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Приём звонков:

Пн-Пт с 9:00 до 18:00

MD+

MIRACULOUS MULTI-PEPTIDE CALLUS CULTURE EXTRACT VOLUFILINE AMPLE

Wrinkle, Energetic
Smooth
Feeling
Naturally
Shiny, Brilliant
Maximize Effects

CALLUS



UNABELLEZZA

WHITENING ANTI WRINKLE KFDA CERTIFIED.

Active & Energetic
Whitening And Wrinkle Care Skin Elasticity Relaxing
And Tightening Smooth Silky Feeling, Soft Focus Effect
Naturally Shiny And Brilliant Skin Tone

미백+주름 개선 2중기능성 화장품

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Advertising materials must receive reviews for advertising.

When using for advertising, please consult the headquarters first.

■ Product Overview**Product Name : MD MIRACULOUS MULTI-PEPTIDE CALLUS AMPLE**

- Skin-friendly naturally derived oil
- Combines high concentration essence and BB types for a smooth and silky experience to make the skin firm and energetic.
- No paraben, benzophenon, animal and mineral oils, artificial colors
- Dual functions of wrinkle care and whitening.

■ **Product Description**

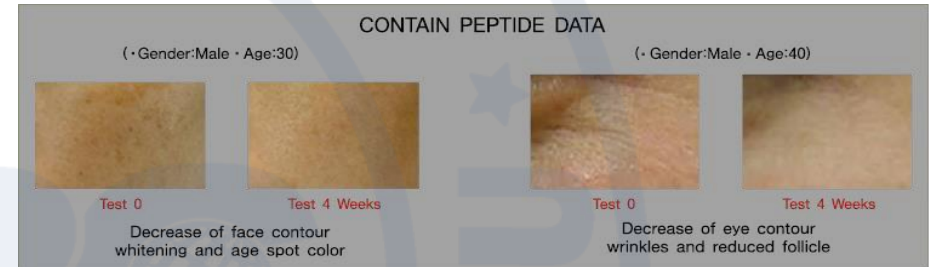
Section	Contents
Product Features	<p>Contains the whitening and wrinkle care complex peptide hexapeptide-9, tripeptide-29, acetyl hexapeptide-8, nicotinoyl dipeptide-22, nicotinoyl dipeptide-24, SH-oligopeptide-2, copper tripeptide-1, SH-oligopeptide-1, SH-polypeptide-3, and tetrapeptide-4, while effects were maximized with the dual functional ingredients (niacinamide, adenosine) that helps with whitening and skin care. In addition, it was reinforced with plant stem cells such as myrothamnus flabellifolia callus cultured extracts, lotus callus cultured extracts, tomato callus cultured extracts, green tea callus cultured extracts, ginseng callus cultured extracts. Also, fermented complex filtrates of patented ingredients (patent no. 10-0910747) of seven natural substances in the natural protector such as fermented beans (lactobacillus fermented filtrate), white willow bark extracts, skullcap extracts, willow tree extracts, cypress extracts, cassia bark extracts, and portulaca extracts, as well as Asiatic pennywort, witch hazel, and hyaluronic acid ingredients adjust sebum, relax the skin, and have excellent tightening effects. Furthermore, it does not contain paraben, benzophenone, animal and mineral oils, and artificial colors for higher safety. This is an O/W (Oil in Water) type with skin-friendly naturally derived oils that tones the skin and forms a thin film to maintain elasticity and moisturizing. It also combines high concentration essence types and BB and CC cream types to make the skin silky and energetic. The natural dye porous powder that is mild and skin soluble is excellent for sebum control, and gives a soft focus effect to cover blemishes and to look as if the skin was photoshopped for a beautiful skin tone with a natural luster.</p>
Effects	<p>Ministry of Food and Drug Safety approved dual functional cosmetic product for whitening and wrinkle care.</p>
Volume	<p>15ml/0.53FL.oz</p>
Instructions	<p>Take moderate amount and apply on entire face, and gently finish by applying along the skin contours.</p>

■ **Product Description**

Section	Contents
Main Ingredients	Hexapeptide-9, Tripeptide-29, Acetyl Hexapeptide-8, NicotinoylDipeptide-22, NicotinoylDipeptide-24, , Lactobacillus/Soybean Ferment Extract, Willow Bark Extract, Cinnamomum Cassia Bark Extract, Origanum Vulgare Leaf Extract, Chamaecyparis Obtusa Leaf Extract, Scutellaria Baicalensis Root Extract, Portulaca Oleracea Extract Made up of Natural Protector (Patent no. 10-0910747), rh-Oligopeptide-2, Copper Tripeptide-1, rh-Oligopeptide-1, sh-Polypeptide-3, Tetrapeptide-44
All Ingredients	Water, Dipropylene Glycol, Cyclohexasiloxane/Cyclopentasiloxane, Butylene Glycol, Glycereth-26, Dimethicone/Vinyl Dimethicone Crosspolymer, Niacinamide, Isoamyl Laurate, Ethanol, Centella Asiatica Extract, Glycerin/Propylene Glycol/Glyceryl Acrylate/Acrylic Acid Copolymer, Hydroxyethyl Acrylate/Sodium Acryloyldimethyl Taurate Copolymer, Cyclopentasiloxane, PEG/PPG-19/19 Dimethicone, PEG-60 Hydrogenated Castor Oil, Phenoxyethanol, Chlorphenesin, Hexapeptide-9, Tripeptide-29, Acetyl Hexapeptide-8, Bifida Ferment Lysate, Polyglutamic acid, Camosine, Glutathione, NicotinoylDipeptide-22, NicotinoylDipeptide-24, Lactobacillus Ferment Lysate Filtrate, Camellia Sinensis Leaf Extract, Willow Bark Extract, Cinnamomum Cassia Bark Extract, Origanum Vulgare Leaf Extract, Chamaecyparis Obtusa Leaf Extract, Scutellaria Baicalensis Root Extract, Portulaca Oleracea Extract, rh-Oligopeptide-2, Copper Tripeptide-1, rh-Oligopeptide-1, sh- Polypeptide-3, Squalane, Tocopheryl Acetate, Jojoba oil, Macadamia Integrifolia Seed Oil, Hydrogenated Polyisobutene, Anemarrhena Asphodeloides Root Extract, Tetrapeptide-44, Laminaria Japonica Extract, Myrothamnus Flabellifolia Callus Culture Extract, Camellia Sinensis Callus Culture Extract, Panax Ginseng Callus Culture Extract, Callus Culture Extract, Nelumbo Nucifera Callus Culture Extract, Tomato Callus Culture Extract, Grape Callus Culture Extract, Rosa Damascena Callus Culture Extract, Sodium Hyaluronate, Perfume, Adenosine

