

Based on Wakazumi (picking young) watermelon produced in Obanazawa, Yamagata

Suika (Watermelon) Extract Obanazawa

(CITRULLUS LANATUS (WATERMELON)
FRUIT EXTRACT)

All round care such as dullness, inflammation, skin quality, aging and scalp concerns by young-picked fruits with full of energy



Natural ingredient and manufacturing method

Upcycle
Wakazumi (picking young)

Beauty ingredients

Citrulline
Malic acid

Function

Anti-glycation
Antioxidant
Anti-inflammatory
Promotes turnover
Improves skin quality
Scalp care

The upcycling of young-picked Obanazawa Watermelon which are generally discarded

Obanazawa is located in a northeast part of Yamagata Prefecture. The climate of the basin, which is characterized by a large temperature difference between night and day, is ideal for cultivation of watermelons, making Obanazawa City the biggest watermelon producer in Japan during the summer.*



Fruit to be discarded after thinning



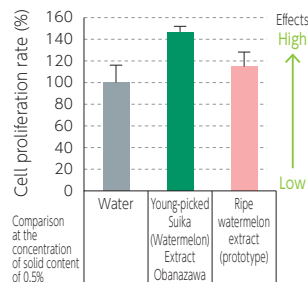
Wakazumi (picking young) Ripe fruit

Fruit thinning is the picking of excess unripe fruit to enable the other fruit to ripe deliciously. Picked unripe fruit are called wakazumi (picking young) fruit. Young-picked watermelons are partly used for pickles and eaten, but most of them are discarded. However, young-picked fruits are rich in beauty ingredients and have more functions than ripe fruits. Therefore, we clarified the usefulness of young-picked fruits for the skin and succeeded in upcycling them into cosmetic raw materials.

*Source: The website of Obanazawa City, Yamagata as of July 2022

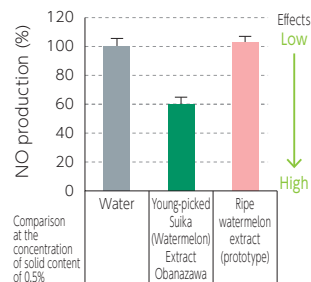
Proliferation of the cells

Test method: Each of the samples was added to human fibroblasts. Following a three-day culture, the cell count was measured.



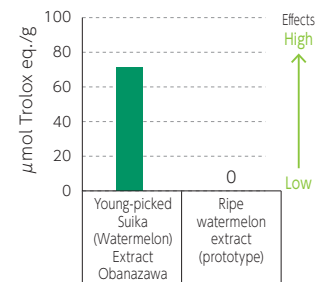
Anti-inflammatory

Test method: Immune cells were stimulated using LPS to induce an inflammatory response. A sample was added, and the level of NO production was then measured after cultivation overnight.



Antioxidant

Test method: TRAP assay was used to measure peroxy radical (a kind of active oxygen) scavenging activity.



Young-picked fruit is superior to ripe fruit in cell proliferation, anti-inflammatory effect and antioxidative effect.

Based on in-house data

Beauty ingredients contained in Wakazumi (picking young) watermelon

Belonging to the Cucurbitaceae family, watermelons are rich in citrulline, which is known as a component that plays an important role in the plant's survival in a harsh sun-drenched and dry environment. Citrulline was discovered in Japan in 1930. It is a free amino acid found in watermelons. Citrulline is one of the natural moisturizing factors (NMFs) that hydrate the skin. It is called a super amino acid because it also stimulates blood flow. It is expected that the young-picked watermelons will exhibit skin conditioning effects, as it is believed they contain many other beauty components such as fructose, glucose, inositol and malic acid (an alpha hydroxy acid or AHA) that are expected to exfoliate in a larger quantity than ripe fruit.

