

**Formulation and Evaluation of Polyherbal Cream Containing
Extracts of Ficus Religiosa and Psidium Guajava**

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Herbal medicine has a significant influence on human health and illnesses nowadays. Herbal therapy is significant in many areas, including the medical and financial. Despite this, the use of these herbal remedies is growing daily due to its high caliber, effectiveness, and safety. This study investigates a novel formulation that includes cream (O/W) extracts of Carica papaya, Ficus religiosa, Psidium guajava, and Curcuma longa. The pharmaceutical properties of the formulation, including its pH, viscosity, spreadability, and appearance, were ascertained Beeswax, sorbitol, and the stearyl alcohol, monooleate, liquid paraffin, methyl paraben, and propyl paraben. Herbal medication is seen as safer than allopathic therapy. Allopathic drugs, on the other hand, may have some negative effects. The cream formulation, on the other hand, is significantly superior to other formulations in terms of the tropical absorption and penetration of the active component.

Keywords: *Carica papaya, Ficus religiosa, Polyherbal, Cream, Psidium guajava.*

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INTRODUCTION

Herbal treatments are useful in managing a wide range of illnesses, and they are becoming. Despite their historical inability to cure a wide range of human ailments, medicinal plants are recognized as a significant contributor to improved patient compliance.¹ In the usual adverse effects of homeopathic medications. Since one-fourth of the world's population depends on traditional medicines that are tried-and-true, safe, and successful in treating a variety of disorders, ayurvedic remedies made from herbs would be the preferred therapy for human ailments. for the purpose of choice and prevention. Therefore, research and development of disease-curing remedies are necessary. In order to improve patient acceptance and compliance, focus is currently being given to novel, herbal medicine formulations. Indian traditional medicine.²

The primary goal of this research is to create and assess a polyherbal cream that has multiple uses, including antimicrobial, anti-inflammatory, boil cure, infectious skin disease treatment, antifungal, analgesic.³ The extracts of *Carica papaya*, *Ficus religiosa*, *Psidium gujava*, and *Curcuma longa* are used in this investigation. In the past, these herbs were each utilized separately to cure different skin conditions. But, for a more thorough treatment, this composition can now be used as an all-in-one cream.⁴

Material and Methods

Ficus Religiosa

Synonym: Peepal tree, Ashvatta tree

Biological Source: The biological source of phytosterols is dried latex of leaves *Ficus Religiosa*

Family: Moraceae

Ficus religiosa are Plantae, Phylum Tracheophyta, subphylum Euphyllopsida, class Magnoliopsida, subclass Dilleniidae, Order Urticales, and Moracea.



Figure No.1: Ficus Religiosa

Uses of Ficus Religiosa

It is used as anti-ulcer, anti-bacterial

It protects from skin diseases

It is used in anti-diabetic patient

It is used as anti-inflammatory, wound healing⁵

Carica Papaya

Synonym: Carica Bourgeauisolms

Biological source: Papain is the dried and purified latex of the green fruits of carica papaya

Family: Caricaceae

Carica Papaya belongs to Plantae, Subkingdom Tracheobionta, Class Magnoliopsida, Subclass Dilleniidae, Order Violales, Family Caricaceae



Figure No.2: CaricaPapaya

Uses of Carica Papaya:

Treats Acne, carica papaya has an anti-inflammatory property which helps reduces acne.

It nourishes skin, rich in vitamin A.

Treats fungal infections.

It produces an anti-aging effect.

Protects against environmental damage.

It used as anti-cancer and hyperlipidemic ,hypoglycaemic property.⁶

Psidium Guajava:

Synonym: Guajava pyrifera.

Biological source: dried extract of psidium guajava leaves.

Family: Myrtaceae.

Psidium Guajava belongs to Plantae, Subkingdom Tracheobionta, Class Magnoliopsida, Subclass Dilleniidae, Order Violales, Family Caricaceae.⁷



Figure No.3: Psidium Guajava

Uses of Psidium Gaujava

It is used as cleanser for cleaning the face.

Remove dead skin.

It is used for skin whitening and brightening effect.

It is a good source of vitamins C and B and antioxidants.

Gaujava leaves are rich source of minerals.⁸

Curcuma longa:

Synonym: Curcuma Domestica.

Biological Source: Turmeric is a product of *Curcuma longa*, a rhizomatous herbaceous perennial plant belonging to the ginger plant.

Family: Zingiberaceae.

Curcuma longa belongs to the kingdom Plantae, the subkingdom Tracheobionts, the order Zingiberales, the family Zingiberaceae, the division Mangoliophyta, the super division Spermatophyta, and the genus *Curcuma*.⁹



Figure No. 4: Curcuma longa

Uses of Turmeric

It has both antioxidant and anti-inflammatory properties

It improves skin health.

Protect your skin form free radicals.

It is used as Anti-bacterial and adds glow to skin.

It is useful for inflammatory conditions such as arthritis and other joint disorders, allergies and infection.

