



THE REVIEW ON FORMULATION AND EVALUATION OF HERBAL FACE PACK OF SOME HERBAL INGREDIENTS

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ABSTRACT

The goal of this project is to create and assess formulations using natural ingredients in varying concentrations for a cosmetic herbal face pack for glowing skin. Such as charcoal, gram flour, neem leaves, sandalwood, aloe vera, banana pulp and rose water. The was evaluated based on various parameters such as organoleptic properties and physicochemical parameters and stability along with irritancy and microbial load test. Nowadays, human skin is becoming more prone to faster aging, atopic dermatitis, acne, and many other skin problems that arise mainly due to increased pollution, allergies, microbes, etc. Acne and dull skin are common problems that occur in various people. Because natural medicines are thought to be safer and have less adverse effects than synthetic ones, they are more widely accepted. Growing demand for herbal preparations on the world market. The aim of this work is to compile and evaluate an herbal face pack for acne and dull skin. Herbal face packs are primarily used to reduce dark circles, acne, and scars by boosting blood flow, preserving, and renewing skin, and clearing debris from pores. So, in this work we have created a package that can be easily made from readily available raw materials. All the benefits of the face mask have been proven and further optimization studies of its various parameters are needed to find out its useful benefits for human beings.

Keyword: Skin care, Natural ingredients, Herbal face packs, Preparation, Standardization, Evaluation.

I. INTRODUCTION

Herbal face packs are used to stimulate sense and increases blood flow, rejuvenate muscles on face and help retain skin elasticity and remove dirt from skin pores. The ingredients of the formula contain many important vitamins that are necessary for the health and radiance of the skin. Using natural face packs is simple. They allow blood to flow freely through the veins in the face, making the skin look more alive. An effective herbal face pack should provide the skin with essential nutrients that can be placed externally on the face as a loose powder. To supply the necessary nutrients, it should penetrate deep into the subcutaneous tissue. Every skin type has different needs when it comes to face packs. Several types of packaging are currently offered for oily, normal, and dry conditions. People have known for centuries that plants can provide many of the basic requirements for beautiful and healthy skin. Products called cosmetics are intended to enhance, clean, and promote a beautiful appearance. Most of the human body, the skin on the face, serves as a mirror reflecting its overall health. An adequate diet that contains carbohydrates, lipids and amino acids is essential for

maintaining fair, shiny, and healthy skin. When women lived in ancient times, they were especially aware of their skin type and took good care of it. People today still use natural remedies, especially in hilly and rural areas, such as neem, aloe vera, Tulsi, orange peel and rose extracts for cosmetic purposes.(1)

Global trends now include the use of herbal products and the subsequent adoption of more natural fashion. Organic foods, herbal medicines and other natural products are popular among consumers. Cosmetic victimization is very popular and generates a lot of interest. The reason behind this whole incident is that herbal products have fewer side effects. Herbal cosmetics are those that contain a bioactive ingredient or drug. The plant ingredients influence the biological processes of the skin and supply it with the nutrition it needs for health. The English word "cosmetic" comes from the Greek "kosm tikos" which means having the power, order, or ability to adorn. In the course of human history, a continuous history of the invention of cosmetics was created. In 3000 BC, man used colour as a decorative element to attract the prey he wanted to hunt. In addition, he used colours to decorate his body, to frighten opponents (whether human or animal), and to defend against attacks from rivals. The history of cosmetics begins with hunting, warfare, religion, gullibility, and then moved into medicine.

Herbal wraps or masks are used on the face to promote blood flow, stimulate muscles, maintain skin elasticity, and unclog pores. Herbal cosmetics are non-toxic, less likely to cause adverse reactions, and are made with ingredients that have been proven to work overtime. Cosmetics are products designed to improve desirable properties, clean, and beautify the skin and hair. Nowadays, skin care is not common. Since individuals have used cosmetics to preserve and beautify their skin throughout history, we can only assume that it is a basic human need. Although cosmetic products have changed, the basic concept of using cosmetics to promote the qualities of good health has not changed.(2)

- Advantages:
- Natural products. herbal cosmetics are derived from natural compounds.
- Safe and effective use. Compared to other cosmetic products flooded on the market, natural cosmetics are the safest and at the same time effective.
- Suitable for all skin types.
- Not tested on animals.
- No side effects.
- Wide selection. (3)

Benefits of Herbal Face Pack:

