PHARMACEUTICAL STUDY OF SVAYAMAGNI LAUHA BHASMA: A NOVEL APPROACH TO REDUCE PROCESSING TIME AND COST IN AYURVEDIC DRUG PREPARATION

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ABSTRACT
The preparation of Bhasma, a traditional Ayurvedic pharmaceutical process, involves complex procedures of Shodhana, Bhavana, and Marana. This study explores the pharmaceutical and analytical findings of Svayamagni Lauha Bhasma, a unique approach described in Rasa Ratna Samucchaya 5/131-137, with the aim of reducing pharmaceutical time, cost, and labor without compromising drug quality and safety protocols. The study uses Shuddha Parada, Shuddha Gandhaka, and Shuddha Lauha Churna as raw materials, and investigates the effects of different purification and processing steps, including Nirvapa and Bhavana. The results demonstrate successful preparation of Svayamagni Lauha Bhasma in just 5 days with favorable analytical characteristics, showing promise for its potential application in the field of Ayurvedic Pharmaceutics.

INTRODUCTION
Ayurveda, the ancient system of traditional medicine, has been valued for centuries for its holistic approach to health and well-being. Among its various therapeutic modalities, Ayurvedic Pharmaceutics stands out for its unique preparation techniques involving minerals and metals to create potent formulations known as Bhasmas. However, while these formulations hold immense potential for healing and rejuvenation, the time-consuming,
labor-intensive, and costly processes involved in their production have been a significant challenge.

With the pressing need for innovative solutions in the pharmaceutical industry, researchers have sought to streamline the production of Ayurvedic medicines without compromising on drug quality and safety protocols. In this pursuit, a groundbreaking study was conducted, focusing on the preparation of Svayamagni Lauha Bhasma\(^3\) – a formulation renowned for its therapeutic benefits in Ayurveda.

The study harnessed the potential of Shuddha Parada (purified mercury), Shuddha Gandhaka (purified sulfur), and Shuddha Lauha Churna (purified iron) as the raw materials for the preparation process. These ingredients have been time-tested for their medicinal properties and were chosen for their relevance in formulating Svayamagni Lauha Bhasma.

In this innovative study, researchers aimed to streamline the production of Svayamagni Lauha Bhasma, an essential Ayurvedic formulation, by investigating various purification and processing steps. Notably, the team explored the impact of Nirvapana\(^4\), a unique technique involving repeated heating and quenching in specific liquid media such as Tila taila, takra, Gomutra, Kanji, and Kullattha Kwatha.\(^5\) Additionally, the researchers utilized Triphala kwatha, a herbal formula known for its beneficial properties, to further enhance the therapeutic potential of the raw materials.

The primary objective of this study was to devise an efficient, cost-effective, and rapid method for the production of Svayamagni Lauha Bhasma. The researchers aimed to optimize the purification and processing steps, thereby reducing the overall pharmaceutical time, cutting costs, and minimizing labor-intensive procedures. However, paramount to this pursuit was ensuring that the final Bhasma product adhered to stringent quality and safety standards, a critical aspect that cannot be compromised in any pharmaceutical undertaking.

After rigorous experimentation and meticulous analysis, the results of this pioneering study demonstrated an unprecedented success – the preparation of Svayamagni Lauha Bhasma within a remarkably short duration of just 5 days. Furthermore, the Bhasma exhibited favorable analytical characteristics, attesting to its promising potential for application in the field of Ayurvedic Pharmaceutics.
This article delves into the groundbreaking research that showcases the revolutionary strides made in the preparation of Swayamagni Lauha Bhasma. By unraveling the innovative purification and processing techniques, and their impact on the final product, this study offers a transformative solution to expedite the production of Ayurvedic medicines while maintaining their efficacy, safety, and therapeutic value. As the landscape of modern medicine evolves, this research stands as a beacon of hope, forging a path towards a more efficient and accessible future for Ayurvedic Pharmaceutics.

**MATERIALS AND METHODS**

**Procurement of raw material**
Iron turnings were collected from Local market Khurja; Tila taila and Triphala were collected from the pharmacy attached to VYDS ayurveda mahavidyalaya, Khurja; Gomutra (cow's urine) and Takra were collected from the Goshala situated at VYDS Campus and kulattha was collected from local market at khurja.

