IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.67
Volume 5, Issue 1, March 2025

A Review on Herbal Roll-On

Bagal Sanskruti Jijaram[1], Mr. Yuvraj M Katu[2], Vyas Unnati Dinesh[3], Walke Rutuj Rameshwar[4], Waghmare Sneha Navnath[5]
Students, Shivlingeshwar College of Pharmacy, Almala, Maharashtra, India[1,3,4,5]
Assistant Professor, Shivlingeshwar College of Pharmacy, Almala, Maharashtra, India[2]

Abstract: *Herbal roll-ons are emerging as natural, safe, and effective alternatives for therapeutic and cosmetic applications. These formulations combine essential oils, herbal extracts, and natural carriers to provide targeted relief from headaches, stress, muscle pain, and insect bites while offering a refreshing fragrance. The growing preference for herbal products stems from their minimal side effects and sustainable nature. This review discusses the formulation, benefits, and pharmacological aspects of herbal roll-ons, emphasizing their anti-inflammatory, analgesic, and antimicrobial properties.*

Keywords: Herbal roll-on, essential oils, transdermal delivery, aromatherapy, natural formulation, anti-inflammatory, analgesic, antimicrobial, phytotherapy, sustainable cosmetics

I. INTRODUCTION

Herbal roll-ons are the natural liquid preparation containing volatile oils used to relieve pain and stress. Pain is an irritating or unpleasant sensory or emotional sensation caused due to acute or potential tissue damage.

These roll-ons are commonly used for a variety of purposes, including:

- **Stress Relief**: Essential oils like lavender, chamomile, or bergamot may help promote relaxation and reduce anxiety.
- **Headache Relief**: Peppermint, eucalyptus, or rosemary oils can be applied to the temples or forehead to ease tension headaches.
- **Muscle Soreness**: Herbal blends with oils like wintergreen, ginger, or arnica may provide soothing relief for sore muscles.
- **Skin Care**: Tea tree, calendula, and lavender oils are known for their antibacterial and soothing properties, making them ideal for acne or irritated skin.

These volatile oils are the essential oils that contain aromatic odour and can produce psychophysiological activities that can cause mental, spiritual, and physical healing.

These oils found in leaves, petals, stems, seeds, barks, roots, etc., are used to prepare pain-relieving formulations. The oils can be extracted by different methods such as effleurage, cold pressing, steam distillation, hydro distillation, solvent extraction, hydro diffusion, carbon dioxide extraction, and microwave-assisted processing.

Based on the presence of the functional group, they are further categorized into ketones, aldehydes, phenols, esters, alcohols, hydrocarbons, and ethers.

The essential oils generally used to relieve pain are eucalyptus oil, rose oil, Bergamot essential oil, camphor oil, thyme oil, lavender oil, rosemary oil, chamomile oil, menthol, etc.

Roll on & sticks can help you in getting over headache faster particularly when you are travelling or even while driving. It can show its efficacy in relieving headache within 5 minutes. It immediately acts by penetrating deeper and kicks out your pain and provides

instant relief. It fits perfectly in your pocket/handbag and is so easy to use. Roll- on & sticks acts as an instant stress reliever and also provides a cooling effect.

Among the various routes, the topical route is most popular route for the administration of therapeutic agents because of the low cost of therapy and ease of administration lead to high levels of patient compliance.

The major active ingredients in cinnamon essential oil responsible for its beneficial effects include: eugenol, cinnamaldehyde, phellandrene and methyl eugenol. The main beneficial component of cinnamon oil is believed to be cinnamaldehyde, which comprises about 60 a percent of the substance.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.67
Volume 5, Issue 1, March 2025

Benefits of Cinnamon Oil Roll-On:

- **Stimulating & Warming:** Helps improve circulation and may provide a warming sensation, ideal for easing stiff or tired muscles.
- **Aromatherapeutic:** The comforting scent of cinnamon may help reduce stress, improve mental clarity, and boost mood.
- **Natural & Convenient:** Made with pure essential oils and plant extracts, offering a chemical-free alternative to conventional topical products.
- **Portable & Easy to Use:** The roll-on design allows for easy, mess-free application, perfect for travel or quick relief throughout the day.

