

ANALYTICAL STUDY OF AN AYURVEDIC COMPOUND: RASAYANA YOGA

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ABSTRACT

Analysis of a compound or any preparation means the detailed examination which reveals the minor but important aspects regarding properties of all its components. Selection of proper raw drugs and using standard compounds is very important in management of any disease. In the present study the ayurvedic compound *Rasayana Yoga* was evaluated analytically. All required pharmacogostical and physico-chemical evaluations were done and it was found that all the parameters were within normal limits. Thus this study establishes a standard for the particular compound and can be used as a reference for further research works.

KEYWORDS: *Rasayana yoga*, Analysis, Ayurvedic compound.

INTRODUCTION

Analytical study of a product provides standards to judge its quality. For the standardization of the finished product, it is essential to analyse it or to fix some standards so that quality of the product can be established. There are formulations of single as well as compound drugs in *Ayurveda* for the cure and prevention of various ailments. Drug combinations are envisaged to serve synergistic action, combined action, toxicity neutralizing action and specific action. *Rasayana* drugs as per *Ayurveda* have been described as drugs which are helpful in rejuvenation of the body by forming good quality of *dhatu*s (nutritional values); thereby improving longevity of human life.^[1] *Rasayana* drugs delay ageing and are helpful in healing of body.^[2] In the present study the compound *Rasayana Yoga*-a combination of *Guduchi*, *Amalaki*, *Haridra* and *Musta* was prepared. *Guduchi* is an efficient rejuvenator (*Rasayana*).^[3] *Amalaki* also has *Rasayana* (rejuvenator) as well as *Chakshushya* (beneficial for eyesight) properties.^[4,5] It is rich in antioxidant vitamins; out of which there is rich highly acidic

vitamin C content followed by vitamin E. *Musta* acts as a metabolic enhancer in the body.^[6] It has superoxide anion scavenging, hydroxyl radical scavenging, nitric oxide scavenging, metal chelating activity, lipid peroxidation inhibition properties. *Haridra* has Curcumin which is a polyphenol; with its antioxidant properties, it acts on oxidative stress^[7,8] Present study was carried out to maintain the quality control of *Rasayana Yoga* by proper identification of raw materials with the help of microscopic morphological characteristics and physico-chemical analysis.

MATERIAL AND METHODS

Aim and Objective

To establish standards for *Rasayana Yoga* by using proper analytical parameters.

Collection and Identification of raw drugs

Rasayana Yoga contains four drugs-*Guduchi*, *Amalaki*, *Musta*, *Haridra*; each in equal quantity (Table-1) Raw drugs for the study were procured from IPGT&RA Jamnagar. Each drug was evaluated in pharmacognosy department of IPGT& RA Jamnagar for their identification.

Preparation of *Rasayana Yoga*

The final product *Rasayana Yoga* in the form of fine powder; was prepared in the pharmacy of IPGT&RA Gujarat Ayurved university, Gujarat.

Analytical study

Following analytical parameters were used for proper analysis of constituents and their properties.

- **Organoleptic study:** Organoleptic characteristics for various sensory characters like color, touch, taste and odor were carefully noted down.
- **Powder microscopy:** Powder microscopy of final product was carried out and microphotographs were taken with the help of camera and microscope. Both stained and unstained images were visualized.
- **Physicochemical analysis:** Physicochemical analysis such as loss on drying, water soluble extract, methanol soluble extract, ash value and pH were carried out in the pharmaceutical laboratory of IPGT & RA Jamnagar.

- **High Performance Thin Layer Chromatography (HPTLC profile):** The Solvent system used was chloroform: Methyl alcohol (9:1). For the development of the plate Stahl chamber was used. The prepared plate was visualized under short (254 nm) and long ultraviolet radiations (366 nm) and density of separated spots was recorded using scanner III. The plate was sprayed with vaniline sulphuric acid reagent and observed in daylight.

RESULTS AND DISCUSSION

Raw drugs were authenticated and analysed before processing because quality of final products depend mainly on quality of raw materials.

