Research Article **ISSN: 2349 – 7106**

Asian Journal of Research in Chemistry and Pharmaceutical Sciences

Journal home page: www.ajrcps.com

https://doi.org/10.36673/AJRCPS.2021.v09.i01.A02

FORMULATION AND EVALUATION OF MAHANARAYANA OIL FOR PAIN RELIEF AND MUSCLE TONE

S. D. Paralkar*[1] and R. P. Patil[1]

[1*]Soham Ayurved Rasashala, Solapur, Maharashtra, India.

ABSTRACT

Herbal oils are made for giving relief from pain and discomfort by using beneficiary contents of natural herbs available. These herbs give a more patient compliance because many people prefer traditional measures over modern for pain relief. Many *'Ayurvedic granthas'* explains role of Mahanarayana oil in the development of muscle tone, this oil has to be applied topically and it does not give irritating effect. Soham Ayurved Rasashala also works on the principles paved by ancient granthas. Mahanarayana oil consists of ten different herbs in extracted form with use of sesame oil as base. Key constituent amongst ten herbs 'Shatavari' (*Asperagus racemosus*) is the premier. Along with herbs sesame oil has its lone benefit of moisturizing skin therefore together they give synergistic effect on paining area as well as skin nourishment. This article showcases two formulae's of preparation which includes sesame oil as base.

KEYWORDS

Mahanarayana oil, Shatavari, *Asperagus racemosus,* Pain and Muscle tone.

Author for Correspondence:

Paralkar S D,

Soham Ayurved Rasashala,

At Post Sanjwad, Solapur,

Maharashtra, India.

Email: sumedhparalkar7@gmail.com

INTRODUCTON

Ayurveda is the dominating treatment method widely practiced, used and followed in different parts of India along with World. Ayurveda has a rich, concrete history in the world as it has practiced by different means. Researchers keep on searching for new dimensions in treatments of variety health problems and Pain is one amongst them, 'An unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage' pain defined by International Association for the Study of Pain[1]. Muscle cramps are one of the effect that come with pain therefore to improve muscle tone is also becomes a key factor while treating it. Natural

origin alternatives for modern also have a significant and instant relief in comparison, so that with scientific data one can elaborate benefits of the same.

Mahanarayana oil consists of variety of herbs including *Ashwagandha (Withania somnifera)*, *Jatamansi (Nordostachys jatamansi)*, *Rasna (Pluchea lanceolata)*, *Karanj (Pongamia pinnata), Vach (Acorus calamus)*. Such characteristic herbs make this formulation a unique. Mahanarayana oil is used widely and it is the well-known one for its benefits. *Shool nashak* literally means Analgesic is the key property of these phytoconstituents. Alkaloids, resins are major constituents for the treatment of pain, essential oils will carry the work of muscle buildup, when oil is selected as the dosage form for pain killing action it has a wide benefit of easy application and more patient compliance eventually the possibilities of skin irritation diminishes. Water extract of all constituents should be mixed and be combined with sesame oil to make it a *'Siddha Taila'* literally means Perfected oil. Herbal drugs mentioned above are all being used since long ago in India for different purposes by using it in a mahanarayana oil is one of effort to showcase their potent behavior. Soham Ayurved Rasashala has made a tiny effort from its side to reimburse those showcased effects by developing our consent of formulae's[2].

MATERIAL AND METHODS

Collection of Herbs

To formulate Mahanarayana oil, herbs were purchased from authorized vendors from State of Punjab, India.

Preparation of Oil

All ingredients mentioned in formula taken in defined quantity. Every herb selected with good quality by making sure its cleanliness again. Herbs added in 500ml water by ascending addition and kept mixture to boil for 2 hrs. Traditional extraction method has been used with occasional stirring. After 2 hours of boiling mixture was filtered and filtrate collected in a neat and clean vessel. Now, siddhi procedure of oil has to be carried out by taking 1000ml of sesame oil in another vessel, kept for heating for 20 minutes. After 20 minutes that became slight warm so filtrate of herbs was added in it. This oil boiled for 2 hours to evaporate all water content in it.

EVALUATION

Physical Characteristics

The Colour, Odor, Taste is identified in the physical characteristics evaluation. These tests give information about external condition of a material.

Relative Density

The relative density of a substance is the ratio of the mass of a given volume of the substance to the mass of an equal volume of *water,* both weighed at 25ºC, unless otherwise specified.

Method- Proceed as described under Weight per rnillilitre. Divide the weight of the substance in the pycnometer by the weight of *water* contained, both determined at 25ºC, unless otherwise directed in the individual monograph[3].

Saponification Value

The saponification value is the number of milligrams of potassium hydroxide necessary to neutralize the free acids and to saponify the esters present in 1g of the substance.

Method- Unless otherwise specified in the individual monograph, introduce about 2g of the substance under examination, accurately weighed, into a 200ml flask of borosilicate glass fitted with a reflux condenser. Add 25.0ml of 0.5M *ethanolic potassium hydroxide* and a little *pumice powder* and boil under reflux on a water-bath for 30 minutes. Add Iml of *phenolphthalein solution* and titrate immediately with *0.5M hydrochloric acid (a* ml). Carry out a blank titration omitting the substance under examination *(b* ml).

