



IJPPR

INTERNATIONAL JOURNAL OF PHARMACY & PHARMACEUTICAL RESEARCH
An official Publication of Human Journals

ISSN 2349-7203



Human Journals

Review Article

February 2023 Vol.:26, Issue:3

© All rights are reserved by Fariah Rizwani et al.

A Review on *Arka Kalpana*



IJPPR
INTERNATIONAL JOURNAL OF PHARMACY & PHARMACEUTICAL RESEARCH
An official Publication of Human Journals

ISSN 2349-7203



Fariah Rizwani*¹, Khush Jain¹, Shefali Thakkar¹

¹*D. Y. Patil University School of Pharmacy, Nerul (E),
Maharashtra, India*

Submitted: 23 January 2023
Accepted: 02 February 2023
Published: 28 February 2023

Keywords: *Ayurveda*, *Arka Kalpana*, Extraction, Distillation.

ABSTRACT

It is a branch of *Ayurveda* that deals with formulations, therapeutic uses of drugs and pharmaceutical products. It helps in determining dosage forms. It is a more pleasant form of Ayurvedic formulation in compared with *kalka*, *swarasa*, *kwath*, etc. In studies of *Arka Prakash*, there are different kinds of procedures mentioned for varied types of *dravyas*. It is a colorless dosage form effective when administered in low dosage forms, it has better stability, compatibility and patient compliance. *Arka kalpana* have more potency, easy absorption and quick onset of action. This all surfaced the way for more future endeavors and better growth opportunities in pharmaceutical and clinical sectors dealing with *arkakalpana*. In our ancient Ayurvedic studies there are numerous *Kalpanas* offered by our *acharyas* to extract the major constituents of plant materials and herbs in the form of dosage forms, few of them are identified as basic types of *Kalpanas*: *kwatha*, *hima*, *phanta*, *sandhana*. As the current population is increasing there's a need to study the simplified methodologies and procedures amplified in the composition of this formulation which could be easily acceptable and admissible both in scientific labs and at industrial levels. The pharmaceutical characteristics regards to this process have its detailed explanation in *patras*, *yantras*, *agnis* and many other methods of preparation depending upon the consistency of *dravyas*. This paper aims to highlight the importance of this practice, as in recent years it has been collectively understood the burning need for preparation of extracts which are to be used in the fields of cosmetics and treating therapeutic disorders. In considerations to modern aspect, a distillation apparatus is used for the preparation of *Arka*.



HUMAN JOURNALS

www.ijppr.humanjournals.com

INTRODUCTION:

Ayurvedic studies are recognized as an ancient system of medicine in entire Asia and Indian sub-continent. These studies are about 5000 years old having great healing potential by using natural components. *Ayurveda* is originated through *vedic* culture. *Ayurveda* has evolved into various branches which can be fruitful towards Life and Science. Its main concern is to treat diseases and keep body fit. Researchers have been doing researches on therapeutic agents that can heal body and maintain its capacity to deal with diseases. Such therapeutic agents are called as Drugs. Ayurvedic formulations are provided by *Acharyas*. There are five basic types of *Kalpna* such as *kwatha*, *kalka*, *hima*, *swarasa* and *phanta*¹. Drugs are administered in different forms as per drugs availability and patient's convenience². *Arka* is one of the types of form³. The process by which the active constituents of drugs and volatile oils are collected is termed as *Arka kalpna* and the content separated by this method is called as *Arka*⁴.

Classification of Arka:

A. Classification as per contents⁵

- 1) **Gandha Arka:** Extracting *Arka* from the drugs containing volatile oil or fragrance e.g: *Ajmoda*, etc.
- 2) **Esthira Arka:** Extracting *Arka* from the drugs not containing Volatile oil e.g: *Triphala*, etc.
- 3) **Drava Arka:** Extracting *Arka* from the drugs that are liquid in state.

