

# Formulation And Evaluation of Cold Cream From Natural Ingredient

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## Abstract

Cosmetics are formulations used for the beauty and beauty of human appearance. The aim of this study was to formulate and evaluate plant extracts containing aloe-vera prepared by the water-in-oil method in order to nourish and moisturize the skin. Cold cream with rose oil, aloe vera extract. Evaluation of the quality of formulated products was evaluated using different evaluation methods. No change in physical properties was observed in the formulated creams. The formulated cream showed good consistency and spreading ability, pH and no evidence of phase separation during the study period. Stability parameters such as appearance, properties, viscosity and fragrance of the formulated cream did not show any significant change during the study period. Cold creams with herbal extracts have a cooling and soothing effect because the water in the emulsion slowly evaporates. Cold creams are more moisturizing because they create an oily barrier that reduces water loss from the outermost layer of the skin. They are water-in- oil emulsions intended for use on accessible skin or mucous membranes to produce a local and sometimes systemic effect at the site of application.

Herbal cosmetics are products intended to enhance and beautify human appearances. In order to nourish and moisturize the skin, the current study set out to formulate and evaluate herbal cold creams that contained plant extracts, liquid paraffin as a lubricating agent, bees wax as stabilizer, by using the water in oil method. The cold cream is prepared by using the and almond oil. After preparation of cream, cream were evaluated for different parameters like appearance, PH, viscosity, stability test, dye test, spread ability & Test for microbial growth. From evaluation study it was concluded that it is a very good attempt to formulate the Cold Cream containing naturally available ingredients like almond. It was also concluded that the prepared formulation was physico-chemically and microbiologically stable, and possessed characteristics of a standard cosmeceutical's formulation for skincare.

Herbal cosmetics are meant to improve and beautify the appearance of people. The current study used the water-in-oil method to develop and assess herbal cold creams including plant extracts, liquid paraffin as a lubricant, beeswax a stabilizer, nourish and moisturize the skin. Almond oil and are used to make the cold cream. Pharmaceutical creams are used for a variety of cosmetic functions, such as moisturizing, cleansing, beautifying, and altering appearance semi-solid preparations are safe for use by the general public and society. Herbal cosmetics are goods that are used to improve and beautify human appearance. The purpose of the current study was create and evaluate herbal cold creams using plant extracts prepared using the water in oil method to nourish and moisturize.

**Keywords:** Cold cream, herbal cosmetics, almond oil, herbal cold cream, Hibiscus Rosa sinensis, Aloe vera, emulsion

### **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 'kosmesticos' which means to adorn. Since then, materials that are used to enhance the appearance or beautify the skin are called cosmetics. From ancient times to the present, people still use herbal cosmetics to beautify their skin. Cold cream is a water-in-oil emulsion. Cold cream provides a longer contact time at the application site compared to other semi-solid dosage forms or formulations. They add elegance to the skin and it is not so greasy. Thanks to the oil phase, it softens the skin. The function of the cold cream is to restore the moisture of the dry skin, it allows to remove waste substances from the pores and also cools the body. It is easily water washable and easy to wash. They are non-irritating when applied to the skin". The water phase provides extra protection to the skin. It liquefies at body temperature. It penetrates through the epidermis of the skin through natural process.<sup>[1]</sup>

### **History of Cold Cream:-**

The origins of cold cream can be traced back to ancient civilizations such as the Greeks and Egyptians, who used a mixture of oils, beeswax, ancient civilizations such as the Greeks and Egyptians, who used a mixture of oils, beeswax, and rosewater to cleanse and moisturize their skin. However, the term "cold cream" specifically refers to a formula developed in the 1800s by a French chemist named Théophile LeClerc.<sup>[2]</sup>

LeClerc's cold cream formula was made of a mixture of beeswax, almond oil, and rosewater, and it became popular among wealthy women in France who were seeking a gentle and effective way to cleanse and moisturize their skin. The formula was called "cold cream" because it had a cooling effect on the skin when applied.

