

## A COMPARATIVE PHARMACEUTICO- ANALYTICAL STUDY OF TILAKSHARA PREPARED BY DIFFERENT APPROACHES W.S.R TO QUANTITY OF WATER

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## INTRODUCTION

*Kshara Kalpana* is one of the prominent and widely practiced dosage form of *Ayurveda*. Varied descriptions regarding the method of preparation are available in different classical texts. *Sushruta Samhita* mentions the use of either *Jala* or *Gomutra* as the solvent. With the facts in place the present study was conducted to find the differences between the two samples. The aim of the study was to prepare two samples of *Tila Kshara* in presence of *Jala*

## METHODS

The preparation was carried out by following the method as mentioned in *Sushruta Samhita*. The sample was analysed on parameters like organoleptic characters, loss on drying, total ash, water soluble ash,

acid insoluble ash, pH, water soluble extractive and alcohol soluble extractive.

## RESULTS

The loss on drying value for AKJ was 10.63% and 4.54% Total ash values of AKJ was 93.21%. The sample had pH value of 10 and 100% water soluble extractive value. The values for alcohol soluble extractive for AKJ was 2.425 and. The results obtained from the study showed that the sample has peculiar characteristics which are in accordance with the properties of *Kshara*.

## CONCLUSION

The study proved that pharmaceutical processing of the raw drugs imparts characteristic properties to the formulation which are evident by the physico-chemical analysis of the sample *Bhaishajya Kalpana*, the science of *Ayurvedic* Pharmaceutics primarily aims at the fortification of the medicaments and formulations thereby increasing their potency by exposing them to different Samskara.<sup>[1]</sup> Conversion of the raw drug into a formulation helps in increasing the clinical efficacy as well as it renders it feasible for the administration to a patient. *Kshara Kalpana* is one such formulation, where the alkali present in the ash of the select ed plants is extracted<sup>[2]</sup> and given the shape of a formulation. Vivid description regarding the preparation of *Kshara* is available in the classics, whereby many differences of opinions are also evident. *Kshara* is obtained by soaking the ash of the plant in suitable liquid medium. *Sushruta Samhita* mentions *Jala* being utilised as the liquid media to extract *Kshara*.<sup>[3]</sup> *Ayurveda* has described various evaluative procedures to judge the quality of the pharmaceutical products, which are based on the physical qualities of the final product. With the advent of the recent advancements in science, there evolved many procedures and tests which could help in proper judgement of the properties and quality of the *Ayurvedic* drugs. These tests express the quality of the drug quantitatively and hence it makes feasible even for a layman to get an idea of the quality, purity and strength of the formulation. Keeping this in mind in the sample i.e. *Tila Kshara* with *Jala* (AKJ) was evaluated in terms of organoleptic characters, physico-chemical parameters and the results were recorded.

## Collection of raw drug

*Tila* required for the study was collected from Ayurveda Pharmacy, Desh Bhagat Ayurvedic College, Mandigobindgarh. Fresh potable water was used for the preparation.

## Pharmaceutical preparation of two samples

The preparation was carried out following the method mentioned in *Sushruta Samhita*.<sup>[3]</sup> 12 kg of *Tila* was collected, which was cut into small pieces and then kept in sunlight till it became completely dried. The weight of the *Tila* was found to be 8 kg after drying. It was then burnt completely and 900 g of greyish white coloured ash was obtained. The ash was then soaked in six times of *Jala*, macerated and stirred well. Then allowed to stand for few minutes and filtration was carried out for 21 times. The filtrate thus obtained was kept on heat source till the *Kshara* was obtained in the form of flakes adhering to the base of the vessel.

### Physico-chemical study

The physico-chemical analysis of the sample was done. Organoleptic characteristics like colour, odour, taste and consistency were recorded along with the evaluation of the parameters like loss on drying, total ash, water soluble ash, acid insoluble ash, pH, water soluble extractive value and alcohol soluble extractive value by following standard procedures.<sup>[4]</sup>

The quantity of AKJ sample obtained was 210g. The colour of AKJ sample was whitish. The taste of both the sample was acrid. The acrid taste suggests the presence of alkaline present in a sample. The loss on drying values denotes the limit to which the sample has absorbed moisture. The lesser the value of loss on drying, the better the sample. The *Kshara* is considered. The values of loss on drying for AKJ was found to be 10.63%.

The ash values denote the amount of inorganic material present in the given sample. As *Kshara* is obtained after complete burning of the organic matter of the drug and hence ash values should be higher. Total ash values for AKJ was found to be 93.21%. pH depicts the relative acidity or alkalinity of any sample. The pH of the sample was found to be 10 which clearly intimates about the alkaline nature of the *Kshara*.

The alcohol soluble extractive value for AKJ was 2.42%. Studies have advocated for repeated washing of the ash as *Kshara* can be obtained after subsequent washing also. The quantity of *Kshara* obtained will be less as compared to the first wash still to extract the whole of *Kshara* repeated washing may prove to be beneficial.<sup>[5]</sup>

**Table 2: Results of physico-chemical analysis of the two samples.**

Parameters	AKJ
Loss on drying	10.63%
Total ash	93.21%
Acid insoluble ash	0.40%
Water soluble ash	93.21%
Alcohol soluble extractive value	2.42%
Water soluble extractive value	100%
pH	10

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