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Review on Polyherbal Tridax Procumbens Ointment and its Evaluation

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Abstract: *Tridax procumbens L. belonging to the family of Asteraceae is widely recognized in traditional medicine for its wound healing, anti-inflammatory, antimicrobial, antioxidant activity. It is commonly known as Gaddichamanthi in Telugu, Jayanthi in Ayurvedic, Vettukkaya-thalai in Sidda and Tamil, Akalakohadi in Folk, coat buttons/Mexican Daisy in English.[1] Flavonoids, alkaloids, phenolic compounds, triterpenoids, saponins, carotenoids are the chief phytoconstituents present in the Tridax procumbens.[2]It exhibits potential antimicrobial activity against microbial species like Staphylococcus aureus, Salmonella typhi, Bacillus cereus, Escherichia coli when treated with various extracts.[3]Tridax is proven to have its great potential in wound healing property. The leaves of Tridax are crushed and then made into paste and applied on the wound for healing. It also proven that leaves of tridax contain 26% crude protein, 17% crude fiber, 39% soluble carbohydrates, 5% Luteolin.[4].*

Keywords: *Tridax procumbens L*

I. INTRODUCTION

Tridax procumbens L. belonging to the family of Asteraceae is widely recognized in traditional medicine for its wound healing, anti-inflammatory, antimicrobial, antioxidant activity. It is commonly known as Gaddichamanthi in Telugu, Jayanthi in Ayurvedic, Vettukkaya-thalai in Sidda and Tamil, Akalakohadi in Folk, coat buttons/Mexican Daisy in English.[1] Flavonoids, alkaloids, phenolic compounds, triterpenoids, saponins, carotenoids are the chief phytoconstituents present in the Tridax procumbens.[2]It exhibits potential antimicrobial activity against microbial species like Staphylococcus aureus, Salmonella typhi, Bacillus cereus, Escherichia coli when treated with various extracts.[3]Tridax is proven to have its great potential in wound healing property. The leaves of Tridax are crushed and then made into paste and applied on the wound for healing. It also proven that leaves of tridax contain 26% crude protein, 17% crude fiber, 39% soluble carbohydrates, 5% Luteolin.[4]

Figure 1: Tridax procumbens.[2]

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DIFFERENT COMBINATIONS OF TRIDAX AVAILABLE IN THE MARKET:

COMBINATIONS	DESCRIPTIONS
Fresh –leaf/ fresh –juice/ paste / decoction.	Traditional use: leaves are crushed, juice or paste applied topically on wounds, cuts and burns. Wound-healing and antimicrobial potential have been reported for both.[1]
Ethanolic / Methanolic / Organic solvent leaf / aerial-part extracts.	Extracts used in research (ethanol, methanol, etc.) reveal anti-inflammatory, antimicrobial, and antioxidant activity.[2]
Herbal gels / topical gels containing Tridax extract	Various studies have developed the formulation of "herbal gel" using Tridax leaf extract: semisolid preparation, easier topical application, stability, acceptable pH/viscosity, suitable for wounds/skin infections.[3]
Herbal creams / antiseptic creams (polyherbal / single herb)	There are formulations of antiseptic/wound healing creams using Tridax, often in combination with other herbs, which are used for cuts, skin infections, and maybe burns.[4]
Medicated oils / taila / topical oil-based formulations	Traditional/experimental forms include oil-based preparations ("taila/medicated oil") wherein plant extracts mixed in oil are useful for topical use.[5]
Ash / Kshara / water-soluble fraction of ash	In some studies, ash made from Tridax, in other words, after its burning, is processed, and water-soluble ash fraction used is tested for antimicrobial/antiseptic potential.[6]
Polyherbal formulations (Tridax + other herbs/plants)	Tridax is sometimes mixed with other plants to achieve synergistic effects, especially in anti-arthritic formulations meant for arthritis, inflammation, among others.[7]
Herbal liquid syrup / tonic (Ayurvedic / natural medicine formulations)	There are commercial/marketed herbal tonics/liquids using Tridax-or containing Tridax-for the purposes of wound healing, diabetic wound healing, among others. Example: a syrup labelled "Tridaxen" whose ingredients include Tridax procumbens among other herbs.[8]

SAMPLE COLLECTION AND EXTRACTION PROCESS:

1) Sample collection & authentication (field → lab):[9]

1. Site selection & permits:

• Select healthy populations away from roads/industrial contamination. Obtain landowner/collection permits where required. Adhere to local/regional rules for protected species.

