

ANALYTICAL STUDY OF SAPTANNA GHRITA

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ABSTRACT

Saptanna Ghrita formulation is mentioned in the Sushruta Samhita, which is an Ayurvedic classic text. The drug has been chosen to treat the *Prathama patalagata timira* (Simple Myopia), which is a *Drishtigata roga*. It consists of seven ingredients with all of them having the *chakshushya* property. After the drug has been prepared it has undertaken the analytical study to establish the physical or the organoleptic character as well as the chemical nature which includes the pH, heavy metal content and the microbiological test to serve as the supporting literature and to maintain the standard quality of the formulations.

KEYWORDS: *Prathama patalagata Timira* (Simple Myopia),

Saptanna Ghrita.

INTRODUCTION

Ayurveda is the science of life. Ayurveda gives prime importance to eye though there are five sense organs. It says “*Sarvendriyanam nayanam pradhanam*”. In this important treatise one complete chapter has been dedicated to disorders of vision i.e. *Drishtigatarogas*, wherein 12 visual disorders have been elaborated. Among these disorders of vision one is *Timira* which

is said to be *Paramadaruna vyadhi* (difficult to cure) because the sufferer of *Timira* ultimately lands into blindness.

Based on the involvement of *patala*, *Timira* is classified into 4 types. When the vitiated *doshas* move in upward direction through *sira* and reach the first *patala* of the eye, leading to stage of *Prathamapatalagata timira*, which is characterised by “*Avyakta Darshana*” i.e. blurring of vision. Myopia (nearsightedness) is a refractive error in which parallel rays of light from an object at infinity enter the eye and is focused in front of retina, when accommodation being at rest. It's main symptom is also blurring of vision.

Myopia is a burning issue in this era. It is corrected by the concave lens and different type of surgeries. Till today no oral medicine invented to correct or to prevent Myopia.

In Ayurvedic medical science *Ghrítapan* is widely described by Acharyas in the treatment of eye disease. Because *Ghríta* has the properties of *Vatapitta Shamaka* as well as *Dhatu Pushtikar* properties. Saptanna Ghríta is explained in Sushruta Samhita in the treatment of *Timira*.

AIMS AND OBJECTIVES

1. To analyse the physical or the organoleptic character of the drug.
2. To findout the pH, heavy metal content and the microbiological study of the *Saptanna Ghríta* prepared by the classical method.

COLLECTION OF DRUG: The raw drugs were collected from Anamika pharmacy sidcul, Haridwar, Uttarakhand.

IDENTIFICATION AND AUTHENTICATION: The raw drugs were identified and authenticated by *Dravya guna* department and *Ras shastra* department of Gurukul campus, Haridwar, Uttarakhand Ayurved University.

METHOD OF PREPARATION

1. *Kwath* of *Triphala*, *Satavari*, *Patola*, *Mudga*, *Amalaki*, *Yava* was prepared by adding eight times water in it. After boiling when it remains 4 times then *kwath* is prepared.
2. *Kalka* of *Triphala*, *Satavari*, *Patola*, *Mudga*, *Amalaki*, *Yava* was in the amount of 1/4th of *Goghríta*.
3. Then all the ingredients were mixed together in steel vessel.

- Intermediate stirring was done in order to avoid charring.
- When *snehasiddhi Lakshana* was seen, heating was stopped and it left for cooling.
- After cooling, filtered with a muslin cloth and stored in sterilised glass container.

INGREDIENTS

DRUG	LATIN NAME	FAMILY	DOSHA SHAMAKATA	KARMA
Goghrita	<i>Butyrum departed</i>		<i>Tridoshashamak</i>	<i>Indriya Balavriddhikara, Chakhyushya</i>
Amalaki	<i>Embelica officinale</i>	<i>Euphorbiaceae</i>	<i>Tridoshashamak Pittashamak</i>	<i>Rasayana, Sonitsthapak</i>
Haritaki	<i>Terminalia chebula</i>	<i>Combretaceae</i>	<i>Tridoshashamak Vatashamak</i>	<i>Rasayana</i>
Bivitaka	<i>Terminalia belerica</i>	<i>Combretaceae</i>	<i>Tridoshashamak Kaphashamak</i>	<i>Sothahara, Raktastambhak, Chakhyusya</i>
Satavari	<i>Asparagus recemosus</i>	<i>Liliaceae</i>	<i>Vatapittashamak, Kaphahara, Pittahara</i>	<i>Varnya, Netrya</i>
Patola	<i>Trichosanthes dioica</i>	<i>Cucurbitaceae</i>	<i>Tridoshashamak</i>	<i>Raktashodhak, Sothahara</i>
Mudga	<i>Phaseolus radiatus</i>	<i>Poaceae</i>		<i>Netrya</i>
Yava	<i>Hordeum Vulgare</i>	<i>Fabaceae</i>		<i>Lekhan</i>

