



SARDA
· BIOPOLYMERS ·

CARRAGEENAN
PLANT PROTEIN
CASSIA TORA
ALGINATE
XANTHA GUM
PSYLLIUM HUSK
CASSIA TORA
PLANT PROTEIN
CARRAGEENAN
PLANT PROTEIN
PSYLLIUM HUSK
PLANT PROTEIN
PSYLLIUM HUSK
GUAR GUM
LOCUST BEAN GUM
CARRAGEENAN
PLANT PROTEIN
PSYLLIUM HUSK
CASSIA TORA
PSYLLIUM HUSK
TAMARIND SEED
POLYSACCHARIDE
PLANT PROTEIN

INNOVATE. SHARE. DELIVER.

ABOUT US

Trust, Quality & Ambitions in the DNA of SARDA are redeemed to Innovate, Share & Deliver for our customers.

Seeded by our Chairman, **Mr. G.L. Sarda**, with an experience of **over 50 years** in creating, establishing and advancing to present various Hydrocolloids, Fibers & more, to be used in food, Pharmaceutical and Technical applications.



Strategically located in the vicinity surrounded with growing of Guar, Psyllium and Cassia Tora, our multi- facility establishment has dedicated units to produce different gums. They are all well designed to meet current quality standards like **FSSC, HACCP, GMP** etc. They have **Kosher and Halal** certifications as well. Cumulatively, we can annually produce nearly **20000 MT** of various Hydrocolloids. We make **Guar, Cassia Tora, Psyllium Husk Powder, Tamarind Seed Gum, Xanthan Gum, Carrageenan and Alloy Gums.**

With deep domain knowledge, "Quarter backed" by our **sophisticated research center**, we are well geared to offer solutions according to client's requirements. Our well-equipped QA, QC and R&D bring capabilities of **tailor-made solutions** under **GMP, FSSC, HACCP** and **ISO** certified facilities.

Certificate and Accreditations



SARDA PORTFOLIO OF INGREDIENTS

Hydrocolloids:

| | | | |
|------------------------|-----------------|--------------------------|--------------------|
| Guar Gum Powder | Cassia Tora Gum | Tamarind Xyloglucan | Carrageenan |
| Psyllium Husk & Powder | Xanthan Gum | Locust (Carob) Bean Gum, | Copolymerized Gums |

Plant Based Proteins:

| | | | |
|-----------|---------------|------------|------------|
| Hemp | Wheat germ | Black seed | Carob Bean |
| Guar Seed | Tamarind Seed | Mung Bean | |

Key Industries served:

| | | | |
|----------------|-----------|---------|---------------|
| Food | Pet Food | Feed | Personal Care |
| Pharmaceutical | Oil & Gas | Textile | |

LOCUST BEAN GUM

Grade: Carcol - 25 A & Carcol - 35 A

Semi refined Locust Bean Gum

Obtained from the seeds of the *Ceratonia siliqua* tree in the Mediterranean area. Suitable for application like: Bakery, Beverage, Cheese, Confectionery, Jelly desserts, Dairy, Fine Food, Food, Fruit Preparation, Ice Cream, Meat, Petfood, etc.

Locust bean gum is used as a stabilizer, thickener, and fat replacer in foods, and also as an adjunct gelling agent and texturizer to other hydrocolloids such as carrageenan.

Suitable for applications like:

Yogurt, cream cheese, dressings and sauces, ice cream, fruit preparations, fish products, fermented milk products, cream and infant formula. It is a gluten-free additive and useful in bakery applications as well for thickening and binding to get elasticity in the product.



LBG REPLACEMENT

SPECIALITY GUAR



Viscomann A1, Viscomann A 2

CASSIA TORA GUM



Gelspark 40, Gelspark 60

Replacement of LBG in 1:1 with similar functionality and properties, directly from the Nature.

Speciality Guar Gum and Cassia Tora Gum are proven to replace LBG 100% in all possible food applications and provide highly economic yet effective solutions for Food.

Applications:

Suitable for applications like: Bakery, Beverage, Cheese, Confectionery, Jelly desserts, Dairy, Fine Food, Food, Fruit Preparation, Ice Cream, Meat, Petfood, etc.

Formulation attributes:

- Viscosity development under high shear conditions, faster viscosity development with heating the solution at 80°C.
- Odorless and mostly tasteless, adopts to the flavor of formulation easily.
- Provides suspension & emulsion beside water binding which is stable under wide temperature range.
- Over 90% solubility and fine particle size enables meet processing easy and fast even with fine needles.
- Water retention & holding capability under high saline, sugar and acidic conditions.
- Imparts creamy mouthfeel with less watery feel in comparison with conventional Guar texture

Replacement of LBG, Speciality Guar and Cassia Tora Gum are famous to combine with Carrageenan, Xanthan Gum, Agar and function 100% similar to LBG in food application

GUAR GUM POWDER

Guar Gum is derived from seed endosperm of plant *Cyamopsis Tetragonoloba*, commonly known as Guar. It is widely grown in Western North parts of India as a major monsoon crop. In general, it is grown once in a year, and it is a crop for local farm-based economy.



