



## PHYTOCHEMICAL ANALYSIS OF MORUS ALBA AND PASSIFLORA EDULIS FRUIT EXTRACTS IN ASSAM

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### Abstract

Medicinal herbs are used in the remedy of several human ailments in Assam. Medicinal plants are natural gift to human beings to promote healthy life. In the current study the aqueous extract of *Morus alba* and *Passiflora edulis* were prepared to analyze the presence or absence of different phytochemicals in the herbs used traditionally to cure various diseases in Assam. *Morus alba* and *Passiflora edulis* show the presence of phytochemicals.

**Keywords:** *Phytochemicals, Aqueous Extract, Morus Alba, Passiflora Edulis.*

### Introduction

The investigation of biologically active compounds from natural resources has been always of great interest to the scientist looking for new drug development in biomedical research [1]. Now a days, the modern pharmaceutical industry is highly dependent on herbal medicines and most of the drug substances are derived from natural resources [6]. Plants are known to produce phytochemicals which possess anticarcinogenic, anticancer, antimicrobial and antioxidant activities [7,8] *Morus alba* Linnaeus, is commonly known as white mulberry, belonging to Moraceae family. It is a short-lived, fast growing mulberry tree, which grows to 10-20 m tall [2]. The plant is widely distributed in the subtropical regions of Asia, Africa, Europe and America. The fruit and the leaf of *Morus alba* are sold in various forms as nutritional supplements [1]. Recent studies have shown *Morus alba* has antioxidant, antibacterial, antiviral and anti-inflammatory properties [3].

*Passiflora edulis* Sims. is a woody climber, belonging to Passifloraceae family, which is cultivated in all parts of the world, mainly for its edible fruits and for its ornamental flowers[4]. The plant is commonly known as yellow passion fruit, which is an agronomically important crop and commercially it is used in the fruit industries [6]. *Passiflora edulis* is used as sedative, antiasthmatic and emetic in traditional system of medicine [9]. It is also reported that *Passiflora edulis* possess anti-inflammatory, antihypertensive, anti- anxiety, antioxidant, and antitumor, antifungal properties [5].

### Materials and Methods

#### Preparation of Extracts

Fruits of *Morus alba* and *Passiflora edulis* were washed under running tap water and chopped into fine pieces; seeds were removed and fruits were air dried at room temperature. The dried fruits were grind to fine powder using a grinder and stored in air tight bottle. 10 g of *Morus alba* and *Passiflora edulis* powder were soaked in two sterile container containing 100ml sterile distilled water respectively. Both were centrifuged at 3000 rpm and supernatant was taken and used for phytochemical analysis.

### Results and Discussion

The present study carried out on the two plants *Morus alba* and *Passiflora edulis* revealed the presence of bioactive constituents of medicinal values. The phytochemical analysis of *Morus Alba* and *Passiflora*



edulis showed the presence of all major bioactive compounds such as carbohydrates, protein, phenol, anthocyanine and oil.

The phytochemical analysis of *Morus alba* and *Passiflora edulis* also showed that the fruits are rich in primary and secondary metabolites which are liable for their antibiotic activity.(Table:1 & fig:1)

**Table -1: Preliminary Phytochemical Screening of *Morus Alba* And *Passiflora Edulis***

Sl No.	Phytochemical Test	<i>Morus alba</i> (Fruit extract)	<i>Passiflora edulis</i> (Fruit extract)
1	Carbohydrates	+	+
2	Protein	+	+
3	Oil	+	+
4	Phenol	+	+
5	Anthocyanin	+	+



**Fig-1: Phytochemical Tests of *Morus Alba* and *Passiflora edulis***

### Conclusion

In Assam many plants have been used from the immemorial for the treatment of various diseases and infections in traditional medicinal systems. The phytochemicals found in the fruit extracts of *Morus alba* indicates its potential as an important source of herbal medicine which is used to improve the health of the people of Assam. In recent years, researchers have shown increasing interest in the passion fruit plant due to its ethno botanical uses and phototherapeutic properties.

The phytochemicals exhibit different structural characteristics. More importantly, there have been no side effects or toxicity reports on these herbs. It has been reported that the study of phytochemistry, various



pharmacognostic and pharmacological properties of a plant provides incentive for proper evaluation of the use of the plant in medicine.

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