

Formulation and Evaluation of Cosmetic herbal Face Pack from Nutmeg

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ABSTRACT

The objective of this work is to formulate and evaluate a cosmetic herbal face pack for glowing skin by using natural ingredients.

With the varying concentrations, four different formulations containing ingredients such as multani mitti, turmeric, aloe vera, sandalwood, orange peel, neem and nutmeg; were prepared named as F1 to F4.

All prepared formulations were evaluated by different parameters like organoleptic properties and physico-chemical parameters and stability along with irritancy test and microbial load.

Among all formulations, F2 was found to be good in physical parameters, free from skin irritation and maintained its consistency even after stability storage conditions and also having microbiological stability.

Keywords:- Curuma longa, Calcium Bentonite, Aloe barbadensis, Santalum alba, Citrus reticulata, Myristica fragrans .

INTRODUCTION

Cosmetics are commercially available products that are used to improve the appearance of the skin by action of cleansing, beautifying, promoting attractiveness.

Face skin is the major part of the body, which indicates the health of an individual. It consists of materials such as amino acids, lipids and carbohydrates etc.

In ayurveda, the herbal paste is called as "mukhalepa" used for a facial therapy. This herbal paste is used to treat acne, pimple, scars, marks and pigments. Face pack is the smooth powder which is used for facial application.

It also helps some one to boost their confidence. Ayurveda is the most useful and successful means for achieving its purpose.

These packs are available in various types and forms and broadly classified into the following categories:

1. Plastic masks: Wax based, latex based, or vinyl based
2. Hydrocolloid masks: Gel masks (ready to use)
3. Argillaceous masks: Clay based or earth based (ready to use or dry powder)

Multani Mitti {calcium bentonite}



Multani mitti, meaning 'mud from Multan', is a popular fuller's earth. Packed with minerals, fuller's earth primarily contains varying composition of hydroxyl aluminium silicates or clay minerals.

The name 'fuller's earth' is applicable to any clay material with the ability to decolorize oil or other liquids without chemical treatment.

In cosmetology and dermatology, fuller's earth is effective as a cleanser, removing oil, dirt, and impurities from

heskinandalsohelpingtreatacneandothersskinproble
ms.

BenefitsOfMultaniMitti



Here'sshowthiswonderclaycanbenefityour**skin:**

Multanimitticleanses

andpurifiesskinbypullingoutoil,dirt,andimpurities.

-Theoil-absorbing **propertiesofmultanimitti** makeiteffectiveagainstacneandhelpspeeduptheheali
ngprocess.

-
Usedasascrub,multanimitticansloughawaydeadskin
cellsand **removeblackheads**
andwhiteheads,givingskinanaturaland **healthyglow.**

Turmeric{curumalonga}



Turmeric isa floweringplant, Curcumalonga ofthe
ginger family, Zingiberaceae,the rhizomes
ofwhichareusedincooking.

Plantsaregatheredeachyearfortheir
rhizomes,someforpropagationinthefollowingseason
andsomeforconsumption
Turmericpowderhasawarm,bitter, blackpepper-
likeflavorandearthy, mustard-like aroma.

ABOUT TURMERIC POWDER



Turmeric, also identified as *Curcuma Longa*, is an Ayurvedic skin care remedy used for over 4000 years now.

Turmeric powder, coined as the most potent spice of all, is made from the roots of *Curcuma zedoaria* - native to Southeast Asia. Its list of healing properties includes antiviral, anti-fungal, antioxidant, antibacterial, anti-carcinogenic, anti-inflammatory, anti-mutagenic, and much more.

Ayurveda uses Turmeric to balance Vata, Pitta, and Kapha (though it can aggravate Vata and Pitta when taken in excess).

Benefits of Turmeric for Skin

1. Turmeric For Skin Whitening

Turmeric is considered one of the most crucial skin whitening ingredients in Ayurveda. It is known to reduce dark patches and even out the skin tone. This is why Hindu weddings follow the tradition of applying Haldi over the bride's skin.

2. Turmeric To Treat Acne

Acne is one of the most common issues every individual faces at least once in their lifetime.

ALOE VERA {*Aloe barbadensis*}



Aloe vera is a succulent plant species of the genus *Aloe*. Having some 500 species, *Aloe* is widely distributed, and is considered an invasive species in many world regions.

It is used in many consumer products, including beverages, skin lotion, cosmetics, ointments or in the form of gel or minor burns and sunburns.

BENEFITS OF ALOE VERA

1. Burns

For minor burns, apply aloe vera gel to the affected area up to three times daily. You may also need to protect the area with gauze.

2. Sunburn

While aloe vera helps soothe sunburn, research from a Trusted Source shows that it's not an effective way to prevent sunburn, so make sure you wear sunscreen.

3. Dry Skin

Aloe vera gel absorbs easily, making it ideal for oily skin. However, it can help treat dry skin, too. Consider swapping out your regular moisturizer for aloe after bathing to help seal moisture into your skin.

