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Formulation and evaluation of polyherbal antimicrobial dusting powder

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Abstract
The Calotropis procera, Aegle marmelos, Annona squamosa is a typical no man's land plant and known for different restorative properties. The point of present examination was to screen the leaves of Calotropis procera, Aegle marmelos and Annona squamosa for the antimicrobial movement against clinical segregates of bacteria; Staphylococcus aureus. The detailed cleaning in powder was read for its hostile movement against Staphylococcus aures. The in vitro antimicrobial action was performed by utilizing agar dissemination technique. The definitions shows critical impact on the tried living being and the phytochemical study uncover the nearness of tannins, alkaloids in these three leaves. The tidying powder can be utilized to treat skin diseases and tingling.

Keywords: antimicrobial dusting powder, *Calotropis procera*, *Aegle marmelos*, *Annona squamosa etc.*

Introduction
Antimicrobial is an operator that murders the microorganisms or repress their development. Antimicrobial helplessness testing can be utilized for the medication revelation, the study of disease transmission, and forecast of restorative results. Cleaning powders are the fine condition of subdivision that can be utilized for outside application to zones where skin is unblemished.
Calotropisprocera (Asclepiadaceae), Aegle marmelos (Rutaceae), and *Annona squamosal (Annonaceae)* leaves contain alkaloids, glycosides and shows antimicrobial, antioxidant, antitumor activity.

Fig 1: Calotropis procera

Fig 2: Annona squamosal

Fig 3: Aegle marmelos

Objective

As per writing study, folkore asserting its helpful movement as antimicrobial and just a few examinations has been done on Calotropis procera, Aegle marmelos, Annona squamosa. Consequently; premium has been created to assess pharmacognostical, prelimanary phytochemical and pharmacological examinations.

Table 1: Formula for Dusting powder

Ingredient	Quantity (gm)	
	F_1	F_2
Calotropis procera	10	20
Aegle marmelos	10	20
Annona sqamosa	10	20
Starch	25	15
Talc	45	25

Result and Discussion

Table 2: Phytochemical screening

Plant constituents	Calotropis procera	Annona squamosa	Aegle marmelos
Alkaloids	+	+	+
Saponins	-	+	+
Tannin	+	+	+
Phenolic compound	+	+	+
Carbohydrate	+	+	-
Glycoside	+	+	+
Proteins & Amino acids	-	+	-
steroids	-	+	+

Note: Present (+), Absent (+)

Table 3: Evaluation Parameters

Sr. No	Physical parameters	Values		Standard
		F_1	F_2	
1	Angle of Repose	29.57	27.45	25.75
2	Bulk density	0.51	0.50	0.53
3	Tapped density	0.53	0.53	0.57
4	Carr's Index	3.77 %	5.66 %	7.0 %
5	Hausner's Ratio	1.03	1.06	1.07
6	pH	5.2	5.7	6.4
7	Moisture content	18 %	17 %	15 %
8. Ash values				
	i. Total ash	16 %	19 %	12 %
	ii. Acid insoluble ash	7%	8%	6%
9. Extractive values				
	i. Water soluble extractive value	4.0 %	2.5 %	2.0 %
	ii. Alcohol soluble extractive value	5.0 %	4.5%	3.0 %
10	Irritancy test	Nil	Nil	Nil

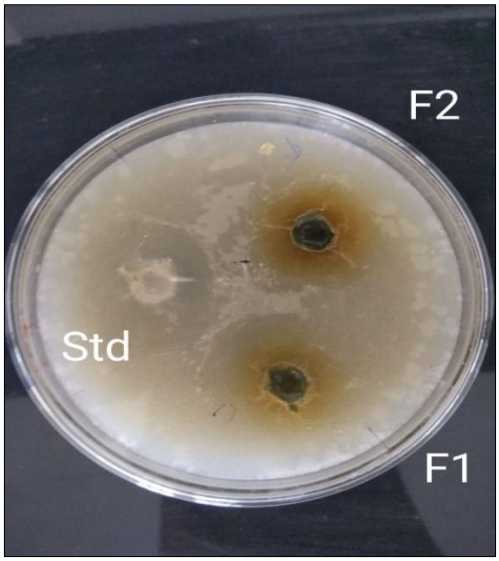

Fig 1: F_1 & F_2 Dusting powder, Std is standard (Neomycin powder)

Table 4: Antimicrobial activity of Dusting powder

Sample	Zone of Inhibition *S. aurues*
1. F_1	18mm
2. F_2	22mm
3. Standard	24mm

Conclusion

Antimicrobial movement of both the plan (i.e F1 and F2) was discovered less when contrasted with standard. The plan (F2) shows more antimicrobial action than F1. Likewise the leaves of these three plants contain the flavonoids, alkaloids and in this manner the detailing represent the great antimicrobial action.

$F_1 < F_2 <$ standard.

Thus, the formulation can be used as antimicrobial dusting powder.

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