Organoleptic Evaluation

Organoleptic evaluation of the final product revealed characteristics listed in Table- 2

Powder Microscopy and Pharmacognostical Analysis

Border pitted vessels, simple fibres, parenchyma-oleoresins, simple and compound starch granules and sclerenchyma cells were characteristics of *Guduchi* stem powder whereas mesocarp cells, prismatic crystals and scleroids were characteristics of *Amalaki* fruit powder. Starch granules, annular vessels, oleo-resins and cork were characteristics of *Haridra* rhizome powder whereas lignified fibres and scalariform vessels were characteristics of *Musta* root powder. “Fig. 1”

Physico chemical Analysis

Loss on drying, ash value, water soluble extract, methanol soluble extract and pH were found in normal range which indicates good quality of product. (Table-3).

High Performance Thin layer Chromatography

Chromatography was carried out under 254 and 366 nm UV to establish finger printing profile. “Fig.2”, “Fig.3”

Table: 1 Rasayana Yoga ingredients and their used parts

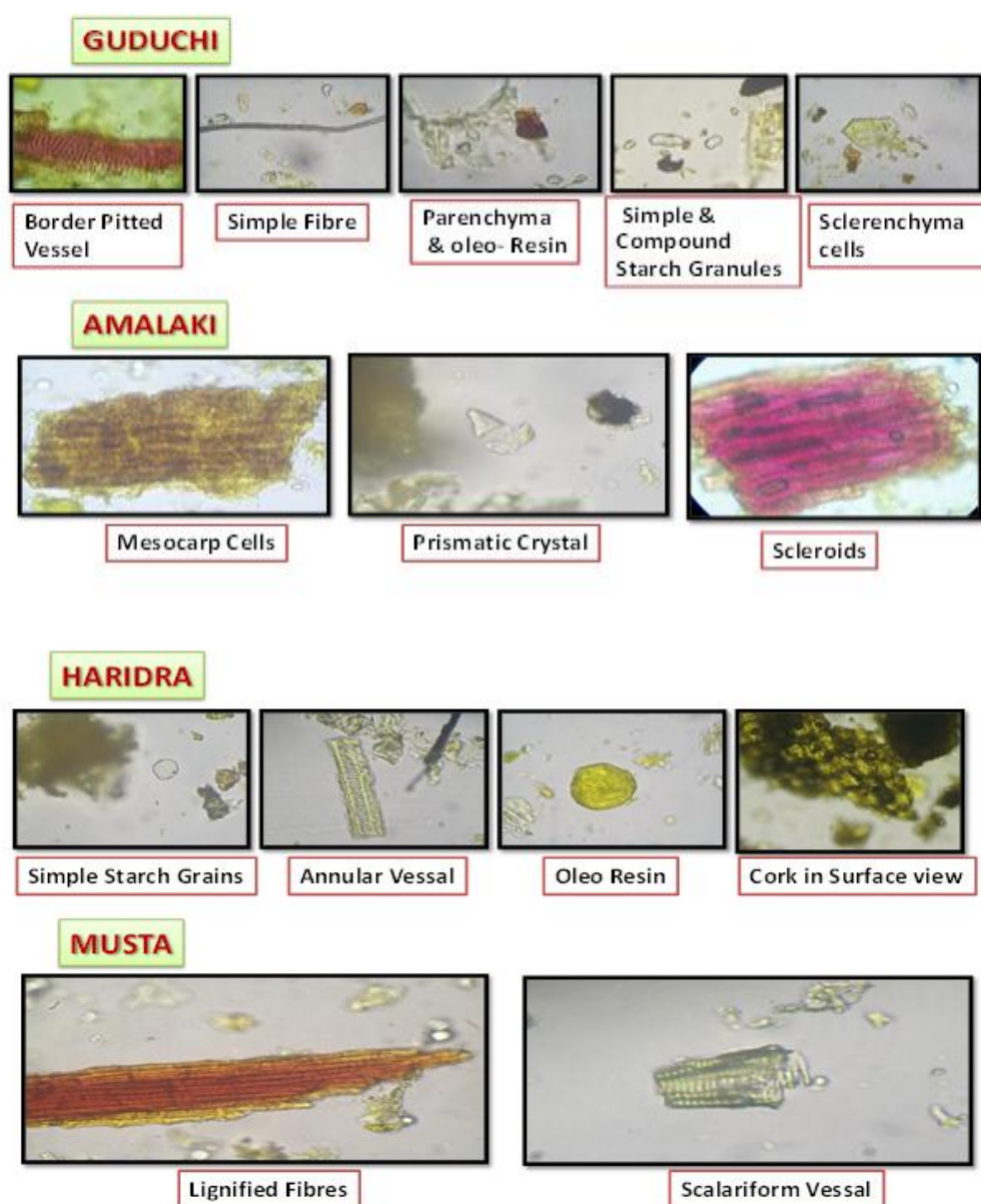
<i>Guduchi (Tinospora cordifolia)</i> -	Stem
<i>Amalaki (Embelica officinalis)</i> -	Fruit
<i>Haridra (Curcuma longa)</i> -	Rhizome
<i>Musta (Cyprus rotundus)</i> -	Root bulb

