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MODIFIED DOSAGE FORMS OF LEHA KALPANA: A CONTEMPORARY PHARMACEUTICAL PERSPECTIVE ON TRADITIONAL AYURVEDIC SEMISOLID FORMULATIONS

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ABSTRACT

Leha Kalpana, a classical semisolid Ayurvedic dosage form, has been used for centuries for its therapeutic benefits, particularly in respiratory and digestive disorders. However, issues such as low bioavailability, instability, and poor palatability have limited its widespread adoption in contemporary medicine. This study explores modified forms of Leha Kalpana, including lozenges, linctuses, herbal jellies, encapsulated forms, and nanoformulations. Lozenges, also referred to as medicated candies or lollies or herbal cough drops, offer several advantages—they begin absorption through the mucosal lining of the mouth, are palatable, easy to administer, and are especially beneficial for children and elderly patients. Compared to the long and labor-intensive preparation process of traditional Leha Kalpana, lozenges are easier and quicker to manufacture with better dosage precision and hygiene control. The research integrates classical Ayurvedic literature with modern pharmaceutical findings. Results indicate that modified forms improve stability, absorption, and patient compliance. These findings suggest a promising future for integrating traditional formulations into mainstream healthcare using modern drug delivery technologies.

KEYWORDS: Leha Kalpana, Ayurveda, modified dosage forms, nano-herbals, lozenges, Rasashastra, pharmaceutical modernization.

1. INTRODUCTION

Leha Kalpana is a semisolid Ayurvedic formulation prepared using herbal extracts with sugar, jaggery, or honey as the base. As a part of the Lehya category in Ayurveda, it is administered by licking and is classified under the Anupana-based drug delivery systems. Popular examples include Chyawanprash, Drakshavaleha, and Agastya Rasayana, which are traditionally used in conditions involving Kasa, Shwasa, Agnimandya, and Rasayana therapy. Despite their classical efficacy, these formulations face practical challenges such as poor bioavailability, short shelf life, issues with taste and texture, and inconvenience in mass production and packaging. These limitations highlight the need for modernization of Leha Kalpana through contemporary pharmaceutical technologies to ensure better clinical outcomes and acceptance.

Figure 1: Herbal Jellies.

Figure 2: Avleha kalpana.

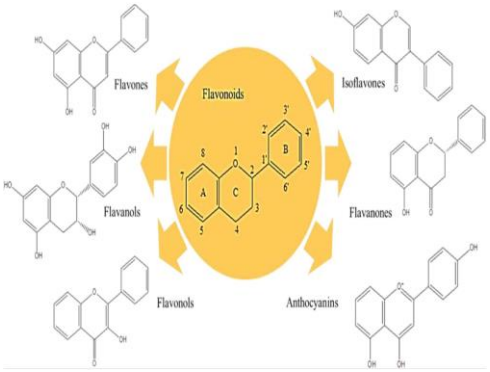


Figure 3: Nano For mulations.

Figure 4: Medicated and Non Medicated Lozenges.

