

LABIO

Moisturizing

Antarctic-G
Hydracell QS
Desertica
MELavo
AquaFerm series
LB-AUR-Glucan
Aqua-proVita D_2
GlycoButter
Atobarriome
GreenShot-Exosome
Dermapid
Glyco-Veil
BIO-Placenta target
Goldbrew Phyto-Mucin

Anti-aging

The First
BeBebiome
BIO-Placenta
MELavo
Ceramide 3B DPS ECO
Desertica
SyncTonin^{24}
PlusXanthin
Atobarriome
GreenShot-Exosome
diveCOLL™
BIO-Placenta target

Trouble care & Anti-inflammation

Stratocare
GinBalance
Fermentoil series
The First
Dr. Kamut
PlusXanthin
Shieldoil Paeonol / Shieldoil Shikonin
BlockACNE

Anti-pollution

The First
Aqua proVita D_3-R
Ginbalance
COOLIN
Shieldoil Paeonol / Shieldoil Shikonin
Atobarriome

Brightening & Skin Tone-up

Lumiflora Peony
Antarctic-G
The First
Fermentoil series

Actives for hair

Scalp-Biome
BIO-Placenta Hair
Fermentoil Hair Complex

Actives for Skin Lipid

Ceramide 3B DPS ECO
MELavo
BIO-Placenta
Shieldoil Paeonol / Shieldoil Shikonin
Lactobarriome
Glyco-Veil

Anti-oxidant

The First
Fermentoil series
Ginbalance
Shieldoil Paeonol / Shieldoil Shikonin

BIO-Emulsifier

MELavo
MELosome

Preservative

BIO-Cide ECO

Pore care

APPORÉ
BlockACNE

Cooling

COOLIN stay

Deodorizing

Deobalance

LABIO

As a specialist in BIO-technology, LABIO is focusing to find the Extremophile and bring out the dermatological benefits through the Cell engineering, and enhance the benefits through the optimum fermentation technology.

LABIO keeps researching the various Extremophiles and analyze each genome to find the best way for the sustainable development and application in terms of cosmetics. We believe our 'Fermentology' is not just the most innovative, but also the most eco-friendlytechnology as well.



Extremophiles

These are microorganisms that thrive in extreme environments, such as those with ver high or low temperatures, acidity, alkalinity, or chemical concentrations. Because of their unique adaptations, extremophiles can provide valuable benefits to human skin-helping to protect it against harsh or damaging conditions when properly applied.

Metabolome

It is the concept after Microbiome, which is referring to metabolites from micro-organism. Rather than micro-organism, metabolite can directly affect the skin.

Fermentology

Consists of fermentation technology. Its process includes controlled fermentation with the capability of producing the exact designed results. This technology enhances benefits while removing any side-effects.

Cell engineering

Using advanced fermentation technology, it enables precise process control to achieve targeted results. This innovation maximizes skincare benefits while minimizing side effects, bridging cellular-level science with real cosmetic applications.

COOLIN stay

Helps protect the skin from heat stress and maintain skin temperature balance with immediate and long-lasting cooling.

INCI & CFDA

2,3-Butanediol, Saccharomyces Ferment Filtrate, Erythritol, Albatrellus Confluens(Mushroom) Extract, Menthyl Lactate, Menthone Glycerin Acetal, 1,2-Hexanediol

Benefit

Heat-aging prevention and long-lasting cooling

An active ingredient that suppresses TRPV1 expression using Fomes fomentarius ferment and provides immediate and sustained cooling through dual modulation of TRPM8.

New solution

TRP System Regulating Skin Temperature Sensation

Heat sensor : Heat sensation ↑ (TRPV1)



- TRPV1 channel activation
- Induces heat sensation
- Heat, flushing & burning

Cooling sensor : Cooling sensation ↑ (TRPM8)



- TRPM8 channel activation
- Induces cooling sensation
- Cooling via heat absorption

Dual TRP System Regulating Skin Temperature Sensors: Heat OFF, Cooling ON

A dual mechanism that inhibits TRPV1 and activates TRPM8 for sustained cooling.

STEP1. Heat-aging suppression

Inhibition of skin heat aging through TRPV1 inhibition
- Relieves heat and redness caused by thermal stimulation
- Reduces heat stress
- Prevents decrease in skin elasticity

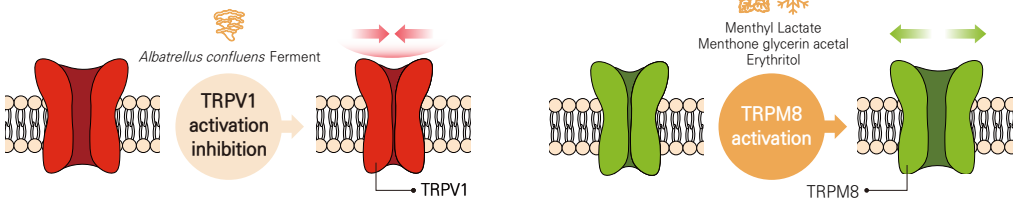
Heat-sensing receptor OFF

STEP2. Enhancement of long-lasting cooling

Increased cooling persistence via TRPM8 activation
- Reduces heat and flushing
- Long-lasting cooling effect

Cooling through endothermic action
- Immediate cooling through heat absorption

Cooling-sensing receptor ON



COOLIN stay Key point

1. **Heat stimulus receptor inhibition**
(*Albatrellus confluens* Ferment)
Heat-aging suppression through TRPV1 inhibition

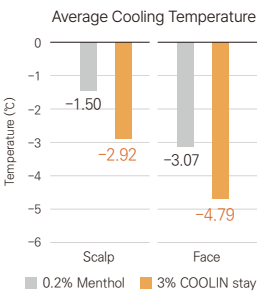
2. **Cooling receptor activation**
(MGA, ML: TRPM8 activating substances)
Provides long-lasting cooling and soothing via TRPM8 activation

3. **Endothermic materials**
(Erythritol: NMF component)
Relieves heat and provides immediate, long-lasting cooling

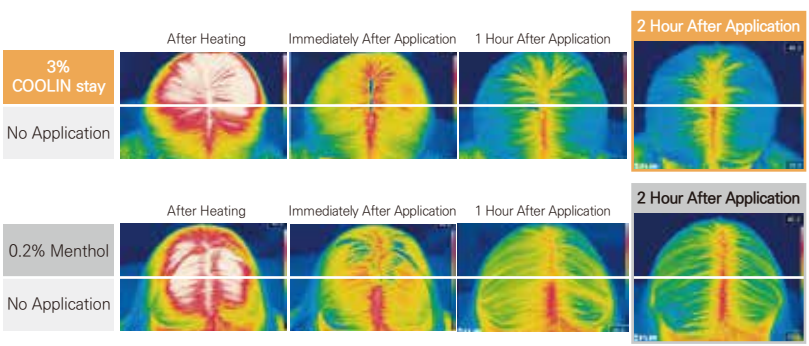
Feature

Clinical test

Stronger and longer-lasting cooling than menthol



Suppresses heat stimulation and maintains cooling effects for over 2 hours.



BIO-Placenta target

A comprehensive anti-aging solution powered by the synergy of senolytics and anti-aging benefits.

INCI

Water, Glycerin, 1,2-Hexanediol, 2,3-Butanediol, Nicotinamide Mononucleotide, Hydrogenated Lecithin, Bacillus/Folic acid ferment filtrate extract, Cholesterol, Arginine, Carnosine, Tocopherol, Acetyl Glutamine, sh-Oligopeptide-1, sh-Polypeptide-11, sh-Polypeptide-1, sh-Oligopeptide-2, sh-Polypeptide-9, Glycolipids

CFDA

Water, Glycerin, 1,2-Hexanediol, 2,3-Butanediol, Nicotinamide Mononucleotide, Hydrogenated Lecithin, Cholesterol, Arginine, Bacillus/soybean ferment extract, Carnosine, Tocopherol, Folic acid, Oligopeptide-1, Oligopeptide-2, Oligopeptide-3, Hexapeptide-11, Acetyl Glutamine, Glycolipids

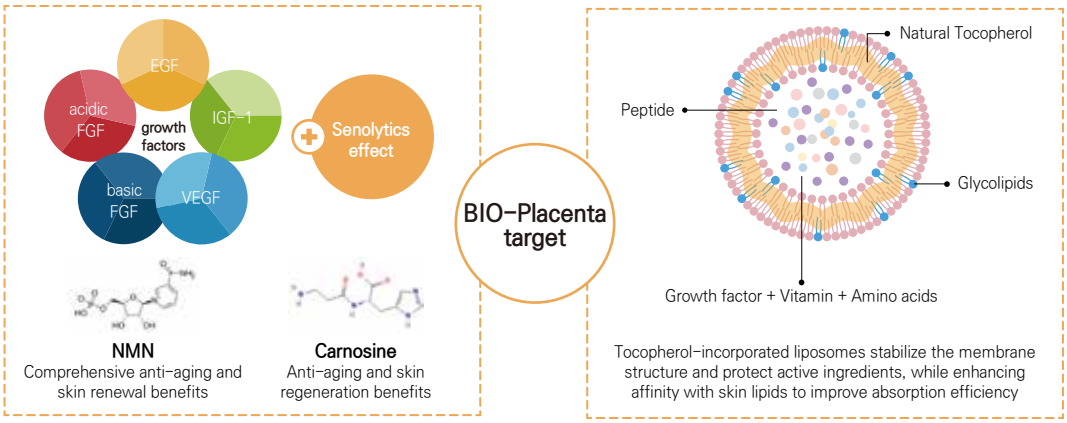
Benefit

Skin regeneration, anti-aging, skin rejuvenation (vitality improvement), enhanced elasticity, moisturization

Five growth factors (EGF, IGF-1, acidic FGF, basic FGF, VEGF), amino acids, and vitamins work synergistically with senolytics to help improve wrinkles

New solution

A liposomal material that stably encapsulates growth factor complexes and senolytic ingredients using LABIO proprietary technology

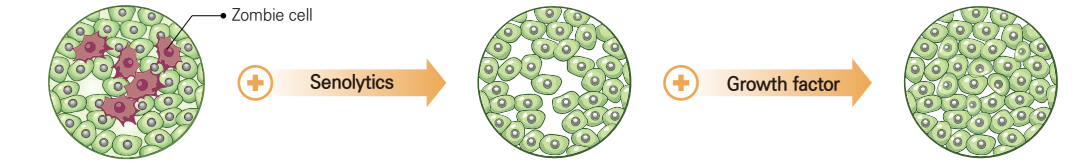


NMN
Comprehensive anti-aging and skin renewal benefits

Carnosine
Anti-aging and skin regeneration benefits

Tocopherol-incorporated liposomes stabilize the membrane structure and protect active ingredients, while enhancing affinity with skin lipids to improve absorption efficiency

BIO-Placenta target removes zombie cells in the skin and delivers the regenerative effects of growth factors to the cleared area, helping restore skin vitality



Chronic inflammation caused by zombie cells

Selective removal of zombie cells

Skin regeneration and recovery

Feature

In-vitro test

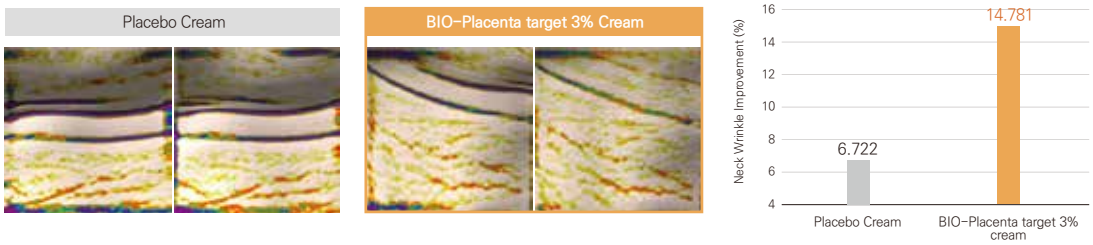
Treatment with BIO-Placenta target at 0.1- 0.4% reduces zombie cells, thereby mitigating the progression of skin aging



Cells : HDF(human dermal fibroblast) Blue staining= Zombie cell

Clinical test

After 4 weeks of using BIO-Placenta target 3% cream, neck wrinkles improved by 14.78%



diveCOLL™

Vegan collagen applied with MI[HD] Technology, based on core skin ECM design

INCI & CFDA

Water, 2,3-Butanediol, 1,2-Hexanediol, Collagen, Hydrogenated lecithin, Cholesterol, Elastin, Glycolipids, Sodium Hyaluronate, L-Arginine

Benefit

Anti-aging, skin regeneration

A functional vegan ingredient in which collagen, elastin, and hyaluronic acid key components of skin ECM are complexed at an optimal ratio to enhance skin regeneration efficacy, with improved absorption through liposome technology

New solution

ECM, extracellular matrix

The extracellular matrix (ECM) is composed of collagen, elastin, and hyaluronic acid, and is a key element responsible for skin elasticity, hydration, and regeneration



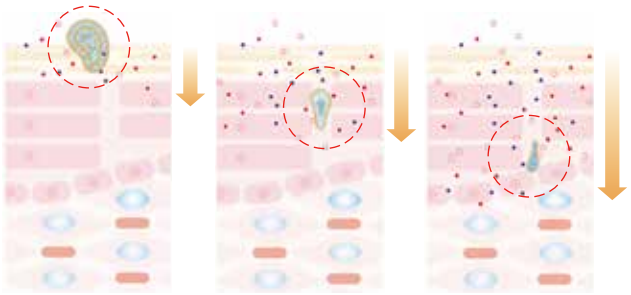
Applied MIT[HD] Technology

With a flexible multilamellar vesicle (MLV) structure, it penetrates the skin through lipid channels of the skin barrier through multi-infusion, the three ECM components interact and fuse with cell membranes from the outermost layer, enabling long-lasting release



MLV Liposome

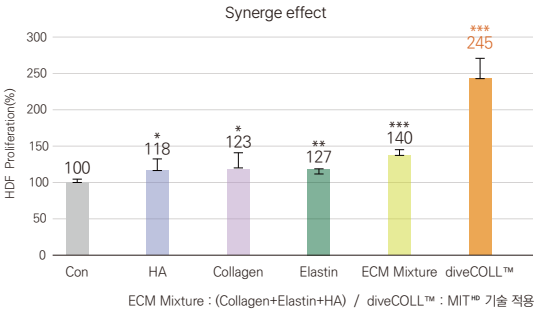
- ✓ Optimized multilamellar delivery system
- ✓ Bio-compatible, skin-identical materials
- ✓ Controlled, stepwise release
- ✓ Long-lasting skin barrier protection



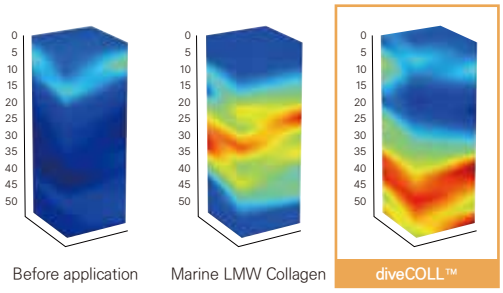
Feature

In-vitro test

diveCOLL™ showed a 20% synergistic improvement, with efficacy increased by 75% using MIT[HD] Technology

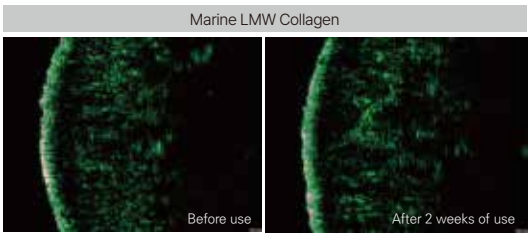


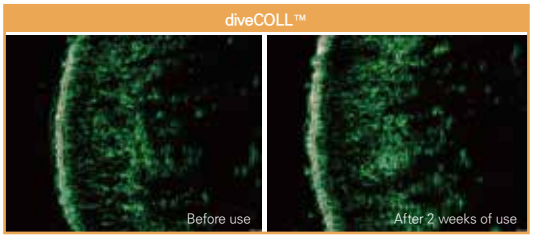
Raman analysis confirmed ~2× deeper and faster penetration of diveCOLL™ vs. marine LMW collagen



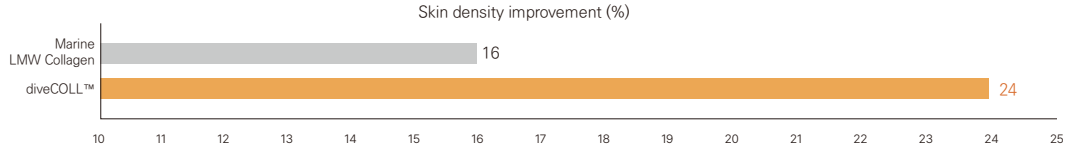
Clinical test

24% skin density improvement after 2 weeks (~1.5× vs. marine LMW collagen).





Representative subject (one individual), left and right



Dermapid

Rebuilding the collapsed skin structure to start a full-scale renovation

INCI & CFDA

Camellia Sinensis Seed Oil, Helianthus annuus (Sunflower) Seed Oil, Simmondsia chinensis (Jojoba) Seed Oil, Macadamia Ternifolia Seed Oil, Candida Bombicola/Glucose/Methyl Rapeseedate Ferment, Ceramide NP, Cholesterol

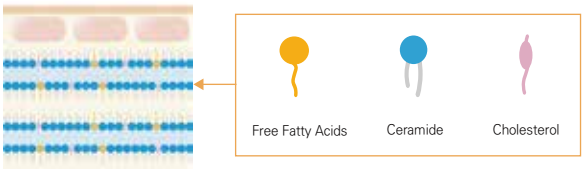
Benefit

Deep Hydration, Inner Elasticity

An ingredient that strengthens the skin barrier, protects the skin from environmental stressors, and enhances elasticity and hydration by mimicking skin-similar lipids

New solution

Key Components for the Skin Barrier

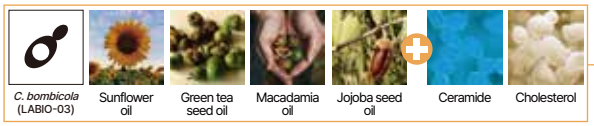


Free Fatty Acids
Help maintain a stable acidic pH of the skin barrier

Ceramides
Prevent moisture loss and help keep the skin hydrated

Cholesterol
Works synergistically with other lipids to form a strong and dense skin barrier structure

Fermentation Technology



Fermentation Technology

- High Affinity to Skin
- Improved Skin Barrier
- Enhanced Skin Elasticity
- Improved Moisture Retention
- Excellent Skin Compatibility

Fermentation-Based Bioconversion
A fermented lipid complex of free fatty acids, ceramides, and cholesterol

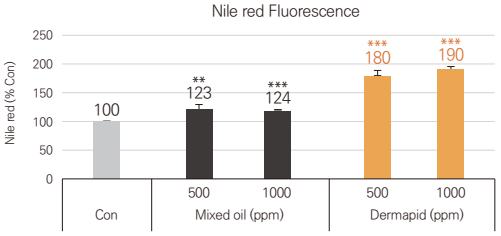
Strengthens the Skin Barrier
Improves Skin Elasticity & Hydration

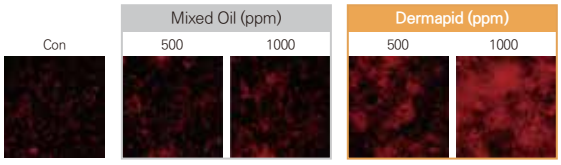
Environmental Stress Defense
Barrier Strength & Moisture Balance

Feature

In-vitro test

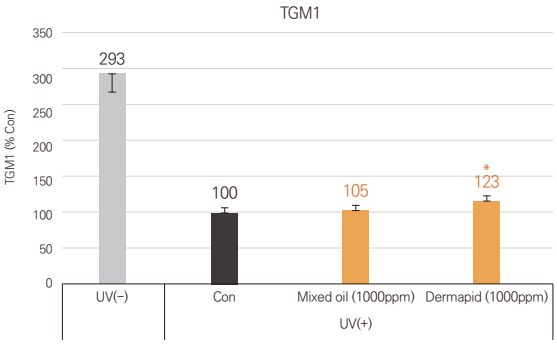
Enhanced lipid synthesis and remodeling for skin barrier recovery, visualized by fluorescence microscopy.





