

Formulation and evaluation of polyherbal gel wound healing

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Date of Submission: 10-08-2021

Date of Acceptance: 29-08-2021

ABSTRACT

Medicinal plant is used ancient India. The study of medicinal plants used in wound healing and skin repairing and properties. The present study was prepared wound healing activity a poly herbal gel formulation.

The study also aimed to evaluate the impact of polyherbalism on antimicrobial, antioxidant and anti-inflammatory effect there after ratio of ayurvedic drug was optimize according to treat the wound (Honey, turmeric, glycerin) Polyherbal gel are tested organism on suitable complete agar medium in petri dishes, cup.

I. INTRODUCTION

Ancient India totally depends on a natural herbal origin, there are cure different types of diseases

Ayurvedic drugs

- Turmeric



Figure 1.

It is well known nature product native to South-East Asia commonly.

1. used in powder form
2. it is recognized by its vibrant yellow hue.
3. Normally used in cooking from ancient India till date.

where they are used in plant leaves, bark and route, stem etc. they are used in therapeutic purpose, wound healing, mouth ulcer, stomach ulcer, vaginal discharge, infection, diarrhea, scabies etc.

Around 80% people of India, Used in herbal (Ayurvedic property) Medicine. Ayurvedic medicine are safe not a harmful for a body, ayurvedic doctor play a vital role in our doses. Tropical formulation to a fast-healing drug are directly to a site of action polyherbal gel applied to a wound, New skin tissue and grow within a cavity between the linked the particle reducing scaring a gel gradually dissolve however it losses the scaffolding support needed for the tissue to repair fully.

Keyword: Polyherbal gel – wound healing activity

4. Include terpenes, steroids and fatty acids, which contribute to its aromatic taste and smell.
5. The skeleton carbon structure illustrates a central seven carbon chain with conjugated double bonds and methoxy groups which contribute to the activity of the molecules.

6. Used in Inflammatory mechanisms, Antioxidant mechanism, Anti- Hyperlipidemia, Anti pruritic.

• **Synonyms**

Curcuma domestica, Curcuma longa, Turmeric, herb.

• **Biological resource**

Turmeric is the dried rhizome of curcuma longa Linn

• **Family:Zingiberaceae.**

• **Chemical constituent:** curcumin is a major component of turmeric and the activities of turmeric are commonly attributed to curcuminoids (curcumin and closely related substance). Curcumin gives turmeric its yellow color. Turmeric dietary supplements are made from the dried rhizome and typically contain a mixture of curcuminoids.

Honey



Figure 2.

1. Sweet
2. Viscous food
3. It produces by bee from the sugary secretions of plants (floral nectar) or from secretions of other insects, by regurgitation, enzymatic activity, and water evaporation.
4. Honey stored in wax by bees and their structures called Honeycombs.
5. It uses and production have a long and varied history as an ancient activity.
6. Treatment of eye diseases, cough, thirst, phlegm, hiccups, blood in vomit, leprosy, diabetes, obesity, worn infestation, vomiting, asthma, diarrhea and healing wounds.

• **Synonyms**

Madhu, Madhu, Mel

• **Biological source**

It is a viscid and sweet secretion stored in the honeycomb by various species of bees, such as Apesdorsa a, Apesflorae, Apes Indica,

Apesmellitic, belonging the natural order Hymenoptera.

• **Family:Apoidea.**

• **Chemical constituent**

The average composition of honey is as follows: Moisture 14-24%, Dextrose 23-36%, Levulose(Fructose) 30-47%, Sucrose 0.4-6%, Dextrin and Gums 0-7% and Ash 0.1 - 0.8%.

II. MATERIAL AND METHOD

Collection of drugs Tata Sampann Turmeric Powder, 500g and Dabur honey 100g

The study is pharmacognosy are selected to crude drugs contain a plant source. Curcumina is thought to a primary pharmacological agent in turmeric obtained from market. In Numerous study Curcumina are an anti-inflammatory are antioxidant and Anti hyperlipidemia and pruritis.

