

Formulation and Evaluation of Herbal Pain Reliving Balm

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Abstract

Modern life is stressful, and tension headaches are one result of that stress. Cosmetics have great demand since ancient time, now a days, a focus has been shifted more towards derived cosmetic products. Not only cosmetic products, but also to the skin products due to their ease of application among all dermal drug delivery products, pain balm formulation are preferably used so as to get the faster local effect. Menthol is naturally occurring cyclic terpene alcohol of plant origin, which has been used since antiquity of medicinal purpose. Its use in dermatology is ubiquitous, where it is frequently part of topical anti-pruritic, antiseptic, analgesic and cooling formulations. Despite its widespread use, it was only recently that the mechanism by which menthol elicits the same cool sensation as low temperature was elucidated upon, with the discovery of the TRPM 8 receptor. Although almost 5 years have passed since this receptor, many dermatologists are still unaware of menthols underlying target.

Keywords: evaluation of herbal pain, dermatology is ubiquitous

INTRODUCTION: The pain attar works on the counter irritancy star the where the rather of relieving the pain, the pain sensation is suppressed by causing the vexation to the point where expression has been applied. The attar in common sense is defined as circumfluous expression (generally having cure) and which is to be applied externally. Pain attar is similar expression that is intended to be used for the relief of mild to moderate rate pain. Pressure headaches are veritably common, affecting up to 78 of people. Unfortunately, ther, also among the most neglected and delicate types of headaches to treat.

Menthol is a natural emulsion of factory origin known to produce cool sensation. Menthol, the cooling natural product of peppermint, is extensively used medications for pain relief in sport injuries, arthritis and other painful conditions. Camphor, a natural product deduced from the wood of the tree cinnamomumcamphora, has a long history of use antiseptic, analgesic, antipuritic counter inconvenience and rubefacient. currently, significance of medicine administration via the skin for remedial goods has increased.

In individual test similar as colonoscopies, it's essential to have bowel medication before performing the procedure. Castor oil painting may be used in these types of procedures as it's effective in bowel evacuation. still, in these procedures, cases generally have better results and satisfaction with other laxative similar as sennosides, polyethylene glycol and other bisacadyl. Pain is defined as 'an unwelcome sensitive and emotional experience associated with factual or implicit towel damage, or described in terms of similardamage, ultramodern life is stressful, and pressure headaches are one result of that stress. Cosmetics have great demand since ancient time, now a days, a focus has been shifted more towards deduced ornamental products. Not only ornamental products, but also to the skin products due to their ease of operation among all dermal medicine delivery products, pain attar expression are rather used so as to get the briskly original effect. Menthol is naturally being cyclic terpene alcohol of factory origin, which has been used since age of medicinal purpose. Its use in dermatology is ubiquitous, where it's constantly part of topicalanti-pruritic, antiseptic, analgesic and cooling phrasings. Despite its wide use, it was only lately that the medium by which menthol elicits the same cool sensation as low temperature was illustrated upon, with the discovery of the TRPM 8 receptor. Although nearly 5 times have passed since this receptor, numerous dermatologists are still unaware of menthols underpinning target.

