different types of factors, both internal and external such as: hormonal imbalances, bacterial causes, stress, genetic factors, drugs and particularly occlusive cosmetics.

As far as the bacterial causes are concerned, acne can be favored by the uncontrolled proliferation of Cutibacterium Acnes, a bacteria that normally lives on the skin under physiological conditions, however in the event of obstruction of the skin pores, this bacteria is able to multiply up to causing to the appearance of acne and inflammation.

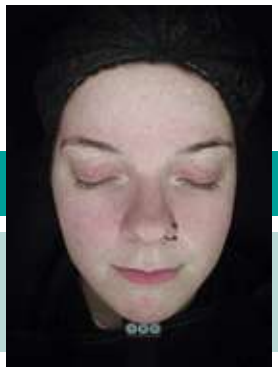
INNOVACTIVE MICROFERM is a Ferment -Peptide Complex with a strong activity against bacteria pathogens and also C. Acnes which is why it is useful in the treatment of acne symptoms where, in addition to counteracting the bacterial proliferation of the responsible pathogen, it also carries out a moisturizing and protective action.

PHOTOGRAPHS taken with the OBSERV 520X, a closed system with standardized lighting conditions and then the parameters are quantified with Framescan Software

GEL CONTAINING MICROFERM 3%

T=0

T=28 days



Results obtained after 28 days of treatment: twice a day daily application of a gel containing 3% of MICROFERM for 4 weeks on hemiface against placebo.

ANTI-REDNESS ACTIVITY

PLACEBO -1,9 %

UP TO -11 %

Soothing and calming action with evident reduction of skin redness and less inflammatory marks.

T=0

T=28 days

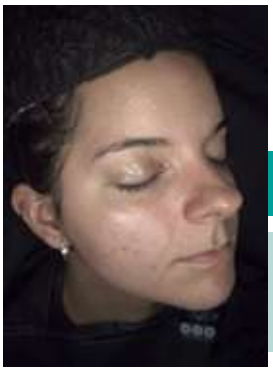
FLUORESCENCE SKIN ANALYSIS BOOSTER ANTIMICROBIAL ACTIVITY ESPECIALLY AGAINST C. ACNES

PLACEBO -4 %

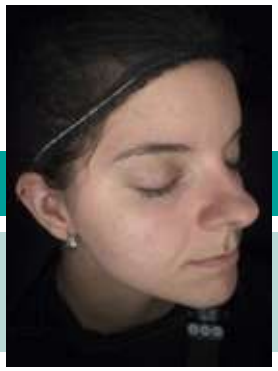
UP TO -24 %

The disappearance of the red fluorescence (bacterial porphyrins) indicates the loss of microbial activity

T=0



T=28 days



SEBUM-REDUCTION ACTIVITY

PLACEBO -7,5 %

UP TO -40 %

The reduction of specular shine demonstrates a reduction in oiliness and therefore in sebum secretion.

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INNOVACTIVE MICROFERM

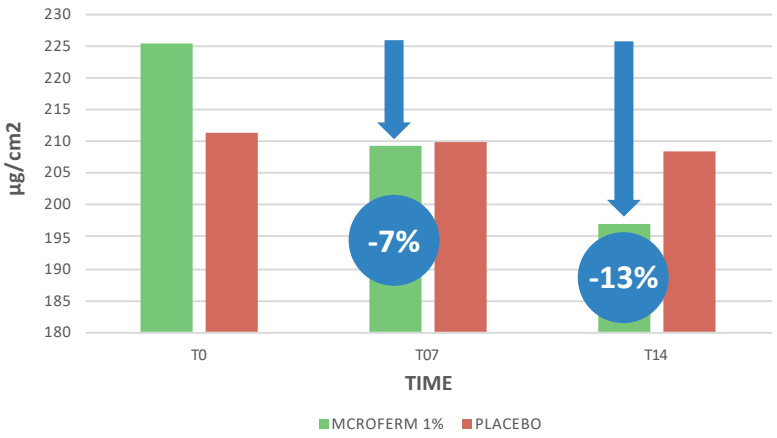
NEW EFFICACY IN VIVO TEST 1%

SEBUM-BALANCING EFFECT
REDUCTION IN THE VISIBILITY OF REDNESS

It was performed a clinical study with 10 subjects and a gel containing Microferm at 1% was applied twice a day for 14 days on one side of the face and the placebo on the other one.

The effect of the product was evaluated analysing the sebum reduction and the reduction of the visibility of redness in comparison with the variation obtained from a placebo.

SKIN SEBUM-BALANCING ANALYSIS



REDUCING EFFECT ON THE VISIBILITY OF REDNESS

CLINICAL EVALUATION

ANTI-REDNESS EFFICACY

10% VOLUNTEERS T07

40% VOLUNTEERS T14

10% and 40% of volunteers after 7 and 14 days of treatment improve the visibility of skin redness.

RESULTS: GEL CONTAINING MICROFERM 1%

T0 T07 T14

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TECHNICAL PRODUCT DATA

INCI: Glycerin, Bacillus Ferment Filtrate, Oligopeptide-10 | **Solubility**: water soluble
pH:6-8 | **Colour**: colorless-yellowish | **Preservative Free** | **Recommended dose**: 1-3%

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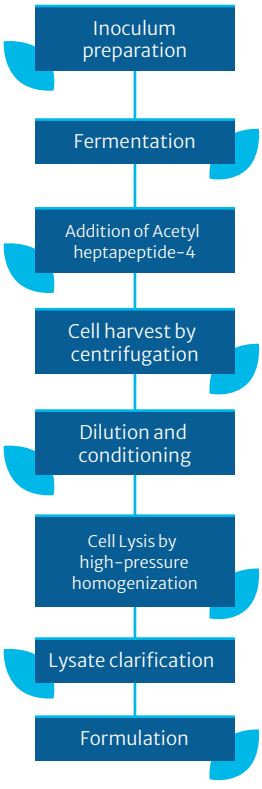
INNOVACTIVE BARRIERFERM

a protective barrier ferment which prevents dehydration supporting a healthy skin microbiota

TECHNOLOGY	EFFICACY STUDIES	DOSAGE	REGULATORY
BIO FERMENTATION	Protective activity (TEWL) Moisturizing activity Promoting adhesion of beneficial skin bacteria	1-3%	EU AU CN KR US CA JP

FLOWCHART FOR INNOVACTIVE BARRIERFERM PREPARATION



INNOVACTIVE FERMENTATION STRATEGY

Bacillus Subtilis originally obtained from Natto (the oldest Japanese food) during soybeans lactic fermentation, is fermented in the laboratory under controlled technological conditions in a specific medium with natural substrates and natural origin peptides having cosmetic properties.

During fermentation process, Bacillus Subtilis sp. Natto produces several bio actives peptides and enzymes playing key roles in skin cells.

The **INNOVACTIVE FERMENTATION STRATEGY** to obtain a Ferment-Peptide Complex is based on the addition of peptide during natural fermentation of Bacillus Subtilis grown with plant-derived nutrients.

INNOVACTIVE BARRIERFERM — Ferment-Peptide Complex derived from natural fermentation in which Bacillus Subtilis grows in a specific medium including Acetyl heptapeptide-4 to synergize with peptides produced by the bacteria.

KEY ACTIVE INGREDIENTS AND THEIR FUNCTIONS:

At the end of fermentation, the bacteria are filtered and lysed to obtain a concentrate rich in active ingredient such as:

- **Vitamins Group B/K2/C**
- **Biologically active peptides**
- **Antioxidants**
- **Peptides and Proteins**
- **Catalase enzyme**
- **Lipase enzyme**

Peptides and enzymes are titrated as total proteins and specific enzymatic activities which together with the B Group Vitamins make the Ferment-Peptide Complex particularly effective in several activities.

In the BARRIERFERM particularly:

Bacillus Subtilis Ferment is a key for microbiota balance, barrier reinforcement, moisturizing and protective activity.

Acetyl heptapeptide-4 boosts the skin's own defense system by promoting microbiota balance, diversity and growth of beneficial bacteria by improving skin.

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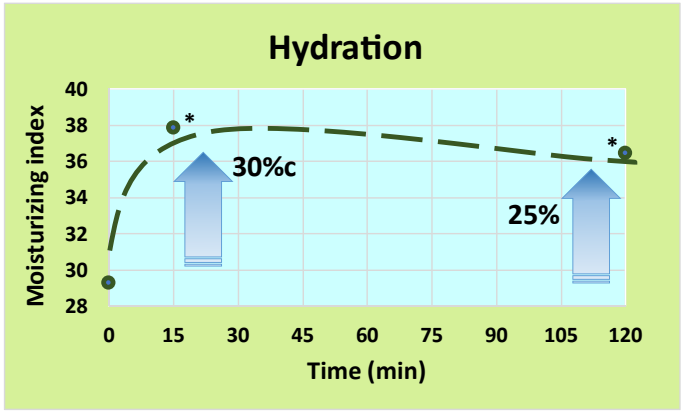
INNOVACTIVE BARRIERFERM

INNOVACTIVE BARRIERFERM EFFICACY

1. Reinforces skin barrier and its functionality
2. Supports and protects the healthy microbiome
3. Promotes the adhesion of beneficial bacteria to the skin
4. Improves protection to prevent dehydration
5. Moisturizing activity
6. Antioxidant protection from pollution, blue light and UV

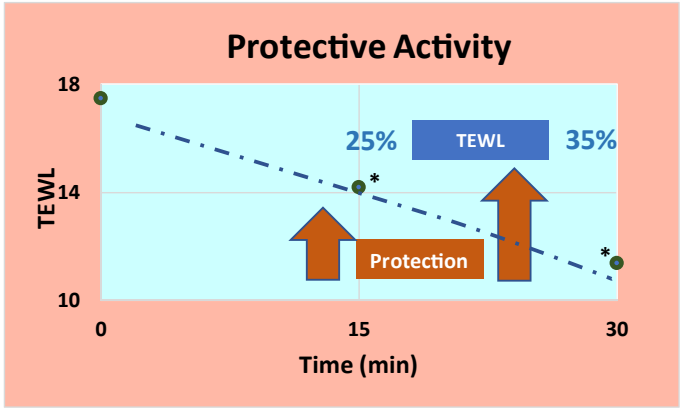
IN VIVO EFFICACY TEST CARRIED OUT USING A CREAM CONTAINING 3% OF BARRIERFERM

Evaluation of the moisturizing efficacy after 15 minutes and 2 h



* Statistical significance $p < 0.05$

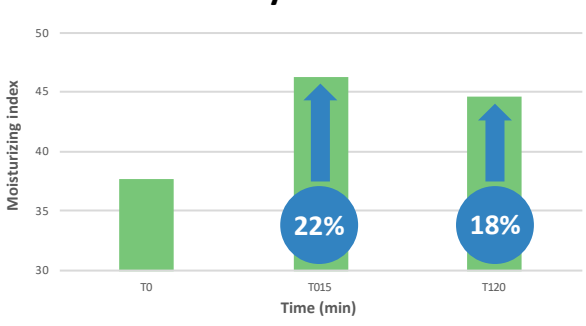
Evaluation of the protective activity after 15 and 30 minutes



