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Formulation and Evaluation of Poly Herbal Topical Wound Healing Cream

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Abstract: *Creams have been used as topical pharmaceutical dosage forms since ancient times due to their ease of application and good patient acceptability. Pharmaceutical creams serve a wide range of purposes, from cosmetic applications such as cleansing, beautifying, moisturizing, and enhancing appearance, to therapeutic uses including protection against bacterial and fungal infections, as well as the treatment of cuts, burns, wounds, and skin injuries. Human skin is highly susceptible to injury but possesses an inherent ability to heal itself. However, the natural wound-healing process is often time-consuming and carries a significant risk of infection, particularly during the early stages of healing. In such cases, topical creams are applied to the affected area to accelerate the healing process and protect the wound from microbial invasion.*

This review focuses on the use of pharmaceutical creams in wound healing, providing a detailed discussion of the wound-healing process, appropriate methods of cream application, and classification of creams based on their function, characteristics, and type of emulsion. The review also covers various types of creams, commonly used ingredients in cream formulations, and evaluation parameters used to assess their quality and effectiveness. Creams are defined as thick liquid or semi-solid preparations consisting of either oil-in-water (O/W) or water-in-oil (W/O) emulsions, with viscosity dependent on the relative proportions of oil and water. They are widely used for cosmetic, protective, and therapeutic purposes.

Topical creams are designed to deliver drugs locally to the underlying layers of the skin or mucous membranes, ensuring targeted treatment of skin disorders. These formulations are developed using pharmaceutical techniques and may be medicated or non-medicated. Ayurvedic, polyherbal, and allopathic creams are commonly used depending on individual therapeutic needs. Creams contain one or more active pharmaceutical ingredients dissolved or dispersed in a suitable base and are classified as O/W or W/O emulsions based on their phase composition.

Wound healing is a complex, multistage biological process that requires an optimal wound environment. Several factors, including infection and underlying pathological conditions, can delay healing. In severe cases, impaired wound healing may lead to serious complications such as amputation. Traditional dry dressings may dehydrate the wound bed, whereas moist wound environments promote angiogenesis and tissue regeneration. Topical creams help maintain skin hydration, thereby enhancing the healing process more effectively than conventional dressings.

This review discusses recent advances, advantages, and limitations of topical creams in wound management and provides recommendations for improving cream formulations to enhance the effective delivery of therapeutic agents. Topical creams play a vital role in personalized wound care and regenerative medicine. The development of advanced wound-healing strategies is essential to reduce healing time and alleviate the financial burden on healthcare systems..

Keywords*:* Wound healing, antibacterial, curcumin, neem, tulsi, Ginkgo biloba

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I. INTRODUCTION

Creams are topical pharmaceutical dosage forms intended for application to the skin. They are defined as thick liquid or semi-solid preparations consisting of either oil-in-water (O/W) or water-in-oil (W/O) emulsions, with their consistency depending on the relative proportions of oil and water. Creams are widely used for cosmetic purposes such as cleansing, beautifying, enhancing appearance, and protecting the skin, as well as for therapeutic applications.

These topical formulations are designed to produce localized effects by delivering active pharmaceutical ingredients directly to the underlying layers of the skin or to mucous membranes. Such targeted drug delivery improves the effectiveness of treatment for various skin disorders while minimizing systemic side effects. Creams are developed using standardized pharmaceutical manufacturing techniques and are therefore considered pharmaceutical products. Both medicated and non-medicated creams are extensively used in the management of a wide range of dermatological conditions.

Depending on their composition and intended use, creams may be formulated using synthetic drugs, herbal extracts, or a combination of both. Accordingly, creams can be classified as ayurvedic, polyherbal, or allopathic formulations, allowing users to select products based on their specific skin conditions and therapeutic needs. Creams typically contain one or more active medicinal substances dissolved or uniformly dispersed in a suitable base.

Based on the nature of the emulsion, creams are classified as oil-in-water (O/W) or water-in-oil (W/O) systems. Traditionally, the term “cream” has been applied to semi-solid emulsions such as water-in-oil formulations (e.g., cold cream) or oil-in-water formulations (e.g., vanishing cream). These characteristics make creams one of the most versatile and widely accepted topical dosage forms in dermatological therapy.

