

## A Review Article on Formulation and evaluation of cold cream

Arjun Yadav<sup>1</sup>, Girijesh kumar Yadav\*<sup>2</sup>, Prof.(Dr) Mohd. Wasiullah<sup>3</sup>, Shasikant Maurya<sup>4</sup>

*Department of pharmacy, Prasad institute of technology, jaunpur(222001) Up India*

*Principal, Department of pharmacy, prasad polytechnic jaunpur, (222001) Up India.*

*Principal, Department of pharmacy, prasad institute of thechnology, jaunpur, Up India.*

*Associate Professor, Department of pharmacy, Prasad institute of technology, jaunpur (222001) Up India*

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### ABSTRACT:

Cosmetics are extensively used by both men and women to conduct beauty and to ameliorate their appearance. Demand for herbal cosmetics is now a days adding because they're inoffensive. Also they've less lateral goods as they're prepared by taking excerpt of natural sauces and shrubs. Because of its good convenience and provident with good quality norms it's largely accepted by numerous people. Herbal cosmetics are prepared in numerous forms like cold cream medications containing natural excerpt of crude medicines like neem, turmeric, fruit excerpt like Bombax Ceiba Fruit Pulp etc., by adding variety of constituents in expression. Cold cream is an conflation which when applied on the skin, a cooling effect is produced due to slow evaporation of water present in conflation. These phrasings can be estimated by using colorful evaluation parameters like pH, density, irritancy, spreadability, microbial growth, thermal stability, unity, acid value, saponification value, accelerated stability studies, patch test, smear test, after sense, washability, physical parcels, color test, after sense, in vitro prolixity study etc.

**Keywords:** Herbal cosmetics, Natural extract, Cold cream, Neem, Turmeric, Fruit extract.

### I. INTRODUCTION:

Cosmetics are the products which are generally used to bedeck the skin and also to purify the skin. The cosmetics are the word deduced from Greek word – 'kosmesticos' which means to adorn. Cold cream is the water in oil painting conflation. Cold cream gives the prolonged contact time in the point of operation as compared to the other circumfluous lozenge form or expression. They give classiness to the skin and it isn't that much slithery. Due to the oil painting phase, it gives an emollience to the skin. The function of the cold cream is for restoring

humidity to dry skin, it allows to exclude the waste accoutrements from the pores and also cools the body. It's fluently doused washable and easy to wash down. They're non-irritating when applied on the skin. The water phase gives redundant conservation to the skin. It gets run at body temperature. It gets entered via the epidermis of the skin via the natural pores. More lately anti-aging creams have been manufactured which can retain youngish looking skin for numerous years. The stylish sanctification agents are sanctifying creams, cleaner and water.

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### II. MATERIAL AND METHOD:

#### Herbal excipients in used in preparation of cold cream:

##### 1. Beeswax

Beeswax is a natural wax produced by honey bees of the genus Apis. The wax is formed into scales by eight wax-producing glands in the abdominal segments of worker bees which discard it in or at the hive. The hive workers collect and use the beehive. Chemically, beeswax consists mainly of esters of fatty acids and various long-chain alcohols.

## 2. Liquid paraffin

Paraffin is also known as paraffinumliquidum, paraffin oil, liquid paraffin oil or Russian mineral oil, is a very highly refined mineral oil used in cosmetics and medicine. Cosmetic or medicinal liquid paraffin should not be confused with the paraffin (i.e. kerosene) used as a fuel. The generic sense of paraffin meaning alkane led to regional differences for the meanings of both paraffin and paraffin oil.

## 3. Borax

Borax (also referred to as sodium borate tincar) is a salt (ionic compound), chemical a hydrated or anhydrous borate of sodium with the chemical formula  $\text{Na}_2\text{H}_2\text{B}_4\text{O}_{17}$ . It is a colorless crystalline solid, that dissolves in water to make a basic solution.