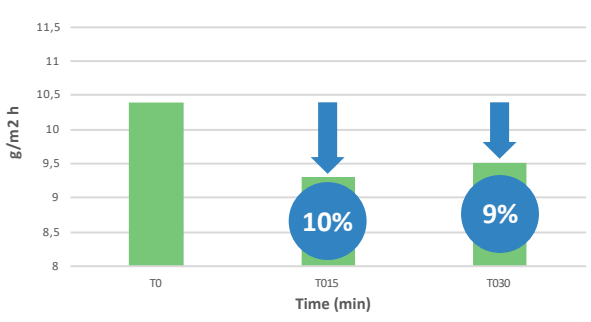
* Statistical significance $p < 0.05$

IN VIVO EFFICACY TEST CARRIED OUT USING A CREAM CONTAINING 1% OF BARRIERFERM

Evaluation of the moisturizing efficacy after 15 minutes and 2 h



Evaluation of the protective activity after 15 and 30 minutes



INNOVACTIVE INGREDIENTS

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TECHNICAL PRODUCT DATA

INCI: Glycerin, Bacillus Ferment Filtrate, Acetyl heptapeptide-4 | **Solubility**: water soluble
pH: 6-8 | **Colour**: colorless-yellowish | **Preservative Free** | **Recommended dose**: 1-3%

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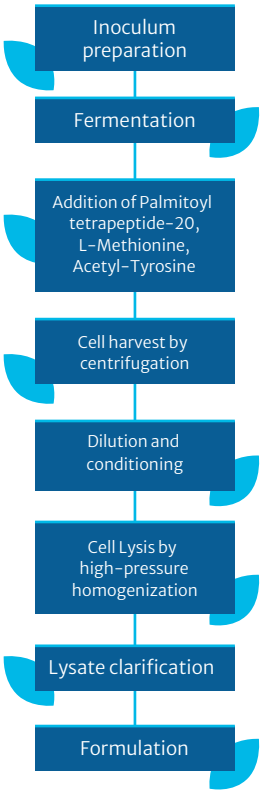
INNOVACTIVE PIGMENFERM

a Ferment-Peptide Complex rich in Catalase which plays a key role in inhibiting the hair greying process by stimulating the synthesis of melanin

TECHNOLOGY	EFFICACY STUDIES	DOSAGE	REGULATORY
BIO FERMENTATION	In vitro evaluation of the pigmenting action on melanocytes Comparative evaluation of protective action against damages induced by H2O2 on melanocytes Color uniforming in vivo test Skin luminosity efficacy	1-3%	EU AU US CA

FLOWCHART FOR INNOVACTIVE PIGMENFERM PREPARATION



INNOVACTIVE FERMENTATION STRATEGY

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INNOVACTIVE PIGMENFERM Ferment-Peptide Complex derived from natural fermentation in which Bacillus Subtilis grows in a specific medium including Palmitoyl tetrapeptide-20, L-Methionine, Acetyl Tyrosine to synergize with peptides produced by the bacteria in enhancing the synthesis of melanin which is the key to delay the hair greying process.

KEY ACTIVE INGREDIENTS AND THEIR FUNCTIONS

At the end of fermentation, the bacteria are filtered and lysed to obtain a concentrate rich in active ingredient such as:

- **Vitamins Group B/K2/C**
- **Biologically active peptides**
- **Antioxidants**
- **Peptides and Proteins**
- **Catalase enzyme**
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Peptides and enzymes are titrated as total proteins and specific enzymatic activities which together with the B Group Vitamins make the Ferment-Peptide Complex particularly effective in several activities.

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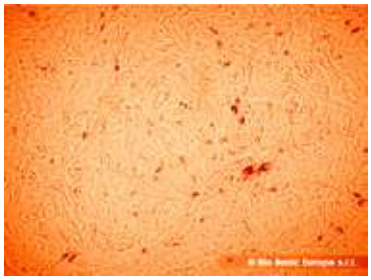
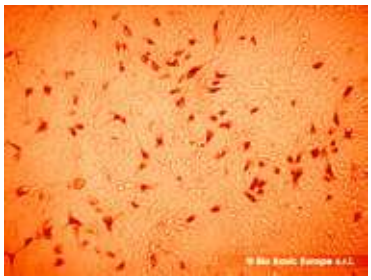
INNOVACTIVE PIGMENFERM

IN VITRO EVALUATION OF THE PIGMENTING ACTION ON MELANOCYTES



NC (not treated cells)



Pigmenferm at 3%

IMPORTANT PREMISES:

Hair colour is due to the synthesis of melanin by melanocytes and its transfer to keratinocytes.

The process of hair greying is related to an increased production of Hydrogen Peroxyde in hair follicles due to a decreased catalase activity.

H2O2 accumulation in hair shafts associated to a reduced ability to fight against oxidative damage promote the hair greying process.

In the PIGMENFERM particularly:

Tyrosinase activity : the rate-limiting enzyme driving melanin synthesis.

Acetyl Tyrosine : a substrate for tyrosinase stimulating melanin synthesis.

BACILFERM (Bacillus Lysate Filtrate) rich in catalase acts together with L-Methionine, reducing H2O2 follicle accumulation which splits into water and oxygen.

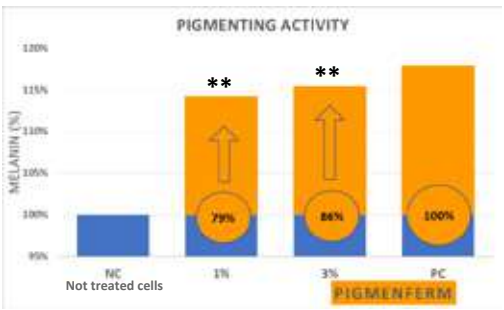
Palmitoyl tetrapeptide-20 by binding to Macrophage Scavenger Receptor 1 (MSHR1) stimulates melanogenesis and restores cells capability to produce pigment.

INNOVACTIVE PIGMENFERM EFFICACY

1. Stimulation of melanin synthesis
2. Melanocyte resistance to stress
3. Antioxidant protection against environmental factors (pollution, blue light and UV)
4. Reduction of gray hair delaying its appearance
5. Moisturizing activity
6. Color uniformity
7. Skin luminosity

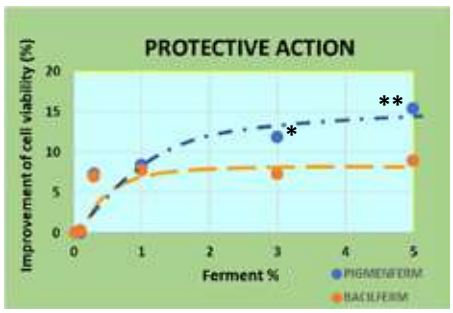
PROTECTIVE ACTION AGAINST DAMAGES INDUCED BY H_2O_2 ON MELANOCYTES

Comparative evaluation Bacilferm over Pigmenferm



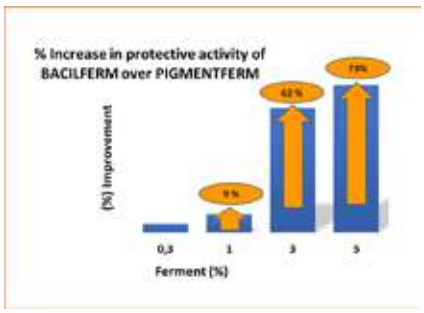
** p < 0.01 vs NC

* PC=melanotropic hormone 2µg/ml



* p < 0.05 vs H_2O_2 stimulated cells

** p < 0.01 vs H_2O_2 stimulated cells



INNOVACTIVE INGREDIENTS

www.innovingredients.com

info@innovingredients.com

TECHNICAL PRODUCT DATA

INCI: Glycerin, Bacillus Ferment Filtrate, Palmitoyl tetrapeptide-20, L-Methionine, Acetyl-Tyrosine | **Solubility**: water soluble | **pH**:6-8 | **Colour**: colorless-yellowish **Preservative** Free | **Recommended dose**: 1-3%

INNOVACTIVE INGREDIENTS (GFT) The Green Ferment Tech®

INNOVACTIVE PIGMENFERM

NEW EFFICACY IN VIVO TEST COLOR UNIFORMING

PRELIMINARY RESULTS: TEST IN PROGRESS

An uneven complexion presents dyschromias due to a difference in the pigmentation caused by different level of melanin, the pigment responsible for the color of the skin and hair.

There can be many causes of skin dyschromias.

The main reasons for this color anomaly are:

- sun and use of UV lamps
- chemical products
- bacteria
- physiological changes
- hormonal imbalances

INNOVACTIVE PIGMENFERM is a Ferment-Peptide Complex that stimulates the synthesis of Melanin by carrying out a protective action against melanocytes, providing hydration and an antioxidant action.

PHOTOGRAPHS taken with the OBSERV 520X, a closed system with standardized lighting conditions and then the parameters are quantified with Framescan Software

A gel containing 3% Pigmenferm was applied twice a day on hemiface against placebo for 56 days.

COLOR UNIFORMING EFFICACY

UP TO +23,4%

PIGMENTING ACTION

UP TO +12%

PLACEBO -2,5%
reduction in pigmentation

An evident darkening can be observed on one side of the face where the gel with 3% Pigmenferm it has been applied.

The final objective of the study will be to verify if we can be able to reduce the visibility of the dyschromias as there has been skin hyperpigmentation.

Volunteer 1

T=0

T=56 days

Volunteer 2

T=0

T= 56 days

INNOVACTIVE PIGMENFERM

NEW EFFICACY IN VIVO TEST 1%

SKIN LUMINOSITY EFFICACY

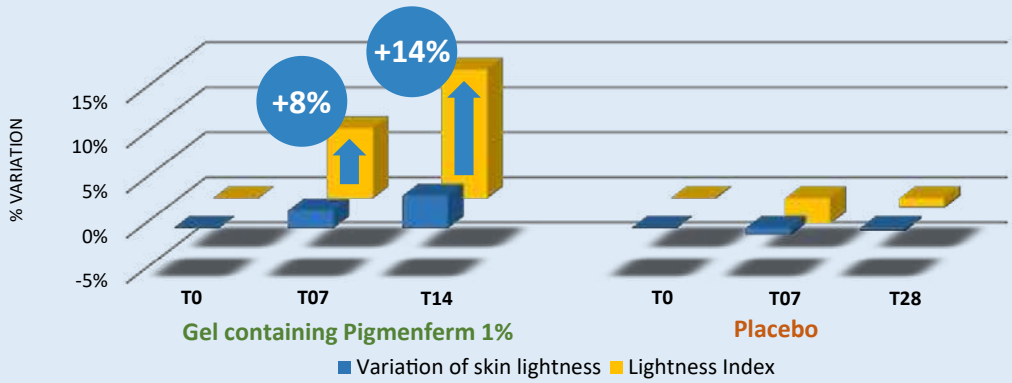
It was performed a clinical study with 10 subjects and a gel containing Pigmenferm at 1% was applied twice a day for 14 days on one side of the face and the placebo on the other one.

The effect of the product was evaluated analyzing the increase of the skin lightness (Lightness Index)* in comparison with the variation obtained from a placebo.

* Lightness Index is calculated by normalizing the detected skin lightness value respect to the maximum value assumed by the parameter in the skin (25 units) . Therefore Lightness Index is equal to 4 times the percentage change of the skin lightness parameter.