- Herbal pack provides skin with vital nutrients.
- Depending on the herbal components used, it helps to lessen scars, marks, acne, and pimples.
- Face packs often eliminate skin's dead cells.
- The skin is soothed and relaxed by these face masks.
- They assist in quickly restoring the skin's lost luster and sheen.
- Regular application of natural face masks improves the texture and tone of the skin and gives it a glow.
- The appropriate usage of face packs can successfully counteract the negative effects of pollution and severe weather.
- They aid in preventing skin aging too soon.
- The use of natural face packs can help to successfully control the formation of wrinkles, fine lines, and skin sagging. (4)

Charcoal

Charcoal is an organic carbon compound. Plant and animal items can be partially burned to make charcoal. Charcoal is widely used in outdoor cooking. Typically, the process of making charcoal involves burning plant materials such as cellulose, peat, wood, and bones. It is a highly porous microcrystalline structure. To save energy during the brick-forming process, charcoal and clay are combined. In cosmetics, activated charcoal has gained popularity. Burning wood, coconut shells, peat, and olive pits in a low-oxygen atmosphere creates pores and increases the powder's surface area many times, up to roughly three thousand square meters per gram. The charcoal absorbs and remove impurities from face treat acne, reduce skin pores size, and treat skin conditions.

Skin care is crucial to our well-being because skin is a delicate and protective layer of the human body that is exposed to both damaging UV radiation and pollution from the environment. Because the skin on the face is thinner and more delicate than the skin on the rest of the body, it requires even more attention and care from us. Activated charcoal is therefore only meant to be applied to the face as a cream, lotion, face mask, face cleanser, or peel-off mask for cosmetic purposes. Not only can a suitable face cleanser protect our skin from hazardous bacteria and harmful pollutants, but it may also increase our confidence. Africa consumes over half of the world's charcoal due to low conversion efficiency caused by outdated production methods. According to the FAO's dry weight conversion efficiency of 23%, 100 million tons of wood are cut down each year to produce charcoal. This research primarily focuses on African charcoal systems because of the significant and quickly growing share of charcoal consumption in Africa. It is challenging to quantify the production and consumption of coal in emerging nations. Using constant charcoal consumption per capita parameters for every nation, the FAO estimates the production of charcoal. These parameters remain constant over the 1981–1992 period depicted, meaning that the population growth is solely responsible for the variations in coal output. (5)

A portion of the populace in the nation may be dependent on charcoal fuel, and rates of charcoal consumption may vary from those reported by the FAO. Even in nations where laws govern charcoal. Government estimates are erroneous due to the manufacturing of illegal charcoal, which is taxed. In Rwanda, Karenzi (1994) discovered that the amount of charcoal used, as determined by field surveys, was far higher than the most recent energy data released by the government's Ministry of Public works, Water and Energy (MINITRAPE). He discovered that Rwanda consumes 9.1 GJ of charcoal annually as opposed to MINITRAPE's estimate of 1.2 GJ. Through the utilization of special contracts, official harvest levels in Senegal are frequently surpassed, potentially increasing overall charcoal production by 30–100% [Ribot, 1993]. These illustrations highlight the requirement for collection of data. Charcoal's adsorbent qualities were first noted in the 1700s, and the first clinical use of the material happened in the early 1800s. Its application as a detox component stems from these adsorptive qualities. The 2014 Goop newsletter from Gwyneth Paltrow suggested charcoal-in fused Lemonade gained attention for its health benefits after being named one of the best juice cleanses of the year. The modern age most associates charcoal with teeth whitening and skin blemish removal. As a result of this growing admiration, activated charcoal surpassed all other cosmetic and beauty product sales records in terms of marketing. This also paved the way for the widespread commercial manufacture of charcoal, which is now used in face cleansers, carbonated face masks, and pore strips in addition to everyday soaps and hand washes. An amazing accomplishment for a skincare ingredient as new as activated charcoal, the International Nomenclature of Cosmetic Ingredients (INCI) listed 148 skincare products using charcoal powder as an ingredient in 2015. Within four years, the numbers were already five times higher than that of 2015. (6)

History:

The Charcoal has been used since 3750 B.C., when the Egyptians utilized it extensively to cure a variety of intestinal issues, including diarrhea, bloating, and constipation, in addition to masking the smells of mining. More emphasis is now focused on using activated charcoal as soon as possible. Patients who have consumed a potentially dangerous amount of a poison (which is known to be adsorbed to charcoal) up to 60 minutes prior should be evaluated for using activated charcoal (Position statement 1997). In the meanwhile, some writers contend that administering activated charcoal within two hours of an overdose would make sense. Nevertheless, despite sporadic studies suggesting improved removal of specific toxins, there is no proof that activated charcoal truly enhances therapeutic result. Furthermore, there is a dearth of evidence to support the efficacy of charcoal used in repeated doses.