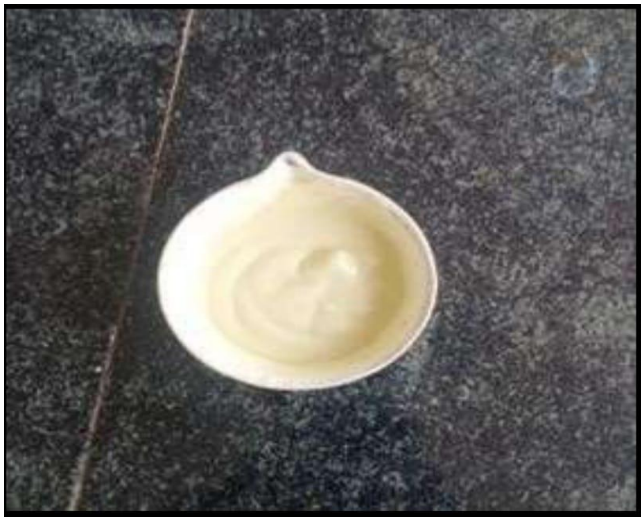

Fig. 1: Formulation of herbal cream.

Types of Cream

1) Make up cream (o/ w conflation)
a) Evaporating creams.
b) Foundation creams.
2) sanctification cream, sanctification milk, sanctifying embrocation (w/o conflation)
3) Winter cream (w/ o conflation)
a) Cold cream or moisturizing creams.
4) Each- purpose cream and general creams.
5) Night cream and massage creams.
6) Skin defensive cream.
7) Hand and body creams.

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Wound Healing

Wound healing is a complex and dynamic biological process through which the body repairs damaged tissues such as skin, muscle, and other connective tissues following injury or trauma. This process involves a coordinated sequence of cellular and molecular events aimed at restoring the structural and functional integrity of the affected tissue.

Wounds

Wounds are defined as injuries involving the loss or disruption of cellular, anatomical, or functional integrity of the skin or underlying living tissues. Such injuries may result from various causes, including physical, chemical, thermal, microbial, viral, mechanical, or immunological trauma to the surface of the skin. Wounds can have significant physical and psychological effects on affected individuals, and in many cases, residual scarring may persist throughout the patient's lifetime.

Wounds are commonly characterized as physical injuries that lead to the opening or breaking of the skin. They can be broadly classified based on the mode of injury and the causative agents involved. Understanding the nature and classification of wounds is essential for selecting appropriate therapeutic strategies and promoting effective wound management.

Types of Wound

1. Closed crack- bruise, closed fracture, etc.
2. Open crack

a) Sharp cut.
b) rent.
c) Bruise.
d) Avulsion.
e) Crush crack.
f) Punctured crack.
g) Bite crack.
h) Burn crack.

Classification of wound healing creams

Based on poly herbal ingredients

1. Single-herb creams: Contain a single poly herbalingredient, such as aloe vera or tea tree oil.
2. Multi-herb creams: Contain a combination of multiple poly herbalingredients, such as turmeric, neem, and ghee.
3. Poly herbalextracts creams: Contain extracts of herbs, such as plantain extract.

Based on poly herbal properties

1. Antimicrobial creams: Contain herbs with antimicrobial properties, such as tea tree oil or neem.
2. Anti-inflammatory creams: Contain herbs with anti- inflammatory properties, such as turmeric or ginger.
3. Antioxidant creams: Contain herbs with antioxidant properties, such as green tea or grape seed extract.

Based on wound type

1. Acute wound creams: Designed for acute wounds, such as cuts or lacerations.
2. Chronic wound creams: Designed for chronic wounds, such as diabetic foot ulcers or pressure ulcers.
3. Surgical wound creams: Designed for surgical wounds.

Based on preparation method

1. Traditional preparation creams: Prepared using traditional methods, such as Ayurvedic or Unani medicine.
2. Modern preparation creams: Prepared using modern methods, such as nanotechnology or micro emulsion.

Examples of poly herbal wound healing creams

1. Turmeric cream: Contains turmeric extract and is used for wounds, cuts, and skin irritation.

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a. Ideal properties of wound healing cream

a. Moisturizing
b. Non-adherent
c. Breathable
d. pH balanced
e. Antimicrobial
f. Anti-inflammatory
g. Cell proliferation
h. Growth factor stimulation

b. Criteria for good quality of cream

a. Texture: Smooth, non-greasy, and easy to apply.
b. Color: Uniform color, no separation or sedimentation.
c. Odor: Mild, pleasant odor, no strong or unpleasant smell.
d. Moisturizing ability: Maintains a moist environment to promote wound healing.
e. Adhesion: Adheres well to the skin, but does not stick to the wound.
f. Durability: Remains effective over time, resistant to wear and tear.

