

International Journal of Advanced Research in Science, Communication and Technology

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 5, Issue 10, March 2025



# Formulation and Evaluation of Herbal Pain Relief Balm

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Abstract: There has been an increasing focus on development of new routes of drug administration to provide tailored treatments for patients, without decreasing efficacy of analgesia, in proportion to the progression of the knowledge of pain mechanisms. While acute pain acts as an alarm, chronic pain is a syndrome requiring meticulous selection of analgesic drugs of high bioavailability for long-term use. Such criteria are challenges that topical medications aim to overcome, allowing progressive delivery of active component, maintaining stable plasma levels, with a good safety profile. This review presents recent findings regarding topical formulations of the most widely used drugs for pain treatment, ; Disclosed herein is an herbal balm composition and the method of preparing said composition. The composition comprising extracts of organically certified herbs, organic essential oils and organic beeswax, wherein the extract is prepared employing a super critical fluid extraction (SCFE) and where in the essential oils used herein is obtained by cold pressed method. The oils used in it is used as a pain killer.

Keywords: natural pain relief balm, vitex negundo oil, Eucalyptus oil.

## I. INTRODUCTION

Herbal balm is an ayurvedic formulation of powerful essential oils for quick relief from head ache, back ache, cold and in relieving pain.

Herbal balm composition comprising organic essential oils, organic bees wax and other desired herbal components has medicated topical preparations for application to skin of human beings. Balms are topical preparations for application to skin to relieve pain and stiffness. These balm contains counter irritant chemical compounds such as methyl salicylate. Petroleum jelly is the common base for any kind of balms.

Pain is an unpleasant feeling often caused by intense or damaging stimuli, such has stubbing a toe, burning a finger, putting alcohol on a cut and bumping the funny bone. The international association for the study of pains widely used definition states, pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.

Pain motivates the individual to withdrawn from damaging situations, to protect a damaged body parts while it kills and to avoid similar experiences in future. Most pain resolves promptly hence the pain stimulus is removed and the body has healed, but sometimes pain persists despite removal of stimulus and apparent healing of the body and sometimes pain arrive in the absence of any detectable stimulus, damage or disease.

## **II. METHODOLOGY**

Take one container in that weigh and add 5gm of petroleum jelly, place the container in a hot plate and boil it until all the amount of petroleum jelly completely dissolved.

In the dissolved petroleum jelly solution weigh and add 5gm of bees wax, stir it and boil until the bees wax added completely dissolve in the petroleum jelly.

After that, weigh and add 5gm of menthol crystals to the above solution and boil it until the menthol completely dissolved.

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DOI: 10.48175/IJARSCT-24769



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Fig.1 Petroleum jelly + Beewax

Weigh 10ml of vitex negundo oil, stir the solution and boil the solution.

Weigh 10ml of eucalyptus oil, stir the solution and boil the solution.

Weigh 5gm of sodium benzoate and add it to the solution, stir it well and boil the solution, for complete dissolution of the solution.

When all the added ingredients were completely dissolved and turns in to the liquid form then take the solution out of the hot plate and keep the herbal balm solution for cooling. Finally the prepared solution cools down and turns into a semi solid herbal balm.



Fig. 2 Semi solid herbal balm

### **III. LITERATURE REVIEW**

Historically, medicinal plants have been used in various cultures for pain management. Ayurveda, Traditional Chinese Medicine (TCM), and Unani medicine documented the use of herbs like menthol, camphor, clove oil, and eucalyptus in pain relief formulations (Kumar et al., 1998).

Menthol (Peppermint extract) has been used since ancient times for its cooling effect and ability to relieve muscle pain (Smith & Brown, 2000).

Camphor, derived from the Cinnamomum camphora tree, was traditionally applied to swollen joints and muscle pain due to its counterirritant properties (Wang et al., 2002).

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Several past studies have investigated the mechanisms of action of herbal pain-relieving ingredients.

Menthol and camphor act as counterirritants, stimulating the skin's sensory nerves to create a cooling or warming sensation that distracts from pain (Taylor et al., 2003).

Eucalyptus oil, traditionally used for muscle aches, was confirmed to have anti-inflammatory properties in a study by Silva et al. (2005).

### IV. RESULT AND DISCUSSION

The physicochemical parameters of the prepared balm were determined parameters such as colour, odour, appearance and PH were tested. The formulations exhibited good in appearance characteristic as well as PH was found in the range 7.0 which is the desired PH of the skin.

Sr. No.	Organoleptic Characters	Herbal Balm	Marketed Balm
1	Formulations	Pain Balm	Pain balm
2	Colour	Light Yellow	Yellow
3	Odour	Fragments	Fragment
4	Appearance	Good	Smooth
5	State	Semi Solid	Semi Solid

 TABLE
 : PHYSICAL PARAMETERS OF HERBAL PAIN RELIEF BALM:



Herbal Pain Relief Balm TABLE : EVALUATION RESULT OF HERBAL PAIN RELIEF BALM:

	Sr. No	Parameters	Results
	1	PH	6.27
ſ	2	Patch test	Non allergenic

### V. CONCLUSION

Herbal balm was prepared by using Hot Processing Technique and were found to be without particles transparent components which are used in formulation are having good compatibility without any significant changes.

The Eucalyptus leaves extracts have relieving pain property, vitex negundo leaves extracts used to relieve Arthritic pain, cures high fever and alleviates menstrual cramps.

The prepared formulation showing good physical characteristics. Further evaluated by various evaluation parameters such as PH, Extrudability, Spreadability, Viscosity, Patch test and gives good result.

Based on the study research it can be concluded that herbal components can be effectively formulated as in the form of balm by using Hot Processing Technique which having excellent pain-relieving property.

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#### VI. ACKNOWLEDGEMENT

It gives us pleasure to present my project on **"Formulation and evaluation of herbal pain relief balm".** The able guidance of all teaching staff of department made this study possible. I express my deep sense of gratitude and respect to **my guide Dr. Jayashree Shailesh Patil (Assistant professor),** Department of chemistry, J.S.M College, Tal. Alibag, Dist.Raigad for her inspire guidance on constructive criticism and constant encouragement during the completion of this project.I place my sincere thanks to **Head of Chemistry Department and Principal Dr. Sonali Patil**, J.S.M COLLEGE ALIBAG for giving me opportunity to complete this work and providing the necessary facilities. I would also like to appreciate all teaching and non-teaching staff of J.S.M. College, Alibag. My special thanks to my all friends M.Sc.-II for their friendly suggestion and timely help during preparation of soap. I must like to thanks University of Mumbai and Chemistry Department for giving us an opportunity to explore this subject by conducting this project. Finally, I would like to thank everybody who played a very important role towards the completion of this work, as well as expressing of this work, as well as expressing my apology that I could not mention all the names one by one.

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DOI: 10.48175/IJARSCT-24769



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