

## DEVELOPMENT OF HERBAL FACIAL MASK CREAM FROM SUAN SUNANDHA PALACE FACIAL BEAUTY

THANYA PROMSORN

College of Allied Health Sciences, Suan Sunandha Rajabhat University, Thailand  
E-mail: <sup>1</sup>thanya.pr@ssru.ac.th, thanya991@gmail.com

**Abstract:** According to historical data from the reign of King Rama V, the royal concubine have been flawless skin, Thai medicinal herbs have been used to clean the skin in the past. Herbal facial mask named “Suan Sunandha Palace Facial Beauty (Ngam Piew Na Wang Suan Sunandha)” was help to soft, and moisture face, bright facial skin, reduce black spots, and fit closely skin pores. This original herbal facial mask formula was consists of 8 species of medicinal plants, and 1 mineral material were as follows: turmeric, wild turmeric, lakoocha, centella, tanaka, coffee, coconut, aloe vera, and white clay filler (whiting) calcined. The objectives of this research were to investigate the beauty benefits, and the active ingredients of the original herbal facial mask, and also development of the herbal facial mask cream from the original. The results found that all of the original herbal facial mask materials were useful aspects of beauty, such as skin rashes, and papules treatment, reduce inflammatory, and infection, increasing collagen production, and epidermal cells, stimulate the regeneration of damaged tissues, anti-oxidant property, inhibit melanogenesis, reduce skin wrinkle, no skin dryness, reveals beautiful, and bright skin, and help to flawless skin. From the development of herbal facial mask cream from Suan Sunandha Palace Facial Beauty, it was found that the physical properties assessment of the herbal facial mask cream after preparation at room temperature, and the stability assessment of the herbal facial mask cream after Freeze-Thaw for 5 cycles were the same result as follows: the creamy texture was slightly rough, very viscous, light brown color, coffee smell, and there was no layer separation of cream. It can be seen that this herbal facial mask cream was well stability.

**Keywords:** Development, Facial Mask, Herb, Suan Sunandha, Chemistry

### I. INTRODUCTION

The beauty of the women have always been associated with the herbs. The ancient people knew and emphasized on herbs. In the past, no cream, oil for the face or skin care, and no cosmetics for oily skin or dry skin. The women knew beauty therapy with herbs by applied to different parts of the body, such as using turmeric for skin care, water from washing rice for shampoo, table salt or rock salt for facial scrub, white clay filler for facial mask [1]. Nowadays, the invention of various herbs for develop products in new forms to meet the needs of consumers. Particularly with regard to beauty products which was high economic value. Worldwide has proven that even the expensive cosmetics, it also must include several useful herbal extracts [2]. The chief reason for dull, tired and darker looking skin is the lack of oxygen and blood in the skin that makes it appear weary and lifeless. Some other reasons for skin darkening were: 1) excessive exposure to pollution, dust and impurities, 2) exposure to UV rays of the sun that cause suntan, 3) improper skin cleansing, 4) diet deficient in essential nutrients, 5) chronic Stress. Nourishing natural remedies were the best solution to the question of how to protect your face from the sun. Mixing honey with pure milk was probably the best face pack for glowing skin. Honey, being an amazing natural antibacterial agent acts as a perfect natural remedy for acne and pimples. Its capacity to retain moisture in the skin cells helps in moisturizing excessive dry skin and adding a natural glow to it. Raw milk was an excellent skin cleanser that helps in improving complexion. It was said that

Queen Cleopatra of Egypt used to bathe in milk to enhance her youth and beauty. Potato juice and pulp are an age-old home remedy for skin lightening, removing blemishes and improving skin health and was a nourishing homemade facial for oily skin. Being a rich source of vitamin C, it nourishes the skin from within. It works as an effective natural remedy for removing hyperpigmentation and dark spots. It helps in improving skin tone and lightening dark circles around eyes. The benefits of lemon as a natural bleaching agent are well known. It helps in cleansing the skin, removing dead cells and impurities and getting rid of suntan effectively. The combination of potato and lemon makes it the best face pack for fairness and tan removal. The benefits of oatmeal for health are well known, but it is also extremely beneficial for exfoliating the skin as well to remove dead cells and impurities and improving the fairness of skin. Natural, unflavored yogurt or sour curd contains high levels of lactic acid and alpha hydroxy acid that helps in moisturizing and exfoliating the skin and make it smooth and glowing. It helps in preventing the breakout of acne and pimples, and its mild bleaching properties helps in correcting skin discoloration and age spots. Being a rich source of vitamins C and B6, banana helps in improving the production of collagen in the skin that helps in maintaining skin elasticity and suppleness. Vitamin C also helps in improving skin complexion. The almond skin benefits were well known and almond oil was one of the most effective natural oils that helps in improving overall skin health. Almonds were a rich source of vitamins E, A and D that works as effective natural antioxidants for improving skin

