

**ANTIBACTERIAL ACTIVITY OF TINDUKADI VATI,
AN AYURVEDIC FORUMLATION**

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Summary

The methanol extract of Tindukadi vati was evaluated for antibacterial activity against *Bacillus subtilis*, *Escherichia coli*, *Streptococcus aureus* and *staphylococcus*. The study was carried out by cup-plate method. Erythromycin was used as standard antibacterial agent. The results of the study revealed that, the Tindukadi vati exhibited significant antibacterial activity.

Keywords: Tindukadi vati, Antibacterial, Erythromycin

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Introduction

Tindikadi vati consisting of Beetle nut (*Areca catechu* Linn), seeds of Amalika (*Tamrindus indicus* Linn), Black pepper (*Piper nigrum* Linn). Tindikadi vati traditionally used for cold, gastrointestinal track discomfort, chest burn, weakness in heart, stomach ach, and arthritis (1-3).

Preparation of extract

Tindikadi vati was extracted with methanol by maceration process. The different concentrations (4, 6, 8 and 10 mg/100 µl) were prepared with methanol.

Test Microorganisms

Bacterial strains were obtained from Microbial type culture collection (MTCC) *Staphylococcus aureus* MTCC 3160, *Escherichia coli* MTCC 40, *Streptococcus* MTCC 389 and *Bacillus Subtilis* MTCC 121, procured from Department of Biotechnology, Nagarjuna College of Engineering and Technology, Bangalore.

Antibacterial study

The antibacterial activity was evaluated by employing 24 hrs cultures of *B. subtilis*, *E. coli*, *S. aureus* and *Staphylococcus*, using nutrient agar medium. The bacterial strains were transferred to sterile plates aseptically. The plates were left at room temperature and allowed for solidification.

In each plate one well of 6 mm diameter were made using a sterile borer. Accurately 100 µl different dilutions of methanolic extract of Tindukadi vati (4, 6, 8 and 10 mg) and single concentration of erythromycin (10 mg/ml) solutions were transferred to wells aseptically and labeled accordingly. The plates were incubated at 37 ± 1°C for 24 hrs. The diameter of zone of inhibition surrounding each of wells was recorded (4).

Results and Conclusions

Results of antimicrobial activity of different dilutions methanol extract Tindukadi vati were measured in terms of zone of inhibition. It revealed that significant antibacterial activity was showed against *Bacillus subtilis*, in comparison with standards erythromycin and at 10 mg concentration only it was active against *E. coli*. But there was no effect against *Streptococcus aureus* and *staphylococcus*.

Table 1: Antibacterial activity of methanol extract of Tindukadi vati

Microorganisms	Zone of Inhibition of methanol extract in mm				
	4 mg	6 mg	8 mg	10 mg	Erythromycin 5 µg/100 µl
<i>E. coli</i>	4	7	9	18	14
<i>Staphylococcus</i>	1	6	4	4	16
<i>B. subtilis</i>	8	12	13	15	12
<i>S. aureus</i>	1	1	3	4	14

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