

## Konjac Mannan gel powder



COSMOS  
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### Description

Konjac Mannan gel powder is a polysaccharide made out of the tuber of *Amorphophallus Konjac*. The plant belongs to the family of *Araceae* which grows in South-East-Africa and Asia. In China the plant is known as “Ju Ruo” and in Japan as “Konyaku”.

In China Konjac has been known for more than 2000 years as a plant or vegetable with medicinal properties. In Japan Konjac has been an established food for more than 1500 years. Nowadays the cultivation and processing of Konjac is done with up-to-date techniques. Products made out of Konjac are found in many different areas of life: In food, as a food additive, in medicine, chemistry, in petroleum and in the light industry.



Glucomannan is the natural main component of the Konjac tuber and its structure is similar to pectin.

Konjac Mannan gel powder is a pure natural water soluble thickener, produced out of a plant. During production the tubers are ground and purified mechanically. The Konjac flour is then washed and precipitated out with alcohol. By extraction the Konjac Mannan gel powder is obtained. Konjac Mannan gel powder can be combined with other hydro colloidal thickeners like starch or Carrageen.

One particle of Konjac Mannan is composed out of extremely long filamentous macromolecules interwoven with each other. When these molecules come into contact with water they swell up to 200 times their original volume resulting in a highly viscous liquid.

A 1 % solution of Konjac Mannan gel powder reaches a viscosity of minimum 8.000 mPa s at 20°C. Within the first hour after dissolution Konjac Mannan gel powder becomes highly viscous and reaches its maximum viscosity after one to two hours.

### INCI

Glucomannan or *Amorphophallus Konjac* Root Extract

### Registration

CAS-No.....37220-17-0  
EINECS-No.....253-404-6

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

### Preservatives / Stabilizers

none

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### Efficacy

- natural thickener: 1 % Konjac Mannan gel powder in water achieves a viscosity of 16.000 mPa s.  
2 % Konjac Mannan gel powder in water achieves up to 78.000 mPa s.
- excellent moisturizing effect: The application of **0.7 % Konjac Mannan gel powder improved skin hydration up to 15 % after 3h** compared to starting conditions and placebo.
- tolerant against electrolytes
- pH-stable (2 - 7)
- outstanding film former

Please have a look at our Leaflet\_2034\_Efficacy\_e for more details.

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

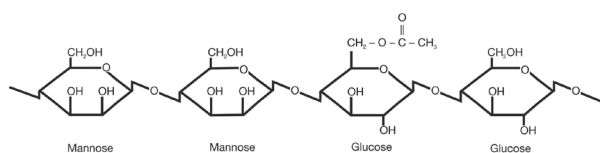
To obtain very stable and high viscous gels we highly recommend combination of Genuvisco® carrageenan CG-131 from Kelco and Konjac Mannan gel powder. The ratio is up to:

creams Konjac Mannan : Carrageenan....1 : 0.14  
hydro gels Konjac Mannan : Carrageenan....1 : 0.14

### Application concentration

thickener, rheological additive.....0.5 - 1.2 %  
skin care products.....0.05 - 0.5 %  
ampoules.....0.08 - 0.5 %

### Chemical Structure



Structure of Glucomannan (Konjac Mannan)

### Toxicology

- non toxic
- non irritating
- non sensitization
- non mutagenic

### Characteristics

Konjac Mannan assay.....≥ 80.0 %  
viscosity (1% sol.).....8.000 - 22.000 mPa s  
loss on drying .....≤ 12.0 %  
total microbial count.....< 5.000 CFU / g

### Storage & Shelf life

Konjac Mannan gel powder should be stored in a dry and light protected place at temperatures between 10°C - 25°C.

In closed containers the shelf life is 24 months.

### Incorporation

Konjac Mannan gel powder is dispersed at the best with a minimum of 2 % Glycerine 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 %.

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