# MATRIGEN

# Matrigen Brand Story

"MATRIGEN" means to improve skin genes.

It is a brand founded by Cosmo C&T.

Skin Matrix + Gene = Matrigen

As a solution to improve skin genes,

it refers to a system that maintains youth by improving the skin's mesh structure more densely.

Excellent highly concentrated cosmeceutical solution strengthens skin lattice structure and brings perfect skin with elastic skin texture and smooth skin tone.

We Monopolize your Value!

# Extra Special Repair Ampoule (**E.S.R**)







# **PDRN Ampoule**

- Composition: 50ml Bottle, Syringe\*1EA
- An ampoule that helps to strengthen the skin barrier with PDRN, an ingredient extracted from salmon's DNA, and controls deep dryness in the skin.
- PDRN, a key ingredient in the PDRN ampoule, is a DNA fragment extracted from the testis of salmon, similar to human DNA structure, which helps strengthen the skin's barrier and restores vitality by providing moisture and nutrition

PDRN: Revitalize the skin, Activate cycle, Helps skin healthier, Skin conditioning, Prevent oxidative stress

Niacinamide: Skin whitening effect, Protects against moisture loss in the skin, Skin barrier strengthening effect,

Skin blemish improvement effect, Blocks discoloration-inducing ingredients

Adenosine: Wrinkle improvement functional ingredient, Skin elasticity strengthening effect,

Helps improve skin wrinkles, Restore skin vitality, Revitalizes tired skin

7-layered hyaluronic acid: Skin hydration, Inhibition of moisture evaporation, Moisture firm formation,

Reduce external stimulation, Moisture retention in the skin

**Madecassoside**: Skin protection, Skin soothing action, Prevention of hyper keratinization,

Prevention of clogged pores, Helps skin healthier





## **Gluta Complex Ampoule**

- Composition: 50ml Bottle, Syringe\*1EA
- A whitening ampoule with certified whitening function as an ampoule with niacinamide and glutathione as the main ingredients to brightens dark skin tones
- Instead of purified water, it uses rice bran water containing nutrients such as vitamins, minerals, and other nutrients as a base to make the skin clear and nourished, helping to make the skin shiny.

Rice Bran: Improvement of Skin Tone, Supply shining on your skin, Improving skin moisturizing effect,

Improving skin blemish, Helping with management of aging

Niacinamide: Skin whitening effect, Protects against moisture loss in the skin, Skin barrier strengthening effect,

Skin blemish improvement effect, Blocks discoloration-inducing ingredients

Glutathione: Blocking skin harmful substances, Maintaining skin moisturizing effect, Prevention of cell damage,

**Antioxidant Effect** 

Rehmannia Chinensis Root Extract: Improves skin immunity, Protects skin, Moisturizes skin, Blocks skin hypersensitivity,

Provides skin conditioning





## **Azulene Relaxer Ampoule**

- Composition: 50ml Bottle, Syringe\*1EA
- Madecassoside and Centella asiatica leaf water maximize the soothing effect of Azulene, and 7-kinds of Hyaluronic acid, Allantoin, and Panthenol ingredients protect the skin barrier to help create lively and clear skin.
- Azulene Relaxer Ampoule has the unique bluish color of natural azulene obtained from the process of concentrating ingredients extracted from chamomile.

Guaiazulene: Strengthen skin barrier, Soothe skin, Moisturizing the skin, Antibacterial and anti-inflammatory effect

7-layered hyaluronic acid: Skin hydration, Inhibition of moisture evaporation, Formation of skin moisturizing film,

Reduce external stimuli

Lemon Balm Leaf Extract: Soothe skin, Give skin conditioning, Improve pore health, Skin antioxidant activity

**Allantoin:** Moisturizing the skin, Soothe skin, Skin texture improvement, Skin protection and barrier enhancement





# **Hydra Cellular Ampoule**

- Composition: 50ml Bottle, Syringe\*1EA
- A moisture locking ampoule that tightly replenishes moisture from the inside of the skin with 7-layered hyaluronic acid that draws in moisture 1,000 times its own weight.
- Containing various moisturizing ingredients such as hydroxyethyl urea, panthenol, and betaine, it helps to prevent moisture evaporation by forming a moisture barrier.

**Hydrolyzed Pea Protein:** Skin Conditioning Role, Supplying Skin Vitality, Promotion Collagen Synthesis,

Relieve Skin, Vitalize the Skin

7-Hyaluronic Acid: Supplying Skin Moisture, Suppression of Moisture Evaporation, Formation of Moisturizing Film,

Reduced External Stimulation, Fixing Moisture in the skin

Amino Acid Complex: Maintaining Skin Moisture, Supplying Cell Nutrition, Prevention of Skin Aging,

Helps Skin Elasticity

Panthenol, Betaine: Effective for wrinkle improvement, moisturizing, whitening, skin soothing, rich in various growth factors

and extracellular matrix substances, excellent immune regulation ability





# **Vital Intense Ampoule**

- Composition: 50ml Bottle, Syringe\*1EA
- An anti-aging ampoule that has been recognized for its dual functions of wrinkle and whitening, with 7 kinds of peptides that revitalize tired skin to help make the skin lively.
- Human stem cell culture medium helps the fibroblast of the dermis to grow, strengthens the skin barrier, and provides various effects such as wrinkle improvement, moisturizing, whitening, and skin barrier to make healthy skin.
- EGF and FGF ingredients that promote the skin circulation cycle and convert it into a new skin layer help to restore damaged skin due to external environment stimulation.

PDRN: Revitalize the skin, Activate cycle, Helps skin healthier, Skin conditioning, Prevent oxidative stress

**7 Kind Peptide**: Providing Skin Vitality, Circulation Cycle Activation, Helps with Skin Health, Providing Skin Conditioning, Prevent Oxidative Stress

Human Stem Cell Culture Fluid: Increasing Collagen Production, Epidermal Strengthening Effect, Wrinkle Reduction,

Amino Acid Production, Whitening Moisturizing Effect

**E.G.F & F.G.F**: Circulation Cycle Activation, Strengthening Skin Barrier, Maintaining Firming Skin, Providing Skin Vitality, Giving Skin Vigor

#### CPNP Name: Matrigen Purifying Active Ampoule



## **Acne Free Active Ampoule**

- Composition: 50ml Bottle, Syringe\*1EA
- A soothing ampoule containing centella asiatica leaf water, tea tree extract, and madecassoside that is effective for improving oily skin to help soothe the skin and care for excess oil.
- Acne-Free Complex ingredients help control excess sebum, and moisturizing ingredients such as panthenol and allantoin form a moisture film to make the skin barrier firm.

White rice flower extract: Alleviates skin irritation, Strengthens skin barrier, Anti-inflammatory action, Relieves redness

Tee Tree Extract: Skin Soothing Effect, Sebum Secretion Control, Pore Convergence Effect, Prevention for Shining

Acne Free Powder: Persimmon Leaf Extract(Conditioning), White Willow Bark Extract(Soothing),

Plantain Extract (Reduce IgE causing inflammation), Hostile kelp Extract (Control Sebum Secretion),

Elm Bark Extract (Free Radical Removal)

Madecassoside: Skin Protection Effect, Skin Soothing Effect, Prevent Over Keratinization, Prevention of Clogged pores,

Helps Skin Health



# Revive Night Peeling Ampoule

- Composition: 50ml Bottle, Syringe\*1EA
- It is not tingling and hot exfoliant, but an ampoule type that is applied to remove unnecessary and aging dead skin cells and sebum, helping to organize the skin texture simply and safely.
- A night peeling ampoule that is applied at the last step of skin care before going to bed, removes unnecessary dead skin cells and makes the skin smooth and soft.

Carthamus Tinctorius (Safflower) Flower Extract: Give conditioning, Skin protection effect, Skin soothing effect,

Antibacterial and anti-inflammatory

Betula Alba Juice: Skin moisturizing effect, Skin soothing effect, Antioxidant effect, Skin whitening effect

Rubus Fruit Extract (Western Strawberry Extract): Skin protection effect, Vigor and vitality,

Strengthen skin barrier, Skin moisturizing effect

Castanea Crenata Shell Extract: Give conditioning, Skin trouble relief, Skin whitening effect, Pore shrinking effect

# **HOW TO USE**



Insert the syringe into the rubber stopper and pull out the desired amount

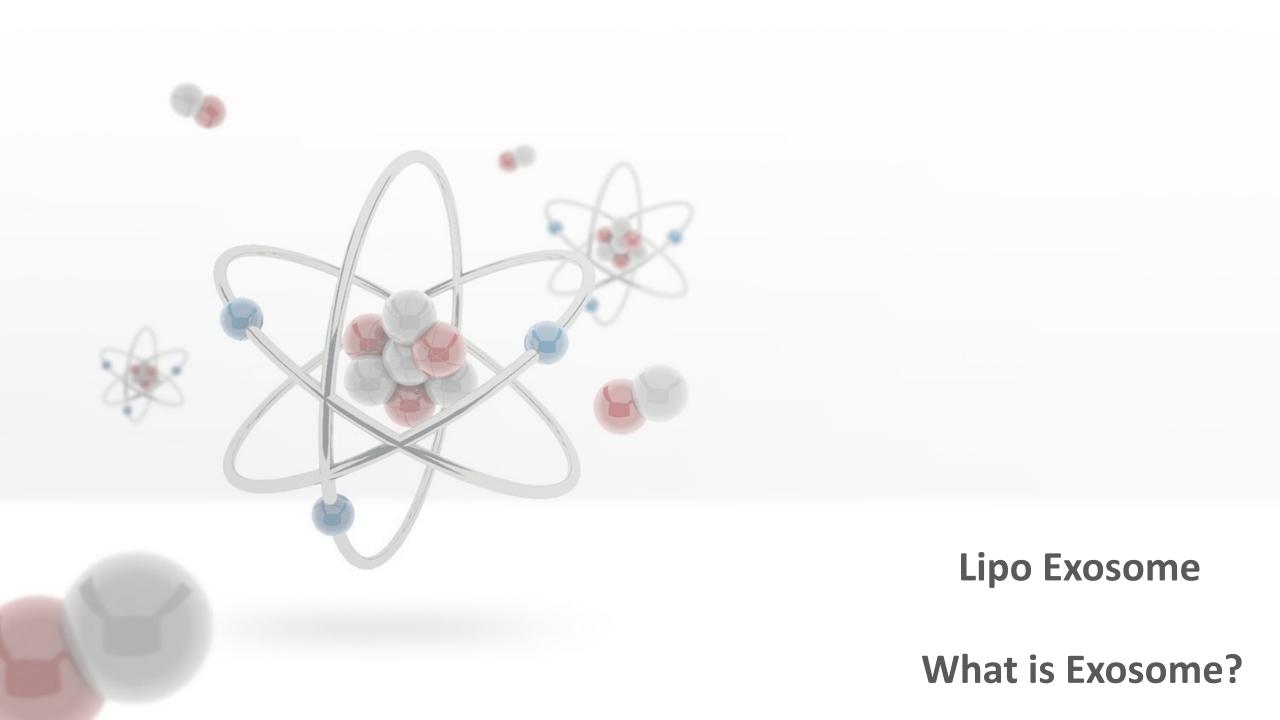


Apply ampoule to face or to body



Rub evenly & absorb enough

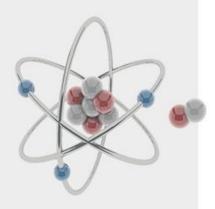




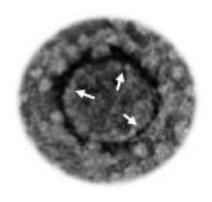
## Exo + some

# Extra + Cellular + Vesicles

- Biological nanoparticles with a diameter of 20-200 nm (intracellular, active secretion, purpose of information exchange)
- Animal cells (including animal tissues), microorganisms, plant cells, and body fluids etc. exist
   in various ways
- Membrane structure of exosomes: Composed of double lipid membranes (which has the very similar structure and components as the cell membranes)
   (High cell absorption rate and stable delivery of active ingredients to cells in the skin)
- Inside the exosome, it contains substances such as various active substances
   (biosynthetic compounds), proteins, DNA, mRNA, miRNA, and Lipid, which serves as an avatar of the cell
- Representative functions of exosomes: Various functions such as tissue growth, regeneration, and immune control
- Factors that play an important role in cells as a function of Cell to Cell Communication (transmission of information between cells) and Paracrine signaling (transduction of paracrine signals)



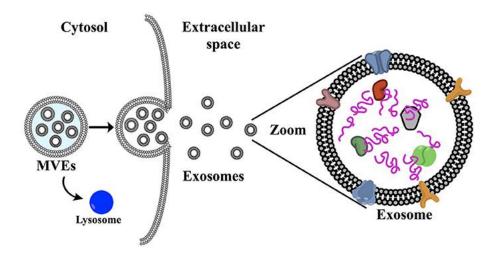
# **Exosome Functions**



[Membrane Structure of Exosomes]

Membrane structure of human adipose-derived stem cell exosomes
through transmission electron microscopy

White Arrow: Lipid bilayer



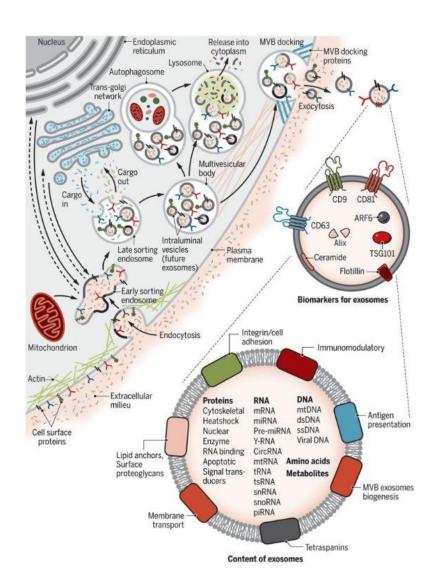
Multivesicular endosomes are formed (MVEs), which encompass the exosomes.