c. Advantages of wound healing cream

a. Accelerated wound closure
b. Improved tissue regeneration
c. Pain relief
d. Antimicrobial activity
e. Moisturizing ability
f. Easy to use
g. Non-invasive
h. Cost-effective

Drugs use in wound healing herbal topical cream

Curcmin

Fig. Curcmin

Curcumin, the bright yellow polyphenolic compound derived from turmeric (Curcuma longa), possesses a wide range of pharmacological properties, including antioxidant and anti-inflammatory activities. It is well known for its ability to scavenge free radicals, inhibit multiple inflammatory signaling pathways, and provide protective effects against various chronic diseases, such as cancer and neurodegenerative disorders. Despite its significant therapeutic potential, curcumin exhibits poor bioavailability and chemical instability, which limit its clinical application.

Curcumin, the principal bioactive constituent of turmeric, demonstrates remarkable wound-healing activity owing to its antioxidant, anti-inflammatory, and antimicrobial properties. It promotes wound repair by enhancing collagen synthesis,

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stimulating granulation tissue formation, and accelerating wound contraction, thereby contributing to faster and more effective healing.

Neem

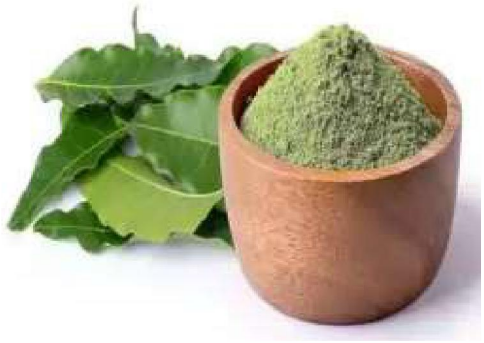

Fig. Neem

Neem (Azadirachta indica) is a medicinal plant widely used in traditional medicine for its broad spectrum of therapeutic properties. It exhibits potent antibacterial, antifungal, anti-inflammatory, and antioxidant activities, which make it particularly effective in wound management. Neem extracts help prevent microbial infection at the wound site, reduce inflammation, and promote tissue regeneration. Additionally, neem enhances angiogenesis and collagen formation, facilitating faster wound closure and improved healing outcomes.

Tulsi

Fig. Tulsi

Tulsi, commonly known as Holy Basil, is a medicinal plant recognized for its significant wound-healing properties. These effects are primarily attributed to its antioxidant, anti-inflammatory, and antimicrobial activities, which contribute to faster wound repair and a reduced risk of infection at the wound site.

Scientifically known as Ocimum tenuiflorum (syn. Ocimum sanctum), Tulsi is a highly revered herb in India with a long-standing history of medicinal and spiritual significance. It belongs to the family Lamiaceae (formerly known as Labiatae) and is native to the Indian subcontinent. The plant is widely cultivated and has become naturalized in various tropical regions due to its extensive therapeutic applications.

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Ginkgo biloba

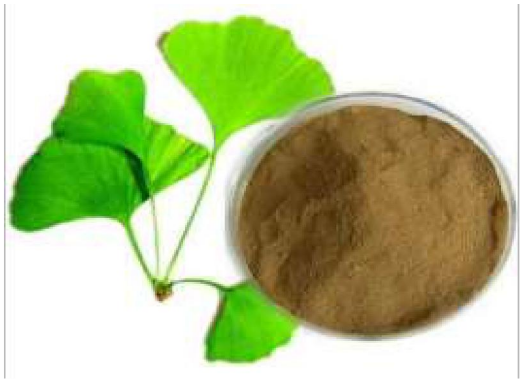

Fig. Ginkgo biloba

Ginkgo biloba extracts have demonstrated potential in wound-healing applications due to their ability to enhance blood circulation, promote collagen synthesis, and exert anti-inflammatory and antioxidant effects. Several experimental studies have reported that Ginkgo biloba extract can accelerate wound closure and improve overall wound appearance. Ginkgo biloba is often referred to as a "living fossil" and is the sole surviving species of its botanical order. It is a deciduous tree characterized by distinctive fan-shaped leaves and has a long history of medicinal use, particularly in traditional Chinese medicine. The standardized extract of Ginkgo biloba, rich in flavonoids and terpenoids, has been widely used for various therapeutic indications, including circulatory disorders and cognitive enhancement, although scientific evidence supporting some of these uses remains inconclusive.

