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A Review On Antibacterial Herbal Face Pack

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Abstract

Natural remedies are more acceptable in the belief that they are safer with fewer side effects than the synthetic ones. Herbal formulations have growing demand in the world market. The objective of this work is to formulate and evaluate a cosmetic preparation polyherbal face pack made from herbal ingredients. Kaoline, tragacanth, orange peel powder, neem powder, chandan powder, aloe juice powder, turmeric powder, Fullers earth and Cicer arietinum Powder were procured from the local market in dried, powdered and then passed through sieve no 80, mixed thoroughly prepared and evaluated for its organoleptic, physico-chemical and microscopical characters. The dried powder of combined form had passable flow property which is suitable for a face pack. Herbal face packs or masks are used to stimulate blood circulation, rejuvenates and help to maintain the elasticity of the skin and remove dirt from skin pores. It is a very good attempt to establish the herbal face pack containing different powders of plants. The advantage of herbal cosmetics is their non-toxic nature, reduce the allergic reactions and time tested usefulness of many ingredients. Thus in the present work, we found good properties of the face packs and further optimization studies are required on this study to find the useful benefits of face packs on human, use as cosmetic product.

Keywords:- Cosmetic, Face Pack, Herbal, Ingredients, Natural Formulation.

Introduction: -

Everybody wants to get fair and charming skin. Now a day, Acne, black head, pimples, dark circle are common among youngsters and person who suffers from it. According to Ayurveda, Skin problems are normally due to impurities in blood. Accumulated toxins in the blood during improper food and lifestyle are causing skin related diseases. Various herbs, medicines are described in Ayurveda for blood purification. The herbal paste which is applied on face to treat acne, pimple, scars, marks and pigments are known as “mukha lepa” in ayurveda. The process of smearing this herbal mix on face is known as “mukha lepana”. This beauty therapy is popular as facial1. The smooth powder which is used for facial application is “face pack”. A good herbal face pack must supply necessary nutrients to skin. It should penetrate the subcutaneous tissues In order to deliver the required nutrients. Different types of skin need different types of herbal face packs. The face packs which are mentioned in ayurveda help women to get rid of wrinkles, dark circles, pimples and

acne. Herbal face packs increase the fairness and smoothness of skin. We can derive the maximum benefits of herbal face packs by using them according to our skin type. These face packs increase skin glow and are best ayurveda treatment to increase fairness. Face packs are one of the oldest and beautiful methods of cleansing skin. There are various kinds of face packs described in Ayurveda which have nourishing, healing, cleaning, astringent and antiseptic properties. From the ancient era people are using herbs for cleaning, beautifying and to manage them. Cosmetics are defined as the products used for the purposes of cleansing, beautifying, promoting attractiveness or alternating one's appearance [1-2] Homemade natural face packs and masks make way for smooth, radiant and silky skin. Face packs used in ayurveda helps to reduce wrinkles, pimples, acne and dark circles. They also increase the fairness and smoothness of the skin³. The Natural face packs do contain some vital vitamins that are required for the health and glow of our skin.[3] These substances also prove to be beneficial for our skin in many ways. Natural Facial Packs are less complicated and pretty simple to use. They help us in looking after skin and also prove its worthiness by increasing the circulation of the blood within the veins of the face.

Type :-

- Plastic masks: wax-based, latex-based, or vinyl-based
- Argillaceous masks: clay-based or earth-based
- Chemically formulated face packs provide vital nutrients to the skin
- Hydrocolloid masks: Gel masks (ready to use)

Advantages

1. They help recover the skin's missing shine and glow in a short period of time.
2. Daily use of the natural face masks gives skin shine, enhances skin texture and taint
3. Helps to reduce, acne, pimple, scars and marks Depending on its herbal ingredients.
4. Face packs usually remove dead cells of skin.
5. These face masks provide a soothing and relaxing Effect on skin.
6. They help to restore the lost shine and glow of skin in short span of time.
7. Regular use of natural face masks bring glow to Skin, improve skin texture and complexion.
8. The harmful effects of pollution and harsh climates Can be effectively combated with judicious use of face Packs.
9. They help to prevent premature aging of skin.
10. Formation of wrinkles, fine lines and sagging of skin Can be effectively controlled by using natural face Packs.
11. Natural face packs make the skin look young and healthy[7]

