



Durae's Jeju Bio center was established in Jeju-do.

Jeju-do is selected as the world natural heritage property by UNESCO and as the new 7wonders of nature. The bio center is working to discover, research and develop natural ingredients from plants growing in the natural environmental.

DURAE Corporation

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TRUST & CONFIDENCE

DURAE CORPORATION

Growing with customers by providing innovative materials and technology.

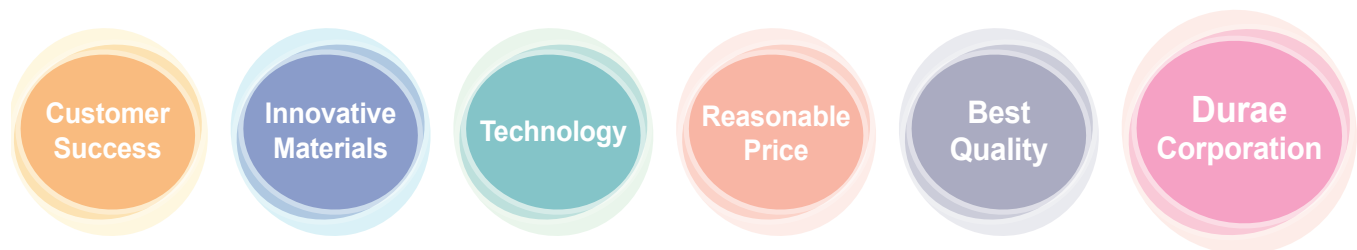
Durae always creates the new future with the customers. We will achieve a good and best company through the construction of the international business network on the basis of the rising company, belief best company.

www.durae.co.kr

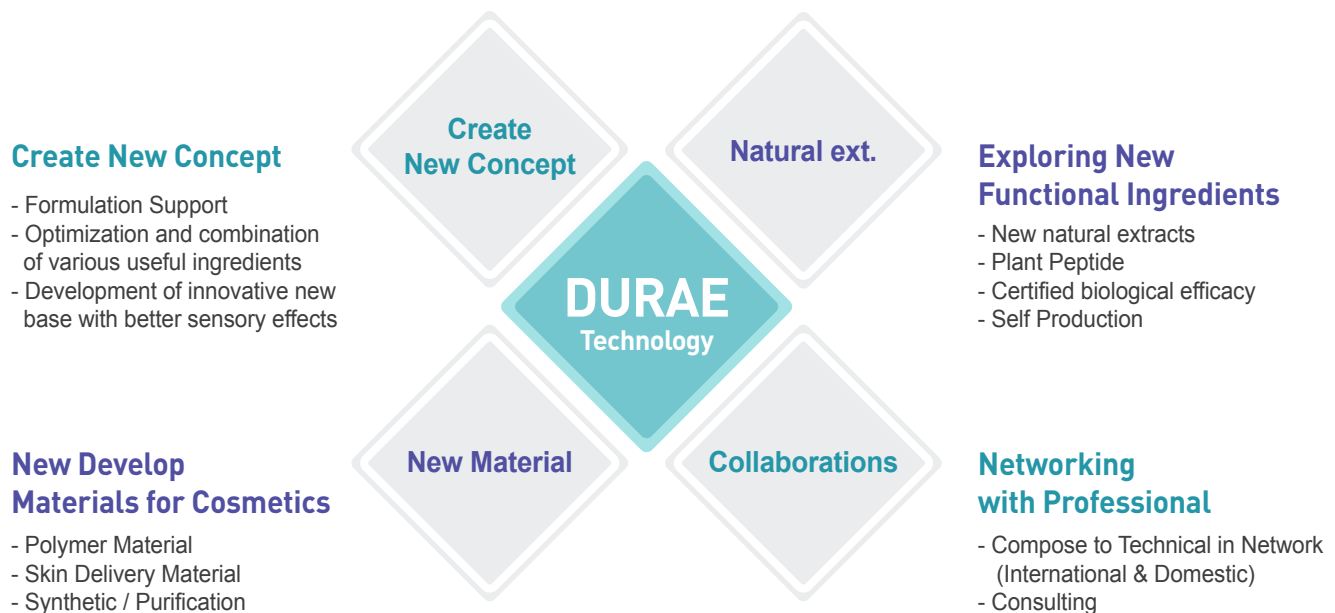


DURAE Corporation

We continue to develop the innovative ingredients of cosmetics and personal care products to improve the beauty all around the world. Since established in 1997, we have rapidly grown every year. We concentrate on the development and supply what our customers want.



Growing with customers by providing innovative materials and technology.