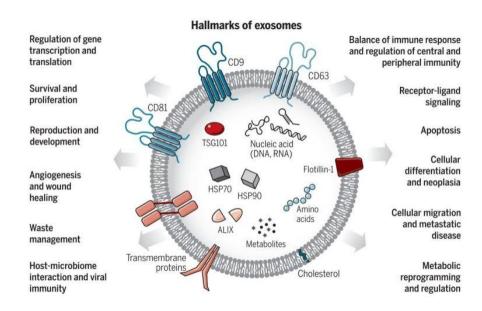
The MVEs can either fuse with the plasma membrane, releasing the exosomes into the extracellular matrix (see zoomed schematic),

or fuse with the lysosome for degradation.

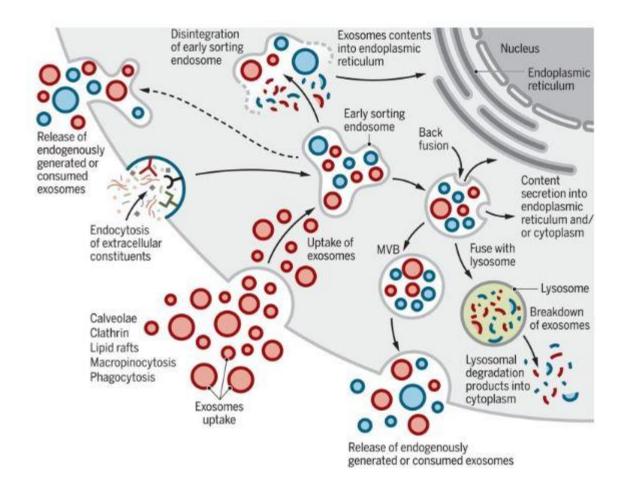
Micro vesicles are formed via direct blebbing from the plasma membrane.

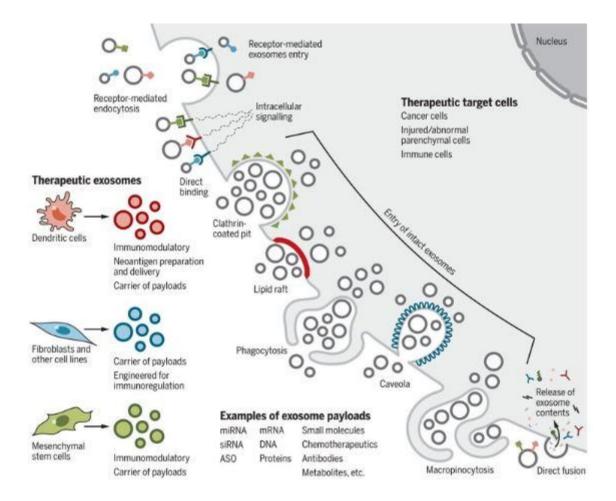
Exosomes contain protein, DNA, RNA and surface membrane proteins, which are specific to the cell of origin and are not limited to cell surface proteins.





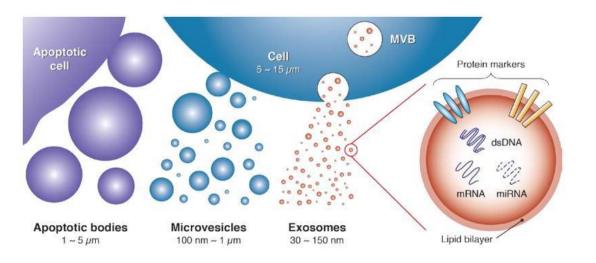
- Components of the exosome membrane
   Proteins (Tetraspanins (CD9, CD63, CD81, CD82)), Lipids, MHCI, II, Integrin, etc.
- Ingredients inside the exosome
   Proteins, DNAs, mRNAs, miRNAs, rRNAs, Lipids, Enzymes, etc.

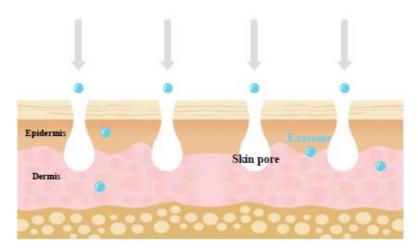


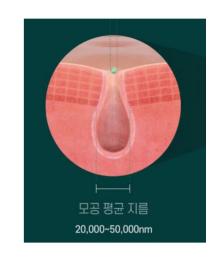


#### ► Mechanism of Action of Exosomes

- 1. Receptor-mediated endocytosis (general endocytosis mechanism: Endocytosis)
- 2. Ligand and Receptor Binding
- 3. Clathrin coated pit
  - \* Clathrin: : Protein complex that that is present in a specific area of the cell membrane and absorb proteins
- 4. Lipid raft: Protein receptors aligned within the sphingoglycolipids and microscopic regions of the cell membrane
- 5. Phagocytosis: An action that traps outside substances from the outside of the cell into the cell and digests them inside the cell
- 6. Caveola: A structure formed by small indentations in the cell membrane by an intramembrane protein called 'caveolin'
- 7. Macropinocytosis (giant cell absorption): A path in which cells mainly absorb proteins or cell debris
- 8. Direct Membrane Fusion: Path in which exosome membrane and cell membrane are fused and incorporated







# Exosome's Size

Average size of about **111.1** times smaller than cell size

If the pore average is now 50,000 nm,

Pores are 184 to 462 times larger than exosomes (In case of size 108.3nm)



Highly concentrated care system consisting of exosomed edelweiss callus culture extract, low molecular weight collagen, and low molecular weight hyaluronic acid.



Exosomes help to be kept in the best condition when freshly extracted from cells, and the vacuum-packaged active ingredients using rapid freeze-drying method are quickly absorbed into the skin surface and make the skin healthy and elastic at the same time.



#### Composition:

- Complex: Freeze-Drying Method of 7ml \* 5EA

- Solution : Syringe of 5ml \* 5EA

Exosomes (umbilical cord blood stem cell culture medium)
 Exosomes are very small vesicles that contain the core ability and growth factors of stem cells and transmit signals between cells.

They contain bioactive substances to promote skin collagen synthesis.

- New freeze-drying method
   It can be stored and used for a long time without preservatives in a low moisture condition
   using freeze drying method, and maintains the original properties of raw materials that
   have not been heated and delivers the active ingredients to the skin as they are.
- Proprietary technology, low molecular weight system
   500Da (Dalton) low-molecular collagen optimized for skin absorption and
   10000Da (Dalton) ultra-low-molecular hyaluronic acid, which is easy to absorb into the skin,
   combine to provide a moist and high lifting effect.

#### **Main Ingredients**

#### **Edelweiss callus culture extract**

Skin whitening effect
Skin soothing and protection
Anti-Aging skin
Skin trouble relief

#### Betula Alba Juice

Skin moisturizing effect
Skin soothing effect
Antioxidant Effect
Skin whitening effect

#### **Hydrolyzed Collagen**

Improve elasticity and prevent aging
Improving collagen self-sufficiency
Increased fibrous cell density
Skin hydration

#### **10 kinds of Peptides**

Strengthen skin barrier

Activate cycle

Helps skin health

Provides skin conditioning

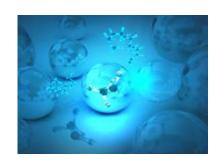
Prevent oxidative stress

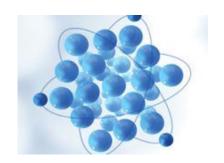
#### **Hydrolyzed Pea Protein**

Provides skin conditioning Revitalize the skin Promote collagen synthesis Skin vitality



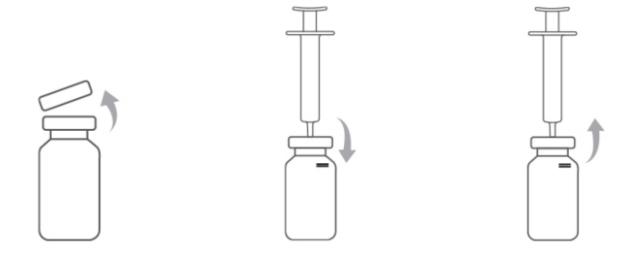








#### **HOW TO USE**



STEP 1) Remove the Bio Cellular Complex white cap by folding it up.

(Do not remove aluminum.)

STEP 2) Insert the Lipo Bio Cellular Solution into the + shape in the center of the rubber cap of the Bio Cellular Complex and shake to mix.

STEP 3) After inserting the syringe into the Bio Cellular Complex, take out an appropriate amount and spread evenly on the skin.



# **Lipo Exosome B-Archive Complex**

Intensive care for Nasolabial fold and eyebrow wrinkles





It provides intensive care for the using lines of skin around the face.

It has a soft moisturizing application with a lot of moisture, and it is not sticky and adheres tightly, and the active ingredient is quickly absorbed into the skin.

#### • Ceramide Beads

Prevent moisture loss from the skin and strengthens the skin barrier more efficiently to improve wrinkles.

#### 7 Peptides

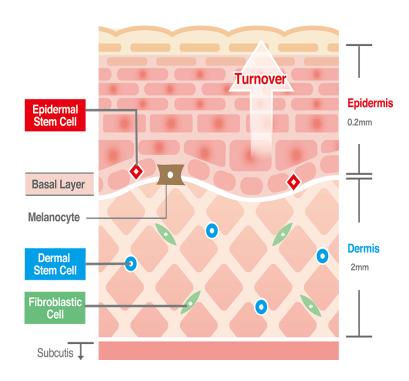
Healthy and firm skin with 7 kinds of Peptide that are effective in strengthen skin barrier and activate circulation more efficiently.

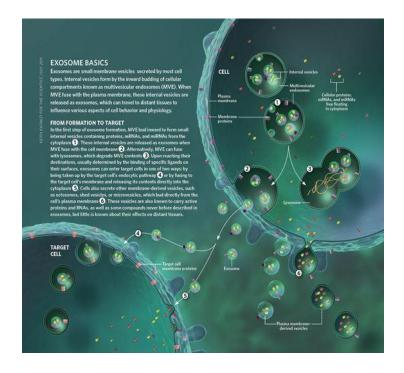
Composition

10ml

# Why Exosome?

Exosomes are very small vesicles that carry signals between cells and cells containing the core capabilities and growth factors of stem cells, and contain bioactive substances that promote skin collagen synthesis.





#### » Differentiated Ceramide

Ceramide NP is a lipid molecule included in a group of lipid molecules called ceramides. Ceramides are major lipid components in the stratum corneum of the human skin.

Ceramide NP can quickly penetrate into skin, help the renewal of the natural protective layer of skin, promote the balance of natural hydration, and combine with the water in the stratum corneum to

form a network structure to lock water.

Ceramide NP has good effects on skin moisturizing and repairing,

and is an important skin activating component in stratum corneum, which can strengthen skin barrier, rebuild cells and form an effective barrier to prevent

water loss and reduce the influence of

external environment.