■ **Product Description**

Section	Contents
PL law application	Read the instructions and precautions before use.
Usage time after opening	For best effects, use this product within six months of opening the product. Store between 10 and 30°C, and avoid direct sunlight.
Consumer damage compensation regulation	In the event that there are defects with the product, compensation shall be given according to the consumer dispute resolution standards announced by the Fair Trade Commission.
Precautions	<ol style="list-style-type: none">1. In the case of the following when using cosmetic products, stop use. Continued use may worsen symptoms so consult a dermatologist.<ol style="list-style-type: none">A. Red dot, itch, irritation or other irregularities during use.B. When the above occurs due to direct sunlight2. Do not use in areas with wounds, rashes or skin inflammation3. Storage and handling precautions<ol style="list-style-type: none">A. Always close lid after useB. Store away from the reach of infants and childrenC. Do not store in high or low temperatures, and store away from direct sunlightD. Do not apply excessive strength when opening or closing cap as there is risk of damage.



A:pep

MD MIRACULOUS MULTI-PEPTIDE CALLUS CULTURE EXTRACT VOLUFILINE AMPLE

Active & Energetic
Whitening And Wrinkle Care
Skin Elasticity Relaxing And Tightening
Smooth Silky Feeling, Soft Focus Effect
Naturally Shiny And Brilliant Skin Tone

기능성화장품 심사 제외 품목 보고서

[제조]

제조판매업자	상 호	(주)메디클래식	제조판매업등록번호	2208
	성 명	이종민	주민등록번호	1955년 01월 01일
	소 재 지	경기도 남양주시 화도읍 재재기로 89-60 2동	전 화 번 호	
제조소(원)	제회사명	별첨	제조국	별첨
	소 재 지	별첨		
보 고 사 항				
제 품 명		엠디미라클라스멀티펩타이드퀵러스앰플		
효 능 · 효 과		별첨		
용 법 · 용 량		별첨		
사용상 주의 사항		별첨		
효능·효과를 나타내게 하는 원료의 종류		나이아신아마이드 · 아데노신 로션		
효능·효과를 나타내게 하는 원료의 함량 (액체상태인 경우에는 농도)		2 그램, 0.04 그램		
제 품 의 pH		6.5		
「화장품법 시행규칙」 제10조제1항 제1호의 기능성화장품	고시한 기준 및 시험방법	KFCC 나이아신아마이드 · 아데노신 로션		
	효능·효과를 나타내게 하는 원료의 규격	KFCC		
「화장품법시행규칙」 제10조제1항제2호의기능성화장품	이미 심사받은 품목의 제품명			
	이미 심사받은 품목의 심사번호		이미 심사받은 품목의 심사결과 통지일	
	활성물질용량			
	자외선차단지수(SPF)		자외선차단지수(PA)	
「화장품법」 제4조 및 같은 법 시행규칙 제10조제2항에 따라 위와 같이 보고합니다.				
2016년 08월 10일				
보 고 인 이종민 (서명 또는 인)				
식품의약품안전처장 귀하				
구비서류 : 없음				수수료 없음

■ **Main Ingredients**

1. Centella Asiatica

This ingredient is extracted from the turning hay of centella asiatica.

It is native to Madagascar and has been used from long ago as folk remedies for health, cosmetics and care.

This herbal plant is also called '**tiger herb**' or '**tiger grass**' as it was said that tigers would rub its body on it to treat wounds. It is also one of the main ingredients of Madecassol.

The fore active ingredients of Centella Asiatica are Madecassoside, Asiatic Acid, Asiaticoside, and Madecassic Acid.

- ① **Prevents skin damage/ Prevents drying of skin/ Soothes skin irritation Relaxes skin/ Helps with elasticity and pore improvement.**
- ② **Helps prevent oiliness of skin due to sebum**
Helps keep skin elastic and smooth.
- ③ **Suitable for use for dry, oily and sensitive skin.**



■ **Main Ingredients**

2. Sodium Hyaluronate

Of the natural moisturizing substances with over 6,000 times moisture content, sodium hyaluronate is often called 'hyaluronic acid'.

When contained in cosmetic products, it pulls in surrounding moisture to prevent evaporation, and it also forms a thin layer to reduce skin irritation. With aging, the amount of hyaluronic acid reduces and the ability to produce hyaluronic acid also drops, causing the skin to age.

That is why cosmetic products with sodium hyaluronate are receiving more attention these days.

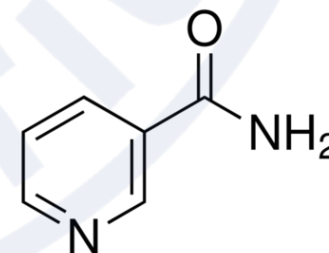
Sodium hyaluronate **wards off bacteria and has skin trouble prevention effects**, and it also helps with the skin's immunity effects and healing, making it an excellent natural moisturizer in many aspects.

3. Niacinamide

In relation to the synthesis of vitamin B3, energizers, hormones and proteins, it improves blood circulation in the skin and helps with skin whitening.

In addition, it also helps upgrade the moisturizing effect of panthenol.

It has recently been known to be an ingredient for whitening functions.



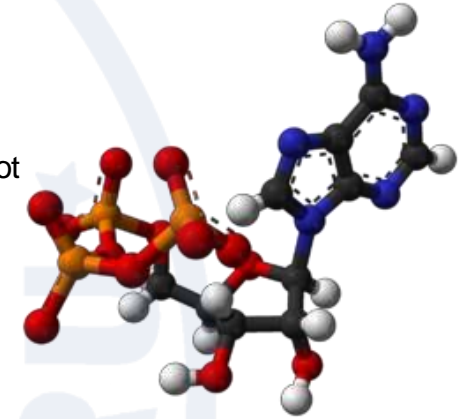
■ Main Ingredients

4. Adenosine

Adenosine, which is a key element for cell energy metabolism, is skin-friendly and penetrates deep into the skin to increase protein synthesis to accelerate the generation of collagen. By doing so, it not only offers wrinkle care, but also adds vitality to the skin.