Natural sugar

(fructose, glucose, inositol sucrose and mannitol)

Moisture retention ingredient

Organic acids

(malic acid and shikimic acid)

Smoothens rough skin
Softens the skin and evens out texture

GABA

Promotes collagen production and turnover to support the improvement of the skin by increasing firmness and elasticity

Glutamic acid

Natural moisturizing factor (NMF)
Moisturizes the corneum

Alanine

Natural moisturizing factor (NMF)
Moisturizes the corneum

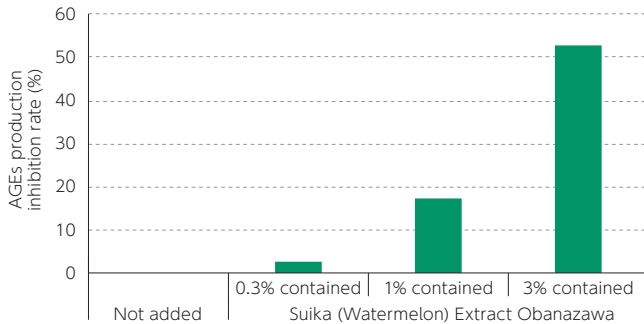
Citrulline

Suppression of collagen degradation and promotion of collagen production
Anti-inflammatory

Function

Anti-glycation

[Test method] The ingredient was added to a solution of glucose and bovine serum albumin. Then, the solution was kept at 60 °C for 48 hours. Then the solution was diluted tenfold and fluorescence intensity was determined.



A concentration-dependent anti-glycation effect was exhibited.

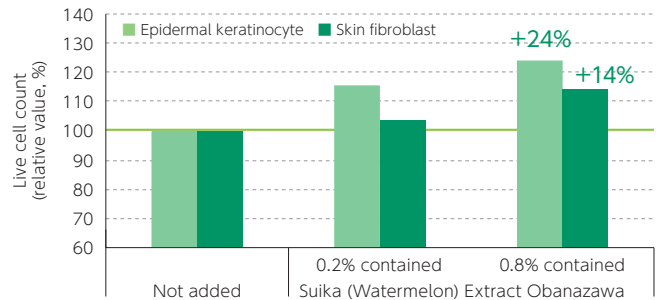
It is expected to have an effect in preventing the deterioration of skin elasticity, dullness and brightness.

Based on in-house data

Promotes turnover

Promotion of keratinocyte and fibroblast proliferation

[Test method] Each of the samples was added to normal human cells (keratinocytes and fibroblasts). Following cultivation, the cell count was measured.



It was confirmed that Suika (Watermelon) Extract Obanazawa increased cell proliferation.

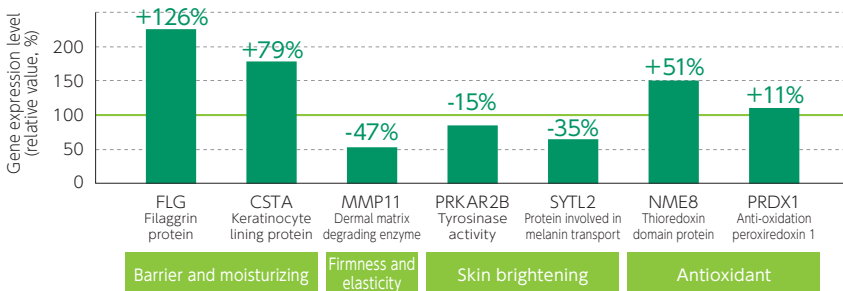
It is expected to promote turnover.

Based on in-house data

Improves skin quality

DNA microarray

[Test method] An aqueous solution of 10% Suika (Watermelon) Extract Obanazawa was added to human fibroblasts. Following culturing, the solution was analyzed using DNA microarray to determine the gene expression level.



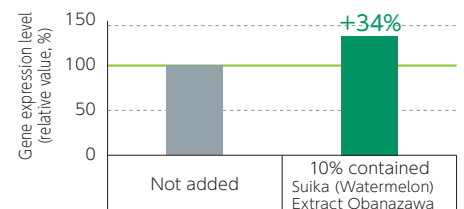
It is expected to have an effect acting on the genes involved in the skin barrier, moisturizing, firmness, elasticity, brightening and anti-oxidation.

Based on in-house data

Moisturizing

Promotion of HAS2 synthesis

[Test method] An aqueous solution of 10% Suika (Watermelon) Extract Obanazawa was added to fibroblasts. Following culturing, the level of hyaluronan synthase 2 (HAS2) expression was determined using RT-PCR.