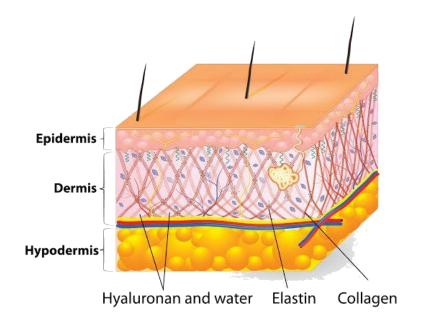


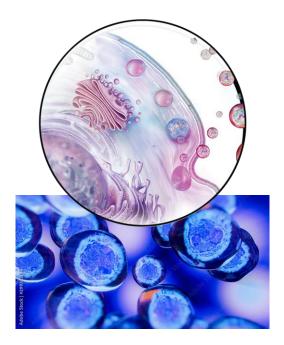


# Muscle aging

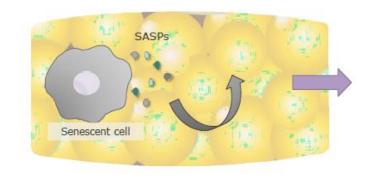
An increase in aging(senescent) muscle cells negatively affects neighboring cells.

In aged muscles, the myotube becomes thinner and the muscle density and support tissue decrease (muscle weakness), and the deformed muscle loses the role of skin support tissue and causes skin sagging.





# Aging of adipose tissue



SASPs (Senescence-associated secretory phenotype) An inflammatory complex substances secreted from senescent cells, which induce senescence in neighboring cells Aging cells in adipose tissue secrete SASP components

When normal cells are exposed to SASP, lip synthesis is impaired



Decreased fat accumulation in fat cells

The face contour changes slightly due to the decrease in skin volume due to aging

# Aging of the dermal layer

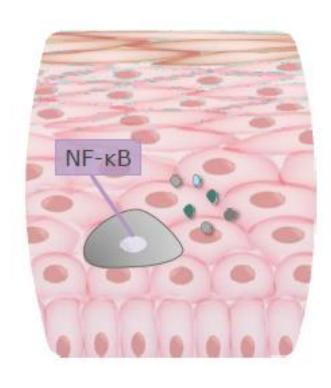


Increased number of senescent fibroblasts, negatively affecting neighboring cells

Destruction of the dermal layer and its biomechanical properties related to the decrease in the production of components constituting the extracellular matrix

Loss of key properties of the skin, such as firmness and elasticity

## Aging of the epidermis



#### Aging (senescence) cell growth

- Nuclear factor κB (NF-κB) regulates the senescence of keratinocytes and becomes an important cause of SASPs expression

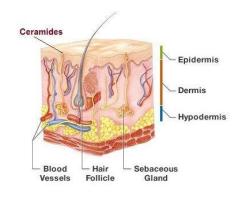
Signs of weakened skin barrier function in the aged epidermis

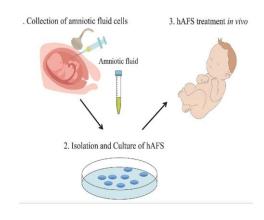
- Reduced lamellar bilayer, reduced fat in the stratum corneum
- Reduced tight junction components located at cell-to-cell junctions

Skin becomes fragile, vulnerable to irritation-causing ingredients and moisture loss

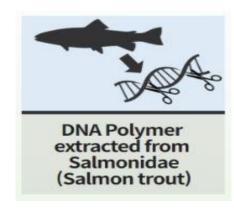
# **Main Ingredients**











#### **Edelweiss Callus Culture Extract**

- Skin whitening effect
- Skin soothing and protective effect
- Skin aging prevention
- Skin trouble relief

#### **Ceramide NP**

- Prevent skin moisture loss
   Strengthen skin barrier
- Improve wrinkles
- Protect skins

#### Human stem cell culture fluid

- Wrinkle improvement, moisturizing, whitening, and soothing effect
- Rich in various growth factors and extracellular matrix substances
- Excellent immune regulation ability
   and new blood vessel formation ability

#### 7 kinds of Peptides

- Strengthen skin barrier
- Activate cycle
- Helps skin health
- Prevent oxidative stress

#### **PDRN**

- Wound recovery and regeneration effect
- Helps to make the skin firm
- Promotion of collagen synthesis
- Proliferation of skin cell activity

# **How to Use**



Open the cap,
unscrew the lock on the back of the container clockwise,
press the button on the back of the container,
apply an appropriate amount to facial winkles including
around the neck wrinkles,
nasolabial folds, and middle of the forehead, then tap
lightly with your fingertips to absorb.



# **Lipo Exosome Absolute Cream**

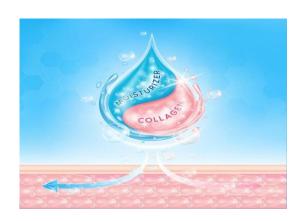
Rich Cream for Glow and Full Nutrition





- Matrigen Lipo Exosome Absolute Cream Formula with innovative technology with excellent skin affinity and lifting effect by implementing the same molecular structure as Exsomized stem cell
- High-purity raw materials can be kept fresh
- Long-term storage possible by inhibiting bacterial growth
- Minimize the use of preservatives to provide safe nutrients for sensitive skin
- Ingredients are stabilized for faster and deeper penetration and absorption into the skin
- Compactable to use average skin type especially dry skin to make fine skin tone

# **Main Ingredients**





- Improve elasticity and prevent aging
- Improving collagen self-sufficiency
- Increased fibrous cell density
- Skin hydration



#### **Edelweiss Callus Culture Extract**

- Skin whitening effect
- Skin soothing and protective effect
- Skin aging prevention
- Skin trouble relief



#### **Acacia Concinna Fruit Extract**

- Antioxidant effect prevents cell damage
- Provides nourishing and moisturizing effects
- Relieves itching through anti-inflammatory effects
- Protect skin's health through antibacterial effects



#### **Adenosine**

- Promote the production of collagen,
   an essential protein for skin elasticity
- Restoration of damaged skin barrier
- Soothing irritated skin
- Skin texture and improvement

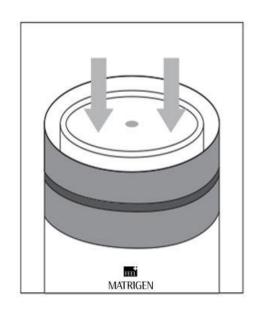
# **Key Point**



It is a light pink cream that sticks tightly to the skin and forms a moisturizing glow without stickiness after absorption.

Contains Adenosine and exosomized Edelwiess Callus Culture Extract (6,500ppm) and various active ingredients to give skin elasticity and form a moist glow without stickiness.

# **How to Use**





- 1. Open the lid cap and press around then the contents can come out from the center.
- 2. When the contents come out, spread them lightly on your face to absorb them.

# **Lipo Exosome Excellent Pack**

Peel Off Mask for Glow and Full Nutrition





Composition

A peel-off pack that contains Silk Water, PDRN (Sodium DNA), and Exosomes (Leontopodium Alpinum Callus Culture Extract) to form a glow film, moisturize and soften dry skin.

#### • Silk Water

Silk is a fibrous protein, produced by insects belonging to the Lepidoptera order.

• Leontopodium Alpinum Callus Culture Extract(100ppm)

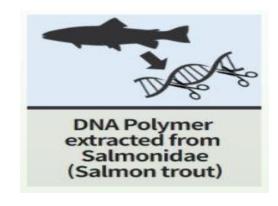
Good moisturizing power helps to keep the skin moist and helps to form the new skin layer.

# **Main Ingredients**









#### Silk Water

- Natural collagen boosting
- Ecological way to exfoliate
- Cleanse and Treat skin
- Plumps skin, leaving face luminous

#### **Edelweiss Callus Culture Extract**

- Skin whitening effect
- Skin soothing and protective effect
- Skin aging prevention
- Skin trouble relief

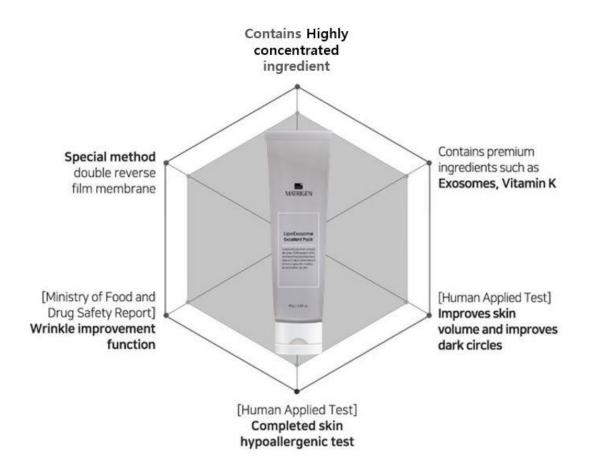
#### Centella Asiatica Callus Extracellular Vesicles

- Anti-inflammatory effect that reduces the amount of inflammatory cytokines
- Inhibiting pigmentation
- A quick cure for a small wound
- Skin soothing

#### **PDRN**

- Wound recovery and regeneration effect
- Helps to make the skin firm
- Promotion of collagen synthesis
- Proliferation of skin cell activity

# **Key Point**



When first applied, it is a white, opaque content,
but as it dries over time,
it becomes transparent and adheres to the skin,
and when removed after the active ingredients are completely absorbed,
a non-sticky, moisturizing radiant film is formed.

## **How to Use**









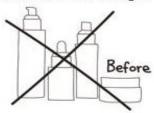


- 1. After washing your face, cleanse your skin with toner and squeeze or press the tube before apply the product to face.
  - 2. Wait until the content turns into a membrane. (In general, it takes about 30-40 minutes to form a film.)
  - \* \* Formation time may vary depending on skin condition and humidity, and also how many volume you applies.
    - 3. After removing the membrane, tap the remaining contents on the skin for absorption.

# **Notice for Use**

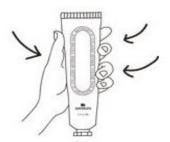
Tips 1

It is better to use it right after washing your face and not to apply other cosmetics before using it.



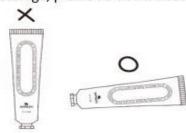
Tips 2

It is good to rub the tube gently before use.



Tips 3

For long-term storage, please lie down instead of standing up.



# **NMN**

**Nicotinamide Mononucleotide** 

## **Contents**

- 1. What is NMN
- 2. Benefits of NMN

## Nicotinamide Base

## What is Nicotinamide Mononucleotide (NMN)?

NMN is a type of molecule called a nucleotide.

Nucleotides play many roles in your body, including as the building blocks of DNA.

Within your cells, NMN is converted into another molecule known as nicotinamide adenine dinucleotide (NAD). Your body needs NAD for a variety of functions involved in metabolism and energy production.

You might think of NMN as raw material and NAD as the refined version that your body can actually use.

The amount of NAD your body can make depends on the amount of NMN available in your body.



NMN is an intermediate of NAD+ biosynthesis.

NAD<sup>+</sup> is a very important metabolic redox co-enzyme in eukaryotic organisms and is essential component for large number of <u>enzymatic reactions</u>.

It plays a vital role in a variety of biological processes of the body including cell death, aging, gene expression, neuroinflammation and <u>DNA</u> repair, which indicating a significance role of NAD<sup>+</sup> in longevity and health of human life.

As revealed by many recent studies, deficiency of NAD<sup>+</sup> can be compensated by the NMN supplementation that affects a range of pharmacological activities in different disease conditions.

Aging, as a natural process is identified by <u>downregulation</u> of energy production in mitochondria of various organs such as brain, adipose tissue, skin, liver, skeletal muscle and pancreas due to the depletion of NAD<sup>+</sup>.

NAD+ levels in the body decrease as a consequence of increasing NAD+ consuming enzymes when aging.

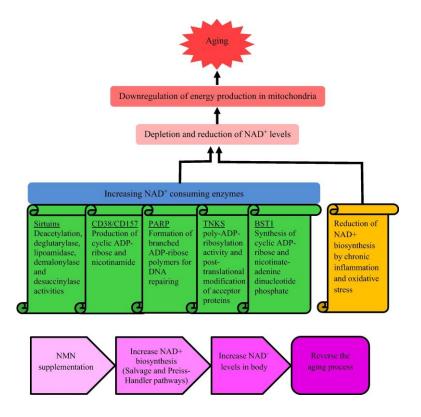
These NAD<sup>+</sup> consuming enzymes include NADase (CD38/CD157), poly (ADP-ribose) polymerase (PARP), NAD<sup>+</sup> dependent acetylase (sirtuins), BST and tankyrase (TNKS).

Sirtuins consume NAD<sup>+</sup> in order to execute a variety of functions such as <u>deacetylation</u>, deglutarylase, lipoamidase, demalonylase and desuccinylase activities.

Regulation of longevity, aging and age-associated physiological changes is one of the substantial aspects of sirtuin biology, while CD38 utilises NAD+ to produce cyclic ADP-ribose and nicotinamide.

Apart from that, PARP expends NAD+ to form branched ADP-ribose polymers which assists in DNA repairing.

