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PHARMACEUTICAL EVALUATION OF KULATTHA GUDA

***[1]Dr. Lopamudra Bag and [2]Dr. Sonalika Jena**

[*1]M. D Scholar, Department of Kayachikitsa, Gopabandhu Ayurveda Mahavidyalaya, Puri.

[2]Associate Professor, Department of Kayachikitsa, Gopabandhu Ayurveda Mahavidyalaya, Puri.

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***Corresponding Author**
Dr. Lopamudra Bag
M. D Scholar, Department of Kayachikitsa, Gopabandhu Ayurveda Mahavidyalaya, Puri.

ABSTRACT

Kulattha Guda is an Ayurvedic formulation described in the context of Hikka Shwasadhikar Adhyaya according to Acharya Chakradatta. In the present study the evaluation on analytic parameters were done on Kulattha Guda. The organoleptic, physiochemical characteristics, qualitative test and quantitative estimation of functional group for the Avaleha done and analytically the study reveals that the Kulattha Guda can be effectively used in Tamaka Shwasa.

KEYWORDS: Kulattha Guda, Siddhi Lakshana, Tamaka Shwasa, Qualitative test.

INTRODUCTION

- Kulattha Guda is a type of avaleha which is indicated in Shwasa roga according to Acharya Chakradatta.
- Avaleha is a semisolid preparation, prepared from decoction or extracts of different herbs by adding sweetening agents like jaggery, sugar or sugar candy.
- Avaleha Kalpana is considered as an Upakalpana of Kwathakalpana.
- Different varieties of Avaleha are mentioned in various Ayurvedic classics and they are the most accepted varieties of Ayurvedic dosage forms due to its easy administration, palatability and long shelf-life.
- The present study is details about the preparation of Kulattha Guda.

OBJECTIVE

- All the required drugs were collected from local market and traders.
- They were identified by the expert faculties of department of *Drvyaguna and Rasashastra*

& BK, Gopabandhu Ayurveda Mahavidyalaya, Puri.

- Preparation of *Kulattha Guda* is done in the pharmacy of RS & BK Development, GAM Puri.
- As per CCRAS guidelines the Analytical study of *Kulattha Guda* has been evaluated in "ALN Rao memorial Ayurvedic medical college & PG centre, Koppa, Karnataka."

कुलत्थं दशमूलं च तथैव द्विजयद्विका |

शतं शतं च संगृह्य जलद्रोणे द्ववपाचयेत् ॥ ३१ पादावशेषे तस्मंस्तु गुडस्यार्धतुलां द्विपेत् ।

शीतीभूते च पक्के च मर्ुनोऽिौ पलाद्वन च ॥३२॥ षट् पलाद्वन तुगाि ीयाधाः द्वपप्पल्याश्च पलियम् ।

द्विसुगस्ि कयुक्तं तत्खादेदद्विवलं प्रद्वत ॥ ३३ ॥ श्वासं कासं ज्वरं द्विक्कां नाशयेत्तमकं तथा ।

प्रद्वतशत द्रोणद्वनयमाज्ज्ञेयं द्रोणियं स्ि ॥ ३४ ॥ (*Chakra Dutta-Hikka swasadhikar*-12/31-34)

INGRIDENTS OF KLATTHA GUDA

DRUGS	GUNA-KARMA
Kulattha	*Kapha-Vata hara* due to *ushna virya, hikka-shwasa hara,ashmarinasaka*
Dashamoola	*Tridosha samana, Shotha hara, Shwasha hara, Anulomana*
Bharangi	Due to *ushna kapha-vata nasaka, kasahara , shwasahara, sothahara,* due to *ushna virya* and *katu tikta rasa* helps in *deepana pachana*
Bansalochana	*Sothahara, kapha-vata nasaka, shwasahara*
Pippali	*Rasayan, shwasa-kasa-jwara hara, vata-kapha hara*
Twak	*Kapha-vata hara, shwasahara, yakshma nasaka, vatanulomaka*
Ela	*Tridoshahara* mainly *kaphahara, shwasa-kasa hara, dahanasaka*
Patra	*Kapha-vata hara, sothahara, shwasahara*
Madhu	*Tridosha hara, swasa-kasa-hikka nasak, sandhaniya*, due to *laghu* its *kaphaghna* and due to *pichhila,madura,kashaya* its *vata-pita hara*