Charcoal was originally used to cure poisoning victims over 150 years ago. Even though activated charcoal is now almost universally accepted, the focus on treating poisoned patients with gastric emptying first has obscured the significance of activated charcoal. We go over how activated charcoal is currently used and new research that indicates it could be the only treatment that works best for a variety of poisonings. Enterohepatic loop disruption and 'back diffusion' are two new theories about the mechanisms of action. Clinical evidence supports activated charcoal's novel and proactive function in treating poisoned and overdosed individuals.

Preparation of active charcoal:

Any carbon-rich materials (from plants, animals, or minerals) can easily be converted into activated carbon by utilizing a combination of chemical and techniques for gas activation), wood, charcoal, nut shells, fruit pits, brown and bituminous coals, lignite, peat, bone, and paper mill waste (lignin) are the most often used raw materials in the production of activated carbon. Synthetic polymers like PVC are also utilized in this process. For adsorption, activated carbon derived from hard wood is preferred over charcoal derived from soft wood, like pinewood, which is prone to instability and crumbling. Some have claimed that apricot pits and coconut shells yield the highest grades of AC. Are often manufactured using the following two fundamental methods: (i) The physical or gas activation approach, and (ii) Chemical activation: The technique of activation chosen also depends on the starting material and the desired consistency of the powdered or granular carbon, depending on whether it is low or high density.

The gas activation method Involves 'first' carbonizing a raw material with less than 25% moisture at 400–500 C to remove most of the volatile matter. The carbon is then exposed to oxidizing gases, typically carbon dioxide or steam, at 800-1000 C or with air at room temperature, to achieve selective oxidation. Typically, a first carbonization of the source material occurs before the oxidation. Wood begins to pyrolysis at a temperature of about 225 C. (7)(8)(9)



Figure

Utilization

The Egyptians utilized it as well during the mummification process. In addition, the Greeks and Romans of antiquity employed it to preserve their dental hygiene. The civilizations residing in and around the Indus valley began using charcoal powder to purify their water around 400 B.C.

Even though activated charcoal has been around for ages, it wasn't until the 1700s that its adsorbent properties were first identified in science. Lowitz, a scientist, noticed that charcoal could successfully remove colour from other materials. Furthermore, in 1830, Tourey, a French pharmacist, demonstrated the adsorptive properties of charcoal with remarkable bravery by ingesting a significant amount of charcoal and a lethal dose of strychnine, highly poisonous, colourless insecticide used to kill birds and rodents. Notably, Tourey remained remarkably unaffected by his risky action.

Later in 1834, powdered charcoal was used by American physician Hort to heal a patient who had been poisoned by mercury dichloride. (10)

Uses:

Cosmetic preparations for skin-lightening creams contain activated charcoal, which can absorb fat, dark spots, and pollutants that stick to our skin.15 additionally; it's frequently found in soaps, pore strips, carbonated face masks, and facial cleansers. Numerous pharmaceutical and cosmetic companies assert that their products, which contain charcoal, can aid in the treatment of adult acne, wounds, minor infections, seborrheic dermatitis, and itchy scalps. Additionally, some dermatologists think that since activated charcoal forms strong bonds with poisons and eventually flushes them out of the body, if it can successfully perform gastric lavage in patients who have consumed poisons in the past, it can also use this mechanism to bind with dead skin and bacteria that attract sebum on when skin has been exposed to toxins in the environment, it can also employ this technique to bind with dead skin and germs that attract sebum, leaving behind clear, healthy skin

that can be rinsed off. Its antifungal and antibacterial qualities can also be used to treat skin disorders including eczema and psoriasis. Furthermore, it efficiently eliminates filth and dandruff from the scalp, which makes it a beneficial supplement to shampoos. Moreover, a number of mouthwashes and dental pastes that contain charcoal also make the claim that they can whiten teeth, which seems to be related to the abrasive nature of the charcoal, which helps to remove stains.(11)

Physical Properties of Charcoal

- Charcoal is amorphous in nature.
- The charcoal powder is black colour.
- Carbon makes up the porous, black substance known as charcoal.
- It is a low-density compound.
- Charcoal shows low mechanical strength properties.
- Carbon charcoal's structure reveals a vast surface area.
- Charcoal acts as a good absorbent. It readily absorbs moisture.
- Charcoal is more easily contaminated when it comes into accidental touch with dust and soil due to its high porosity and surface area. Therefore, it requires precautions while storing.

