



## DEVELOPMENT OF TALISADI KHANDA (GRANULES) FROM TALISADI CHURNA AND ITS ANALYTICAL STUDY

Dr. Sadanand G. Sakri<sup>1\*</sup>, Dr. M. B. Rudrapuri<sup>2</sup>, Dr. Jayashree. D. Kotabagi<sup>3</sup> and Dr. Vinay Mohan<sup>4</sup>

<sup>1</sup>PG. Scholar, Department of Post-Graduate Studies in Rasashastra & Bhaishajya Kalpana, Shri Shivayogeeswar Rural Ayurvedic Medical College & Hospital, Inchal, Karnataka, India.

<sup>2</sup>M.D. (Ayu), Professor and HOD Department of Rasashastra and Bhaishajya Kalpana, Shri Shivayogeeswarrural Ayurvedic Medical College & Hospital, Inchal, Belgavi, Karnataka, India.

<sup>3</sup>M.D. (Ayu), Professor, Department of Rasashastra and Bhaishajya Kalpana, Shri Shivayogeeswarrural Ayurvedic Medical College & Hospital, Inchal, Belgavi, Karnataka, India.

<sup>4</sup>M D (Ayu) Principal Shri Shivayogeshwar Rural Ayurvedic Medical College And Hospital Inchal. Tal- Saundatti Dist- Belagavi, India.

\*Corresponding Author: Dr. Sadanand G. Sakri

PG. Scholar, Department of Post-Graduate Studies in Rasashastra & Bhaishajya Kalpana, Shri Shivayogeeswar Rural Ayurvedic Medical College & Hospital, Inchal, Karnataka, India.

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### ABSTRACT

The research work entitled, development of Talisadi Khanda (granules) from Talisadi churna and its analytic study is a new dosage form of churna. In a sophisticated urban society, purchase manufactured drugs is preferred to the time consuming preparations as a result demand for finished product lead to new phenomenon which is manufacturing ayurvedic drugs currently more importance is giving for the availability, palatability, smallest dose, easy administration increased bio availability and mainly self-life of the formulations. In this view as per the need of time there is a need to modify the Talisadi churna into granular form. In the present study Talisadi churna was prepared in accordance with description of sharangadhara samhita. After that Talisadi granules were prepared. Talisadi granules were investigated for loss on drying, ash value, acid insoluble ash, water soluble extract, alcohol soluble extract, PH, fat content, reducing sugar, water soluble ash, Particle size, TLC, HPTLC and organoleptic characteristics was used to determine the purity of the modified form of Talisadi khanda (Granules). Analysis of the data obtained from the analytical study indicated the parameters will be useful for standardisation of Talosadi khanda (Granules).

**KEYWORDS:** Talisadi Khanda; Pharmaceutico-Analytical Standardization; Talisadi Churna.

### AIMS AND OBJECTIVES

- To prepare Talisadi churna as per classical method.
- To prepare Talisadi khanda (granules) from Talisadi churna. To test the Physico-chemical analysis of both samples of Talisadi khanda (granules) that is Talisadi khanda with added sugar and Talisadi khanda without added sugar.

### INTRODUCTION

Acharya charaka has mentioned panchavidhakashaya kalpana<sup>[1]</sup>, in the same sequence Acharya have mentioned different formulation with the same herbs according to their efficacy, dose and palatability etc. but there are demerits of these formulation to e g, Large amount of does less shelf life etc Ayurveda is one of indian medicinal system with its origin in antiquity but inviting always new researches. Its findings are based on scientific logics based on its own principles. ayurved

emphasizes on health of body with purity of mind and soul it has separate branches to achieve this target Bhaishajya kalpana is one that. In Ayurvedic therapeutics numbers of churna preparation are found described either as Medicine or for preparing other drugs or for adding as prakshepaka dravy in other Preparation. The Talisadi churna in one popular medicine in churna form. This Churna self-life is only for 2 months.<sup>[2]</sup> The development of Bhaishajya kalpana in ayurvedaic System to improve the formulation, to challenge this churna converting In to Granular form ( Khanda Kalpana) its self-life is 1 year.<sup>[3]</sup> Among the various formulation explained in Ayurvedic texts, Avaleha Kalpana is a Popular one. The metabolism and absorption of this Preparation starts from mouth itself Granular ( Khand Kalpana ) is same as that of Avaleha Kalpana, the only difference is that, when the Avaleha preparation is boiled further and brought into granular form is Termed as Khanda Kalpana.<sup>[4]</sup> Currently more impornates is given

for the achievability, palatability, smallest dose, easy Administration, increased bio availability & shelf life of Formulation. As per need of time there is a need to modify the Talisadi churna into granules form. Conversions of this granular form of Talisadi khanda ensures palatability, easy of Handling and comfortable for use. However intended for better result there is a necessity for the correct manufacturing techniques. Inappropriate results in harmful effects in humans In this

concern, there is requiring for proper standardization of the granular form of Talisadi churna as a result of investigated analytical parameter confirms purity of medicine.

