

Water Soluble Gums and Resins

Introduction

True gums are formed from the disintegration of internal plant tissues, mostly from the decomposition of cellulose in a process called gummosis. Gums contain high amounts of sugar and are closely allied to the pectins. Gums are especially common in plants of dry regions. They are used primarily as adhesives, and are also used in printing and finishing textiles, as a sizing for paper, in the paint and candy industries and as drugs.

Resins are formed as oxidation products of various essential oils and are very complex and varied in chemical composition. The resin is usually secreted in definite cavities or passages. Resins are also used in medicine; for sizing paper; as a stiffening material for mats; in the preparation of sealing wax, incense and perfumes; and for many other purposes as well.

Resins, gums and latex are almost ubiquitous in the plant kingdom and many of them continue to play an important role in our daily lives. Numerous plants produce some kind of resin, latex or gum, but only a few are commercially important today, even though their uses and applications are truly manifold. They have been used as adhesives, emulsifiers, thickening agents, they are added to varnishes, paints and ink; they lend their aromas to perfumes and cosmetics and even play a role in pharmacy and medicine. Gums are viscous substances which are secreted by the bark of certain trees.

Usually transparent (but sometimes slightly tinted) they contain a mucilage which when dissolved in water makes the latter become viscous. When this mucilage is dissolved in water it can be made to precipitate with alcohol. Resins, on the other hand, are gluey and viscous substances which may be whitish, brownish, or red and are secreted by certain trees when they are incised. Resins contain an essence and are usually not water soluble. Most commonly found types of plant exudates are chemically completely different to gums. Several acacia species are important economically.

True gums are complex organic substances mostly obtained from plants, some of which are soluble in water and others of which, although insoluble in water, swell up by absorbing large quantities of it. They are used in adhesives, pharmaceuticals, inks, confections, and other products. Resins are terpene based compounds. Terpenes constitute one of the largest groups of plant chemicals and they can be very complex. They are not water soluble, but can be either oil soluble or spirit soluble, depending on their specific chemical composition. Worldwide interest and activity in gums and resins has grown dramatically in the last few years.

Governments, environmentalists, research institutions and other interest groups are among those who have begun to push for stronger support for gums and resins as a way to meet a range of economic, social and environmental goals.

Some of the fundamentals of the book are photosynthesis and metabolism of carbohydrates, occurrence, properties and synthesis of the monosaccharides, nitrogen derivatives, carbohydrates in parenteral nutrition, essential carbohydrates, ethers, anhydro sugars and unsaturated derivatives, constitution of nicotinic acid and of nicotinamide,

industrial methods of preparing nicotinic acid and nicotinamide, general physiology, metabolism and mechanism of the vitamin action etc.

This book gives a complete insight of water soluble gums and resins that are used in day to day life in various Industries. It is an invaluable resource to all its readers, students, scientist, new entrepreneurs, existing industries and others.

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Niir Project Consultancy Services (NPCS)
can provide Process Technology Book on
Water Soluble Gums and Resins

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Niir PROJECT CONSULTANCY SERVICES

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- *One of the leading reliable names in industrial world for providing the most comprehensive technical consulting services*
- *We adopt a systematic approach to provide the strong fundamental support needed for the effective delivery of services to our Clients' in India & abroad*



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What do we offer?

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- *Laboratory Testing Services*
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- *Entrepreneur India (An Industrial Monthly Journal)*

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- *We empower our customers with the prerequisite know-how to take sound business decisions*
- *We help catalyze business growth by providing distinctive and profound market analysis*
- *We serve a wide array of customers , from individual entrepreneurs to Corporations and Foreign Investors*
- *We use authentic & reliable sources to ensure business precision*



Our Approach

Requirement collection



Thorough analysis of the project



Economic feasibility study of the Project



Market potential survey/research



Report Compilation

Who do we serve?

- *Public-sector Companies*
- *Corporates*
- *Government Undertakings*
- *Individual Entrepreneurs*
- *NRI's*
- *Foreign Investors*
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- *Adhesives, Industrial Adhesive, Sealants, Glues, Gum & Resin*
- *Activated Carbon & Activated Charcoal*
- *Aluminium And Aluminium Extrusion Profiles & Sections,*
- *Bio-fertilizers And Biotechnology*
- *Breakfast Snacks And Cereal Food*
- *Bicycle Tyres & Tubes, Bicycle Parts, Bicycle Assembling*

- *Bamboo And Cane Based Projects*
- *Building Materials And Construction Projects*
- *Biodegradable & Bioplastic Based Projects*
- *Chemicals (Organic And Inorganic)*
- *Confectionery, Bakery/Baking And Other Food*
- *Cereal Processing*
- *Coconut And Coconut Based Products*
- *Cold Storage For Fruits & Vegetables*
- *Coal & Coal Byproduct*

- *Copper & Copper Based Projects*
- *Dairy/Milk Processing*
- *Disinfectants, Pesticides, Insecticides, Mosquito Repellents,*
- *Electrical, Electronic And Computer based Projects*
- *Essential Oils, Oils & Fats And Allied*
- *Engineering Goods*
- *Fibre Glass & Float Glass*
- *Fast Moving Consumer Goods*
- *Food, Bakery, Agro Processing*

- *Fruits & Vegetables Processing*
- *Ferro Alloys Based Projects*
- *Fertilizers & Biofertilizers*
- *Ginger & Ginger Based Projects*
- *Herbs And Medicinal Cultivation And Jatropha (Biofuel)*
- *Hotel & Hospitality Projects*
- *Hospital Based Projects*
- *Herbal Based Projects*
- *Inks, Stationery And Export Industries*

Sectors We Cover *Cont...*

- *Infrastructure Projects*
- *Jute & Jute Based Products*
- *Leather And Leather Based Projects*
- *Leisure & Entertainment Based Projects*
- *Livestock Farming Of Birds & Animals*
- *Minerals And Minerals*
- *Maize Processing(Wet Milling) & Maize Based Projects*
- *Medical Plastics, Disposables Plastic Syringe, Blood Bags*
- *Organic Farming, Neem Products Etc.*

Sectors We Cover *Cont...*

- *Paints, Pigments, Varnish & Lacquer*
- *Paper And Paper Board, Paper Recycling Projects*
- *Printing Inks*
- *Packaging Based Projects*
- *Perfumes, Cosmetics And Flavours*
- *Power Generation Based Projects & Renewable Energy Based Projects*
- *Pharmaceuticals And Drugs*
- *Plantations, Farming And Cultivations*
- *Plastic Film, Plastic Waste And Plastic Compounds*
- *Plastic, PVC, PET, HDPE, LDPE Etc.*

Sectors We Cover *Cont...*

- *Potato And Potato Based Projects*
- *Printing And Packaging*
- *Real Estate, Leisure And Hospitality*
- *Rubber And Rubber Products*
- *Soaps And Detergents*
- *Stationary Products*
- *Spices And Snacks Food*
- *Steel & Steel Products*
- *Textile Auxiliary And Chemicals*

- *Township & Residential Complex*
- *Textiles And Readymade Garments*
- *Waste Management & Recycling*
- *Wood & Wood Products*
- *Water Industry(Packaged Drinking Water & Mineral Water)*
- *Wire & Cable*

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