

Alpha Glucosyl
Hesperidin



raw material approved by
ECOCERT GREENLIFE, conform
to the COSMOS Standard

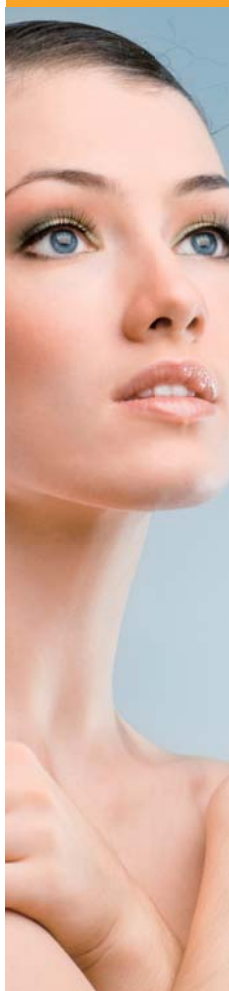
CFDA
IECIC (2014) Listed

all components listed in the
Inventory of Existing Cosmetic
Ingredients in China

highly soluble
bioflavonoid
from
Hayashibara

Alpha Glucosyl Hesperidin

for toning up your skin



A Nagase Group Company

Alpha Glucosyl Hesperidin

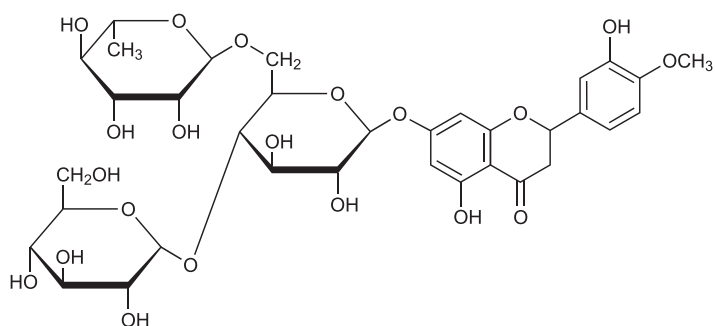
highly soluble bioflavonoid from

For centuries in Japan, citrus peels have been added to hot bath water both for their aromatic effects and to provide “a body-warming sensation” after bathing. It is now understood that hesperidin, which belongs to a class of substances known as bioflavonoids, is an active component of citrus peel and is responsible for the warming sensation by stimulating circulation in the skin.

As hesperidin is poorly soluble in water, it is difficult to use in many health, beauty and cosmetic products.

Alpha Glucosyl Hesperidin is composed of glucose and hesperidin, bound together using technology developed by Hayashibara. This proprietary process has improved solubility in water, while retaining the natural biologic functions of hesperidin.

 Structure of Alpha Glucosyl Hesperidin (main component)



Activity

Improvement of skin tone by stimulating surface circulation

Many skin problems – such as dark circles under the eyes, dull skin, dark skin and puffy skin – can be related to poor circulation in the skin.

Poor skin circulation can be caused by day-to-day stress, a cold climate, lack of exercise, or lack of sleep; but the result is always the same: tired, older-looking skin.

Alpha Glucosyl Hesperidin has been scientifically shown to improve circulation when applied to the skin, thus helping to overcome the negative physical effects caused by stress, tiredness and cold.

By stimulating surface circulation, Alpha Glucosyl Hesperidin can improve skin tone and color, helping to combat:

- Dark circles under the eyes
- Dull complexion
- Tired skin
- Aging skin
- Puffy skin

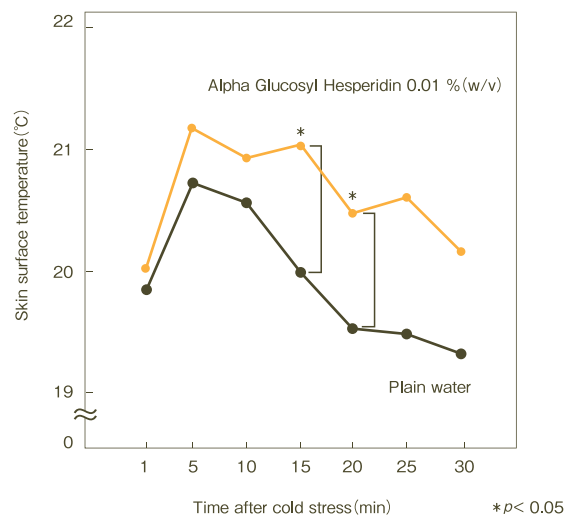


Efficacy

Improvement of blood flow

Retention of skin surface temperature

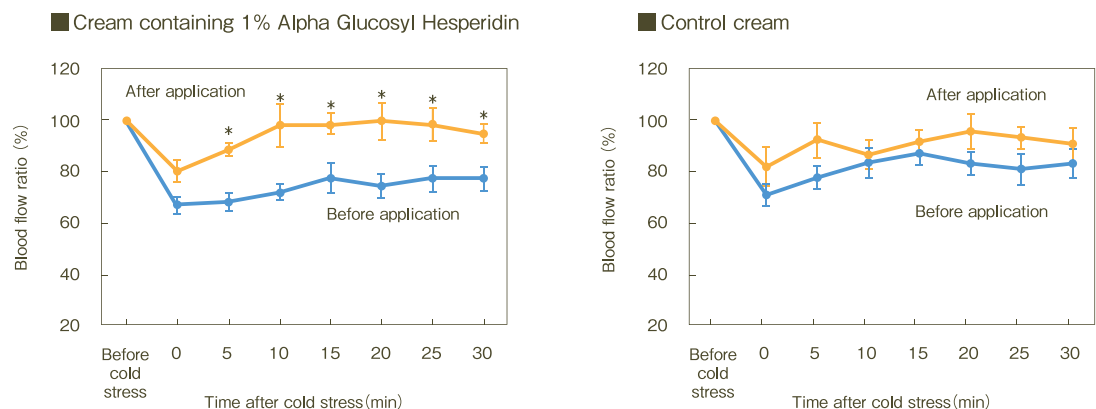
When added to warm water at 0.01% (w/v) Alpha Glucosyl Hesperidin resulted in increased skin temperature.



Test solutions were prepared for: (1) water with Alpha Glucosyl Hesperidin added at 0.01% (w/v), and (2) plain water. Six healthy subjects immersed their feet in each test solution for 10 minutes at 40°C. Their feet were then immersed in cold water (15°C) for 1 minute. Skin surface temperature was then measured using thermography every 5 minutes. *Denotes a significant increase for Alpha Glucosyl Hesperidin, compared to plain water at $p < 0.05$.

Application for formulations

Formulations containing Alpha Glucosyl Hesperidin were found to increase blood flow to the surface of the skin.



Ten volunteers applied a hand cream containing 1% Alpha Glucosyl Hesperidin or a control cream. After applying one of the creams, the volunteers put their hands into cold water (10°C) for 30 seconds to reduce skin temperature. Hands were then kept at room temperature and the blood flow of surface skin was measured every 5 minutes using laser blood flow analysis. *Denotes that significantly greater blood flow was observed after application of Alpha Glucosyl Hesperidin, $p < 0.01$.

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INCI name: Glucosyl Hesperidin

Alpha Glucosyl Hesperidin is
manufactured by
Hayashibara Co., Ltd. in Japan.



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