Cold cream continued to gain popularity throughout Europe and eventually made its way to the United States, where it was embraced by Hollywood stars and beauty enthusiasts alike. The cream was particularly popular in the 1950s and 1960s, and it remains a classic skincare product to this day. Over the years, the basic formula of cold cream has been modified and adapted to suit different skin types and preferences. However, the core ingredients of oil, wax, and water remain the foundation of the cream and continue to provide effective cleansing and moisturization for the skin.<sup>[3]</sup>

### **Classification of cosmetics:-**

According to the function, cosmetics are classified into the following groups:

- 1) Decorative function (Example Lipstick, Nail polish, etc.).
- 2) Corrective function (Example – Dry cream and heavy face powder).
- 3) Protective function (Example-Dry cream and heavy face powder),
- 4) Curative function (Example antiperspirant, hair preparation, etc..)

According to their uses, cosmetics are again sub-divided into the following classes:

- 1) For the skin (Example Powder, Cream, Lotion, Deodorant, Bath and cleansing preparation, Make up, etc.)
- 2) For the Hair (Example Shampoo, Hair tonic, Hair dressing. Shaving preparation, etc.).
- 3) For the nails (Example – Nail polish, Nail conditioner, Polish remover, etc.), etc.).
- 4) For the teeth and mouth (Example – Dentifrices).

### **Skin care product :-**

- 1) Face

- 2) Moisturing cream
- 3) Vanishing cream
- 4) Cold cream

### **Cold cream:-**

Cold creams are water-in-oil or oil-in-water type emulsions added with certain fats (generally beeswax) and perfuming agents. These are applied on skin to provide smoothness and remove makeup. Cold creams are named so due to the cooling effect they impart on application.<sup>[4]</sup>

What is Cold Cream and How Does It Work?

Cold cream is a type of facial cleanser and moisturizer that has been used for centuries to clean and hydrate the skin. It's made from a mixture of water, oil, and wax, which creates a thick and creamy emulsion that can be used to remove dirt, makeup, and other impurities from the skin.

The name "cold cream" comes from the fact that it feels cool and refreshing when applied to the skin. It's also known for its gentle and nourishing properties, which make it suitable for all skin types, including dry and sensitive skin.

Cold cream works by creating a barrier on the skin's surface that helps to prevent moisture loss and protect against environmental irritants. The oil and wax in the cream act as emollients, which help to soften and smooth the skin, while the water helps to hydrate and refresh.

To use cold cream, apply a small amount to your face and gently massage it in using circular motions. Use a warm, damp washcloth or cotton pad to remove the cream and any impurities from your skin. Some people prefer to leave the cream on for a few minutes before wiping it off to allow it to fully hydrate and nourish the skin.

Overall, cold cream is a gentle and effective way to cleanse and moisturize your skin. It's a classic skincare staple that has stood the test of time and remains a popular choice among people who value natural and nourishing ingredients.<sup>[5]</sup>

### **What is Cold Cream Made Of**

Cold cream is made of a mixture of water, oil, and wax, which are emulsified together to create a thick and creamy texture. The specific ingredients and ratios can vary depending on the manufacturer and recipe, but the basic components of cold cream are:

- 1) Water: This is the main liquid component of the cream and helps to hydrate and refresh the skin.
- 2) Oil: Oils such as mineral oil, almond oil, or coconut oil are commonly used in cold cream to provide moisturization and nourishment to the skin.
- 3) Wax: Wax such as beeswax or candelilla wax is added to cold cream to create a thick and creamy texture and to help create a barrier on the skin that prevents moisture loss.
- 4) Emulsifier: An emulsifier is added to help combine the oil and water components of the cream and create a stable emulsion. Common emulsifiers used in cold cream include borax or beeswax

Additional ingredients may be added to cold cream to provide additional benefits to the skin, such as glycerin, aloe vera, or essential oils. Overall, the combination of these ingredients creates a gentle and nourishing cleanser and moisturizer that is suitable for all skin types.

### **Cold Cream vs. Traditional Cleansers**

Cold cream and traditional cleansers are both used for cleansing the face, but they work in different ways and have different benefits.