Disadvantages

1. The one Face pack should not be apply all over the face.
2. As every part of our face doesn't has the same type of skin.
3. Sometimes it takes longer duration of time for drying of face pack.
4. There is difficulty of application of face pack for dry skin person.
5. It may cause the irritation. Sometimes face pack cause redness to skin.[4]

Material and Methods:

The all-natural materials used in the present study i.e., Sandal powder, Milk Powder, Camphor were Purchased From local market in the dried Powder form. Remaining Natural ingredient powders were prepared by shade drying And Grinded to make fine powder by using Size reduction Mill and Grinder such as Turmeric, Rice flour, Gram flour, Rose powder, Potato powder, Tomato powder, orange peel Powder.[12]

Cinnamon

- Botanical name: - Cinnamomum verum
- Family: - Lauraceae
- Genus: - Cinnamomum



Fig. 1. Cinnamon Powder

Active constituents:

Cinnamon consists of a variety of resinous compounds, including Cinnamaldehyde, Cinnamate, Cinnamic acid, and numerous Essential oils. The spicy taste and fragrance are due to the presence of Cinnamaldehyde and occur due to the absorption of oxygen. As cinnamon ages, it darkens in colour, improving the resinous compounds. Various physiochemical properties of cinnamon. The presence of a wide range of essential oils, such as TransCinnamaldehyde, Cinnamyl acetate, Eugenol, L-Borneol, Caryophyllene oxide, β Caryophyllene, L-Bornyl acetate, E-Nerolidol, A-Cubebene, α -Terpineol, Terpinolene, and α -Thujene, has been reported

Uses:-

- Cinnamon has Antibacterial properties and it helps in treating pimples.
- Cinnamon is a powerful Antioxidant and thus prevents signs of ageing
- It can make skin look plumper and more even-toned
- Cinnamon has Anti-inflammatory properties.[15]

Orange Seed :-

- Botanical name: - Citrus sinensis (sweet orange) Citrus aurantium (bitter orange)
- Family: - Rutaceae

- Genus: - Citrus



Fig 2. Orange Seed Powder

Active constituents:

Limonene (90%), Citral (4%), Vitamin C, Pectin, Hesperidine, Aurantimaricin, Aurantimaric acid, Octanal (39%), Decanal (42%), Monoterpene (91%) and contains no less than 2.5% Volatile oil [13]

Uses:-

- Protects skin from free radical damage.
- Heals dry, flaky, and itchy skin.
- Hydrates dehydrated skin.
- Brings back moisture.
- Prevents oxidative stress in skin cells, for youthful, glowing skin.
- Helps in renewing worn-out cellage
- Works as a skin lightening agent.
- Removes tan.
- Loaded with Anti-ageing properties.
- Promotes healthy skin glow[17]

Neem

- Botanical name: - Azadirachta indica
- Family: - Meliaceae
- Genus: - Azadirachta



Fig. 3 Neem

Active constituents:

The extracted chemical constituents of different parts of neem tree contained many biologically active compounds, including Triterpenoids, Alkaloids, Phenolic compounds, Flavonoids, Carotenoids, Ketones and Steroid. The most biologically active Compound is Azadirachtin. This compound belongs to the C-seco Limonoids which was classified as Tetranortriterpenes. It is Actually a mixture of seven isomeric compounds labelled as Azadirachtin M and Azadirachtin N ,Meliacin, Azadirachtin, [20]

Uses

A study on hairless mice shows that neem oil is a promising agent to treat aging symptoms like thinning skin, dryness, and wrinkling.

