

**PHARMACEUTICAL PREPARATION AND EVALUATION OF ACNE
VANISHING CREAM WITH SPECIAL REFERENCE TO *BHAISHAJYA*
RATNAWALI MUKHDUSHIKAHAR LEPA.**

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ABSTRACT

The aim of the present study is to pharmaceutical preparation and evaluate the Acne Vanishing cream containing maximum concentration of herbal constituents and having number of advantages Compared to other synthetic creams. Acne vulgaris is one of the most common illnesses that lowers a person's quality of life. Many treatments for the same condition were available in modern science, but they were all associated with some side effects. As a result, herbal vanishing cream was created, with the highest concentration of herbal constituents possible, including stearic acid (10%), cetyl alcohol (0.5%), glycerine (6%), isopropyl alcohol, and the extracts of *Dhanyak*, *Vacha*, and *Lodhra* (70%), among others. A fairly basic procedure is used to create the herbal cream. Steric acid and cetyl alcohol are used to prepare the oil phase, while glycerine, isopropyl alcohol, triethanolamine, and the *Ark* (extract) of *Dhanyak*, *Vacha*, and *Lodhra* are used to prepare the watery phase. After the oil and water phases were fully melted in separate containers, they were combined at 70⁰c with constant stirring.

Physical characteristics of the prepared Acne vanishing cream were assessed, including pH, homogeneity by touch and sight, appearance, washability, consistency, patch test and irritation test to learn more about the effectiveness of this formulation, more research is required.

KEYWORDS: Acne Vulgarise, Vanishing Cream, Ark etc.

INTRODUCTION

Cream can be defined as semisolid dosage form containing two phases either oil in water and water in oil phase. Cream can be classified into cleansing and cold cream, foundation and vanishing cream, night and massage cream, hand and body cream, all purpose and general creams.^[1] vanishing cream are the creams which get disappear when applied and rubbed into the skin.^[2]

Now a days, due to changing lifestyle, food habits, global warming majority of population especially young generation are suffering from major and most common problem that is acne vulgaris, so everyone is concerning for healthy, beautiful and attractive skin there by giving prime importance to cosmetics.

Acne in patients may begin in adolescence and continue into adulthood, or it may develop during this time. Numerous psychosocial consequences of acne lower a patient's quality of life. The pilosebaceous unit is affected by acne vulgaris, which results in inflammatory lesions such as papules, pustules, nodules, and noninflammatory lesions such as open and closed comedones, and variable degrees of scarring.^[3]

Acne vulgaris is a very common condition that primarily affects adolescents and having lifetime prevalence of about 85%, women ages 20 to 29 had a 50.9% prevalence rate of acne, compared to 26.3% for women ages 40 to 49.^[3] A wide variety of treatment are available for acne vulgarise in modern science but none of these methods are free from side effects, so the cosmetics product containing herbal crude drugs are most widely used considering its minimal side effects.

In the present study herbal vanishing cream is planned to be formulated for acne vulgaris. For the preparation of Vanishing cream referred literature *Bhaishajya Ratnawali* in the context of *Lepa Kalpana* (*lepa of dhanyak, vacha and lodhra*) in *Kshudra rogadhikara*.^[4]

As *Lepa* is not convenient to use on daily basis so this cream is planned to prepared by using extract form of *Dhanyak, Vacha* and *Lodhra* along with some cream base.

AIM: Pharmaceutical preparation of Acne Vanishing Cream by using Arka.

OBJECTIVES

1) To review articles related to vanishing cream.

2) To review ayurvedic concept behind modification.

MATERIAL AND METHODS

Raw drugs were collected from Acharya Pharmacy, Nashik and from vadodkar's pharmacy Nanded.

The raw material collected were Authorized in DTL Lab of Govt. Ayurvedic. College, Nanded.

Three batches of cream were prepared.

Method of Preparation

Steps carried out during preparation of vanishing cream were as follows.

1. Preparation of Ark from Crude Drug.

150 gm of *Dhanyak* were taken separately and crushed into small particles by using mortar and pestle and soaked into 300 ml of water for 24 hours.

After 24 hours 6 times of water is added into the drug and it is filled into arka yantra and *Ark Yantra* is lighted and kept at 70⁰ c, after ½ hour steam starts appearing and the condensed liquid start collecting In collecting flask.in this way *dhanyak ark* is collected.^[5]

Similar procedure were followed for preparation of *Vacha*^[6] and *Lodhra arka*.^[7]



Fig. 1: Ark Preparation.

