

Pharmaceutical standardization and physicochemical analysis of “*Manspachak Vati*”.

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ABSTRACT

In the ancient Ayurvedic texts, numerous formulations of herbal, mineral, and herbomineral origin are described. These formulations exhibit therapeutic efficacy in various diseases based on their inherent qualities and properties. The present study focuses on *Manspachak Vati*, a purely herbal preparation. In *Charak Samhita*, *Uttarsthana*, Acharya Charak has described *Pachak Yoga* for the management of *Vishamjwara*, and “*Manspachak Yoga*” is specifically indicated for *Mansagat Jwara*. Ayurvedic practitioners routinely prescribe *Manspachak Yoga* in different dosage forms—such as *kashaya* (decoction) and *churna* (powder)—as per convenience.

The choice of dosage form plays a crucial role in the drug’s action, absorption, and targeted delivery within the body. Tablets are widely preferred due to their ease of preparation, packaging, transport, and patient-friendly administration. Therefore, in this study, *Manspachak Yoga* was converted into tablet form using modern manufacturing equipment and analytical techniques.

An attempt was made to validate the pharmaceutical and analytical procedures to

ensure consistent product quality and minimize batch-to-batch variation. Pharmacopoeial standards were established for this Ayurvedic formulation in tablet form. All three prepared batches exhibited uniform characteristics, and the analytical parameters showed no significant variation. These established standards may serve as a reference for future pharmaceutical preparations.

Keywords: *Charak Samhita*, *Jwar Chikitsa-Pachak Yoga*, *Manspachak Tablet (MnPT)*, Pharmaceutical standard Procedure, Dosage forms.

INTRODUCTION

Five *Pachak Yogas* are described in the treatment of *Vishamjwara* in *Jwara Chikitsa Adhyaya* [1]. These include *Rasa Pachak*, *Rakta Pachak*, *Mansa Pachak*, *Medo Pachak*, and *Asthi-Majja Pachak*.

The causes of *Mansavaha Srotodushti* (vitiation of the channels responsible for transporting and nourishing muscle tissue) are as follows:

1. *Abhishyandi Bhojan* – consumption of foods that produce excessive moisture or secretions
2. *Sthoola Bhojan* – excessive intake of heavy or dense foods

3. **Guru Bhojan** – frequent consumption of foods that are difficult to digest
4. **Diwaswapna** – excessive daytime sleeping
5. **Adhyashana** – eating before the previous meal has been properly digested
6. **Prushtayana** – sedentary habits or lack of physical activity
7. **Vegavidhāraṇa** – forcible suppression of natural urges [2]

According to WHO, nearly 80% of the global population relies on herbs and traditional medicine for primary healthcare needs. With the growing international demand for herbal medicines, the responsibility to ensure high-quality products in standardized dosage forms lies with the Ayurvedic industry. Dosage form plays a crucial role in therapeutic action and efficacy. Among the various dosage forms—such as syrups, powders, and injectables—**tablets are widely preferred**, as they are easy to administer, ensure accurate dosing, are palatable, and facilitate convenient packaging and transportation. Therefore, Manspachak Yoga has been adapted into tablet form.

The Ministry of AYUSH, Government of India, is currently focused on developing Standard Operating Procedures (SOPs) for the manufacturing of Ayurvedic formulations to minimize batch-to-batch variations. This goal can be achieved by evaluating and analyzing herbal products through both classical Ayurvedic methods and modern standardization techniques during manufacturing as well as after obtaining the final product.

Table 1: Contents of the drug

Sr. No.	Sanskrit Name	Latin Name	Parts Used	Quantity for batch size 1 kg
1	<i>Nimba</i>	<i>Azadirachta indica</i>	Leaves	167gm
2	<i>Patol</i>	<i>Trichosanthes dioica</i>	Leaves	167gm

In the original Ayurvedic texts, **Manspachak Yoga/Kalpa is not described in tablet (Vati) form**. To ensure proper dosage administration and to mask its inherent bitterness, the *Kalpa* has been adapted into **Vati (tablet)** form [3]. The ingredients and *Bhavana Dravya* used were identical to those mentioned in the original classical reference.

One of the major challenges faced by Ayurvedic practitioners is the lack of standardized pharmaceutical and analytical validation for herbal medicines and their formulations. In this context, the standardization of **Manspachak Yoga** in its **Vati (tablet)** form [4] becomes an important step.

To establish its physicochemical profile, comprehensive **pharmaceutical and analytical validation** of the formulated herbal drug was carried out.

MATERIALS AND METHODS

Manspachak Yog contains a total of 5 ingredients viz. *Sariva*, *Patol*, *Kutki*, *Patha*, *Musta*. Decoction of all these drugs was used to give *Bhavana* to enhance the therapeutic potency of the drug.

