



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Formulation And Evaluation Of Polyherbal Facepack

1GAURAVKISANRAO AWATADE, 2Zine S.R, 3Dr prachi Udapurkar
1Bachelor of Pharmacy, 2Master of Pharmacy, 3PhD Pharmacy
1Kishori Collage Of Pharmacy

INTRODUCTION

Since from ancient period of time, people are aware of the use of plants for the healthy, glowing and beautiful skin. Cosmetics are products used to clean, beautify and promote attractive appearance. Cosmetics are commercially available products that are used to improve the appearance of the skin by action of cleansing, beautifying, promoting attractiveness. From the ancient time, different herbs are used for cleaning, beautifying and to manage them. Face skin is the major part of the body, which indicates the health of an individual.

Skin of the face is the major part of the body, which is a mirror, reflecting the health of an individual. A balanced nutrition containing amino acids, lipids and carbohydrates are required for the skin to keep it clear, glossy and healthy. In ancient times, women were very conscious about their beauty and took special care of their specific skin types. It consists of materials such as amino acids, lipids and carbohydrates etc. So that a balanced nutrition is required for the skin to keep it clear glossy and healthy. In Ayurveda, the herbal paste is called as "mukha lepa" used for a facial therapy.

This herbal paste smeared on face to treat acne, pimple, scars, marks and pigments. Face pack is the fine powder which is used for application on face. These preparations are applied on the face in the form of liquid or paste and allowed to dry for giving tightening, and cleansing effect to the skin. They are usually left on the skin for ten to twenty five minutes to allow all the water to evaporate, the resulting film thus contracts and hardens and can easily be removed.

The warmth and tightening effect produced by application of face pack produces the stimulating sensation of a rejuvenated face, while the colloidal and adsorption clays used in these preparations remove the dirt and grease from the skin of the face. When the applied face pack is eventually removed skin debris and deposited dirt gets removed with it.

Face packs are basically additives delivering some additional benefits. Different types of herbal face packs are used for different types of skin.

Herbal face packs help to reduce wrinkles, pimples, acne and dark circles. Also increase the fairness and smoothness of skin. It also helps someone to boost their confidence. Ayurveda is the most useful and successful means for achieving this purpose.

It consists of materials such as amino acids, lipids and carbohydrates etc. So that a balanced nutrition is required for the skin to keep it clear glossy and healthy.³ In Ayurveda, the herbal paste is called as “mukha lepa” used for as a facial therapy. This herbal paste smeared on face to treat acne, pimple, scars, marks and pigments. Face pack is the Fine powder which is used for application on Face. These preparations are applied on the face in the form of liquid or pastes and allowed to dry for giving tightening, and cleansing effect to the skin. They are usually left on the skin for ten to twenty five minutes to allow all the water to evaporate, the resulting film thus contracts and hardens and can easily be removed. The warmth and tightening effect produced by application of face pack produces the stimulating sensation of a rejuvenated face, while the colloidal and adsorption clays used in these preparations remove the dirt and grease from the skin of the face. When the applied face pack is eventually removed skin debris and deposited dirt gets removed with it.

Face packs are basically additives delivering some additional benefits. Different types of herbal face packs are used for different types of skin. Herbal face packs help to reduce wrinkles, pimples, acne and dark circles. Also increase the fairness and smoothness of skin. It also helps someone to boost their confidence. Ayurveda is the most useful and successful means for achieving this purpose.