Cold cream is a type of moisturizer that is used to cleanse and moisturize the skin at the same time. It is a thick, emollient cream that is applied to the face and then wiped off with a tissue or cotton pad. Cold cream

is particularly effective at removing makeup and dirt from the skin, and it leaves the skin feeling soft and supple. It is also gentle on the skin and can be used by people with sensitive skin.<sup>[6]</sup>

Traditional cleansers, on the other hand, are specifically formulated to remove dirt, oil, and impurities from the skin. They come in a variety of forms, such as foaming cleansers, gel cleansers, and cream cleansers. Traditional cleansers can be harsh on the skin if they contain harsh surfactants or if they are used too frequently. However, they can be very effective at removing oil and impurities from the skin, which can be important for people with acne-prone skin.

In summary, cold cream is a good option for people with dry or sensitive skin who want to cleanse and moisturize their skin at the same time. Traditional cleansers are better for people with oily or acne-prone skin who need a more thorough cleansing.<sup>[7]</sup>

### **Benefits of Cold Cream for Your Skin:**

Cold cream is a popular skincare product that has been used for decades to cleanse and moisturize the skin. It is made with a mixture of water, oil, and emulsifiers, which creates a thick, creamy consistency that is easy to apply and effective at removing dirt, makeup, and other impurities from the skin. Here are some of the benefits of using cold cream for your skin:

1)Cleanses the skin: Cold cream is an effective cleanser that can help to remove dirt, oil, and makeup from the skin. It works by dissolving these impurities, making it easy to wipe them away with a tissue or cotton pad.

2) Moisturizes the skin: Cold cream is also a great moisturizer that can help to hydrate and nourish the skin. The oil content in the cream helps to lock in moisture, leaving the skin feeling soft and supple.

3)Soothes dry and sensitive skin: Cold cream is a gentle product that is suitable for people with dry or sensitive skin. It can help to soothe and calm irritated skin, while also providing a protective barrier that helps to prevent further irritation.

4) Reduces the appearance of fine lines and wrinkles: The moisturizing properties of cold cream can help to reduce the appearance of fine lines and wrinkles. By hydrating the skin, cold cream can make it look smoother and more youthful.

5) Improves skin texture: Cold cream can help to improve the texture of the skin by removing dead skin cells and promoting cell renewal. This can leave the skin looking brighter and more radiant.

6) Deeply moisturises skin & boosts hydration Does your skin feel dry in winter? The best tip: use cold cream for dry skin!Cold cream forms a protective barrier on your skin that prevents moisture loss and keeps your skin hydrated and moisturised in winter. It can also make your skin feel more textured!

7) Helps treat redness and itchiness Because the skin loses moisture in winter, it can result in rashes, redness, and itchiness. Using a moisturising cold cream can help prevent these problems and maintain glowing & healthy skin in winter.

8)Repairs chapped lipsAnother reason to use cold cream for winter- you won't need to buy a lip balm separately! Cold creams can be great lip balms. Applying them to your lips can help lock in moisture and provide your lips the nourishment they need to combat cold winter winds.

9)Can act as a makeup remover Cold cream is like a moisturizing makeup remover. It removes your makeup and softens your skin at the same time. You can use it as a pre-cleanser followed by your usual night skin care routine.

Overall, cold cream is a versatile skincare product that can provide a range of benefits for the skin. Whether you have dry, oily, or sensitive skin, cold cream can help to cleanse, moisturize, and protect your skin, leaving it looking and feeling its best.<sup>[8,9]</sup>

## How to Use Cold Cream in Your Skincare Routine

Cold cream is a versatile skincare product that can be used in a variety of ways to cleanse and moisturize the skin. Here are some steps you can follow to incorporate cold cream into your skincare routine:

1) Start with a clean face: Before applying cold cream, make sure your face is clean and free of makeup and other impurities.

2) Apply the cold cream: Take a small amount of cold cream and apply it to your face using your fingertips. Gently massage the cream into your skin, paying extra attention to areas where you have makeup or other impurities.

3) Remove the cold cream: Once you have massaged the cold cream into your skin, use a tissue or cotton pad to wipe it away. Be sure to remove all of the cream, including any residue around your hairline and neck.

4) Rinse your face: After removing the cold cream, rinse your face with warm water to remove any remaining.

5) Follow with a moisturizer: After using cold cream, it's important to moisturize your skin to keep it hydrated and nourished. Apply a moisturizer to your face and neck, and massage it gently.