Chemical Properties of Charcoal

- Charcoal is a low ash compound. Charcoal has this quality, which makes it a valuable product.
- It is a highly combustible compound.
- It reacts strongly with carbon dioxide.
- Charcoal is not easily absorbed in the gastrointestinal (GI) tract.
- Charcoal is not metabolized in the body. Charcoal is a high surface area compound.
- Therefore, it absorbs chemicals in the stomach. The chemicals are captured by charcoal, which then removes them from the body before they can enter the bloodstream.

Types of Charcoal

Activated charcoal is a fine, black powder that is produced by combining coal, bone char, coconut shells, peat, and petroleum coke. High temperatures cause the activation of charcoal. By decreasing the pore size during the heating procedure used to create activated charcoal, the surface area is increased. Comparatively speaking, this type of charcoal has more pores than the others. Activated charcoal is used to absorb poisons and other toxic compounds into the intestines. It is hence in charge of preventing absorption. Charcoal has a negative charge, which attracts negatively charged positive molecules. As a result, it facilitates the removal of these particles.

Wood Charcoal Plant wood is heated to a high temperature to produce a carbon compound known as wood charcoal. It is a chemical with low weight. Wood charcoal has a black colour. Charcoal is solid amorphous state in nature.

BBQ Charcoal Sawdust is compressed at high pressure and temperature without the use of binders or additives to create BBQ charcoal. In the Middle East, Taiwan, Korea, and Greece, this kind of charcoal is preferred. It has a hexagon-shaped intersection at the centre where a hole is present. Barbecue charcoal is mostly used for barbecues because it burns for longer than four hours and produces no smoke, ash, or odours.

Activated charcoal in the form of coconut shell charcoal is produced by using coconut shells. So called coconut charcoal that has been activated. There are medical uses for this kind of charcoal. Soft tissue and skin infections are treated with it. It exhibits antimicrobial properties. Coconut coal is another name for this type of charcoal.

Activated Bamboo Charcoal This type of bamboo is produced when it goes through a pyrolysis reaction without oxygen. There are two kind of bamboo charcoal: raw bamboo charcoal and bamboo BBQ (briquette) charcoal.

Use of Charcoal in restaurants, food is heated, cooked, and flavour-infused with charcoal. Several dangerous poisons can be eliminated by using charcoal as an absorbent. It is used to treat overdoses and poisonings in emergency medical situations.

Benefits of charcoal face pack:

- Emergency toxin removal

- Detoxifies the Skin
- Remove cleanses oil.
- Reduces acne
- Reduces skin irritations.
- Prevents premature ageing.
- Smoothen skin.
- Reduce inflammation. (12)(13)

Gram flour:

This is a pulse flour produce from ground chickpea (also known as Bengal gram or garbanzo). Staple diet in the cuisine from the Indian subcontinent, this flour can be manufacture either from Raw or roasted chickpeas. The raw variety is slightly bitter, while the roasted variety is more Flavourful. Gram flour, also referred to as started, has been utilized. Widely known for its properties to enhance attractiveness since ancient times. It helps to clean and sluff the skin, acting primarily as a tonic for it. All that gram flour is made of is ground chickpea flour. It has several benefits for both skin and hair. It is applied to lessen skin tanning and oiliness, making it an effective anti-pimple agent. Because it lightens the skin tone, it is utilized as a direct agent for fairness. A 24-hour natural fermentation was carried out on a blend of finger millet and horse gram flour in various ratios (2:1, 3:1, 4:1, and 5:1). Biochemical study revealed that at 16 hours, there was a significant increase in titratable acidity (0.168–1.046%), soluble proteins (1.1-fold), free amino acids (2.6-fold), and a fair decline in pH (6.6–4.2) and starch content (25.52%). Throughout the fermentation process, the amount of lactic acid bacteria predominated in the yeast counts, and total soluble and reducing sugars decreased concurrently. During a 16-hour fermentation, the overall amount of essential amino acids grew by 1.1 times, with protein comprising 48.68% of essential amino acids relative to total amino acids. Between 5.87 to 6.73 g of lysine are present per 100 g of total amino acids. (14)