(Red indicates cellular lipids)

Under UV-Damaged Conditions, Increased TGM1 Expression Enhances Skin Barrier Structure and Function



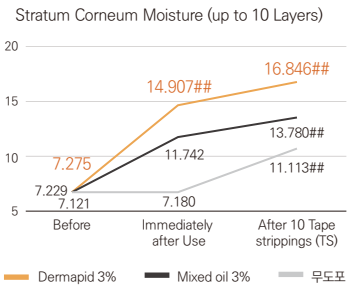
TGM1 Gene

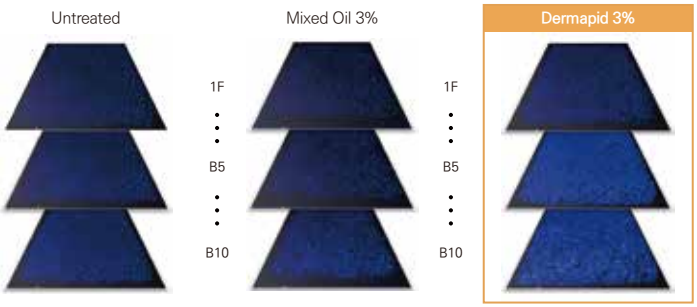
Produces Transglutaminase 1, a key enzyme essential for skin protective barrier formation

Strengthens the skin and stabilizes its structure by cross-linking epidermal proteins

Involved in cornified envelope formation, helping protect the skin from moisture loss and external irritation

Clinical test





Goldbrew Phyto-Mucin

Improves elasticity and replenishes moisture within the deep skin

INCI & CFDA

Glycerin, Bacillus Ferment, 2,3-Butanediol, 1,2-Hexanediol, Hibiscus Abelmoschus Extract

Benefit

Skin Elasticity, Deep Moisturizing

Deep elasticity and hydration penetrating up to 10 layers of the stratum corneum

New solution

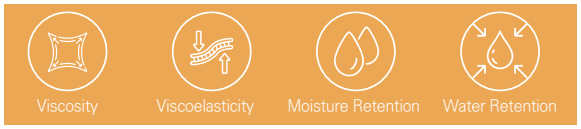
Abelmoschus manihot



Abelmoschus manihot
(= Hibiscus Abelmoschus)
Also known as Golden Hibiscus, Sunset Hibiscus It is rich in plant-derived mucin and minerals.

Phyto-MUCIN

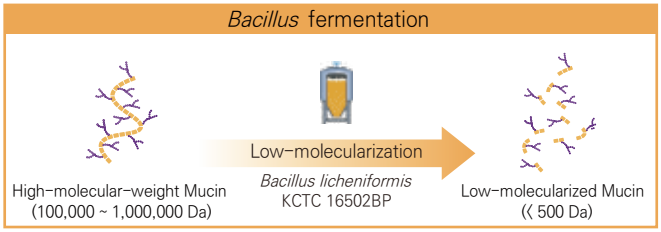
Plant-derived mucin from Abelmoschus manihot: used in food and medicine since the early 4th century



Elasticity and hydration with fermented low-molecular mucin



Optimized mucin extraction process



Low-molecularized Mucin : 91.5%

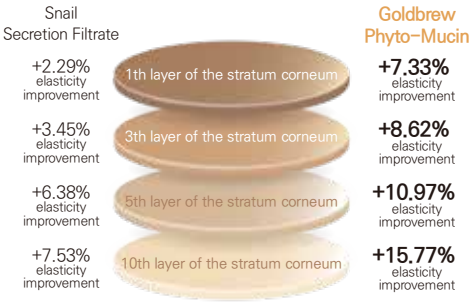


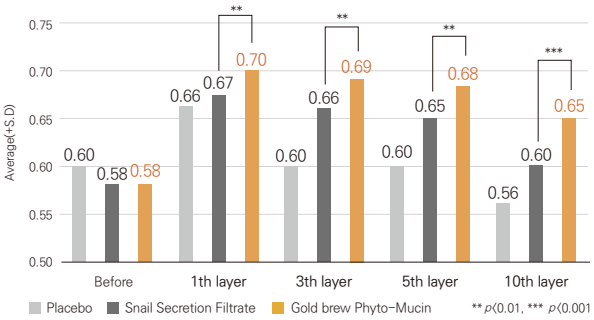
Enhanced skin absorption of low-molecularized Mucin

Feature

Clinical test

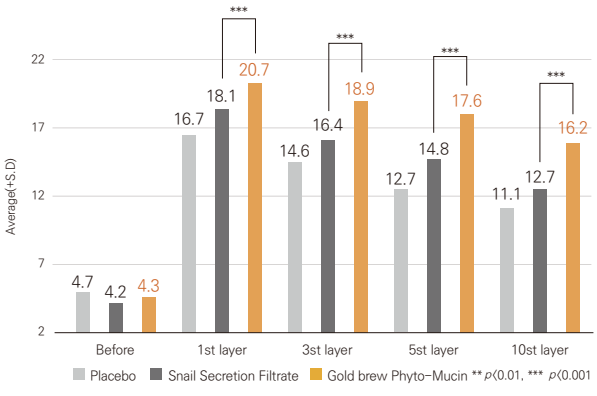
Goldbrew Phyto-Mucin improves inner skin elasticity up to 10 layers, compared to snail secretion filtrate.

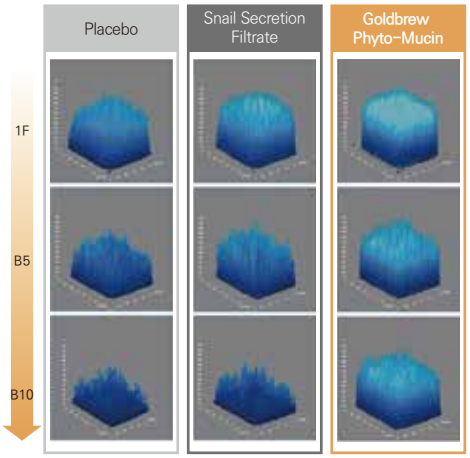




KC Skin Clinical Research Center / Cutometer / 21 adults aged 19-59
1.Negative control: Placebo cream formulation 2.Positive control: 3% snail secretion filtrate cream formulation 3.Test group: 3% GoldbrewPhyto-Mucin cream formulation

Confirmed improvement in deep hydration up to 10 layers of the stratum corneum with Goldbrew Phyto-Mucin, compared to snail secretion filtrate





KC Skin Clinical Research Center / Epsilon / 21 adults aged 19-59
1) Negative control: Placebo cream formulation 2) Positive control: 3% snail secretion filtrate cream formulation 3) Test group: 3% GoldbrewPhyto-Mucin cream formulation

Deobalance

3rd Generation Smart Deodorizing Solution

INCI & CFDA

Aureobasidium Pullulans Ferment,
Lactobacillus Ferment, 1,2-Hexanediol

Benefit

Deodorization

A symbiotic fermented ingredient clinically proven to provide deodorizing efficacy without skin irritation

New solution

3rd Generation Human-Science Approach & Solution

1st Generation Physical Approach
Blocking sweat glands

→

2nd Generation Chemical Approach
Antimicrobial action

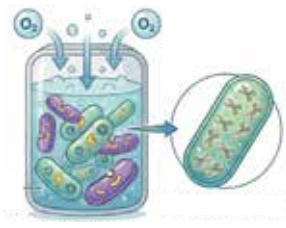
→

**3rd Generation Human Science Approach
Precision odor control**

Dual breath Fermentation

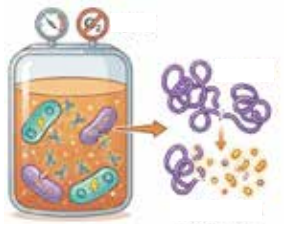
Utilizing a 2-step SCOBY fermentation process

STEP1 : Deep Breath



Enzyme activation

STEP2 : Hold Breath



Generation of beneficial metabolites



Tea tree leaf



Aureobasidium + Lactobacillus

Yeast breaks proteins into oligopeptides, then lactic acid bacteria into smaller peptides.

Production of ultra-low molecular weight peptides and bioactive substances

2-Step Smart Deodorant Care

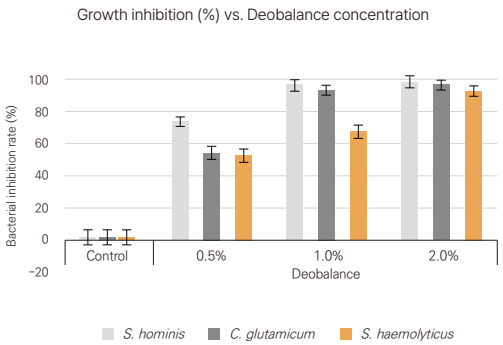
Symbiotic fermentation supports healthy skin and suppresses odor-causing bacteria.

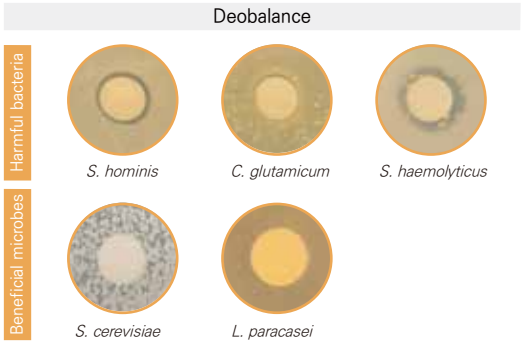
Kombucha-inspired peptides compete with odor precursors to block odor formation.

Feature

In-vitro test

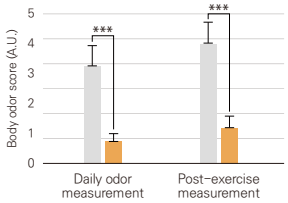
At 2% concentration, Deobalance inhibits the growth of odor-causing bacteria by up to 98.5%.





Clinical test

After 3 days of product use, both expert sniff tests and instrumental evaluations confirmed a significant reduction in body odor during daily activity and after exercise.



Time point		Body odor score (Sniff test)	
Daily odor measurement	Before product use	2.91±0.70	Odor detected ➡ Not detected
	After 3 days of use	0.82±0.60	
Post-exercise measurement	Before product use	3.91±0.70	Strong odor ➡ Mild odor
	After 3 days of use	1.55±0.69	

Glyco-Veil

Strengthening skin hydration and barrier through lamellar structure-forming capability of Glyco-Veil

INCI & CFDA
2,3-Butanediol, Glycolipids

Benefit
Hydration and skin barrier strengthening

A skin-mimetic solution based on lamellar structure-forming capability, reinforcing the skin barrier through intercellular lipid formation

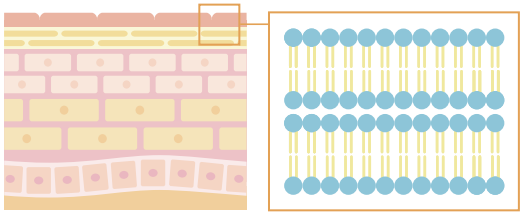
New solution

Formation of Glyco-Veil Liquid Crystal



MEL
A purified natural biosurfactant produced through a natural fermentation process.
Mannosylerythritol Lipid (MEL) is a natural glycolipid ingredient that not only provides excellent skin affinity and emulsifying properties, but also delivers superior moisturizing, anti-inflammatory, and antioxidant benefits.

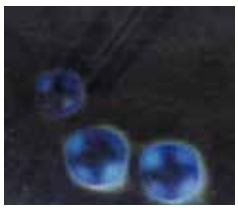
Skin Barrier



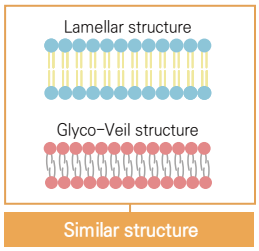
Supports skin protection, hydration, and nutrient delivery.

Reinforces the skin barrier with a lamellar lipid structure.

Glyco-Veil Liquid Crystal Formation



Confirmation of lamellar structure formation

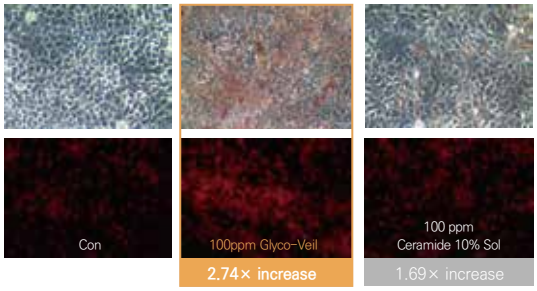


Similar structure

Feature

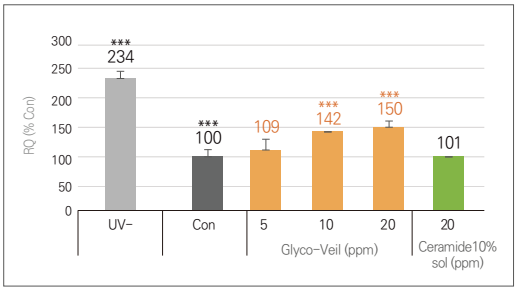
In-vitro test

Skin barrier strengthening efficacy
2.74× increase in intracellular lipids (Glyco-Veil)



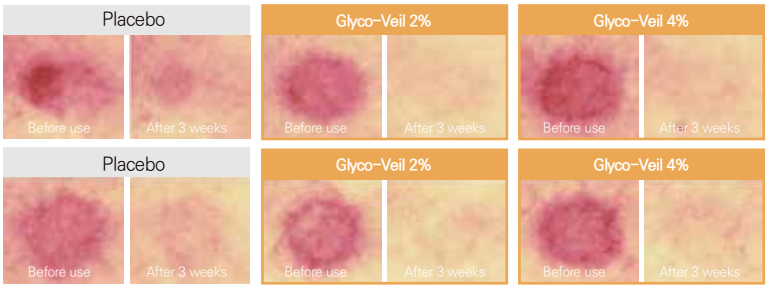
*Ceramide 10% : Ceramide NP

Skin barrier recovery efficacy (Filaggrin)
50% recovery of skin barrier gene expression at 20 ppm



Clinical test

Skin soothing After 3 weeks, Glyco-Veil reduced erythema and TEWL while improving skin barrier function

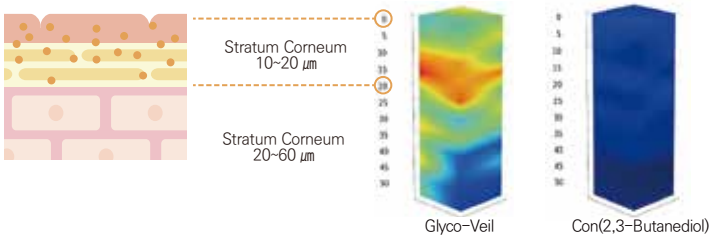


Glyco-Veil 2% vs. Control
Erythema reduced by 6.73%
TEWL reduced by 11.87%

Glyco-Veil 4% vs. Control
Erythema reduced by 7.78%
TEWL reduced by 13.82%

Confirmed skin barrier strengthening effect of Glyco-Veil

Skin absorption Glyco-Veil strengthens the skin barrier by forming a lipid layer



Average skin penetration depth: 25 μm
(30 minutes after application: absorption rate: 50 μm/h)

Stratum corneum (10-20 μm):
Lipid layer formation

Stratum granulosum (20-60 μm):
Lamellar body formation, strengthening the skin barrier and maintaining moisture

Skin absorption assessment
(Raman spectroscopy), 30 min post-application

BlockACNE

A total care solution addressing four key acne-related factors

INCI & CFDA

Lactobacillus Ferment, Bacillus Ferment, Pentylene Glycol, Aqua, Glycerin, Pyrus Malus (Apple) Fruit Extract

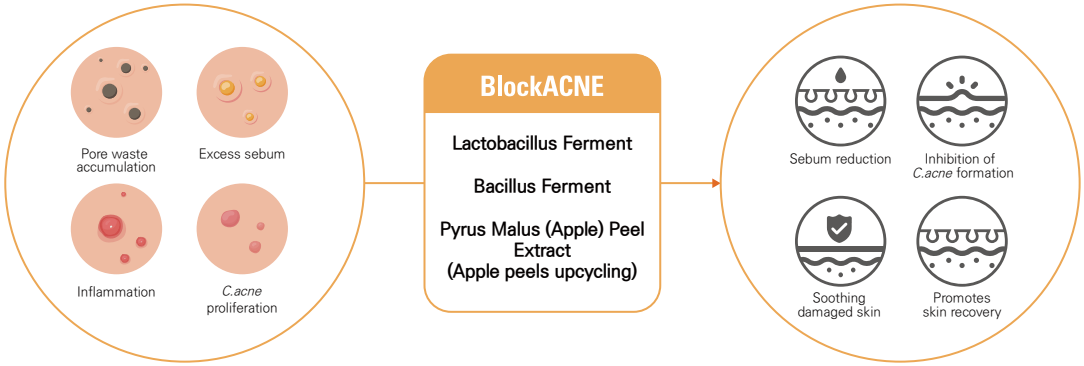
Benefit

Acne relief, anti-inflammatory effect, sebum reduction, pore improvement

Provides a total acne care solution
Inhibits the growth of acne-causing bacteria through Lactobacillus ferment, Provides anti-inflammatory and sebum-regulating effects through Bacillus ferment, Promotes procollagen synthesis and pore care using upcycled apple peel extract

New solution

Total acne care solution



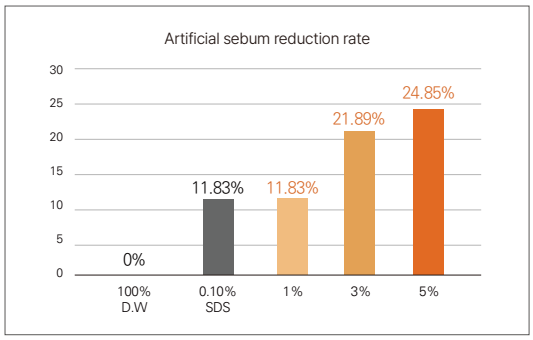
PATENT Effectively inhibits proliferation of acne-causing bacteria, strengthening the skin's defense system

PATENT Reduces inflammation and excess sebum to help prevent pore clogging

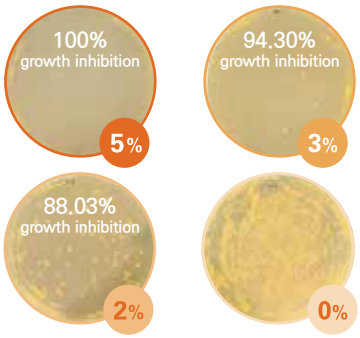
Feature

In-vitro test

Sebum reduction effect confirmed with BlockACNE

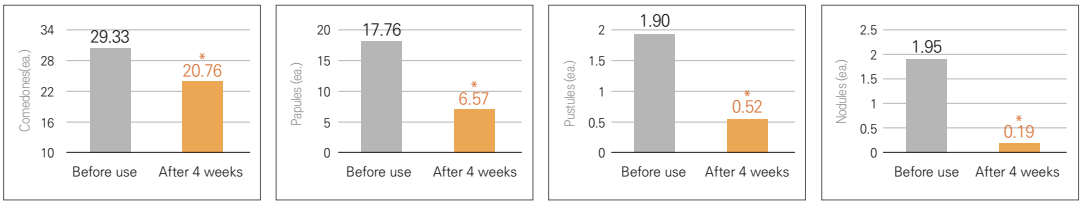


BlockACNE shows strong growth inhibition against *C.acne*



Clinical test

After 4 weeks, BlockACNE 3% reduced both non-inflammatory and inflammatory acne lesions



29.22% reduction in comedones | 63.00% reduction in papules | 72.50% reduction in pustules | 90.24% reduction in nodules

Case 1



Before Using BlockACNE | After Using BlockACNE

Case 2

Before Using BlockACNE | After Using BlockACNE

Atobarriome

Rebalance of skin microbiome

INCI & CFDA

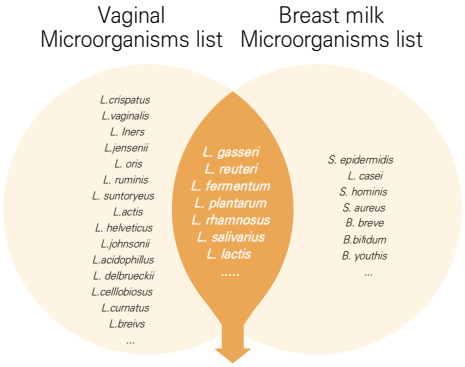
Lactobacillus Ferment, Propanediol, 1,2-Hexanediol

Benefit

Anti-itching, Skin barrier & Moisturizing , Anti-inflammation, Rebalance of skin microbiome

Atobarriome is a fermentation extract made up of beneficial bacteria fermentation solution through the blueberry ferment. It promotes the growth of beneficial bacteria in the skin and improves the skin barrier, helping to enhance the skin through inflammation relief

New solution

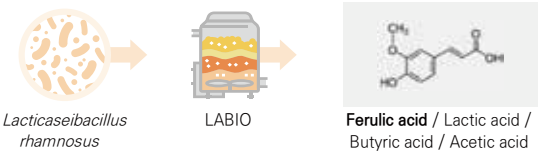


Screening for skin

PMC LABIO

LABIO & PMC collaborative research proceeds

Lacticaseibacillus rhamnosus



Ferulic acid / Lactic acid / Butyric acid / Acetic acid

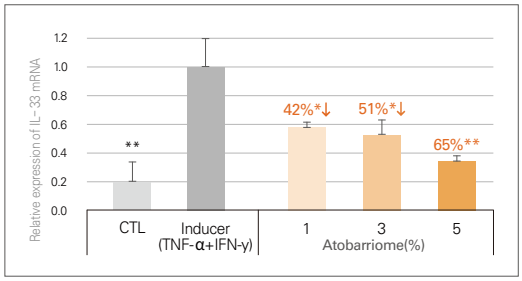
Microorganisms extracted from blueberries and fermented using LABIO's technology result in a fermented extract. Ferulic acid in this extract helps alleviate discomforts like inflammation and itching.

