

# Formulation and Evaluation of Herbal Cold Cream

Dhawale Vishnu Haridas, Dudhe Shraavan Jagan, Maske Aniket Madhukar, Dr. L. D. Hingane  
Aditya Pharmacy College, Beed, Maharashtra, India

**Abstract:** *Since the beginning of time, creams have been valued as essential topical preparations in cosmetic products because of how simple it is to apply and remove them from the skin. Pharmaceutical creams are used for a number of aesthetic purposes, including cleansing, beautifying, modifying look, moisturizer, etc. They also protect the skin from bacterial and fungal infections and can be used to treat skin injuries including burns, cuts, and wounds Utilising several evaluation techniques, the created product's quality was evaluated. The physical characteristics of the cream formulation did not alter. During the research study period, the cream formulation demonstrated good consistency and spreadability, homogeneity, pH, non-greasy properties, and no signs of phase separation. There was no discernible change in the created cream's viscosity, aroma, or visual appearance during the research period, according to stability measures. As the water in the emulsion slowly evaporates, the cooling and calming effects of the herbal extract with cold cream are produced. Cold creams are more moisturising because they create an oily barrier to stop the loss of water from the stratum corneum, the outermost layer of the skin. They are water-in-oil emulsion and intended for application on skin or accessible mucous membrane to provide localized and sometimes systemic effect at the.*

**Keywords:** Beeswax, Paraffin.

## I. INTRODUCTION

Cosmetics are the products which are generally used to beautify the skin and also to purify the skin. The cosmetics are the word derived from Greek word- 'kosmeticos' which means to adorn. From that time the materials which are used to promoting appearances or to beautify the skin are called as cosmetic. From ancient time till now people are still using polyherbal or herbal cosmetics for the beautification of skin. Cold cream is the water in oil emulsion. Cold cream gives the prolonged contact time in the site of application as compared to the other semisolid dosage form or formulation. They give elegance to the skin and it is not that much greasy. Due to the oil phase, it gives an emollience to the skin. The function of the cold cream is for restoring moisture to dry skin, it allows to eliminate the waste materials from the pores and also cools the body. It is easily watered washable and easy to wash away. They are non-irritating when applied on the skin. The water phase provides the skin with additional protection. At body temperature, it becomes liquefiable. It enters the skin through the pores of the skin's epidermis. Galen, a Greek physician who created the cold cream formulation in the second century, is credited with develop in git. He made a mixture of water, beeswax, and rose petals. These were the main moisturiser component she used to create the cold cream. Galen's cream was the common name for this skin lotion. Cold creams can be used to remove temporary tattoo marks and then removed with a cotton ball in addition to moisturising the skin. Uses of cold creams are also related to the creation of children's face paint.[1]



Fig . COLD CREAM

## II. ADVANTAGE OF TOPICAL DRUGDELIVERY

- Preventing of first pass metabolism.
- Convenient and simple to use.
- Prevention of risk.
- The drawbacks of intravenous therapy and the various conditions of absorption, such as PH changes, the presence of enzymes, the rate at which the stomach empties, etc
- Continuous drug input can achieve efficacy with a lower total daily dose of medication
- Prevent intra-and inter-patient fluctuations in medication levels
- The medicine or its excipients may cause skin irritation or dermatitis
- Because they are poorly fat soluble and have a large molecular weight, most medications are not absorbed through the skin or mucous membranes.
- Very low absorption.
- It can only be used for medications whose plasma concentrations low to work.
- May only be used for medications whose action depends on very low plasma concentrations.
- Water resistance: The skin serves as a water-resistant barrier to prevent the body's vital nutrients from being rinsed away.

### Diseases of Skin

- Vitiligo.
- Scabies.
- Rosacea.
- Psoriasis.
- Melanoma.
- Eczema.