LITERATURE SURVEY

- 1) **Triveni S Inganakal** reported “Launaea pinnatifida:: A Review on its Pharmacological and Traditional Uses 2021 “ in which he state that The plant is a valuable herb that is well-known for its Ayurvedic and traditional uses, which include health advantages for humans. many more ailments have all been treated with the herb. The presence of alkaloids, saponin, flavonoids, terpenoids, and tannin was discovered in apreliminary phytochemical research. Triterpenoid saponins, as well as glutenol and hopenol-B, were extracted from a methanolic extract of Launaea pinnatifida and have been shown to have antifungal, antibacterial, antioxidant, hepatoprotective, and antidiabetic properties. Serum markers in alloxan-induced s showed they give a face gloving property substantial variable differences in serum markers when the isolated compound and ethanolic extract of L. Piida leaves were compared in an experimental model.It is essentsil to our face Face pack is an most useful product for beautifying property
- 2) **Makwana Ht , Pandya DJ** reported Comprehensive Review 2019” in which they stated thatMany primary and secondary metabolites, including as carbohydrates, alkaloids, amino acids, glycosides, steroids, and tannin, have been discovered in root powder, accordingto pharmacognostical research. Only a few phytochemical components, such as from the leaves and from the roots, have been identified from L. Apart from that, triterpenoid saponins were extracted from Methanolic extract of L. pida seed, as well as recognized chemicals glutenol andhopenol B. The ethanol fraction of L. pda leaves has been shown to have significant hetive, antibacterial, an, and antioxidant properties

Mahendran Sekar, et.al. (2016)

Rambutan be found widely in Malaysia, belongs to the family Sapindaceae. The leaves of rambutan are traditionally used for face care and many people experience a noticeable change in their face quality in just a few weeks

Face pack is an important part of the cosmetics

He was reserched that the tey are useful in the cosmetics the cosmetics are the that gives temporary action obut thry atre that of theuses for face care productsv

. K. Kishore, et.al. (2016)

Face acne is among the unbiased and most prevailing sinfection that requires cosmetic managements. The present study was undertaken to evaluate the antibacterial and antifungal potential of the commercially available herbal and non-herbal sface care

. Anusha Potluri, et.al, (2013)

They include chemical based face pack and herbal based face pack. The face pack only slow down the flaking and have their own disadvantages like loss of hair, increased scaling. itching, irritation, nausea, headache, vomiting, photosensitivity. Herbal extracts formulations are viable alternative to synthetic drugs.Now-a-days, many herbal shampoos are available in the market which contains herbal ingredients such as plant extracts and essential oils.

products. Agar well diffusion method and disc diffusion method were used for the comparative assessment of antimicrobial activity.

Anuradha Keshwar et al. formulated a poly herbal face pack and evaluated. In day to day practice the medicinal plants or herbs are widely used by the traditional practitioners for curing various diseases. There is an increase in demand for plant based medicines, cosmetics, health products, food supplements and various pharmaceutical products. The aim of present study is to formulate and evaluate cold cream using *Bombax ceiba* fruit pulp. Traditionally, *Bombax ceiba* is a well-known plant used in treatment of many diseases, with its therapeutic activity partly due to the presence of flavonoids, phenolics, sesquiterpenoids, shamicin, bombamalosides, bombamalones, bombasin, bombasin 4-o-glucoside, and bombalin

MATERIALS AND METHODS

All the natural materials used in the present study i.e, Gram Flour, Rice flour, charcoal powder, Arjuna Powder, Orange peel Powder, Nutmeg, saffron, Turmeric, Aloe Vera were purchased from local market. Beed in a form of dried powder and were authenticated.

The details of the plant material used for the formulation of face pack are mentioned below.

Gram flour

It has certain properties that treat acne and has been used for this purpose in India for centuries. For one, the zinc in besan has been shown to fight the infections that cause your face to erupt with acne. Secondly, it also helps control excess sebum production and soothes inflamed skin.

Rice Flour

Rice flour can be applied to cure some forms of skin ailments. In Indian subcontinent, rice water is duly prescribed by Ayurvedic practitioners as in undigested form. It aids the growth of useful bacteria for normal bowel movements and an effective ointment to cool off inflamed skin surfaces.

Charcoal powder

Activated charcoal, when used in a face mask, helps bind the oil and dirt in your pores and pulls them out. Make pores appear smaller it takes care of oily skin. Activated charcoal when used in a mask or a face wash helps pull out the excess oil

from your skin, leaving it clean and smooth.

Arjuna Powder

Arjuna bark extract (Arjuna chaal) prevents skin aging. The main and most important role of arjuna bark is it reduces acne marks (Ghadde) natural way. Aging is associated with an increase in the number of free radicals. Arjuna has good antioxidant property that prevents skin damage caused by these free radicals. It strengthens the skin barrier and induces sebum production to reduce the signs of dry skin and protect the skin from external challenges.

