

A unique skincare raw material that works from both the inside and outside\*<sup>1</sup> contains soluble beauty ingredients and fruit fibers

# Freeze-dried powder of the domestically produced fruit

(Cherry)

"Beni Sayaka",  
a cherry reminiscent  
of a deep red gemstone,  
prevents roughness and  
helps achieve resilient  
and translucent skin



Natural ingredient and manufacturing method
Sustainable
Freeze-drying method
Beauty ingredients
Anthocyanin
Polyphenol
Vitamin
Amino acids
Function
Second skin fiber
Soft scrubs
Anti-inflammatory
Improvement of rough skin
Promotes turnover
Moisturizing and improves resilience
Prevents the loss of firmness and sagging
Brightens up skin tones

\*Skin care from the skin surface to the stratum corneum

# Cherry Powder Koken

Cherries are often called "the jewel of fruits" due to their pretty round appearance. We focused on Beni Sayaka, variety of cherry in a striking deep red color, and the power of its red flesh.

Cherry Powder Koken was developed by freeze-drying the flesh, which contains multiple beauty ingredients, to preserve the benefits.

It is produced using a waterless method\*2, meaning it is formulated without water. This powder contains soluble beauty ingredients as well as insoluble fruit fibers. They collectively create a unique texture that resembles the flesh of real fruit.

\*2 An extraction method without using water

## Commitment to materials and manufacturing method

### ● Domestic materials

Beni Sayaka, variety of cherry from Yamagata Prefecture, the top cherry production area of Japan, was chosen for the product. We collaborated with local companies in Yamagata to ensure clear and accurate traceability. Requests for interviews are welcomed.

### ● Effective use of resources (sustainability)

We upcycled the whole fruit without wasting any. It is an environmentally friendly raw material that is cultivated as a pollinator for the highest-grade brand "Sato Nishiki", and also makes effective use of in edible non-standard products.

### ● Beauty ingredients derived from fruit

The product contains a number of beauty ingredients derived from fruit. Beni Sayaka contains a greater amount of polyphenols that have anti-inflammatory and antioxidant effects compared to other varieties of cherries.

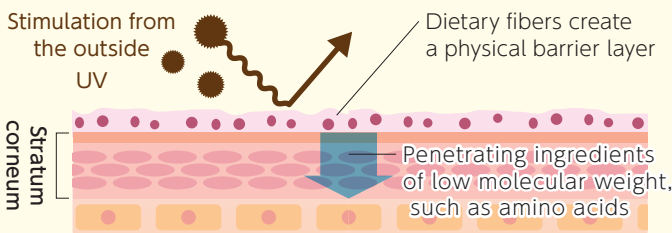
<b>Anthocyanin</b> Anti-inflammatory ingredient	<b>Flavonoid</b> Anti-inflammatory ingredient	<b>Polyphenol</b> Antioxidant ingredient	<b>Natural sugar</b> Moisture retention ingredient
<b>Folic acid</b> Promotes protein synthesis	<b>Amino acids</b> Natural moisturizing factor (NMF)	<b>Vitamins</b> Antioxidant ingredient	etc...

Beauty ingredients found in Beni Sayaka (comparison with Sato Nishiki)



## Conceptual drawing showing how the powder work

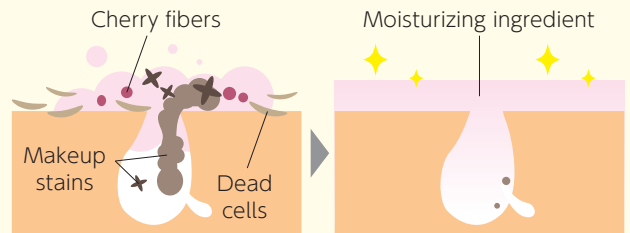
### No-rinse product (Second skin fiber\*3)



The physical barrier layer consisting of insoluble ingredients prevents the skin surface from receiving external stimulation and provides an anti-inflammatory effect. Penetrating ingredients of low molecular weight care for the skin from the inside.

\*3: A generic name given to the fibers that form a skin-like membrane or layer.

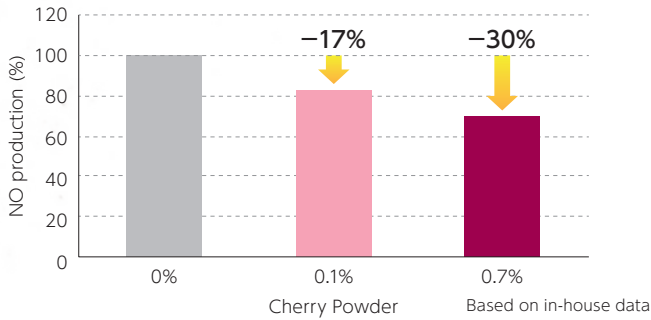
### Rinse-off product (Soft scrubs)



Cherry fibers gently remove the dead cells and dirt. Moisturizing ingredients, such as amino acids and natural sugar, cleanse the face moistly while also improving turnover.