It is useful for weight loss.¹⁰

Sr. No.	Ingredients	Role
1	Carica papaya	Antiaging, Anti-inflammatory
2	Ficus religious	Anti-bacterial , Anti-septic, healing properties
3	Psidium gujava	Brightening & Whitening effect, cleanser
4	Turmeric extract	Antibacterial, adds glow to the face.
5	Stery alcohol	Miosturizer.
6	Beeswax	Emulsifying agent

7	Liquid paraffin	Lubricating agent
8	Sorbitol monoleat	Texturizing agent
9	Propyl paraben	Preservative
10	Methyl parabean	Anti-microbial
11	Honey	Hydrates skin

Table No.1. : Excipients and herbal ingredients with their role.^{11,12}

Experimental Work

Formulation of 10 gm polyherbal cream

Sr.no.	Ingredients	F1	F2	F3
1	Carica papaya	1.25 gm	1.75 gm	2 gm
2	Ficus religious	1 gm	1.25 gm	1.50 gm
3	Psidium gujava	0.5 gm	0.5 gm	0.5 gm
4	Turmeric extract	0.2 gm	0.2 gm	0.2 gm
5	Steryl alcohol	1 ml	1 ml	1 ml
6	Beeswax	2.2 gm	1.5 gm	1 gm
7	Liquid paraffin	1.5 ml	1.5 ml	1.5 ml
8	Sorbitol monoleat	0.5 ml	0.5 ml	0.5 ml
9	Propyl paraben	0.5 ml	0.5 ml	0.5 ml
10	Methyl parabean	0.2 ml	0.2 ml	0.2 ml
11	Honey	Q.S.	Q.S.	Q.S.

Table No.2.: Ingredients with Quantity



Figure No. 5: Polyherbal Cream Preparation

Methodology

Its o/w cream

Phase A

Prepare base by using steryl alcohol, liquid paraffine, beeswax, sorbitol monoolete.

Take China dish add above base add kept on water bath at 75°C.

Phase B

In another beaker water extracts of carica papaya, ficus religiosa, psidium gujava, curcuma longa was mixed and kept 75°C.

As after heating, oil phase was taken in mortar and as pastel and slowly the water phase was added and triturated them till clicking sound was heard.

At by last, when temperature gets cooled down above cream add honey with added with required quantity by addition of methyl paraben, propyl paraben.^{13,14}



Figure No. 6: Polyherbal Cream

Evaluation Test of herbal cream

Physical Evaluation Formulated herbal creams was further Evaluated by using the following physical parameter physical parameter colour, odour, consistency, and state of the formulation.

Colour: The colour of the cream was observed by visual examination.

Odour: The odour of cream was found to be characteristics.

State: The state was cream was examined visually.¹⁵

Uniformity: The formulation was examined by rubbing cream on hand manually.¹⁶

Sr No.	Parameter	F1	F2	F3
1	Colour	Yellow	Yellow	Yellow
2	Odour	Characteristics	Characteristics	Characteristics
3	State	Semi-Solid	Semi-Solid	Semi-Solid
4	Uniformity	Smooth	Smooth	Smooth

Table No.3: Organoleptic Evaluation

pH:

pH of prepared herbal cream was measured by using digital pH meter. The solution of cream was prepared by using 100 ml of Distilled water and set aside 2hr. pH was determined in three times for solution and the average value was calculated.¹⁷

Sr No.	Formulation	pH
1	F1	6.3
2	F2	6.4
3	F3	6.5

Table No.4: pH**Spreadability**

spreadability of formulated cream was measured by placing sample in between two slides then compressed to uniform thickness by placing a definite weight for defined time. The specified time required to separate the two slides was measured as Spreadability.

Lesser the time taken for separation of two slides results showed better Spreadability.¹⁸

Sr no.	Formulation	Time (sec)	Spreadability
1	F1	5	5.7
2	F2	7	5.5
3	F3	6	5.6

Table No.5.: Spreadability Test**Washability:**

Formulation was applied on the skin and then ease extends of washing with water was checked.¹⁹

Sr No.	Formulation	Washability
1	F1	Easily Washable
2	F2	Easily Washable
3	F3	Easily Washable

Table No.6: Washability Test**Irritancy test**

Mark 1 to 2 cm area on left hand dorsal. Cream was applied on that area and note that time. After interval upto 24 hours it is checked for irritant effect reported.²⁰

Sr No.	Formulation	Irritant effect
1	F1	Non-Irritant
2	F2	Non-Irritant
3	F3	Non-Irritant

Table No.7: Irritancy Test

Greasiness

The cream is applied in the form of smear on the surface of skin and observed.

Sr No.	Formulation	Greasiness
1	F1	Non-Greasy
2	F2	Non-Greasy
3	F3	Non-Greasy

Table No. 8: Greasiness Test

RESULT

The Evaluation test of above formulations F1, F2, F3 was performed. According to result of evaluation test it is observed that the formulation F2 is more stable and effective than others.

There are following parameters and observations of F2 formulation:

Sr No	Parameters	Observation
1	Colour	Yellow
2	Odour	Characteristics
3	State	Semi-Solid
4	Uniformity	Smooth
5	pH	6.4
6	Spreadability	5.5
7	Washability	Easily Washable
8	Irritancy	Non-Irritant
9	Greasiness	Non-Grasy

Table No. 9: Evaluation parameters

DISCUSSION

Prepared polyherbal cold cream by using *Carica papaya*, *Ficus religiosa*, *Psidium guajava* & *Turmeric* in those 3 different formulations are prepared and evaluated. According to evaluation test the 3 formulations were compared. Evaluation test confirmed that the formulation F2 is more stable and good than others.

CONCLUSION

By using *Carica papaya*, *Ficus religiosa*, *Psidium guajava* and *curcuma longa* the cream showed multipurpose effect and all herbal ingredients were used showed different significant activities. Based on the results we can say that the formulation can be safely used on the skin. As mixture of this extracts, develop in new polyherbal cream formulation in this present which will show these entire properties and can be effective and safe.

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