Dabur Honey are obtained from market, its property to show cough, worm infestation, asthma vomiting, diarrhea and healing wound.

two phase first phase is a methyl paraben, propyl paraben add distilled water heated on water bath second phase are turmeric, honey and glycerin are added in neutralizer Carbopol gel base they are slowly mix in a second to first phase continuous stirring. Last are added in a triethanolamine.

Methods of preparation of gel

First Step are Carbopol 940 are dissolved in a water in 24-hour Preparation of gel divided in a

Synod	Ingredients	G1	G2	G3	G4
1	CARBOPOL	1	2	3	4
2	HONEY	5	5	5	5
3	TURMERIC	0.2	0.2	0.2	0.2
4	GLYCERINE	5	5	5	5
5	TRIETHANOLINE	Q. S	Q. S	Q. S	Q. S
6	METHYL PARASEN	0.02	0.02	0.02	0.02
7	PROPYL PARABEN	0.01	0.01	0.01	0.01
8	DISTILLED WATER	Q. S	Q. S	Q. S	Q. S

Result of preliminary phytochemical screening of extract

Synod	TEST	DRUG	
		HONEY	TURMERIC
1	ALKALOIDS	+	+
2	FLAVONOIDS	+	+
3	STERIODS	+	+
4	SAPONINS	+	+
5	TANNINS	-	+
6	CARDIAC GLYCOSIDE	-	+
7	PHENOL	+	+



Figure 3

Physicochemical evaluation of formulated ointment

Physical properties	G1	G2	G3	G4
COLORS	RADDISH BROWN	RADDISH BROWN	RADDISH BROWN	RADDISH BROWN
PH	6.6	6.5	6.8	6.8
ORDER	CHARACTERISTIC	CHARACTERISTIC	CHARACTERISTIC	CHARACTERISTIC
WASHBILITY	GOOD	GOOD	GOOD	GOOD
NON-IRRITANCY	NON IRRITENT	NON IRRITENT	NON IRRITENT	NON IRRITENT
TEXTURE	SMOOTH	SMOOTH	SMOOTH	SMOOTH
APPERANCE	TRANSLUCENT	TRANSLUCENT	TRANSLUCENT	TRANSLUCENT
STABLE (37 C)	STABLE	STABLE	STABLE	STABLE

In-Vitro antimicrobial activity

Agar well diffusion method

Test microbial strains. All the test extract was tested for their effect on gram positive strains and gram-negative strains by using cup plate method.



G1



G2



G3



G4

The polyherbal gel samples are checked using the disk-diffusion and broth or agar dilution methods. Antimicrobial activity can be defined as a collective term for all active principles (agents) that

inhibit the growth of bacteria, prevent the formation of microbial colonies, and may destroy microorganisms.

S. No	Sample	Microbial activity
1	G1	No microbial activity growth
2	G2	No microbial activity growth
3	G3	No microbial activity growth
4	G4	No microbial activity growth

III. RESULT AND DISCUSSION: -

The polyherbal gel is formulated for transdermal use of wound healing, repair skin, reduce skin problems and work in anti-microbial activity. Different parameters are studied where carried preparation and evaluated polyherbal gel formation. Various formulations with different concentrations of Carbopol, turmeric, and honey were taken as repaired formulations G1, G2, G3, G4.

The result of physical evaluation of formulated gel shows that uniformly mixed little or no lump or gritty texture. Polyherbal gel texture is smooth. Gel formulation translucent and color is reddish brown. Carbopol was found to be a suitable candidate as it gives better consistency, viscous pH, and in-vitro drug diffusion. Triethanolamine was taken as a neutralizer to maintain the pH. Methylparaben and propylparaben were used to prevent germ growth. Turmeric and honey play a role in wound healing, antioxidant, worm infection, repair

of skin, cough, anti-bacterial and inflammatory properties.

IV. CONCLUSION: -

The based study and result show good antimicrobial, inflammatory activity. Physical properties of gel formulation contain herbal isolate. They are used in a topical region to the effect on a kill microbes' treatment of skin infection with wound healing potential is safe to apply.

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