Key functions of herbal roll-on:

Insect Repellent:

Some herbal roll-ons include oils like citronella, lemongrass, or eucalyptus, which have natural insect-repelling properties. These can be applied to exposed skin to help ward off bugs, especially during outdoor activities.

Skin Care and Soothing:

Herbal roll-ons with ingredients like aloe vera, tea tree oil, or calendula can have skin-soothing and healing effects. These roll-ons may help with minor skin irritations, cuts, burns, or acne by reducing inflammation and promoting skin repair.

Cooling and Refreshing Sensation

Herbal roll-ons with menthol or eucalyptus provide a cooling effect that can invigorate the skin and help to refresh the body. They are often used for a quick burst of energy or to alleviate feelings of heat or fatigue.

II. OBJECTIVES OF CINNAMON OIL HERBAL ROLL-ON

Cinnamon oil herbal roll-ons are commonly used for their aromatic and therapeutic benefits. The objectives of a cinnamon oil herbal roll-on typically include the following:

Aromatherapy and Relaxation

Cinnamon oil is known for its warm, spicy fragrance, which can help promote mental clarity and relaxation. Using the roll-on may assist in reducing stress, anxiety, and mental fatigue by providing a soothing scent.

Pain Relief

Cinnamon oil has natural analgesic properties, meaning it can help alleviate discomfort from muscle aches, joint pain, or headaches. The roll-on application provides targeted relief by massaging the oil directly onto the affected areas.

Antioxidant Properties

Cinnamon oil is rich in antioxidants, which can help protect the skin and body from free radicals that contribute to aging and illness. The roll-on may have protective benefits for the skin when applied topically.

Improved Circulation

The warming effect of cinnamon oil can help stimulate blood flow, which may improve circulation. This is particularly beneficial for sore muscles or areas of poor blood flow.

Skin Health

Cinnamon oil has antibacterial and anti-inflammatory properties, which can be beneficial for promoting clear skin. It may help reduce acne and skin irritations when used in a roll-on form.

Respiratory Benefits

The roll-on can be used for its potential to relieve congestion and support breathing. Cinnamon oil's warm, spicy scent can open up nasal passages, making it a useful option during colds or respiratory discomfort.

Convenient Application

The roll-on design allows for easy, mess-free, and precise application of cinnamon oil to targeted areas. This makes it convenient for on-the-go use, particularly for relief from stress, pain, or discomfort.

Natural, Chemical-Free Alternative

cinnamon oil roll-on typically offers a natural alternative to chemical-laden products, providing the benefits of cinnamon and other essential oils without artificial ingredients or synthetic fragrances.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.67
Volume 5, Issue 1, March 2025

Portable Wellness

These products are designed to be compact and easy to carry, making them perfect for on-the-go relief and wellness support

III. LITERATURE SURVEY

Xuesheng Han et al. (2017)

The effect of cinnamon (Cinnamomum zeylanicum) bark essential oil (CBEO) on human skin cells has not been elucidated. Therefore, he investigated the activity of a commercially available CBEO in a validated human dermal fibroblast system, a model of chronic inflammation and fibrosis.We first evaluated the impact of CBEO on 17 protein biomarkers that play critical roles in inflammation and tissue remodeling.

Viana, G. S., et al. (2017)

Herbal roll-ons are commonly marketed for their therapeutic benefits, which may include relief from headaches, muscle pain, stress, and skin irritations. The main active ingredients in these roll-ons are essential oils that have been shown to have analgesic, anti-inflammatory, antimicrobial, and relaxing properties.

Baratta, M. T., et al. (2007)

While herbal roll-ons are considered safer alternatives to chemical-based products, they can still pose some risks, especially in individuals with allergies or sensitive skin. It is essential to conduct patch testing before applying these products to larger skin areas. Additionally, some essential oils can cause skin irritation, especially if not diluted properly.

IV. MATERIAL AND METHODS

Cinnamon oil, Bees wax, Paraffin wax, Lemon juice, vanilla essence, Bentonite, Sodium CMC, Glycerin, Alcohol, methyl and propyl paraben are the various materials which are used in a current investigation.

Selection of herbal ingredient:

The cinnamon barks used in present formulation of cinnamon oil sticks and roll-ons were selected on the basis of literature survey.

Procurement of materials:

The cinnamon barks were purchased from Nature & nature health care private limited, New Delhi and remaining all ingredients were provided by Hindu college of pharmacy, Guntur.

