IJAYUSH
International Journal of AYUSH
AYURVEDA • YOGA • UNANI • SIDDHA • HOMEOPATHY
https://internationaljournal.org.in/journal/index.php/ijayush/
ISSN: 2349-7025
OPEN ACCESS
★ PEER REVIEWED ★
MONTHLY

Original Research Article	Volume 15 Issue 11	November 2026

PHARMACEUTICAL DEVELOPMENT AND STANDARDIZATION OF *VIDA LAVANA*

***Ketvi Patel[1], Bharti Umretia[2], Bharat Kalsariya[3]**

[1]P.G. Scholar, Upgraded Department of *Rasashastra* and *Bhaishajya Kalapana*, Government Ayurveda College, Vadodara, Gujarat, India.

[2]Head of Department and Reader, Upgraded Department of *Rasashastra* and *Bhaishajya Kalapana*, Government Ayurveda College, Vadodara, Gujarat, India.

[3]Principal & Professor, Upgraded Department of *Rasashastra* and *Bhaishajya Kalpana*, Government Ayurved College & Hospital, Vadodara, Gujarat, India.

***Corresponding Author's Email ID:** drketvipatel98@gmail.com

DOI: https://doi.org/10.5281/10.5281/zenodo.24237806

Abstract

Background: *Vida Lavana* are mentioned under *Lavana Varga* in Ayurveda. *Vida Lavana* is artificially prepared from *Amalaki Churna* and *Romaka Lavana*. Various methods for the preparation of *Vida Lavana* were mentioned in the classical texts of Rasashastra. In the present study reference of Rasatarangini was adopted. In the classical preparation of *Vida Lavana,* there are significant challenges in terms of temperature, time consumed, as well as yield of the final product. **Objective**: To develop a Standard Manufacturing Procedure (SMP) of *Vida Lavana*. **Materials and Methods:** A pharmaceutical pilot study comprising 22 batches was conducted to evaluate different heating methods, including *Gajaputa*, *Varahaputa*, Electric Muffle Furnace, gas-stove and *Bhrastri*, along with the source and quality of *Romaka Lavana*. Based on the pilot study observations, *Gajaputa* using *Romaka Lavana* obtained from Sambhar Lake, Rajasthan, was selected for the main study. Five batches were prepared using *Amalaki* and *Romaka Lavana* in a 1:8 ratio under standardized conditions. **Results:** The optimised process involved gradual heating to approximately 800-900°C, exposure above 800°C for about 45-60 minutes, followed by approximately 30 hours of natural self-cooling. The five main batches showed peak temperatures ranging from 834-880°C and final yields ranging from 50-55%, with an average yield of 52.3%. The finished product exhibited a characteristic reddish-black crystalline appearance. **Conclusion:** The study successfully established a Standard Manufacturing Procedure for *Vida Lavana* using *Amalaki* and *Romaka Lavana* in a 1:8 ratio. *Gajaputa* with gradual heating, adequate high-temperature exposure and controlled self-cooling produced a characteristic reddish-black crystalline product with an average yield of 52.3%.

Keywords: *Vida Lavana*, *Romaka Lavana, Amalaki, Gajaputa,* Standardization.

INTRODUCTION

Lavana Varga are group of drugs mentioned in Ayurvedic classics which are of great importance. From Samhita period onwards, descriptions of various types of *Lavana* are available. Based on origin of *Lavana*, it is classified as *Prakritha* (naturally occurring) and *Kritrima* (artificially prepared) *Lavana*. *Vida Lavana* is one such *Lavana* preparation described in Rasa Tarangini[1]. It is indicated in the management of

Agnimandya (impaired digestive fire), *Ajirna* (indigestion), *Anaha* (abdominal distension), *Adhmana* (flatulence), *Vishtambha* (constipation), *Shula* (abdominal pain), *Gulma* (abdominal lump), *Hridgaurava* and other disorders associated with deranged *Vata*. Owing to its *Dipana, Pachana, Anulomana, Vata-Kaphahara* and *Shulahara*[2] properties, *Vida Lavana* is widely incorporated in several important classical formulations such as *Chitrakadi Gutika*[3], *Shankha Vati*[4], *Takrarishta*[5] and numerous digestive preparations.

There are two artificial methods of preparation of *Vida Lavana* mentioned in Rasa Tarangini. The second method of preparation is adopted for the present study. According to the classical reference, *Vida Lavana* is prepared using *Amalaki* and *Romaka Lavana* in a ratio of 1:8, with continuous heating for approximately six hours. However, the classical description does not clearly specify the type of heating system, temperature range, duration of peak thermal exposure, or cooling pattern required for successful preparation. These parameters are important in pharmaceutical processing because changes in heat intensity and duration can influence the transformation and final characteristics of the product.

