PRODUCT DATA SHEET

# GELLAN GUM ND-101

Gellan gum is a fermentation-derived hydrocolloid produced by the microorganism Pseudomonas elodea (ATCC 31461). The product Gellan Gum ND-101 is a high acyl (HA) type gellan gum recommended for use as a texturizing agent in yoghurt. Gellan Gum ND-101 can be used in combination with other hydrocolloids to give different textures and mouthfeels. Typical use levels of Gellan Gum ND-101 range from 0.015% to 0.03%.

## ND-101 Features and Benefits

| Key feature | Benefits |
|---|---|
| Gels at low dosages | Excellent flavor release and syneresis control |
| High gel set temperature | Tolerate high fill temperatures; good suspension before filling |
| Low ion sensitivity | Hydration not affected by ions or acid |

## Dispersion

To disperse the product without lumps:

- Premix the powder with other dry ingredients, and add the dry mix slowly into the liquid under sufficient stirring to obtain a complete dispersion;
- Or disperse the product in a non-solvent medium such as oil or alcohol before adding to water.

## Hydration

HA gellan gum swells in deionized water to a starch-like consistency (when the concentration is high enough). The presence of cations in water can reduce the extent of swelling and thus is useful in aiding the dispersion of the product and reducing the viscosity of the dispersion before hydration. Heat is required to fully hydrate HA gellan gum. The hydration of HA gellan is not very calcium sensitive and the gum can usually hydrate at about 80-85°C. The use of chelating agents is not recommended for HA gellan gum hydration.

## Gel Formation

The gelation of HA gellan gum does not require the presence of gelling ions and the gel usually sets between 70-80°C. HA gellan gels are considered thermal reversible gels, melting at about the same temperature as the setting temperature around 70-80°C.

## Quality Assurance

Zhejiang DSM Zhongken Biotechnology is certified with ISO 9001 and FSSC 22000. It is also approved for Kosher and Halal.

## Packaging, Storage and Shelf Life

The product is packed in 20 kg/carton with a PE inner bag. Store product in ambient temperature and away from direct sunlight. The product, when stored in these conditions and in its original unopened packaging, will maintain its initial properties for 24 months.

## Specifications

(Testing done on every lot)

| Property | Requirement |
|---|---|
| Appearance | Off-white powder |
| Purity (gellan gum content) | 85-108% |
| Gel strength (1%) | 450-750 g/cm$^2$ |
| Particle size (Pass 60 mesh with 280 µm aperture) | ≥96% |
| Loss on drying | ≤15% |
| Ash | ≤15% |
| pH value | 4.5-6.0 |
| Total bacterial count | ≤10000 cfu/g |
| Mold & yeast | ≤400 cfu/g |
| Coliform | ≤30 MPN/100g |

## Other Specifications

(Periodic inspection)

| Property | Requirement |
|---|---|
| Salmonella | Negative in 25g |
| E. coli | Negative in 25g |
| Lead | ≤2 mg/kg |
| Heavy metals | ≤20 mg/kg |
| Total arsenic | ≤3 mg/kg |
| Mercury | ≤1 mg/kg |
| Cadmium | ≤1 mg/kg |
| Nitrogen | ≤3 g/100g |

## DSM Hydrocolloids

For further information, please see:
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