Feature

In-vitro test

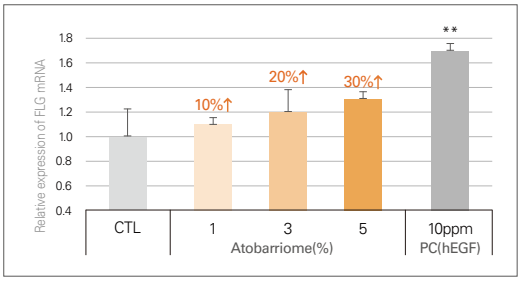
Inflammation

1% Atobarriome inhibits inflammation factor by 42%



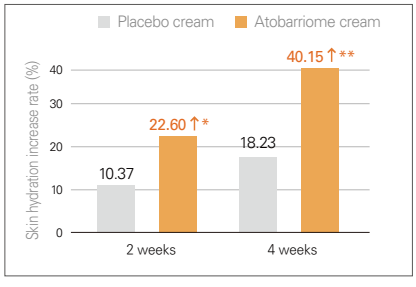
Skin barrier & Hydration

1% Atobarriome improves skin barrier factor by 10%



Clinical test

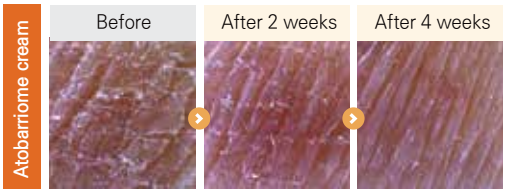
Skin hydration Atobarriome improves skin hydration by 40%





Skin roughness Atobarriome enhances the barrier to improve skin texture





BIO-Cide ECO

Natural preservative with fermented Lactobacillus originated from plant

INCI & CFDA
Lactobacillus Ferment, Pentylene glycol

Benefit
Natural preservative with fermented Lactobacillus originated from plant 100% natural plant-derived Lactobacillus fermentation marker compound: Organic acid complex

New solution

Cabbage & Lactobacillus



Medicinal plants widely used since ancient times



Lactobacillus paracasei UOS1
Scientific name: Lactobacillus sp.
Subspecies: *Lactobacillus paracasei ssp. paracasei; Lactobacillus paracasei ssp. Tolerans*
Deposited name : *Lactobacillus paracasei* UOS1
Deposit number : KACC 81213BP (2022.05.10)

BIO-Cide ECO

- Natural preservative created by LABIO's unique fermentation technology
- 100% natural plant-derived Lactobacillus fermentation
- Water-soluble preservative material
- Antibacterial power against wide pathogenic microorganisms
- Available in a wide pH range (pH 4~8)

Safety

Analysis of presence or absence of Parabens, Heavy metals, and Chemical substances



3 types of Parabens ▶ All not detected
5 types of Heavy metals ▶ All not detected
6 types of Chemical substances ▶ All not detected

* Phenoxyethanol, Benzyl alcohol, Sorbic Acid, Benzethonium chloride, Salicylic Acid, Iodopropynyl Butylcarbamate

Feature

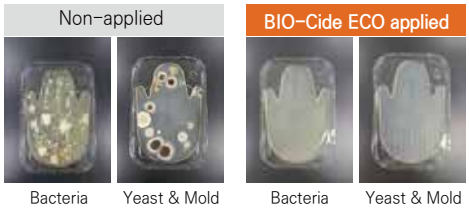
Anti-bacterial test

Clear zone test (Applied BIO-Cide ECO 3.5%)



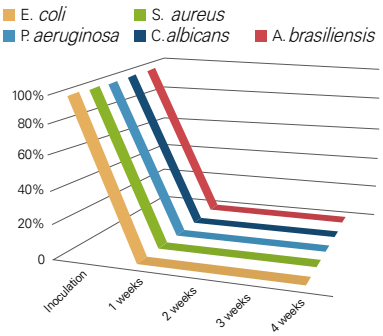
Hand plate test: Applied BIO-Cide ECO 3.5%

*Agar plate: Bacteria-TSA, Yeast & Mold-SDA

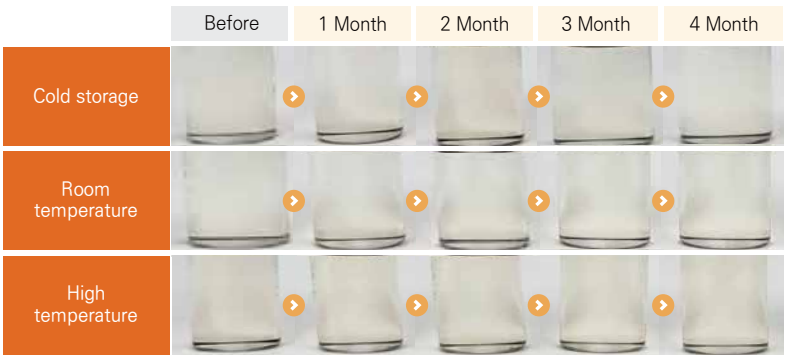


Challenge test (BIO-Cide ECO 3.5%)

Microorganism	Infusion volume (CFU/ml)	1 weeks *additional inoculation	2 weeks	3 weeks	4 weeks
E.*coli*	3.2 X 10^5	> 99.999%	> 99.999%	> 99.999%	> 99.999%
S.*aureus*	1.9 X 10^5	> 99.999%	> 99.999%	> 99.999%	> 99.999%
P.*aeruginosa*	2.9 X 10^5	> 99.999%	> 99.999%	> 99.999%	> 99.999%
C.*albicans*	1.8 X 10^4	99.792%	99.958%	> 99.999%	> 99.999%
A. *brasiliensis*	1.2 X 10^4	99.200%	99.800%	> 99.999%	> 99.999%



Stability test



GlycoButter

New solution of Shea butter with natural Glycolipids

INCI & CFDA

Glycerin, Water, Butylene Glycol,
1,2-Hexanediol, Lecithin,
Butyrospermum Parkii (Shea) Butter, Glycolipids

Benefit

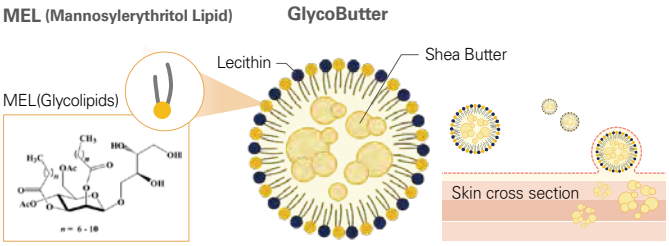
Water soluble, Easy-to-use, Can be applied directly to the final formulation

A raw material that combines high-moisturizing natural ingredients such as shea butter with a highly active emulsifier separated through natural materials and microbial fermentation, enhancing excellent absorbency and long-lasting moisturizing capability

New solution



Shea butter, rich in essential fatty acids, provides long-lasting moisture and contains abundant natural vitamins, offering anti-inflammatory and UV protection benefits



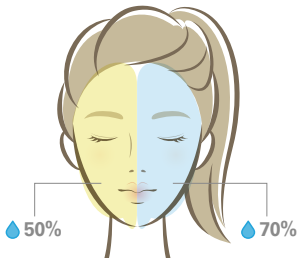
Combining natural shea butter with MEL to inhibit the solidification of shea butter and enhance skin penetration, improving the moisturizing and lasting power of shea butter

Feature

Clinical test

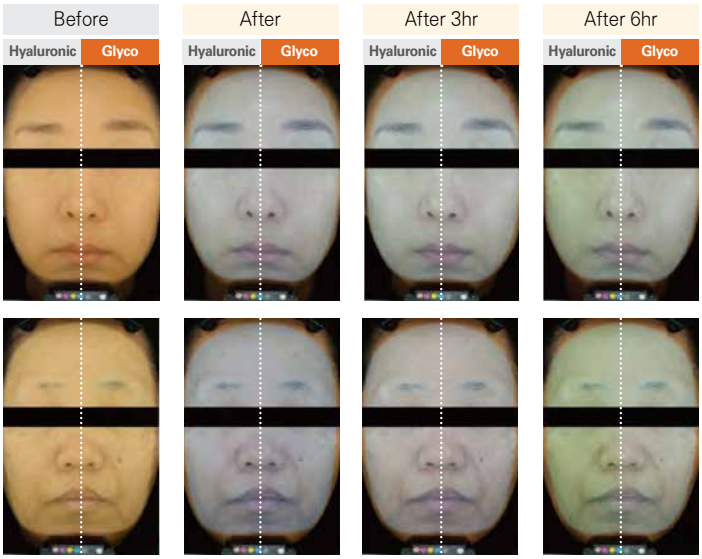
GlycoButter

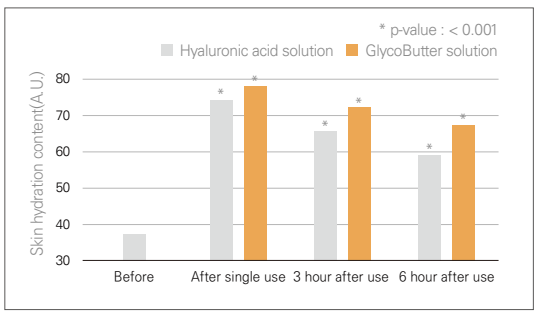
GlycoButter helps improve skin moisturization compared to Hyaluronic acid solution

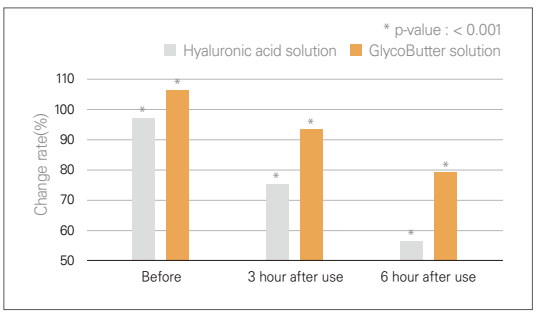


Hydration: Yellow 〈 Green 〈 Blue

The skin will look yellow
if it's less moisturizing







Shieldoil Shikonin

The powerful anti-inflammatory effect of the mystical red Lithospermum erythrorhizon Root

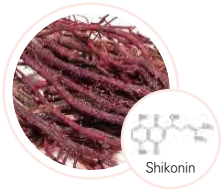
INCI & CFDA

Helianthus Annuus (Sunflower) Seed Oil, Lithospermum Erythrorhizon Root Extract, Candida Bombicola/Glucose/Methyl Rapeseedate Ferment

Benefit

Anti-oxidant activity, Shield effect, Skin soothing effect, Improvement of the damaged skin barrier, Prevention of skin damage

New solution



Lithospermum erythrorhizon

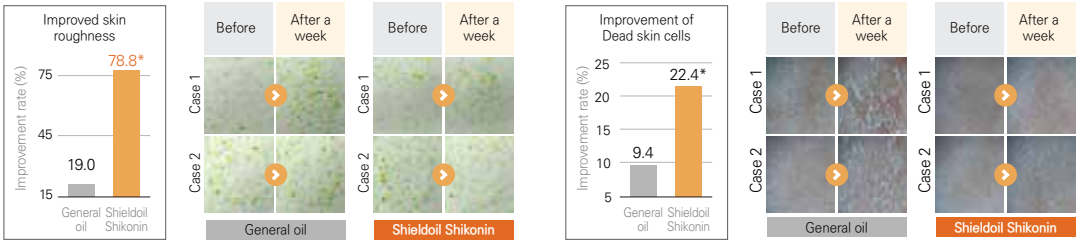
The roots of the Lithospermum erythrorhizon, this ingredient protects against UV-induced saccharification, inflammation, and oxidative stress Inhibition of skin collagen degradation

· Ingredient : Shikonin
· Characteristics : Anti-oxidant, Anti-bacterial, Collagen Secretion, Anti-inflammatory

Feature

Clinical test

Check the soothing effect of damaged skin by external stimulation of Shieldoil Shikonin



Shieldoil Paeonol

Ingredients derived from the roots of paeonia to maintain clear skin

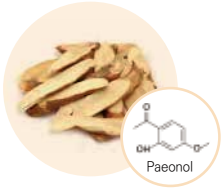
INCI & CFDA

Helianthus Annuus (Sunflower) Seed Oil, Paeonia Lactiflora Root Extract, Candida Bombicola/Glucose/Methyl Rapeseedate Ferment

Benefit

Anti-oxidant activity, Shield effect, Skin soothing effect, Improvement of the damaged skin barrier, Prevention of skin damage

New solution



Paeonia Lactiflora

Derived from the root of the paeonia, this ingredient has antiinflammatory and Anti-bacterial properties, making it beneficial for acne-prone skin and effective in preventing blemishes.

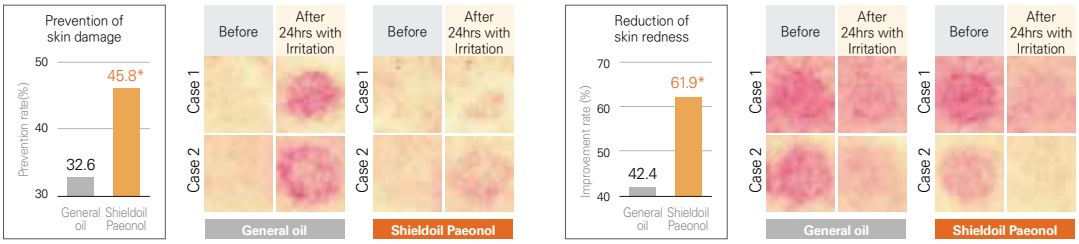
· Ingredient : Paeonol
· Characteristics : Anti-inflammatory, Anti-bacterial, Acne Management, Prevention of Pigmentation

Feature

Clinical test

Check the effect of Shieldoil Paeonol preventing skin damage caused by external stimulation

Check the soothing effect of damaged skin by external stimulation of Shieldoil Paeonol



Fermentoil series

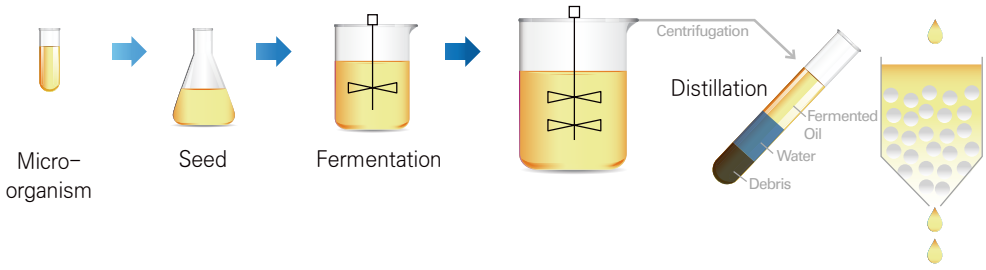
New generation oil to improve your cosmetics

Benefit
Moisturizing, Anti-aging

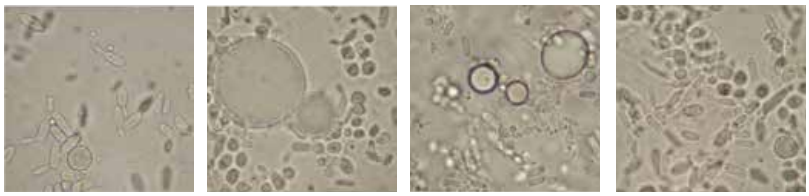
The development of Fermentoil Series is aimed for better texture with better efficacy when compared to the conventional oil.
The fermentation process enhances free fatty acid values, which is an essential part of the skin. Also, Fermentoil has better emulsifying capacities and provides a non-greasy feeling, while it is still a 100% natural oil

New solution

Fermentation process



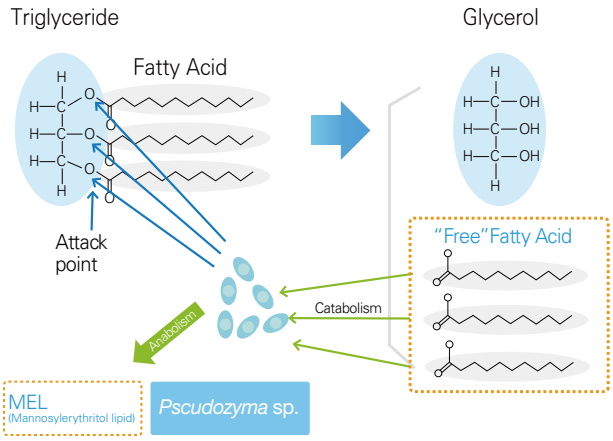
Fermentoil

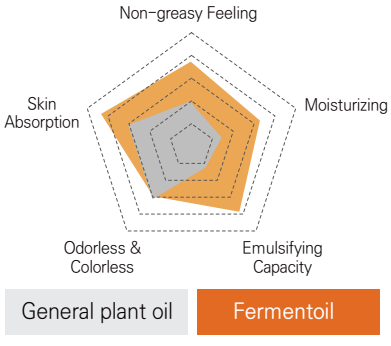


Pseudozyma sp. SY16 | Oil Feeding (0hr) | Fermentation (60hr) | Fermentation (120hr)

Feature

What changes during the fermentation?





