

**S.K.P. GOVT. DEGREE COLLEGE**

**GUNTAKAL**



***BEST PRACTICES***

**“PREPARATION OF  
ANTI-DIABETIC HERBAL POWDER”**

**DEPARTMENT OF BOTANY**

**S.K.P. GOVT. DEGREE COLLEGE**

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## **Title of the best practice : “Plant drug preparation for diabetes”**

### **Objectives of the practice:**

1. To inculcate research attitude.
2. To spread awareness about plant and environment.
3. To develop a team solely dedicated to plant science.
4. To spread awareness about plants.
5. To take part in activities which are related to the development of the subject.

### **The context:**

The world of plants hold the solution to most of our problems named environment, earth and health problems of the major issues faced globally. To throw light on this aspect of plants, students are encouraged to portray their knowledge about plants and its uses. A lecture is organized in which eminent people in the field of plant sciences are invited. This introduces the students to the latest happening in the world of plants. Keeping the above objectives in mind various departments in our institute have formulated events which serve as a platform where interaction, presentation of research by students is the main aim.

### **The practice:**

Department of botany has an annual event, which encourages the students to prepare medicine from plant material. Also the students are able to interact amongst the peers which helps widen their perspectives about the topic. Apart from the academic part three events are managed by the B.Sc. III year students with guidance of the faculty of botany.

## **PREPARATION OF ANTI-DIABETIC HERBAL POWDER FROM MANGO & JAMUN LEAVES**

### Antidiabetic Potential of *Mangifera indica* leaves



Mango is known as the 'king of fruits' -- a well-known summer fruit that finds a number of uses in the Indian cuisine. Both raw and ripe mangoes are used to prepare dozens of dishes including mains, sides and especially accompaniments like chutneys and pickles. Mango drinks are especially popular in tropical countries, for their amazing taste and flavour and their ability to quench thirst like nothing else. Mangoes also have a number of health benefits; from supplying the body with healthy fibre to improving digestion, boosting immunity and keeping us hydrated. However, the mango tree has much more to give us than just its juicy and delicious fruit. For example, did you know that even mango leaves can provide with a lot of health benefits? The shiny, green leaves have a number of health benefits, due to which they have traditionally been used in home remedies in ancient medicinal practices. One such purported benefit of mango leaves is its ability to regulate blood sugar levels and manage diabetes.

Mango leaves generally have a reddish or purplish hue when they are young, but as they mature, they become dark green with a pale underside. These leaves have powerful antioxidant properties and are rich in flavonoids and phenol. They are consumed in both powder and decoction form. The latter is produced by boiling mango leaves in [water](#). In South East Asia, the tender [mango leaves](#) are cooked as is and eaten. They also have anti-microbial properties and the young leaves have a number of medicinal benefits.

## How To Use Mango Leaves To Manage Diabetes

Mango leaves have been used in Chinese medicine to control [diabetes](#). An ancient Chinese remedy involves using mango leaf extracts to manage diabetes and asthma, through their abundance of nutrients. However, one particular scientific study in 2010 also provides credibility to the ability of mango leaves to manage diabetes. The study showed that mice who were given mango leaf extracts, absorbed less glucose than those who weren't. This is because mango leaf extracts have been known to increase insulin production in the body and also fight cholesterol in blood, due to the presence of vitamin C, pectin and fibre in the leaves. Moreover, mango leaves have also been known to provide relief from diabetic symptoms like frequent urination, blurry visions etc.

A diabetes home remedy involving mango leaves suggests that drinking the water that has been used to boil about 10 to 15 fresh mango leaves after letting it sit overnight, is effective to control and manage diabetes. However, there is limited scientific evidence about the effectiveness of this home remedy. It is advisable to consult a certified dietitian or a clinical nutritionist before making any changes or additions in your diabetes diet.

## Antidiabetic Potential of *Syzygium cumini*

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**Different parts of Jamun, *Syzygium cumini*.**

**A: leaves;      B: stem;      C: fruit;      D: seed.**

Jamuns are one of India's favourite summer fruits, known to have [numerous health benefits](#). Commonly known as the Indian blackberry, java plum, or black plum, they are rich in protein, fibre, antioxidants, flavonoids, calcium, iron, phosphorus, potassium, manganese, Vitamin C and B6, and several other nutrients.

These tangy fruits are mostly consumed raw or as juice, and also make for a great ingredient in salads, smoothies, and more.

The goodness of jamuns isn't just limited to just the fruit — the seeds, which are often removed before consumption, are in fact rich in nutrients as well. They are known to be a great healer for digestive ailments and are used in various alternative healing systems like Ayurveda, Unani, and Chinese medicine. The seeds are also known for their anti-diabetic properties, which can help patients with severe blood sugar levels.

Shilpa Arora, macrobiotic nutritionist and health practitioner, told NDTV Food, "Both jamun seeds and the fruit have substances called jamboline and jambosine, which slow down the release of sugar into the blood. Jamun seeds also increase the availability of insulin."

A study published in the Asian Pacific Journal of Tropical Biomedicine stated that jamun seed extracts reduced blood glucose levels significantly, and regulated insulin levels in hyperglycemic rats. It added that the seeds have a potent prophylactic role against hyperglycaemia.

The best way to consume jamun seeds is in the form of powder, which can be mixed with water or milk on a daily basis.

### Here's how you can make the powder:

- Separate the seeds from the fruit and wash them thoroughly by making sure that no fleshy part of the fruit remains.
- Keep the seeds to sun-dry on a clean cloth for at least three to four days.
- Once dried, peel off the outer shell and keep just the green inner core of the seeds.
- This core can be broken into half by pressing the seeds. Then sun-dry them again for a few more days.
- Once they are dried thoroughly, powder them in a grinder.
- Sieve the coarse powder and repeat the same method till most of the seed powder is fine enough to pass through the sieve.
- Store the jamun seed powder in an air-tight container and consume it by mixing it with water or milk.

Apart from helping with managing diabetes, it is believed that the powder also helps in a good detox, eliminating toxins from the body. It is also recommended for boosting metabolism and also for good digestion.





# RAW MATERIAL



## PROCESS OF DRUG PREPARATION