### Anti-inflammatory effect

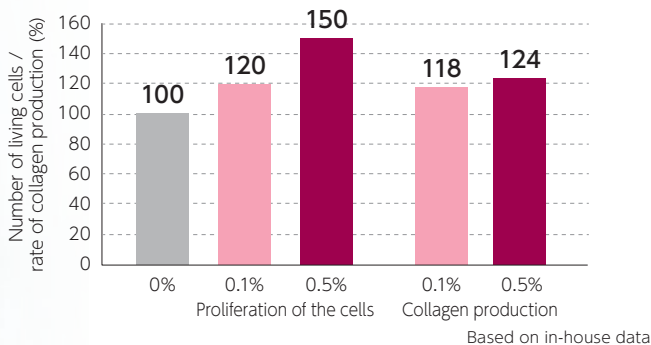
Immune cells were stimulated using LPS to induce an inflammatory response (NO production). A sample was added, and the level of NO production was then measured after cultivation overnight.



The addition of this raw material was found to inhibit inflammatory response (NO production).

### Promotion of turnover and collagen production

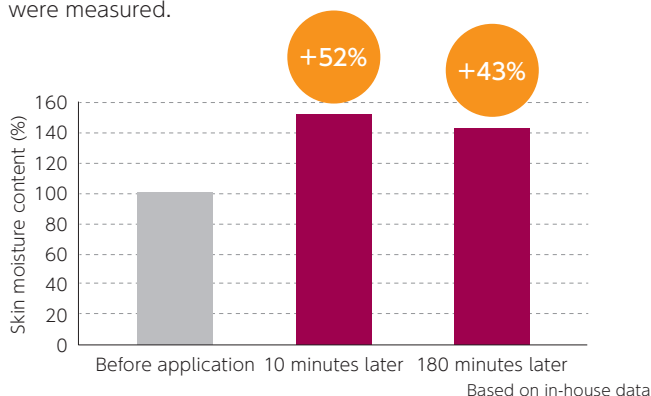
A sample was added to fibroblasts. The number of cells was measured after three days of cultivation. The rate of collagen production was measured after seven days of cultivation.



Cherry Powder was found to encourage the proliferation of fibroblasts and production of collagen. Cherry Powder is expected to improve resilience, promote turnover and collagen production that decreases with age.

### Moisturizing effect (human study)

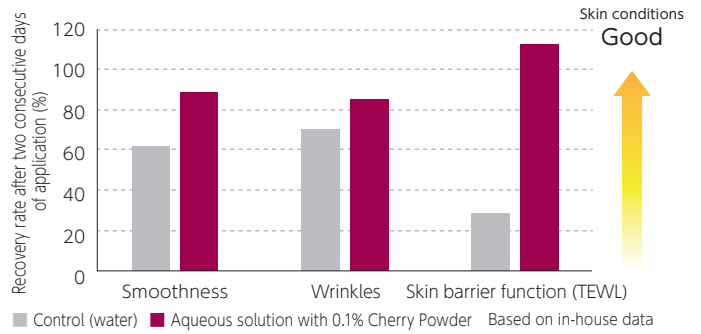
An aqueous solution with 0.1% Cherry Powder was applied to the skin. Time-dependent changes in skin moisture content were measured.



Application of an aqueous solution with Cherry Powder was found to have a moisturizing effect.

### Improvement of rough skin (human study)

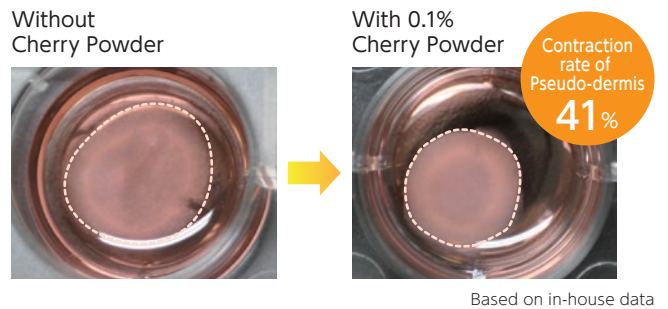
Rough skin was prepared by tape stripping. An aqueous solution with 0.1% Cherry Powder was applied for two consecutive days. Smoothness, wrinkles and skin barrier function (TEWL) were observed.



Application of this aqueous solution with 0.1% Cherry Powder was found to improve roughness and skin barrier function.

### Prevention of the loss of firmness and sagging

Pseudo-dermis with collagen\*4 was cultivated in a medium that contained the sample. The contraction rate of Pseudo-dermis was measured after seven days of cultivation.

