

# Sarcostemma Acidum Voigt Somlata Ethnobotany, Medicinal Uses and Pharmacological Potential

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**Abstract:** *Sarcostemma acidum Voigt* is a xerophytic plant of the family Apocynaceae. Plant is locally known as Somlata. . It is a traditional medicinal plant categorized as a member of soma plants used to prepare Somras. It is much branched, leafless, straggling shrub. The plant found in India, Pakistan, and Europe. In India, it is mainly found in Bihar, West Bengal, Odisha and many places of South India in dry rocky places. The different parts of *S. acidum* plant including stem, root, seeds, latex, and fruits exhibited various medicinal uses. The juice of this plant is considered as the divine drink offered to gods, contemplated with medicinal efficacy, and used as natural restorative for health that makes the consumer awakened and alert. As per geographical indications, flowering of the plant occurs during summer and fruiting in October. It was propagated through seed. The stem juice of the plant was used as ear drops in otitis and dog bite. However root was used in to treat snake bite, rabies, emesis and leprosy. Latex is applied on wounds and cuts. The whole extractives of the plant were reported to have to number of psychopharmacological effect including antipsychotic, anxiolytic and CNS inhibitory activity. *S. acidum* stem extract resulted in an arrest of spermatogenesis without any systemic side effect. Sperm motility as well as sperm density was reduced significantly.

**Keywords:** *Sarcostemmaacidumvoigt*, Somlata, Medicinal plant, Traditional medicine, Pharmacological effects

## 1. Introduction



*Sarcostemma acidum* plant with flowers

Botanica name: *Sarcostemma acidum* Voigt

Taxonomical classification

Kingdom: Plantae

Order: Asterids

Family: Apocynaceae

Genus: *Sarcostemma*

Species: *Sarcostemma acidum*

Synonyms: *Asclepiasacidum* Roxb., *Cynanchumacidum* (Roxb.), *Sarcostemma brevistigma*.

Vernacular names

English: Moon plant, Moon creeper

Hindi: Soma, Somlata

Sanskrit: Soma, Somlata, Somavalli

Bengal: Kula Thar, Soma, Somlatha

Odia: Somlata, Borohwi, Notasiju

Tamil: Kodikklli, Somamum

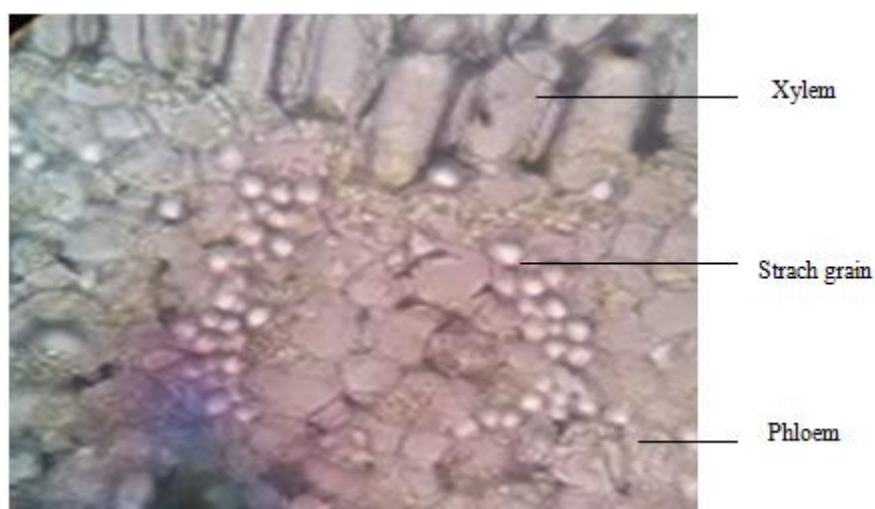
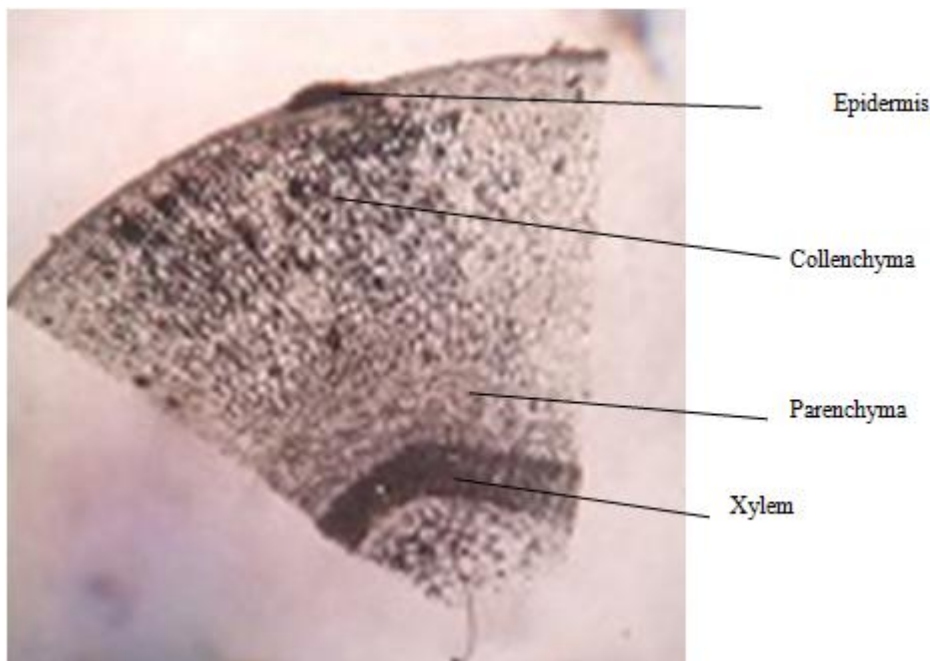
Telugu: Kondapaala, Somlatha