Adenosine is a signal substance like hormones and is the main substance of cell energy metabolism that promotes connection with cells and physiological functions.

Furthermore, it promotes DNA and protein synthesis in the epidermis to improve various aging symptoms such as wrinkles.



5. Anemarrhena Asphodeloides Root Extract

This substance is extracted from the roots of Anemarrhena, which is a perennial in the lilaceae family.

It contains high contents of saponin and the roots of Anemarrhena are also used for medicine, and it can help strength skin elasticity, supply nutrition, relax the skin, improve skin tone, and moisturize.



6. Natural Protector

- 1) Uses seven natural ingredients safe for the skin
- 2) Traditional pre-processing method to enhance effects
- 3) Patent registered compound extracts (Patent no. 10-0910747)
- 4) In addition to excellent antibacterial functions, skin relaxing and moisturizing effects

① **Excellent antibacterial effects :**

Effective for not only skin fungus, but also for food poisoning and pathogens

② **Safety :** Safe ingredients without thermal denaturalization or pH changes

③ **Skin protection :** Clean raw materials with not only antibacterial effects, but also anti-inflammatory and anti-allergy effects

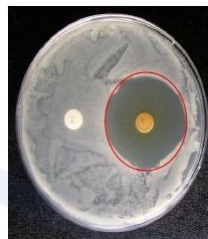
④ **Natural ingredients :** Reliable ingredients made by a company specializing in natural ingredients



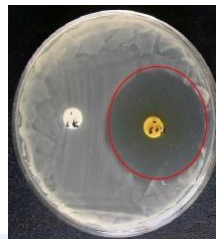
· **Antibacterial test on organisms that cause food poisoning or pathogenic germs**



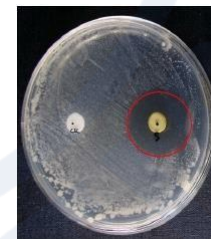
Salmonella
Enteritis, acute
stomach
problems



Colon bacillus
Pathogenic food
poisoning



Staphylococcus
Pathogenic food
poisoning



Listeria Pathogenic
food poisoning

∴ **Clear zone for four types of bacteria checked.**

No.1. What is Lactobacillus/Soybean Ferment Extract?

This is an extract acquired by fermenting beans with lactobacillus, and it is a lactobacillus that creates high amounts of lactic acids by acquiring energy through the fermenting of sugars. For the most part, it has no motility and grows well in areas with little oxygen.

Grants moisture and conditioning to the skin and is involved with improving skin immunity to help provide healthy skin care.

No.2. What is Salix Alba (Willow) Bark Extract?

White willow trees contain salicylic acid (BHA) and tannin, making it effective for keratin care and to soothe problematic skins, and it blocks the evaporation of moisture in the skin to help maintain skin moisture.



No.3. What is Cinnamomum Cassia Bark Extract?

Cassia, which is also known as cinnamon, conditions the skin to make the skin filled with energy.

It protects the skin and makes the skin texture soft, while also improving skin moisture to prevent drying.

It also suppresses the generation of melanin, and helps take care of skin tone.



No.4. What is Chamaecyparis Obtusa Leaf Extract?

Cypress trees, which are evergreen coniferous and is a gymnosperm in the cupressaceae family of the pinales order. It is also called hinoki and contains terpene that generates refreshing forest scents as well as natural antibacterial materials called phytoncide. It is involved in making the skin tone bright and clear, and has protection abilities for active oxygens to prevent oxidizing damage to the skin. It helps harmful substances for the skin to become inactive to help with several skin problems, and is involved in improving skin immunity for healthy skin.



No.5. What is Origanum Vulgare Leaf Extract?

Oregano is a herb that is strong against harmful insects, cold and the heat exhibiting the strength of wild flowers, and adds conditioning to the skin. It prevents oxidizing stress of the skin from activated oxygens (free radicals) that are the cause of skin disease to help you have energetic skin. In addition, it helps prevent oxidative stress of follicles to make the hair healthy and energetic.



No.6. What is Scutellaria Baicalensis Root Extract?

This is a natural extract from skullcaps, which are labiatae perennial herbs, and contains a substance called tyrosinase that makes the skin clean and bright.

The active ingredient baicaline has skin moisturizing and oxidization-prevention effects to relax sensitized skin and protects the skin from harmful external environments.

**No.7. What is Portulaca Oleracea Extract?**

Portulaca extracts - Portulaca are obtained by drying the turning hay of purslane, and the turning hay is picked between summer and fall.

It has traditionally been used as an ingredient for skin ointment due to its skin soothing effect, and it prevents the skin from drying and has excellent moisturizing power. In addition, it relaxes the skin and soothes irritation to improve the skin environment.



■ **Main Ingredients**

7. Lactobacillus

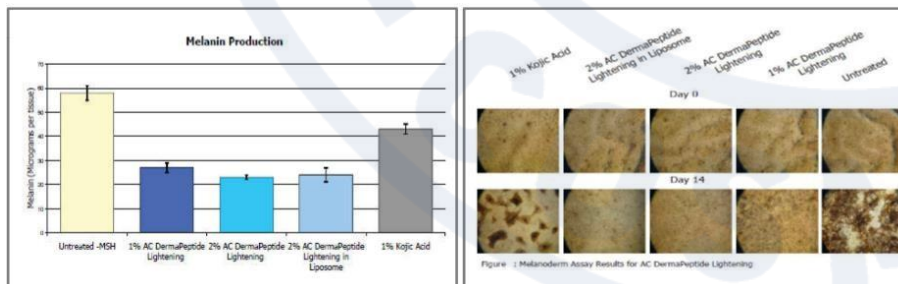
This ingredient is a microorganism that ferments sugars to obtain energy and generates high quantities of lactic acid. Formatively, it is polymorphic with gram positive asporogenic bacillus. The arrays include single frame, non-serial, single serial, etc. Most are not mobile and are characterized by growing in environments with little oxygen.