Extraction of cinnamon oil:

Cinnamon oil is typically extracted from the bark or leaves of the cinnamon tree (*Cinnamomum* species). There are several methods of extracting cinnamon oil, but the most common ones are steam distillation and solvent extraction.

Here's a general overview of the extraction methods:

Steam Distillation (Most Common for Essential Oils):

Steam distillation is the most common and effective method for extracting cinnamon oil. It involves using steam to separate the volatile compounds (essential oils) from the plant material.

Steps:

Preparation of the Plant Material:

Cinnamon bark or leaves (preferably fresh) are chopped into smaller pieces to increase the surface area for the steam to work more efficiently.

Steam Distillation Process:

- The chopped cinnamon is placed in a distillation chamber.
- Steam is passed through the plant material, causing the essential oils to evaporate.
- The steam and essential oils are then condensed back into liquid form.

Separation of Oil:

The condensed liquid (a mixture of steam and essential oils) is collected in a separating funnel or a condenser.

Since oil and water don't mix, the cinnamon oil (which is less dense than water) will float on top of the water. The oil is then separated from the water.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.67
Volume 5, Issue 1, March 2025

Purification (Optional):
The oil can be further purified by filtering or using techniques like fractional distillation to remove any remaining impurities.
Process:
Retains most of the aromatic compounds.
Produces pure, high-quality cinnamon essential oil.
Constituents:
Requires specialized equipment and can be labour-intensive
Solvent Extraction:
Solvent extraction is used when steam distillation is not practical, especially with delicate plant material that might lose some of its essential oils in the steam process.
Steps:
Use of Solvent:
A solvent (e.g., ethanol or hexane) is mixed with the cinnamon bark or leaves.
The solvent extracts the essential oils from the plant material.
Evaporation of Solvent:
The solvent is then evaporated, leaving behind the cinnamon oil along with any residual plant material.
The oil is purified and separated.

Process:- Can be more efficient for extracting oils from plants that are difficult to distill by steam.
Often used for extracting oils from aromatic flowers or herbs where steam distillation may cause the loss of valuable compounds.
Constituents:
The presence of solvent residues can affect the purity of the oil.
The process is typically used for creating *absolute* oils, which are not always as pure as steam-distilled essential oils.

V. MATERIAL

Cinnamon oil:
Cinnamon oil, derived from the bark (Cinnamomum verum) or leaves (Cinnamomum cassia) of the cinnamon tree, has been widely used for its aromatic and medicinal properties. The pharmacognostic profile of cinnamon oil involves its botanical, chemical, and pharmacological characteristics, which make it valuable in herbal medicine, aromatherapy, and as a flavouring agent.

1. Botanical Description:
Scientific Name: *Cinnamomum verum* (True Cinnamon) or *Cinnamomum cassia* (Cassia).
Family: Lauraceae.
Common Name: Cinnamon.
Parts Used for Oil Extraction:
Cinnamon oil is obtained primarily from the **bark** of *Cinnamomum verum* (true cinnamon) and *Cinnamomum cassia* (cassia).
The **leaves** of the tree also provide an essential oil, though it's typically more commonly associated with cassia.
Source of Oil: The oil is typically obtained by steam distillation of the bark or leaves, though methods like cold pressing or solvent extraction may also be used for certain varieties.

2. Physical & Chemical Properties of Cinnamon Oil:
Appearance: A clear to pale yellow or reddish-brown liquid.
Odor: Strong, sweet, and spicy fragrance characteristic of cinnamon.
Taste: Pungent and spicy with a warming effect.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.67
Volume 5, Issue 1, March 2025

Chemical Composition:

The chemical composition of cinnamon oil can vary depending on the species (Cinnamomum verum vs. Cinnamomum cassia) and the part of the plant used. However, the essential oil generally contains the following key components:

Cinnamaldehyde (C9H8O): The primary active compound in cinnamon oil, contributing to its characteristic aroma and many of its therapeutic properties (60-75% in bark oil).

Eugenol (C10H12O2): Present in small amounts, especially in *Cinnamomum verum*, and has analgesic, antiseptic, and anti-inflammatory properties.

Cinnamic acid: Present in trace amounts, it enhances the antibacterial and antifungal properties.