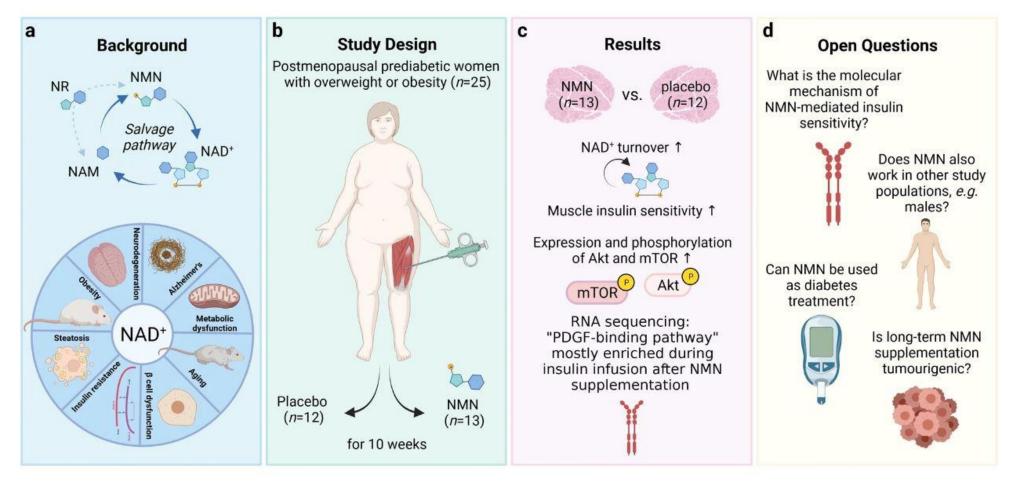
This depleted NAD<sup>+</sup> level by NAD<sup>+</sup> consuming enzymes can be compensated by administration of NMN to the body since NMN is an intermediate compound of the NAD<sup>+</sup> biosynthesis.



Causes for reducing NAD+ levels when aging and mechanism underlying anti-aging activity of NMN. <u>DNA</u> damage, chronic inflammation, <u>oxidative stress</u> and increasing NAD+ consuming enzymes (sirtuins, CD38/CD157, <u>PARP</u>, TNKS and BST) accelerate NAD degradation.

The reduced levels of NAD+ cause <u>downregulation</u> of energy production in mitochondria, leading to aging and various age-associated diseases.

NMN supplementation can reinstate NAD+ levels in the body through biosynthesis pathways, reversing the aging process and preventing age-associated diseases.



**a** In a salvage pathway nicotinamide ribose (NR) and/or nicotinamide (NAM) are converted to nicotinamide mononucleotide (NMN), which is the precursor of nicotinamide adenine dinucleotide (NAD<sup>+</sup>). NAD<sup>+</sup> is involved in a spectrum of diseases. **b** Postmenopausal prediabetic women with overweight or obesity were treated with NMN or placebo for 10 weeks and muscle biopsies revealed, **c** increased muscle NAD<sup>+</sup> turnover, insulin sensitivity, phosphorylation of mTOR and Akt, and a gene expression involving the PDGF-binding pathway in NMN-treated participants as compared to control. **d** Open questions, however, remain to fully assess the mechanism of NMN in mediating muscle insulin sensitivity. Furthermore, potential long-term side effects should be considered. The figure was generated with Biorender.com.

Nicotinamide Mononucleotide (NMN) exists as  $\underline{\alpha}$  and  $\theta$  anomeric forms while it is identified as nicotinamide ribotide,

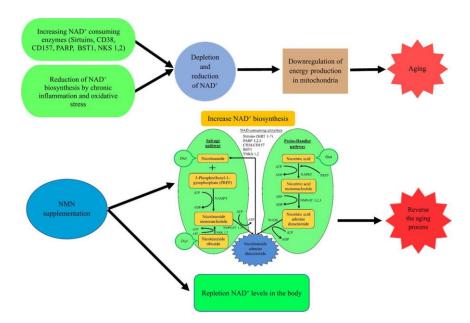
nicotinamide-1-ium-1- $\theta$ -D-ribofuranoside 5'-phosphate,  $\theta$ -nicotinamide <u>ribose monophosphate</u> and 3-carbamoyl-1-[5-O-(hydroxyphosphinato)- $\theta$ -D-ribofuranosyl] pyridinium, among others.

The  $\theta$  form is the active anomer and NMN is naturally structured as a result of a reaction, which catalysed by nicotinamide phosphoribosyltransferase enzyme,

between a <u>phosphate group</u> and a <u>nucleoside</u> comprising nicotinamide (an amide form of vitamin B<sub>3</sub>) and <u>ribose</u>.

NMN is a bioactive nucleotide with a <u>pyridine</u> base and its <u>molecular weight</u> is 334.22 g/mol.

It is fairly acidic and water-soluble compound. The solubility has been reported to be 1.8 mg/mL.



### **Benefits of NMN**

All the cells in your body use NAD and therefore require NMN, its precursor, to function properly.

NAD helps cells regulate a number of essential functions that help keep your cells running smoothly, including:

- energy metabolism
- •DNA repair
- •gene expression
- •cellular stress responses

It's essential that your cells have plenty of NMN to produce enough NAD to support these functions.

Your NMN levels naturally decline over time, and, as a result, your levels of NAD decline, too.

This may contribute to some of the health effects you might experience during aging.

For example, research has shown that people with different age-related conditions, including diabetes and liver diseases, may have lower levels of NMN and NAD.

Test-tube and animal studies also suggest that NMN may play a role in other aspects of aging, including heart and brain health.

Since taking NMN may help your body produce more NAD, it's also important to consider the research behind the benefits of NAD. Studies investigating NAD shed light on its potential benefits:

•It may increase longevity. In your cells, NAD activates a group of proteins called sirtuins, which help repair your DNA.

The activity of sirtuins is linked to longevity. On the flip side, low-NAD levels are associated with agerelated diseases.

•It may have protective effects on the brain. NAD is thought to modulate the production of a protein that helps guard cells against impairment of mitochondrial function and oxidative stress.

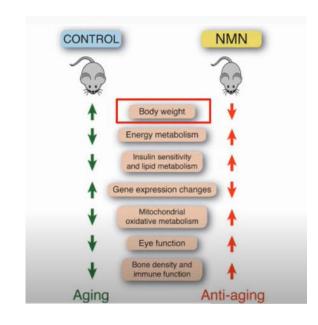
These cellular stressors are related to some neurological diseases, including Alzheimer's disease.

•It may help reduce heart disease risk. Research in mice has found that high NAD levels in the blood reversed age-related arterial damage, which may help guard against heart disease.

•It may protect against cancer. Elevated NAD levels may help protect cells against oxidative stress and DNA damage, which are associated with cancer development.

•It may help with jet lag. Research suggests NAD may help adjust your internal clock, potentially helping ease jet lag or other circadian rhythm disorders.

•It may help aging muscles. Research in older mice have shown that high blood NAD levels helped improve muscle function, strength, and endurance in older mice.



It is a toner pad that contains NMN and Edelweiss callus culture extract to provide moisture to make the skin elastic and healthy.

After washing the face, gently wipes the skin texture along with various tannins, exfoliated dead skin cells and sebum, as well as wastes in the skin to make the skin smooth.

**#One Pad per day #Exfoliation #Waste removal #Skin conditioning** 

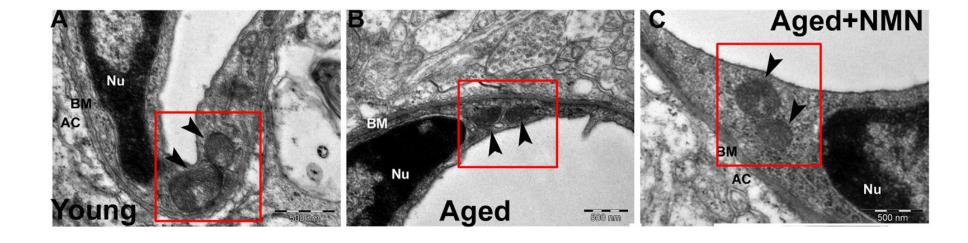
## **NMN Refine Toner Pad**



60 Pads \* 160g

### **Nicotinamide Mononucleotide (NMN)**

As a Vitamin B3 derivative that helps to increase NAD+ concentration, which decreases the aging, and helps delay aging by slowing down Telomere damage.



#### **Edelweiss callus culture extract**

Good moisturizing power helps to keep the skin moist and helps to form the new skin layer.

#### A gift for skin, 'Edelweiss'

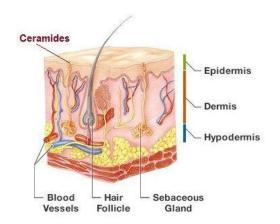
It has antioxidant properties and is known to have a great effect on skin
care, and is used as a raw material for cosmetics in many countries around the world
Skin soothing and protective effects of glycoflavonoids and leontopodicacid components
Relieves skin troubles caused by external irritation by promoting the skin's cycle and participating in the formation of new skin layers
Reduces skin damage and aging by absorbing excessive UV rays delivered to the skin
Prevent skin aging by suppressing active oxygen that causes skin aging



#### Ceramide

Restrains the evaporation of moisture in the skin and strengthens the skin barrier.

Ceramide ingredients enhance the **skin's moisture retention ability** and help **strengthen the skin barrier**, maintaining a comfortable and dense moisturizing feeling with white rice flower extract and aloe vera leaf juice.



### **Birch tree sap Juice**

Birch tree sap is praised in Korean beauty for its ability to alleviate inflammation, cleanse, and moisturize skin.

#### The nobility of the forest, 'birch sap'

'Birch', a tree that does not rot even after a thousand years and burn well

A beautiful tree with snow-white bark, called "a nobleman in the forest, a poet, and a queen in the forest"

Not only the bark, but also the roots, sap, and living mushrooms are all used as medicinal ingredients

Birch tree sap is an essential element for tree growth and is rich in minerals, providing vitality to the skin

Moisturizing care, antioxidant, and soothing effect



#### **Tannin**

Restrains the evaporation of moisture in the skin and strengthens the skin barrier.

#### Tannins are naturally occurring chemical compounds, known as polyphenols, found in many plants.

In grapes, these compounds are found in the skin, seeds, and stems, and act as a defense mechanism against animals and insects.

When it comes to aging wines, tannins can be imparted by wood barrels.

Foods and beverages such as tea, dark chocolate, nuts, and coffee also contain tannins.



NMN ingredients improve skin elasticity to show slower aging.

With just one pad

Matrigen NMN Refine Toner Pad gives you a future from your past.

## **How To Use**

- 1. After washing the face, use the embossed side pad to gently wipe the entire face except for the eye area in the direction of the skin texture.
  - 2. Put on the gauze side pad like the pack for 3-5 minutes to boost the skin with nutrition.
    - 3. After use, close and seal the lid to prevent the pad from drying out.



NMN (Nicotinamide Mononucleotide) and Human Stem Cell Conditioned Media ingredients slow down the skin's aging cycle provide elastic and healthy skin, while Rosa Damascena Callus Culture Extract makes skin more vibrant.

#Enhanced #Anti-aging #Moisturizing #Nutrition

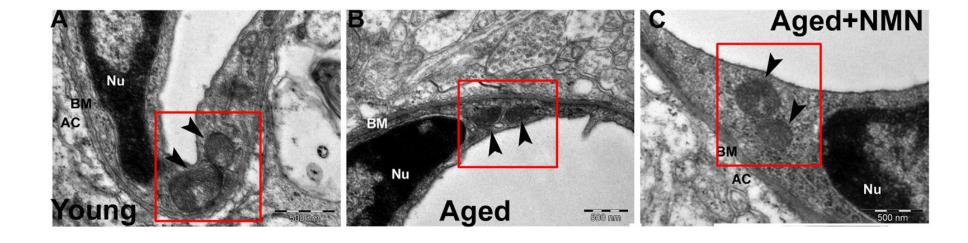
## NMN Cell Recover Ampoule



10ml \* 5EA

### **Nicotinamide Mononucleotide (NMN)**

As a Vitamin B3 derivative that helps to increase NAD+ concentration, which decreases the aging, and helps delay aging by slowing down Telomere damage.



#### **Human Stem Cell Conditioned Media**

Prevents skin damage, improves skin elasticity, and helps maintain skin health

#### **Self-Renewal, Differentiate, and Homing Effect**

Human Stem Cell Conditioned Media contain various active substances such as **growth factors** and extracellular matrix that are very important for skin health, helping with overall skin concerns such as loss of elasticity, dryness and roughness of the skin.