General plant oil has been improved in quality and compatibility through LABIO's fermentation technology

Standard Fermentoil

Product	INCI	CFDA	Benefit
 Fermentoil Olive	Pseudozyma epicola/ Olive Fruit Oil Ferment Filtrate	Candida bombicola/Glucose/Methyl Rapeseedate Ferment, Olea Europaea (Olive) Fruit Oil	Moisturizing Anti-oxidant Protection against UVB damage Anti-inflammationn
 Fermentoil Argan	Pseudozyma epicola/ Argania Spinosa Kernel Oil Ferment Filtrate	Candida bombicola/Glucose/Methyl Rapeseedate Ferment, Argania Spinosa Kernerl Oil	Moisturizing Anti-sebum Anti-aging Wound healing
 Fermentoil Green Tea Seed	Pseudozyma epicola/ Camellia Sinensis Seed Oil/ Ferment Extract Filtrate	Candida bombicola/Glucose/Methyl Rapeseedate Ferment, Camellia Sinensis Seed Oil	Moisturizing Anti-oxidant Antiseptic Fungicide and bactericide
 Fermentoil Sunflower Seed	Pseudozyma epicola/ Sunflower Seed Oil Ferment Extract Filtrate	Candida bombicola/Glucose/Methyl Rapeseedate Ferment, Carthamus Tinctorius (Safflower) Seed Oil	Moisturizing Anti-oxidant Relief of skin irritation Bactericide
 Fermentoil Safflower Seed	Pseudozyma epicola/ Safflower Seed Oil Ferment Extract Filtrate	Candida bombicola/Glucose/Methyl Rapeseedate Ferment, Carthamus Tinctorius (Safflower) Seed Oil	Moisturizing Anti-oxidant Antiseptic Fungicide and bactericide
 Fermentoil Camellia Seed	Pseudozyma epicola/ Camellia Japonica Seed Oil Ferment Extract Filtrate	Candida bombicola/Glucose/Methyl Rapeseedate Ferment,Camellia Japonica Seed Oil	Moisturizing Anti-oxidant Conditioning effect Relief on skin irritation
 Fermentoil Avocado	Pseudozyma epicola/ Avocado Oil Ferment Extract	Candida bombicola/Glucose/Methyl Rapeseedate Ferment, Persea Gratissima (Avocado) Oil	Moisturizing Anti-oxidant Conditioning effect
 Fermentoil Evening Primrose	Pseudozyma epicola/ Evening Primrose Oil Ferment Extract	Candida bombicola/Glucose/Methyl Rapeseedate Ferment, Oenothera Biennis (Evening Primrose) Oil	Moisturizing Anti-oxidant Anti-inflammation
 Fermentoil Angelica	Pseudozyma epicola/Apricot Kernel Oil/ Olive Fruit Oil/Sunflower Seed Oil/Sweet Almond Oil/Angelica Gigas Root Extract Ferment Extract Filtrate	Candida bombicola/Glucose/Methyl Rapeseedate Ferment, Olea Europaea (Olive) Fruit Oil, Prunus Armeniaca (Apricot) Kernel Oil, Helianthus Annuus (Sunflower) Seed Oil, Prunus Amygdalus Dulcis (Sweet Almond) Oil, Angelica Gigas Root Extract	Moisturizing Anti-wrinkle Anti-oxidant Anti-inflammation

Oriental Medicinal Herb Fermentoil

Product	INCI	CFDA	Benefit
 Fermentoil Artemisia	Pseudozyma epicola/Apricot Kernel Oil/ Olive Fruit Oil/Sweet Almond Oil/Sunflower Seed Oil/Artemisia Princeps Extract Ferment Extract Filtrate	Candida bombicola/Glucose/Methyl Rapeseedate Ferment, Olea Europaea (Olive) Fruit Oil, Prunus Armeniaca (Apricot) Kernel Oil, Helianthus Annuus (Sunflower) Seed Oil, Prunus Amygdalus Dulcis (Sweet Almond) Oil, Artemisia Princeps Leaf Extract	Anti-microbial Anti-inflammation Anti-oxidant Brightening
 Fermentoil Red Ginseng	Pseudozyma epicola/Apricot Kernel Oil/ Olive Fruit Oil/Sunflower Seed Oil/Sweet Almond Oil/Panax Ginseng Root Extract Ferment Extract Filtrate	Candida bombicola/Glucose/Methyl Rapeseedate Ferment, Olea Europaea (Olive) Fruit Oil, Prunus Armeniaca (Apricot) Kernel Oil, Helianthus Annuus (Sunflower) Seed Oil, Prunus Amygdalus Dulcis (Sweet Almond) Oil, Panax Ginseng Root Extract	Wound healing Anti-inflammation Anti-stress Collagen synthesis
 Fermentoil Glycyrrhiza	Pseudozyma epicola/Apricot Kernel Oil/ Olive Fruit Oil/Sweet Almond Oil/Sunflower Seed Oil/Licorice Root Extract Ferment Extract Filtrate	Candida bombicola/Glucose/Methyl Rapeseedate Ferment, Olea Europaea (Olive) Fruit Oil, Prunus Armeniaca (Apricot) Kernel Oil, Helianthus Annuus (Sunflower) Seed Oil, Prunus Amygdalus Dulcis (Sweet Almond) Oil, Glycyrrhiza Uralensis (Licorice) Root Extract	Anti-oxidant Anti-inflammation Anti-irritation Brightening
 Fermentoil Saururus	Pseudozyma epicola/Apricot Kernel Oil/ Olive Fruit Oil/Sunflower Seed Oil/Sweet Almond Oil/Saururus Chinensis Extract Ferment Extract Filtrate	Candida bombicola/Glucose/Methyl Rapeseedate Ferment, Olea Europaea (Olive) Fruit Oil, Saururus Chinensis Extract	Anti-oxidant Brightening
 Fermentoil Shiunko	Pseudozyma epicola/Apricot Kernel Oil/ Olive Fruit Oil/Sunflower Seed Oil/Sweet Almond Oil/(Angelica Gigas/Lithospermum Erythrorhizon) Root Extract Ferment Extract Filtrate	Candida bombicola/Glucose/Methyl Rapeseedate Ferment, Olea Europaea (Olive) Fruit Oil, Prunus Armeniaca (Apricot) Kernel Oil, Helianthus Annuus (Sunflower) Seed Oil, Prunus Amygdalus Dulcis (Sweet Almond) Oil, Angelica Gigas Root Extract, Lithospermum Erythrorhizon Root Extract	Skin Tone-up Anti-oxidant Anti-inflammation Anti-microbial
 Fermentoil Complex	Pseudozyma epicola/Argania Spinosa Kernel Oil/Olive Fruit Oil/Sunflower Seed Oil/(Angelica Gigas, Licorice, Lithospermum Erythrorhizon) Root Ferment Extract Filtrate	Candida bombicola/Glucose/Methyl Rapeseedate Ferment, Olea Europaea (Olive) Fruit Oil, Helianthus Annuus (Sunflower) Seed Oil, Argania Spinosa Kernel Oil, Angelica Gigas Root Extract, Lithospermum Erythrorhizon Root Extract, Glycyrrhiza Uralensis (Licorice) Root Extract	Moisturizing Anti-oxidant Anti-sebum Anti-inflammation Anti-irritation
 Fermentoil Hair Complex	Pseudozyma epicola/Argania Spinosa Kernel Oil/Camellia Japonica Seed Oil/ Camellia Sinensis Seed Oil/Sunflower Seed Oil/Sweet Almond Oil Ferment Extract Filtrate	Candida bombicola/Glucose/Merhyl Rapeseedate Ferment, Prunus Amygdalus Dulcis (Sweet Almond) Oil, Camellia Japonica Seed Oil, Argania Spinosa Kernel Oil, Helianthus Annuus (Sunflower) Seed Oil, Camellia Sinensis Seed Oil	Moisturizing Repairing damaged hair Hair conditioning
 Fermentoil Body Complex	Pseudozyma epicola/Olive Fruit Oil Ferment Filtrate, Pseudozyma Epicola/ Sunflower Seed Oil Ferment Extract Filtrate, Pseudozyma Epicola/Camellia Sinensis Seed Oil Ferment Extract Filtrate, Lavandula Angustifolia (Lavender) Oil	Candida bombicola/Glucose/Methyl Rapeseedate Ferment, Olea Europaea (Olive) Fruit Oil, Helianthus Annuus (Sunflower) Seed Oil, Camellia Sinensis Seed Oil, Lavandula Angustifolia (Lavender) Oil	Moisturizing Anti-oxidant Anti-sebum Anti-inflammation Anti-irritation
 Fermentoil Derma Complex	Helianthus annuus (Sunflower) Seed Oil, Camellia Sinensis Seed Oil, Simmondsiachinensis (Jojoba) Seed Oil, Macadamia TernifoliaSeed Oil, Candida Bombicola/Glucose/Methyl RapeseedateFerment		Moisturizing Improves skin elasticity Skin barrier

Fermentoil Hair Complex

INCI

Pseudozyma Epicola / Argania Spinosa Kernel Oil / Camellia Japonica Seed Oil / Camellia Sinensis Seed Oil / Sunflower Seed Oil / Sweet Almond Oil Ferment Extract Filtrate

CFDA

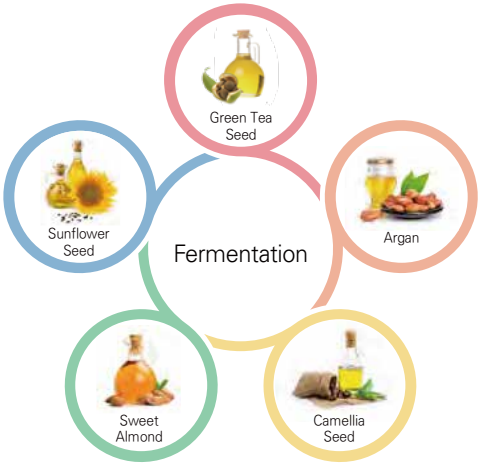
Candida Bombicola / Glucose / Merhyl Rapeseedate Ferment, Prunus Amygdalus Dulcis (Sweet Almond) Oil, Camellia Japonica Seed Oil, Argania Spinosa Kernel Oil, Helianthus Annuus (Sunflower) Seed Oil, Camellia Sinensis Seed Oil

Benefit

Moisturizing, Strengthen hair tensile, Repairing damaged hair

Fermentoil Hair Complex contains five different Fermentoils (Argan, Green tea seed, Camellia seed, Sunflower seed and Sweet almond) which can enhance hair tensile with better texture and feeling

New solution



Clinical test

Dyed hair



Regular hair



Fermentoil Body Complex

INCI

PseudozymaEpicola/Olive Fruit Oil Ferment Filtrate, PseudozymaEpicola/ Sunflower Seed Oil Ferment Extract Filtrate, PseudozymaEpicola/Camellia SinensisSeed Oil Ferment Extract Filtrate, LavandulaAngustifolia(Lavender)Oil

Benefit

Moisturizing, Anti-oxidantactivity, Anti-sebum, Anti-inflammation, Anti-irritation, Recommended Dosage

New solution

Lavender oil



Fermentoil Olive



Fermentoil Green tea seed



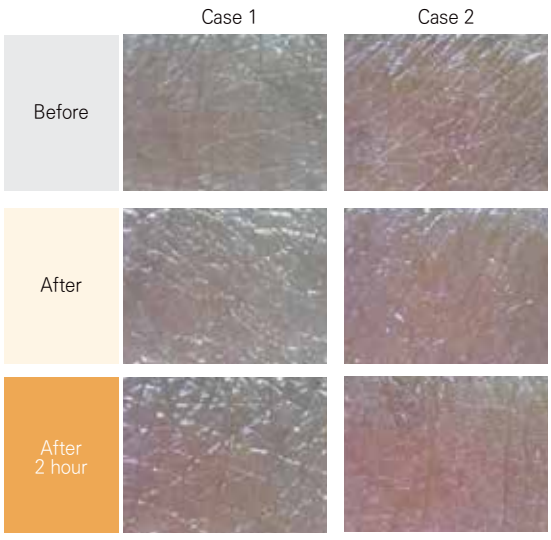
FermentoilSunflower seed



Advantage 1
Cost-effectiveness

Advantage 2
BIO-technology uses controlled fermentation to create fresher-feeling oils with enhanced efficacy, delivering synergistic benefits when combined.

Clinical test



MELavo

A multifunctional, highly active glycolipid isolated through natural materials and microbial fermentation

INCI & CFDA
Glycolipids

Benefit
Moisturization, anti-inflammatory, emulsifying agent

A multifunctional glycolipid, Mannosylerythritol Lipid (MEL), highly purified from metabolites produced through a natural fermentation process. A multifunctional natural ingredient that provides moisturizing, anti-inflammatory, and anti-aging benefits, in addition to its use as a surfactant and emulsifier

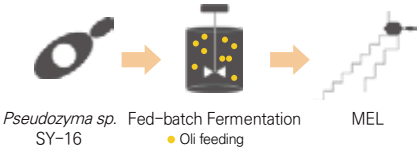
New solution

MEL: A Natural Multi-Benefit Active

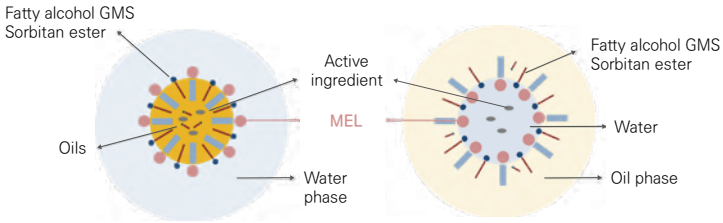


Pseudozyma sp. SY-16[KCTC 8950P]

Patented technology
(KR 10-0599248 and 3 additional patents)
Bio-engineering (fermentation technology) & bio-conversion
Microorganism produced under KRIBB patent
(KR 10-0308523): Pseudozyma sp. SY-16



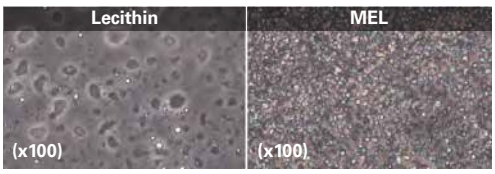
Applicable to both O/W and W/O formulations



O/W emulsification W/O emulsification

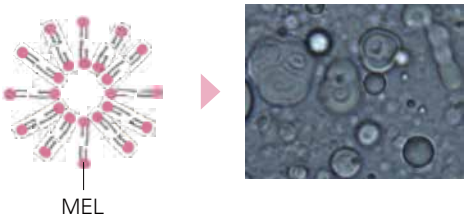
Feature

Lecithin vs MEL



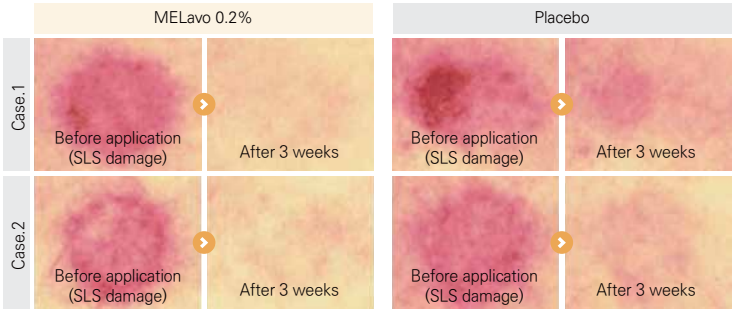
Composition
· Lotion emulsified with Lecithin (1%)
· Lotion emulsified with MEL (0.4%)
Homogenization at 80℃

Self-assembly from LUV (large unilamellar vesicles) to MLV (multilamellar vesicles)

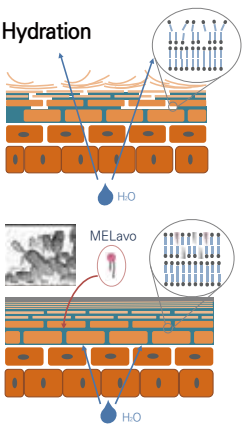


Clinical test

Skin soothing



Hydration



MELosome

Automatic Liposome

INCI & CFDA

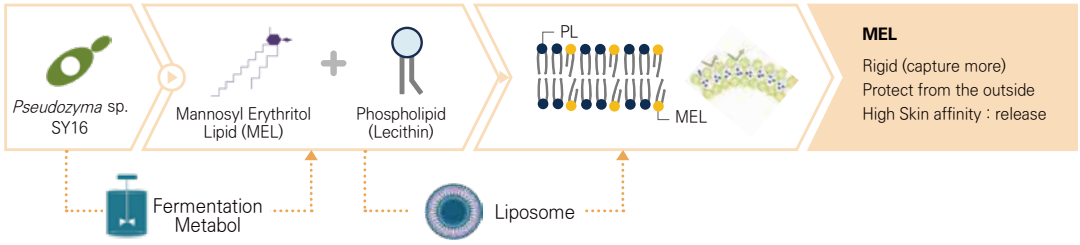
Propanediol, Lecithin, Glycolipids

Benefit

Easy to make Liposome possible to entrap the hydrophilic & lipophilic materials, Apply final formula directly

Carrier ingredient that can easily form Liposomes without special devices by utilizing glycemic and phospholipids and effectively deliver effective active ingredients to the skin

New solution

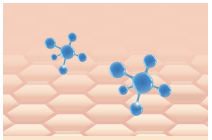




No need special equipment



Cold process



Delivery System



100% Natural



App. Customized formula

Feature

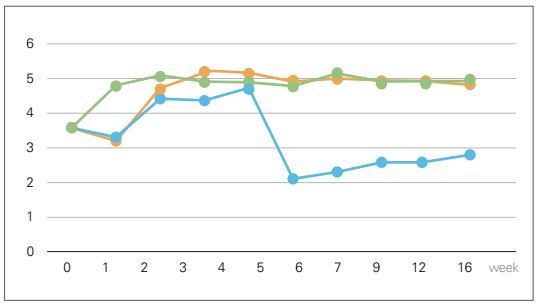
Apply MELosome to Formula : maintained stability with MELosome



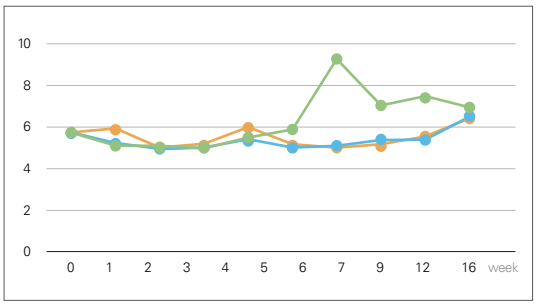
Stability test : MELosome almost maintained stability at POV, AV, pH

RT 40℃ Cycle

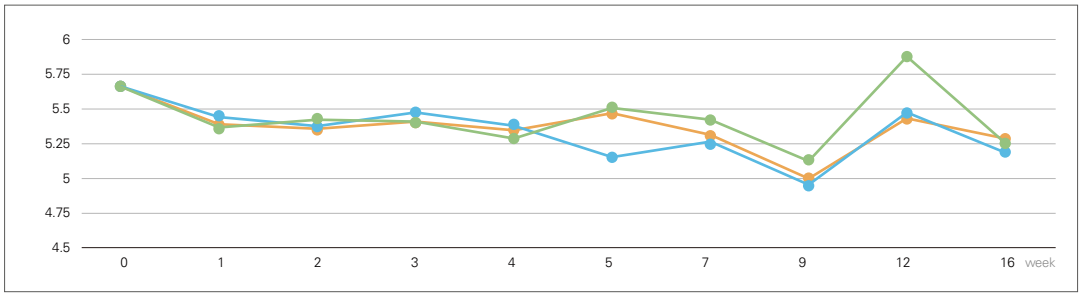
Peroxide value (POV)