-Lactobacillus/Collagen Ferment Filtrate

Collagen fermented once again for tight skin, and helps create shiny, energetic and tight skin, while supplying nutrients. Various vitamins are added in the fermentation process of collagen, and it has good cosmetic effects. In addition, it regulates the activities the T-lymphocyte that is in charge of the immunity functions of lactobacillus and immunity controllers in the body to reduce factors that cause skin trouble.

-Lactobacillus Ferment Lysate Filtrate

It suppresses the generation of melanin and is effective for skin whitening. It was also revealed to help improve skin immunity and soothe skin inflammation, and it has also recently received a lot of attention as skin cosmetic microorganisms.



∴ Lactobacillus fermented filtrate increases melanin synthesis simultaneously to improve skin tone, while also reducing excessive moisture, while also reacting excessively.

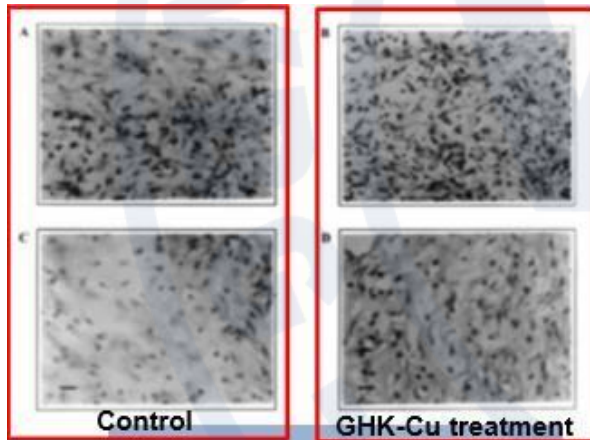
■ **Main Ingredients**

8. Copper Tripeptide-1

This material is a copper compound of tripeptide-1, and it strengthens and reconstructs skin barriers, and adds conditioning effects on the skin for energetic and healthy skin.

Furthermore, it is involved in strengthen elasticity for wrinkled skin and promoting skin cycles to improve the skin and help turn into a new skin layer.

· **Copper Tripeptide-1 Wound regeneration test**



· **Copper Tripeptide-1 Hair growth test**



∴ **Copper Tripeptide-1 was found to have great skin penetration efficiency and promote wound regeneration and hair growth**

Note.

Skin penetration test : Test that measures the skin penetration of a substance

■ **Main Ingredients**

9. sh-Polypeptide-3, KGF

This substance is also called KGF (Keratinocyte Growth Factor) and it is a keratinocyte growth factor that works on both the outer and inner skin, and supports the maximization of functions and effects by promoting absorption of other peptides. It also offers direct skin cell regeneration functions similar to other peptides such as Human Oligopeptide-1.

10. rh-Oligopeptide-1, EGF

This is comprised of 53 amino acids is a protein involved with skin damage care. When EGF, which decreases with aging, is absorbed through cosmetic products, it can normalize skin cycles to strengthen damaged skin barriers, while making sagging skin firm again. It can make the skin fuller or tighter to have energetic and vivid skin.

11. rh-Oligopeptide-2, IGF-1

This is also called IGF (Insulin-like Growth Factor 1) and it is a peptide that is highly involved with the growth of skin layers after being generated in the peripheral tissues.

It is involved in the activities of collagen and elastin in the skin to help make healthy and elastic skin, while also helping the formation of healthy hair.

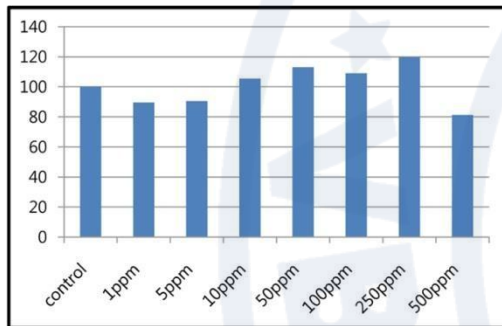


■ Main Ingredients

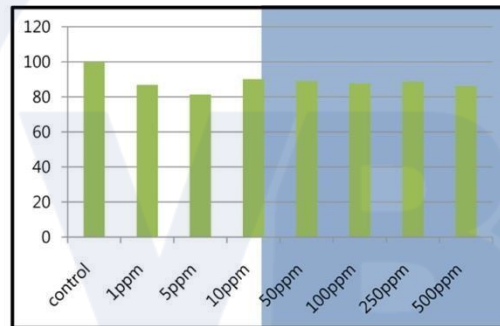
12. Tetrapeptide-44

This ingredient is a non-toxic naturally derived peptide that helps with soothing inflammations, suppressing skin trouble, and soothing irritation.

· **ApepAF-1 – Cytotoxicity**



HACAT cells



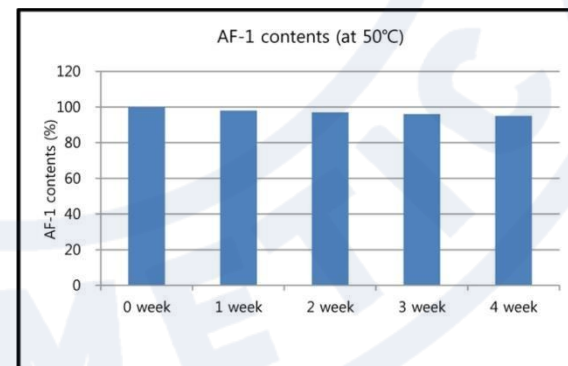
3T3cells

∴ The anti-inflammatory peptide ApepAF-1 was found to have no toxins in the applied dosage

Note.
HACAT cells : Human Keratinocyte 3T3
cells : Mouse Fibroblast

· **ApepAF-1 - Stability test (in Cream) O/W**

Cream (ApepAF-1 7%) at 50°C No discoloration, changing of odors, or phase-separation after four weeks



