

### Product Information Sheet

G3251

### Gelzan™ CM Gellan Gum Powder

**Synonym:** 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/cm<sup>2</sup>  
 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.<sup>2</sup>

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<sup>++</sup>) 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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