Ingredients

1. ***Kulattha*** – 100 Part
2. ***Dashamoola*** – 100 Part
3. ***Bharangi*** – 100 Part
4. ***Guda*** – 50 Part
5. ***Bamsalochana*** – 6 Part

KWATHA DRAVYA

6. ***Pippali*** - 2 Part
7. ***Twak*** – 2/3 Part
8. ***Ela*** – 2/3 Part
9. ***Patra*** – 2/3 Part
10. ***Madhu*** – 8 Part

PRAKSHEPA DRAVYA

Glimpses of preperation of Kulattha Guda

Drying of Drugs

Kwatha preparation.

filtered kwatha.

Preparation of prakshepa Dravya



During paka of guda and kwatha.

Avaleha Paka Parikshan- Tantumatwam - Thread like consistency.

Adding of Prakshepa dravya.

Mixing of Prakshepa in Avaleha

Storage of Kulattha Guda

Packaging & Labelling

FINAL PRODUCT

Method of preparation

Purvakarma: (It includes preparation of Kwatha and powder of Prakshepa Dravya)

- Prescribed quantity of prakshepa Dravya first dried under sun and were taken into a mixer grinder to make it fine powder form.
- Then prescribed quantity of Kwatha Dravya (Kulattha,Dashamoola,Bharngi) were taken and made into yavakuta form.
- Then the yavakuta powder were soaked in water for overnight.
- In the next day morning preparation of kwatha was done.
- When water was reduced to 1/4th ,boiling was stopped.
- The decoction was filtered into another clean big vessel.

***Pradhan Karma :* (It includes *Guda paka* and *paka pariksha*)**

- Mentioned quantity of *guda* was added into the filtered *kwatha* and dissolved.
- The blend was filtered once to get rid of the physical impurities present in jaggery and taken back in vessel.
- This vessel was placed again over mild fire and boiled till it attains *avaleha paka lakshana*.
- Soon after getting 2 to 3 thread consistency of the solution the vessel was removed from the fire and the fine powder of all the *prakshepa Dravya* (except honey) were added little by little with continuous stirring.

Paschat Karma : (Includes adding of honey ,storage and packaging)

- After the *avaleha was* cooled on its own ,honey was added, mixed well and stored in air

tight container.

- The packaging of *Kulattha Guda was done in a container* free from moisture and sealedtightly.

Siddhi lakshana			
Tantumatva	Thread like consistency	***Peedithomudra***	Finger prints appear when pressed due to proper consistency of the product, which is also a sign of perfect preparation.
Apsumajjana	Sinks in water due to proper consistency.	***Gandha varna rasodbhava***	odour, colour, taste of ingredients used for paka
Sthiratva	Firm due to the proper Consistency.	***Sukhamarda***	Soft to roll

Kulattha Guda (Research Trial Drug) (**Ref: Chakradutta-Hikkaswasadhikar -12/31-34**) Batch no- 07-KG-25 Mfg . Dt- 05-04-25 Exp. Dt - 05-04-26 **Dr. Lopamudra Bag** Final yr PG Scholar PG Deptt. Of Kayachikitsa GAM, Puri	**Ingredients** 1. Kulattha – 100 Part 2. Dashamoola –100 Part 3. Bharangi – 100 Part 4. Guda – 50 Part 5. Vamsalochana- 6 Part 6. Pippali – 2 Part 7. Twak – 2/3 Part 8. Ela - 2/3 Part 9. Patra- 2/3 Part 10. Madhu – 8 Part

Packaging and labelling

- The final product should be stored in a clean ,dry,airtight glass container with a view to protect from the invasion of microorganism.
- The finished product was filled in glass container and sealed. The container was labelled with required details of ***Kulattha Guda*** and kept ready for analytical study.

