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ANALYTICAL STUDY OF SIMHASYADI KASHAYA AND GHANAVATI

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ABSTRACT

Bhaishajya Kalpana mainly aims to understand various pharmaceutical preparations and their further modifications to give better results, longer shelf life, and for easy administration. Kashaya Kalpana is the most significant Ayurvedic dosage forms widely described by the Acharyas. But the palatability, shelf life and storage are difficult and to increase shelf life, need to add preservatives too. Vatis are more durable, medicinal value can be maintained for a longer period, easy to administer and easy to store. In the present study, Simhasyadi Kashaya is modified into Ghanavati and try to find out the analysis of both kalpanas.

KEYWORDS: Simhasyadi Kashaya, Ghanavati, Analytical study.

INTRODUCTION

Acharya Charaka has quoted that, all dravyas present around us are of medicinal value, and their proper utilization depends upon the yukti of the physician.[1] The best among the physicians is one who knows the administration of medicinal plants, external and internal, combination and single drug.[2] In the Ayurvedic field of practice, several types of kalpanas are being used. Few of such kalpanas are – kashaya kalpana & vati kalpana, which have great popularity in present era. Simhasyadi kashaya was first explained by Chakradatta in Shopha prakarana.[3] Later it was included in Bhaishajya Ratnavali, Vangasena and Brihath Nighantu Rathnakara. It contains Guduchi, Brihati and Vasa. The yoga is indicated for Shopha, Swasa, Kasa, Jwara and Chardi.

The shelf life of Kashaya is one day and Acharya advised to take Kashaya in koshnavastha (luke warm stage), immediately after preparation.[4] In order to increase the shelf life, it is necessary to use preservatives which are inert and could maintain drug potency for longer duration. Rasakriya/ Ghana is the concentrated dosage form of Kashaya Kalpana. Compared to Kashaya, ghanavati is having longer shelf life, easy storage etc. In this study, the Simhasyadi kashaya was modified into ghanavati and try to find out the analysis of both Kashaya and Ghanavati.

Objectives of the study

1. Pharmaceutical preparation of Simhasyadi Kashaya and Ghanavati.[5,6]
2. Analytical study of Simhasyadi Kashaya
3. Analytical study of Simhasyadi Ghanavati

Pharmaceutical Preparation of Simhasyadi Kwatha and Ghanavati

All the drugs were taken in fresh form. Acharya Sarangadhara mentioned the drugs which can be taken in fresh form in Sarangadhara Samhita, Purva khanda 1st chapter.[7] Guduchi and vasa comes under that group. But Brihati is not mentioned to take in fresh form. In present study, Guduchi and Vasa taken 1 part each and Brihati 2 parts taken.

All these dravyas are mridu in nature. So as per Acharya Sarangadhara, the water taken according to the dravya swabhava.[8] So 4 parts of water added and heated over mandagni. It was reduced to one fourth and filtered through clean cloth. While preparing kashaya, the vessel was not closed and the obtained kashaya was dark brown in colour.

In Samhita's, a lot of references are available regarding rasakriya [Eg: Rasanjana, Kutajadi rasakriya etc]. In netra chikitsa, there is reference for Gutikanjana which comes under rasakriya preparation. But there is no reference regarding ghanavati in any of the Samhita's. It was Yadavji Trikamji Achraya, in Sidhayoga samgraha 1st chapter, Jwaradhikara.[9] mentioned about the preparation of Samshamani vati (Guduchi ghanavati) and its nirmana vidhi in detail which is a modified form of Rasakriya kalpana. Ghanavati can be taken as Sagni siddha vati.

The Ghanasatwa is the irregular mass obtained after reheating and drying of kwatha etc. Its administration in the above form cause difficulties with regards to

palatability and dose fixation. Hence, it was written in the protocol that the vatis will be prepared out of ghanasatwa. It was noted that the ghanasatwa of Simhasyadi kashaya could not be retained in the vati form, since the prepared vati used to absorb moisture and turn into sticky, irregular masses to achieve the purpose it became imperative to use some additives. Since the study was to be conducted on the combination of three drugs, the fine powder of the same drugs were used to stabilize the vati forms. The quantity of the powder required to give desirable consistency was found to be 50% of the ghana mass. But for the analytical study, Ghana without the addition of powder is only used. Addition of powder is important only from the pharmaceutical point of view.