### Cold Creams:

- Cold cream is an emulsion of water and certain fats that is used to smooth skin and remove makeup. It typically contains beeswax and other fragrances.
- The European Pharmacopoeia refersto it as Fatty Cream.
- Water and oil are combined in every type of cold cream. The water in the cream evaporates as you apply it to your skin, giving you a cooling sensation. Most likely, the name came from this chilling effect.
- Moisturiser or moisturising cream are other names for cold cream. Cold cream needs to behave emolliently. When used, it should feel cool to the touch and leave no occlusive oil film on the skin.
- Although it is an emulsion with a high proportion of fatty and oily content, it has a cooling effect when applied to the skin because the water in the emulsion slowly evaporates. An illustration of a water-in-oil (W/O)emulsion is cold cream
- In cold cream, the major portion is the oil phase. Simply, the cold cream is an oil-based semisolid preparation. Cold cream is also known as Unguentum or Ceratum Refrigerans. Generally, it contains mineral oil, beeswax, borax, and water .
- It is a cosmetic that calms and cleanses the skin; it often has an oily and heavy consistency. It fits the description of a cleansing cream.

## III. HISTORY OF COLD CREAM PREPARATION

Prior to the first century, numerous druggists would prepare rosewater cream and keep it chilled on ice so that it would be suitable for use as a skin cream. Since the water in cold cream evaporates when applied, it produces a cooling sensation, thus the Latin word“ refriger an”(meaning “making cold”).

Galen, a renowned Greek physician and chemist who worked in Rome during the First Century AD's Roman Empire, is credited with creating the first cold cream. Over many centuries, the proportions and preparation procedure of the Galen cold cream formula have seldom changed

The term "cold cream" refers to the numbing sensation the cream left behind on the skin. Water in oil (w/o) emulsions were typically used to create cold creams. Much of the water in the creams evaporates after they are applied to the skin, leaving the residual oil to function as a solvent, clearing the skin of makeup and other impurities. Additionally, surfactant activity might exist. According to some chemists, the cooling effect of the water evaporation on the skin is the reason why these creams are referred to as "cold creams." An other argument is that the creams required to be stored in a cool environment to prevent them from growing rancid in the days before mineral oil or Petrolatum were utilised. They acquired their moniker because of how frigid they felt to the touch. Galen, a Roman physician who lived around 150 CE, is credited with creating the first cold cream by blending water with molten beeswax and olive oil. It took a lot of mixing to make it, and when it stood, it tended to split. The recipe, which typically uses rosewater and/or oil of roses as a perfume, continued nonetheless, and was included in the first edition of the "pharmacopoeia Londinensis" in 1618.

**IV. GENERAL INGREDIENTS USED IN COLD CREAM**

Ingredients	Quantity taken (20gm)	Use of ingredients
Bees wax	3.2 gm	Emulsifying agent
Borax	0.16 gm	Emollient
Methyl paraben	0.02gm	Preservative
Liquid paraffi	10 ml	Laxative
Water	6 ml	Diluent
Perfume	0.62 ml	Fragrance

Table 1: Ingredients Used In Cold Cream Ingredients

**Apparatus Used:**

- Measuring cylinder
- Spatula
- Pipette
- Waterbath
- China disc
- Glass rod
- Thermomet

**Raw Materials Used:**

Mineral and vegetable oils, together with fatty alcohols, fatty acids, and fatty esters, emulsifying agents, preservatives, and filtered water, can all be used to create cold creams. There should be the following four main components:

- Oil
- Water
- Emulsifier
- Thickening Agent

**Procedure of Making Cold Cream:**

- To start, we weighed each ingredient.
- Next, we add the 3.2 grammes of weighed beeswax to the china disc, which serves as the basis in this case.
- The 10ml of liquid paraffin is then added to the china disc.



Fig2 Bees Wax

After melting the beeswax and making it miscible with the liquid paraffin, we combined the two materials using a glass rod and heated the mixture in a water bath at 70° C.



Fig 3 Hot Water Bath

The china disc was taken out of the water bath and set aside.