Activating cells by creating an environment **most similar** to the human body.



#### **Rosa Damascena Callus Culture Extract**

Vitamin C, A, K

Rosa Damascena Callus Culture Extract contains **polyphenols** that have the effect of suppressing the hormone called cortisol, which is secreted when exposed to stress, helping soothe the skin.

It moisturizes the skin and maintains a bright skin tone as it is **non-irritating** and can be safely used on any skin type.

Effective in preventing skin aging and the **anthocyanin** ingredient helps with collagen formation, which is good for skin elasticity.



#### **Camellia Sinensis Callus Culture Extract**

Excellent Antioxidation & bisabolol effects

High-enriched bioactive substance is effective on anti corrugation and whitening

Containing **flavonoid** ingredients, it helps remove oxygen radicals and provides soothing and moisturizing to sensitive skin.

As an **antioxidant**, it plays an important role in preventing skin aging.



## **Panax Ginseng Callus Culture Extract**

Contains useful nutrients for the human body, including saponin

It nourishes the skin, increases energy levels and helps **metabolism**.

It **refines** the skin and makes it smooth and shiny.

It provides antioxidant, anti-aging, and anti-inflammatory effects to help to achieve healthier skin.





NMN ingredients improve skin elasticity to show slower aging.

With everyday, every night

NMN Cell Recover Ampoule gives you a future from your past.

## **How To Use**

- 1. Open the cap on the top of the ampoule by bending it backwards.
  - 2. Cover the enclosed silicone cap and apply it all over the face.
    - 3. Spread the ampoule evenly and tap it to absorb it.







Using active ingredients, including NMN(Nicotinamide Mononucleotide), with a solution made up of rapidity freeze-dried powder and functional concentrated ingredients helps to make the skin healthier, more vibrant, and more elastic.

**#High Concentrate #Anti-aging #Moisturizing #Activate** 

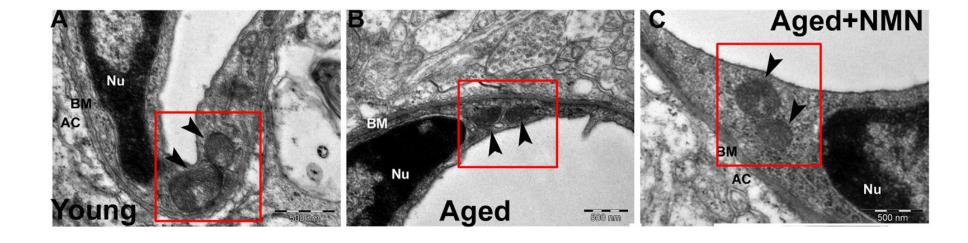
## **NMN Fine Active Formula**



Solution 20ml \* Freeze-Drying 0.3g

### **Nicotinamide Mononucleotide (NMN)**

As a Vitamin B3 derivative that helps to increase NAD+ concentration, which decreases the aging, and helps delay aging by slowing down Telomere damage.



### **Dipotassium Glycyrrhizate**

An anti-inflammatory agent that is effective in supplying skin moisture and improving tone, and is effective in removing skin wastes

#### An indispensable thing (to), a quiet but strong ingredient

It is excellent at soothing the skin, can be expected to have a sebum control effect due to its natural active ingredients, and helps **repair damage** to the skin's epidermal barrier.

It is effective in treating acne and **anti-aging**, and the effect becomes even more effective when **combined with NMN** ingredient, helping to maintain healthy skin.

### **Rosmarinus Officinalis (Rosemary)**

Inhibits elastin-degrading enzymes, gives vitality to sagging tissue.

The representative effect of rosemary leaf extract is that it has a protective ability against free radicals that cause skin aging and prevents oxidative damage to the skin.

It helps a lot in regeneration, blocks moisture evaporation, and helps to manage and soothe problem skin.

It is an ingredient often added to cosmetics to give a natural fragrance or to prevent deterioration of cosmetics.



### **Chamomilla Recutita (Matricaria) Flower Extract**

Chamomile herb, meaning apple from the ground.

It soothes reddened skin, softens the skin, and blocks moisture evaporation from the skin.

It is known for protecting the skin by inhibiting and defending against the activity of external substances harmful to the skin.

It is especially **rich in bisabolol and flavonoids**, making it effective in preventing aging and improving wrinkles.

Warm nature of Chamomilla Recutita (Matricaria) flower extract promotes blood circulation, **removes skin toxins**, and **cleans sweat glands**.



#### Allantoin

Hypoallergenic and mild ingredients for use from babies to adults

It helps regenerate skin cells by activating cell activity and helps **heal minor skin woun**ds or soothe skin troubles. It is a safe ingredient that **does not cause allergies** and is effective in soothing the skin and relieving skin texture.

It protects skin sensitive to irritation and helps skin recover quickly.

Also used instead of steroids for atopic treatment because it has an **effect of relieving itching**.





NMN ingredients improve skin elasticity to show slower aging.

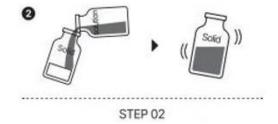
With everyday, every night

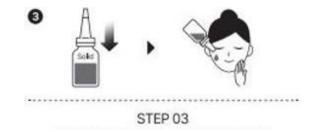
NMN Fine Active Formula gives you a future from your past.

### **How To Use**

- 1. Open the white cap on the top of the ampoule by bending it backwards.
  - 2. Pour the solution into the Solid and shake to mix.
  - 3. Put on the enclosed rubber cap and apply it to the entire face.



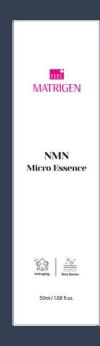




NMN (Nicotinamide Mononucleotide), and Betaine ingredients improve skin elasticity and help delay aging by slowing down the damage to telomeres, and Nelumbo Nucifera Flower Water strengthens moisturizing and protect moist skin.

# High Concentrate #Anti-aging #Skin Barrier #Fast Absorption

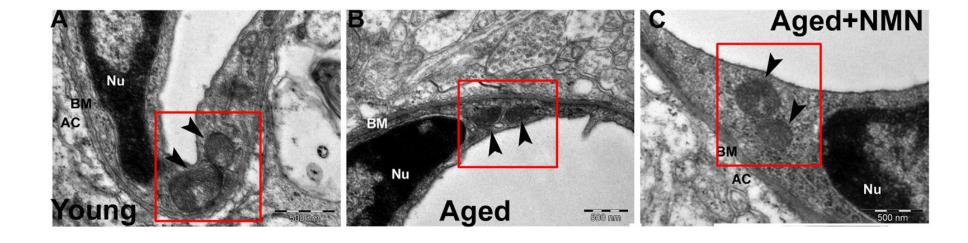
### **NMN Micro Essence**



50ml

### **Nicotinamide Mononucleotide (NMN)**

As a Vitamin B3 derivative that helps to increase NAD+ concentration, which decreases the aging, and helps delay aging by slowing down Telomere damage.



#### **Betaine**

Betaine acts as a gentle hydrator that helps you **skin gain** and **maintain moisture**.

It helps **slow aging** by suppressing cell damage and aiding cell recovery.

Often used in post procedural skin products, Betaine **reduces sensitivity** and has a calming effect on the skin.

Unlike other products, it doesn't immobilize water molecules and **protects skin** from further damage.



#### **Nelumbo Nucifera Flower Water**

Nelumbo Nucifera Flower Water, which is **rich in antioxidants**, acts as a **skin booster**.

It can balance oily skin, preventing skin troubles and soothing them.

It has the effect of keeping the skin clean, adding **vitality** and vigor to the skin.

In addition, it helps **slow aging** and has an anti-inflammatory effect as an antibacterial effect.



### **Hydrolyzed Collagen**

Hydrolyzed collagen is a **form of protein** that is broken down into small molecules.

This form is easily absorbed by our body and is actively used in various tissues such as skin, bones, and muscles.

In particular, it is effective in **improving skin elasticity and wrinkles**, and it also helps joint health.

In addition, it also supplements collagen reduction due to aging, helping to improve healthy beauty and immunity.



### **Sodium Hyaluronate**

Sodium hyaluronate, which is in the form of a sodium salt,

is safe and is well absorbed into the skin thanks to its **small molecular size**.

Sodium hyaluronate has the effect of suppressing skin troubles and soothing the skin, and also helps to strengthen the skin barrier that **strengthens the barrier of the weakened skin**.

In addition, it can help improve skin elasticity and vitality, so you can expect **skin elasticity** improvement.





NMN ingredients improve skin elasticity to show slower aging.

With everyday, every night

NMN Micro Essence gives you a future from your past.

# **How To Use**

Open the cap, pump 2-3 times and spread gently then lightly tap the skin for sufficient absorption.











NMN (Nicotinamide Mononucleotide) and low-molecular-weight collagen ingredients to give skin elasticity and help delay aging by slowing down the damage to telomeres, and create a protective film on the skin when applied to keep it moist.

# High Concentrate #Anti-aging #Soothing #Elasticity

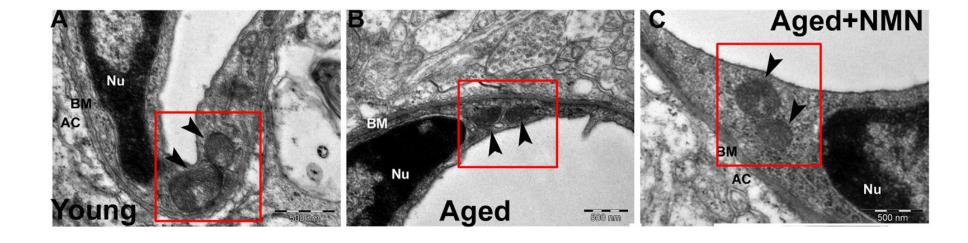
### **NMN Macro Cream**



50ml

### **Nicotinamide Mononucleotide (NMN)**

As a Vitamin B3 derivative that helps to increase NAD+ concentration, which decreases the aging, and helps delay aging by slowing down Telomere damage.



### Persea Gratissima (Avocado) Oil

Among the ingredients contained in avocados, fatty acids such as lecithin and omega-9 improve **skin elasticity**, **reduce the formation of fine wrinkles**, and promote the skin regeneration process.

It can also help protect the skin from free radicals, and has excellent skin absorption, which enhances its effect by delivering nutrients deep into the skin when used with other active ingredients.



### **Tocopheryl Acetate**

It is a fat-soluble substance, also called **vitamin E acetate**, that helps with skin conditioning and antioxidation.

It can be extracted from vegetable oil and can be safely used, and has **antioxidant effects**, such as delaying or **preventing wrinkles**, **aging**, **skin keratinization**, edema, and skin damage caused by harmful oxygen, and inhibiting the oxidation of unsaturated fatty acids that make up cell membranes.



### **Acetyl Hexapeptide-8**

### It is a low-molecular-weight neuropeptide,

nicknamed Botox, that helps **improve skin elasticity** and **wrinkles** by relaxing muscles by controlling the signaling process of nerve cells connected to wrinkle muscles.

It is a non-toxic natural substance that is easily absorbed into the skin and works directly on the skin.



#### **Asiaticoside**

It improves skin regeneration, supplies moisture to the skin,

heals damaged skin to help it recover quickly,

and helps **relieve skin inflammation** through its anti-inflammatory properties.

In addition, it is effective in preventing skin aging by **improving wrinkles** through its antioxidant effect.





NMN ingredients improve skin elasticity to show slower aging.

With everyday, every night

NMN Macro Cream gives you a future from your past.

# **How To Use**

Open the cap, pump 2-3 times and spread gently then lightly tap the skin for sufficient absorption.



NMN (Nicotinamide Mononucleotide) helps delay aging by improving skin elasticity and slowing down telomere damage, and the seven plant extract ingredients provide a refreshing, soft and satisfying feeling even after washing face.

# High Concentrate #Anti-aging #Moisturizing #Calming

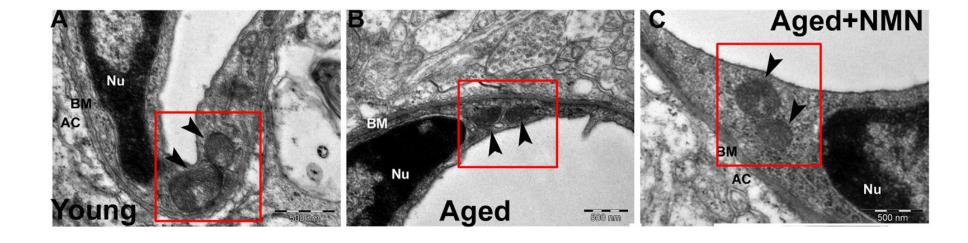
# **NMN Beta Cleansing Foam**



200ml

### **Nicotinamide Mononucleotide (NMN)**

As a Vitamin B3 derivative that helps to increase NAD+ concentration, which decreases the aging, and helps delay aging by slowing down Telomere damage.