Hence, the present study is an attempt to “Development of granules from Talisadi Churna and its analytical study” The content of the Talisadi churna like Talish<sup>[5]</sup> patra, maricha, suti, pippali, vamsalochana, ela, Twak, sarkara, to analyse the Talisadi granules.

## MATERIALS AND METHODS

### Materials

#### Contents of Talisadi Churna and their Properties.

SL.NO	DRUG NAME	RASA	GUNA	VEERYA	VIPAKA
1	Talisha patra	Katu	Laghu	Ushna	katu
2	Maricha	Katu	Laghu, Tikshana	Ushna	katu
3	Sunthi	Katu	Laghu, tikshana	Ushna	katu
4	Pippali	Katu	Laghu, tikshana U	Ushna	katu
5	Vamshalochna	Madura	Laghu, Ruksha	sheet	Madura
6	Ela	Katu, Madura	Laghu, Ruksha	sheet	katu
7	Twak	Katu, tikta, Madhura	Laghu, Ruksha	Ushna	Madura
8	Khanda Sarkara	Madhura	Laghu	Sheet	Madura

#### Dravya scientific name part used and Praportion

SL.NO	DRAVYA	SCIENTIFIC NAME	PART TO BE USED	PRAPORTION
1	Talisha patra	Abies webbiana Lindl	Leaf	1 Karsa 12gm
2	Maricha	Piper nigrum Linn.	Fruit	2 Karsa 24gm
3	Sunthi	Zingiber Officinale Roscoe	Rhizon	3 Karsa 36 gm
4	Pippali	Piper longum Linn	Fruit	4 Karsa 48 gm
5	Vamshalochna	Bambusa arundinaceae		5 Karsa 60 gm
6	Ela	Elettaria cardamomum maton.	Seed	½ Karsa 6 gm
7	Twak	Cinnamomum Zeylanicum blume	Bark	½ karsa 6 gm
8	Khanda Sarkara			32 Karsa

## METHODS

### ➤ PREPARATION OF TALISADI CHURNA<sup>[6]</sup>

- All the ingredient or drug of the Talisadi churna {i.e Talis patra-1part[12gm], Maricha 2 parts (24gm), Sunthi 3part (36gm), pippali 4parts (48gm) Vamsalochana-5part[60gm], Ela- 1/2parts [6gm], Twak- 1/2 part [6gm] Sarkara 32 parts (384gm) are taken separately
- Pounded well in Ulukhala yantra [pounding machine] and sieraed.
- Sieraed churna will be filter through a clean cotton cloth.
- Mix all the ingredients or drugs to form a homogenous mixture.
- The homogenous mixture of Talisadi churna will be taken in a air tight container.

### ➤ Method of preparation of Talisadi khanda(Granules)<sup>[7]</sup>

Talisadi khanda (granules) will be prepared according to the ratio of sharkara or sita used for the preparation that is

- A. Talisadi khanda (granules) with added sugar.
- B. Talisadi khanda (granules) without added sugar.

#### A. Talisadi khanda (granules) with added sugar

- The sweetening agent khanda sarkara is taken equal quantity of Talisadi churna ( 1 : 1 ) that is 584 grams of Khanda Sharkara and 584 grams of Talisadi churna prepared from procedure no 1 was taken for the preparation. 375 grams of Khanda Sharkara was taken and dissolved in 584 ml of water over mild fire in a clean bigger vessel ( Drug and water ratio was taken for the preparation was 1 : 1).
- The blend filtered once through a clean cloth to get rid of physical impurities present in the sweetening agents
- The filtrate is again boiled and reduced over mild fire to a thicker consistency of 3 to 4 threads.
- Switch of the fire and vessel is taken out after 3 to 4 threads consistency.
- Add Fine powder of Talisadi churna little by little with continuous stirredwell to attain granular shape.
- Preparation was taken out from vessel in a big container for fully cool.

- When the preparation was full cooled, packed in dry airtight wide mouthed container and preserved for further evaluation of analytical parameters.

#### **B. Talisadi khanda (granules) without added sugar**

- The sweetening agent khanda sharkara 384 grams remaining in Talisadi churna prepared from procedure no 2 was taken for preparation. 384 grams of Khanda Sharkara was taken and dissolve in 384 ml of water over mild fire in a clean bigger vessel ( Drug and water ratio was taken for the preparation was 1 : 1.
- The blend filtered once through a clean cloth to get rid of physical impurities present in the sweetening agents.
- The filtrate is again boiled and reduced over mild fire to a thicker consistency of 3 to 4 threads.
- Switch of the fire and vessel is taken out after 3 to 4 threads consistency.
- Fine powder of remaining churna as prepared from procedure no 2, 192gm is taken and add little by little with continuous stirred well to attain granular shape.
- Preparation was taken out from vessel in a big container for fully cool.
- When the preparation was full cooled, packed in dry airtight wide mouthed container and preserved for further evaluation of analytical parameters.

