



Original Research Article

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## FORMULATION AND EVALUATION OF POLYHERBAL COLD FACE CREAM

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### Abstract

Herbal cosmetics are products that are used to improve one's look. The goal of the research was to develop an herbal cream for moisturizing, nourishing, whitening, and treating various skin diseases. *Curcuma longa* (Turmeric powder), *Aloe vera* (Aloes), *Phyllanthus emblica* (Amla), *Cassia angustifolia Vahl* (Senna), *Acalypha indica* (Indian nettle), *Cucumis sativus* are some of the basic drugs used to make the cream. The selection of components is based on the agents' various therapeutic characteristics. Various evaluation parameters are used to the cream.

**Keywords:** Cosmetic, Herbal cold cream, Turmeric.

### INTRODUCTION

The Demand of herbal cosmetics due to the availability of new ingredients the financial rewards for developing successful products and maintained of quality standard. Cosmetics are the products applying on the body. Face cream are used as cosmetic for softening and cleansing action.

The Ayurvedic system of medicine was one of the most important systems that uses herbal plant and extract of the treatment of management of various Diseases state.

A Cream is a preparation used for the application to the skin. Creams are also applied to the mucus membrane such as vagina, rectum. Creams may be considered as pharmaceutical products and cosmetics used in variety of skin conditions.<sup>(1,2)</sup>

**Creams are semi solid preparation of Oil and Water.**

- **O/W**
- **W/O**

O/W Creams which are composed of small droplets of Oil dispersed in continuous Water Phase. O/W type are more comfortable and more acceptable cosmetically<sup>(3,4)</sup> they are less greasy, easily washed off using Water.

W/O Creams which are composed of small droplets of Water dispersed in continuous Oil Phase. W/O types are more difficult to handle they are also moisturizing<sup>(5,6)</sup> more as they provide oily barrier which reduce water loss from stratum corneum.<sup>(7,8)</sup>

**GENERAL USES OF CREAM:**

- Cleansing
- Emollient Effect
- Aid in retention of Moistures ( W/o Creams)
- Physical/ Chemicals barrier like Sun screen.

**Face Creams :<sup>(3)</sup>**

- Face Creams are used as cosmetic for softening and cleansing action.
- Emollient are non-Cosmetic moisture preparations which come in the form of Creams, Ointment, Lotions and Gels. Emollient help the skin to feel comfortable.
- Emollient action provide a protective film for Patient with conditions such as eczema or psoriasis. Emollient are essential part of skin care. Emollient action are used in skin beauty application such as lipsticks, lotions, and other cosmetic products.

**Cosmological Importance's**

**1. ALOES<sup>(4,5)</sup>**

Aloe vera has been used since ancient times for healing infection and burns. However with the improvement in cosmetology, it has been proved that Aloe vera is a very important component of cosmetics.



**Fig.1 Aloes**

**Itching and Blisters**

Aloe vera also provides relief from itching and also helps to treat blisters. Aloe contains vitamin B1, B2, B6, B12 and vitamin C that provide soothing and pleasing sensation to skin [11,12].

### **Skin Aging**

Aloe vera initiates the synthesis of elastin as well as collagen. These proteins are essential for preventing the aging of the skin [13,14]. Acne Aloe vera helps to eradicate acne scars by performing as an immune booster and an anti-inflammatory agent. Beauty products composed of Aloe vera may diminish the rigorousness of acne. It is also composed of the chemical ingredients which have the property to save the skin to initiate the acne [15, 16]

### **Freshness**

Aloe vera impart the sensation freshness. It helps in increasing distribution of blood therefore providing easier oxygen exchange among the cells, hence giving them nourishment [17]

### **Sun-burns**

Aloe Vera has an outstanding possession in diminishing the hurting of sunburn. For this purpose, it is rubbed directly on skin. The fresh fluid from the plant or Aloe vera containing aftersun creams may be used for sun-burns.

### **Phytochemical screening**

It contains almost 20 amino acids, minerals like calcium, magnesium and sodium in sufficient quantities, enzymes, vitamins, polysaccharides, nitrogen and other components that make it a miracle beauty herb.

### **2. AMLA<sup>(7)</sup>**

Well, you must be wondering how gooseberry can be used to your skin. You can consume it with honey or you can also apply it on your skin directly and reap its benefits. If you are finding it hard to consume this sour fruit, then try making juice out of it and consume it. This will do well for your skin



**Fig.2 Alma**

### **Anti-Ageing Properties**

Consuming gooseberry juice can help your skin age slowly. As you begin to age, you would always want to look younger and that is one particular phase of growing older. However, who does not want to look young? So, simply just make some amla juice and add some honey to it and drink it. This drink has loads of antioxidants in it that can help make your skin look better and beat ageing cells. Vitamin C is found in amla and this aids in glowing skin. Regularly drinking amla juice will prevent premature ageing, fine lines, dark spots and wrinkles.

