

## PHYSICO-CHEMICAL EVALUATION OF MARICHYADI GUTIKA

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Article Received on 20/12/2020

Article Revised on 30/12/2020

Article Accepted on 20/01/2021

## ABSTRACT

**Introduction:** Ayurveda is a highly evolved and codified system of life and health science based on its own unique and original concept and fundamental principles. Bhaishajya Kalpana as a science of drug manufacturing briefs the principles in compounding drug as general outlines. It involves the science of identification, selection, preservation and standardization also. Rasashastra is a branch of Ayurveda which deals with the various pharmaceutical processes of Rasaushodhis, which are used therapeutically in practice of Ayurveda. Marichyadi Gutika is one of the important yoga among them, which is mentioned in well-known Ayurvedic text. **Materials and methods:** To set the SOP for Marichyadi Gutika we prepared its *three* batches. To standardize the sample on physico-chemical parameters it was tested in analytical laboratory and results were documented. **Results:** As a pharmaceutical and physico-chemical analysis there were no much more difference found in all three samples of Marichyadi Gutika. **Discussion and conclusion:** Marichyadi Gutika was prepared by following the method prescribed in A.F.I. Analytical study revealed the uniformity of the procedures in all the three samples, as evidenced by the observation of the analytical values of the three samples were not much variation found.

**KEYWORDS:** Marichyadi Gutika, Pharmaceutical study, Analytical study.

## INTRODUCTION

Pharmaceutical study is the study of drug manufacturing. As like healing drug manufacturing too is an art. In treating an ailment the first and foremost thing is preparation of the drug should be proper. Hence the present study is planned to prepare the selected drug following all the methods mentioned in classical texts.

Most of the drugs as such are not easily absorbable to the biological system. So, to make them absorbable and to bring the therapeutic effect, some modifications are required through the specialized techniques called pharmaceutical process.

Standards are living documents, which reflect science, technology & system.

To maintain their value they should be first decided, achieved, set and then periodically, reviewed to maintain their currency. In this attempt to set process standardization in the preparation of Marichyadi Gutika three batches of trial drug were prepared and analysed.

While actually testing the utility of any pharmaceutical process, it should be viewed with two aspects.

- The first is inherent in the process and the materials it involves. They are such that they actually do not much alter the results.
- The other aspect is of handling this process & materials. If the process along with the materials involved is very vulnerable to time, space, season, gravitational pull, heat man handling etc. then there is every possibility that it will not yield constant & persistently uniform results over a period variation or place variation.

## OBJECTIVES OF THE STUDY

1. To validate the standard method of preparation of Marichyadi Gutika.
2. To find out difficulties in the preparation.
3. To know difference in Marichyadi Gutika prepared in three different batches at pharmaceutical grounds.
4. To Analyse the trial drug through various physico-chemical tests.

## MATERIALS AND METHODS

Materials and methods used in this preparation are based on availability, feasibility in classical indication of Rasa Shastra, traditional value and expert opinions. All the raw materials were procured from the Shri Ekanath pharmacy, Shevgaon, Dist. Ahamednager Maharashtra.

Pharmaceutical processes carried out during the study are as follows –

- Removing foreign material from crude drugs.
- Preparation of Marichyadi Gutika.( Sharandhar Samhita, Madhyam Khand 7/ 13-15)

After removing the foreign matter the entire ingredients were offered for further pharmaceutical processes.

### Preparation of Marichyadi Gutika

The Gutika were made with the reference of A.F.I. (Results shown in table 3)

### Analytical Study

All the three samples of Marichyadi Gutika have been analyzed for following organoleptic and physico-chemical parameters.

## OBSERVATION AND RESULTS

**Table 1: Showing Organoleptic characters of 3 samples of Marichyadi Gutika.**

Character	M <sub>1</sub>	M <sub>2</sub>	M <sub>3</sub>
Colour	Reddish	Reddish	Dark Reddish
Taste	Astringent	Astringent	Astringent
Odour	Faint	Faint	Faint
Texture	Smooth	Smooth	Smooth

**Table 2: Showing Physico chemical parameters of 3 samples of Marichyadi Gutika.**

Sr. No.	Name of Test	S <sub>1</sub>	S <sub>2</sub>	S <sub>3</sub>	Mean
1	Disintegration Time	34 min	37 min	28 min	33 min
2	Hardness	02	02	2.5	2.16 kg/cm <sup>2</sup>
3	Loss on Drying	5.07	5.47	6.4	5.64 %
4	Total Ash	26.53	24.63	23.34	24.83 %
5	Water soluble Ash	19.01	15.03	10.24	14.76 %
6	Water soluble Extractive	23.91	23.98	23.32	23.76
7	Acohol soluble Extractive	8.82	7.19	9.62	8.55
8	pH	8.69	8.49	8.59	8.59
9	Friability	Nil	Nil	Nil	Nil

## DISCUSSION

This study was carried out to fix the SOP of Marichyadi Gutika. In this study three samples of the trial drug were prepared. All the genuine raw materials for the preparation of the drug were collected from Shri Ekanath Pharmacy, Shevgaon. For the preparation of trial drug various procedures like powdering of crude drugs, Bhavana were carried on.

### Marichyadi Gutika preparation

There are various references mentioned in the text for the preparation of Marichyadi Gutika. But here we have made Gutika according to the reference of A.F.I.

Three samples, having same ingredients were prepared for the present study.

**Table 3: Showing Result of Three Samples of Marichyadi Gutika.**

	Sample 1	Sample 2	Sample 3
Maricha churna	12 gm	12 gm	12 gm
Pippali churna	12 gm	12 gm	12 gm
Yavkshar churna	6 gm	6 gm	6 gm
Dadim	24 gm	24 gm	24 gm
Guda	96 gm	96 gm	96 gm
Final Yield	150 gm	148 gm	146 gm

Here the gain in the final yield of all three samples may be due to addition of extract of trituration drug. From above data it was seen that, there was no much difference found in the final yield of three samples, as same procedure was followed during preparation.

### Analytical study

Analytical study deals with the analysis of the values of some physical constants and chemical values of the prepared formulation. In present research work, for physico-chemical standardization, three samples of Marichyadi Gutika were prepared as per A.F.I. specification (M<sub>1</sub>, M<sub>2</sub>, and M<sub>3</sub>) in the departmental

laboratory of Rasashastra. Here an attempt was made to put physico-chemical standards for this formulation. (Table 1 & 2).

## CONCLUSION

Marichyadi Gutika prepared as per the A.F.I. specification shows the increase in weight of sample1, sample2, sample3 that is due to addition of extract from 3 Bhavanas, found to be 5%, 7.5%, 11.25% respectively as compared with the initial weight.

Analytical study of Marichyadi Gutika revealed the uniformity of the procedures in the three samples of Marichyadi Gutika, as evidenced by the observation of the analytical values of the three samples were not much variation found.

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