We should keep in mind that the temperature of the combined solution should be up to 70° C and that it should be in a liquid state before adding the remaining ingredients to it.

Next, using a glass rod to stir, we combined the borax and water

The following stage was adding the previously weighed 0.02 gm of methyl paraffin and mixing the solution with a glass rod until all of the paraffin's particles were fully dissolved.

As a final touch, we added a drop or two of rose oil, which we utilised to smell the recipe.

After that, we continually stirred the entire mixture using a glass rod until it took on a semi-solid form.



Fig 4 Prepared Cold Cream

## V. USES OF COLD CREAM

The contents of a cream determine the uses of cold cream, i.e., functional ingredients determine the uses of cold cream. These are the primary applications for cold cream: In order to maintain the skin's moisture balance and prevent dry skin diseases, medicated cold cream is primarily utilised as a topical pharmaceutical dosage form for the treatment of skin. It is one of the basic applications for non-medicated cold cream.

As a makeup removal and cleansing preparation.

In order to provide an emollient effect

To give the skin an oiled barrier of protection.

As with sunscreen components, additionally offer a chemical barrier.

As a vehicle for pharmaceutical ingredients such diflucortolone valerate in ointments.

To eliminate skin contaminants that are soluble in oil.

## VI. CONCLUSION

The formulation and evaluation of herbal cold cream using turmeric and aloe vera offer a promising natural skin care product with potential therapeutic benefits. By incorporating turmeric, known for its anti-inflammatory and antioxidant

properties, and aloe vera, valued for its soothing and moisturizing effects, the cold cream formulation provides a holistic approach to skin care. Through careful formulation, the synergistic effects of turmeric can enhance the cream's efficacy in addressing various skincare concerns, inflammation, dryness, and irritation. The anti-inflammatory properties of turmeric help calm and soothe the skin, while aloe vera provides hydration and promotes healing. Evaluation of the herbal cold cream formulation involves its physical characteristics, stability, safety, and efficacy. This includes tests for texture, color, odor, pH, viscosity, microbial contamination, and skin compatibility. Additionally, clinical studies and user feedback can provide valuable insights into the cream's performance and user satisfaction.

## VII RESULT

Stability: Cold cream can be stable and show no change in color, smell, texture, or smoothness at normal temperatures.

Consistency: Cold cream can have good consistency and spreadability.

pH: Cold cream can have the desired pH.

Microbial growth: Cold cream can be microbiologically stable.

Irritancy: Cold cream can be tested for irritability by applying it to a small area on the skin and checking for any irritation over 24 hours.

## REFERENCES

- [1]. Kumar, A., Divyansh, N.A., Shukla, R. And Singh, G.P., 2022. Formulation and Evaluation of Herbal Moisturizing Cream. *IJPPR*, 25(1), pp.9-16.
- [2]. Sonalkar, M.Y. and Nitave, S.A., 2016. Formulation and evaluation of polyherbal cosmetic cream. *World J Pharm Pharm Sci*, 5, pp.772-9.
- [3]. Shah, N. And Methal, B.M., 2006. *A Handbook of Cosmetic*. Vallabh Prakashan. Mishra, B., Pandit, J.K. and Bhattacharya, S.K., 1990. Recent trends in drug delivery systems: transdermal drug delivery. *Indian Journal of Experimental Biology*, 28(11), pp.1001-1007.
- [4]. STORM, E.J., COLLIER, W.S., STEWART, F.R. and BRONAUGH, L.R., 1990. Metabolism of xenobiotics during percutaneous penetration: role of absorption rate and cutaneous enzyme activity. *Toxicological Sciences*, 15(1), pp.132-141.
- [5]. Clewell, A., Barnes, M., Endres, J.R., Ahmed, M. And Ghambeer, D.K., 2012. Efficacy and tolerability assessment of a topical formulation containing copper sulfate and hypericum perforatum on patients with herpes skin lesions: a comparative, randomized controlled trial. *Journal of drugs in dermatology: JDD*, 11(2), pp.209-215.