



Hair protection effect (UV/sunlight) | P4

Suppression of hair damage caused by washing | P3·P5 KOHAKUYUKI-Sake Lees Aging Fermented Extract SACRAN

Moisturizing the hair | P5

SHONAI BIJIN-Rice Fermented Extract (SAKE)
AF SHONAI BIJIN-Rice Fermented Extract (SAKE)

Scalp care | P8

Suika(Watermelon) Extract Obanazawa Cherry Koken Cherry Powder Koken LaFrance Powder Koken Shonai Kaki Powder Koken

\*Tilapia Atelocollagen SS

Styling | P4 Squeezed Rice Oil

Hair surface repair | P5.P6 SHONAI BIJIN-Rice Fermented Extract (SAKE) KOHAKUYUKI-Sake Lees Aging Fermented Extract Soluge AtelocollagenSS\*

Combability | P4·P6 Squeezed Rice Oil Soluge AtelocollagenSS\*

Preventing the fading of hair coloring agents | P3-P5-P6

Pholitect SACRAN AF SHONAI BIJIN-Rice Fermented Extract (SAKE) Soluge Atelocollagen \$5\*

#### Products list for hair care

			3 3		
Category	Product name	INCI Name	Outline	Features	Page
Natural	Pholitect BG Pholitect PE	Pholiota Microspora Polysaccharides *For products destined for China, it can be read as Polyamino Sugar Condensate	The first anti-inflammatory botanical shield polymer in the world!	Preventing the fading of hair coloring agents	- P3
macromolecule SACRA	SACRAN SACRAN B (P)	Aphanothece Sacrum Polysaccharides	A biomass material discovered from a Japanese blue-green algae	Preventing the fading of hair coloring agents     Suppression of hair damage caused by washing	
	Squeezed Rice Oil	Oryza Sativa (Rice) Bran Oil	Natural premium oil made purely from Japanese rice bran	Hair protection effect     (UV/sunlight)     Damage care effect     Combability     Styling	P4
Raw materials derived from Japanese rice	SHONAI BIJIN-Rice Fermented Extract (SAKE) BG	Rice Ferment Filtrate (Sake)	The multifunctional rice fermented extract developed using an ancient Japanese traditional technique	Moisturizing the hair     Hair surface repair	
	AF SHONAI BIJIN-Rice Fermented Extract BG	Rice Ferment Filtrate (Sake)	A fermented ancient Japanese material resulting from the pursuit of friendliness toward the skin and the environment	Moisturizing the hair     Preventing the fading of hair coloring agents	P5
	KOHAKUYUKI Sake Lees Aging Fermented Extract BG	Oryza Sativa (Rice) Lees Extract	Materials purely made in Japan pro- duced using the fermentation technolo- gy of a long-established sake brewery	Suppression of hair damage caused by washing     Hair surface repair	
Collagen	Tilapia Atelocollagen SS 1% GPD Tilapia Atelocollagen SS 1% PE	Succinoyl Atelocollagen	Native collagen with added succinic acid for excellent texture and formulation suitability	Hair surface repair Preventing the fading of hair coloring agents Combability P6	P6 - P7
	Tilapia Soluge 1% GPD Tilapia Soluge 1% PE	Atelocollagen	Middle-sized molecule collagen manu- factured using an atelocollagen extraction technology, a method for manufacturing medical collagen	Hair surface repair     Preventing the fading of hair coloring agents     Combability	
Japanese plant-derived raw materials	Suika(Watermelon) Extract Obanazawa BG	Citrullus Lanatus (Watermelon) Fruit Extract	Fruit extract from energy-filled young picked watermelon	· Scalp care	P8

# Natural macromolecule

Japanese plant-based raw materials that are unique and sustainable

Natural raw materials protect and care for your scalp and hair.

#### **Pholitect**

The first anti-inflammatory botanical shield polymer in the world!

#### Preventing the fading of hair coloring agents

White hair was dyed with a hair color. Bundles of dyed hair were washed by shaking them in a 1% SDS solution that contained water (control) or a 1% Pholitect solution and rinsed with running water. The water was removed, and hair was dried with a hair dryer. This procedure was repeated five times. Then, the changes in hair color before after rinsing were measured using a chronometer.