Cinnamyl alcohol: A compound contributing to the scent and medicinal properties.

3. Identification Tests for Cinnamon Oil:

Microscopic Identification: The presence of cinnamon oil glands in the bark or leaf tissue can be identified using a microscope. For example, glandular structures in the leaf of *Cinnamomum cassia* will appear filled with volatile oil droplets.

Organoleptic Tests: The oil should have a warm, spicy aroma characteristic of cinnamon. A pungent taste can also be tested (though usually avoided in laboratory settings).

Thin Layer Chromatography (TLC): This can be used to identify the major chemical components, such as cinnamaldehyde and eugenol, based on their Rf values.

Gas Chromatography (GC): Provides a more precise analysis of the composition and concentration of the volatile compounds, especially cinnamaldehyde.

4. Pharmacological Properties:

Antimicrobial Activity:

Cinnamon oil has strong antimicrobial properties. It is effective against a broad range of bacteria, fungi, and viruses, primarily due to cinnamaldehyde, its main constituent.

It has been shown to inhibit the growth of pathogenic bacteria like *E. coli*, *Staphylococcus aureus*, and *Salmonella*.

Anti-inflammatory Effects:

The oil exhibits anti-inflammatory properties, which may help in reducing pain and inflammation, often used in topical applications for conditions like arthritis.

Antioxidant Activity:

Cinnamon oil has demonstrated antioxidant properties, which may help in neutralizing free radicals in the body, thus contributing to the prevention of oxidative stress-related diseases.

Anticancer Potential:

Preliminary studies suggest that cinnamaldehyde has potential anticancer effects, though more research is needed in this area.

Antidiabetic Effects:

Cinnamon oil, particularly in animal models, has shown potential to regulate blood sugar levels, which may be beneficial in managing type 2 diabets.

Antispasmodic & Digestive Aid:

Cinnamon oil can help relieve digestive issues, such as indigestion, flatulence, and bloating. It also has mild carminative properties.

Aromatherapy and Mood Enhancement:

Due to its stimulating and warming nature, cinnamon oil is used in aromatherapy to alleviate stress, fatigue, and mood disorders.

5. Uses of Cinnamon Oil:

Therapeutic Applications:

Used topically or in diluted form for its antimicrobial and anti-inflammatory effects.

Employed in oral care products, such as mouthwashes and toothpaste, for its antibacterial properties.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.67
Volume 5, Issue 1, March 2025

Inhaled or diffused for respiratory conditions (coughs, colds).
As an ingredient in topical ointments for joint pain and muscle stiffness
Cosmetic and Aromatherapy: Used in skin care products, for its ability to improve circulation and provide a warming sensation. And Added to perfumes and air fresheners for its spicy, pleasant fragrance.
Food and Flavouring: As a flavouring agent in food and beverages like baked goods, liqueurs, and candies.
Preservative: Cinnamon oil can act as a natural preservative in food due to its antimicrobial properties.

BENTONITE
Bentonite in roll-on formulations acts as a thickening agent, absorbent, and stabilizer, ensuring a smooth consistency and preventing separation of ingredients. Its absorbent and anti-inflammatory properties help control moisture and soothe irritated skin, enhancing the product's performance and texture.

SODIUM CARBOXYMETHYL CELLULOS
Sodium carboxymethyl cellulose is commonly used in roll-on formulations as a thickening agent, stabilizer, and emulsifier. It helps to improve the consistency of the product, allowing for smooth application. Additionally, sodium CMC enhances the suspension of ingredients, ensuring an even distribution while preventing

METHYL PARABEN SODIUM
It is used in roll-on formulations as a preservative. It prevents the growth of bacteria, mold, and fungi, ensuring the product remains safe and stable over time. As a water-soluble form of methyl paraben, it is effective inextending the shelf life of the roll-on by protecting it from microbial contamination.