SKIN LIGHTNESS/LUMINOSITY – LIGHTNESS INDEX

Measured by Antera 3D



GEL CONTAINING PIGMENFERM 1%

T0

T07

T14

www.innovingredients.com
info@innovingredients.com

TECHNICAL PRODUCT DATA

INCI: Glycerin, Bacillus Ferment Filtrate, Palmitoyl tetrapeptide-20, L-Methionine, Acetyl-Tyrosine | **Solubility**: water soluble | **pH**:6-8 | **Colour**: colorless-yellowish
Preservative Free | **Recommended dose**: 1-3%

INNOVACTIVE INGREDIENTS

A company inspired by nature and supported by science

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(GFT)

The Green Ferment Tech®

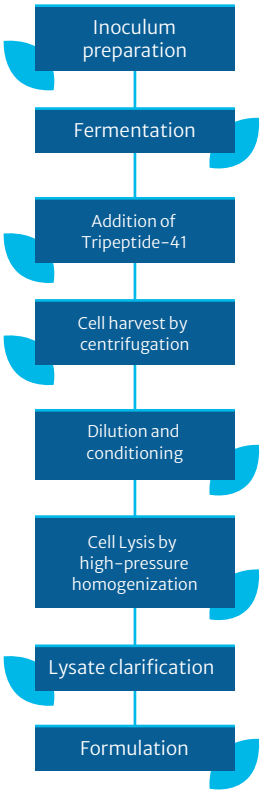
Transformation of simple raw materials in a Ferment-Peptide Complex by a process that combines Natural ferment with a natural origin peptide

INNOVACTIVE LIPOFERM

a lipo-reducing and remodeling ferment with body and face shaping activity

TECHNOLOGY	EFFICACY STUDIES	DOSAGE	REGULATORY
BIO FERMENTATION	In vitro evaluation of the lipo-reducing activity Face remodeling in vivo test Body remodeling in vivo test	3%	EU AU US CA

FLOWCHART FOR INNOVACTIVE LIPOFERM PREPARATION



INNOVACTIVE FERMENTATION STRATEGY

Bacillus Subtilis originally obtained from Natto (the oldest Japanese food) during soybeans lactic fermentation, is fermented in the laboratory under controlled technological conditions in a specific medium with natural substrates and natural origin peptides having cosmetic properties.

During fermentation process, Bacillus Subtilis sp. Natto produces several bio actives peptides and enzymes playing key roles in skin cells.

The **INNOVACTIVE FERMENTATION STRATEGY** to obtain a Ferment-Peptide Complex is based on the addition of peptide during natural fermentation of Bacillus Subtilis grown with plant-derived nutrients.

INNOVACTIVE LIPOFERM	Ferment-Peptide Complex derived from natural fermentation in which Bacillus Subtilis grows in a specific medium including Tripeptide-41 to synergize with peptides produced by the bacteria, acting on lipolytic processes.

KEY ACTIVE INGREDIENTS AND THEIR FUNCTIONS

At the end of fermentation, the bacteria are filtered and lysed to obtain a concentrate rich in active ingredient such as:

- **Vitamins Group B/K2/C**
- **Biologically active peptides**
- **Antioxidants**
- **Peptides and Proteins**
- **Catalase enzyme**
- **Lipase enzyme**

Peptides and enzymes are titrated as total proteins and specific enzymatic activities which together with the B Group Vitamins make the Ferment-Peptide Complex particularly effective in several activities.

INNOVACTIVE INGREDIENTS
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info@innovingredients.com

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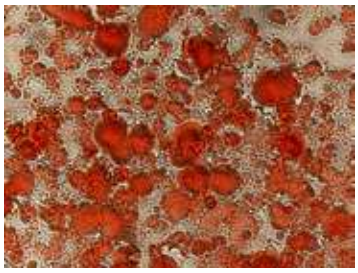
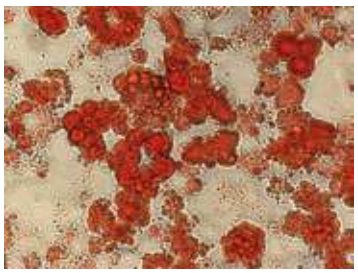
INNOVACTIVE LIPOFERM

IN VITRO LIPO-REDUCING ACTIVITY ON ADIPOCYTES

Reduction triglycerides accumulated in adipocytes

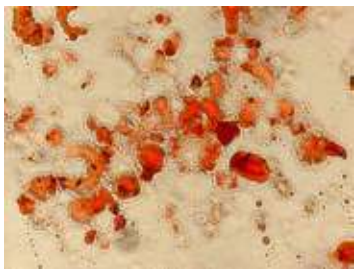


NC (not treated cells)



Adipocytes treated with Lipoferm at 1%

Adipocytes treated with Lipoferm at 3%



Adipocytes treated with PC (Positive Control = Caffeine 0.5 mg/ml)

In the LIPOFERM particularly:

The **LIPASE enzyme** contained in the Bacillus Subtilis Ferment shows lipo-reducing and remodeling effects by inhibiting pre-adipocyte differentiation.

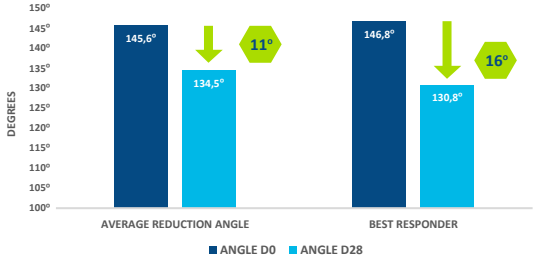
Tripeptide-41 stimulates lipolysis and contribute to the regulation of lipid mobilization. It promotes Brown adipocyte respiration, thermogenesis and the "browning" of white adipose deposits.

INNOVACTIVE LIPOFERM EFFICACY

1. Lipo-reducing activity (slimming – anticellulite)
2. Inhibition of pre-adipocyte differentia - tion
3. Remodeling and redistribution activity of the body and face shaping
4. Moisturizing activity
5. Antioxidant protection from pollution, blue light and UV

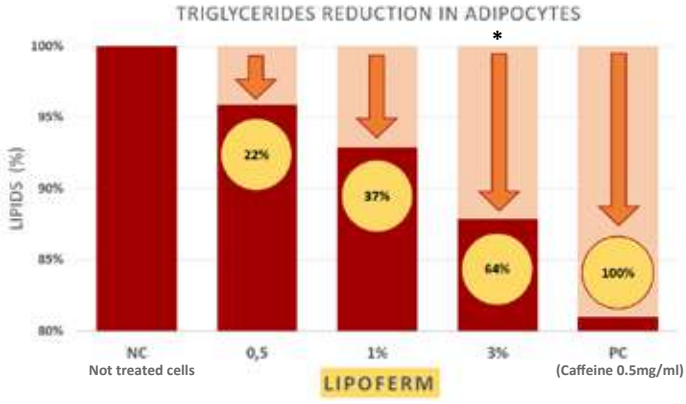
IN VIVO STUDIES

Cervico-Mandibular Angle



Product: Gel With 3% Lipoferm **Application:** twice a day during 28 days
Date at D0 & D28

Face reshape activity



* $p < 0.05$ vs NC

INNOVACTIVE INGREDIENTS
www.innovingredients.com
info@innovingredients.com

TECHNICAL PRODUCT DATA

INCI: Glycerin, Bacillus Ferment Filtrate, Tripeptide-41 | **Solubility**: water soluble
pH:6-8 | **Colour**: colorless-yellowish | **Preservative Free** | **Recommended dose**: 3%

INNOVACTIVE INGREDIENTS (GFT) The Green Ferment Tech®

INNOVACTIVE LIPOFERM

NEW EFFICACY IN VIVO TEST BODY REMODELING

Adipose tissue is a connective tissue made up of adipocytes of two types: white and brown and has the intrinsic ability to transform white adipocytes into brown adipocytes and vice versa. The coexistence of these cells is antithetical: the white ones accumulate lipids in the form of triglycerides (which have an energy reserve function, storing calories), while the brown ones burn them (that is, they burn calories by generating heat: thermogenesis) and this happens when there is a drop in body temperature.

In fact, the brown adipose tissue activates in response to a drop in temperature, as in our case, and by activating it consumes and therefore burns the white fat with a consequent increase in temperature.

Of course, during the efficacy test we observe and measure the various parameters at a given moment and we do not observe a prolonged and lasting trend over time, because as we can see in the results obtained, we can appreciate a lowering or raising of the temperature of the same area of the body after 28 days of twice a day application of our product containing 3% of Lipoferm, due precisely to the cold-hot variations which correspond to the activation of brown fat which burns white fat with a consequent increase in temperature.

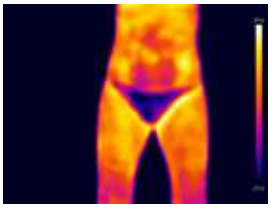
In vivo efficacy test carried out using a cream containing 3% Lipoferm twice a day for 28 consecutive days

PHOTOS MADE WITH INFRARED THERMOGRAPHY

Infrared thermography consists in measuring precisely the changes in the surface temperature of the skin using infrared thermal images: the range of colors reveals an increase or decrease in the infrared radiation emitted by the skin surface.

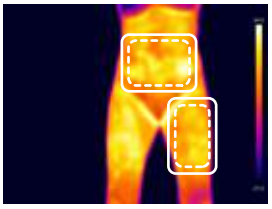
Volunteer 1

T=0



The photo at T= 28 days shows how the same area has become more yellow compared to T=0 this means that has been an increase in temperature

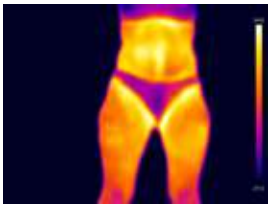
T=28 days



HIGHER TEMPERATURE: brown fat is burning white fat resulting in an increase in temperature

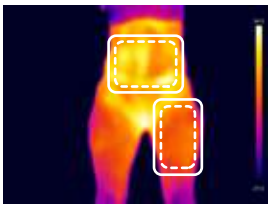
Volunteer 2

T=0



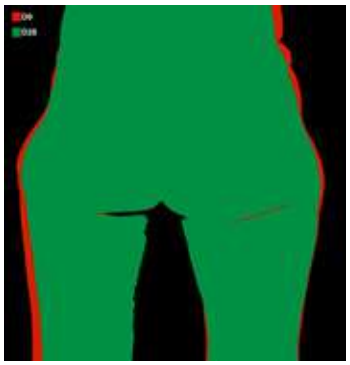
In the photo below we observe how the same area after 28 days has become more purple or blue this means that there has been a drop in temperature