Table 1: Organo Leptic Characters of Simhasyadi kashaya.

Characters	Sample No.1
Physical appearance	Liquid
Colour	Brownish black
Odour	Characteristic smell of Guduchi & Vasa
Taste	Thikta
Touch	Cool, watery

Table 2: Organoleptic characters of Simhasyadi Ghana.

Characters	Sample No.2
Physical appearance	Semisolid
Colour	Black
Odour	Characteristic smell of Guduchi & Vasa
Taste	Thikta
Touch	Soft

1) Physical Evaluation

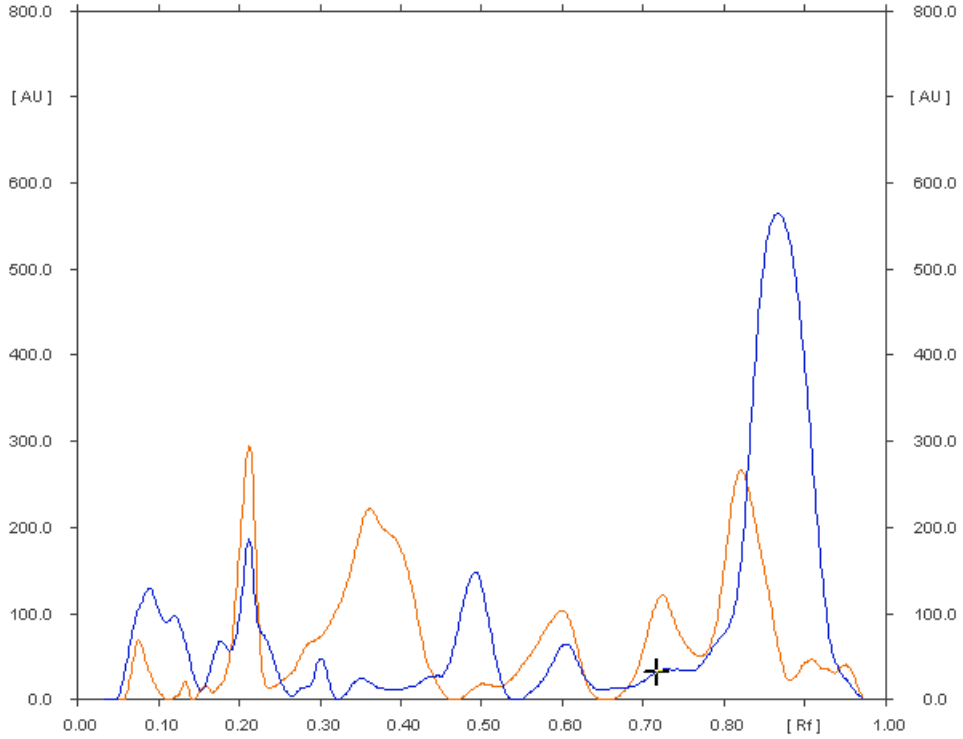
Table 3: Showing the results of physical analysis of Simhasyadi kashaya.

Parameters	Values
p^H	6.2
Viscosity	.5199
Specific gravity	1.01
Total Dissolved Solids	1.25% w/v

Table 4: Showing the results of physical analysis of Simhasyadi Ghana.

