ESTIMATION OF ANTIOXIDANT, ANTIMICROBIAL AND PHYTOCHEMICAL ANALYSIS OF TRIDAX PROCUMBANS

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I. INTRODUCTION

The main aim of this work is to prepare Bioenzyme of *Tridax procumbans*. The wound sample collected from infected person for the isolation and characterization of microbes and testing antimicrobial activity of wound with the Bioenzyme of *Tridax procumbens*. The Bioenzyme was prepared from the fresh,mature, healthy leaves. The analysis of antioxidantand enzyme activities were estimated. From the aqueous extracts were prepared. The present study carried out isolation and characterization of microbes from wound infection and testing its antimicrobial activity with the bioenzyme . Staphylococcus aureus, klebsiella pneumoniae and Pseudomonas aeruginosa isolated and tested its antioxidant and antiinflamamtory rsponse. The isolated microbes tested against Bioenzyme of Tridax procumbens extract. The maximam zone observed on Staphylococcus aureus (18 mm) and the minimum zone observed on Pseudomonas (14 mm) followed by Escherichia coli (13 mm). In this study the Tridax procumbens Bioenzyme shows phytochemical compounds ,tannins, saponins, flavonoid, alkaloids, glycosides and phenols. Hence, through this study,these medicinal plants might be useful as antioxident and antimicrobial agents.

Tridax procumbens , commonly known as coat buttons or *Tridax daisy*, is a species of flowering plant in the daisy family. It is best known as widespread weed and pest plant. It is native to the tropical Americas but it has been introduced to tropical, subtropical, and mild temperate region world wide. Tridax procumbens (family: Asteraceae) is a common plant. It is found in tropical areas, growing primarily during rainy season' and popularly called 'coat buttons' **(A.Chatterjee,et al., 2000), (VK.Saxena,et al., 2005).** It possess antidiebetic **(A.Durgacharan, et al.,2008)**.Anti hepato toxic, Anti-oxidant(**Reddipalli Hemalatha, 2008).**

II. BIOENZYME PREPARATION

The fresh leaves of *Tridax procumbens* were washed with sterile water and cut into small pieces and processed to the step of Bioenzyme preparation. The procedure for the preparation of Bioenzyme includes jaggery, *Tridax procumbens* leaves, and distilled water to be taken in the ratio of 1:3:10.

III. PHYTOCHEMICAL STUDY

For the photochemical analysis following studies analysed. Tannin assay, Saponin assay , Alkaloid assay, Flavonoid assay, Terpenoid assay, Glycoside assay and Steroid assay.

IV. MICROSCOPIC EXAMINATION

The microbeson wound sample estimated motility byHanging drop methods. Gram staining methods and by various biochemical tests Indole production test, Methyl red test, Vogesproskauer test, Citrate utilization test, Triple sugar iron agar test, Starch hydrolysis, Catalyse test, Coagulase test, Urease test, Lipid hydralysis tests. And antimicrobial assay was estimated by agar well diffusion methods. The principal of agar well diffusion is similar to that of agar disc diffusion assay method (Das et al., 2010).

V. ANTIOXIDENT ACTIVITY OF TRIDAX PROCUMBENS

The Antioxidant assay -The potential of the aqueous fruit peels formulation extract was evaluated by DPPH free radical scavenging assay.

VI. RESULT

Table 1: Phytochemical Analysis of *Tridax procumbens* Bio-enzyme

S.NO	Phytochemical test	*Tridaxprocumbens*
1	*Tanin*	*Positive*
2	*Saponins*	*Positive*
3	*Alkaloid*	*Positive*
4	*Flavonoids*	*Positive*
5	*Terpenoids*	*Positive*
6	*Glycosides*	*Positive*
7	*Steroids*	*Negative*
8	*Phenols*	*Positive*

Table 2: Antioxidant Activity of *Tridax procumbens* Bio-Enzyme

Concentration (µg/ml)	Ascorbic acid (%)	DPPH Scavenging Activity (%)
20	59.50±1.15	48.25±0.75
40	64.05±0.75	55.35±0.95

60	73.15±1.35	66.55±1.55
80	89.25±1.75	72.45±1.25
100	92.5±0.75	82.35±2.15

Values are mean ± S.E.M, n=3

Table 3: Isolated Microbes from Wound Sample

Sample	Isolated micro organisms
Wound samples	*Staphylococcus sp.,*
	Klebsiella sp.,
	Pseudomonas sp.,

Table 4: Antimicrobial Activity of Isolated Microbes against *Tridax procumbens* bIO – ENZYME

Sample	Micro organisms	Zone of inhibition
Tridax Procumbens Bioenzyme	*Staphylococcus aureus*	18mm
	Klebsiella pneumoniae	16mm
	Pseudomonas aeruginosa	14mm