Beeswax

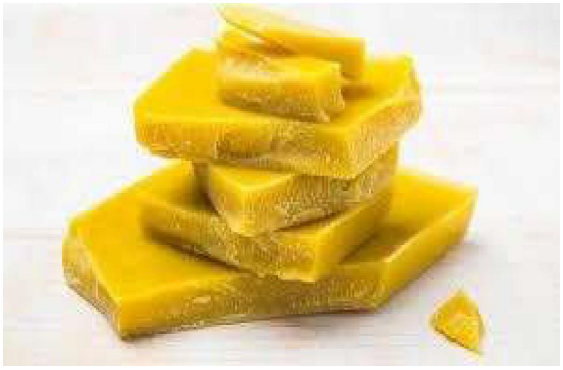

Fig. Beeswax

Beeswax is a natural wax produced by worker honeybees and is a complex lipid-based organic substance primarily composed of esters of fatty acids and long-chain alcohols. It is secreted in the form of scales from specialized wax glands located in the abdomen of bees and is subsequently chewed and modified before being incorporated into the honeycomb structure. Beeswax has demonstrated promising wound-healing properties due to its antimicrobial, anti-inflammatory, and antioxidant activities. Additionally, it forms a protective barrier on the skin, which helps retain moisture, prevent microbial contamination, and support the natural healing process.

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Tea Tree Oil

Fig. Tea Tree Oil

Tea tree oil, derived from the leaves of Melaleuca alternifolia, is an essential oil widely recognized for its potent antimicrobial properties and is commonly used in the topical treatment of various skin conditions. It contains bioactive compounds such as monoterpenes, particularly terpinen-4-ol, as well as sesquiterpenes, which contribute to its antiseptic, anti-inflammatory, and antioxidant effects. Due to these properties, tea tree oil exhibits significant wound-healing potential by reducing microbial load, minimizing inflammation, and potentially accelerating tissue repair while lowering the risk of infection.

Vitamin E

Vitamin E is regarded as the most important fat-soluble, non-enzymatic antioxidant and is primarily recognized for its ability to inhibit the activity of pro-oxidant agents generated by reactive oxygen species (ROS). It effectively neutralizes free radicals produced by internal and external factors such as ultraviolet radiation, medications, and environmental pollutants, thereby preventing oxidative damage to skin cells.

Fig. Vitamin E

Vitamin E plays a significant role in skin therapy and wound management by protecting cell membranes, enhancing tissue repair, and improving skin hydration and elasticity. It is commonly used in topical formulations and oral supplementation as part of comprehensive skin-care and wound-healing regimens.

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Olive Oil

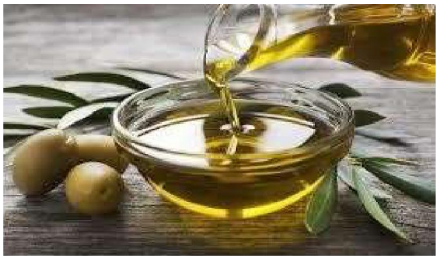

Fig. Olive Oil

It is derived from the Olea europaea fruit, is rich in monounsaturated fatty acids, particularly oleic acid, and contains antioxidants like polyp henols, contributing to its health benefits. particularly extra virgin, shows promise for wound healing due to its anti-inflammatory and antioxidant properties, potentially accelerating tissue regeneration and reducing inflammation. It contains compounds like phenolic acids and omega-3 fatty acids that contribute to these effects.

Rose water

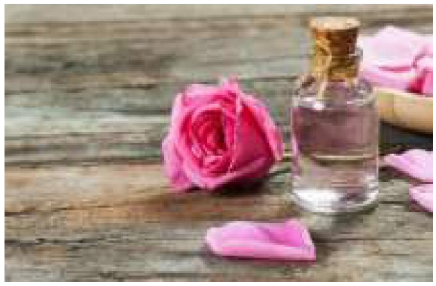

Fig. Rose water

Rose water, derived from steam-distilling rose petals, exhibits potential benefits for wound healing due to its antiseptic and antibacterial properties, aiding in faster healing and reducing infection risk. While more research is needed, some studies suggest its anti-inflammatory and antioxidant properties may contribute to these effects.

Excipienused in wound healing cream

1. Methyl paraben

Methylparaben is a synthetic preservative commonly used in personal care products, pharmaceuticals, and food. It is a member of the paraben family, which has been widely used for decades due to their antimicrobial properties.

