



## RESEARCH ARTICLE

### *Formulation and Evaluation of Herbal Analgesic Oil*

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## **ABSTRACT**

With the growing interest in Herbal Therapies among persons associated with pain, inflammation, Arthritis, Surgery or other medical conditions. There exists a need for formulation & evaluation of Herbal Analgesic oil. The present work intends to formulate & evaluate Herbal Analgesic oil.

## **KEYWORDS**

Anti-inflammatory, Analgesic, Evaluation

## **INTRODUCTION**

Analgesics are derived from Greek word 'An' means without & 'Algos' means Pain. Analgesic agents act by inhibiting cyclooxygenase Enzymes<sup>1</sup>. NSAIDS ( Non steroidal Anti inflammatory drugs) are the drug of choice for inflammation & its associated symptoms , but these drugs shows severe Gastro-intestinal irritations , ulcers Kidney failure & liver toxicity. Hence for this Ayurvedic formulations are the best alternate<sup>2</sup>, Herbal analgesic oils one of the Ayurvedic formulation in which herbs and base oils are used for the formulation. The different Tailas have been prepared using different herbs accordingly to the purpose and of its use.

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The herbal Ayurvedic formulations are popular worldwide because they don't show any side effects. Herbal analgesic oil shows anti-inflammatory action, analgesic action, and antimicrobial activities.

Herbs used for formulation provides essential nutrients for treatment of the diseases. Herbal formulations are comparatively causing fewer side effects than chemical formulations<sup>3</sup>.

The herbal products have dual importance due to the presence of variety of phytochemical which helps in body care and improves the biological functions of the human body<sup>4</sup>.

Hence an attempt is made to formulate & Evaluate Analgesic oil from Bilva, Guduchi, sweet flag, pipal (long pepper), Moringa gum, Gingelly oil & Mustard oil.

**Table: 1 Ingredients**

SL NO	NAM E OF THE DRUG	FIGURE	BOTANICAL NAME	USES
1.	BILVA		<i>Aegle marmelos</i>	Anti-inflammatory, antianalgesic
2.	GUDUCHI		<i>Tinospora cardifolia</i>	Anti-inflammatory, antimicrobial
3.	SESAME OIL		<i>Sesamum indicum</i> L	Helps in joint strengthening and bone rejuvenation.
4.	MUSTARD OIL		<i>Brassica campestris</i>	Reduces inflammation, blocks microbial growth.
5.	SWEET FLAG		<i>Acorus calamus</i>	Anti-inflammatory, flavouring agent
6.	PIPAL (LONG PEPPER)		<i>Piper longum</i>	Antibacterial, antidiabetic

7.	MORINGA GUM		<i>Moringa oleifera</i>	Antioxidant
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**Table: 2 Formulation of Herbal Analgesic Oil**

SL NO	INGREDIENTS	FORMULATION
1	Sweet flag	130gm
2	Pipal	130gm
3	Guduchi	130gm
4	Bilva	130gm
5	Moringa gum	10gm
6	Sesame oil	1lt
7	Mustard oil	50ml

### Materials And Methods

#### Preparation of Kalka (Paste)

The Kalka were prepared by mixing Sweet flag, Pipal, Guduchi, Moringa gum, Bilva with 3 to 4 volumes of water & heat it for 2 hours until Decoction is obtained. Filter the Decoction & concentrate until Kalka ( Paste )is obtained

#### Preparation of Analgesic Oil.

Take 1 litre of Sneha dravya ( Sesame oil) & add 50 ml of mustard oil and heat it until it forms homogeneous mixture. Add Kalka to the preparation and stir it until a strong base is formed. Then add 9 litres of water and constantly heat it until the oil is fully extracted. Filter & store in food grade glass container<sup>5</sup>.

### Evaluation

The prepared herbal analgesic oil was subjected to under mentioned evaluations.

#### 1. Organoleptic evaluation:

Different parameters were studied such as: Colour, Physical state, Odour and solubility and it is tabulated in Table No-3.

Table No-3

A.	Colour	Reddish brown colour
B.	Physical state	Liquid with greasy in nature
C.	Odour	Pleasant
D.	Solubility	Soluble in non polar solvents

## 2. Phytochemical evaluation:

The formulated herbal analgesic oil were subjected to qualitative chemical analysis for identification of various plant constituents like alkaloids, saponins, glycosides, protein, steroids, carbohydrates and flavonoids. The results are tabulated in Table No-4.

Table No-4

Sl no	Constituents	Sesame oil
1.	Alkaloids	Present(+ve)
2.	Saponins	Present(+ve)
3.	Glycosides	Present(+ve)
4.	Protein	Absent(-ve)
5.	Steroids	Present(+ve)
6.	Carbohydrates	Absent(-ve)
7.	Flavonoids	Present(+ve)

## 3. Physical evaluation of herbal analgesic oil :

The physicochemical evaluation was carried out with respect to Acid value, Saponification value, Iodine value, Specific gravity, Density, pH & Skin irritation test were carried out as per standard methods<sup>6,7</sup>.

The observations for the physical evaluations were reported in Table-5 where it was found that the formulation has all the value within the standard limits

Table No-5

PARAMETERS	FORMULATED OIL
COLOUR	Dark brown
ODOUR	Characteristic
PH	5.6
SAPONIFICATION VALUE	57.78
ACID VALUE	0.396
IODINE VALUE	19.82
SPECIFIC GRAVITY	0.98
SKIN IRRITATION TEST	No irritation
DENSITY	0.923gm/cc

## CONCLUSION

This research provides guidelines on the use of herbal ingredients in the preparation of herbal analgesic oil having minimal (or) no side effects. The good quality and purity of the analgesic oil has met with almost all the parameters and comes under the specified limits. The oil can be rolled on by further clinical trials which will fetch further benefits of analgesic oils.

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