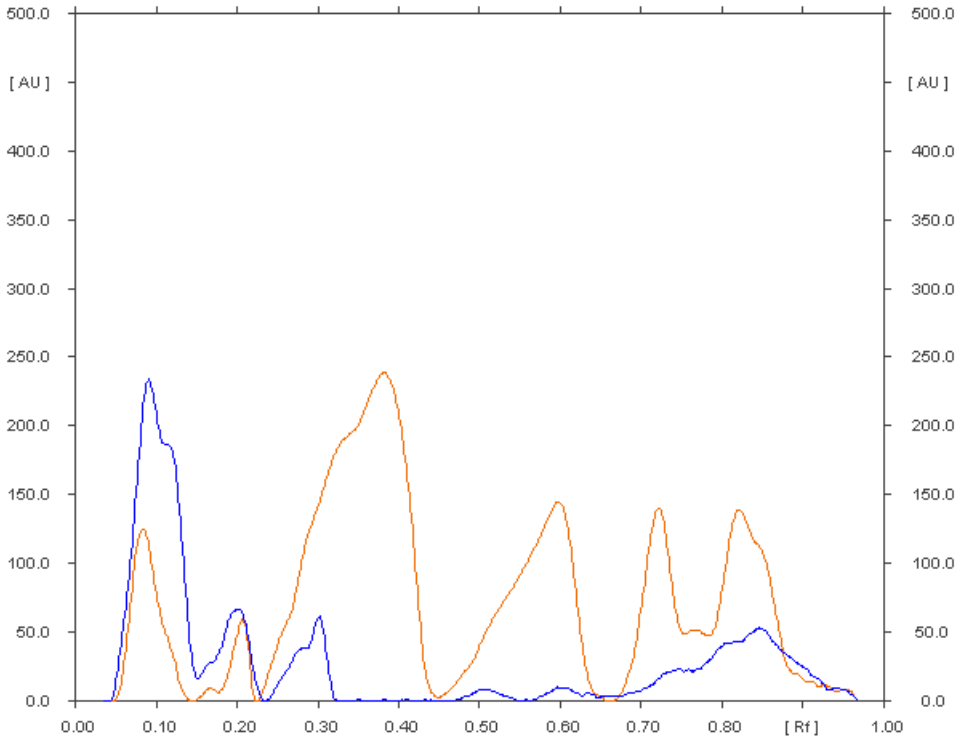
Parameters	Values
p^H	4.8
LOD	7.39%
Hardness	6.1 kg / cm^2
Friability	Passes
Disintegration time	35min
Ash	17.74%
Acid insoluble ash	Traces