∴ Found to maintain 90% ApepAF-1 content at 50°C after four weeks

■ Main Ingredients

13. Wrinkle, Anti-aging complex

- INCI Name : Hexapeptide-9, Tripeptide-29, Carnosine, Glutathione, Acetyl Hexapeptide-8, Polyglutamic acid, Bifida Ferment Lysate, Lactobacillus/Collagen Ferment Filtrate
- This is a complex comprised of peptides with excellent effects for wrinkle care and anti-aging of the skin. Its effects are manifested through different mechanisms, so it is possible to fundamentally respond and improve, and it is judged to have powerful anti-aging effects.
- Apep AGEs (Carnosine, Glutathione) is effective for anti-aging by removing the oxidants in the body.
- Hexapeptide-9 is effective for skin regeneration and generates Tripeptide-29 collagen that is effective for wrinkle care
- Application : Anti-aging, anti-wrinkle

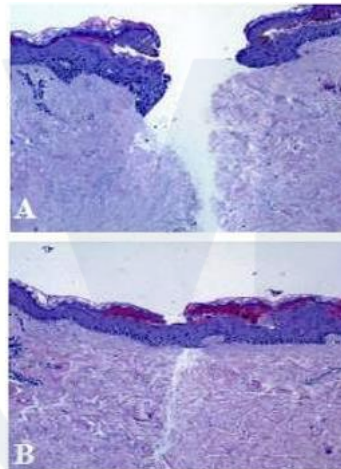
Component	Contents	Component	Contents
Hexapeptide-9	100ppm	Tripeptide-29	400ppm
Acetyl Hexapeptide-8	100ppm	Bifida Ferment Lysate	25%
Carnosine	400ppm	Polyglutamic acid	0.25%
Glutathione	1600ppm	Lactobacillus/Collagen Ferment Filtrate	10%

-Hexapeptide-9

This is a peptide made up of six amino acids (NH₂-Gly-Pro-Gln-Gly-Pro-Gln-OH) and it is comprised of a highly pure tripeptide repeated structure combining three amino acids, which are important substances of collagen

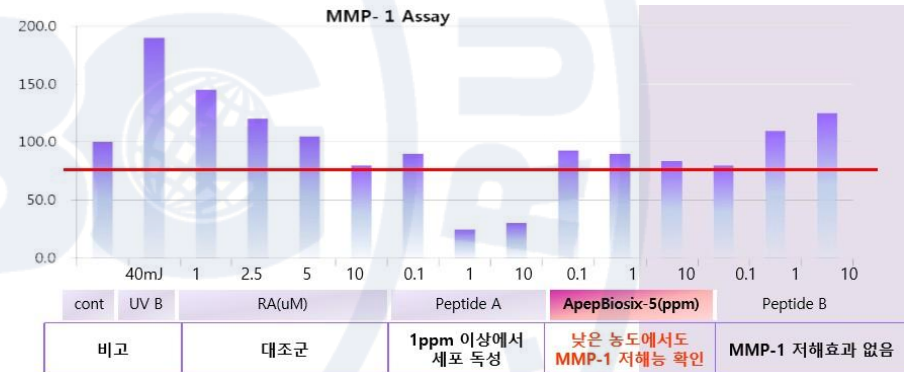
· Hexapeptide-9 Effects Test

Ex vivo human skin, experimentally wounded
 peptide: 1%
 Sample culture: 72 hours
 Treatment: One single application
 A: Untreated skin
 B: Skin treated with Peptide



∴ Hexapeptide-9 was found to be effective for skin regeneration in the epidermal cells having scars.

· Hexapeptide-9 Effects (MMP-1 inhibitory activity)



∴ Hexapeptide-9 was found to have MMP-1 inhibitory activity at low concentrations.

Note.

MMP-1 (Matrix Metalloprotease-1):

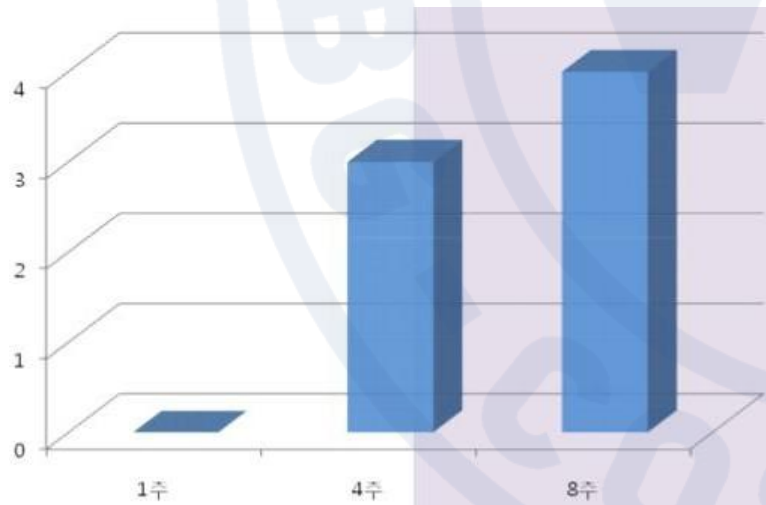
Representative enzyme that decomposes collagen in the cell. When MMP-1 activity is suppressed, collagen generation is promoted.

· **Hexapeptide-9 clinical trial**

- Participants : 15
- Age group : 20-30s
- Trial subject : Fine wrinkle care
- Trial period : 4-8 weeks (Repeated Inspections)
- Trial concentration: Hexapeptide-9 : 5%(0.05%)

∴ Pimple scar care effect :
Average 53.3% improvement, 8 weeks, 15 subjects

* Gender: female, age: 25



Test 0

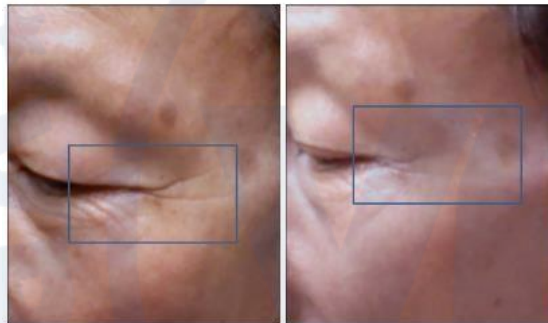
Test 4 weeks

-Tripeptide-29

This is a highly pure tripeptide combining three amino acids that are important elements of collagen, and due to its low molecular weight (285), it penetrates into the skin layer in high concentration for collagen generation effects, skin elasticity, wrinkle care and in preventing wrinkle formation.