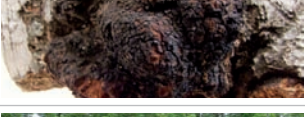
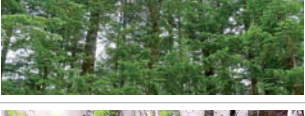



STAVECTOR (Stabilized Nanoencapsules)

Anti Wrinkles	Whitening	Anti Oxidant	Health Skin	Sliming	Nanoemulsion
Stavector Retinol	Stavector Ellagic Acid	Stavector CO-Q10	Stavector Ursolic Acid	Stavector Slim	Stavector LSB20
Stavector Resveratrol	Stavector Licorice				Stavector BBS

Dendrimer (Skin Delivery System)

Transdermal delivery system based on polyamidoamine dendrimer

Plant Peptide

Products	Characteristics	Remark
Green Tea Glycoprotein	Skin brightening Anti inflammatory	
Ginseng Glycoprotein	Healthy skin Moisturizing	
Red Ginseng Glycoprotein	Anti oxidant Collagen synthesis Anti aging	
Pine Needle Glycoprotein	Skin whitening Skin regeneration Anti aging activity	
Carrot Glycoprotein	Anti oxidant Healthy skin tone	
Golden Root Glycoprotein	Anti oxidant Anti aging Skin regeneration	
Chaga Glycoprotein	Anti oxidant Anti inflammatory	
Abies Sibirica Glycoprotein	Cell proliferation Anti aging Skin whitening	
Betula Pendula Buds Glycoprotein	Anti oxidant Anti aging	
Bergenia Glycoprotein	Anti oxidant Anti aging Cell proliferation	
Comarum Palustre Glycoprotein	Anti oxidant Anti aging	

Natural Extract

Products	Plant origin	INCI Name	Effects
Schnewhite	Lentinus Edoges (Mushroom)	Lentinus Edodes Extract	Skin Whitening, Anti oxidant
Pellia Seed Extract	Pellia Seed	Perilla Ocymoides Seed Extract	Anti inflammatory, Acne
Seed Germination	Black Soybean	Glycine Soja (soybean) Seed Extract	Anti oxidation, Anti aging
	Black Rice	Oryza Sativa (Rice) Extract	Anti oxidation, Anti aging
	Black Sesame	Sesamum Indicum(Sesame) Sprout Extract	Anti oxidation, Anti aging
	Mungbean	Phaseolus Radiatus Seed Extract	Anti oxidation
	Sorghum	Sorghum Vulgare Seed/Skin/Stalk Extract	Whitening
	Millet	Panicum Miliaceum(Millet) Seed Extract	Whitening
	Milk Thistle	Silybum Marianum Seed Extract	Whitening
Skin Plant Essence	Bilimbi	Averrhoa Bilimbi Leaf Extract	Relaxation, Acne, Anti inflammatory
	Jasmin	Jasminum Sambac (Jasmine) Flower Extract	Moisturizer, Relaxation, Skin regeneration
	Sambung Nyawa	Gynura Procumbens Leaf Extract	Anti oxidation, Anti aging
	Papaya	Carica Papaya (Papaya) Fruit Extract	Skin regeneration, Nutrition, Anti wrinkle
Tremoist-2B	Silver Ear (Mushroom)	Trimella Fuciformis Polysaccharide	Moisturize
Yambean	Yambean (Pachyrrhizus erosus)	Pachyrrhizus Erosus Root Extract	Moisturize, Skin lightening
Anti Oxidant Berry	Acai Berry	Euterpe Oleracea Fruit Extract	Anti oxidant, Anti inflammatory
	Camu Camu	Myrciaria Dubia Fruit Extract	Anti oxidant, Anti inflammatory
	Kaniwa	Chenopodium Quinoa Seed Extract	Anti oxidant, Anti inflammatory
	Yerba Mate	Ilex Paraguariensis Leaf Extract	Anti oxidant, Anti inflammatory
	Prunus Mume	Prunus Mume Fruit	Anti oxidant, Skin conditioning, Cooling
Flax Peptide Water	Flax Seed	Linum Usitatissimum(Linseed) Seed Extract	Atopy, Relaxation for skin trouble
Sugar Apple Peptide Water	Sugar Apple	Anona Cherimolia Fruit Extract	Skin tightening
Jeju Aloe Extract	Jeju Organic Aloe	Aloe Barbadensis Leaf Extract	Skin smooth and glowing
Scutellaria Extract	Scutellaria Baicalensis	Scutellaria Baicalensis Root Extract	Anti ageing, Anti microbial
Soapberry Water	Soap Nut	Sapindus Trifoiatus Fruit Extract	Mild detergent, Cleanser, Surfactant antimicrobial
Acacia Concinna Fruit Extract	Shikakai	Acacia Concinna Fruit Extract	Strengthen the hair root and promote hair growth. Dandrop
Chinese Honeylocust Fruit	Gleditsia Sinensis Lam	Gleditsia Sinensis Thorn / Houltuynia Cordata	Reduce hair loss, White hair condition