Water soluble extractive	71.24%
Alcohol soluble extractive	3.53%

High Performance Thin Layer Chromatography



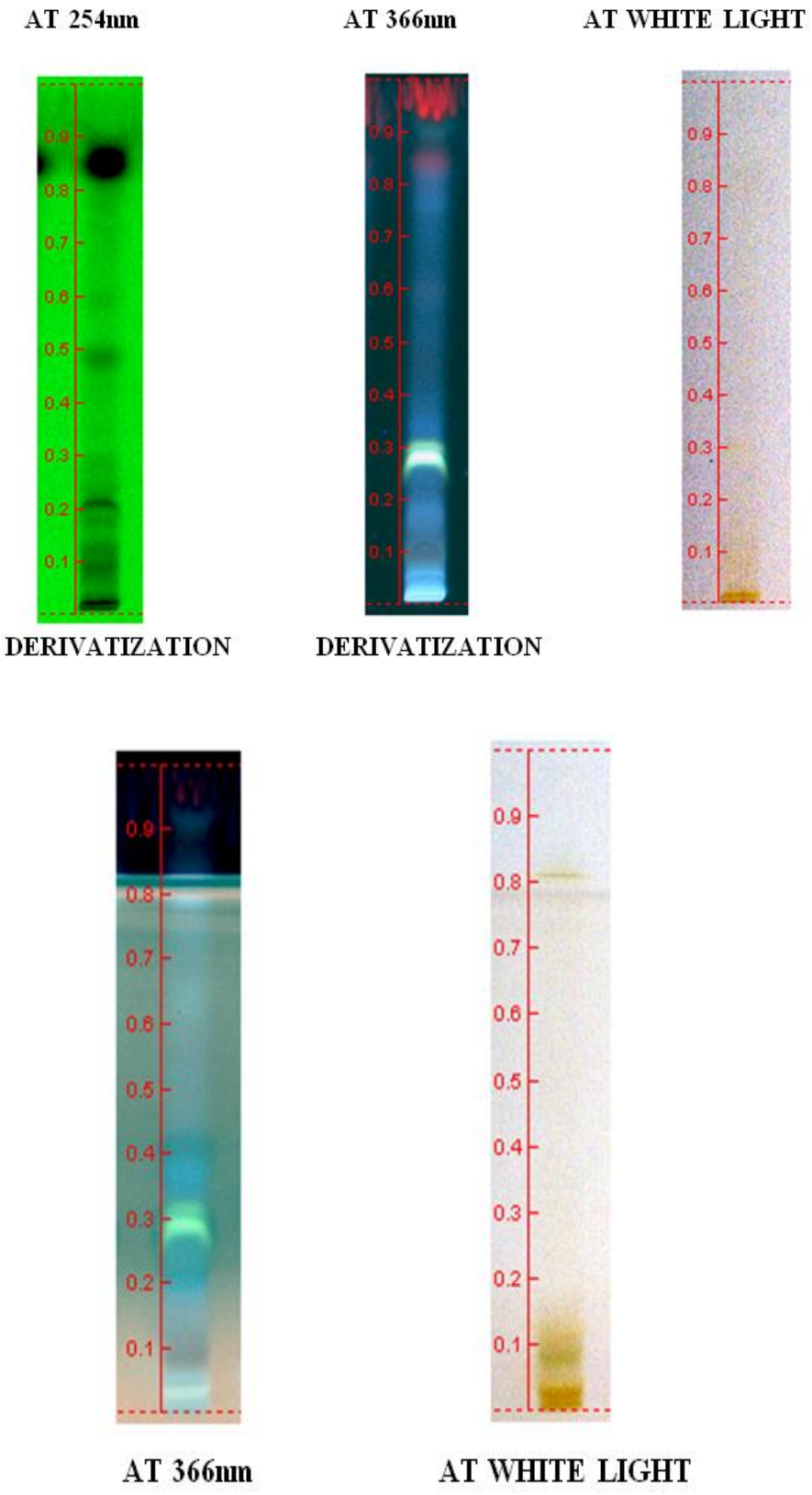
Blue -Kashayam Sample
Red - Leham Sample