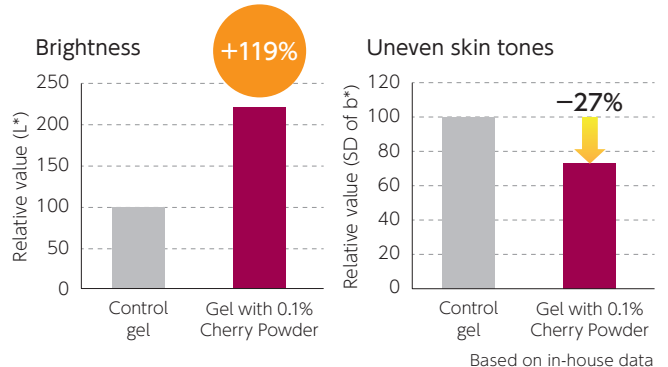


Contraction of Pseudo-dermis was enhanced. Therefore, Cherry Powder is expected to prevent the loss of firmness and sagging.

\*4 Collagen gel mixed with fibroblast

### Brightening effect (human study)

Gel with 0.1% Cherry Powder was massaged into the skin. After a certain period of time, skin tones were measured.



Cherry Powder was found to have a brightening effect and effect on the reduction of uneven skin tones. Although there is no need to wipe off, Cherry Powder is expected to have a brightening effect, which helps achieve translucent skin.

# Basic physical property

## Appearance・Particle size

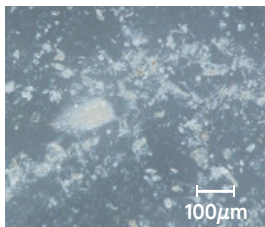
Cherry Powder was dispersed in water. The supernatant liquid was then removed. Insoluble components obtained were examined under a microscope.

### Product appearance



This powder contains beauty ingredients derived from fruit. They are either soluble or insoluble fruit fibers.

### Insoluble fibers



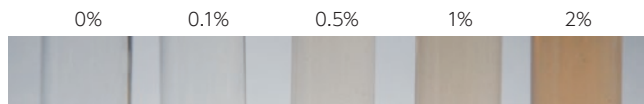
### Fiber size

Crystals: 10 - 20µm  
Fibers: 30 - 300µm

Based on in-house data

## Appearance at formulating

Cherry Powder was mixed into gel.



Based on in-house data

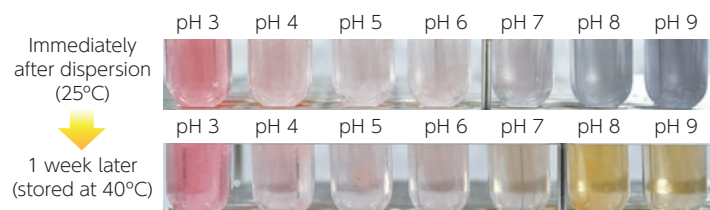
The composition of gel with 0.1% Cherry Powder (pH: 6-7)

Raw material	%
Cherry Powder	0.10
Carbomer	0.20
Xanthan gum	0.10
Glycerin	10.00
Pentylene glycol	3.00
1,2-hexanediol	2.00
Methylparaben	0.02
Potassium hydroxide	0.80
Water	83.78
Total	100.00

\*The color also turns pink when emulsion is used.

## Effects on pH, temperature, and color

Cherry Powder was dispersed in water to make a 2% solution. pH was then adjusted accordingly. Color differences were observed immediately after dispersion and after storing for a week at 40°C.



### pH

Color differences were arisen from anthocyanin, depending on the level of pH. (It is bright pink when the solution is acidic. It is blue when the solution is alkaline.)

### Temperature

The colors of solutions, which pH values were 7 or higher, changed after storing for a week at 40°C. (pH value of 6 or lower is recommended)

Based on in-house data

## Purposes of fruit fibers

Product name	Anti-inflammatory	Improvement of rough skin	Brightens up skin tones	Antioxidant	Moisturizing	Collagen production	Prevention of the loss of firmness and sagging	Turnover	Deodorant effect
Cherry Powder	◎	◎	◎	○	○	○	○	○	—
LaFrance Powder	—	—	○	○	◎	◎	◎	○	—
Shonai Kaki Powder	—	—	○	○	○	○	○	◎	◎

Recommended formulation ratio: 0.1 ~ 1%

Safety evaluation: Human Repeat Insult Patch Test (HRIPT): Negative

Product number	Product name	中文名称	INCI name	Other ingredients	Package	Sample
CFP-000	Cherry Powder Koken	—	PRUNUS AVIUM (SWEET CHERRY) FRUIT	Maltodextrin, Sucrose, Zea mays(CORN) starch, Elaeis guineensis(PALM) oil	100g	10g

The country of origin: Japan. The place of origin: Yamagata Prefecture

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