

# Products list for hair care

Product name	INCI name	Outline	Features
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
KOHAKUYUKI- Sake Lees Aging Fermented Extract BG	ORYZA SATIVA(RICE) LEES EXTRACT	Materials purely made in Japan produced using the fermentation technology of a long-established sake brewery	Suppression of hair damage caused by washing     Hair surface repair
Squeezed Rice Oil	ORYZA SATIVA(RICE) BRAN OIL	Natural premium oil made purely from Japanese rice bran	<ul><li> Hair protection effect (UV/sunlight)</li><li> Damage care effect</li><li> Combability</li><li> Styling</li></ul>
Pholitect BG Pholitect PE	PHOLIOTA MICROSPORA POLYSACCHAIRDES *For products destined for China, it can be read as poly amino sugar condensate	The first anti-inflammatory botanical shield polymer in the world	Prevening the fading of hair coloring agents
Suika(Watermelon) Extract Obanazawa BG	CITRULLUS LANATUS (WATERMELON) FRUIT EXTRACT	Fruit extract from energy-filled young picked watermelon	·Scalp care
Soluge 1% PE	ATELOCOLLAGEN	Soluge is a middle size collagen produced by harnessing technology to extract atelocollagen, a type of collagen used for medical purposes.	Hair surface repair     Combability

Hair protection effect (UV/sunlight) Squeezed Rice Oil 04

Suppression of hair damage caused by washing KOHAKUYUKI-Sake Lees Aging Fermeted Extract 03

Scalp care
Suika(Watermelon) Extract
Obanazawa 06

Moisturizing the hair SHONAI BIJIN-Rice Fermented Extract (SAKE) 01 AF SHONAI BIJIN-Rice Fermented Extract 02 Styling
Squeezed Rice Oil 04

### Hair surface repair

SHONAI BIJIN-Rice Fermented Extract (SAKE) 01 KOHAKUYUKI-Sake Lees Aging Fermeted Extract 03 Soluge 07

## Combability

Squeezed Rice Oil **04**Soluge **07** 

Prevening the fading of hair coloring agents AF SHONAI BIJIN-Rice Fermented Extract 02 Pholitect® 05

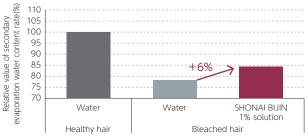
# SHONAI BIJIN-Rice Fermented Extract (SAKE)

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

01

#### Moisturizing the hair

[Test method] 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.



Based on in-house dat

Confirmed the effect of replenishing moisture lost due to damage

#### Hair surface repair

[Test method] 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

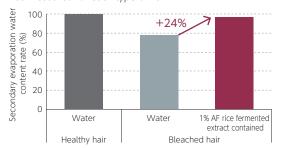
# AF SHONAI BIJIN-Rice Fermented Extract

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



# Moisturizing the hair

[Test method] 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.

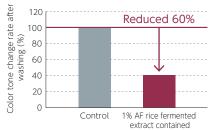


The natural water retention ability of the hair was restored to the level of healthy hair after having been lost due to damaging treatment.

Based on in-house data

# Preventing the fading of hair coloring agents

**[Test method]** 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

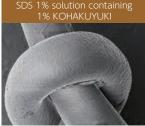
Materials purely made in Japan produced using the fermentation technology of a long-established sake brewery

# 03

#### Suppression of hair damage caused by washing

**[Test method]** 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

**[Test method]** 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

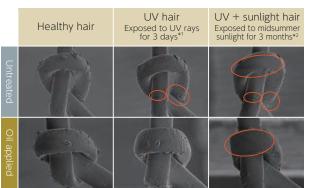
# Squeezed Rice Oil

Natural premium oil made purely from Japanese rice bran

# 04

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

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



: Damage/ loss of cuticle

Less damage when oil is applied than when untreated.

Protective effect against UV rays and sunlight

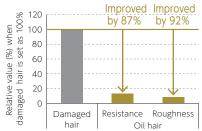
\*1 UV treatment: Irradiated by 254nm wavelength UV radiation for 3 J/cm² (daily total UVB exposure is 1-2 J/cm²)
\*2 Sunlight treatment: Irradiated with light at a wavelength of 300-800nm for 6.5 hours (a total of 1,800J/cm², equivalent to 3 months of exposure when spending an hour outside at noon in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

Based on in-house data

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

#### Smooth combing

[Test method] 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.



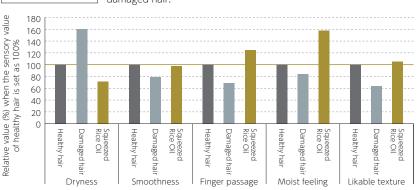
Based on in-house data

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

#### Damage care effect

Sensory evaluation for hair

[Test method] Squeezed Rice Oil is applied to damaged hair, and sensory evaluation is conducted to compare it with healthy and damaged hair.



. 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





Based on in-house data

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

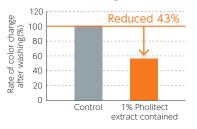
# Pholitect®

The first anti-inflammatory botanical shield polymer in the world

05

#### Preventing the fading of hair coloring agents

[Test method] A bundle of dyed hair was washed by shaking it with a cleaning solution containing 1% controlled solution (1% SDS solution) or AF rice fermented extract. It was rinsed with running water and dried with a hair dryer. The above procedure was repeated five times. The change in color tone was measured with a chromometer before and after washing.





Friction is reduced by the thickening effect of the solution, and the lost amino acids are replenished to suppress hair color fading.

Based on in-house data

Expected to prevent the fading of hair coloring.

# Suika (Watermelon) Extract Obanazawa

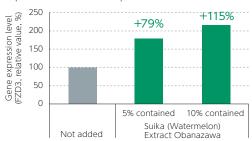
Young-picked fruits with full of energy

#### Scalp care

Promotion of FZD3 synthesis

[Test method] 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.  $$_{\rm Based\ on\ in\mbox{-}house\ data}$$ 

It is expected to condition the scalp environment.

# Soluge

Soluge is a middle size collagen produced by harnessing technology to extract atelocollagen, a type of collagen used for medical purposes.



#### Hair surface repair

[Test method] Damaged hair was observed with SEM. Soluge was applied to the damaged hair and the hair was observed again with SEM.



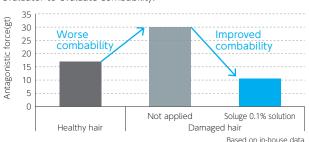


Based on in-house data

Confirmed the repair effect on the hair surface

#### Combability

[Test method] Healthy hair and damaged hair were measured with a friction evaluator to evaluate combability, then 0.1% Soluge was applied and the damaged hair was measured with a friction evaluator to evaluate combability.



Confirmed improvement in the resistance caused by damaged hair

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