Based on in-house data

	Control	1% Pholitect
Red		
Navy		

Based on in-house data

It is expected to prevent the fading of hair coloring agents.

#### Smooth foam shampoo

	Ingredients	Blending rate (%)
Α	Water	up to 100
	Betaine	0.1
	Disodium EDTA	0.1
	Polyquaternium-10	0.25
	Isopropyl Alcohol	0.15
	Sodium Chloride	Appropriate amount
В	Phenoxyethanol	0.6
	Pentylene Glycol	2
	Ethylhexylglycerin	0.3
	Tocopherol	Appropriate amount
	Pholitect BG	1
	Sodium Lauroyl Sarcosinate	1.5
С	Cocamidopropyl Betaine	2.1
	Sodium Lauryl Sulfoacetate	5
	Disodium Laureth Sulfosuccinate	6.9
	Sodium Carbonate	Appropriate amount
D	Citric Acid	Appropriate amount

pH5  $\sim$  5.5

Production methods

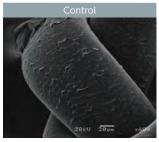
- Heat A and B to 80 °C and dissolve them in the solution.
   While keeping the temperature at 80 °C, add C and dissolve it in the solution.
- 3 Add D to the solution, dissolving it.
- After confirming that D is completely dissolved, cool to 30 °C. For more detailed production methods, please contact our sales representative.

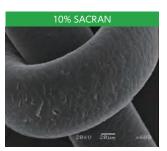
#### SACRAN™

A biomass material discovered from a Japanese blue-green algae

#### Suppression of hair damage caused by washing

Damaged hair was treated with either water (control) or a 10% SACRAN solution (0.05% Aphanothece sacrum polysaccharide), then rinsed with water and dried. This was repeated 10 times and observed with an electron microscope (SEM).





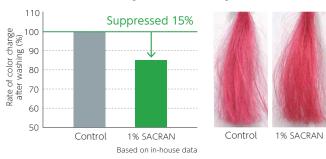
By adding SACRAN, smoothness while washing hair was improved and cuticle improvement effects were observed.

Based on in-house data

When added to in-bath products, it is expected to improve smoothness and squeaking sensation when washing hair.

#### Preventing the fading of hair coloring agents

White hair was dyed with a hair color. Bundles of dyed hair were washed by shaking them in a 1% SDS solution that contained water (control) or a 1% SACRAN solution (0.005% Aphanothece sacrum polysaccharide) and then rinsed with running water. The water was removed, and hair was dried with a hair dryer. This procedure was repeated five times. Then, the changes in hair color before after rinsing were measured using a chronometer.



It is expected to repair the surface of the hair and prevent the outflow of dye to control hair color fading.

# Cosmetics raw materials derived from Japanese rice

Cosmetics raw materials developed through a natural manufacturing process using carefully selected Japanese rice

This raw material utilizes traditional Japanese fermentation techniques inspired by sake and sake lees, which are deeply rooted in Japan's cultural heritage.

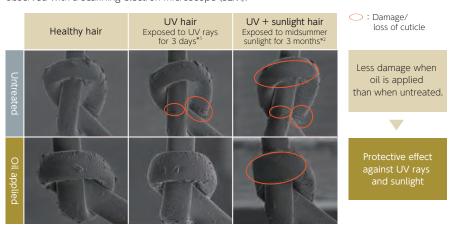
It contains a diverse range of rice-derived compounds and fermented bioactives that function to protect hair from multiple forms of damage, leading to beautiful hair.

#### Squeezed Rice Oil

Natural premium oil made purely from Japanese rice bran

#### Hair protection effect (UV/sunlight)

Untreated and oil-applied healthy hair is irradiated with UV and sunlight, and hair condition is observed with a scanning electron microscope (SEM).



