



## Pharmaceutical and Analytical Study of Dhanyamla Prepared as per Sahasrayogam

<sup>1</sup>S Divya, <sup>2</sup>Sonawane Nirmala, <sup>3</sup>Jahagirdar Sangeeta, <sup>4</sup>Pagad Archana, <sup>5</sup>NR Navoday Raju

<sup>1</sup>Postgraduate Scholar, Dept. of Panchakarma, Parul Institute of Ayurved, Parul University, Vadodara-391760, Gujarat, India.

<sup>2</sup>Corresponding Author: Associate Professor, Dept. of Panchakarma, Parul Institute of Ayurved, Parul University, Vadodara-391760, Gujarat, India.

<sup>3</sup>Professor and HOD, Dept. of Panchakarma, Parul Institute of Ayurved, Parul University, Vadodara-391760, Gujarat, India.

<sup>4</sup>Assistant Professor, Dept of Rasashastra and Bhaishajya Kalpana, SDM College of Ayurveda and Hospital, Hassan, 573201, Karnataka, India and Ph.D. Scholar, Dept of Rasashastra and Bhaishajyakalpana, Parul Institute of Ayurved, Parul University, Vadodara-391760, Gujarat, India.

<sup>5</sup>Associate Professor, Dept. of Kriya Sharir, Parul Institute of Ayurved and Research, Parul University, Vadodara-391760, Gujarat, India.

For Correspondence: [nirmala.sonawane260111@paruluniversity.ac.in](mailto:nirmala.sonawane260111@paruluniversity.ac.in)

### ABSTRACT

In Ayurveda we get different dosage forms like solid, semi-solid and liquid. Among them Dhanyamla comes under liquid dosage form of ShuktaSandhana Kalpana. It is the fermented liquid prepared by soaking the drugs in a solution for a specific period of time which is intended for internal or external use. It is beneficial in Urusthamba, Amavata, Arshas, Vriddhi, Athisthaulya, Rajayakshma, Prathishyaya, Vidradhi, Daha, Peenasa and Jwara. In this article the Dhanyamla is prepared according to Sahasrayoga. The ingredients mentioned are Tandula (*Oryza sativa*), Pruthuka (pressed form of *Oryza sativa*), Kulattha (*Macrotyloma uniforum*), Laja (puffed form of *Oryza sativa*), Kangubeeja (*Panicum sumatrense*), Kodrava (*Paspalum scrobulatum*), Nagara (*Zingiber officinale*), Nimbuka (*Citrus aurantifolia*), Deepyaka (*Trachyspermum*) and water are fermented and analysis was carried out.

**Keywords:** Sahasrayogam, Shukta, sandhanakalpana

Received 11.12.2021

Revised 21.02.2022

Accepted 28.02.2022

### INTRODUCTION

The word Dhanyamla is comprised of two word, viz. Dhanya and Amla. It is a sour medicated liquid preparation prepared by fermentation process of various grains [1, 2]. It can be used both internally and externally. Internally it is used for Pana (drinking) as it increases digestive power and appetite. For externally, used for AvagahaSweda, Parisheka, NadiSweda, Upanaha.Sweda, UtkarikaSweda and Udavartana, Virechana, AsthapanaVasti and Shirodhara. The aim of the study to prepare *Dhanyamla* as per *SahasraYogam* and determine physico-chemical analysis of *Dhanyamla*.

### MATERIAL AND METHODS

Raw materials required for preparation of *Dhanyamla* were purchased from the local market of Vadodara, Gujarat. After collection and proper cleaning of all the ingredients, *Dhanyamla* was prepared in the Department of *Rasashastra* and *Bhaishajya Kalpana*, Parul Institute of Ayurveda and Research (Teaching Pharmacy), Parul University, Vadodara, Gujarat. The method of preparation of *Dhanyamla* is taken from *SahasraYogam* and related data collected from scientific articles and journals.

**Table 1 - The Ingredients and Parts used in the Preparation of the *Dhanyamla* [3-16]**

S. No.	Name of the Sample	Botanical Name	Family	Useful Part	Proportion
1.	<i>Tandula</i>	<i>Oryza sativa</i>	Poaceae	Seed	10 <i>Prastha</i>
2.	<i>Pruthaka</i>	<i>Oryza sativa (Pressed form)</i>	Poaceae	Seed	10 <i>Prastha</i>
3.	<i>Kulattha</i>	<i>Macrotyloma uniflorum</i>	Leguminosae	Seed	10 <i>Prastha</i>
4.	<i>Laja</i>	<i>Oryza sativa (Puffed form)</i>	Poaceae	Seed	4 <i>Prastha</i>
5.	<i>Kangubeeja</i>	<i>Panicum sumatrense</i>	Poaceae	Seed	1 <i>Adhaka</i>
6.	<i>Kodrava</i>	<i>Paspalum scrobiculatum</i>	Poaceae	Seed	4 <i>Prastha</i>
7.	<i>Nagara</i>	<i>Zingiber officinale</i>	Zingiberaceae	Rhizome	2 <i>Prastha</i>
8.	<i>Nimbuka</i>	<i>Citrus aurantifolia</i>	Rutaceae	Fruit	4 <i>Prastha</i>
9.	<i>Deepyaka (Ajamoda)</i>	<i>Trachyspermum involucreatum</i>	Apiaceae	Seed	8 <i>Kudava</i>
10.	<i>Ushnodaka</i>				200 <i>Prastha</i>

**Method of Preparation of *Dhanyamla***

It is prepared in two steps

**Step 1: Preparation of Ingredients**

On auspicious day all ingredients cleaned coarse powder was made and taken in earthen pot. Water was added and boiled. Then it was closed with an earthen lid and sealed by wrapping clay and cloth.