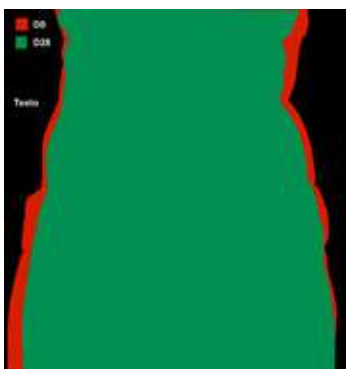
T=28 days



LOWER TEMPERATURE: brown fat activated

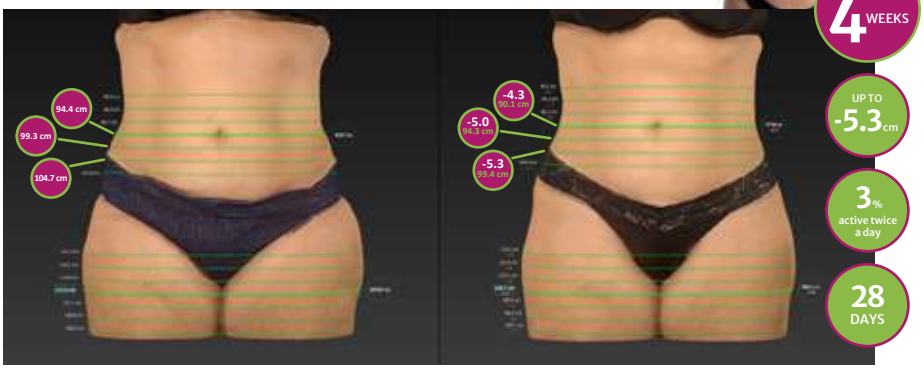
BODY CONTOUR REMODELING



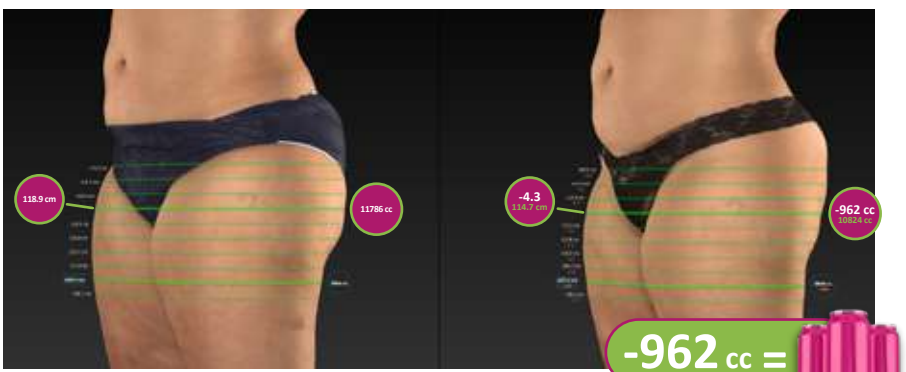


NORMOMETRIC MEASUREMENTS

Waist circumference reduction (cm)



Buttock volume and circumference reduction



INNOVACTIVE INGREDIENTS

A company inspired by nature
and supported by science

GFT

The Green Ferment Tech®

Transformation of simple raw materials
in a Ferment -Peptide Complex
by a process that combines Natural ferment
with a natural origin peptide

INNOVACTIVE INGREDIENTS S.L
Carrer Sant Francesc, 26
Sant Cugat (Barcelona) SPAIN

info@innovingredients.com
www.innovingredients.com

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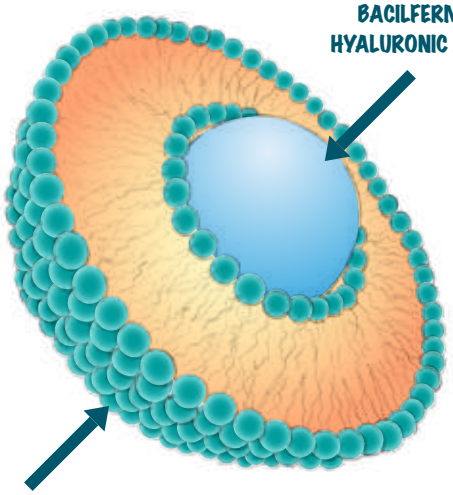

(GFT) *The Green Ferment Tech®*

Green Encapsulation of a functional combination of two active Ingredients

HYALUFERM MOIST-SOME®

Green encapsulation of a functional combination of two active Ingredients to increase deep skin hydration for at least 72 hours

TECHNOLOGY	EFFICACY STUDIES	DOSAGE	REGULATORY
LIPOSOME	Deep hydrating efficacy in vivo study for 24-48-72 hours	3%	EU AU CN KR US CA JP

NOI = 0,988

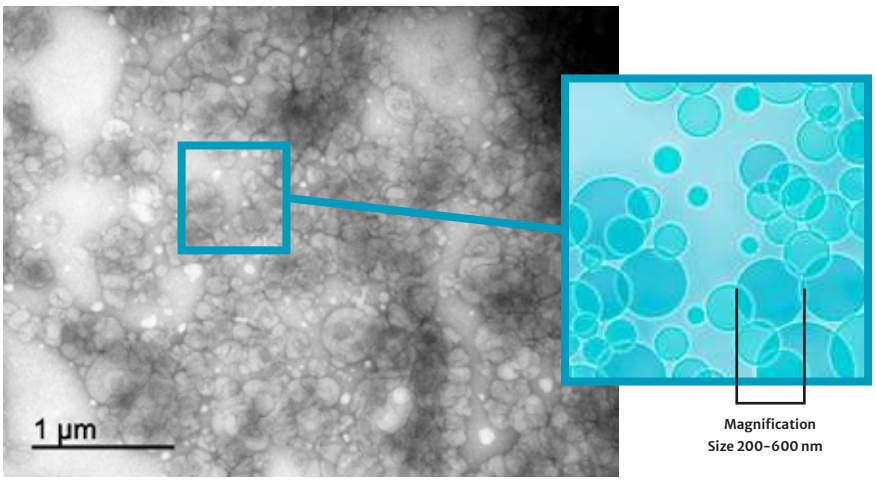

Photo Liposome taken with Transmission Electron Microscope (TEM)

100%
Proven Encapsulation Efficacy

Hyaluronic Acid is a macromolecule with high polarity and consequently solubility in water, so it complexes with many water molecules, reaching a high degree of hydration.

The Hyaluronic Acid with very low molecular weight nourishes the deeper skin layers, its ability to increase its volume allows it to fill the spaces between the skin cells, forming a viscous gel matrix which manages to soften wrinkle lines.

Hyaluronic Acid with very low molecular weight works by giving high hydration and firmness to the deeper skin layers, stimulating the production of Collagen and Elastin and giving support to the skin by increasing its firmness.

All these benefits are potentiated by its combination with Bacilferm (Bacillus ferment filtrate), a Ferment with moisturizing and cell protective action, rich in B Group Vitamins, enzymes, peptides and potent antioxidants acting against UV radiation , Blue light and Ozone.

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info@innovingredients.com

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(GFT) The Green Ferment Tech®

HYALUFERM MOIST-SOME®

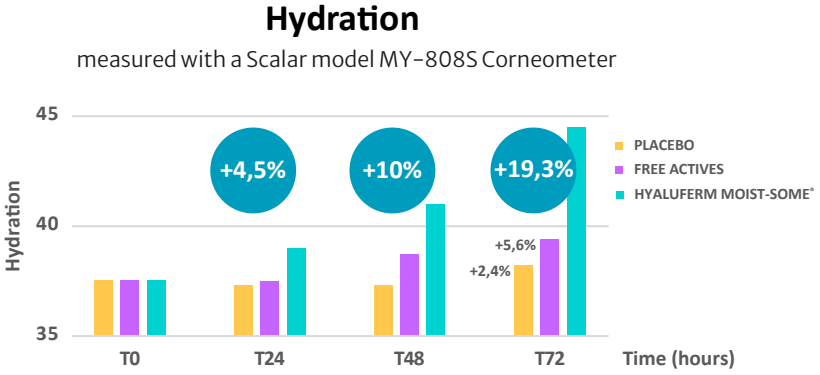
HYALUFERM MOIST-SOME® EFFICACY

1. Deep Hydrating efficacy for 24-48-72 hours
2. Reduction of dermal echogenic density
3. Increase in the % of Water and therefore in the Volume
4. Protection against oxidative environmental induced damages (pollution, UV, Blue light)
5. Protective action against damages induced by H_2O_2

IN VIVO STUDY: DEEP HYDRATING EFFICACY FOR 24/48/72 hours

3D Photo taken with camera using a VECTRA H2 lens

The in vivo efficacy test was carried out using twice a day for 3 days a Cream containing 3% of HYALUFERM MOIST-SOME® vs Cream with Free Actives vs Placebo



UP TO -24% IMPROVEMENT IN DEEP HYDRATION

UP TO -7% FREE ACTIVES

Reduction of DERMAL ECHOGENIC DENSITY

Mesured by Hight Resolution 50MHz Ultrasound (DUB SKIN SCANNER)

UP TO 30%

Increase in VOLUME which means an Increase in WATER

Measurement taken with camera using a Vectra H2 lens

HYALUFERM MOIST-SOME® increases deep hydration by acting in depth, reducing the echogenic density mainly of the dermis with an **increase in water and volume** and consequently an increase in skin firmness

INNOVACTIVE INGREDIENTS
www.innovingredients.com
info@innovingredients.com

TECHNICAL PRODUCT DATA

INCI: Water (Aqua), Glycerin, Sorbitol, Lecithin, Sodium Hyaluronate, Bacillus ferment filtrate, Xanthan Gum | **Additives**: Benzyl Alcohol, Glyceryl Caprylate, Benzoic Acid, Propanediol, Sodium Phytate | **Colour**: pale brown | **Aspect**: aqueous suspension | **Solubility**: dispersible in water and in O/W, W/O emulsions | **pH**: 4.0-6.0 | **Recommended dose**: 3%

INNOVACTIVE INGREDIENTS

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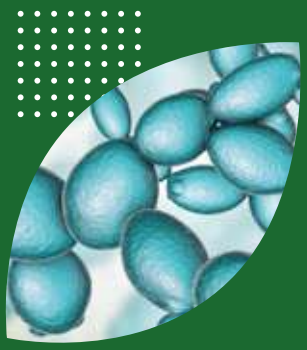
(GFT)

The Green Ferment Tech®

Transformation of simple raw materials in a Ferment-Peptide Complex by a process that combines Natural ferment with a natural origin peptide



INNOVACTIVE WOMANFERM®

Ferment-Peptide Complex to fight the signs associated with hormonal variations starting from Premenopause period.

TECHNOLOGY	EFFICACY STUDIES		DOSAGE	REGULATORY
BIO FERMENTATION	• Deep hydration • Epidermal/Dermal density • Echogenic density	• TEWL • Protein Glycation • Skin tightening • Skin volumizing	3%	EU AU CN KR US CA JP

FLOWCHART FOR INNOVACTIVE WOMANFERM® PREPARATION

- Inoculum preparation
- Fermentation
- Addition of Acetyl Tetrapeptide-2
- Centrifugation
- Sample conditioning
- Cell disruption
- Clarification by centrifugation
- Filtration
- Formulation

INNOVACTIVE FERMENTATION STRATEGY

Saccharomyces Cerevisiae strain from fermented rice specifically selected based on its natural content of Ergosterol and the three main fatty acids Omega 3, Omega 6 and Omega 9 .

The selection is carried out using cultivation techniques and biochemical analyzes to verify the content of these components.

The fermentation is carried out in the laboratory under controlled technological conditions in a specific medium, with natural nutrients (like glucose and soy peptones), and natural origin peptide, having cosmetic properties.

The **INNOVACTIVE FERMENTATION STRATEGY** to obtain a Ferment-Peptide Complex is based on the addition of a peptide during natural fermentation of Saccharomyces Cerevisiae grown with plant-derived nutrients to obtain synergies of active ingredients and cosmetic activities.

INNOVACTIVE WOMANFERM®

Ferment-peptide Complex derived from natural fermentation in which Saccharomyces Cerevisiae with natural content of Ergosterol (precursor of Vitamin D) enriched by the fermentation process, and fatty acids omega 3, omega 6 and omega 9 which are the essential constituents of hydrolipidic film of the skin, grow in a specific medium , including the biomimetic peptide Acetyl tetrapeptide-2, to counteract facial skin changes associated with hormonal variations occurring from premenopause period such as:

- Flaccidity
- Loss of density, elasticity and tone
- Dryness
- Increased protein glycation
- Reduction of skin immune defenses

and keep the skin looking more youthful.