- Neem oil helps in healing process of post-surgical scalp wounds.
- Neem oil has a good prolonged treatment for acne.
- It also has Antifungal and Antibacterial activity
- It reduces scars, heal wounds, minimize warts and mole[19]

Ritha/ Indian soapberry :-

- Botanical name: - Sapindu mukori
- Family: - Sapindaceae
- Genus: Sapindus



Fig.4 Ritha/Indian Soapberry

Active constituents:

Hederagenin3-O-u-L-arabinopyranosyl(2+1)-a-L-Rhamnopyranosyl(3-1)-BDxylopyranosyl(4-glucopyranoside,Hederagenin3-O-a-L-arabinopyranosyl(2-1)-a-L Rhamnopyranosyl(3-1)-D-xylopyranosyl.28-arabinopyranosyl(2-1)-a-L-rhamno Pyranosyl(3-1)xylopyranosyl(41)glucopyranosyl[(61)rhamnopyranosyl](2+1)glucopyranoside

Uses :

- The saponins present in Ritha is an excellent ingredient that has a superb cleansing property, and thus it is used in making soap and face wash.
- The mixture of Ritha and Besan flour prepared in water is applied to all parts of the skin, and it helps improve the skin Glow and sustenance.
- Due to the perfect moisturizing property of Ritha, it keeps the skin hydrated and prevents the excessive drying of skin, Which further helps make the skin look radiant.
- Ritha fruit has powerful Anti-inflammatory and Antibacterial properties, which help treat skin disorders such as Psoriasis, Acne, and Eczema

Bilva:

- Botanical name: *Aegle marmelos*
- Family : Rutaceae
- Genus : *Aegle*



Fig.5 Bilva

Chemical constituents:

Leaves contain Alkaloids, Mermesinin, Rutin, Phenylethyl Cinnamides. Anhydromarmeline, and Aegelinosides Sterols, and Essential oils. Aegelenine, Acgeline. Aegelinosides A. Aegelinosides B. Dictamine, Ethyl cinnamamide, Ethyl cinnamate, Frangine, Halfordinol, Imperatorin, Isoimperatorin, Marmelide, Marmelosin, Marmesin, Marmin, Methyl ether [5]

Uses :

- The Anti-bacterial, Anti-fungal, and Anti-inflammatory property present in Bael is an excellent remedy for skin infections.
- An oil prepared from Bael leaf is beneficial for skin rash and itchy bumps. Bael leaves is also a blood purifier.
- It helps to flush all toxins from the body.

➤ These fruits are also popular for Antioxidant, Anti-inflammatory and Laxative properties and it has been in use for its medicinal and therapeutic properties in Ayurveda, Siddha and other forms of alternate medicine for thousands of years. [16]

Nutmeg :

- Botanical name : Myristica fragrans
- Family: Myristicaceae
- Genus : Myristica



Fig.6 Nutmeg

Chemical constituents:

Nutmeg contains of 5 to 15% Volatile oil, Lignin, Stearin, Starch, Gum, Colouring matter, and 0.08% of an acid substance. The volatile oil contains Clemicine, Myristicin, Geraniol, Borneol, Pinene, Camphene, and Dipentene. It also contains Eugenol, Safrol, p-Cymene and Isoeugenol in small quantity.

Uses :

- It reduces pigmentation
- Mildly abrasive nature makes nutmeg a great exfoliator for skin. Hence it makes skin gentle and smooth.
- Treats oily skin
- Nutmeg has Anti-oxidant and Anti-ageing properties. Hence it promotes youthful skin.
- Natural toning cleanser[10]