Standardization of Ayurvedic formulations requires control not only over the composition of raw materials but also over their source, quality, processing conditions and critical manufacturing parameters**.** In the case of Vida Lavana, the quality and source of Romaka Lavana may influence the course of preparation and characteristics of the final product. During the preliminary pharmaceutical trials, different heating systems, including Gajaputa, Varahaputa, Electric Muffle Furnace, gas-stove and Bhrastri, were evaluated to identify suitable processing conditions.

Based on the pilot findings, *Gajaputa* was selected for the main pharmaceutical study because it provided gradual heating, adequate high-temperature exposure, and prolonged self-cooling. Five batches were subsequently prepared under standardized conditions to establish a reproducible Standard Manufacturing Procedure (SMP).

MATERIALS AND METHODS

The whole pharmaceutical study was carried out in the following steps;

- Procurement and identification of raw material
- Preparation of drug

Procurement and identification of raw material

Procurement of the raw materials

The sample of *Romaka Lavana* was collected from Sambhar Lake during November 2025. Dried *Amalaki* was procured from the Government Ayurved Pharmacy, Rajpipala, Gujarat.

Identification of raw material

The sample of Dried *Amalaki* was identified in Pharmacognosy Laboratory of Upgraded Department of Dravyaguna and *Romaka Lavana* was identified in Quality Control Laboratory of Upgraded Department of Rasashastra and Bhaishajya Kalpana, Government Ayurved College, Vadodara, Gujarat.

Preparation of Drug

All the batches of *Vida Lavana* were prepared in the Pharmaceutical Laboratory of Upgraded Department of Rasashastra and Bhaishajya Kalpana, Government Ayurved College, Vadodara, Gujarat. This study was conducted to standardize the pharmaceutical procedure of *Vida Lavana* according to the reference mentioned in Rasa Tarangini.[6]

A pilot study was carried out to standardize important parameters such as the suitable type of *Puta* for heating, appropriate quality and quantity of *Romaka Lavana*, size of the vessel, expected yield and total

duration of the process. During this pilot study, 22 batches of *Vida Lavana* were prepared. To standardize the preparation method and assess the effect of different heating techniques on the final product, pilot batches were carried out using various heating media, namely *Gajaputa* (5 batches), *Varahaputa* (5 batches), Electric Muffle Furnace (10 batches), gas stove heating (2 batches) and *Bhrastri* heating (2 batches).

The required quantity of dried Amalaki was coarsely powdered and mixed thoroughly with Romaka Lavana in a 1:8 ratio. The mixture was placed in an earthen pot, covered with an earthen lid and sealed with Multani Mitti-smeared cloth. After drying, the sealed pot was subjected to Gajaputa. Then, the prepared Vida Lavana was collected, weighed, labelled and stored in an airtight container. (Figure no. 1 to 6)



Figure : 1



Figure : 2



Figure : 3



Figure : 4



Figure : 5

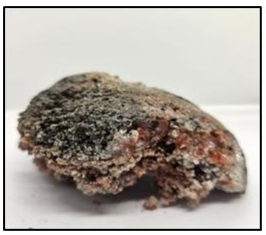


Figure : 6

(Figure 1: Dried *Amalaki Yavakuta* and *Romaka Lavana*; Figure 2: Mixing of dried *Amalaki Yavakuta* and *Romaka Lavana*; Figure 3: Placing the mixture into an earthen pot; Figure 4: After sealing the earthen pot and lid with *Multani Mitti*-smeared cloth; Figure 5: *Gajaputa*; Figure 6: *Vida Lavana*)

RESULT

In table no. 1 and table no. 2 time and temperature pattern and details of the results of *Vida Lavana* of all five main batches are mentioned respectively.