The details of parts and quantity used are given below in Table No. 1

All the ingredients for this *kalpa* were collected from local authentic markets and identified and authenticated at the quality control laboratory by using facilities of Shree *Bramhachaitanya* Ayurved, Nagpur, Maharashtra. All these herbal ingredients passed quality parameters described in API [5].

3	<i>Mridvika</i>	<i>Vitis vinifera</i>	Dried Fruit	167gm
4	<i>Musta</i>	<i>Cyperus rotundus</i>	Rhizome	167gm
5	<i>Kutaj</i>	<i>Holarrhena antidyenterica</i>	Stem bark	167gm
6	<i>Triphala</i>		Fruits	165gm

Pharmaceutical Procedure

All the ingredients listed in the table above were taken in equal quantities of 200 g each and blended together. The mixture was then processed in a mass pulverizer and passed through a mass sifter using sieve no. 80 to obtain a fine powder. This powder was uniformly mixed in a mass mixer and subsequently triturated in an end-runner for **three prahar** (approximately 9 hours) using a decoction prepared from the same ingredients.

Following trituration, the material was dried in an electric dryer at a temperature not exceeding 60°C. Excipients—MCC (30 g) and starch (50 g)—were then

incorporated into the dried mass. The mixture was passed through a mm fitted with sieve no. 2 to form granules. Tablet compression was carried out using a tableting machine to produce tablets of **250 mg** each.

Each batch yielded approximately **3,800 to 4,000 tablets**.

OBSERVATIONS AND RESULTS

Physico-chemical analysis was done at a quality control lab by using facilities of Shree *Bramhachaitanya Ayurved*, Nagpur, Maharashtra.

Table 2: Showing comparative physico-chemical study.

Sr. No.	Test Name	Sample A	Sample B	Sample C
1	Colour	Light Brown coloured	Dark Brown	Brown
2	Average Weight	0.252 mg	0.249mg	0.256mg
3	Uniformity in Weight	Not >5%	Not >5%	Not >5%
4	Diameter	8.22 mm	8.19mm	8.21mm
5	Thickness	3.59 mm	3.62 mm	3.55 mm
6	Hardness [6]	2.49Kg/cm2	2.53kg/cm2	2.48kg/cm2
7	Friability [7]	0.5%w/w	0.3%w/w	0.2%w/w
8	Disintegration [8]	13 min	12 min	15 min

DISCUSSION

Tablets are among the most widely used dosage forms, as they allow for accurate dosing, are easy to administer, palatable, conveniently transportable, and simple to package. These features make tablets more advantageous than many other dosage forms. The ingredients used in *Manspachak*

Tablet (*MnPT*) are identical to those described in the *Charak Samhita*. To enhance the potency of the tablets, *bhavana* was performed using a *kwatha* prepared from the same ingredients during manufacturing.

Pharmaceutical and analytical validation of *Manspachak* Tablet (*MnPT*) was achieved

by meticulously following each manufacturing step and employing modern physicochemical analyses on the finished product. The entire process—from pulverization of raw materials to packaging—was carried out in accordance with GMP guidelines, with observations recorded at every stage. The final product was evaluated using both classical Ayurvedic parameters and modern analytical techniques to assess batch-to-batch variation and ensure consistency.

Across all three sample batches, quality control parameters showed no significant differences, indicating that the manufacturing process is consistent and can be standardized.

The analytical parameters established for *Manspachak Vati* (tablet) prepared using this method may serve as the basis for developing an SOP for this formulation, as presented in the table below.

Table 3: Showing set parameters for *Manspachak* tablet

Sr. No.	Test Name	Parameters
1	Description	Brownish, circular compressed, biconvex uncoated tablet
2	Average Weight	0.249 to 0.256 mg
3	Uniformity of weight	Complies
4	Diameter	8.19 mm to 8.22 mm
5	Thickness	3.55mm to 3.62mm
6	Hardness	2.48 Kg/cm ² to 2.53 Kg/cm ²
7	Friability	NMT 1%
8	Disintegration	NMT 30min

CONCLUSION

The pharmaceutical and analytical standardization of the Ayurvedic formulation *Manspachak Vati (tablet)* was established using both classical Ayurvedic parameters and modern physicochemical evaluation methods. The validated procedure can be reliably applied for the preparation of *Manspachak Vati*, ensuring optimal efficacy of the final product. All three batches exhibited no significant variations, indicating consistency in the manufacturing process.

This study demonstrates that *Manspachak Vati* prepared through the described method meets the required quality standards. As no previously published reference data for this formulation are available, direct comparison was not possible; hence, the findings of the present study may serve as a reference point for future research.

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