- Botanical name : Rosa
- Family : Rosaceae

Rose petals powder is rich with the antibacterial properties, due to the positive effects of vitamins K, C and B. It also provides a pleasant smell. A rose is a woody of perennial flowering plant Genus Rosacea, in the

family. It is grown as ornamental Rosa Plant for its beautiful flowers and the petals of flower is used Commercial in perfume industries. Petals are occasionally Rose Made into, and or are brewed for jam jelly marmalade soup Tea, primarily for their high content. Rose hips are vitamin C Also used to produce, which is used in skin rose hip seed oil Products and some makeup products Rose petals powder is rich with the Antibacterial properties, all with the positive effects of Vitamins K, C and B. It also has good amount of antioxidant [9]



Fig.7 Rose Petals

Used

- Perfume
- Rose Water

Orange Seed (*Citrus sinensis*):-

- Botanical name: *Citrus Aurantion Dulcis*
- Family : Rutaceae

Orange is a citrus fruit which contains different nutritional Source such as vitamin C, calcium, potassium and magnesium. It prevents the skin from Free radical damage, skin hydration and oxidative stress. Also, it has instant glow property, Prevent acne, blemishes, wrinkles and aging. It cures blackheads, cell build up Around the pore's brightness your face, dark circles, dry skin, Wrinkles, aging, prevent acne. Orange peel can be used for Facial cosmetics. Orange as a folk medicine. And it is a good Source of Vit C, B, Flavonoids, terpenes as per traditional Chinese symbol good luck and prosperity. Antibacterial, Antifungal, Larvicidal activity[14]



Fig.8. Orange Peel

Method of Preparation of Face Pack:-**FORMULATION OF HERBAL FACE PACK**

Step 1: All the required herbal powders for the face pack preparation were accurately weighed individually by using digital balance. The quantity and compositions are listed in table

Sr.No.	Ingredients (in powder form)	Quantity
	Cinnamon	5 gm
	Orange	5 gm
	Neem	5 gm
	Ritha	5 gm
	Bilva	5 gm
	Nutmeg	2.48 gm
	Rose water	Q.S.

Step 2. The herbal drugs such as Cinnamon, Orange peel , Neem , were transferred to mortar and pestle and triturated.

Step 3. Herbal drugs such as Ritha, Bilva & Nutmeg were triturated in a separate mortar and pestle to form a uniform fine mixture.

Step 4. Previously prepared mixture of herbal powders was transferred to the mixture of fine powders and triturated to obtain uniform drug powder of face pack.

Step 5. The powders were passed through sieve no #44

Step 6. The prepared face pack powder was packed into a self-sealable polyethylene bag, labelled and used for further studies. [11]

Method of Evaluation

Following evaluating parameters were performed to check the creditability of prepared face pack. Organoleptic Evaluation The evaluation of organoleptic parameters such as color, odor, appearance, texture and smoothness were carried out. Color and texture were evaluated visually and by touch sensation respectively.[18] For odor evaluation, a team of four healthy Faculty member persons were selected (Bureau of Indian Standards, 2002). Physicochemical Evaluation

A) pH: The pH of individual preparation was determined by using digital pH meter which was initially calibrated at pH 7 and 9.2 with suitable buffer solution. A 10 % (w/v) dispersion of the individual preparation was prepared in distill water and pH was determined directly without any dilution (Laxmi and Vijayalaxmi, 2017).

B) Loss on Draying: Moisture content is important for the plant drugs because insufficient drying may lead to possible enzymatic deterioration of active principles.¹⁹ Weigh accurately about 3gm of powder preparation in petri dish and placed in hot air oven and measure the weight after 30 minutes up to standard weight

C) Ash value: Ash value is calculated to determine the inorganic contents which are characteristic for an herb. About 2gm of powder drug was taken in crucible dish previously ignited and weighed.²⁰ Temperature was increased by gradually increasing the heat not exceeding to red color. After complete burning, ash is cooled and weighed.

Powder Properties Evaluation Physical parameters like Angle of repose, Bulk density, tapped density and Hausner's ratio were observed and calculated for the formulation.