Menthol is veritably answerable in alcohol, chloroform, ether and hexane and slightly answerable in water. Menthol is an alcohol that's set up in mint canvases and analogous to peppermint, has a refreshing odour, white crystalline structure and cooling parcels. Chemical formula of menthol $C_{10}H_{20}O$ and molecular weight is 156.37g/mol. Menthol is set up innumerable topical pain relief specifics due to its counter inconvenience and original anaesthetic parcels. The medium by which menthol is suitable to conduct a cooling sensation when applied topically to the skin is well-conditioned understood. Menthol in over the attention has an excellence safety profile. (8- 11). For the pharmaceutical purpose beeswax are used in medicines, capsules, capsules, dressing and ointments as thickness, binding agent, time release medium and carrier of medicine. (12) Herbal drug has been used since ancient period for numerous centuries. In moment's life there's need for efficient remedy for pain and inflammation. In the hunt for new remedial options, new biomolecules of natural sources are to be delved. Purpose of this study was to estimate the analgesic and anti-inflammatory goods of OFCMT (unctuous expression of camphor, menthol and thymol). One of the important and effective corridor of herbal shops is essential oil painting and substances present in different corridor of shops. Essential canvases are factors which are oil painting answerable that have effective smell and aroma and are separated by use of water and brume distillation and prepared by birth with detergents and enzymatic hydrolysis. Menthol, the cooling natural product of peppermint, is extensively used medications for pain relief in sports injuries, arthritis, and other painful conditions. Thymol is a natural monoterpene phenol secondary cymene, isomeric with carvacrol, set up in oil painting of thyme, and uprooted from *Thymus vulgaris* and colorful other kinds of shops as a white crystalline substance of a affable sweet odor and strong antiseptic parcels.

IMPORTANCE OF COMPONENTS:

1. Menthol:

Scientific Name: Hexahydrothymol.

Synonym: Peppermint camphor.

Family: Lamiaceae.

Chemical constituents: Menthol (40.7%), Menthone (23.4%), menthyl acetate, limonine, beta pinene, an beta-caryophyllene.

Uses:

- 1.Reduces spasm and pain caused by endoscopy.
2. In migraine headache.
- 3.To treat nausea.
- 4.To reduce inflammation.

5.Menthol is naturally occurring cyclic terpene alcohol of plant origin, which has been used since antiquity of medicinal purpose. Its use in dermatology is ubiquitous, where it is frequently part of topical anti-pruritic, antiseptic, analgesic and cooling formulations. Despite its widespread use, it was only recently that the mechanism by which menthol elicits the same cool sensation as low temperature was elucidated upon, with the discovery of the TRPM 8 receptor. Although almost 5 years have passed since this receptor, many dermatologists are still unaware of menthols underlying target.



2. Bees wax:**Scientific name:** Ceraalba.**Synonym:** Yellow wax.**Family:** Apidea.**Chemical constituents:** Myricylpalmitate(80%), free cerotic acid (15%), melissic acid,cerolein.**Uses:**

- 1.Used as antibacterial, antifungal.
 - 2.It has anti-inflammatory and anti-allergicproperties.
 3. High levels of cholesterol or other fats (lipids) in the blood (hyperlipidemia).Pain.
 4. Stomach ulcers.
 - 5.The beeswax forms a protective barrier on the skin, while the wintergreen provides a cooling and soothing sensation, helping to reduce inflammation and ease discomfort. This balm is perfect for anyone who suffers from joint and muscle pain.
 - 6.As medicine, beeswax is used for lowering cholesterol and for relieving pain. It is also used for swelling (inflammation), ulcers, diarrhea, and hiccups. In foods and beverages, white beeswax and beeswax absolute (yellow beeswax treated with alcohol), are used as stiffening agents.
 - 1.To relieves the patients from muscle aches and join pains.
 - 2.To Excellent Effect for headaches Patients.
 - 3.To treat the common cold as compare to other types of Products.
 - 4.To Relieves stress and promote relaxation.
- Propolis.

**Plan of Work:****1) Literature Survey.**

Literature survey was carried out by Goggle search, books and Different Research and review paper etc.

2) Collection of raw material.

All the material are collected from market and the natural material used in present study i.e., Menthol, Beeswax, Castor oil, rosemary oil, Camphor and Betanin were purchased from the market.

3) Methods of data collection.

Observation method of the data collection will be employed for the collection of data for the present dissertation work. Data on the Formulation and Evaluation of herbal pain reliving Balm will be collected from various standard journals and other sources like research literature databases such as Springer, Research Gate, Google scholar, Yahoo Gov and various ayurveda and Herbal formulation book etc.

