

“Marine Colloids™ Carrageenan/konjac flour gels are heat stable.”



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University of California
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• Forms heat stable foods • Pseudoplastic viscosity • Acid stable gels



Konjac flour is a building block in many traditional foods in the Far East. It is a high molecular weight polysaccharide which offers such

functional properties as:

- heat stable gelation
- thermal reversible gelation with carrageenan
- pseudoplastic viscosity
- synergism with other gums

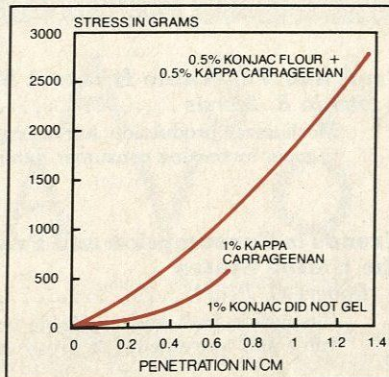
Nutricol® konjac flour is synergistic with kappa carrageenan. A 1.0% Gelcarin® GP 812 carrageenan gel will produce about 600 grams breakforce. Replacing half the carrageenan with Nutricol® konjac flour will enhance the gel strength to about 2500 grams breakforce.

Subjecting the gel to autoclaving results in a heat stable gel structure.

Mitsumame, a traditional Japanese gel

dessert, lends itself nicely to this technology. A hot solution containing carrageenan/konjac flour is poured into cans, sealed and retorted at 130°C for 60 minutes. The cooled gels are removed from the can and cut into desired shapes.

Nutricol® Konjac Flour Enhances Kappa Carrageenan Gels



MITSUMAME GEL CUBES	(%)
Sugar	7.60
Nutricol® KC5G konjac flour	1.6-2.0
Gelcarin® GP 379 carrageenan	0.30
Sodium citrate	0.40
Potassium citrate	0.16
Adipic acid	0.02
CaSO ₄ • 2H ₂ O	0.02
Flavor	to suit
Water	to 100%

The gel cubes and real fruit pieces are placed into a hot, acidified sugar solution (about 3.5 pH). The hot mixture is then filled into canning jars and sterilized.

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