

Glucomannan gel powder

Description

Glucomannan Gel Powder is a naturally derived polysaccharide obtained from the tuber of *Amorphophallus muelleri*, a plant species native to Southeast Asia and traditionally valued for its functional and nutritional properties. Plants of the *Amorphophallus* genus have been used for centuries in various regions of Asia, where their starchy tubers were appreciated for both culinary and health-related applications.

Glucomannan represents the major structural polysaccharide of the tuber and is characterized by extremely long, filamentous macromolecules with a molecular architecture similar to pectin. These molecules form a highly purified, water-soluble powder produced through a careful sequence of mechanical grinding, washing, extraction, and selective precipitation. The resulting material is free of synthetic additives and retains the natural integrity of the plant-based polymer. When dispersed in water, the particles rapidly hydrate and swell, absorbing large quantities of liquid and forming a smooth, cohesive gel. Under typical conditions, a one-percent aqueous preparation develops substantial viscosity within the first hour and reaches its maximum gel strength after approximately one to two hours, creating a soft, elastic texture without tackiness.

Due to its excellent water-binding capacity and distinctive rheological behavior, Glucomannan Gel Powder serves as an effective natural thickener, film former, and texture enhancer in modern cosmetic formulations. It can be combined with other hydrocolloids, including starches and carrageenan, to achieve synergistic gel structures with high stability and an appealing sensory profile. Its gentle feel, high purity, and plant-derived origin make Glucomannan Gel Powder a versatile ingredient for skincare concepts that aim to deliver clean, reliable, and naturally inspired texture performance.

Efficacy

- acts as a moisturizer: **0.7 % Glucomannan gel powder improved skin hydration up to 15 %**
- acts as a natural thickener: **1 % Glucomannan gel powder in water achieves a viscosity of 16.000 mPa s**
- offers a protective film
- shows outstanding pH stability (2 - 7)

Please have a look at our
Leaflet_2034_Efficacy_e for more details.

Appearance

white to cream white powder

INCI

Glucomannan or *Amorphophallus* Root *Muelleri* Extract

Registration

CAS-No.....-/-
EC-No.....-/-

Raw material approved by ECOCERT GREENLIFE,
conform to the COSMOS Standard.



Nature needs no cosmetics,
but cosmetics need nature

Glucomannan gel powder

Preservatives / Stabilizers

none

Characteristics

content of polysaccharides.....>= 85 %
viscosity (1% sol.).....8.000 - 22.000 mPa s
loss on drying≤ 12 %

Application

daily cosmetic products
creams and lotions
face masks
gels and ampoules
body care
after sun care
after shave
sensitive care
baby care

Application concentration

skin care formulation.....0.05 - 0.5 %
as thickener / rheology additive.....0.5 - 1.2 %
ampoules.....0.08 - 0.5 %

Incorporation

Glucomannan gel powder is dispersed at the best with a minimum of 2 % glycerin to avoid the formation of hydro colloidal lumps. Afterwards the water phase can be added till 90 °C under stirring. Precipitation by ethanol with concentrations above 10 %.

Excellent stability in combination with the self-tanning agent dihydroxyacetone (DHA) at pH values 2 - 4 with alpha-hydroxyacids (AHA).

To obtain very stable and high viscous gels we highly recommend combination of Genuvisco[®] carrageenan CG-131 from Kelco and Glucomannan gel powder. The ratio is up to:

creams

Glucomannan : Carrageenan.....1 : 0.14

hydro gels

Glucomannan : Carrageenan.....1 : 0.14

Toxicology

non hazardous in normal use concentration

Storage & Shelf life

Glucomannan gel powder should be stored in a dry and light protected place at 10 - 25 °C.

In closed original containers the shelf life is 24 months.