Advantages And Disadvantages:**1. ADVANTAGES:**

1. Avoidance of first pass metabolism.
2. Convinient and easy to apply.
3. Ability to deliver drug more selectively to a specific site.
4. Improving physiological and pharmacological response.
5. Improving patient compliance.
6. Providing utilization of drug with short biological halflife.
7. Provide suitability for selfmedication.
8. Ability to easily terminate the medication when needed.

2.DISADVANTAGES:

1. Skin irritation of contact dermatitis may occure due to the drug and / or excipients.
2. Poor permeability of some drug through the skin.

3. Possibility of allergic reaction.
4. Can be used only for drugs which require very small plasma concentration for action.
5. Drugs of larger particle size not easy to absorb through the skin.

Review Literature:

1. Syed Safiullah Ghori, Md Ikram Ahmed (et al. 2015)

Herbal medicine has been used since ancient era for many centuries. In today's life there is need for efficacious therapy for pain and inflammation. In the search for new therapeutic options, novel biomolecules of natural sources are to be investigated. Purpose of this study was to evaluate the analgesic and anti-inflammatory effects of OFCMT (Oily formulation of camphor, menthol and thymol). One of the important and effective parts of herbal plants is essential oil and substances present in different parts of plants. Essential oils are components which are oil soluble that have effective smell and aroma and are separated by use of water and steam distillation and prepared by extraction with solvents and enzymatic hydrolysis. Menthol, the cooling natural product of peppermint, is widely used preparations for pain relief in sports injuries, arthritis, and other painful conditions. Thymol is a natural monoterpene phenol derivative cymene, isomeric with carvacrol, found in oil of thyme, and extracted from *Thymus vulgaris* and various other kinds of plants as a white crystalline substance of a pleasant aromatic odor and strong antiseptic properties.

2. Chatur Vibhavari M, Ghode Shweta P, Choudhari Pooja (et al. 2019)

Cosmetics have great demand since ancient time. Now a days, a focus has been shifted more towards derived cosmetic products. Not only cosmetic products, but also to the skin products due to their ease of application. Among all dermal drug delivery products, pain balm formulations are preferably used so as to get the faster local effect. The main aim of the present work was to formulate a pain balm containing paracetamol, a drug used in the treatment for relief of mild to moderate pain such as headache, toothache, backache etc. The paracetamol is considered to be safe at recommended dosage. Hence, in the current study the main focus was on the development of a pain balm using paracetamol so as to know the physical compatibility as well as the stability of the drug in the balm formulation and then to evaluate it with the basic primary characteristics.

3. Stefan Bogdanov (et al. 2009)

Beeswax was used for making of figures and cult objects in ancient Egypt. In regions with stingless bees stingless-beeswax figures were made in different South American countries and in Australia¹⁶. Beeswax was an important ingredient of ancient seals¹⁶. At the beginning pure beeswax was used and only later resin and colour were added. In ancient Egypt beeswax was used for writing tablets, the oldest known being from around 1300 BC¹⁶. The use of writing tablets continued until after the Middle Ages in Europe. The production and selling of beeswax and beeswax candles was a good business until the introduction of paraffin wax in the 19th century. Nowadays beeswax has lost its exclusiveness, but it remains the most expensive of all natural waxes.

Need: Modern life is stressful and tension headaches are one result of that stress. Cosmetics have great demand since ancient time a focus has been shifted more towards derived cosmetic products. Not only cosmetic products, but also to the skin products due to their ease of application among all dermal drug delivery products, pain balm formulation is preferably used so as to get the faster local effect. Herbal balm is an ayurvedic formulation of powerful essential oils for quick relief from headaches, backache cold and in relieving pain by considering this point we are formulating herbal pain relieving Balm.

Menthol is naturally occurring cyclic terpene alcohol of plant origin, which has been used since antiquity of medicinal purpose. Its use in dermatology is ubiquitous, where it is frequently part of topical anti-pruritic, antiseptic, analgesic and cooling formulations. Despite its widespread use, it was only recently that the mechanism by which menthol elicits the same cool sensation as low temperature was elucidated upon, with the discovery of the TRPM 8 receptor. Although almost 5 years have passed since this receptor, many dermatologists are still unaware of menthols underlying target.

