



PULLULAN

(COSMETIC GRADE)



Natural Instant Lifter with Smooth Texture

Reduces wrinkle depth

Provides instant lifting effect

Superior texture creation

PULLULAN (COSMETIC GRADE)

A fermentation-derived, environmentally friendly polymeric material that provides a luxuriantly smooth texture

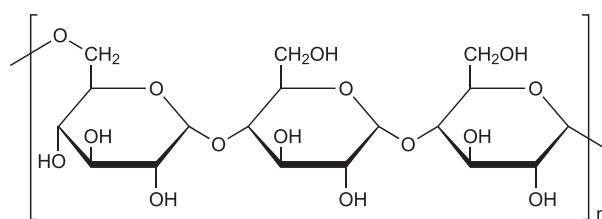
PULLULAN (COSMETIC GRADE) is a water soluble polysaccharide made by microbially fermenting starch syrup. It has a lower viscosity in an aqueous solution than most other polysaccharide thickening agents. PULLULAN is freely soluble in water, and has unique characteristics such as adhesiveness, film-forming ability and lubricity. In food and pharmaceutical products, it is used in capsules and oral films, and in industrial products, it can be used in biodegradable plastic.

PULLULAN provides skin lifting and wrinkle tightening actions due to its film-forming properties. The adhesiveness of PULLULAN is best utilized for products requiring long-lasting wear such as foundations and mascaras, and its excellent lubricity can be used in the basic formulations of serums and creams to provide body. In addition to improving functionality of make-up products, PULLULAN can be used in a wide range of applications to add a unique and ultra-rich texture to commercial products.

- Rich in bonding and coating properties
- Physically reduces wrinkles
- Provides immediate and effective lifting
- Improves luxuriant feel by providing lubricity

Structural formula of PULLULAN

PULLULAN consists of maltotriose units polymerized by α -1,6-glycosidic bonds.

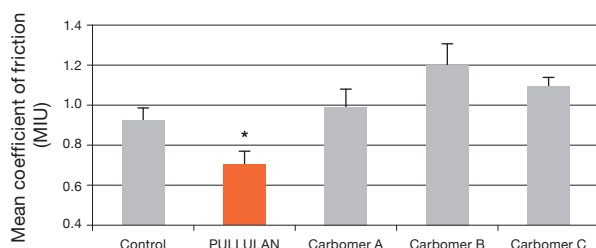


PROPERTY 1

Lubricity

A PULLULAN aqueous solution has excellent lubricity, and adds smoothness and richness to formulations.

EXTENSIBILITY OF SKIN CREAM



vs. Control, and Carbomer A, B and C, *: $p < 0.01$

Creams with or without 0.3% polymers were applied to the artificial leather test surfaces, friction force was assessed by moving the weight in the same direction. Extensibility was confirmed by mean coefficient of friction (MIU).

PROPERTY 2

Coating and film-forming properties

PULLULAN has exceptional coating and film-forming properties, and because of these attributes, its films can be used for the development of innovative cosmetic products.

PROPERTY 3

Binding properties

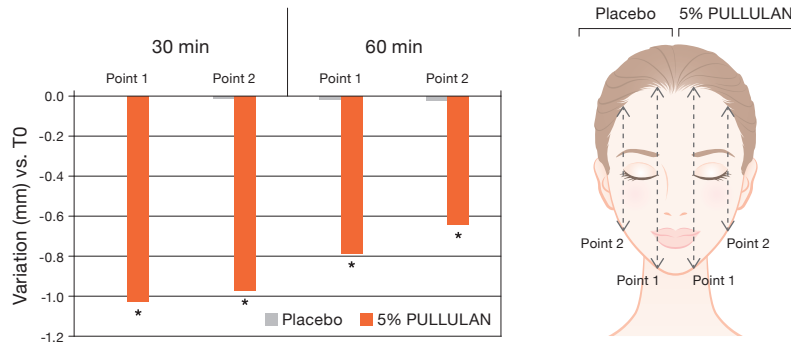
PULLULAN has excellent adhesive properties. It can be used in improving adhesiveness of facial masks and hair styling products, and for enhancing the binding of powder-based products.