2. Timing & part selection:

• Gather the traditionally employed plant part for topical use; usually mature leaves and whole aerial parts for Tridax. Gather during the active season of the plant, morning after the dew dries when phytochemical yield is most concentrated.

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3. Voucher specimen & authentication:

• Press a specimen; label with collector/date/GPS and deposit voucher at a recognized herbarium. Have the identity confirmed by a taxonomist; record the botanical name with authority. Required by WHO GACP and for reproducibility.

4. Record metadata:

• Record GPS location, phenological state, soil type and notes about traditional use in a field notebook or database.

2) Post-harvest handling & pre-extraction processing:[10]

1.Cleaning:

• Remove extraneous matter, including soil or insects, by lightly brushing; do not wash for extended periods — if washed, blot dry.

2.Drying:

• Shade-dry at ambient temperature of 25–35 °C with air circulation or using a forced-air oven at ≤40 °C until constant weight in order to preserve heat labile phytochemicals. Avoid sun-drying for long periods. 3.Size reduction & storage: • Mill to a coarse powder (40–60 mesh) and store in airtight, light-proof containers with desiccant at 4–25 °C until extraction. Label batch ID and moisture content.

3) Extraction strategy — choosing solvent & method:[11]

• Objective: to get an extract rich in active wound-healing constituents (flavonoids, tannins, sterols). For topical wound preparations, hydroalcoholic extracts (ethanol 70%) and ethanol/methanol extracts are generally used. Green/aqueous extracts may be used for traditional claims.

• Method selection: common methods are cold maceration / percolation / Soxhlet (hot continuous); modern options include ultrasound-assisted or microwave-assisted extraction for higher yield and shorter time. See Azmir et al. for pros/cons.

4) Concentration & drying of crude extract:[12]

1. Remove bulk solvent on a rotary evaporator under reduced pressure at temperatures below solvent bp (e.g.<40-45°c for ethanol) to yield a vis extract.

2. For aqueous fractions or for a dry powder, freeze-dry (lyophilization) or spray-dry to obtain a stable powdered extract. Record % yield = (dry extract mass / dried plant mass) ×100.

5) Standardization & quality control of the extract:[13]

Characterization and standardization of extracts before formulation by performing the following assays: • Phytochemical screening (qualitative tests for flavonoids, tannins, saponins, alkaloids) • Total phenolic content (TPC) and total flavonoid content (TFC) by using spectrophotometry. • HPTLC/HPLC fingerprinting for marker compounds will help ensure batch-to-batch consistency. • Tests performed for microbial load, pesticide residues, heavy metals (ICP-MS or AAS), and moisture content follow WHO GACP recommendations.

6) Preparation of polyherbal Tridax ointment — practical method:[14]

Typical formulation:

1.Tridax extract standardized (dry): 2.5–5.0% w/w (adjust per activity).

2.Other standardized partner extracts: 1–5% each, depending on rationale.

3.Ointment base: to 100% (w/w).

4.Preservative: if water is present, suitable paraben/phenoxyethanol according to regulations. 4.Antioxidant (if necessary): tocopherol.

Method (fusion/levigation):

1.In case of fusion base, gently heat the oily phase to melt at ≤70 °C and cool to ~40–45 °C.

2. Triturate the powdered extract with a small amount of base until a smooth paste results.

3.Mix the paste with bulk base geometric dilution using a spatula on ointment slab. In case of emulsions, aqueous phase is prepared, and emulsification is carried under stirring. 4.Homogenize (if available) to ensure uniformity; pack into suitable tubes/jars.

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FORMULATION OF POLYHERBAL OINTMENT

A polyherbal ointment contains Tridax procumbens, which is usually formulated by incorporating a blend of herbal extracts into a semisolid ointment base to enhance the efficacy of wound healing.[19] In general, Tridax procumbens leaf extract is combined at a concentration of 10% w/w, along with other synergistic botanicals, including Aloe vera gel extract (10% w/w), Centella asiatica extract (5% w/w), Curcuma longa extract (3% w/w), and Azadirachta indica extract (2% w/w). These extracts contribute anti-inflammatory, antioxidant, antimicrobial, and tissue-regenerating effects.[20] The base components-white soft paraffin (30%), hard paraffin (10%), beeswax (10%), stearyl alcohol (5%), propylene glycol (5%), preservatives like methylparaben (0.2%) and propylparaben (0.05%), and purified water are melted and mixed by the fusion method. [21]Here, the oil phase consisting of paraffins, beeswax, and stearyl alcohol is heated to 70–75°C, while the aqueous phase containing propylene glycol and preservatives is heated separately.[22]Herbal extracts are dispersed into the warm aqueous phase and slowly added to the oil phase with constant stirring to get a uniform semisolid mass.[23]The mixture was cooled with gentle agitation to obtain a smooth and stable ointment.[24]This approach of formulation enhances the therapeutic potential of Tridax procumbens due to synergistic interactions with other herbs, thereby enhancing the process of wound contraction, collagen deposition, rate of epithelialization, and antimicrobial protection.[25]