#### **Scutellaria Baicalensis Root Extract**

Scutellaria Baicalensis Root Extract acts as a preservative as a natural antioxidant effect and has an **excellent anti-inflammatory effect** that suppresses inflammatory mediators and factors that cause inflammation, making it effective in **relieving oily skin** and skin problems.

In addition, antioxidant ingredients help **improve wrinkles** and protect the skin by **suppressing dark pigmentation** caused by tyrosinase activity.



### **Polygonum Cuspidatum Root Extract**

Polygonum Cuspidatum Root Extract contains excellent antioxidant,
helps **prevent skin aging**, helps maintain healthy skin,
and has the effect of **suppressing the formation of wrinkles and fine lines**.

In addition, it protects skin cells by blocking active oxygen and prevents the deposition of melanin pigment by **blocking** the activity of tyrosinase, which helps form melanin pigment.



### **Glycerin**

Glycerin has excellent moisture content and **moisturizing effect**,

providing shine and moisture to the skin and forming a thin film on the surface of the skin

to normalize the **cell cycle** and help **relieve psoriasis**.

In addition, it has the function of **alleviating wrinkles** by stimulating collagen production, making it effective in preventing aging and promoting the growth of skin cells.



### **Cocamidopropyl Betaine**

Cocamidopropyl Betaine has excellent cleansing power, helping to cleanse the skin, remove impurities, and **create a soft foam**.

**Stabilizes pH values** to provide less irritating to the skin and increasing stability.

It can also be used on sensitive skin, has **antibacterial** and antibacterial properties, and improves hygiene.





NMN ingredients improve skin elasticity to show slower aging.

With everyday, every night

NMN Beta Cleansing Foam gives you a future from your past.

### **How To Use**

While cleansing face, take an appropriate amount, and make the foam with water, gently roll and massage the skin texture, then wash thoroughly with lukewarm water.











# **Core Solution 100**



# 1. Glutathione

Glutathione is a powerful **antioxidant** found in every cell in the body and is consisted of 3 types of molecules known as **amino acids**.

Glutathione reduces oxidative stress, helps to improve the overall complexion of the skin, and inhibits melanin pigment in the skin to maintain and **improve bright skin**.





# Benefits of Glutathione

- 1. Glutathione decreases free radical damage, used together with Vitamin C & E, it increases collagen formation.
- 2. Glutathione lightens skin, corrects dark spots and uneven skin tone.

It is the safest way to brighten the skin without side effects.

3. Glutathione prevents oxidative stress at the cellular level.

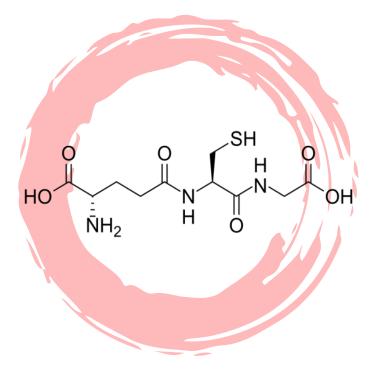
It is often called 'The Mother of All Antioxidant'.

Niacinamide blocks the synthesis of tyrosinase and prevents the movement of melanin pigment, improving the overall skin tone and helping to make the skin clear and bright.

- Niacinamide is a type of vitamin B3 and is known to have excellent whitening effects.

- Glutathione helps prevent freckles and blemishes from forming with a benefit of reducing melanin production for cleaner and clearer skin.
- © Glutathione delivers skin glow by helping regenerate skin cells, while improving skin elasticity for healthier skin.
- © Glutathione enriched with antioxidant, helps prevent skin aging and improve skin's strength by reducing oxygen free radicals.

### Glutathione



### **Ascorbic Acid**

Vitamin C (Ascorbic acid) is an ingredient that has a strong antioxidant effect,

recovers when the skin is stressed by ultraviolet rays and improves pigmentation in the skin due to anti-aging and UV exposure.

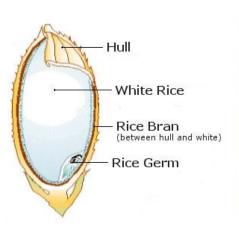
Ascorbic acid is also a well-known ingredient in the whitening effect

that reduces oxidation in the melanin synthesis process and improves skin tone.

Vitamin C Ascorbic acid









### Rice bran

Rice bran contains vitamin E and a large amount of antioxidants,

which provides **gloss to the skin** and improves skin moisturizing power to **moisturize**dry skin and help with skin beauty.

It is also effective in improving skin diseases by suppressing

the production of melanin pigments to brighten skin tone

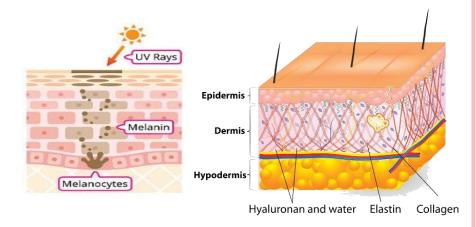
and helping to manage blemishes such as freckles

and helping to maintain clear and clean skin.

### **Ferulic Acid**

It protects the skin from free radicals, which is one of the causes of skin aging, shows an **anti-oxygen effect** depending on the concentration of tyrosinase activity, and brings a **whitening effect** to the skin.

It is also involved in pigmentation such as melasma and freckles, **helping to maintain clean skin**, and is used as an antioxidant in cosmetics to prevent discoloration / deterioration.



# 2. Volufiline

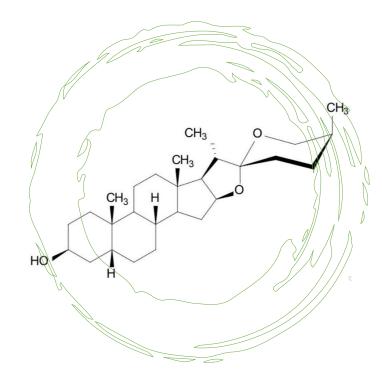
Volufiline, which is extracted in a small amount from the root of the **Anemarrhena asphodeloides penetrates deep into the skin** to make the skin that has lost its

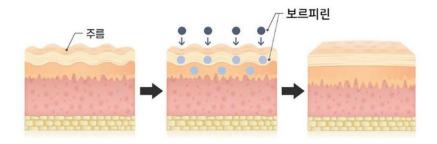
strength firm and voluminous, and **prevents moisture loss** in the skin to make it moist.

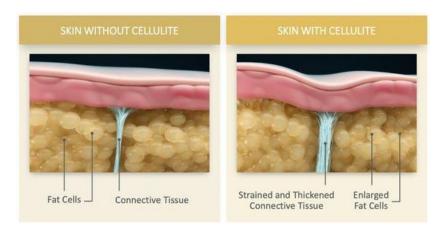


# Benefits of Volufiline

- 1. The biggest advantage of Volufiline is that there is no need to worry about side effects caused by hormones because it is a non-hormonal component and does not affect the body's hormonal balance.
- 2. Fat can be lost little by little due to skin aging or diet, but Volufiline itself has the advantage of promoting the production and storage of fat cells and permanently drawing out the results.
- 3. It takes a long time to see the effect, but it is applied with a safe ampoule rather than a direct injection method, where there is no need to worry about side effects such as skin necrosis and skin loss, and it can be applied conveniently anytime, anywhere.







## **Hydrogenated Polyisobutene**

- O Hydrogenated Polyisobutene supplies oil and moisture to the skin, it helps to make the skin smooth.
- ① It helps to maintain moisture by **preventing moisture loss** from the skin.
- It helps to keep the skin texture **flexibly and smoothly**.

Cultivates a drooping and sagging skin into resilient skin by effectively enhancing the skin's health.

## Anemarrhena asphodeloides Bunge

It is an ingredient that activates fat cells and **helps improve the elasticity** of the breast skin.

It has the effect of providing rich moisture and nutrition to make the skin elastic and glossy.

Anemarrhena asphodeloides Bunge is a smart plant that has antibacterial, hypoglycemic,

and antipyretic effects, and is an effective ingredient for increasing cellular molecular elasticity.





# 3. Vitamin K

Vitamin K is directly involved in **blood vessel health** and helps heal wounds,

shortening the time the skin recovers.

It also improves the skin conditions and brightens the skin tone to help keep the skin

clear and clean.

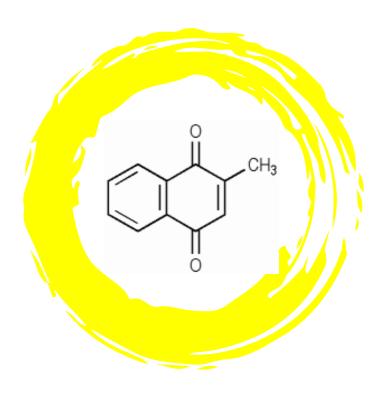


30ml / 1.01 fl.oz

# **Benefits of V**itamin K

- 1. Anti-inflammatory
- 2. Lightens hyperpigmentation
- 3. Fights wrinkles
- 4. Helps heal bruises
- 5. Increases microcirculation under the eyes

Vitamin K can be found in dark, leafy greens like spinach and kale, but can also be a great skincare ingredient. It can be used by all skin types, and it is particularly good for reducing dark circles, rosacea and spider veins.



# **Hippophae Rhamnoides Fruit Extract**

Vitamin tree fruit extract contains a lot of antioxidants such as vitamin C (Ascorbic acid),

vitamin E (Phenol), and polyphenols, which are antioxidants that remove active oxygen

that cause various diseases.

It helps to clear the skin by preventing aging and improving cell health.







### Menadione

Menadione, a synthetic vitamin K3, cares for skin damage caused by external stimuli, helps to soothe and relieve quickly, and strengthens skin barriers to make your skin strong and healthy.

√ Ingredients specialized for soothing

It is a synthetic compound that has the activity of vitamin K3 and is 2 to 3 times more active than natural vitamin K.

# 4. Ceramide

Ceramide ingredients enhance the skin's moisture retention ability and

help strengthen the skin barrier, maintaining a comfortable and dense moisturizing feeling

with white rice flower extract and aloe vera leaf juice.



30ml / 1.01 fl.oz

# **Benefits of Ceramide**

- 1. Seal in moisture
- 2. Nourish the skin barrier
- 3.. Great for dry and sensitive skin
- Skin protection

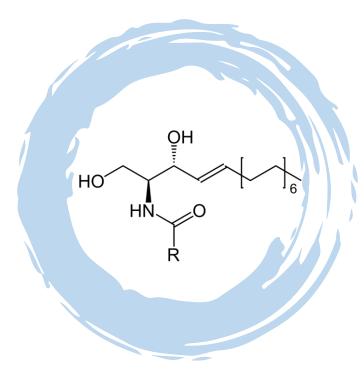
Cholesterol and saturated fatty acids form a skin barrier to protect the skin from various external stimuli such as surfactants.

Moisturizing

It prevents moisture from evaporating from the skin and supplementing ceramide is helpful for skin diseases such as atopy.

Anti-aging

As we age, lipid components such as ceramide in the skin decrease, and by supplementing it, it helps prevent skin aging.



### **Vincetoxicum Atratum Extract**

Synapinic acid, an indicator component of white rice, is effective in antioxidation, anticancer, and hair loss prevention.

In addition, it is excellent for strengthening the skin barrier and regenerating/soothing the skin.

Derma-clera affects skin keratinocytes and has an excellent effect on controlling skin barrier function.

It prevents moisture from escaping through the skin barrier, which has been strengthened through high moisture,

and keeps dry skin moist from dry weather and masks.

### **SKIN RICH WITH CERAMIDES**

Healthy, hydrated skin cells



### SKIN LOW WITH CERAMIDES

Fine lines and wrinkles, loss of firmness, roughness









### **Aloe Vera Leaf**

Aloe vera is used as an effective facial moisturizer by **helping to soothe and hydrate**.

It is an ingredient that helps prepare the skin according to the **28-day skin turnover cycle** and approach

the ideal cycle.

It also has a whitening effect that makes the **skin transparent** by thinning spots and freckles.

It helps to inhibit the function of tyrosinase, which makes melanin pigment, and has a cooling effect.