\*1 UV treatment: Irradiated by 254nm wavelength UV radiation for 3 J/cm² (daily total UVB exposure is 1-2 J/cm²) \*2 Sunlight treatment: Irradiated with light at a wavelength of 300-800nm for 6.5 hours (a total of 1,800J/cm², equivalent to 3 months of exposure when spending an hour outside at noon in midsummer)

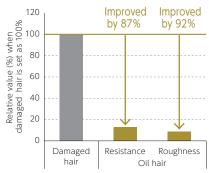
\*\*Based on in-house data\*

The application of Squeezed Rice Oil can be expected to protect hair from UV rays.

Squeezed Rice Oil is applied to damaged hair, and sensory evalua-

#### Smooth combing

Resistance and roughness of damaged hair and oil hair (damaged hair with Squeezed Rice Oil applied to it) are measured with a friction meter to evaluate how smoothly the hair flows through a comb.



Based on in-house data

Squeezed Rice Oil improves resistance and roughness experienced when combing damaged hair, leading to smoother hair.

#### Damage care effect

Sensory evaluation for hair tion is conducted to compare it with healthy and damaged hair. 180 Squeezed Rice Oil Squeezed Rice Oil Healthy hair Damaged Healthy haii Damaged Damaged Healthy hair Damaged Healthy hai Damaged hair hair hair Dryness Smoothness Finger passage Moist feeling Likable texture Based on in-house data

With the application of Squeezed Rice Oil, the dryness, smoothness, passage of fingers through the hair, and moist feeling of bleached damaged hair are improved to the same as or better than healthy hair, and the hair texture is also improved to the same level as healthy hair.

#### Styling



Not applied Applied



Based on in-house data

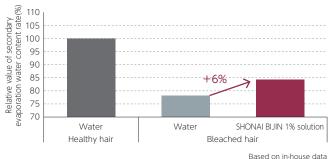
The application of Squeezed Rice Oil prevents hair from spreading due to damage for a manageable and glossy finish.

#### SHONAI BIJIN-Rice Fermented Extract (SAKE)

The multifunctional rice fermented extract developed using an ancient Japanese traditional technique

#### Moisturizing the hair

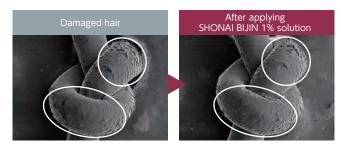
Healthy hair/bleached hair was soaked in each sample and left at rest in a thermostatic chamber for 24 hours. Then, the secondary evaporation water content rate was measured for each type of hair.



Confirmed the effect of replenishing moisture lost due to damage

#### Hair surface repair

The damaged hair was observed with SEM, and after applying SHONAI BIJIN Rice Fermented Extract to the damaged hair, it was observed again with SEM.



Based on in-house data

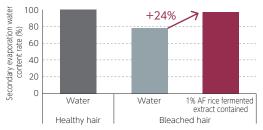
Confirmed the repair effect on the hair surface

#### AF SHONAI BIJIN-Rice Fermented Extract

A fermented ancient Japanese material resulting from the pursuit of friendliness toward the skin and the environment

#### Moisturizing the hair

Healthy hair/bleached hair was soaked in each sample and left at rest in a thermostatic chamber for 24 hours. Then, secondary evaporation water content rate was measured for each type of hair.

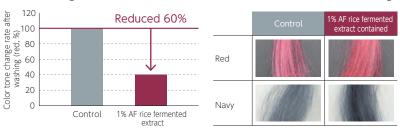


The natural water retention ability of the hair was restored to the level of healthy hair after having been lost due to damaging treatment.

Based on in-house data

#### Preventing the fading of hair coloring agents

A bundle of dyed hair was washed by shaking with a cleaning solution containing 1% control (1% SDS solution) or AF rice fermented extract. It was rinsed with running water and dried with a hair dryer. With the process above as determined above, the procedure was repeated five times. Change in color tone was measured with a chromometer before and after washing.



Organic acids (malic acid and succinic acid), amino acids and other hair repairing ingredients included in AF rice fermented extract prevent the discharge of dye during washing and they reduce the fading of hair coloring agents.