You can use cold cream as part of your daily skincare routine, either in the morning or at night. It's a great option for people with dry or sensitive skin, and it can be particularly effective at removing makeup and other impurities from the skin. Remember to choose a cold cream that is suitable for your skin type and to use it in moderation to avoid clogging your pores.

## Cold Cream for Sensitive Skin

Cold cream is an excellent option for people with sensitive skin. It is gentle and non-irritating, and it can help to soothe and calm the skin, while also providing hydration and nourishment. Here are some tips for using cold cream for sensitive skin:

1) Look for a gentle formula: Choose a cold cream that is specifically formulated for sensitive skin. Look for products that are fragrance-free, hypoallergenic, and free from harsh ingredients like alcohol and sulfates.

2) Test it out first: Before using cold cream on your face, test it out on a small patch of skin to make sure you don't have an allergic reaction. Apply a small amount of cream to the inside of your wrist or behind your ear, and wait 24 hours to see if you have any redness, itching, or other signs of irritation.

3) Use it sparingly: While cold cream is gentle and non-irritating, it's still important to use it in moderation to avoid clogging your pores. Use a small amount of cream, and massage it gently into your skin.

4) Avoid harsh scrubbing: When removing the cold cream from your skin, avoid harsh scrubbing or rubbing, which can irritate sensitive skin. Instead, use a soft tissue or cotton pad, and gently wipe away the cream.

5) Follow with a gentle moisturizer: After using cold cream, it's important to follow up with a gentle moisturizer that is also suitable for sensitive skin. Look for a product that is free from fragrance and other irritants, and that provides hydration without clogging your pores.

By following these tips, you can use cold cream to cleanse and moisturize your sensitive skin, without causing irritation or other adverse reactions.

## Cold Cream for Removing Makeup

Cold cream is an excellent option for removing makeup, as it can dissolve even stubborn makeup and leave your skin feeling clean and moisturized. Here are some tips for using cold cream to remove makeup:

1) Start with a clean face: Before applying cold cream, make sure your face is clean and free of any dirt or oil.

2)Apply the cold cream: Take a small amount of cold cream and apply it to your face, focusing on areas where you have makeup. Gently massage the cream into your skin using circular motions, making sure to cover all areas of your face.

3)Remove the makeup: Once you have massaged the cold cream into your skin, use a soft tissue or cotton pad to wipe away the makeup. Be sure to remove all of the cream and makeup, including any residue around your hairline and neck.

4)Rinse your face: After removing the cold cream and makeup, rinse your face with warm water to remove any remaining residue.

5)Follow up with a gentle cleanser: After using cold cream to remove makeup, it's a good idea to follow up with a gentle cleanser to ensure that all traces of makeup and cream are removed from your skin.

Using cold cream to remove makeup is an effective and gentle way to cleanse your skin, without stripping it of its natural oils. It's a great option for people with dry or sensitive skin, as it can help to hydrate and nourish your skin while removing makeup.<sup>[10,11]</sup>

### **Cold Cream for Dry Skin**

Cold cream is an excellent for people with dry skin, as it is rich in emollients and can help to hydrate and nourish your skin. Here are some tips for using cold cream for dry skin:

1)Choose a cream with hydrating ingredients: Look for a cold cream that is formulated with hydrating ingredients like glycerin, hyaluronic acid, or ceramides. These ingredients can help to lock in moisture and keep your skin feeling soft and supple.

2)Apply the cream to damp skin: To maximize the moisturizing benefits of cold cream, apply it to damp skin. This will help to lock in moisture and prevent your skin from drying out.

3)Massage the cream in gently: When applying cold cream to your skin, be sure to massage it in gently using circular motions. This will help to stimulate blood flow to your skin and enhance the moisturizing benefits of the cream.

4)Leave the cream on for a few minutes: For maximum hydration, leave the cold cream on your skin for a few minutes before wiping it away. This will allow the emollients to penetrate your skin and provide deep hydration.

5)Follow up with a moisturizer: After using cold cream, be sure to follow up with a moisturizer to help seal in the hydration. Look for a moisturizer that is specifically formulated for dry skin and that contains ingredients like shea butter or jojoba oil.

By following these tips, you can use cold cream to help hydrate and nourish your dry skin, leaving it feeling soft, supple, and moisturized.