Orange peel powder

Makes for a natural skin whitening agent that helps to do away with marks, blemishes, and spots pigmentation. Orange peels are high on vitamin C and comes with exfoliating properties that in addition, helps add a degree of fairness to the skin in the most natural manner.

Nutmeg

Nutmeg is widely used for its analgesic, anti-inflammatory, antiseptic and anti-bacterial property. It helps in reducing wrinkles, fine lines and other signs of aging. It also helps in reducing acne scars and to make them less visible.

Saffron


Mainly consists of dried stigmas and upper parts of styles of plant known as *Crocus sativus*, belonging to the family Iridaceae. It is rich in carotenoid glycosides, mainly containing terpenoids. It lightens the skin tone and provides fair and glowing skin.

Turmeric



Turmeric has been used in this preparation due to its blood purifying property and helps in wound healing, because of its antiseptic action. It cures the skin diseases occurring due to blood impurities. It is a very good anti-inflammatory and anti-allergic agent. The phytoconstituents, mainly terpenoids present in it help to lighten the skin tone. Turmeric delays the signs of aging like wrinkles, improves skin elasticity. It cures pigmentation, uneven skin tone and dull skin. **Aloe Vera**

Aloe Vera is a great moisturizer intended for a skin. Aloe Vera rejuvenates skin, hydrates this and keeps skin layer looking fresh all the time. Aloe Vera has anti-microbial property rendering it ideal to deal with acne and pimples. Aloe Vera powder contains several nutrients like glycerin, sodium palmate, sodium carbonate, sodium palm kemelate, sorbitol, etc.

Table 1: List of Ingredients.

Sr. No.	Common Name	Figure	Category
1	Gram flour		Tan removal, anti-Bacterial, reduces redness and irritation, treat acne, removes dark spots.
2	Rice Flour		Antibacterial, Antifungal, Antioxidant, Heal acne, anti-aging.

3	Charcoal Powder		<p>Detoxify skin, clean and minimize open pores to less them visible.</p>
4	Arjun powder		<p>Anti-ageing, removes acne scars (ghadde).</p>
5	Orange peel Powder		<p>Improves fairness, Antibacterial, Soothe sunburn, remove suntan, Exfoliates skin, Fight Acne. And reduces hyper pigmentation.</p>
6	Nutmeg		<p>Treat Acne and spots Smoothing, cooling effect and improves fairness, reduces rashes, burns and infections.</p>
7	Saffron		<p>Soothing agent, Improve complexion and skin tone, Treats dry skin, Remove suntan, treat acne.</p>

8	Turmeric		Bacterial, Anti-septic, improve skin color.
9	Aloe Vera		Antiseptic, Antioxidant, soothing effect to skin. Moisturizing Agent.

METHOD OF PREPARATION

- Take dried powder natural ingredients.
- Sieve dried powder using #120 mesh.
- Weighed accurately and mixed geometrically for uniform formulation mentioned in Table 2.
- The prepared face pack was then stored in an air tight container for evaluation of various parameter.

Table 2: Composition of Herbal face pack.

Sr. No	Constituents	ScientificName	Family Name	Percentage
1.	Gram Flour	<i>Cicer arietinum</i>	Fabaceae	15
2.	Rice Flour	<i>Oryza sativa</i>	Gramineae	15
3.	Charcoal powder	<i>Trema orientalis</i>	Cannabaceae	10
4.	Arjuna powder	<i>Terminalia arjuna</i>	Combretaceae	05
5.	Orange Peel Powder	<i>Citrus limon</i>	Rutaceae	17.75
6.	Nutmeg	<i>Myristica fragrans</i>	Myristicaceae	10
7.	Saffron	<i>Crocus sativus</i>	Iridaceae	0.25

8.	Turmeric	<i>Curuma longa</i>	Zingiberaceae	15
9.	Aloe Vera	<i>Aloe barbadensis</i>	Asphodelaceae	12

Procedure for application of face pack

The pack should be applied on wet face:

- For Oily skin: add curd/tomato juice/potato juice/orange juice.
- For Dry skin: add raw milk/rose water/ normal water forming a paste with optimum thickness.
- It should be applied evenly on the face with the help of a smooth brush.
- It should be left for 15-25 minutes for complete drying.
- Then it should be removed with the help of a wet sponge/or wash your face with lukewarm water.