Table no. 1: Showing details of time and temperature pattern of *Vida Lavana*

Time (hr:min)	Temperature (°C)				
	Batch 1	Batch 2	Batch 3	Batch 4	Batch 5
00:00	28	25	24	23	24
00:15	30	25	25	23	22
00:30	214	217	219	101	204
00:45	503	397	413	497	398
01:00	690	570	509	795	560
01:15	747	753	656	876	680
01:30	779	780	684	880	780
01:45	792	773	722	798	810
02:00	785	799	789	775	824
02:15	798	643	820	756	784
02:30	705	651	859	749	751

Time (hr:min)	Temperature (°C)				
	Batch 1	Batch 2	Batch 3	Batch 4	Batch 5
02:45	656	643	820	768	734
03:00	740	621	810	750	691
03:15	730	601	779	756	649
03:30	670	589	745	754	613
03:45	605	555	720	705	584
04:00	539	539	701	720	567
04:15	543	527	697	698	536
04:30	555	513	674	683	527
04:45	554	511	655	678	519
05:00	550	507	651	659	504
05:15	551	508	647	634	501
05:30	543	503	631	644	495
05:45	535	501	587	632	487
06:00	530	495	548	617	471
06:15	520	487	478	601	463
06:30	512	475	457	599	448
06:45	506	453	420	478	432
07:00	500	444	404	468	424
07:15	498	436	417	447	419
07:30	477	429	431	444	420
07:45	445	421	401	431	412
08:00	433	416	398	389	408
08:15	431	411	378	378	401
08:30	426	405	347	367	396
08:45	401	399	321	347	389
09:00	395	378	314	324	372
12:00	199	176	217	333	351
24:00	131	121	127	216	107
30:00	38	31	24	24	37
Peak Temperature (°C)	834	861	865	880	837
Time required for attain Peak Temp. (hrs:min)	2:18	1:58	2:30	1:50	2:12
No. of cow dung cakes used for *Puta*	317	319	315	313	314

Table no.2: Showing the details of the results of *Vida Lavana*

Parameters		Results					
		B 1	B 2	B 3	B4	B5	Average
Initial quantity of dried *Amalaki* (g)		22	22	22	22	22	22
Initial quantity of *Romaka Lavana* (g)		178	178	178	178	178	178
Initial quantity of *Amalaki* + *Romaka Lavana* (g)		200	200	200	200	200	200
Final quantity of *Vida Lavana*	(g)	110	102	100	105	106	104.6

Parameters		Results					
		B 1	B 2	B 3	B4	B5	Average
	(%)	55	51	50	52.5	53	52.3
Total loss (g)	(g)	90	98	100	95	94	95.4
	(%)	45	49	50	47.5	47	47.7
Reason of loss		Due to heating and evaporation of water content in raw material					
Total time required for preparation of *Vida Lavana* (Days)		2	2	2	2	2	2

Organoleptic characteristics of all main batches before and after *Puta* are mentioned in table no.3

Table no. 3: Showing the organoleptic characters of finished product before and after *Puta*

Stages of samples	Organoleptic Characters			
	Colour	Odour	Texture	Taste
Before *Puta*	Blackish white	Characteristic	Coarse	*Lavana*
After *Puta*	Reddish black crystals	Burnt	Rough	*Lavana*

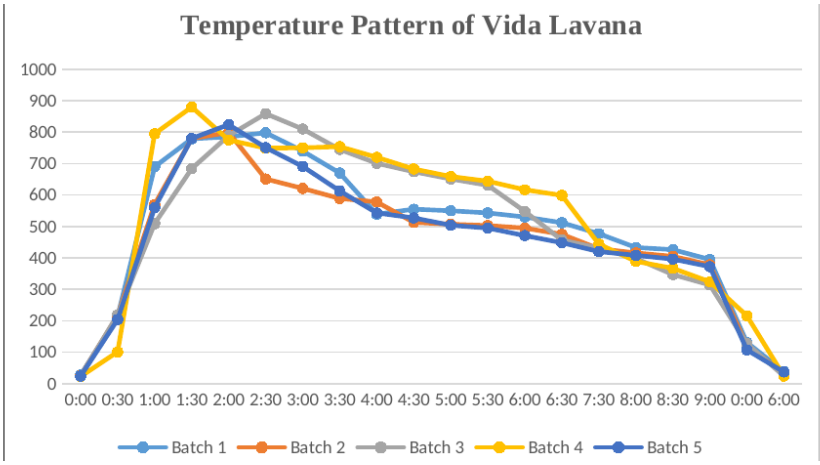
DISCUSSION

In the present study, five batches of *Vida Lavana* were prepared to establish a Standard Manufacturing Procedure (SMP). Classical review revealed that Rasa Tarangini[7] describes the preparation of *Vida Lavana* using *Amalaki* and *Romaka Lavana* in a ratio of 1:8, with continuous heating for approximately 6 hours. However, the classical reference does not specify the method of heating. Therefore, different heating methods were evaluated during the pilot study to identify suitable processing conditions.