It was confirmed that HAS2 synthesis was promoted.

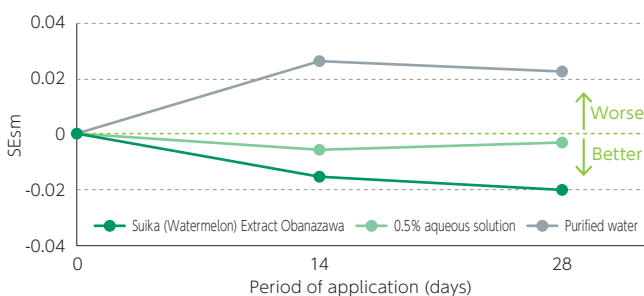
It is expected to increase the innate moisturizing power of the skin from within.

Based on in-house data

Improves skin quality (human study)

Smoothness

[Test method] Skin surface images were taken after continued application of each of the samples. Changes in the skin condition over time was quantified.



The Suika (Watermelon) Extract Obanazawa group showed improvements while the skin quality worsened in the water group.

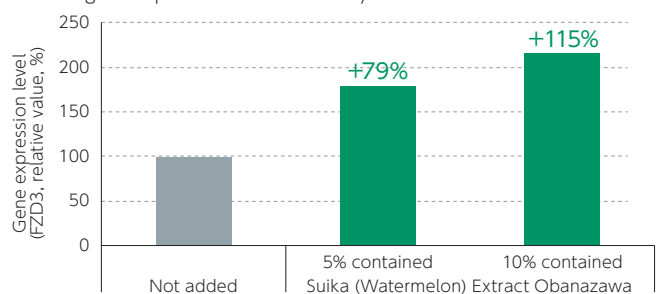
It is expected to improve skin smoothness.

Based on in-house data

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.

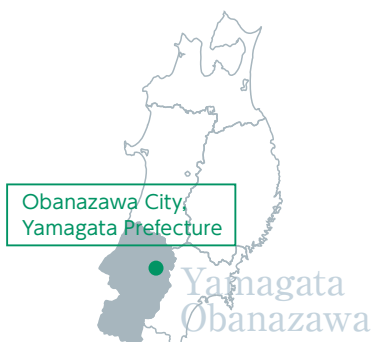


The level of expression of the gene involved in hair follicle generation increased.

It is expected to condition the scalp environment.

Based on in-house data

Place of origin

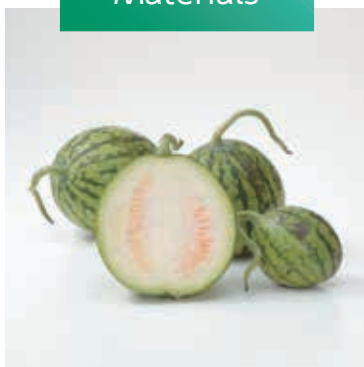


The town of snow, watermelons and the Hanagasa (flower-adorned hat) Festival

Obanazawa City, Yamagata

Requests for interviews are welcomed

Materials



The effective use of Wakazumi (picking young) watermelon which are generally discarded

Manufacturing method and specifications



Natural manufacturing method (hot water extraction)

Identifying the usefulness of unused resources in Japan, we will support the creation of a recycling-based society and the future-oriented production of cosmetics.



SUSTAINABLE



UPCYCLING



VEGAN-FRIENDLY



100% NATURAL



JAPANESE MATERIAL



CHINA NMPA REGISTERED



NON-CITES SPECIES



PALM OIL FREE



CRUELTY FREE



GMO FREE



ALCOHOL FREE

Recommended formulation ratio: 0.5% ~

Safety evaluation: Human Repeat Insult Patch Test(HRIPT) Conducted・Skin irritation alternative test(OECD TG439) Negative

Product No.	Product Name	INCI name	中文名称	Other ingredients	Package	Sample
WME-131	Suika (Watermelon) Extract Obanazawa BG	CITRULLUS LANATUS(WATERMELON) FRUIT EXTRACT	西瓜 (CITRULLUS LANATUS) 果提取物	Water・BG (Botanical-derived)	1kg	30g

The country of origin: Japan, The place of origin: Yamagata Pref.

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