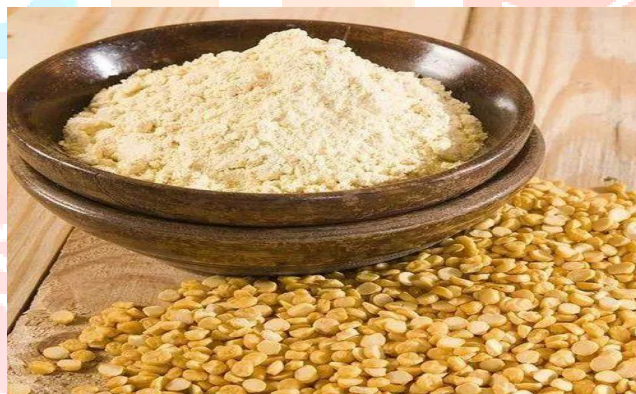


Figure 2 Gram

Gram flour is high in oleic and linoleic acids, two nutritionally significant unsaturated fatty acids, according to a study conducted in India. It is also an excellent source of beta-carotene, niacin, folate, and riboflavin, among other vitamins. Additionally, the flour may include some antinutritional ingredients that boiling will remove. Overall, the flour is produced using a significant pulse crop that offers several advantages. Gram flour contains zinc, which helps combat infections that lead to acne. Moreover, the fibre keeps blood sugar levels stable. Your hormones may be stressed by unbalanced blood sugar levels, which can lead to breakouts or pimples. That can be avoided with gram flour. Are you curious about using besan to remove tans? Now combine 1 teaspoon each of lemon juice, yogurt, and besan with 4 teaspoons. Mix with a small teaspoon of salt to create a smooth paste. After applying the mask to your entire face and neck, let it dry. Use cool water to rinse. This is a process you can repeat every day before taking a bath.(15)

It evens out skin tone and is a natural exfoliator. It brightens and thoroughly cleanses your skin. Zinc, which is present in gram flour, fights dark spots, minimizes blemishes, and delays the onset of ageing. Furthermore, it regulates the production of sebum and relieves irritated skin.

Besan is an extremely useful substance that is frequently seen in Indian kitchens and works incredibly well for skin issues. Whatever the issue with your skin, besan will nearly always help you deal with it. Beautifying your skin tone, eliminating hyperpigmentation and sun tan, and enhancing your complexion besan does it all.

Benefits of gram flour:

- Exfoliates our skin.
- Eliminates dirt.
- Pollutants
- Remove dead skin cells.
- Excellent exfoliating
- Lightening effects (16)(17)

Neem leaves:

Neem might have potential antimicrobial properties; it may be helpful for various skin problems and diseases such as acne, eczema, and other skin conditions. Psoriasis symptoms Treat by neem oil.

Neem leaves have long been used to treat a variety of epidermal dysfunctions, including acne, psoriasis, and eczema. Antioxidant-rich neem supports a stronger immune response in the tissues of the afflicted skin area. Bioactive substances with antibacterial, antifungal, and anticancer properties are also present. In this work, neem leaf extract was utilized to make herbal neem soap, which is intended to treat skin conditions. The study's chosen physical and chemical parameters' results indicate that the soap's moisture content was 4.02% and its pH value was 10.60, 57.40% total fatty matter, and 0.44% free caustic alkali. The findings suggest that herbal neem soap is safe for use on human skin and may be an effective treatment for skin issues.(18)



By highlighting the most recent research on neem extracts, we hope to shed light on a few key areas, including their significance as antioxidants and their potential to reduce the risk of cancer and diabetes. Prior to that, we will provide a quick summary of a few of the most significant bioactive compounds that are commonly present in many extracts. Despite this, we will continue to refer to other compounds throughout our work because it is reasonable that starting materials and extraction techniques vary widely. Additionally, we stress that a large portion of the work being done now is experimental, and as such, a section on the toxicity consequences is included. It is important to always take these impacts into account and to encourage more research to create better goods for human usage. Lastly, we talk about a section on neem as medical use. The neem tree, which is mostly grown in southern Asia and Africa, has long been associated with healing traditions. It is noteworthy to add that several elements of the Neem tree, such as the leaves, bark, fruit, flowers, oil, and gum, are linked to the previously described medical folklore for the treatment of certain medical ailments like diabetes, cancer, hypertension, and heart diseases. These extracts' potential effects can undoubtedly be attributed to cellular and molecular mechanisms. These mechanisms include the ability to modulate different signaling pathways, detoxification, DNA repair, cell cycle alteration, immune surveillance, autophagy and programmed cell death mitigation, immune surveillance, anti-inflammatory, anti-angiogenic, and anti-metastatic activities, and free radical scavenging.

Benefits of Neem for Skin Remove Pimples and Acne

It tightens the pore and assists in removing excessive sebum from the skin. Additionally, it relieves any skin irritation and itching caused by acne. Thus, applying neem oil for pimples might help get rid of zits. Frequent application would also aid in lowering skin redness and inflammation on the face. The use of neem face packs for pigmentation regulates the skin's synthesis of melanin. Helps to remove or protect sunburn. It also lessens the visibility of black patches and scars.