Based on in-house data

Expected to prevent the fading of hair coloring agents by compensating for lost moisture in hair and by repairing the damaged inside hair.

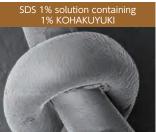
## KOHAKUYUKI-Sake Lees Aging Fermented Extract

Materials purely made in Japan produced using the fermentation technology of a long-established sake brewery

#### Suppression of hair damage caused by washing

Damaged hair was washed with a controlled solution (1% SDS solution) or a controlled solution containing 1% aging sake lees extract, dried with a towel, and then dried using a dryer. This was repeated 10 times and observed with an electron microscope (SEM).



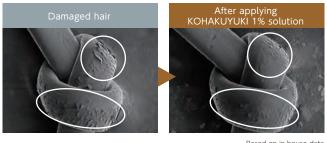


Based on in-house data

Confirmed the effect of suppressing frictional damage during washing

#### Hair surface repair

The damaged hair was observed with SEM, and after applying KOHAKUYUKI-Aging Fermented Sake Lees Extract to the damaged hair, it was observed again with SEM.



Based on in-house data

Confirmed the repair effect on the hair surface



#### Collagen with high biological compatibility from a medical device manufacturer

Collagen is the main component of the skin and bones. In particular, approximately 70% of the dermis which contains hair roots and follicles is composed of collagen. If the amount or quality of collagen declines, this may cause wrinkles, cause the skin to sag, or reduce the elasticity of the skin.

#### Types and Applications of Collagen

Also referred to as Native collagen. This type of collagen is made up of high molecular weight proteins arranged in a

triple helix structure, giving it an elongated shape.

It has excellent moisturizing properties and barrier properties against external stressors.

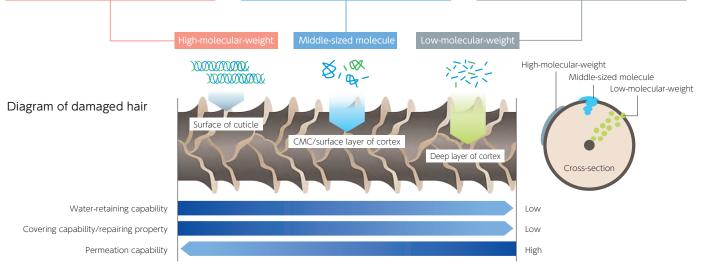
A new concept and new size of collagen that has never been seen on the market before.

This collagen offers a well-balanced combination of the characteristics of both high and low molecular weight collagen, delivering multiple benefits to the hair.

### Low molecular weight

This type of collagen is produced through the hydrolysis of collagen.

It is believed to permeate deep into the hair and provide effective results.



#### Recommended Raw Materials

#### Atelocollagen SS

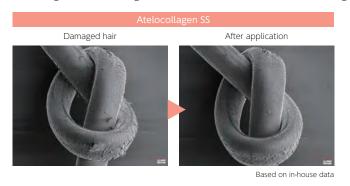
Native collagen with added succinic acid, which is effective in caring for damaged hair

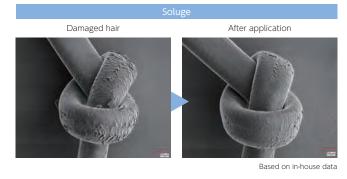
#### Soluge

A new collagen concept that is highly effective and makes it possible to flexibly design formulations

#### Hair surface repair (cuticle protection)

Damaged hair was examined using a scanning electron microscope (SEM). Each sample of damaged hair was soaked in an aqueous solution containing 1% (0.01% collagen) for five minutes, the hair was dried overnight, and then the hair was examined again using a SEM.

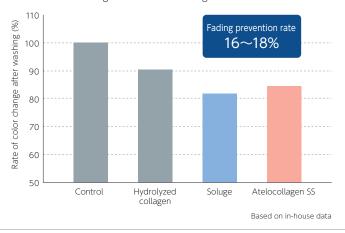




It was confirmed to both Soluge and AtelocollagenSS are effective for coating damaged cuticles and conditioning hair.