INNOVACTIVE INGREDIENTS
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info@innovingredients.com

INNOVACTIVE INGREDIENTS

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(GFT)

The Green Ferment Tech®

INNOVACTIVE WOMANFERM®

KEY ACTIVE INGREDIENTS AND THEIR FUNCTIONS

At the end of fermentation, the bacteria are lysed and filtered after centrifugation, to obtain a concentrate rich in active ingredients such as:

Ergosterol
Fatty acids
Biomimetic peptide

Ergosterol and fatty acids are titrated in each batch and make the Ferment-Peptide Complex together with the biomimetic peptide, particularly effective in counteract the effects of sagging skin, helping to fight the signs associated with hormonal variations and keep the skin looking youthful.

In the WOMANFERM® particularly:

Saccharomyces ferment lysate filtrate

with natural Ergosterol content (precursor of Vitamin D) enriched by the fermentation process and fatty acids omega 3, omega 6 and omega 9 which are the essential constituents of the hydrolipidic film of the skin, it helps to increase dermal and epidermal density, makes the hydrolipidic film more compact and the skin barrier more resistant, bringing the skin back to an optimal physiological state and appearance.

Acetyl Tetrapeptide-2

Biomimetic peptide which helps the skin fight the signs associated with hormonal variation, starting from premenopause period , counteracting the effects of skin sagging and loss of tone due to aging and the force of gravity, stimulating skin's immune defenses and increasing elasticity, firming and skin tightening efficacy.

INNOVACTIVE WOMANFERM® EFFICACY

With age, hormonal variations occur in a woman's life which lead to stress, exhaustion and energy deficiency, but also loss of skin tone, dryness, thinning of the epidermis, poor production of Collagen/Elastin/HA, loss of brightness, appearance of age spots and increased loss of trans epidermal water due to lack of fatty acids in the hydrolipidic film.

All these skin changes are due to hormonal variations that occur starting from premenopause period and that we try to compensate bringing the skin back to an optimal physiological state and appearance in multiple ways:

1. counteracting sagging skin
2. Increasing the tone, firming, elasticity and tightening the skin
3. increasing dermal and epidermal density
4. improving protection thanks to greater resistance and compactness of the skin barrier
5. reducing skin dryness by increasing deep hydration
6. reducing protein glycation

INNOVACTIVE INGREDIENTS
www.innovingredients.com
info@innovingredients.com

TECHNICAL PRODUCT DATA

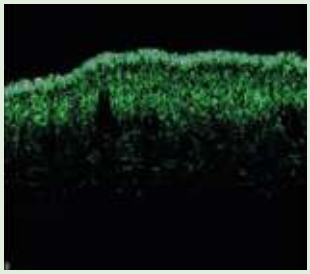
Producte Code: INNO-007 | **INCI**: Glycerin, Saccharomyces ferment lysate filtrate, Acetyl tetrapeptide-2 | **Solubility**: water soluble | **pH**:6-8 | **Colour**: colorless-yellowish | **Preservative** Free | **Recommended dose**: 3%

INNOVACTIVE INGREDIENTS (GFT) The Green Ferment Tech®

INNOVACTIVE WOMANFERM®

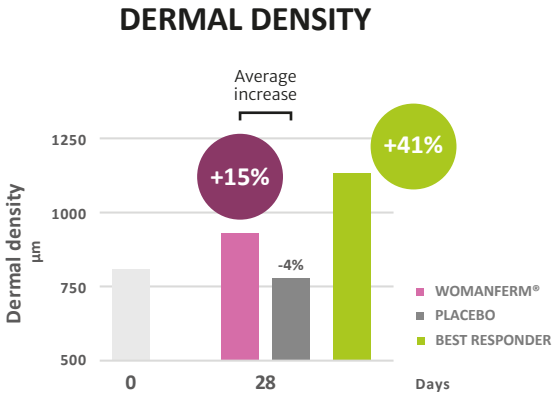
In vivo efficacy test carried out using a Cream containing 3% of Womanferm® twice a day for 28 consecutive days vs Placebo

Measurement of EPIDERMAL and DERMAL DENSITY using HIGH RESOLUTION 15-20 MHz Ultrasound (DUB SKIN SCANNER) and an average skin penetration of 16 mm



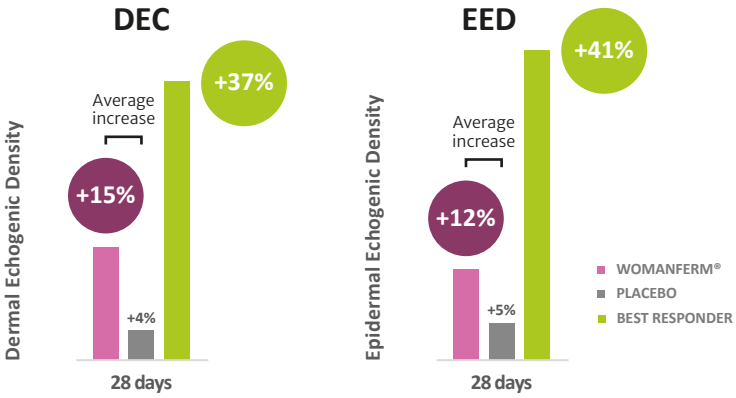
T0

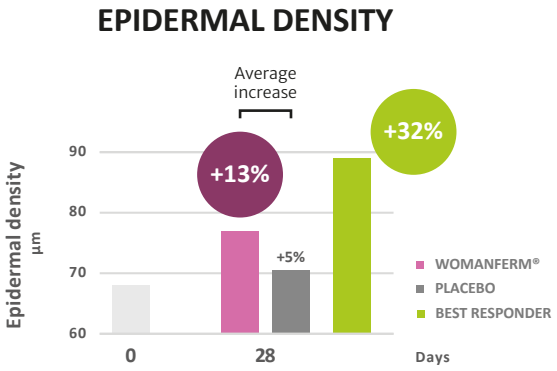
T28



ECHOGENIC DENSITY (quantity of acustic wave/area)

Measured by High Resolution 50 MHz Ultrasound (DUB SKIN SCANNER)





An increase in Echogenic density indicates an increase in the extracellular matrix, this means, a more organized skin structure and therefore a more compact dermal-epidermal junction.

VOLUME and TIGHTENING effect

3D Photos taken with camera using VECTRA H2 lens

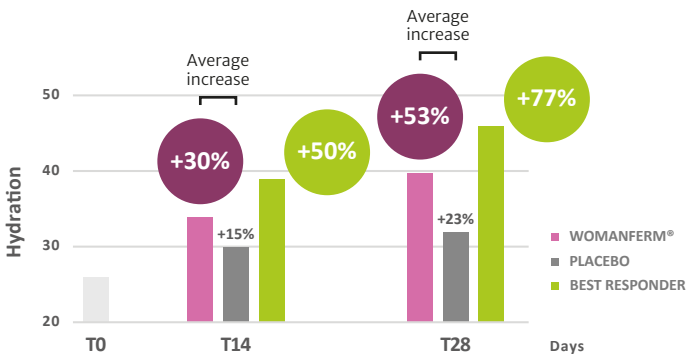
PLACEBO T28

WOMANFERM® T28

INNOVACTIVE WOMANFERM®

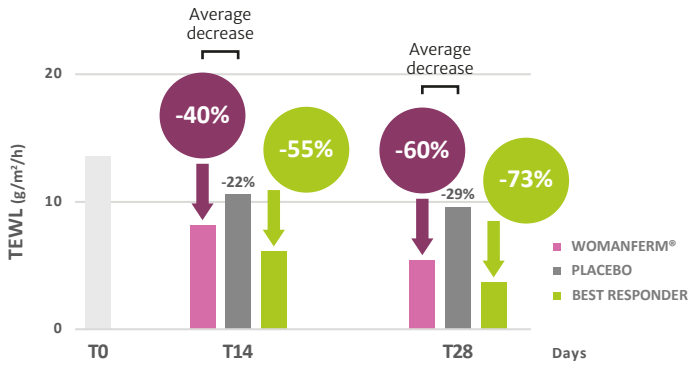
HYDRATION

Measured with a Scalar Model MY-808S Corneometer



TEWL (Protective Activity)

Measured with BIOX AQUAFLUX SYSTEM

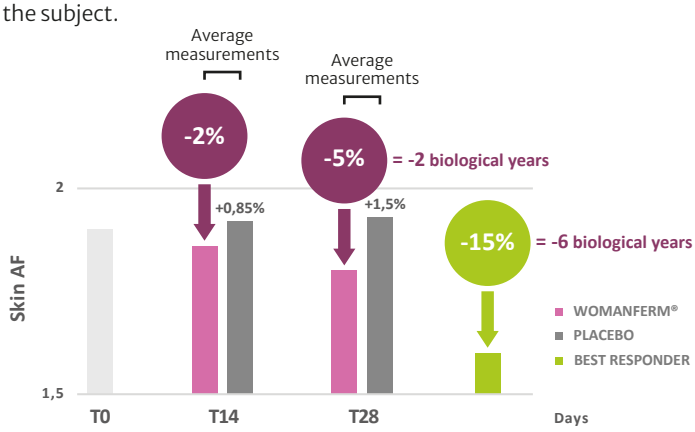


ANTI-GLYCATION EFFICACY

Measured with AGE Reader device that measures tissue accumulation of Advanced Glycation End- products (AGEs) by means of Fluorescence techniques.

GLYCATION REDUCTION
=
INCREASE IN SKIN ELASTICITY

The graph connects the skin AF of the Glycation and th AGE of the subject.



A rejuvenation of the biological age of the skin can also be seen by observing the change in the shape of the skin pores which have gone from oval to being rounder.
There is a direct correlation between the shape of the pore, the age and the elasticity of the skin.

T=0

T= 28

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TECHNICAL PRODUCT DATA

Producte Code: INNO-007 | **INCI**: Glycerin, Saccharomyces ferment lysate filtrate, Acetyl tetrapeptide-2 | **Solubility**: water soluble | **pH**:6-8 | **Colour**: colorless-yellowish | **Preservative** Free | **Recommended dose**: 3%

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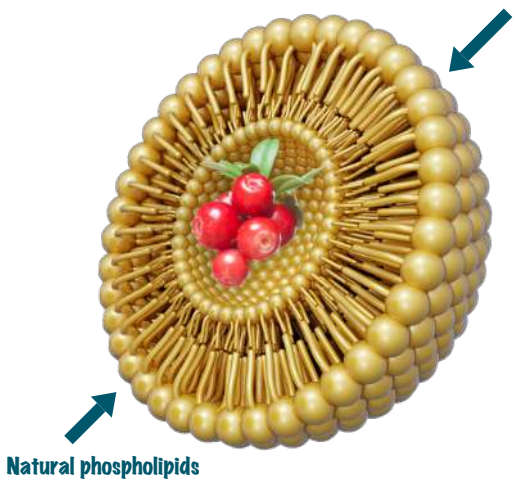

(GFT)

The Green Ferment Tech®

Green Encapsulation of a functional combination of two active Ingredients

PROTECTFERM-SOME®

Green encapsulation of a functional combination of two active ingredients to help fight oxidative stress and protect skin from environmental damage rebuilding the skin barrier function

TECHNOLOGY	EFFICACY STUDIES IN VITRO TEST	DOSAGE	REGULATORY
LIPOSOME	• Protective efficacy vs UV light, smoke, heavy metals • Oxidative stress protection test	2%	EU AU CN KR US CA JP

NOI = 0,988

SACCHAROMYCES FERMENT LYSATE FILTRATE

From fermented rice specifically selected based on its natural content of the three main fatty acids Omega3, Omega6, Omega 9, helps to rebuild the hydrolipidic film, restore the barrier function and therefore increase skin protection.