EVALUATION OF FACE PACK

Organoleptic Evaluation

It refers to the evaluation of the herbal face pack by its color, odor, appearance, texture etc. The external characters of the formulation were examined based on the method described by Siddiqui *et al.*

Physicochemical evaluation

Physicochemical parameters were determined, including the determination of extractive value, ash value, pH and moisture content.

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, bulk density and tapped density by Tapping Method.

Phytochemical evaluation

The aqueous extract of the herbal face pack was evaluated for the presence of different phytoconstituents as per the standard procedures.

Irritancy test

Mark an area (1sq.cm) on the left-hand dorsal surface. Definite quantities of prepared face packs were applied to the specified area and time was noted. Irritancy, erythematic, edema, was checked if any for regular intervals up to 24 hrs and reported.

Stability studies

Stability testing of prepared formulation was conducted by storing at different temperature conditions for the period of one month. The packed glass vials of formulation stored at different temperature conditions like, room temperature and 400°C and were evaluated for physical parameters like color, odor, pH, consistency and feel.

RESULT AND DISCUSSION

Result and Discussion The results of evaluation are displayed in Table for organoleptic and 6 physico-chemical and general powder evaluation. The study of nature, color, odor, taste, texture, wash ability, grittiness, moisture content and pH of dried powders of combined form under investigation provided the important feature of organoleptic and physicochemical evaluation. The moisture content value was found to be less than 5%. The acidic or alkaline nature of the dried powder of combined form was determined by preparing 1% dispersion of powder form in distilled water and measuring the pH with pH meter. The pH of 1% dispersion of powder was obtained as 5.9 which indicated that the powder of combined form was slightly acidic in nature. Dried powder of combined form was evaluated for particle size, angle of repose, bulk density and tapped density before being formulated. Values of , tapped density , bulk density , angle of repose, , Carr's index, Hausner's ratio obtained for powder of combined form were found of B3 to be respectively, 0.43 g/ml, 0.46 g/ml, 31, 1.12 and , have good flow properties. The powder had good flow property which is suitable for a face pack. And it's easily washable with water. Antimicrobial evaluation was performed with two organisms Staphylococcus aureus, E.Coli and the Zone of inhibition was found in formulation was displayed in table Following evaluation parameters were performed to ensure superiority of prepared face pack.

Organoleptic Evaluation

Herbal face pack was evaluated for Organoleptic parameters showed in the **Table**

3. The color of formulation was Brown. The odor of prepared formulations was pleasant and good acceptable which is desirable to cosmetic formulations. Texture and smoothness was acceptable as per requirement of cosmetic formulations.

Table 3: Organoleptic Evaluation.

S. No	Parameter	Observation
1.	Color	Brown Color
2.	Odor	Pleasant
3.	Appearance	Smooth, fine
4.	Texture	fine
5.	Smoothness	smooth

Physicochemical Evaluation

Herbal face pack was evaluated for physicochemical parameters showed in the **Table 4**. The pH of formulation was found close to neutral. The ash content and moisture content was within limit. The particle size of formulations was found in the range of $24.3 \pm 2.5 \mu\text{m}$.

Table 4: Physicochemical Evaluation.

Sr. No	Parameter	Observation
1.	pH	6.92
2.	Loss on Drying	2.9
3.	Ash content	89 ± 0.352
4.	Particle size (µm)	24.3±2.5

Phytochemical Evaluation

Herbal face pack was evaluated for phytochemical parameters showed in the **Table**

5. It was found to be a presence of phytoconstituents such as carbohydrates, alkaloids, glycosides, tannins and volatile oil which act as good nourisher for the skin.

Table 5: Phytochemical evaluation.

Sr. No	Phytoconstituents	Observation
1.	Carbohydrates	+
2.	Alkaloids	+
3.	Glycosides	+
4.	Tannins	+
5.	Volatile oil	+

Physical Evaluation (powder property)

Herbal face pack was evaluated for physical parameters (powder property) showed in the **Table**

6. Rheological findings justified the flow (powder) properties of the herbal face pack. It was found to be a free-flowing and non-sticky in nature.