B. Classification based on duration of preparation⁵

- 1) **Shreshitha Arka:** It is prepared in 9 Hrs.
- 2) **Nyune:** It is prepared in 3 Hrs.
- 3) **Madhya Arka:** It is prepared in 6 Hrs.

C. Classification based on the part used⁵

- 1) *Vishavargaarka*
- 2) *Sugandha ganaarka*
- 3) *Tandularka*

- 4) *Satu dhanyaarka*
- 5) *Kshirivrikshaarka*
- 6) *Tail dhanyaarka*
- 7) *Pushp arka*

MATERIALS AND METHODS

1) **Objectives:** To review the Ayurvedic *samhitas* – *Arka Kalpana*.

2) **Materials:** *Chulika, Ayushadhidravaya, Kastha, Sangrahapatra* and *Arka yantra* (Distillation Apparatus). Alum, red and black clay, geru and Iron, glass and bone powder used to make clay pot.

3) **Methods of preparation of Arka⁶:** Toprepare *Arka* drugs are soaked for overnight/ day. *Arka yantra* is lighted and kept at medium flame. Steam which is generated is collected in liquid and it is termed as *Arka*. There are few more methods used to separate out *Arka* which are suggested by *Arka prakash*.

- 1) Liquid drug
- 2) Twig drug
- 3) Fresh drug
- 4) Hard drug
- 5) Very hard drug



3.1) Arka of Wet Drugs: Wet Drugs gives about 60% drugs and it depends upon quantity of water added to it. If 6 times of water is added then, it shows wet and soft drugs. And if 8 times of water are added then, it shows wet and mildly hard drug.

3.2) Arka of Dry Drugs: Drugs are soaked in double the quantity of water and is kept for 24 hours before using it in *Arka yantra*. About 60% drug is collected and it depends on quantity of water added to it. If 6 to 8 times water is added then it results into Dry and Soft drug. If 8 times of water is added then it results into Dry and moderately hard drug. If 10 times or more water is added then it forms Dry and Hard drug.

3.3) Arka of liquid Drugs: Drugs present in Liquid forms are directly poured into *Arka yantra* and *Arka* is obtained.

3.4) Madyarka: In this method one part of rice and four parts of water are kept in a big pot and after fermentation it should be distilled and is used as *Madyarka*.

3.5) Arka from Narcotics: To prepare narcotics like *Bhanga*, $\frac{1}{4}$ th of *Ajamoda* is added to it and *Arka* is prepared.

4) Agni distribution is Arka preparation ⁵: We use six different types of *Agni* for preparation of *Agni*. *Dipagni*, *Dhumagni*, *Madhyamagni*, *Mandagni*, *Bhttagni* and *Kharagni*. *Arka* is firstly given *dhumagni* for one and half hours, followed by *dipagni* for next one and half hours. Then half hour *mandagni*, 45 minutes *madhyamgni* and *kharagni* are given.

5) Characteristic of *Arka* ⁵:

- Taste as per original drug.
- Transparent and clear.
- Odour as per original drug.



6) Precautions:

- It must maintain medium flame.
- Cool water must be placed in upper area and water must be changed periodically.
- If the drug content is soaked in presence of sunlight, then 4 times of water is added to it.
- *Arka yantra* is completely sealed with the help of clays.

7) Process after preparation: *Arka* has bad odour and it is removed by fumigating the content, this process is repeated several times in order to remove the bad smell. *Arka* preparation is stored in glass bottles (air-tight). If the *Arka* is kept open and it is exposed to environment, it will lose its main medicinal value.

8) Modern Aspect ⁷

8.1) Distillation types:

- Fractional distillation

- Steam distillation
- Simple distillation
- Vacuum distillation

8.2) Apparatus used:

- Utensil where the vapors are produced after heating the liquid till its boiling point.
- Boiler which is used to provide heat to the container.
- Condenser which acts as a cooling apparatus helps in maintaining the temperature of apparatus via continuous circulation of water to it. Eg: Reflux condenser and Soxhlet apparatus.
- Receiver used to collect the condensed liquid.

