



Formulation and Comparative Study of Herbal Cold Cream Using Neem Oil to Treat Dry Skin, Wrinkles and Acne

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ABSTRACT :

Any material or preparation meant to come into contact with different exterior body parts is referred to as a cosmetic product. [Nail, hair system, epidermis, lips, the mucosal membrane of the oral cavity, and the external genital organ with an exclusive view. or mostly to tidy them. Scenting them altering their look, addressing their body odour, and safeguarding and maintaining their condition. Throughout the research study period, the formulated cream had good pH, consistency, and spreadability, as well as no signs of phase separation. The created cream's stability criteria, such as its visual appearance, nature, viscosity, and scent, shown no discernible modification during the course of the research investigation. Characteristics of stability such as nature, viscosity, and scent of the prepared cream demonstrated that there had been no discernible change during the research study time. The calming and cooling effect of the herbal extract with cold cream is caused by the gradual evaporation of there is water in the emulsion. The greasy barrier that the cold creams create minimises the amount of water lost from the skin, making them more hydrating. the skin's outermost layer, the stratum corneum. They are an emulsion of water and oil designed for application to the skin or a mucous membrane that is accessible to produce a localised, occasionally systemic impact at the application site.

Introduction

Cosmetics are typically used for Enhance the appearance and cleanse the skin. The makeup Is the word 'kosmesticos' derived from the Greek language which is for decoration. Since then, the materials which ' Commonly utilized to enhance one's complexion or to adorn the skin. referred to as cosmetic. People have been since ancient times until now. People are still using polyherbal or herbal cosmetics to enhance the appearance of their skin. Coldcream is an emulsion of water in oil. Coldcream provides longer contact time at the application site compared to other types of semi-solid dosage forms or formulations.[1]

enhanced with a dose of vitamin E Because cold cream is moisturising, it is primarily utilised for skin care (think lip balm or facial masks). As a cream, it can also be used to apply and remove makeup. Cold and windy weather cream, which is typically enhanced with vitamin E, natural oils like jojoba and olive oil, rose petals, and various fruit extracts, especially grape seed, protects the facial skin from drying out and gives it a glow, softness, and fairness when shaving in colder temperatures. As a result, customers must always have face cream in their winter makeup bag.

Winter care creams work well with the three types of weather creams. These include rose water, natural oils like neem and coconut oil, and various fruit extracts, especially grape seed extract, which prevent dry skin on the face and give it a radiance, softness, and fairness. As a result, customers must always have face cream in their winter makeup bag. The three varieties of face skin that are ideal for winter care lotions are normal, oily, and dry. A lot of face creams for winter care are made to lessen the appearance of peeling and restore facial skin that is easily damaged by the cold.[2] When applied to the skin, they cause no irritation. The skin receives additional protection from the water phase. At body temperature, it melts. It enters the skin through the natural pores in the epidermis. Anti-aging treatments that help keep skin looking younger for years have been produced more recently. Soap, water, and cleansing creams are the greatest cleaners . Cream is defined as semisolid emulsions of the water in oil (w/o) or oil in water (o/w) type that are meant to be applied externally. Cream is divided into two categories: water in oil emulsion and oil in water. Its primary function is to stay longer at the application site when applied to the outer or superficial layers of the skin. A skin cream's purpose is to protect the skin from various environmental factors and weather conditions while also providing calming effects. Different kinds of creams are available, including ones for hand and body massages, vanishing, night, cleansing, cold, and foundation. [3]

Classification of cream

The majority of the natural ingredients in the herbal creams are extracted from herbal plants and provide nutritional and health benefits without being harmful or toxic. Both herbal and synthetic creams have been formulated using essentially the same cream bases, additional components, and production techniques. In herbal creams, extract from plants is used instead of active medicinal components. In general, creams are divided into five categories based on their

Clinical and therapeutic of herbal cosmetics

It was found that herbal creams may be created utilising a range of techniques and methodologies. Majorly anti-inflammatory, dermatitis, anti-trauma, anti-aging, anti-acne, and Divansh sahu ,Prerana sahu et all ,formulation and evaluation of herbal cold cream ; International journal of creative research thoughts Regulation and future perspective of herbal cream

Regulatory agencies are vital to preserve and guarantee the safety and quality of herbal medicine products, as well as their manufacturing and distribution. The United States Food and Drug Administration (USFDA), the Drug and Cosmetic Act, and the Laws of 1940 and 1945, respectively, primarily regulate herbal creams and other items. However, each nation has its own regulatory bodies and policies to control the manufacturing and distribution of herbal remedies. [4]

Material and methods

Herbal excipients in used in preparation of herbal cream

Beeswax

The natural wax known as "beeswax" is created by Apis honey bees. Eight wax-producing glands in the abdomen segments of worker bees shape the wax into scales, which are then discarded in or near the hive. The beehive workers gather and utilise the hive. Chemically speaking, beeswax is mostly made up of different longchain alcohols and fatty acid esters.

Borax

Borax, also known as sodium borate tincar, is an ionic substance that is a salt. Its chemical formula is $\text{Na}_2\text{H}_2\text{B}_4\text{O}_{17}$, and it can be either hydrated or anhydrous. It is a crystalline solid that is colourless and dissolves in water to form a basic solution.