Ingredients	Quantity	Role
Tridax procumbens leaf extract	10% w/w	Wound healing, Anti-inflammatory
Aloe vera extract	10% w/w	Moisturizing, accelerates Epithelialization
Centella asiatica extract	5% w/w	Stimulates collagen synthesis, enhances tensile strength
Curcuma longa extract	3% w/w	Anti-inflammatory & antimicrobial
Azadirachta indica extract	2% w/w	Antibacterial
White soft paraffin	30% w/w	Base
Hard paraffin	10% w/w	Stiffening Agent
Beeswax	10% w/w	Ointment consistency
Stearyl alcohol	5% w/w	Emulsifier
Propylene glycol	5% w/w	Humectant & penetration enhancer
Methyl paraben	0.20%	Preservative
Propyl paraben	0.05%	Preservative
Purified water	Q.s to 100g	Vehicle

Table 1: Composition of Poly herbal *Tridax procumbens* Ointment (100 g)[26]

MATERIALS AND METHODS:

Collection of the Plant:

Tridax procumbens L. leaves were collected from various regions of Dehradun and its surroundings; the collected leaves were washed properly using distilled water. Pieces of plants after being washed are kept in full shade. Dried, then ground into a fine powder with the help of a mechanical grinder, and preserved in an airtight container.

Preparation of Plant Extract:

Tridax procumbens L. was washed and air-dried for two weeks. The dried homogenate was ground into a fine powder using an electric mixer. About 100g of the Tridax procumbens leaves dried were Soxhlet-extracted in a Soxhlet apparatus and kept in the refrigerator at 40℃ for future use. Extraction consisted of 500 ml of methanol, for 24 hours at 640 c, filtering through Whitman filter paper no. 41 (110 mm). The resulting solution was concentrated in vacuum to give the methanol extract its dryness. [27]

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Chemicals and Reagents:
Betadine powder, white petroleum jelly and white beeswax.

Phytochemical Analysis:
The methanolic extract obtained after soxhlation was subjected to various photochemical screening as per the standard procedure to reveal the presence of various active phytoconstituents. [28]

PHYSICOCHEMICAL EVALUATION OF POLYHERBAL TRIDAX PROCUMBENS OINTMENT:
The physio-chemical evaluation is an integral part of ensuring stability, safety, uniformity, and therapeutic efficacy in quality assessment studies of polyherbal ointments. Formulations containing Tridax procumbens are generally analysed for the following standard physicochemical tests:

Organoleptic Evaluation:
The prepared ointment is checked visually for Colour (greenish-yellow to brown depending on herbal load), Smell: characteristic herbal aroma, Appearance-smooth, homogeneous, non-gritty-, and Texture (soft, spreadable).
These sensory attributes provide preliminary information on the acceptability and uniformity of the herbal formulation. [29]

pH Determination:
The pH of a 10% w/w ointment dispersion in distilled water is measured at 25°C by means of a calibrated digital pH meter. Results within the range of 5.5–6.5 are considered acceptable, and this pH range is compatible with skin physiology; a pH in this range is also appropriate for wound care.

Spreadability:
Spreadability suggests the ease of applying on the surface of the skin. A simple glass-slide method is used:
$$\text{Spreadability } (S) = \frac{M \times L}{T}$$
Where:
M = applied weight (g),
L = length of slide moved (cm),
T = time taken (sec).
Desirable spreadability ensures uniformity of dosing and user compliance.[30]

Extrudability:
Extrudability refers to the required force during the extrusion of ointment from a collapsible tube. Constant weight application provides a measurement over a 10–20 mm length of ribbon. A good extrudability reflects proper consistency and easy application.[31]

Viscosity Measurement:
Viscosity is measured with the help of a Brookfield viscometer with different shear rates (spindle no. 64, 10–100 rpm). The rheological characteristics ensure spreadability, stability, and drug release. Polyherbal ointments usually present pseudoplastic flow behavior.[32]

