

## Preparation and Evaluation of Beverage of Mahua Flowers and its Reducing Power Assay

Puja Ramteke, Ekta Tembhare\*, Atish Y. Sahare, S. C. Akare

Bajiraoji Karanjekar College of Pharmacy, Sakoli, Dist: Bhandara, Maharashtra-441802, India

### Abstract

**Objective:** The objective of present study is to prepare beverage from mahua flowers and to evaluate its physicochemical parameters including alcohol content. Another one objective is to determine its antioxidant potential by means of reducing power assay.

**Materials and methods:** The beverage prepared by boiling ripe fruits of mahua in water. This beverage evaluated for alcohol content, appearance (color, odour and taste), pH, viscosity, specific gravity and refractive index. The reducing power of mahua beverage was determined with different concentrations using UV-visible spectrophotometer.

**Result:** The beverage was prepared from mahua flowers and subjected for the evaluation of physicochemical parameters, which found to express significant result. The reducing power of beverage was increases with increasing amount of sample. The reducing capacity serves as a significant indicator of its potential antioxidant activity has been reported to be concomitant with the development of reducing power. The presence of antioxidant constituents in beverage causes the reduction of ferric cyanide complex to ferrous form.

**Conclusion:** The present study indicates that fresh mahua beverage express antioxidant potential as determined by reducing power assay. Previous research studies explore its enrichment in potential phytochemicals hence it can be conclude that beverage of mauha flower may use as a potential drink with nutritional value.

**Keywords:** *Madhuca indica*, beverage, antioxidant activity, reducing power.

### \*Correspondence Info:

Ekta Tembhare,  
Bajiraoji Karanjekar College of Pharmacy,  
Sakoli, Dist: Bhandara,  
Maharashtra-441802, India

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### 1. Introduction

Plants have been used for medicinal purposes long before recorded history. Primitive men observed and appreciated the great diversity of plants available to them. Plants provide food, clothing, shelter, and medicine. *Madhuca* plants are considered as divine in origin and were worshipped as Mother (Goddess). They have played significant role in maintaining human health and improving the quality of human life for thousands of years. In the last few years there has been an exponential growth in the field of herbal medicine and these drugs are gaining popularity both in developing countries because of their origin and less side effects. *Madhuca indica* is highly regarded as a universal panacea in the Ayurvedic medicine. *Madhuca indica* is a large evergreen tree distributed in India, Sri

Lanka and Nepal. *Madhuca* has commonly known as mahua or butternut tree, 15-20 m height with a large top. It belongs to the family *Sapotaceae*. It has a significant place in tribal culture. The bark is yellowish grey to dark brown red in color and milky inside [1].

Inner bark is dark red, branches are numerous. Leaves are 10-30 cm long, thick and leathery, most of leaves pointed at the tip, crust scent, glabbered near end of the branches, elliptic or elliptical belongs to 7.5 to 23 cm into 3.8 to 11.5 cm. Mahua flowers are in dense fascicles near end of the branches having 1.5 cm long, fresh cream colored corolla tubular, freshly pale yellow, aromatic and cad cells, fruits are 2-6 cm long, fleshy and greenish. The species is drought resistant, strong light demander and readily suppressed under shade [2].