**Step 2: Preparation of Fermentation**

It was subjected to heating process for seven days continuously. On eighth day liquid content should be collected. Same quantity of hot water should be added to the pot. This preparation is known as *Dhanyamla*. After the preparation final product it should be filled in air tight container. Shelf life of *Dhanyamla* can be preserved for 6 months without harming its potency [17, 18].

**Indication:** All types of *Vata Vyadhi* [19, 20]

**Photographs of Preparation****Fig. 1 Preparation of *Dhanyamla*****Analytical Reports**

Analytical parameters like foreign matter, Pesticide detection, Total Ash value, Acid insoluble ash, Alcohol soluble extractive and water soluble extractive was carried out in Parul Institute of *Ayurved* and Research (Teaching pharmacy), Parul University, Vadodara, Gujarat. Following are results,

**Table 2 - Analytical Parameters of the Ingredients**

Ingredients	Foreign matter	Pesticide detection	Limit test for heavy metals	Total Ash value	Acid insoluble ash	Alcohol soluble extractive	Water soluble extractive
<i>Tandula</i>	2.5%	Nil	Nil	18%	12%	--	16%
<i>Pruthaka</i>	1.2%	Nil	Nil	10%	16%	2%	10%
<i>Kulattha</i>	0%	Nil	Nil	4%	1%	6%	14.8%
<i>Laja</i>	1%	Nil	Nil	4%	11%	--	14%
<i>Kangubeeja</i>	1%	Nil	Nil	6.8%	19%	5.4%	11%
<i>Kodrava</i>	1.43%	Nil	Nil	4%	12%	6.2%	12%
<i>Shunthi</i>	0.6%	Nil	Nil	4.3%	0.76%	12.5%	32%
<i>Dantashataluka</i>	1%	Nil	Nil	11%	14%	4.4%	11%
<i>Ajmoda</i>	1.2%	Nil	Nil	19%	1.6%	9%	10.75%
<i>Godhum</i>	1%	Nil	Nil	14%	8%	4%	21%

**Table 3- Organoleptic Parameters of the prepared Dhanyamla.**

S. No	Parameters	Value
	Description	Liquid
1.	Color	Pale yellow
2.	Odor	Acidic
3.	Taste	Sour, bitter
4.	Consistency	Watery

**Table 4-Physico-Chemical Analysis of the prepared Dhanyamla**

S. No.	Parameters	Value
1.	pH(5% Aqueous)	3.3
2.	Refractive index at 40	1.2326
3.	Specific gravity	1.12
4.	Mayer's test	Positive-Alkaloids present
5.	Test for carbohydrates <ul style="list-style-type: none"> <li>• Molisch test</li> <li>• Benedict's</li> </ul>	positive -carbohydrates present positive -reducing sugar present

## DISCUSSION

*Dhanyamla* is a sour liquid i. e. *Amla* or acidic due to the process of fermentation. In this study its pH was found to be 3.3 which is Acidic. Acid in soluble ash is a presence of sand and silica, higher is the impurity the higher is the acid insoluble ash, *KanguBeeja* has more compare to other ingredients. Total Ash value is useful in determining authenticity and purity of sample, these values are important to assess the qualitative standards, here *Ajmodahas* 19% of total ash value. Water soluble extractive is proportion of the biomass that is lost as a result of extraction with water, here *Godhuma* is found to be more as compared to other drugs. Refractive index indicates the concentration of active principles dissolved in *Dhanyamla*. The specific gravity indicates about the relative density of the *Dhanyamla* that depends on dissolved and suspended particles present in the solution. Mayer's test is positive which indicates the presence of alkaloids, because of which *Dhanyamla* may act as anti inflammatory and analgesic. Molisch test found to be is positive because the *Dhanyamla* contains *Pruthuka*, *Lajaand Godhuma*. Benedict's is positive it indicates reducing sugar.

*Dhanyamla* possess *Amla Rasa* because of fermentation, it has *Laghuand Snigdha* and *Teekshna Guna* which acts as *Deepaka* and *Pachaka*, it has *Ushna Veerya* because of all these properties *Dhanyamla* does *Vata-Kapha Shamana*. Researches have proved the phytochemicals like Flavonoids and Tannins. Flavonoids are having anti-oxidant activity, hepato-protective activity, antibacterial property, anti-inflammatory, anti cancer activity, antiviral activity, effects on capillary fragility and ability to inhibit human platelet aggregation. Tannins are having anti-inflammatory, antimicrobial activities, accelerate blood clotting, reduce blood pressure, decrease serum lipid level and module immune responses [21].

