Rootlab Gellan Gum LA

Low acyl gellan gum for plant tissue culture

Low acyl | Optically clear | Firm, sliceable gel | Sets at about 30 to 50°C

PRODUCT CODE	CAS NUMBER	INS / E NUMBER	SOURCE
RTLGGLA	71010-52-1	418 / E418	Fermentation of *Sphingomonas elodea*

SPECIFICATION

PARAMETER	UNIT	SPECIFICATION
PHYSICAL AND CHEMICAL		
Appearance		**Off-white powder**
Identification		**Passes test**
Assay, gellan gum content (dried basis)	%	**85.0 to 108.0**
pH (0.5% in deionised water)		**4.5 to 7.0**
Gel strength	g/cm²	**≥850**
Transparency	%	**≥75**
Particle size (through 60 mesh)	%	**≥92**
Loss on drying	%	**≤15.0**
Residual 2-propanol (IPA) or ethanol	mg/kg	**≤750**
Total nitrogen	%	**≤3**
Suspension		**Passes test**
HEAVY METALS		
Lead (Pb)	mg/kg	**≤2**
Heavy metals (as Pb)	mg/kg	**≤20**
Arsenic (As)	mg/kg	**≤2**
Cadmium (Cd)	mg/kg	**≤1**
Total mercury (Hg)	mg/kg	**≤1**
MICROBIOLOGICAL		
Total plate count	cfu/g	**≤10,000**
Yeasts and moulds	cfu/g	**≤400**
Coliforms	MPN/100 g	**≤30**
Salmonella		**Not detected in 25 g**

Each batch is supplied with a Certificate of Analysis reporting its results against this specification.

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Gel properties, use and handling

GEL PROPERTIES

PROPERTY	LOW ACYL BEHAVIOUR
Texture	Firm and brittle; cuts cleanly under a scalpel
Clarity	Optically clear; roots, callus and early contamination stay visible
Setting temperature	About 30 to 50°C as the medium cools
Behaviour on reheating	Close to thermally irreversible once set with adequate cations
Cation requirement	Needs calcium and magnesium; standard MS, WPM, Knudson C and Vacin and Went salts supply enough
Syneresis	Weeps a little liquid over time

RECOMMENDED USE RATES

APPLICATION	USE RATE (G/L)
Standard herbaceous species	**2.0 to 3.0**
Orchids and general micropropagation	**2.5 to 3.5**
Woody species and firmer matrices	**3.5 to 4.5**
Microbiological media and agar replacement	**4.0 to 8.0**

PREPARATION

1. Disperse the powder into cold or room temperature water while stirring vigorously to avoid clumping. Add it before the salts where possible.
2. Add media salts, sugar and supplements, then adjust pH to 5.4 to 5.8.
3. Autoclave at 121°C (15 psi) for 15 to 20 minutes. The powder must reach 90°C or above to hydrate fully.
4. Dispense while hot. The gel sets as the medium cools through about 30 to 50°C.

Weak gel on low salt or custom media? Add 0.5 to 1.0 mM calcium chloride or magnesium sulphate.

STORAGE AND PACKAGING

- Store sealed at 15 to 30°C in a cool, dry place.
- Shelf life 24 months from production.
- Batch expiry is on the label and COA.
- Packs of 100 g, 300 g, 500 g and 1 kg.

INTENDED USE

- For plant tissue culture and laboratory media.
- Not for food, feed, therapeutic or diagnostic use.
- Vegan; free of gluten and soy allergens.
- SDS on request from info@rootlab.com.au.

Information is given in good faith. Confirm suitability for your own protocols before use.