Gum Arabic for Food Application

**Dairy products**
Gum Arabic is added to milk and milk products to produce the desired dish or beverage. This includes applications where Gum Arabic is used to suspend the ingredients and impart richness and body to the drink.
In this field Gum Arabic is used as an excellent binder of water and as stabilizer. It is applied in the production of ice cream, liquid milk products, sherbets and other products. The addition of Gum Arabic prevents the formation of ice crystals by combining with large quantities of water. The proper amount of milk or cream is mixed with Gum Arabic, then the mixture is heated mildly, poured into molds, cooled and packed.

**Confectionery products**
Gum Arabic functions in confections as an emulsifier, sugar crystallization control agent, bulking agent, and film former. In caramels and toffee products, Gum Arabic is emulsification properties aid in the reduction of fat droplet size distribution thus providing stability to the product.
It is the recognized preferred natural ingredient for the production of high quality and reduced calories soft candies. Moreover it is an excellent flavor carrier and is used by formulations for the imparting of a clean, long-lasting fresh taste. Gum Arabic is used to emulsify the flavor oils or fats in confections or to retard crystallization in high sucrose confections.
Bakery products
Gum Arabic is widely used for glossy coatings, sealing of baked goods and effecting binding. Even small quantities of Gum Arabic added to the dough increase the yield, give greater resiliency, improve texture and give longer shelf life. When used in a bun glaze, Gum Arabic imparts stability in conjugation with free-flowing and adhesive characteristics. The glaze is applied while still warm and adheres firmly to the bun upon cooling.

Fruit juices and Beverages
Gum Arabic is widely used to stabilize emulsions, add dietary fiber, suspend solids and largely responsible for the lace curtain effect on the sides of beer glasses. Eye-appearance opacity in beverages and beverage dry mixes are produced by spray-dried combination of vegetable oil and Gum Arabic sold commercially as a clouding agent.
Nutritional products
Gum Arabic is a low calorie food and cholesterol reducer. Many weight loss products also require the use of stabilizer to increase bulk in the stomach through swelling of the food. Gum has a great deal of experience in weight loss and weight control products. It has been used for more than 3000 year and is generally regarded as safe (no ADI value given).

Culinary products
Gum Arabic is a very effective water-binding agent. Its primary emulsification properties are particularly effective in standard and low oil pourable products. The surface active properties of the gum emulsify and stabilize the oil droplets and provide a creamy mouthfeel.
Processed Fruits and Vegetables
Gum Arabic is used to preserve fruits and vegetables. All dried fruits, root and tubers, legumes and packaged seeds are likely to have Gum Arabic added to them. Canned vegetables might contain Gum Arabic as well. Spreads, pureed fruits and vegetables, vegetable sauces, candied fruit, canned vegetable juice and other processed products that contain fruits and vegetables are often prepared with Gum Arabic to ensure that the ingredients will last longer.

Processed Meats
Any meats that have been processed or have ingredients such as flavorings added to them are likely to contain Gum Arabic. This includes hot dogs, sausages, luncheon meats and canned fish. Any preserved meat or fish, as well as dried egg products and meaty soups and sauces also contain Gum Arabic. Products made with soybeans, such as tofu and soymilk, usually don't contain Gum Arabic. However, soy-based seasonings, such as soy sauce, are likely to use Gum Arabic as a preservative.
Flavor encapsulation
The flavor industry uses Gum Arabic as a fixative in spray drying applications where the gum encapsulates the flavor compound, protecting it from oxidation and volatilization. When used as a fixation, Gum Arabic forms a thin film around the flavor particle, protecting it from oxidation, evaporation, and absorption of moisture from the air. This is advantageous when hygroscopic materials become spray dried. Flavors spray dried with protective colloids last 10-20 times longer than the same flavor air dried on a solid. Gum Arabic is reacted with gelatin in a medium containing the flavor to form an insoluble, protective film surrounding or encapsulating the sphere of flavor. In the flavor industry, Gum Arabic is used for two primary applications. These are as a stabilizer for the concentrate used for soft drink manufacture (oil in water emulsion) and as a protective carrier for spray drying liposoluble and sensitive products.