Calculate the saponification value from the expression

Saponification value = 28.05 *(b - a)/w*

Where, *w* = weight, in g, of the substance[4].

Acid Value

The acid value is the number which expresses in milligrams the amount of potassium hydroxide necessary to neutralize the free acids present in 1g of the substance.

Method- Unless otherwise specified in the individual monograph, dissolve about 10g of the substance under examination, accurately weighed, in 50ml of a mixture of equal volumes of *ethanol* (95 *per cent)* and *ether,* previously neutralized with 0.1M *potassium hydroxide* to *phenolphthalein solution.* If the sample does not dissolve in the cold solvent, connect the flask with a reflux condenser and warm slowly, with frequent shaking, until the sample dissolves. Add 1ml of *phenolphthalein solution* and titrate with 0.1M *potassium hydroxide* until the solution remains faintly pink after shaking for 30 seconds.

Calculate the acid value from the expression

Acid value =5.61 *n/w*

Where, *n* = the number of ml of 0.1M *potassium hydroxide* required;

w = the weight, in g, of the substance[5].

Peroxide Value

The peroxide value is the number of milliequivalents of active oxygen that expresses the amount of peroxide contained in 1000g of the substance.

Method- Unless otherwise specified in the individual monograph, weigh accurately about 5g of the substance under examination, transfer to a 250ml glass-stoppered conical flask, add 30ml of a mixture of 3 volumes of *glacial acetic acid* and 2 volumes of *chloroform,* swirl until dissolved and add 0.5ml of *saturated potassium iodide solution.* Allow to stand for exactly 1 minute, with occasional shaking, add 30ml of *water* and titrate gradually, with continuous and vigorous shaking, with 0.01M *sodium thiosulphate* until the yellow colour almost disappears. Add 0.5ml of *starch solution* and continue the titration, shaking vigorously until the blue colour just disappears *(a* ml). Carry out a blank titration omitting the substance under examination *(b* ml). The volume of 0.01M *sodium thiosulphate* in the blank determination must not exceed 0.1ml.

Calculate the peroxide value from the expression

Peroxide value = 10 *(a - b)/w*

Where, *w* = weight, in g, of the substance[6].

RESULTS AND DISCUSSION

This article is a small effort to showcase analytical data of Mahanarayana oil formulated by Soham Ayurved Rasashala. Amongst batches F1 batch found to be good batch with desired analytical parameters. F1 was an optimized batch.

Table No.1: Formulation Table

S.No	Content	F1	F2
1	Shatavari (Asperagusracemosus)	80gm	20gm
2	Ashwagandha (Withania somnifera)	10gm	20gm
3	Jatamansi (Nordostachys jatamansi)	10gm	20gm
4	Rasna (Pluchea lanceolata)	10gm	20gm
5	Karanj (Pongamia pinnata)	10gm	20gm
6	Vach (Acorus calamus)	10gm	20gm
7	Guduchi (Tinospora cordifolia)	10gm	20gm
8	Erandmul (Ricinus communis)	10gm	20gm
9	Devdar (Cedrus deodara)	10gm	20gm
10	Sesame Oil	1000ml	1000ml
11	Water	500ml	500ml

Table No.2: Evaluation Parameters

S.No	Parameters	Observations	
		F1	F2
1	Appearance	Transparent	Transparent
2	Colour	Dark Brown	Dark Brown
3	Odour	Unpleasant	Unpleasant
4	pH	N.A.	N.A.
5	Relative Density	0.9125gm/ml	1.012gm/ml
6	Saponification Value	53mg/gm	53mg/gm
7	Acid Value	0.12mg/gm	0.12mg/gm
8	Peroxide Value	2.92mMol/kg	2.92mMol/kg

CONCLUSION

Batch F1 has shown the desired effects for the need of treating pain.

ACKNOWLEDGEMENT

Authors are thankful to Aadhar Life Sciences Pvt. Ltd. Chincholi MIDC, Dist. Solapur, Maharashtra for analytical studies of samples.

CONFLICT OF INTEREST

We declare that we have no conflict of interest.

BIBLIOGRAPHY

1. Raja *et al*. The revised International Association for the Study of Pain definition of pain: concepts, challenges and compromises, *Pain,* 161(9), 2020, 1976-1982.
2. Satyendra Kumar *et al*. *In-vitro* anti-inflammatory effects of Mahanarayan oil formulations using dendritic cell based assay, *Annals of Phytomedicine,* 3(2), 2014, 40-45.
3. Indian Pharmacopoeia Relative Density, 1, 2010, 171.
4. Indian Pharmacopoeia Saponification Value, 1, 2010, 93.
5. Indian Pharmacopoeia Acid Value, 1, 2010, 84.
6. Indian Pharmacopoeia Peroxide Value, 1, 2010, 92.

Please cite this article in press as: Paralkar S D and Patil R P. Formulation and evaluation of mahanarayana oil for pain relief and muscle tone, *Asian Journal of Research in Chemistry and Pharmaceutical Sciences,* 9(1), 2021, 9-12.