Graph 1: Overview Graph of Simhasyadi Samples At 254nm.

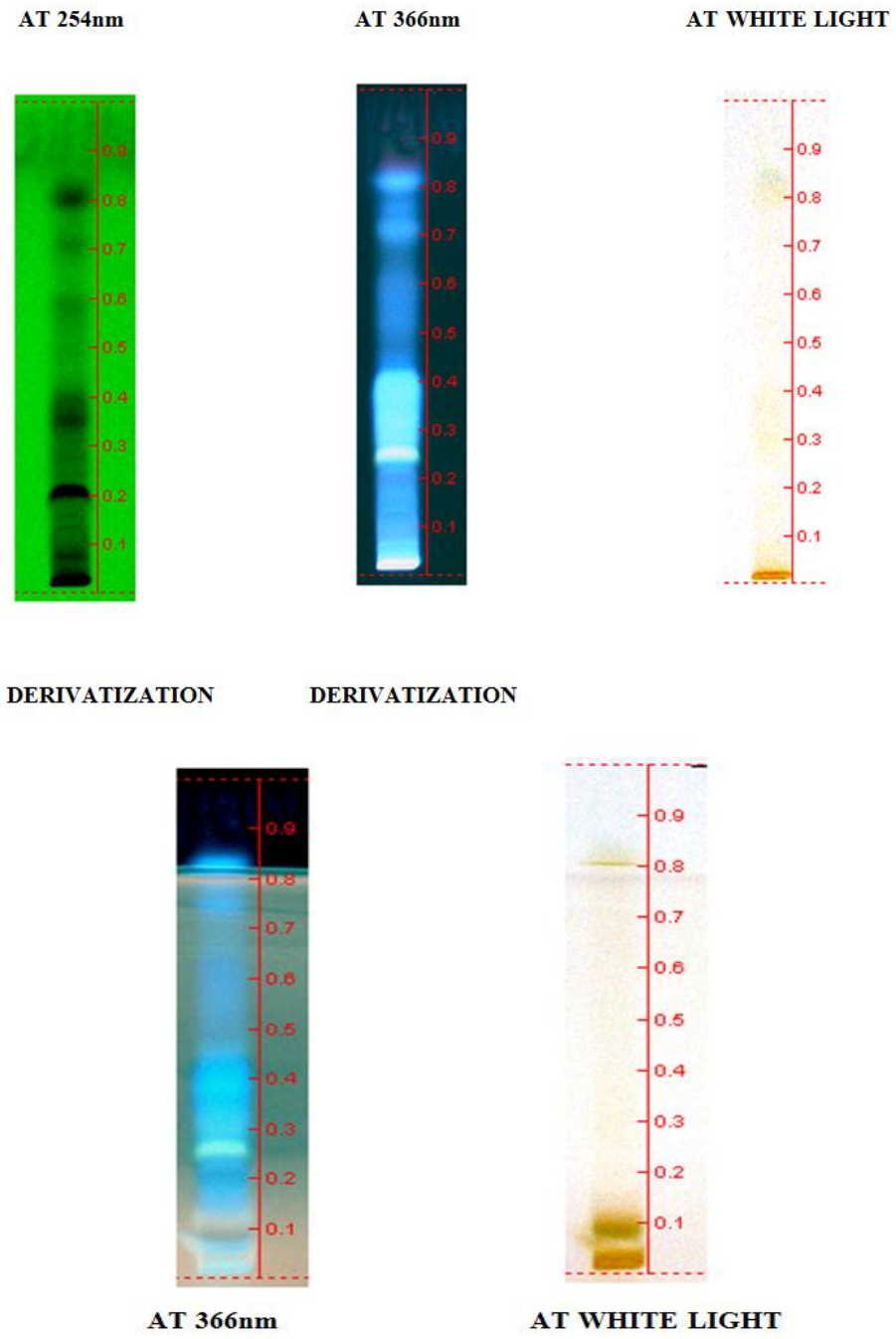


Blue -Kashayam Sample
Red - Leham Sample

Graph 2: Overview Graph Of Simhasyadi Samples at 366nm.



Photograph 1: TLC Plate Views Of Simhasyadi Kashaya Sample.



Photograph 2: TLC Plate Views Of Simhasyadi Ghana Sample.

Table 5: Comparison of Area & Peaks Of Simhasyadi Samples AT 254nm.

Kashayam Sample Peak no	Kashaya SampleArea(AU)	Ghana Sample Peak No	Ghana Sample Area(AU)
1	1908.2	1	1282.9
2	567.4	2	185.0
3	380.8	3	109.2
4	2889.2	4	5690.4
5	804.1	5	17732.3
6	361.5	6	182.5
7	5493.9	7	4504.6
8	2045.6	8	3145.9
9	244.8	9	9350.1
10	33550.4	10	446.9

Simhasyadi Kashayam Sample
Total peak no – 10
Total Area – 48245.9 (AU)

Simhasyadi Ghana Sample
Total peak no – 10
Total Area – 42629.8 (AU)

Discussion on Analytical Study

pH of the Simhasyadi kwatha is more compared to Simhasyadi Ghana. It may be due to the presence of preservatives added to kwatha. Ash value was more for Simhasyadi ghanavati. Ash value indicates presence of inorganic substances. This may be due to addition of base powder. The extractive values of ghanavati shows that number of constituents present in ghanavati during the condensation of kashaya are both water soluble and alcohol soluble. Water soluble extractive is more i.e, 71.24% whereas alcohol soluble extractive is 3.53%. The friability percentage was also low 0.12%, means these vatis are easy to handle and easy to transport. As the preparation of both kashaya and ghanavati is similar at beginning without any change in component drugs, the chemical constituents exhibited by thin layer chromatography are also found similar when both extracts were run in same solvent system. Being the concentrated form, ghanavati exposed darker colour compared to kashaya. In H.P.T.L.C, extra peak found in kashaya sample compared to ghana. It may be due to the presence of preservatives. By doing the chromatographic study, the result shows that both Simhasyadi kashaya and Simhasyadi ghanavati having similar characteristics. By the addition of preservatives, there is some variation happened to the analytical study results.

CONCLUSION

By observing the Pharmaceutical part, Preparation of Simhasyadi kashaya was comparatively easy. Preparation of Simhasyadi Ghana involves more time and cost of fuel. But it was observed that the Ghana satwa could be preserved for a longer period (14 months) without the addition of any preservatives. This has a positive score from the pharmaceutical point of view. Analytically, both Simhasyadi kwatha as well as Simhasyadi Ghanavati have almost similar characteristics but some alterations are noted in the peaks in H.P.T.L.C probably because of the addition of preservatives in Kashaya.

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