- **Angle of Repose:** After allowing the required amount of dried powder is dropped from height of 6 cm, the height and radius of the heap is noted and recorded.[21] For the above method, the angle of repose (θ) can be calculated by using the formula:

Where, Angle of repose(θ) = $\tan(h/r)$

θ - Angle of repose,

h- Height of the heap,

r- Radius of the base.

- **Bulk Density:** It is the weight of given substance in a given volume. It is calculated by the ratio of given mass of powder and its bulk volume.[22] It is determined by transferring an accurately weighed amount of powder sample to the graduated cylinder with the help of funnel. The initial volume was noted. The ratio of weight to the volume it occupied was calculated by using formula:

$$\text{Bulk Density} = \frac{\text{Mass of Powder}}{\text{Volume of Powder}}$$

- **Tapped Density:**

It is measured by transferring a known quantity (10 gm) of powder into a graduated cylinder and tapping it for a specific number of times.[23] The initial volume was noted. The graduated cylinder was tapped continuously for a period of 10-15 min. The density can be determined as the ratio of mass of the powder to the tapped volume.

$$\text{Tapped density} = \frac{\text{Tapped Volume}}{\text{Mass of Powder}}$$

- **Hausner's Ratio:**

It indicates the flow property of the powder.[24] The ratio of tapped density to the bulk density of the powder is called Hausner's ratio.

$$\text{Hausner's ratio} = \frac{\text{Tapped Density}}{\text{Bulk Density [7]}}$$

Irritancy test: Mark an area of about 1 sq. cm on the left-hand dorsal surface.[25] definite quantities of prepared face packs were applied to the marked area and time was noted. Irritancy, erythema and edema was checked if any for regular intervals up to 24 hrs.²⁶ and reported

Washability:-

Formulation was applied on the skin and then ease and extent of washing with normal tap water were checked manually.[8]

Conclusion

In the present scenario of industrialization, pollutant and Stressful life style people are suffering from various skin ailments and need cure without side effects in easy regular way. Thus, Herbal ingredients provides the way to formulate cosmetics Without any harmful effect. Herbal formulations are acceptable Now for its safer profile with nil or few side effects compared to the synthetic counterparts. It was an attempt to formulate and evaluate herbal face pack formulation, and found to improves Face skin blood circulation, rejuvenate and help to maintain the elasticity of the skin.

The all four formulations found to have satisfactorily passed all evaluation parameters and improve the appearance of the skin without any side effects. Thus, it has been revealed that herbal face pack carries enough potential to give efficient glowing effect on skin. Herbal face packs or masks are used to stimulate blood circulation, rejuvenates those muscles and help to maintain the elasticity of the skin and remove dirt from skin pores. Thus, in the present work, we found good properties for the face Packs and further optimization studies are required on this study to find the useful benefits of face packs on human.

