

KELCOGEL[®] GELLAN GUM

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Description	KELCOGEL[®] gellan gum is a multifunctional gelling agent for use in foods and personal care applications. KELCOGEL gellan gum is ideal for a variety of gelling, texturizing, stabilizing and film forming applications.
Features	<ul style="list-style-type: none"> • excellent stability • high gel strength • heat stable • sparkling clarity • outstanding flavor release • easily combined with other hydrocolloids • fluid gel suspension • high compatibility with protein
Typical Applications	<ul style="list-style-type: none"> • aspics • bakery fillings • beverages / fluid gels • confections • dairy products • dessert gels • non-standard jams and jellies • personal care • fruit preparations
Typical Use Level	KELCOGEL gellan gum forms gels at extremely low gum use levels - as low as 0.05%. Gel strength can be increased by manipulating both gum and ion concentration.
Dispersion/Hydration	Model gels are produced by adding KELCOGEL gellan gum to tap water under shear, heating to 90°C, adding ions and cooling to set. Both monovalent and divalent ions can be used: K ⁺ , Na ⁺ , Ca ⁺⁺ and Mg ⁺⁺ . Sequestrants such as sodium citrate or phosphates may be required for hydration in hard water.
Standard Packaging	Packed in 25-kg Leverpak drums (or their equivalent) with polyethylene liners (21 CFR §177.1520). All packaging materials comply with relevant UK, EU, and United States food contact legislation.
Ingredient/Labeling	KELCOGEL gellan gum Food grade gellan gum, CAS: 71010-52-1; E418 For use as a stabilizer and thickener Kosher approved; Halal approved
Regulatory Information	Gellan gum complies with requirements contained in the following regulations and standards: <i>Food Chemicals Codex</i> , 21 CFR § 172.665 (USA), <i>Canadian Food and Drug Law</i> (Item G.2, Table IV), JECFA, the purity criteria in the current EC Directive, 1829/2003/EC, and <i>Japan's Specifications and Standards for Food Additives</i>
Storage Conditions/ Shelf Life	Store in a roofed and well-ventilated area in the unopened original package. Functional properties of the product are guaranteed to conform with the stated sales specifications for 730 days from the date of manufacture when stored under these conditions. Product quality should be re-evaluated prior to use if this "Best Before" date has been exceeded.
Quality System	Manufactured according to a Quality System registered to ISO 9001.

Specifications

Testing to the following specifications is conducted on every product lot.

<u>Property</u>	<u>Requirement</u>	<u>Test Method</u>
Particle Size	Tyler Standard Screen Scale, Ro-Tap	KTM146
- 28 mesh (600 µm)	Not less than 99% through	
- 42 mesh (355 µm)	Not less than 98% through	
Loss on Drying	Not more than 14%	KTM003
Powder Color	Not less than 72	KTM006
Appearance	White to tan, uniform in appearance	
Solution pH		KTM005
- 1% gum in DI water	4.5 – 6.5	
Transmittance		KTM087
- 0.5% gum in 6 mM CaCl ₂	Not less than 74%	
Isopropyl Alcohol	Not more than 750 mg/kg (ppm)	KTM520
Bacteria*	Not more than 10,000 cfu/g	KTM800
Fungal (Yeast & Mold) Count	Not more than 400 cfu/g	KTM803
Coliform	Negative by Most Probable Number (MPN)	KTM801
<i>Escherichia coli</i>	Absent in 25 g	KTM802
<i>Salmonella</i> spp.	Absent in 25 g	KTM804

* Total viable mesophilic aerobic count, 48 hr incubation

Specifications – Guaranteed to Comply

Testing to the following specifications is conducted on a skip-lot basis and may not be reported on the Certificate of Analysis. Product is guaranteed by CP Kelco to comply with compendial requirements applicable for each property.

<u>Property</u>	<u>Requirement</u>	<u>Test Method</u>
Identification	Pass	KTM519
Total Nitrogen	Not more than 3.0%	KTM516
Assay	3.3 – 6.8% CO ₂	KTM503
Ash	4.0 – 14.0%	KTM255
Heavy Metals	Not more than 20.0 mg/kg (ppm)	KTM514
Lead	Not more than 2.0 mg/kg (ppm)	KTM514
Arsenic	Not more than 2.0 mg/kg (ppm)	KTM514
Mercury	Not more than 1.0 mg/kg (ppm)	KTM514
Cadmium	Not more than 1.0 mg/kg (ppm)	KTM514
<i>Staphylococcus aureus</i>	Absent in 1.0 g	KTM806
<i>Pseudomonas aeruginosa</i>	Absent in 1.0 g	KTM807

METHODS OF TESTING (For test methods not listed, follow the applicable compendium. Full details of test methods are available upon request)

Particle Size (KTM146)

Shake 50 g product on 28 and 42 mesh (600 and 355 μ m) Tyler Standard Screens for 20 minutes using a Ro-Tap sieve shaker.

Loss on Drying (KTM003)

Spread 3-5 g product evenly on a tared weighing pan and weigh accurately. Dry in an oven at 105°C for 2½ hours. Cool in a desiccator and reweigh.

Powder Color (KTM006)

Test method is available upon request.

Solution pH (KTM005)

Slowly add 3 g product to 297 mL deionized water in a 400-mL beaker while stirring at 800 rpm using a low-pitched, propeller-type stirrer. After stirring for 30 min, measure the pH of this solution using a pH meter.

Transmittance (KTM087)

Slowly add 1.50 g product to 250 g deionized water in a tared hot cup while stirring at 800 ± 20 rpm. Add 48 ± 1 mL deionized water and mix for at least 1 minute. Heat to 90°C and hold at this temperature for 1 minute with continued stirring. Pipet 3.0 mL of a 0.6 M calcium chloride solution (prepared by dissolving 88.21 g $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$ to a total of 1 L in deionized water) into the heated solution and continue mixing for 1 minute. Using deionized water at 80°C, adjust the weight of the solution to 301 g and mix for 30 seconds. Measure the transmittance of this solution using a Bausch and Lomb Spectronic 215, or other suitable spectrometer, at 490 nm. Use deionized water as the 100% transmittance standard. **Note:** After adding the solution to the cuvette, allow to cool to room temperature (approximately 1 hour) before measuring the transmittance.

NOTE: CP Kelco reserves the right to use company test methodology.

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www.cpkelco.com



e-mail: solutions@cpkelco.com

The Americas
CP Kelco
800-535-2687 phone
678-247-2752 fax

Europe/Middle East/Africa
CP Kelco France SARL
+33 (0) 1 49 03 78 00 phone
+33 (0) 1 49 03 78 29 fax

Asia Pacific
CP Kelco Singapore Pte. Ltd.
+65 6491 9100 phone
+65 6491 9101 fax