



FORMULATION OF POLYHERBAL ANTIACNE AND ANTI- WRINKLE GEL

Rohini Dhananjay Alat, Pooja Ambhure, Anuradha Jaid

¹Student of Bachelor in pharmacy, Dr.Babsaheb Ambedkar Technological University, Raigad,Lonere.

²Department of Pharmaceutics, Faculty of Pharmaceutics, Dr.Babsaheb Ambedkar Technological University, Raigad, Lonere

³Department of pharmacology, Faculty of pharmacology,Dr.Babsaheb Ambedkar Technological University, Raigad, Lonere

*Corresponding Author

ABSTRACT

The study's goal was to create and assess a polyherbal anti-wrinkle and anti-acne gel that contains powdered papaya extracts for treating these conditions.^[1] Using papaya, green tea, honey, rose water, carbapol, glycerine, coconut oil, lactic acid, trimethylamine, and the necessary amount of distilled water, the polyherbal anti-acne and anti-wrinkle gel composition was created. Papaya is utilised to lessen dark circles and irritation. 1-2 papaya pills, followed by 8–12 days of dry and mixed Prepare a powder by heating 2 grammes of papaya powder and 2 millilitres of distilled water in a beaker. Add a small amount of gelling agent and trimethalamine, and combine in other ingredients.^[2] Keep swirling until a homogenous gel is achieved, at which point a gel formulation is formed.

KEYWORDS: Anti- acne, semisolid Gel, Anti wrinkle, Green tea.

INTRODUCTION

Skin diseases typically result from blood toxins building up as a result of blood impurities, poor eating habits, and lifestyle choices. The majority of teenagers going through puberty suffer from acne vulgaris, a skin condition brought on by hormonal changes that alter physiologic variables.^[3] The disorder is linked to follicular distention abstraction and the inflammatory response being activated, resulting in open or closed comedones, inflammatory papules, and nodules.^[4] These days, 80% of people rely on herbal therapies for acne vulgaris, which typically affects skin areas with denser sebaceous follicles, such as the face, upper chest, back pain, tenderness, or erythema skin illness.^[5]

In the current skin disease treatment landscape, herbal cosmetics are becoming more and more important due to recent developments in the creation of novel formulations for the treatment of skin disorders, particularly chronic skin illnesses.^[6]



FIG NO 1: Acne Infection



Adolescence is afflicted by acne, a common inflammatory skin ailment that affects 85% of teenagers. more frequently observed in women than in men. Acne mostly affects adolescence and is most common in those between the ages of 18 and 25. Individuals between the ages of 35 and 40 are often less affected by this condition. Acne vulgaris is a common adolescent inflammatory sebaceous gland condition. In addition to redness, swelling, and occasionally the formation of pus, this condition may be painful. The study's objectives are to create a polyherbal gel of papaya extra with varying gelling agent concentrations and examine the impact of applying the gel topically with papaya extracts on acne healing.^[7]

3]. Drugs and excipient used profile

A]. papaya^[8]

Common name :- papaya, pawpaw,

Family :- Caricaceae.

Synonyms:- Carica posoposa

It has powerful antioxidant effect .

Papaya has a fight inflammation and help to remove dead skin cells. Have to reduce acne.



Fig 2.: Papaya

B] Green Tea

Family:- Theaceae

Scientific name:- Camellia sinensis. Acne reduce inflammation.^[9]

Help reduce the production of Sebum. Reduce acne.

Health inhibit the growth of bacteria.



Fig.3. Green Tea



C].Coconut Oil

Scientific name :-cocos nucifera.

Family:- palmae.

Common name:- coconut oil.

It is a reach source of vitamin E that keeps the skin healthy and clear. Coconut oil helps to reduce scares and repairs damage skin.^[10]



Fig.4.Coconut oil

D]Honey^[11]

Scientific name:-Honey Bee

Family:- Apidae

Honey is an effective natural acne treatment it has antibacterial and healing properties that can improve the appearance of pimples and the reduce their frequency.



Fig.5.Honey

E]Rose Water

Family: Rosaceae

Scientific name:-Rosa lamascena mill

Rose Water is a natural toner that cleanses your pores, removes excess oil, and reduce the size of acne^[12].



Fig.6.Rose water

F]Carbapol

Synonyms:-Acrypol, Carbomera.