### **Treats Acne**

You can also make amla paste and apply it over the affected area of your face and leave it to dry for not more than 15 minutes. This will help in managing the pimples, fine lines and reduce scarring done by acne. It is a natural blood purifier that keeps pimples and the after-effects of acne away. Thus, amla juice gives you flawless skin. Good Skin Tone High amounts of collagen contents in your skin help in skin firmness and make your skin appear soft. Regular consumption of amla juice boosts vitamin C levels and helps increase the production of collagen level in your skin. This will make your skin look soft and youthful.

### **Treats Skin Pigmentation**

Applying or drinking Amla juice is said to cleanse your skin and reduced skin pigmentation. All you need to do is to apply some amla juice onto your face and once this dries, make sure that you use a small piece of cotton and wipe it away. Also, keep your eye closed when you are doing this. Doing this on a regular basis will help lighten your skin marks and reduce skin pigmentation.

### **Removes Dead Skin Cells**

Amla juice is said to rejuvenate your skin and add an extra layer of skin brightness that will make your skin outshine itself. How more confident can you get with your skin appearing all bright and vibrant. This adds to some extra boost of your self-confidence. Also, amla juice is an excellent cleanser whether it is applied directly or consumed. This will help remove dead cells and make promote anti-ageing.

### **Phytochemical screening:**

Alma phyto-chemicals, including ellagic acid, emblicanin a, emblicanin B, Gallic acid, phyllanthin, quercetin and phyllanthidin were found to have various biological activities such as antioxidants, antimicrobials, anti-inflammatory, antidiabetic, anti-radiation protection, chemopreventive and healing of wounds.

### **3. TURMERIC <sup>(10)</sup>**



**Fig.3 Turmeric**

### **Lightens Hyperpigmentation**

Turmeric inhibits the production of melanin, the pigment responsible for dark spots and other kinds of hyperpigmentation. With regular use, a turmeric-based product can help these blemishes fade away naturally to give skin a more even-toned appearance

### **Reduces Dark Circles**

Add up turmeric's anti-inflammatory, skin-lightening and microcirculation-boosting powers, and you've got a perfect recipe for fighting dark under-eye circles — all in one ingredient.

### **Could Help Heal Acne**

This works on several levels. First, turmeric prevents skin cells from clumping together and clogging the pores. Since it's antiseptic and antibacterial, it may effectively stop the growth of acne-causing bacteria. Additionally, its anti-inflammatory properties promote quicker healing by calming areas that are already inflamed.

### **Prevents Premature Aging**

Another one of the major benefits of turmeric for your skin is its ability to boost collagen production and speed up the body's ability to form new, healthy tissue! It also blocks elastase, an enzyme that attacks your skin's ability to produce elastin. If elastin production slows down, fine lines, wrinkles and sagging are more likely to appear.

### **Phytochemical screening**

Phytochemical components of turmeric include sugars, proteins, resins, traces of volatile oils and a compound called curcuminoids which includes curcumin (diferuloylmethane), demethoxycurcumin, and bisdemethoxycurcumin.

### **4. SENNA FLOWER <sup>(11)</sup>**



**Fig.4 Senna flower**

### **Good for Skin:**

Dried Avaram Senna flower is good for external application and helps treat many skin disorders. It works wonders when used as a face pack. It prevents black spots, treats uneven skin tone and improves skin complexion. Regular use of dried Avaram Senna flowers keeps the skin blemish free. Avaram flowers are effective in curing body odor.

### **Rich in Antioxidants**

The flowers of the Avaram Senna plant are rich in antioxidants, so tea made from these flowers offers a variety of benefits to the body than the usual caffeinated beverages such as tea and coffee.

There are also some health benefits by drinking avaram flower tea in the morning and evening. Free radicals are generally the name given to compounds in the body that can cause great harm to the body when the level of these compounds exceeds a certain level.

Also, extreme levels of free radicals can lead to heart disease, cancer, and diabetes. The unique properties of these senna flowers help the body to fight off free radicals.

### **PHYTOCHEMICAL SCREENING:**

Phytochemical analysis The extracts were analyzed for the presence of alkaloids, resins, tannins, saponins, flavonoids, glycosides, phenols, anthraquinones, cardiac glycosides, steroids, phlobatannins, reducing sugars

## 5. Cucumber Peels<sup>(8)</sup>



**Fig.5 Cucumber**

### **Beneficial for the skin:**

Cucumber peels helps in revitalizing the skin from within. Regular application of cucumberbased face packs or grated cucumber appears to be effective in reducing the signs of skin aging. It is also good for your dark circles, open pores, blemishes, etc.

### **Reverses Skin**

Tanning Cucumber has a mild bleaching property that can help you get rid of skin tan. Just grate the cucumber and apply the juice on your face and you're all set to face harsh UV rays!