Table6: Evaluation of flow properties.

Sr. No.	Parameter	Observation
1	Tapped density	1.326gm/ml
2	Bulk density	1.09gm/ml
3	Angle of repose	32.510
4	Hausner's ratio	1.232
5	Carr's index	22.93%

Irritancy Test

The results of irritancy test were shown in **Table 7**. The formulation showed absence of irritation, redness and swelling during irritancy studies. This formulation has safe to use on skin.

Table 7: Irritancy Test.

Sr. No.	Parameter	Observation
1.	Irritation	No
2.	Redness	No
3.	Swelling	No

Stability Studies

The results of stability were shown in **Table 8**. No change in color, odor, texture and smoothness was observed at mentioned conditions of stability except pH. The stability studies showed a slight change in pH of formulation at 400°C.

Determination of rheological properties of the prepared pack

Physical parameters like Untapped (Bulk) density, tapped density, the angle of repose, Hausner's ratio, and Carr's index were observed and calculated for the formulation. Bulk density refers to the adjustment of particles or granules to pack themselves collectively [17, 18] The Hausner's ratio is calculated as D/D' where D is the tapped density and D' , the bulk density. Carr's index helps to measure powder flow from bulk density

Determination of moisture content

Weigh about 1.5 gm of the powdered drug into a weighed flat and thin porcelain dish. Dry in the oven at 100°C or 105°C, until two consecutive weights do not differ by more than 0.5 mg. Cool in desiccators and weigh. The loss in weight is usually recorded as moisture

Angle of repose

It is defined as the maximum angle possible in between the surface of pile of powder to the horizontal flow

Bulk density Bulk

Density is the ratio between the given mass of a powder and its bulk volume. Required amount of the powder is dried and filled in a 50 ml measuring cylinder up to 50 ml mark. Then the cylinder is dropped onto a hard wood surface from a height of 1 inch at 2 second intervals. The volume of the powder is measured. Then the powder is weighed. This is repeated to get average values. The Bulk Density is calculated by using the below given formula.

$$\text{Bulk Density} = \text{Volume/Mass}$$

Tapped density

Tapped density is an increased bulk density attained after mechanically tapping a container containing the powder sample. After observing the initial powder volume or mass, the measuring cylinder or vessel is mechanically tapped for 1 min and volume, or mass readings are taken until little further volume or mass change was observed. It was expressed in grams per cubic centimeter (g/cm^3)

Phytochemical screening

The aqueous extract of the herbal face pack was evaluated for the presence of different phytoconstituents as per the standard procedures

- a. **Shinoda test** Aqueous solution was added to a pinch of magnesium turnings and 1-2 drops of concentrated hydrochloric acid were added. Formation of pink color indicates the presence of Flavanoids.
- b. **Lead acetate test** Aqueous solution was taken and few drops of 10% lead acetate solution were added. Appearance of yellow color precipitate indicates the presence of flavonoids.
- c. **Salkowski test** Aqueous Solution (5 ml) was mixed with chloroform (2 ml), and concentrated sulphuric acid (3 ml) was carefully added to form a layer. A reddish-brown coloration of the interface was formed to show positive results for the presence of terpenoids.

Particle size

Particle size is a parameter, which affect various properties like spread ability, grittiness etc., particle size was determined by sieving method by using I.P. Standard sieves by mechanical shaking for 10 min

PH

PH of 1% aqueous solution of the formulation was measured by using a calibrated digital pH meter at constant

Wash ability

This is the common method for checking the wash ability of the formulation. The formulation was applied on the skin and then ease and extent of washing with water were checked manually by using 1 liter of water is used to remove all content of the formulation were applied on the surface

Microbial Assay

The antibacterial activities of all four formulations were determined by modified agar well diffusion method. In this method, nutrient agar plates were seeded with 0.2 ml of 24 h broth culture of Escherichia coli and Staphylococcus aureus. The agar plates were allowed to solidify. A sterile 8 mm borer was used to cut wells of equidistance in each of the plates. 0.5 ml of formulations, herbal extracts were introduced into the wells at randomly. The plates were incubated at 37°C for 24 hours. The antibacterial activities were evaluated by measuring the zones of inhibition (in mm)

Application of poly-face pack

The pack should be applied daily on wet face, forming a paste of it in water or rose water with optimum thickness. It should be applied evenly on the face with the help of a brush. It should be left for 10-20 minutes for complete drying. Then it should be removed with the help of a wet sponge

Table 8: Stability Test.