Acid value (AV)



pH



AquaFerm series

A formulation ingredient designed for easy, high-load application of fermented oils

INCI

Pseudozyma Epicola/Oil INCI Ferment Extract, Water, Lecithin, 1,2-Hexanediol

CFDA

Glycerin, Water, Candida Bombicola/Glucose/Methyl Rapeseedate Ferment, Oil INCI, Lecithin, 1,2-Hexanediol

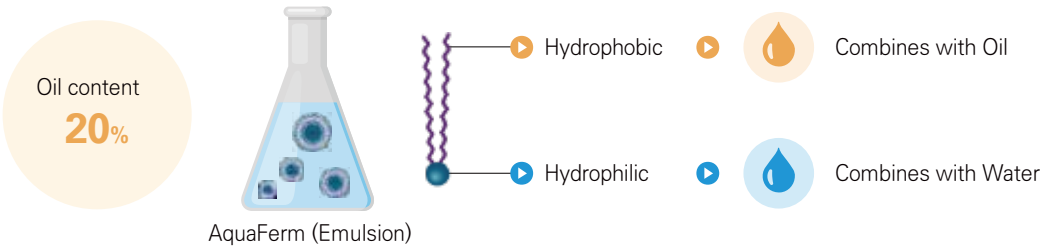
Benefit

Moisturizing

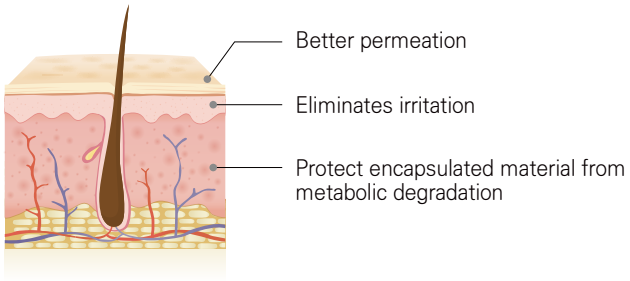
AquaFerm is 20%'s fermentoil liposomal without chemical emulsifier. It can be added for light formulation which like mist or skin and up to 20% of oil will be smoothly combined with your ready-formulation without separation

New solution

Fermentoil & Liposome



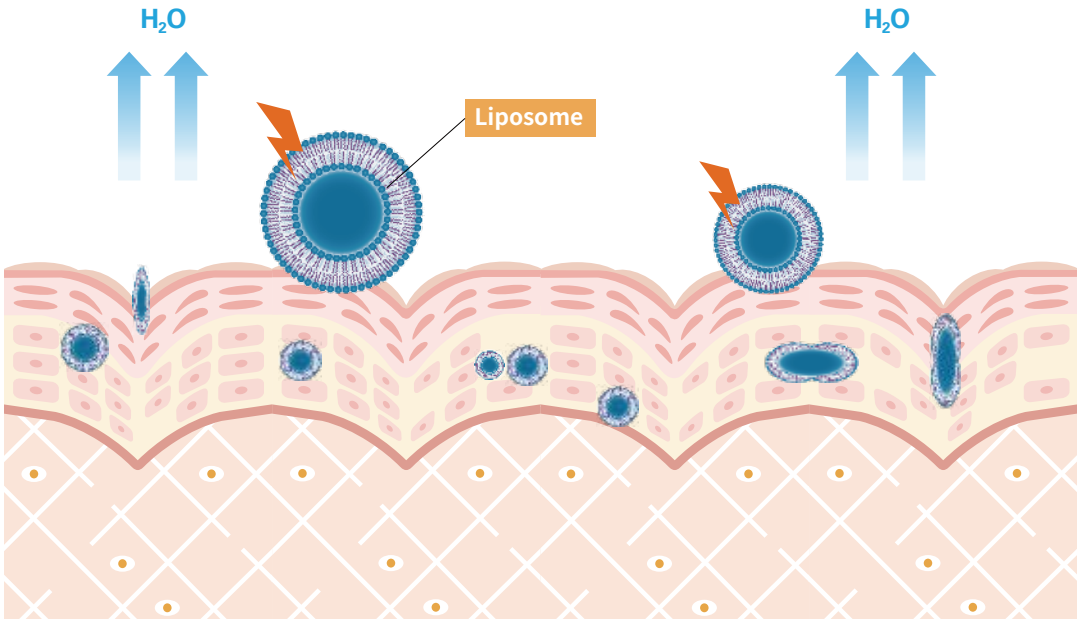
Liposome



Feature

Moisturizing function of Liposome

Liposomes interact with skin lipids, proteins and carbohydrates and make the strutum corneum performs its defensive function properly on dry skin



BeBebiome

Baby + Microbiome

INCI
Lactobacillus ferment, Bacillus ferment, Benzyl Alcohol, Dehydroacetic Acid

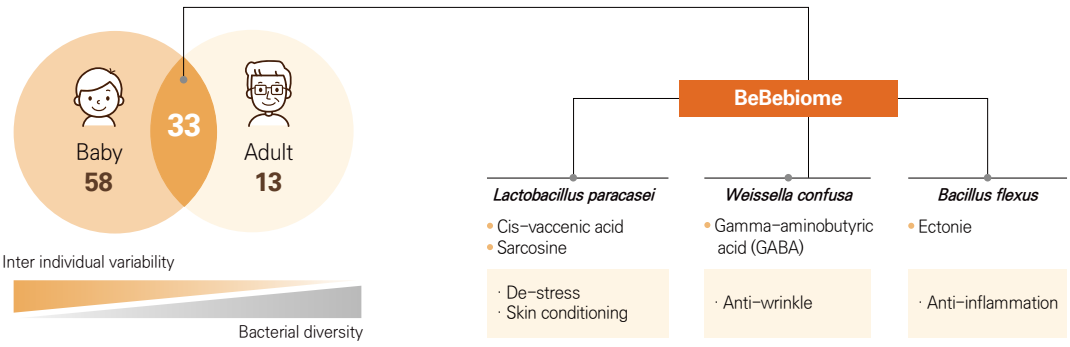
[BeBebiome-H] INCI & CFDA
Lactobacillus Ferment, Bacillus Ferment, 1,2-Hexanediol

Benefit
Anti-wrinkle, Firming, Lifting

Suggest the post-biotics generation that for best skin condition BeBebiome is helps to wrinkled skin return to babies' skin condition with metabolite which is found usually in babies' skin

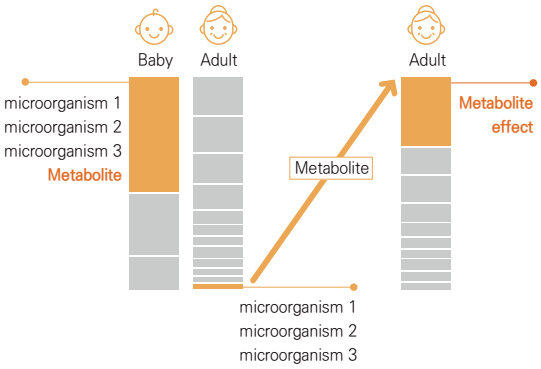
New solution

Baby & Adult



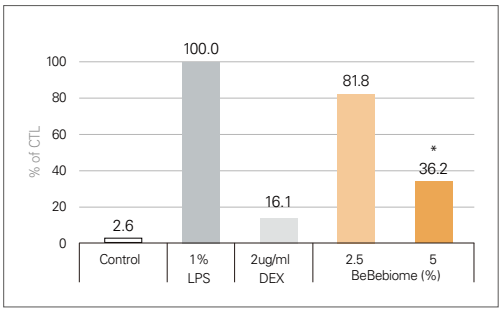
Feature

Skin microbial communities



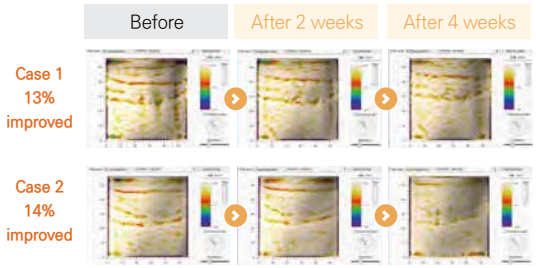
Anti-inflammation

BeBebiome inhibits NO production about 27% at 5% concentration

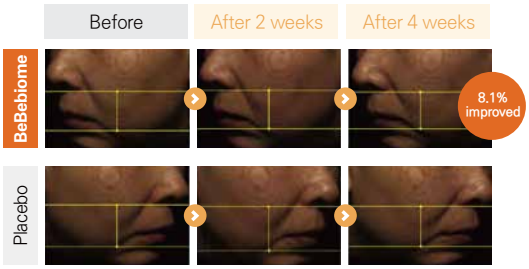


Clinical test

Anti-wrinkle effect on neck_Antera 3D
In average, 10.11% of neck wrinkle has been reduced



Firming (Lifting) effect on bulldog_F-RAY
In average, 6.32% of bulldog flesh has been shrunk



PlusXanthin

Powerful carotenoids biosynthesized through microbial fermentation

INCI & CFDA

Water, Micrococcus lysate,
1,2-Hexanediol, Polyglyceryl-10 Laurate

Benefit

Anti-oxidant, Anti-inflammatory, Anti-aging

The Plusxanthin consists of a carotenoid (Deinoxanthin) with powerful Anti-oxidant and multi-functional effects through our microbial fermentative production for improving eye wrinkles, especially eye bags

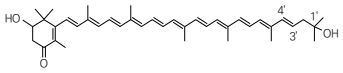
New solution

Deinoxanthin



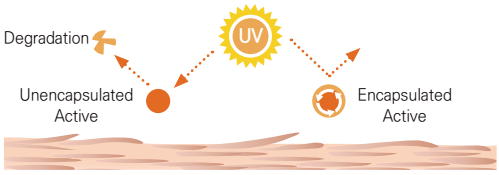
Deinococcus radiodurans

New Carotenoid: Deinoxanthin ($C_{40}H_{54}O_6$)



- Deinoxanthin is a unique carotenoid by biosynthetic of Deinococcus.
- It can live in unusual circumstance such as strong y-ray or UV radiation and dry conditions

Encapsulation with LABIO's technology



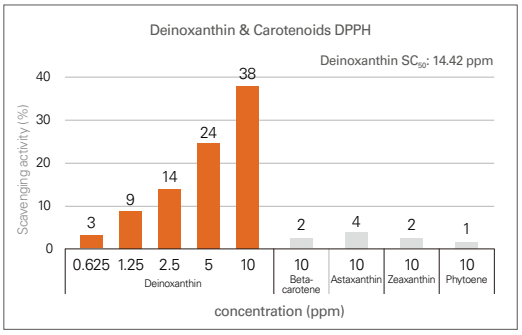
Existing Anti-oxidant	Improved Anti-oxidant
· Weak to UV and sun light · Low efficacy persistence	· High stability against UV and sun light · High efficacy persistence

Feature

In-vitro test

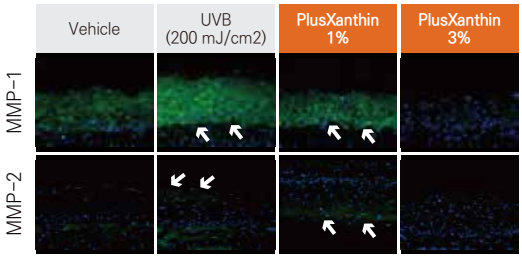
Anti-oxidant

There are Anti-oxidant effect of in Deinoxanthin 10 ppm



Anti-aging

Decreased MMP 1 & MMP 2 expression
at PlusXanthin 3% confirmed Anti-aging efficacy

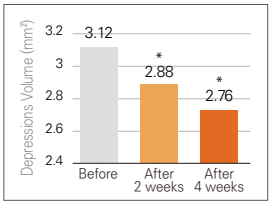


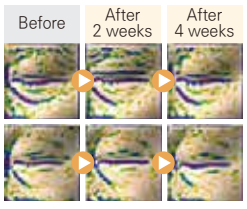
*UV irradiation for 4 days after Deinoxanthin treatment
(Focus on green area)

Clinical test

Reduction of Eye bags

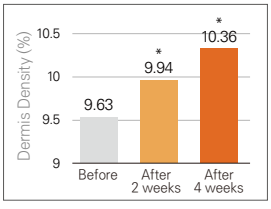
PlusXanthin reduces Eye bag by 11.6% after 4 weeks of use

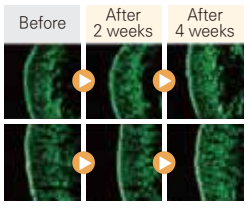




Improvement of Skin density

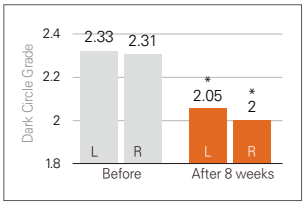
PlusXanthin improves Skin density by 7.5% after 4 weeks of use

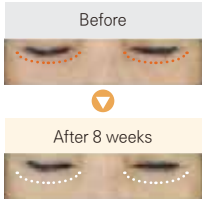




Reduction of Dark Circle

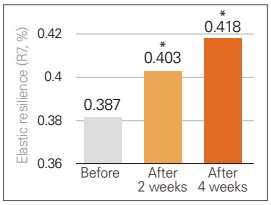
PlusXanthin reduces Dark circle by 13.4% after 8 weeks of use

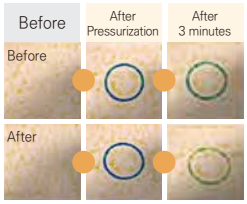




Improvement of Elastic resilience

PlusXanthin increased elastic resilience by 68.6% after use and improved resilience by 8.2% after 4 weeks.





The First

Anti-wrinkle effect from the most resistant microbe in the world

INCI

Water, Deinococcus Ferment Extract Filtrate, Butylene Glycol, 1,2-Hexanediol

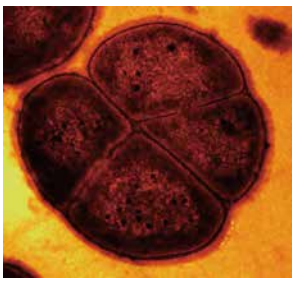
CFDA

Water, Micrococcus Lysate, Butylene Glycol, 1,2-Hexanediol

Benefit

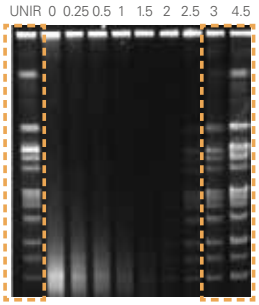
Anti-oxidant, Anti-inflammation, Anti-blue light, Skin Tone-up, Anti-wrinkle
The First consists of adjusted carotenoids to induce a colorless ingredient that contain strong anti-wrinkle properties. In addition, multi-functional effects are produced through our microbial fermentative production. The micro-organism used is Deinococcus sp., and it is a very well-known bacterium having been listed on the Guinness World Record for holding the highest resistance against radiation

New solution



Deinococcus radiodurans

The world toughest bacterium
Guinness Book of world records

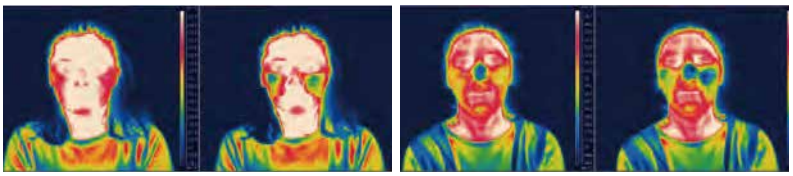


Proof of DNA repairing (PFGE)

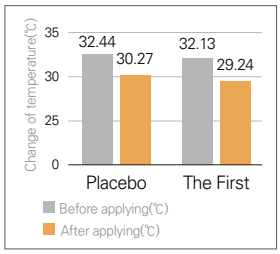
Feature

Clinical test **Cooling effect**

Subject 1 / Subject 2

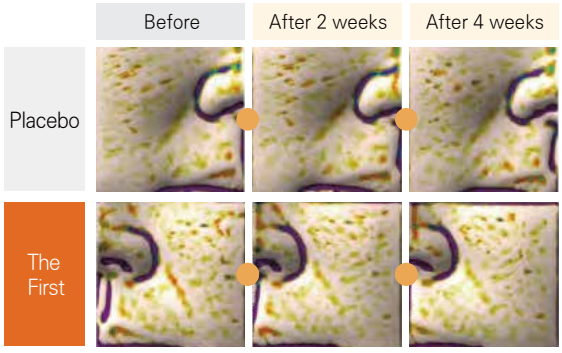


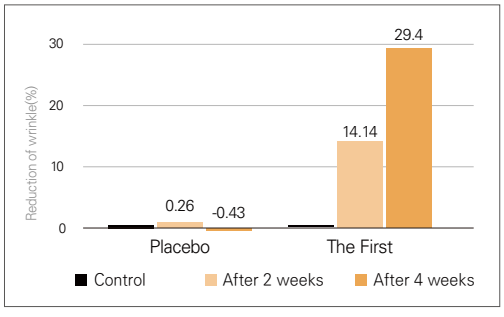
Placebo cream 3.2℃ decreased | The First cream 4.8℃ decreased | Placebo cream 1.4℃ decreased | The First cream 3.0℃ decreased

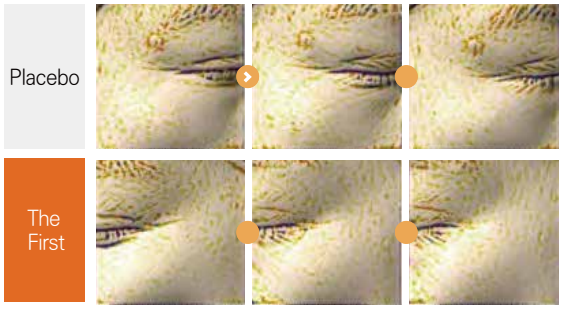


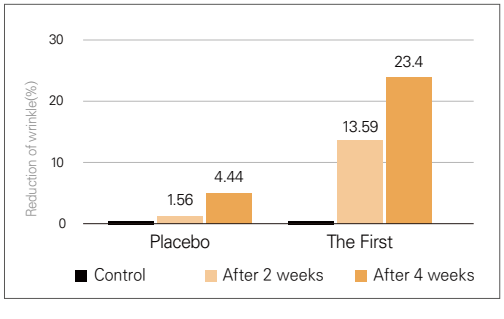
Wrinkle improvement

Nasolabial wrinkles reduced by 29.4% after 4 weeks of cream application.









Stratocare

Sebum control and Trouble care with Extremophile from Stratosphere

INCI & CFDA
Bacillus ferment, 2,3-Butanediol, Glycerin, 1,2-Hexanediol, Lecithin

Benefit
Anti-inflammation, Sebum control, Trouble care

The active ingredients that can improve daily sebum using stratospheric habitat extreme microorganisms, eventually contribute to trouble care

New solution

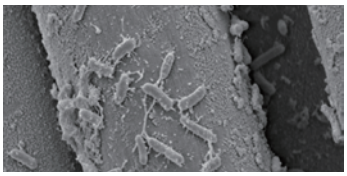
Stratosphere



Stratosphere is 10 to 50 km above the surface. The top section of an airplane.