ASHWAGANDHA DRY EXTRACT (Whitania somnifera root extract)

Is known as Indian Ginseng and is considered a wellness plant. It is an adaptogenic Ayurvedic plant, which means it helps the skin to adapt to external factors by increasing the skin's resistance. Increases the ability of our skin to resist stress caused by environmental factors and strengthens the barrier by rebuilding its function and resistance in synergy with Saccharomyces ferment.

PROTECTFERM-SOME® is a liposome that deeply transports a synergistic combination of two effective green active ingredients in protecting cells (fibroblasts) from oxidative stress, reducing the oxidative marker level and preserving cell viability.

In particular, through in vitro tests, its effectiveness in protecting cells from environmental stress caused by UV, smoke, heavy metals and urban dust, has been demonstrated.

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The Green Ferment Tech®

PROTECTFERM-SOME®

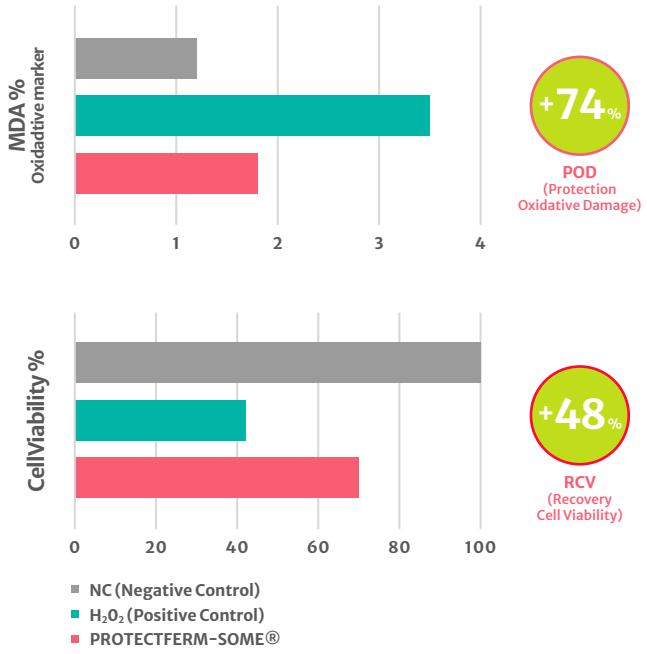
PROTECTFERM-SOME® EFFICACY

1. Helps fight oxidative stress
2. Protects the skin from environmental damage
3. Rebuilds the function and resistance of the skin barrier

IN VITRO STUDIES:

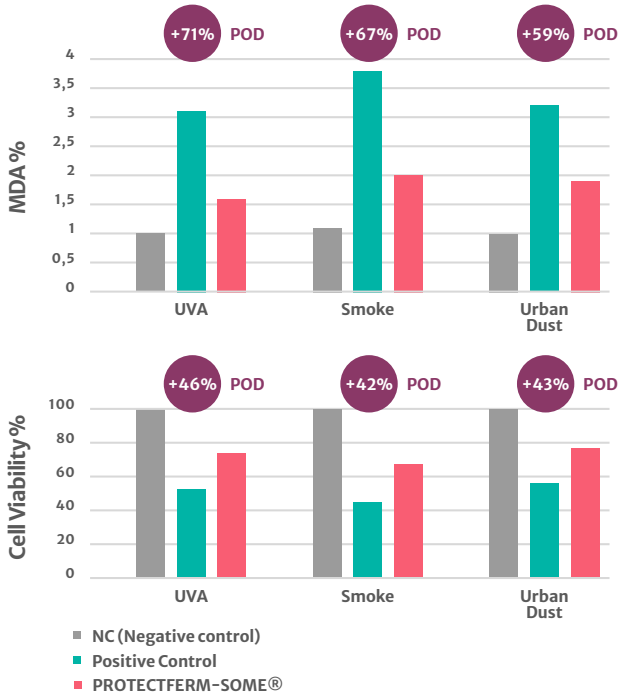
Environmental stress protection test (UV Light - smoke - urban dust - heavy metals) and Oxidative stress protection test (chemical insult with H_2O_2)

Oxidative stress protection test



PROTECTFERM-SOME® protects cells (fibroblasts) from oxidative damage caused by chemical insult preserving cell viability.

Environmental stress protection test (UV-smoke-urban dust)



PROTECTFERM-SOME® protects cells (fibroblasts) against oxidative damage caused by environmental contaminants (UV, smoke, urban dust, heavy metals), preserving cellular viability.

TECHNICAL PRODUCT DATA

Producte Code: INNO-009 | **INCI**: Water (Aqua), Glycerin , Sorbitol, Withania somnifera root extract, Lecithin, Saccharomyces ferment lysate filtrate, Xanthan gum | **Additives**: Benzyl Alcohol, Glyceryl Caprylate, Benzoic Acid, Propanediol, Sodium Phytate | **Colour**: brown **Aspect**: liposomal aqueous solution | **Solubility**: dispersible in water and in O/W, W/O emulsions | **pH**: 4.0-6.0 | **Recommended dose**: 2%

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(GFT)

The Green Ferment Tech®

Transformation of simple raw materials in a Ferment-Peptide Complex by a process that combines Natural ferment with a natural origin peptide

INNOVACTIVE SENSIFERM®

Ferment-Peptide Complex with a specific soothing / calming and anti-redness action for sensitive skin

TECHNOLOGY	EFFICACY STUDIES		DOSAGE	REGULATION
BIO FERMENTATION	• In vitro soothing / anti-inflammatory efficacy test • antioxidant enhancement in vivo test • Soothing/calming, anti-redness efficacy in vivo test	• Hydration • Elasticity • TEWL • Clinical evaluation	2%	EU AU CN KR US CA JP

FLOWCHART FOR INNOVACTIVE SENSIFERM® PREPARATION

- Inoculum preparation
- Enrichment of the culture medium with Oat Flour
- Fermentation
- Addition of Palmitoyl Tripeptide-8
- Centrifugation
- Sample conditioning
- Cell lysis
- Clarification by centrifugation
- Filtration
- Formulation

INNOVACTIVE FERMENTATION STRATEGY

Saccharomyces Cerevisiae strain from fermented rice specifically selected based on its natural content of Ergosterol and the three main fatty acids Omega 3, Omega 6, Omega 9.

The fermentation is carried out in the laboratory, under controlled technological conditions in a specific medium with natural nutrients enriched with OAT FLOUR which is in turn rich in fatty acids to create a synergy with those already present in the Saccharomyces Cerevisiae.

The **INNOVACTIVE FERMENTATION STRATEGY** to obtain a Ferment- Peptide Complex is based on the addition of a peptide during natural fermentation with plant-derived nutrients enriched with Oat flour to obtain synergies of active ingredients and cosmetics activities.

INNOVACTIVE SENSIFERM®

Ferment- Peptide Complex derived from natural fermentation of Saccharomyces Cerevisiae **rich in Ergosterol** (precursor of Vitamin D) **and particularly in Fatty Acids Omega – 3 -6- 9, thanks to the presence of Oat flour** in the culture medium, and it grows in a specific medium that includes the **natural origin peptide Palmitoyl tripepti-de-8.**

Innovactive SENSIFERM® has a soothing/calming, anti-redness effect, reducing skin sensitivity to external stimuli and also unpleasant sensations typical of hypersensitive skin.

Characteristics associated with skin hypersensitivity:

- Weak hydrolipidic film
- Exaggerated reactivity to external stimuli (temperature changes, wind, sun, pollution, laser treatment) and internal stimuli (drug therapies, hormonal changes, moments of strong stress)
- Dry skin with flaking and a rough surface
- Sensation of tight skin, redness and itching

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(GFT)

The Green Ferment Tech®

INNOVACTIVE SENSIFERM®

KEY ACTIVE INGREDIENTS AND THEIR FUNCTIONS

Ergosterol
Fatty Acids (10.000 – 15.000 ppm)
Biomimetic peptide

Ergosterol and Fatty Acids are titrated in each batch and make the Ferment -Peptide Complex together with the biomimetic peptide, particularly effective in reducing skin sensitivity with a soothing/ calming and anti-redness efficacy as well as reducing itching and unpleasant sensations typical of hypersensitive skin.

In the SENSIFERM® we have:

Saccharomyces ferment lysate filtrate

Contains natural Ergosterol (precursor of Vitamin D), and Fatty Acids enriched by those present in the **OAT FLOUR** with which the culture medium is enriched.
As we know, **FATTY ACIDS** are the main components of the skin's hydrolipidic film which is altered in sensitive skin promoting dehydration, dry and sensitive skin that reddens easily.

Palmitoyl tripeptide-8

Biomimetic peptide with specific anti-reddening, soothing/ calming efficacy, which reduces the skin's sensitivity to external stimuli and unpleasant sensations, helping to restore the balanced level of sensitivity.

INNOVACTIVE SENSIFERM® EFFICACY

Premise: the deficiency of Fatty Acids observed in sensitive skin is manifested by increased TEWL (trans epidermal water loss), a compromised hydrolipidic film, altered skin barrier function and appearance of skin reactions.

Efficacy:

1. helps to rebuild the weak hydrolipidic film to improve the functionality of the compromised skin barrier of sensitive, irritated, very dry skin
2. helps to calm, soothe, reduce redness, itching and irritation
3. protects the skin from environmental damage
4. improves skin hydration and elasticity also smoothing the surface of the skin
5. protects the skin from UV irradiation – induced damage and signs of aging

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TECHNICAL PRODUCT DATA

Producte Code: INNO-008 | **INCI**: Glycerin, Saccharomyces ferment lysate filtrate, Palmitoyl tripeptide-8 | **Solubility**: water dispersible| **pH**:5-8 | **Colour**: whitish-yellowish **Preservative** Free | **Recommended dose**: 2% | Shake before use

INNOVACTIVE INGREDIENTS (GFT) The Green Ferment Tech®

INNOVACTIVE SENSIFERM®

IN VITRO TEST
SOOTHING / ANTI-INFLAMMATORY EFFECT

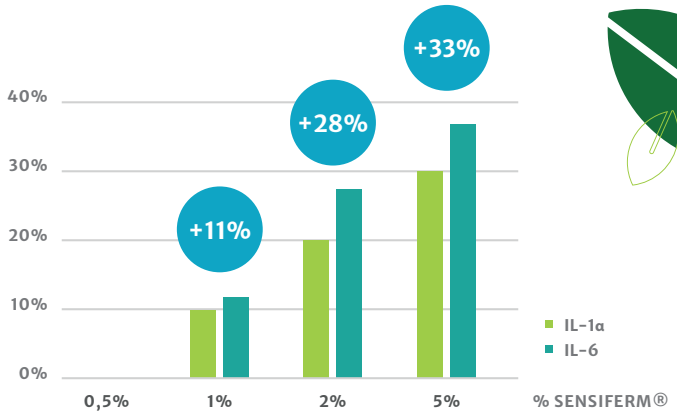
ANTI-INFLAMMATORY TEST

Technique: ELISA

Sensiferm is able to reduce the release of pro-inflammatory interleukins IL-1α and IL-6 after inflammatory stimulation with LPS (Lipopolysaccharide).

