

## Evaluation of antibacterial activities in *Carica papaya* Linn.

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### Abstract

**Introduction:** *Carica papaya* Linn. is a well-known medicinal plant that has been widely used for a long time to cure various types of infectious disease especially in South Asian countries. This study intended to identify the potential antibacterial properties in *Carica papaya*.

**Methods:** The leaves of *carica papaya* was collected and thoroughly washed with tap water to remove dust, soil, birds dropping etc, within them. Then the leaves are dried under the shade for one week. The dried powder of papaya leaves was dissolved in 200ml methanol and it was thoroughly shaken to dissolve the powder into the solvent. Antibacterial activity was evaluated by using Cup Plate Method.

**Results:** The results of this study showed that both extracts showed moderate antibacterial activity against the test bacterial strains (*E. coli*).

**Conclusion:** The crude methanolic extract of *Carica papaya* showed significant, antimicrobial activities, some of which supports the traditional use of this plant in various diseases.

**Keywords:** *Carica papaya*, *E. Colli*, antibacterial activities.

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### 1. Introduction

#### 1.1 *Carica papaya* plant

Medicinal sources are easily and abundantly available in nature since time immemorial, herbal source of active ingredients helps in managing intractable diseases for this reason trade of plant material have been increased. Herbal medicines are always considered to be safe that has led to its increase in demand. *Carica papaya* Linn (Caricaceae) also called as pawpaw. All parts of these plants can be used such as leaves, fruits, seeds, peels, roots, and flowers as medicinal sources.

Papaya is native to the tropics of Americas. The papaya is a tree like plant of 5 to 10m tall in which leaves are 50-70cm in diameter with seven lobes. Fruits are 45cm long and 10-30 cm in diameter. Papaya fruit contains high percentage of Vitamins C, A, E, Magnesium,

potassium, calcium and carbohydrates. Vitamins B, C and E, carotenoid and phenolic compounds are the most abundant antioxidants present in the plant. Papaya leaves contain high calories than papaya fruit.

This plant has been used traditionally in cases of kidney failure, dental care, and heart problems. The leaf extract have been demonstrated to have anticancer, antioxidative, anti-inflammatory, anti-bacterial, nephroprotective, hepatoprotective, hypoglycemic and hypolipidemic effects.

The current study was aimed to carry out the Antibacterial activity against *E.coli*.

The leaves are large, 50 to 70cm diameter, deeply palmately lobed with 7 lobes. The lower trunk is conspicuously scarred where leaves and fruit were borne. The flowers are similar in shape.