Guar Gum powder has wide range of possibilities for range of **viscosity** (Ultra low-Very low-high-Very high), **Particle size** (coarse, medium fine and very fine) etc. We not only provide straight gum specifications, also **high purified** and **non Chemically treated, very low microbe guaranteed types**. They can be called as **Odourless** or **tasteless, de-pigmented, depolymerized, hydrolysed etc.**

Properties:

- Rehydration and reconstitution of texture and providing body.
- Prolonged moisture retention, suspension film forming, flavor release etc.
- Promote a creamy mouth feel and good flavour release and absorb thermal shock.
- It can be modified chemically to obtain specific ionic nature or remain non-ionic.
- Synerstic combination with Xanthan Gum or compatibility with CMC, Alginate, Pectin.
- **EFSA regulations - E412**
US FDA: 21 CFR 184.1339

Applications:

There is one fit for each type of application where texturizing is needed by Guar.



CASSIA TORA GUM

Seed Gum is derived from the plant Cassia Tora, that grows in wild and collected by tribal and native people. It grows after Monsoon rainfall once a year and considered as golden crop for villagers.

Cassia Tora Gum is comprised of a linear chain of mannose units with side chains of galactose at a mannose to galactose ratio about 5:1. Properties of Cassia Tora Gum are **very similar to that of Locust Bean Gum or Tara Gum** and hence it becomes **an additive of choice for food and petfood industry primarily.**

Properties:

- Partially cold and partially hot soluble
- Highly stable in retorted process
- Interactive with other hydrocolloid like Kappa Carrageenan, Xanthan , Agar
- A thickener, film former, gelling agent

Regulations:

Compliant with EFSA regulations – E 427 and 1f499



Cassia Tora Plant



Cassia Tora Seed



Cassia Splits



Normal Gum



Refined Gum

Application in Food

| GRADE NAME | TYPES | |
|------------|---------------|---------------|
| LBCOL 100 | Petfood Grade | E499 |
| Gelspark | Food Grade | E427 IF499 |

Processed Meat
 Dessert
 Ketchup
 Mayonnaise
 Jams
 Food for infants
 Sauces in General
 Ready Soups
 Cheese
 Sweets
 Ice Cream
 Pets Food



PSYLLIUM HUSK & POWDER

Husk derived from seeds of Plantago Ovata, commonly known as Psyllium is Soluble dietary fiber that has ancient history of use in India.

- Also known as **Isabgol** in local language
- Non-chemically treated, it is a **clean label ingredient** that is available in various **particle sizes and purity** to choose from

Functionality of Psyllium Husk Powder is to **swell** in water-based system and promote various properties that are: **thickening, water holding/binding, gelling**, thus imparting texture in food and various similar usage. The consistency of holding texture under wide range of conditions like high sugar/salt, Acidic/alkaline, hot/cold etc.

The gel formed is capable to impart an **elastic texture** that can texturize and provide body to food and many such applications in **food, nutraceutical, and pharmaceutical** regime. For example, **gluten free food** looks at psyllium as perfect solution to mimic gluten like texture. Similarly, **Sodium Alginate properties** in **plant-based meat products**.

TAMARIND SEED POLYSACCHARIDE

Tamarind Seed Polysaccharide (Tamarind Xyloglucan) is constituted of **Glucose, Xylose and Galactose**. This composition of polysaccharide makes it a hydrocolloid of wide range usefulness in **food, nutraceutical, and pharmaceutical areas**. Also, its film forming capabilities make it a product of choice for protective coatings wherever needed.

Key Properties:

- Binds high brix sugar & alcohol
- Thickening and gelling
- Suspending, Emulsifying
- High salt / heat / acid stable
- Film former & coating
- Redefine pectin application