Preparation of neem leaf extract:

As previously mentioned, 50 grams of powdered neem leaf was combined with 500 millilitre of distilled water and allowed to boil for approximately half an hour to create the aqueous leaf extract. Whatman No.1 filter paper was used to filter the boiling solution, yielding clear aqueous leaf extract. Until it was needed again, the extract was kept at 4°C. The assay was conducted in less than a day after the addition of 1 mm AgNO₃ powder to 100 ml of distilled water.

Benefits of neem leaves:

- Moisturizes the skin.
- Soothes inflamed and irritated skin.
- Fight multiple signs of premature aging. Tackles blackheads and whiteheads.
- Treats uneven skin tone.
- Fights acne and pimples.
- Protects against environmental damage.(19)(20)

Sandal wood:

A class of woods from trees in the genus *Santalum* is known as sandalwood.

Native to the Malay Archipelago, northern Australia, and the tropical belt of peninsular India, sandalwood is a valuable commodity. The main areas of distribution include the Indonesian islands of Timor and Sumba as well as the drier tropical parts of India. The genus's taxonomy and nomenclature are based on the historical and widespread use of this species. In terms of etymology, it ultimately comes from Sanskrit Chandana (čandana), derived from the Latin candere, to shine or glow, and candrah, "shining, glowing," meaning "wood for burning incense." In the fourteenth or fifteenth century, it made its way into English via Late Greek, Medieval Latin, and Old French. The Malay Archipelago, northern Australia, and the tropical zone of peninsular India are the native home of sandalwood. The Indonesian islands of Timor and Sumba as well as the drier tropical parts of India are the primary distribution areas.

Infection, inflammation, and hyperplasia are the hallmarks of many skin disorders and illnesses. We need long-term topical therapy solutions that are both safe and effective. Conventional botanical remedies are being investigated as possible novel active components in dermatology. These remedies are frequently complex mixtures with various modes of action. The essential oil extracted from the sandal wood tree is called sandalwood album oil (SAO), or East Indian sandalwood oil (EISO). It has been shown to have biological action as an anti-inflammatory, anti-microbial, and anti-proliferative agent. Clinical research on the treatment of common warts, psoriasis, acne, and eczema has demonstrated the potential of sandalwood album oil. Sandalwood album oil of medicinal quality has recently been available, and its good safety profile, convenience of topical application, and assistance broader use as the basis of novel therapies in dermatology.

Benefits of sandal wood:

- Anti-inflammatory
- Antimicrobial
- Ant proliferative or inhibits undesirable cell growth Antiviral.
- Antiseptic
- Fever-reducing
- Scabies inhibiting (21,22)



Figure A Sandal Wood

Aloe- vera:

This perennial evergreen grows wild in desert, tropical, and semi-tropical conditions worldwide. It is indigenous to the Arabian Peninsula. Mostly used as a topical therapy for centuries, it is cultivated for commercial purposes. When grown indoors in a pot, the species looks good and is useful for decoration.

The polysaccharide gels an acemannan, which has numerous medicinal uses, is found in considerable quantities in aloe vera leaves. Aloin, a poison, is found in the skin. Typically, just the gel is used in aloe vera products. Numerous items, such as skin lotions, cosmetics, ointments, and gels for minor burns and abrasions on the skin, include the acemannan found in aloe vera because the reactions caused by oral intake of aloe vera extracts are yet unclear, they can be harmful. Pregnant women are particularly at risk because it can cause allergic reactions in certain individuals, even when given topically. However, some people may experience allergic reactions to topical use.

Two components of Aloe vera are used in the production of commercial products: the clear gel and the yellow latex. Topical treatments for skin ailments such as burns, wounds, frostbite, rashes, psoriasis, cold sores, or dry skin are commonly made with aloe gel. Aloe latex can be taken on its own or combined with other substances to make a product that is consumed to relieve constipation.

History:

For millennia, aloe vera has been utilized medicinally in several countries, including Greece, Egypt, India, Mexico, Japan, and China. Nefertiti and Cleopatra, the queens of Egypt, incorporated it into their daily beauty regimens. It was used to cure soldiers' wounds by Christopher Columbus and Alexander the Great. John Good Yew's translation from the A.D. has the earliest known mention of Aloe vera in English in 1655 of 'Dioscorides' Medical treatise De Material Medica.² By the early 1800s, Aloe vera was in use as a laxative in the United States, but in the mid-1930s, when it was effectively utilized to treat severe and chronic radiation dermatitis, it marked a turning point.⁽²³⁾

Action:

Mucopolysaccharides provide a moisturizing and anti-aging impact by assisting the skin in retaining moisture. The production of collagen and elastin fibres by aloe promotes fibroblast, which makes the skin less wrinkled and more elastic. Additionally, by binding the superficially peeling epidermal cells together, it has cohesive effects that soften the skin. Zinc works as an astringent to constrict pores, while amino acids also soften tough skin cells. Aloe vera gel gloves have also been tested for their moisturizing properties in the treatment of dry skin brought on by industrial exposure; in these cases, the skin integrity, fine wrinkle appearance, and erythema were all improved.²¹ it has an anti-acne effect as well.