· Tripeptide-29 Clinical Trial

(=Gender: Male = Age: 69)

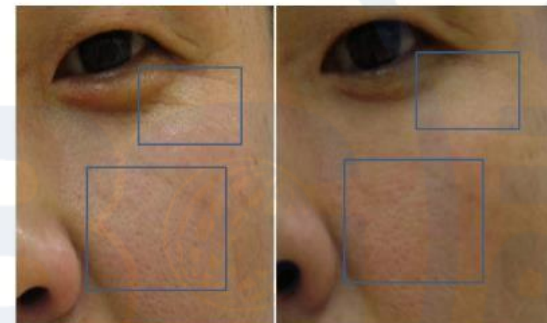


Test 0

Test 4 Weeks

∴ Reduced eye wrinkle sagging and Liverspots

(=Gender: Male = Age:40)



Test 0

Test 4 Weeks

∴ Reduced wrinkles around the eyes and Reduced follicles

-Bifida Ferment Lysate

Bifidus bacteria is a lactic acid bacteria that is closely related to human health.

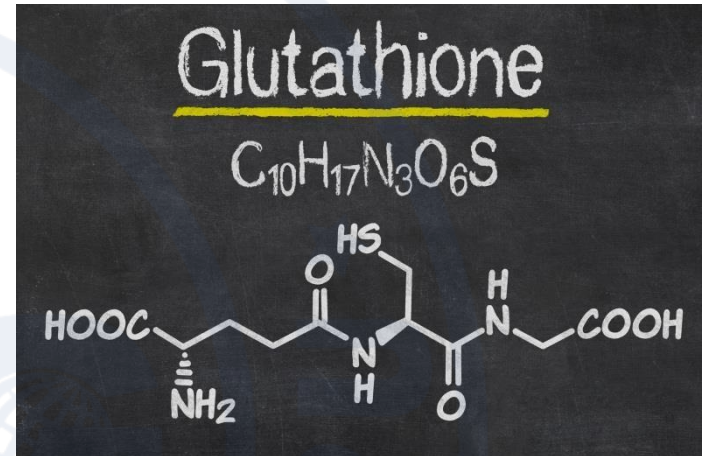
This was discovered at the Pasteur laboratory in 1899 by Tissier while conducting research on why children that consumed breast milk are healthier.

Proteins, lactose, lactic acid, vitamins and other minerals in bifida fermented filtrate helps skin gain vitality.

-Glutathione

Glutathione (GSH) is a water soluble crystallized polypeptide found in living cells or enzymes, and it is widely distributed in the natural system. It plays an important role in the oxidation-reduction reaction of almost all living things.

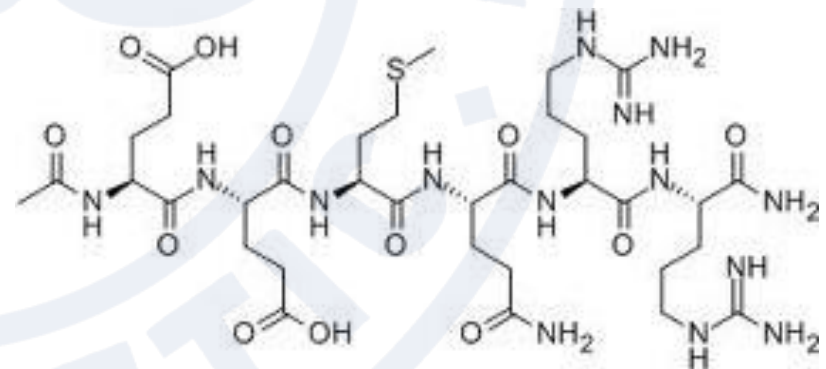
This purifies harmful energies in the skin into positive energy to add vitality to the skin, and it helps activate skin metabolism and circulation.



-Acetyl Hexapeptide-8

Acetyl hexapeptide, which is a non-irritating, non-toxic substance generated naturally in the skin, is a low molecular weight peptide nicknamed Botox peptide. Its molecular size is small and is quickly absorbed by the skin giving it high safety.

It is involved with temporarily controlling the intensity of facial muscular contraction and helps soothe signs of initial aging.



-Polyglutamic Acid

This is a naturally fermented moisturizing substance that generates natural moisturizers in the skin and strengthens skin moisture power.

It has excellent moisture absorption and once it penetrates into the skin, it attracts nearby moisture to make the skin moist.



-Carnosine

This is a compound of histidine and alanine, which are amino acids, and was initially used for patients with Alzheimer's disease.

When used on the skin, its functions are compound skin conditioning and antioxidizing, and the risk index is 0, making it a very safe substance.





■ **Main Ingredients**

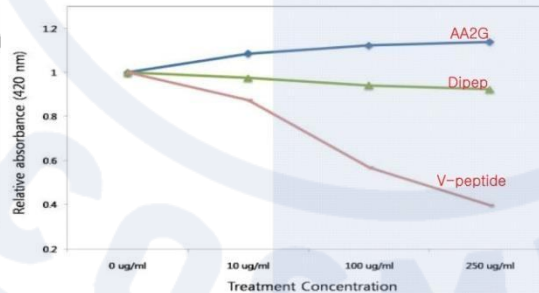
14. WW complex (Whitening)

-INCI Name : NicotinoylDipeptide-22, NicotinoylDipeptide-24, Lactobacillus Ferment Lysate Filtrate, Bifida Ferment lysate, Camosine, Glutathione, Bifida Ferment Lysate

- Complex type comprised of various peptide combinations effective for whitening
- Lactobacillus ferment lysate filtrate suppresses the hormone α -MSH that is involved with melanin synthesis, and is effective for whitening.
- Nicotinoyl Dipeptide-22 and 24 suppress melanin generation and interrupts movement within melanin cells, thus giving it whitening functions
- Bifida ferment lysate improves the skin barrier, soothes irritations, and has whitening effects through skin turnover.
- Glutathione and Camosine maintains skin health through antioxidantizing effects by removing oxidants in the body and suppressing melanin settlement
- Polyglutamic acids have complete anti-aging effects through moisturizing effects.



media Treatment with V-peptide



Melanin generation reduction experiments
 ∴ NicotinoylDipeptide-22 and NicotinoylDipeptide-24 were proven to have whitening effects by suppressing the generation of melanin at low concentrations.