## CONCLUSION

*Dhanyamla* is liquid dosage form which can be used internally and externally for therapeutic purpose in *Panchakarma* i.e. *Virechana* and *Vasti* (internally) *Shirodhara* and *Kayaseka* (externally). It can be also used in *Paschat Karma* i.e. *Kavala Dharana*, *Gandusha* and *Karna Purana*.

## ACKNOWLEDGEMENTS

Author would like to acknowledge the support and cooperation rendered by Prof. Dr. Prasanna Mathad and staff of Department of Rasa Shastra and Bhaishajya Kalpana, Teaching Pharmacy of Parul Institute of Ayurved and Research in the Preparation and Analysis of Prepared Drug.

## REFERENCES

1. Srikantha Murthy K.R, Ashtanga Hrudaya Samhita of Vagbhatacharya, English Translation, Vol 1, Sutra Stana, Chapter 5: 79, Varanasi, ChowkhambaKrishnadas Academy. 2012. P.72.
2. Hiremath G.Shobha, A Textbook Of Bhaishajya Kalpana (Indian Pharmaceutics), 6<sup>th</sup> Reprint Ed. Chapter 13, Bangalore, IBH Prakashana. 2011. P. 291.
3. Panditarava, D.D.V., 1990. Sahasra Yoga Hindi Translation. SaptamaPrakarana: 46. Delhi. Kendriya Ayurveda Anusandhanaparishada. P. 366, 367.
4. Nishteswar K. Vidyanath R. Sahasrayogam. English Translation. Kashaya Prakarana: 66. Varanasi. Chaukhamba Sanskrit Series Office. 2011. P. 52.
5. Varier PS. ChikitsaSamgraha. Kolkata, Mathrubhumi Press. 1991. P.131.

6. Jayaweera DMA. Medicinal Plants (Indigenous & Exotic) used in Ceylon. Part 3. Colombo: The National Science Council. 1981. P. 45.
7. Warriar PK, Nambiar VPK, Ramankutty C. editors. Indian Medicinal Plants. Vol 4. Madras. Orient Lonman Ltd. 1994. P.193-198.
8. [Anonymous], Ayurveda pharmacopeia Vol 1. Part 3, Colombo: Department of Ayurveda. 1969. P. 157.
9. Jayaweera DMA. Medicinal Plants (Indigenous & Exotic) used in Ceylon. Part 3. Colombo: The National Science Council. 1981. P. 205.
10. Jayaweera DMA. Medicinal Plants (Indigenous & Exotic) used in Ceylon. Part 3. Colombo: The National Science Council. 1981. P. 57.
11. Warriar PK, Nambiar VPK, Ramankutty C. editors. Indian Medicinal Plants. Vol 2. Madras. Orient Lonman Ltd. 1994. P.226- 229.
12. Jayaweera DMA. Medicinal Plants (Indigenous & Exotic) used in Ceylon. Part 3. Colombo: The National Science Council. 1981. P. 51.
13. Jayaweera DMA. Medicinal Plants (Indigenous & Exotic) used in Ceylon. Part 5. Colombo: The National Science Council. 1981. P. 217.
14. [Anonymous], Ayurveda pharmacopeia Vol 1. Part 3, Colombo. Department of Ayurveda. 1969. P. 52.
15. [Anonymous], Ayurveda pharmacopeia Vol 1. Part 3, Colombo. Department of Ayurveda. 1969. P. 240.
16. Jayaweera DMA. Medicinal Plants (Indigenous & Exotic) used in Ceylon. Part 5. Colombo. The National Science Council. 1981. P. 11.
17. Reddy K.R.C. Bhaishajya Kalpana Vijnanam. Varanasi. Chaukhamba Sanskrit Sansthan. 2004. P. 81.
18. G. Prabhakara Rao, Sahasrayogam, Reprint, 2019, Chaukhamba Publication, New Delhi, 2019. P. 712.
19. G. Prabhakara Rao, Sahasrayogam, Reprint, 2019, Chaukhamba Publication, New Delhi, 2019. P. 713.
20. K. Nishteswar, R. Vidyanath, Sahasrayogam, Reprint 2014, Chowkhamba Sanskrit Series Office, Varanasi, 2014. P. 52-53.
21. Ranasinghe, R. L., & Ediriweera, E. R. (2015). A pharmacological appraisal of dhanyamla. *Int Ayurvedic Med J*, 3, 1-20.

#### CITATION OF THIS ARTICLE

S Divya, Sonawane Nirmala, Jahagirdar Sangeeta, Pagad Archana, NR Navoday Raju. Pharmaceutical and Analytical Study of Dhanyamla Prepared as per Sahasrayogam. Bull. Env. Pharmacol. Life Sci., Vol 11[4] March 2022 : 91-94.