Dose - dependent soothing effect by significantly reducing the levels of IL-1α and IL-6.

SOOTHING ACTIVITY INDEX (Average % IL)

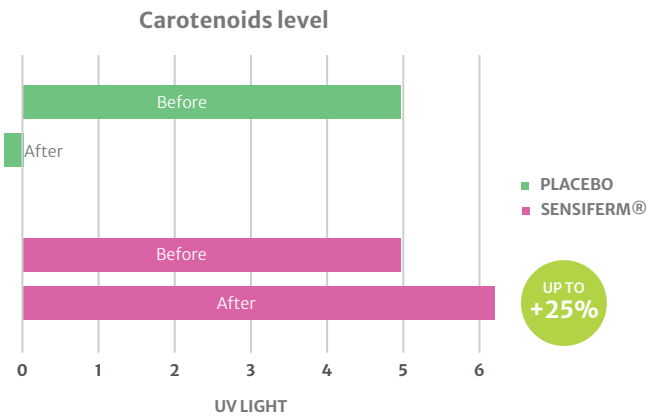


IN VIVO EFFICACY TEST CARRIED OUT USING A CREAM CONTAINING 2% OF SENSIFERM

IMMEDIATE EFFICACY: after just one application of the product

ANTIOXIDANT ENHANCEMENT EFFICACY

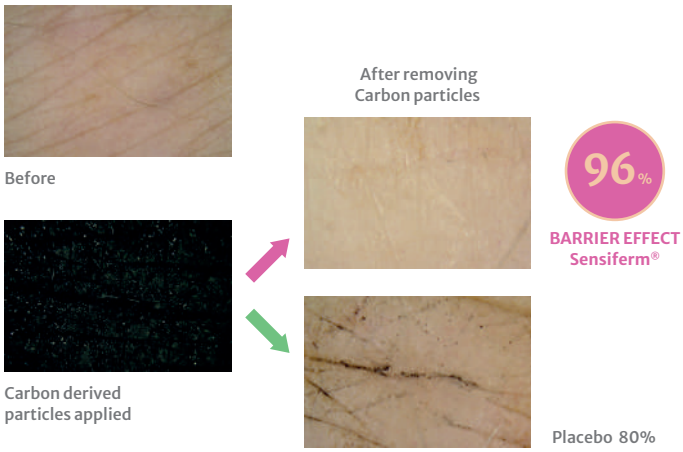
Technique: BIOZOOM (Skin Autoflorescence)
Dose: 2% Sensiferm vs Placebo
1 Application 15 min exposition to Oxidative source (UV light)



BARRIER EFFECT

Technique: Dermatoscope SIF PRO

SENSIFERM ® has a Barrier effect protecting skin from fine dust (Polluting particles) that induce Radical Radiation triggering processes of increase in Free Radicals.



% Barrrier Effect = Carbon derived particles applied
- Carbon derived particles removed

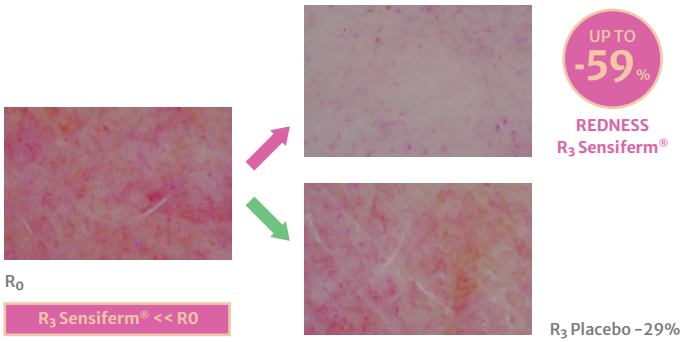
INNOVACTIVE SENSIFERM®

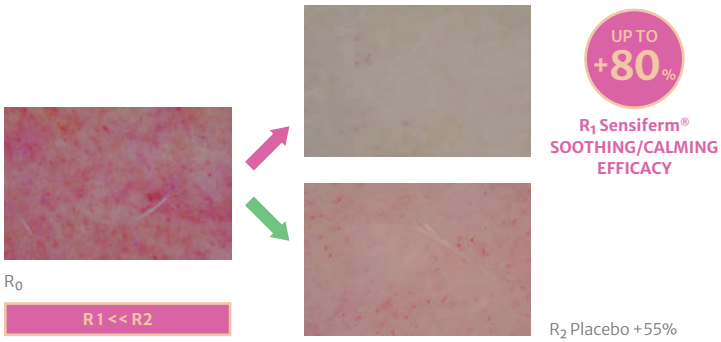
SOOTHING/CALMING / ANTI-REDNESS EFFECT: PREVENTIVE ACTION AND TREATMENT

Technique: Dermatoscope SIF PRO / LASER Dynamis SP

PREVENTIVE EFFICACY: Skin previously treated with Sensiferm® is less sensitive and reddens less after laser treatment than untreated skin (R0).

TREATMENT EFFICACY: Sensiferm ®reduces skin redness on skin sensitized by external stimuli such as laser treatment.



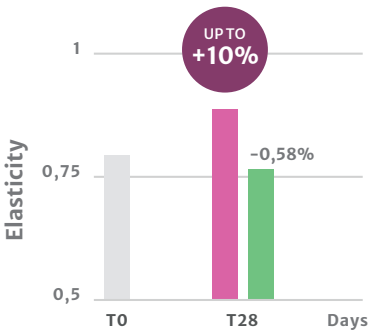


R_0 = basal redness of the skin after laser treatment | R_1 = redness after laser treatment and subsequent application of Sensiferm®
R_2 = redness after laser treatment and subsequent application of Placebo | R_3 = redness after applying Sensiferm® or Placebo and subsequent laser treatmen

IN VIVO EFFICACY TEST WITH DAILY APPLICATION OF A CREAM CONTAINING 2% OF SENSIFERM ® vs PLACEBO FOR 28 DAYS

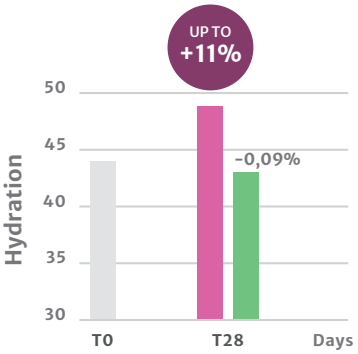
ELASTICITY

Measured with Cutometer Dual MPA 58



HYDRATION

Measured with a Scalar Model MY-808S Corneometer



TEWL (protective activity)

Measured with BIOX AQUAFLUX SYSTEM

CLINICAL EVALUATIONS: ROUGHNESS

The Allergan Visual Roughness Scale was used to evaluate skin texture after treatment.

In 100% of the volunteers skin roughness was significantly reduced (half a grade improvement of the Allergan Scale) with a significant increase in smothness.

100% EFFECTIVE SMOOTHING SKIN SURFACE

100% REDUCTION SKIN SURFACE ROUGHNESS

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TECHNICAL PRODUCT DATA

Producte Code: INNO-008 | **INCI**: Glycerin, Saccharomyces ferment lysate filtrate, Palmitoyl tripeptide-8 | **Solubility**: water dispersible| **pH**:5-8 | **Colour**: whitish-yellowish **Preservative** Free | **Recommended dose**: 2% | Shake before use

INNOVACTIVE INGREDIENTS

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Ceratonia Siliqua Seed Flour

FLOWCHART FOR INNOVACTIVE WATERDEEPFERM® PREPARATION

- Starter culture setup
- Enrichment with **Ceratonia Siliqua seed flour**
- Fermentation
- Addition of **Oligopeptide-1**
- Biomass recovery
- Sample adjustment
- Cell lysis
- Debris removal by centrifugation
- Microfiltration
- Formulation and product preparation

(GFT)

The Green Ferment Tech®

Transformation of simple raw materials in a Ferment-Peptide Complex by a process that combines Natural ferment with a natural origin peptide

INNOVACTIVE WATERDEEPFERM®

Ferment-peptide Complex that deeply hydrates the skin, facilitating the production, transport and retention of water thanks to the stimulation of the synthesis of Aquaporins-3

TECHNOLOGY	EFFICACY STUDIES	DOSAGE	REGULATORY
BIO FERMENTATION	**In vitro test:** Aquaporins-3 stimulation **In vivo test:** Superficial and deep Hydration Protection (TEWL) Elasticity Reduction of aggressiveness of rinse-off products Clinical evaluation	0,5% and 2%	EU AU CN KR US CA JP

INNOVACTIVE FERMENTATION STRATEGY

Saccharomyces Cerevisiae strain from fermented rice specifically selected based on its natural content of **Polysaccharides** and the three main **Fatty acids Omega 3-6-9**.

The fermentation is carried out in the laboratory, under controlled technological conditions in a specific medium with natural nutrients enriched with **CERATONIA SILIQUA SEED FLOUR** in turn rich in hydrocolloidal Polysaccharides, to create a synergy with those already presents in the Saccharomyces Cerevisiae.

The **INNOVACTIVE FERMENTATION STRATEGY** consists in creating a Ferment-Peptide Complex by adding a natural origin Peptide Oligopeptide-1, to the culture medium enriched with Ceratonia Siliqua seed flour during natural fermentation to create synergies of active ingredients and cosmetics activities.

INNOVACTIVE WATERDEEPFERM® Ferment-peptide complex derived from the natural fermentation of **Saccharomyces Cerevisiae rich in Polysaccharides and Omega 3-6-9 Fatty Acids**, which grows in a culture medium enriched with:

- **Ceratonia siliqua seed flour**, in turn rich in hydrocolloidal Polysaccharides which facilitate **water retention**.
- **Oligopeptide-1**, a signal peptide of natural origin which **stimulates the turnover of skin protein essential** for skin firmness and elasticity (Collagen and Elastin), **promoting cell regeneration and the synthesis of Aquaporins-3** (microscopic channels present in the cell membranes of the epidermis which facilitate the transport of water within the cells and between the layers of the epidermis improving the skin's hydration system from within).

Innovactive WATERDEEPFERM hydrates the skin deeply and for a long time , maintaining optimal levels of humidity , improving resistance to environmental factors and therefore the function of the skin barrier, elasticity, skin tone and reducing the appearance of wrinkles.