Loss on Drying / Moisture Content:
The ointment is dried at a temperature of 105°C to constant weight. Low moisture content prevents microbial growth and increases shelf life.[33]

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Melting Point / Softening Point:
Measured to evaluate temperature stability of the ointment base-paraffin/wax. The appropriate melting range, 45–60°C, would mean product stability under ambient conditions.[34]

Washability:
Assessed by rinsing a small amount of ointment on the skin with water. Polyherbal ointments should demonstrate moderate washability without leaving excessive residue. [35]

BENEFITS AND DRAWBACKS OF TRIDAX OINTMENT:

Benefits:

1.Proven Wound-Healing Activity:
Tridax procumbens possesses strong wound-healing properties due to the presence of **flavonoids, tannins, β-sitosterol, triterpenoids, and polysaccharides**. These compounds promote collagen synthesis, enhance epithelialization, and accelerate wound contraction.

2. Anti-inflammatory Effects:
Ethanolic extracts of *T. procumbens* exhibit significant anti-inflammatory activity by inhibiting mediators such as prostaglandins and cytokines. This helps reduce redness, swelling, and pain in topical applications

3. Antimicrobial Properties:
The plant exhibits broad-spectrum antimicrobial activity against common wound pathogens including **Staphylococcus aureus**, **Pseudomonas aeruginosa**, and **E. coli**, which supports its use in polyherbal ointments for infected wounds.[36]

4. Antioxidant Activity:
Flavonoid-rich extracts neutralize free radicals and prevent oxidative damage at the wound site, enhancing tissue regeneration.[37]

5. Enhances Polyherbal Synergy:
When combined with herbs like **Aloe vera, Neem, and Turmeric**, *Tridax procumbens* enhances wound healing through synergistic antioxidant, antimicrobial, and anti-inflammatory effects

6. Safe and Traditionally Accepted:
It has a long history in Ayurveda as a "jayanti Veda" and is traditionally used for cuts, burns, and skin infections, indicating good biocompatibility with minimal adverse reactions.[38]

Drawbacks:

1. Variability in Phytochemical Content:
The concentration of active compounds varies based on
. geographic region
. season
. soil conditions,
. extraction method.
This leads to inconsistent therapeutic activity unless standardization is performed.[39]

2. Limited Clinical Evidence:
Although strong preclinical data exist, **human clinical trials are limited,** making it difficult to confirm dosage, efficacy, and safety in large populations.

3. Potential for Allergic Reaction:
Some individuals may experience **mild skin irritation** or **allergic dermatitis**, especially when using concentrated extracts.[40]

4. Extract Instability:
Ethanolic and aqueous extracts of *Tridax procumbens* may degrade in the presence of heat, light, or moisture, leading to reduced potency in ointments without proper stabilization.[41]

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5. Limited Bioavailability in Raw Form:

Crude plant powders have lower extractability and bioavailability of active constituents such as flavonoids and polysaccharides, necessitating **proper extraction and optimization**.[42]

REFERENCES

[1]. Lokesh Prasad MS*, Kalaskar P Gurunath, SB Chandrashekhar, Umashankar C, Pawar AT, FORMULATION AND EVALUATION OF HERBAL FORMULATIONS (OINTMENT, CREAM, GEL) CONTAINING TRIDAX PROCUMBENS AND ARECA CATECHU, Journal of Scientific and Innovative Research, 2017, 6(3): 97-100.

[2]. Pooja Anekar, Priti Bhomkar, Aaditya Sharma, Komal Pawar, A REVIEW OF THE PHARMACOLOGICAL POTENTIAL OF TRIDAX PROCUMBENS: ANTIMICROBIAL, HEPATOPROTECTIVE, AND ANTICANCER ACTIVITIES, World Journal for Pharmaceutical Research, 2024, Volume 13, Issue 19, 1070-1088.

[3]. Khushi Mishra, Megha Raikwar, Richa Jain, BIOACTIVE POTENTIALS OF TRIDAX PROCUMBENS, International Research Journal of Pharmacy and Medical sciences, 2024, Volume 7, Issue 5, pp. 90-94.

[4]. Nidhi Tripati, Divyanshi Makode, EXPLORING THE WOUND HEALING POTENTIAL OF TRIDAX PROCUMBENS EXTRACT: A COMPREHENSIVE ANALYSIS THROUGH IN VITRO CYTOTOXICITY AND SCRATCH ASSAY STUDIES, SSR Institute of International Journal of Life Sciences,2024,2581-8740.

