PLANT TISSUE CULTURE

GELLING AGNTS

CAG Colloids offers a variety of agars and other products that can be used as gelling agents. These products have been tested in plant tissue culture applications to ensure the highest quality.
Agar has long been used to solidify media for plant tissue culture. The type of agar or gelling agent used can influence the growth of the tissue in culture. Both purity and cost of the gelling agent are important factors in any research or production operation
CAGGEL™ MTC (Gellan gum equals to Gelrite or Phytogel) is a kind of high molecular weight extracellular microbial polysaccharide produced by aerobic fermentation, it is a promising alternative to agar agar for plant tissue culture media. it may be used at approximately half the use level of agar.

Product Name	CAGARG™ General	CAGARG™ PTC	CAGGEL™ MTC	PhytoAgar™ GA	CAGCAR™ PTC
Product Code	PTC01	PTC02	PTC03	PTC04	PTC05
Description	Agar Agar for normal plant tissue culture purpose	Purified Agar Agar for good Clarity and higher gel strength	Gellan Gum equals to Gelrite or Phytogel	Gellan Gum mix with agar agar with appropriate proportion	Purified Carrageenan for plant tissue culture purpose
Characteristic	Stable and good consistency in quality	Low impurities, higher gel strength, excellent gel stability and good clarity	Higher purity, excellent crystal gel, high stability to heat and low pH, faster in gel forming.	High transmittance, low impurities, avoid the hyperhydricity	Higher transmittance, The lower sulfate content better suits for plant growth
Appearance	White to light brown, homogenous free flowing powder	White to light brown, homogenous free flowing powder	White to off- white, homogenous free flowing powder	White to off white, homogenous free flowing powder	White to off -white, homogenous free flowing powder
Solubility	Hazy solution of 0.8 g in 100ml of water after boiling	Slightly hazy solution at 0.6 g in 100ml of water after boiling	Clear to solution at 0.25 g in 100ml of water after boiling	Slightly hazy solution at 0.5 g in 100ml of water after boiling	Clear to Slightly hazy solution at 0.4 g in 100ml of water after boiling
Clarity	Opaque gel formed on cooling	Slightly hazy gel formed on cooling	Transparent gel formed on cooling	Slightly hazy gel formed on cooling	Transparent gel formed on cooling
Loss on drying	≤ 12%	≤ 12%	≤ 15%	≤ 15%	≤ 10%
Gel Strength	≥ 1000g/cm^2	≥ 1200g/cm^2	≥ 1000g/cm^2	≥ 900g/cm^2	≥ 1200g/cm^2
Transmittance	≤ 15%	≥ 45%	≥ 85%	≥ 65%	≥ 70%
Recommended Using dosage	5 – 8 g/L	5 – 8 g/L	2 – 2.5 g/L	3.5 – 5 g/L	6 – 8 g/L
Packing size	20kg, 25Kg	20kg, 25Kg	20kg, 25Kg	20kg, 25Kg	20kg, 25Kg

CAGARG ™ PTC Agar Agar (High Clarity)

Gelling agent for plant tissue culture

CAS NUMBER: 9002-18-0

SYNONYMS: Agar-agar; Gum agar; Bacto-agar; Bengal gelatin; Bengal ising glass; Ceylon; Ceylon ising glass; Chinese ising glass; Digenea simplex mucilage; GAM medium; Gelose; Japan agar; Japan ising glass; Kantenmatsu; Layor caran; NCI-C50475; Oxoid III; Oxoid L 11; S 100

PRODUCT PROPERTIES AND DESCRIPTION:

Appearance: White to light brown, homogenous free flowing powder

Molecular weight: N/A

CAGARG™ PTC is a next-generation, highly refined gelling agent specifically engineered for the demanding requirements of modern plant tissue culture. Through a proprietary purification process, we have optimized the natural polymer structure of agar to deliver unparalleled clarity, consistency, and performance in all major culture media.

CAGARG ™ PTC is your reliable foundation for supporting healthy plant growth, from micropropagation and callus culture to genetic transformation and conservation efforts.

Key Features & Benefits

Exceptional Clarity: Allows for easy visual monitoring of culture health and contamination without the need for disruptive handling.

Superior Gel Strength & Stability: Forms a firm, yet breathable matrix that provides optimal physical support while facilitating efficient nutrient and gas diffusion to the explants.

High Purity & Low Impurities: Our advanced processing significantly reduces salts, heavy metals, and organic impurities (notably sulfate content), leading to reduced experimental variability and enhanced reproducibility.

Optimal Water Retention: Prevents media from drying out during long culture cycles, even under high-light conditions, ensuring stable hydration for your plants.

Batch-to-Batch Consistency: Rigorous quality control guarantees identical performance in every shipment, which is critical for long-term research projects and commercial production schedules.

Wide Media Compatibility: Proven to perform excellently in a vast range of standard media, including MS, B5, WPM, N6 formulations.

Typical Properties & Specification Data (CAGARG™ PTC)

Items	Specification	Test Method
Appearance	White solid powder	Visual
Particle size	≥ 95% pass 60 mesh	Screen
Gel Strength (1.5%)	≥ 1200 g/cm²	Standard Agar Test
Insoluble matter	≤ 0.5%	
pH (1.5% solution)	6.5 - 7.5	-In H_2O
Gelling Temperature (1.5%)	38 - 41 °C	-
Melting Temperature (1.5%)	85 - 95 °C	-
Ash Content	≤ 4.5%	Muffle Furnace
Moisture Content	≤ 12%	Loss on Drying
Starch Test	Negative	-
Lead	≤ 5ppm	AAS
Total Plate Count	≤ 5000 cfu/g	-

Please contact CAG for formal Product Data Sheet (PDS)

Preparation:

Add the weighed quantity of CAGARG™ PTC to your room temperature media solution while stirring vigorously. Heat with constant agitation until the solution becomes completely clear. Autoclave at 121°C for 15-20 minutes. Dispense into culture vessels under sterile conditions.

Storage

Store sealed medium containing Agar Agar at 2 - 30 C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

Expiration

Refer to expiration date stamped on container. Agar Agar should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to Agar Agar in its intact container when stored as directed.

Packing

20kg or 25kg per drum