Chemical Properties

1. Chemical Name: Methylparaben
2. Chemical Formula: C8H8O3
3. Molecular Weight: 152.15 g/mol
4. Melting Point: 125-128°C
5. Boiling Point: 270-280°C
6. Structure

2. Borax

Borax, also known as sodium tetraborate, is a naturally occurring mineral compound. It has been used for various purposes, including cleaning, pest control, and personal care.

Chemical Properties

1. Chemical Name: Sodium tetraborate
2. Chemical Formula: Na2B4O7·10H2O
3. Molecular Weight: 381.37 g/mol

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4. Melting Point: 743°C
5. Boiling Point: 1,575°C
6. Structure:

3. Liquid paraffin

Liquid paraffin, also known as mineral oil, is a colorless, odorless, and tasteless oil that is commonly used in various industries, including cosmetics, pharmaceuticals, and food.

Chemical properties

1. Chemical Name: Liquid paraffin
2. Chemical Formula: C15H32-C40H82
3. Molecular Weight: 200-600 g/mol
4. Melting Point: -10°C to -30°C
5. Boiling Point: 250°C to 400°C
6. Structure :

MATERIAL AND METHOD

Formula for wound healing cream formulation

Table 1: Formulation Table

Sr. No	Ingredients	F1C	F2C	F3C
1.	Curcumin	3 ml	2.5 ml	2 ml
2.	Neem	1 ml	0.88 ml	0.65 ml
3.	Tulsi	0.83 ml	0.75 ml	0.55 ml
4.	Ginkgo-biloba	0.01 ml	0.03 ml	0.02 ml
5.	Tea Tree Oil	0.3 ml	0.2 ml	0.1 ml
6.	Bess wax	6 gm	5.5 gm	3 gm
7.	Borax	3 gm	2.7 gm	2 gm
8.	Methyl paraben	1 gm	0.5 gm	0.2 gm
9.	Liquid paraffin	12 ml	11 ml	10 ml
10.	Vitamin-E oil	0.5 ml	0.4 ml	0.2 ml
11.	Olive oil	0.4 ml	0.2	0.2 ml
12.	Rose water	Q.s	Q.s	Q.s
13.	Dist. water	Q.s	Q.s	Q.s

Ingredients and their roles

Table 2: Roles of Ingredients.

Sr.No	Ingredients	Roles
1.	Curcumin	Anti- inflamntory, antibacterial properties
2.	Neem	Anti inflamentory & anti-oxidant
3.	Tulsi	Tissue strength improver & scarring reducer
4.	Ginkgo-biloba	Growth factor promoter
5.	Tea Tree Oil	Preventive activity
6.	Bess wax	Protective barrier
7.	Borax	Emulsifier
8.	Methyl paraben	Preservative & Stabilizer
9.	Liquid paraffin	Emollient
10.	Vitamin-E oil	Efficacy enhancer
11.	Olive oil	Burn care
12.	Rose water	Fragerance agent
13.	Dist.Water	Vehical

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1. Collectionof plant material

Curcumin powder

Has anti-inflammatory and antibacterial properties, helping to reduce redness and swelling associated with wounds.
Biological Source: It is obtained from the rhizome of herb Curcuma longa.
Family: Zingiberaceae
Chemical Constituents: Turmeric powder is about 60-70% carbohydrates, 6-13% water, 6-8% protein, 5-10% fat, 3 7% dietary minerals, 3--7% essential oils, 2-7% dietary fiber, and 1-6% curcuminoids. The golden yellow color of turmeric is due to curcumin. The rhizomes are used fresh or boiled in water and dried, after which they are ground into a deep orange-yellow powder commonly used as a coloring and flavoring agent in many Asian cuisines, especially for curries, as well as for the dyeing characteristics imparted by the principal turmeric constituent, curcumin.

Neem powder

Has anti-inflammatory and anti-oxidant properties, helping to reduce redness and swelling associated with wounds.
•Biological Source : it is obtained from neem azadirachta indica
•Family: Meliaceae
•Chemical Constituents :- Azadirachtin: 0.2-0.4%,
Nimbidin: 0.1-0.3%, Nimbinin: 0.05-0.1%, Quercetin: 0.1-0.2%,
Triterpenoids: 1-2%, Flavonoids: 1-2%, Saponins: 1-2%, Tannins: 5-10%

Tulsi powder

Has tissue strainght and scarring reducer properties, helping to growth of tissue and swelling associated with wounds.
•Biological Source : It is obtained from leaves of lamiaceae
Family: Lamiaceae •
•Chemical Contituents :- Eugenol: 1-3%, Ursolic Acid: 0.5-1.5%, Rosmarinic Acid: 1-2%, Apigenin: 0.5-1.5%, Luteolin: 0.2-0.5%, Volatile Oils: 0.5-1.5%, Flavonoids: 1-2%, Phenolic
Acids: 1-2%.