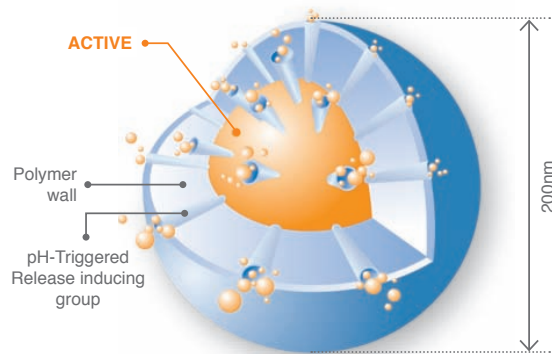
Natural Powder

Products	Plant origin	INCI Name	Effects
Jeju Bija Powder	BIJA	Torreyia Nucifera Seed Powder	Phytoncide
Lotus Germ Powder	Lotus Germ	Nelumbo Nucifera Seed Powder	Quench feeling, Body scrub
Kenaf Cellulose	Kenaf	Hibiscus Cannabinus Stem Powder	Exfoliation

Innovation for Young Looking Skin
By Stabilized Nanoencapsules

STAVECTOR

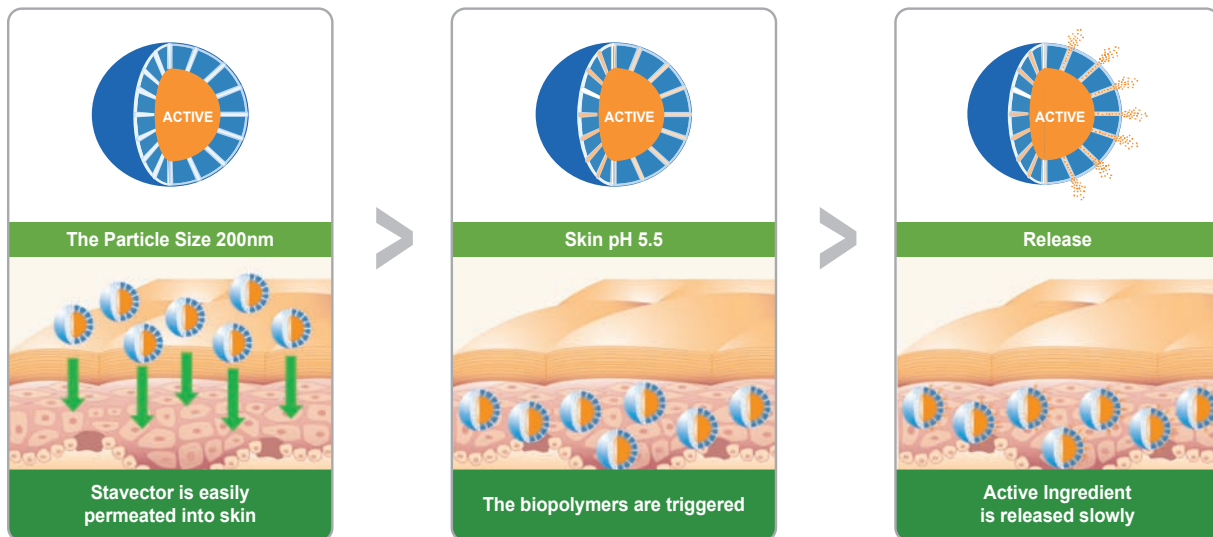
Newly developed Stavector is nanoencapsulated and stabilized active ingredients series to ensure high efficiency and long lasting effects.



Nanoencapsulation

1. Stavector is nanoencapsulation with the skin affinity biopolymer ; chitosan and cellulose acetate.
2. It is encapsulated with biopolymer through polymer complexation process.
3. Biopolymer is safe for the skin and enhance permeability in order to deliver high efficacy into the skin.

Enhanced skin permeability

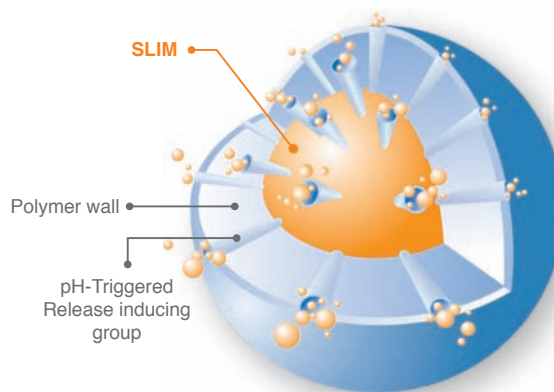


1. Controlled release guarantees the active ingredients are delivered to the skin in optimum level.
2. Encapsulation and stabilization of the active ingredients ensure the long lasting effects.
3. Nano-sized ingredients promote the enhanced penetration into the skin.
4. Skin friendly biopolymer encapsulation does no harm to skin.
5. The water base makes formulation and application easy.

STAVECTOR Slim

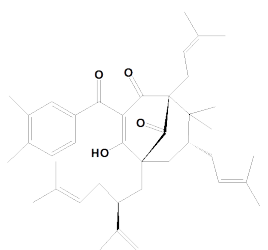
Lose Fat & Increase Lean Body Mass!
Wanna be Slim?

Specially encapsulated complexing of *garcinia cambogia*, *coleus forskohlii*, *phaseolus vulgaris* extract solution and tetrahydropiperine for cosmetic use.