8.3) Process ⁸:

Process is divided into two parts: Evaporation and Condensation. Evaporation is defined as the freely escape of vapor from the surface of liquid. And it is differentiated from the boiling which happens at given pressure. Condensation is the process where the evaporated vapors are converted to water by cooling mechanism.

DISCUSSION:

The word *Arka kalpana* is mentioned in the book *Arka Prakasha*. According to the few historians and vedas it is believed that when Mughals came to India they have used *Arka* in their daily medicinal practice. *Arka* is used to treat and heal various diseases such as eg: *Brahmi arka* is used to treat *Apasmar* and *Unmada*. *Tulsi arka* is used in *Shwasa* and *Kasa*⁹. *Arka* is used for *shodhan* of *parad* and other drugs. *Arka* has great potency, shelf life and palatability. Even due to fewer doses used to treat diseases it also shows patient compliance. Such properties are very useful via pharmaceutical aspect. Distillation method is in practice to collect *Arka*.

CONCLUSION:

Arka kalpana is one of the many forms of *Kalpanas* and it is said to be the best method among all. Its shelf-life is usually 1-2 years. It produces contents like volatile oil. Its

phytochemicals can be stored and preserved for 1-2 years in their form of *Arka kalpana*. As it has good absorption rate it is widely used now-a-days. The preparation of arka is associated with various factors which require certain starting equipments such as Arka yantra, Woods, and the drugs needed for its therapeutic benefit. *Arka kalpana* came into pharmacy of ayurveda in late *samhita* period which was found to be significant for medicinal use.

REFERENCES:

- 1) Shastri P. Sharandhar Samhita of Sharangadhar with SankritGudartha Commentary by Adamal. Varanasi: ChaukhambaOrientaila 2002;145.
- 2) Tripathi I. Arka Prakash of LankapatiRavan with Hindi Commentary, Pratham Shatak, Verse 46. Varanasi: Chaukhamba Sanskrit Series 1995;9.
- 3) Mishra S. Abhinav Bhaishjya Kalpana Vigyan. Varanasi: ChaukhambaSurbharti Prakashan;176-77.
- 4) CCRAS. The Ayurvedic Formulary of India (Part I, Vol I) 2003;27.
- 5) Tripathi I. Arka Prakash of LankapatiRavan with Hindi Commentary, Pratham Shatak. Varanasi: Chaukhamba Sanskrit Series, 1995;9-28.
- 6) The Ayurvedic Formulary of India (Part 3) 2011; 28-36.
- 7) Honwad S. A Hand Book of Standardization of Ayuredic Formulations. Jaykrishnadas Ayurveda Series 2012;19 -24.
- 8) Angadi R. A Text Book of Bhaishajya Kalpana Vigyana. Reprint ed. Varanasi: ChaukhambhaSurbhartiPrakashan 2011;118- 122.
- 9) Tripathi I. Arka Prakash of LankapatiRavan with Hindi Commentary, Pratham Shatak. Varanasi: Chaukhamba Sanskrit Series, 1995;28- 30.

<p><i>Image</i> <i>Author -1</i></p>	<p>Author Name – Ms. Fariah Rizwani (<i>Corresponding author</i>) <i>Author Affiliation: D. Y. Patil University School of Pharmacy, Nerul</i> <i>Author Address/Institute Address: Sector-7,Navi-Mumbai-400706</i></p>
<p><i>Image</i> <i>Author -2</i></p>	<p>Author Name – Mr. Khush Jain <i>Author Affiliation:D. Y. Patil University School of Pharmacy, Nerul</i> <i>Author Address/Institute Address: Sector-7,Navi-Mumbai-400706</i></p>
<p><i>Image</i> <i>Author -3</i></p>	<p>Author Name – Dr. Shefali Thakkar <i>Author Affiliation: D. Y. Patil University School of Pharmacy, Nerul</i> <i>Author Address/Institute Address: Sector-7,Navi-Mumbai-400706</i></p>