The fibroblast's growth factor receptors are contacted by the mannose-rich polysaccharide glucomannan and the growth hormone gibberellin, which stimulates the fibroblast's activity and proliferation. This, in turn, greatly boosts collagen synthesis following topical and oral Aloe vera treatment. Aloe gel improved the amount of collagen in the wound while also altering its composition to include more type III collagen and strengthening its cross-linking. As a result, it quickened the healing process and raised the scar tissue's breaking strength. There have been reports of enhanced hyaluronic acid and dermatan sulfate production in the granulation tissue of a healed wound after oral or topical therapy.⁽²⁴⁾

Aloe vera frequently moisturizes skin cells and relieves facial discomfort. This gel is safe to use on the face and hair, and it would also offer quicker relief from irritation and inflammation. If chemicals like SLS and parabens were absent, it would be even better. The production of collagen and elastin fibres by aloe promotes fibroblast, which makes the skin less wrinkled and more elastic. Additionally, by binding the superficially peeling epidermal cells together, it has cohesive effects that soften the skin. Aloin, a well-known and organic depigmenting chemical, is found in aloe vera. This substance efficiently lightens skin, gets rid of dead skin cells, and removes skin flaws like dark spots and patches. Aloe vera can therefore help lighten your skin tone, so the answer is yes. With time, age-related symptoms including fine lines, wrinkles, and drooping skin around the eyes and neck become more noticeable. Try applying some aloe vera gel for comfort. It brings back the moisture balance and brightness of the skin. By restoring skin suppleness and healing damaged skin cells, it not only minimizes the appearance of fine lines and wrinkles on the face but also slows down the skin's natural aging process.

Benefits of aloe Vera

- Efficacy in treating burns or wound.
- Help in treat psoriasis, acne, and rashes, among other skin conditions.(25)(26)



Banana:

A banana is a long, edible fruit that belongs to the genus *Musa*. It is technically a berry. However, it is produced by several huge, herbaceous blooming plants. Dessert bananas are referred to as 'plantains' in some nations, whereas cooking bananas are termed "bananas." A rind that can be green, yellow, red, purple, or brown when ripe, covers the soft flesh that is high in starch. It is often elongated and curved. When the plant reaches its summit, the fruits climb upward in clusters. *Musa acuminata* and *Musa balbisiana* are two wild species that are the source of nearly all edible seedless (parthenocarp) bananas grown today. Depending on their genetic makeup, the most common cultivated bananas are known by their scientific names, *Musa acuminata*, *Musa balbisiana*, and *Musa × paradisiaca* for the hybrid *Musa acuminata* × *M. balbisiana*. *Musa sapientum*, the hybrid's previous scientific name, is no longer in use. However, there are certain alleged advantages of bananas that go beyond simply consuming them. Banana masks are becoming more and more well-liked as do-it-yourself treatments for a range of dermatological problems, from hair to skin care. Because of its high silica content and nutritious composition, banana face masks are supposed to help with skin problems. These advantages haven't, however, been thoroughly investigated in clinical settings.(27)

A serving of bananas provides a respectable 13% of the recommended daily intake of manganese. Despite being crucial to the formation of collagen, manganese is a trace mineral that is often overlooked in skin care products. In particular, proline, an amino acid necessary for the creation of collagen, is produced only with manganese. The protein called collagen keeps skintight and strong. Manganese, therefore, may help with anti-aging and healing properties of a banana face mask. Magnesium is last but most definitely not least. Magnesium has anti-inflammatory properties and may be used to treat acne when administered topically. Excess sebum and germs clogging pores cause blemishes, which are then followed by enema and irritation.

Inflamed pimples may be soothed by a banana face mask, hastening their healing process. For this reason, applying a banana face mask to treat acne is frequently advised.



Figure 6 Banana Peel

Banana face masks benefits:

Nutrients found in bananas may benefit skin health in certain cases.

