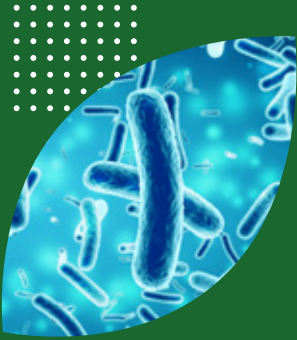




A company inspired by nature and supported by science

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



INNOACTIVE BACILFERM

an antioxidant/protective Ferment with Catalase and Lipase activity

TECHNOLOGY

BIO FERMENTATION

EFFICACY STUDIES

Protective activity (TEWL)
Moisturizing activity
MIC evaluation including C. Acnes
Protective action against damages induced by H2O2
Antioxidant in vivo study

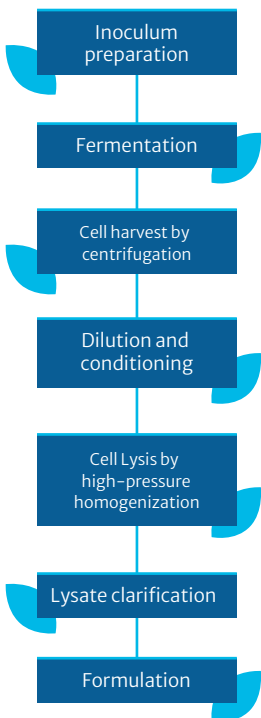
DOSAGE

3%

REGULATORY

EU AU CN KR
US CA JP

FLOWCHART FOR INNOACTIVE BACILFERM PREPARATION



INNOACTIVE 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

INNOACTIVE 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...



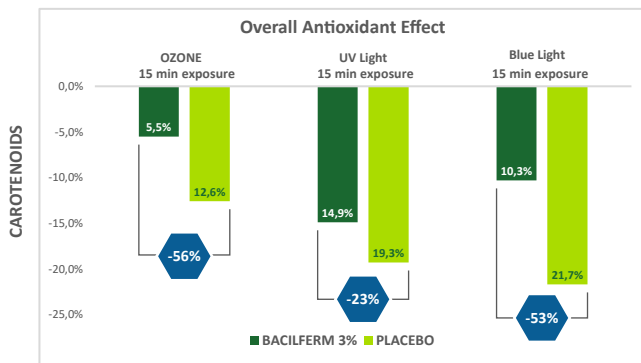
www.innovingredients.com
info@innovingredients.com



INNOACTIVE BACILFERM

ANTIOXIDANT IN VIVO STUDIES

Carotenoids level measure



Technique: BIOZOOM (Skin Autofluorescence)
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.

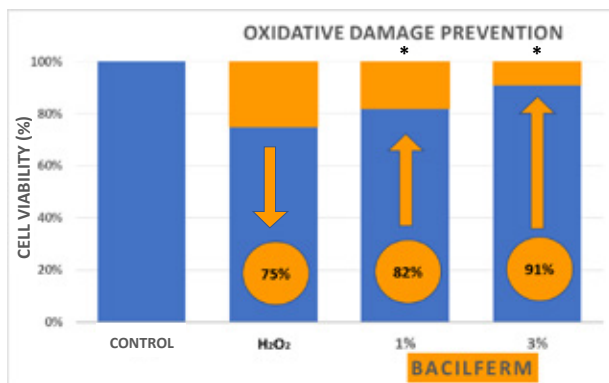
Group B Vitamins (especially B6) : reinforce skin barrier, supply hydration, protects from pollution damaging factors while reduces acne, balance sebum and calms irritated skin by controlling UV skin sensitivity.

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

INNOACTIVE 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 Lipolytic 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 H₂O₂



* p < 0.05 vs H₂O₂ stimulated cells

MIC EVALUATION (INCLUDING C. ACNES)

BACILFERM	Inoculo (UFC/ml) - Inoculum (CFU/ml)						
	<i>S. aureus</i>	<i>S. epidermidis</i>	<i>E. coli</i>	<i>P.aeruginosa</i>	<i>A. brasiliensis</i>	<i>C. albicans</i>	<i>C. acnes</i>
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