Table: 2 Organoleptic Parameters of *Rasayana Yoga*

Colour-	Dark yellow
Odor-	Pleasant
Touch-	Smooth
Taste-	Sweetish

Table: 3 Physicochemical Parameters of *Rasayan Yoga*

Loss on drying-	7.9%
Ash value-	6.13%
Water soluble extract-	0.411
Methanol soluble extract-	0.233
pH-	4

Fig-1: pharmacognostical analysis of *Rasayana Yoga*

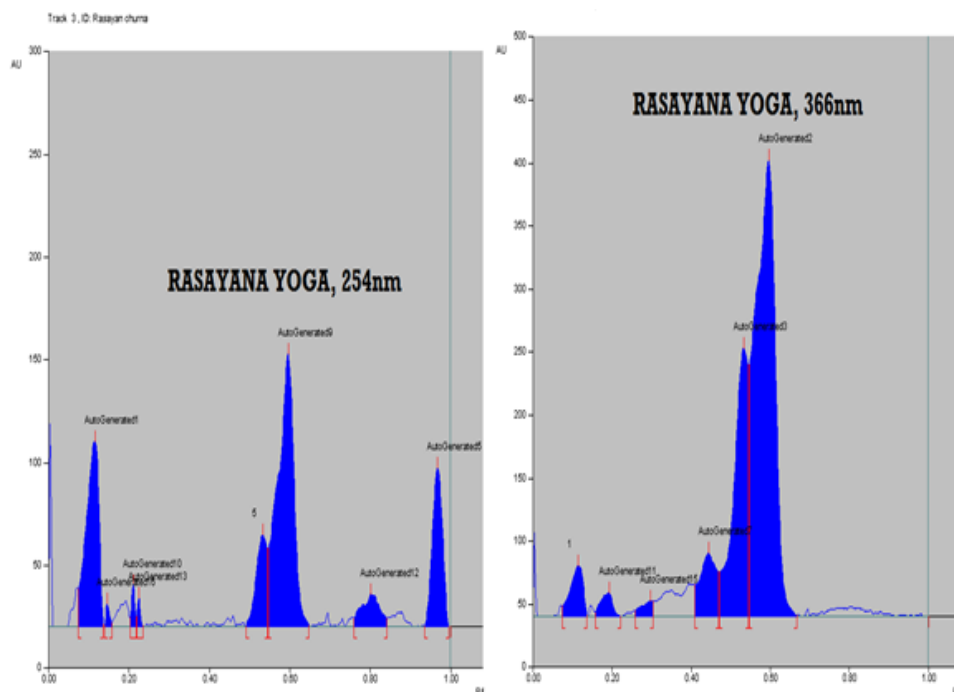


Fig-2: peak densitogram of *Rasayana Yoga*

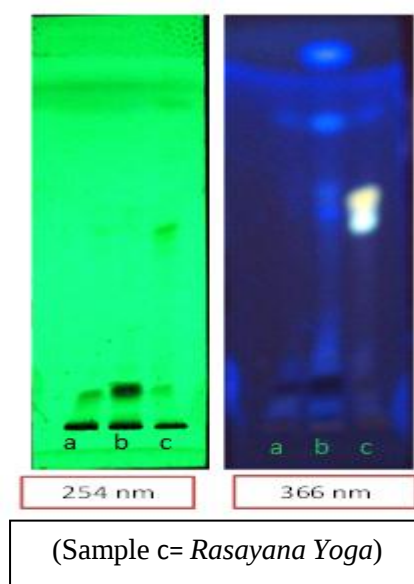


Fig-3: HPTLC profile of *Rasayana Yoga* at 254nm and 366 nm

CONCLUSION

In the present study specific characters of all the different ingredients of *Rasayana Yoga* were illustrated. Obtained results related to pharmacognostical and physico- chemical studies were found within normal limits. Thus this study can be used as reference standard for compound *Rasayana Yoga*.

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