#### Preventing the fading of hair coloring agents

White hair was dyed with a hair color. Bundles of dyed hair were washed by shaking them in a cleaning solution containing 1% sample (1% SDS) and rinsed with running water. The water was removed, and hair was dried with a hair dryer. This procedure was repeated five times. Then, the changes in hair color before after rinsing were measured using a chronometer.



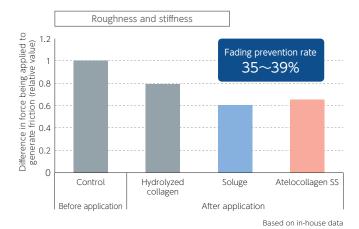


It was confirmed that both AtelocollagenSS and Soluge are effective for preventing hair color fading.

#### Improved ease of combing

Healthy hair and damaged hair were examined using a tribometer to determine ease of combing. Each sample of damaged hair was then soaked in an aqueous solution containing 0.1% (0.001% collagen) and examined again using a tribometer.





Both Soluge and AtelocollagenSS address difficult hair brushing caused by hair damage to make the hair smooth and eliminate roughness and stiffness.

#### Formulation with Collagen

Damage Renair Collagen Hair Pack

Damage	керап	Collageri Hali Fack
Collagen-Based Repair		Two types of collagen components help repair damaged hair cuticles.
Collagen C Effect	oating	A collagen-based wrapping effect smooths the hair surface, enhancing comb-through and overall feel.
Improved Color Reter	ntion	Collagen repairs the hair surface, helping maintain hair color for longer-lasting results.
Production methods	Add C, D, E, and F in order, Stirring the Solution.	

	Ingredients	Blending rate (%)
	Water	up to 100
А	Behentrimonium Chloride (80%)	2.5
	Isopropyl Myristate	2
	Dipropylene Glycol	5
	Steareth-7	1
	Soluge	1
	Sodium Benzoate	Appropriate amount
В	Stearyl Alcohol	5
С	Dimethicone 2	
D	Citric Acid	Appropriate amount
E	Disodium EDTA	Appropriate amount
F	Atelocollagen SS	0.1%

pH4 ~ 5

# Botanical Extracts and Powders

Upcycled Japanese botanical raw materials produced using natural methods (hot water extraction and freeze-drying)

Plant-derived fruit acids, amino acids and polyphenols condition the skin and lead to a healthy scalp.

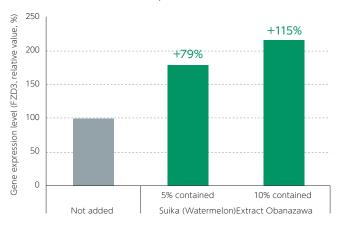
#### Suika (Watermelon) Extract Obanazawa

Young-picked fruits with full of energy

#### Scalp care

Promotion of FZD3 synthesis

Each of the samples was added to human fibroblasts. Following culturing, the cells were analyzed using a DNA microarray, and the gene expression level was analyzed.



The level of expression of the gene involved in hair follicle generation increased.  ${}^{\rm Based\ on\ in-house\ data}$ 

It is expected to condition the scalp environment.

Recommended	aw materials for scalp care
Hair follicle generation (gene expression)	Suika(Watermelon) Extract Obanazawa
Hydrating	Suika(Watermelon) Extract Obanazawa Cherry Koken Cherry Powder Koken LaFrance Powder Koken Shonai Kaki Powder Koken
Prevents the loss of firmness and sagging	Cherry Koken Cherry Powder Koken LaFrance Powder Koken Shonai Kaki Powder Koken
Anti-glycation care	Suika(Watermelon) Extract Obanazawa
Antioxidant care	Suika(Watermelon) Extract Obanazawa Cherry Koken Cherry Powder Koken LaFrance Powder Koken Shonai Kaki Powder Koken
Anti-inflammatory care	Suika(Watermelon) Extract Obanazawa Cherry Koken Cherry Powder Koken
Improvement of rough skin	Cherry Powder Koken
Deodorant effect	Shonai Kaki Powder Koken

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