### **Cold Cream for Anti-Aging**

Cold cream can be beneficial for anti-aging skincare as it can help to moisturize and nourish the skin, which can reduce the appearance of fine lines and wrinkles. Here are some tips for using cold cream for anti-aging:

1)Look for a cream with anti-aging ingredients: Choose a cold cream that contains ingredients like retinol, antioxidants, or peptides, which can help to reduce the signs of aging and promote collagen production.

2)Apply the cream daily: To see the benefits of cold cream for anti-aging, it's important to use it daily. Apply the cream to your face and neck each night before bed, and massage it gently into your skin.<sup>[12,13]</sup>

3)Be gentle: When applying cold cream to your skin, be sure to be gentle and avoid harsh rubbing or scrubbing. This can cause irritation and damage to your skin, which can exacerbate the signs of aging.

4)Use a gentle cleanser: To maximize the anti-aging benefits of cold cream, be sure to use a gentle cleanser that is formulated for aging skin. This will help to remove dirt and oil without stripping your skin of its natural oils.

5) Follow up with a moisturizer: After using cold cream, be sure to follow up with a moisturizer that is specifically formulated for aging skin. Look for a product that contains hydrating ingredients like hyaluronic acid or glycerin, and that can help to lock in moisture and reduce the appearance of fine lines and wrinkles. By following these tips, you can use cold cream to help moisturize and nourish your skin, which can help to reduce the appearance of fine lines and wrinkles and promote a more youthful complexion.

### **How to Choose the Right Cold Cream for Your Skin Type**

Choosing the right cold cream for your skin type is important to ensure that you get the maximum benefits from the product. Here are some tips for selecting the right cold cream for your skin type:

1) Dry skin: If you have dry skin, look for a cold cream that is formulated with emollients and hydrating ingredients like glycerin, shea butter, or ceramides. These ingredients can help to moisturize your skin and prevent dryness and flakiness.

2) Oily skin: If you have oily skin, look for a lightweight cold cream that is non-comedogenic and oil-free. Avoid products that are heavy or greasy, as they can clog your pores and exacerbate oiliness.

3) Combination skin: If you have combination skin, look for a cold cream that is balanced and designed to work well for both dry and oily areas. You may want to consider using different products on different areas of your face, depending on your skin's needs.

4) Sensitive skin: If you have sensitive skin, look for a gentle cold cream that is free from fragrances, dyes, and other potential irritants. Avoid products that contain alcohol or other harsh ingredients that can cause irritation.

5) Mature skin: If you have mature skin, look for a cold cream that contains anti-aging ingredients like retinol, antioxidants, or peptides. These ingredients can help to reduce the signs of aging and promote collagen production.

By selecting the right cold cream for your skin type, you can ensure that you get the maximum benefits from the product and avoid any potential irritation or negative side effects<sup>[14]</sup>

### **Drug And Excipient Profile:-**

All the natural materials used in the present study i.e., Almond oil. in a form of dried powder. The details of the plant material used for the formulation of cold cream are mentioned below.

1. **Orange peel**
2. **Aloe**
3. **Bees Wax**
4. **Borax**
5. **Rose water**
6. **Honey**
7. **Vitamin E**
8. **Almond oil**
9. **Liquid Paraffin**

## 1. Orange Peel :



**Orange Peel**

**Scientific Name:** Citrus reticulata

**Family:** Rutaceae

**Subfamily:** Aurantioideae

**Other Common Names:**

Citrus aurantium

**Kingdom:** Plantae

**Genus:** Citrus

**Species:** C. Reticulata

**Order:** Sapindales

**Clade:** Angiosperm

**Synonym:** Orange cortex, Bigarade orange, Seville orange, China orange, Bitter orange peel

**Biological Source:**

Orange peel is consisting of fresh and dried outer part of the pericarp of citrus aurantium Linn

- skin Protects skin from free radicle damage
- Hydrates dehydrated skin
- Promotes healthy skin glow, <sup>[15]</sup>

**Chemical constituents:-** orange peel contains a variety of chemical compounds, including essential oils, flavonoids, carotenoids, steroids, terpenoids, alkane groups, and ethyl esters.

**Uses:-** Orange peels are rich in vitamin A and C, both which are natural antioxidants that boost the overall health of the immune system and help fight infection, colds and flu Orange peels have more phytonutrients and flavonoids than the inner pulp, endowing it with anti-inflammatory properties.