Wheat Germ Protein



Carob Seed Protein



Guar Protein



Hemp Protein



Mung Bean Protein

PLANT-BASED PROTEINS

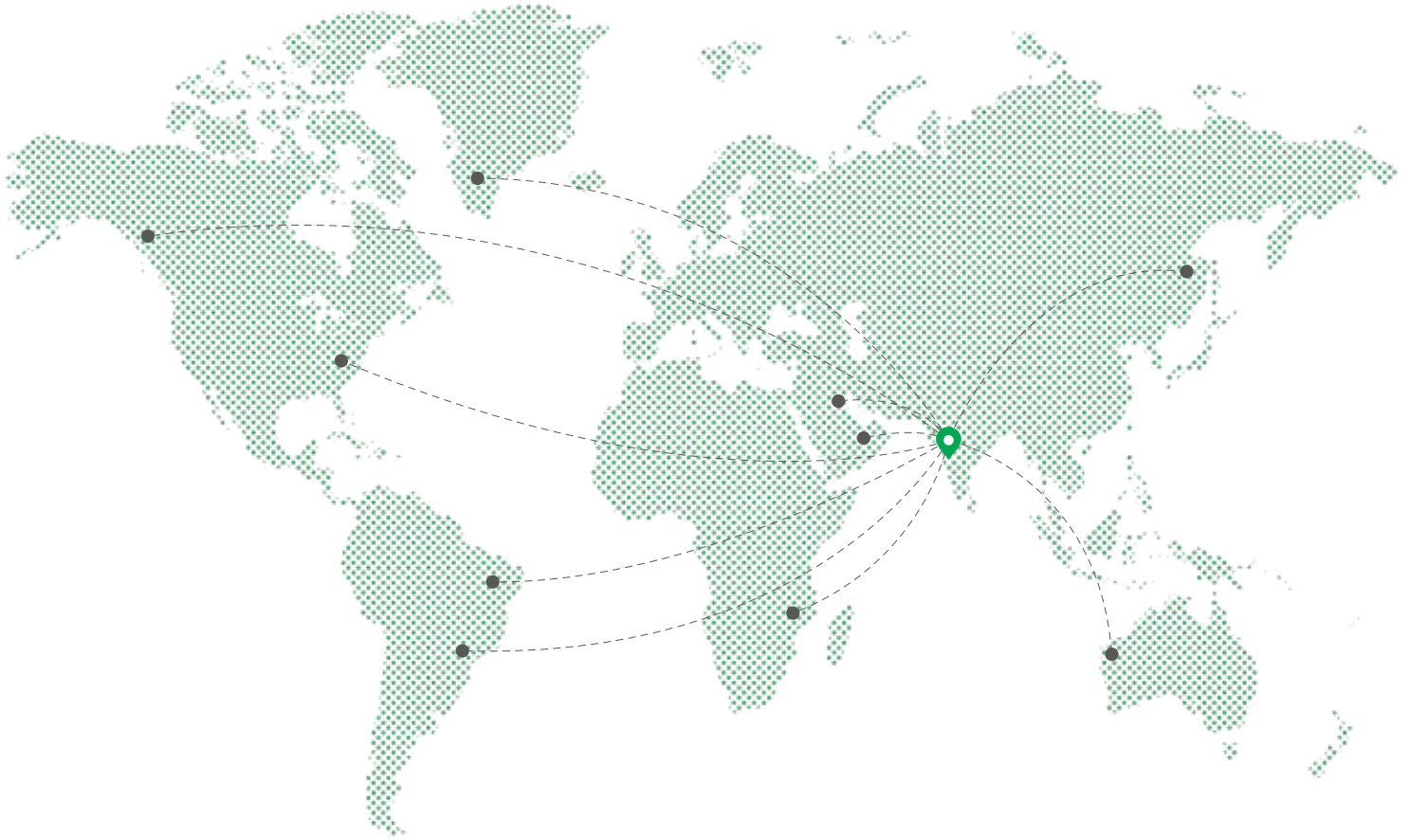
At Sarda, we announce our foray into the world of Plant Based Proteins.

Our proteins are derived, enhanced and concentrated using a Clean Label Technology .

We can customize the requirement of specific attributes in Plant Based Proteins for Protein %, Sensory Profile, Amino Acid Profile and others. These attributes contribute to signature functionality of the Protein- Solubility, Gelling, Emulsification, Foam Stability & Texture.

With our conventional Hydrocolloids Portfolio, we are in a unique position to provide customized pre-mixes and blends as per the application requirements.

| PROTEIN ORIGIN | PROTEIN % RANGE | APPLICATIONS |
|----------------|-----------------|--|
| Guar Bean | 50 % - 75 % | <ul style="list-style-type: none"> • Meat Analogues • Gluten Free |
| Carob bean | 40 % - 75 % | <ul style="list-style-type: none"> • Snacks & Savory • Plant Based Beverages |
| Mung Bean | 30 % - 65 % | <ul style="list-style-type: none"> • Ice Creams • Egg Replacement |
| Wheat Germ | 45 %- 70 % | <ul style="list-style-type: none"> • Textured Proteins (High Moisture & Low Moisture) |
| Hemp Seed | 30 % - 70% | <ul style="list-style-type: none"> • Protein Shakes • Alternative Dairy |



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