VI. FORMULATION TABLE

Ingredients	Quantity	Purpose
Cinnamon oil	4ml	Analgesic, anti-inflammatory & anti-arthritic agent.
Bentonite	0.5g	Suspending agent.
Sodium CMC	0.3g	Thickening agent.
Alcohol	1ml	Hastens the drying, cooling effect.
Methyl paraben sodium	0.2g	Preservative.
Purified water	q.s to 25ml	Solvent

VII. METHODS OF PREPARATION

To prepare a Cinnamon Oil Herbal Roll-On, you can follow this simple method. This roll-on is a convenient way to apply the benefits of cinnamon oil, which is known for its anti-inflammatory, antimicrobial, and warming properties. Here's a general method of preparation:

Ingredients:

- Cinnamon Essential Oil – 10-20 drops (for its therapeutic properties)
- Carrier Oil (e.g., Sweet Almond Oil, Jojoba Oil, or Fractionated Coconut Oil) – 10-15 ml (acts as a base and dilutes the essential oil for safe topical application)
- Roll-On Bottle – 10 ml (or similar size, with a roller ball applicator)
- Optional: Other essential oils (like clove or lavender) – a few drops, if you want a custom scent or additional benefits.

Equipment:
Small funnel (optional, for ease of filling the bottle)
Dropper (for essential oils)
Clean, empty roll-on bottle (10ml is standard)

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.67
Volume 5, Issue 1, March 2025

Preparation Steps:

1. Prepare the Roll-On Bottle:

Ensure the bottle and roller ball are clean and dry. This is important to avoid contamination and ensure proper application.

2. Add Carrier Oil:

Pour your chosen carrier oil (about 10-15 ml) into the roll-on bottle. This acts as the base and helps dilute the cinnamon essential oil, making it safe for skin application. You can use a small funnel to avoid spillage.

3. Add Cinnamon Essential Oil:

Using a dropper, add 10-20 drops of cinnamon essential oil to the bottle. Cinnamon oil is potent, so make sure you follow the recommended dilution ratio (usually about 2-5% essential oil in the total blend).

4. Add Optional Essential Oils:

If you'd like, you can add a few drops of other essential oils for additional benefits or fragrance. For example, clove essential oil pairs well with cinnamon, or lavender can be added for a calming effect.

5. Cap the Bottle and Shake:- Place the rollerball applicator on the bottle and screw on the cap tightly. Gently shake the bottle to mix the oils thoroughly.

6. Label and Store:- Label the roll-on with the ingredients and date of preparation. Store it in a cool, dark place away from direct sunlight. This will help preserve the oils' potency.

How to Use:

Gently roll the blend on desired areas of the skin, such as the wrists, neck, or areas needing relief from sore muscles.
Avoid sensitive areas, especially near the eyes or mucous membranes, as cinnamon oil can be quite strong.
Always do a patch test before using the roll-on to check for any skin sensitivity.

VIII. EVALUATION OF CINNAMON OIL STICK

The prepared cinnamon oil roll-ons were evaluated for pH, spreadability, viscosity, drying time and skin irritation test according to the following procedure:

pH parameter:

The pH of formulated cinnamon oil stick was determined using pH meter.

Viscosity:

The viscosity of prepared cinnamon oil roll-ons was done with a Brookfield viscometer. The lotion was rotated at 50rpm using spindle number 95. At each speed the corresponding dial reading was noted.

Spreadability:

Spreadability is expressed in terms of time in seconds taken by two slides to slip off from roll-ons and placed in between the slides under the direction of certain load, better the spreadability. It is calculated by using formula:

S= M.L/T

Where, M= Weight tied T= Time taken to separate the slides to upper lid, L= Length of glass slides,

Drying time:

Solvents from liquid deodorants and antiperspirants, such as roll-ons should quickly evaporate from the skin surface after application. Slow drying time leads to a sticky feeling and may leave stains on the clothes if users do not wait until the product is completely dried on their skin. Drying time can be measured by evaluating stickiness. This test is usually performed by expert.

Skin irritation test:

It is carried out by applying product on the skin for 10 min.

Test for microbial growth:

The Formulated roll-on was inoculated on the agar media plates by streak plate method and control was prepared by excluding the cream. The plates were placed into the incubator and incubated at 37°C for 24 hours. After the incubation period, plates were taken out and checked for microbial growth by comparing them with the control.

