



## TO EVALUATE THE EFFICACY OF PATOLADI SYRUP

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### ABSTRACT

Concepts regarding standardization and quality control of *Ayurvedic* drugs can be traced back to the ancient times. *Vaidyas* of ancient days, used to collect the herbs themselves based on their organoleptic characters i.e. typical taste, texture, smell, color and utilized them in preparing medicines. Based on their observations, principles of drug processing and ideal qualities of finished drugs etc. have been documented. Even though the principles developed based upon the scientific parameters prevailing in those days, they are to be viewed and answered looking at the advancement of science and technology of present scenario. Considering the significance of traditional practices in global health care, WHO has been encouraging and promoting these traditional practices since past few decades. Hence, the standardization of raw drug, processing, finished products, verification of the claims, mechanism of action and free from heavy metal and microbial contamination etc. The present study is intended to evaluate the efficacy of *Patoladi syrup* in the treatment of *Pratishyaya*. The Ingredients of *yoga* are *Patolpatra*, *Haritaki*, *Vibhitak* and *Amalaki* which help in reducing *Vata* and *Kapha doshas* vitiation.

**KEYWORDS:** *Pratishyaya*, *Kashyapa*, *Patoladi syrup*.

### INTRODUCTION

*Pratishyaya* is a complex disease involving several symptomatology & diverse pathogenesis. It is well known for its recurrence chronicity. The specific features of a child like *Dosha*, *Dushya*, *Mala alpata*<sup>[1]</sup>, *Soukumaryata*<sup>[2]</sup>, *Aparipakwa Dhatu*, *Asampurna Bala*, *Kleshahishnutwa*<sup>[3]</sup> etc. which makes him / her subject for special consideration. According to *Ayurveda* "pratishanam shyayate iti pratishyayas". *Pratishyaya* is one of the *vyadhi*, which is characterized by *Nasarava*, *Nasavarodha*, *Shavathu*, *Shirashoola* & *Gandhajanata*.<sup>[4]</sup> *Acharya Sushruta* explained that if *pratishyaya* is not treated in time leads to *dushta pratishyaya* with *updrava's* like *badhirya*, *andhata*, *aghranam*, *kasa*, *agnimandya* and *Sopha*<sup>[5]</sup> etc. The Ingredients of *Patoladi yoga*<sup>[6]</sup> are *Patol patra*, *Haritaki*, *Vibhitak* and *Amalaki* which help in reducing *Vata* and *Kapha doshas* vitiation. Hence the present study is intended to evaluate the organoleptic & physiochemical analysis of *Patoladi syrup*.

### AIM AND OBJECTIVES

Organoleptic and Physiochemical analysis of *Patoladi syrup* for *Pratishyaya*.

### MATERIAL AND METHOD

- Collection, identification and authentication of raw drugs
- Preparation of drug at pharmacy
- Physiochemical analysis of compound drugs

### Collection Identification And Authentication of Raw Drugs

- Collection

### Sources of data

#### 1. Literary sources –

Available literature on *pratishyaya* in classical references of *Kashyap Samhita*.

#### 2. Pharmaceutical Sources- Table no 1.

DRUGS NAME	BOTANICAL NAME	PARTS USED	QUANTITY
<i>Patol</i>	<i>Trichosanthes Diocia Roxb.</i>	<i>Patra</i>	<i>Sam Praman</i>
<i>Haritaki</i>	<i>Terminalia Chebula</i>	<i>Phala</i>	<i>Sam Praman</i>
<i>Vibhitaka</i>	<i>Terminalia Bellerica</i>	<i>Phala</i>	<i>Sam Praman</i>
<i>Amalaki</i>	<i>Embelica Officinalis</i>	<i>Phala</i>	<i>Sam Praman</i>
<i>Madhu</i>	Honey	-----	Litres

**AYURVEDIC PROPERTIES****PATOL<sup>[7]</sup>**

Rasa : Tikta

Guna : Laghu, Snigdha

Veerya : Ushna

Vipaka : Katu

TRIDOSHA EFFECT : Alleviates

Kapha : +++

Pitta : ++

Vata : +

**AMALAKIP<sup>[7]</sup>**

Rasa : Amla, Madhur, Kashaaya, Tikta, Katu

Guna : Laghu, Ruksha

Veerya : Sheeta

Vipaka : Madhur

Tridosha : Effect : alleviates

Pitta : +++++

Vaata : ++

Kapha : ++

**HARITAKI<sup>[9]</sup>**

Rasa : Kashaya, Madhur, Amala, Katu, Tikta .