#### **Pharmaceutical study of Talisadi khanda (Granules)**

Talisadi churna preparation is explained in sharangadhara samhita this is prepared by using drugs like sita, vamsalochona, pippali, ela, twak. The drugs were taken in appropriate quality. 80 # mesh is used for the formulation of the churna preparation after the preparation of Talisadi churna preparation of Talisadi khanda (granules) is made by 40 # mesh. Talisadii khanda (granules) were prepared as Talisadi Khanda with added sugar (A) and Talisadi Khanda without added sugar ((B) and were analysed separately.

Physico chemical parameters of the Talisadi khanda ( granules) were suggestive of the quality and increased self life.

#### **Physico chemical study of two samples of Talisadi khanda (granules): Organoleptic Characteristics**

The developed formulation was granules form and greyish white in colour sweet and pungent in taste, fragrant in odour but in sample without added sugar pungent odour.

The remaining observations were similar to sample with added sugar.

#### **LOSS ON DRYING**

Moisture content of both Sample A & B was found 1.847% and 0.579% it indicates low moisture content and desirable for higher stability of the both formulation.

#### **ASH VALUE**

Ash value of both samples A&B was found 11.634 %, 6.603% respectively. This value was found to be

reasonably low, which indicates low contamination. It is criteria for identifying the purity of the drugs. Total ash is inclusive of extraneous matter such as sand, soil etc adhering to the herbal drug.

#### **WATER SOLUBLE ASH**

Water soluble ash of both samples of A&B was found 76.631 % and 84.526 % respectively. This shows normal quality of the drugs of the Talisadi khanda (granules) and presence of more active principle in the sample.

#### **ACID INSOLUBLE ASH**

Acid insoluble ash of both samples A&B was found 9.769% & 5.958% respectively. This indicative of less amount of non-physiological components like silica less adherent dirt and sand particles of the Talisadi khanda (granules).

#### **WATER SOLUBLE EXTRACTIVE AND ALCOHOL SOLUBLE EXTRACTIVE**

Water soluble extractive of both samples of A&B were found to be 76.7 % & 56.5 % and alcohol soluble extractive of both samples of Talisadi khanda (granules) were found to be 3.7 % & 6.3 % respectively indicating considerable amount of polar compounds in the samples.

#### **P<sup>H</sup> VALUE**

PH of both samples of A&B was 7.05 % & 6.91% respectively, which is Alkaline or basic. This indicates granules is non gastric friendly cause harm to the gastric mucosa and increase the integrity of gastric mucosa 4.

#### **REDUCING SUGAR**

Reducing sugar of both samples of A&B was present 1.70 % & 2.826% respectively.

#### **FAT CONTENT**

Fat content of both samples of A& was found to be 2.6% & 2.4% respectively.

#### **TLC**

TLC of both samples of A&B reveals the presence of phytoconstituents in the individual ingredients.

#### **HPTLC**

HPTLC of both samples of A&B was performed to get finer results to get finer details.

#### **PARTICLE SIZE**

Particle size of both samples of A&B was found to be 311- 419 micron and 211-349micron respectivel.

#### **RESULTS**

The results were assessed in following section. Granular form of Talisadi Khanda was subjected to Physico chemical analysis. The results are tabulated in following tables.

**Physico chemical analysis of both samples of Talisadi khanda(granules) A and B was**

Sr No	TEST PARAMETER	(A) TALIDADI KHANDA (GRANULES) WITH ADDED SUGAR	(B) TALISADI KHANDA(GRANULES) WITHOUT ADDED SUGAR
1	Form	Granules	Granules
2	Colour	Greyish white	Greyish white
3	Taste	Sweet and punjent	Sweet and punjent
4	Odour	Aromatic	Aromatic
5	Loss on drying	1.847%	0.579%
6	Ash value	11.634%	6.603%
7	Acid insoluble ash	9.769%	5.958%
8	Water soluble extractive	76.631%	84.526%
9	Alcohol soluble extractive	3.913%	2.957%
10	p <sup>H</sup>	7.05%	6.91%
11	Fat content	1.141%	1.036%
12	Reducing sugar	1.709%	2.826%
13	Water soluble ash	1.995%	0.631%
14	TLC	0.31	0.30
15	HPTLC	0.14	0.14
16	Particle size	311-419 micron	211-249 micron

### DISCUSSION

Development of Talisadi khanda (granules) from Talisadi Churna and its analytical study was taken in this study. Samples selected for the study shows that analytical standards were in accordance with API standards.

Physico chemical parameters of Talisadi Khanda (Granules) were suggestive of the quality and increased shelf life. Parameters results of Powered drugs were as per the guidelines of Ayurvedic pharmacopoeia of India.

### CONCLUSION

The analytical parameters were within the parameters mentioned in the API and were suggestive of the genuine of the raw material used and the quality of the end product obtained. The data obtained from Analytical parameters of Talisadi Khand (Granules) can be considered as reference for its standardization.

The Physico chemical parameters such as loss on drying, Total Ash value, water soluble ash, acid insoluble ash, pH, Alcohol soluble extractives, Water soluble extractives, Acid insoluble ash, Water soluble ash, TLC, Fat Content, Reducing Sugar, HPTLC, Particle size and Organoleptic characteristics can be efficiently used for standardization of Talisadi Khand Granules.

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