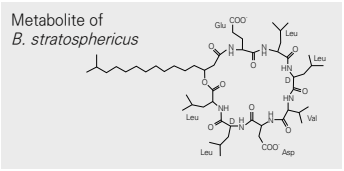
: A reversal of temperature
: Oxygen (air) lean and mild convection
: Ozone Layer Existence, UV Absorption

Bacillus stratosphericus



The secret to keeping the Stratosphere clean:
Microorganisms living in the stratosphere make Natural surfactants

Surfactin



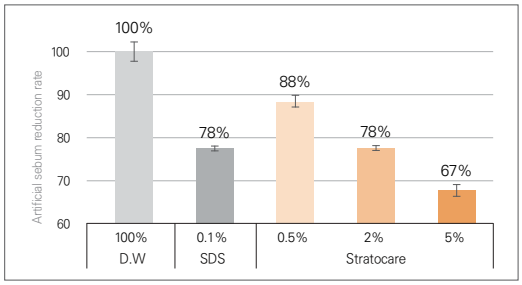
· Lipo-peptide first discovered in *Bacillus subtilis*
· Known as an amphiphilic natural surfactant
· Cycloaliphatic hepapeptide composed of 7 amino acids
· Cleansing / Anti-wrinkle agents / Anti-microbial agents

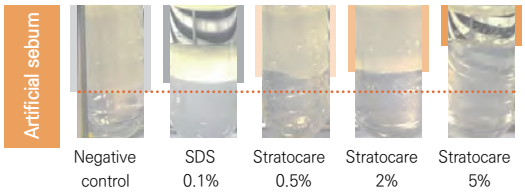
Feature

In-vitro test

Sebum control Sebum reduction efficiency by concentration of Stratocare

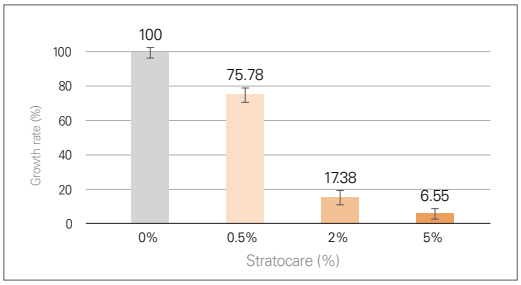
Artificial sebum reduction rate



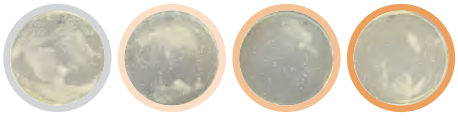


Growth inhibition Growth rate of *C. acnes* by concentration of Stratocare

C. acnes inhibition rate



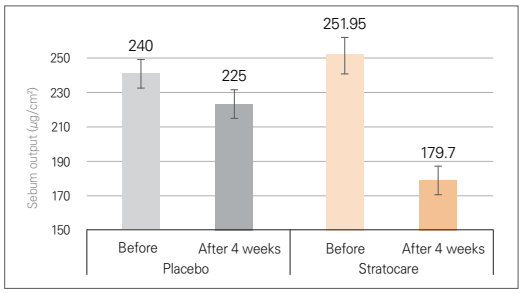
Stratocare 5% inhibited ~95% of *C. acnes* growth.



Clinical test

Sebum control Stratocare significantly reduced the amount of sebum by 28.68% after 4 weeks of use

Measurement results of the daily sebum output





*4 weeks, Apply twice a day / Compare red color spot

Antarctic-G

Fulfill your dream skin with bright energy from Antarctica

INCI

Pseudozyma Antarctica Ferment Extract, Pseudoalteromonas Ferment Extract, Water, 1,2-Hexanediol

CFDA

Yeast Ferment Extract, Pseudoalteromonas Ferment Extract, Water, 1,2-Hexanediol

Benefit

Brightening, Moisturizing

Antarctic-G is an active ingredients derived from 'Pseudoalteromonas sp. & Pseudozyma antarctica' which survive from Antarctic glacier. They accumulate small metabolites like glycine, betain, etc. And they produce EPS which is polysaccharide existed on viscous form in their body to protect from external stress factors. With LABIO's elaborate optimized fermentation technology, it allows to get high productivity of Glyceryl Glucoside and EPS. And those became of the effective cosmetic active ingredient

New solution

Extremophiles from Antarctica

Pseudoalteromonas sp.
Microbiome from Antarctica Ross Sea

2-GG, Glyceryl Glucoside (Moisturizing)

- Increase Aquaporin activity
- EWG grade : 1
- Elasticity
- Skin texture
- Wound healing



Pseudozyma antarctica
Microbiome from Antarctica Lake Vanda

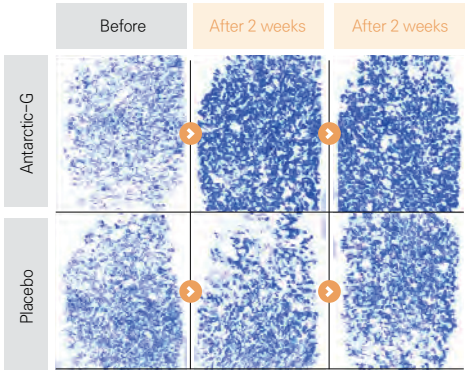
EPS, Exopolysaccharides (Skin Tone-up)

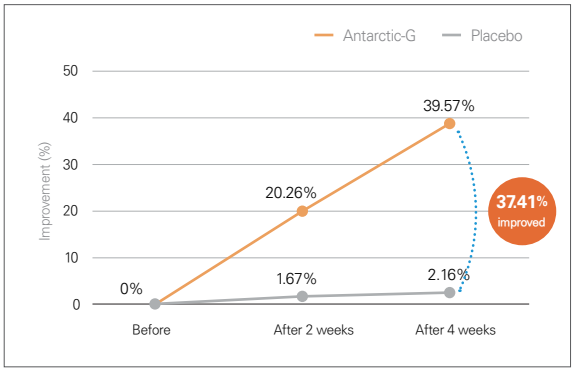
- Anti-inflammatory
- Tyrosinase Inhibitory Effect
- Homo-polysaccharide / Hetero-polysaccharide
- Anti-oxidant
- Anti-microbial

Feature

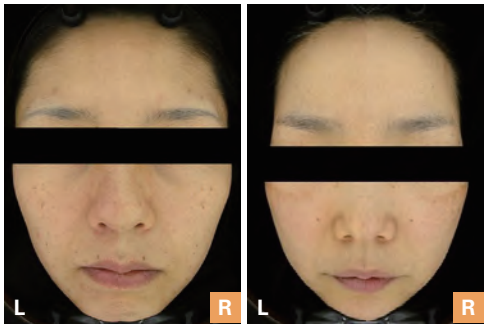
Clinical test

Skin hydration Antarctic-G improved water distribution 37.41%

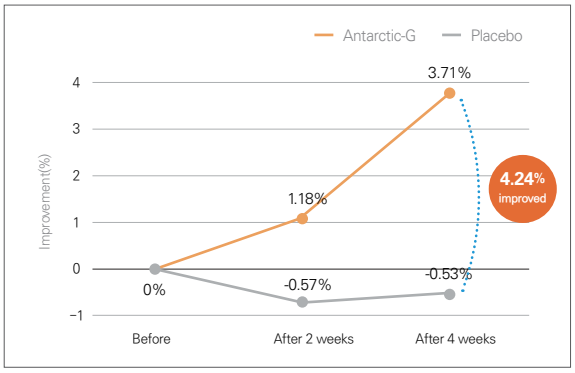




Brightening Antarctic-G improved skin tone 4.24%



Left : Before Right : After 4 weeks



Desertica

Infinite Vitality from Desert

INCI

Butylene Glycol,
Scenedesmus Deserticola Ferment Extract

CFDA

Butylene Glycol, Chlorella Ferment

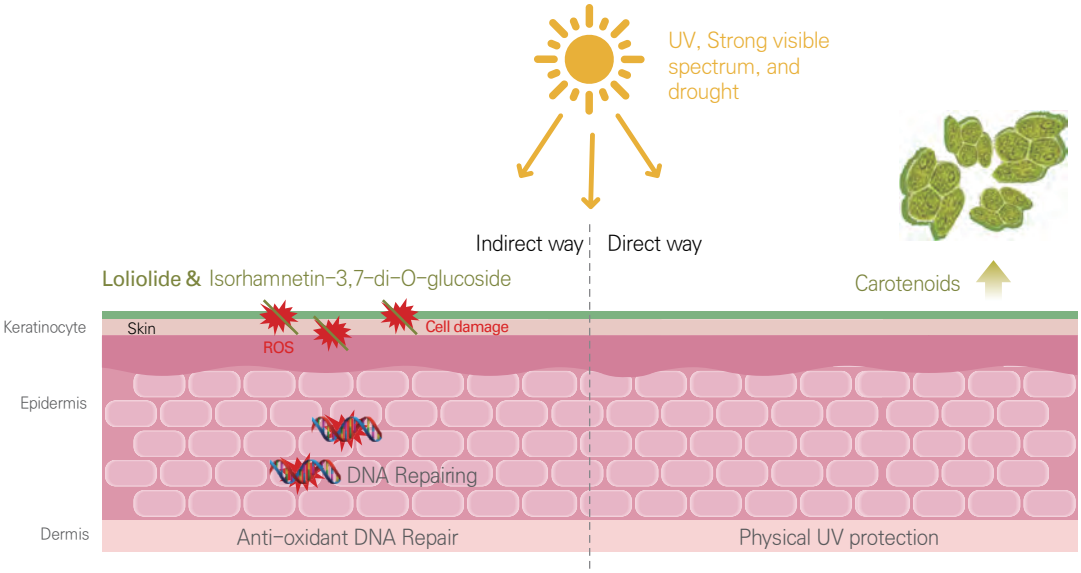
Benefit

Moisturizing, Soothing effect on UV damage, Anti-wrinkle

Desertica is a green microalgae found in the desert, possessing characteristics of being able to thrive in severe circumstances such as extreme heat UV and insufficient water. With the ideal extraction from the source, Desertica supports the DNA repair process of being anti-UV, anti-heat and preventing moisture loss. This mysterious species was only discovered in 2004 so there is continuous research to study more of its strong rejuvenating benefits

New solution

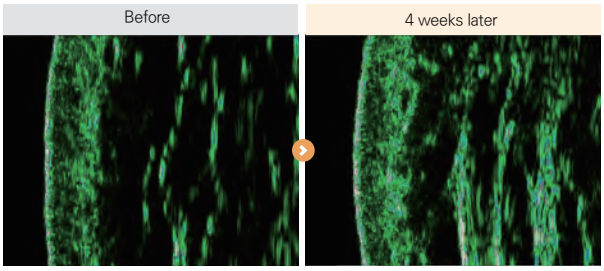
How Desertica works?

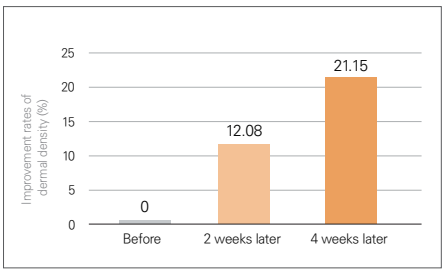


Feature

Clinical test

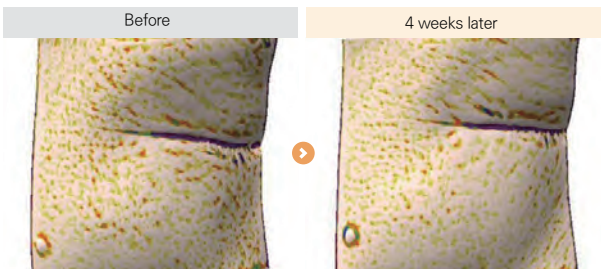
Dermal density

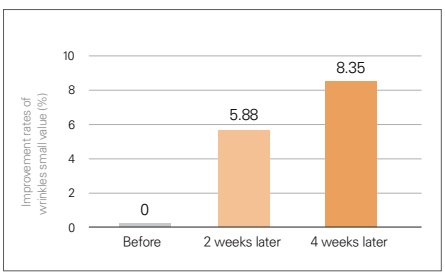




DUB-Skin scanner

Anti-wrinkle





ANTERA 3D

COOLIN

Cooling + Grifolin

INCI & CFDA

Saccharomyces Ferment Filtrate,
Albatrllus confluens (Mushroom) Extract, Butylene Glycol,
1,2-Hexanediol

[COOLIN-GL] INCI & CFDA

Saccharomyces Ferment Filtrate, Albatrellus confluens (Mushroom) Extract, Benzyl Alcohol, Dehydroacetic Acid

Benefit

Anti-thermo, Cooling

COOLIN is the fermented natural extract from a mushroom that originated in Finland. Through the fermentation process and the metabolites produced, it works on TRPV-1 modulating the temperature, and giving the soothing and cooling effect on the skin

New solution

UV Protection Trend

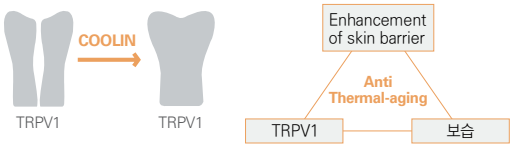
90% of cell aging comes from sun



Chemical Protection | Micro coating technology High SPF | New Trend UV + Heat block

Anti-thermal Aging

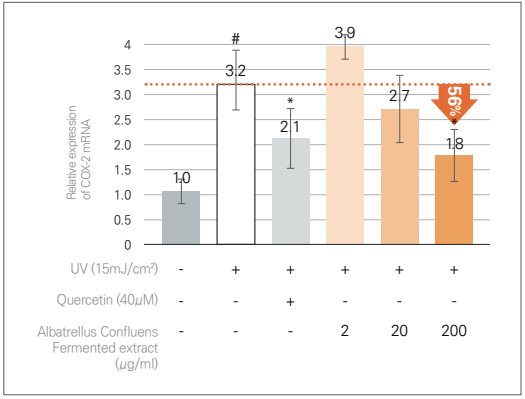
Decrease Heat Damage & Increase Elasticity



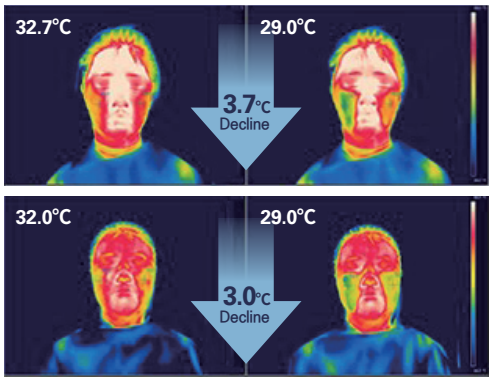
- Controls the thermo-aging progress by modulating TRPV1
- Inhibits Ca2+ influx which leads MMP-1 expression by modulating TRPV1
- Enhances thermo-damaged skin barrier with Fatty acid (oleic acid, linoleic acid)
- Supplies skin moisture with abundant Mineral

Feature

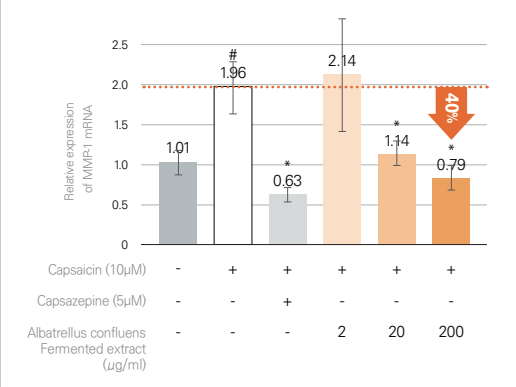
COX-2 gene expression (Anti-inflammation)



Cooling Effect Coolin decreased skin temperature 2.63℃ in average compare to placebo



TRPV1 gene expression

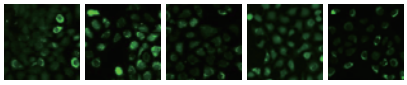


Anti-calcium influx

Influx of Calcium Ion by Capsaicin stimulation is inhibited by Albatrellus confluens ferment extract

Capsaicin (5μM)	-	+	+	+	+
Capsazepine (μM)	-	-	5	-	-
Albatrellus confluens (μg/ml)	-	-	-	200	-
Albatrellus confluens Fermented extract (μg/ml)	-	-	-	–	200

[Ca^{2+}]



Ginbalance

Keep the skin balance through Korean traditional ginseng

INCI & CFDA

Butylene Glycol, Paeonia Lactiflora Root Water, Panax Ginseng Extract, Aspergillus Ferment

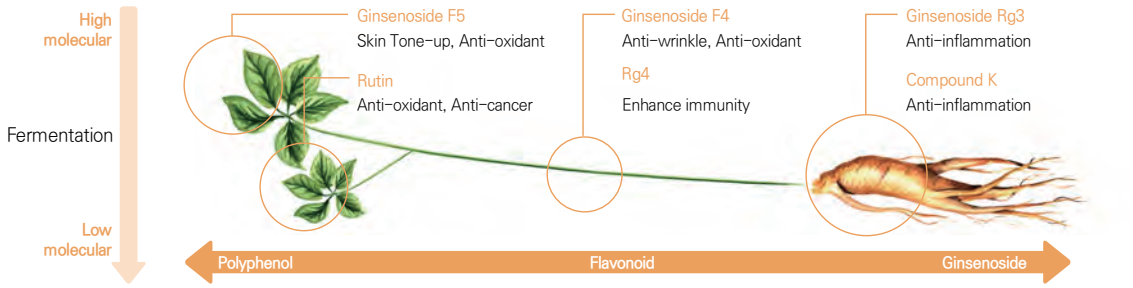
Benefit

Anti-oxidant, Anti-inflammation, Anti-pollution

Rather than just giving an immediate soothing effect, immunity balance is a long term goal. Ginbalance's focus is to strengthen the TH1 and TH2 cells on both a cellular and humoral level

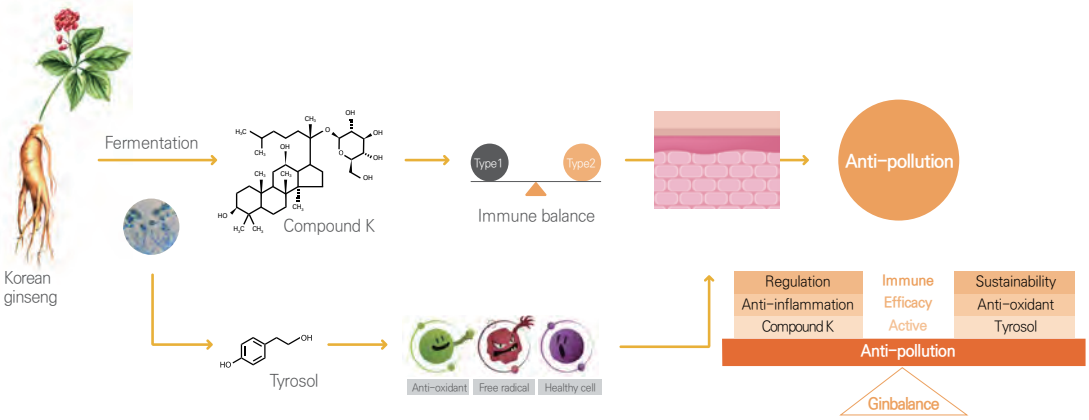
New solution

Fermentation keeps total amount of Saponin while increasing active component Better absorption by fermentation process



Feature

LABIO's Technology



Clinical test

Skin Calming

21 female (28~59 ages) 3% Ginbalance lotion

No.	Case 1 (Age : 37)		Case 2 (Age : 50)	
	Ginbalance	Control	Ginbalance	Control
CTL				
1% SLS				
After 24hrs				
After 48hrs				

Skin Color improving

21 female (34~58 ages) 5% Ginbalance lotion

No.	Case 1 (Age : 38)		Case 2 (Age : 49)	
	Left	Right	Left	Right
CTL				
After 2 weeks				
After 4 weeks				

Dr. Kamut

BIO-Sprout : Fresh, Start, The beginning

INCI & CFDA

Propanediol, Glycerin,
Triticum Vulgare (Wheat) Sprout Extract,
Saccharomyces Ferment Filtrate,
Lactobacillus Ferment

Benefit

Anti-inflammation, Anti-oxidant

Sprout has 3~4 times of nutrients than its adulthood. But it has risk of toxicity because of their protection system against blight. Dr. Kamut is an active containing full of nutrients and increasing skin-benefits while having decreased toxicity by fermentation technology

New solution

Kamut

Ancient wheat seeds (Traceable, Exclusive and Certified source); Seeds maintained to prevent Non-GMO or NO-Mutation



KAMUT

Saccharomyces sp., *Lactobacillus* sp.