Liquid paraffin

Paraffin is a highly refined mineral oil used in cosmetics and medicine. It should not be confused with kerosene, which is used as fuel. Paraffinumliquidum, paraffin oil, liquid paraffin oil, or Russian mineral oil are other names for it. Regional variations exist for the definitions of paraffin and paraffin oil due to the general understanding of paraffin as an alkane.



Rose water

Because rose water can lessen the appearance of ageing, it is a common ingredient in cosmetics. Rose water plumps the skin and minimises the look of wrinkles when applied to a particular area. Rose water also tightens the skin, giving you a firmer, more radiant appearance.



Coconut oil

Coconut oil is great for dry skin since it hydrates the skin and strengthens its natural protective layer to help it retain moisture. Because acne is an inflammatory condition, coconut oil can help treat it because of its anti-inflammatory qualities.



Almond oil

Whether it's a sunburn, inflammation, allergy, or the skin being harmed by the elements. When combined with naturally hydrating almond oil, coconut oil facilitates the skin's simple absorption of vital nutrients, protecting it from the harshest weather.



Methyl paraben

One of the most widely used parabens is methylparaben. It inhibits the growth of germs and is found in most cosmetic products as part of a paraben mixture. It is also naturally occurring in various fruits and can be utilised as an antifungal or food preservative.

Distilled water

Water that has been heated to a vapour and then condensed back into liquid in a different container is known as distilled water. Water impurities that do not boil at or below the water's boiling point stay in the original container. Distilled water is therefore a kind of purify

Neem oil

Azadirachta indica is a widely distributed, rapidly growing, evergreen tree that grows quickly in India, Africa, and America. Because of its therapeutic qualities, it has been utilised in ayurvedic medicine for over 4,000 years. The Sanskrit name for neem is "arista," which means "perfect, complete, and imperishable." The Sanskrit name for the neem tree is Arishtha, which means "reliever of sickness" and is therefore referred to as a "Sarbarogaribarini." The US National Academy of Sciences acknowledged the value of neem trees in a 1992 paper titled "Neem-a tree for solving global problem."



Benefits of neem oil

Neem's antioxidant properties include its ability to prevent cancer, reduce inflammation, fight viruses, fight bacteria, and fight fungi.

Preparation of neem extract

The plant's leaves were removed, properly cleaned in distilled water, and then let to dry in the shade for ten days. Powder was created by grinding dried leaves. After being infused for three hours with 350 millilitres of 90% ethanol, 100 grammes of powder was put into a percolator and 150 millilitres of 90% ethanol was added. The powder was left to macerate for seven days, stirring periodically. Ultimately, a blackish green residue was obtained by collecting and condensing the ethanolic extract. The extract was kept in a cool, dark place in an airtight container.[6]

Method of preparation

- Fill a porcelain dish with the necessary amount of liquid paraffin and beeswax.
- To melt this mixture, heat it in a water bath.
- Take the dish out of the water bath.
- Fill a beaker with distilled water and borax.
- This solution is heated to roughly 75 C in a water bath.
- This Borax solution was put to the porcelain dish drop by drop while being constantly stirred.
- In a porcelain dish, add methyl paraben and stir to dissolve.
- Incorporate rose water coconut oil, almond and neem oils into this mixture.
- For fragrance, add perfume. It was possible to get herbal cold cream. [7]

Formula of cold cream

Composition	F1	F2	F3	Properties
Borax	10%	10%	10%	Stability
Beeswax	15%	15%	15%	Emulsify agent
Liquid paraffin	40%	40%	40%	Prevent skin itching ,lubricating agent
Neem oil	3%	4%	5%	Prevent kill fungus
Almond oil	10%	10%	10%	Anti inflammatory
Coconut oil	10%	10%	9.5%	Defensive barrier
Rose water	2%	1%	0.5%	Fragrance

Methyl paraben	10%	10%	10%	Antibacterial and preservation
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Evolution parameters

Physical properties

We looked at the cream's colour, smell, and appearance.

Washability

after applying the cream, the hand was examined under running water.

pH

The standard buffer solution helped with the pH meter's calibration. A digital pH metre was used to weigh 0.5 grammes of cream, dissolve it in 50.0 millilitres of distilled water, and determine its pH.

Viscosity

The cream's viscosity was measured using a Brookfield viscometer at 100 rpm and spindle number 7.

Spreadability test

After applying the cream sample between the two glass slides, 50 g of weight was placed between them for five minutes to compress it to a consistent thickness before the weight was added to the weighing pan. The amount of time that the upper glass slide travelled was t = time taken by s = weight tight to upper slide l = length moved on glass slide t .

Irritancy test

On the dorsal surface of your left hand, mark a square centimetre. After applying the cream to the designated area, the time was recorded. For a full day, irritability, erythema, and edoema were monitored at regular intervals and reported.

Test for microbial growth

After preparing the agar medium, the designed cream was infected using the steak plate method on the agar media, and a controlled was created by leaving out the cream. After being put in the incubator, the plates are incubated for 24 hours at 37 C. The plates were removed from the incubator after the incubation period, and the microbial growth was examined and contrasted with the control. [8]

Conclusion

From above the result formulation no. F2 is the best effect of herbal cream . it is reduce the acne problem , dry skin and wrinkles.

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