health. It's amazing anti-inflammatory properties help in soothing skin infections and allergies. It was the best deep nourishing moisturizer for dry skin that also helps in lightening dark circles, protects the skin against the harmful UV rays of the sun and improves blood circulation throughout the skin. Vitamin C was essential for neutralizing the skin damage caused by the harmful free radicals and oxidative stress. It functions as an effective natural remedy to remove blackheads on nose. Its natural bleaching properties help in removing dark patches and suntan and improve skin tone effectively. Sandalwood was one of the oldest remedies for skin problems that has been used since ancient times, and it holds an important place in Ayurvedic treatment. This was the most effective face pack for skin whitening that also exfoliates and tones the skin at the same time. Turmeric was a widely used kitchen spice in India and it holds a very important place in auspicious Hindu ceremonies such as marriages where turmeric or "Haldi" paste is applied on the bride and bridegroom's face and body. It works as an amazing natural remedy for nourishing dry skin and removing impurities and dead cells from the skin. Being a natural antiseptic, it was also used for treating skin conditions such as eczema and psoriasis and was one of the best homemade remedies for pimples and acne. Gram flour or "besan" was a time tested remedy for increasing skin fairness and correcting dark patches and suntan. It also helps in keeping the skin radiant and glowing. Undoubtedly this was the best skin whitening pack straight from grandmother's remedies. Tomatoes were one of the most common vegetables that were used widely in kitchens around the world. It can be used effectively in a fairness face pack to enhance the skin tone naturally. The antioxidant lycopene present in tomatoes acts as a natural sunscreen and soothes the skin against sunburn. It helps in adding a natural glow to dull, lifeless skin. Its natural astringent properties help in reducing the size of open pores and control the excessive oiliness of the skin. Cucumber juice and pulp act as an effective natural remedy for improving the complexion by removing pigmentation, blemishes and scars. It functions like a natural remedy for reducing cellulite and also works in lightening dark circles around eyes. Walnuts were loaded with antioxidants, vitamin E and B vitamins that help in improving overall skin health by neutralizing skin damage caused by free radicals and oxidative stress and slowing the process of aging. It moisturizes and nourishes the skin from within and helps in revitalizing damaged cells and improves regeneration of new cells, which in turn improves skin complexion. Milk cream or "Malai" is perhaps the oldest known home remedy for improving skin health. It was the best natural moisturizer for excessive dry and flaky skin. It also acts as a soothing skin toner that helps in improving skin tone and adding an instant healthy glow to the skin. It was also

one of the best home remedies for dark circles and bags under eyes. The juice of strawberries contains ellagic acid which is extremely effective in treating acne/pimple scars and blemishes and reducing skin damage caused by harmful UV rays of the sun. Being a rich source of vitamin C and folic acid, it helps in regeneration of new skin cells and improves the production of collagen. Enjoy skin whitening at home with this yummy natural fruit pack. Ripe papaya was a rich source of enzyme papain that helps in skin renewal. It was also loaded with vitamins A, C, and E along with antioxidants that help in moisturizing skin and protecting it against infections. It also acts as an effective natural sunscreen to protect against suntan. It helps in reducing the signs of skin aging such as freckles and age spots. It was one of the most effective home skin whitening solutions that removes age spots, pigmentation and blemishes effectively [3]. According to historical data from the reign of King Rama V of Thailand, the royal concubine have been flawless skin, herbs have been used to clean the skin. Herbal facial mask named "Suan Sunandha Palace Facial Beauty (Ngam Piew Na Wang Suan Sunandha)" was help to soft, and moisture face, bright facial skin, reduce black spots, and fit closely skin pores.