2. Traditional Leha Kalpana with Ayurvedic and Scientific Names.

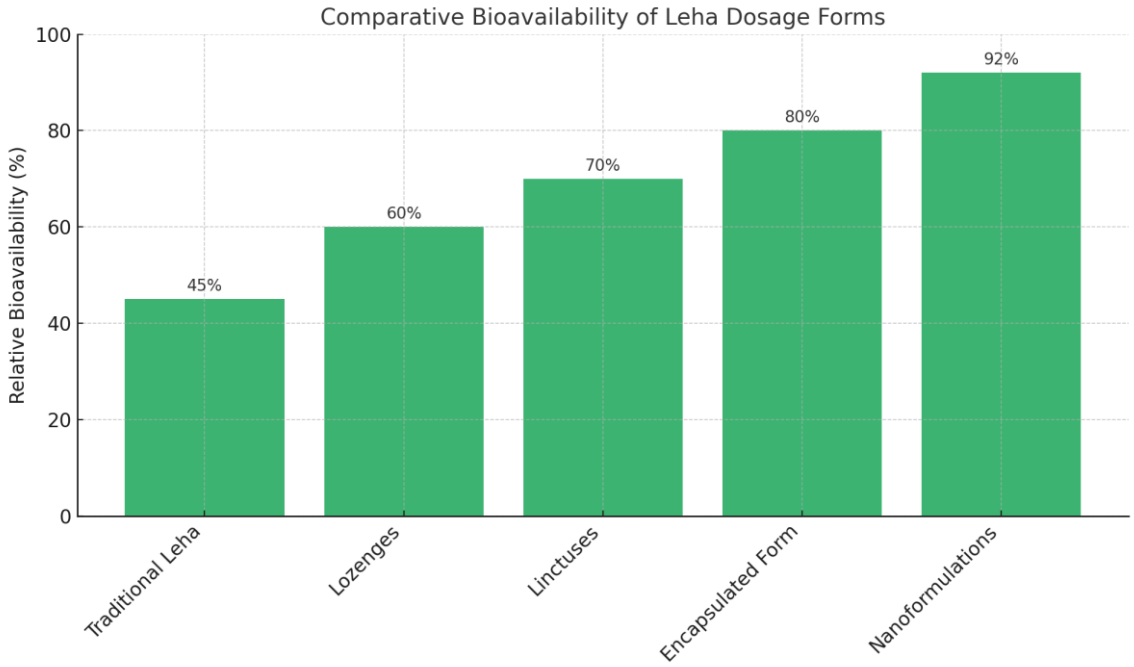
Formulation Name	Key Ingredients (Ayurvedic Name – Scientific Name)	Primary Use/Indications
Chyawanprash	Amla (Amalaki – Emblica officinalis), Ashwagandha (Withania somnifera), Dashamoola (10 herbal roots)	Rasayana, rejuvenation, immunity booster
Drakshavaleha	Draksha (Vitis vinifera), Pippali (Piper longum), Haritaki (Terminalia chebula)	Respiratory and hepatic disorders
Madhuyashtyavaleha	Yashtimadhu (Glycyrrhiza glabra), Madhu (Apis dorsata), Pippali (Piper longum)	Chronic cough, asthma, sore throat
Agastya Rasayana	Agastya (Sesbania grandiflora), Haritaki (Terminalia chebula), Dashamoola	Bronchial asthma, chronic respiratory diseases
Brahma Rasayana	Haritaki (Terminalia chebula), Guduchi (Tinospora cordifolia), Amla (Emblica officinalis)	Neuroprotective, anti-aging
Kantakaryavaleha	Kantakari (Solanum xanthocarpum), Pippali (Piper longum), Gud (jaggery)	Productive cough, bronchitis
Pippalyavaleha	Pippali (Piper longum), Shunthi (Zingiber officinale), Maricha (Piper nigrum)	Chronic respiratory disorders, Agnimandya
Talisadi Leha	Talisapatra (Abies webbiana), Vamsalochana (Bambusa arundinacea), Shunthi (Zingiber officinale)	Asthma, dry cough, throat infections
Vasavaleha	Vasa (Adhatoda vasica), Shunthi (Zingiber officinale), Pippali (Piper longum)	Bronchial asthma, expectorant

3. METHODS

This study uses a literature-based review methodology. Classical Ayurvedic texts such as Charaka Samhita, Sushruta Samhita, Ashtanga Hridaya, and Sharangadhara Samhita were analyzed for traditional references to Leha Kalpana. Modern research was reviewed via databases like PubMed, Google Scholar, and the AYUSH Research Portal using keywords such as 'Leha Kalpana', 'herbal lozenges', 'honey lozenges', and 'nanoformulations'. Sources were selected based on relevance, recency, and availability of scientific evaluation.

4. RESULTS

Modified dosage forms of Leha Kalpana such as lozenges, linctuses, herbal jellies, encapsulated forms, and nanoformulations show enhanced bioavailability, better patient compliance, and increased shelf life. These forms overcome issues of traditional Leha such as microbial degradation, poor taste, and inconsistency in dosing. Herbal lozenges especially demonstrated antimicrobial effects when honey was used as a base, as supported by modern research.



5. DISCUSSION

The adaptation of Leha Kalpana into modern dosage forms supports the integration of Ayurveda into evidence-based medicine. Lozenges and linctuses enhance mucosal absorption and patient acceptability. Nanoformulations and encapsulated preparations allow for precision dosing and targeted delivery. However, challenges such as the need for

pharmacopoeial standardization, clinical validation, and regulatory guidance remain. Addressing these will open avenues for mainstream adoption of these novel Ayurvedic formulations.

6. CONCLUSION

The modernization of Leha Kalpana using pharmaceutical innovation offers improved therapeutic efficacy, safety, and acceptability. This paves the way for large-scale production, standardization, and global recognition of Ayurvedic medicine. Continued interdisciplinary research, regulatory policy evolution, and education on these formulations are crucial for sustainable integration.

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