## 4. Turmeric

Turmeric is a flowering plant *Curcuma longa* of the ginger family, Zingiberaceae, the rhizomes of which are used in cooking. The plant is a perennial rhizomatous, herbaceous plant native to the Indian subcontinent and Southeast Asia that requires temperatures between 20 and 30 °C (68 and 86 °F) and high annual rainfall to thrive. Plants are gathered each year for their rhizomes some for propagation in the following season and some for consumption.

## 5. Rose oil

Rose oil is the essential oil extracted from the petals of various types of rose. Rose otto is extracted through steam distillation while rose absolutes are obtained through solvent extraction the absolute being used more commonly in perfumery. The production technique originated

in Greater Iran. Even with their high price and the advent of organic synthesis, rose oils are still perhaps the most widely used essential oil in perfumery.

## 6. Aloe vera

Aloe vera is a succulent plant species of the genus *Aloe*. It is widely distributed, and is considered an invasive species in many world regions.

An evergreen perennial, it originates from the Arabian Peninsula but grows wild in tropical, semi-tropical, and arid climates around the world. It is cultivated for commercial products, mainly as a topical treatment used over centuries. The species is attractive for decorative purposes, and succeeds indoors as a potted plant.

## 7. Olive oil

Olive oil is a liquid fat obtained by pressing whole olives, the fruit of *Olea europaea*, a traditional tree crop of the Mediterranean Basin and extracting the oil.

Olive oil has long been a common ingredient in Mediterranean cuisine, including ancient Greek and Roman cuisine. Wild olives, which originated in Asia Minor, were collected by Neolithic people as early as the 8th millennium BC. Besides food, olive oil has been used for religious rituals, medicines, as a fuel in oil lamps, soap-making, and skincare application.

## 8. Distilled water

Distilled water is water that has been boiled into vapor and condensed back into liquid in a separate container. Impurities in the original water that do not boil below or near the boiling point of water remain in the original container. Thus, distilled water is a type of purified water.

## Preparation of cold cream:

Table: Composition of cold cream

Sr.No	Ingredient	Quantity
1	Beeswax	6gm
2	Liquid Paraffin	18ml
3	Borax	0.3gm
4	Turmeric Powder	0.3gm
5	Rose Oil	0.06
6	Alovera Gel	q.s
7	Olive Oil	0.3ml
8	Distilled Water	q.s

**Method:**

Melt beeswax in a demitasse dish on hot plate. To this, liquid paraffin is added and also heat on a hot plate at 70 °C. also in a 100 ml teacup, borax was dissolved and hotted along with olive oil painting on a 4hot plate at 70 °C. Both the unctuous and waterless phases are hotted at the same temperature. I.e. 70 °C and turmeric and alovera gel was added in the teacup. Now borax result is added gradationally to the melted beeswax result, drop by drop with constant shifting. To this, many drops of rose oil painting is added to give scent. It was stirred continuously until it cools down and a semi solid mass was gain.

**EVALUATION TEST FOR CREAMS :****1.Organoleptic Properties :**

The organoleptic properties such as color, odor and appearance was observed.

**2.Determination of pH :**

The pH value of freshly formulated emulsion was determined using a digital pH meter at room temperature.

**3.Determination of homogeneity :**

The homogeneity of the herbal preparation was observed by visual appearance and by touch..

**4Determination of spread ability :**

The term spreadability is expressed as the extent of the area to which the topical application spreads when applied to the affected region of the skin. The therapeutic efficacy of the herbal formulation is also dependent on its spreading range. Thus, it is necessary to determine the spreading ability of the prepared formulation. For the determination about 3 gms of cream was applied between the two glass slides and pressed to obtain a thin film of uniform thickness. A weight of 5 gm was placed over the top slide to apply the required pressure for 5 minutes. Followed by addition of about 10 gms of weight in a pan and the upper slide was subjected to pull with the help of a string attached to a hook. The time taken by the two slides to slip over each other by a distance of 10 cm under certain load was noted. Following is the formula to calculate the spreadability of the prepared formulation.  $S = m \times L/T$  Where, S- solubility m- weight tied to upper glass slide L- length moved on glass slide T- time taken. The results were carried out in a triplicate manner and the average of these readings were noted

**5.Determination of type of smear :**

This test was conducted by the application of cream on the skin surface of a human volunteer for its greasiness. After application, the type of smear was observed.

