

## Phytochemical Study of *Sarcostemma Acidum Voigt*.

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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 was 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.

The plant extract of *Sarcostemma acidum* contains carbohydrates and glycosides, alkaloids, tannins,

flavonoids, proteins and free amino acids, steroids and triterpenoids, fixed oils and fats, mucilage, gums and waxes.

### I. INTRODUCTION

Ever since the birth of humanity, there has been a relation between life and plants. The plants are indispensable to man for his life. The three important necessities of life – food, clothing and shelter are supplied to him by plant kingdom. The plant also provided a store house of remedies to cure the diseases. The history of herbal medicine is equally old as human history. By their experience , this knowledge of herbal remedies was transferred to generation as family medicine. Most of these plant derived drugs were originally identified through the subject of traditional remedies and folk knowledge of indigenous people and some of these could not be substituted despite tremendous progress in synthetic chemistry. Therefore the plant can be depicted as a major source of medicines, not as isolated active principle but also as crude drug. So now modern medicine and herbal medicine are complementary being used in the areas of health care. The herbal product today symbolize safety in contrast to synthetics because the synthetics are giving more adverse effect.

*SARCOSTEMMA ACIDUM VOIGT* is a xerophytic leafless plant of the family Apocynaceae. Locally it is known as Somlata. Traditionally the plant is used to prepare somras.

## PLANT PROFILE



### SARCOSTEMMA ACIDUM PLANT

**Botanical name** : – *Sarcostemma acidum* Voigt

#### Taxonomical classification

Kingdom :- Plantae  
Order :- Asterids  
Family :- Apocynaceae  
Genus :- Sarcostemma  
Species :- *Sarcostemma acidum*  
Synonyms :- *Asclepiasacida* Roxb. ,  
*Cynanchum acidum* (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

#### Description

*Sarcostemma acidum* 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 .

The different parts of *Sarcostemma acidum* plant including stem, root, latex exhibited various medicinal uses. The juice of this plant ( somras ) is considered as the divine drink and used as natural restorative for health. The stem juice of the plant was used as ear drop in otitis and dog bite. The root was used to treat snake bite, rabies, emesis and leprosy. Latex is applied in wound and cut. The stem juice is used in arthritis and joint pain. The whole extractives of the plant was reported to have number of psychopharmacological effect like anxiolytic, antipsychotic, and CNS inhibitory effect.

#### PHYTOCHEMICAL SCREENING

The phytochemical screening help us to identify the types of secondary metabolites present in the plant. So the screening was carried out by taking the powder, aqueous and methanolic extract of stem of *Sarcostemma acidum*

**PHYTOCHEMICAL SCREENING RESULT**

TEST	POWER DRUG	AQUEOUS EXTRACT	METHANOLIC EXTRACT
<b>TEST FOR CARBOHYDRATES</b>			
Molisch's Test	+	+	+
Benedict's Test	+	+	+
Fehling's Test	+	+	+
Test for Starch	+	+	+
<b>TEST FOR ALKALOIDS</b>			
Mayer's Test	+	+	+
Dragendroff's Test	+	+	+
Wagner's Test	+	+	+
Hager's Test	+	+	+

TEST	POWDER DRUG	AQUEOUS EXTRACT	METHANOLIC EXTRACT
<b>TEST FOR FLAVONOIDS</b>			
Ferric chloride Test	+	+	+
Shinoda's Test	+	+	+
Acid Test	+	+	+
Alkali Test	+	+	+
<b>TEST FOR PHENOL</b>	-	-	-
<b>TEST FOR TANNINS</b>	+	+	+
<b>TEST FOR SAPONINS</b>	+	+	+
<b>TEST FOR VOLATILE OIL</b>	+	-	-
<b>TEST FOR FIXED OILS AND FATS</b>	+	-	-

**II. CONCLUSION**

These studies provide detail scientific information about phytochemical composition and pharmacognostic activities of *Sarcostemma acidum*.

The plant extract of *Sarcostemma acidum* contains carbohydrates and glycosides, alkaloids tannins, flavonoids, proteins and free amino acids, steroids and triterpenoids, fixed oils and fats. This study

provides details phytochemical composition of the plant that would be helpful in further scientific researches and studies.

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