Sr. No	Parameter	Room temperature	400°C
1.	Color	No Change	No Change
2.	Odor	No Change	No Change
3.	pH	6.92 ± 0.12	6.87 ± 0.13
4.	Texture	Fine	Fine
5.	Smoothness	Smooth	Smooth

Prepared formulation**Picture-1: Prepared formulation**

CONCLUSION

In the present study, people need cure for various skin problems without side effects. Natural remedies are more acceptable in the belief that they are safer with fewer side effects than the synthetic ones. 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, Herbal formulations have growing demand in the world market. Herbal face packs are used to stimulate blood circulation, rejuvenate the muscles and help to maintain the elasticity of the skin and remove dirt from skin pores.

It is a our good attempt to formulate the herbal face pack containing natural herbal ingredients such as Gram Flour, Rice flour, charcoal powder, Arjuna Powder, Orange peel Powder, Nutmeg, saffron, Turmeric, Aloe Vera. After evaluation, we found good properties for the face packs, free from skin irritation and maintained its consistency even after stability storage conditions.

It has been revealed that herbal face pack having enough potential to give efficient crystal clear, Healthy and glowing effect on skin. The overall study is useful to substantiate product claims due its useful benefits on the human beings.

A poly-herbal face pack is used to rejuvenate the muscles, maintain the elasticity of the skin, remove adhered dirt particles, and improve the blood circulation. The benefits of herbal based cosmetics are there as they are nontoxic nature.

This poly-face pack supplies essential nourishment to the skin. It helps in the elimination of blemishes, acne, pimple, scars, and marks. Poly-herbal Face pack exfoliates the skin and provides a soothing, calming, and cooling effect on the skin. Frequent uses of herbal face packs improve skin texture and complexion. Pollution and harsh climates badly affect the skin.

The present work, an attempt was made to formulate the poly-herbal face pack containing naturally available ingredients like Morigna powder, orange peel powder, sandalwood powder, maize starch, and peppermint oil. It is suggested that the prepared formulation was physico-chemically and microbiologically stable and possessed characteristics of a standard cosmeceuticals formulation for skincare

Ethics approval and consent to participate

Not applicable.

Human and animal rights

No Animals/Humans were used for studies that are base of this research.

Conflict of interest

The authors declare no conflict of interest, financial or otherwise

REFERENCES

1. Rani S, Hiremanth R. Formulation & Evaluation of Poly-herbal Face washes gel. *World J Pharm Sci.*, 2015; 4(6):585-8.
2. Okereke JN, Udebuani AC, Ezeji EU, Obasi KO, Nnoli MC. Possible Health Implications Associated with Cosmetics: A Review, *Sci J Public Health*, 2015; 3(5- 1):58-63.
3. Mary P. Lupo. Antioxidants and Vitamins in Cosmetics. *Clin Dermatol*, 2001; 19:467–473.
4. Sowmya KV, Darsika CX, Grace F, Shanmuganathan S. Formulation & Evaluation of Poly-herbal Face wash gel. 4(6): 585-588. *World J Pharm & Pharma Sci.*, 2015; 4(6):585-8.
5. Sowmya KV, Darsika CX, Grace F, Shanmuganathan S. Formulation & Evaluation of Poly-herbal Face wash gel. *World J Pharm Pharm Sci.*, 2015;4(6):585-588.
6. Millikan, Larry E. Cosmetology, Cosmetics, Cosmaceuticals: Definitions and Regulations. *Clin Dermatol*, 2001; 19(4):371-374.
7. Rieger MM. Harry's Cosmeticology. In: Chapter 23, Face, Body & Hair Masks & Scrubs. 8th ed. vol I. New York: Chemical Publishing Co., Inc., 2009; 471-483.
8. Umadevi M, Pushpa R, Sampathkumar KP, Bhowmik D. Rice-traditional medicinal plant in India. *Journal of Pharmacognosy and Phytochemistry*, 2012 May 1; 1(1): 6- 12.
9. Koli DS, Mane AN, Kumbhar VM, Shaha KS. Formulation & Evaluation of Herbal Anti-Acne Face Wash. *World J Pharm Pharm Sci.*, 2016; 5(6): 2001- 2007.