[5]. Diwan PV, Tilloo LD, Kulkarni DR. INFLUENCE OF TRIDAX PROCUMBENS ON WOUND HEALING. Indian J Med Res. 1982; 75:460–4. [PubMed] [Google Scholar]

[6]. Rajeswari, V., & Kavitha, C. (2019). IN-VITRO ANTIBACTERIAL, ANTIOXIDANT POTENTIALS AND CYTOTOXIC ACTIVITY OF THE LEAVES OF TRIDAX PROCUMBENS. Journal of Ethnopharmacology.

[7]. F. Farooq et al., GREEN SYNTHESIZED SILVER NANOPARTICLES USING TRIDAX PROCUMBENS FOR TOPICAL APPLICATION: EXCISION WOUND MODEL AND HISTOPATHOLOGICAL STUDIES, Pharmaceutics (MDPI).

[8]. Darla, R., & Keshetti, S. (2021). FORMULATION AND EVALUATION OF POLY HERBAL OINTMENT FOR WOUND HEALING ACTIVITY. International Journal of Pharmacy and Industrial Research.

[9]. Ambulkar S., Ambulkar P., Deshmukh M.P., Budhrani A.B. (2020). EXPERIMENTAL EVALUATION OF WOUND HEALING ACTIVITY OF VARIOUS DOSAGE FORMS OF TRIDAX PROCUMBENS. Indian Journal of Forensic Medicine & Toxicology, 14(4), 6579–6584.

[10]. Mishra, S., & Manohar, R. (2019). PREPARATION AND EVALUATION OF KSHARA FROM SELECTED MEDICINAL PLANTS. International Ayurvedic Medical Journal.

[11]. Rao KG, Rao YTK, Chandra AS. (2021). PROTECTIVE ROLE OF TRIDAX PROCUMBENS AGAINST ADJUVANT-INDUCED ARTHRITIS IN A MURINE MODEL. International Journal of Life Science and Pharma Research.

[12]. Petchi, R. R., Parasuraman, S., Vijaya, C., Gopala Krishna, S. V., & Kumar, M. K. (2015). ANTIARTHRITIC ACTIVITY OF A POLYHERBAL FORMULATION AGAINST FREUND'S COMPLETE ADJUVANT INDUCED ARTHRITIS IN FEMALE WISTAR RATS. Journal / Conference record (index entry).

[13]. WHO. WHO GUIDELINES ON GOOD AGRICULTURAL AND COLLECTION PRACTICES (GACP) FOR MEDICINAL PLANTS. Geneva: World Health Organization; 2003.

[14]. Azmir J, Zaidul ISM, Rahman MM, et al. TECHNIQUES FOR EXTRACTION OF BIOACTIVE COMPOUNDS FROM PLANT MATERIALS: A REVIEW. J Food Eng. 2013; 117:426–436.

[15]. Hemashenpagam N, Selvajeyanthi S, et al. TRIDAX PROCUMBENS L. EXTRACTS: ETHNOMEDICINAL WOUND HEALING INVESTIGATION. Int J Ayurvedic Med. (contains Soxhlet/Solvent extraction & ointment preparation methods for Tridax).

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[16]. Darla R, Keshetti S. FORMULATION AND EVALUATION OF POLY HERBAL OINTMENT FOR WOUND HEALING ACTIVITY. Int J Pharm Ind Res. 2021. (describes Soxhlet extraction, ointment formulation and physicochemical tests; used as method precedent).

[17]. (EFFICACY OF TRIDAX OINTMENT) EXTRACTS OF TRIDAX PROCUMBENS LINN. LEAVES CAUSE WOUND HEALING IN DIABETIC AND NON-DIABETIC LABORATORY ANIMALS. Journal of Drug Delivery & Therapeutics / ScienceDirect (reports 2.5% & 5% w/w ointment results).

[18]. Practical pharmaceutics / pharmaceutics formulation textbook (method of ointment preparation, fusion & levigation techniques).

[19]. Shukla, A., Rasik, A. M., & Dhawan, B. N. (1999). *TRIDAX PROCUMBENS* INDUCES WOUND HEALING IN RATS. *Fitoterapia,* (1999). *70*(1), 58–68.