These include: 1. Potassium 2. Vitamin B-6 3. Vitamin C 4. Traces of vitamin A (28)(29)

Rose water:

To make rose-flavoured water, rose petals are soaked in water. It is the hydrosol fraction of the rose petal distillate, which is a leftover after rose oil is extracted for use in fragrances. Throughout Eurasia, rose water is also utilized for religious purposes, as a component of several cosmetic and medicinal products, and to flavour food.

Methods of rose water preparation

Simmering

- Fill your saucepan or pot with the cleaned rose petals.
- Add distilled water to just over the petals. Avoid diluting your rose water by adding excessive amounts of water.
- Place the pot on the gas stove on average heat condition.
- After placing a lid on the pot, simmer it for thirty to forty-five,
- Simmer until the petals lose their colour.
- Wait until rose water and be cool.
- Filter the water into a spray bottle.
- Refrigerate and use for up to a mon.

Distilling

- In the centre of a wide saucepan, place a small bowl that can withstand heat.
- Fill the pot with the cleaned petals, being cautious not to let them lodge beneath the bowl.
- Add distilled water in pot until the petals are barely submerged.
- Turn the pot's lid upside down, then add the ice.
- Bring to a boil.
- Continue adding ice cubes as needed.
- Simmer for thirty to forty-five minutes on low heat.
- Using tongs, carefully remove the cover to examine the colour of the petals. Once they've lost their colour, you're done!
- Allow the rose water to cool completely.
- After the rose water has cooled, pour it into a spray bottle.

- Refrigerate and use for up to 6 months.(30,31)



Figure 7 Rose Water

The rosewater was used at banqueting tables across medieval Europe to wash hands. Typically, scent ingredients include rose water. Rose water can also be found in cosmetics like toners, face washes, and cold creams. During the winter months, especially, some people use rose water sprayed directly on their faces as a moisturizing and scent. Additionally, Indian weddings frequently sprinkle it on guests to greet them. It should come as no surprise that rose water may lighten skin redness and improve complexion, it has been used as a cosmetic for hundreds of years. Reduced acne could be aided by the antimicrobial qualities. Skin redness can be lessened by the anti-inflammatory characteristics. Puppy Chow and a Reliable Source.

Benefits of rose water:

- Cleanses and Brightens Skin.
- Soothes irritated skin.
- Balances natural oils.
- Decongests skin pores.
- Moisturizes skin. (32)

Evaluation Parameter:

- Organoleptic Evaluation: It speaks about judging the herbal face pack based on its appearance, texture, colour, and so on. Based on the methodology, the formulation's exterior characteristics were investigated.
- Physicochemical Evaluation: The determination of physicochemical characteristics encompassed the assessment of extractive value, ash value, pH, and moisture content.
- Physical Evaluation: The method of microscopy was used to test the particle size. Using the funnel method, bulk density, and tapping method, the flow property of the dried powder in mixed form was assessed.
- Phytochemical Evaluation: The presence of several phytoconstituents was assessed in the herbal face pack's aqueous extract using established protocols.
- Irritancy Test: On the dorsal surface of your left hand, mark a square centimetre. A certain amount of ready-made face packs was applied to the designated region, and the time was recorded. For a full day, irritability, erythema, and edema were monitored at regular intervals and reported.
- Stability Studies: A month-long stability test of the obtained formulation was carried out by storing it at various temperatures. The formulation's packed glass vials were kept at various temperatures. Stability analyses A month-long stability test of the obtained formulation was carried out by storing it at various temperatures. The glass vials containing the formulation were stored at different temperatures.(33)

CONCLUSION:

People now a days require side-effect-free treatments for a variety of skin conditions. Given that natural medicines are safer and have less adverse effects than synthetic ones, they are considered more appropriate. In the global market, herbal formulations are in demand. The face pack made of herbs is quite beneficial and includes ingredients such as rose water, aloe vera, gram flour, nutmeg, sandal wood, and charcoal. It is suggested that the developed formulation had characteristics of a typical cosmeceutical formulation for cosmetics and was both physically and microbiologically stable. It effectively gives the skin a radiant

appearance. A face pack made of herbs is used to restore muscle flexibility, eliminate stuck-on dirt particles, and enhance blood flow. One of the advantages of herbal-based cosmetics is their non-toxic composition. The facial skin is nourished by it. This face pack gives the skin essential nutrients. Acne, pimples, scars, and markings are all reduced by it. A face pack has the dual benefits of exfoliating the skin and cooling, relaxing, and soothing it. They give skin its ideal radiance back in the shortest amount of time. Natural medicines are becoming widely accepted because they are less harmful and have less adverse effects than solutions made of chemicals. To meet the demands of the expanding global market, a significant volume of herbal formulation was needed.

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