# 5. Collagen

Hydrolyzed collagen, which boasts a higher absorption than regular collagen,

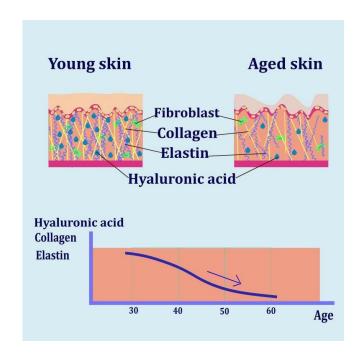
gives elasticity to the skin, forms a film, gently covers the skin,

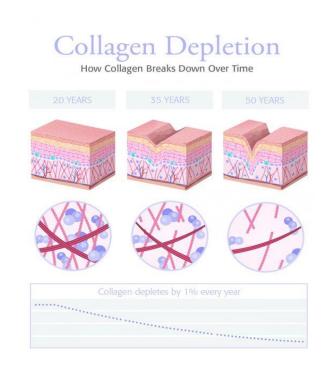
and **moisturizes** it by supplying moisture.

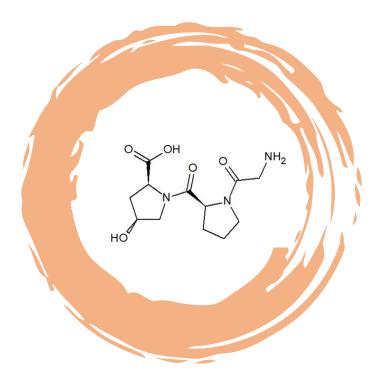


30ml / 1.01 fl.oz

# **Collagen Analysis**









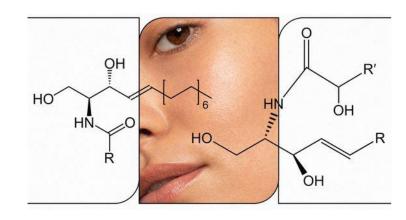
# **Hydrolyzed Collagen**

Hydrolized collagen is a **form of protein** that is broken down into small molecules.

This form is easily absorbed by our body and is actively used in various tissues such as skin, bones, and muscles.

In particular, it is effective in **improving skin elasticity and wrinkles**, and it also helps joint health.

In addition, it also supplements collagen reduction due to aging, helping to improve healthy beauty and immunity.





## **Dioscorea Japonica Root Extract**



The sticky ingredient extracted from yam root is called phytomucin, and it is called vegetable snail mucus

because it is similar to snail mucus.

Phytomucin is effective for troubled skin as it has the effect of soothing the damaged and irritated skin,

and rich in amino acids, which increases skin elasticity and helps to improve wrinkles.



Due to the nature of mucus, it has an excellent moisturizing effect, strengthens the skin barrier and

keeps the skin smooth to soothe sensitive and damaged skin, it is also effective for those with troubled or atopic skin prone

to heat or redness.

In addition, mutin, saponin, and allantoin form a natural moisturizing film to moisturize the skin,

erasing traces left on problematic skin and helping to create clean and soft skin.

# 6. Hyaluronic Acid

The low molecular hyaluronic acid ingredient penetrates moisture deep into the skin,

and the high molecular hyaluronic acid ingredient creates a moisture barrier to keep moisture

in the skin from escaping, making the skin moist for a long time.

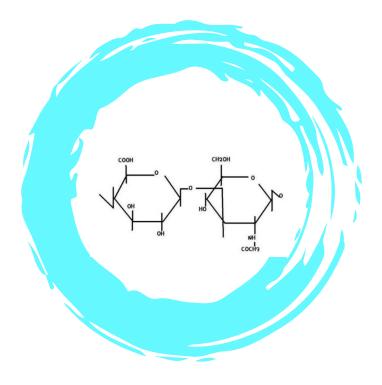


30ml / 1.01 fl.oz

# **Hyaluronic Acid Meaning**







## **Sodium hyaluronate**

Hyaluronic acid is not easily absorbed into the skin because of its large molecular size.

Sodium hyaluronate, which is in the form of a sodium salt, is safe and is well absorbed into the skin

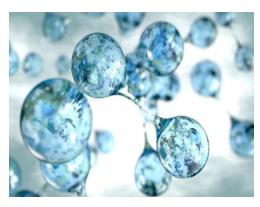
thanks to its small molecular size.

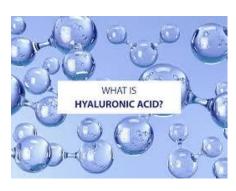
Sodium hyaluronate has the effect of suppressing skin troubles and soothing the skin,

and also helps to strengthen the skin barrier that strengthens the barrier of the weakened skin.

In addition, it can help improve skin elasticity and vitality, so you can expect skin elasticity improvement.







## **Hyaluronic Acid**

It is a natural moisturizing factor (NMF) that contains a lot of moisture in the dermal layer of the skin to maintain

and help keep the skin moist.

It is an ingredient that plays an important role in collecting and retaining moisture in the skin.

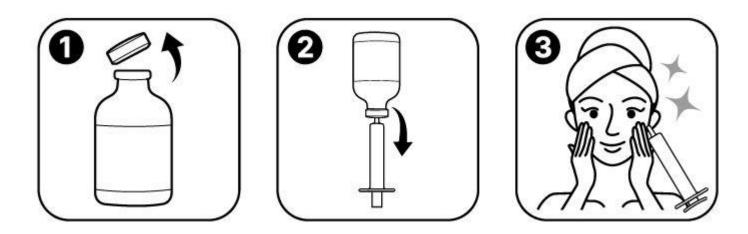
It helps to manage moisture by **forming a moisturizing film** that supplies moisture to the skin

and fixes moisture by pulling moisture from the outside.

It has excellent absorption power that attracts water molecules, prevents moisture evaporation, and supplies moisture

and nutrients.

# **How To Use**



- 1. Open the white cap of the product by bending it in the OFF direction.
- 2. Insert the syringe into the cross (+) mark in the center of the rubber cap and take out the ampoule.
- 3. Apply the ampoule to the face and massage gently for absorption.

# **Skin Repair Mask**

A mask pack with 6 peptide to help skin regeneration and excellent moisturizing and soothing effects such as edelweiss, lotus flower, hibiscus flower, and honey.

Revitalizes tired and rough skin, solving various skin problems from dryness to elasticity.

Mask pack for intensive care from the most basic moisturizing to soothing of stressed and sensitive skin, anti-aging, and the core of skin repair mask.



Composition: 30g \* 10EA

### **Main Ingredient**



**Hibicus Flower Extract :** It contains about 5% of "pyruvic acid", one of the basicmetabolites of the human body, which has the effect of exfoliating softly and delicately and accumulating in the skin. It softens skin tone by alleviating toxins.

It also helps the energy activity of the skin, giving it vitality to maintain a firm skin.

**Edelweiss Extract :** Ingredients such as glycoflavonoids and leontopodic acid help to soothe and protect the skin.

It promotes the circulation of the skin and participates in the formation of new skin layers and relieves skin traces caused by external stimuli.

Provides rich moisture to dry and non-vibrant skin to make it moist and healthy.

**Lotus Leaf Extract :** Gives a conditioning effect to vitalize the skin.

It has the effect of removing free radicals that fatal to aging.

It suppresses peroxidation of the skin and the skin receives.

It makes role to reduce oxidative stress.

Helps improve skin texture by converging pores.





**Honey Extract :** Contains B1, B2, B6, and Pantothenic Acid, which are vitamin B complexes, to help calm and protect.

Prevents dryness by giving moisturizing power to the skin.

To make your skin look lively and vital Involved in promoting the circulation of the skin cycle. It improves skin condition and makes it healthy.

**6 Peptide :** Oligopeptide, Copper tripeptide, Palmitoylpentapeptide-1, Tripeptide, Hexapeptide, Palmitoylpentapeptide-4.

Six types of peptides stimulate skin cells and DNA to help strengthen the skin barrier. Participates in moisturizing and collagen and elastin production.

**Adenosine**: Adenosine, a functional cosmetic ingredient that improves wrinkles, provides elasticity to weak skindue to aging and helps improve wrinkles on the skin.

As a conditioning agent, it restores skin regeneration power.

There is also an effect to give vitality to tired skin

(\* The above efficacy is limited to raw material properties)

### **HOW TO USE**









- 1. After cleansing, clean the skin texture with toner and open the pouch to remove the sheet.
- 2. After spreading the sheet, apply the mask sheet to the face to fit well.
- 3. Remove the remaining mesh and use a mask pack for 20 minutes.
- 4. Remove the sheet and tap the remaining essence for absorption.

# **Derma Cell Repair Mist** Matrigen Derma Cell Repair Mist has various peptide and PDRN active ingredients as well as Stem Cell culture that makes skin texture smooth and helps in wrinkle management by supplying nutrients deep into the skin. Composition: 3.37 fl.oz. 100ml

# **Soothing Mist** Matrigen Soothing Mist is a dual functional product containing plant extracts and Centella asiatica active that are effective in calming the skin which soothes sensitive skin due to stress. Composition: 3.37 fl.oz. 100ml

### **Main Ingredient**

### Milk Protein Extract(Net content 20,000ppm)

Milk protein extract is an aqueous solution of glycoprotein extracted from milk that forms a moisture film on the skin to supply and maintain moisture, care for dead skin cells, and revitalize the skin to protect and nourish the skin.

### **PDRN**

PDRN, a DNA fragment extracted and processed from salmon semen, revitalizes the skin, helps skin health, and prevents stress caused by skin texture oxidation, thereby activating the circulation cycle.

### **Stem Cell Culture**

Stem cell culture medium, which gives fundamental vitality to skin cells, increases collagen production, strengthens the skin epidermis, reduces wrinkles, and amino acids help whitening and moisturizing.

### **6 Kinds of Peptide**

6 kinds of peptides give vitality to the skin and activate the blood circulation cycle in the skin to help skin health, strengthening skin elasticity and reducing wrinkles.

### **Main Ingredient**

### Houttuynia Cordata Extract(Net content 176,000ppm)

Houttuynia Cordata Extract contains rich in Quericitrin and Isoquercitrin which makes the skin clear and healthy, helps to soothe sensitive skin.

### 7-Layered Hyaluronic Acid

7-layered hyaluronic acid supplies moisture to the skin and inhibits moisture evaporation, forming a moisture barrier in the skin.

Moisture in the fixed skin reduces external stimuli.

### **Centella Asiatica Active**

Centella asiatica Active is excellent for soothing and conditioning, so it soothes rough skin comfortably, and evens out the sensitive skin texture by relieving skin wounds or inflammation.

### Madecassoside

Madecassoside ingredient protects the skin and helps to calm the skin, preventing hyperkeratinization and clogging of pores, so that sensitive skin is prepared and helps skin health.

### **How to Use**

- 1. Shake the product slightly first.
- 2. Close your eyes from a distance of 10-20cm, and spray over the entire face 3 to 4 times.
- 3. Tap gently for absorption.





# **Creams**



Composition: 50ml / 400ml



### **Intense Repair Cream**

- A nourishing cream that contains EGF & FGF ingredients to supply moisture and provide energy to stressed skin to promote cell regeneration and make the skin strong and lively.
- Jojoba seed oil provides a soft and smooth feeling and prevents moisture evaporation to keep the skin moist for a long time.
- It is a dual functional cosmetic that has been certified by the Ministry of Food and Drug Safety to improve dark skin tone and improve wrinkles.

**Ginseng Callus Culture Extract :** Effects for Anti-aging & Antioxidant, It has high stability, It has biocompatibility, Revitalization of metabolism, Providing Vitality & Energy

**Niacinamide:** Functional Ingredients for Whitening, Improve Skin Tone by Preventing Skin Discoloration inducing ingredients, Prevents Moisture loss and prevents dry skin, Maintain Skin Health by Strengthening skin barrier

**Adenosine :** Functional Ingredients for Wrinkle Improvement, Enhancing Skin Elasticity and Improving Wrinkles, As a conditioning agent, restores skin regeneration, Revitalize Tired Skin

**Rosa Damascena Callus Culture Extract :** Improvement of aging skin, Skin protection from free radicals, Blocked by harmful substances, Reduce skin sensitization, Providing Vitality & Energy





### **Active Purifying Cream**

- A cream that contains Centella asiatica extract and aloe vera leaf juice to improve the damaged skin barrier and at the same time provide moisture with abundant moisturizing ingredients, and jojoba seed oil, a skin-like ingredient, helps control oil.
- Various moisturizing ingredients such as panthenol called provitamin B5, beta-glucan, a natural polymer, and ttehalose, which is contained in large amounts in resurrection plants such as cactus, are delivered to the skin to help maintain moisture.