Ginkgo biloba

Has growth factor promoter properties, helps to improving cells and skin tissue and swelling associated with wounds.

- Biological Source: It is obtained from leaves of ginkgoaceae.
- Family : Ginkgoaceae
- Chemical Constituents - Flavonoids: 0.5-1.5%, Terpenoids: 0.2-0.5%, Ginkgolic Acids: 0.1-0.3%, Biflavonoids: 0.1- Polysaccharides: 1-

2. Extraction of poly herbal drugs

Extraction process of curcumin

1.Harvesting of Curcumin : Curcumin is a bioactive compound extracted from the rhizomes of the turmeric plant (Curcuma longa). Harvesting curcumin involves several steps, from cultivation to extraction.
2.Washing : Washing is a critical step in the processing of curcumin, a bioactive compound extracted from the rhizomes of the turmeric plant (Curcuma longa). Washing helps remove impurities, dirt, and other contaminants from the curcumin.
3.Peeling : Peeling involves removing the outer layer of the rhizome to expose the inner layer, which contains the curcumin.

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4.Grinding : Grinding is a critical step in the processing of curcumin, a bioactive compound extracted from the rhizomes of the turmeric plant (Curcuma longa). Grinding involves reducing the size of the curcumin particles to increase their surface area and enhance their bioavailability.

5.Straining : Straining involves passing the liquid extract through a filter or a mesh to remove impurities and improve the quality of the curcumin.

6.Extraction : Curcumin is a bioactive compound extracted from the rhizomes of the turmeric plant (Curcuma longa). The extraction of curcumin involves several steps, including harvesting, drying, grinding, and extraction using various solvents or methods.

7.Boiling : The boiling method is a traditional and simple technique used to extract curcumin from the rhizomes of the turmeric plant (Curcuma longa).

This method involves boiling the turmeric rhizomes in water or a solvent to release the curcumin.

8.Filtration: filtration is a basic method used to separate curcumin from impurities and other substances. This method involves passing the curcumin mixture through a filter medium, such as a membrane or a paper filter, to remove impurities and improve the purity of the curcumin.

Extraction Process of Neem

Harvesting: Neem (Azadirachta indica) is a tree native to the Indian subcontinent and is widely cultivated for its medicinal and agricultural uses. Harvesting neem involves collecting its leaves, seeds, and other plant parts for use in various applications.

Washing: Washing neem leaves is an essential step in preparing them for use in various applications, including medicinal, agricultural, and cosmetic uses. The washing process helps remove dirt, debris, and other impurities from the leaves.

Drying: Drying neem leaves is an essential step in preserving their quality and potency. Drying helps remove excess moisture from the leaves, preventing spoilage and extending their shelf life.

Crushing: Crushing neem leaves is a process used to release their bioactive compounds, such as azadirachtin, which is a natural insecticide. Crushing can be done using various methods, including manual and mechanical techniques.

Sieving: is a process used to separate crushed neem powder into different particle sizes. This is an important step in ensuring the quality and consistency of the final product.

Boiling: Boiling neem powder is a process used to extract its bioactive compounds, such as azadirachtin, which is a natural insecticide. Boiling can be done using various methods, including hot water extraction.

1.Filtration: Filtration is a basic method used to separate solid particles from a liquid or gas. It is a common technique used in various industries, including water treatment, pharmaceuticals

Extraction Process of Tulsi

Tulsi, also known as holy basil, is a plant that has been used for centuries in traditional medicine and spiritual practices. The extraction process of tulsi involves separating the bioactive compounds from the plant material to create various products, such as essential oils, extracts, and powders.

Harvesting: Harvesting of tulsi, also known as holy basil, is a crucial step in the production of tulsi products. The harvesting process involves collecting the leaves, stems, and flowers of the tulsi plant, which are used for medicinal, spiritual, and culinary purposes.

Washing: Tulsi leaves is an essential step in preparing them for use in various applications, including medicinal, culinary, and spiritual purposes. The washing process helps remove dirt, debris, and other impurities from the leaves.

Drying: Drying tulsi leaves is an essential step in preserving their quality and potency. Drying helps remove excess moisture from the leaves, preventing spoilage and extending their shelf life.