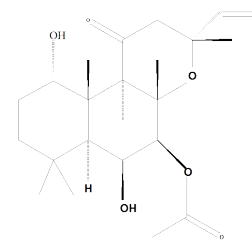
Active materials

Garcinia Cambogia Extract



-Garcinol-

Coleus Forskohlii Root Extract



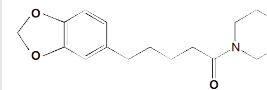
-Forskolin-

Phaseolus Vulgaris (Kidney Bean) Extract



Phaseolamin
 · Proteinaceous inhibitor of the enzyme alpha-amylase
 · Carbohydrate blocker
 · Amylase inhibitory activity

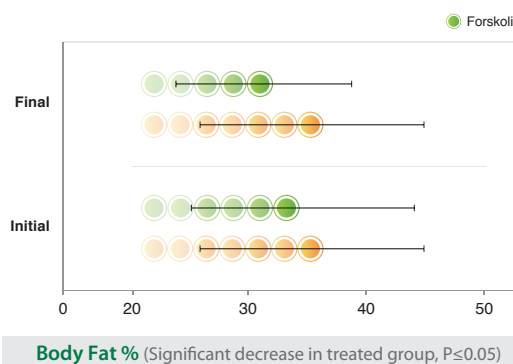
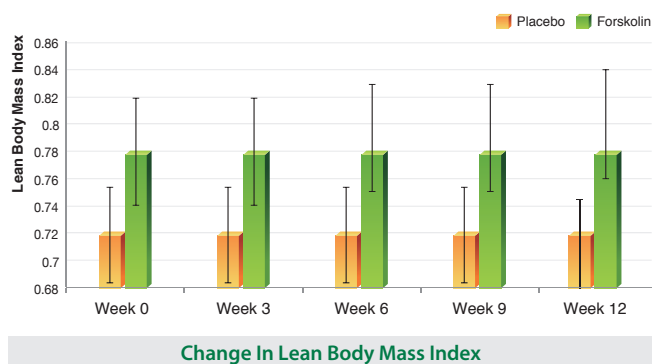
Tetrahydropiperine (improving the skin penetration)



-Tetrahydropiperine-

Main functions

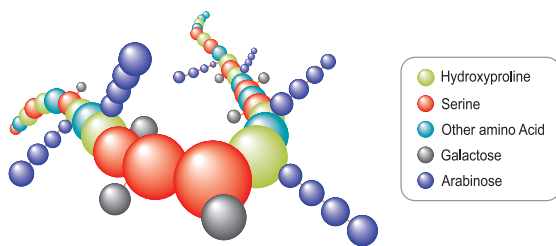
1. Significant decrements in body weight
2. Decreasing cholesterol and fatty acids



Plant Peptide

Plant peptide is existed in the primary cell wall of plant cells.
Keep Fresh skin and have Powerful Anti-aging Effects

Keep Fresh skin and have Powerful Anti aging Effects

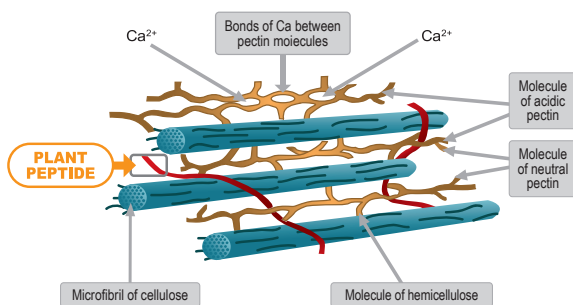


Plant peptide that exists in the first cell wall of plant cells

A scaffold protein that is massively produced during the growth of a plant or when cell walls are damaged

Preserving skin structure and elasticity

Preserves skin structure and elasticity by replenishing plant peptide that contains amino acids, glycine, proline, alanine, hydroxy proline which are the most abundant collagen components in the human body.



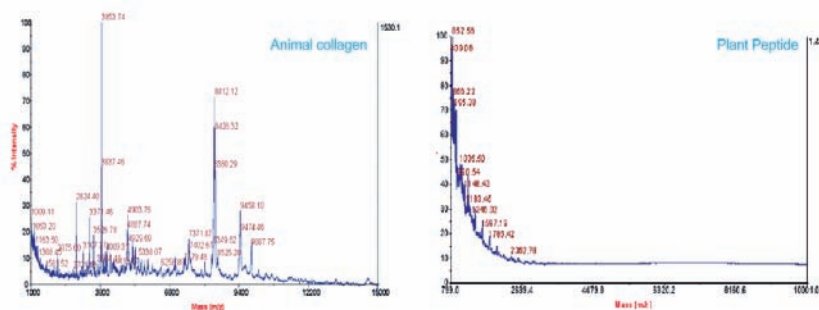
Physiological Activity

Plant peptide which acts as an important natural moisturizer for the skin contains more sugar than animal collagen, and this highly functional substance provides durability to physiological activities.