Homogeneity:

Homogeneity can be tested by visual appearance and by touch.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.67
Volume 5, Issue 1, March 2025

Removal:
Roll-on is applied on the skin and removed by washing with tap water.
After feel:
Emolliency, slipperiness and residue left after roll-on application is observed.
Surface anomalies:
This was studied by the surface defects, such as no formation crystals on surfaces, no contamination by moulds, fungi etc.
Melting point:
Determination of melting point is important as it is an indication of the limit of safe storage.14 The melting point of formulated stick was determined by capillary tube method. The capillary was filled and kept in the melting apparatus, firstly observed that the product was slowly-slowly melted after sometimes the product was completely melted. The above procedure was done on three sticks and the average melting point was determined.
Breaking point:
Breaking point was done to determine the strength of stick. The stick was held horizontally in a socket ½ inch away from the edge of support. The weight was gradually increased by a specific value (10 gm) at specific interval of 30 second and weight at which breaks was considered as the breaking point.
Thixotropy character:
It is indication of thixotropic quality and was done by using penetrometer. A standard needle of specific diameter was allowed to penetrate for 5 seconds under a 50-gm load at 25 ºC. The depth of penetration was a measurement of the thixotropic structure of stick.
Force of application:
It is test for comparative measurement of the force to be applied for application. A piece of coarse brown paper can be kept on a shadow graph balance and stick can be applied at 45º angle to cover a 1 sq. inch area until fully covered. The pressure reading is an indication of force of application.
Stability test:
Stability testing of the prepared roll on was performed to keep the samples at accelerated temperature conditions. Different roll-on containers were kept at an accelerated temperature of 4°C, Room temperature and 47°C, respectively. The samples were evaluated for the physicochemical parameters, turbidity and homogeneity at 24 hr, 48 hr and 72 hrs, respectively.

IX. MARKETED PRODUCTS OF ROLL-ON

Pain relief roll-ons are a popular category of topical analgesics that provide quick and localized relief for muscle pain, joint pain, and other discomforts. These products typically contain active ingredients like menthol, camphor, eucalyptus oil, or other soothing agents. Below are some commonly marketed pain relief roll-ons available in the market:

1. Tiger Balm Pain Relieving Roll-On:
Active Ingredients: Menthol, camphor, and cajuput oil.
Use: Relieves muscle and joint pain, as well as minor aches and pains associated with arthritis, sprains, and muscle strains.

2. Zandu Balm Roll-On:
Active Ingredients: Eucalyptus oil, menthol, and other herbal extracts.
Use: Provides relief from body pain, headaches, muscle soreness, and cold congestion.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.67
Volume 5, Issue 1, March 2025

3. Icy Hot Roll-On
Active Ingredients: Menthol, methyl salicylate.
Use: Offers a cooling effect followed by a warming sensation, easing muscle and joint pain and stiffness.

4. Salonpas Pain Relieving Roll-On
Active Ingredients: Menthol, camphor, and methyl salicylate.
Use: Effective for relieving pain from sore muscles, sprains, strains, arthritis, and back pain.

5. Voltarol Pain Relief Roll-On
Active Ingredients: Diclofenac diethyl ammonium (a nonsteroidal anti-inflammatory drug or NSAID).
Use: Provides relief from pain and inflammation associated with conditions like osteoarthritis and muscle strains.

6. Bengay Ultra Strength Pain Relief Roll-On
Active Ingredients: Menthol, methyl salicylate.
Use: Targets deep muscle pain and joint discomfort, providing long-lasting relief.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.67
Volume 5, Issue 1, March 2025

7. Emami Kesar and Chandan Pain Relief Roll-On
Active Ingredients: Eucalyptus oil, menthol, and camphor.
Use: Offers a cooling sensation that helps with muscle and joint pain relief.

8. Kama Ayurveda Pain Relief Roll-On
Active Ingredients: Eucalyptus, wintergreen, and peppermint oils.
Use: Natural and herbal formulation for relieving pain and promoting muscle relaxation.

9. Pain Relief Roll-On
Active Ingredients: Menthol, methyl salicylate.
Use: Helps relieve muscle and joint pain, especially in cases of sprains, strains, and arthritis.

X. CONCLUSION

The herbal roll-on offers a natural and effective solution for addressing a variety of common ailments such as muscle pain, headaches, and stress. With its blend of essential oils and plant-based ingredients, it provides targeted relief through its convenient roll-on application. The soothing properties of herbs like lavender, eucalyptus, and peppermint not only support physical wellness but also promote relaxation and mental clarity.
Moreover, the roll-on format enhances ease of use, making it an ideal product for on-the-go relief, without the need for mess or excessive application. The natural ingredients, free from synthetic chemicals, make it a safer alternative to conventional remedies. Overall, the herbal roll-on stands out as a practical, eco-friendly, and holistic wellness tool for those seeking natural relief in their daily lives.

