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## Formulation and Evaluation of *Anisomeles Malabarica*

### Panchanga Kshara

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#### Abstract

Ksaras are the derivatives of plant drug ashes in the form of solutions or crystals all of which have the basic quality of being alkaline. Because of its corrosive nature (Ksaranat), it is known as Kshara (alkali), Kshara is not having rasa, this is manifested by the combination of many rasas and it possesses itself many rasas dominated by katu and lavana rasas. It is the object of many senses and it involves a special method of preparation. In the present study, we have prepared *Anisomeles malabarica* panchanga Kshara under standard laboratory conditions and studied about the organoleptic and qualitative characteristics of *Anisomeles malabarica* Kshara. The Phytochemical parameters for the *Anisomeles malabarica* panchanga were also studied with the aim of drawing the phytochemical standards for this species. The presence study includes phytochemical standardization of *Anisomeles malabarica* aerial parts first time. The presence study includes preparation and evaluation of *Anisomeles malabarica* kshara first time.

**Keywords:** Ksaras, *Anisomeles malabarica*, Rasas, Panchanga, Standardization.

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#### Introduction

*Anisomeles malabarica* is a medicinal plant, slightly aromatic subshrub commonly seen in India, It is grown in Hills above 600m on the slopes, in crevices of rocks; more numerous by arable lands, etc. It have a number of pharmacological uses as, aqueous extract of leaves is reported to have diuretic activity in

rats and acetylcholine antagonistic activity in frog skeletal muscle contraction, also have antioxidant activity (Kavimani S. *et al.*, 1998; Sundarammal S *et al.*, 2012).

As per our knowledge there is no phytochemical study carried on aerial parts of the *Anisomeles malabarica*. Therefore we

focused our study on the phytochemistry of *Anisomeles malabarica*.

As the plant is very potential in pharmacological uses the hypothesis were made that its Kshara preparation may prepared and evaluated. As ksara preparation rich in inorganic elements and it may use as diuretic, electrolyte replenisher etc. the aim draws in this study 'preparation and evaluation of *Anisomeles malabarica* panchang kshara'.

### **Materials and Methods**

#### **Procurement of plant material**

Fresh panchang (leaf, flower, stem, root, bark) of *Anisomeles malabarica* was supplied by Mr. D. Md. S. Sheikh, Proprietor of Sheikh International, Dindigul, State-Tamilnadu, India, in the month of February 2019. Botanical identification of plant was authenticated by Asso. Prof. Rajesh T. Wankhade, Dept. of Dravyguna, S.M.B.T. Ayurvedic College and Hospital, Nashik.

#### **Phytochemical Study**

The successive extractive values carry out as per the procedure of C. K. Kokate (Kokate CK., 1994). Physical Evaluation-Moisture content of the powdered determined based on the loss of drying method (Khandelwal KR., 2005). The ash values were determined, to find out about the physiological state and level of extraneous matter. Extractive values were determined according to the official methods prescribed in Ayurvedic Pharmacopoeia (Anonymous, 1985). TLC Finger Print Profile-

Thin layer chromatography of the ethanolic extract was studied and Rf values were determined (Harborne JB., 1985; Brain KR, Turner TD., 1975).

#### **Preparation of Kshara**

The *Anisomeles malabarica* kshara prepared as per general procedure mentioned for kshara in Bhaisajya Kalpana Vijnanam (Dr. G. Prabhakara Rao, 2008). The dried whole plant of *Anisomeles malabarica* powdered. Burn to ash (Bhasma). Add 4 parts of water to the Bhasma stir well and keep overnight. Next morning decant the clear liquid and filter through a three-layered muslin cloth. Repeat the filtering process till a colorless filtrate is obtained. Transfer filtered material to a stainless steel vessel and heat to evaporate the water. Collect kshara deposited as flakes from the bottom of the vessel and grind it to a fine powder. Pack it in tightly closed containers to protect from light and moisture (Anonymous, 2019).

#### **Results and Discussion**

The moisture content seems to be lower than necessary to support the growth of microbes to bring any change in the composition of the drugs. Physical constant as ash value of the drug gives an idea of the earthy matter or the inorganic composition and other impurities present along with the drug. Extractive values are useful for the determination of exhausted or adulterated drugs. The Phytochemical Investigation revealed the presence of

metabolites as amino acids, flavonoids, tannins, terpenoids, keto steroids, phenols and carbohydrates. Thin layer chromatography of the ethanolic extracts was carried out using Ethanol: Ethyl acetate (6:4) as mobile phase, silica gel GF254 as stationary phase and the R<sub>f</sub> were recorded as 0.15, 0.19, 0.23, 0.73 and 0.93. The total Ash Value was found to be 10.63 w/w (Table 1).

**Table 1: Physical Evaluation of *Anisomeles malabarica* Panchang**

Parameter	% w/w
<b>Ash Values</b>	
Total	10.63+0.545
Acid - insoluble	02.56+0.160
Water – soluble	06.46+0.155
<b>Extractive Values</b>	
Pet. Ether Soluble (40-60o)	04.13+0.176
Ethanol Soluble (95%)	11.57+0.761
Water Soluble	12.78+1.106
<b>Moisture content</b>	08.74+0.546

During study 500gm panchang powder of *Anisomeles malabarica* were take which gave 53.15g of ash (Bhasma). And from that ash (Bhasma) finally 7.52g *Anisomeles malabarica* panchang kshara obtained. The 10% solution has the p<sup>H</sup> value 10.8 which is alkaline. The formulation is fine powder, passing smoothly through sieve number 100, hygroscopic, odor faint and taste saline, freely soluble in water. The qualititative Investigation revealed the presence of elements as sodium (Na<sup>2+</sup>), Potassium (K<sup>+</sup>), Iron (Fe<sup>2+</sup>), Sulphates (So<sub>4</sub>) etc (Table 2).

**Table 2: Qualitative Evaluation of *Anisomeles malabarica* Panchang Kshara**

Inorganic Elements	Inference
Calcium	--
Magnesium	--
Sodium	++
Potassium	++
Iron	++
Sulphate	++
Phosphates	--
Chloride	++
Carbonates	++
Nitrates	--

++ presence; -- absent

### Conclusion

The internal use of Kshara is advised in Mutrashmari (viz. renal calculi), external application in Arshas (hemorrhoid piles) and in the form of Kshara Sutra in the treatment of Bhagandhara (fistula-in-ano) (Shruti Pandey *et al.*, 2016).

So we can conclude that the *Anisomeles malabarica* panchanga kshara also used in above stated diseases and disorder as it evaluated as per the modern parameter and it meets the quality of available ksharas in market.

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### Conflict of interest

The authors declare no conflict of interest.

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