Crushing: Crushing tulsi leaves is a process used to release their bioactive compounds, such as essential oils and other nutrients. Crushing can be done using various methods, including manual and mechanical techniques.

Sieving: Sieving tulsi leaves is a process used to separate the leaves into different sizes or to remove impurities. Sieving can be done using various methods, including manual and mechanical techniques. Boiling : Boiling tulsi

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leaves is a traditional method used to extract their bioactive compounds, such as essential oils and other nutrients. Boiling can be done using various methods,

1. Filtration: Filtration is a method used to separate solid particles from a liquid or gas. In the context of tulsi leaves, simple filtration can be used to remove impurities and debris from tulsi tea or extracts

Extraction process of Ginkgo Biloba

Ginkgo biloba is a popularpoly herbalsupplement known for its potential health benefits, including improved cognitive function and memory. The extraction process of ginkgo biloba involves separating the bioactive compounds from the plant material to create various products, such as extracts, powders, and teas.

1.Harvesting: Ginkgo biloba is a deciduous tree native to China, and its leaves are widely used in traditional medicine and dietary supplements.

Harvesting ginkgo biloba leaves is a crucial step in the production of ginkgo biloba products.

2.Washing: Washing ginkgo biloba leaves is an essential step in preparing them for use in various applications, including medicinal, dietary, and cosmetic products. The washing process helps remove dirt, debris, and other impurities from the leaves.

3. Drying: Drying ginkgo biloba leaves is an essential step in preserving their quality and potency. Drying helps remove excess moisture from the leaves, preventing spoilage and extending their shelf life.

4. Crushing: Crushing ginkgo biloba leaves is a process used to release their bioactive compounds, such as flavonoids and terpenoids. Crushing can be done using various methods, including manual and mechanical techniques.

5. Sieving: Ginkgo biloba leaves is a process used to separate the leaves into different sizes or to remove impurities. Sieving can be done using various methods, including manual and mechanical techniques.

6. Boiling: Boiling Ginkgo biloba leaves is a traditional method used to extract their bioactive compounds, such as flavonoids and terpenoids. Boiling can be done using various methods, including hot water extraction.

RESULT

The formulated poly herbal cream has been evaluated at different parameters. All the organoleptic properties are checked visually such as colour, odour, consistency, and texture. As a result, the colour observed was pale yellow, no bad odour occurred from formulation and the consistency of the formulation was found suitable as required to apply on the wounds. Washability and cleansing properties of curcumin has found to be good, there was no redness, no irritation or any dermatological effects were observe on skin during irritancy testing.

The Result are as Follows

Sr. No.	Test	Result
1.	Colour	Pale yellow
2.	Odour	Charecterestics
3.	Texture/ Appearance	Smooth
4.	Nature	Semi solid
5.	Consitency	Good
6.	ph	7
7.	Washability	Easily washable
8.	Irritability	Non irritant
9.	Grittiness	Not gritty
10.	Cleaning effect	Good
11.	Ease of use	Yes
12.	Phase separation test	No separation
13.	Spred ability test	10.16g.cm/s
14.	Washability test	Easily washable
15.	After feel test	Good
16.	Irritancy test	Non irritancy
17.	Greasiness test	Midly-greasy

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18.	Stability test	Stable

II. CONCLUSION

The cream demonstrated effective wound-healing properties due to the inclusion of Curcumin, Neem, Tulsi, and ginkgo biloba. Each poly herbal constituent exhibited noteworthy therapeutic actions. According to the findings, all formulations—FIC, F2C & F3C were stable at room temperature and safe for topical application. Among these, the F2C formulation proved to be superior compared to FIC & F3C.The current study focuses on the potential of poly herbal extracts for cosmetic applications. The personal care industry has significantly increased the use of cosmetics containing natural ingredients. Bioactive compounds in the skin‘s biological processes and provide essential activitie for maintaining wound health. Throughout the trial period, the formulated cream exhibited high consistency, good spreadability, and no signs of phase separation. The resulting poly herbal cream possesses excellent qualities and offers nutritional benefits while minimizing the use of chemicals, thereby protecting the skin from various conditions. It is cost- effective, as it was prepared using simple ingredients and a straightforward method. These poly herbal cosmetic formulation can serve as a protective barrier for the skin and is considered safe for use. Test results indicate that the cream can be applied topically to safeguard the skin from damage. The belief that natural remedies are safer and have few side effects than synthetic alternatives contributes to their growing acceptance.