10. Kokate CK, Purohit AP, Gokhale SB. Textbook of Pharmacognosy 49th ed, 2014
11. Mieloch M, Witulska M. Evaluation of Skin Colouring Properties of Curcuma Longa Extract. Int. J Pharm Sci., 2014; 76(4): 374-8.
12. Rajeswari R, Umadevi M, Rahale CS, Pushpa R, Selvavenkadesh S, Sampath Kumar KP, Bhowmik D. Aloe Vera: The Miracle Plant Its Medicinal and Traditional Uses in India. J Pharmacogn Phytochem, 2012;1(4): 118-124.
13. Siddhi qi MA. Format for the pharmacopoeial analytical standards of compound formulation, workshop on standardization of Unani drugs, Central Council for Research in Unani Medicine 1995. New Delhi, 1995.
14. World Health Organization. Pharmaceuticals Unit: Quality control methods for medicinal plant materials, 1992: Available from: <http://www.who.int/iris/handle/10665/63096>.
15. Banchhor M, Ashawat MS, Saraf S. Herbal cosmetics: Trends in Skin Care Formulation. Pharmacogn Reviews, 2009; 3(5): 82-89.
16. Khandelwal KR. Practical Pharmacognosy 12th ed, 2004.
17. Mandeep S, Shalini S, Sukhbir LK, Ram KS, Rajendra J. Preparation and Evaluation of Herbal Cosmetic Cream. Pharmacology online, 2011; 1258-1264.
18. Singh M, Sharma S, Khokra SL, Sahu RK, Jangde R. Preparation and evaluation of herbal cosmetic cream. Pharmacology online, 2011; 2: 1258-64.
19. Rajeswari R, Umadevi M, Rahale CS, Pushpa R, Selvavenkadesh S, Sampath Kumar KP, Bhowmik D. Aloe Vera: The Miracle Plant Its Medicinal and Traditional Uses in India. J Pharmacogn Phytochem, 2012; 1(4): 118-124.
20. 0. Siddhi qi MA. Format for the pharmacopoeial analytical standards of compound formulation, workshop on standardization of Unani drugs, Central Council for Research in Unani Medicine 1995. New Delhi, 1995
21. . World Health Organisation. Pharmaceuticals Unit: Quality control methods for medicinal plant materials, 1992: Available from: <http://www.who.int/iris/handle/10665/63096>.
22. Banchhor M, Ashawat MS, Saraf S. Herbal cosmetics: Trends in Skin Care Formulation. Pharmacogn Reviews, 2009; 3(5): 82-89.
23. . Khandelwal KR. Practical Pharmacognosy 12th ed, 2004.
24. Mandeep S, Shalini S, Sukhbir LK, Ram KS, Rajendra J. Preparation and Evaluation of Herbal Cosmetic Cream. Pharmacology online, 2011; 1258- 1264

25. Singh M, Sharma S, Khokra SL, Sahu RK, Jangde R. Preparation and evaluation of herbal cosmetic cream. Pharmacologyonline, 2011; 2: 1258-64.
26. Choudhuri, RK. Emblica cascading antioxidants: Novel natural skin care ingredients. Skin Pharmacol. Applied Skin Physiol, (2002). Page no 15: 374-380.
27. Sachin B. Somwanshi , Kiran S. Kudale , Ramdas T. Dolas , Kiran B. Kotade,. Formulation and evaluation of cosmetic herbal face pack for glowing skin, Int. J. Res. Ayurveda Pharm. 8 (Suppl 3), 2017
28. U. Jain, Beauty through Herb. Institute of herbal science publishers, 1, 1997, 23-27.