The control groups Dipeptide and AA2G were found to have no melanin suppression functions.

*Note.
 Melanin generation suppression experiment :
 Suppress the activation of enzymes that generate melanin

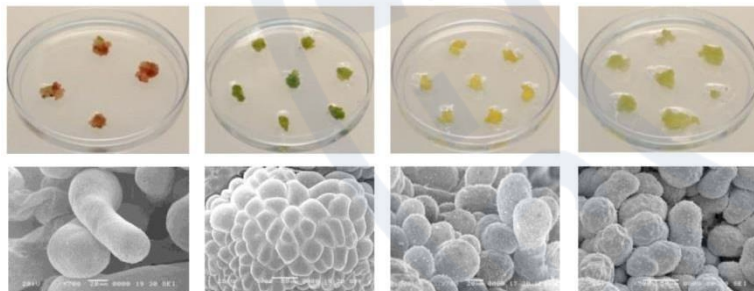
15. Flabellifolia Callus Culture Extract

Cells are separated from the plant division tissue called callus and growth control substances were added and cultured. The growth control substance used in plant callus culturing are auxin and cytokinin.

Their concentration and rate between the two are different depending on the plant species, and the cells that can make up plant callus have different totipotency that can make full plants. When the plant is damaged, division around the wound becomes highly active, and so it contains more effective bioactive substances than other plants.

· Importance of plant cell cultivation

- 1) High safety not affected by changes in the external environment
- 2) High effectiveness with experimental manipulation
- 3) Reproducibility that can reproduce repeatedly



cell plant during solid culturing (top)/microscopic photo (bottom)

∴ Plant cells have unique forms depending on the type of plant.

Note.

What is plasticity?

Ability to change functionally or formatively according to the environment

No.1. What is Myrothamnus Flabellifolia Callus Culture Extract?

It has been reported that myrothamnus flabellifolia generate high amounts of sucrose and arbutin to adapt to dry environmental stress.

This is also contained in dried myrothamnus flabellifolia leaf extracts. It contains various phyto-chemicals and thus has excellent antioxidant effects and collagen synthesis performance, and can thus be applied to skin elasticity products.

Paschal candles are effective for itching and rashes, and has quick relaxing effects for such symptoms on the head, face, and private parts.

It also kills pyogenic bacteria, so it is said to be effective by applying when blisters or abscess pop.

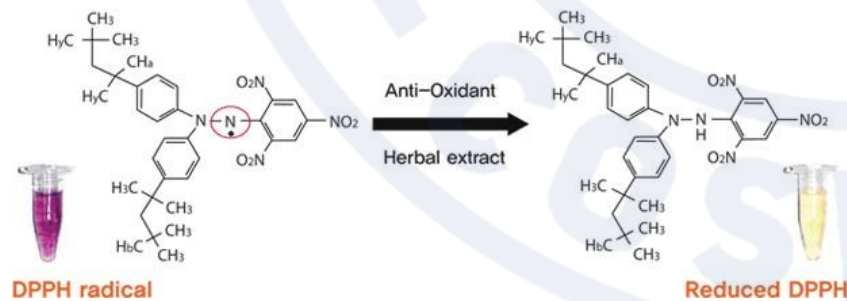
No.2. What is Camellia Sinensis Callus Culture Extract?

After testing based on various anti-inflammatory and anti-allergy effects, this ingredient was found to excellent anti-inflammatory and anti-allergy effects, while also reducing cytotoxicity.

Therefore, it can prevent and soothe inflammations and allergies, and it is used as ingredients for various cosmetic products for external use. In addition, it can help soothe skin irritated from the external environment.



· Antioxidant Effect

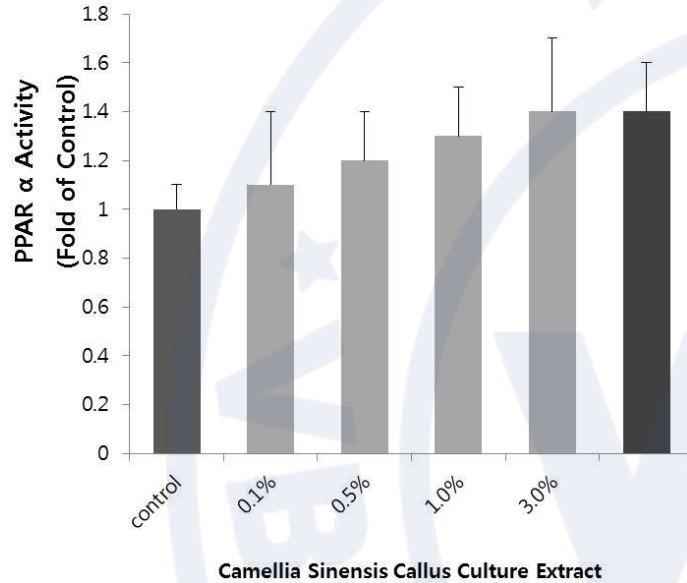


Diphenyl-2-picrylhydrazyl (DPPH) is a safe gene and is oxidized by anti-inflammatory substances.

At this time, DPPH loses its unique purple color (λ_{max} 515–517nm).

∴ Using this characteristic, the antioxidant capacities of Panax Ginseng Callus Culture Extracts were confirmed.

· **Anti-inflammatory Effect**



Peroxisome proliferator-activated receptor(PPAR) : a is a transcriptional regulatory factor activated by fatty acids and has various functions.

It has also been reported to have functions such as wound healing and skin inflammation effects.

By activating PPAR-a, it was found that the atopic symptoms related to skin inflammation and red dots caused by exposure to UV rays can be soothed.

∴ **Green tea callus extracts increase the generation of PPAR-a of keratinocyte of the skin surface. Through this, the anti-inflammatory effects of green tea callus**

No.3. What is Nelumbo Nucifera Callus Culture Extract?