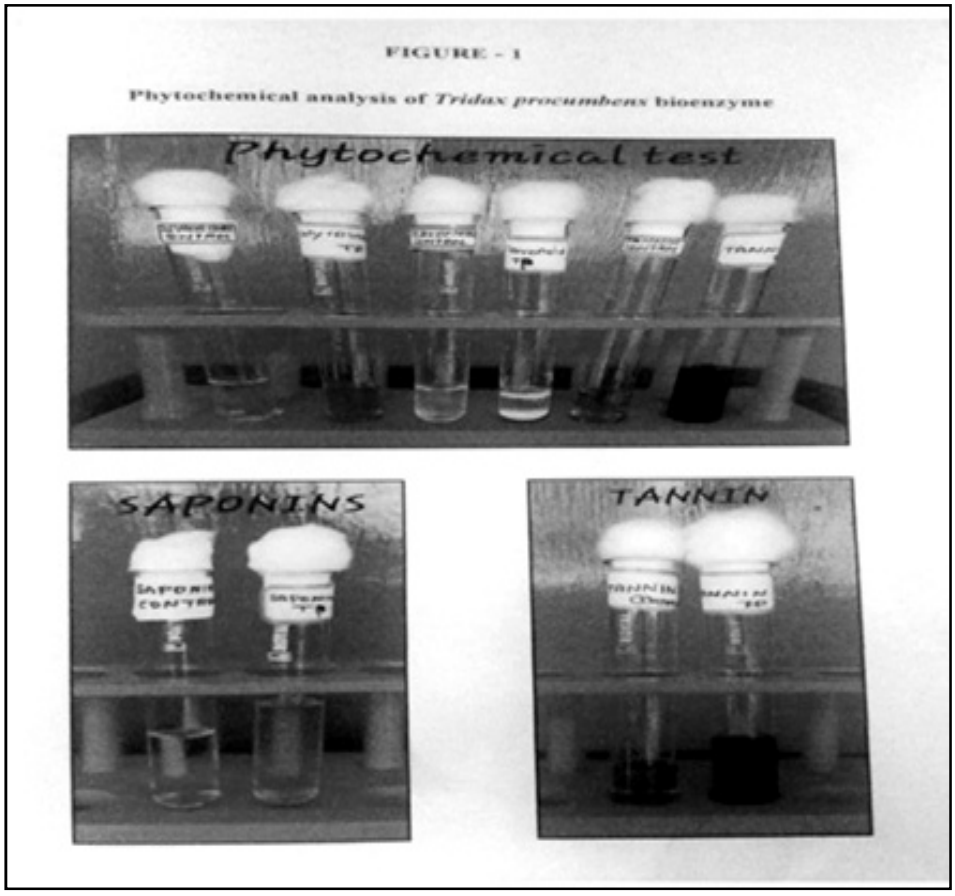

Figure 1

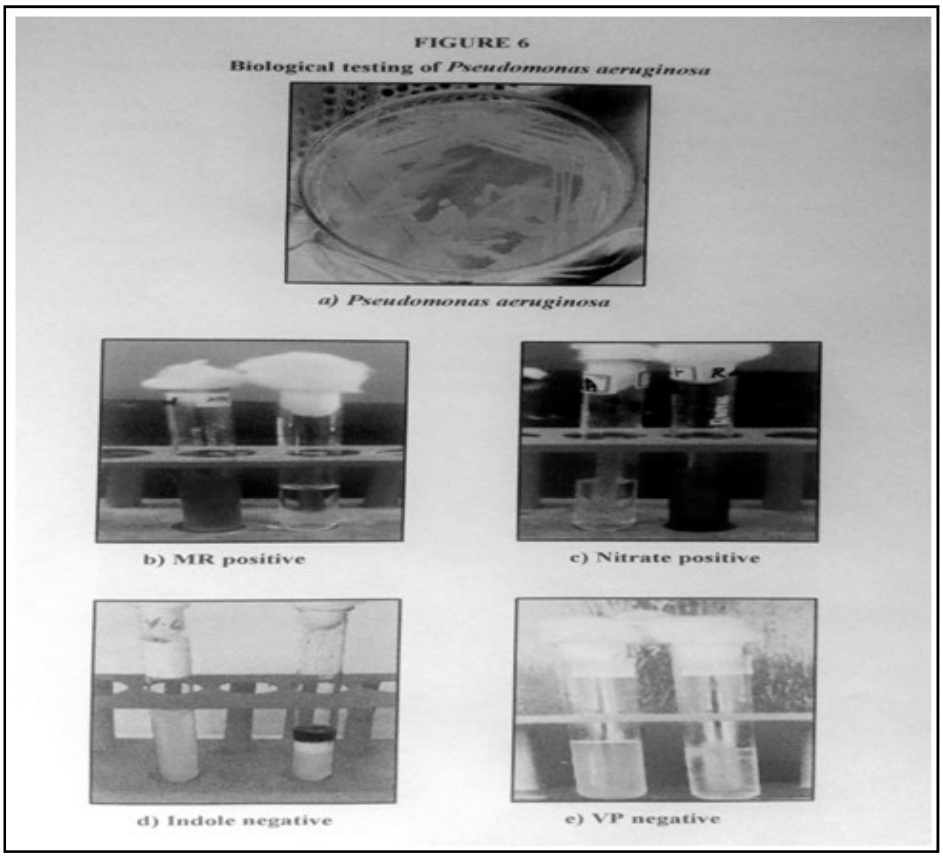

Figure 2

VII. CONCLUSION

The present study concluded that *Tridax bioenzyme* has antioxidant antimicrobial properties.

REFERENCE

[1] Tridax procumbens (family: Asteraceae) is a common plant. It is found in tropical areas, growing primarily during rainy season' and popularly called 'coat buttons' (A.Chatterjee,et al., 2000).
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