

# Plant-Extraction of Glue from Trees: Applications in Pharmacology

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## INTRODUCTION

Plant gums, resins and latex are non-wood products that are widely used and traded after essential oils. Vegetable gum is a hydrophilic polymer composed of a complex mixture of branched polysaccharides, which is formed mainly by the decomposition of cellulose in a process called "gelatinization" and is secreted from the shell or endosperm of the seed. These carbohydrates are usually present with small amounts of protein and minerals, depending on the type of gum. 3 Vegetable gum is the gum of the biosynthesized seed in the embryo as a food reserve, or the secretory gum secreted by the cortex as a defense mechanism against injury. Bleeding glue is a water-soluble or water-dispersible hydrophilic colloid, which has the characteristics of suspension, dispersion and stability. Therefore, vegetable gum secretions are used as emulsifiers, gelling agents, thickeners, suspending agents, adhesives, blowing agents, blowing agents, encapsulating agents and flocculating agents in the food, pharmaceutical, textile, oil, paper and cosmetic industries. .

Recent years have witnessed the widespread use of vegetable gums on an industrial scale, posing a threat to the sustainability of these economically important gum trees. Among the various species of gum-producing trees, members of the Leguminosae (*Acacia* spp., *Prosopis* spp.), *Sterculia urens*, and *Combretaceae* (*Anogeissus latifolia*) families are highly recognized for commercial applications; therefore, studies can be planned. Explore the potential of various tree species to secrete gums and the potential to use gums in various food and drug formulations.

The plant secretes chewing gum throughout the year; however,

for the current investigation, a typical hardened brown chewing gum was collected from the bark of the plant. Deacetylation of the gum produces a dark brown solution with little insoluble gum residue. Adding a dilute ammonia solution is beneficial for recovering high molecular weight compounds, while cold water only dissolves low molecular weight compounds.

## GUMS COME FROM DIFFERENT PARTS OF PLANTS

The source of some gums can be the epidermis of the seeds or it can be extracted from the leaves and bark of plants. Chewing gum is considered a sick substance, caused by damage to plants or adverse conditions (such as damage to cell walls). Acacia gum tragacanth and guar gum are chewing gum samples; chewing gum is easy to dissolve in water. Chewing gum is most likely taken orally for protein drugs and is an effective option for effective administration of protein drugs.

## CONCLUSION

Natural polysaccharides, especially gums and mucilages, are considered to be sustainable materials due to their unique structure, biology, physicochemical and biomechanical properties. Plant-derived gums and mucilages are well known in the scientific community, and is widely used in food processing, pharmaceuticals and nanomedicine. Prominent examples include gum tragacanth (from various species of the genus *Astragalus*) and gum arabic (*Acacia senegal* (L.) Wild.). In this study, different rubber nanostructures and their preparation methods were discussed, and the application of rubber nanostructures in various food bioactive ingredients was reviewed..

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