

# In-vitro Analysis of Anti-Microbial, Anti-Fungal & Anti-Oxidant Activity of Polyherbal Formulation - "Dooshivishari Agada"



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## INTRODUCTION:

'Dooshivishari Agada' is one of the frequently prescribed herbo-mineral compound medications in variety of ailments including venomous bites and stings in south India especially in Kerala. The compound preparation is a contribution of Vagbhata's Ashtanga Hridaya, Uttarantra, chapter 35/39-40 which indicates its benefits and versatile applicability in various poisonous infectious insect bites.

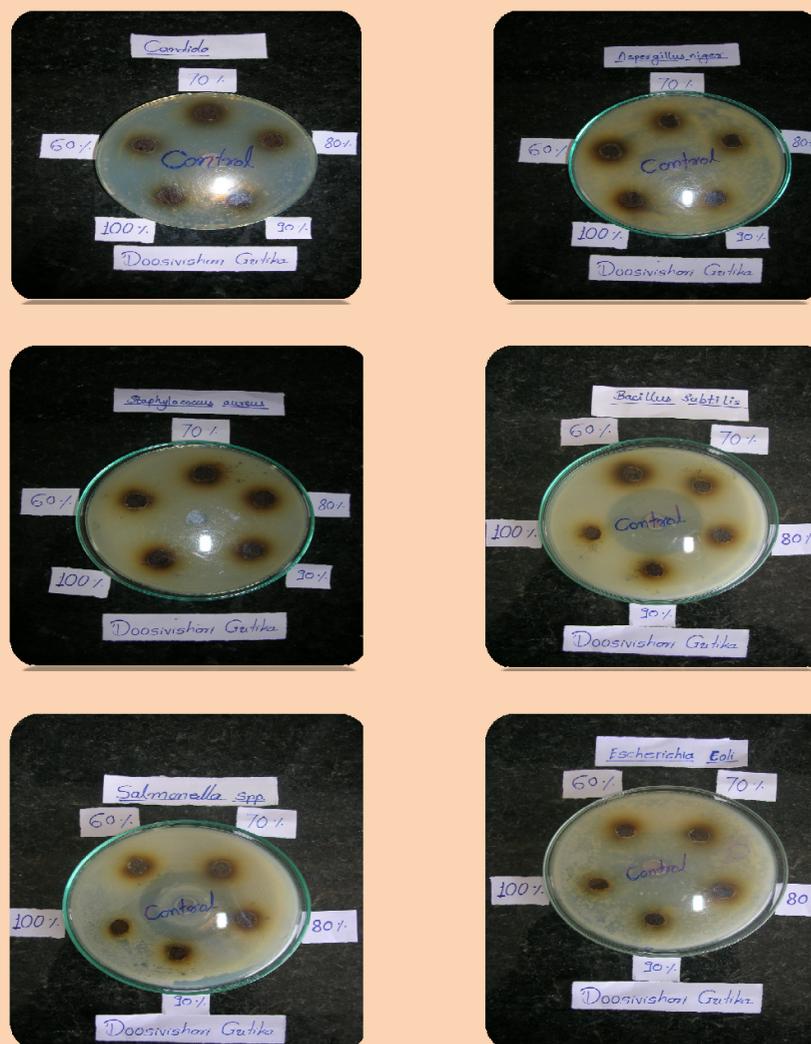
## AIM & OBJECTIVES:

The present study was planned to explore the in vitro antimicrobial, anti-fungal and anti-oxidant activity of this formulation.

## MATERIALS & METHODS:

Agar-well method was used for screening in vitro antibacterial and antifungal activity. Zones of inhibition were observed in disc diffusion for antimicrobial investigation against selected standard bacterial strains of *E. Coli*, *Bacillus Subtilis*, *Staphylococcus aureus*, *Salmonella typhi*

and *Shigella*, and fungal strains *Asperigillus niger* and *Candida albicans*. Cefpodoxime and Fluconazole were used as anti-bacterial and antifungal control with concentration of 10mg/ml respectively to compare the effects.



## OBSERVATIONS:

Sr. No	Parameter	Control	Concentration				
<b>Anti-Bacterial Activity</b>		<b>Cefpodoxime</b>	60%	70%	80%	90%	100%
1	E. coli.	18 mm	--	--	--	--	--
2	S. aureus	24 mm	25	26	26	31	33
3	B. Subtilis	32 mm	17	17	18	19	20
4	S. typhi	28 mm	--	--	--	--	--
5	Shigella	34 mm	--	--	--	--	--
<b>Anti-fungal Activity</b>		<b>Fluconazole</b>	60%	70%	80%	90%	100%
1	A. niger	22 mm	--	--	--	--	--
2	C. albicans	31 mm	--	--	--	--	--

Sr. No	Parameter	Unit	Value
1	Total Ash	%	13.47
2	Total Phenols	mg / 100gm	258.32
3	Anti-Oxidant Activity	Ascorbic acid	10.91
4	Total Plate Count	cfu/g	12 x 10 <sup>4</sup>
5	Total Fungal Count	cfu/g	04 x 10 <sup>2</sup>

## RESULTS & CONCLUSION:

'Dooshivishari Agada' showed average zone of inhibition ranging from 17-33 mm suggesting its activeness against the tested microorganisms and confirmed its antimicrobial perspective. Anti oxidant activity was calculated in terms of Ascorbic acid which was observed as 10.91 again suggesting its free radical scavenging potentials.

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