2. Preparation of Oil Phase^[8]

Stearic acid and cetyl alcohol in below mentioned quantity was taken into porcelain dish and the mixture was melted by indirect heat method.

Sr.no	Stearic acid	Cetyl alcohol
Batch 1 st	15%	0.5%
Batch 2 nd	10%	0.5%
Batch 3 rd	10%	0.5%

3. Preparation of Aqueous Phase^[8]

Extract of *Dhanyak*, *Vacha* and *Lodhra*, Glycerine, tween 80, TEA (triethanolamine)

Isopropyl alcohol in below mentioned quantity were taken into another porcelain dish and heated and melted by indirect heating method.

Sr.no	Extract of <i>Dhanyak</i> , <i>Vacha</i> and <i>Lodhra</i>	Glycerine	Tween 80	TEA (triethanolamine)	Isopropyl alcohol
	70%	8%	0.6%	0.5%	5%
Batch 2 nd	70%	6%	0.6%	---	5%
Batch 3 rd	70%	6%	0.6%	---	5%

4. Mixing of Aqueous Phase and Oil Phase^[8]

The aqueous phase was added to the oil phase by continuous stirring at 70⁰c, once the transfer was completed the solution is taken out and continuous stirring was carried out till it become completely mixed transferred to suitable container.



Fig.2-Preparation of oil phase.



Fig.3-Preparation of aqueous phase.



Fig.4-Mixing of aqueous and oil phase.

Excipients used in Vanishing Cream

Sr.No	Common Name	Properties
1.	<i>Dhanyak Arka</i> (extract of <i>Coriandrum sativum</i>)	It is used in <i>Trushna</i> , <i>Daha</i> , <i>Vaman</i> , <i>Shwas</i> and It Is <i>Tridoshamak</i> in Action ^[9]
2.	<i>Vacha Arka</i> (<i>Acorus Calamus</i>)	It Is <i>Agnipradeepak</i> , <i>Vamankarak</i> And Used In <i>Malavrodh</i> , <i>Adhman</i> And <i>Shool</i> . ^[10]
3.	<i>Lodhra Arka</i> (<i>Symplocos Racemose</i>)	It is <i>Sheetal</i> , <i>Grahi</i> , <i>Chakshushya</i> , <i>Dahashamak</i> and <i>Vata-Pittaghna</i> in properties. ^[11]
4.	Stearic acid	Used to get thick cream, and to bind all ingredients together. ^[12]
5.	Cetyl alcohol	Used to prevent separation of cream into oil and water ^[13]
6.	Glycerine	Used to provide good moisturization and lubrication to skin. ^[14]
7.	Tween 80	Used as an emulsifier and solubilizer. ^[15]
8.	TEA (triethanolamine)	Used to balance PH of cream and stabilize them. ^[16]
9.	Isopropyl alcohol	It used to kill bacteria and act as a solvent, toner and Anti-perspirant. ^[17]

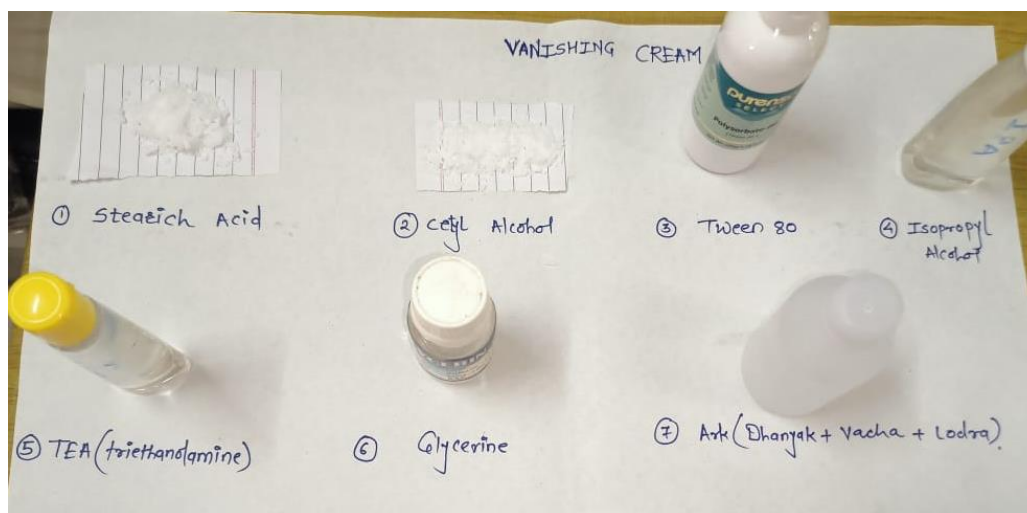


Fig.5-Excipients used in vanishing cream preparation.