Malaylam: Somam, Somavalli

## 2. Morphology

*Sarcostemmaacidum Voigt* (Somlata) is a perennial jointed shrub with green, cylindrical, fleshy glabrous branches containing milky white latex. The length of the stem is 2 to 4 meter and diameter is 0.5 cm. to 1 cm. The root is brownish in color containing 3 to 5 sub root branches. The plant flowers between July to February and bears light yellow or white flowers. The plant is widely distributed in India, Sri Lanka, Pakistan and European countries. In India it is mostly found in rocky dry places of Karnataka, Tamil Nadu, Andhra Pradesh, Odisha, Bihar, West Bengal.

### Microscopy of Stem of *Sarcostemma Acidum*



### Microscopy of stem

The microscopy of the stem of *Sarcostemma acidum* is major divided into three parts.

- 1) Outer epidermis layer
- 2) Cortex
- 3) Vascular bundles.

The outer most epidermis consist of single layer of cell.

The cortex consist of collenchyma and parenchymal cells. Below the epidermis 2 to 3 layers of collenchyma cells are present. Under this 5 to 6 layers of polyhedral parenchymal cells are present. A single layer endodermis cells separate the cortex and vascular bundles. The vascular bundle is of ring shape containing the xylem and phloem fibers. Starch grain are present near the phloem tissue. Medullary rays and pith form the central part of the stem

### Powder Analysis

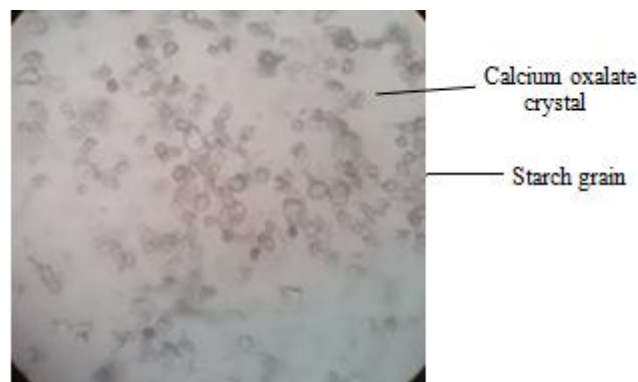
#### Organoleptic property

Color: Yellow brown

Odour; Pungent

Taste: Characteristics

### Powder Microscopy



### Microscopy of powder

In the microscopy of powder, it is found that the powder contains

- 1) Starch grain
- 2) Prismatic crystal of calcium oxalate
- 3) Mucilage
- 4) Elongated collapsed fiber.

**pH of powdered drug**

pH of 1% solution	pH of 10% solution
6.26	6.27

**Physical Evaluation Parameters**

S. No.	Parameter	Values (% w/w)
1	Loss on Drying	0.4%
2	Extractive Value	
	Water Soluble Extractive	12%
	Methanol Soluble Extractive	8%
	Ethanol Soluble Extractive	6%
	Ether soluble Extractive	5%
	Ethyl acetate Soluble Extractive	7%
3	Ash Value	
	Total Ash	9%
	Water Soluble Ash	4%
	Acid insoluble Ash	1%
4	Swelling Index	Zero

**3. Conclusion**

This Pharmacognostic studies of *sarcostemmaacidum* provide useful information to identifying and authenticating of this plant. This study gives details about distribution, identification and morphological features, microscopic characteristics, physical parameters of the plant that would be helpful in further scientific researches and studies.

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