Safety

It safely breaks down when entering the skin since it is an amino acid which is a biological substance.

Distribution of molecular weight of collagen and vegetable collagen



Plant peptide directly delivers amino acids of each plant to the skin which makes it better for skin absorption compared to animal collagen, and this provides protection for the skin from aging.

Natural in Beauty Green Tea Glycoprotein

Characteristic

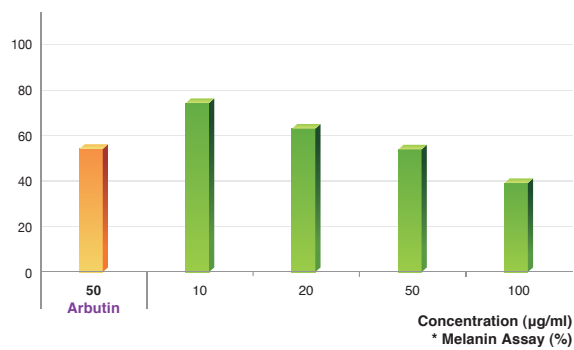
Green tea glycoprotein is made from JAKSUL TEA which is first tender sprouts picked in late spring when the nature brings back to life.

Effects

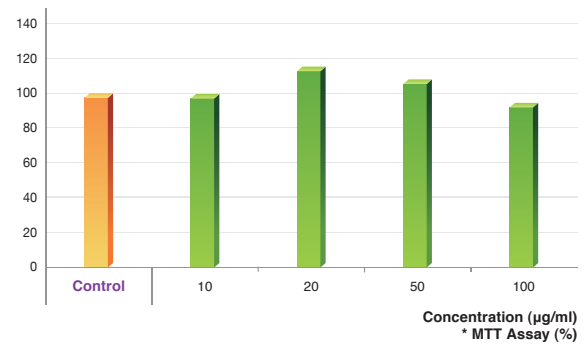
Skin brightening, Anti inflammatory

Double purpose-ONE-material

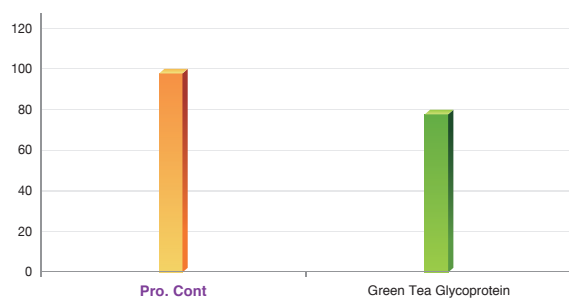
1. Melanin inhibition



2. Cytotoxicity(%)



3. Irritation relaxation(IL-1)(%)



4. Amino acid composition

Amino acid			
Aspartic acid	12.41	Isoleucine	0.88
Threonine	2.17	Leucine	1.61
Serine	3.14	Tyrosine	0.91
Glutamic acid	17.82	Phenylalanine	1.11
Glycine	3.88	Lysine	2.67
Alanine	2.01	Histidine	0.65
Valine	2.12	Arginine	4.09
Cystine	0.93	Proline	0.90
Methionine	0.00	etc.	42.70



Betula Bud Glycoprotein



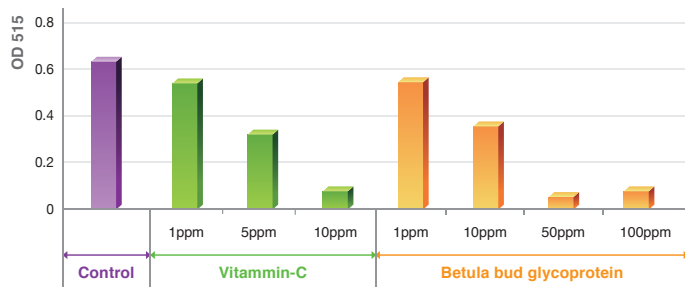
Characteristic

Betula pendula believe that the name “birch” is derived from the word “protect” as the ancients is valued and protected the plant, considering it a gift from the gods. The birch tree has a long history of medicinal use in different countries and cultures to cure skin diseased especially eczema, inflammations, rheumatism and urinary disorders.

Effects

Anti oxidant, Anti aging, Skin regeneration

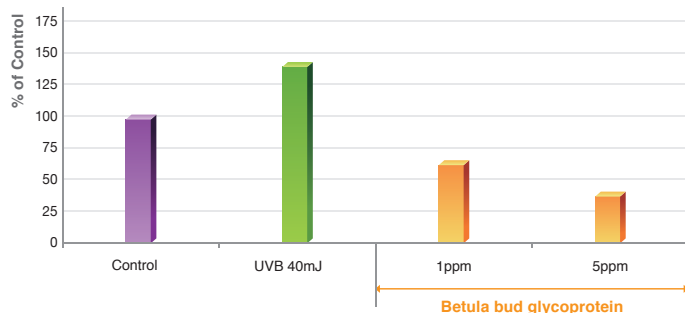
Anti oxidant activity (DPPH assay)