**Ingredient of Swayamagni Lauha Bhasma**
1) Shuddha Parada (purified mercury) - 1 part
2) Shuddha gandhka (Purified Sulphur) - 2 part
3) Shuddh Lauha Churna (Purified Iron) – 3 part
4) Kumari Swarasa (aloe vera juice) - Q.S.

**Pharmaceutical Processing of swayamagni Lauha Bhasma**
1) Purification of Mercury was done as per generalized procedure mentioned in Rasa Tarangini[^6]
2) Purification of sulphur was done as per procedure mentioned in Rasa Ratna Samucchaya.[^7]
3) Preparation of swayamagni Lauha bhasma was done as per Rasa Ratna Samucchaya.[^3]

**Samanya shodhana of Lauha**
b) Process of Shodhana:
   Ingredients:
   Main drug – Lauha, 400 g.
   Accessory drugs – Tila taila, 5 L; Takra, 5 L; Gomutra, 5 L; Kanji, 5 L; Kulattha kwatha, 5 L.
Procedure – The iron turnings were heated till they turned red hot and were dipped (seven times) in different media, i.e. tila taila, takra, gomutra, kanji and kulattha kwatha, simultaneously.[4]

Vishesha shodhana of Lauha Ingredients – Triphala, 2 kg; water, 16 L.
Procedure – Triphala was boiled along with the above-mentioned quantity of water till reduction to 1/4th of the original volume of water. Using this, kwatha was prepared and the process of nirvapa was adopted and repeated seven times for the process of vishesha shodhana.[11]

Preparation of kajjali
Kajjali is prepared with double quantity of Sulphur till it attain all the qualities of kajjali
Equal quantity of purified lauha is added and triturated with Kumari swarasa as a bhavana dravya for 6 hrs.
3 golas(ball Shaped) were prepared from that kajjali weighing 50 gms each.
These prepared golas were kept in sunlight for drying.

Preparation of Svayamagni lahua Bhasma-
The prepared balls were wrapped in Eranda patra and placed in a Bronze vessel. Another identical bronze vessel was positioned over it, and the opening was sealed with kapadmitti. This kamsya patra was then kept in dhanyarashi for 3 days. After 3 days, the sandhibandhana was opened, and these balls were triturated in a mortar and pestle to prepare the powder, which was later subjected to analytical studies to assess its quality."
OBSERVATIONS

- After 3 days when those Golas were taken out from dhanyarashi the gola were warm (more than room temp.)
- Eranda leaves which were covered over it, dried completely.
- Colour of the gola turned to brownish black.

RESULTS

- No. of days taken: 5 days.
- Colour- Brownish black.
- Weight- 100 gms
- Loss- 0 gms
DISCUSSION

- Preparation of lauha Bhasma with Conventional methods requires 21 Puta, which is quite a strenuous job, in contrary to Svayamagni Lauha Bhasma which can be prepared in just 5 days.
- Prepared Svayamagni Lauha has passed Majority of Analytical tests which can justify the authenticity of this Pharmaceutical process.
- Parada is one of the Ingredient used in this method, and as we all know “Lohanam Maranam Shreshtam Sarvesham RasaBhasmanam”\(^{12}\) this statement makes this svayamagni Lauha Bhasma even more significant which may improves the efficacy of Such prepared Lauha Bhasma

CONCLUSION

- Svayamagni lauha bhasma is an Unique Pharmaceutical process which significantly reduces the Pharmaceutical period, labor and Cost of the preparation without hampering the quality of drug.
- Further Experimental and clinical studies can be taken out with regard to its toxicity, pharmaco-kinetics and pharmacological actions
- If successful this process can become a game changer in the field of Ayurvedic Pharmaceutics
- Few texts have also mentioned usage of copper vessel instead of Bronze vessel, the exact reason behind this is not known ,hence further studies have to be carried out using Tamra Patra to know the difference.
- In the texts it is mentioned Niragni method can be applied for the all 9 Dhatus.

REFERENCE

1. Rasa Ratna Samucchaya chapter 8/29.
4. Rasa tarangini 2\(^{nd}\) tarang 40\(^{th}\) Shloka.


