



COLONY GUMS

Hydrocolloid & Stabilizer Systems

A BRENNTAG GROUP COMPANY

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# Fenugreek Gum



## SOURCE & PROCESSING

Fenugreek Gum is produced from ground dehulled seeds from the edible legume *Trigonella foenum-graecum*. The hulls and embryos are removed from the seeds to produce endosperm splits. The splits are washed, dried, ground and sifted to deliver powder of the desired mesh.

As a crop, fenugreek is grown worldwide in semi-arid regions. The use of fenugreek seeds has been traced back to 4000 BC and seeds were found in the tomb of Tutankhamen. Fenugreek seeds and leaves have a long history of use in alternative medicines, spice blends and culinary dishes most commonly from the Indian subcontinent, Turkey, Iran, Egypt and Ethiopia. It is also used in traditional middle eastern foods including those consumed during the celebration of the Jewish New Year, Rosh Hashana.

The ground seeds carry a flavor and aroma that have been described as “curry,” “maple syrup,” “herbaceous,” and “caramel” which can limit use of fenugreek to more savory-type product applications.

To order or for more information, visit us online or call:

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704.226.9666

FX 704.226.1954

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# Fenugreek Gum

## POLYMER CHEMISTRY

The primary functional carbohydrate in fenugreek is a galactomannan similar to other hydrocolloids from legumes: guar, tara, locust bean and cassia. The linear polymer chain of mannose units joined by  $\beta(1-4)$ -D linkages has galactose substitutions attached with  $\alpha(1-6)$  linkages. The overall proportion of mannose and galactose in the fenugreek polymer is 1:1. Full hydration and functionality are achieved with use in both cold and hot applications. Once hydrated, fenugreek is known to alter the surface tension of water and add interfacial activity delivering emulsification properties.

## FUNCTIONALITY

- ~ Thickening
- ~ Emulsification
- ~ Moisture Management

## USES

- ~ **Soups, Sauces, Dressings & Marinades**  
Emulsification, viscosity, body, shine, cling and overall product stability
- ~ **Dry Bakery Mixes and Batters**  
Increased overrun/volume and increased moisture management following baking
- ~ **Baked Goods**  
Moisture management, shelf-life, structure

## APPLICATIONS

Fenugreek is the most soluble and dispersible of all the major hydrocolloids, aiding in its application to a very wide variety of foods and processing equipment. The thickening functionality of fenugreek is influenced by dissolved cations, electrolyte salts and pH. Although it does not exhibit defined synergies it can be used to complement the functionality of other carbohydrates in many applications. The combination of thickening and emulsification makes fenugreek a very versatile hydrocolloid tool.



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*Three generations of excellence in service, innovation and quality.*