REFERENCES

[1]. Rai R. Poudyl AP, Das S, Pharmaceutical Creams and their use in wound healing: A Review, Journal of Drug Delivery and Therapeutics. 2019, 9(3-s): 907-912

[2]. Mahalingam RC, Xiaoling L, Bhaskara RJ. Semisolid Dosages: Ointments, Creams and Gels‖, Pharmaceutical Manufacturing Handbook. 2021; 2(3): 267-274.

[3]. Biswas TK, Mukherjee B, ―Plant medicines of Indian origin for wound healing activity: a review‖ The international journal of lower extremity wounds, 2023; 2(1): 25-39.

[4]. Kiran K, Asad M, ―Wound healing activity of Sesamum indicum L seed and oil in rats‖

[5]. Manoj D. Jadhav, Mangesh P. Ubale, Shubham V. Kadam, Ansari M. Ehtesham Matoshri Institute of Pharmacy, Dhanore, Yeola(2021).

[6]. Biswas, T.K. and Mukherjee, B. (2023) Plant Medicines of Indian Origin for Wound Healing Activity: A Review. International Journal of Lower Extremity Wounds, 2: 25-39.

[7]. Sana Bardaa Laboratory of Pharmacology, Faculty of Medicine of Sfax, University of Sfax, Tunisia Merkle, R.C. (2024) A Digital Signature Based on a Conventional Encryption Function. In: Pomerance, C., Ed., Advances in Cryptology—CRYPTO‘87. CRYPTO 1987. Lecture Notes in Computer Science, Vol. 293. Springer, Berlin, Heidelberg.

[8]. Christaki EV, Florou-Paneri PC. Aloe vera: A plant for many uses. J Food Agric Environ. 2010; 8(2): 245-249.

[9]. Araujo CA, Leon LL. Biological activities of Curcuma longa L. Mem Inst Oswaldo Cruz. 2001; 96(5): 723–728.

[10]. Reddy AKG, Saranya SC, Kumar ACK. ―Wound healing potential of Indian medicinal plants‖. Int J Pharm Rev Res. 2012; 2(2): 75-87.

[11]. Sah AK, Vijaysimha M, Mahamood M. The tulsi, queen of green medicines: Biochemistry and pathophysiology a review. Int J Pharm Sci Rev Res. 2018; 50(2): 106-114.

[12]. Girijashankar V. Micropropagation of multipurpose medicinal tree Acacia auriculiformis. Journal of Medicinal Plants Research, 2011; 5: 462-466.

[13]. Singh S, Sharma N, Evaluation of Wound Healing Activity of Acacia auriculiformis A. Cunn. Stem Bark. Asian Journal of Pharmaceutical and Clinical Research, 2014; 7: 204-207.

[14]. Kapoor S, Saraf S. Formulation and evaluation of moisturizer containing herbal extracts for the management of dry skin. Pharmacog J., 2010; 2(11): 409-417.

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[15]. Pal A, Soni M, Patidar K, ―Formulation and evaluation of polypoly herbalcream‖ International Journal Pharmaceutical and Biological Archives, 2014; 5: 67-71.

[16]. Aswal A, Kalra M, Rout A, ―Preparation and evaluation of poly herbal cosmetic cream‖ Der Pharmacia Lettre., 2013; 5(1): 838

[17]. Boateng, J. S., Matthews, K. H., Stevens, H. N. E., & Eccleston, G. M. (2008). Wound healing dressings and drug delivery systems: A review. Journal of Pharmaceutical Sciences, 97(8), 2892–2923.

[18]. Pandey, A., & Singh, S. (2011). Herbal medicines: Current status and future prospects. International Journal of Pharmaceutical Sciences Review and Research, 8(2), 14–23.

[19]. Gupta, S. C., Patchva, S., Koh, W., & Aggarwal, B. B. (2012). Discovery of curcumin, a component of turmeric, and its wound-healing properties. Clinical and Experimental Pharmacology and Physiology, 39(3), 283–299.

[20]. Biswas, K., Chattopadhyay, I., Banerjee, R. K., & Bandyopadhyay, U. (2002). Biological activities and medicinal properties of neem (Azadirachta indica). Current Science, 82(11), 1336–1345.

[21]. Bhowmik, D., Chiranjib, B., Yadav, J., & Tripathi, K. K. (2010). Herbal remedies of wound healing A review. International Journal of Pharmacy and Pharmaceutical Sciences, 2(1), 1–7