**Madecassoside**: Reducing Skin Irritation, Improvement for Skin Elasticity, Antioxidant Effect, Smooth Skin, Nutrient Supply

**Chamaecyparis Obtusa Leaf Extract :** Prevention of oxidative damage, Helps in troubled Skin Care, Enhancing Skin Immunity, Blocking the activity of harmful substances, Skin tone improvement

**Morus Alba Bark Extract :** Supplying Skin Conditioning, Skin vitality & Energy, Smooth skin texture, The role of bocks moisture evaporation, Make the skin comfortable

**Aloe Barbadensis Leaf Juice :** Soothing Sensitive Skin, Maintaining Skin Moisturizing Power, Clear & Bright Skin, Contains vitamin & Amino Acids, Helps with skin health





Multi Oxygen Cream

- A cream that contains plant-derived extracts and 7-layered hyaluronic acid, which moisturizes and softens the skin weakened by various external stimuli, and at the same time helps to make the skin healthy.
- It does not contain mineral oil, silicone oil, animal raw material, PEG, paraben, synthetic fragrance, or pigment, so it can be used without irritation even for sensitive skin.

**Rosemarinus Officinalis Leaf Extract :** Prevention of oxidative damage, Troubled Skin Care, Blocking Active Skin, Removal of Harmful Substances, Skin Conditioning

**7-Layered Hyaluronic Acid :** Supplying Moisture to the Skin, Inhibition of Moisture Evaporation, Moisture Film Formation, Reduction of External Irritation, Fixing Moisture in Skin

**Scutellaria Baicalensis Root Extract :** Soothing Sensitive Skin, Improving Skin Tone, Prevention of Wrinkle Formation, Skin Protection Function, Skin Moisturizing Effect

**Polygonum Cuspidatum Extract:** Prevention of oxidative damage, Inhibition of Tyrosinase, Function for Skin Protection, Vital Skin, Control of deterioration by oxidation



**Composition: 50ml** 

### **24K Gold Clarifying Cream**

- → Strengthen skin's natural power with 24K Gold therapy
- → Gold care cream consisting of 24K Gold ingredient to replenish enriched nutrient s, and to make skin firm with intensive care.

### > Luminant skin glow.

With 24K gold ingredients, luxury care providing glossy skin.

➤ With PDRN ingredient, skin revitalization raises UP Revitalize and plump up untidy face lines.

### Nourished skin

Apply 24K Gold Clarifying Cream on the worried area about elasticity. It fills up with nourishing moisturizers to help keep your skin moist for longer.



## **Main Ingredient**

- 1. Gold Blood circulation, Improves skin texture, Improves wrinkles
- 2. Sodium DNA (PDRN)
  Skin care, Moisturizing nourishment, Recovering damaged skin

Goldened nourishment providing deep to rough skin!

### We Recommend To Those!

- √ Those who's skin seems to have less elasticity than before
- √ Those who want vital and firm skin
- √ Those who want a rich nutritional care that I can do at home



# **HOW TO USE**





Take off an appropriate amount of the product and apply it in the direction of the skin texture then gently tap to absorb.

# **pH Vortex Bubble Foam**



A cleansing product containing Lactobacillus fermented lysate, which protects and moisturizes the skin, and balances the pH of the skin with a slightly acidic cleanser.

It gently deep cleanses fine dust, sebum, and oil adsorbed on the skin through anti-pollution ingredients and abundant microbubbles to make moist skin without tightness.

#Skin moisturizing #Microbubble #Deep Cleaning #Adsorption



pH Vortex Bubble Foam is a product designed to be easily and conveniently washed off for those who are concerned about complex skin concerns and the advantage of being able to take care of pores, waste, and dead skin cells at once.

It is composed of beneficial and safe ingredients for those who are looking for a mild cleanser or want to feel moist skin even after washing face.

# Beware of high pH cleansers!



Beware of high pH cleansers as they can disrupt the skin's acid mantle, a key defense mechanism of the skin.

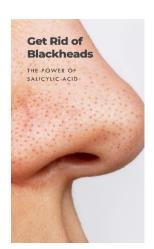
# Salicylic Acid

"Salicylic acid" is a keratolytic.

It is classified as the same drug as aspirin, and acts by dissolving the elements that make skin cells stick together by increasing skin moisture content.

It helps reduce acne scarring, does less damage to the skin than physically rubbing, and is effective in removing dead skin cells.

It also helps to suppress pigmentation.



# **Benefits of Salicylic Acid**

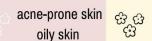
Salicylic Acid Lactic Acid



BHA



**AHA** 



dry skin sensitive skin



- anti-bacterial
- control sebum
- minimize pores
- reduce acne
- fade hyperpigmentation
- even skin complexion
- moisturize skin
- stimulate collagen
   production

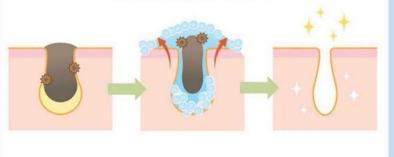


# **SALICYLIC ACID**

See how this BHA works to combat blackheads & enlarged pores...

Salicylic Acid penetrates pores to dissolve blockages such as dirt, dead skin cells, and sebum

It also increases cell turnover to brighten dull skin & smooth uneven texture



# Caution

It is one of the acid components that are easy to find in fruits, and it is accompanied by some irritation to the skin, for this reason, the Ministry of Food and Drug Safety limits the mixing limit for cosmetics to 0.5%.

#### **TYPES OF ACNE**











# **Lactobacillus Ferment Lysate**

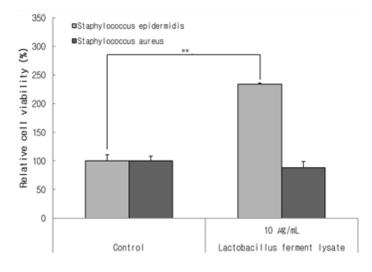
Lactobacillus fermented lysate is a type of lactobacillus that is a representative of lactic acid bacteria found in fermented products such as Korean kimchi, milk and cheese, as well as makgeolli(Korean traditional alcohol).

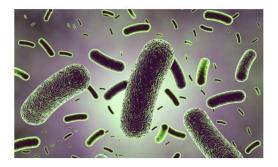
It is a fermented ingredient obtained by seed culture of Lactobacillus lactic acid bacteria, and it is good to use when you have rough or dry skin and need moisturizing.



The skin is colonized by a large number of microorganisms with a stable composition of species. However, disease states of skin such as acne vulgaris, psoriasis, and atopic dermatitis have specific microbiome compositions that are different from those of healthy skin. The target modulation of the skin microbiome can be a potential treatment for these skin diseases. Quorum sensing (QS), a bacterial cell-cell communication system, can control the survival of bacteria and increase cell density. Also, QS affects the pathogenicity of bacteria such as biofilm formation and protease production. In this study, we confirmed anti-QS activity of Amorepacific patented ingredients, which are Lactobacillus ferment lysate (using Lactobacillus plantarum APsulloc 331261, KCCM 11179P) through bio-reporter bacterial strain Chromobacterium violaceum.

The purple pigment production of C. violaceum controlled by QS was reduced 27,3% by adding 10 µg/mL of Lactobacillus ferment lysate (freeze dried). In addition, the Lactobacillus ferment lysate increased growth of Staphylococcus epidermidis 12% and decreased growth of Pseudomonas aeruginosa 38,5% and its biofilm formation 17,7% at a concentration of 10 µg/mL compared to the untreated control group. Moreover, S. epidermidis was cocultured with the representative dermatological bacterium Staphylococcus aureus in the same genus, the growth of S. epidermidis was increased 134% and the growth of S. aureus was decreased 13%. These results suggest that fermented lysate using Lactobacillus plantarum APsulloc 331261 may be useful as a cosmetic ingredient that can control the balance of skin microbiome.





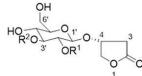
#### Taraxacum Officinale(Dandelion) Leaf Extract

Taraxacum Officinale(Dandelion) Leaf Extract, an EWG grade 1 and green grade raw material, is, as the name suggests, an ingredient extracted from dandelion leaves, and Western dandelion leaves themselves are raw materials used as food or medicinal herbs.

The reason why Taraxacum Officinale(Dandelion) Leaf Extract is used as food and medicinal herbs is because they have good effects on fever and detoxification, toilets, and stomachs, but the effects of using them as cosmetics ingredients are characterized by blocking skin problems and skin aging management.



Taraxacum officinale



1 R<sup>1</sup> = 4-hydroxyphenylacetyl

 $R^2 = 4$ -hydroxyphenylacetyl 2  $R^1 = 4$ -hydroxyphenylacetyl

 $R^2$  = phenylacetyl

3 R<sup>1</sup> = 4-hydroxyphenylacetyl R<sup>2</sup> = H

4 R<sup>1</sup> = 4-hydroxyphenylglyoxyl

 $R^2$  = phenylacetyl

5 R<sup>1</sup> = 4-hydroxyphenylacetyl

 $R^2$  = phenylacetyl

 $6 R^1 = 4$ -hydroxyphenylacetyl

4-hydroxyphenylglyoxyl =

 $R^2 = H$ 

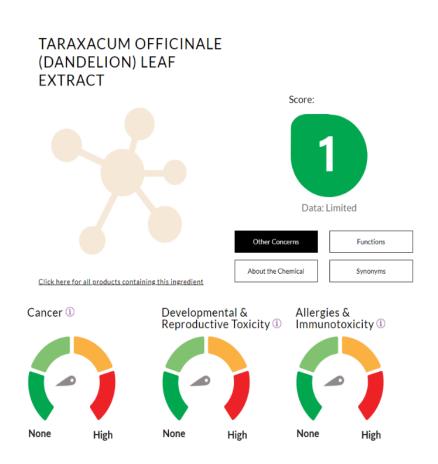
4-hydroxyphenylacetyl =

phenylacetyl =

#### Benefits of Taraxacum Officinale(Dandelion) Leaf Extract







#### Tannin

Restrains the evaporation of moisture in the skin and strengthens the skin barrier.

Tannins are naturally occurring chemical compounds, known as polyphenols, found in many plants.

In grapes, these compounds are found in the skin, seeds, and stems, and act as a defense mechanism against animals and insects.

When it comes to aging wines, tannins can be imparted by wood barrels.

Foods and beverages such as tea, dark chocolate, nuts, and coffee also contain tannins.



#### Citric Acid

Citric acid, also called citric acid, is an acid compound found in citrus fruits (citrus family) as a component called fruit acid.

Citric acid, also known as citric acid, promotes peeling when used in cosmetics, helping to regulate the skin cycle to normal circulation.



#### "AHA Ingredients"

Lactic acid is called a natural moisturizing factor and is mainly used in peeling products to help remove dead skin cells and make the skin smooth.

These lactic acids are known to help exfoliate old keratin and create a healthy stratum corneum in the skin layer.

Citric Acid is a weak acid with a chemical formula  $C_6H_8O_7$ . It can occur in two forms — monohydrate or water—free (anhydrous).

This acid is usually found in citrus fruits like lemons, oranges etc. It is considered as a tribasic acid.

It is odourless, sour in taste, and appears as a white crystalline solid. It has a monoclinic crystal structure. This organic acid was isolated for the first time by chemist Carl Wilhelm Scheele in the year 1784.

Since it is similar in resemblance to table salt, it is sold in the market as sour salt.



#### Betaine

Betaine is one of the oxidized carotenoids produced by plants and is abundant in yellow and red vegetables.

Betaine is a whole cell of vitamin A, and helps remove free radicals and prevent cell damage through antioxidant action.

Naturally occurring in the body and often plant derived from sugar beet—Betaine is a humectant that helps the skin stay hydrated, plump, and youthful. Betaine acts as a gentle hydrator that helps you skin gain and maintain moisture.

$$H_3C$$
 $O$ 
 $H_3C$ 
 $O$ 
 $O$ 
 $O$ 



Betaine as a skincare ingredient is one of the most gentle humectants you could ever encounter — perfect for any clean beauty routine.

As an amino acid with osmolyte properties, betaine can balance your skin's moisture content and improve its ability to retain hydration.

And, great news for all of us whose skin gets irritated by just breathing — this skincare ingredient is the solution you've needed all along.

This skincare ingredient is a very low-risk ingredient. It mixes well with everything, and it shouldn't cause any side effects unless you're allergic to it.

If you get a reaction from a skincare product containing it, check that it's not another ingredient in the same product.

Betaine helps hydrate your skin cells by acting as a natural magnet for water. When your skin cells become dehydrated, betaine will deliver water to dried-out cells and restore balance to the hydration of your skin.





#### How to Use

- 1. Pump an appropriate amount of content into your hands about 2-3 times to gently massage the entire face with bubble foams.
- 2. Rinse thoroughly with lukewarm water.





# Thank you,

More product will reveal in 2024.