

Gelzan®

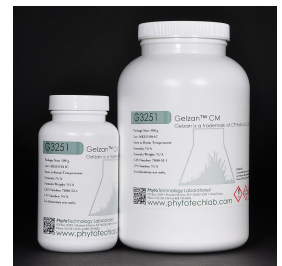
Product ID: **G3251**

Introduction

Description: Gelzan® is produced by fermentation and an agar substitute also known as Gellan Gum. Use at 2-4 g/L. Do not use with media containing high levels of calcium such as DKW and Quoirin & Lepoivre. Also if divalent cation (Ca²⁺, Mg²⁺) concentrations are below that of 1/2X MS (e.g. P668) you may need to use 10-12 g/L to obtain free-standing gels. This gelling agent requires melting at 121°C. If your autoclave doesn't reach that temperature for 15-20 min the final gel may appear clumpy.

Product Information

Solubility	Heated to Boiling Water
Physical Form	Solid
Storage Temp.	Room Temperature
Other Notes	Plant Tissue Culture Tested
UPC / SKU	G3251
CAS NUMBER	71010-52-1
Synonyms	Gellan Gum
Gelling Strength	400-700 g/cm ²



G3251 Gelzan™ CM Gellan Gum Powder

Synonyms: This product is sometimes co-listed as "Gelrite™" by some suppliers. However, Gelrite™ is no longer made and this product (Gelzan™) has lower gel strength than that of the original Gelrite™

CAS: 71010-52-1

PROPERTIES

Form: Powder

Appearance: White to Cream

Application: Gelling Agent

Solubility: Soluble in Boiling Water

Typical Working Concentration: 2 to 4 grams per liter, more for low Ca/Mg media

Storage Temp: Room Temperature

Other Notes: Transparency: Minimum 80% Gel Strength: 400 – 700 g/cm² Plant Tissue Culture Tested

Application Notes

Gellan gum is produced by bacterial fermentation from a pure culture of *Sphingomonas elodea* (formerly *Pseudomonas elodea*). *S. elodea* is a well-characterized, gram-negative, non-pathogenic bacterium that secretes a high molecular weight polysaccharide gum.²

As with all gellan gum products, Gelzan™ will form a gel in the presence of mono- or divalent cations; the latter being more efficient (e.g., calcium and magnesium). However, Gelzan™ is not recommended for use with DKW (9.3 mM Ca⁺⁺) or other media (e.g., Quoirin & Lepoivre Basal Salt Mixture), containing high calcium levels as they have shown to produce a soft and cloudy gel. Oppositely, low levels of mono- or divalent cations present in the medium (e.g. less than ½ strength Murashige and Skoog) will require the addition of more Gelzan to produce a firm gel.

Gelzan™ is typically used at 2 to 4 g/L. It is suspended in medium that is room temperature or colder. Attempting to suspend it in hot medium will usually result in an incomplete, lumpy suspension that will not melt and dissolve uniformly when autoclaved. It should be added to medium after all heat-stable supplements have been added.

PhytoTechnology Laboratories® also carries a generic brand gellan gum, Product No. G434.

Gelzan™ and Gelrite™ are trademarks of CP Kelco U.S., Inc.

References

1. Merck 13, 4394
2. Jansson, PE and B Lindberg. 1983. Structural studies of gellan gum, an extracellular polysaccharide elaborated by *Pseudomonas elodea*. Carbohydr. Res. 124:135-139.

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ISO Certifications: [ISO 9001:2008 \(QMS\)](#) | [ISO 10002:2014](#)