

GELLAN GUM - HIGH ACYL

GELUM-HA

INS 418 ; CAS No. 71010-52-1

It is a water-soluble Polysaccharide which is produced by the aerobic fermentation of the microorganism *Sphingomonas elodea*.

This is a gelling agent, heat stabilizer in fruit preparations & stabilizer in soy drinks etc.

Features of GELUM-HA

1. Very low dosage can help to make "fluid gels" which act as suspending or stabilizing agents in beverages.
2. Excellent acid stability or wide pH application range.
3. Helps to form elastic gels.
4. Helps the blended beverage to have a thicker mouth feel.
5. Good combination with modified starch can be used as thickener.
6. Good compatibility with other ingredients & hydrocolloids.
7. In some dairy-alternative milks (i.e., oat milk or almond milk), gellan gum keeps the beverage's ingredients stable & suspended.

GELUM-HA gum, in aqueous solutions is not very sensitive to calcium, magnesium, potassium, sodium ions etc. but provides suspension effects & stabilization. Its optimum sol temperature is above 80°C & is stable in pH range of 3.4 to 7.5.

GELUM-HA is usually used in non-transparent beverages & foods like dairy products, grain beverages, plant protein drinks, health drinks, meta products etc. It can be used along with Sodium CMC, Guar Gum, Pectin, Carrageenan Gum, Microcrystalline cellulose etc.

GENERAL PROCEDURE FOR USING GELUM-HA

1. Disperse GELUM-HA in cool deionised water by stirring
2. Heat the above solution to 80°C
3. Add desired cations into above solution.
4. Cool down the solution to temperature where stabilizing / suspending functions are required.

Method for Dispersion:

To disperse GELUM-HA without lumps, premix it with other dry ingredients & add to aqueous system under efficient stirring. Continue stirring to obtain a complete dispersion.

Method for Dissolution/Hydration of GELUM-HA:

The dissolution of GELUM-HA depends on the medium & the process & it is improved by heat treatment (time, temperature), shear stress (stirrer, homogenizer). A complete dissolution can be rapidly obtained by boiling for 5 to 10 minutes at about 85-90°C for 20-30 minutes & adding complexing agents like sodium citrate.

TYPICAL SPECIFIC APPLICATIONS:

GELUM-HA provides fluid gelation, suspension or stabilisation to foods & beverages:
(including dairy products)

1. Acid fruit juice;
2. Fruit Pulps Suspending Beverage;
3. Dairy Drinks such as neutral milk, yoghurt, cereal milk, soybean milk, fruits pulps suspending milk beverages;
4. Roughage or Fibrous foods or drinks;
5. Vegetable protein beverage.
6. Dairy-alternative milks (i.e., oat or almond milk)