Amino acid composition

Amino acid	
Aspartic acid	6.24
Glutamic acid	14.91
Serine	2.31
Glycine	3.10
Histidine	0.68
Arginine	0.98
Threonine	1.28
Alanine	2.54
Proline	61.09
Tyrosine	1.04
Valine	1.33
Methionine	0.59
Cystine2	0.06
Ileucine	0.74
Leucine	1.15
Phenylalanine	0.92
Lysine	1.04

Anti aging activity (MMP-1 inhibition)





Schnewhite

INCI name

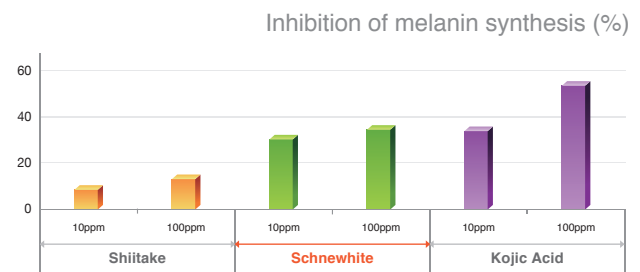
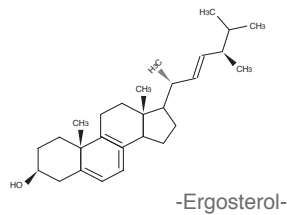
: Lentinus Edodes Extract

Characteristic

: It is the whitest shiitake and comes out only in spring after long winter.

Of a thousand shiitakes only a few ones becomes Schnewhite, so it is rather rare and has superior flavor and scent.

Effects : Whitening, Immuno modulatory, Anti oxidant



Seed Germination



Optimum Active Ingredients

Anti oxidant

- » Black Sesame (Sesamin)
- » Sorghum (Luteolin)
- » Black Rice (Ferulic acid)
- » Mungbean (Vitexin)

Anti aging

- » Black Sesame (Sesamin)
- » Black Soybean (Daidzein)
- » Black Rice (Ferulic acid)

Whitening

- » Sorghum (Luteolin)
- » Millet (p-Coumaric acid)
- » Milk thistle (Silymarin)

Seed Germination

Germination is the process by which plants, fungus and bacteria emerge from seeds and spores, and begin growth. When seeds began to germinate, the cell wall of seed and the protoplast have hydrated. Protoplasts transform from the gel state to the sol state. Various enzymes become activated, and nutrition stored in the seed begins to change.



Gynura Procumbens Leaf

Skin Plant Essence

INCI name : Gynura Procumbens, Averrhoa Bilimbi, Jasminum Sambac and Carica Papaya.

Characteristic

: Traditional medicine comprises knowledge systems that developed over generations with in various societies before the era of modern medicine.

Our products of research and development based on JAMU (Indonesian herbal medicine).

Gynura procumbens : Main ingredients of skin plant essence.

Indonesian Name is "Sambung = Persistence, Nvawa = Life"

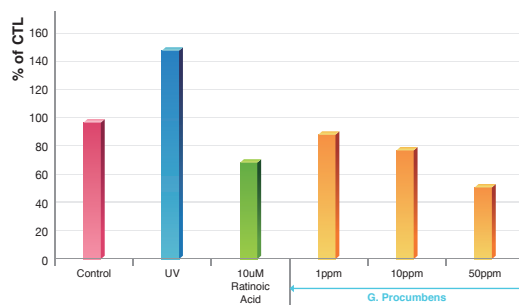
English Name is "Life sustainable Plant"

Traditional medicine use

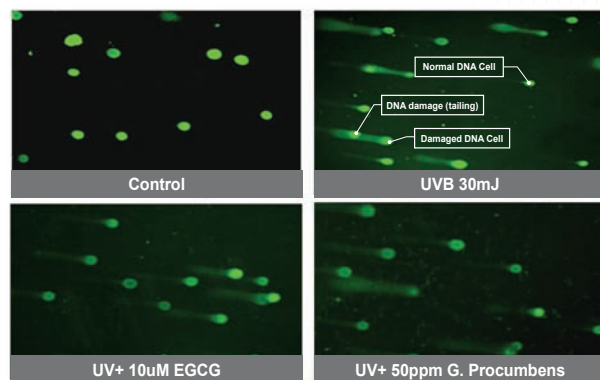
: Inflammation, rheumatism, Skin diseases, Diabetes, Cancer medication

Effects : Anti oxidant, Anti aging, Whitening

MMP-1 expression inhibition assay



DNA protection from UV damage



Tremoist-2B

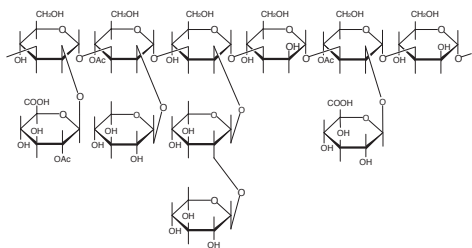
INCI name : Tremella Fuciformis Polysaccharide

Characteristic

: Tremoist-2B is an acidic hetero-polysaccharide extracted from the edible fruit bodies of the muchroom called Silver Ear in China. It is said that imperial Concubine Yang Kuei-fei, considered to be the most beautiful woman in Chinese history, used it for her facial care.