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(GFT) *The Green Ferment Tech®*

INNOVACTIVE WATERDEEPFERM®

KEY ACTIVE INGREDIENTS AND THEIR FUNCTIONS

Total Polysaccharides (23-28%)
Fatty Acids Omega 3-6-9

At the end of fermentation, after lysis, centrifugation, and filtration, we obtain a concentrate titrated in:

- **Total Polysaccharides**, present in high percentages thanks to the synergy between the Polysaccharides present in the Ceratonia Siliqua seed flour with which the culture medium in which the yeast grows is enriched, and the structural Polysaccharides present in the yeast cell wall which increase with cell growth.
- **Fatty Acids Omega 3-6-9** essential constituents of the skin's hydrolipidic film, which help to make it more compact and the skin barrier more resistant

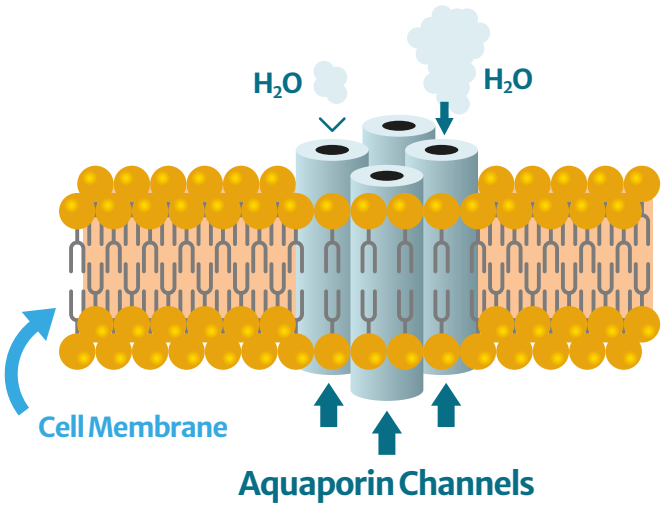
In the WATERDEEPFERM® we have:

Saccharomyces ferment lysate filtrate

It is rich in Fatty Acids and Polysaccharides, enriched by those present in the Ceratonia Siliqua seed flour present in the culture medium in which the yeast grows.

Saccharomyces **activates and regulates the transport of water between the layers of the epidermis by Aquaporins-3**, helping to fight the degradation of collagen.

The polysaccharides it contains are particularly hydrating due to their ability to bind water deep in the dermal-epidermal junction and form a protective moisturizing film on the surface that helps provide a protective barrier against dehydration, as well as to release water gradually, thus keeping the skin hydrated and PH balanced.



Oligopeptide-1

Signal peptide capable of modulating **skin protein turnover by enhancing the production of skin protein** essential like Collagen, Elastin **and Aquaporines-3**, which the skin needs to counteract and reduce the appearance of wrinkles and signs of aging, to increase tone, elasticity and skin resilience thanks an improvement in the function of skin barrier.

The increase in the protein channels of Aquaporin-3 (essential for the transport of water through the skin layers of the epidermis), leads to an increase in the transport of water, therefore improving hydration and helping the skin to remain more elastic and softer for a long time.

The combination of Oligopeptide-1 with the Saccharomyces ferment in the Ferment-Peptide Complex **Waterdeepferm®, increases the skin's ability to retain and distribute water, thus ensuring more effective and long-lasting hydration in the deeper layers**.

Aquaporins-3

Microscopic channels present in the cell membranes of the epidermis which facilitate the transport of water within the cells and between the skin layers of the epidermis, improving the skin's hydration system from within.

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TECHNICAL PRODUCT DATA

Producte Code: INNO-010 | **INCI**: Glycerin, Saccharomyces ferment lysate filtrate, Oligopeptide-1 | **Solubility**: water soluble | **pH**:5-8 | **Colour**: golden yellow
Preservative Free | **Recommended dose**: 2% | Shake before use

INNOVACTIVE INGREDIENTS (GFT) The Green Ferment Tech®

INNOVACTIVE WATERDEEPFERM®

INNOVACTIVE WATERDEEPFERM® EFFICACY

Premise

Well-hydrated skin is more flexible, resistant, elastic, and has a healthier appearance.

The production of Aquaporins-3 (the most abundant in the skin and closely linked to hydration), plays a key role in hydration and skin barrier function, two parameters that are closely related to each other.

The amount of Aquaporins in the skin decreases with age and sun exposure, leading to dehydration (reduction in water flow) and loss of elasticity and skin tone, with the appearance of wrinkles.

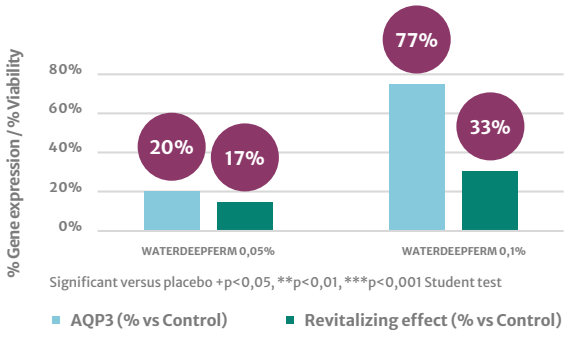
Alterations in aquaporins-3 have also been observed in the presence of an altered function of the skin barrier, as in the case of sensitive skin and Atopic Dermatitis (DA).

Efficacy:

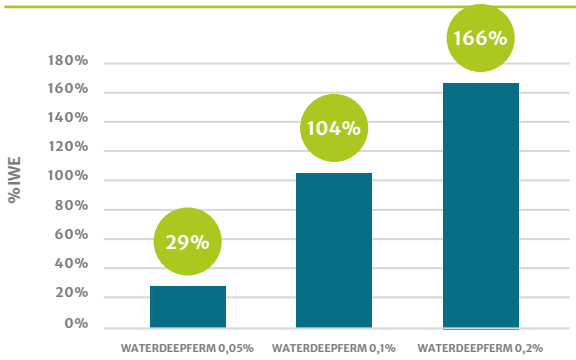
1. Stimulates the production of **AQUAPORINS-3**
2. Improves **superficial and deep skin hydration** starting from 15 minutes after application
3. Improves natural function of the skin barrier and therefore the **skin's resilience**.
4. Improves skin **Elasticity**
5. **Reduces and counteracts the appearance of wrinkles**
6. Reduces the roughness and the tightness of the skin surface, **leaving it soft and hydrated for a long time**

IN VITRO TEST
on monolayer of keratinocyte cell cultures

Increase in AQP3 synthesis and revitalizing effect after 24 h



Water Energy Index: index that combines hydrating and revitalizing action

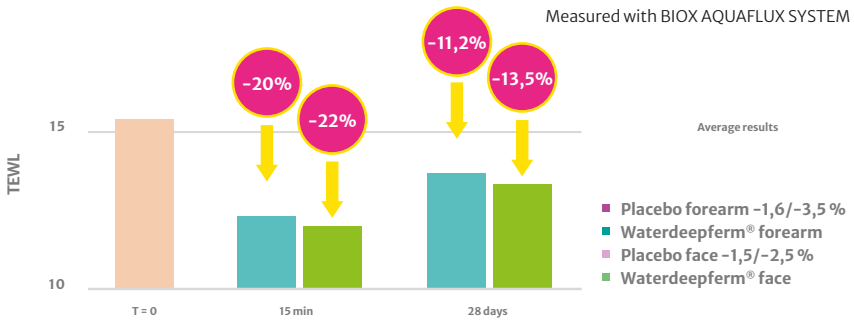


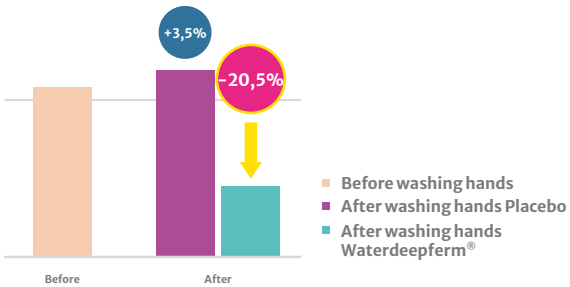
IN VIVO EFFICACY TEST

carried out using a Gel Cream containing 2% of Waterdeepferm® twice a day for 28 days

After one application of a Rinse-off product with 0,5% of Waterdeepferm

TEWL (Protective activity)





Reduction of the aggressiveness of surfactants in RINSE-OFF products

(GFT) The Green Ferment Tech®

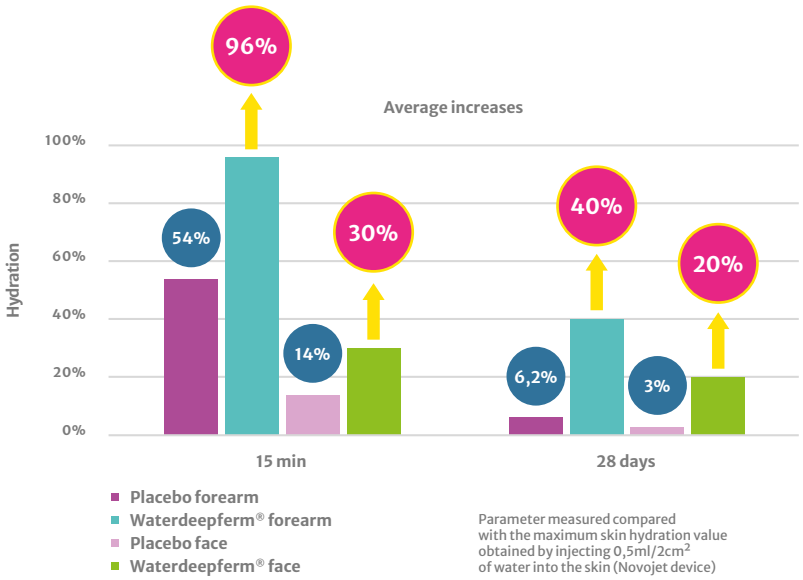
INNOVACTIVE WATERDEEPFERM®

IN VIVO EFFICACY TEST

carried out using a Gel Cream with 2% of Waterdeepferm® twice a day for 28 days

DEEP HYDRATION

Technique: Scalar Model MY-808S Corneometer // Novojet



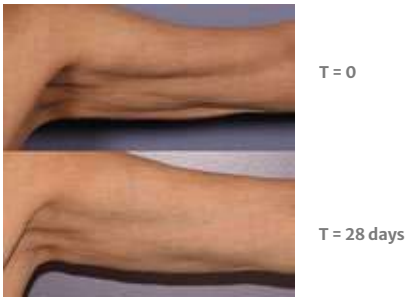
Parameter measured compared with the maximum skin hydration value obtained by injecting 0,5ml/2cm² of water into the skin (Novojet device)

Hydrated skin after just one application of the product

OVERALL IMPROVEMENT OF FACE SKIN

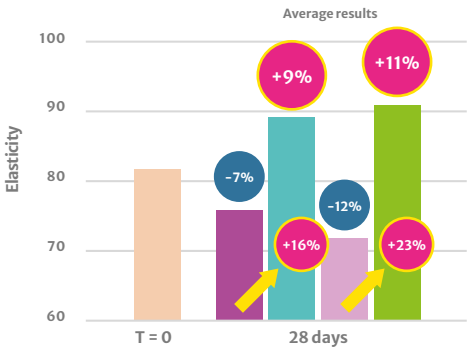
Technique: Dematoscope SIFPRO

OVERALL IMPROVEMENT OF FOREARM SKIN



ELASTICITY

Measured with Cutometer Dual MPA58



CLINICAL EVALUATIONS

- **100%** BRIGHTNESS
- **100%** REDUCTION SKIN SURFACE ROUGHNESS
- **100%** TIGHTENING EFFECT
- **100%** EFFECTIVE SMOOTHING SKIN SURFACE

INNOVACTIVE INGREDIENTS

www.innovingredients.com
info@innovingredients.com

TECHNICAL PRODUCT DATA

Producte Code: INNO-010 | **INCI**: Glycerin, Saccharomyces ferment lysate filtrate, Oligopeptide-1 | **Solubility**: water soluble | **pH**:5-8 | **Colour**: golden yellow **Preservative** Free | **Recommended dose**: 2% | Shake before use