### **Cools You Off**

Due to its cooling qualities, cucumber has a tendency to calm and refresh you in this pricking heat. Just put water and some peels in an infuser and you're all set to beat the heat.

### **Phytochemical screening**

The phytochemicals screening, in which the concentrated extracts of the pulverized Cucumis sativus peel aqueous extract was screened for the presence of alkaloids, tannins, saponins, glycosides, steroids, flavonoids and Anthraquinone

## 6. INDIAN NETTLE<sup>(11)</sup>



**Fig.6 Indian Nettle**

### **Anti-PimpleFacePack**

Take handful of kuppaimeni powder and mix it with rose water to make a smooth paste. Alternatively, you can add aloe vera gel or coconut water. Apply the pack evenly on face.

Wait till the pack gets completely dried and wash with cold water.

### **SkinRashes**

It helps in rashes anywhere on your skin. Make a thin paste of powder with filtered water and apply on the rashes. Wash off after an hour with plain water. Repeat this few times a day for good results.

### **Facial Hair Removal**

Kuppaimeni powder with turmeric powder and 1 teaspoon honey. Mix all the ingredients together. Apply on your face. Leave it for 30 minutes. Rinse with cold water. Regular application of this powder makes hair thinner and removes it without pain. Repeat the process thrice a week for few months to get hair-free skin.

## **MATERIAL AND METHODS**

### **Plant materials:**

The proposed study of Aloe vera, Amla. Cucumber peel Collected from the local area. Preparation of Extract: Air dried and coarsely powdered of Aloe vera, Amla, cucumber peel and turmeric. Were placed in decoction separately, using water. The extract was then concentrated to dryness under reduced pressure and controlled Temperature, and they were preserved in a Refrigerator

### **Cream Formulation:**

Beeswax is taken in first beaker. Then heat on a water bath for uniform mixing. After few minutes oil phase was formed. Aloe vera extract and Amla extract, cucumber peel extract, Turmeric extract and Indian nettle extract. Distilled water, white soft paraffin and glycerine, Rose oil was taken in second beaker. Mixing all the ingredients by heating on a water bath, the aqueous phase was formed. Oil phase was added into aqueous phase International Journal of Pharmaceutical Research and Application.

**Table no.1 Formula of cream Formulation**

<b>s.no</b>	<b>INGRIDENTS</b>	<b>QUANTITY (gm/ml)</b>
1	Aloes vera	1.5
2	Alma	1.5
3	Cucumber	0.8
4	Indian nettle	1.5
5	Senna flower	1
6	Liquid paraffin	5
7	Methyl paraffin	0.2
8	Bees wax	3.2
9	Water	q.s
10	Rose oil	q.s

## EVALUATION OF CREAM

Evaluation of herbal cream was following.

### Physical Evaluation

Formulated herbal creams was further Evaluated by using the following physical parameter physical parameter colour, odour, consistency, and state of the formulation.

a) **Colour:** The colour of the cream was observed by visual examination.

b) **Odour:** The odour of cream was found to be characteristics.

c) **State:** The state was cream was examined visually.

d) **Consistency:** The formulation was examined by rubbing cream on hand manually. The cream having smooth consistency

### e) PH:

ph of prepared herbal cream was measured by using digital ph meter. The solution of cream was prepared by using 100 ml of Distilled water and set aside 2h. Ph was determined in three times for solution and the average value was calculate.

### f) Spreadability:

Spread ability of formulated cream was measured by placing sample in between two slides then compressed to uniform thickness by placing a definite weight for defined time. The specified time required to separate the two slides was measured as Spreadability. Lesser the time taken for separation of two slides results showed better Spreadability. Spreadability was calculated by the following formula.

### g) Washability:

Formulation was applied on the skin and then ease extends of washing with water was check.

### H) Non- irritancy test:

Herbal cream formulation was evaluated for the non-irritancy test. Preparation shown no redness and irritancy.

### i) Viscosity



Viscosity of cream was done by using Brooke field viscometer at the temp of 25 Degree c. using spindle no, 63.at rpm

#### j) **Phase separation-**

The prepared cream was transferred in a suitable wide mouth container. Set aside for storage the oil phase and aqueous phase separation were visualizing after 24h

#### **RESULT:**

The study is aimed formulation of face cold cream was done by trituration method and further evaluated by various evaluation parameters such as physical properties, PH, Spreadability, Washability, non-irritancy test, viscosity and phase separation of cream.

The outcome of the formulation is good.

From this study, the polyherbal formulation are have minimum side effects compare to synthetic formulation in both cost and medicinal aspects.

Ayurvedic formulation are ancient medicine for both external and internal use.

As per our research, we strongly recommended the future always depends on natural herbs and their formulation.

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