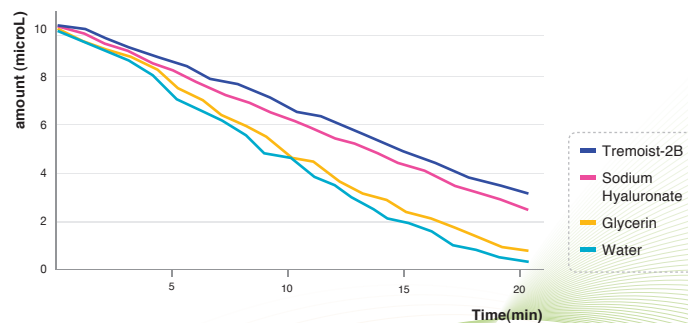
It is a kind of plant-derived hyaluronic acid, because it contains much amount of glucuronic acid (about 20%) as hyaluronic acid does.

Effects : Makes skin moist and smooth



-Glucuronic acid-

Amount of water inside





Soapberry

INCI name

: Sapindus Trifoliatus Fruit Extract

Characteristic

: The soapberry has been used for centuries by Native Americans in India, and is still utilized for many purposes in Asia today. The shell of the soapberry fruit is very high in saponins, which acts as a surfactant that removes stains from skin.

Effects : Mild detergent, Cleanser, Surfactant antimicrobial

Biologically active constituents : Saponins



Aloe

INCI name : Aloe Barbadensis Leaf Extract

Characteristic

: Aloe vera (syn. A. barbadensis Mill., A. vulgaris Lam.) is a species of Aloe, native to Northern Africa. Ancient times of Egyptians has been used externally to treat to various skin conditions such as cuts, burns and inflammation. Aloe is classed Liliopsida, well-known aloe is Aloe vera "aloe" is 'something bitter' in Arabic, "vera" is 'truth' in Latin.

Effects

: Moisture, Anti bacterial



Yambean

INCI name : Pachyrrhizus Erosus Root Extract

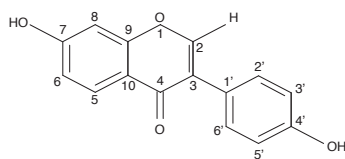
Characteristic

: Yambean is a component in the Indonesian traditional salad called "rujak".

It is eaten raw, sometimes with lemon juice and powdered chilli.

Bengkoang consists of 86-90% water. It contains only trace amounts of protein and lipids. There are other compounds in bengkoang, such as adenine, choline, saponine and flavonoids.

Effects : High moisture, UV absorption active material, Anti oxidant, Tyrosinase inhibition activity, Melanin synthesis Inhibition



-Daidzein-

Jejubija Powder

INCI name
: Torreya Nucifera Seed Powder



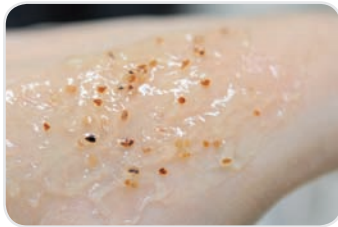
Lotus Germ Powder

INCI name
: Nelumbo Nucifera Seed Powder



Camellia Seed Powder

INCI name
: Camellia Japonica Seed Powder



Benefit & Effect

- Korean Origin, Natural 100% Powder
- 0.7~1.0mm size
- Help to remove dead skin from body, Making feel fresh and rejuvenated.

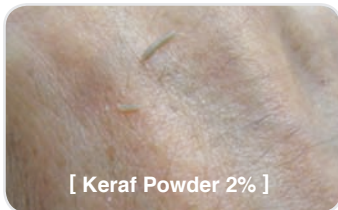


Kenaf cellulose

INCI name
: Hibiscus Cannabinus Stem Powder










Characteristic

- Effective and mild exfoliation
- Remove the rough skin layer leaving with a soft and supple skin.

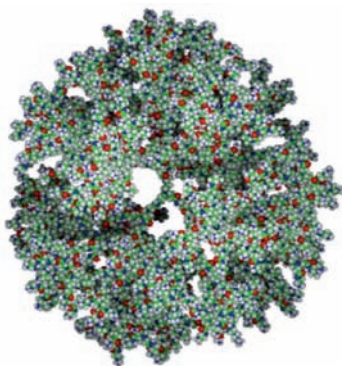


Kenaf cellulose property		Mineral oil absorption	
Average particle size	50 μ m	Kenaf cellulose powder	1 : 3.3
Total cellulose content	About 51%	Cellulose powder	1 : 1.2
Lignin content	About 17%	Silica powder	1 : 1.4
Pentosan content	About 19%	Skin fabric silica complex	1 : 1.5