Reference

- [1] Okereke JN, Udebu1Cosmaceuticals: Definitions and Regulations. Clin Dermatol 2001; 19 (4); 37ani AC, Ezeji EU, Obasi KO, Nonoil MC. Possible Health Implications Associated with Cosmetics: A Review, Sci J Public Health, 2015; 3(5-1): 58-63.
- [2] Mary P. Lupo. Antioxidants and Vitamins in Cosmetics. Clin Dermatol, 2001; 19: 467–473
- [3]. Sowmya KV, Darsika CX, Grace F, Shanmuganathan S. Formulation & Evaluation of Polyherbal Face wash gel. World J Pharm Pharm Sci, 2015; 4(6): 585-588.
- [4]. Millikan, Larry E. Cosmetology, Cosmetics, Rieger MM. Harry's Cosmeticology. In: Chapter 23, Face, body & Hair Masks & Scrubs. New York: Chemical Publishing Co., Inc, 2009; 8(1): 471-483.
- [5] Agrawal S, Kadam A, Sonavale S, Mulik P. Formulation and Evaluation of Peel off Mask of Bael Fruit. Evaluation. 2022;15:16.
- [6]Sinare Sonali B, Sinare Pratiksha P, Dokhe Punam G. FORMULATION AND EVALUATION OF HERBAL FACE WASH GEL.
- [7]Nagre AK, Khan SS, Joshi JP, Nawale VA, Waghulde VR. FORMULATION AND EVALUATION OF HERBAL FACE PACK. World Journal of Pharmaceutical Research. 2022 Aug 3.
- [8].Vats AS, Maurya S. FORMULATION AND EVALUATION OF COSMETIC HERBAL FACE PACK FOR GLOWING SKIN.
- [9]. Rashmi Saxena Pal, Yogendra Pal and Pranay Wal. In-House Preparation and Standardization of Face Pack. The Open Dermatology Journal. 2017;11; 72-80.
- [10]. Swati Siddheshwar Londhe, Mangesh Gautam Bhosale and Amol Arun Joshi. Formulation and Evaluation of Polyherbal Face Pack. World Journal of Pharmaceutical and Medical Research. 2020;6(7); 159-165.
- [11]. Seema Yuvraj Mendhekar, Pratiksha Sukhadev Sonawane, Rupali Bajirao Kale, Jadhav S.L. And Gaikwad D.D. Formulation and Evaluation of Polyherbal Face Pack. World Journal of Pharmacy and Pharmaceutical Sciences. 2017;6(12); 1378-1387.
- [12]. Aglawe SB, Gayke AU, Mindhe SA, Rane VG. Formulation and evaluation of herbal face pack. Int J Pharm Biol Sci. 2018;8:49-52.

[13]. Avinash O Maske, Manisha Pandhare, Ashwin D Wanjari. Formulation and Evaluation of Herbal Face Pack for Glowing Skin. International Journal of Advances in Pharmaceutics. 2019;8(1); 1-5.

[14]. Sachin B Somwanshi, Kiran S Kudale, Ramdas T Dolas, Kiran S Kotade. Formulation and Evaluation of Cosmetic Herbal Face Pack For Glowing Skin. International Journal of Research in Ayurveda and Pharmacy. 2017;8(3); 199-203.

[15]. Pasupuleti Visweswara Rao, Siew Hua Gan. Cinnamon A Multifaceted Medicinal Plant. Evid Based Complement Alternat Med. Published online 2014 Apr 10.

[16]. Skin Benefits of Cinnamon/Dalchini. Published online on 3 July 2020.

[17]. Orange Peel Biological Sources, Morphological Features, Chemical Constituents and Uses. November 03, 2020.

[18]. 5 ways you can use orange peels to get glowing skin. Updated on March 02, 2021. www.timesnownews.com Antibacterial Herbal Face Pack 19

[19]. Ahmad Eid, Nidal Jaradat, Nagib Elmarzugi. A Review of Chemical Constituents and Traditional Usage of Neem Plant. Palestinian Medical and Pharmaceutical Journal. 2017; 2(2): 75

[20]. Use of Neem oil for skin care. Medically reviewed by Cynthia Cobb, DNP, APRN, WHNPBC, FAANP — Written by Kitty Jay — Updated on May 15, 2019.

[21]. A. Sharma, S.C. Sati, O.P. Sati, D. Maneesha. Chemical Constituents And Bio Activities of Genus Sapindus. International Journal of research in Ayurveda and Pharmacy. Febryary 2011; 2(2); 403-409.

[22]. Reetha Uses, Benefits, Side Effects And Dosage.

[23]. Chamila Kumari Pathirana, Terrence Madhujith, Janakie Eeswara, Bael(Aegle marmelos L. Corrêa), Medicinal Tree with Immense Economic Potentials. Advances in Agriculture, vol. 2020, Article ID 8814018, 13 pages, 2020.

[24]. Bael: Medicinal Uses, Therapeutic Benefits For Skin, Diabetes And Supplements. Updated on January 24, 2021.

[25]. Nutmeg. Pharmacognosy and Phytochemistry. Drugs containing Volatile oils.