Sandalwood {*Santalum alba*}



Sandalwood is a much-loved fragrance across the world, often evoking soft breezes, restful spaces, and a sense of peace and calm. It's commonly used in aromatherapy and meditation practice around the world. Sandalwood's soft, woody aroma works well in soaps and body scrub. Ancient Ayurvedic text and Traditional Chinese Medicine praises sandalwood for its many medicinal uses, and there's plenty of scientific evidence to support this.

Types of sandalwood

There are several kinds of sandalwood trees used for different purposes. The main genus is *Santalum* and belong to the same family as mistletoe. There are two main kinds of "true" sandalwood, as well as other important varieties, including:
White sandalwood
Indian sandalwood
Red sandalwood

Benefits OF SANDALWOOD OIL

Sandalwood oil may help with....

Scarring

Sandalwood oil helps nourish the skin, improve the elasticity of skin cells, even out skin tone. Because of these qualities, it can be beneficial in reducing appearance of scars.

Wrinkles

Sandalwood oil contains antioxidants that help maintain the buoyancy and structure of the skin cells.

"Due to the rich antioxidant component, sandalwood can help prevent wrinkles by fighting free radical formation," Bhan notes.

Inflammation, eczema, psoriasis, and wounds

Due to its anti-

inflammatory properties, sandalwood oil has shown promise in clinical trials.

Trusted Source for the treatment of acne, psoriasis, eczema, common warts, and molluscum contagiosum

ORANGE PEEL {citrus reticulata}



Orange peel means the rind of orange fruit. The orange fruit has a slightly bumpy outer skin with some white pith under it.

Orange peel has a high content of flavonoids, phytochemicals, antioxidants along with vitamin B, A, C, calcium, copper and magnesium.

Orange peel powder recipe:

Take a few organic oranges and wash it.

Cut thin slices of the peel and avoid the inner white part.

Keep it covered with a thin cloth for 3 to 5 hours until it has dried up.

Blend it in a mixer until you get a fine powder.

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Storethispowderinanairtightjar.

BENEFITS OF ORANGE PEEL FOR SKIN

1. Orange peel powder contains Vitamin C which helps to form collagen and elastin which is the secret to beautiful skin.

2. It makes your skin look youthful and bright.

3. It improves oily skin and makes the skin soft, smooth and firm.

4. It helps unclog pores and reduces blackheads.

NUTMEG {myristica fragrans }



Nutmeg is the seed or ground spice of several species of the genus Myristica.

It is also a commercial source of an essential oil and nutmeg butter.

These seeds are dried gradually in the sun over a period of six to eight weeks.

Two other species of genus Myristica with different flavors, M. malabarica and M. argentea, are sometimes used to adulterate nutmeg as a spice.

BENEFITS OF NUTMEG FOR SKIN

1. HELPS WITH HYPERPIGMENTATION



Nutmeg combat hyperpigmentation and discoloration caused on the skin due to hormonal changes in the body, aging, medication, exposure to the ultraviolet rays of the sun, etc

2. HELPS WITH SKIN TONING



Nutmeg helps in preventing discoloration of skin. It clears any form of texture-raised bumps, blemishes, dark spots, acne scars, dark circles, etc.

3. HELPS WITH OILY SKIN

Nutmeg gets deep into the pores of the skin and extracts the excess oil that is causing problem on the face.

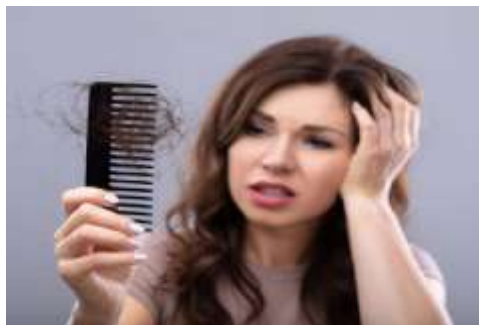
4 HELP WITH AGING



Nutmeg helps in improving the elasticity of skin. It delays the appearance of wrinkles, fine lines, dark circles, crow's feet and other **signs of aging**. Apply it all over the face and leave it on for 30 minutes. Do this 3-4 times a week for effective results.

BENEFITS OF NUTMEG FOR HAIR

1. HELPS WITH HAIR FALL



Nutmeg strengthens the hair follicles by providing antioxidants which benefit and stimulate hair growth. Wash the hair mask after an hour using a mild shampoo. Repeat this recipe 3 times a week for reduced hair fall and strong hair.

2. HELPS WITH DULLNESS

Nutmeg provides shine to the hair. It adds lustre and restores the moisture content to the hair making it look smooth and shiny. You can apply nutmeg to the hair by adding it to hair oils like coconut oil, olive oil or **argan oil**.