This original formula was consists of nine materials as follows: turmeric powder, wild turmeric powder, lakoocha (monkey jack) powder, centella powder, tanaka powder, fresh coffee beans powder, coconut oil, white clay filler (whiting) calcined, and gel of aloe vera leaves. Preparation of the original herbal facial mask was as follows: One fourth of tea spoon of turmeric powder, wild turmeric powder, lakoocha powder, and fresh coffee beans powder, One of tea spoon of centella powder, tanaka powder, and whiting calcined powder were mixed together. Gel of aloe vera leaves were blended into liquid, 3 of table spoons of liquid were put into the above mixtures, and blended together. After that, coconut oil was put into the mixtures, and well blended together [4].

Herbal facial mask has been more popular today, because of readily available and affordable, there were a few or no side effects to the skin. This article investigate the beauty benefits, the active ingredients of the original formula, and the development of herbal facial mask cream from Suan Sunandha Palace Facial Beauty.

## II. DETAILS EXPERIMENTAL

### 2.1. Materials and Procedures

A review of the literature on Suan Sunandha Palace Facial Beauty, and related documents. Investigate on the beauty benefits, the active ingredients of this original formula, and development of herbal facial mask cream from Suan Sunandha Palace Facial Beauty.

## 2.2. Preparation of the Herbal Facial Mask Cream

The original herbal facial mask was consist of nine materials as follows: turmeric powder, wild turmeric powder, lakoocha powder, centella powder, tanaka powder, fresh coffee beans powder, coconut oil, whitening calcined, and gel of aloe vera leaves. In this study, another four substances were added to the formula as follows: purified water, glycerin, preservatives, and xanthan gum. Besides, the four medicinal plants were modified from original formula as follows: turmeric rhizome, wild turmeric rhizome, lakoocha heartwood, and centella leaves were extracted by 80 % ethanol, filtered, and evaporated, respectively. The other one plant was also modified as follows: the gel of aloe vera leaves were crushed as the liquid, filtered, and freeze-dried, respectively. It was obtained crude extracted powder and the residue of the five plants.

Tanaka powder, whitening calcined powder, fresh coffee beans powder, and the residue of lakoocha were incubated at 90 OC for 2 hours. Tanaka powder, and whitening calcined powder were sieved at 100 mesh. Fresh coffee beans powder, and the residue of lakoocha were sieved at 80 mesh.

Ten gram of xanthan gum were completely dissolved in 4 L of purified water by homogenizer. Six hundred gram of tanaka powder, 150 g of whitening calcined powder, 200 g of fresh coffee beans powder, and 100 g of the residue of lakoocha powder were added, and well homogenized in the solution of xanthan gum. Two hundred gram of crude extracted powder of aloe vera leaves were completely dissolved in 500 mL of purified water, and added into the homogenizer. Five hundred gram of lakoocha, and centella leaves crude extracted powder, 40 g of wild turmeric crude extracted powder, and 20 g of turmeric crude extracted powder, 230 g of preservatives, 300 g of glycerin, 100 g of coconut oil, and 2460 mL of purified water were added into the homogenizer, and well homogenized until become the smooth cream. Herbal facial mask cream was filled in cosmetic tube by automatic liquid & semi-solid filling machine.

## 2.3. Evaluation of the Herbal Facial Mask Cream

The herbal facial mask cream after preparation at room temperature was physical properties assessment. Stability assessment of the herbal facial mask cream by Freeze-Thaw technique. Herbal face mask cream was placed at 4 OC for 24 hours, and 45 OC for 24 hours, for 5 cycles. The creamy texture, viscosity, color, smell, and layer separation of cream were observed [5].