## 2. Aloe:



### Aloe

**Kingdom:** Plantae

**Clade:** Tracheophytes

**Clade:** Angiosperms

**Clade:** Monocots

**Order:** Asparagales

**Family:** Asphodelaceae

**Subfamily:** Asphodeloideae

**Genus:** Aloe

**Chemical constituents:** Aloe vera contains 75 potentially active constituents: vitamins, enzymes, minerals, sugars, lignin, saponins, salicylic acids and amino acids. Vitamins: It contains vitamins A (beta-carotene), C and E, which are antioxidants. It also contains vitamin B12, folic acid, and choline.

**Uses:**

- It contains healthful plant compounds.
- It has antioxidant and antibacterial properties.
- It accelerates wound healing.
- It reduces dental plaque.
- It helps treat canker sores.
- It reduces constipation.
- It may improve skin and prevent wrinkles.
- It lowers blood sugar levels.<sup>[16,17]</sup>

### 3. Bees wax:-



**Bees Wax**

Beeswax has becoming more widely used in cosmetics and skincare products. When applied as directed by study conducted in Germany, beeswax proved to be more effective than similar barrier creams, which are often based on mineral oil and include petroleum jelly. Beeswax is utilized in moisturizers, hand creams, salves, lip balms, lip glosses, and makeup like blush, eye shadow, and eye liner. Additionally. Beeswax is a key component in hair pomades and moustache

### 4. Borax:-



**Borax**

Borax, combined with wax, is used in many cosmetic products like creams, gels, and lotions. It is famously used in hand soaps to help wash off the oil or grease from the hands. Borax's alkaline nature makes it a perfect ingredient in cleansers and toners. In cosmetic products, borax is sometimes used as an emulsifier, buffering agent, or preservative for moisturizing products, creams, shampoos, gels, lotions, bath bombs, scrubs, and bath salts. Borax is also an ingredient combined with glue and water to make "slime," a gooey material that many kids enjoy playing with right from creams and body lotions to shampoos, bath gels and even the in-vogue bath bombs, just about every product associated with skincare has Borax as one of its components. Given its mild and antiseptic nature, quite a few natural cosmetic products tend to include Borax as an essential ingredient as well. <sup>[18]</sup>

## 5. Rose Water:-



**Rose water**

**Scientific name:** Rosa damascena

**Family:** Rosaceae

**Uses :** Rose water is an antibacterial. This means that it fights off bacteria that could lead to infections. Using rose water for face and body care can prevent wounds such as burns and cuts becoming infected and it can also be used to reduce the appearance of scars when used in high concentrations.

Rose water is especially hydrating when combined with other moisturizing ingredients, such as ceramides or glycerin. “These help to moisturize the skin, protect the skin barrier and prevent further water loss from the skin,” says Allash. However, it shouldn’t replace your current moisturizer. Rose water has been used as a beauty product for thousands of

years, so it’s no surprise that it can improve your complexion and reduce skin redness. The antibacterial properties may help reduce acne. The anti-inflammatory properties can reduce skin redness and puffiness. Rose Water Maintains the Skin’s Natural pH Balance. Chemically produced soaps and cleansers disrupt the pH balance of our skin, making it prone to bacteria that cause various skin conditions like rashes and acne. This property helps rose water restore the skin to its normal pH level.

## 6. Honey:-



**Honey**

**Kingdom:** Animalia

**Phylum:** Arthropoda

**Class:** Insecta

**Order:** Hymenoptera

**Family:** Apidae

**Genus:** Apis

Honey is used in a number of winter face Packs contains honey as an ingredient due to the viscous golden liquid's ability to moisturise the skin effectively.

**Chemical constituents:** Glucose (35%), fructose (45%), sucrose (2%), maltose, gum, traces of succinic acid, acetic acid, dextrin, formic acid, colouring matter, enzymes- invertase, diastase, inulase and traces of vitamins, proteins.

**Uses:** Crafted with the natural goodness of honey, a powerful humectant, this cold cream locks moisture into your skin, keeping dryness at bay. Also packed with the richness of malai, the cold cream adds a healthy milky glow to your skin, resulting in buttery soft, smooth, and radiant skin.