PHARMACODYNAMICS OF SAPTANNA GHRITA

DRUG	RASA	GUNA	VIRYA	VIPAKA	PART USED
Goghrita	<i>Madhura</i>	<i>Guru, Snigdha, Sara(purana)</i>	<i>Sheeta</i>	<i>Katu</i>	
Amalaki	<i>Pancha rasa, Lavanarahita</i>	<i>Laghu, Rukshya, Sheeta</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Phala</i>
Haritaki	<i>Pancha rasa, Lavanabarjita</i>	<i>Laghu, Rukshya</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Phala</i>
Bivitaka	<i>Kasaya</i>	<i>Laghu, Rukshya</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Phala</i>
Satavari	<i>Madhura, Tikta</i>	<i>Guru, Snigdha</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Kanda</i>
Patola	<i>Tikta</i>	<i>Laghu, Rukshya</i>	<i>Ushna</i>	<i>Katu</i>	<i>Patra</i>
Mudga	<i>Madhura, Kasaya</i>	<i>Laghu, Rukshya</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Beeja</i>
Yava	<i>Madhura, Kasaya</i>	<i>Rukshya</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Beeja</i>

ORGANOLEPTIC PROPERTIES OF SAPTANNA GHRITA

Organoleptic properties	<i>Saptanna ghrita</i>
ROOPA(COLOUR)	Light green
RASA(TASTE)	Bitter
GANDHA(SMELL)	Characteristic

PHYSIO-CHEMICAL ANALYSIS OF SAPTANNA GHRITA

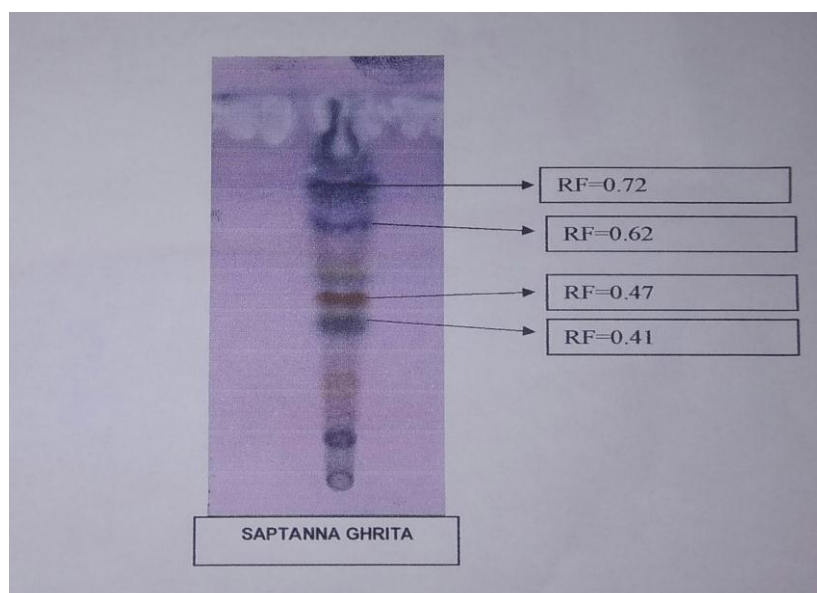
Parameters	<i>Saptanna ghrita</i>
Refractive Index at 25 c	1.453
Weight/MI(g) at 25 c	0.919
Acid Value	2.54
Peroxide Value	3.44
Saponification Value	214.26
Iodine Value	39.52

Microbiological Limit Test

Micro organisms	
Total bacterial count(cfu/g)	120
Total fungal count(cfu/g)	<10
E.coli	Absent
S.aureus	Absent
P.aeruginosa	Absent
Salmonella sp.	Absent

Heavy Metals in *Saptanna Ghrita*

Heavy metals	<i>Saptanna Ghrita</i>
Lead(Pb)ppm	1.12
Arsenic(As)ppm	<0.50
Cadmium(Cd)ppm	0.12
Mercury(Hg)	<0.13

THIN LAYER CHROMATOGRAPHY OF SAPTANNA GHRITA**DISCUSSION**

Saptanna Ghrita is one such formulation explained in *Sushruta Samhita*. It is said to be used in *Drustigata Netrarog*. *Timira* is one among 12 *Drustigatarog* explained by Acharya

Sushruta. All the drugs of *Saptanna Ghrita* have *chakshushya* property. All the pharmaceutical parameters analyzed showed value permissible for *Saptanna Ghrita* in the form of *Ghrita*. TLC is the most common form of chromatographic method used by Ayurvedic research workers to determine the purity of sample and to detect the no. of compounds present in the product.

CONCLUSION

The contents of *Saptanna Ghrita* are predominantly *chakshusya*, works on *netrarog*. Results of microscopy and preliminary organoleptic properties were cross verified with individual raw drug of *Saptanna Ghrita* with the parameters mentioned in Ayurvedic pharmacopeia of India and all the ingredients were proved to be authentic. The result of present study may also serve as reference standards in the preparation of drug formulation and also help in further clinical researches.