This substance is extracted from the stem cells of lotus flowers. It protects the skin from activated oxygen that causes skin aging,

and prevents damages to the skin related to oxidization, while also soothing hypersensitive reactions.

In addition, it gives conditioning to the skin to make the skin filled with energy, while comfortably soothing sensitized skin.



No.4. What is Panax Ginseng Callus Culture Extract?

This substance is produced by plants.

Plants have different phyto-chemicals, and it is related to the defense mechanism

for external environmental stimulation such as microorganisms and UV.

Normally, it exhibits strong antioxidizing effects, and reduces damages to cells caused by oxidization.



No.5. What is Vitis Vinifera(Grape) Callus Culture Extract?

This substance was used frequently in folk remedies in Europe.

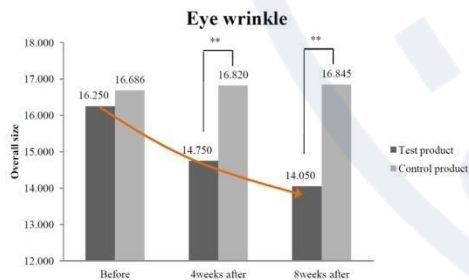
Ointment is made using the sap from grape trees to treat skin and eye diseases.

Grape leaves are also used to stop bleeding, anti-inflammatory effects, or to stop pains.

In addition, unripe grapes are used for treatment of sore throats, and dried grapes are used to alleviate constipation and thirst.



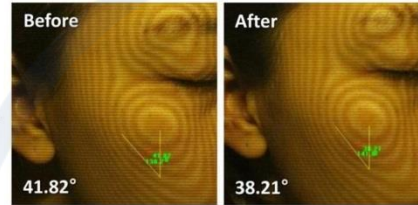
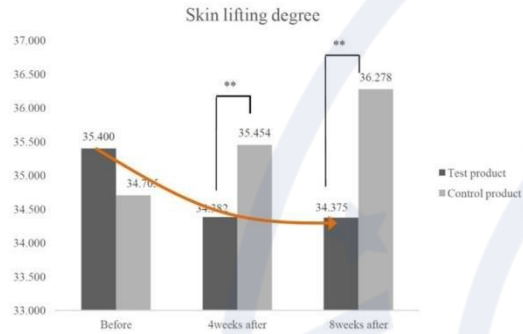
· Eyewrinkle test



∴ Upon using the test products for four weeks and eight weeks, it was found that wrinkles around the eyes decreased

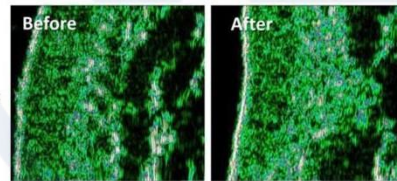
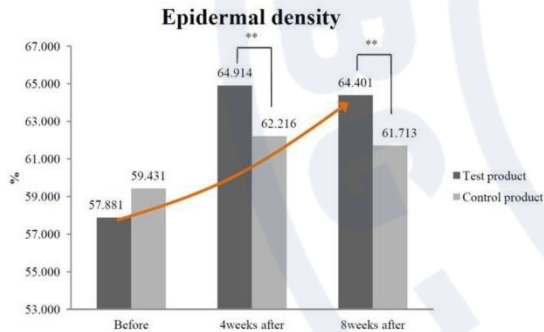
After four weeks to eight weeks from use of product, there were significant differences compared to similar products

· **Skin lifting test**

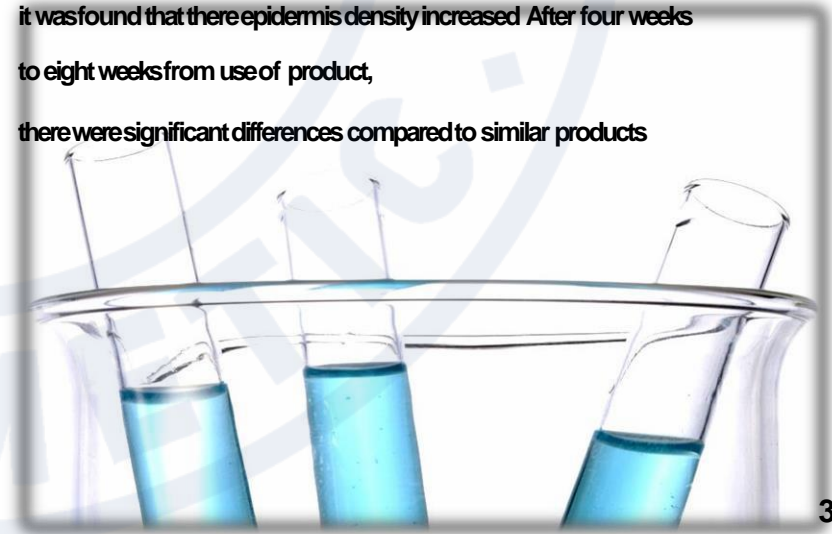


∴ Upon using the test products for four weeks and eight weeks, it was found that there were skin lifting effects. After four weeks to eight weeks from use of product, there were significant differences compared to similar products.

· **Epidermis density improvement test**



∴ Upon using the test products for four weeks and eight weeks, it was found that there epidermis density increased. After four weeks to eight weeks from use of product, there were significant differences compared to similar products.



No.6. What is Callus Culture Extract?

From long ago, mulberry trees were rich in nutrients and used for medicinal purposes, and the bark, fruit and leaves were all used effectively.

The root barks are used for alleviation of fevers, anxiety and as a diuretic, while the leaves and bark were used to improve immunity against colds and also soothes coughs and phlegm, and is also effective to bring down swelling of the body.



No.7. What is Tomato Callus Culture Extract?

Lycopene, which makes this substance red, secretes active oxygens that cause aging to maintain cell youth and prevent aging.

In addition, vitamin C contained in tomatoes can add elasticity to the skin to prevent wrinkles, while also having freckle prevention effects by blocking the formatin of melanin pigments.



No.8. What is Rosa Damascena Callus Culture Extract?

This is acquired by culturing and extracting damask rose callus. Damask rose, which is an evergreen small shrub of the rosa genus, rosaceae family, rosales order, is a herb indigenous to Turkey, and has been cultivated from ancient times. Rose oil is obtained from its petals.