## 7. Vitamin E:-



**Vitamin E**

Eight fat-soluble substances make up vitamin E, including four tocopherols and four tocotrienols. Nerve issues can result from vitamin E insufficiency, which is uncommon and typically caused by an underlying issue with dietary fat digestion rather than from a diet deficient in vitamin E. Vitamin E is a fat-soluble antioxidant which may help protect cell membranes from reactive oxygen species.<sup>[19]</sup>

## 8. Almond Oil:-



**Almond oil**

**Scientific name:** *Prunus Amygdalus Dulcis*

**Biological source:**

It consists of dried ripe seeds of *Prunus amygdalus var amara*

**Family:** Rosaceae

**Geographical source:**

Bitter almonds trees are native of Iran and Asia

At present they are widely cultivated in Sicily, Italy, Spain, Portugal, France and Morocco.

Bitter almonds trees can not be easily distinguished from sweet almond trees (*Prunus communis*).

It's also anti-inflammatory and boosts immunity. Containing omega-3 fatty acids, almond oil might help you maintain healthy cholesterol levels and improve your memory. It may help lower your risk for disease like cancer and heart disease

**Chemical constituents:** From the reviewed studies, it appears that almond oil contains a significant proportion of poly and monounsaturated fatty acids, with oleic acid as the main compound, and an important amount of tocopherol and phytosterol content.

**Uses:** almond oil is an anti-inflammatory, it may help ease swelling of the skin. Improves complexion and skin tone. Due to its emollient properties, almond oil has the potential to improve both complexion and skin tone. Treats dry skin.<sup>[20]</sup>

## 9. Liquid Paraffin:



**Liquid Paraffin**

Liquid paraffin is primarily used as a pediatric laxative in medicine and is a popular treatment for constipation and encopresis. Because of its ease of titration, the drug is convenient to synthesize.<sup>[21]</sup>

### Experimental Work:

The Cold Cream formulated with different natural ingredients ( Aloe Vera gel, Orange Peel Powder,)

**Aloe Vera Gel:** Take a fresh aloe vera leaves & washed with purified water. Then the outer part of the leaf were dissected using a sterile knife. Remove the aloe vera gel, using the sterile knife. Then it is blend in blender to form aloe vera gel

### Extraction process Aloe Vera gel

Mature, healthy and fresh aloe Vera leaves were collected and washed with distilled water. Then after proper drying of leaves, the outer part of the leaf was dissected using a sterile knife. Then the aloe Vera gel that is the colourless parenchymatous tissue was removed using the sterile knife. Then it is filtered to remove the fibres and impurities. Then the filtrate or the filter product which is a clear aloe Vera gel was used in the preparation.



Fig

**Formulation:**

Heat the liquid paraffin and beeswax in a borosilicate glass beaker to 75°C and maintain this heating temperature". (Oil phase). In another beaker, dissolve the borax, methyl paraben in distilled water and heat this beaker to 75°C to dissolve the borax and methyl paraben to give a clear solution. (Aqueous phase). Then slowly add this aqueous phase to the heated oil phase". Then add a measured amount of Aloe vera gel and mix until a smooth cream is formed. Then add a few drops of rose oil for fragrance and then slowly add Hibiscus extract powder mix well. Put this cream on a plate and if necessary add a few drops of distilled water and stir the cream geometrically on the plate so that the cream gets a smooth texture and all the ingredients are mixed properly This method is called the plate technique or the improvised method of preparing the cream".

**Formulation Table:-****Table No :-1**

Sr.No.	Name of Ingredients	F1.	F2.	F3.
1.	Orange peel powder	2.1 gm	2 gm	2.1 gm
2.	Aloe	2.1 ml	2.0 ml	2.1 ml
3.	Bees wax	3.5 gm	3.7 gm	3.6 gm
4.	Borax	0.15 gm	0.14 gm	0.15 gm
5.	Rose water	0.5 ml	0.5 ml	0.5 ml
6.	Honey	0.2 gm	0.3 gm	0.2 gm
7.	Vitamin e	0.1 gm	0.1 gm	0.1 gm
8.	Almond oil	0.5 ml	0.6 ml	0.5 ml
9.	Liquid paraffin	2.2 ml	2 ml	2.1 ml

**Preparation:-**

- Preparation can be done by adding natural ingredients
- First we melt the solid ingredients by indirect heat.
- Then add all oils in it and stir it well.
- Then dissolve borax in water with continuous help of heat.
- Then add borax solution in oil mixture with continuously stirring with help of heat.
- Continuous this process for 5 min.