Oil & Butter

Products	Common Name	Picture	Common Name	Effects	Feature
Oils	Jeju Bija Oil		Torreya Nucifera Seed Oil	Anti irritation Cell proliferation	Rich in Oleic acid and Linoleic acid
	Jeju Camellia Oil		Camellia Oleifera Seed Oil	Effect of calming skin and atopic dermatitis, Moisture	Pleasant feel Emollient Rich in Linoleic acid
	Vitamin Fruit Oil		Hippophae Rhamnoides Fruit Oil	Anti oxidant Anti microbial Anti inflammatory	Rich in lipids, water and fat soluble vitamins, and flavonoids
	Oriental Oil		Squalane (and) Pinus Koraiensis Seed Oil (and) Sesamum Indicum (Sesame) Seed Oil (and) Camellia Japonica Seed Oil (and) Prunus Armeniaca (Apricot) Kernel Oil (and) Prunus Mume Fruit Extract (and) Nelumbo Nucifera Germ Extract	Anti oxidant, Moisture, Anti irritation	Light feel Emollient Good skin affinity
	Orange Daylily Oil		Hemerocallis Fulva Flower Extract	Anti oxidant Anti irritaion	Rich in antioxidant compounds, such as polyphenolics, ascorbic acid, and b-carotene.
Butters	Greentea Butter		Camellia Sinensis Leaf Oil	Anti oxidant	Green Tea contains a high level of polyphenols and bioflavonoids
	Jeju Bija Butter		Torreya Nucifera Seed Oil	Anti irritation Cell proliferation	Rich in Oleic acid and Linoleic acid
	Sunflower Butter		Sunflower Seed Oil / Hydrogenated Sunflower Seed Oil Esters	Anti oxidant, Moisture	Rich in vitamin E and three vitamin B essential for human health
	Camellia Butter		Camellia Oleifera Seed Oil / Hydrogenated Camellia Oleifera Seed Oil Esters	Effect of calming skin and atopic dermatitis, Moisture	Glossy Cushion feel Good skin affinity

Skin Delivery System : Dendrimer



Differentiated Active Delivery System!

- ✓ Well-controlled size (3 to 10nm)
- ✓ Ease of functionalization (conjugation with biofunctional molecules)
- ✓ High water solubility and Biocompatibility

Article!

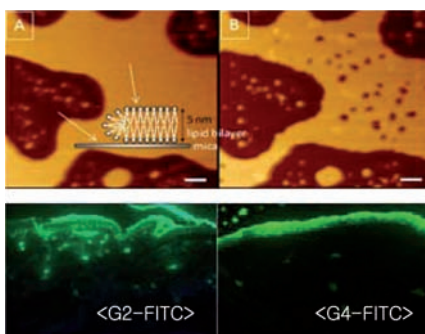
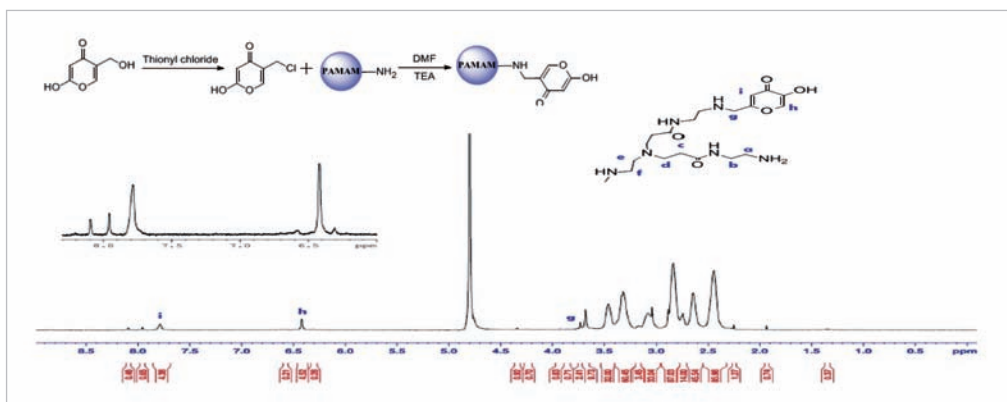
Effect of size, Surface Charge, and Hydrophobicity of Poly (amidoamine) Dendrimers on Their Skin Penetration Biomacromolecules. 2012, 13, 2154-2162

Patent pending!

Transdermal Delivery System based on PAMAM Dendrimer

Congugation with Dendrimer & Active!

- ✓ Synthesis of G2 PAMAM - Kojic acid conjugation



Nano-scale interactions between PAMAM dendrimers and cells

- A. The AFM images of the supported lipid bilayer without treatment.
- B. After exposure to generation 7 polyamidoamine (G7 PAMAM) dendrimer.

Size effect of PAMAM dendrimers on skin permeation

G2 PAMAM dendrimers are much more effective in skin permeation than G4 Dendrimers were conjugated with fluorescein isothiocyanate (FITC)