3. HELPS WITH OILY HAIR



Nutmeg exfoliates the dead skin cells and extracts the impurities accumulated on the scalp. It extracts the excess oil which clogs the pores of the scalp. Nutmeg balances the level of natural oils on the scalp.

HEALTH BENEFITS OF NUTMEG

1. HELPS WITH CANCER PREVENTION

Nutmeg has antioxidants which prevent the growth of cancerous cells in the body. Studies have shown that using nutmeg delays the formation of blood vessels responsible for giving rise to tumor.

2. HELPS WITH DIABETES TREATMENT

Nutmeg has triterpenes compounds which are anti-diabetic in nature. It reduces high blood sugar levels which are responsible for giving rise to other severe diseases.

3. HELPS WITH JOINT PAIN



Nutmeg also helps in treating pain associated with **arthritis**.

Method of Preparation Face pack

Four different formulations were prepared with varying concentrations of all ingredients named as F1 to F4. Concentration of each ingredient was mentioned in Table 1.

The accurate quantity of ingredients were weighed and ground into fine powder by using sieve #120.

The healing ingredients were mixed geometrically by serial dilution method for uniform mixing.

Then the prepared face pack was packed into a self-sealable polyethylene bag, labeled and used for further studies.

Procedure of Face Pack Application

Take prepared face pack powder in a bowl as per the requirement and add rose water to mix. Mix well and apply over the facial skin. Cover the acne and blemish spots too. Keep it for completed drying for 20 to 25 min and then wash with cold water.

1. Methods of Evaluation

Following evaluation parameters were performed to ensure superiority of prepared face pack;

2. Organoleptic Evaluation

The organoleptic parameters include its nature, color, odor, feel and consistency which were evaluated manually for its physical properties.

3. Physical Evaluation

The particle size was tested by microscopy method. The flow property of the dried powder of combined form was evaluated by performing Angle of Repose by funnel method.

hod, bulk density and tapped density by Tapping Method

4. Physicochemical Evaluation

Ash content was performed using incinerator, pH was found by using pH meter and loss on drying was also performed.

5. Irritancy test

Markan area (1 sq. cm) on the left hand and dorsal surface. Definite quantities of prepared face packs were applied to the specified area and time was noted.

FORMULATION OF FACEPACK

SR.NO	Name of ingredient	Scientific Name	Quantity of sample for 100g			
			F1	F2	F3	F4
1	Multanimitti	Calcium Bentonite	25	30	35	15
2	Turmeric	Curuma Longa	20	5	10	20
3	Aloevera	Aloe barbadensis	10	15	10	20
4	Sandal Wood	Sataluma lba	25	25	20	25
5	Orange peel	Citrus reticulata	10	12	6	5
6	Neem	Azadirachta indica	3	8	15	10
7	Nutmeg	Myristica fragrans	7	5	4	5

OBSERVATIONS

Table: Organoleptic Properties

SR.NO	Parameters	Observation			
		F1	F2	F3	F4
1	Appearance	Powder (Free Flowing)	Powder (Free Flowing)	Powder (Free Flowing)	Powder (Free Flowing)
2	Color	Slight Yellow	Slight Yellow	Greenish Yellow	Slight Yellow
3	Odor	Slight	Slight	Slight	Slight
4	Texture	Fine	Fine	Fine	Fine
5	Smoothness	Smooth	Smooth	Smooth	Smooth

Table: Irritancy Test

SR.NO	Evaluation	Formulation				Observation
		F1	F2	F3	F4	
1	Irritant	+	NIL	+	+	+Noirritation
2	Erythema	NIL	NIL	NIL	NIL	+Noirritation
3	Edema	NIL	NIL	NIL	NIL	+Noirritation

RESULT

1. Physical parameters

The flow property parameters showed free flowing properties. The color of formulations were different due to variation in composition of contents. Formulation F1, F2 and F4 were slightly yellow in color and formulation F3 showed as greenish yellow.

2. Irritancy test

The formulations F1, F3 and F4 showed mild irritation because of presence of turmeric powder.

The formulations which was prepared by lowering the concentration of turmeric i.e. formulations F2 showed no redness, edema, inflammation and irritation during irritancy studies.

This formulation is safe to use for skin.

3. Stability studies

The stability studies showed a light change in pH for formulation which was stored at 40°C and no changes were observed at room temperature and at 35°C.

The odour of formulation was slightly changed after one month of stability studies at 40°C and there was no change in color and odor at other mentioned conditions of stability.

CONCLUSION

In the present scenario, people need cure for various skin problems without side effects.

Herbal ingredients opened the way to formulate cosmetics without any harmful effect.

Herbal face packs are considered as sustaining and productive way to advance the appearance of skin.

Thus in the present work, it is a very good attempt to formulate the herbal face pack containing naturally available ingredients like multani mitti, turmeric, aloe vera, sandalwood, orange peel, neem and nutmeg.

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