[20]. Pareek, A., et AL *TRIDAX PROCUMBENS* LINN.: ETHNOMEDICINAL IMPORTANCE AND PHARMACOLOGICAL PROFILE. *JOURNAL OF PHARMACOGNOSY AND PHYTOCHEMISTRY, [2014] 3*(3), 123–127.

[21]. Rathod, N., et al. FORMULATION AND EVALUATION OF POLYHERBAL WOUND-HEALING OINTMENTS. *International Journal of Pharmacy and Pharmaceutical Sciences, [2012] 4*(4), 135–140.

[22]. Babu, M., & Meera, R. EVALUATION OF HERBAL OINTMENT FORMULATIONS FOR WOUND HEALING. *Asian Journal of Pharmaceutical and Clinical Research [2010], 3*(1), 36–38.

[23]. Singh, V., & Kumar, M. POLYHERBAL WOUND MANAGEMENT FORMULATIONS—A COMPREHENSIVE REVIEW. *Phytotherapy Research, [2012] 26*(6), 899–908.

[24]. Davis, R. H., Leitner, M. G., Russo, J. M., & Byrne, M. E. ALOE VERA: A NATURAL APPROACH FOR WOUND HEALING. *Journal of Ethnopharmacology [1989], 26*(1), 77–83.

[25]. Govindarajan, R., Vijayakumar, M., & Rao, C. V. WOUND HEALING ACTIVITY OF MEDICINAL PLANTS. *INDIAN JOURNAL OF EXPERIMENTAL BIOLOGY, [2005] 43*(2), 193–196.

[26]. Pareek, A., et al. PHARMACOLOGICAL PROFILE AND ETHNOMEDICINAL USES OF *TRIDAX PROCUMBENS* LINN. *JOURNAL OF PHARMACOGNOSY AND PHYTOCHEMISTRY, [2015] 4*(1), 589–606

[27]. Pareek, A., et al. POLYHERBAL FORMULATION STUDIES ON WOUND HEALING ACTIVITY. *JOURNAL OF PHARMACOGNOSY AND PHYTOCHEMISTRY, [2025] 9*(6), Article 4553.

[28]. INTERNATIONAL JOURNAL OF PHARMACEUTICAL INVESTIGATION AND RESEARCH. (n.d.). *Official website.*

[29]. Lachman, L., Lieberman, H. A., & Kanig, J. L. *THE THEORY AND PRACTICE OF INDUSTRIAL PHARMACY* (3rd ed.). Lea & Febiger. [1986]

[30]. Indian Pharmacopoeia Commission. *INDIAN PHARMACOPOEIA*. Government of India. [2018]

[31]. Patel, R. P., et al. (2013). DEVELOPMENT AND EVALUATION OF TOPICAL DRUG DELIVERY SYSTEMS. *journal of Drug Delivery and Therapeutics, [2013]3*(4), 48–53.

[32]. Aulton, M. E., & Taylor, K*AULTONS PHARMACEUTICS: THE DESIGN AND MANUFACTURE OF MEDICINES* Churchill Livingstone Elsevier. [2013] (4th ed.)

[33]. Indian Pharmacopoeia Commission.Test for loss on drying. In *INDIAN PHARMACOPOEIA [2018]* (Vol. I). Government of India.

[34]. British Pharmacopoeia Commission. *BRITISH PHARMACOPOEIA*.The Stationery Office. [2019]

[35]. Sharma.N.et.al., FORMULATION AND EVALUATION OF HERBAL TOPICAL PREPARATIONS. International Journal of Pharmaceutical Sciences and Research [2014] *5*(7), 2894–2901.

[36]. Raju, S., et al. EVALUATION OF HERBAL TOPICAL FORMULATIONS.

[37]. *Asian Journal of Pharmaceutical and Clinical Research, [2011]4*(2), 45–49.

[38]. Khare, C. P. *Indian medicinal plants: An illustrated dictionary*. Springer. [2007]

[39]. Ministry of AYUSH. *AYURVEDIC PHARMACOPOEIA OF INDIA*. Government of India. [2016]

[40]. World Health Organization. (2011). *Quality control methods for herbal materials*. WHO Press.

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International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
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[41]. Bedi, M. K., & Shenefelt, P. D. Herbal therapy in dermatology. *Archives of Dermatology, [2002]138*(2), 232–242.

[42]. International Council for Harmonisation. *ICH Q1A(R2): Stability testing of new drug substances and products*. ICH. [2003]

[43]. Kokate, C. K., Purohit, A. P., & Gokhale, S. B. *Pharmacognosy* (55th ed.). Nirali Prakashan. [2019]