Evaluation Of Physical Parameters of Cream^[18]

The prepared cream was evaluated for further physical parameters.

a) Determination Of Organoleptic Characters of Cream

The cream's colour, pearlescence, and roughness were used to evaluate and grade its appearance.

b) Measurement of pH

After calibrating the pH meter, 5gm gram of cream were added in 50 ml of distilled water and PH were calculated.

c) Assessment of homogeneity

The homogeneity of the formulations was evaluated through both tactile and visual means.

d) Determination of Wetness

A human volunteer's skin surface was covered with cream to determine the level of moisture.

e) Determination of the Patch Test

On a piece of cloth or a funnel, 1-3 grams of the material to be tested was put to the skin's most sensitive area, such as the area behind the ears. One square meter of skin was treated with the cosmetic under test. Also used were control patches (of a known brand with a comparable cosmetic). After a day, the patch location is examined. The test was conducted three times because there was no response. Given that there was no reaction after the third application, the person might not be hypersensitive.

f) Determination of Appearance

The cream's colour, opacity, and other characteristics were used to determine how it looked.

g) Determination of Smear Type

The test was carried out to see if the smear that formed was aqueous or oily after the skin had been treated with cream.

h) Emollient determination

After applying predetermined amounts of cream, the amount of residue remaining, slipperiness, and emollient were assessed.

i) Assessing Washability

The cream was washed from the skin by running a mild stream of tap water over it.

j) Determining Irritancy

A 1-sq-cm area on the dorsal side of the left hand was covered with the cream, and irritation, redness, and oedema were noted at equal intervals for up to 24 hours.

RESULT AND DISCUSSION

The acne vanishing cream was prepared by oil in water type of emulsion method, containing concentrated extracts of *Dhanyak*, *Vacha* and *Lodhra* along with some cream base were used.

This acne vanishing cream passes all the above evaluated parameters as follow.

Sr.no	Parameters	Observation
1.	Appearance	White in colour
2.	Smell	No any specific smell.
3.	PH	Batch 1 st -8.5 Batch 2 nd -8.4 Batch 3 rd -7.1
4.	Homogeneity	By Sight: Uniform By Using Touch: smooth
5.	Patch test	Not overly sensitive
6.	Smear type	Non greasy
7.	Irritability	Non-irritant to skin
8.	Washability	Easily washable
9.	Emollient	Provide skin with adequate moisture.
10.	Consistency	Good

Nutritionally valuable crude medication acne-vanishing cream was made with minimal equipment and straightforward techniques. The prepared herbal cream can be helpful for

pimples since it has strong antibacterial activity as it contains isopropyl alcohol in it and can have anti-inflammatory activity as it contains extract of *Lodhra*, *Dhanyak* which is having *Daha-Shamak* activity.

Stearic acid was employed at a rate of 15% in the first batch. However, upon analysis, it was found that the cream had some greasy spots and its absorption was delayed. Consequently, the stearic acid percentage was reduced to 10% in the second and third batch which produced the best absorption results.

Since all Arka were acidic in nature, in the first batch, 0.5% triethanolamine was added to balance the PH of the cream. However, once the cream's PH was analysed, it came out to be 8.4. As a result, we chose not to add triethanolamine in the next two batches, and the PH of the cream returned to normal at 7.1.

The prepared cream's homogeneous composition allows it to function effectively on skin; also, it passes the patch test, demonstrating that there are no allergic responses and that it is safe to use as a skincare product. The cream has good washability, indicating full absorption and cooling properties. Cream's good emollient feature indicates that it will provide skin with good hydration and smoothing.

CONCLUSION

It can be concluded that the cream prepared from extract of *dhanyak*, *vacha* and *lodhra* is prepared by following easy methods and with the help of less equipment.

Since the cream's maximum percentage is *Ark* (extract of *vacha*, *dhanyak*, and *lodhra*) that is 70%, we can conclude that it will include fewer chemicals and have less adverse effects.

Further clinical studies should be carried out for further practical evaluation of cream.

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