## III. RESULTS AND DISCUSSION

### 3.1. The Beauty Benefits and the Active Ingredients of the Original Herbal Facial Mask

The original herbal facial mask was consists of nine materials as follows: turmeric powder, wild turmeric powder, lakoocha powder, centella powder, tanaka

powder, fresh coffee beans powder, coconut oil, whitening calcined, and gel of aloe vera leaves. Beauty benefits of turmeric rhizome were used for skin rashes treatment, reduce inflammatory, and help to flawless skin. The active ingredients in turmeric rhizome were consist of 2 groups as follows: volatile oil, and curcuminoids. The major components of volatile oil were turmerone, and zingiberene. The curcuminoids (yellow color) were consist of curcumin, demethoxycurcumin, and bisdemethoxycurcumin [6,7]. Beauty benefits of wild turmeric rhizome was able to inhibit melanogenesis. The active ingredients in wild turmeric rhizome were eugenol, and curcumenoids [8]. Beauty benefits of lakoocha heartwood extract was able to inhibit melanogenesis, and help to white skin. The active ingredient in lakoocha heartwood was oxyresveratrol [9]. Beauty benefits of centella leaves ethanol extract was able to increase collagen production, and epidermal cells. The active ingredients in centella leaves were asiaticoside, linoleic acid, and thiobarbituric acid [10]. Beauty benefits of aloe vera leaves were able to skin healing, reduce infection, stimulate the regeneration of damaged tissues, and help to flawless skin. The active ingredients in aloe vera leaves were aloe cutin, aloctin A, barbaloin, and anthraquinone [11]. Beauty benefits of tanaka was perfumery for skin care for Thai women in the past, it was use for blemish, and acne treatment, skin whitening, besides it was able to UV protection [12]. The active ingredients in tanaka were marmesin, suberosin, arbutin, and coumarins [13]. Beauty benefits of coconut oil was help to moisture face, bright skin face, reduce wrinkle, no skin face dryness, and there was anti-oxidant property. The active ingredients in coconut oil were lauric acid, capric acid, and vitamin E [14]. Beauty benefits of fresh coffee beans powder was used for coffee scrub detoxification, reveals beautiful and bright skin [15]. The active ingredients in fresh coffee beans were caffeine, trigonelline, tannin, glucose, dextrin, lipid, and protein [16]. Beauty benefits of whitening calcined was used for treatment of papule, rash, and help to beautiful skin [17]. The major component of whitening calcined was calcium oxide [18]. Many researches revealed that the calcium hydroxy apatite were used in various branches of sciences. Calcium hydroxy apatite crystal structure was hexagonal, it was suitable for use as a sorbent because there was a large surface area, and was a good ability to exchange ions [19]. It may be added to the Herbal Facial Mask Cream for used as a sorbent on skin.

### 3.2. Evaluation of the Herbal Facial Mask Cream

The physical properties assessment of the herbal facial mask cream after preparation at room temperature, it was found that creamy texture was slightly rough, very viscous, light brown color, coffee smell, and there was no layer separation of cream. Stability assessment of the herbal facial mask cream

after Freeze-Thaw, it was found that creamy texture was slightly rough, very viscous, light brown color, smell the coffee, and there was no layer separation of cream. It can be seen that this herbal facial mask cream was well stability.

## CONCLUSIONS

The objectives of this research were to investigate the beauty benefits, and the active ingredients of the original herbal facial mask (Suan Sunandha Palace Facial Beauty:

Ngam Piew Na Wang Suan Sunandha), and also development of herbal facial mask cream from the original herbal facial mask. The results of the study were summarized as follows:

1. The original herbal facial mask formula was consists of 8 species of medicinal plants, and 1 mineral material as follows; turmeric, wild turmeric, lakoocha, centella, tanaka, coffee, coconut, aloe vera, and whitening calcined. There were 7 materials were used as the powder as follows; turmeric powder, wild turmeric powder, lakoocha powder, centella powder, tanaka powder, fresh coffee beans powder, and whitening calcined powder.

The coconut was used as coconut oil, and the aloe vera was used as gel from its leaves. All of these materials were useful aspects of beauty, such as skin rashes, and papules treatment, reduce inflammatory, and infection, increasing collagen production, and epidermal cells, stimulate regeneration of damaged tissues, anti-oxidants properties, inhibit melanogenesis, reduce skin wrinkle, no skin dryness, reveals beautiful and bright skin, and help to flawless skin.

2. The physical properties assessment of the herbal face mask cream after preparation at room temperature, and the stability assessment of the herbal face mask cream after Freeze-Thaw were the same result, the creamy texture was slightly rough, very viscous, light brown color, coffee smell, and there was no layer separation of cream. It can be seen that this herbal facial mask cream was well stability.

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