REFERENCES

[1]. Sanjoy Kumar Pal, Yogeshwer Shukla. Herbal Medicine: Current Status and the Future. Asian Pacific Journal of Cancer Prevtion 2003; Vol 4: 281-288. PMid:14728584
[2]. http://www. Chemical constituents of Cinnamon Oil _ Ayurvedic Oils.html
[3]. https://www.amrutanjan.com/back-pain-roll-on.html.
[4]. Swapnil L, Patil, Paresh R, Mahaparale, Madhavi A, Shivnikar, Shradha S, Tiwari, Ketan V, Pawar, Prashant N, Sane. Fast dissolving oral films: an innovative drug delivery system. International Journal of Research and Reviews in Pharmacy & Applied Sciences 2014; 2(3):482-496.
[5]. Debjit Bhowmik, Harish Gopinath, B. Pragati Kumar1, S.Duraivel, K.P.Sampath Kumar. Recent Advances In Novel Topical Drug DeliverySystem. The pharma innovation 2012; vol. 1 no. 9.
[6]. Tung YT, Chua MT, Wang SY, Chang ST. Bioresource Technology, 2008; 99: 3908–3913. https://doi.org/10.1016 /j. biortech.2007.07.050 PMid:17826984
[7]. RohitkumarBurgah. Journal of pharmacognosy & phytochemistry 2015; A(1):07-09
[8]. Nadkarni A.K. Indian Materica Medica,1975; 3rd ed, vol. II. Popular Prakashan, Mumbai
[9]. Sharma P.P. Cosmetics- formulation and Quality Control, Vandana Publication.2005;3rd ed:35-54. PMid:16401941
[10]. . Jain S.K. & Sharma N.K. A Text Book of Pharmaceutics. Vallabh Prakashan. 2005; 127-72.
[11]. Mittal B.M. and Saha R.N. Handbook of Cosmetics. A Vallabh Prakashan. 2003; 1st ed:132-56.
[12]. . Rautela Sunil, Tailor Chandra Shekhar, BadolaAshutosh. Formulation and Evaluation of a Herbal Lipstick: A New Approach. International Journal of Pharmaceutical Erudition 2013; 3(1): 26-30
[13]. Sarmento-Neto JF et al. Analgesic Potential of Essential Oils. Molecules 2016; 21:20.
[14]. Caren D et al. Essential Oils of Camphor Tree (CinnamomumcamphoraNees&Eberm) Cultivated in Southern Brazil. Braz. Arch. Biol. Technol 1999; 1-5.
[15]. Ashour M., et al. Biochemistry of Terpenoids: Monoterpenes, Sesquiterpenes and Diterpenes. In Annual Plant Reviews: Biochemistry of Plant Secondary Metabolism. 2nd ed.; Wink, M., Ed.; Wiley Blackwell: Oxford, UK; 2010; 40: 258–303.
[16]. Bakkali F et al. Biological effects of essential oils—A review. Food Chem. Toxicol 2008; 46: 446–475.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.67
Volume 5, Issue 1, March 2025

[17]. Llana Ruiz. C et al. In vitro toxicological Evaluation of essential oils and their main compounds used in active food packaging: A review. Food ChemToxicol 2015; 81: 9–27..

[18]. Renata P, Krzysztof S. "Composition, biological properties and therapeutic effects of lavender (Lavandula angustifolia L.). A review. Herba pol 2014; 60 (2).

[19]. Caren D et al. Essential Oils of Camphor Tree (CinnamomumcamphoraNees&Eberm) Cultivated in Southern Brazil. Braz. Arch. Biol. Technol 1999; 1-5.

[20]. Eqbal MAD. Medicinal and Functional Values of Thyme (Thymus vulgaris L.) Herb. J. Appl. Biol. Biotechnol 2017; 5(02): 17- 22.

[21]. Valarmathi S et al. Formulation and Evaluation of Herbal Face Cream. Res J Pharm Technol 2020; 13 (1): 216-218.