Initial batches prepared using *Romaka Lavana* procured from Junagadh and Pune did not produce the characteristic reddish-black crystalline product, indicating the influence of raw-material quality and source on the pharmaceutical outcome. In contrast, the use of authentic *Romaka Lavana* obtained from Sambhar Lake, Rajasthan, resulted in better product formation when appropriate thermal conditions were provided.

Among the heating methods evaluated, *Gajaputa* provided a suitable thermal profile for the preparation of *Vida Lavana*. The *Gajaputa* batches exhibited gradual heating, with peak temperatures ranging from 770°C to 868°C, followed by prolonged self-cooling. Particularly, Batch 21 prepared with authentic Sambhar *Romaka Lavana* attained 868°C in approximately 2 h 30 min, remained above 800°C for about 45 - 60 min and subsequently underwent approximately 30 h of self-cooling, resulting in characteristic reddish-black crystalline *Vida Lavana*. In comparison, *Varahaputa* did not provide adequate sustained thermal exposure, while gas-stove heating reached only about 495°C despite prolonged heating. EMF achieved higher temperatures up to 1050°C but failed to produce the characteristic reddish-black crystals, whereas continuous high-temperature exposure in *Bhrastri* resulted in overheating. These findings indicate that successful preparation depends not merely on attaining a high temperature but on the combined effect of gradual heating, adequate thermal exposure and controlled self-cooling.

Based on these observations, *Gajaputa* using authentic Sambhar Lake *Romaka Lavana*, an Amalaki: *Romaka Lavana* ratio of 1:8, heating to approximately 800- 900°C, exposure above 800°C for 45- 60 minutes, followed by about 30 hours of natural self-cooling**,** was established as the suitable Standard Manufacturing Procedure. Five batches prepared under these conditions showed comparable processing characteristics and appearance, supporting the reproducibility of the developed procedure. (Graph no.1)



Graph no.1: Comparative Temperature pattern of five batches of *Vida Lavana*

The five main batches prepared using the optimized conditions showed comparable temperature profiles and physical characteristics. The peak temperature ranged from 834 -880°C, and the final yield ranged from 50-55%, with an average yield of 52.3%. The consistency among batches indicates satisfactory reproducibility of the developed SMP.

Overall, the study indicates that authentic *Romaka Lavana*, appropriate temperature, sufficient heat-retention period, gradual heating, and controlled self-cooling are the major pharmaceutical factors governing successful preparation of *Vida Lavana*.

CONCLUSION

The study successfully established a reproducible Standard Manufacturing Procedure for Vida Lavana using Amalaki and Romaka Lavana in a 1:8 ratio. Gajaputa with controlled heating and gradual self-cooling produced consistent pharmaceutical transformation, with peak temperatures of 834- 880°C and an average yield of 52.3%.

References

1. Pranacharya Shri Shadananda Sharma, Rasatarangini, Taranga 14/143-152, with Tarangini hindi Commentary by Dr. Devanath sinh Gautam, Reprint Edition 2018; Chaukhamba Subharti Prakashan; Varanasi; P.354
2. Agnivesha, Acharya Charaka, Charaka Samhita, Sutrasthana 27/302, Brahmanand Tripathi with Chakrapani Tika, Vol. 1, Reprint Edition; Varanasi: Chaukhambha Bharti Academy, 2017, p.492
3. Acharya Charaka, Charaka Samhita, Chikitsasthana 15/96, Brahmanand Tripathi with Chakrapani Tika, Vol. 1, Reprint Edition; Varanasi: Chaukhambha Bharti Academy, 2017, p. 567
4. Mayurpada Bhikshu, Yogaratnakara, 7/63 with Siddhiprada Hindi Commentary by Siddhinandana Mishra, First edition; Varanasi: Chaukhambha orientalia; 2020, p.123
5. Acharya Charaka, Charaka Samhita, Chikitsasthana 15/121, Brahmanand Tripathi with Chakrapani Tika, Vol. 1, Reprint Edition; Varanasi: Chaukhambha Bharti Academy, 2017, p. 571
6. Pranacharya Shri Shadananda Sharma, Rasatarangini, Taranga 14/150-152, with Tarangini hindi Commentary by Dr. Devanath sinh Gautam, Reprint Edition 2018; Chaukhamba Subharti Prakashan; Varanasi; P.354
7. Pranacharya Shri Shadananda Sharma, Rasatarangini, Taranga 14/143-152, with Tarangini hindi Commentary by Dr. Devanath sinh Gautam, Reprint Edition 2018; Chaukhamba Subharti Prakashan; Varanasi; P.35 4