Dose: ***1pala (Approximately 48gm) in divided doses twice daily after food. Anupana : Ushnajala (Luke warm water).***

INDICATION

Shwasa, Kasa, Jwara, Hikka, TAMAKA SHWASA

Analytical study

- In this study the Physicochemical characters had been evaluated out in **"ALN Rao memorial.**

Ayurvedic medical college & PG center, Koppa, Karnataka.

- All the modern parameters were adopted for quality assessment of the trial drug as per the guidelines framed for quality assessment of AYURVEDA & SIDDHA drugs by CCRAS , Ministry of AYUSH, Govt. India , New Delhi.

EVALUATION

It can be done on following parameters

1. Organoleptic characters
2. Physicochemical parameters
3. Preliminary phytochemical tests (Qualitative tests)
4. Quantitative estimation

Sl. No	Parameters	Appearance of specimen sample
1.	Colour	Brown - black
2.	Odour	Characteristic
3.	Taste	Sweet,astringent, pungent
4.	Texture	Semi-solid

Sl. No.	Test parameters	Results
01	Loss on drying at 105◦ C	14.75%
02	Total ash	11.25%
03	Acid insoluble ash	2.05%
04	Water soluble ash	6.75%
05	Alcohol soluble extractives	21.50%
06	Water soluble extractives	44.65%
07	pH(5% aqueous solution)	4.76 ± 0.10

Parameters	Results
Total sugar	55.50%
Reducing sugar	40.50%
Non –reducing sugar	15.00%

Parameters	Result
Carbohydrate	Present
Protein	Present
Alkaloid	Present
Cardiac glycoside	Present
Flavonoids	Present
Tannins	Present
Antraquinone glycoside	Present
Triterpenoides	Present

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C. Fluorescent tests: Kulatha Guda

	Under Visible Light	Under Long UV
Sample + water	Greenish-brown	Fluorescent green
Sample + MeOH	Brownish yellow	Fluorescent yellow
Sample + 10% NaOH	Brownish Orange	Fluorescent green
Sample + 10% HCl	Yellowish Brown	Fluorescent yellow
Sample + 10% HNO_3	Orange-brown	Fluorescent yellow
Sample + 10% H_2SO_4	Brownish yellow	Fluorescent green
Sample + 10% NH_3	Dark Brown	Brown

D. Quantitative estimation

Total Sugar	: 55.50%
Reducing Sugar	: 40.50%
Non-reducing Sugar	: 15.00%

E. Thin Layer Chromatography

Solvent System: Toluene: Ethyl acetate: 9 : 1

Rf Values	Under Long UV
0.04	Bright fluorescent green
0.05	Bright fluorescent green
0.11	Fluorescent blue
0.23	Fluorescent blue
0.35	Fluorescent blue
0.42	Fluorescent blue
0.63	Fluorescent green
0.72	Bright fluorescent green
0.79	Fluorescent green
0.86	Fluorescent blue

Patron: Honourable Shri Aroor Ramesh Rao
Laboratory is not liable to bear any legal action or dispute based on this report

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F. Microbial contamination

Total aerobic count	$1.1*10^2$cfu
Total fungal count	$1.1*10^2$ cfu

Dr. Prashant Kumar Jha
DIM, CIPR, PGDHE, M.Sc., Ph.D.
Head, Quality Control Laboratories
A.L.N. Rao Memorial Ayurvedic Medical
College Koppa, Karnataka - 577126

Patron: Honourable Shri Aroor Ramesh Rao
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CONCLUSION

The formulation ***Kulattha Guda*** is mentioned in the text *Chakradatta Hikkashwas rogadhikara adhyaya*. On account of analytical study it can be concluded that the Kulattha Guda is rich in functional components. It has maximum ingredients having **Vata-Kapha Shamaka** properties and also having **Anti-inflammatory** and **Antiasthmatic** actions. Thus, I expect Kulattha Guda may be helpful in curing the disease and will beneficial for society.