**6. Determination of viscosity :**

The viscosity of the prepared emulsion was determined by using Brookfield viscometer. Spindle number S-64 at 20 rpm was used at a temperature of 25°C and was determined by taking an average of three readings.

**7.Irritancy test :**

The formulated cream shows no redness , edema , irritation and inflammation during studies. The formulated cream is safe to use.

**8.Dilution test :**

In this test type of emulsion is determined by diluting the emulsion either with water or oil. The emulsion is completely miscible with water if it is o/w type, as the dispersion medium is water and separates out if it is w/o type of emulsion. Similarly, w/o type of emulsion is miscible, if the emulsion is dissolved in oil but o/w type of emulsion is immiscible in oily liquid .

**9.Test for microbial growth :**

These test were carried out to determine the microbial contamination of the prepared formulation in an agar medium. The prepared creams were inoculated on the plates of agar plate medium using streak plate method and a control was prepared without the cream. These plates were placed into the incubator and were incubated at 37°C for 24 hours. After the incubation period, the plates were taken out and observed for microbial contamination in comparison with the control.

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**10.Patch test :**

About 1-3 gms of the formulated creams was evenly applied on sensitive region of the skin surface such as the skin under the lower jaw. The

cream for testing was applied on an area of 1 sq.m of the skin surface and the site was inspected after 24 hours of application.

#### 11. Dye Test :

The Scarlet red dye is mixed with the cream. Place a drop of the cream on a microscopic slide then covers it with a cover slip, and examines it under a microscope. If the dispersed globules appear red the ground colorless. The cream is w/o type. The reverse condition occurs in o/w type cream i.e. the dispersed globules appear colorless.

### III. RESULT

The MECA crude possesses a admixture of phytochemicals that include alkaloids, carbohydrates, flavonoids, steroids, terpenoids, phenols, glycosides, tannins, and phlobatannins Table 2. also, we formulated the cold cream at 50 mg, 100 mg, and 200 mg attention. The cold cream color has been grounded position of medicine pale green to dark greenish and empty cold cream has no color shown in Fig. 1. The wild succulent rubric of *Caralluma* crude is having rich in phytoconstituent and its further pharmacological exertion. still, phytochemicals aren't used direct topical apply for infected injuries that induce some allergen for skin. Hence, we need herbal formulated antimicrobial cold wave cream having the eventuality to against the bacteria and fungi and its confining side goods of the skin. According to former reports, colorful solvent succulents demonstrated antimicrobial exertion against different microorganism. Antimicrobial exertion of cold cream containing biofabrication of MECA crude, on the other hand, negative control cold cream containing without excerpt of MECA and Neosporin, is used as the positive control. The antimicrobial exertion of zone inhibition on the bacterial and fungal strain has significantly increased by Neosporin (request available cream) and formulated cold creams.



### IV. CONCLUSION :

From the below results it's concluded that the formulated cream showed good thickness and spread capability, unity, pH, non-greasy and there's no phase separation during study period of exploration. From the below study it can be concluded that the polyherbal cold wave cream is safe to use as it's developed from herbal excerpt. Natural remedies are more respectable in the belief that they're safer with smaller side goods than the synthetic bones. So, the values of sauces in the cosmeceutical has been considerably bettered in particular care system and there's a great demand for the herbal cosmetics currently. An herbal cream which is non-toxic, safe, effective and improves patient compliance by the application of herbal excerpts would be largely respectable than synthetic bones.

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