Chemical name:- Carbomer(9003-01-4)

Functional category(uses):-bio adhesive material ,controlled reduce agent emulsifying agent,gelling agent, suspending agent.^[13]



Fig.7.Carbapol

G].Glycerine

Non proprietary names. BP -glycerol

Europe-glycetol Usp- glycerine synonyms- crodetol

Chemical name:- propane1,2,3triol and category number[56-81-5]4 molecular weight- 92.095

Formula -C₃H₈O₃

Uses-Antimicrobial preservative ,cosolvent, sweetening agent ,Tonivity agent

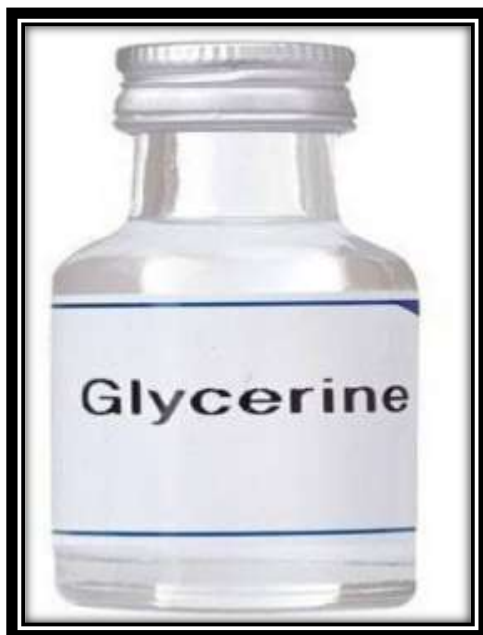


Fig 8. Glycerine

H] Trimethylamines

Synonyms- n,n dimethanamin

Formula- $N(CH_3)_3$

Uses-Ph adjust



Fig.9. Trimethylamine

I]. lactic acid

Formula $C_3H_6O_3$

Synonyms- 2 hydroxyproponic acid.

Uses-To treat hyperpigmentation agents spots, and dull skin.

It helps promote the Shading of date skin cells ,soft and smoothness.