Early microbes that coexisted with humans Ancient Sprout source



Saccharomyces cerevisiae sp. *Lactobacillus* sp.

LED-hydroponics system

- Pesticide-free claim
- Human resource saving
- Sustainability

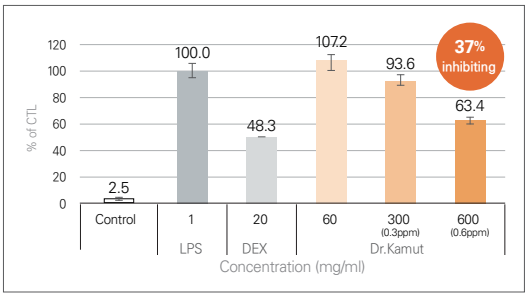


Feature

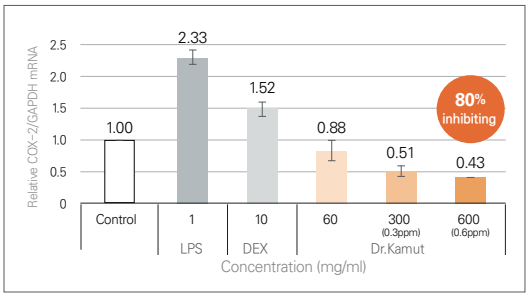
In-vitro test

Anti-inflammatory

NO assay | CTL : control; LPS 1ug/ml, DEX : Dexamethasone

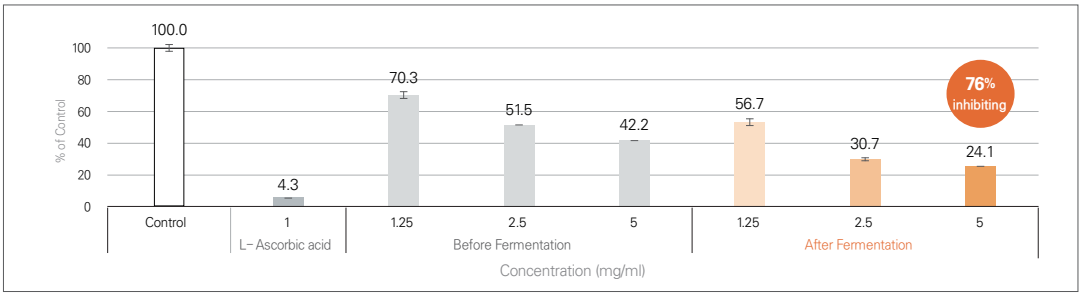


COX-2 mRNA level | LPS 1ug/ml, positive control : Dexamethasone (Dex)



Anti-oxidant

DPPH assay



APPORÉ

Pore care with Upcycling

INCI & CFDA

Water, Pyrus Malus (Apple) Fruit Extract, Castanea Crenata (Chestnut) Shell Extract, Diospyros Kaki Leaf Extract, Propanediol, 1,2-Hexanediol

Benefit

Pore care, Skin elasticity

A sustainable ingredient derived from apple pomace, chestnut peel, and persimmon leaves. Rich in tannic acid, APPORE improves skin texture, tightens pores, and enhances skin hydration and elasticity

New solution

Upcycling

Utilization of raw materials rich in Tannic Acid with excellent pore improvement effect



Apple peel
Pyrus Malus (apple) Fruit Extract

- Pore contraction
- Exfoliation care
- Rutin, Pectin, Catechin



Chestnut shell
Castanea Crenata (Chestnut) Shell Extract

- Anti-aging
- Anti-inflammation
- Quercetin, Ellagic acid



Persimmon leaves
Diospyros Kaki Leaf Extract

- Anti-oxidant
- Skin elasticity
- Rutin, Beta carotene

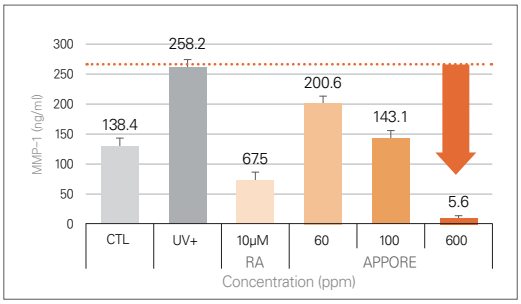
Feature

In-vitro test

Anti-aging

APPORE inhibits MMP-1 production by more than 90% at 600 ppm

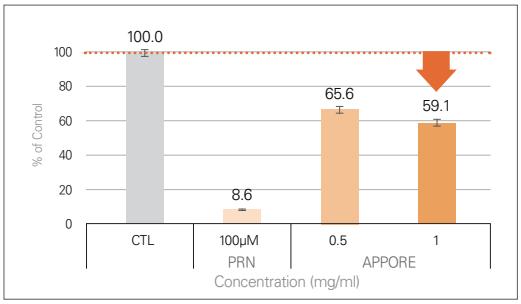
MMP-1 assay



Skin elasticity

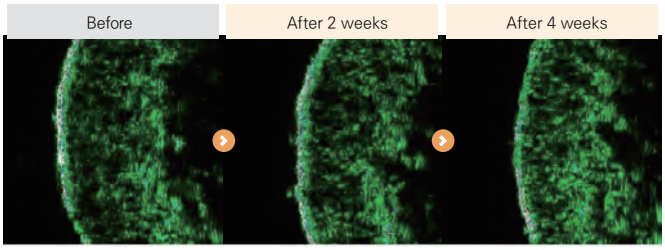
APPORE exhibits about 42% Elastase inhibition effect at 1mg/ml

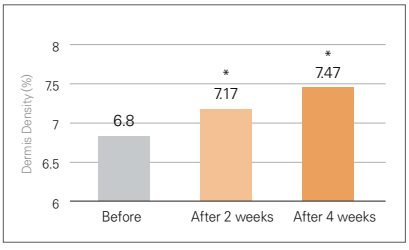
Elastase inhibition assay



Clinical test

Improve pore density Increased pore density by 5.43% after 2 weeks of use and 9.88% after 4 weeks of use

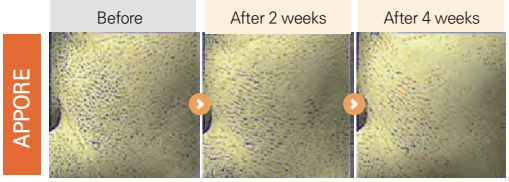


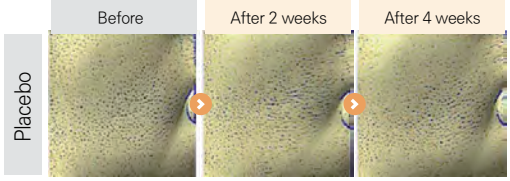


Improve pore area & volume

Pore area decreased by 26.87% after 2 weeks of use and 46.54% after 4 weeks of use

Pore volume decreased by 30.53% after 2 weeks of use and 49.27% after 4 weeks of use





Lumiflora Peony

When petals fall on your skin

INCI & CFDA

Butylene Glycol, Water,
Paeonia Albiflora Flower Extract

Benefit

Skin Tone-up, Anti-aging, Anti-oxidant

Lumiflora Peony contains Paeonia flower extract that helps brighten skin and provide antioxidant benefits. Extracted only from the flower and sourced from Mt. Jiri—Korea's first and largest national park—it is known for its strong skin-brightening effects

New solution

When petals fall on your skin

Extract only flower part which gives skin tone-up effect

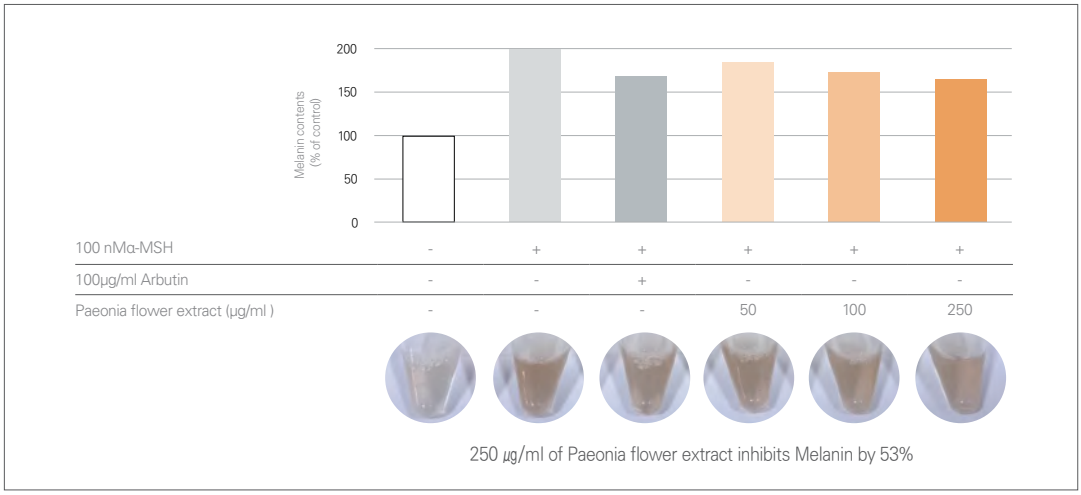
Peony grown naturally and collected from Mt. Jiri inspires marketer

Feature

In-vitro test

Melanin Contents

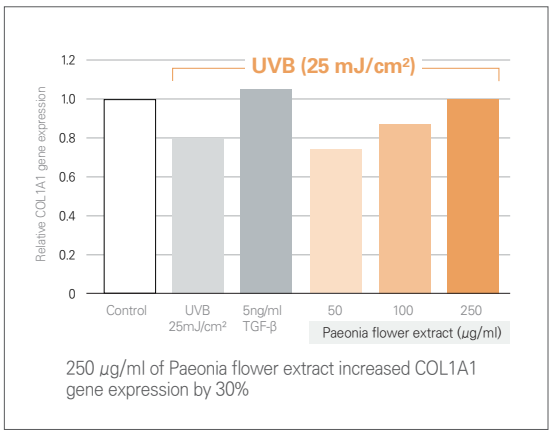
Melanin Contents (Melanocyte B16F10)



250 μg/ml of Paeonia flower extract inhibits Melanin by 53%

COL1A1 Gene expression

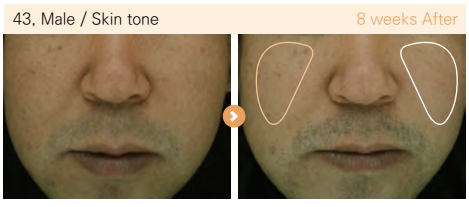
Anti-aging Human Dermal Fibroblast neonatal (HDFn, LONZA) Detection method : Real-time PCR



250 μg/ml of Paeonia flower extract increased COL1A1 gene expression by 30%

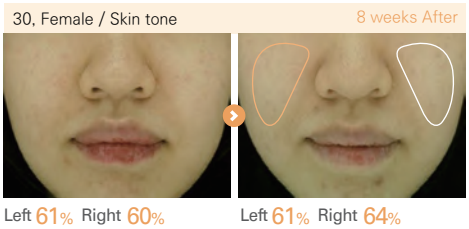
Clinical test (사내 임상)

Skin tone Brightening



Left 46% Right 42%

Left 46% Right 48%



Left 61% Right 60%

Left 61% Right 64%

SyncTonin^{24}

Circadian Rhythm Synchronizer 24hrs

Vegan

INCI & CFDA

Propandiol, Musa Sapientum (Banana) Fruit Extract,
Hedera Helix (Ivy) Extract,
Ziziphus Jujuba Fruit Extract

Benefit

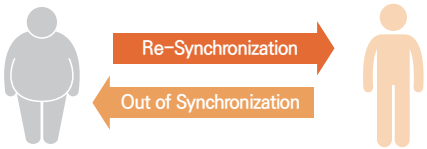
Skin tightening, Slimming, Anti-cellulite, Anti-aging, Anti-wrinkle, Moisturizer

Circadian rhythm is a biological cycle influenced by lifestyle and environment. SyncTonin24 helps restore this rhythm with melatonin and serotonin, improving cellulite and skin elasticity

New solution

Circadian Rhythm

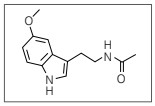
If Circadian Rhythm collapses, there is a possibility of a rapid increase in weight due to body stress.



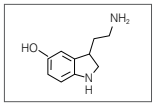
Melatonin & Serotonin

Melatonin & Serotonin are the key of Re-Synchronization

Adipose regulator



Melatonin (N-acetyl-5-methoxyptamine)
is a bionic hormone secreted by the brain that is used to treat insomnia. It activates melatonin receptors to induce natural sleep.



Serotonin(5-Hydroxy tryptamine (5-HT)
Serotonin is a monoamine neurotransmitter, and reduced serotonin levels can cause emotional and behavioral disorders.

SyncTonin^{24} 바나나, 대추, 아이비

BANANA (Phytoserotonin)



- Anti-oxidant
- Anti-aging
- Include Serotonin
- Anti-wrinkle

JUJUBE (Phytomelatonin)



- Anti-oxidant
- Include Melatonin
- Anti-aging

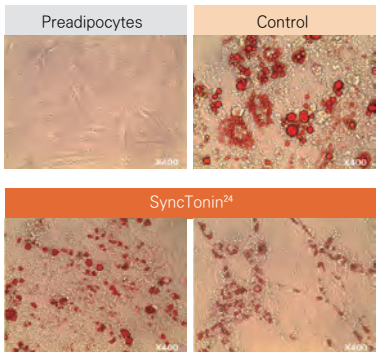
IVY



- Vines and perennial grass
- Anti-oxidant
- Include Quercetin
- Boosts serotonin
- Anti-aging
- Anti-wrinkle

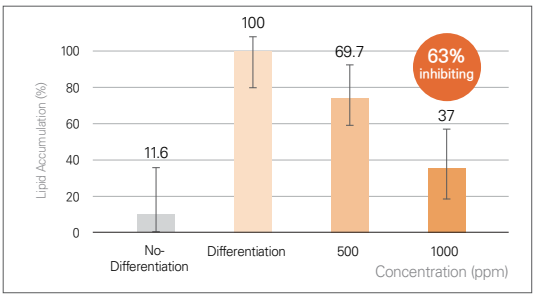
Feature

In-vitro test Inhibiting fat differentiation effect about 3T3-L1 Cell



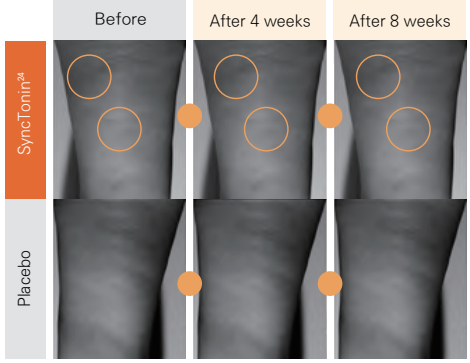
500 ppm 1000 ppm

Oil red O Staining

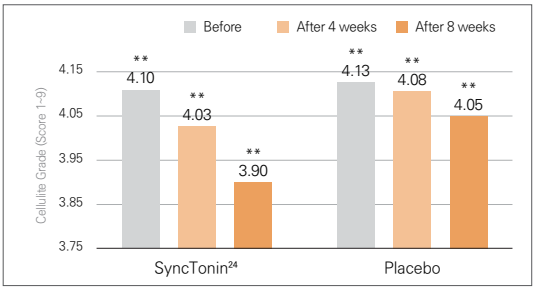


Confirmation of the inhibitory efficacy about 63% fat differentiation at 1,000 ppm of SyncTonin^{24}

Clinical test Visual evaluation result by researcher Cellulite Grade



Change in the Cellulite Grade



Visual evaluation results of the test areas was decreased 0.2 at a significant level in 8 weeks

Aqua-proVita D₂

A stabilized, plant-based vegan vitamin D₂ that is easy to apply

INCI & CFDA

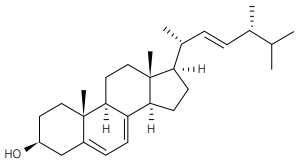
Dipropylene Glycol, Hydroxypropyl Cyclodextrin, Lecithin, Phytosterols

Benefit

The vegan Vitamin D2 through exclusive stabilization technology

New solution

Ergosterol



Ergosterol (Ergocalciferol) = Vegetable Vitamin D (D₂)
Equivalent to animal vitamin D (D3, cholecalciferol) in efficacy

Ergocalciferol (vitamin D2)is the synthetic form of vitamin D that can be formed from the plant steroid, ergosterol by UV irradiation (Vanden-Berg, 1997)and it is assumed to have the same biological activity as cholecalciferol.
In the cell walls of fungi such as mushrooms and yeasts, they exist in the form of Ergosterol, which is converted to D2 through ultraviolet light and converted to Calcidiol and Calcitriol.