Guna : Laghu, Ruksha

Veerya : Ushna

Vipaka : Madhur

Tridosha effect : Alleviates

Kapha : +++++

Vaata : ++

Pitta : +

**VIBHITAKA<sup>[10]</sup>**

Rasa : Kashaya

Guna : Laghu, Ruksha

Veerya : Ushna

Vipak : Madhur

Tridosha Effect : alleviates

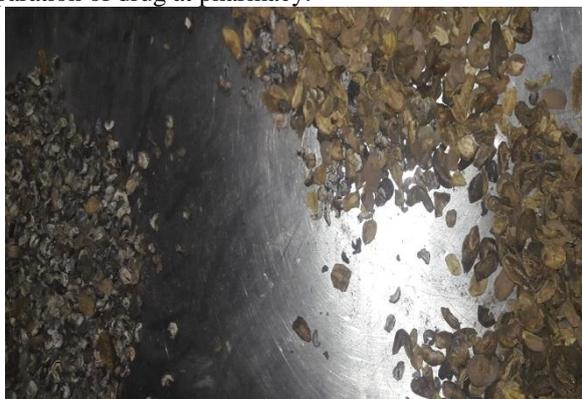
Kapha : +++

Pitta : ++

**3. Preparation of the Drug at Pharmacy –**

Firstly raw material i.e. *Patol* and *triphla* were identified pharmacologically. Then they were powdered in pulverizer until required *churna* form is obtained. Then

Preparation of drug at pharmacy:



Triphla

the decoction was made from *patol* & *triphla churna* through standard decoction procedure. It was covered with cloth & kept aside to let it cool down. Sugar base syrup was prepared in acc. to ratio with decoction. After that decoction is added to syrup slowly by continuously mixing. Appropriate honey is added as a preservative, to improve palatability & also it has good effect on respiratory tract infections. Lastly sodium benzoate was added acc. to the total weight of syrup prepared. Syrup was packed in standard 100 ml bottles with measuring cap & proper labeling.

**Organoleptic & Physicochemical analysis of the drug:**

*Patoladi* syrup was analyzed at vasu research centre<sup>[11]</sup>, Vadodara, Gujarat

**RESULTS**

**Organoleptic parameters:** *Patoladi* syrup was evaluated for organoleptic analysis like appearance, colour, taste.

Organoleptic characters-Table no 2:

S.no.	Parameters	Result
1	Appearance	Viscous liquid
2	Colour	Brown
3	Taste	Sweet

**Physicochemical parameters:** *Patoladi* syrup was evaluated for Physicochemical analysis like pH, Viscosity by Brookfield viscometer, total sugar content.

Physicochemical parameters-Table no 3:

S.no.	Parameters	Result
1	pH	3.30
2	Viscosity by Brookfield viscometer	800 cP
3	Total sugar by UV(% w/w)	96.64 %

Above mentioned result suggested that authenticate drugs were used in the preparation of syrup and quality control parameter also suggest authenticate and pure formation of drug for research purpose.



Patol patra



Kwath



Adding sugar to make it in a syrup form



Finished product

## DISCUSSION

- **Taste:** Drug(syrup) is having sweet taste, which makes it palatable & easy to administer to the child
- **pH:** The pH was measured to note the acidity or alkalinity of the aqueous solution of the drug. This helps in understanding the pharmacological basis of drug absorption and metabolism. In this sample pH is 3.30% so it is acidic in nature.
- **Viscosity:** The viscosity of a fluid is a measure of its resistance to gradual deformation by shear stress or tensile stress. Viscosity was measured by Brookfield viscometer & the result was 800 cP, which helps us to understand that the mode of action of syrup(drug) starts from mouth because of its good viscosity value.  
The 800cP of viscosity of syrup is due to classical adaptation of kashaya kalpana which was transfer into sharkara kalpana(syp). Hence; the turbidity is more as it lies to the nearer turbidity of avleha
- **Total sugar content:** Total sugar content measured by UV(%w/w) is 96.64%. Reducing & non reducing sugar was not established due to the presence of honey in the syrup.

- *Patoladi* syrup encounters *vata & kapha dosha* due to its *ushna virya* dominance.
- *Vatahara* action is also achieved by *laghu & snigdha* property.
- Honey has an excellent result in Respiratory tract infections.

## CONCLUSION

Drugs used in the *Patoladi syrup* are well known for *pranvaha strotas roga adhikar*. From *churna* form, it is modified in Syrup form, to overcome the unwieldy situation of consumption of dry powder, an effort is made to convert it in to convenient syrup form for patient's palatability. It is an attempt to standardize the formulation of compound. The organoleptic parameters & physicochemical tests are under normal limits so it can be used for further pharmacological evaluation for its efficacy and safety.

The probable mode of action of *Patoladi* syrup is because of its active ingredients working on respiratory tract & as well as maintaining *agni* to achieve *strotoshodhan*.

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