- Then remove from heat and stir until it get cold.
- We can also use honey and aloe Vera in it in small amount.
- Because natural ingredients are more profitable to skin as a excipients.

#### **EQUIPMENTS: -**

- Hot Air Oven
- Digital PH meter
- Tapping Instrument
- Bulk density instruments

#### **METHOD OF PREPARATION:-**

- ❖ **All the ingredients (Orange peel, ) were weighed accurately**
- ❖ **And then mix the powders geometrically for uniform formulation**
- ❖ **Add Rose Water or Rise soak Water into the mix powder.**
- ❖ **Then here u see the amazing and effective prepared cold cream.**
- ❖ **Then apply it into your tanned skin and wash your face after 15-20 minutes,**

#### **Evaluation of Cold Cream:-**

##### **1: Determination of Physical appearance**

The physical appearance of cold cream was inspected visually against dark background. The average of three reading is recorded. The result is given in the table no

##### **2: Homogeneity**

Homogeneity is the formulated cold cream was tested for the homogeneity y visual appearance and by touch. After feel Emolliency, slipperiness and amount of residue left after the application of fixed amount of cream was checked. After application of cream, the type of film or smear formed on the skin were checked. The ease of removal of the cream applied was examined by washing the applied part with tap water.

##### **3. Sensitivity test:-**

The cream which was prepared has applied on Icm skin of hand and exposed to sunlight fo for 4-5mins.

##### **4. Spread ability**

The spread ability was expressed in terms of time in seconds taken by two slides to slip off from the cream, placed in between the slides, under certain load. Lesser the time taken for separation of the two slides better the spread ability. Two sets of glass slides of standard dimension were taken". Then one slide of suitable dimension was taken and the cream formulation was placed on that slide. Then other slide was placed on the top of the formulation. Then a weight or certain load was placed on the upper slide so that the cream between the two slides. was pressed uniformly to form a thin layer. Then the weight was removed and excess of formulation adhering to the slides was scrapped off. The upper slide was allowed to slip off freely by the force of weight tied to it. The time taken by the upper slide to slip off was noted.

$$\text{Spread ability} = \frac{mxl}{t}$$

Where,

M Standard weight which is tied to or placed over the upper slide (30g)

l length of a glass slide (5 cm)

T time taken in seconds.

**5. pH:**

The pH of aloe cold cream was determined using pH meter. The most accurate common means of measuring pH is through a lab device called a probe and meter, or simply a pH meter. The probe consists of a glass electrode

through which a small voltage is passed. The meter is a voltmeter, measures the electronic impedance in the glass electrode and displays pH units instead of volts. Measurement is made by submerging the probe in the semisolid until a reading is registered by the meter

**RESULT AND DISCUSSION:****Physical observation:-****Table No:-2**

Sr.no	Parameter	Formula F1	Formula F2	Formula F3
01	Colour	Faint yellow a	Faint yellow	Faint yellow
02	Odour	Pleasant	Pleasant	Pleasant
03	Texture	Smooth	Smooth	Smooth
04	State	Semi solid	Semi solid	Semi solid

**Washability observation:-****Table No:-3**

Sr.no.	Formulation	Washability
01	F1	Easily washable
02	F2	Easily washable
03	F3	Easily washable

**Sensitivity study observation:-****Table No:-4**

Sr.no	Formulation	Irritant effect	Erythema	Edema
01	F1	No	No	No
02	F2	No	No	No
03	F3	No	No	No



**Ph determination:-****Table No:-5**

Sr.no	Formulation	pH
01	F1	6.7
02	F2	6.2
03	F3	6.6

**Conclusion:-**

By using Aloe Vera gel the cream showed a multipurpose effect and all these aloe ingredients showed significant different activities. Based on results and discussion, the formulations F1, F2 and F3 were stable at room temperature and can be safely used on the skin. However, the formula 1 showed the best results in all aspects.

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