The pain balm works on the counter irritancy principle where instead of relieving the pain, the pain sensation is suppressed by causing the irritation to the point where formulation has been applied. The balm in common sense is defined as semisolid formulation (generally having medicament) and which is to be applied externally. Pain balm is such formulation that is intended to be used for the relief of mild to moderate rate pain.

Preparation of base: The menthol was dissolved in eucalyptus oil. The base for the balm prepared by fusion method and was made suitable for incorporation of oils and drugs then cooled the hot melt stirring continuously.

Formulation of balm: At the temperature 40°C the menthol and eucalyptus oil mixture was dissolved in it with stirring. The drug was incorporated slowly with constant stirring till the uniform mass is obtained.

Container and Storage: Store in well closed mouth bottle at room temperature.

Category: Intended to be used as an analgesic.

Direction for use:

1. To be rubbed externally.
2. Rub gently on the skin with the help of finger.
3. Do not applied for dry skin.

Uses:

1. It is used as Arthritis.
2. It is used as Backches.

Procedure for pain relieving balm application:

In the first step the take pain relieving balm as per the requirement and in second step apply gently on the affected area. It helps to reduce headache, pains and sprains.

Formulation:

Raw material were gathered from home and market. The natural ingredient were shed dried, powered and sieved, weighed accurately and mixed. For the evaluation of various parameters, the formulated pain relieving balm was stored in air tight container.

Evaluation Parameters:

1.Colour and odour: Colour and odour were examined by visual inspection.

2.Consistency: Smooth and no greeting is observed.

3.Spreadability: The spreadability was determined by placing sample between two glass slides which was compressed to uni form thickness by applying definite time period. The time required to separate the two slides was measured as spreadability less time taken for separation of two slides shown better spreadability calculated by formula.

4.Washability: This test is also used to check quality of balm. In this first of all we have to add small amount of balm which was applied on the hand. After that we have to washed with tap water.



Results & Discuss: In the presence of study, the pain balm of menthol was fomulated by using various excipients. The balm was then evaluated for the following physical parameters and was found to be satisfactory in terms of appearance and texture. It was easily spreadable with fingers without any roughness felt to touch. The smell of the balm was found to be characteristics. Only thing was the colour was faded as the natural colorant with origin of beetroot was incorporated. The balm was dense with the optimized melting point. In general, oral or topical antibiotic formulation is used for the treatment of skin diseases. Traditional

medicinal and aromatic plants are interesting and explore its various bioactive natural organic compounds for various treatments. In the last two decades, more research has been carried out towards the identification of the bioactive compound from medicinal plants and developing into drug for the various treatments.

Conclusion: Frequency of intake the allopathic drugs for the treatment of acne vulgaris results to produce adverse side effects. Recently, hebal remedies are considered as safe as the synthetic one and hebal formulations are having growing demand in the global market. Overall to conclude with, as the main objective of the study was to formulate and evaluate the basic physical parameter and stability check for pain balm containing menthol. We have attempted the same and the evaluation parameter results showed that, if the menthol formulated in the balm, remains stable. (The in- vitro studies are pending). The basic parameters were found to be within normal range except the color variation. Again that can be improved by using the approved colorant. During this stability study of six months, the balm was found to be physically stable with all the basic characteristics. It had smooth and good consistency. Still to perform the diffusion study, the drug release study, animal study also the preformulation study since the menthol is the bcs class iv study our next motive would be to incorporate the suitable permeation enhancer, suitable and to check whether the release of drug can be increased, and the same study is being recommended further so as to know the effectiveness of the drug in balm formulation. That is further research which is carried out so as to find the in vitro as well as in vivo characterisation hence the pain reducing activity can be notified.

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