BENEFIT 1

Instant lifting effect

Application of PULLULAN essence inhibited sagging cheeks and jawline.

VARIATION IN DISTANCE



vs. placebo, *: $p < 0.05$

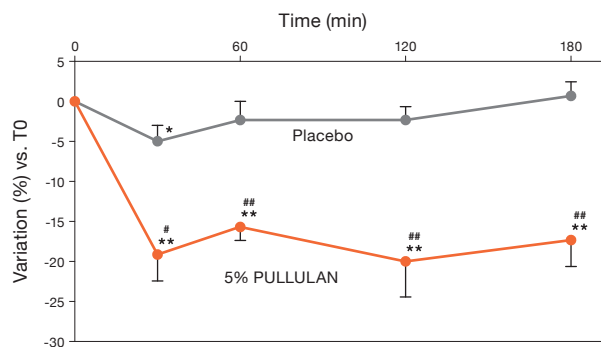
20 healthy females showing clinical signs of skin atony or skin sagging participated in a half-face test applying 5% PULLULAN essence or placebo. Front face photographs were taken with a high-precision camera, and the distances of points 1 and 2 were accurately measured.

BENEFIT 2

Wrinkle smoothing effect by skin tightening

Application of PULLULAN cream made wrinkles less noticeable.

VARIATION OF WRINKLE DEPTH

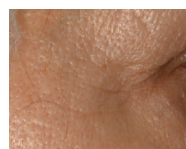


vs. before application, *: $p < 0.05$, **: $p < 0.01$

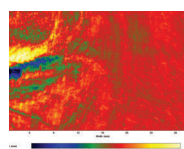
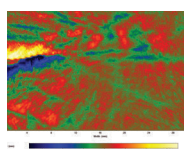
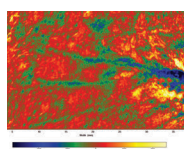
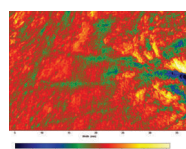
vs. placebo, #: $p < 0.05$, **: $p < 0.01$

PHOTOGRAPHY AND 3D IMAGE ANALYSIS OF CROW'S FEET AREA

PLACEBO



PULLULAN



Before application

180 min. after

Before application

180 min. after

20 healthy females showing clinical signs of aging around the crow's feet area participated in a half-face test applying 5% PULLULAN cream or placebo. The wrinkle depths and 3D reconstructed pictures of crow's feet area were analyzed by Primos 3D (GFMesstechnik GmbH).

APPLICATIONS

Skin Care

Body Care

Make-Up

PRODUCT FORMS

Lotions, Toners, Milk Lotions, Creams, Gels, Serums/Essences, Peel-off and Wash-off Masks, Sheet Masks, Dry Cosmetic Strips

SUGGESTED USAGE LEVEL

Skin Care	0.1–5.0%
Body Care	0.1–5.0%
Instant Tightening/Lifting	5.0%
Peel-off and Wash-off Masks	10–20%
Sheet Mask	0.1–5.0%

INFORMATION

INCI NAME

Pullulan

DESCRIPTION

White to light yellowish-white powder and odorless or slightly characteristic odor

STORAGE

Store at room temperature. Avoid direct sunlight, and high temperature and humidity.

EXPIRATION

Eighteen (18) months from the production date

PACKAGE

Polyethylene bag in a carton box (net 10 kg)

SAFETY

Data acquired



Raw material verified by ECOCERT GREENLIFE, conform to the COSMOS Standard

PULLULAN (COSMETIC GRADE) is certified as Halal

Contact Us

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Please visit our website for further information.



Nagase Viita has received EcoVadis Platinum rating in sustainability for two consecutive years. EcoVadis is an independent institution that assesses sustainability of over 150,000 supplier companies operating in more than 185 countries across more than 250 industries. Platinum is the highest possible rating given by EcoVadis, awarded to companies whose overall score rank in the top 1% of all eligible companies.

PULLULAN (COSMETIC GRADE) is manufactured by Nagase Viita Co., Ltd. in Japan

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