Vegan vitamin D



Aqua-proVita D₃-R

- Animal vitamin D
- Extract from wool
- High Conversion to Vitamin D



Aqua-proVita D₂

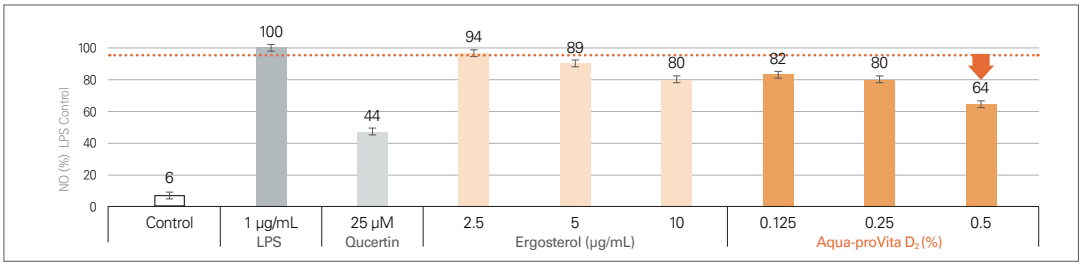
- Vegan vitamin D
- Extract from mushroom
- Mid Conversion to Vitamin D

Feature

In-vitro test

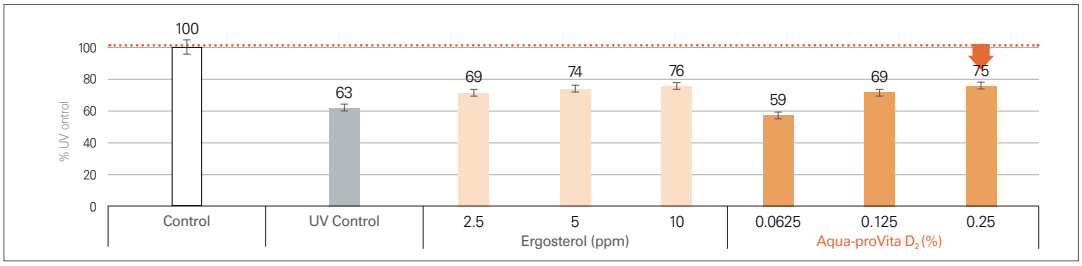
Anti-inflammation (NO assay)

Aqua-proVita D2 inhibits 36% inflammatory response at 0.5% concentrations



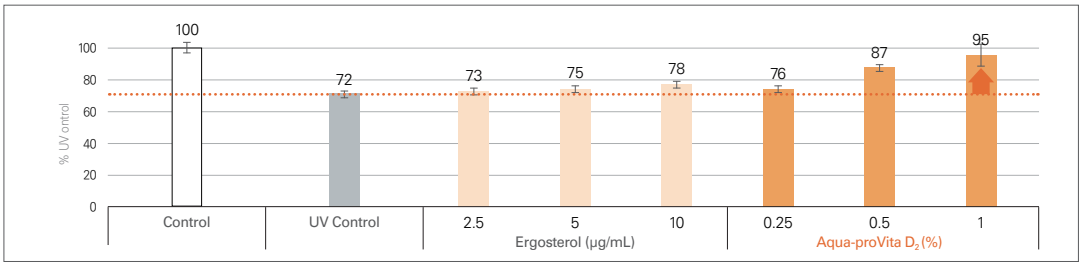
Cell Protection: UV-Protection

Aqua-proVita D2 improves cell protection rate 10% at 0.25%



Cell Protection: UV-Recovery

Increased by 22% compared to UV treatment group with Aqua-proVita D2 1% treatment



Aqua-proVita D_3-R

One step closer and easier, soluble vitamin D_3

INCI & CFDA

Glycerin, Hydroxypropyl Cyclodextrin, Water, 7-Dehydrocholesterol

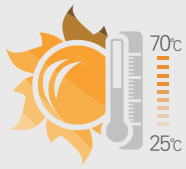
Benefit

Moisturizing, Biosynthesis of collagen, Cell activation, Cell growth stimulation

Aqua-proVita D3-R is a water-soluble form of 7-DHC (pre-vitamin D), stabilized with cyclodextrin. Unlike conventional vitamin D, it remains stable in water and can be used in various formulations, including body mists and hair sprays

New solution

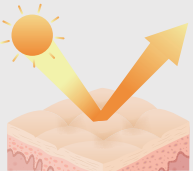
Stable for Wide Range of Temperature



Soluble in Water Formulation



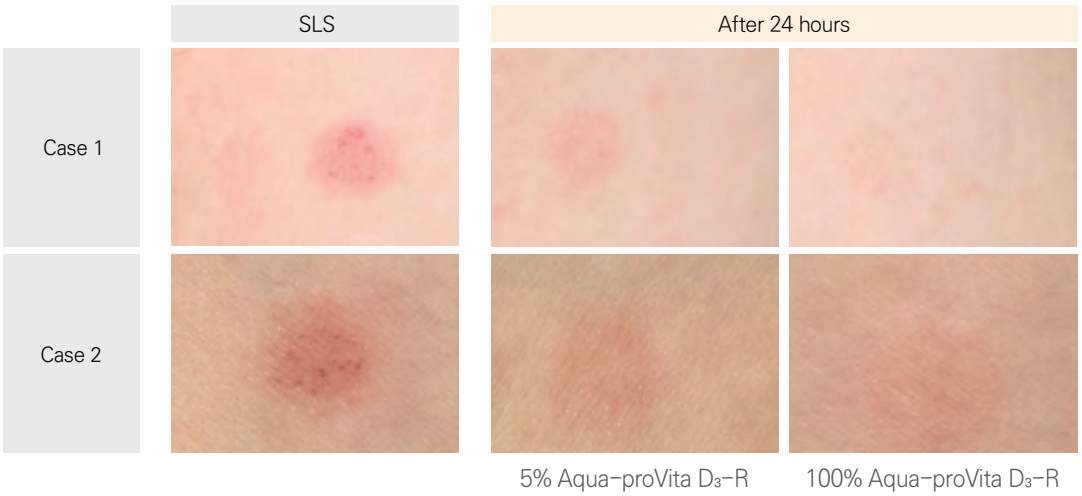
Stable at UV Radiation



Feature

Improvement of skin trouble (24 hours patch test)

100% / 5% of Aqua-proVita D3-R / 10 volunteers



BIO-Placenta

Analogous placenta with synergic effects and safety

INCI

Water, Lecithin, Acetylglutamine, sh-Oligopeptide-1, sh-Oligopeptide-2, sh-Polypeptide-1, sh-Polypeptide-9, sh-Polypeptide-11, Bacillus/folic acid ferment filtrate extract, Sodium Hyaluronate, Caprylyl Glycol, Butylene Glycol, 1,2-Hexanediol

CFDA

Water, Lecithin, Acetyl Glutamine, Oligopeptide-1, Oligopeptide-2, Oligopeptide-3, Hexapeptide-11, Bacillus/Soybean Ferment Extract, Folic Acid, Sodium Hyaluronate, Caprylyl Glycol, Butylene Glycol, 1,2-Hexanediol

Benefit

Anti-aging, skin rejuvenation, Elasticity enhancement, Moisturizing, Cell vitalization

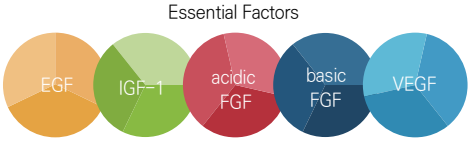
BIO-Placenta is the combination of five different growth factors plus glutamine and Vitamin B9. Its purpose is to stimulate beneficial core ingredient like the human placenta, but not derived from human nor animal. Thanks to the synergic effect existing among the best composition of growth factors, it works better than single type of growth factor

New solution

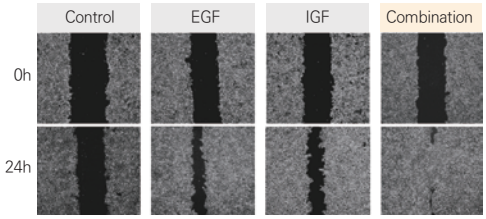
BIO-Placenta vs Human placenta

	Human Placenta	Effect	BIO-Placenta
Growth Factor	EGF	Skin rejuvenation	EGF
	IGF-1	Anti-wrinkle	IGF-1
	acidic FGF	Anti-wrinkle	acidic FGF
	basic FGF	Elasticity enhance	basic FGF
	VEGF	Nutritional supplement	VEGF
	TGF-B	Anti-wrinkle	-
	The minority parts	-	-
Essential Factor	Vitamin	Cell vitalization	Vitamin B_9
	Amino acids	Energy supplement	Acetyl Glutamine

Synergic Effect



Combination of 5 growth factors and essential factors make synergic effect on skin

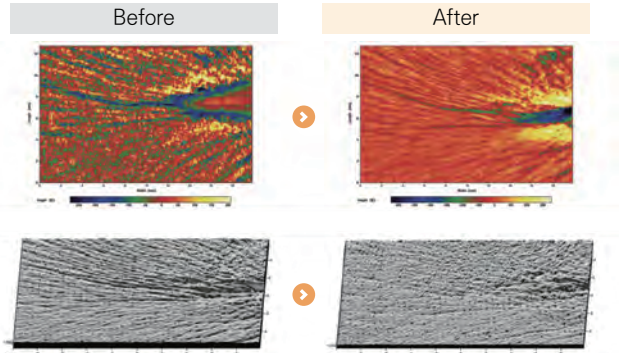


Cells : HaCaT(Human Keratinocyte)
Parameter : Cell migration
Measurement : Microscope
Analysis: ImageJ from NIH

Feature

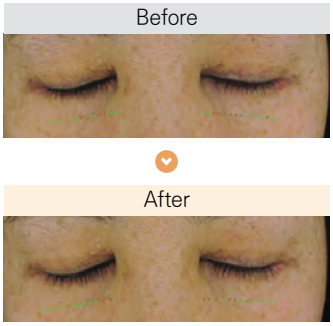
Anti-wrinkle

Eye wrinkles
Detection method PRIMOS Lite 3D Face and Skin ScannerAnalyzing System, GFMesstechnik



Reduces wrinkles by 10% in 2 weeks and 21% in 4 weeks on crow's feet

Under-eye wrinkles
Detection method Robo Skin Analyzer CS50, Inforward, Inc.



Reduces wrinkles by 38% in 2 weeks and 46% in 4 weeks on below eyes

BIO-Placenta Hair

Improvement of scalp condition

INCI

Water, Glycerin, Lecithin, Alcohol, Propanediol, Arginine, Caprylyl Glycol, Phenoxyethanol, Citric Acid, Eucalyptus Globulus Leaf Extract, Tocopherol, sh-Polypeptide-11, sh-Polypeptide-1, sh-Oligopeptide-2, sh-Oligopeptide-10, sh-Polypeptide-9

CFDA

Water, Glycerin, Lecithin, Alcohol, Propanediol, Arginine, Caprylyl Glycol, Phenoxyethanol, Citric Acid, Eucalyptus Globulus Leaf Extract, Tocopherol, Hexapeptide-11, Oligopeptide-3, Oligopeptide-2, Oligopeptide-6

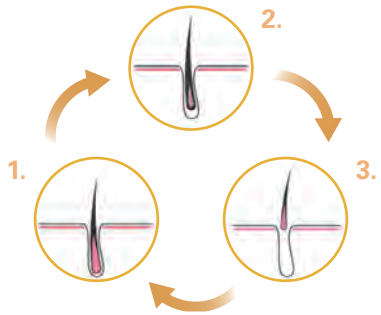
Benefit

Regulating hair cycle, Controlling hair scalp condition

5 safely synthesized growth factors stimulate mRNA expression, essential factors such as beneficial Vitamin improves hair quality, Amino acids provides moisturizing effect and natural extract for cooling effect are working synergistically to regulate hair scalp condition

New solution

Hair Loss is caused by hair cycle's alteration



1. Anagen (growth phase)
Growth and formation of the hair shaft
·Duration : 2~8 years
·85~90% of the hair follicles are in Anagen phase

2. Catagen (transition phase)
Interruption of hair growth and regression of the follicle
·Duration : 2~3 weeks
·1~2 % of the hair follicles are in Catagen phase

3. Telogen (resting phase)
Resting state of the hair follicle.
·Duration : 2~4 months.
·5~15 % of the hair follicles are in Telogen phase.

Feature

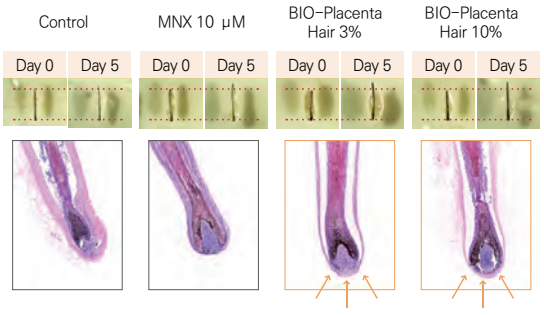
Why BIO-Placenta Hair

BIO-Placenta : Efficacy on the scalp

	Human Placenta	Effect	BIO-Placenta Hair
Growth Factor	FGF	Promote follicular growth	FGF
	VEGF	Promote formation of new blood vessels	VEGF
	IGF	Promote of proliferation of hair matrix cell	IGF
	KGF	Developing dermal papilla	KGF-2
Essential Factor	Vitamin	Improve the quality of hair	Vitamin E
	Amino acids	Stimulate hair regrowth	Amino acids : L-Arginine
Cooling Factor	-	Cooling hair scalp	Eucalyptus leaf Extract

ex vivo, Elongation test

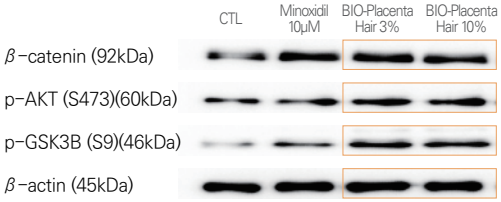
BIO-Placenta Hair promotes significant elongation of hair shaft after 5 days



In-vitro test

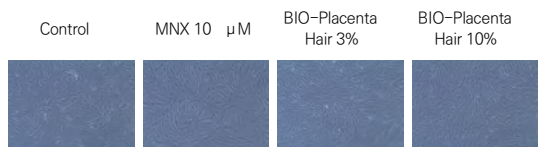
Protein expression profile

Detection method : Western blot



HDP (Human Dermal Papilla) Cell proliferation

BIO-Placenta Hair increases HDP cell proliferation by induced Wnt / β-catenin



Hydracell QS

Water your skin cells like drinking aqua

INCI & CFDA

Water, Dipotassium Phosphate, Acetyl Glutamine, Butylene Glycol, 1,2-Hexanediol, Cellulose Gum

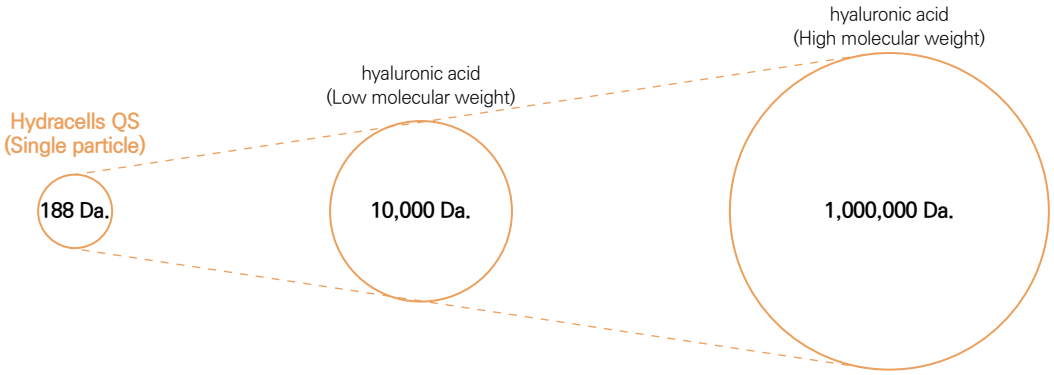
Benefit

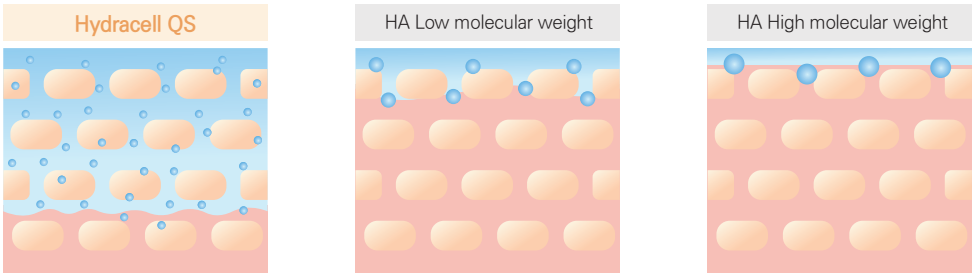
Moisturizing, Biosynthesis of collagen, Cell activation, Cell growth stimulation

Hydracell QS is acetylated glutamine with high stability. The smallest molecular weight of Hydracell QS helps bring moisture deeper into skin. It also prevents damages that are caused by oxidative stress through cell swelling process

New solution

What makes it different?



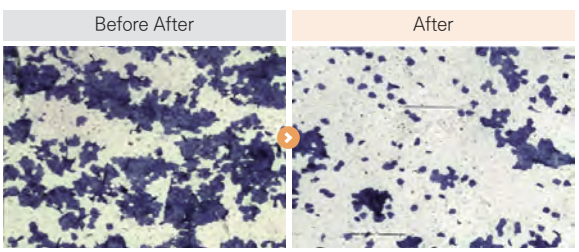


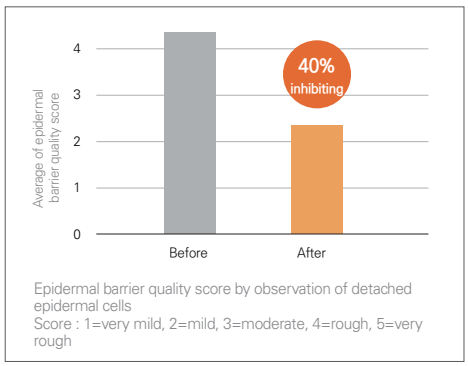
Feature

Clinical test

Epidermal Barrier Quality

Test area : Left cheek
Detection : Keratin sticker (KISCS), Digital light Microscope(Advanced Microscopy Group)





Epidermal barrier quality has been improved 40% after treatment

LB-AUR-Glucan

Beta-glucan derived from black yeast fermentation

INCI

Aureobasidium Pullulans Ferment, 1,2-Hexanediol

CFDA

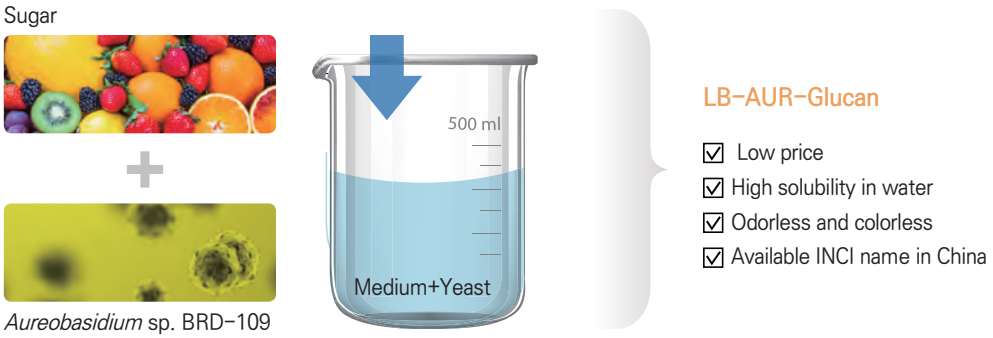
Beta Glucan, 1,2-Hexanediol

Benefit

Moisturizing, Anti-irritation, Anti-inflammation, Enhancement of collagen biosynthesis

LB-AUR-Glucan is a water-soluble β-glucan derived from black yeast fermentation. It provides long-lasting hydration by binding water and forming a moisturizing film, giving a smooth and silky texture.

New solution

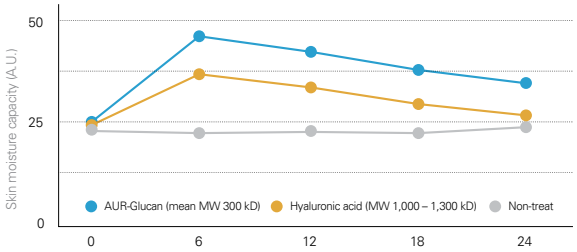


Feature

Clinical test

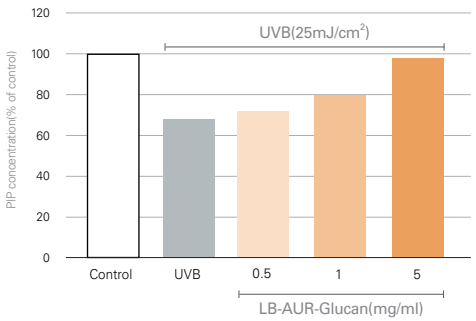
Test method
in vivo corneometer study

Samples
LB-AUR-Glucan, 1% Hyaluronic acid solution



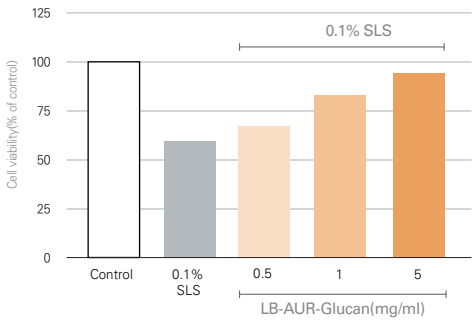
In-vitro test

Test method : ELISA assay, MTT assay
Samples : LB-AUR-Glucan, SLS(Sodium lauryl sulfate)



LB-AUR-Glucan treatment increased PIP expression up to 25% at 5 mg/ml, compared with the UVB-irradiated control.

*PIP(Procollagen Type I C-Peptide)



MTT assay shows that LB-AUR-Glucan is effective for cell protection, which means that LB-AUR-Glucan can perform to promote cell activity and self-healing.