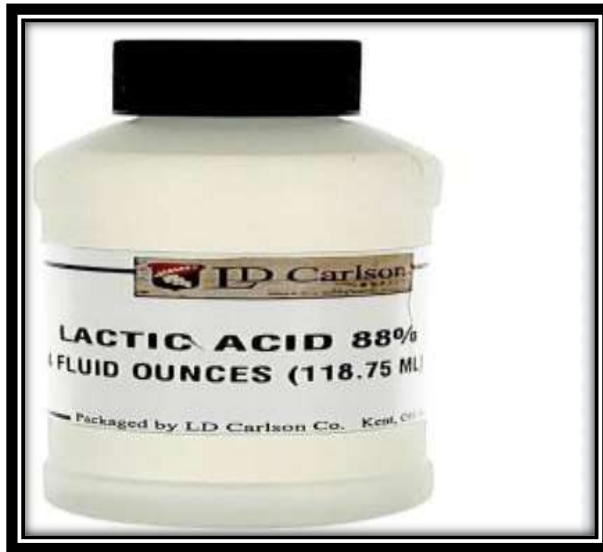


Fig.10.Lactic acid

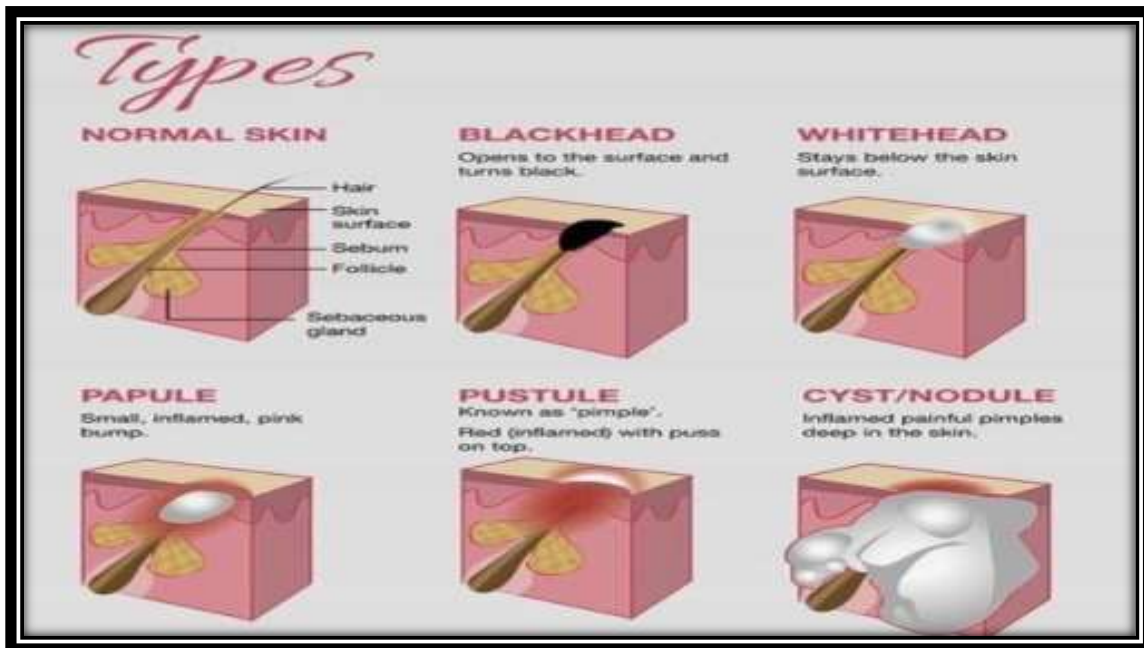


Fig.11.Type of Acne



Fig.12.Causes of Acne

Symptoms :--Whiteheads blackheads
Crusting of skin bumps redness Papules

Formulation material and Requirements

Sr.No.	Ingredients	Quantity Taken	Category
1	Papaya	2 gm	Brightness
2	Green tea	10 ml	Glowing
3	Carbopol	1 ml	Gelling agent
4	Honey	5 ml	Antibacterial
5	Glycerine	10 ml	Skin repellent
6	Coconut oil	10 ml	Anti inflammatory
7	Trimethylamine	1.2 ml	Buffer
8	Rose water	10 ml	Flavouring Agents
9	Lactic Acid	10 ml	Antibiotics
10	Distilled Water	Upto 100 ml	Solvent

Procedure

- 1)Take a papaya pill was washed and dried 8 to12 days and size reduce to fine powder.
- 2)The fine powder was passed to the sieve number 80.
- 3)Then make a papaya pill powder using 2 ml distilled water+2gm papaya powder mix and boil for the beaker 10 to 15 min cool the solution then filter the paper using the filter solution in one small beaker then adding some gelling agent carbopol[1gm] trimethylamines [1.2ml],glycerin [10ml] ,Rose Water[10ml],honey[5ml],coconut oil[10ml],lactic acid [10ml],green tea[10 ml] these total are mixed and continuously stirring until homogeneous gel your then finally obtained polyherbal gel formulation.^[14]



Fig.13.Papya powder



Fig.14. 5.65 gram of Papya powder



Fig.15. Filtration Processes



Fig.16.Antiacne and Anti wrinkle gel

EVALUATION PARAMETERS

PHYSICAL EVALUATION

Physical parameters such as colour, odour and consistency were checked visually

COLOUR: The colour of formulation was checked by visual inspection. **CONSISTANCY::** The consistency of formulations was checked by applying on skin.

ODOUR:: The odour of the formulations was checked by mixing the gel in water and observing the smell. Physical evaluations of gel formulations were reported

PERCENTAGE YEILD :

Weight the empty container in which the gel formulation was stored then again weigh the container with gel formulation. To obtain the practical yield subtract the weight of empty container with the container with gel formulation. Then the percentage yield was calculated by the formula given below:

Percentage yield = (practical yield/theoretical yield) × 100 Percentage yield of gel formulations were reported

Observation Table:

Sr.No.	Parameter	Observation/Results
1	Colour	Yellow
2	Odour	Mildly aromatic
3	Texture	Smooth
4	Appearance	Semi-solid
5	Spreadability	6.3 cm
6	Washability	Easily washable
7	PH	7.32
8	Viscosity	3405 cps
9	Homogeneity	Good
10	Skin irritation	No

CONCLUSION

Given that natural therapies have fewer adverse effects and are safer than synthetic medications, they are more widely accepted. Herbal formulas are becoming more and more popular on the global market these days. The attempt to create a herbal gel using papaya extract is excellent. The study's data showed that the development of mixed herbal gel formulations was a substantial, therapeutically appropriate, effective, low-cost, and potentially highly promising drug delivery method. The results indicate that the newly developed herbal gel formation, when combined with safe and stable dosages, has good antibacterial and anti-inflammatory properties, making it an excellent choice for treating acne and wrinkles.



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